APPENDIX C
LABORATORY ANALYTICAL RESULTS – YEAR 2018
(CD-ROM)

Comprehensive Data Validation Report
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Groundwater Monitoring Event:Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Antimony	5W5B	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		2	0.4	2	0.4	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Arsenic	5W5B	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Barium	5W5B	22.4		22.4		10	1	10	1	ug/l	No action taken.
	5W7B	33.9		33.9		10	1	10	1	ug/l	No action taken.
	5WC21	13		13		10	1	10	1	ug/l	No action taken.
	5WC22	28.4		28.4		10	1	10	1	ug/l	No action taken.
	5WC23	23.4		23.4		10	1	10	1	ug/l	No action taken.
	5WDUP	12.7		12.7		10	1	10	1	ug/l	No action taken. Blind field dupllicate 5WC21.
Beryllium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.59	J	U	N	1	0.2	1	0.2	ug/l	Result <QL. Blank contamination in the initial and continuing calibration blanks.
	5WC22	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.6	J	U	N	1	0.2	1	0.2	ug/l	Result <QL. Blank contamination in the initial and continuing calibration blanks. Blind field dupllicate 5WC21.
Cadmium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Cadmium	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.32	J	0.32	J	1	0.2	1	0.2	ug/l	Result <QL.
	5WC22	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.29	J	0.29	J	1	0.2	1	0.2	ug/l	Result <QL. Blind field dupllicate 5WC21.
Chromium	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	J	1	J	5	1	5	1	ug/l	Result <QL.
	5WC21	1.9	J	1.9	J	5	1	5	1	ug/l	Result <QL.
	5WC22	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.7	J	1.7	J	5	1	5	1	ug/l	Result <QL. Blind field dupllicate 5WC21.
Cobalt	5W8B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.9	J	1.9	J	5	1	5	1	ug/l	Result <QL.
	5WC21	41.9		41.9		5	1	5	1	ug/l	No action taken.
	5WC22	4.9	J	4.9	J	5	1	5	1	ug/l	Result <QL.
	5WC23	1.8	J	1.8	J	5	1	5	1	ug/l	Result <QL.
	5WDUP	41.3		41.3		5	1	5	1	ug/l	No action taken. Blind field dupllicate 5WC21.
	5W12A	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
Copper	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.6	J	1.6	J	5	1	5	1	ug/l	Result <QL.
	5WC22	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.6	J	1.6	J	5	1	5	1	ug/l	Result <QL. Blind field dupllicate 5WC21.
Lead	5W5B	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Lead	5W7B	0.55	J	0.55	J	2	0.2	2	0.2	ug/l	Result <QL.
	5WC21	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Nickel	5W5B	2	U	U		10	2	10	2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3.3	J	3.3	J	10	2	10	2	ug/l	Result <QL.
	5WC21	21.9		21.9		10	2	10	2	ug/l	No action taken.
	5WC22	3.8	J	3.8	J	10	2	10	2	ug/l	Result <QL.
	5WC23	2.1	J	2.1	J	10	2	10	2	ug/l	Result <QL.
	5WDUP	21.8		21.8		10	2	10	2	ug/l	No action taken. Blind field dupllicate 5WC21.
Selenium	5W5B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Silver	5W5B	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Thallium	5W5B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Thallium	5WC22	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	1	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Vanadium	5W5B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Zinc	5W5B	10.9	J	U	N	30	7.3	30	7.3	ug/l	Result <QL. Blank contamination in the method blank.
	5W7B	7.3	U	U		30	7.3	30	7.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	31.5		U	A	30	7.3	30	7.3	ug/l	Blank contamination in the method blank. Result < 5X blank concentration.
	5WC22	7.3	U	U		30	7.3	30	7.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	7.3	U	U		30	7.3	30	7.3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	20.5	J	U	N	30	7.3	30	7.3	ug/l	Result <QL. Blank contamination in the method blank. Blind field dupllicate 5WC21.
Method: 7470A											
Laboratory: ELLE, Lancaster, PA											
Mercury	5W5B	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		2	0.2	2	0.2	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Acetone	5W5B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	3	U	U		10	3	10	3	ug/l	Analyte not detected at or above the DL or QL.
2-Butanone	5W5B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	1	U	U		10	1	10	1	ug/l	Analyte not detected at or above the DL or QL.
Chloroform	5W5B	3.2		3.2		1	0.1	1	0.1	ug/l	No action taken.
	5W7B	4.5		4.5		1	0.1	1	0.1	ug/l	No action taken.
	5WC21	2.6		2.6		1	0.1	1	0.1	ug/l	No action taken.
	5WC22	1.4		1.4		1	0.1	1	0.1	ug/l	No action taken.
	5WC23	1.3		1.3		1	0.1	1	0.1	ug/l	No action taken.
	5WDUP	2.6		2.6		1	0.1	1	0.1	ug/l	No action taken. Blind field dupllicate 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Dichlorodifluoromethane	5W5B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Dichlorodifluoromethane	5WC21	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.3	U	U		1	0.3	1	0.28	ug/l	Analyte not detected at or above the DL or QL.
1,2-Dichloroethane	5W5B	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.147	ug/l	Analyte not detected at or above the DL or QL.
1,1-Dichloroethene	5W8B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
cis-1,2-Dichloroethene	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
cis-1,2-Dichloroethene	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
Diethyl ether	5W5B	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.5	J	1.5	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WC22	5.7	J	5.7	J	12	0.4	12	0.39	ug/l	Result < QL.
	5WC23	13		13		12	0.4	12	0.39	ug/l	No action taken.
	5WDUP	1.5	J	1.5	J	12	0.4	12	0.39	ug/l	Result < QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.4	U	U		12	0.4	12	0.39	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Methylene chloride	5W5B	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		1	0.2	1	0.182	ug/l	Analyte not detected at or above the DL or QL.
Toluene	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	2.7		2.7		1	0.2	1	0.177	ug/l	No action taken.
	5WC22	3.1		3.1		1	0.2	1	0.177	ug/l	No action taken.
	5WC23	4.5		4.5		1	0.2	1	0.177	ug/l	No action taken.
	5WDUP	2.7		2.7		1	0.2	1	0.177	ug/l	No action taken. Blind field dupllicate 5WC21.
	5W12A	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
Vinyl chloride	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
Xylenes (Total)	5W5B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	Trip Blank 1	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 2	0.2	U	U		3	0.2	3	0.208	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
bis(2-Ethylhexyl)phthalate	5W5B	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.6	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	1.5	U	U		6	1.5	6	1.5	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Diethyl phthalate	5W5B	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.52	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.5	U	U		10	0.5	10	0.5	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
2,4-Dinitrotoluene	5W5B	0.6	U	U		10	0.6	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.6	U	U		10	0.6	10	0.6	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	J	0.8	J	10	0.6	10	0.6	ug/l	Result < QL.
	5WC22	1	J	1	J	10	0.6	10	0.6	ug/l	Result < QL.
	5WC23	1	J	1	J	10	0.6	10	0.6	ug/l	Result < QL.
	5WDUP	0.9	J	0.9	J	10	0.6	10	0.6	ug/l	Result < QL. Blind field dupllicate 5WC21.
2,6-Dinitrotoluene	5W5B	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.73	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
o-Nitroaniline	5W5B	0.71	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.7	U	U		10	0.7	10	0.7	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8270D											
Laboratory: ELLE, Lancaster, PA											
o-Nitroaniline	5WC21	1	J	1	J	10	0.7	10	0.7	ug/l	Result < QL.
	5WC22	2	J	2	J	10	0.7	10	0.7	ug/l	Result < QL.
	5WC23	3	J	3	J	10	0.7	10	0.7	ug/l	Result < QL.
	5WDUP	2	J	2	J	10	0.7	10	0.7	ug/l	Result < QL. Blind field dupllicate 5WC21.
p-Nitroaniline	5W5B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	2	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above low level verification QL of 2 ug/l.
	5WDUP	1.3	U	U		20	1.3	20	1.3	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
Nitrobenzene	5W5B	0.81	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.83	U	U		10	0.8	10	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	1	J	1	J	10	0.8	10	0.8	ug/l	Result < QL.
	5WC23	1	J	1	J	10	0.8	10	0.8	ug/l	Result < QL.
	5WDUP	1	J	1	J	10	0.8	10	0.8	ug/l	Result < QL. Blind field dupllicate 5WC21.

Definitions:

QL Denotes quantitation limit**.**
DL Denotes detection limit
Q Denotes data qualifier.
U Denotes analyte not detected at or above Detection Limit (DL) or Quantitation Limit (QL).
UA Denotes analyte not detected at or above adjusted sample DL or QL.
J Denotes analyte reported at or above the DL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above DL and QL and DL and QL are estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted DL and QL and adjusted DL and QL are estimated.
R Denotes result rejected.
Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the DL or QL.

SW-846 METHODS 6020A AND 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive data review of the analytical results for the April 9-10, 2018 Corrective Action groundwater monitoring event for Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia.

Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23, and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the inorganic data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) were analyzed for the sixteen inorganic constituents listed in Appendix K of the facility's permit by SW-846 Method 6020A and SW-846 Method 7470A. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for cobalt only by SW-846 Method 6020A.

Inductively coupled plasma atomic emission spectroscopy/mass spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA) were the techniques used for the metal analyses. ICP-MS Method 6020A was used to analyze for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc. CVAA Method 7470A was used to analyze for mercury. Target analytes were analyzed for total (T) concentrations.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 6020A and 7470A analyses. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results. ELLE is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the above analytes, methods and matrix.

The evaluation of ELLE's compliance with the method and validation of results presented here are based upon a review of quality assurance/quality control (QA/QC) information including chain-of-custody, case narrative, holding time, preservation procedures, instrument calibration, tuning, blank (method, calibration and other blanks), interference check sample, matrix spike/matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution data. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel, except where noted below. Applicable holding time and preservation criteria were met.

Method 6020A (ICP-MS)

The revised certificate of analysis was received on June 11, 2018. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL). The certificate of analysis was revised to reflect the permit required QLs and MDLs.

QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration, calibration verification and tuning requirements were met. QL check standards, blank, interference check samples (ICSAB), MS/MSD, LCS, internal standard data, and serial dilution sample results were within control limits, where applicable. Field duplicate/sample results exhibited acceptable precision, where applicable. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. Deviations from QA/QC criteria that were noted during the data review are summarized below.

Zinc was reported below the QL in the method blank. Beryllium was reported below the QL in the initial and continuing calibration blanks. Detected results for zinc and beryllium were considered influenced by the observed laboratory blank contamination and qualified accordingly. Detected results for zinc and beryllium below the QL were qualified as "UN." Detected results for zinc greater than the QL, but less than five times the blank concentration, were qualified as "UA." For those samples qualified as "UA", the QL was adjusted to the sample concentration (see data validation report). The remaining blank criteria were met.

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit specified detection limit (DL). Target analytes detected at or above the DL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

Results for samples unaffected by the data validation process and reported as not detected at or above the DL were validated and qualified "U" or as described above. Reported detected values less than the QL should be considered estimated concentrations and were validated and qualified "J" or as describe above. No results were rejected based on the data validation criteria.

Method 7470A (CVAA)

The revised certificate of analysis was received on June 11, 2018. The certificate of analysis appeared complete in its presentation and the final data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the reported permit QL or DL for mercury. The certificate of analysis were revised to reflect the permit required QL and MDL for mercury.

QC history documentation was provided. Applicable preservation and technical holding time criteria were met. Instrument calibration and calibration verification criteria were met. QL standard, blank, MS/MSD and LCS results recovered within control limits. Field duplicate/sample results exhibited acceptable precision, where applicable. Calculation checks were performed on ten percent of the data set. A review of transcriptions from instrument data to sample summary sheets was performed. No deviations from QA/QC criteria were noted during data review.

For this Corrective Action groundwater monitoring event, sample results were reported to at or above the permit detection limit. Mercury detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For this Corrective Action groundwater monitoring event, mercury results for the samples unaffected by the data validation process and not detected at or above the detection limit and/or QL were validated and reported as "U." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION FOR ICP/MS SW-846 METHOD 6020A

Eurofins Lancaster Laboratories Environmental, Lancaster, PA; SDG#: RAF05-V.2
Preparation Method: 3020A
"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Standard analyzed at the QL (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
- ☑ Instrument detection limit (IDL) less than QL
- ☑ VELAP accredited

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ IDOC for analysts B. Berlot and C. Tian submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion prior to analysis
- ☑ Digestion method: 3020A
- ☑ Samples and standards matrix matched or internal standards used

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO_3)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) </=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration </=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ 1 calibration blank and at least 1 standard,
- ☑ Linear curve fit with correlation coefficient r>0.998
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration
- ☑ ICV concentration near mid-point of calibration curve, 90-110% recovery
- ☑ Low level ICV (LLICV) – prior to analysis, at QL concentration, 70-130% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Daily following ICV
- ☑ Interference free

J. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☑ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☑ CCV recovery within 90-110%, mid-point of curve concentration
- ☑ Low level CCV (LLCCV), concentration at QL, prior to analysis, after every 10 samples, end of analysis (70-130% R)

K. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Immediately after the CCV, 10 sample frequency
- ☑ Interference free

L. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- N/A Trip Blank (check only if analyzed)
- ☑ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☑ Interference free

M. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☑ At beginning of analytical run
- ☑ Recovery: 80-120%

N. MATRIX SPIKE DUPLICATE (MSD) OR SAMPLE DUPLICATE CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ RPD ≤ 20 between MS and MSD results or sample and duplicate results
- ☑ MSD analyte recovery 75-125%

O. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☑ All analytes, one MS per digestion batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ Recovery: 75-125%
- ☑ Post digestion spike if MS/MSD recoveries low
- ☑ Recovery of post digestion spike analytes within 80-120%

P. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ LCS for all target analytes, one LCS per 20 sample batch
- ☑ LCS concentration at approximately mid-point of analytical curve
- ☑ Recovery within 80-120% for all analytes

Q. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☑ IS added to each sample and QC sample
- ☑ % Relative intensity (RI) within 60-125%

R. SERIAL DILUTION TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ Similar matrix, if concentration is 10X QL, then % Difference < 10%

S. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☑ Sample results reported within instrument calibration range
- ☑ Sample results reported to the project detection limit
- ☑ Calculation checks on 10% of the data set
- ☑ Sample/Field duplicate RPD ≤ 20, where applicable

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

INORGANIC DATA EVALUATION FOR MERCURY BY COLD VAPOR AA METHOD 7470A

Eurofins Lancaster Laboratories Environmental, Lancaster, PA; SDG#: RAF05-V.2
"☑" denotes items were reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific quantitation limit for mercury
- ☑ Specific detection limit for mercury, where applicable
- ☑ Electronic data file reviewed
- ☑ QC standard analyzed at or less than the QL (70-130%Recovery)
- ☑ IDOC for analyst D. Valentin submitted previously
- ☑ VELAP accredited

B. TECHNICAL HOLDING TIMES / PRESERVATION REQUIREMENTS:
- ☑ 28 days holding time
- ☑ Adjust pH <2 w/ HNO_3

C. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 5 standards
- ☑ Instrument calibrated for every analytical sequence for every method
- ☑ Linear curve fit with correlation coefficient r>0.995

D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:
- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120% range

E. BLANK CRITERIA:
- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

F. DUPLICATE/MATRIX SPIKE DUPLICATE (MSD) CRITERIA:
- ☑ Target analyte: mercury
- ☑ One sample duplicate or matrix spike duplicate per batch of 20 samples
- ☑ RPD ≤ 20 for spike/sample values greater than 5 times QL
- ☑ RPD ≤ 20 between MS and MSD results

G. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ Mercury, MS spiked prior to digestion
- ☑ Recovery within 75-125%

H. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:
- ☑ Recovery within 80-120%
- ☑ LCS for Mercury, one LCS per 20 sample batch

I. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument calibration range
- ☑ Results reported to detection limit
- ☑ Calculation checks on 10% of the data set
- ☑ Sample/Field duplicate RPD ≤ 20, where applicable

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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SW-846 METHOD 8260C VOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a manual comprehensive review of the analytical results for the April 9-10, 2018 semiannual groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 5W8B, 5W5B, 5W7B, 5WC21, 5WC22, 5WC23 and 5W12A. Groundwater sample 5WDUP was submitted to the laboratory as a blind sample duplicate for 5WC21. The following information and attached table summarize the Method 8260C data validation results. Validation of other required methods is presented on separate reports.

For this Corrective Action annual groundwater monitoring event, samples 5W5B, 5W7B, 5WC21, 5WC22 and 5WC23 (downgradient point of compliance (POC) wells) and a trip blank for each day of sample collection were analyzed for five Appendix J and nine Appendix K volatile organic target analytes, as listed in the facility's permit, by USEPA SW-846 Method 8260C. Samples 5W8B (upgradient groundwater monitoring well) and 5W12A (plume monitoring well) were analyzed for the five Appendix J volatile organic target analytes by USEPA SW-846 Method 8260C.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant documentation to validate and verify the results (SDG#: RAF04).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: quality control (QC) deliverables package, QC history documentation, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification, blank, surrogate spike, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and/or target analyte identification and quantitation results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Applicable holding time and preservation criteria were met for the samples.

The original certificate of analysis was received on May 10, 2018. The original certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificate of analysis demonstrated the ability of the laboratory to achieve the permit required quantitation limit (QL) for each target analyte, except where noted below.

QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Sample holding time, preservation, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS, and internal standards criteria were met, except where noted below. No deviations from specific QA/QC criteria were identified during the data review process. Field duplicate/sample results exhibited acceptable precision, where applicable. Sample results were verified and no transcription errors were observed.

A 25 ml sample purge volume was used for the analysis of the target analytes.

Results were reported by the laboratory to at or above the laboratory method detection limit (MDL) for this Corrective Action monitoring event. The laboratory MDL was at or below the permit specified detection limit (DL), or slightly above, due to rounding.

Results for samples unaffected by the data validation process and reported as not detected at or above the MDL were validated and qualified "U." Except where noted above, reported values less than the quantitation limit (QL) should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANIC DATA VALIDATION

Comments: *Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 25 ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1.	Was the case narrative present/signed by a lab representative?	☑ YES ☐ NO
2.	Was the Chain of Custody present/signed by a lab representative?	☑ YES ☐ NO
3.	Were the sample results included for the sample locations?	☑ YES ☐ NO
4.	Did the laboratory report the required target analytes?	☑ YES ☐ NO
5.	Were the analyte QLs reported on reports in agreement with the instrument specific MDL study and project required QL?	☑ YES ☐ NO
6.	Were the sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)?	☑ YES ☐ NO

Comments: QC deliverables package requirements were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1.	Were instrument specific detection limits provided for analytes?	☑ YES ☐ NO
2.	Were the instrument specific QLs for target analytes provided?	☑ YES ☐ NO
3.	Was calibration range specified for the target analytes?	☑ YES ☐ NO

Comments: QC history documentation was provided and met criteria. The laboratory analyzed a MDL check sample at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1.	Was the 14-day sample collection to analysis holding time met?	☑ YES ☐ NO
2.	Were the samples received at ≤6°C, zero headspace?	☑ YES ☐ NO
3.	Were the sample pHs adjusted to < 2 with HCl?	☑ YES ☐ NO
4.	Were sample pHs adjusted to 4-5 with HCl? (Acrolein)	☑ NA ☐ YES ☐ NO
5.	Were samples analyzed unpreserved (2-Chloroethyl vinyl)	☑ NA ☐ YES ☐ NO

Comments: Technical holding time and sample preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1.	Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period during which standards or samples were analyzed?	☑ YES ☐ NO
2.	Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)?	☑ YES ☐ NO
3.	Were the ion abundance criteria met?	☑ YES ☐ NO

4. Were calibration, blank, and sample analyses performed within 12 hours of tuning? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria*:*

1. Did the internal standard (IS) which was selected for target analyte RF calculation have a retention time close to the IS? ☑ YES ☐ NO
2. Were the target analytes included in the ICAL? ☑ YES ☐ NO
3. Were any calibration levels removed from the curve that would negatively influence the data integrity? ☐ YES ☑ NO
4. Did the ICALs consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL? ☑ YES ☐ NO
6. Was the calibration curve developed using the same purge volume used for sample analysis? ☑ YES ☐ NO
7. Were 8260C minimum Relative Response Factor (RRF) criteria met? ☑ YES ☐ NO
   Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs
8. Was each target analyte %RSD ≤ 20%? ☑ YES ☐ NO
9. Was the correlation coefficient >0.99 for target analytes with ≥20 % RSD? (*System recalibrated if >10% analytes fail above condition)* ☑ NA ☐ YES ☐ NO
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION (CV) CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
   Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs ☑ YES ☐ NO
3. Did the target analytes and system monitoring analytes

(surrogates) have the % D within ± 20%? ☑ YES ☐ NO
If "NO", list analytes that exceed these criteria: *None*

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within ± 20%? ☑ YES ☐ NO

Comments: The CV standard criteria were met.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12-hour period beginning with the injection of BFB? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☑ YES ☐ NO
4. Was the level of blank contamination less than 5% of the regulatory limit associated with an analyte or less than 5% of the sample result for the same analyte, whichever is greater? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*
6. Did any result exceed the calibration range? ☐ YES ☑ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☑ NA ☐ YES ☐ NO

Comments: A trip blank was submitted and analyzed for each day of sample collection. Blank criteria were met.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☑ YES ☐ NO
   - dibromofluoromethane (80-120%)
   - 4-bromofluorobenzene (80-120%)
   - toluene-d_8 (80-120%)
   - 1,2-dichloroethane-d_4 (80-120%)
2. Were recoveries within specified ranges? ☑ YES ☐ NO
   If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted
3. Were samples with surrogates outside the QC window reanalyzed as required? ☑ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*% RPD Water*
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13

chlorobenzene	75-130	13

1. Was a MS/MSD analyzed per sample batch or every 20 samples? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List the MS % recovery range: 75-125%; 70-130% poor purge analytes; RPD ≤20
5. Were any analytes qualified as estimated? ☐ YES ☑ NO
    - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS acceptance criteria: 80-120% (most analytes).
4. List the LCS analytes which were not within the specified ranges: *None*
5. Were any analytes flagged as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☑ YES ☐ NO
   t-butyl alcohol-d_{10}, fluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
2. Were IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were IS RTs within ± 30 seconds of the last CV? ☑ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☑ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Did characteristic ions maximize in the same scan or within one scan of each other? ☑ YES ☐ NO
   * Were the characteristic ions present in the standard spectra and sample spectra for analytes detected above the QL? ☑ YES ☐ NO
   * Were the relative intensities of the ions between the standard and sample spectra within ± 30%? ☑ YES ☐ NO
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).

1. List the detected analytes whose %RSD was > 20%: *None*
   - Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☐ YES ☑ NO
   If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the instrument data/quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
4. Were sample/ field duplicate RPDs <20% where applicable? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met. Calculation checks were performed on ten percent of the data set and no errors were noted.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was taken. Library searches were not requested. The initial demonstration of capability (IDOC) for analyst M. Krause was submitted previously.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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SW-846 METHOD 8270D SEMIVOLATILE ORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 9-10, 2018 Corrective Action groundwater monitoring event at Hazardous Waste Management Unit 5 (HWMU 5) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from point of compliance (POC) monitoring wells 5W5B, 5W7B, 5WC21, 5WC22, and 5WC23. Sample 5WDUP was submitted to the laboratory as a blind field sample duplicate for 5WC21.

Samples were analyzed for the seven Appendix K semivolatile target analytes listed in the facility's permit by USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Other wells were listed on the chain of custody (COC); however, USEPA SW-846 Method 8270D analysis was not required for those sample locations.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 8270D analyses. ELLE is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, method and matrix as reported on the certificate of analysis. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in final certificates of analysis, which included sample analytical results, as well as relevant documentation to validate and verify the results (SDG# RAF04).

The evaluation of ELLE's compliance with Method 8270D and validation of the results was based on review of the following items: quality control (QC) deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), and internal standard results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculations checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel, except as noted.

The original certificate of analysis was received on May 10, 2018. The certificates of analysis appeared complete and data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit required quantitation limit (QL).

QC history documentation (instrument specific initial demonstration of proficiency and method detection limit data) were provided. Applicable preservation and technical holding time criteria were met. Instrument performance check (tuning) criteria, initial calibration, calibration verification, blank, MS/MSD, LCS, surrogate recoveries, and internal standard requirements were met, except where noted below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. No deviations from specific QA/QC criteria were identified during the data review process. Field duplicate/sample results exhibited acceptable precision, where applicable.

A footnote presented in Appendix K, Groundwater Corrective Action Annual Monitoring List, of Permit Module VI – *Groundwater Corrective Action & Monitoring Program for Unit 5* indicates that verification is required for constituents detected at a concentration less than the Limit of Quantitation/Quantitation Limit (LOQ)/QL if their associated groundwater protection standard (GPS) is:

(1) based on a background value equal to the QL/LOQ/PQL
(2) greater than the applicable risk-based concentration (i.e., ACL or RBC/regional screening level).

During Second Quarter 2018, the following constituent listed in the table below with a GPS based on a background value equal to the QL/LOQ/PQL was detected at a concentration less than the respective QL. In order to confirm the observed detection below the QL, an additional aliquot, collected from sample location 5WC23 during the original sampling event and submitted to TestAmerica North Canton, North Canton, Ohio, was analyzed. The result for p-nitroaniline at 5WC23, received May 23, 2018 (SDG 240-93909-1), was not detected at or above the laboratory DL. The additional low-level sample analysis refuted the initial detection of p-nitroaniline and no further action is warranted.

Sample Location	Constituent Detected Below the QL	GPS (µg/l)	Analytical Method (SW-846)	Confirming Laboratory QL / DL (µg/l)	Permit ACL (µg/l)
5WC23	p-Nitroaniline	20	8270D	2 / 0.24	3.3

The detected results less than the QL for nitrobenzene were unable to be confirmed by TestAmerica as the ACL/RSL for nitrobenzene is unattainable by the laboratory's QL/DL.

Except where noted above, results remain as reported by the laboratory. Sample results were reported by the laboratory to at or above the method detection limit (MDL). These current laboratory established MDLs slightly differ from the MDL listed in Appendix K of the permit.

Target analytes detected at or above the MDL or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

Sample results unaffected by the data validation process and reported as not detected at or above the MDL/detection limit (DL) were validated and qualified "U." Reported values less than the QL should be considered estimated concentrations and were validated and qualified "J." No results were rejected based on the data validation criteria.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: *Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using liquid/liquid extraction technique (SW-846 Method 3510C). The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1. Was the case narrative present/signed by a lab representative? ☑ YES ☐ NO
2. Was the Chain of Custody present/signed by a lab representative? ☑ YES ☐ NO
3. Were the sample results included for the sample locations? ☑ YES ☐ NO
4. Did the data correspond to the project specific analyte list? ☑ YES ☐ NO
5. Were the analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study? ☑ YES ☐ NO

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1. Were instrument specific detection limits provided for analytes? ☑ YES ☐ NO
2. Were the instrument specific QLs for target analytes provided? ☑ YES ☐ NO
3. Was calibration range specified for the target analytes? ☑ YES ☐ NO

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1. Was the 7-day sample collection to extraction holding time met? ☑ YES ☐ NO
2. Was the 40-day extraction to analysis holding time met? ☑ YES ☐ NO
3. Were the samples received at ≤6^{o}C? ☑ YES ☐ NO

Comments: Sample holding times and preservation criteria were met.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

1. Was performance check solution analysis performed at the beginning of each 12-hour period of standard and/or sample analysis? ☑ YES ☐ NO
2. Was there documentation of the injection of 50 ng of DFTPP? ☑ YES ☐ NO
3. Were the ion abundance criteria met? ☑ YES ☐ NO
4. Was the injection port inertness verified by analysis of 4,4′-DDT? ☑ YES ☐ NO
   - If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
   - Was the injection port inertness check acceptable? ☑ YES ☐ NO
5. Was column performance checked through the analysis of peak tailing of pentachlorophenol and benzidine? ☑ YES ☐ NO

- If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
- Was column performance check acceptable? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☑ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D? ☑ YES ☐ NO
3. Were the target analytes included in the ICAL? ☑ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☑ YES ☐ NO
6. Were calibration levels removed from the curve that would negatively impact the data integrity? ☐ YES ☑ NO
7. Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☑ YES ☐ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☑ NA ☐ YES ☐ NO
   **System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ NA ☐ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ NA ☐ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or run independently on another 12-hour analysis period. ☑ YES ☐ NO

2. Was each target analyte % difference/drift ≤ 20%? ☑ YES ☐ NO
   (Corrective action if >20%)
3. Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*

Method Validation Performance Criteria:

1. Did target analytes and system monitoring
   analytes (surrogates) have % Ds within ± 20.0%? ☑ YES ☐ NO
   If "NO", list analytes that exceed this criterion:

Comments: Calibration verification criteria were met.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system
   used for sample analysis? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☑ YES ☐ NO
4. Was the level of blank contamination > 5% of the MCL? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? See comment
   - phenol - d_6 (10%-94%)
   - 2-fluorophenol (21%-100%)
   - 2,4,6-tribromophenol (10%-123%)
   - nitrobenzene – d_5 (30%-111%)
   - 2-fluorobiphenyl (39%-105%)
   - p-terphenyl - d_{14} (27%-116%)
2. Were recoveries within the specified ranges? ☑ YES ☐ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☑ NA ☐ YES ☐ NO
   If yes, was a reextraction and reanalysis performed to confirm that the non-compliance was due to sample matrix effects rather than laboratory deficiencies?

Comments: The laboratory only used the base/neutral surrogates as allowed by the method. The surrogate criteria were met.

I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*% RPD Water*
Phenol	12-110	42
2-Chlorophenol	27-123	40

N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List the MS % recovery range: *See certificate of analysis*
5. Were any analytes qualified as estimated? ☐ YES ☑ NO
    - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met. Field duplicate/sample results exhibited acceptable precision, where applicable.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain required target analytes? ☑ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range: *See semivolatile certificate of analysis.*
4. Were any analytes qualified as estimated due to LCS criteria? ☐ YES ☑ NO

Comments: LCS criteria were met.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards used? ☑ YES ☐ NO
    - 1,4-Dichlorobenzene-d_4
    - Naphthalene-d_8
    - Acenapththene-d_{10}
    - Phenanthrene-d_{10}
    - Pyrene-d_{10}
    - Perylene-d_{12}
2. Were the IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were IS RTs within ± 30 seconds of last CV? ☑ YES ☐ NO

Comments: Internal standard criteria were met or no data qualification was required.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard

spectra to see that the following criteria were met: ☑ YES ☐ NO

* Did characteristic ions maximize in the same scan or within one scan of each other?
* Were characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
* Were the relative ion intensities between the standard and sample spectra within ± 30%?

3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments*:* Target analyte identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).

1. List the analytes detected above the QL whose %RSD was >20%: *None*
   a. Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
   b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☑ NO
   -If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
4. Were sample/ field duplicate RPDs <20% where applicable? ☐ YES ☑ NO

Comments: Target analyte quantitation criteria were met except where noted above. Calculations checks were performed on ten percent of the data set, where applicable.

N. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: No corrective action was taken. Library searches were not requested with this data set. The initial demonstration of capability (IDOC) for analysts A. Transue was submitted previously.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

LIMITATIONS:

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Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

This Report has been prepared by:

_____KO for AT_____ _____7/16/2018_____
Ashley Thacker, Staff Environmental Scientist Date:
2206 South Main Street, Blacksburg, Virginia 24060
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This Report has been subjected to technical and quality review by:

_____KO_____ _____7/16/2018_____
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Comprehensive Data Validation Report
Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Barium	5WC21	13		13		10	No action taken.
	5WDUP	12.7		12.7		10	No action taken. Blind field dupllicate 5WC21.
Cobalt	5WC21	41.9		41.9		5	No action taken.
	5WDUP	41.3		41.3		5	No action taken. Blind field dupllicate 5WC21.
Nickel	5WC21	21.9		21.9		10	No action taken.
	5WDUP	21.8		21.8		10	No action taken. Blind field dupllicate 5WC21.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroform	5WC21	2.6		2.6		1	No action taken.
	5WDUP	2.6		2.6		1	No action taken. Blind field dupllicate 5WC21.
Trichloroethene	5WC21	2.7		2.7		1	No action taken.
	5WDUP	2.7		2.7		1	No action taken. Blind field dupllicate 5WC21.

Definitions:
Data Validation Qualifiers:
QL Denotes permit quantitation limit. **Q** Denotes data qualifier.
J Denotes analyte reported at or above quantitation limit and associated result is estimated.

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater and Water Samples
Collected on 04/09/18-04/10/18

SDG# RAF04

GROUP	SAMPLE NUMBERS
1930455	9553119-9553130

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **05/08/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF04
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9553119	5W8B	04/09/2018 09:35	04/11/2018 09:20
9553120	5W5B	04/09/2018 12:05	04/11/2018 09:20
9553121	5W7B	04/09/2018 11:10	04/11/2018 09:20
9553122	5W7B Matrix Spike	04/09/2018 11:10	04/11/2018 09:20
9553123	5W7B Matrix Spike Dup	04/09/2018 11:10	04/11/2018 09:20
9553124	5WC21	04/10/2018 10:15	04/11/2018 09:20
9553125	5WDUP	04/10/2018 10:20	04/11/2018 09:20
9553126	5WC22	04/09/2018 12:55	04/11/2018 09:20
9553127	5WC23	04/10/2018 09:15	04/11/2018 09:20
9553128	5W12A	04/09/2018 10:10	04/11/2018 09:20
9553129	Trip Blank 1	04/09/2018 00:00	04/11/2018 09:20
9553130	Trip Blank 2	04/09/2018 00:00	04/11/2018 09:20

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Sample pH Log

SDG: RAF04

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
9553119	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:33AM	9052
9553120	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:31AM	9052
9553120	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:06:06PM	12665
9553120	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:07:24PM	12665
9553121	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:31AM	9052
9553121	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:06:53PM	12665
9553121	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:06:39PM	12665
9553122	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553122	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:05:52PM	12665
9553122	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:07:12PM	12665
9553123	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553123	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:07:36PM	12665
9553123	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:06:16PM	12665
9553124	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553124	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:05:41PM	12665
9553124	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:08:14PM	12665
9553125	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553125	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:08:31PM	12665
9553125	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:06:27PM	12665
9553126	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553126	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:07:50PM	12665
9553126	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:08:00PM	12665
9553127	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553127	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:08:23PM	12665
9553127	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/11/2018 7:05:28PM	12665
9553128	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553129	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052
9553130	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/20/2018 9:18:32AM	9052

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14241 SVOAs 8270D MINI

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: April 22, 2018 14:00

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1930455
SDG: RAF04
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	04/09/2018 09:35	9553119
5W5B Grab Groundwater	04/09/2018 12:05	9553120
5W7B Grab Groundwater	04/09/2018 11:10	9553121
5W7B Matrix Spike Grab Groundwater	04/09/2018 11:10	9553122
5W7B Matrix Spike Dup Grab Groundwater	04/09/2018 11:10	9553123
5WC21 Grab Groundwater	04/10/2018 10:15	9553124
5WDUP Grab Groundwater	04/10/2018 10:20	9553125
5WC22 Grab Groundwater	04/09/2018 12:55	9553126
5WC23 Grab Groundwater	04/10/2018 09:15	9553127
5W12A Grab Groundwater	04/09/2018 10:10	9553128
Trip Blank 1 Water	04/09/2018	9553129
Trip Blank 2 Water	04/09/2018	9553130

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU-5
ELLE Group #: 1930455

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: **5W8B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 09:35
SDG#: RAF04-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553119
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 03:54	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 03:54	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W5B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:05
SDG#: RAF04-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553120
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	3.2	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
14241	2-Nitroaniline	88-74-4	N.D.	0.71	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 04:16	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 04:16	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 00:23	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF04-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553121
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	4.5	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.70	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
14241	2-Nitroaniline	88-74-4	N.D.	0.70	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	N.D.	0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 02:47	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 02:47	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 00:52	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF04-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553122
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	37		3.0	10	1
11996	2-Butanone	78-93-3	41		1.0	10	1
11996	Chloroform	67-66-3	9.6		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.1		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	4.7		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.3		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.2		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.1		0.8	1.0	1
11996	Ethyl ether	60-29-7	5.4	J	0.4	12	1
11996	Methylene Chloride	75-09-2	4.4		0.2	1.0	1
11996	Toluene	108-88-3	5.1		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.2		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	4.7		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	44		0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	50		0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	53		0.70	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	50		1.5	6.0	1
14241	2-Nitroaniline	88-74-4	52		0.70	10	1
14241	4-Nitroaniline	100-01-6	49		1.3	20	1
14241	Nitrobenzene	98-95-3	50		0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 03:09	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 03:09	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 01:20	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF04-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553123
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	33		3.0	10	1
11996	2-Butanone	78-93-3	37		1.0	10	1
11996	Chloroform	67-66-3	9.7		0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.3		0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	4.8		0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.5		0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.3		0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.3		0.8	1.0	1
11996	Ethyl ether	60-29-7	5.4	J	0.4	12	1
11996	Methylene Chloride	75-09-2	4.5		0.2	1.0	1
11996	Toluene	108-88-3	5.1		0.1	1.0	1
11996	Trichloroethene	79-01-6	5.2		0.2	1.0	1
11996	Vinyl Chloride	75-01-4	4.9		0.1	1.0	1
11996	Xylene (Total)	1330-20-7	16		0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	45		0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	53		0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	55		0.70	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	53		1.5	6.0	1
14241	2-Nitroaniline	88-74-4	54		0.70	10	1
14241	4-Nitroaniline	100-01-6	52		1.3	20	1
14241	Nitrobenzene	98-95-3	52		0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 03:32	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 03:32	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 01:48	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC21 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:15
SDG#: RAF04-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553124
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	2.6	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	1.5 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	2.7	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.52	10	1
14241	2,4-Dinitrotoluene	121-14-2	0.8 J	0.62	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.73	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.6	6.2	1
14241	2-Nitroaniline	88-74-4	1 J	0.73	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	21	1
14241	Nitrobenzene	98-95-3	N.D.	0.83	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 04:42	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 04:42	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 02:16	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WDUP Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:20
SDG#: RAF04-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553125
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	2.6	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	1.5 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	2.7	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	0.9 J	0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.70	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
14241	2-Nitroaniline	88-74-4	2 J	0.70	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	1 J	0.80	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 05:04	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 05:04	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 02:44	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC22 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:55
SDG#: RAF04-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553126
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.4	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	5.7 J	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	3.1	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	1 J	0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
14241	2-Nitroaniline	88-74-4	2 J	0.71	10	1
14241	4-Nitroaniline	100-01-6	N.D.	1.3	20	1
14241	Nitrobenzene	98-95-3	1 J	0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 05:26	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 05:26	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 03:12	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC23 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 09:15
SDG#: RAF04-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553127
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	1.3	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	13	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	4.5	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	N.D.	0.50	10	1
14241	2,4-Dinitrotoluene	121-14-2	1 J	0.60	10	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.71	10	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.5	6.0	1
14241	2-Nitroaniline	88-74-4	3 J	0.71	10	1
14241	4-Nitroaniline	100-01-6	1 J	1.3	20	1
14241	Nitrobenzene	98-95-3	1 J	0.81	10	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 05:49	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 05:49	Matthew S Krause	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAB026	04/19/2018 03:40	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	2	18106WAB026	04/16/2018 16:30	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W12A Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 10:10
SDG#: RAF04-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553128
ELLE Group #: 1930455
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 06:11	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 06:11	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018
SDG#: RAF04-09TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553129
ELLE Group #: 1930455
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	N.D.	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 02:02	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 02:02	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 2 Water**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018
SDG#: RAF04-10TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553130
ELLE Group #: 1930455
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.0	10	1
11996	2-Butanone	78-93-3	N.D.	1.0	10	1
11996	Chloroform	67-66-3	N.D.	0.1	1.0	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.3	1.0	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.1	1.0	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Ethyl ether	60-29-7	N.D.	0.4	12	1
11996	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
11996	Toluene	108-88-3	N.D.	0.1	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1
11996	Xylene (Total)	1330-20-7	N.D.	0.2	3.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" and "K" lists	SW-846 8260C 25mL purge	1	G181092AA	04/20/2018 02:24	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181092AA	04/20/2018 02:24	Matthew S Krause	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930455
Reported: 04/22/2018 14:00

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: G181092AA	Sample number(s): 9553119-9553130		
Acetone	N.D.	3.0	10
2-Butanone	N.D.	1.0	10
Chloroform	N.D.	0.1	1.0
Dichlorodifluoromethane	N.D.	0.3	1.0
1,2-Dichloroethane	N.D.	0.1	1.0
1,1-Dichloroethene	N.D.	0.4	1.0
cis-1,2-Dichloroethene	N.D.	0.1	1.0
trans-1,2-Dichloroethene	N.D.	0.8	1.0
Ethyl ether	N.D.	0.4	12
Methylene Chloride	N.D.	0.2	1.0
Toluene	N.D.	0.1	1.0
Trichloroethene	N.D.	0.2	1.0
Vinyl Chloride	N.D.	0.1	1.0
Xylene (Total)	N.D.	0.2	3.0
Batch number: 18106WAB026	Sample number(s): 9553120-9553127		
Diethylphthalate	N.D.	2.0	5.0
2,4-Dinitrotoluene	N.D.	1.0	5.0
2,6-Dinitrotoluene	N.D.	1.0	5.0
bis(2-Ethylhexyl)phthalate	N.D.	2.0	5.0
2-Nitroaniline	N.D.	1.0	5.0
4-Nitroaniline	N.D.	1.0	5.0
Nitrobenzene	N.D.	1.0	5.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G181092AA	Sample number(s): 9553119-9553130								
Acetone	37.5	36.34			97		68-141		
2-Butanone	37.5	37.96			101		59-141		
Chloroform	5.00	4.83			97		80-120		
Dichlorodifluoromethane	5.00	3.81			76		23-128		
1,2-Dichloroethane	5.00	4.65			93		68-137		
1,1-Dichloroethene	5.00	4.89			98		80-124		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930455
Reported: 04/22/2018 14:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
cis-1,2-Dichloroethene	5.00	4.92			98		80-120		
trans-1,2-Dichloroethene	5.00	4.84			97		80-120		
Ethyl ether	5.00	5.11			102		62-120		
Methylene Chloride	5.00	4.28			86		80-120		
Toluene	5.00	4.78			96		80-120		
Trichloroethene	5.00	4.67			93		80-120		
Vinyl Chloride	5.00	4.31			86		56-120		
Xylene (Total)	15	14.23			95		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18106WAB026	Sample number(s): 9553120-9553127								
Diethylphthalate	50	43.96			88		42-124		
2,4-Dinitrotoluene	50	52.82			106		56-128		
2,6-Dinitrotoluene	50	55.01			110		57-131		
bis(2-Ethylhexyl)phthalate	50	53.27			107		52-132		
2-Nitroaniline	50	53.3			107		54-133		
4-Nitroaniline	50	49.65			99		46-114		
Nitrobenzene	50	49.39			99		43-128		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: G181092AA	Sample number(s): 9553119-9553130 UNSPK: 9553121									
Acetone	N.D.	37.5	37.34	37.5	33.35	100	89	68-141	11	30
2-Butanone	N.D.	37.5	40.6	37.5	36.58	108	98	59-141	10	30
Chloroform	4.50	5.00	9.61	5.00	9.69	102	104	80-120	1	30
Dichlorodifluoromethane	N.D.	5.00	4.15	5.00	4.31	83	86	23-128	4	30
1,2-Dichloroethane	N.D.	5.00	4.72	5.00	4.78	94	96	68-137	1	30
1,1-Dichloroethene	N.D.	5.00	5.28	5.00	5.51	106	110	80-124	4	30
cis-1,2-Dichloroethene	N.D.	5.00	5.19	5.00	5.33	104	107	80-120	3	30
trans-1,2-Dichloroethene	N.D.	5.00	5.12	5.00	5.34	102	107	80-120	4	30
Ethyl ether	N.D.	5.00	5.35	5.00	5.45	107	109	62-120	2	30
Methylene Chloride	N.D.	5.00	4.40	5.00	4.55	88	91	80-120	3	30
Toluene	N.D.	5.00	5.14	5.00	5.15	103	103	80-120	0	30
Trichloroethene	N.D.	5.00	5.15	5.00	5.20	103	104	80-120	1	30
Vinyl Chloride	N.D.	5.00	4.73	5.00	4.91	95	98	56-120	4	30
Xylene (Total)	N.D.	15	15.62	15	15.71	104	105	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930455
Reported: 04/22/2018 14:00

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18106WAB026	Sample number(s): 9553120-9553127 UNSPK: 9553121									
Diethylphthalate	N.D.	50	43.97	50.2	45.08	88	90	42-124	3	30
2,4-Dinitrotoluene	N.D.	50	49.83	50.2	53.3	100	106	56-128	7	30
2,6-Dinitrotoluene	N.D.	50	53.37	50.2	55.38	107	110	57-131	4	30
bis(2-Ethylhexyl)phthalate	N.D.	50	49.79	50.2	52.79	100	105	52-132	6	30
2-Nitroaniline	N.D.	50	52.24	50.2	54.43	104	108	54-133	4	30
4-Nitroaniline	N.D.	50	49.48	50.2	51.51	99	103	46-114	4	30
Nitrobenzene	N.D.	50	50.3	50.2	52.17	101	104	43-128	4	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: RAAP Unit 5 "J" and "K" lists
Batch number: G181092AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9553119	100	97	101	100
9553120	100	98	100	99
9553121	99	99	100	99
9553122	98	98	100	101
9553123	101	100	100	101
9553124	99	99	100	99
9553125	99	98	100	99
9553126	99	99	100	99
9553127	99	100	101	100
9553128	100	99	100	99
9553129	99	100	100	99
9553130	98	97	100	100
Blank	100	100	100	100
LCS	101	101	100	100
MS	98	98	100	101
MSD	101	100	100	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SVOAs 8270D MINI
Batch number: 18106WAB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9553120	74	74	81
9553121	90	87	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930455
Reported: 04/22/2018 14:00

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SVOAs 8270D MINI
Batch number: 18106WAB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9553122	92	86	48
9553123	96	89	49
9553124	73	71	41
9553125	84	81	32
9553126	86	84	49
9553127	83	82	75
Blank	84	66	98
LCS	91	82	95
MS	92	86	48
MSD	96	89	49
Limits:	30-111	39-105	27-116

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200 | 1930455 | 9553119-30

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RFAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier	**Location:**	HWMU5
Address:	0	**Address:**	2206 South Main Street	**Event:**	2Qtr 2018 Corrective Action Annual Monitoring Event
	0		Blacksburg, Virginia 24060	**DAA JN:**	B03204-18A
Phone:	0	**Phone:**	(540) 552-0444	**Lab JN:**	
Fax:	0	**Fax:**	(540) 552-0291		
Fax:	0				

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? YES
UPS!
Carrier: ~~12-237-301-01-9375-9700~~ 1Z
Tracking Number: ~~12-754-02X-Y0-5756~~ 2878
Invoice 12-754-02X-Y0-5561-0480
Copy to Consultant: YES
Bill: CLIENT **OTHER** _____
Preserved and shipped on ice: YES

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Box 4 - Sample Type	G	G	G	G				
Box 3 - Filtered/Unfiltered	U	U	U	U				
Required pH of Sample	<2	<2	<2					
Box 2 - Preservative	A	B	B	H				
Box 5 - Sample Container Type	3-40ml V	1-500ml P	1-500ml P	2-250mL AG				

Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge Appendix J Analyte List	8260C/5030C 25 ml purge Appendix K Analyte List	(Metals-Total) 6020A(3020A)/ 7470A	Cobalt only-Total 6020A/3020A	8270D/3510C (Semivolatiles)	
5W8B	04/09	0935	GW	4	X			X		upgradient monitoring well
5W5B	04/09	1205	GW	6	X	X	X		X	
5W7B	04/09	1110	GW	18	X	X	X		X	USE FOR QC
5WC21	04/10	0915	GW	6	X	X	X		X	
5WDUP	04/10	1020	GW	6	X	X	X		X	
5WC22	04/09	1255	GW	6	X	X	X		X	
5WC23	04/10	0915	GW	6	X	X	X		X	
5W12A	04/09	1010	GW	4	X			X		plume well
Trip Blank 1	04/09	—	T	2	X	X				
Trip Blank 2	04/09	—	T	2	X	X				

GENERAL NOTES:
1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QLs attached.
5. Cobalt QL = 5ug/l ; DL = 1ug/l JW 3/30/18

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition X Yes ____ No Custody Seal Intact X Yes ____ No Temperature upon arrival 0.6-1.0 Received on Ice X Yes ____ No
Describe problems, if any:

Sampler Name (Print):	Ken Coddington	Date: 4-9-18	#1 Relinquished by (Signature):		Date: 4/10/18	#2 Relinquished by (Signature):	Date:
Sampler Signature:		Time: 0700	Company Name:	DAA	Time: 1700	Company Name:	Time:
Sampler Name (Print):	KY-TranVo	Date: 4/9/18	#1 Received by (Signature):		Date:	#2 Received by (Signature):	Date: 4/11/18
Sampler Signature:		Time: 0700	Company Name:		Time:	Company Name: ELLE	Time: 920

Sample Storage Time Requested: 30 DYS ORG/6 MTHS INORG

JW 3/30/2018 1/5

1930455

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – J Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL*
1.	Trichloroethene	79-01-6	1	0.177
2.	1,1-Dichloroethene	75-35-4	1	0.44
3.	Cis-1,2-Dichloroethene	156-59-2	1	0.1
4.	Trans-1,2-Dichloroethene	156-60-5	1	0.8
5.	Vinyl Chloride	75-01-4	1	0.1

Note: *Report current lab MDL if higher.

25 ml purge volume

1930455

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – K Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Acetone	67-64-1	10	3
2.	Chloroform (trichloromethane)	67-66-3	1	0.1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10	1
4.	1,2-dichloroethane	107-06-2	1	0.147
5.	Methylene chloride (Dichloromethane)	75-09-2	1	0.182
6.	Toluene (methyl benzene)	108-88-3	1	0.1
7.	Xylenes (total)	1330-20-7	3	0.208
8.	Diethyl ether	60-29-7	12	0.39
9.	Dichlorodifluoromethane	75-71-8	1	0.28

Note.
2Q2010 is the first event under corrective action monitoring. Analyte list and monitoring wells sampled have changed from previous event.

Final Report must list the project required QLs and MDLs listed above. Report results between the project required QL and MDL as estimated value.

Rev 07-2014 permit mod. JCF

25 ml purge volume

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-5\hwmu5 - coc rev 2010\hwmu 5 - appendix k cap target analtye list - rev 2017.doc

1930455

HWMU5 - Appendix K
Radford Army Ammunition Plant
Groundwater Corrective Action Annual Monitoring Event
DAA JN: B03204-18A

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Bis(2-ethylhexyl)phthalate	117-81-7	6	1.5
2.	Diethyl phthalate	84-66-2	10	0.5
3.	2,4-dinitrotoluene	121-14-2	10	0.6
4.	2,6-dinitrotoluene	606-20-2	10	0.7
5.	2-Nitroaniline (o-Nitroaniline)	88-74-4	10	0.7
6.	4-Nitroaniline (p-Nitroaniline)	100-01-6	20	1.3
7.	Nitrobenzene	98-95-3	10	0.8

Final Report must list the project required QLs listed above. Report results between the project required QL and MDL noted above as estimated value.

Note: # 5-7 added on Jan 2004 due To 4Q2003 detection. JCF 0104

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
Reviewed 4 Q 2006 -3/30/2018 12:44 PM
10/9/2007 JCF – 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfc
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. Checked 2015JCF

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Sample Administration Receipt Documentation Log

Doc Log ID: 213415

Group Number(s): 1930455

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/11/2018 9:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 17:26 on 04/11/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.4	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

GC/MS Volatiles

Fraction: Volatiles by GC/MS
RAAP Unit 5 "J" and "K" lists

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9553119	5W8B	X		1	
9553120	5W5B	X		1	
9553121	5W7B	X		1	Unspiked
9553122	5W7B Matrix Spike	X		1	Matrix Spike
9553123	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9553124	5WC21	X		1	
9553125	5WDUP	X		1	Field Duplicate Sample
9553126	5WC22	X		1	
9553127	5WC23	X		1	
9553128	5W12A	X		1	
9553129	Trip Blank 1	X		1	Trip Blank
9553130	Trip Blank 2	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
RAAP Unit 5 "J" and "K" lists	G181092AA	VBLKG75	04/19/2018 21:54:00
		LCSG75	04/19/2018 21:32:00
		9553120	04/20/2018 04:16:00
		9553121 UNSPK	04/20/2018 02:47:00
		9553122 MS	04/20/2018 03:09:00
		9553123 MSD	04/20/2018 03:32:00
		9553124	04/20/2018 04:42:00
		9553125	04/20/2018 05:04:00
		9553126	04/20/2018 05:26:00
		9553127	04/20/2018 05:49:00
		9553129	04/20/2018 02:02:00
		9553130	04/20/2018 02:24:00
RAAP Unit 5 "J" list	G181092AA	9553119	04/20/2018 03:54:00
		9553128	04/20/2018 06:11:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAF04
Matrix: LIQUID

Fraction: Volatiles by GC/MS

G181092AA / VBLKG75 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/19/18	N.D.	ug/l	0.3	1.0
Vinyl Chloride	04/19/18	N.D.	ug/l	0.1	1.0
Ethyl ether	04/19/18	N.D.	ug/l	0.4	12
1,1-Dichloroethene	04/19/18	N.D.	ug/l	0.4	1.0
Acetone	04/19/18	N.D.	ug/l	3.0	10
Methylene Chloride	04/19/18	N.D.	ug/l	0.2	1.0
trans-1,2-Dichloroethene	04/19/18	N.D.	ug/l	0.8	1.0
2-Butanone	04/19/18	N.D.	ug/l	1.0	10
cis-1,2-Dichloroethene	04/19/18	N.D.	ug/l	0.1	1.0
Chloroform	04/19/18	N.D.	ug/l	0.1	1.0
1,2-Dichloroethane	04/19/18	N.D.	ug/l	0.1	1.0
Trichloroethene	04/19/18	N.D.	ug/l	0.2	1.0
Toluene	04/19/18	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/19/18	N.D.	ug/l	0.2	3.0

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF04
Matrix: LIQUID

Fraction: Volatiles by GC/MS

G181092AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKG75	100	80 - 120	100	80 - 120	100	80 - 120	100	80 - 120
LCSG75	101	80 - 120	100	80 - 120	101	80 - 120	100	80 - 120
9553119	97	80 - 120	100	80 - 120	100	80 - 120	101	80 - 120
9553120	98	80 - 120	99	80 - 120	100	80 - 120	100	80 - 120
9553121 UNSPK	99	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9553122 MS	98	80 - 120	101	80 - 120	98	80 - 120	100	80 - 120
9553123 MSD	100	80 - 120	101	80 - 120	101	80 - 120	100	80 - 120
9553124	99	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9553125	98	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9553126	99	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9553127	100	80 - 120	100	80 - 120	99	80 - 120	101	80 - 120
9553128	99	80 - 120	99	80 - 120	100	80 - 120	100	80 - 120
9553129	100	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9553130	97	80 - 120	100	80 - 120	98	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9553121 MS: 9553122 MSD: 9553123 **Analyte**	Batch: **G181092AA** (Sample number(s): 9553119-9553130)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	4.15	4.31	83	86	23-128	4	30
Vinyl Chloride	5.00	N.D.	4.73	4.91	95	98	56-120	4	30
Ethyl ether	5.00	N.D.	5.35 J	5.45 J	107	109	62-120	2	30
1,1-Dichloroethene	5.00	N.D.	5.28	5.51	106	110	80-124	4	30
Acetone	37.5	N.D.	37.34	33.35	100	89	68-141	11	30
Methylene Chloride	5.00	N.D.	4.40	4.55	88	91	80-120	3	30
trans-1,2-Dichloroethene	5.00	N.D.	5.12	5.34	102	107	80-120	4	30
2-Butanone	37.5	N.D.	40.6	36.58	108	98	59-141	10	30
cis-1,2-Dichloroethene	5.00	N.D.	5.19	5.33	104	107	80-120	3	30
Chloroform	5.00	4.50	9.61	9.69	102	104	80-120	1	30
1,2-Dichloroethane	5.00	N.D.	4.72	4.78	94	96	68-137	1	30
Trichloroethene	5.00	N.D.	5.15	5.20	103	104	80-120	1	30
Toluene	5.00	N.D.	5.14	5.15	103	103	80-120	0	30
Xylene (Total)	15	N.D.	15.62	15.71	104	105	80-120	1	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF04
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSG75	Batch: **G181092AA** (Sample number(s): 9553119-9553130)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	3.81	NA	76	NA	23-128	NA	NA
Vinyl Chloride	5.00	4.31	NA	86	NA	56-120	NA	NA
Ethyl ether	5.00	5.11 J	NA	102	NA	62-120	NA	NA
1,1-Dichloroethene	5.00	4.89	NA	98	NA	80-124	NA	NA
Acetone	37.5	36.34	NA	97	NA	68-141	NA	NA
Methylene Chloride	5.00	4.28	NA	86	NA	80-120	NA	NA
trans-1,2-Dichloroethene	5.00	4.84	NA	97	NA	80-120	NA	NA
2-Butanone	37.5	37.96	NA	101	NA	59-141	NA	NA
cis-1,2-Dichloroethene	5.00	4.92	NA	98	NA	80-120	NA	NA
Chloroform	5.00	4.83	NA	97	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	4.65	NA	93	NA	68-137	NA	NA
Trichloroethene	5.00	4.67	NA	93	NA	80-120	NA	NA
Toluene	5.00	4.78	NA	96	NA	80-120	NA	NA
Xylene (Total)	15	14.23	NA	95	NA	80-120	NA	NA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ga19t01.d BFB Injection Date: 04/19/18

Instrument ID: HP16334 BFB Injection Time: 11:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.74
75	30.0 - 60.0% of mass 95	52.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.98
173	Less than 2.0% of mass 174	0.41 (0.47)1
174	Greater than 50.0% of mass 95	86.84
175	5.0 - 9.0% of mass 174	6.17 (7.11)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.87 (96.58)1
177	5.0 - 9.0% of mass 176	5.61 (6.69)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	ga19i01.d	04/19/18	12:22
02	VSTD10	ga19i02.d	04/19/18	12:44
03	VSTD5	ga19i03.d	04/19/18	13:06
04	VSTD2	ga19i04.d	04/19/18	13:28
05	VSTD1	ga19i05.d	04/19/18	13:51
06	VSTD.5	ga19i06.d	04/19/18	14:14
07	VSTD.2	ga19i07.d	04/19/18	14:37
08	MDL0.1 - MDL0.1	ga19m01.d	04/19/18	14:59
09	LCSG01	ga19v01.d	04/19/18	15:21
10	VSTD25	ga19i11.d	04/19/18	16:06
11	VSTD10	ga19i12.d	04/19/18	16:28
12	VSTD5	ga19i13.d	04/19/18	16:51
13	VSTD2	ga19i14.d	04/19/18	17:13
14	VSTD1	ga19i15.d	04/19/18	17:35
15	VSTD.5	ga19i16.d	04/19/18	17:57
16	VSTD.2	ga19i17.d	04/19/18	18:19
17	MDL0.1 - MDL0.1	ga19m11.d	04/19/18	18:42

FORM V VOA

^

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF04___

Lab File ID: ga19t05.d BFB Injection Date: 04/19/18

Instrument ID: HP16334 BFB Injection Time: 20:27

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.13
75	30.0 - 60.0% of mass 95	53.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.33 (0.38)1
174	Greater than 50.0% of mass 95	86.32
175	5.0 - 9.0% of mass 174	7.11 (8.23)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.03 (98.51)1
177	5.0 - 9.0% of mass 176	5.15 (6.05)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ga19c01.d	04/19/18	21:10
02	LCSG74	ga19s01.d	04/19/18	21:32
03	LCSG75	ga19s31.d	04/19/18	21:32
04	VBLKG74	ga19b01.d	04/19/18	21:54
05	VBLKG75	ga19b05.d	04/19/18	21:54
06	9549963	ga19s02.d	04/19/18	22:42
07	9551932	ga19s03.d	04/19/18	23:04
08	9549958	ga19s04.d	04/19/18	23:26
09	9549959MS	ga19s05.d	04/19/18	23:48
10	9549960MSD	ga19s06.d	04/20/18	00:11
11	9549962	ga19s07.d	04/20/18	00:33
12	9549964	ga19s08.d	04/20/18	00:55
13	9554435	ga19s09.d	04/20/18	01:17
14	9556835	ga19s10.d	04/20/18	01:39
15	9553129	ga19s32.d	04/20/18	02:02
16	9553130	ga19s33.d	04/20/18	02:24
17	9553121	ga19s34.d	04/20/18	02:47
18	9553122MS	ga19s35.d	04/20/18	03:09
19	9553123MSD	ga19s36.d	04/20/18	03:32
20	9553119	ga19s37.d	04/20/18	03:54
21	9553120	ga19s38.d	04/20/18	04:16
22	9553124	ga19s39.d	04/20/18	04:42

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF04___

Lab File ID: ga19t05.d BFB Injection Date: 04/19/18

Instrument ID: HP16334 BFB Injection Time: 20:27

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.13
75	30.0 - 60.0% of mass 95	53.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.93
173	Less than 2.0% of mass 174	0.33 (0.38)1
174	Greater than 50.0% of mass 95	86.32
175	5.0 - 9.0% of mass 174	7.11 (8.23)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.03 (98.51)1
177	5.0 - 9.0% of mass 176	5.15 (6.05)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9553125	ga19s40.d	04/20/18	05:04
24	9553126	ga19s41.d	04/20/18	05:26
25	9553127	ga19s42.d	04/20/18	05:49
26	9553128	ga19s43.d	04/20/18	06:11

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3259	0.3854	0.3898	0.3804	0.3879	0.3993	0.3570	0.3751	7	AVG #
Chloromethane	#0.3706	0.4078	0.3901	0.3675	0.3856	0.3786	0.3435	0.3777	5	AVG #
Vinyl Chloride	#0.3110	0.3477	0.3248	0.3178	0.3313	0.3328	0.3034	0.3241	5	AVG #
1,3-Butadiene	0.8398	0.8208	0.7810	0.7306	0.6168	0.5643	0.4739	0.6896	20	AVG
Bromomethane	#0.2093	0.2369	0.2156	0.2132	0.2198	0.2180	0.2042	0.2167	5	AVG #
Chloroethane	#0.1757	0.2128	0.1834	0.1806	0.1841	0.1839	0.1719	0.1846	7	AVG #
Dichlorofluoromethane	0.4531	0.4963	0.4510	0.4354	0.4376	0.4357	0.4081	0.4453	6	AVG
Trichlorofluoromethane	#0.3863	0.4252	0.4305	0.4262	0.4393	0.4402	0.4113	0.4227	4	AVG #
Ethyl ether	0.2060	0.2080	0.2130	0.2163	0.2188	0.2140	0.1989	0.2107	3	AVG
Freon 123a	0.2927	0.3179	0.3040	0.2967	0.3009	0.2997	0.2832	0.2993	4	AVG
Acrolein	1.6692	1.7493	1.6625	1.8028	1.8107	1.7780	1.6192	1.7274	4	AVG
1,1-Dichloroethene	#0.1979	0.2141	0.2056	0.2177	0.2065	0.2060	0.2010	0.2070	3	AVG #
Freon 113	#0.2119	0.2311	0.2371	0.2342	0.2402	0.2442	0.2347	0.2333	4	AVG #
Acetone	#3.0926	2.9920	2.7444	2.8562	2.7807	2.6267	2.4447	2.7910	8	AVG #
Methyl Iodide	0.3796	0.4232	0.3957	0.3947	0.4118	0.4110	0.3976	0.4020	4	AVG
Carbon Disulfide	#0.9273	0.8809	0.7997	0.7799	0.7901	0.7965	0.7738	0.8212	7	AVG #
Allyl Chloride	0.5013	0.4823	0.4724	0.4791	0.4794	0.4769	0.4699	0.4802	2	AVG
Methyl Acetate	#8.8525	7.5493	7.4423	7.8394	7.8655	7.7279	7.7931	7.8671	6	AVG #
Methylene Chloride	#0.3700	0.3039	0.2794	0.2588	0.2528	0.2518	0.2425	0.2799	16	AVG #
t-Butyl Alcohol	1.0510	0.9829	0.9825	0.9540	0.9737	0.8894	0.7895	0.9461	9	AVG
Acrylonitrile	2.7779	3.0392	2.9966	3.2860	3.3056	3.2410	3.0893	3.1051	6	AVG
trans-1,2-Dichloroethene	#0.2385	0.2601	0.2372	0.2341	0.2390	0.2415	0.2332	0.2405	4	AVG #
Methyl Tertiary Butyl Ether	#0.7178	0.7066	0.7068	0.7215	0.7368	0.7374	0.7189	0.7208	2	AVG #
n-Hexane	0.3797	0.3928	0.4123	0.4132	0.4133	0.4216	0.4106	0.4062	4	AVG
1,1-Dichloroethane	#0.4680	0.5180	0.4865	0.4928	0.4936	0.4959	0.4796	0.4906	3	AVG #
di-Isopropyl Ether	0.9920	1.0205	0.9901	1.0008	1.0165	1.0168	0.9959	1.0047	1	AVG
2-Chloro-1,3-Butadiene	0.4386	0.4726	0.4403	0.4429	0.4494	0.4569	0.4433	0.4491	3	AVG
Ethyl t-butyl ether	0.8578	0.8811	0.8707	0.8764	0.9051	0.9033	0.8800	0.8820	2	AVG
cis-1,2-Dichloroethene	#0.2463	0.2840	0.2687	0.2680	0.2756	0.2763	0.2696	0.2698	4	AVG #
2,2-Dichloropropane	0.3625	0.4156	0.4003	0.3987	0.4132	0.4176	0.4089	0.4024	5	AVG
2-Butanone	#4.5167	4.7814	4.6804	5.0621	5.0230	4.9159	4.6358	4.8022	4	AVG #
Propionitrile	1.1059	1.1890	1.1774	1.2130	1.1933	1.2403	1.1927	1.1874	3	AVG
Methacrylonitrile	3.4434	3.7390	3.5778	3.9524	3.9806	3.9371	3.7105	3.7630	5	AVG
Bromochloromethane	0.1154	0.1189	0.1232	0.1261	0.1289	0.1284	0.1262	0.1239	4	AVG
Tetrahydrofuran	1.1135	1.1172	1.0704	1.1943	1.1862	1.1912	1.1291	1.1431	4	AVG
Chloroform	#0.4596	0.4868	0.4577	0.4628	0.4749	0.4742	0.4676	0.4691	2	AVG #
1,1,1-Trichloroethane	#0.3691	0.4061	0.3928	0.3969	0.4010	0.4059	0.4017	0.3962	3	AVG #
Cyclohexane	#0.4528	0.4623	0.4785	0.4774	0.4861	0.4917	0.4779	0.4752	3	AVG #
Cyclohexane(2)	#0.3452	0.4203	0.3723	0.3692	0.3676	0.3798	0.3650	0.3742	6	AVG #
Cyclohexane(3)	#0.1329	0.1350	0.1391	0.1387	0.1411	0.1428	0.1388	0.1383	2	AVG #
1,1-Dichloropropene	0.3477	0.3835	0.3722	0.3676	0.3726	0.3758	0.3666	0.3694	3	AVG
Carbon Tetrachloride	#0.2856	0.3073	0.3203	0.3239	0.3322	0.3439	0.3396	0.3218	6	AVG #
Isobutyl Alcohol	0.4383	0.3671	0.3791	0.3616	0.3720	0.3696	0.3446	0.3760	8	AVG
Benzene	#0.9803	1.0835	1.0118	1.0044	1.0195	1.0264	1.0133	1.0199	3	AVG #
1,2-Dichloroethane	#0.3980	0.3788	0.3532	0.3519	0.3503	0.3479	0.3471	0.3610	5	AVG #
t-Amyl methyl ether	0.7185	0.7316	0.7491	0.7401	0.7622	0.7711	0.7673	0.7485	3	AVG
n-Heptane	0.4698	0.4740	0.5052	0.4906	0.4888	0.4961	0.4964	0.4887	3	AVG
n-Butanol	0.2656	0.2781	0.2921	0.3142	0.3183	0.3157	0.2993	0.2976	7	AVG
Trichloroethene	#0.2585	0.2752	0.2675	0.2690	0.2702	0.2739	0.2705	0.2693	2	AVG #
Methylcyclohexane	#0.4074	0.4373	0.4679	0.4675	0.4737	0.4773	0.4698	0.4573	6	AVG #
1,2-Dichloropropane	#0.2726	0.2891	0.2796	0.2750	0.2896	0.2891	0.2866	0.2831	3	AVG #
Methyl Methacrylate	5.9467	6.8698	6.9455	7.6033	7.7977	7.6277	7.3776	7.1669	9	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1372	0.1320	0.1312	0.1339	0.1358	0.1372	0.1384	0.1351	2	AVG
1,4-Dioxane	0.0344	0.0418	0.0586	0.0594	0.0574	0.0576	0.0538	0.0519	19	AVG
Bromodichloromethane	#0.2903	0.3248	0.3228	0.3266	0.3424	0.3538	0.3594	0.3314	7	AVG #
2-Nitropropane	1.9672	2.1856	2.2404	2.5585	2.7039	2.7869	2.7421	2.4549	13	AVG
cis-1,3-Dichloropropene	#0.3548	0.3851	0.3900	0.4090	0.4325	0.4422	0.4532	0.4096	9	AVG #
4-Methyl-2-Pentanone	#10.762	11.580	11.552	12.492	12.461	12.322	11.413	11.797	5	AVG #
Toluene	#0.8251	0.8989	0.8343	0.8330	0.8466	0.8591	0.8505	0.8496	3	AVG #
trans-1,3-Dichloropropene	#0.3986	0.4352	0.4385	0.4549	0.4859	0.5025	0.5101	0.4608	9	AVG #
Ethyl Methacrylate	0.3761	0.3999	0.4022	0.4141	0.4304	0.4431	0.4424	0.4155	6	AVG
1,1,2-Trichloroethane	#0.2516	0.2606	0.2533	0.2556	0.2564	0.2583	0.2580	0.2562	1	AVG #
Tetrachloroethene	#0.3785	0.4175	0.3887	0.3903	0.3905	0.3983	0.3944	0.3940	3	AVG #
1,3-Dichloropropane	0.4783	0.4643	0.4576	0.4651	0.4666	0.4709	0.4647	0.4668	1	AVG
2-Hexanone	#7.3596	8.0145	8.2036	8.8413	8.9232	8.6905	8.0102	8.2918	7	AVG #
Dibromochloromethane	#0.2270	0.2519	0.2687	0.2805	0.3022	0.3182	0.3280	0.2823	13	AVG #
1,2-Dibromoethane	#0.2438	0.2344	0.2371	0.2433	0.2493	0.2525	0.2530	0.2448	3	AVG #
Chlorobenzene	#0.9363	1.0110	0.9820	0.9643	0.9684	0.9819	0.9683	0.9732	2	AVG #
1,1,1,2-Tetrachloroethane	0.2819	0.3055	0.3139	0.3243	0.3389	0.3516	0.3586	0.3249	8	AVG
Ethylbenzene	#1.6135	1.7797	1.6975	1.6669	1.6839	1.7070	1.6693	1.6882	3	AVG #
m+p-Xylene	#0.6120	0.6486	0.6372	0.6400	0.6461	0.6604	0.6551	0.6428	2	AVG #
o-Xylene	#0.5999	0.6564	0.6296	0.6282	0.6537	0.6662	0.6765	0.6443	4	AVG #
Styrene	#0.9311	1.0323	1.0479	1.0500	1.0854	1.1192	1.1374	1.0576	6	AVG #
Bromoform	#0.1209	0.1397	0.1483	0.1566	0.1768	0.1902	0.2047	0.1625	18	AVG #
Isopropylbenzene	#1.5169	1.7537	1.6768	1.6656	1.6998	1.7256	1.7103	1.6784	5	AVG #
1,1,2,2-Tetrachloroethane	#0.5664	0.5567	0.5904	0.5790	0.6022	0.6104	0.6089	0.5877	4	AVG #
Bromobenzene	0.7392	0.7694	0.7764	0.7478	0.7770	0.7932	0.7997	0.7718	3	AVG
1,2,3-Trichloropropane	0.1606	0.1609	0.1672	0.1632	0.1660	0.1688	0.1633	0.1643	2	AVG
n-Propylbenzene	3.4254	3.7711	3.6587	3.5339	3.6344	3.6506	3.4840	3.5940	3	AVG
2-Chlorotoluene	0.7136	0.7328	0.7264	0.6888	0.7233	0.7232	0.7123	0.7172	2	AVG
1,3,5-Trimethylbenzene	2.4140	2.6174	2.6023	2.5172	2.6053	2.6603	2.5971	2.5734	3	AVG
4-Chlorotoluene	0.7159	0.7522	0.7520	0.7431	0.7575	0.7613	0.7521	0.7477	2	AVG
tert-Butylbenzene	0.4805	0.5800	0.5373	0.5283	0.5343	0.5473	0.5524	0.5372	6	AVG
Pentachloroethane	0.3251	0.3651	0.3805	0.4112	0.4549	0.4750	0.5077	0.4171	16	AVG
1,2,4-Trimethylbenzene	2.4471	2.5690	2.6518	2.6057	2.6909	2.7186	2.6895	2.6246	4	AVG
sec-Butylbenzene	2.9712	3.3207	3.3232	3.2134	3.3592	3.3897	3.3033	3.2687	4	AVG
1,3-Dichlorobenzene	#1.4423	1.5023	1.5557	1.4958	1.5561	1.5852	1.5995	1.5338	4	AVG #
p-Isopropyltoluene	2.6293	2.8485	2.8826	2.7928	2.8965	2.9740	2.9481	2.8531	4	AVG
1,4-Dichlorobenzene	#1.5214	1.5575	1.5678	1.5253	1.5761	1.5896	1.6063	1.5634	2	AVG #
1,2,3-Trimethylbenzene	1.1477	1.1751	1.1728	1.1483	1.1924	1.2033	1.2212	1.1801	2	AVG
Benzyl Chloride		0.1592	0.1818	0.2064	0.2260	0.2471	0.2605	0.2135	18	AVG
n-Butylbenzene	1.4296	1.5446	1.5873	1.4956	1.5497	1.5756	1.5630	1.5351	4	AVG
1,2-Dichlorobenzene	#1.3802	1.4253	1.4498	1.4110	1.4656	1.5003	1.4987	1.4473	3	AVG #
1,2-Dibromo-3-chloropropane	#1.4739	1.5366	1.6541	1.7877	1.8841	2.0057	2.0577	1.7714	13	AVG #
1,3,5-Trichlorobenzene	1.1970	1.2626	1.3112	1.2520	1.2924	1.3224	1.3416	1.2828	4	AVG
1,2,4-Trichlorobenzene	#1.1159	1.1528	1.2143	1.1614	1.2060	1.2348	1.2450	1.1900	4	AVG #
Hexachlorobutadiene	0.5887	0.6422	0.6523	0.6077	0.6235	0.6380	0.6381	0.6272	4	AVG
Naphthalene	1.8702	1.8787	2.0217	1.9833	2.0350	2.0796	2.0560	1.9892	4	AVG
1,2,3-Trichlorobenzene	0.9453	0.9623	1.0642	1.0094	1.0289	1.0526	1.0597	1.0175	5	AVG
Dibromofluoromethane	0.2504	0.2499	0.2519	0.2518	0.2530	0.2529	0.2504	0.2515	1	AVG
Dibromofluoromethane(2)	0.2587	0.2576	0.2588	0.2582	0.2601	0.2604	0.2564	0.2586	1	AVG
1,2-Dichloroethane-d4	0.0533	0.0528	0.0543	0.0538	0.0537	0.0528	0.0524	0.0533	1	AVG
1,2-Dichloroethane-d4(2)	0.3082	0.3073	0.3076	0.3018	0.2997	0.2998	0.2962	0.3029	2	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(3)	0.0334	0.0334	0.0338	0.0338	0.0327	0.0317	0.0337	0.0332	2	AVG
Toluene-d8	1.3463	1.3514	1.3329	1.3478	1.3322	1.3425	1.3347	1.3411	1	AVG
Toluene-d8(2)	0.8516	0.8548	0.8521	0.8555	0.8460	0.8567	0.8568	0.8534	0	AVG
4-Bromofluorobenzene	0.5126	0.5172	0.5157	0.5099	0.5108	0.5142	0.5129	0.5133	1	AVG
4-Bromofluorobenzene(2)	0.4359	0.4386	0.4383	0.4408	0.4359	0.4415	0.4398	0.4387	1	AVG

Average %RSD 5

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i01.d	VSTD025
/chem2/HP16334.i/18apr19i.b/ga19i02.d	VSTD010
/chem2/HP16334.i/18apr19i.b/ga19i03.d	VSTD005
/chem2/HP16334.i/18apr19i.b/ga19i04.d	VSTD002
/chem2/HP16334.i/18apr19i.b/ga19i05.d	VSTD001
/chem2/HP16334.i/18apr19i.b/ga19i06.d	VSTD0.5
/chem2/HP16334.i/18apr19i.b/ga19i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	ga19i01.d	ga19i02.d	ga19i03.d	ga19i04.d	ga19i05.d	ga19i06.d	ga19i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	221249	219199	212064	210083	224043	211767	225587	217713	3	Yes
Fluorobenzene	2071999	2172211	2151089	2150008	2094201	2057002	2046775	2106184	2	Yes
Chlorobenzene-d5	1603608	1651185	1639809	1622110	1587578	1537140	1539514	1597278	3	Yes
1,4-Dichlorobenzene-d4	918007	931947	919901	922950	894690	865930	862291	902245	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ga19i01.d	ga19i02.d	ga19i03.d	ga19i04.d	ga19i05.d	ga19i06.d	ga19i07.d	Avg. RT
t-Butyl Alcohol-d10	3.946	3.952	3.971	3.946	3.958	3.952	3.946	3.953
Fluorobenzene	7.482	7.482	7.488	7.482	7.482	7.482	7.476	7.482
Chlorobenzene-d5	11.018	11.018	11.018	11.018	11.018	11.018	11.018	11.018
1,4-Dichlorobenzene-d4	12.914	12.914	12.914	12.914	12.914	12.914	12.914	12.914

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/19/2018 at 20:12.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3751	0.3146	4.19	5	-16	#
# Chloromethane	0.3777	0.3276	4.34	5	-13	#
# Vinyl Chloride	0.3241	0.3007	4.64	5	-7	#
1,3-Butadiene	0.6896	0.4860	3.52	5	-30	
# Bromomethane	0.2167	0.2083	4.81	5	-4	#
# Chloroethane	0.1846	0.1724	4.67	5	-7	#
Dichlorofluoromethane	0.4453	0.4365	4.90	5	-2	
# Trichlorofluoromethane	0.4227	0.4201	4.97	5	-1	#
Ethyl ether	0.2107	0.2231	5.29	5	6	
Freon 123a	0.2993	0.3088	5.16	5	3	
Acrolein	1.7274	1.7358	37.68	37.5	0	
# 1,1-Dichloroethene	0.2070	0.2140	5.17	5	3	#
# Freon 113	0.2333	0.2303	4.94	5	-1	#
# Acetone	2.7910	2.6931	36.18	37.5	-4	#
Methyl Iodide	0.4020	0.3810	4.74	5	-5	
# Carbon Disulfide	0.8212	0.7399	4.51	5	-10	#
Allyl Chloride	0.4802	0.4881	5.08	5	2	
# Methyl Acetate	7.8671	7.4233	4.72	5	-6	#
# Methylene Chloride	0.2799	0.2513	4.49	5	-10	#
t-Butyl Alcohol	0.9461	0.9308	49.19	50	-2	
Acrylonitrile	3.1051	3.2821	26.43	25	6	
# trans-1,2-Dichloroethene	0.2405	0.2472	5.14	5	3	#
# Methyl Tertiary Butyl Ether	0.7208	0.7137	4.95	5	-1	#
n-Hexane	0.4062	0.4025	4.95	5	-1	
# 1,1-Dichloroethane	0.4906	0.4975	5.07	5	1	#
di-Isopropyl Ether	1.0047	1.0411	5.18	5	4	
2-Chloro-1,3-Butadiene	0.4491	0.4538	5.05	5	1	
Ethyl t-butyl ether	0.8820	0.8897	5.04	5	1	
# cis-1,2-Dichloroethene	0.2698	0.2840	5.26	5	5	#
2,2-Dichloropropane	0.4024	0.4115	5.11	5	2	
# 2-Butanone	4.8022	4.9760	38.86	37.5	4	#
Propionitrile	1.1874	1.1967	37.79	37.5	1	
Methacrylonitrile	3.7630	3.9286	39.15	37.5	4	
Bromochloromethane	0.1239	0.1247	5.03	5	1	
Tetrahydrofuran	1.1431	1.1603	25.38	25	2	
# Chloroform	0.4691	0.4740	5.05	5	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3962	0.4011	5.06	5	1	#
# Cyclohexane	0.4752	0.4878	5.13	5	3	#
1,1-Dichloropropene	0.3694	0.3669	4.97	5	-1	
# Carbon Tetrachloride	0.3218	0.3282	5.10	5	2	#
Isobutyl Alcohol	0.3760	0.3671	122.05	125	-2	
# Benzene	1.0199	1.0319	5.06	5	1	#
# 1,2-Dichloroethane	0.3610	0.3482	4.82	5	-4	#
t-Amyl methyl ether	0.7485	0.7636	5.10	5	2	
n-Heptane	0.4887	0.4950	5.06	5	1	
n-Butanol	0.2976	0.3068	257.68	250	3	
# Trichloroethene	0.2693	0.2712	5.04	5	1	#
# Methylcyclohexane	0.4573	0.4711	5.15	5	3	#
# 1,2-Dichloropropane	0.2831	0.2944	5.20	5	4	#
Methyl Methacrylate	7.1669	7.5741	5.28	5	6	
Dibromomethane	0.1351	0.1373	5.08	5	2	
1,4-Dioxane	0.0519	0.0632	152.35	125	22	
# Bromodichloromethane	0.3314	0.3378	5.10	5	2	#
2-Nitropropane	2.4549	2.2953	4.67	5	-7	
# cis-1,3-Dichloropropene	0.4096	0.4170	5.09	5	2	#
# 4-Methyl-2-Pentanone	11.797	12.3982	26.27	25	5	#
# Toluene	0.8496	0.8611	5.07	5	1	#
# trans-1,3-Dichloropropene	0.4608	0.4713	5.11	5	2	#
Ethyl Methacrylate	0.4155	0.4272	5.14	5	3	
# 1,1,2-Trichloroethane	0.2562	0.2637	5.15	5	3	#
# Tetrachloroethene	0.3940	0.3989	5.06	5	1	#
1,3-Dichloropropane	0.4668	0.4722	5.06	5	1	
# 2-Hexanone	8.2918	8.9620	27.02	25	8	#
# Dibromochloromethane	0.2823	0.2901	5.14	5	3	#
# 1,2-Dibromoethane	0.2448	0.2534	5.18	5	4	#
# Chlorobenzene	0.9732	0.9776	5.02	5	0	#
1,1,1,2-Tetrachloroethane	0.3249	0.3344	5.15	5	3	
# Ethylbenzene	1.6882	1.7165	5.08	5	2	#
# m+p-Xylene	0.6428	0.6617	10.29	10	3	#
# o-Xylene	0.6443	0.6551	5.08	5	2	#
# Styrene	1.0576	1.1044	5.22	5	4	#
# Bromoform	0.1625	0.1627	5.01	5	0	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Isopropylbenzene	1.6784	1.7320	5.16	5	3	#
#	1,1,2,2-Tetrachloroethane	0.5877	0.5868	4.99	5	0	#
	Bromobenzene	0.7718	0.7612	4.93	5	-1	
	1,2,3-Trichloropropane	0.1643	0.1698	5.17	5	3	
	n-Propylbenzene	3.5940	3.6355	5.06	5	1	
	2-Chlorotoluene	0.7172	0.7072	4.93	5	-1	
	1,3,5-Trimethylbenzene	2.5734	2.5826	5.02	5	0	
	4-Chlorotoluene	0.7477	0.7485	5.01	5	0	
	tert-Butylbenzene	0.5372	0.5376	5.00	5	0	
	Pentachloroethane	0.4171	0.4298	5.15	5	3	
	1,2,4-Trimethylbenzene	2.6246	2.6637	5.07	5	1	
	sec-Butylbenzene	3.2687	3.3588	5.14	5	3	
#	1,3-Dichlorobenzene	1.5338	1.5175	4.95	5	-1	#
	p-Isopropyltoluene	2.8531	2.9287	5.13	5	3	
#	1,4-Dichlorobenzene	1.5634	1.5616	4.99	5	0	#
	1,2,3-Trimethylbenzene	1.1801	1.2116	5.13	5	3	
	Benzyl Chloride	0.2135	0.2187	5.12	5	2	
	n-Butylbenzene	1.5351	1.5299	4.98	5	0	
#	1,2-Dichlorobenzene	1.4473	1.4475	5.00	5	0	#
#	1,2-Dibromo-3-chloropropane	1.7714	1.9198	5.42	5	8	#
	1,3,5-Trichlorobenzene	1.2828	1.2607	4.91	5	-2	
#	1,2,4-Trichlorobenzene	1.1900	1.1608	4.88	5	-2	#
	Hexachlorobutadiene	0.6272	0.6187	4.93	5	-1	
	Naphthalene	1.9892	1.9533	4.91	5	-2	
	1,2,3-Trichlorobenzene	1.0175	1.0075	4.95	5	-1	

Average %Drift 3

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i07.d
/chem2/HP16334.i/18apr19i.b/ga19i06.d
/chem2/HP16334.i/18apr19i.b/ga19i05.d
/chem2/HP16334.i/18apr19i.b/ga19i04.d
/chem2/HP16334.i/18apr19i.b/ga19i03.d
/chem2/HP16334.i/18apr19i.b/ga19i02.d
/chem2/HP16334.i/18apr19i.b/ga19i01.d

File /chem2/HP16334.i/18apr19i.b/ga19i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP16334.i/18apr19b.b/ga19c01.d

RT Summary

Internal Standard Name	File ID: ga19c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	3.958	3.952	Yes
Fluorobenzene	7.482	7.482	Yes
Chlorobenzene-d5	11.018	11.018	Yes
1,4-Dichlorobenzene-d4	12.914	12.914	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ga19c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	207378	219199	109600	438398	Yes
Fluorobenzene	2092264	2172211	1086106	4344422	Yes
Chlorobenzene-d5	1597602	1651185	825592	3302370	Yes
1,4-Dichlorobenzene-d4	914062	931947	465974	1863894	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/19/18 Time: 21:10

Lab File ID: ga19c01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3751	0.3581	9.55	10	-5	#
# Chloromethane	0.3777	0.3521	9.32	10	-7	#
# Vinyl Chloride	0.3241	0.3103	9.58	10	-4	#
1,3-Butadiene	0.6896	0.4799	6.96	10	-30	<-
# Bromomethane	0.2167	0.2026	9.35	10	-7	#
# Chloroethane	0.1846	0.1746	9.46	10	-5	#
Dichlorofluoromethane	0.4453	0.4156	9.33	10	-7	
# Trichlorofluoromethane	0.4227	0.4131	9.77	10	-2	#
Ethyl ether	0.2107	0.2041	9.68	10	-3	
Freon 123a	0.2993	0.2836	9.47	10	-5	
Acrolein	1.7274	1.7708	512.55	500	3	
# 1,1-Dichloroethene	0.2070	0.1891	9.14	10	-9	#
# Freon 113	0.2333	0.2269	9.73	10	-3	#
# Acetone	2.7910	2.5498	91.35	100	-9	#
Methyl Iodide	0.4020	0.3795	9.44	10	-6	
# Carbon Disulfide	0.8212	0.7266	8.85	10	-12	#
Allyl Chloride	0.4802	0.4627	9.63	10	-4	
# Methyl Acetate	7.8671	7.3944	9.40	10	-6	#
# Methylene Chloride	0.2799	0.2326	8.31	10	-17	#
t-Butyl Alcohol	0.9461	0.9130	193.00	200	-3	
Acrylonitrile	3.1051	3.1851	51.29	50	3	
# trans-1,2-Dichloroethene	0.2405	0.2256	9.38	10	-6	#
# Methyl Tertiary Butyl Ether	0.7208	0.7021	9.74	10	-3	#
n-Hexane	0.4062	0.3923	9.66	10	-3	
# 1,1-Dichloroethane	0.4906	0.4701	9.58	10	-4	#
di-Isopropyl Ether	1.0047	0.9792	9.75	10	-3	
2-Chloro-1,3-Butadiene	0.4491	0.4349	9.68	10	-3	
Ethyl t-butyl ether	0.8820	0.8659	9.82	10	-2	
# cis-1,2-Dichloroethene	0.2698	0.2621	9.71	10	-3	#
2,2-Dichloropropane	0.4024	0.3991	9.92	10	-1	
# 2-Butanone	4.8022	4.9183	102.42	100	2	#
Propionitrile	1.1874	1.2050	202.97	200	1	
Methacrylonitrile	3.7630	3.9253	104.31	100	4	
Bromochloromethane	0.1239	0.1255	10.13	10	1	
Tetrahydrofuran	1.1431	1.1756	102.84	100	3	
# Chloroform	0.4691	0.4550	9.70	10	-3	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/19/18 Time: 21:10

Lab File ID: ga19c01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3962	0.3866	9.76	10	-2	#
# Cyclohexane	0.4752	0.4682	9.85	10	-1	#
# Cyclohexane(2)	0.3742	0.3578	9.56	10	-4	#
# Cyclohexane(3)	0.1383	0.1341	9.70	10	-3	#
1,1-Dichloropropene	0.3694	0.3593	9.73	10	-3	
# Carbon Tetrachloride	0.3218	0.3238	10.06	10	1	#
Isobutyl Alcohol	0.3760	0.3756	499.40	500	0	
# Benzene	1.0199	0.9904	9.71	10	-3	#
# 1,2-Dichloroethane	0.3610	0.3418	9.47	10	-5	#
t-Amyl methyl ether	0.7485	0.7500	10.02	10	0	
n-Heptane	0.4887	0.4830	9.88	10	-1	
n-Butanol	0.2976	0.3138	1054.36	1000	5	
# Trichloroethene	0.2693	0.2641	9.81	10	-2	#
# Methylcyclohexane	0.4573	0.4794	10.48	10	5	#
# 1,2-Dichloropropane	0.2831	0.2825	9.98	10	0	#
Methyl Methacrylate	7.1669	7.5571	10.54	10	5	
Dibromomethane	0.1351	0.1325	9.80	10	-2	
1,4-Dioxane	0.0519	0.0560	539.54	500	8	
# Bromodichloromethane	0.3314	0.3435	10.36	10	4	#
2-Nitropropane	2.4549	2.7687	112.78	100	13	
# cis-1,3-Dichloropropene	0.4096	0.4297	10.49	10	5	#
# 4-Methyl-2-Pentanone	11.797	12.369	3 104.85	100	5	#
# Toluene	0.8496	0.8325	9.80	10	-2	#
# trans-1,3-Dichloropropene	0.4608	0.4841	10.50	10	5	#
Ethyl Methacrylate	0.4155	0.4267	10.27	10	3	
# 1,1,2-Trichloroethane	0.2562	0.2522	9.84	10	-2	#
# Tetrachloroethene	0.3940	0.3860	9.80	10	-2	#
1,3-Dichloropropane	0.4668	0.4624	9.91	10	-1	
# 2-Hexanone	8.2918	8.6944	104.85	100	5	#
# Dibromochloromethane	0.2823	0.3057	10.83	10	8	#
# 1,2-Dibromoethane	0.2448	0.2473	10.10	10	1	#
# Chlorobenzene	0.9732	0.9442	9.70	10	-3	#
1,1,1,2-Tetrachloroethane	0.3249	0.3387	10.42	10	4	
# Ethylbenzene	1.6882	1.6583	9.82	10	-2	#
# m+p-Xylene	0.6428	0.6364	19.80	20	-1	#
# o-Xylene	0.6443	0.6459	10.02	10	0	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/19/18 Time: 21:10

Lab File ID: ga19c01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Styrene	1.0576	1.0808	10.22	10	2	#
# Bromoform	0.1625	0.1857	11.43	10	14	#
# Isopropylbenzene	1.6784	1.6680	9.94	10	-1	#
# 1,1,2,2-Tetrachloroethane	0.5877	0.5913	10.06	10	1	#
Bromobenzene	0.7718	0.7601	9.85	10	-2	
1,2,3-Trichloropropane	0.1643	0.1636	9.96	10	0	
n-Propylbenzene	3.5940	3.4864	9.70	10	-3	
2-Chlorotoluene	0.7172	0.6963	9.71	10	-3	
1,3,5-Trimethylbenzene	2.5734	2.5366	9.86	10	-1	
4-Chlorotoluene	0.7477	0.7267	9.72	10	-3	
tert-Butylbenzene	0.5372	0.5281	9.83	10	-2	
Pentachloroethane	0.4171	0.4688	11.24	10	12	
1,2,4-Trimethylbenzene	2.6246	2.6132	9.96	10	0	
sec-Butylbenzene	3.2687	3.2464	9.93	10	-1	
# 1,3-Dichlorobenzene	1.5338	1.5109	9.85	10	-1	#
p-Isopropyltoluene	2.8531	2.8299	9.92	10	-1	
# 1,4-Dichlorobenzene	1.5634	1.5189	9.71	10	-3	#
1,2,3-Trimethylbenzene	1.1801	1.1770	9.97	10	0	
Benzyl Chloride	0.2135	0.2387	11.18	10	12	
n-Butylbenzene	1.5351	1.5134	9.86	10	-1	
# 1,2-Dichlorobenzene	1.4473	1.4382	9.94	10	-1	#
# 1,2-Dibromo-3-chloropropane	1.7714	2.0071	11.33	10	13	#
1,3,5-Trichlorobenzene	1.2828	1.2584	9.81	10	-2	
# 1,2,4-Trichlorobenzene	1.1900	1.1702	9.83	10	-2	#
Hexachlorobutadiene	0.6272	0.6093	9.71	10	-3	
Naphthalene	1.9892	1.9906	10.01	10	0	
1,2,3-Trichlorobenzene	1.0175	1.0035	9.86	10	-1	
Dibromofluoromethane	0.2515	0.2514	10.00	10	0	
Dibromofluoromethane(2)	0.2586	0.2583	9.99	10	0	
1,2-Dichloroethane-d4	0.0533	0.0525	9.86	10	-1	
1,2-Dichloroethane-d4(2)	0.3029	0.3037	10.03	10	0	
1,2-Dichloroethane-d4(3)	0.0332	0.0336	10.11	10	1	
Toluene-d8	1.3411	1.3435	10.02	10	0	
Toluene-d8(2)	0.8534	0.8538	10.01	10	0	
4-Bromofluorobenzene	0.5133	0.5158	10.05	10	0	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/19/18 Time: 21:10

Lab File ID: ga19c01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.4387	0.4448	10.14	10	1

Average %Drift 4

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF04___

Lab File ID (Standard): ga19c01.d Date Analyzed: 04/19/18

Instrument ID: HP16334 Time Analyzed: 21:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	207378	3.958	2092264	7.482	1597602	11.018	914062	12.914
UPPER LIMIT	414756	4.458	4184528	7.982	3195204	11.518	1828124	13.414
LOWER LIMIT	103689	3.458	1046132	6.982	798801	10.518	457031	12.414
LAB SAMPLE ID								
01 LCSG74	212266	3.964	2122015	7.482	1609072	11.018	917175	12.914
02 LCSG75	212266	3.964	2122015	7.482	1609072	11.018	917175	12.914
03 VBLKG74	228706	3.952	2084050	7.476	1566587	11.018	868656	12.914
04 VBLKG75	228706	3.952	2084050	7.476	1566587	11.018	868656	12.914
05 9549963	199127	3.940	1944620	7.470	1472585	11.018	818556	12.914
06 9551932	199852	3.952	1963425	7.482	1473063	11.018	824108	12.914
07 9549958	183756	3.952	1934210	7.482	1463038	11.018	812519	12.914
08 9549959MS	178426	3.952	2010768	7.476	1529339	11.018	883548	12.914
09 9549960MSD	201715	3.952	2080227	7.482	1583514	11.018	902823	12.914
10 9549962	208781	3.940	2018547	7.482	1517209	11.018	846130	12.914
11 9549964	151103	3.952	1987553	7.482	1495337	11.018	834656	12.914
12 9554435	194854	3.952	1931667	7.482	1464433	11.018	814861	12.914
13 9556835	188270	3.940	1886488	7.482	1433613	11.018	797659	12.914
14 9553129	182380	3.952	1887156	7.488	1435434	11.018	804226	12.914
15 9553130	163333	3.964	1851520	7.482	1411631	11.018	786326	12.914
16 9553121	174904	3.958	1846099	7.482	1407871	11.018	790688	12.914
17 9553122MS	181940	3.946	1990145	7.482	1534011	11.018	889551	12.914
18 9553123MSD	206673	3.958	2031806	7.482	1547599	11.018	898150	12.914
19 9553119	189778	3.940	2008990	7.482	1499481	11.018	845777	12.914
20 9553120	182121	3.952	1918397	7.482	1457847	11.018	815293	12.914
21 9553124	175295	3.952	1860148	7.476	1411198	11.018	796213	12.914
22 9553125	172023	3.952	1873318	7.482	1412831	11.018	801559	12.914

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF04___

Lab File ID (Standard): ga19c01.d Date Analyzed: 04/19/18

Instrument ID: HP16334 Time Analyzed: 21:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	207378	3.958	2092264	7.482	1597602	11.018	914062	12.914
UPPER LIMIT	414756	4.458	4184528	7.982	3195204	11.518	1828124	13.414
LOWER LIMIT	103689	3.458	1046132	6.982	798801	10.518	457031	12.414
LAB SAMPLE ID								
23 9553126	179552	3.958	1849385	7.482	1407964	11.018	793468	12.914
24 9553127	163034	3.958	1825540	7.482	1383427	11.018	783963	12.914
25 9553128	165271	3.958	1824572	7.482	1394475	11.018	785529	12.914

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

11996: RAAP Unit 5 "J" and "K" lists Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.3	1.0	ug/l
Vinyl Chloride	0.1	1.0	ug/l
Ethyl ether	0.4	12	ug/l
1,1-Dichloroethene	0.4	1.0	ug/l
Acetone	3.0	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
trans-1,2-Dichloroethene	0.8	1.0	ug/l
2-Butanone	1.0	10	ug/l
cis-1,2-Dichloroethene	0.1	1.0	ug/l
Chloroform	0.1	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l
Toluene	0.1	1.0	ug/l
Xylene (Total)	0.2	3.0	ug/l

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9553119

Data file: /chem2/HP16334.i/18apr19b.b/ga19s37.d Injection date and time: **20-APR-2018 03:54**
Data file Sample Info. Line: R0401;9553119;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 04:10 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.940	(0.018)	386	65	189778	(-8)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	2008990	(-4)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1499481	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	845777	(-7)	10.00	

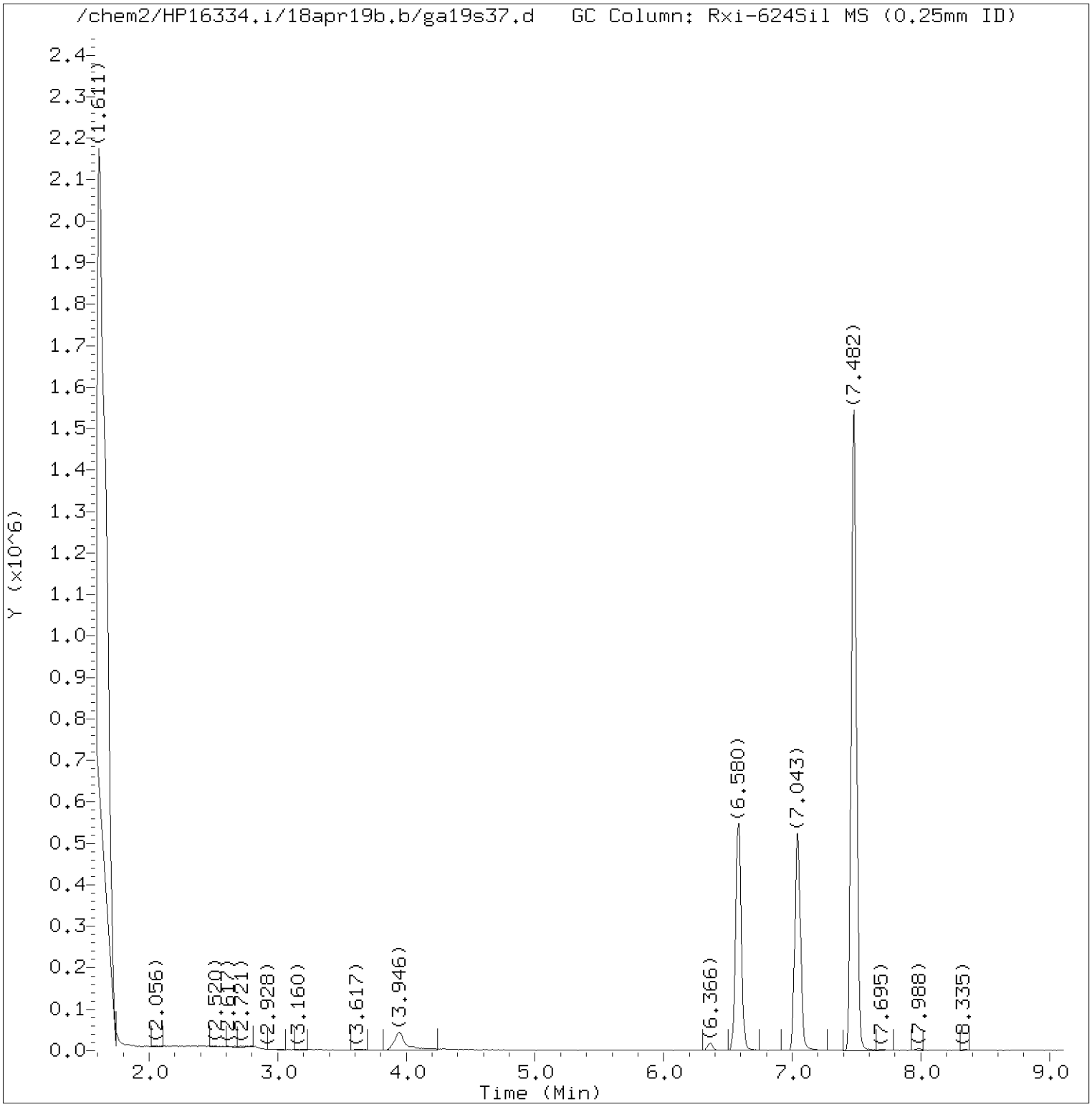
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.001)	113	504320	9.983	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	104156	9.729	97%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	2031420	10.102	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	773090	10.044	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

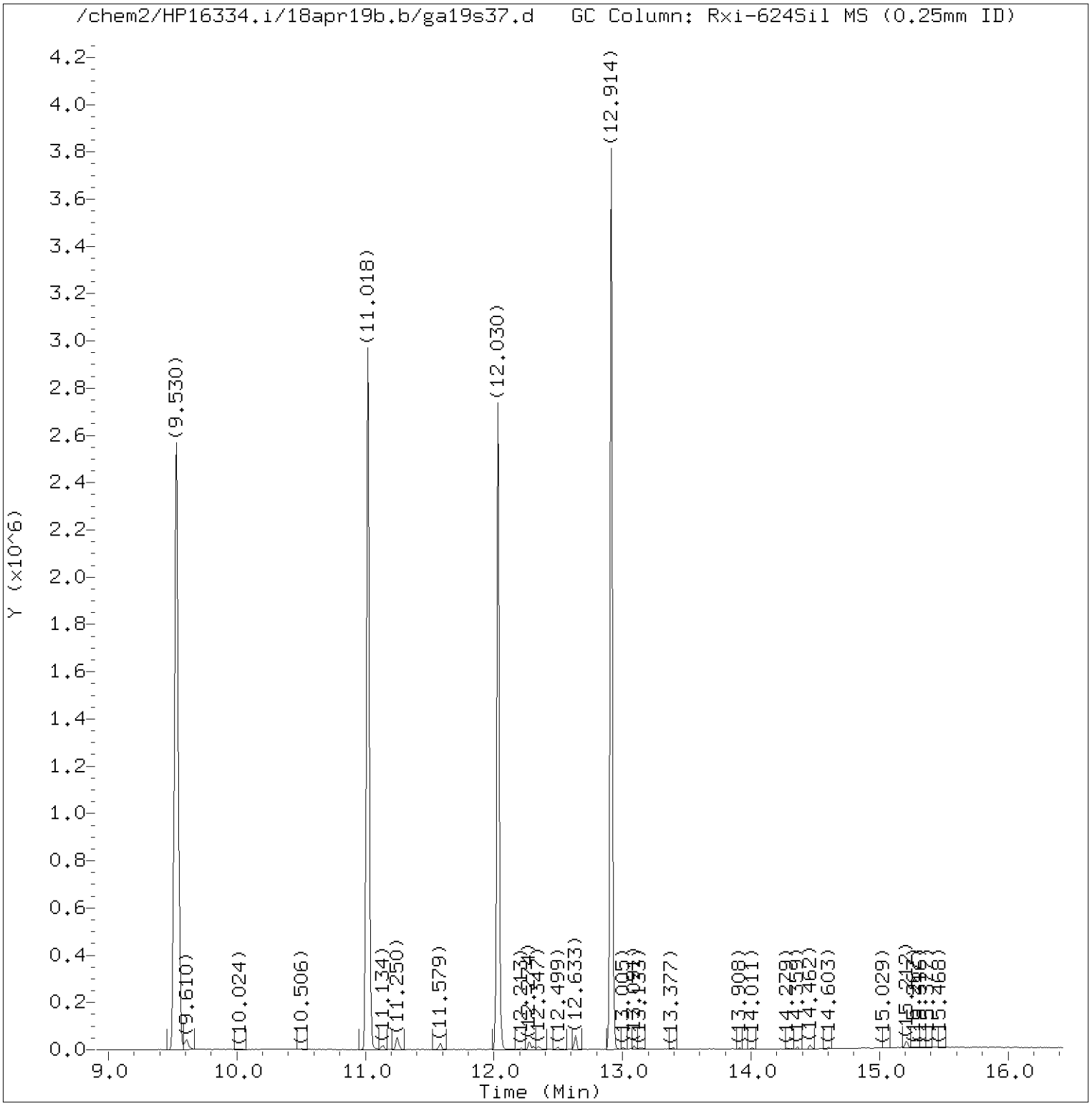
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s37.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:10 Automation

Sample Name: R0401 Lab Sample ID: 9553119

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s37.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:10 Automation

Sample Name: R0401 Lab Sample ID: 9553119

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s37.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:10 Automation

Sample Name: R0401 Lab Sample ID: 9553119

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.940	65	189778	50.000
50)$Dibromofluoromethane	(2)	6.580	113	504320	9.983
57)$1,2-Dichloroethane-d4	(2)	7.043	102	104156	9.729
63)*Fluorobenzene	(2)	7.482	96	2008990	10.000
82)$Toluene-d8	(3)	9.530	98	2031420	10.102
97)*Chlorobenzene-d5	(3)	11.018	117	1499481	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	773090	10.044
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	845777	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

R0402 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9553120

Data file: /chem2/HP16334.i/18apr19b.b/ga19s38.d Injection date and time: **20-APR-2018 04:16**
Data file Sample Info. Line: R0402;9553120;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.006)	388	65	182121	(-12)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1918397	(-8)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1457847	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	815293	(-11)	10.00	

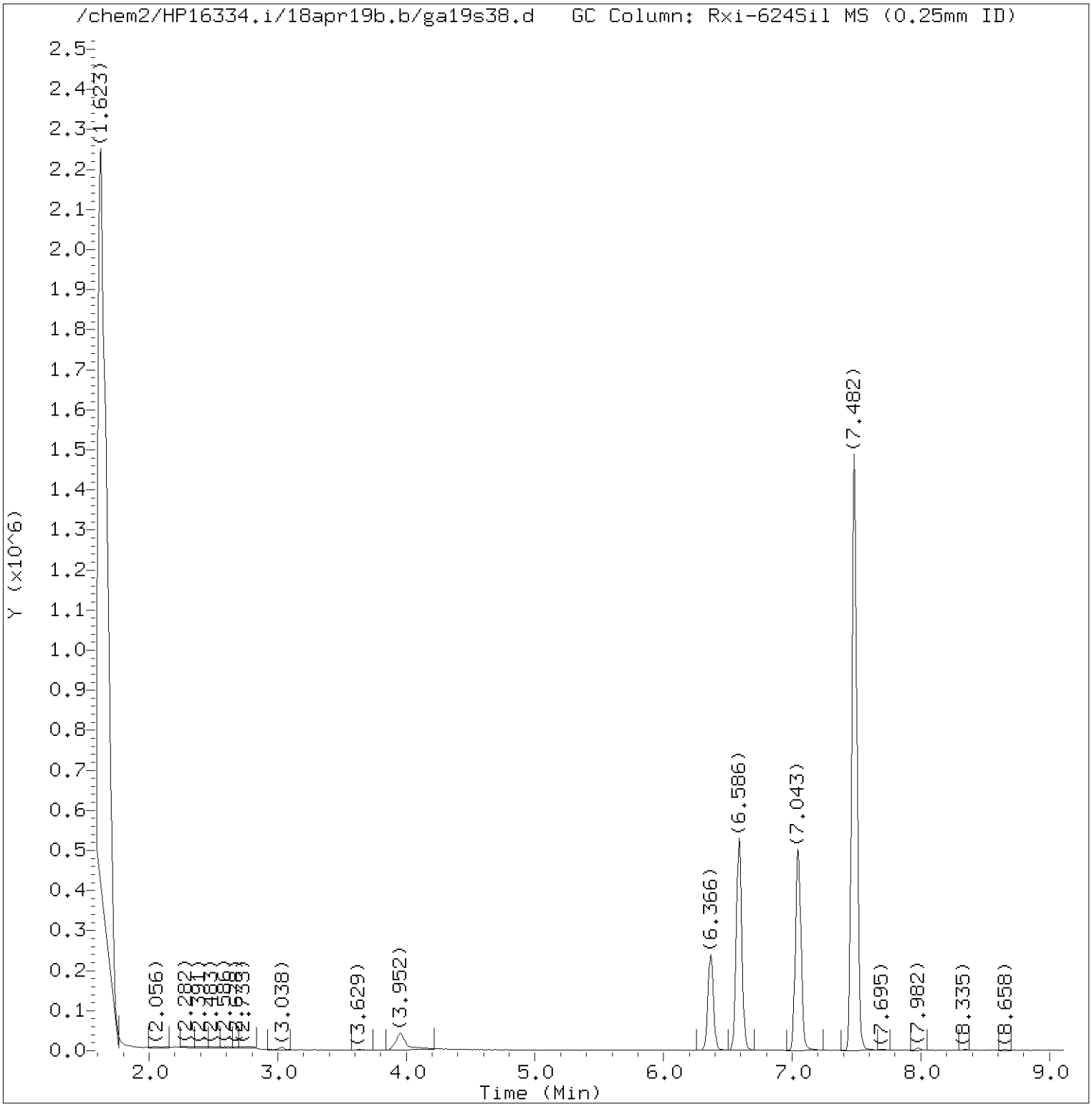
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	480433	9.959	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	100235	9.805	98%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1959010	10.020	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	743545	9.936	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.366	(0.000)	83	287668	3.197	3.20			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)	11.249	(-0.000)	106	17423	0.186	0.19		J	0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)			106	17423	0.186	0.19		J	0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

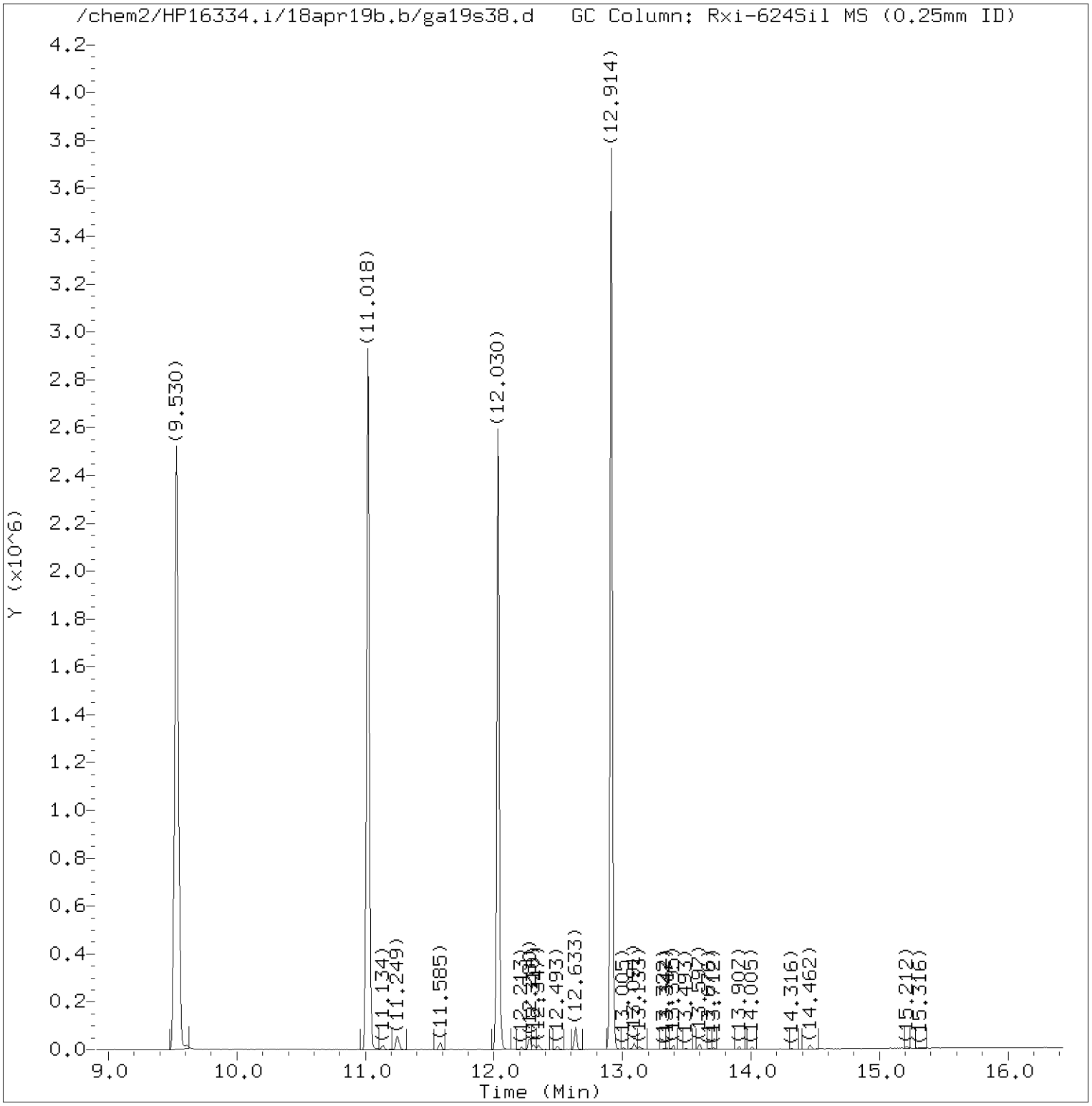
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s38.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:16 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

Sample Name: R0402 Lab Sample ID: 9553120

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s38.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:16 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

Sample Name: R0402 Lab Sample ID: 9553120

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s38.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:16 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

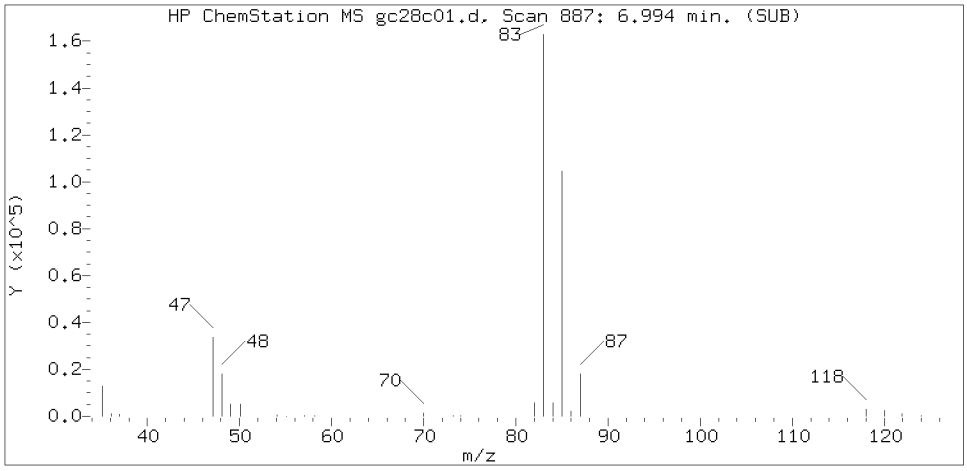
Sample Name: R0402 Lab Sample ID: 9553120

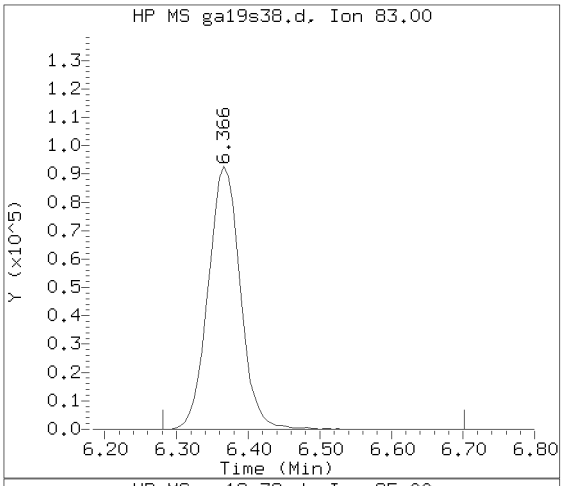
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.952	65	182121	50.000
49) Chloroform	(2)	6.366	83	287668	3.197
50)$Dibromofluoromethane	(2)	6.586	113	480433	9.959
57)$1,2-Dichloroethane-d4	(2)	7.043	102	100235	9.805
63)*Fluorobenzene	(2)	7.482	96	1918397	10.000
82)$Toluene-d8	(3)	9.530	98	1959010	10.020
97)*Chlorobenzene-d5	(3)	11.018	117	1457847	10.000
101) m+p-Xylene	(3)	11.249	106	17423	0.186
105) Xylene (Total)	(3)		106	17423	0.186
111)$4-Bromofluorobenzene	(3)	12.030	95	743545	9.936
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	815293	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

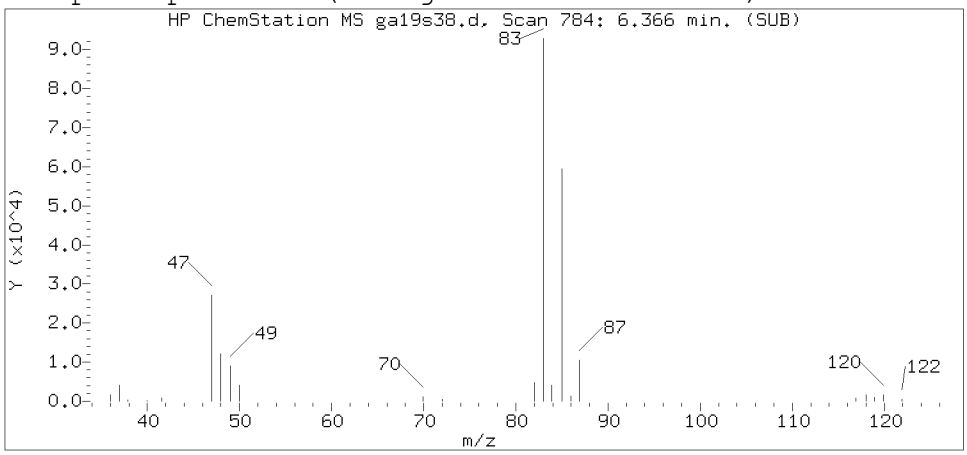
Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

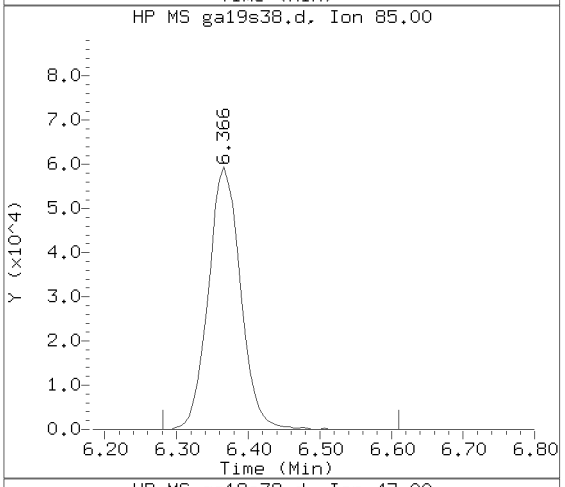
Reference Standard Spectrum for Chloroform



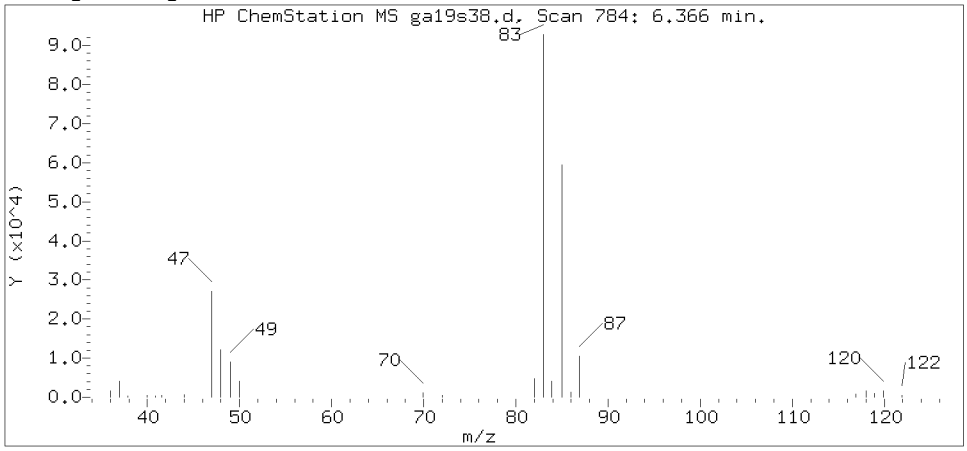


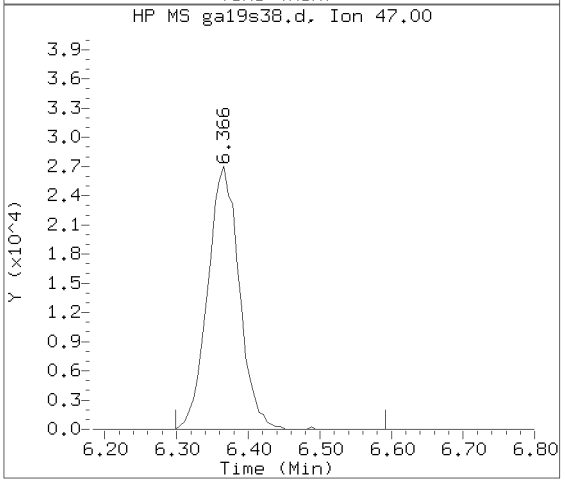
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s38.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:16 Analyst ID: MSK07970

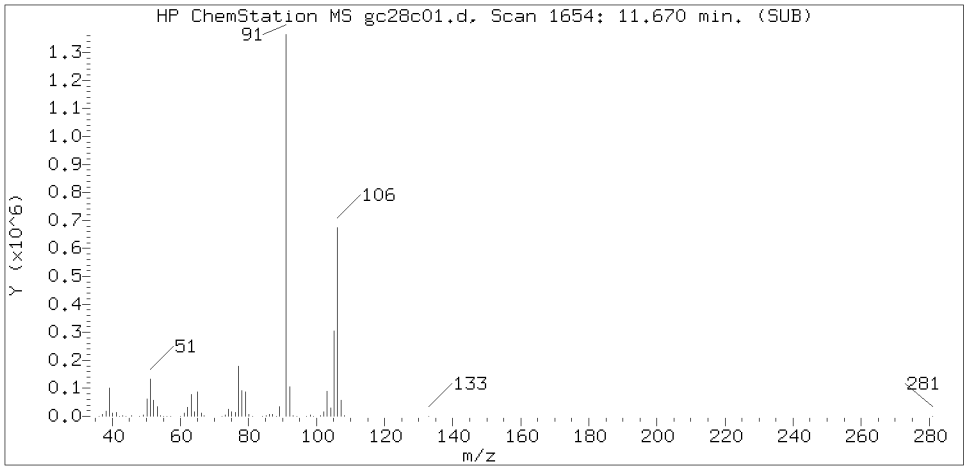
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

Sample Name: R0402 Lab Sample ID: 9553120

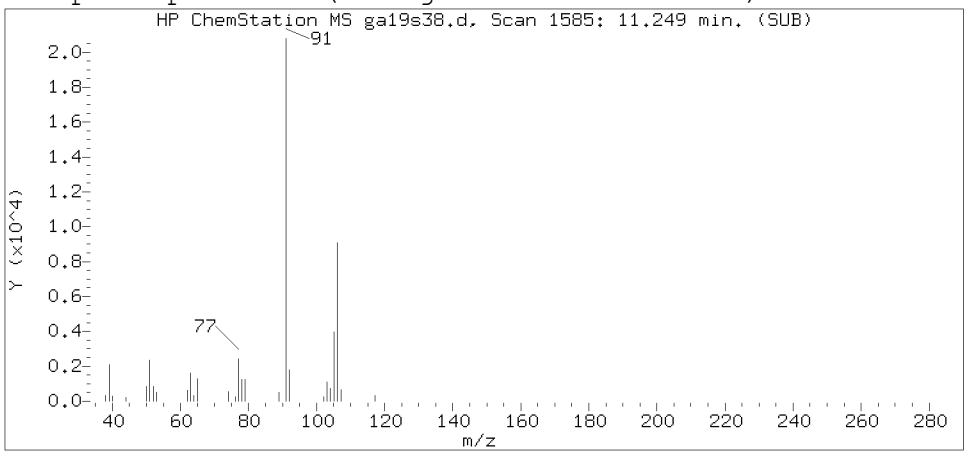
Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 784
Retention Time (minutes)	: 6.366
Relative Retention Time	: 0.00000
Quant Ion	: 83.00
Area (flag)	: 287668
On-Column Amount (ng)	: 3.1966

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

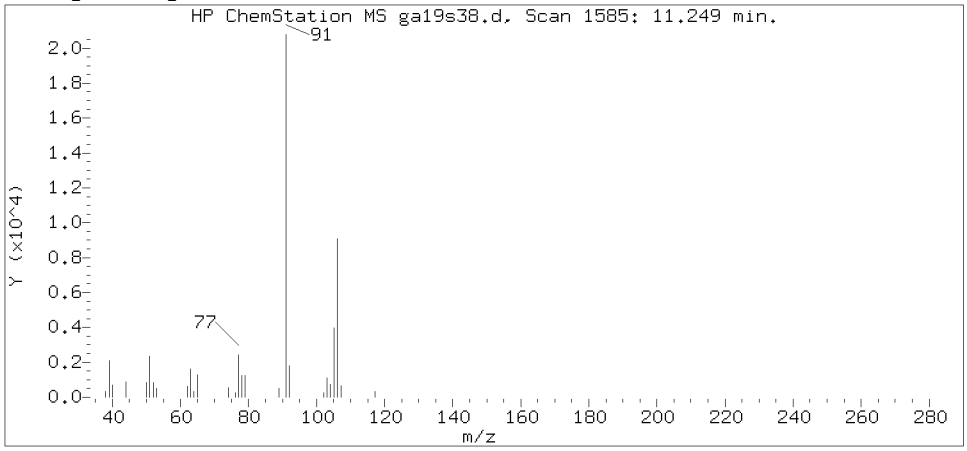
Reference Standard Spectrum for m+p-Xylene

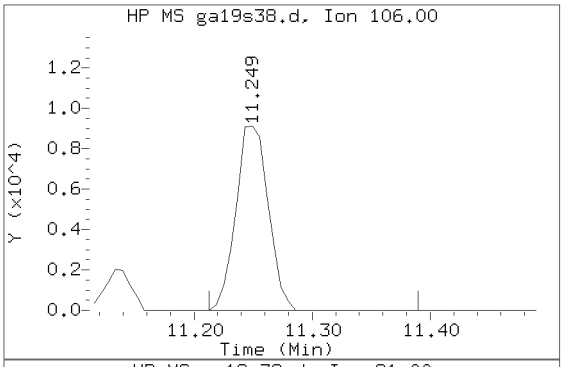


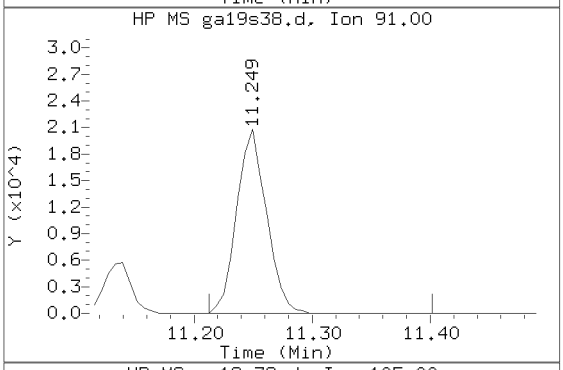
Sample Spectrum (Background Subtracted)

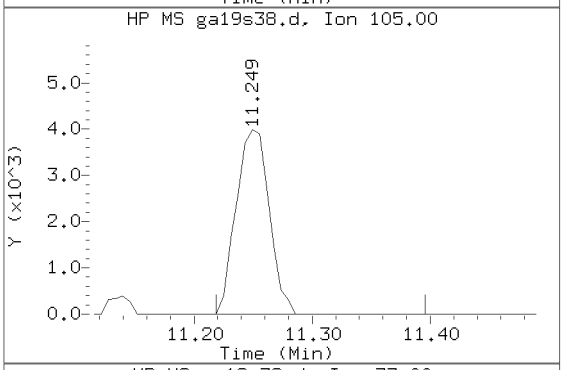


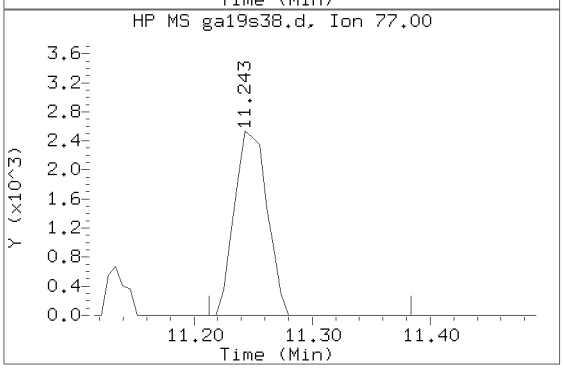
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s38.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:16 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:32 Automation

Sample Name: R0402 Lab Sample ID: 9553120

Compound Number : 101
Compound Name : m+p-Xylene
Scan Number : 1585
Retention Time (minutes): 11.249
Relative Retention Time :-0.00000
Quant Ion : 106.00
Area (flag) : 17423
On-Column Amount (ng) : 0.1859

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9553121

Data file: /chem2/HP16334.i/18apr19b.b/ga19s34.d Injection date and time: **20-APR-2018 02:47**
Data file Sample Info. Line: R0403;9553121;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(0.000)	389	65	174904	(-16)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1846099	(-12)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1407871	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	790688	(-13)	10.00	

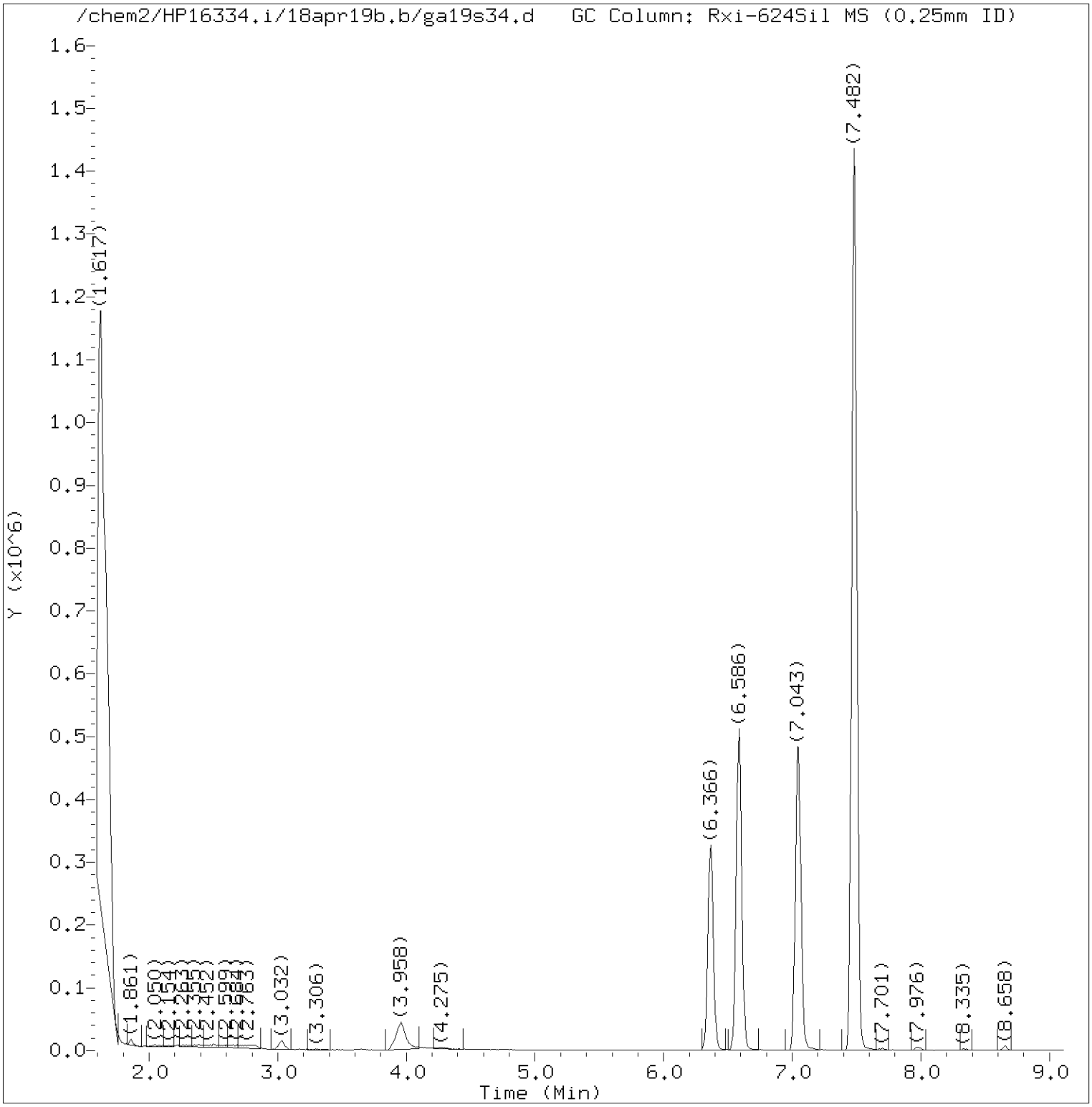
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	459733	9.903	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.000)	102	97078	9.868	99%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1886356	9.991	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	718387	9.940	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.366	(0.000)	83	389442	4.497	4.50			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)	11.249	(-0.000)	106	12312	0.136	0.14		J	0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:52. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

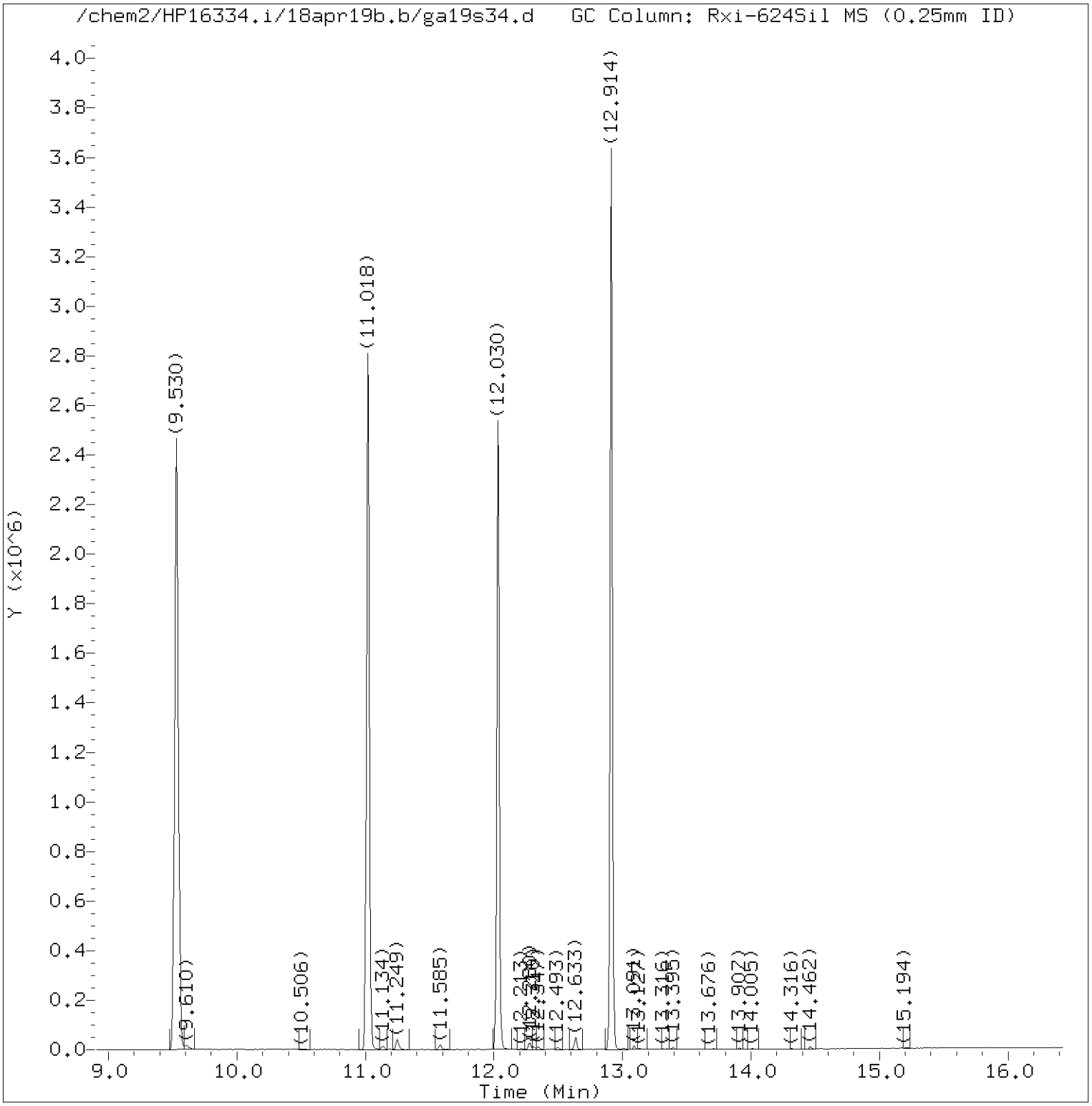
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s34.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:47 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

Sample Name: R0403 Lab Sample ID: 9553121

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s34.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:47 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

Sample Name: R0403 Lab Sample ID: 9553121

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s34.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:47 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

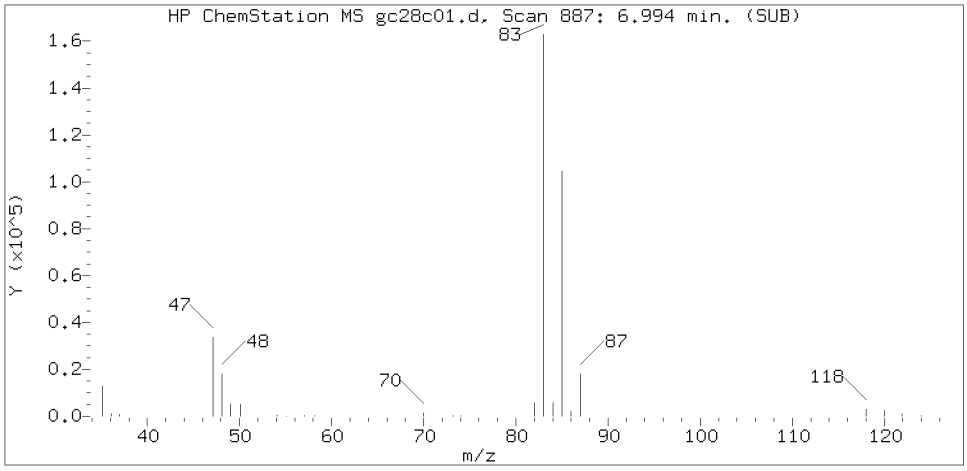
Sample Name: R0403 Lab Sample ID: 9553121

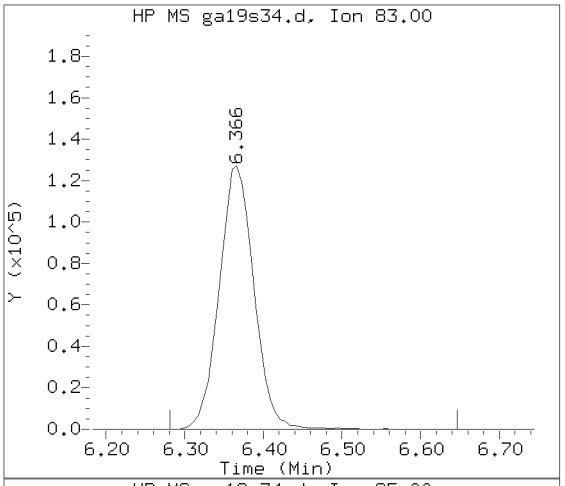
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.958	65	174904	50.000
49) Chloroform	(2)	6.366	83	389442	4.497
50)$Dibromofluoromethane	(2)	6.586	113	459733	9.903
57)$1,2-Dichloroethane-d4	(2)	7.049	102	97078	9.868
63)*Fluorobenzene	(2)	7.482	96	1846099	10.000
82)$Toluene-d8	(3)	9.530	98	1886356	9.991
97)*Chlorobenzene-d5	(3)	11.018	117	1407871	10.000
101) m+p-Xylene	(3)	11.249	106	12312	0.136
111)$4-Bromofluorobenzene	(3)	12.030	95	718387	9.940
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	790688	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

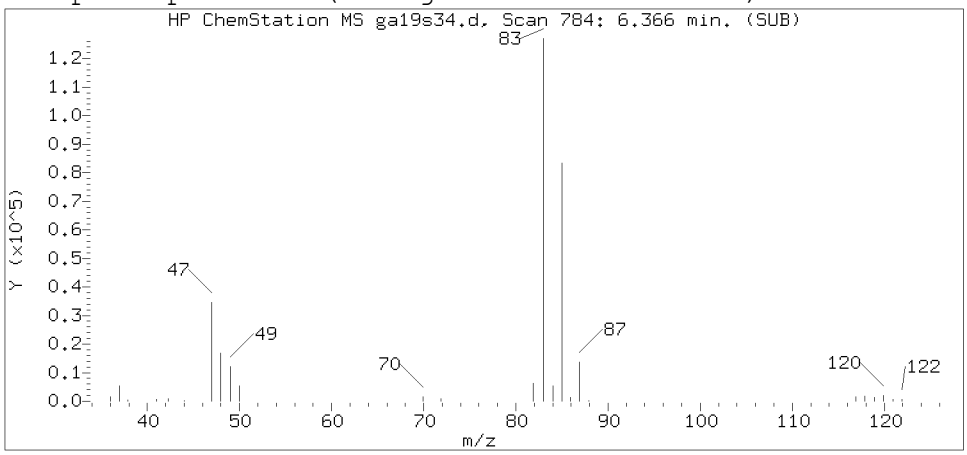
Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

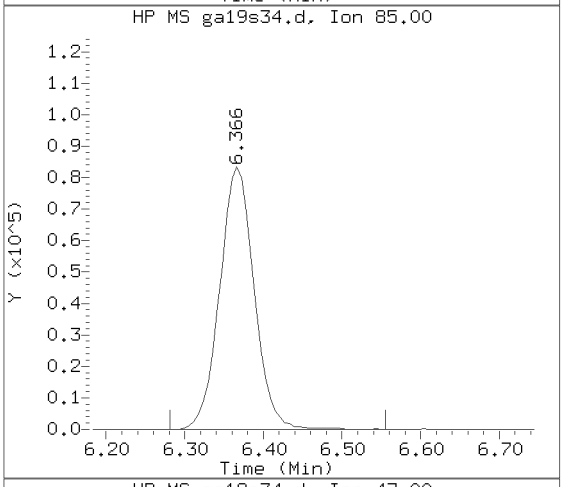
Reference Standard Spectrum for Chloroform



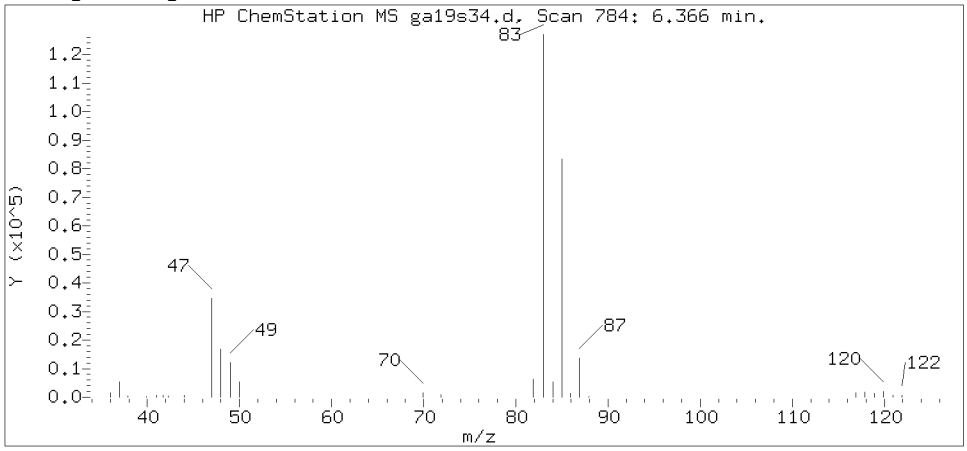


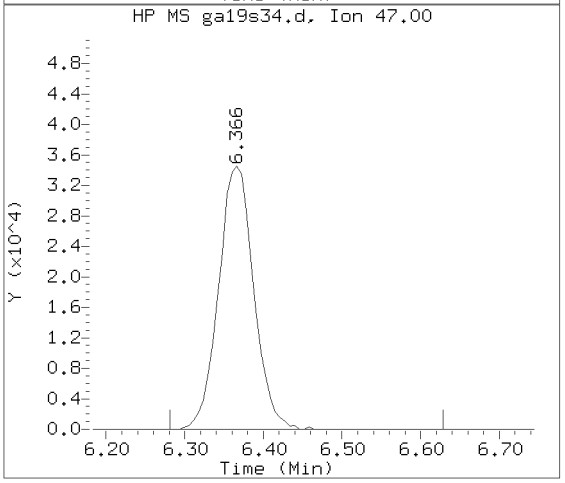
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s34.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:47 Analyst ID: MSK07970

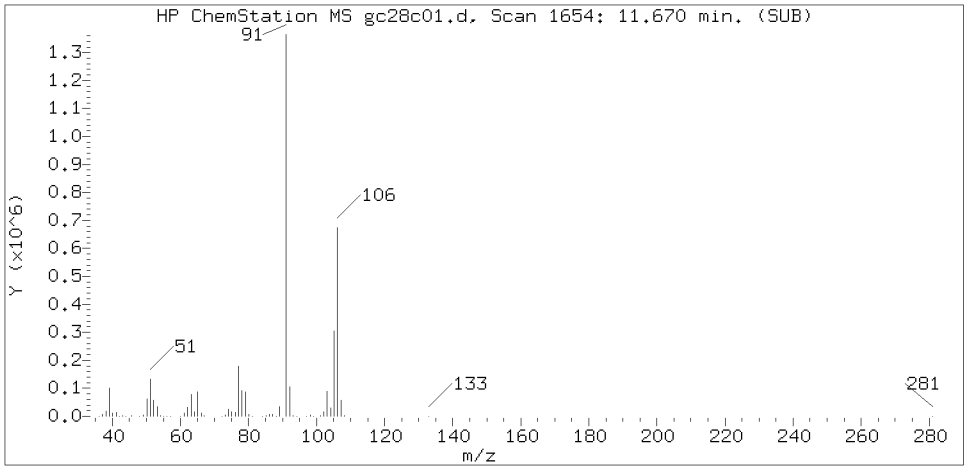
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

Sample Name: R0403 Lab Sample ID: 9553121

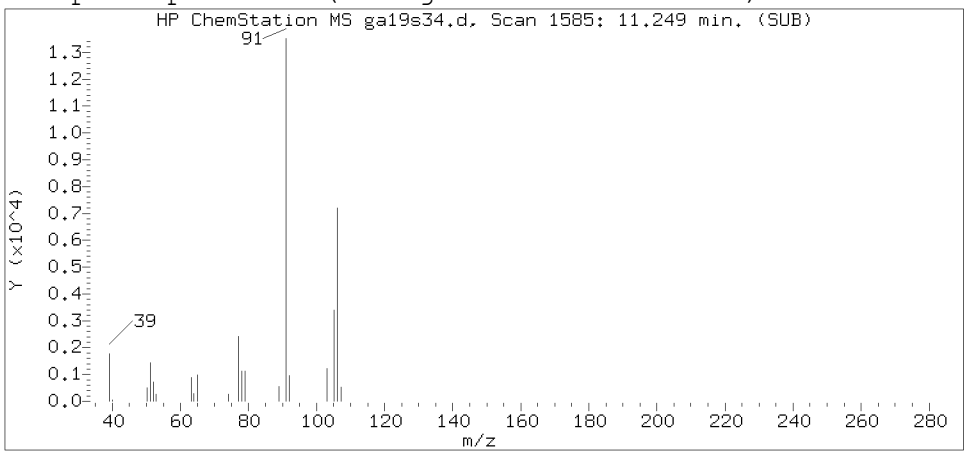
Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 784
Retention Time (minutes)	: 6.366
Relative Retention Time	: 0.00000
Quant Ion	: 83.00
Area (flag)	: 389442
On-Column Amount (ng)	: 4.4971

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

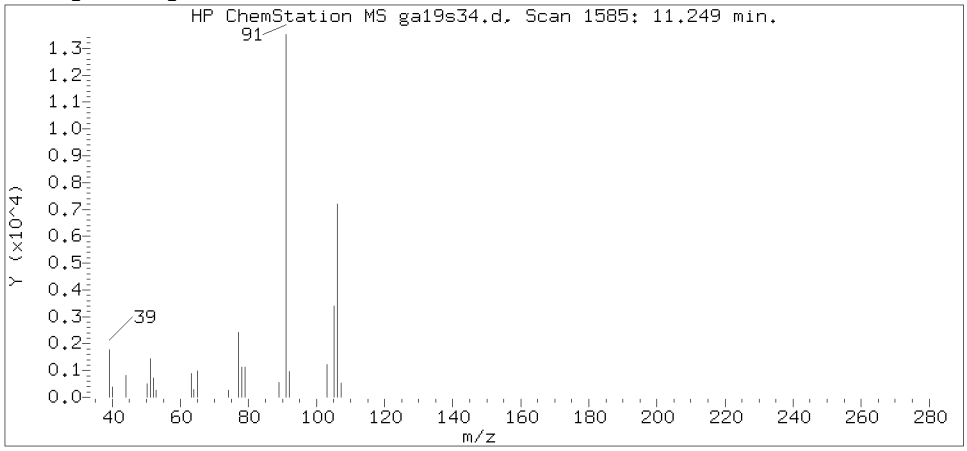
Reference Standard Spectrum for m+p-Xylene

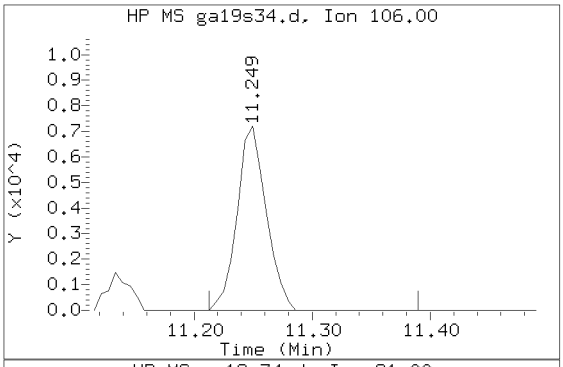


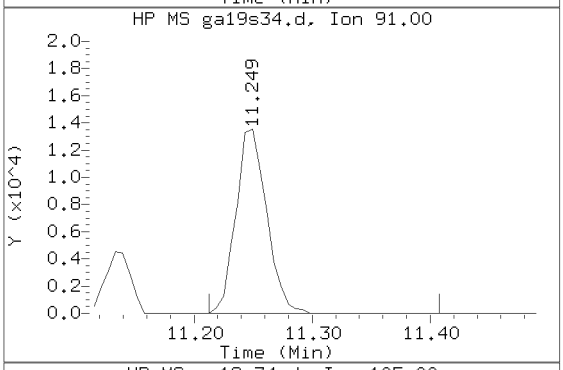
Sample Spectrum (Background Subtracted)

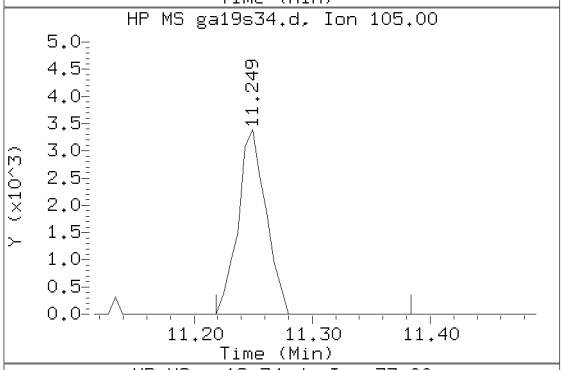


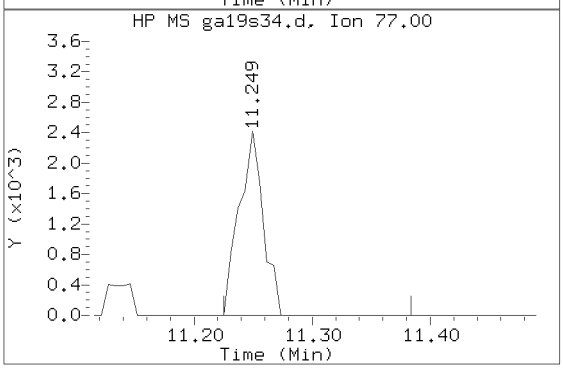
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s34.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:47 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 03:03 Automation

Sample Name: R0403 Lab Sample ID: 9553121

Compound Number : 101
Compound Name : m+p-Xylene
Scan Number : 1585
Retention Time (minutes): 11.249
Relative Retention Time :-0.00000
Quant Ion : 106.00
Area (flag) : 12312
On-Column Amount (ng) : 0.1361

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr19b.b/ga19s39.d Injection date and time: **20-APR-2018 04:42**
Data file Sample Info. Line: R0404;9553124;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.006)	388	65	175295	(-15)	50.00	
63) Fluorobenzene	7.476	(0.006)	966	96	1860148	(-11)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1411198	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	796213	(-13)	10.00	

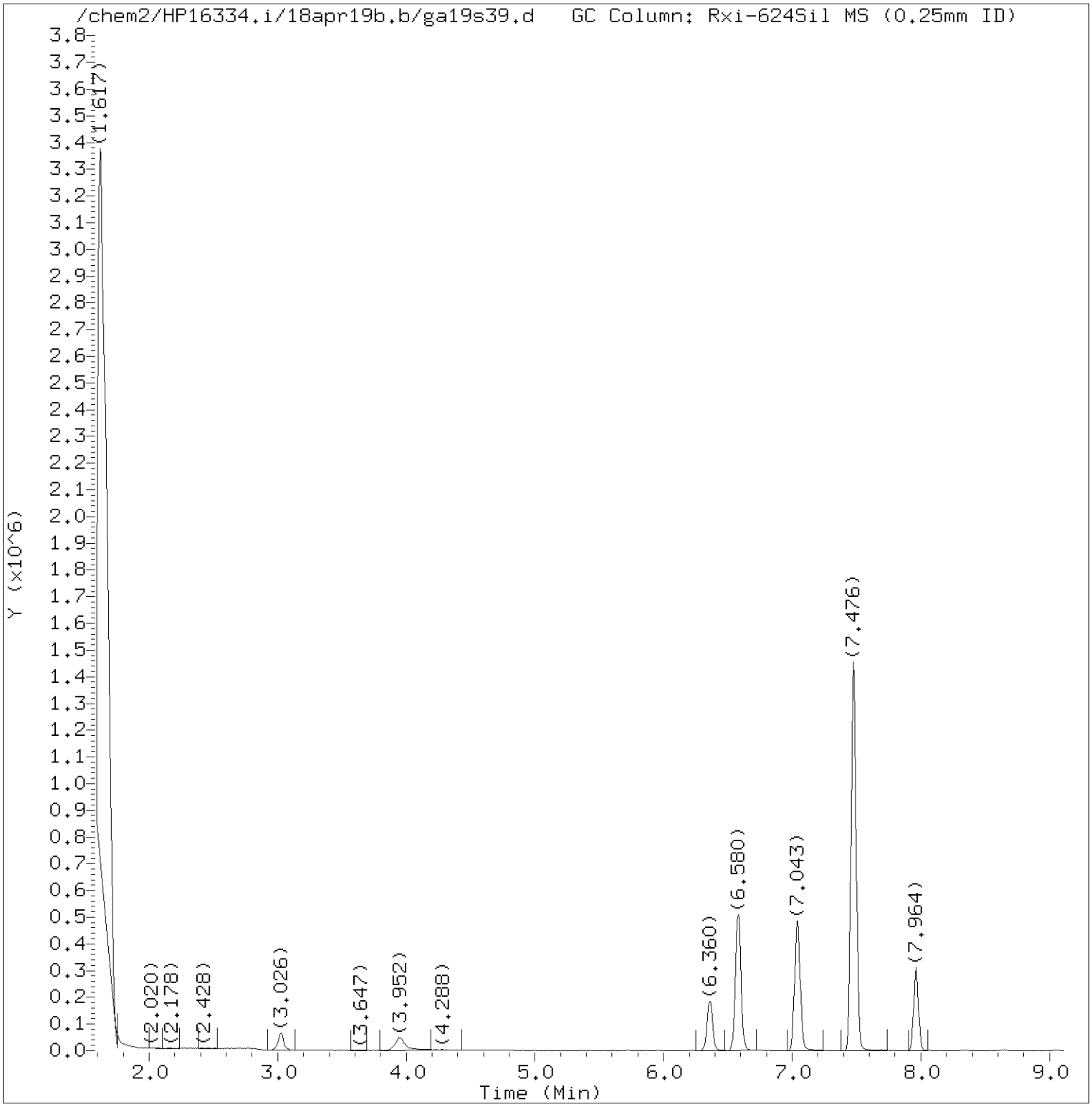
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.000)	113	464300	9.926	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.000)	102	97877	9.874	99%		80 - 120
82) Toluene-d8	(3)	9.524	(0.001)	98	1898929	10.034	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	719291	9.929	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.026	(0.000)	59	60252	1.537	1.54		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.360	(0.000)	83	224812	2.576	2.58			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	7.964	(-0.000)	95	135969	2.715	2.71			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

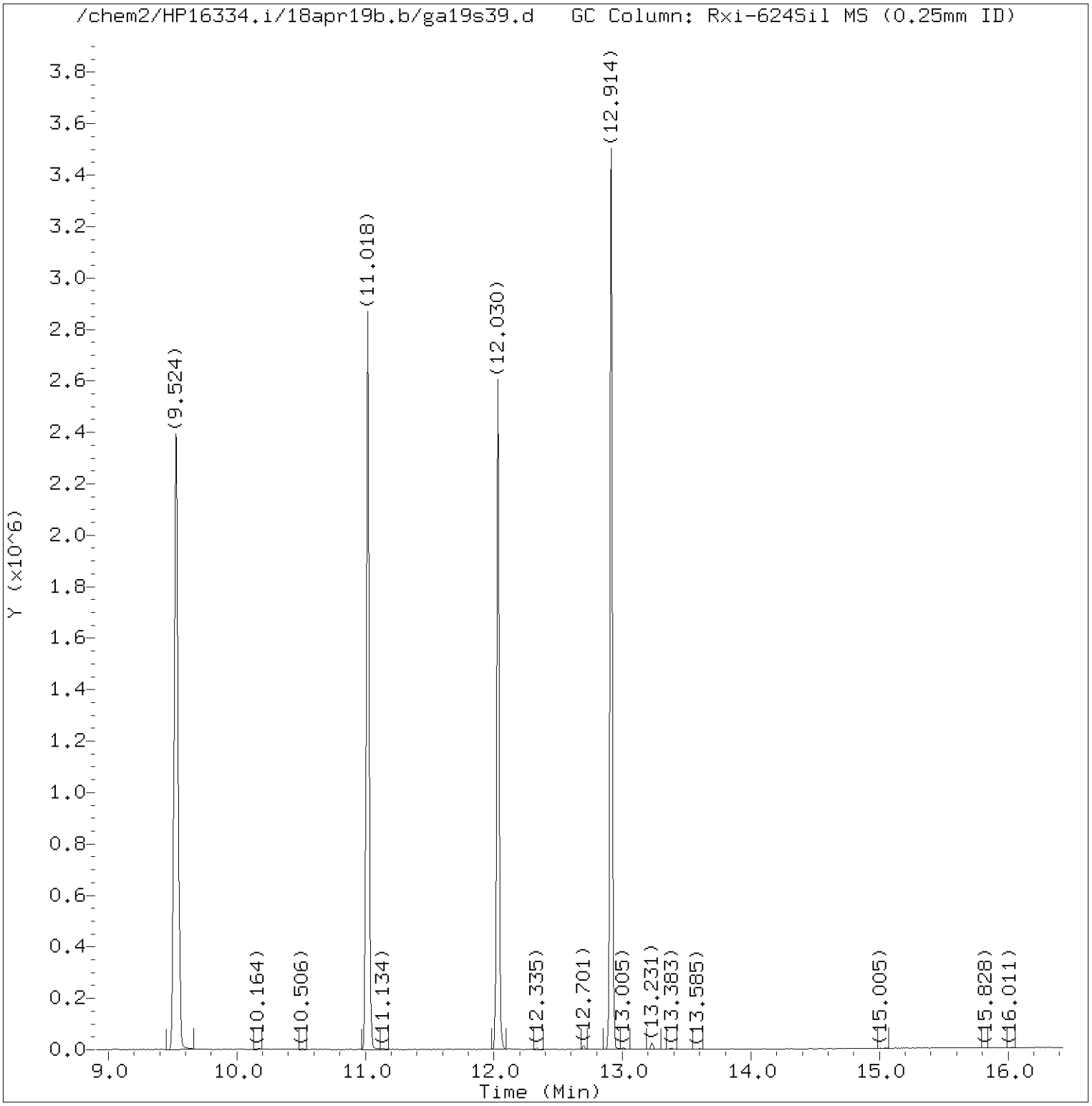
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.026	59	60252	1.537
26)*t-Butyl Alcohol-d10	(1)	3.952	65	175295	50.000
49) Chloroform	(2)	6.360	83	224812	2.576
50)$Dibromofluoromethane	(2)	6.580	113	464300	9.926
57)$1,2-Dichloroethane-d4	(2)	7.043	102	97877	9.874
63)*Fluorobenzene	(2)	7.476	96	1860148	10.000
67) Trichloroethene	(2)	7.964	95	135969	2.715
82)$Toluene-d8	(3)	9.524	98	1898929	10.034
97)*Chlorobenzene-d5	(3)	11.018	117	1411198	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	719291	9.929
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	796213	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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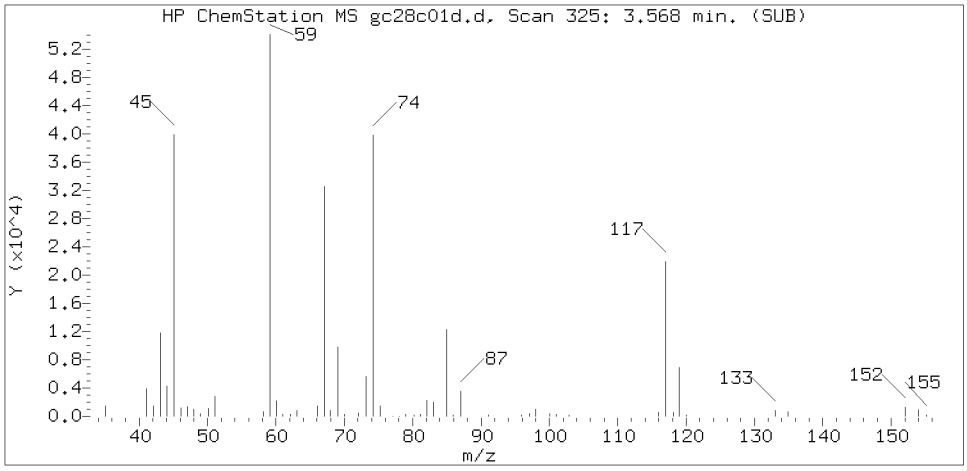
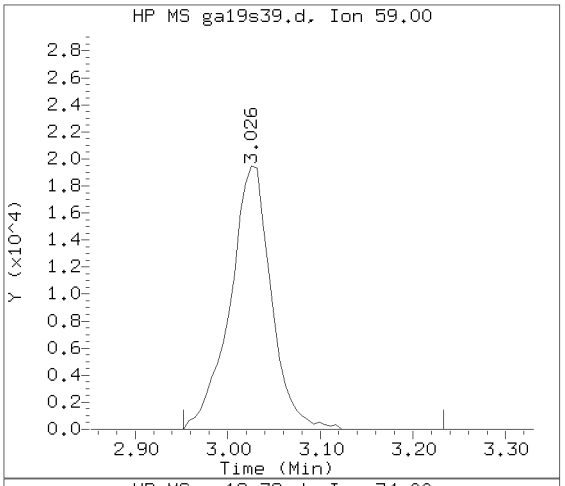
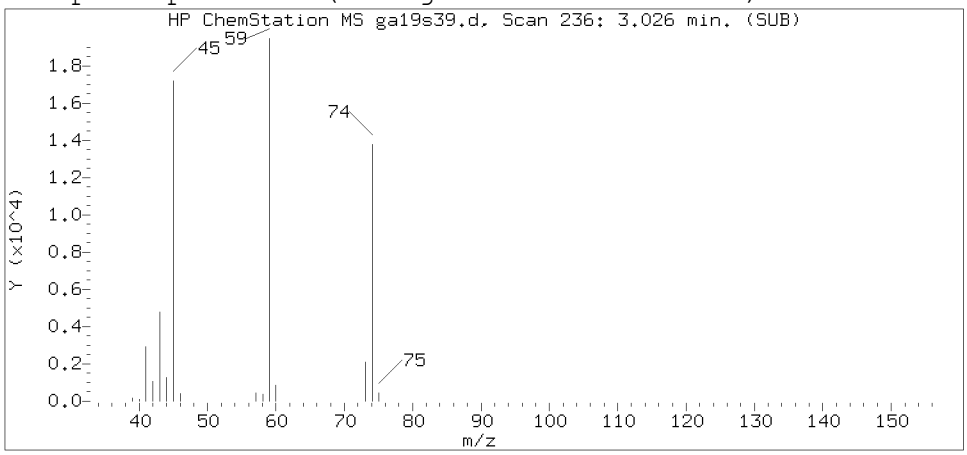
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

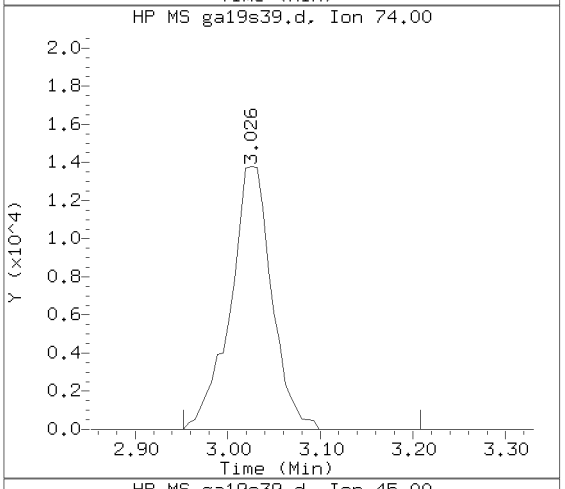
Reference Standard Spectrum for Ethyl ether



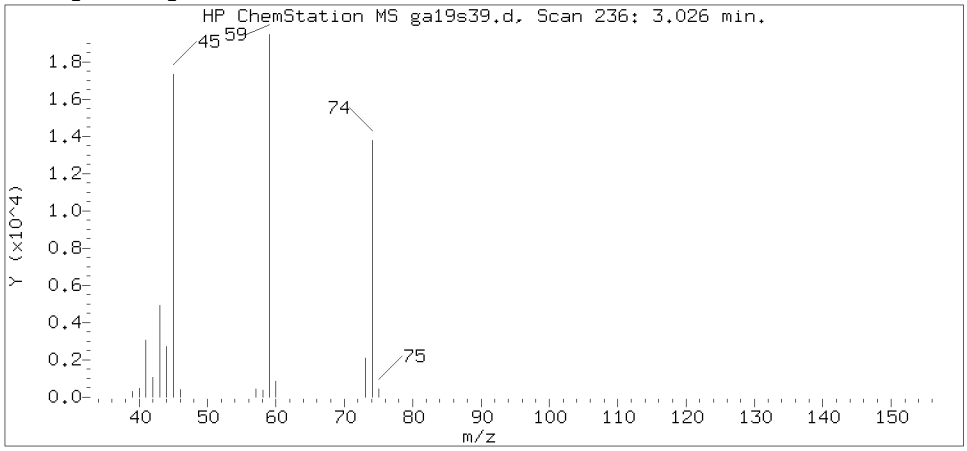


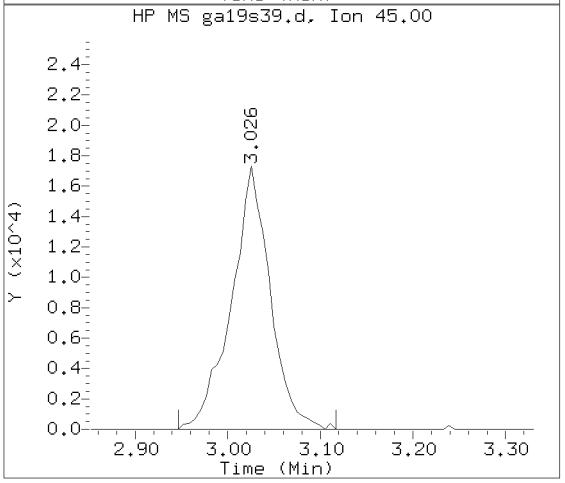
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 236
Retention Time (minutes)	: 3.026
Relative Retention Time	: 0.00048
Quant Ion	: 59.00
Area (flag)	: 60252
On-Column Amount (ng)	: 1.5373

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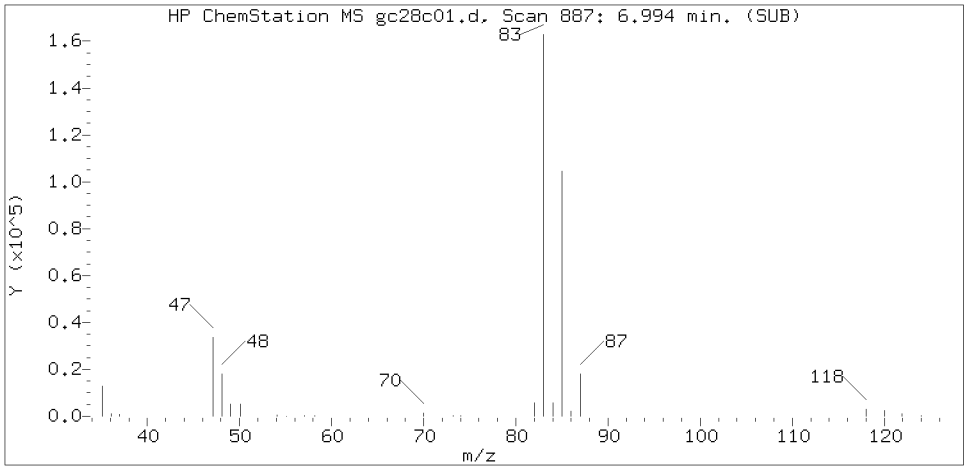
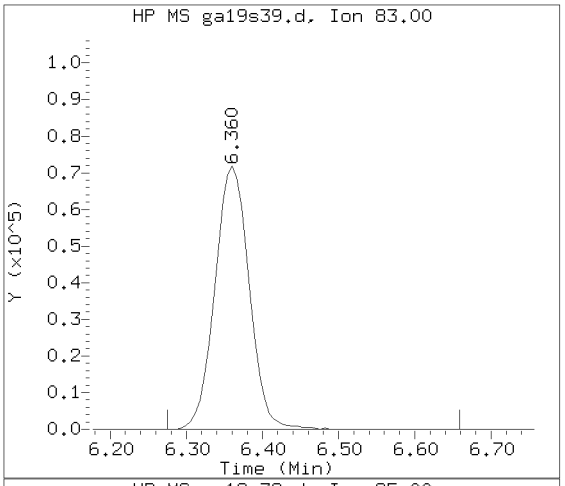
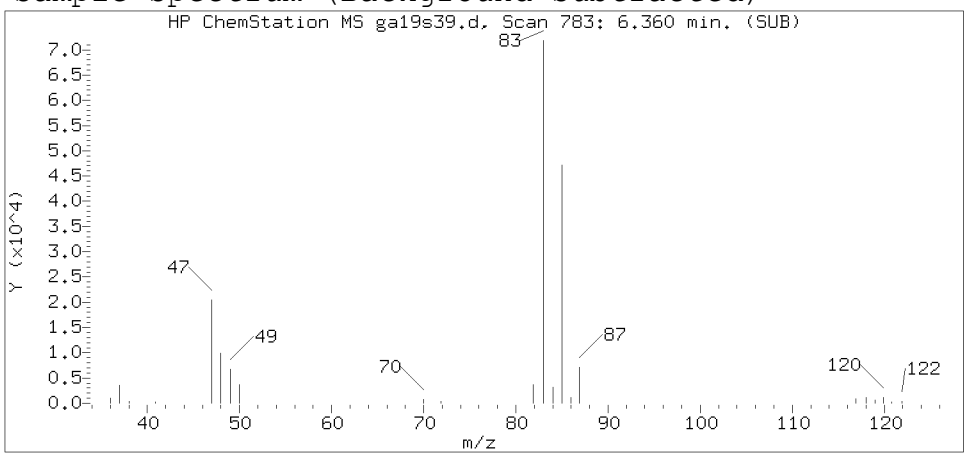
Target 3.5 esignature user ID: jkh09052

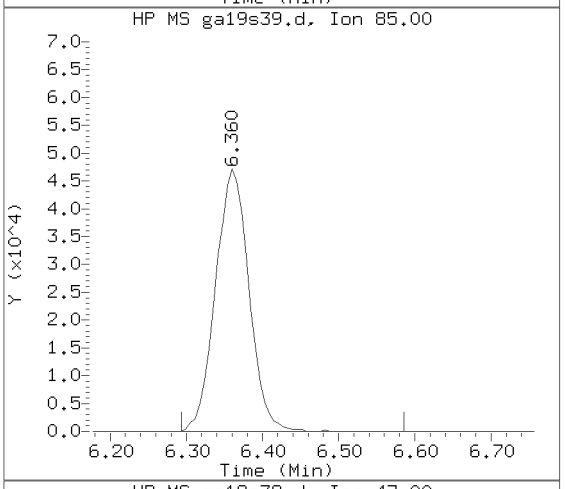
Reference Standard Spectrum for Chloroform



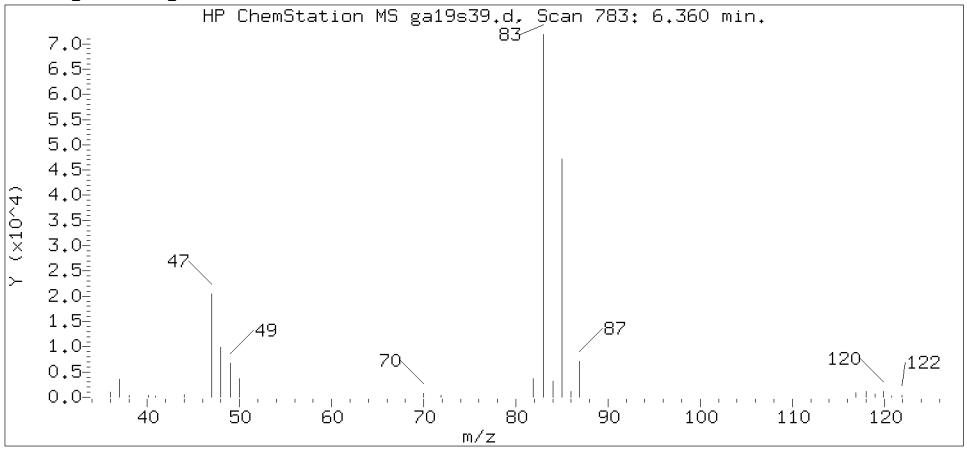


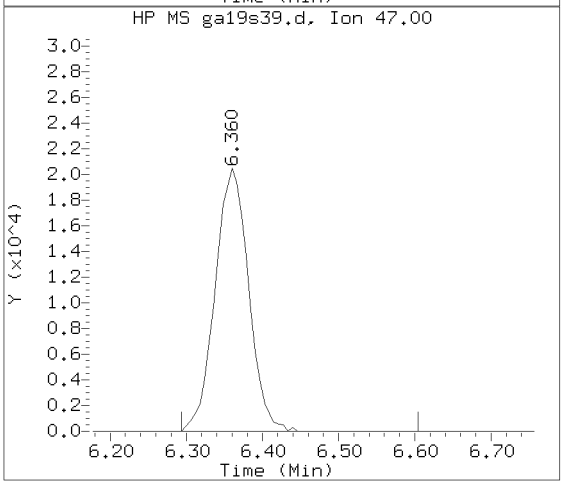
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 783
Retention Time (minutes)	: 6.360
Relative Retention Time	: 0.00012
Quant Ion	: 83.00
Area (flag)	: 224812
On-Column Amount (ng)	: 2.5764

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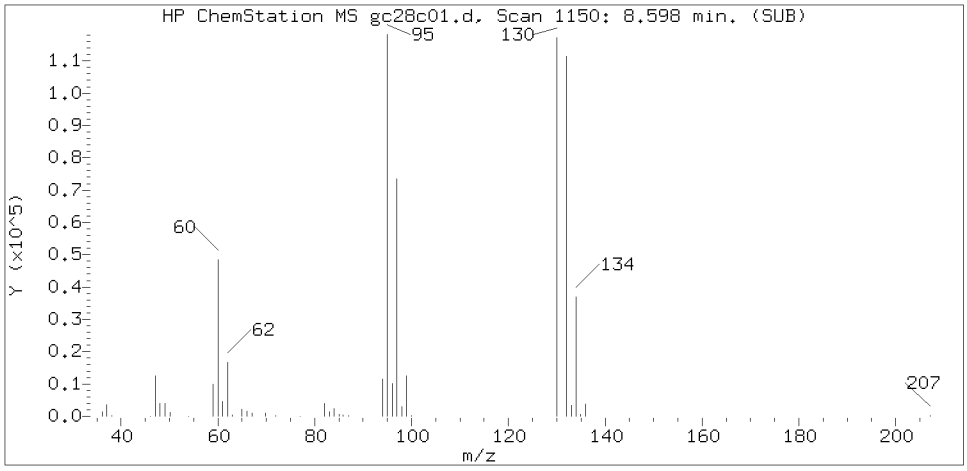
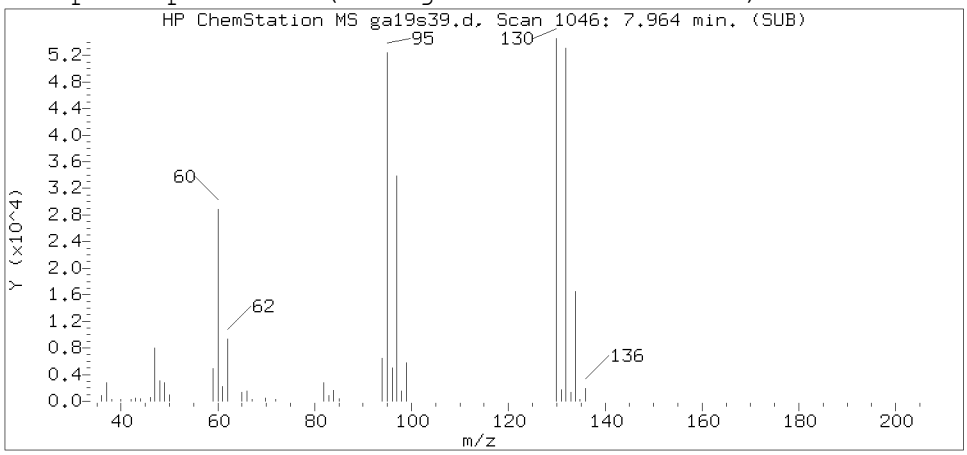
Target 3.5 esignature user ID: jkh09052

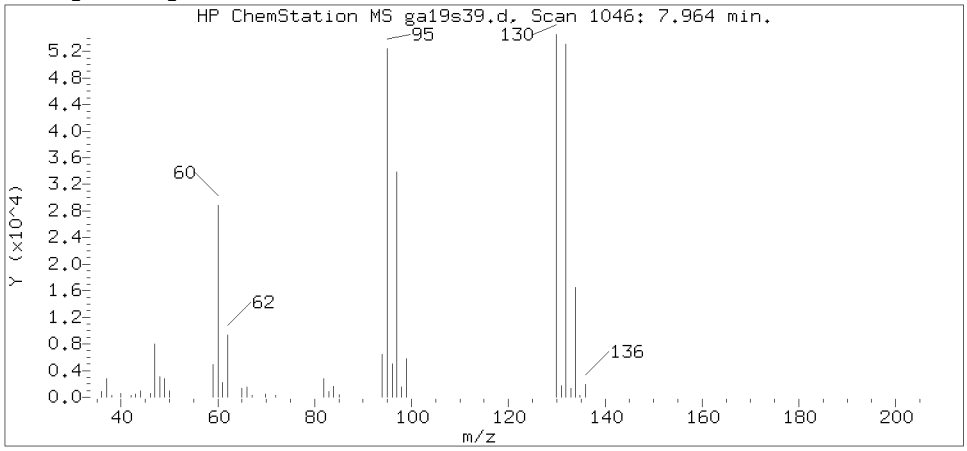
Reference Standard Spectrum for Trichloroethene

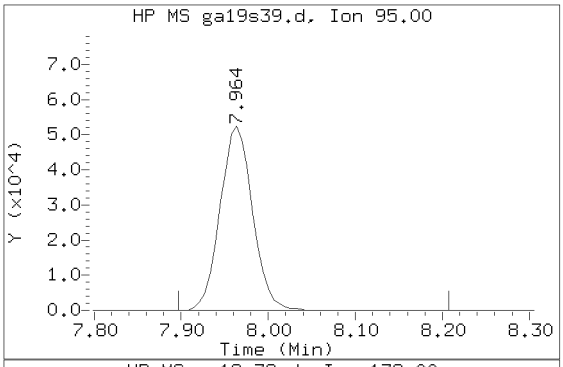


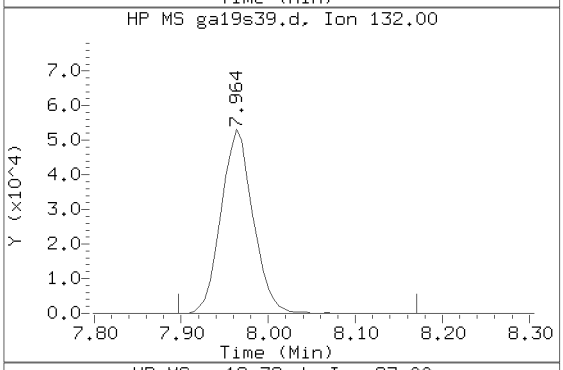
Sample Spectrum (Background Subtracted)

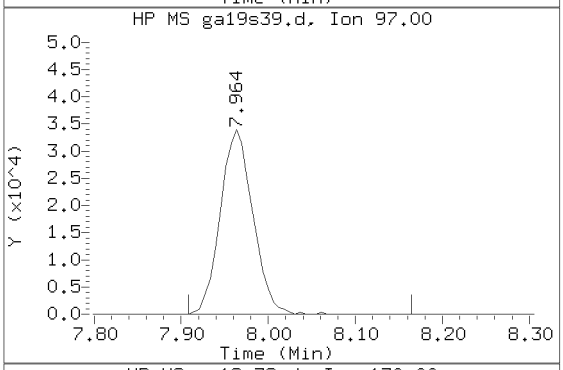


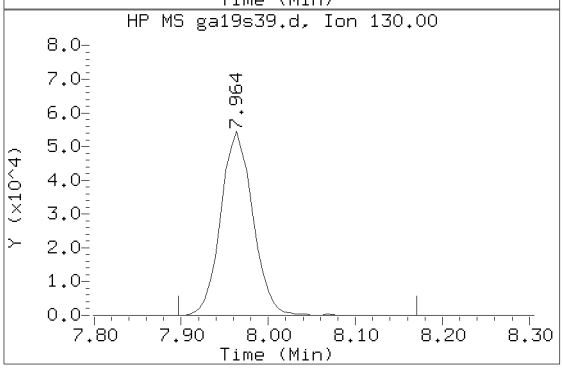
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s39.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 04:42 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 04:58 Automation

Sample Name: R0404 Lab Sample ID: 9553124

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1046
Retention Time (minutes): 7.964
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 135969
On-Column Amount (ng) : 2.7146

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Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr19b.b/ga19s40.d Injection date and time: **20-APR-2018 05:04**
Data file Sample Info. Line: R0405;9553125;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.006)	388	65	172023	(-17)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1873318	(-10)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1412831	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	801559	(-12)	10.00	

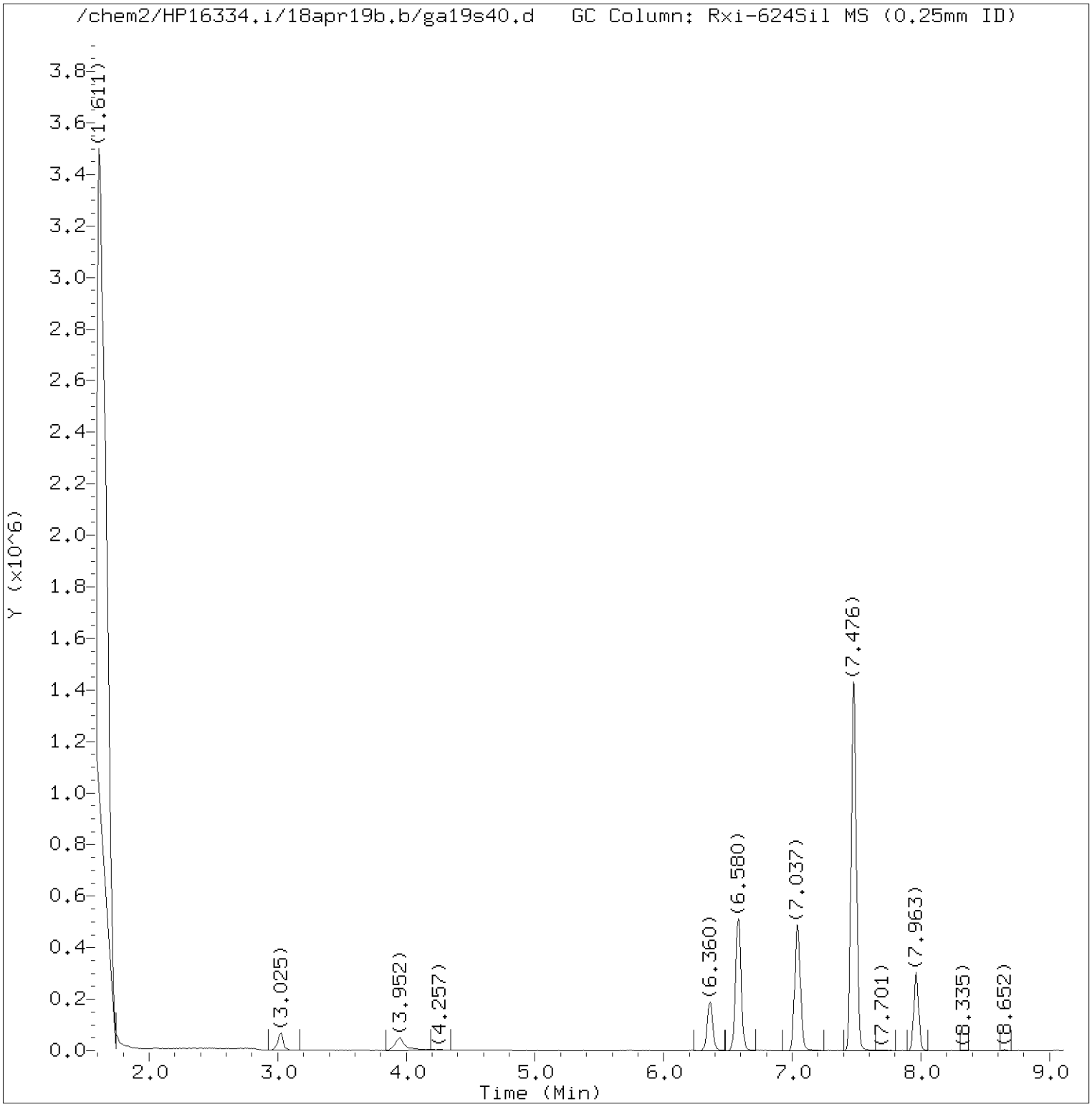
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.001)	113	468352	9.942	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.037	(0.002)	102	97908	9.808	98%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1900939	10.033	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	717948	9.899	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.025	(0.000)	59	60614	1.536	1.54		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.360	(0.000)	83	226768	2.581	2.58			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	7.964	(0.000)	95	138042	2.737	2.74			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

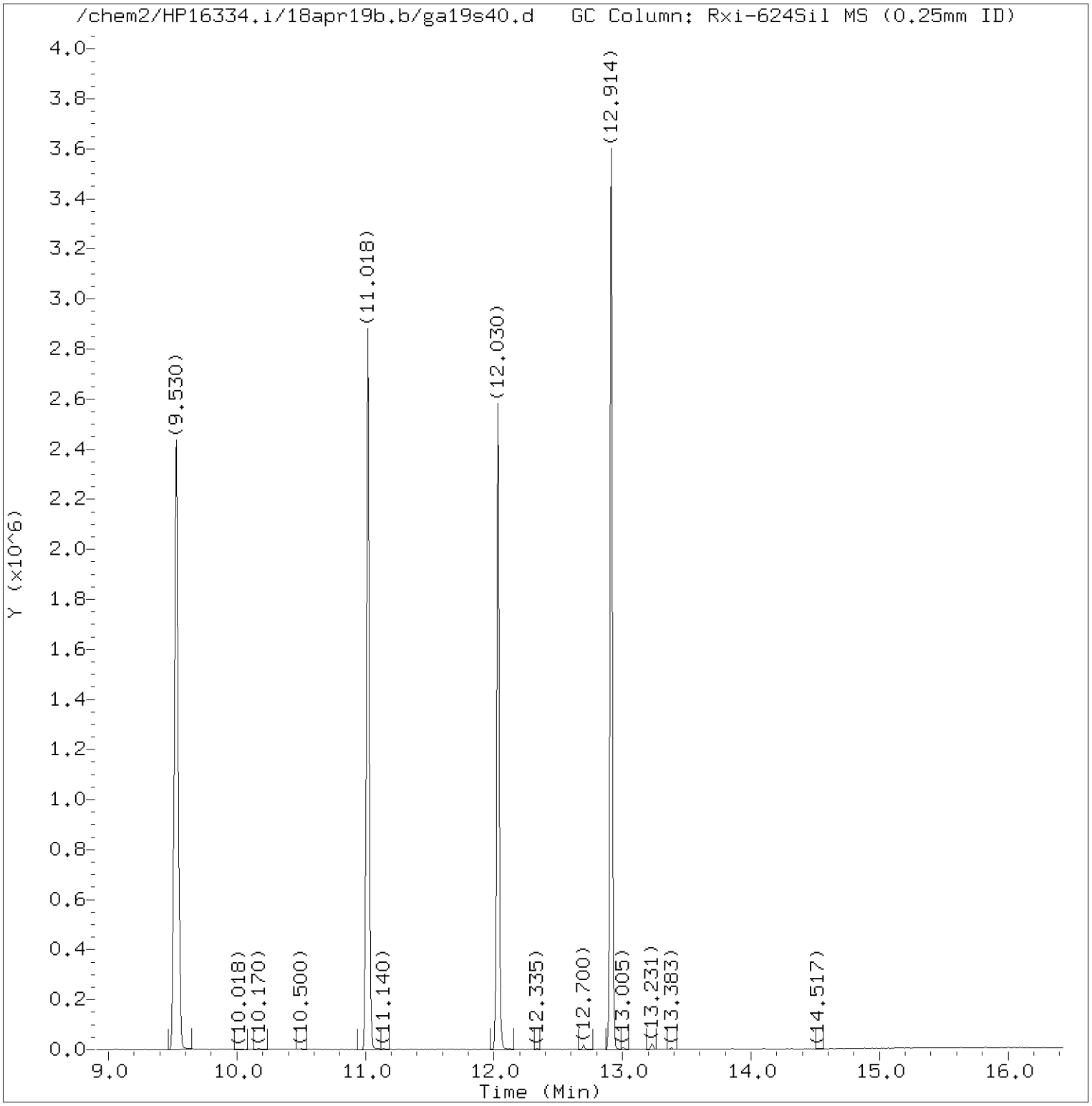
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

Sample Name: R0405 Lab Sample ID: 9553125

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

Sample Name: R0405 Lab Sample ID: 9553125

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

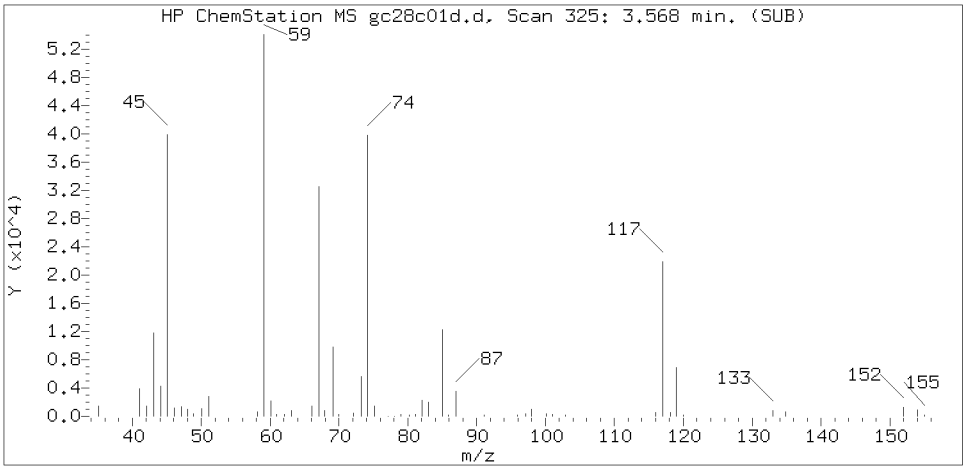
Sample Name: R0405 Lab Sample ID: 9553125

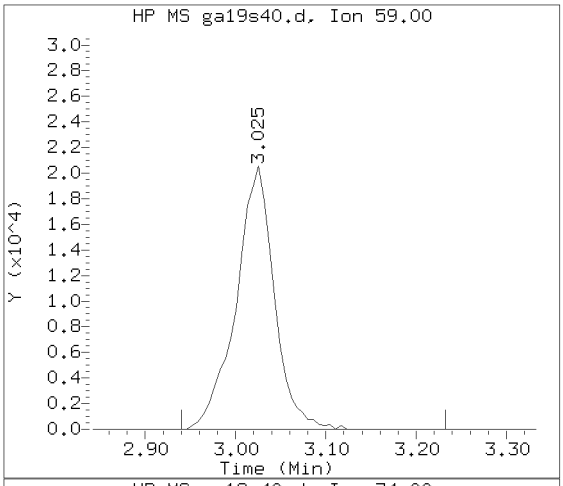
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.025	59	60614	1.536
26)*t-Butyl Alcohol-d10	(1)	3.952	65	172023	50.000
49) Chloroform	(2)	6.360	83	226768	2.581
50)$Dibromofluoromethane	(2)	6.580	113	468352	9.942
57)$1,2-Dichloroethane-d4	(2)	7.037	102	97908	9.808
63)*Fluorobenzene	(2)	7.482	96	1873318	10.000
67) Trichloroethene	(2)	7.963	95	138042	2.737
82)$Toluene-d8	(3)	9.530	98	1900939	10.033
97)*Chlorobenzene-d5	(3)	11.018	117	1412831	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	717948	9.899
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	801559	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

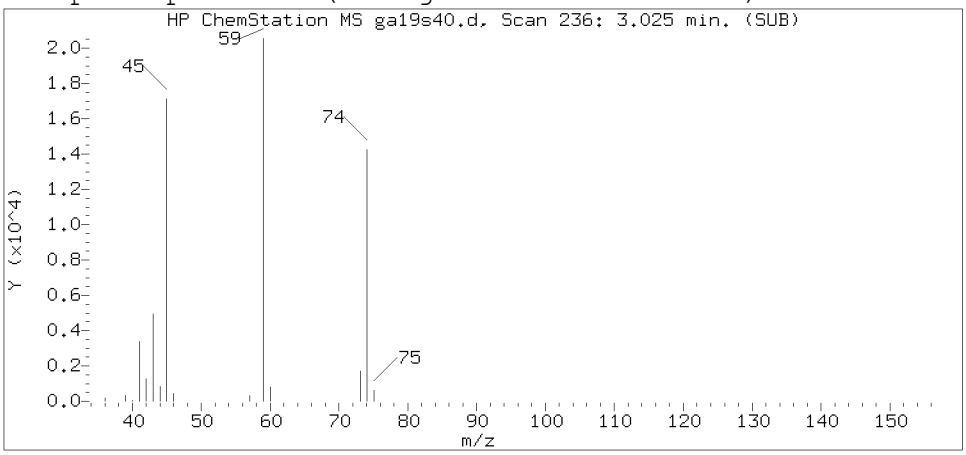
Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

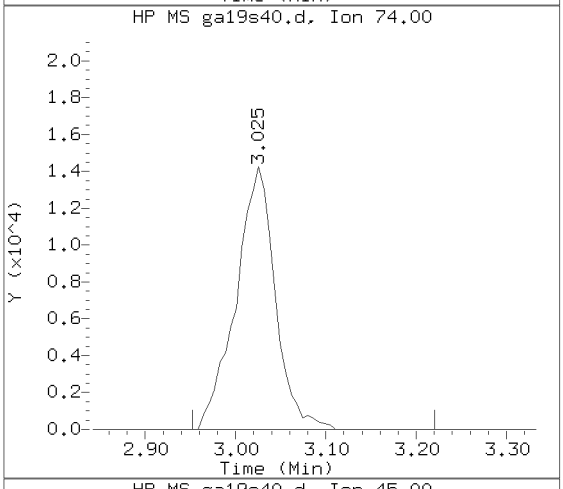
Reference Standard Spectrum for Ethyl ether



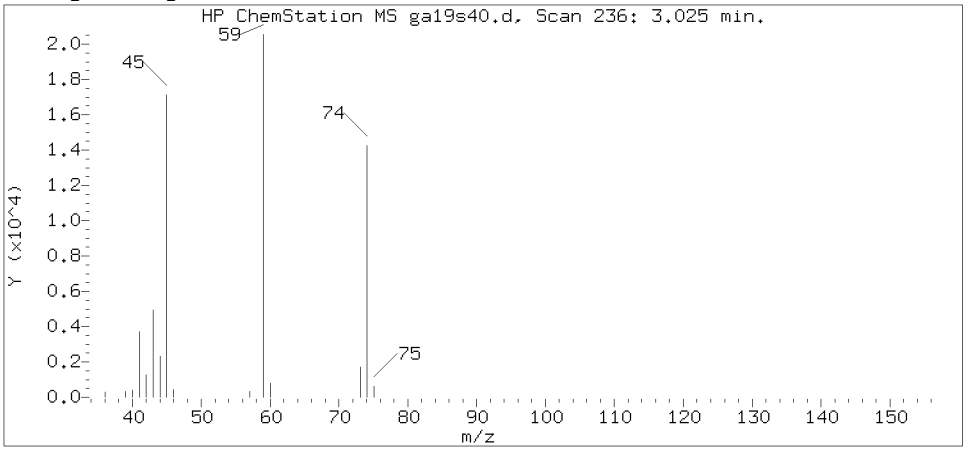


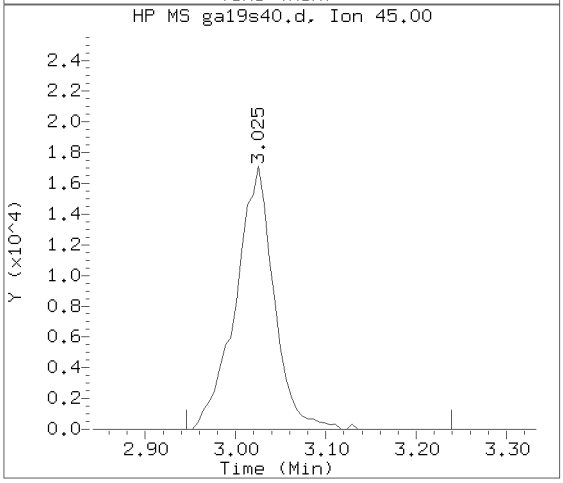
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

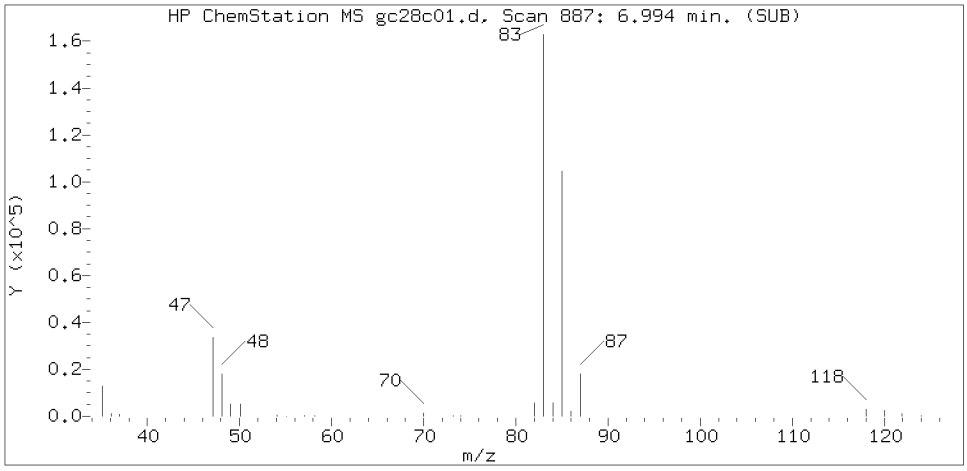
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

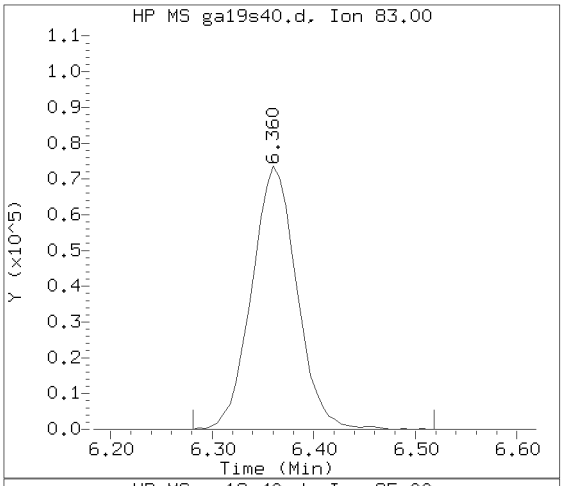
Sample Name: R0405 Lab Sample ID: 9553125

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 236
Retention Time (minutes)	: 3.025
Relative Retention Time	: 0.00082
Quant Ion	: 59.00
Area (flag)	: 60614
On-Column Amount (ng)	: 1.5356

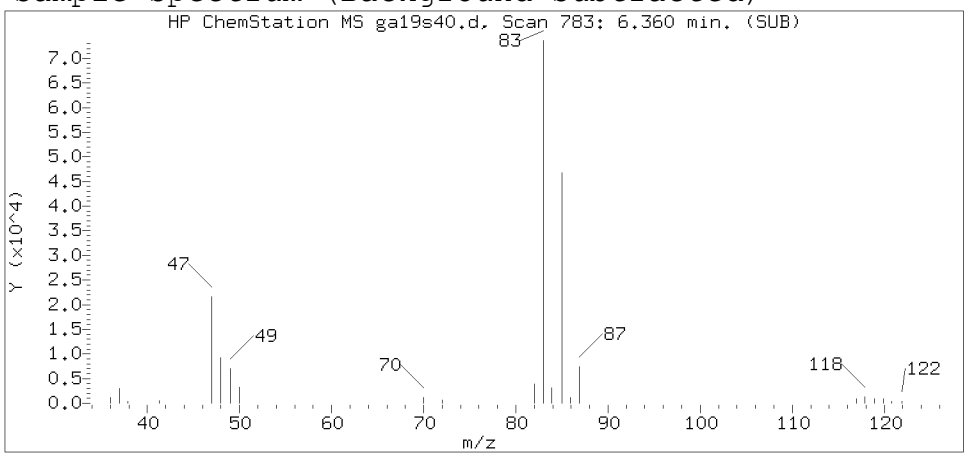
Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

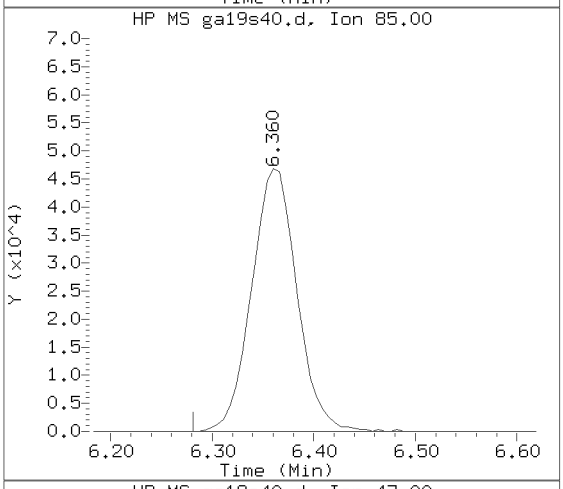
Reference Standard Spectrum for Chloroform



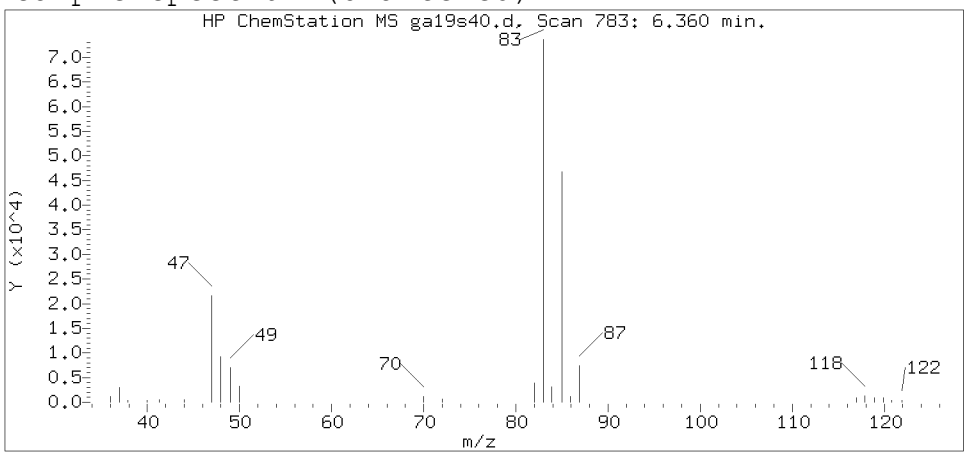


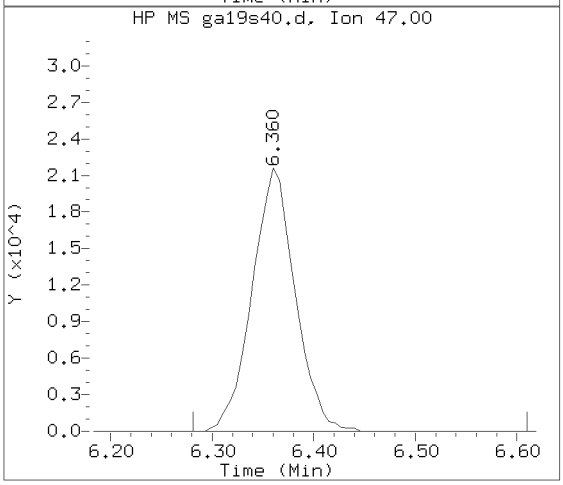
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

Sample Name: R0405 Lab Sample ID: 9553125

Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 783
Retention Time (minutes)	: 6.360
Relative Retention Time	: 0.00082
Quant Ion	: 83.00
Area (flag)	: 226768
On-Column Amount (ng)	: 2.5806

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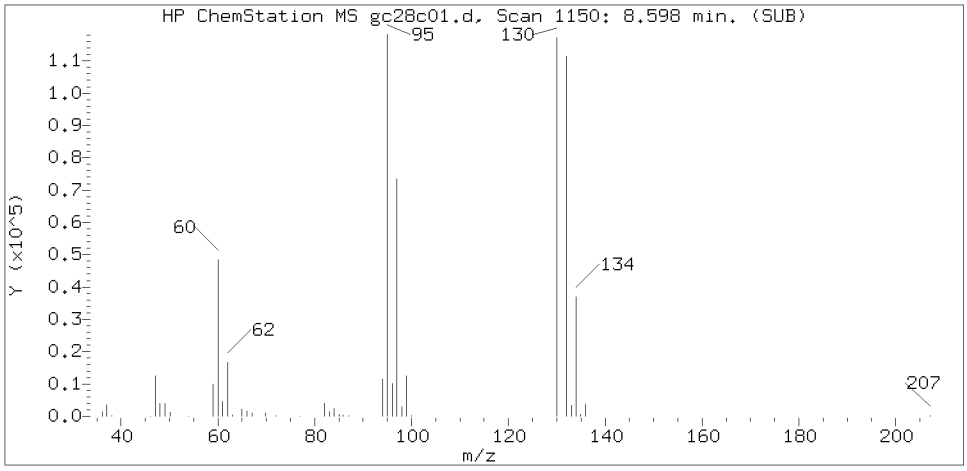
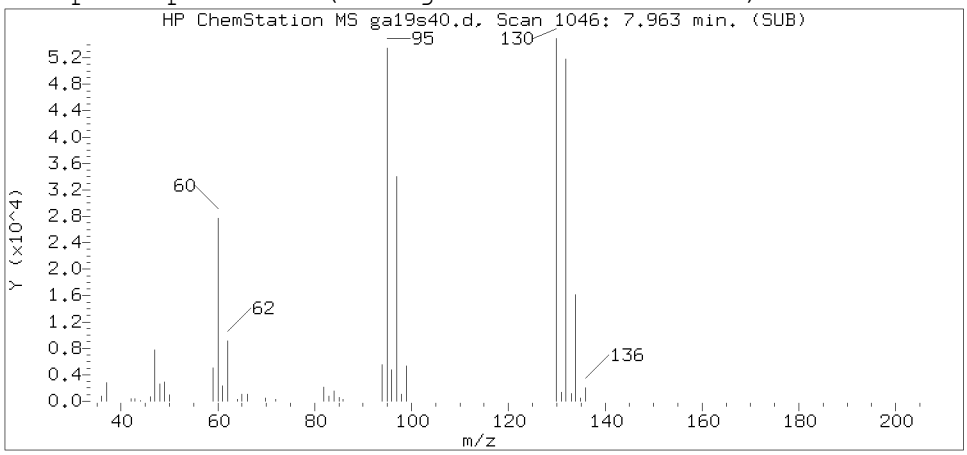
Target 3.5 esignature user ID: jkh09052

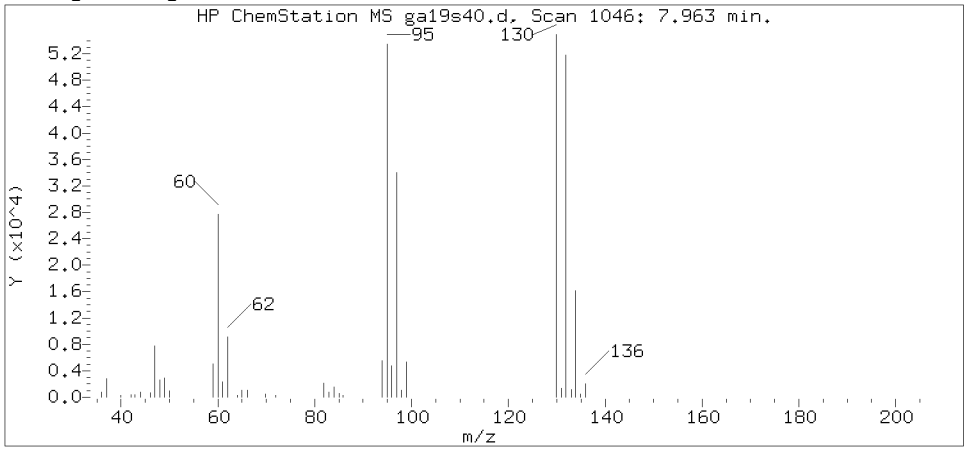
Reference Standard Spectrum for Trichloroethene

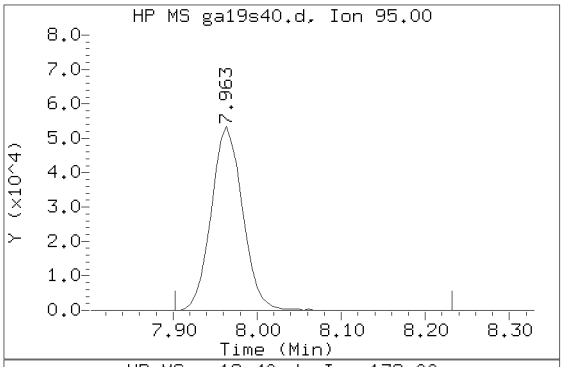


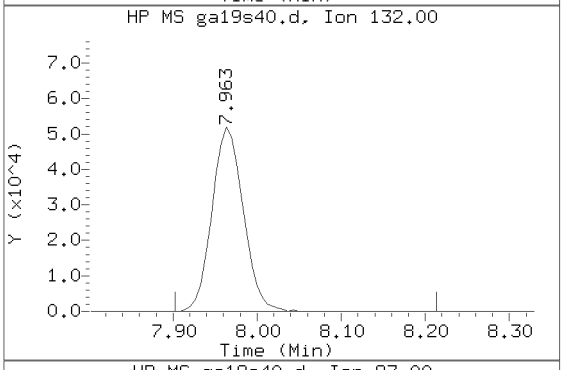
Sample Spectrum (Background Subtracted)

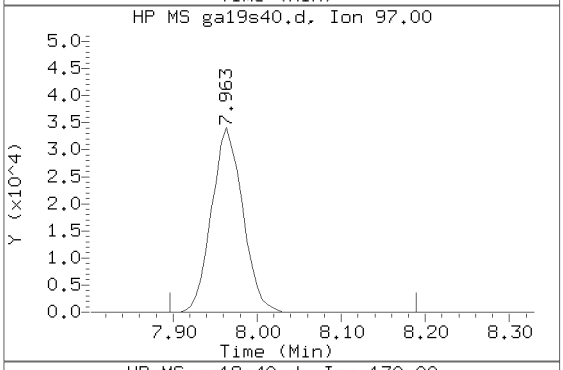


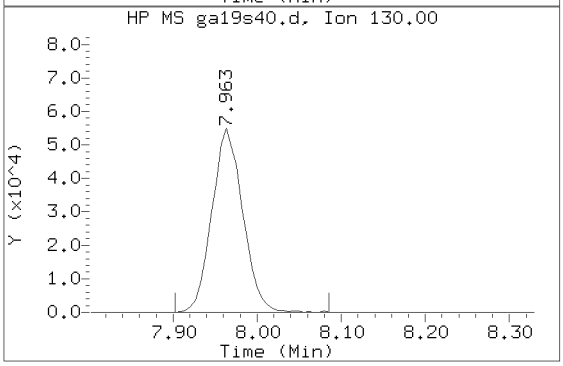
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s40.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:04 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:21 Automation

Sample Name: R0405 Lab Sample ID: 9553125

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1046
Retention Time (minutes)	: 7.963
Relative Retention Time	: 0.00081
Quant Ion	: 95.00
Area (flag)	: 138042
On-Column Amount (ng)	: 2.7366

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Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr19b.b/ga19s41.d Injection date and time: **20-APR-2018 05:26**
Data file Sample Info. Line: R0406;9553126;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(0.000)	389	65	179552	(-13)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1849385	(-12)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1407964	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	793468	(-13)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.001)	113	461887	9.932	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	97989	9.943	99%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1891309	10.016	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	717724	9.931	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.026	(0.000)	59	221041	5.672	5.67		J	0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.366	(-0.000)	83	118494	1.366	1.37			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	7.964	(0.000)	95	154353	3.100	3.10			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)	11.250	(-0.000)	106	10904	0.120	0.12		J	0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

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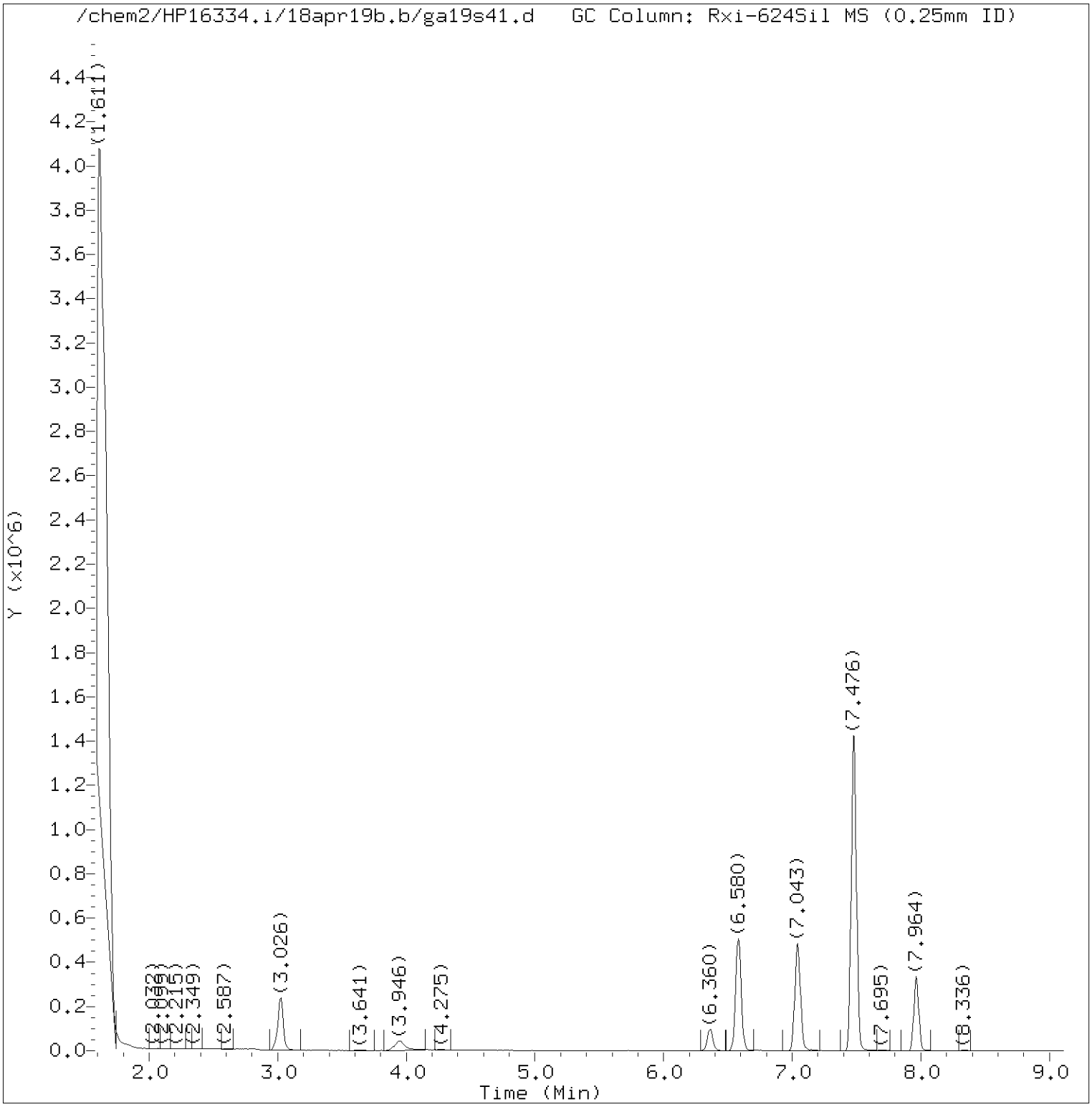
Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

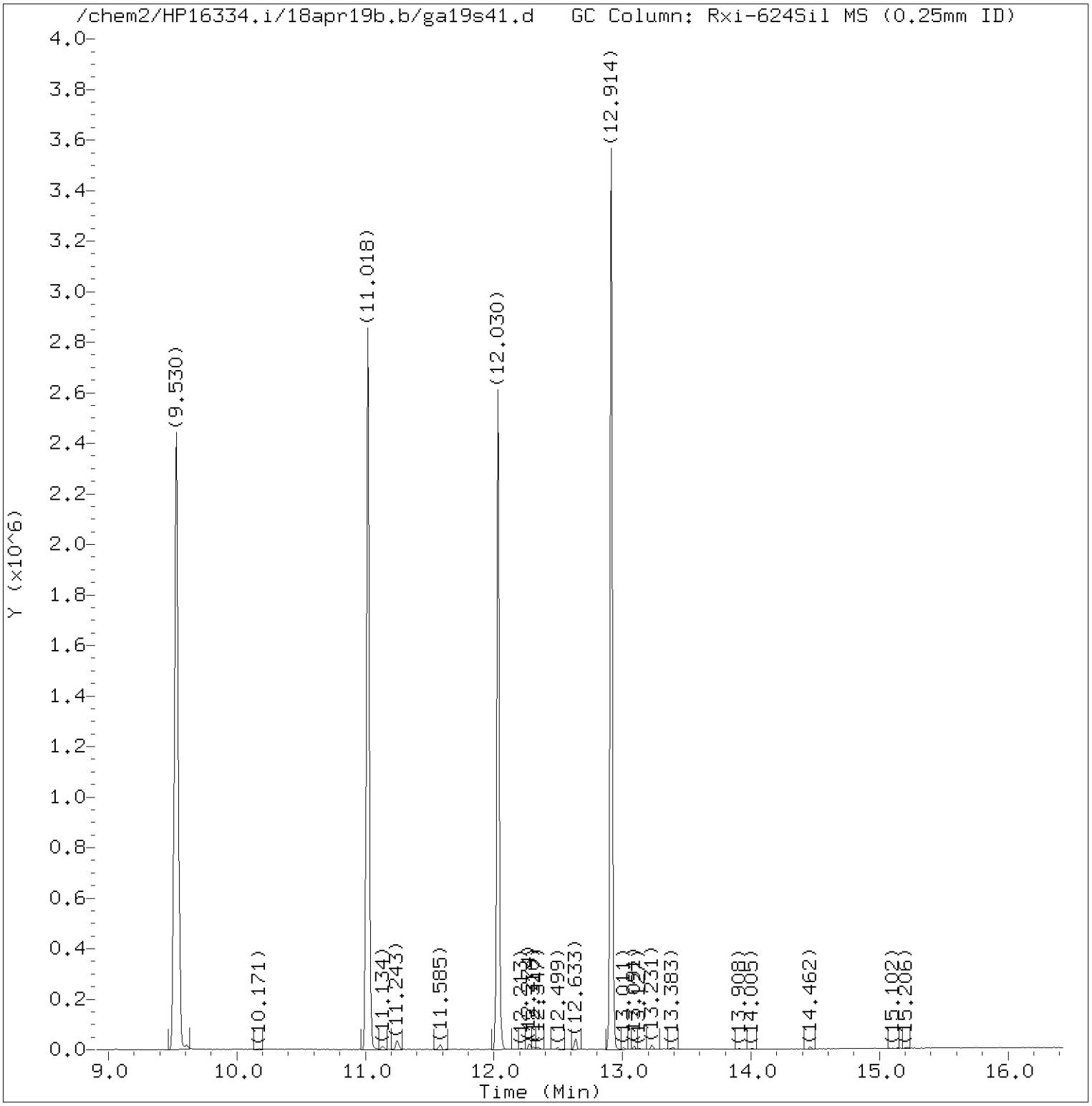
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.026	59	221041	5.672
26)*t-Butyl Alcohol-d10	(1)	3.958	65	179552	50.000
49) Chloroform	(2)	6.366	83	118494	1.366
50)$Dibromofluoromethane	(2)	6.580	113	461887	9.932
57)$1,2-Dichloroethane-d4	(2)	7.043	102	97989	9.943
63)*Fluorobenzene	(2)	7.482	96	1849385	10.000
67) Trichloroethene	(2)	7.964	95	154353	3.100
82)$Toluene-d8	(3)	9.530	98	1891309	10.016
97)*Chlorobenzene-d5	(3)	11.018	117	1407964	10.000
101) m+p-Xylene	(3)	11.250	106	10904	0.120
111)$4-Bromofluorobenzene	(3)	12.030	95	717724	9.931
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	793468	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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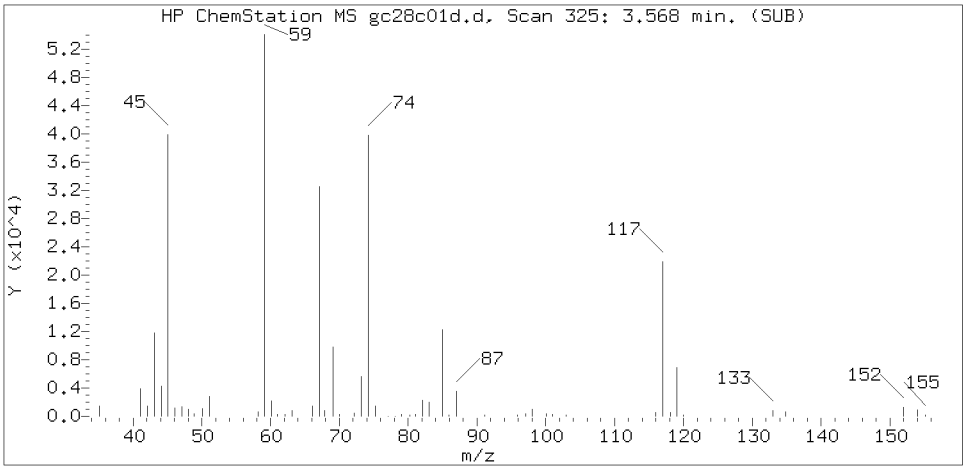
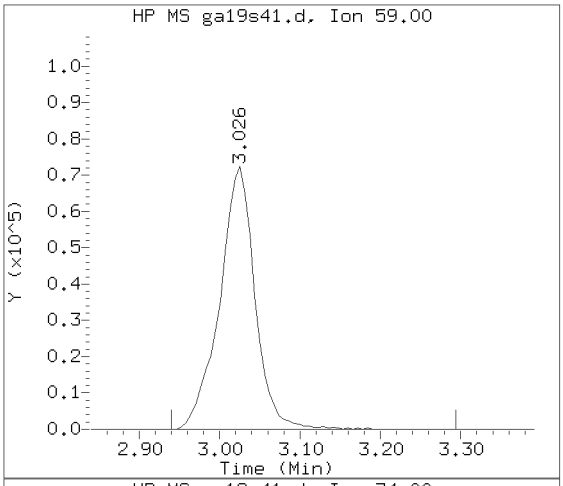
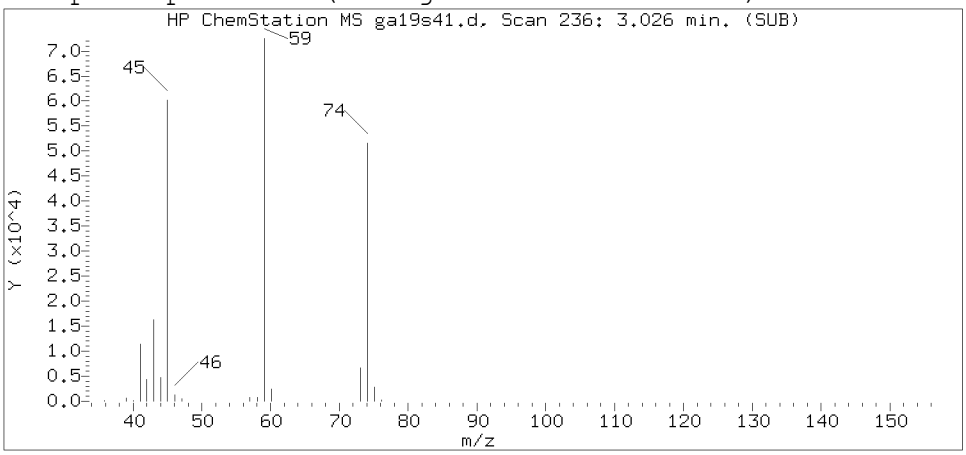
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

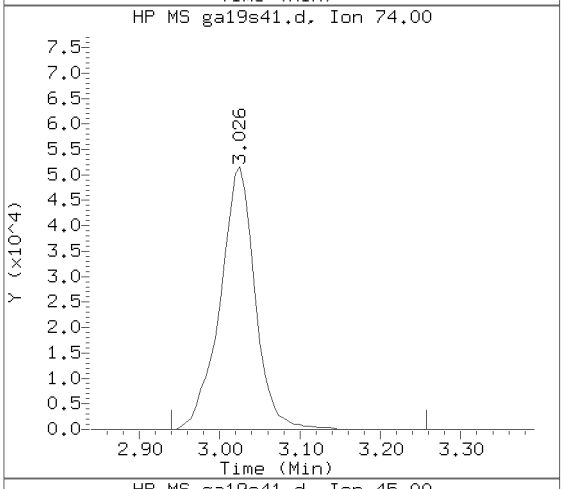
Reference Standard Spectrum for Ethyl ether



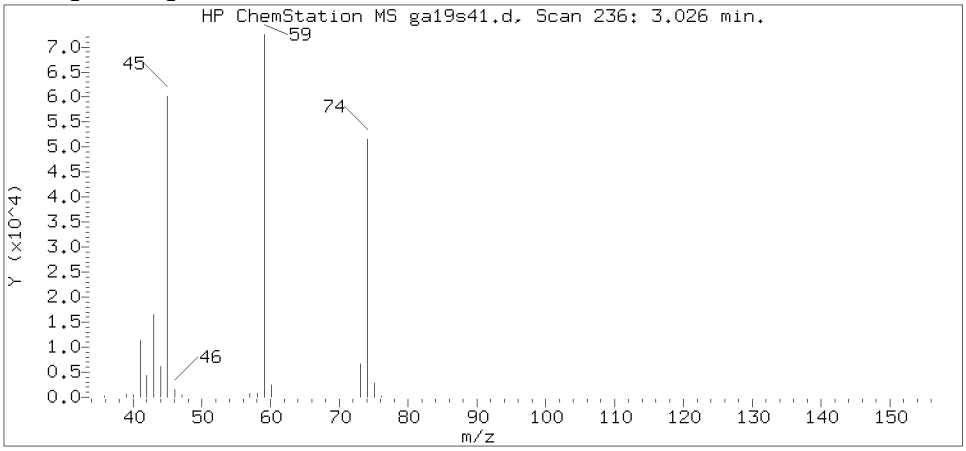


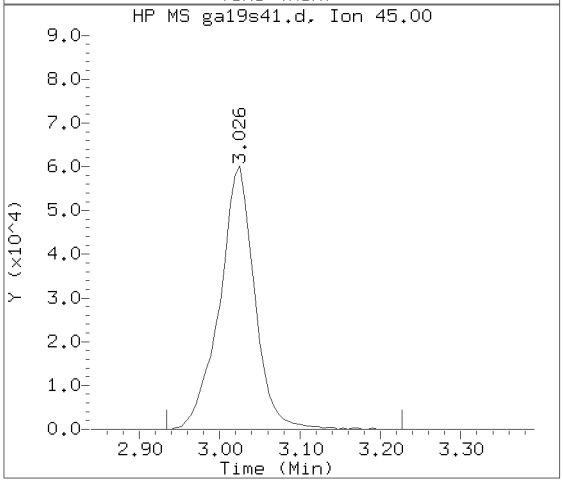
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

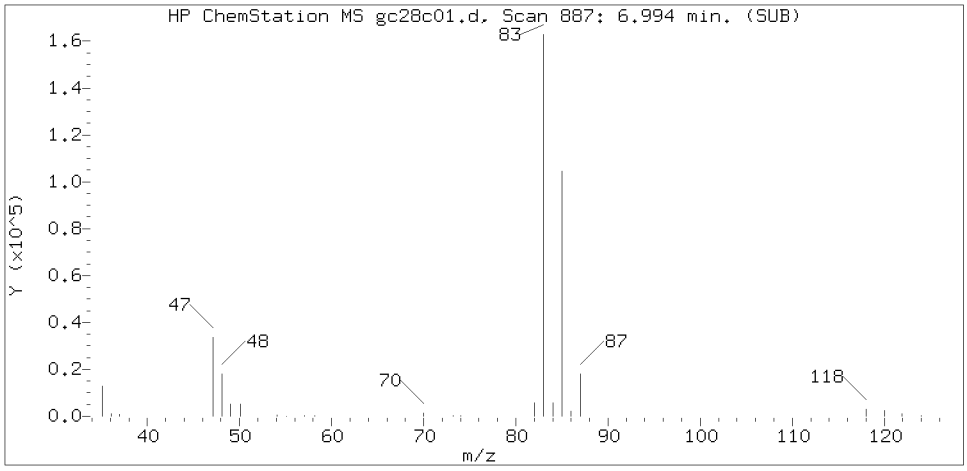
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

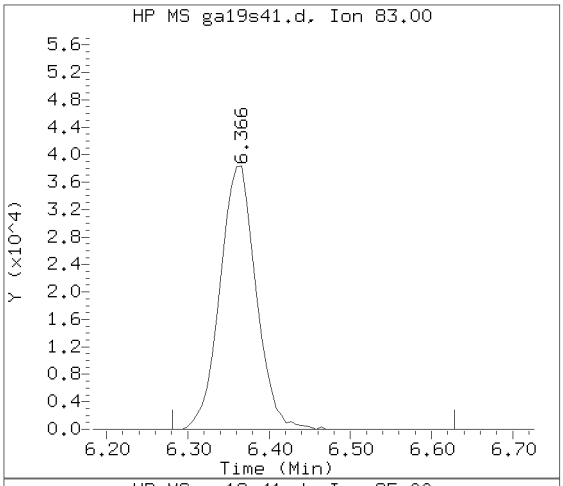
Sample Name: R0406 Lab Sample ID: 9553126

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 236
Retention Time (minutes): 3.026
Relative Retention Time : 0.00081
Quant Ion : 59.00
Area (flag) : 221041
On-Column Amount (ng) : 5.6724

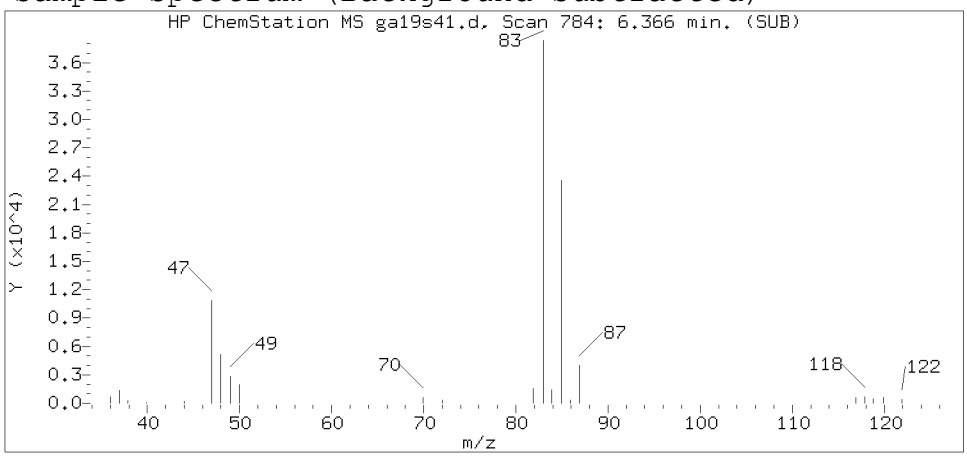
Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

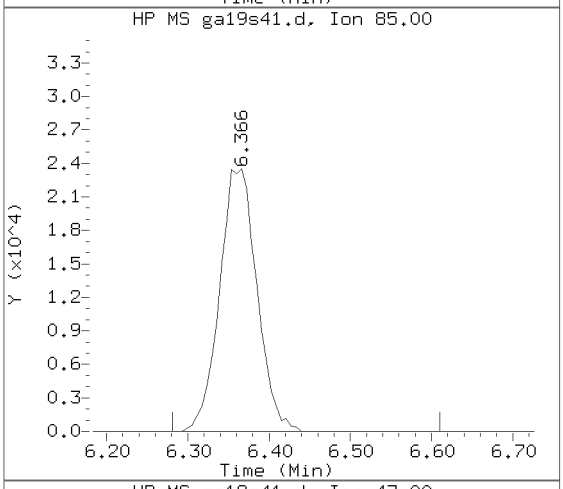
Reference Standard Spectrum for Chloroform



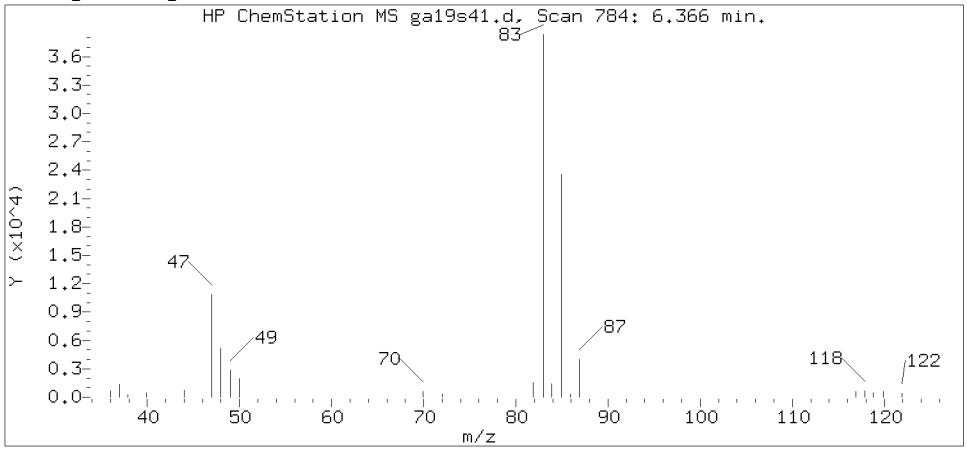


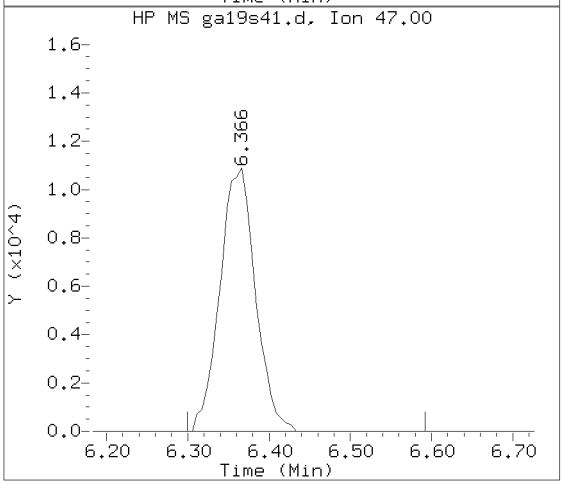
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

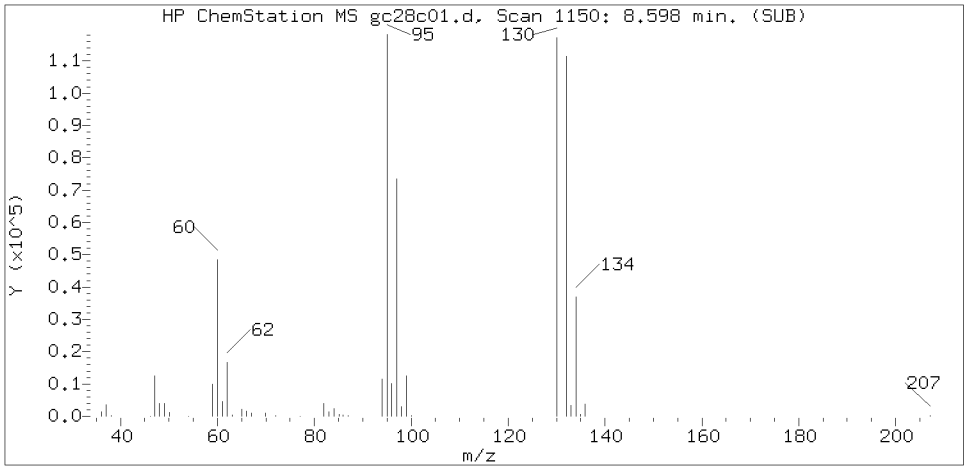
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

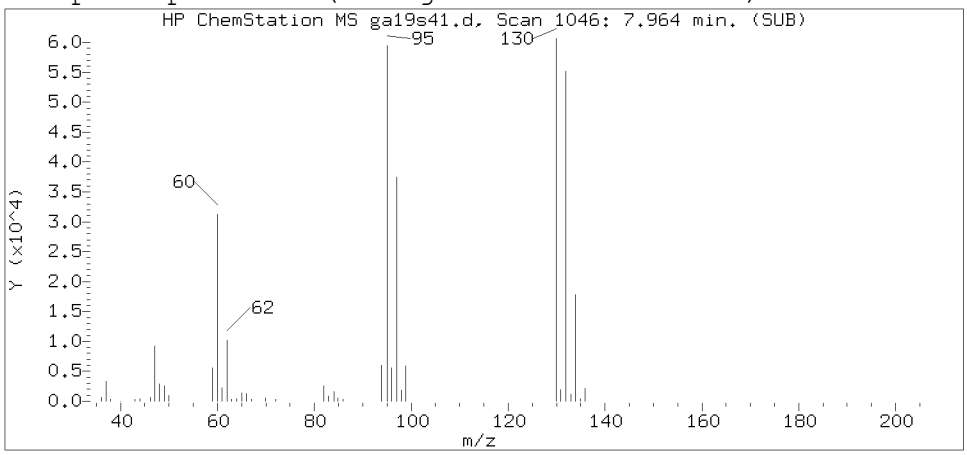
Compound Number : 49
Compound Name : Chloroform
Scan Number : 784
Retention Time (minutes): 6.366
Relative Retention Time :-0.00000
Quant Ion : 83.00
Area (flag) : 118494
On-Column Amount (ng) : 1.3659

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

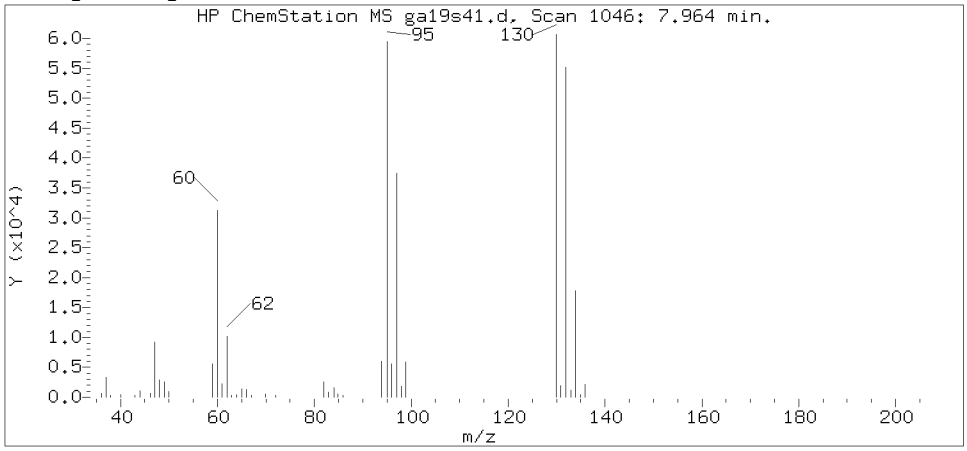
Reference Standard Spectrum for Trichloroethene

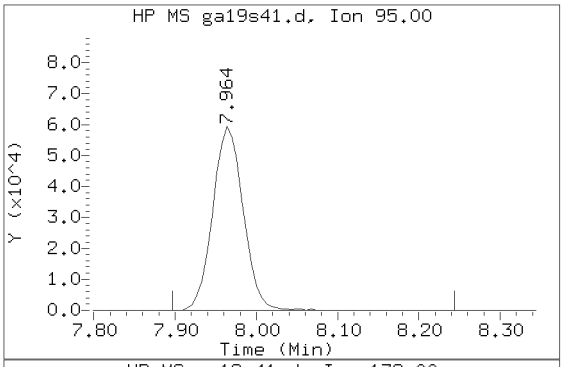


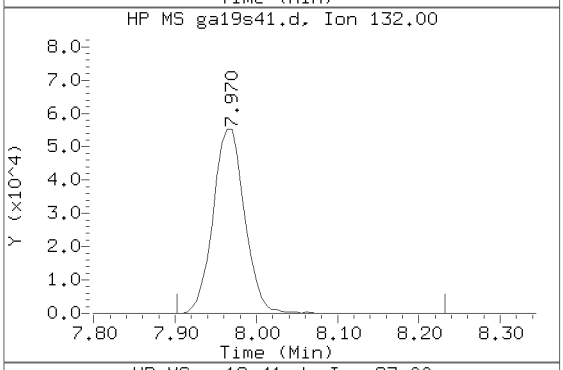
Sample Spectrum (Background Subtracted)

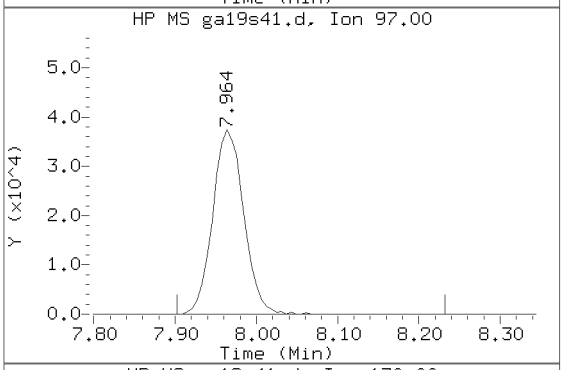


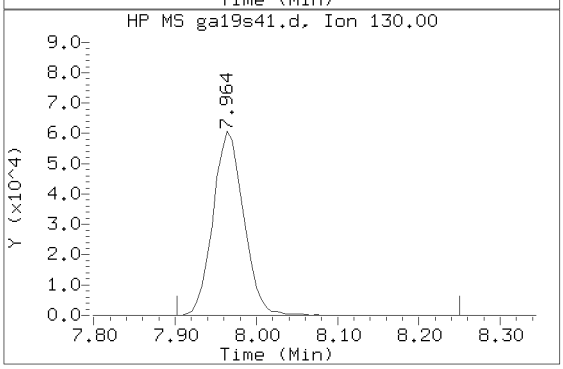
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1046
Retention Time (minutes)	: 7.964
Relative Retention Time	: 0.00081
Quant Ion	: 95.00
Area (flag)	: 154353
On-Column Amount (ng)	: 3.0996

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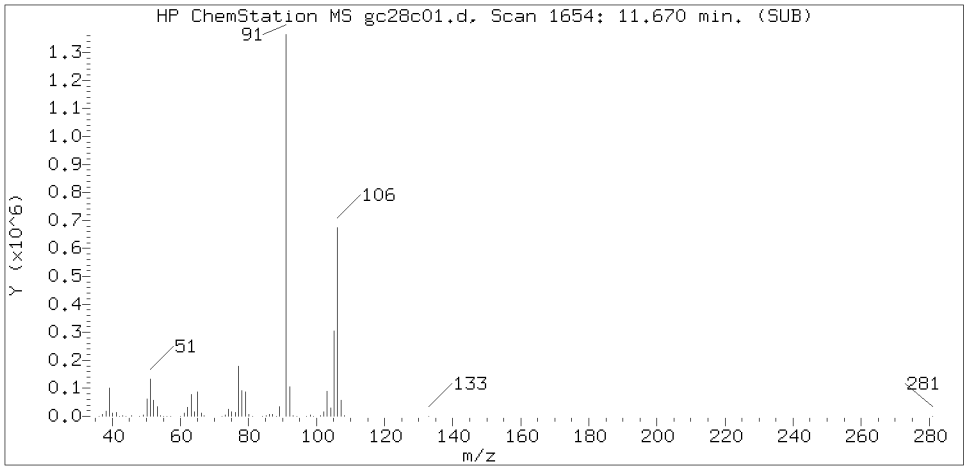
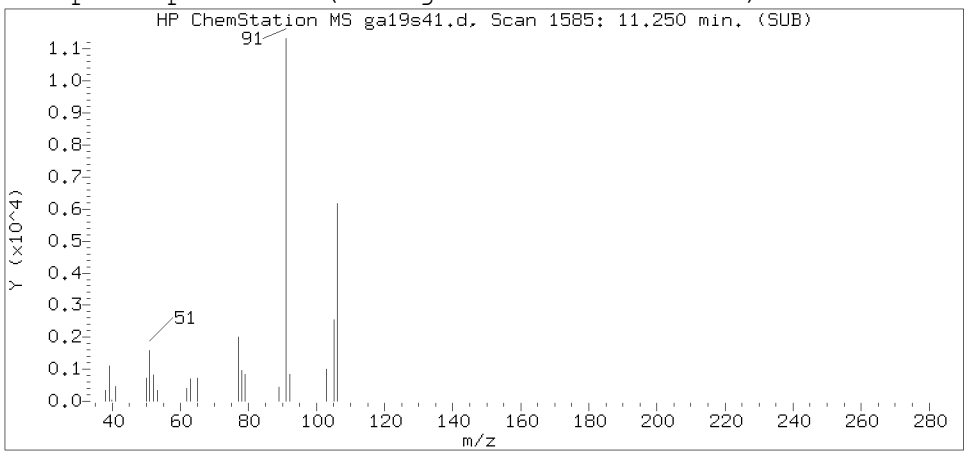
Target 3.5 esignature user ID: jkh09052

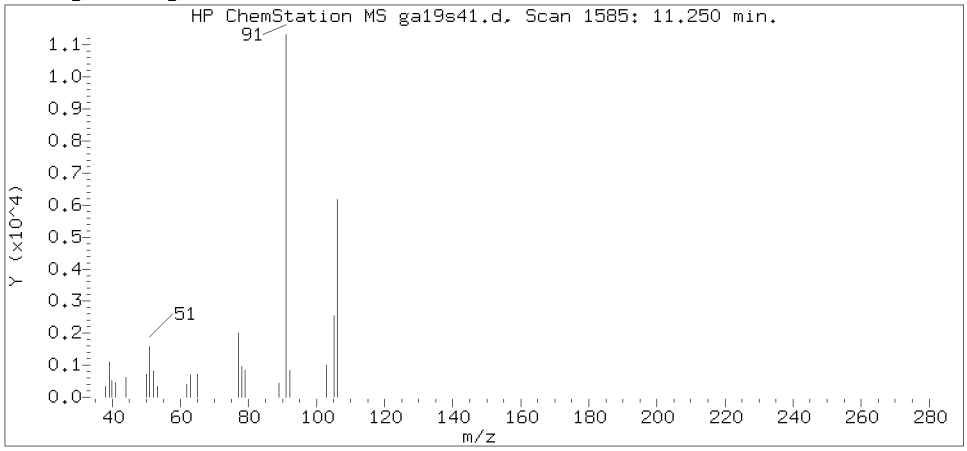
Reference Standard Spectrum for m+p-Xylene

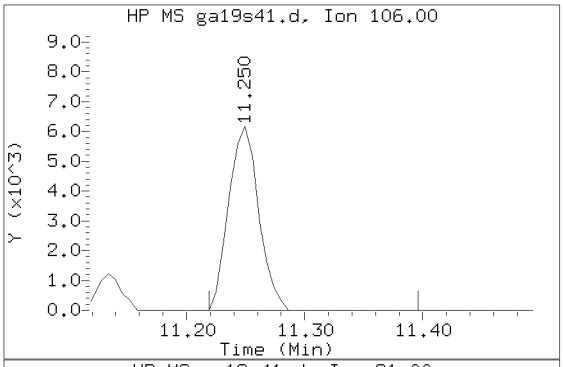


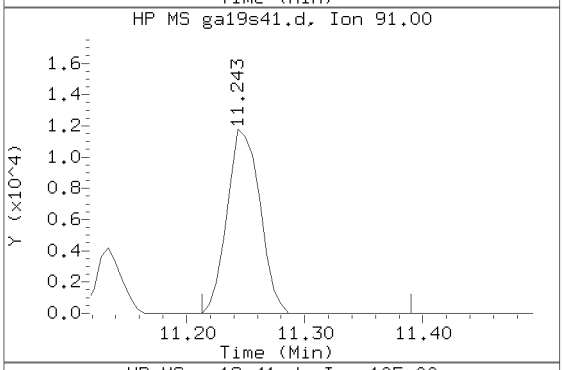
Sample Spectrum (Background Subtracted)

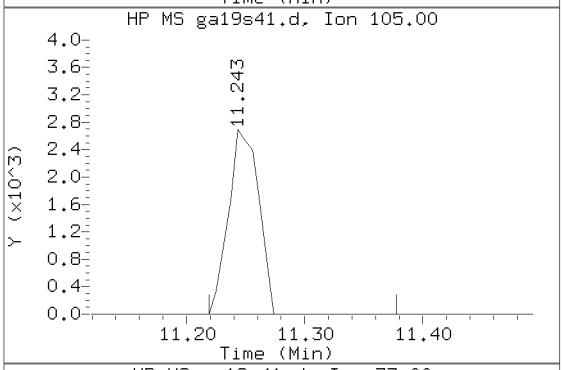


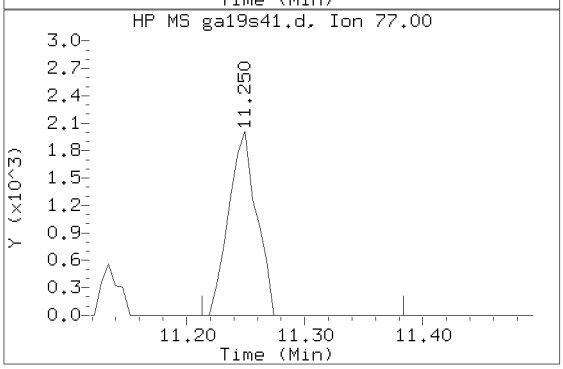
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s41.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:26 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 05:43 Automation

Sample Name: R0406 Lab Sample ID: 9553126

Compound Number : 101
Compound Name : m+p-Xylene
Scan Number : 1585
Retention Time (minutes): 11.250
Relative Retention Time :-0.00000
Quant Ion : 106.00
Area (flag) : 10904
On-Column Amount (ng) : 0.1205

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Target 3.5 esignature user ID: jkh09052

R0407 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9553127

Data file: /chem2/HP16334.i/18apr19b.b/ga19s42.d Injection date and time: **20-APR-2018 05:49**
Data file Sample Info. Line: R0407;9553127;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(0.000)	389	65	163034	(-21)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1825540	(-13)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1383427	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	783963	(-14)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	454509	9.901	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.000)	102	97332	10.005	100%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1870354	10.081	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	708895	9.982	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)	3.032	(0.000)	59	488665	12.704	12.70			0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)	6.366	(0.000)	83	115050	1.344	1.34			0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)	7.970	(-0.000)	95	220845	4.493	4.49			0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

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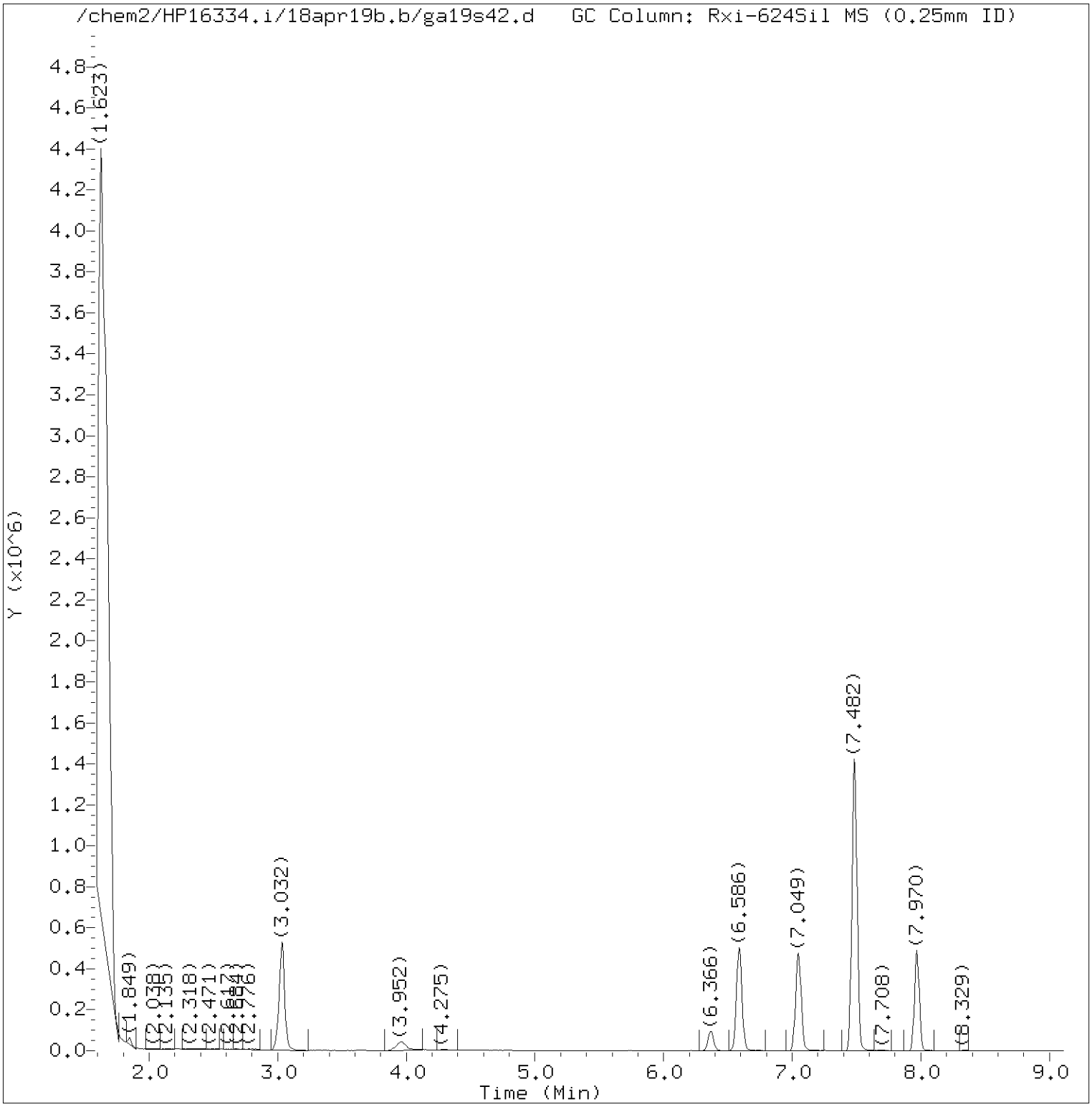
Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

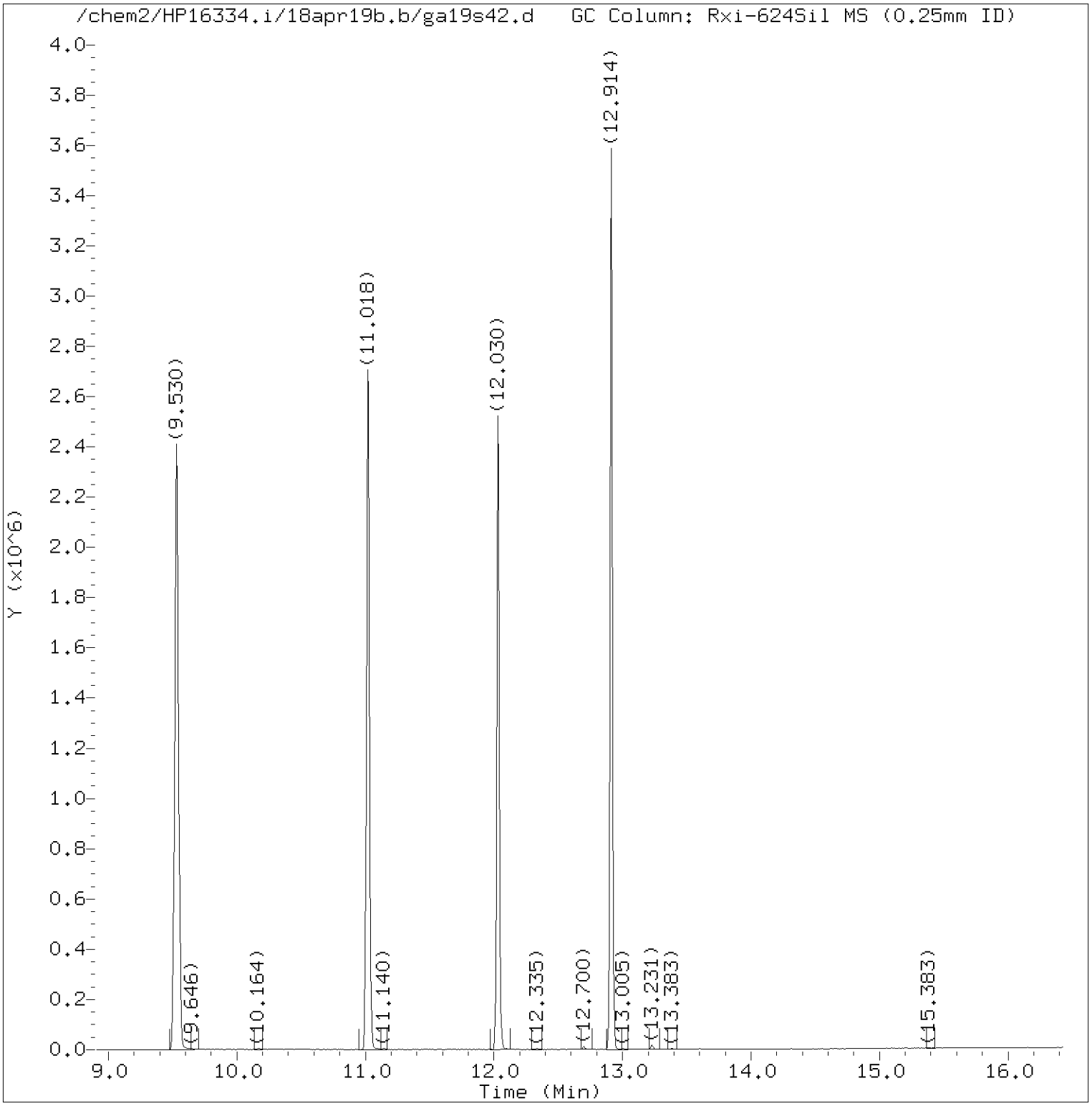
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.032	59	488665	12.704
26)*t-Butyl Alcohol-d10	(1)	3.958	65	163034	50.000
49) Chloroform	(2)	6.366	83	115050	1.344
50)$Dibromofluoromethane	(2)	6.586	113	454509	9.901
57)$1,2-Dichloroethane-d4	(2)	7.049	102	97332	10.005
63)*Fluorobenzene	(2)	7.482	96	1825540	10.000
67) Trichloroethene	(2)	7.970	95	220845	4.493
82)$Toluene-d8	(3)	9.530	98	1870354	10.081
97)*Chlorobenzene-d5	(3)	11.018	117	1383427	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	708895	9.982
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	783963	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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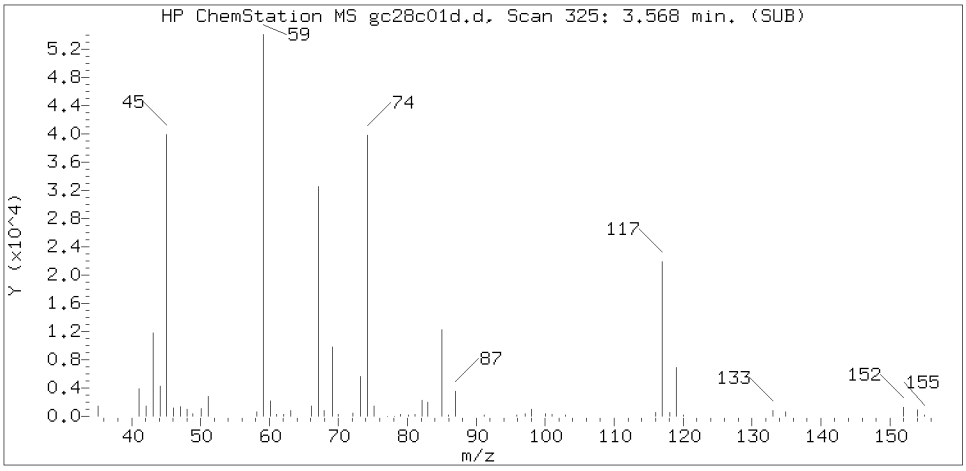
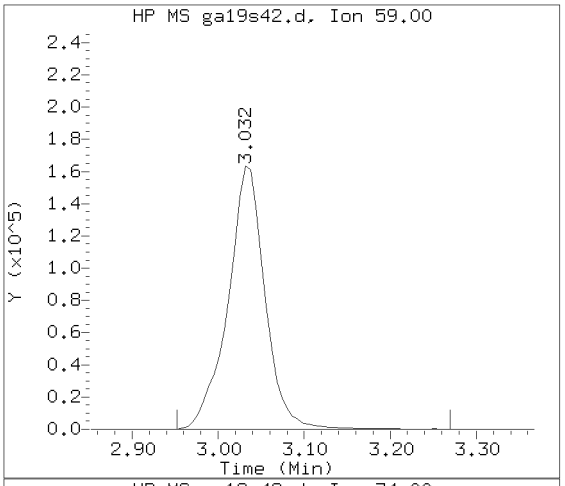
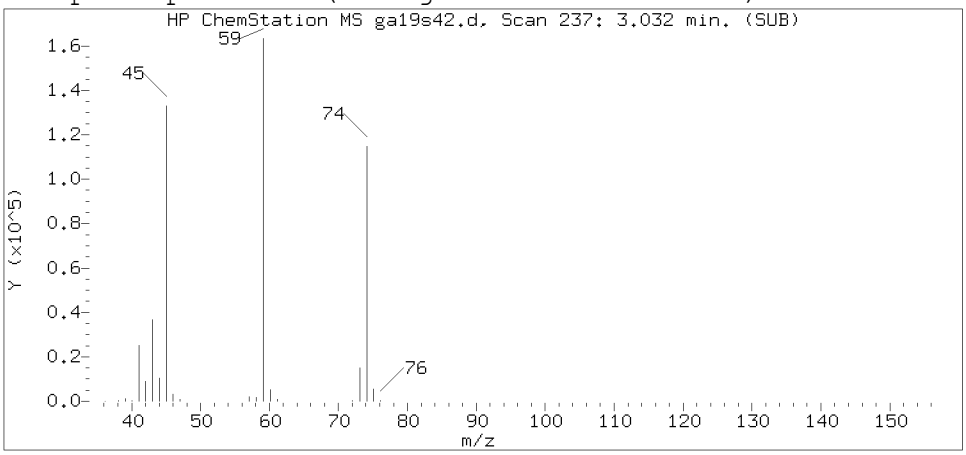
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

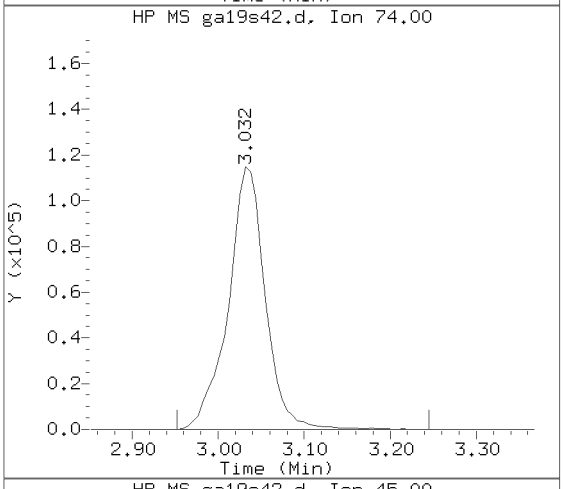
Reference Standard Spectrum for Ethyl ether



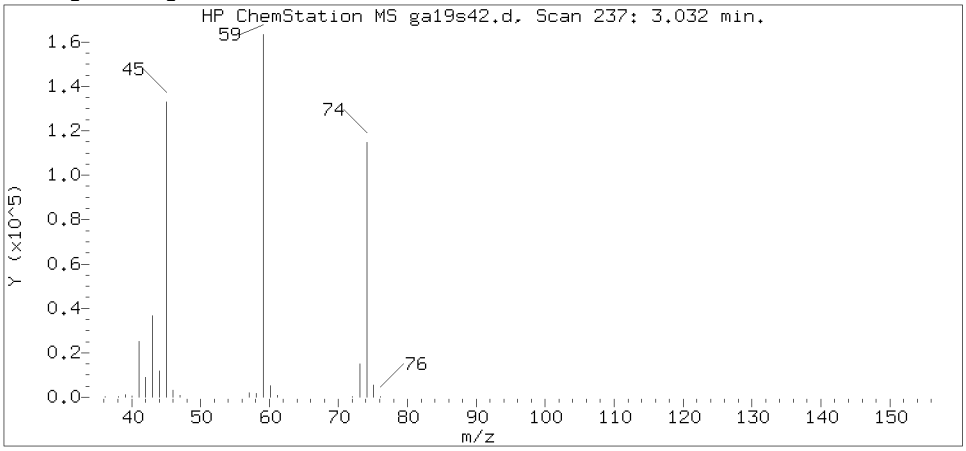


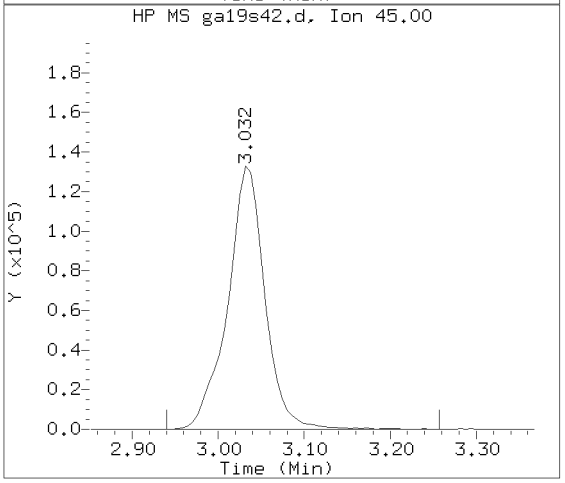
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 237
Retention Time (minutes): 3.032
Relative Retention Time : 0.00000
Quant Ion : 59.00
Area (flag) : 488665
On-Column Amount (ng) : 12.7040

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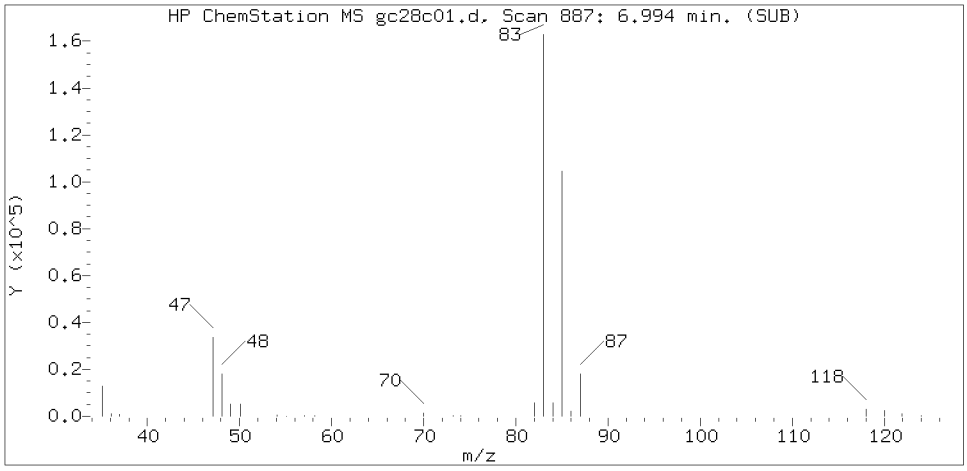
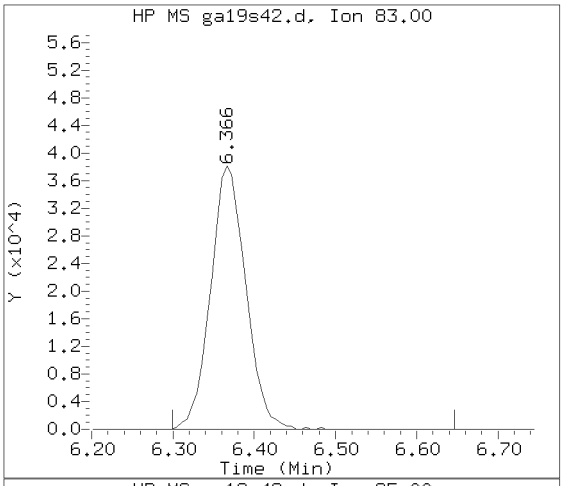
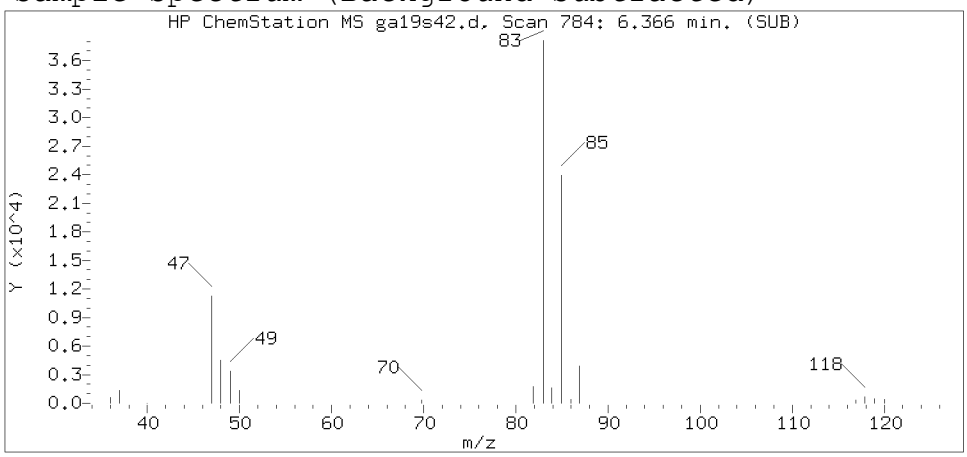
Target 3.5 esignature user ID: jkh09052

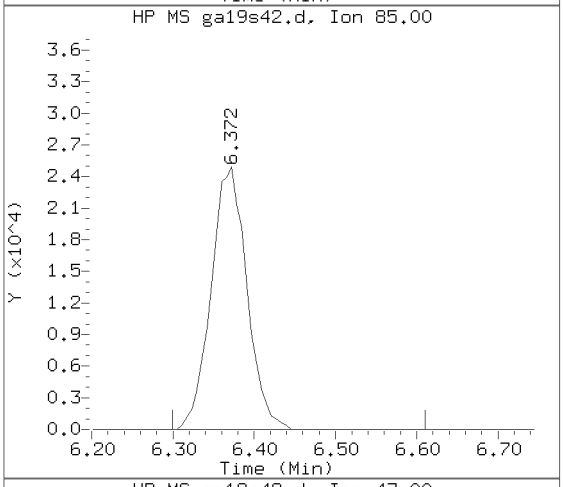
Reference Standard Spectrum for Chloroform



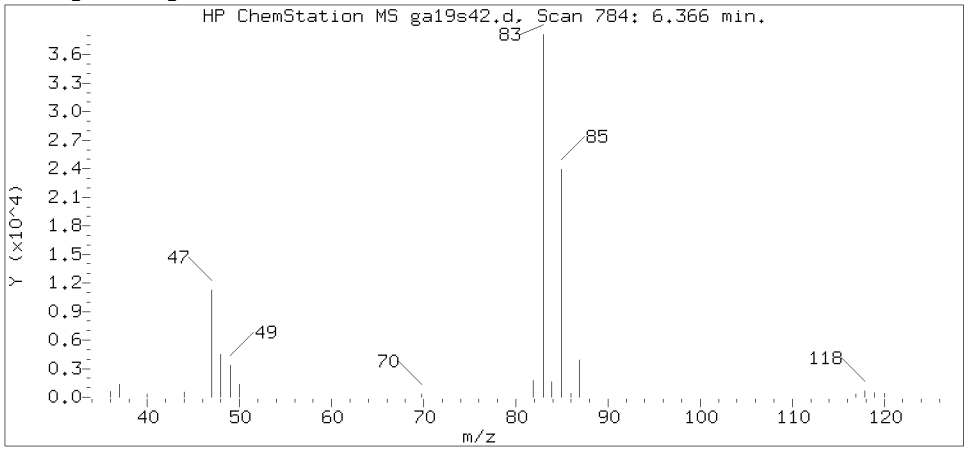


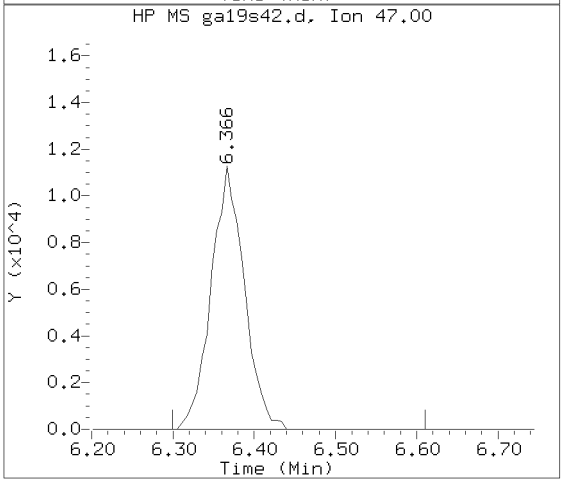
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

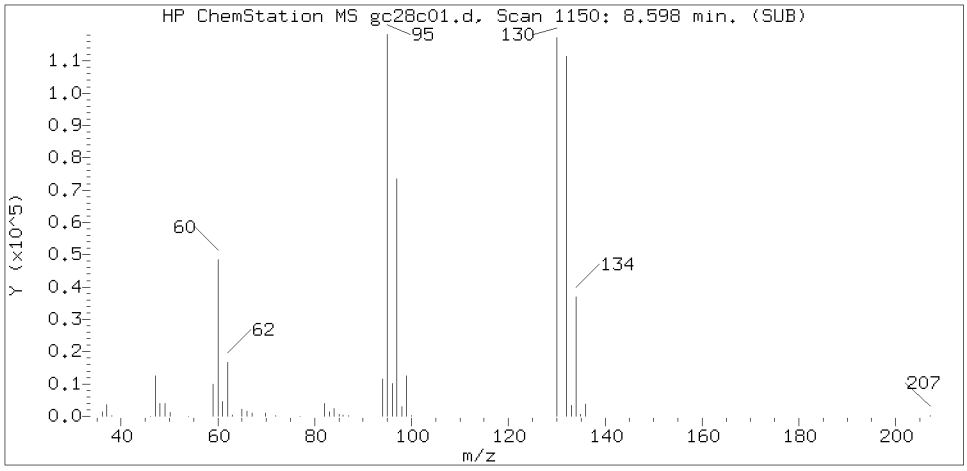
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

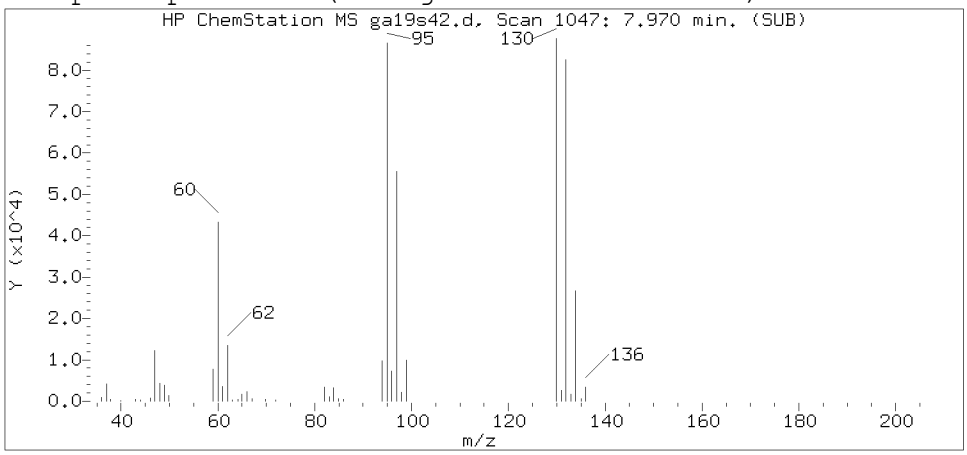
Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 784
Retention Time (minutes)	: 6.366
Relative Retention Time	: 0.00000
Quant Ion	: 83.00
Area (flag)	: 115050
On-Column Amount (ng)	: 1.3435

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

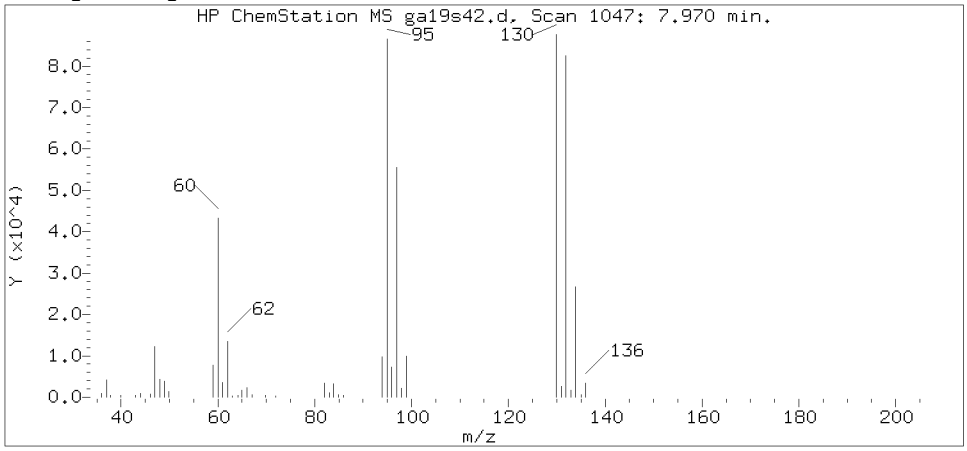
Reference Standard Spectrum for Trichloroethene

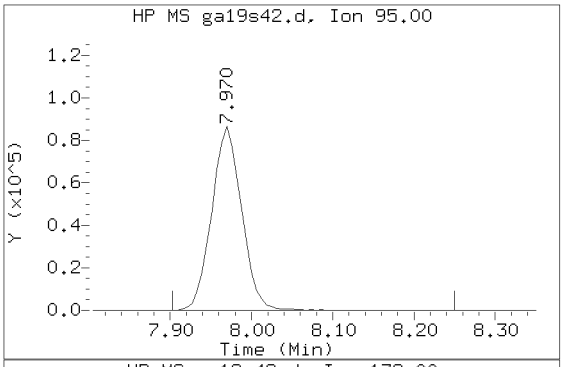


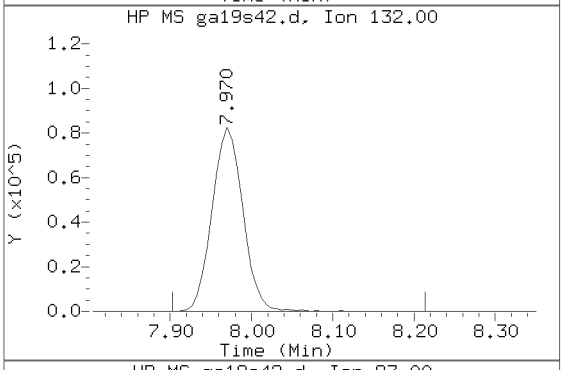
Sample Spectrum (Background Subtracted)

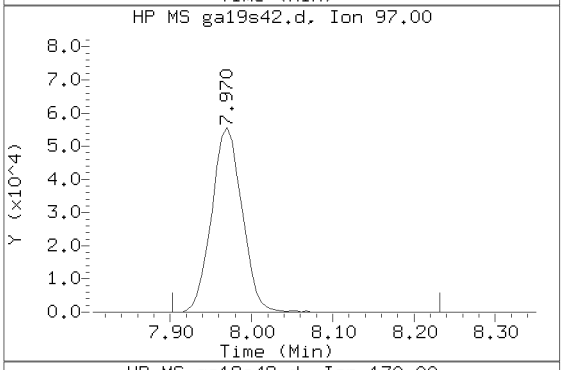


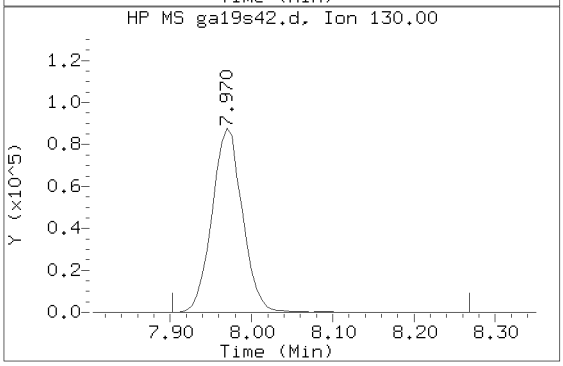
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/18apr19b.b/ga19s42.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 05:49 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:05 Automation

Sample Name: R0407 Lab Sample ID: 9553127

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1047
Retention Time (minutes): 7.970
Relative Retention Time :-0.00000
Quant Ion : 95.00
Area (flag) : 220845
On-Column Amount (ng) : 4.4927

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr19b.b/ga19s43.d Injection date and time: **20-APR-2018 06:11**
Data file Sample Info. Line: R0408;9553128;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 06:27 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(0.000)	389	65	165271	(-20)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1824572	(-13)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1394475	(-13)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	785529	(-14)	10.00	

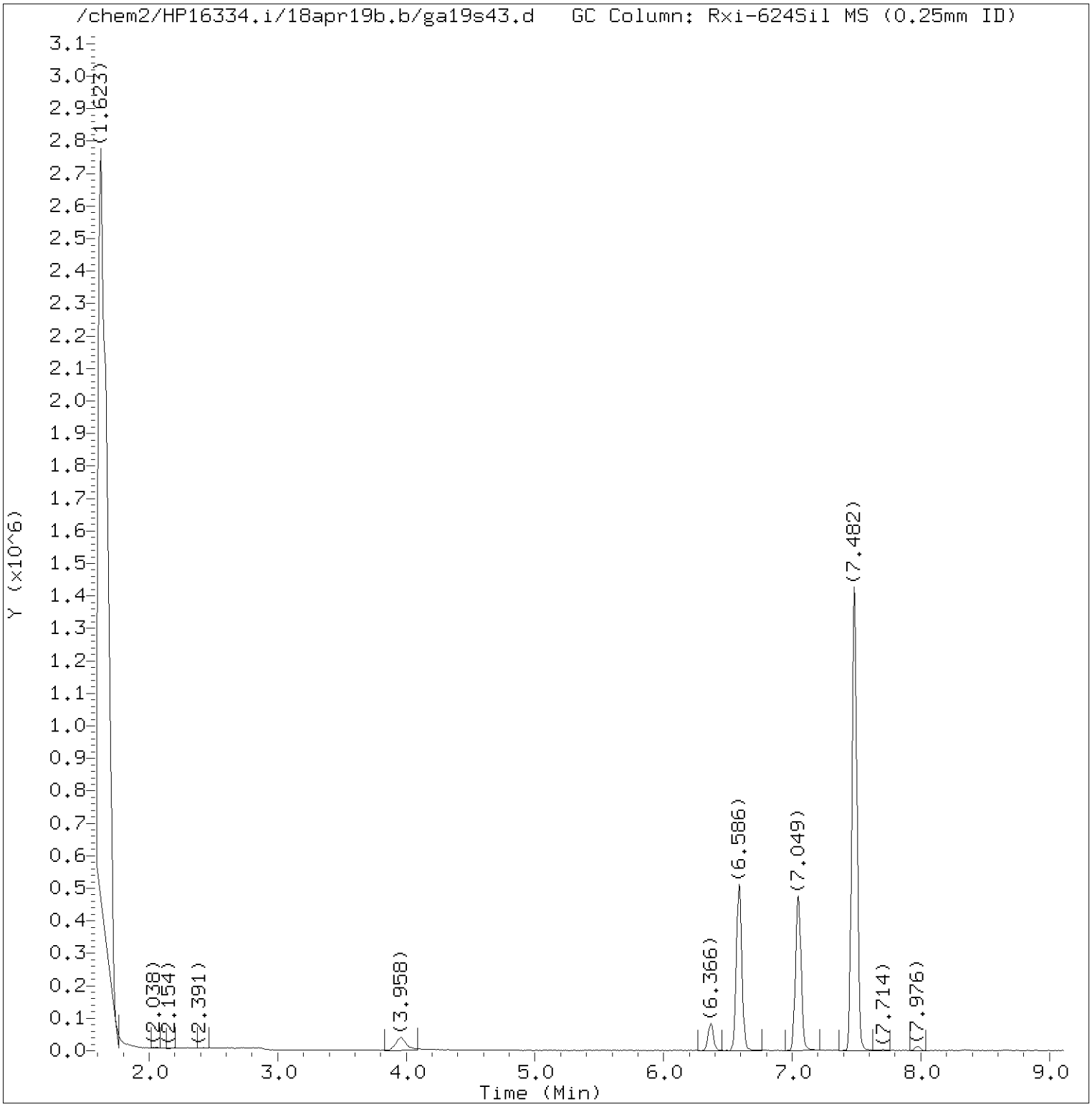
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	457319	9.967	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.000)	102	96682	9.944	99%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1872646	10.013	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	705665	9.858	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:53. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

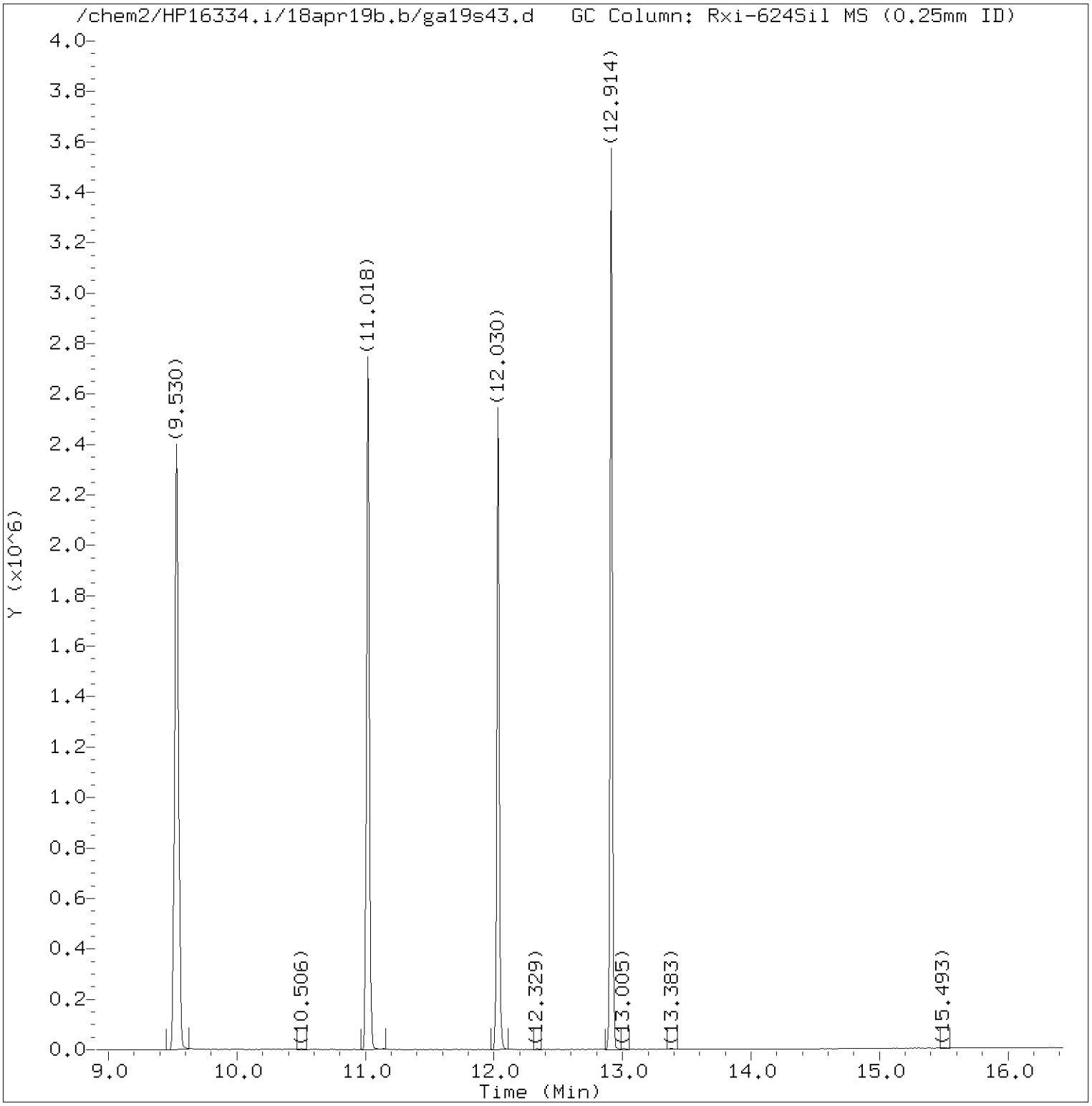
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s43.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 06:11 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:27 Automation

Sample Name: R0408 Lab Sample ID: 9553128

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s43.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 06:11 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:27 Automation

Sample Name: R0408 Lab Sample ID: 9553128

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s43.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 06:11 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 06:27 Automation

Sample Name: R0408 Lab Sample ID: 9553128

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.958	65	165271	50.000
50)$Dibromofluoromethane	(2)	6.586	113	457319	9.967
57)$1,2-Dichloroethane-d4	(2)	7.049	102	96682	9.944
63)*Fluorobenzene	(2)	7.482	96	1824572	10.000
82)$Toluene-d8	(3)	9.530	98	1872646	10.013
97)*Chlorobenzene-d5	(3)	11.018	117	1394475	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	705665	9.858
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	785529	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:53.
Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9553129

Data file: /chem2/HP16334.i/18apr19b.b/ga19s32.d Injection date and time: **20-APR-2018 02:02**
Data file Sample Info. Line: R0409;9553129;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 02:19 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.006)	388	65	182380	(-12)	50.00	
63) Fluorobenzene	7.488	(-0.006)	968	96	1887156	(-10)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1435434	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	804226	(-12)	10.00	

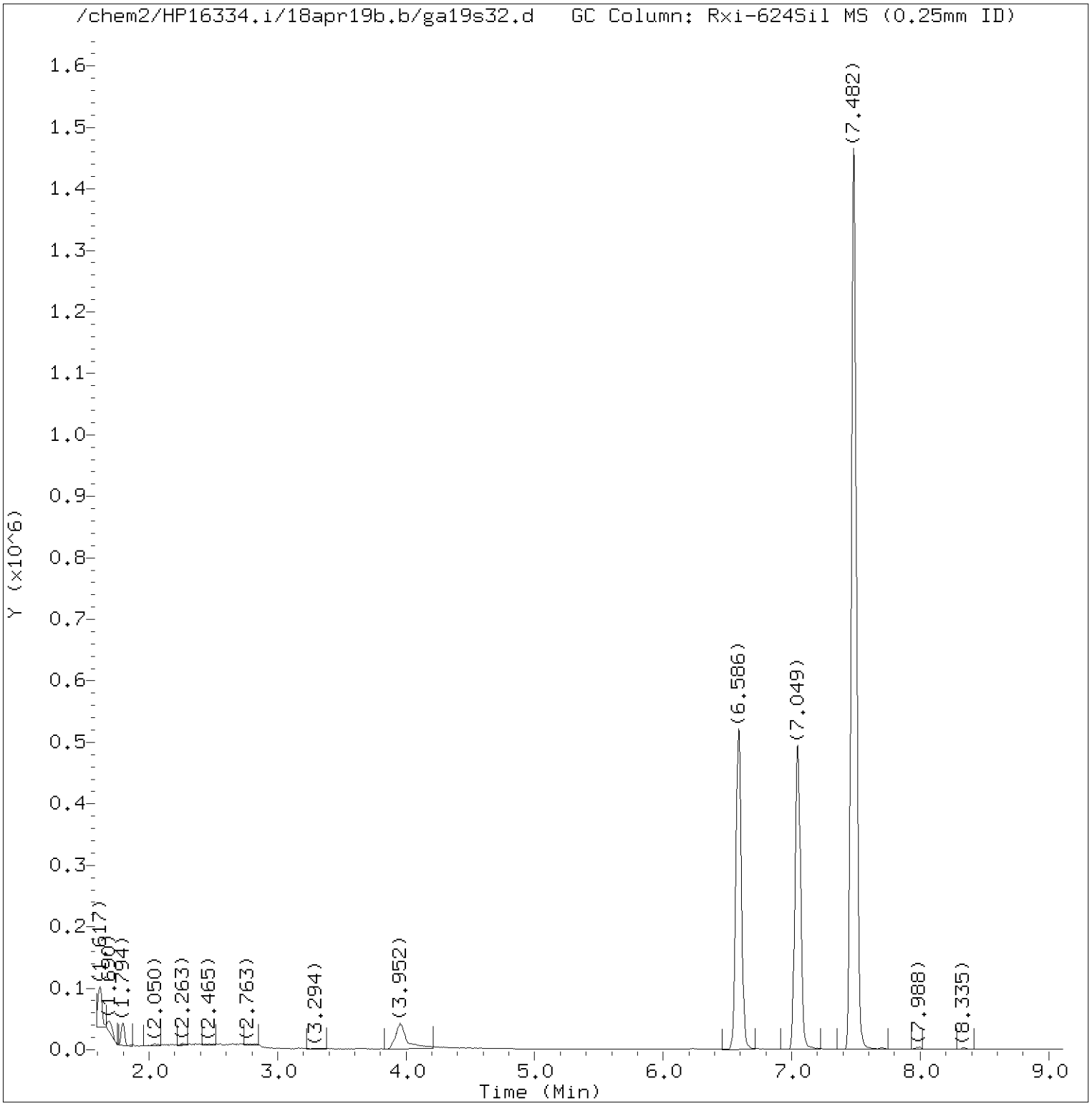
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.001)	113	470552	9.916	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.002)	102	100516	9.995	100%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1927901	10.015	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	732838	9.946	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:52. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

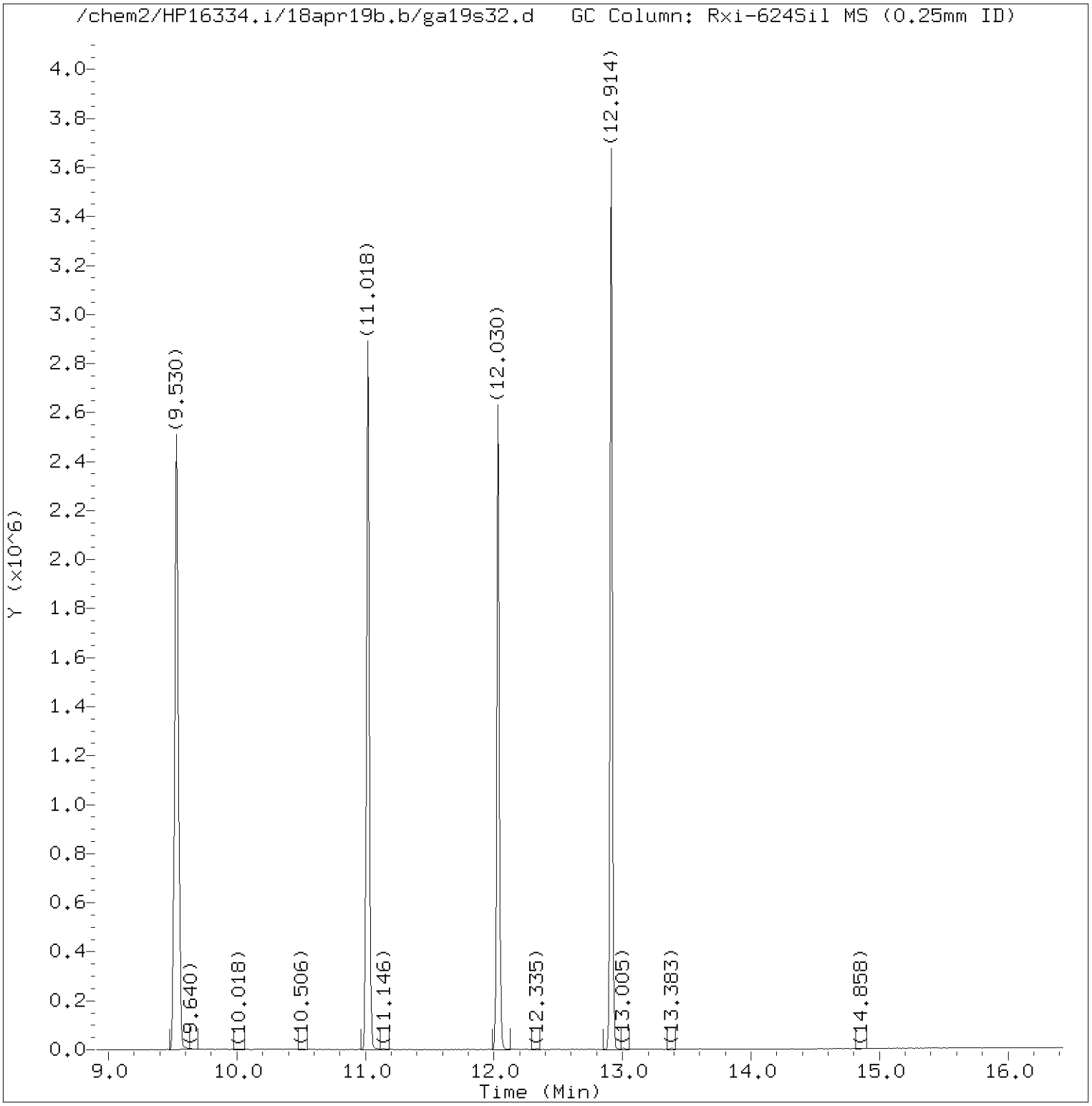
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s32.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:02 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:19 Automation

Sample Name: R0409 Lab Sample ID: 9553129

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s32.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:02 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:19 Automation

Sample Name: R0409 Lab Sample ID: 9553129

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s32.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:02 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:19 Automation

Sample Name: R0409 Lab Sample ID: 9553129

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.952	65	182380	50.000
50)$Dibromofluoromethane	(2)	6.586	113	470552	9.916
57)$1,2-Dichloroethane-d4	(2)	7.043	102	100516	9.995
63)*Fluorobenzene	(2)	7.488	96	1887156	10.000
82)$Toluene-d8	(3)	9.530	98	1927901	10.015
97)*Chlorobenzene-d5	(3)	11.018	117	1435434	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	732838	9.946
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	804226	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

R0410 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9553130

Data file: /chem2/HP16334.i/18apr19b.b/ga19s33.d Injection date and time: **20-APR-2018 02:24**
Data file Sample Info. Line: R0410;9553130;1;0;;RAF04;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 20-Apr-2018 02:41 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.964	(-0.006)	390	65	163333	(-21)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1851520	(-12)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1411631	(-12)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	786326	(-14)	10.00	

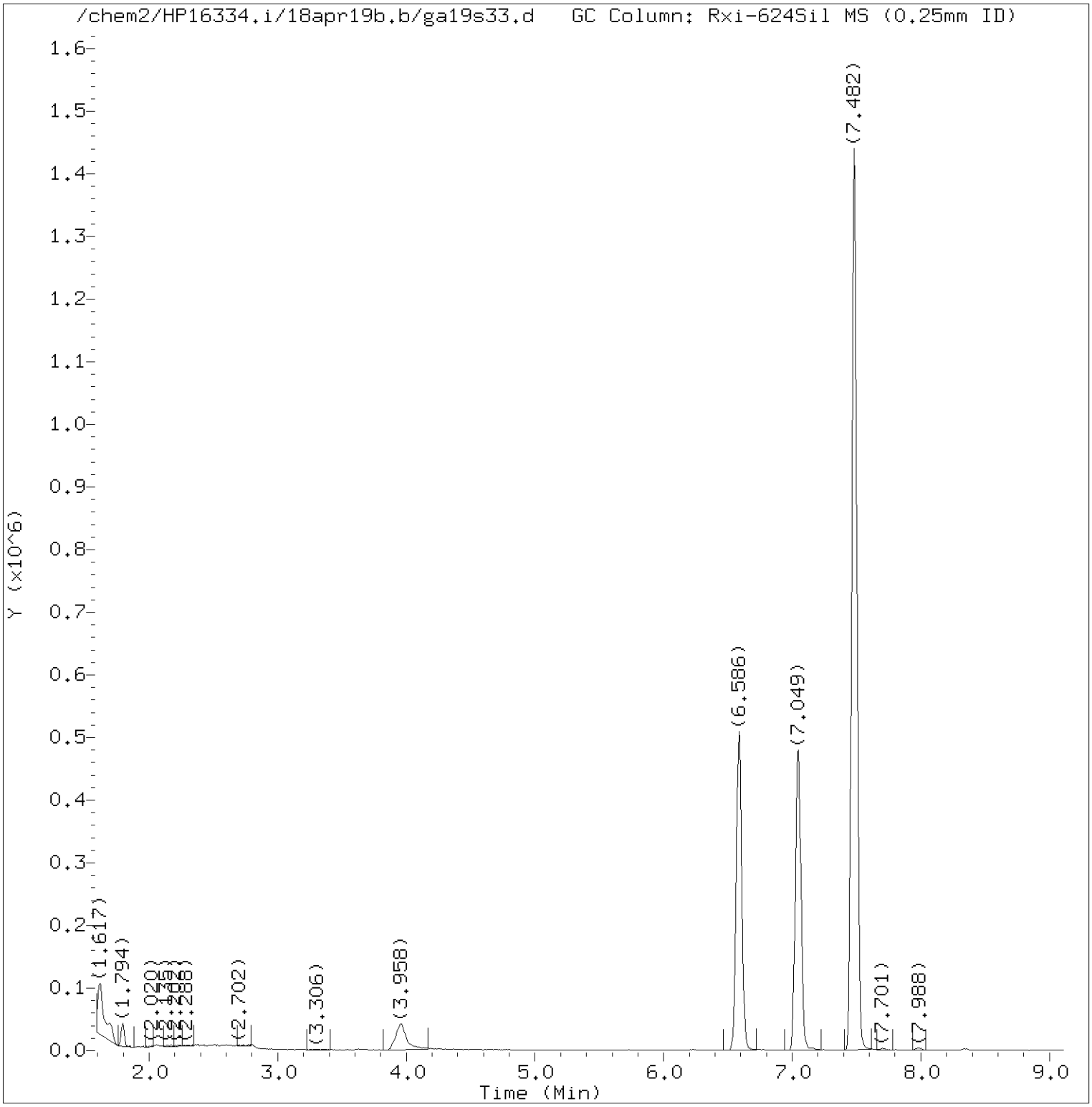
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	456549	9.806	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	95593	9.689	97%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	1884285	9.953	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	721618	9.958	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/20/2018 at 07:52. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

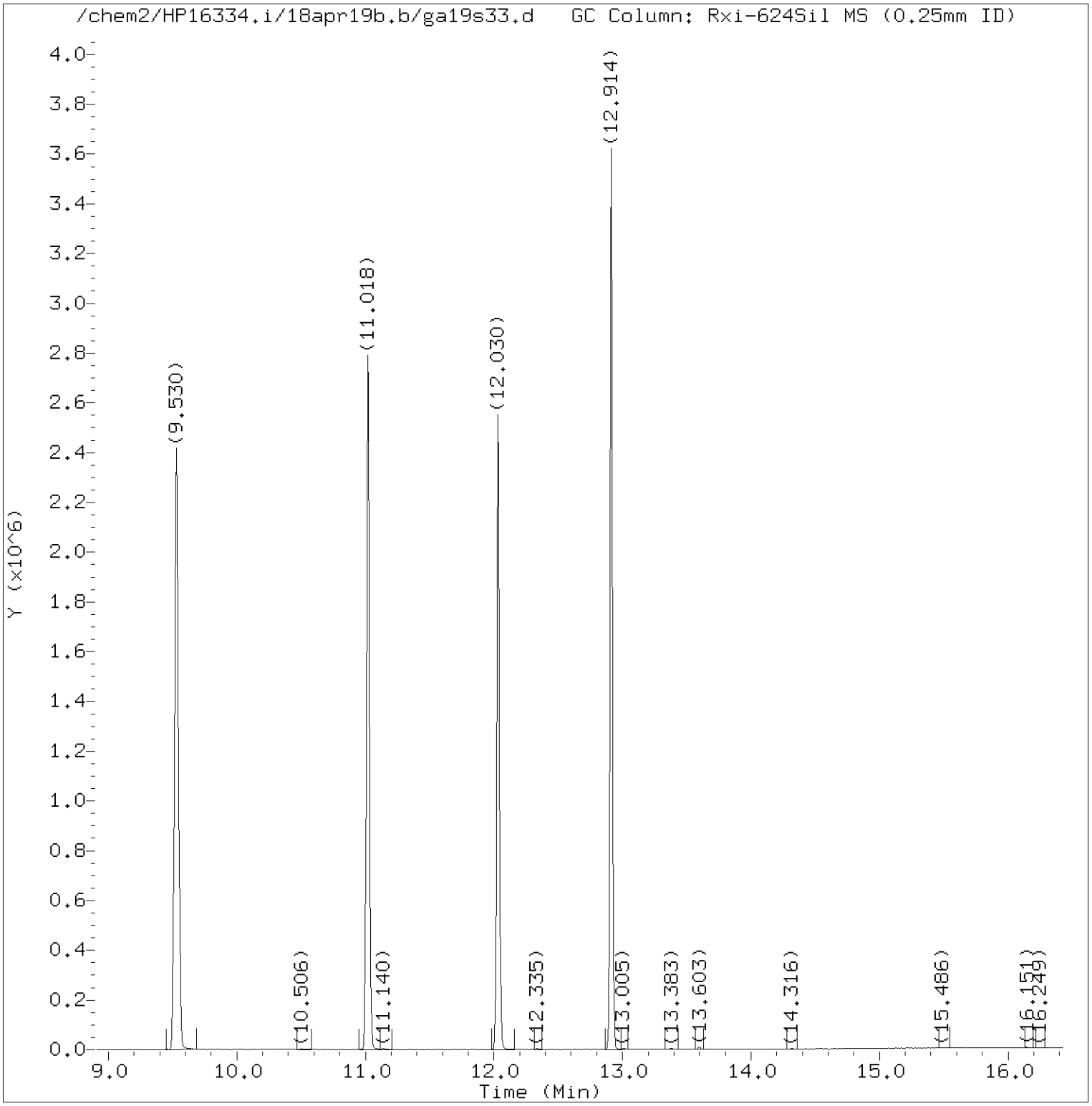
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s33.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:24 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:41 Automation

Sample Name: R0410 Lab Sample ID: 9553130

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s33.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:24 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:41 Automation

Sample Name: R0410 Lab Sample ID: 9553130

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s33.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 02:24 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 20-Apr-2018 02:41 Automation

Sample Name: R0410 Lab Sample ID: 9553130

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.964	65	163333	50.000
50)$Dibromofluoromethane	(2)	6.586	113	456549	9.806
57)$1,2-Dichloroethane-d4	(2)	7.043	102	95593	9.689
63)*Fluorobenzene	(2)	7.482	96	1851520	10.000
82)$Toluene-d8	(3)	9.530	98	1884285	9.953
97)*Chlorobenzene-d5	(3)	11.018	117	1411631	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	721618	9.958
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	786326	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/20/2018 at 07:52.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP16334 **HP #29**

Data Directory Path is - D:\DATA\18APR19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	GA19T01.D	BFB FEB13-18	04/19/2018	11:47		
JKH09052	GA19X00.D	BLK	04/19/2018	11:59		
JKH09052	GA19I01.D	VSTD025	04/19/2018	12:22		
JKH09052	GA19I02.D	VSTD010	04/19/2018	12:44		
JKH09052	GA19I03.D	VSTD005	04/19/2018	13:06		
JKH09052	GA19I04.D	VSTD002	04/19/2018	13:28		
JKH09052	GA19I05.D	VSTD001	04/19/2018	13:51		
JKH09052	GA19I06.D	VSTD0.5	04/19/2018	14:14		
JKH09052	GA19I07.D	VSTD0.2	04/19/2018	14:37		
JKH09052	GA19M01.D	MDL0.1	04/19/2018	14:59		
JKH09052	GA19V01.D	LCSG01	04/19/2018	15:21		
JKH09052	GA19X01.D	BLK	04/19/2018	15:44		
JKH09052	GA19I11.D	VSTD025	04/19/2018	16:06		
JKH09052	GA19I12.D	VSTD010	04/19/2018	16:28		
JKH09052	GA19I13.D	VSTD005	04/19/2018	16:51		
JKH09052	GA19I14.D	VSTD002	04/19/2018	17:13		
JKH09052	GA19I15.D	VSTD001	04/19/2018	17:35		
JKH09052	GA19I16.D	VSTD0.5	04/19/2018	17:57		
JKH09052	GA19I17.D	VSTD0.2	04/19/2018	18:19		
JKH09052	GA19M11.D	MDL0.1	04/19/2018	18:42		
JKH09052	GA19V11.D	LCSSMG	04/19/2018	19:04		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP16334 **HP #29**

Data Directory Path is - d:\data\18apr19B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
MSK07970	GA19T05.D	50NGBFB	04/19/2018	20:27	G181091AA	
MSK07970	GA19X21.D	VBLKG74	04/19/2018	20:47	G181091AA	
MSK07970	GA19C01.D	VSTD010	04/19/2018	21:10	G181091AA	
MSK07970	GA19S01.D	LCSG74	04/19/2018	21:32	G181091AA	
MSK07970	GA19B01.D	VBLKG74	04/19/2018	21:54	G181091AA	
MSK07970	GA19S02.D	9549963	04/19/2018	22:42	G181091AA	
MSK07970	GA19S03.D	9551932	04/19/2018	23:04	G181091AA	
MSK07970	GA19S04.D	9549958	04/19/2018	23:26	G181091AA	
MSK07970	GA19S05.D	9549959MS	04/19/2018	23:48	G181091AA	
MSK07970	GA19S06.D	9549960MSD	04/20/2018	00:11	G181091AA	
MSK07970	GA19S07.D	9549962	04/20/2018	00:33	G181091AA	
MSK07970	GA19S08.D	9549964	04/20/2018	00:55	G181091AA	
MSK07970	GA19S09.D	9554435	04/20/2018	01:17	G181091AA	
MSK07970	GA19S10.D	9556835	04/20/2018	01:39	G181091AA	
MSK07970	GA19S32.D	9553129	04/20/2018	02:02	G181092AA	
MSK07970	GA19S33.D	9553130	04/20/2018	02:24	G181092AA	
MSK07970	GA19S34.D	9553121	04/20/2018	02:47	G181092AA	
MSK07970	GA19S35.D	9553122MS	04/20/2018	03:09	G181092AA	
MSK07970	GA19S36.D	9553123MSD	04/20/2018	03:32	G181092AA	
MSK07970	GA19S37.D	9553119	04/20/2018	03:54	G181092AA	
MSK07970	GA19S38.D	9553120	04/20/2018	04:16	G181092AA	
MSK07970	GA19S39.D	9553124	04/20/2018	04:42	G181092AA	
MSK07970	GA19S40.D	9553125	04/20/2018	05:04	G181092AA	
MSK07970	GA19S41.D	9553126	04/20/2018	05:26	G181092AA	
MSK07970	GA19S42.D	9553127	04/20/2018	05:49	G181092AA	
MSK07970	GA19S43.D	9553128	04/20/2018	06:11	G181092AA	

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

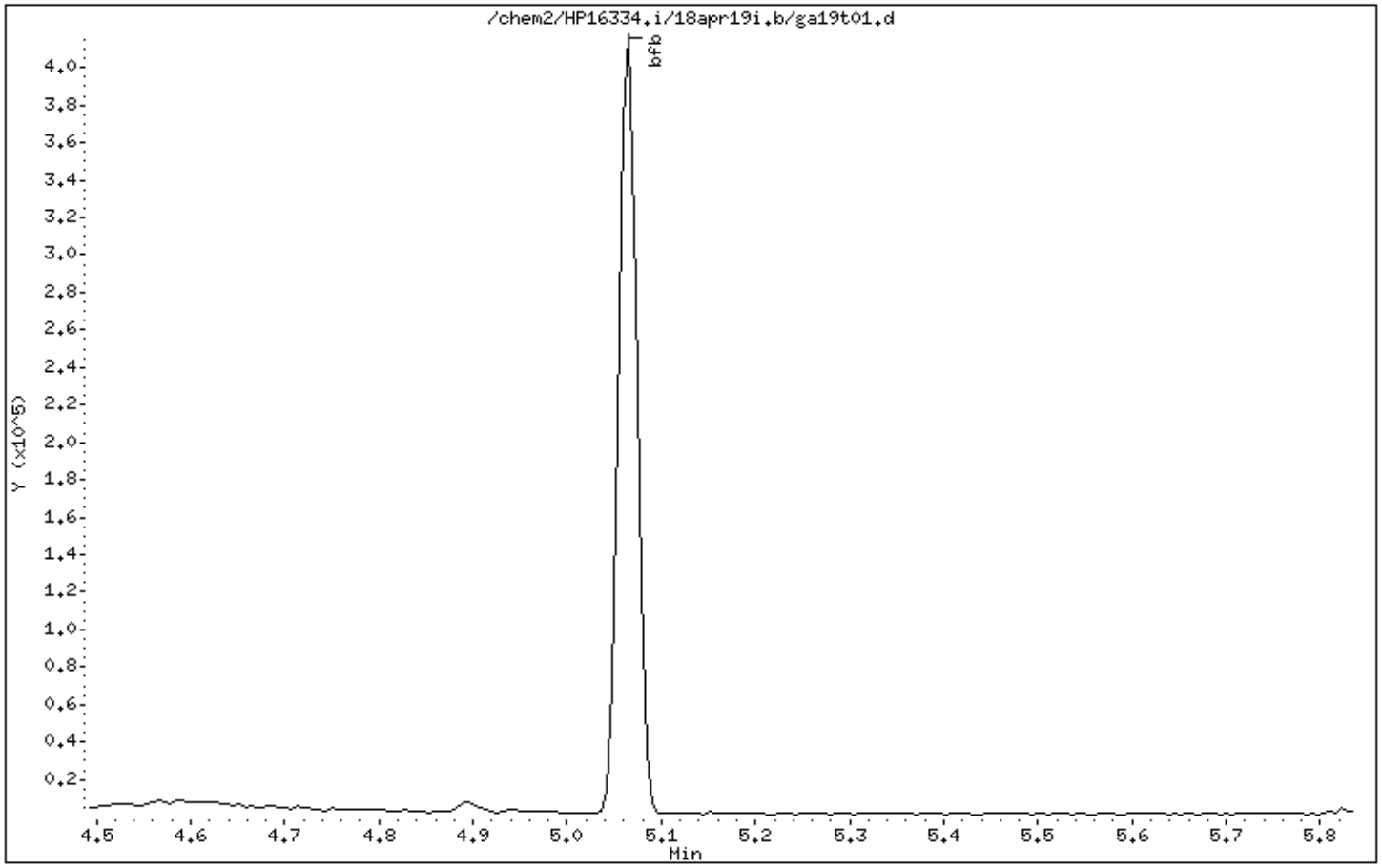
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



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Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

Instrument: HP16334.i

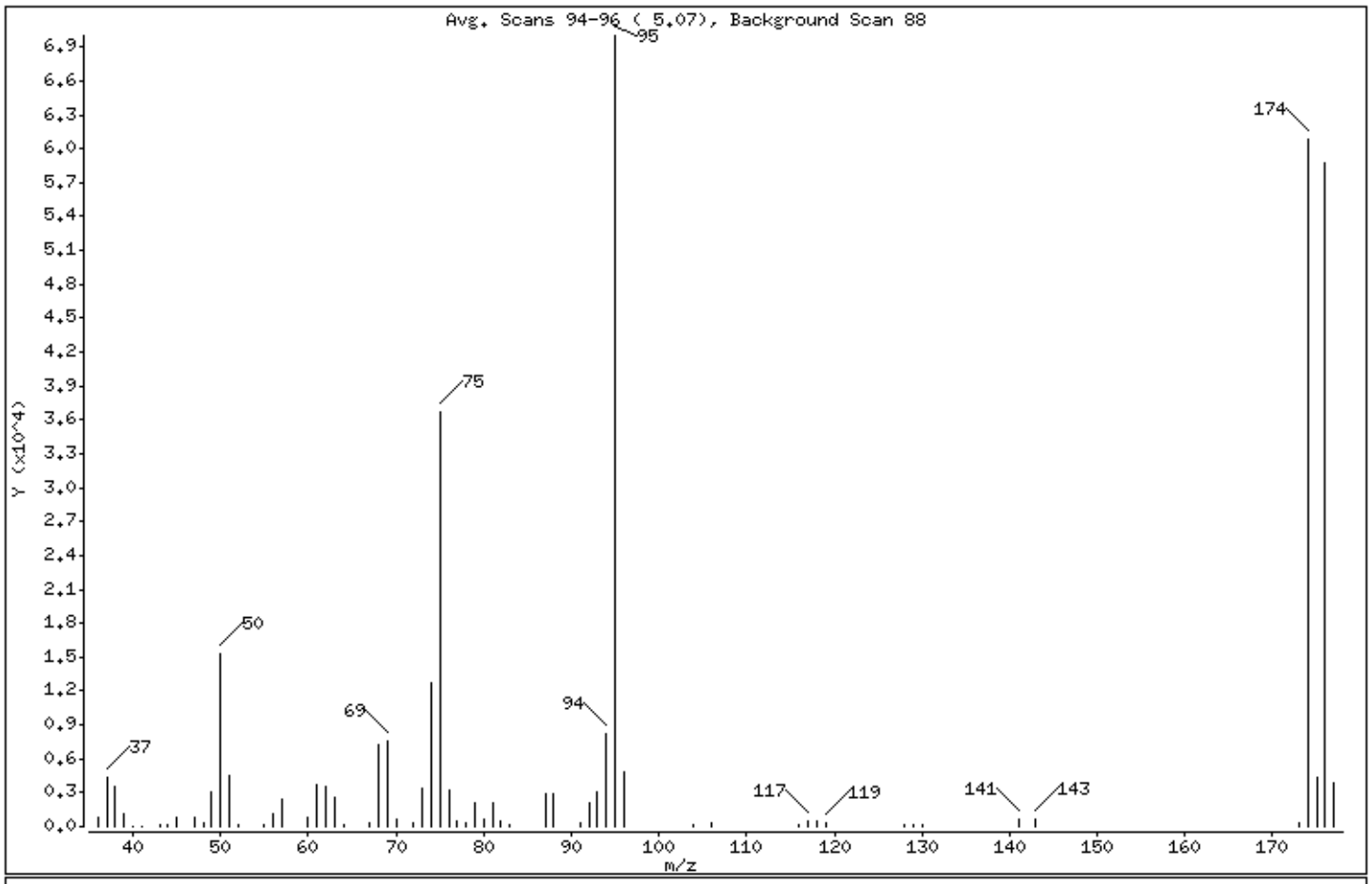
Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.74
75	30.00 - 60.00% of mass 95	52.48
96	5.00 - 9.00% of mass 95	6.98
173	Less than 2.00% of mass 174	0.41 (0.47)
174	50.00 - 100.00% of mass 95	86.84
175	5.00 - 9.00% of mass 174	6.17 (7.11)
176	95.00 - 101.00% of mass 174	83.87 (96.58)
177	5.00 - 9.00% of mass 176	5.61 (6.69)

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Target 3.5 esignature user ID: msk07970

Date : 19-APR-2018 11:47

Client ID: 50ngBFB Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ga19t01.d
Spectrum: Avg. Scans 94-96 (5.07), Background Scan 88
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	751	56.00	1165	77.00	444	106.00	374
37.00	4308	57.00	2369	78.00	334	116.00	213
38.00	3590	60.00	775	79.00	2080	117.00	485
39.00	1106	61.00	3780	80.00	659	118.00	412
40.00	80	62.00	3534	81.00	2037	119.00	302
41.00	61	63.00	2497	82.00	443	128.00	188
43.00	192	64.00	213	83.00	84	129.00	98
44.00	212	67.00	293	87.00	2948	130.00	193
45.00	740	68.00	7241	88.00	2832	141.00	703
47.00	799	69.00	7585	91.00	301	143.00	702
48.00	402	70.00	657	92.00	2163	173.00	286
49.00	3128	72.00	358	93.00	3063	174.00	60792
50.00	15218	73.00	3407	94.00	8246	175.00	4322
51.00	4581	74.00	12760	95.00	70008	176.00	58712
52.00	202	75.00	36736	96.00	4885	177.00	3929
55.00	209	76.00	3174	104.00	221		

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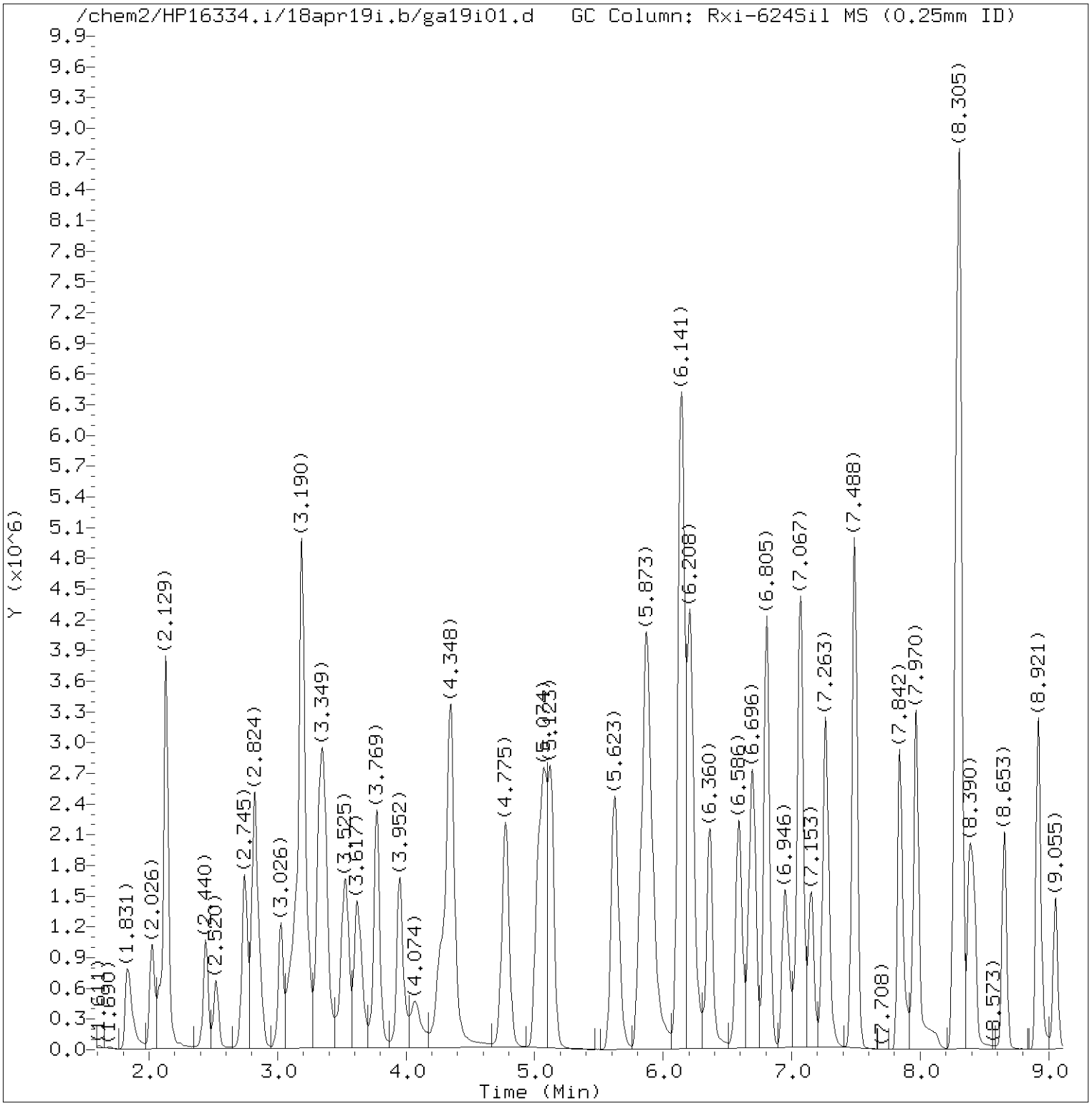
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

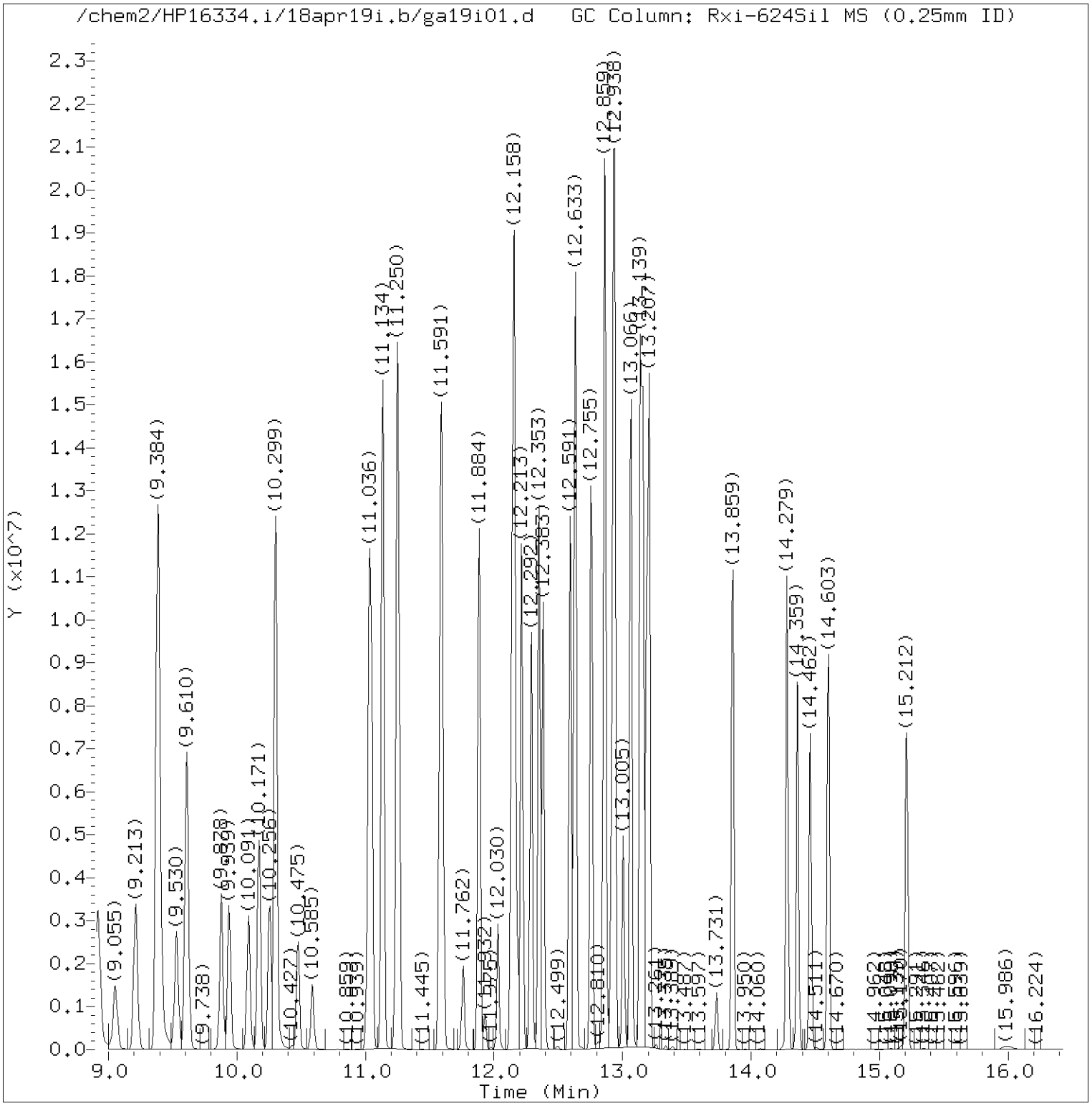
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	1849343	25.000
2) Chloromethane	(2)	2.020	50	1779238	25.000
5) Vinyl Chloride	(2)	2.129	62	1571531	25.000
6) 1,3-Butadiene	(2)	2.129	39	2454788M	25.000
7) Bromomethane	(2)	2.440	94	1057629	25.000
8) Chloroethane	(2)	2.520	64	890278	25.000
9) Dichlorofluoromethane	(2)	2.745	67	2113977	25.000
10) Trichlorofluoromethane	(2)	2.806	101	2130327M	25.000
11) Ethyl ether	(2)	3.026	59	1030308	25.000
12) Freon 123a	(2)	3.129	67	1466723	25.000
13) Acrolein	(1)	3.190	56	8956232	1250.000
15) 1,1-Dichloroethene	(2)	3.324	96	1041365	25.000
14) Acetone	(1)	3.343	43	2704389	250.000
16) Freon 113	(2)	3.367	101	1215525	25.000
17) Methyl Iodide	(2)	3.513	142	2059437	25.000
18) Carbon Disulfide	(2)	3.617	76	4008052	25.000
21) Methyl Acetate	(1)	3.739	43	862108M	25.000
22) Allyl Chloride	(2)	3.769	41	2434316	25.000
26)*t-Butyl Alcohol-d10	(1)	3.946	65	221249M	50.000
23) Methylene Chloride	(2)	3.952	84	1256340	25.000
28) t-Butyl Alcohol	(1)	4.074	59	1746673	500.000
29) Acrylonitrile	(1)	4.263	53	1708754	125.000
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	3723874	25.000
31) trans-1,2-Dichloroethene	(2)	4.348	96	1207771	25.000
32) n-Hexane	(2)	4.775	57	2126850M	25.000
33) 1,1-Dichloroethane	(2)	5.019	63	2484566	25.000
34) di-Isopropyl Ether	(2)	5.074	45	5158603	25.000
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	2296104	25.000
37) Ethyl t-butyl ether	(2)	5.623	59	4558525	25.000
38) 2-Butanone	(1)	5.824	43	5128350	250.000
39) cis-1,2-Dichloroethene	(2)	5.866	96	1396461	25.000
41) 2,2-Dichloropropane	(2)	5.885	77	2117990	25.000
42) Propionitrile	(1)	5.915	54	2638767	500.000
40) 1,2-Dichloroethene (Total)	(2)		96	2604232	50.000
45) Methacrylonitrile	(1)	6.141	67	4104743	250.000
47) Bromochloromethane	(2)	6.208	128	653776	25.000
48) Tetrahydrofuran	(1)	6.214	71	1249027	250.000
49) Chloroform	(2)	6.366	83	2422084	25.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	518734	10.000
50)$Dibromofluoromethane	(2)	6.586	111	531326	10.000
51) 1,1,1-Trichloroethane	(2)	6.592	97	2081038	25.000
52) Cyclohexane	(2)	6.696	56	2475766	25.000
52) Cyclohexane	(2)	6.696	84	1890685	25.000
52) Cyclohexane	(2)	6.696	69	718781	25.000
54) Carbon Tetrachloride	(2)	6.805	117	1759100	25.000
55) 1,1-Dichloropropene	(2)	6.805	75	1898815	25.000
56) Isobutyl Alcohol	(1)	6.946	41	1906137	1250.000
57)$1,2-Dichloroethane-d4	(2)	7.043	102	108673M	10.000
57)$1,2-Dichloroethane-d4	(2)	7.049	65	613726	10.000
57)$1,2-Dichloroethane-d4	(2)	7.043	104	69894	10.000
58) Benzene	(2)	7.074	78	5249138	25.000
59) 1,2-Dichloroethane	(2)	7.153	62	1798082	25.000
60) t-Amyl methyl ether	(2)	7.263	73	3974673	25.000
63)*Fluorobenzene	(2)	7.482	96	2071999	10.000
62) n-Heptane	(2)	7.494	43	2571265	25.000
65) n-Butanol	(1)	7.842	56	3311509	2500.000
67) Trichloroethene	(2)	7.970	95	1400954	25.000
69) Methylcyclohexane	(2)	8.281	83	2433720	25.000
70) 1,2-Dichloropropane	(2)	8.305	63	1484759	25.000
71) Methyl Methacrylate	(1)	8.384	69	816138	25.000
72) 1,4-Dioxane	(1)	8.390	88	297580M	1250.000
73) Dibromomethane	(2)	8.415	93	716941	25.000
74) Bromodichloromethane	(2)	8.653	83	1861915	25.000
76) 2-Nitropropane	(1)	8.921	41	3033389	250.000
80) cis-1,3-Dichloropropene	(2)	9.213	75	2347744	25.000
81) 4-Methyl-2-Pentanone	(1)	9.384	43	12625487M	250.000
82)$Toluene-d8	(3)	9.530	98	2140263	10.000
82)$Toluene-d8	(3)	9.530	100	1374009	10.000
83) Toluene	(3)	9.610	92	3409708	25.000
84) trans-1,3-Dichloropropene	(3)	9.878	75	2045084	25.000
86) Ethyl Methacrylate	(3)	9.939	69	1773774	25.000
88) 1,1,2-Trichloroethane	(3)	10.091	97	1034177	25.000
85) 1,3-Dichloropropene (total)	(3)		75	4392828	50.000
89) Tetrachloroethene	(3)	10.171	166	1581183	25.000
90) 1,3-Dichloropropane	(3)	10.256	76	1863067	25.000
91) 2-Hexanone	(1)	10.299	43	8861239M	250.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	1314760	25.000
95) 1,2-Dibromoethane	(3)	10.585	107	1014098	25.000
97)*Chlorobenzene-d5	(3)	11.018	117	1603608	10.000
98) Chlorobenzene	(3)	11.048	112	3881846	25.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	1437610	25.000
100) Ethylbenzene	(3)	11.134	91	6692153	25.000
101) m+p-Xylene	(3)	11.250	106	5252980	50.000
104) o-Xylene	(3)	11.585	106	2712075	25.000
106) Styrene	(3)	11.597	104	4560006	25.000
105) Xylene (Total)	(3)		106	7965055	75.000
107) Bromoform	(3)	11.762	173	820701	25.000
108) Isopropylbenzene	(3)	11.884	105	6856780	25.000
111)$4-Bromofluorobenzene	(3)	12.030	95	822456	10.000
111)$4-Bromofluorobenzene	(3)	12.030	174	705228	10.000
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	1397464M	25.000
114) Bromobenzene	(4)	12.146	156	1835312	25.000
116) 1,2,3-Trichloropropane	(4)	12.176	110	374830	25.000
117) n-Propylbenzene	(4)	12.213	91	7995929	25.000
119) 2-Chlorotoluene	(4)	12.292	126	1634842	25.000
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	5960494	25.000
122) 4-Chlorotoluene	(4)	12.383	126	1726077	25.000
125) tert-Butylbenzene	(4)	12.591	134	1267746	25.000
126) Pentachloroethane	(4)	12.627	167	1165194	25.000
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	6172405	25.000
128) sec-Butylbenzene	(4)	12.755	105	7581053	25.000
131) 1,3-Dichlorobenzene	(4)	12.859	146	3670990	25.000
132) p-Isopropyltoluene	(4)	12.865	119	6765848	25.000
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	918007	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	3686389	25.000
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	2802631	25.000
136) Benzyl Chloride	(4)	13.005	126	597818	25.000
138) n-Butylbenzene	(4)	13.158	92	3587064	25.000
139) 1,2-Dichlorobenzene	(4)	13.188	146	3439540	25.000
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	227631	25.000
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	3078991	25.000
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	2857378	25.000
146) Hexachlorobutadiene	(4)	14.365	225	1464541	25.000
147) Naphthalene	(4)	14.462	128	4718543	25.000

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	2432098	25.000

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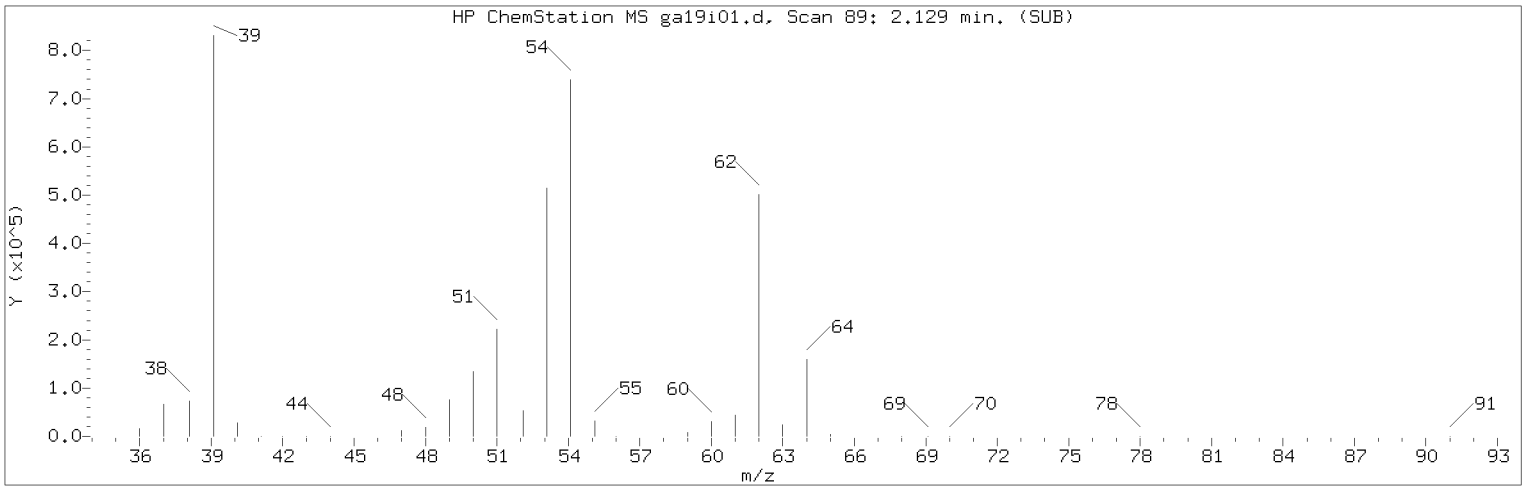
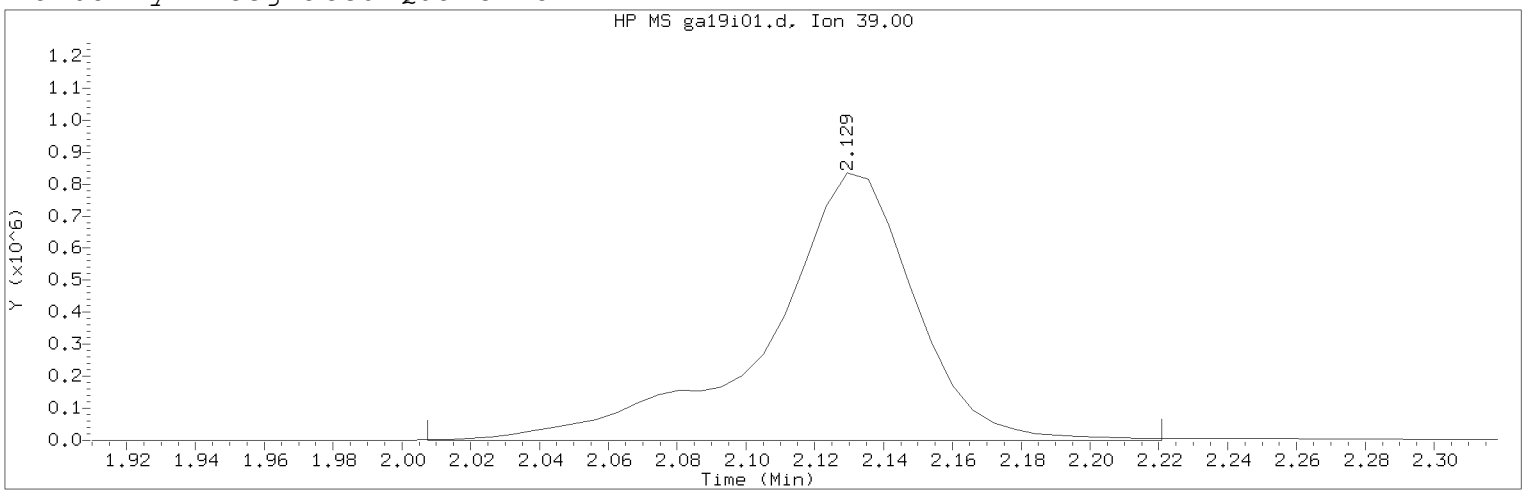
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

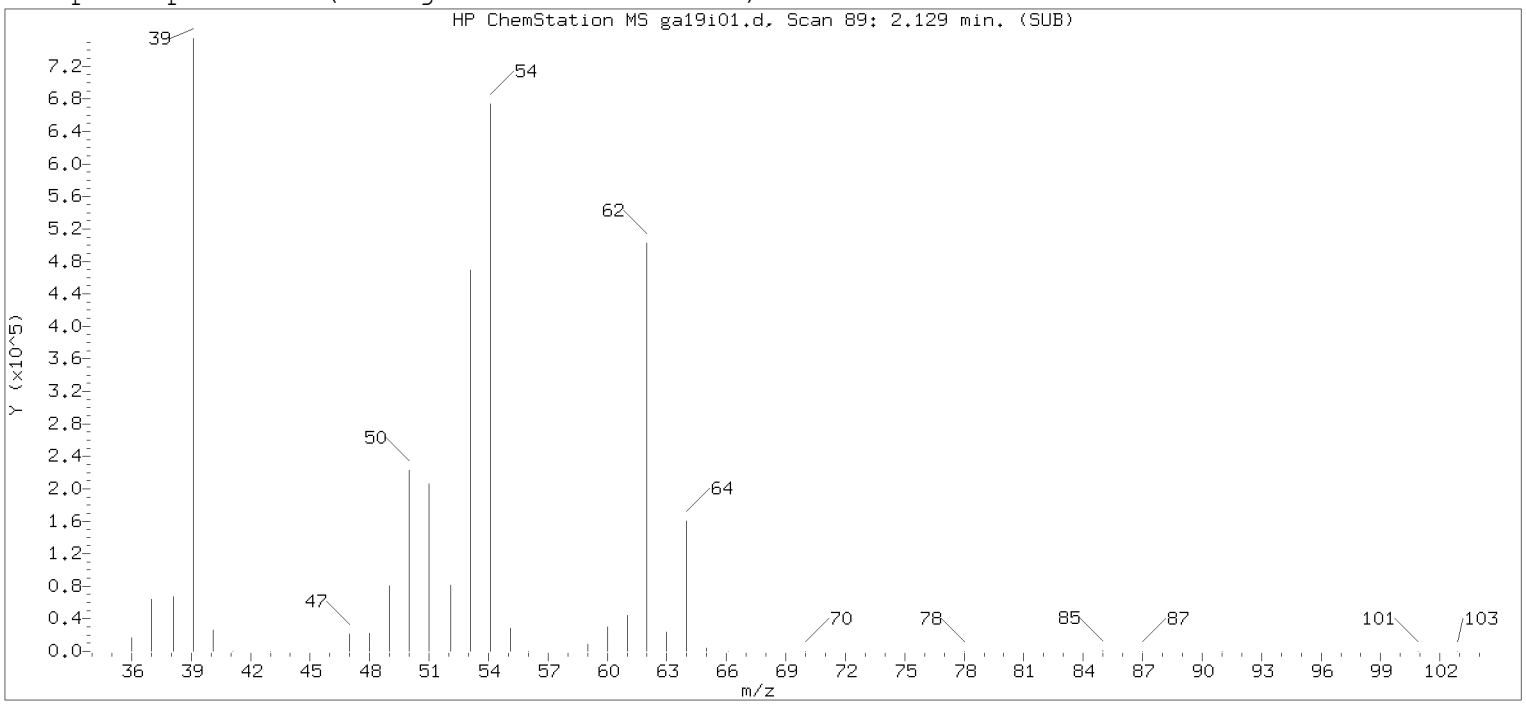
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area (flag) : 2454788M
On-Column Amount (ng) : 25.0000
Integration start scan : 68 Integration stop scan: 103
Y at integration start : 353 Y at integration end: 353

Reason for manual integration: improper integration

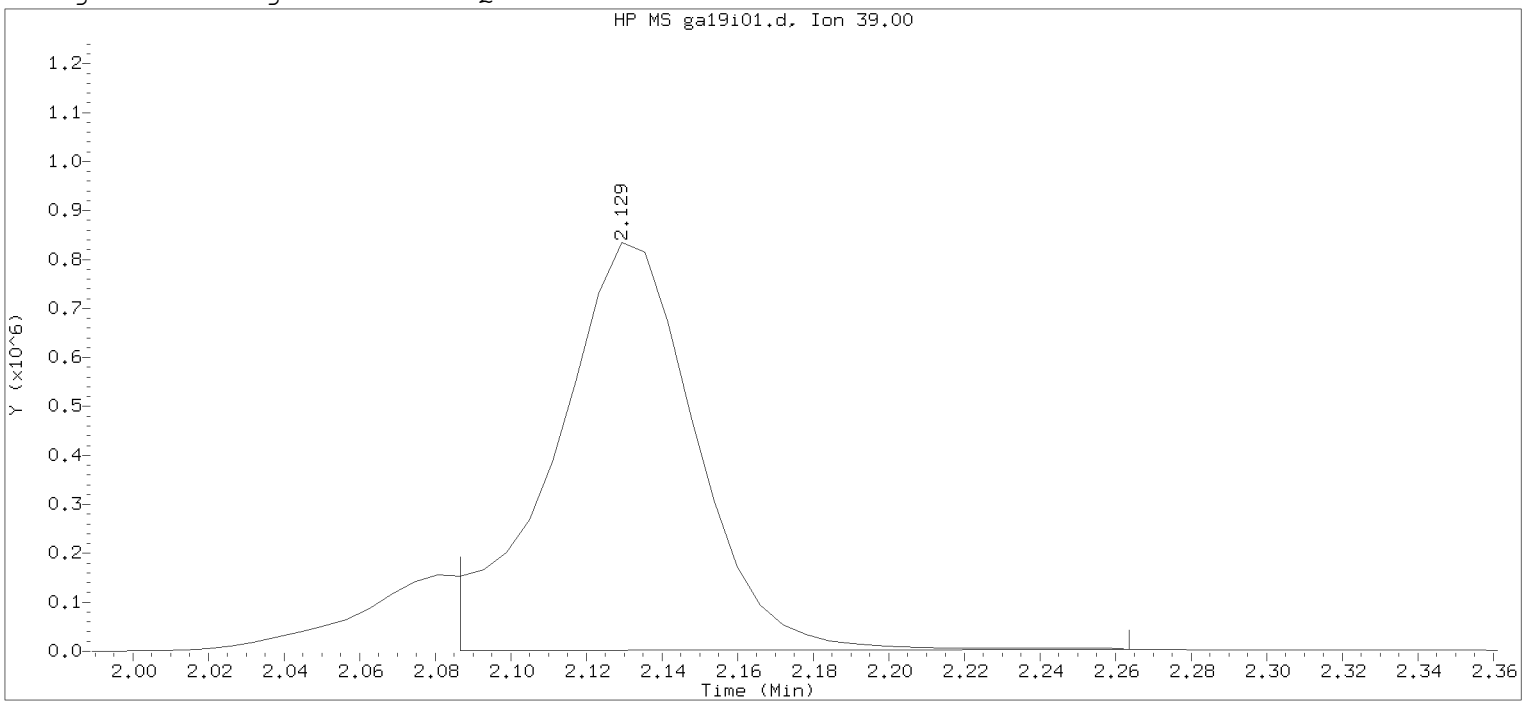
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

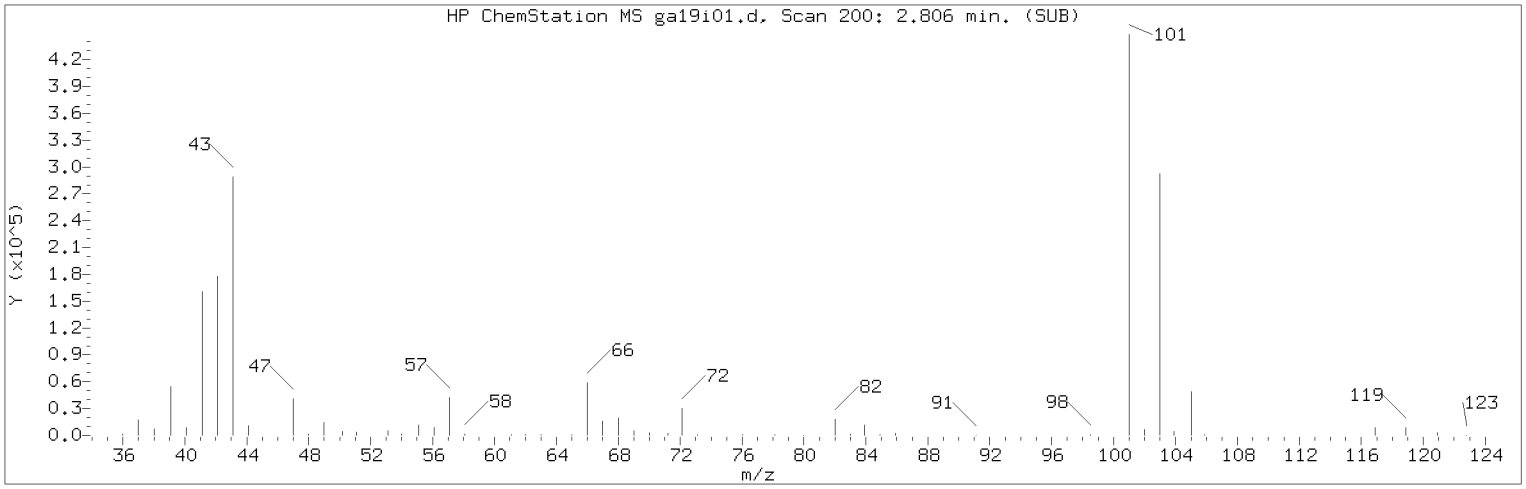
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

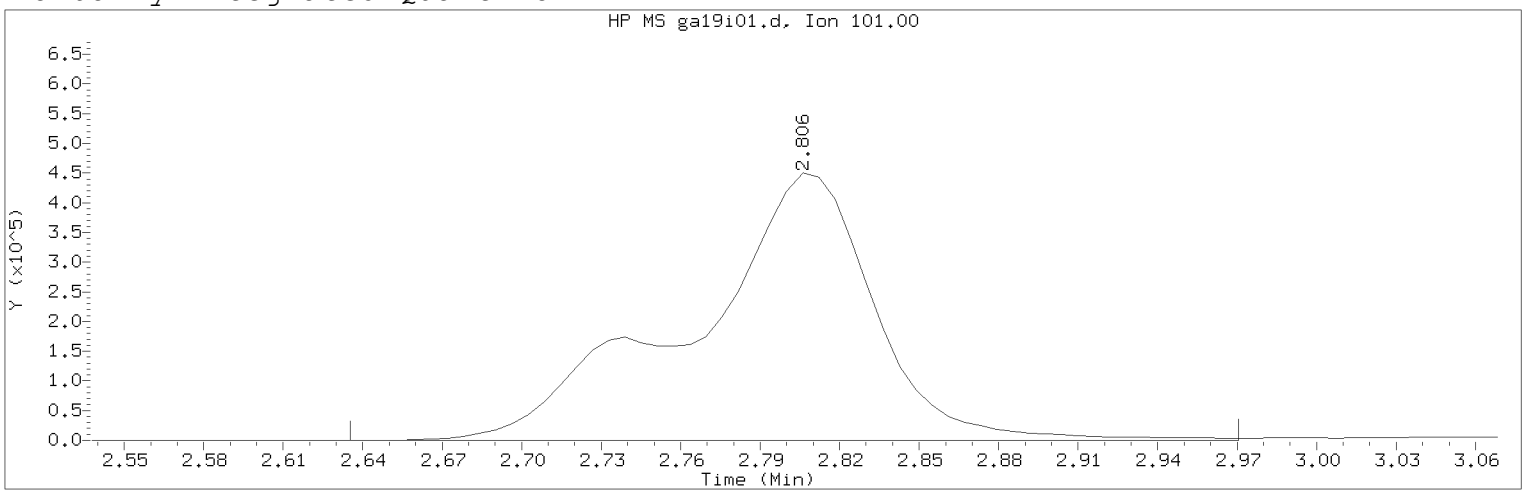
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area : 2150740
On-column Amount (ng) : 25.0000
Integration start scan : 81 Integration stop scan: 110
Y at integration start : 1801 Y at integration end: 4204

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

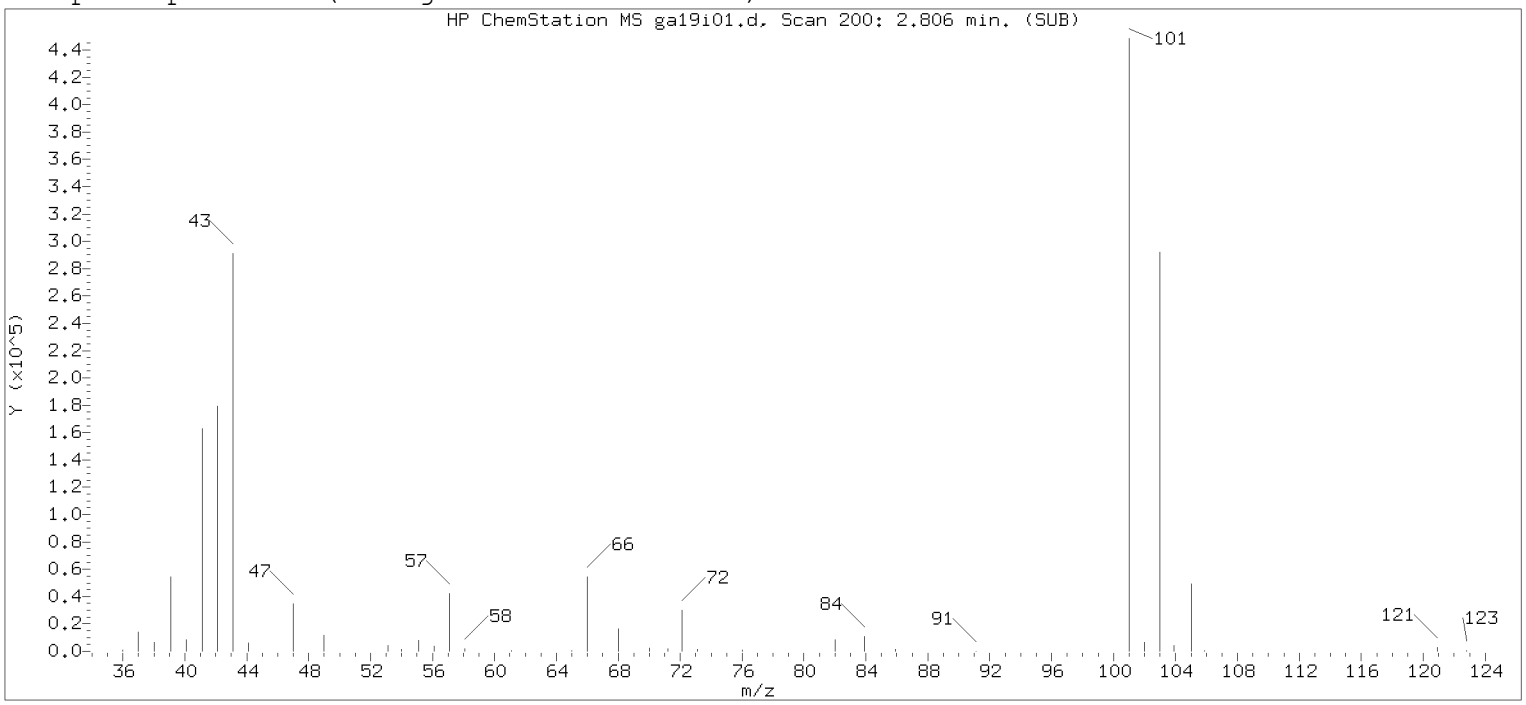
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 2130327M
On-Column Amount (ng) : 25.0000
Integration start scan : 171 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

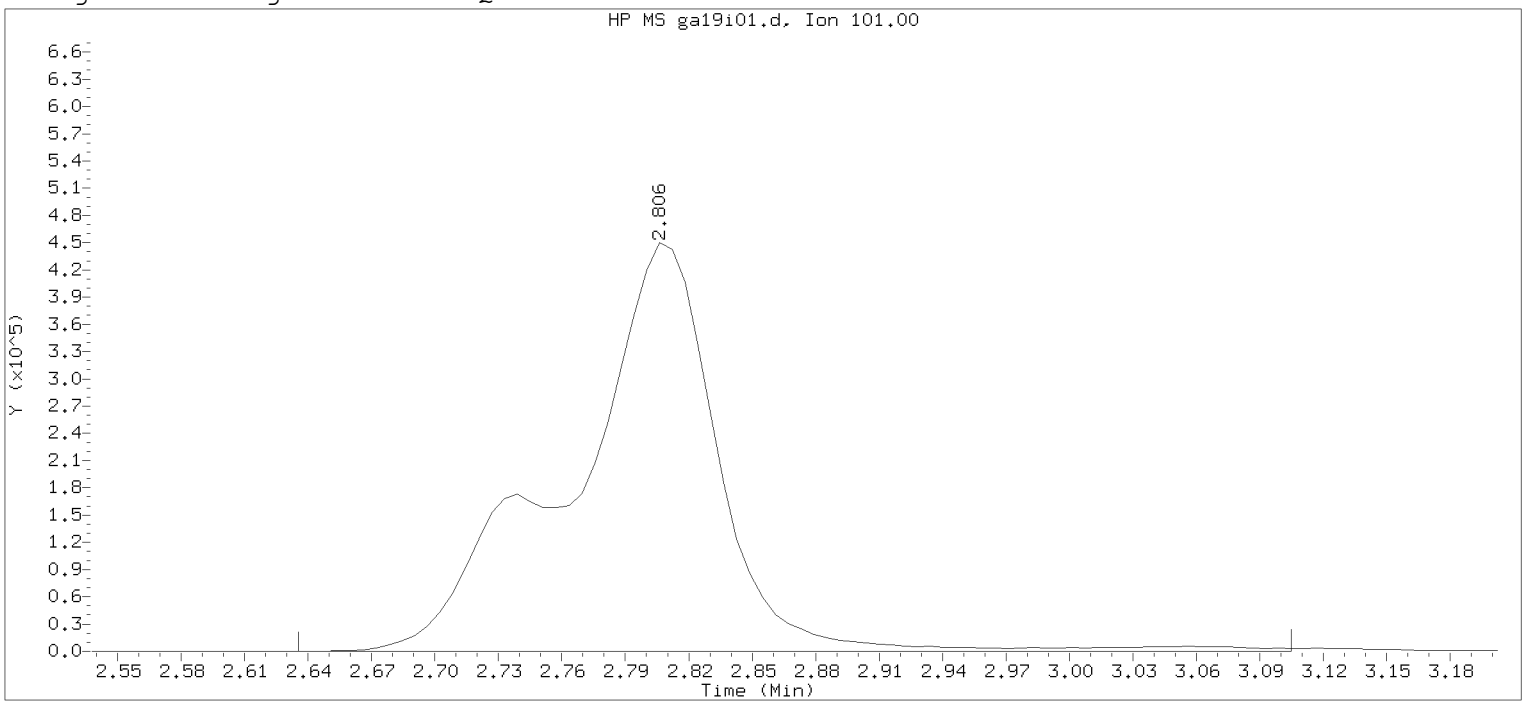
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

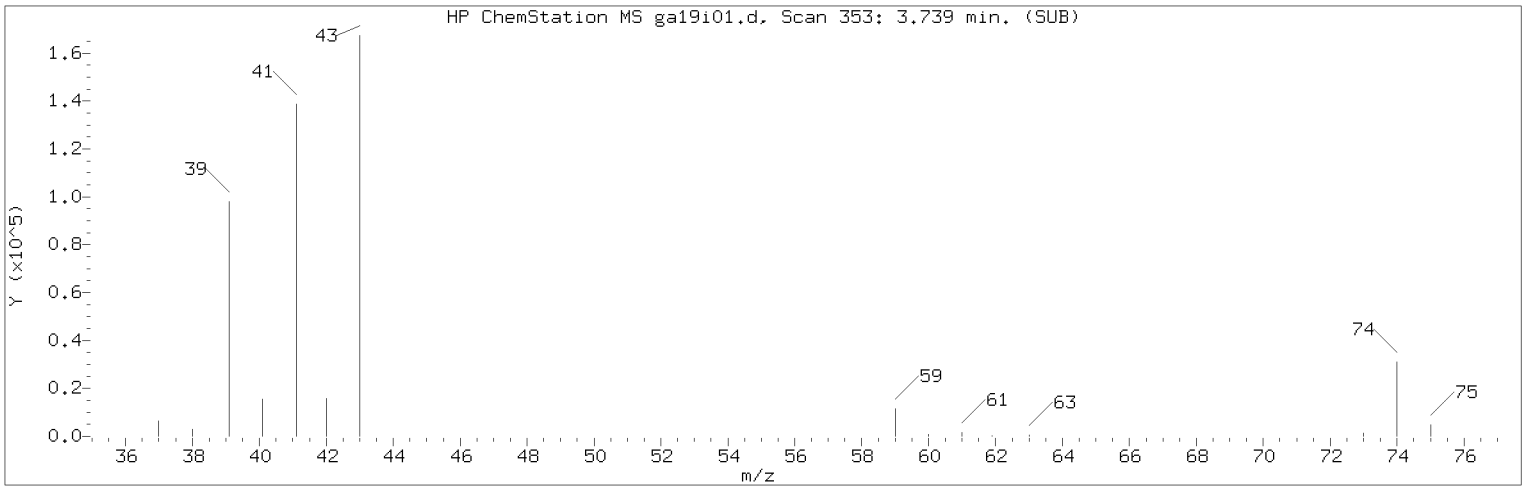
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

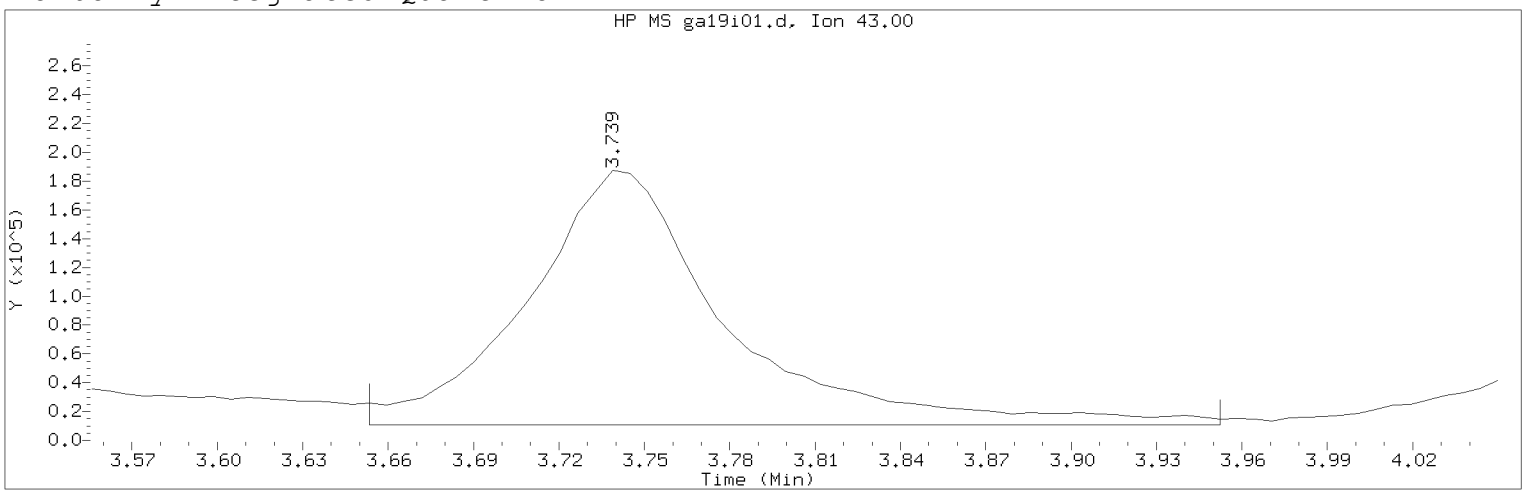
Compound Number	: 10		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 200		
Retention Time (minutes)	: 2.806		
Quant Ion	: 101.00		
Area	: 2163836		
On-column Amount (ng)	: 25.0000		
Integration start scan	: 171	Integration stop scan:	248
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

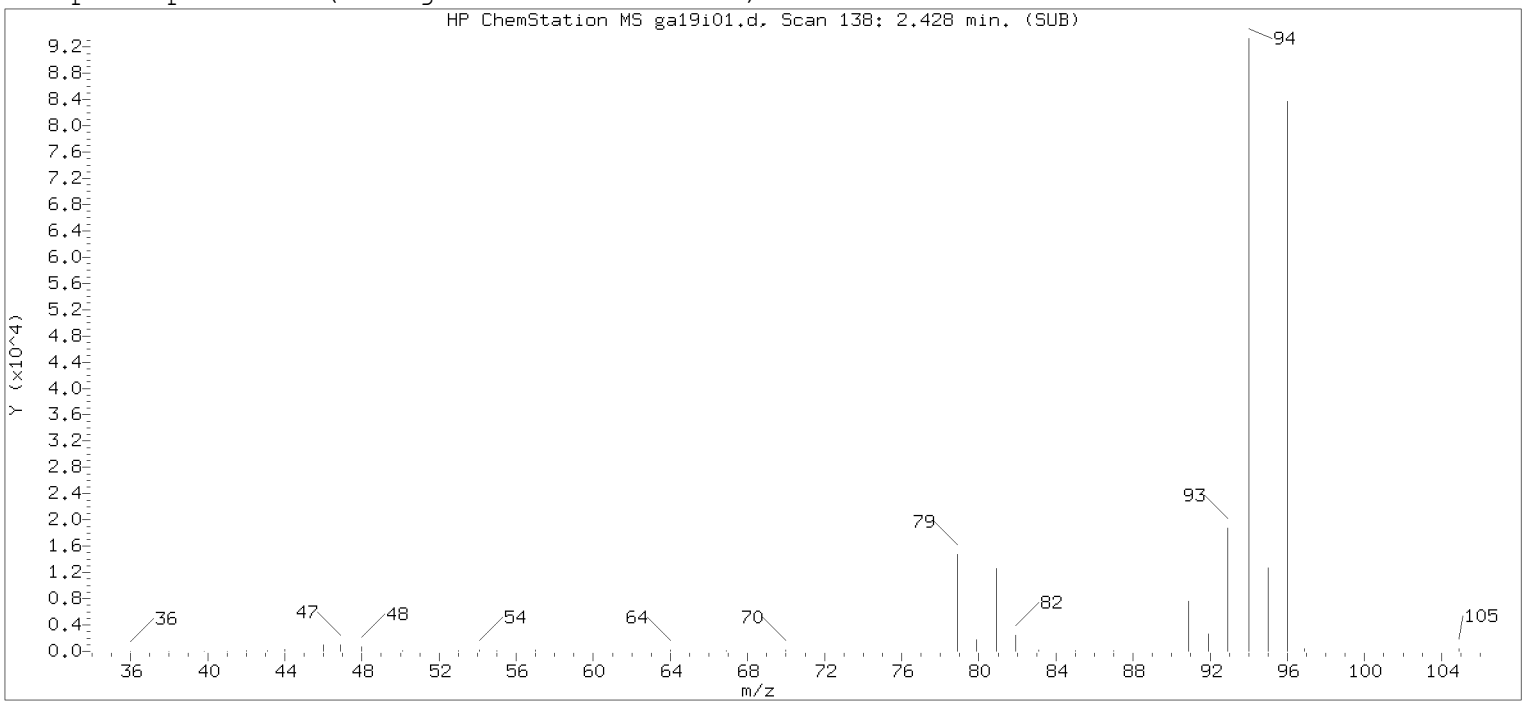
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 353
Retention Time (minutes): 3.739
Quant Ion : 43.00
Area (flag) : 862108M
On-Column Amount (ng) : 25.0000
Integration start scan : 338 Integration stop scan: 387
Y at integration start : 10565 Y at integration end: 10565

Reason for manual integration: improper integration

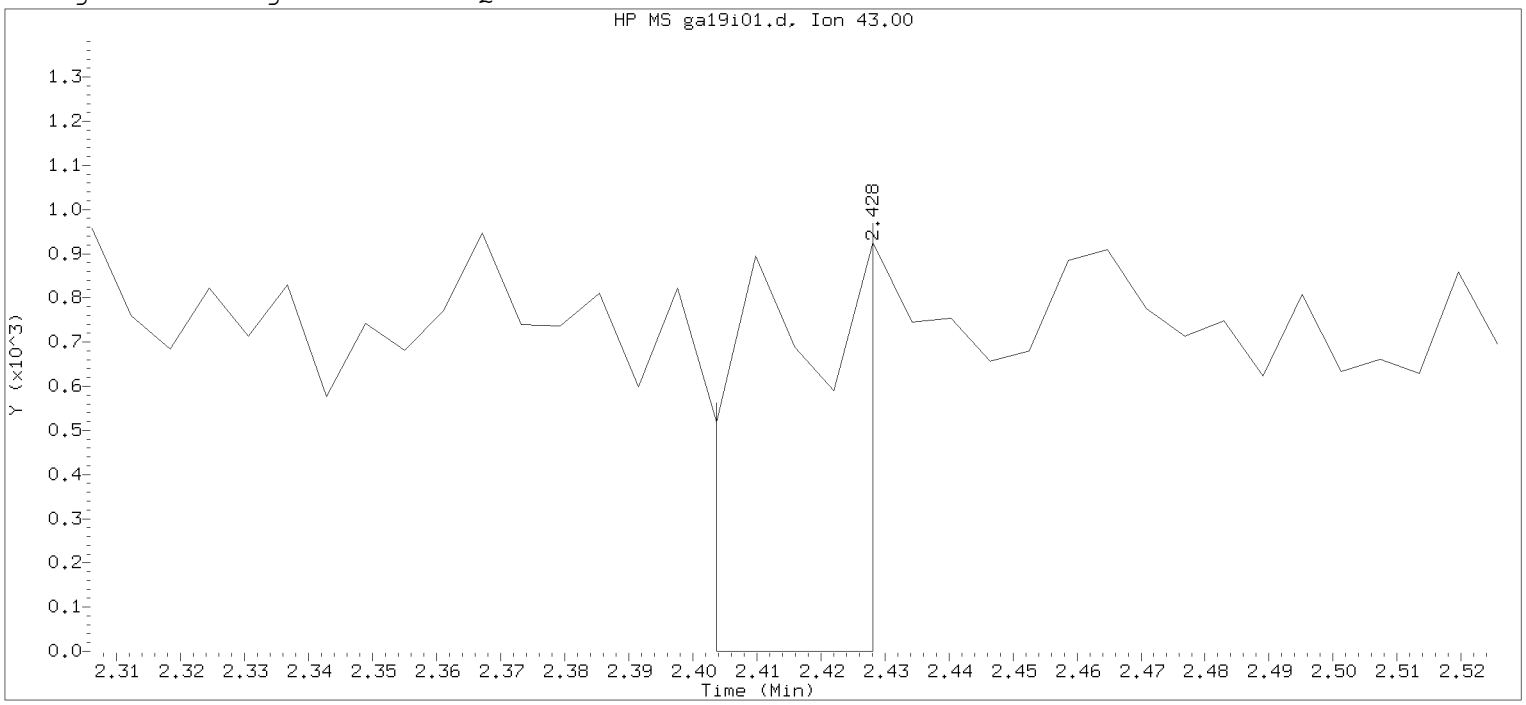
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

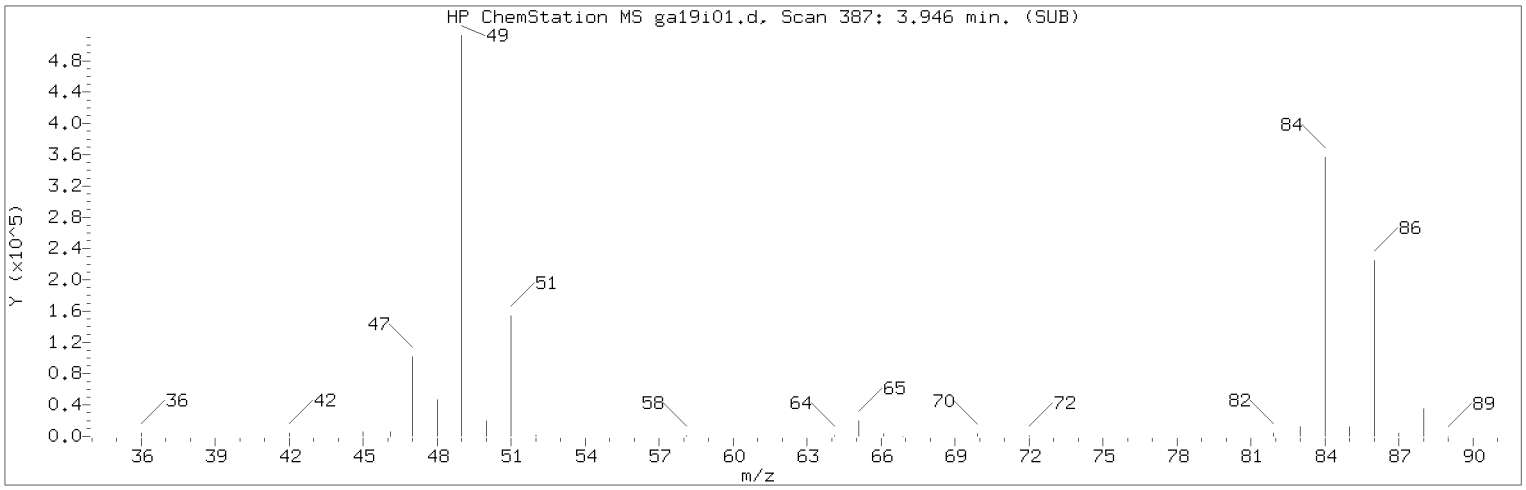
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

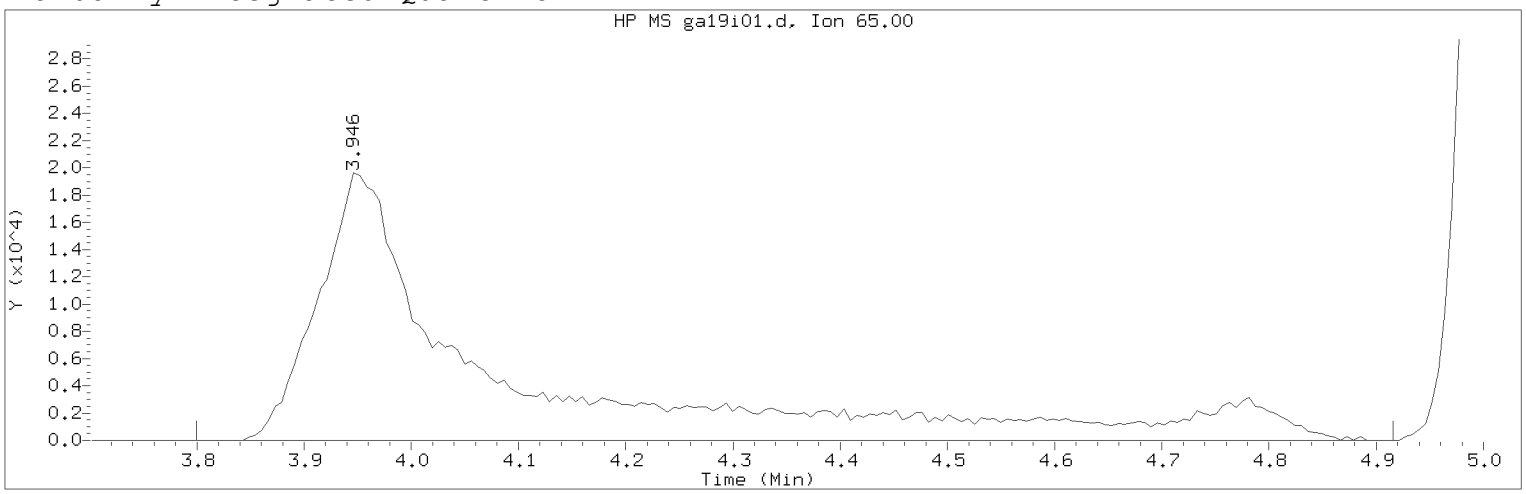
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 138
Retention Time (minutes): 2.428
Quant Ion : 43.00
Area : 1058
On-column Amount (ng) : 25.0000
Integration start scan : 133 Integration stop scan: 137
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

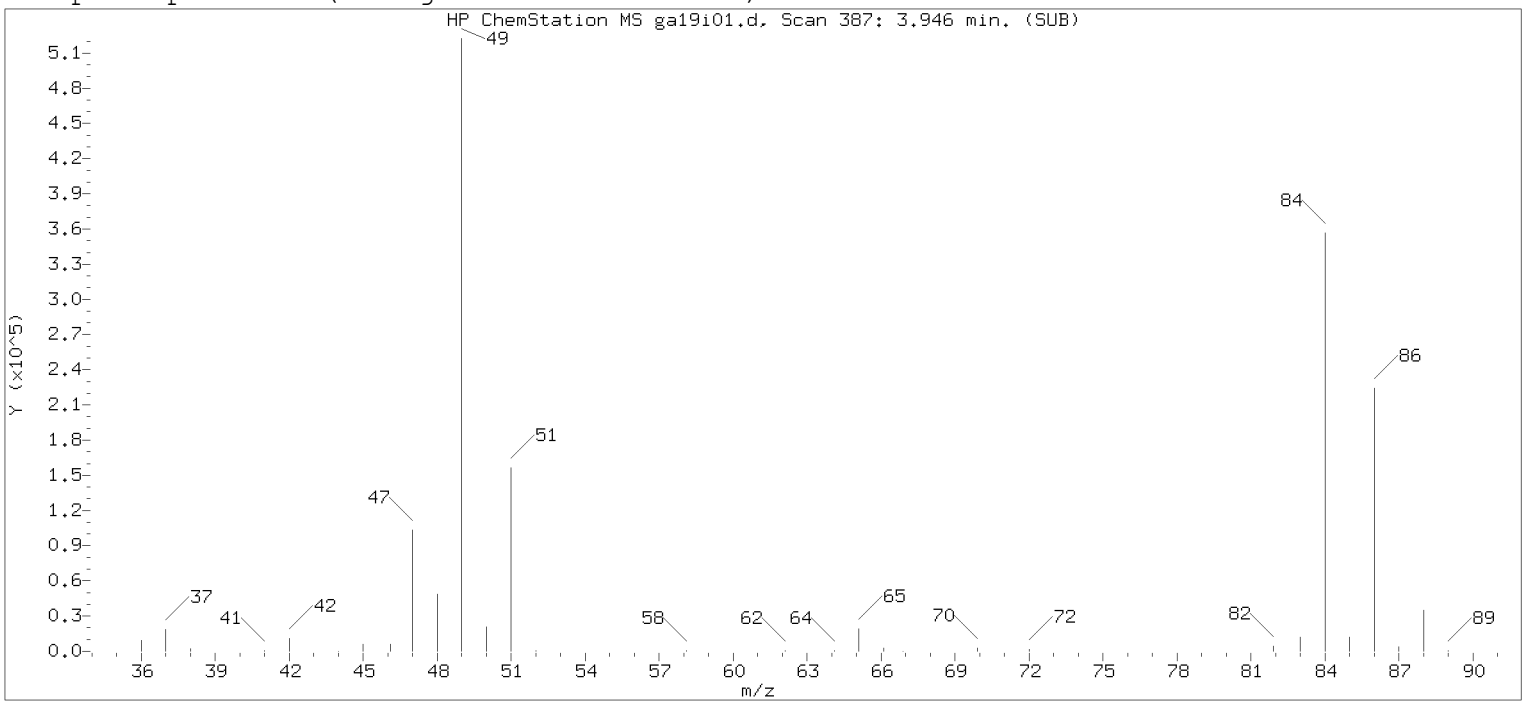
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 387
Retention Time (minutes): 3.946
Quant Ion : 65.00
Area (flag) : 221249M
On-Column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 545
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

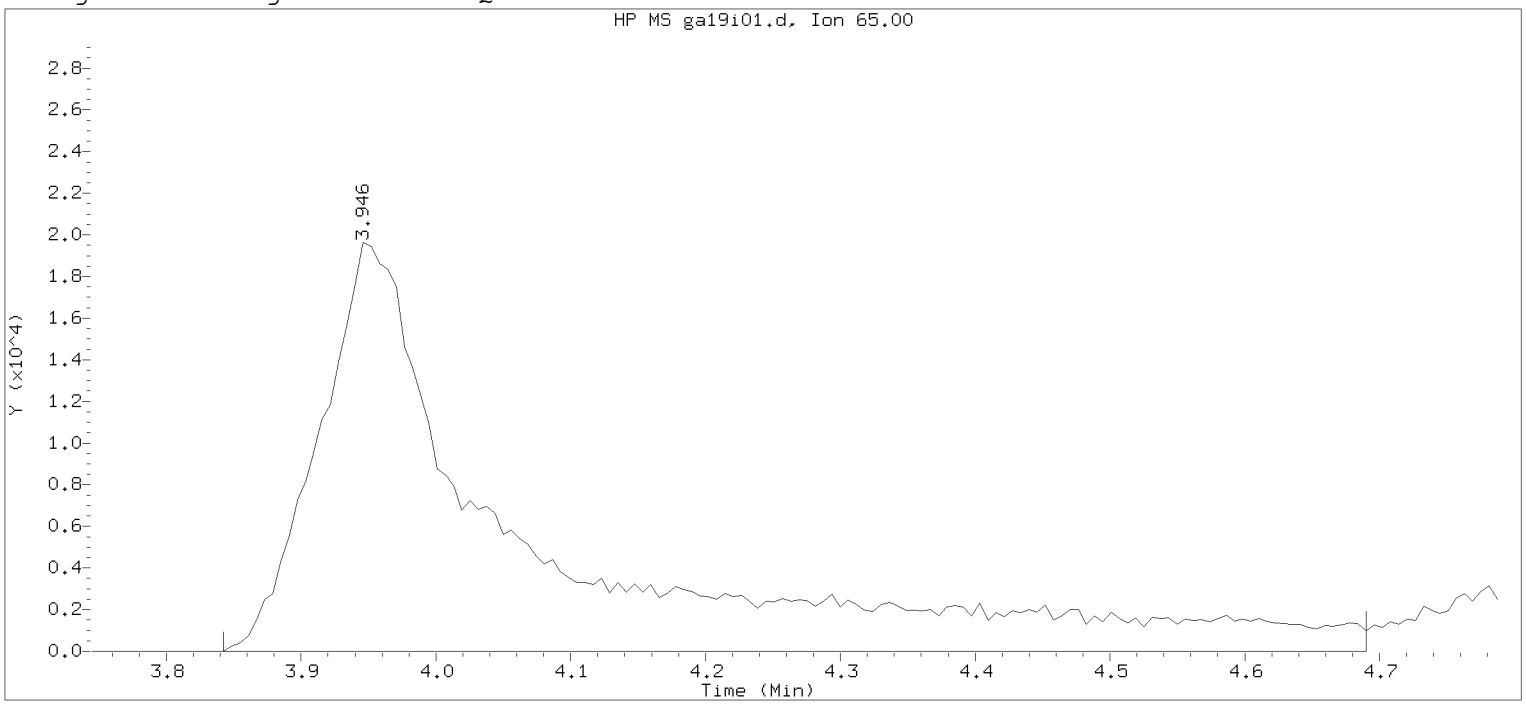
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

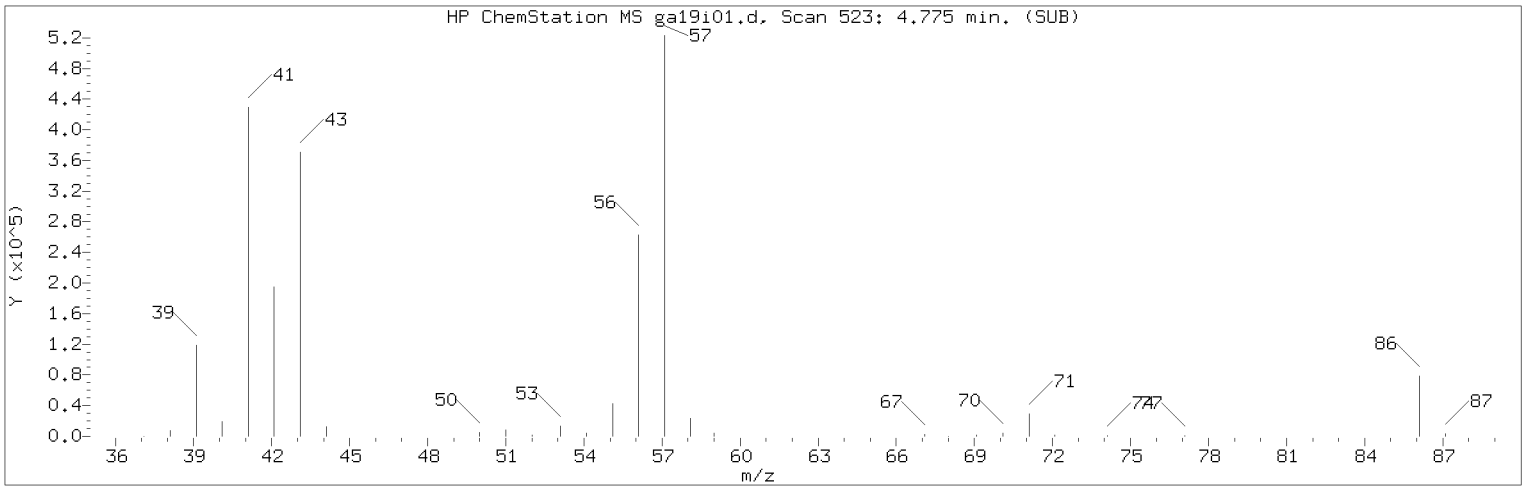
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

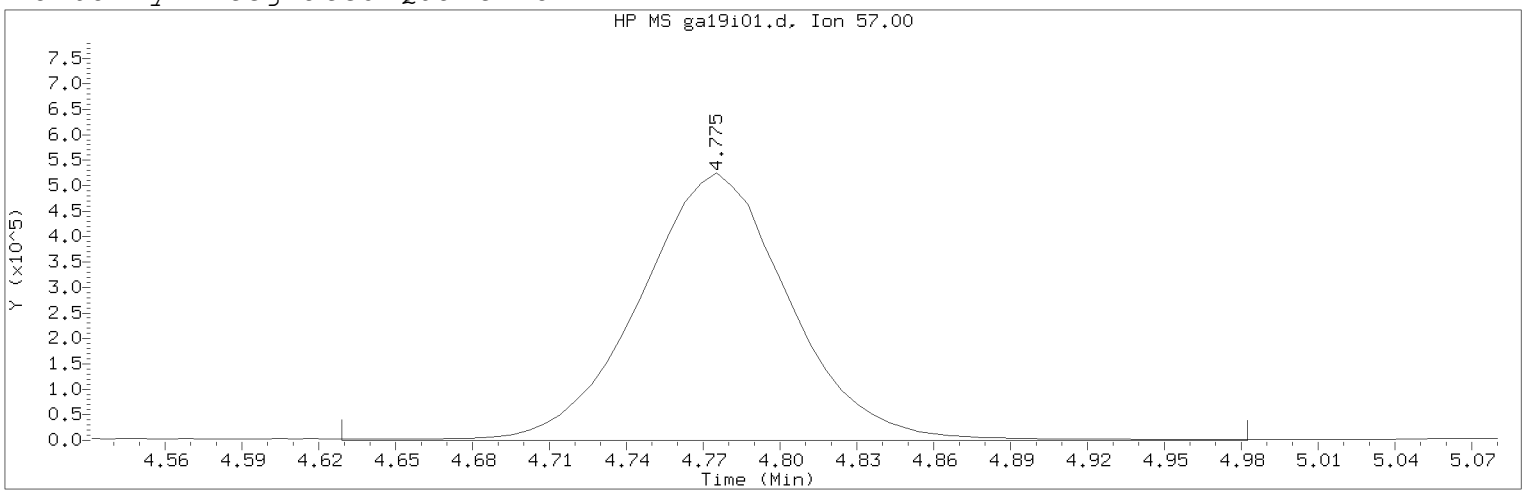
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 387		
Retention Time (minutes)	: 3.946		
Quant Ion	: 65.00		
Area	: 203887		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 369	Integration stop scan:	508
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

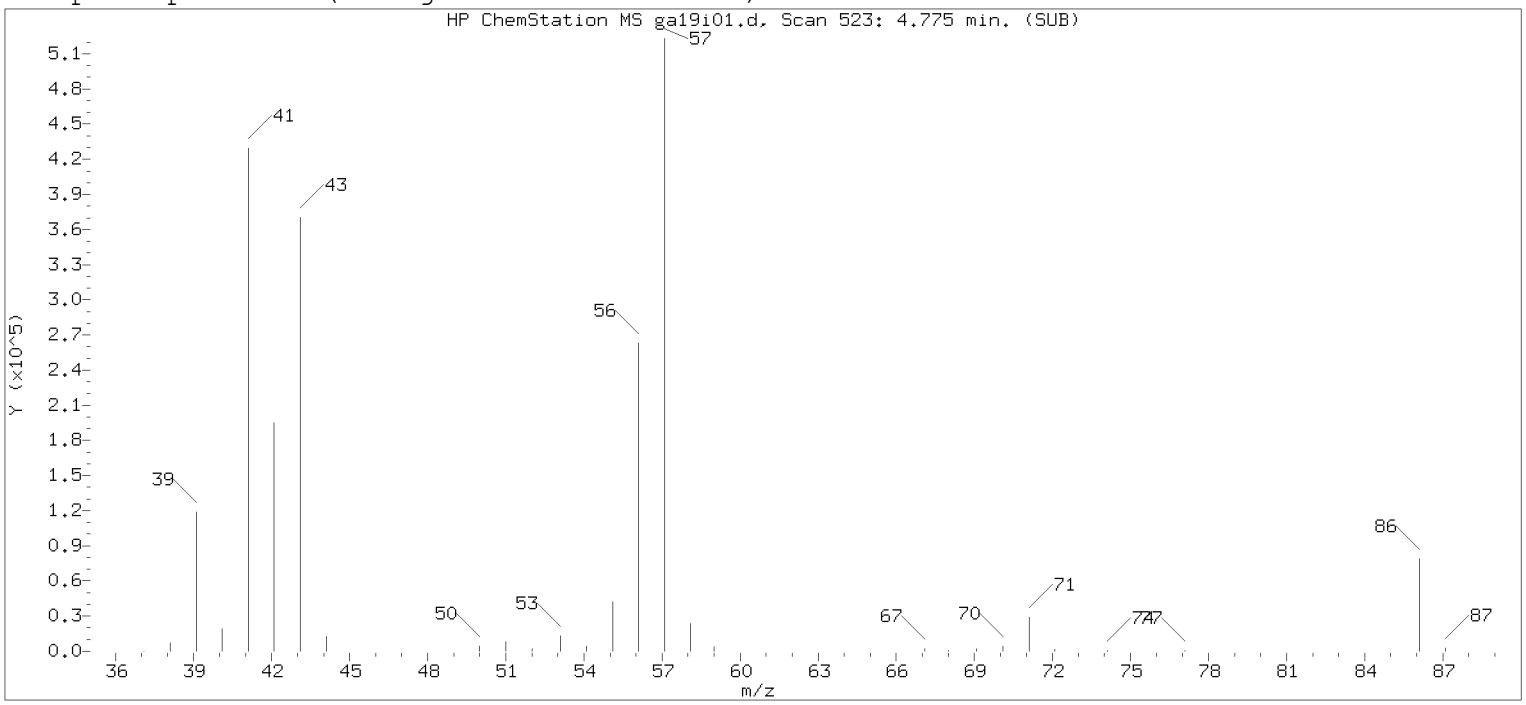
Compound Number : 32
Compound Name : n-Hexane
Scan Number : 523
Retention Time (minutes): 4.775
Quant Ion : 57.00
Area (flag) : 2126850M
On-Column Amount (ng) : 25.0000
Integration start scan : 498 Integration stop scan: 556
Y at integration start : 450 Y at integration end: 450

Reason for manual integration: improper integration

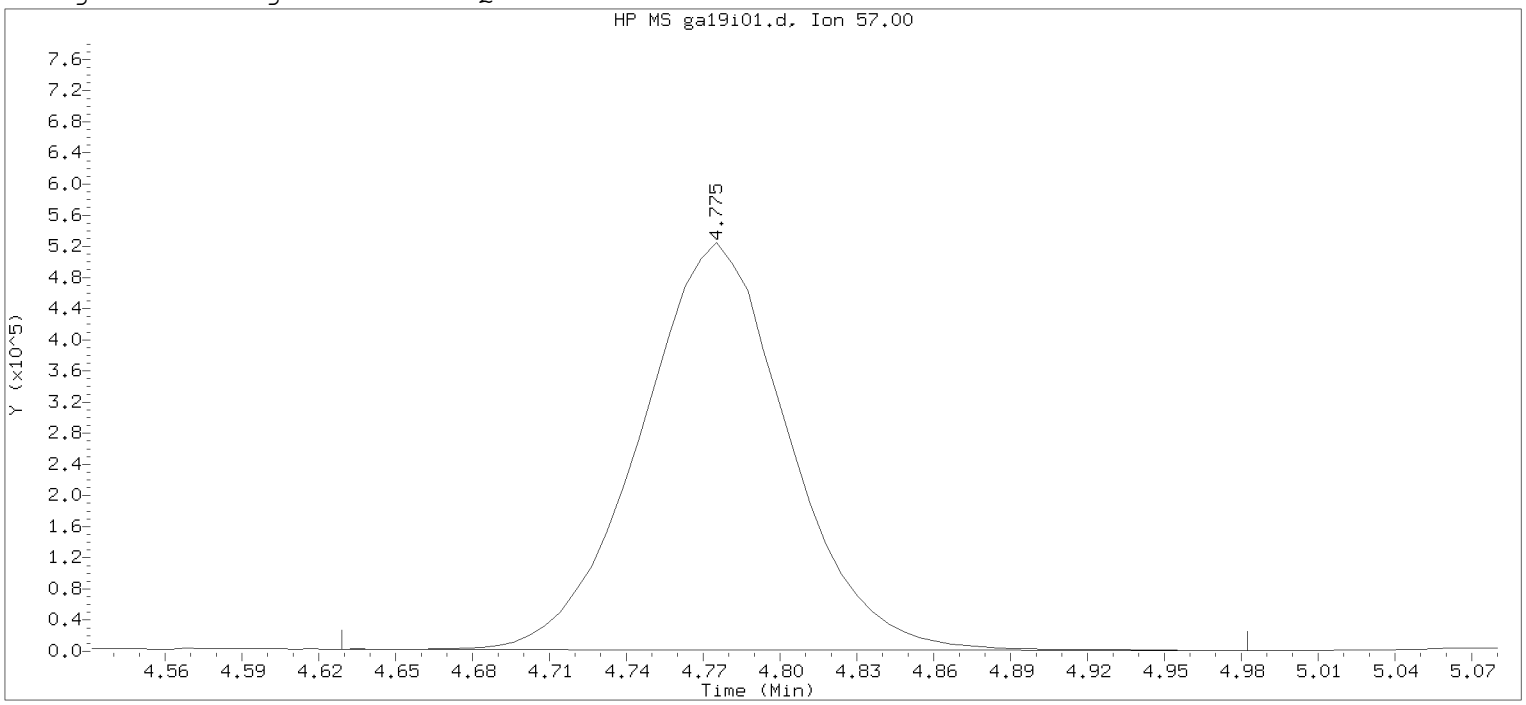
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

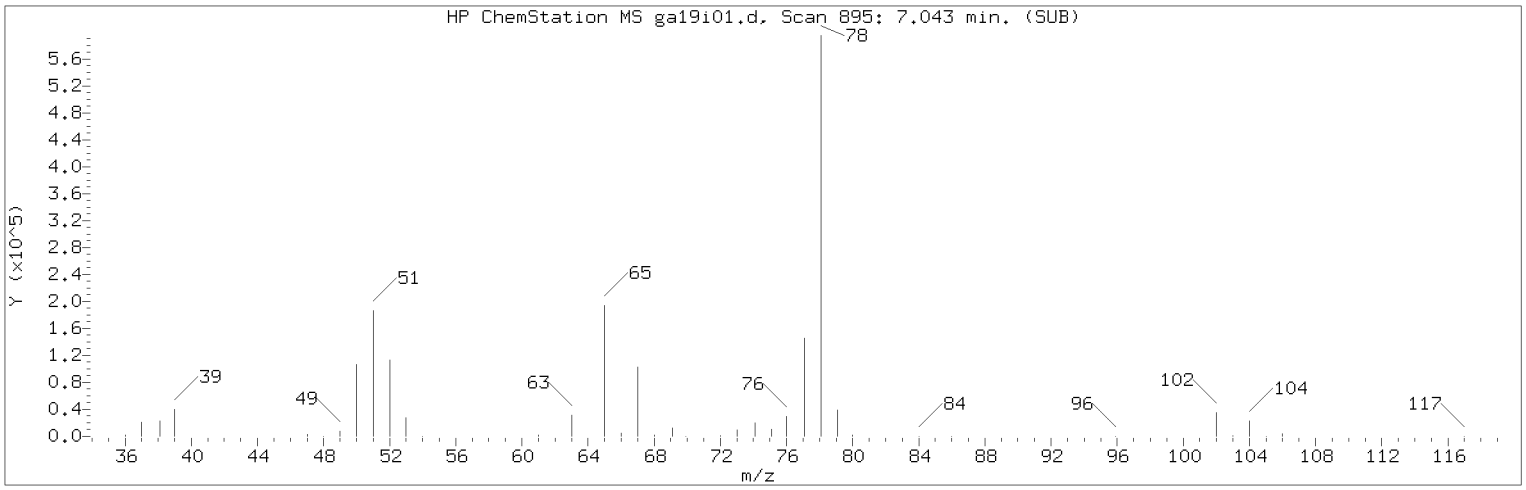
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

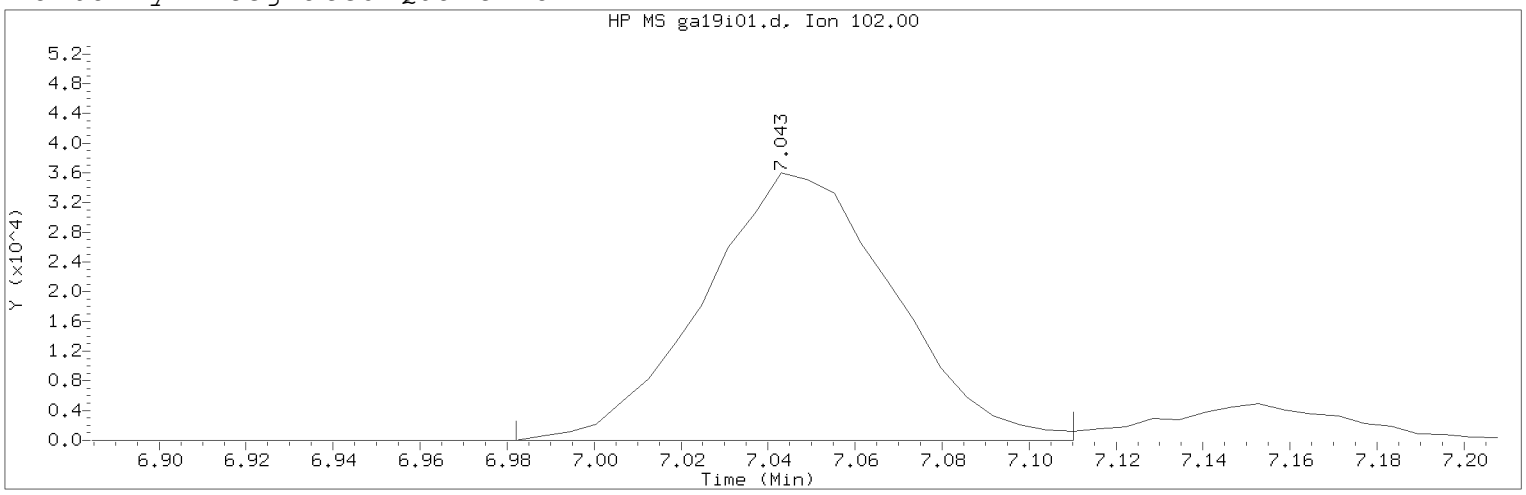
Compound Number	: 32		
Compound Name	: n-Hexane		
Scan Number	: 523		
Retention Time (minutes)	: 4.775		
Quant Ion	: 57.00		
Area	: 2101631		
On-column Amount (ng)	: 25.0000		
Integration start scan	: 498	Integration stop scan:	556
Y at integration start	: 2508	Y at integration end:	726

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

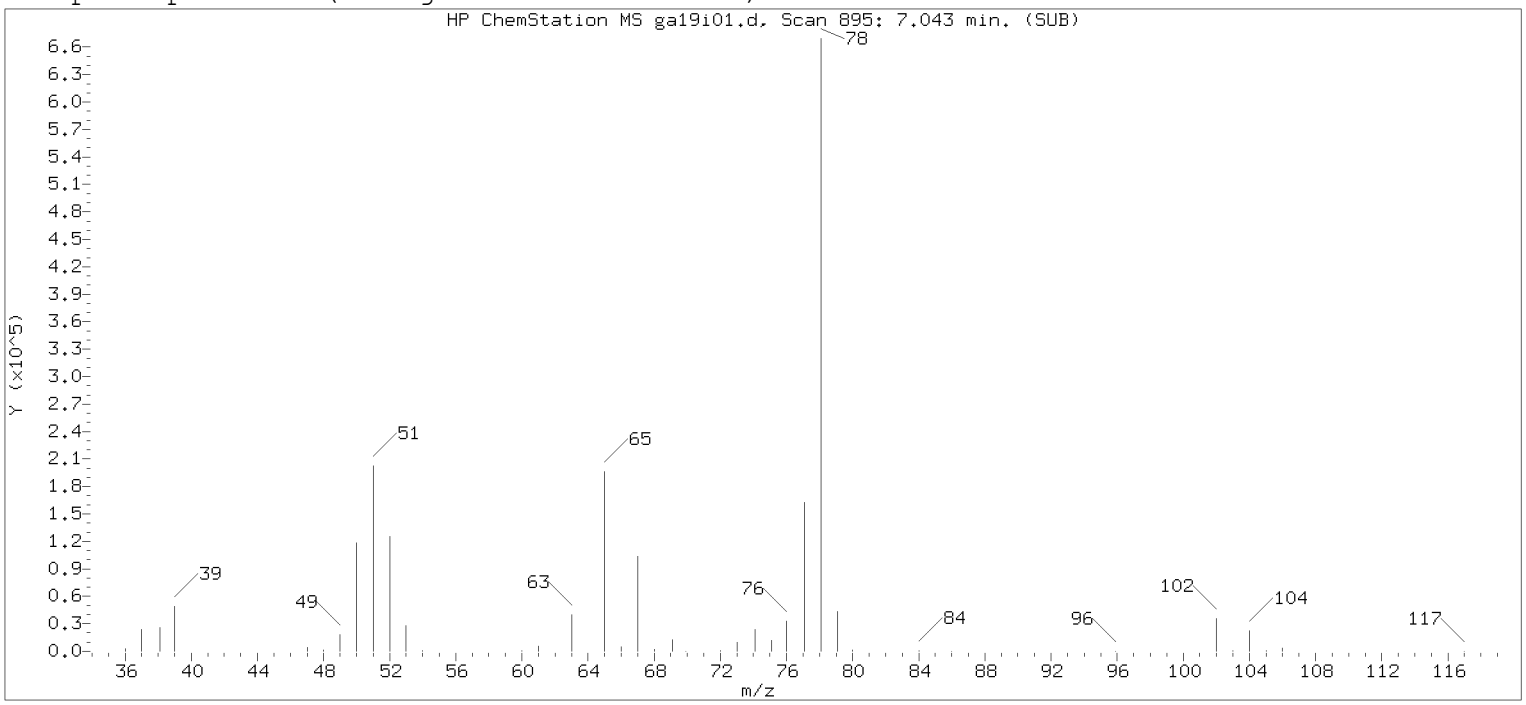
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 895
Retention Time (minutes): 7.043
Quant Ion : 102.00
Area (flag) : 108673M
On-Column Amount (ng) : 10.0000
Integration start scan : 884 Integration stop scan: 905
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

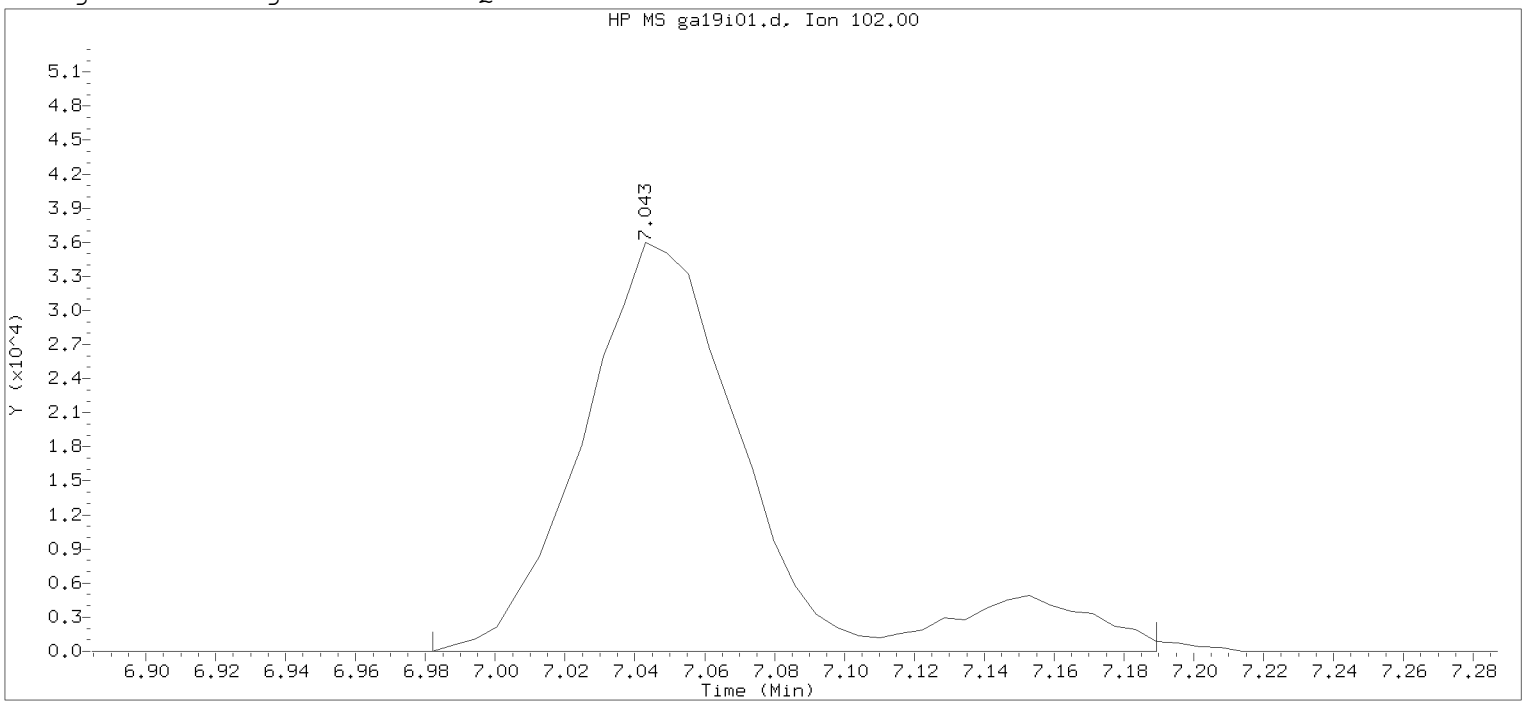
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

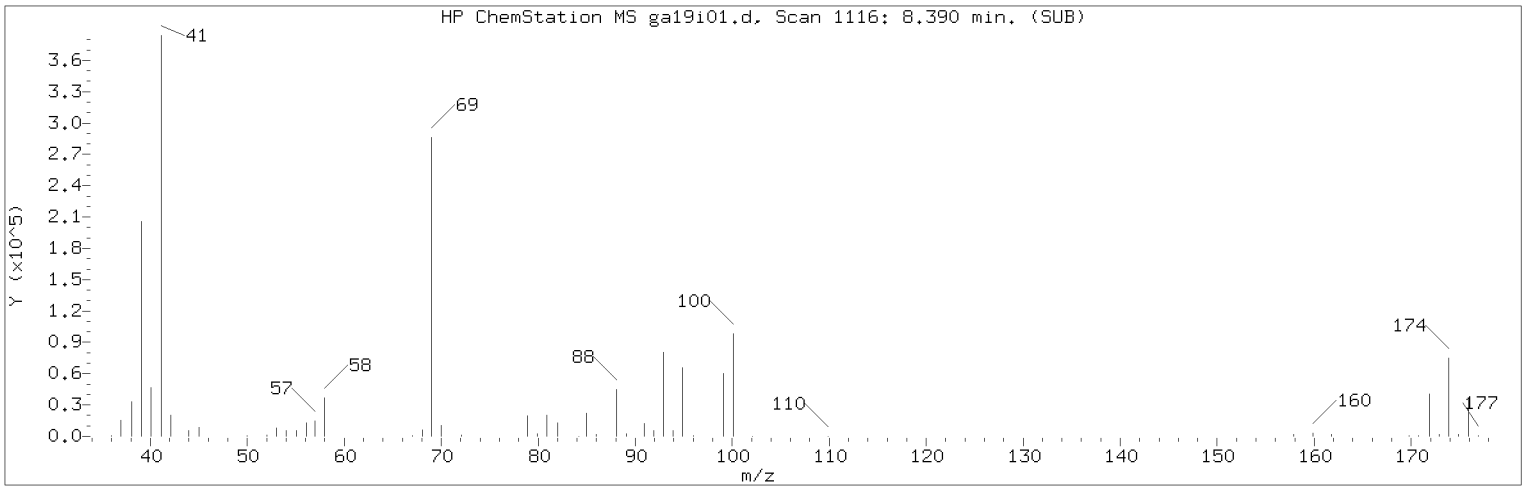
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

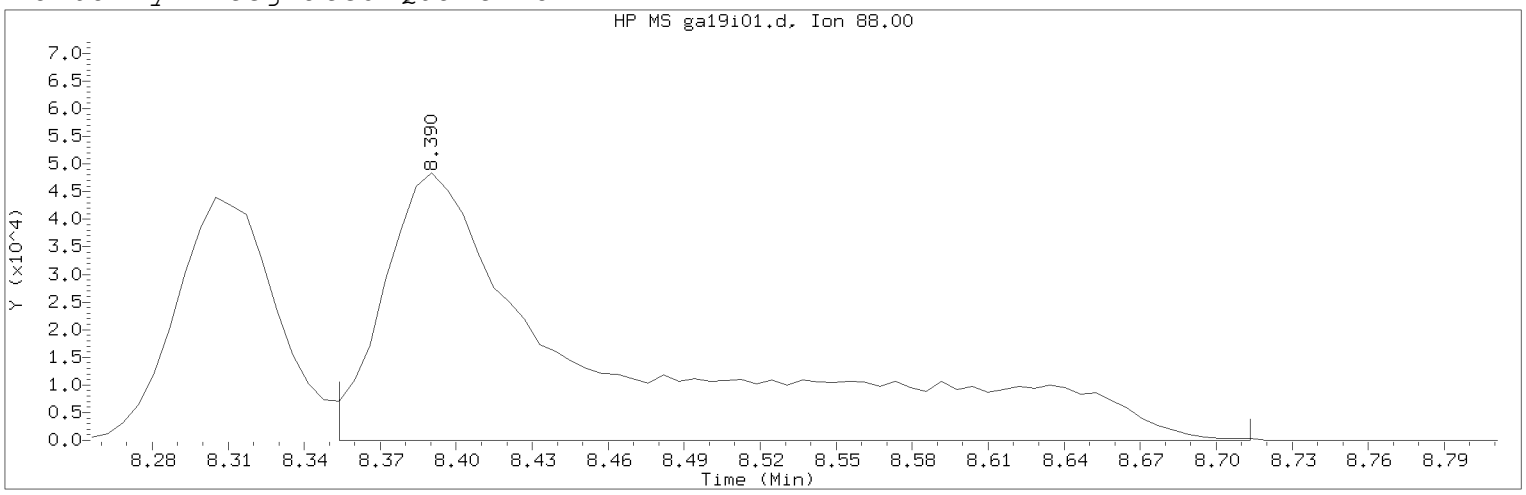
Compound Number	: 57		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 895		
Retention Time (minutes)	: 7.043		
Quant Ion	: 102.00		
Area	: 122473		
On-column Amount (ng)	: 10.0000		
Integration start scan	: 884	Integration stop scan:	918
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

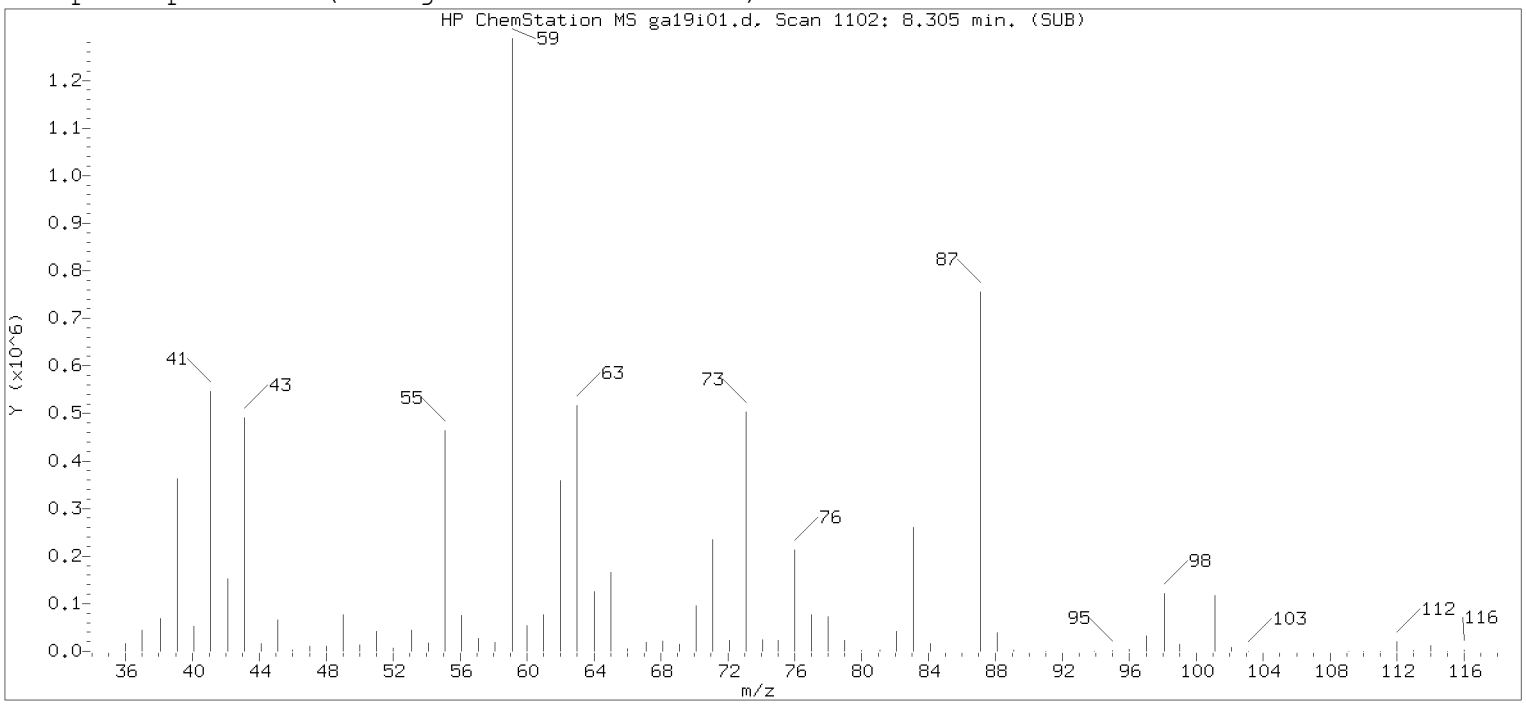
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 297580M
On-Column Amount (ng) : 1250.0000
Integration start scan : 1109 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

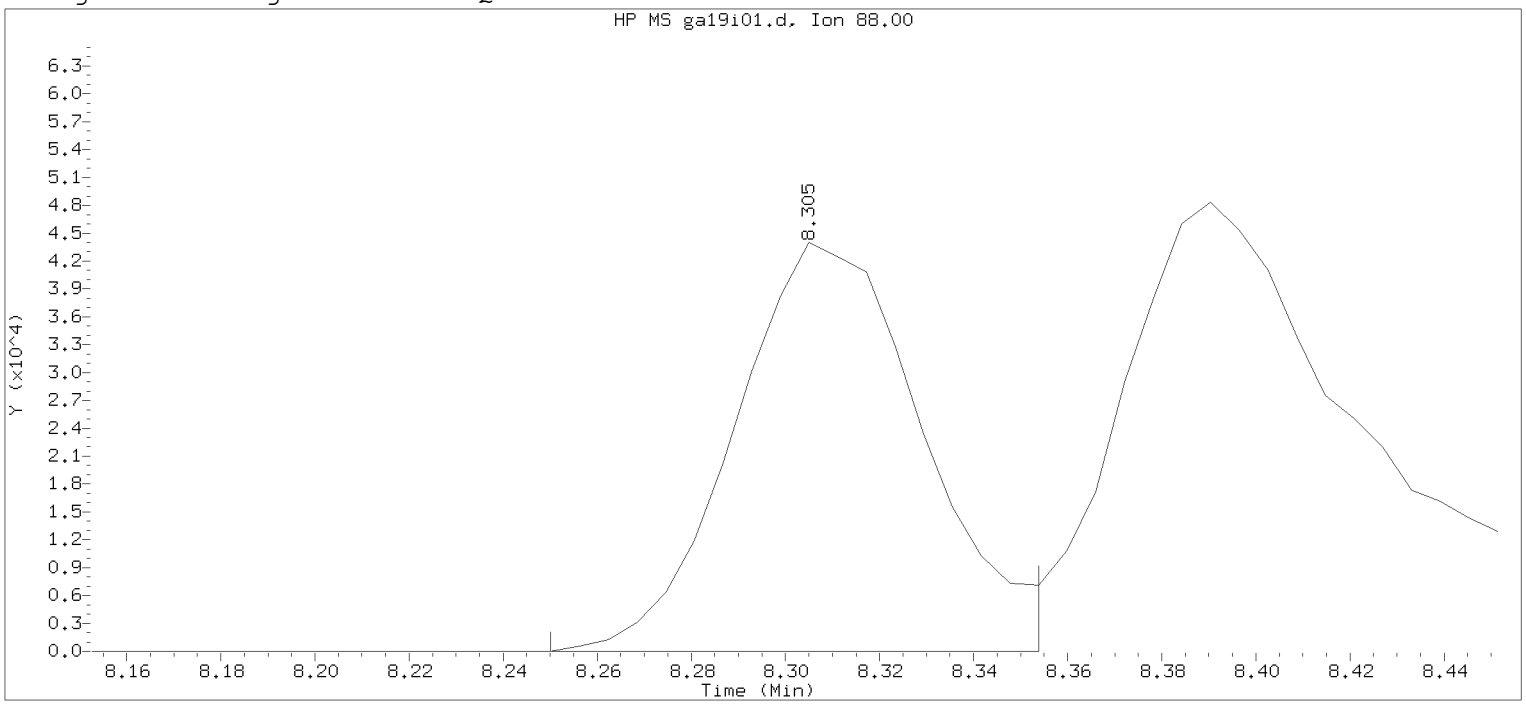
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

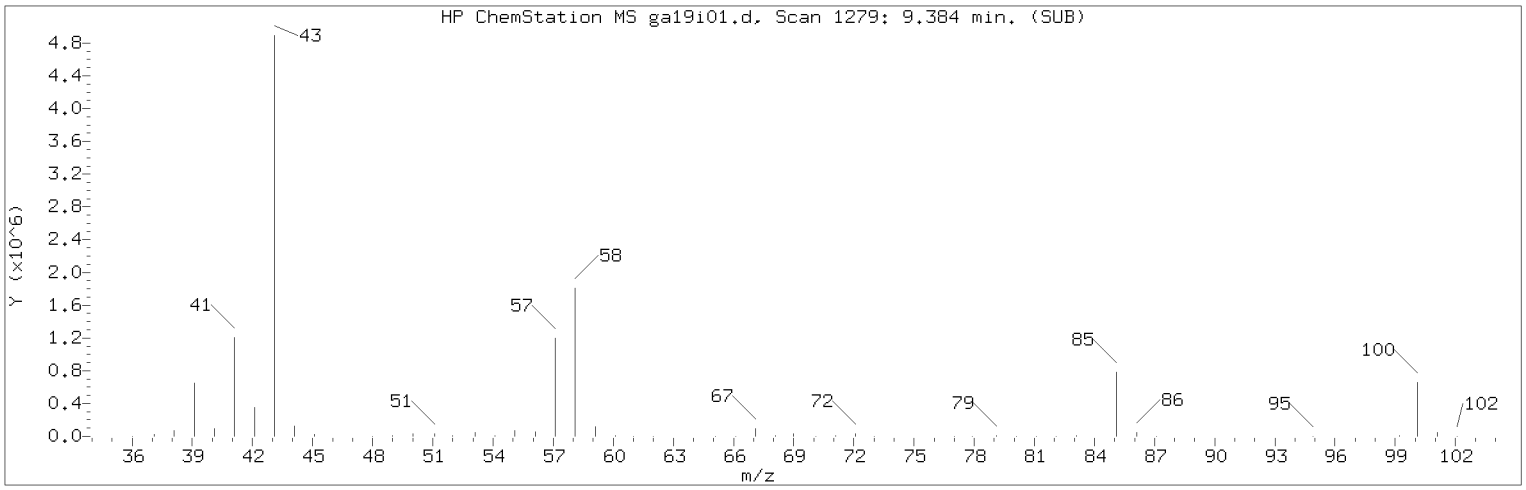
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

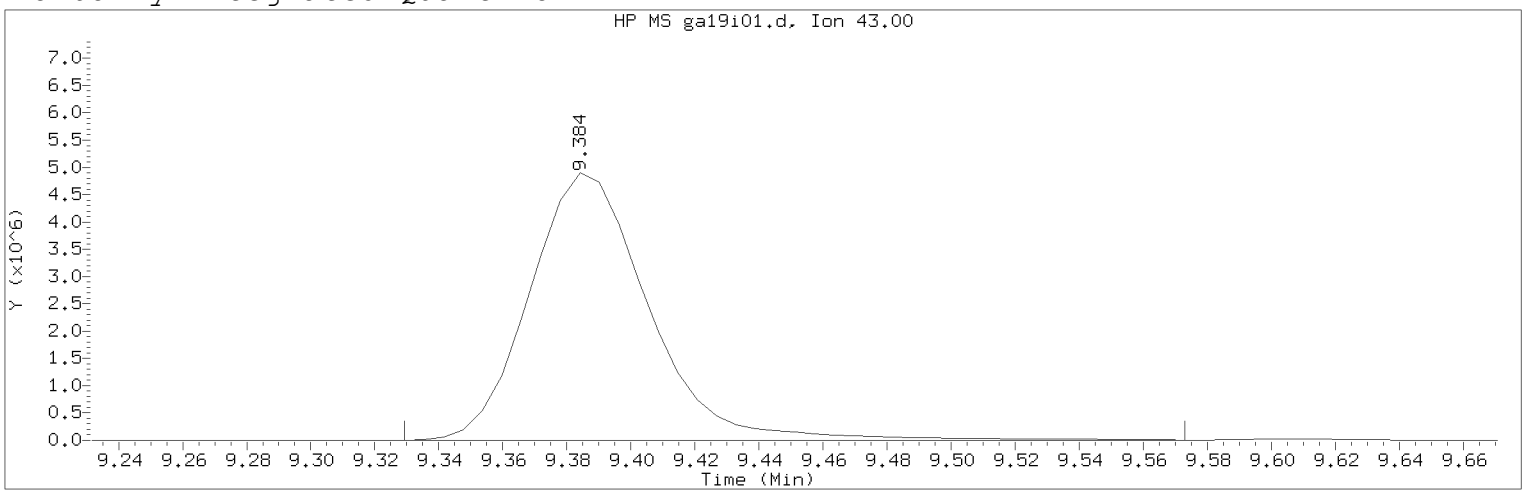
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 88.00		
Area	: 121426		
On-column Amount (ng)	: 1250.0000		
Integration start scan	: 1092	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

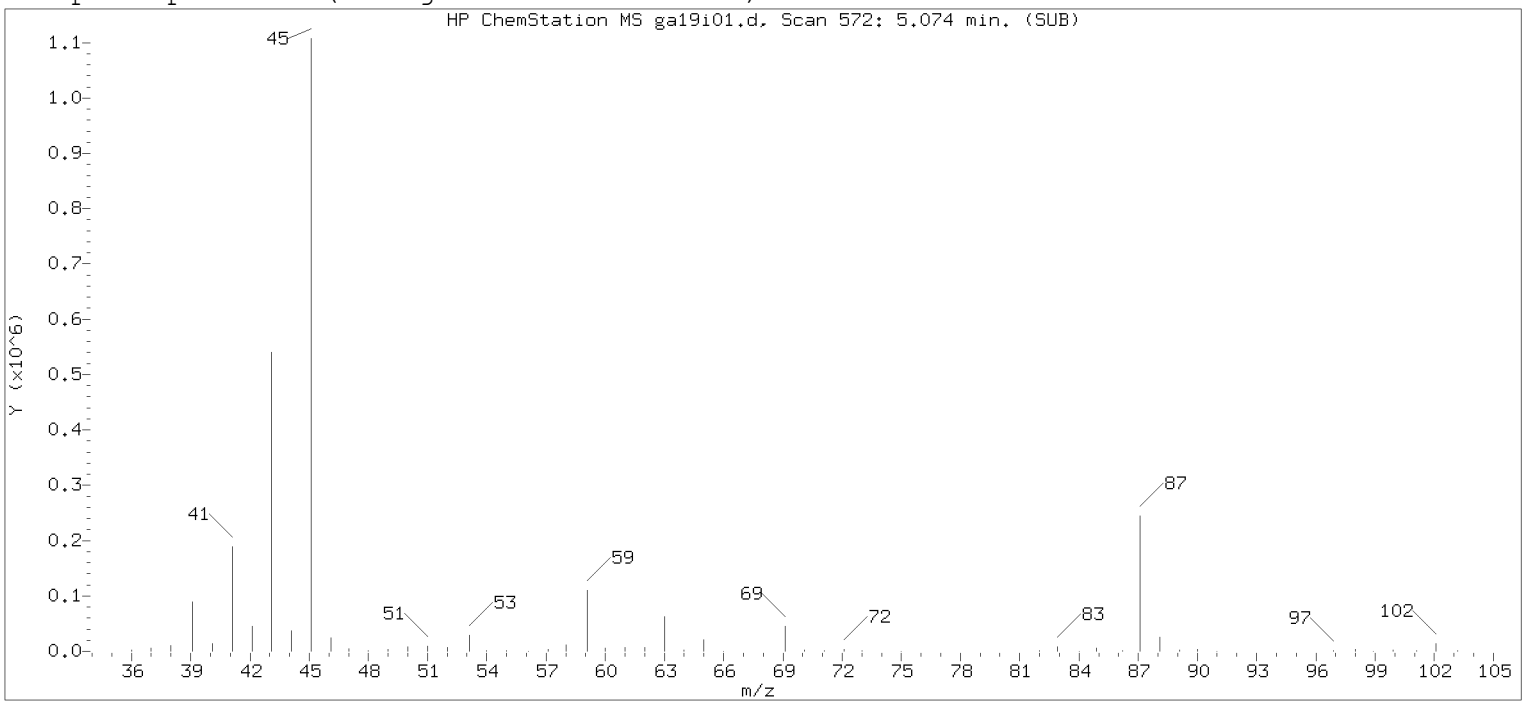
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 12625487M
On-Column Amount (ng) : 250.0000
Integration start scan : 1269 Integration stop scan: 1309
Y at integration start : 632 Y at integration end: 632

Reason for manual integration: improper integration

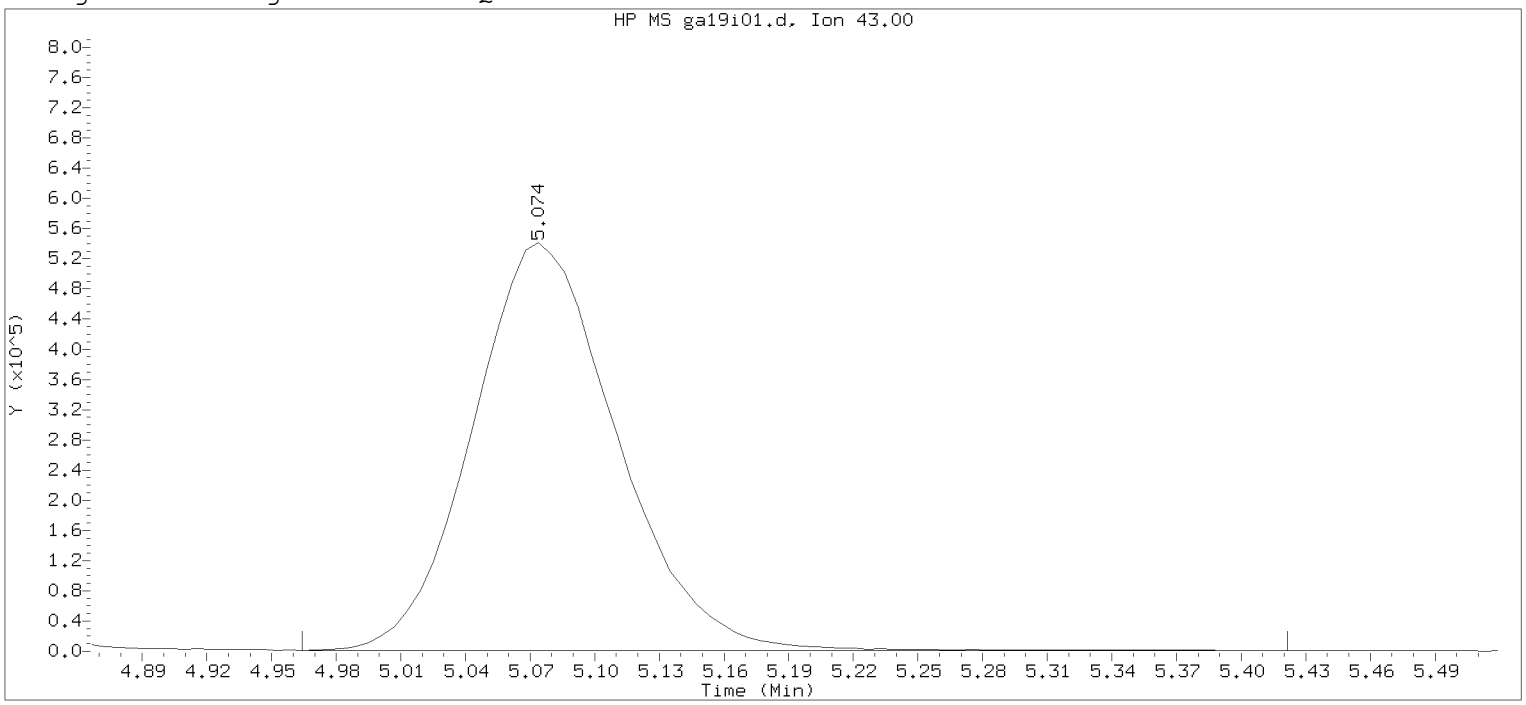
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 2516114
On-column Amount (ng) : 250.0000
Integration start scan : 553 Integration stop scan: 628
Y at integration start : 1185 Y at integration end: 789

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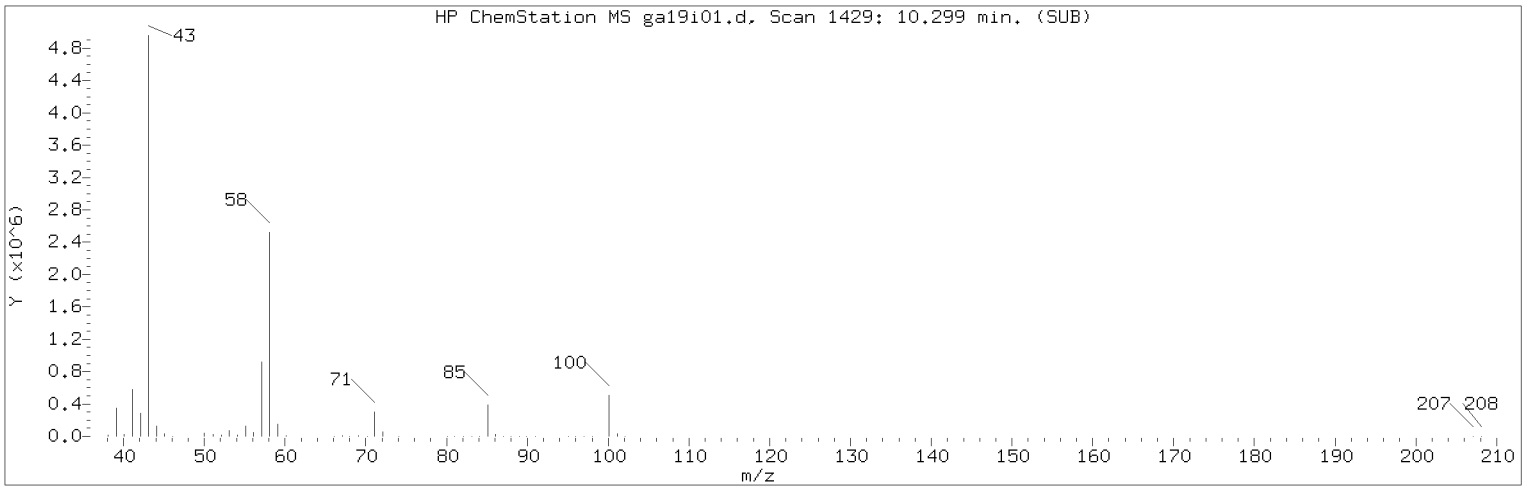
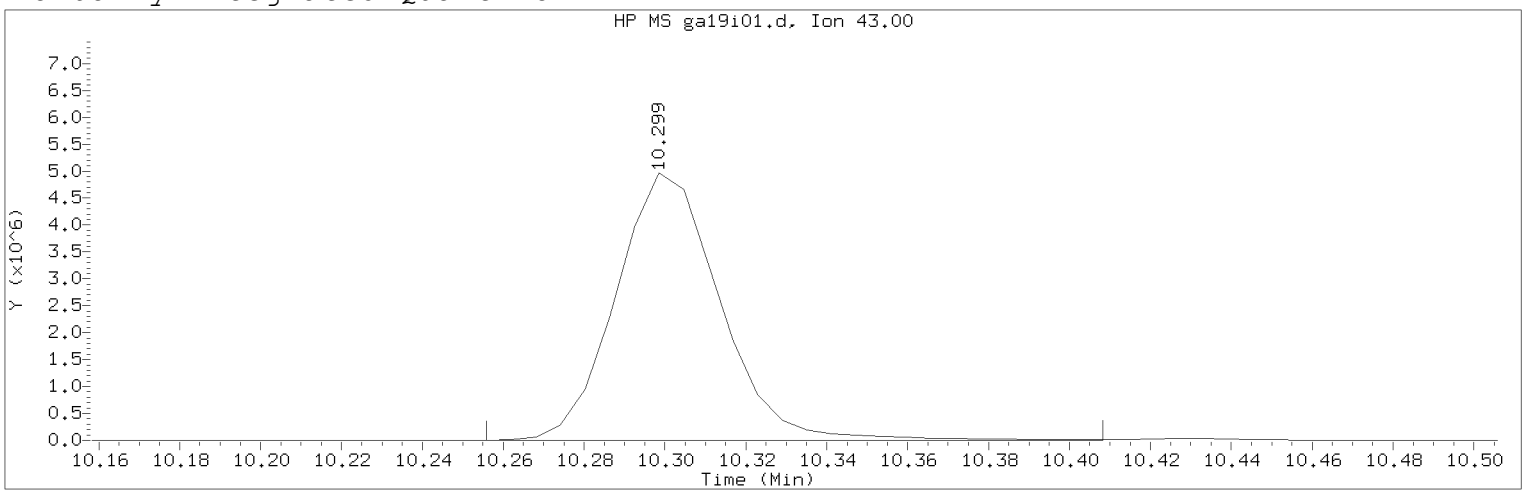
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

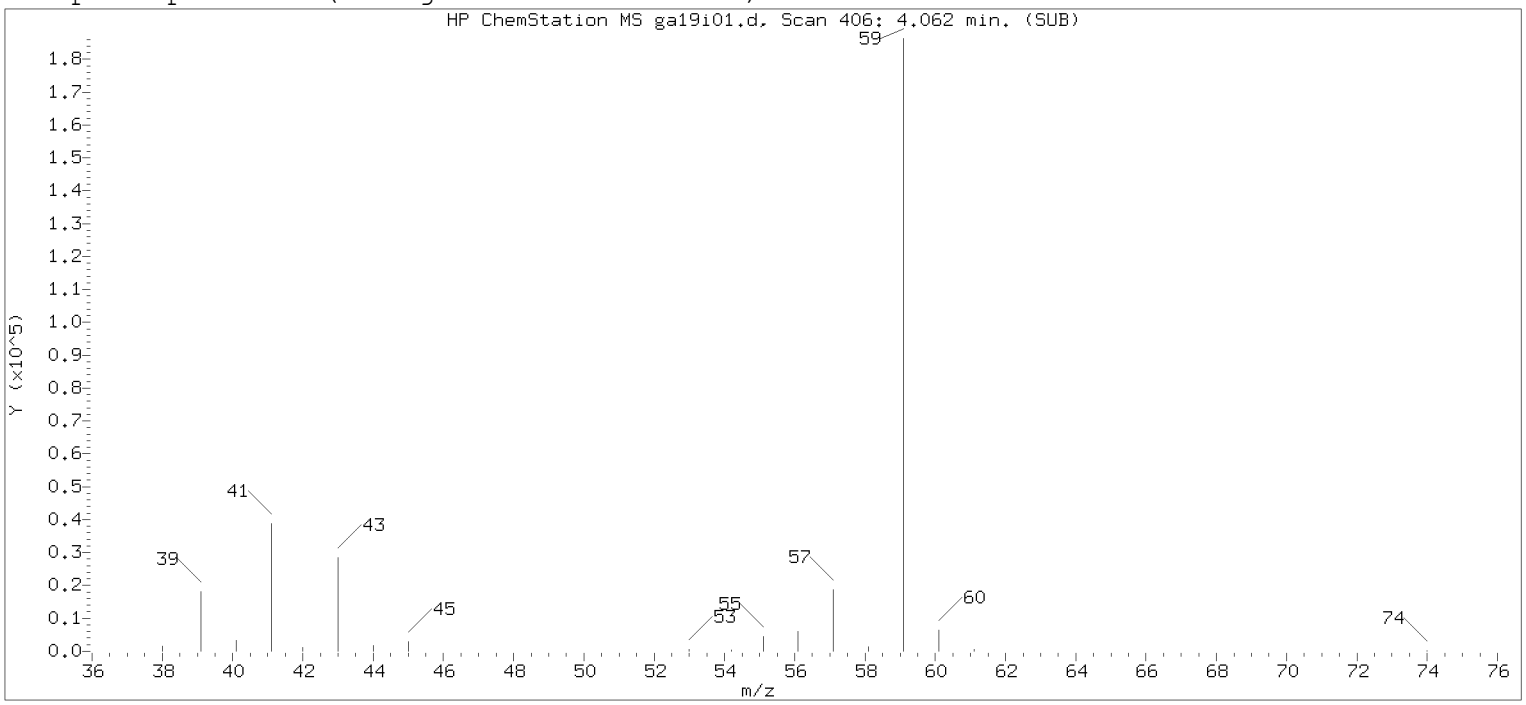
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 8861239M
On-Column Amount (ng) : 250.0000
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 389 Y at integration end: 389

Reason for manual integration: improper integration

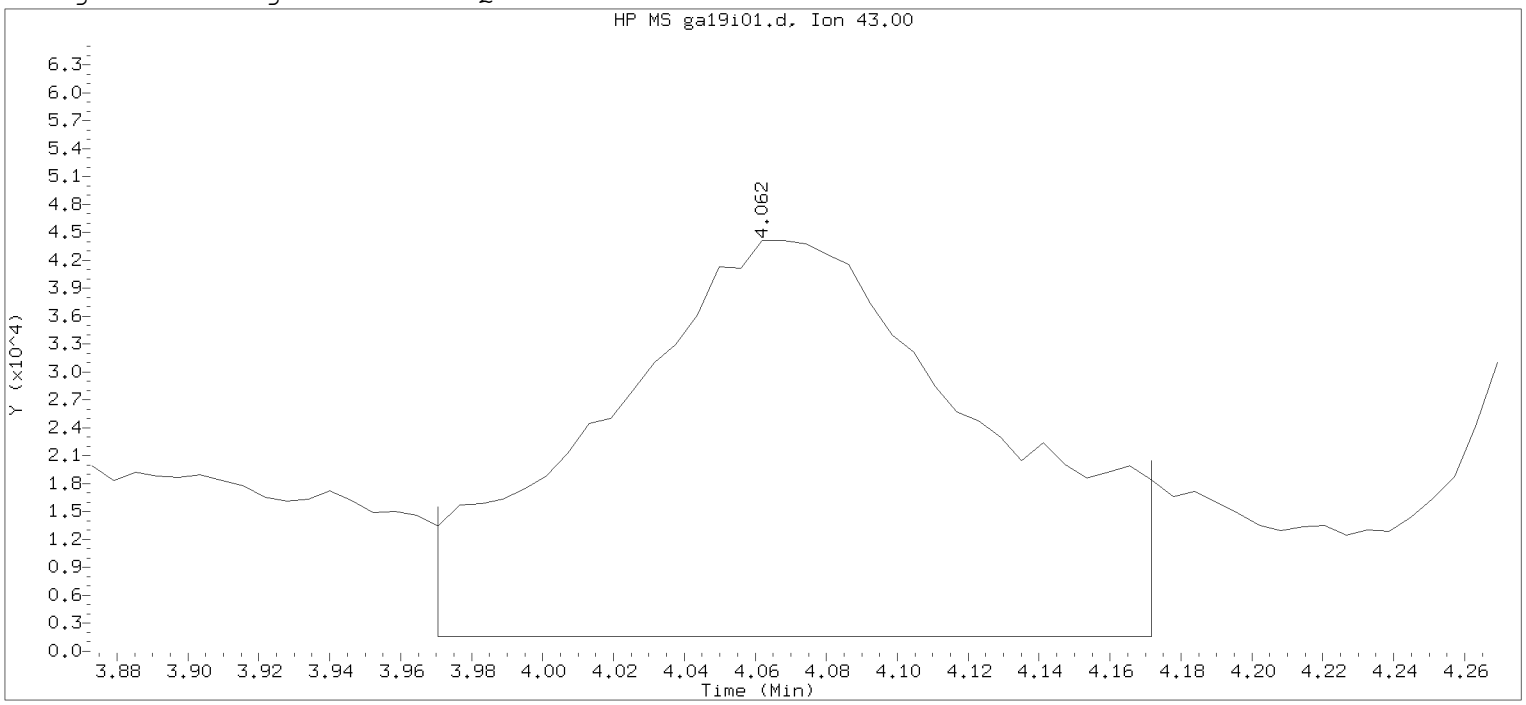
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 43.00
Area : 319163
On-column Amount (ng) : 250.0000
Integration start scan : 390 Integration stop scan: 423
Y at integration start : 1558 Y at integration end: 1558

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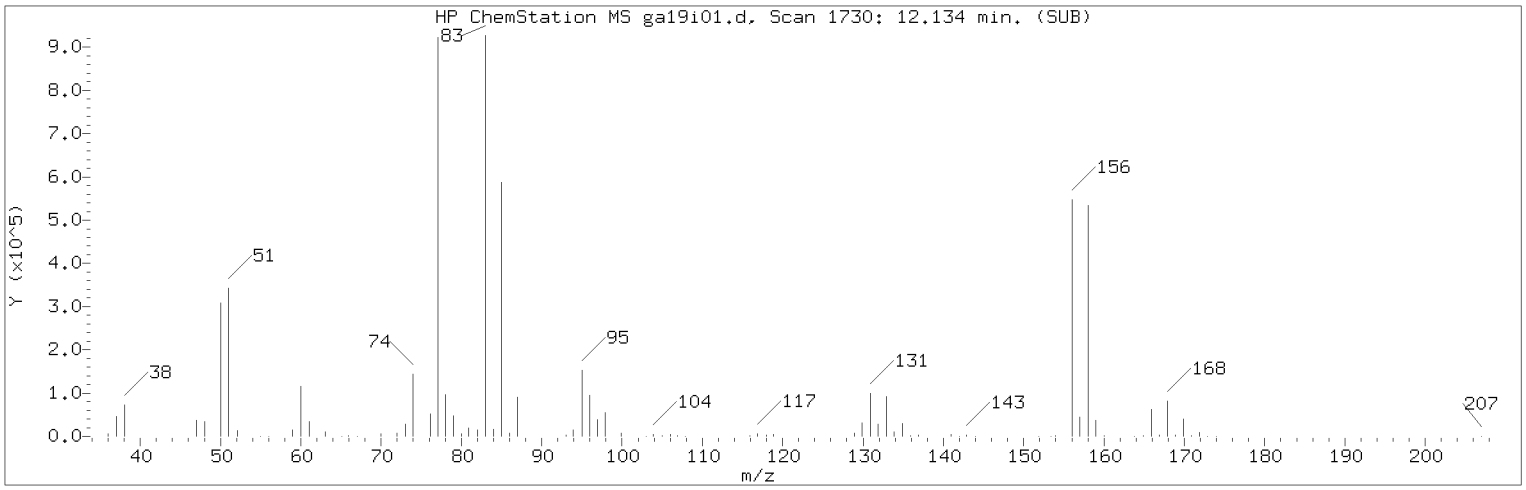
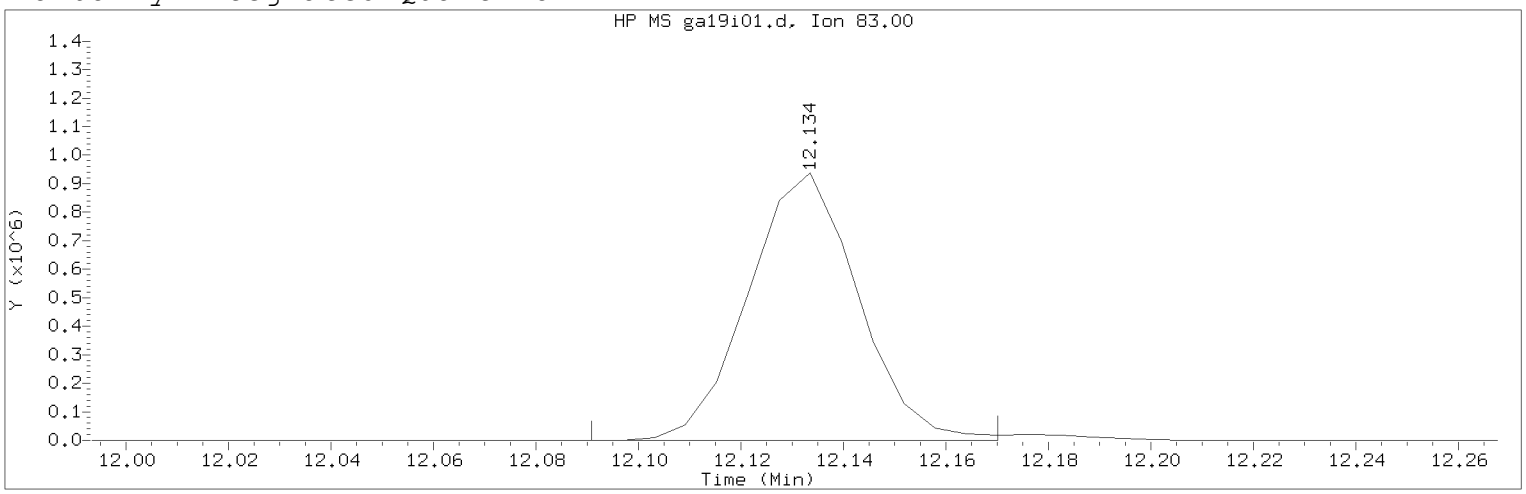
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

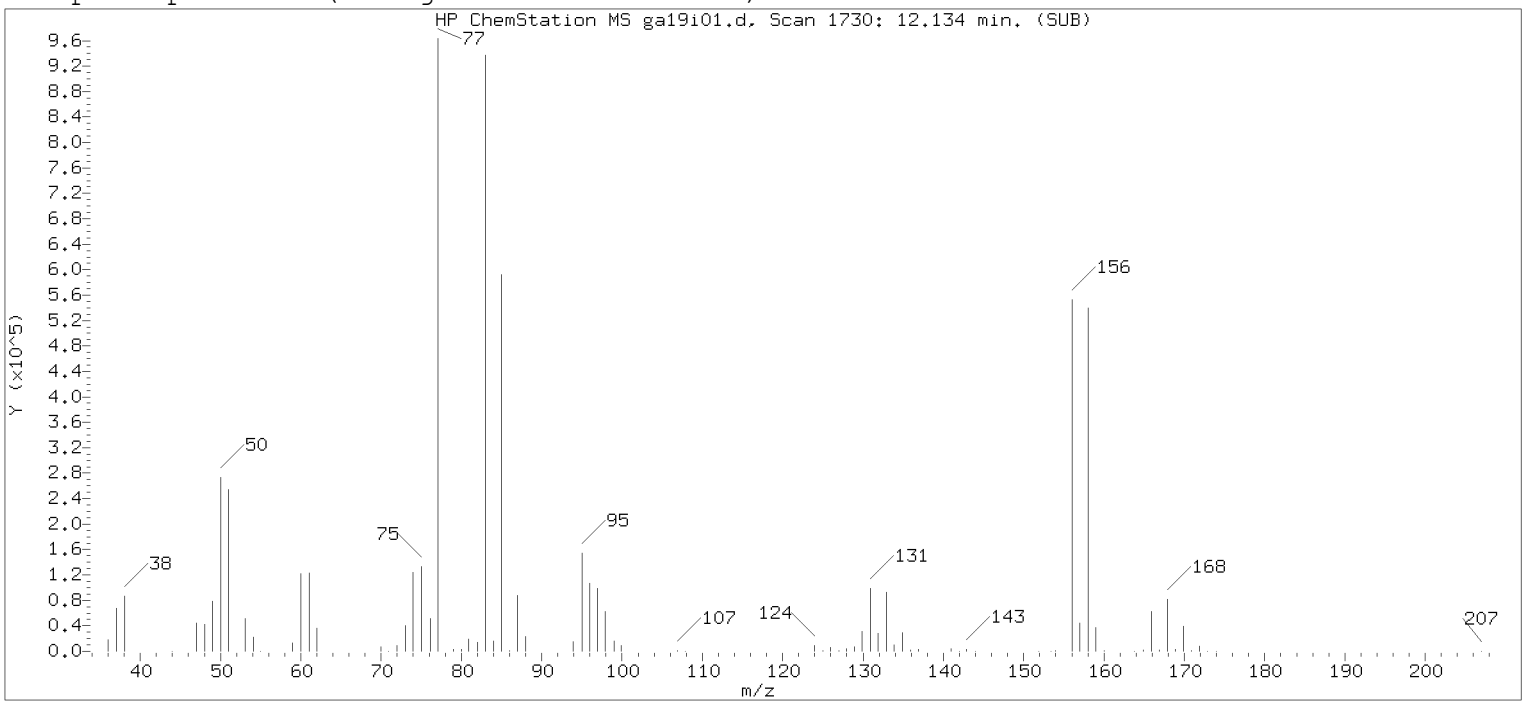
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 1397464M
On-Column Amount (ng) : 25.0000
Integration start scan : 1722 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

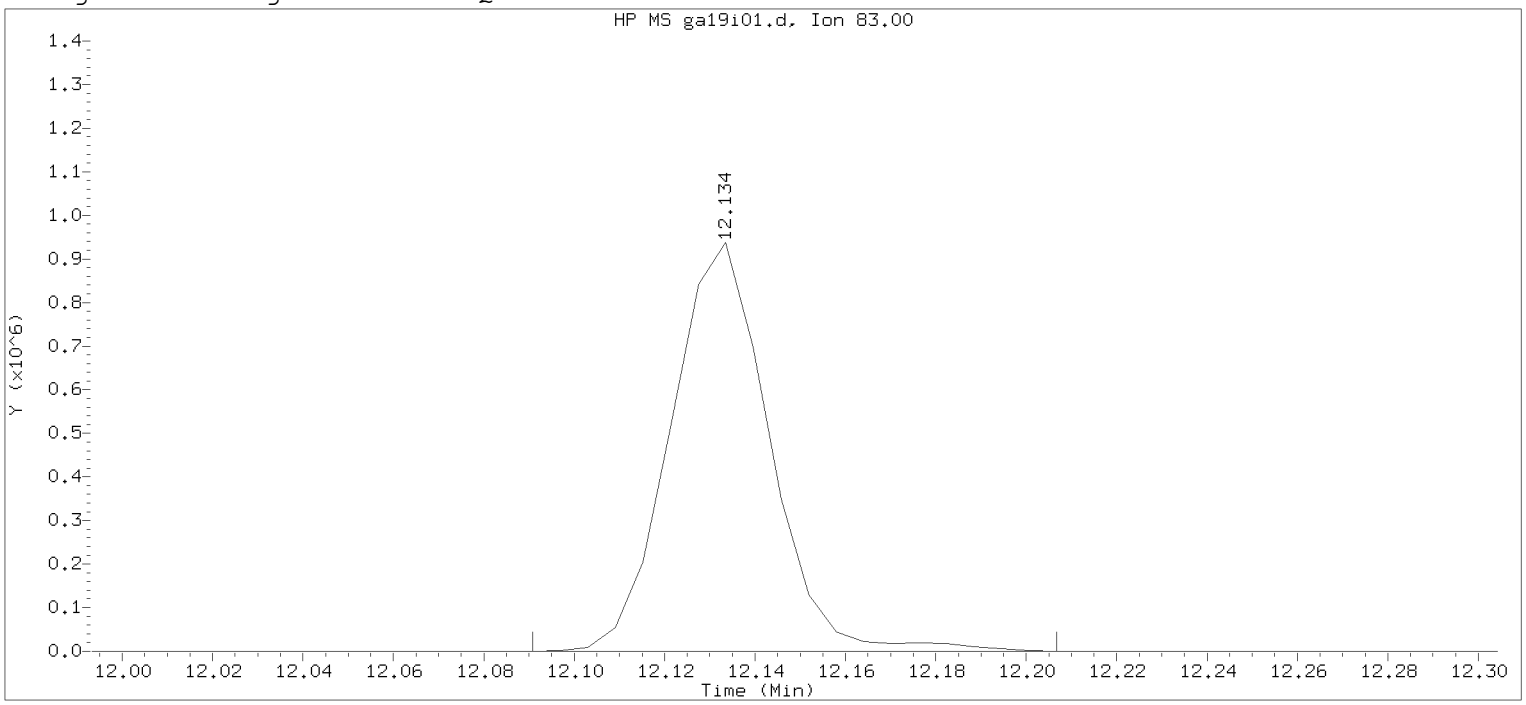
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



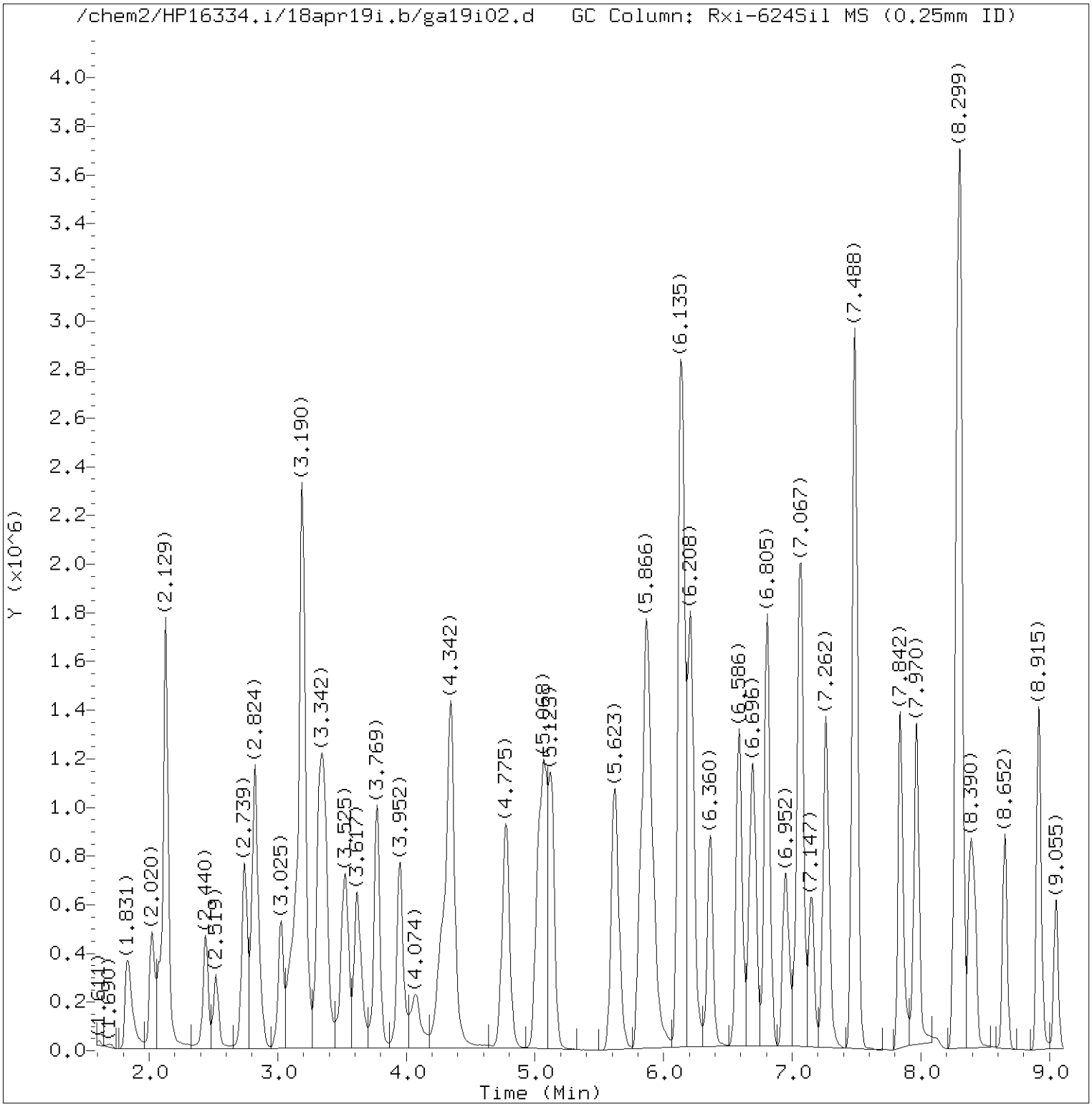
Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 1418149
On-column Amount (ng) : 25.0000
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: MSKrause



Total Ion Chromatogram (TIC)

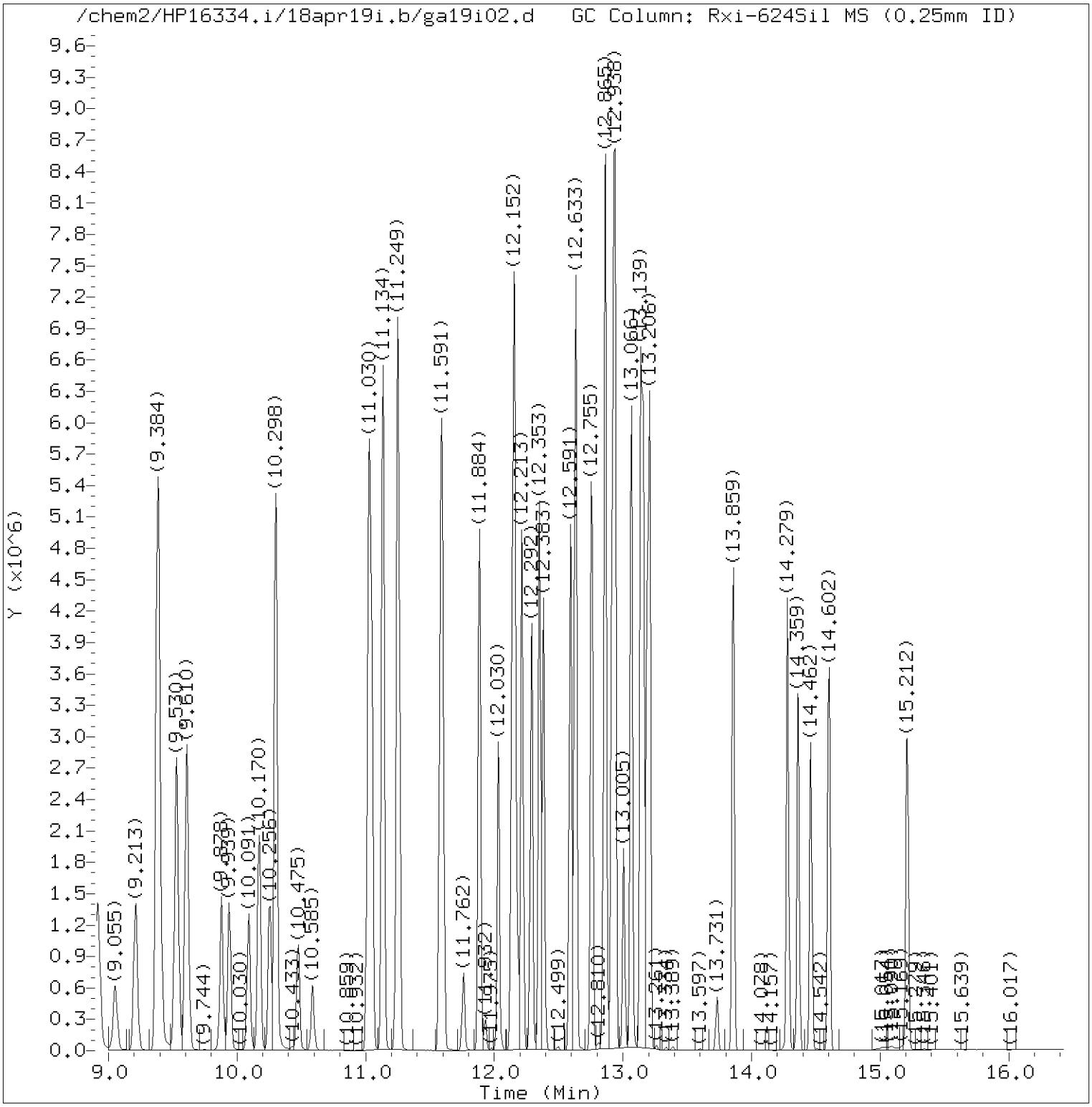
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	867459	10.560
2) Chloromethane	(2)	2.020	50	822489	10.487
5) Vinyl Chloride	(2)	2.129	62	722889	10.462
6) 1,3-Butadiene	(2)	2.129	39	1225843	10.871
7) Bromomethane	(2)	2.440	94	473509	10.327
8) Chloroethane	(2)	2.519	64	399550	10.339
9) Dichlorofluoromethane	(2)	2.745	67	946328	10.326
10) Trichlorofluoromethane	(2)	2.806	101	956285M	10.340
11) Ethyl ether	(2)	3.025	59	464763	10.365
12) Freon 123a	(2)	3.117	67	650928	10.283
13) Acrolein	(1)	3.190	56	3897371	523.371
15) 1,1-Dichloroethene	(2)	3.318	96	447547	10.123
14) Acetone	(1)	3.349	43	1151552	103.590
16) Freon 113	(2)	3.361	101	530460	10.199
17) Methyl Iodide	(2)	3.513	142	892813	10.166
18) Carbon Disulfide	(2)	3.617	76	1730265	10.145
21) Methyl Acetate	(1)	3.745	43	338790M	9.958
22) Allyl Chloride	(2)	3.769	41	1035977	10.074
23) Methylene Chloride	(2)	3.946	84	546940	10.187
26)*t-Butyl Alcohol-d10	(1)	3.952	65	219199	50.000
28) t-Butyl Alcohol	(1)	4.080	59	779790	211.902
29) Acrylonitrile	(1)	4.269	53	710419	51.198
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	1601834	10.127
31) trans-1,2-Dichloroethene	(2)	4.348	96	524574	10.176
32) n-Hexane	(2)	4.775	57	915834	10.132
33) 1,1-Dichloroethane	(2)	5.025	63	1077126	10.166
34) di-Isopropyl Ether	(2)	5.074	45	2208765	10.104
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	992527	10.152
37) Ethyl t-butyl ether	(2)	5.623	59	1962075	10.130
38) 2-Butanone	(1)	5.824	43	2155118	102.932
39) cis-1,2-Dichloroethene	(2)	5.866	96	600189	10.123
41) 2,2-Dichloropropane	(2)	5.885	77	907034	10.105
42) Propionitrile	(1)	5.921	54	1087481	203.915
40) 1,2-Dichloroethene (Total)	(2)		96	1124763	20.299
45) Methacrylonitrile	(1)	6.135	67	1726030	102.963
47) Bromochloromethane	(2)	6.208	128	278937	10.086
48) Tetrahydrofuran	(1)	6.214	71	522212	102.677
49) Chloroform	(2)	6.360	83	1029991	10.070

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	549270	10.050
50)$Dibromofluoromethane	(2)	6.586	111	565657	10.077
51) 1,1,1-Trichloroethane	(2)	6.592	97	881601	10.051
52) Cyclohexane	(2)	6.689	56	1068011	10.142
52) Cyclohexane	(2)	6.696	84	825057	10.199
52) Cyclohexane	(2)	6.696	69	310148	10.143
54) Carbon Tetrachloride	(2)	6.805	117	747093	10.063
55) 1,1-Dichloropropene	(2)	6.805	75	816391	10.125
56) Isobutyl Alcohol	(1)	6.952	41	810131	517.483
57)$1,2-Dichloroethane-d4	(2)	7.043	102	114605	10.030
57)$1,2-Dichloroethane-d4	(2)	7.043	65	651324	10.061
57)$1,2-Dichloroethane-d4	(2)	7.037	104	68857	9.689
58) Benzene	(2)	7.067	78	2229473	10.064
59) 1,2-Dichloroethane	(2)	7.153	62	755804	10.012
60) t-Amyl methyl ether	(2)	7.262	73	1674991	10.025
63)*Fluorobenzene	(2)	7.482	96	2172211	10.000
62) n-Heptane	(2)	7.494	43	1077641	9.997
65) n-Butanol	(1)	7.842	56	1383869	1026.533
67) Trichloroethene	(2)	7.970	95	594884	10.063
69) Methylcyclohexane	(2)	8.281	83	1036688	10.078
70) 1,2-Dichloropropane	(2)	8.305	63	628043	10.043
71) Methyl Methacrylate	(1)	8.384	69	334395	10.167
72) 1,4-Dioxane	(1)	8.390	88	126261M	517.060
73) Dibromomethane	(2)	8.415	93	298000	9.956
74) Bromodichloromethane	(2)	8.652	83	768427	9.920
76) 2-Nitropropane	(1)	8.915	41	1221787	100.812
80) cis-1,3-Dichloropropene	(2)	9.213	75	960653	9.877
81) 4-Methyl-2-Pentanone	(1)	9.384	43	5401892M	103.830
82)$Toluene-d8	(3)	9.530	98	2216725	10.029
82)$Toluene-d8	(3)	9.530	100	1414585	9.999
83) Toluene	(3)	9.610	92	1418514	10.050
84) trans-1,3-Dichloropropene	(3)	9.878	75	829727	9.925
86) Ethyl Methacrylate	(3)	9.939	69	731679	10.008
88) 1,1,2-Trichloroethane	(3)	10.091	97	426440	10.006
85) 1,3-Dichloropropene (total)	(3)		75	1790380	19.802
89) Tetrachloroethene	(3)	10.170	166	657662	10.049
90) 1,3-Dichloropropane	(3)	10.256	76	777575	10.066
91) 2-Hexanone	(1)	10.298	43	3809911M	104.074

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	525341	9.848
95) 1,2-Dibromoethane	(3)	10.585	107	416983	9.992
97)*Chlorobenzene-d5	(3)	11.018	117	1651185	10.000
98) Chlorobenzene	(3)	11.048	112	1621339	10.070
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	580478	9.901
100) Ethylbenzene	(3)	11.134	91	2818638	10.112
101) m+p-Xylene	(3)	11.249	106	2180827	20.080
104) o-Xylene	(3)	11.585	106	1100027	9.923
106) Styrene	(3)	11.597	104	1847971	9.919
105) Xylene (Total)	(3)		106	3280854	30.003
107) Bromoform	(3)	11.762	173	314090	9.633
108) Isopropylbenzene	(3)	11.884	105	2849333	10.045
111)$4-Bromofluorobenzene	(3)	12.030	95	848986	10.013
111)$4-Bromofluorobenzene	(3)	12.030	174	729017	10.020
113) 1,1,2,2-Tetrachloroethane	(4)	12.133	83	568890M	10.012
114) Bromobenzene	(4)	12.146	156	739206	9.959
116) 1,2,3-Trichloropropane	(4)	12.176	110	157314	10.165
117) n-Propylbenzene	(4)	12.213	91	3402211	10.234
119) 2-Chlorotoluene	(4)	12.292	126	673978	10.076
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	2479223	10.120
122) 4-Chlorotoluene	(4)	12.383	126	709530	10.061
125) tert-Butylbenzene	(4)	12.591	134	510020	9.953
126) Pentachloroethane	(4)	12.627	167	442688	9.667
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	2533554	10.054
128) sec-Butylbenzene	(4)	12.755	105	3158992	10.129
131) 1,3-Dichlorobenzene	(4)	12.859	146	1477303	9.955
132) p-Isopropyltoluene	(4)	12.865	119	2771578	10.044
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	931947	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	1481422	9.948
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	1121441	9.926
136) Benzyl Chloride	(4)	13.005	126	230287	9.736
138) n-Butylbenzene	(4)	13.158	92	1468416	10.040
139) 1,2-Dichlorobenzene	(4)	13.188	146	1398212	10.005
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	87929	9.872
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	1232435	9.928
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	1150774	9.959
146) Hexachlorobutadiene	(4)	14.365	225	594628	9.999
147) Naphthalene	(4)	14.462	128	1938040	10.057

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.602	180	981001	9.966

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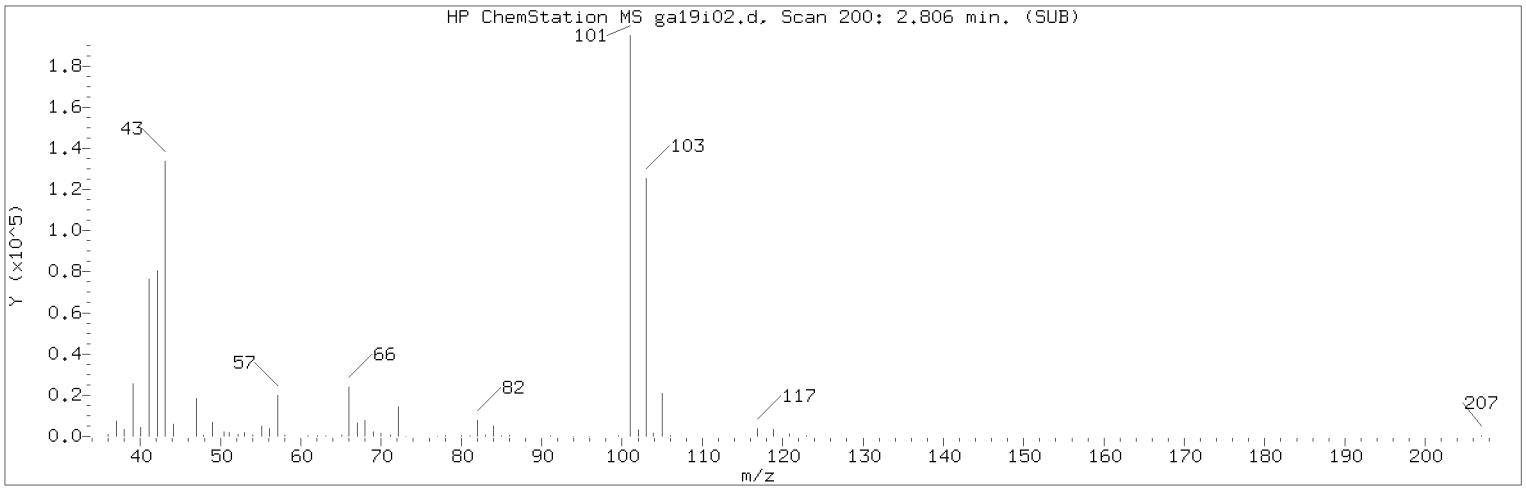
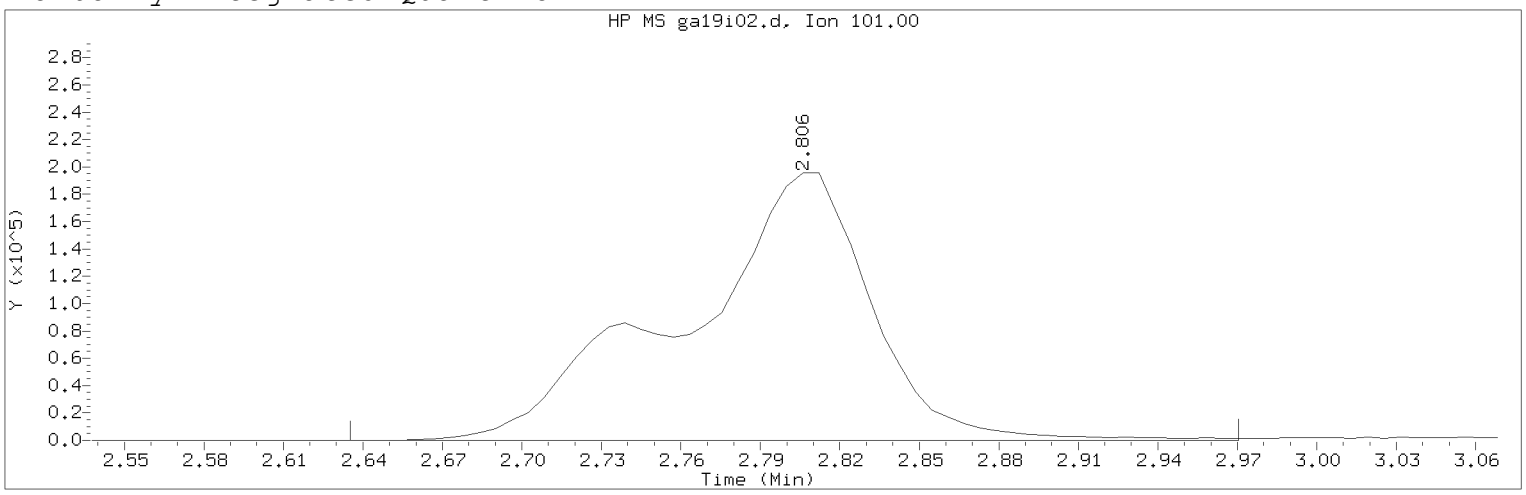
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

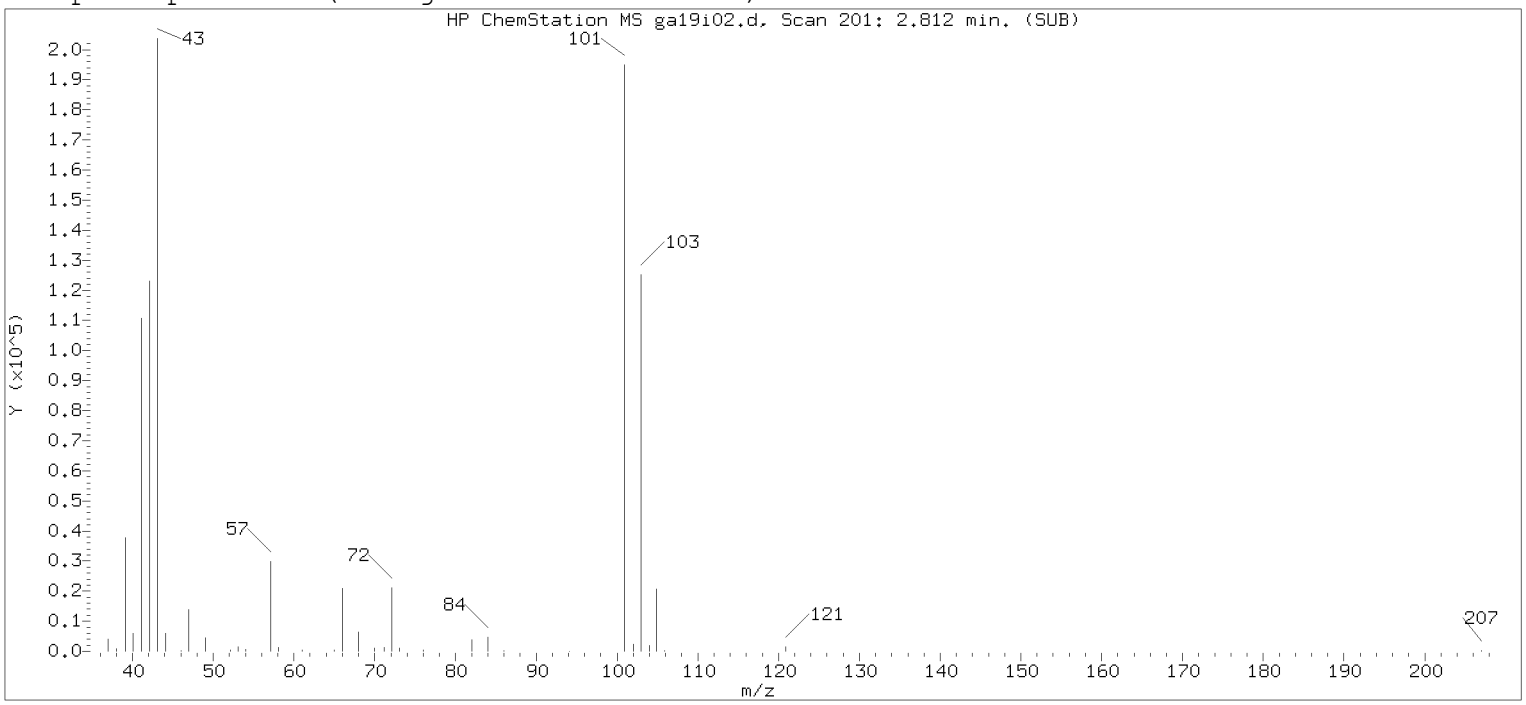
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 956285M
On-Column Amount (ng) : 10.3403
Integration start scan : 171 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

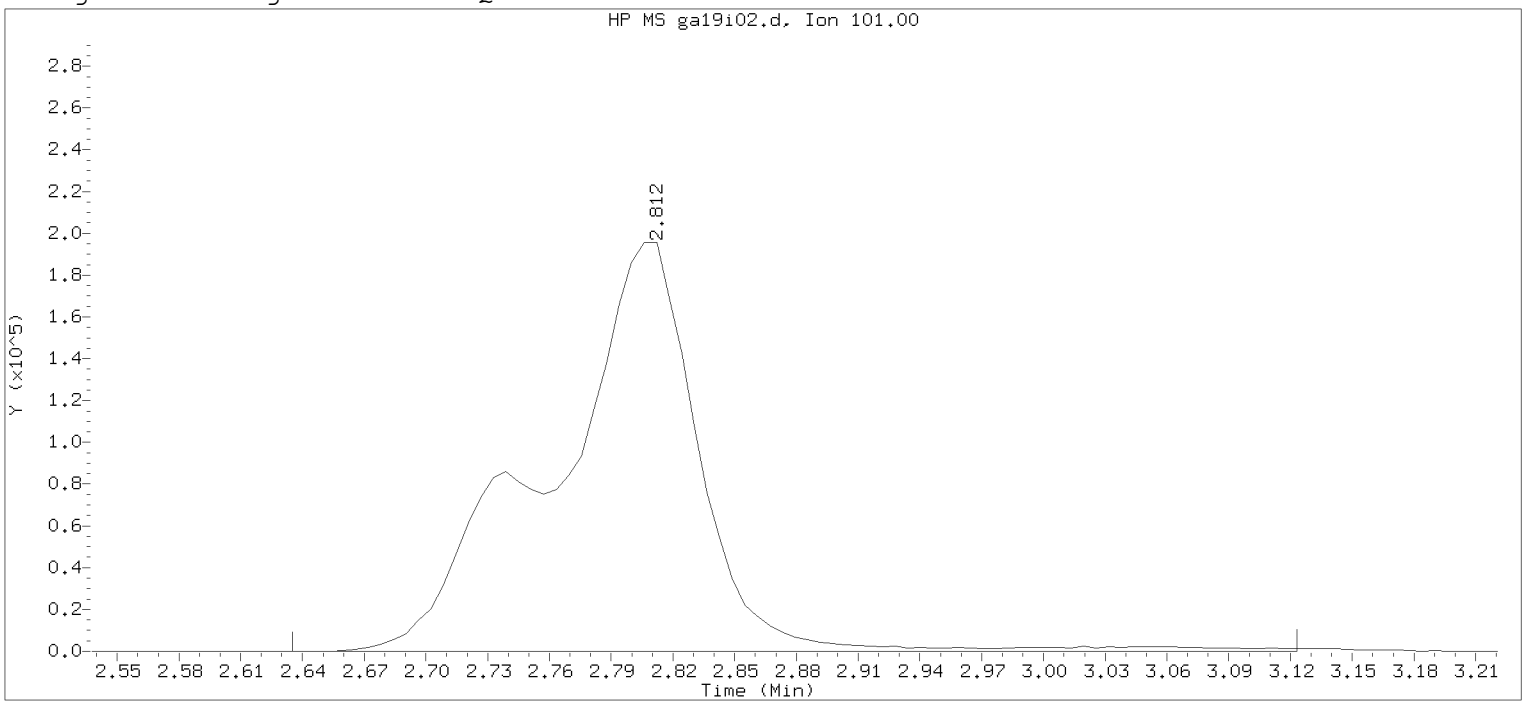
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

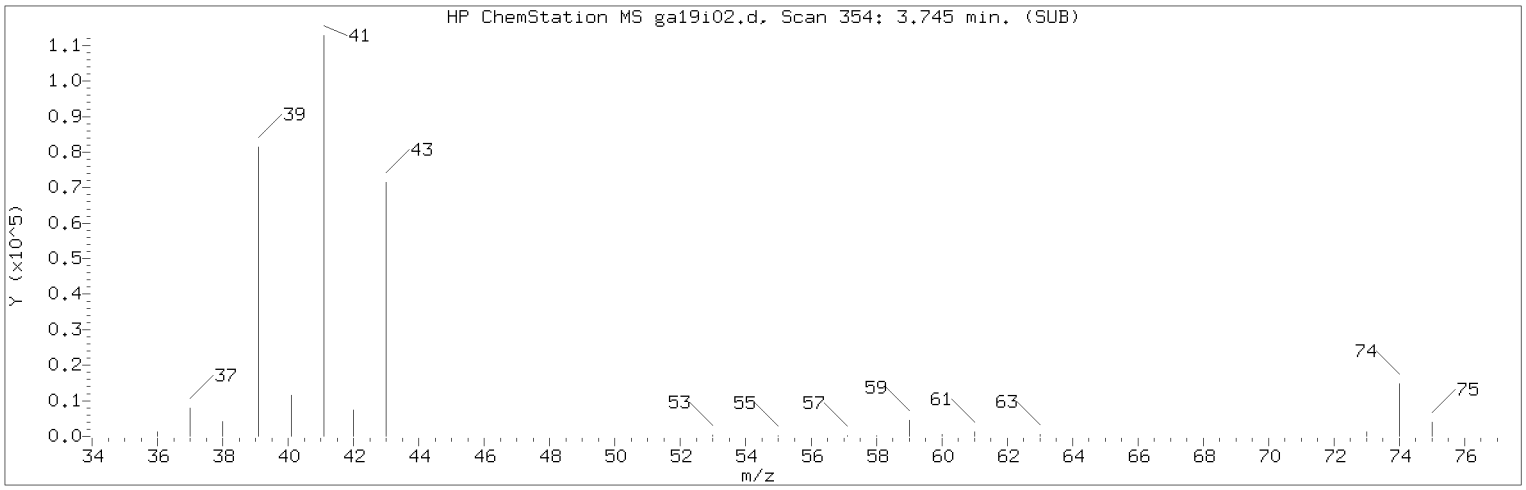
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

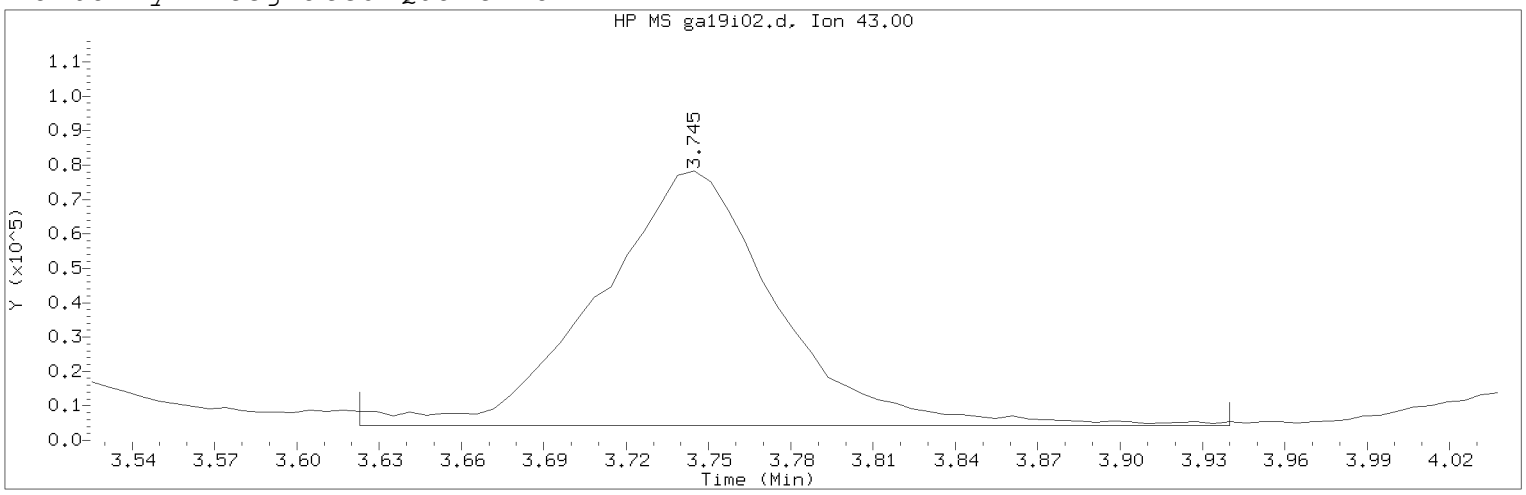
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area : 971712
On-column Amount (ng) : 10.3423
Integration start scan : 171 Integration stop scan: 251
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

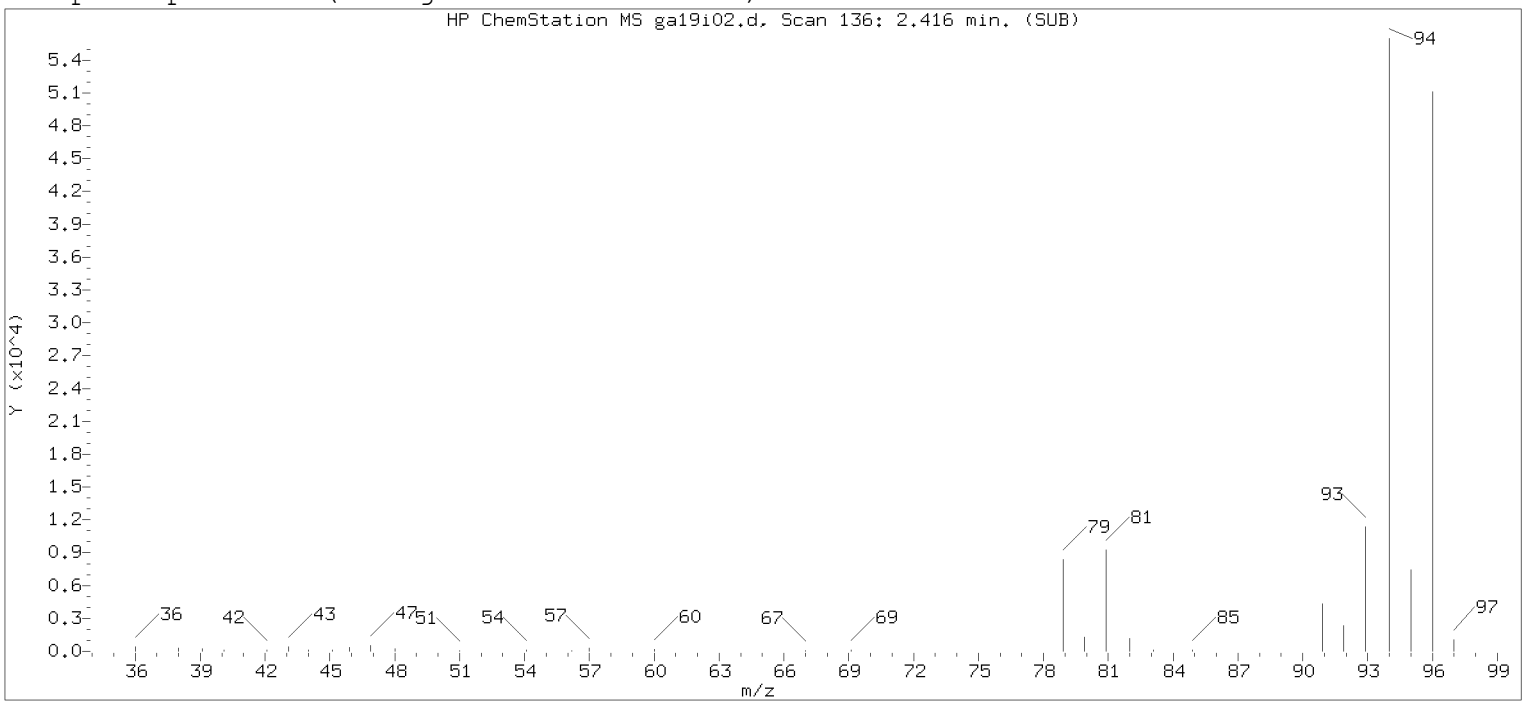
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 354
Retention Time (minutes): 3.745
Quant Ion : 43.00
Area (flag) : 338790M
On-Column Amount (ng) : 9.9580
Integration start scan : 333 Integration stop scan: 385
Y at integration start : 4238 Y at integration end: 4238

Reason for manual integration: improper integration

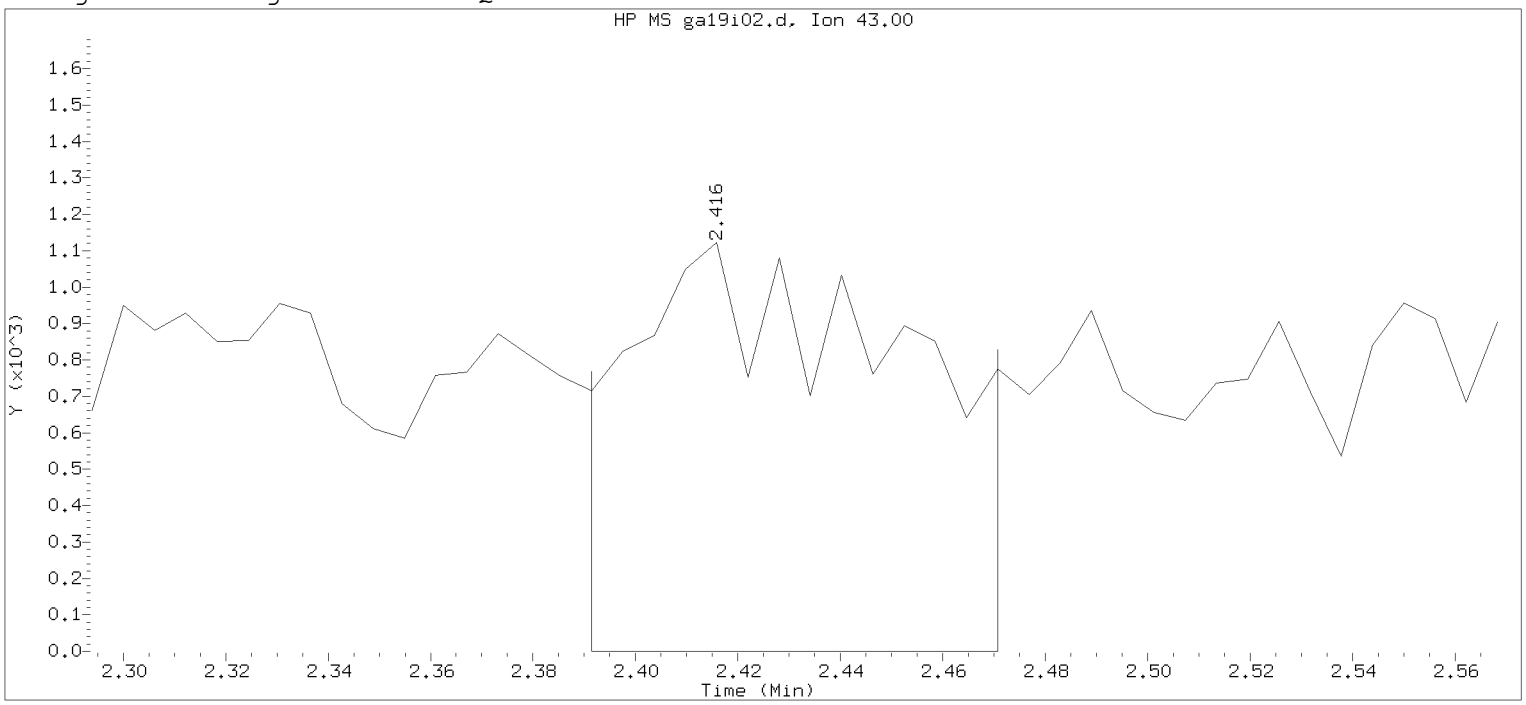
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 21		
Compound Name	: Methyl Acetate		
Scan Number	: 136		
Retention Time (minutes)	: 2.416		
Quant Ion	: 43.00		
Area	: 4142		
On-column Amount (ng)	: 18.0207		
Integration start scan	: 131	Integration stop scan:	144
Y at integration start	: 0	Y at integration end:	0

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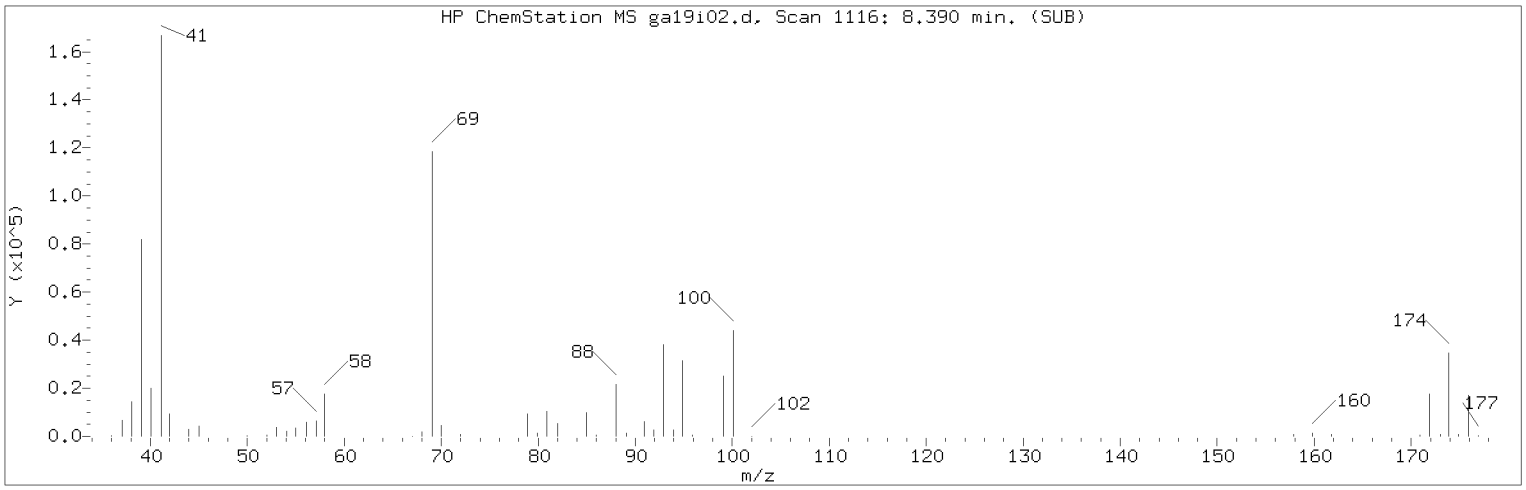
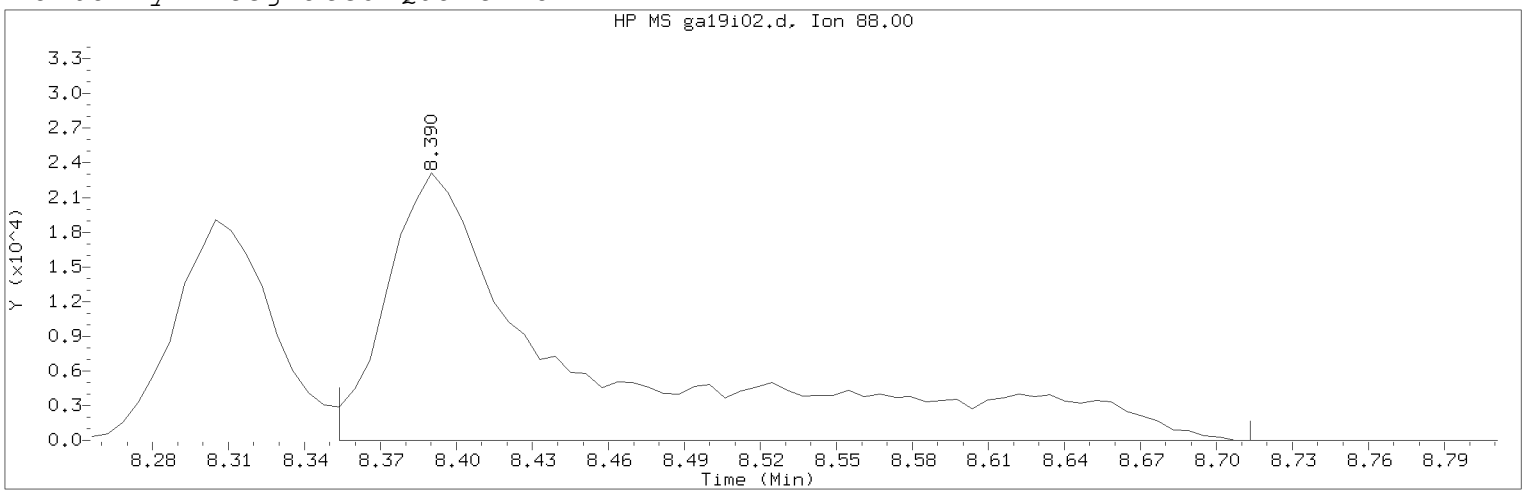
Target 3.5 esignature user AF04mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

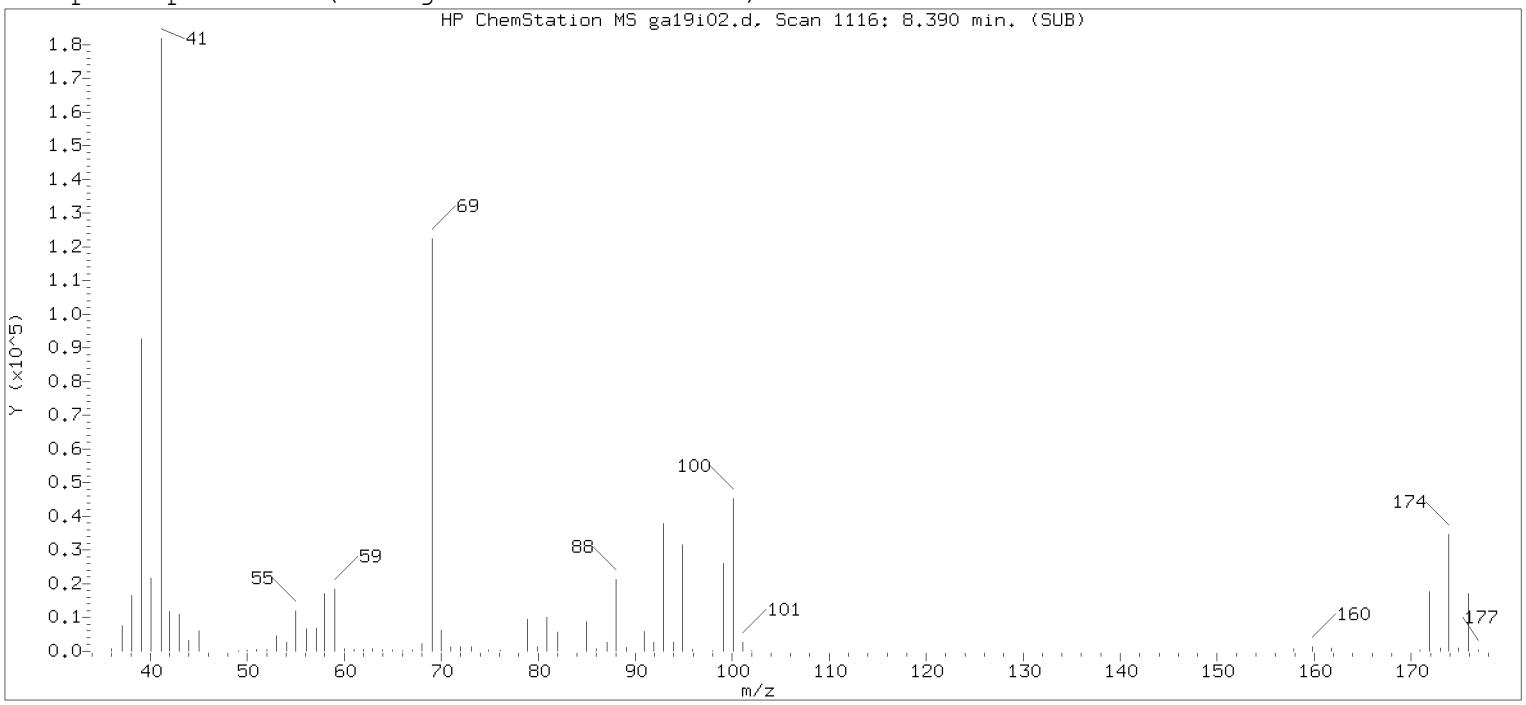
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 126261M
On-Column Amount (ng) : 517.0603
Integration start scan : 1109 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

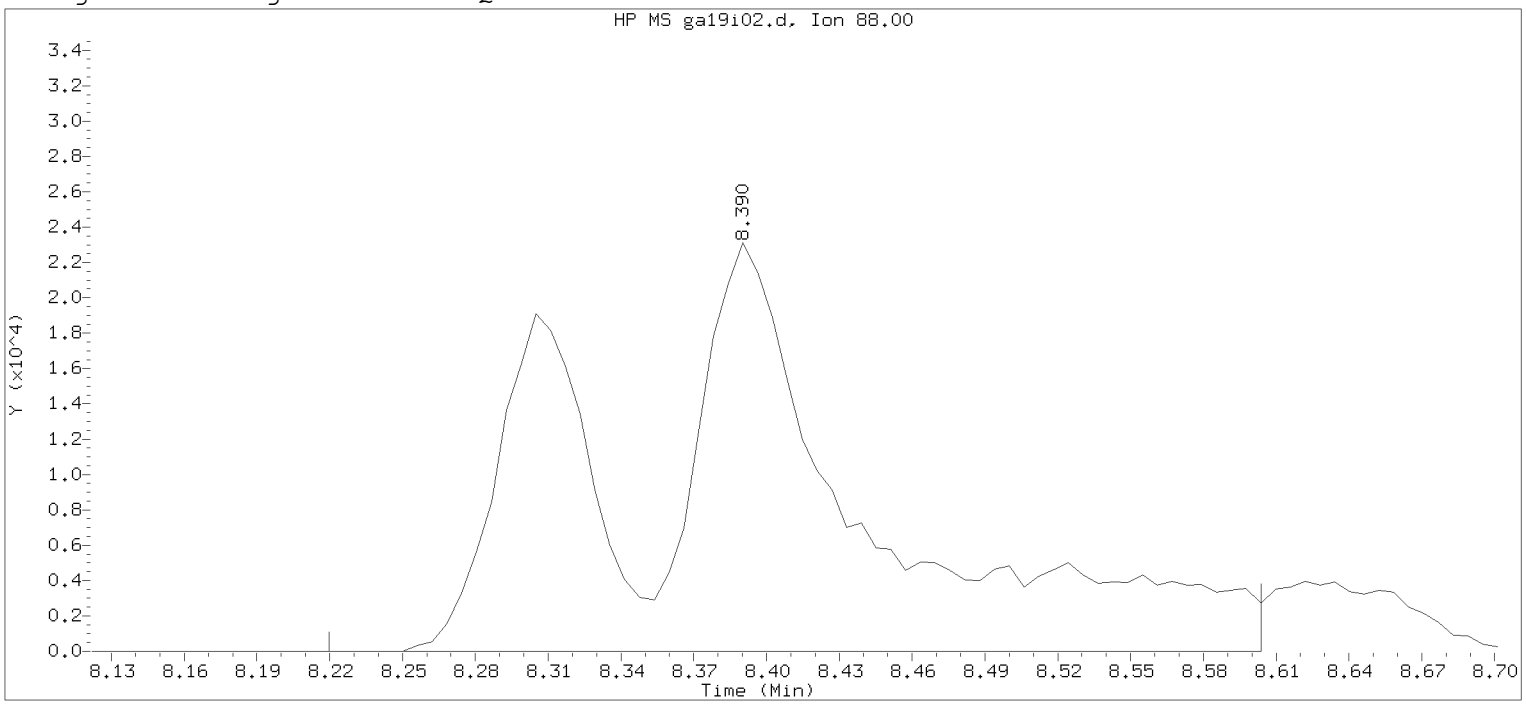
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1116		
Retention Time (minutes)	: 8.390		
Quant Ion	: 88.00		
Area	: 161580		
On-column Amount (ng)	: 755.7593		
Integration start scan	: 1087	Integration stop scan:	1150
Y at integration start	: 0	Y at integration end:	0

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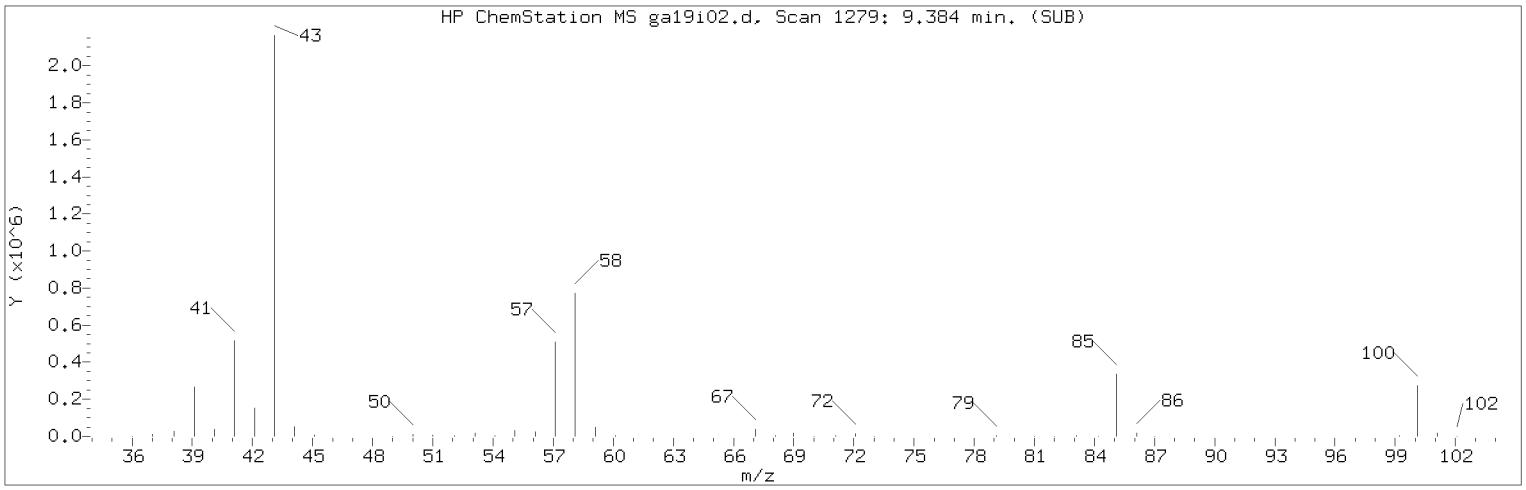
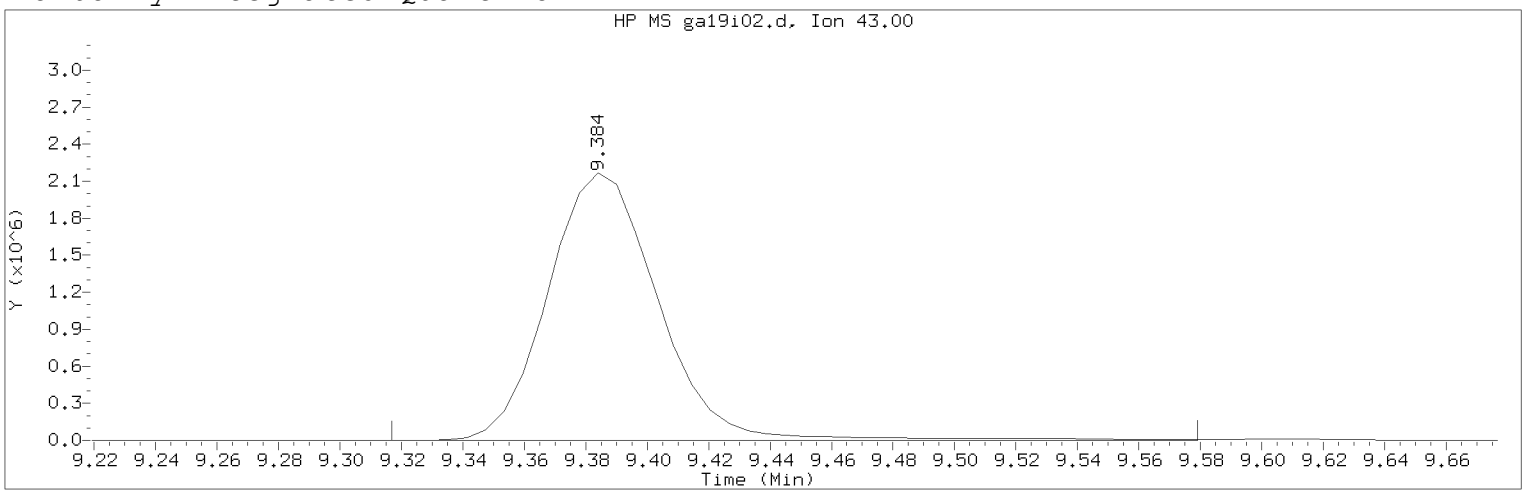
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

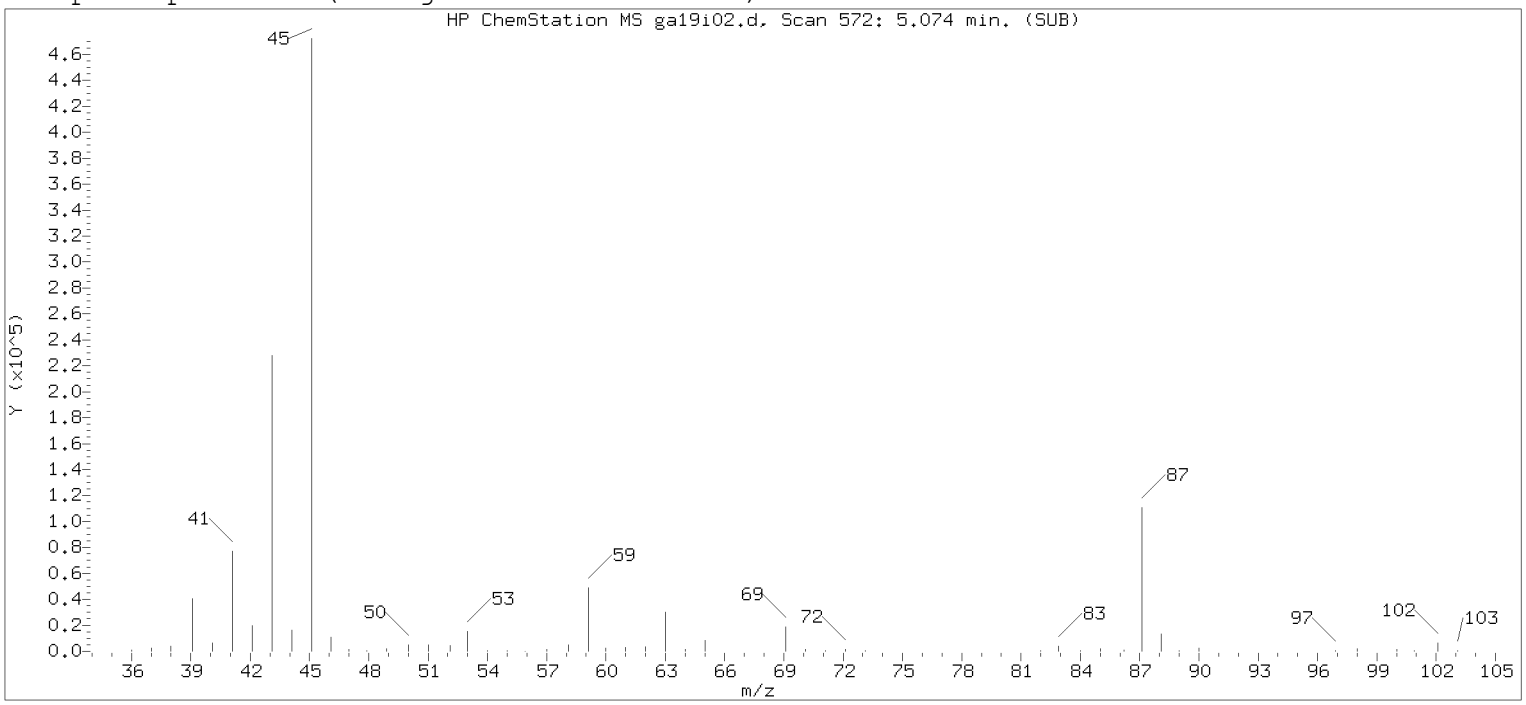
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 5401892M
On-Column Amount (ng) : 103.8297
Integration start scan : 1267 Integration stop scan: 1310
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

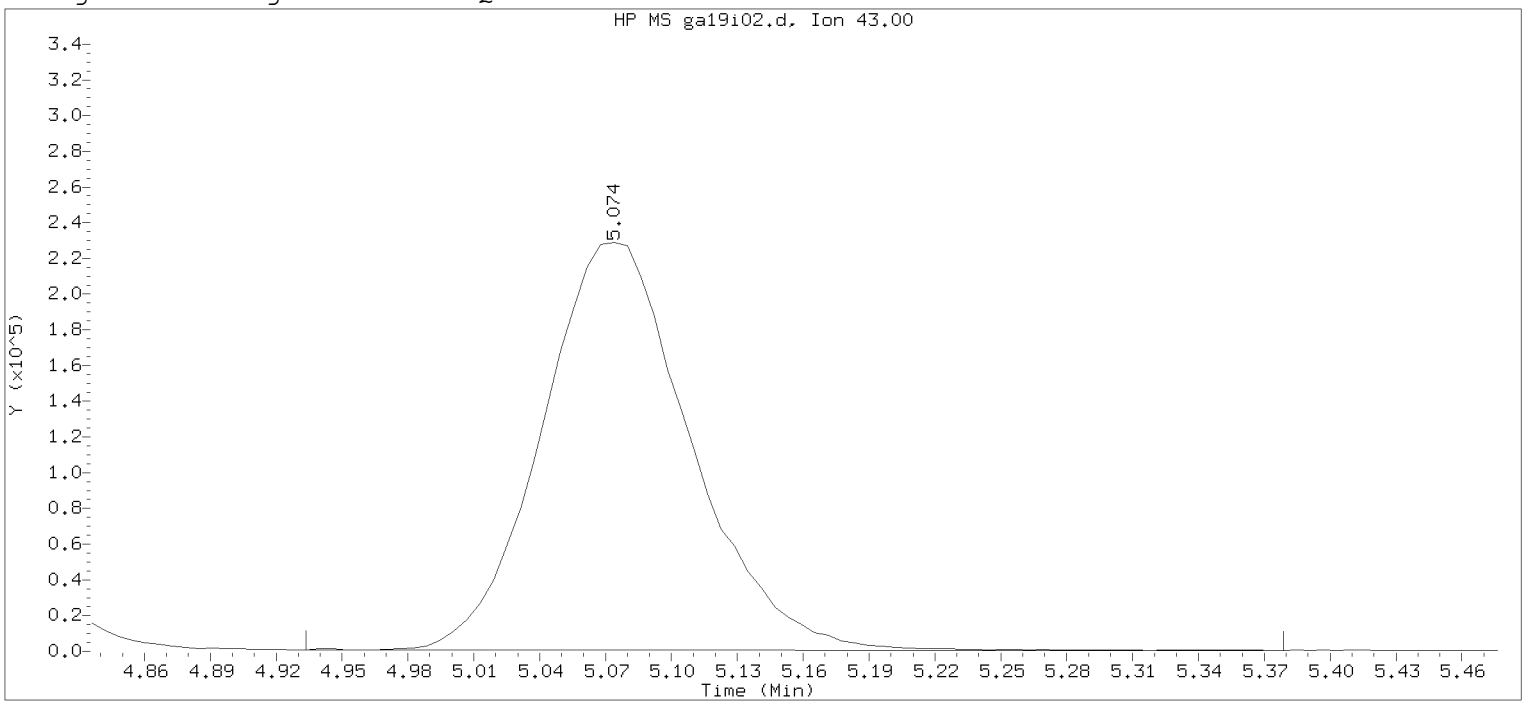
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 1073258
On-column Amount (ng) : 99.5928
Integration start scan : 548 Integration stop scan: 621
Y at integration start : 754 Y at integration end: 391

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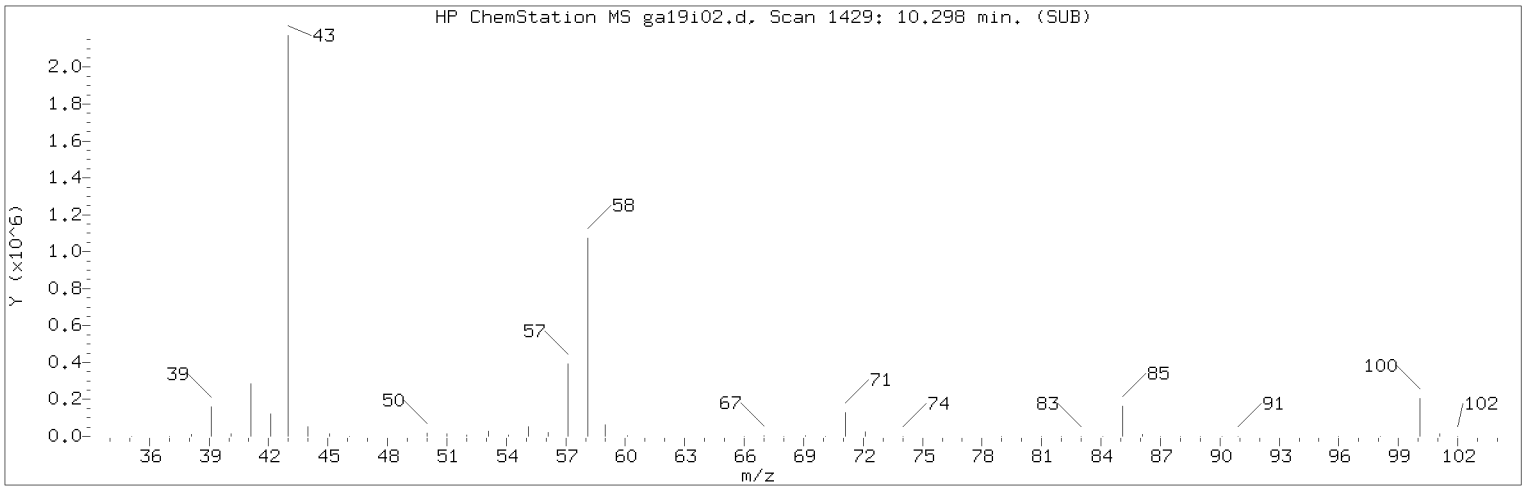
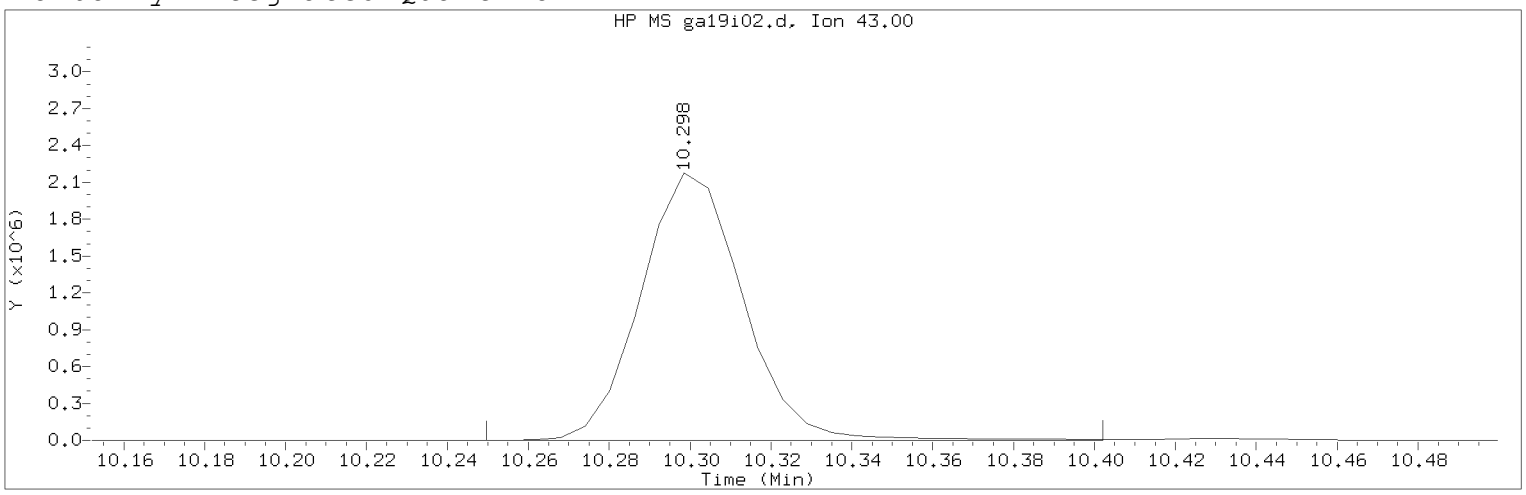
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

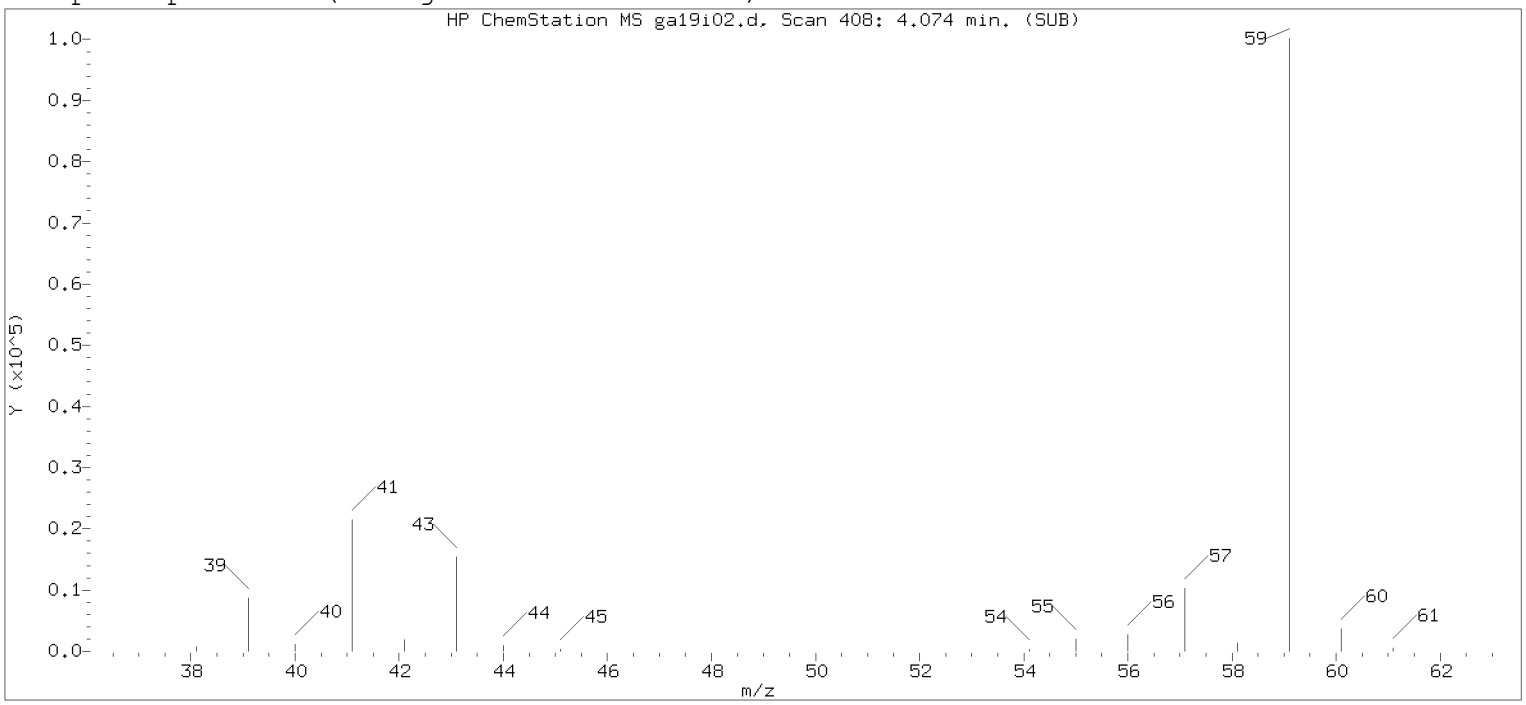
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.298
Quant Ion : 43.00
Area (flag) : 3809911M
On-Column Amount (ng) : 104.0737
Integration start scan : 1420 Integration stop scan: 1445
Y at integration start : 111 Y at integration end: 111

Reason for manual integration: improper integration

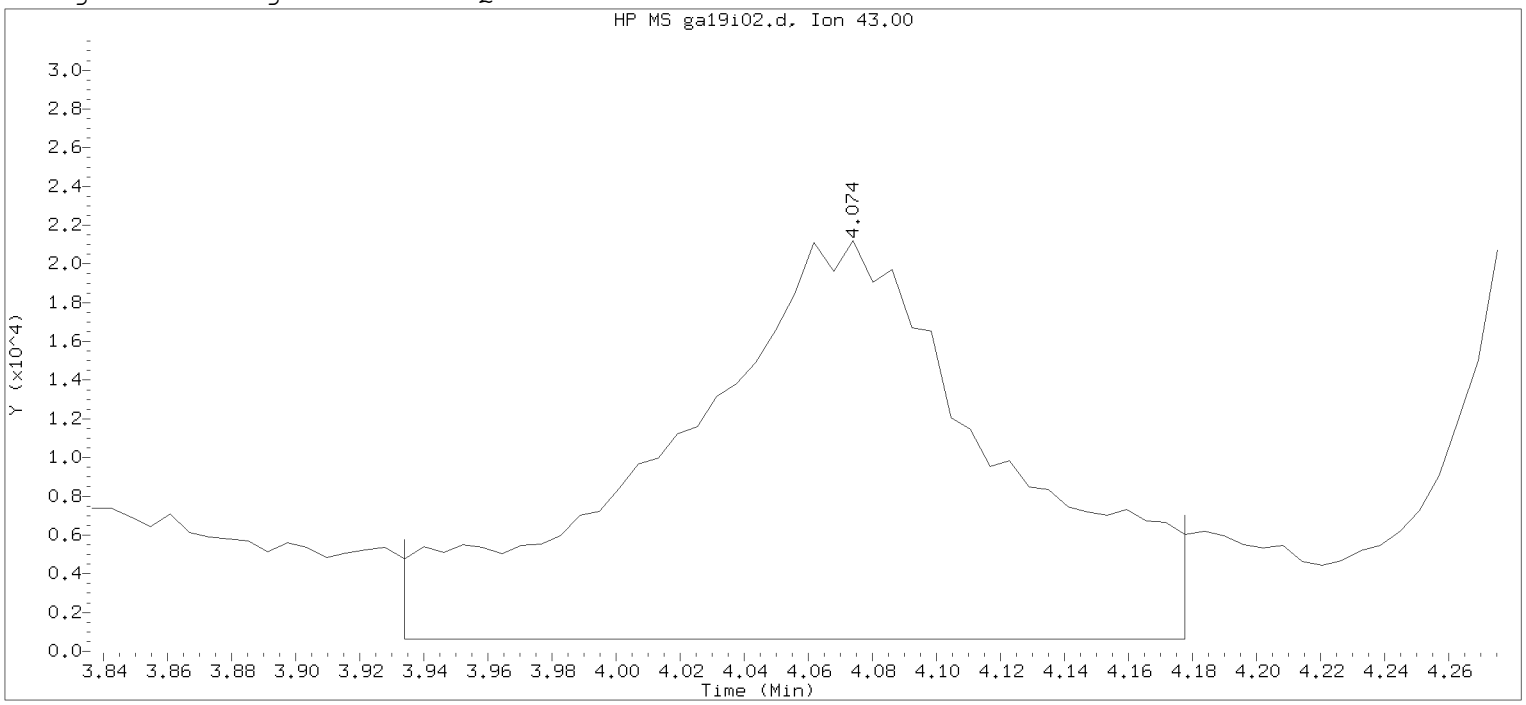
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

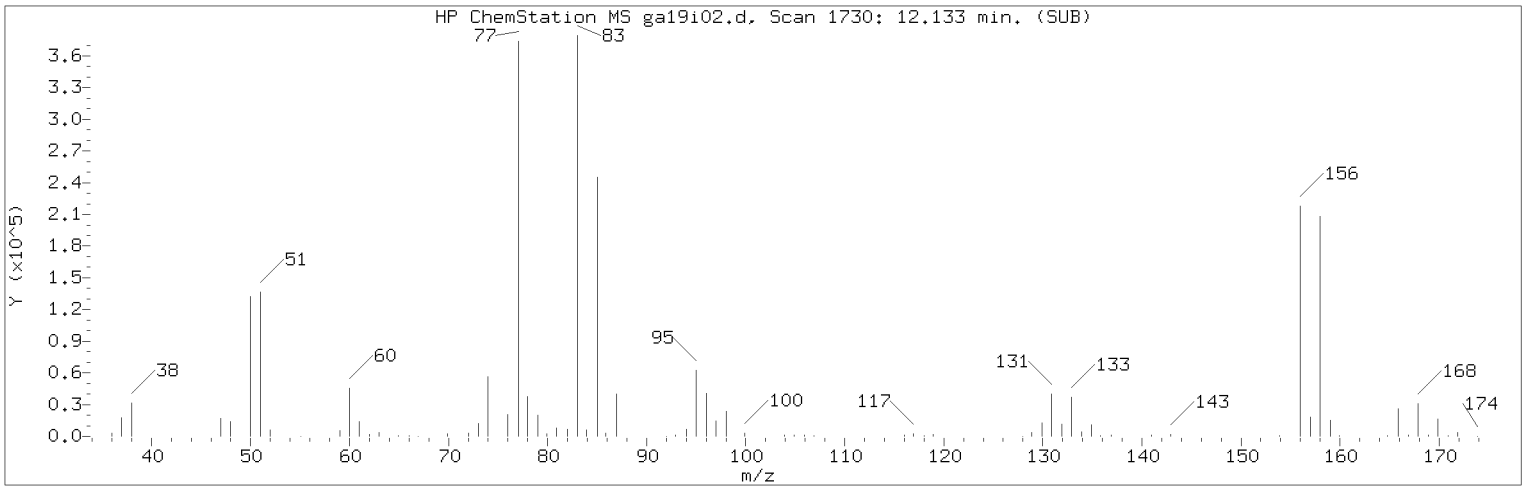
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

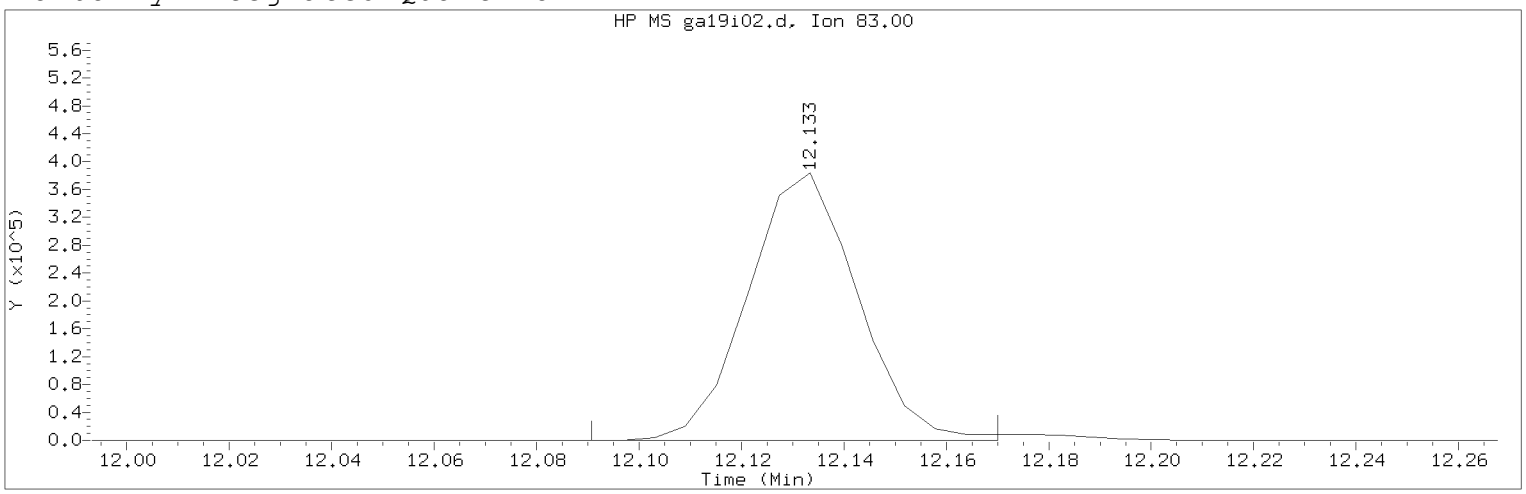
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 408		
Retention Time (minutes)	: 4.074		
Quant Ion	: 43.00		
Area	: 146968		
On-column Amount (ng)	: 103.4182		
Integration start scan	: 384	Integration stop scan:	424
Y at integration start	: 626	Y at integration end:	626

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

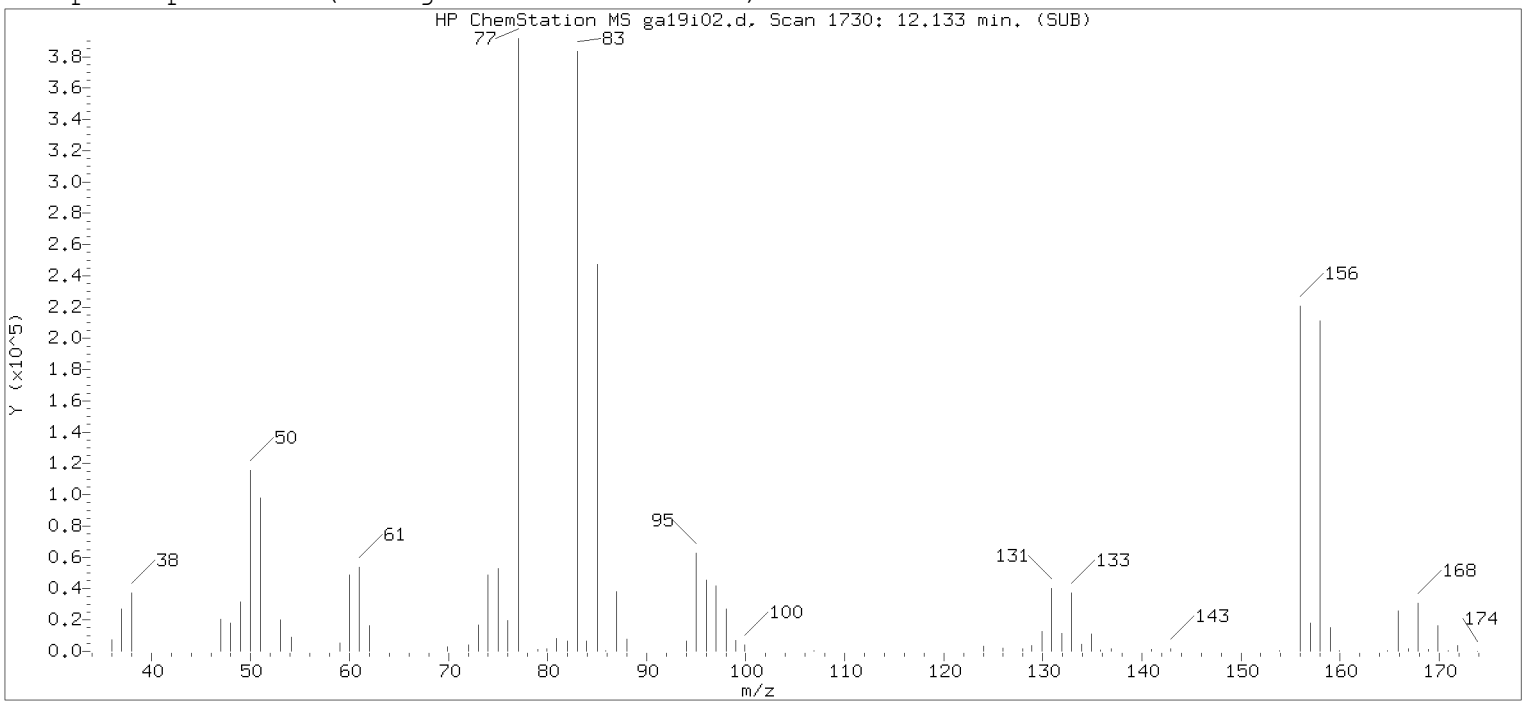
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.133
Quant Ion : 83.00
Area (flag) : 568890M
On-Column Amount (ng) : 10.0125
Integration start scan : 1722 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 65

Reason for manual integration: improper integration

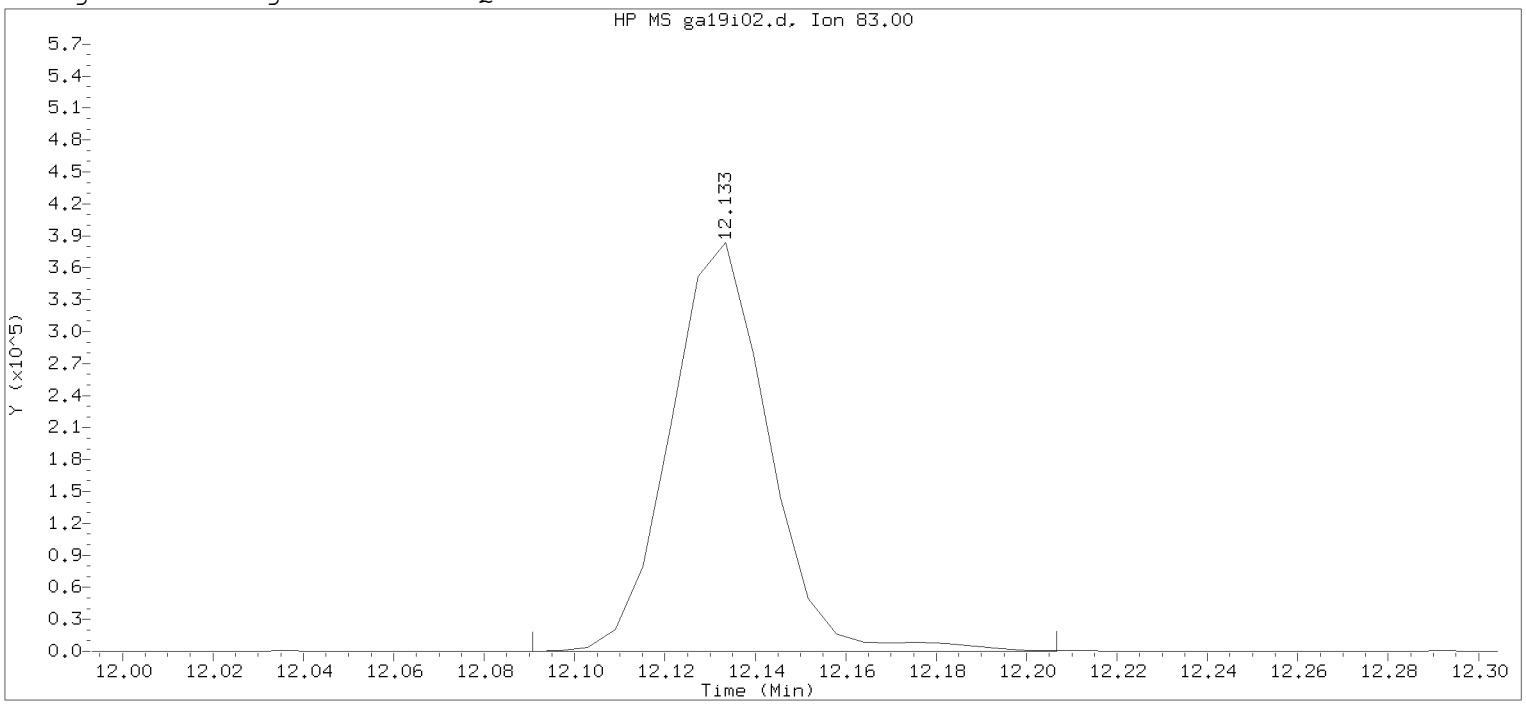
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.133
Quant Ion : 83.00
Area : 577289
On-column Amount (ng) : 10.0123
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 96

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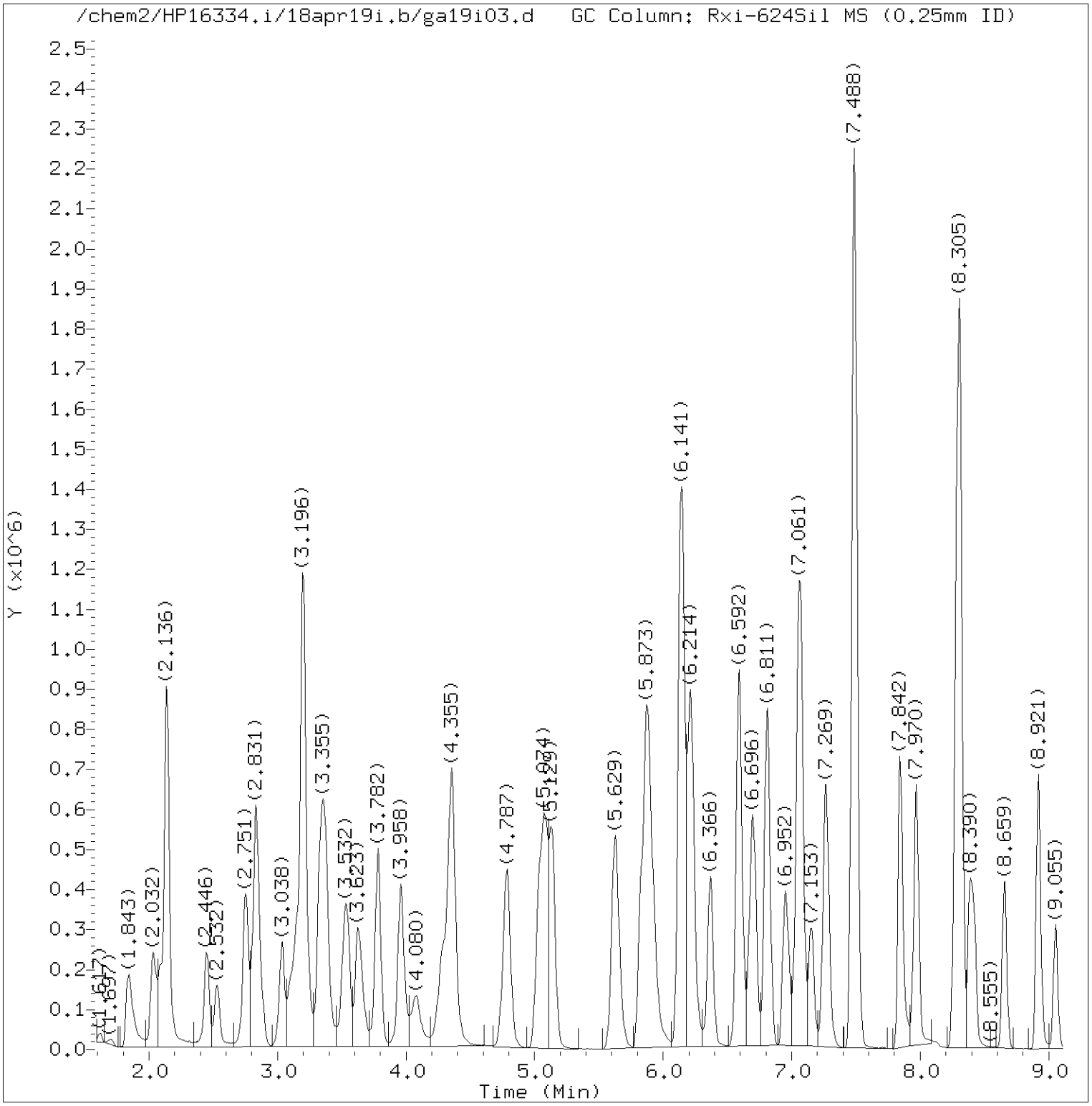
Target 3.5 esignature user AF04 Page 170 of 744



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

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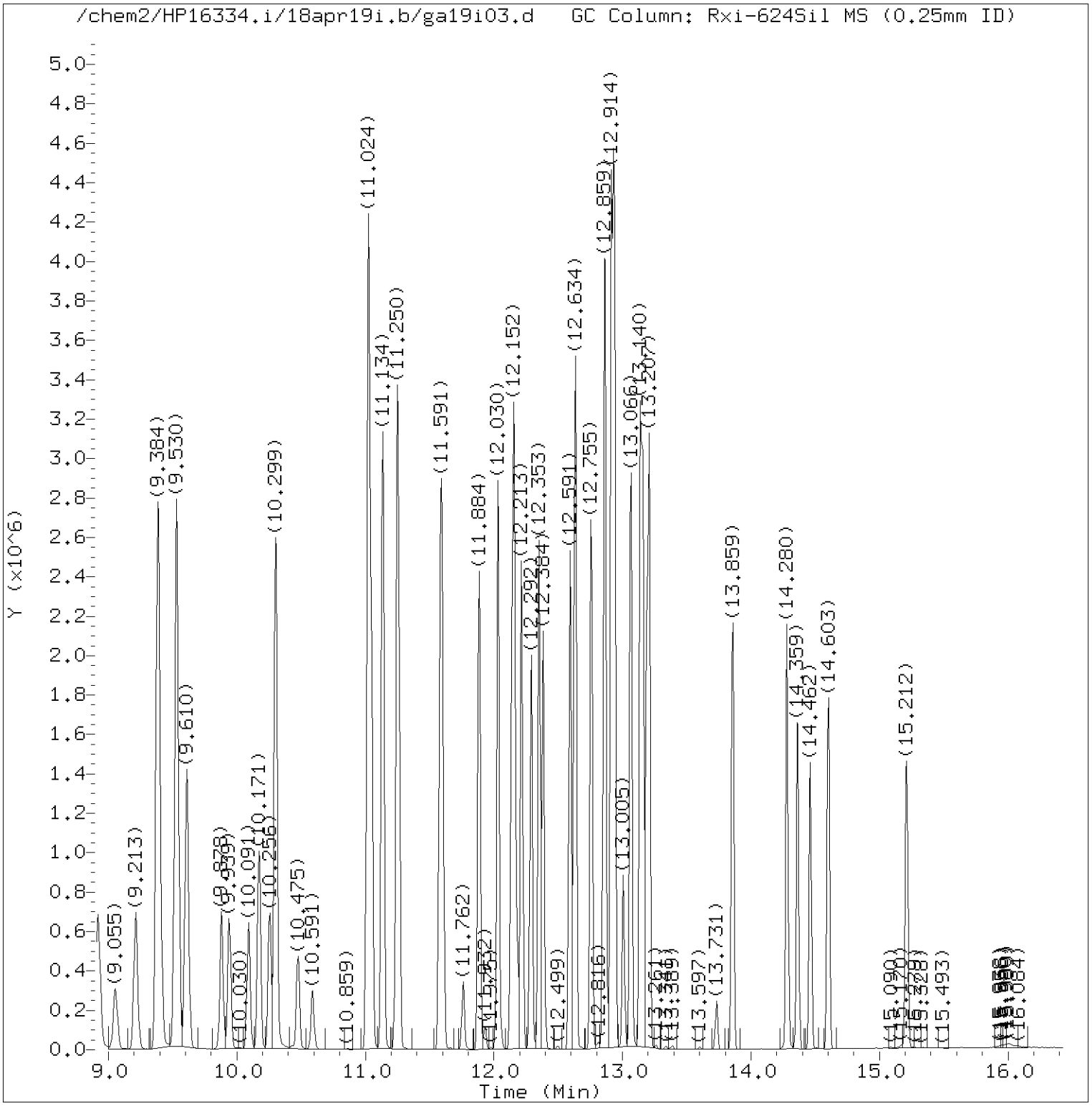
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.843	85	417203	5.085
2) Chloromethane	(2)	2.032	50	414757	5.222
5) Vinyl Chloride	(2)	2.136	62	356378	5.137
6) 1,3-Butadiene	(2)	2.136	39	663351M	5.590
7) Bromomethane	(2)	2.446	94	236409	5.136
8) Chloroethane	(2)	2.532	64	198000	5.115
9) Dichlorofluoromethane	(2)	2.751	67	470661	5.123
10) Trichlorofluoromethane	(2)	2.812	101	472523M	5.105
11) Ethyl ether	(2)	3.038	59	235320	5.196
12) Freon 123a	(2)	3.129	67	323672	5.108
13) Acrolein	(1)	3.196	56	1919900	260.760
15) 1,1-Dichloroethene	(2)	3.330	96	222059	5.048
14) Acetone	(1)	3.355	43	589695	53.121
16) Freon 113	(2)	3.379	101	258318	5.010
17) Methyl Iodide	(2)	3.519	142	442960	5.062
18) Carbon Disulfide	(2)	3.629	76	849766	5.021
21) Methyl Acetate	(1)	3.751	43	166799M	5.045
22) Allyl Chloride	(2)	3.782	41	515573	5.042
23) Methylene Chloride	(2)	3.958	84	271850	5.075
26)*t-Butyl Alcohol-d10	(1)	3.971	65	212064M	50.000
28) t-Butyl Alcohol	(1)	4.080	59	412964	110.124
29) Acrylonitrile	(1)	4.275	53	350503	25.729
30) Methyl Tertiary Butyl Ether	(2)	4.336	73	792450	5.039
31) trans-1,2-Dichloroethene	(2)	4.361	96	257096	5.024
32) n-Hexane	(2)	4.787	57	444493	4.977
33) 1,1-Dichloroethane	(2)	5.031	63	530841	5.039
34) di-Isopropyl Ether	(2)	5.080	45	1093343	5.034
35) 2-Chloro-1,3-Butadiene	(2)	5.141	53	483399	4.995
37) Ethyl t-butyl ether	(2)	5.629	59	973433	5.050
38) 2-Butanone	(1)	5.830	43	1065205	51.696
39) cis-1,2-Dichloroethene	(2)	5.873	96	296441	5.033
41) 2,2-Dichloropropane	(2)	5.891	77	444467	5.000
42) Propionitrile	(1)	5.928	54	506118	98.722
40) 1,2-Dichloroethene (Total)	(2)		96	553537	10.057
45) Methacrylonitrile	(1)	6.147	67	844141	51.348
47) Bromochloromethane	(2)	6.214	128	138690	5.043
48) Tetrahydrofuran	(1)	6.214	71	251549	50.743
49) Chloroform	(2)	6.366	83	510783	5.028

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) 1,1,1-Trichloroethane	(2)	6.592	97	431292	4.977
50)$Dibromofluoromethane	(2)	6.592	113	544328	10.038
50)$Dibromofluoromethane	(2)	6.586	111	559453	10.043
52) Cyclohexane	(2)	6.696	56	522771	5.009
52) Cyclohexane	(2)	6.696	84	395325	4.956
52) Cyclohexane	(2)	6.702	69	151811	5.009
54) Carbon Tetrachloride	(2)	6.811	117	357329	4.906
55) 1,1-Dichloropropene	(2)	6.811	75	400762	5.013
56) Isobutyl Alcohol	(1)	6.952	41	394402	256.843
57)$1,2-Dichloroethane-d4	(2)	7.049	102	115430	10.133
57)$1,2-Dichloroethane-d4	(2)	7.049	65	644780	10.038
57)$1,2-Dichloroethane-d4	(2)	7.043	104	70285	9.992
58) Benzene	(2)	7.074	78	1096523	4.999
59) 1,2-Dichloroethane	(2)	7.153	62	376712	5.026
60) t-Amyl methyl ether	(2)	7.269	73	819812	4.970
63)*Fluorobenzene	(2)	7.488	96	2151089	10.000
62) n-Heptane	(2)	7.500	43	525768	4.950
65) n-Butanol	(1)	7.842	56	675021M	511.576
67) Trichloroethene	(2)	7.970	95	290624	4.976
69) Methylcyclohexane	(2)	8.281	83	509485	5.001
70) 1,2-Dichloropropane	(2)	8.305	63	311487	5.020
71) Methyl Methacrylate	(1)	8.384	69	165361	5.129
72) 1,4-Dioxane	(1)	8.390	88	60823M	254.925
73) Dibromomethane	(2)	8.421	93	146012	4.950
74) Bromodichloromethane	(2)	8.659	83	368289	4.866
76) 2-Nitropropane	(1)	8.921	41	573397	49.264
80) cis-1,3-Dichloropropene	(2)	9.213	75	465166	4.885
81) 4-Methyl-2-Pentanone	(1)	9.384	43	2642519M	51.640
82)$Toluene-d8	(3)	9.530	98	2184587	9.968
82)$Toluene-d8	(3)	9.530	100	1387314	9.916
83) Toluene	(3)	9.610	92	694171	4.968
84) trans-1,3-Dichloropropene	(3)	9.878	75	398431	4.864
86) Ethyl Methacrylate	(3)	9.939	69	352849	4.906
88) 1,1,2-Trichloroethane	(3)	10.091	97	210222	4.978
85) 1,3-Dichloropropene (total)	(3)		75	863597	9.749
89) Tetrachloroethene	(3)	10.171	166	320176	4.951
90) 1,3-Dichloropropane	(3)	10.256	76	382596	4.992
91) 2-Hexanone	(1)	10.299	43	1892288M	52.236

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	247750	4.780
95) 1,2-Dibromoethane	(3)	10.591	107	204398	4.954
97)*Chlorobenzene-d5	(3)	11.018	117	1639809	10.000
98) Chlorobenzene	(3)	11.048	112	794031	4.977
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	277874	4.846
100) Ethylbenzene	(3)	11.134	91	1380634	4.992
101) m+p-Xylene	(3)	11.250	106	1059519	9.881
104) o-Xylene	(3)	11.579	106	535967	4.912
106) Styrene	(3)	11.597	104	889883	4.871
105) Xylene (Total)	(3)		106	1595486	14.793
107) Bromoform	(3)	11.762	173	144994	4.639
108) Isopropylbenzene	(3)	11.884	105	1393669	4.965
111)$4-Bromofluorobenzene	(3)	12.030	95	837615	9.965
111)$4-Bromofluorobenzene	(3)	12.030	174	714713	9.927
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	276992M	4.959
114) Bromobenzene	(4)	12.146	156	357365	4.918
116) 1,2,3-Trichloropropane	(4)	12.182	110	76345	4.998
117) n-Propylbenzene	(4)	12.213	91	1671661	5.062
119) 2-Chlorotoluene	(4)	12.292	126	332689	5.026
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	1198308	4.970
122) 4-Chlorotoluene	(4)	12.384	126	348401	5.003
125) tert-Butylbenzene	(4)	12.591	134	245761	4.905
126) Pentachloroethane	(4)	12.627	167	209242	4.747
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	1237700	4.984
128) sec-Butylbenzene	(4)	12.755	105	1545057	5.013
131) 1,3-Dichlorobenzene	(4)	12.859	146	715707	4.923
132) p-Isopropyltoluene	(4)	12.865	119	1332255	4.927
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	919901	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	724924	4.954
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	548457	4.945
136) Benzyl Chloride	(4)	13.005	126	103940	4.621
138) n-Butylbenzene	(4)	13.158	92	712786	4.958
139) 1,2-Dichlorobenzene	(4)	13.188	146	674105	4.924
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	39955	4.752
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	594445	4.900
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	554681	4.908
146) Hexachlorobutadiene	(4)	14.365	225	286762	4.923
147) Naphthalene	(4)	14.462	128	936001	4.947

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	473255	4.913

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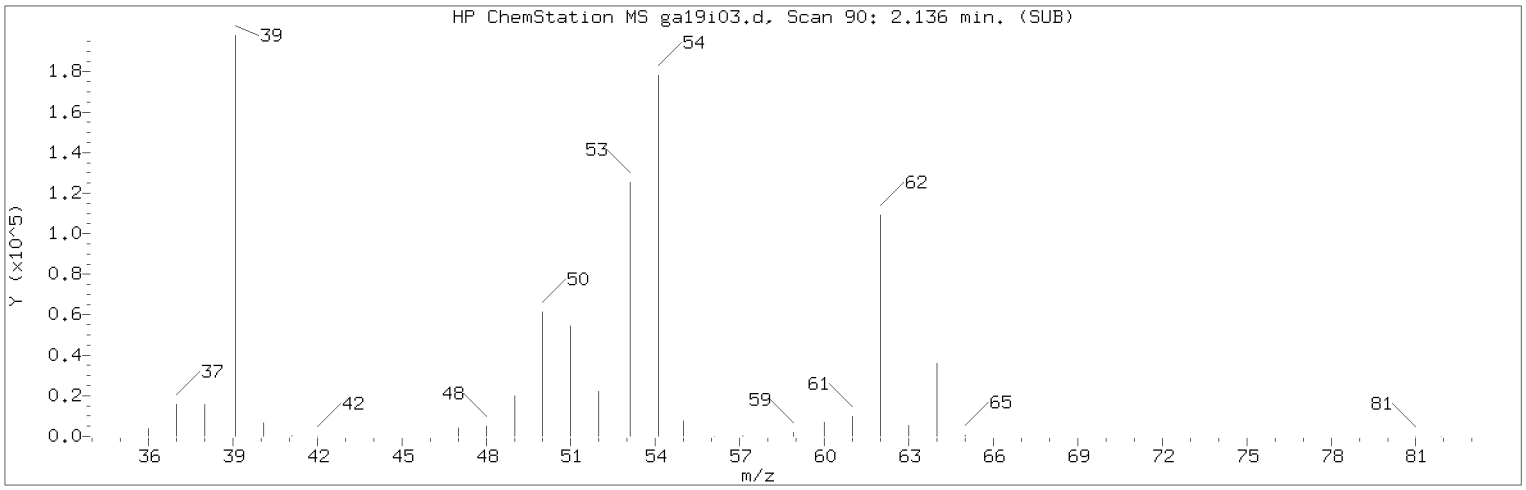
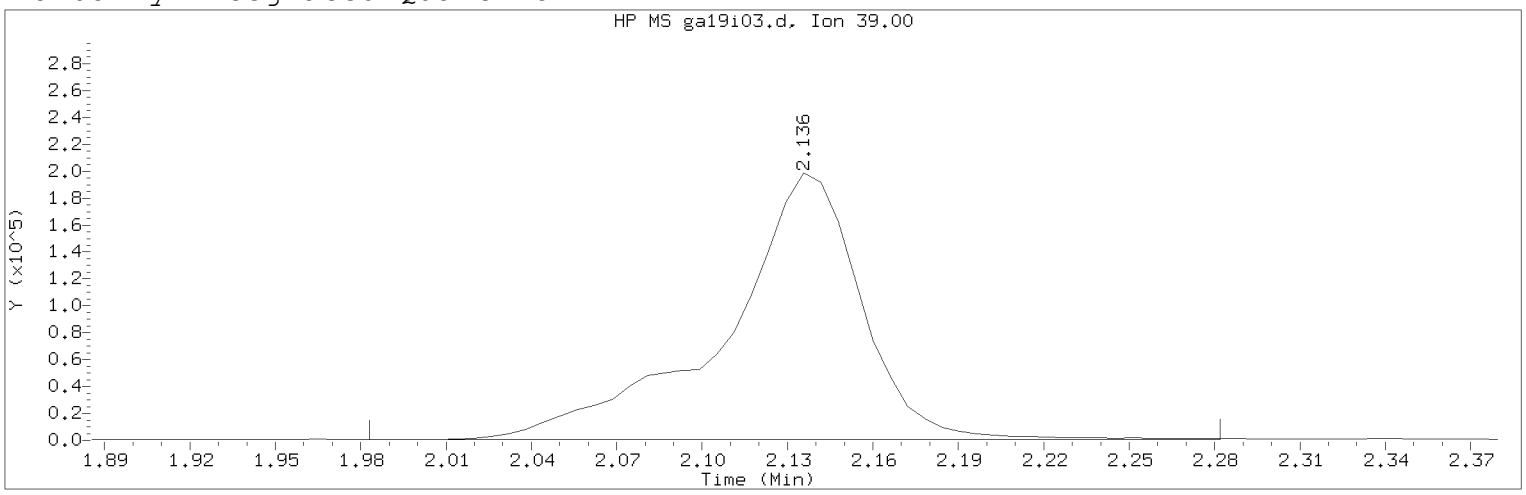
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

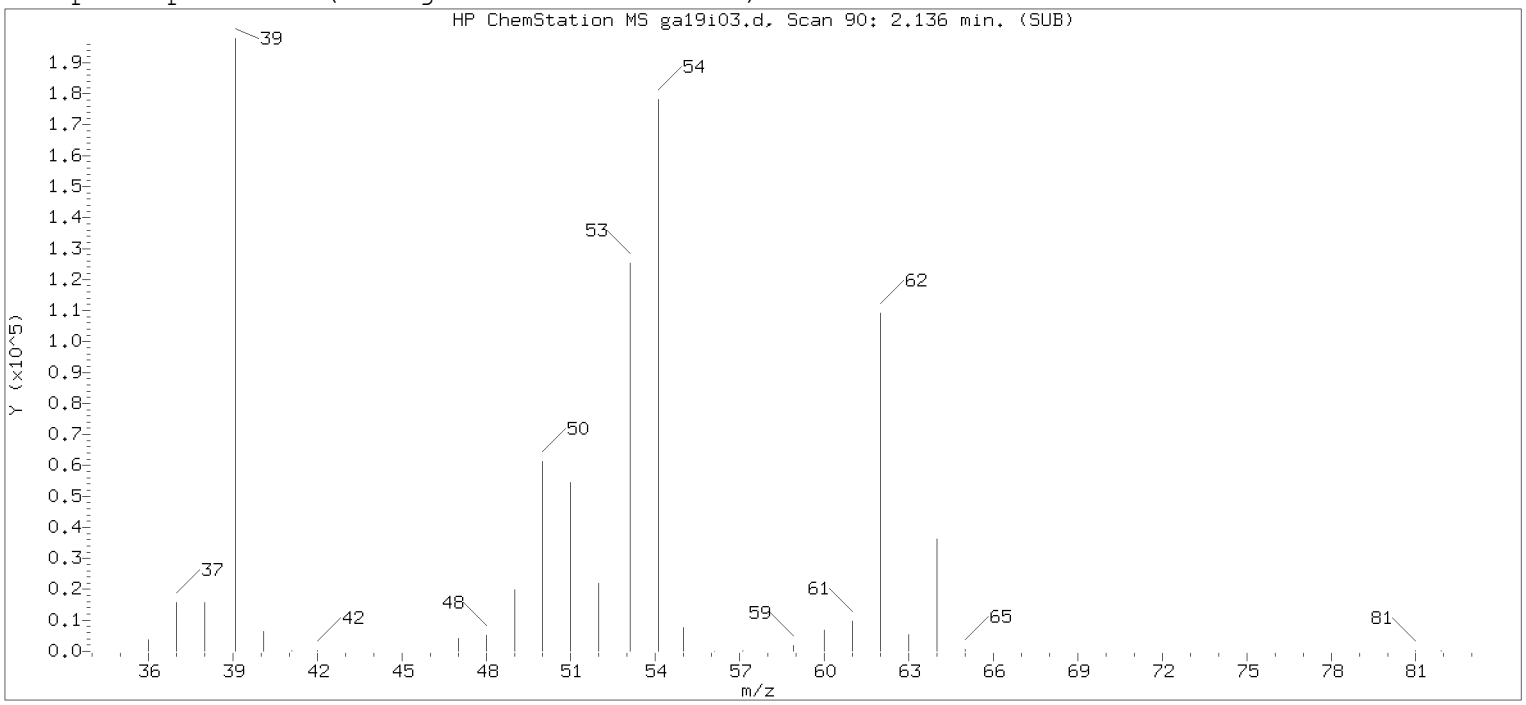
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 663351M
On-Column Amount (ng) : 5.5900
Integration start scan : 64 Integration stop scan: 113
Y at integration start : 316 Y at integration end: 316

Reason for manual integration: improper integration

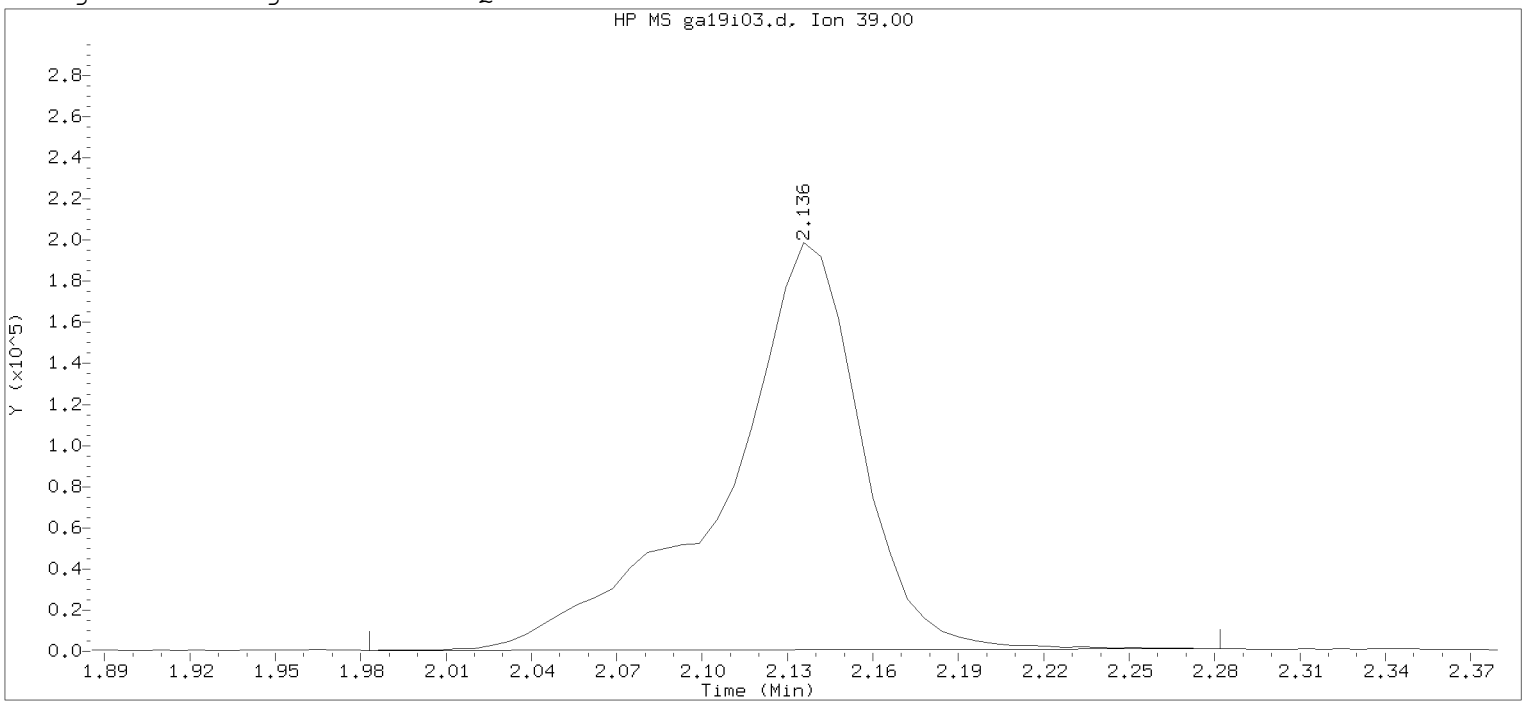
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 654429
On-column Amount (ng) : 5.7475
Integration start scan : 64 Integration stop scan: 113
Y at integration start : 412 Y at integration end: 1196

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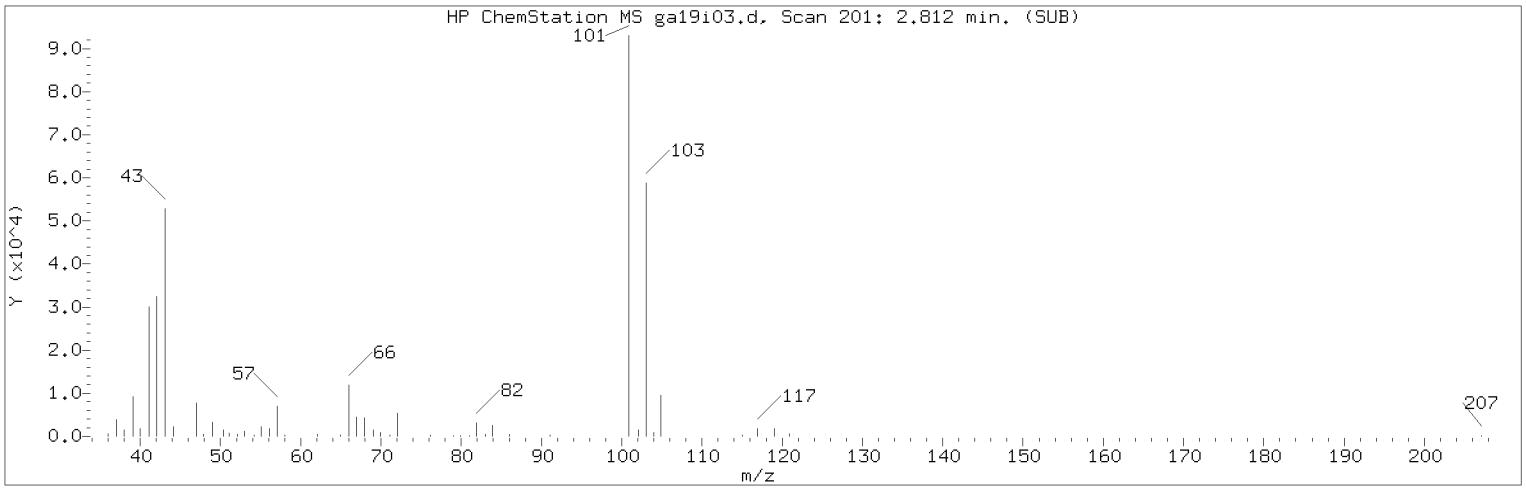
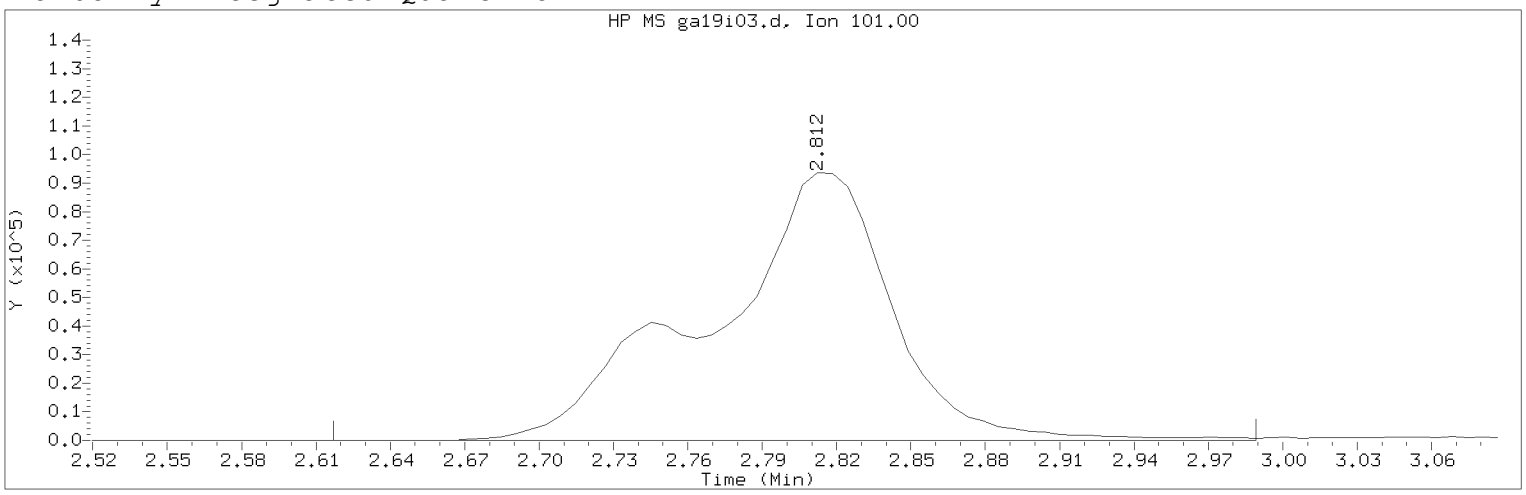
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

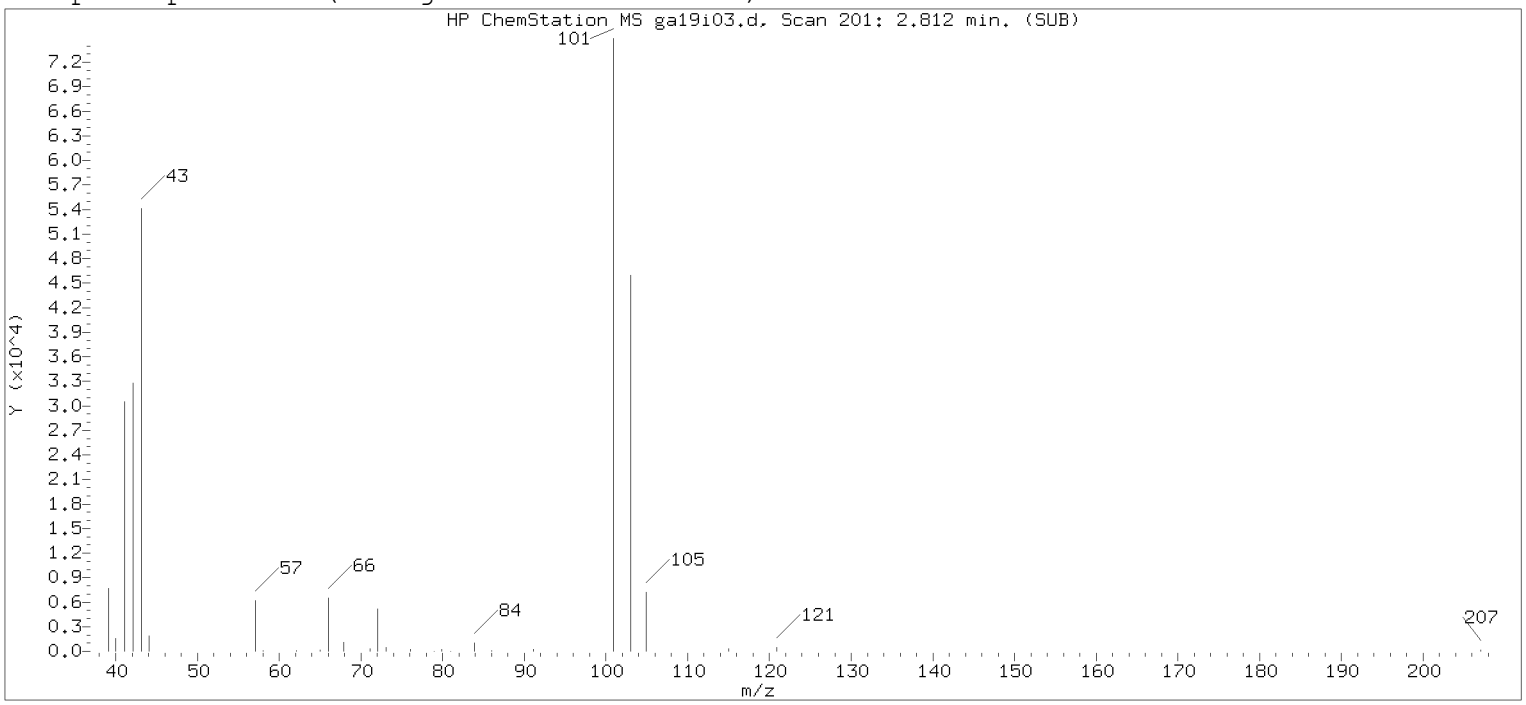
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area (flag) : 472523M
On-Column Amount (ng) : 5.1052
Integration start scan : 168 Integration stop scan: 229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

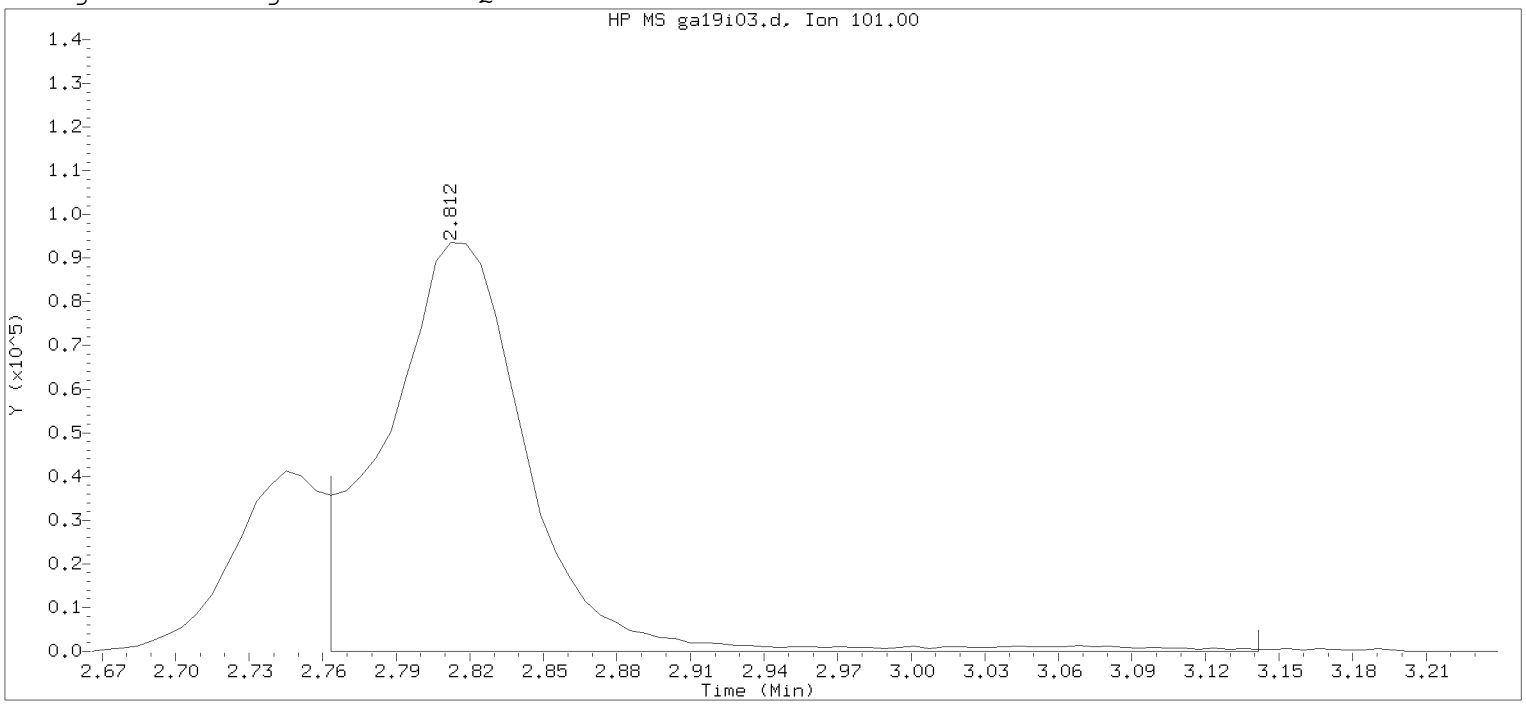
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

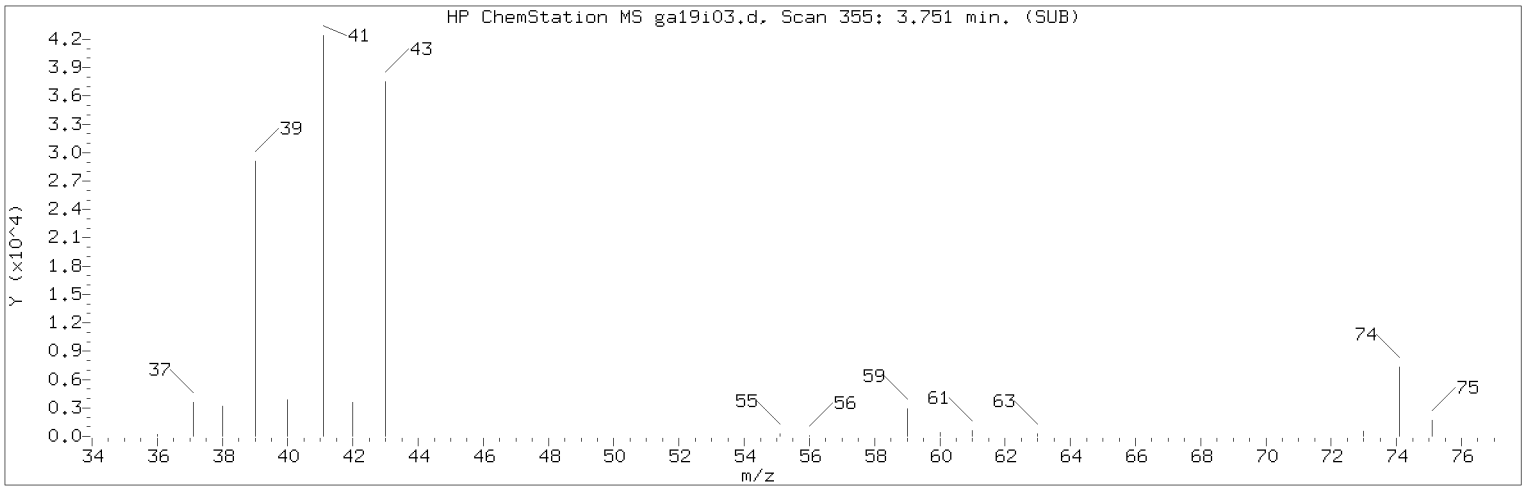
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

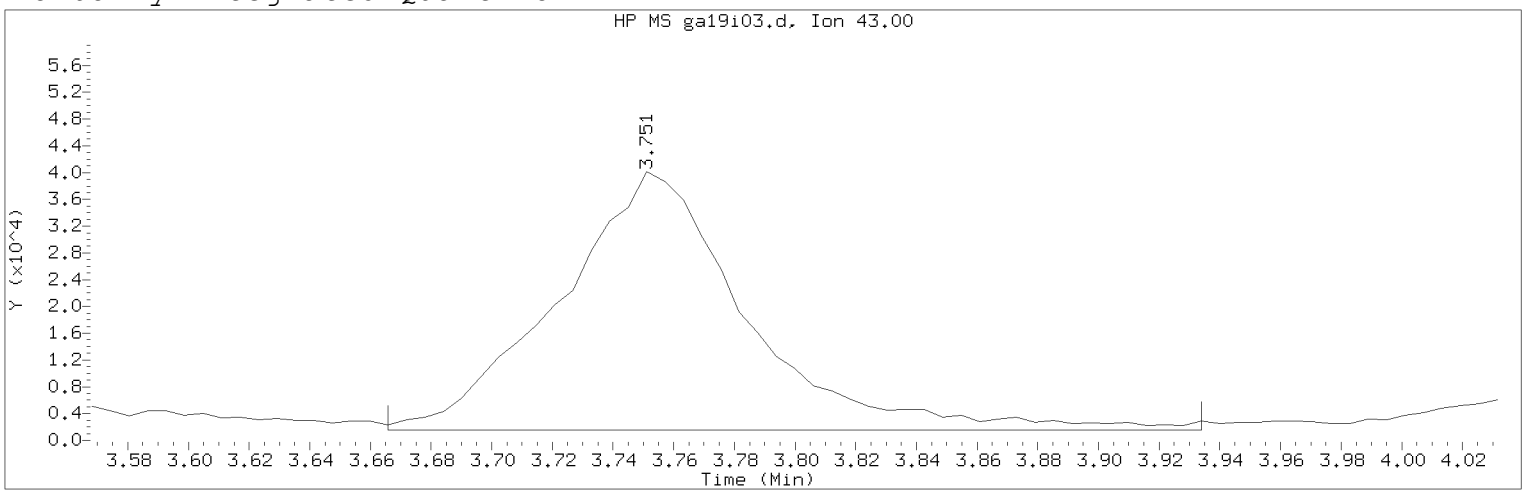
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area : 374647
On-column Amount (ng) : 4.3061
Integration start scan : 192 Integration stop scan: 254
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

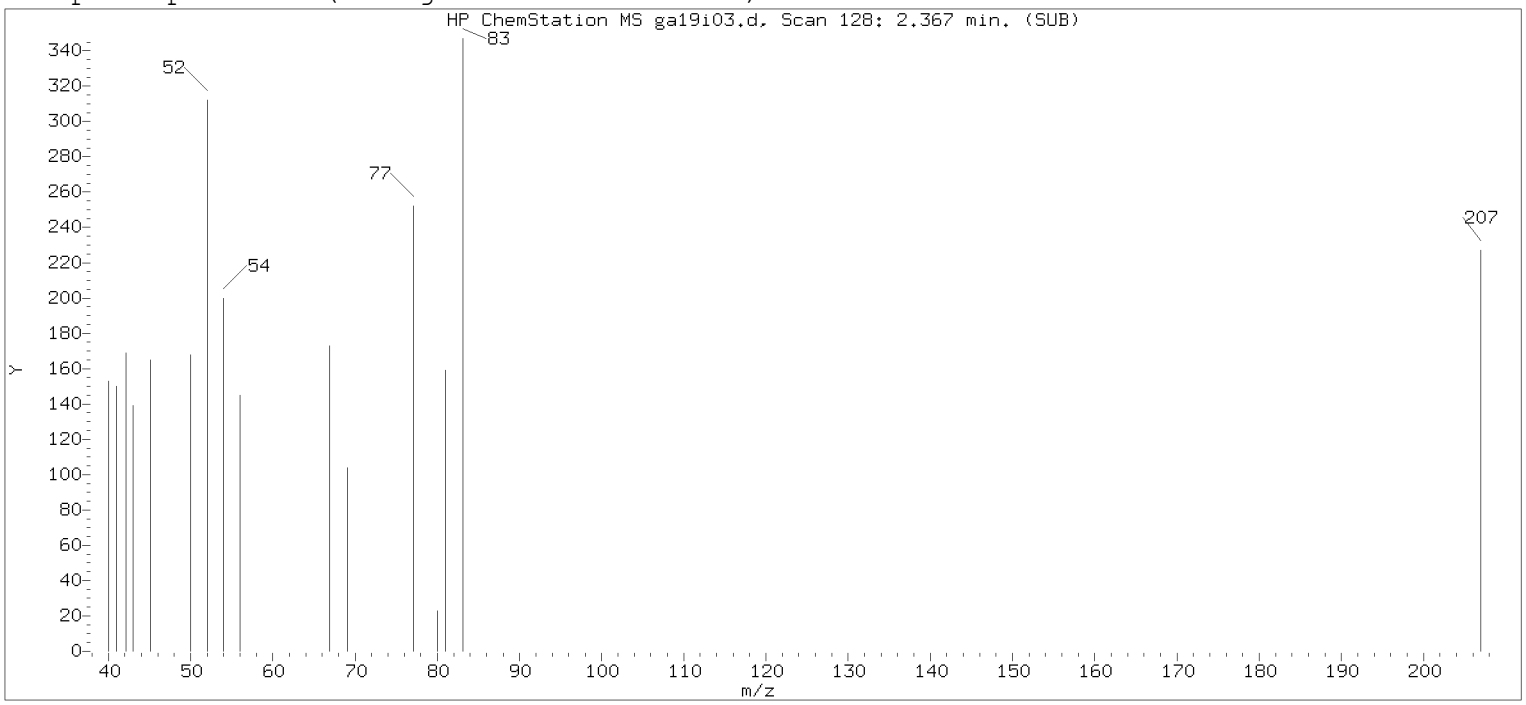
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 166799M
On-Column Amount (ng) : 5.0449
Integration start scan : 340 Integration stop scan: 384
Y at integration start : 1496 Y at integration end: 1496

Reason for manual integration: improper integration

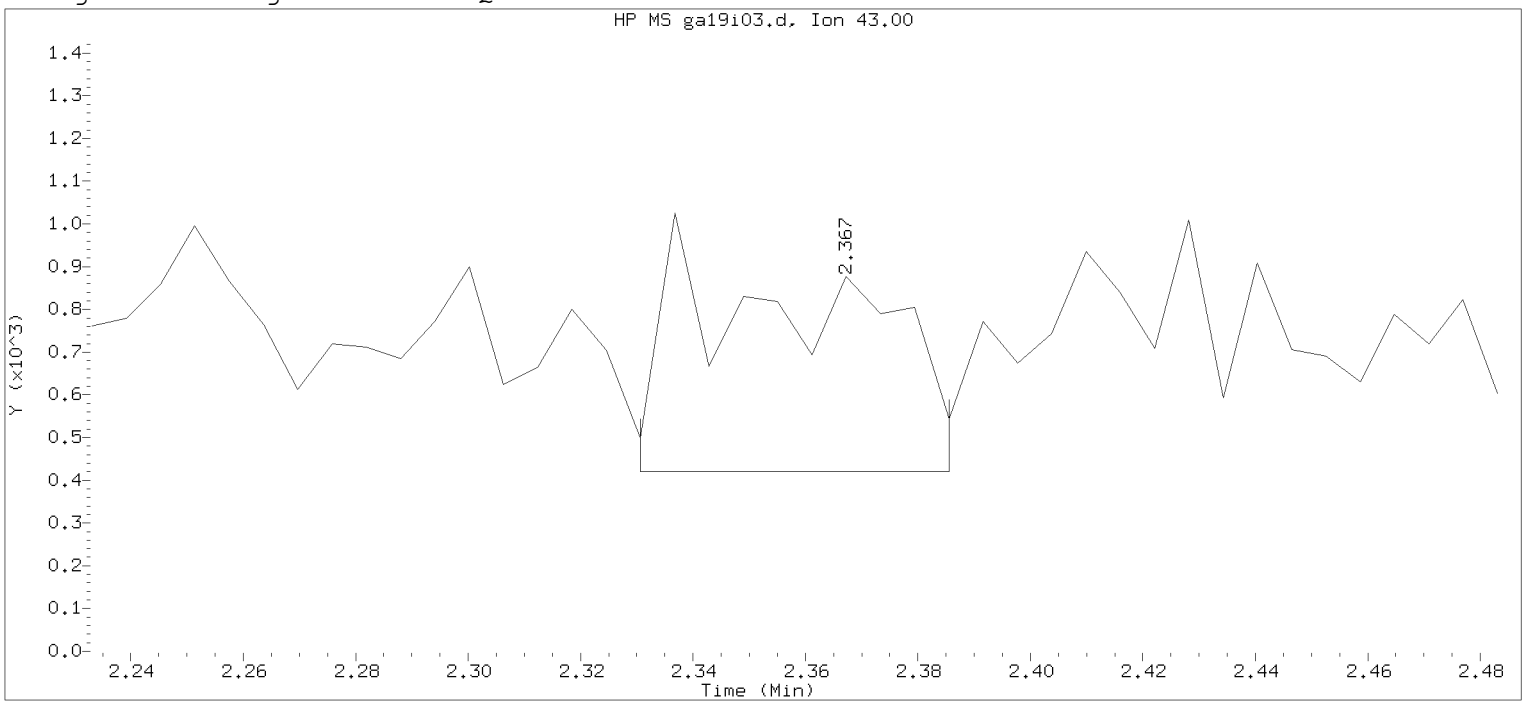
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

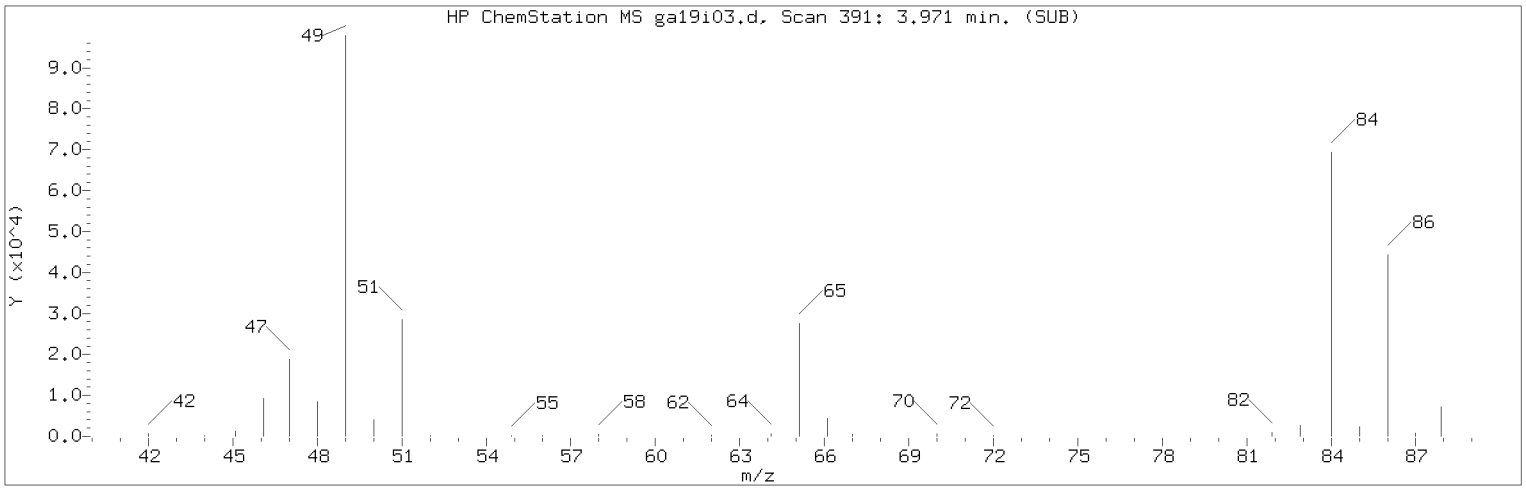
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

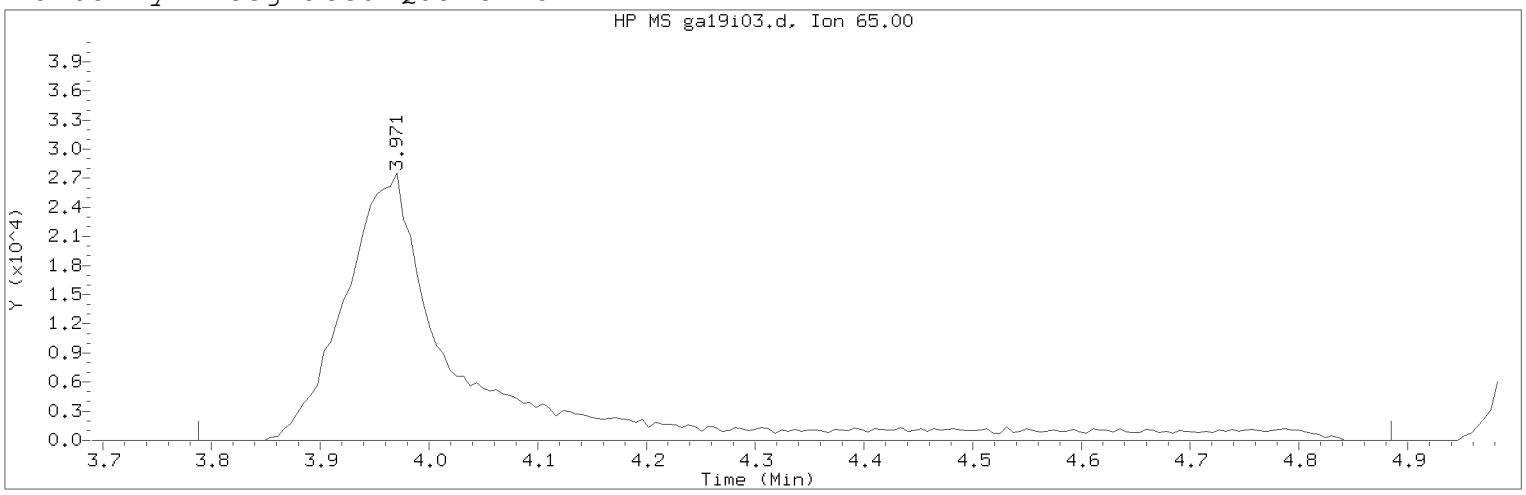
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 128
Retention Time (minutes): 2.367
Quant Ion : 43.00
Area : 1188
On-column Amount (ng) : 5.7616
Integration start scan : 121 Integration stop scan: 130
Y at integration start : 420 Y at integration end: 420

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

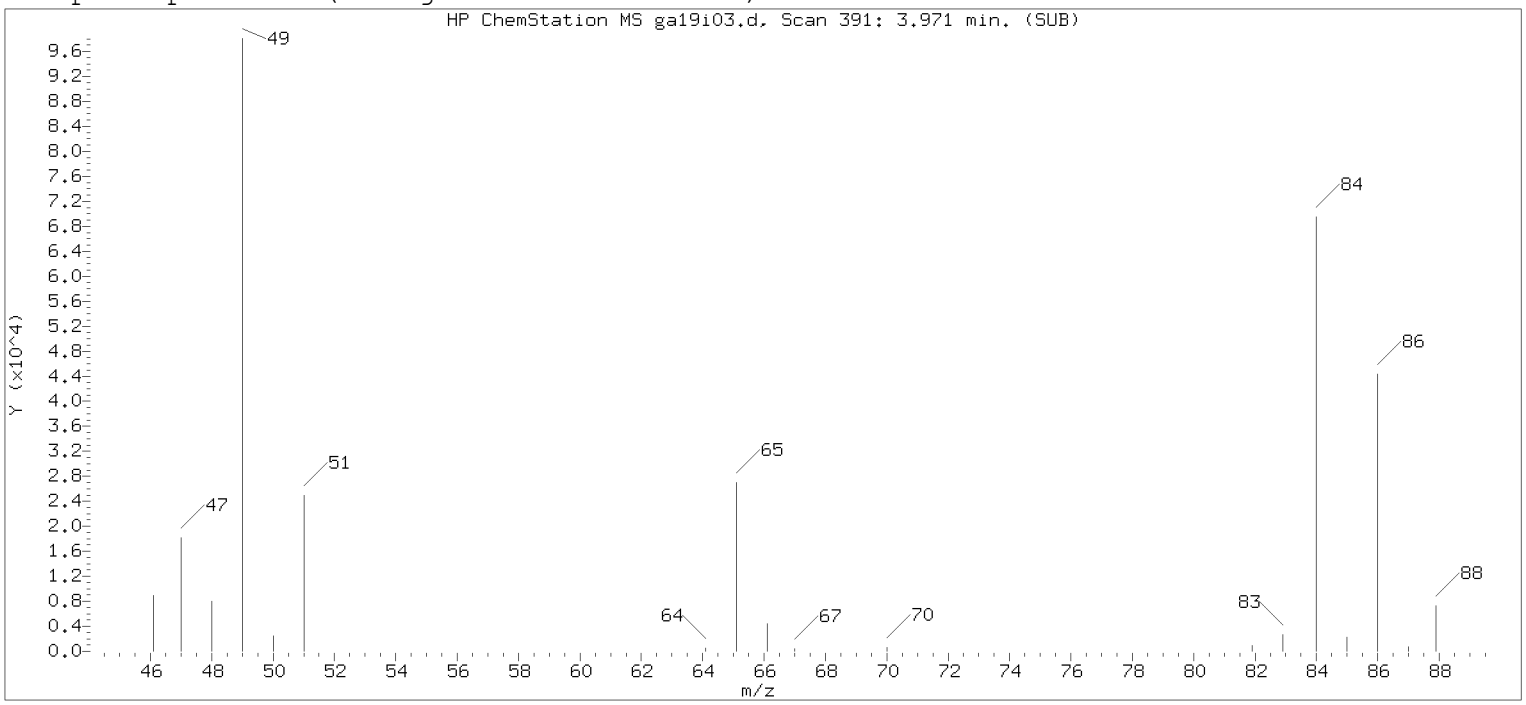
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 391
Retention Time (minutes): 3.971
Quant Ion : 65.00
Area (flag) : 212064M
On-Column Amount (ng) : 50.0000
Integration start scan : 360 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

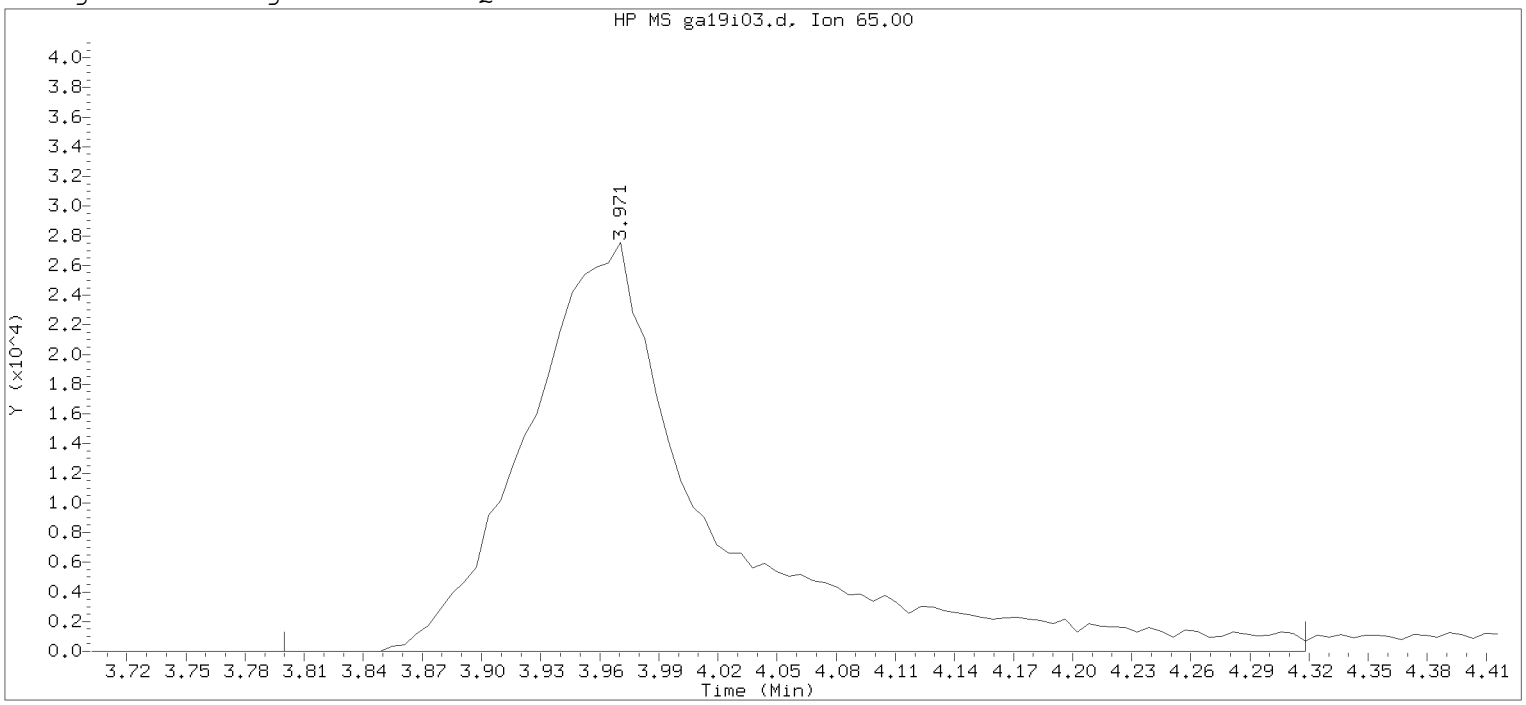
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

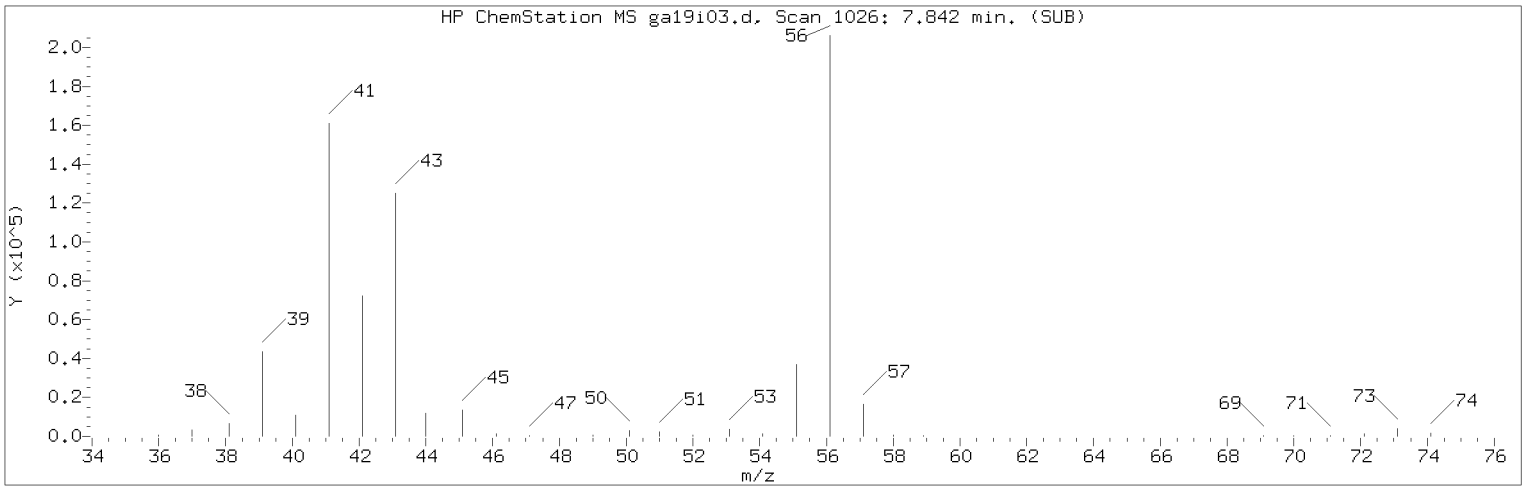
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

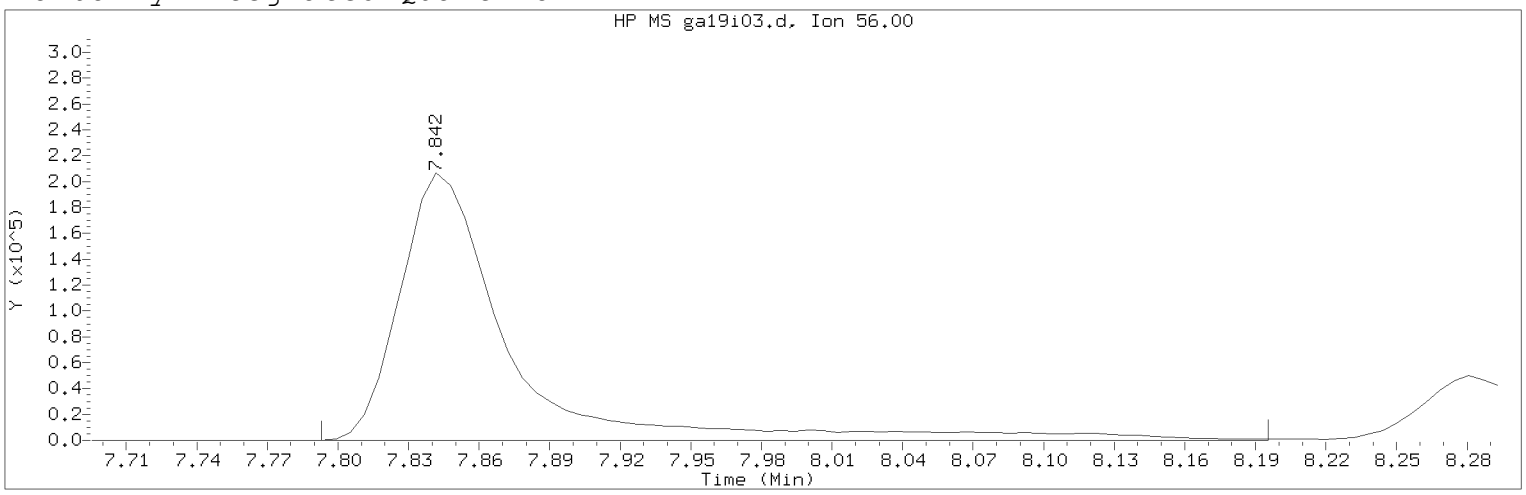
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 391
Retention Time (minutes): 3.971
Quant Ion : 65.00
Area : 181668
On-column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

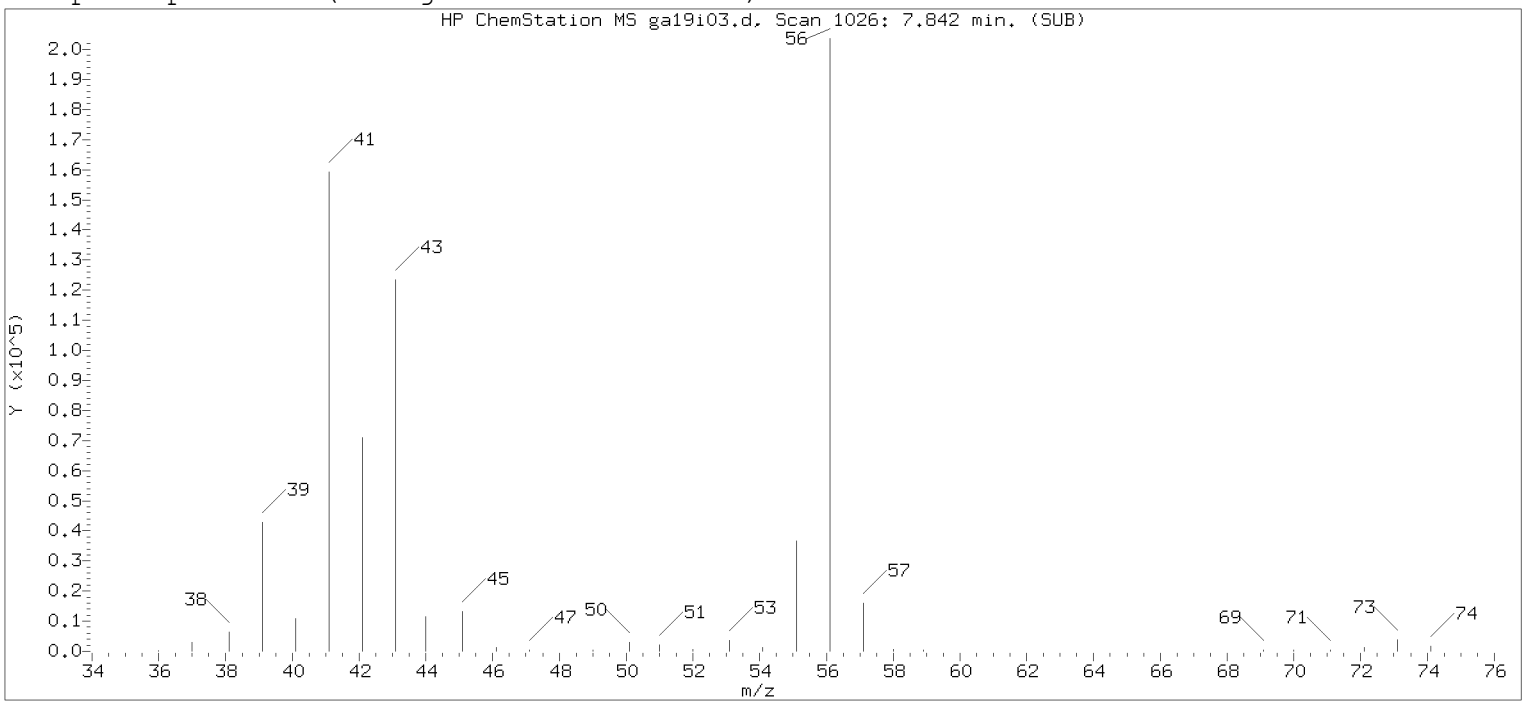
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1026
Retention Time (minutes): 7.842
Quant Ion : 56.00
Area (flag) : 675021M
On-Column Amount (ng) : 511.5760
Integration start scan : 1017 Integration stop scan: 1083
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

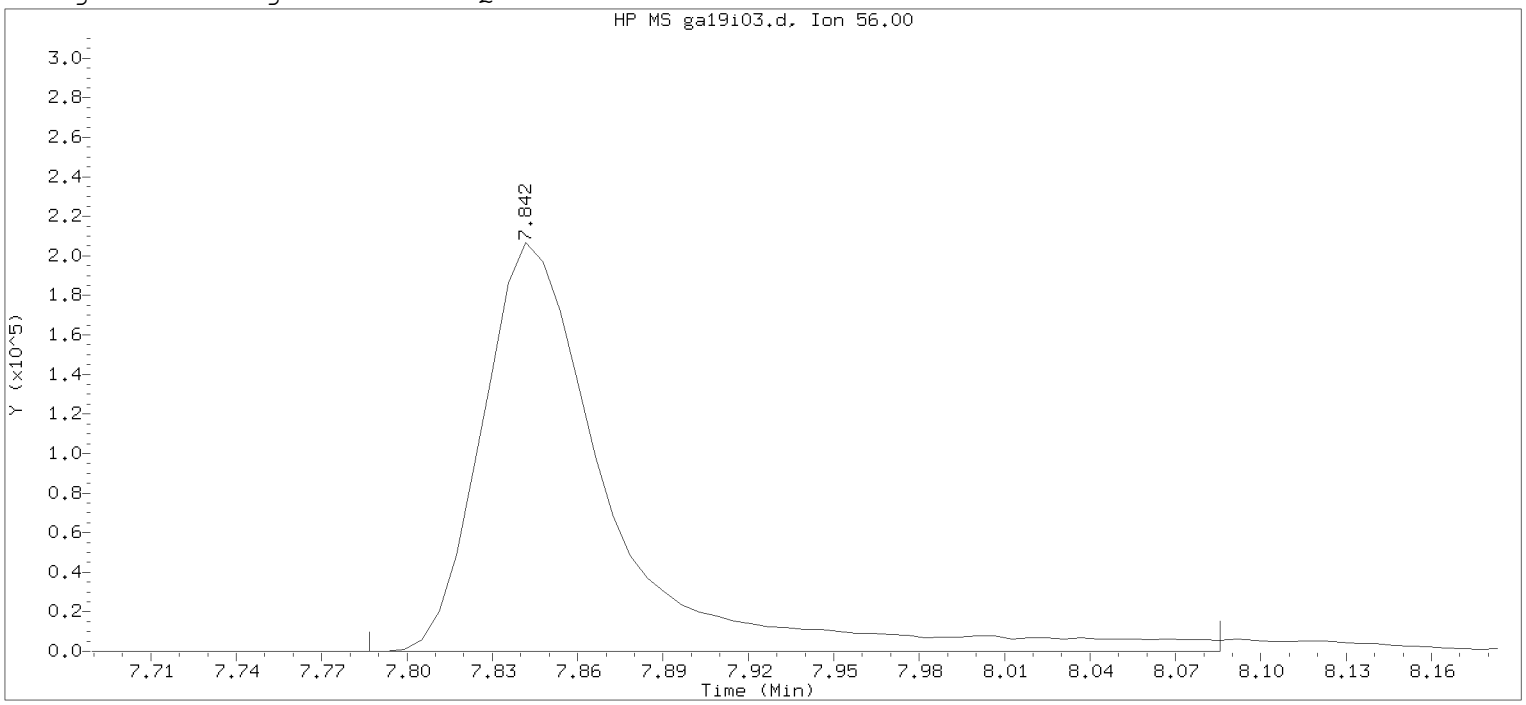
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

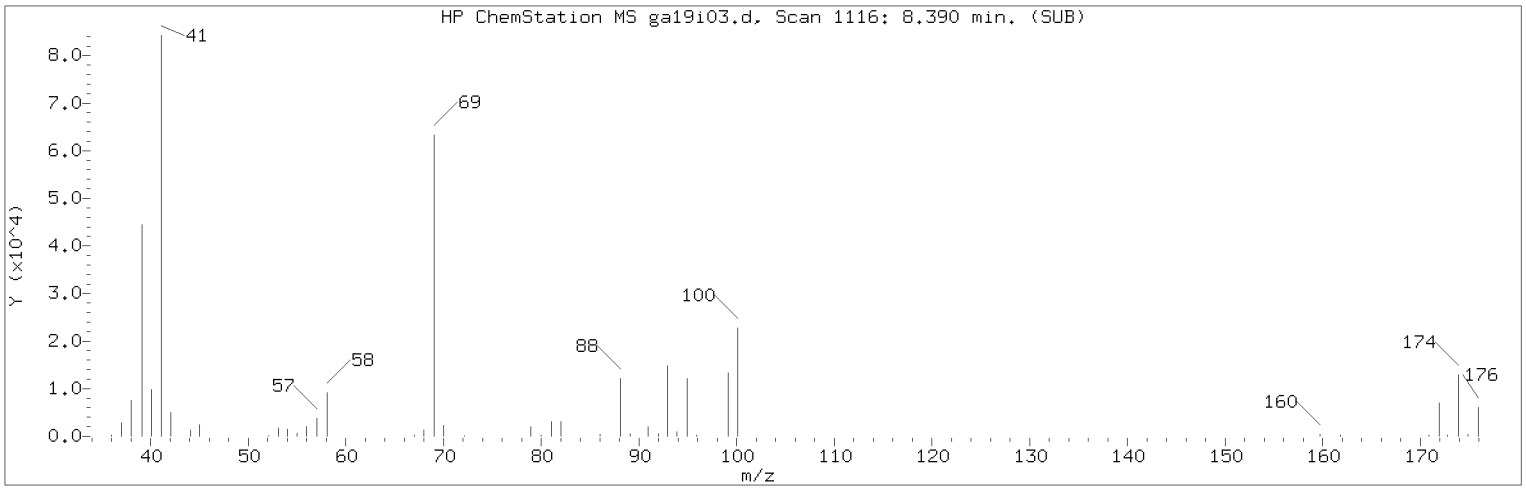
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

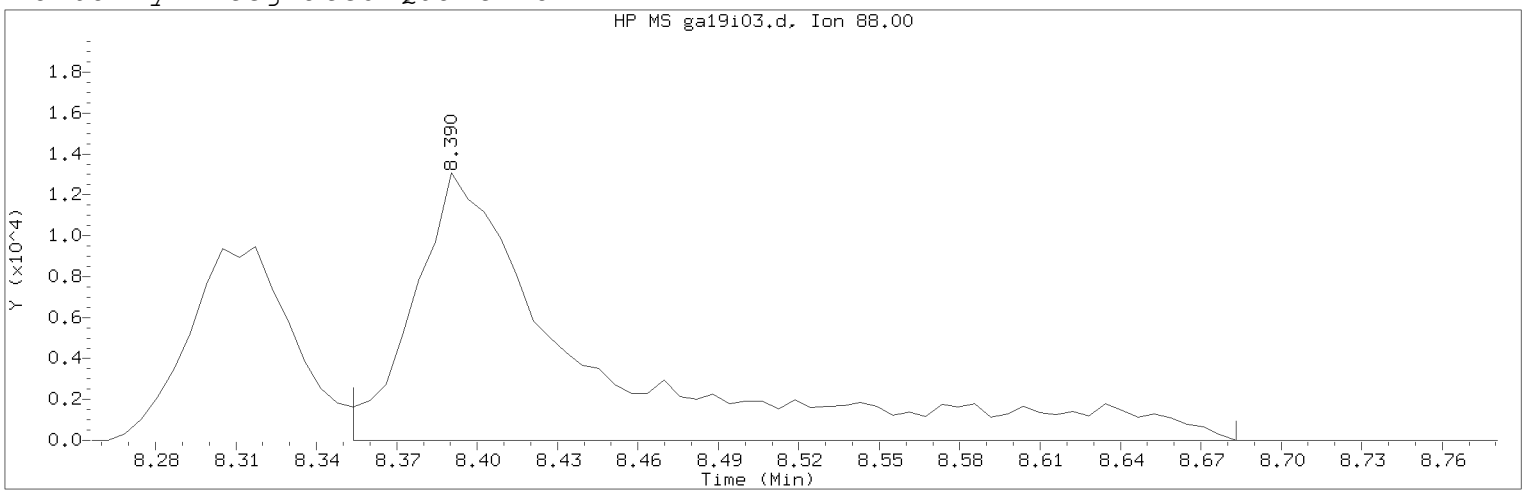
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1026		
Retention Time (minutes)	: 7.842		
Quant Ion	: 56.00		
Area	: 652479		
On-column Amount (ng)	: 538.9205		
Integration start scan	: 1016	Integration stop scan:	1065
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user AP04 mode 2

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

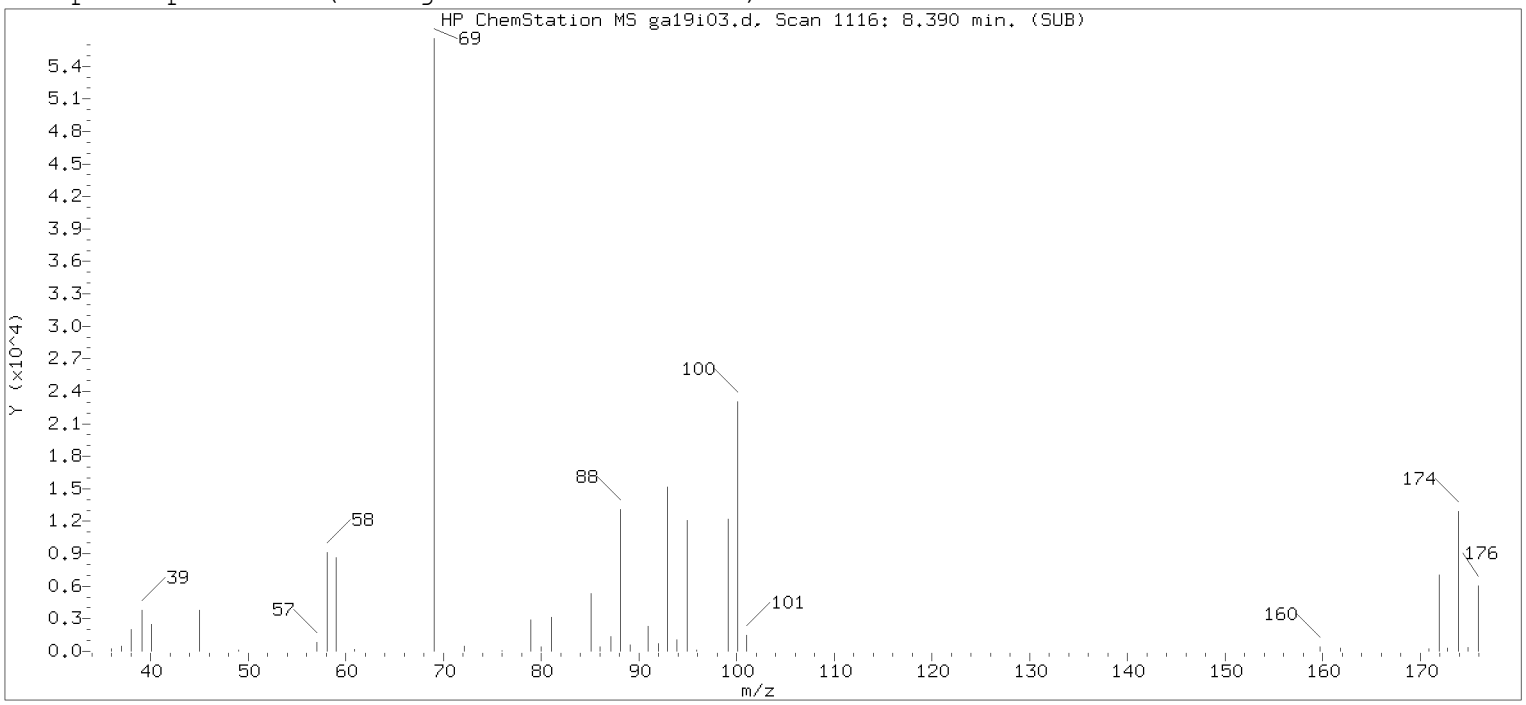
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 60823M
On-Column Amount (ng) : 254.9250
Integration start scan : 1109 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

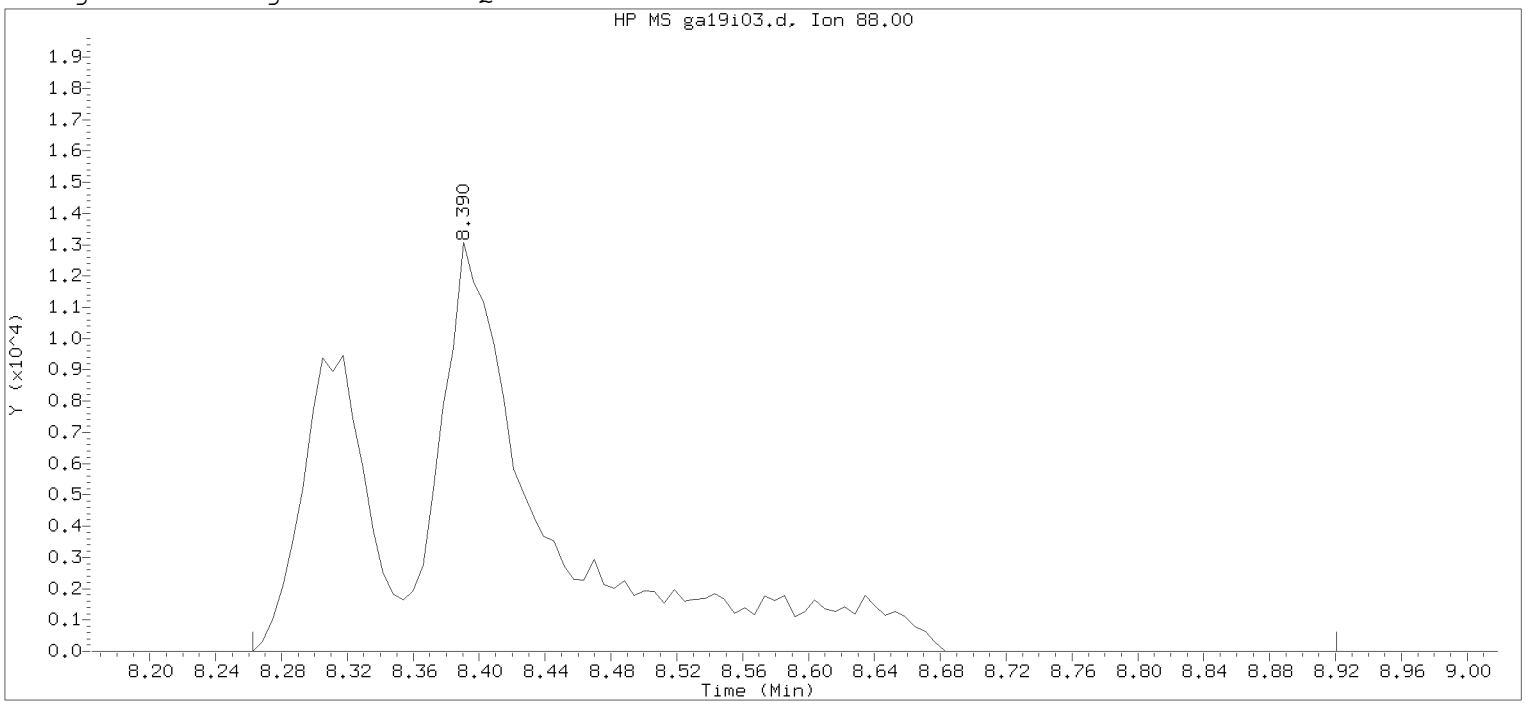
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

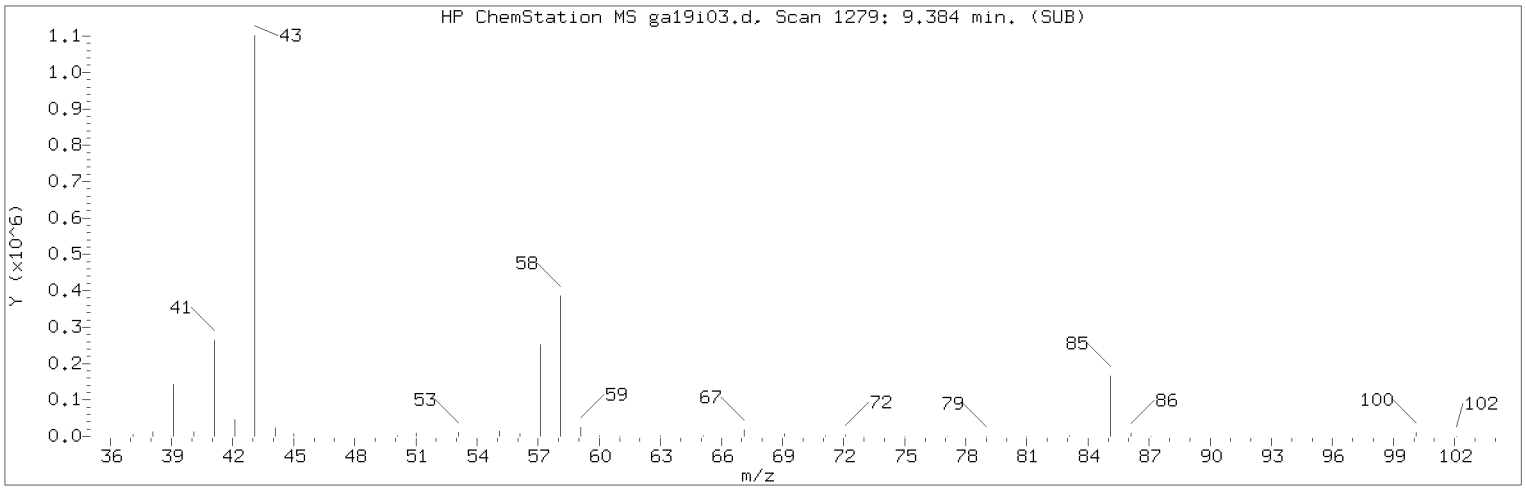
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

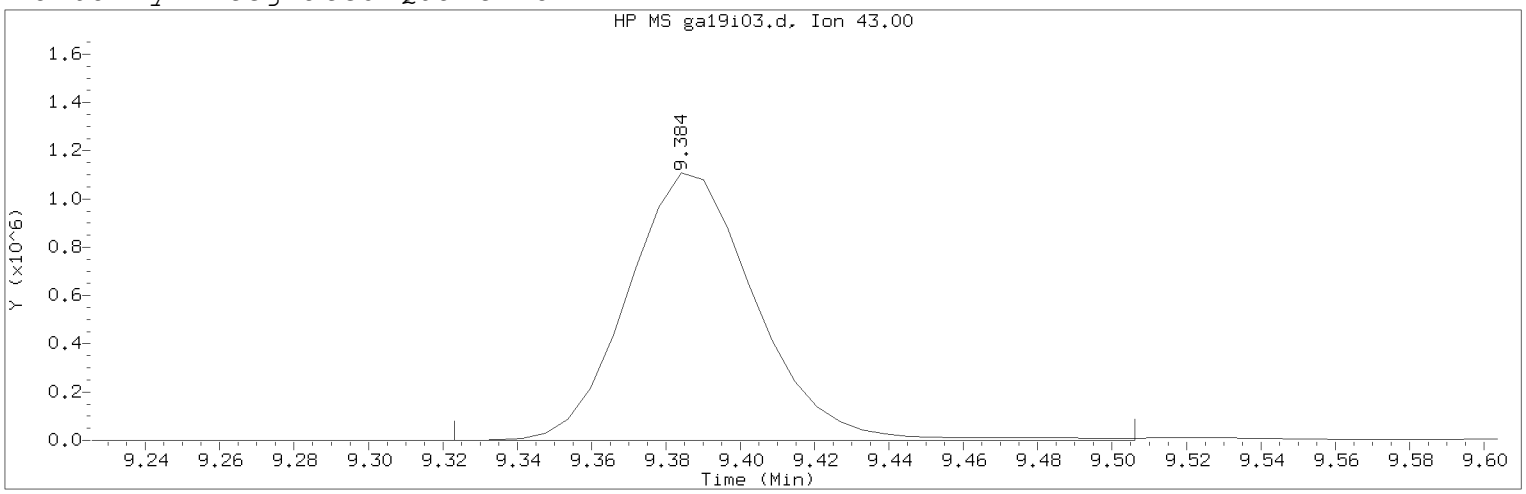
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area : 86101
On-column Amount (ng) : 369.6454
Integration start scan : 1094 Integration stop scan: 1202
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user AF04mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

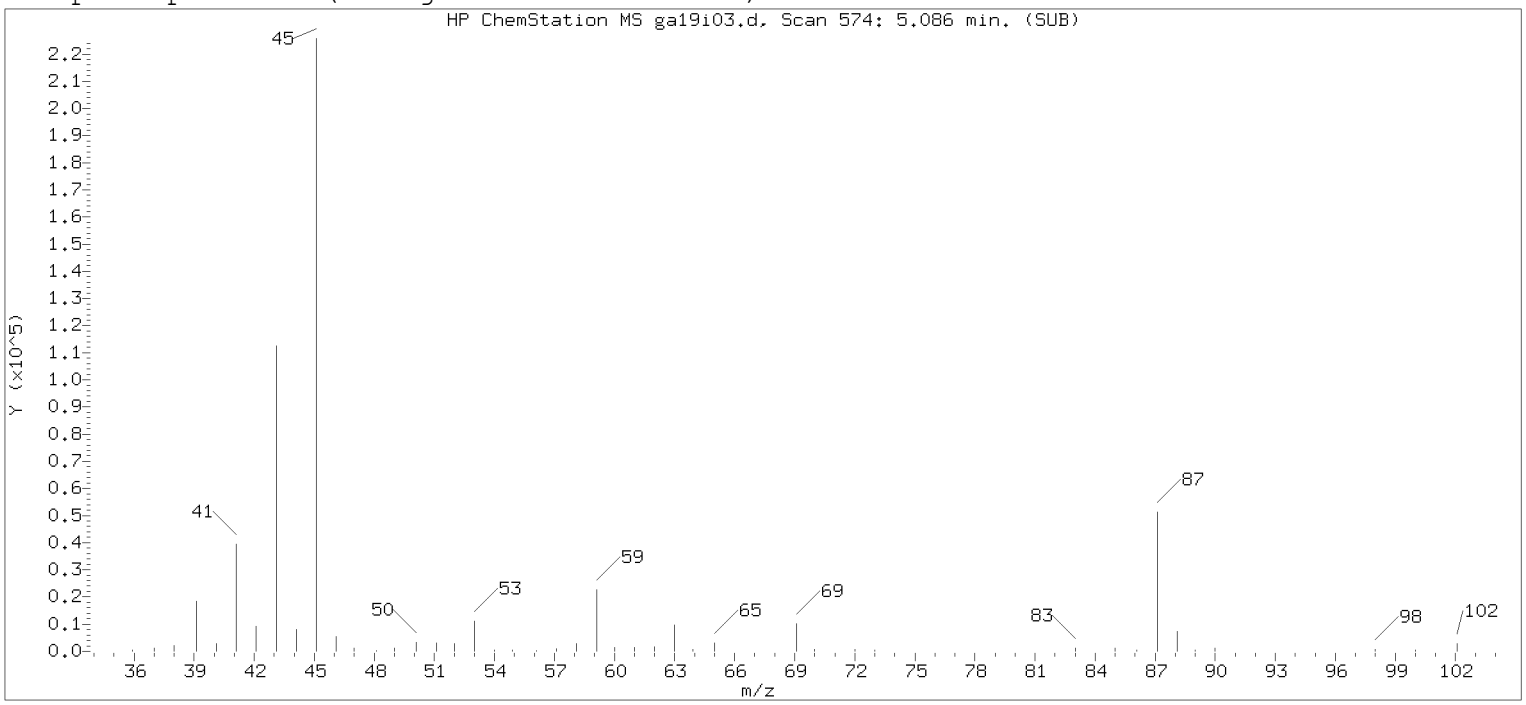
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 2642519M
On-Column Amount (ng) : 51.6398
Integration start scan : 1268 Integration stop scan: 1298
Y at integration start : 236 Y at integration end: 236

Reason for manual integration: improper integration

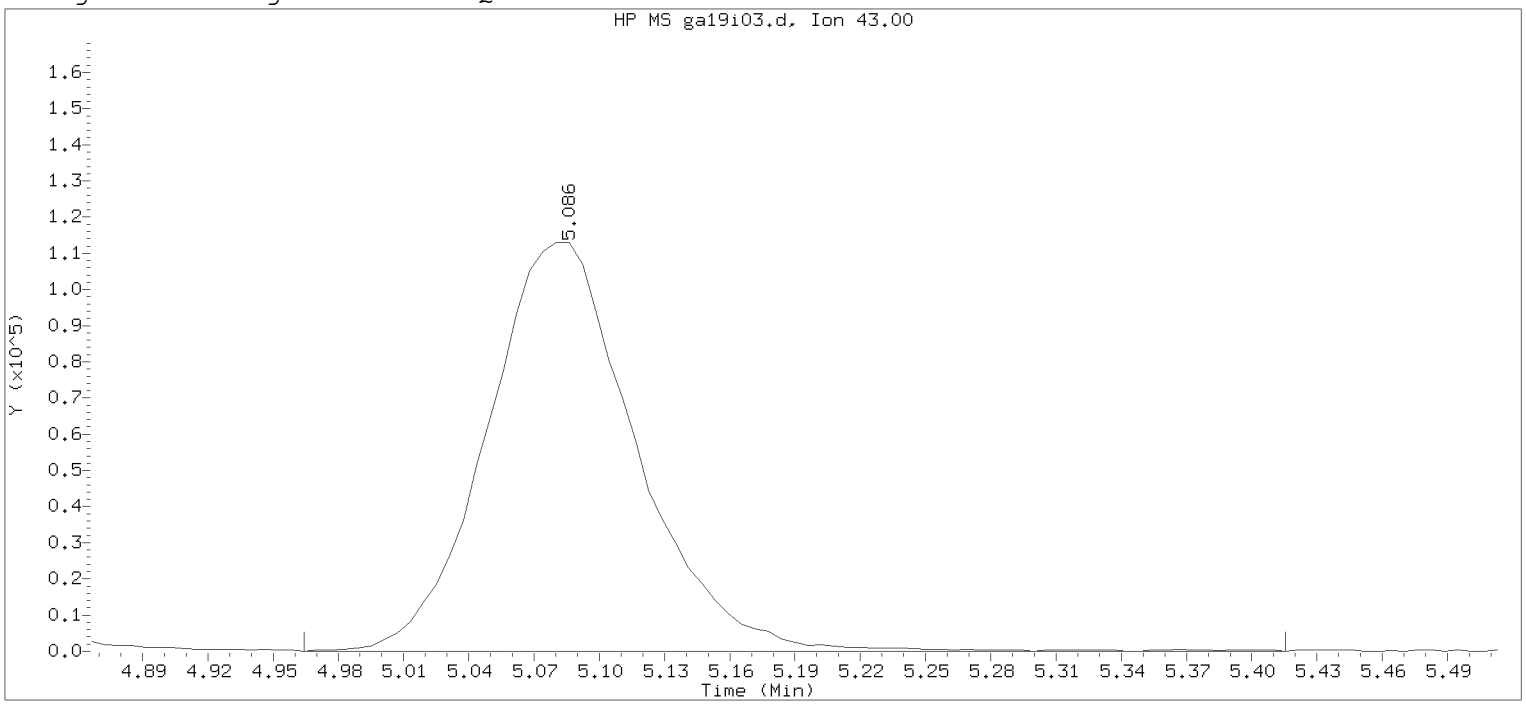
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

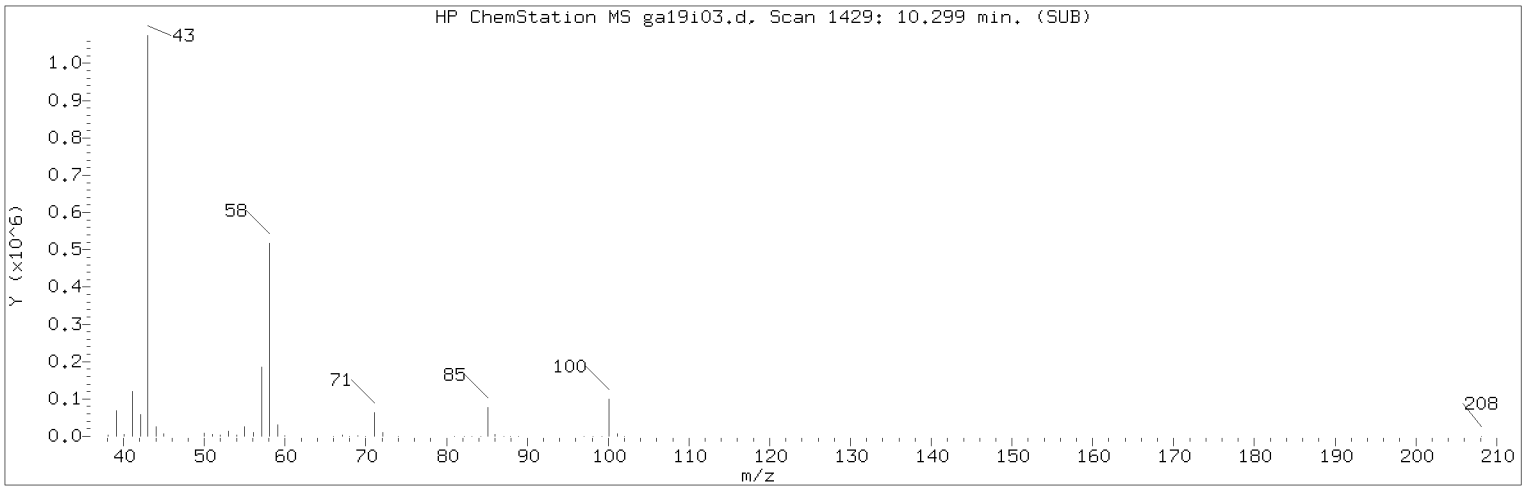
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

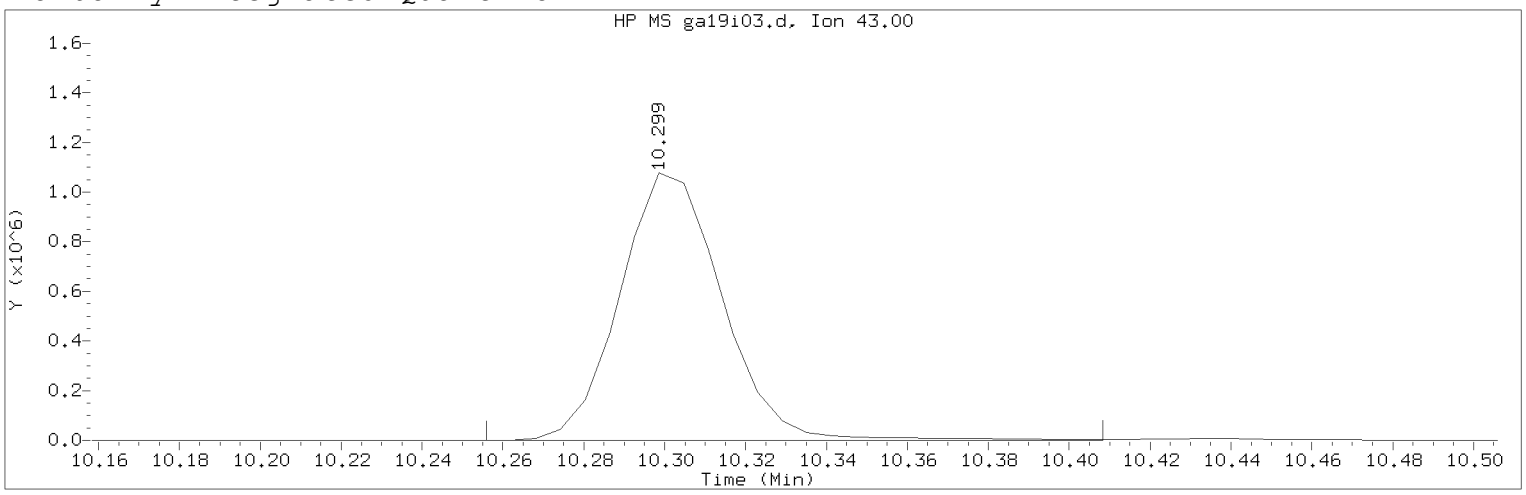
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 574
Retention Time (minutes): 5.086
Quant Ion : 43.00
Area : 538888
On-column Amount (ng) : 56.4469
Integration start scan : 553 Integration stop scan: 627
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

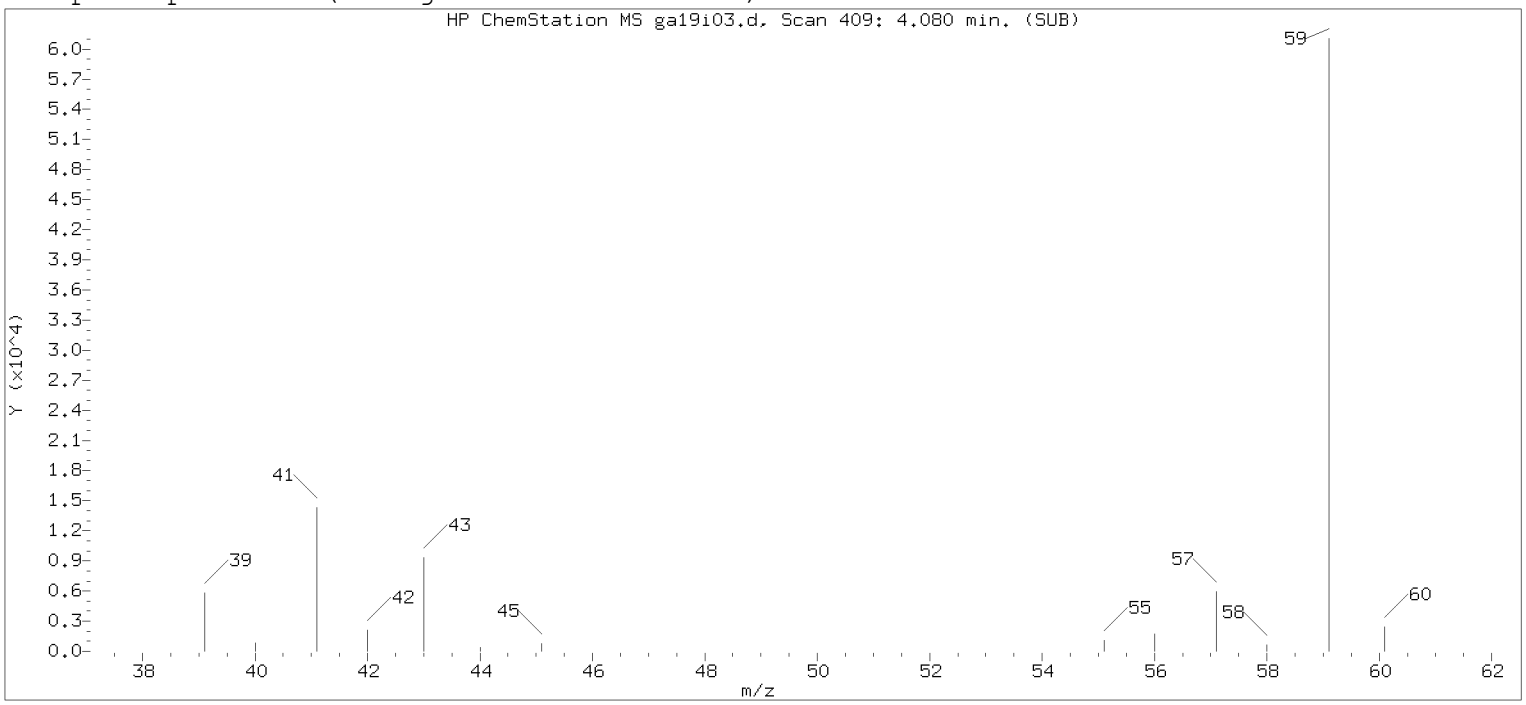
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 1892288M
On-Column Amount (ng) : 52.2355
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 25 Y at integration end: 25

Reason for manual integration: improper integration

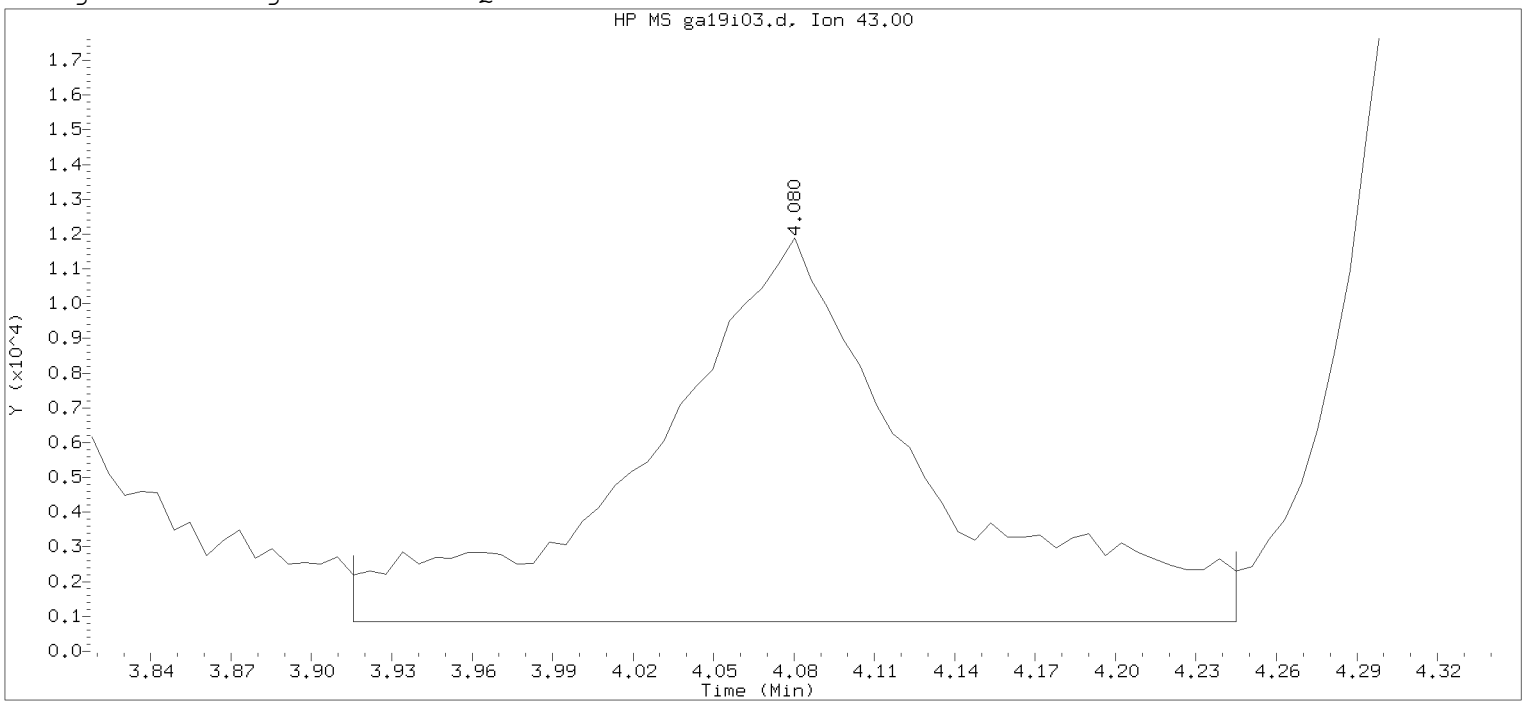
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

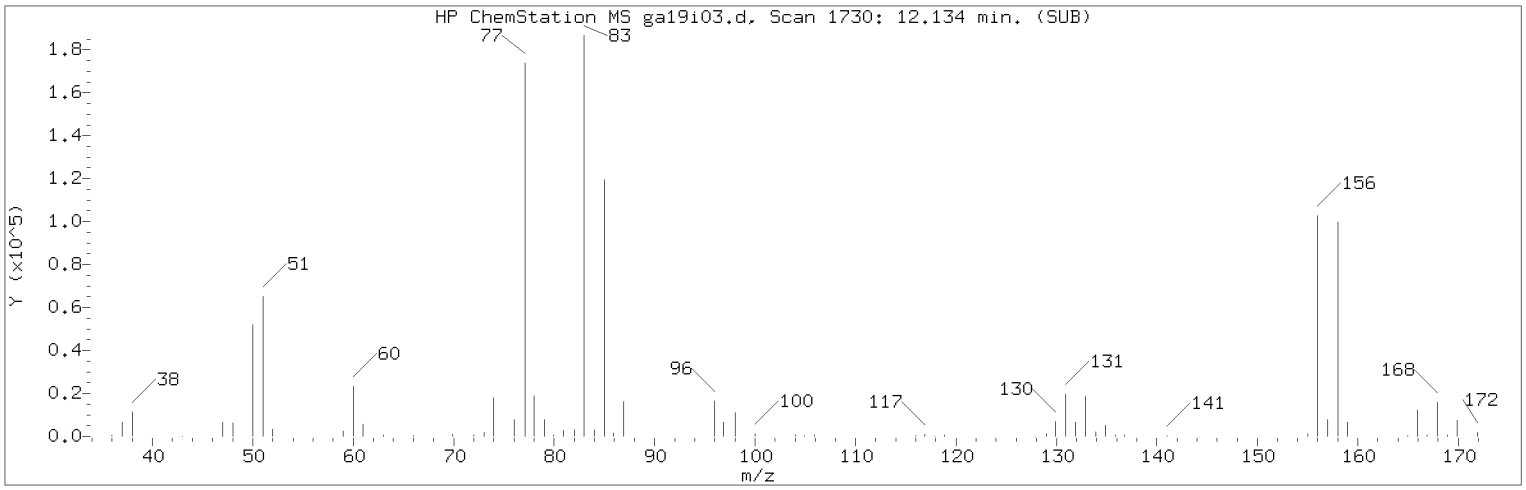
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

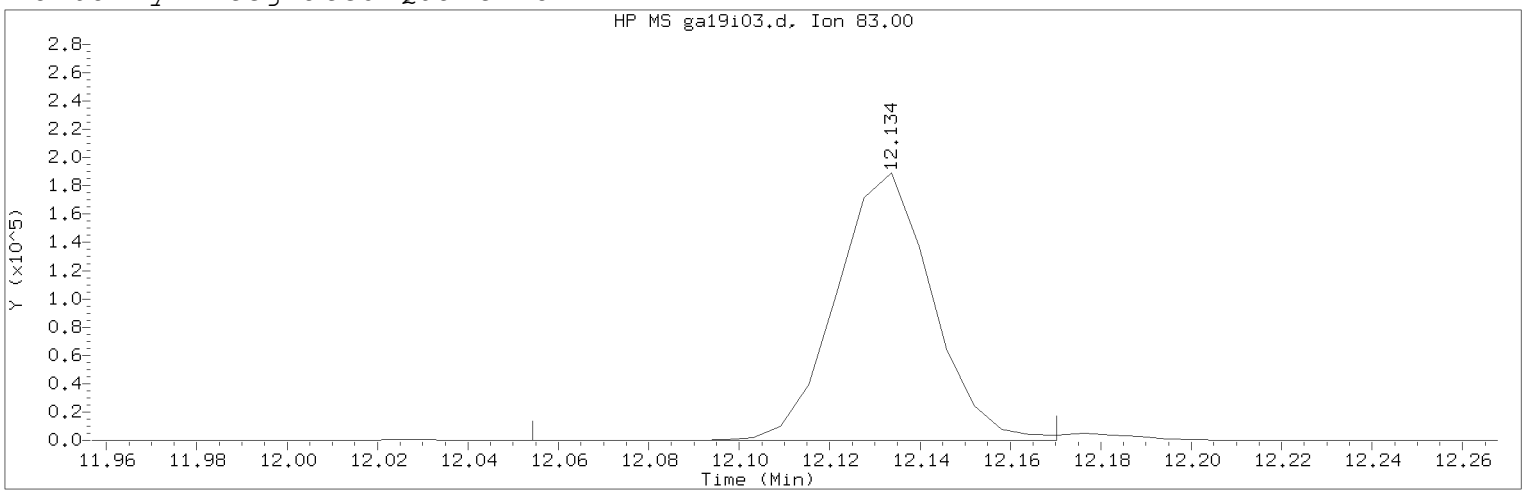
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 409
Retention Time (minutes): 4.080
Quant Ion : 43.00
Area : 78238
On-column Amount (ng) : 59.8710
Integration start scan : 381 Integration stop scan: 435
Y at integration start : 845 Y at integration end: 845

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

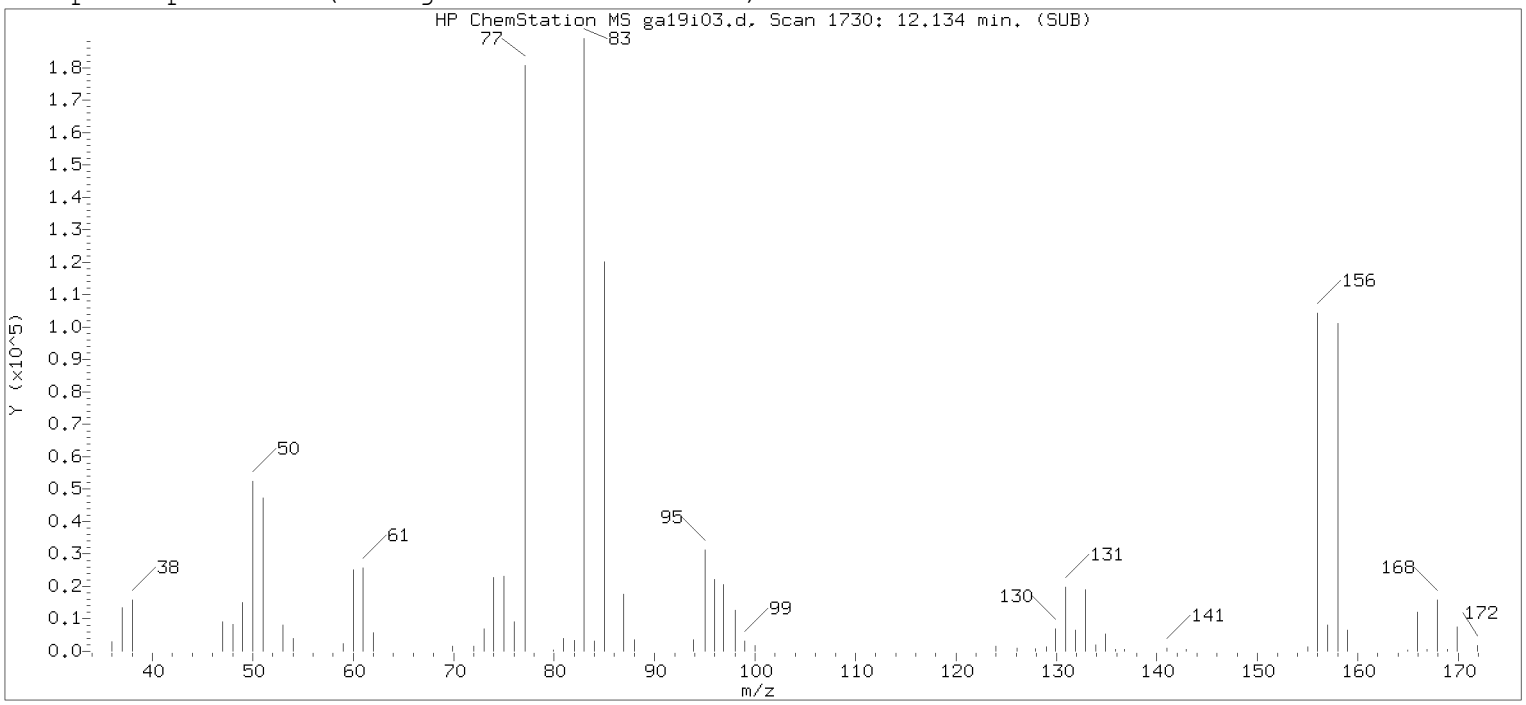
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 276992M
On-Column Amount (ng) : 4.9591
Integration start scan : 1716 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

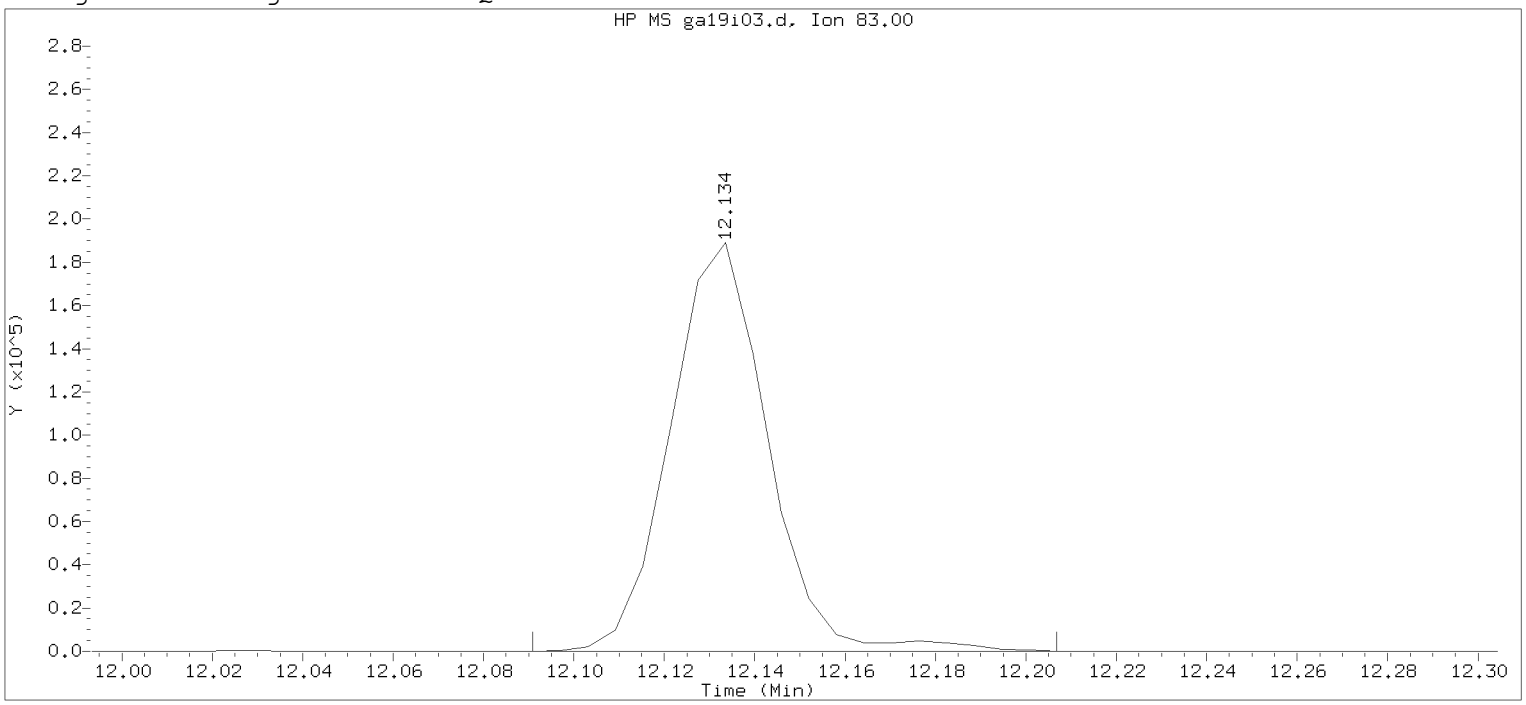
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



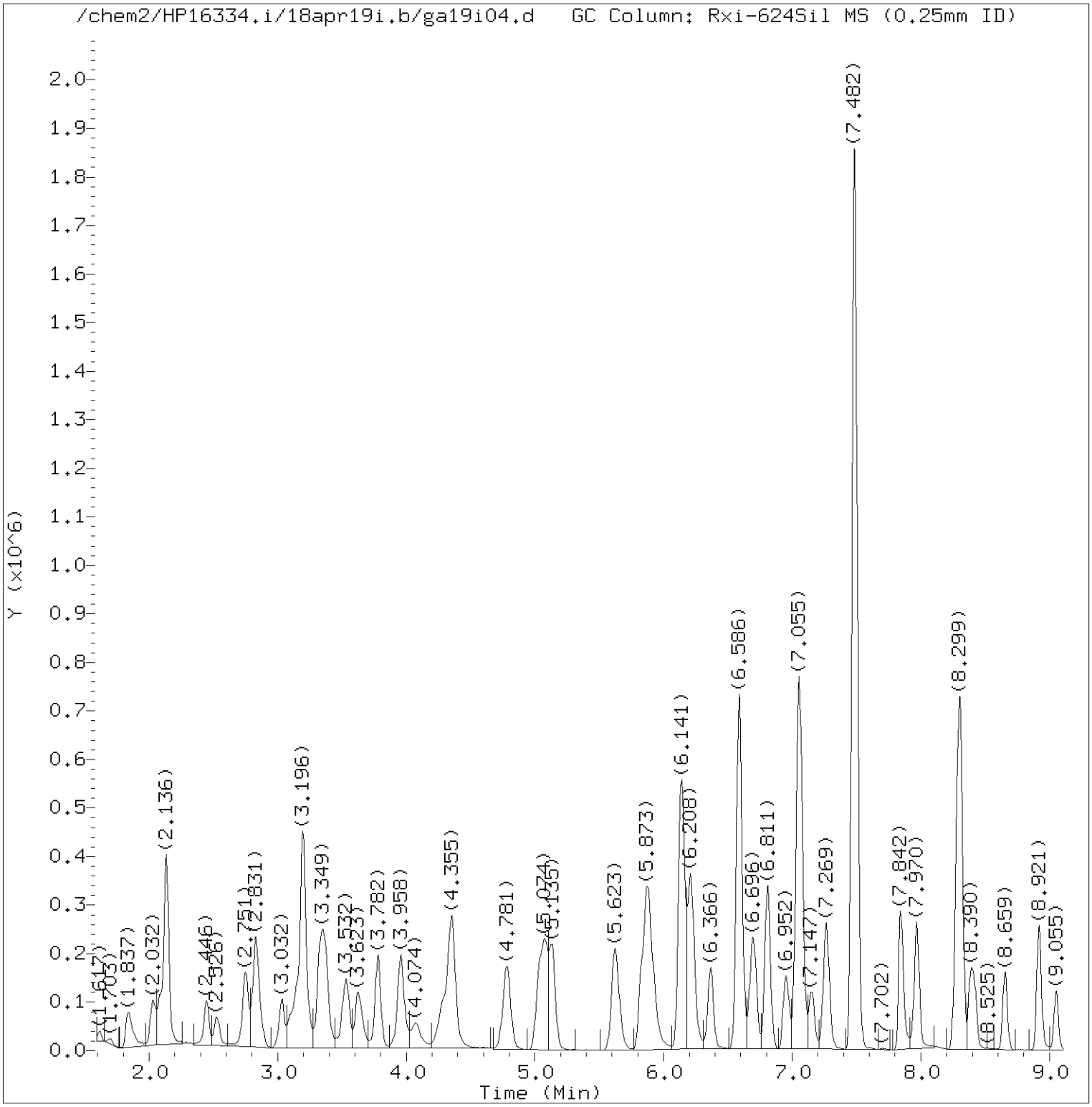
Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 281626
On-column Amount (ng) : 4.9655
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause



Total Ion Chromatogram (TIC)

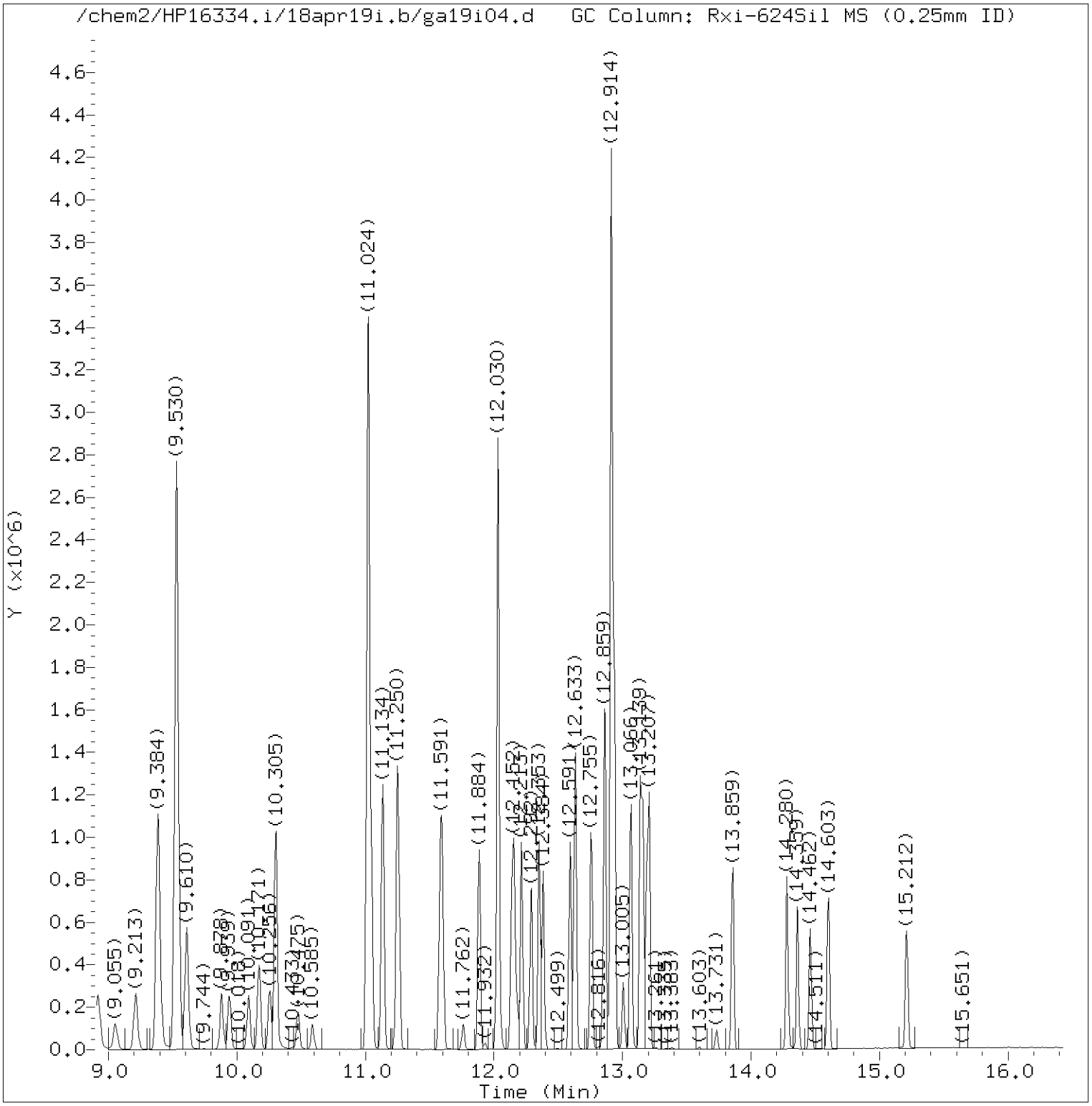
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	163581	1.996
2) Chloromethane	(2)	2.026	50	158007	1.993
5) Vinyl Chloride	(2)	2.136	62	136636	1.978
6) 1,3-Butadiene	(2)	2.136	39	314176M	2.450
7) Bromomethane	(2)	2.446	94	91666	1.994
8) Chloroethane	(2)	2.520	64	77640	2.005
9) Dichlorofluoromethane	(2)	2.751	67	187240	2.029
10) Trichlorofluoromethane	(2)	2.806	101	183283	1.986
11) Ethyl ether	(2)	3.038	59	93001	2.041
12) Freon 123a	(2)	3.123	67	127584	2.011
13) Acrolein	(1)	3.196	56	757463	102.859
15) 1,1-Dichloroethene	(2)	3.330	96	93613	2.095
14) Acetone	(1)	3.355	43	240015	21.338
16) Freon 113	(2)	3.373	101	100723	1.966
17) Methyl Iodide	(2)	3.519	142	169723	1.955
18) Carbon Disulfide	(2)	3.629	76	335356	1.987
21) Methyl Acetate	(1)	3.757	43	65877M	2.008
22) Allyl Chloride	(2)	3.782	41	206011	2.012
26)*t-Butyl Alcohol-d10	(1)	3.946	65	210083	50.000
23) Methylene Chloride	(2)	3.958	84	111270	2.058
28) t-Butyl Alcohol	(1)	4.074	59	160328	42.322
29) Acrylonitrile	(1)	4.269	53	138067	10.172
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	310233	1.980
31) trans-1,2-Dichloroethene	(2)	4.361	96	100679	1.976
32) n-Hexane	(2)	4.781	57	177664	1.993
33) 1,1-Dichloroethane	(2)	5.025	63	211913	2.010
34) di-Isopropyl Ether	(2)	5.080	45	430353	1.987
35) 2-Chloro-1,3-Butadiene	(2)	5.135	53	190468	1.977
37) Ethyl t-butyl ether	(2)	5.623	59	376848	1.967
38) 2-Butanone	(1)	5.830	43	425386	20.623
39) cis-1,2-Dichloroethene	(2)	5.873	96	115223	1.968
41) 2,2-Dichloropropane	(2)	5.891	77	171455	1.947
42) Propionitrile	(1)	5.928	54	203865	40.105
40) 1,2-Dichloroethene (Total)	(2)		96	215902	3.944
45) Methacrylonitrile	(1)	6.141	67	332133	20.294
48) Tetrahydrofuran	(1)	6.208	71	100358	20.325
47) Bromochloromethane	(2)	6.214	128	54202	1.979
49) Chloroform	(2)	6.366	83	199020	1.970

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	541432	9.992
50)$Dibromofluoromethane	(2)	6.586	111	555118	9.977
51) 1,1,1-Trichloroethane	(2)	6.592	97	170685	1.978
52) Cyclohexane	(2)	6.702	56	205295	1.976
52) Cyclohexane	(2)	6.702	84	158744	1.993
52) Cyclohexane	(2)	6.702	69	59651	1.977
54) Carbon Tetrachloride	(2)	6.805	117	139299	1.934
55) 1,1-Dichloropropene	(2)	6.811	75	158079	1.984
56) Isobutyl Alcohol	(1)	6.952	41	151913	99.896
57)$1,2-Dichloroethane-d4	(2)	7.049	102	115674	10.119
57)$1,2-Dichloroethane-d4	(2)	7.049	65	648945	10.081
57)$1,2-Dichloroethane-d4	(2)	7.049	104	72636	10.246
58) Benzene	(2)	7.074	78	431902	1.977
59) 1,2-Dichloroethane	(2)	7.147	62	151301	2.015
60) t-Amyl methyl ether	(2)	7.263	73	318225	1.947
63)*Fluorobenzene	(2)	7.482	96	2150008	10.000
62) n-Heptane	(2)	7.500	43	210974	1.990
65) n-Butanol	(1)	7.842	56	264019M	201.480
67) Trichloroethene	(2)	7.964	95	115687	1.986
69) Methylcyclohexane	(2)	8.281	83	201047	1.981
70) 1,2-Dichloropropane	(2)	8.305	63	118258	1.929
71) Methyl Methacrylate	(1)	8.384	69	63893	2.000
72) 1,4-Dioxane	(1)	8.397	88	24973M	104.182
73) Dibromomethane	(2)	8.415	93	57589	1.965
74) Bromodichloromethane	(2)	8.653	83	140423	1.890
76) 2-Nitropropane	(1)	8.921	41	215000	18.967
80) cis-1,3-Dichloropropene	(2)	9.213	75	175884	1.884
81) 4-Methyl-2-Pentanone	(1)	9.384	43	1049709M	20.525
82)$Toluene-d8	(3)	9.530	98	2186204	10.063
82)$Toluene-d8	(3)	9.530	100	1387666	10.020
83) Toluene	(3)	9.610	92	270241	1.966
84) trans-1,3-Dichloropropene	(3)	9.878	75	147580	1.863
86) Ethyl Methacrylate	(3)	9.939	69	134335	1.915
88) 1,1,2-Trichloroethane	(3)	10.091	97	82933	1.989
85) 1,3-Dichloropropene (total)	(3)		75	323464	3.747
89) Tetrachloroethene	(3)	10.177	166	126614	1.984
90) 1,3-Dichloropropane	(3)	10.256	76	150897	1.993
91) 2-Hexanone	(1)	10.305	43	742959M	20.522

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	91000	1.826
95) 1,2-Dibromoethane	(3)	10.591	107	78947	1.950
97)*Chlorobenzene-d5	(3)	11.018	117	1622110	10.000
98) Chlorobenzene	(3)	11.048	112	312851	1.987
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	105207	1.889
100) Ethylbenzene	(3)	11.134	91	540774	1.982
101) m+p-Xylene	(3)	11.250	106	415246	3.936
104) o-Xylene	(3)	11.585	106	203789	1.915
106) Styrene	(3)	11.597	104	340627	1.913
105) Xylene (Total)	(3)		106	619035	5.851
107) Bromoform	(3)	11.762	173	50807	1.720
108) Isopropylbenzene	(3)	11.884	105	540353	1.959
111)$4-Bromofluorobenzene	(3)	12.030	95	827180	9.961
111)$4-Bromofluorobenzene	(3)	12.030	174	715029	10.030
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	106873	1.929
114) Bromobenzene	(4)	12.146	156	138032	1.919
116) 1,2,3-Trichloropropane	(4)	12.182	110	30126	1.974
117) n-Propylbenzene	(4)	12.213	91	652319	1.977
119) 2-Chlorotoluene	(4)	12.292	126	127143	1.935
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	464651	1.940
122) 4-Chlorotoluene	(4)	12.384	126	137165	1.972
125) tert-Butylbenzene	(4)	12.591	134	97524	1.955
126) Pentachloroethane	(4)	12.627	167	75904	1.779
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	480980	1.947
128) sec-Butylbenzene	(4)	12.755	105	593165	1.938
131) 1,3-Dichlorobenzene	(4)	12.859	146	276108	1.919
132) p-Isopropyltoluene	(4)	12.865	119	515525	1.924
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	922950	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	281559	1.938
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	211959	1.928
136) Benzyl Chloride	(4)	13.005	126	38098	1.757
138) n-Butylbenzene	(4)	13.158	92	276070	1.935
139) 1,2-Dichlorobenzene	(4)	13.188	146	260453	1.921
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	15023	1.849
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	231114	1.923
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	214386	1.917
146) Hexachlorobutadiene	(4)	14.365	225	112176	1.939
147) Naphthalene	(4)	14.462	128	366089	1.946

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

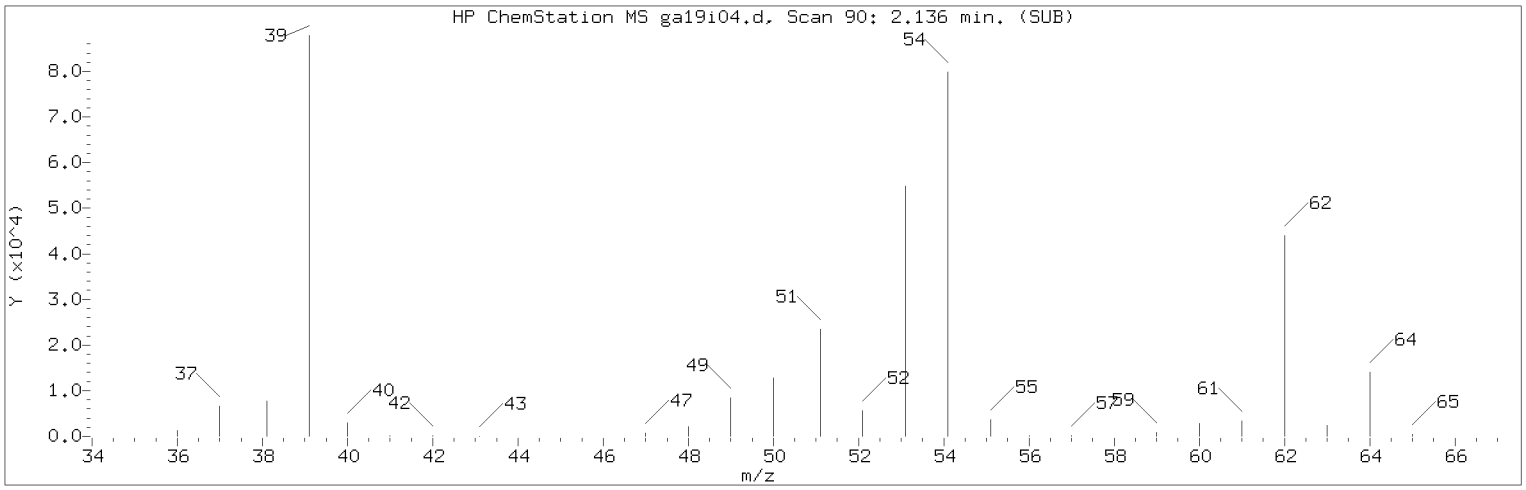
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

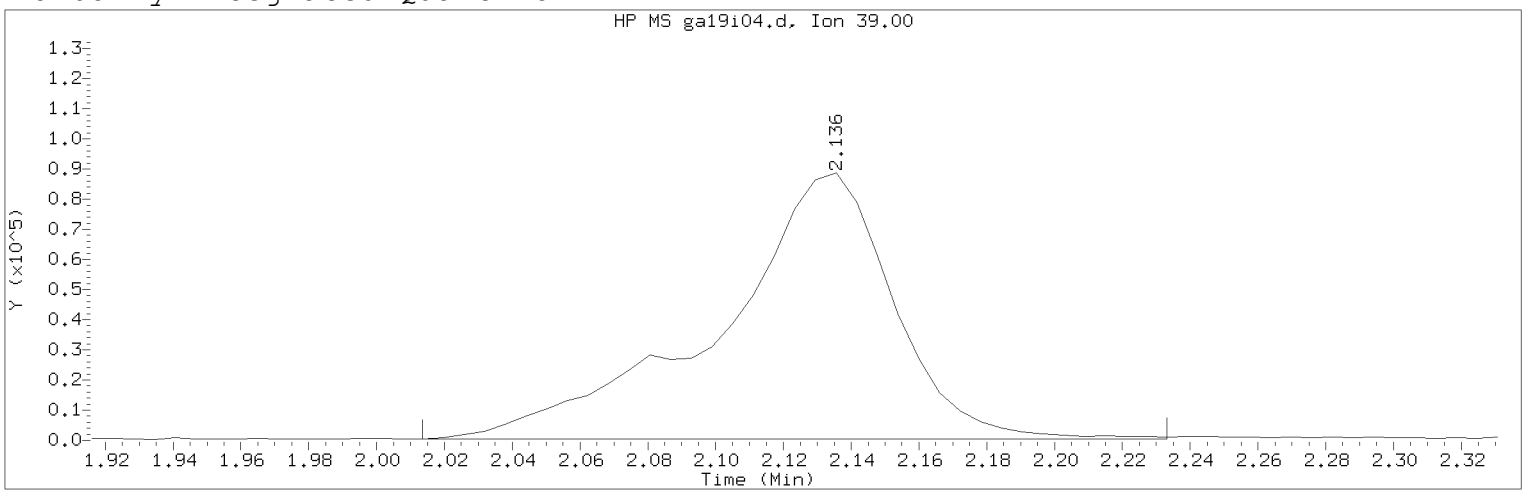
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	186318	1.945

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

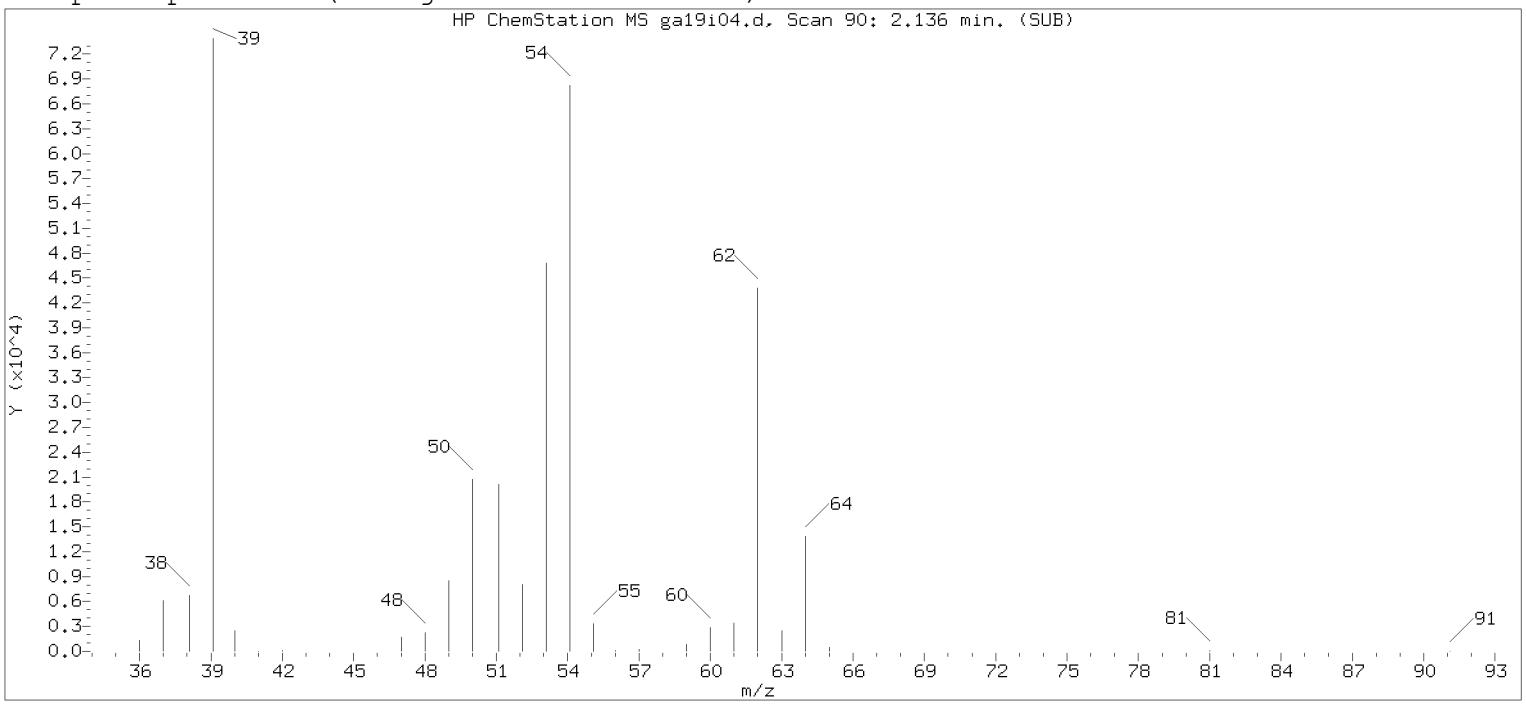
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 314176M
On-Column Amount (ng) : 2.4501
Integration start scan : 69 Integration stop scan: 105
Y at integration start : 354 Y at integration end: 354

Reason for manual integration: improper integration

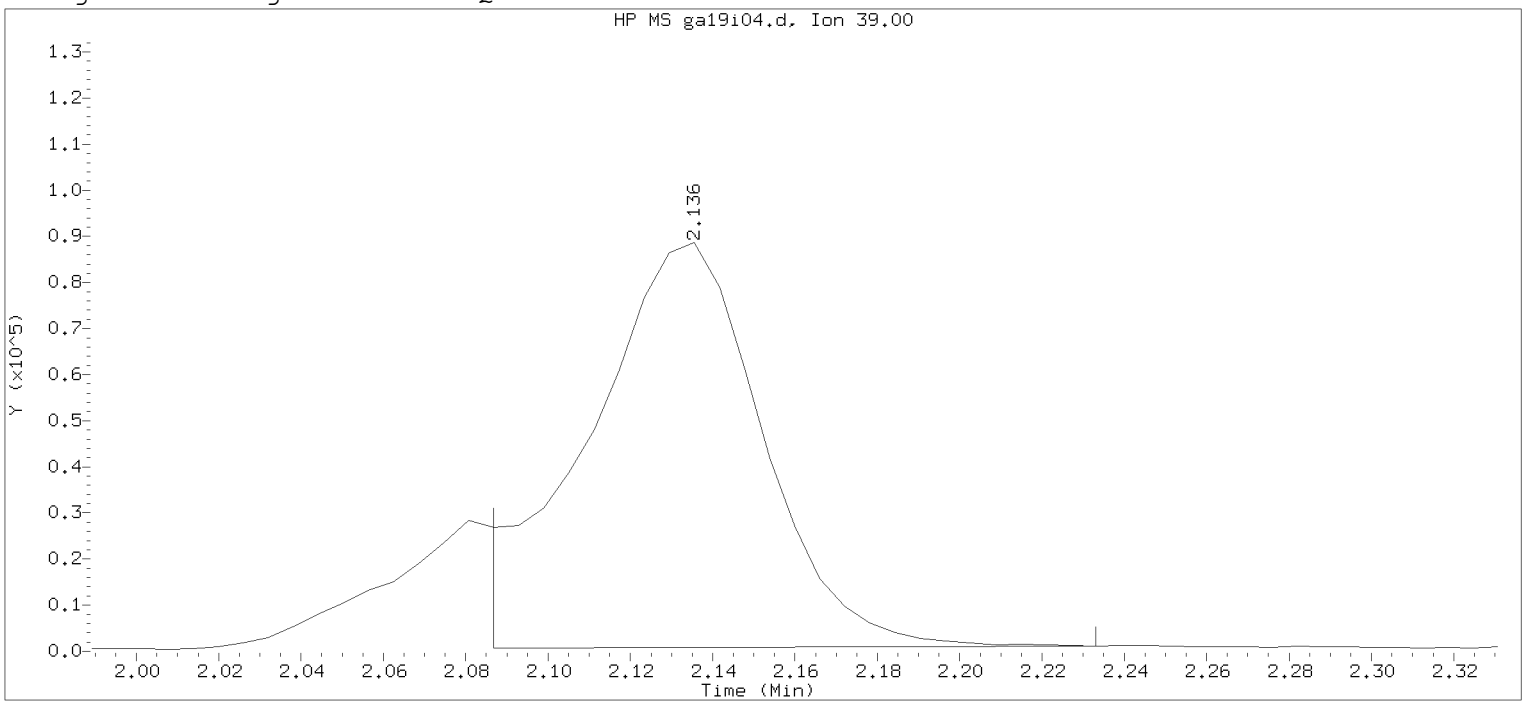
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

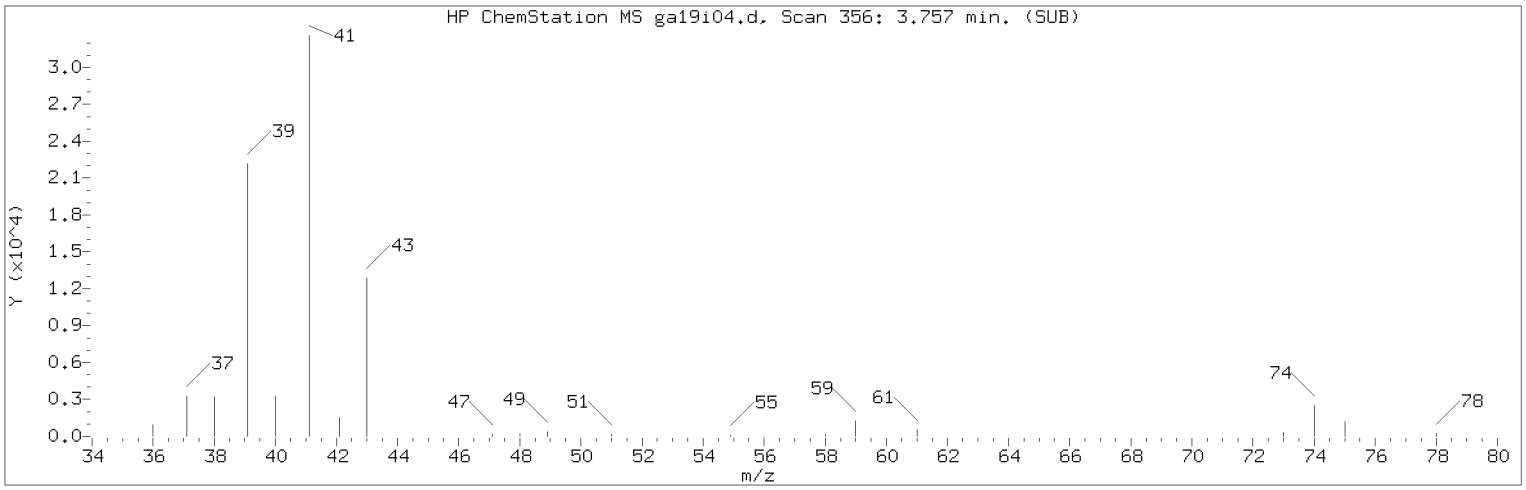
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

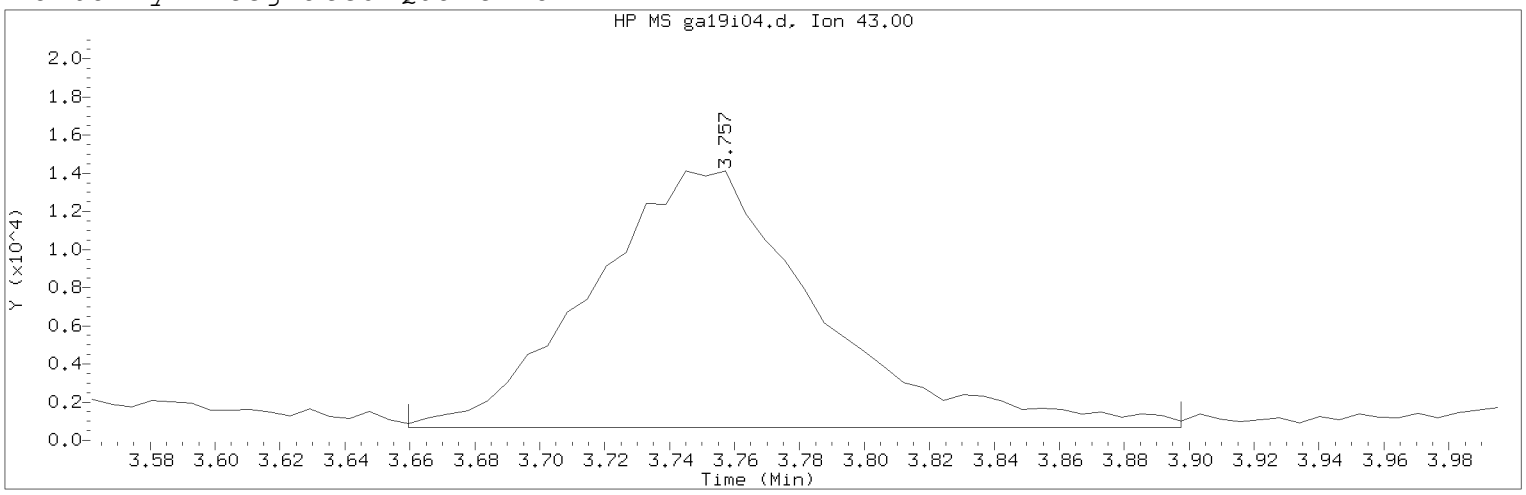
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 258868
On-column Amount (ng) : 2.1991
Integration start scan : 81 Integration stop scan: 105
Y at integration start : 656 Y at integration end: 1116

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

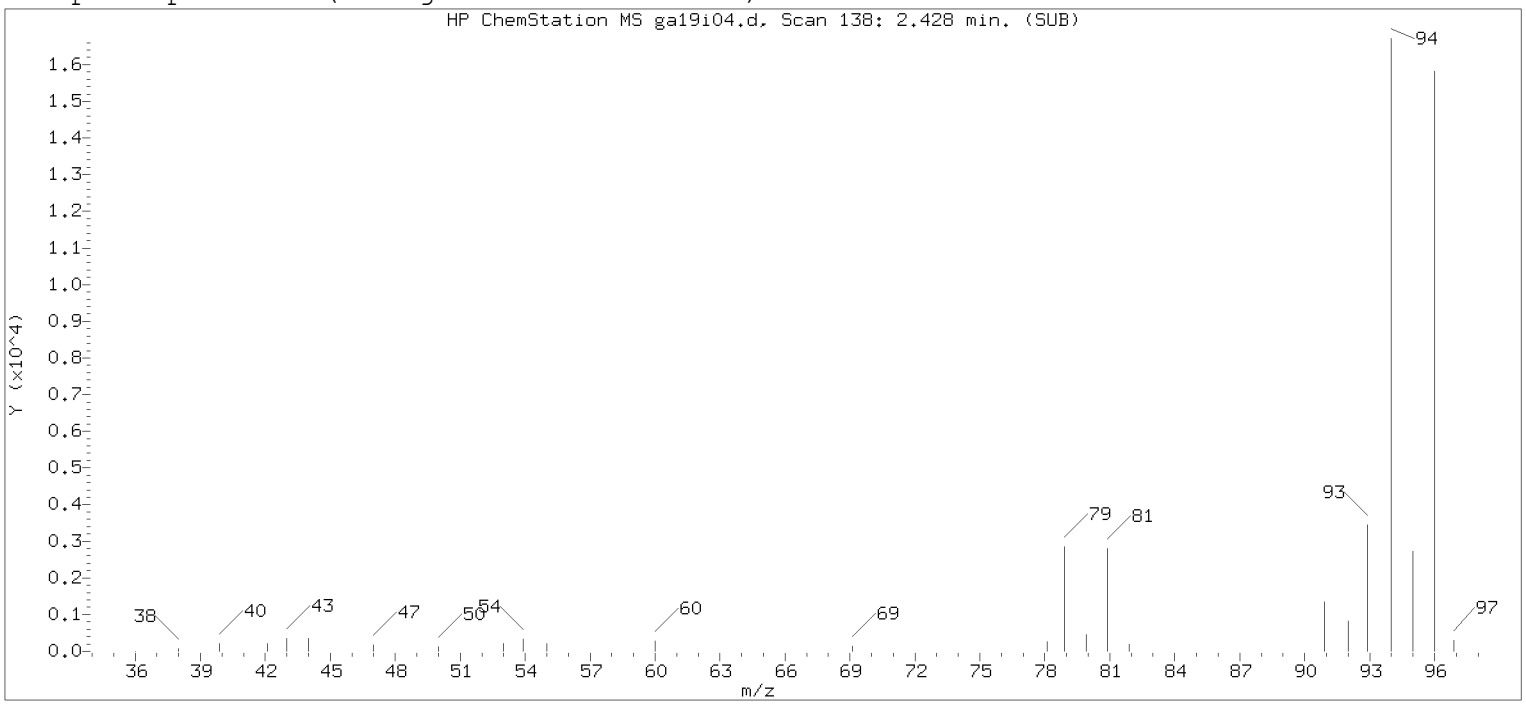
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 356
Retention Time (minutes): 3.757
Quant Ion : 43.00
Area (flag) : 65877M
On-Column Amount (ng) : 2.0084
Integration start scan : 339 Integration stop scan: 378
Y at integration start : 667 Y at integration end: 667

Reason for manual integration: improper integration

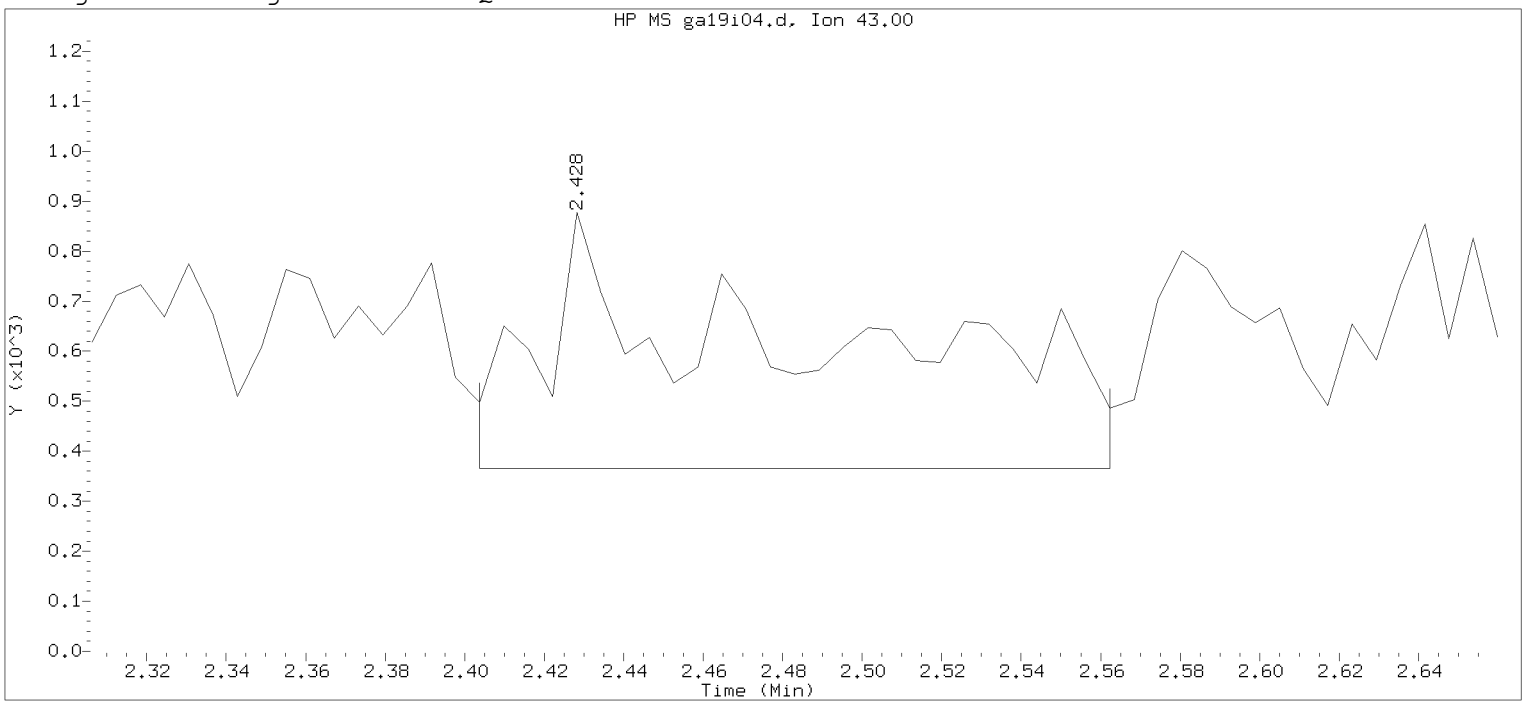
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

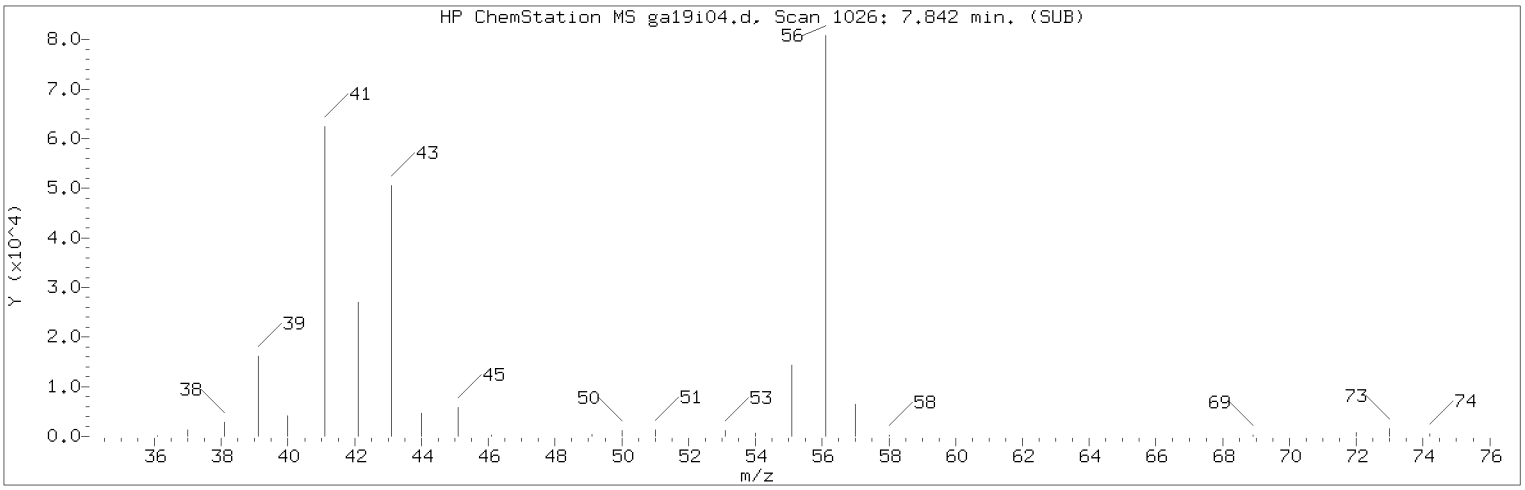
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

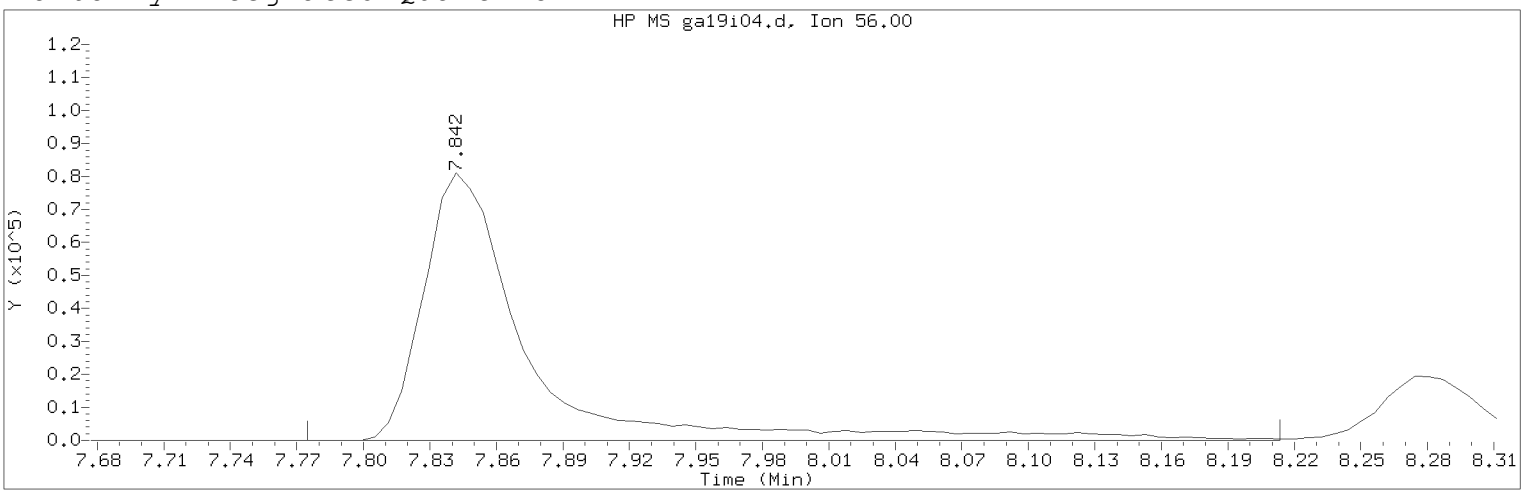
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 138
Retention Time (minutes): 2.428
Quant Ion : 43.00
Area : 2402
On-column Amount (ng) : 5.0141
Integration start scan : 133 Integration stop scan: 159
Y at integration start : 366 Y at integration end: 366

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

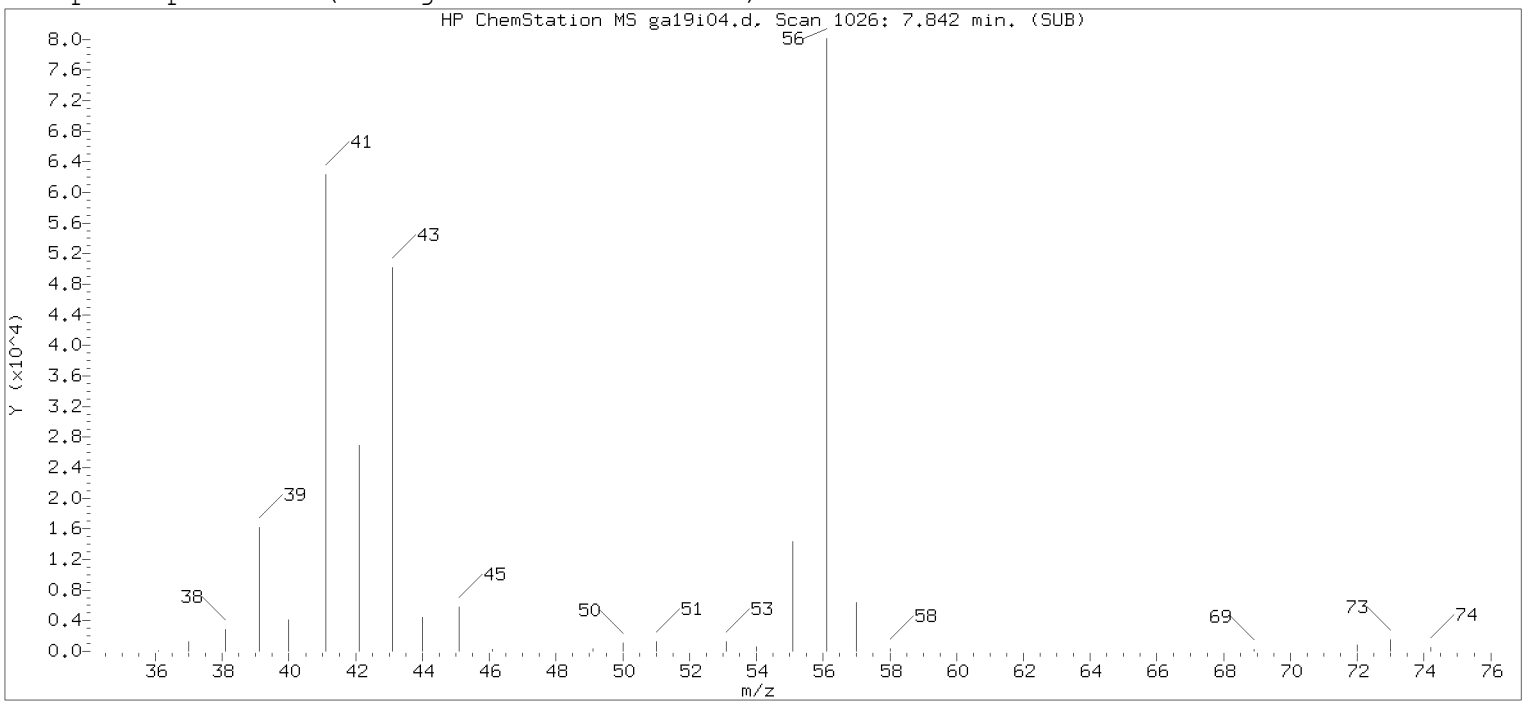
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1026
Retention Time (minutes): 7.842
Quant Ion : 56.00
Area (flag) : 264019M
On-Column Amount (ng) : 201.4799
Integration start scan : 1014 Integration stop scan: 1086
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

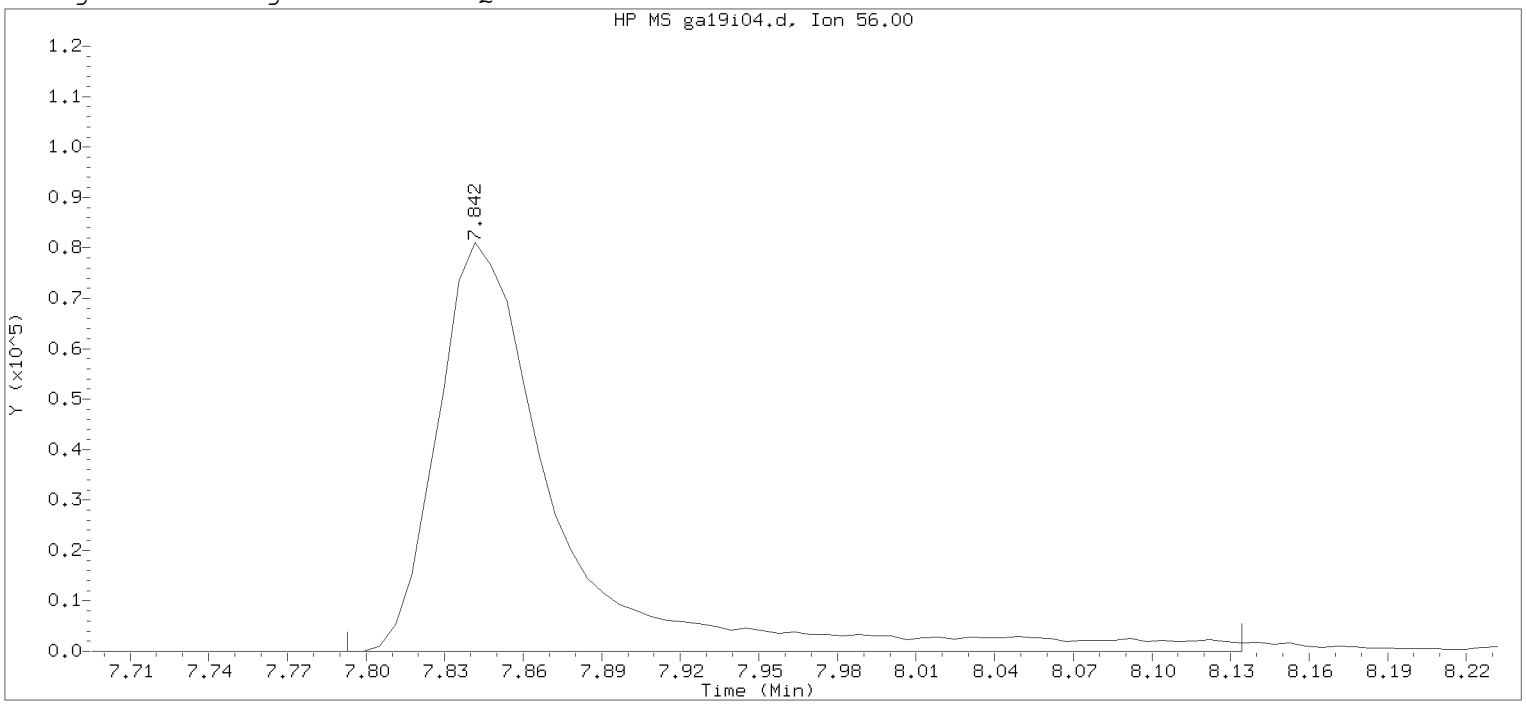
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

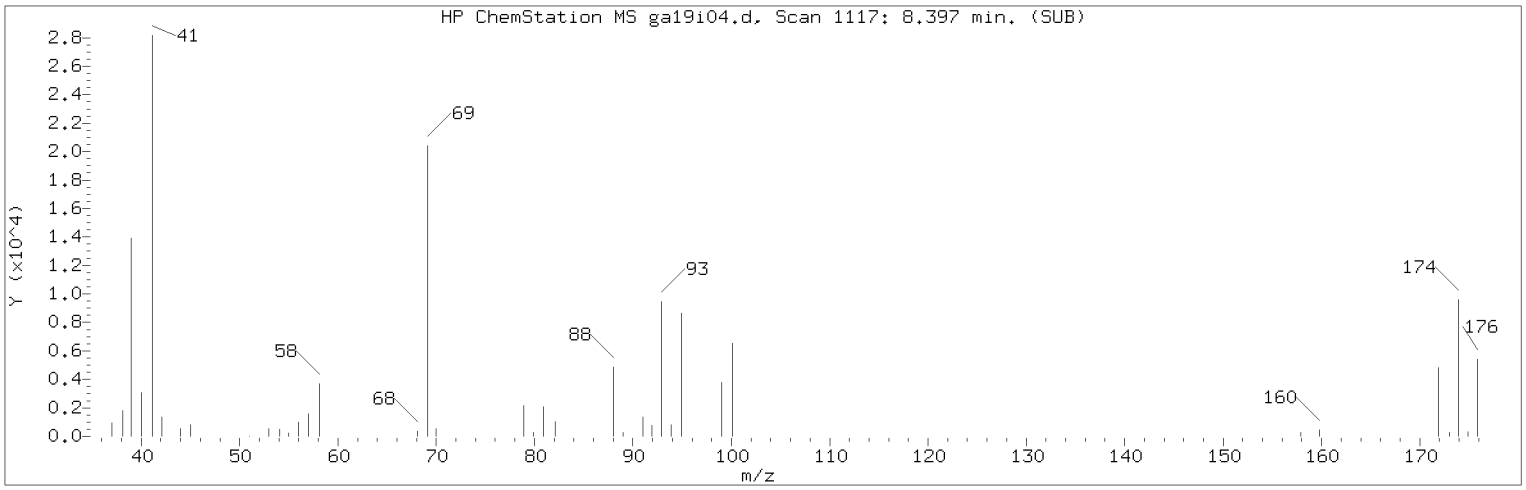
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

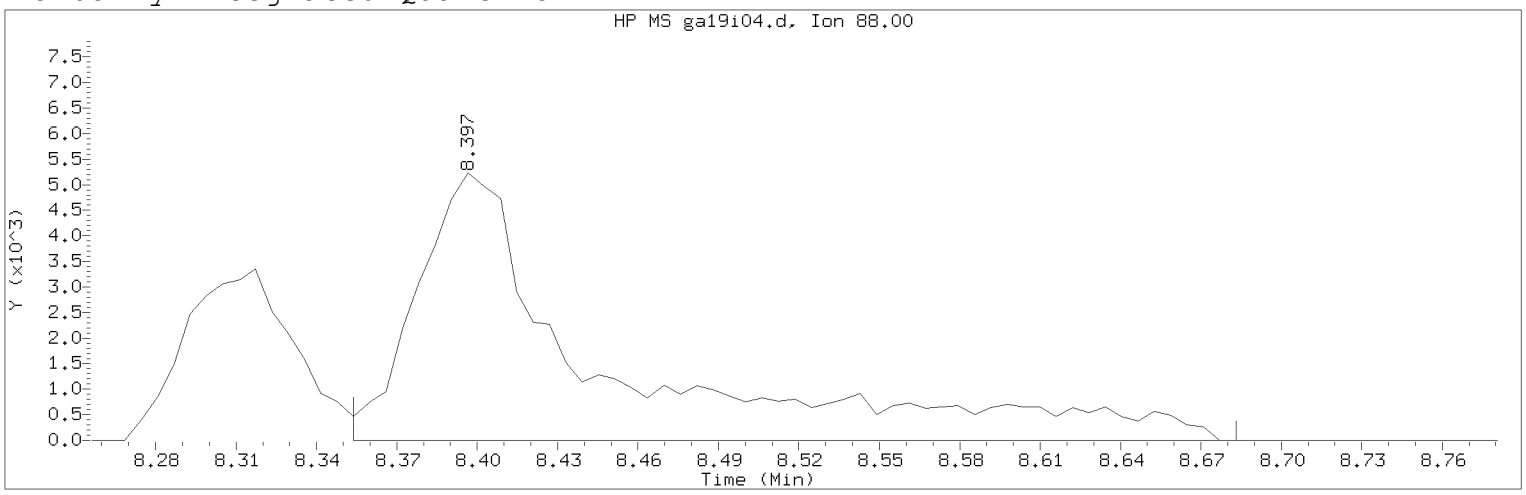
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1026		
Retention Time (minutes)	: 7.842		
Quant Ion	: 56.00		
Area	: 259385		
On-column Amount (ng)	: 188.7406		
Integration start scan	: 1017	Integration stop scan:	1073
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

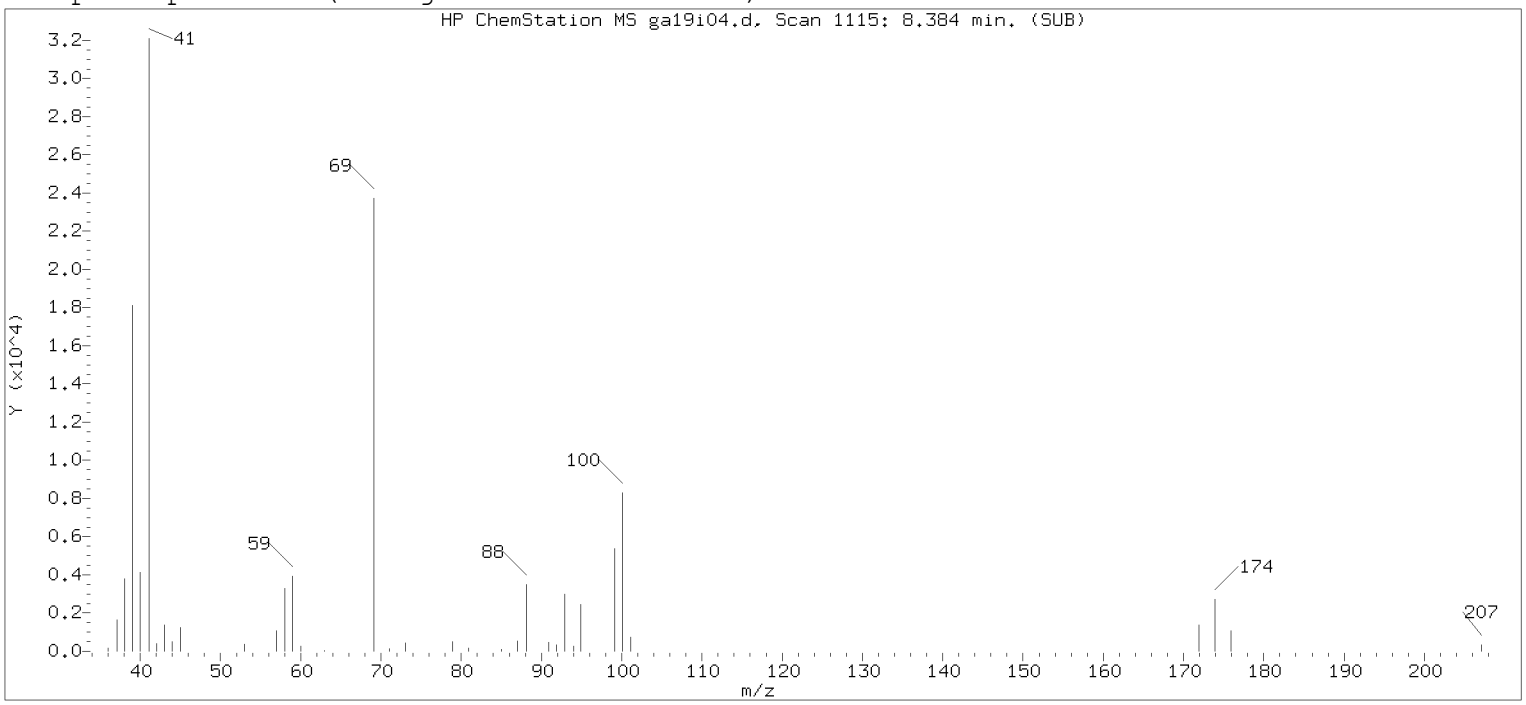
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1117
Retention Time (minutes): 8.397
Quant Ion : 88.00
Area (flag) : 24973M
On-Column Amount (ng) : 104.1824
Integration start scan : 1109 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

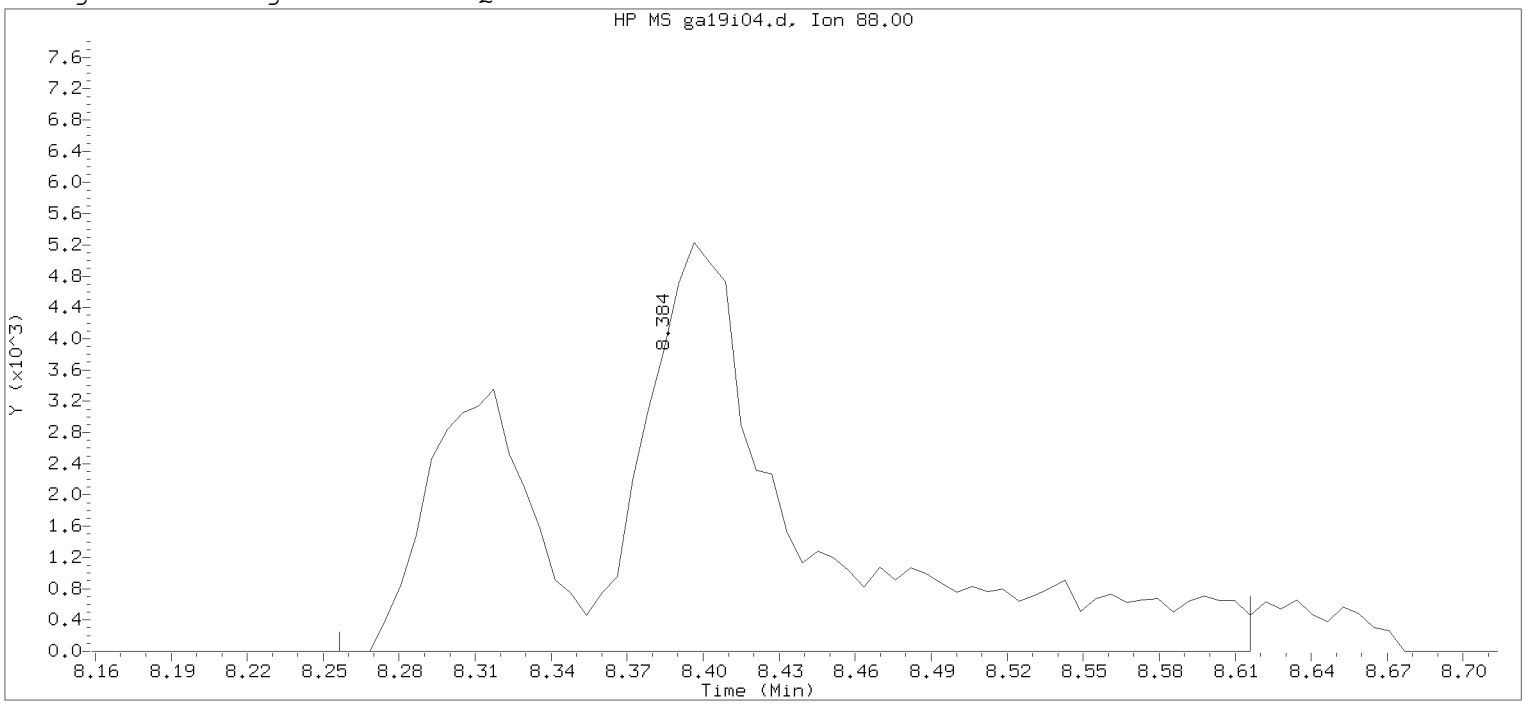
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1115		
Retention Time (minutes)	: 8.384		
Quant Ion	: 88.00		
Area	: 32625		
On-column Amount (ng)	: 115.0465		
Integration start scan	: 1093	Integration stop scan:	1152
Y at integration start	: 0	Y at integration end:	0

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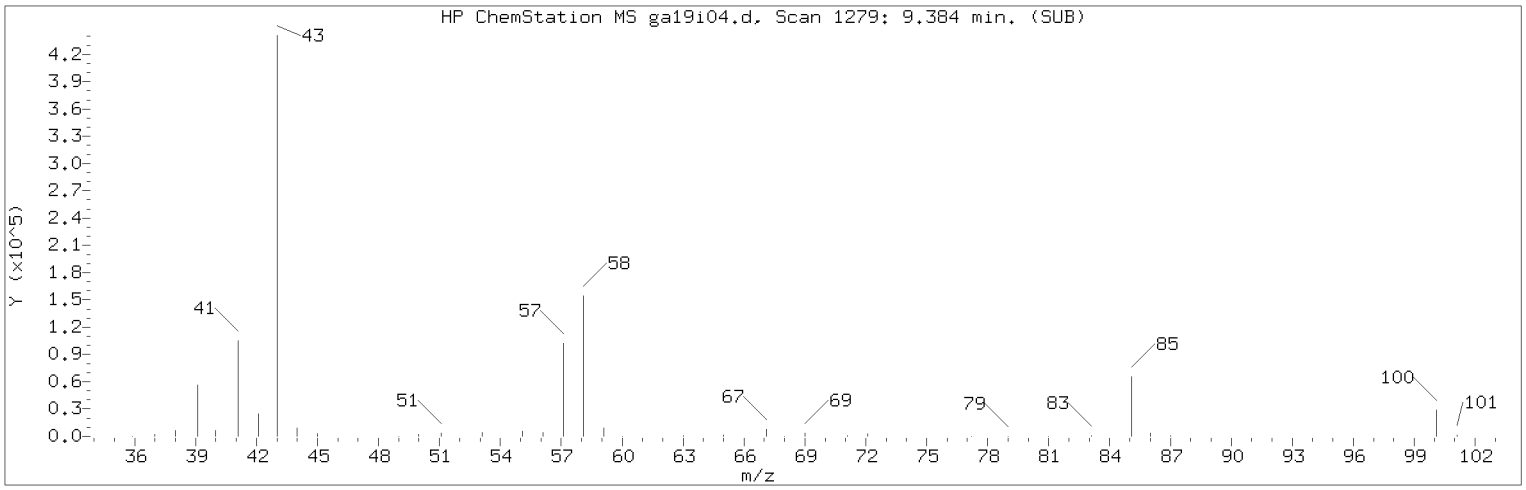
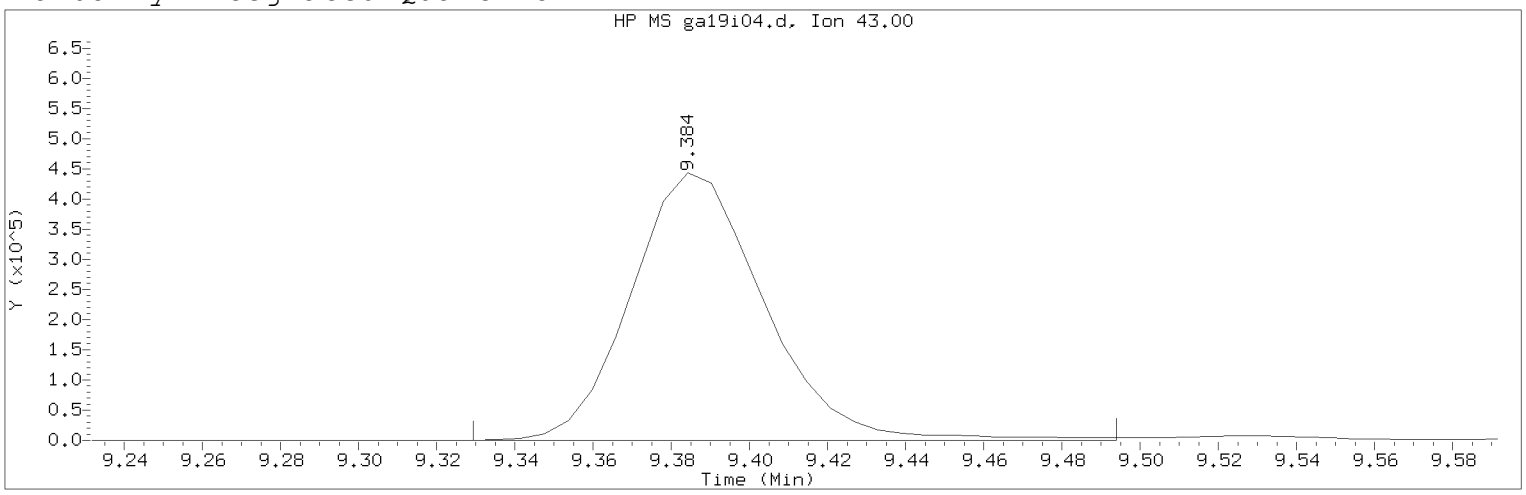
Target 3.5 esignature user name: MSK

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

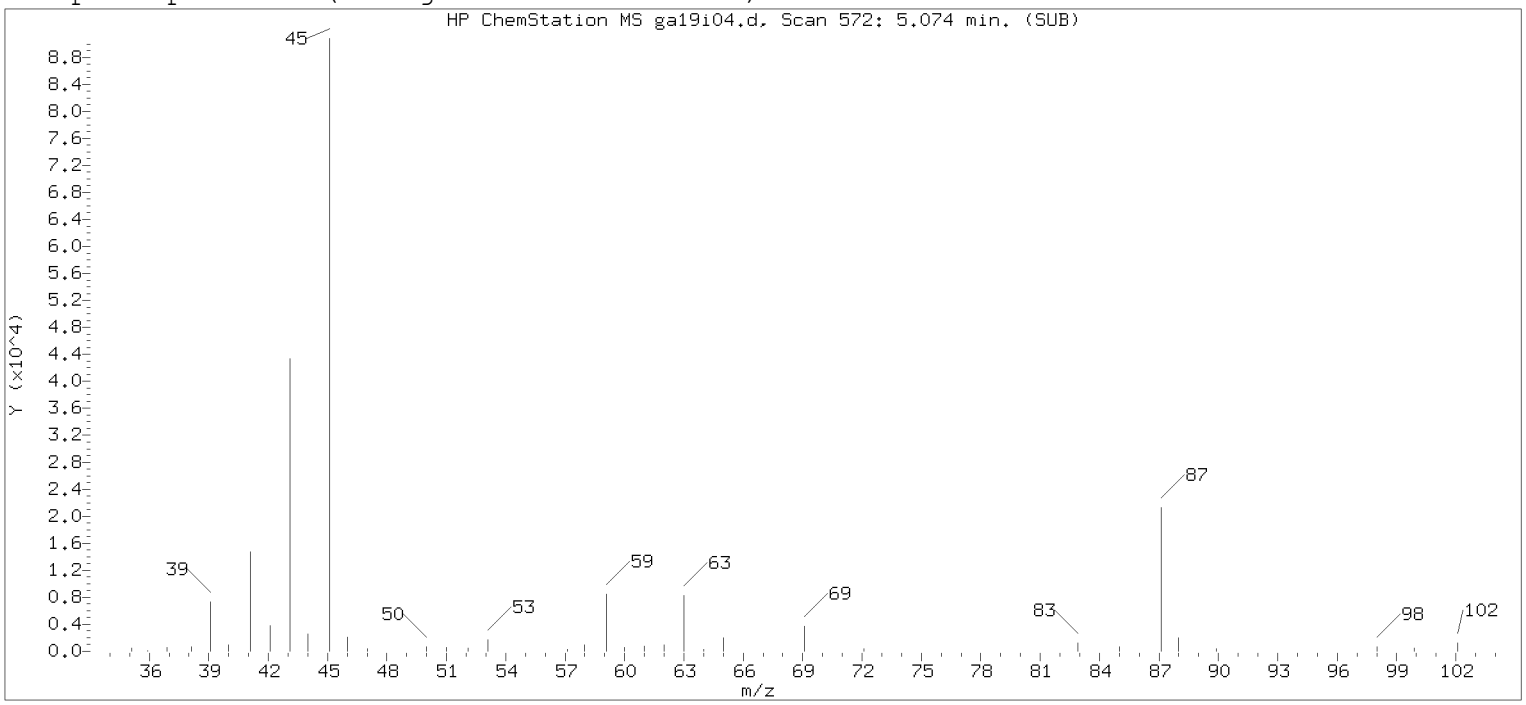
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 1049709M
On-Column Amount (ng) : 20.5254
Integration start scan : 1269 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

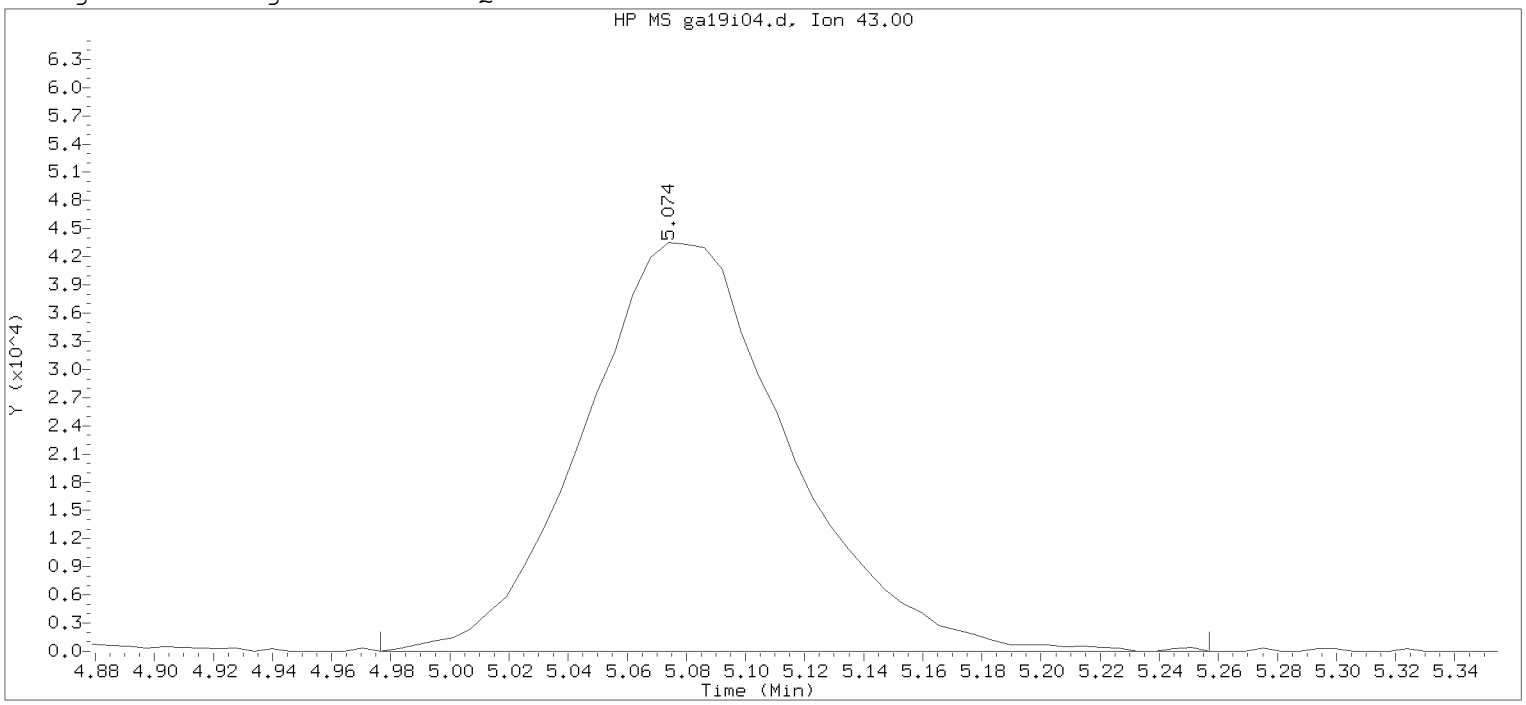
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 209575
On-column Amount (ng) : 19.2276
Integration start scan : 555 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

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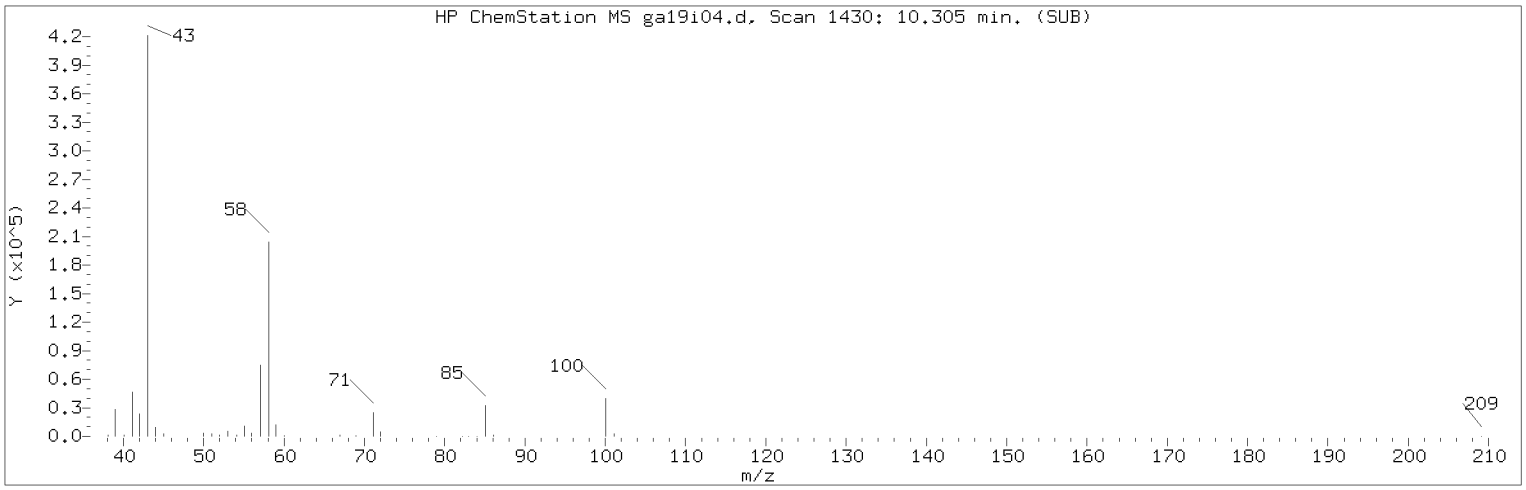
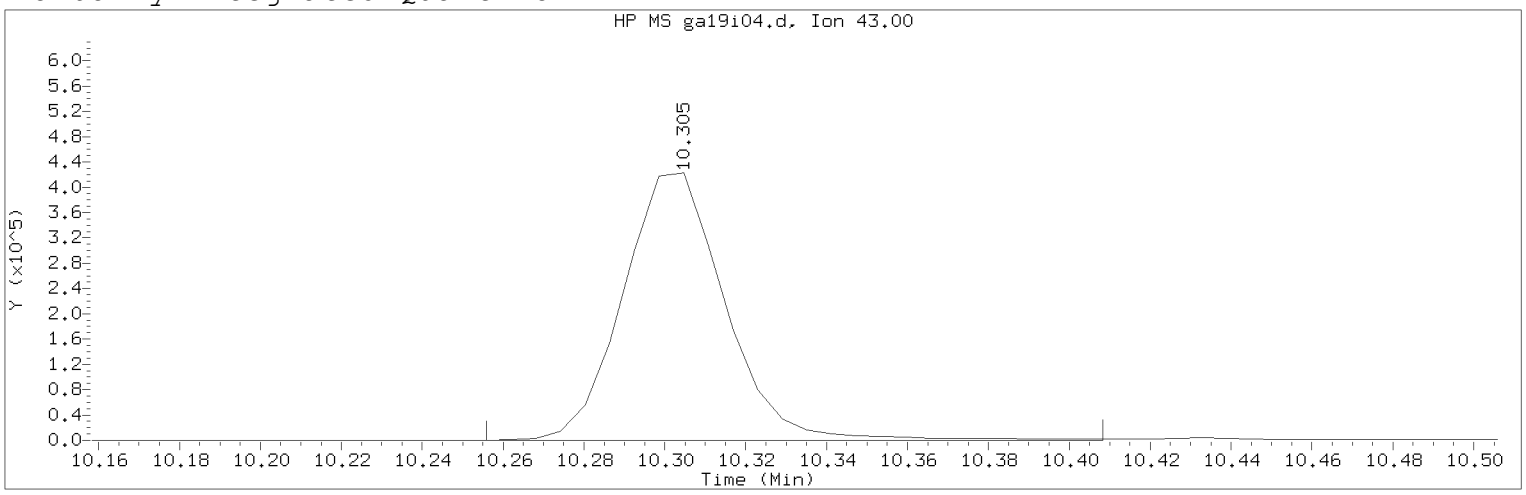
Target 3.5 esignature user AF04 Page 210 of 744

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

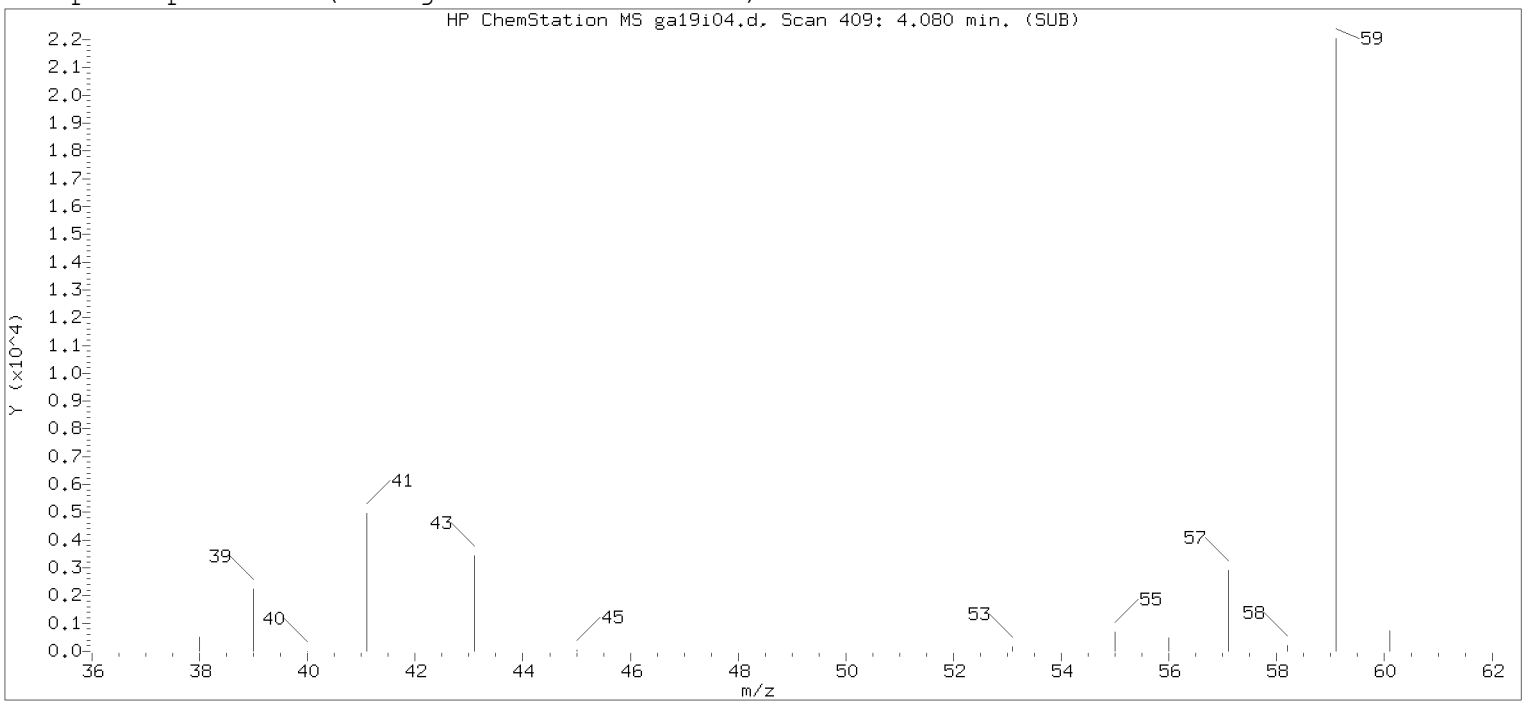
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 742959M
On-Column Amount (ng) : 20.5222
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

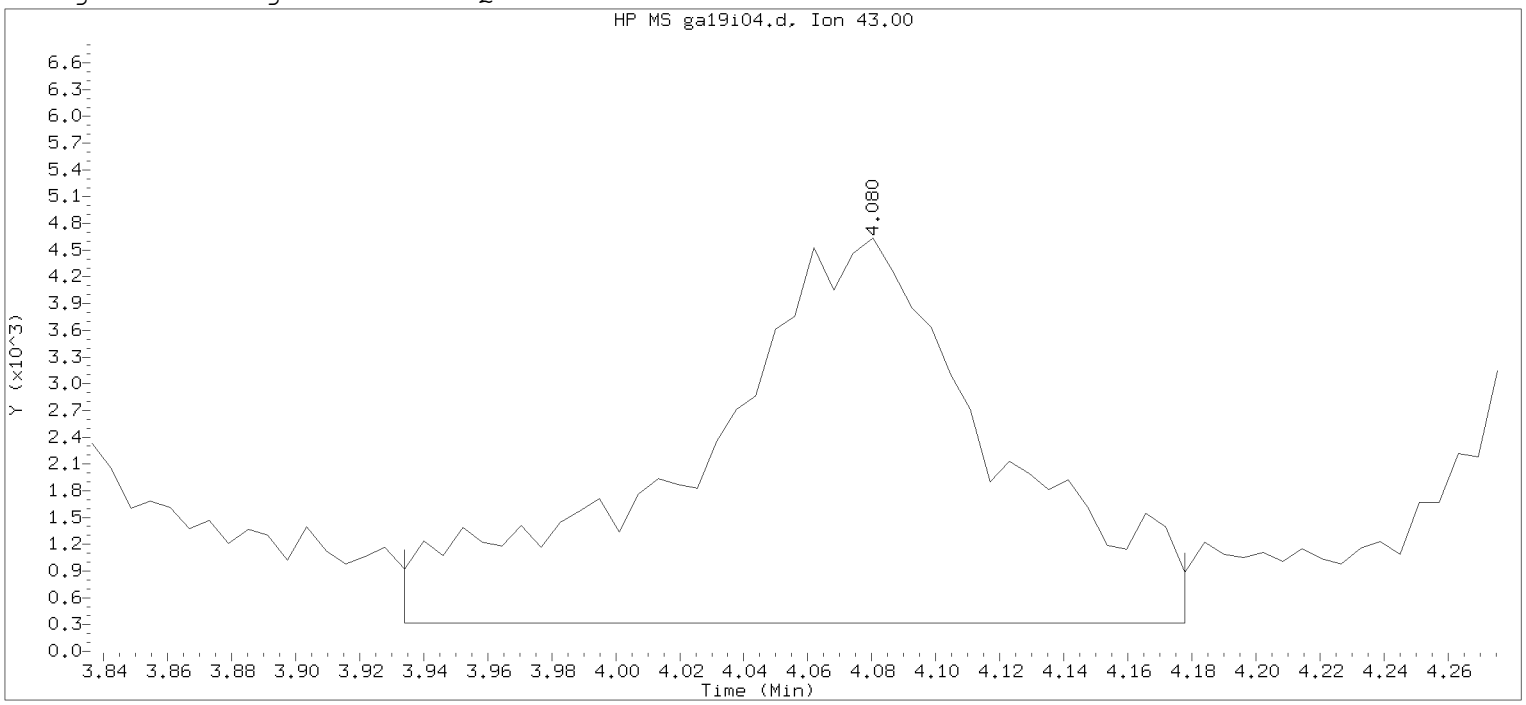
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



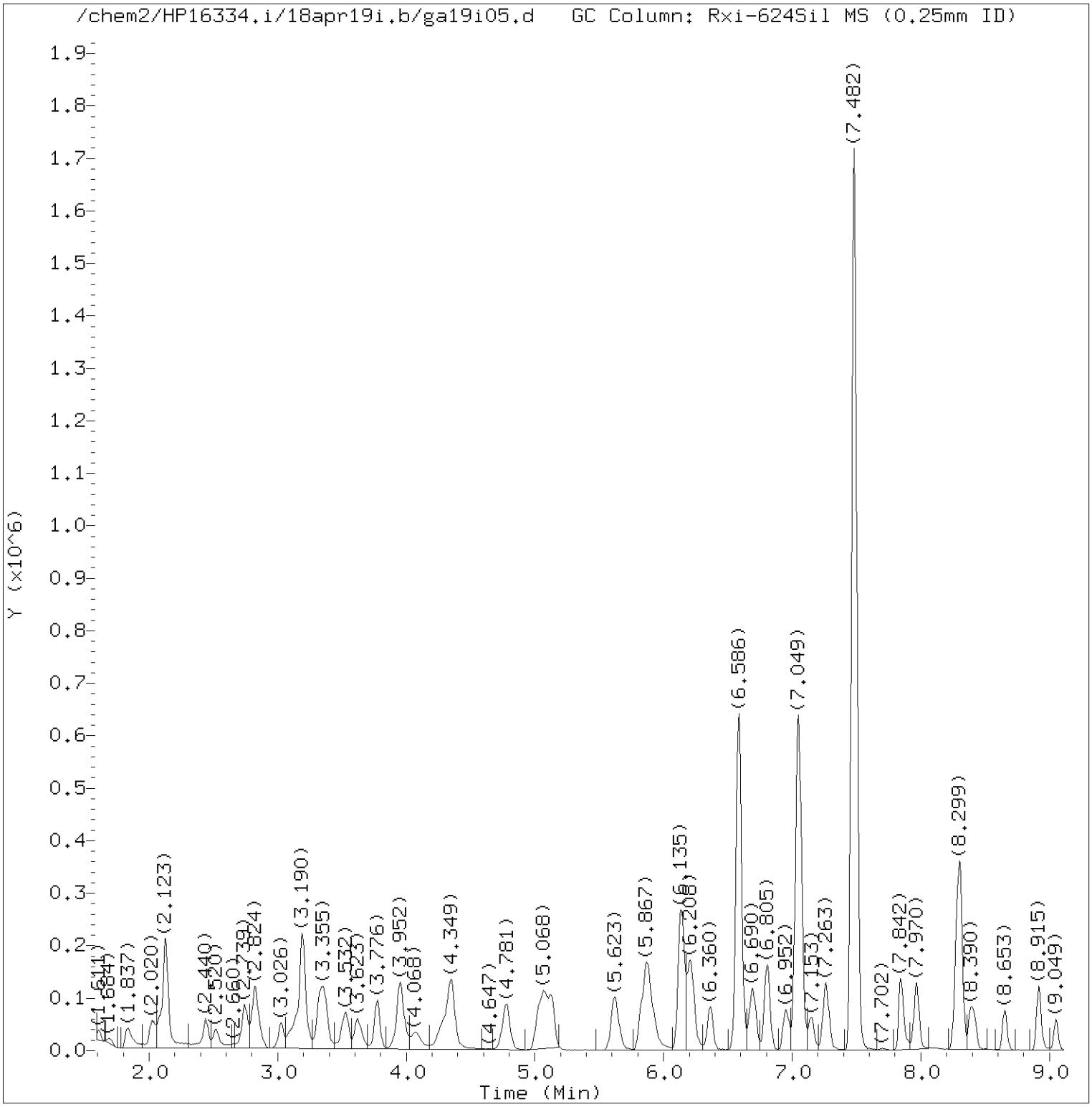
Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 409
Retention Time (minutes): 4.080
Quant Ion : 43.00
Area : 28425
On-column Amount (ng) : 19.0941
Integration start scan : 384 Integration stop scan: 424
Y at integration start : 314 Y at integration end: 314

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause



Total Ion Chromatogram (TIC)

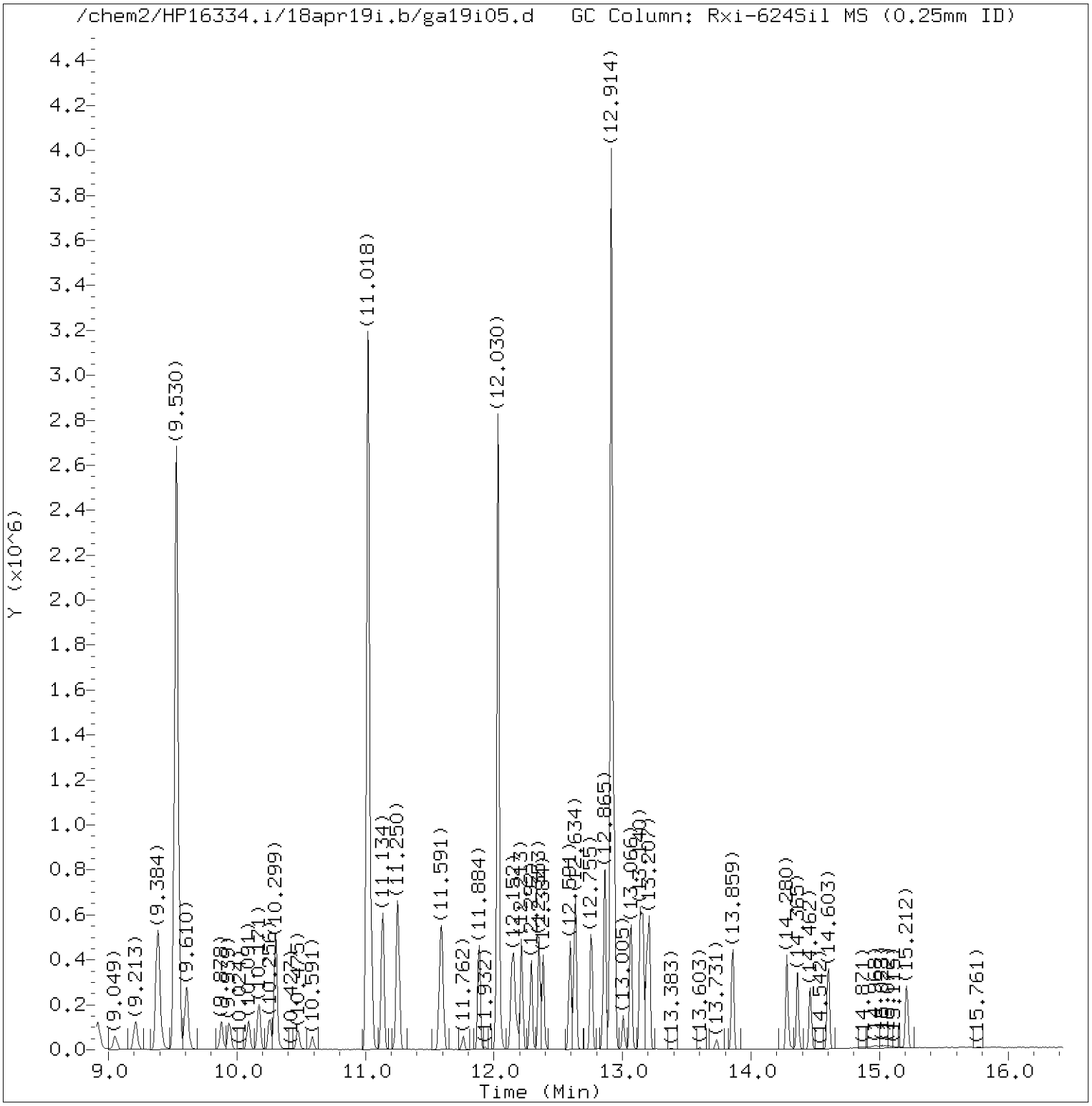
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	81639	1.018
2) Chloromethane	(2)	2.020	50	81693	1.046
6) 1,3-Butadiene	(2)	2.123	39	163567	1.233
5) Vinyl Chloride	(2)	2.130	62	68017	1.009
7) Bromomethane	(2)	2.440	94	45160	1.007
8) Chloroethane	(2)	2.526	64	38411	1.015
9) Dichlorofluoromethane	(2)	2.745	67	94444	1.040
10) Trichlorofluoromethane	(2)	2.800	101	90163M	1.002
11) Ethyl ether	(2)	3.026	59	44610	1.004
12) Freon 123a	(2)	3.117	67	63658	1.024
13) Acrolein	(1)	3.190	56	372481	47.922
15) 1,1-Dichloroethene	(2)	3.324	96	43056	0.991
14) Acetone	(1)	3.355	43	122973	10.200
16) Freon 113	(2)	3.367	101	49646	0.996
17) Methyl Iodide	(2)	3.513	142	82869	0.984
18) Carbon Disulfide	(2)	3.623	76	167464	1.015
21) Methyl Acetate	(1)	3.745	43	33348M	0.962
22) Allyl Chloride	(2)	3.776	41	98938	0.993
23) Methylene Chloride	(2)	3.952	84	58512	1.087
26)*t-Butyl Alcohol-d10	(1)	3.958	65	224043	50.000
28) t-Butyl Alcohol	(1)	4.074	59	88053	21.411
29) Acrylonitrile	(1)	4.269	53	67137	4.706
30) Methyl Tertiary Butyl Ether	(2)	4.318	73	148018	0.976
31) trans-1,2-Dichloroethene	(2)	4.361	96	49678	1.001
32) n-Hexane	(2)	4.781	57	86347	0.995
33) 1,1-Dichloroethane	(2)	5.019	63	101885	0.994
34) di-Isopropyl Ether	(2)	5.068	45	207356	0.986
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	92202	0.986
37) Ethyl t-butyl ether	(2)	5.623	59	182342	0.982
38) 2-Butanone	(1)	5.830	43	209722	9.624
39) cis-1,2-Dichloroethene	(2)	5.873	96	56271	0.989
41) 2,2-Dichloropropane	(2)	5.885	77	83841	0.982
42) Propionitrile	(1)	5.921	54	105513	19.569
40) 1,2-Dichloroethene (Total)	(2)		96	105949	1.990
45) Methacrylonitrile	(1)	6.135	67	160314	9.337
47) Bromochloromethane	(2)	6.208	128	25804	0.974
48) Tetrahydrofuran	(1)	6.220	71	47962	9.274
49) Chloroform	(2)	6.366	83	95852	0.979

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	527476	9.995
50)$Dibromofluoromethane	(2)	6.586	111	541929	10.000
51) 1,1,1-Trichloroethane	(2)	6.592	97	82262	0.983
52) Cyclohexane	(2)	6.696	56	100218	0.992
52) Cyclohexane	(2)	6.690	84	77976	1.004
52) Cyclohexane	(2)	6.696	69	29126	0.993
54) Carbon Tetrachloride	(2)	6.799	117	67080	0.965
55) 1,1-Dichloropropene	(2)	6.805	75	77941	1.003
56) Isobutyl Alcohol	(1)	6.952	41	84927	51.876
57)$1,2-Dichloroethane-d4	(2)	7.043	102	113675	10.167
57)$1,2-Dichloroethane-d4	(2)	7.043	65	644122	10.217
57)$1,2-Dichloroethane-d4	(2)	7.043	104	70681	10.188
58) Benzene	(2)	7.068	78	211887	0.997
59) 1,2-Dichloroethane	(2)	7.153	62	73971	1.009
60) t-Amyl methyl ether	(2)	7.263	73	156867	0.988
63)*Fluorobenzene	(2)	7.482	96	2094201	10.000
62) n-Heptane	(2)	7.494	43	105802	1.020
65) n-Butanol	(1)	7.842	56	130877	94.857
67) Trichloroethene	(2)	7.964	95	56030	0.990
69) Methylcyclohexane	(2)	8.275	83	97994	0.993
70) 1,2-Dichloropropane	(2)	8.305	63	58561	0.985
72) 1,4-Dioxane	(1)	8.384	88	13136M	51.103
71) Methyl Methacrylate	(1)	8.384	69	31122	0.930
73) Dibromomethane	(2)	8.421	93	27471	0.970
74) Bromodichloromethane	(2)	8.653	83	67601	0.947
76) 2-Nitropropane	(1)	8.921	41	100389	8.596
80) cis-1,3-Dichloropropene	(2)	9.213	75	81667	0.917
81) 4-Methyl-2-Pentanone	(1)	9.384	43	517626M	9.588
82)$Toluene-d8	(3)	9.530	98	2116094	9.962
82)$Toluene-d8	(3)	9.530	100	1352785	9.985
83) Toluene	(3)	9.610	92	132451	0.988
84) trans-1,3-Dichloropropene	(3)	9.884	75	69609	0.917
86) Ethyl Methacrylate	(3)	9.939	69	63854	0.943
88) 1,1,2-Trichloroethane	(3)	10.091	97	40207	0.988
85) 1,3-Dichloropropene (total)	(3)		75	151276	1.833
89) Tetrachloroethene	(3)	10.171	166	61708	0.990
90) 1,3-Dichloropropane	(3)	10.256	76	72648	0.984
91) 2-Hexanone	(1)	10.299	43	367593M	9.613

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	42666	0.897
95) 1,2-Dibromoethane	(3)	10.591	107	37637	0.960
97)*Chlorobenzene-d5	(3)	11.018	117	1587578	10.000
98) Chlorobenzene	(3)	11.049	112	155907	1.009
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	49828	0.930
100) Ethylbenzene	(3)	11.134	91	269486	1.007
101) m+p-Xylene	(3)	11.250	106	202327	1.967
104) o-Xylene	(3)	11.585	106	99953	0.967
106) Styrene	(3)	11.597	104	166356	0.963
105) Xylene (Total)	(3)		106	302280	2.935
107) Bromoform	(3)	11.762	173	23550	0.846
108) Isopropylbenzene	(3)	11.884	105	266204	0.989
111)$4-Bromofluorobenzene	(3)	12.030	95	818746	10.059
111)$4-Bromofluorobenzene	(3)	12.030	174	695895	9.979
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	52821M	0.987
114) Bromobenzene	(4)	12.146	156	69466	0.997
116) 1,2,3-Trichloropropane	(4)	12.176	110	14961	1.009
117) n-Propylbenzene	(4)	12.213	91	327336	1.018
119) 2-Chlorotoluene	(4)	12.292	126	64989	1.016
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	232829	1.002
122) 4-Chlorotoluene	(4)	12.384	126	67282	0.998
125) tert-Butylbenzene	(4)	12.591	134	48072M	0.995
126) Pentachloroethane	(4)	12.627	167	34040	0.853
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	237250	0.993
128) sec-Butylbenzene	(4)	12.755	105	297322	1.002
131) 1,3-Dichlorobenzene	(4)	12.859	146	139183	0.998
132) p-Isopropyltoluene	(4)	12.865	119	257905	0.994
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	894690	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	140270	0.997
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	104926	0.988
136) Benzyl Chloride	(4)	13.005	126	16267	0.810
138) n-Butylbenzene	(4)	13.158	92	142011	1.021
139) 1,2-Dichlorobenzene	(4)	13.188	146	129708	0.990
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	7412	0.881
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	117315	1.006
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	108644	1.002
146) Hexachlorobutadiene	(4)	14.365	225	58364	1.032
147) Naphthalene	(4)	14.462	128	180882	0.993

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Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	95212	1.020

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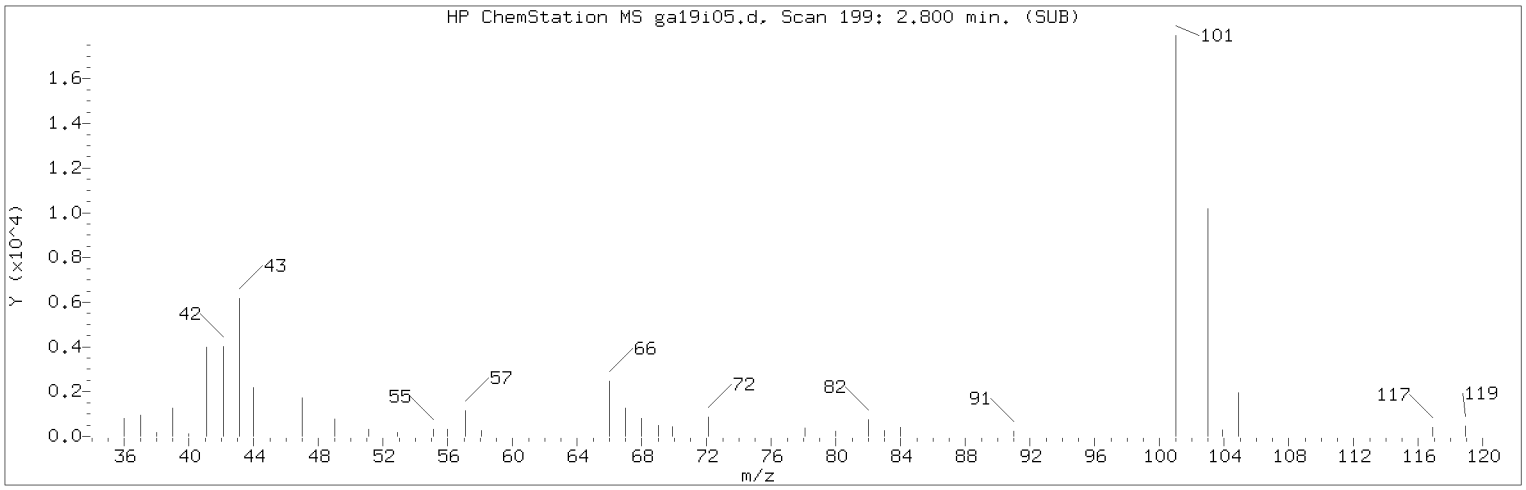
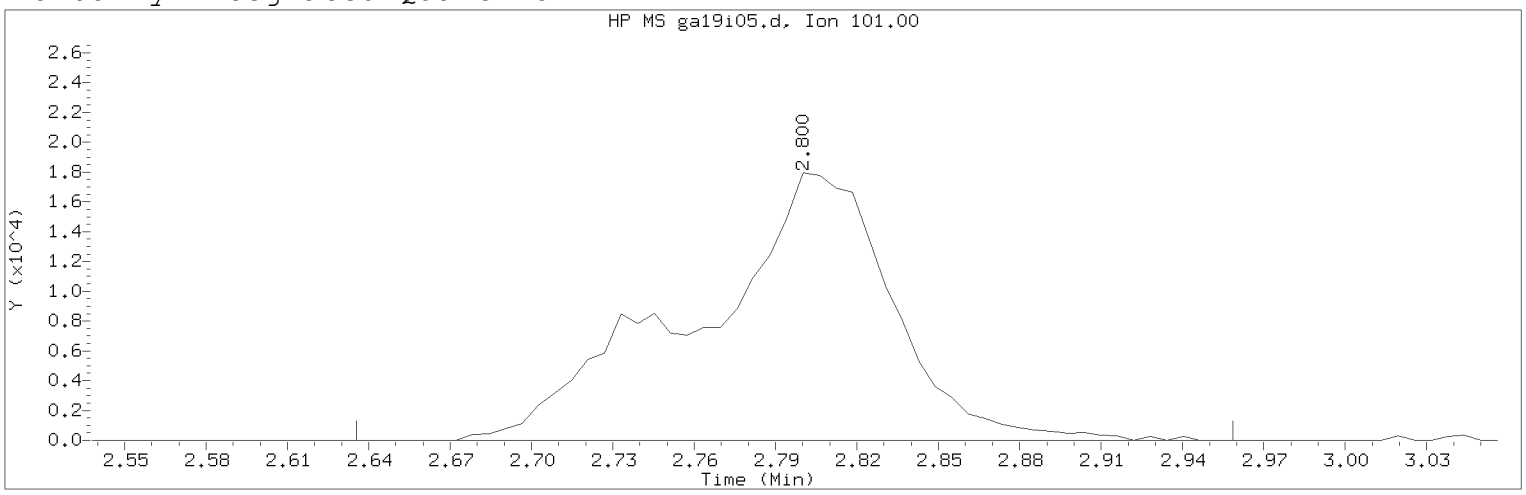
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

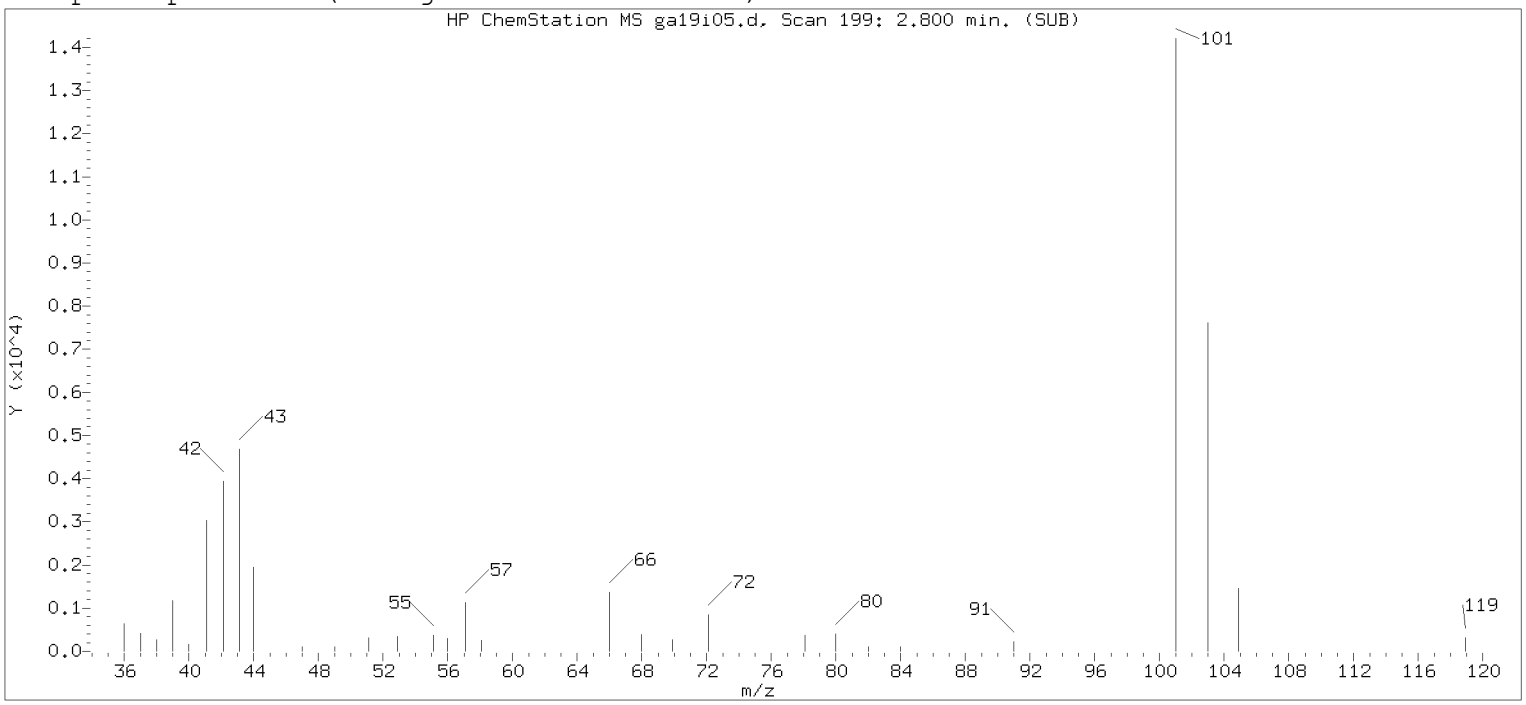
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area (flag) : 90163M
On-Column Amount (ng) : 1.0024
Integration start scan : 171 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

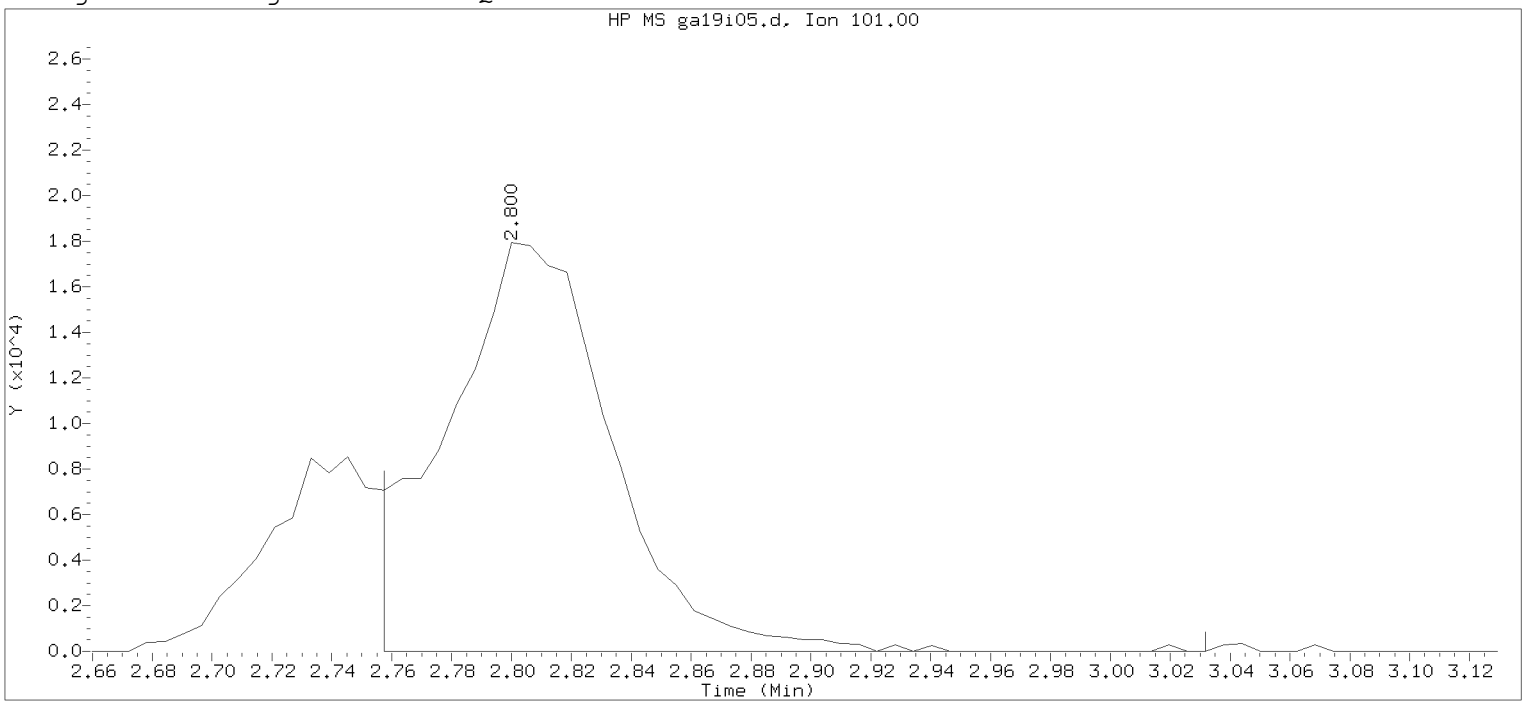
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

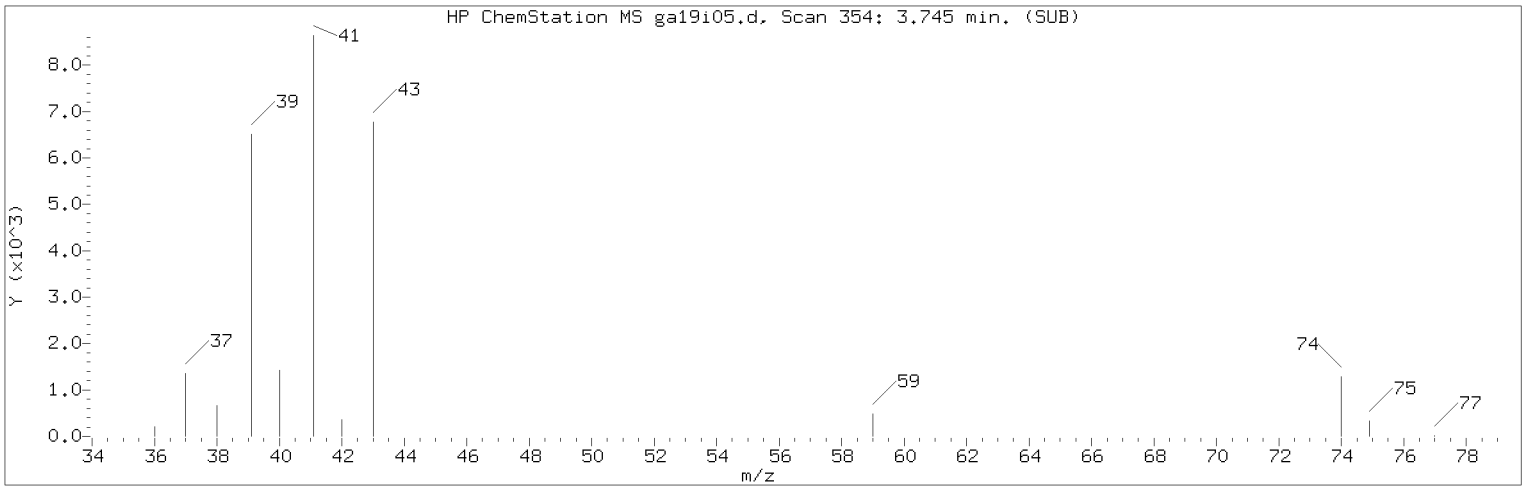
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

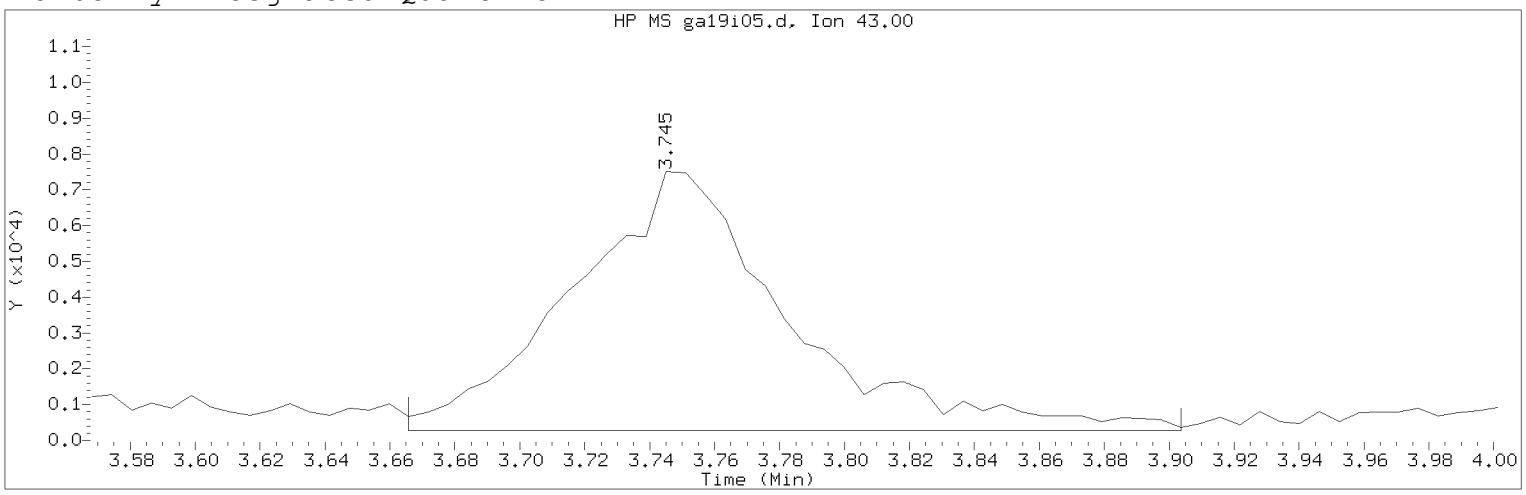
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area : 68618
On-column Amount (ng) : 0.8328
Integration start scan : 191 Integration stop scan: 236
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

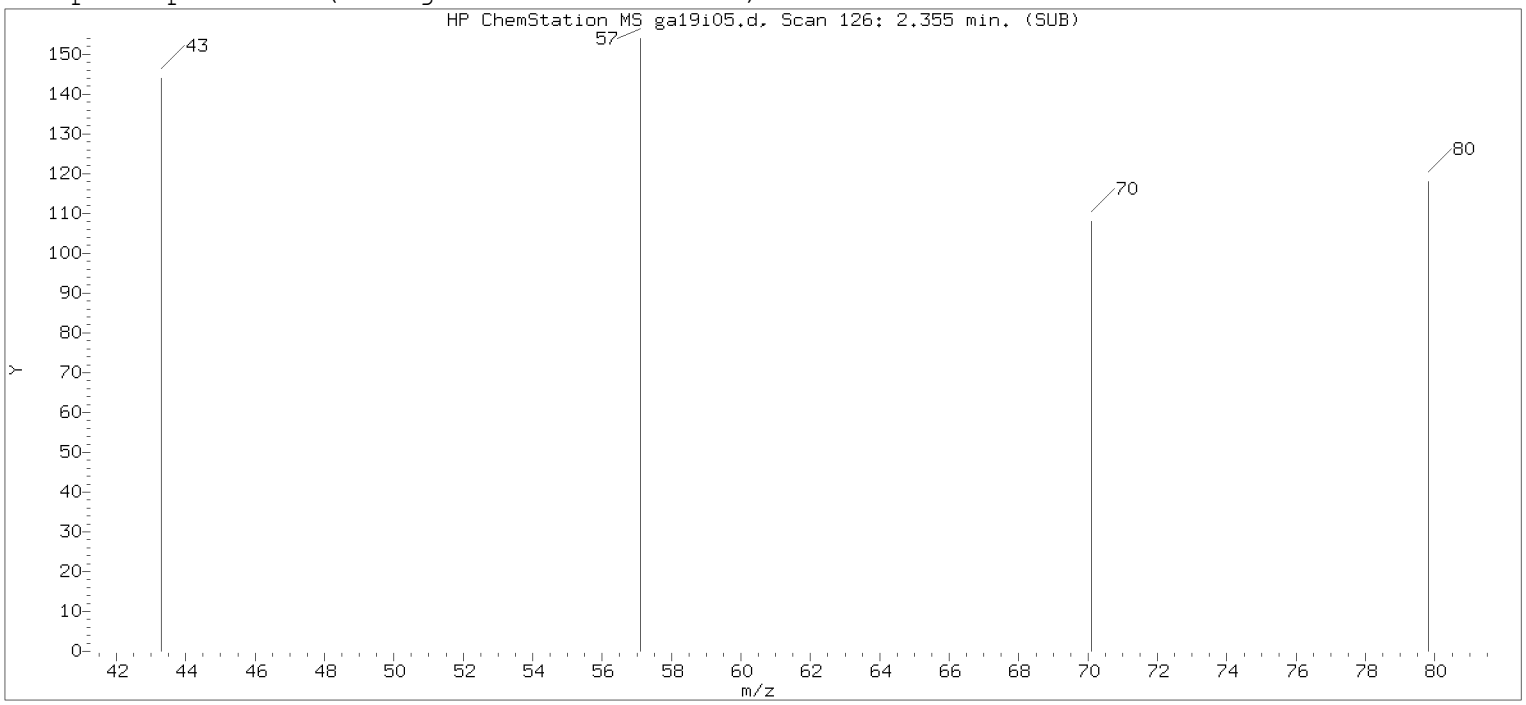
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 354
Retention Time (minutes): 3.745
Quant Ion : 43.00
Area (flag) : 33348M
On-Column Amount (ng) : 0.9623
Integration start scan : 340 Integration stop scan: 379
Y at integration start : 272 Y at integration end: 272

Reason for manual integration: improper integration

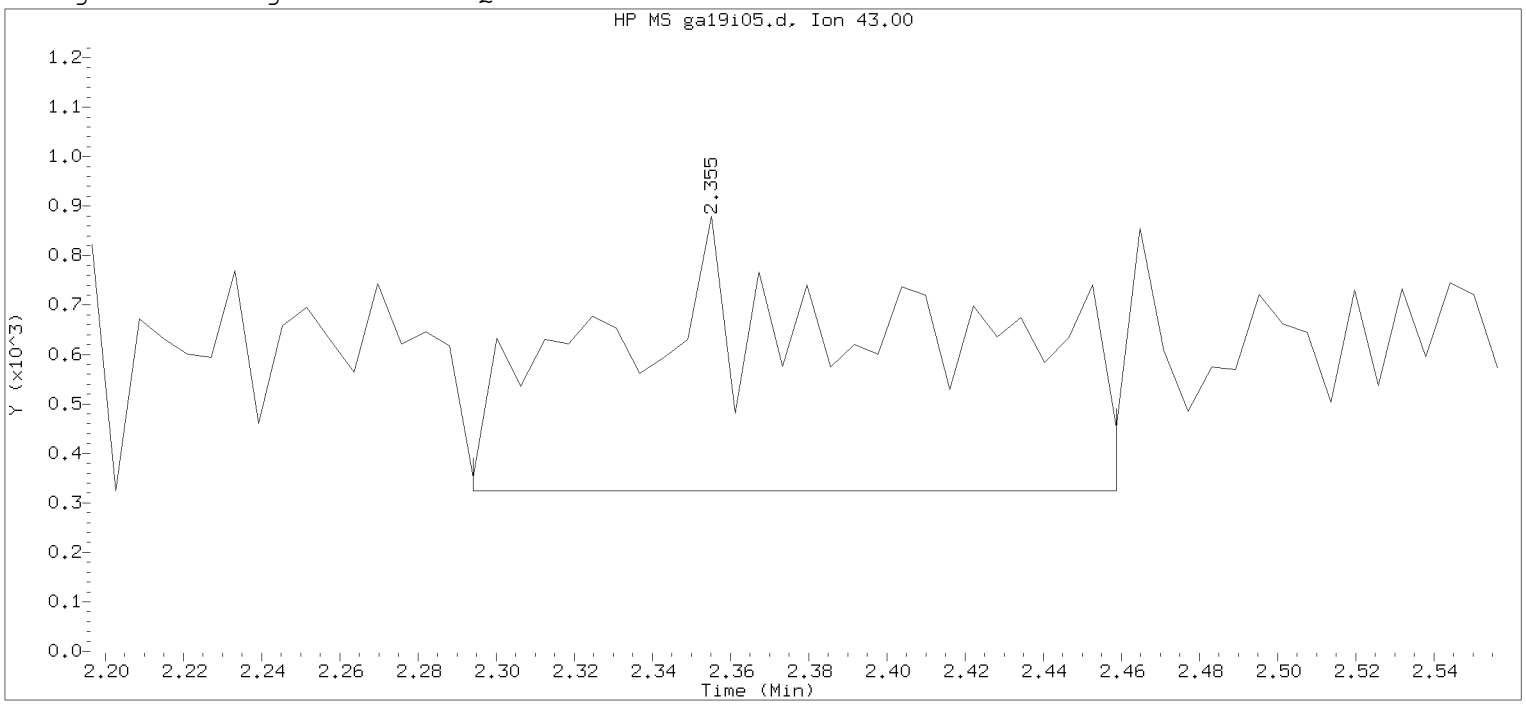
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 126
Retention Time (minutes): 2.355
Quant Ion : 43.00
Area : 3067
On-column Amount (ng) : 3.0010
Integration start scan : 115 Integration stop scan: 142
Y at integration start : 324 Y at integration end: 324

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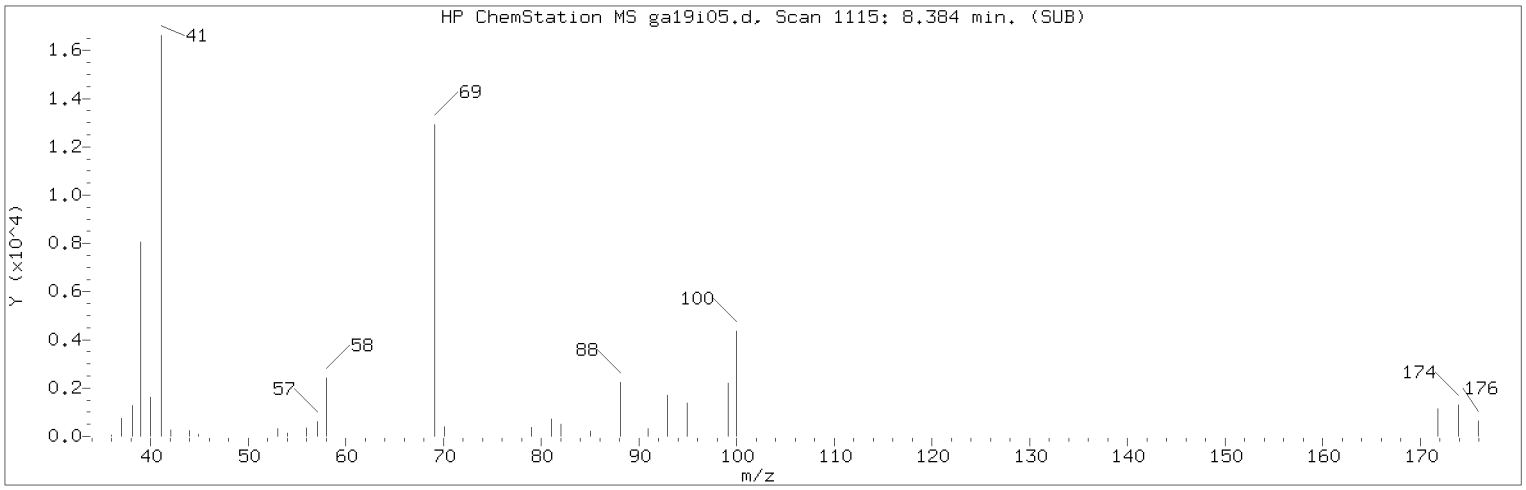
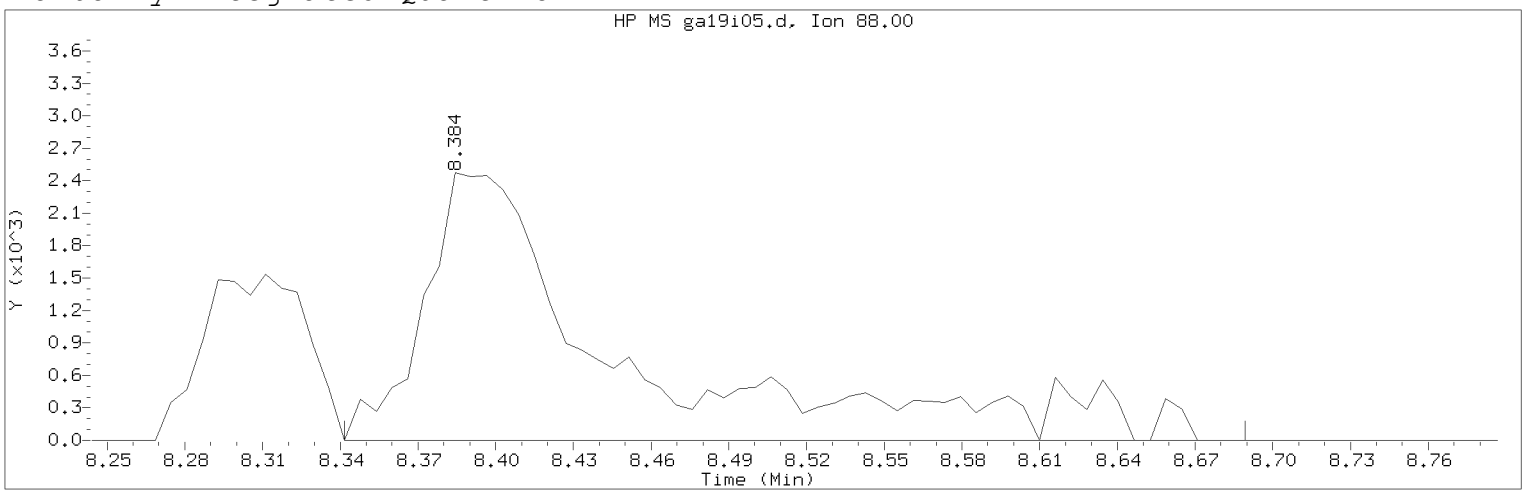
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

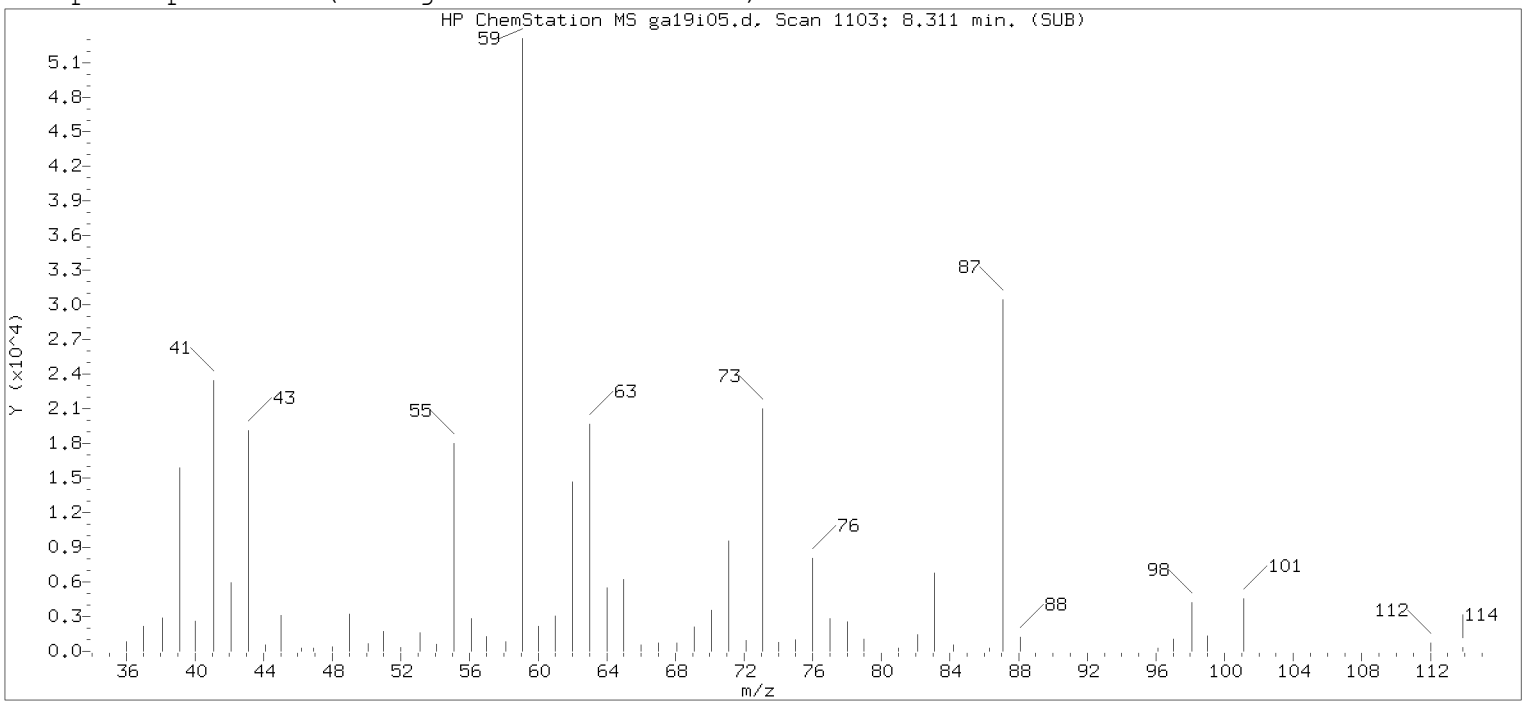
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1115
Retention Time (minutes): 8.384
Quant Ion : 88.00
Area (flag) : 13136M
On-Column Amount (ng) : 51.1028
Integration start scan : 1107 Integration stop scan: 1164
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

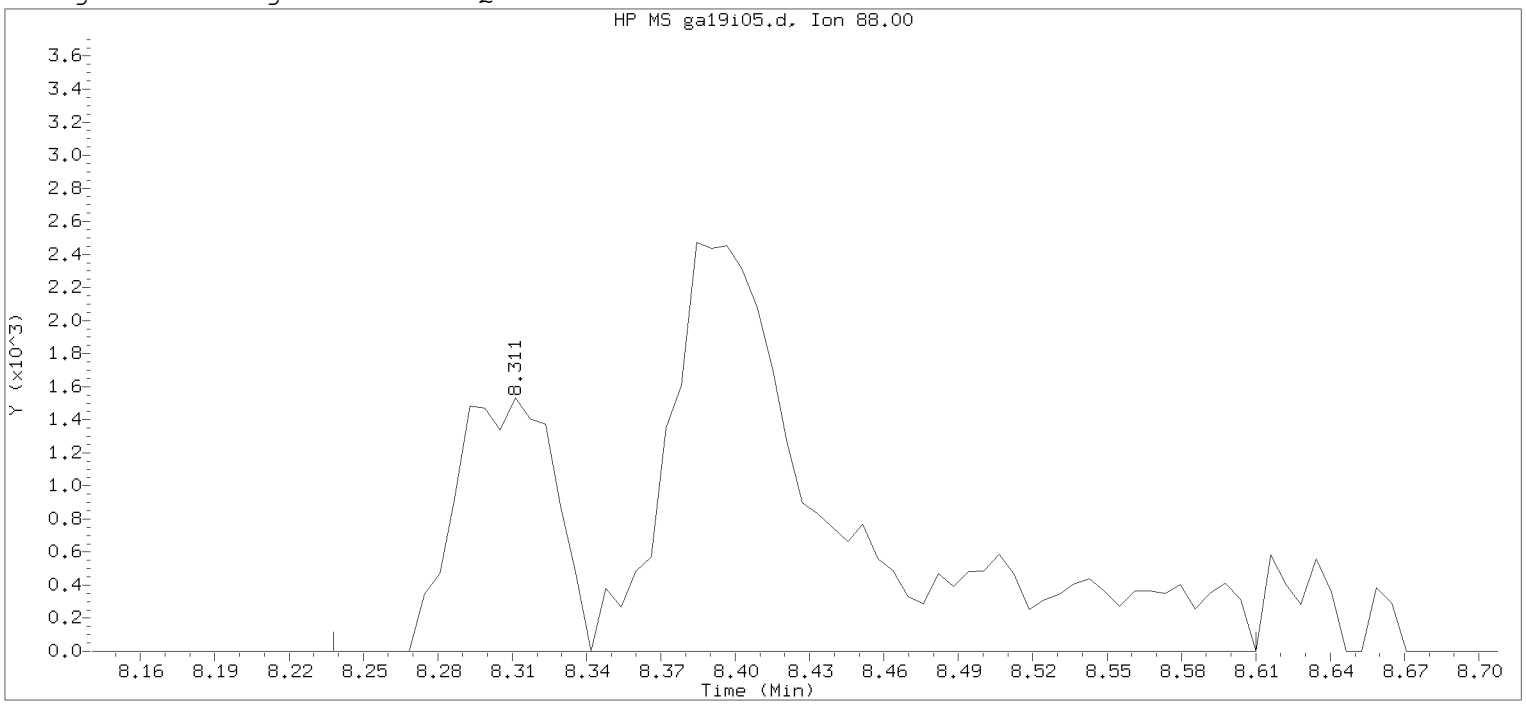
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

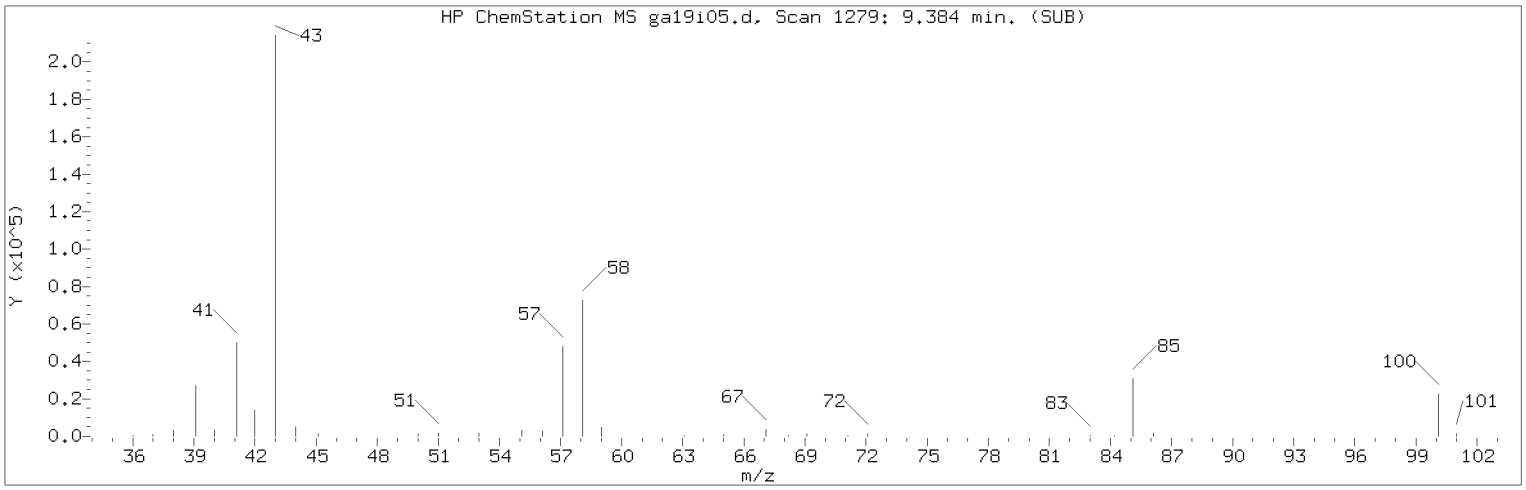
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

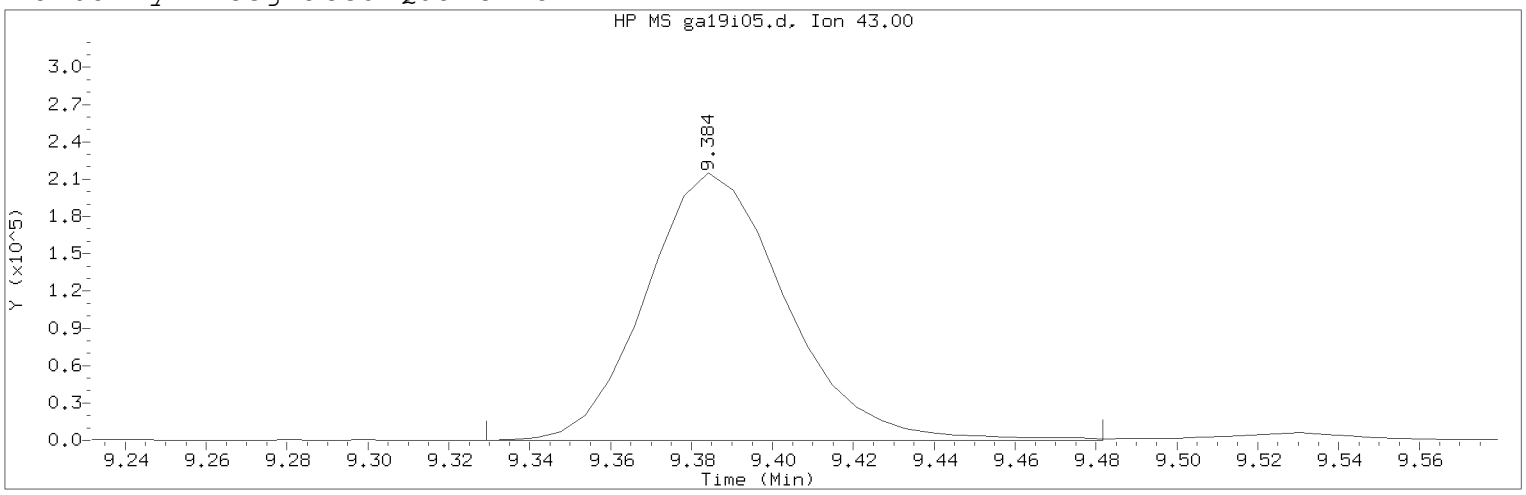
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 88.00
Area : 16368
On-column Amount (ng) : 53.2454
Integration start scan : 1090 Integration stop scan: 1151
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

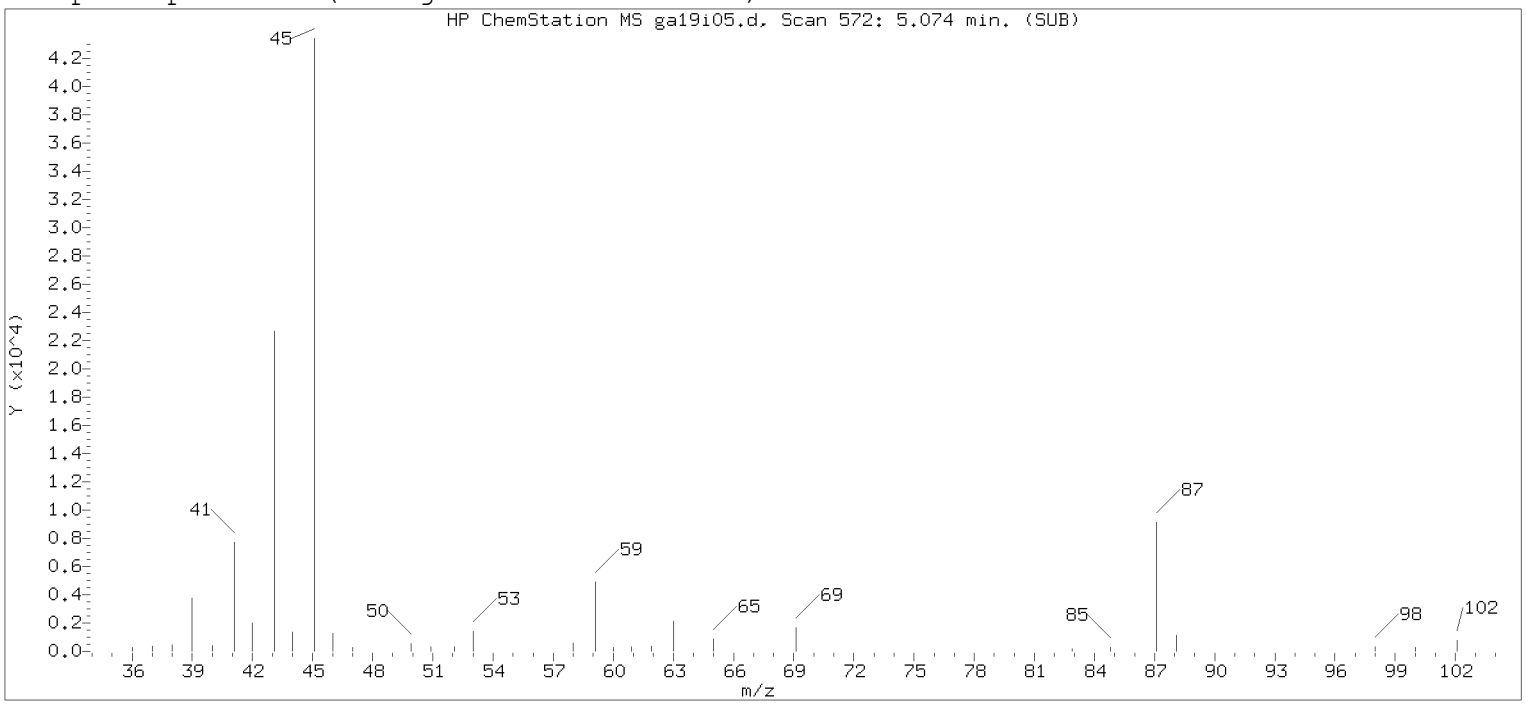
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 517626M
On-Column Amount (ng) : 9.5884
Integration start scan : 1269 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

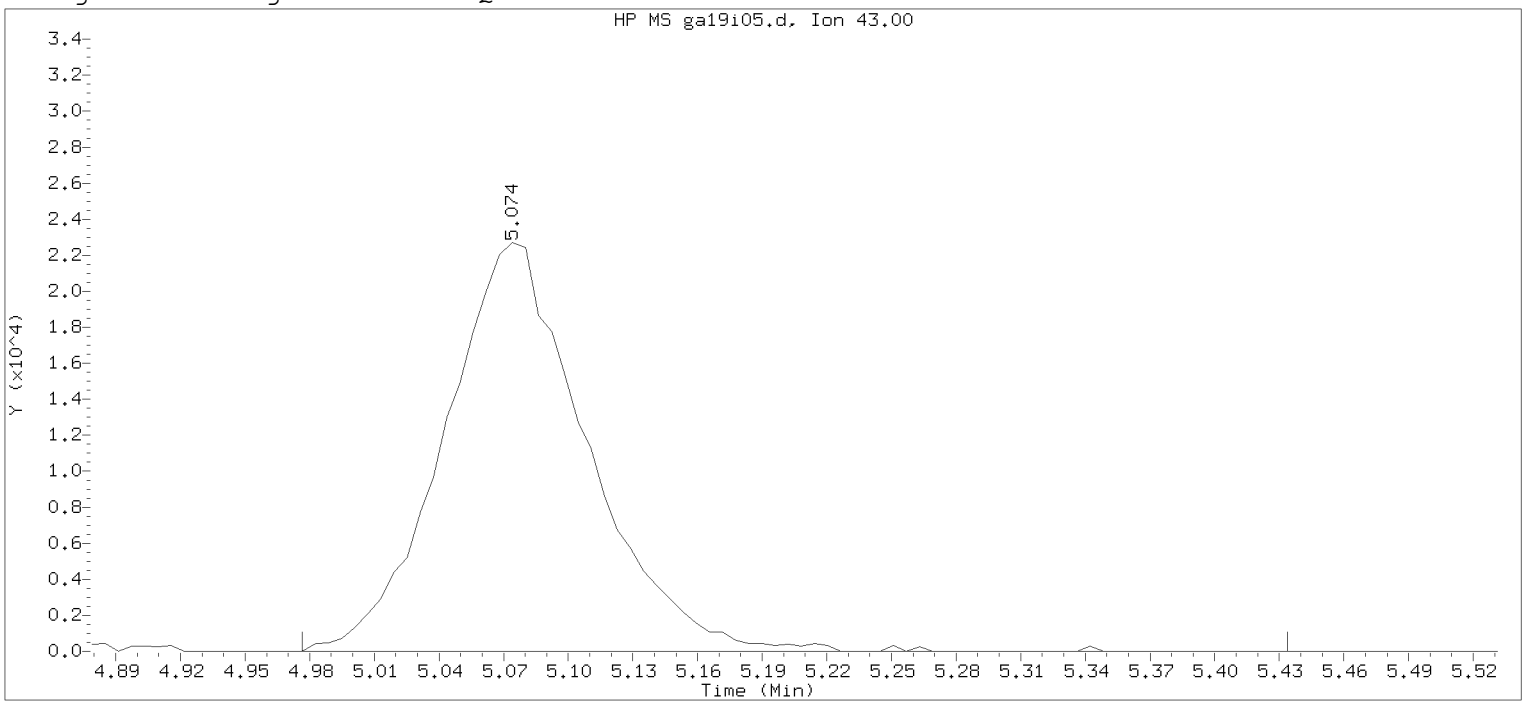
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

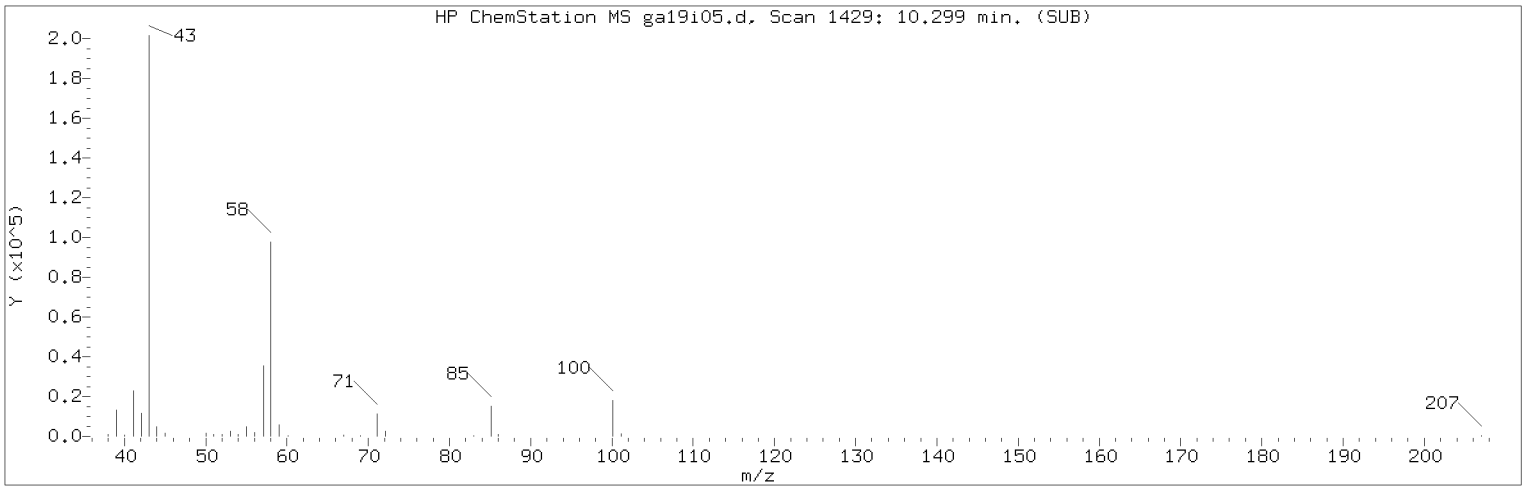
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

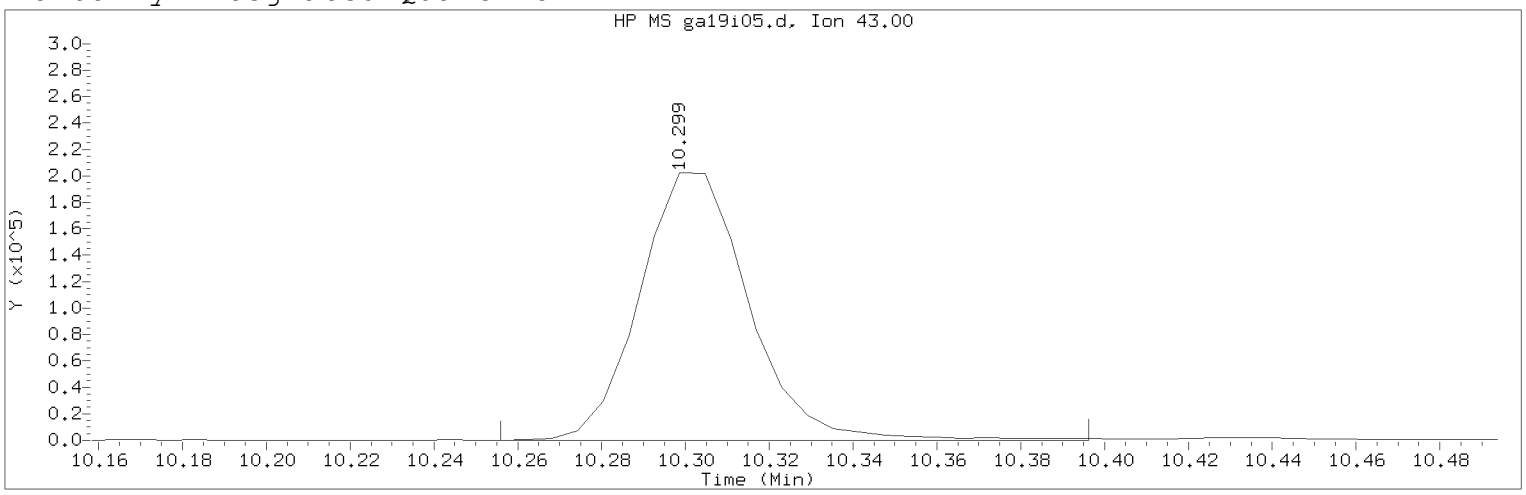
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 104459
On-column Amount (ng) : 9.1724
Integration start scan : 555 Integration stop scan: 630
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

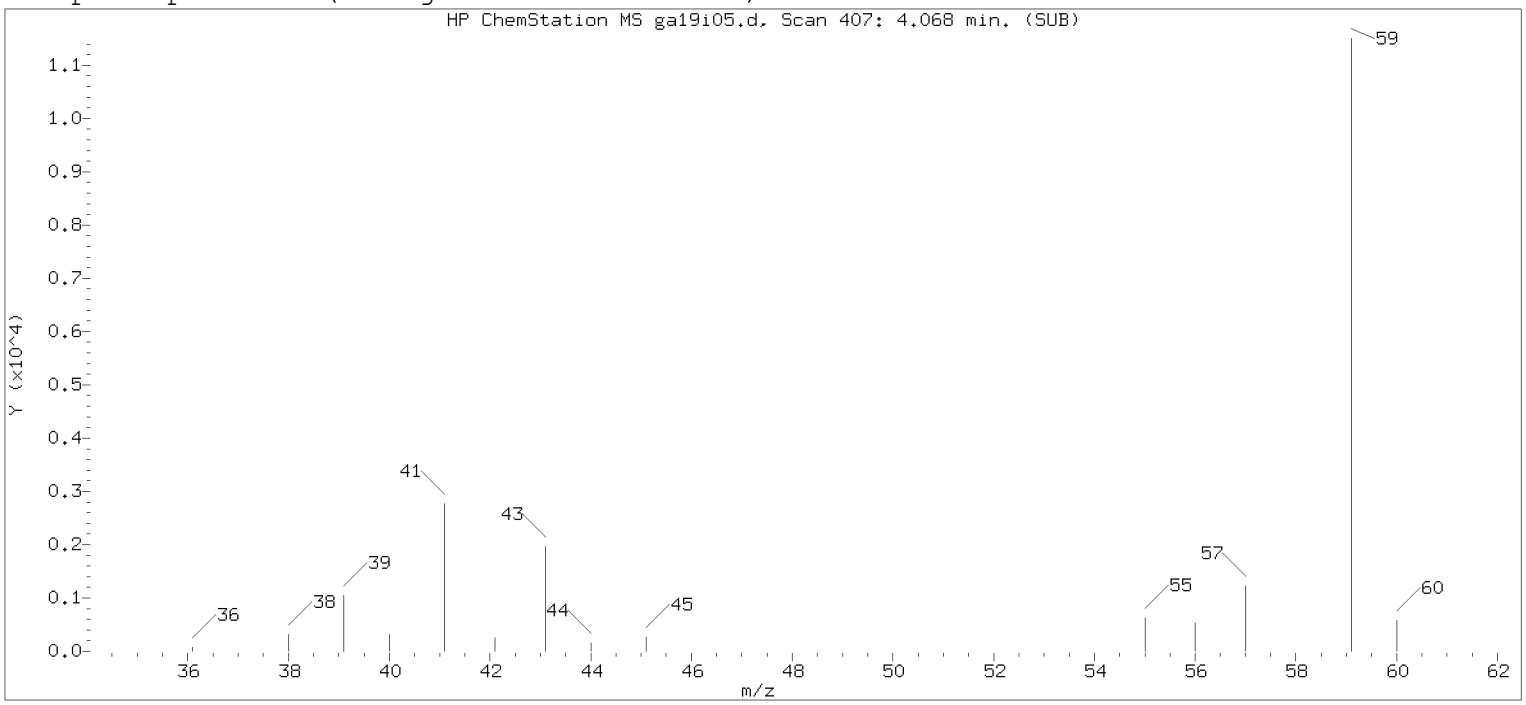
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 367593M
On-Column Amount (ng) : 9.6131
Integration start scan : 1421 Integration stop scan: 1444
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

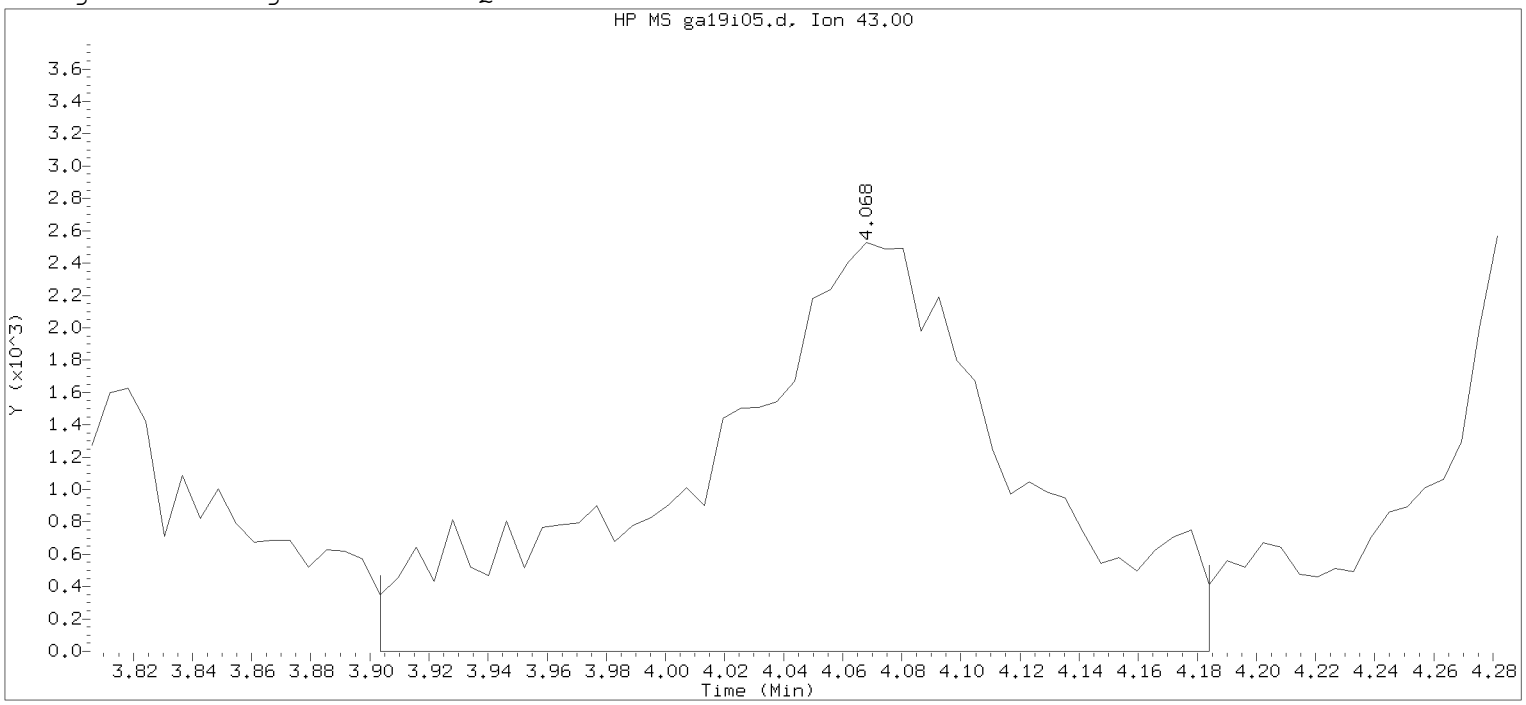
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

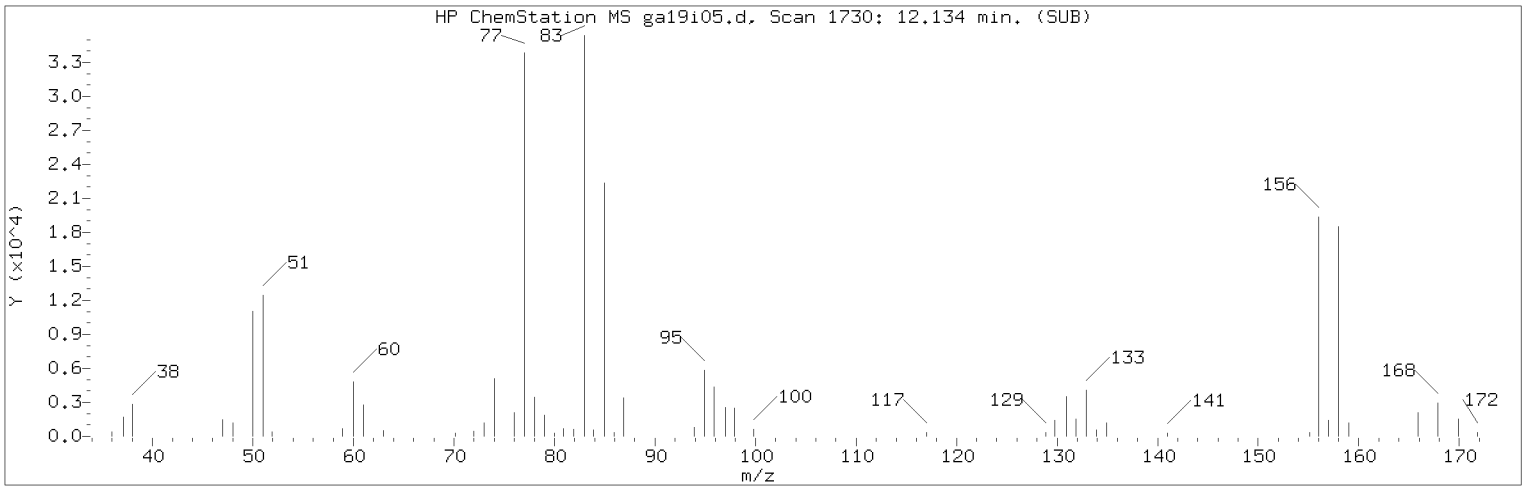
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

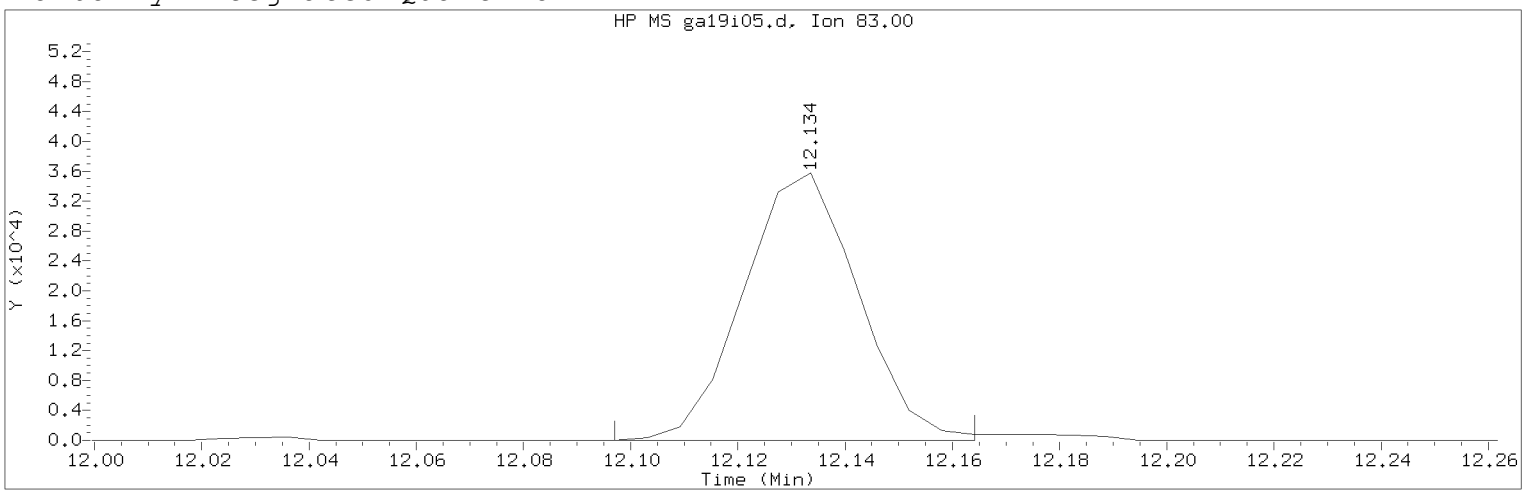
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 407		
Retention Time (minutes)	: 4.068		
Quant Ion	: 43.00		
Area	: 19259		
On-column Amount (ng)	: 11.6349		
Integration start scan	: 379	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

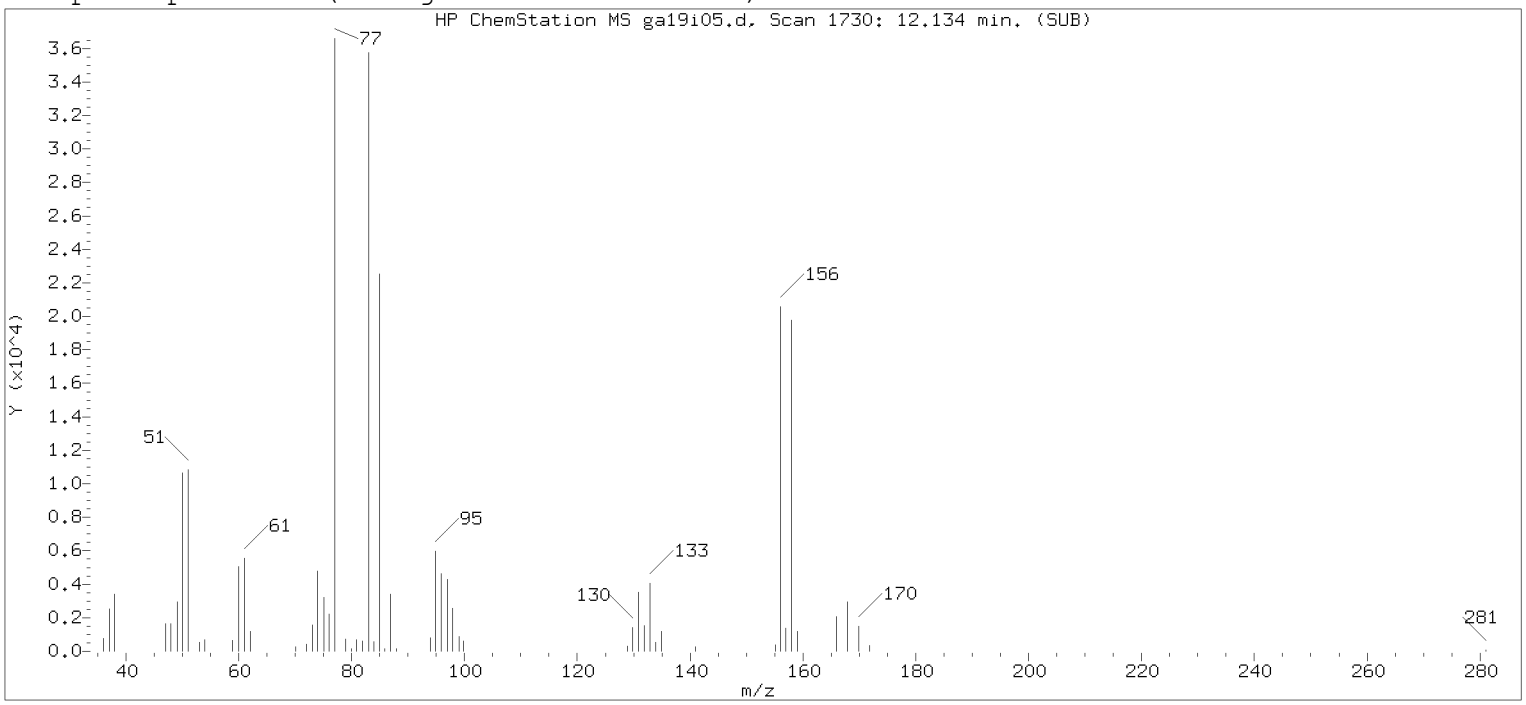
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 52821M
On-Column Amount (ng) : 0.9870
Integration start scan : 1723 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

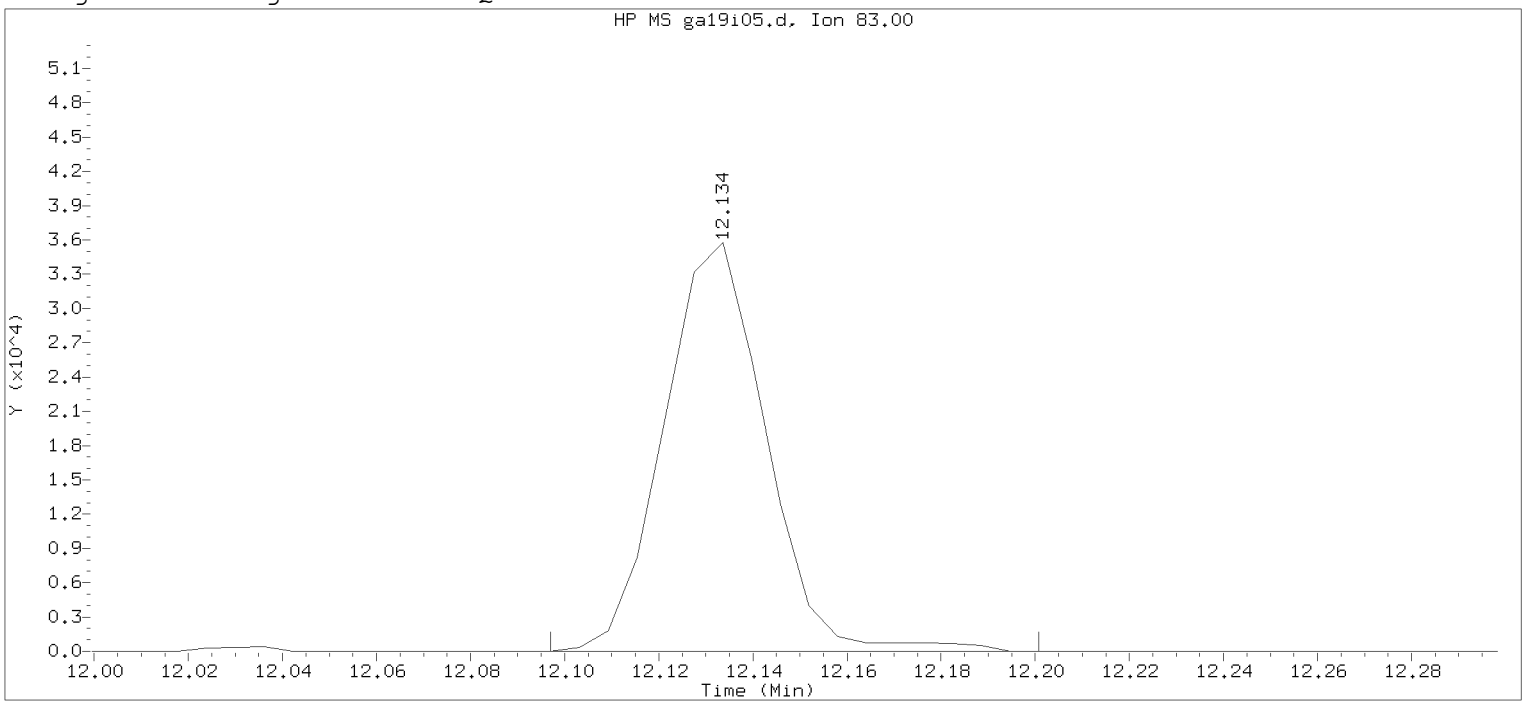
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

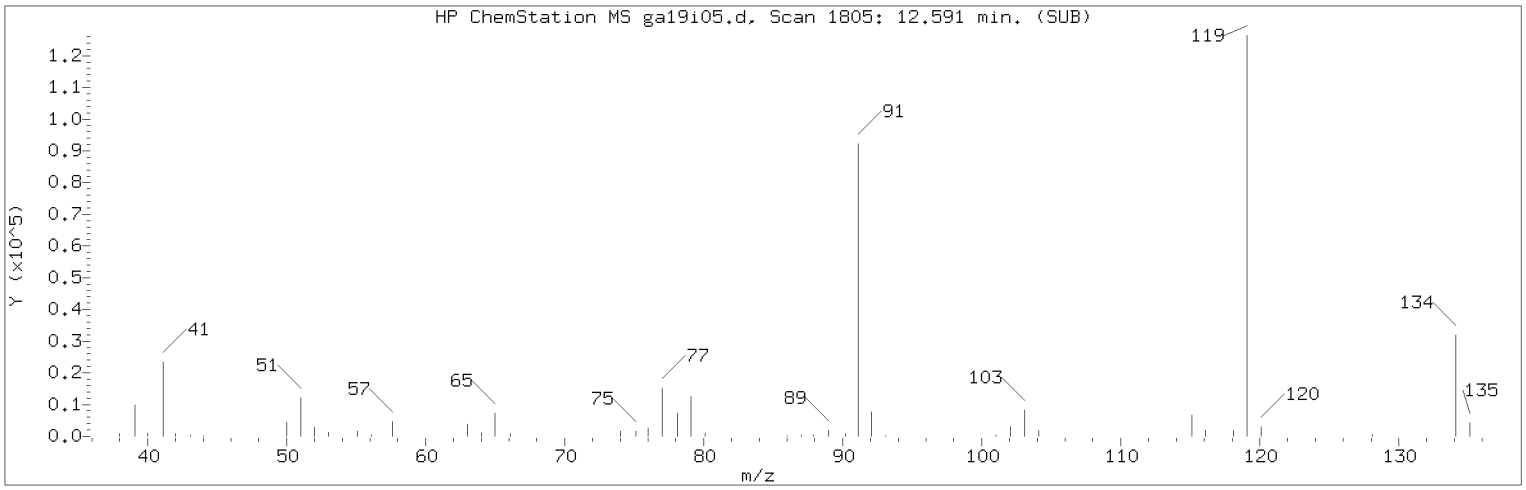
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

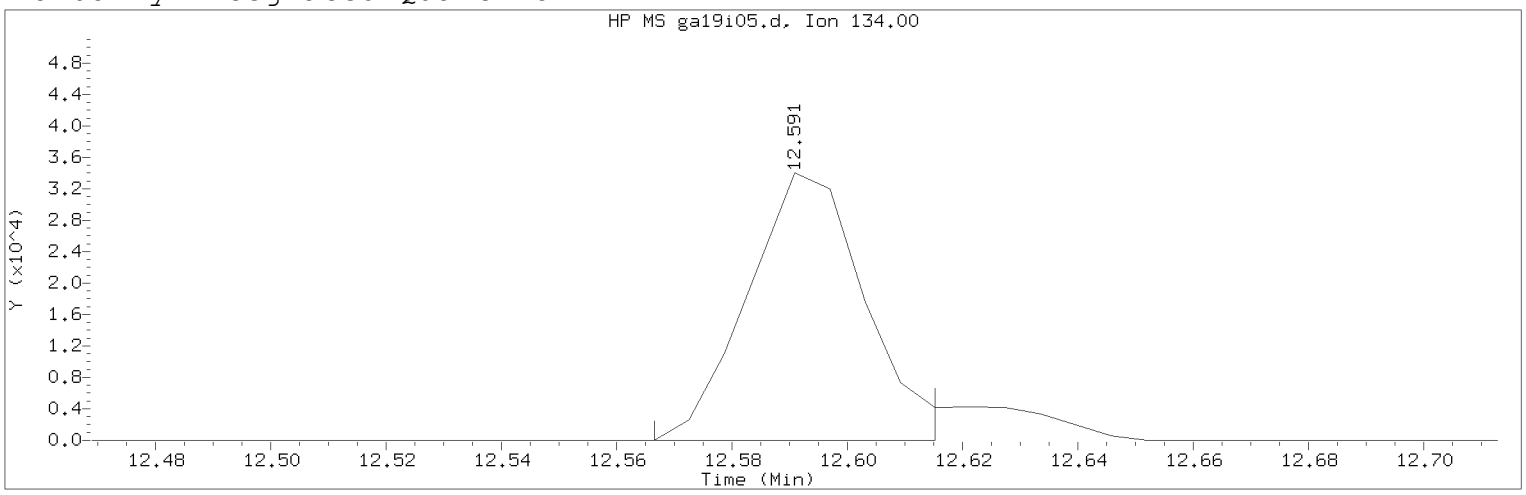
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 53790
On-column Amount (ng) : 0.9922
Integration start scan : 1723 Integration stop scan: 1740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

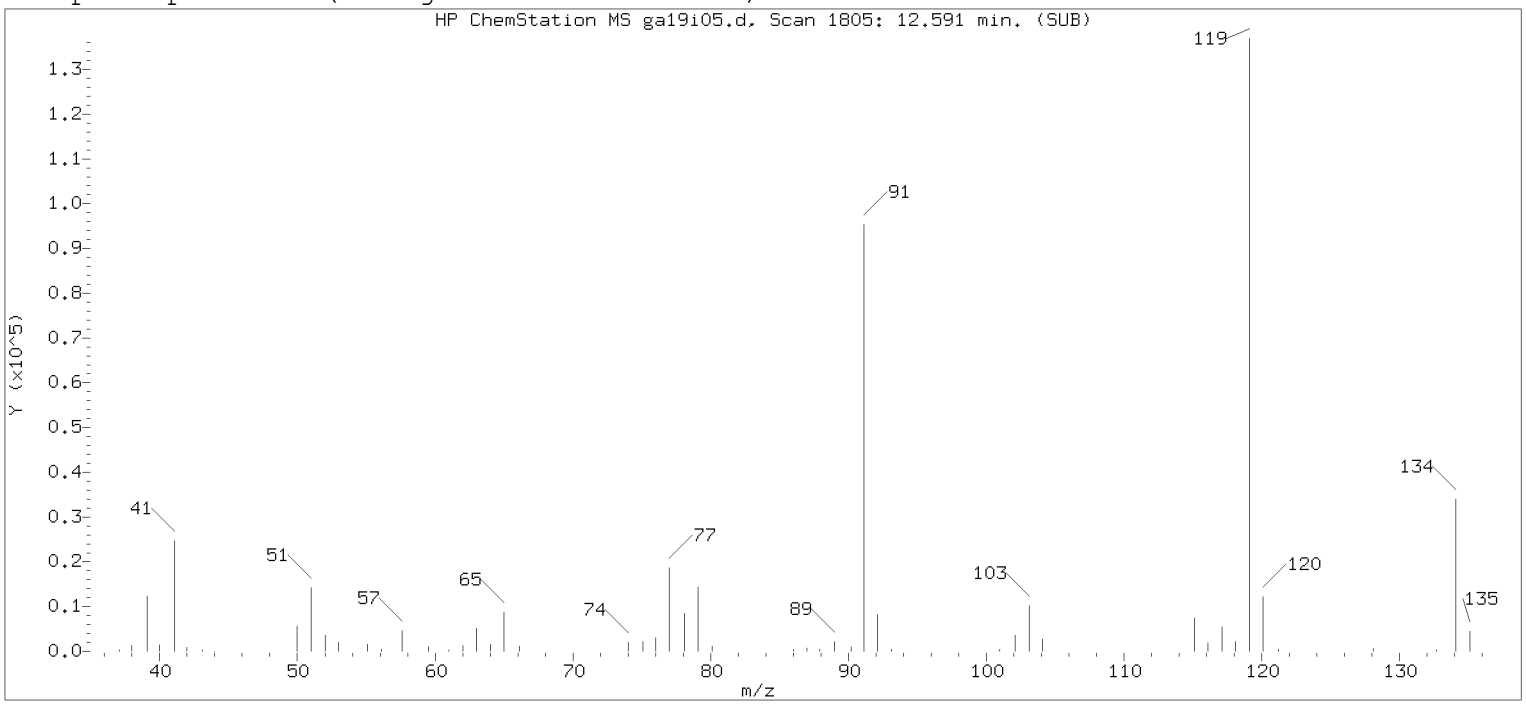
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 48072M
On-Column Amount (ng) : 0.9952
Integration start scan : 1800 Integration stop scan: 1808
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

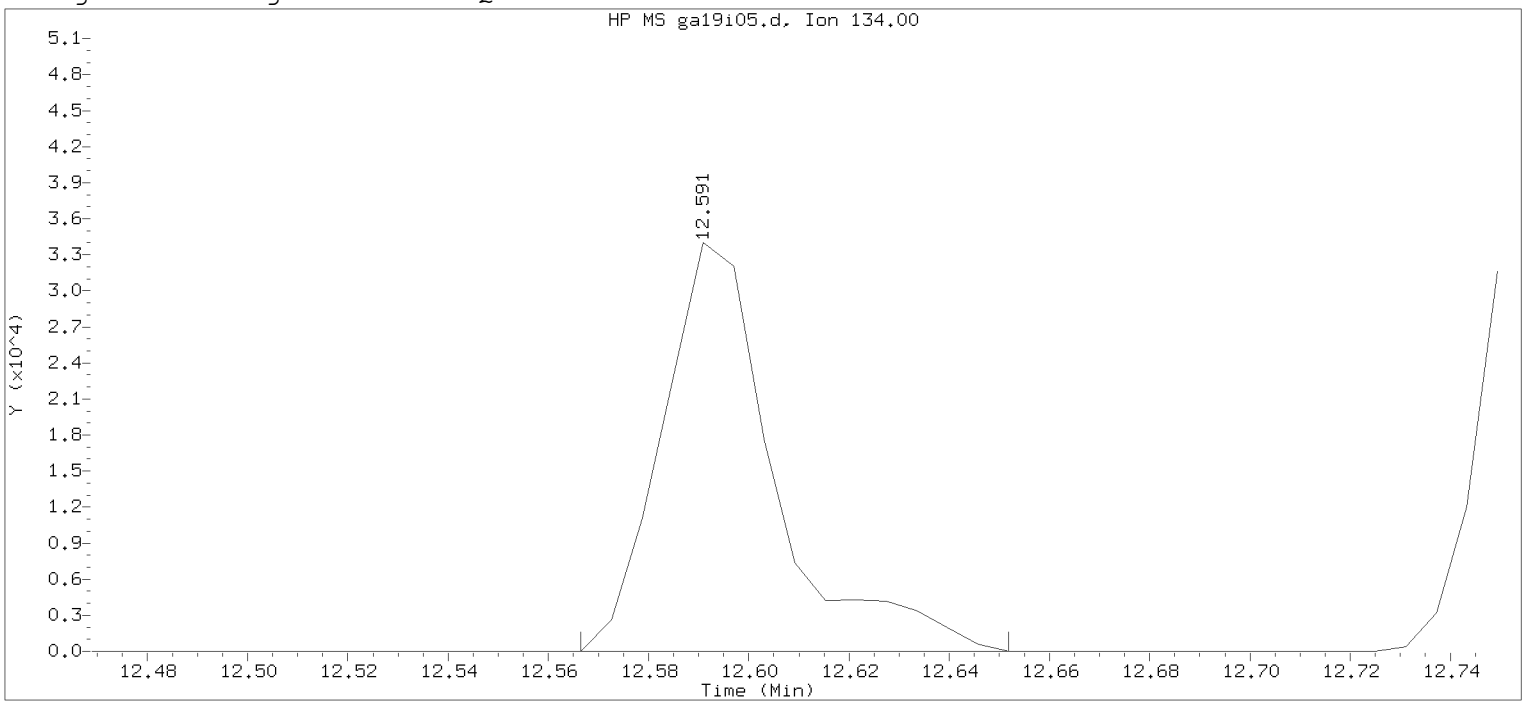
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



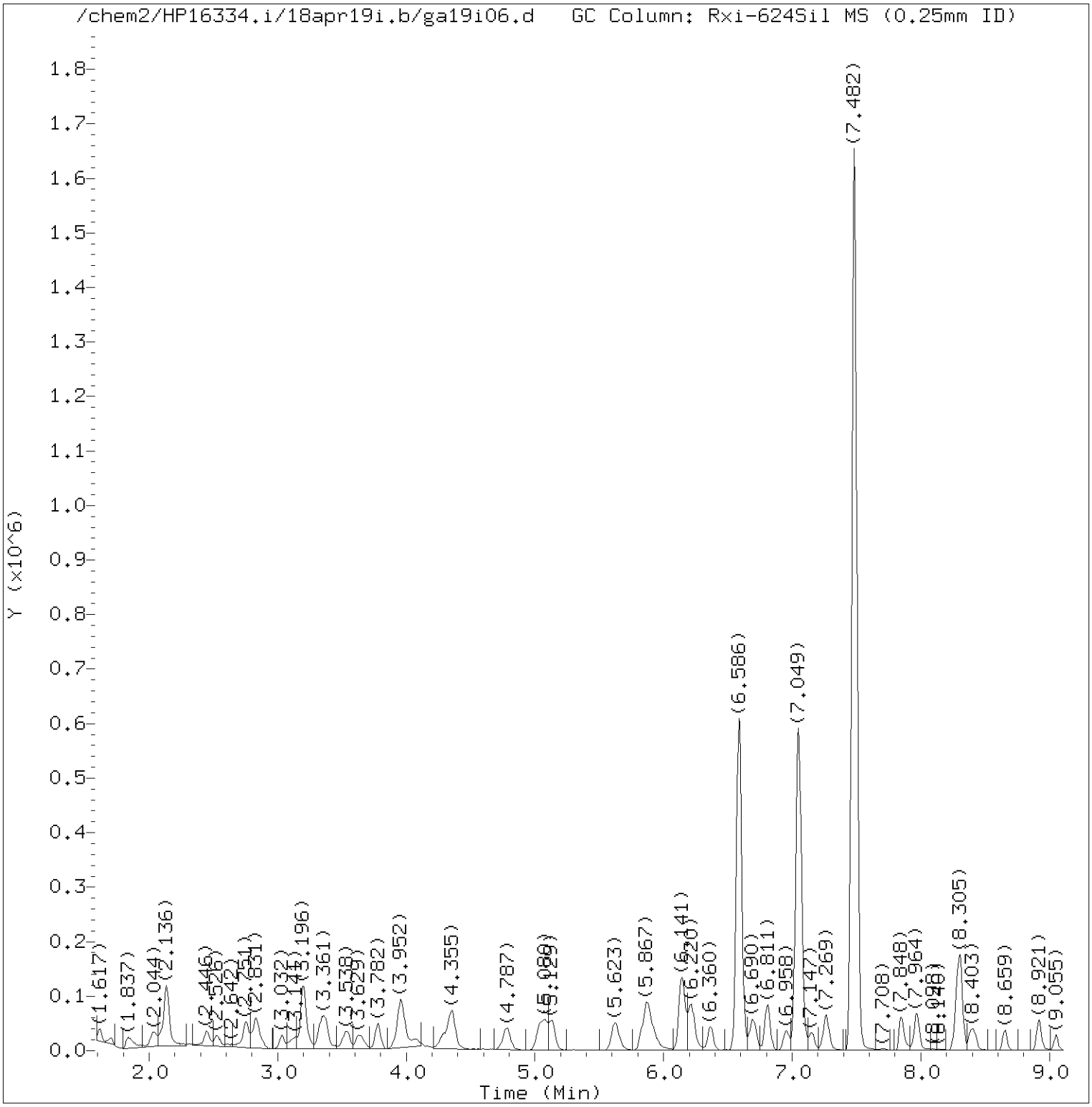
Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1805		
Retention Time (minutes)	: 12.591		
Quant Ion	: 134.00		
Area	: 53318		
On-column Amount (ng)	: 1.0803		
Integration start scan	: 1800	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause



Total Ion Chromatogram (TIC)

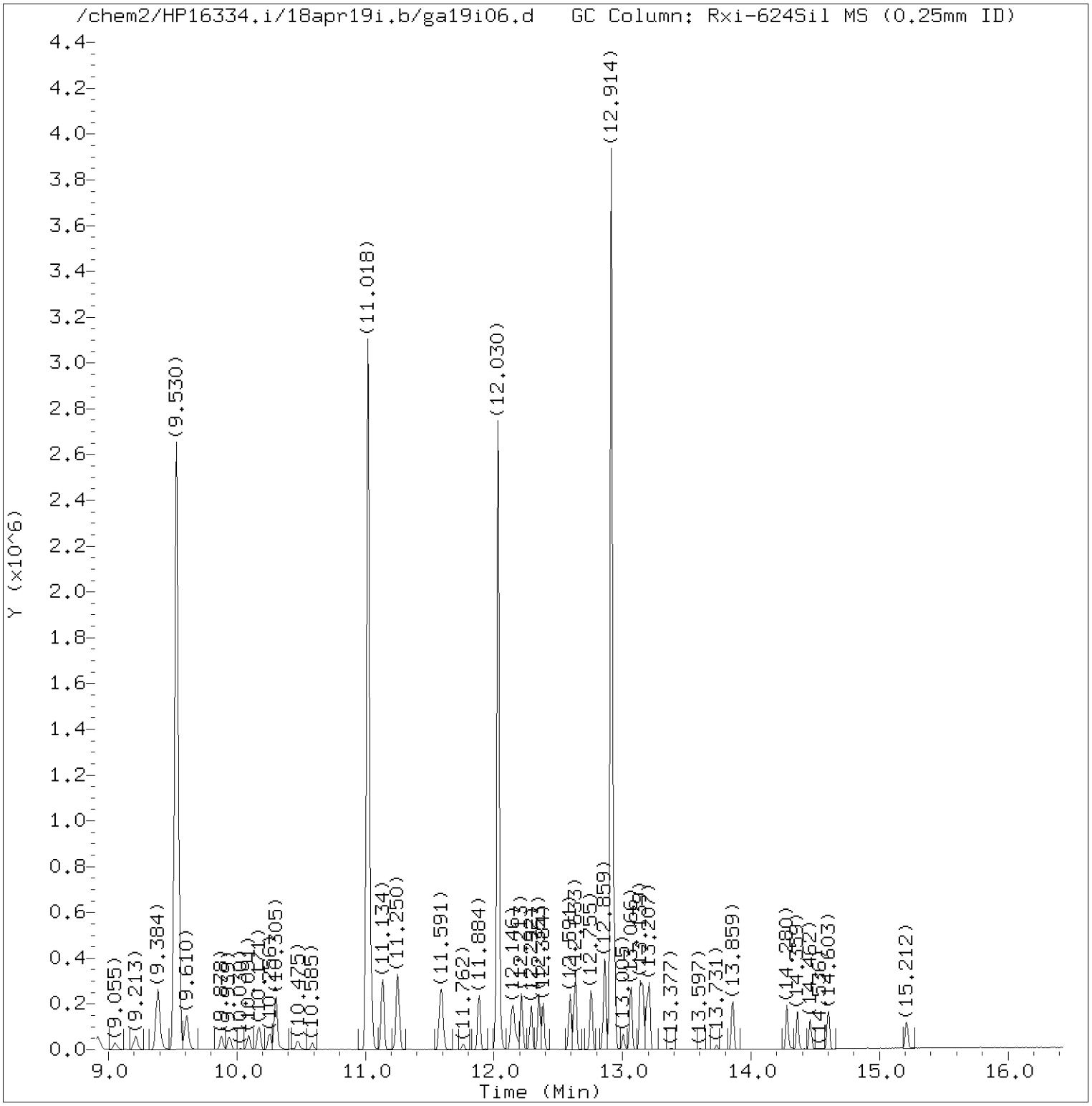
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	39636	0.503
2) Chloromethane	(2)	2.026	50	41943	0.538
5) Vinyl Chloride	(2)	2.136	62	35766	0.533
6) 1,3-Butadiene	(2)	2.136	39	84424M	0.618
7) Bromomethane	(2)	2.453	94	24361	0.543
8) Chloroethane	(2)	2.526	64	21885	0.572
9) Dichlorofluoromethane	(2)	2.751	67	51040	0.559
10) Trichlorofluoromethane	(2)	2.818	101	43732M	0.496
11) Ethyl ether	(2)	3.032	59	21390	0.492
12) Freon 123a	(2)	3.117	67	32697	0.529
13) Acrolein	(1)	3.202	56	185224	25.176
15) 1,1-Dichloroethene	(2)	3.330	96	22025	0.514
14) Acetone	(1)	3.355	43	63361M	5.458
16) Freon 113	(2)	3.367	101	23768	0.488
17) Methyl Iodide	(2)	3.526	142	43528	0.522
18) Carbon Disulfide	(2)	3.629	76	90603	0.548
21) Methyl Acetate	(1)	3.751	43	15987M	0.490
22) Allyl Chloride	(2)	3.782	41	49609	0.506
23) Methylene Chloride	(2)	3.952	84	31255	0.574
26)*t-Butyl Alcohol-d10	(1)	3.952	65	211767M	50.000
28) t-Butyl Alcohol	(1)	4.080	59	41631	10.585
29) Acrylonitrile	(1)	4.288	53	32180	2.405
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	72677	0.490
31) trans-1,2-Dichloroethene	(2)	4.361	96	26754	0.540
32) n-Hexane	(2)	4.787	57	40399	0.478
33) 1,1-Dichloroethane	(2)	5.025	63	53279	0.524
34) di-Isopropyl Ether	(2)	5.086	45	104957	0.507
35) 2-Chloro-1,3-Butadiene	(2)	5.141	53	48609	0.524
37) Ethyl t-butyl ether	(2)	5.623	59	90626	0.497
38) 2-Butanone	(1)	5.830	43	101255	4.930
39) cis-1,2-Dichloroethene	(2)	5.873	96	29213	0.519
41) 2,2-Dichloropropane	(2)	5.897	77	42746	0.508
42) Propionitrile	(1)	5.934	54	50359	9.901
40) 1,2-Dichloroethene (Total)	(2)		96	55967	1.059
45) Methacrylonitrile	(1)	6.141	67	79180	4.899
47) Bromochloromethane	(2)	6.214	128	12233	0.475
48) Tetrahydrofuran	(1)	6.220	71	23658	4.866
49) Chloroform	(2)	6.360	83	50070	0.517

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	514049	9.931
50)$Dibromofluoromethane	(2)	6.586	111	529798	9.961
51) 1,1,1-Trichloroethane	(2)	6.598	97	41766	0.507
52) Cyclohexane	(2)	6.696	56	47547	0.483
52) Cyclohexane	(2)	6.696	84	43225	0.554
52) Cyclohexane	(2)	6.683	69	13885	0.485
54) Carbon Tetrachloride	(2)	6.805	117	31603	0.469
55) 1,1-Dichloropropene	(2)	6.805	75	39443	0.514
56) Isobutyl Alcohol	(1)	6.964	41	38865	25.097
57)$1,2-Dichloroethane-d4	(2)	7.049	102	108596	9.907
57)$1,2-Dichloroethane-d4	(2)	7.049	65	632092	10.172
57)$1,2-Dichloroethane-d4	(2)	7.049	104	68656	10.062
58) Benzene	(2)	7.067	78	111440	0.528
59) 1,2-Dichloroethane	(2)	7.153	62	38964	0.534
60) t-Amyl methyl ether	(2)	7.269	73	75245	0.485
63)*Fluorobenzene	(2)	7.482	96	2057002	10.000
62) n-Heptane	(2)	7.494	43	48752	0.482
65) n-Butanol	(1)	7.848	56	58896M	45.901
67) Trichloroethene	(2)	7.970	95	28309	0.508
69) Methylcyclohexane	(2)	8.281	83	44976	0.470
70) 1,2-Dichloropropane	(2)	8.305	63	29730	0.507
71) Methyl Methacrylate	(1)	8.390	69	14548	0.466
72) 1,4-Dioxane	(1)	8.397	88	4429M	19.091
73) Dibromomethane	(2)	8.415	93	13576	0.490
74) Bromodichloromethane	(2)	8.659	83	33410	0.480
76) 2-Nitropropane	(1)	8.921	41	46284	4.309
80) cis-1,3-Dichloropropene	(2)	9.213	75	39612	0.460
81) 4-Methyl-2-Pentanone	(1)	9.384	43	245229M	4.837
82)$Toluene-d8	(3)	9.530	98	2077352	10.084
82)$Toluene-d8	(3)	9.530	100	1313986	10.014
83) Toluene	(3)	9.610	92	69089	0.526
84) trans-1,3-Dichloropropene	(3)	9.878	75	33451	0.462
86) Ethyl Methacrylate	(3)	9.939	69	30738	0.474
88) 1,1,2-Trichloroethane	(3)	10.091	97	20029	0.507
85) 1,3-Dichloropropene (total)	(3)		75	73063	0.922
89) Tetrachloroethene	(3)	10.171	166	32089	0.526
90) 1,3-Dichloropropane	(3)	10.256	76	35685	0.499
91) 2-Hexanone	(1)	10.305	43	169720M	4.744

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	19360	0.432
95) 1,2-Dibromoethane	(3)	10.591	107	18014	0.478
97)*Chlorobenzene-d5	(3)	11.018	117	1537140	10.000
98) Chlorobenzene	(3)	11.048	112	77699	0.516
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	23480	0.460
100) Ethylbenzene	(3)	11.134	91	136782	0.523
101) m+p-Xylene	(3)	11.250	106	99702	1.001
104) o-Xylene	(3)	11.579	106	50450	0.504
106) Styrene	(3)	11.597	104	79339	0.478
105) Xylene (Total)	(3)		106	150152	1.505
107) Bromoform	(3)	11.762	173	10734	0.412
108) Isopropylbenzene	(3)	11.884	105	134786	0.514
111)$4-Bromofluorobenzene	(3)	12.030	95	795004	10.073
111)$4-Bromofluorobenzene	(3)	12.030	174	674228	9.988
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	24104	0.471
114) Bromobenzene	(4)	12.146	156	33311	0.495
116) 1,2,3-Trichloropropane	(4)	12.176	110	6968	0.488
117) n-Propylbenzene	(4)	12.213	91	163274	0.521
119) 2-Chlorotoluene	(4)	12.292	126	31729	0.510
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	113325	0.503
122) 4-Chlorotoluene	(4)	12.384	126	32566	0.499
125) tert-Butylbenzene	(4)	12.591	134	25111M	0.531
126) Pentachloroethane	(4)	12.627	167	15809	0.422
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	111227	0.484
128) sec-Butylbenzene	(4)	12.755	105	143774	0.500
131) 1,3-Dichlorobenzene	(4)	12.859	146	65044	0.485
132) p-Isopropyltoluene	(4)	12.865	119	123331	0.493
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	865930	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	67434	0.496
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	50876	0.496
136) Benzyl Chloride	(4)	13.005	126	6891	0.373
138) n-Butylbenzene	(4)	13.158	92	66877	0.497
139) 1,2-Dichlorobenzene	(4)	13.188	146	61712	0.489
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	3254	0.422
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	54666	0.487
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	49913	0.479
146) Hexachlorobutadiene	(4)	14.365	225	27804	0.507
147) Naphthalene	(4)	14.462	128	81341	0.468

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

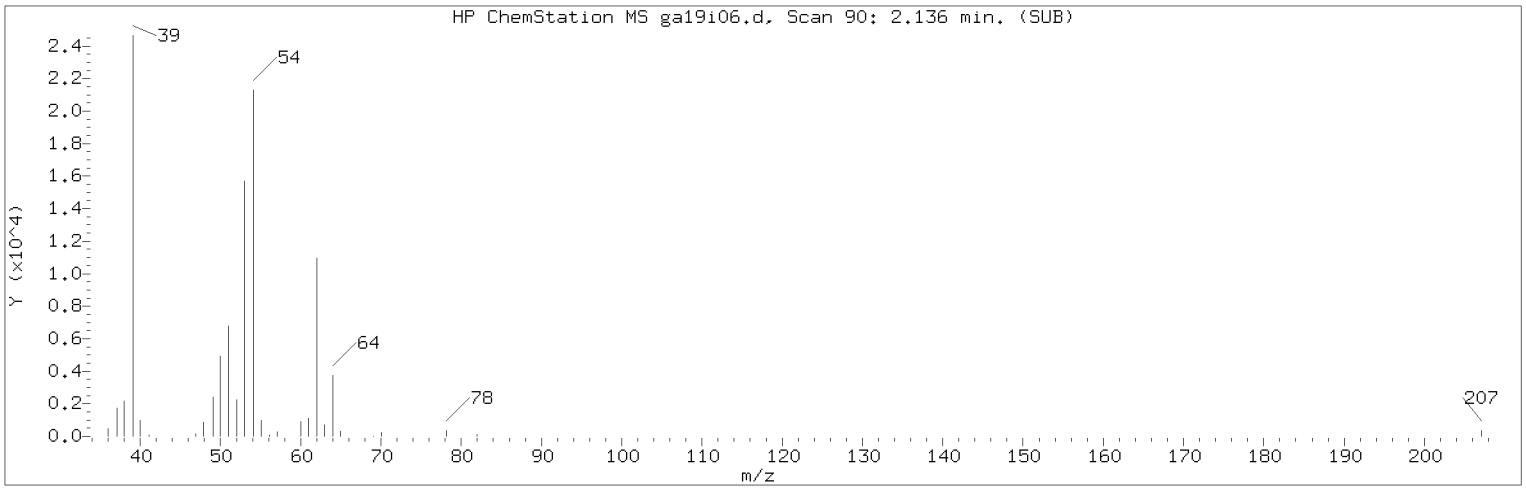
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

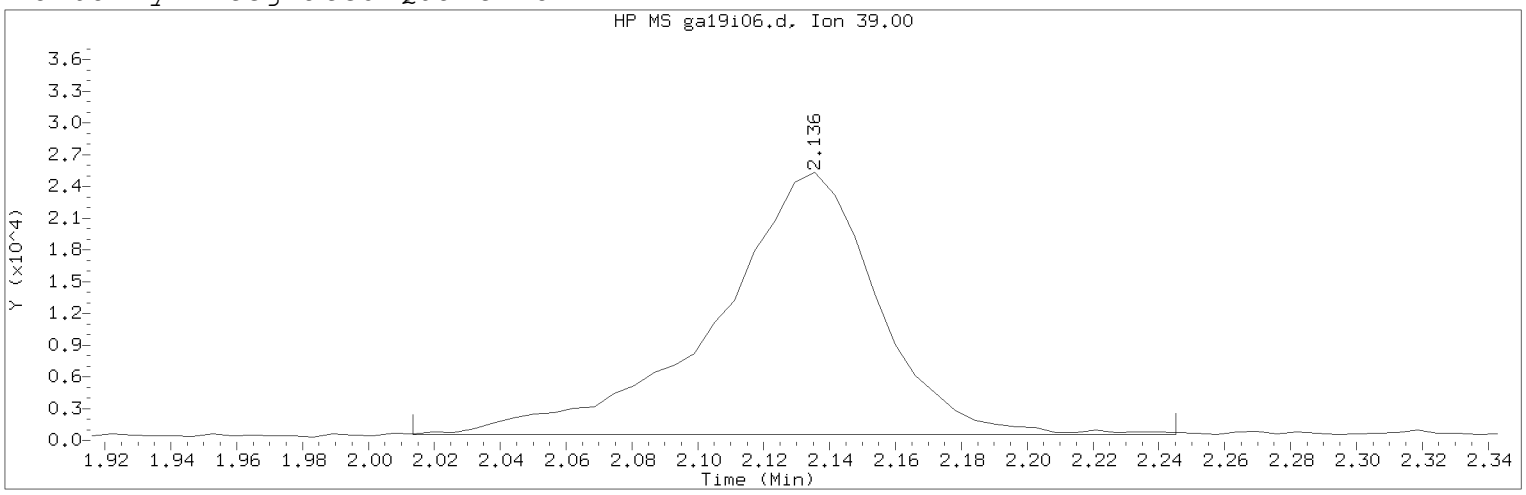
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	41666	0.467

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

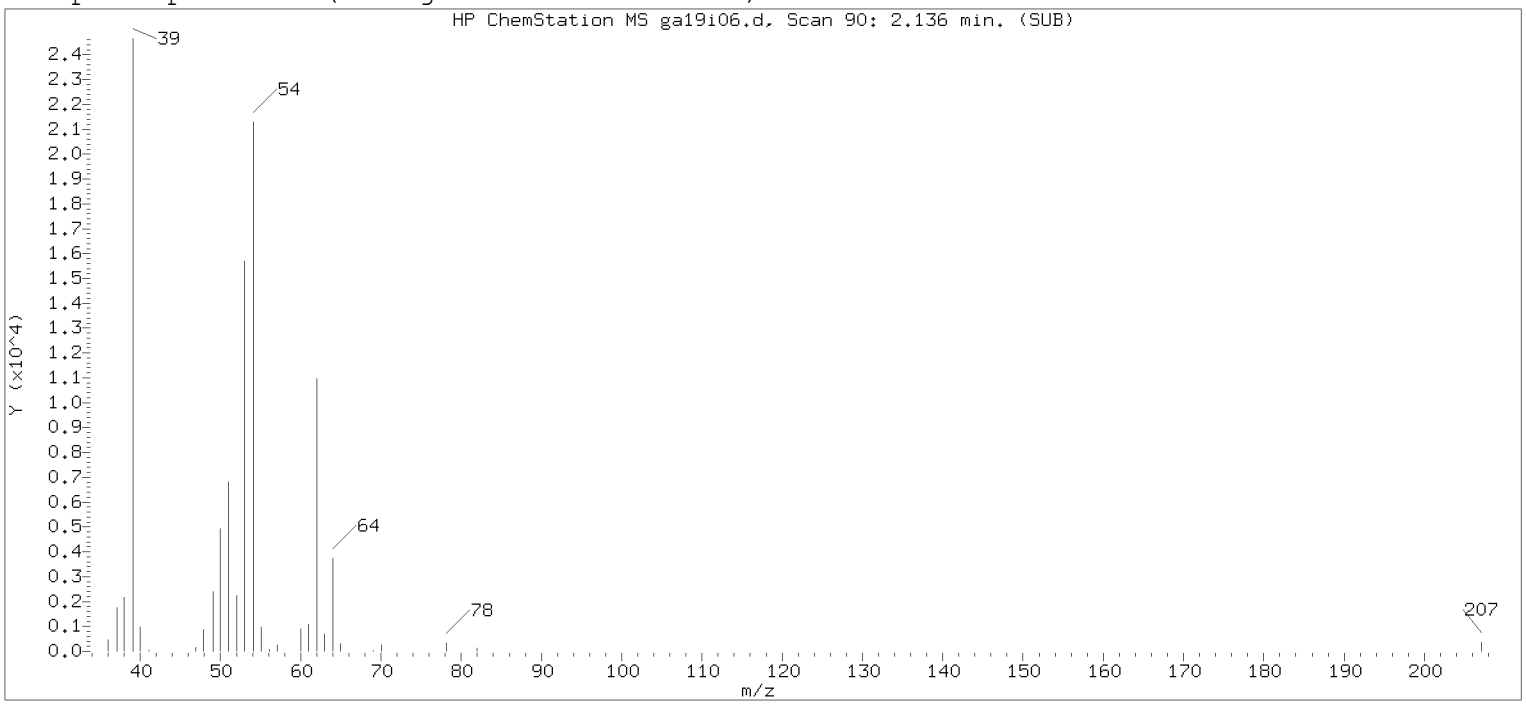
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 84424M
On-Column Amount (ng) : 0.6176
Integration start scan : 69 Integration stop scan: 107
Y at integration start : 555 Y at integration end: 555

Reason for manual integration: improper integration

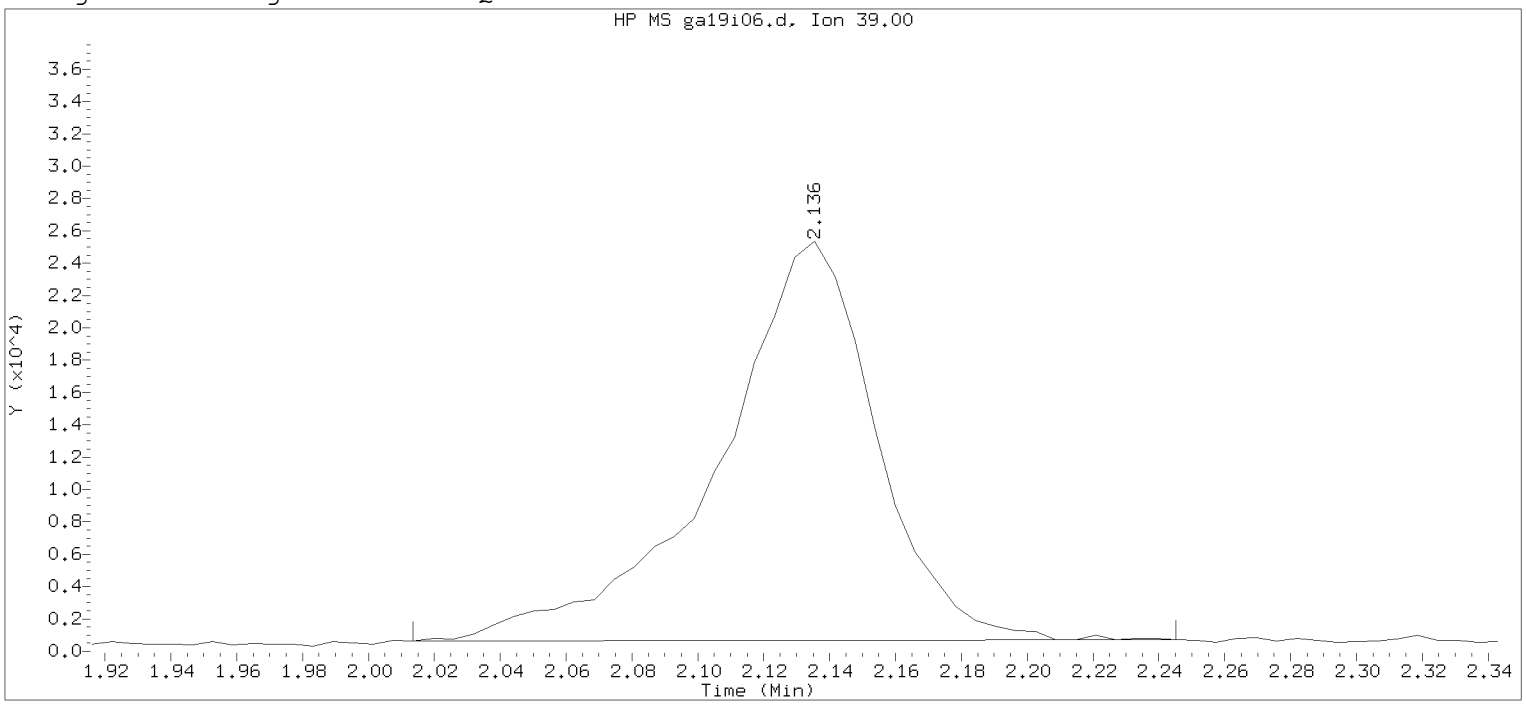
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

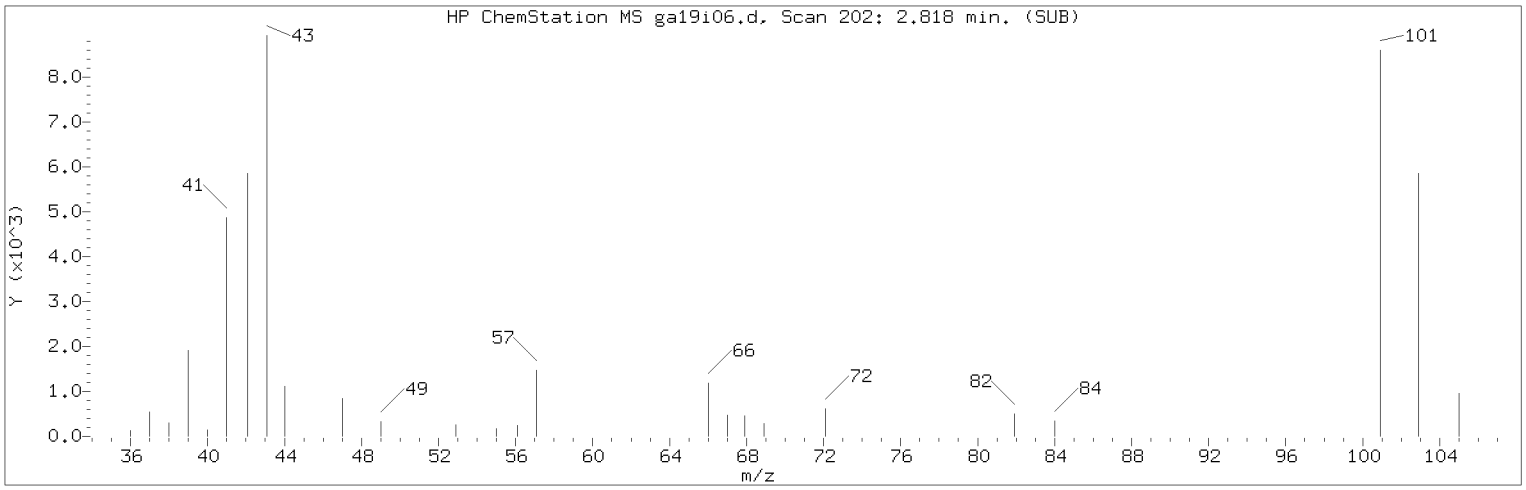
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

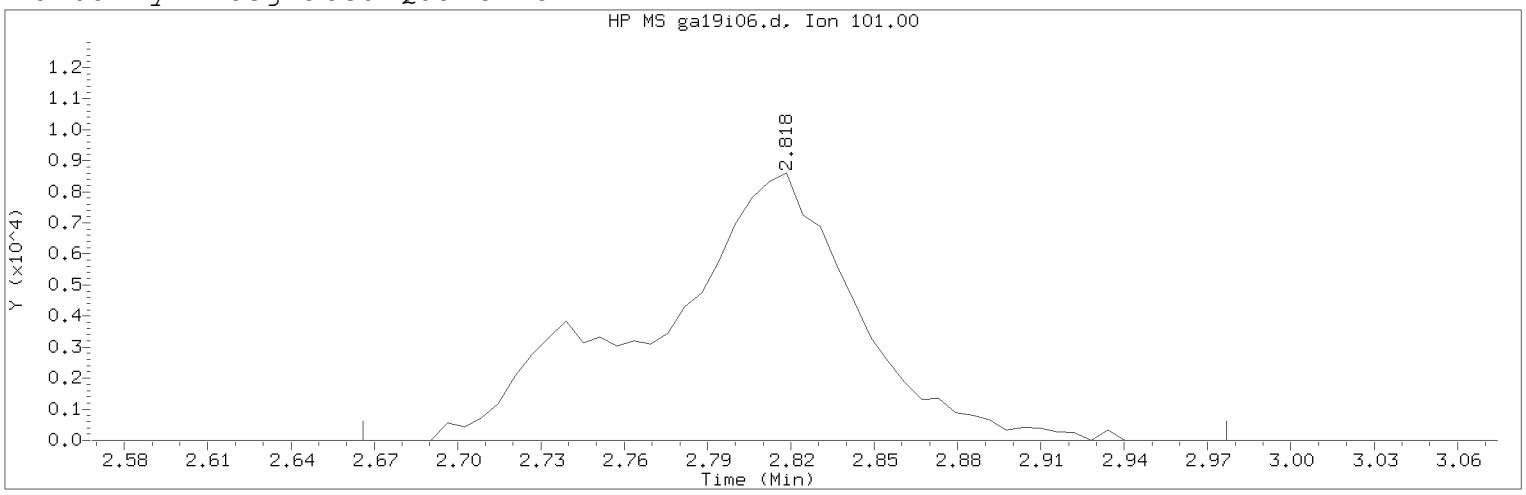
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 82704
On-column Amount (ng) : 0.6390
Integration start scan : 69 Integration stop scan: 107
Y at integration start : 626 Y at integration end: 725

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

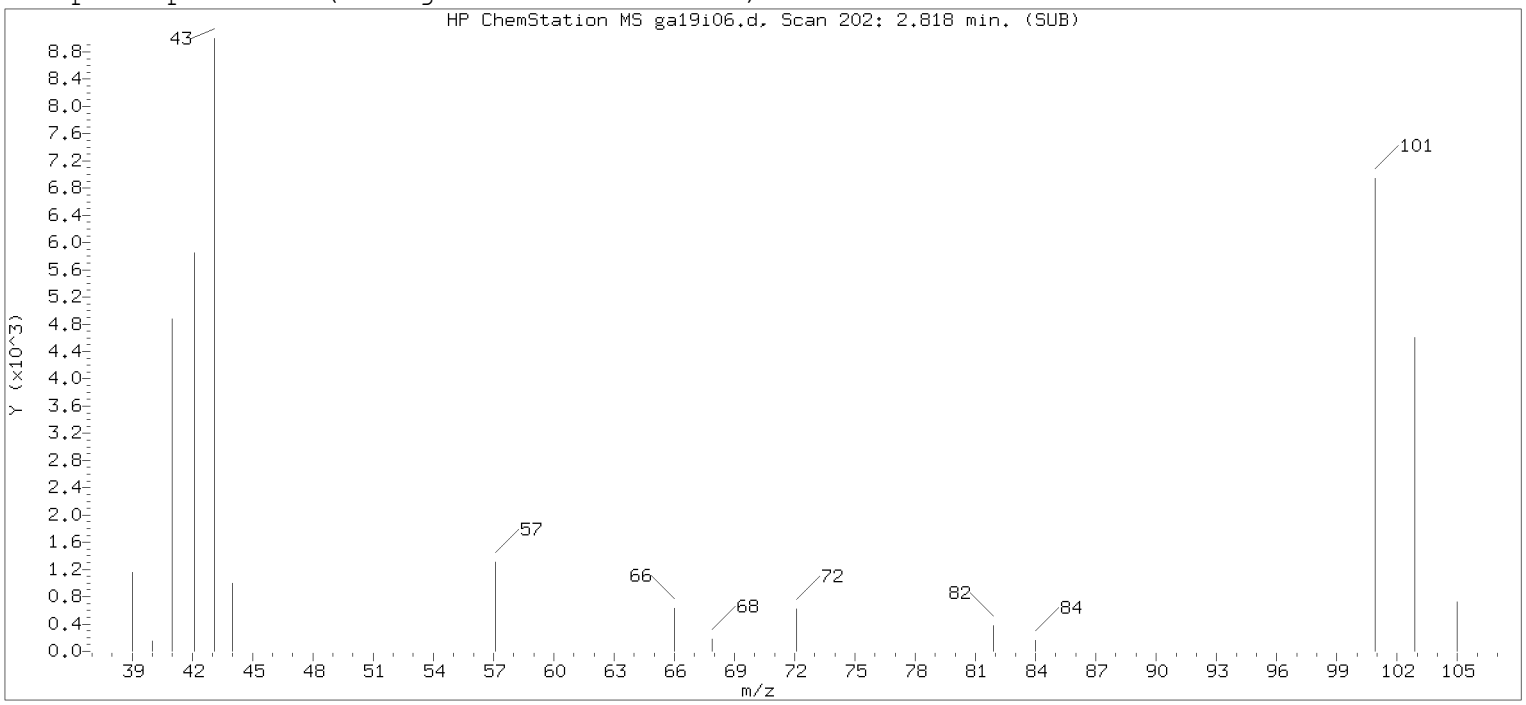
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 202
Retention Time (minutes): 2.818
Quant Ion : 101.00
Area (flag) : 43732M
On-Column Amount (ng) : 0.4958
Integration start scan : 176 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

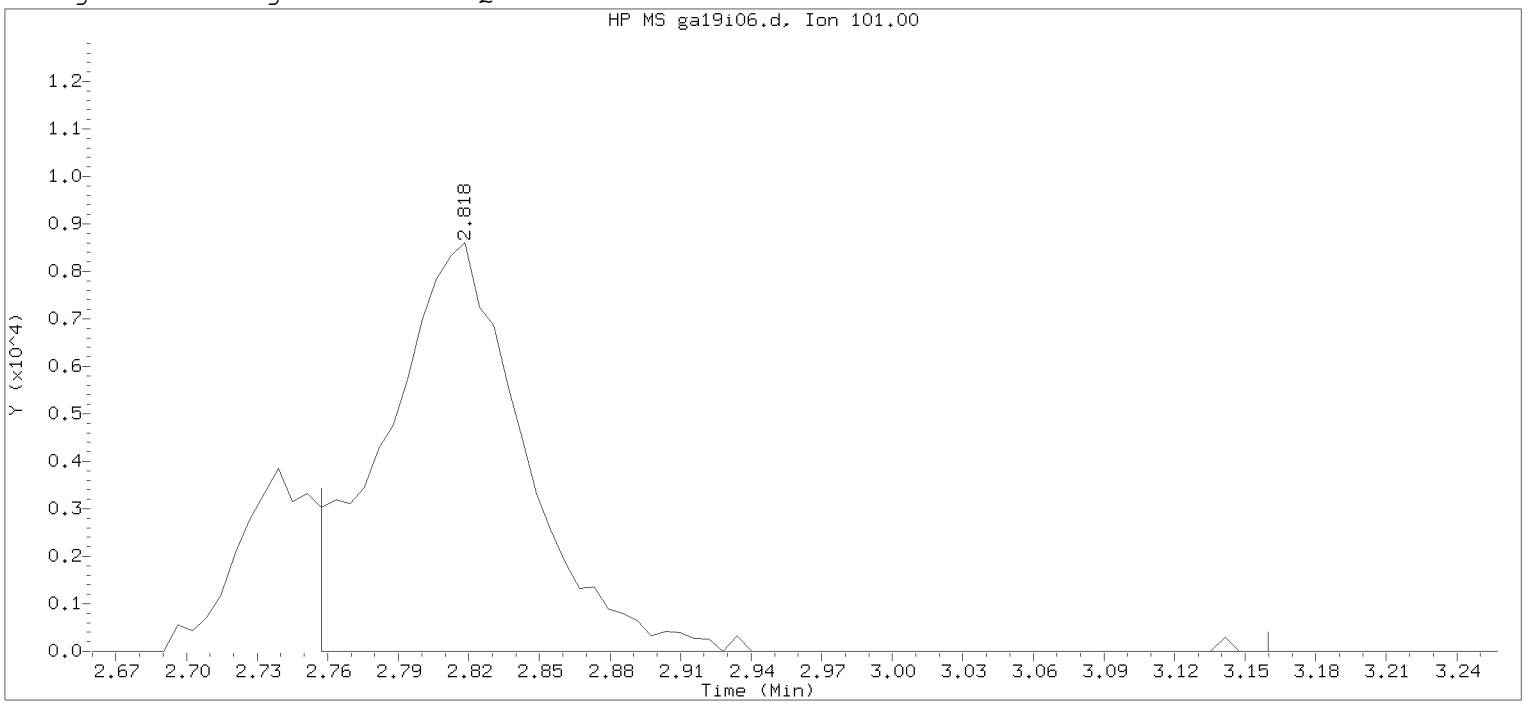
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

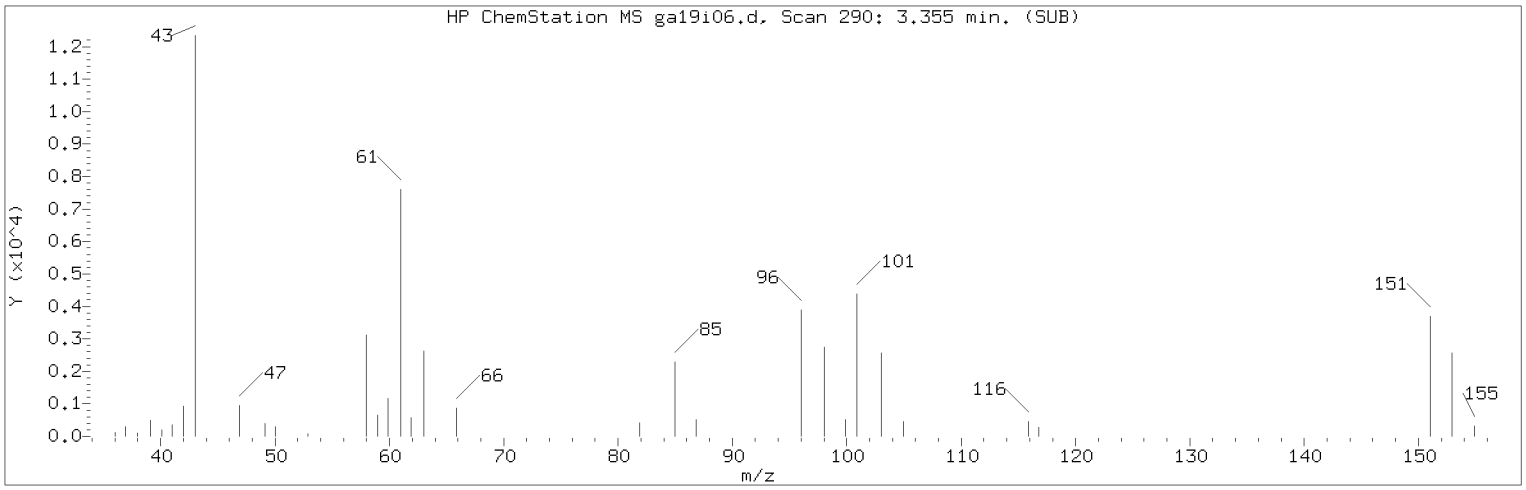
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

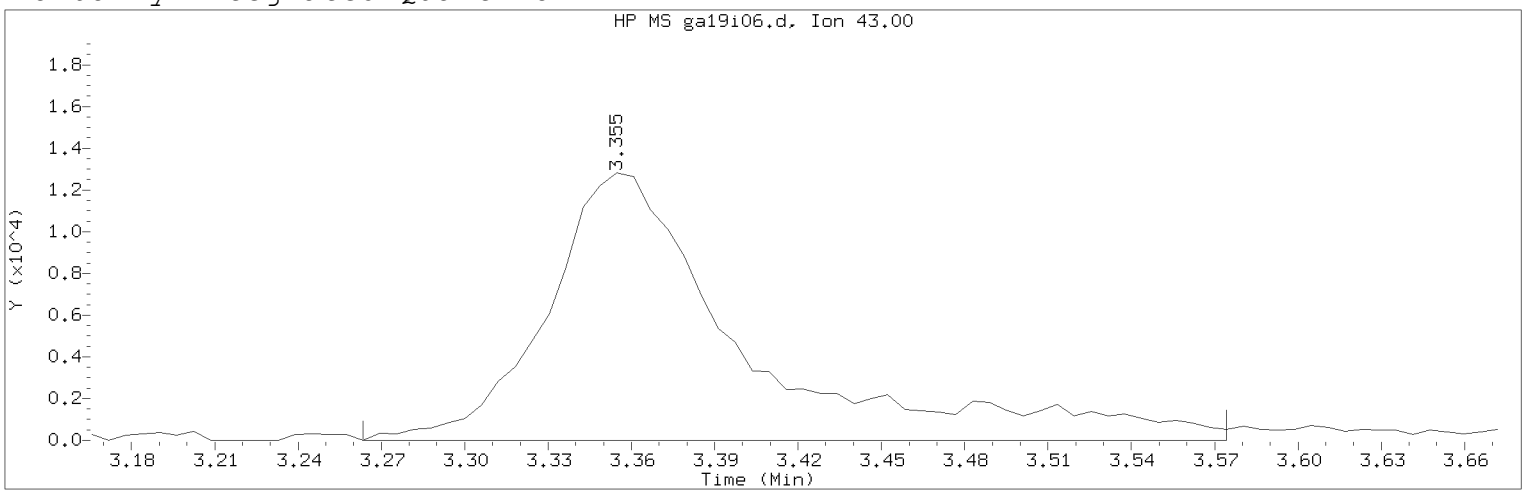
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 202
Retention Time (minutes): 2.818
Quant Ion : 101.00
Area : 35474
On-column Amount (ng) : 0.4475
Integration start scan : 191 Integration stop scan: 257
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

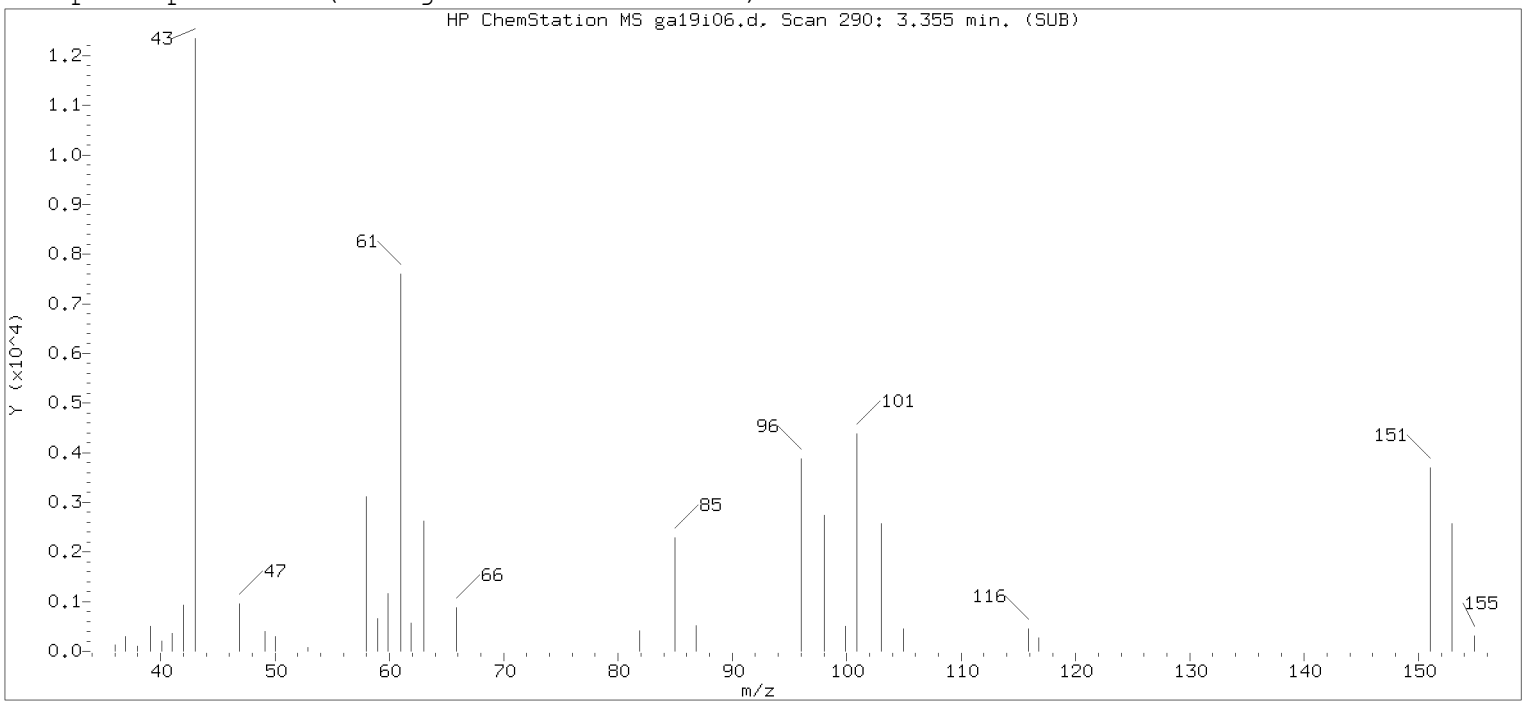
Compound Number : 14
Compound Name : Acetone
Scan Number : 290
Retention Time (minutes): 3.355
Quant Ion : 43.00
Area (flag) : 63361M
On-Column Amount (ng) : 5.4583
Integration start scan : 274 Integration stop scan: 325
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

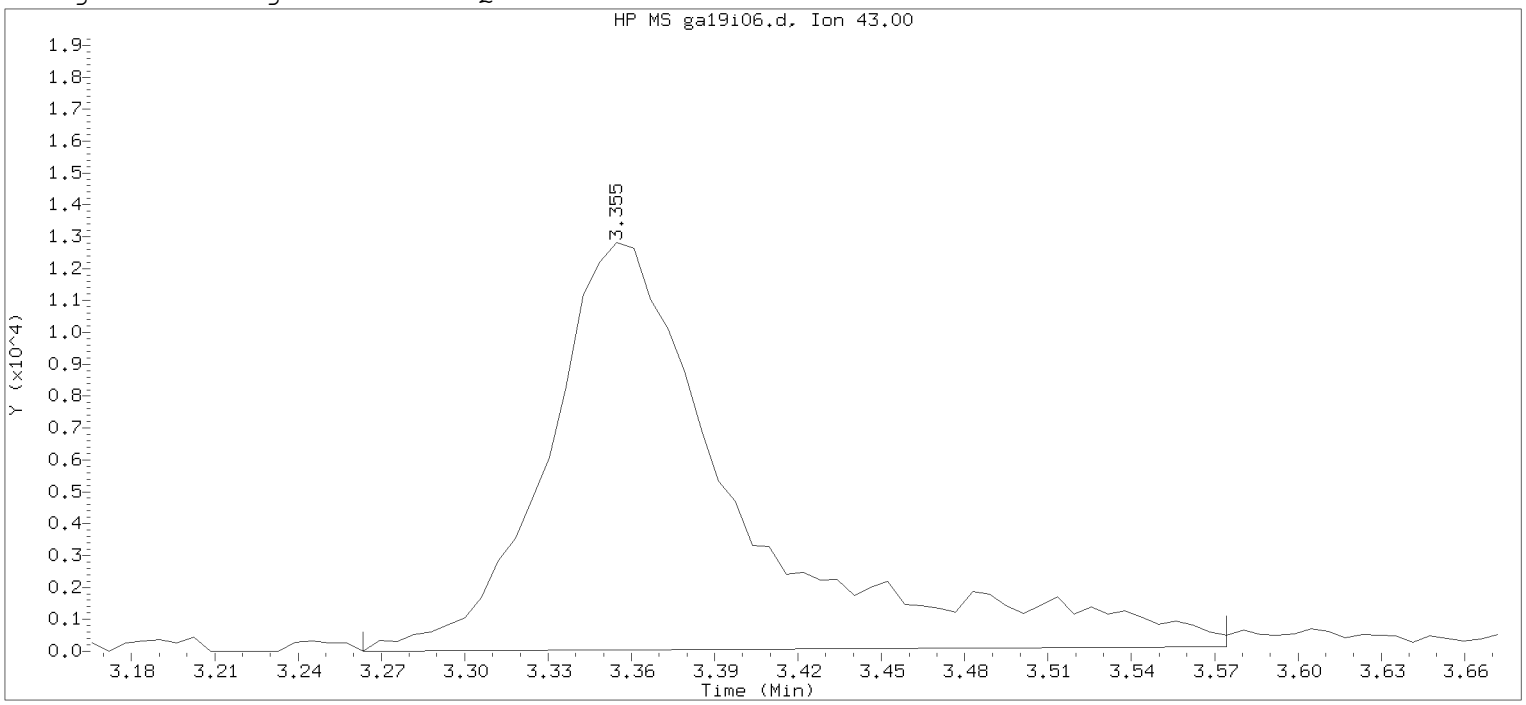
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

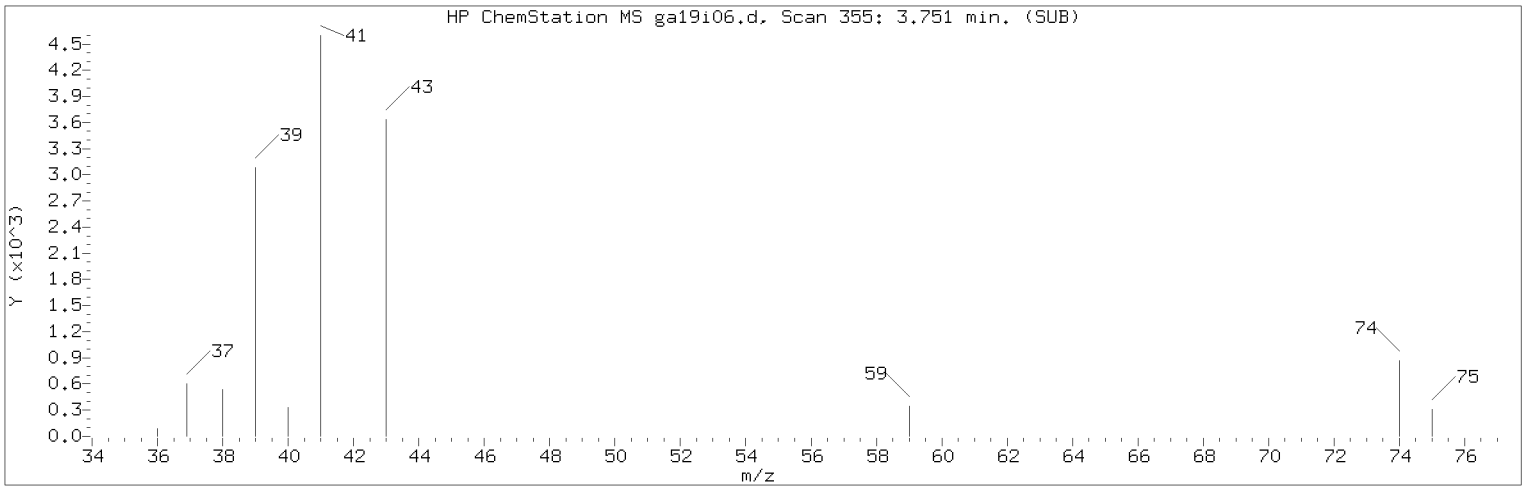
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

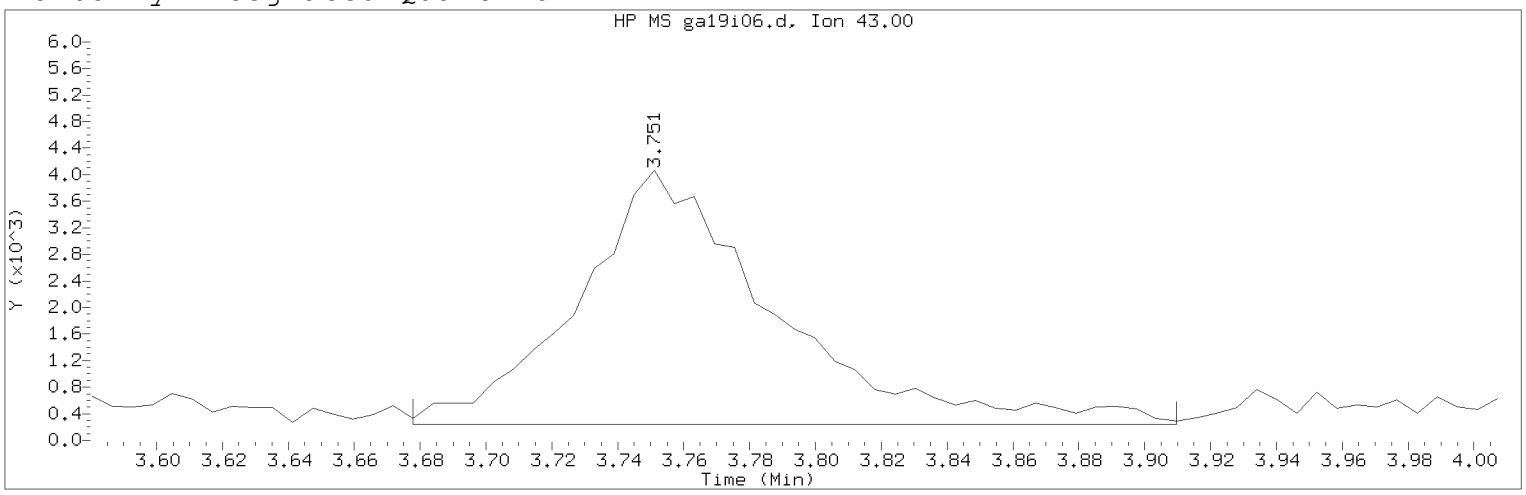
Compound Number : 14
Compound Name : Acetone
Scan Number : 290
Retention Time (minutes): 3.355
Quant Ion : 43.00
Area : 61896
On-column Amount (ng) : 5.5051
Integration start scan : 274 Integration stop scan: 325
Y at integration start : 0 Y at integration end: 147

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

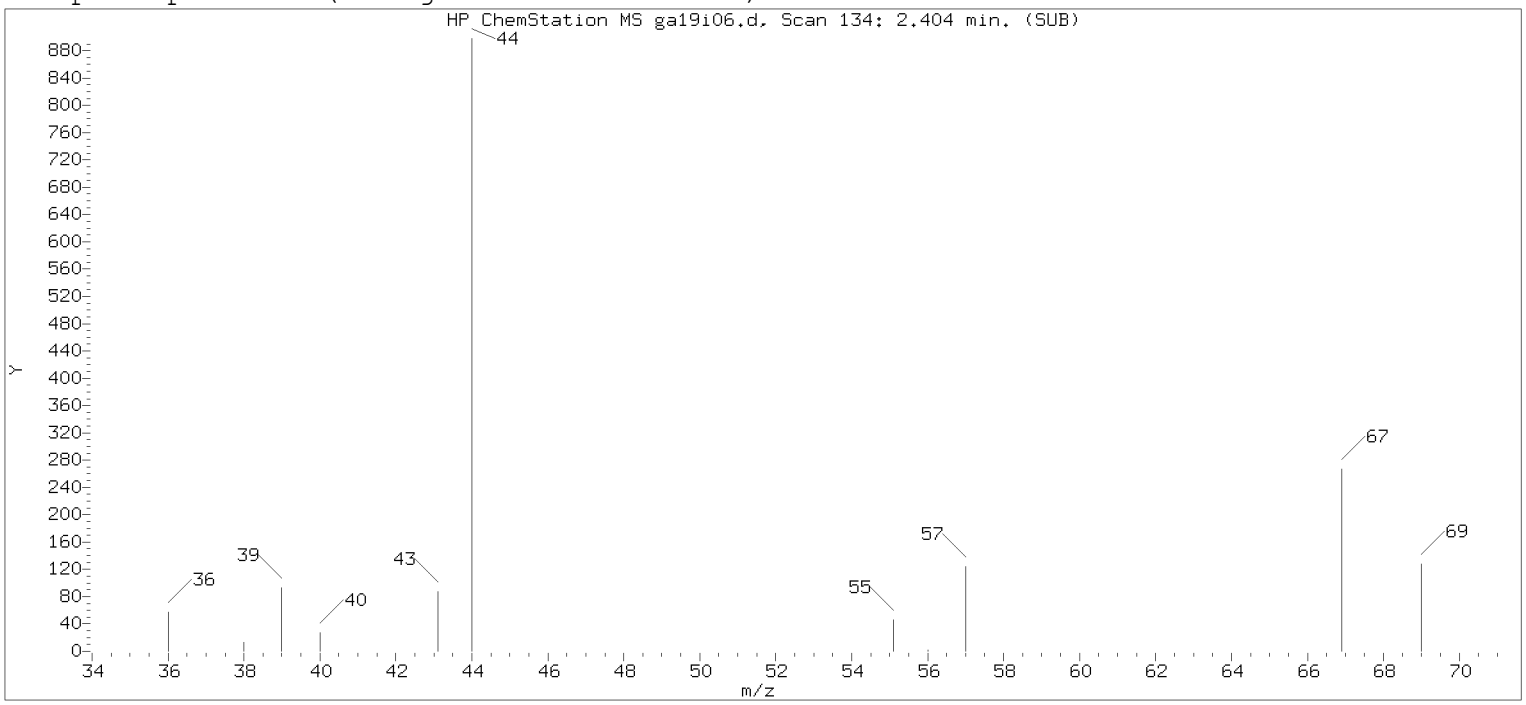
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 15987M
On-Column Amount (ng) : 0.4900
Integration start scan : 342 Integration stop scan: 380
Y at integration start : 239 Y at integration end: 239

Reason for manual integration: improper integration

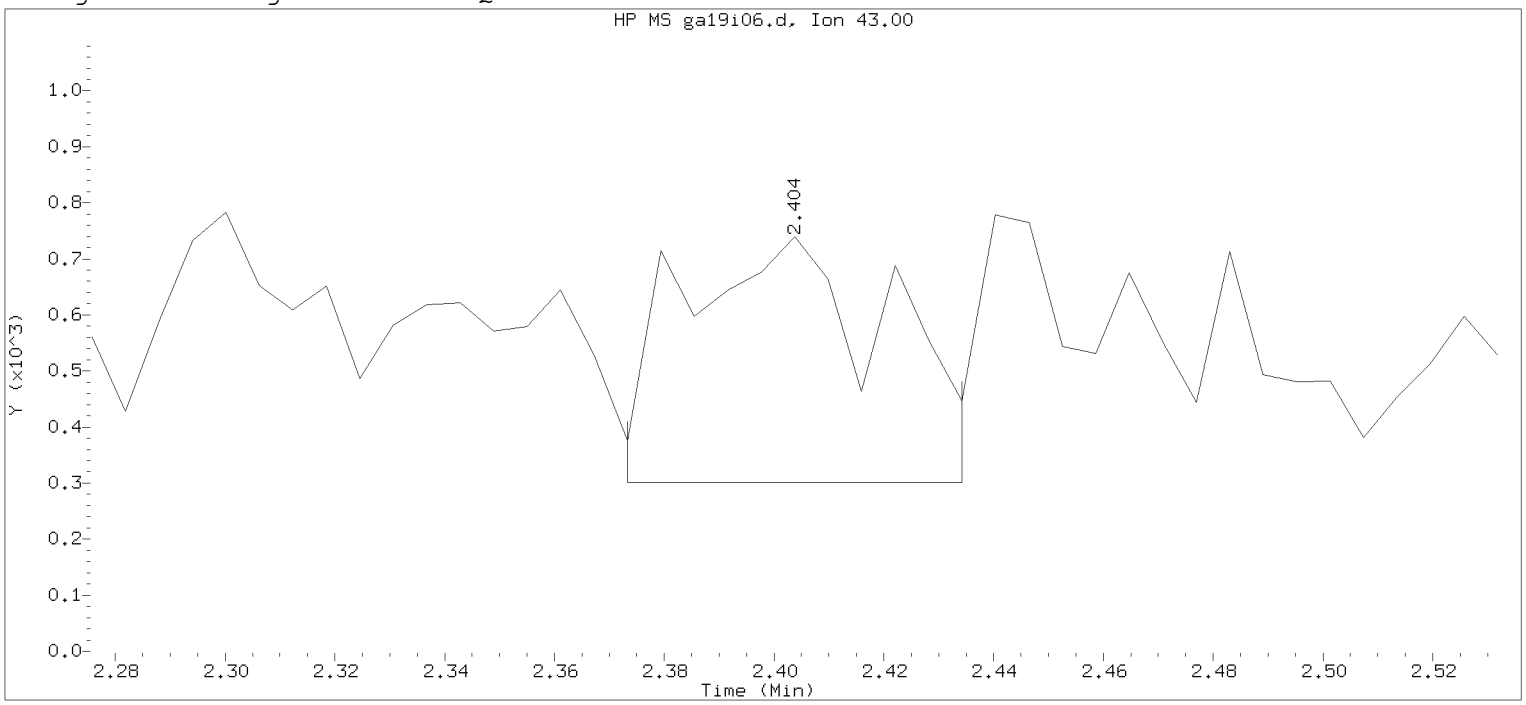
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

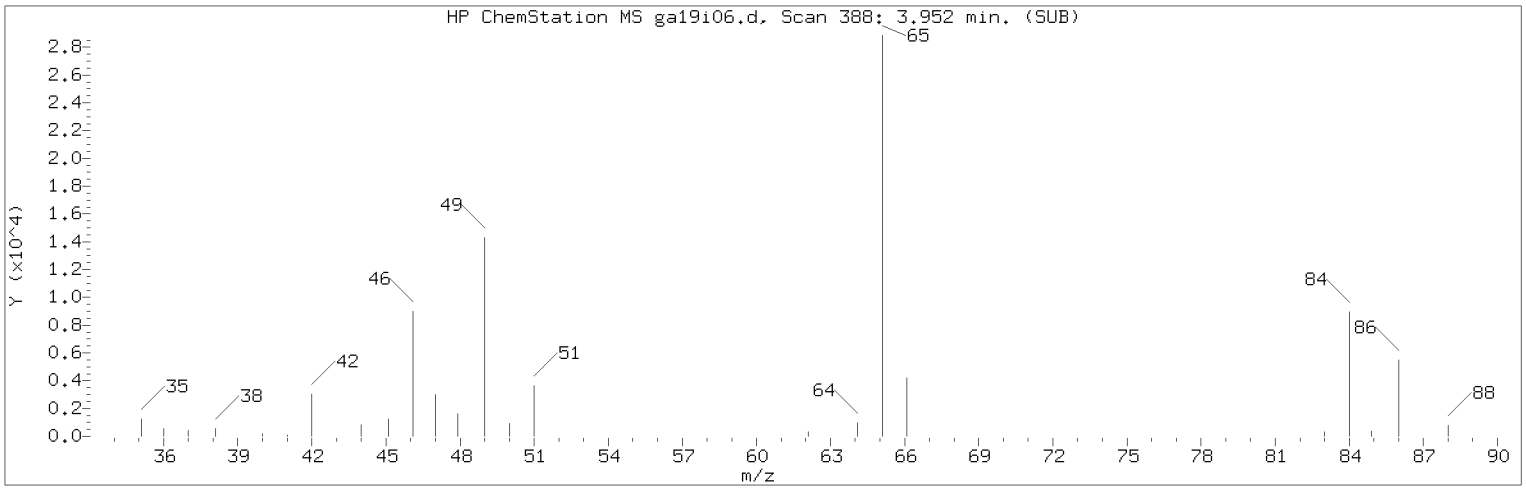
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

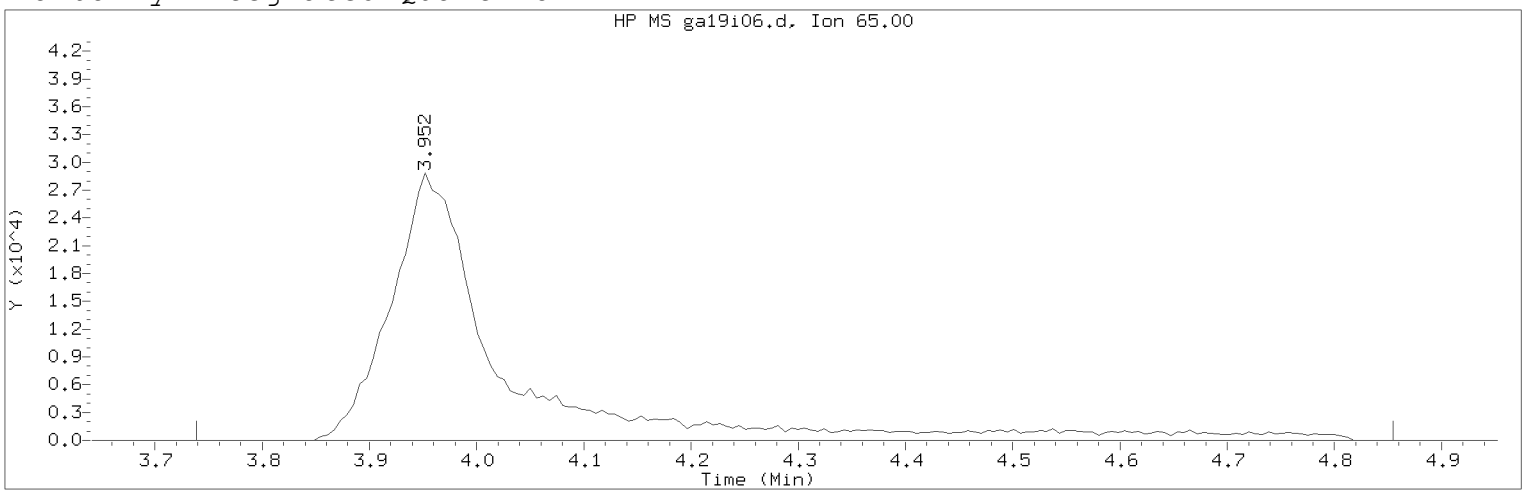
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 43.00
Area : 1149
On-column Amount (ng) : 1.0225
Integration start scan : 128 Integration stop scan: 138
Y at integration start : 301 Y at integration end: 301

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

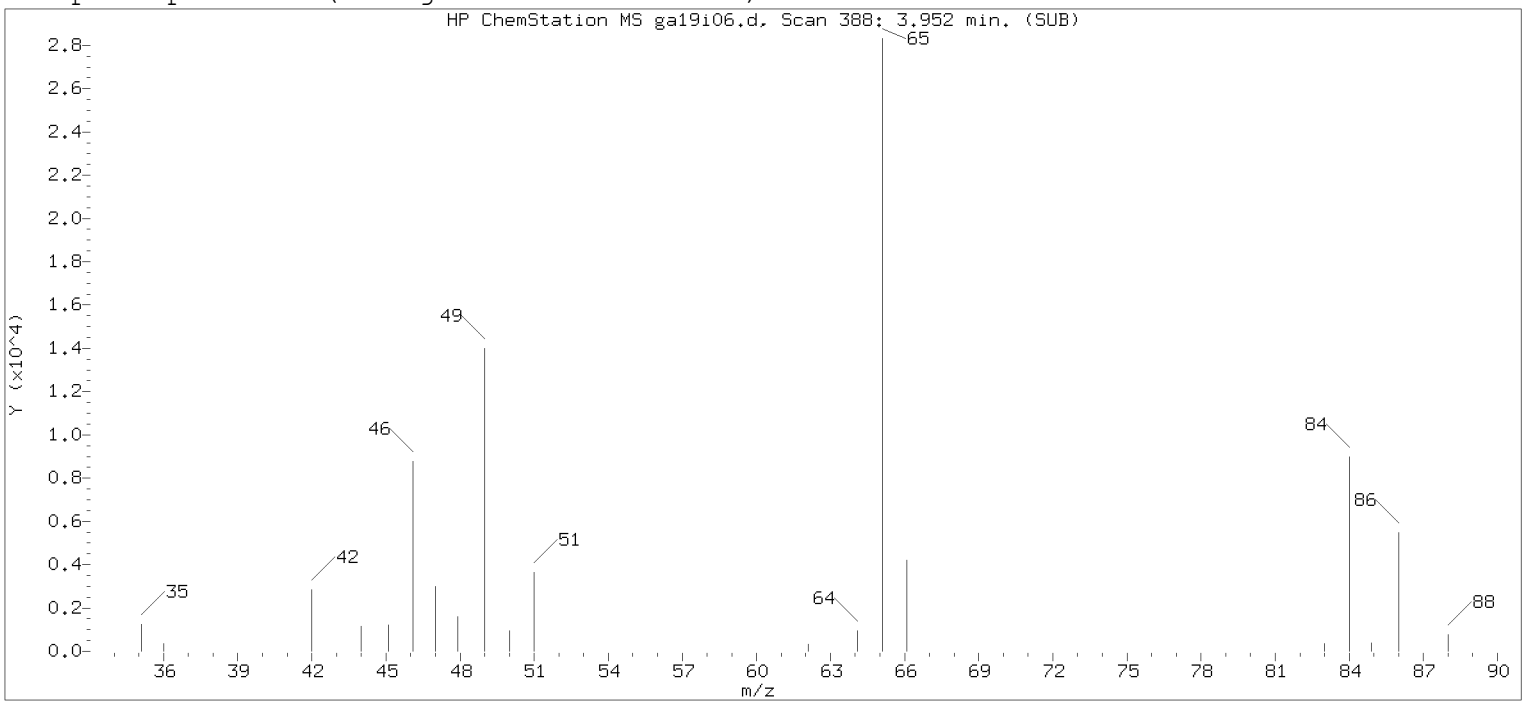
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 388
Retention Time (minutes): 3.952
Quant Ion : 65.00
Area (flag) : 211767M
On-Column Amount (ng) : 50.0000
Integration start scan : 352 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

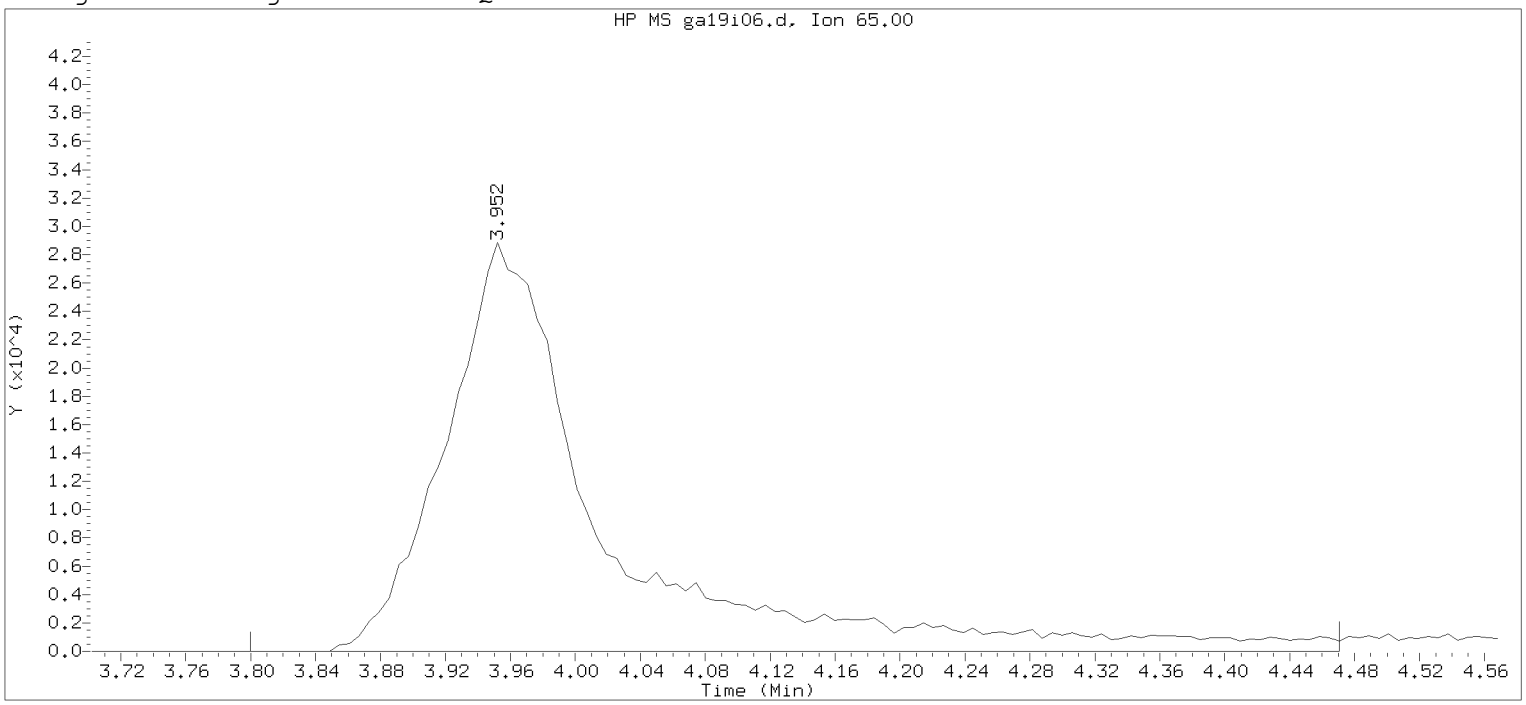
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

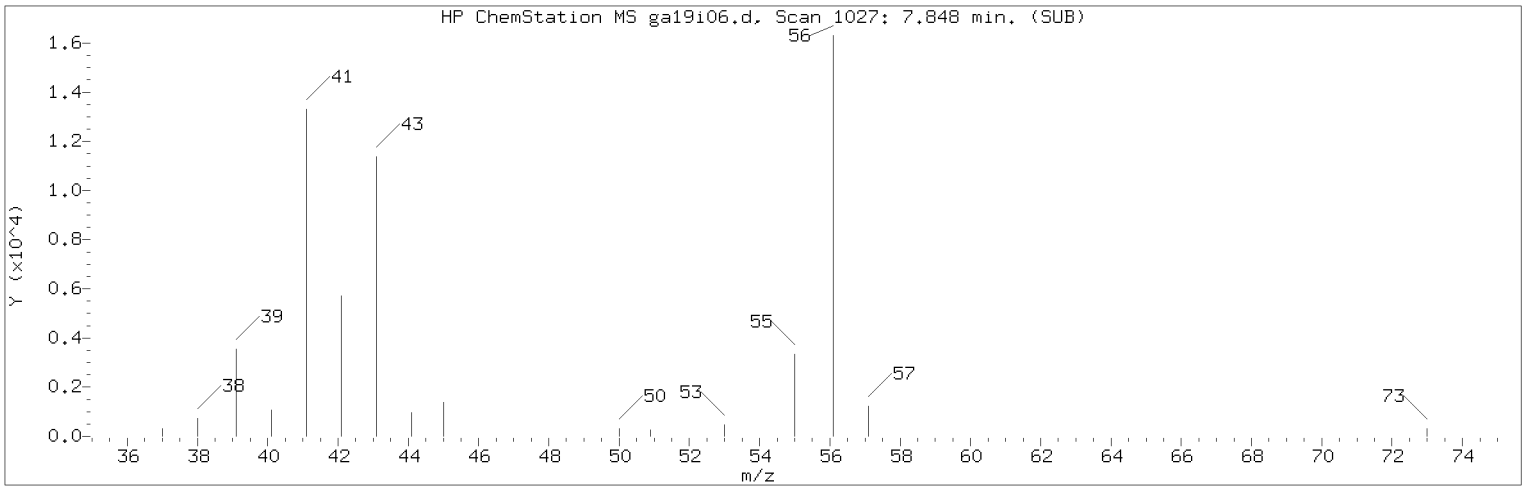
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

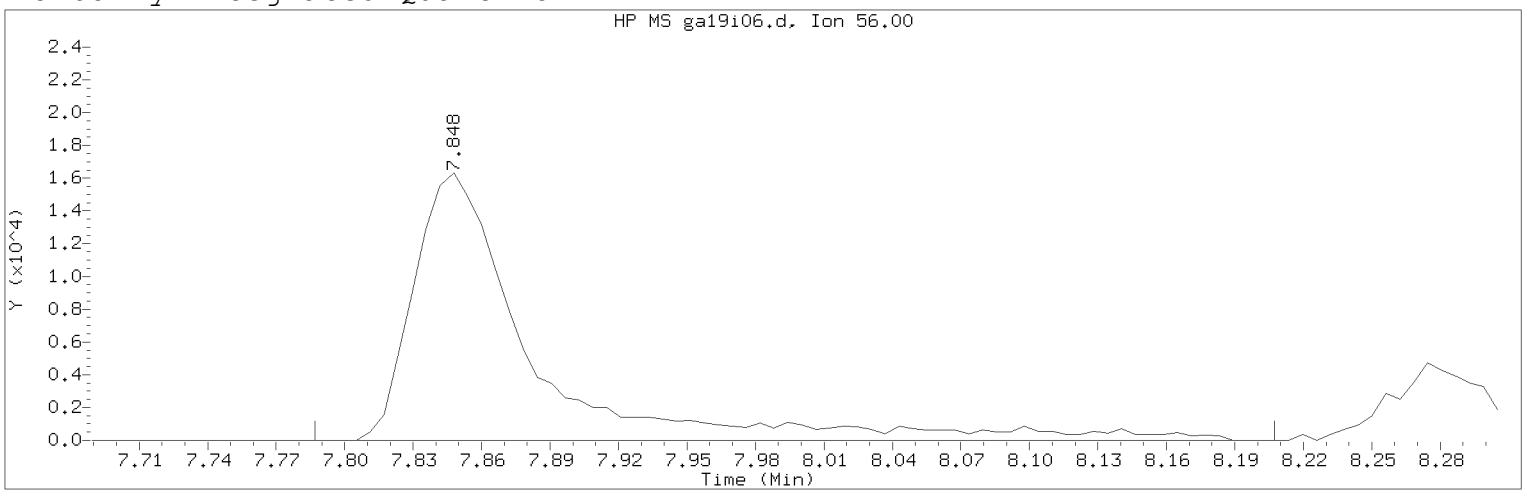
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 388
Retention Time (minutes): 3.952
Quant Ion : 65.00
Area : 194962
On-column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 472
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

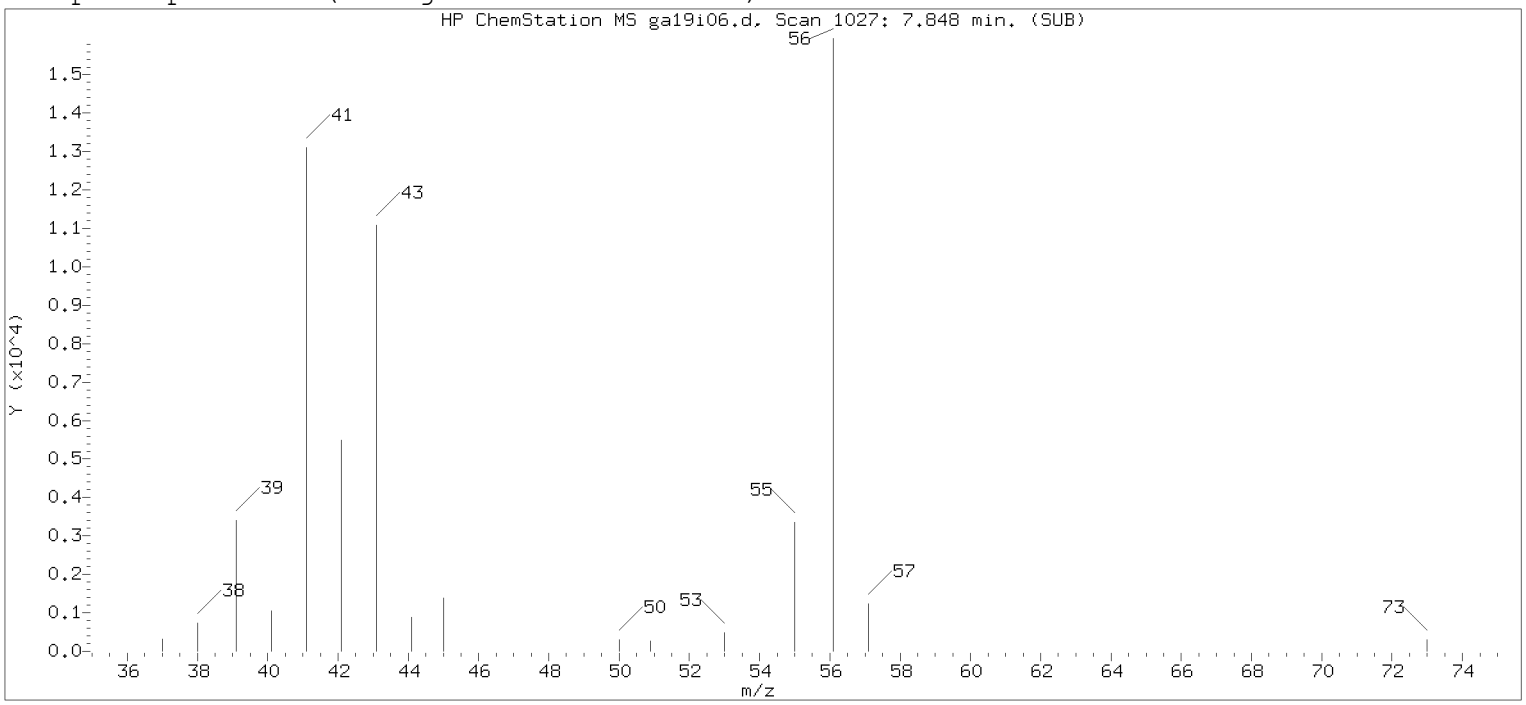
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area (flag) : 58896M
On-Column Amount (ng) : 45.9014
Integration start scan : 1016 Integration stop scan: 1085
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

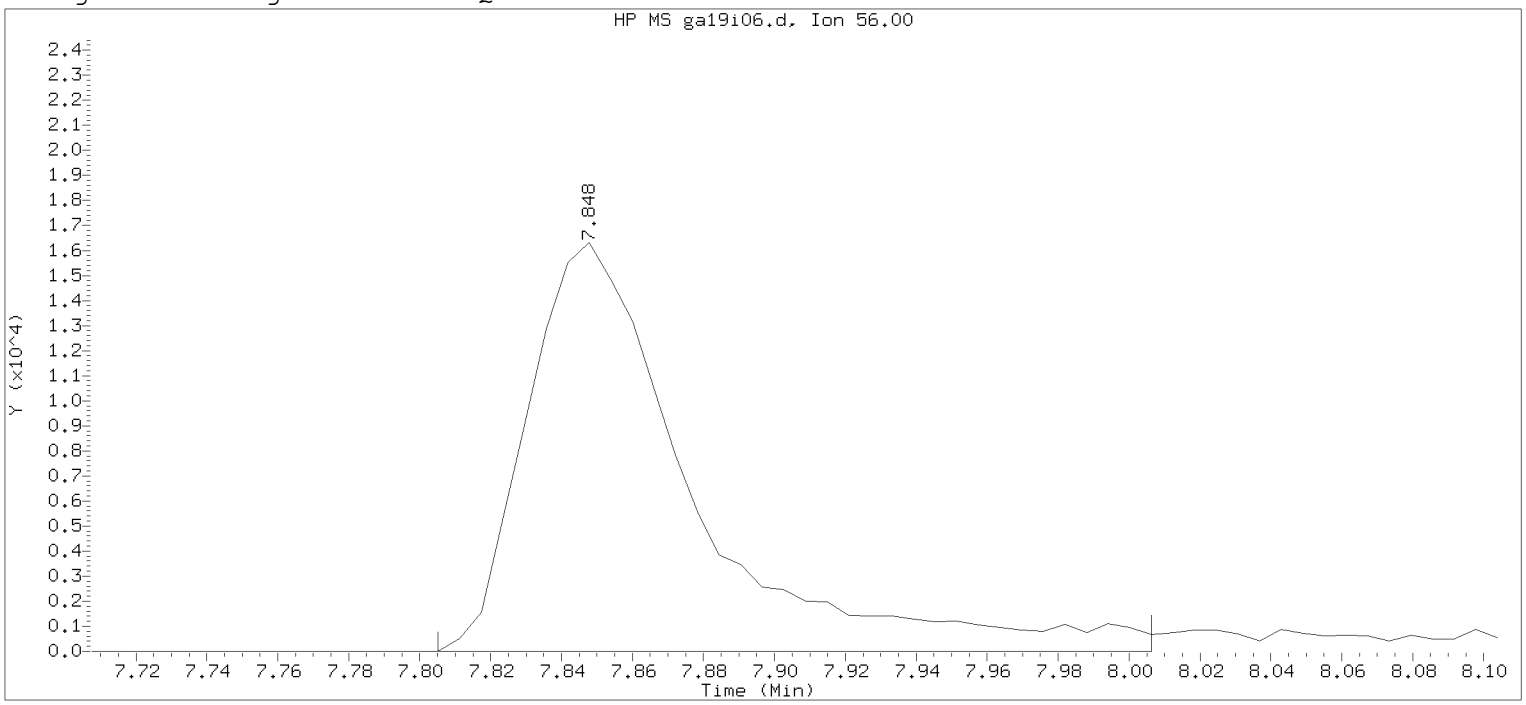
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

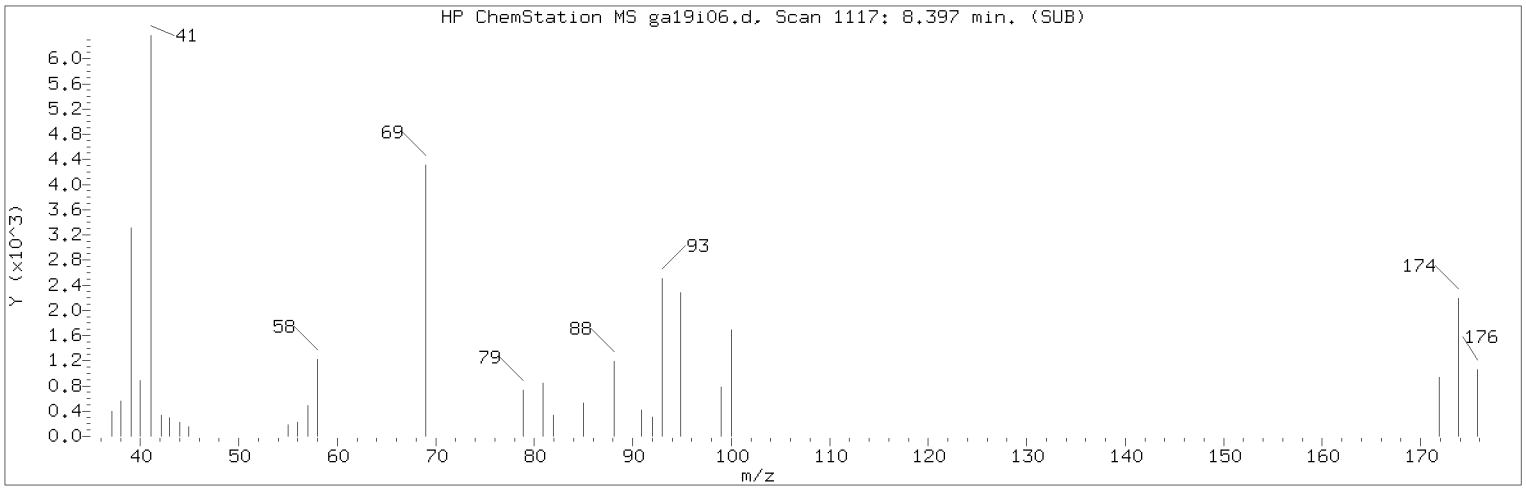
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

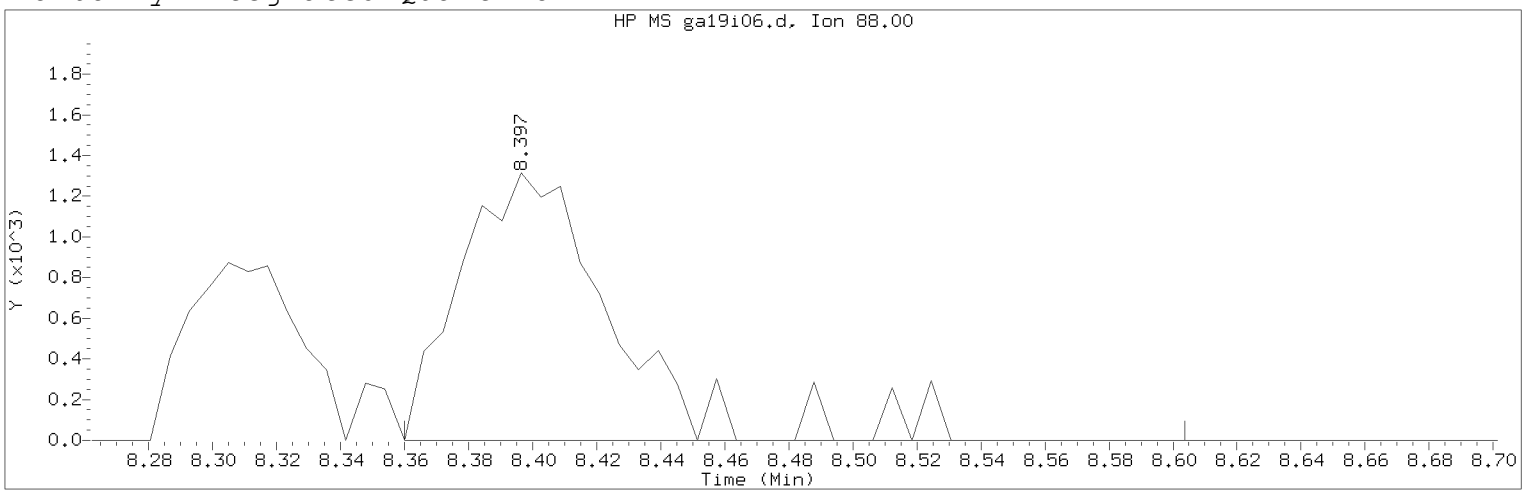
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area : 53011
On-column Amount (ng) : 43.5670
Integration start scan : 1019 Integration stop scan: 1052
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

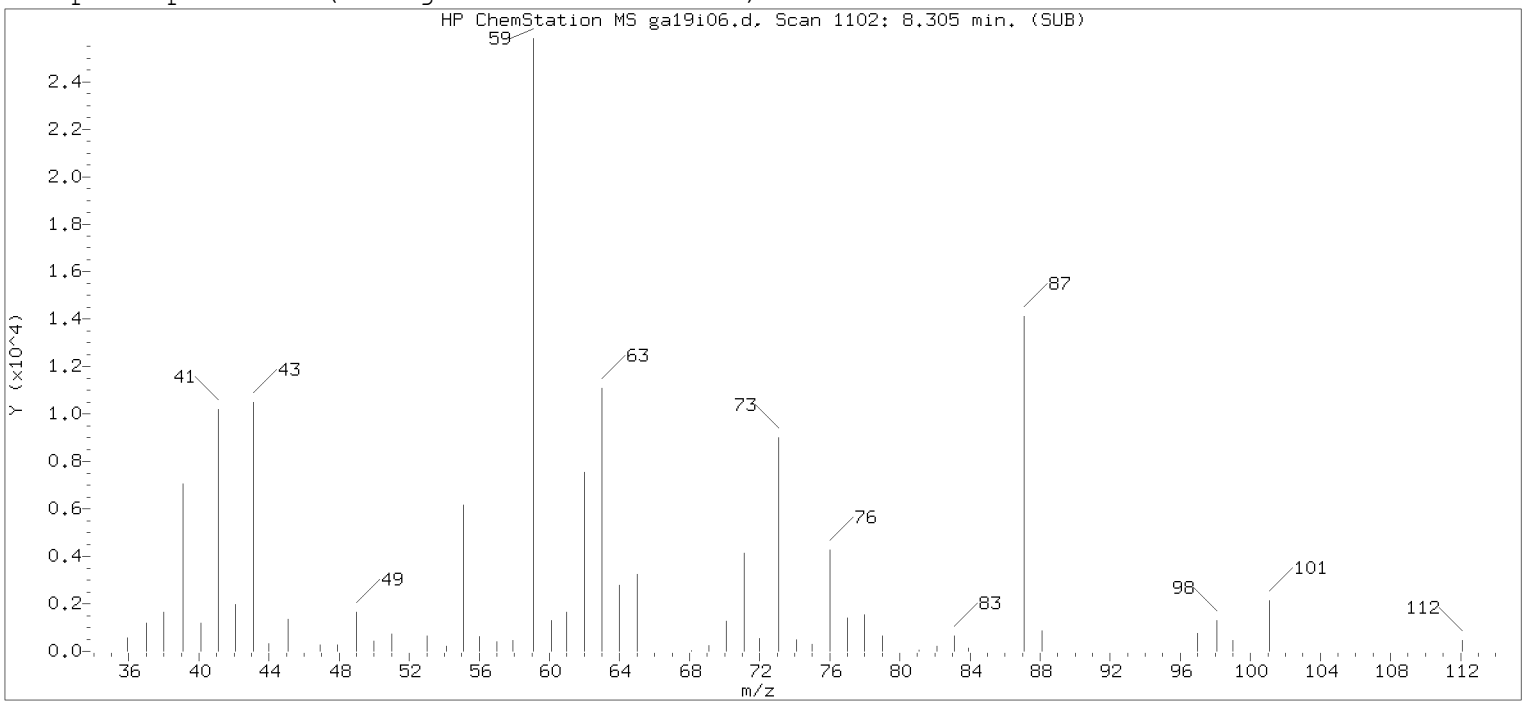
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1117
Retention Time (minutes): 8.397
Quant Ion : 88.00
Area (flag) : 4429M
On-Column Amount (ng) : 19.0907
Integration start scan : 1110 Integration stop scan: 1150
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

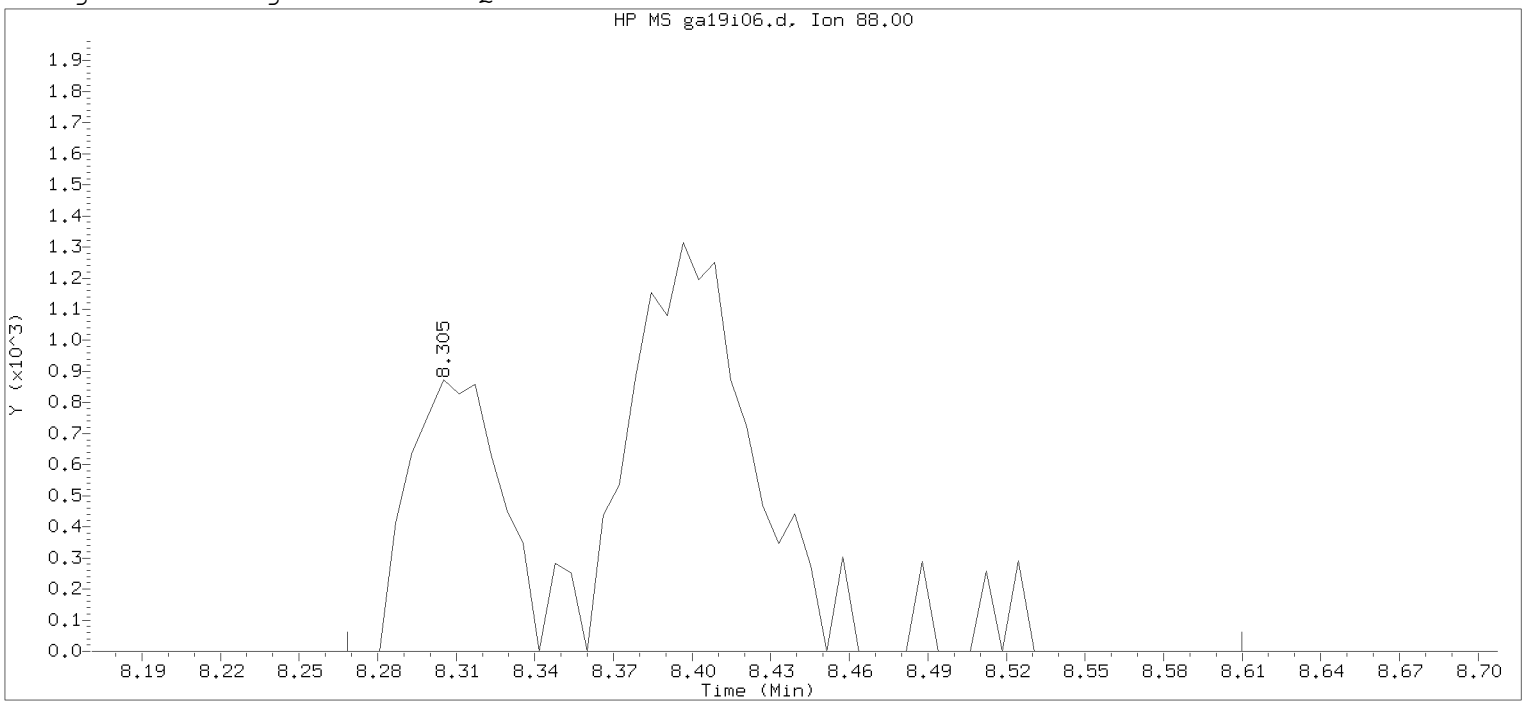
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

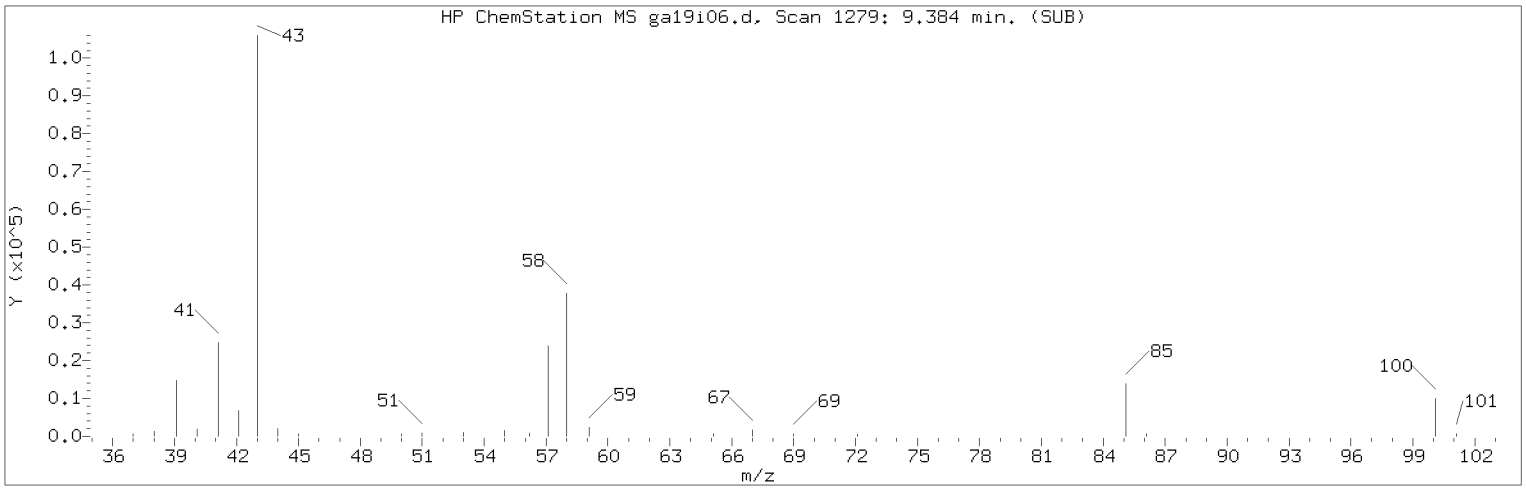
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

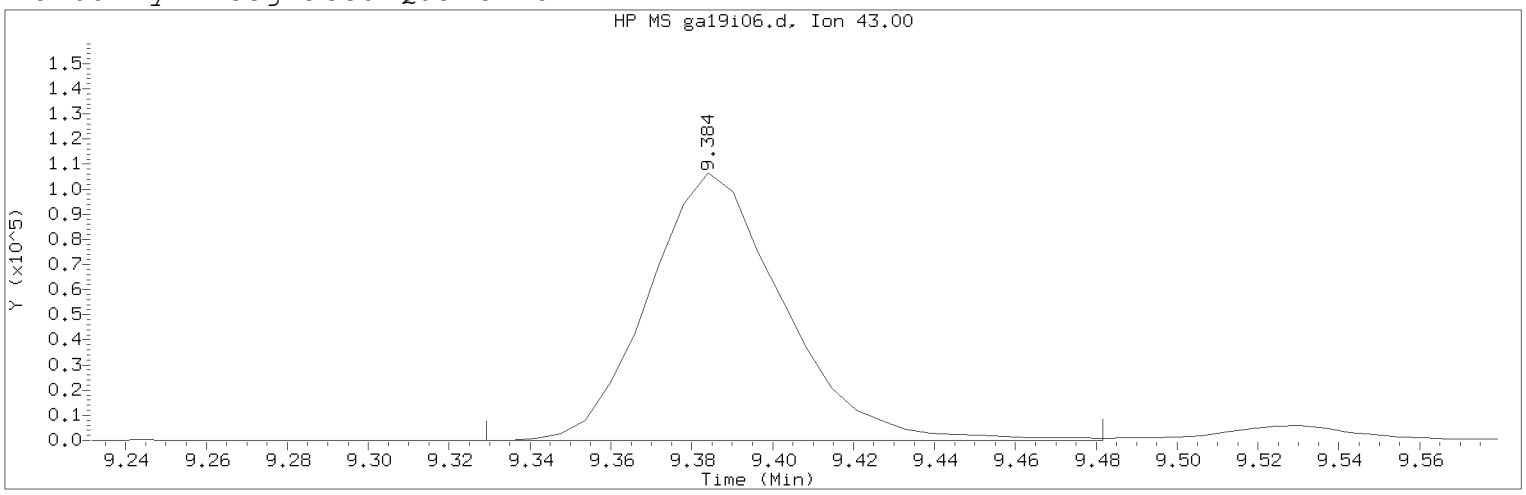
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 88.00		
Area	: 6743		
On-column Amount (ng)	: 25.2068		
Integration start scan	: 1095	Integration stop scan:	1151
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

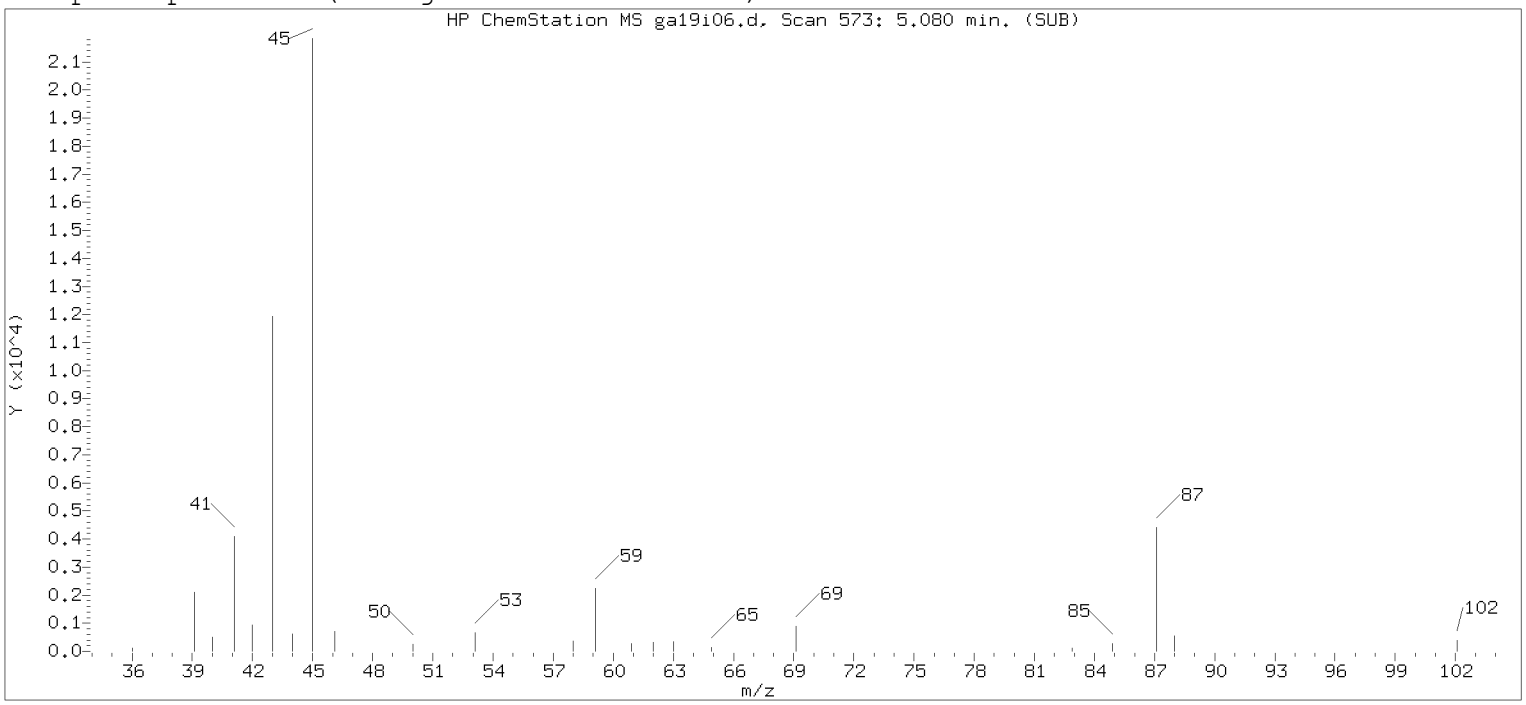
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 245229M
On-Column Amount (ng) : 4.8372
Integration start scan : 1269 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

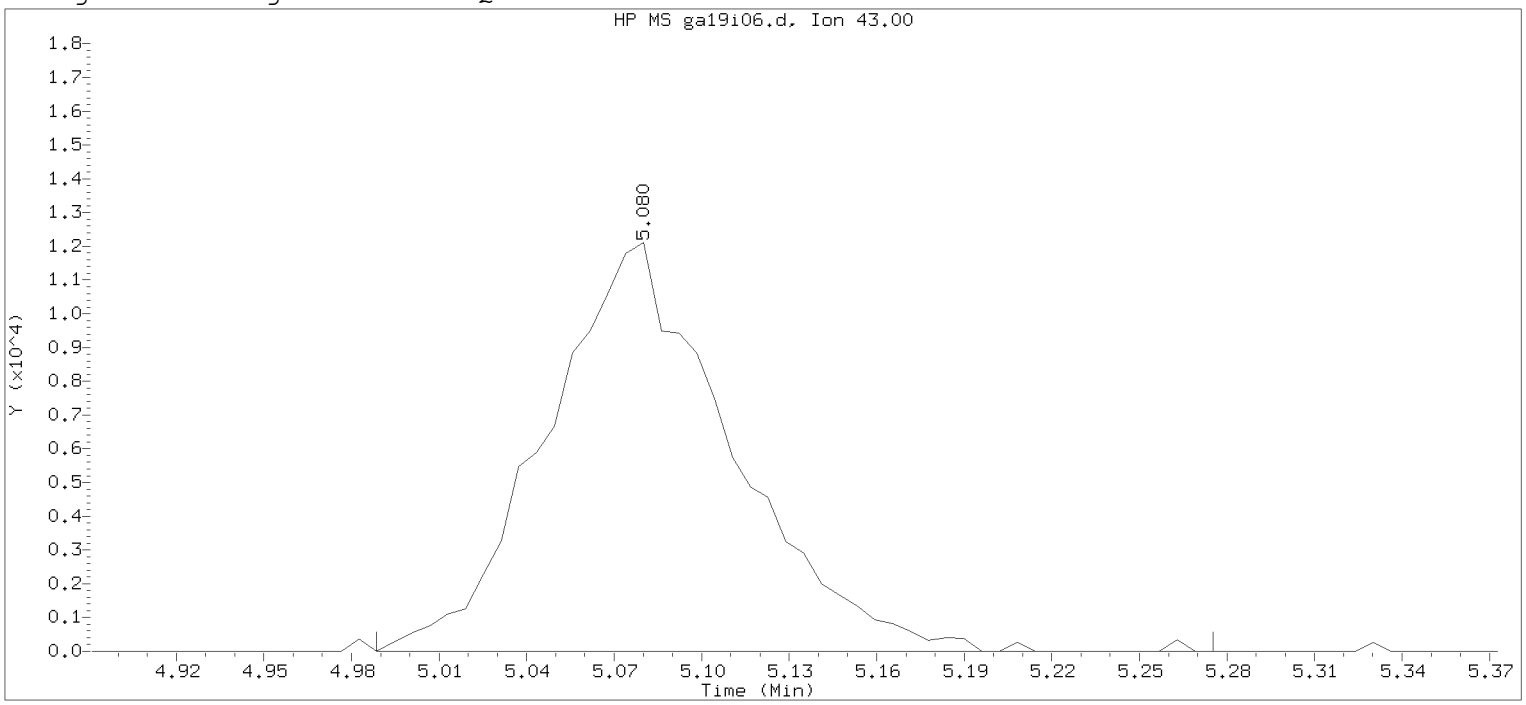
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

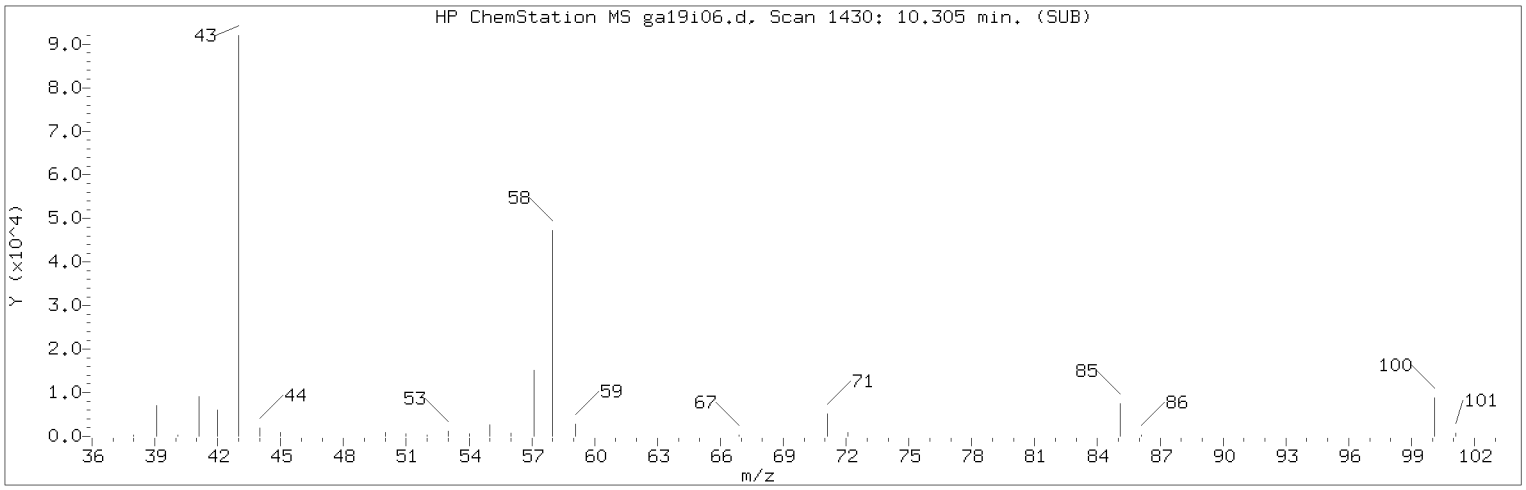
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

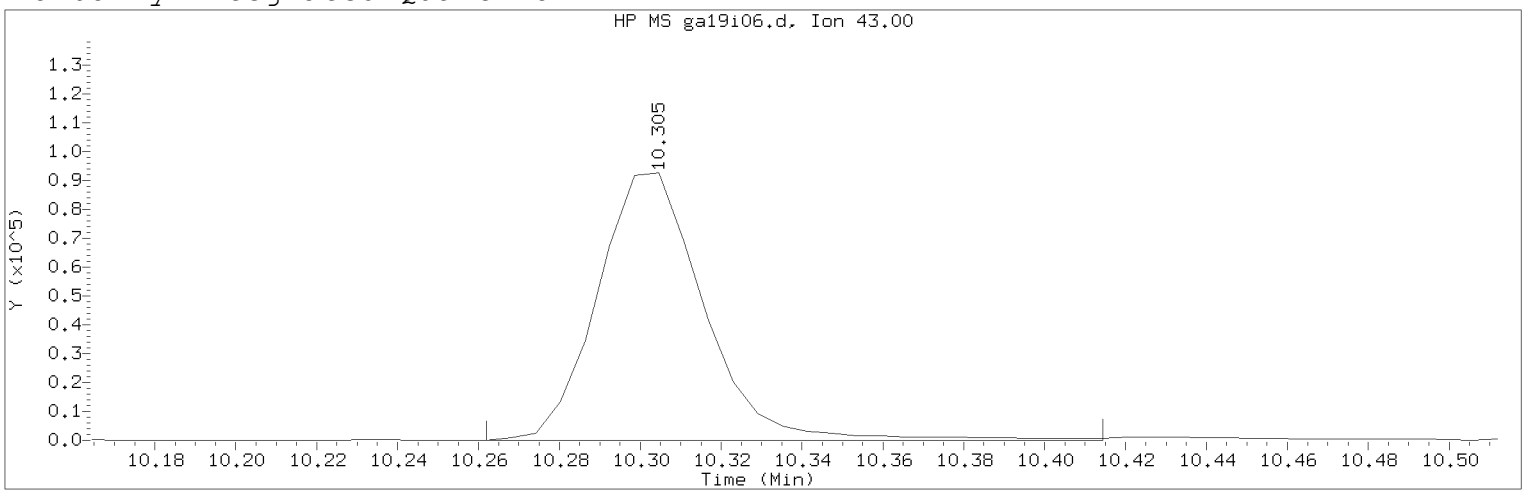
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 573
Retention Time (minutes): 5.080
Quant Ion : 43.00
Area : 53419
On-column Amount (ng) : 5.3211
Integration start scan : 557 Integration stop scan: 604
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

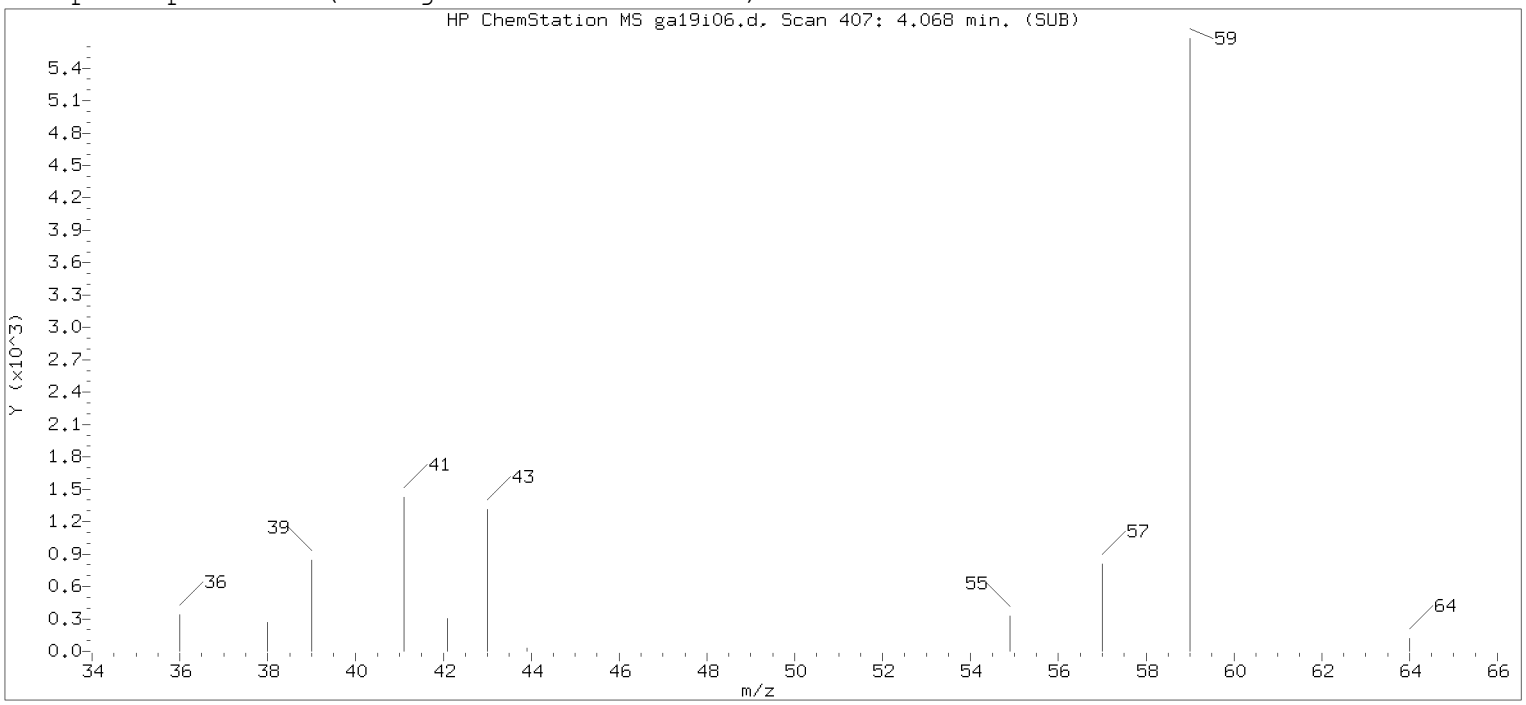
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 169720M
On-Column Amount (ng) : 4.7439
Integration start scan : 1422 Integration stop scan: 1447
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

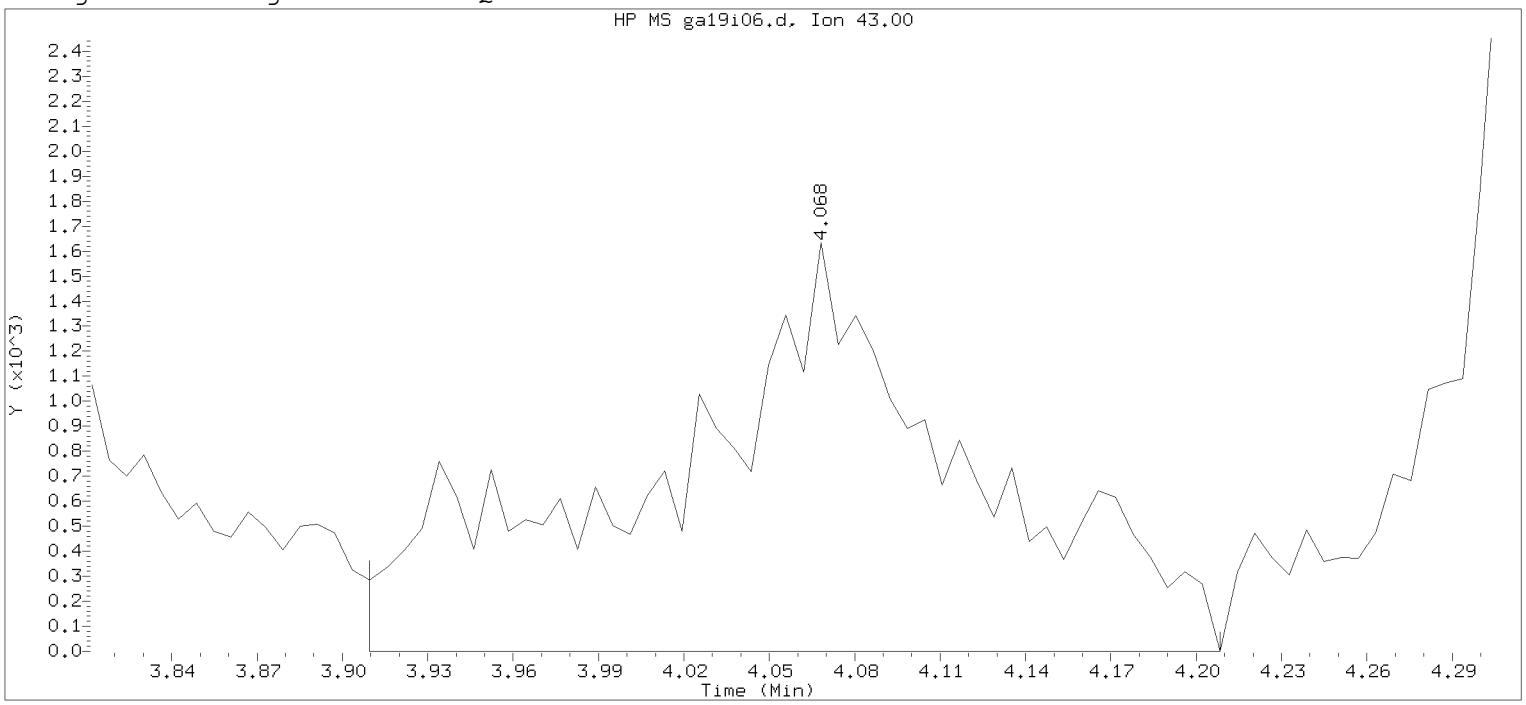
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

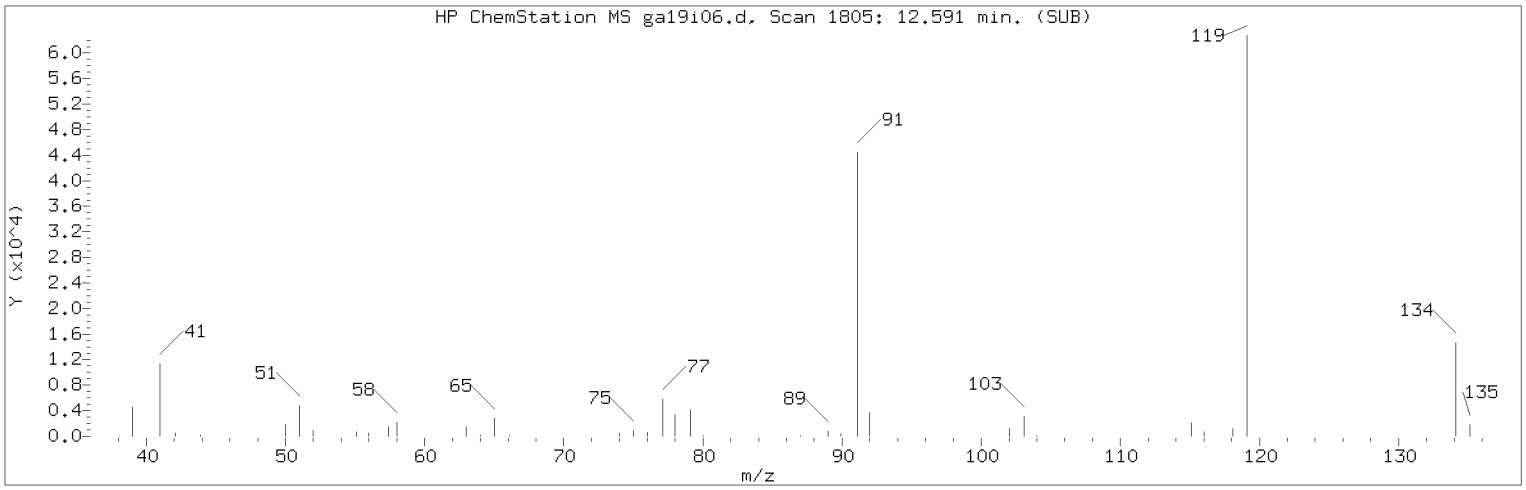
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

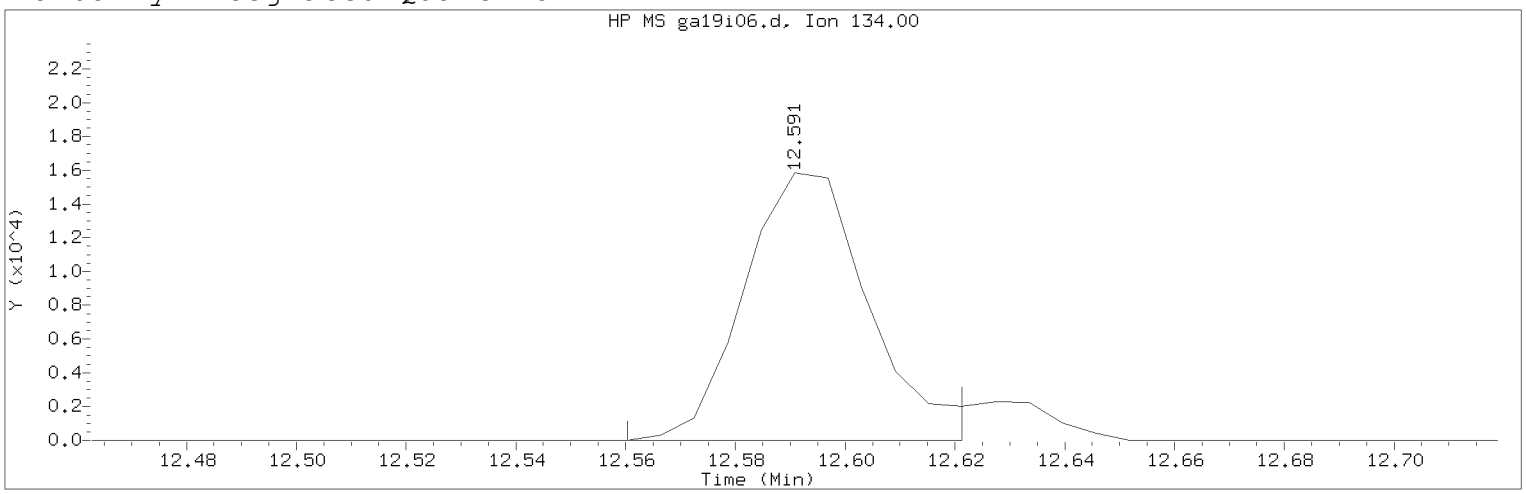
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 43.00
Area : 12213
On-column Amount (ng) : 7.5978
Integration start scan : 380 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

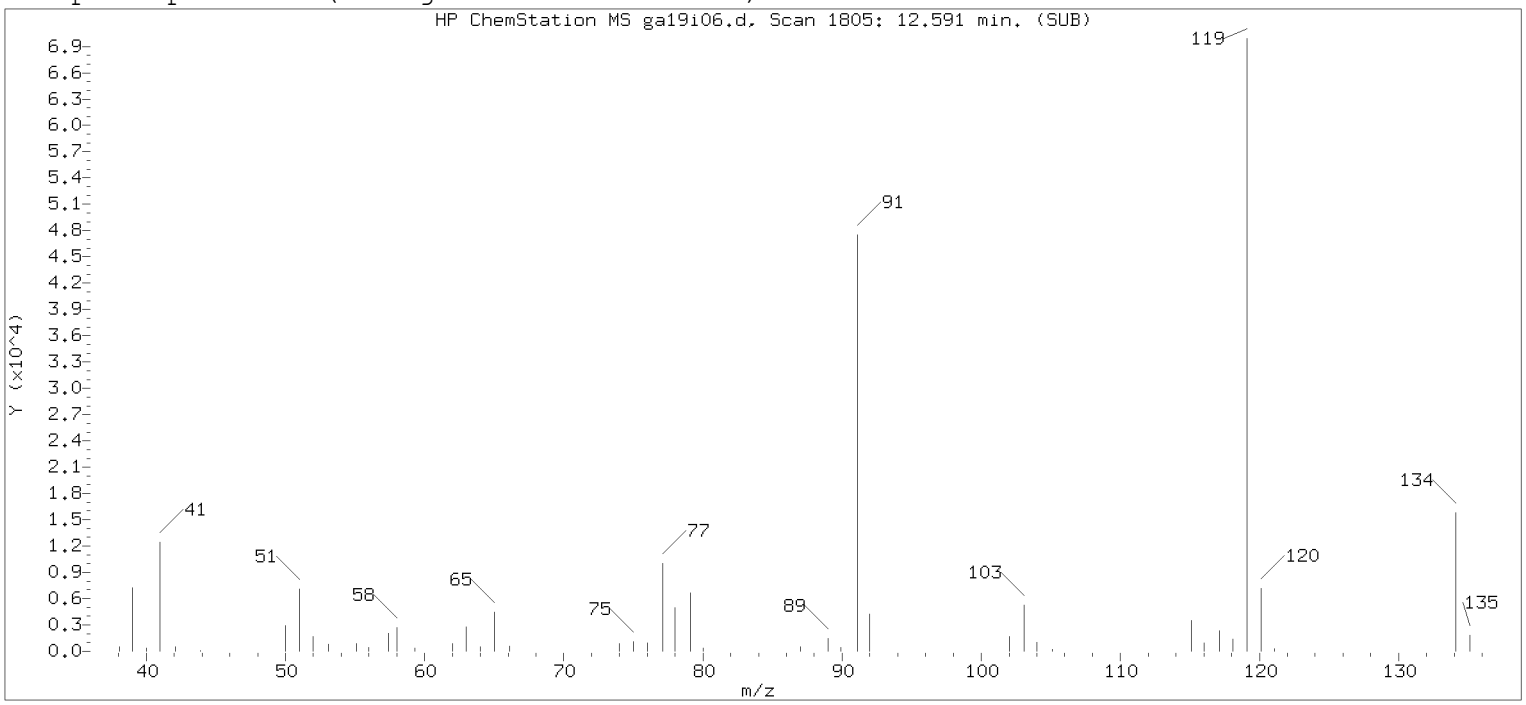
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 25111M
On-Column Amount (ng) : 0.5305
Integration start scan : 1799 Integration stop scan: 1809
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

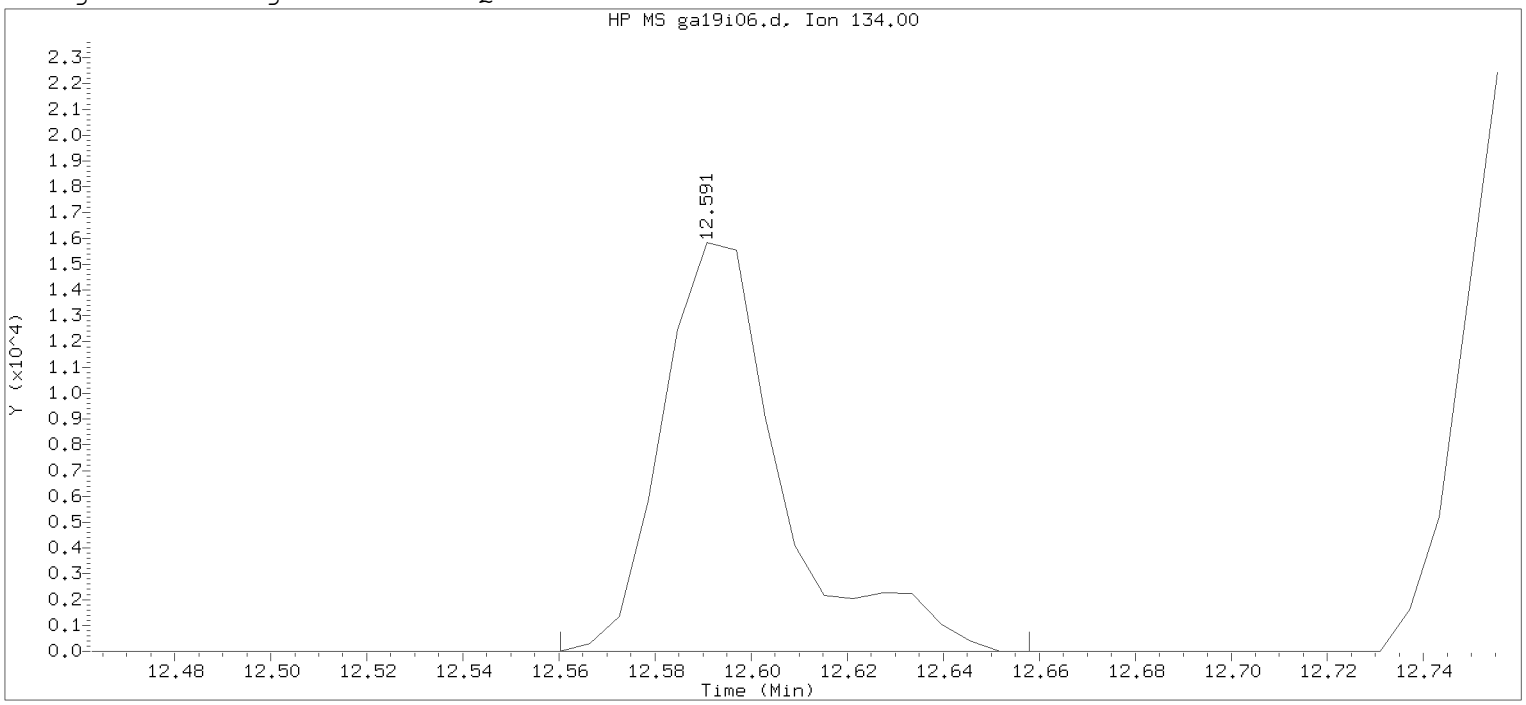
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



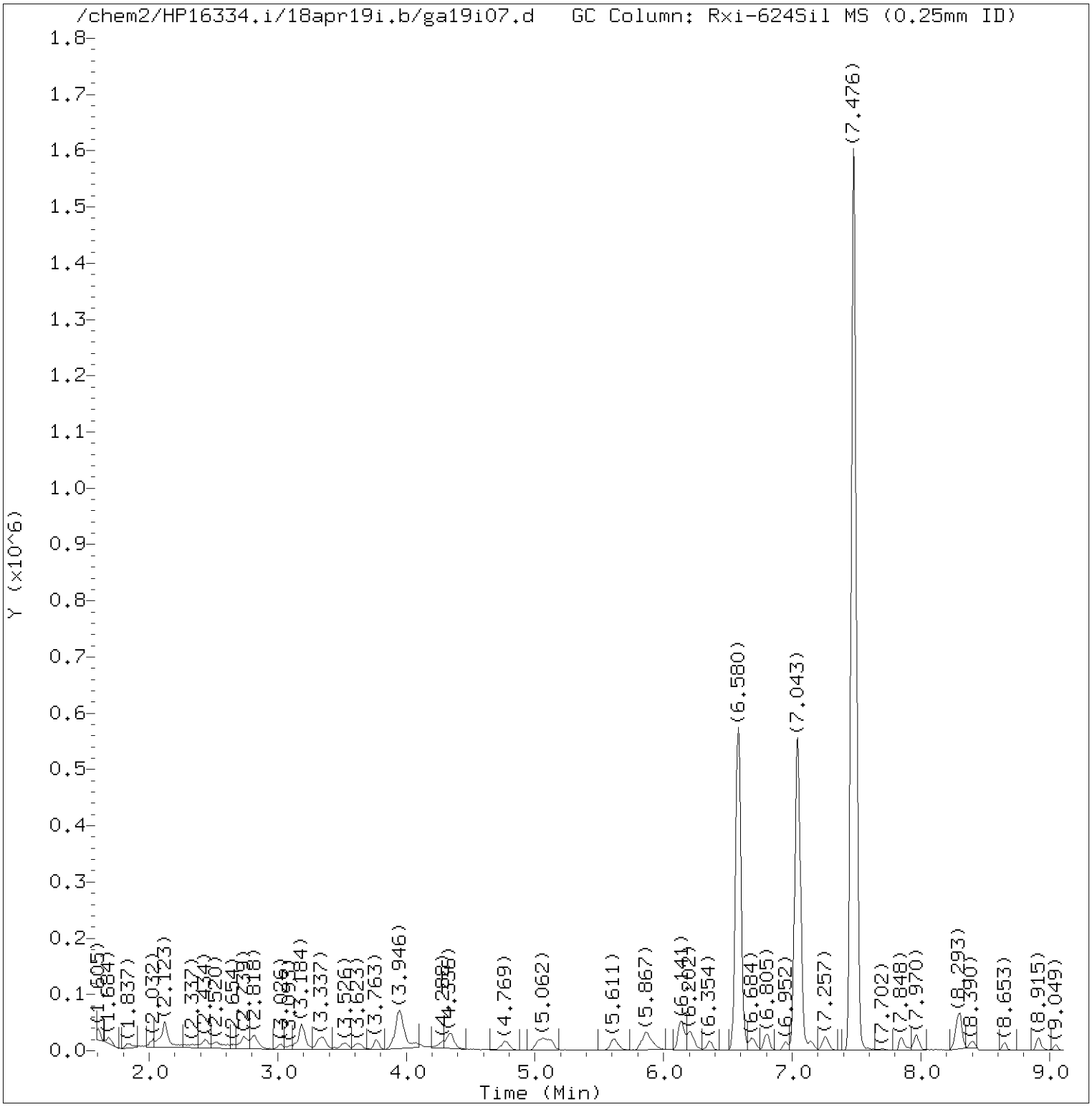
Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area : 27286
On-column Amount (ng) : 0.5580
Integration start scan : 1799 Integration stop scan: 1815
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause



Total Ion Chromatogram (TIC)

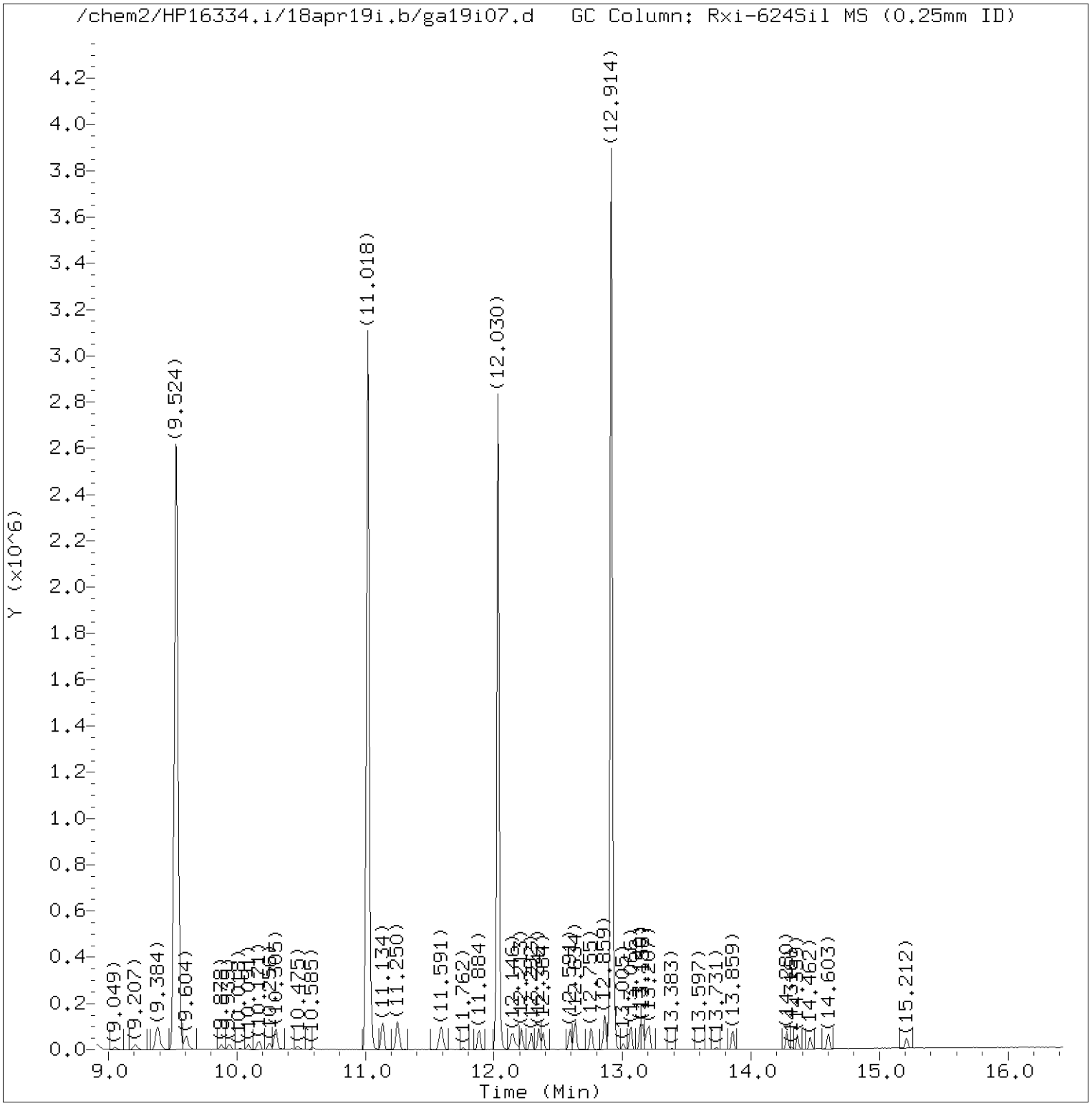
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.825	85	13339	0.174
2) Chloromethane	(2)	2.020	50	15171	0.196
6) 1,3-Butadiene	(2)	2.117	39	34377M	0.244
5) Vinyl Chloride	(2)	2.123	62	12731	0.192
7) Bromomethane	(2)	2.434	94	8569	0.193
8) Chloroethane	(2)	2.514	64	7192	0.190
9) Dichlorofluoromethane	(2)	2.739	67	18549	0.204
10) Trichlorofluoromethane	(2)	2.806	101	15812	0.183
11) Ethyl ether	(2)	3.026	59	8434	0.196
12) Freon 123a	(2)	3.111	67	11981M	0.196
13) Acrolein	(1)	3.184	56	75312	9.663
15) 1,1-Dichloroethene	(2)	3.318	96	8100	0.191
14) Acetone	(1)	3.337	43	27906M	2.216
16) Freon 113	(2)	3.355	101	8676	0.182
17) Methyl Iodide	(2)	3.501	142	15541	0.189
18) Carbon Disulfide	(2)	3.635	76	37961	0.226
21) Methyl Acetate	(1)	3.751	43	7988M	0.225
22) Allyl Chloride	(2)	3.763	41	20522	0.209
23) Methylene Chloride	(2)	3.940	84	15145	0.264
26)*t-Butyl Alcohol-d10	(1)	3.946	65	225587	50.000
28) t-Butyl Alcohol	(1)	4.074	59	18967	4.443
29) Acrylonitrile	(1)	4.275	53	12533	0.895
30) Methyl Tertiary Butyl Ether	(2)	4.318	73	29384	0.199
31) trans-1,2-Dichloroethene	(2)	4.349	96	9764	0.198
32) n-Hexane	(2)	4.763	57	15545	0.187
33) 1,1-Dichloroethane	(2)	5.019	63	19158	0.191
34) di-Isopropyl Ether	(2)	5.062	45	40610	0.197
35) 2-Chloro-1,3-Butadiene	(2)	5.123	53	17955	0.195
37) Ethyl t-butyl ether	(2)	5.611	59	35115	0.195
38) 2-Butanone	(1)	5.830	43	40756	1.881
39) cis-1,2-Dichloroethene	(2)	5.860	96	10082	0.183
41) 2,2-Dichloropropane	(2)	5.879	77	14839	0.180
42) Propionitrile	(1)	5.928	54	19959	3.726
40) 1,2-Dichloroethene (Total)	(2)		96	19846	0.381
45) Methacrylonitrile	(1)	6.135	67	31071	1.830
48) Tetrahydrofuran	(1)	6.202	71	10048	1.948
47) Bromochloromethane	(2)	6.208	128	4723	0.186
49) Chloroform	(2)	6.366	83	18815	0.196

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.580	113	512455	9.957
50)$Dibromofluoromethane	(2)	6.580	111	529522	10.005
51) 1,1,1-Trichloroethane	(2)	6.592	97	15110	0.186
52) Cyclohexane	(2)	6.684	56	18535	0.191
52) Cyclohexane	(2)	6.696	84	14129	0.184
52) Cyclohexane	(2)	6.684	69	5440	0.192
54) Carbon Tetrachloride	(2)	6.805	117	11692	0.177
55) 1,1-Dichloropropene	(2)	6.805	75	14233	0.188
56) Isobutyl Alcohol	(1)	6.958	41	19777M	11.657
57)$1,2-Dichloroethane-d4	(2)	7.043	102	109052	9.998
57)$1,2-Dichloroethane-d4	(2)	7.043	65	630819	10.173
57)$1,2-Dichloroethane-d4	(2)	7.037	104	68346	10.057
58) Benzene	(2)	7.061	78	40129	0.192
59) 1,2-Dichloroethane	(2)	7.147	62	16292	0.220
60) t-Amyl methyl ether	(2)	7.257	73	29412	0.192
63)*Fluorobenzene	(2)	7.476	96	2046775	10.000
62) n-Heptane	(2)	7.482	43	19233	0.192
65) n-Butanol	(1)	7.848	56	23969M	17.850
67) Trichloroethene	(2)	7.964	95	10583	0.192
69) Methylcyclohexane	(2)	8.275	83	16676	0.178
70) 1,2-Dichloropropane	(2)	8.305	63	11158	0.193
71) Methyl Methacrylate	(1)	8.378	69	5366	0.166
72) 1,4-Dioxane	(1)	8.390	88	1552M	6.632
73) Dibromomethane	(2)	8.415	93	5617	0.203
74) Bromodichloromethane	(2)	8.653	83	11883	0.175
76) 2-Nitropropane	(1)	8.915	41	17751	1.603
80) cis-1,3-Dichloropropene	(2)	9.207	75	14522	0.173
81) 4-Methyl-2-Pentanone	(1)	9.384	43	97110M	1.824
82)$Toluene-d8	(3)	9.524	98	2072635	10.039
82)$Toluene-d8	(3)	9.524	100	1310996	9.979
83) Toluene	(3)	9.610	92	25404	0.194
84) trans-1,3-Dichloropropene	(3)	9.878	75	12272	0.173
86) Ethyl Methacrylate	(3)	9.939	69	11580	0.181
88) 1,1,2-Trichloroethane	(3)	10.091	97	7746	0.196
85) 1,3-Dichloropropene (total)	(3)		75	26794	0.346
89) Tetrachloroethene	(3)	10.171	166	11655	0.192
90) 1,3-Dichloropropane	(3)	10.256	76	14727	0.205
91) 2-Hexanone	(1)	10.305	43	66409M	1.775

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	6989	0.161
95) 1,2-Dibromoethane	(3)	10.585	107	7508	0.199
97)*Chlorobenzene-d5	(3)	11.018	117	1539514	10.000
98) Chlorobenzene	(3)	11.042	112	28828	0.192
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	8679	0.173
100) Ethylbenzene	(3)	11.134	91	49680	0.191
101) m+p-Xylene	(3)	11.250	106	37686	0.381
104) o-Xylene	(3)	11.579	106	18471	0.186
106) Styrene	(3)	11.597	104	28668	0.176
107) Bromoform	(3)	11.756	173	3722	0.149
105) Xylene (Total)	(3)		106	56157	0.567
108) Isopropylbenzene	(3)	11.884	105	46705	0.181
111)$4-Bromofluorobenzene	(3)	12.030	95	789121	9.985
111)$4-Bromofluorobenzene	(3)	12.030	174	671071	9.936
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	9768	0.193
114) Bromobenzene	(4)	12.146	156	12748	0.192
116) 1,2,3-Trichloropropane	(4)	12.182	110	2769	0.195
117) n-Propylbenzene	(4)	12.213	91	59074	0.191
119) 2-Chlorotoluene	(4)	12.286	126	12307	0.199
121) 1,3,5-Trimethylbenzene	(4)	12.347	105	41631	0.188
122) 4-Chlorotoluene	(4)	12.384	126	12346	0.191
125) tert-Butylbenzene	(4)	12.591	134	8287	0.179
126) Pentachloroethane	(4)	12.627	167	5606	0.156
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	42203	0.186
128) sec-Butylbenzene	(4)	12.755	105	51241M	0.182
131) 1,3-Dichlorobenzene	(4)	12.859	146	24873	0.188
132) p-Isopropyltoluene	(4)	12.865	119	45344	0.184
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	862291	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	26238	0.195
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	19793	0.195
136) Benzyl Chloride	(4)	13.005	126	2469	0.134
138) n-Butylbenzene	(4)	13.158	92	24655	0.186
139) 1,2-Dichlorobenzene	(4)	13.188	146	23802	0.191
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	1330	0.166
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	20644	0.187
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	19244	0.188
146) Hexachlorobutadiene	(4)	14.359	225	10152	0.188
147) Naphthalene	(4)	14.462	128	32253	0.188

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	16303	0.186

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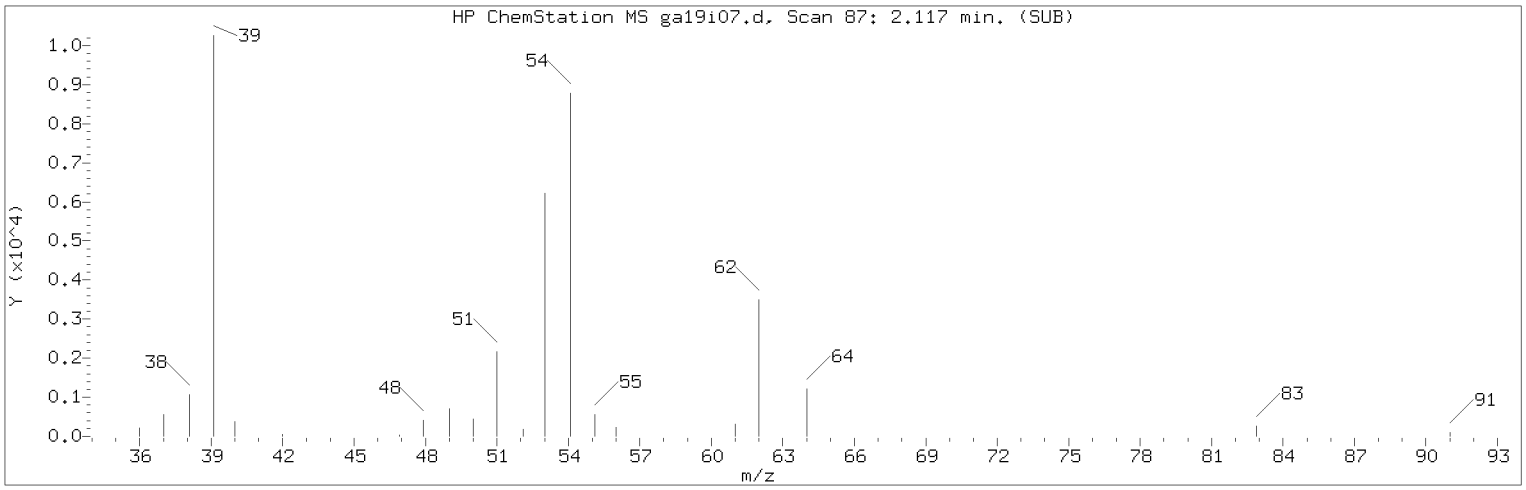
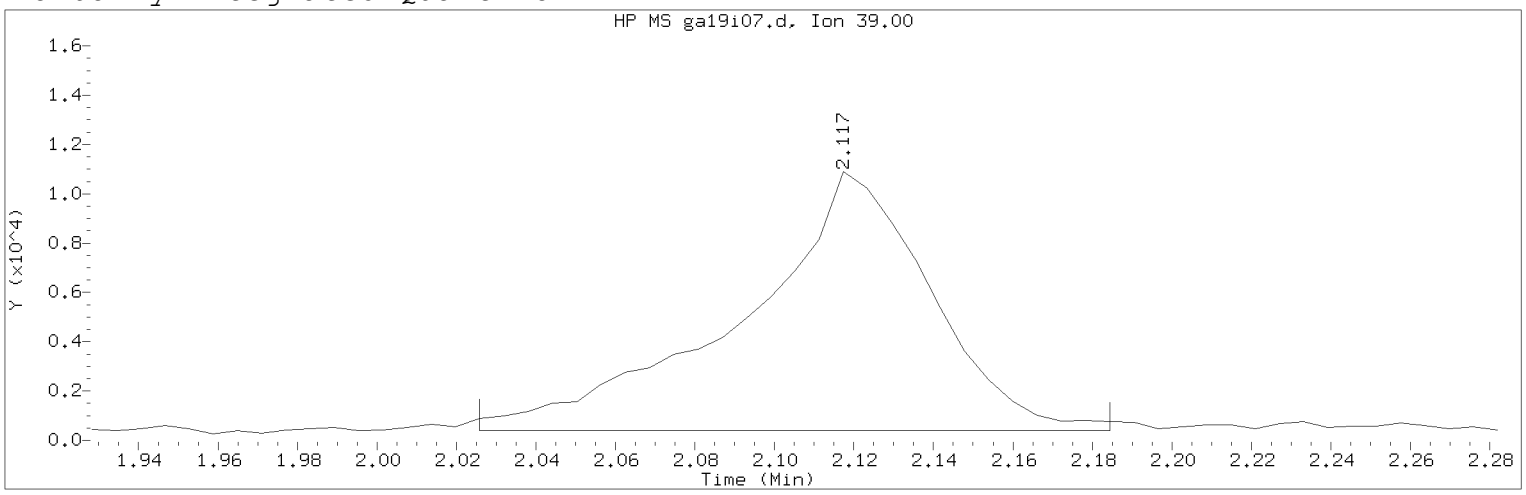
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

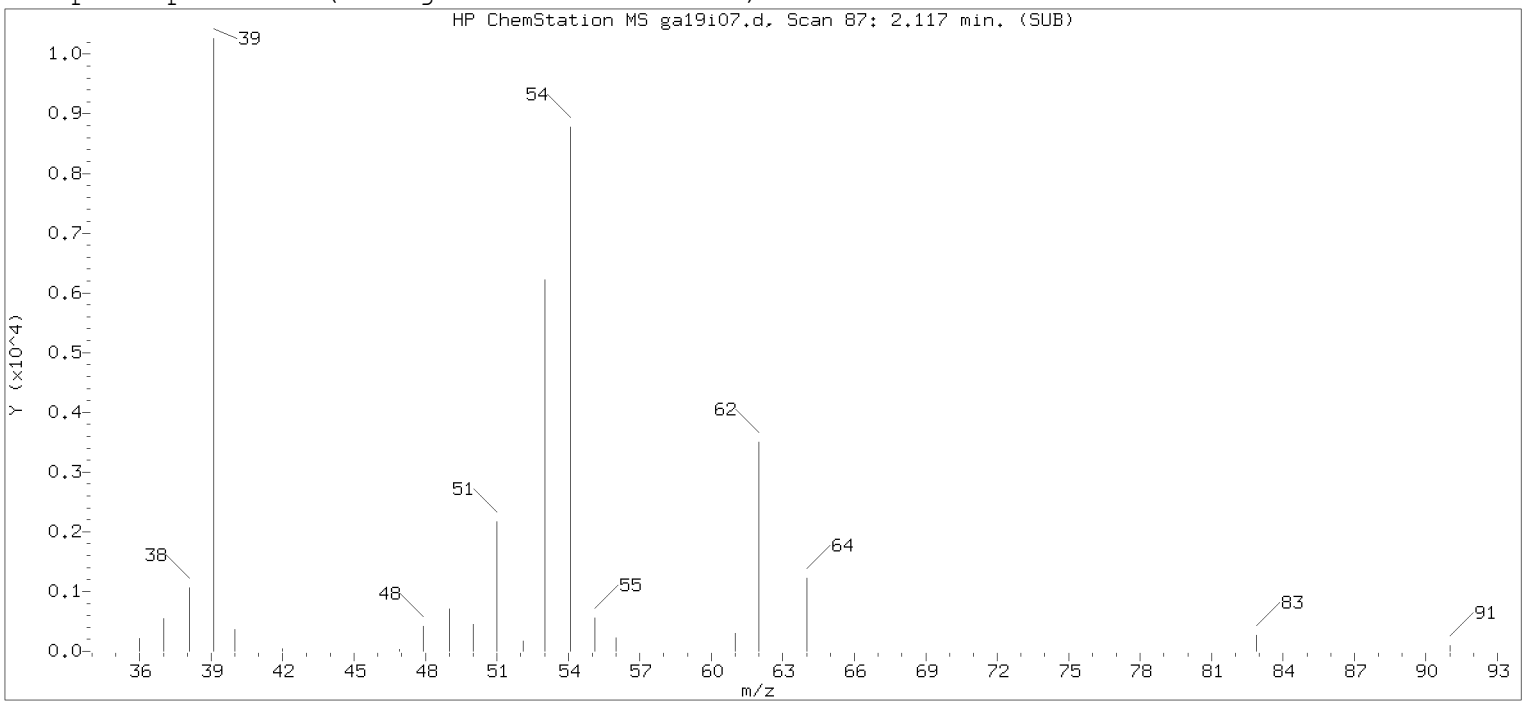
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 87
Retention Time (minutes): 2.117
Quant Ion : 39.00
Area (flag) : 34377M
On-Column Amount (ng) : 0.2436
Integration start scan : 71 Integration stop scan: 97
Y at integration start : 402 Y at integration end: 402

Reason for manual integration: improper integration

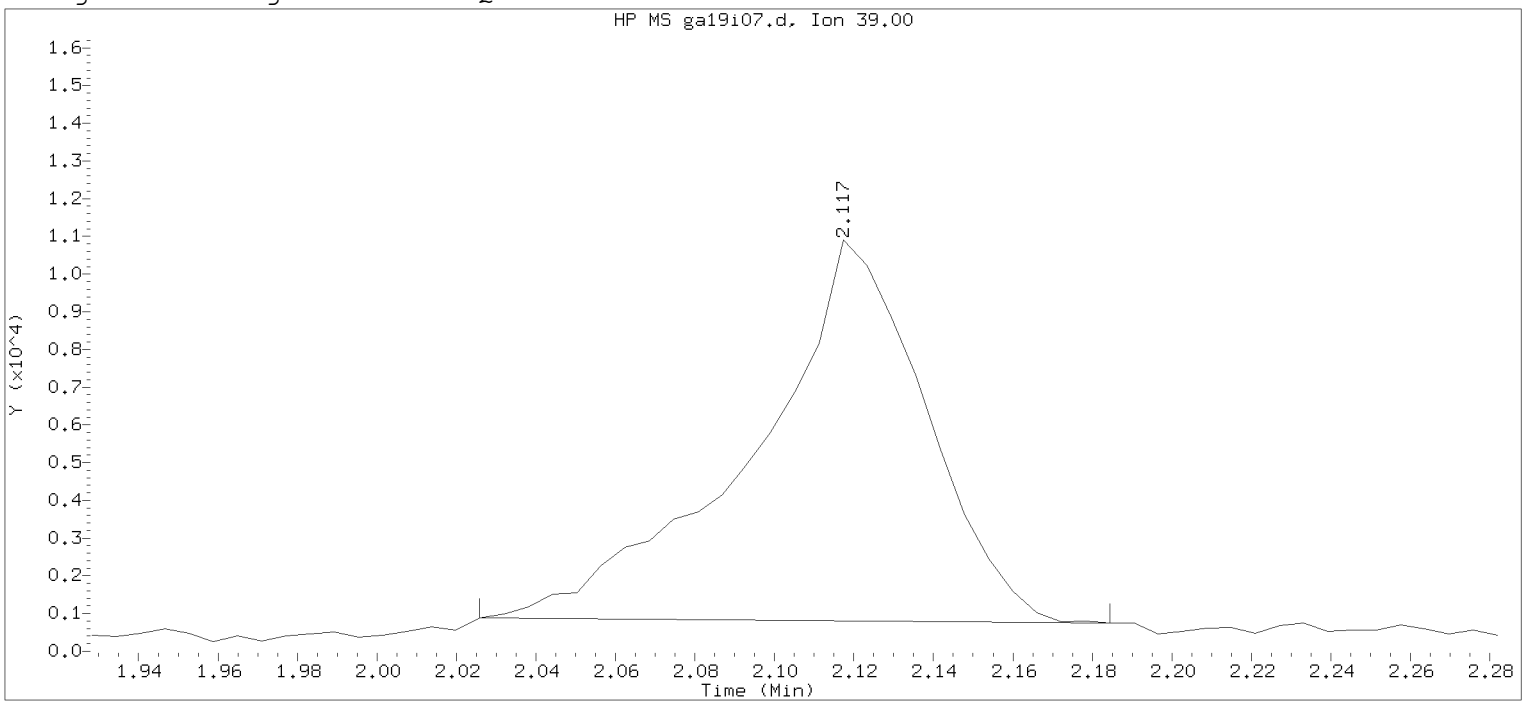
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

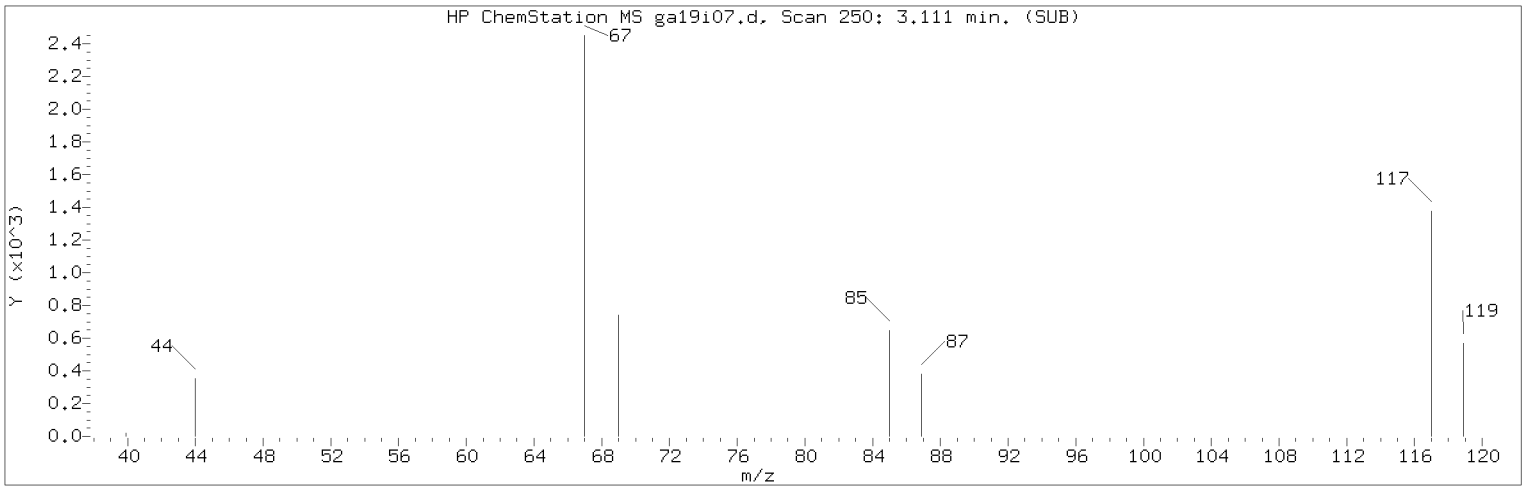
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

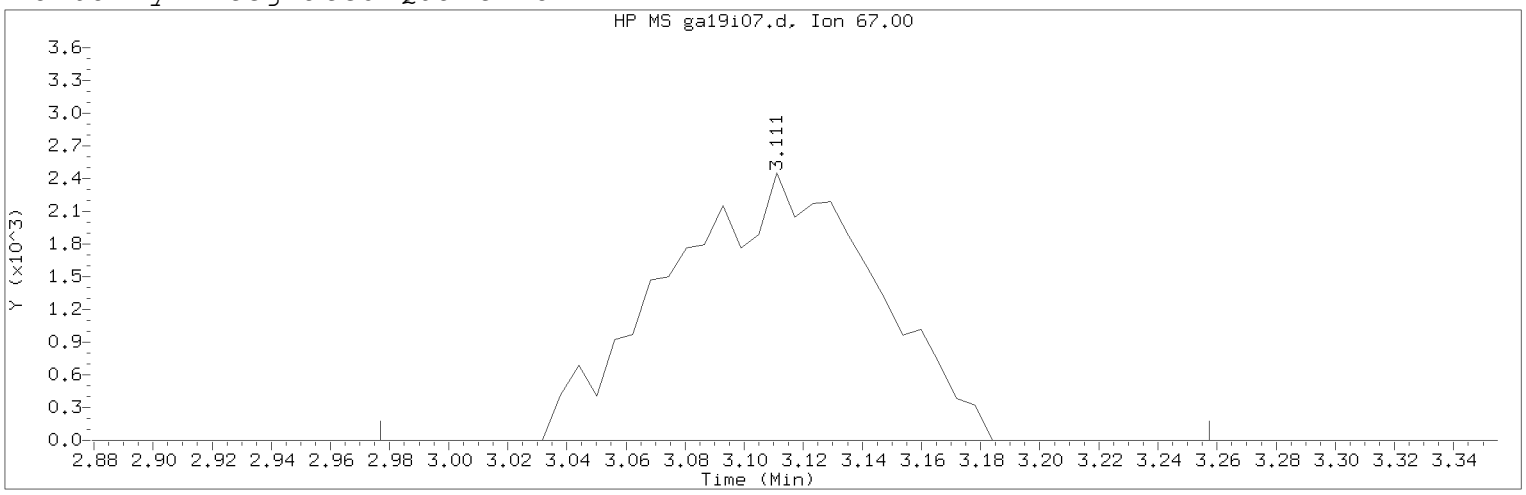
Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 87		
Retention Time (minutes)	: 2.117		
Quant Ion	: 39.00		
Area	: 30332		
On-column Amount (ng)	: 0.2297		
Integration start scan	: 71	Integration stop scan:	97
Y at integration start	: 879	Y at integration end:	744

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

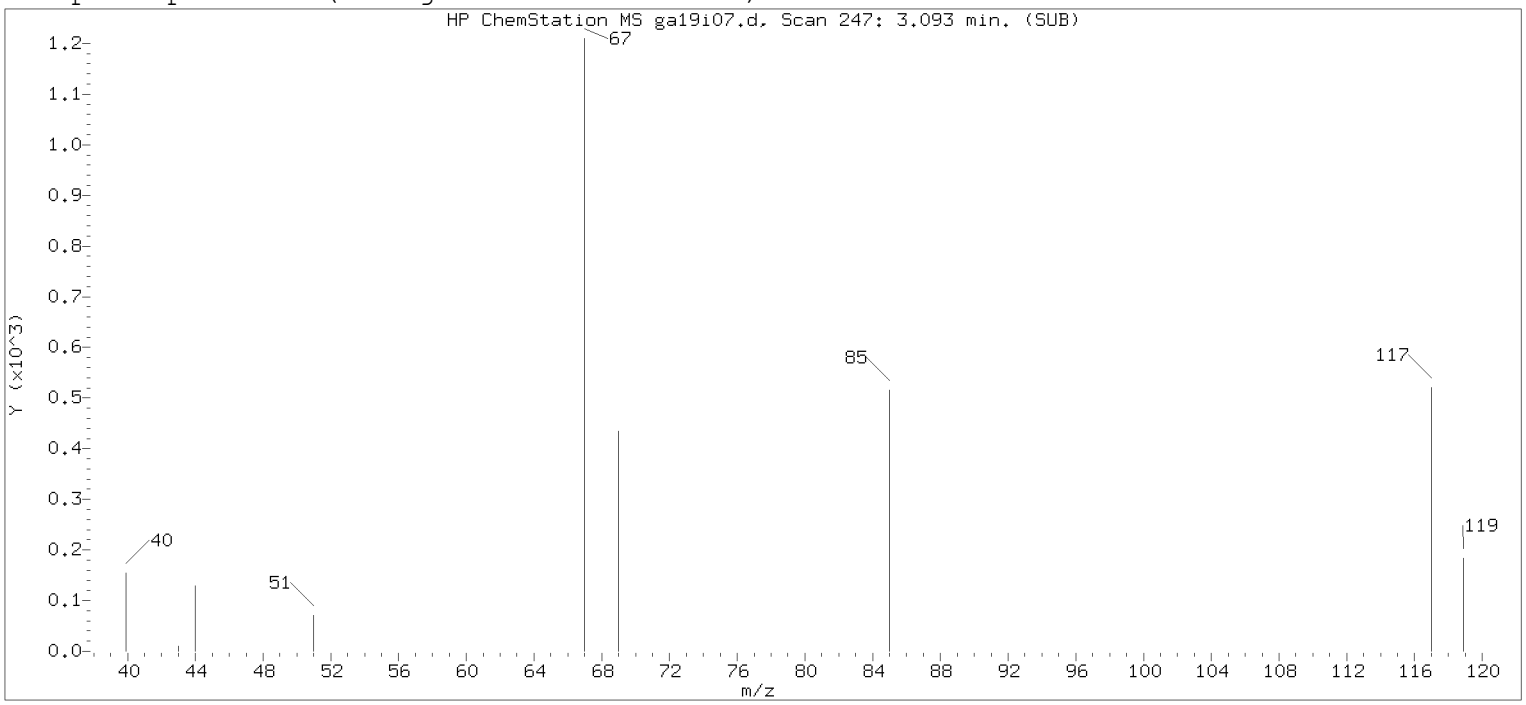
Compound Number : 12
Compound Name : Freon 123a
Scan Number : 250
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 11981M
On-Column Amount (ng) : 0.1956
Integration start scan : 227 Integration stop scan: 273
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

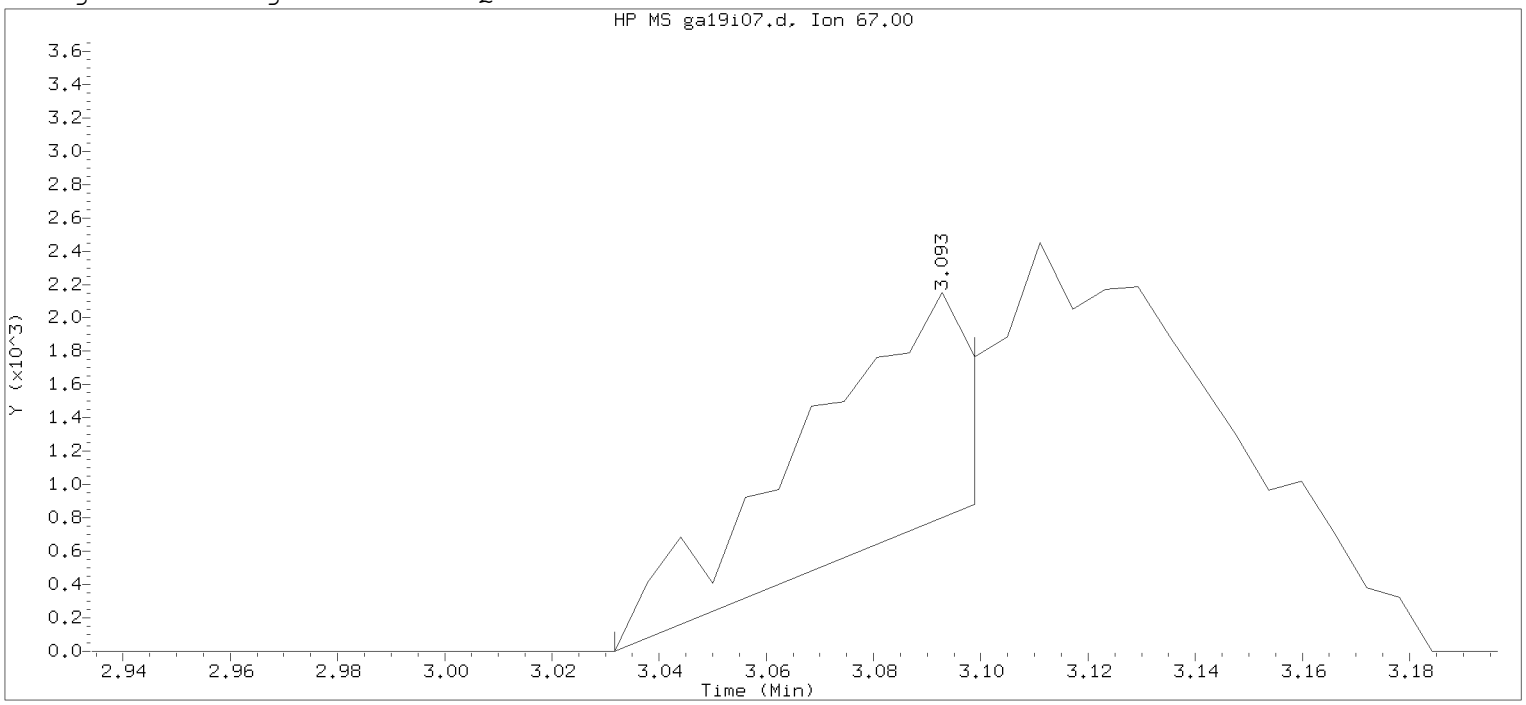
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 12		
Compound Name	: Freon 123a		
Scan Number	: 247		
Retention Time (minutes)	: 3.093		
Quant Ion	: 67.00		
Area	: 2963		
On-column Amount (ng)	: 0.0541		
Integration start scan	: 236	Integration stop scan:	247
Y at integration start	: 0	Y at integration end:	883

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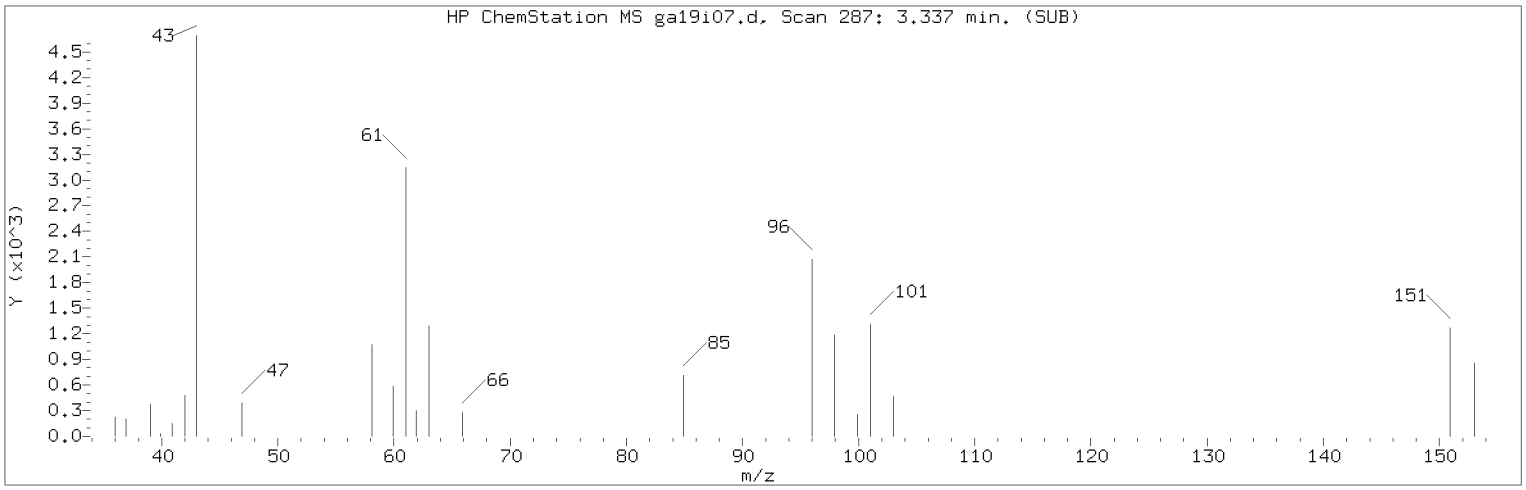
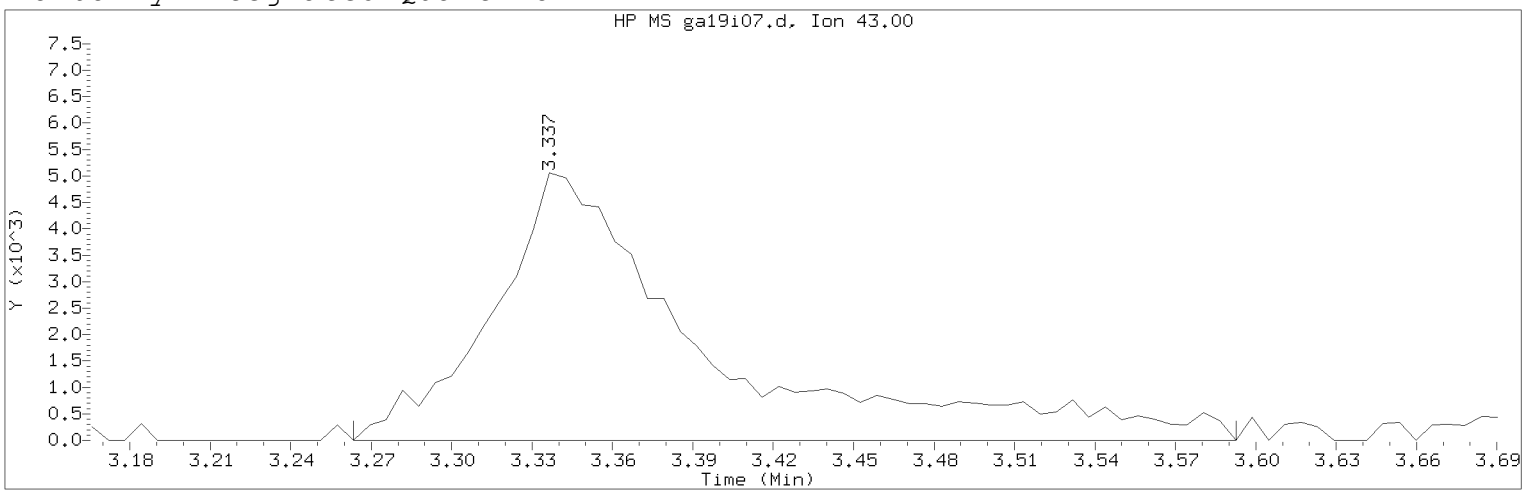
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

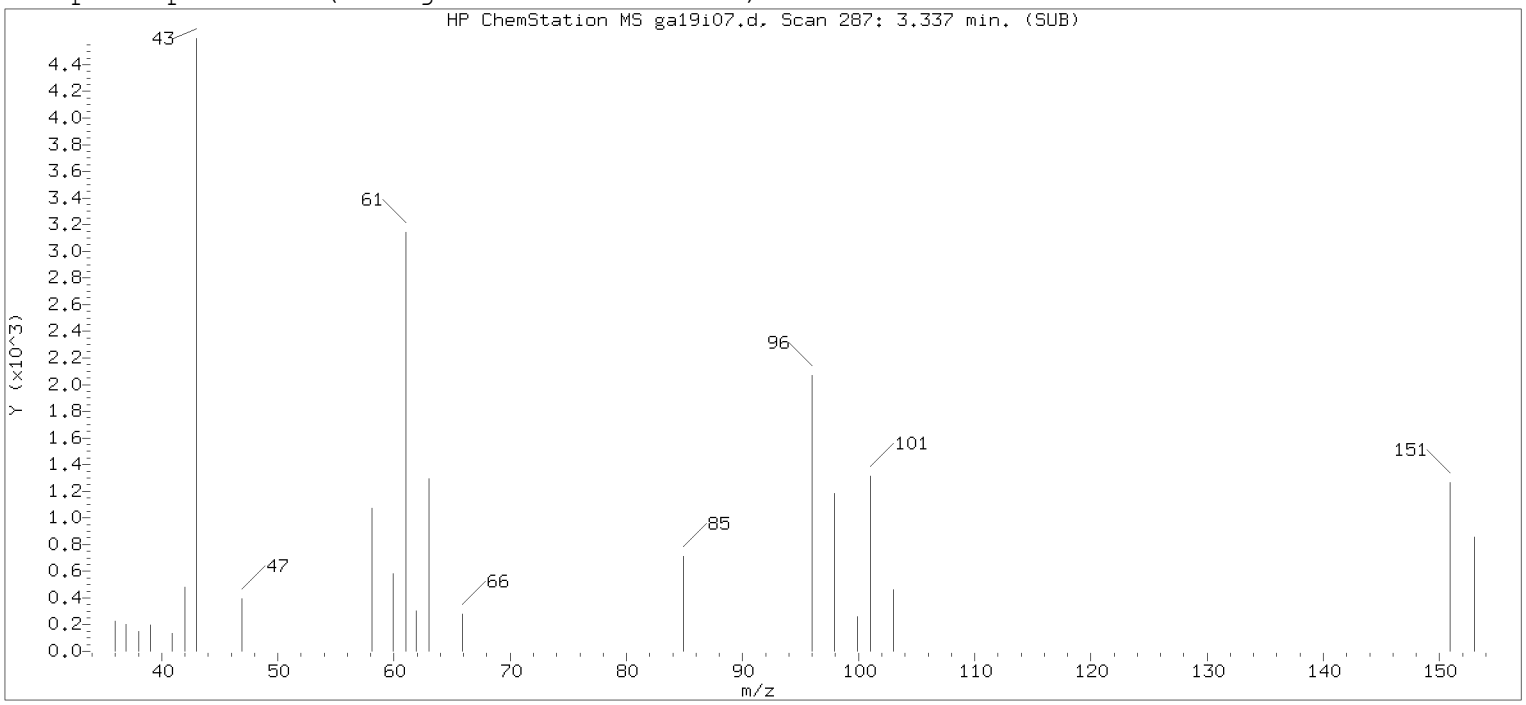
Compound Number : 14
Compound Name : Acetone
Scan Number : 287
Retention Time (minutes): 3.337
Quant Ion : 43.00
Area (flag) : 27906M
On-Column Amount (ng) : 2.2161
Integration start scan : 274 Integration stop scan: 328
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

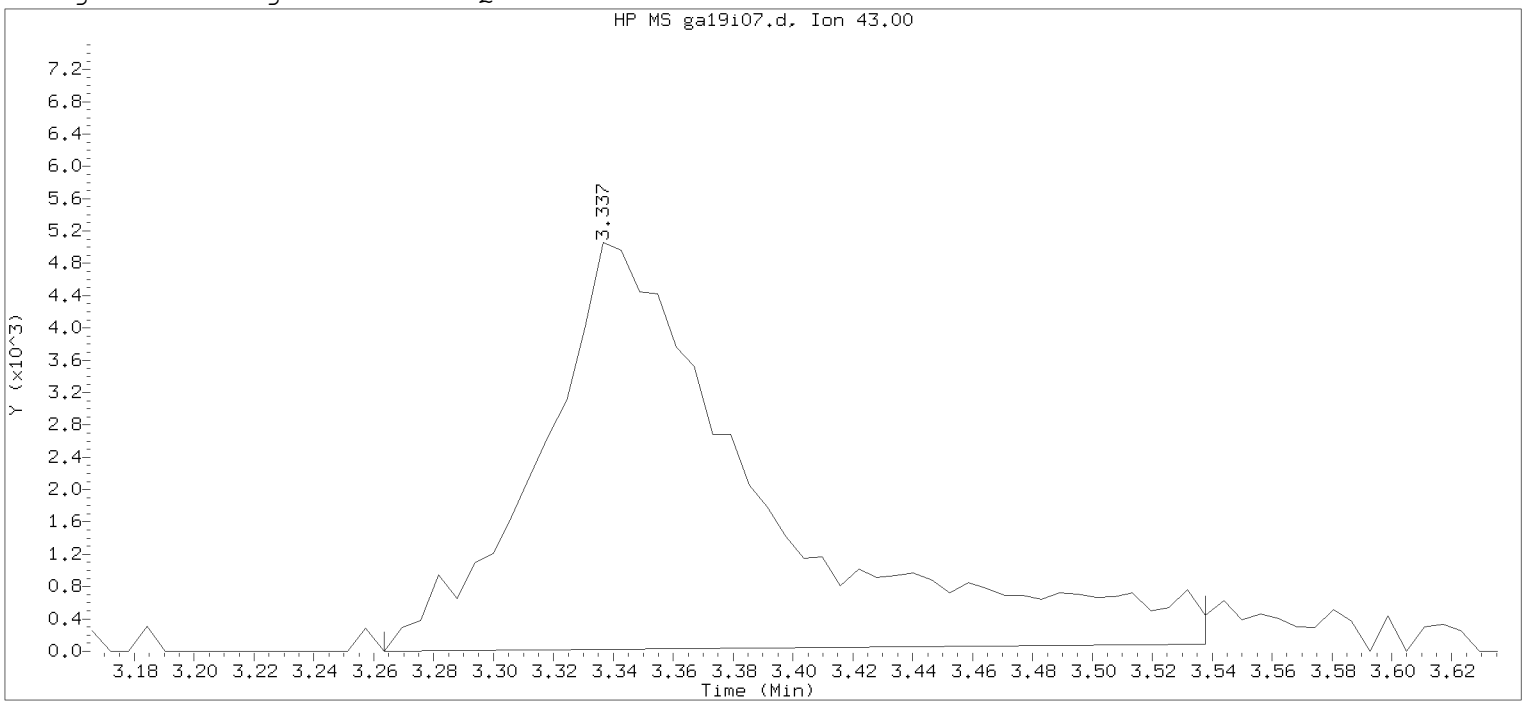
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 14
Compound Name : Acetone
Scan Number : 287
Retention Time (minutes): 3.337
Quant Ion : 43.00
Area : 25842
On-column Amount (ng) : 1.9865
Integration start scan : 274 Integration stop scan: 319
Y at integration start : 0 Y at integration end: 91

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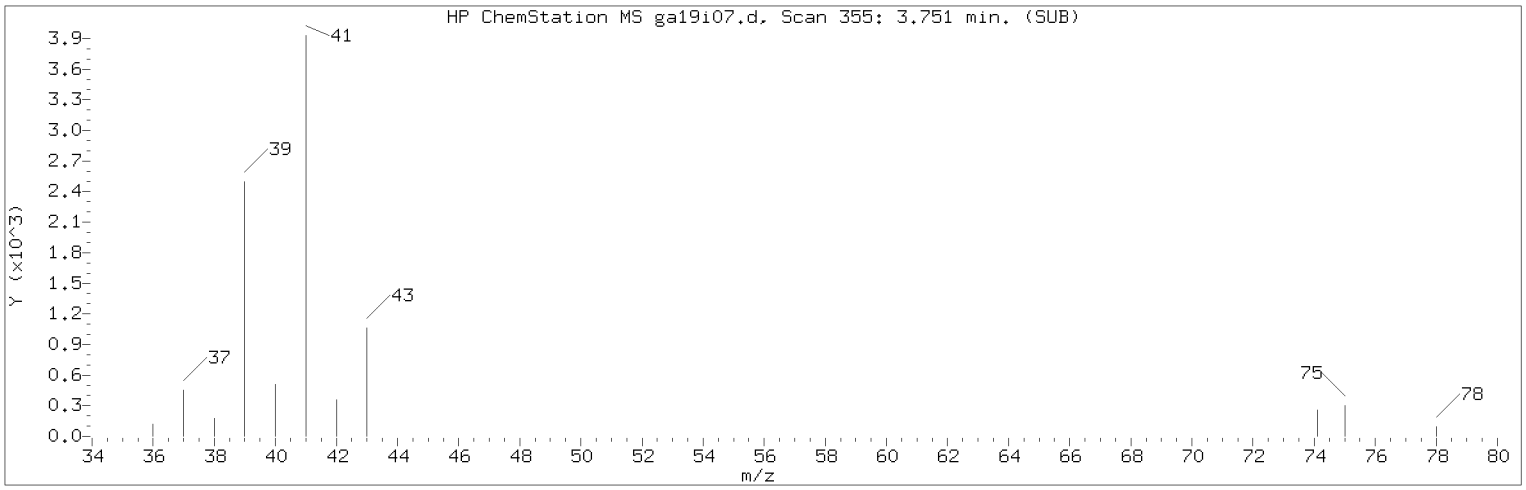
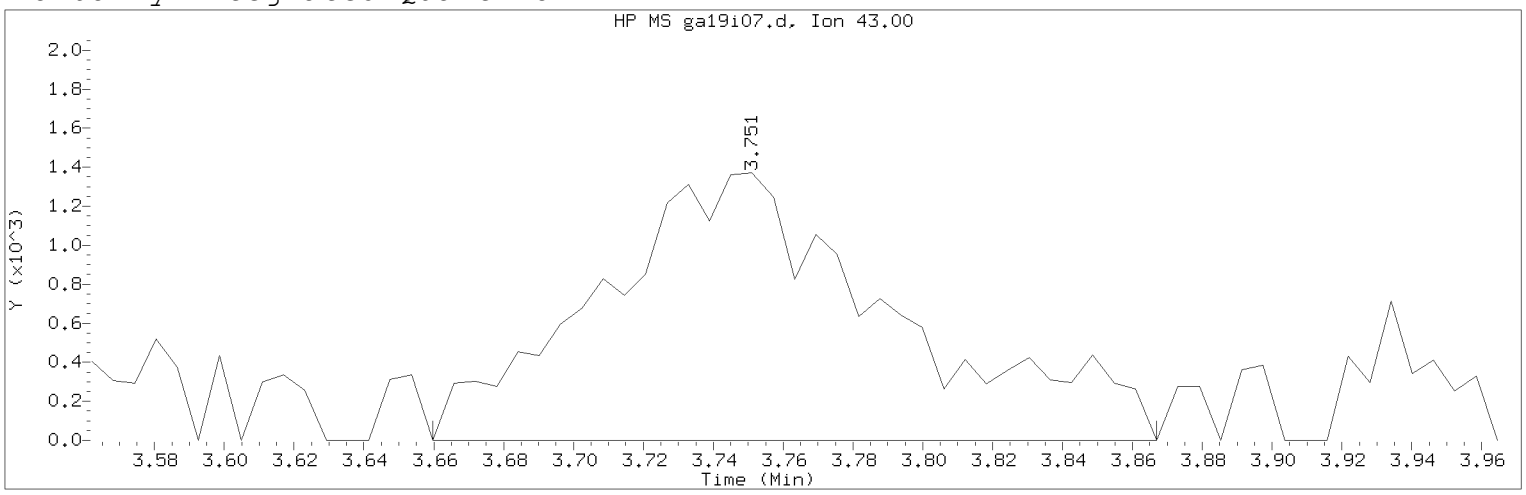
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

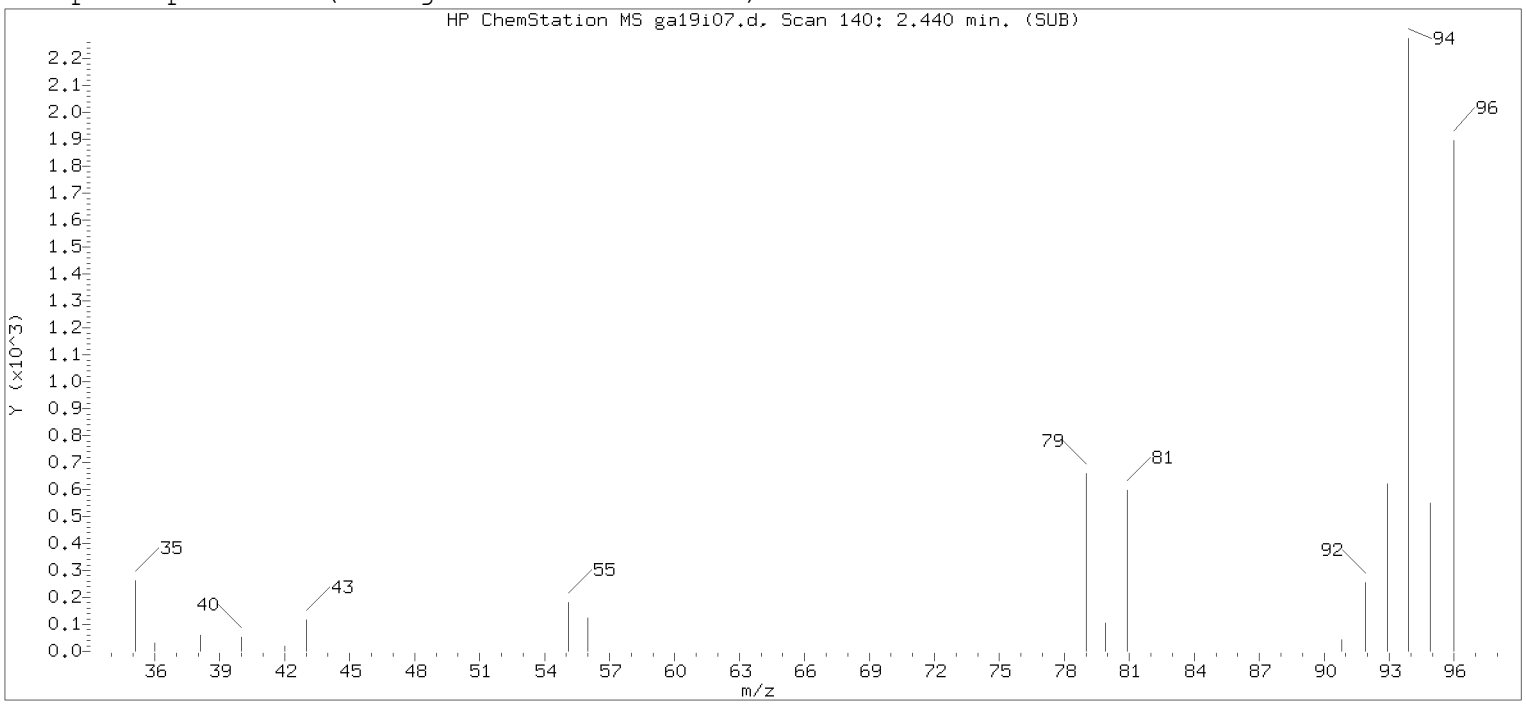
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 7988M
On-Column Amount (ng) : 0.2250
Integration start scan : 339 Integration stop scan: 373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

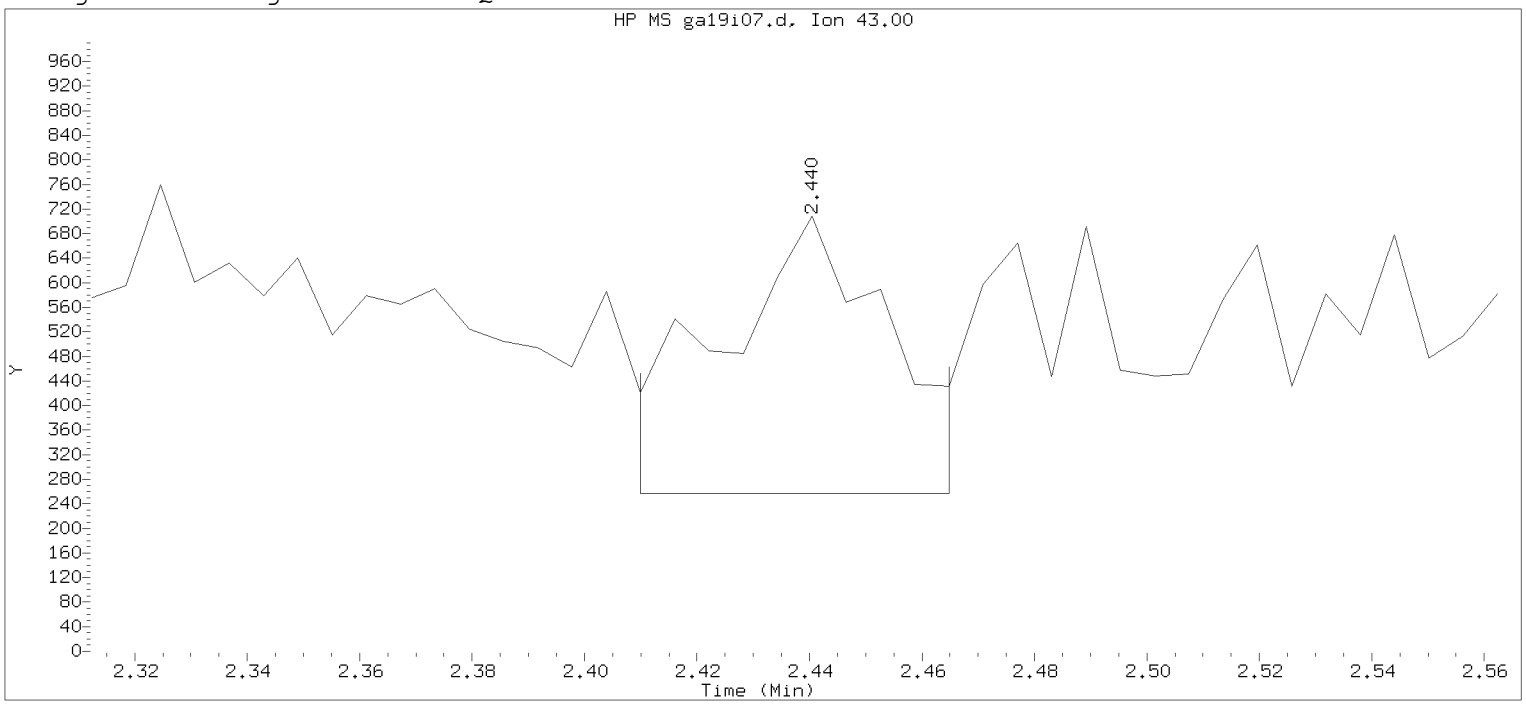
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 140
Retention Time (minutes): 2.440
Quant Ion : 43.00
Area : 928
On-column Amount (ng) : 0.5220
Integration start scan : 134 Integration stop scan: 143
Y at integration start : 257 Y at integration end: 257

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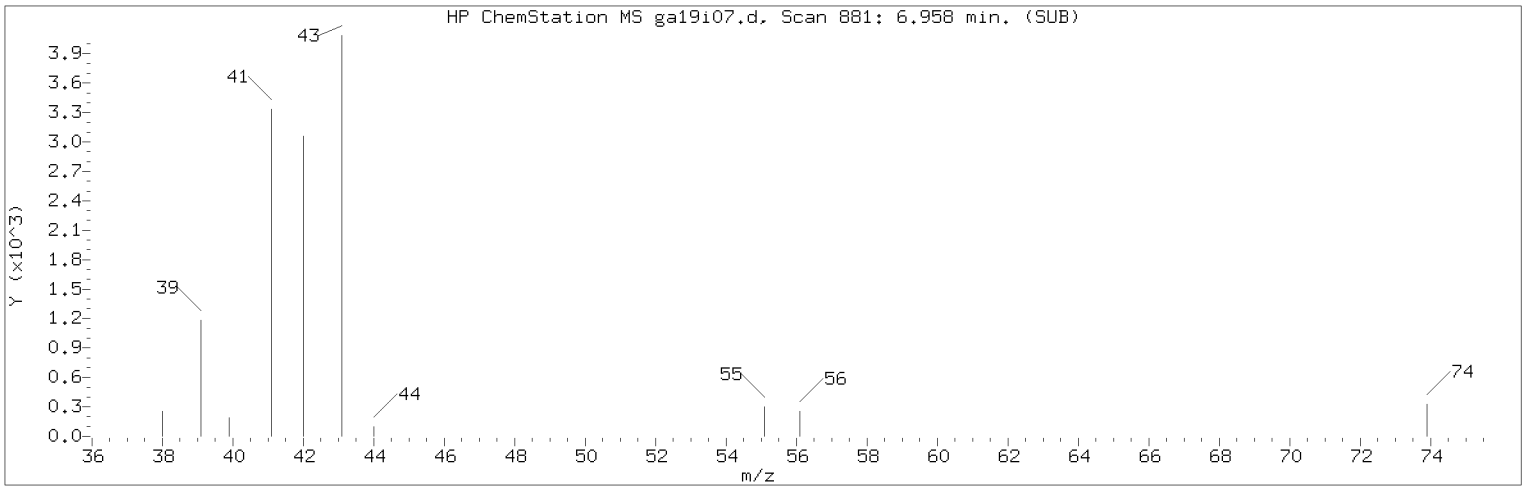
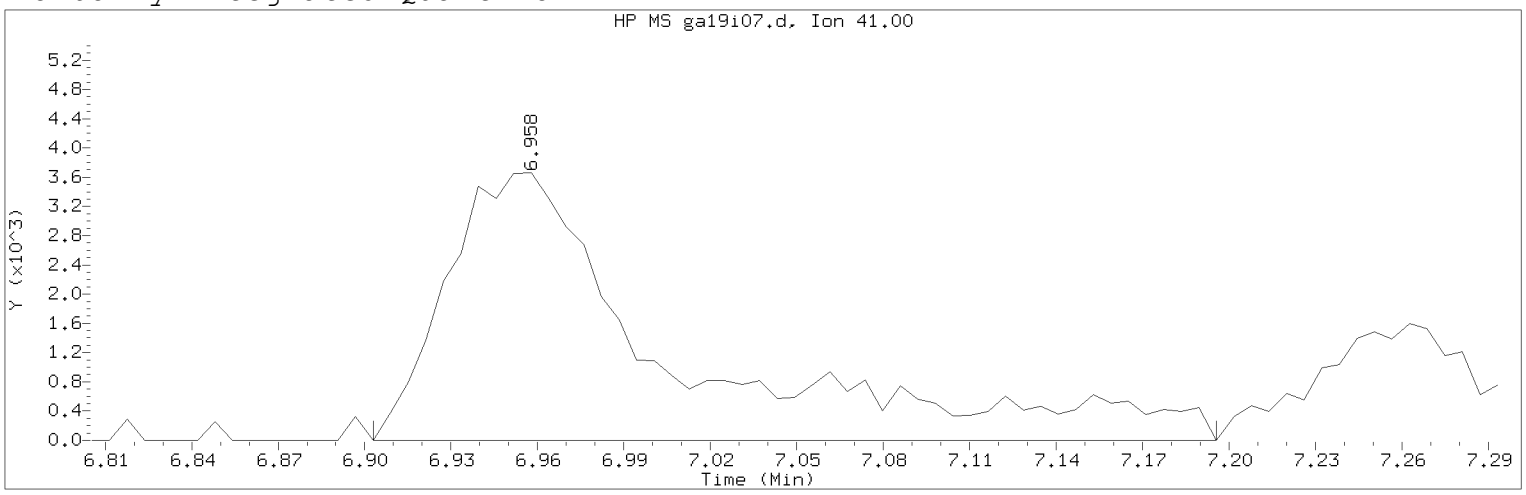
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

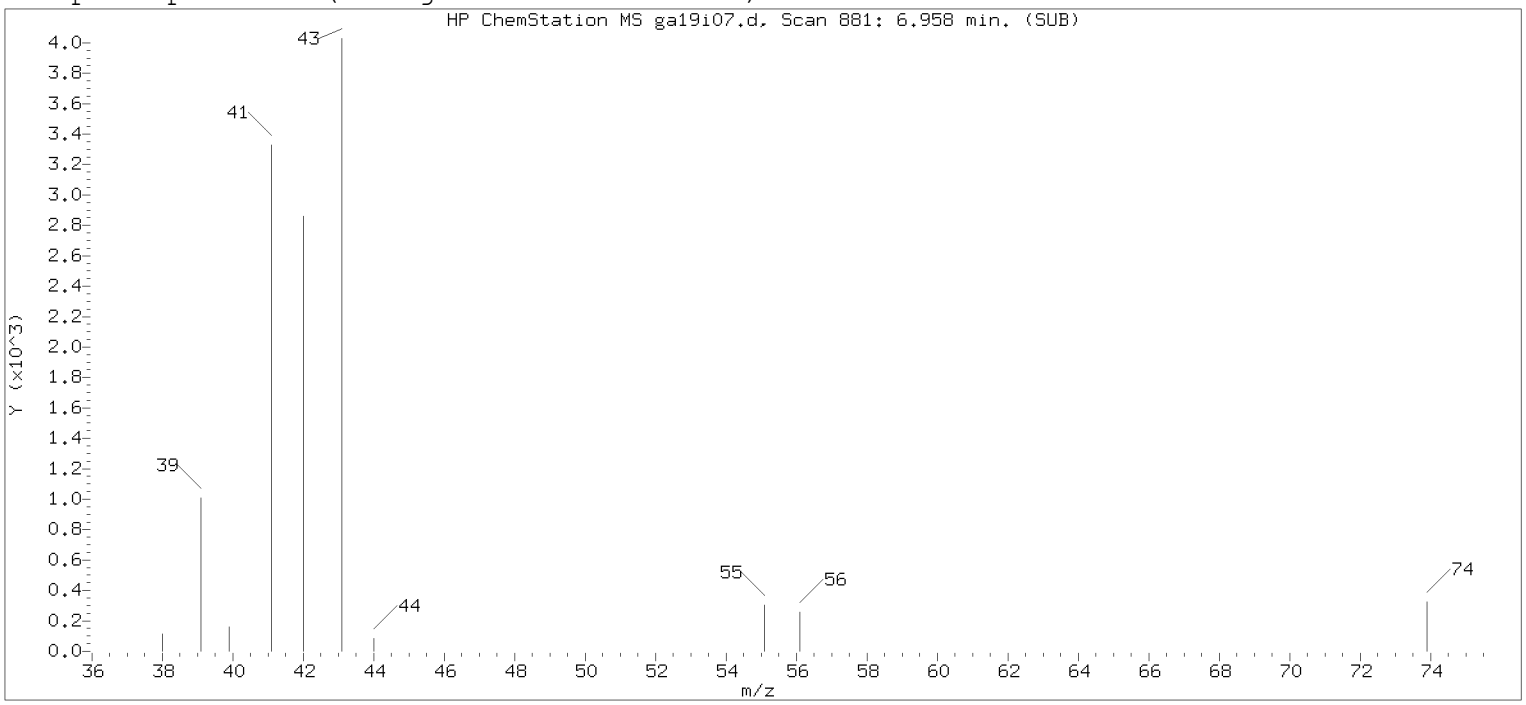
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 881
Retention Time (minutes): 6.958
Quant Ion : 41.00
Area (flag) : 19777M
On-Column Amount (ng) : 11.6573
Integration start scan : 871 Integration stop scan: 919
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

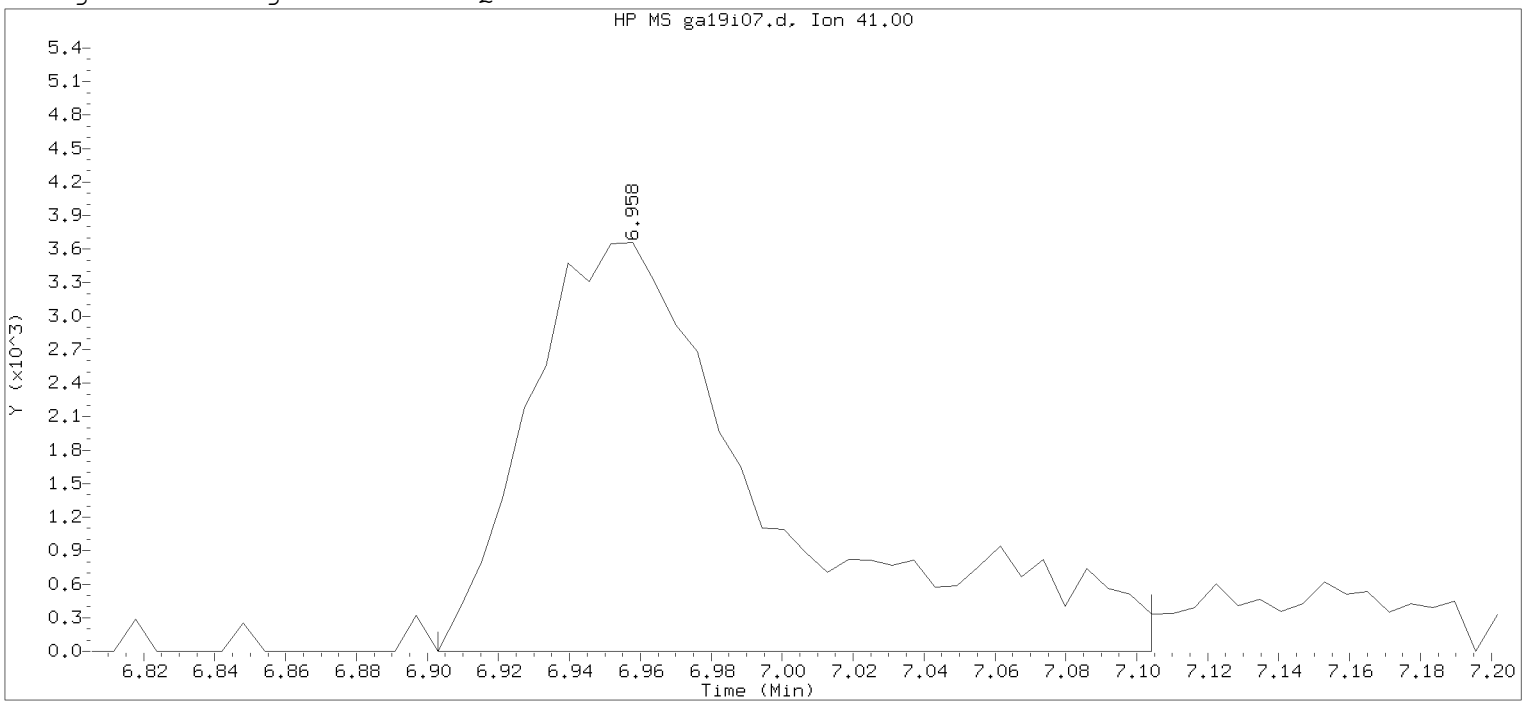
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

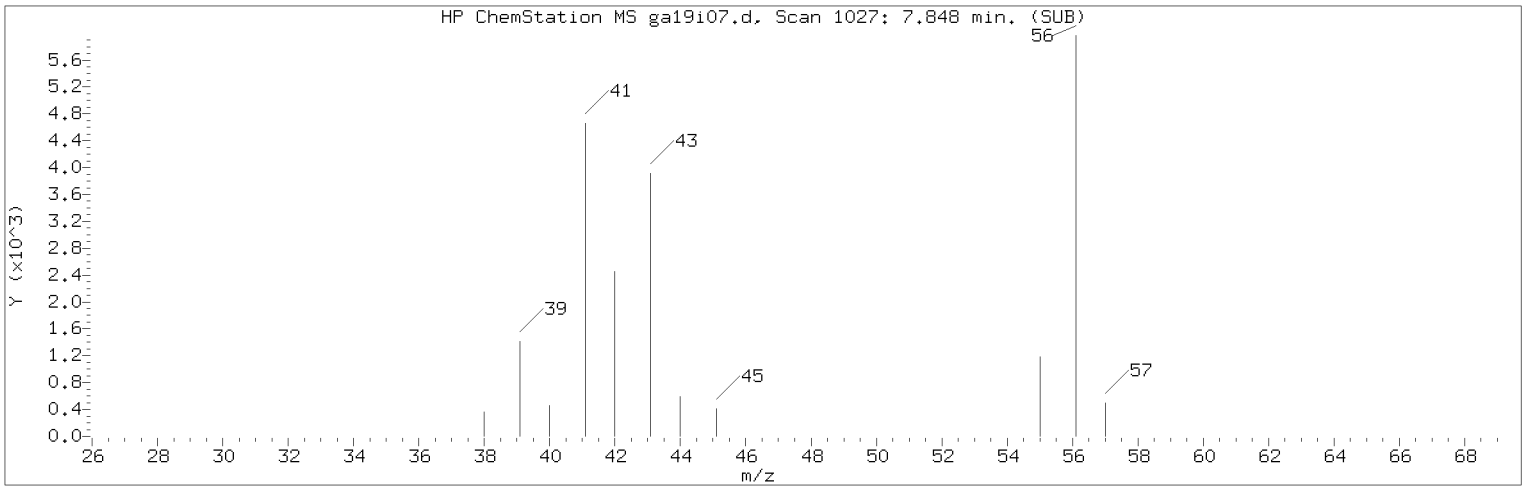
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

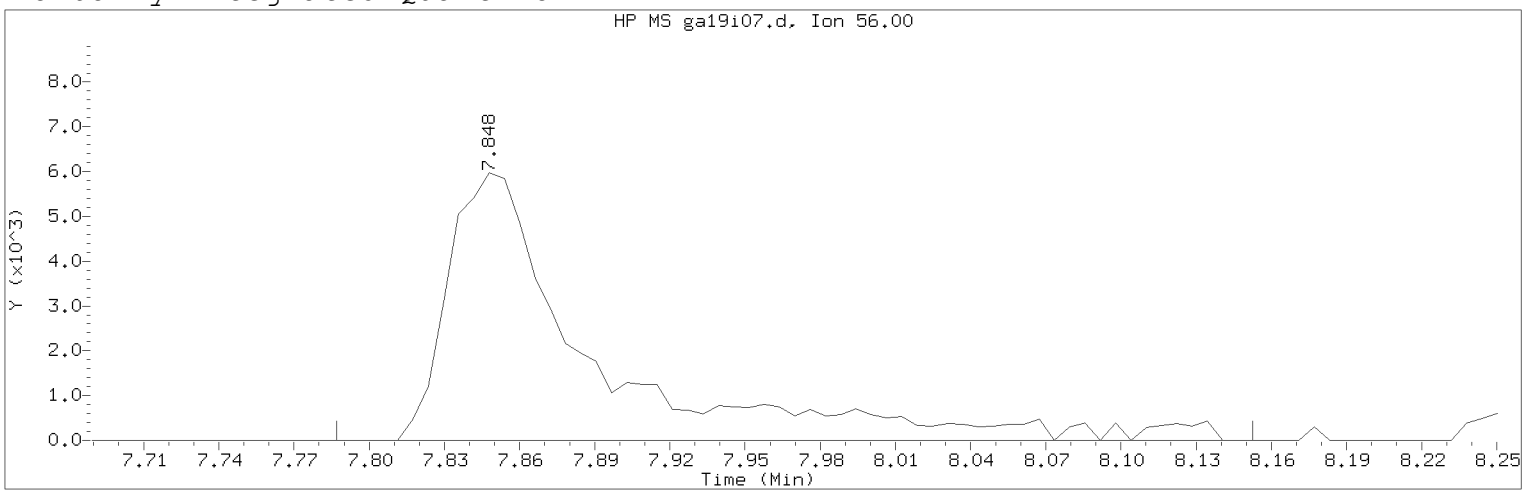
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 881
Retention Time (minutes): 6.958
Quant Ion : 41.00
Area : 17422
On-column Amount (ng) : 9.9997
Integration start scan : 871 Integration stop scan: 904
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

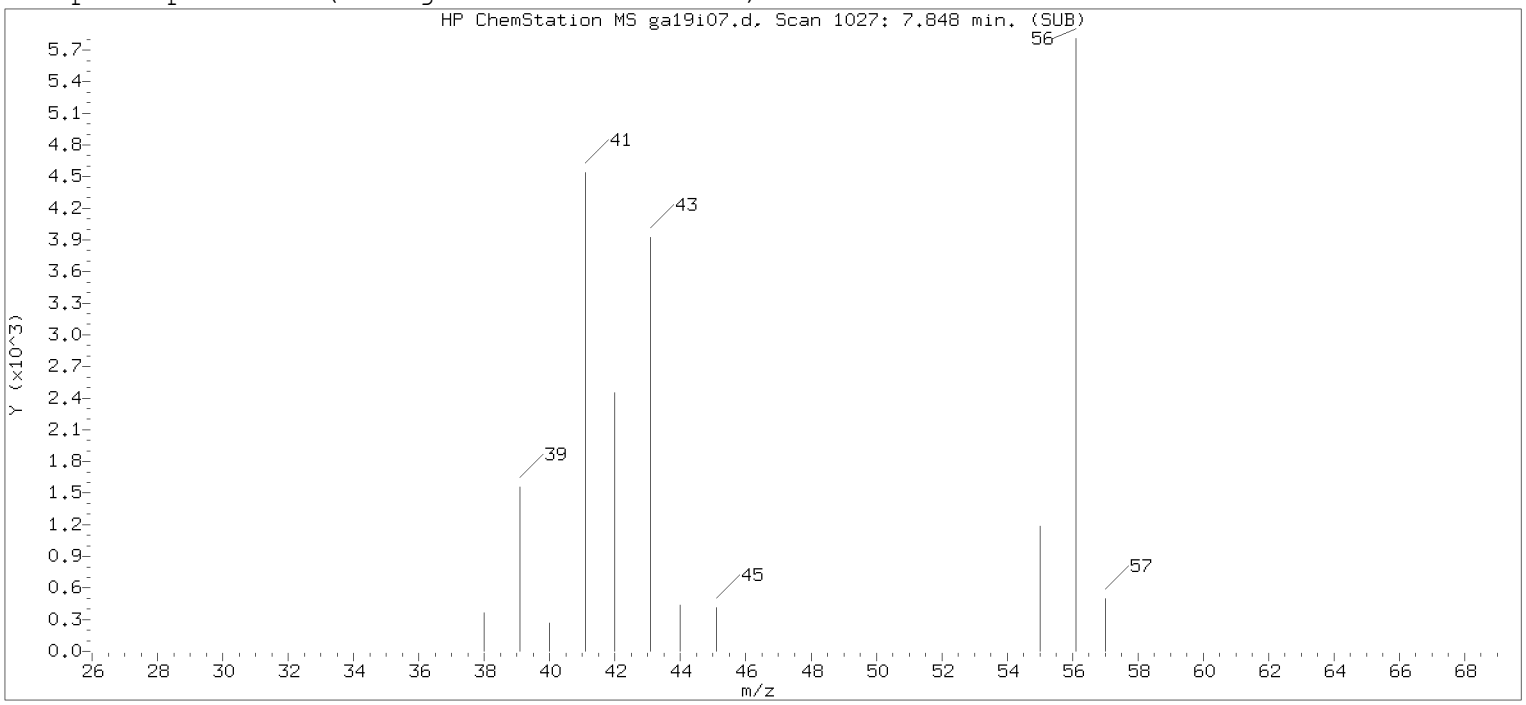
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area (flag) : 23969M
On-Column Amount (ng) : 17.8503
Integration start scan : 1016 Integration stop scan: 1076
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

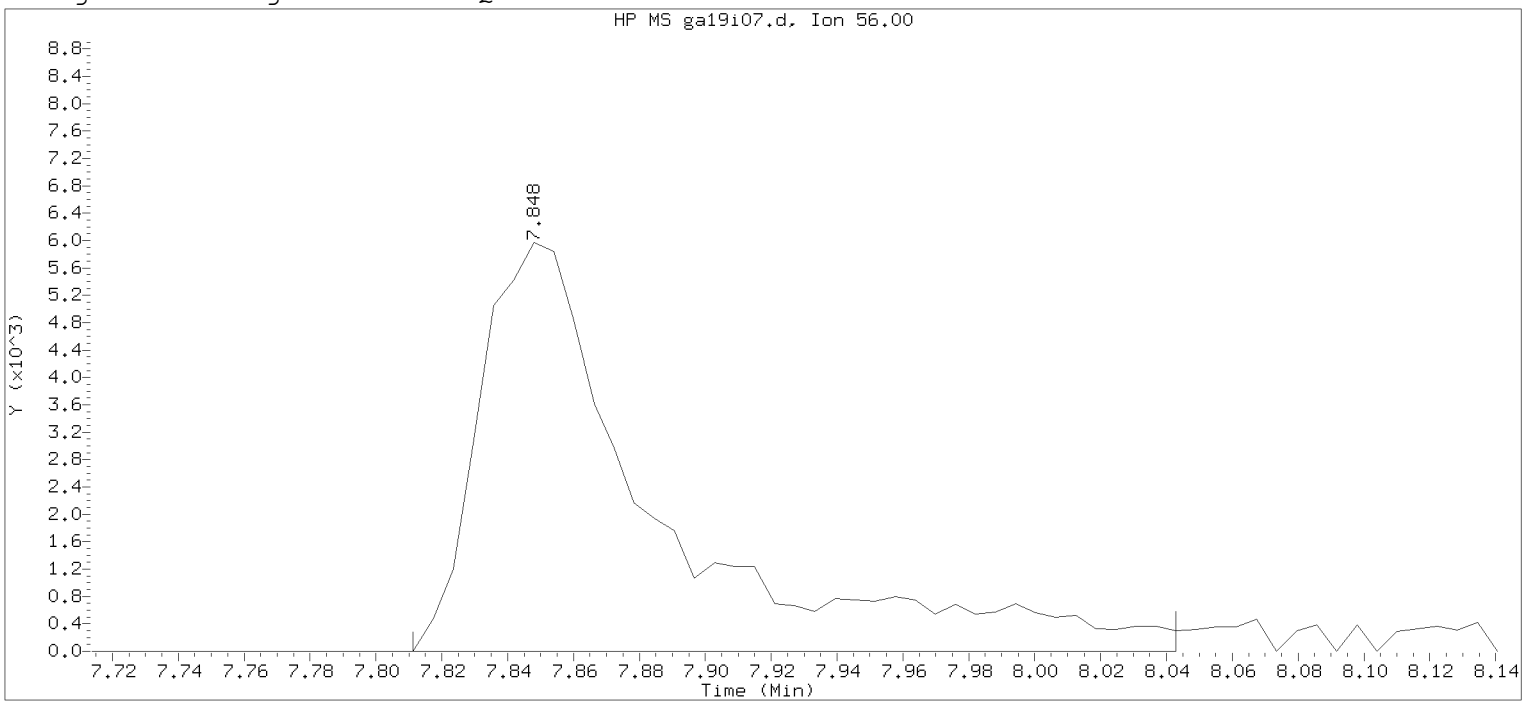
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

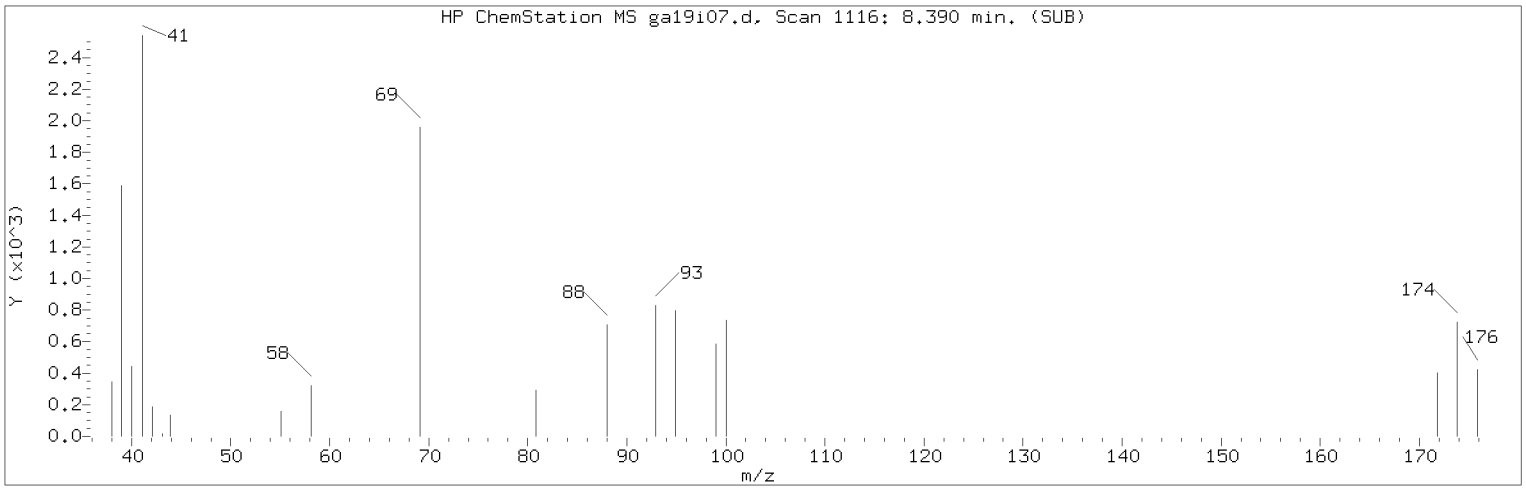
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

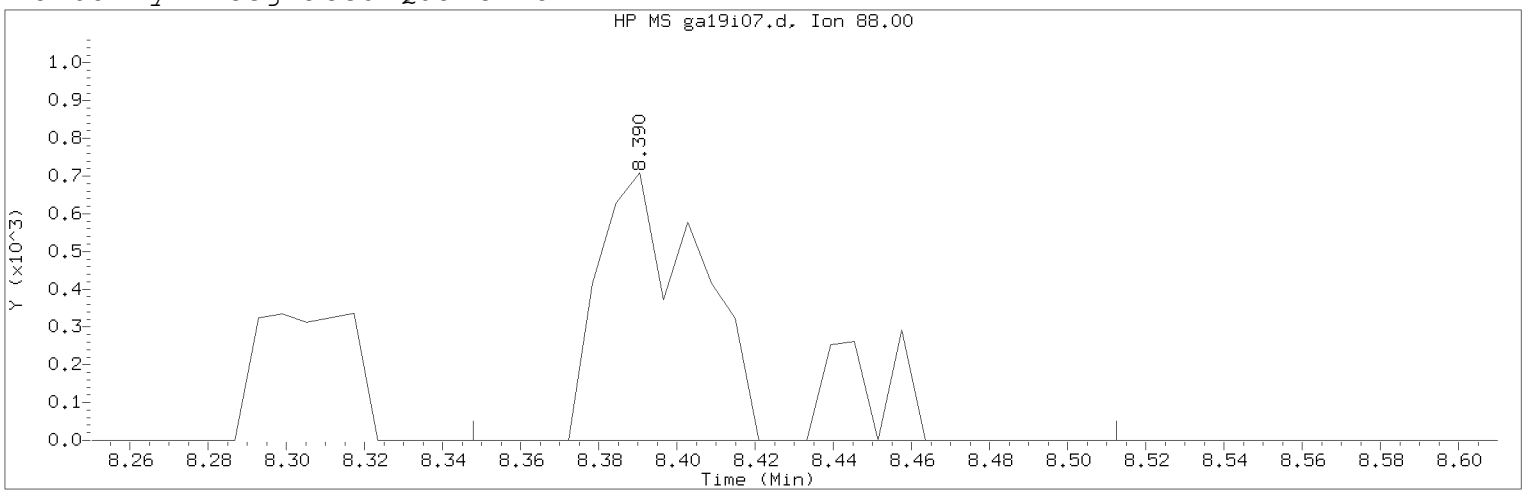
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1027		
Retention Time (minutes)	: 7.848		
Quant Ion	: 56.00		
Area	: 22339		
On-column Amount (ng)	: 16.3498		
Integration start scan	: 1020	Integration stop scan:	1058
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

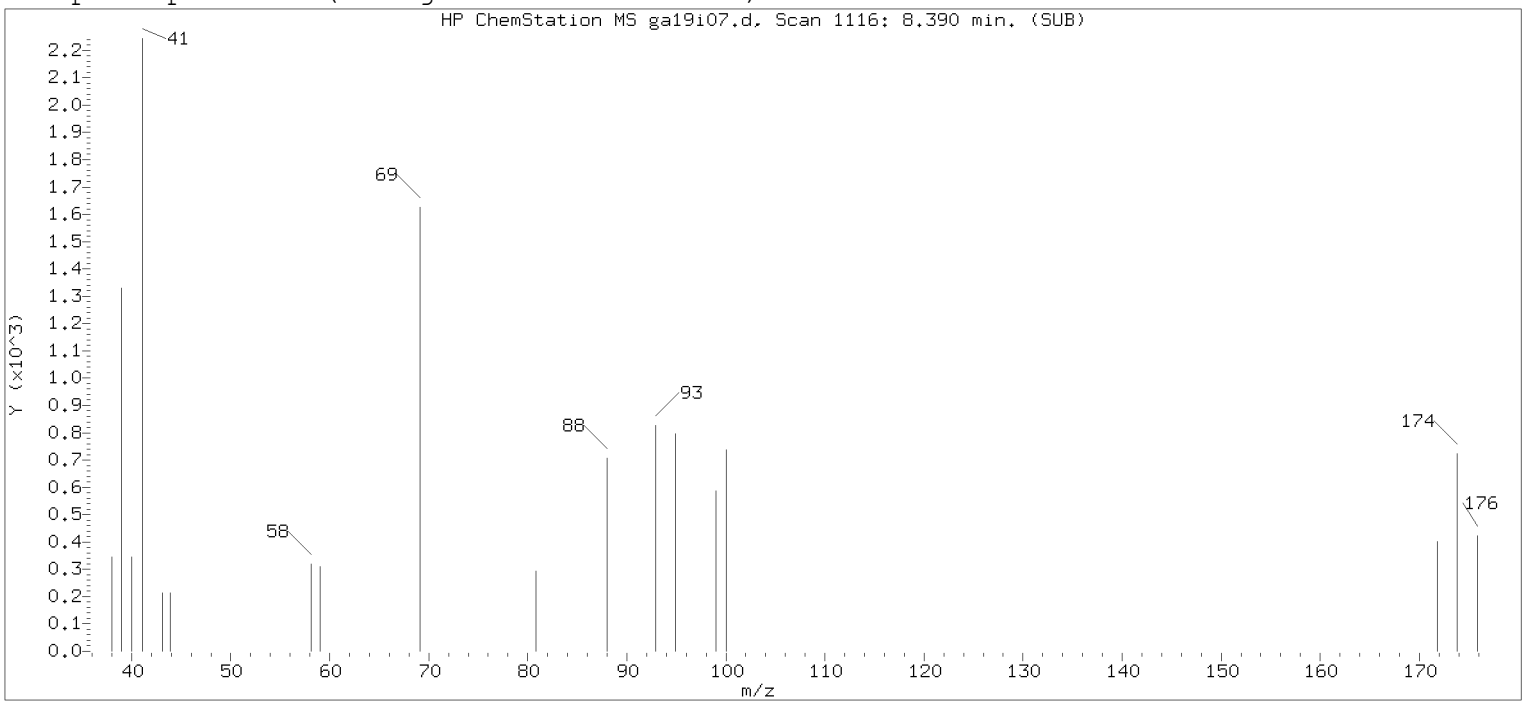
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 1552M
On-Column Amount (ng) : 6.6324
Integration start scan : 1108 Integration stop scan: 1135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

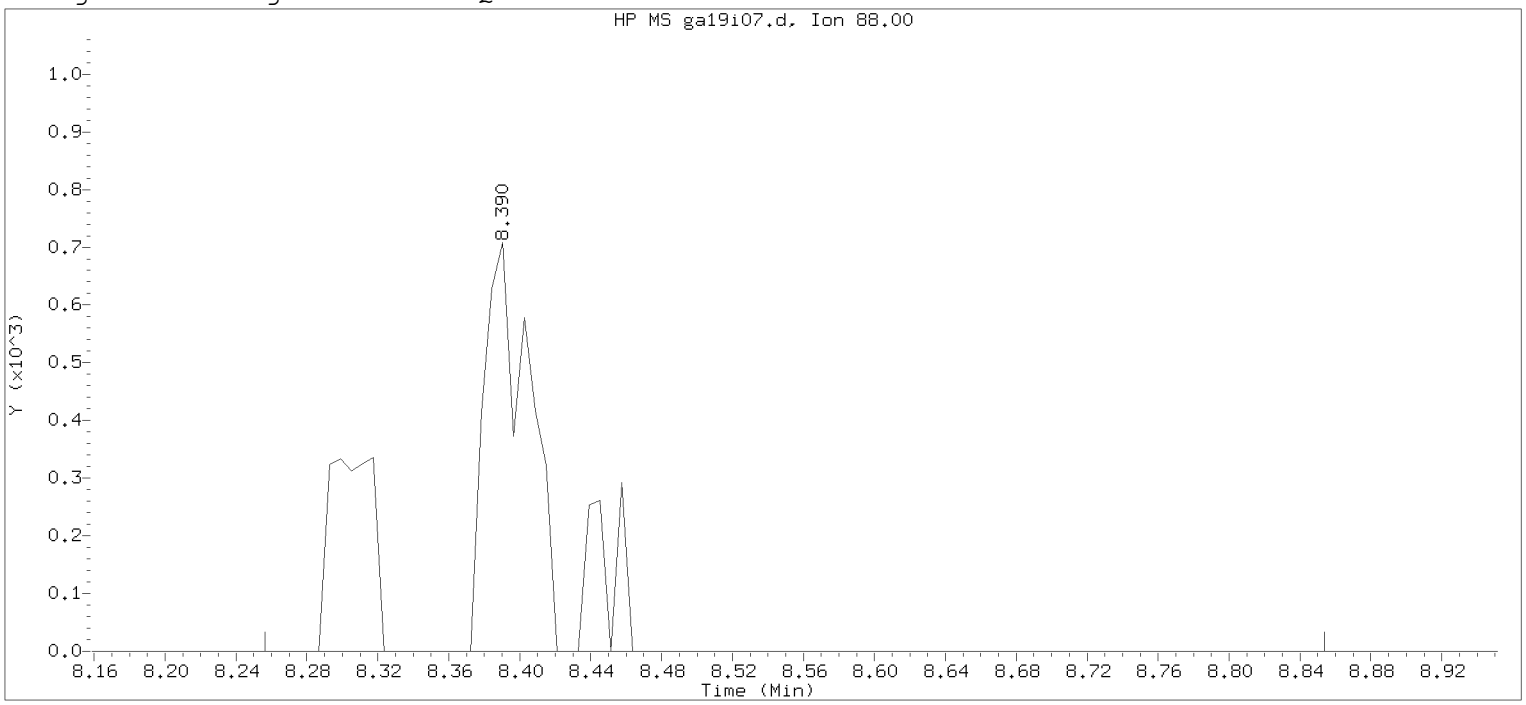
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

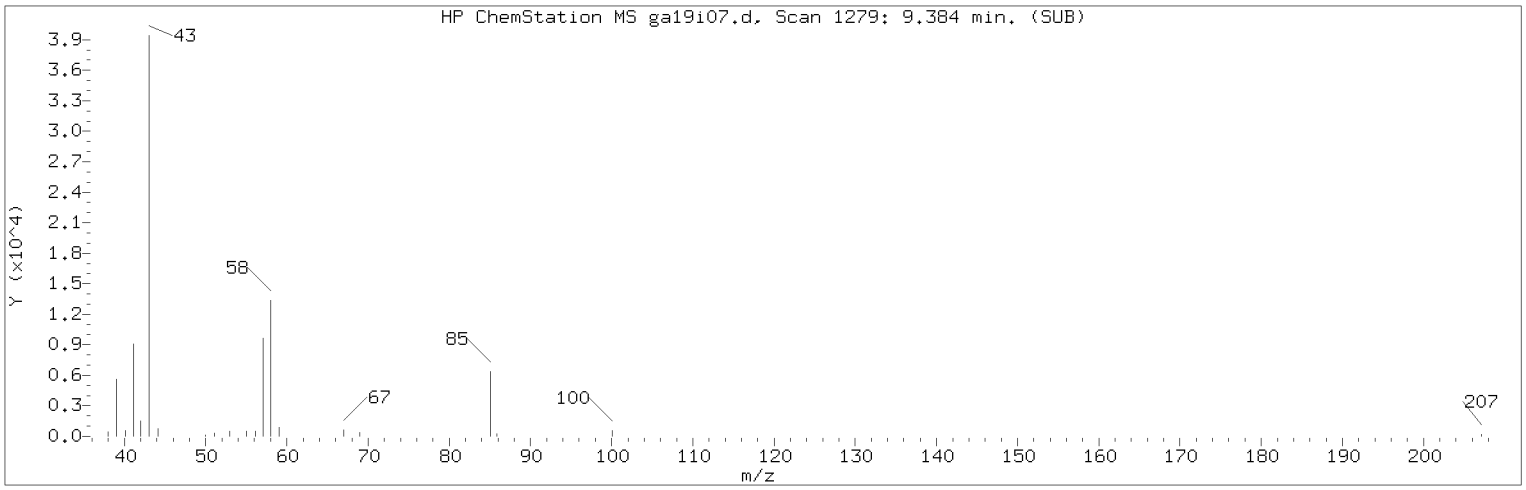
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

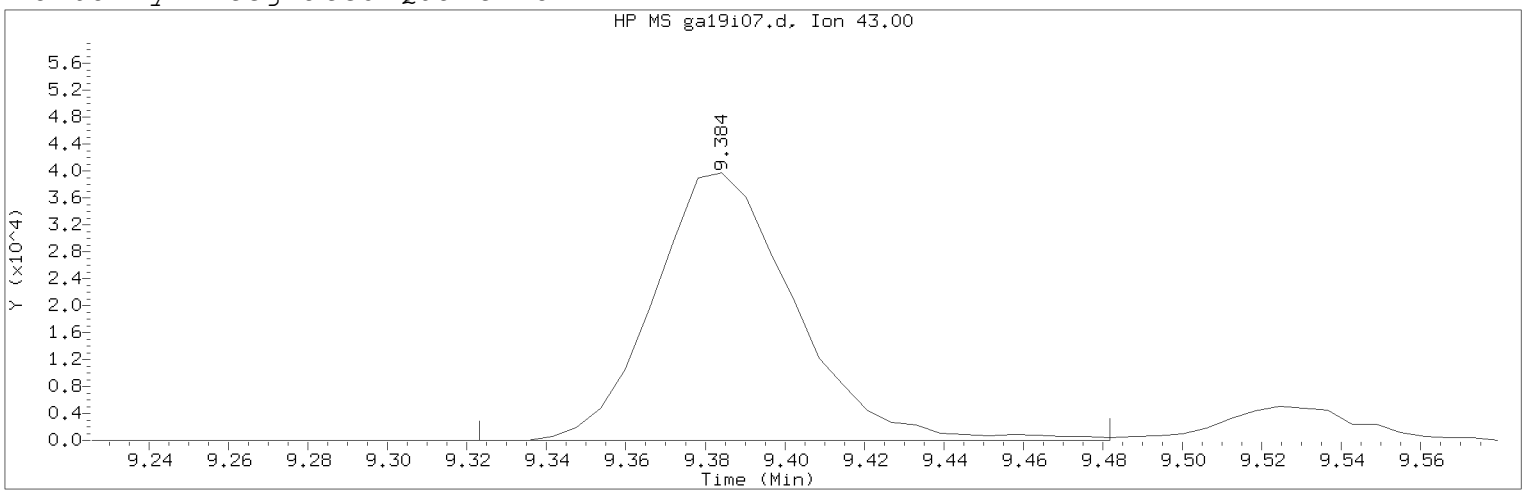
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1116		
Retention Time (minutes)	: 8.390		
Quant Ion	: 88.00		
Area	: 2149		
On-column Amount (ng)	: 6.9438		
Integration start scan	: 1093	Integration stop scan:	1191
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

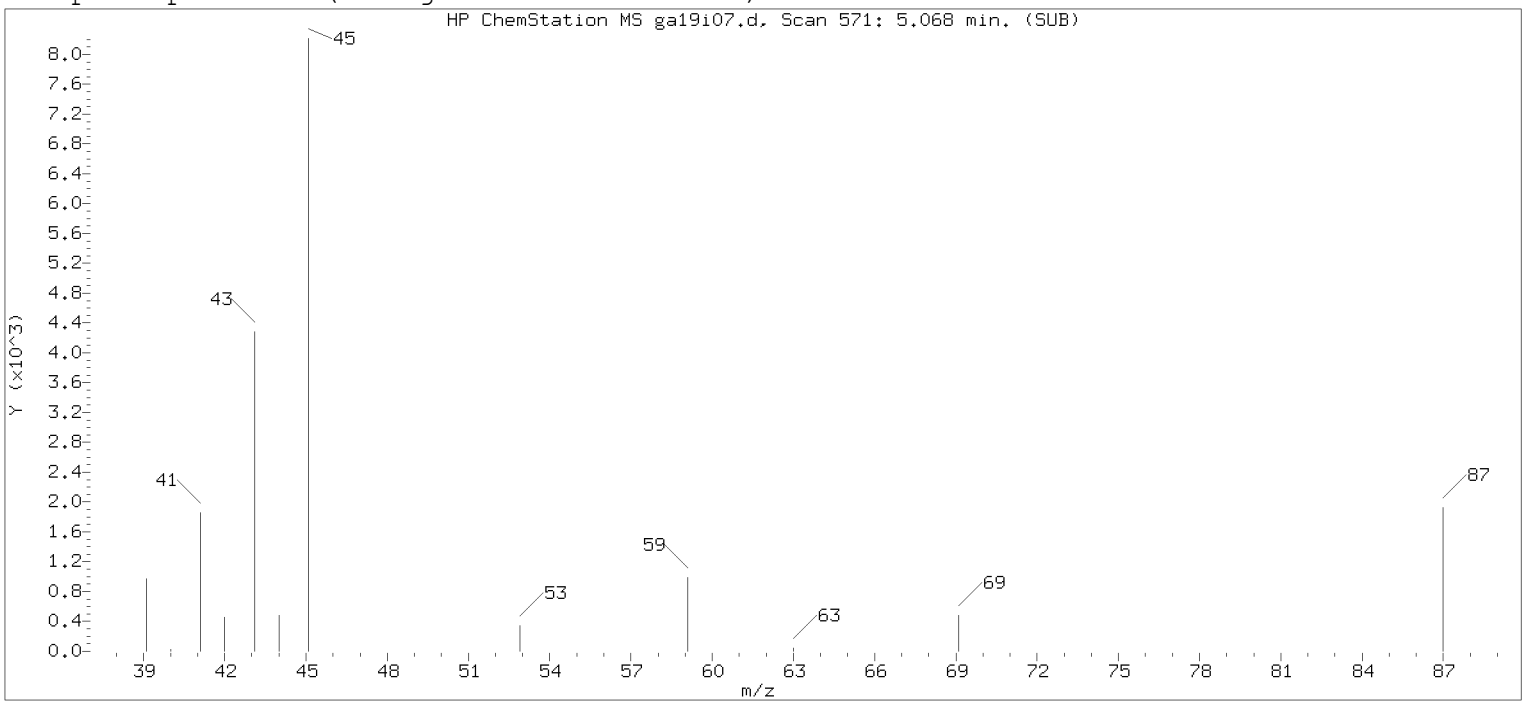
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 97110M
On-Column Amount (ng) : 1.8245
Integration start scan : 1268 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

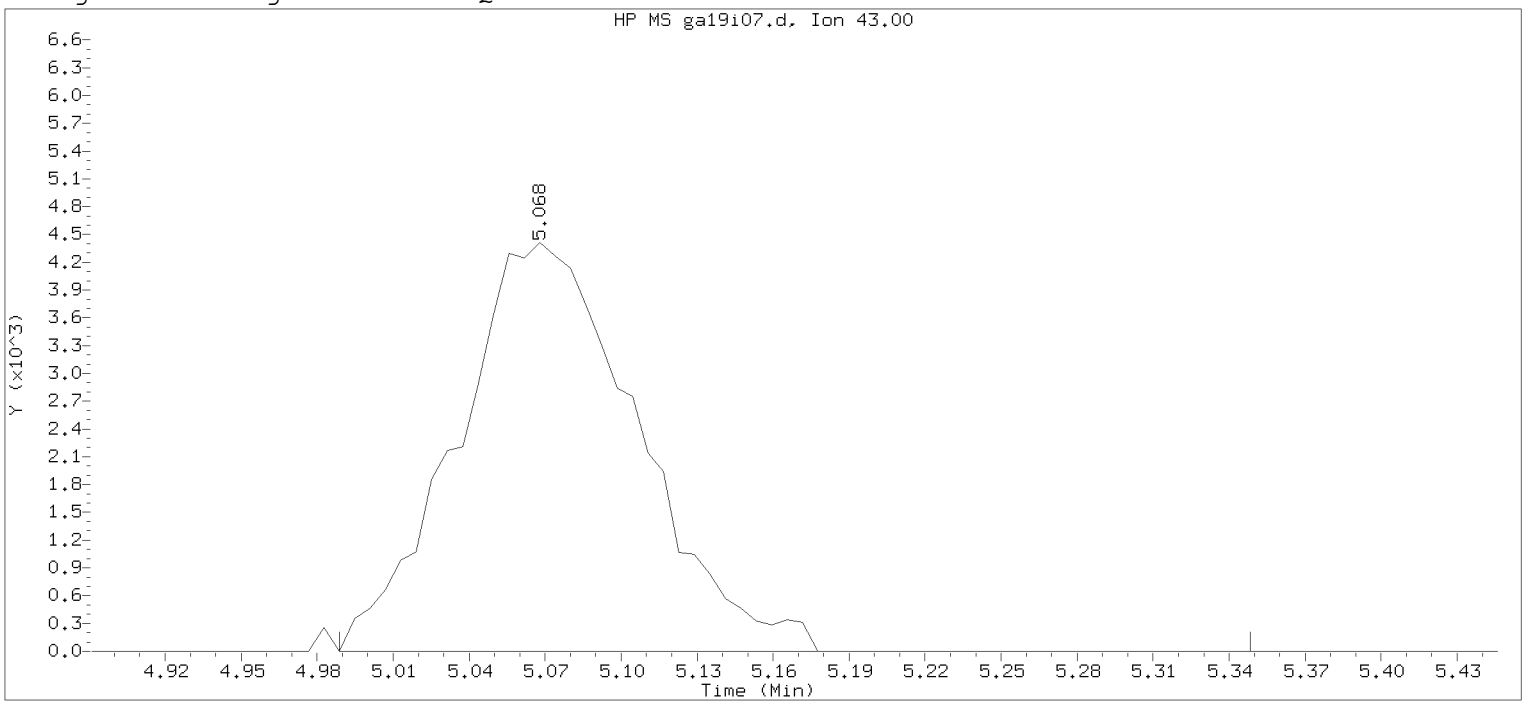
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

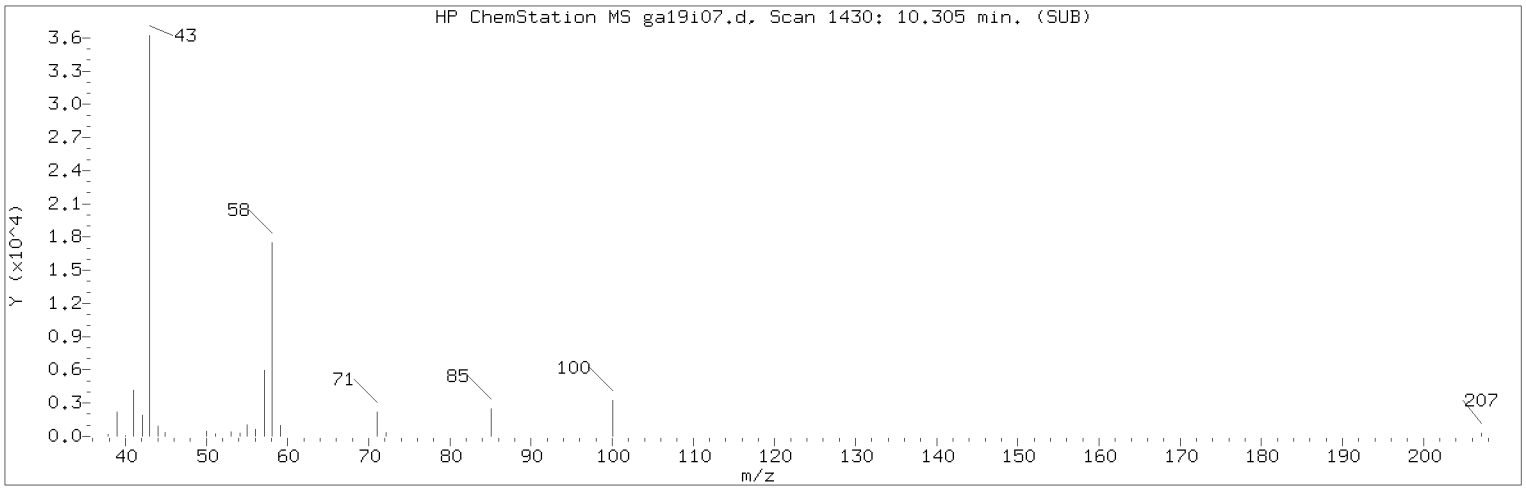
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

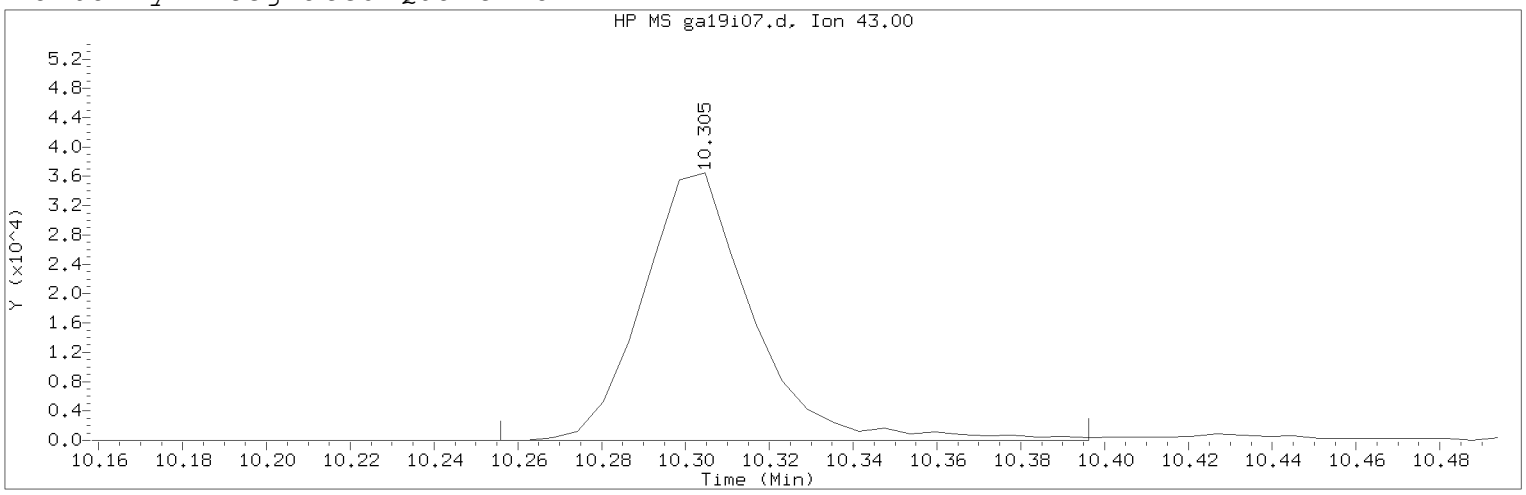
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 571
Retention Time (minutes): 5.068
Quant Ion : 43.00
Area : 21799
On-column Amount (ng) : 1.8933
Integration start scan : 557 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

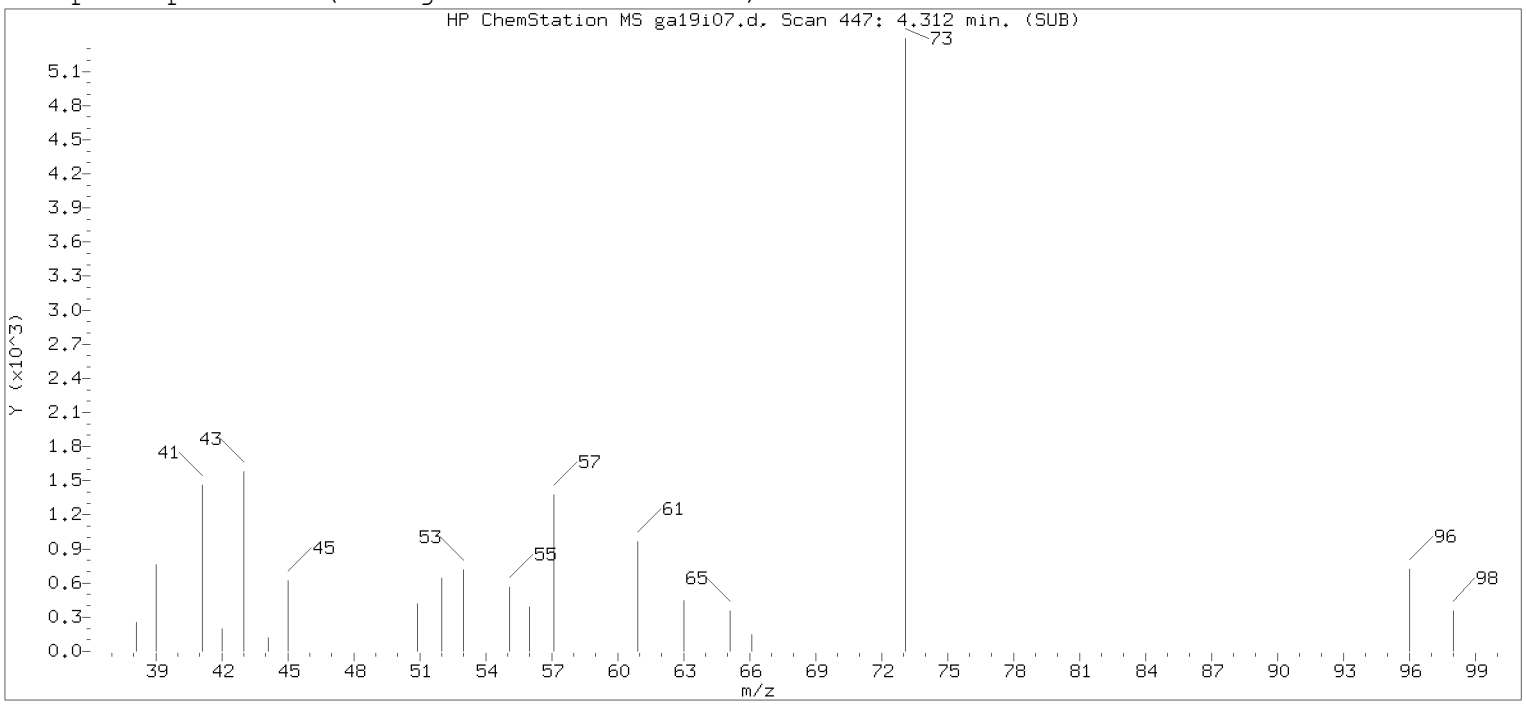
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 66409M
On-Column Amount (ng) : 1.7751
Integration start scan : 1421 Integration stop scan: 1444
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

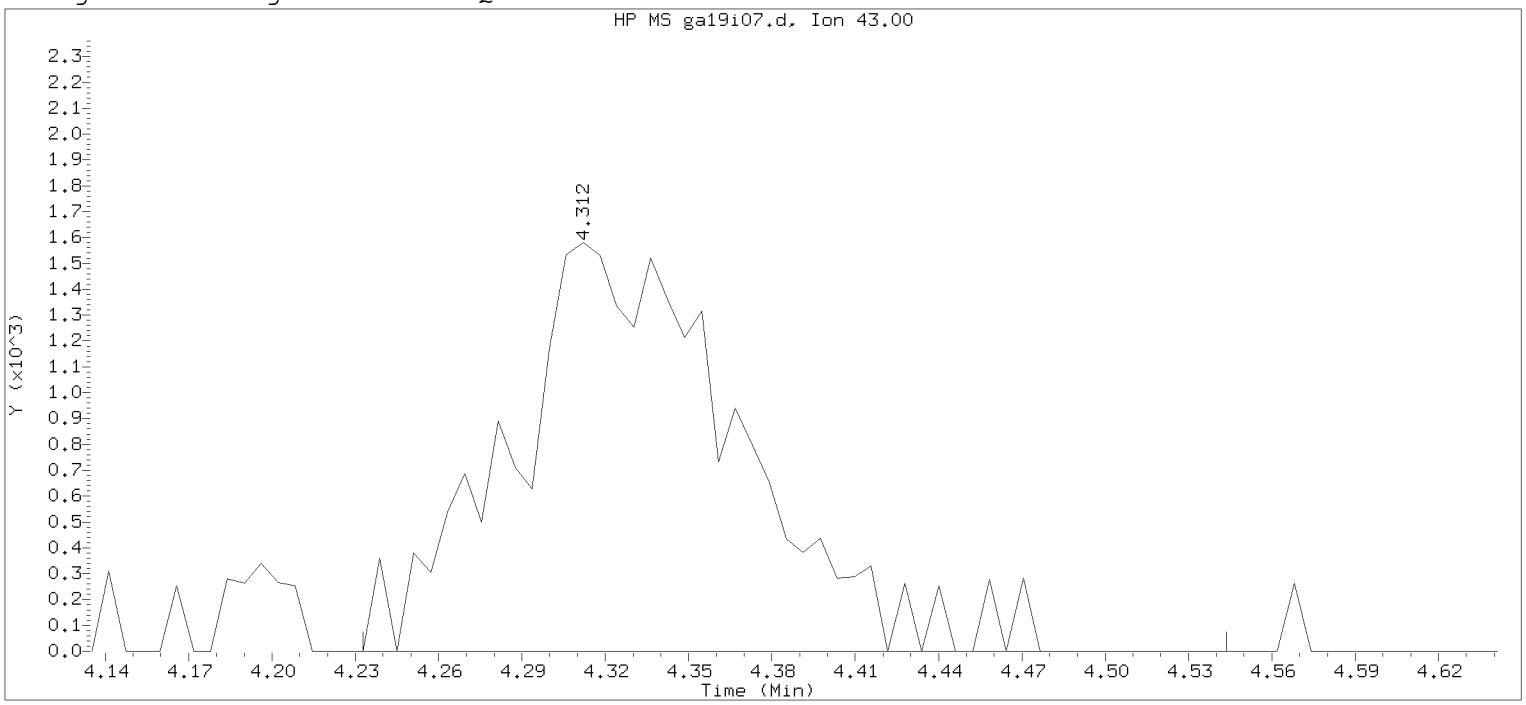
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

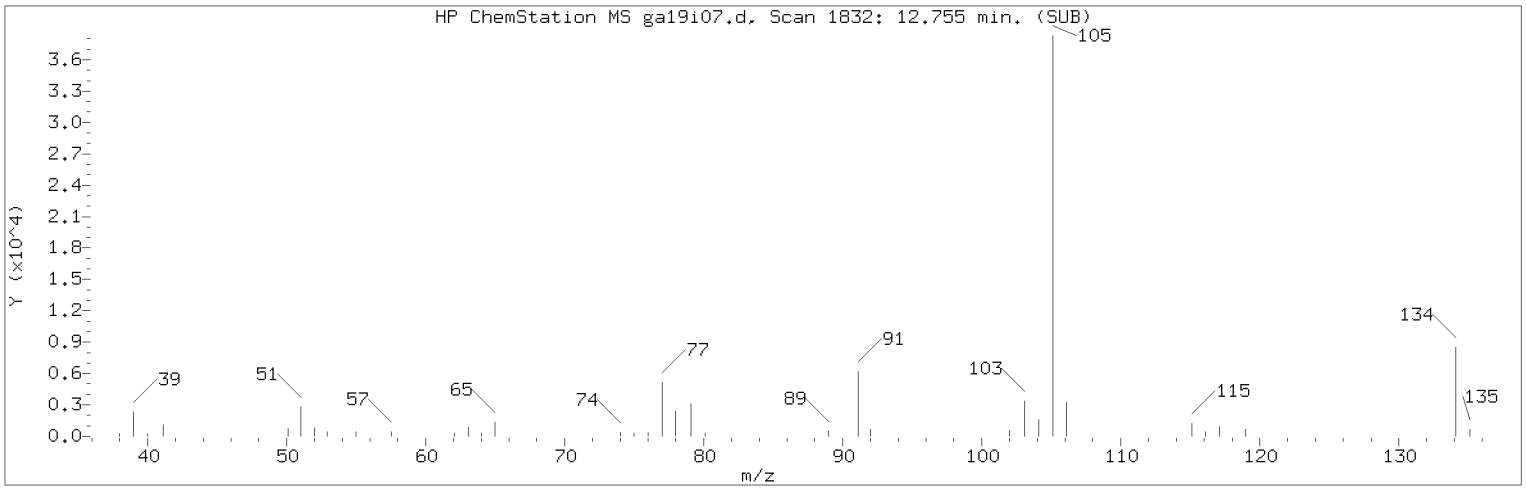
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

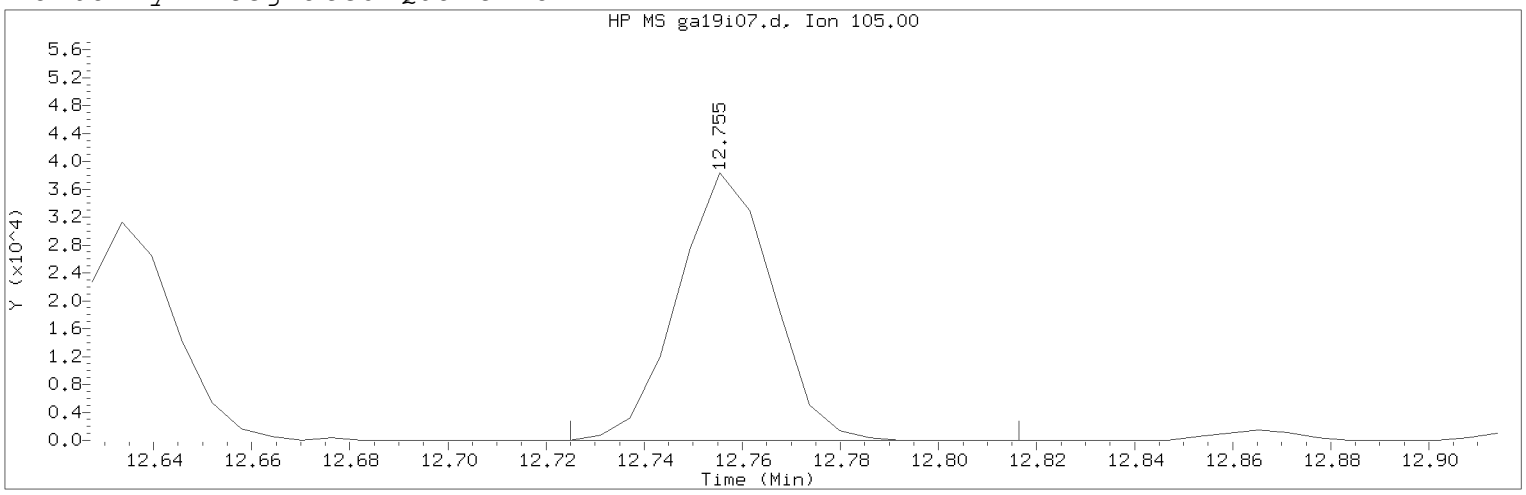
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 447		
Retention Time (minutes)	: 4.312		
Quant Ion	: 43.00		
Area	: 9206		
On-column Amount (ng)	: 4.0884		
Integration start scan	: 433	Integration stop scan:	484
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

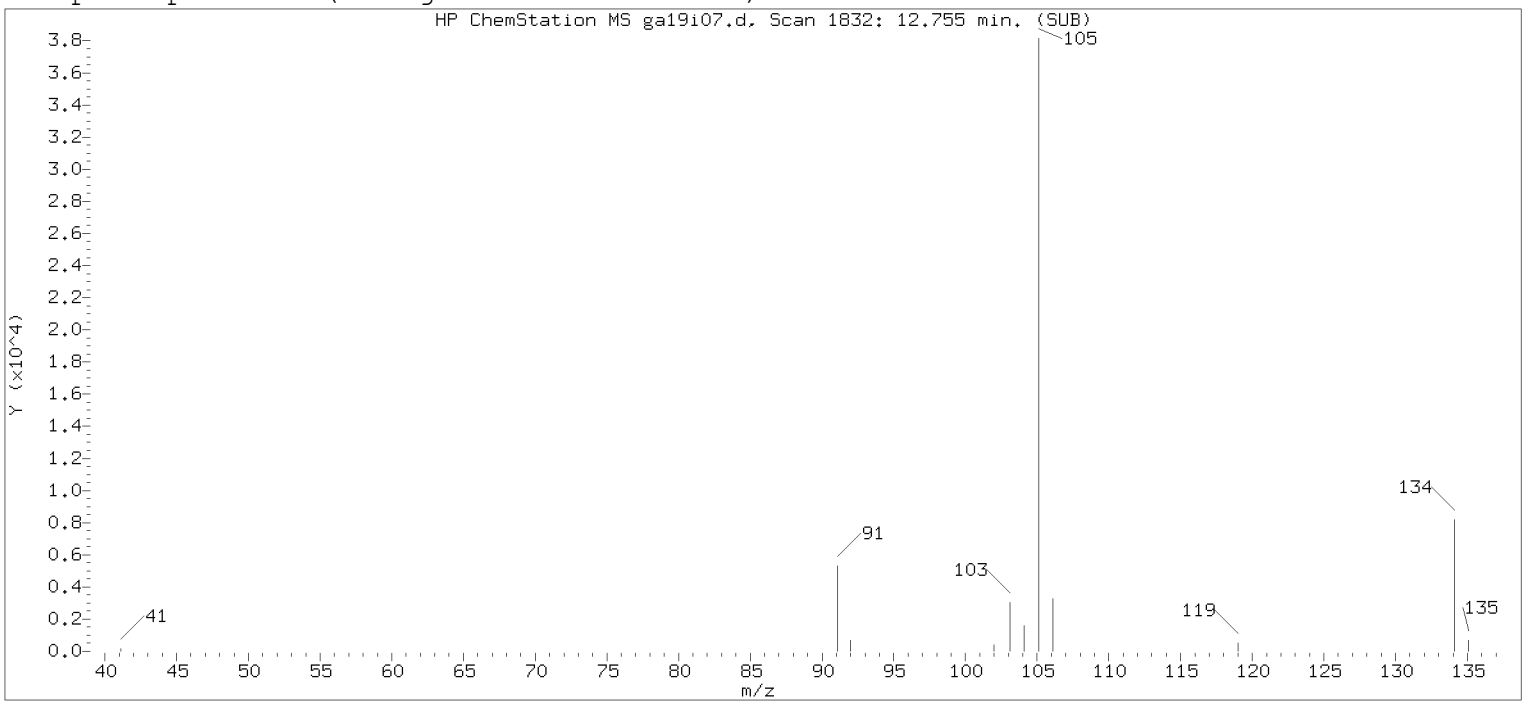
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area (flag) : 51241M
On-Column Amount (ng) : 0.1818
Integration start scan : 1826 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

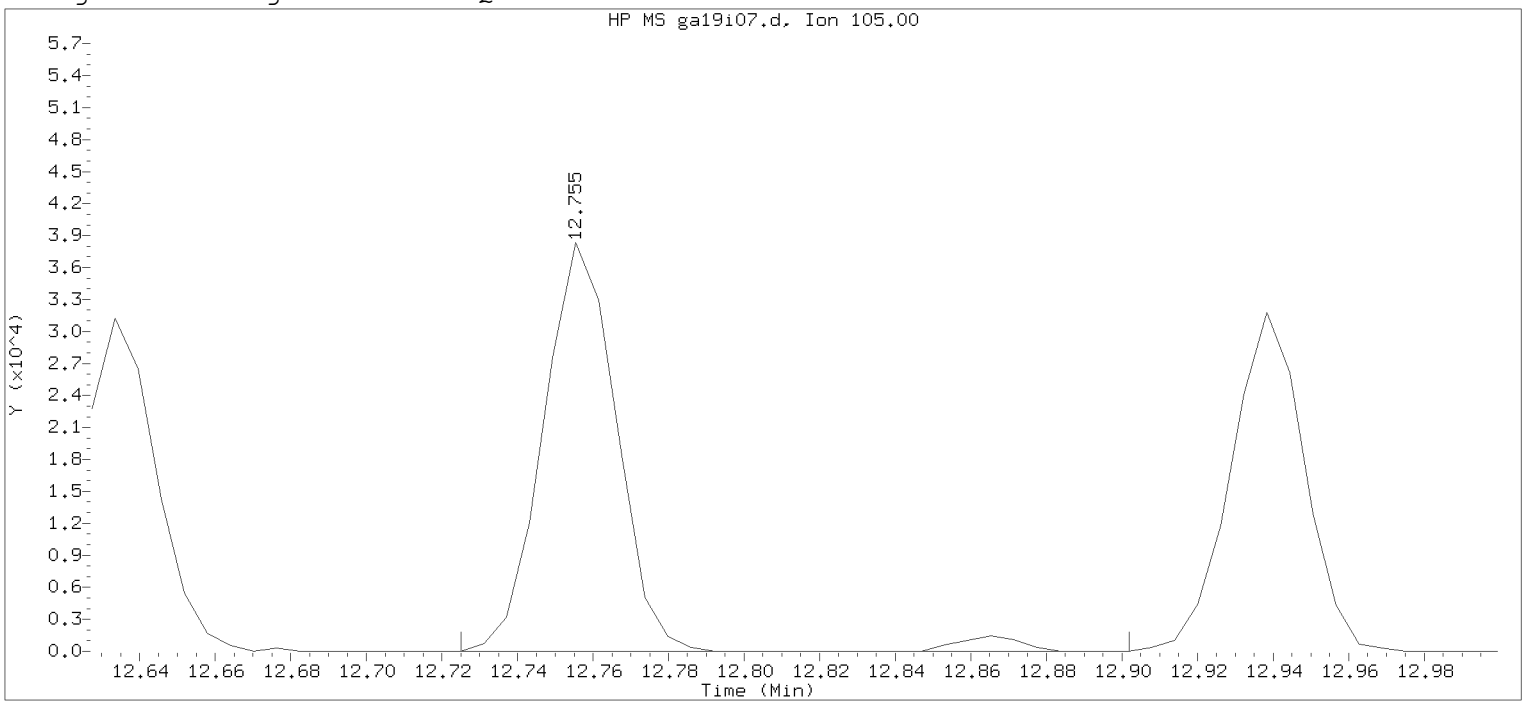
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



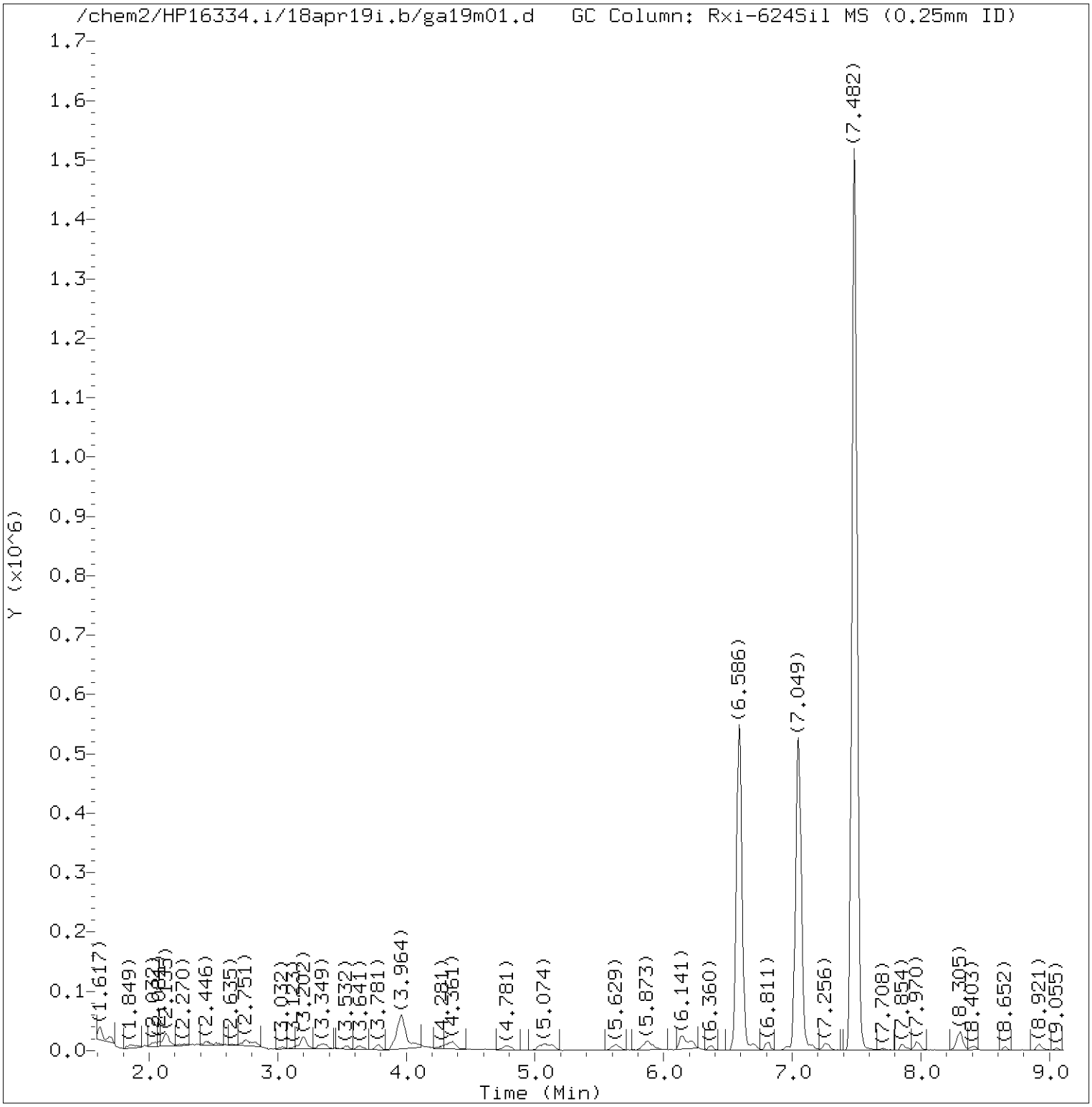
Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area : 52877
On-column Amount (ng) : 0.1868
Integration start scan : 1826 Integration stop scan: 1855
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user name: MSKrause



Total Ion Chromatogram (TIC)

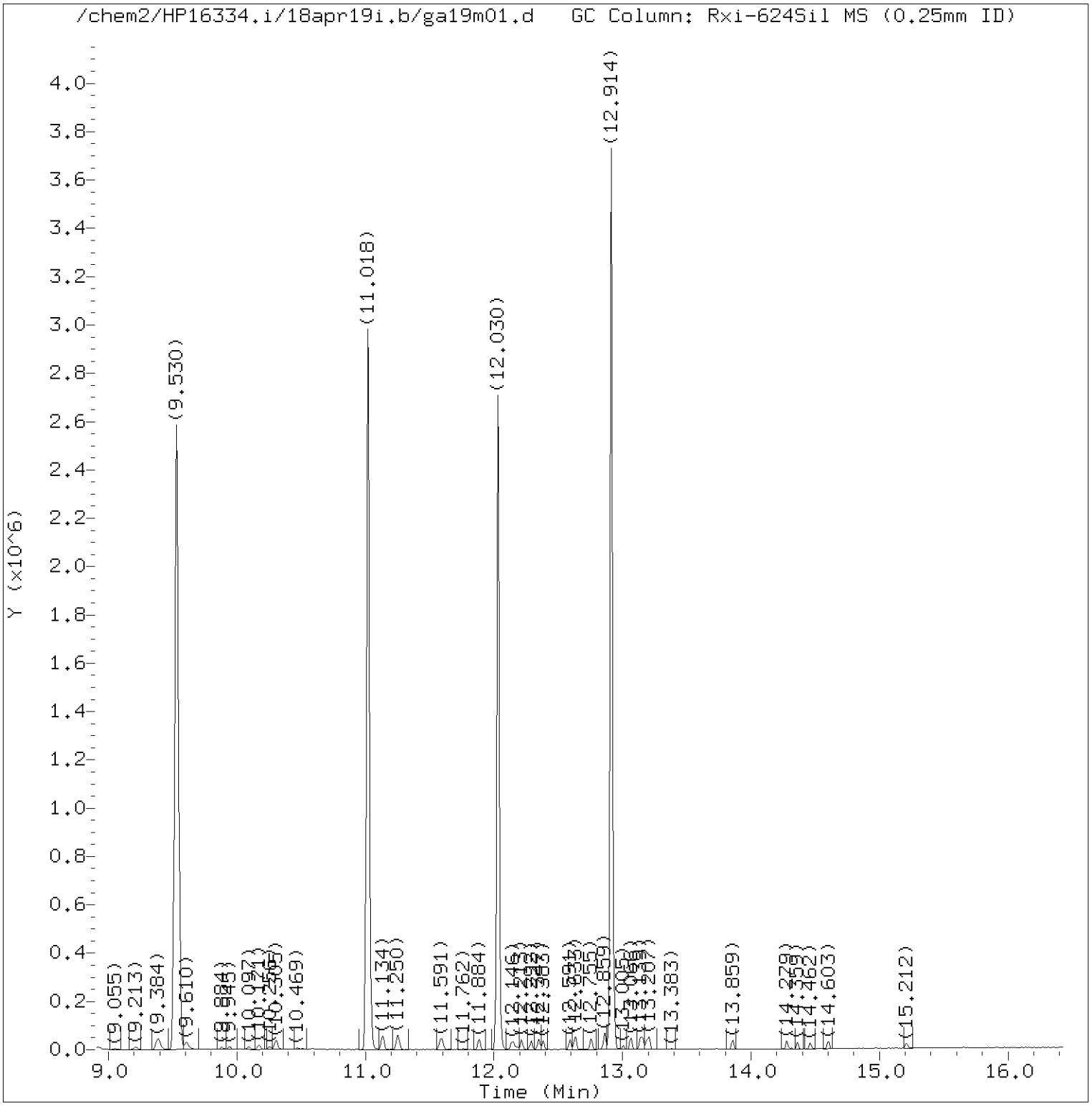
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	7416	0.100
2) Chloromethane	(2)	2.026	50	8287	0.111
5) Vinyl Chloride	(2)	2.129	62	6888	0.108
6) 1,3-Butadiene	(2)	2.129	39	18830M	0.138
7) Bromomethane	(2)	2.446	94	4920	0.115
8) Chloroethane	(2)	2.538	64	4044	0.111
9) Dichlorofluoromethane	(2)	2.751	67	10114	0.115
10) Trichlorofluoromethane	(2)	2.812	101	8791	0.105
11) Ethyl ether	(2)	3.032	59	4344	0.104
12) Freon 123a	(2)	3.129	67	5914M	0.100
13) Acrolein	(1)	3.202	56	38043	5.258
15) 1,1-Dichloroethene	(2)	3.343	96	3645	0.089
14) Acetone	(1)	3.367	43	16446	1.407
16) Freon 113	(2)	3.379	101	3750	0.081
17) Methyl Iodide	(2)	3.519	142	7300	0.092
18) Carbon Disulfide	(2)	3.623	76	19961M	0.123
21) Methyl Acetate	(1)	3.775	43	3487M	0.106
22) Allyl Chloride	(2)	3.788	41	10989	0.116
23) Methylene Chloride	(2)	3.952	84	9932	0.180
26)*t-Butyl Alcohol-d10	(1)	3.964	65	209443M	50.000
28) t-Butyl Alcohol	(1)	4.092	59	8796	2.219
29) Acrylonitrile	(1)	4.281	53	5679	0.437
30) Methyl Tertiary Butyl Ether	(2)	4.336	73	13847	0.097
31) trans-1,2-Dichloroethene	(2)	4.361	96	4371	0.092
32) n-Hexane	(2)	4.787	57	6480	0.081
33) 1,1-Dichloroethane	(2)	5.037	63	9045	0.093
34) di-Isopropyl Ether	(2)	5.086	45	20117	0.101
35) 2-Chloro-1,3-Butadiene	(2)	5.135	53	7750	0.087
37) Ethyl t-butyl ether	(2)	5.629	59	17412	0.100
38) 2-Butanone	(1)	5.830	43	20716	1.030
39) cis-1,2-Dichloroethene	(2)	5.879	96	5084	0.095
41) 2,2-Dichloropropane	(2)	5.891	77	7693	0.097
42) Propionitrile	(1)	5.934	54	8036M	1.616
40) 1,2-Dichloroethene (Total)	(2)		96	9455	0.187
45) Methacrylonitrile	(1)	6.147	67	14677	0.931
47) Bromochloromethane	(2)	6.220	128	1945	0.079
48) Tetrahydrofuran	(1)	6.226	71	4545	0.949
49) Chloroform	(2)	6.372	83	9149	0.099

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.592	113	493821	9.939
51) 1,1,1-Trichloroethane	(2)	6.604	97	6844	0.087
52) Cyclohexane	(2)	6.696	56	8341	0.089
55) 1,1-Dichloropropene	(2)	6.805	75	6574	0.090
54) Carbon Tetrachloride	(2)	6.811	117	5382	0.085
56) Isobutyl Alcohol	(1)	6.970	41	9833	6.243
57)$1,2-Dichloroethane-d4	(2)	7.043	102	103972	9.874
58) Benzene	(2)	7.074	78	20423	0.101
59) 1,2-Dichloroethane	(2)	7.153	62	9219	0.129
60) t-Amyl methyl ether	(2)	7.256	73	13873	0.094
63)*Fluorobenzene	(2)	7.482	96	1975906	10.000
62) n-Heptane	(2)	7.494	43	8736	0.090
65) n-Butanol	(1)	7.860	56	9524	7.639
67) Trichloroethene	(2)	7.970	95	4947	0.093
69) Methylcyclohexane	(2)	8.275	83	6138	0.068
70) 1,2-Dichloropropane	(2)	8.305	63	5507	0.098
71) Methyl Methacrylate	(1)	8.384	69	2369	0.079
73) Dibromomethane	(2)	8.427	93	2443	0.092
74) Bromodichloromethane	(2)	8.659	83	5967	0.091
76) 2-Nitropropane	(1)	8.915	41	8568	0.833
80) cis-1,3-Dichloropropene	(2)	9.213	75	7309	0.090
81) 4-Methyl-2-Pentanone	(1)	9.384	43	46864M	0.948
82)$Toluene-d8	(3)	9.530	98	2004422	10.082
83) Toluene	(3)	9.604	92	12237	0.097
84) trans-1,3-Dichloropropene	(3)	9.884	75	5993	0.088
86) Ethyl Methacrylate	(3)	9.945	69	5894	0.096
88) 1,1,2-Trichloroethane	(3)	10.091	97	4048	0.107
85) 1,3-Dichloropropene (total)	(3)		75	13302	0.178
89) Tetrachloroethene	(3)	10.171	166	5107	0.087
90) 1,3-Dichloropropane	(3)	10.256	76	6722	0.097
91) 2-Hexanone	(1)	10.305	43	31709M	0.913
93) Dibromochloromethane	(3)	10.475	129	3385	0.081
95) 1,2-Dibromoethane	(3)	10.591	107	3431	0.095
97)*Chlorobenzene-d5	(3)	11.018	117	1482426	10.000
98) Chlorobenzene	(3)	11.048	112	14281	0.099
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	4297	0.089
100) Ethylbenzene	(3)	11.134	91	23968	0.096
101) m+p-Xylene	(3)	11.256	106	18922	0.199

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

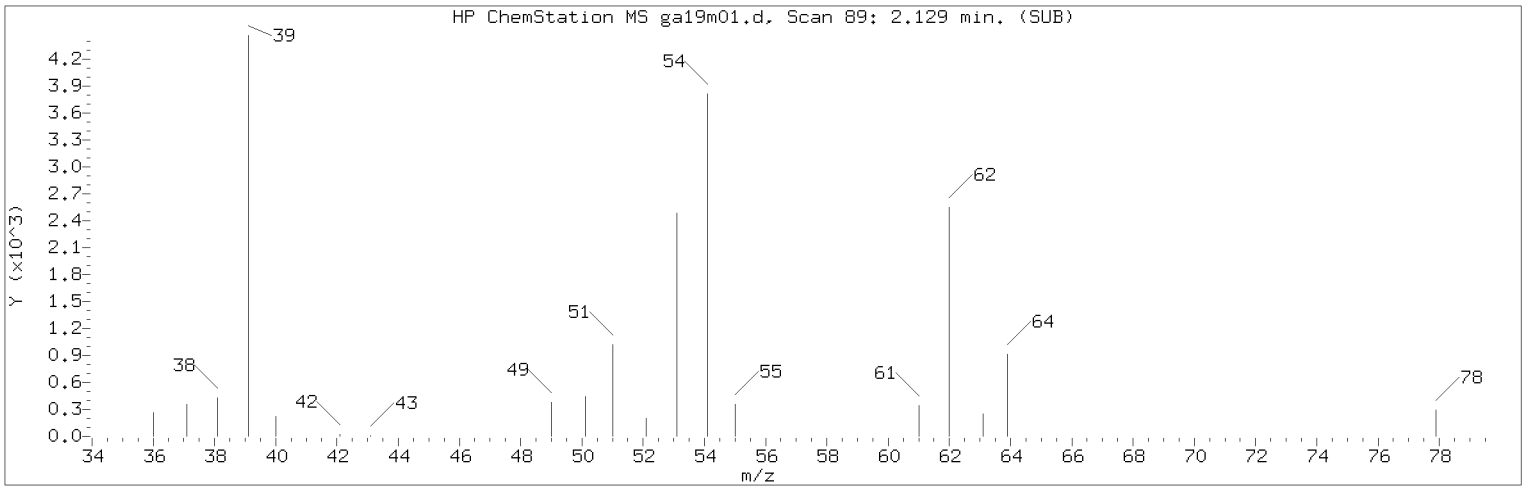
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.585	106	9038	0.095
106) Styrene	(3)	11.603	104	13763	0.088
105) Xylene (Total)	(3)		106	27960	0.293
107) Bromoform	(3)	11.762	173	1592	0.066
108) Isopropylbenzene	(3)	11.884	105	23383	0.094
111)$4-Bromofluorobenzene	(3)	12.030	95	761924	10.013
113) 1,1,2,2-Tetrachloroethane	(4)	12.127	83	4765	0.098
114) Bromobenzene	(4)	12.146	156	6107	0.095
116) 1,2,3-Trichloropropane	(4)	12.182	110	1071	0.079
117) n-Propylbenzene	(4)	12.213	91	27732	0.093
119) 2-Chlorotoluene	(4)	12.292	126	5453	0.092
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	19480	0.091
122) 4-Chlorotoluene	(4)	12.383	126	5787	0.093
125) tert-Butylbenzene	(4)	12.591	134	4029M	0.090
126) Pentachloroethane	(4)	12.627	167	2375	0.069
127) 1,2,4-Trimethylbenzene	(4)	12.640	105	19966	0.092
128) sec-Butylbenzene	(4)	12.755	105	23947M	0.088
131) 1,3-Dichlorobenzene	(4)	12.859	146	12904	0.101
132) p-Isopropyltoluene	(4)	12.865	119	20975	0.089
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	830067	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	12797	0.099
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	10395	0.106
136) Benzyl Chloride	(4)	12.999	126	1071	0.060
138) n-Butylbenzene	(4)	13.158	92	11824M	0.093
139) 1,2-Dichlorobenzene	(4)	13.188	146	12080	0.101
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	347	0.047
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	10028	0.094
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	9590	0.097
146) Hexachlorobutadiene	(4)	14.359	225	4720	0.091
147) Naphthalene	(4)	14.462	128	15274	0.093
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	7776	0.092

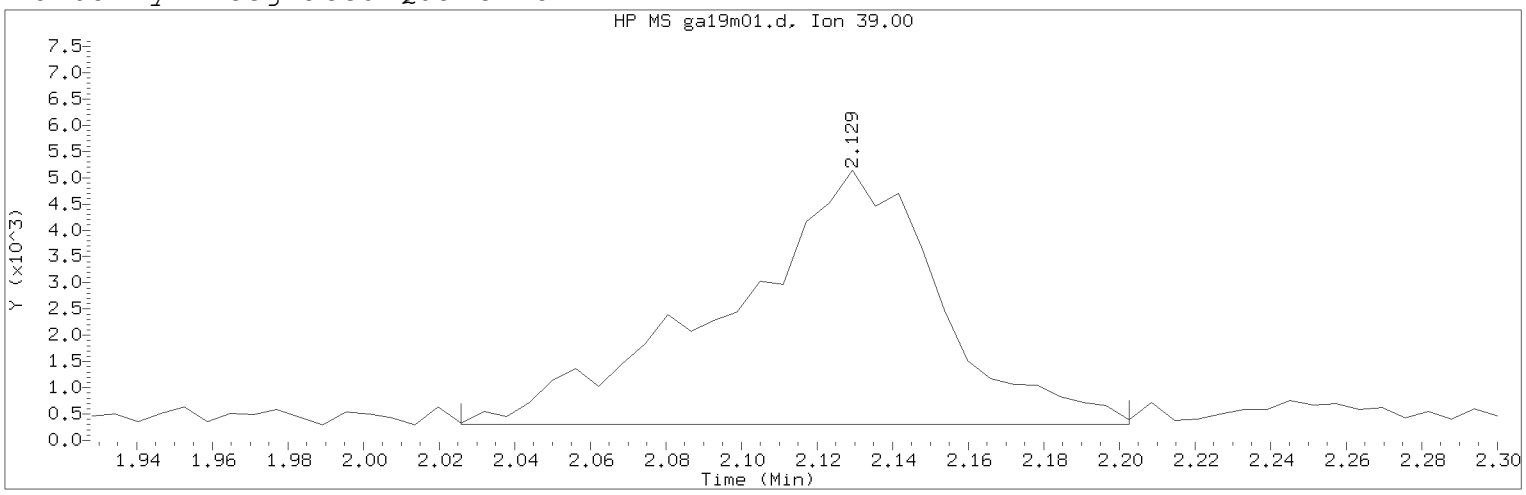
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

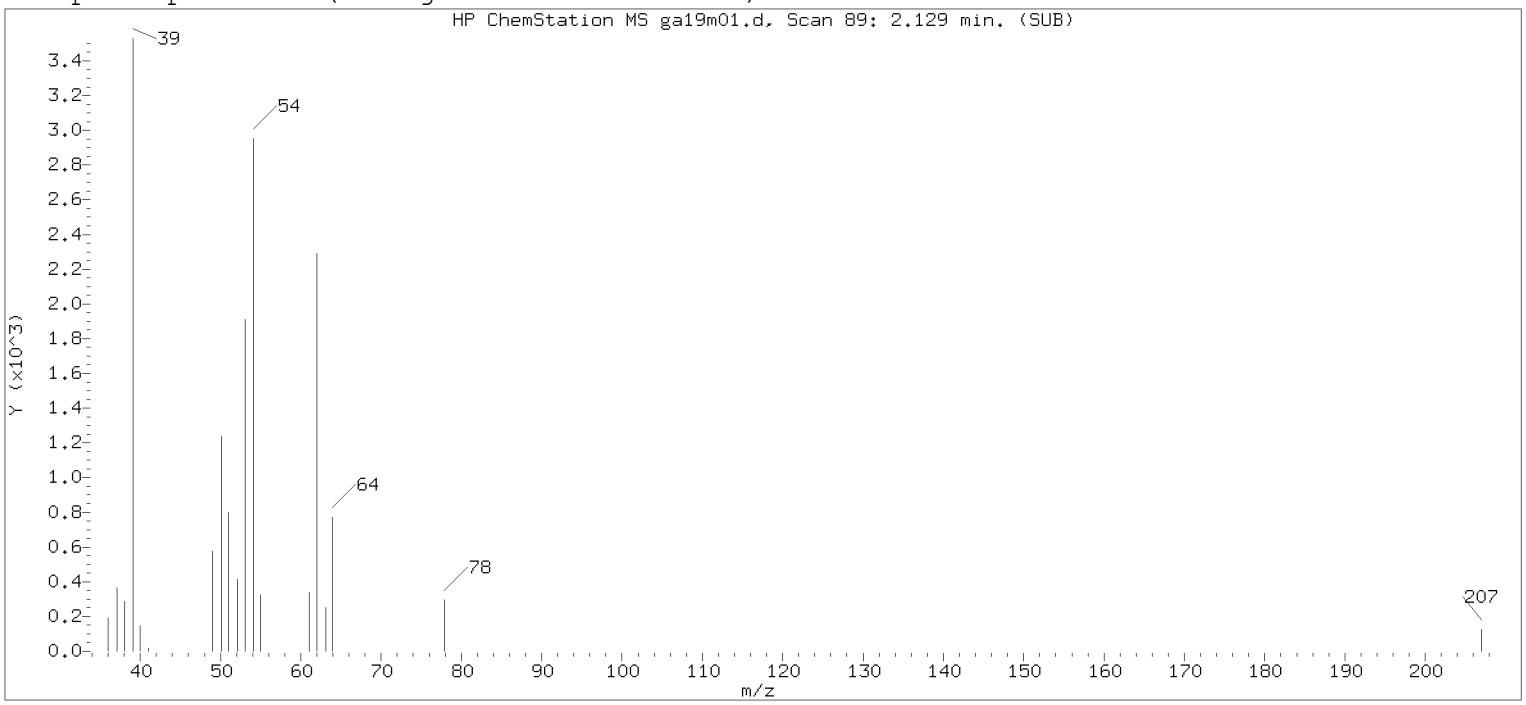
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area (flag) : 18830M
On-Column Amount (ng) : 0.1382
Integration start scan : 71 Integration stop scan: 100
Y at integration start : 304 Y at integration end: 304

Reason for manual integration: improper integration

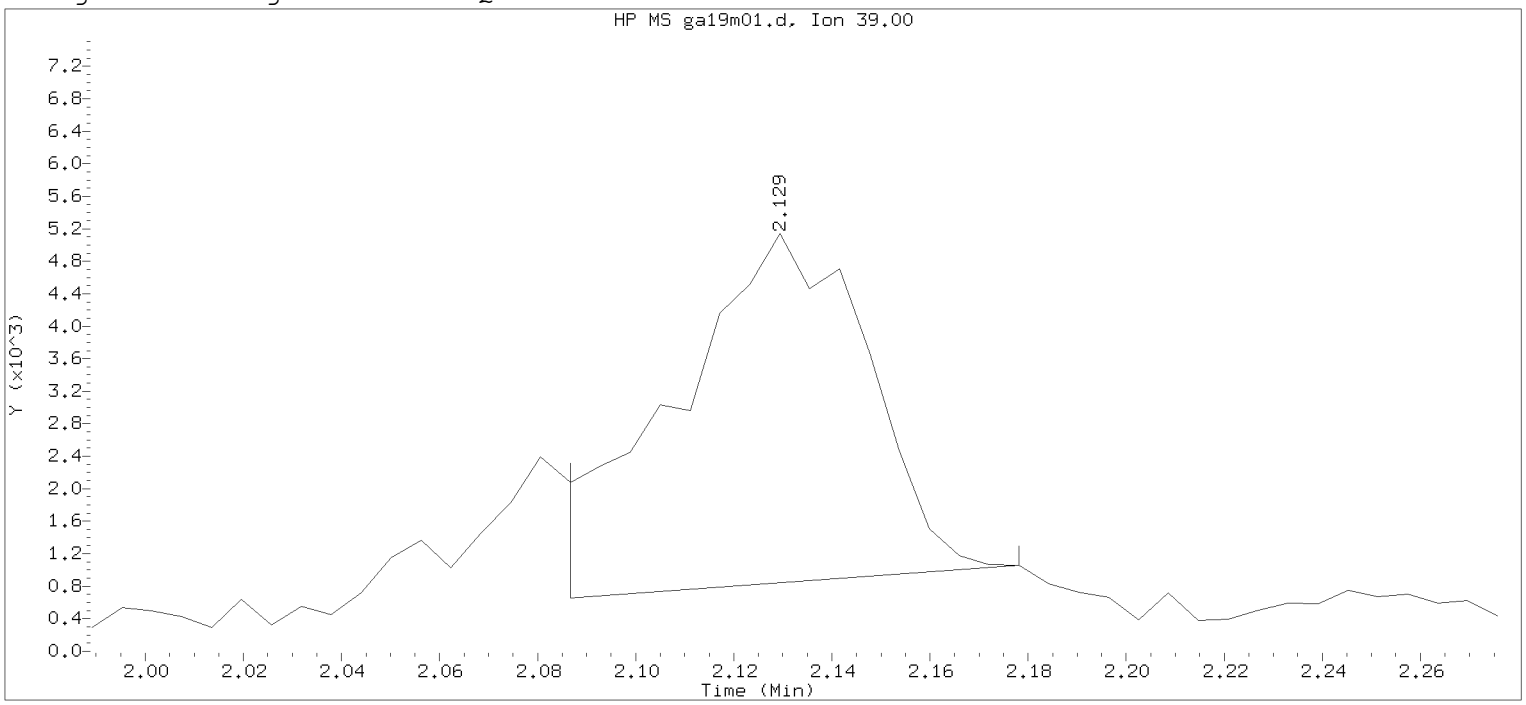
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 6
Compound Name	: 1,3-Butadiene
Scan Number	: 89
Retention Time (minutes)	: 2.129
Quant Ion	: 39.00
Area	: 11823
On-column Amount (ng)	: 0.0927
Integration start scan	: 81 Integration stop scan: 96
Y at integration start	: 659 Y at integration end: 1055

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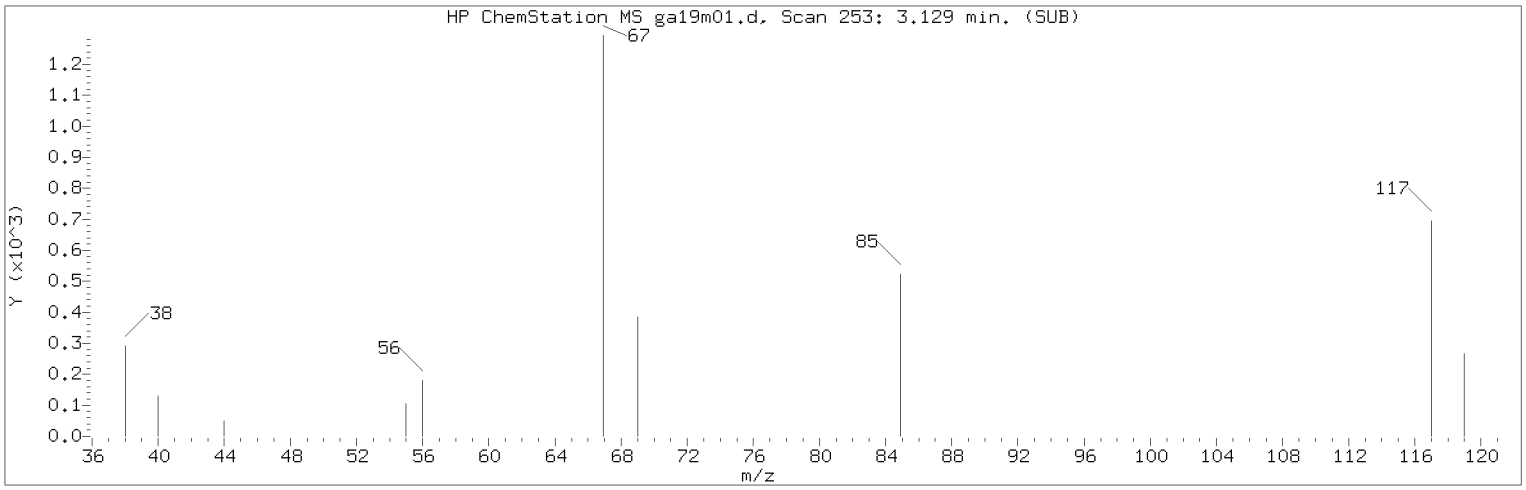
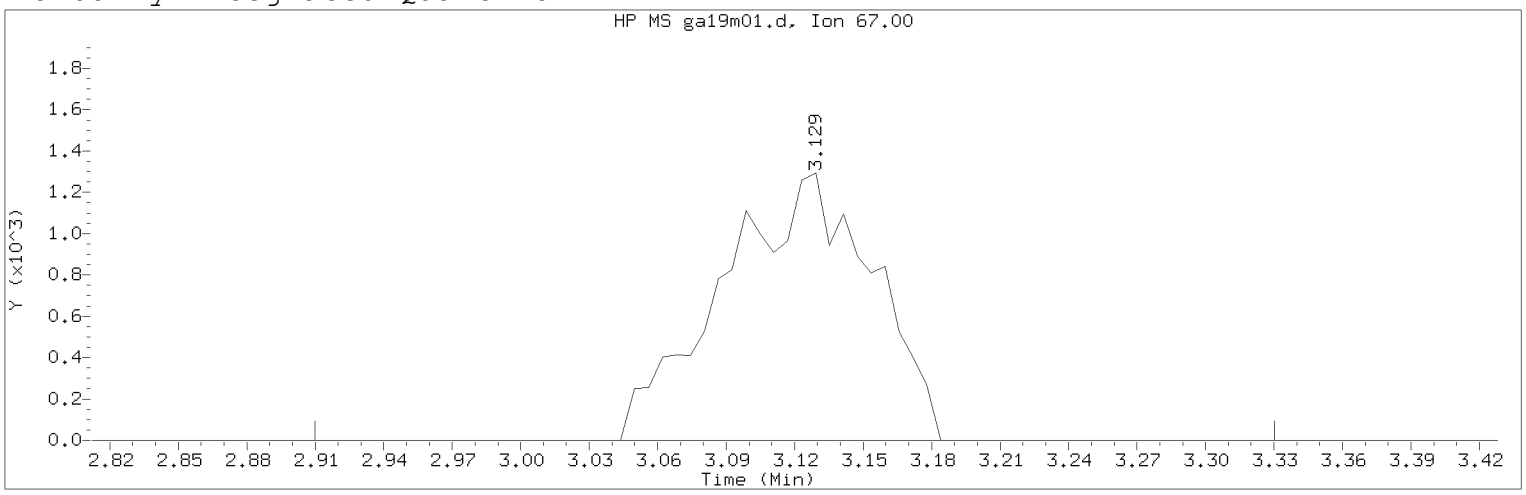
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

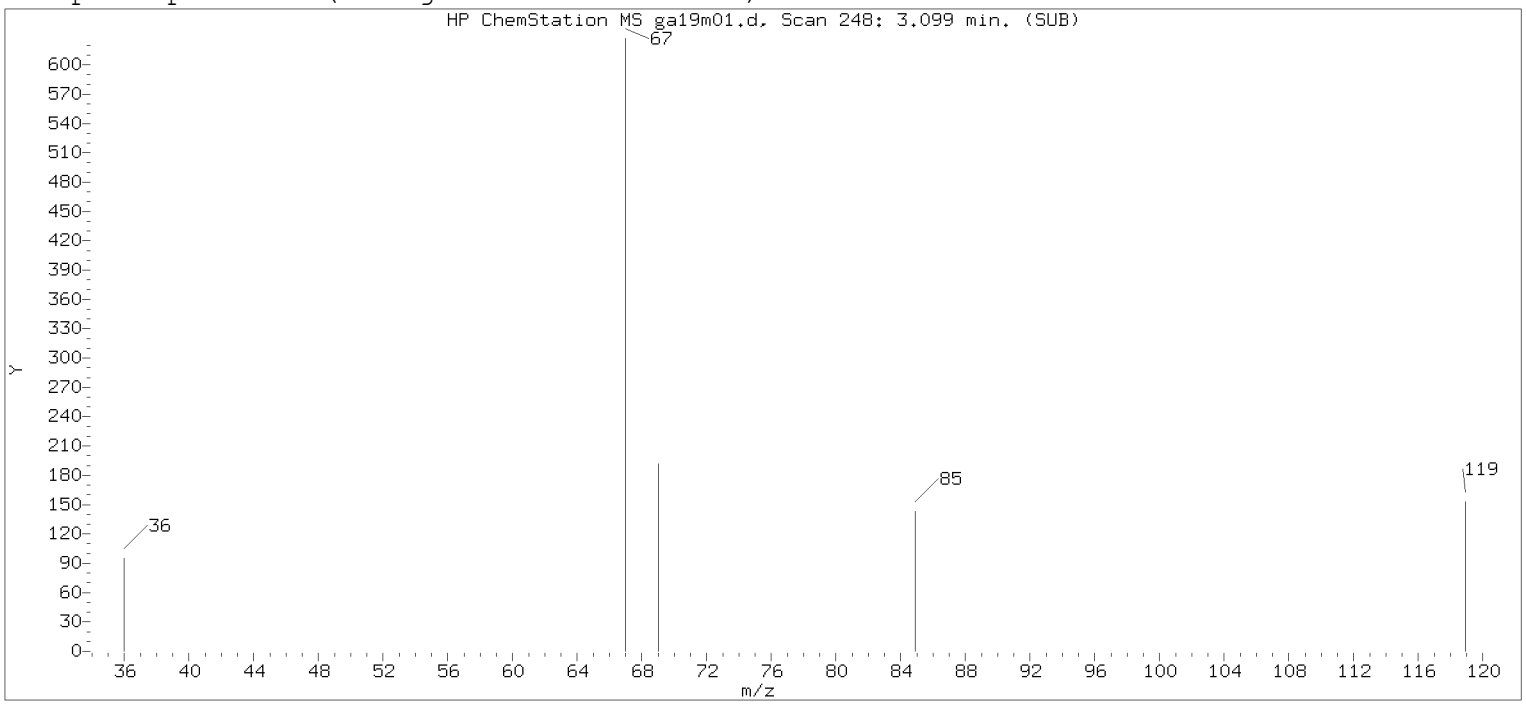
Compound Number : 12
Compound Name : Freon 123a
Scan Number : 253
Retention Time (minutes): 3.129
Quant Ion : 67.00
Area (flag) : 5914M
On-Column Amount (ng) : 0.1000
Integration start scan : 216 Integration stop scan: 285
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

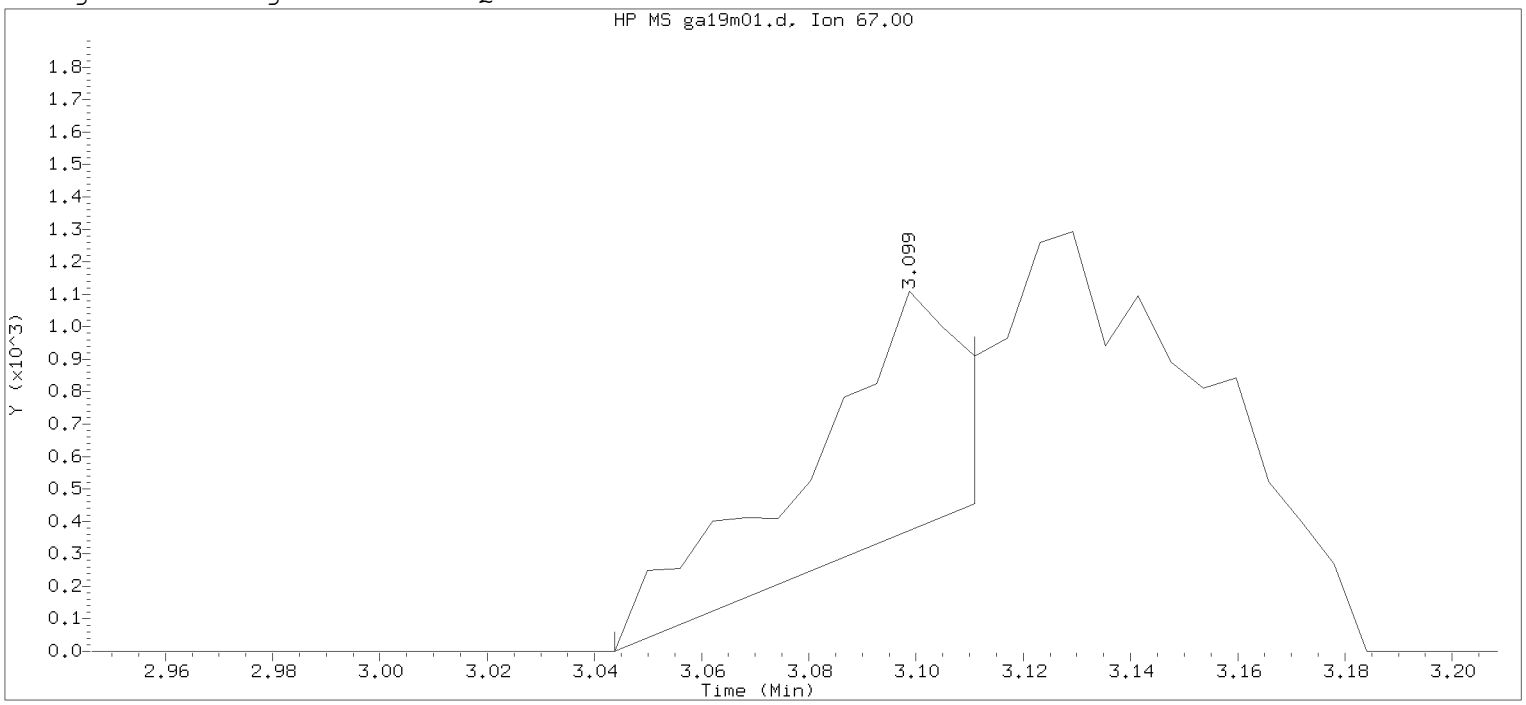
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 12
Compound Name : Freon 123a
Scan Number : 248
Retention Time (minutes): 3.099
Quant Ion : 67.00
Area : 1437
On-column Amount (ng) : 0.0272
Integration start scan : 238 Integration stop scan: 249
Y at integration start : 0 Y at integration end: 454

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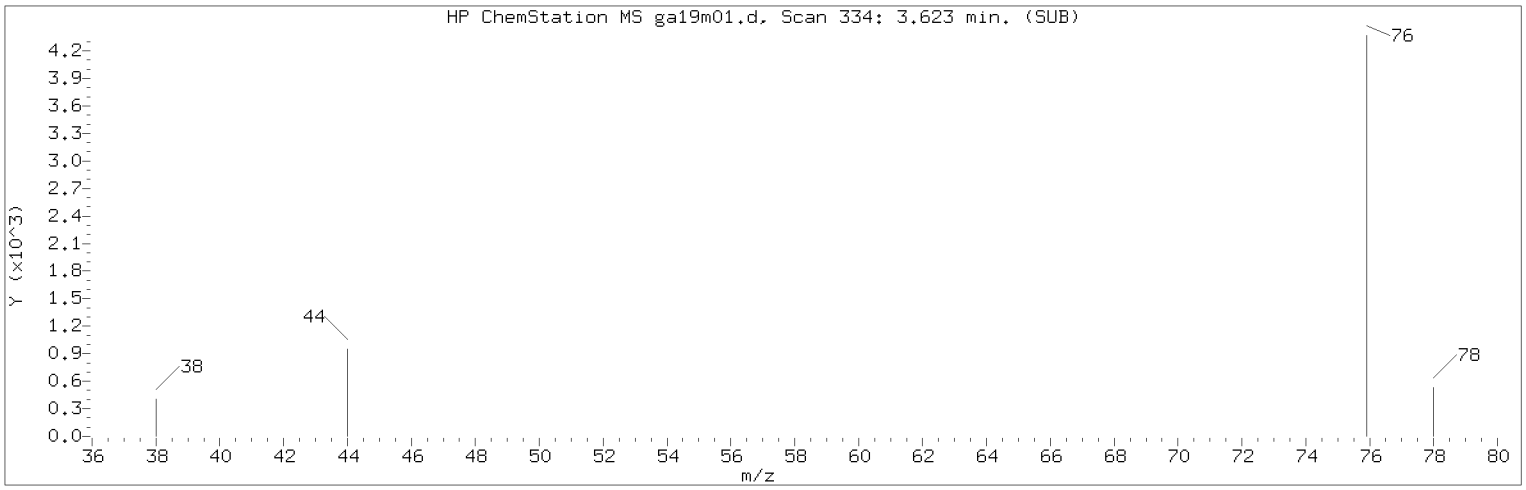
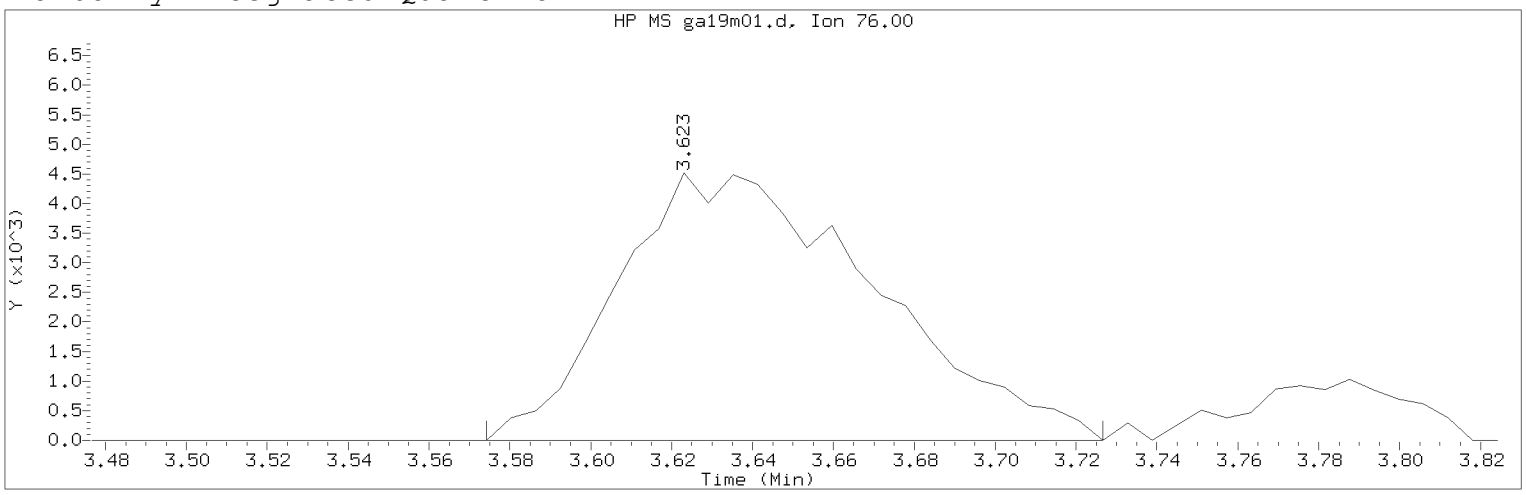
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

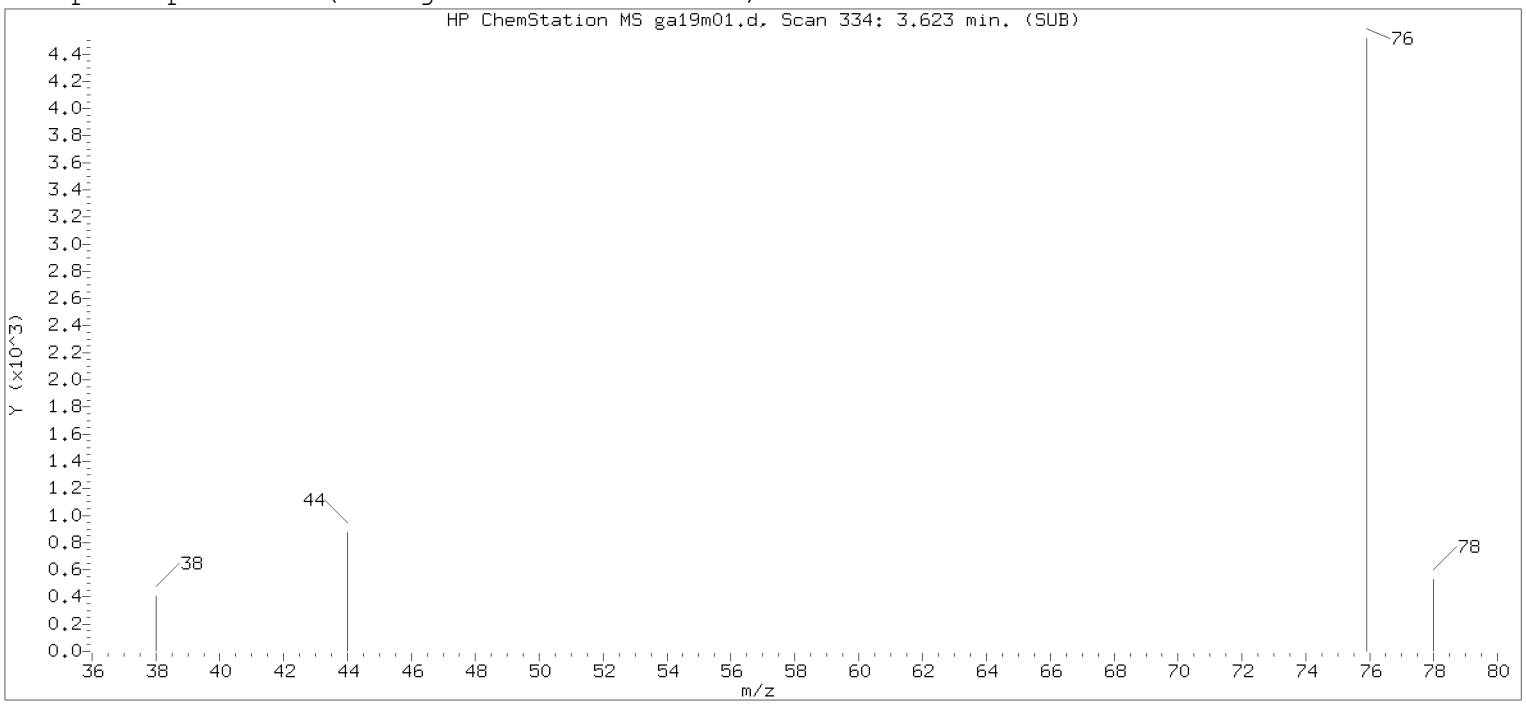
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 76.00
Area (flag) : 19961M
On-Column Amount (ng) : 0.1230
Integration start scan : 325 Integration stop scan: 350
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

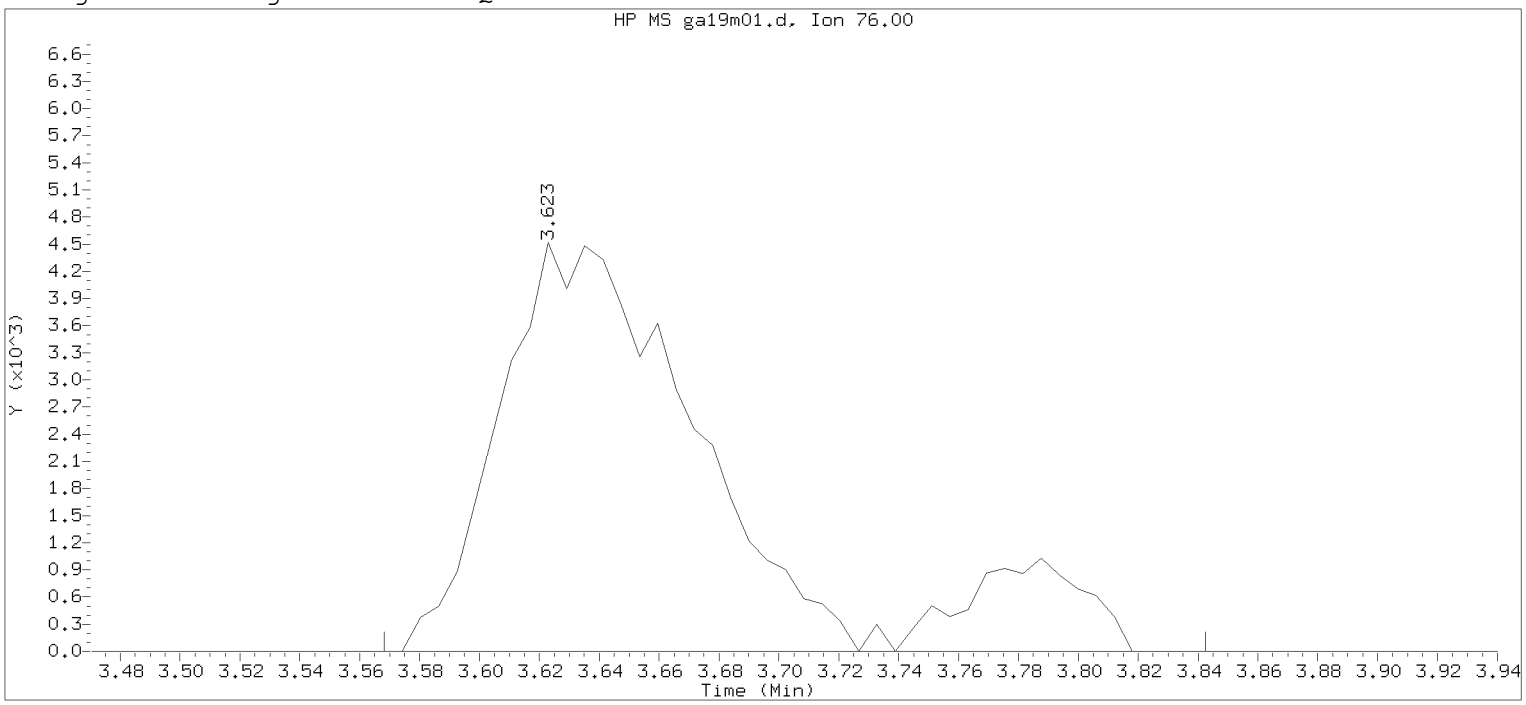
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

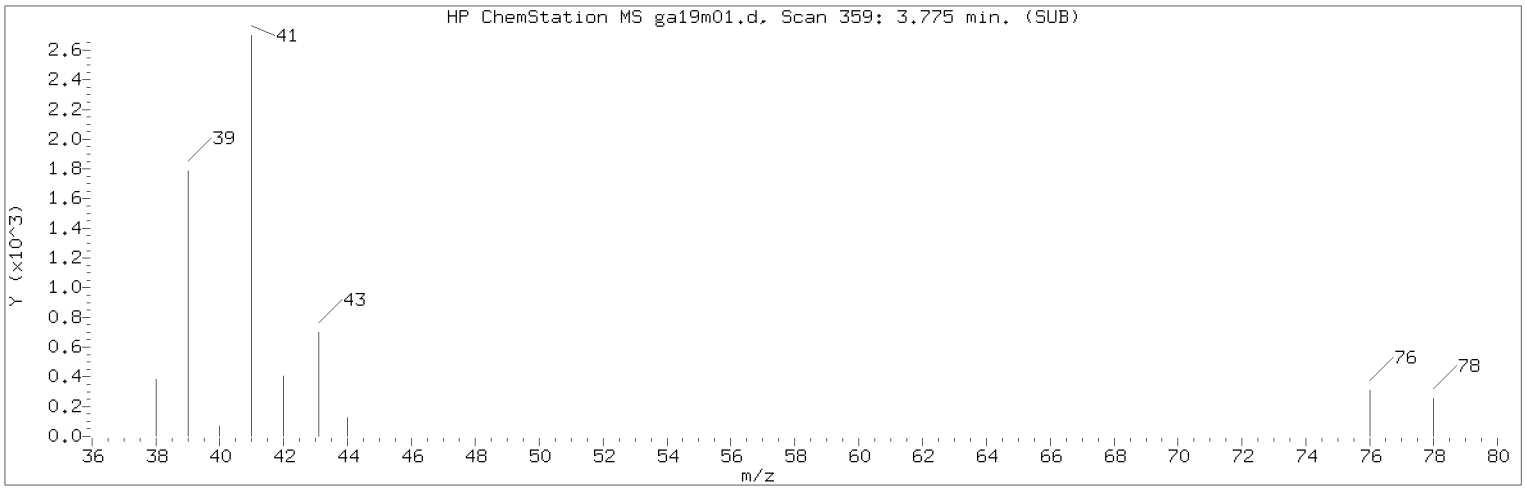
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

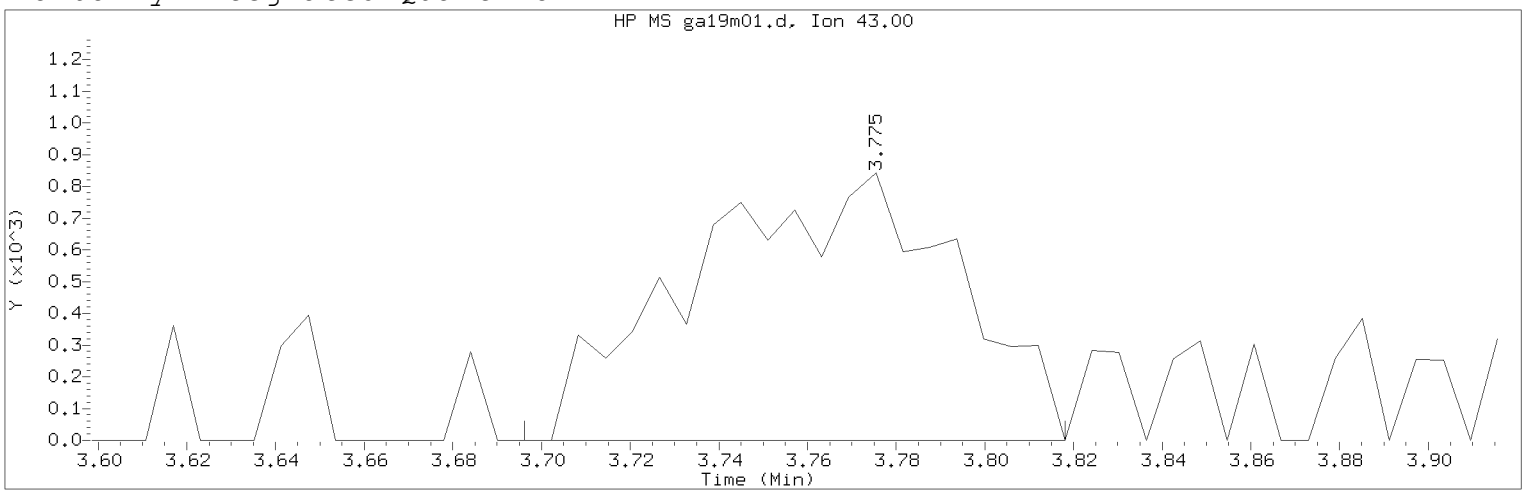
Compound Number	: 18		
Compound Name	: Carbon Disulfide		
Scan Number	: 334		
Retention Time (minutes)	: 3.623		
Quant Ion	: 76.00		
Area	: 22924		
On-column Amount (ng)	: 0.1413		
Integration start scan	: 324	Integration stop scan:	369
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

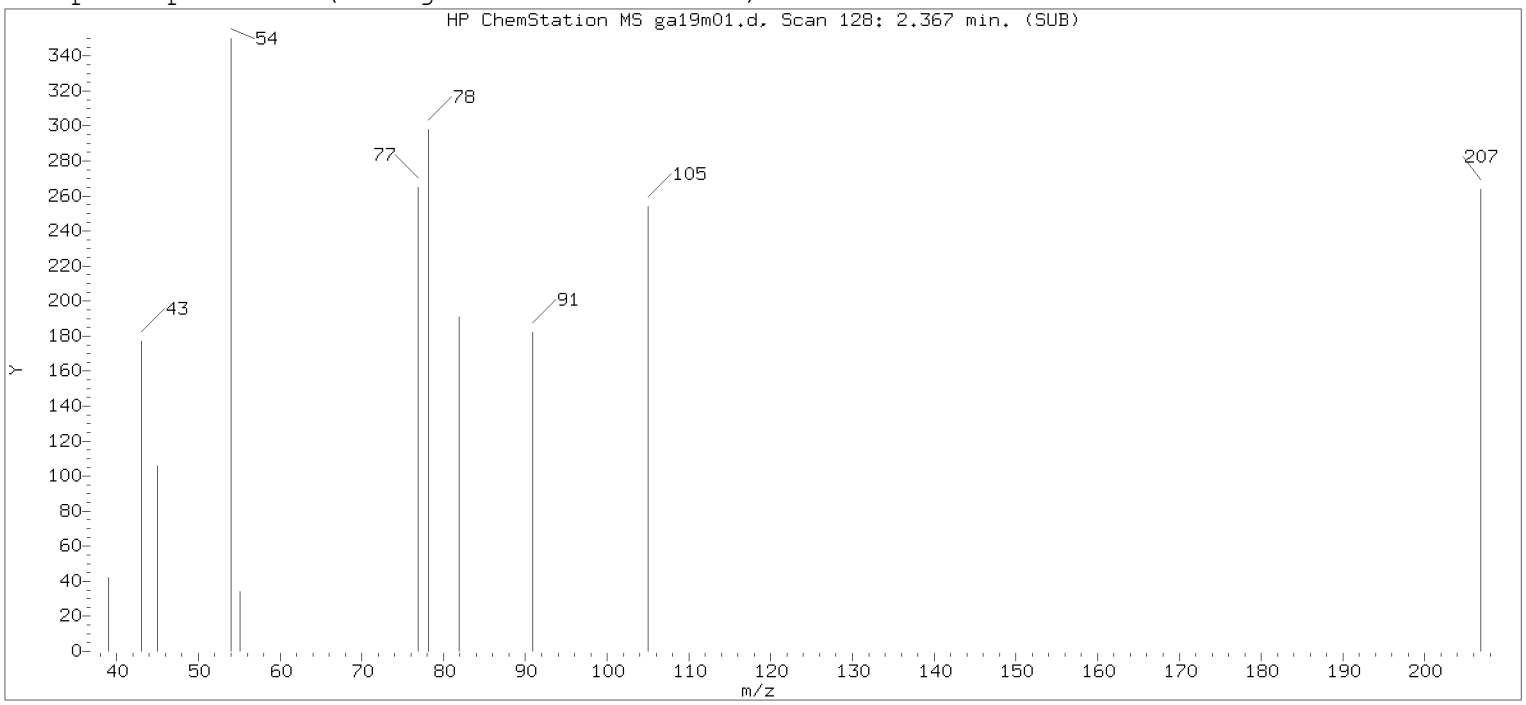
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 359
Retention Time (minutes): 3.775
Quant Ion : 43.00
Area (flag) : 3487M
On-Column Amount (ng) : 0.1058
Integration start scan : 345 Integration stop scan: 365
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

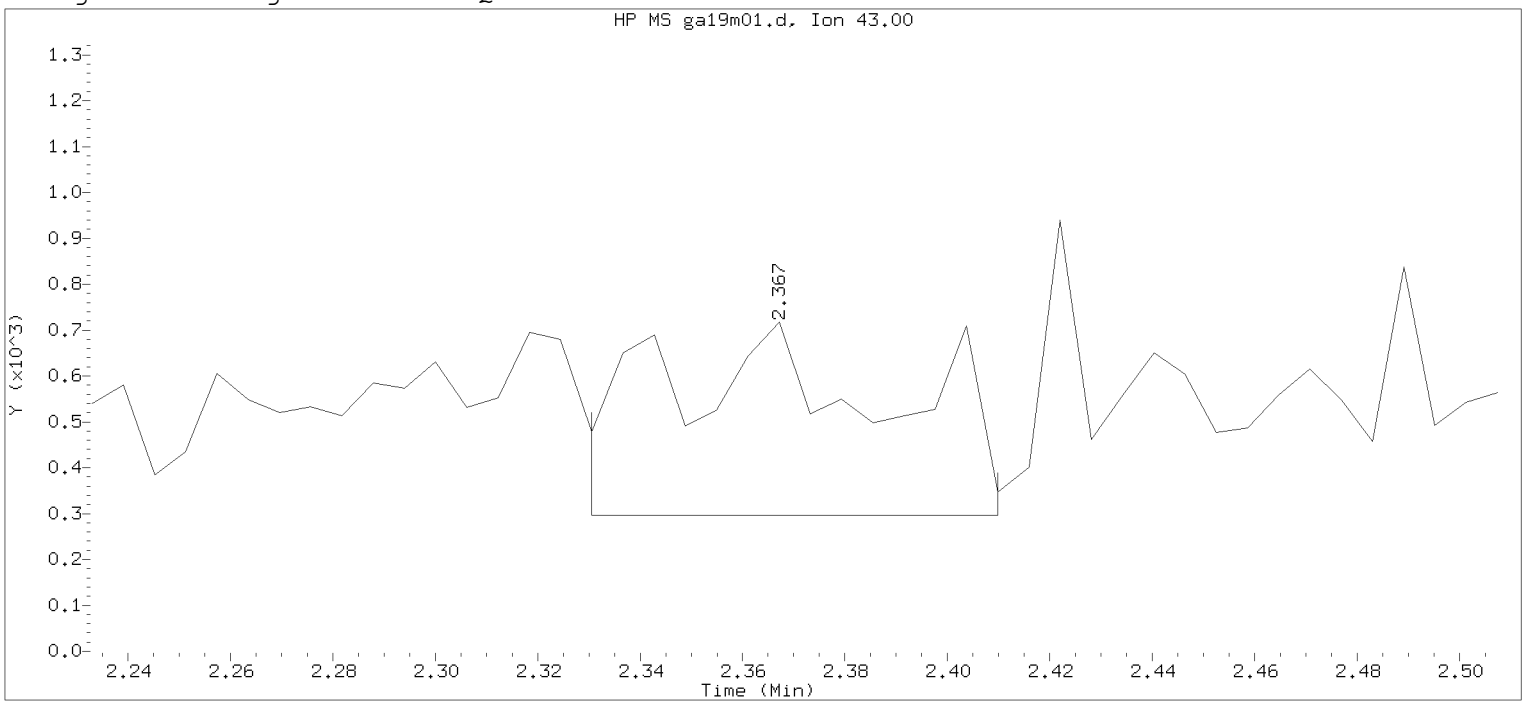
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

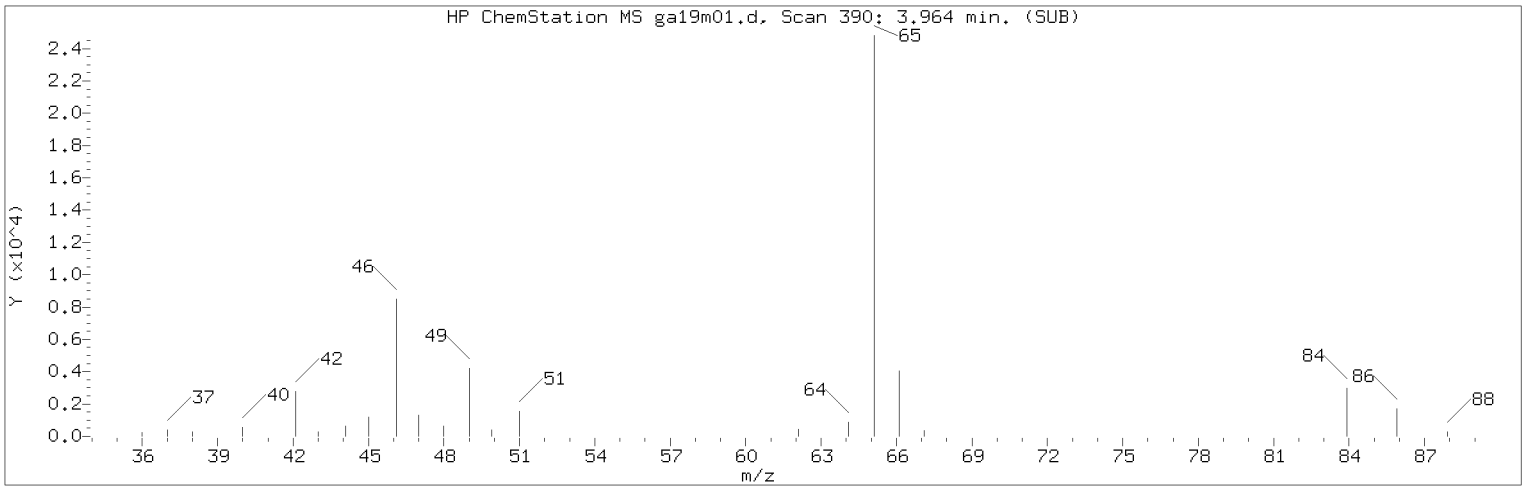
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

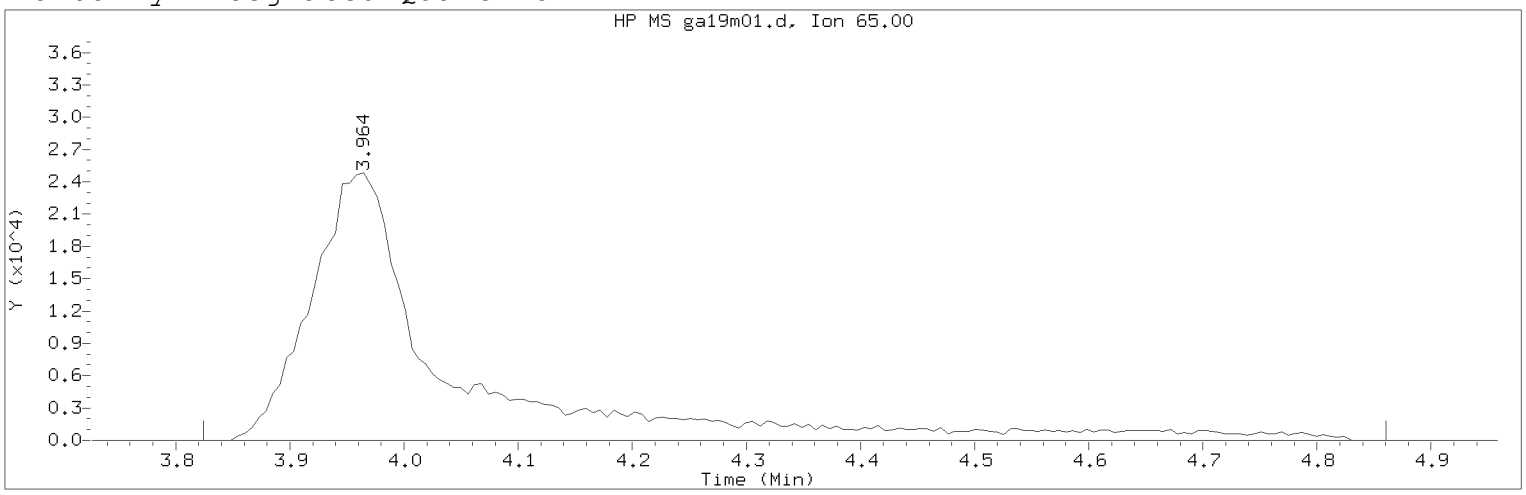
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 128
Retention Time (minutes): 2.367
Quant Ion : 43.00
Area : 1312
On-column Amount (ng) : 0.8499
Integration start scan : 121 Integration stop scan: 134
Y at integration start : 297 Y at integration end: 297

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

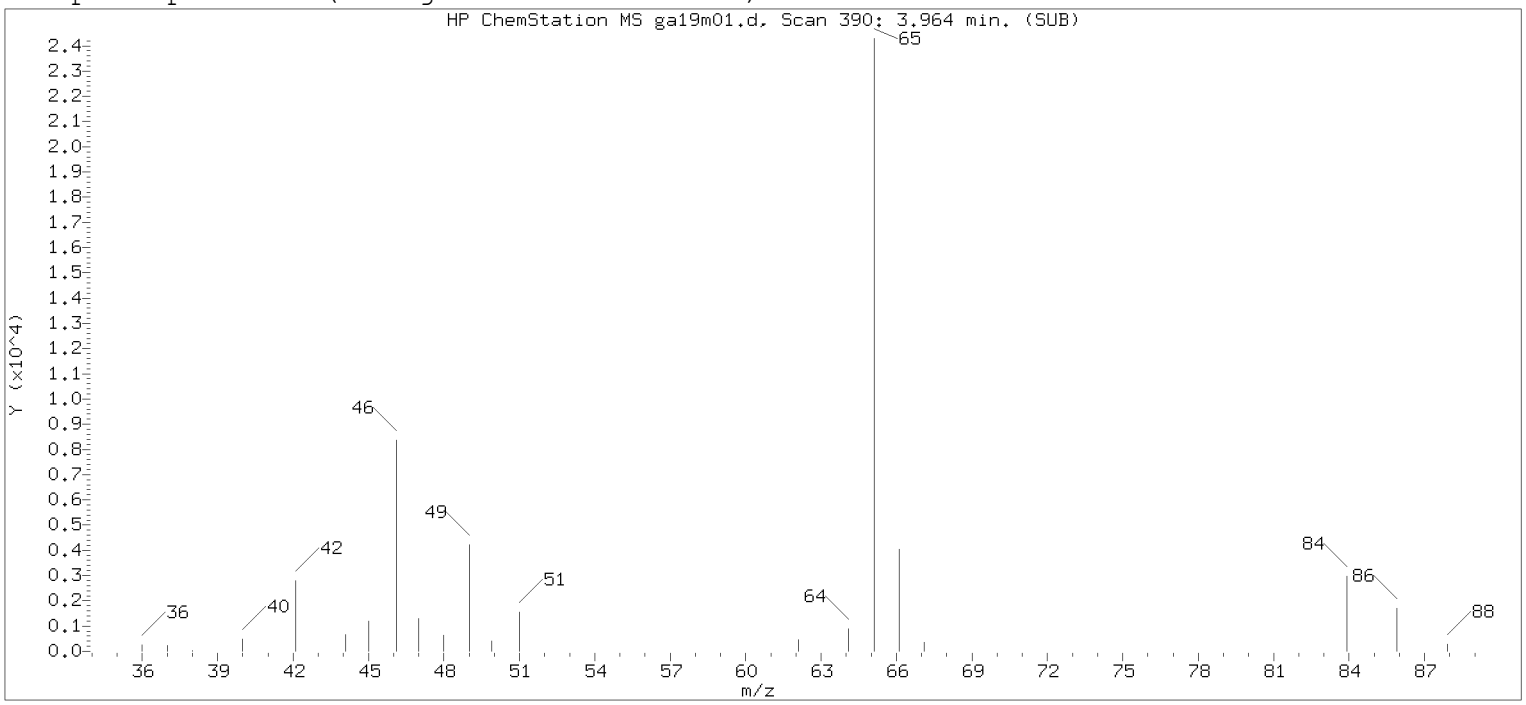
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 65.00
Area (flag) : 209443M
On-Column Amount (ng) : 50.0000
Integration start scan : 366 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

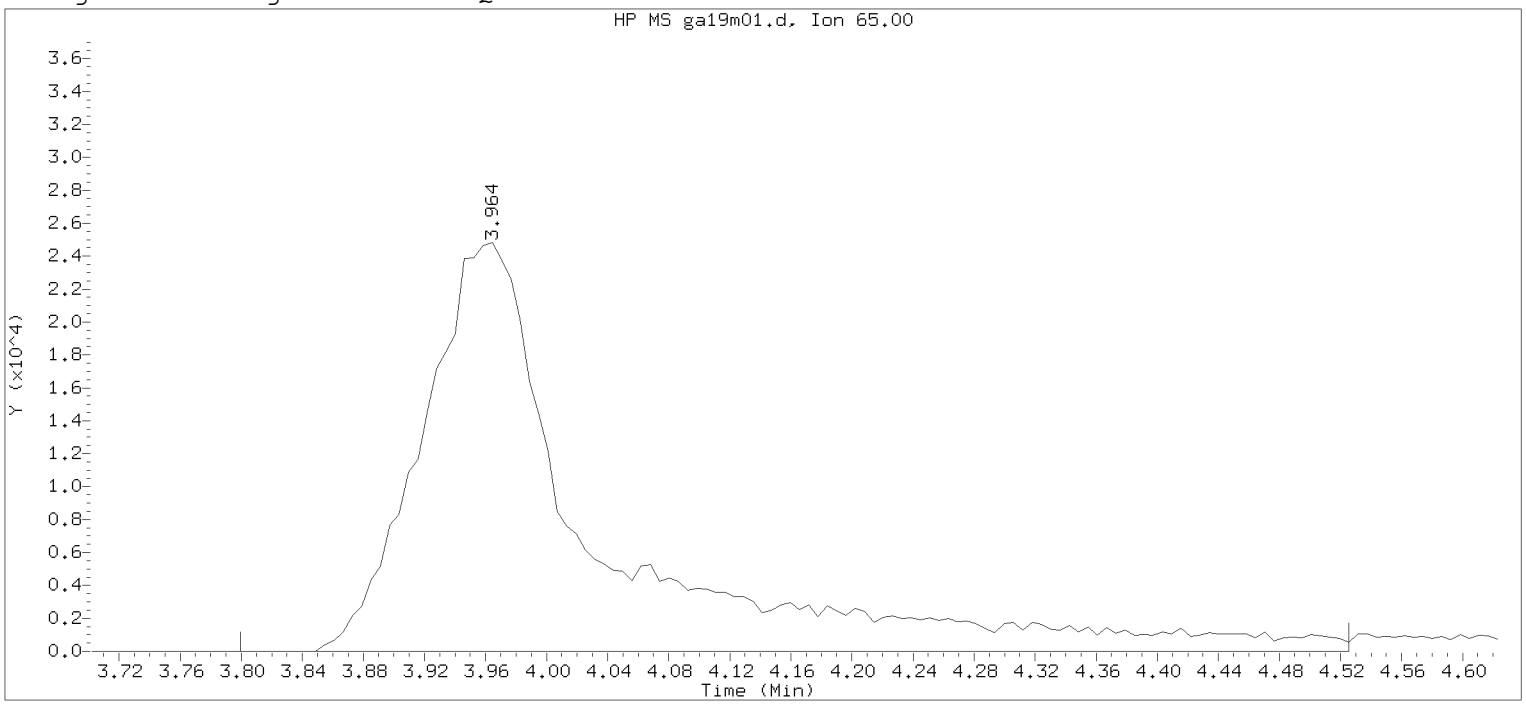
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

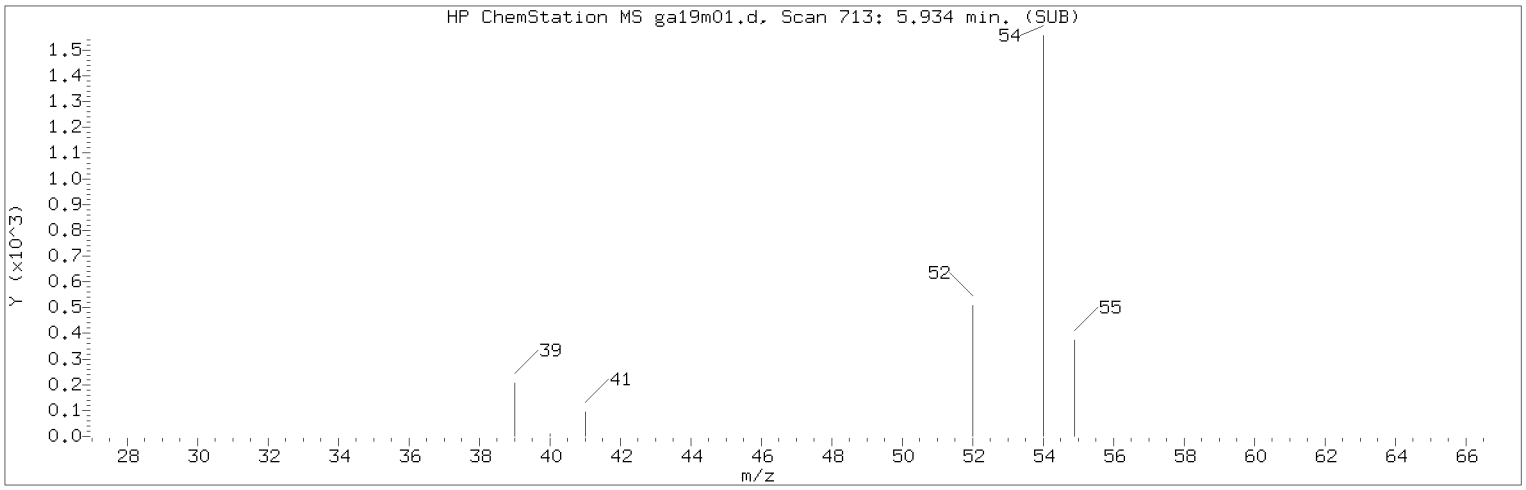
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

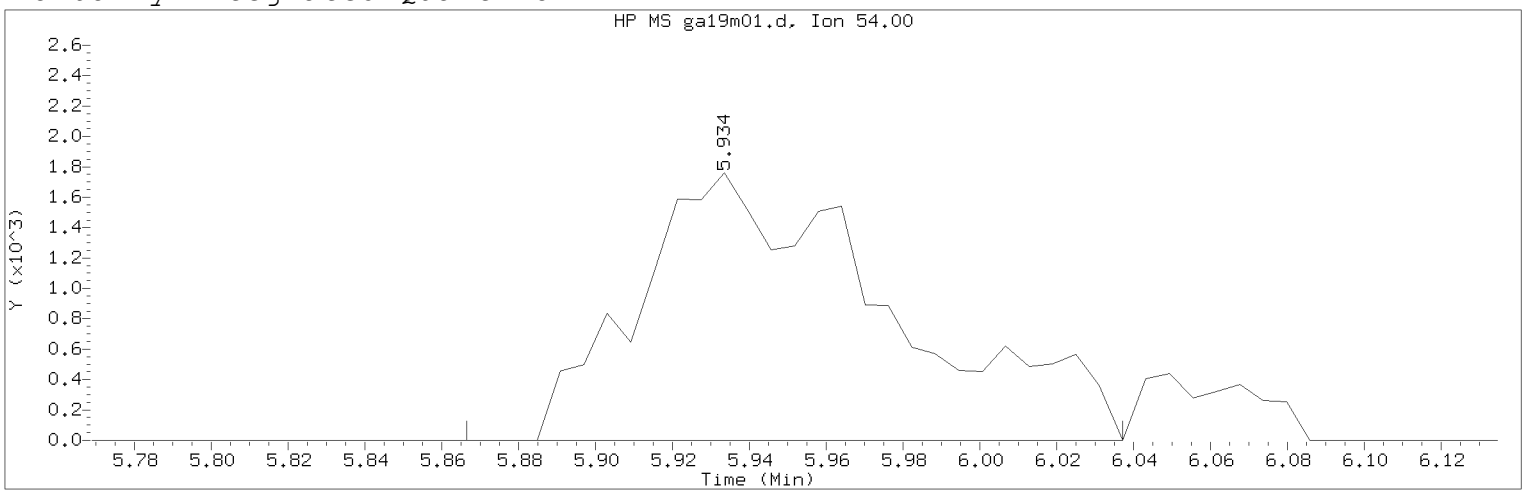
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 390		
Retention Time (minutes)	: 3.964		
Quant Ion	: 65.00		
Area	: 195900		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 362	Integration stop scan:	481
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

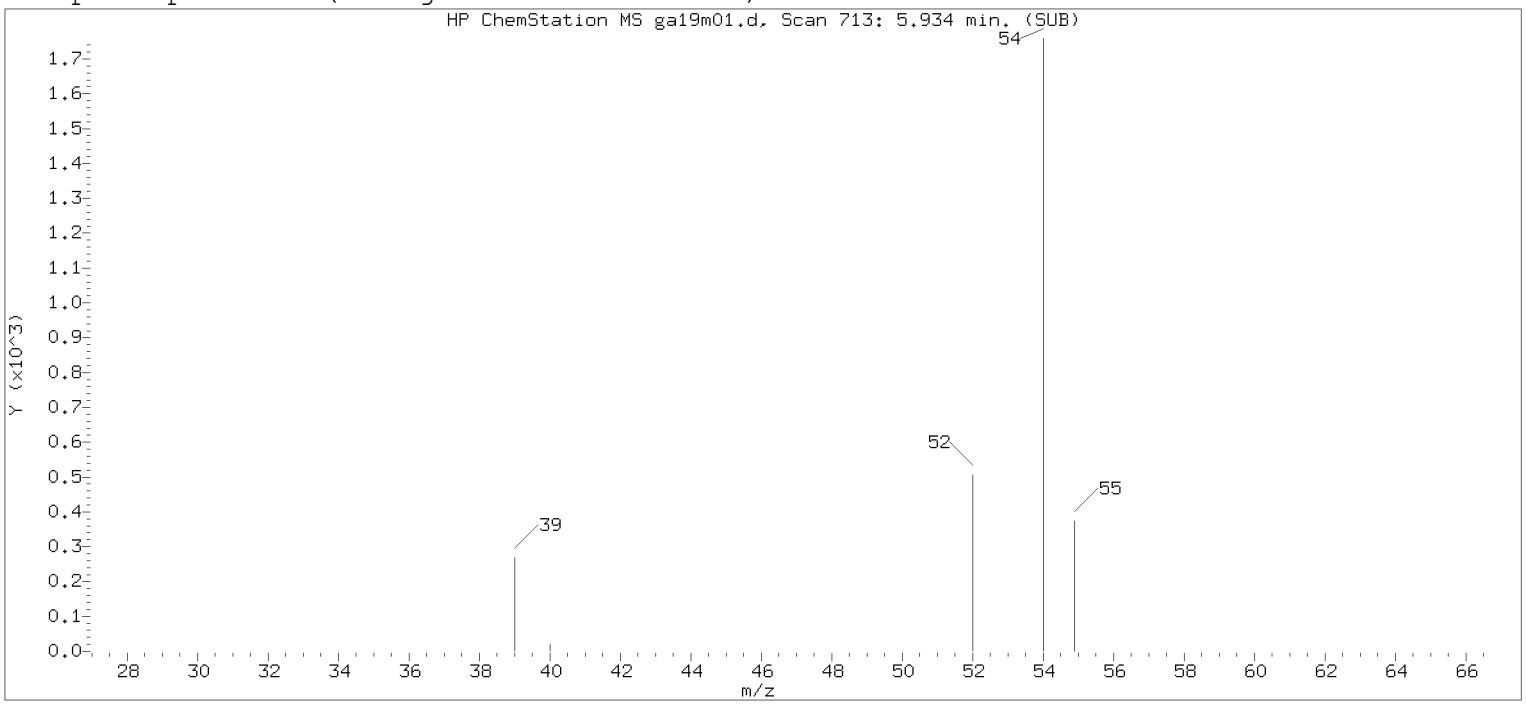
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 713
Retention Time (minutes): 5.934
Quant Ion : 54.00
Area (flag) : 8036M
On-Column Amount (ng) : 1.6157
Integration start scan : 701 Integration stop scan: 729
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

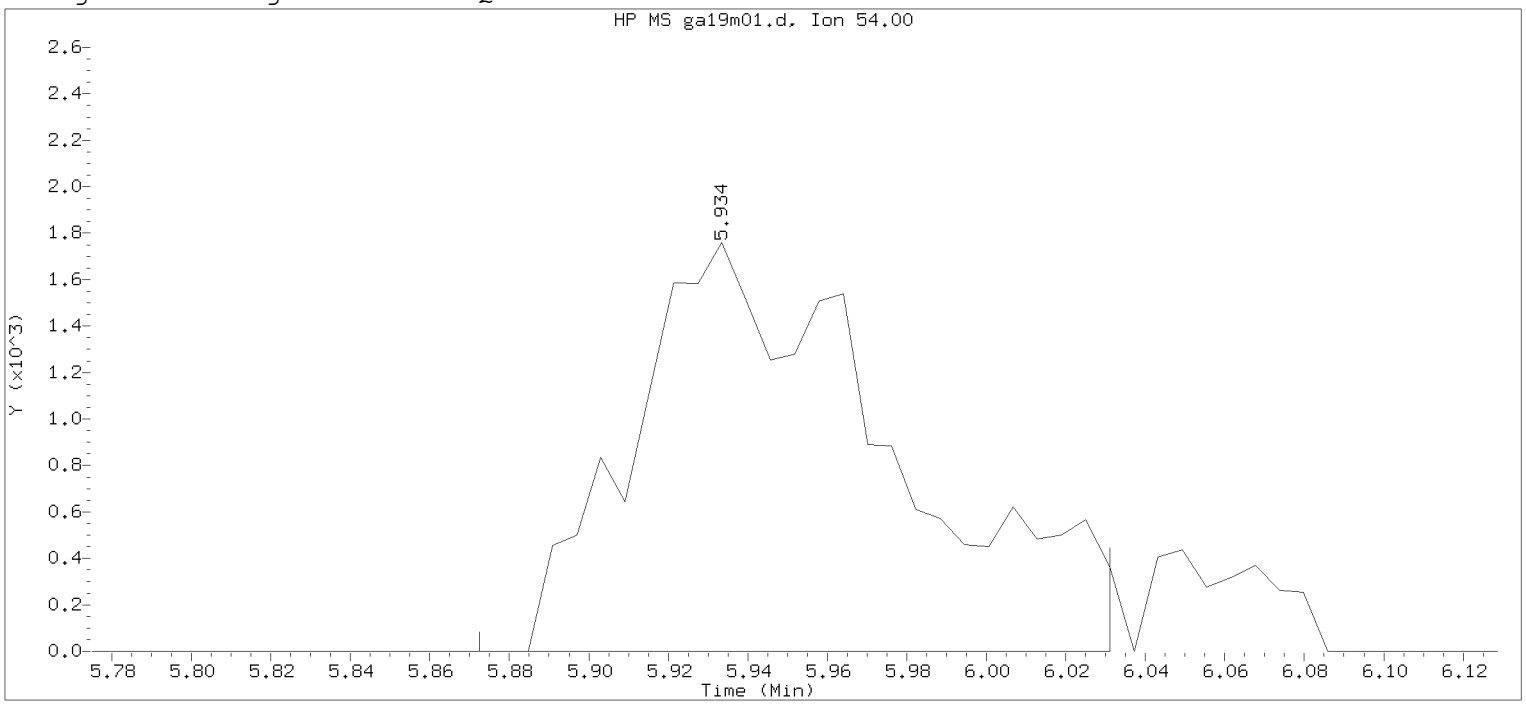
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

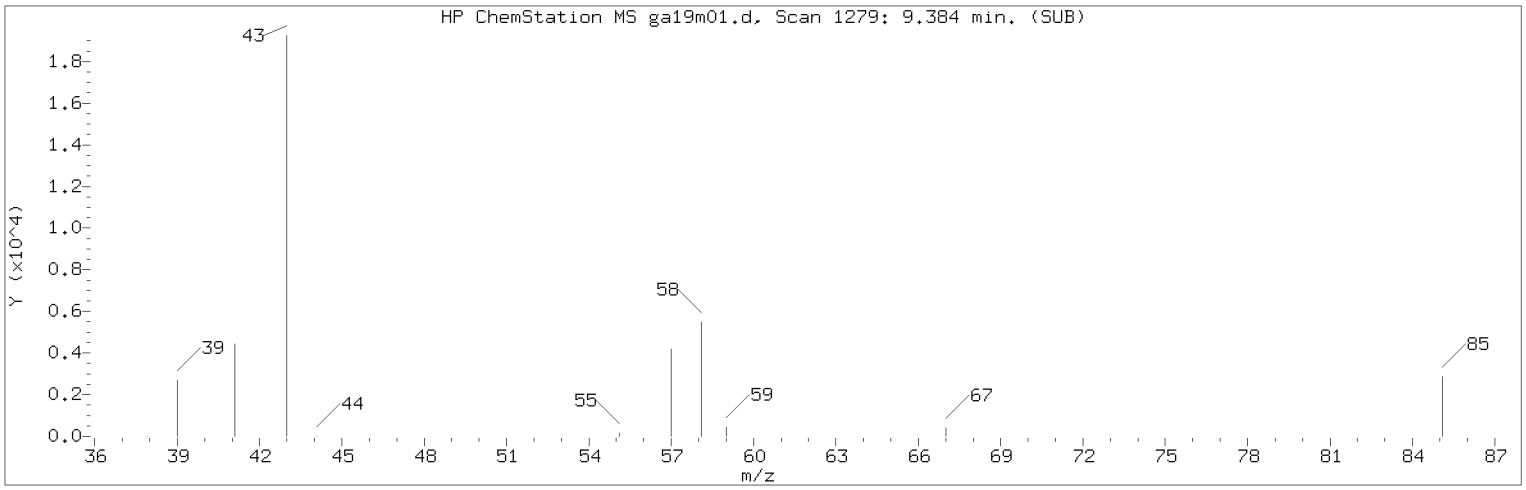
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

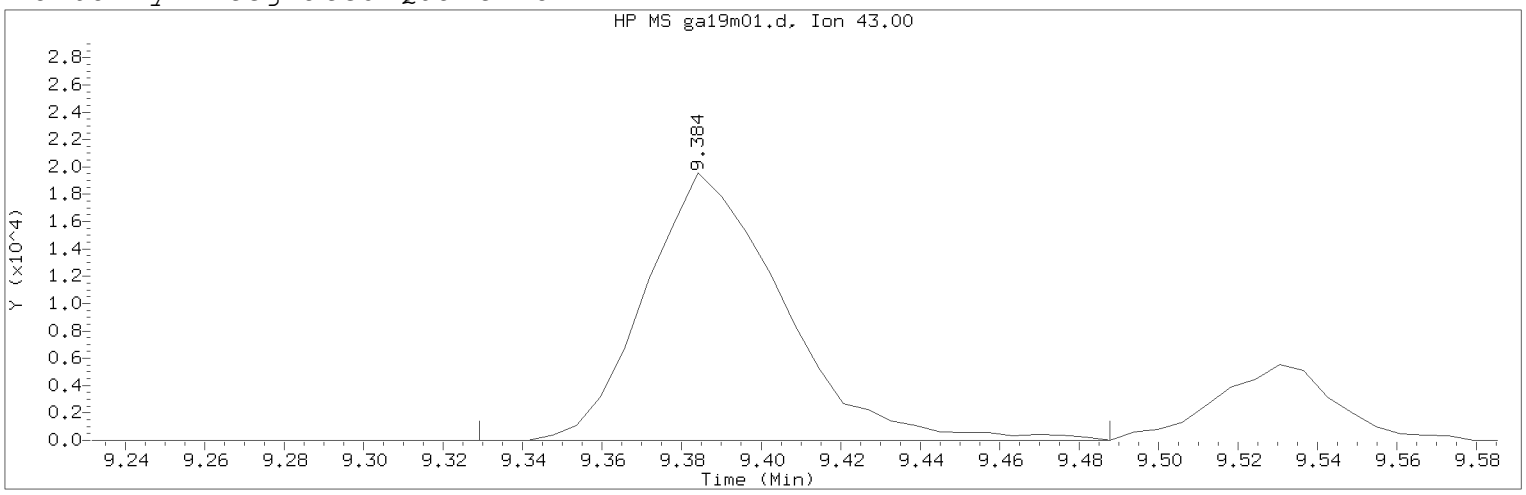
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 713
Retention Time (minutes): 5.934
Quant Ion : 54.00
Area : 7970
On-column Amount (ng) : 1.6340
Integration start scan : 702 Integration stop scan: 728
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

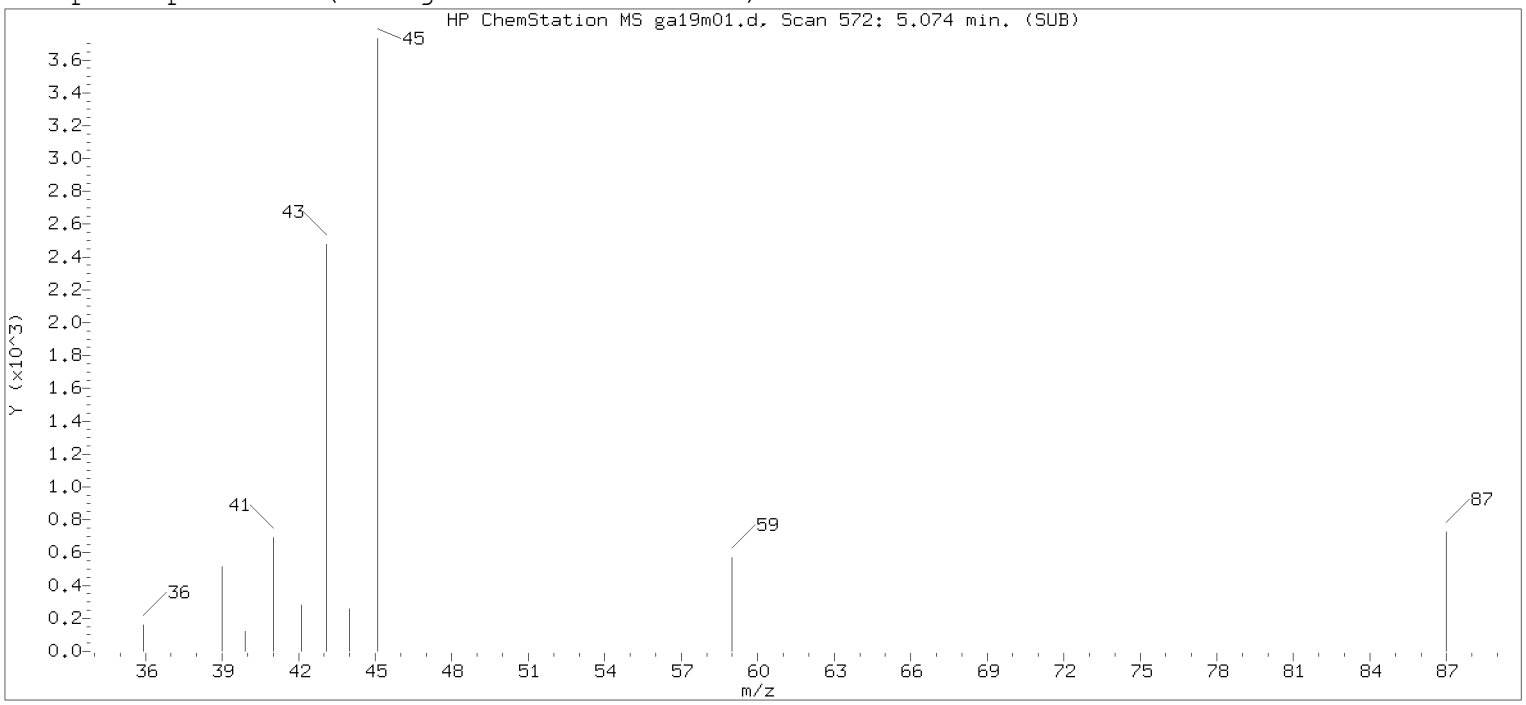
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 46864M
On-Column Amount (ng) : 0.9483
Integration start scan : 1269 Integration stop scan: 1295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

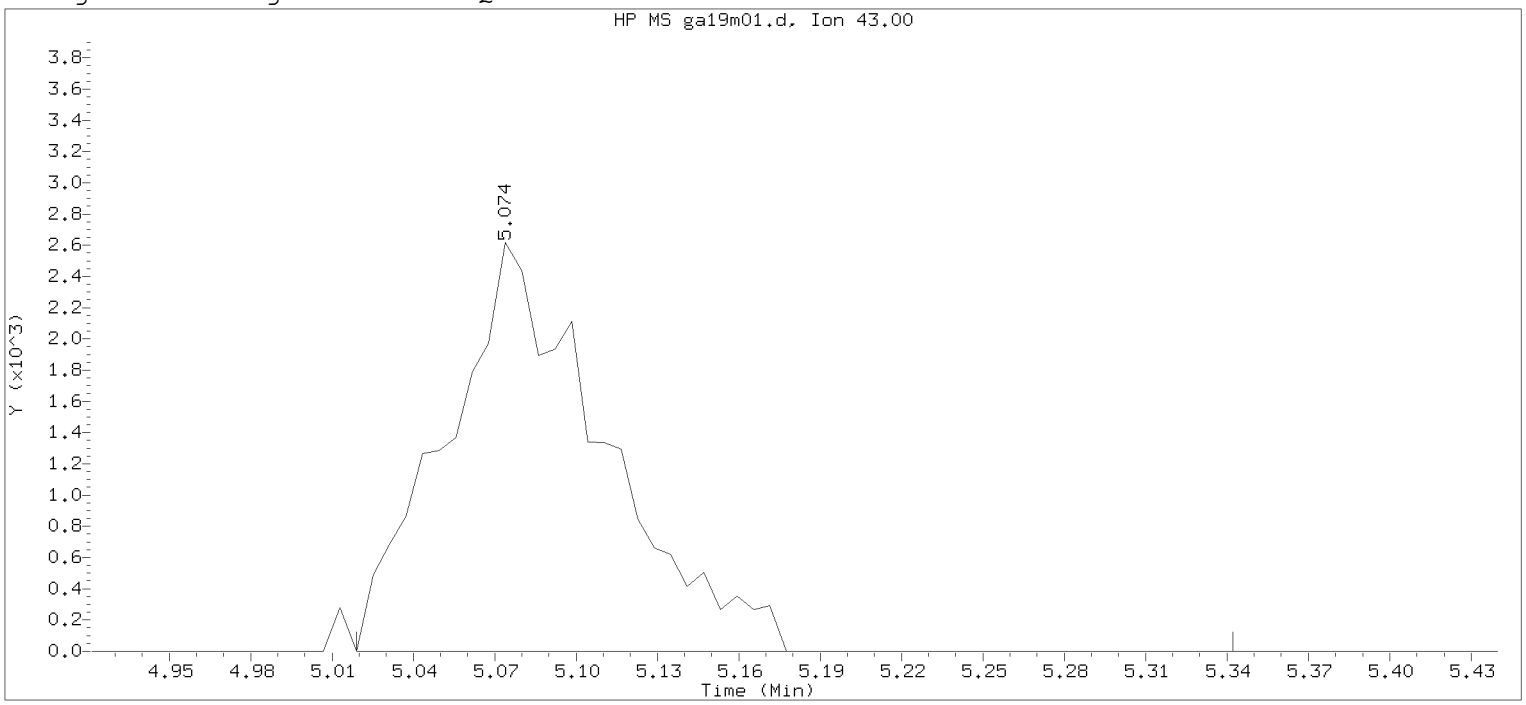
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

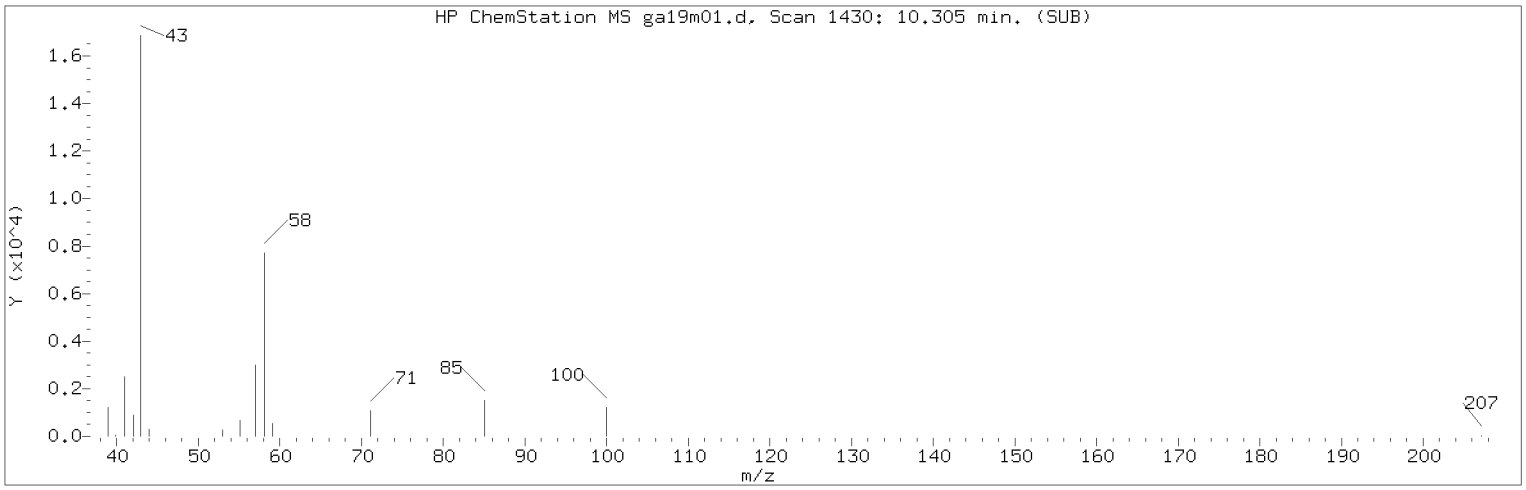
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

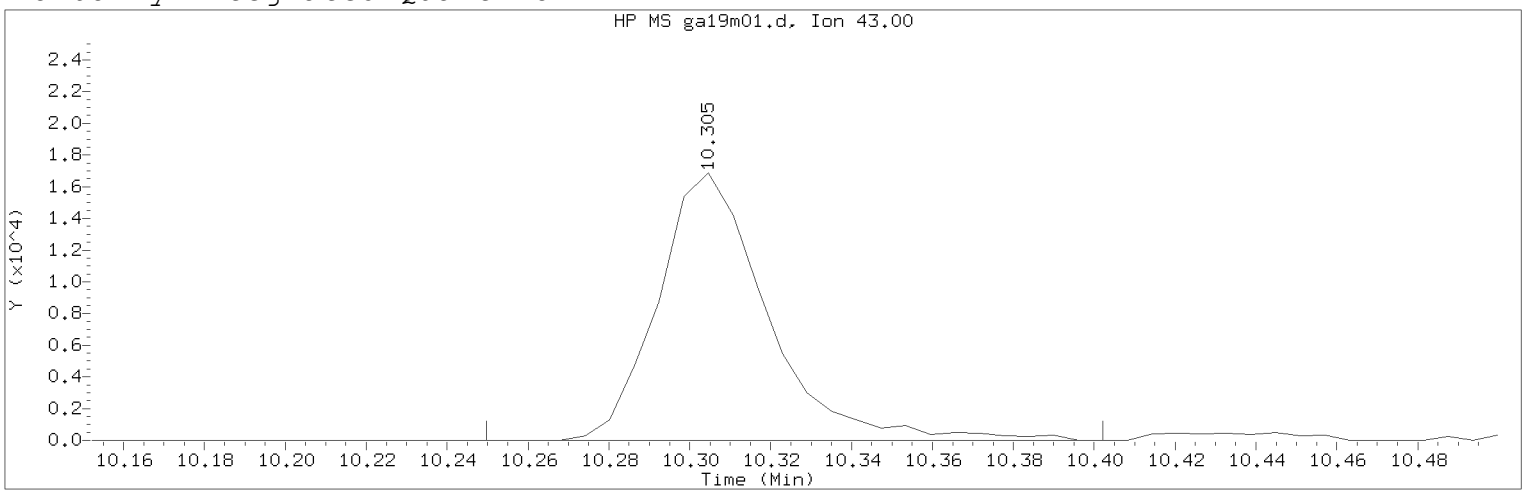
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 10578
On-column Amount (ng) : 1.0580
Integration start scan : 562 Integration stop scan: 615
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user AP04 mode 7303

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

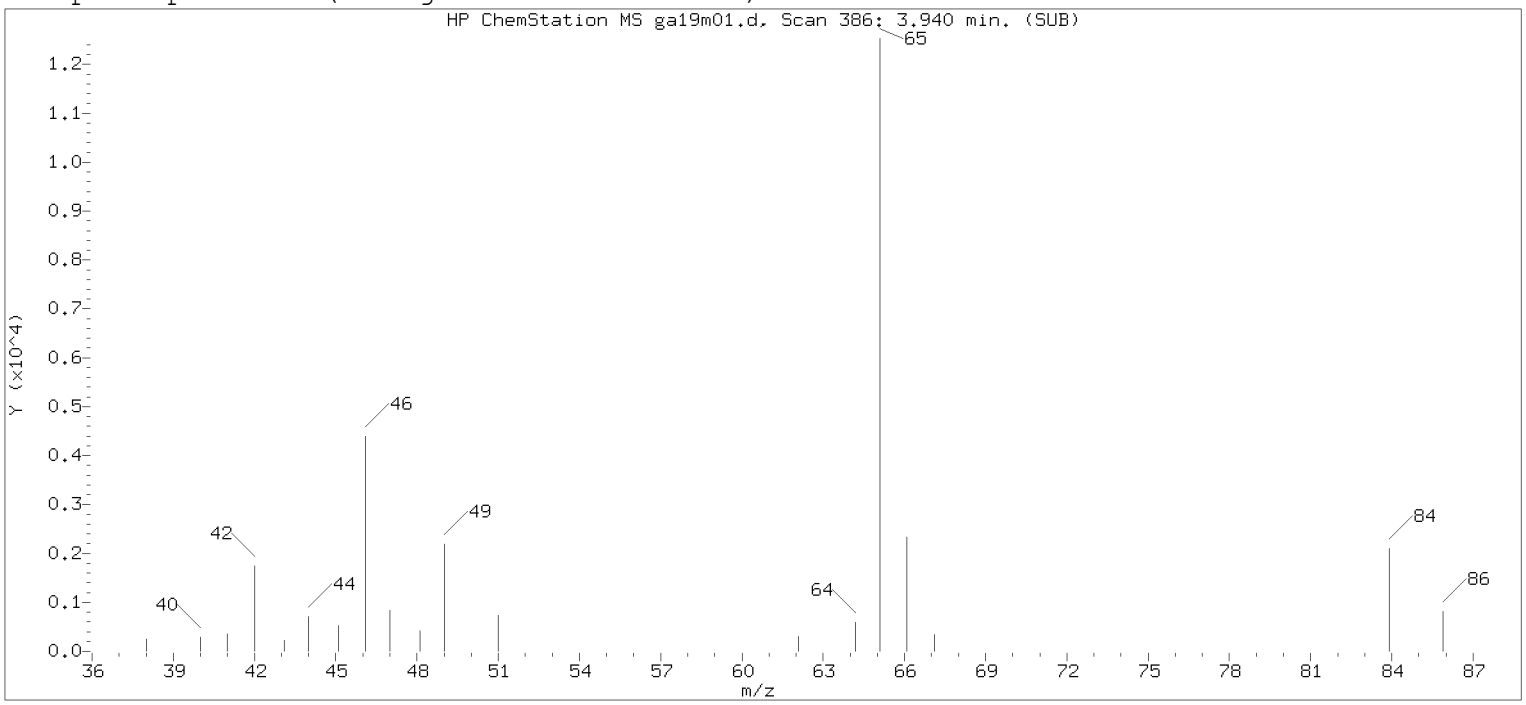
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 31709M
On-Column Amount (ng) : 0.9129
Integration start scan : 1420 Integration stop scan: 1445
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

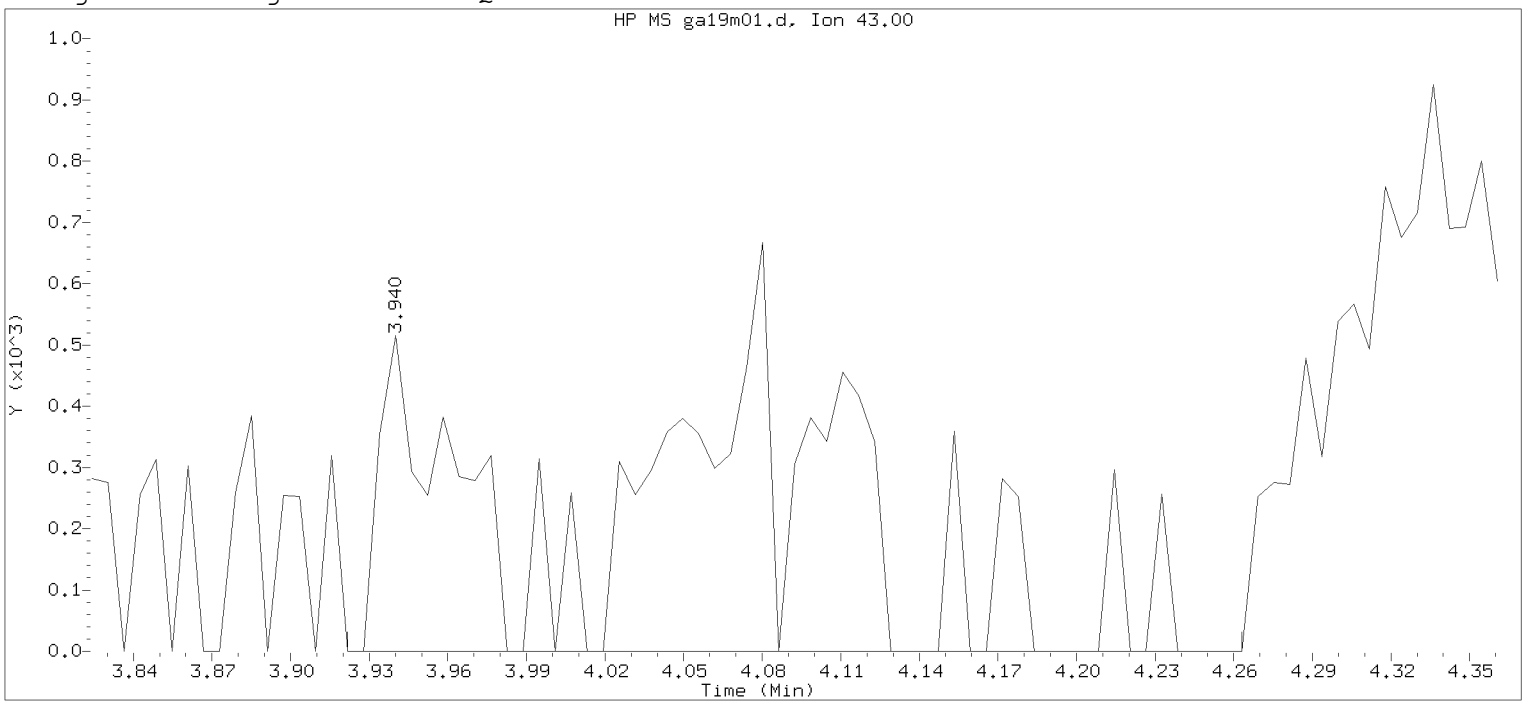
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

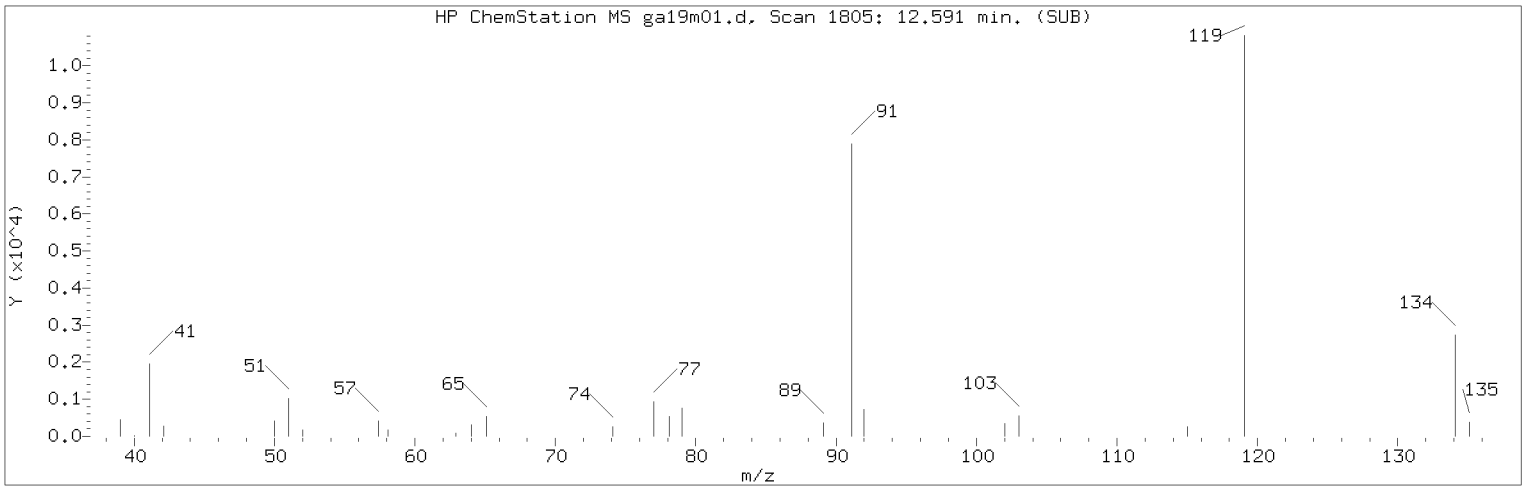
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

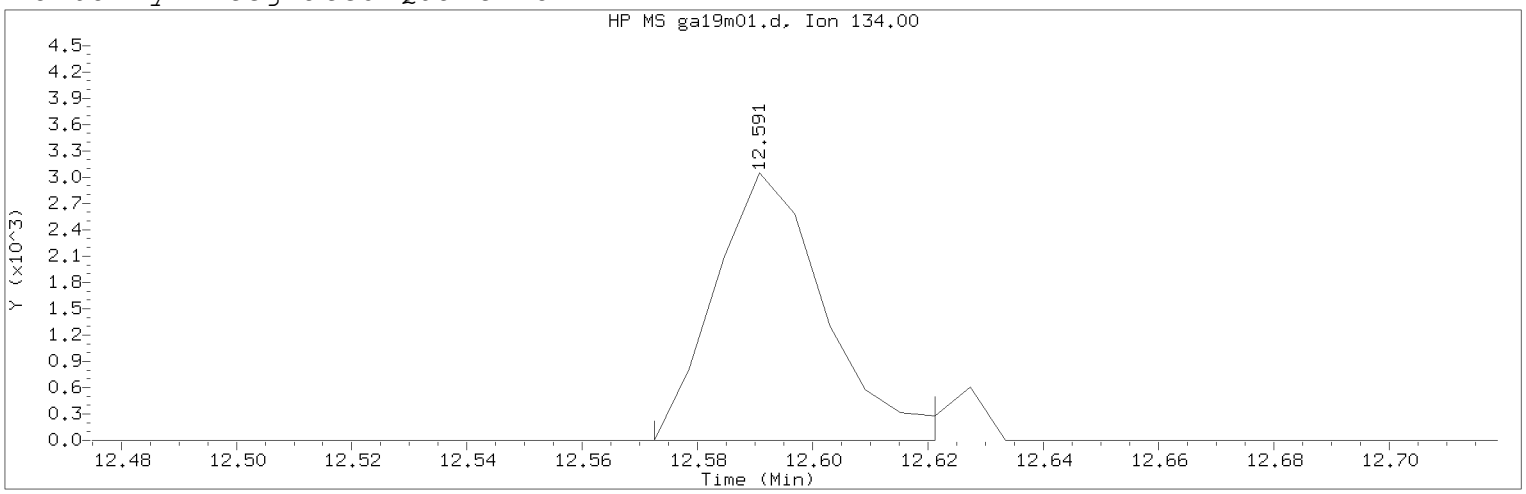
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 43.00
Area : 3897
On-column Amount (ng) : 1.9932
Integration start scan : 382 Integration stop scan: 438
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

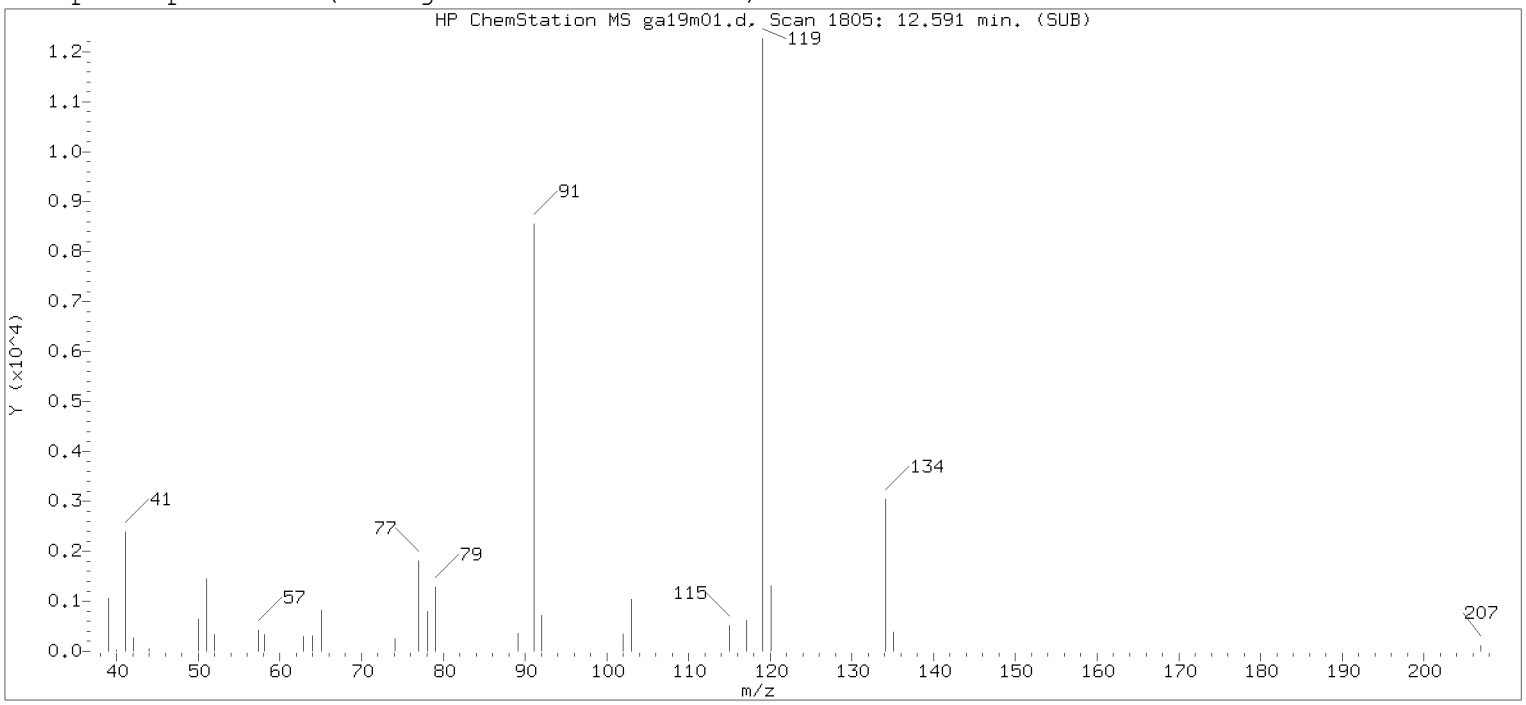
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 4029M
On-Column Amount (ng) : 0.0904
Integration start scan : 1801 Integration stop scan: 1809
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

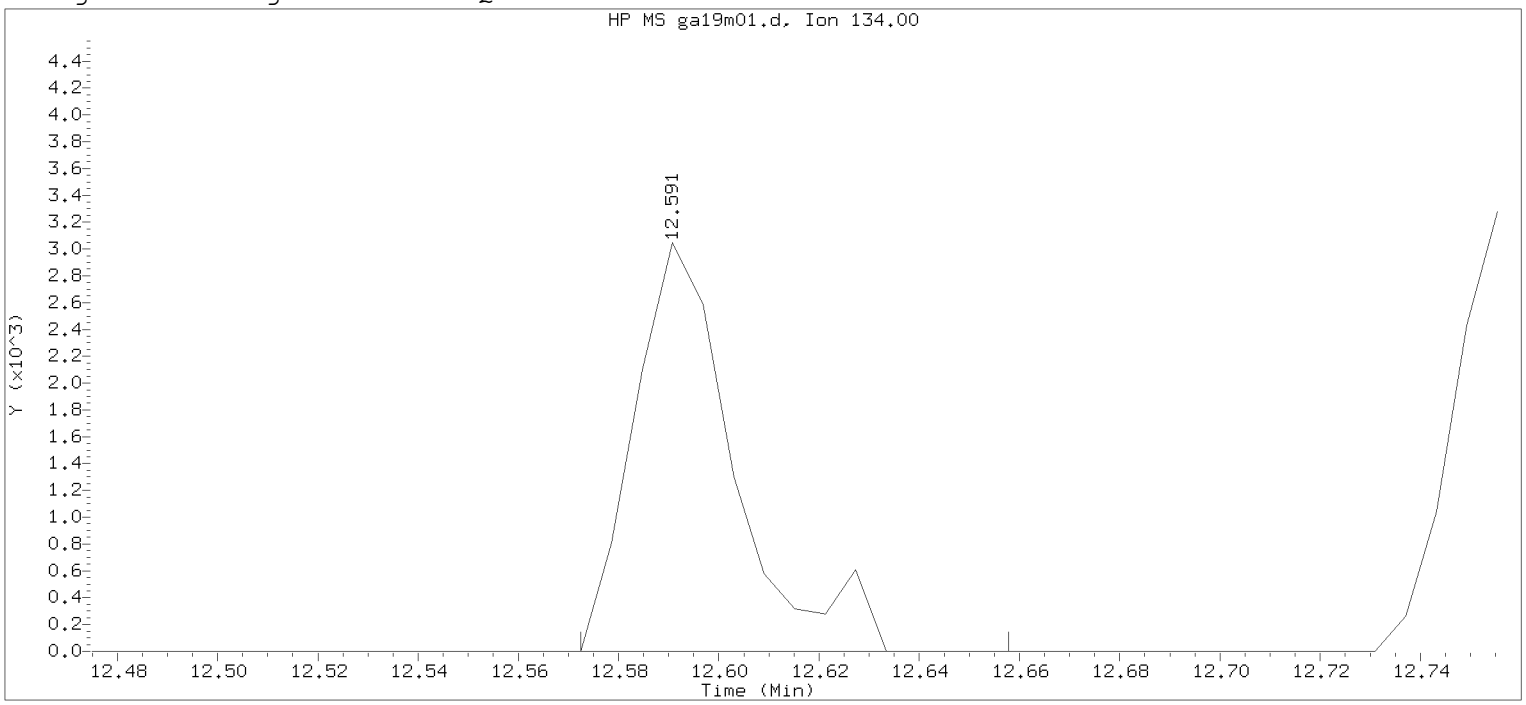
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

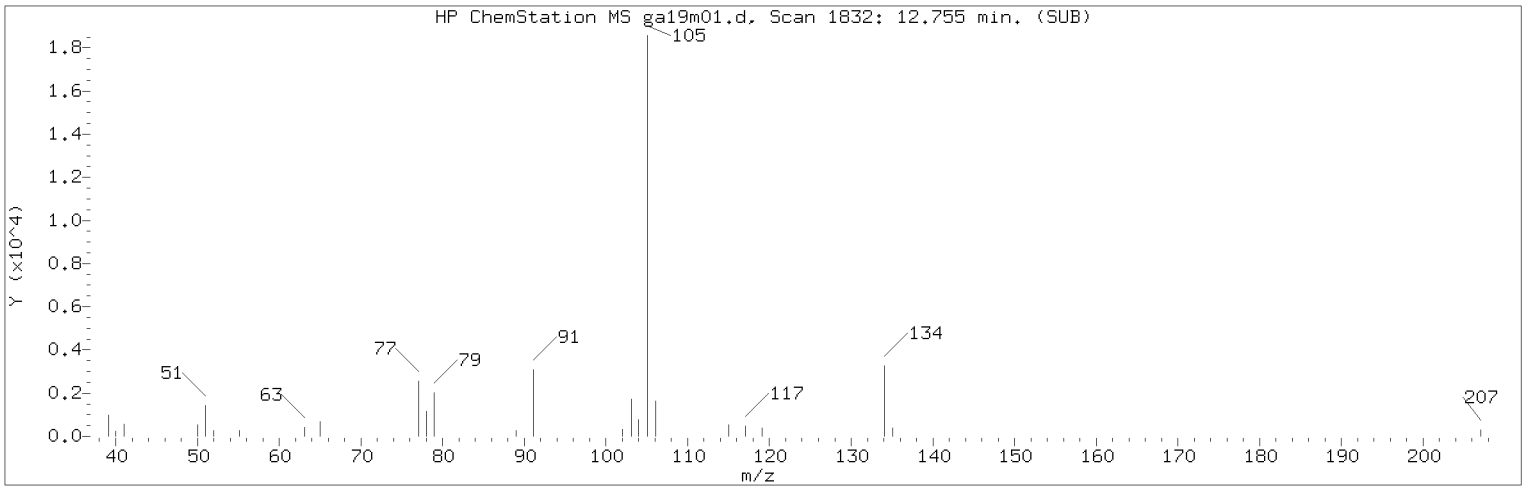
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

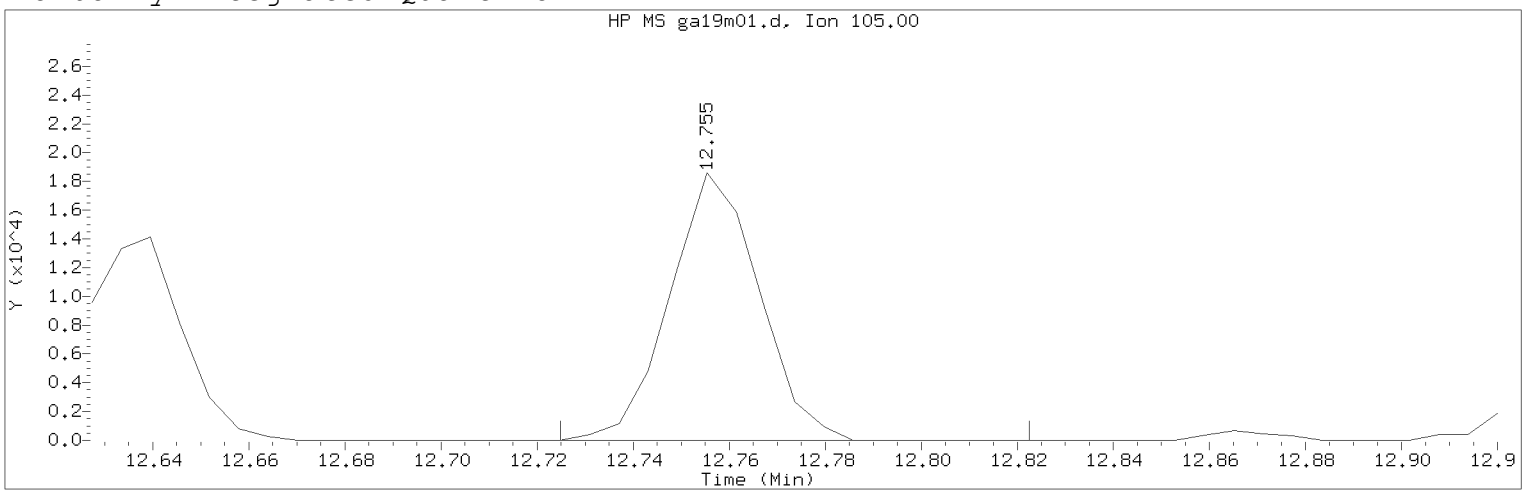
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area : 4252
On-column Amount (ng) : 0.0927
Integration start scan : 1801 Integration stop scan: 1815
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: MKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

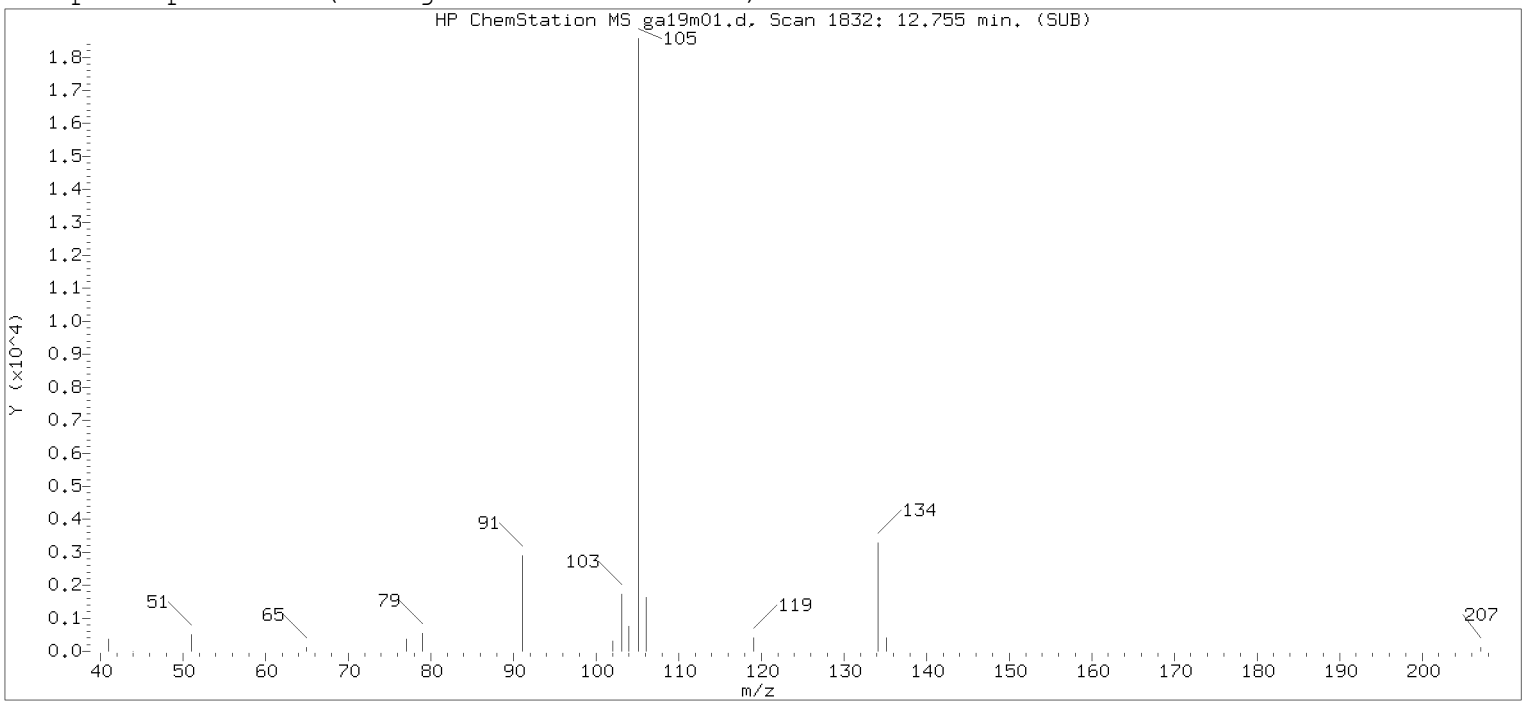
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area (flag) : 23947M
On-Column Amount (ng) : 0.0883
Integration start scan : 1826 Integration stop scan: 1842
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

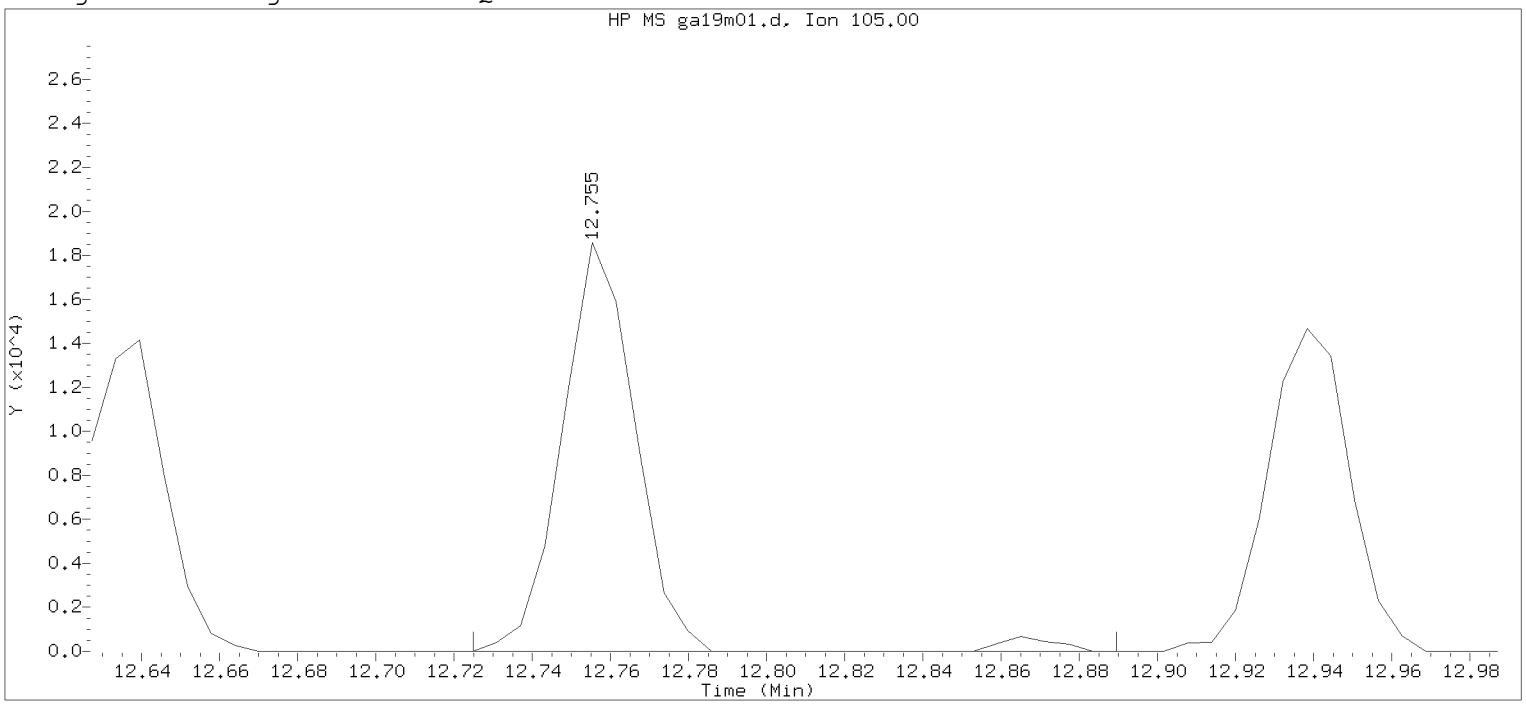
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

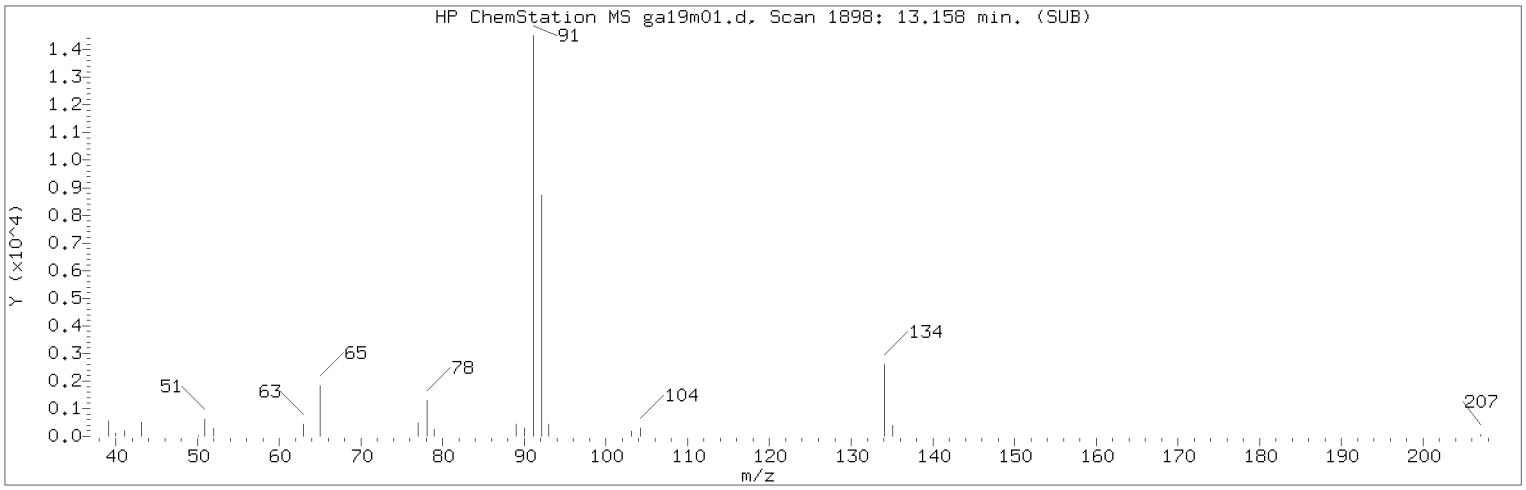
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

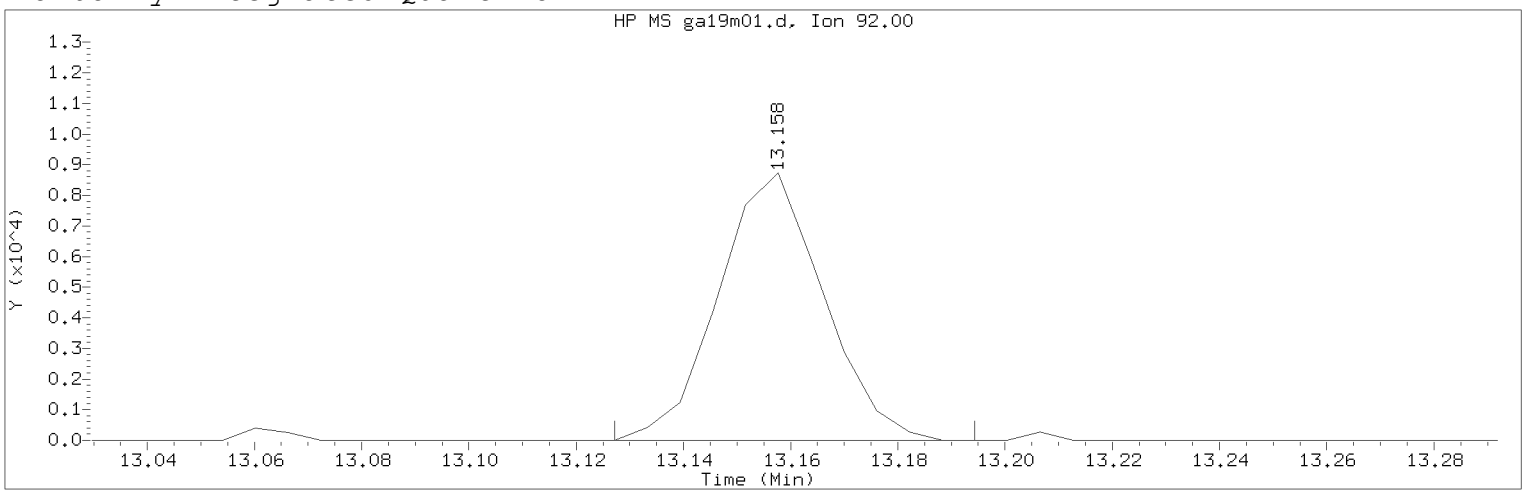
Compound Number	: 128		
Compound Name	: sec-Butylbenzene		
Scan Number	: 1832		
Retention Time (minutes)	: 12.755		
Quant Ion	: 105.00		
Area	: 24596		
On-column Amount (ng)	: 0.0903		
Integration start scan	: 1826	Integration stop scan:	1853
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

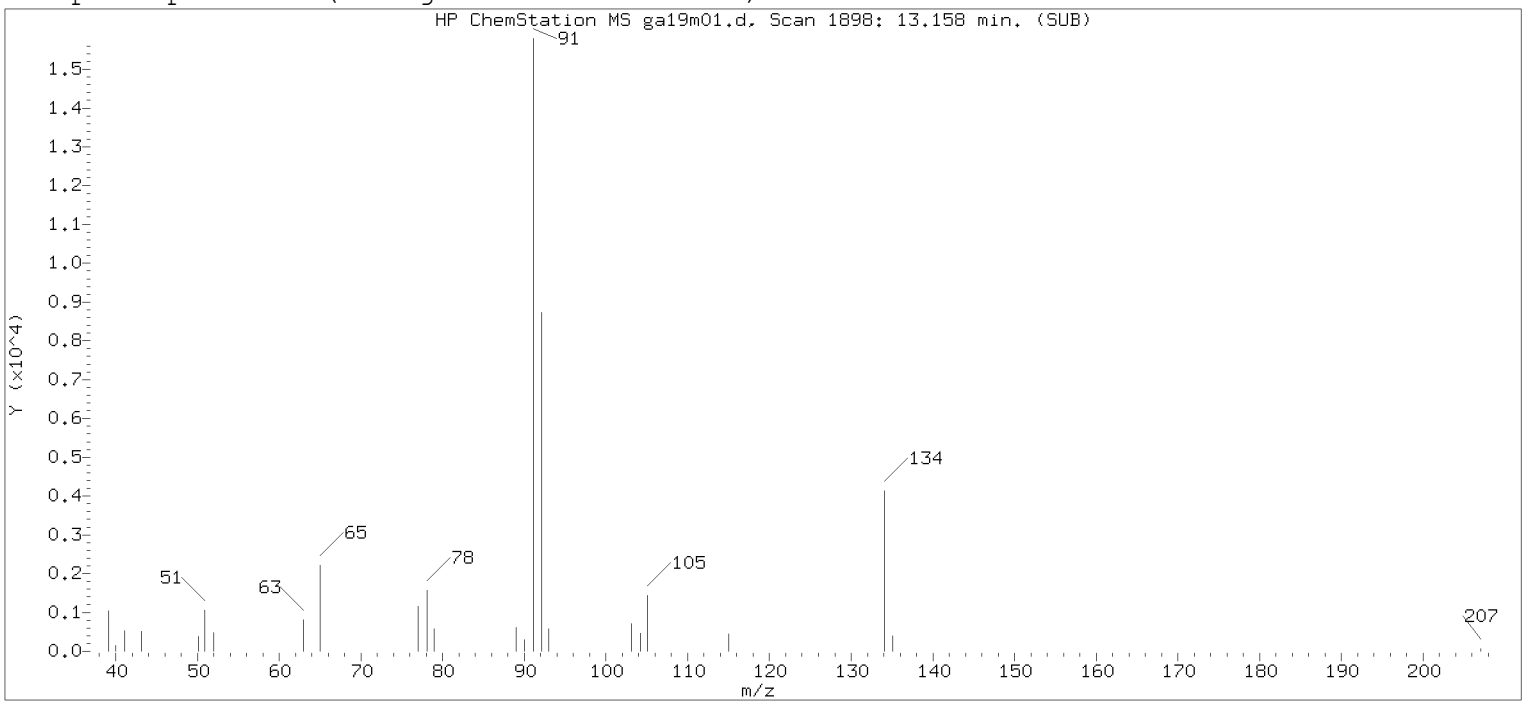
Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 92.00
Area (flag) : 11824M
On-Column Amount (ng) : 0.0928
Integration start scan : 1892 Integration stop scan: 1903
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

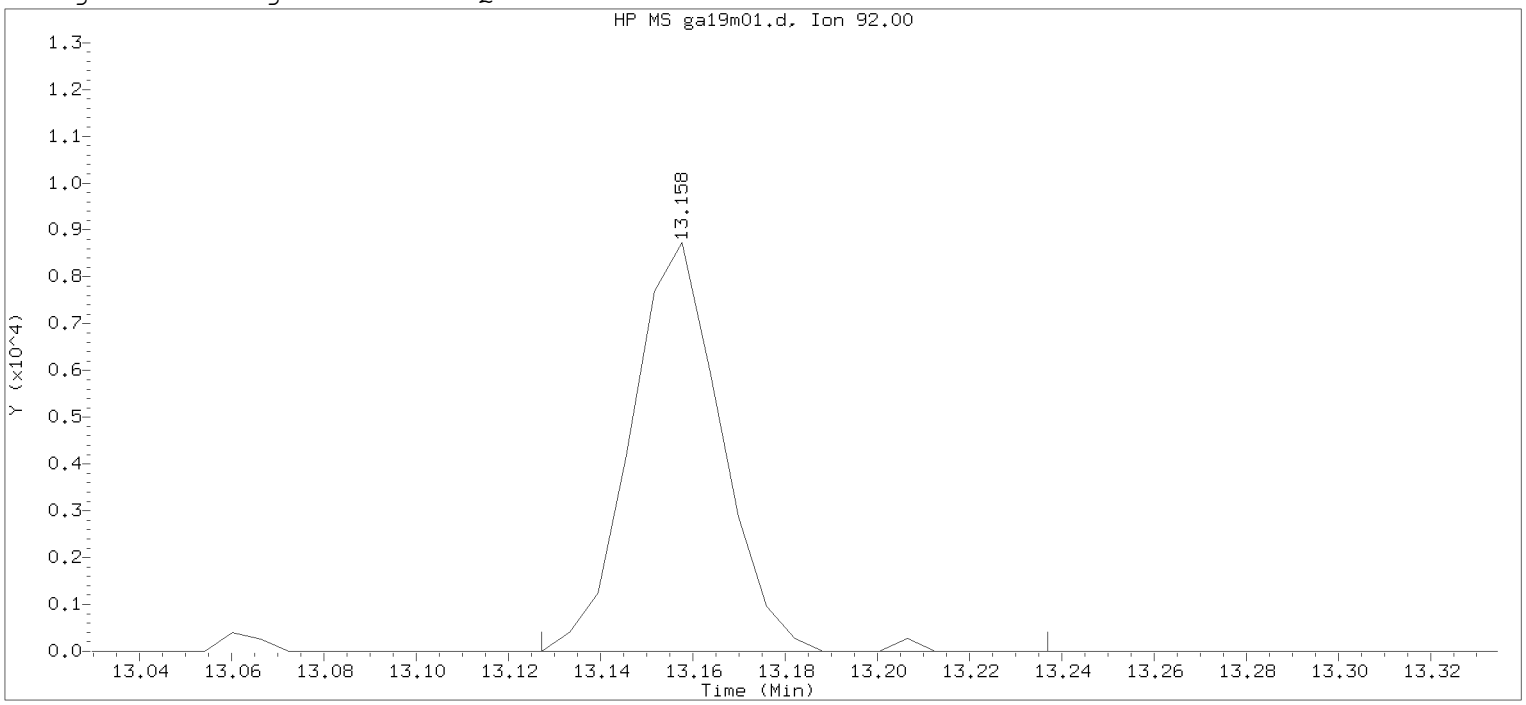
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



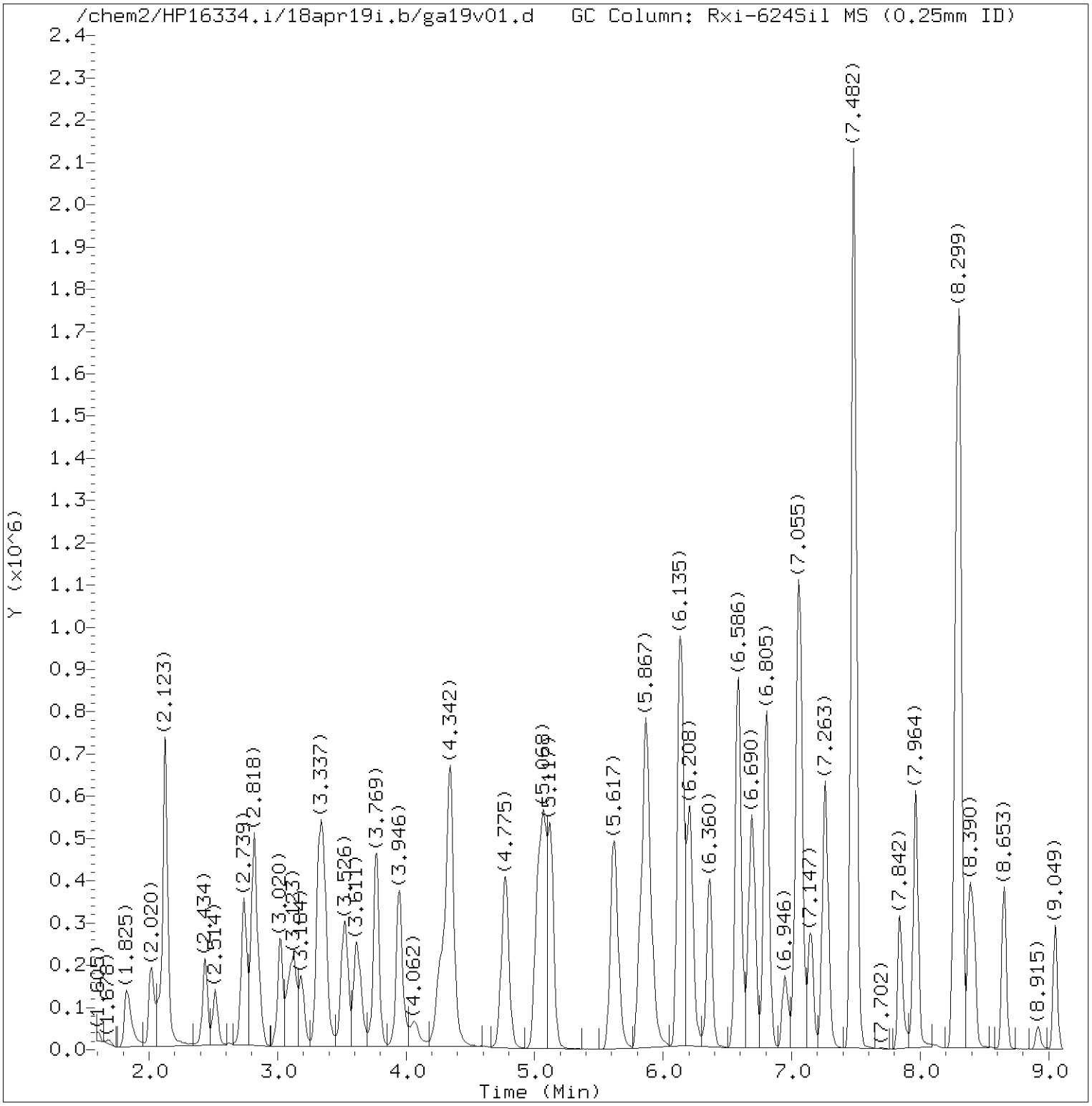
Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 138		
Compound Name	: n-Butylbenzene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.158		
Quant Ion	: 92.00		
Area	: 11923		
On-column Amount (ng)	: 0.0936		
Integration start scan	: 1892	Integration stop scan:	1910
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature user name: MSKrause



Total Ion Chromatogram (TIC)

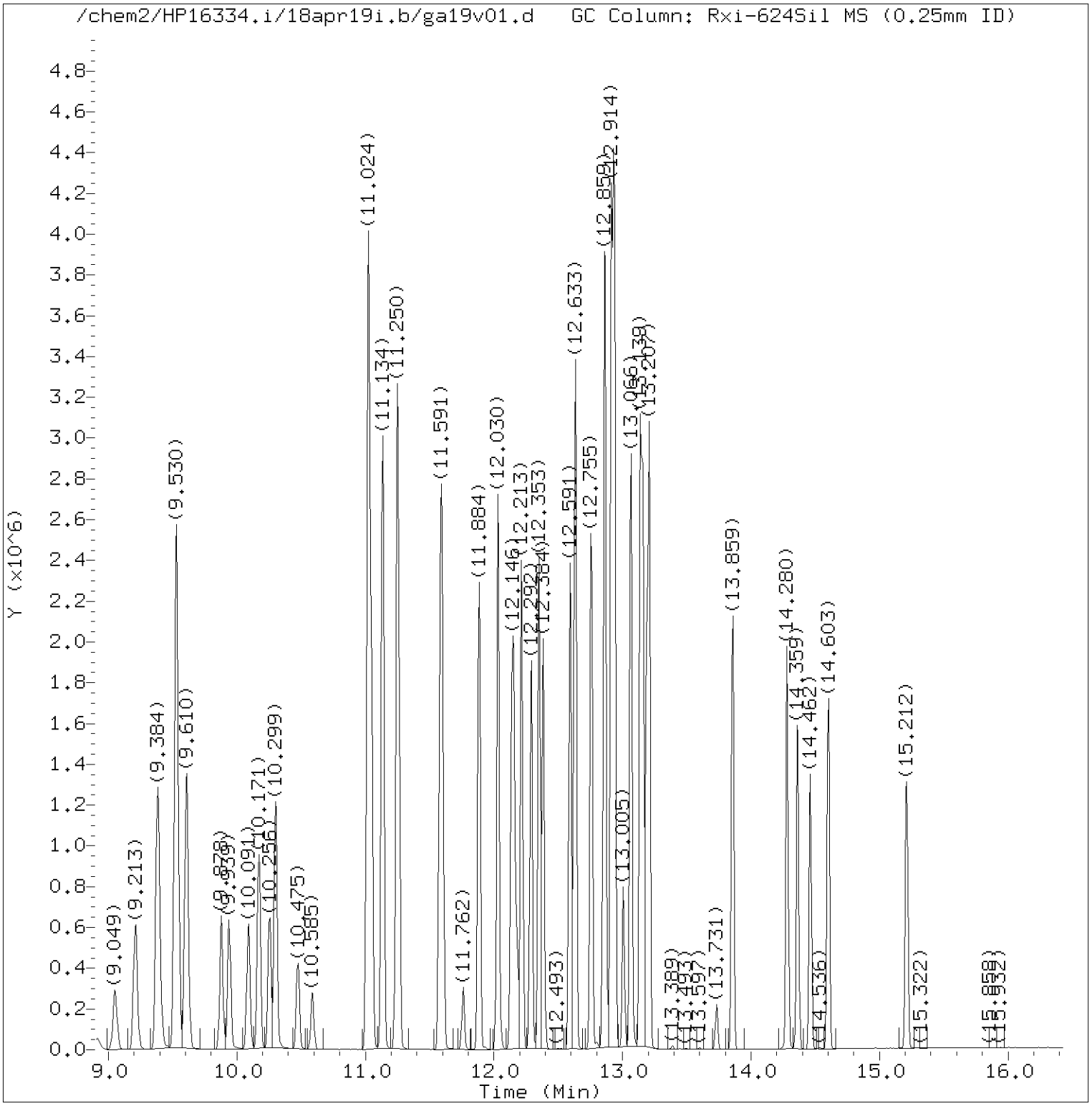
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.825	85	315819	4.194
2) Chloromethane	(2)	2.020	50	328840	4.337
5) Vinyl Chloride	(2)	2.123	62	301861	4.639
6) 1,3-Butadiene	(2)	2.123	39	487833M	3.523
7) Bromomethane	(2)	2.434	94	209114	4.806
8) Chloroethane	(2)	2.514	64	173069	4.669
9) Dichlorofluoromethane	(2)	2.739	67	438126	4.901
10) Trichlorofluoromethane	(2)	2.800	101	421677M	4.969
11) Ethyl ether	(2)	3.020	59	223931	5.294
12) Freon 123a	(2)	3.117	67	310010	5.159
13) Acrolein	(1)	3.184	56	258970	37.682
15) 1,1-Dichloroethene	(2)	3.318	96	214820	5.170
14) Acetone	(1)	3.337	43	401794	36.183
16) Freon 113	(2)	3.361	101	231202	4.935
17) Methyl Iodide	(2)	3.507	142	382467	4.739
18) Carbon Disulfide	(2)	3.611	76	742740	4.505
21) Methyl Acetate	(1)	3.739	43	147671M	4.718
22) Allyl Chloride	(2)	3.769	41	489975	5.082
23) Methylene Chloride	(2)	3.946	84	252305	4.490
26)*t-Butyl Alcohol-d10	(1)	3.946	65	198928	50.000
28) t-Butyl Alcohol	(1)	4.062	59	185169M	49.192
29) Acrylonitrile	(1)	4.263	53	326449	26.425
30) Methyl Tertiary Butyl Ether	(2)	4.324	73	716465	4.951
31) trans-1,2-Dichloroethene	(2)	4.349	96	248133	5.138
32) n-Hexane	(2)	4.769	57	404087	4.955
33) 1,1-Dichloroethane	(2)	5.019	63	499389	5.070
34) di-Isopropyl Ether	(2)	5.068	45	1045066	5.181
35) 2-Chloro-1,3-Butadiene	(2)	5.123	53	455521	5.052
37) Ethyl t-butyl ether	(2)	5.617	59	893072	5.043
38) 2-Butanone	(1)	5.818	43	742404	38.857
39) cis-1,2-Dichloroethene	(2)	5.867	96	285053	5.263
41) 2,2-Dichloropropane	(2)	5.885	77	413044	5.113
42) Propionitrile	(1)	5.921	54	178540	37.794
40) 1,2-Dichloroethene (Total)	(2)		96	533186	10.401
45) Methacrylonitrile	(1)	6.135	67	586127	39.150
47) Bromochloromethane	(2)	6.208	128	125163	5.033
48) Tetrahydrofuran	(1)	6.208	71	115408	25.376
49) Chloroform	(2)	6.360	83	475791	5.052

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) 1,1,1-Trichloroethane	(2)	6.586	97	402687	5.062
50)$Dibromofluoromethane	(2)	6.586	113	505912	10.021
52) Cyclohexane	(2)	6.690	56	489634	5.132
54) Carbon Tetrachloride	(2)	6.805	117	329477	5.099
55) 1,1-Dichloropropene	(2)	6.805	75	368339	4.966
56) Isobutyl Alcohol	(1)	6.946	41	182591	122.049
57)$1,2-Dichloroethane-d4	(2)	7.043	102	109267	10.213
58) Benzene	(2)	7.068	78	1035864	5.059
59) 1,2-Dichloroethane	(2)	7.147	62	349539	4.822
60) t-Amyl methyl ether	(2)	7.263	73	766564	5.101
63)*Fluorobenzene	(2)	7.482	96	2007665	10.000
62) n-Heptane	(2)	7.494	43	496857	5.064
65) n-Butanol	(1)	7.842	56	305112	257.675
67) Trichloroethene	(2)	7.964	95	272217	5.035
69) Methylcyclohexane	(2)	8.281	83	472864	5.151
70) 1,2-Dichloropropane	(2)	8.305	63	295484	5.199
71) Methyl Methacrylate	(1)	8.384	69	150670	5.284
72) 1,4-Dioxane	(1)	8.390	88	31438M	152.352
73) Dibromomethane	(2)	8.415	93	137829	5.082
74) Bromodichloromethane	(2)	8.653	83	339135	5.096
76) 2-Nitropropane	(1)	8.915	41	45660	4.675
80) cis-1,3-Dichloropropene	(2)	9.213	75	418567	5.091
81) 4-Methyl-2-Pentanone	(1)	9.384	43	1233176M	26.273
82)$Toluene-d8	(3)	9.530	98	2042820	9.972
83) Toluene	(3)	9.610	92	657668	5.068
84) trans-1,3-Dichloropropene	(3)	9.878	75	359969	5.114
86) Ethyl Methacrylate	(3)	9.939	69	326245	5.141
88) 1,1,2-Trichloroethane	(3)	10.091	97	201433	5.146
85) 1,3-Dichloropropene (total)	(3)		75	778536	10.205
89) Tetrachloroethene	(3)	10.171	166	304626	5.061
90) 1,3-Dichloropropane	(3)	10.256	76	360612	5.058
91) 2-Hexanone	(1)	10.299	43	891400M	27.021
93) Dibromochloromethane	(3)	10.475	129	221535	5.137
95) 1,2-Dibromoethane	(3)	10.585	107	193498	5.175
97)*Chlorobenzene-d5	(3)	11.018	117	1527466	10.000
98) Chlorobenzene	(3)	11.048	112	746626	5.023
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	255407	5.146
100) Ethylbenzene	(3)	11.134	91	1310945	5.084

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

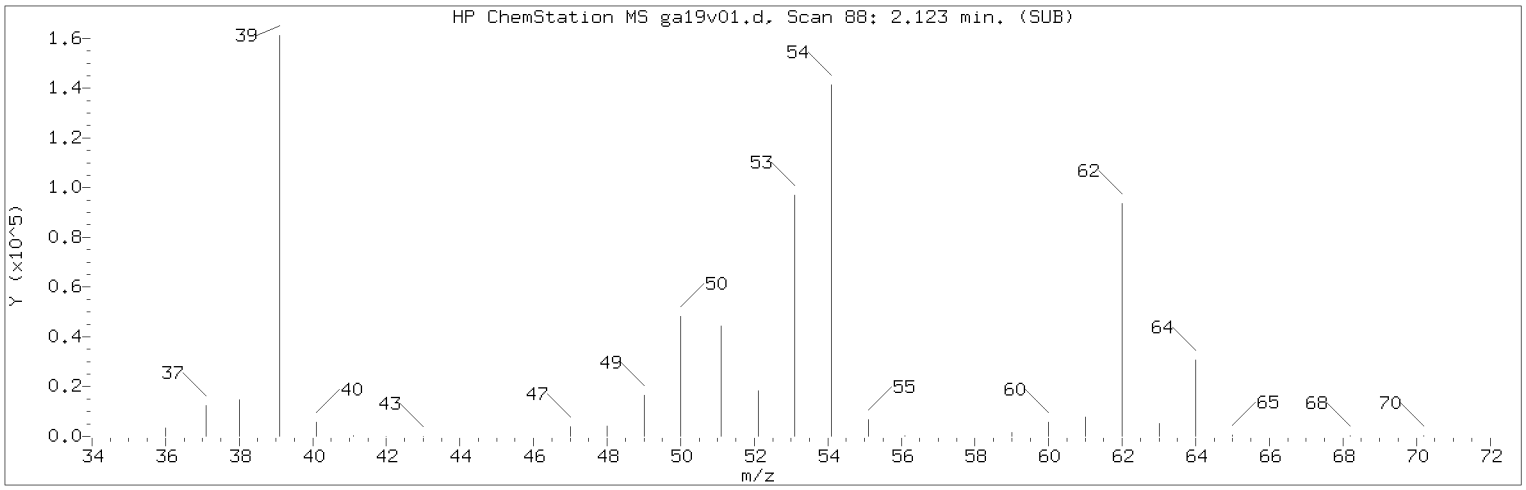
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.250	106	1010773	10.295
104) o-Xylene	(3)	11.579	106	500317	5.083
106) Styrene	(3)	11.597	104	843447	5.221
105) Xylene (Total)	(3)		106	1511090	15.378
107) Bromoform	(3)	11.762	173	124257	5.007
108) Isopropylbenzene	(3)	11.884	105	1322801	5.160
111)$4-Bromofluorobenzene	(3)	12.030	95	786691	10.033
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	258665M	4.992
114) Bromobenzene	(4)	12.146	156	335518	4.931
116) 1,2,3-Trichloropropane	(4)	12.176	110	74833	5.167
117) n-Propylbenzene	(4)	12.213	91	1602450	5.058
119) 2-Chlorotoluene	(4)	12.292	126	311704	4.930
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	1138343	5.018
122) 4-Chlorotoluene	(4)	12.384	126	329945	5.006
125) tert-Butylbenzene	(4)	12.591	134	236981	5.004
126) Pentachloroethane	(4)	12.627	167	189457	5.153
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	1174122	5.074
128) sec-Butylbenzene	(4)	12.755	105	1480479	5.138
131) 1,3-Dichlorobenzene	(4)	12.859	146	668881	4.947
132) p-Isopropyltoluene	(4)	12.865	119	1290934	5.133
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	881563	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	688345	4.994
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	534045	5.133
136) Benzyl Chloride	(4)	13.005	126	96420	5.123
138) n-Butylbenzene	(4)	13.158	92	674364	4.983
139) 1,2-Dichlorobenzene	(4)	13.188	146	638029	5.001
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	38191	5.419
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	555700	4.914
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	511638	4.877
146) Hexachlorobutadiene	(4)	14.365	225	272696	4.932
147) Naphthalene	(4)	14.462	128	860975	4.910
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	444089	4.951

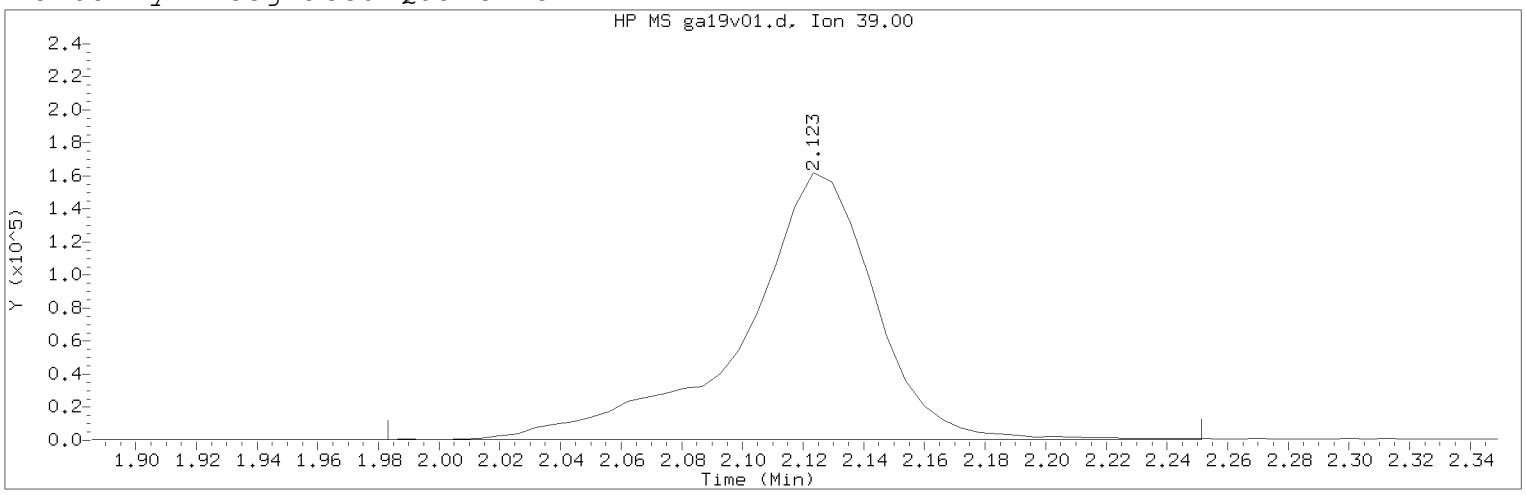
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

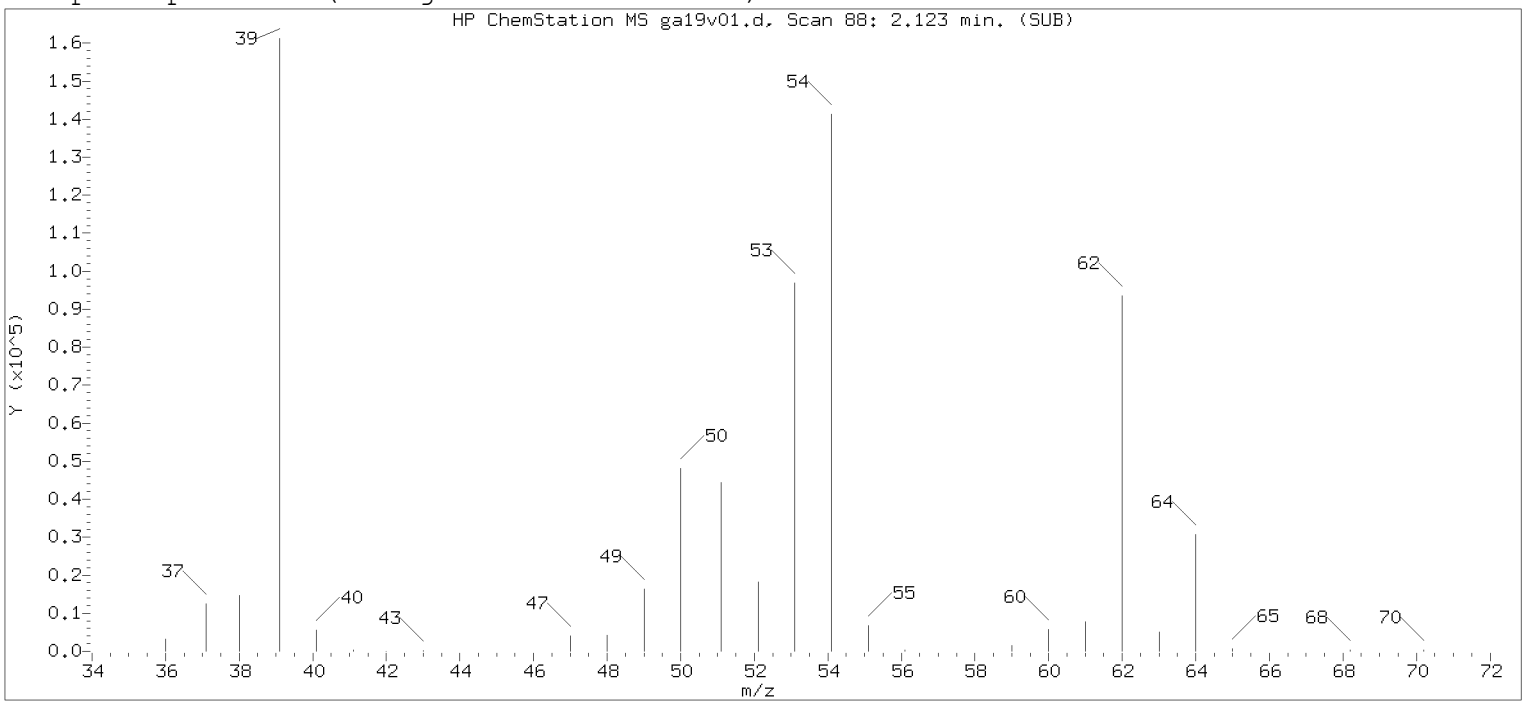
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 88
Retention Time (minutes): 2.123
Quant Ion : 39.00
Area (flag) : 487833M
On-Column Amount (ng) : 3.5235
Integration start scan : 64 Integration stop scan: 108
Y at integration start : 333 Y at integration end: 333

Reason for manual integration: improper integration

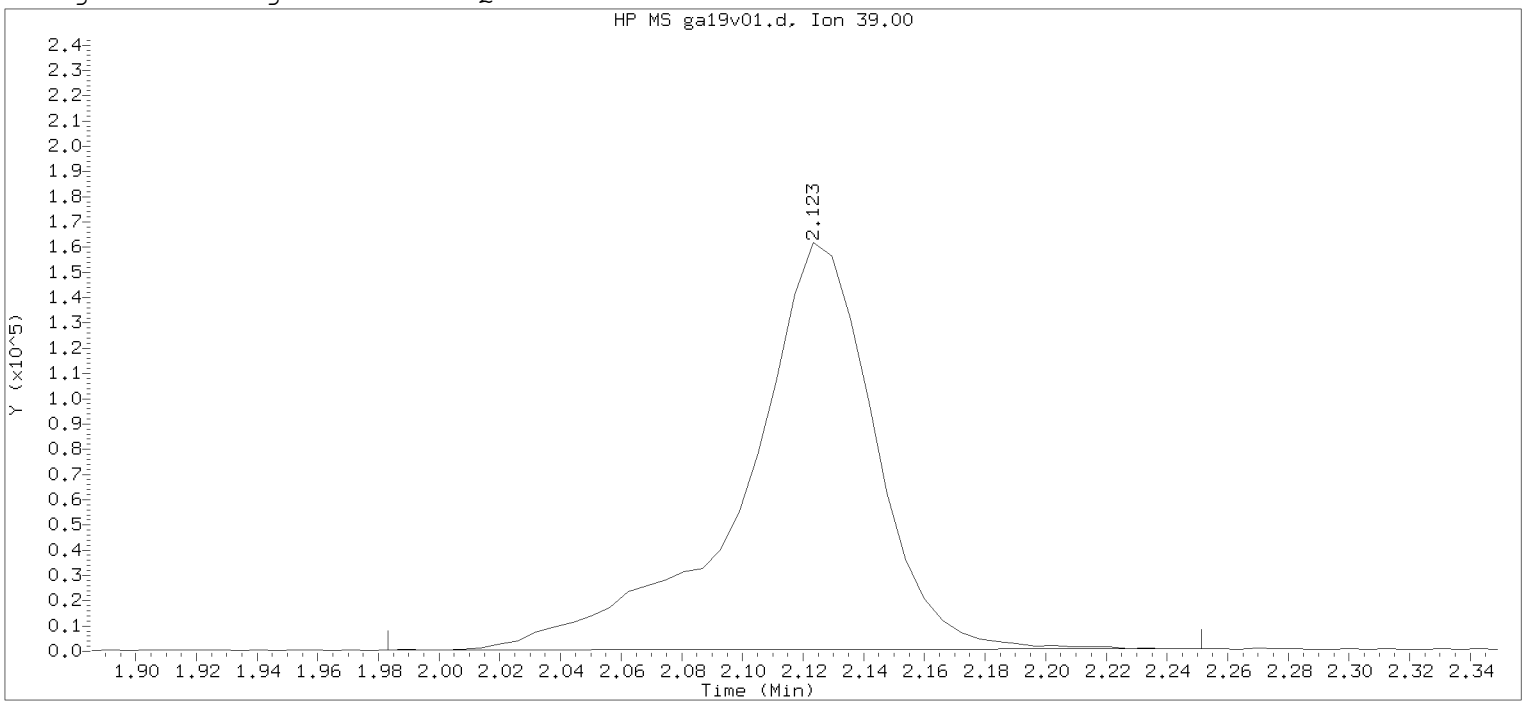
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

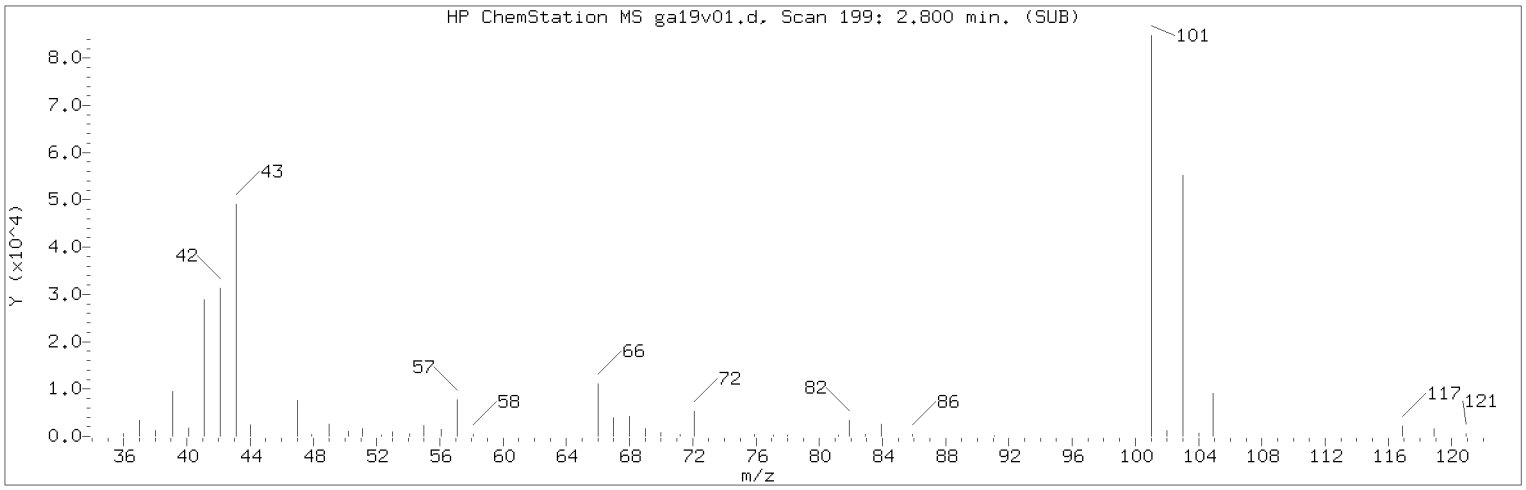
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

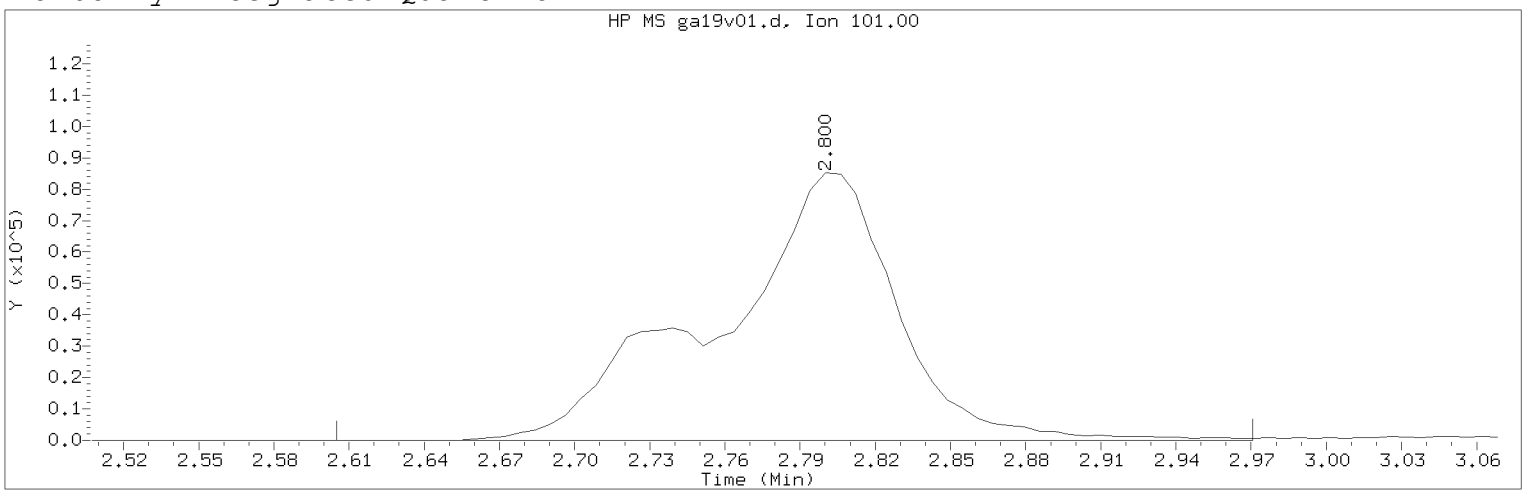
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 88
Retention Time (minutes): 2.123
Quant Ion : 39.00
Area : 481237
On-column Amount (ng) : 3.7153
Integration start scan : 64 Integration stop scan: 108
Y at integration start : 419 Y at integration end: 1048

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

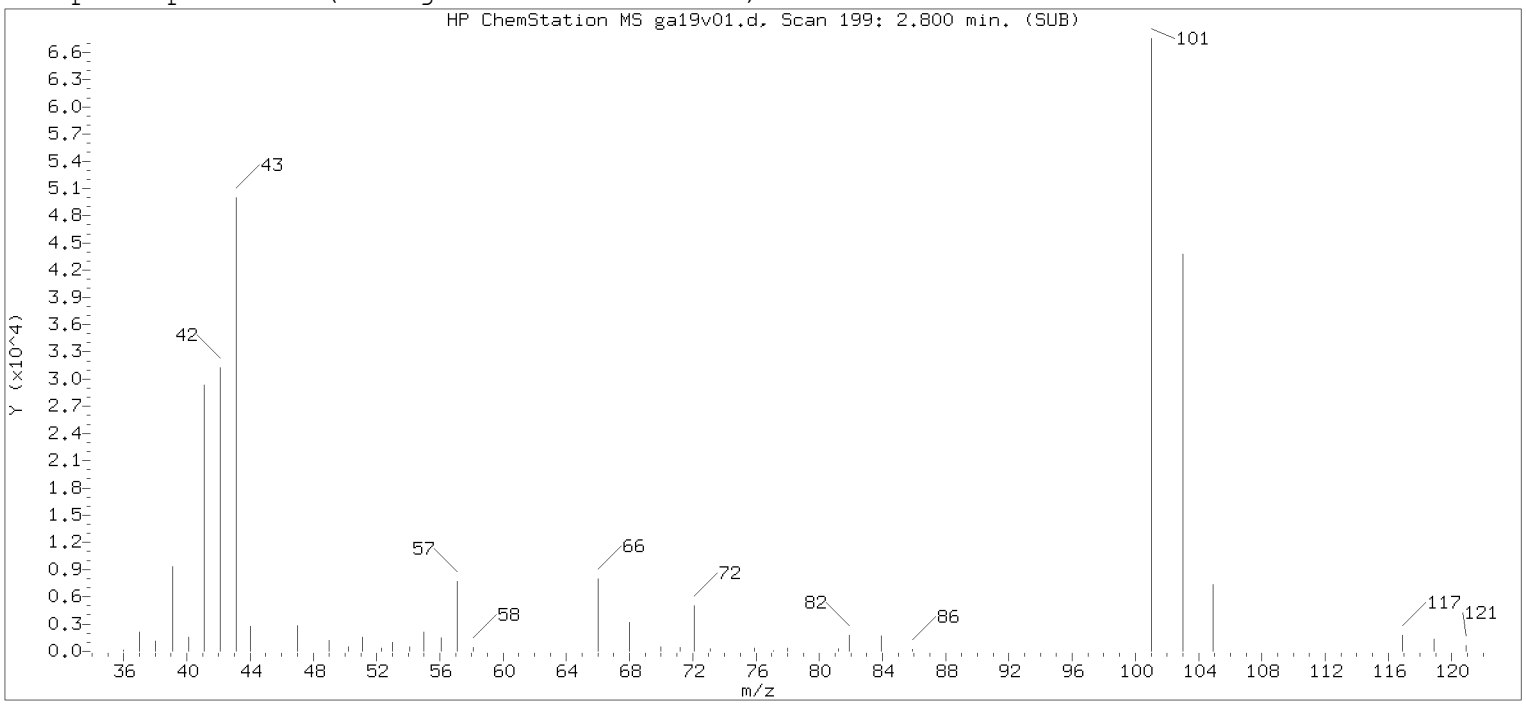
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area (flag) : 421677M
On-Column Amount (ng) : 4.9686
Integration start scan : 166 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

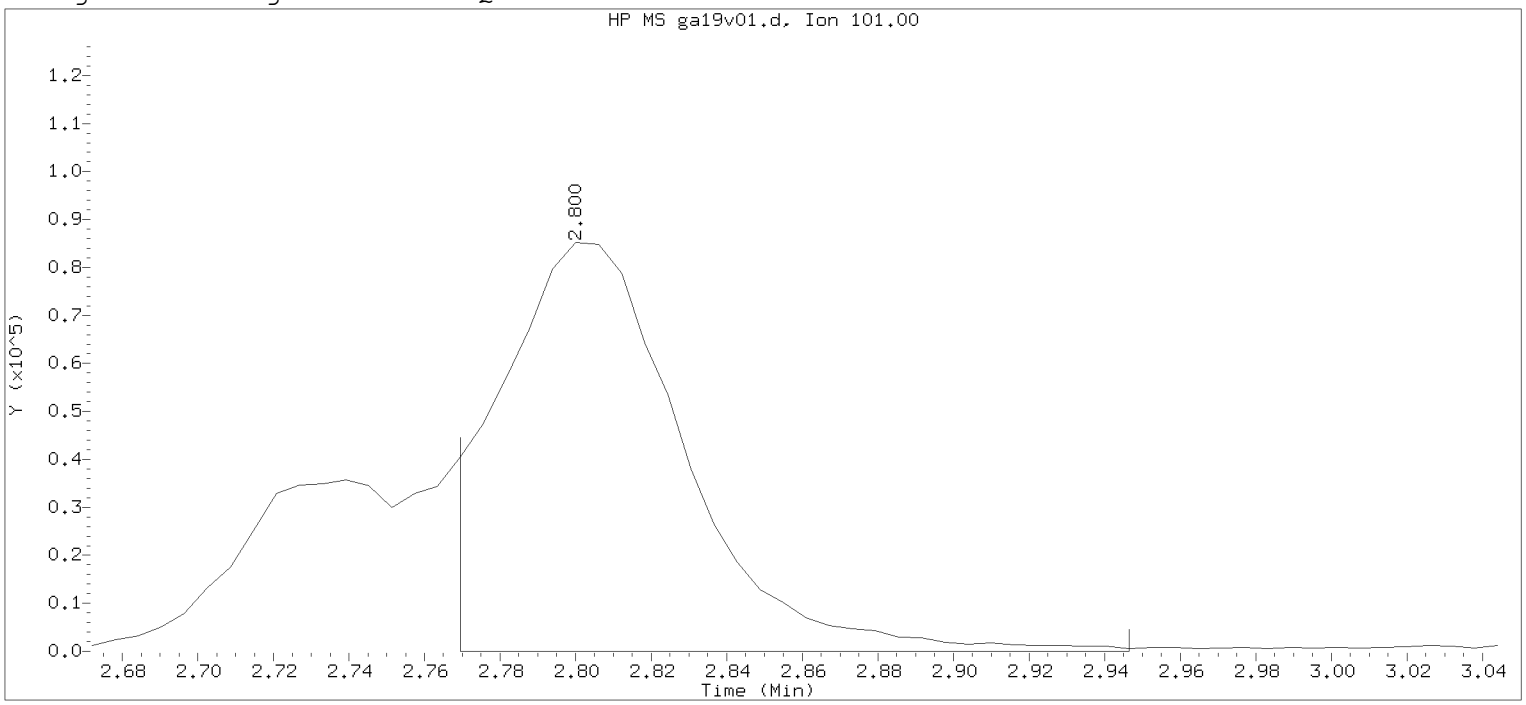
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

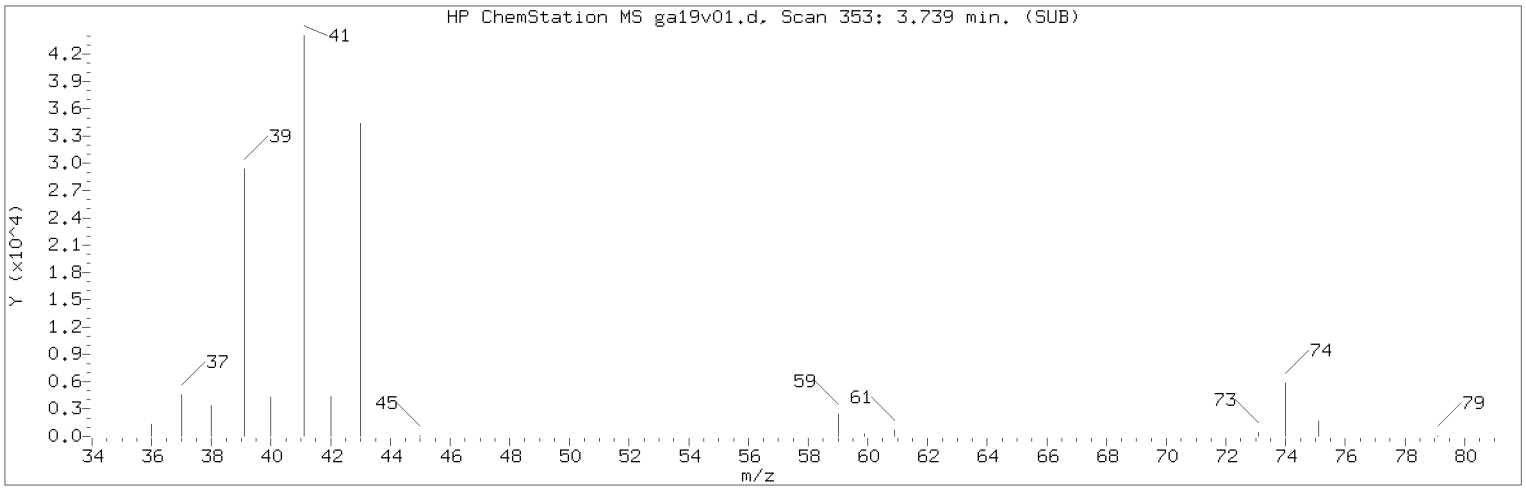
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

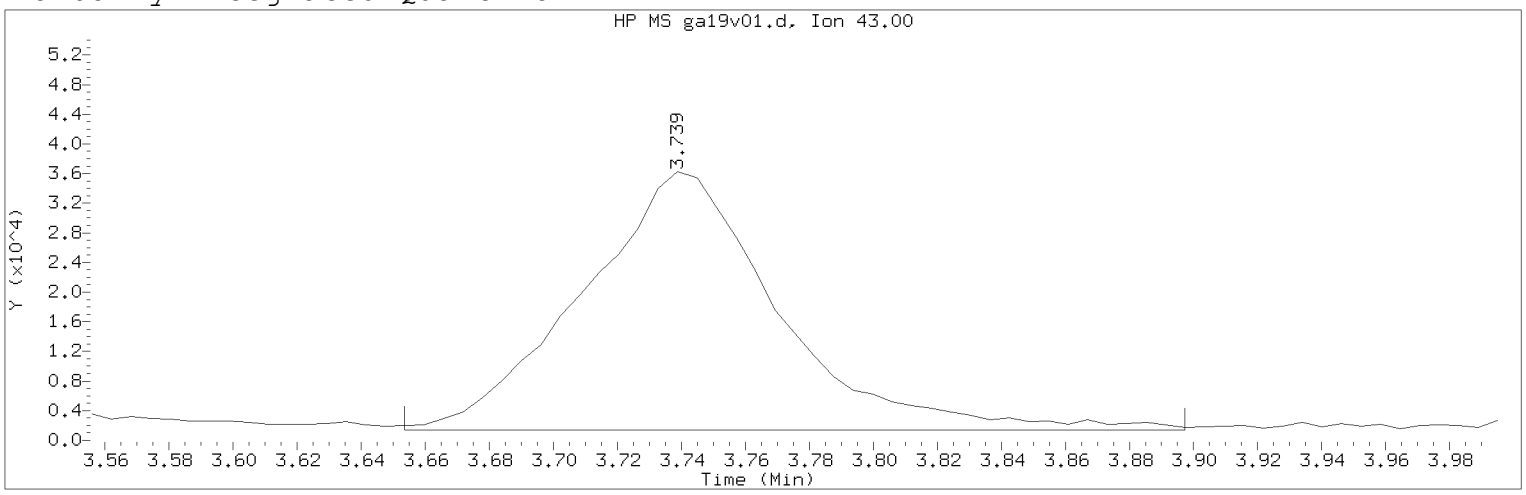
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area : 286183
On-column Amount (ng) : 3.6977
Integration start scan : 193 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

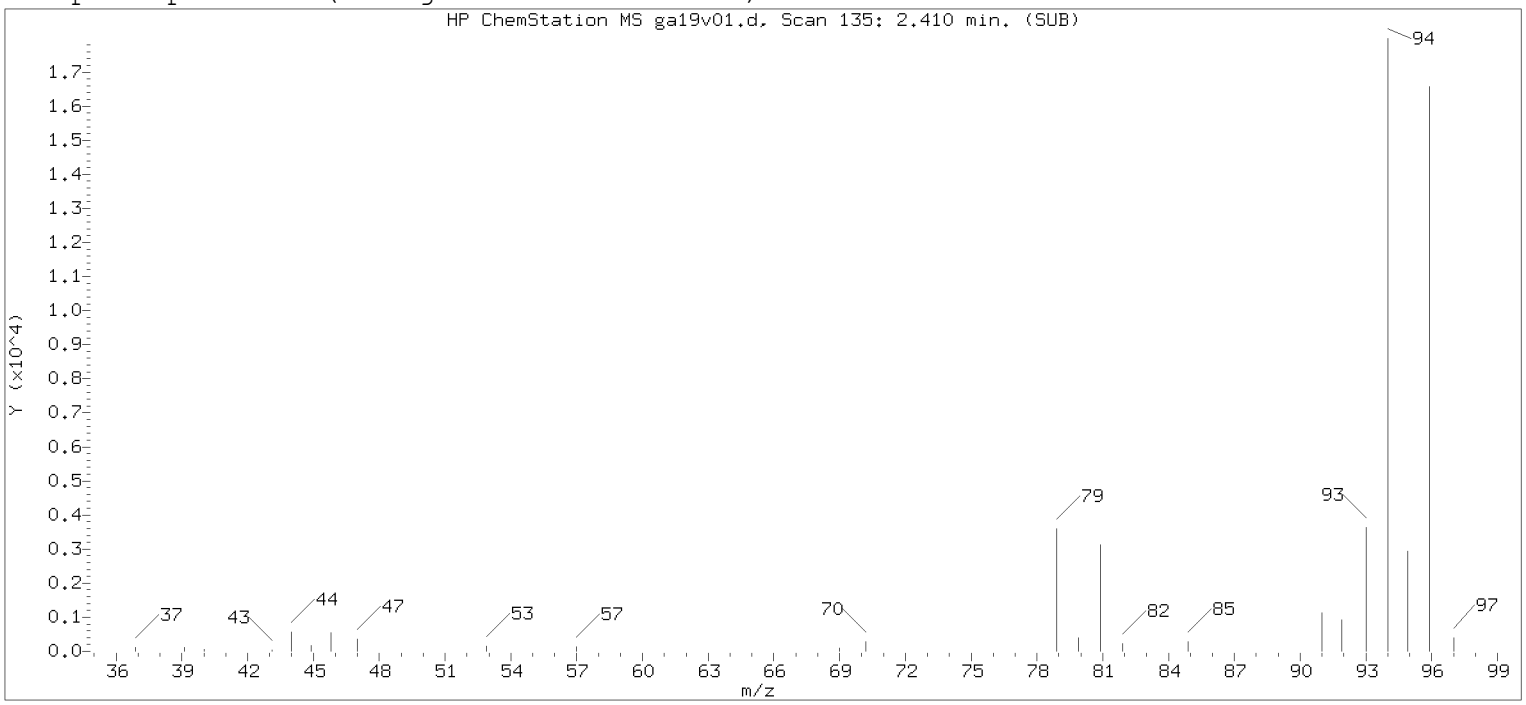
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 353
Retention Time (minutes): 3.739
Quant Ion : 43.00
Area (flag) : 147671M
On-Column Amount (ng) : 4.7179
Integration start scan : 338 Integration stop scan: 378
Y at integration start : 1411 Y at integration end: 1411

Reason for manual integration: improper integration

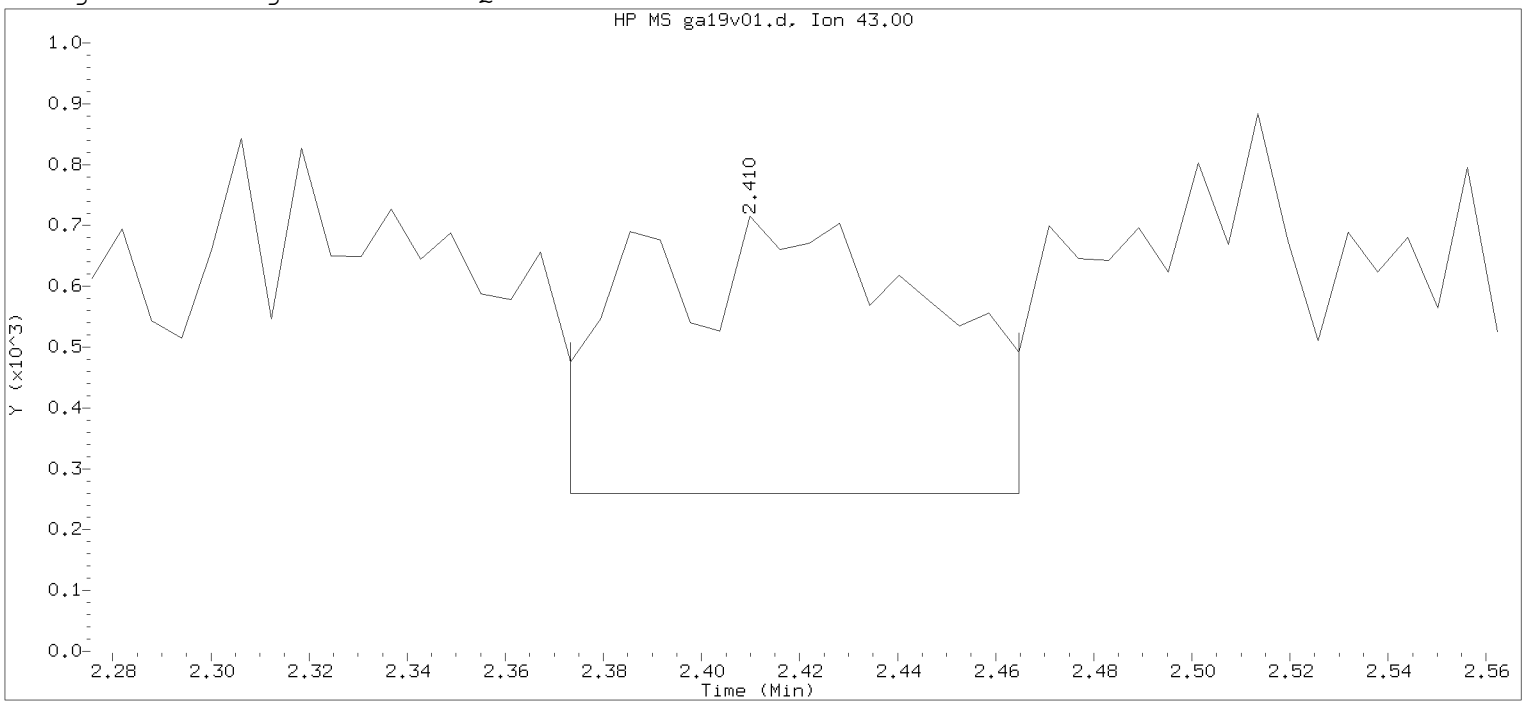
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

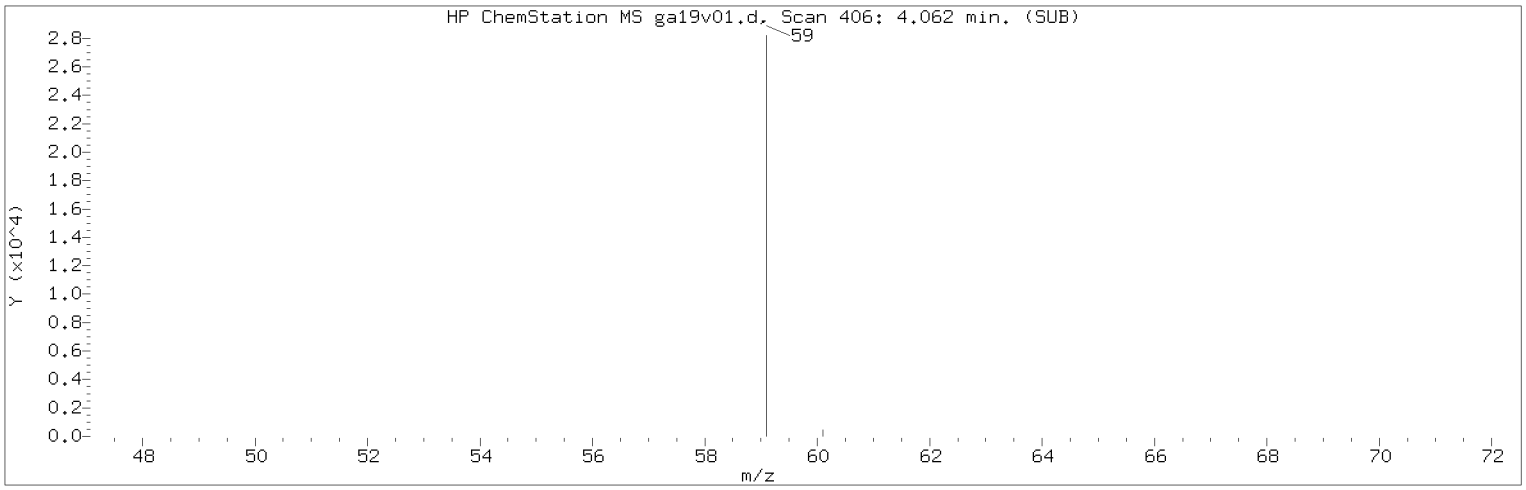
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

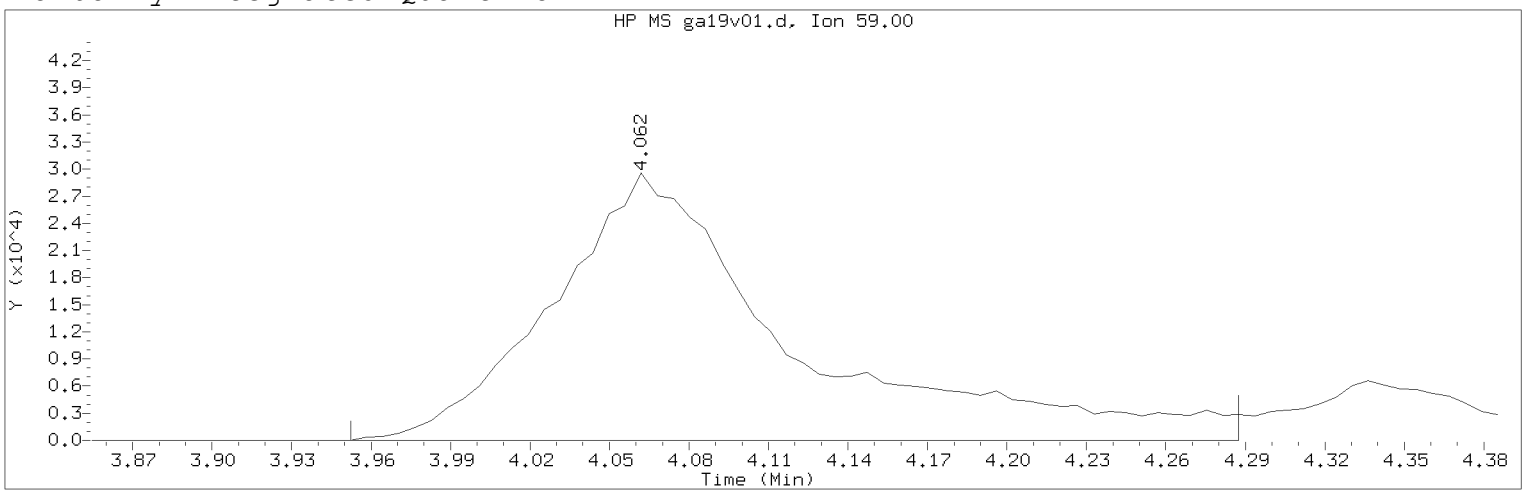
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 135
Retention Time (minutes): 2.410
Quant Ion : 43.00
Area : 1889
On-column Amount (ng) : 1.2055
Integration start scan : 128 Integration stop scan: 143
Y at integration start : 260 Y at integration end: 260

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

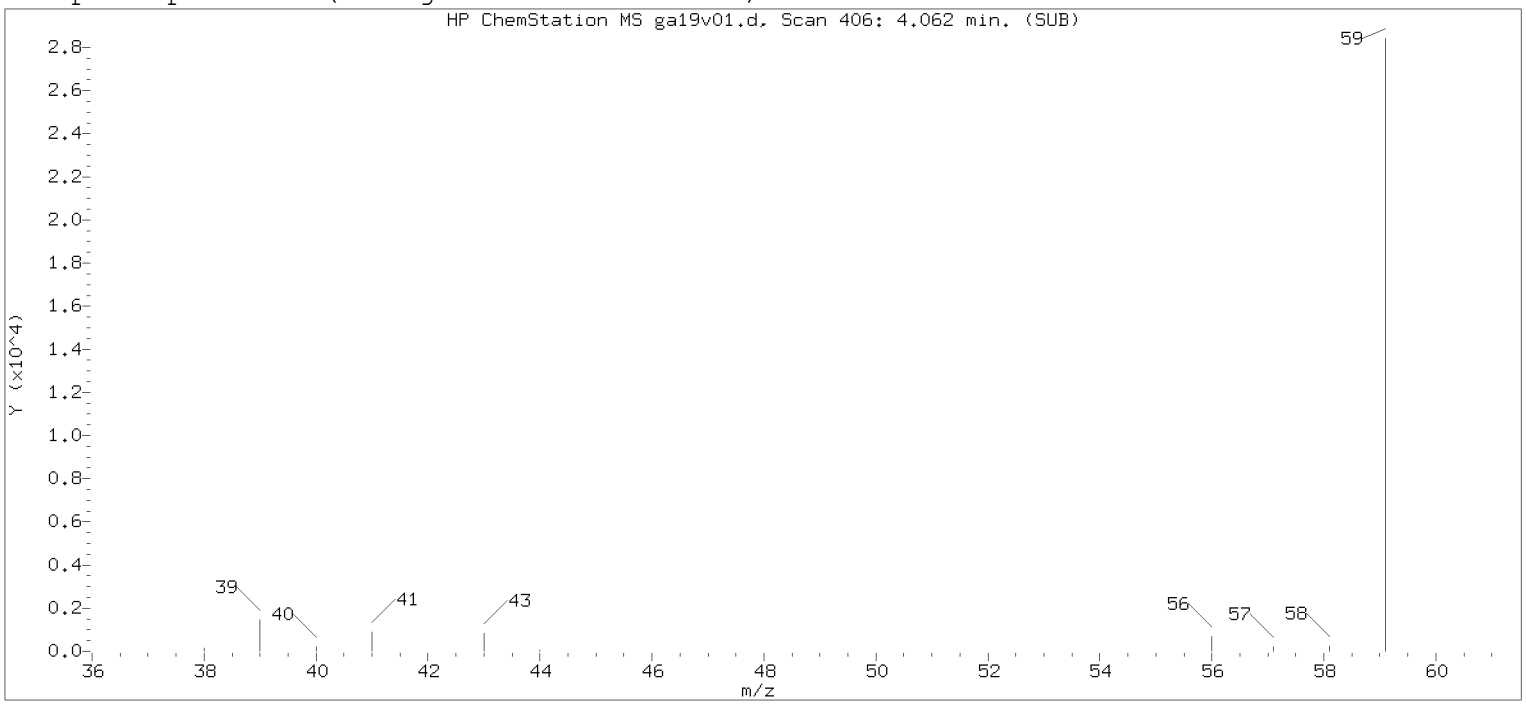
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 59.00
Area (flag) : 185169M
On-Column Amount (ng) : 49.1915
Integration start scan : 387 Integration stop scan: 442
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

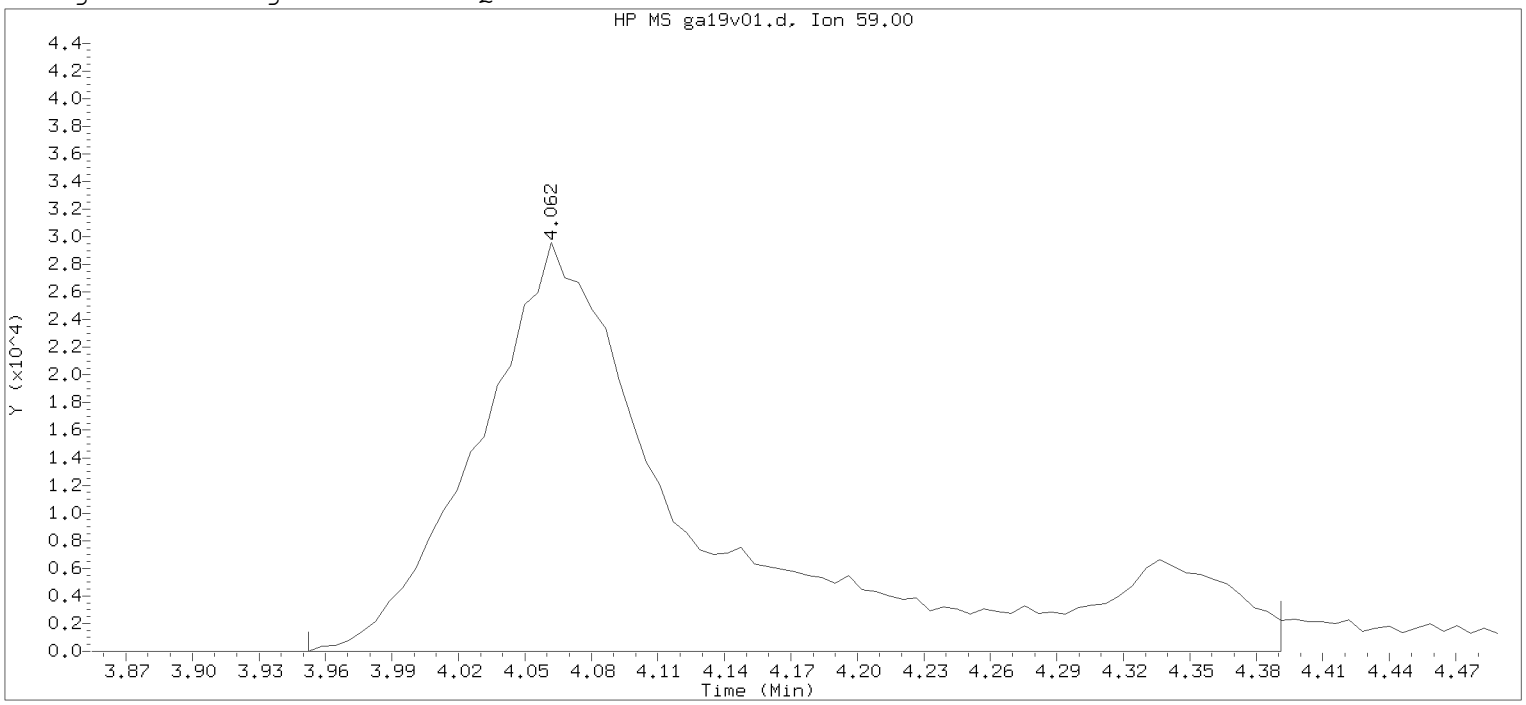
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

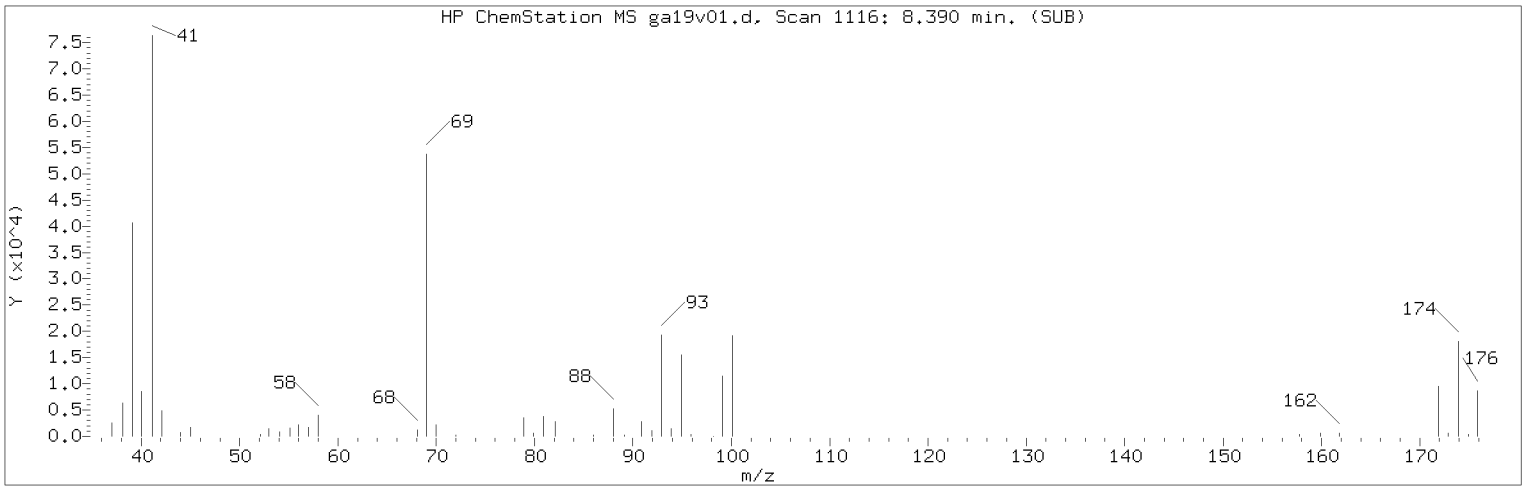
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

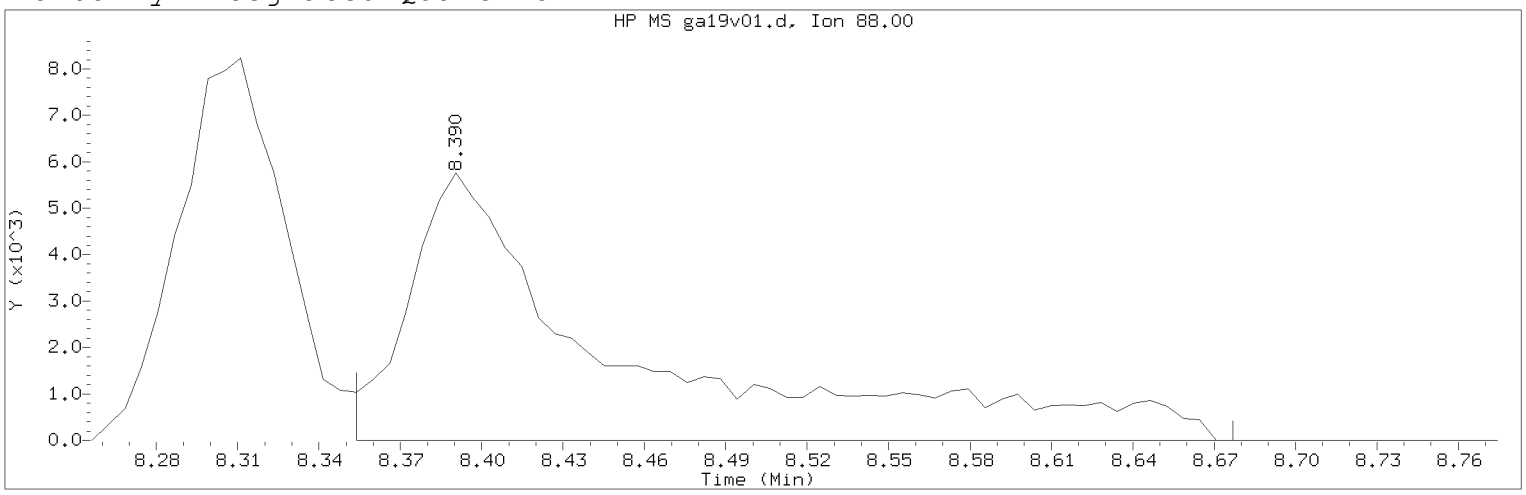
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 406		
Retention Time (minutes)	: 4.062		
Quant Ion	: 59.00		
Area	: 211798		
On-column Amount (ng)	: 53.7119		
Integration start scan	: 387	Integration stop scan:	459
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: MSKrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

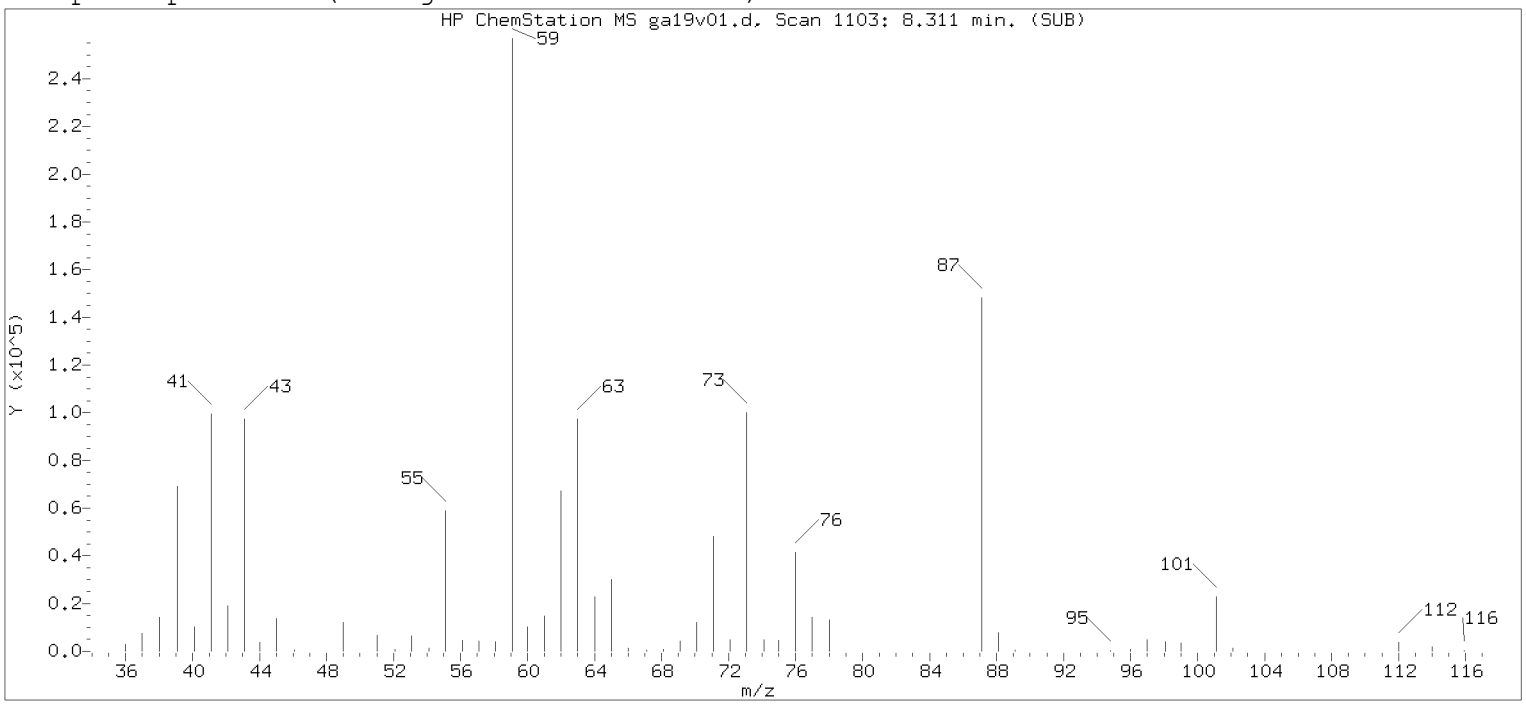
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 31438M
On-Column Amount (ng) : 152.3523
Integration start scan : 1109 Integration stop scan: 1162
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

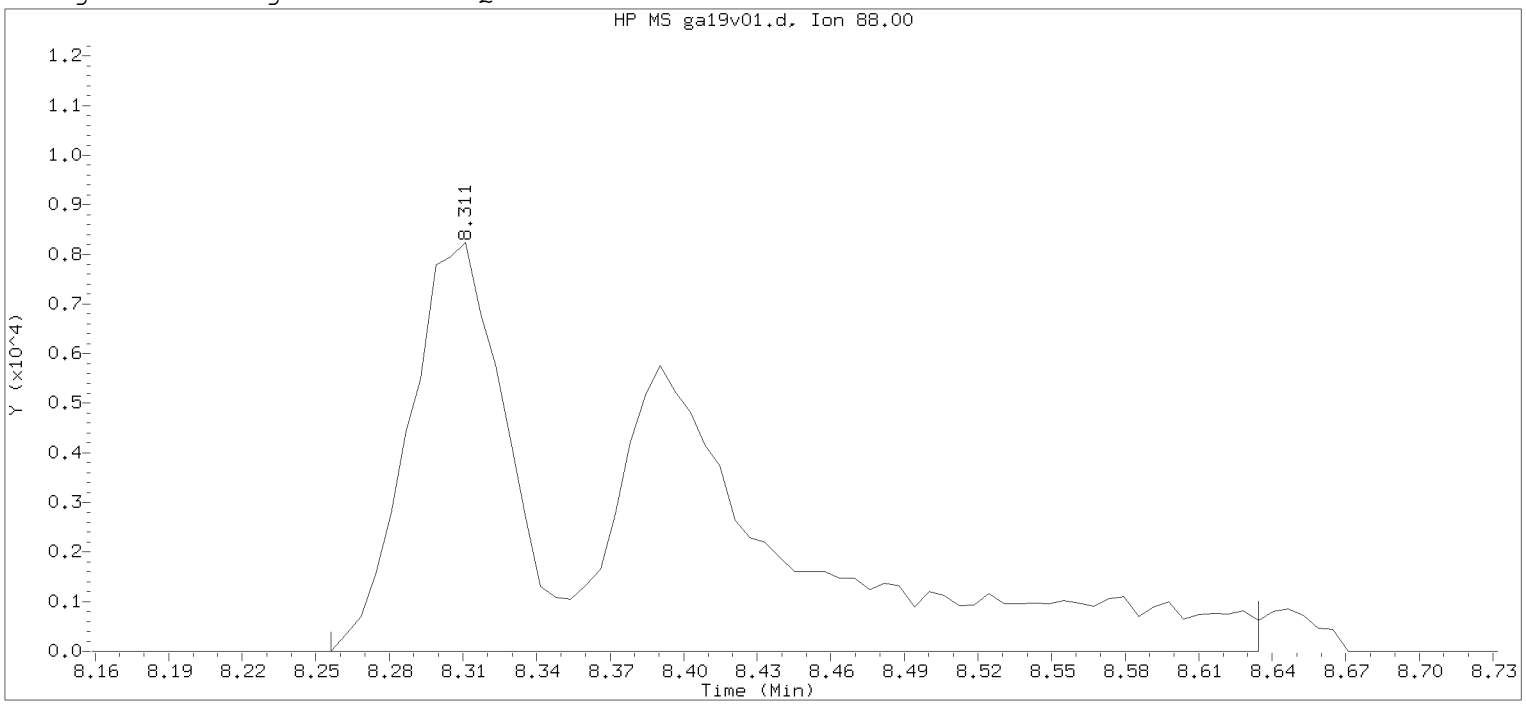
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

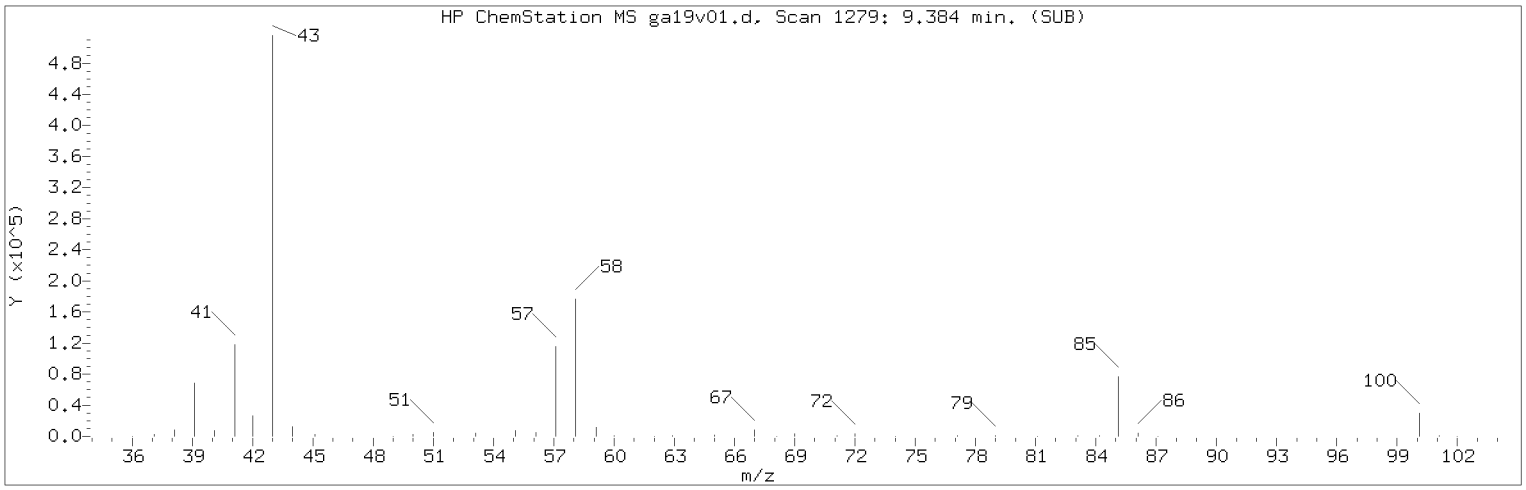
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

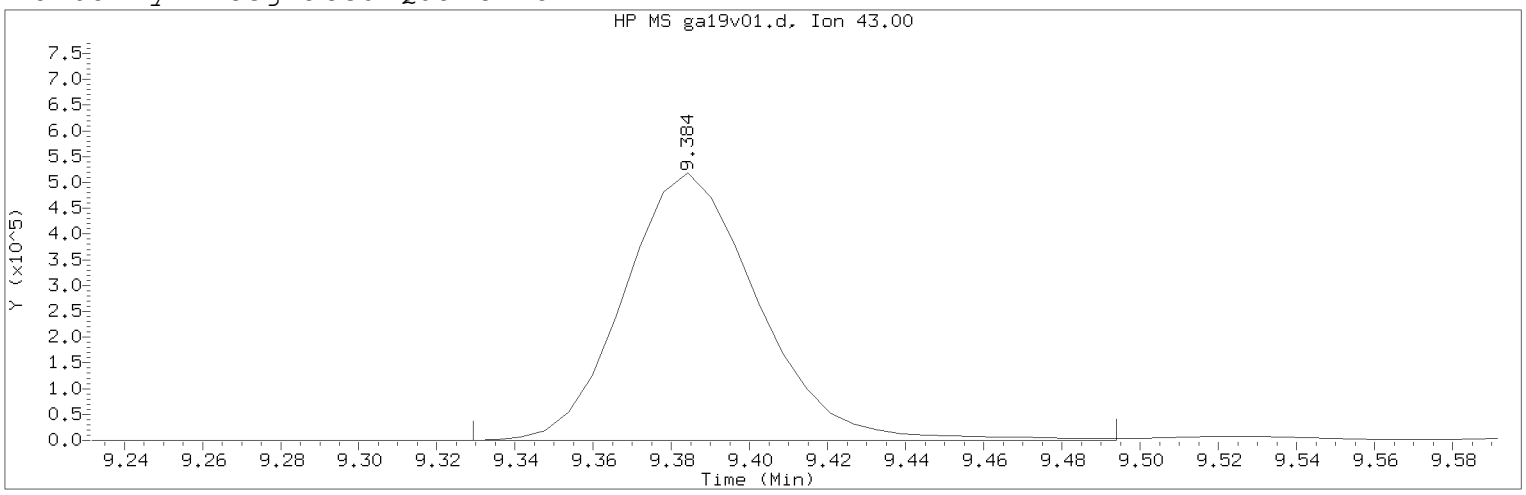
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 88.00		
Area	: 52493		
On-column Amount (ng)	: 192.3167		
Integration start scan	: 1093	Integration stop scan:	1155
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

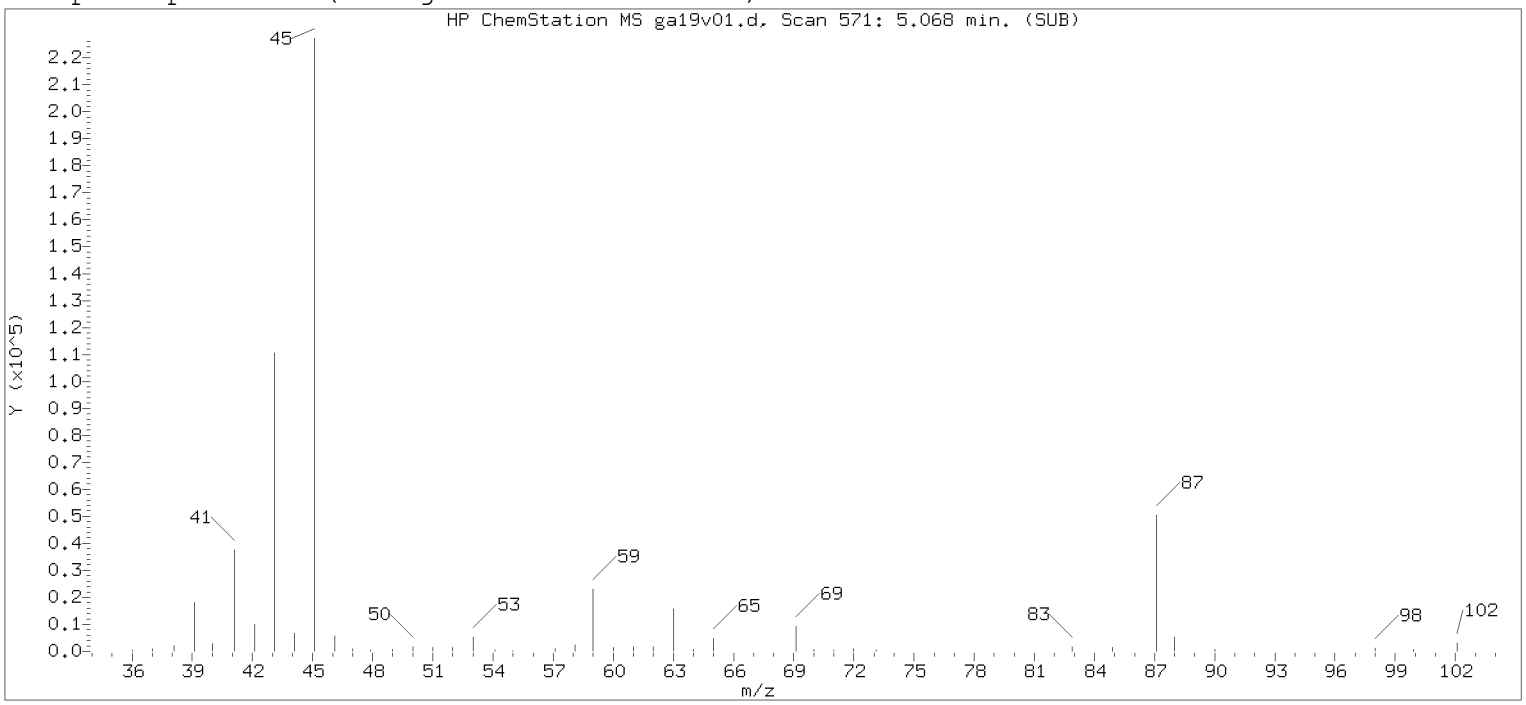
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 1233176M
On-Column Amount (ng) : 26.2733
Integration start scan : 1269 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

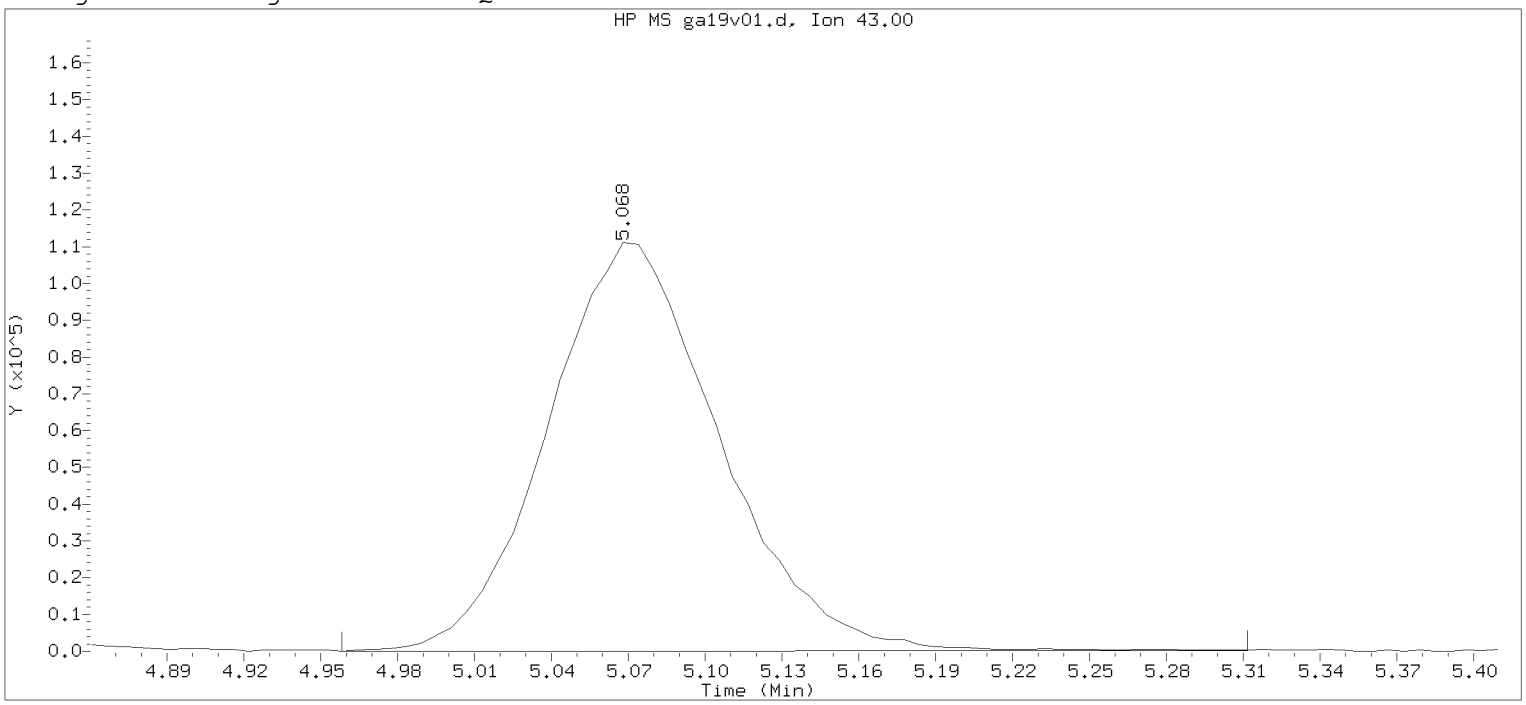
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

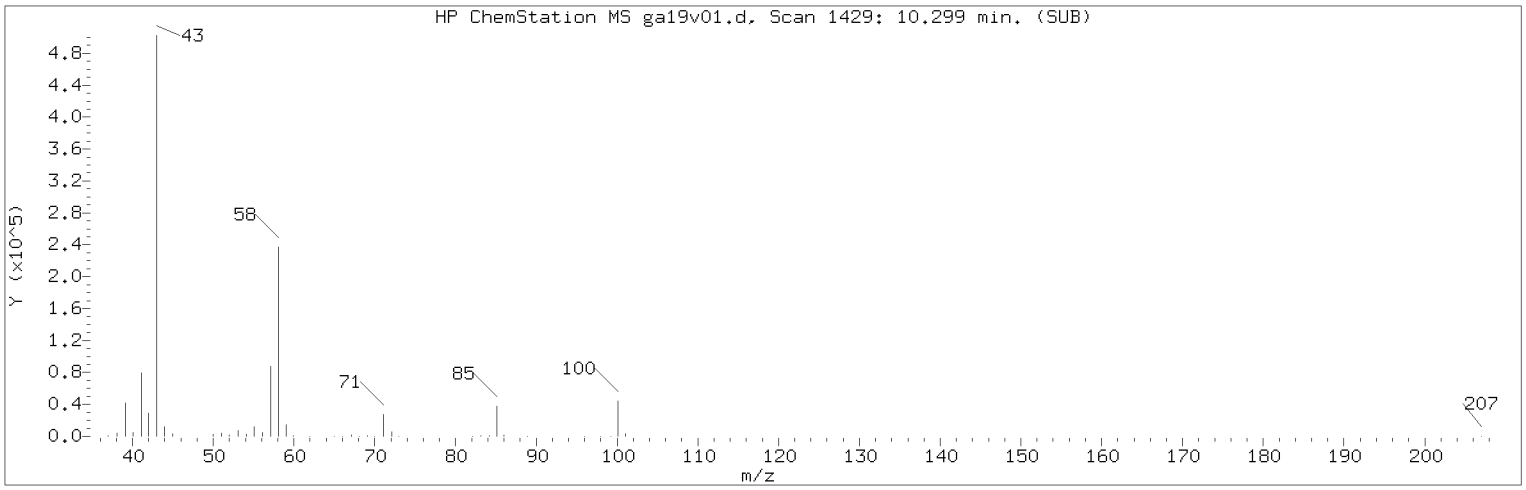
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

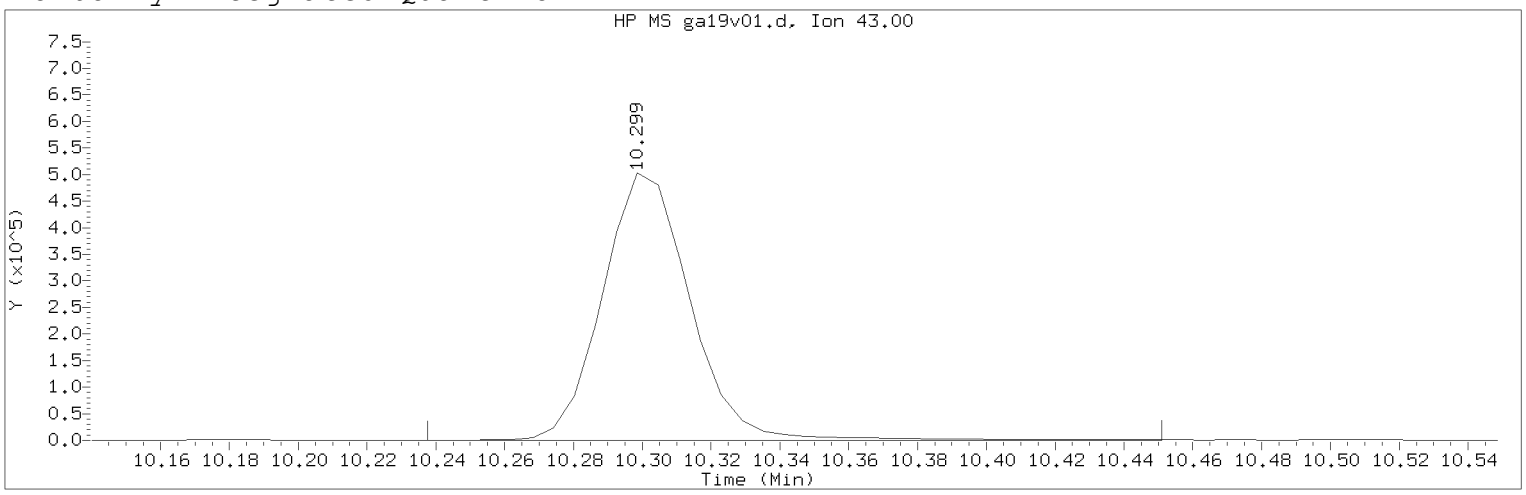
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 571
Retention Time (minutes): 5.068
Quant Ion : 43.00
Area : 518037
On-column Amount (ng) : 51.0227
Integration start scan : 552 Integration stop scan: 610
Y at integration start : 0 Y at integration end: 133

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user AF04mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

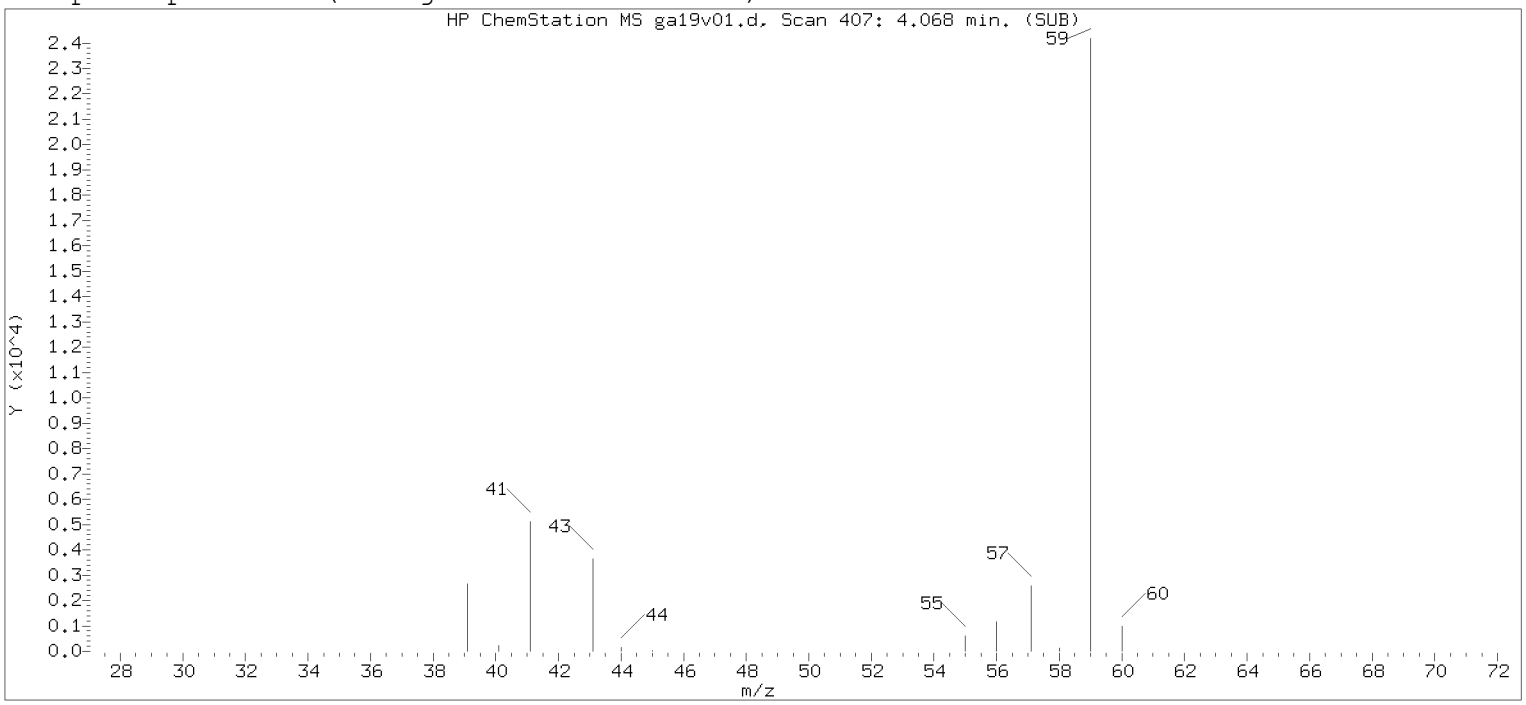
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 891400M
On-Column Amount (ng) : 27.0207
Integration start scan : 1418 Integration stop scan: 1453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

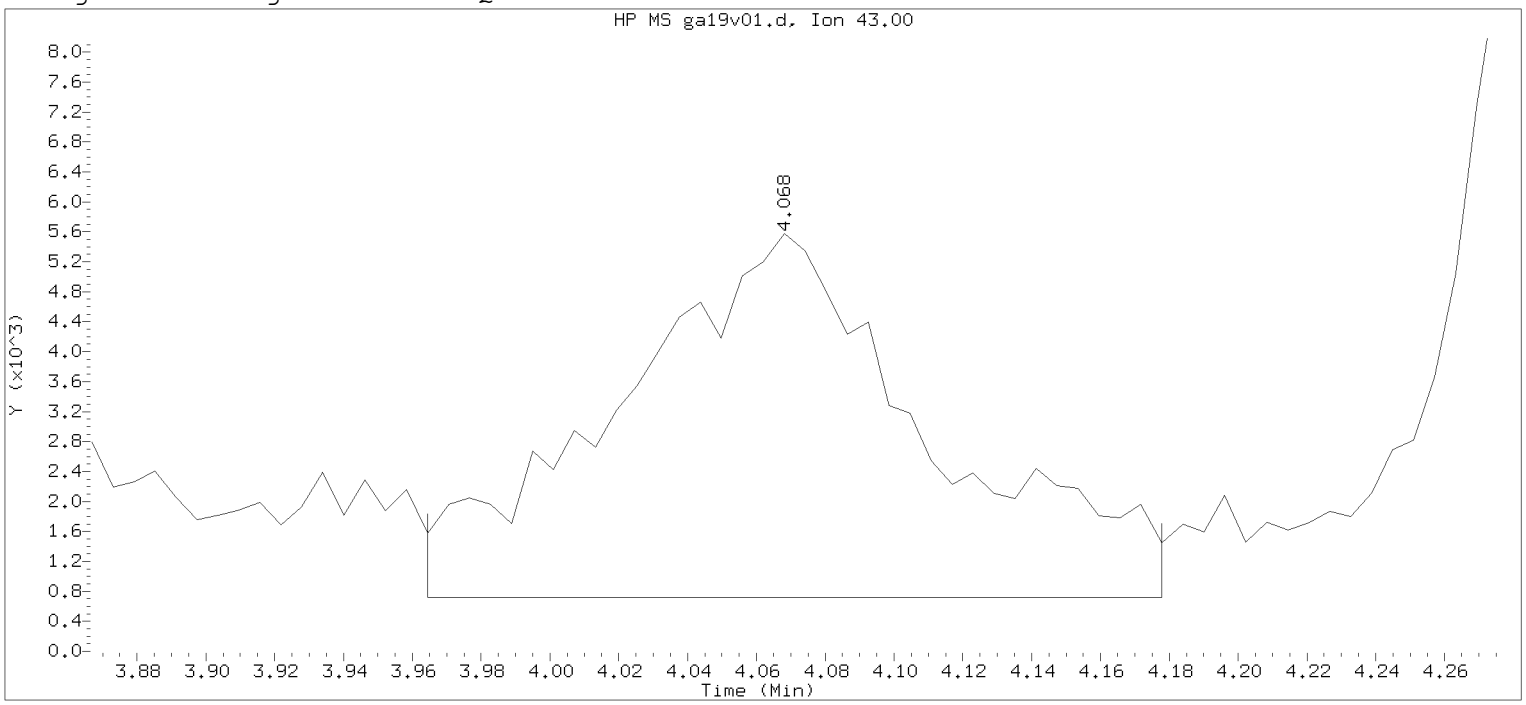
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

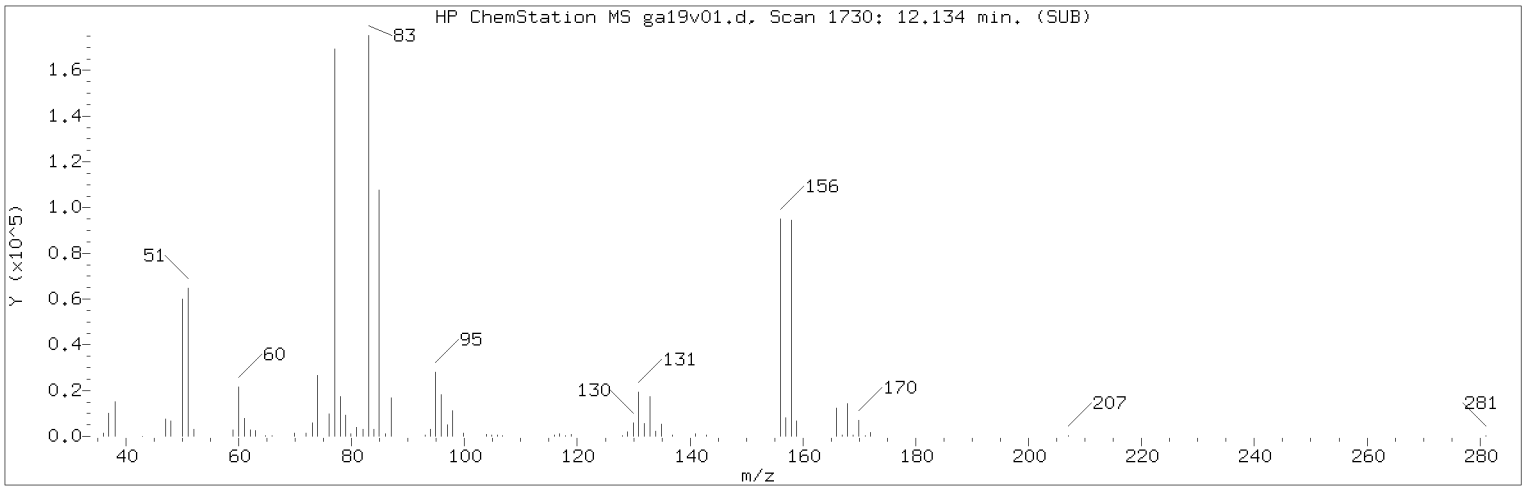
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

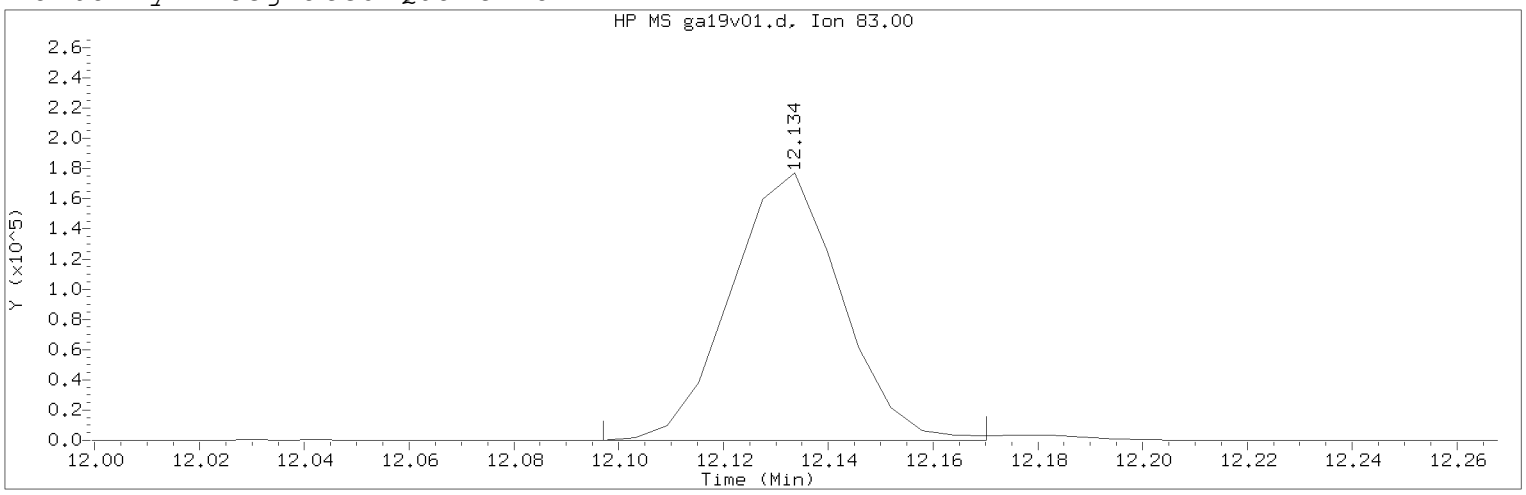
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 43.00
Area : 30590
On-column Amount (ng) : 15.4051
Integration start scan : 389 Integration stop scan: 424
Y at integration start : 719 Y at integration end: 719

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: mkrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

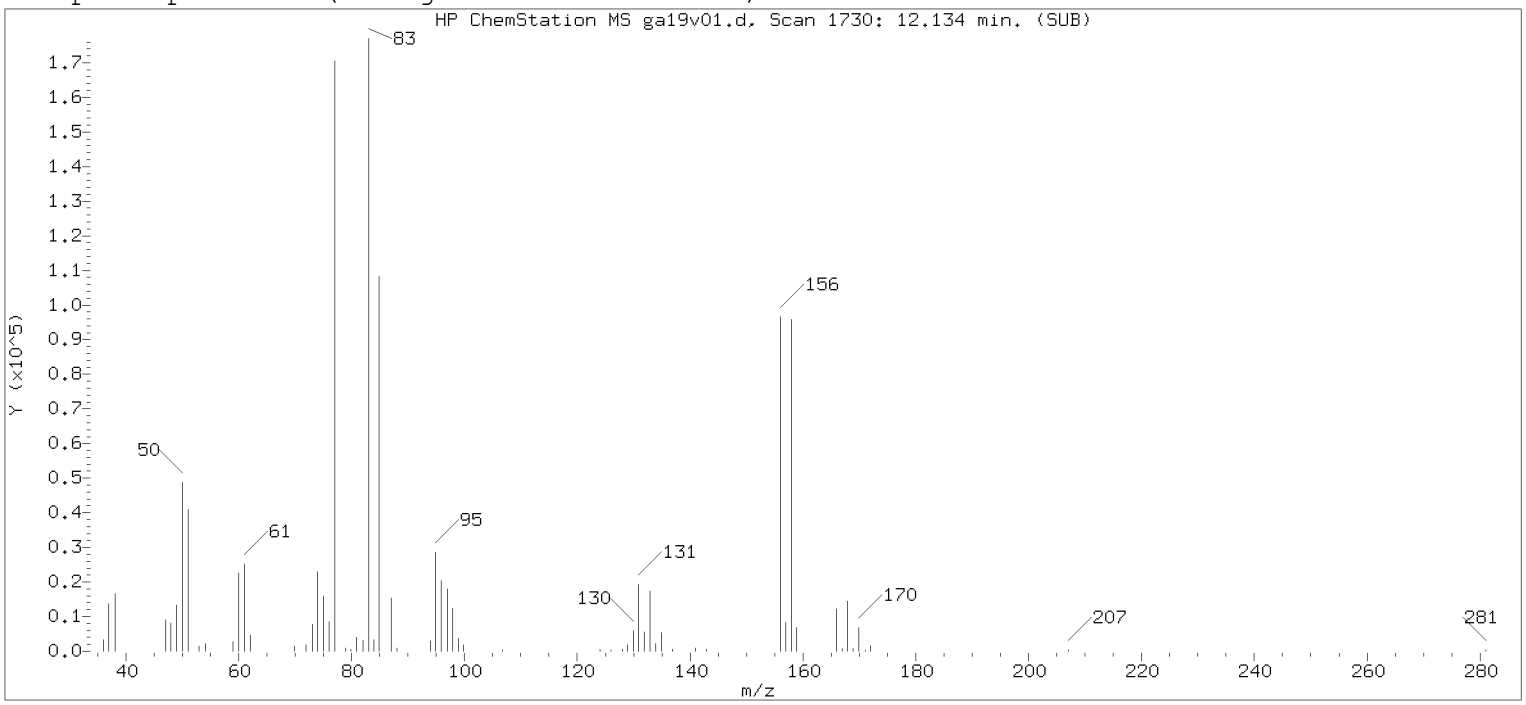
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 258665M
On-Column Amount (ng) : 4.9925
Integration start scan : 1723 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

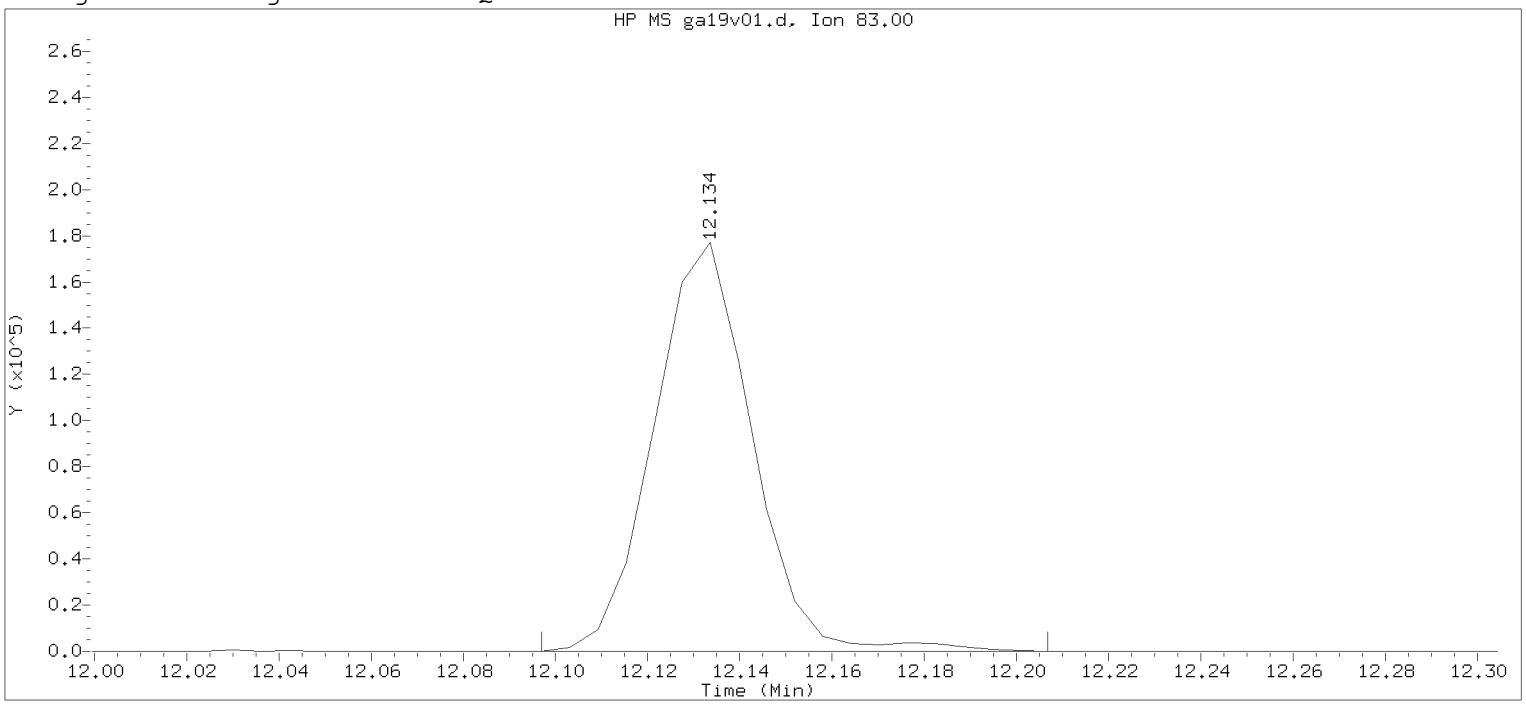
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 262370
On-column Amount (ng) : 5.0165
Integration start scan : 1723 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user name: MSK

Data File: /chem2/HP16334.i/18apr19b.b/ga19t05.d

Page 1

Date : 19-APR-2018 20:27

Client ID: BFB/feb13-18

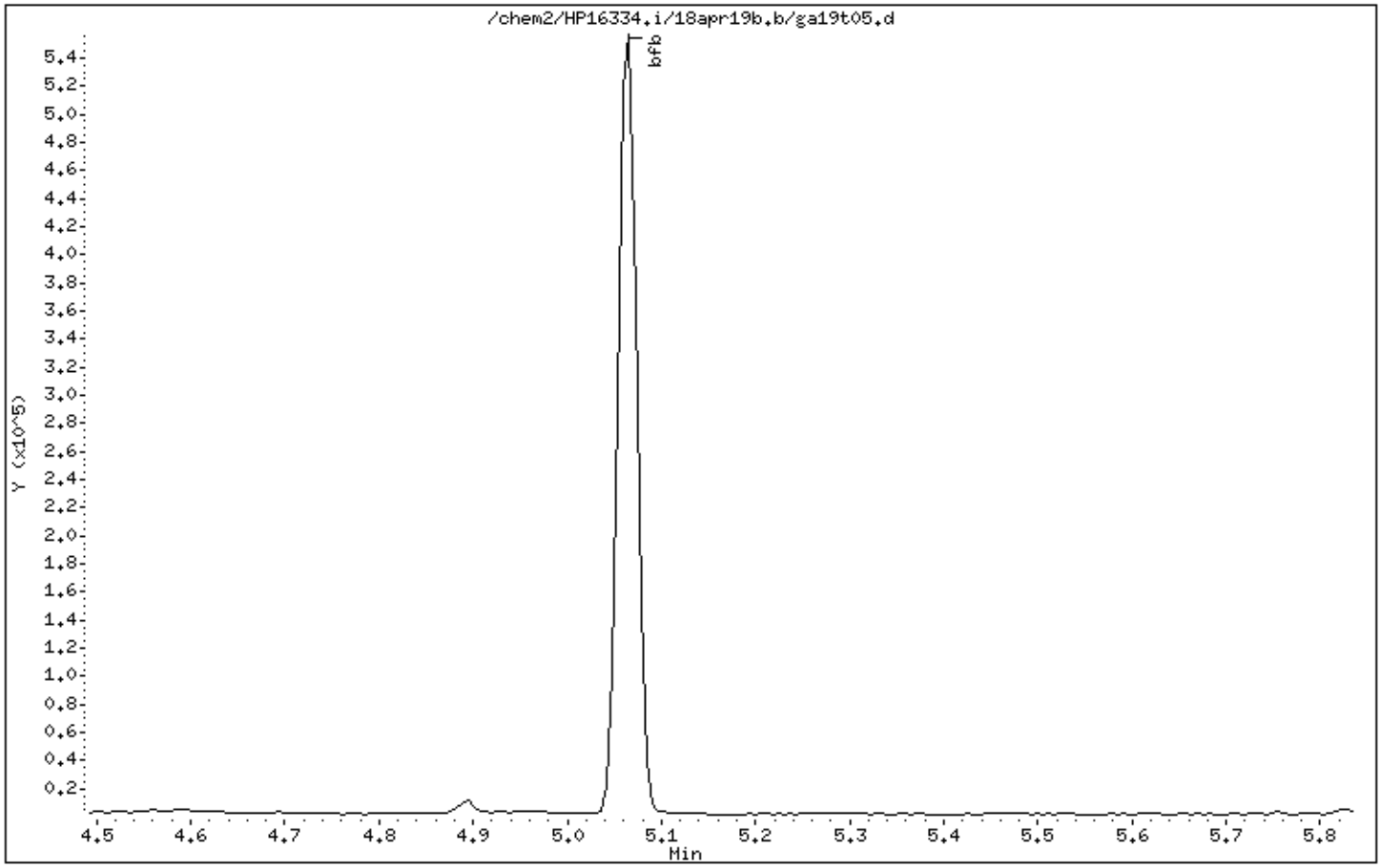
Instrument: HP16334.i

Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

Operator: MSK07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 04/19/2018 at 22:27.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19b.b/ga19t05.d

Date : 19-APR-2018 20:27

Client ID: BFB/feb13-18

Instrument: HP16334.i

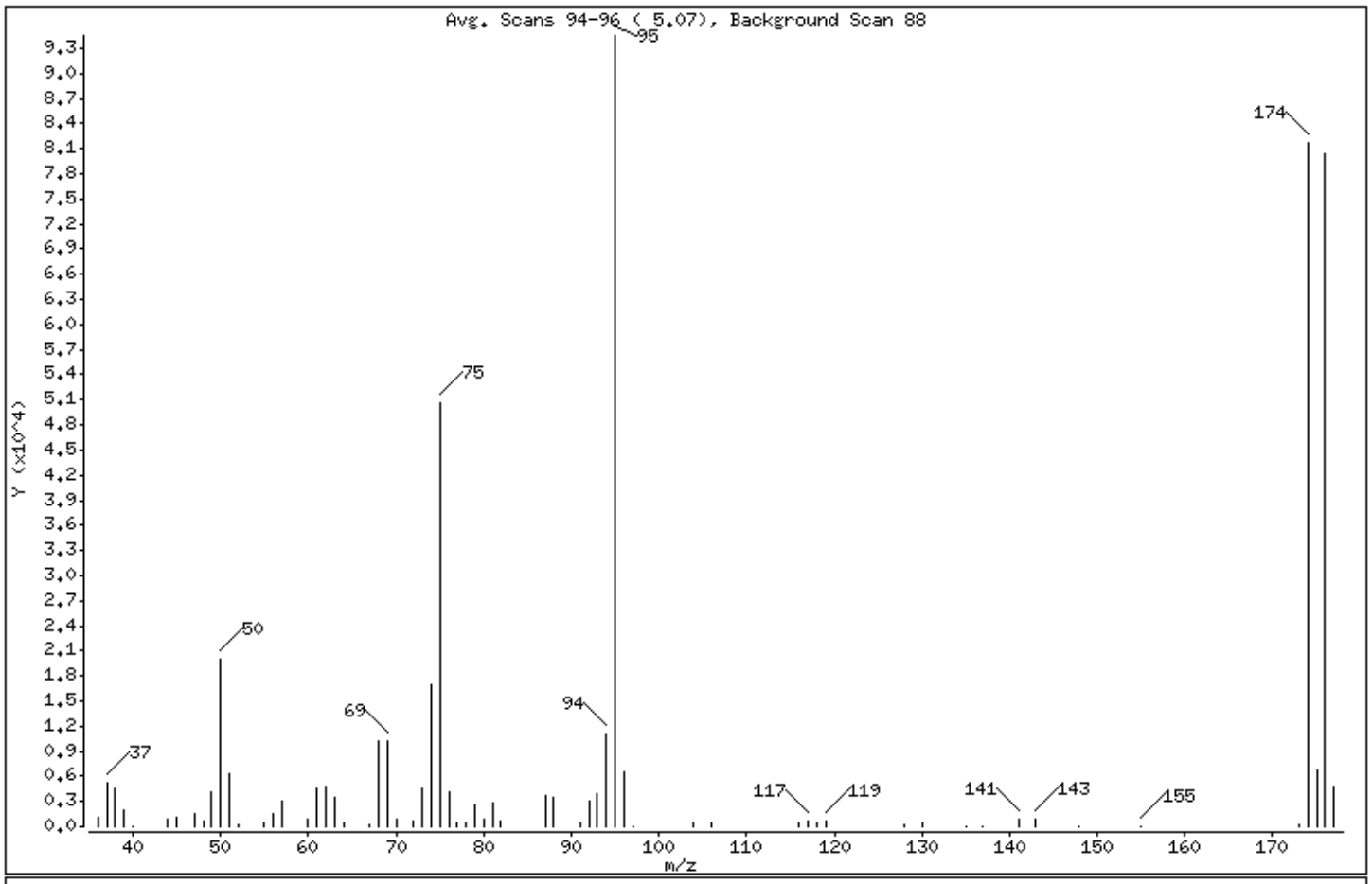
Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

Operator: MSK07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.13
75	30.00 - 60.00% of mass 95	53.48
96	5.00 - 9.00% of mass 95	6.93
173	Less than 2.00% of mass 174	0.33 (0.38)
174	50.00 - 100.00% of mass 95	86.32
175	5.00 - 9.00% of mass 174	7.11 (8.23)
176	95.00 - 101.00% of mass 174	85.03 (98.51)
177	5.00 - 9.00% of mass 176	5.15 (6.05)

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:27.
Target 3.5 esignature user ID: msk07970

Date : 19-APR-2018 20:27

Client ID: BFB/feb13-18 Instrument: HP16334.i

Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

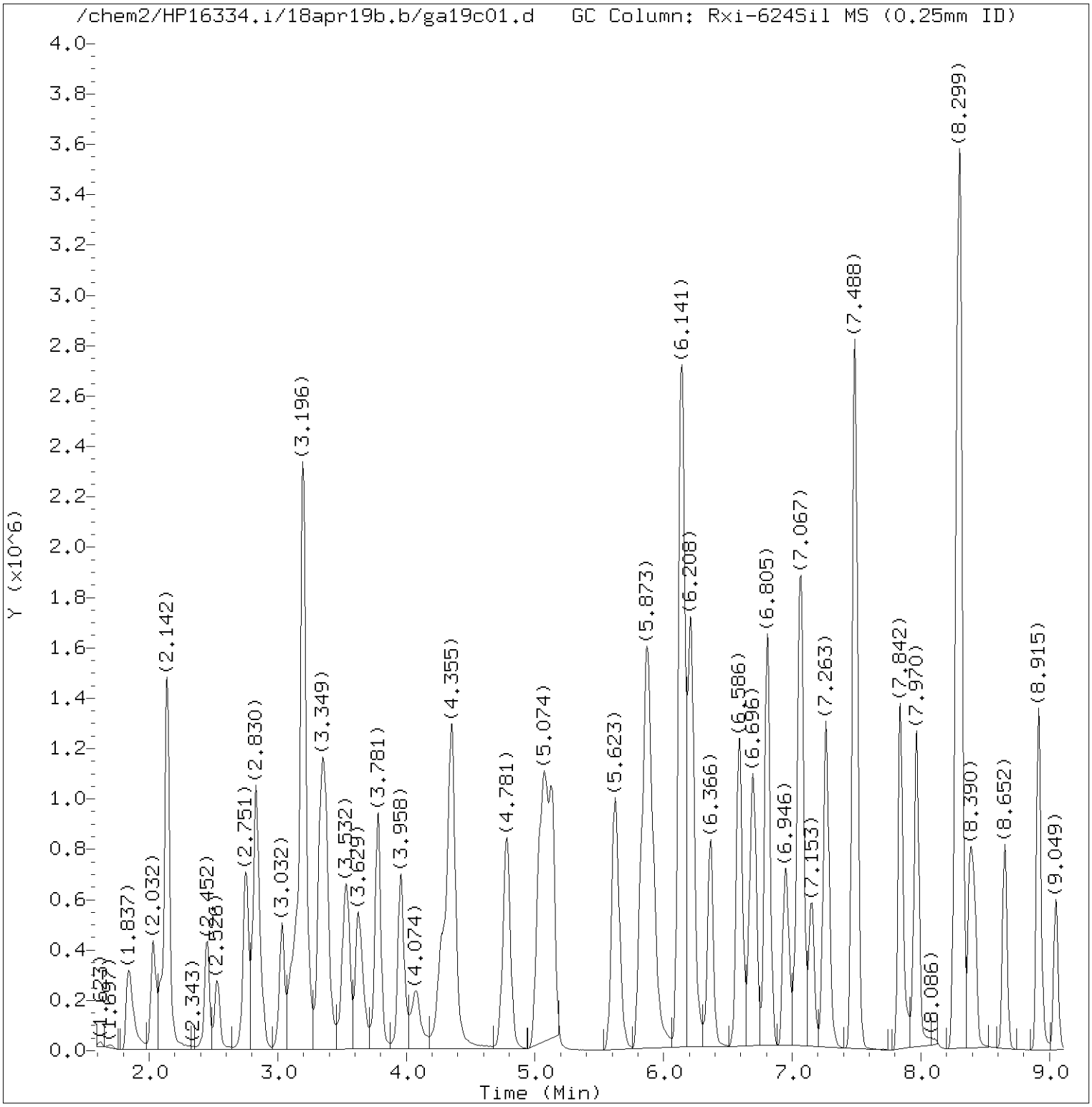
Operator: MSK07970

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ga19t05.d
Spectrum: Avg. Scans 94-96 (5.07), Background Scan 88
Location of Maximum: 95.00
Number of points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1150	61.00	4635	81.00	2737	128.00	231
37.00	5291	62.00	4697	82.00	577	130.00	374
38.00	4635	63.00	3525	87.00	3774	135.00	92
39.00	1865	64.00	365	88.00	3411	137.00	88
40.00	75	67.00	236	91.00	330	141.00	858
44.00	796	68.00	10107	92.00	2953	143.00	936
45.00	1014	69.00	10254	93.00	3838	148.00	91
47.00	1469	70.00	887	94.00	11049	155.00	106
48.00	667	72.00	653	95.00	94520	173.00	314
49.00	4200	73.00	4560	96.00	6553	174.00	81592
50.00	19968	74.00	16896	97.00	85	175.00	6718
51.00	6306	75.00	50552	104.00	498	176.00	80376
52.00	219	76.00	4168	106.00	390	177.00	4865
55.00	333	77.00	470	116.00	428		
56.00	1467	78.00	368	117.00	712		
57.00	2977	79.00	2645	118.00	330		
60.00	936	80.00	787	119.00	562		

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:27.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

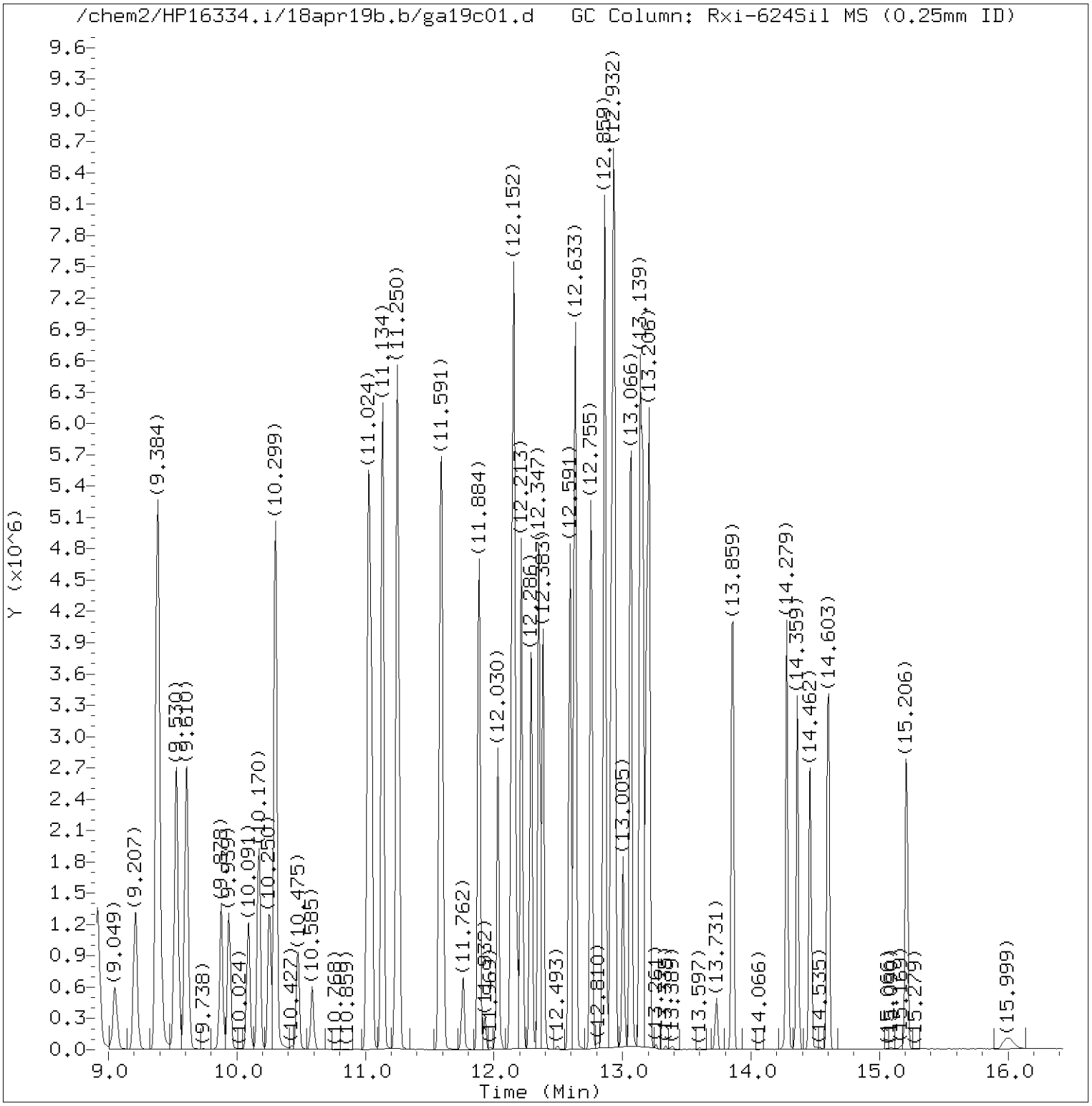
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	749186	9.546
2) Chloromethane	(2)	2.032	50	736692	9.323
5) Vinyl Chloride	(2)	2.142	62	649319	9.575
6) 1,3-Butadiene	(2)	2.142	39	1004013	6.959
7) Bromomethane	(2)	2.446	94	423924	9.350
8) Chloroethane	(2)	2.532	64	365388	9.459
9) Dichlorofluoromethane	(2)	2.751	67	869610	9.334
10) Trichlorofluoromethane	(2)	2.818	101	864244	9.772
11) Ethyl ether	(2)	3.032	59	426958	9.685
12) Freon 123a	(2)	3.129	67	593309	9.475
13) Acrolein	(1)	3.196	56	3672169	512.550
15) 1,1-Dichloroethene	(2)	3.330	96	395719	9.138
14) Acetone	(1)	3.349	43	1057532M	91.355
16) Freon 113	(2)	3.373	101	474813	9.726
17) Methyl Iodide	(2)	3.519	142	793971	9.441
18) Carbon Disulfide	(2)	3.629	76	1520289	8.849
21) Methyl Acetate	(1)	3.751	43	306689M	9.399
22) Allyl Chloride	(2)	3.781	41	967991	9.634
23) Methylene Chloride	(2)	3.958	84	486625	8.310
26)*t-Butyl Alcohol-d10	(1)	3.958	65	207378M	50.000
28) t-Butyl Alcohol	(1)	4.074	59	757364	193.000
29) Acrylonitrile	(1)	4.275	53	660521	51.288
30) Methyl Tertiary Butyl Ether	(2)	4.336	73	1469082	9.741
31) trans-1,2-Dichloroethene	(2)	4.361	96	472086	9.381
32) n-Hexane	(2)	4.781	57	820821	9.658
33) 1,1-Dichloroethane	(2)	5.025	63	983509	9.581
34) di-Isopropyl Ether	(2)	5.074	45	2048778	9.747
35) 2-Chloro-1,3-Butadiene	(2)	5.135	53	909840	9.682
37) Ethyl t-butyl ether	(2)	5.623	59	1811678	9.817
38) 2-Butanone	(1)	5.824	43	2039886	102.417
39) cis-1,2-Dichloroethene	(2)	5.873	96	548361	9.715
41) 2,2-Dichloropropane	(2)	5.885	77	834960	9.917
42) Propionitrile	(1)	5.921	54	999568	202.969
40) 1,2-Dichloroethene (Total)	(2)		96	1020447	19.096
45) Methacrylonitrile	(1)	6.141	67	1628050	104.314
47) Bromochloromethane	(2)	6.214	128	262512	10.128
48) Tetrahydrofuran	(1)	6.214	71	487598	102.844
49) Chloroform	(2)	6.366	83	952084	9.701

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	526098	9.999
50)$Dibromofluoromethane	(2)	6.586	111	540497	9.990
51) 1,1,1-Trichloroethane	(2)	6.592	97	808828	9.757
52) Cyclohexane	(2)	6.696	56	979532	9.851
52) Cyclohexane	(2)	6.696	84	748514	9.561
52) Cyclohexane	(2)	6.696	69	280619	9.695
55) 1,1-Dichloropropene	(2)	6.805	75	751841	9.727
54) Carbon Tetrachloride	(2)	6.811	117	677539	10.062
56) Isobutyl Alcohol	(1)	6.946	41	778862	499.399
57)$1,2-Dichloroethane-d4	(2)	7.049	102	109897	9.857
57)$1,2-Dichloroethane-d4	(2)	7.049	65	635472	10.025
57)$1,2-Dichloroethane-d4	(2)	7.043	104	70232	10.110
58) Benzene	(2)	7.067	78	2072254	9.711
59) 1,2-Dichloroethane	(2)	7.153	62	715105	9.467
60) t-Amyl methyl ether	(2)	7.263	73	1569276	10.020
63)*Fluorobenzene	(2)	7.482	96	2092264	10.000
62) n-Heptane	(2)	7.494	43	1010508	9.882
65) n-Butanol	(1)	7.842	56	1301505	1054.364
67) Trichloroethene	(2)	7.970	95	552608	9.809
69) Methylcyclohexane	(2)	8.275	83	1002963	10.483
70) 1,2-Dichloropropane	(2)	8.305	63	591047	9.979
71) Methyl Methacrylate	(1)	8.384	69	313438	10.544
72) 1,4-Dioxane	(1)	8.396	88	116063M	539.538
73) Dibromomethane	(2)	8.415	93	277138	9.805
74) Bromodichloromethane	(2)	8.652	83	718629	10.363
76) 2-Nitropropane	(1)	8.915	41	1148329	112.780
80) cis-1,3-Dichloropropene	(2)	9.213	75	898963	10.491
81) 4-Methyl-2-Pentanone	(1)	9.384	43	5130279M	104.849
82)$Toluene-d8	(3)	9.530	98	2146451	10.018
82)$Toluene-d8	(3)	9.530	100	1364044	10.005
83) Toluene	(3)	9.610	92	1330084	9.799
84) trans-1,3-Dichloropropene	(3)	9.878	75	773368	10.505
86) Ethyl Methacrylate	(3)	9.939	69	681733	10.271
88) 1,1,2-Trichloroethane	(3)	10.091	97	402850	9.841
85) 1,3-Dichloropropene (total)	(3)		75	1672331	20.996
89) Tetrachloroethene	(3)	10.170	166	616659	9.796
90) 1,3-Dichloropropane	(3)	10.256	76	738754	9.906
91) 2-Hexanone	(1)	10.299	43	3606057M	104.855

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	488388	10.827
95) 1,2-Dibromoethane	(3)	10.585	107	395054	10.102
97)*Chlorobenzene-d5	(3)	11.018	117	1597602	10.000
98) Chlorobenzene	(3)	11.042	112	1508518	9.703
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	541092	10.423
100) Ethylbenzene	(3)	11.134	91	2649339	9.823
101) m+p-Xylene	(3)	11.250	106	2033568	19.803
104) o-Xylene	(3)	11.579	106	1031825	10.023
106) Styrene	(3)	11.597	104	1726621	10.219
105) Xylene (Total)	(3)		106	3065393	29.826
107) Bromoform	(3)	11.762	173	296627	11.428
108) Isopropylbenzene	(3)	11.884	105	2664801	9.938
111)$4-Bromofluorobenzene	(3)	12.030	95	824082	10.049
111)$4-Bromofluorobenzene	(3)	12.030	174	710694	10.141
113) 1,1,2,2-Tetrachloroethane	(4)	12.127	83	540500	10.061
114) Bromobenzene	(4)	12.146	156	694816	9.849
116) 1,2,3-Trichloropropane	(4)	12.176	110	149533	9.957
117) n-Propylbenzene	(4)	12.213	91	3186798	9.701
119) 2-Chlorotoluene	(4)	12.292	126	636506	9.709
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	2318610	9.857
122) 4-Chlorotoluene	(4)	12.383	126	664257	9.719
125) tert-Butylbenzene	(4)	12.591	134	482751	9.832
126) Pentachloroethane	(4)	12.627	167	428556	11.241
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	2388653	9.957
128) sec-Butylbenzene	(4)	12.755	105	2967447	9.932
131) 1,3-Dichlorobenzene	(4)	12.853	146	1381022	9.850
132) p-Isopropyltoluene	(4)	12.865	119	2586732	9.919
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	914062	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	1388336	9.715
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	1075873	9.974
136) Benzyl Chloride	(4)	13.005	126	218191	11.181
138) n-Butylbenzene	(4)	13.158	92	1383343	9.859
139) 1,2-Dichlorobenzene	(4)	13.188	146	1314645	9.938
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	83246	11.330
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	1150291	9.810
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	1069643	9.833
146) Hexachlorobutadiene	(4)	14.359	225	556926	9.714
147) Naphthalene	(4)	14.462	128	1819504	10.007

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$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	917272	9.863

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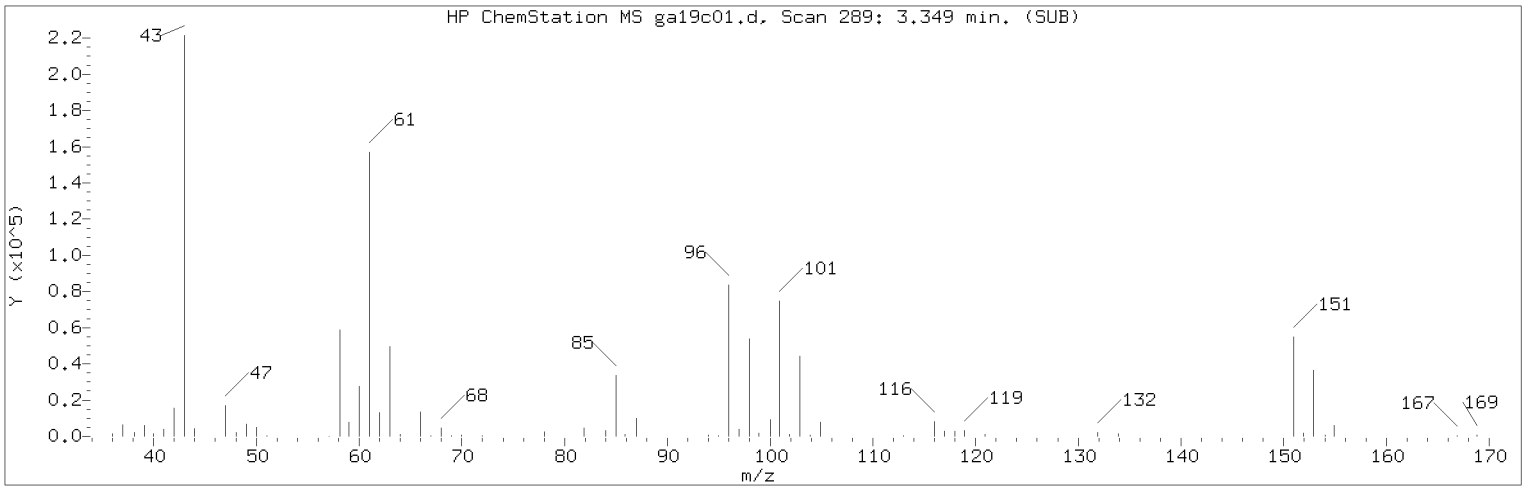
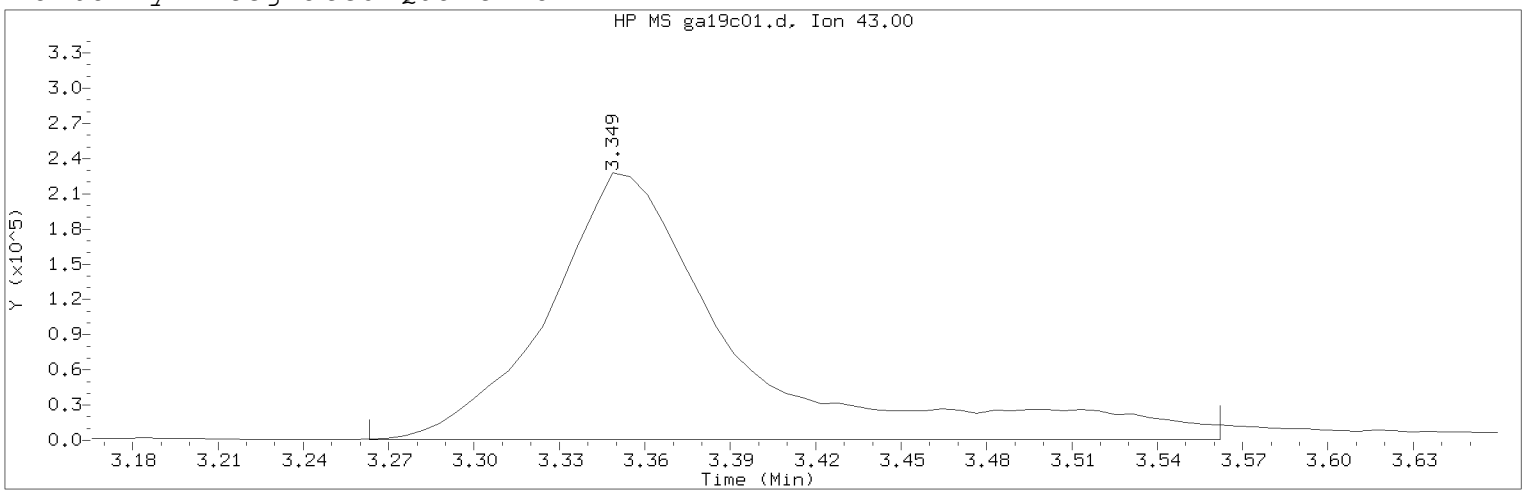
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

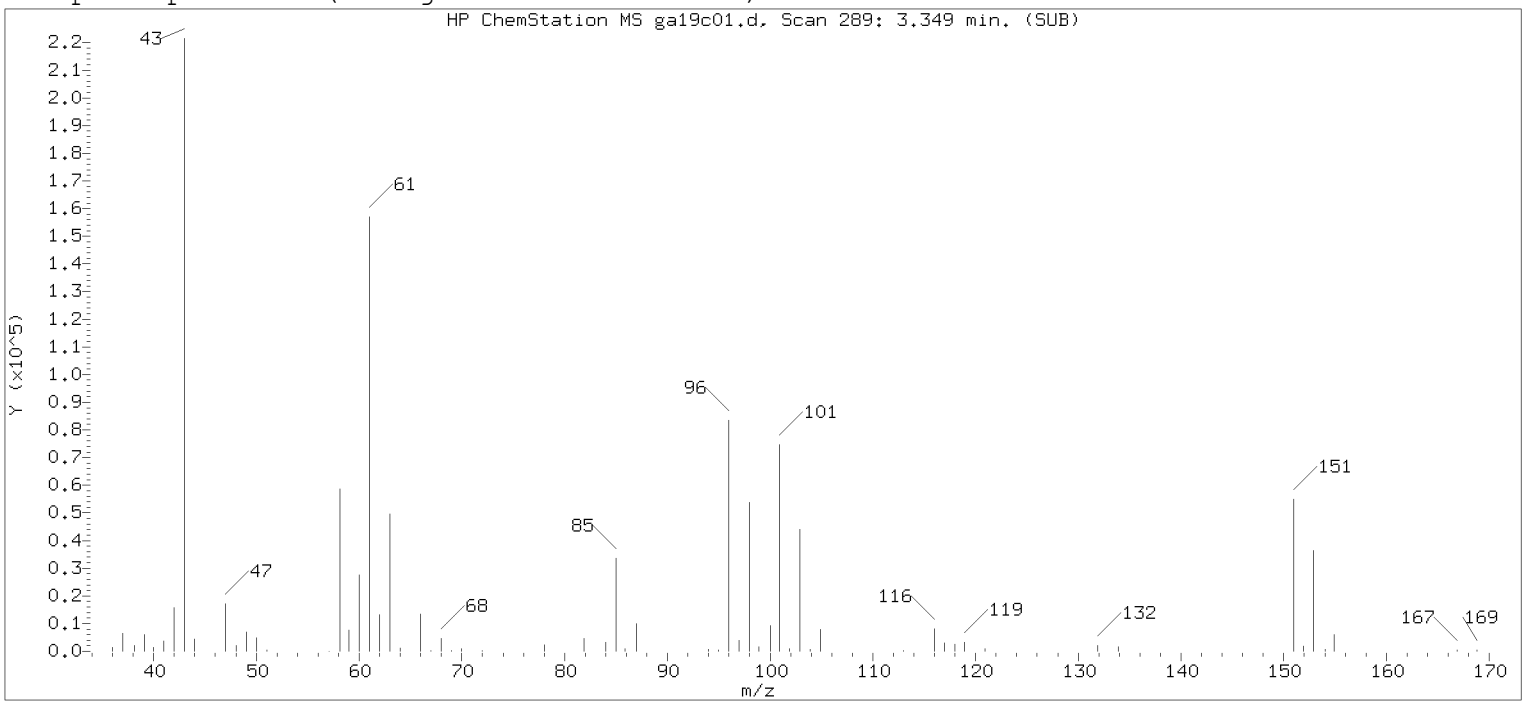
Compound Number : 14
Compound Name : Acetone
Scan Number : 289
Retention Time (minutes): 3.349
Quant Ion : 43.00
Area (flag) : 1057532M
On-Column Amount (ng) : 91.3548
Integration start scan : 274 Integration stop scan: 323
Y at integration start : 407 Y at integration end: 407

Reason for manual integration: improper integration

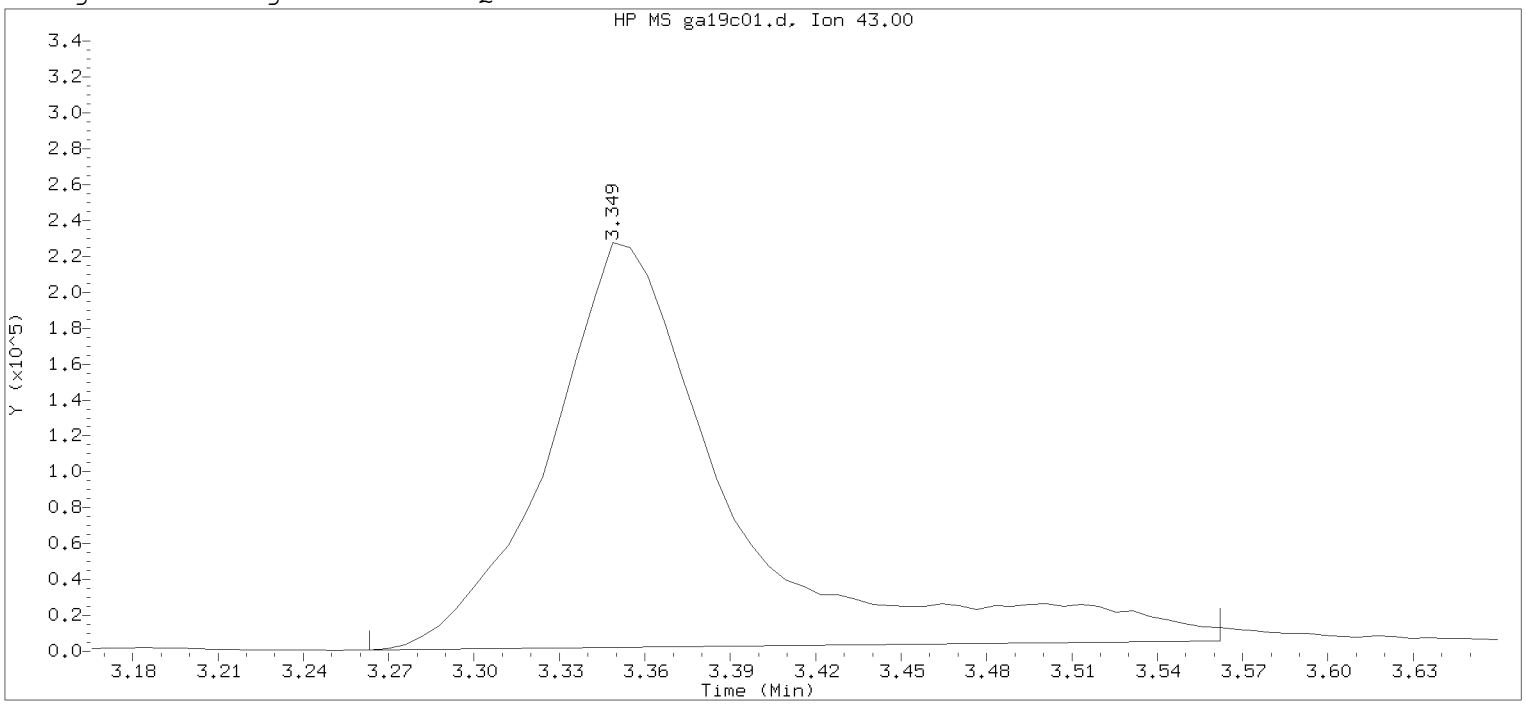
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

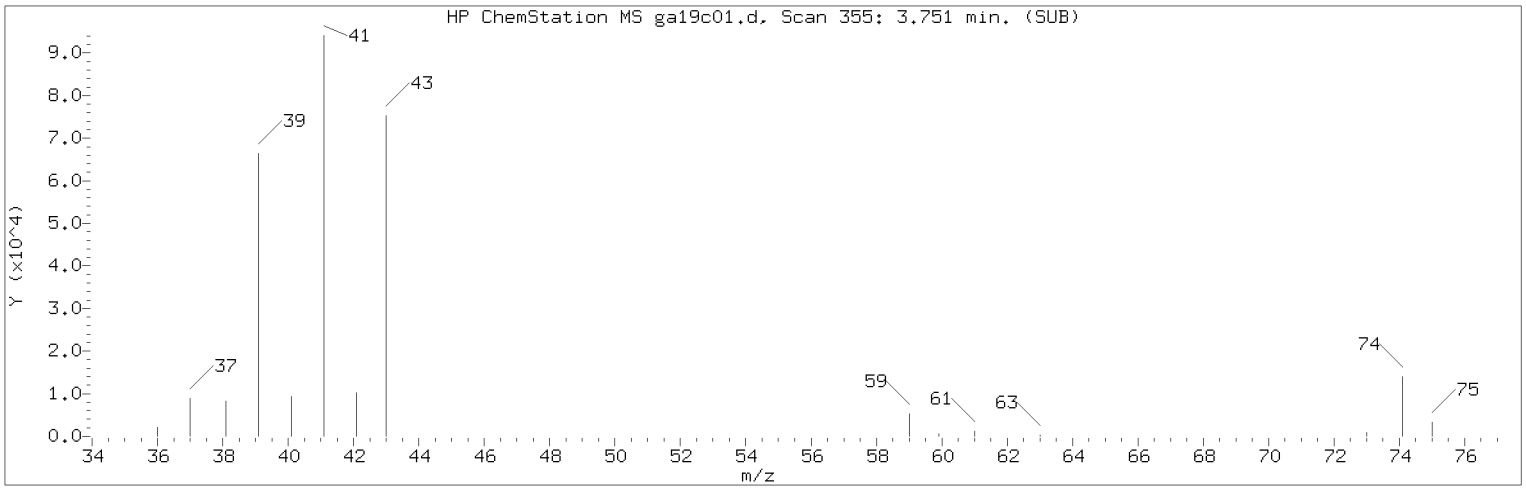
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

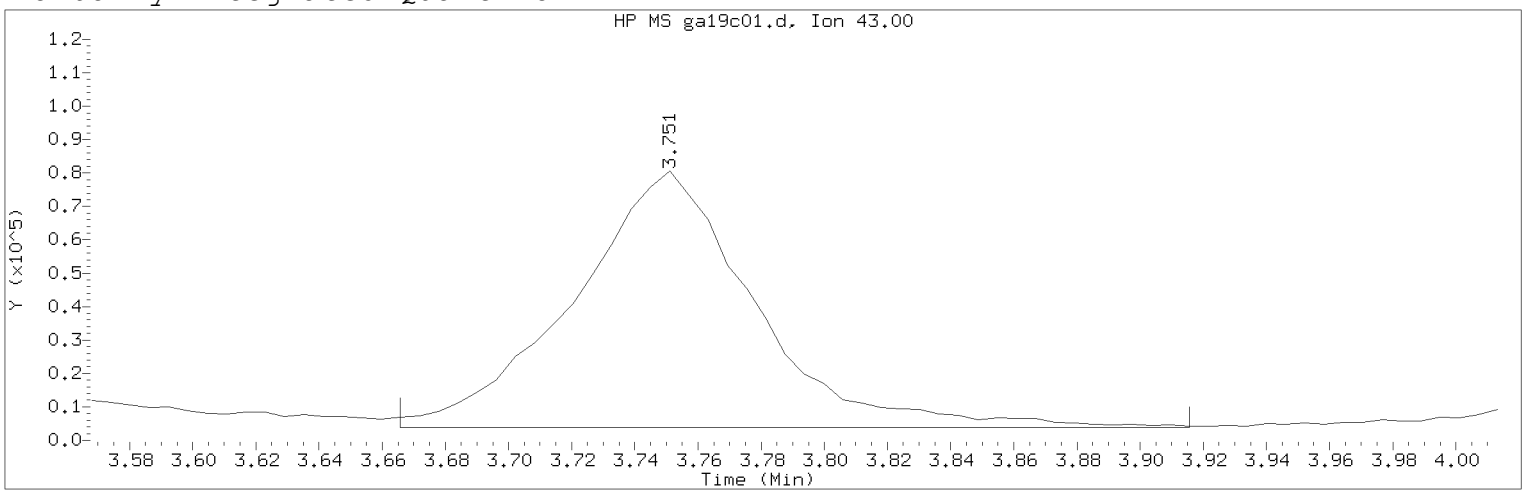
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 289		
Retention Time (minutes)	: 3.349		
Quant Ion	: 43.00		
Area	: 1004908		
On-column Amount (ng)	: 94.9774		
Integration start scan	: 274	Integration stop scan:	323
Y at integration start	: 683	Y at integration end:	5732

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user name: MSK07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

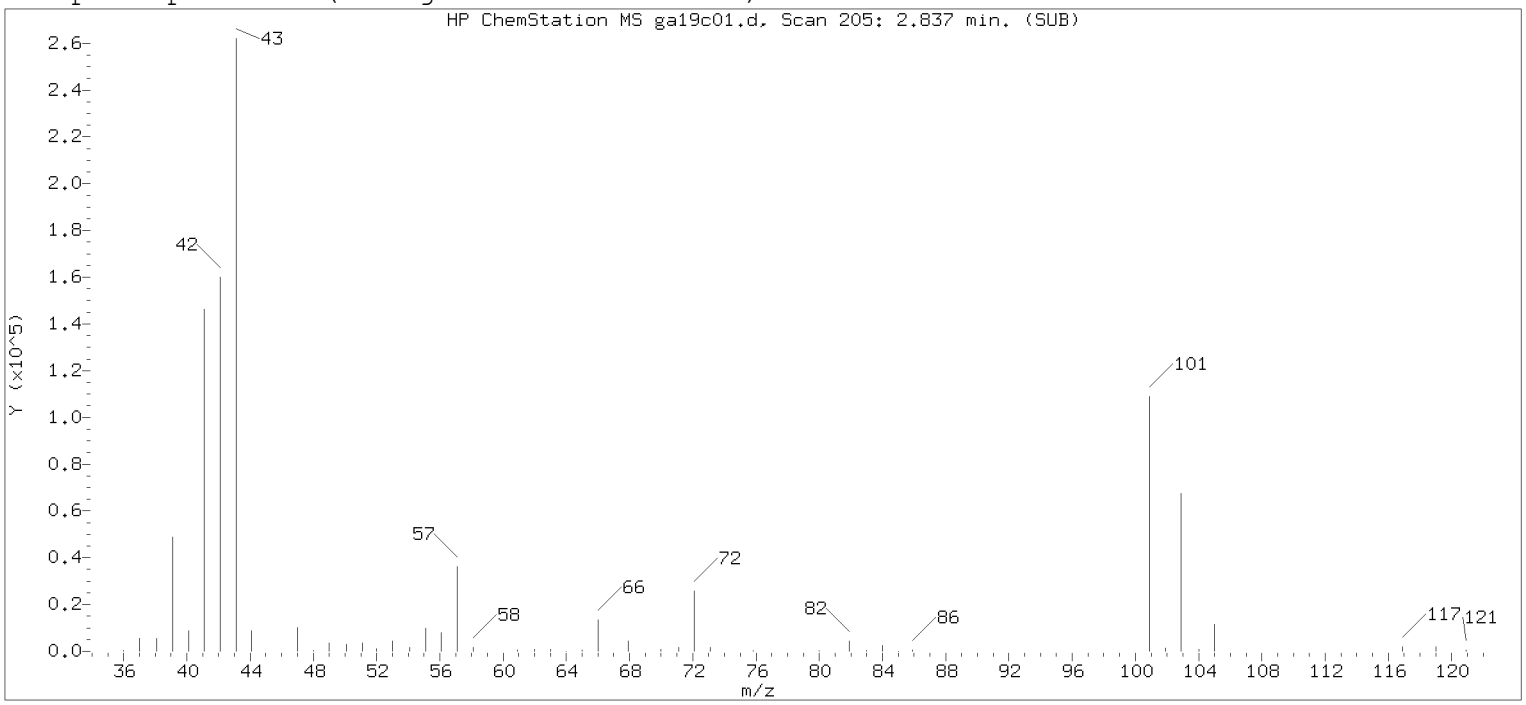
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 306689M
On-Column Amount (ng) : 9.3991
Integration start scan : 340 Integration stop scan: 381
Y at integration start : 3795 Y at integration end: 3795

Reason for manual integration: improper integration

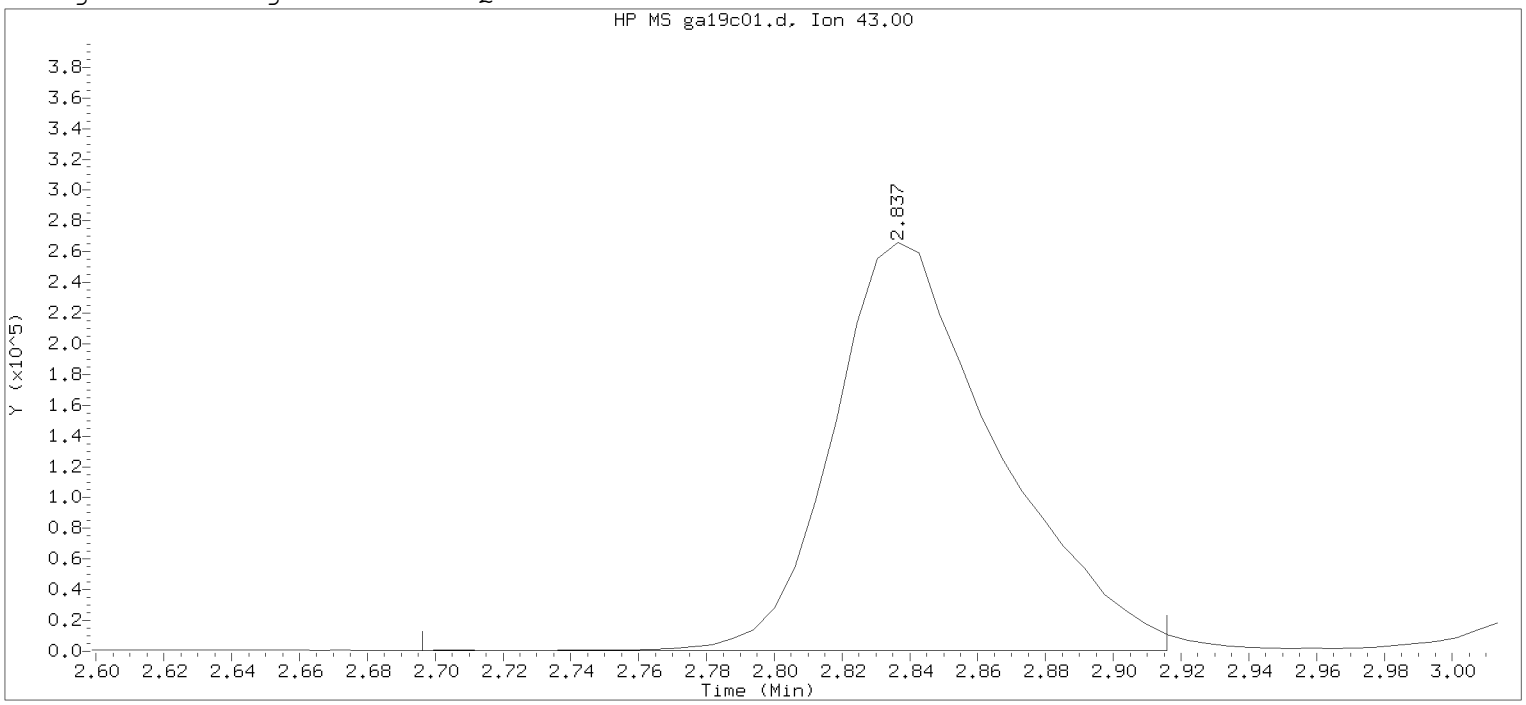
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

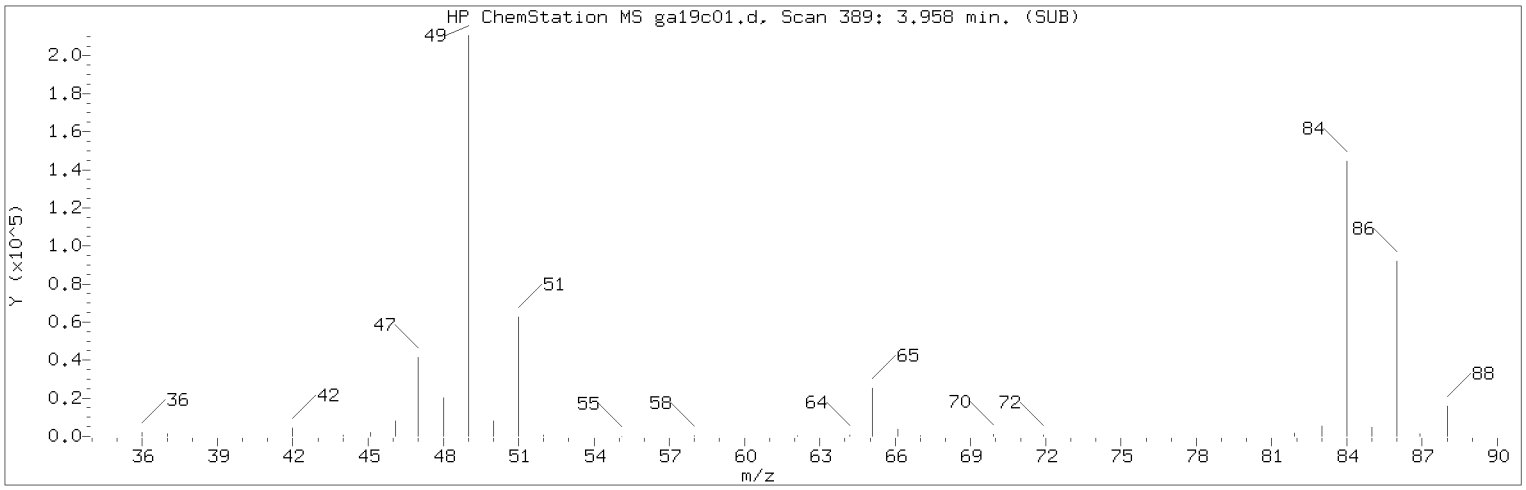
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

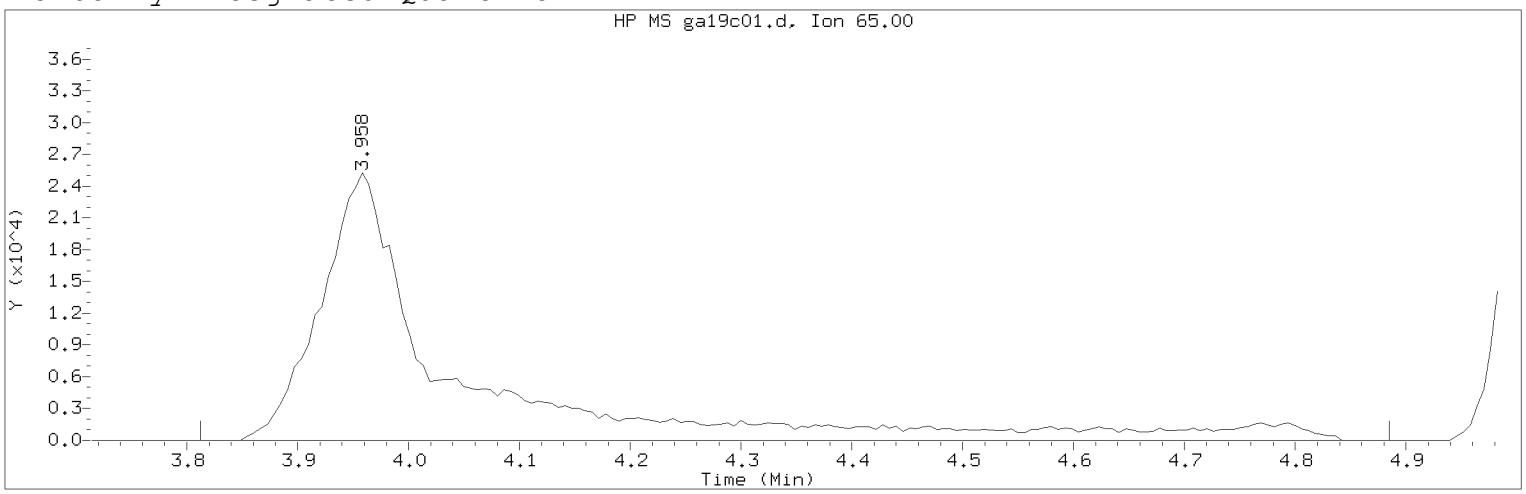
Compound Number	: 21		
Compound Name	: Methyl Acetate		
Scan Number	: 205		
Retention Time (minutes)	: 2.837		
Quant Ion	: 43.00		
Area	: 891939		
On-column Amount (ng)	: 29.9075		
Integration start scan	: 181	Integration stop scan:	217
Y at integration start	: 310	Y at integration end:	310

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user name: MSK07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

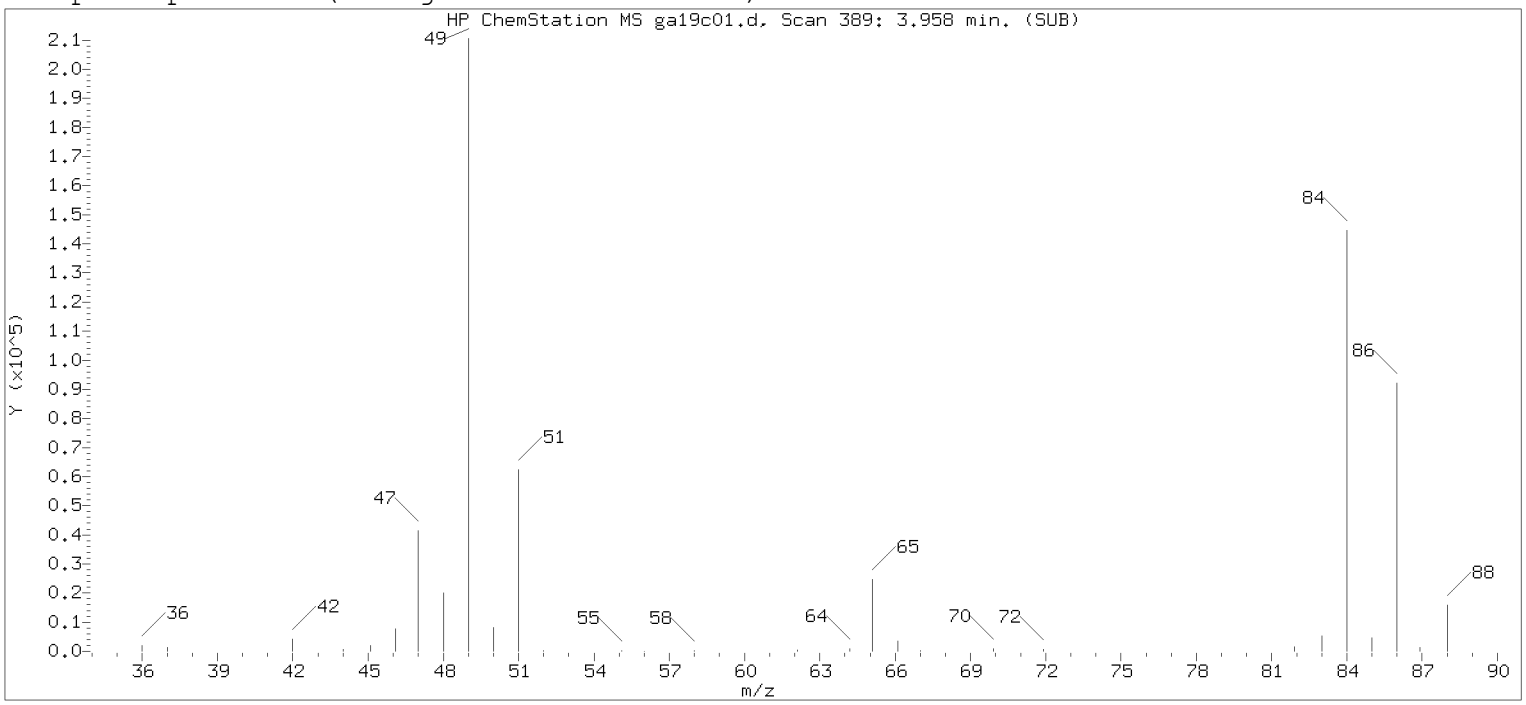
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 389
Retention Time (minutes): 3.958
Quant Ion : 65.00
Area (flag) : 207378M
On-Column Amount (ng) : 50.0000
Integration start scan : 364 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

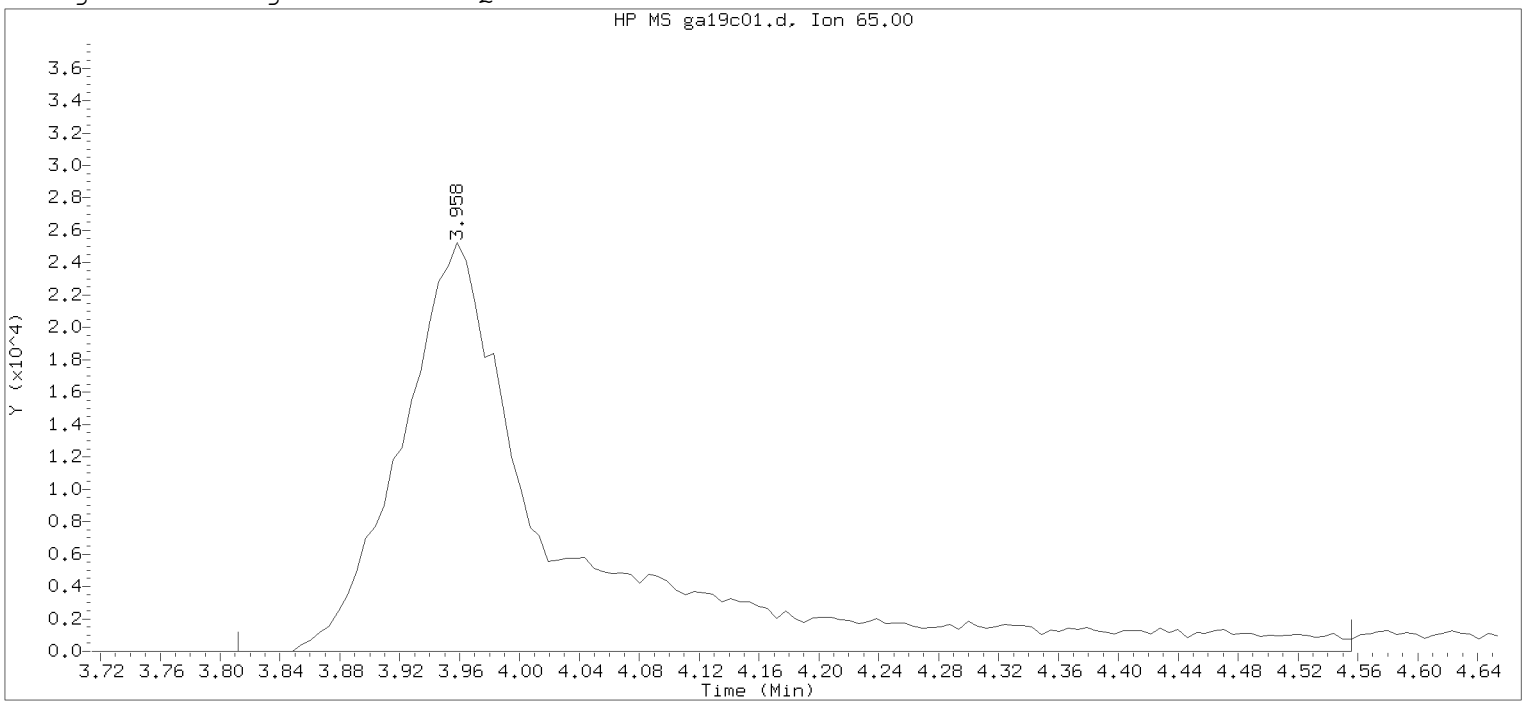
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

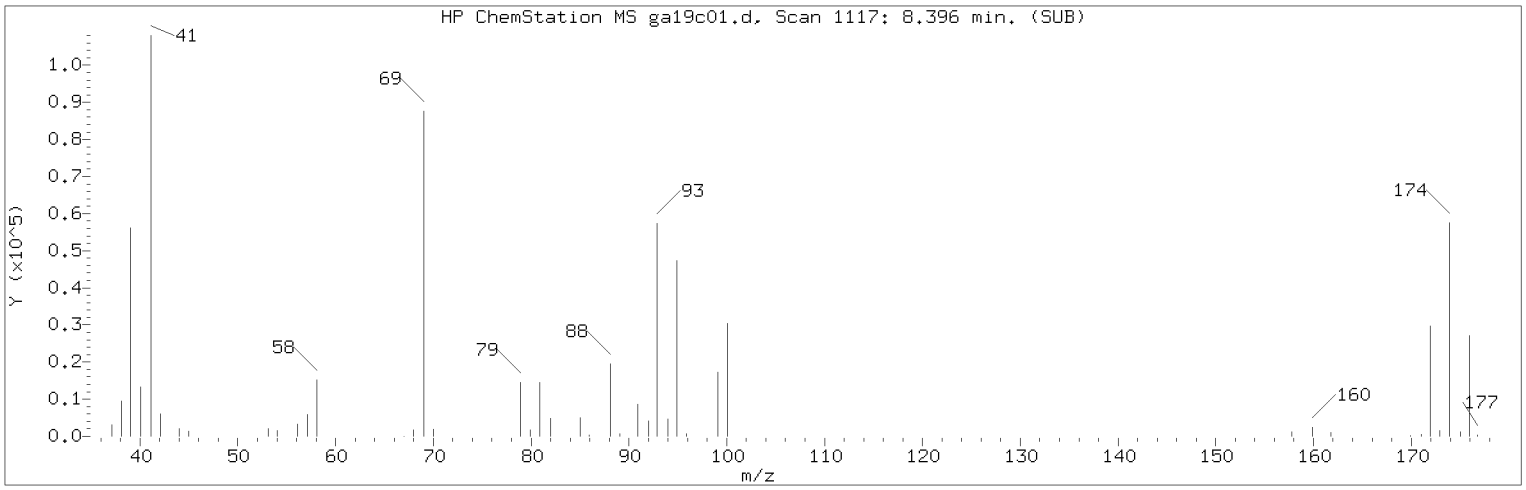
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

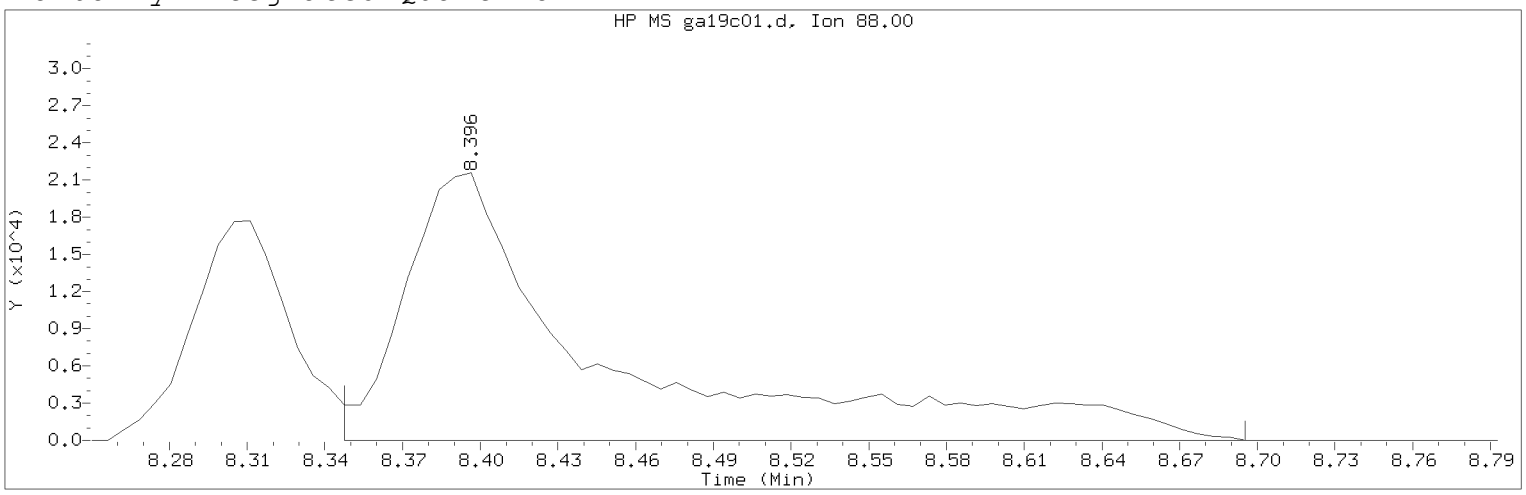
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 389
Retention Time (minutes)	: 3.958
Quant Ion	: 65.00
Area	: 189543
On-column Amount (ng)	: 50.0000
Integration start scan	: 364 Integration stop scan: 486
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user name: MSK07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

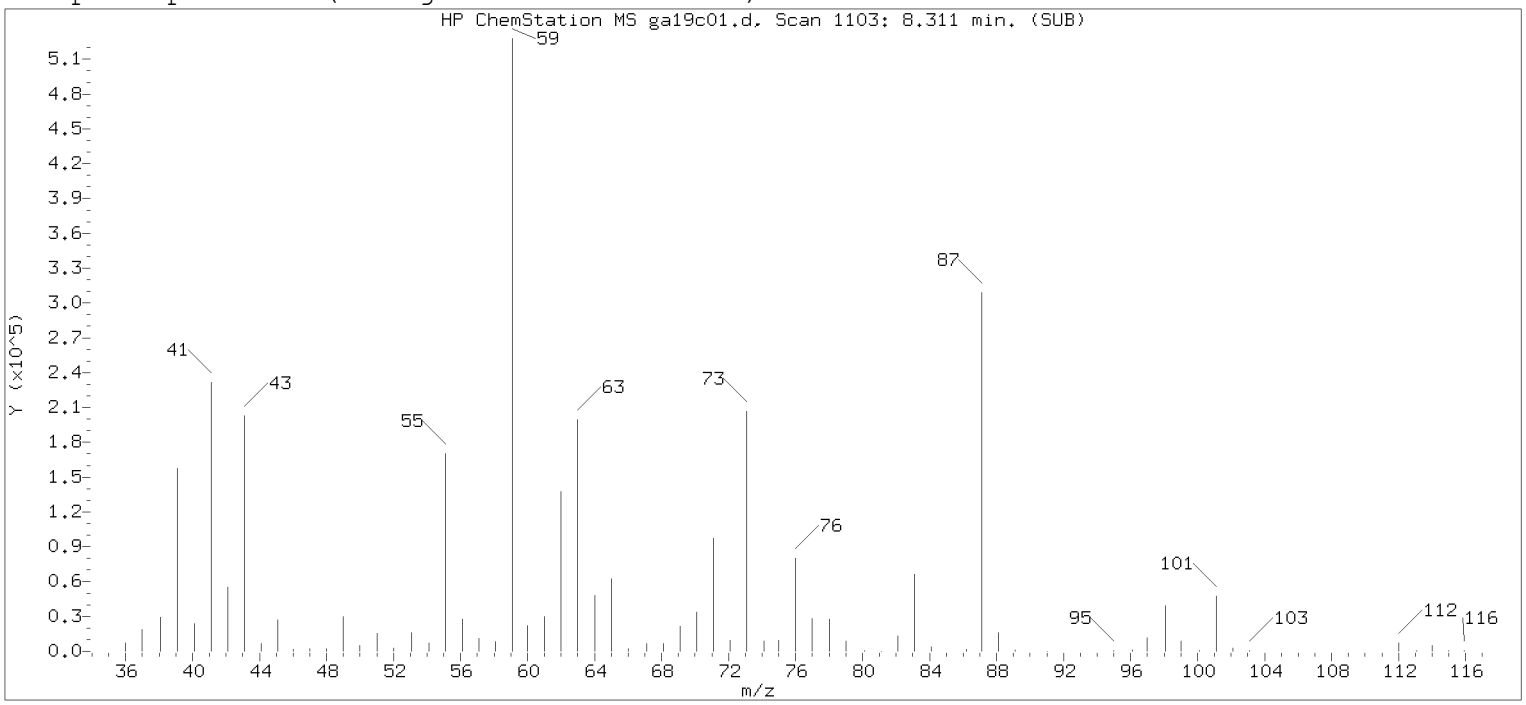
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1117
Retention Time (minutes): 8.396
Quant Ion : 88.00
Area (flag) : 116063M
On-Column Amount (ng) : 539.5380
Integration start scan : 1108 Integration stop scan: 1165
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

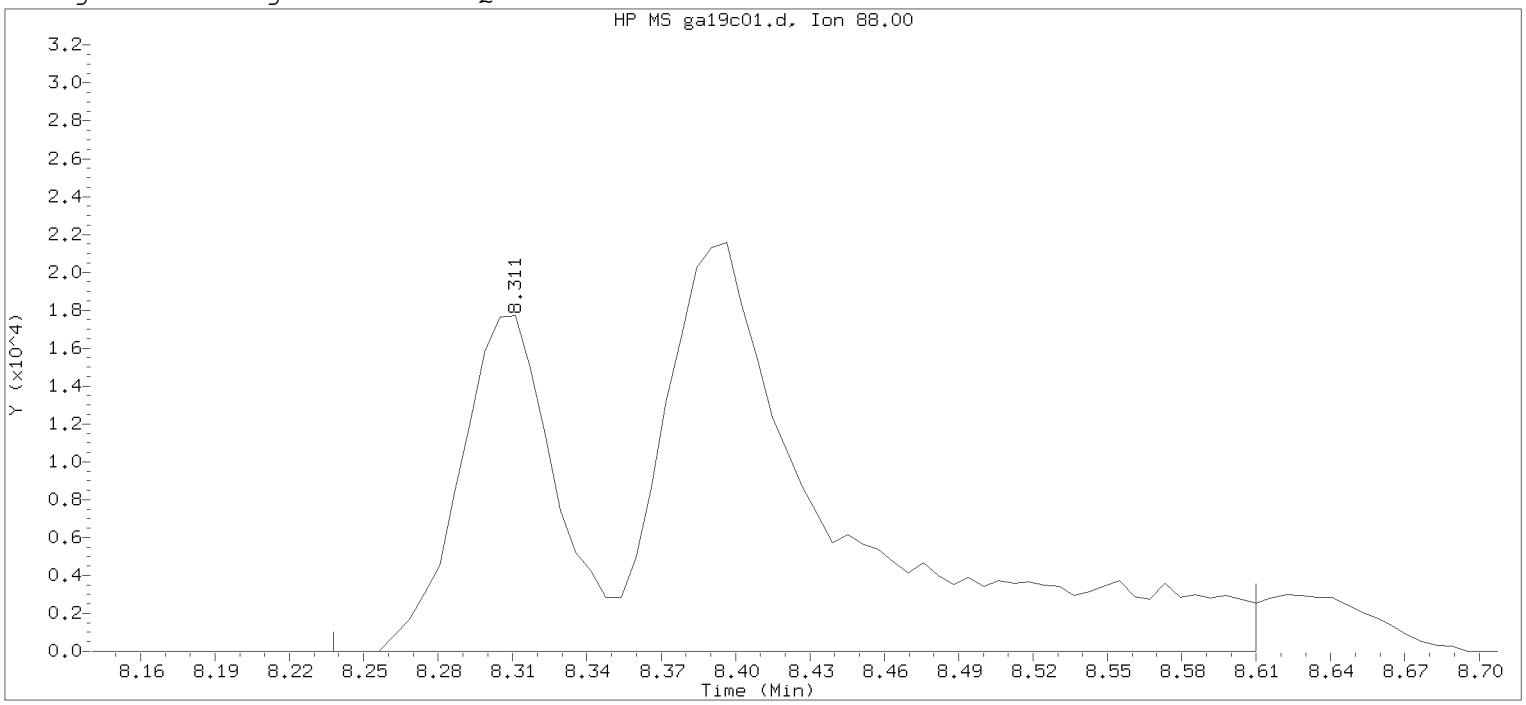
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

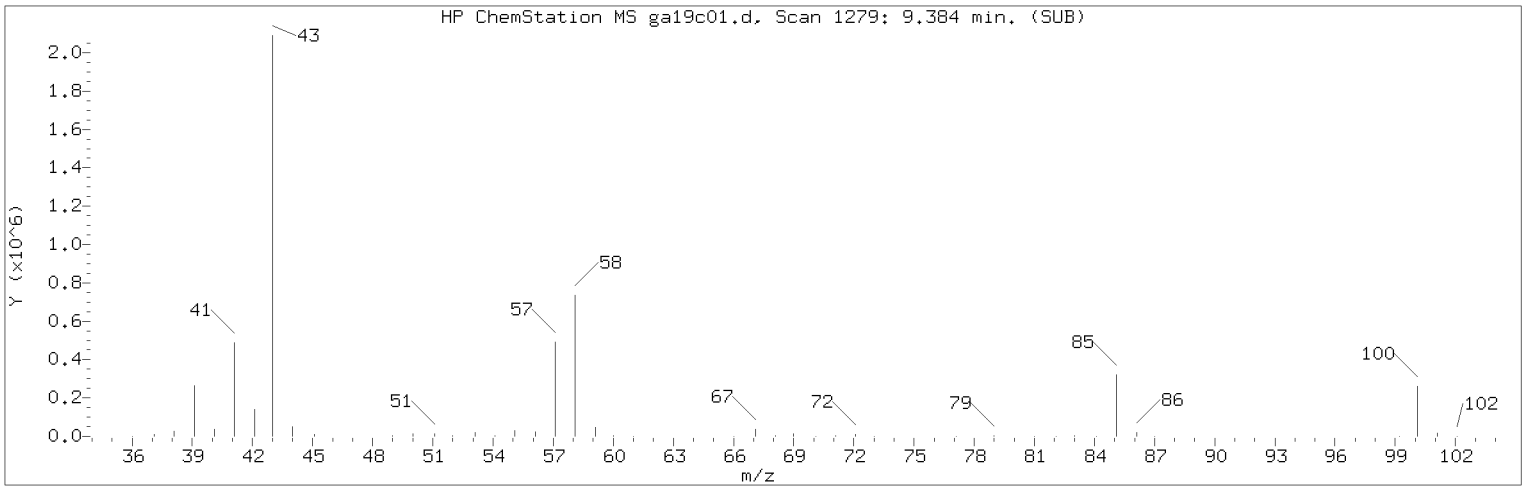
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

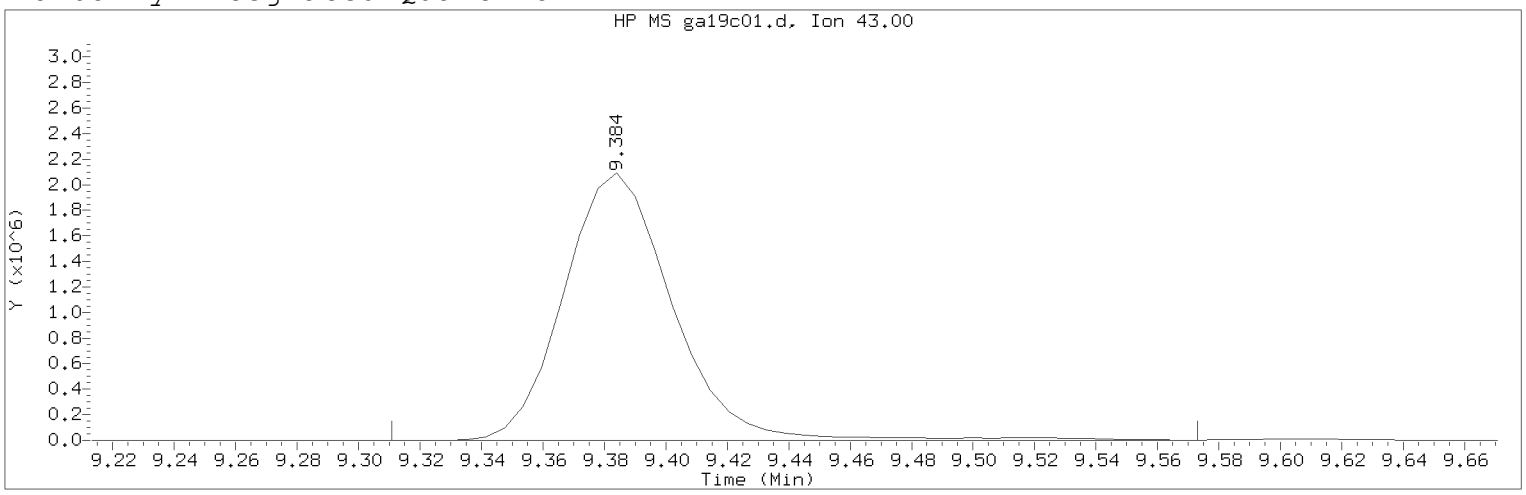
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 88.00		
Area	: 152510		
On-column Amount (ng)	: 775.6766		
Integration start scan	: 1090	Integration stop scan:	1151
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user AP04 mkrause 7.3.0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

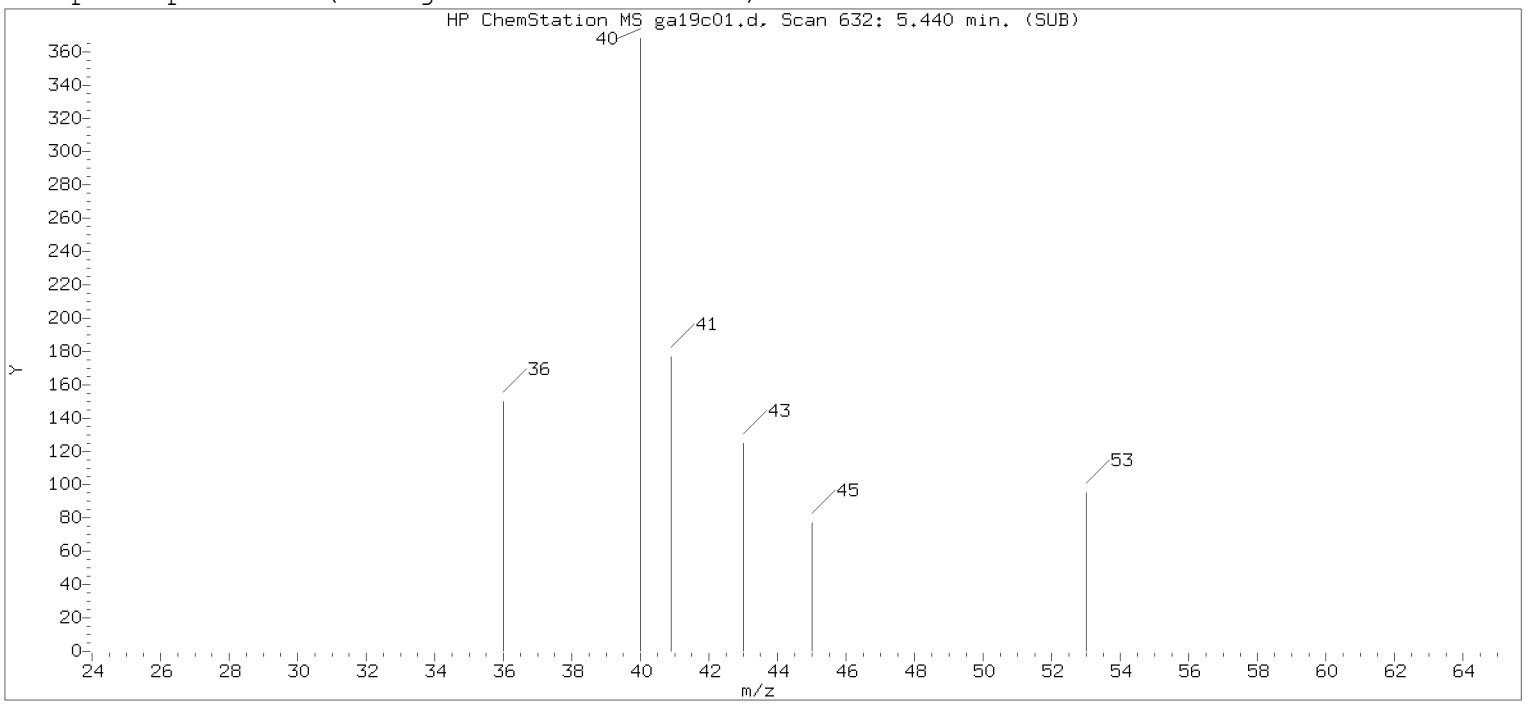
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 5130279M
On-Column Amount (ng) : 104.8485
Integration start scan : 1266 Integration stop scan: 1309
Y at integration start : 242 Y at integration end: 242

Reason for manual integration: improper integration

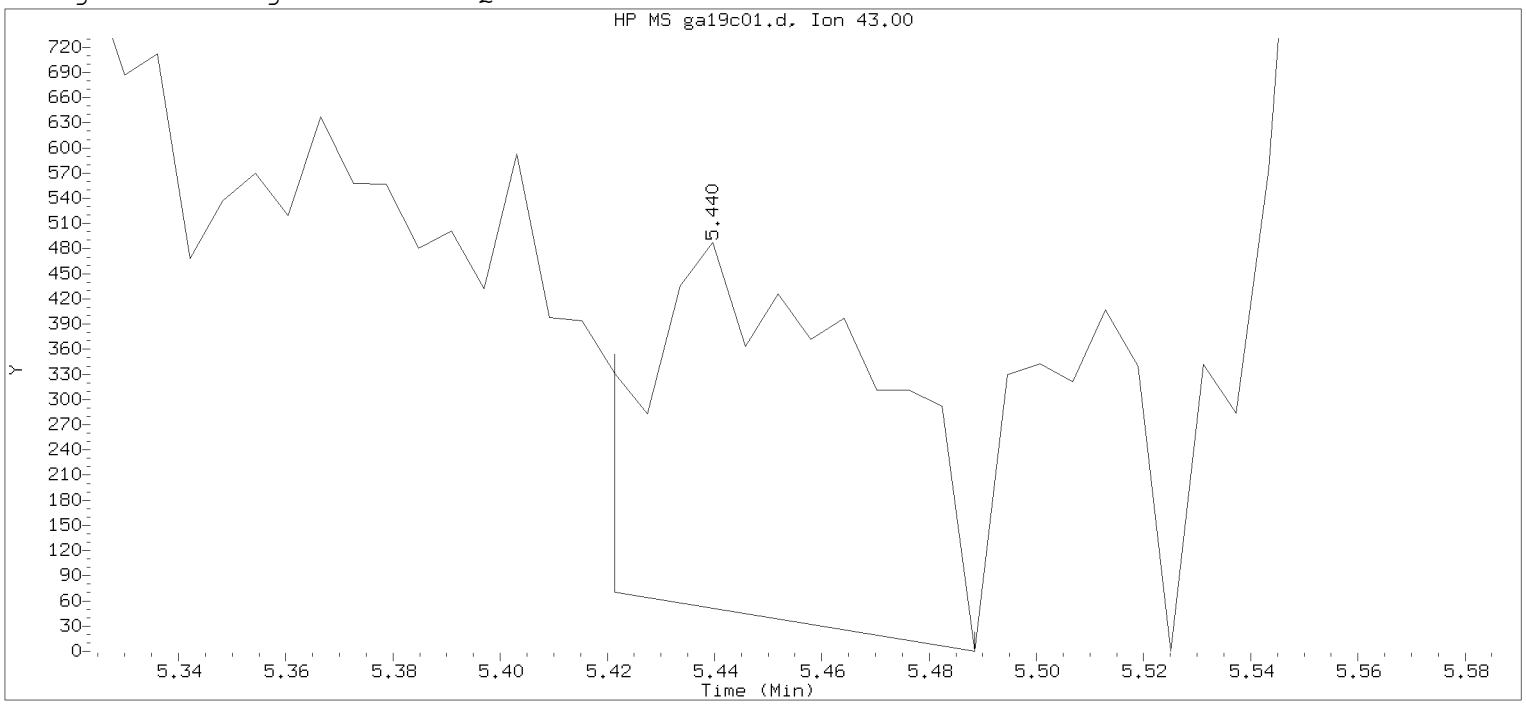
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

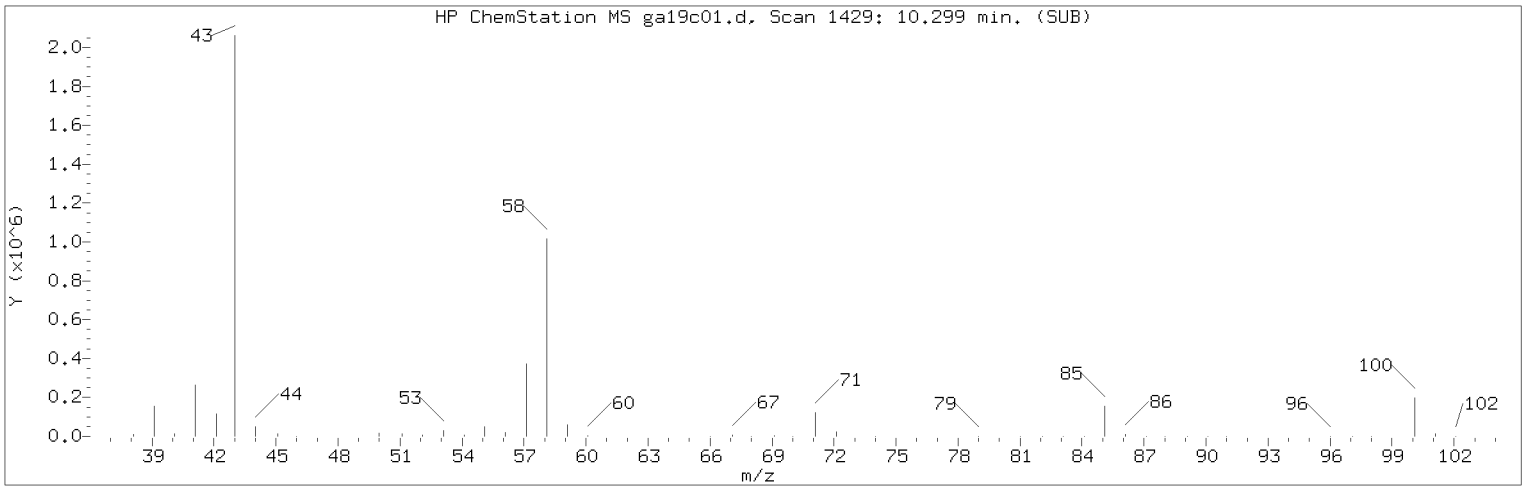
Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

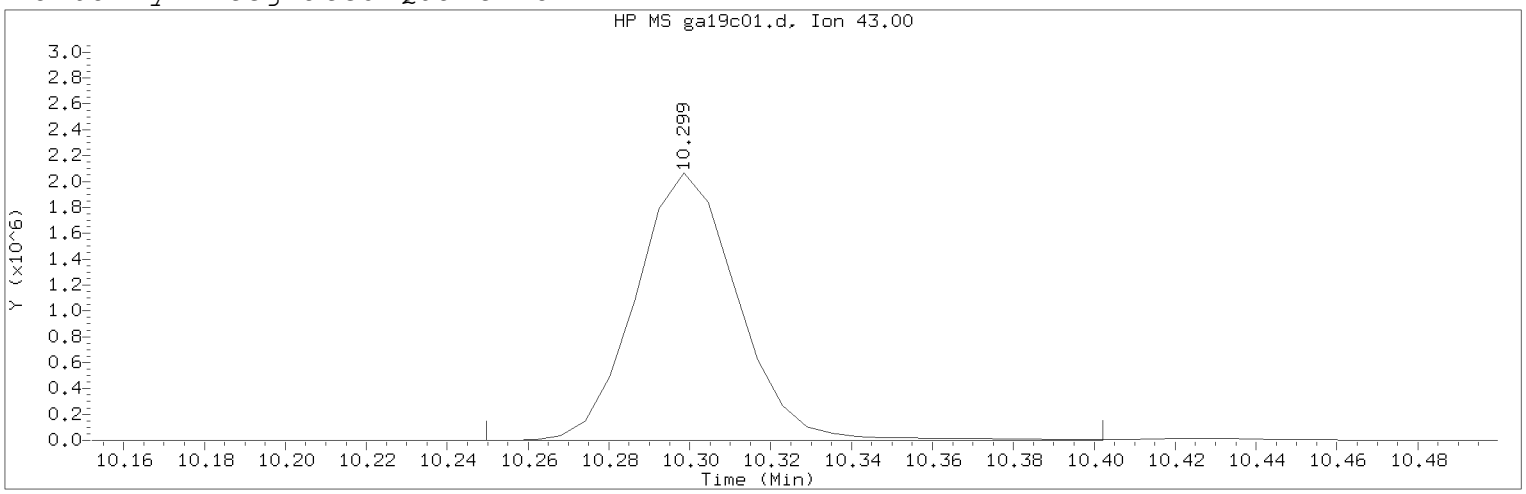
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 632
Retention Time (minutes): 5.440
Quant Ion : 43.00
Area : 1264
On-column Amount (ng) : 0.0283
Integration start scan : 628 Integration stop scan: 639
Y at integration start : 70 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user name: MSK07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:31 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

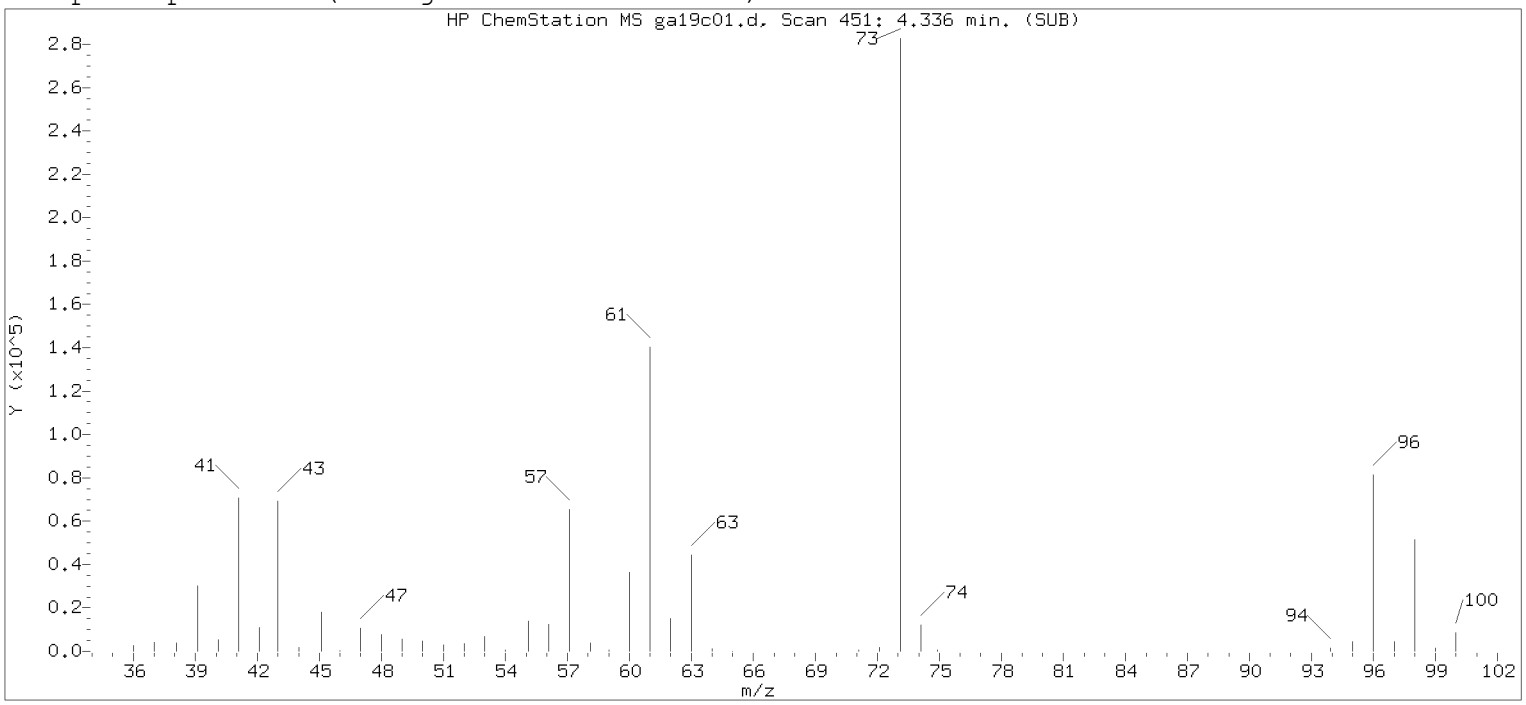
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 3606057M
On-Column Amount (ng) : 104.8546
Integration start scan : 1420 Integration stop scan: 1445
Y at integration start : 308 Y at integration end: 308

Reason for manual integration: improper integration

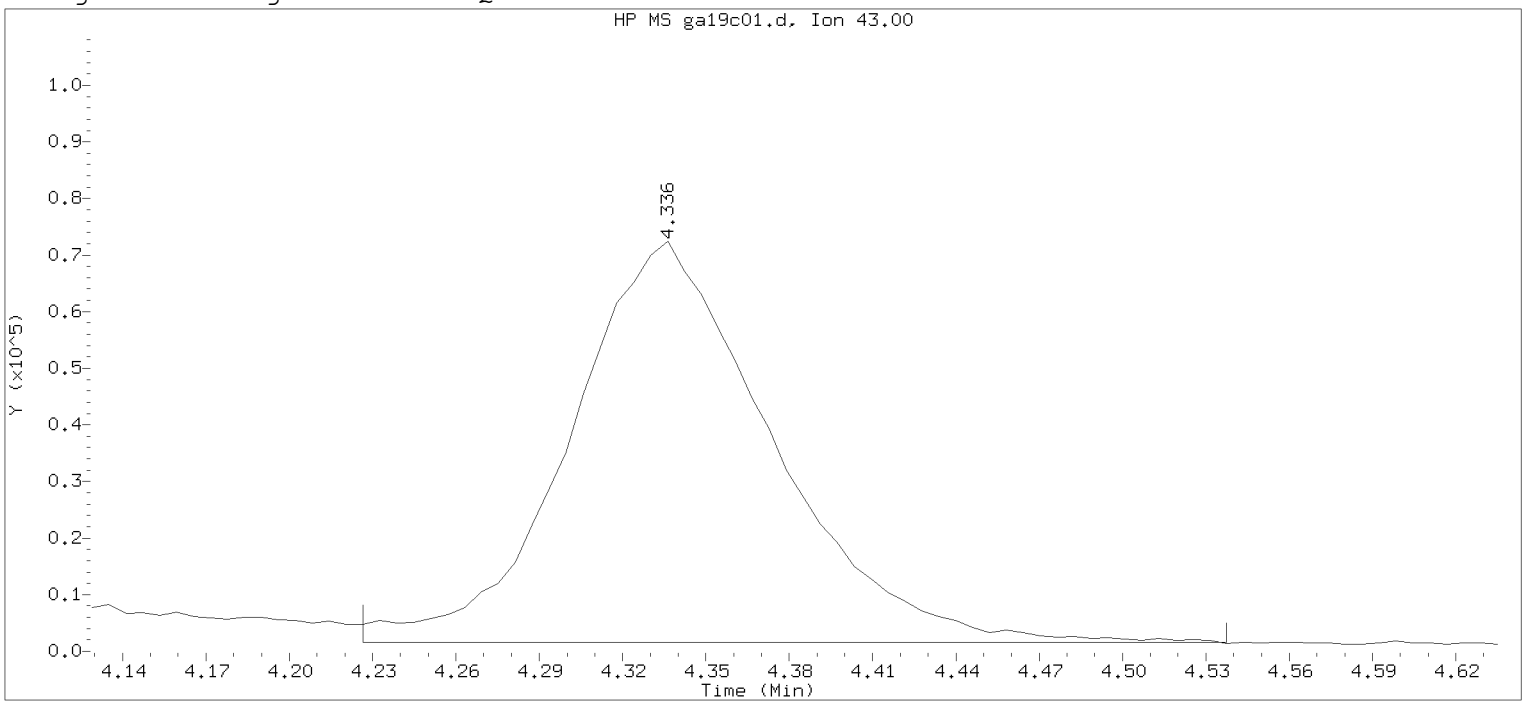
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:23.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19c01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:10 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:26 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 451
Retention Time (minutes): 4.336
Quant Ion : 43.00
Area : 358403
On-column Amount (ng) : 11.4020
Integration start scan : 432 Integration stop scan: 483
Y at integration start : 1563 Y at integration end: 1563

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24.
Target 3.5 esignature user name: MSK07970

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKG75

Data file: /chem2/HP16334.i/18apr19b.b/ga19b05.d Injection date and time: **19-APR-2018 21:54**
Data file Sample Info. Line: VBLKG75;VBLKG75;1;3;;;DRAPERJK;;; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 19-Apr-2018 22:22 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.006)	388	65	228706	(10)	50.00	
63) Fluorobenzene	7.476	(0.006)	966	96	2084050	(0)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1566587	(-2)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	868656	(-5)	10.00	

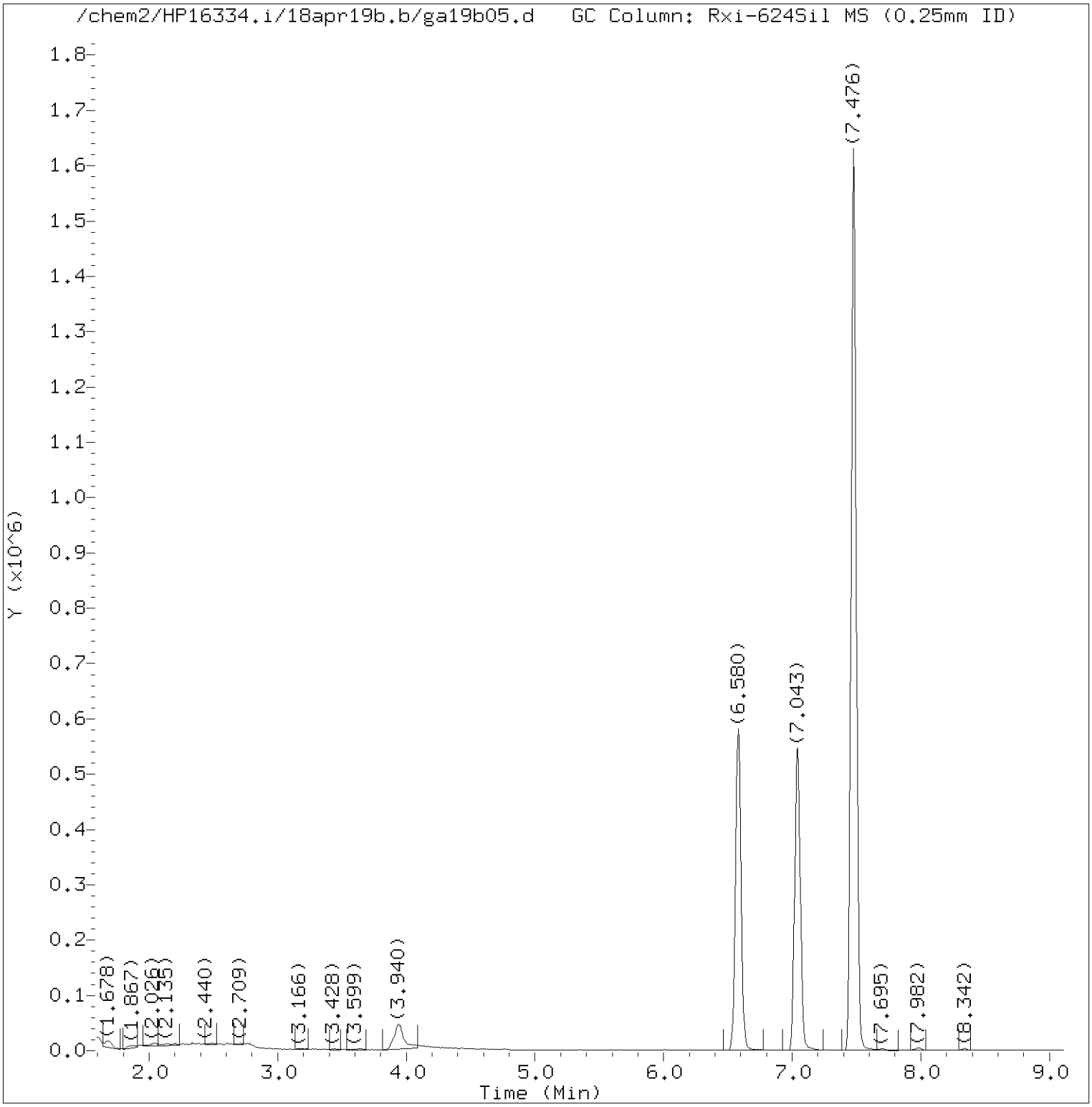
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.000)	113	522149	9.964	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.000)	102	111121	10.006	100%		80 - 120
82) Toluene-d8	(3)	9.524	(0.001)	98	2107272	10.030	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	800406	9.953	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.3	1
5) Vinyl Chloride	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.4	12
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
14) Acetone	(1)				Not Detected					3	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
49) Chloroform	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
83) Toluene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3

Total number of targets = 16

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:24. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

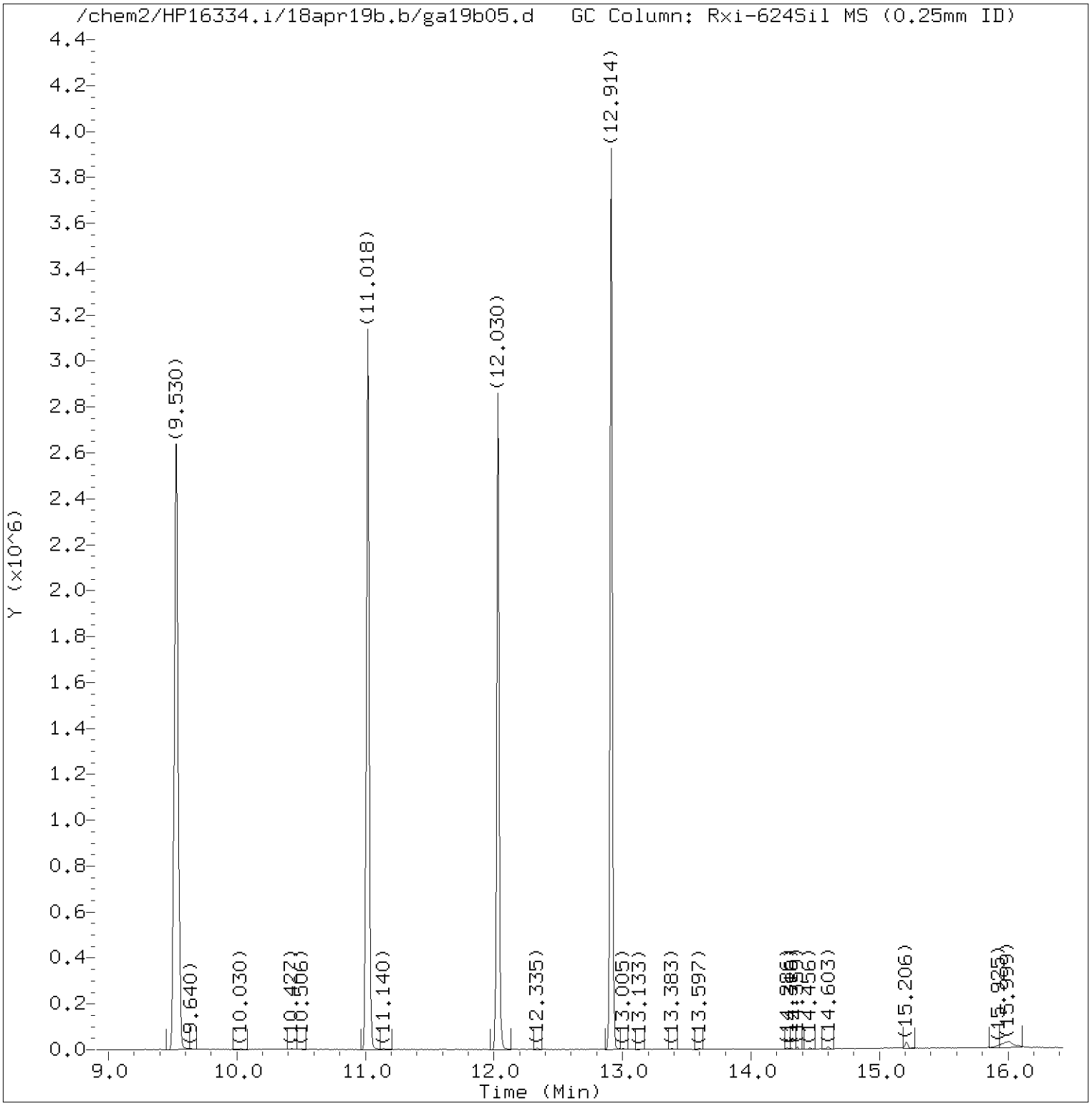
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19b05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:22 msk07970

Sample Name: VBLKG75 Lab Sample ID: VBLKG75

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19b05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:22 msk07970

Sample Name: VBLKG75 Lab Sample ID: VBLKG75

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19b05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:54 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:22 msk07970

Sample Name: VBLKG75 Lab Sample ID: VBLKG75

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.952	65	228706	50.000
50)$Dibromofluoromethane	(2)	6.580	113	522149	9.964
57)$1,2-Dichloroethane-d4	(2)	7.043	102	111121	10.006
63)*Fluorobenzene	(2)	7.476	96	2084050	10.000
82)$Toluene-d8	(3)	9.524	98	2107272	10.030
97)*Chlorobenzene-d5	(3)	11.018	117	1566587	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	800406	9.953
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	868656	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:24.
Target 3.5 esignature user ID: msk07970

Data file: /chem2/HP16334.i/18apr19b.b/ga19s35.d Injection date and time: **20-APR-2018 03:09**
Data file Sample Info. Line: R0403MS;9553122MS;1;3;MS;RAF04;DRAPERJK;;ga19b05 Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.946	(0.012)	387	65	181940	(-12)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	1990145	(-5)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1534011	(-4)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	889551	(-3)	10.00	

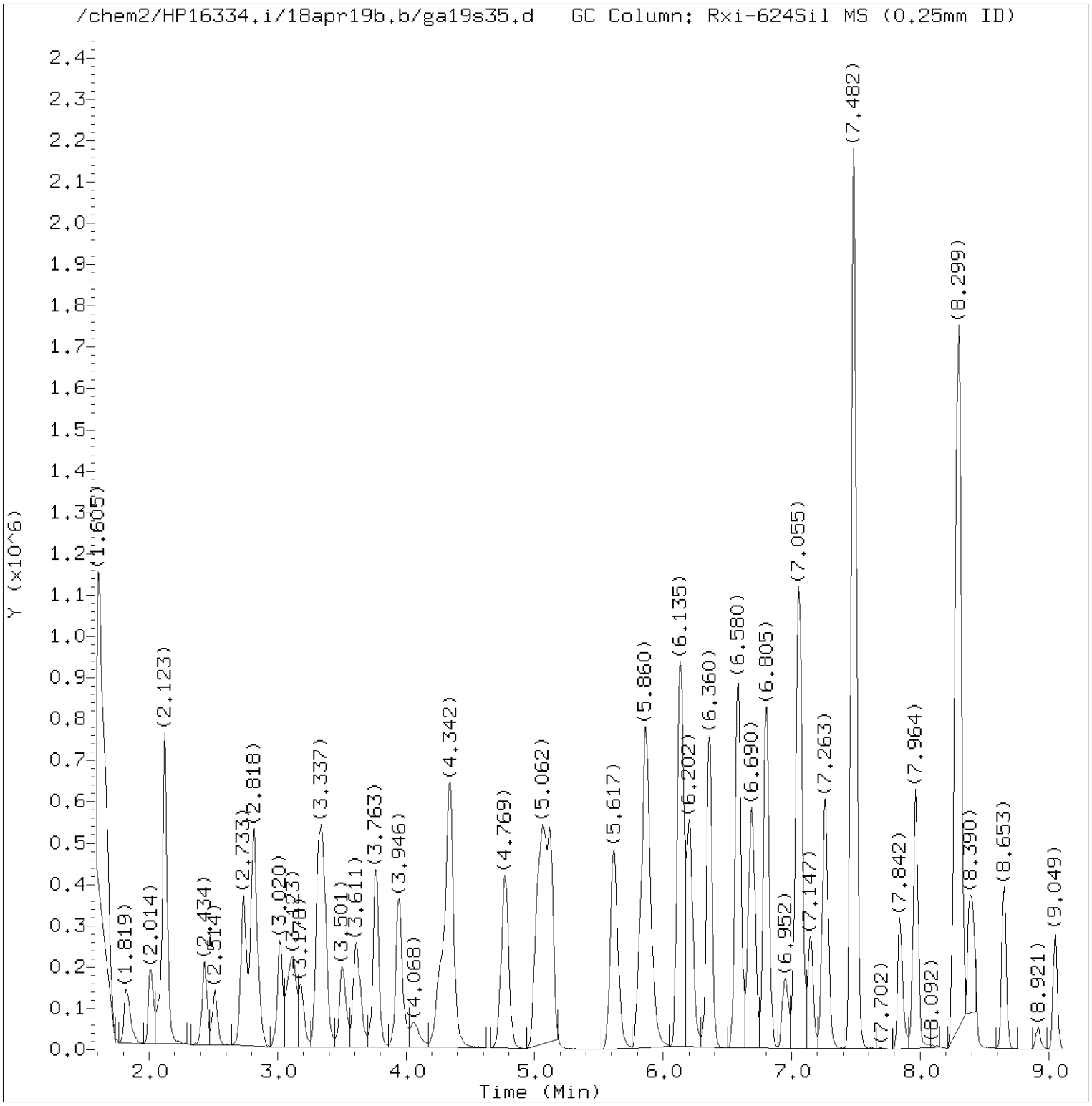
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.001)	113	492705	9.845	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	104300	9.835	98%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	2050453	9.967	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	797360	10.126	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.818	(0.002)	85	309477	4.146	4.15			0.3	1
5) Vinyl Chloride	(2)	2.117	(0.003)	62	305289	4.733	4.73			0.1	1
11) Ethyl ether	(2)	3.020	(0.001)	59	224385	5.351	5.35		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.312	(0.002)	96	217539	5.281	5.28			0.4	1
14) Acetone	(1)	3.343	(-0.001)	43	379181	37.335	37.34			3	10
23) Methylene Chloride	(2)	3.946	(0.001)	84	245294	4.404	4.40			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.342	(0.002)	96	244926	5.117	5.12			0.8	1
39) cis-1,2-Dichloroethene	(2)	5.860	(0.001)	96	278812	5.193	5.19			0.1	1
38) 2-Butanone	(1)	5.824	(-0.004)	43	709480	40.602	40.60			1	10
49) Chloroform	(2)	6.360	(0.000)	83	897052	9.609	9.61			0.1	1
59) 1,2-Dichloroethane	(2)	7.147	(0.000)	62	338922	4.717	4.72			0.1	1
67) Trichloroethene	(2)	7.964	(0.000)	95	276060	5.151	5.15			0.2	1
83) Toluene	(3)	9.610	(-0.000)	92	669536	5.137	5.14			0.1	1
101) m+p-Xylene	(3)	11.250	(0.000)	106	1033688	10.483	10.48			0.1	0.5
104) o-Xylene	(3)	11.579	(0.000)	106	508025	5.140	5.14			0.1	0.5
105) Xylene (Total)	(3)			106	1541713	15.623	15.62			0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/23/2018 at 05:56. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 17:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

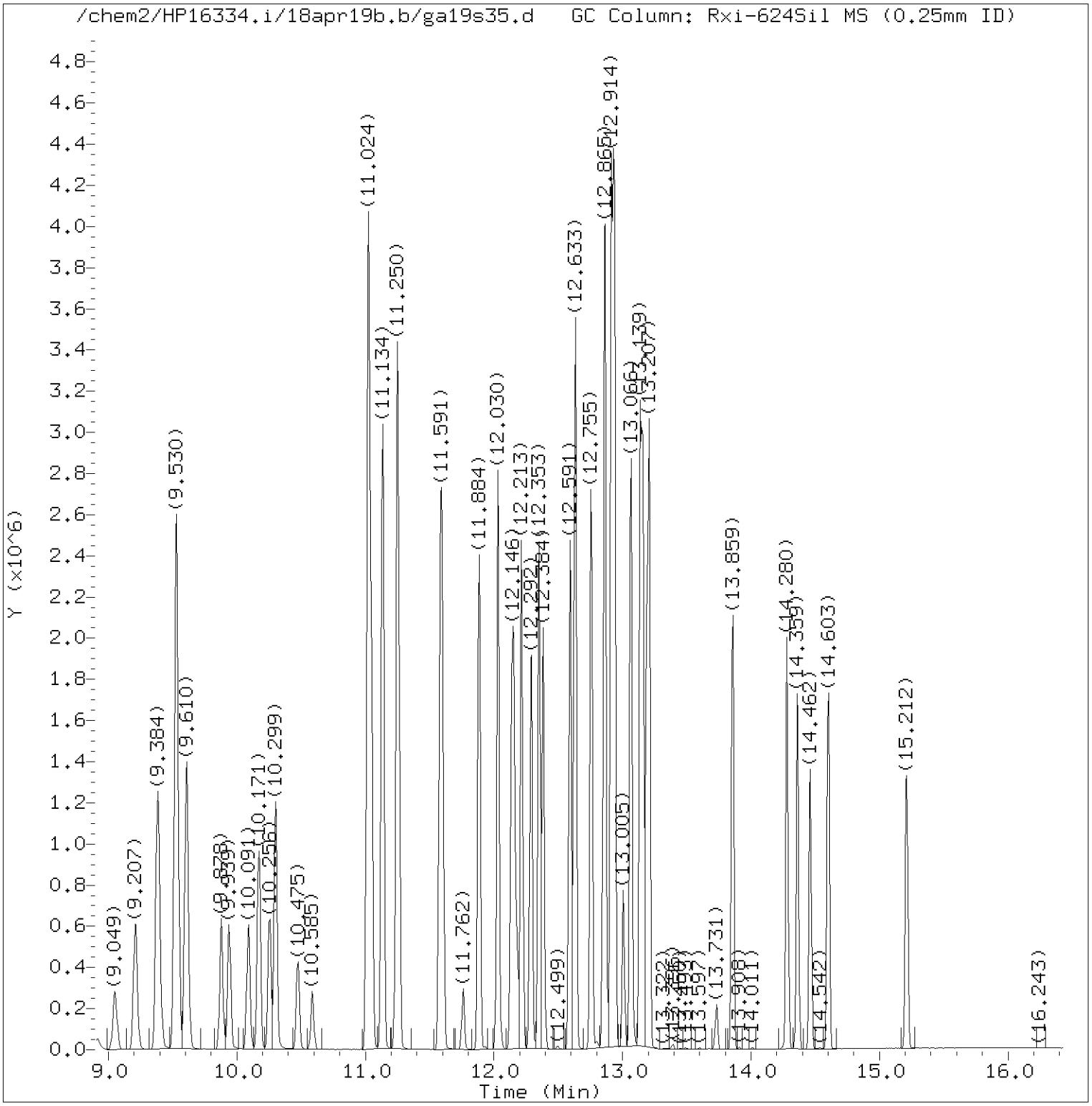
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s35.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:09 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MS Lab Sample ID: 9553122MS

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:56.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s35.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:09 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MS Lab Sample ID: 9553122MS

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:56.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s35.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:09 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MS Lab Sample ID: 9553122MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.819	85	309477	4.146
5) Vinyl Chloride	(2)	2.117	62	305289	4.733
11) Ethyl ether	(2)	3.020	59	224385	5.351
15) 1,1-Dichloroethene	(2)	3.312	96	217539	5.281
14) Acetone	(1)	3.343	43	379181	37.335
23) Methylene Chloride	(2)	3.946	84	245294	4.404
26)*t-Butyl Alcohol-d10	(1)	3.946	65	181940	50.000
31) trans-1,2-Dichloroethene	(2)	4.342	96	244926	5.117
38) 2-Butanone	(1)	5.824	43	709480	40.602
39) cis-1,2-Dichloroethene	(2)	5.860	96	278812	5.193
49) Chloroform	(2)	6.360	83	897052	9.609
50)$Dibromofluoromethane	(2)	6.580	113	492705	9.845
57)$1,2-Dichloroethane-d4	(2)	7.043	102	104300	9.835
59) 1,2-Dichloroethane	(2)	7.147	62	338922	4.717
63)*Fluorobenzene	(2)	7.482	96	1990145	10.000
67) Trichloroethene	(2)	7.964	95	276060	5.151
82)$Toluene-d8	(3)	9.530	98	2050453	9.967
83) Toluene	(3)	9.610	92	669536	5.137
97)*Chlorobenzene-d5	(3)	11.018	117	1534011	10.000
101) m+p-Xylene	(3)	11.250	106	1033688	10.483
104) o-Xylene	(3)	11.579	106	508025	5.140
105) Xylene (Total)	(3)		106	1541713	15.623
111)$4-Bromofluorobenzene	(3)	12.030	95	797360	10.126
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	889551	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:56.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP16334.i/18apr19b.b/ga19s36.d Injection date and time: **20-APR-2018 03:32**
Data file Sample Info. Line: R0403MSD;9553123MSD;1;3;MSD;RAF04;DRAPERJK;;ga19b05 Instrument ID: **HP16334.i** Batch: **G18109**
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(0.000)	389	65	206673	(0)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	2031806	(-3)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1547599	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	898150	(-2)	10.00	

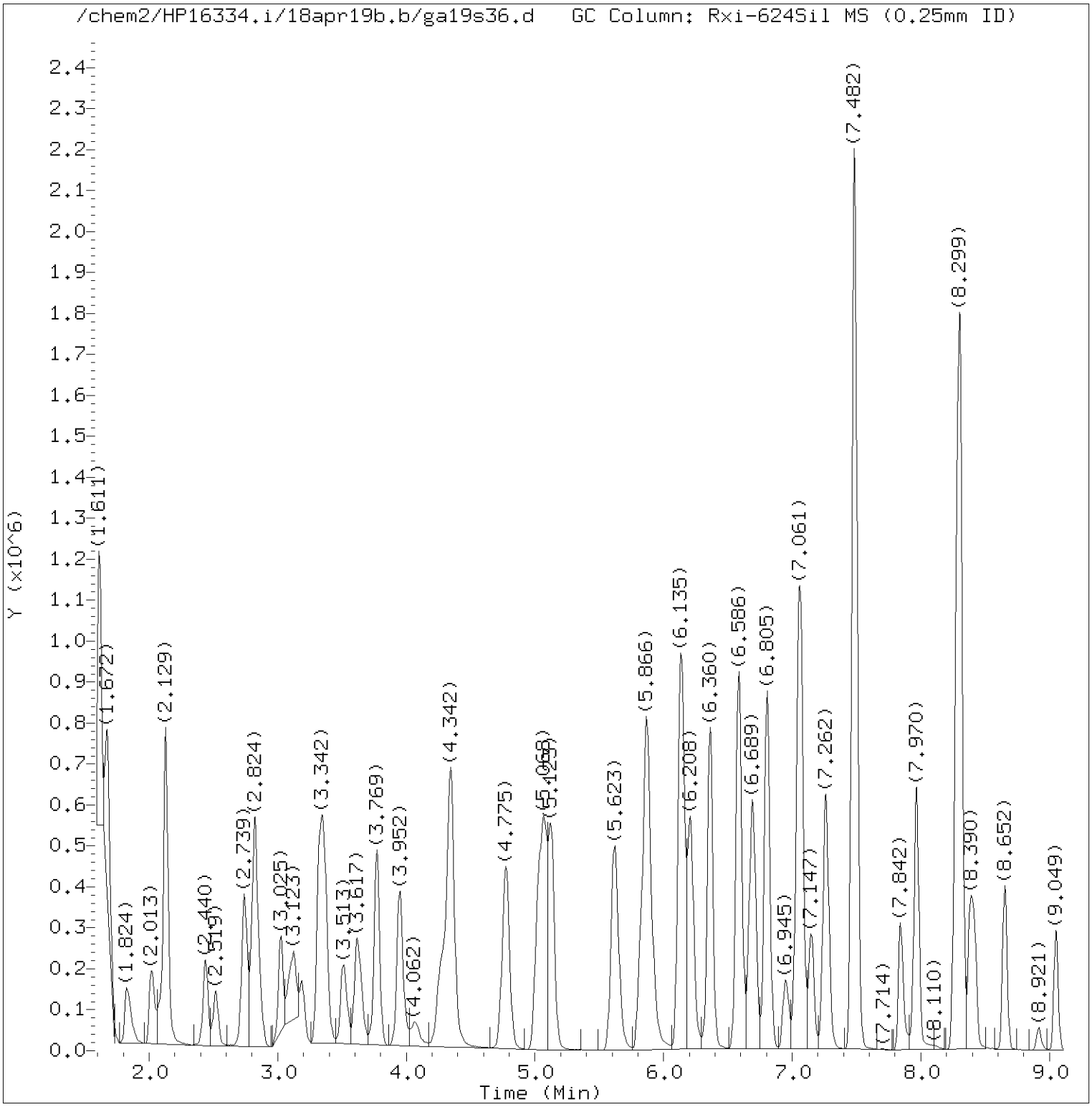
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.580	(0.001)	113	514145	10.063	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.000)	102	107881	9.964	100%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	2075536	10.000	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	799597	10.065	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.824	(0.001)	85	328271	4.307	4.31			0.3	1
5) Vinyl Chloride	(2)	2.129	(0.001)	62	323390	4.911	4.91			0.1	1
11) Ethyl ether	(2)	3.025	(0.000)	59	233270	5.449	5.45		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.318	(0.001)	96	231581	5.507	5.51			0.4	1
14) Acetone	(1)	3.348	(-0.000)	43	384785	33.353	33.35			3	10
23) Methylene Chloride	(2)	3.952	(0.000)	84	258632	4.548	4.55			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.348	(0.001)	96	261043	5.342	5.34			0.8	1
39) cis-1,2-Dichloroethene	(2)	5.866	(0.000)	96	292376	5.334	5.33			0.1	1
38) 2-Butanone	(1)	5.818	(0.001)	43	726143	36.582	36.58			1	10
49) Chloroform	(2)	6.360	(0.000)	83	923510	9.689	9.69			0.1	1
59) 1,2-Dichloroethane	(2)	7.147	(0.000)	62	350418	4.777	4.78			0.1	1
67) Trichloroethene	(2)	7.964	(0.000)	95	284518	5.200	5.20			0.2	1
83) Toluene	(3)	9.610	(0.000)	92	676661	5.146	5.15			0.1	1
101) m+p-Xylene	(3)	11.249	(-0.000)	106	1052154	10.577	10.58			0.1	0.5
104) o-Xylene	(3)	11.585	(-0.000)	106	512270	5.137	5.14			0.1	0.5
105) Xylene (Total)	(3)			106	1564424	15.714	15.71			0.2	3

Total number of targets = 16

Digitally signed by Jennifer K. Howe on 04/23/2018 at 05:57. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 17:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

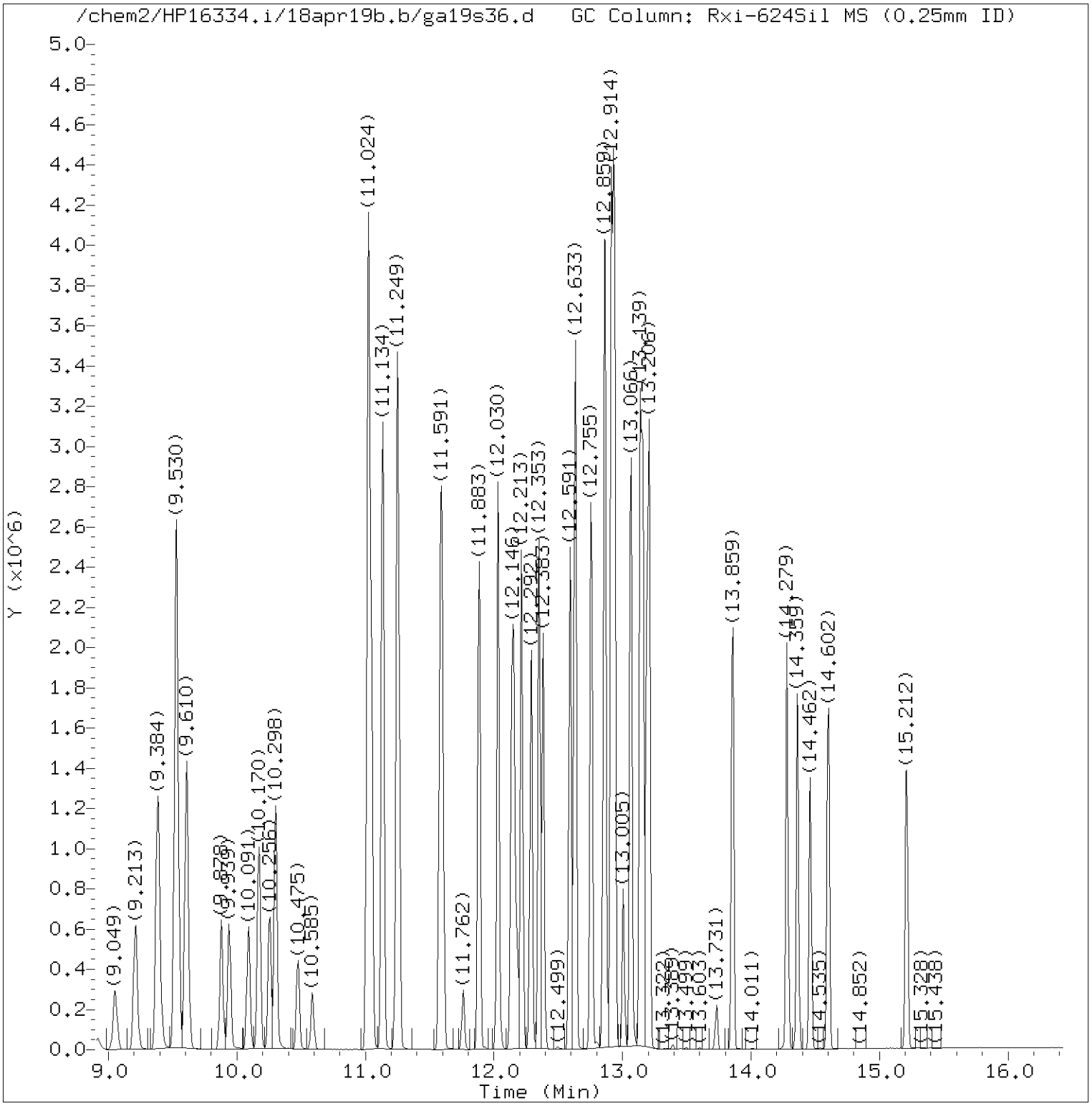
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s36.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MSD Lab Sample ID: 9553123MSD

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:57.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s36.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MSD Lab Sample ID: 9553123MSD

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:57.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s36.d Instrument ID: HP16334.i
Injection date and time: 20-APR-2018 03:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 23-Apr-2018 05:54 jkh09052

Sample Name: R0403MSD Lab Sample ID: 9553123MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.824	85	328271	4.307
5) Vinyl Chloride	(2)	2.129	62	323390	4.911
11) Ethyl ether	(2)	3.025	59	233270	5.449
15) 1,1-Dichloroethene	(2)	3.318	96	231581	5.507
14) Acetone	(1)	3.349	43	384785	33.353
23) Methylene Chloride	(2)	3.952	84	258632	4.548
26)*t-Butyl Alcohol-d10	(1)	3.958	65	206673	50.000
31) trans-1,2-Dichloroethene	(2)	4.348	96	261043	5.342
38) 2-Butanone	(1)	5.818	43	726143	36.582
39) cis-1,2-Dichloroethene	(2)	5.866	96	292376	5.334
49) Chloroform	(2)	6.360	83	923510	9.689
50)$Dibromofluoromethane	(2)	6.580	113	514145	10.063
57)$1,2-Dichloroethane-d4	(2)	7.049	102	107881	9.964
59) 1,2-Dichloroethane	(2)	7.147	62	350418	4.777
63)*Fluorobenzene	(2)	7.482	96	2031806	10.000
67) Trichloroethene	(2)	7.964	95	284518	5.200
82)$Toluene-d8	(3)	9.530	98	2075536	10.000
83) Toluene	(3)	9.610	92	676661	5.146
97)*Chlorobenzene-d5	(3)	11.018	117	1547599	10.000
101) m+p-Xylene	(3)	11.249	106	1052154	10.577
104) o-Xylene	(3)	11.585	106	512270	5.137
105) Xylene (Total)	(3)		106	1564424	15.714
111)$4-Bromofluorobenzene	(3)	12.030	95	799597	10.065
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	898150	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/23/2018 at 05:57.
Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr19b.b/ga19s31.d Injection date and time: **19-APR-2018 21:32**
Data file Sample Info. Line: LCSG75;LCSG75;1;3;LCS;;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.964	(-0.006)	390	65	212266M	(2)	50.00	
63) Fluorobenzene	7.482	(0.000)	967	96	2122015	(1)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1609072	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(0.000)	1858	152	917175	(0)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	537632	10.075	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	114029	10.084	101%		80 - 120
82) Toluene-d8	(3)	9.530	(0.000)	98	2148217	9.955	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(0.000)	95	822784	9.961	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.837	(0.000)	85	302898	3.805	3.81			0.3	1
5) Vinyl Chloride	(2)	2.135	(0.000)	62	296276	4.308	4.31			0.1	1
11) Ethyl ether	(2)	3.032	(0.000)	59	228620	5.113	5.11		J	0.4	12
15) 1,1-Dichloroethene	(2)	3.330	(0.000)	96	214929	4.894	4.89			0.4	1
14) Acetone	(1)	3.355	(-0.000)	43	430645	36.345	36.34			3	10
23) Methylene Chloride	(2)	3.958	(0.000)	84	254135	4.279	4.28			0.2	1
31) trans-1,2-Dichloroethene	(2)	4.360	(0.000)	96	246824	4.836	4.84			0.8	1
39) cis-1,2-Dichloroethene	(2)	5.872	(0.000)	96	281592	4.919	4.92			0.1	1
38) 2-Butanone	(1)	5.830	(0.000)	43	773937	37.963	37.96			1	10
49) Chloroform	(2)	6.366	(0.000)	83	480564	4.828	4.83			0.1	1
59) 1,2-Dichloroethane	(2)	7.153	(0.000)	62	356141	4.649	4.65			0.1	1
67) Trichloroethene	(2)	7.970	(-0.000)	95	266675	4.667	4.67			0.2	1
83) Toluene	(3)	9.610	(0.000)	92	653112	4.777	4.78			0.1	1
101) m+p-Xylene	(3)	11.249	(-0.000)	106	986350	9.537	9.54			0.1	0.5
104) o-Xylene	(3)	11.579	(-0.000)	106	486855	4.696	4.70			0.1	0.5
105) Xylene (Total)	(3)			106	1473205	14.232	14.23			0.2	3

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:25. Target 3.5 esignature user ID: msk07970

Data file: /chem2/HP16334.i/18apr19b.b/ga19s31.d Injection date and time: **19-APR-2018 21:32**
Data file Sample Info. Line: LCSG75;LCSG75;1;3;LCS;;DRAPERJK;;ga19b05; Instrument ID: **HP16334.i** Batch: **G181092AA**
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr19b.b/ga19b05.d**

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: **12026**
Calibration date and time (Last Method Edit): 19-APR-2018 21:26
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr19b.b/ga19c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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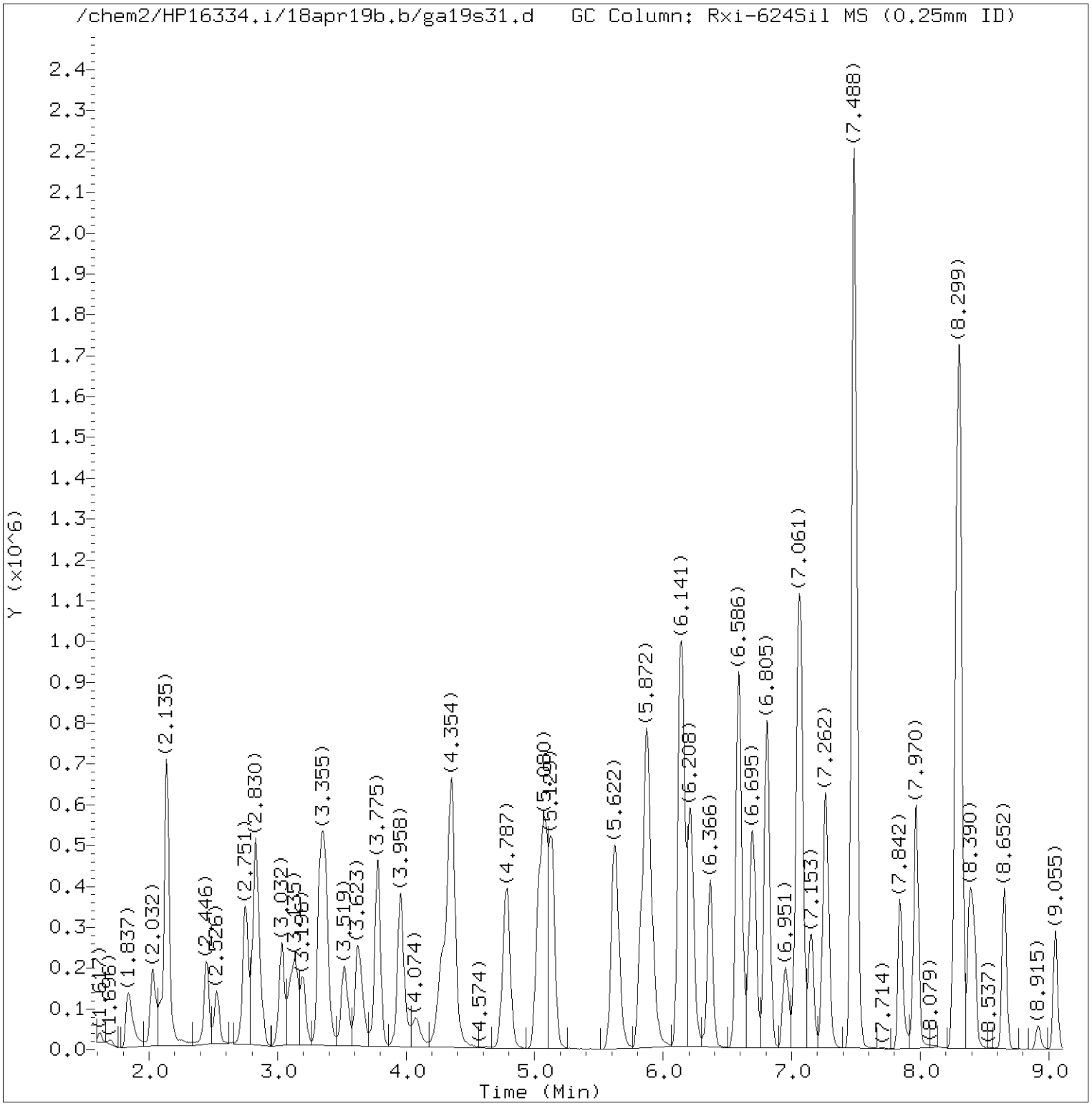
Total number of targets = 16

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:25. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

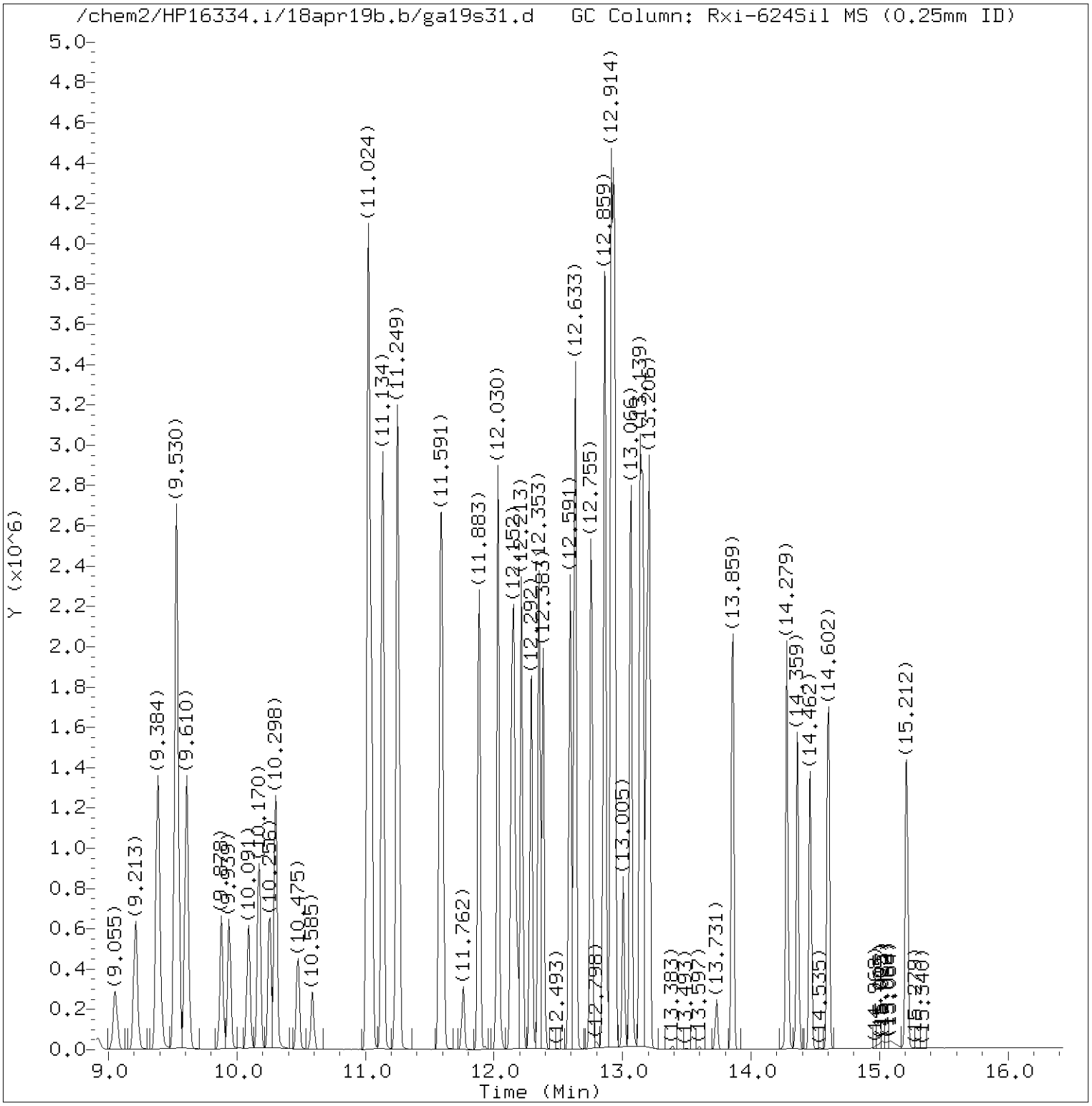
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s31.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

Sample Name: LCSG75 Lab Sample ID: LCSG75

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:25.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s31.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

Sample Name: LCSG75 Lab Sample ID: LCSG75

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:25.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19b.b/ga19s31.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

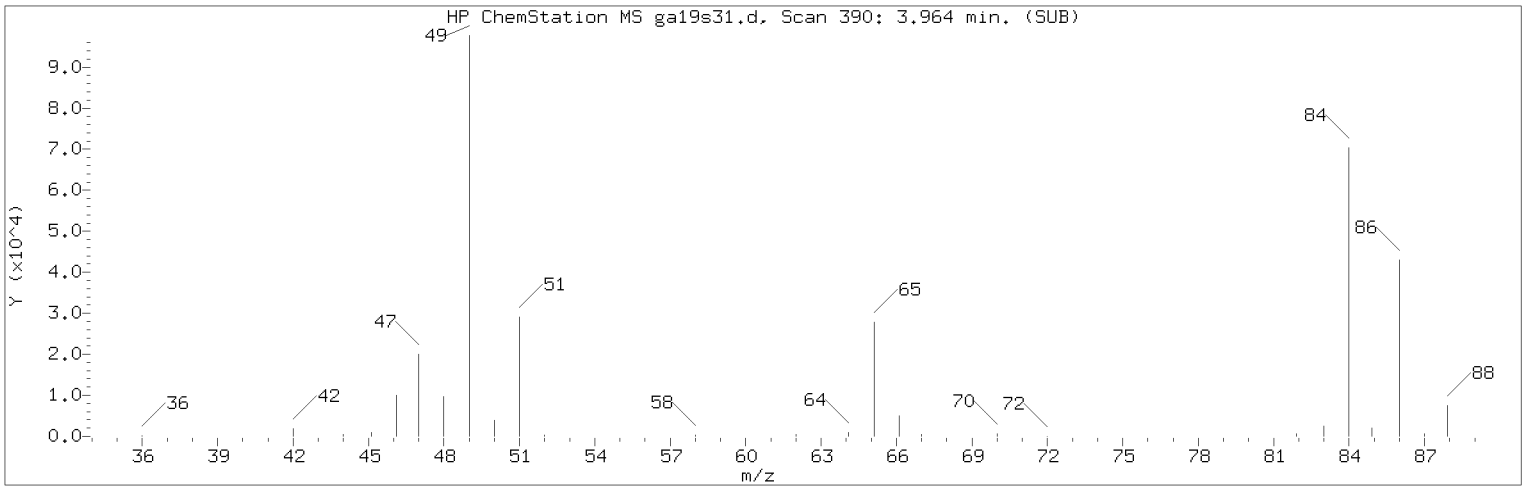
Sample Name: LCSG75 Lab Sample ID: LCSG75

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	302898	3.805
5) Vinyl Chloride	(2)	2.135	62	296276	4.308
11) Ethyl ether	(2)	3.032	59	228620	5.113
15) 1,1-Dichloroethene	(2)	3.330	96	214929	4.894
14) Acetone	(1)	3.355	43	430645	36.345
23) Methylene Chloride	(2)	3.958	84	254135	4.279
26)*t-Butyl Alcohol-d10	(1)	3.964	65	212266M	50.000
31) trans-1,2-Dichloroethene	(2)	4.361	96	246824	4.836
38) 2-Butanone	(1)	5.830	43	773937	37.963
39) cis-1,2-Dichloroethene	(2)	5.872	96	281592	4.919
49) Chloroform	(2)	6.366	83	480564	4.828
50)$Dibromofluoromethane	(2)	6.586	113	537632	10.075
57)$1,2-Dichloroethane-d4	(2)	7.043	102	114029	10.084
59) 1,2-Dichloroethane	(2)	7.153	62	356141	4.649
63)*Fluorobenzene	(2)	7.482	96	2122015	10.000
67) Trichloroethene	(2)	7.970	95	266675	4.667
82)$Toluene-d8	(3)	9.530	98	2148217	9.955
83) Toluene	(3)	9.610	92	653112	4.777
97)*Chlorobenzene-d5	(3)	11.018	117	1609072	10.000
101) m+p-Xylene	(3)	11.249	106	986350	9.537
104) o-Xylene	(3)	11.579	106	486855	4.696
105) Xylene (Total)	(3)		106	1473205	14.232
111)$4-Bromofluorobenzene	(3)	12.030	95	822784	9.961
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	917175	10.000

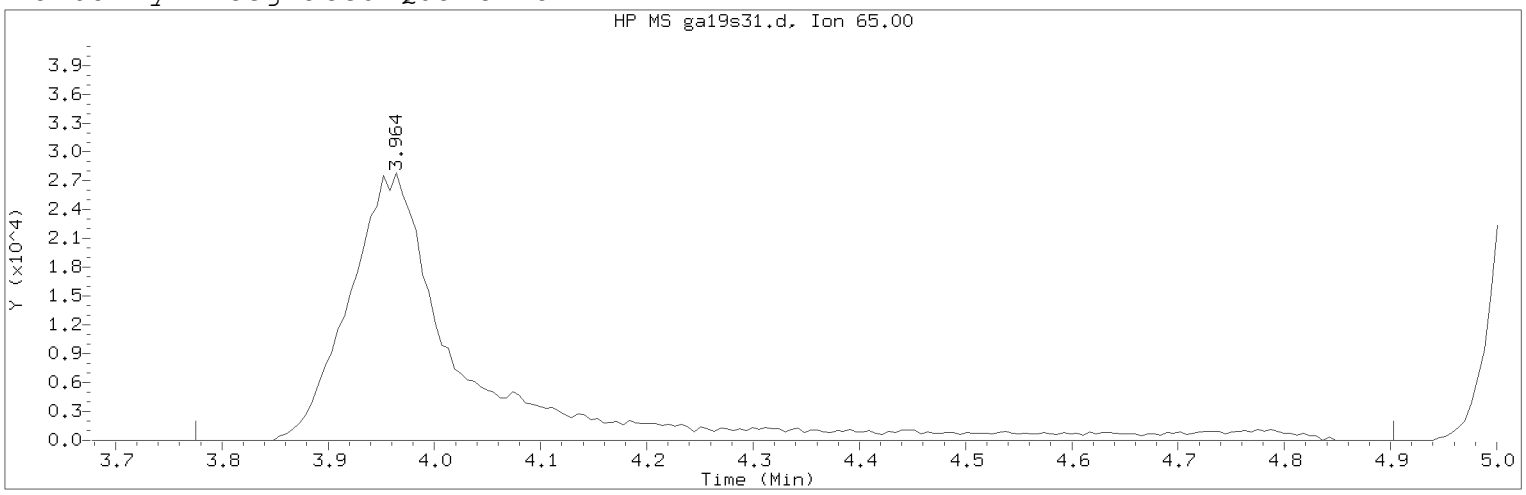
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:25.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19s31.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 22:24 msk07970

Sample Name: LCSG75 Lab Sample ID: LCSG75

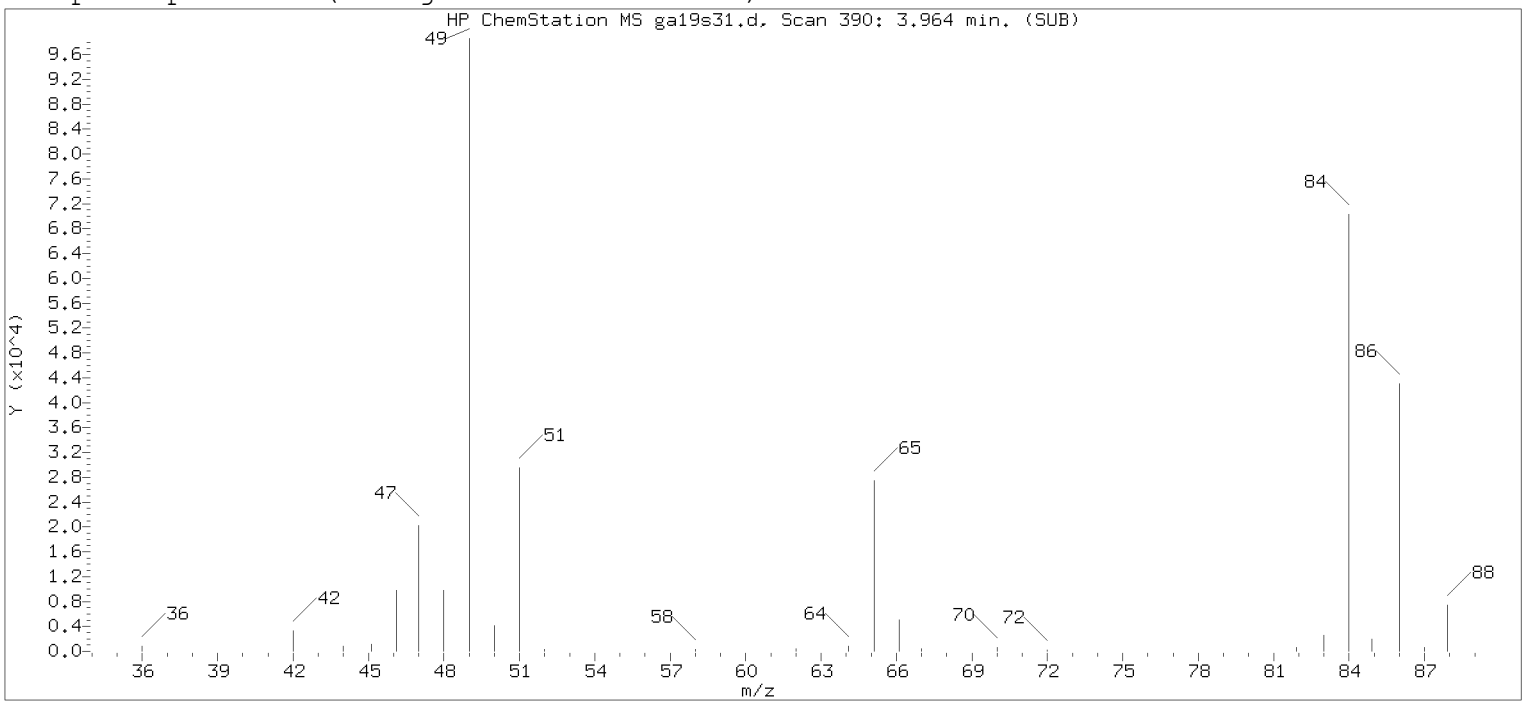
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 65.00
Area (flag) : 212266M
On-Column Amount (ng) : 50.0000
Integration start scan : 358 Integration stop scan: 543
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

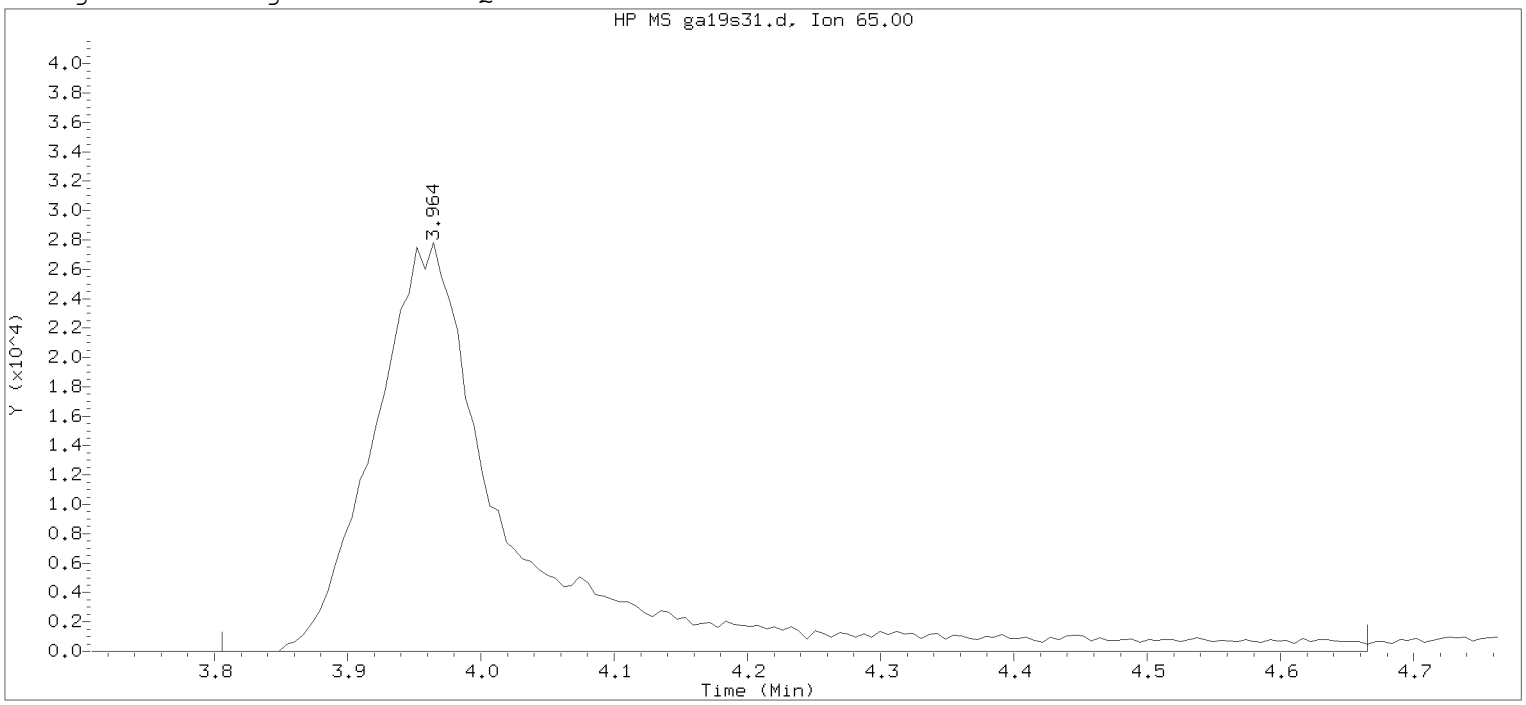
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 22:25.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/20/2018 at 17:56.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19b.b/ga19s31.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 21:32 Analyst ID: MSK07970

Method used: /chem2/HP16334.i/18apr19b.b/m8260c25.m Sublist used: 12026
Calibration date and time: 19-APR-2018 21:26
Date, time and analyst ID of latest file update: 19-Apr-2018 21:51 msk07970

Sample Name: LCSG75 Lab Sample ID: LCSG75

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 65.00
Area : 204239
On-column Amount (ng) : 50.0000
Integration start scan : 363 Integration stop scan: 504
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 22:25.
Target 3.5 esignature user name: mskrause

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9553120	5W5B	X		1	
9553121	5W7B	X		1	Unspiked
9553122	5W7B Matrix Spike	X		1	Matrix Spike
9553123	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9553124	5WC21	X		1	
9553125	5WDUP	X		1	Field Duplicate Sample
9553126	5WC22	X		1	
9553127	5WC23	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF04

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOAs 8270D MINI	18106WAB026	SBLKWB106	04/18/2018 22:02:00
		106WBLCS	04/18/2018 22:30:00
		9553120	04/19/2018 00:23:00
		9553121 UNSPK	04/19/2018 00:52:00
		9553122 MS	04/19/2018 01:20:00
		9553123 MSD	04/19/2018 01:48:00
		9553124	04/19/2018 02:16:00
		9553125	04/19/2018 02:44:00
		9553126	04/19/2018 03:12:00
		9553127	04/19/2018 03:40:00

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAF04
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18106WAB026 / SBLKWB106 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitrobenzene	04/18/18	N.D.	ug/l	1	5
2-Nitroaniline	04/18/18	N.D.	ug/l	1	5
2,6-Dinitrotoluene	04/18/18	N.D.	ug/l	1	5
2,4-Dinitrotoluene	04/18/18	N.D.	ug/l	1	5
Diethylphthalate	04/18/18	N.D.	ug/l	2	5
4-Nitroaniline	04/18/18	N.D.	ug/l	1	5
bis(2-Ethylhexyl)phthalate	04/18/18	N.D.	ug/l	2	5

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF04
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18106WAB026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWB106	66	39 - 105	84	30 - 111	98	27 - 116
106WBLCS	82	39 - 105	91	30 - 111	95	27 - 116
9553120	74	39 - 105	74	30 - 111	81	27 - 116
9553121 UNSPK	87	39 - 105	90	30 - 111	99	27 - 116
9553122 MS	86	39 - 105	92	30 - 111	48	27 - 116
9553123 MSD	89	39 - 105	96	30 - 111	49	27 - 116
9553124	71	39 - 105	73	30 - 111	41	27 - 116
9553125	81	39 - 105	84	30 - 111	32	27 - 116
9553126	84	39 - 105	86	30 - 111	49	27 - 116
9553127	82	39 - 105	83	30 - 111	75	27 - 116

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9553121 MS: 9553122 MSD: 9553123 **Analyte**	Batch: **18106WAB026** (Sample number(s): 9553120-9553127)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	50 / 50.2	N.D.	50.3	52.17	101	104	43-128	4	30
2-Nitroaniline	50 / 50.2	N.D.	52.24	54.43	104	108	54-133	4	30
2,6-Dinitrotoluene	50 / 50.2	N.D.	53.37	55.38	107	110	57-131	4	30
2,4-Dinitrotoluene	50 / 50.2	N.D.	49.83	53.3	100	106	56-128	7	30
Diethylphthalate	50 / 50.2	N.D.	43.97	45.08	88	90	42-124	3	30
4-Nitroaniline	50 / 50.2	N.D.	49.48	51.51	99	103	46-114	4	30
bis(2-Ethylhexyl)phthalate	50 / 50.2	N.D.	49.79	52.79	100	105	52-132	6	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF04
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 106WBLCS	Batch: **18106WAB026** (Sample number(s): 9553120-9553127)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitrobenzene	50	49.39	NA	99	NA	43-128	NA	NA
2-Nitroaniline	50	53.3	NA	107	NA	54-133	NA	NA
2,6-Dinitrotoluene	50	55.01	NA	110	NA	57-131	NA	NA
2,4-Dinitrotoluene	50	52.82	NA	106	NA	56-128	NA	NA
Diethylphthalate	50	43.96	NA	88	NA	42-124	NA	NA
4-Nitroaniline	50	49.65	NA	99	NA	46-114	NA	NA
bis(2-Ethylhexyl)phthalate	50	53.27	NA	107	NA	52-132	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0410z.d DFTPP Injection Date: 04/11/18

Instrument ID: HP20296 DFTPP Injection Time: 07:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.0
68	Less than 2.0% of mass 69	0.74 (1.64)1
69	Mass 69 relative abundance	45.4
70	Less than 2.0% of mass 69	0.27 (0.59)1
127	10.0 - 80.00% of mass 198	48.3
197	Less than 2.0% of mass 198	0.37
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.7
275	10.0 - 60.0% of mass 198	21.7
365	Greater than 1.00% of mass 198	2.06
441	Present, and less than mass 443	9.78
442	Greater than 50.00% of mass 198	64.0
443	15.00 - 24.00% of mass 442	12.0 (18.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0411a.d	04/11/18	07:59
02	rvSTD0968 - SSTD.125	ld0412.d	04/11/18	09:33
03	rvSTD0968 - SSTD30	ld0413.d	04/11/18	10:01
04	rvSTD0968 - SSTD20	ld0414.d	04/11/18	10:28
05	rvSTD0968 - SSTD12.5	ld0415.d	04/11/18	10:56
06	rvSTD0968 - SSTD3.75	ld0416.d	04/11/18	11:24
07	rvSTD0968 - SSTD1.25	ld0417.d	04/11/18	11:52
08	rvSTD0968 - SSTD.25	ld0418.d	04/11/18	12:20
09	rvMDL0968 - SSTD0.125	ld0419.d	04/11/18	12:47
10	rvPAHMDL0968 - SSTD0.025	ld0420.d	04/11/18	13:15
11	rvIVC0648 - SSTD12.5	ld0421.d	04/11/18	13:43
12	rvBASICV0648 - SSTD12.5	ld0422.d	04/11/18	14:11
13	ms1808526A - SSTD12.5	ld0423.d	04/11/18	14:39

FORM V SV

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0740.d DFTPP Injection Date: 04/18/18

Instrument ID: HP20296 DFTPP Injection Time: 19:15

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	49.2
68	Less than 2.0% of mass 69	0.73 (1.51)1
69	Mass 69 relative abundance	48.0
70	Less than 2.0% of mass 69	0.25 (0.51)1
127	10.0 - 80.00% of mass 198	47.6
197	Less than 2.0% of mass 198	1.02
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.78
275	10.0 - 60.0% of mass 198	22.5
365	Greater than 1.00% of mass 198	2.29
441	Present, and less than mass 443	9.87
442	Greater than 50.00% of mass 198	61.6
443	15.00 - 24.00% of mass 442	12.3 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0741.d	04/18/18	19:39
02	SBLKWJ107	ld0742.d	04/18/18	20:38
03	107WJLCS	ld0743.d	04/18/18	21:06
04	107WJLCSD	ld0744.d	04/18/18	21:34
05	SBLKWB106	ld0745.d	04/18/18	22:02
06	SBLKWW106	ld0745w.d	04/18/18	22:02
07	106WBLCS	ld0746.d	04/18/18	22:30
08	106WWLCS	ld0746w.d	04/18/18	22:30
09	9553721	ld0747.d	04/18/18	22:59
10	9553724	ld0748.d	04/18/18	23:27
11	9553727	ld0749.d	04/18/18	23:55
12	9553120	ld0750.d	04/19/18	00:23
13	9553121	ld0751.d	04/19/18	00:52
14	106WWUS	ld0751w.d	04/19/18	00:52
15	9553122MS	ld0752.d	04/19/18	01:20
16	106WWMSMS	ld0752w.d	04/19/18	01:20
17	9553123MSD	ld0753.d	04/19/18	01:48
18	106WWMSDMSD	ld0753w.d	04/19/18	01:48

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0740.d DFTPP Injection Date: 04/18/18

Instrument ID: HP20296 DFTPP Injection Time: 19:15

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	49.2
68	Less than 2.0% of mass 69	0.73 (1.51)1
69	Mass 69 relative abundance	48.0
70	Less than 2.0% of mass 69	0.25 (0.51)1
127	10.0 - 80.00% of mass 198	47.6
197	Less than 2.0% of mass 198	1.02
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.78
275	10.0 - 60.0% of mass 198	22.5
365	Greater than 1.00% of mass 198	2.29
441	Present, and less than mass 443	9.87
442	Greater than 50.00% of mass 198	61.6
443	15.00 - 24.00% of mass 442	12.3 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9553124	ld0754.d	04/19/18	02:16
20	9553125	ld0755.d	04/19/18	02:44
21	9553126	ld0756.d	04/19/18	03:12
22	9553127	ld0757.d	04/19/18	03:40
23	9551275	ld0758.d	04/19/18	04:08

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

Calibration Times: 07:59 12:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.711	0.564	0.661	0.648	0.660	0.678	0.654	8	AVG
N-Nitrosodimethylamine			0.917	0.920	1.011	1.025	1.040	1.059	0.995	6	AVG
Pyridine			1.781	1.662	1.751	1.779	1.824	1.859	1.776	4	AVG
2-Picoline			1.757	1.682	1.782	1.829	1.862	1.863	1.796	4	AVG
N-Nitrosomethylethylamine			0.707	0.664	0.720	0.733	0.749	0.745	0.720	4	AVG
Methyl methanesulfonate			0.866	0.821	0.870	0.883	0.890	0.901	0.872	3	AVG
N-Nitrosodiethylamine		0.473	0.663	0.647	0.702	0.718	0.739	0.731	0.668	14	AVG
Ethyl methanesulfonate		0.639	0.741	0.696	0.735	0.757	0.760	0.761	0.727	6	AVG
Benzaldehyde			1.299	1.300	1.416	1.382	1.398	1.356	1.358	4	AVG
Phenol		1.590	2.153	2.045	2.134	2.184	2.189	2.172	2.067	10	AVG
Aniline		1.732	2.461	2.344	2.497	2.536	2.567	2.545	2.383	12	AVG
a-methylstyrene			0.494	0.526	0.488	0.520	0.542	0.554	0.521	5	AVG
bis(2-Chloroethyl)ether		1.153	1.628	1.540	1.619	1.612	1.621	1.597	1.539	11	AVG
2-Chlorophenol		0.968	1.404	1.309	1.411	1.434	1.449	1.415	1.341	13	AVG
1,3-Dichlorobenzene		1.062	1.600	1.532	1.571	1.616	1.616	1.600	1.514	13	AVG
1,4-Dichlorobenzene		1.105	1.634	1.533	1.575	1.636	1.627	1.615	1.532	13	AVG
Benzyl alcohol			0.819	0.882	0.840	0.914	0.953	0.963	0.895	7	AVG
1,2-Dichlorobenzene		1.085	1.521	1.440	1.519	1.563	1.558	1.527	1.459	12	AVG
Indene			2.009	2.162	2.020	2.147	2.221	2.267	2.138	5	AVG
2-Methylphenol		1.055	1.370	1.300	1.356	1.390	1.399	1.387	1.322	9	AVG
2,2'-oxybis(1-Chloropropane)		1.745	2.374	2.155	2.223	2.270	2.273	2.250	2.184	9	AVG
bis(2-Chloroisopropyl)ether		1.745	2.374	2.155	2.223	2.270	2.273	2.250	2.184	9	AVG
N-Nitrosopyrrolidine		0.570	0.726	0.688	0.738	0.785	0.783	0.779	0.724	11	AVG
Acetophenone		1.168	2.050	2.010	2.224	2.222	2.203	2.238	2.017	19	AVG
4-Methylphenol		1.116	1.441	1.379	1.446	1.476	1.461	1.460	1.397	9	AVG
Total Cresols		1.085	1.405	1.340	1.401	1.433	1.430	1.423	1.360	9	AVG
N-Nitroso-di-n-propylamine		0.944	1.186	1.124	1.180	1.204	1.203	1.205	1.150	8	AVG
N-Nitrosomorpholine			0.959	0.912	0.970	0.983	0.973	0.968	0.961	3	AVG
o-Toluidine		1.807	2.484	2.324	2.415	2.470	2.461	2.411	2.339	10	AVG
Hexachloroethane			0.663	0.627	0.648	0.663	0.664	0.654	0.653	2	AVG
Nitrobenzene		0.336	0.456	0.433	0.455	0.472	0.462	0.465	0.440	11	AVG
N-Nitrosopiperidine		0.150	0.180	0.175	0.183	0.192	0.192	0.194	0.181	8	AVG
Isophorone		0.623	0.772	0.747	0.779	0.819	0.818	0.824	0.769	9	AVG
2-Nitrophenol		0.127	0.176	0.173	0.181	0.196	0.194	0.197	0.178	14	AVG
2,4-Dimethylphenol		0.304	0.392	0.370	0.393	0.405	0.403	0.400	0.381	9	AVG
O,O,O-Triethylphosphorothioat			0.194	0.179	0.185	0.191	0.192	0.191	0.189	3	AVG
bis(2-Chloroethoxy)methane		0.426	0.513	0.492	0.505	0.522	0.516	0.523	0.500	7	AVG
Benzoic acid			0.127	0.183	0.185	0.232	0.257	0.261	0.207	25	1STDEG
2,4-Dichlorophenol		0.225	0.302	0.286	0.307	0.322	0.318	0.317	0.297	11	AVG
1,2,4-Trichlorobenzene		0.260	0.346	0.322	0.337	0.353	0.348	0.347	0.331	10	AVG
Naphthalene	0.874	0.851	1.121	1.031	1.079	1.110	1.103	1.096	1.033	11	AVG
4-Chloroaniline		0.353	0.430	0.408	0.426	0.452	0.442	0.441	0.422	8	AVG
2,6-Dichlorophenol		0.238	0.295	0.289	0.301	0.314	0.311	0.309	0.294	9	AVG
Hexachloropropene			0.237	0.224	0.237	0.249	0.244	0.245	0.239	4	AVG
Hexachlorobutadiene		0.150	0.212	0.200	0.209	0.210	0.211	0.211	0.200	11	AVG
Quinoline			0.650	0.626	0.641	0.682	0.676	0.675	0.658	3	AVG
Caprolactam			0.092	0.087	0.095	0.098	0.092	0.094	0.093	4	AVG
N-Nitrosodi-n-butylamine			0.277	0.275	0.286	0.372	0.366	0.371	0.324	15	AVG
4-Chloro-3-methylphenol		0.250	0.324	0.319	0.335	0.351	0.350	0.349	0.326	11	AVG
Safrole			0.276	0.265	0.272	0.286	0.282	0.282	0.277	3	AVG
2-Methylnaphthalene	0.580	0.571	0.754	0.685	0.707	0.740	0.728	0.727	0.686	10	AVG
1-Methylnaphthalene	0.566	0.549	0.666	0.623	0.648	0.666	0.662	0.658	0.630	7	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

Calibration Times: 07:59 12:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.378	0.374	0.408	0.420	0.427	0.420	0.404	6	AVG
1,2,4,5-Tetrachlorobenzene		0.597	0.722	0.658	0.683	0.701	0.711	0.689	0.680	6	AVG
cis-Isosafrole			0.590	0.547	0.587	0.600	0.636		0.592	5	AVG
2,4,6-Trichlorophenol		0.323	0.414	0.412	0.436	0.455	0.475	0.474	0.427	12	AVG
2,4,5-Trichlorophenol		0.319	0.466	0.443	0.468	0.485	0.485	0.471	0.448	13	AVG
trans-Isosafrole			0.641	0.603	0.625	0.647	0.668		0.637	4	AVG
Isosafrole			0.632	0.593	0.618	0.639	0.662		0.629	4	AVG
1,1'-Biphenyl		1.061	1.764	1.590	1.721	1.689	1.693	1.703	1.603	15	AVG
2-Chloronaphthalene		1.126	1.471	1.356	1.331	1.343	1.433	1.477	1.362	9	AVG
1-Chloronaphthalene		1.184	1.331	1.225	1.270	1.319	1.309	1.184	1.260	5	AVG
Diphenyl ether		0.798	0.938	0.880	0.896	0.914	0.933	0.908	0.895	5	AVG
2-Nitroaniline		0.315	0.385	0.383	0.408	0.430	0.438	0.432	0.399	11	AVG
1,4-Naphthoquinone			0.500	0.505	0.534	0.564	0.572	0.555	0.538	6	AVG
1,4-Dinitrobenzene			0.184	0.191	0.228	0.218	0.225	0.225	0.212	9	AVG
Dimethylphthalate			1.590	1.494	1.507	1.555	1.567	1.443	1.526	4	AVG
1,3-Dinitrobenzene			0.208	0.220	0.202	0.240	0.252	0.239	0.227	9	AVG
2,6-Dinitrotoluene		0.239	0.319	0.323	0.334	0.348	0.357	0.350	0.324	12	AVG
Acenaphthylene	1.622	1.596	2.001	1.883	1.962	2.022	2.059	2.003	1.894	10	AVG
3-Nitroaniline		0.238	0.333	0.339	0.349	0.367	0.383	0.381	0.341	15	AVG
Acenaphthene	1.323	1.225	1.414	1.314	1.338	1.376	1.401	1.352	1.343	4	AVG
2,4-Dinitrophenol				0.163	0.179	0.205	0.218	0.209	0.195	12	AVG
4-Nitrophenol				0.220	0.235	0.249	0.254	0.246	0.241	6	AVG
Pentachlorobenzene		0.495	0.577	0.543	0.557	0.571	0.583	0.558	0.555	5	AVG
2,4-Dinitrotoluene			0.427	0.429	0.442	0.465	0.481	0.451	0.449	5	AVG
2,4_2,6-Dinitrotoluenes		0.275	0.373	0.376	0.388	0.406	0.419	0.400	0.377	13	AVG
Dibenzofuran		1.705	1.979	1.824	1.875	1.907	1.920	1.848	1.865	5	AVG
1-Naphthylamine				1.253	1.266	1.350	1.393	1.374	1.327	5	AVG
2,3,4,6-Tetrachlorophenol		0.238	0.344	0.351	0.357	0.376	0.391	0.385	0.349	15	AVG
2-Naphthylamine				1.167	1.168	1.286	1.330	1.337	1.258	7	AVG
Diethylphthalate			1.532	1.419	1.497	1.544	1.547	1.474	1.502	3	AVG
Thionazin			0.256	0.243	0.253	0.266	0.264	0.252	0.256	3	AVG
Fluorene	1.345	1.297	1.527	1.476	1.500	1.523	1.520	1.470	1.457	6	AVG
4-Chlorophenyl-phenylether		0.655	0.782	0.707	0.725	0.731	0.738	0.718	0.722	5	AVG
5-Nitro-o-toluidine		0.315	0.393	0.389	0.402	0.421	0.435	0.423	0.397	10	AVG
4-Nitroaniline		0.261	0.354	0.342	0.357	0.368	0.374	0.360	0.345	11	AVG
4,6-Dinitro-2-methylphenol				0.114	0.128	0.139	0.139	0.142	0.132	9	AVG
N-Nitrosodiphenylamine (1)		0.546	0.643	0.612	0.600	0.627	0.621	0.634	0.612	5	AVG
NDPA as diphenylamine		0.546	0.643	0.612	0.600	0.627	0.621	0.634	0.612	5	AVG
1,2-Diphenylhydrazine		0.754	0.903	0.843	0.855	0.889	0.861	0.873	0.854	6	AVG
Tetraethyldithiopyrophosphate			0.154	0.139	0.144	0.150	0.141	0.143	0.145	4	AVG
1,3,5-Trinitrobenzene				0.071	0.077	0.085	0.085	0.089	0.082	9	AVG
Diallate (peak 1)			0.398	0.374	0.382	0.392	0.388	0.386	0.387	2	AVG
Phorate		0.469	0.562	0.549	0.567	0.581	0.555	0.549	0.548	7	AVG
Phenacetin		0.266	0.388	0.379	0.400	0.430	0.414	0.429	0.387	15	AVG
4-Bromophenyl-phenylether		0.182	0.225	0.200	0.202	0.208	0.204	0.211	0.204	6	AVG
Diallate (peak 2)			0.300	0.309	0.307	0.311	0.304	0.306	0.306	1	AVG
Diallate trans/cis			0.381	0.363	0.369	0.378	0.374	0.372	0.373	2	AVG
Hexachlorobenzene	0.220	0.201	0.224	0.201	0.205	0.212	0.205	0.212	0.210	4	AVG
Dimethoate			0.304	0.314	0.332	0.347	0.335	0.344	0.330	5	AVG
Atrazine			0.225	0.204	0.215	0.206	0.194	0.197	0.207	5	AVG
Pentachlorophenol			0.113	0.115	0.123	0.139	0.138	0.143	0.129	10	AVG
4-Aminobiphenyl		0.562	0.724	0.677	0.700	0.756	0.718	0.740	0.697	9	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

Calibration Times: 07:59 12:20

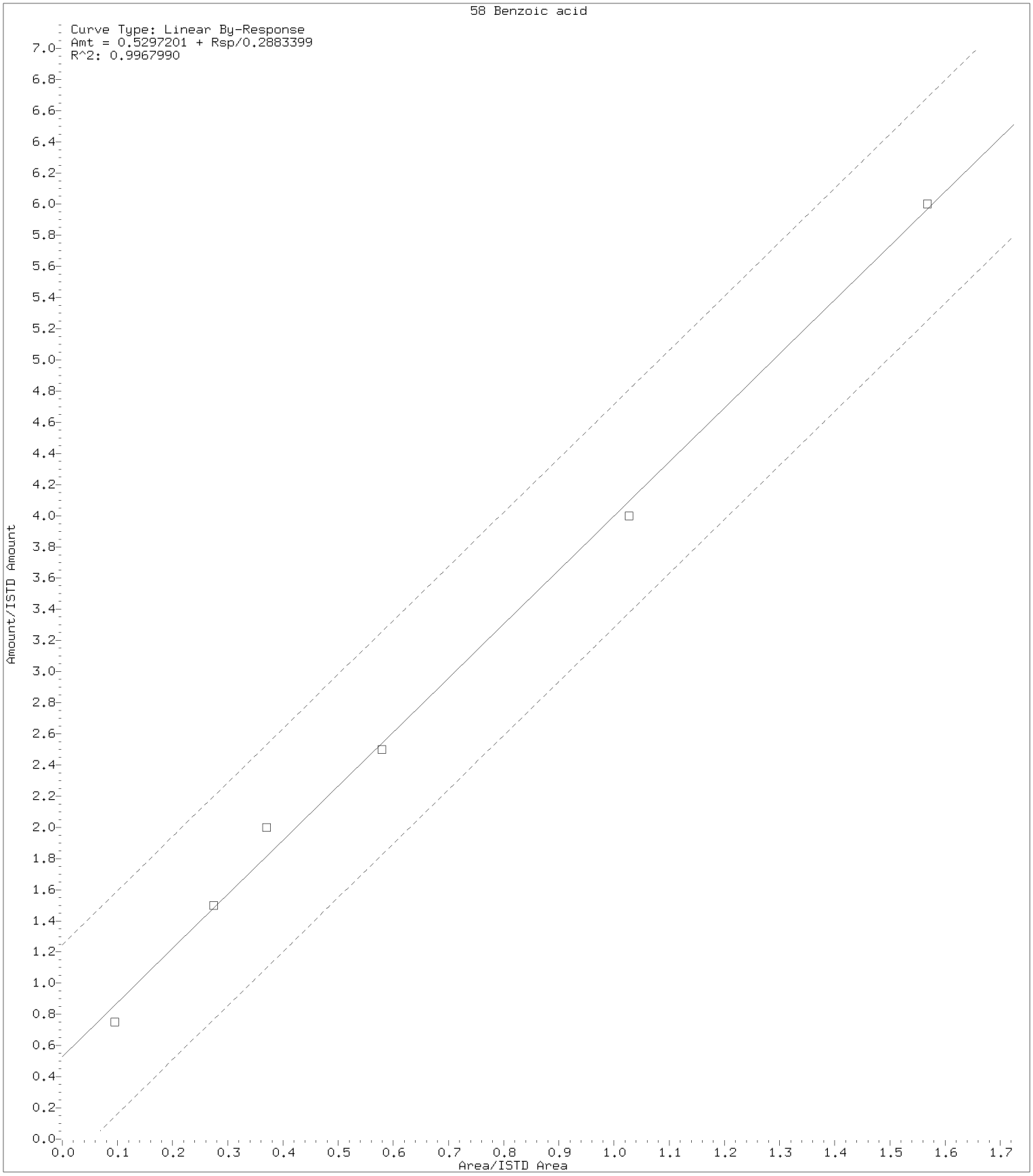
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	% RSD	CAL. METHOD
Pentachloronitrobenzene			0.094	0.095	0.099	0.105	0.103	0.105	0.100	5	AVG
Pronamide		0.251	0.340	0.343	0.362	0.378	0.367	0.374	0.345	13	AVG
Dinoseb			0.166	0.180	0.202	0.228	0.229	0.238	0.207	14	AVG
Phenanthrene	1.106	1.010	1.175	1.081	1.097	1.137	1.129	1.085	1.102	4	AVG
Anthracene	1.017	0.952	1.177	1.099	1.126	1.173	1.143	1.154	1.105	7	AVG
Carbazole		0.845	0.994	0.939	0.983	1.042	1.011	1.036	0.979	7	AVG
Methyl parathion			0.216	0.228	0.253	0.270	0.266	0.274	0.251	10	AVG
Di-n-butylphthalate			1.239	1.244	1.301	1.377	1.353	1.390	1.317	5	AVG
Parathion			0.134	0.146	0.160	0.176	0.176	0.183	0.163	12	AVG
4-Nitroquinoline-1-oxide				0.098	0.120	0.140	0.142	0.153	0.131	17	AVG
Octachlorostyrene			0.082	0.075	0.072	0.079	0.079	0.084	0.079	6	AVG
Isodrin		0.133	0.146	0.127	0.133	0.140	0.137	0.140	0.137	5	AVG
Fluoranthene	1.143	1.059	1.280	1.211	1.261	1.334	1.297	1.334	1.240	8	AVG
Benzidine				0.683	0.727	0.771	0.747	0.756	0.737	5	AVG
Pyrene	1.257	1.210	1.336	1.228	1.266	1.310	1.283	1.286	1.272	3	AVG
p-Dimethylaminoazobenzene		0.135	0.171	0.183	0.202	0.221	0.219	0.227	0.194	17	AVG
Chlorobenzilate			0.360	0.357	0.376	0.398	0.389	0.394	0.379	5	AVG
3,3'-Dimethylbenzidine			0.650	0.711	0.810	0.876	0.879	0.881	0.801	12	AVG
Butylbenzylphthalate			0.540	0.549	0.589	0.625	0.617	0.626	0.591	7	AVG
2-Acetylaminofluorene			0.383	0.413	0.463	0.512	0.509	0.526	0.468	13	AVG
3,3'-Dichlorobenzidine			0.363	0.370	0.409	0.437	0.434	0.440	0.409	9	AVG
4,4'-Methylenebis(2-chloroani				0.222	0.242	0.262	0.258	0.257	0.248	7	AVG
Benzo(a)anthracene	1.001	0.969	1.174	1.117	1.168	1.231	1.215	1.217	1.136	9	AVG
Chrysene	1.005	0.974	1.168	1.092	1.123	1.163	1.130	1.139	1.099	7	AVG
bis(2-Ethylhexyl)phthalate			0.749	0.770	0.828	0.888	0.881	0.894	0.835	8	AVG
6-Methylchrysene			0.758	0.717	0.761	0.797	0.792	0.818	0.774	5	AVG
Di-n-octylphthalate			1.325	1.428	1.546	1.732	1.696	1.706	1.572	11	AVG
Benzo(b)fluoranthene	1.118	1.057	1.276	1.201	1.233	1.322	1.282	1.318	1.226	8	AVG
7,12-Dimethylbenz[a]anthracen		0.384	0.471	0.489	0.525	0.565	0.551	0.555	0.506	13	AVG
Benzo(k)fluoranthene	1.061	1.087	1.265	1.185	1.186	1.257	1.215	1.186	1.180	6	AVG
Benzo(a)pyrene	0.951	0.938	1.140	1.076	1.129	1.214	1.178	1.198	1.103	10	AVG
3-Methylcholanthrene		0.466	0.515	0.500	0.543	0.581	0.569	0.579	0.536	8	AVG
Dibenz(a,h)acridine			0.918	0.860	0.915	0.980	0.969	0.983	0.937	5	AVG
Dibenz(a,j)acridine			0.911	0.892	0.940	1.003	0.983	0.984	0.952	5	AVG
Indeno(1,2,3-cd)pyrene	0.963	0.918	1.031	1.000	1.054	1.153	1.115	1.146	1.047	8	AVG
Dibenz(a,h)anthracene	0.913	0.912	1.110	1.023	1.102	1.172	1.135	1.145	1.064	10	AVG
Benzo(g,h,i)perylene	0.985	0.977	1.095	1.057	1.107	1.163	1.137	1.138	1.082	6	AVG
Total PAHs	1.002	0.963	1.124	1.057	1.088	1.152	1.112	1.096	1.074	6	AVG
2-Fluorophenol		0.993	1.396	1.337	1.434	1.465	1.479	1.479	1.369	13	AVG
Phenol-d6		1.364	1.857	1.776	1.840	1.912	1.917	1.901	1.795	11	AVG
Nitrobenzene-d5		0.338	0.446	0.423	0.441	0.461	0.456	0.454	0.431	10	AVG
2-Fluorobiphenyl		1.368	1.662	1.529	1.574	1.584	1.608	1.557	1.554	6	AVG
2,4,6-Tribromophenol		0.133	0.174	0.169	0.173	0.182	0.190	0.188	0.173	11	AVG
Terphenyl-d14		0.713	0.847	0.778	0.807	0.839	0.817	0.813	0.802	6	AVG

Average %RSD 8

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Ashley R. Transue on 04/11/2018 at 18:23.
Target 3.5 esignature user ID: art12405

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d SSTD7.5
/chem/HP20296.i/18apr11.b/ld0412.d SSTD0.125
/chem/HP20296.i/18apr11.b/ld0413.d SSTD30
/chem/HP20296.i/18apr11.b/ld0414.d SSTD20
/chem/HP20296.i/18apr11.b/ld0415.d SSTD12.5
/chem/HP20296.i/18apr11.b/ld0416.d SSTD3.75
/chem/HP20296.i/18apr11.b/ld0417.d SSTD1.25
/chem/HP20296.i/18apr11.b/ld0418.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	ld0411a.d	ld0412.d	ld0413.d	ld0414.d	ld0415.d	ld0416.d	ld0417.d	ld0418.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	219894	221518	207168	208633	211752	216786	201608	222764	213765	4	Yes
Naphthalene-d8	846035	870407	793995	806502	809630	836120	777233	854280	824275	4	Yes
Acenaphthene-d10	428686	427128	408206	404835	421078	423912	396437	434849	418141	3	Yes
Phenanthrene-d10	847675	822379	799312	834360	827854	834381	772431	841976	822546	3	Yes
Pyrene-d10	871904	846867	842063	853042	857466	864134	801267	858273	849377	3	Yes
Perylene-d12	795931	751073	782499	779313	765985	779658	727312	762938	768089	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ld0411a.d	ld0412.d	ld0413.d	ld0414.d	ld0415.d	ld0416.d	ld0417.d	ld0418.d	Avg. RT
1,4-Dichlorobenzene-d4	6.968	6.968	6.969	6.968	6.969	6.969	6.968	6.969	6.969
Naphthalene-d8	8.958	8.953	8.958	8.958	8.958	8.953	8.953	8.953	8.956
Acenaphthene-d10	11.788	11.788	11.793	11.793	11.793	11.788	11.788	11.788	11.790
Phenanthrene-d10	13.718	13.718	13.724	13.718	13.719	13.719	13.713	13.713	13.718
Pyrene-d10	15.778	15.772	15.778	15.778	15.778	15.778	15.772	15.772	15.776
Perylene-d12	20.377	20.378	20.383	20.378	20.378	20.378	20.378	20.378	20.378

Comments:_____

_____

Report generated on 04/11/2018 at 18:24

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP20296

Method: SW-846 8270D MINI | File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 | BATCH: 18APR11026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	14.73	18	30	YES
N-Nitrosodimethylamine	12.50	12.14	-3	30	YES
Pyridine	12.50	11.76	-6	30	YES
2-Picoline	12.50	11.79	-6	30	YES
N-Nitrosomethylethylamine	12.50	11.60	-7	30	YES
Methyl methanesulfonate	12.50	12.08	-3	30	YES
N-Nitrosodiethylamine	12.50	12.32	-1	30	YES
Ethyl methanesulfonate	12.50	12.05	-4	30	YES
Phenol	12.50	12.47	0	30	YES
Aniline	12.50	12.41	-1	30	YES
bis(2-Chloroethyl)ether	12.50	12.10	-3	30	YES
2-Chlorophenol	12.50	12.60	1	30	YES
1,3-Dichlorobenzene	12.50	12.48	0	30	YES
1,4-Dichlorobenzene	12.50	12.75	2	30	YES
Benzyl alcohol	12.50	13.62	9	30	YES
1,2-Dichlorobenzene	12.50	12.77	2	30	YES
Indene	12.50	15.33	23	30	YES
2-Methylphenol	12.50	12.35	-1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.20	-2	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.20	-2	30	YES
N-Nitrosopyrrolidine	12.50	12.23	-2	30	YES
Acetophenone	12.50	12.85	3	30	YES
4-Methylphenol	12.50	12.27	-2	30	YES
N-Nitroso-di-n-propylamine	12.50	12.27	-2	30	YES
N-Nitrosomorpholine	12.50	11.85	-5	30	YES
o-Toluidine	12.50	12.17	-3	30	YES
Total Cresols	25.00	24.62	-2	30	YES
Hexachloroethane	12.50	11.70	-6	30	YES
Nitrobenzene	12.50	12.30	-2	30	YES
N-Nitrosopiperidine	12.50	12.03	-4	30	YES
Isophorone	12.50	12.92	3	30	YES
2-Nitrophenol	12.50	13.04	4	30	YES
2,4-Dimethylphenol	12.50	11.00	-12	30	YES
bis(2-Chloroethoxy)methane	12.50	12.42	-1	30	YES
O,O,O-Triethylphosphorothio	12.50	12.15	-3	30	YES
2,4-Dichlorophenol	12.50	12.70	2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	12.62	1	30	YES
Naphthalene	12.50	12.56	0	30	YES
4-Chloroaniline	12.50	12.67	1	30	YES
2,6-Dichlorophenol	12.50	12.47	0	30	YES
Hexachloropropene	12.50	12.73	2	30	YES
Hexachlorobutadiene	12.50	12.54	0	30	YES
Quinoline	12.50	12.47	0	30	YES
N-Nitrosodi-n-butylamine	12.50	10.67	-15	30	YES
4-Chloro-3-methylphenol	12.50	12.98	4	30	YES
Safrole	12.50	12.04	-4	30	YES
2-Methylnaphthalene	12.50	12.70	2	30	YES
1-Methylnaphthalene	12.50	12.86	3	30	YES
Hexachlorocyclopentadiene	25.00	26.54	6	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.03	-4	30	YES
cis-Isosafrole	1.50	1.56	4	30	YES
2,4,6-Trichlorophenol	12.50	12.78	2	30	YES
2,4,5-Trichlorophenol	12.50	12.84	3	30	YES
trans-Isosafrole	11.00	11.08	1	30	YES
1,1'-Biphenyl	12.50	12.76	2	30	YES
2-Chloronaphthalene	12.50	12.43	-1	30	YES
Isosafrole	12.50	12.64	1	30	YES
2-Nitroaniline	12.50	12.57	1	30	YES
1,4-Naphthoquinone	15.63	15.52	-1	30	YES
1,4-Dinitrobenzene	12.50	12.17	-3	30	YES
Dimethylphthalate	12.50	11.91	-5	30	YES
1,3-Dinitrobenzene	12.50	12.62	1	30	YES
2,6-Dinitrotoluene	12.50	12.66	1	30	YES
Acenaphthylene	12.50	13.73	10	30	YES
3-Nitroaniline	12.50	12.99	4	30	YES
Acenaphthene	12.50	12.76	2	30	YES
2,4-Dinitrophenol	25.00	25.56	2	30	YES
4-Nitrophenol	12.50	12.14	-3	30	YES
Pentachlorobenzene	12.50	12.06	-4	30	YES
2,4-Dinitrotoluene	12.50	12.30	-2	30	YES
Dibenzofuran	12.50	12.18	-3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	24.96	0	30	YES
1-Naphthylamine	25.00	23.37	-7	30	YES
2-Naphthylamine	25.00	24.28	-3	30	YES
Diethylphthalate	12.50	11.96	-4	30	YES
Thionazin	12.50	12.26	-2	30	YES
Fluorene	12.50	12.17	-3	30	YES
4-Chlorophenyl-phenylether	12.50	11.81	-6	30	YES
5-Nitro-o-toluidine	12.50	12.81	3	30	YES
4-Nitroaniline	12.50	12.58	1	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.21	-2	30	YES
N-Nitrosodiphenylamine	12.50	11.99	-4	30	YES
NDPA as diphenylamine	12.50	11.99	-4	30	YES
1,2-Diphenylhydrazine	12.50	12.21	-2	30	YES
Tetraethyldithiopyrophospha	12.50	11.39	-9	30	YES
1,3,5-Trinitrobenzene	12.50	11.96	-4	30	YES
Diallate (peak 1)	9.38	8.16	-13	30	YES
Phorate	12.50	11.94	-4	30	YES
Phenacetin	12.50	12.59	1	30	YES
4-Bromophenyl-phenylether	12.50	11.38	-9	30	YES
Diallate (peak 2)	3.13	3.08	-2	30	YES
Hexachlorobenzene	12.50	11.40	-9	30	YES
Diallate trans/cis	12.50	11.23	-10	30	YES
Dimethoate	12.50	12.60	1	30	YES
Pentachlorophenol	12.50	13.24	6	30	YES
4-Aminobiphenyl	12.50	13.87	11	30	YES
Pentachloronitrobenzene	12.50	11.78	-6	30	YES
Pronamide	12.50	12.19	-3	30	YES
Dinoseb	12.50	12.08	-3	30	YES
Phenanthrene	12.50	12.01	-4	30	YES
Anthracene	12.50	12.18	-3	30	YES
Carbazole	12.50	12.58	1	30	YES
Methyl parathion	12.50	13.20	6	30	YES
Di-n-butylphthalate	12.50	12.13	-3	30	YES
Parathion	12.50	12.83	3	30	YES
4-Nitroquinoline-1-oxide	150.00	169.16	13	30	YES
Isodrin	12.50	11.50	-8	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	12.10	-3	30	YES
Benzidine	62.50	58.82	-6	30	YES
Pyrene	12.50	11.83	-5	30	YES
p-Dimethylaminoazobenzene	12.50	15.24	22	30	YES
Chlorobenzilate	12.50	12.54	0	30	YES
3,3'-Dimethylbenzidine	25.00	23.39	-6	30	YES
Butylbenzylphthalate	12.50	12.47	0	30	YES
2-Acetylaminofluorene	12.50	12.45	0	30	YES
3,3'-Dichlorobenzidine	12.50	12.79	2	30	YES
Benzo(a)anthracene	12.50	12.58	1	30	YES
Chrysene	12.50	12.26	-2	30	YES
4,4'-Methylenebis(2-chloroa	12.50	11.91	-5	30	YES
bis(2-Ethylhexyl)phthalate	12.50	12.59	1	30	YES
6-Methylchrysene	12.50	12.04	-4	30	YES
Di-n-octylphthalate	12.50	12.53	0	30	YES
Benzo(b)fluoranthene	12.50	12.23	-2	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	12.67	1	30	YES
Benzo(k)fluoranthene	12.50	12.24	-2	30	YES
Benzo(a)pyrene	12.50	12.56	1	30	YES
3-Methylcholanthrene	12.50	13.54	8	30	YES
Dibenz(a,h)acridine	12.50	12.00	-4	30	YES
Dibenz(a,j)acridine	12.50	10.98	-12	30	YES
Indeno(1,2,3-cd)pyrene	12.50	12.38	-1	30	YES
Dibenz(a,h)anthracene	12.50	12.75	2	30	YES
Benzo(g,h,i)perylene	12.50	11.97	-4	30	YES
Total PAHs	225.00	223.88	-1	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0422.d

ICV SAMPLE ID: rvBASICV0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	12.52	0	30	YES
Caprolactam	12.50	12.11	-3	30	YES
Atrazine	12.50	12.95	4	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0423.d

ICV SAMPLE ID: ms1808526A BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.15	-3	30	YES
Benzoic acid	25.00	26.54	6	30	YES
1-Chloronaphthalene	12.50	13.06	4	30	YES
Diphenyl ether	12.50	13.19	6	30	YES
2,3,4,6-Tetrachlorophenol	12.50	14.05	12	30	YES

NC = Could not calculate

Comments: _____

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/18/18 Time: 19:39

Lab File ID: ld0741.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.654	0.596	6.840	7.5	-9
N-Nitrosodimethylamine	0.995	0.946	7.130	7.5	-5
Pyridine	1.776	1.501	6.340	7.5	-15
2-Picoline	1.796	1.516	6.330	7.5	-16
N-Nitrosomethylethylamine	0.720	0.702	7.310	7.5	-3
Methyl methanesulfonate	0.872	0.883	7.590	7.5	1
N-Nitrosodiethylamine	0.668	0.672	7.550	7.5	1
Ethyl methanesulfonate	0.727	0.722	7.450	7.5	-1
Benzaldehyde	1.358	1.365	7.540	7.5	0
Phenol	2.067	2.127	7.720	7.5	3
Aniline	2.383	2.428	7.640	7.5	2
a-methylstyrene	0.521	0.476	6.850	7.5	-9
bis(2-Chloroethyl)ether	1.539	1.550	7.560	7.5	1
2-Chlorophenol	1.341	1.373	7.680	7.5	2
1,3-Dichlorobenzene	1.514	1.544	7.650	7.5	2
1,4-Dichlorobenzene	1.532	1.570	7.690	7.5	2
Benzyl alcohol	0.895	0.732	6.130	7.5	-18
1,2-Dichlorobenzene	1.459	1.508	7.750	7.5	3
Indene	2.138	1.949	6.840	7.5	-9
2-Methylphenol	1.322	1.366	7.750	7.5	3
2,2'-oxybis(1-Chloropropane)	2.184	2.358	8.090	7.5	8
bis(2-Chloroisopropyl)ether	2.184	2.358	8.090	7.5	8
N-Nitrosopyrrolidine	0.724	0.744	7.710	7.5	3
Acetophenone	2.016	2.138	7.950	7.5	6
4-Methylphenol	1.397	1.525	8.190	7.5	9
Total Cresols	1.360	1.446	15.940	15.0	6
N-Nitroso-di-n-propylamine	1.150	1.197	7.810	7.5	4
N-Nitrosomorpholine	0.961	0.929	7.260	7.5	-3
o-Toluidine	2.339	2.363	7.580	7.5	1
Hexachloroethane	0.653	0.635	7.290	7.5	-3
Nitrobenzene	0.440	0.474	8.090	7.5	8
N-Nitrosopiperidine	0.181	0.185	7.660	7.5	2
Isophorone	0.769	0.804	7.840	7.5	5
2-Nitrophenol	0.178	0.179	7.540	7.5	1
2,4-Dimethylphenol	0.381	0.395	7.770	7.5	4
O,O,O-Triethylphosphorothioate	0.189	0.190	7.550	7.5	1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/18/18 Time: 19:39

Lab File ID: ld0741.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.500	0.516	7.740	7.5	3
Benzoic acid	0.207	0.112	6.520	10.0	-35
2,4-Dichlorophenol	0.297	0.321	8.120	7.5	8
1,2,4-Trichlorobenzene	0.331	0.354	8.030	7.5	7
Naphthalene	1.033	1.085	7.880	7.5	5
4-Chloroaniline	0.422	0.432	7.690	7.5	3
2,6-Dichlorophenol	0.294	0.311	7.950	7.5	6
Hexachloropropene	0.239	0.253	7.920	7.5	6
Hexachlorobutadiene	0.200	0.221	8.280	7.5	10
Quinoline	0.658	0.650	7.400	7.5	-1
Caprolactam	0.093	0.099	7.950	7.5	6
N-Nitrosodi-n-butylamine	0.324	0.283	6.550	7.5	-13
4-Chloro-3-methylphenol	0.326	0.339	7.820	7.5	4
Safrole	0.277	0.277	7.490	7.5	0
2-Methylnaphthalene	0.686	0.718	7.850	7.5	5
1-Methylnaphthalene	0.630	0.651	7.750	7.5	3
Hexachlorocyclopentadiene	0.404	0.425	7.880	7.5	5
1,2,4,5-Tetrachlorobenzene	0.680	0.716	7.890	7.5	5
cis-Isosafrole	0.592	0.599	1.290	1.3	1
2,4,6-Trichlorophenol	0.427	0.459	8.060	7.5	7
2,4,5-Trichlorophenol	0.448	0.476	7.970	7.5	6
trans-Isosafrole	0.637	0.647	6.320	6.2	2
Isosafrole	0.629	0.639	7.610	7.5	2
1,1'-Biphenyl	1.603	1.755	8.210	7.5	9
2-Chloronaphthalene	1.362	1.387	7.640	7.5	2
1-Chloronaphthalene	1.260	1.267	7.540	7.5	1
Diphenyl ether	0.895	0.935	7.830	7.5	4
2-Nitroaniline	0.399	0.400	7.520	7.5	0
1,4-Naphthoquinone	0.538	0.533	7.430	7.5	-1
1,4-Dinitrobenzene	0.212	0.202	7.160	7.5	-4
Dimethylphthalate	1.526	1.543	7.580	7.5	1
1,3-Dinitrobenzene	0.227	0.233	7.700	7.5	3
2,6-Dinitrotoluene	0.324	0.341	7.890	7.5	5
Acenaphthylene	1.894	1.998	7.920	7.5	6
3-Nitroaniline	0.341	0.353	7.750	7.5	3
Acenaphthene	1.343	1.360	7.600	7.5	1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/18/18 Time: 19:39

Lab File ID: ld0741.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.195	0.178	9.130	10.0	-9
4-Nitrophenol	0.241	0.227	7.070	7.5	-6
Pentachlorobenzene	0.555	0.586	7.920	7.5	6
2,4-Dinitrotoluene	0.449	0.446	7.450	7.5	-1
2,4_2,6-Dinitrotoluenes	0.377	0.393	15.330	15.0	2
Dibenzofuran	1.865	1.917	7.710	7.5	3
1-Naphthylamine	1.327	1.320	7.460	7.5	-1
2,3,4,6-Tetrachlorophenol	0.349	0.380	8.170	7.5	9
2-Naphthylamine	1.258	1.275	7.600	7.5	1
Diethylphthalate	1.502	1.512	7.550	7.5	1
Thionazin	0.256	0.250	7.330	7.5	-2
Fluorene	1.457	1.528	7.860	7.5	5
4-Chlorophenyl-phenylether	0.722	0.760	7.890	7.5	5
5-Nitro-o-toluidine	0.397	0.409	7.720	7.5	3
4-Nitroaniline	0.345	0.371	8.070	7.5	8
4,6-Dinitro-2-methylphenol	0.132	0.116	6.600	7.5	-12
N-Nitrosodiphenylamine (1)	0.612	0.607	7.440	7.5	-1
NDPA as diphenylamine	0.612	0.608	7.450	7.5	-1
1,2-Diphenylhydrazine	0.854	0.866	7.600	7.5	1
Tetraethyldithiopyrophosphate	0.145	0.150	7.730	7.5	3
1,3,5-Trinitrobenzene	0.082	0.078	7.210	7.5	-4
Diallate (peak 1)	0.387	0.374	6.030	6.2	-3
Phorate	0.548	0.781	10.700	7.5	43
Phenacetin	0.387	0.402	7.810	7.5	4
4-Bromophenyl-phenylether	0.204	0.204	7.480	7.5	0
Diallate (peak 2)	0.306	0.321	1.340	1.3	5
Diallate trans/cis	0.373	0.365	7.370	7.5	-2
Hexachlorobenzene	0.210	0.211	7.530	7.5	0
Dimethoate	0.330	0.323	7.360	7.5	-2
Atrazine	0.207	0.217	7.870	7.5	5
Pentachlorophenol	0.129	0.119	6.920	7.5	-8
4-Aminobiphenyl	0.697	0.697	7.500	7.5	0
Pentachloronitrobenzene	0.100	0.105	7.880	7.5	5
Pronamide	0.345	0.360	7.810	7.5	4
Dinoseb	0.207	0.181	6.550	7.5	-13
Phenanthrene	1.102	1.108	7.540	7.5	0

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/18/18 Time: 19:39

Lab File ID: ld0741.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.105	1.139	7.730	7.5	3
Carbazole	0.979	1.014	7.770	7.5	4
Methyl parathion	0.251	0.248	7.400	7.5	-1
Di-n-butylphthalate	1.317	1.295	7.380	7.5	-2
Parathion	0.163	0.159	7.320	7.5	-2
4-Nitroquinoline-1-oxide	0.131	0.083	4.790	7.5	-36
Octachlorostyrene	0.079	0.076	7.220	7.5	-4
Isodrin	0.137	0.138	7.600	7.5	1
Fluoranthene	1.240	1.305	7.890	7.5	5
Benzidine	0.737	0.718	21.920	22.5	-3
Pyrene	1.272	1.254	7.390	7.5	-1
p-Dimethylaminoazobenzene	0.194	0.196	7.590	7.5	1
Chlorobenzilate	0.379	0.369	7.300	7.5	-3
3,3'-Dimethylbenzidine	0.801	0.779	7.290	7.5	-3
Butylbenzylphthalate	0.591	0.571	7.250	7.5	-3
2-Acetylaminofluorene	0.468	0.463	7.420	7.5	-1
3,3'-Dichlorobenzidine	0.409	0.421	7.730	7.5	3
4,4'-Methylenebis(2-chloroanil	0.248	0.248	7.500	7.5	0
Benzo(a)anthracene	1.136	1.189	7.850	7.5	5
Chrysene	1.099	1.150	7.840	7.5	5
bis(2-Ethylhexyl)phthalate	0.835	0.826	7.420	7.5	-1
6-Methylchrysene	0.774	0.774	7.500	7.5	0
Di-n-octylphthalate	1.572	1.481	7.060	7.5	-6
Benzo(b)fluoranthene	1.226	1.254	7.670	7.5	2
7,12-Dimethylbenz[a]anthracene	0.506	0.495	7.340	7.5	-2
Benzo(k)fluoranthene	1.180	1.186	7.530	7.5	0
Benzo(a)pyrene	1.103	1.141	7.760	7.5	3
3-Methylcholanthrene	0.536	0.541	7.570	7.5	1
Dibenz(a,h)acridine	0.937	0.938	7.510	7.5	0
Dibenz(a,j)acridine	0.952	0.935	7.360	7.5	-2
Indeno(1,2,3-cd)pyrene	1.048	1.095	7.840	7.5	5
Dibenz(a,h)anthracene	1.064	1.118	7.880	7.5	5
Benzo(g,h,i)perylene	1.082	1.117	7.740	7.5	3
Total PAHs	1.074	1.030	139.510	135.0	3
2-Fluorophenol	1.369	1.395	15.280	15.0	2

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/18/18 Time: 19:39

Lab File ID: ld0741.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.795	1.807	15.100	15.0	1
Nitrobenzene-d5	0.431	0.465	16.170	15.0	8
2-Fluorobiphenyl	1.554	1.607	15.510	15.0	3
2,4,6-Tribromophenol	0.173	0.191	16.590	15.0	11
Terphenyl-d14	0.802	0.814	15.230	15.0	2
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d **
/chem/HP20296.i/18apr11.b/ld0412.d
/chem/HP20296.i/18apr11.b/ld0413.d
/chem/HP20296.i/18apr11.b/ld0414.d
/chem/HP20296.i/18apr11.b/ld0415.d
/chem/HP20296.i/18apr11.b/ld0416.d
/chem/HP20296.i/18apr11.b/ld0417.d
/chem/HP20296.i/18apr11.b/ld0418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18apr18a.b/ld0741.d

Area Summary

File ID:

Internal Standard Name	ld0741.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	194220	219894	109947	439788	Yes
Naphthalene-d8	714477	846035	423018	1692070	Yes
Acenaphthene-d10	363882	428686	214343	857372	Yes
Phenanthrene-d10	736883	847675	423838	1695350	Yes
Pyrene-d10	799510	871904	435952	1743808	Yes
Perylene-d12	775587	795931	397966	1591862	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ld0741.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.672	6.968	No
Naphthalene-d8	8.657	8.958	No
Acenaphthene-d10	11.491	11.788	No
Phenanthrene-d10	13.433	13.718	No
Pyrene-d10	15.428	15.778	No
Perylene-d12	19.953	20.377	No

(8)

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: (8) Column Maintenance AT12405

4/18/18

Report generated on 04/18/2018 at 20:15

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0741.d Date Analyzed: 04/18/18

Instrument ID: HP20296 Time Analyzed: 19:39

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	194220	6.672	714477	8.657	363882	11.491
UPPER LIMIT	388440	7.172	1428954	9.157	727764	11.991
LOWER LIMIT	97110	6.172	357239	8.157	181941	10.991
LLI SAMPLE NO.						
01 SBLKWJ107	158483	6.672	592531	8.657	298691	11.491
02 107WJLCS	151768	6.672	559272	8.657	286089	11.492
03 107WJLCSD	162358	6.677	608670	8.656	306525	11.491
04 SBLKWB106	154827	6.672	579016	8.651	293921	11.491
05 SBLKWW106	154827	6.672	579016	8.651	293921	11.491
06 106WBLCS	146083	6.672	558976	8.657	282546	11.491
07 106WWLCS	146083	6.672	558976	8.657	282546	11.491
08 9553721	158797	6.672	584496	8.657	292401	11.491
09 9553724	158973	6.672	596784	8.657	300322	11.491
10 9553727	156961	6.672	593249	8.656	293752	11.491
11 9553120	163104	6.672	598539	8.657	300607	11.491
12 106WWUS	168152	6.672	620654	8.656	308041	11.491
13 9553121	168152	6.672	620654	8.656	308041	11.491
14 106WWMS	154466	6.678	577615	8.657	294596	11.497
15 9553122MS	154466	6.678	577615	8.657	294596	11.497
16 106WWMSD	155152	6.678	570723	8.662	293553	11.497
17 9553123MSD	155152	6.678	570723	8.662	293553	11.497

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0741.d Date Analyzed: 04/18/18

Instrument ID: HP20296 Time Analyzed: 19:39

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	736883	13.433	799510	15.428	775587	19.953
UPPER LIMIT	1473766	13.933	1599020	15.928	1551174	20.453
LOWER LIMIT	368442	12.933	399755	14.928	387794	19.453
LLI SAMPLE NO.						
01 SBLKWJ107	607798	13.428	637534	15.423	623337	19.953
02 107WJLCS	564626	13.428	605079	15.423	604183	19.948
03 107WJLCSD	602943	13.427	653500	15.423	647102	19.947
04 SBLKWB106	588377	13.427	605277	15.417	603887	19.947
05 SBLKWW106	588377	13.427	605277	15.417	603887	19.947
06 106WBLCS	587846	13.428	602452	15.423	613985	19.948
07 106WWLCS	587846	13.428	602452	15.423	613985	19.948
08 9553721	594179	13.428	624139	15.423	610575	19.948
09 9553724	617500	13.428	641148	15.423	634501	19.969
10 9553727	596543	13.427	628162	15.422	615353	19.947
11 9553120	606862	13.428	626846	15.423	622014	19.948
12 106WWUS	619579	13.427	640829	15.423	627292	19.947
13 9553121	619579	13.427	640829	15.423	627292	19.947
14 106WWMS	608063	13.428	624346	15.428	630281	19.953
15 9553122MS	608063	13.428	624346	15.428	630281	19.953
16 106WWMSD	603040	13.428	609061	15.428	626004	19.953
17 9553123MSD	603040	13.428	609061	15.428	626004	19.953

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0741.d Date Analyzed: 04/18/18

Instrument ID: HP20296 Time Analyzed: 19:39

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	194220	6.672	714477	8.657	363882	11.491
UPPER LIMIT	388440	7.172	1428954	9.157	727764	11.991
LOWER LIMIT	97110	6.172	357239	8.157	181941	10.991
LLI SAMPLE NO.						
18 9553124	159267	6.672	600849	8.657	298139	11.491
19 9553125	160857	6.672	600189	8.657	294709	11.491
20 9553126	154759	6.672	574439	8.656	287165	11.491
21 9553127	154304	6.672	576628	8.657	289394	11.491
22 9551275	152473	6.672	567293	8.657	304402	11.491

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0741.d Date Analyzed: 04/18/18

Instrument ID: HP20296 Time Analyzed: 19:39

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	736883	13.433	799510	15.428	775587	19.953
UPPER LIMIT	1473766	13.933	1599020	15.928	1551174	20.453
LOWER LIMIT	368442	12.933	399755	14.928	387794	19.453
LLI SAMPLE NO.						
18 9553124	600895	13.428	630619	15.423	601471	19.948
19 9553125	589650	13.428	622987	15.423	599231	19.948
20 9553126	571152	13.427	598975	15.423	571613	19.947
21 9553127	577210	13.428	599968	15.423	570703	19.948
22 9551275	549475	13.433	649679	15.433	643820	19.964

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D MINI Analyte Name	Default MDL	Default LOQ	Units
Nitrobenzene	1	5	ug/l
2-Nitroaniline	1	5	ug/l
2,6-Dinitrotoluene	1	5	ug/l
2,4-Dinitrotoluene	1	5	ug/l
Diethylphthalate	2	5	ug/l
4-Nitroaniline	1	5	ug/l
bis(2-Ethylhexyl)phthalate	2	5	ug/l

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0750.d
Data file Sample Info. Line: R0402;9553120;1;0;SAMPLE;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Injection date and time: **19-APR-2018 00:23**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672	(0.000)	876	152	163104	(-16)	5.00	
68) Naphthalene-d8	8.657	(0.000)	1247	136	598539	(-16)	5.00	
118) Acenaphthene-d10	11.491	(0.000)	1777	164	300607	(-17)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	606862	(-18)	5.00	
180) Pyrene-d10	15.423	(0.005)	2512	212	626846	(-22)	5.00	
218) Perylene-d12	19.948	(0.005)	3358	264	622014	(-20)	5.00	

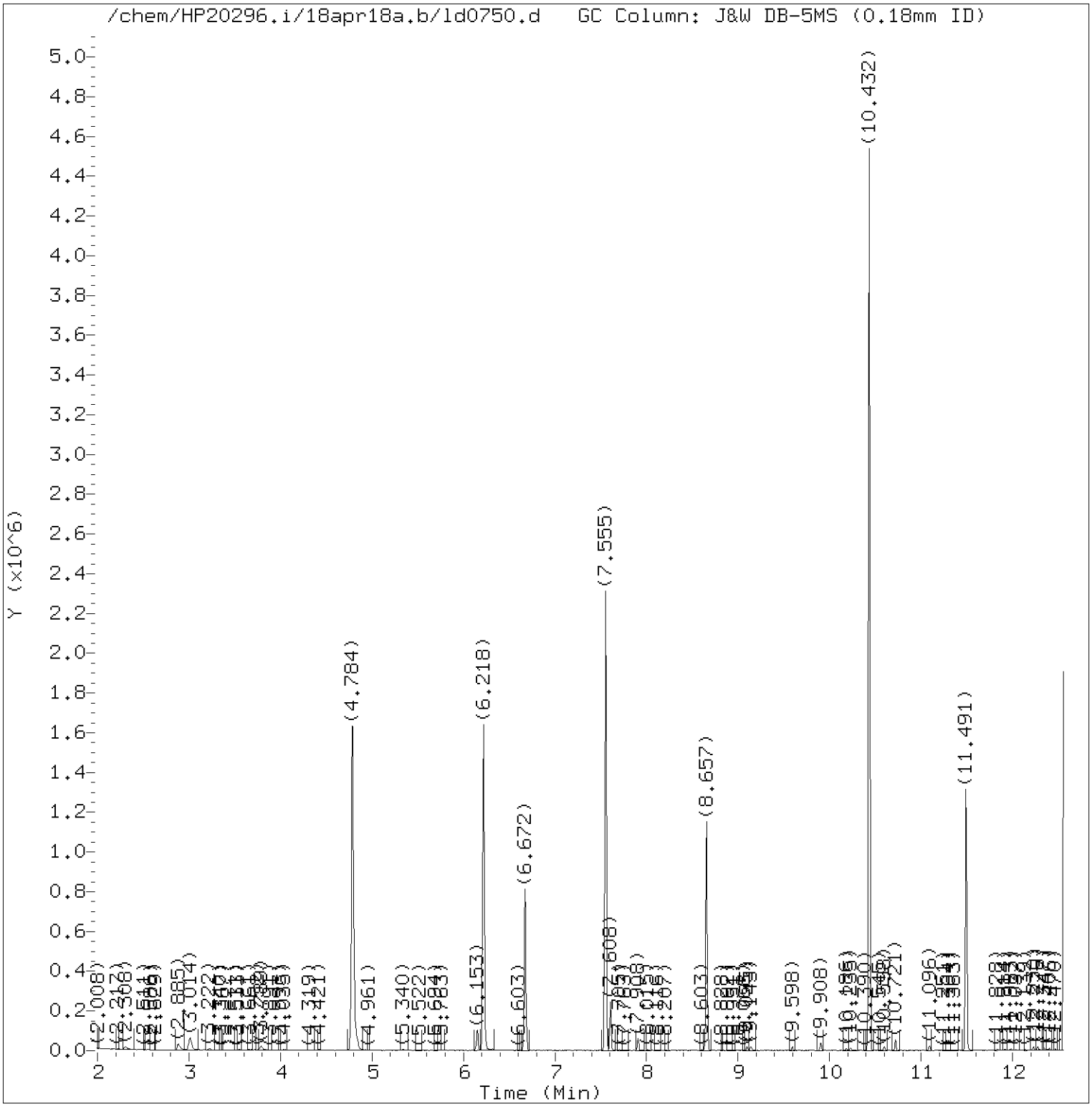
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555	(0.000)	82	959999	18.596	74%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432	(0.000)	172	1720485	18.410	74%		39 - 105
184) Terphenyl-d14	(5)	15.728	(0.000)	244	2026926	20.163	81%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)				Not Detected					0.2
104) 2-Nitroaniline	(3)				Not Detected					0.2
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
129) Diethylphthalate	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 09:59. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

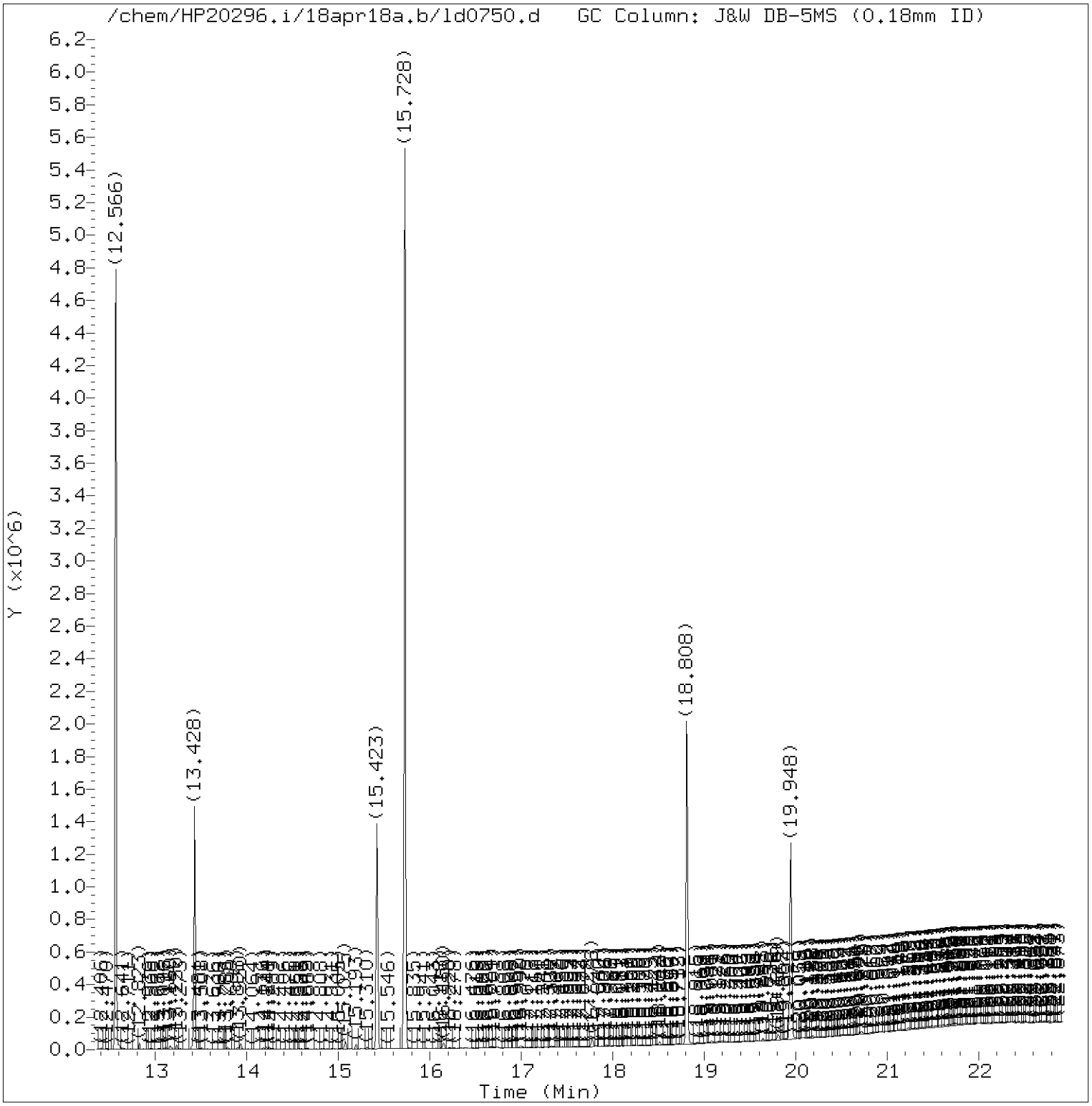
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0750.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:23 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0402 Lab Sample ID: 9553120

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0750.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:23 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0402 Lab Sample ID: 9553120

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0750.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:23 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0402 Lab Sample ID: 9553120

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	163104	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	959999	18.596
68)*Naphthalene-d8	(2)	8.657	136	598539	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1720485	18.410
118)*Acenaphthene-d10	(3)	11.491	164	300607	5.000
158)*Phenanthrene-d10	(4)	13.428	188	606862	5.000
180)*Pyrene-d10	(5)	15.423	212	626846	5.000
184)$Terphenyl-d14	(5)	15.728	244	2026926	20.163
218)*Perylene-d12	(6)	19.948	264	622014	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0751.d Injection date and time: **19-APR-2018 00:52**
Data file Sample Info. Line: R0403;9553121;1;0;SAMPLE;;DRAPERMINI; Instrument ID: **HP20296.i** Batch: **18106WAB**
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672	(0.000)	876	152	168152	(-13)	5.00	
68) Naphthalene-d8	8.656	(0.000)	1247	136	620654	(-13)	5.00	
118) Acenaphthene-d10	11.491	(0.000)	1777	164	308041	(-15)	5.00	
158) Phenanthrene-d10	13.427	(0.005)	2139	188	619579	(-16)	5.00	
180) Pyrene-d10	15.422	(0.005)	2512	212	640829	(-20)	5.00	
218) Perylene-d12	19.947	(0.005)	3358	264	627292	(-19)	5.00	

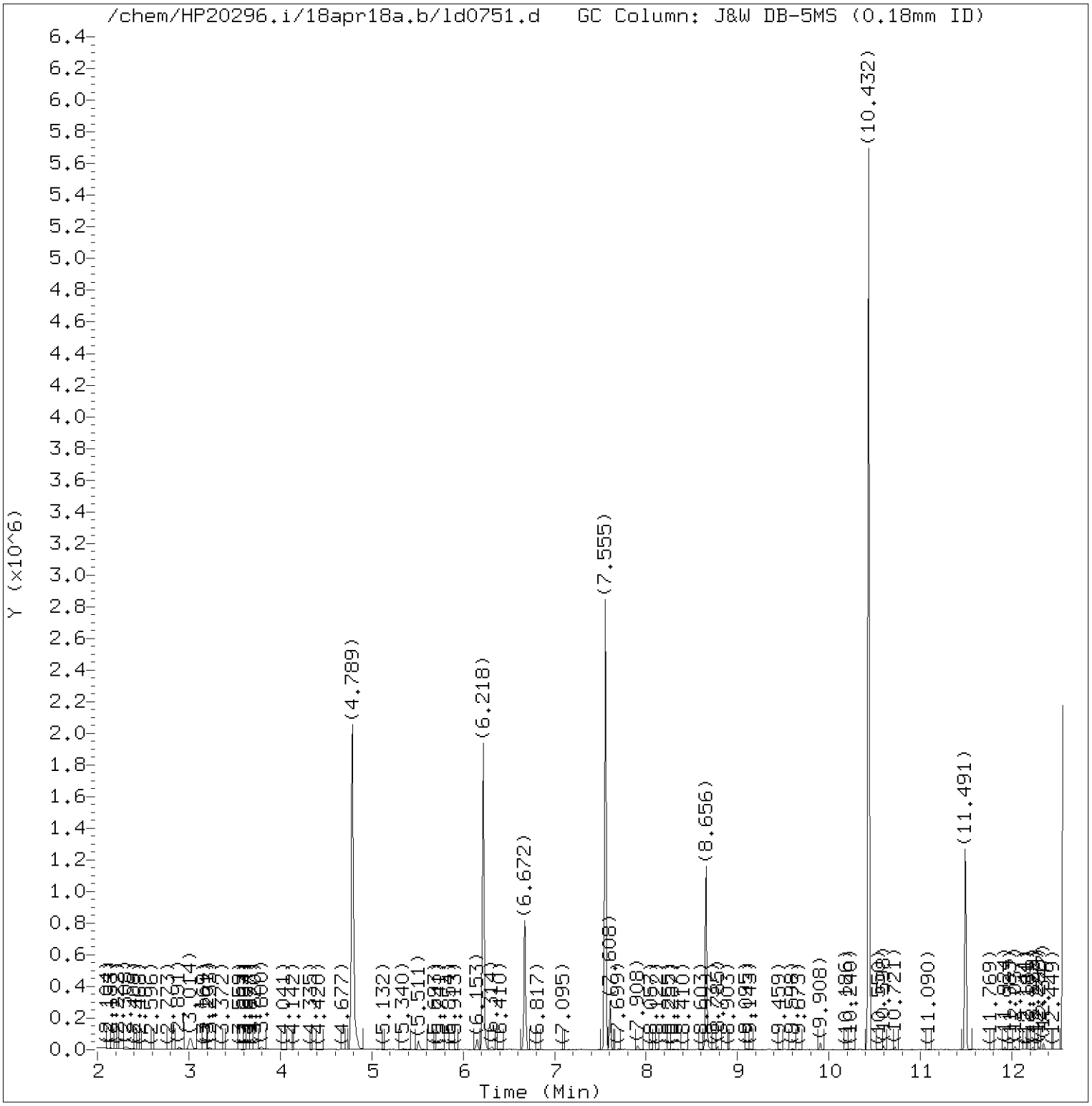
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555	(0.000)	82	1198120	22.382	90%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432	(0.000)	172	2072879	21.646	87%		39 - 105
184) Terphenyl-d14	(5)	15.727	(0.000)	244	2532151	24.639	99%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)				Not Detected					0.2
104) 2-Nitroaniline	(3)				Not Detected					0.2
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.2
129) Diethylphthalate	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 09:59. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

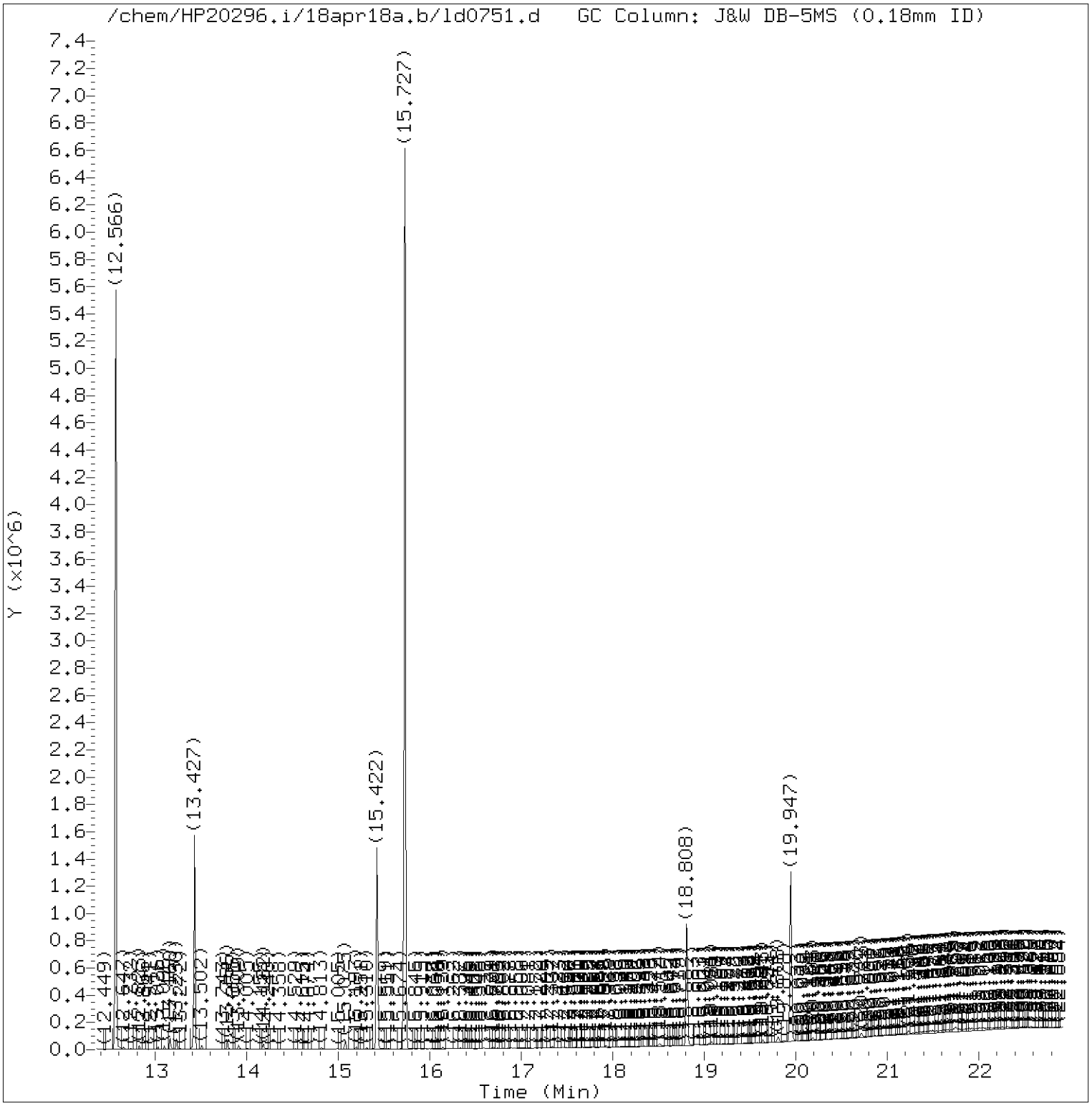
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0751.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:52 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0403 Lab Sample ID: 9553121

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0751.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:52 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0403 Lab Sample ID: 9553121

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0751.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 00:52 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0403 Lab Sample ID: 9553121

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	168152	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	1198120	22.382
68)*Naphthalene-d8	(2)	8.656	136	620654	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	2072879	21.646
118)*Acenaphthene-d10	(3)	11.491	164	308041	5.000
158)*Phenanthrene-d10	(4)	13.427	188	619579	5.000
180)*Pyrene-d10	(5)	15.422	212	640829	5.000
184)$Terphenyl-d14	(5)	15.727	244	2532151	24.639
218)*Perylene-d12	(6)	19.947	264	627292	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:59.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0754.d
Data file Sample Info. Line: R0404;9553124;1;0;SAMPLE;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Injection date and time: **19-APR-2018 02:16**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 241 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672	(0.000)	876	152	159267	(-18)	5.00	
68) Naphthalene-d8	8.657	(0.000)	1247	136	600849	(-16)	5.00	
118) Acenaphthene-d10	11.491	(0.000)	1777	164	298139	(-18)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	600895	(-18)	5.00	
180) Pyrene-d10	15.423	(0.005)	2512	212	630619	(-21)	5.00	
218) Perylene-d12	19.948	(0.005)	3358	264	601471	(-22)	5.00	

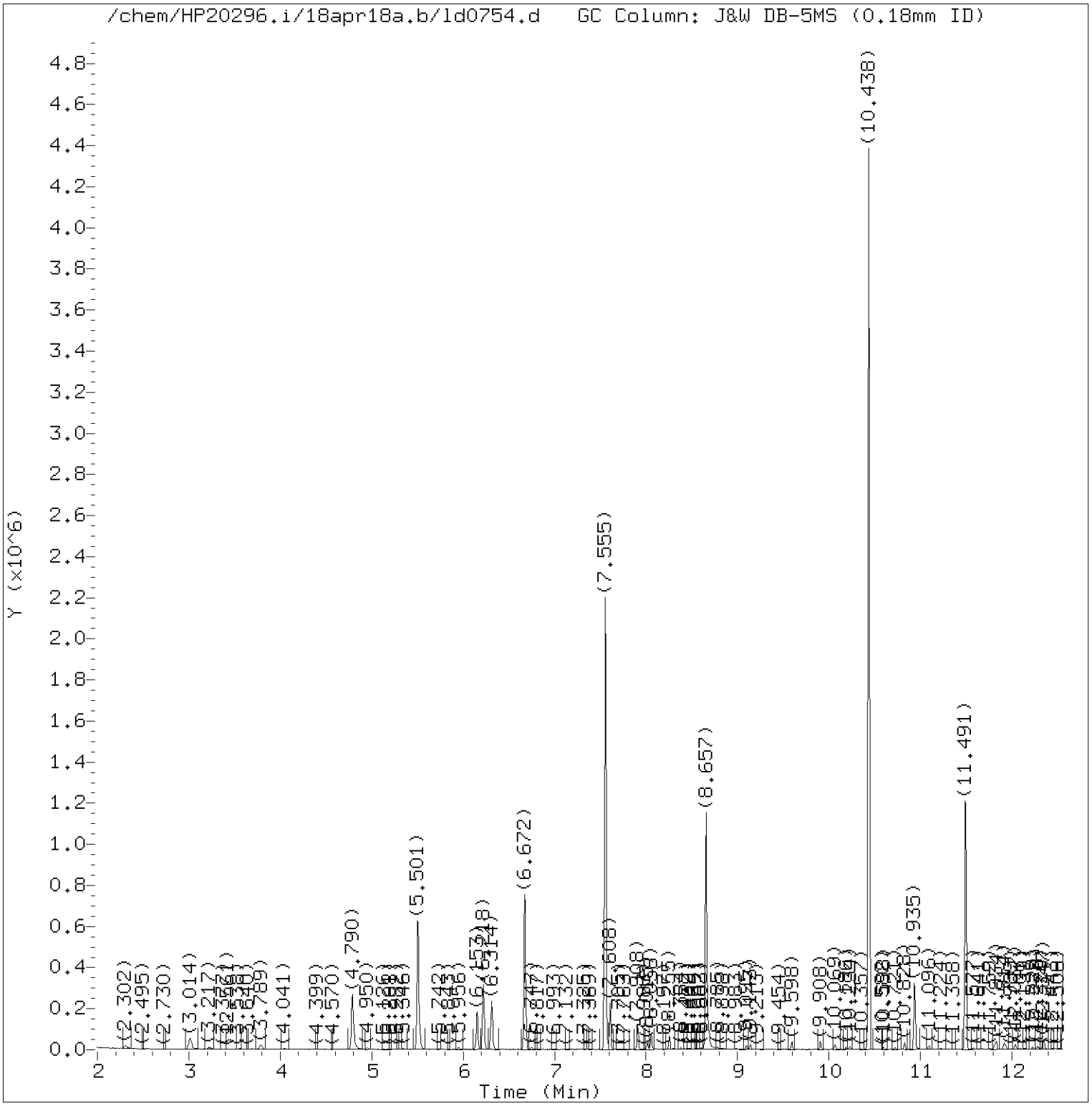
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555	(0.000)	82	947961	18.293	73%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.438	(0.000)	172	1646048	17.759	71%		39 - 105
184) Terphenyl-d14	(5)	15.727	(0.000)	244	1045515	10.338	41%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)				Not Detected					0.2
104) 2-Nitroaniline	(3)	10.828	(-0.000)	138	6307	0.265	1.10		J	0.2
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)	11.834	(0.000)	165	5048	0.189	0.78		J	0.2
129) Diethylphthalate	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

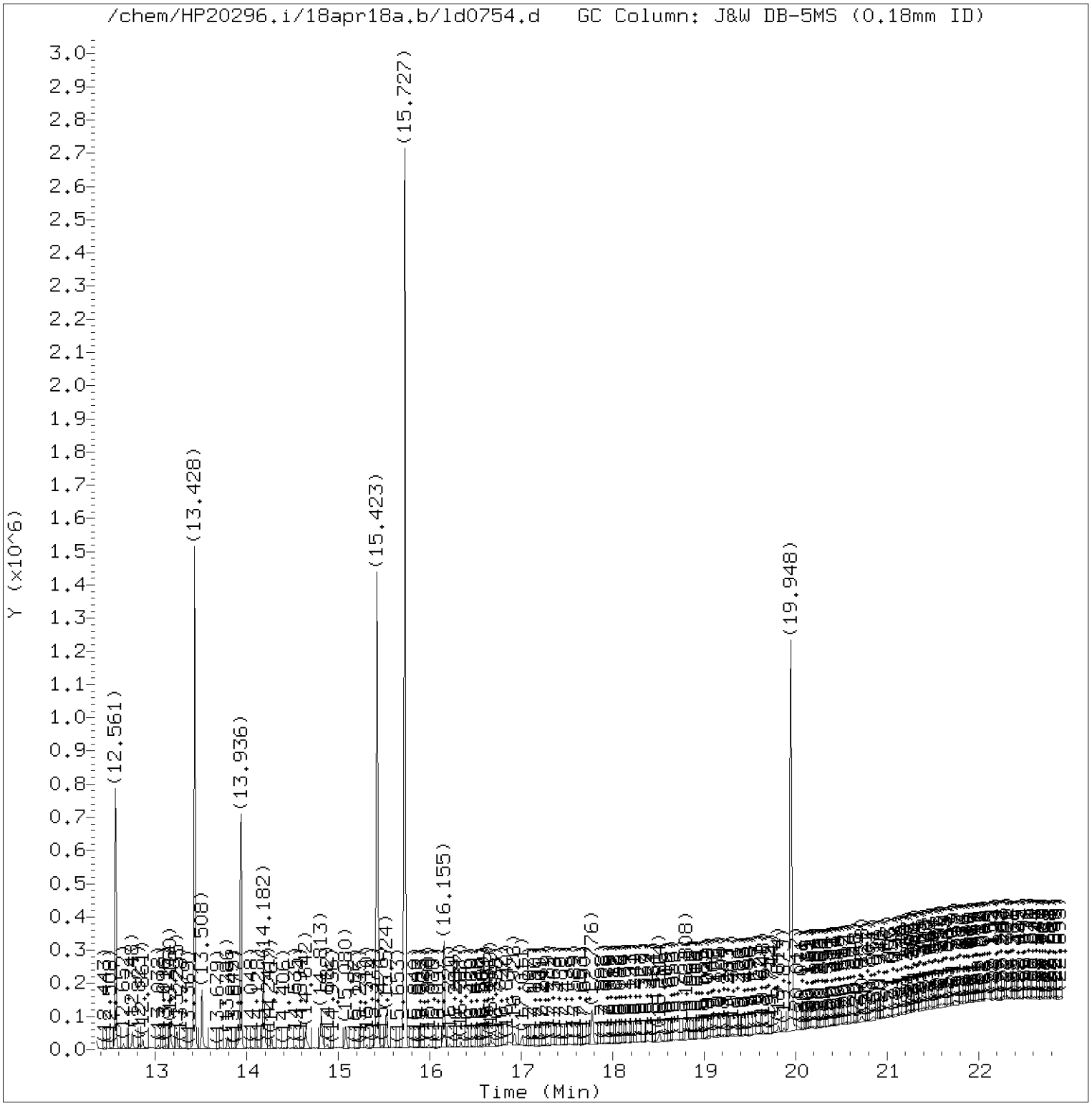
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0754.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:16 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0404 Lab Sample ID: 9553124

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0754.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:16 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0404 Lab Sample ID: 9553124

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0754.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:16 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

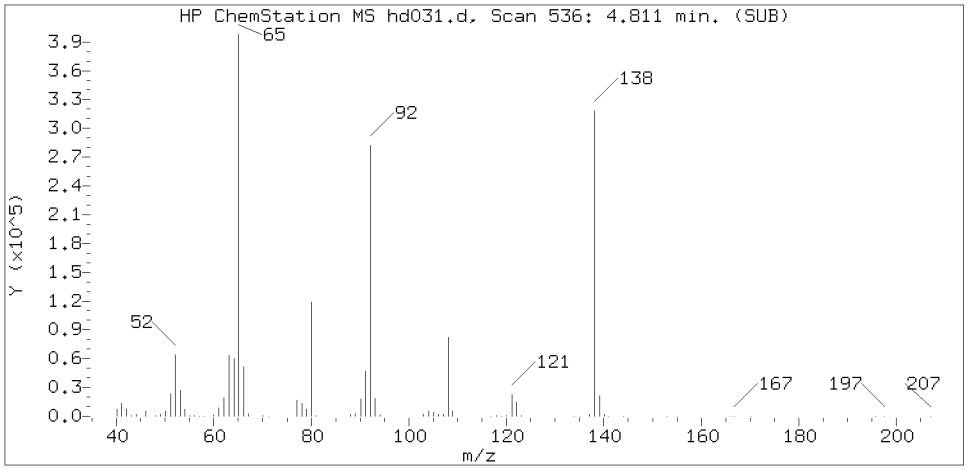
Sample Name: R0404 Lab Sample ID: 9553124

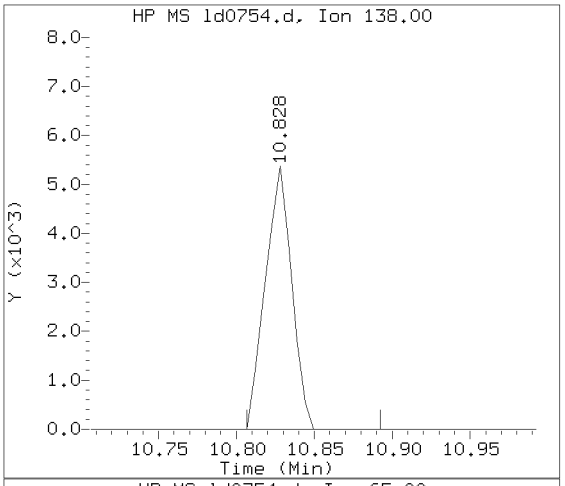
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	159267	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	947961	18.293
68)*Naphthalene-d8	(2)	8.657	136	600849	5.000
96)$2-Fluorobiphenyl	(3)	10.438	172	1646048	17.759
104) 2-Nitroaniline	(3)	10.828	138	6307	0.265
118)*Acenaphthene-d10	(3)	11.491	164	298139	5.000
123) 2,4-Dinitrotoluene	(3)	11.834	165	5048	0.189
158)*Phenanthrene-d10	(4)	13.428	188	600895	5.000
180)*Pyrene-d10	(5)	15.423	212	630619	5.000
184)$Terphenyl-d14	(5)	15.727	244	1045515	10.338
218)*Perylene-d12	(6)	19.948	264	601471	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

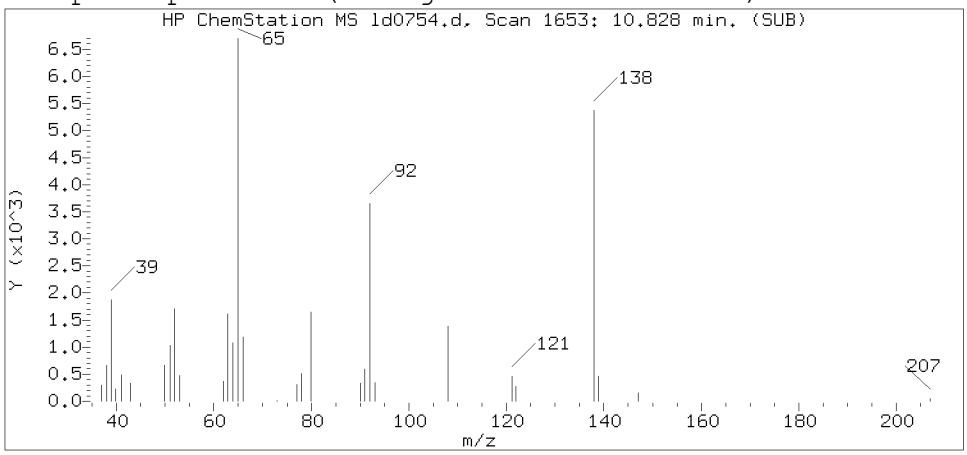
Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

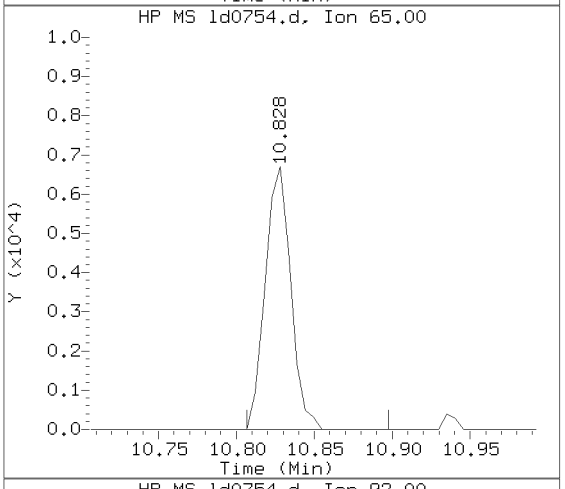
Reference Standard Spectrum for 2-Nitroaniline



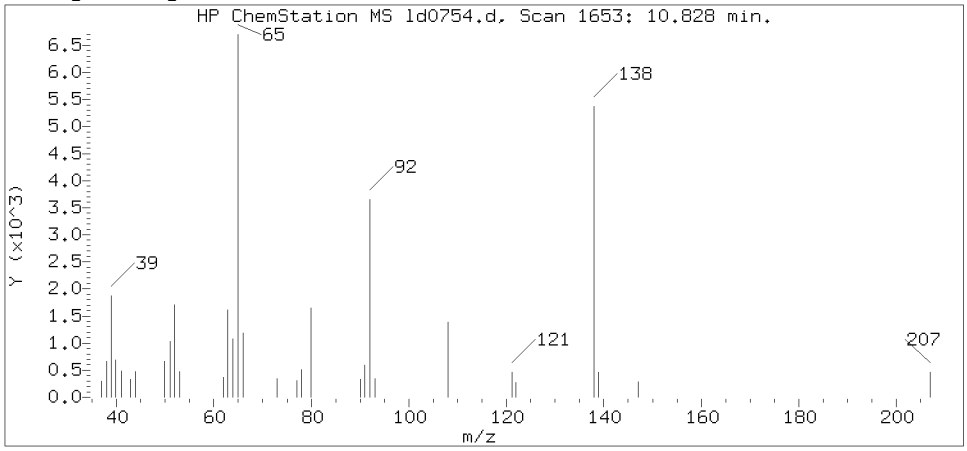


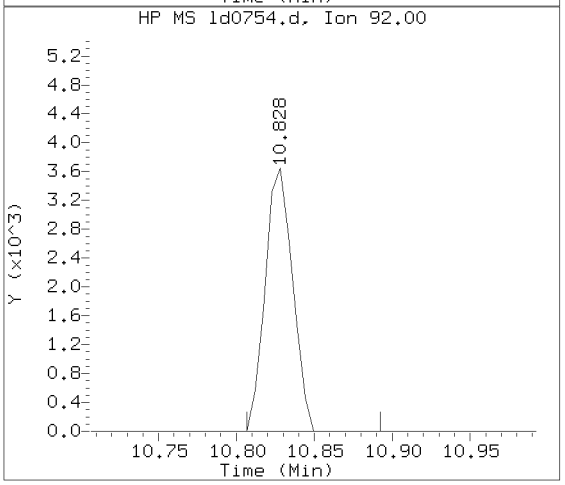
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0754.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:16 Analyst ID: art12405

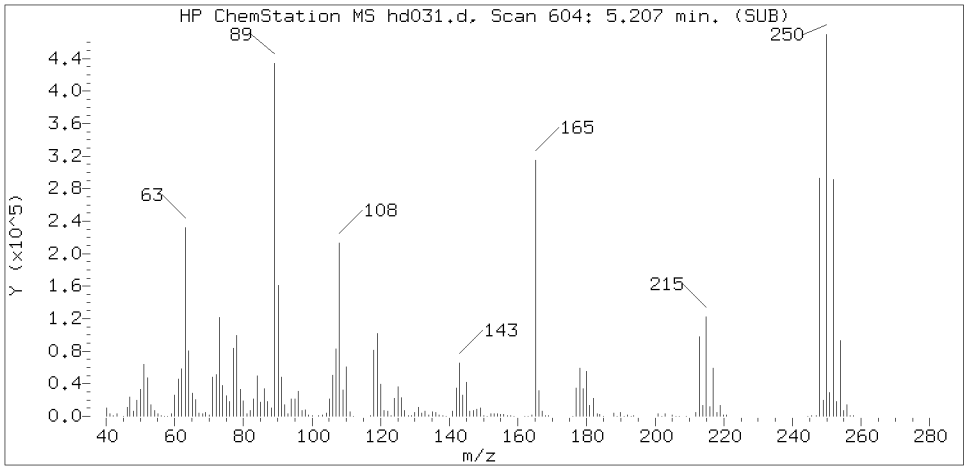
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0404 Lab Sample ID: 9553124

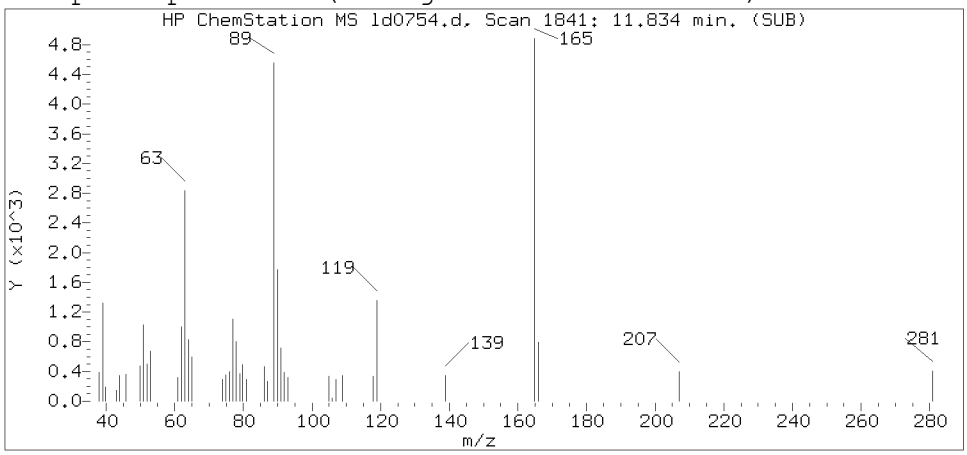
Compound Number : 104
Compound Name : 2-Nitroaniline
Scan Number : 1653
Retention Time (minutes) : 10.828
Relative Retention Time :-0.00000
Quant Ion : 138.00
Area (flag) : 6307
On-column Amount (ng/ul) : 0.2653

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

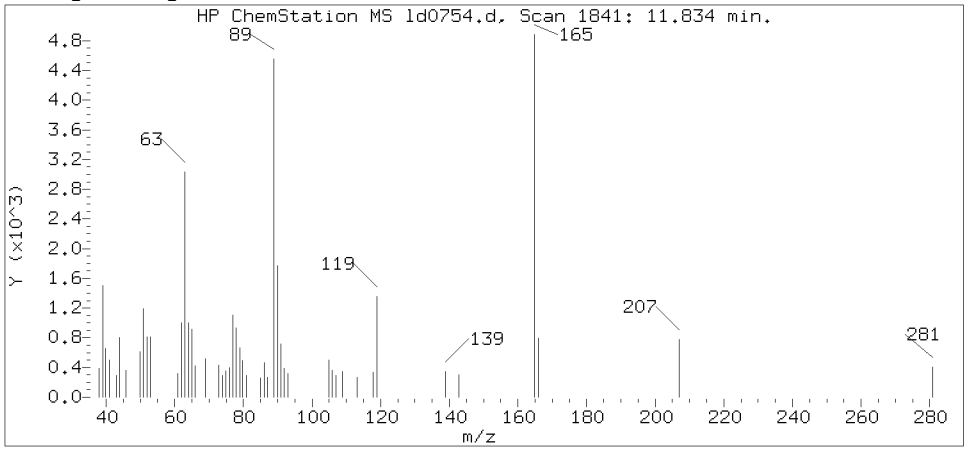
Reference Standard Spectrum for 2,4-Dinitrotoluene

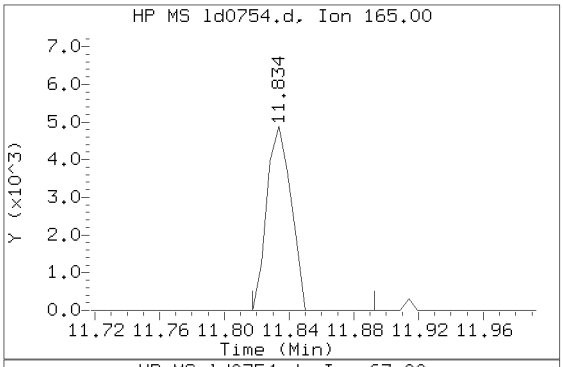


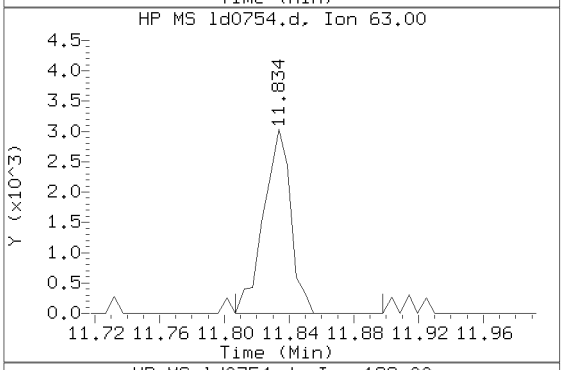
Sample Spectrum (Background Subtracted)

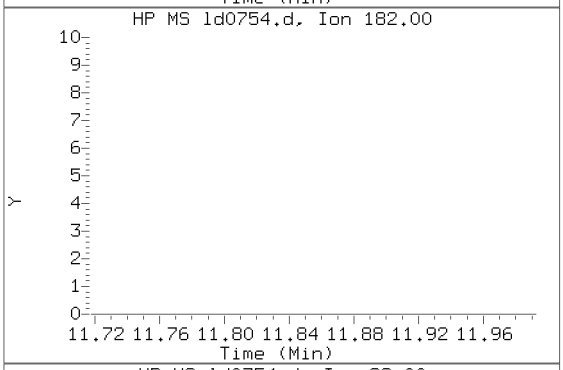


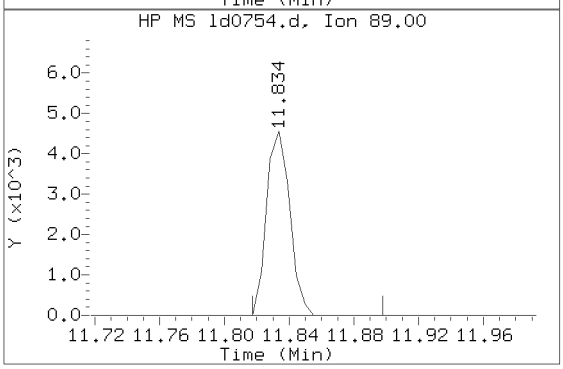
Sample Spectrum (Unaltered)











Data File: /chem/HP20296.i/18apr18a.b/ld0754.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:16 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0404 Lab Sample ID: 9553124

Compound Number	: 123
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1841
Retention Time (minutes)	: 11.834
Relative Retention Time	: 0.00047
Quant Ion	: 165.00
Area (flag)	: 5048
On-column Amount (ng/ul)	: 0.1885

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0755.d
Data file Sample Info. Line: R0405;9553125;1;0;SAMPLE;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Injection date and time: **19-APR-2018 02:44**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672	(0.000)	876	152	160857	(-17)	5.00	
68) Naphthalene-d8	8.657	(0.000)	1247	136	600189	(-16)	5.00	
118) Acenaphthene-d10	11.491	(0.000)	1777	164	294709	(-19)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	589650	(-20)	5.00	
180) Pyrene-d10	15.423	(0.005)	2512	212	622987	(-22)	5.00	
218) Perylene-d12	19.948	(0.005)	3358	264	599231	(-23)	5.00	

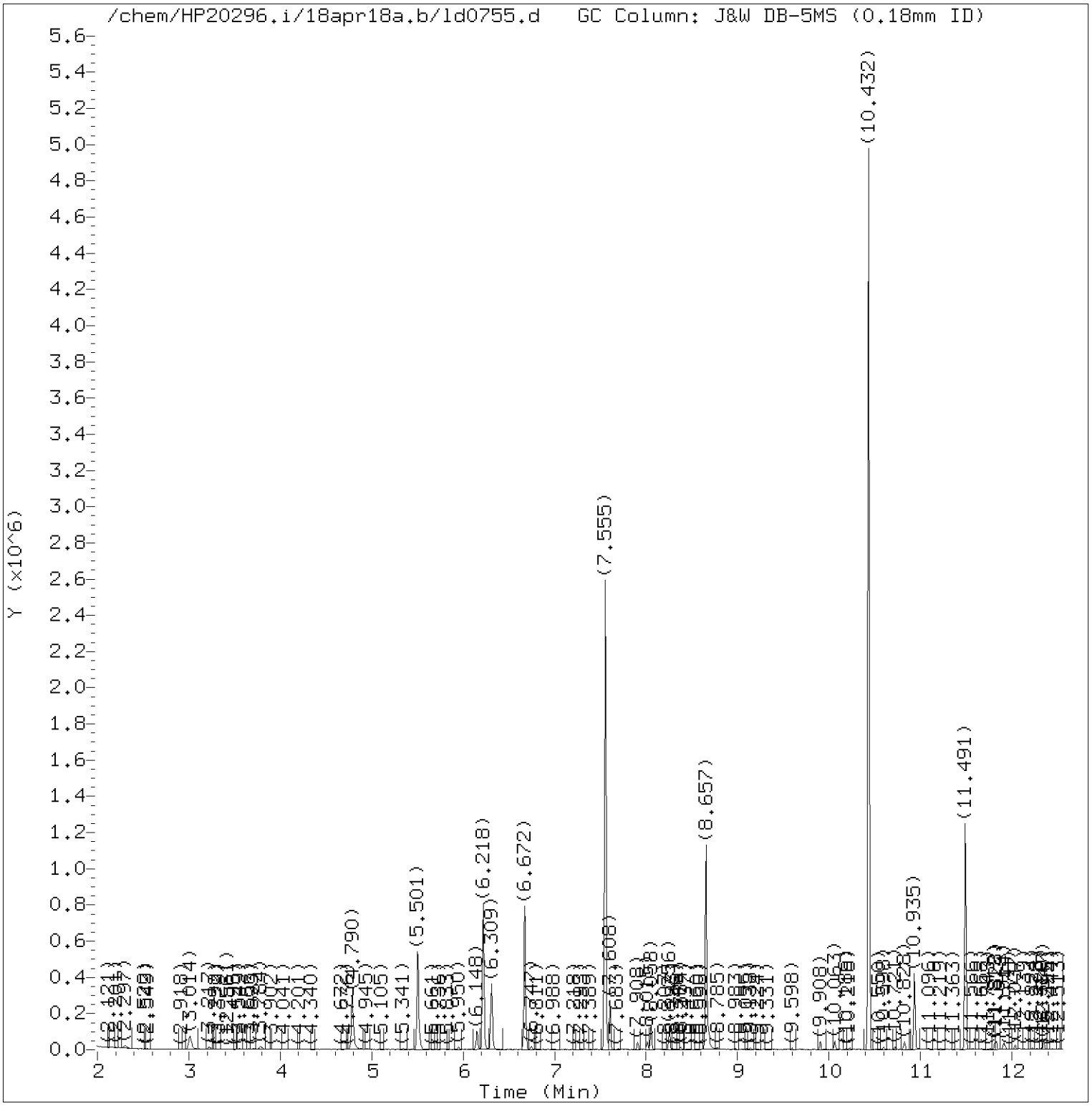
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555	(0.000)	82	1090179	21.060	84%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432	(0.000)	172	1851431	20.208	81%		39 - 105
184) Terphenyl-d14	(5)	15.722	(0.000)	244	811282	8.120	32%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.582	(0.000)	77	12795	0.242	0.97		J	0.2
104) 2-Nitroaniline	(3)	10.828	(-0.000)	138	9004	0.383	1.54		J	0.2
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)	11.834	(0.000)	165	6136	0.232	0.93		J	0.2
129) Diethylphthalate	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

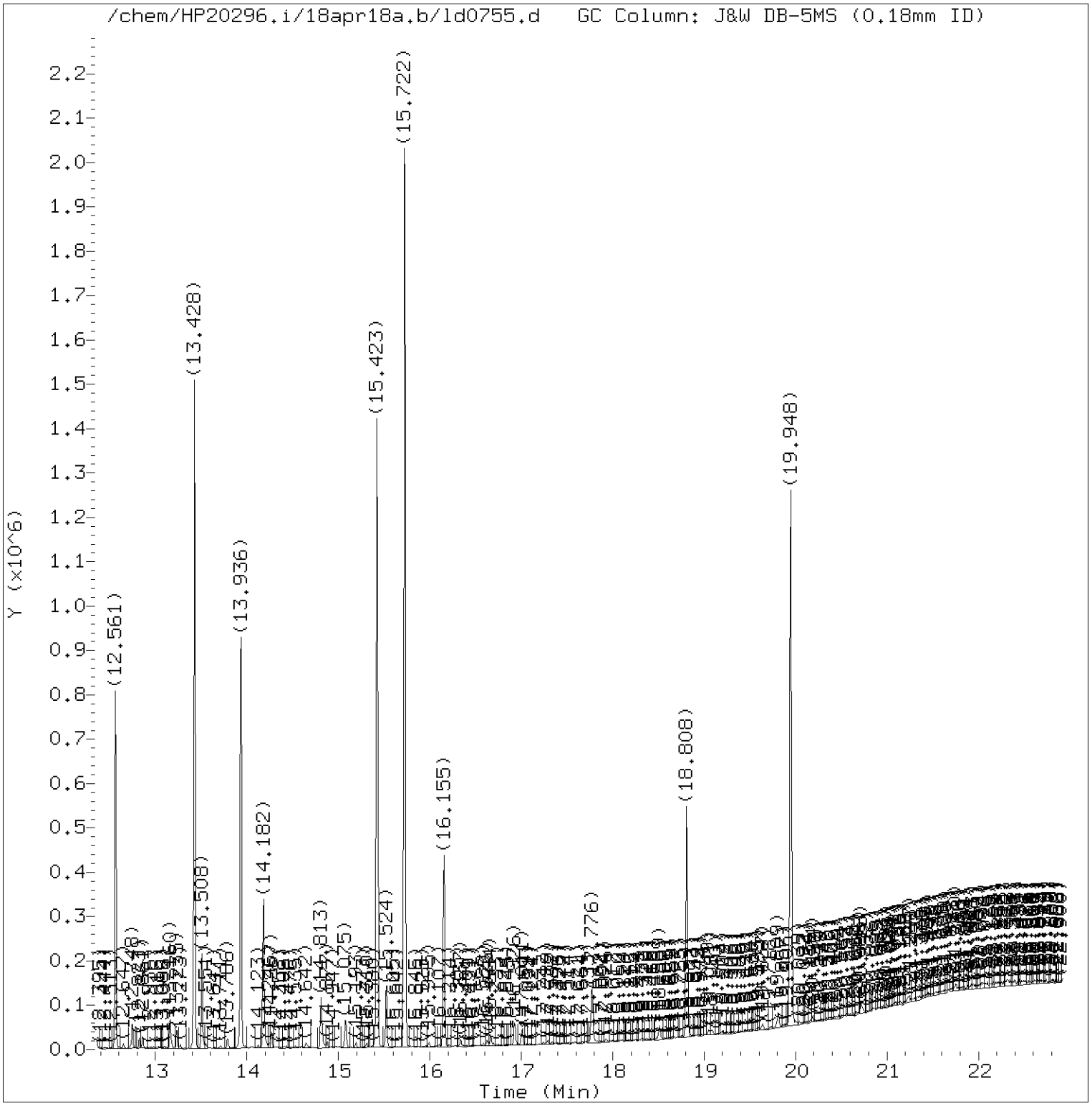
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0405 Lab Sample ID: 9553125

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0405 Lab Sample ID: 9553125

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

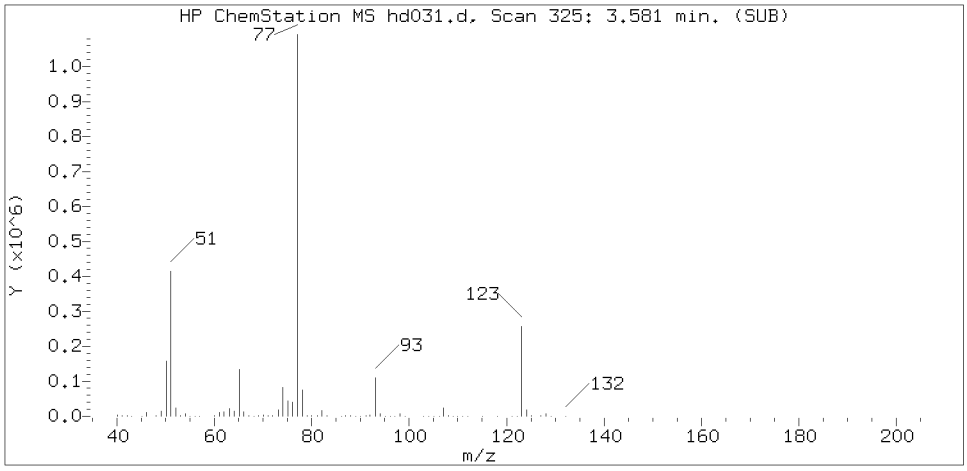
Sample Name: R0405 Lab Sample ID: 9553125

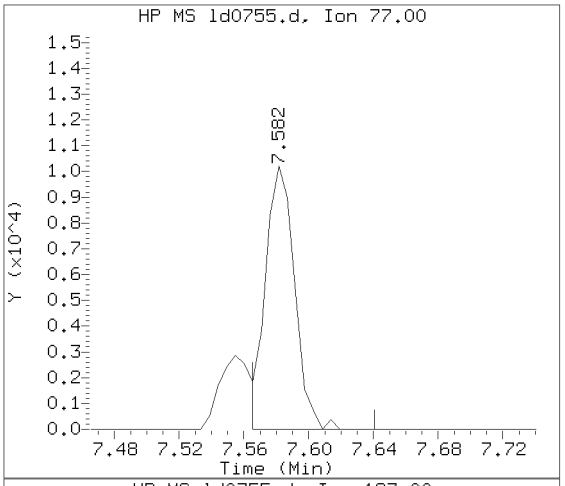
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	160857	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	1090179	21.060
46) Nitrobenzene	(2)	7.582	77	12795	0.242
68)*Naphthalene-d8	(2)	8.657	136	600189	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1851431	20.208
104) 2-Nitroaniline	(3)	10.828	138	9004	0.383
118)*Acenaphthene-d10	(3)	11.491	164	294709	5.000
123) 2,4-Dinitrotoluene	(3)	11.834	165	6136	0.232
158)*Phenanthrene-d10	(4)	13.428	188	589650	5.000
180)*Pyrene-d10	(5)	15.423	212	622987	5.000
184)$Terphenyl-d14	(5)	15.722	244	811282	8.120
218)*Perylene-d12	(6)	19.948	264	599231	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

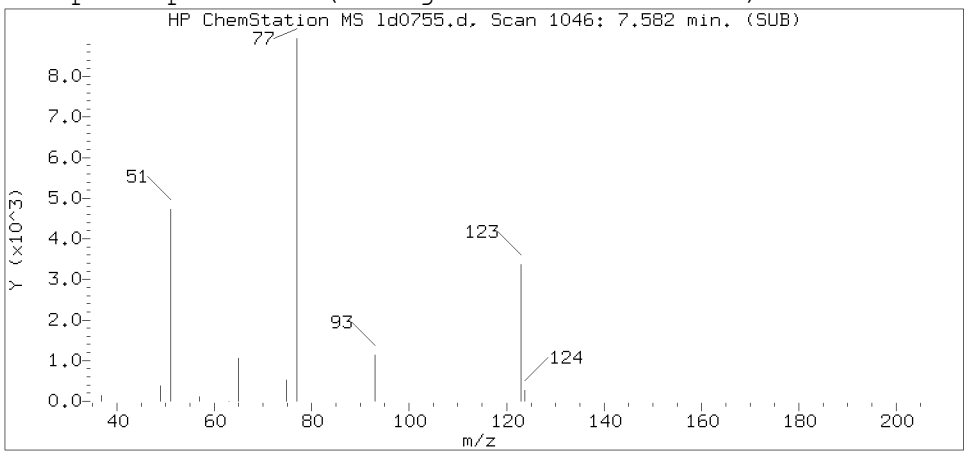
Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

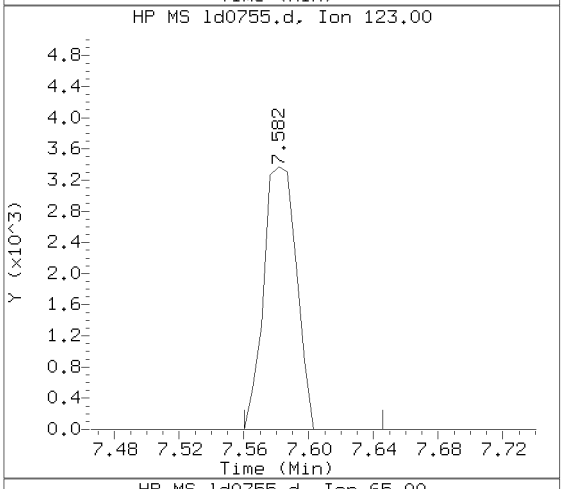
Reference Standard Spectrum for Nitrobenzene



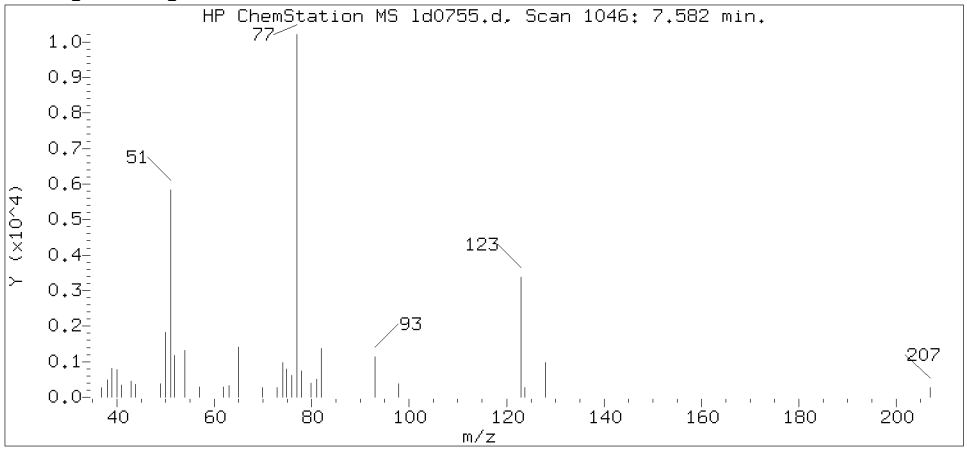


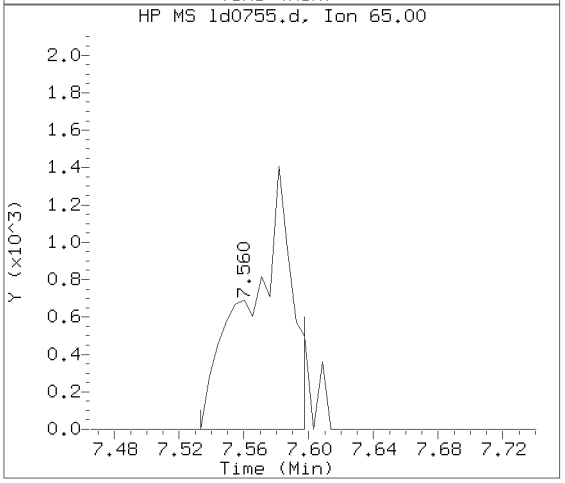
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

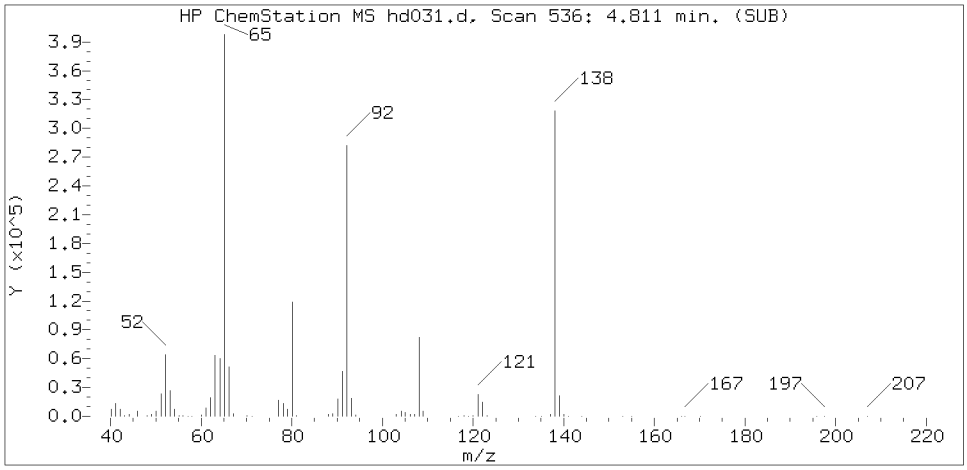
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

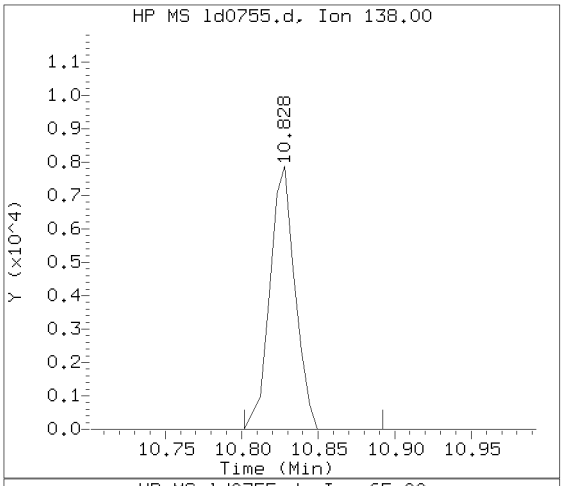
Sample Name: R0405 Lab Sample ID: 9553125

Compound Number	: 46
Compound Name	: Nitrobenzene
Scan Number	: 1046
Retention Time (minutes)	: 7.582
Relative Retention Time	: 0.00062
Quant Ion	: 77.00
Area (flag)	: 12795
On-column Amount (ng/ul)	: 0.2423

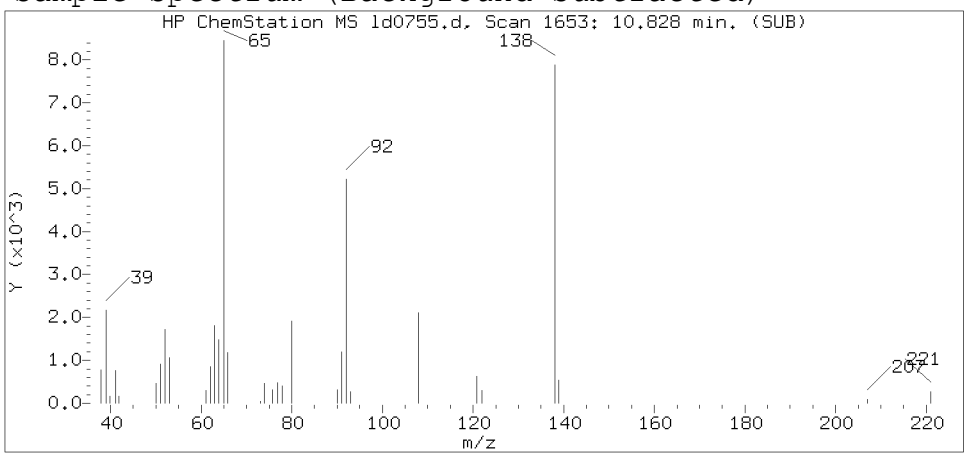
Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

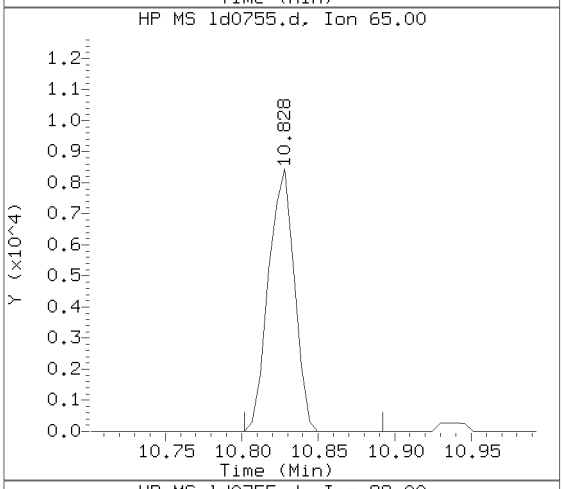
Reference Standard Spectrum for 2-Nitroaniline



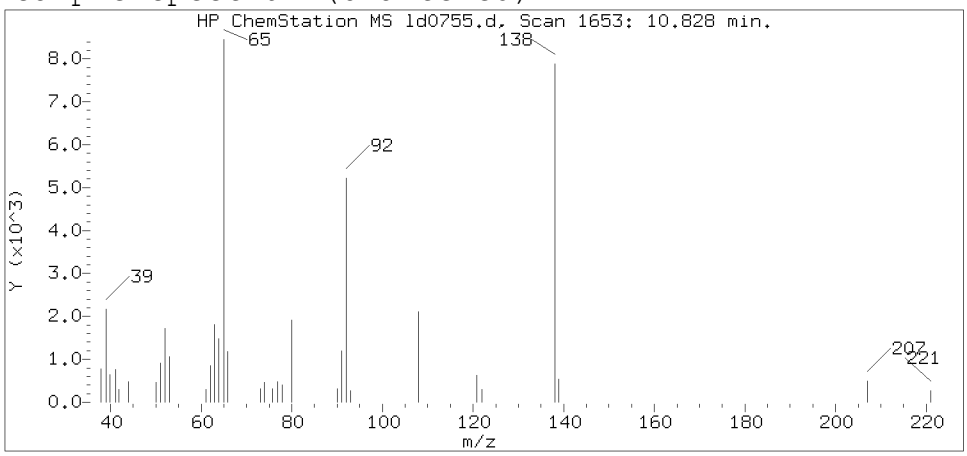


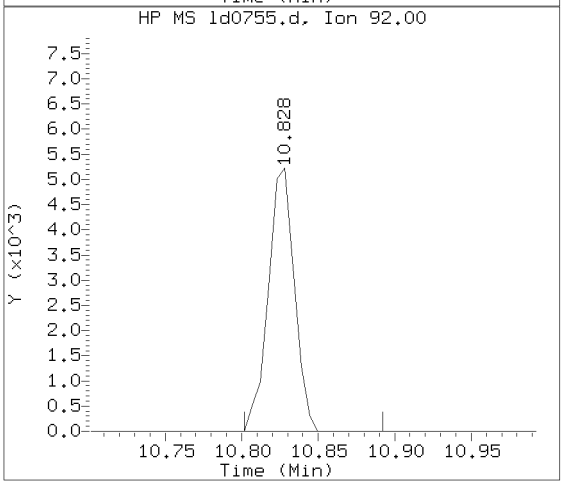
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0405 Lab Sample ID: 9553125

Compound Number : 104
Compound Name : 2-Nitroaniline
Scan Number : 1653
Retention Time (minutes) : 10.828
Relative Retention Time :-0.00000
Quant Ion : 138.00
Area (flag) : 9004
On-column Amount (ng/ul) : 0.3831

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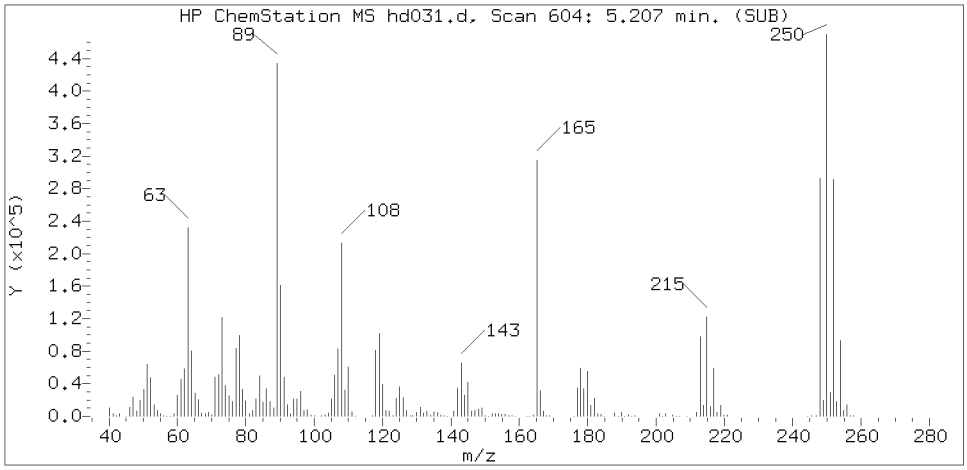
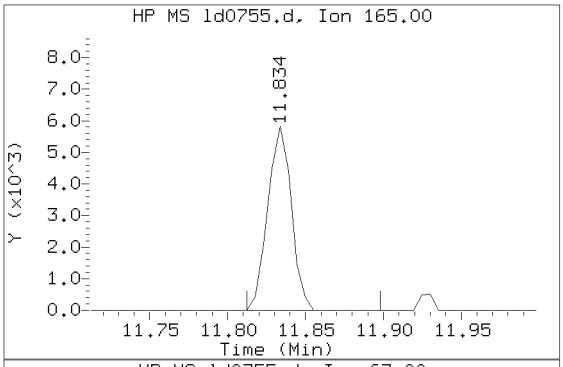
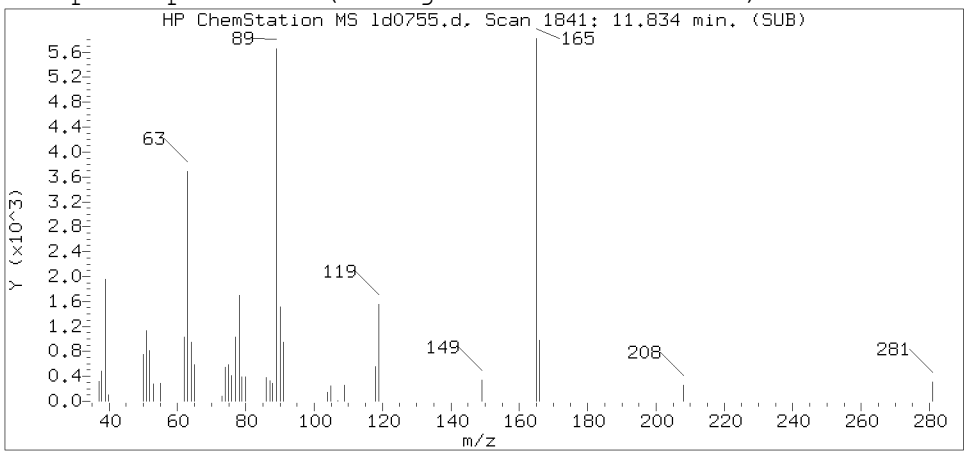
Target 3.5 esignature user ID: bhs10208

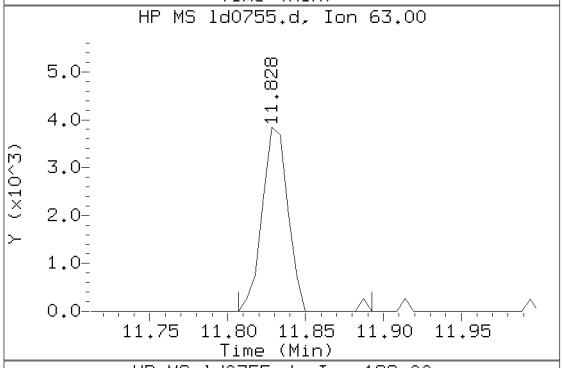
Reference Standard Spectrum for 2,4-Dinitrotoluene

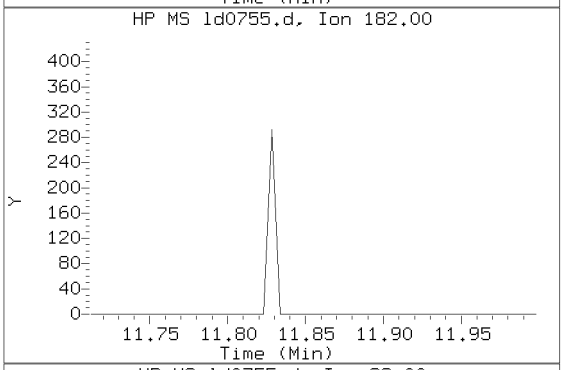




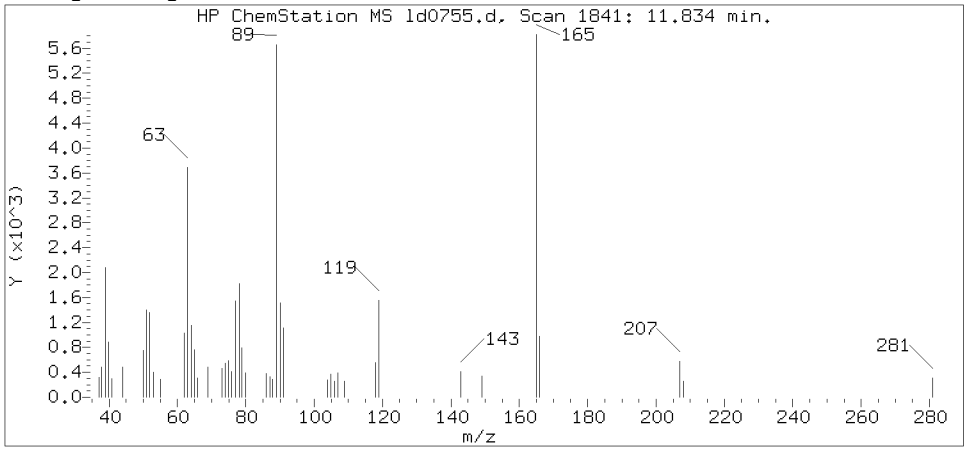
Sample Spectrum (Background Subtracted)

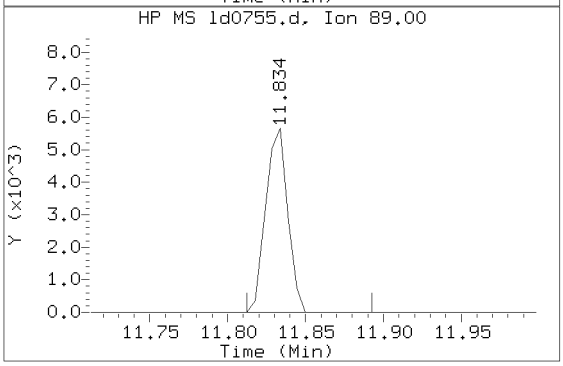






Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0755.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 02:44 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0405 Lab Sample ID: 9553125

Compound Number	: 123
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1841
Retention Time (minutes)	: 11.834
Relative Retention Time	: 0.00047
Quant Ion	: 165.00
Area (flag)	: 6136
On-column Amount (ng/ul)	: 0.2318

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Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0756.d
Data file Sample Info. Line: R0406;9553126;1;0;SAMPLE;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Injection date and time: **19-APR-2018 03:12**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672(0.000)	876	152	154759 (-20)	5.00	
68) Naphthalene-d8	8.656(0.000)	1247	136	574439 (-20)	5.00	
118) Acenaphthene-d10	11.491(0.000)	1777	164	287165 (-21)	5.00	
158) Phenanthrene-d10	13.427(0.005)	2139	188	571152 (-22)	5.00	
180) Pyrene-d10	15.423(0.005)	2512	212	598975 (-25)	5.00	
218) Perylene-d12	19.947(0.005)	3358	264	571613 (-26)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555(0.000)	82	1070315	21.603	86%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432(0.000)	172	1872691	20.977	84%		39 - 105
184) Terphenyl-d14	(5)	15.722(0.000)	244	1184022	12.326	49%		27 - 116

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.581(0.000)	77	14256	0.282	1.14		J	0.2
104) 2-Nitroaniline	(3)	10.823(0.000)	138	13989	0.611	2.46		J	0.2
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)	11.834(0.000)	165	6691	0.259	1.05		J	0.2
129) Diethylphthalate	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)			Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

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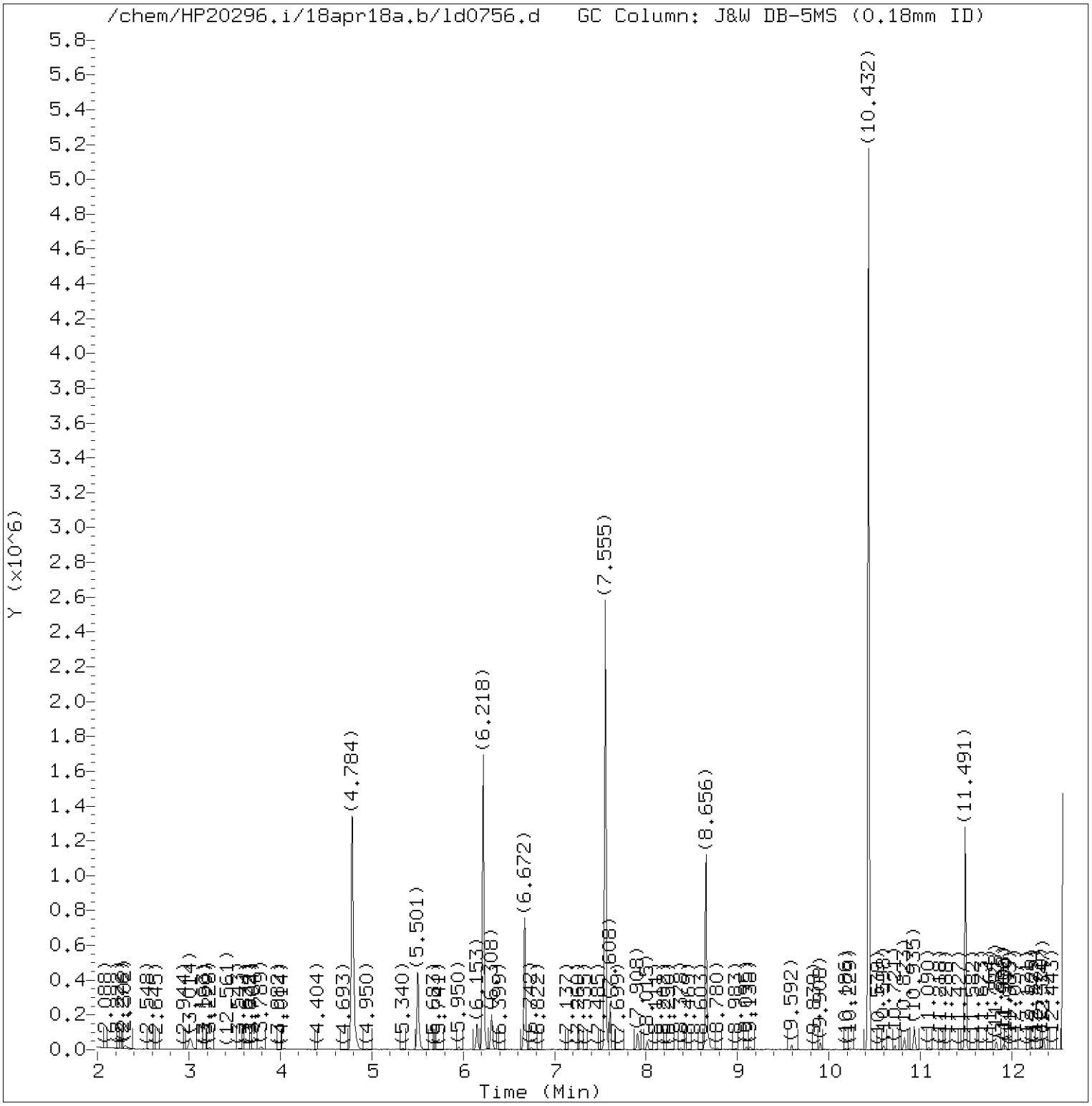
Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

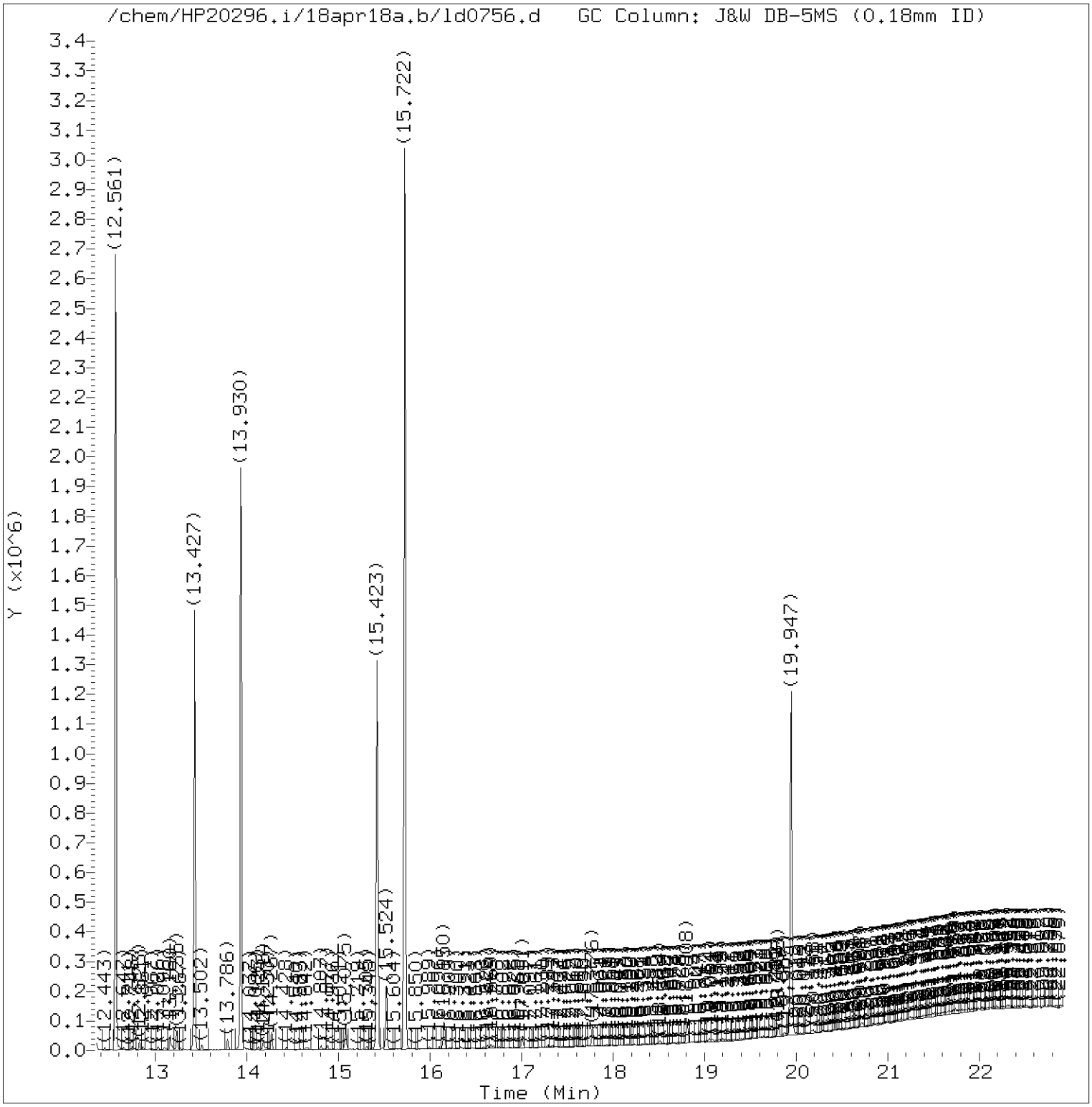
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0406 Lab Sample ID: 9553126

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0406 Lab Sample ID: 9553126

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

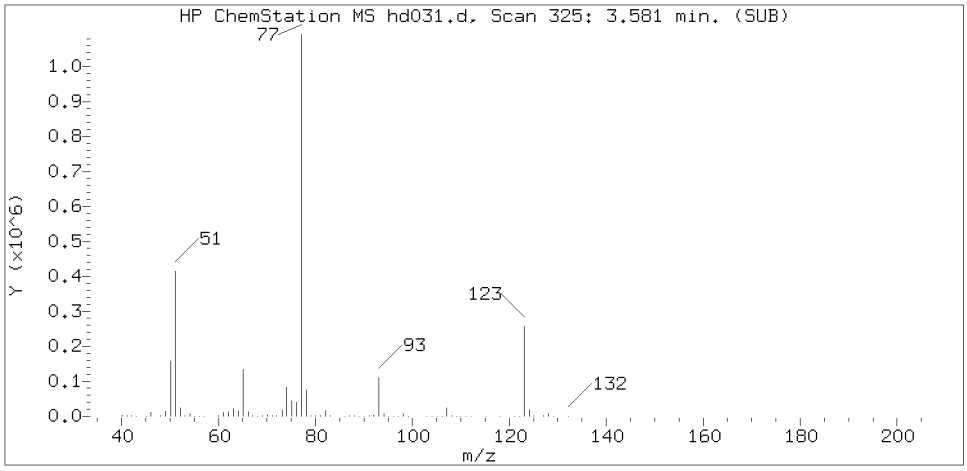
Sample Name: R0406 Lab Sample ID: 9553126

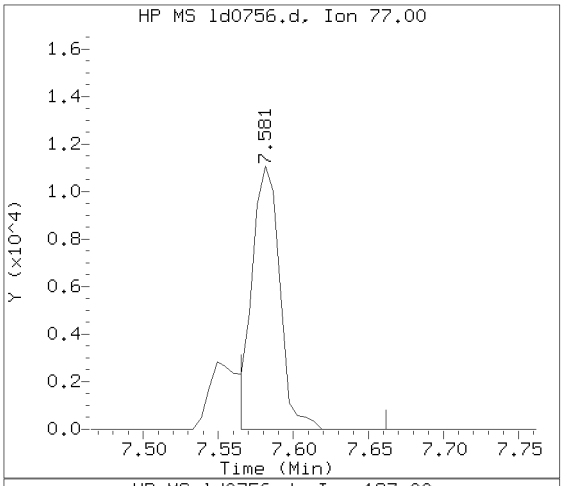
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	154759	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	1070315	21.603
46) Nitrobenzene	(2)	7.581	77	14256	0.282
68)*Naphthalene-d8	(2)	8.656	136	574439	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1872691	20.977
104) 2-Nitroaniline	(3)	10.823	138	13989	0.611
118)*Acenaphthene-d10	(3)	11.491	164	287165	5.000
123) 2,4-Dinitrotoluene	(3)	11.834	165	6691	0.259
158)*Phenanthrene-d10	(4)	13.427	188	571152	5.000
180)*Pyrene-d10	(5)	15.423	212	598975	5.000
184)$Terphenyl-d14	(5)	15.722	244	1184022	12.326
218)*Perylene-d12	(6)	19.947	264	571613	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

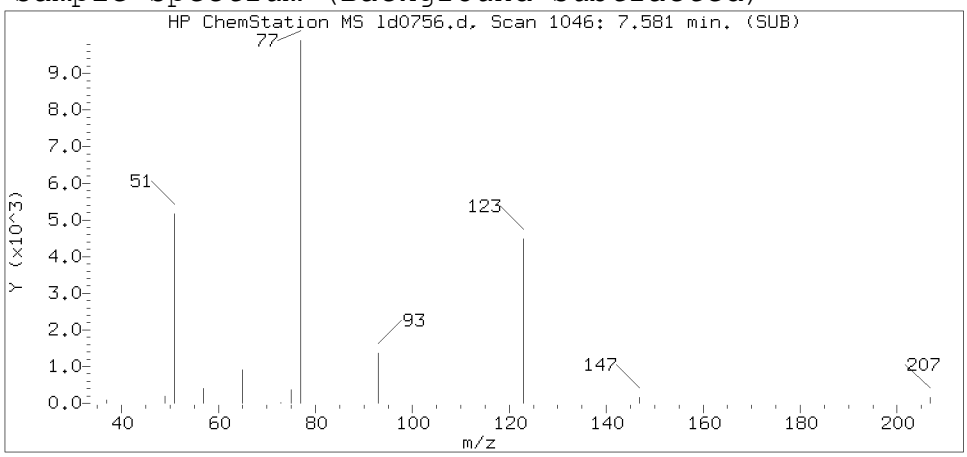
Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

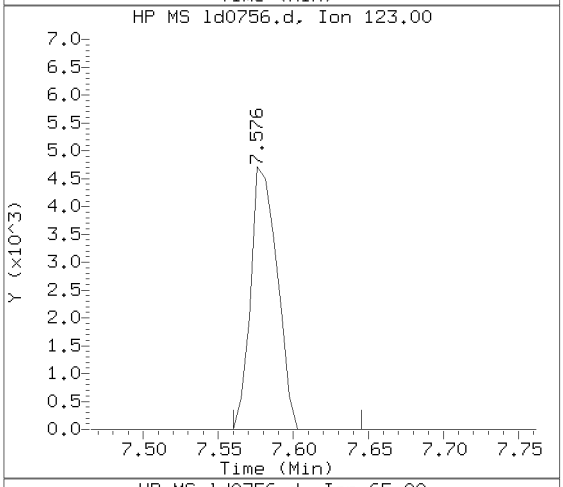
Reference Standard Spectrum for Nitrobenzene



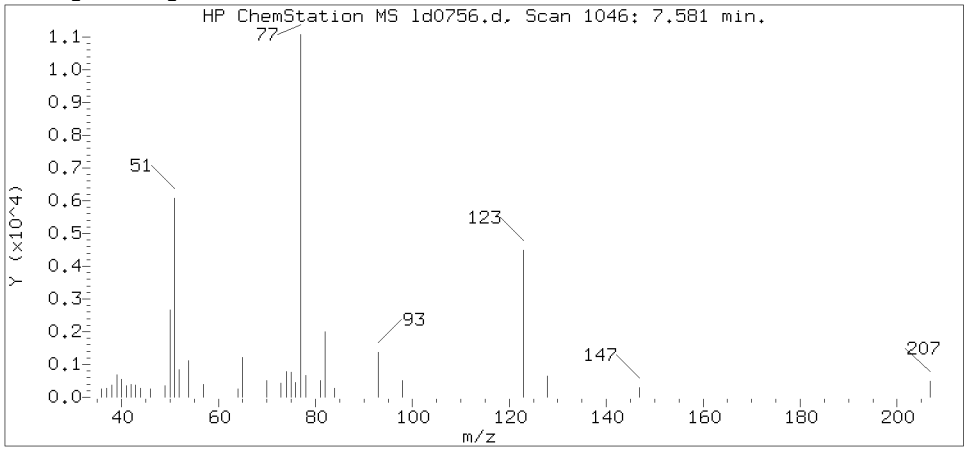


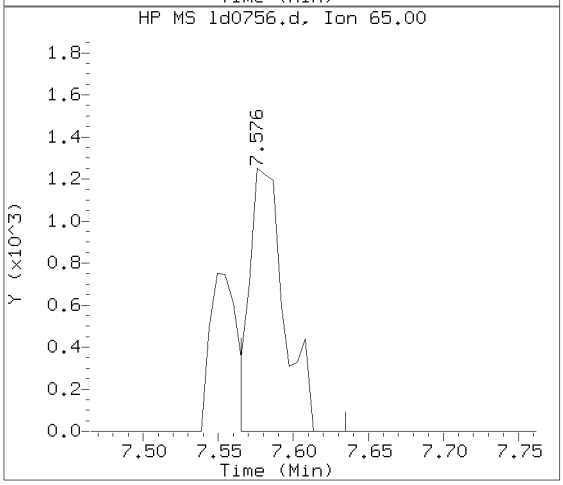
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

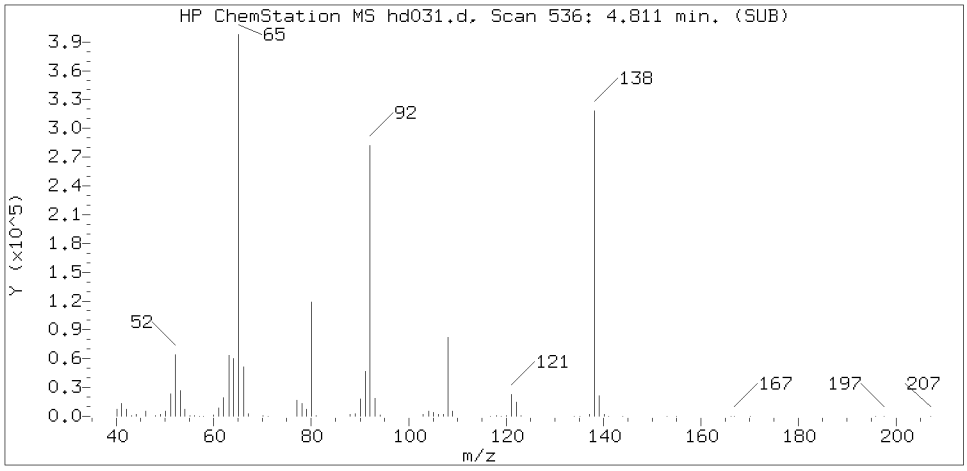
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

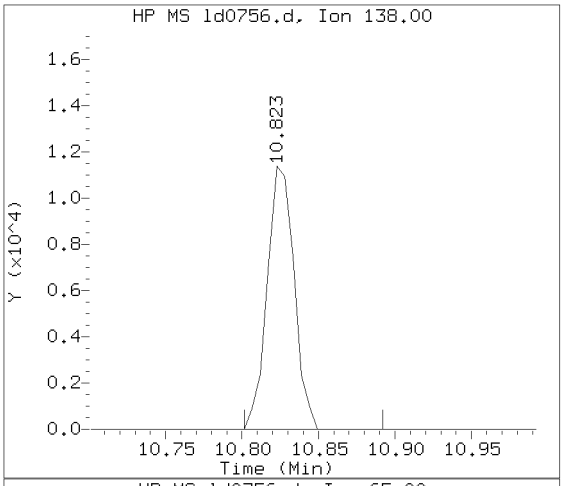
Sample Name: R0406 Lab Sample ID: 9553126

Compound Number	: 46
Compound Name	: Nitrobenzene
Scan Number	: 1046
Retention Time (minutes)	: 7.581
Relative Retention Time	: 0.00062
Quant Ion	: 77.00
Area (flag)	: 14256
On-column Amount (ng/ul)	: 0.2821

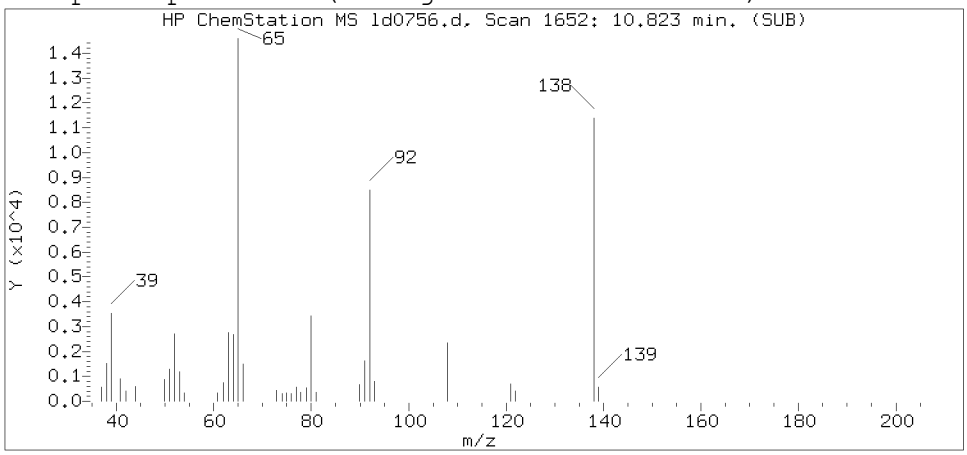
Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

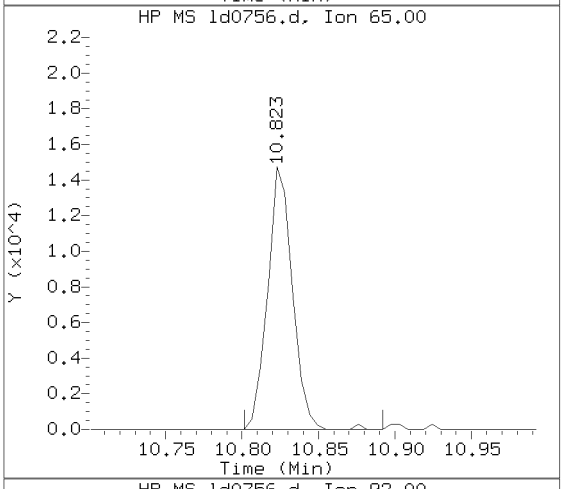
Reference Standard Spectrum for 2-Nitroaniline



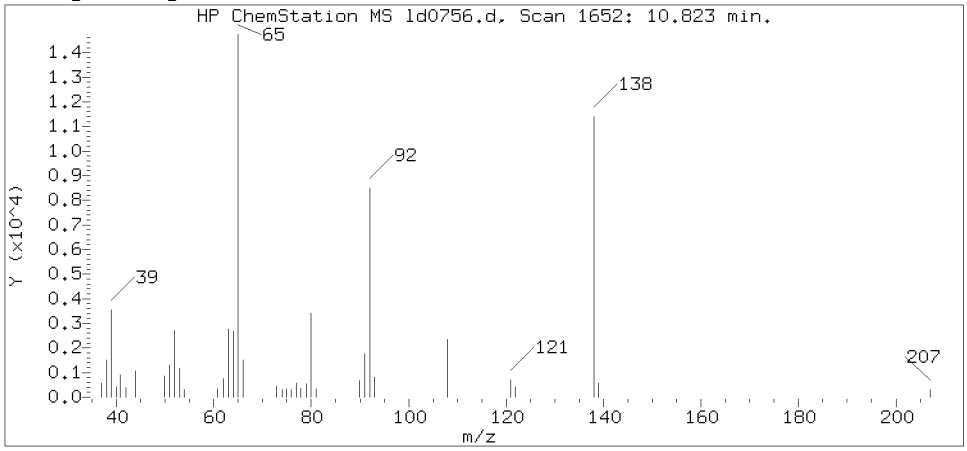


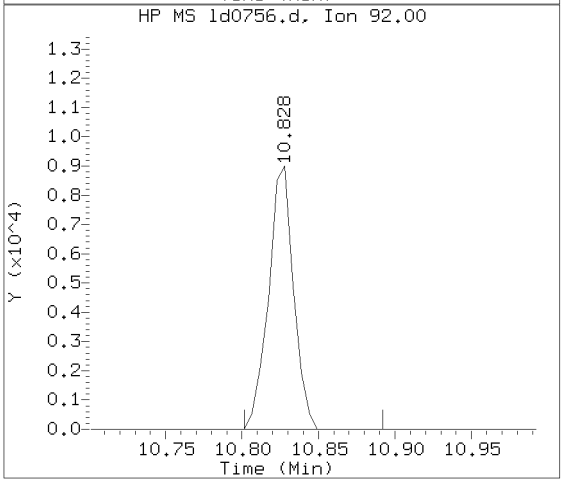
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

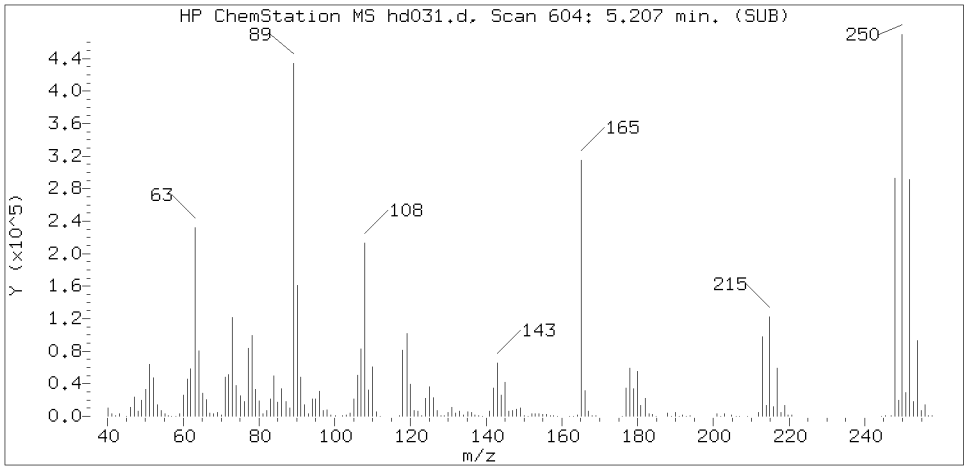
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

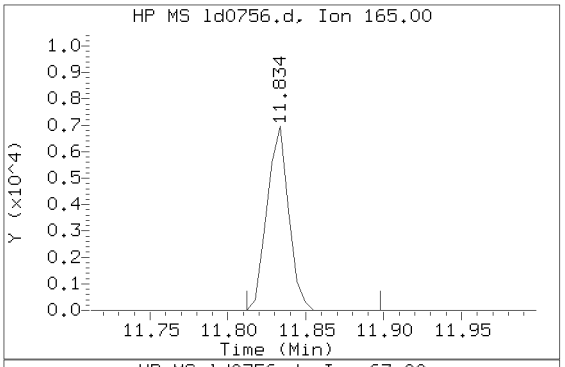
Sample Name: R0406 Lab Sample ID: 9553126

Compound Number	: 104
Compound Name	: 2-Nitroaniline
Scan Number	: 1652
Retention Time (minutes)	: 10.823
Relative Retention Time	: 0.00047
Quant Ion	: 138.00
Area (flag)	: 13989
On-column Amount (ng/ul)	: 0.6109

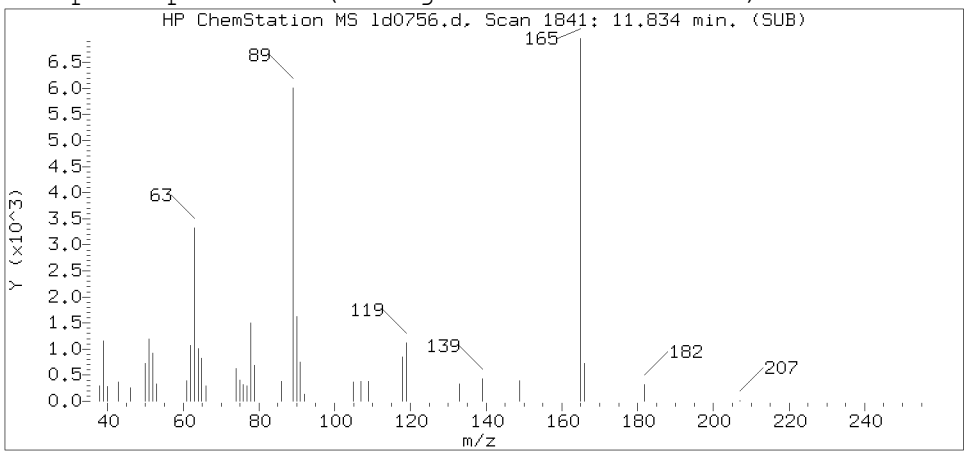
Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

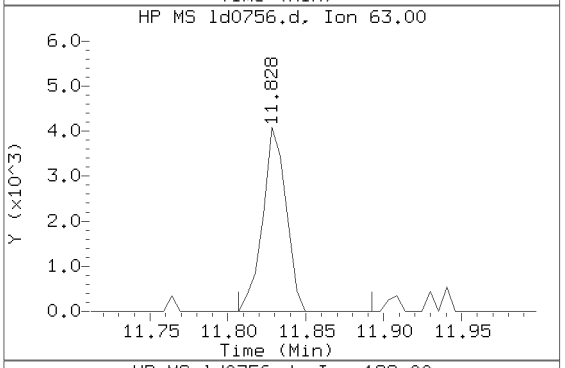
Reference Standard Spectrum for 2,4-Dinitrotoluene

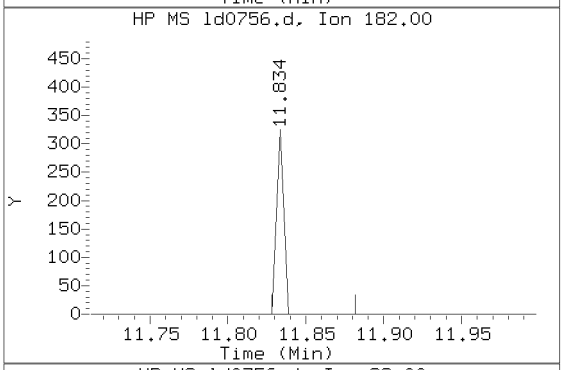




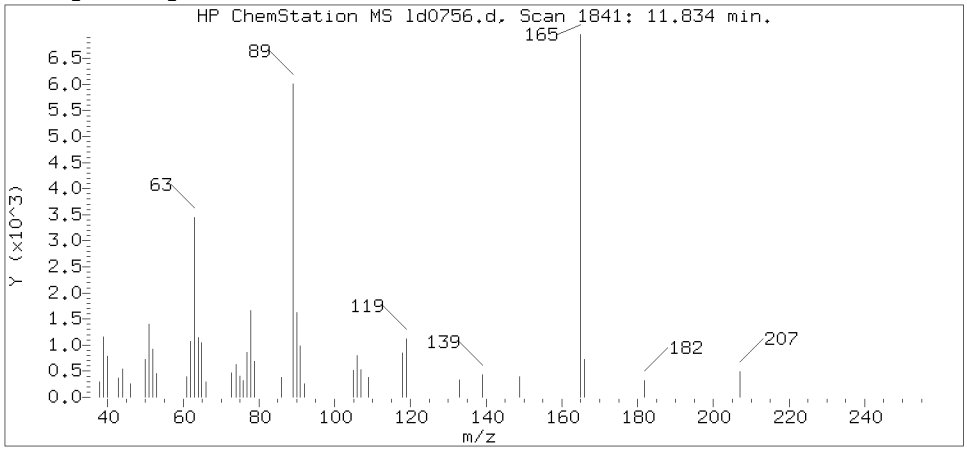
Sample Spectrum (Background Subtracted)

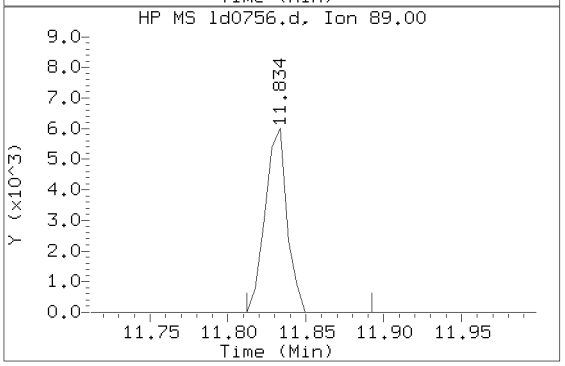






Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0756.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:12 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0406 Lab Sample ID: 9553126

Compound Number	: 123
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1841
Retention Time (minutes)	: 11.834
Relative Retention Time	: 0.00047
Quant Ion	: 165.00
Area (flag)	: 6691
On-column Amount (ng/ul)	: 0.2595

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0757.d
Data file Sample Info. Line: R0407;9553127;1;0;SAMPLE;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Injection date and time: **19-APR-2018 03:40**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672(0.000)	876	152	154304 (-21)	5.00	
68) Naphthalene-d8	8.657(0.000)	1247	136	576628 (-19)	5.00	
118) Acenaphthene-d10	11.491(0.000)	1777	164	289394 (-20)	5.00	
158) Phenanthrene-d10	13.428(0.005)	2139	188	577210 (-22)	5.00	
180) Pyrene-d10	15.423(0.005)	2512	212	599968 (-25)	5.00	
218) Perylene-d12	19.948(0.005)	3358	264	570703 (-26)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555(0.000)	82	1034815	20.807	83%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432(0.000)	172	1851436	20.579	82%		39 - 105
184) Terphenyl-d14	(5)	15.728(0.000)	244	1799496	18.702	75%		27 - 116

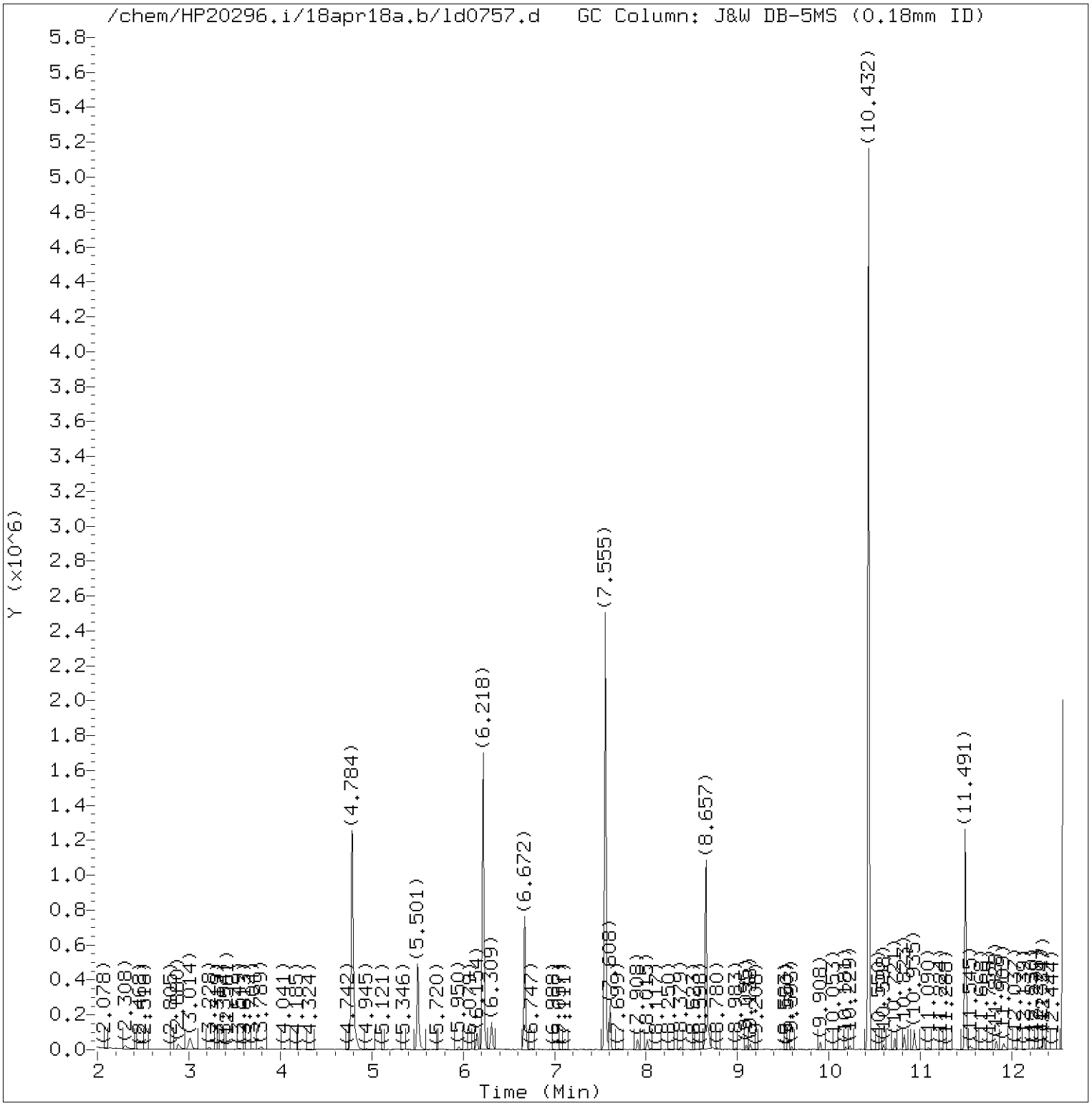
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.582(0.000)	77	14513	0.286	1.15		J	0.2
104) 2-Nitroaniline	(3)	10.828(-0.000)	138	15284	0.662	2.67		J	0.2
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)	11.834(0.000)	165	7039	0.271	1.09		J	0.2
129) Diethylphthalate	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)	12.347(0.000)	138	6765M	0.339	1.37		J	0.3
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

M = Compound was manually integrated.

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

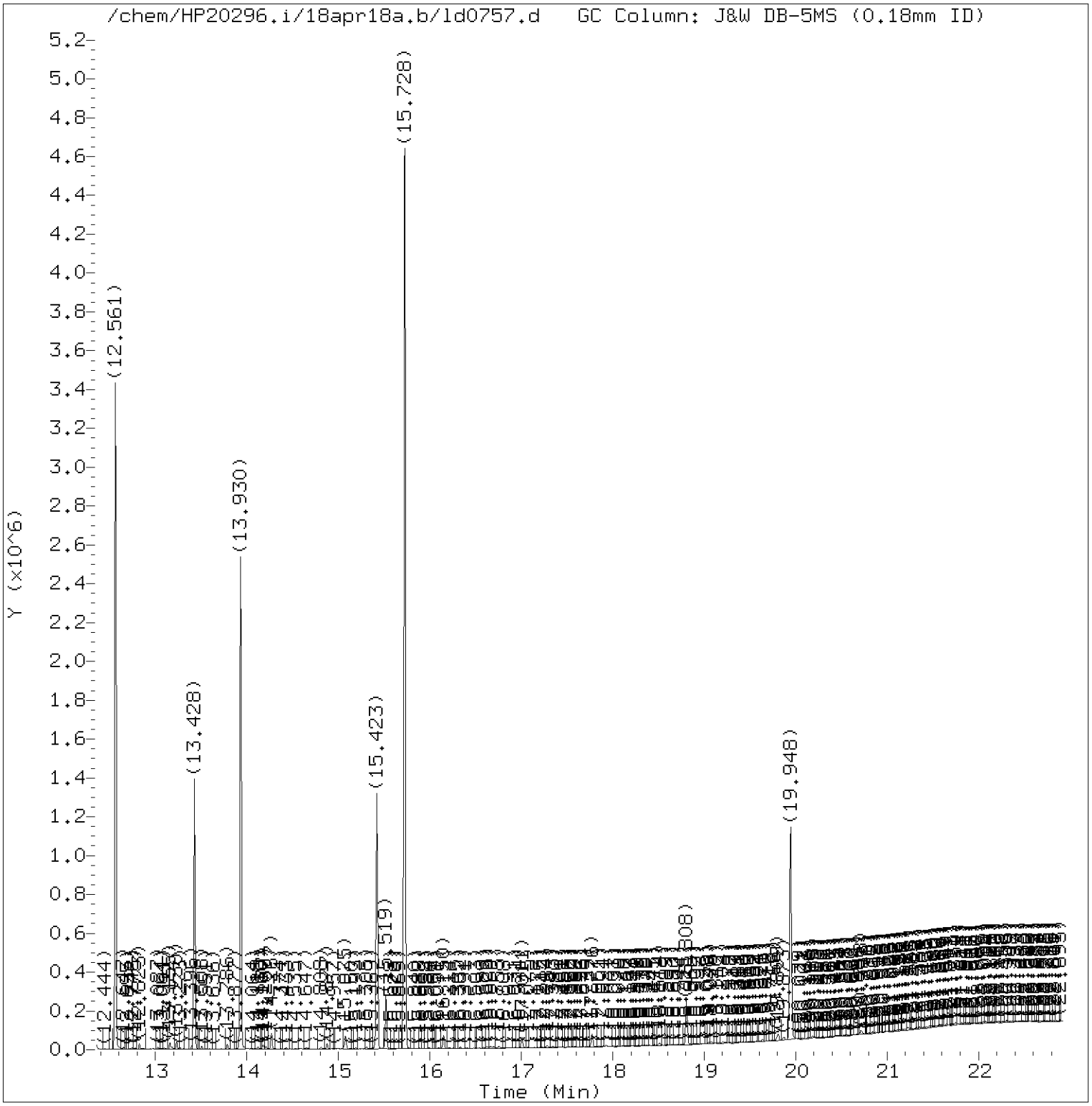
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0407 Lab Sample ID: 9553127

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0407 Lab Sample ID: 9553127

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

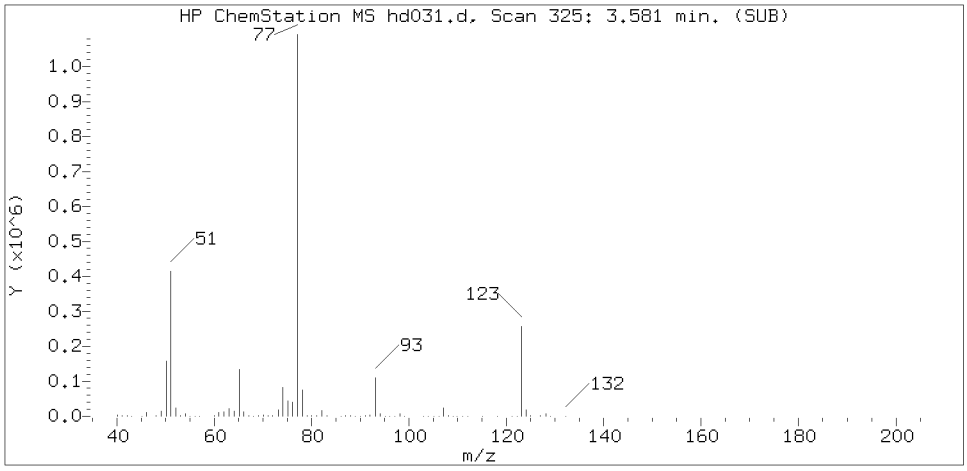
Sample Name: R0407 Lab Sample ID: 9553127

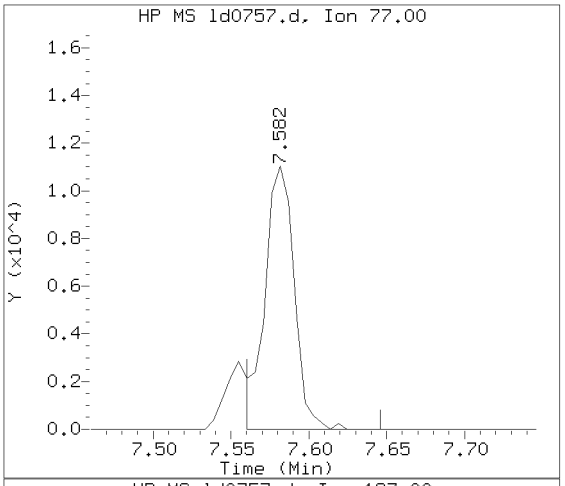
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	154304	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	1034815	20.807
46) Nitrobenzene	(2)	7.582	77	14513	0.286
68)*Naphthalene-d8	(2)	8.657	136	576628	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1851436	20.579
104) 2-Nitroaniline	(3)	10.828	138	15284	0.662
118)*Acenaphthene-d10	(3)	11.491	164	289394	5.000
123) 2,4-Dinitrotoluene	(3)	11.834	165	7039	0.271
134) 4-Nitroaniline	(3)	12.347	138	6765M	0.339
158)*Phenanthrene-d10	(4)	13.428	188	577210	5.000
180)*Pyrene-d10	(5)	15.423	212	599968	5.000
184)$Terphenyl-d14	(5)	15.728	244	1799496	18.702
218)*Perylene-d12	(6)	19.948	264	570703	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

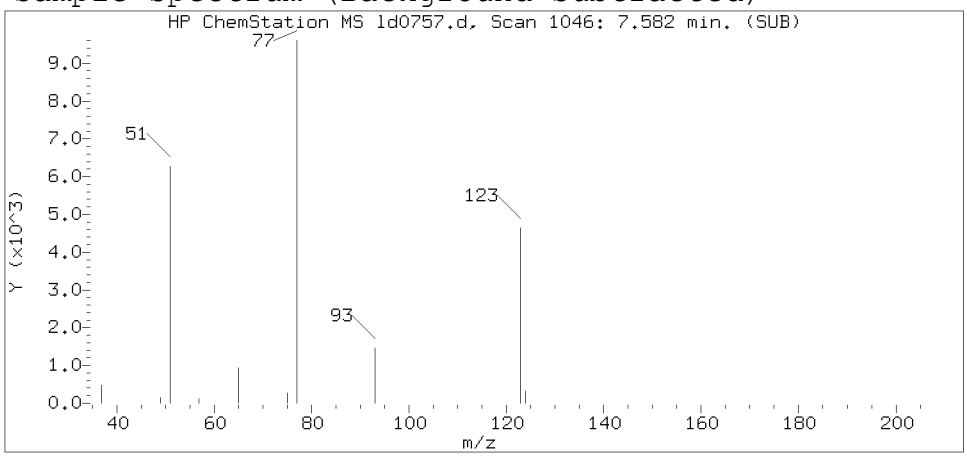
Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

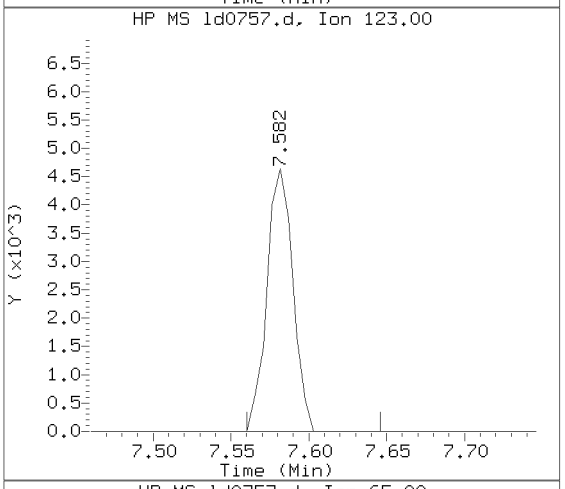
Reference Standard Spectrum for Nitrobenzene



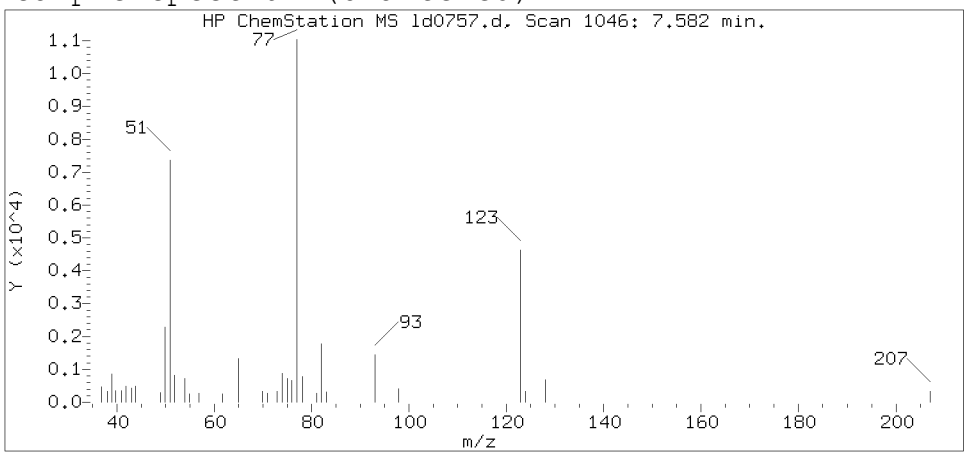


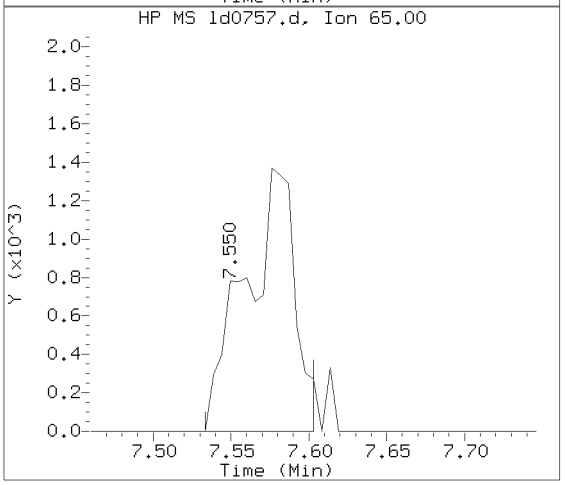
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

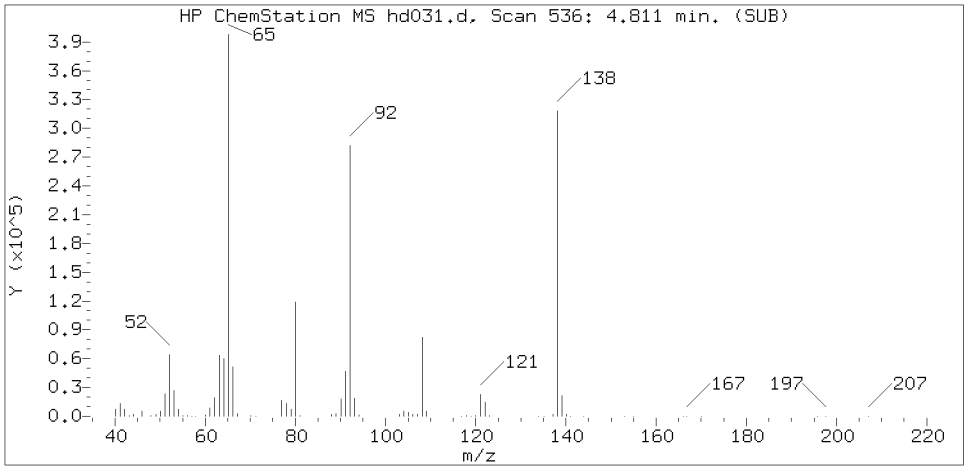
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

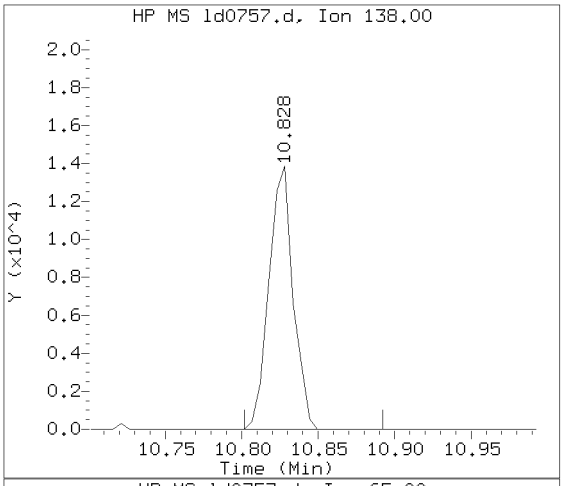
Sample Name: R0407 Lab Sample ID: 9553127

Compound Number	: 46
Compound Name	: Nitrobenzene
Scan Number	: 1046
Retention Time (minutes)	: 7.582
Relative Retention Time	: 0.00062
Quant Ion	: 77.00
Area (flag)	: 14513
On-column Amount (ng/ul)	: 0.2861

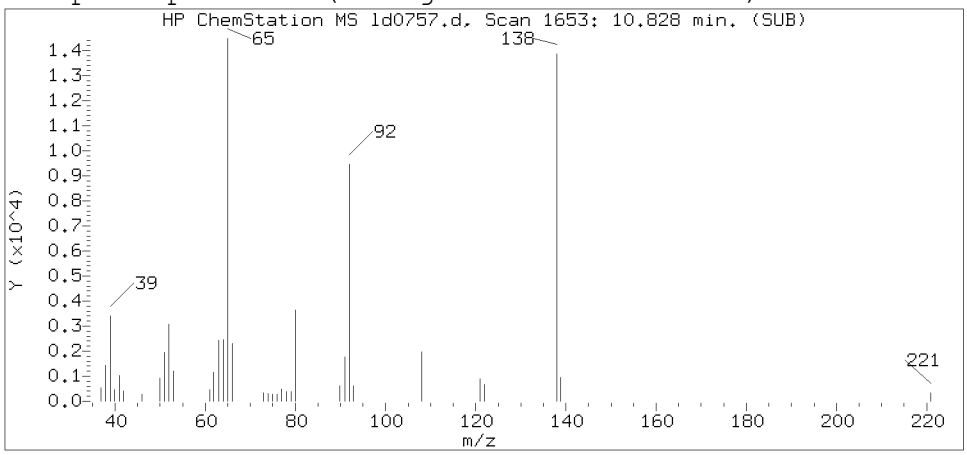
Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

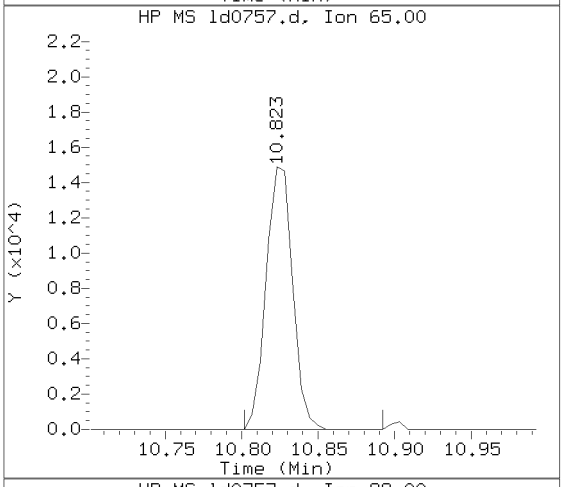
Reference Standard Spectrum for 2-Nitroaniline



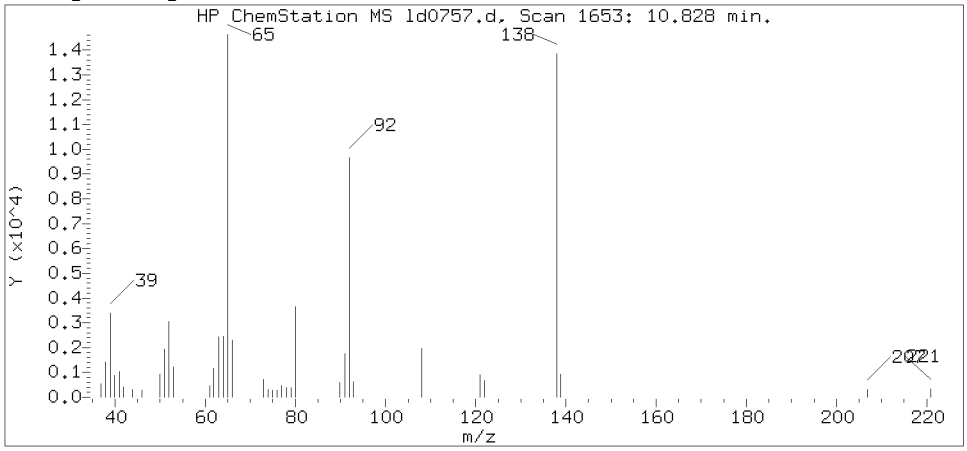


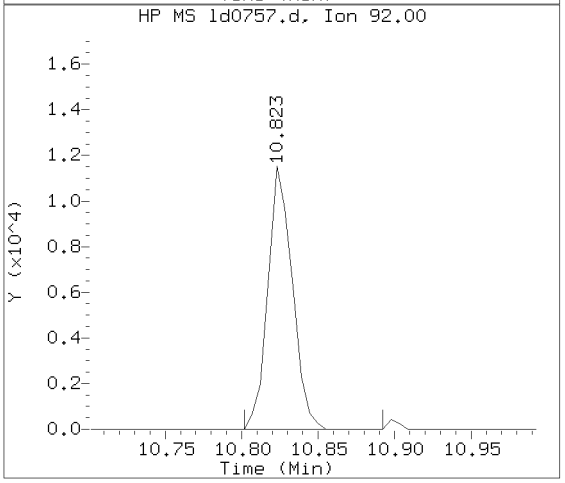
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

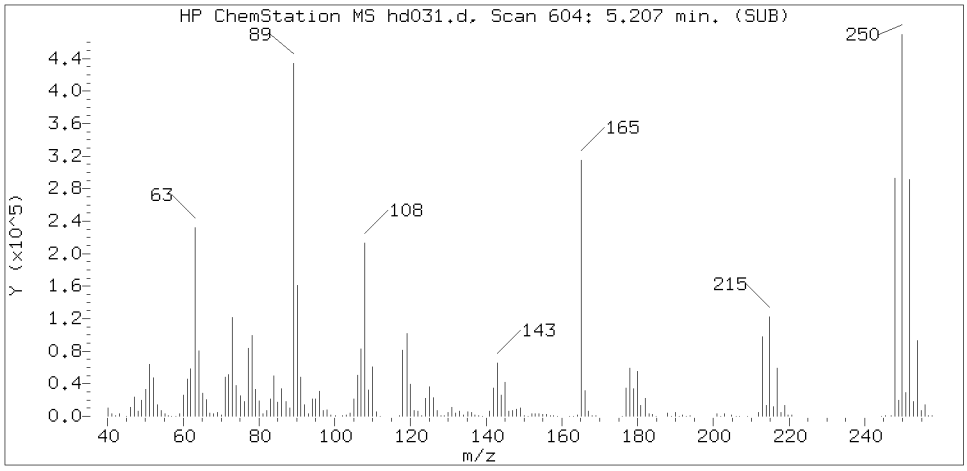
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

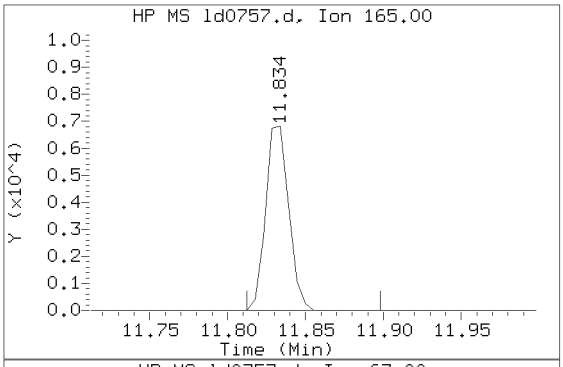
Sample Name: R0407 Lab Sample ID: 9553127

Compound Number : 104
Compound Name : 2-Nitroaniline
Scan Number : 1653
Retention Time (minutes) : 10.828
Relative Retention Time :-0.00000
Quant Ion : 138.00
Area (flag) : 15284
On-column Amount (ng/ul) : 0.6623

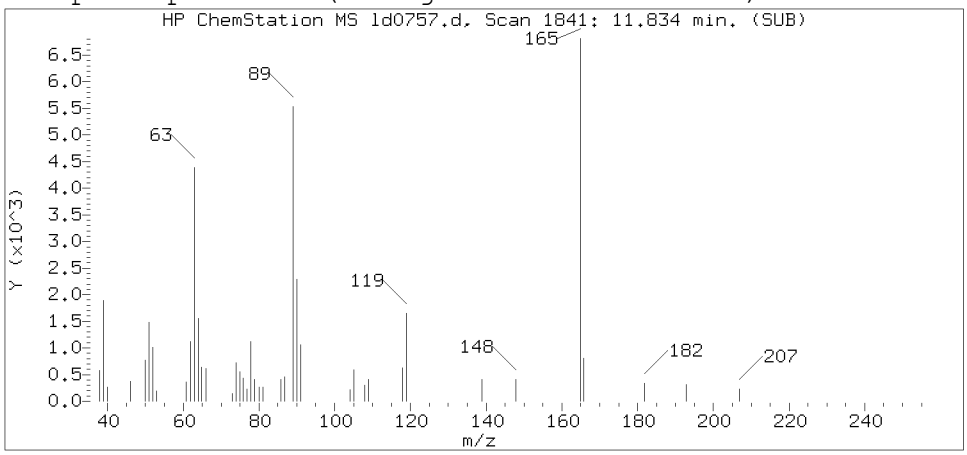
Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

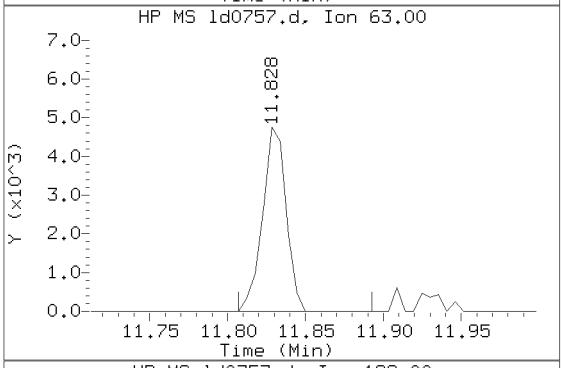
Reference Standard Spectrum for 2,4-Dinitrotoluene

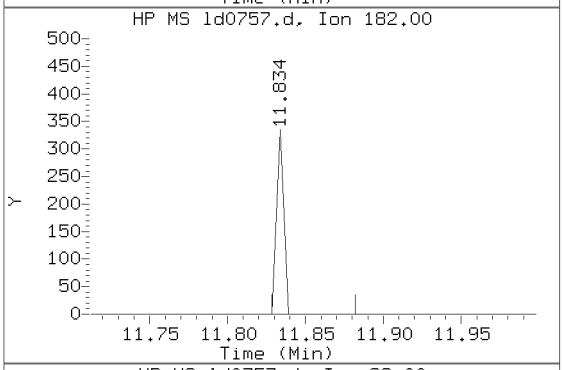




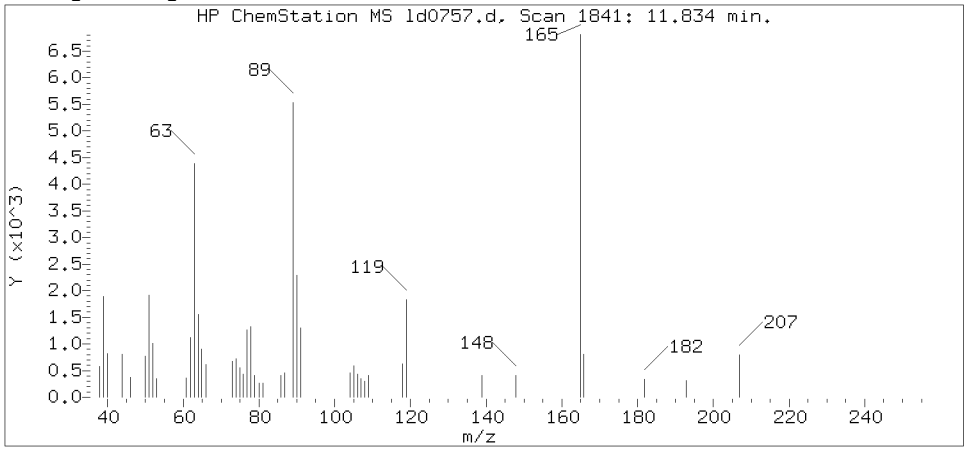
Sample Spectrum (Background Subtracted)

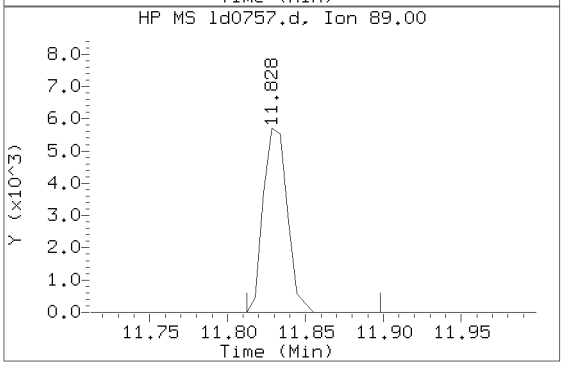






Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

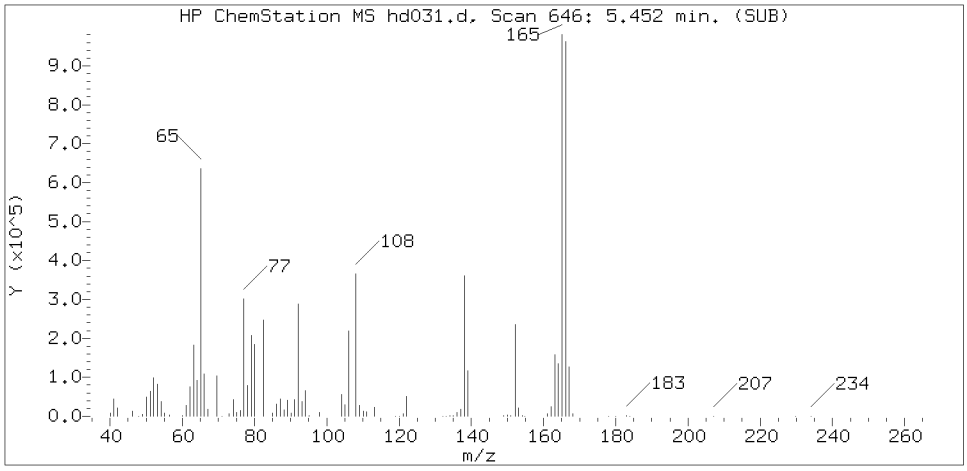
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0407 Lab Sample ID: 9553127

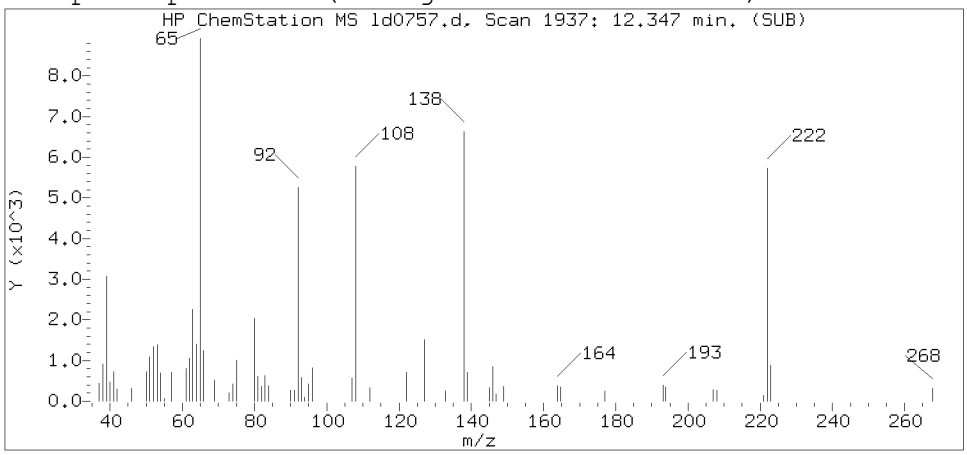
Compound Number	: 123
Compound Name	: 2,4-Dinitrotoluene
Scan Number	: 1841
Retention Time (minutes)	: 11.834
Relative Retention Time	: 0.00047
Quant Ion	: 165.00
Area (flag)	: 7039
On-column Amount (ng/ul)	: 0.2708

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

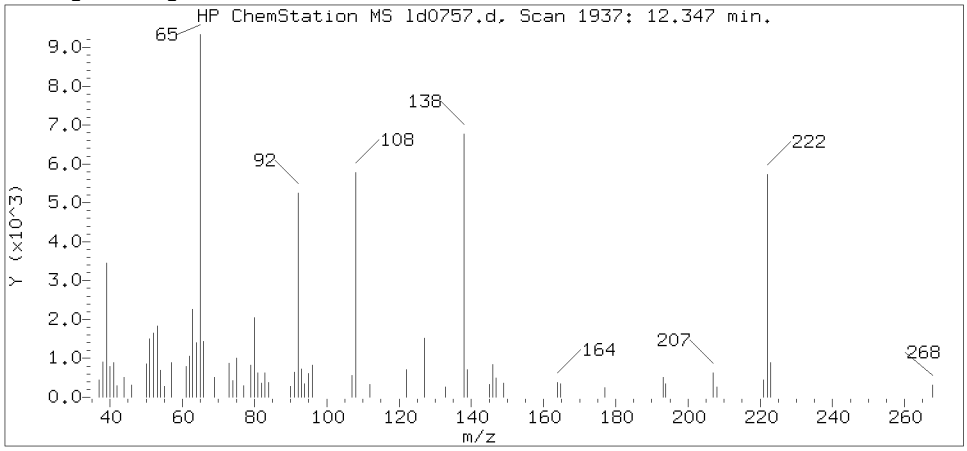
Reference Standard Spectrum for 4-Nitroaniline

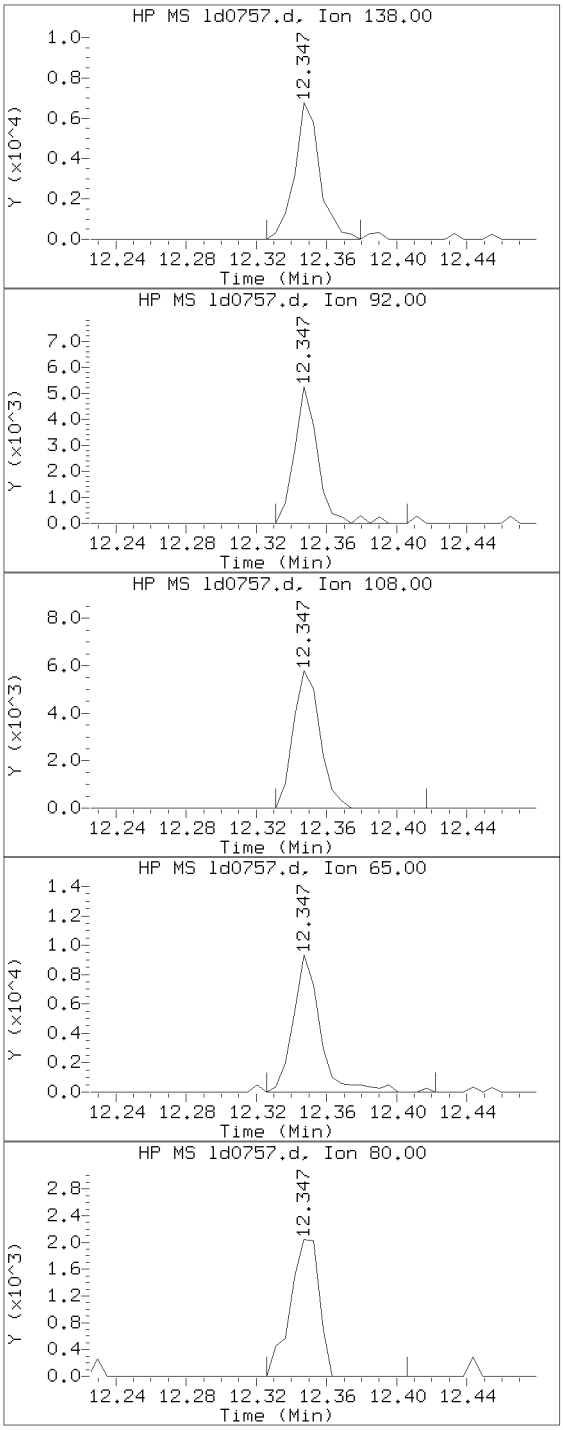


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

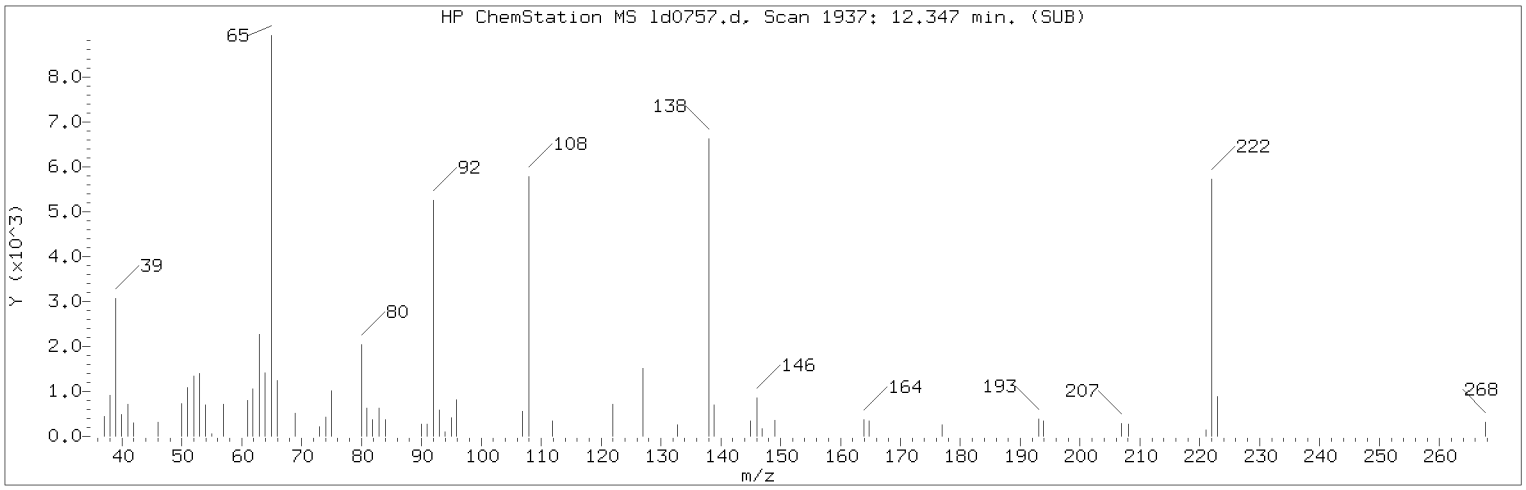
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0407 Lab Sample ID: 9553127

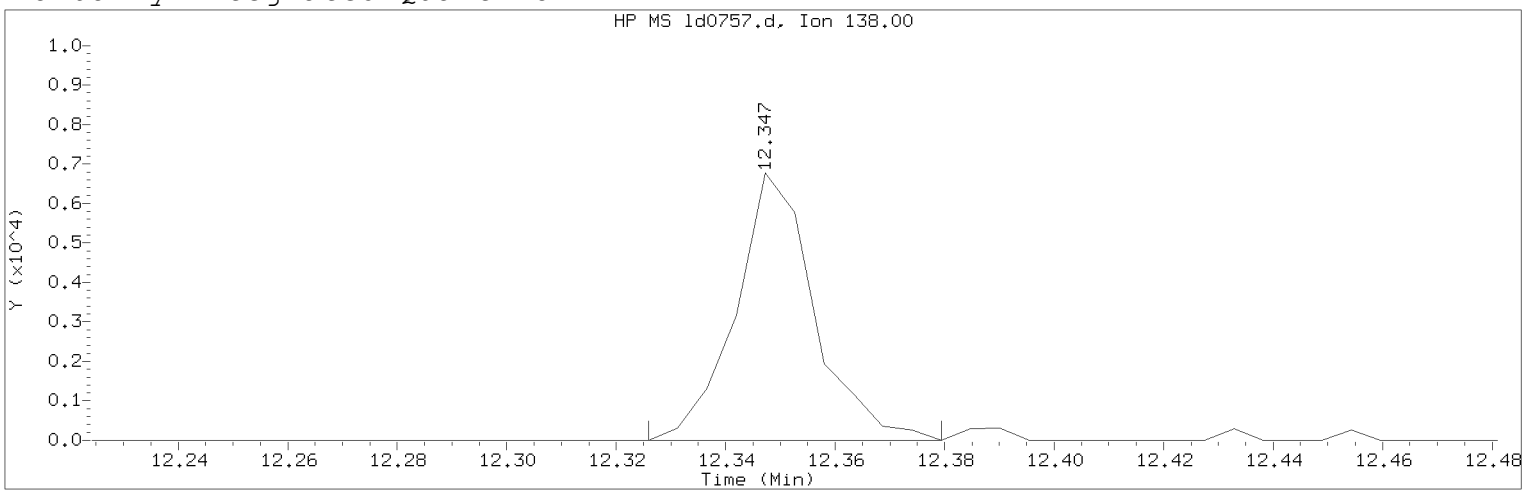
Compound Number	: 134
Compound Name	: 4-Nitroaniline
Scan Number	: 1937
Retention Time (minutes)	: 12.347
Relative Retention Time	: 0.00093
Quant Ion	: 138.00
Area (flag)	: 6765M
On-column Amount (ng/ul)	: 0.3387

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 09:36 bhs10208

Sample Name: R0407 Lab Sample ID: 9553127

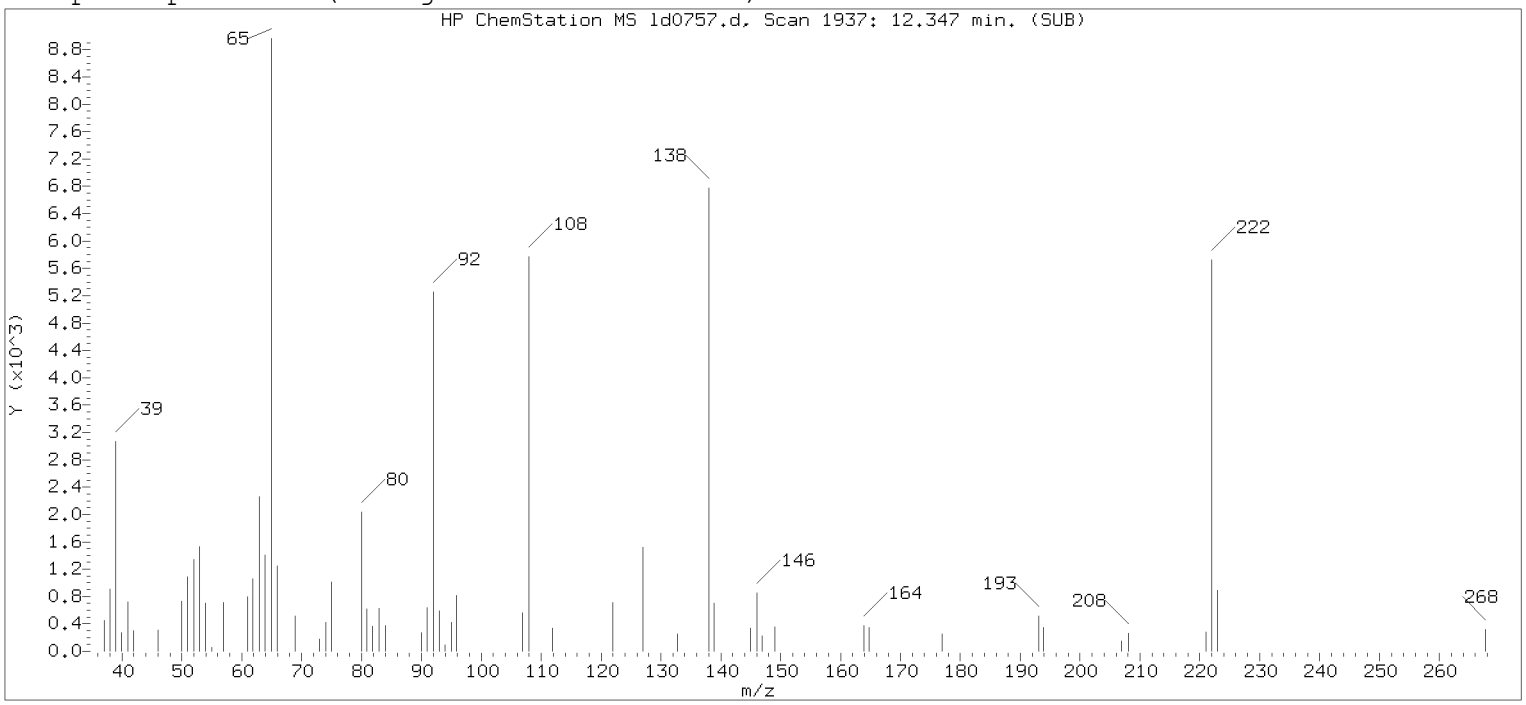
Compound Number : 134
Compound Name : 4-Nitroaniline
Scan Number : 1937
Retention Time (minutes) : 12.347
Quant Ion : 138.00
Area (flag) : 6765M
On-column Amount (ng/ul) : 0.3387
Integration start scan : 1932 Integration stop scan: 1942
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

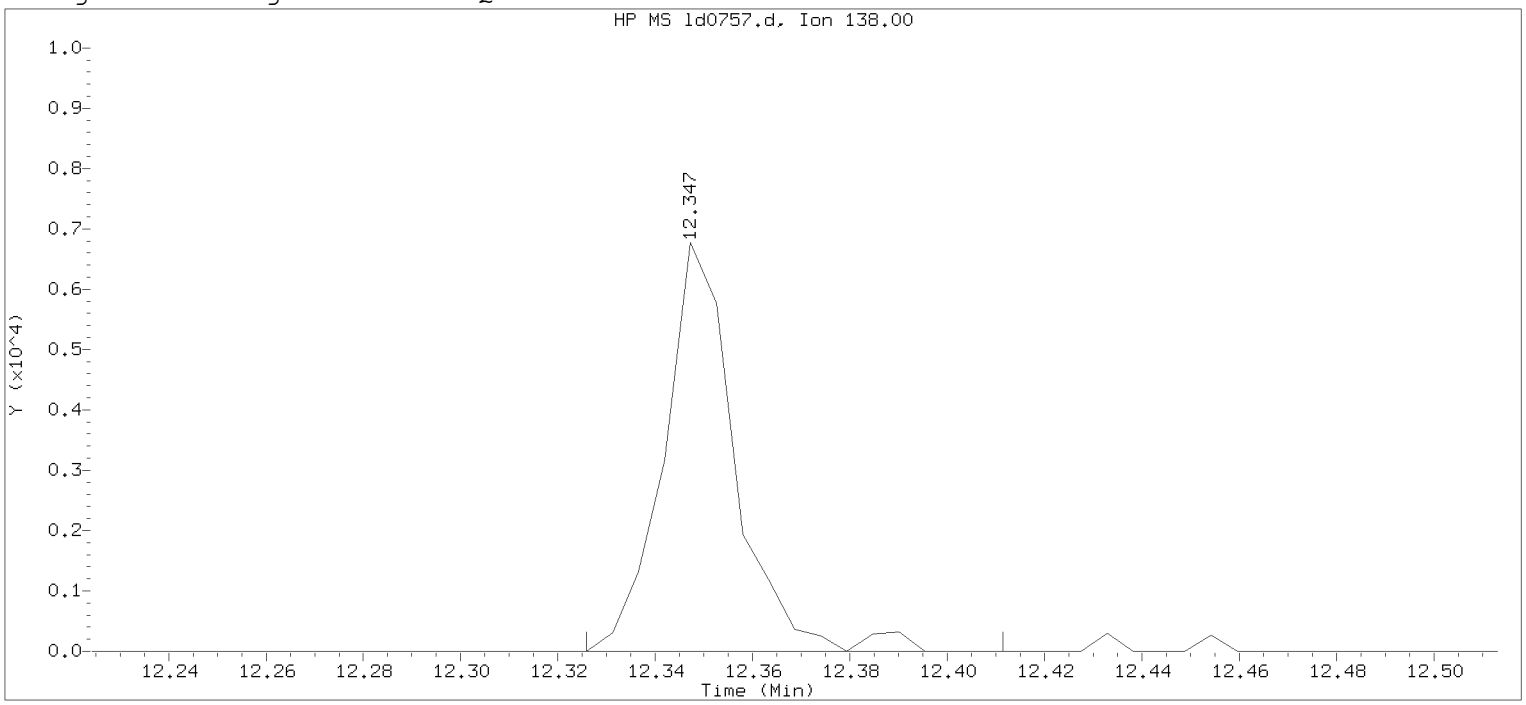
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0757.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 03:40 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 19-Apr-2018 04:06 Unknown

Sample Name: R0407 Lab Sample ID: 9553127

Compound Number	: 134		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1937		
Retention Time (minutes)	: 12.347		
Quant Ion	: 138.00		
Area	: 6959		
On-column Amount (ng/ul)	: 0.3485		
Integration start scan	: 1932	Integration stop scan:	1948
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:01.
Target 3.5 esignature user ID: bhsmith0247

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
hbz01996	LD0410.D	RVDFTPP0878	04/11/2018	06:11		
hbz01996	LD0411.D	RVSTD0968	04/11/2018	06:26		
hbz01996	LD0410z.D	RVDFTPP0878	04/11/2018	07:24		
hbz01996	LD0411a.D	RVSTD0968	04/11/2018	07:59		
hbz01996	Ld0412.D	rvSTD0968	04/11/2018	09:33		
hbz01996	Ld0413.D	rvSTD0968	04/11/2018	10:01		
hbz01996	Ld0414.D	rvSTD0968	04/11/2018	10:28		
hbz01996	Ld0415.D	rvSTD0968	04/11/2018	10:56		
hbz01996	Ld0416.D	rvSTD0968	04/11/2018	11:24		
hbz01996	Ld0417.D	rvSTD0968	04/11/2018	11:52		
hbz01996	Ld0418.D	rvSTD0968	04/11/2018	12:20		
hbz01996	Ld0419.D	rvMDL0968	04/11/2018	12:47		
hbz01996	Ld0420.D	rvPAHMDL0968	04/11/2018	13:15		
hbz01996	Ld0421.D	rvIVC0648	04/11/2018	13:43		
hbz01996	Ld0422.D	rvBASICV0648	04/11/2018	14:11		
hbz01996	Ld0423.D	ms1808526A	04/11/2018	14:39		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	LD0740.D	RVDFTPP0878	04/18/2018	19:15		
art12405	LD0741.D	RVSTD0968	04/18/2018	19:39		
art12405	LD0742.D	SBLKWJ107	04/18/2018	20:38	18107WAJ	
art12405	LD0743.D	107WJLCS	04/18/2018	21:06	18107WAJ	
art12405	LD0744.D	107WJLCSD	04/18/2018	21:34	18107WAJ	
art12405	LD0745.D	SBLKWB106	04/18/2018	22:02	18106WAB	
art12405	LD0746.D	106WBLCS	04/18/2018	22:30	18106WAB	
art12405	LD0747.D	9553721RE	04/18/2018	22:59	18107WAJ	
art12405	LD0748.D	9553724RE	04/18/2018	23:27	18107WAJ	
art12405	LD0749.D	9553727RE	04/18/2018	23:55	18107WAJ	
art12405	LD0750.D	9553120RE	04/19/2018	00:23	18106WAB	
art12405	LD0751.D	9553121RE	04/19/2018	00:52	18106WAB	
art12405	LD0752.D	9553122RE	04/19/2018	01:20	18106WAB	
art12405	LD0753.D	9553123RE	04/19/2018	01:48	18106WAB	
art12405	LD0754.D	9553124RE	04/19/2018	02:16	18106WAB	
art12405	LD0755.D	9553125RE	04/19/2018	02:44	18106WAB	
art12405	LD0756.D	9553126RE	04/19/2018	03:12	18106WAB	
art12405	LD0757.D	9553127RE	04/19/2018	03:40	18106WAB	
art12405	LD0758.D	9551275RE	04/19/2018	04:08	18106WAW	
art12405	LD0759.D	RVSTD0968	04/19/2018	04:36		

Data File: /chem/HP20296.i/18apr11.b/ld0410z.d

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5

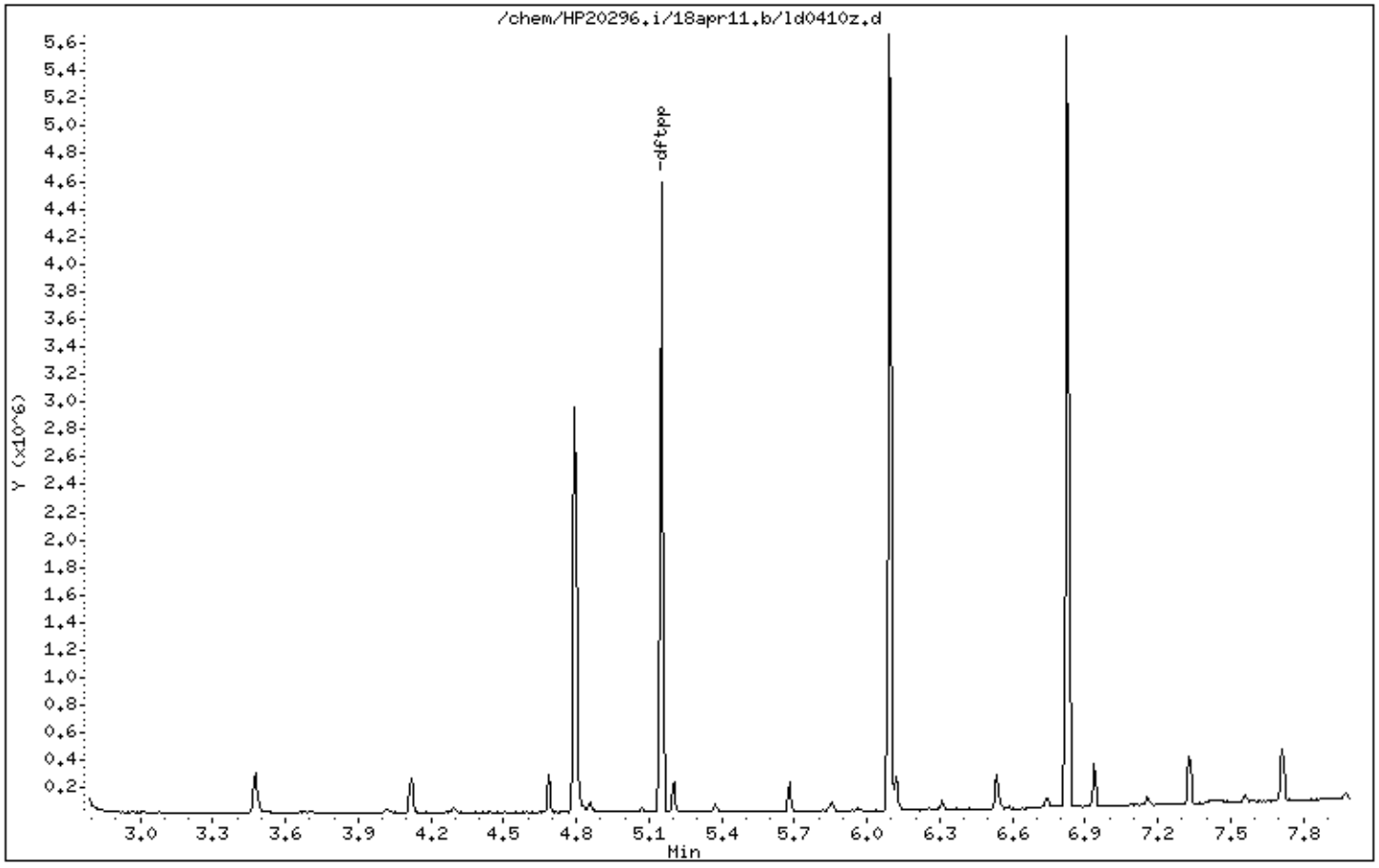
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr11.b/ld0410z.d

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5

Instrument: HP20296.i

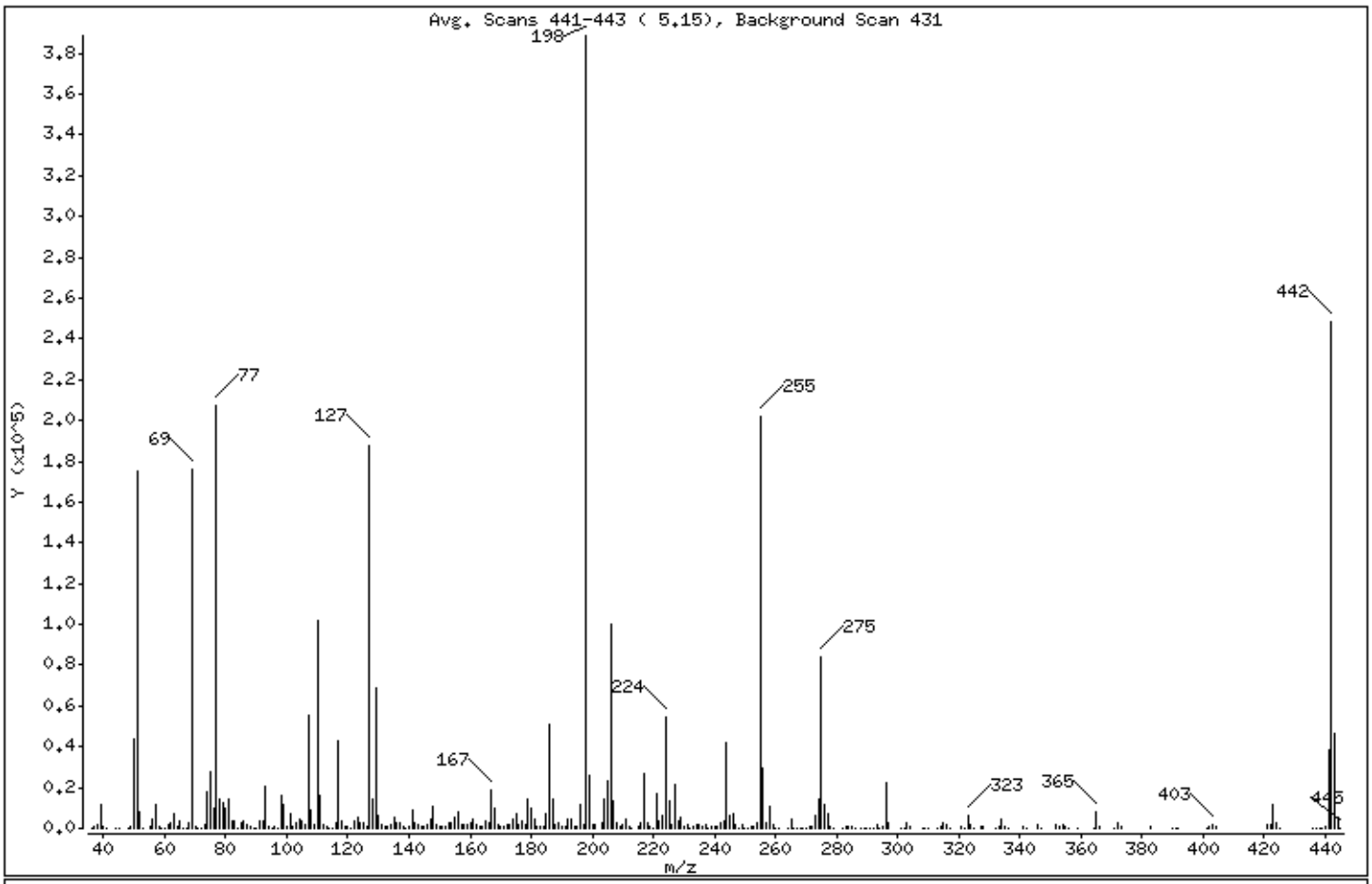
Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.96
68	Less than 2.00% of mass 69	0.74 (1.64)
69	Mass 69 relative abundance	45.36
70	Less than 2.00% of mass 69	0.27 (0.59)
127	10.00 - 80.00% of mass 198	48.27
197	Less than 2.00% of mass 198	0.37
199	5.00 - 9.00% of mass 198	6.70
275	10.00 - 60.00% of mass 198	21.70
365	Greater than 1.00% of mass 198	2.06
441	0.01 - 24.00% of mass 442	9.78 (15.29)
442	50.00 - 99.99% of mass 198	63.99
443	15.00 - 24.00% of mass 442	11.99 (18.74)

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	214	120.00	962	199.00	26048	284.00	514
37.00	650	121.00	328	200.00	1660	285.00	1051
38.00	1746	122.00	3191	201.00	2190	286.00	188
39.00	11925	123.00	5192	203.00	2768	288.00	102
40.00	712	124.00	2379	204.00	14270	289.00	277
41.00	322	125.00	2550	205.00	23384	290.00	87
44.00	259	126.00	764	206.00	100072	291.00	133
45.00	133	127.00	187520	207.00	13069	292.00	114
48.00	101	128.00	14220	208.00	2790	293.00	1758
49.00	1282	129.00	69144	209.00	945	294.00	388
50.00	43928	130.00	6355	210.00	1794	295.00	602
51.00	174656	131.00	1511	211.00	4035	296.00	22424
52.00	8368	132.00	740	212.00	505	297.00	3000
53.00	101	133.00	560	213.00	303	301.00	416
55.00	833	134.00	2115	215.00	1206	302.00	445
56.00	4778	135.00	5455	216.00	2451	303.00	2765
57.00	11760	136.00	2366	217.00	26768	304.00	640
58.00	481	137.00	2970	218.00	3060	308.00	285
59.00	419	138.00	590	219.00	480	309.00	116
60.00	245	139.00	370	220.00	116	310.00	304
61.00	2086	140.00	978	221.00	17056	313.00	229
62.00	2632	141.00	8976	222.00	3202	314.00	1127
63.00	7021	142.00	2891	223.00	6007	315.00	2312
64.00	1040	143.00	2009	224.00	54504	316.00	1357
65.00	3624	144.00	581	225.00	13673	317.00	225
66.00	430	145.00	651	226.00	1656	321.00	768
67.00	339	146.00	1821	227.00	21152	322.00	353
68.00	2886	147.00	4356	228.00	3175	323.00	6668
69.00	176256	148.00	10498	229.00	5175	324.00	1437
70.00	1039	149.00	1821	230.00	766	325.00	104
71.00	126	150.00	818	231.00	2063	327.00	1205
72.00	117	151.00	1268	232.00	158	328.00	562
73.00	1915	152.00	710	233.00	568	332.00	431
74.00	17608	153.00	2634	234.00	1369	333.00	615
75.00	27440	154.00	2418	235.00	1655	334.00	4210

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	9829	155.00	5733	236.00	1029	335.00	1001
77.00	206976	156.00	8109	237.00	1823	336.00	120
78.00	13974	157.00	1667	238.00	373	341.00	834
79.00	12894	158.00	1404	239.00	936	342.00	318
80.00	9439	159.00	1399	240.00	804	346.00	1638
81.00	14323	160.00	2681	241.00	1310	347.00	129
82.00	3201	161.00	4121	242.00	2944	352.00	1959
83.00	3298	162.00	1392	243.00	3178	353.00	1295
84.00	405	163.00	484	244.00	41600	354.00	1860
85.00	2658	164.00	645	245.00	5985	355.00	573
86.00	3714	165.00	3334	246.00	7457	356.00	112
87.00	1838	166.00	2844	247.00	1646	359.00	97
88.00	666	167.00	19104	248.00	425	364.00	166
89.00	349	168.00	9385	249.00	1555	365.00	8022
90.00	86	169.00	1643	250.00	333	366.00	1295
91.00	3186	170.00	560	251.00	373	371.00	416
92.00	3154	171.00	766	252.00	459	372.00	2682
93.00	20416	172.00	1644	253.00	1223	373.00	832
94.00	1336	173.00	2228	254.00	2490	383.00	780
95.00	389	174.00	4241	255.00	202176	390.00	362
96.00	949	175.00	7051	256.00	29616	391.00	287
97.00	185	176.00	2096	257.00	2804	392.00	128
98.00	16053	177.00	3243	258.00	10892	401.00	344
99.00	12005	178.00	1494	259.00	1634	402.00	961
100.00	1182	179.00	14302	260.00	394	403.00	1876
101.00	7436	180.00	9605	261.00	336	404.00	759
102.00	459	181.00	4199	264.00	334	421.00	1547
103.00	2494	182.00	1017	265.00	4240	422.00	1531
104.00	4525	183.00	447	266.00	406	423.00	11186
105.00	3821	184.00	1138	267.00	131	424.00	2786
106.00	1507	185.00	6963	268.00	95	425.00	406
107.00	55128	186.00	50680	269.00	105	436.00	108
108.00	8869	187.00	14237	270.00	277	437.00	136
109.00	1596	188.00	1746	271.00	486	438.00	393
110.00	101968	189.00	2939	272.00	723	439.00	183

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

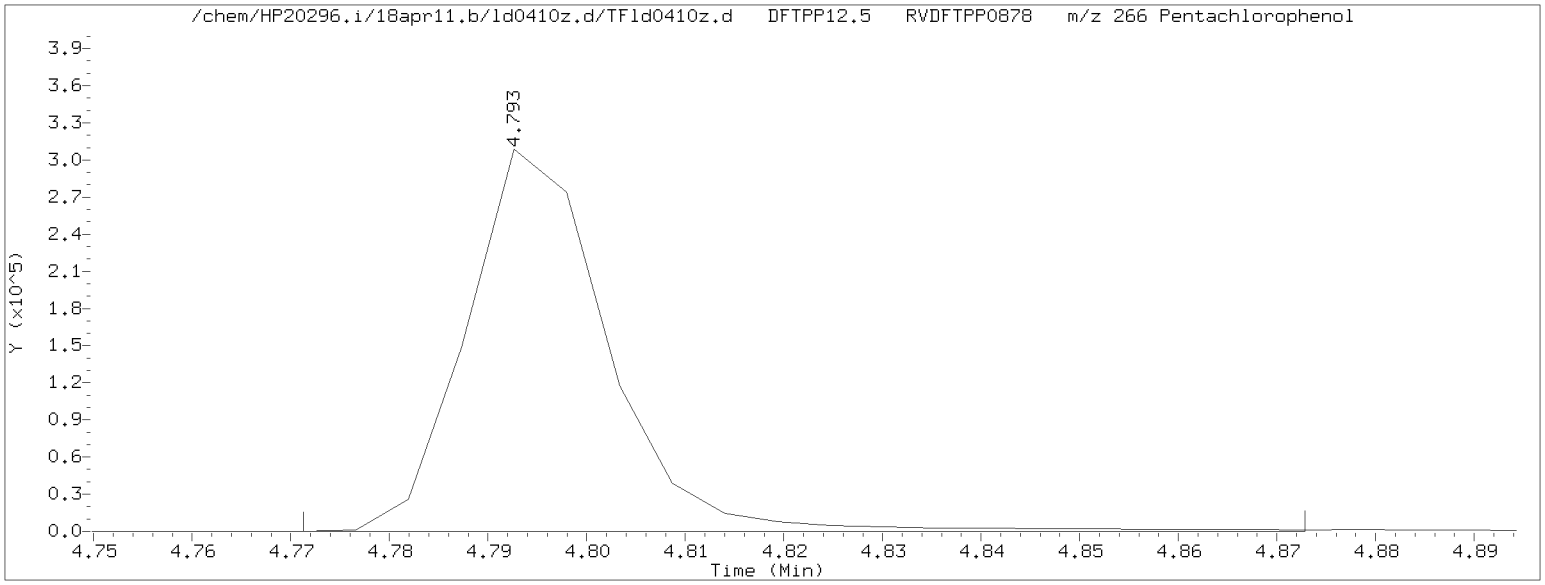
Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	15833	190.00	682	273.00	5966	440.00	528
112.00	2146	191.00	1209	274.00	14719	441.00	38016
113.00	663	192.00	4178	275.00	84336	442.00	248640
114.00	85	193.00	4757	276.00	11776	443.00	46600
115.00	399	194.00	1023	277.00	6741	444.00	4503
116.00	3104	195.00	1016	278.00	1184	445.00	164
117.00	42984	196.00	11637	279.00	323		
118.00	3539	197.00	1427	282.00	151		
119.00	528	198.00	388608	283.00	924		

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

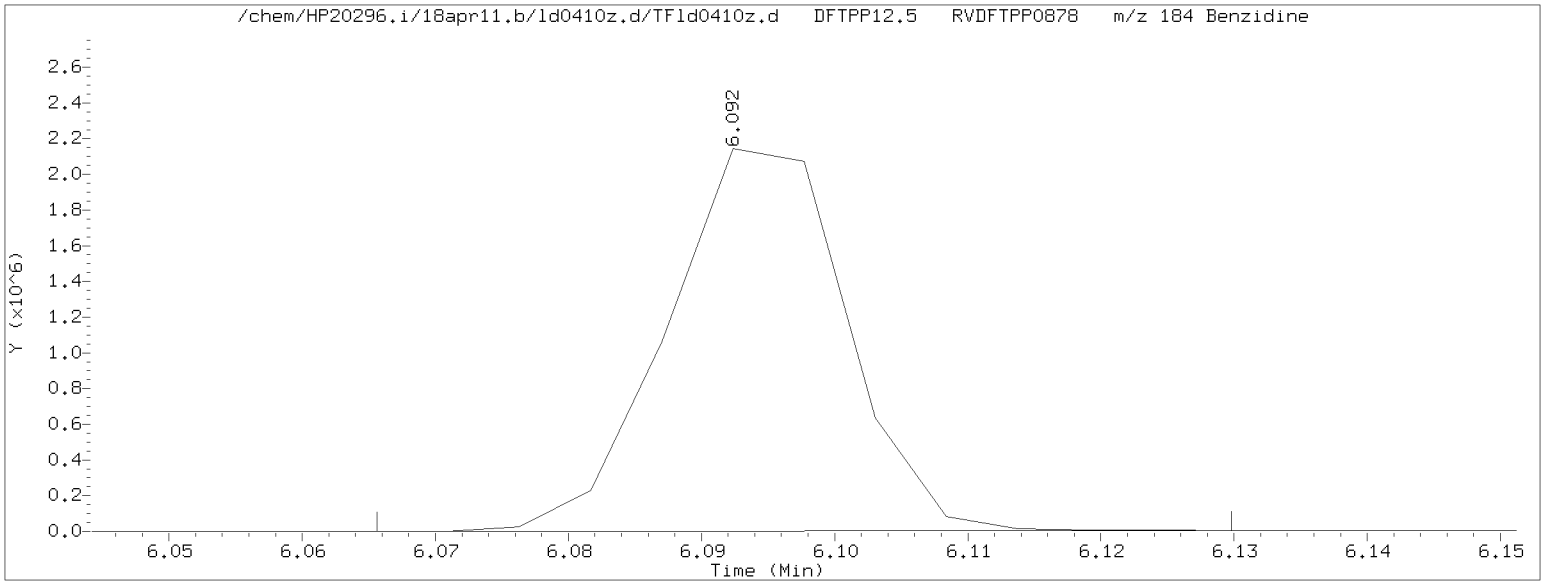
Instrument ID: HP20296.i Injection Date: 11-APR-2018 07:24 Operator: hbz01996



Pentachlorophenol EICP peak height = 308800 EICP peak height at 10% = 30880 Pentachlorophenol EICP area = 308021

Pentachlorophenol EICP peak apex (min.) = 4.793
RT at 10% of front half of EICP (min.) = 4.782 'Front' peak width (min.) = 0.0104500000
RT at 10% of back half of EICP (min.) = 4.810 'Tailing' peak width (min.) = 0.0177500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0177500000}{0.0104500000} = 1.699$$



Benzidine EICP peak height = 2141262 EICP peak height at 10% = 214126 Benzidine EICP area = 2006523

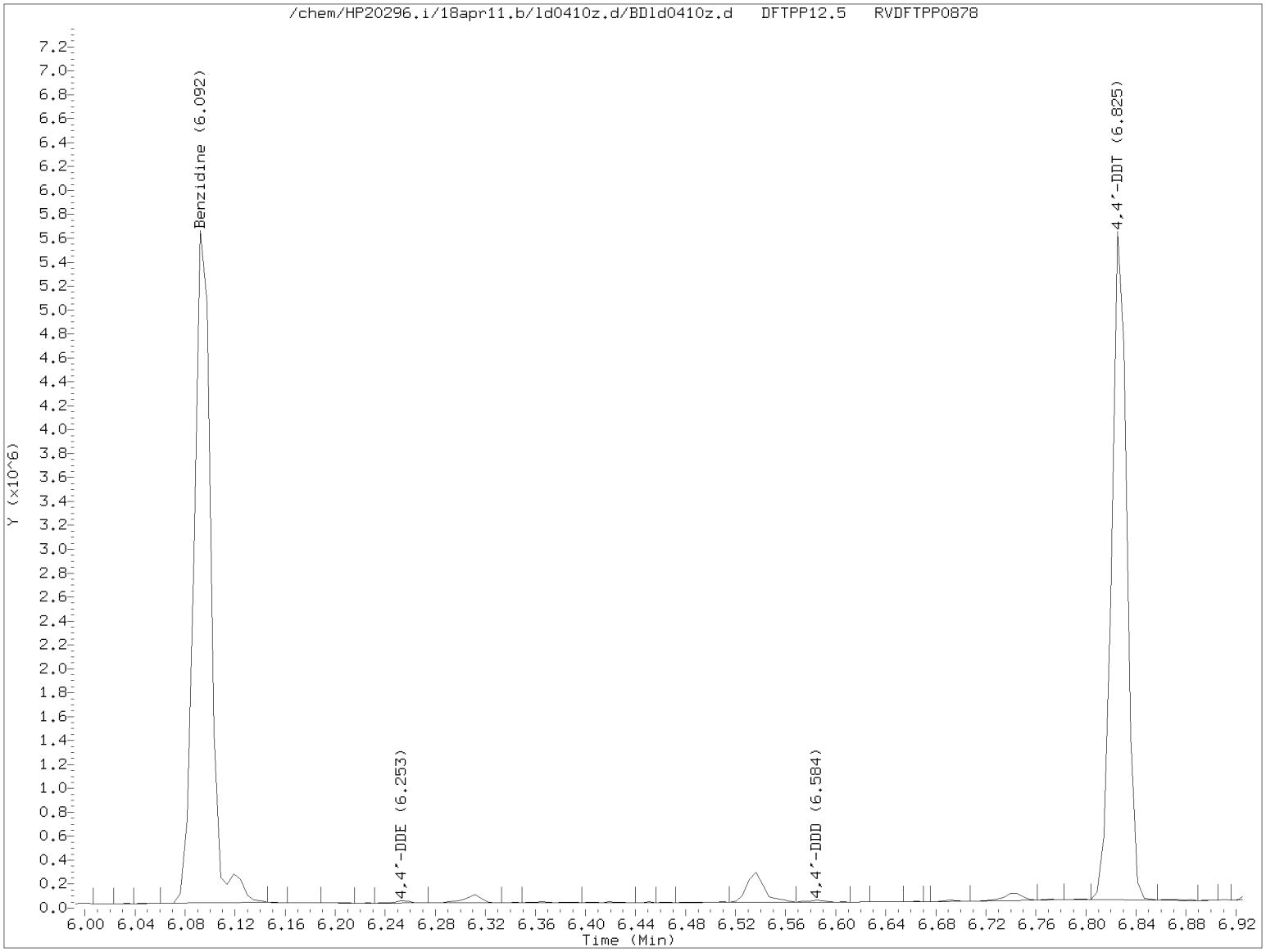
Benzidine EICP peak apex (min.) = 6.092
RT at 10% of front half of EICP (min.) = 6.081 'Front' peak width (min.) = 0.0111000000
RT at 10% of back half of EICP (min.) = 6.107 'Tailing' peak width (min.) = 0.0147166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0147166667}{0.0111000000} = 1.326$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

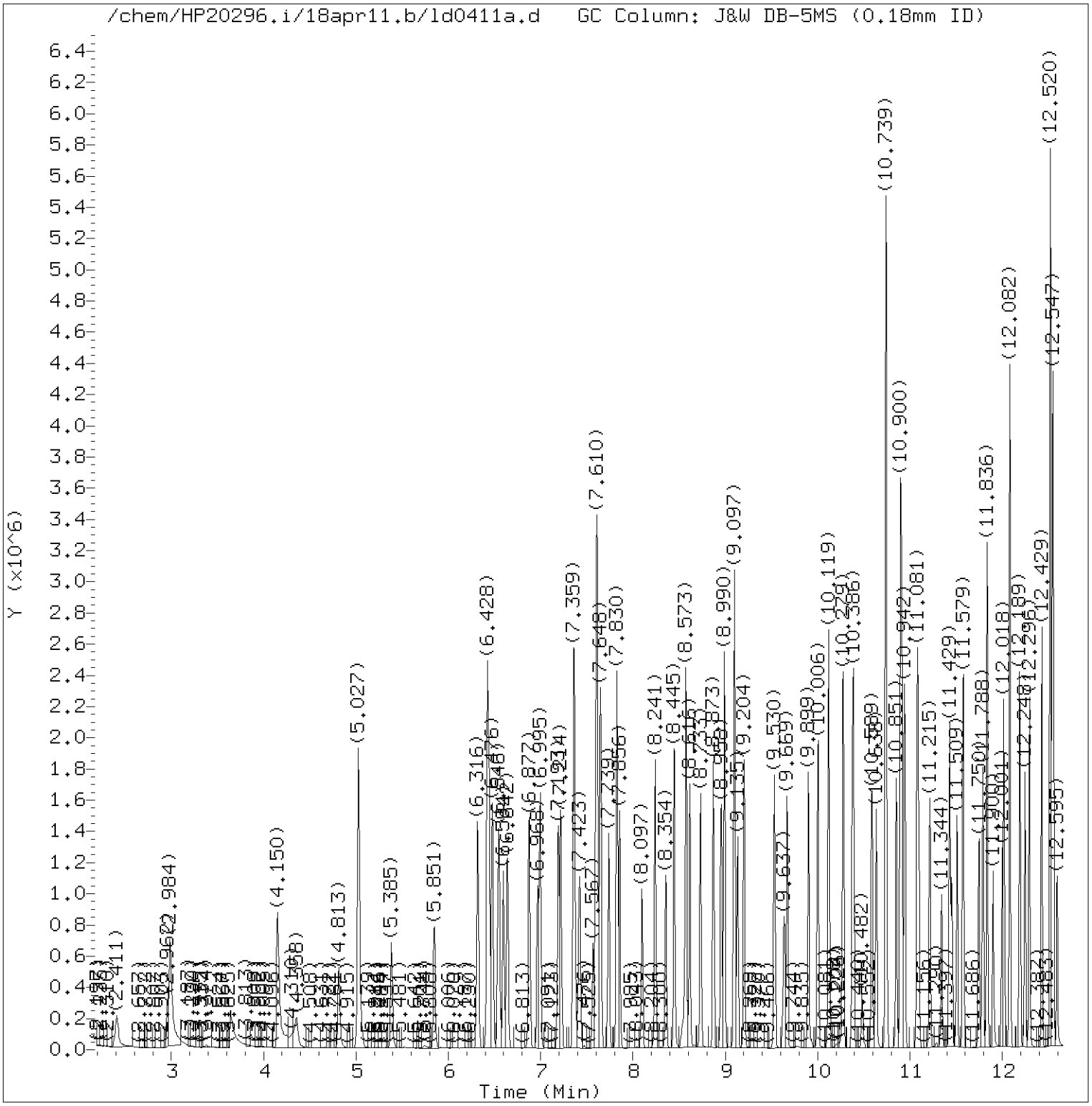
Instrument ID: HP20296.i Injection Date: 11-APR-2018 07:24 Operator: hbz01996



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{15587 + 17791}{15587 + 17791 + 4771824} \times 100 = 0.7$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

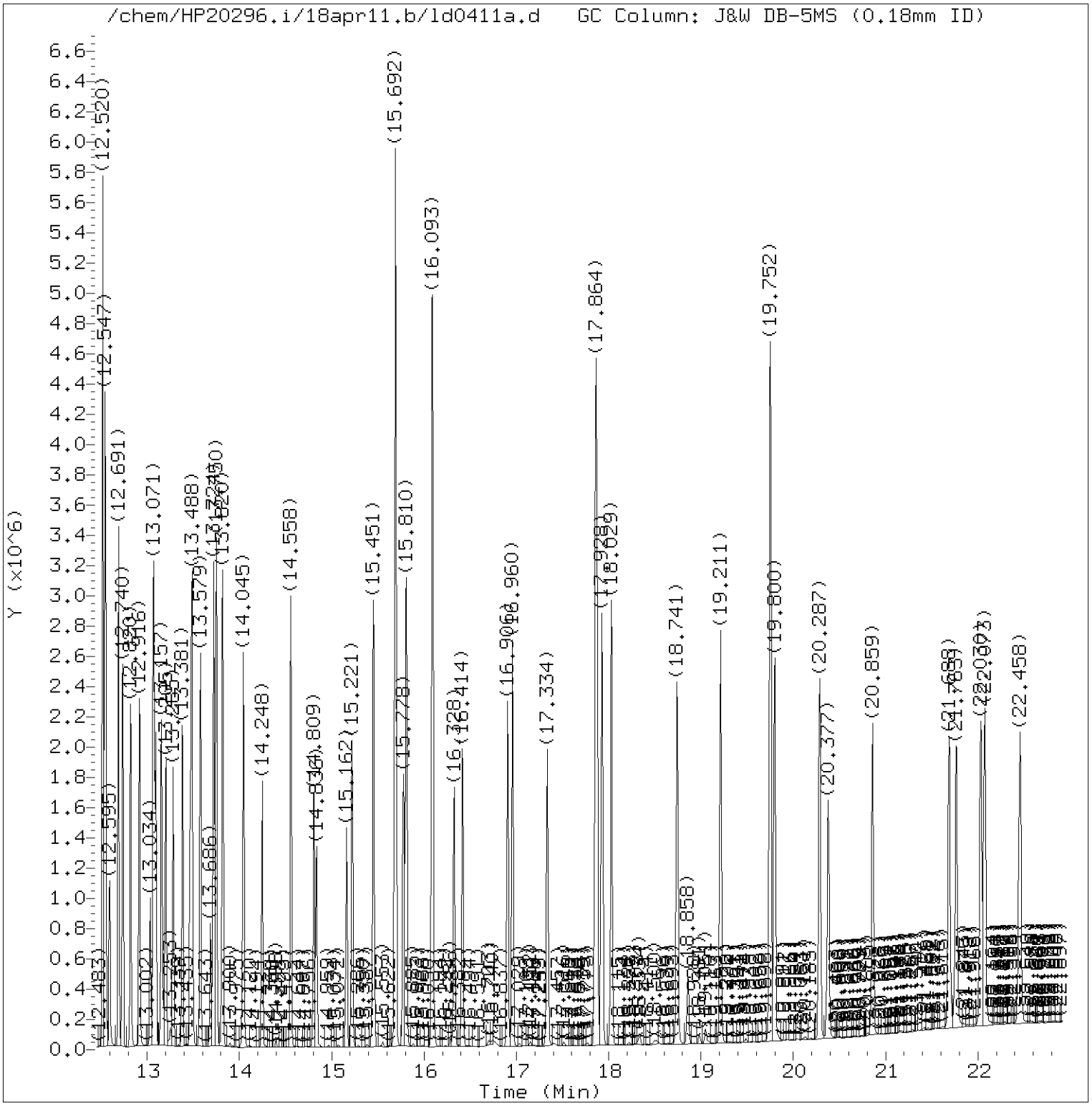
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.411	88	217982	7.582
5) N-Nitrosodimethylamine	(1)	2.962	74	333412	7.616
6) Pyridine	(1)	2.989	79	577705	7.396
8) 2-Picoline	(1)	4.150	93	587778	7.442
9) N-Nitrosomethylethylamine	(1)	4.358	88	237321	7.498
10) Methyl methanesulfonate	(1)	4.813	80	287126	7.489
12)$2-Fluorophenol	(1)	5.027	112	945841	15.708
14) N-Nitrosodiethylamine	(1)	5.385	102	231651	7.892
43) Total Cresols	(1)			923895	15.448
16) Ethyl methanesulfonate	(1)	5.851	109	242352	7.581
17) Benzaldehyde	(1)	6.316	77	467030	7.818
18)$Phenol-d6	(1)	6.423	99	1213509	15.370
19) Phenol	(1)	6.444	94	704017	7.745
20) Aniline	(1)	6.476	93	823646	7.859
21) a-methylstyrene	(1)	6.551	118	160951	7.030
23) bis(2-Chloroethyl)ether	(1)	6.594	93	533902	7.890
24) 2-Chlorophenol	(1)	6.642	128	465477	7.892
25) 1,3-Dichlorobenzene	(1)	6.877	146	518250	7.783
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	219894	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	519431	7.709
28) Benzyl alcohol	(1)	7.193	108	276998	7.036
29) 1,2-Dichlorobenzene	(1)	7.214	146	501023	7.809
31) Indene	(1)	7.359	115	666361	7.088
32) 2-Methylphenol	(1)	7.364	108	447101	7.687
100) Isosafrole	(3)			397646	7.373
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	733333	7.634
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	733333	7.634
36) N-Nitrosopyrrolidine	(1)	7.567	100	243305	7.640
37) Acetophenone	(1)	7.600	105	733625	8.272
38) 4-Methylphenol	(1)	7.610	108	476794	7.761
39) N-Nitroso-di-n-propylamine	(1)	7.616	70	389329	7.701
40) N-Nitrosomorpholine	(1)	7.642	56	320050	7.575
41) o-Toluidine	(1)	7.648	106	796456	7.744
44) Hexachloroethane	(1)	7.739	117	213835	7.443
45)$Nitrobenzene-d5	(2)	7.830	82	1120068	15.350
46) Nitrobenzene	(2)	7.856	77	576823	7.750
125) 2,4_2,6-Dinitrotoluenes	(3)			498715	15.106
50) N-Nitrosopiperidine	(2)	8.097	114	231680	7.574
52) Isophorone	(2)	8.241	82	988371	7.597
53) 2-Nitrophenol	(2)	8.354	139	230200	7.654

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	498320	7.729
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	234627	7.353
58) Benzoic acid	(2)	8.578	105	312985	9.064
57) bis(2-Chloroethoxy)methane	(2)	8.616	93	640987	7.580
62) 2,4-Dichlorophenol	(2)	8.733	162	389151	7.752
151) Diallate trans/cis	(4)			469119	7.424
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	428199	7.655
68)*Naphthalene-d8	(2)	8.958	136	846035	5.000
69) Naphthalene	(2)	8.990	128	1369378	7.833
70) 4-Chloroaniline	(2)	9.097	127	540137	7.569
71) 2,6-Dichlorophenol	(2)	9.102	162	381866	7.681
72) Hexachloropropene	(2)	9.135	213	300172	7.416
74) Hexachlorobutadiene	(2)	9.204	225	264869	7.810
78) Quinoline	(2)	9.536	129	813359	7.303
79) Caprolactam	(2)	9.637	113	120307	7.643
80) N-Nitrosodi-n-butylamine	(2)	9.669	84	362783	6.612
83) 4-Chloro-3-methylphenol	(2)	9.899	107	425702	7.728
85) Safrole	(2)	10.006	162	344726	7.350
86) 2-Methylnaphthalene	(2)	10.119	142	897640	7.728
87) 1-Methylnaphthalene	(2)	10.279	142	822044	7.714
88) Hexachlorocyclopentadiene	(3)	10.375	237	262136	7.561
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	439043	7.529
91) cis-Isosafrole	(3)	10.482	162	64130	1.264
93) 2,4,6-Trichlorophenol	(3)	10.589	196	280628	7.664
95) 2,4,5-Trichlorophenol	(3)	10.638	196	301099	7.834
96)$2-Fluorobiphenyl	(3)	10.739	172	2023719	15.185
97) trans-Isosafrole	(3)	10.851	162	333516	6.109
98) 1,1'-Biphenyl	(3)	10.900	154	1106868	8.053
99) 2-Chloronaphthalene	(3)	10.910	162	855845	7.327
101) 1-Chloronaphthalene	(3)	10.942	162	816450	7.557
103) Diphenyl ether	(3)	11.081	170	576142	7.505
104) 2-Nitroaniline	(3)	11.098	138	262202	7.670
108) 1,4-Naphthoquinone	(3)	11.215	158	343508	7.443
111) 1,3-Dinitrobenzene	(3)	11.344	168	130074	6.684
110) Dimethylphthalate	(3)	11.429	163	969316	7.408
109) 1,4-Dinitrobenzene	(3)	11.456	168	146800	8.080
113) 2,6-Dinitrotoluene	(3)	11.509	165	214783	7.731
114) Acenaphthylene	(3)	11.579	152	1261562	7.771
117) 3-Nitroaniline	(3)	11.750	138	224394	7.666
118)*Acenaphthene-d10	(3)	11.788	164	428686	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	860432	7.474
120) 2,4-Dinitrophenol	(3)	11.900	184	153840	9.211
121) 4-Nitrophenol	(3)	12.001	109	150985	7.318
122) Pentachlorobenzene	(3)	12.018	250	357974	7.528
124) Dibenzofuran	(3)	12.082	168	1205707	7.539
123) 2,4-Dinitrotoluene	(3)	12.087	165	283932	7.375
126) 1-Naphthylamine	(3)	12.189	143	814127	7.154
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	229384	7.670
128) 2-Naphthylamine	(3)	12.296	143	750921	6.965
129) Diethylphthalate	(3)	12.429	149	962321	7.473
130) Thionazin	(3)	12.520	107	162580	7.416
131) Fluorene	(3)	12.520	166	964347	7.719
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	466114	7.527
133) 5-Nitro-o-toluidine	(3)	12.547	152	258699	7.602
134) 4-Nitroaniline	(3)	12.558	138	229388	7.754
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	162508	7.241
136) N-Nitrosodiphenylamine	(4)	12.691	169	762715	7.353
137) NDPA as diphenylamine	(4)	12.691	169	762715	7.353
139) 1,2-Diphenylhydrazine	(4)	12.740	77	1086688	7.507
140)$2,4,6-Tribromophenol	(3)	12.825	330	222268	14.999
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	183233	7.443
144) 1,3,5-Trinitrobenzene	(4)	13.034	213	98364	7.115
145) Diallate (peak 1)	(4)	13.066	86	402675	6.145
146) Phorate	(4)	13.077	75	721210	7.768
147) Phenacetin	(4)	13.098	108	508748	7.760
148) 4-Bromophenyl-phenylether	(4)	13.157	248	256706	7.406
149) Diallate (peak 2)	(4)	13.173	86	66444	1.279
150) Hexachlorobenzene	(4)	13.205	284	260514	7.318
152) Dimethoate	(4)	13.285	87	422646	7.565
153) Atrazine	(4)	13.387	200	272821	7.774
154) Pentachlorophenol	(4)	13.467	266	156591	7.182
156) Pentachloronitrobenzene	(4)	13.478	237	125575	7.391
155) 4-Aminobiphenyl	(4)	13.488	169	890155	7.537
157) Pronamide	(4)	13.579	173	460703	7.875
158)*Phenanthrene-d10	(4)	13.718	188	847675	5.000
159) Dinoseb	(4)	13.724	211	256926	7.314
160) Phenanthrene	(4)	13.750	178	1394297	7.460
162) Anthracene	(4)	13.820	178	1432349	7.644
168) Carbazole	(4)	14.045	167	1249511	7.531
169) Methyl parathion	(4)	14.248	109	321668	7.553

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

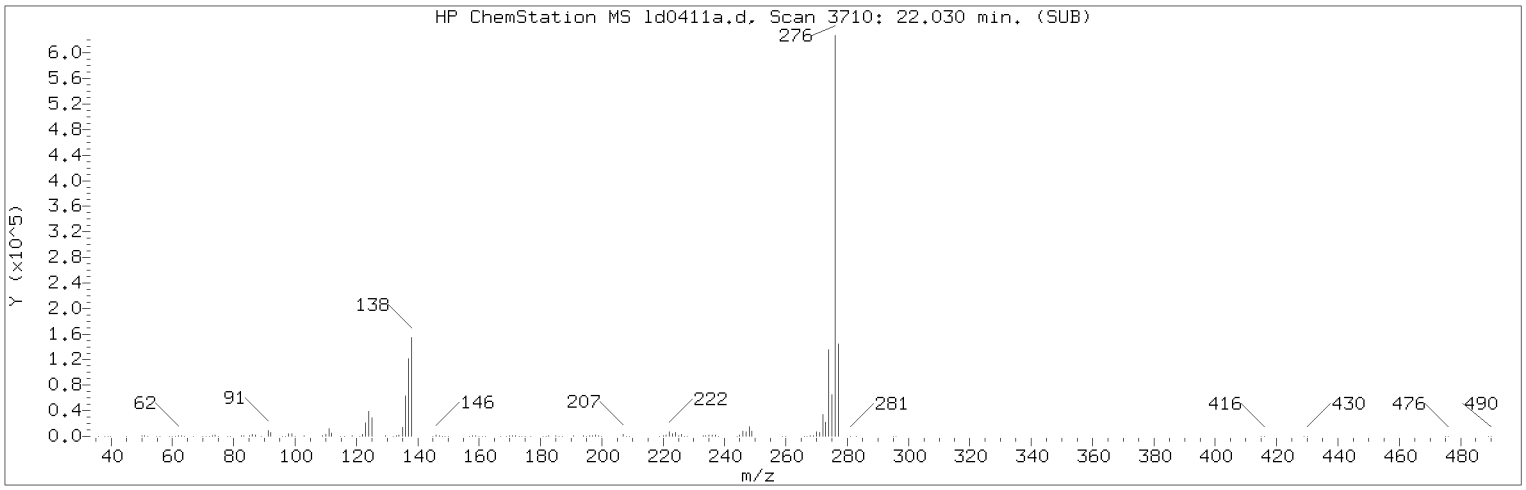
Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	1654142	7.407
172) Parathion	(4)	14.804	109	203503	7.384
173) 4-Nitroquinoline-1-oxide	(4)	14.836	190	152875	6.907
227) Total PAHs	(6)			23389246	137.546
174) Octachlorostyrene	(4)	15.162	308	92041	6.911
176) Isodrin	(4)	15.221	193	169601	7.324
178) Fluoranthene	(4)	15.451	202	1603710	7.629
179) Benzidine	(5)	15.692	184	2853827	22.213
180)*Pyrene-d10	(5)	15.778	212	871904	5.000
182) Pyrene	(5)	15.810	202	1655514	7.464
184)$Terphenyl-d14	(5)	16.093	244	2110890	15.096
187) p-Dimethylaminoazobenzene	(5)	16.328	225	263672	7.792
190) Chlorobenzilate	(5)	16.414	139	491277	7.435
192) 3,3'-Dimethylbenzidine	(5)	16.906	212	1059762	7.584
193) Butylbenzylphthalate	(5)	16.960	149	770750	7.479
196) 2-Acetylaminofluorene	(5)	17.334	181	605629	7.425
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	535227	7.506
200) Benzo(a)anthracene	(5)	17.864	228	1527968	7.711
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	316789	7.315
201) Chrysene	(5)	17.928	228	1468906	7.663
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	1083068	7.438
208) 6-Methylchrysene	(5)	18.741	242	995773	7.378
210) Di-n-octylphthalate	(6)	19.211	149	1846002	7.375
211) Benzo(b)fluoranthene	(6)	19.752	252	1471661	7.541
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.752	256	626398	7.781
213) Benzo(k)fluoranthene	(6)	19.800	252	1416403	7.538
216) Benzo(a)pyrene	(6)	20.287	252	1347641	7.675
218)*Perylene-d12	(6)	20.377	264	795931	5.000
220) 3-Methylcholanthrene	(6)	20.859	268	648743	7.599
222) Dibenz(a,h)acridine	(6)	21.688	279	1092313	7.320
223) Dibenz(a,j)acridine	(6)	21.768	279	1122303	7.405
224) Indeno(1,2,3-cd)pyrene	(6)	22.030	276	1257937M	7.544
225) Dibenz(a,h)anthracene	(6)	22.073	278	1315620	7.767
226) Benzo(g,h,i)perylene	(6)	22.458	276	1321837	7.672

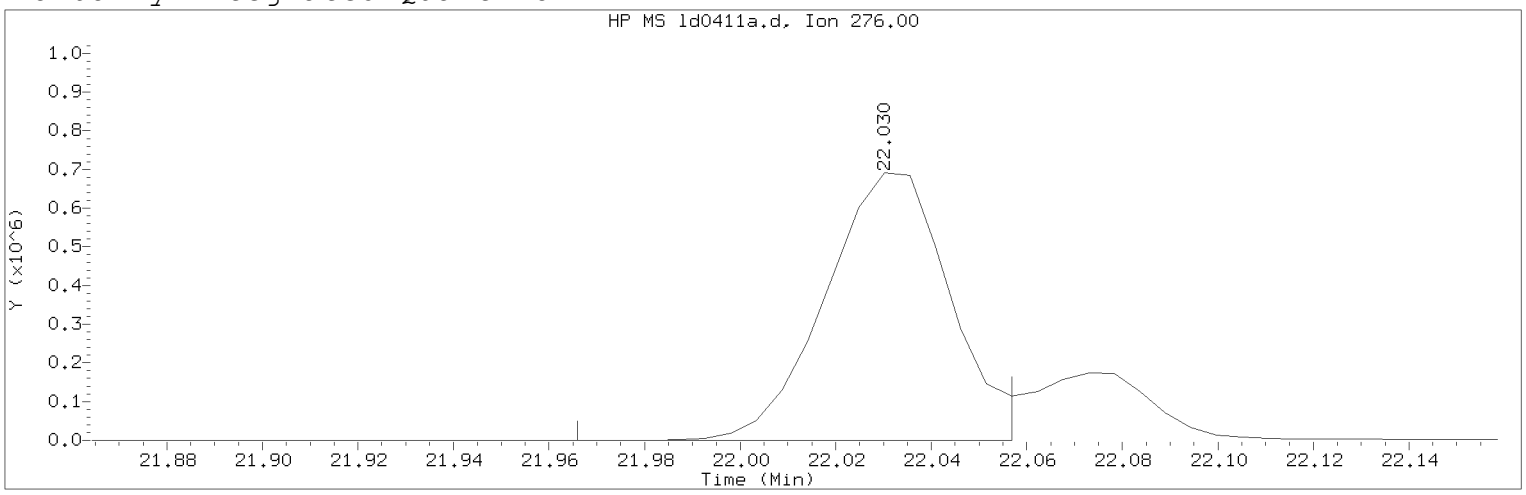
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

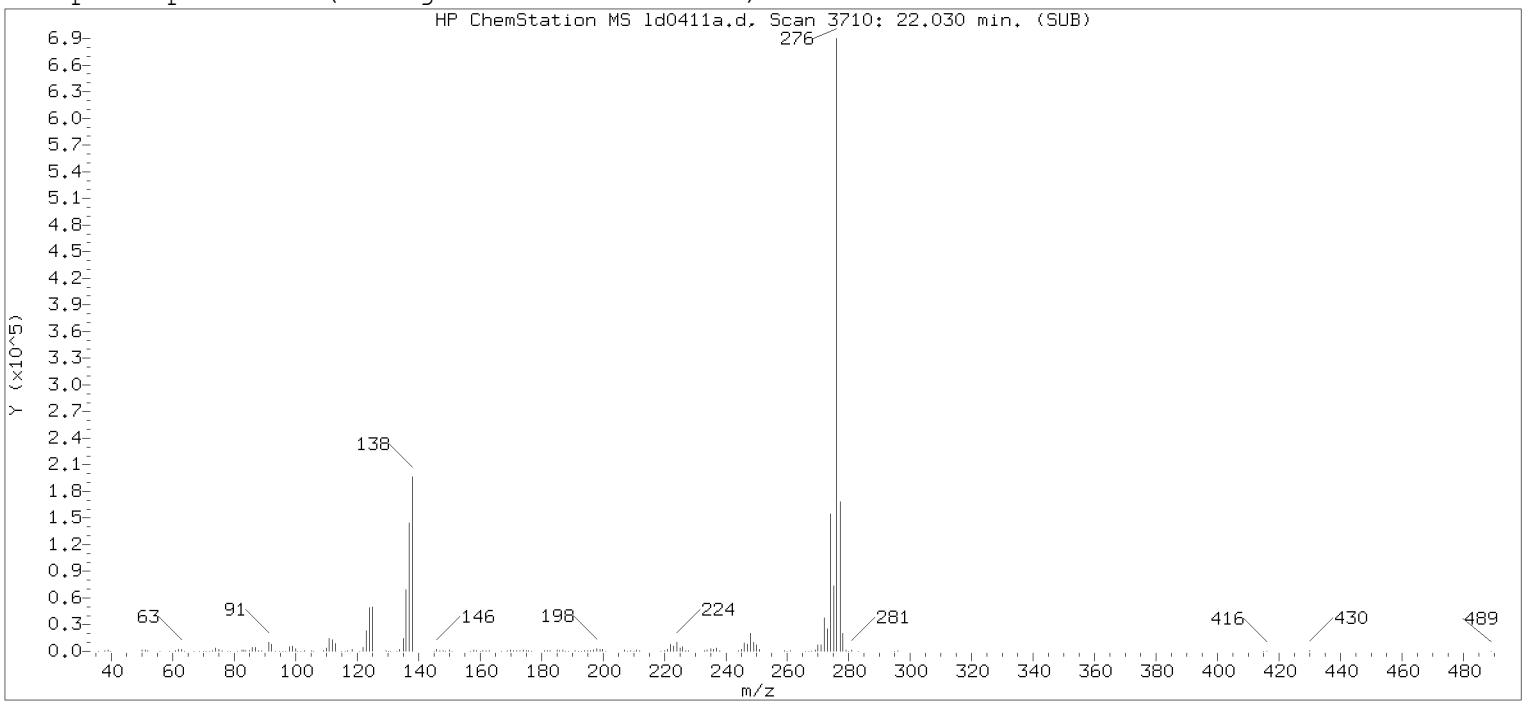
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3710
Retention Time (minutes) : 22.030
Quant Ion : 276.00
Area (flag) : 1257937M
On-Column Amount (ng/ul) : 7.5442
Integration start scan : 3697 Integration stop scan: 3714
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

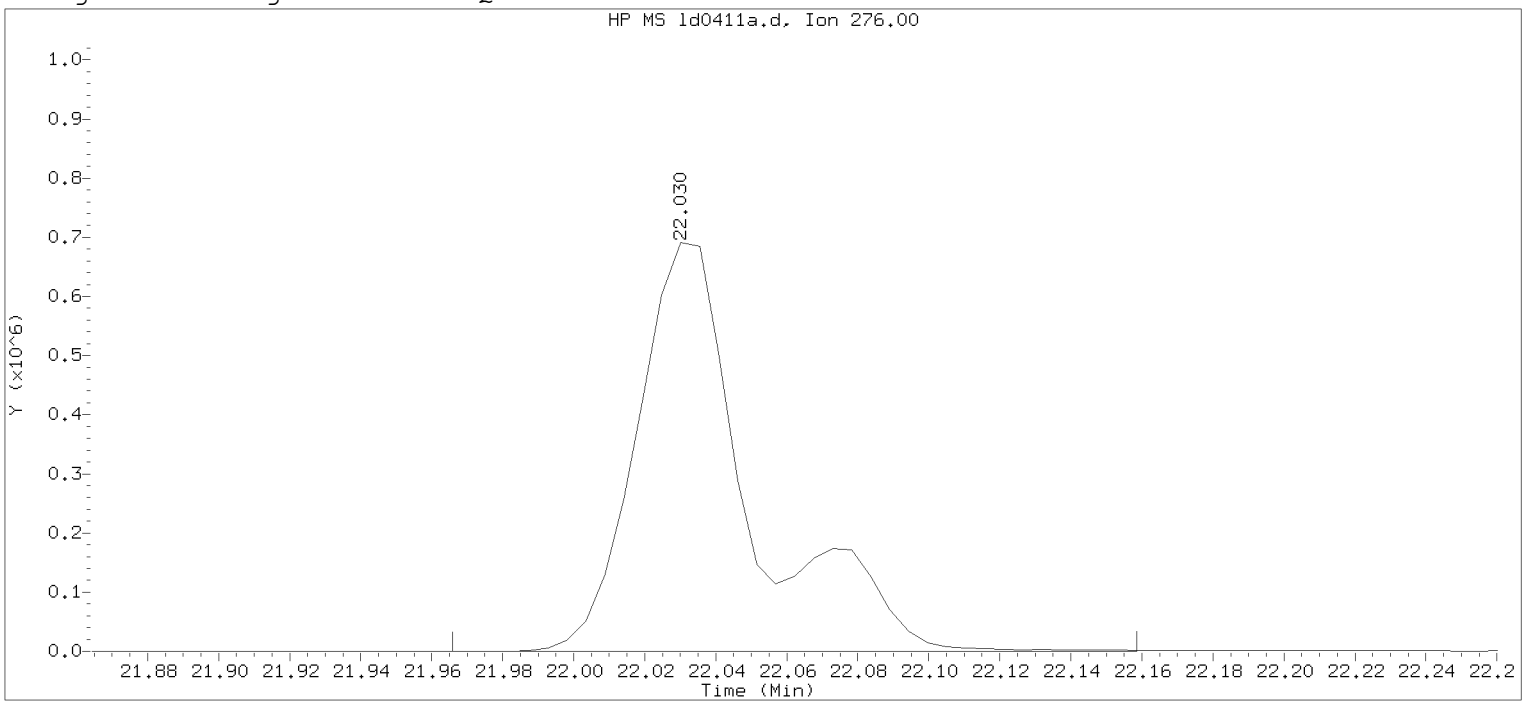
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



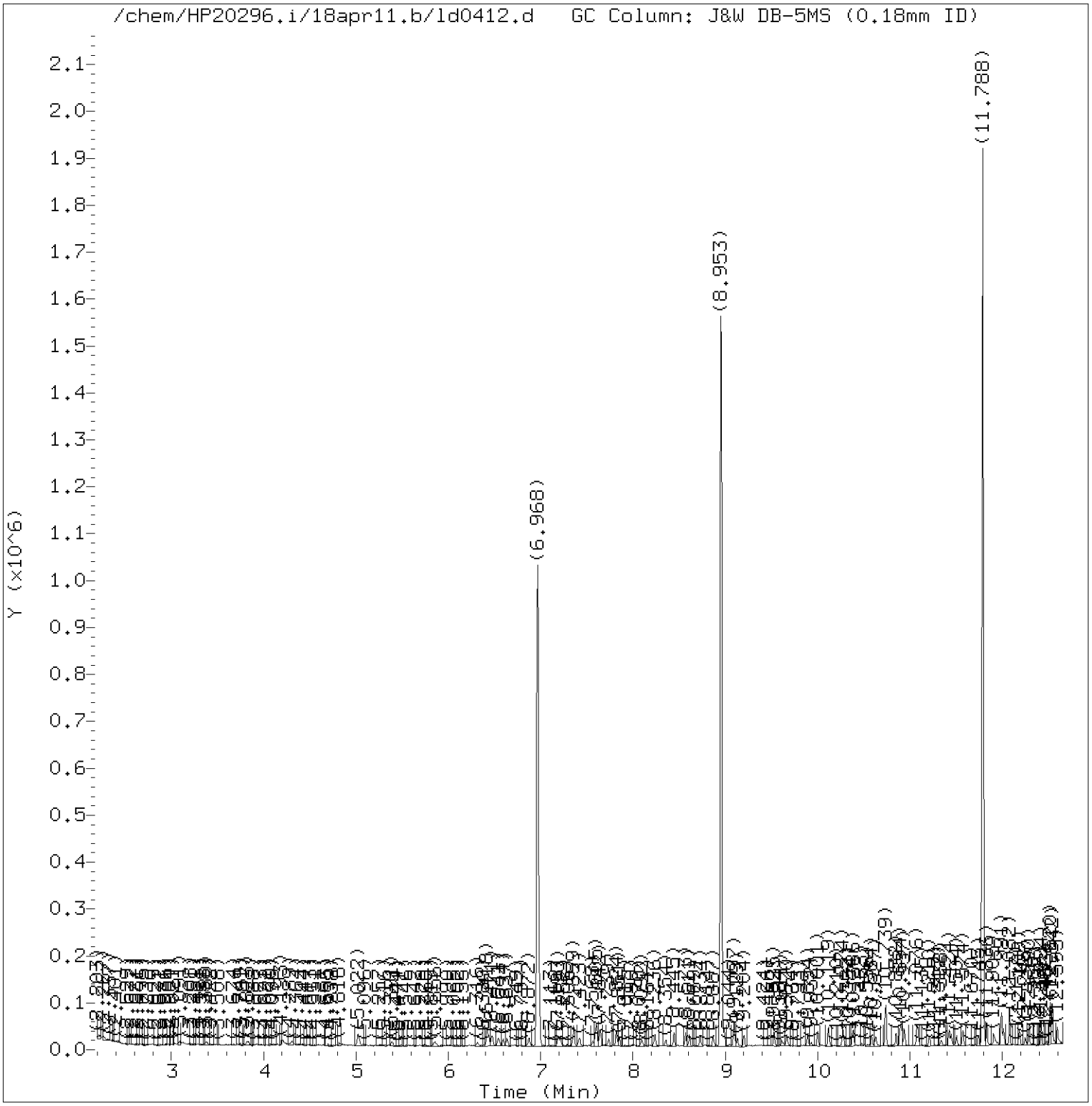
Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270c.m Sublist used: all1
Calibration date and time: 11-APR-2018 08:42
Date, time and analyst ID of latest file update: 11-Apr-2018 08:42 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3710		
Retention Time (minutes)	: 22.030		
Quant Ion	: 276.00		
Area	: 1549553		
On-column Amount (ng/ul)	: 8.8069		
Integration start scan	: 3697	Integration stop scan:	3733
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ART on 04/12/2018



Total Ion Chromatogram (TIC)

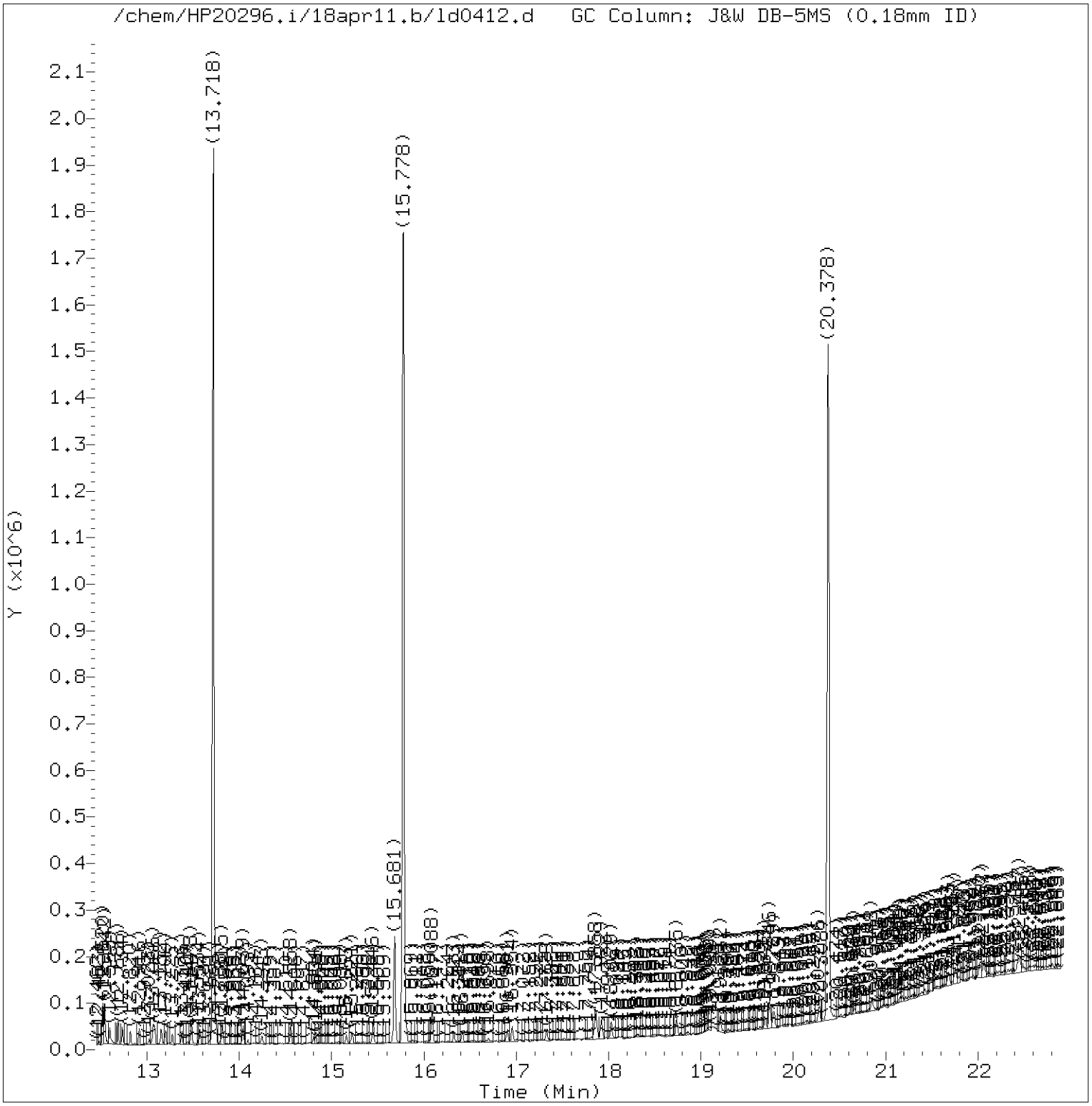
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	3.037	74	4401	0.100
6) Pyridine	(1)	3.091	79	7230	0.092
8) 2-Picoline	(1)	4.193	93	4931	0.062
10) Methyl methanesulfonate	(1)	4.824	80	3355	0.087
12)$2-Fluorophenol	(1)	5.022	112	11166	0.184
14) N-Nitrosodiethylamine	(1)	5.391	102	2576	0.087
43) Total Cresols	(1)			13296	0.221
17) Benzaldehyde	(1)	6.316	77	1808	0.030
18)$Phenol-d6	(1)	6.418	99	16035	0.202
19) Phenol	(1)	6.439	94	8650	0.094
20) Aniline	(1)	6.476	93	10419	0.099
23) bis(2-Chloroethyl)ether	(1)	6.594	93	6292	0.092
24) 2-Chlorophenol	(1)	6.637	128	5370	0.090
25) 1,3-Dichlorobenzene	(1)	6.872	146	5746	0.086
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	221518	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	6388	0.094
28) Benzyl alcohol	(1)	7.193	108	3697	0.093
29) 1,2-Dichlorobenzene	(1)	7.220	146	5569	0.086
31) Indene	(1)	7.359	115	8442	0.089
32) 2-Methylphenol	(1)	7.364	108	6565	0.112
100) Isosafrole	(3)			6215	0.116
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	11159	0.115
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	11159	0.115
36) N-Nitrosopyrrolidine	(1)	7.568	100	3895	0.121
37) Acetophenone	(1)	7.594	105	7300	0.082
38) 4-Methylphenol	(1)	7.600	108	6731	0.109
39) N-Nitroso-di-n-propylamine	(1)	7.605	70	5607	0.110
40) N-Nitrosomorpholine	(1)	7.632	56	5068	0.119
41) o-Toluidine	(1)	7.648	106	10638	0.103
44) Hexachloroethane	(1)	7.733	117	2667	0.092
45)$Nitrobenzene-d5	(2)	7.819	82	14962	0.199
46) Nitrobenzene	(2)	7.851	77	7020	0.092
125) 2,4_2,6-Dinitrotoluenes	(3)			6291	0.192
50) N-Nitrosopiperidine	(2)	8.092	114	3499	0.111
52) Isophorone	(2)	8.236	82	13965	0.104
53) 2-Nitrophenol	(2)	8.354	139	2810	0.091
55) 2,4-Dimethylphenol	(2)	8.445	107	7133	0.108
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	3364	0.102
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	9067	0.104
62) 2,4-Dichlorophenol	(2)	8.734	162	5725	0.111

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
151) Diallate trans/cis	(4)			11168	0.199
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	5698	0.099
68)*Naphthalene-d8	(2)	8.953	136	870407	5.000
69) Naphthalene	(2)	8.990	128	19025	0.106
70) 4-Chloroaniline	(2)	9.092	127	8746	0.119
71) 2,6-Dichlorophenol	(2)	9.103	162	5351	0.105
72) Hexachloropropene	(2)	9.135	213	3674	0.088
74) Hexachlorobutadiene	(2)	9.204	225	3654	0.105
78) Quinoline	(2)	9.525	129	12918	0.113
79) Caprolactam	(2)	9.616	113	1381	0.085
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	5816	0.103
83) 4-Chloro-3-methylphenol	(2)	9.894	107	6176	0.109
85) Safrole	(2)	10.001	162	5124	0.106
86) 2-Methylnaphthalene	(2)	10.119	142	12612	0.106
87) 1-Methylnaphthalene	(2)	10.274	142	12322	0.112
88) Hexachlorocyclopentadiene	(3)	10.376	237	3092	0.090
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	7149	0.123
91) cis-Isosafrole	(3)	10.488	162	928	0.018
93) 2,4,6-Trichlorophenol	(3)	10.584	196	4033	0.111
95) 2,4,5-Trichlorophenol	(3)	10.627	196	4203	0.110
96)$2-Fluorobiphenyl	(3)	10.739	172	32097	0.242
97) trans-Isosafrole	(3)	10.852	162	5287	0.097
98) 1,1'-Biphenyl	(3)	10.894	154	12448	0.091
101) 1-Chloronaphthalene	(3)	10.905	162	13616	0.126
99) 2-Chloronaphthalene	(3)	10.905	162	13616	0.117
103) Diphenyl ether	(3)	11.076	170	10395	0.136
104) 2-Nitroaniline	(3)	11.087	138	3486	0.102
108) 1,4-Naphthoquinone	(3)	11.210	158	3753	0.082
109) 1,4-Dinitrobenzene	(3)	11.344	168	1576	0.087
110) Dimethylphthalate	(3)	11.424	163	14727	0.113
111) 1,3-Dinitrobenzene	(3)	11.445	168	1646	0.085
113) 2,6-Dinitrotoluene	(3)	11.504	165	2766	0.100
114) Acenaphthylene	(3)	11.574	152	17319	0.107
117) 3-Nitroaniline	(3)	11.745	138	2767	0.095
118)*Acenaphthene-d10	(3)	11.788	164	427128	5.000
119) Acenaphthene	(3)	11.836	153	14126	0.123
120) 2,4-Dinitrophenol	(3)	11.905	184	4692	0.282
121) 4-Nitrophenol	(3)	11.991	109	7888	0.384
122) Pentachlorobenzene	(3)	12.018	250	5614	0.118
123) 2,4-Dinitrotoluene	(3)	12.082	165	3525	0.092

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Dibenzofuran	(3)	12.082	168	19939	0.125
126) 1-Naphthylamine	(3)	12.189	143	11896	0.105
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	2762	0.093
128) 2-Naphthylamine	(3)	12.290	143	12867	0.120
129) Diethylphthalate	(3)	12.424	149	15596	0.122
131) Fluorene	(3)	12.520	166	14357	0.115
130) Thionazin	(3)	12.520	107	2550	0.117
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	7380	0.120
133) 5-Nitro-o-toluidine	(3)	12.542	152	3495	0.103
134) 4-Nitroaniline	(3)	12.547	138	2742	0.093
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	6751	0.310
137) NDPA as diphenylamine	(4)	12.686	169	11436	0.114
136) N-Nitrosodiphenylamine	(4)	12.686	169	11436	0.114
139) 1,2-Diphenylhydrazine	(4)	12.734	77	15290	0.109
140)$2,4,6-Tribromophenol	(3)	12.820	330	3064	0.208
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1083	0.081
149) Diallate (peak 2)	(4)	13.061	86	5584	0.111
145) Diallate (peak 1)	(4)	13.061	86	5584	0.088
142) Tetraethyldithiopyrophosphate	(4)	13.071	97	2519	0.105
146) Phorate	(4)	13.071	75	9311	0.103
147) Phenacetin	(4)	13.082	108	6395	0.101
148) 4-Bromophenyl-phenylether	(4)	13.157	248	3676	0.109
150) Hexachlorobenzene	(4)	13.200	284	4515	0.131
152) Dimethoate	(4)	13.275	87	5008	0.092
153) Atrazine	(4)	13.376	200	3239	0.095
154) Pentachlorophenol	(4)	13.472	266	1047	0.049
156) Pentachloronitrobenzene	(4)	13.483	237	1456	0.088
155) 4-Aminobiphenyl	(4)	13.488	169	12244	0.107
157) Pronamide	(4)	13.574	173	5193	0.091
158)*Phenanthrene-d10	(4)	13.718	188	822379	5.000
160) Phenanthrene	(4)	13.745	178	22749M	0.125
162) Anthracene	(4)	13.815	178	20899	0.115
168) Carbazole	(4)	14.045	167	18533	0.115
169) Methyl parathion	(4)	14.248	109	2957	0.072
170) Di-n-butylphthalate	(4)	14.558	149	22120	0.102
172) Parathion	(4)	14.804	109	2388	0.089
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	1199	0.056
227) Total PAHs	(6)			338503	2.043
174) Octachlorostyrene	(4)	15.163	308	1309	0.101
176) Isodrin	(4)	15.221	193	2897	0.129

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
178) Fluoranthene	(4)	15.446	202	23508	0.115
179) Benzidine	(5)	15.681	184	111103	0.890
180)*Pyrene-d10	(5)	15.772	212	846867	5.000
182) Pyrene	(5)	15.804	202	26623	0.124
184)$Terphenyl-d14	(5)	16.088	244	32387	0.238
187) p-Dimethylaminoazobenzene	(5)	16.323	225	3037	0.092
190) Chlorobenzilate	(5)	16.414	139	5933	0.092
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	12556	0.093
193) Butylbenzylphthalate	(5)	16.954	149	9093	0.091
196) 2-Acetylaminofluorene	(5)	17.329	181	6765	0.085
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	6633	0.096
200) Benzo(a)anthracene	(5)	17.864	228	21199	0.110
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	3700	0.088
201) Chrysene	(5)	17.922	228	21273	0.114
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	12987	0.092
208) 6-Methylchrysene	(5)	18.735	242	13851	0.106
210) Di-n-octylphthalate	(6)	19.212	149	21296	0.090
211) Benzo(b)fluoranthene	(6)	19.741	252	20999	0.114
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	7051	0.093
213) Benzo(k)fluoranthene	(6)	19.789	252	19923	0.112
216) Benzo(a)pyrene	(6)	20.281	252	17853	0.108
218)*Perylene-d12	(6)	20.378	264	751073	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	9860	0.122
222) Dibenz(a,h)acridine	(6)	21.683	279	16441	0.117
223) Dibenz(a,j)acridine	(6)	21.757	279	17171	0.120
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	18076M	0.115
225) Dibenz(a,h)anthracene	(6)	22.068	278	17137	0.107
226) Benzo(g,h,i)perylene	(6)	22.442	276	18503	0.114

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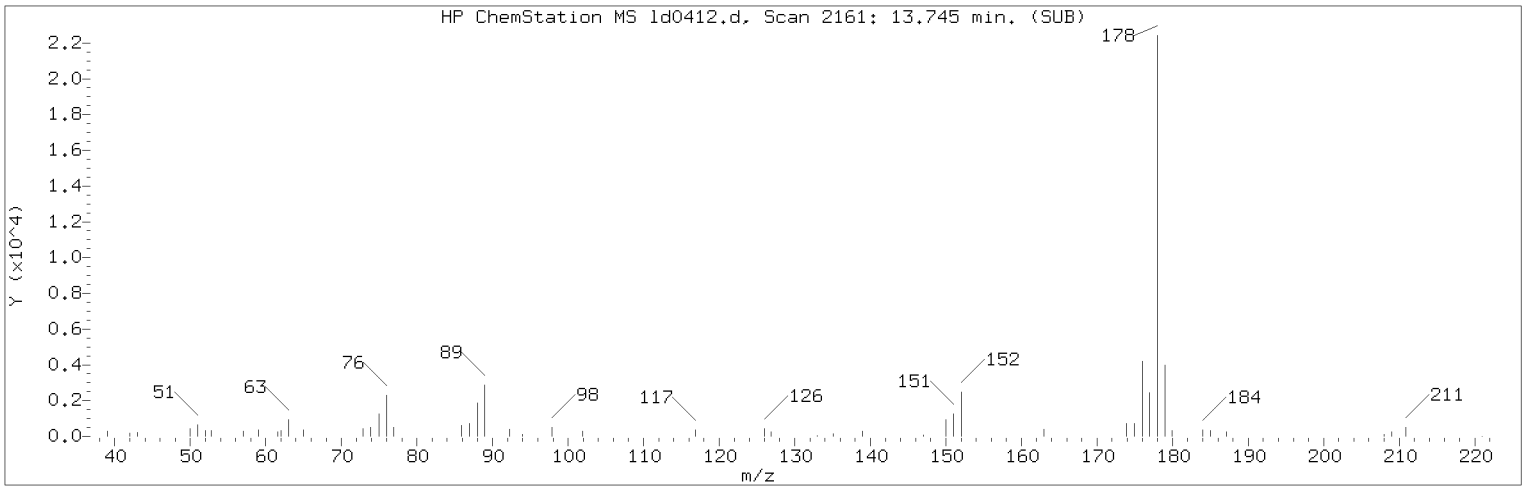
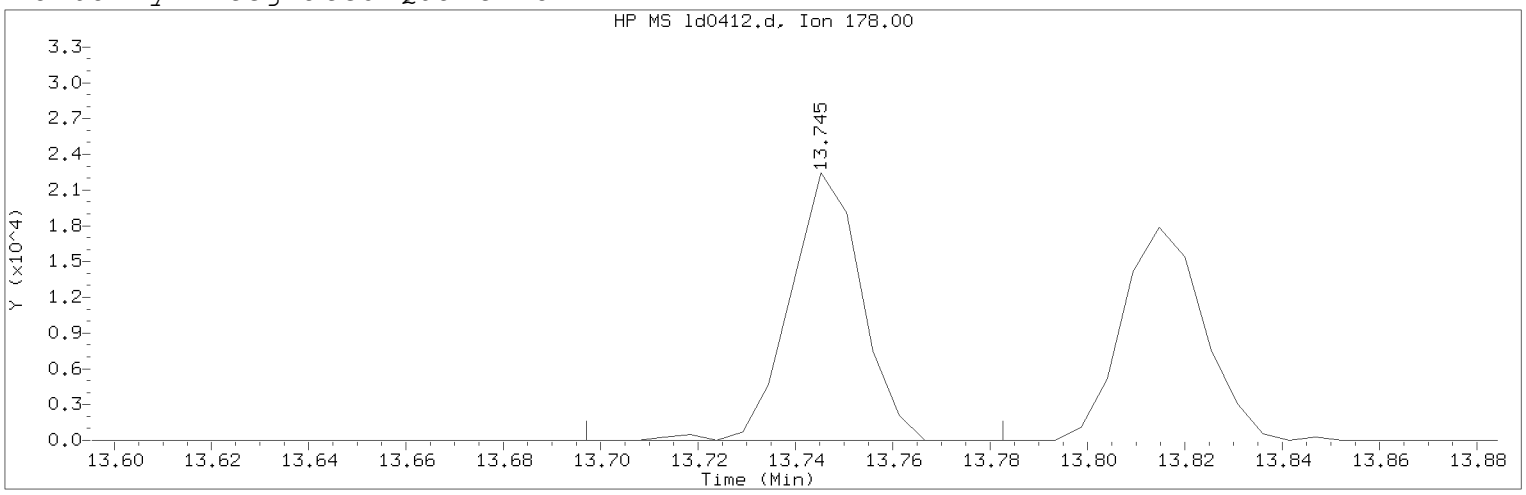
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

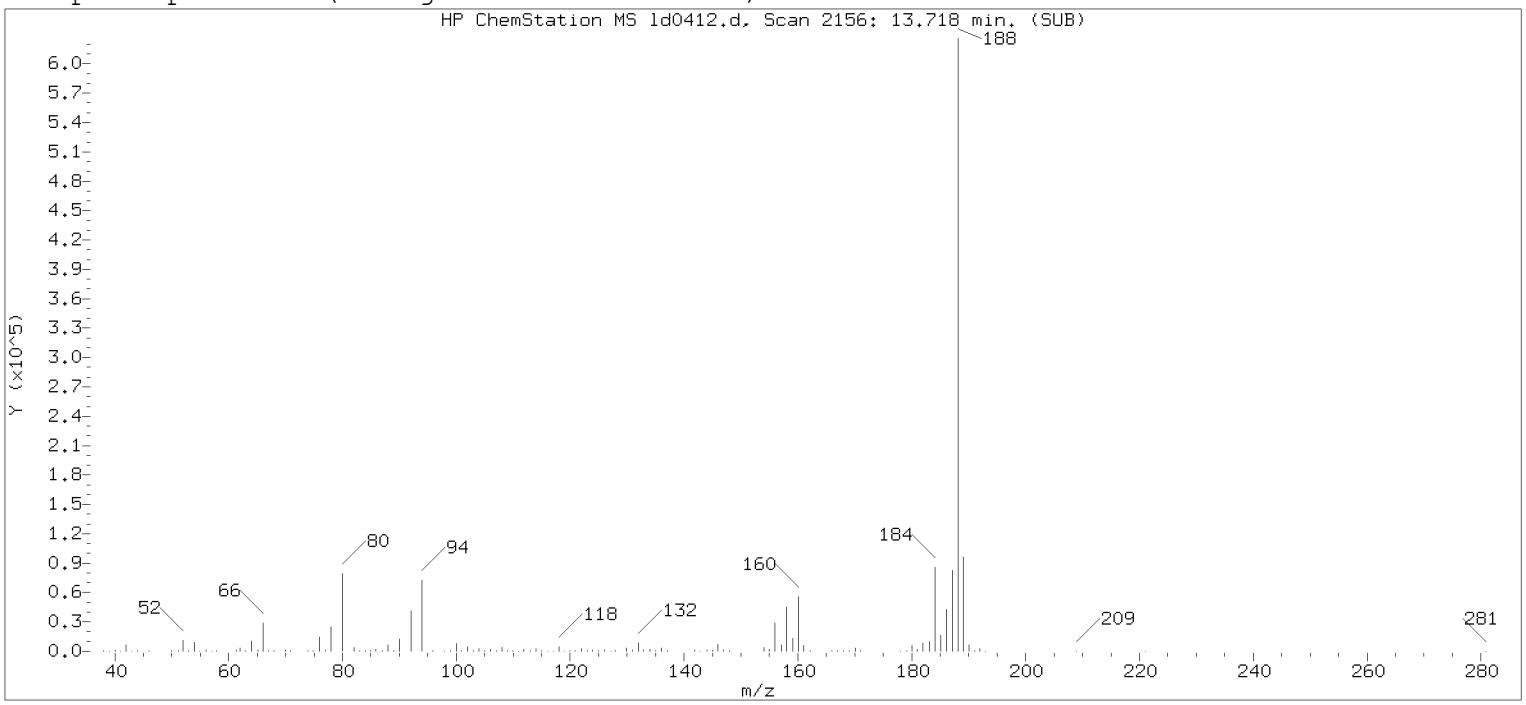
Compound Number : 160
Compound Name : Phenanthrene
Scan Number : 2161
Retention Time (minutes) : 13.745
Quant Ion : 178.00
Area (flag) : 22749M
On-Column Amount (ng/ul) : 0.1255
Integration start scan : 2151 Integration stop scan: 2167
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

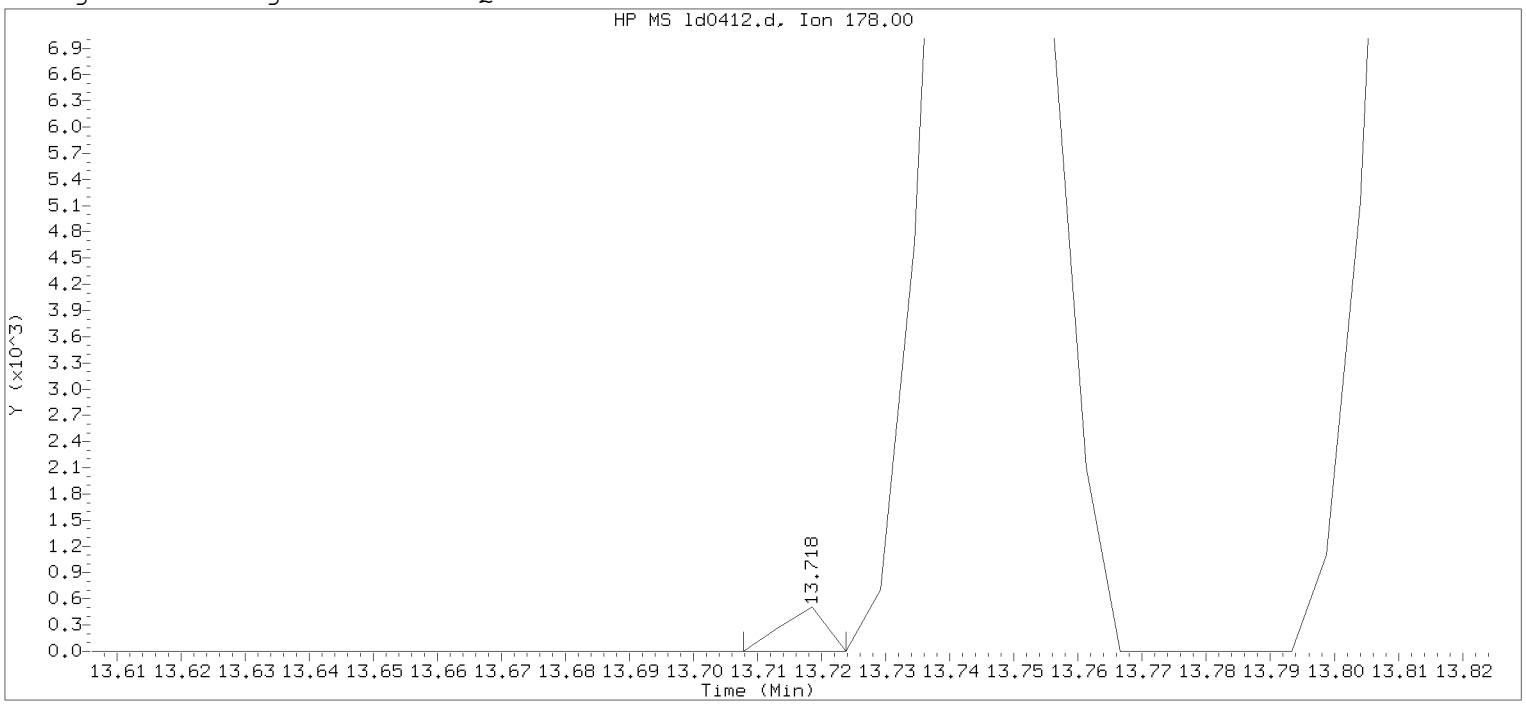
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

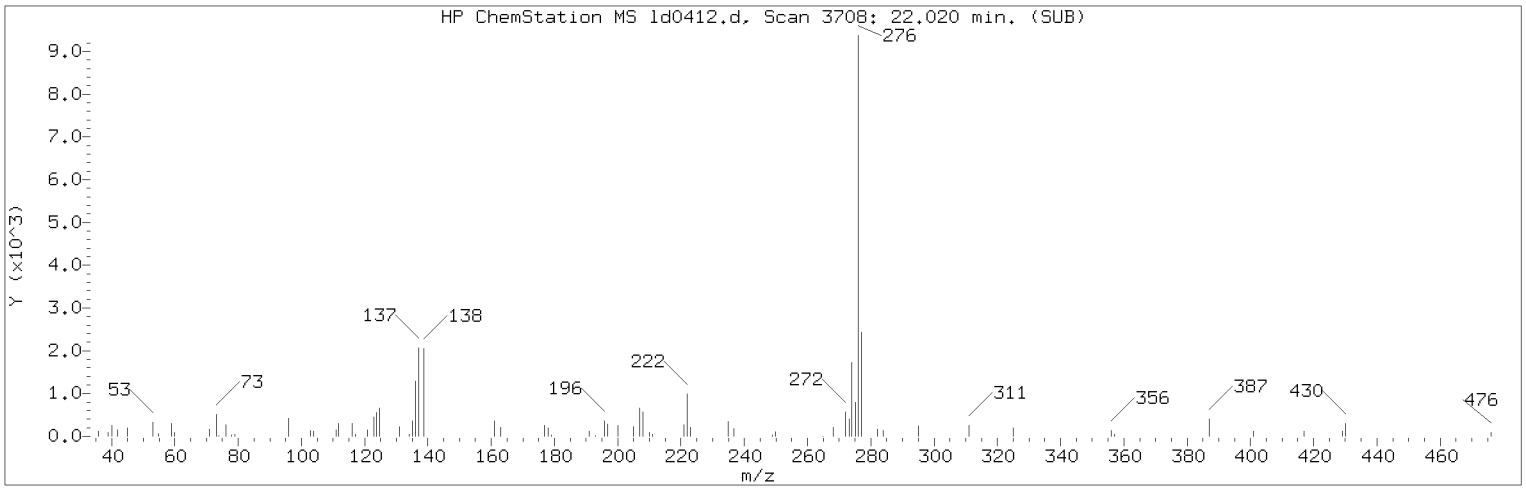
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 09:59
Date, time and analyst ID of latest file update: 11-Apr-2018 09:59 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

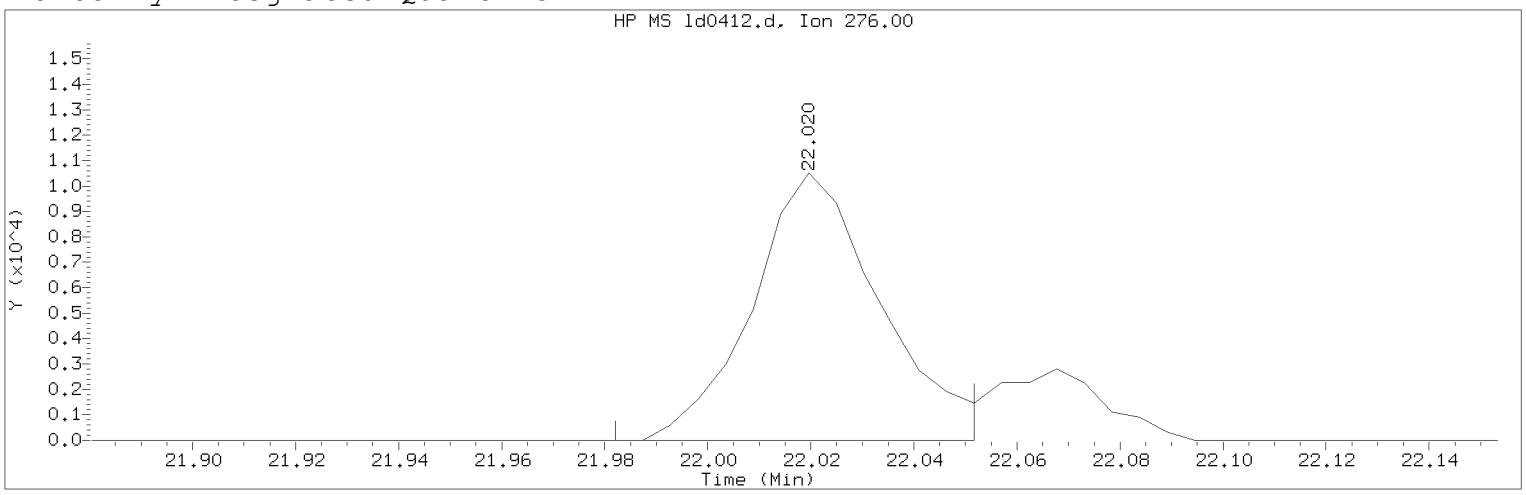
Compound Number	: 160		
Compound Name	: Phenanthrene		
Scan Number	: 2156		
Retention Time (minutes)	: 13.718		
Quant Ion	: 178.00		
Area	: 247		
On-column Amount (ng/ul)	: 0.0013		
Integration start scan	: 2153	Integration stop scan:	2156
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user name: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

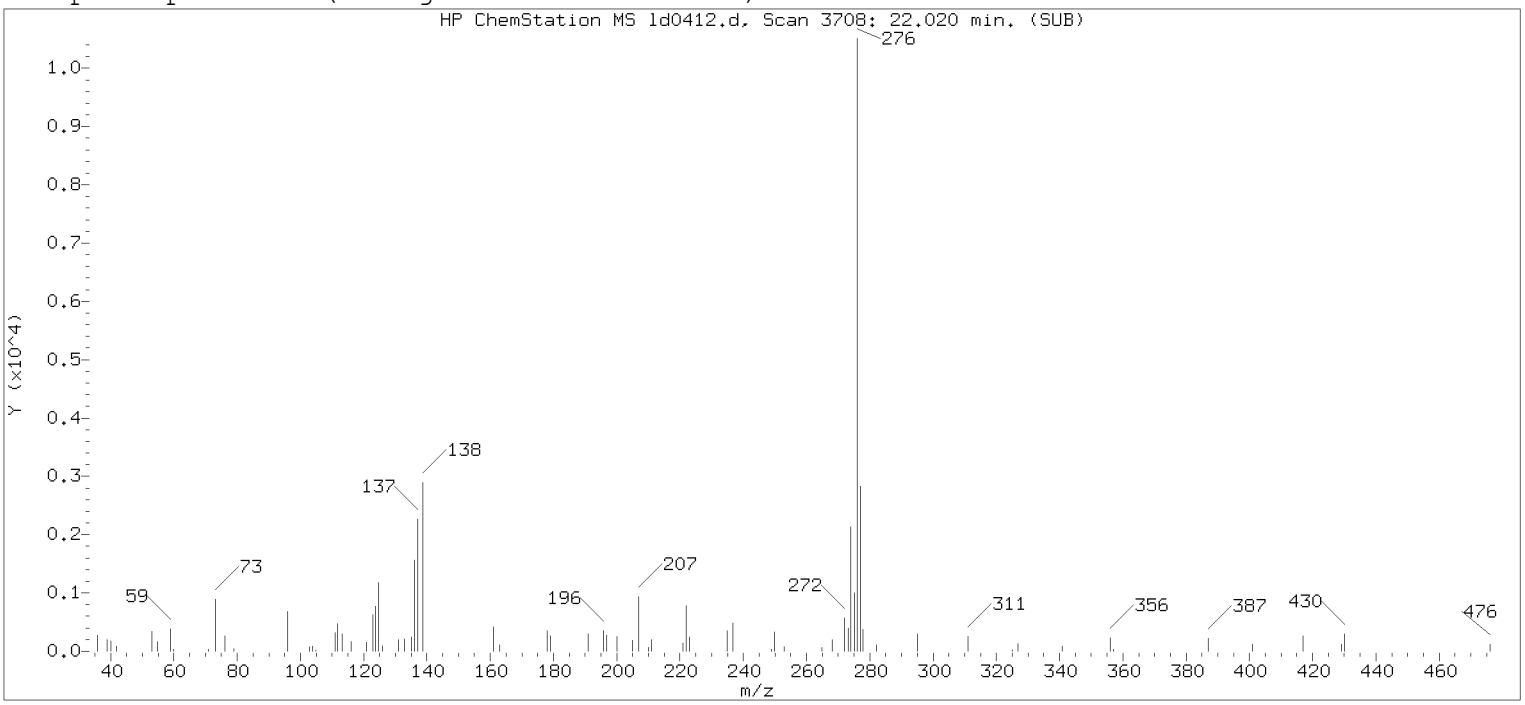
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3708
Retention Time (minutes) : 22.020
Quant Ion : 276.00
Area (flag) : 18076M
On-Column Amount (ng/ul) : 0.1149
Integration start scan : 3700 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

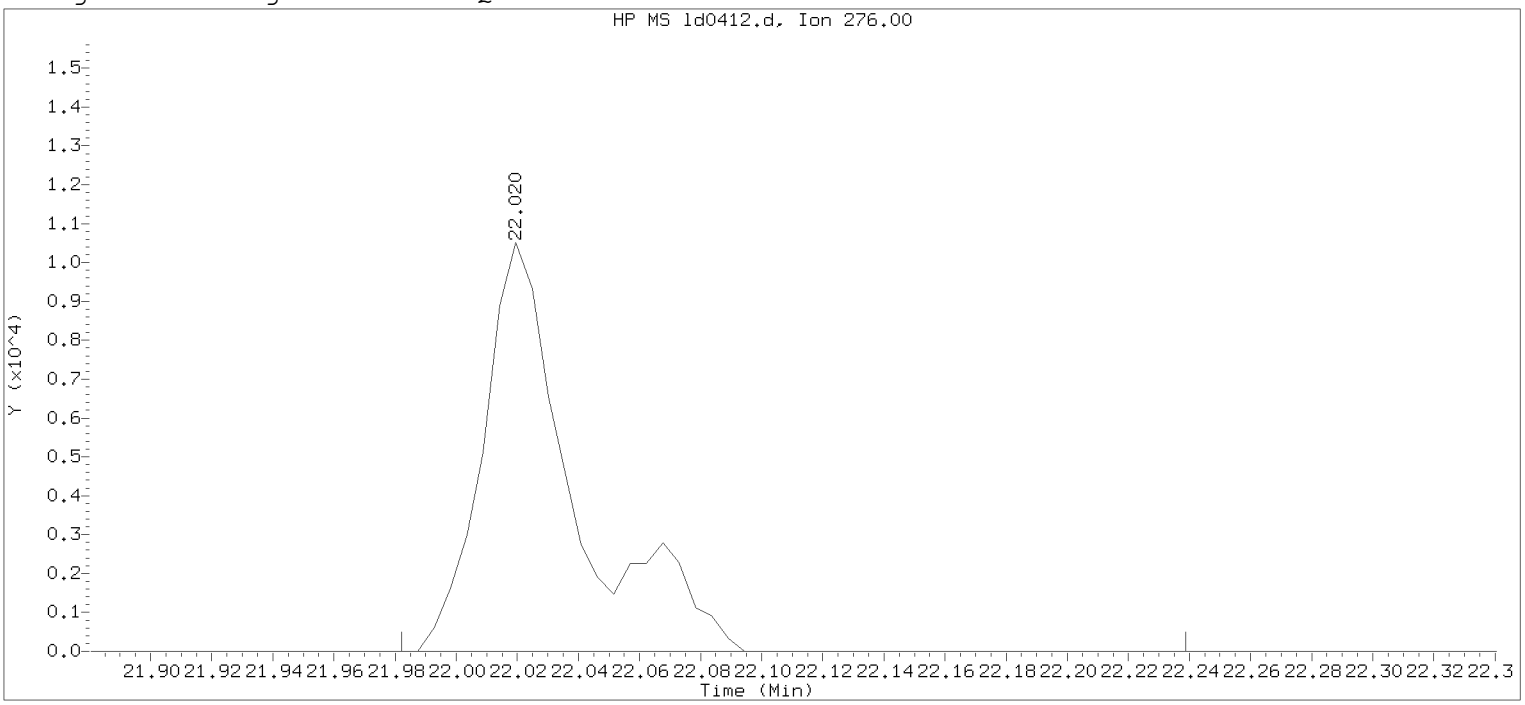
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 09:59
Date, time and analyst ID of latest file update: 11-Apr-2018 09:59 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3708		
Retention Time (minutes)	: 22.020		
Quant Ion	: 276.00		
Area	: 21912		
On-column Amount (ng/ul)	: 0.1320		
Integration start scan	: 3700	Integration stop scan:	3748
Y at integration start	: 0	Y at integration end:	0

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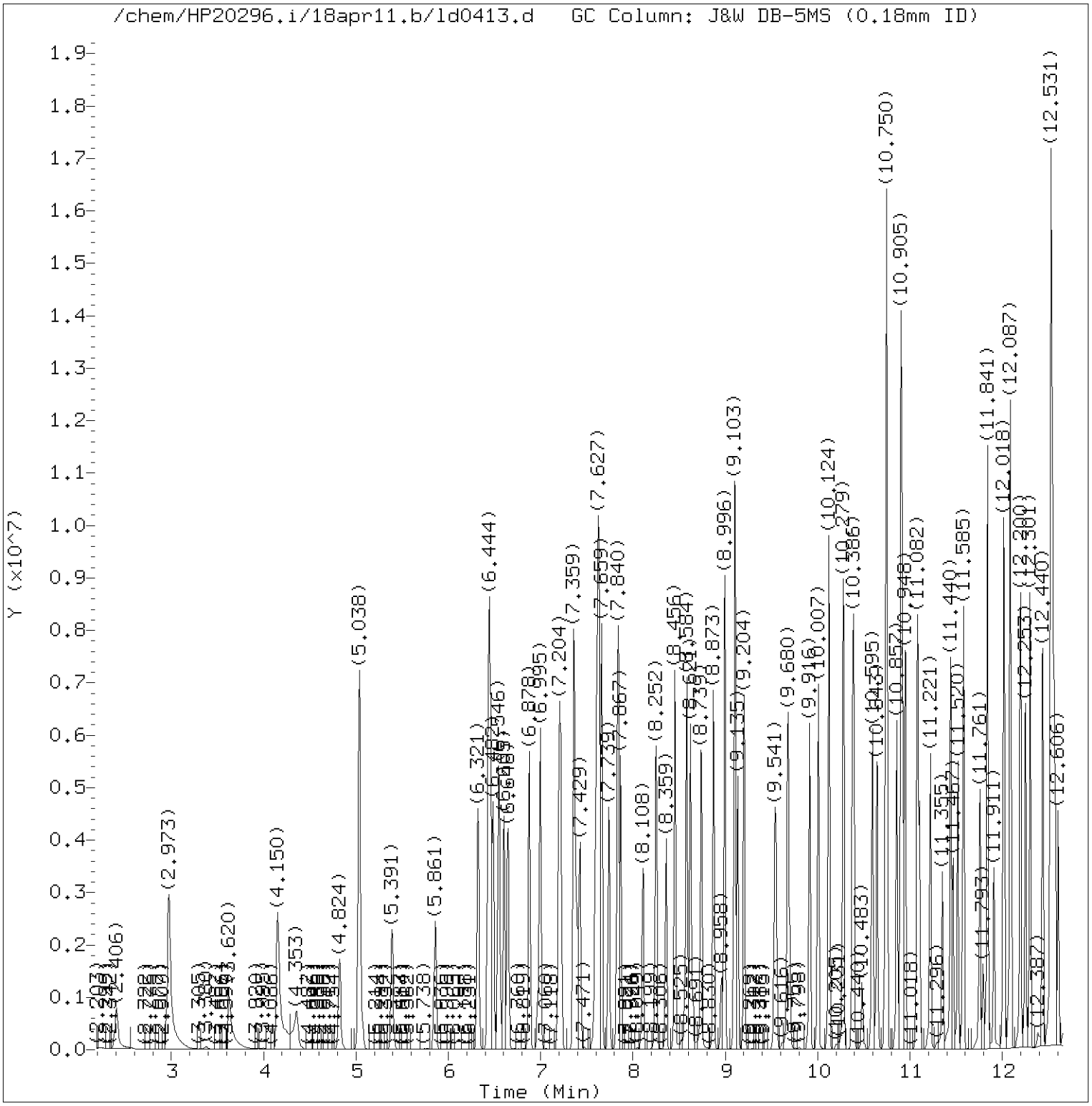
Target 3.5 esignature user analyst



Total Ion Chromatogram (TIC)

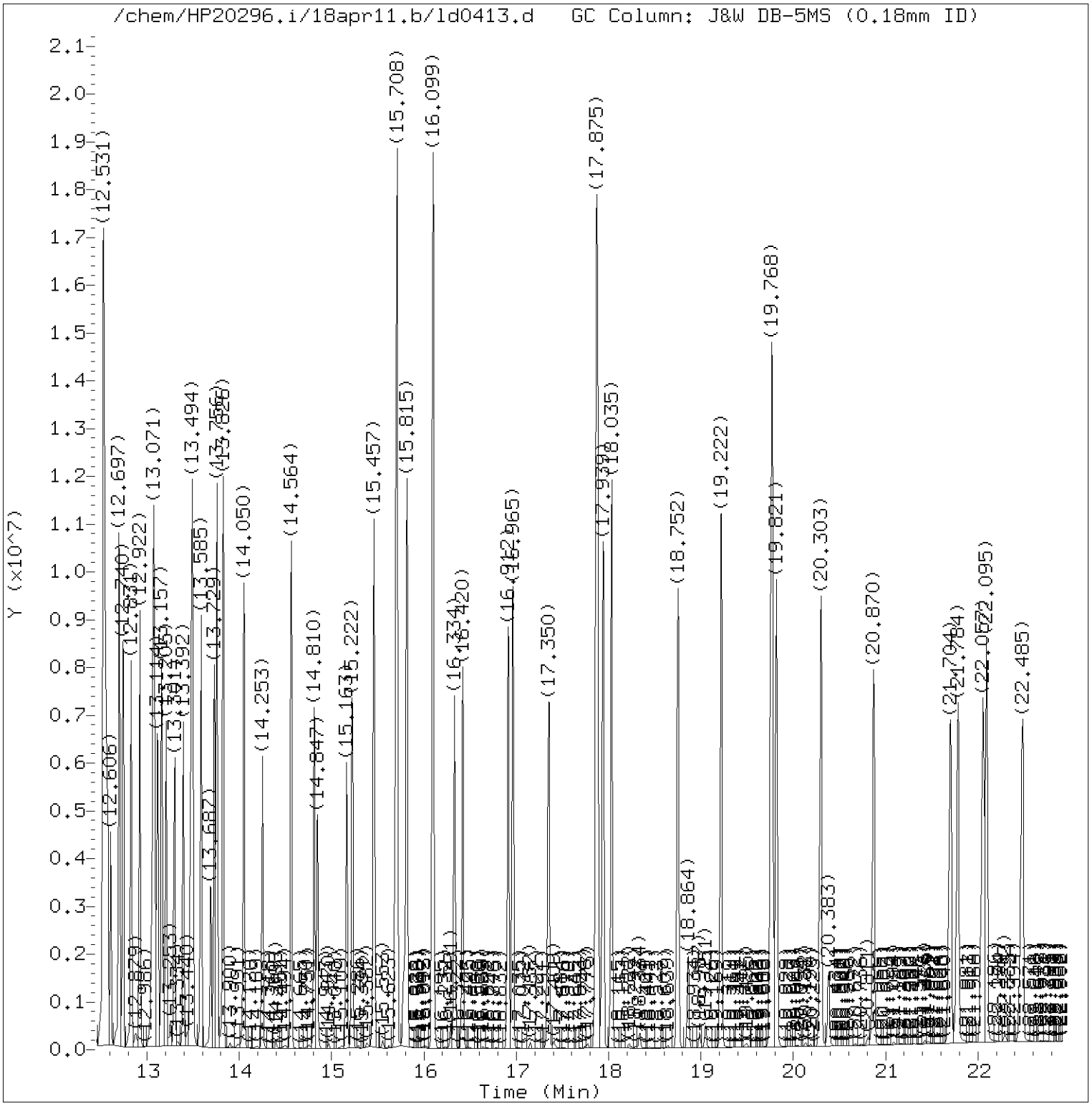
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	843327	31.135
5) N-Nitrosodimethylamine	(1)	2.962	74	1316393	31.918
6) Pyridine	(1)	2.979	79	2310460	31.397
8) 2-Picoline	(1)	4.150	93	2315416	31.119
9) N-Nitrosomethylethylamine	(1)	4.353	88	925857	31.048
10) Methyl methanesulfonate	(1)	4.824	80	1119501	30.994
12)$2-Fluorophenol	(1)	5.038	112	3677169	64.821
14) N-Nitrosodiethylamine	(1)	5.391	102	908768	32.860
43) Total Cresols	(1)			3538617	62.814
16) Ethyl methanesulfonate	(1)	5.861	109	946030	31.412
17) Benzaldehyde	(1)	6.321	77	1685843	29.953
18)$Phenol-d6	(1)	6.439	99	4725835	63.531
19) Phenol	(1)	6.461	94	2699814	31.527
20) Aniline	(1)	6.482	93	3163579	32.038
21) a-methylstyrene	(1)	6.551	118	688329	31.910
23) bis(2-Chloroethyl)ether	(1)	6.605	93	1985568	31.147
24) 2-Chlorophenol	(1)	6.648	128	1758393	31.642
25) 1,3-Dichlorobenzene	(1)	6.878	146	1988953	31.706
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	207168	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	2007784	31.627
28) Benzyl alcohol	(1)	7.199	108	1197465	32.286
29) 1,2-Dichlorobenzene	(1)	7.220	146	1898213	31.402
31) Indene	(1)	7.359	115	2817861	31.815
32) 2-Methylphenol	(1)	7.375	108	1723793	31.458
100) Isosafrole	(3)			1585932	30.877
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.429	45	2796772	30.902
35) bis(2-Chloroisopropyl)ether	(1)	7.429	45	2796772	30.902
36) N-Nitrosopyrrolidine	(1)	7.594	100	968109	32.268
37) Acetophenone	(1)	7.610	105	2781334	33.289
38) 4-Methylphenol	(1)	7.627	108	1814824	31.356
39) N-Nitroso-di-n-propylamine	(1)	7.637	70	1497931	31.449
41) o-Toluidine	(1)	7.659	106	2996457	30.923
40) N-Nitrosomorpholine	(1)	7.664	56	1202908	30.220
44) Hexachloroethane	(1)	7.739	117	812726	30.026
45)$Nitrobenzene-d5	(2)	7.840	82	4323239	63.131
46) Nitrobenzene	(2)	7.867	77	2216878	31.738
125) 2,4_2,6-Dinitrotoluenes	(3)			1961320	62.511
50) N-Nitrosopiperidine	(2)	8.108	114	922717	32.144
52) Isophorone	(2)	8.252	82	3926402	32.160
53) 2-Nitrophenol	(2)	8.359	139	936165	33.169

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.456	107	1905409	31.491
59) O,O,O-Triethylphosphorothioate	(2)	8.584	198	907984	30.319
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	2493378	31.416
58) Benzoic acid	(2)	8.653	105	1244643M	29.831
62) 2,4-Dichlorophenol	(2)	8.744	162	1511419	32.080
151) Diallate trans/cis	(4)			1785202	29.948
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	1654622	31.519
68)*Naphthalene-d8	(2)	8.958	136	793995	5.000
69) Naphthalene	(2)	8.996	128	5220488	31.818
70) 4-Chloroaniline	(2)	9.103	127	2102691	31.399
71) 2,6-Dichlorophenol	(2)	9.108	162	1472357	31.555
72) Hexachloropropene	(2)	9.135	213	1169148	30.779
74) Hexachlorobutadiene	(2)	9.204	225	1004900	31.575
78) Quinoline	(2)	9.541	129	3215304	30.764
80) N-Nitrosodi-n-butylamine	(2)	9.680	84	1768188	34.338
79) Caprolactam	(2)	9.702	113	447290M	30.279
83) 4-Chloro-3-methylphenol	(2)	9.916	107	1663176	32.170
85) Safrole	(2)	10.012	162	1343460	30.524
86) 2-Methylnaphthalene	(2)	10.124	142	3461545	31.756
87) 1-Methylnaphthalene	(2)	10.279	142	3133760	31.335
88) Hexachlorocyclopentadiene	(3)	10.381	237	1029792	31.193
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	1687944	30.399
91) cis-Isosafrole	(3)	10.483	162	253939	5.255
93) 2,4,6-Trichlorophenol	(3)	10.595	196	1159881	33.264
95) 2,4,5-Trichlorophenol	(3)	10.649	196	1153054	31.506
96)$2-Fluorobiphenyl	(3)	10.750	172	7626208	60.095
97) trans-Isosafrole	(3)	10.857	162	1331993	25.622
98) 1,1'-Biphenyl	(3)	10.905	154	4170989	31.870
99) 2-Chloronaphthalene	(3)	10.921	162	3617887	32.527
101) 1-Chloronaphthalene	(3)	10.953	162	2899527M	28.182
103) Diphenyl ether	(3)	11.082	170	2224404	30.428
104) 2-Nitroaniline	(3)	11.103	138	1057586	32.491
108) 1,4-Naphthoquinone	(3)	11.221	158	1359202	30.927
109) 1,4-Dinitrobenzene	(3)	11.355	168	551302	31.866
110) Dimethylphthalate	(3)	11.440	163	3534822	28.371
111) 1,3-Dinitrobenzene	(3)	11.467	168	586369	31.642
113) 2,6-Dinitrotoluene	(3)	11.520	165	856131	32.363
114) Acenaphthylene	(3)	11.585	152	4906430	31.738
117) 3-Nitroaniline	(3)	11.761	138	933785	33.503
118)*Acenaphthene-d10	(3)	11.793	164	408206	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.841	153	3310637	30.201
120) 2,4-Dinitrophenol	(3)	11.911	184	512425	32.221
121) 4-Nitrophenol	(3)	12.018	109	601572	30.618
122) Pentachlorobenzene	(3)	12.023	250	1365555	30.157
124) Dibenzofuran	(3)	12.087	168	4525287	29.713
123) 2,4-Dinitrotoluene	(3)	12.098	165	1105189	30.148
126) 1-Naphthylamine	(3)	12.200	143	3366289	31.063
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	943272	33.121
128) 2-Naphthylamine	(3)	12.301	143	3273413	31.884
129) Diethylphthalate	(3)	12.440	149	3610263	29.443
131) Fluorene	(3)	12.526	166	3600101	30.261
130) Thionazin	(3)	12.531	107	618391	29.624
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	1759094	29.833
133) 5-Nitro-o-toluidine	(3)	12.558	152	1035448	31.954
134) 4-Nitroaniline	(3)	12.574	138	880503	31.256
135) 4,6-Dinitro-2-methylphenol	(4)	12.606	198	681438	32.203
136) N-Nitrosodiphenylamine	(4)	12.697	169	3042816	31.108
137) NDPA as diphenylamine	(4)	12.697	169	3042816	31.108
139) 1,2-Diphenylhydrazine	(4)	12.740	77	4184949	30.661
140)$2,4,6-Tribromophenol	(3)	12.831	330	918790	65.113
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	685635M	29.535
144) 1,3,5-Trinitrobenzene	(4)	13.055	213	426345	32.707
145) Diallate (peak 1)	(4)	13.066	86	1535641	24.852
146) Phorate	(4)	13.082	75	2634738	30.096
147) Phenacetin	(4)	13.114	108	2057034	33.273
148) 4-Bromophenyl-phenylether	(4)	13.157	248	1013064	30.996
149) Diallate (peak 2)	(4)	13.173	86	249561M	5.096
150) Hexachlorobenzene	(4)	13.210	284	1017424	30.309
152) Dimethoate	(4)	13.301	87	1651486	31.347
153) Atrazine	(4)	13.398	200	946672	28.608
154) Pentachlorophenol	(4)	13.473	266	684993	33.319
156) Pentachloronitrobenzene	(4)	13.489	237	505442	31.548
155) 4-Aminobiphenyl	(4)	13.494	169	3549849	31.877
157) Pronamide	(4)	13.585	173	1794609	32.530
158)*Phenanthrene-d10	(4)	13.724	188	799312	5.000
159) Dinoseb	(4)	13.729	211	1141333	34.456
160) Phenanthrene	(4)	13.756	178	5201356M	29.512
162) Anthracene	(4)	13.826	178	5535955	31.332
168) Carbazole	(4)	14.050	167	4969725	31.767
169) Methyl parathion	(4)	14.253	109	1316372	32.780

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.564	149	6666427	31.657
172) Parathion	(4)	14.810	109	879624	33.848
173) 4-Nitroquinoline-1-oxide	(4)	14.847	190	733096	35.128
227) Total PAHs	(6)			92639944	565.346
174) Octachlorostyrene	(4)	15.163	308	403671	32.146
176) Isodrin	(4)	15.222	193	671141	30.735
178) Fluoranthene	(4)	15.462	202	6396451	32.269
179) Benzidine	(5)	15.708	184	11457973	92.343
180)*Pyrene-d10	(5)	15.778	212	842063	5.000
182) Pyrene	(5)	15.815	202	6497355	30.331
184)$Terphenyl-d14	(5)	16.099	244	8210731	60.801
187) p-Dimethylaminoazobenzene	(5)	16.334	225	1148123	35.130
190) Chlorobenzilate	(5)	16.420	139	1990409	31.189
192) 3,3'-Dimethylbenzidine	(5)	16.912	212	4451885	32.989
193) Butylbenzylphthalate	(5)	16.965	149	3162723	31.777
196) 2-Acetylaminofluorene	(5)	17.350	181	2657663	33.738
198) 3,3'-Dichlorobenzidine	(5)	17.864	252	2225516	32.315
200) Benzo(a)anthracene	(5)	17.875	228	6146650	32.117
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.885	231	1298349	31.042
201) Chrysene	(5)	17.939	228	5752746	31.075
204) bis(2-Ethylhexyl)phthalate	(5)	18.035	149	4516212	32.115
208) 6-Methylchrysene	(5)	18.752	242	4135345	31.725
210) Di-n-octylphthalate	(6)	19.222	149	8009395	32.550
211) Benzo(b)fluoranthene	(6)	19.768	252	6187894	32.254
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.768	256	2604673	32.908
213) Benzo(k)fluoranthene	(6)	19.821	252	5568913M	30.145
216) Benzo(a)pyrene	(6)	20.303	252	5625182	32.587
218)*Perylene-d12	(6)	20.383	264	782499	5.000
220) 3-Methylcholanthrene	(6)	20.870	268	2717189	32.372
222) Dibenz(a,h)acridine	(6)	21.704	279	4616558	31.468
223) Dibenz(a,j)acridine	(6)	21.784	279	4618062	30.992
224) Indeno(1,2,3-cd)pyrene	(6)	22.057	276	5379958M	32.819
225) Dibenz(a,h)anthracene	(6)	22.095	278	5373947	32.272
226) Benzo(g,h,i)perylene	(6)	22.485	276	5340576	31.527

M = Compound was manually integrated.
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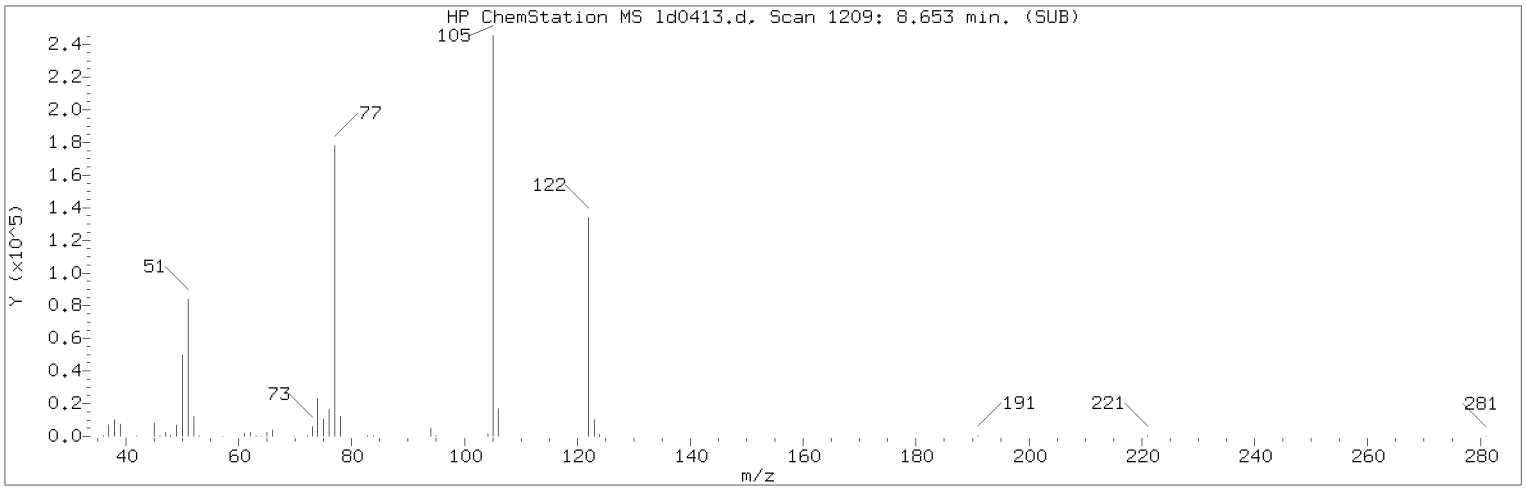
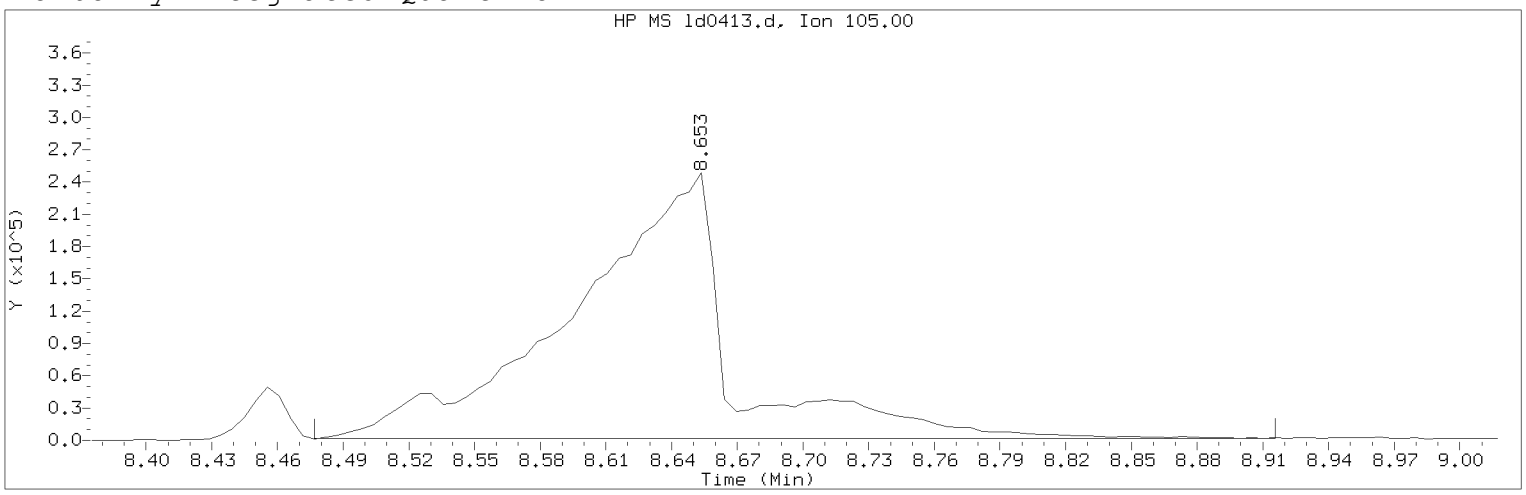
Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

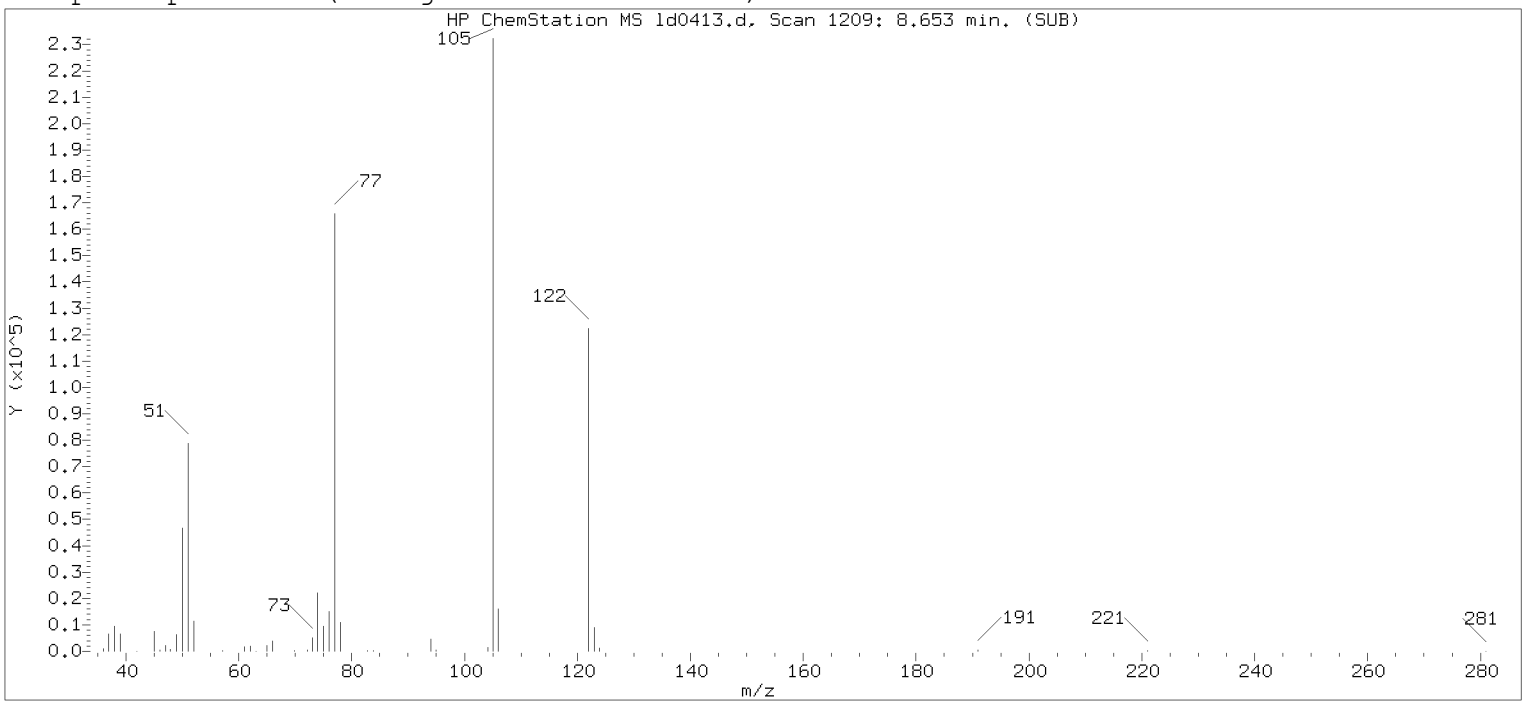
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1209
Retention Time (minutes) : 8.653
Quant Ion : 105.00
Area (flag) : 1244643M
On-Column Amount (ng/ul) : 29.8313
Integration start scan : 1175 Integration stop scan: 1257
Y at integration start : 1541 Y at integration end: 1541

Reason for manual integration: improper integration

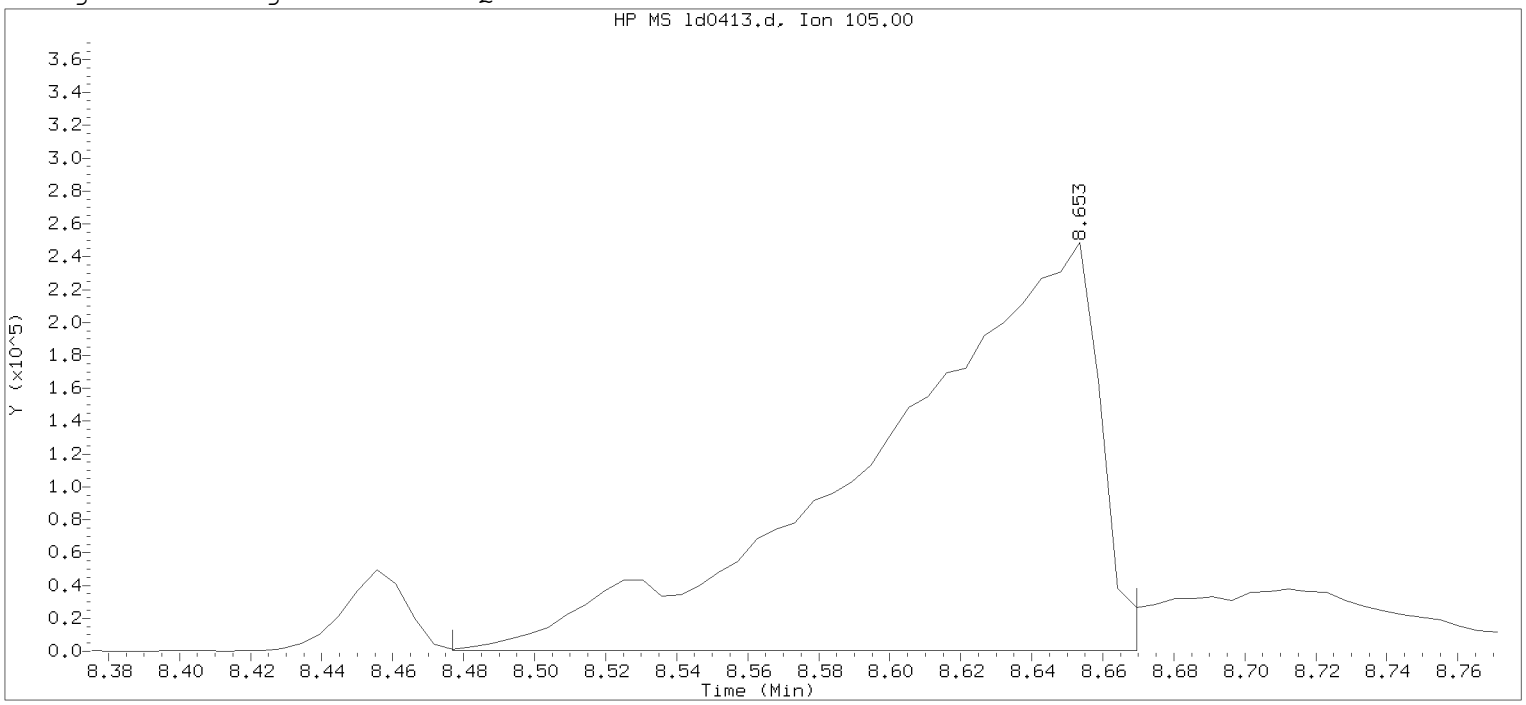
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

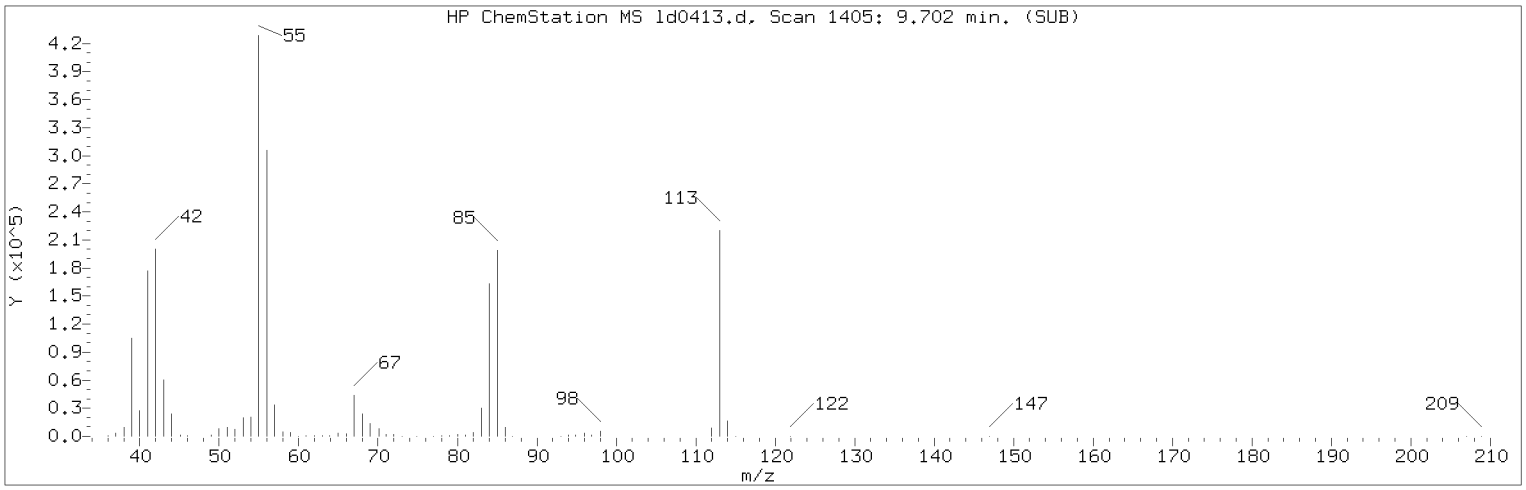
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

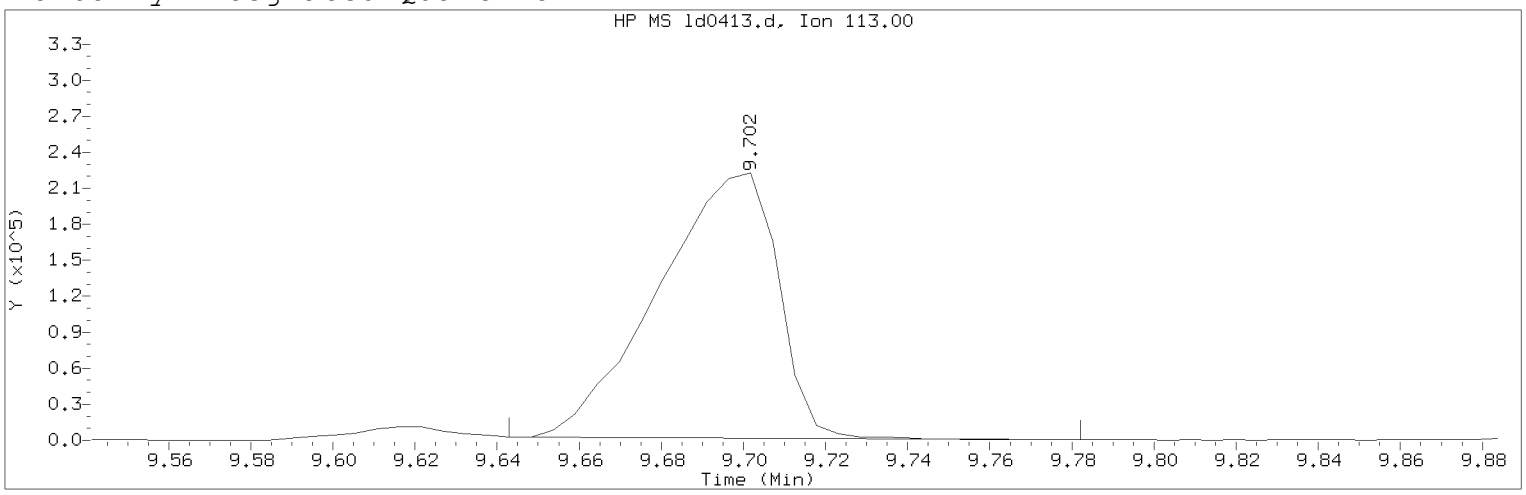
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1209		
Retention Time (minutes)	: 8.653		
Quant Ion	: 105.00		
Area	: 1070951		
On-column Amount (ng/ul)	: 27.9373		
Integration start scan	: 1175	Integration stop scan:	1211
Y at integration start	: 428	Y at integration end:	428

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

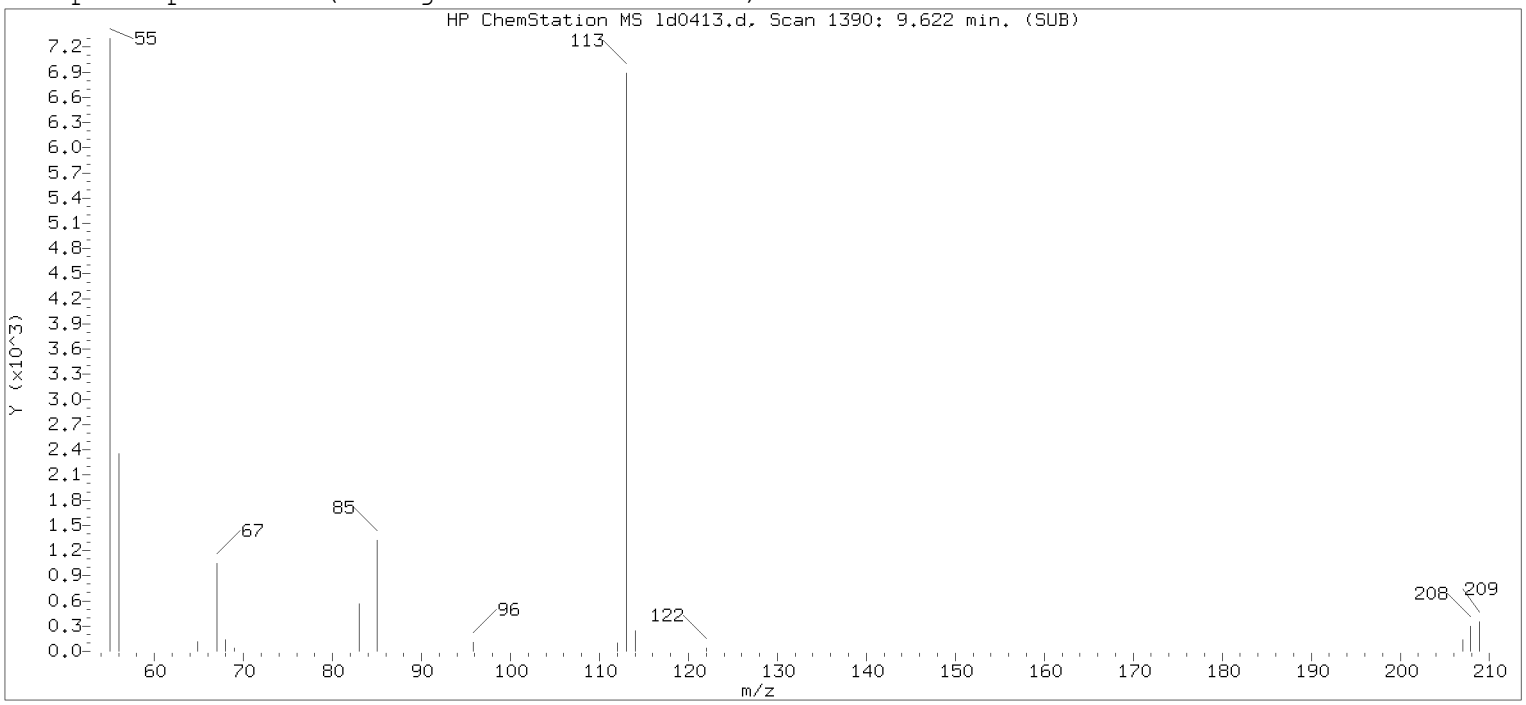
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1405
Retention Time (minutes) : 9.702
Quant Ion : 113.00
Area (flag) : 447290M
On-Column Amount (ng/ul) : 30.2788
Integration start scan : 1393 Integration stop scan: 1419
Y at integration start : 2707 Y at integration end: 452

Reason for manual integration: improper integration

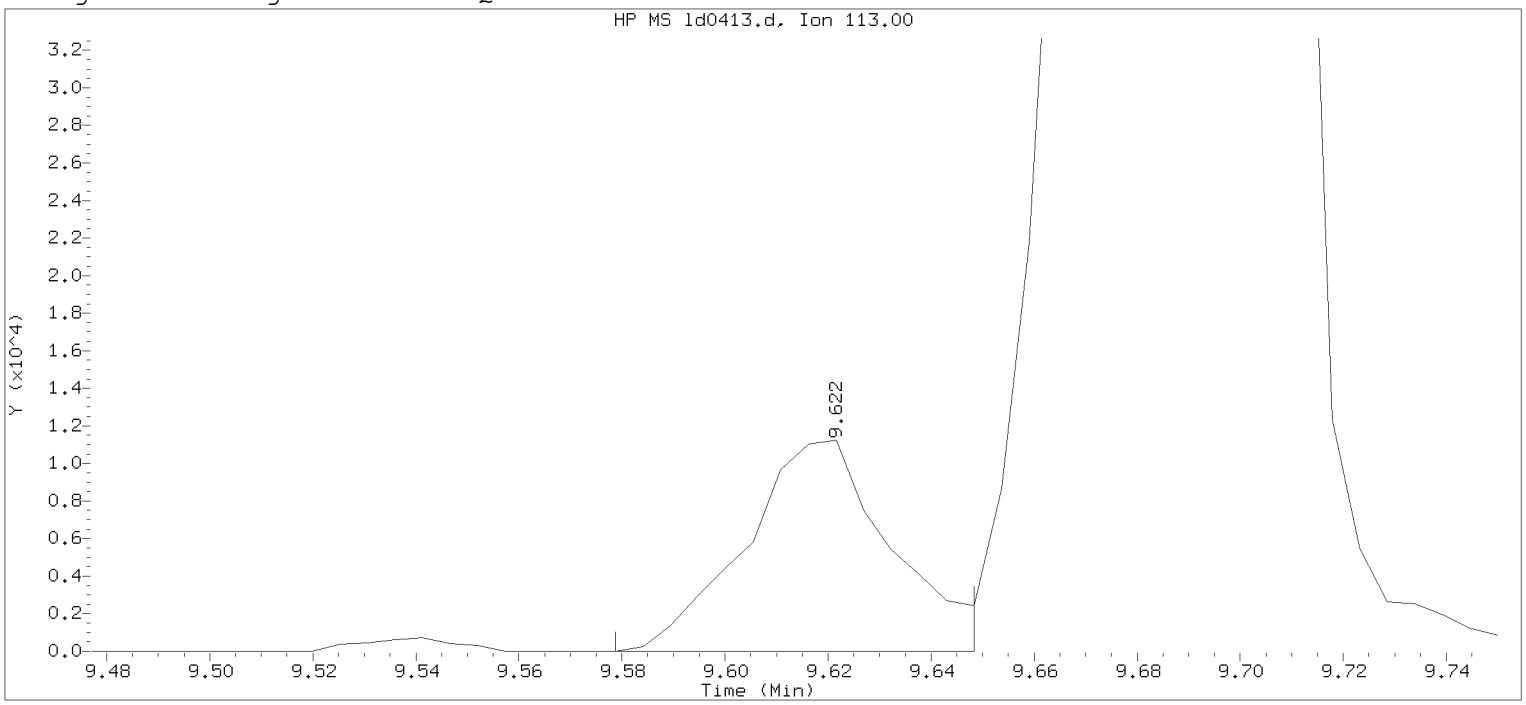
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

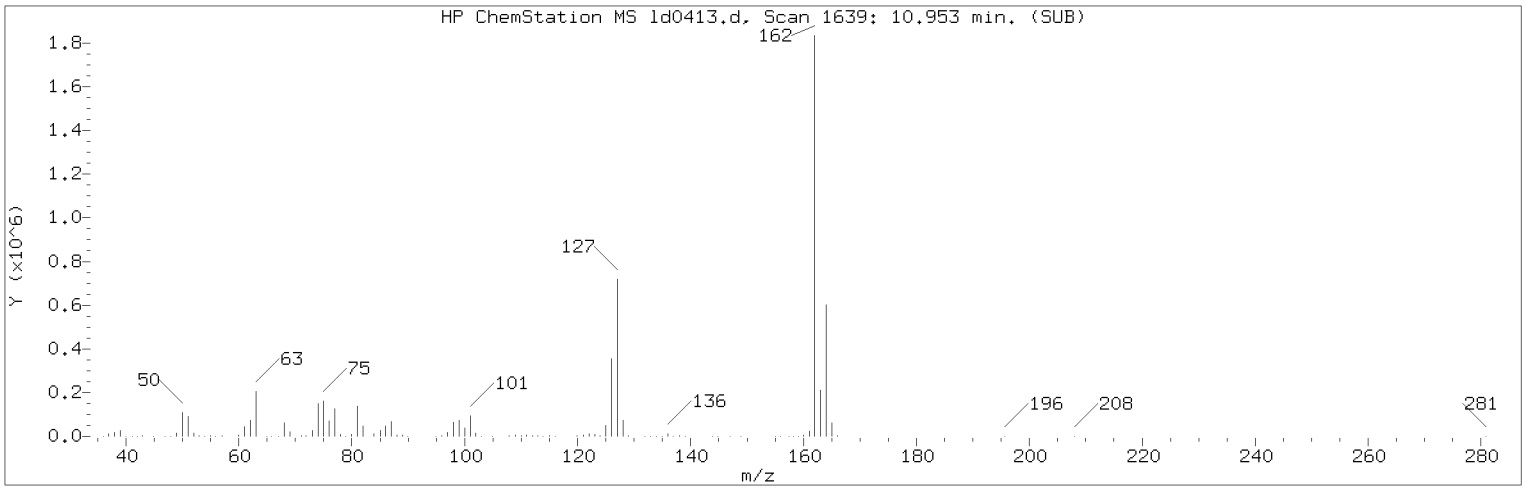
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

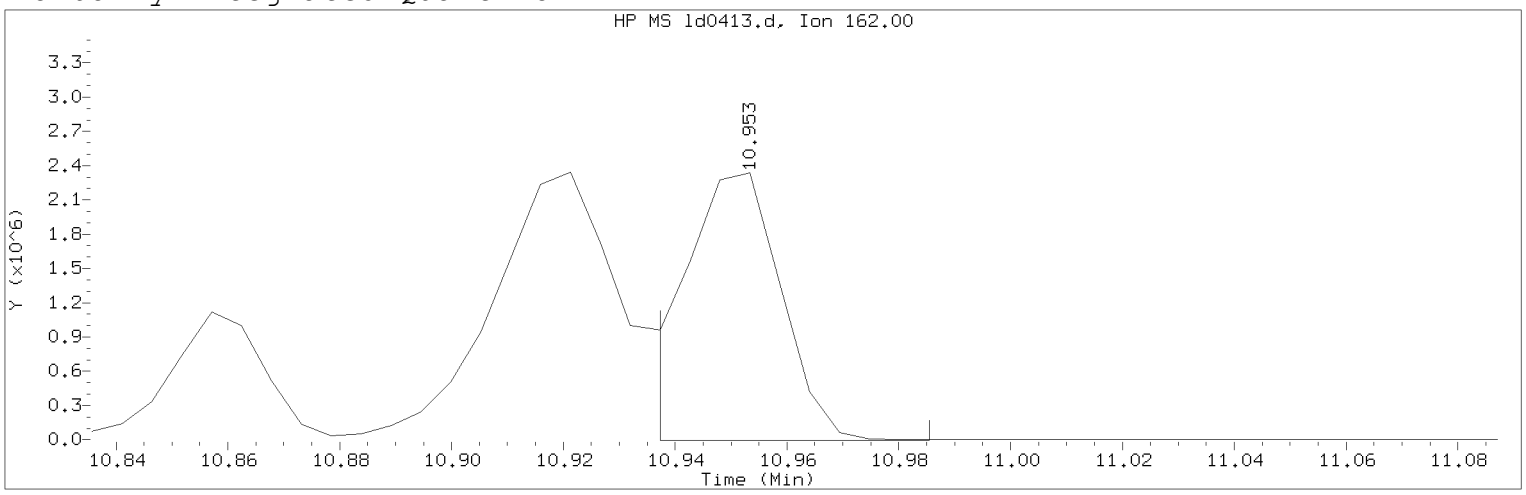
Compound Number	: 79		
Compound Name	: Caprolactam		
Scan Number	: 1390		
Retention Time (minutes)	: 9.622		
Quant Ion	: 113.00		
Area	: 21743		
On-column Amount (ng/ul)	: 1.4317		
Integration start scan	: 1381	Integration stop scan:	1394
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

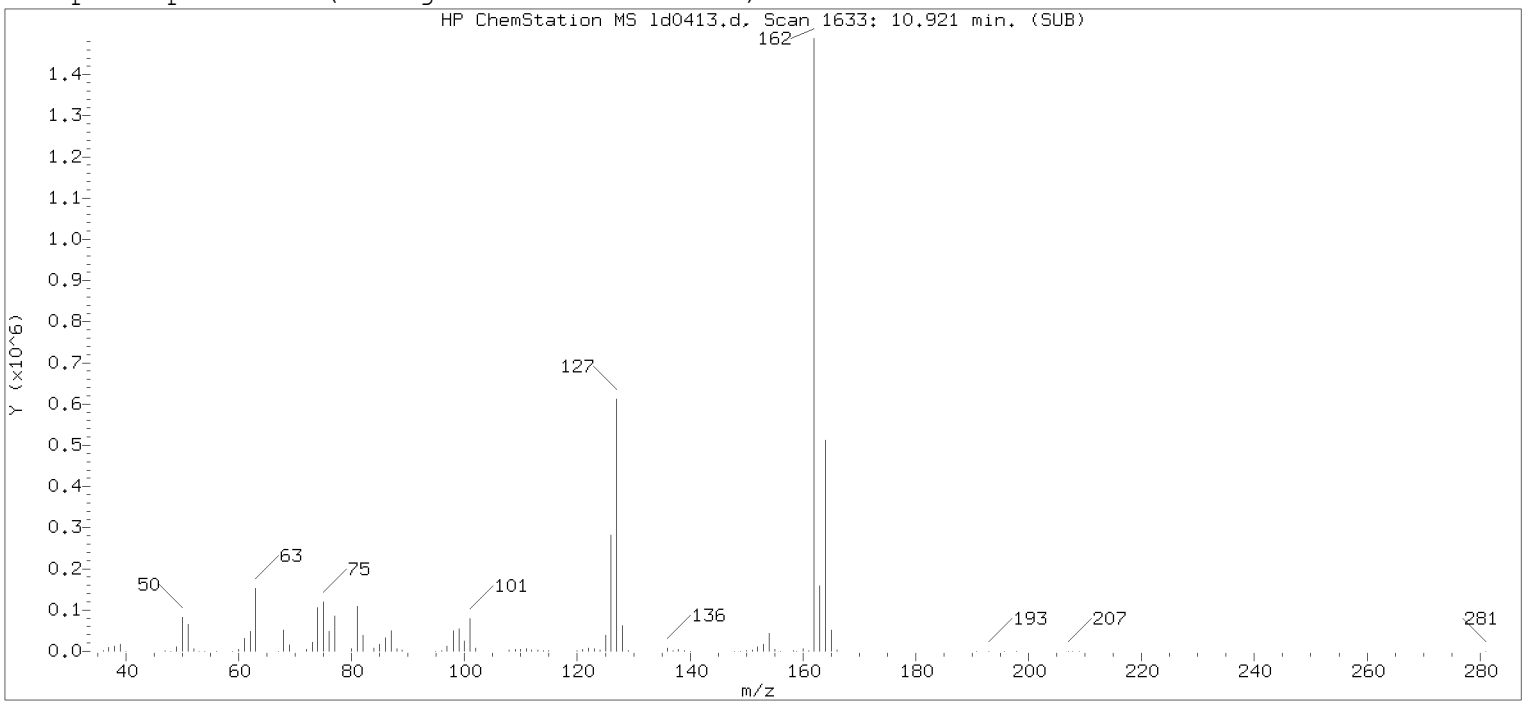
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1639
Retention Time (minutes) : 10.953
Quant Ion : 162.00
Area (flag) : 2899527M
On-Column Amount (ng/ul) : 28.1825
Integration start scan : 1635 Integration stop scan: 1644
Y at integration start : -3652 Y at integration end: -3652

Reason for manual integration: improper integration

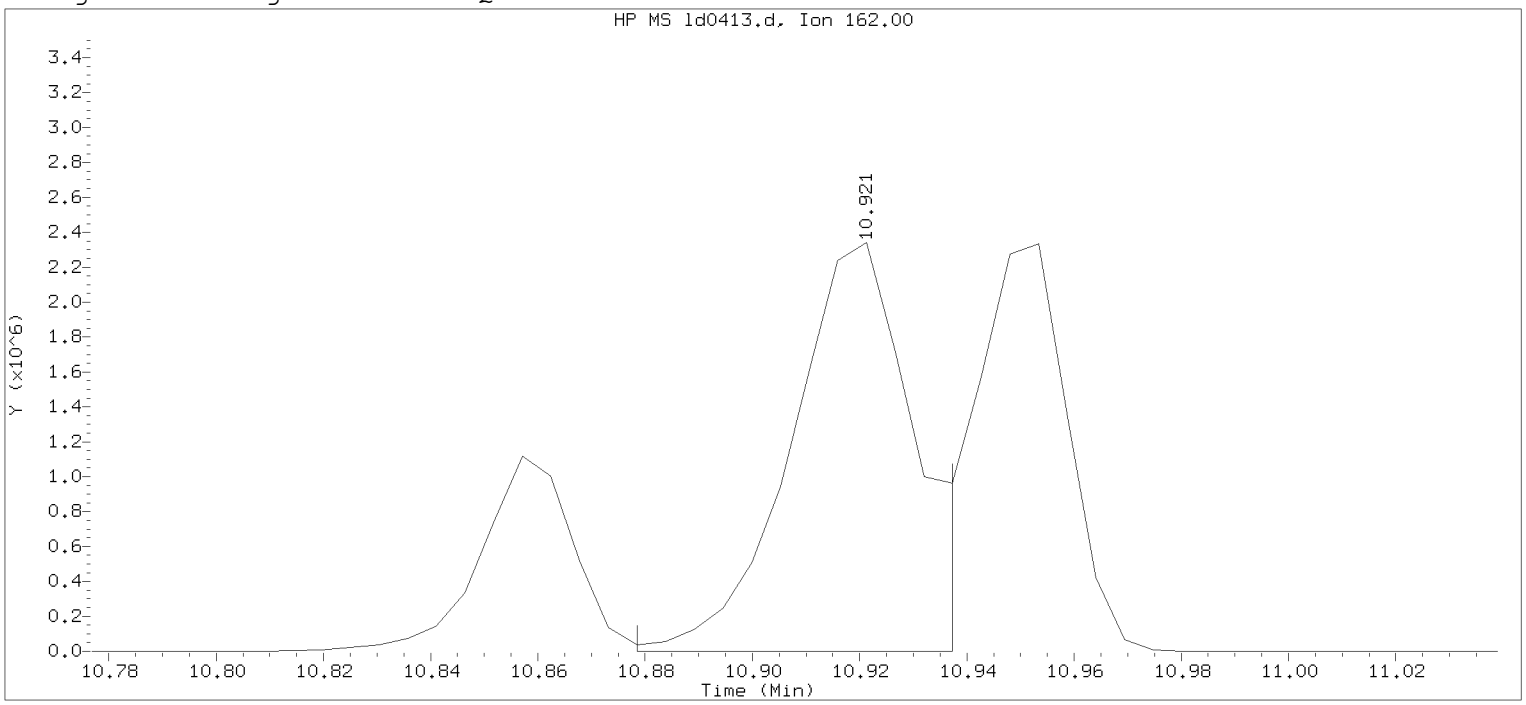
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

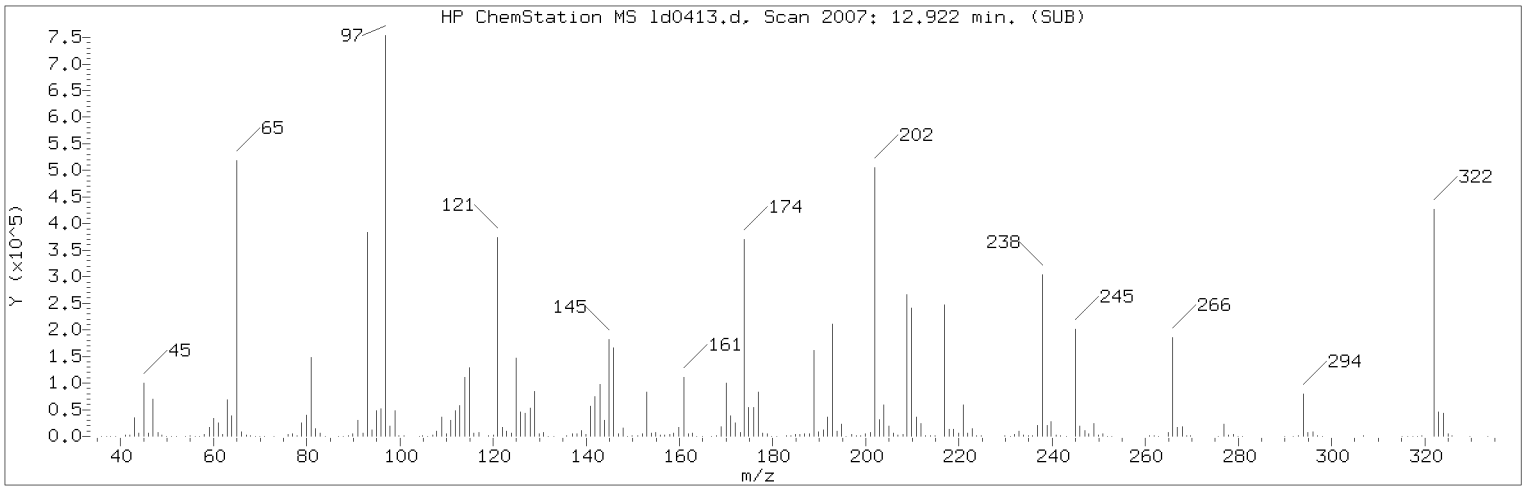
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

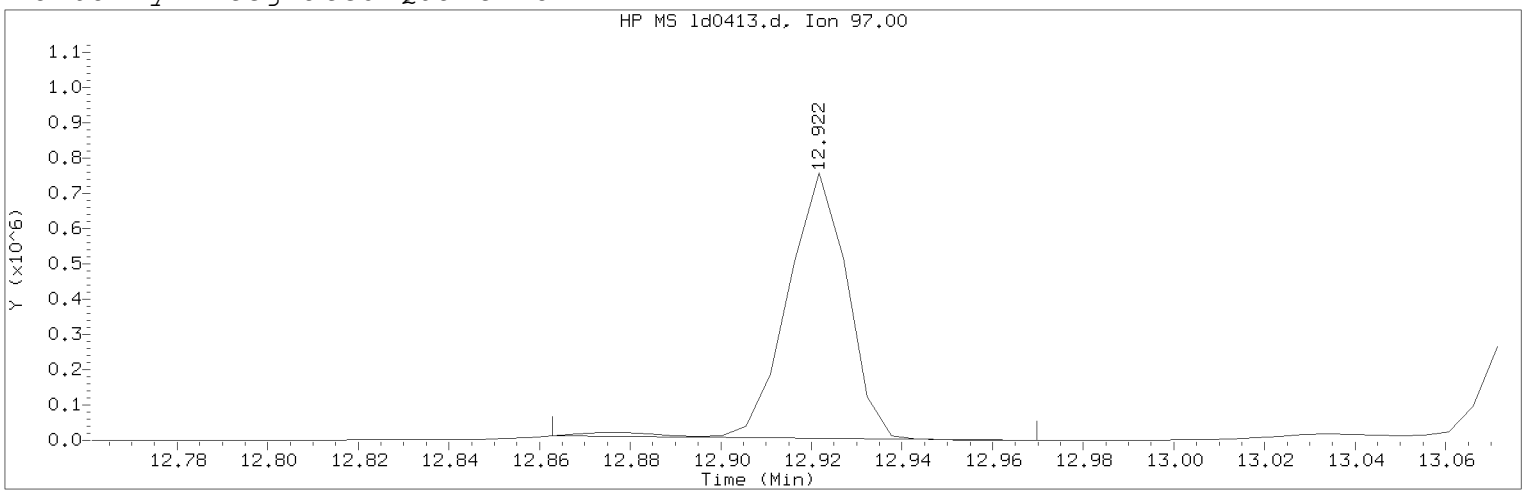
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1633		
Retention Time (minutes)	: 10.921		
Quant Ion	: 162.00		
Area	: 3617887		
On-column Amount (ng/ul)	: 35.1696		
Integration start scan	: 1624	Integration stop scan:	1635
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user analyst 2017

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

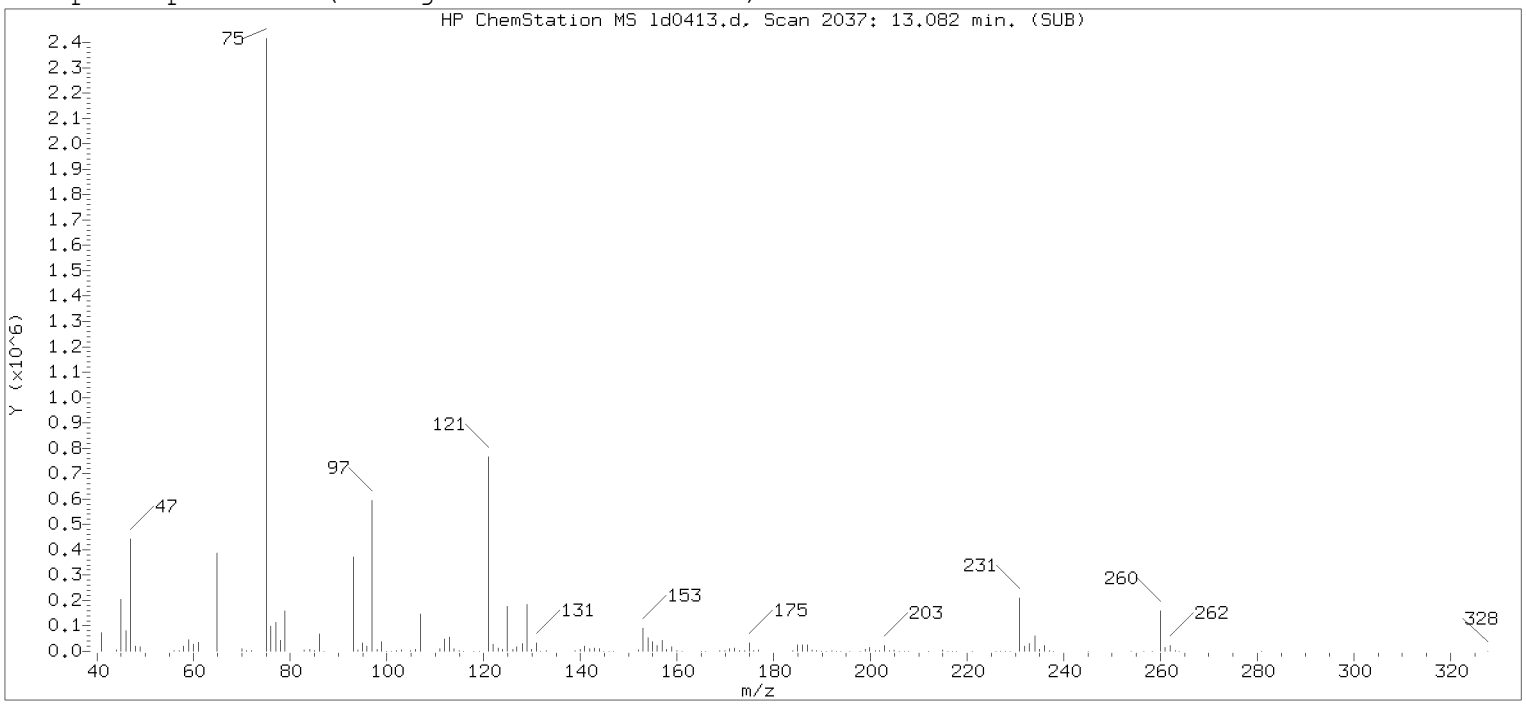
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 685635M
On-Column Amount (ng/ul) : 29.5350
Integration start scan : 1995 Integration stop scan: 2015
Y at integration start : 13572 Y at integration end: 359

Reason for manual integration: improper integration

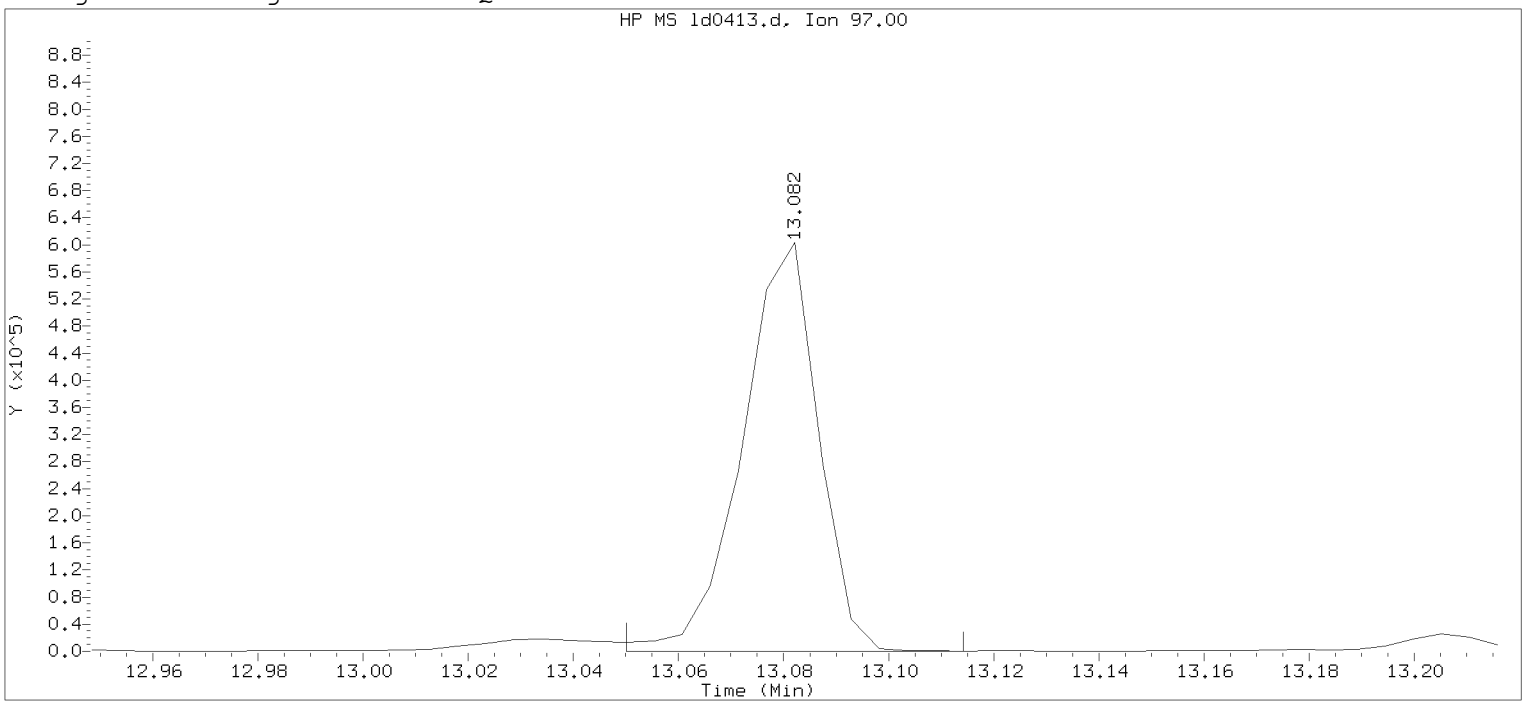
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

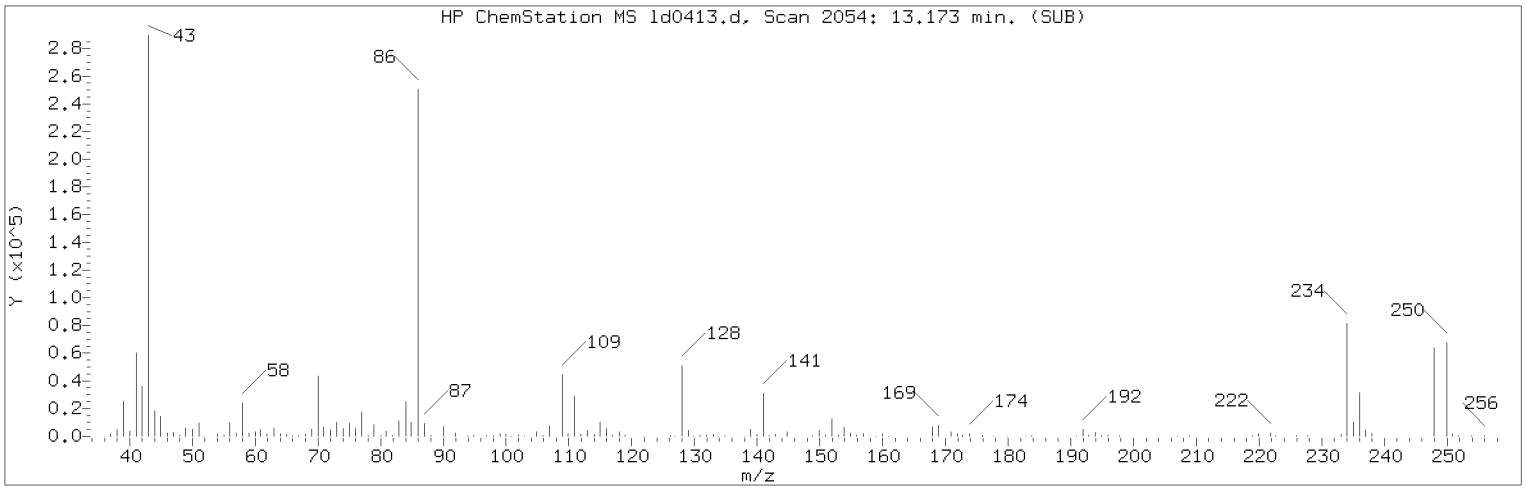
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

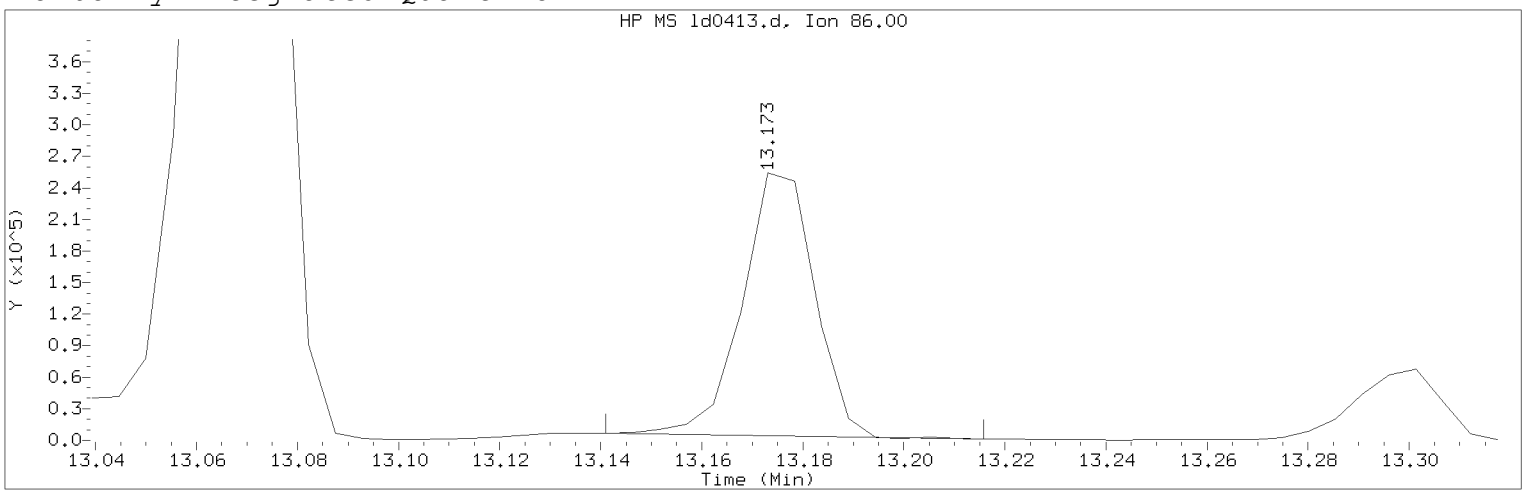
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2037		
Retention Time (minutes)	: 13.082		
Quant Ion	: 97.00		
Area	: 601520		
On-column Amount (ng/ul)	: 24.6838		
Integration start scan	: 2030	Integration stop scan:	2042
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

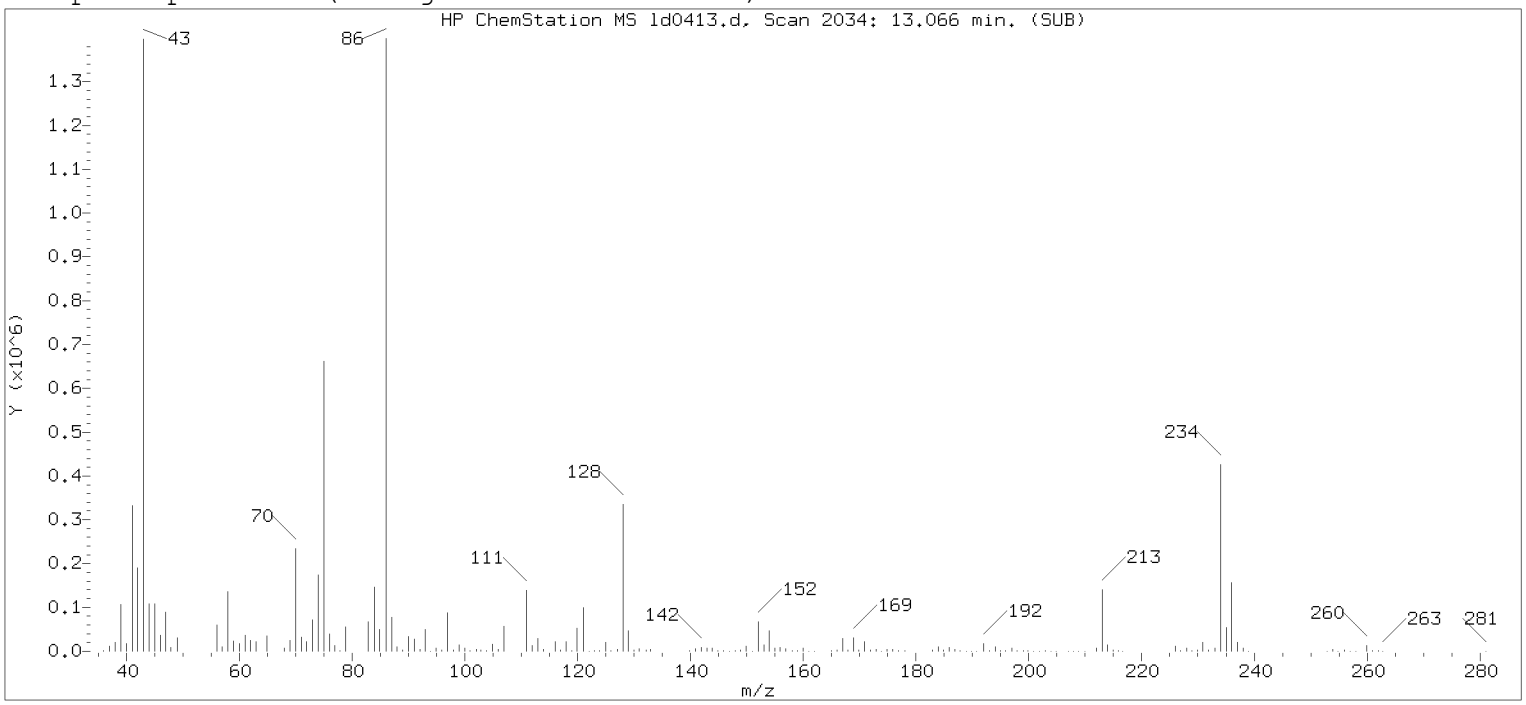
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 249561M
On-Column Amount (ng/ul) : 5.0957
Integration start scan : 2047 Integration stop scan: 2061
Y at integration start : 6432 Y at integration end: 1049

Reason for manual integration: improper integration

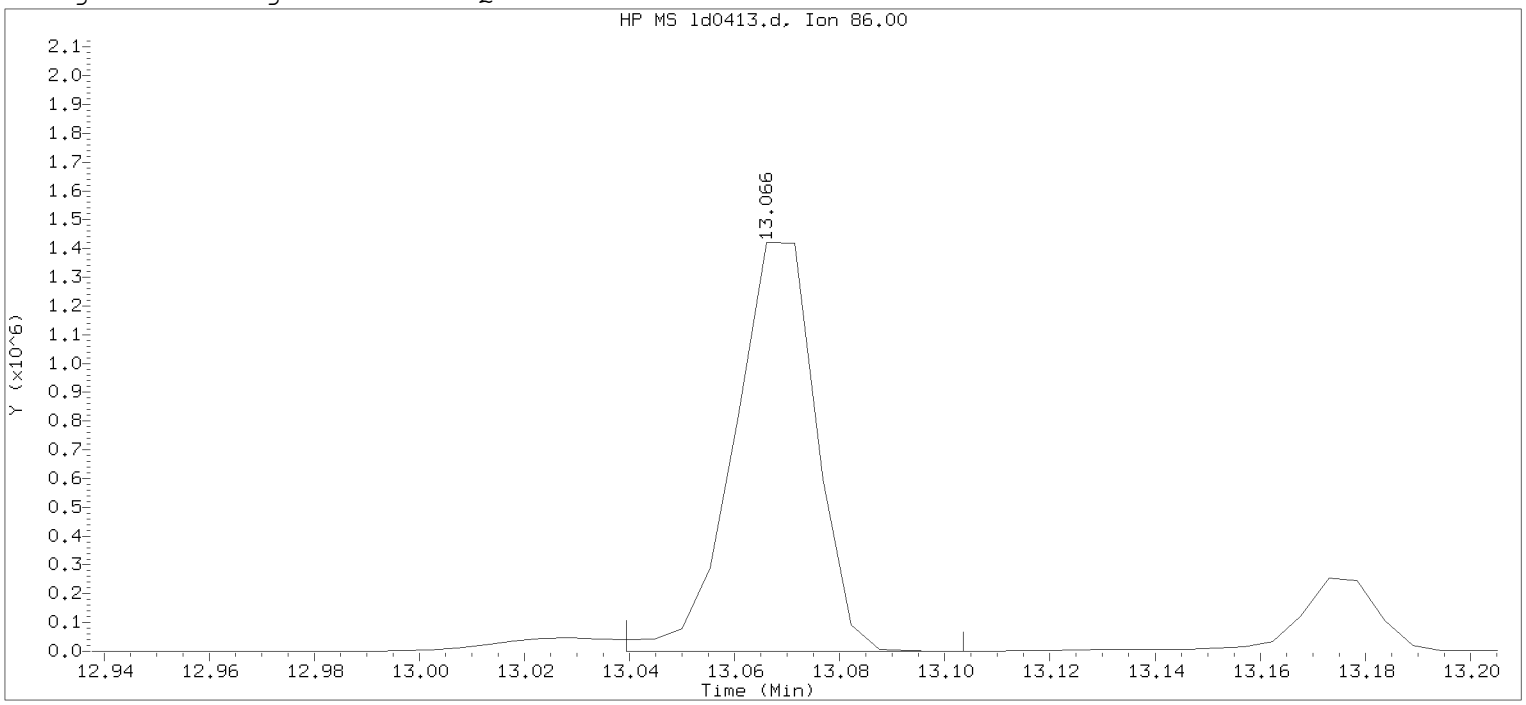
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

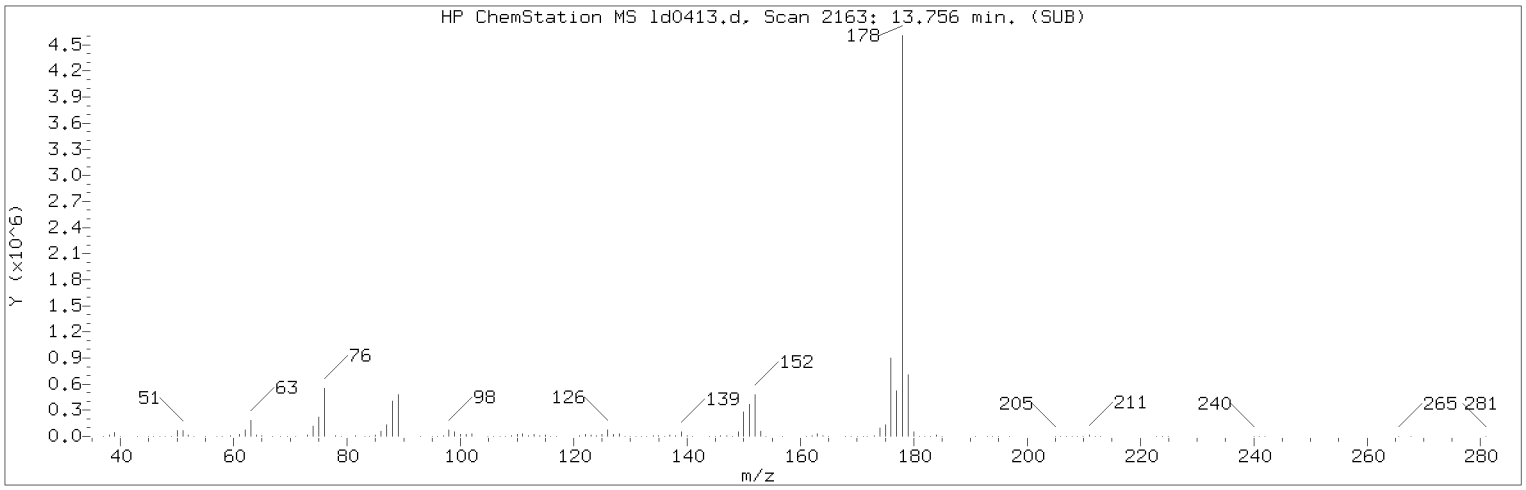
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

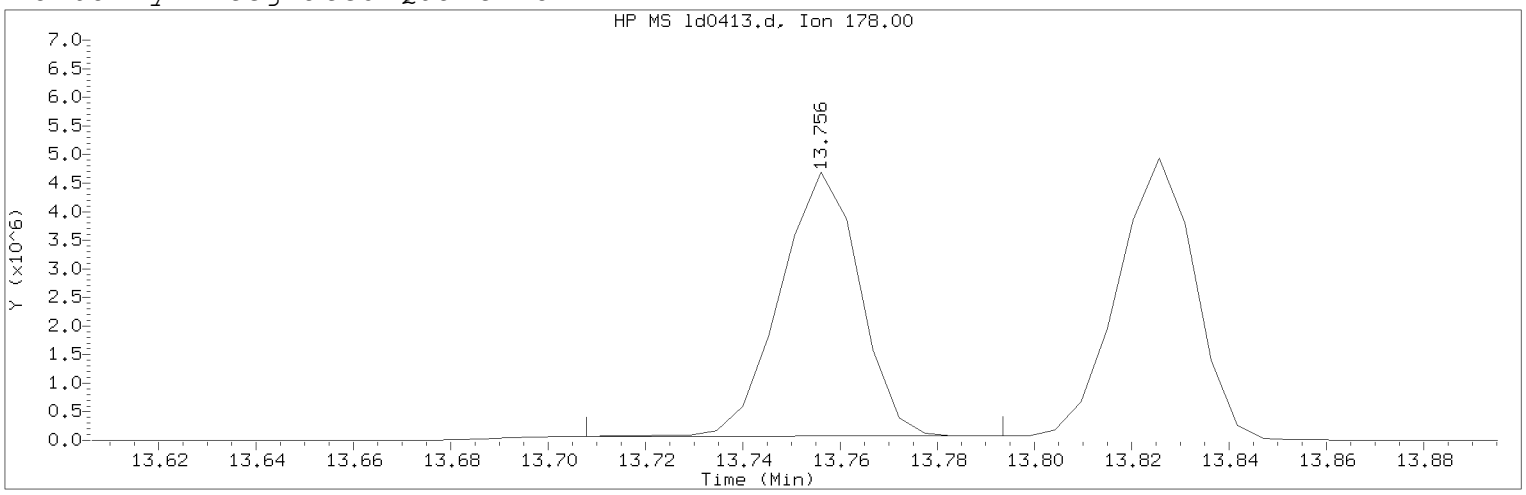
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 1535641		
On-column Amount (ng/ul)	: 29.9742		
Integration start scan	: 2028	Integration stop scan:	2040
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

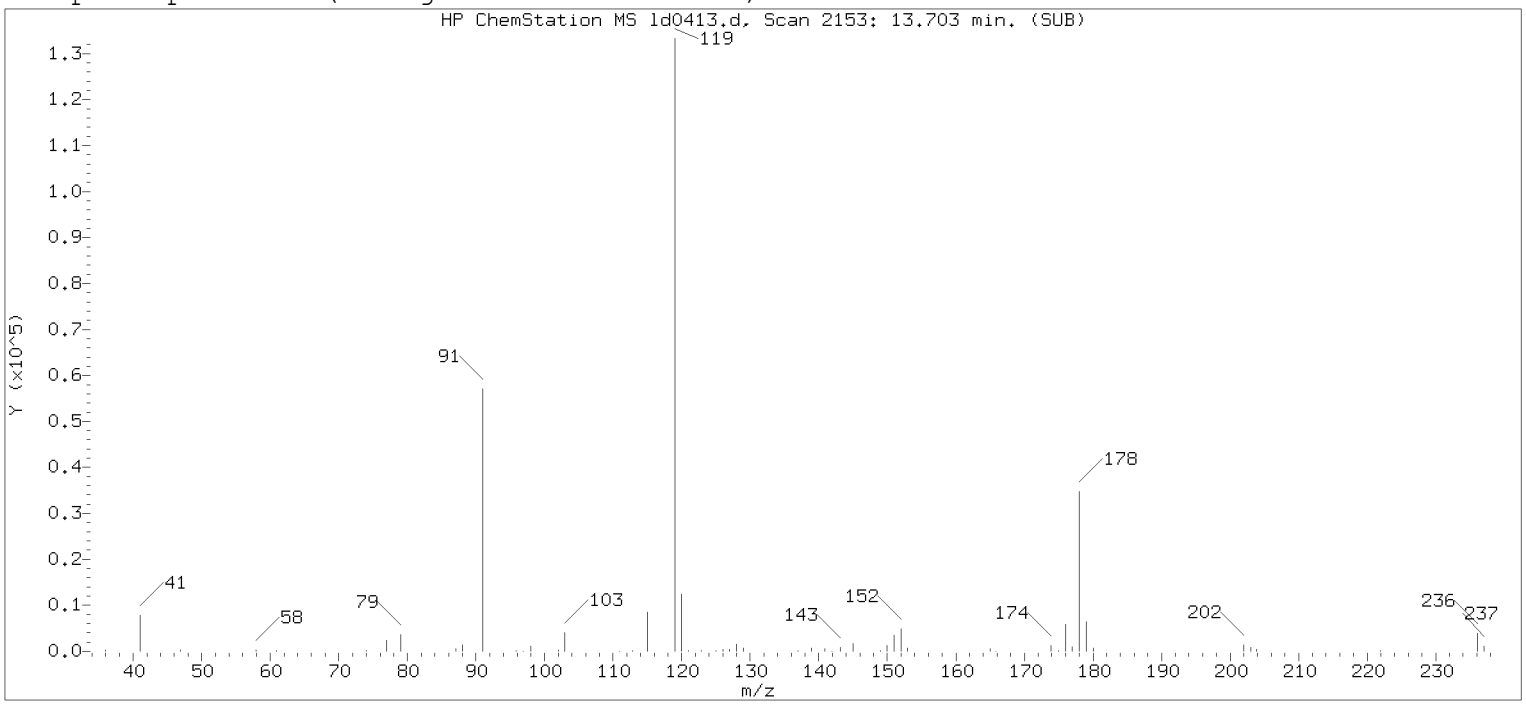
Compound Number : 160
Compound Name : Phenanthrene
Scan Number : 2163
Retention Time (minutes) : 13.756
Quant Ion : 178.00
Area (flag) : 5201356M
On-Column Amount (ng/ul) : 29.5119
Integration start scan : 2153 Integration stop scan: 2169
Y at integration start : 71072 Y at integration end: 77864

Reason for manual integration: improper integration

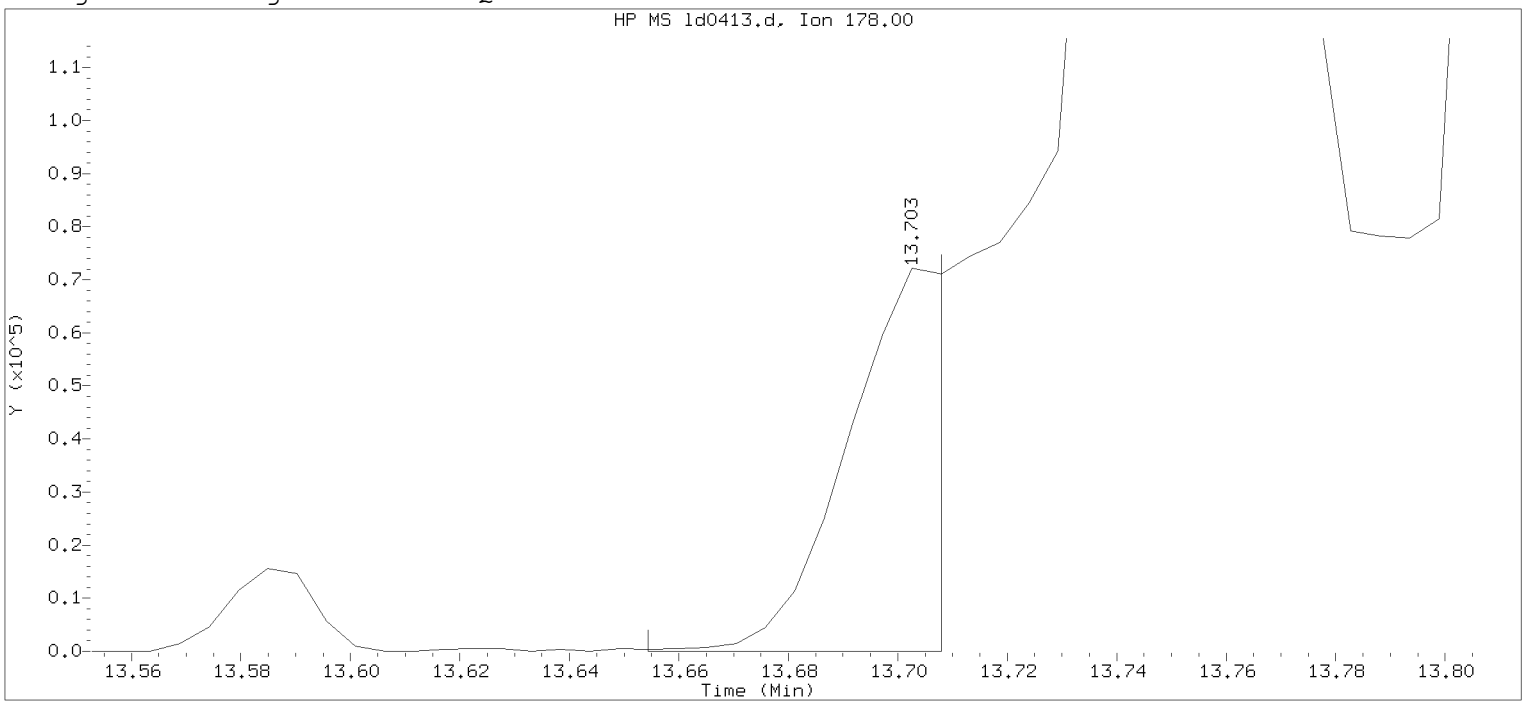
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compound Number	: 160		
Compound Name	: Phenanthrene		
Scan Number	: 2153		
Retention Time (minutes)	: 13.703		
Quant Ion	: 178.00		
Area	: 81581		
On-column Amount (ng/ul)	: 0.4327		
Integration start scan	: 2143	Integration stop scan:	2153
Y at integration start	: 0	Y at integration end:	0

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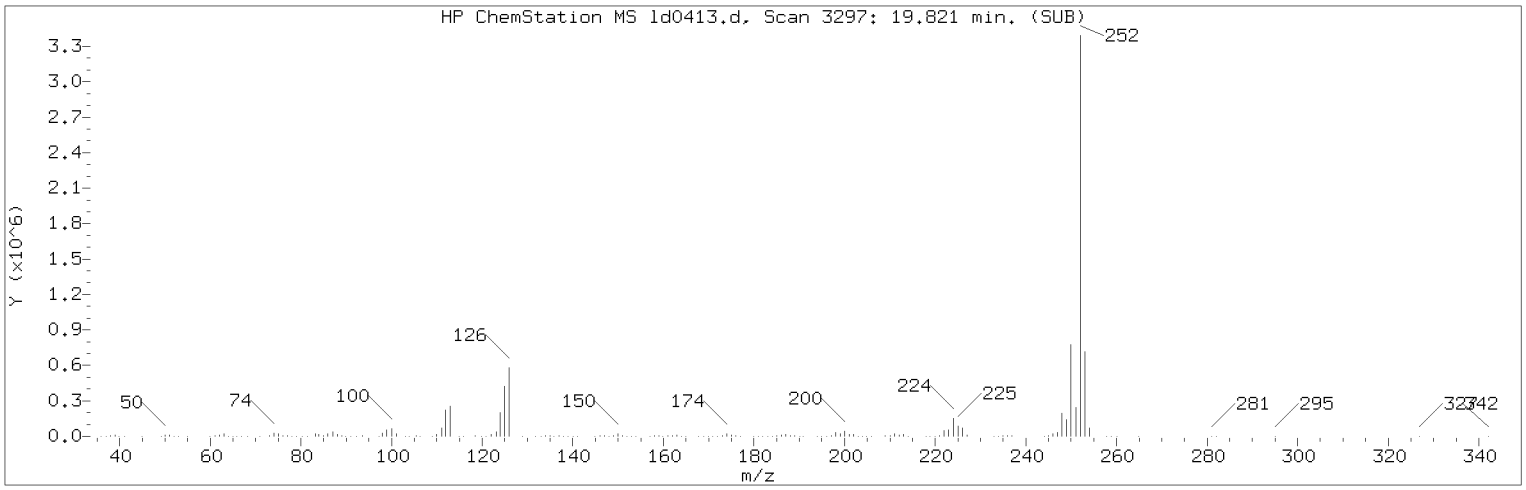
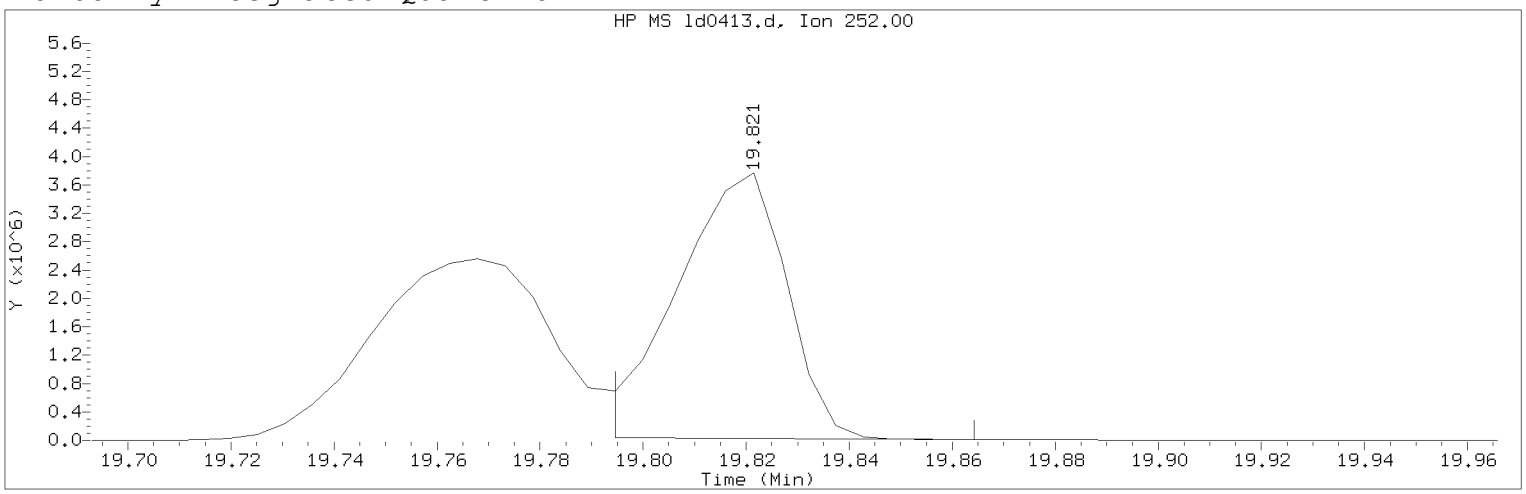
Target 3.5 esignature user ID: ART04 Page 493 of 744

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

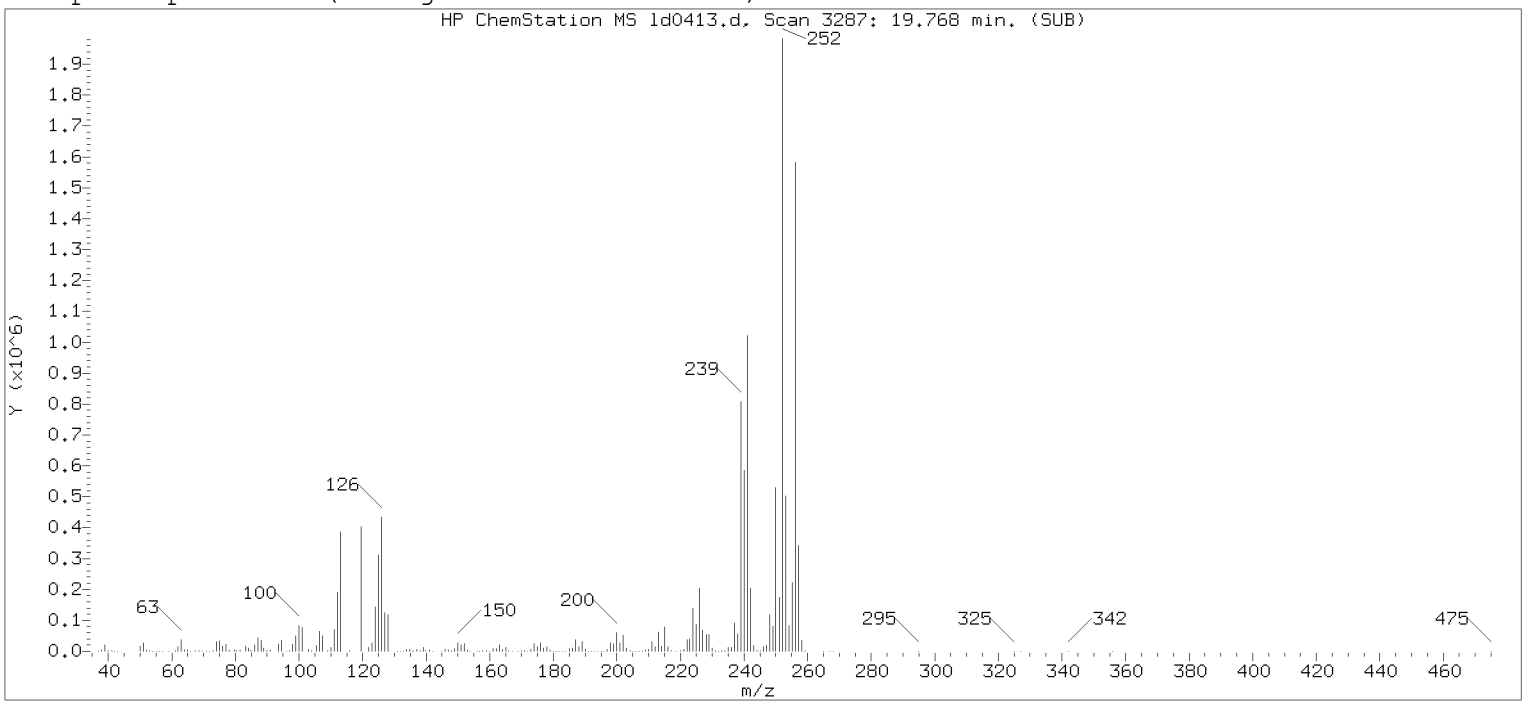
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3297
Retention Time (minutes) : 19.821
Quant Ion : 252.00
Area (flag) : 5568913M
On-Column Amount (ng/ul) : 30.1446
Integration start scan : 3291 Integration stop scan: 3304
Y at integration start : 38462 Y at integration end: 8808

Reason for manual integration: improper integration

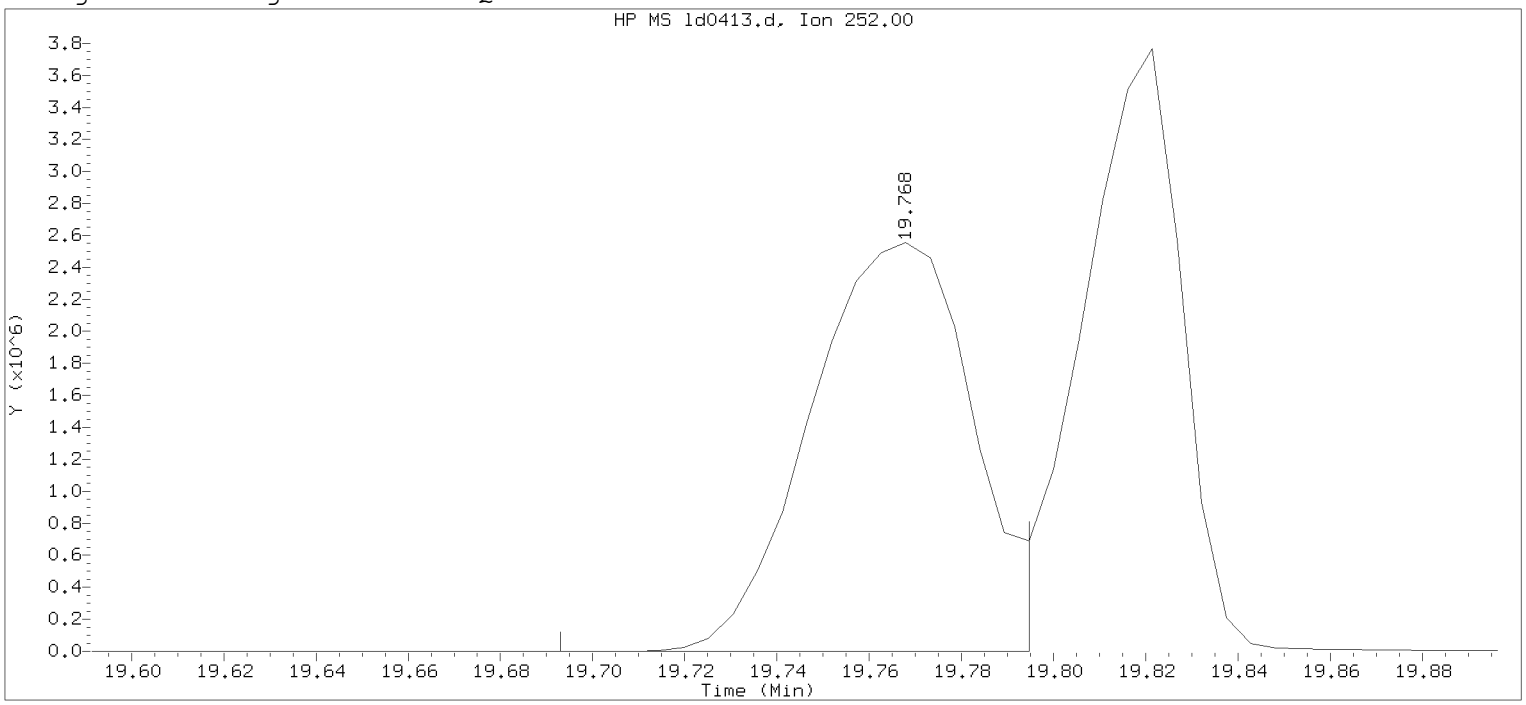
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

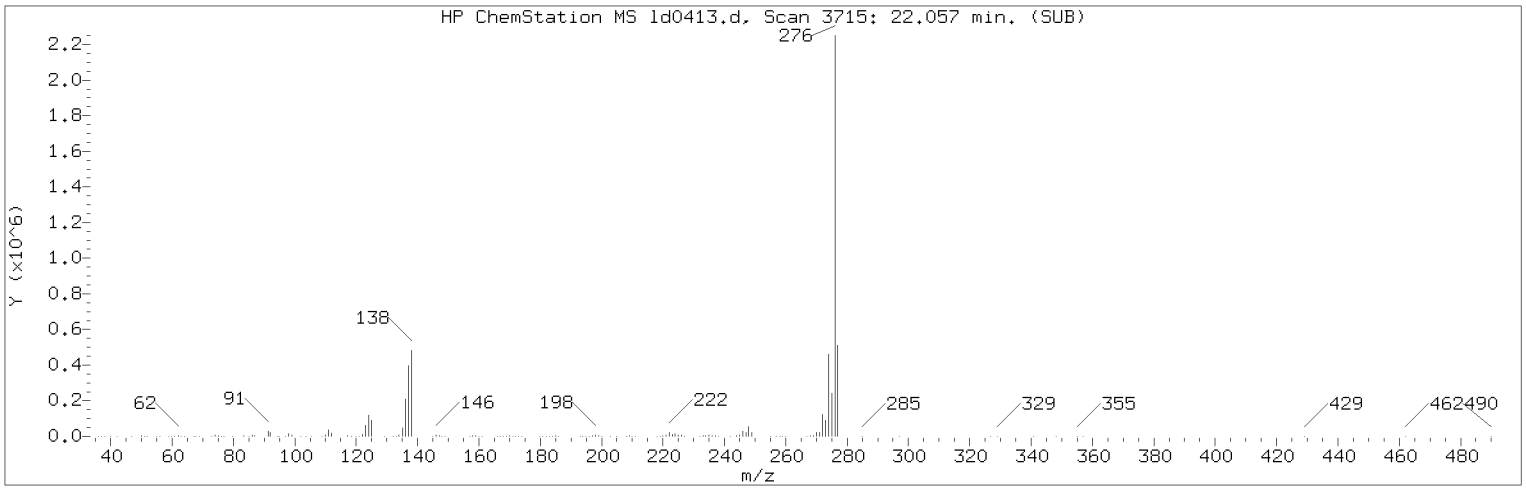
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

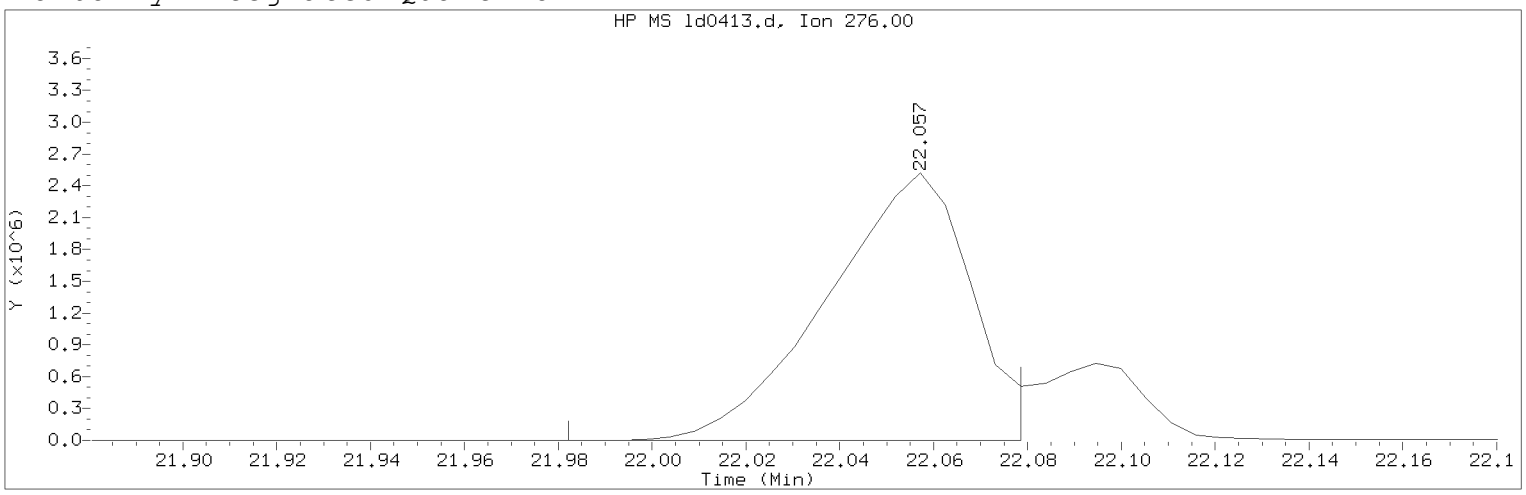
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3287		
Retention Time (minutes)	: 19.768		
Quant Ion	: 252.00		
Area	: 6187894		
On-column Amount (ng/ul)	: 32.1898		
Integration start scan	: 3272	Integration stop scan:	3291
Y at integration start	: 290	Y at integration end:	290

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

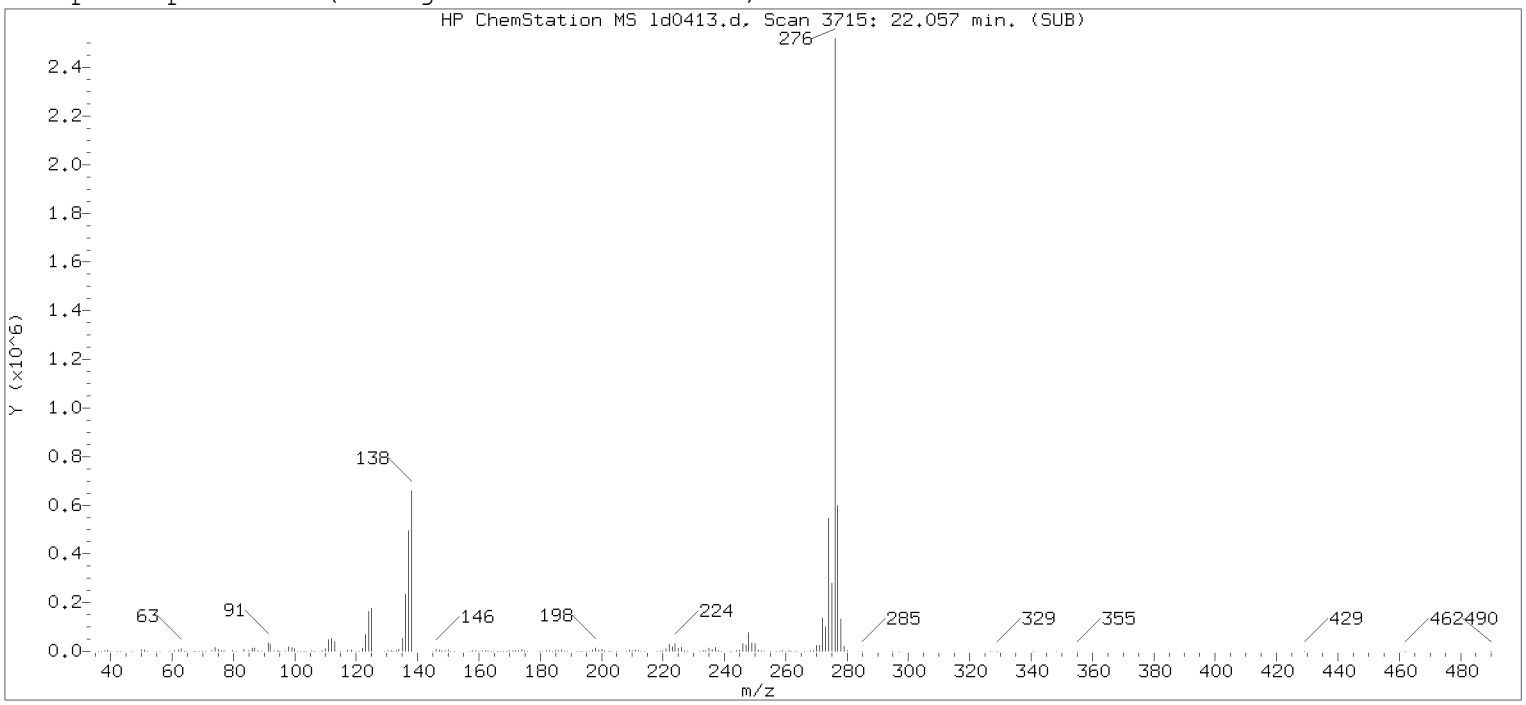
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3715
Retention Time (minutes) : 22.057
Quant Ion : 276.00
Area (flag) : 5379958M
On-Column Amount (ng/ul) : 32.8188
Integration start scan : 3700 Integration stop scan: 3718
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

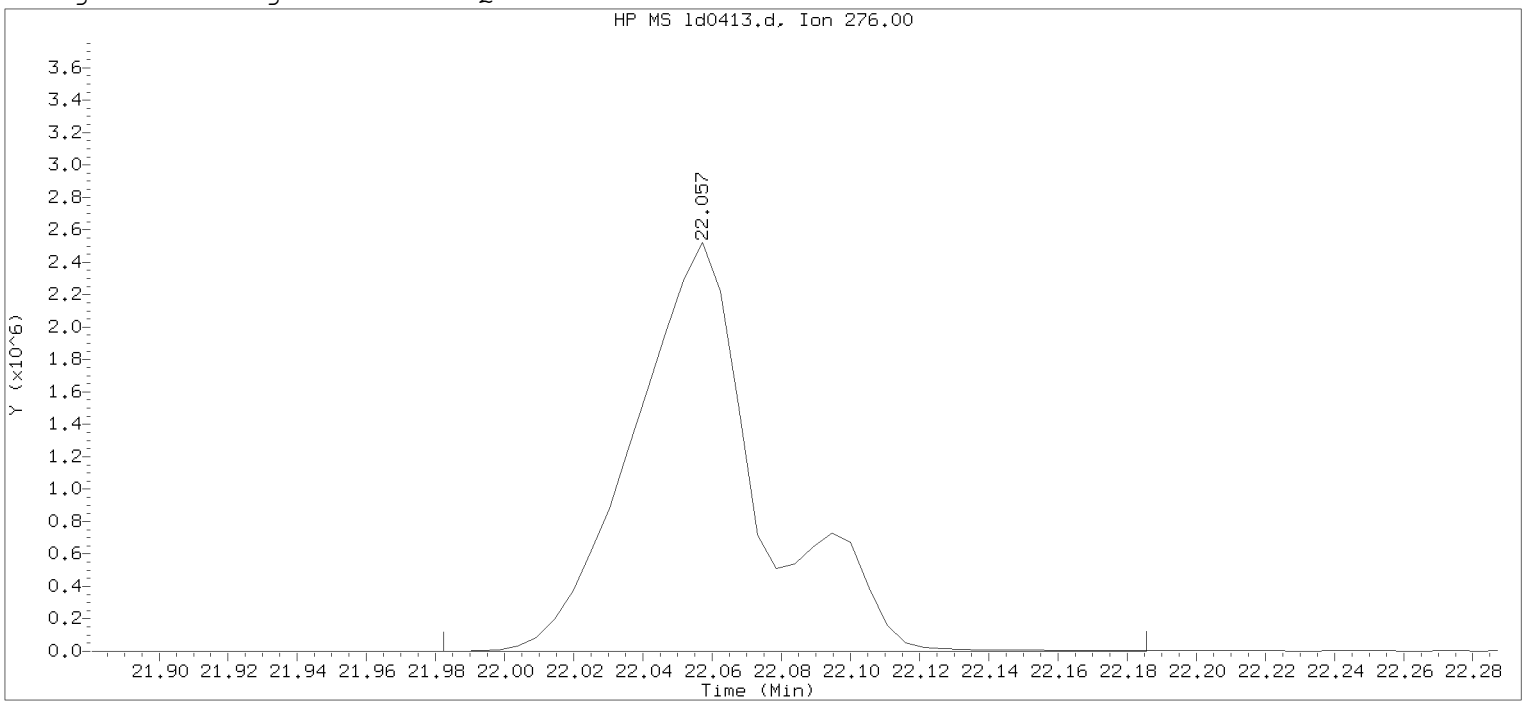
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



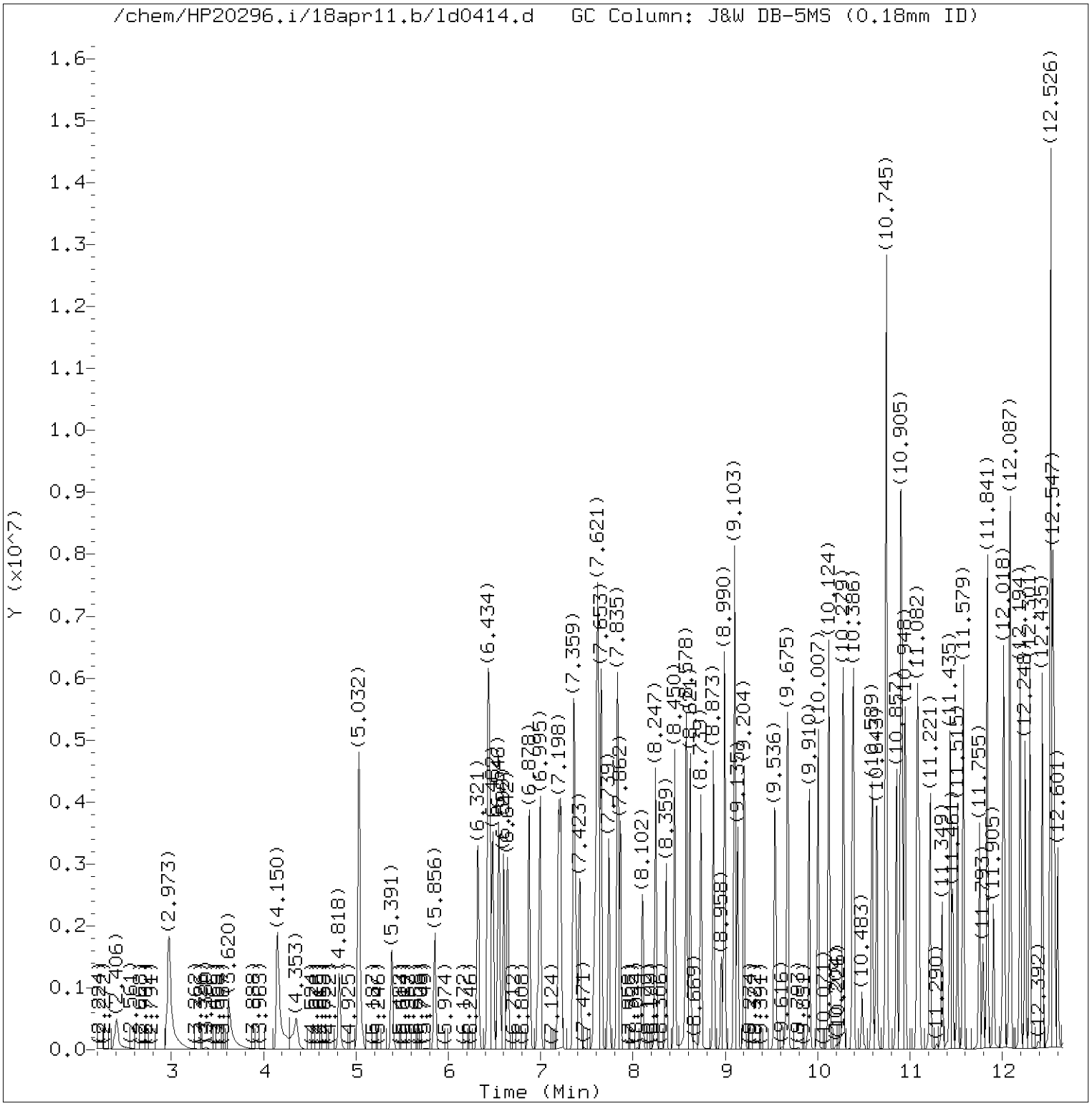
Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3715		
Retention Time (minutes)	: 22.057		
Quant Ion	: 276.00		
Area	: 6437679		
On-column Amount (ng/ul)	: 37.2171		
Integration start scan	: 3700	Integration stop scan:	3738
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ARTransue



Total Ion Chromatogram (TIC)

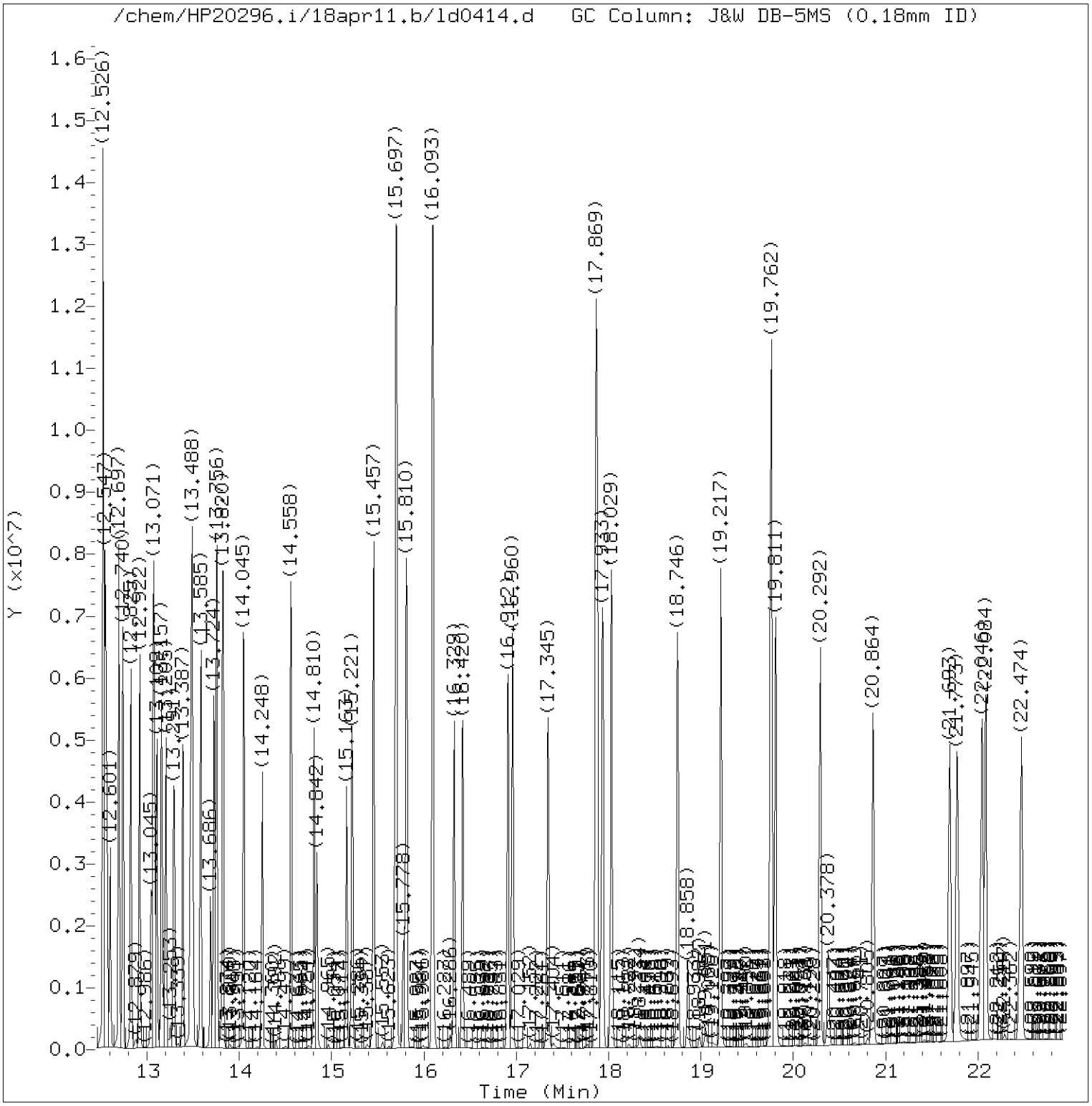
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	550868	20.195
5) N-Nitrosodimethylamine	(1)	2.957	74	868311	20.906
6) Pyridine	(1)	2.978	79	1522457	20.543
8) 2-Picoline	(1)	4.150	93	1553703	20.735
9) N-Nitrosomethylethylamine	(1)	4.353	88	625167	20.818
10) Methyl methanesulfonate	(1)	4.818	80	742475	20.412
12)$2-Fluorophenol	(1)	5.032	112	2469045	43.219
14) N-Nitrosodiethylamine	(1)	5.391	102	616614	22.140
43) Total Cresols	(1)			2387046	42.080
16) Ethyl methanesulfonate	(1)	5.856	109	633909	20.900
17) Benzaldehyde	(1)	6.321	77	1166276	20.576
18)$Phenol-d6	(1)	6.434	99	3200369	42.722
19) Phenol	(1)	6.455	94	1826386	21.178
20) Aniline	(1)	6.482	93	2142435	21.545
21) a-methylstyrene	(1)	6.551	118	452390	20.825
23) bis(2-Chloroethyl)ether	(1)	6.599	93	1352581	21.068
24) 2-Chlorophenol	(1)	6.642	128	1209011	21.603
25) 1,3-Dichlorobenzene	(1)	6.878	146	1348787	21.350
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	208633	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	1358132	21.243
28) Benzyl alcohol	(1)	7.198	108	795106	21.287
29) 1,2-Dichlorobenzene	(1)	7.215	146	1300404	21.362
31) Indene	(1)	7.359	115	1853296	20.778
32) 2-Methylphenol	(1)	7.370	108	1167891	21.164
100) Isosafrole	(3)			1072740	21.064
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	1896576	20.809
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	1896576	20.809
36) N-Nitrosopyrrolidine	(1)	7.584	100	653642	21.633
37) Acetophenone	(1)	7.605	105	1838672	21.852
38) 4-Methylphenol	(1)	7.621	108	1219155	20.916
39) N-Nitroso-di-n-propylamine	(1)	7.626	70	1004210	20.935
40) N-Nitrosomorpholine	(1)	7.653	56	811682	20.248
41) o-Toluidine	(1)	7.653	106	2054101	21.049
44) Hexachloroethane	(1)	7.739	117	554404	20.338
45)$Nitrobenzene-d5	(2)	7.835	82	2941078	42.282
46) Nitrobenzene	(2)	7.862	77	1490945	21.014
125) 2,4_2,6-Dinitrotoluenes	(3)			1356192	43.436
50) N-Nitrosopiperidine	(2)	8.102	114	619026	21.230
52) Isophorone	(2)	8.247	82	2638823	21.278
53) 2-Nitrophenol	(2)	8.359	139	627002	21.870

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.450	107	1299649	21.146
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	619077	20.351
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	1665662	20.662
58) Benzoic acid	(2)	8.621	105	828554	20.463
62) 2,4-Dichlorophenol	(2)	8.739	162	1025304	21.425
151) Diallate trans/cis	(4)			1248157	20.051
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	1123189	21.064
68)*Naphthalene-d8	(2)	8.958	136	806502	5.000
69) Naphthalene	(2)	8.990	128	3559430	21.357
70) 4-Chloroaniline	(2)	9.103	127	1425518	20.956
71) 2,6-Dichlorophenol	(2)	9.103	162	1003154	21.166
72) Hexachloropropene	(2)	9.135	213	786015	20.372
74) Hexachlorobutadiene	(2)	9.204	225	680762	21.058
78) Quinoline	(2)	9.541	129	2179955	20.534
80) N-Nitrosodi-n-butylamine	(2)	9.675	84	1179937	22.559
79) Caprolactam	(2)	9.680	113	297577M	19.832
83) 4-Chloro-3-methylphenol	(2)	9.910	107	1128296	21.485
85) Safrole	(2)	10.007	162	910409	20.364
86) 2-Methylnaphthalene	(2)	10.124	142	2348740	21.213
87) 1-Methylnaphthalene	(2)	10.279	142	2134408	21.011
88) Hexachlorocyclopentadiene	(3)	10.376	237	691191	21.111
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	1151304	20.907
91) cis-Isosafrole	(3)	10.483	162	175018	3.652
93) 2,4,6-Trichlorophenol	(3)	10.589	196	769791	22.261
95) 2,4,5-Trichlorophenol	(3)	10.643	196	785232	21.634
96)$2-Fluorobiphenyl	(3)	10.745	172	5206496	41.369
97) trans-Isosafrole	(3)	10.857	162	897722	17.412
98) 1,1'-Biphenyl	(3)	10.900	154	2741855	21.124
99) 2-Chloronaphthalene	(3)	10.916	162	2320484	21.037
101) 1-Chloronaphthalene	(3)	10.948	162	2119536M	20.773
103) Diphenyl ether	(3)	11.082	170	1511412	20.847
104) 2-Nitroaniline	(3)	11.103	138	708796	21.957
108) 1,4-Naphthoquinone	(3)	11.221	158	925777	21.241
109) 1,4-Dinitrobenzene	(3)	11.349	168	364974	21.272
110) Dimethylphthalate	(3)	11.435	163	2537714	20.538
111) 1,3-Dinitrobenzene	(3)	11.461	168	407726	22.185
113) 2,6-Dinitrotoluene	(3)	11.515	165	577967	22.030
114) Acenaphthylene	(3)	11.579	152	3334928	21.752
117) 3-Nitroaniline	(3)	11.755	138	619836	22.424
118)*Acenaphthene-d10	(3)	11.793	164	404835	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.841	153	2267952	20.861
120) 2,4-Dinitrophenol	(3)	11.905	184	352569	22.354
121) 4-Nitrophenol	(3)	12.007	109	410704	21.078
122) Pentachlorobenzene	(3)	12.018	250	944364	21.029
124) Dibenzofuran	(3)	12.082	168	3109790	20.589
123) 2,4-Dinitrotoluene	(3)	12.092	165	778225	21.406
126) 1-Naphthylamine	(3)	12.194	143	2256137	20.992
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	633870	22.442
128) 2-Naphthylamine	(3)	12.301	143	2154227	21.158
129) Diethylphthalate	(3)	12.435	149	2505333	20.602
130) Thionazin	(3)	12.526	107	427082	20.629
131) Fluorene	(3)	12.526	166	2462040	20.867
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	1194748	20.431
133) 5-Nitro-o-toluidine	(3)	12.558	152	705058	21.939
134) 4-Nitroaniline	(3)	12.569	138	605046	21.657
135) 4,6-Dinitro-2-methylphenol	(4)	12.601	198	463447	20.981
136) N-Nitrosodiphenylamine	(4)	12.697	169	2072286	20.296
137) NDPA as diphenylamine	(4)	12.697	169	2072286	20.296
139) 1,2-Diphenylhydrazine	(4)	12.740	77	2872392	20.160
140)$2,4,6-Tribromophenol	(3)	12.825	330	616614	44.062
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	469535M	19.376
144) 1,3,5-Trinitrobenzene	(4)	13.050	213	285075	20.951
145) Diallate (peak 1)	(4)	13.066	86	1075700	16.677
146) Phorate	(4)	13.077	75	1851481	20.261
147) Phenacetin	(4)	13.109	108	1382816	21.428
148) 4-Bromophenyl-phenylether	(4)	13.157	248	680537	19.947
149) Diallate (peak 2)	(4)	13.173	86	172457M	3.373
150) Hexachlorobenzene	(4)	13.205	284	685269	19.556
152) Dimethoate	(4)	13.291	87	1119566	20.358
153) Atrazine	(4)	13.392	200	649079	18.791
154) Pentachlorophenol	(4)	13.472	266	461946	21.526
156) Pentachloronitrobenzene	(4)	13.483	237	342875	20.502
155) 4-Aminobiphenyl	(4)	13.494	169	2395526	20.608
157) Pronamide	(4)	13.585	173	1225609	21.283
158)*Phenanthrene-d10	(4)	13.718	188	834360	5.000
159) Dinoseb	(4)	13.729	211	764270	22.103
160) Phenanthrene	(4)	13.756	178	3768058	20.481
162) Anthracene	(4)	13.825	178	3814740	20.684
168) Carbazole	(4)	14.045	167	3373725	20.660
169) Methyl parathion	(4)	14.248	109	888464	21.195

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	4516479	20.546
172) Parathion	(4)	14.810	109	587966	21.674
173) 4-Nitroquinoline-1-oxide	(4)	14.842	190	472482	21.689
227) Total PAHs	(6)			62410132	377.743
174) Octachlorostyrene	(4)	15.163	308	263277	20.085
176) Isodrin	(4)	15.221	193	457091	20.054
178) Fluoranthene	(4)	15.457	202	4329796	20.925
179) Benzidine	(5)	15.703	184	7642226	60.798
180)*Pyrene-d10	(5)	15.778	212	853042	5.000
182) Pyrene	(5)	15.810	202	4376710	20.168
184)$Terphenyl-d14	(5)	16.099	244	5572921	40.736
187) p-Dimethylaminoazobenzene	(5)	16.329	225	748286	22.601
190) Chlorobenzilate	(5)	16.420	139	1328566	20.550
192) 3,3'-Dimethylbenzidine	(5)	16.912	212	2998314	21.932
193) Butylbenzylphthalate	(5)	16.960	149	2106242	20.890
196) 2-Acetylaminofluorene	(5)	17.345	181	1736227	21.757
198) 3,3'-Dichlorobenzidine	(5)	17.858	252	1481517	21.235
200) Benzo(a)anthracene	(5)	17.869	228	4145184	21.380
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.880	231	879651	20.761
201) Chrysene	(5)	17.933	228	3856065	20.561
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	3004808	21.093
208) 6-Methylchrysene	(5)	18.746	242	2701478	20.458
210) Di-n-octylphthalate	(6)	19.217	149	5286424	21.572
211) Benzo(b)fluoranthene	(6)	19.762	252	3996917	20.919
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.762	256	1718884	21.806
213) Benzo(k)fluoranthene	(6)	19.811	252	3786214M	20.579
216) Benzo(a)pyrene	(6)	20.292	252	3672996	21.365
218)*Perylene-d12	(6)	20.378	264	779313	5.000
220) 3-Methylcholanthrene	(6)	20.864	268	1773997	21.221
222) Dibenz(a,h)acridine	(6)	21.699	279	3020756	20.675
223) Dibenz(a,j)acridine	(6)	21.773	279	3064201	20.648
224) Indeno(1,2,3-cd)pyrene	(6)	22.046	276	3474549M	21.282
225) Dibenz(a,h)anthracene	(6)	22.089	278	3538362	21.336
226) Benzo(g,h,i)perylene	(6)	22.474	276	3543043	21.001

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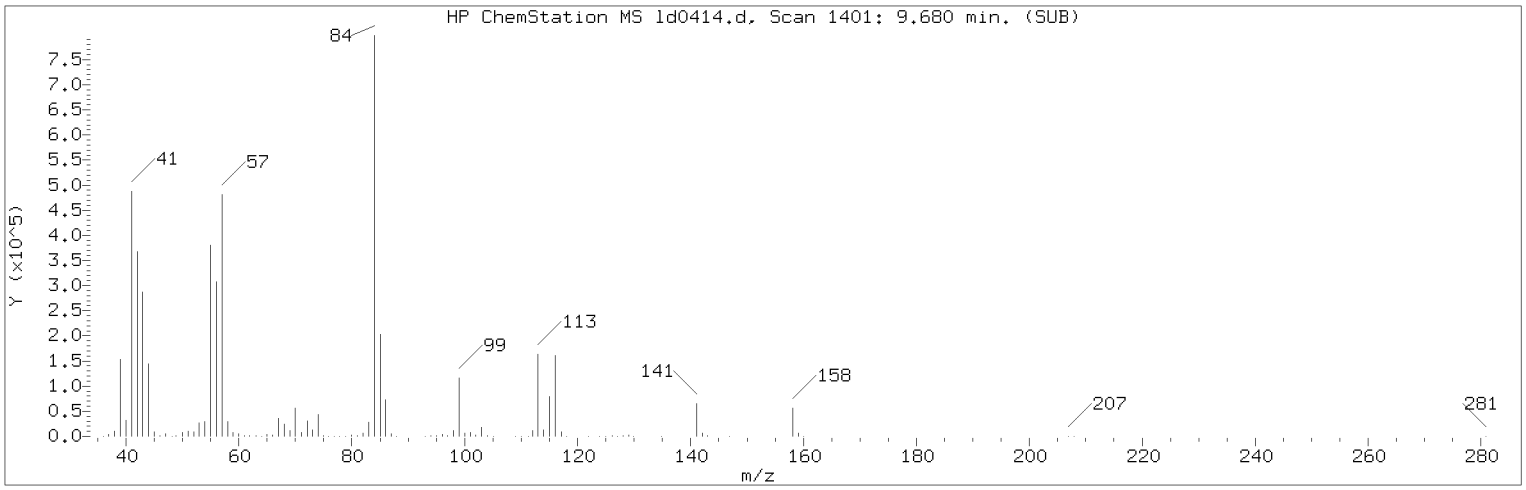
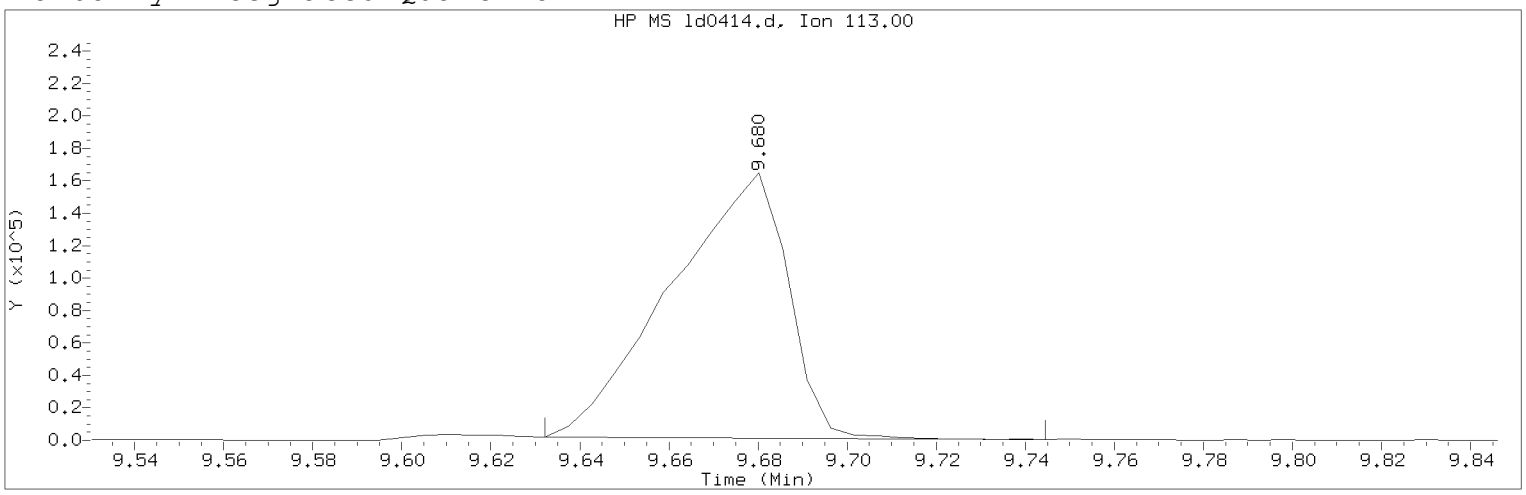
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

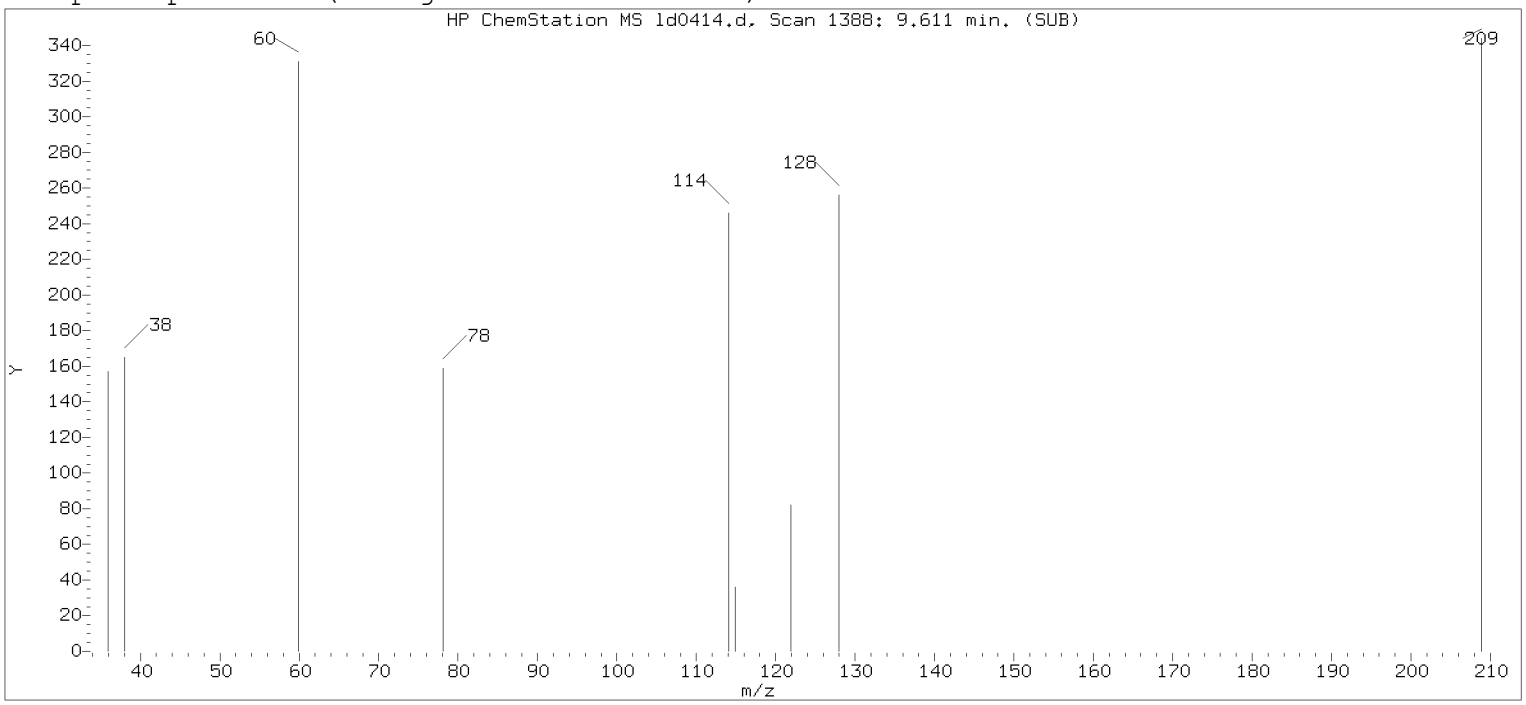
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1401
Retention Time (minutes) : 9.680
Quant Ion : 113.00
Area (flag) : 297577M
On-Column Amount (ng/ul) : 19.8318
Integration start scan : 1391 Integration stop scan: 1412
Y at integration start : 2161 Y at integration end: 446

Reason for manual integration: improper integration

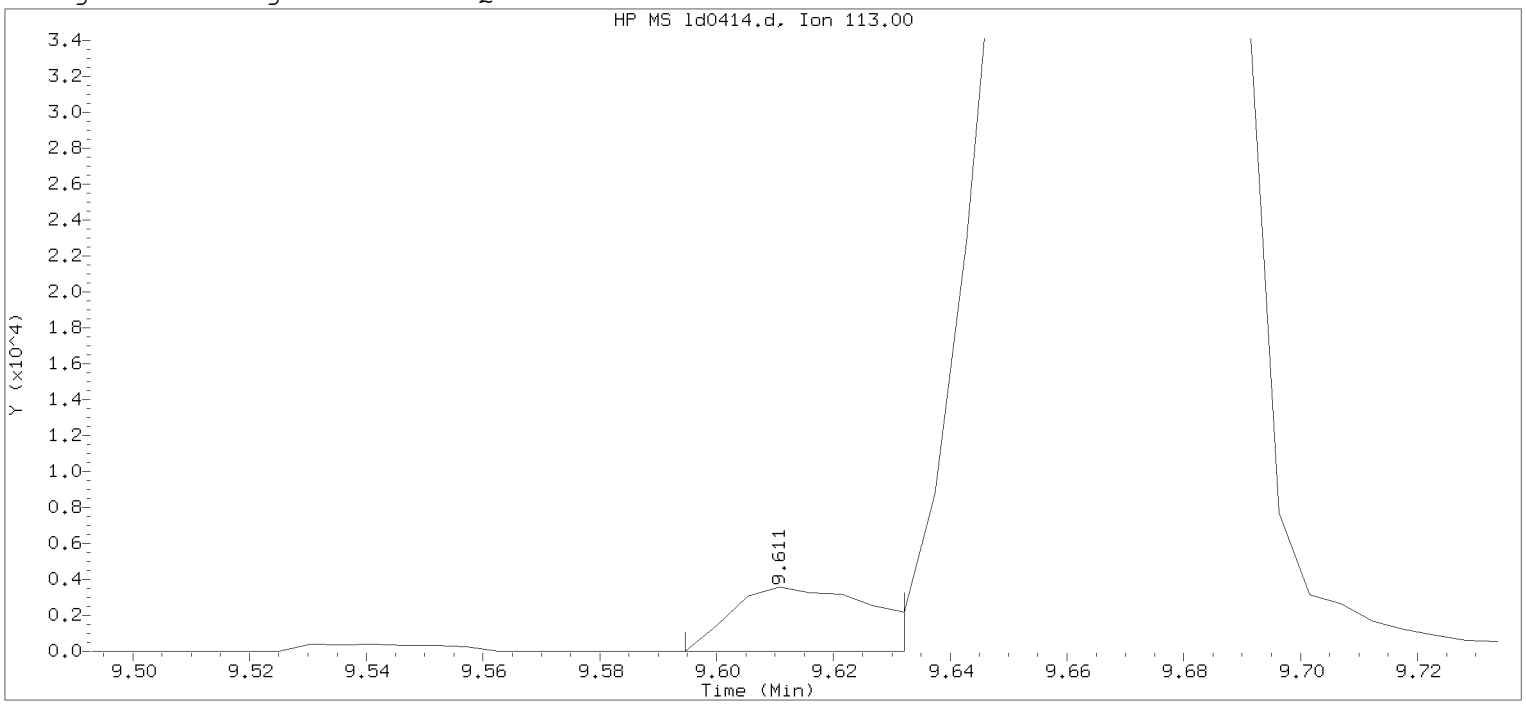
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 79		
Compound Name	: Caprolactam		
Scan Number	: 1388		
Retention Time (minutes)	: 9.611		
Quant Ion	: 113.00		
Area	: 5801		
On-column Amount (ng/ul)	: 0.3761		
Integration start scan	: 1384	Integration stop scan:	1391
Y at integration start	: 0	Y at integration end:	0

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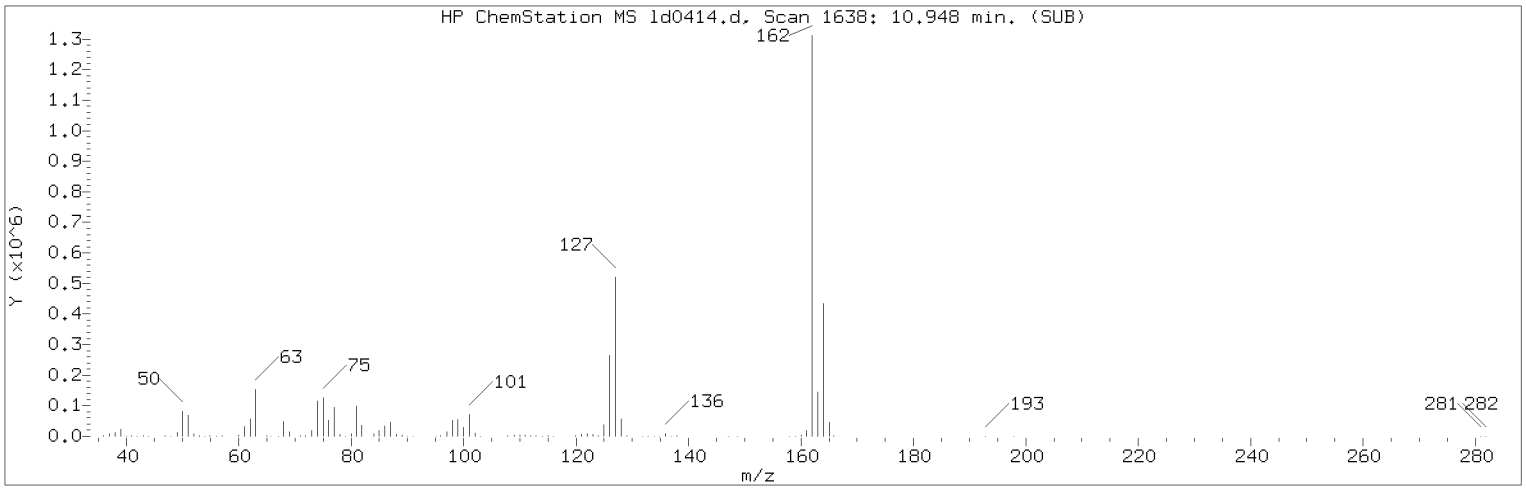
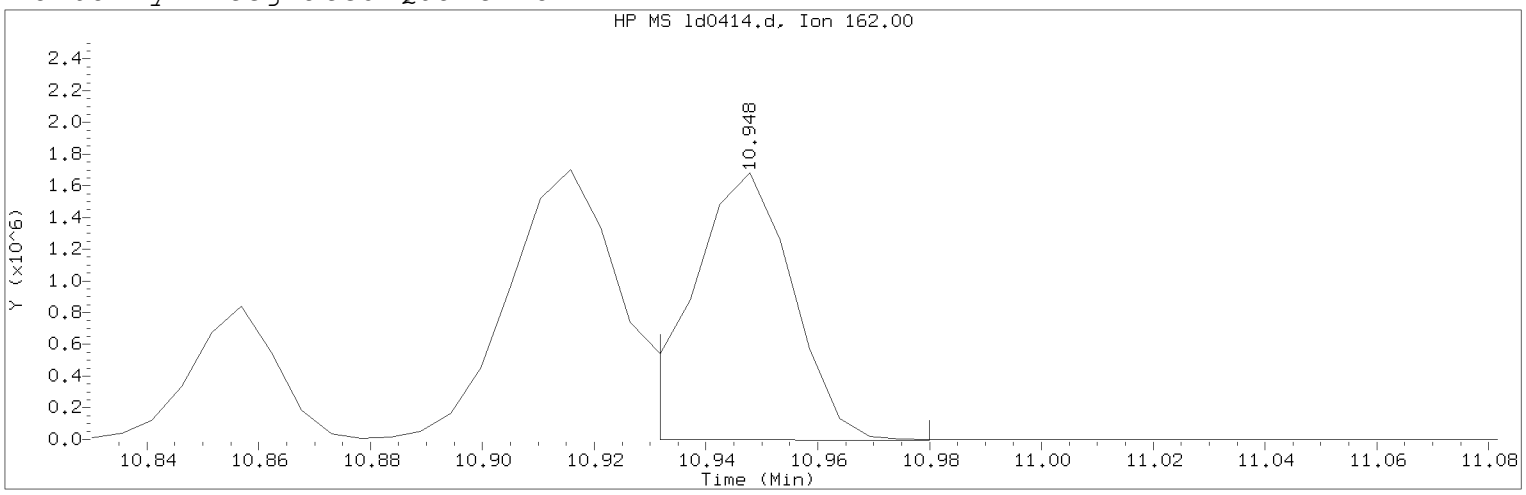
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

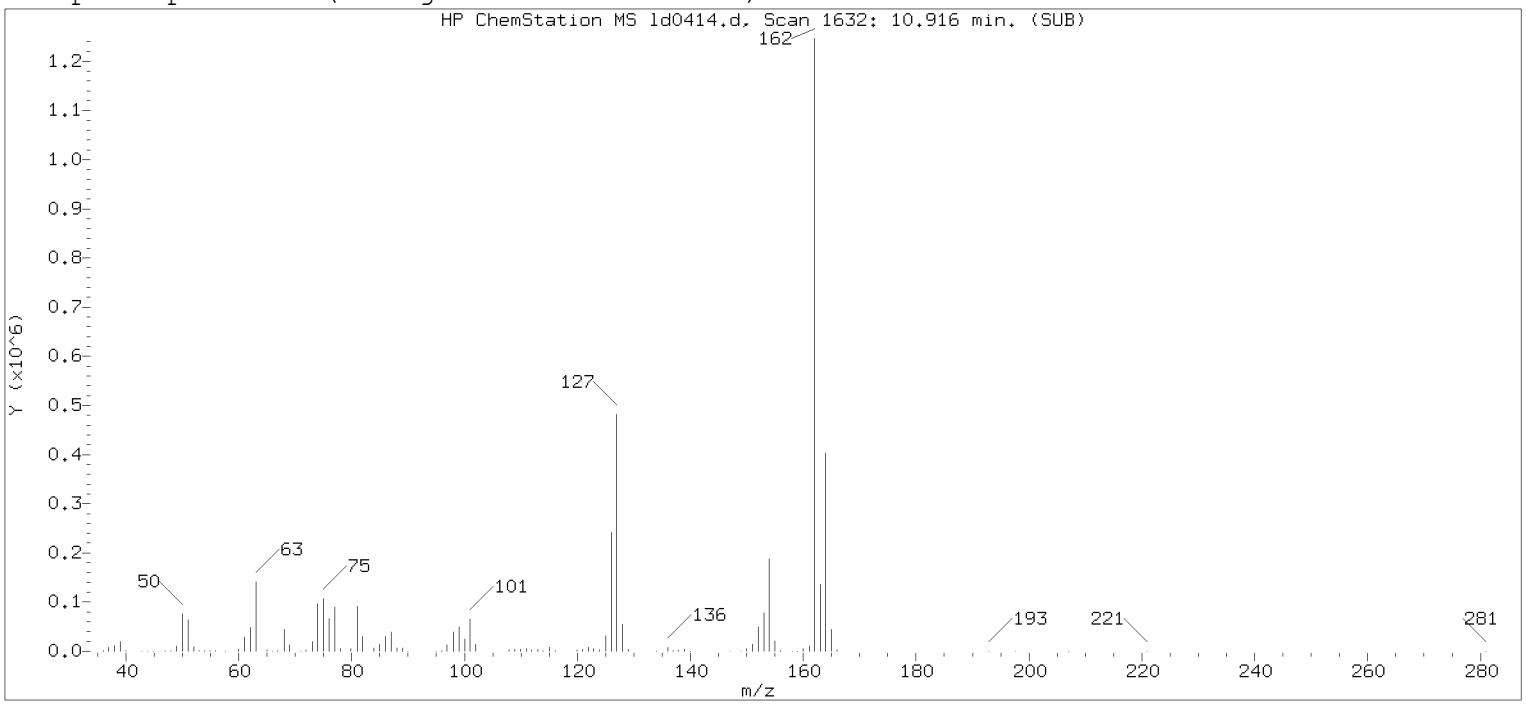
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 2119536M
On-Column Amount (ng/ul) : 20.7728
Integration start scan : 1634 Integration stop scan: 1643
Y at integration start : -897 Y at integration end: -5099

Reason for manual integration: improper integration

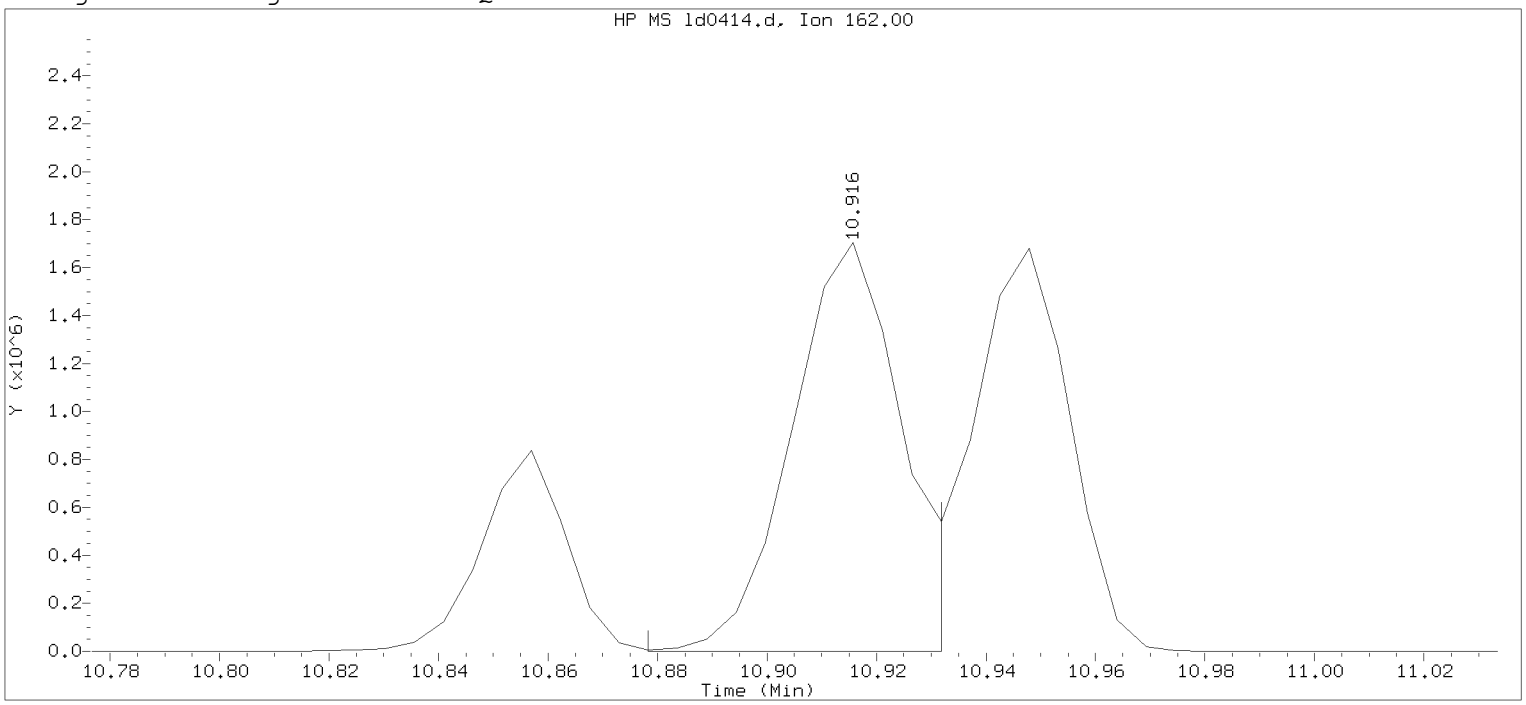
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1632
Retention Time (minutes) : 10.916
Quant Ion : 162.00
Area : 2320484
On-column Amount (ng/ul) : 22.7453
Integration start scan : 1624 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

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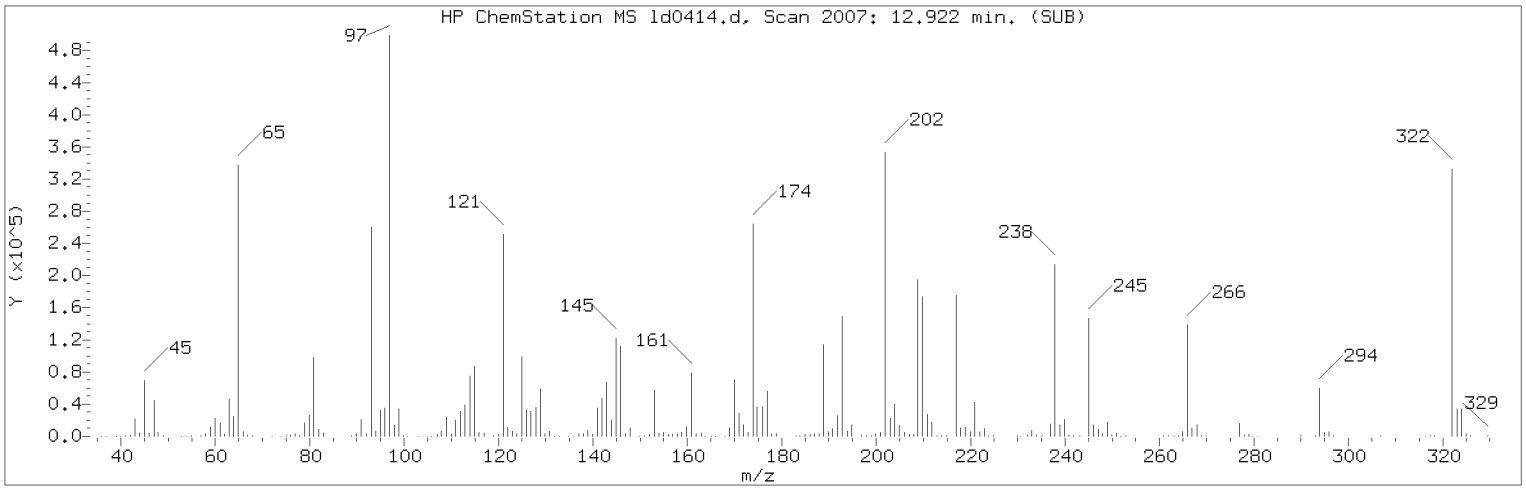
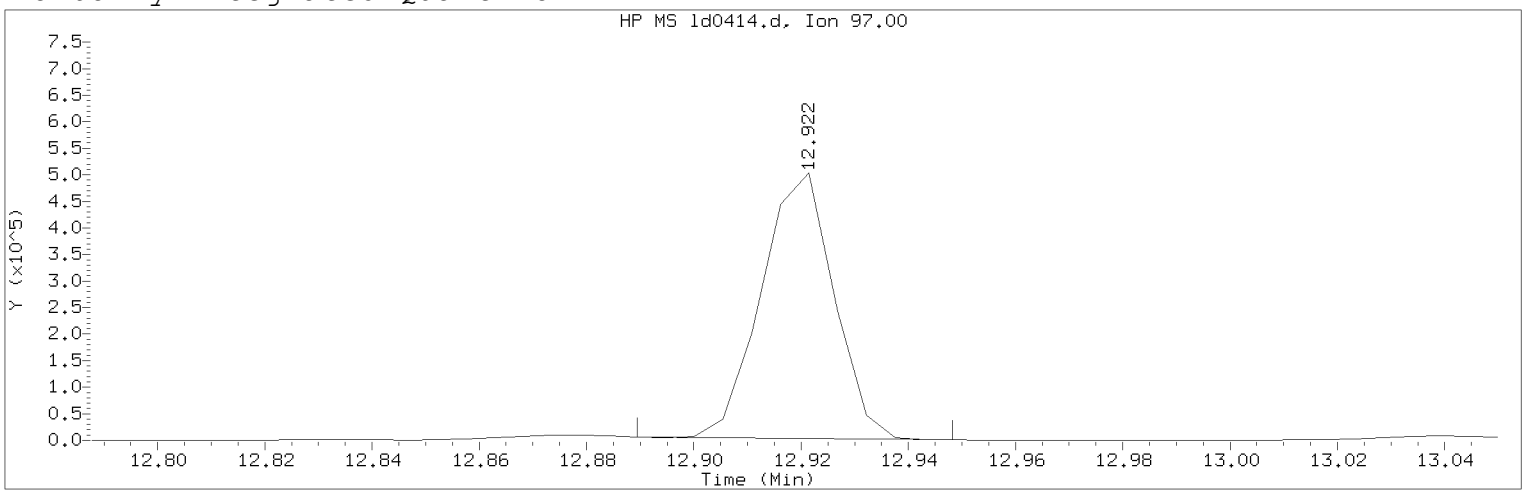
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

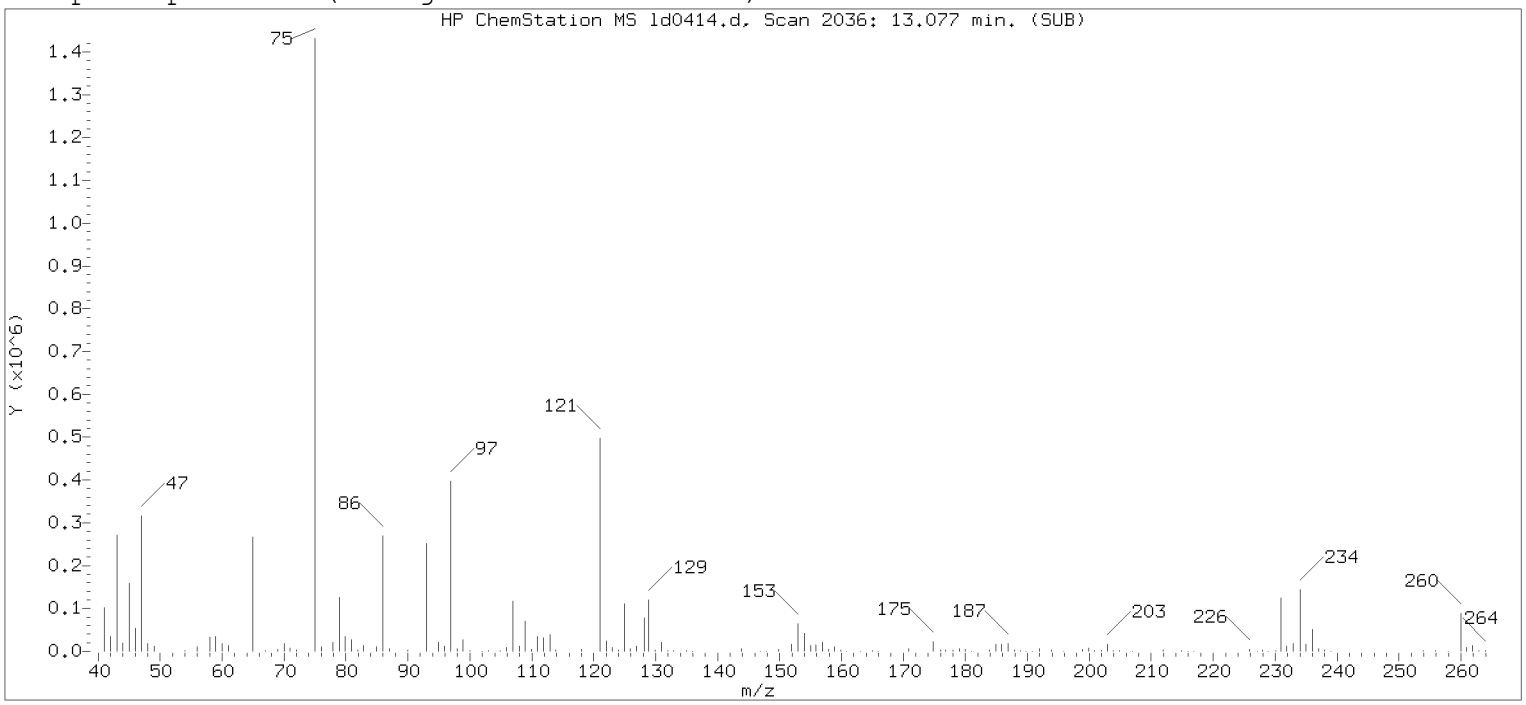
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 469535M
On-Column Amount (ng/ul) : 19.3765
Integration start scan : 2000 Integration stop scan: 2011
Y at integration start : 5521 Y at integration end: 1626

Reason for manual integration: improper integration

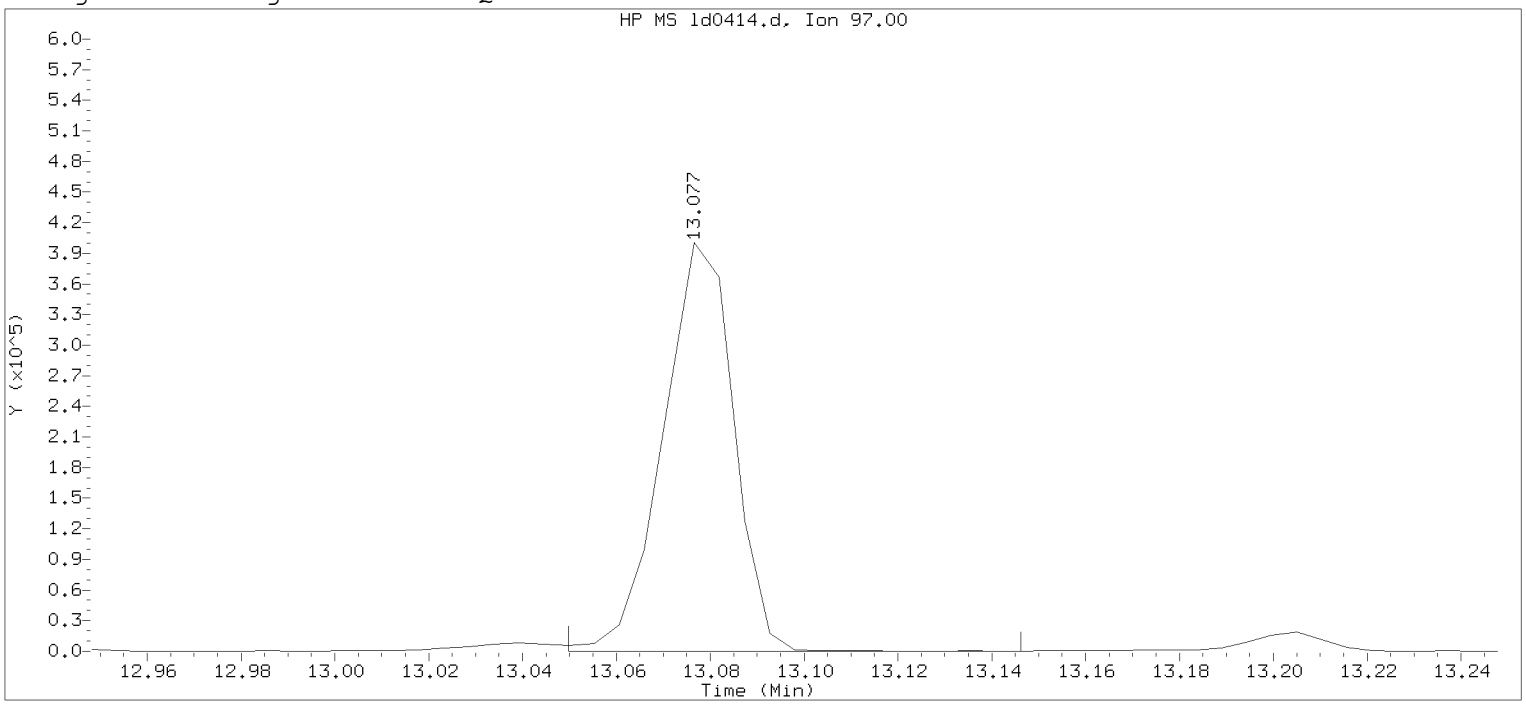
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

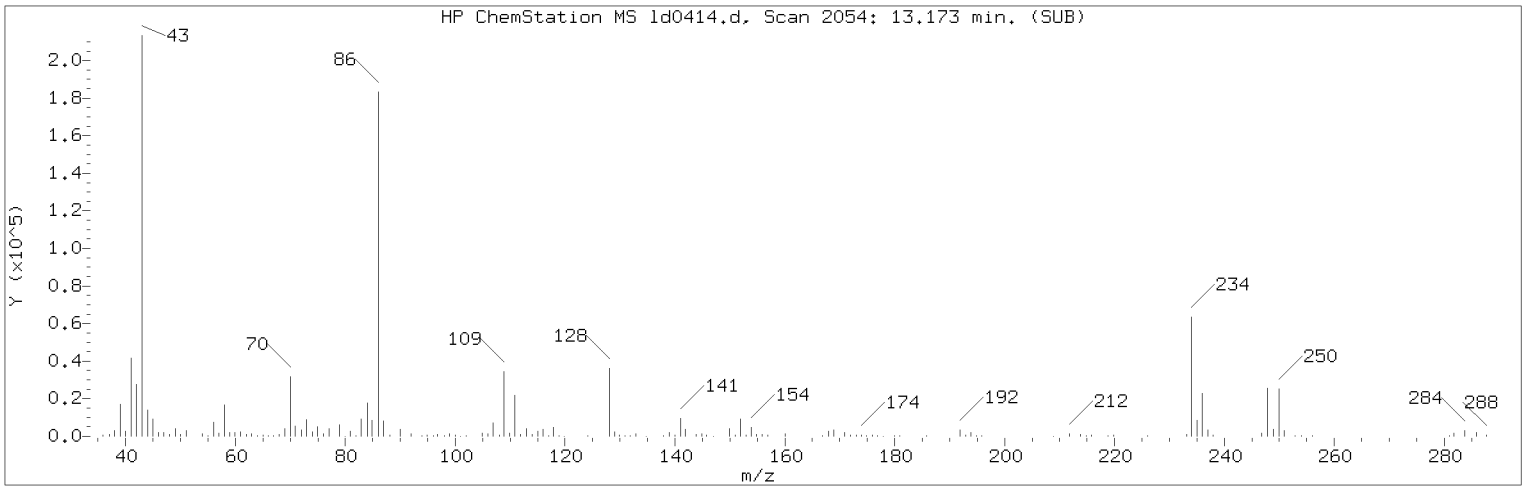
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

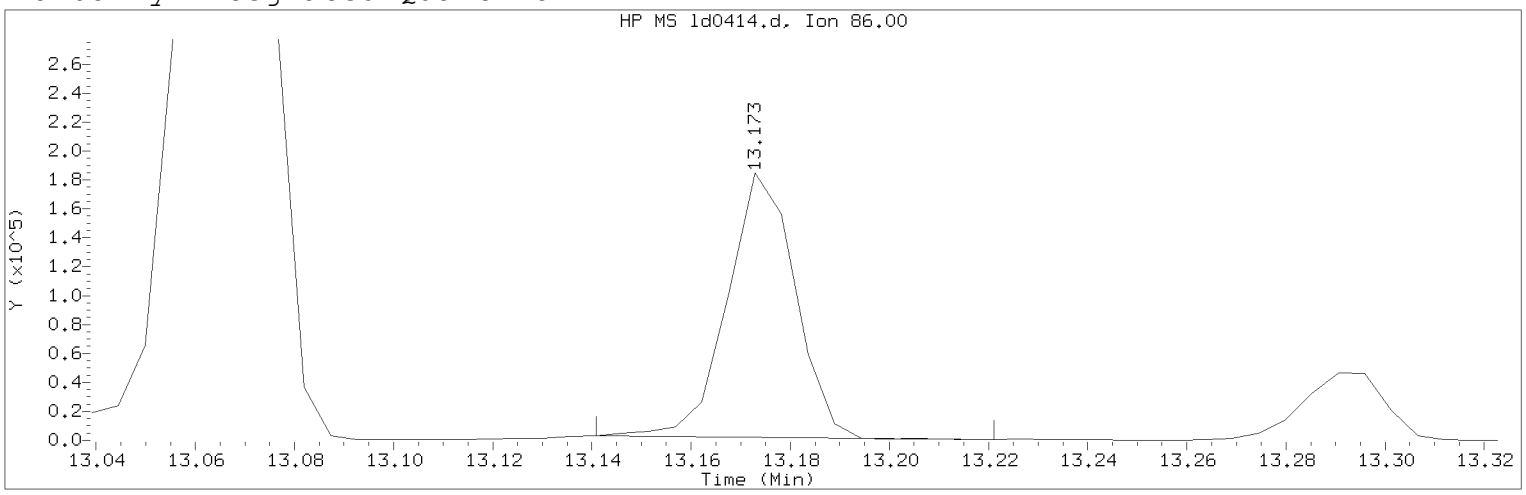
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 417910		
On-column Amount (ng/ul)	: 16.4289		
Integration start scan	: 2030	Integration stop scan:	2048
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

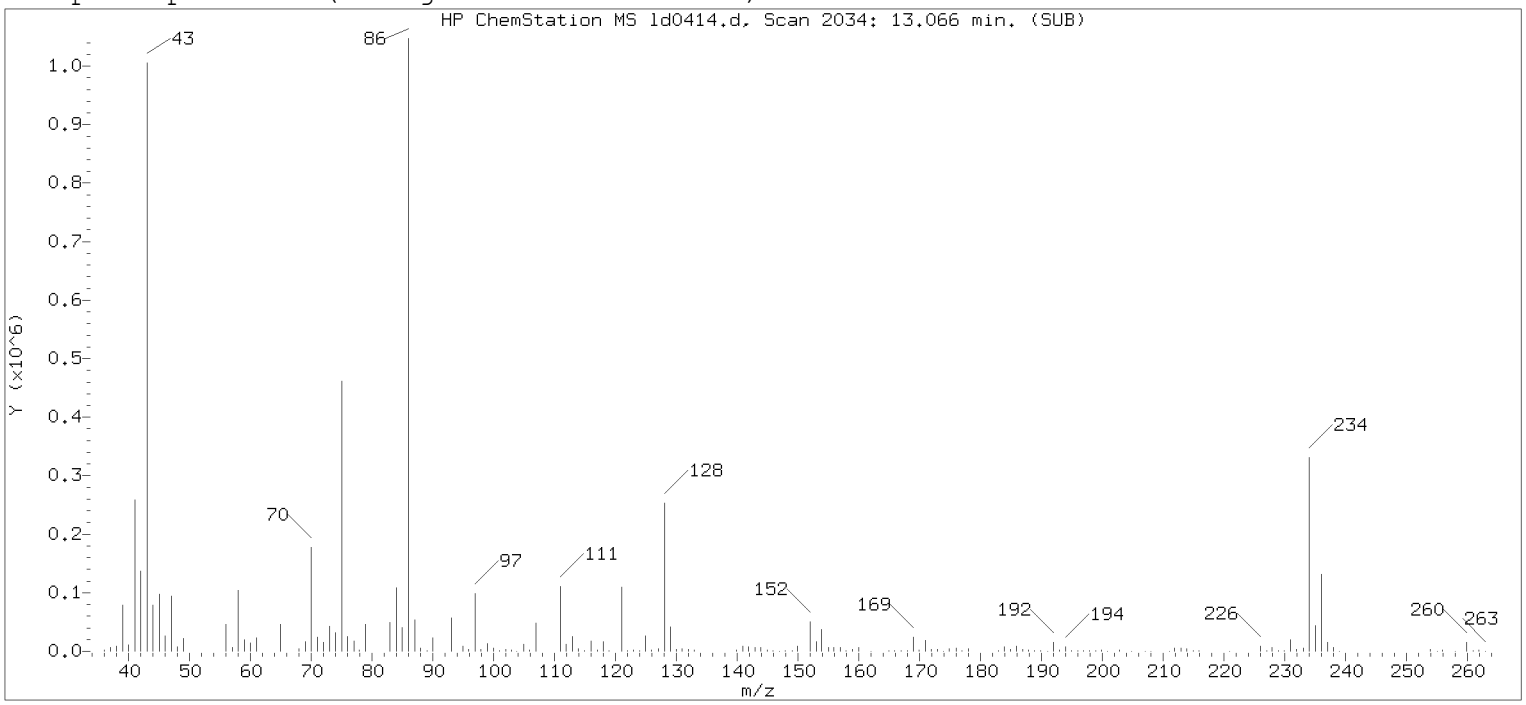
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 172457M
On-Column Amount (ng/ul) : 3.3734
Integration start scan : 2047 Integration stop scan: 2062
Y at integration start : 3313 Y at integration end: 525

Reason for manual integration: improper integration

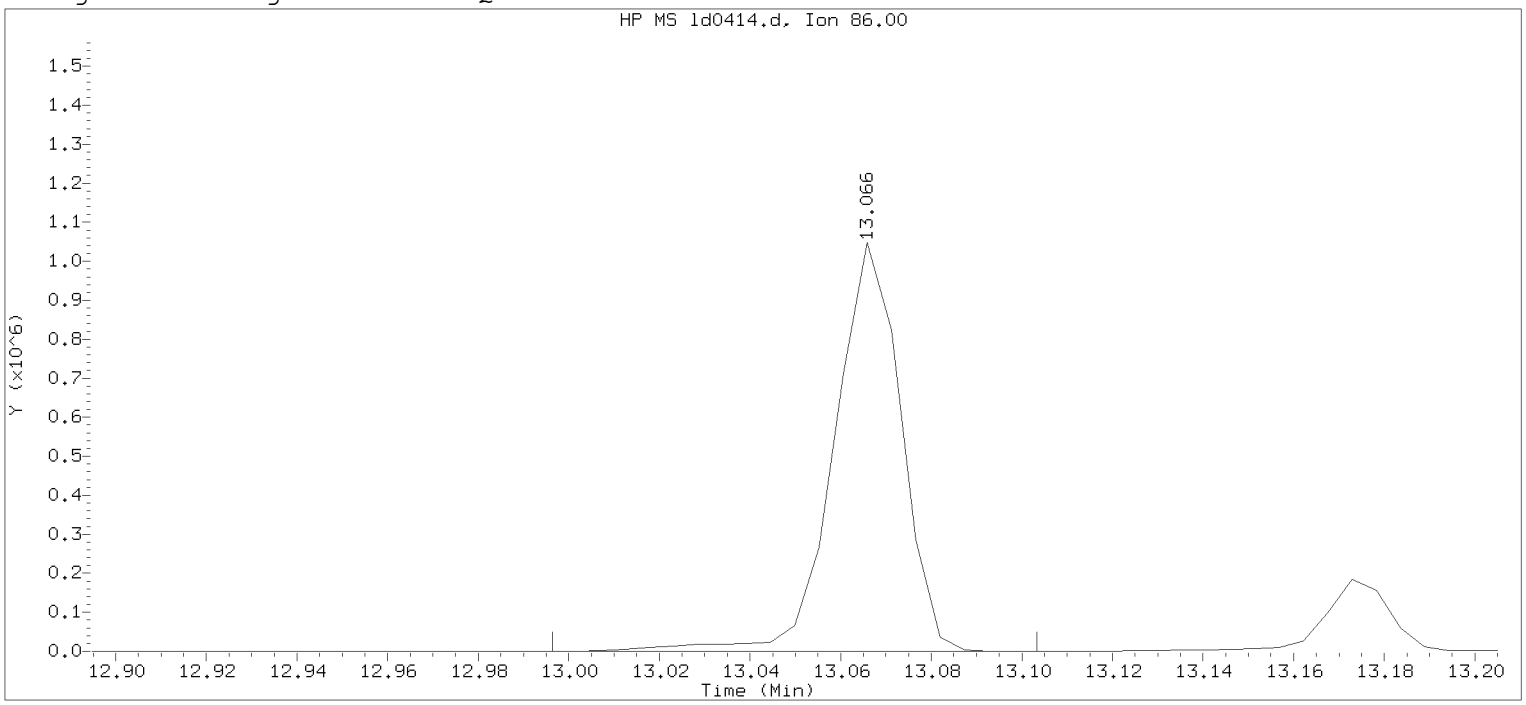
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

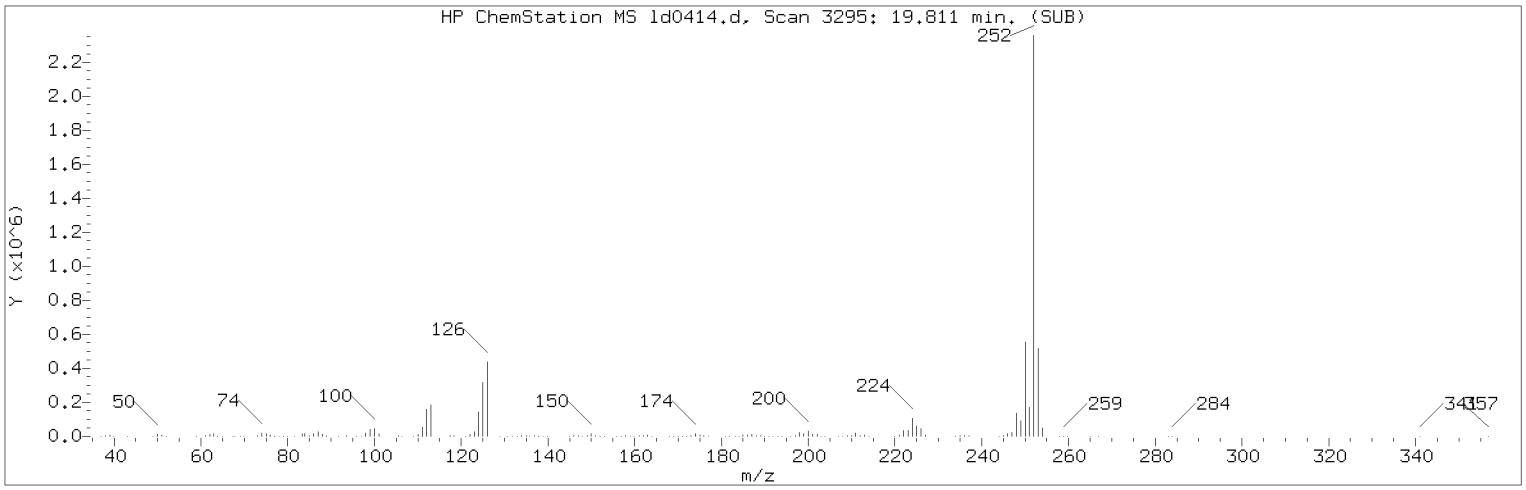
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

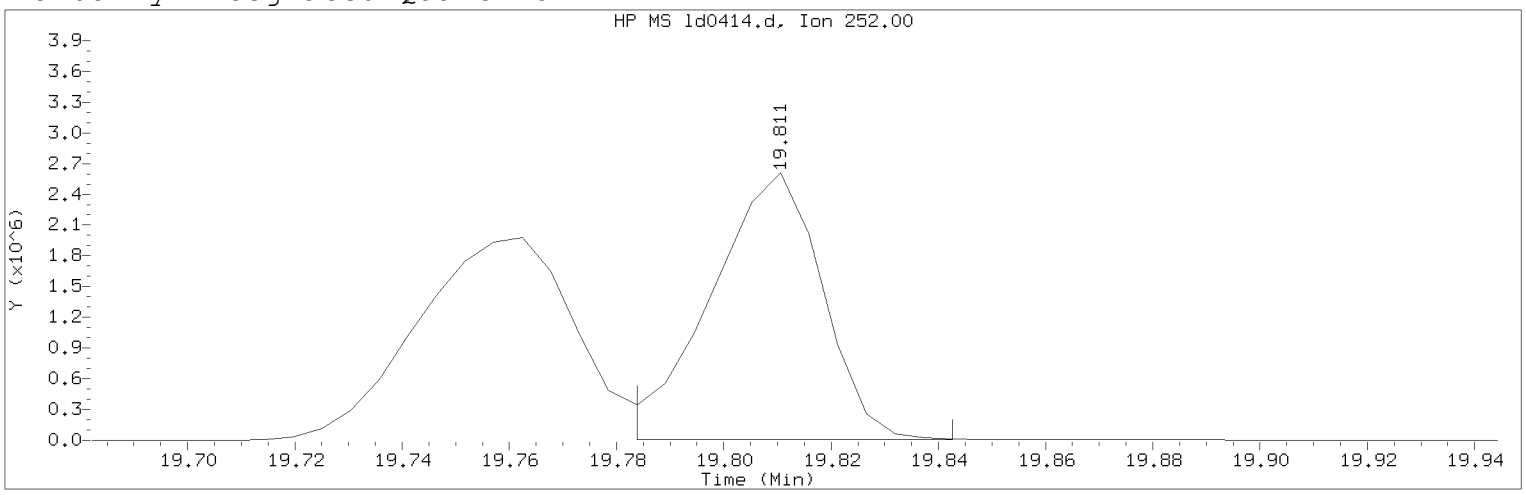
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 1075700		
On-column Amount (ng/ul)	: 20.1146		
Integration start scan	: 2020	Integration stop scan:	2040
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user name: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

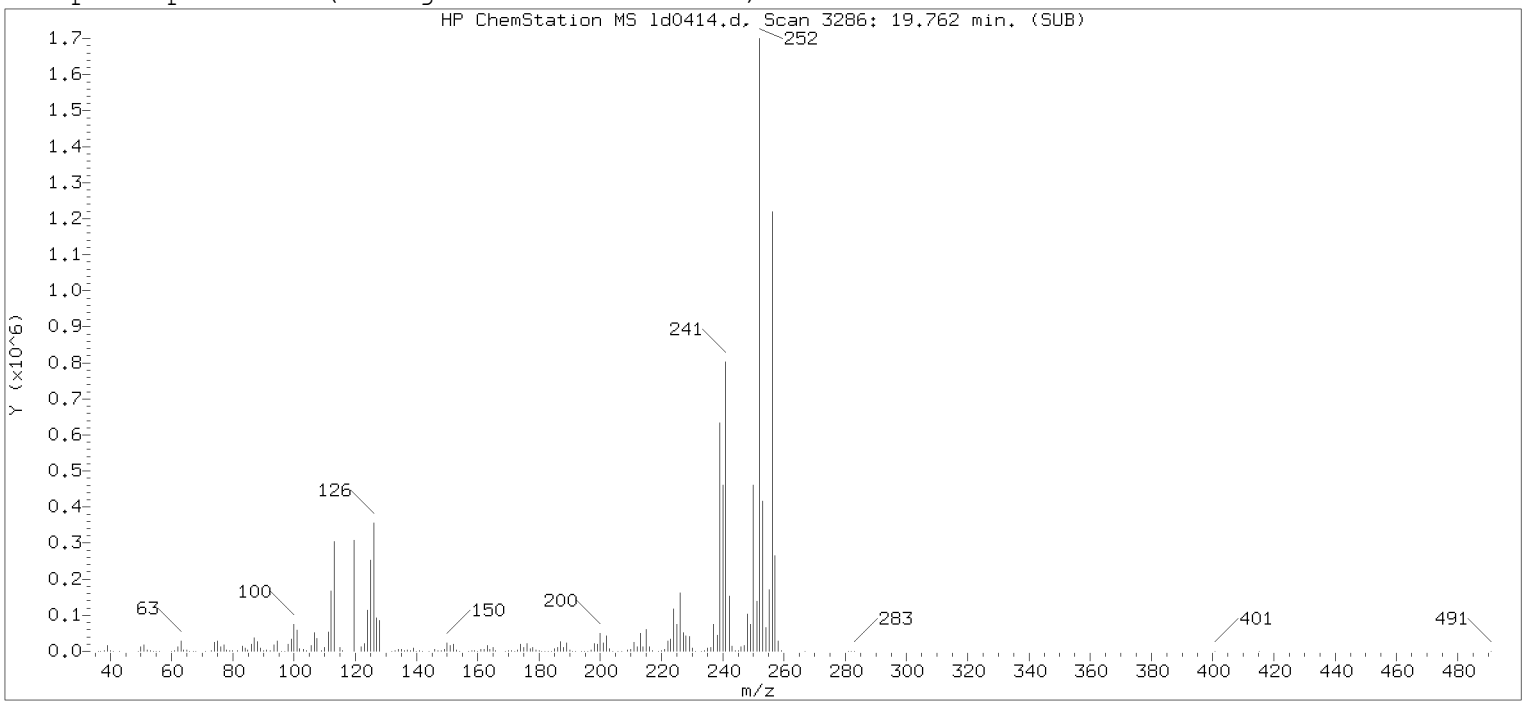
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3295
Retention Time (minutes) : 19.811
Quant Ion : 252.00
Area (flag) : 3786214M
On-Column Amount (ng/ul) : 20.5786
Integration start scan : 3289 Integration stop scan: 3300
Y at integration start : 5259 Y at integration end: 5259

Reason for manual integration: improper integration

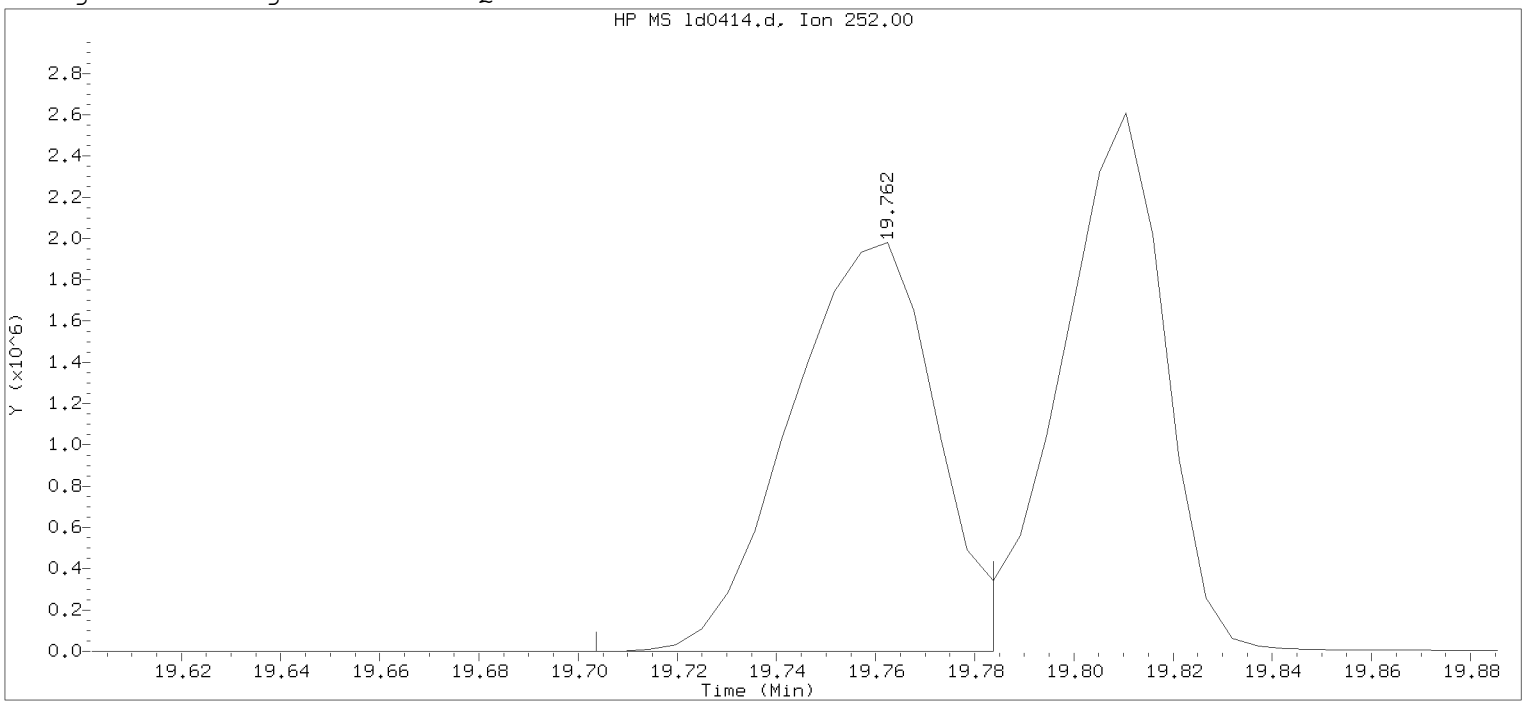
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3286		
Retention Time (minutes)	: 19.762		
Quant Ion	: 252.00		
Area	: 3996917		
On-column Amount (ng/ul)	: 20.8772		
Integration start scan	: 3274	Integration stop scan:	3289
Y at integration start	: 0	Y at integration end:	0

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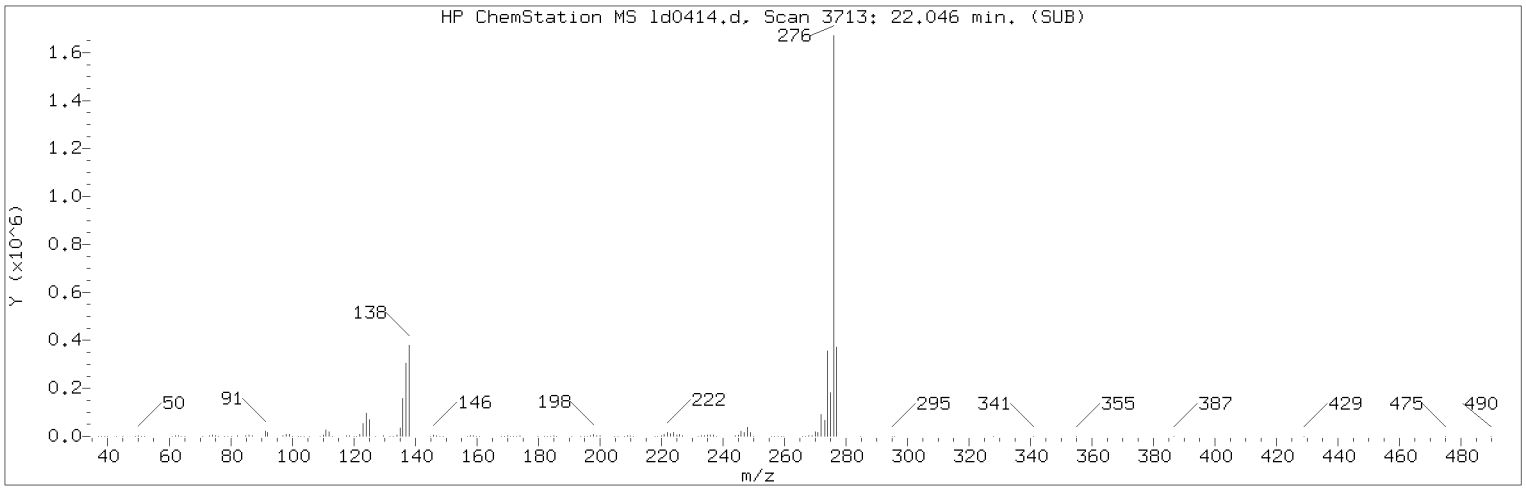
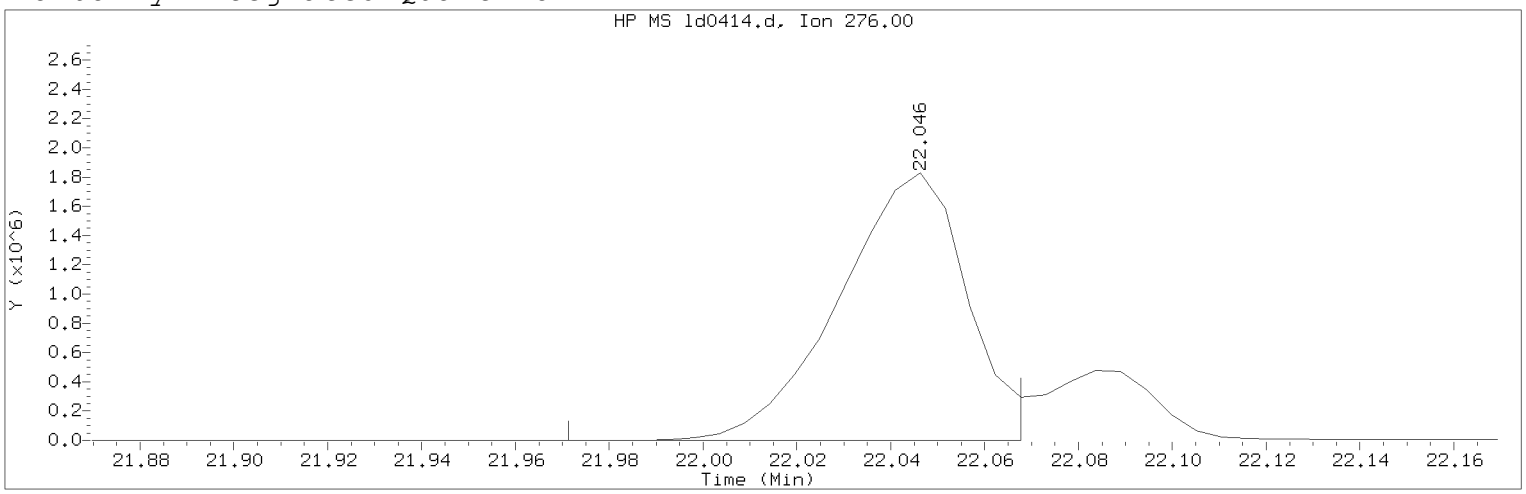
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

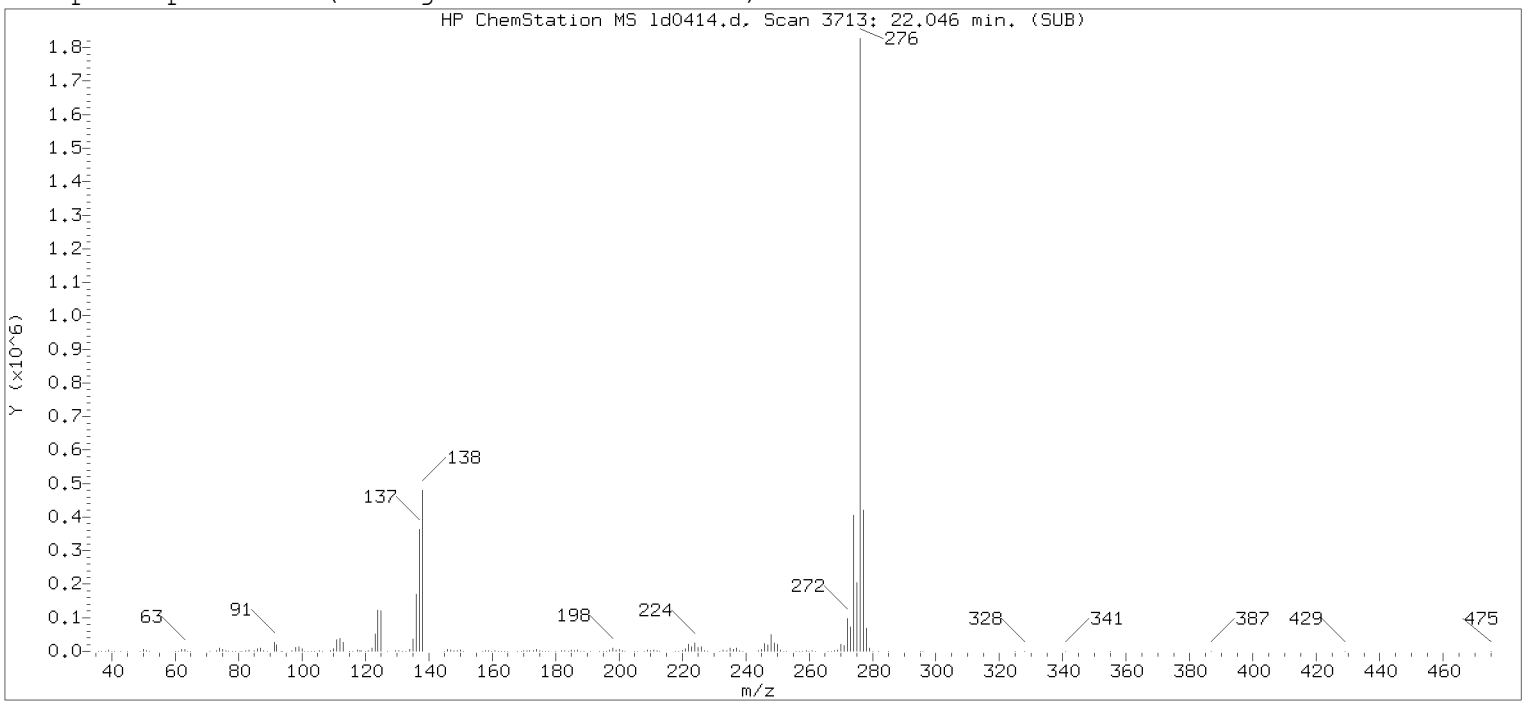
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3713
Retention Time (minutes) : 22.046
Quant Ion : 276.00
Area (flag) : 3474549M
On-Column Amount (ng/ul) : 21.2821
Integration start scan : 3698 Integration stop scan: 3716
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

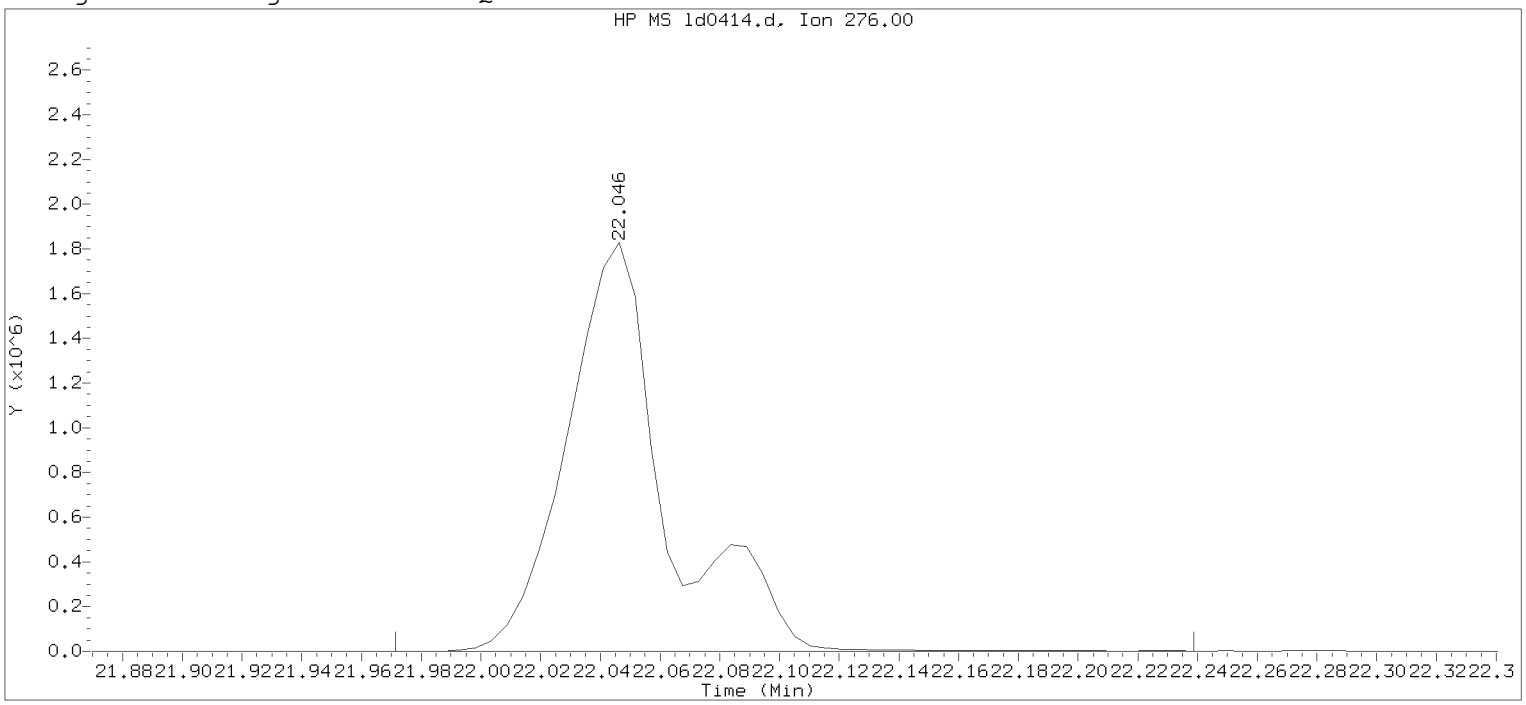
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3713		
Retention Time (minutes)	: 22.046		
Quant Ion	: 276.00		
Area	: 4232201		
On-column Amount (ng/ul)	: 24.5670		
Integration start scan	: 3698	Integration stop scan:	3748
Y at integration start	: 0	Y at integration end:	0

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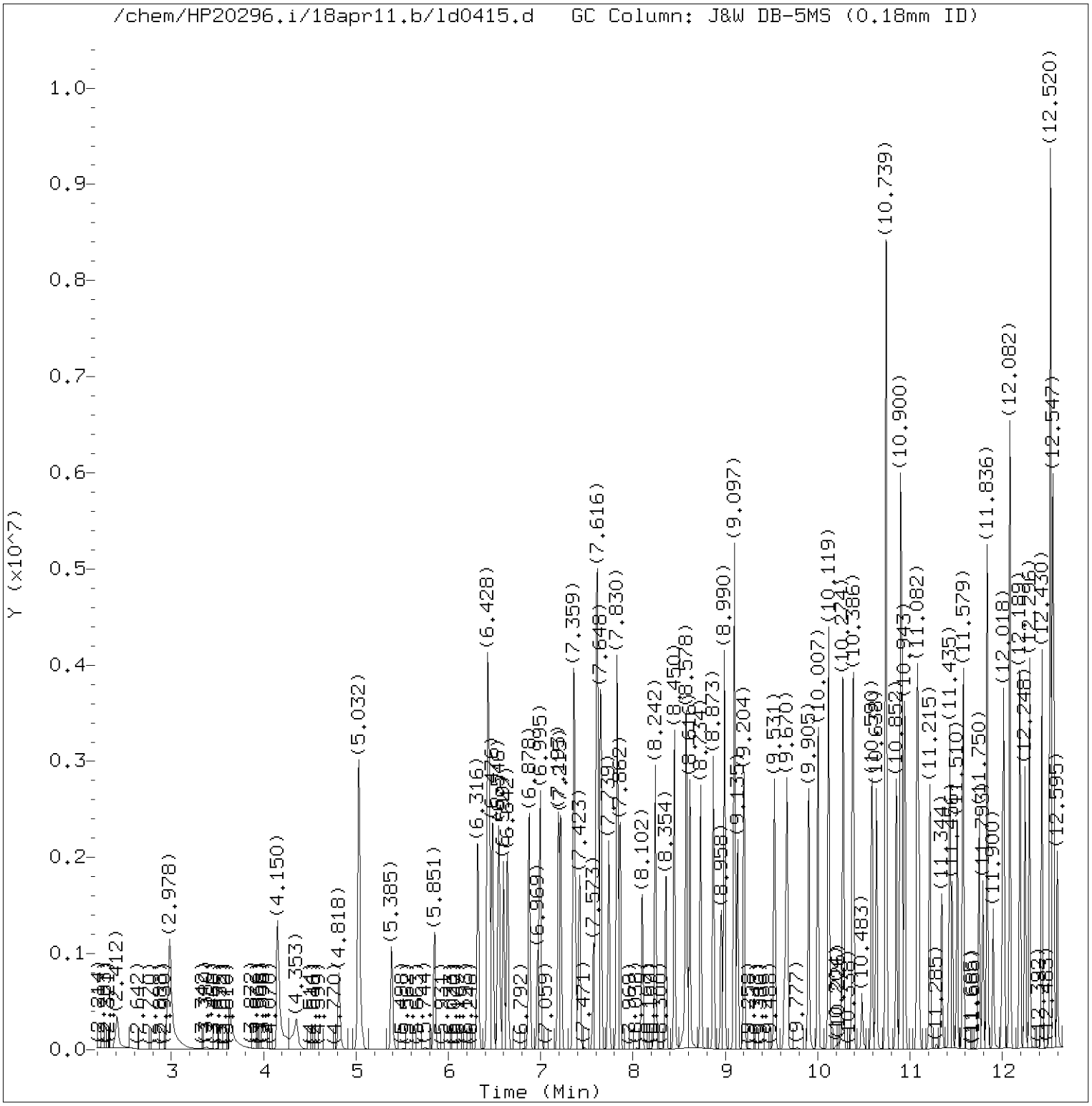
Target 3.5 esignature user ID: ARTransue



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

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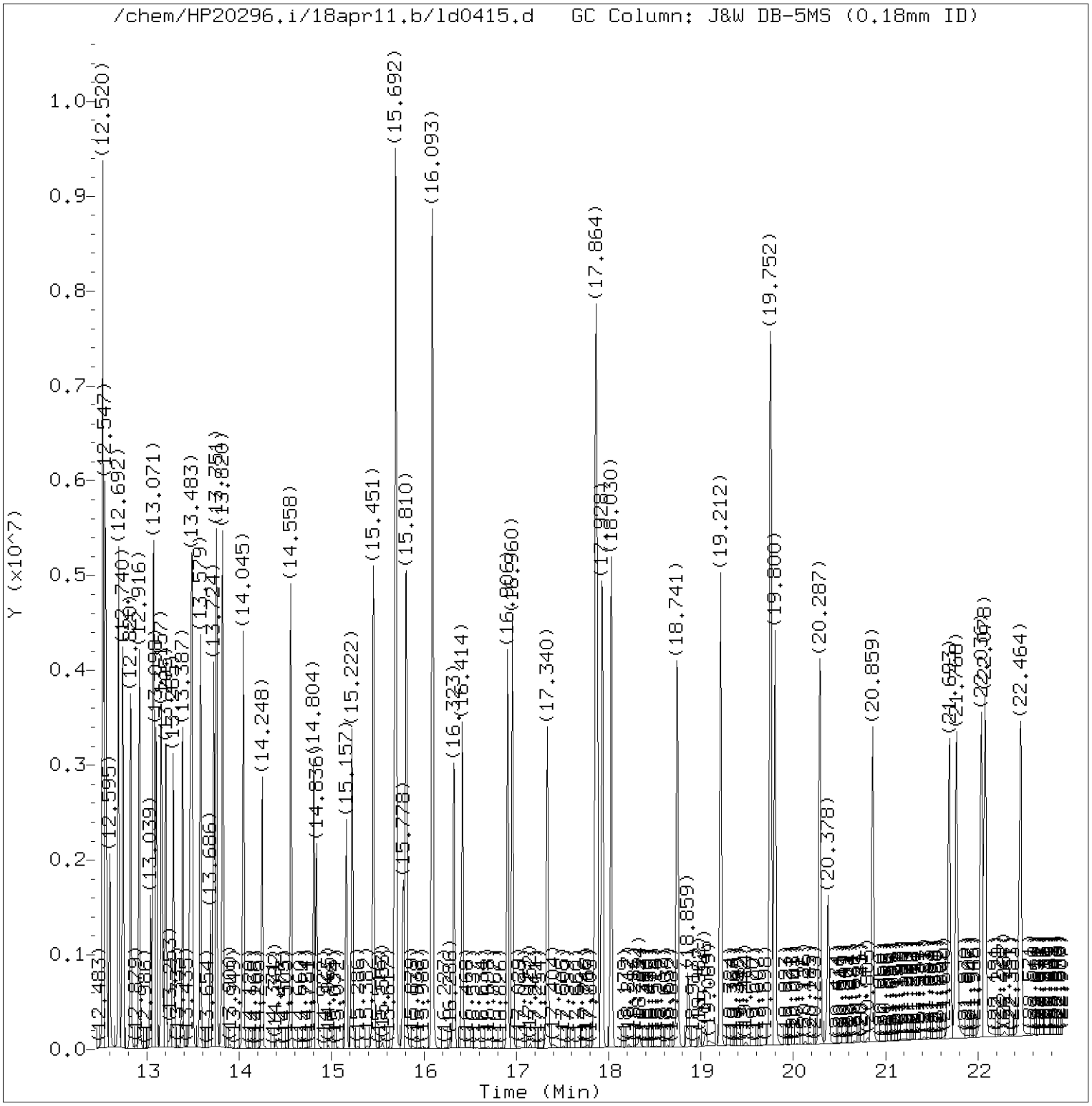
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.412	88	343276	12.399
5) N-Nitrosodimethylamine	(1)	2.962	74	542818	12.877
6) Pyridine	(1)	2.984	79	941658	12.519
8) 2-Picoline	(1)	4.150	93	967983	12.728
9) N-Nitrosomethylethylamine	(1)	4.353	88	388091	12.733
10) Methyl methanesulfonate	(1)	4.813	80	467358	12.659
12)$2-Fluorophenol	(1)	5.032	112	1551518	26.758
14) N-Nitrosodiethylamine	(1)	5.385	102	379964	13.442
43) Total Cresols	(1)			1517590	26.353
16) Ethyl methanesulfonate	(1)	5.851	109	400792	13.020
17) Benzaldehyde	(1)	6.316	77	731684	12.719
18)$Phenol-d6	(1)	6.428	99	2024132	26.622
19) Phenol	(1)	6.450	94	1156386	13.211
20) Aniline	(1)	6.482	93	1342572	13.302
21) a-methylstyrene	(1)	6.551	118	275509	12.496
23) bis(2-Chloroethyl)ether	(1)	6.599	93	853504	13.099
24) 2-Chlorophenol	(1)	6.642	128	758993	13.362
25) 1,3-Dichlorobenzene	(1)	6.878	146	855615	13.344
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	211752	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	865912	13.345
28) Benzyl alcohol	(1)	7.193	108	483854	12.763
29) 1,2-Dichlorobenzene	(1)	7.220	146	827218	13.388
31) Indene	(1)	7.359	115	1136528	12.554
32) 2-Methylphenol	(1)	7.370	108	735994	13.141
100) Isosafrole	(3)			673014	12.702
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	1201938	12.993
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	1201938	12.993
36) N-Nitrosopyrrolidine	(1)	7.573	100	415378	13.545
37) Acetophenone	(1)	7.600	105	1176534	13.777
38) 4-Methylphenol	(1)	7.616	108	781596	13.212
39) N-Nitroso-di-n-propylamine	(1)	7.621	70	637428	13.093
40) N-Nitrosomorpholine	(1)	7.648	56	520245	12.787
41) o-Toluidine	(1)	7.653	106	1307419	13.200
44) Hexachloroethane	(1)	7.739	117	351118	12.691
45)$Nitrobenzene-d5	(2)	7.830	82	1865065	26.709
46) Nitrobenzene	(2)	7.862	77	956357	13.427
125) 2,4_2,6-Dinitrotoluenes	(3)			855073	26.344
50) N-Nitrosopiperidine	(2)	8.102	114	388510	13.273
52) Isophorone	(2)	8.242	82	1658622	13.323
53) 2-Nitrophenol	(2)	8.359	139	397185	13.801

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.450	107	820198	13.294
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	387375	12.685
58) Benzoic acid	(2)	8.595	105	468704	12.687
57) bis(2-Chloroethoxy)methane	(2)	8.616	93	1056918	13.060
62) 2,4-Dichlorophenol	(2)	8.734	162	651095	13.553
151) Diallate trans/cis	(4)			783297	12.688
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	714899	13.355
68)*Naphthalene-d8	(2)	8.958	136	809630	5.000
69) Naphthalene	(2)	8.990	128	2246678	13.428
70) 4-Chloroaniline	(2)	9.097	127	914704	13.395
71) 2,6-Dichlorophenol	(2)	9.103	162	634941	13.345
72) Hexachloropropene	(2)	9.135	213	504229	13.018
74) Hexachlorobutadiene	(2)	9.204	225	425376	13.108
78) Quinoline	(2)	9.536	129	1380558	12.954
79) Caprolactam	(2)	9.659	113	198285	13.163
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	752237	14.326
83) 4-Chloro-3-methylphenol	(2)	9.905	107	711112	13.489
85) Safrole	(2)	10.007	162	579048	12.902
86) 2-Methylnaphthalene	(2)	10.119	142	1497089	13.469
87) 1-Methylnaphthalene	(2)	10.279	142	1348170	13.220
88) Hexachlorocyclopentadiene	(3)	10.376	237	441901	12.976
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	737628	12.878
91) cis-Isosafrole	(3)	10.483	162	107378	2.154
93) 2,4,6-Trichlorophenol	(3)	10.590	196	478567	13.305
95) 2,4,5-Trichlorophenol	(3)	10.638	196	510889	13.533
96)$2-Fluorobiphenyl	(3)	10.745	172	3335794	25.483
97) trans-Isosafrole	(3)	10.852	162	565636	10.548
98) 1,1'-Biphenyl	(3)	10.900	154	1778184	13.171
99) 2-Chloronaphthalene	(3)	10.911	162	1413643	12.321
101) 1-Chloronaphthalene	(3)	10.943	162	1388386M	13.082
103) Diphenyl ether	(3)	11.082	170	962458	12.763
104) 2-Nitroaniline	(3)	11.098	138	453067	13.493
108) 1,4-Naphthoquinone	(3)	11.215	158	594110	13.105
109) 1,4-Dinitrobenzene	(3)	11.344	168	229128	12.839
110) Dimethylphthalate	(3)	11.435	163	1636482	12.733
111) 1,3-Dinitrobenzene	(3)	11.456	168	253098	13.240
113) 2,6-Dinitrotoluene	(3)	11.515	165	365821	13.406
114) Acenaphthylene	(3)	11.579	152	2128808	13.349
117) 3-Nitroaniline	(3)	11.750	138	385864	13.421
118)*Acenaphthene-d10	(3)	11.793	164	421078	5.000

M = Compound was manually integrated.
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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	1448303	12.808
120) 2,4-Dinitrophenol	(3)	11.905	184	215832	13.157
121) 4-Nitrophenol	(3)	12.002	109	262395	12.947
122) Pentachlorobenzene	(3)	12.018	250	600636	12.859
124) Dibenzofuran	(3)	12.082	168	2007396	12.778
123) 2,4-Dinitrotoluene	(3)	12.087	165	489252	12.938
126) 1-Naphthylamine	(3)	12.194	143	1421355	12.715
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	396135	13.484
128) 2-Naphthylamine	(3)	12.296	143	1353622	12.782
129) Diethylphthalate	(3)	12.430	149	1624883	12.846
131) Fluorene	(3)	12.520	166	1603449	13.066
130) Thionazin	(3)	12.526	107	279967	13.002
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	769368	12.649
133) 5-Nitro-o-toluidine	(3)	12.553	152	443390	13.265
134) 4-Nitroaniline	(3)	12.563	138	387388	13.331
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	288121	13.146
136) N-Nitrosodiphenylamine	(4)	12.692	169	1298424	12.816
137) NDPA as diphenylamine	(4)	12.692	169	1298424	12.816
139) 1,2-Diphenylhydrazine	(4)	12.740	77	1839236	13.010
140)$2,4,6-Tribromophenol	(3)	12.825	330	384151	26.392
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	310636M	12.920
144) 1,3,5-Trinitrobenzene	(4)	13.039	213	176303	13.059
145) Diallate (peak 1)	(4)	13.066	86	673721	10.527
146) Phorate	(4)	13.077	75	1203177	13.270
147) Phenacetin	(4)	13.098	108	890698	13.911
148) 4-Bromophenyl-phenylether	(4)	13.157	248	429634	12.692
149) Diallate (peak 2)	(4)	13.173	86	109576M	2.160
150) Hexachlorobenzene	(4)	13.205	284	439629	12.645
152) Dimethoate	(4)	13.285	87	718759	13.173
153) Atrazine	(4)	13.387	200	426688	12.450
154) Pentachlorophenol	(4)	13.467	266	286835	13.471
156) Pentachloronitrobenzene	(4)	13.478	237	217743	13.122
155) 4-Aminobiphenyl	(4)	13.489	169	1565620	13.574
157) Pronamide	(4)	13.579	173	781837	13.684
158)*Phenanthrene-d10	(4)	13.719	188	827854	5.000
159) Dinoseb	(4)	13.724	211	471187	13.734
160) Phenanthrene	(4)	13.751	178	2353941	12.896
162) Anthracene	(4)	13.820	178	2427163	13.264
168) Carbazole	(4)	14.045	167	2156503	13.309
169) Methyl parathion	(4)	14.248	109	558636	13.431

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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

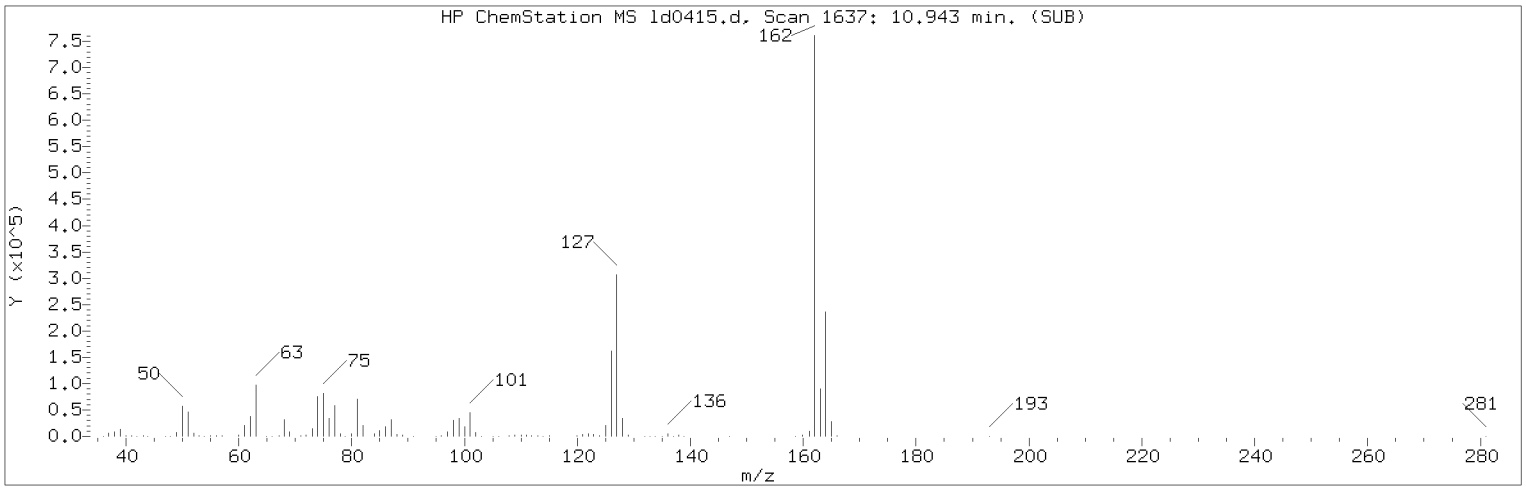
Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	2849939	13.067
172) Parathion	(4)	14.804	109	364046	13.525
173) 4-Nitroquinoline-1-oxide	(4)	14.836	190	289404	13.389
227) Total PAHs	(6)			39698460	240.101
174) Octachlorostyrene	(4)	15.157	308	162502	12.494
176) Isodrin	(4)	15.222	193	288730	12.767
178) Fluoranthene	(4)	15.451	202	2761164	13.449
179) Benzidine	(5)	15.692	184	4958640	39.245
180)*Pyrene-d10	(5)	15.778	212	857466	5.000
182) Pyrene	(5)	15.810	202	2807255	12.869
184)$Terphenyl-d14	(5)	16.093	244	3595323	26.145
187) p-Dimethylaminoazobenzene	(5)	16.329	225	472693	14.204
190) Chlorobenzilate	(5)	16.414	139	853683	13.137
192) 3,3'-Dimethylbenzidine	(5)	16.906	212	1877616	13.663
193) Butylbenzylphthalate	(5)	16.960	149	1339126	13.213
196) 2-Acetylaminofluorene	(5)	17.340	181	1097143	13.678
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	936418	13.353
200) Benzo(a)anthracene	(5)	17.864	228	2637798	13.535
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	562322	13.203
201) Chrysene	(5)	17.928	228	2493318	13.226
204) bis(2-Ethylhexyl)phthalate	(5)	18.030	149	1902902	13.289
208) 6-Methylchrysene	(5)	18.741	242	1709431	12.879
210) Di-n-octylphthalate	(6)	19.212	149	3317041	13.771
211) Benzo(b)fluoranthene	(6)	19.752	252	2532431	13.485
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.757	256	1082034	13.965
213) Benzo(k)fluoranthene	(6)	19.805	252	2407845M	13.315
216) Benzo(a)pyrene	(6)	20.287	252	2324318	13.755
218)*Perylene-d12	(6)	20.378	264	765985	5.000
220) 3-Methylcholanthrene	(6)	20.859	268	1112827	13.544
222) Dibenz(a,h)acridine	(6)	21.693	279	1876158	13.064
223) Dibenz(a,j)acridine	(6)	21.768	279	1921081	13.170
224) Indeno(1,2,3-cd)pyrene	(6)	22.041	276	2208804M	13.765
225) Dibenz(a,h)anthracene	(6)	22.078	278	2244818	13.771
226) Benzo(g,h,i)perylene	(6)	22.464	276	2227108	13.431

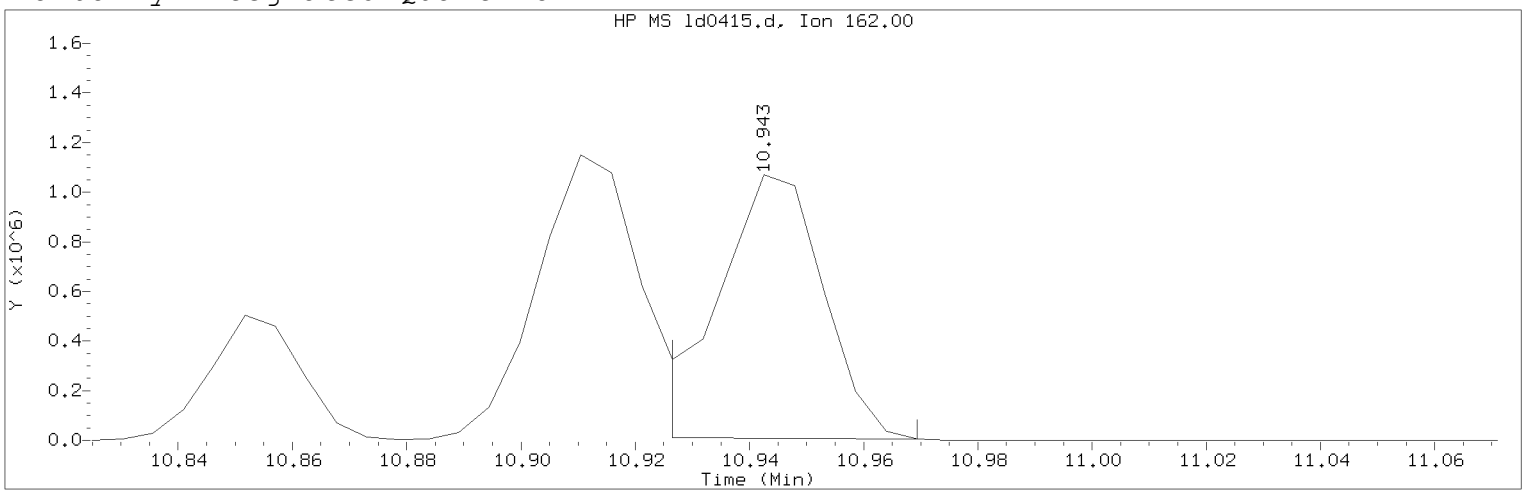
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

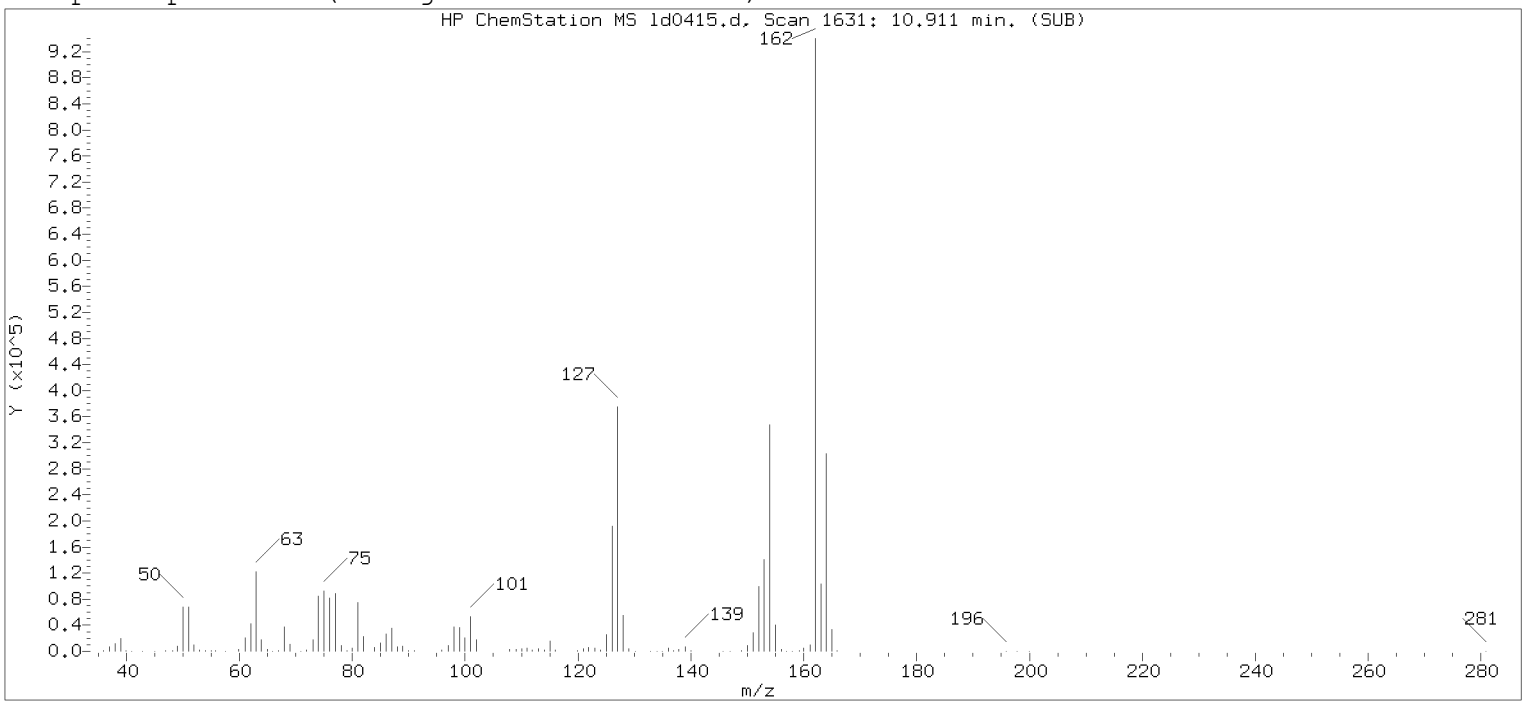
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1637
Retention Time (minutes) : 10.943
Quant Ion : 162.00
Area (flag) : 1388386M
On-Column Amount (ng/ul) : 13.0822
Integration start scan : 1633 Integration stop scan: 1641
Y at integration start : 11218 Y at integration end: 5087

Reason for manual integration: improper integration

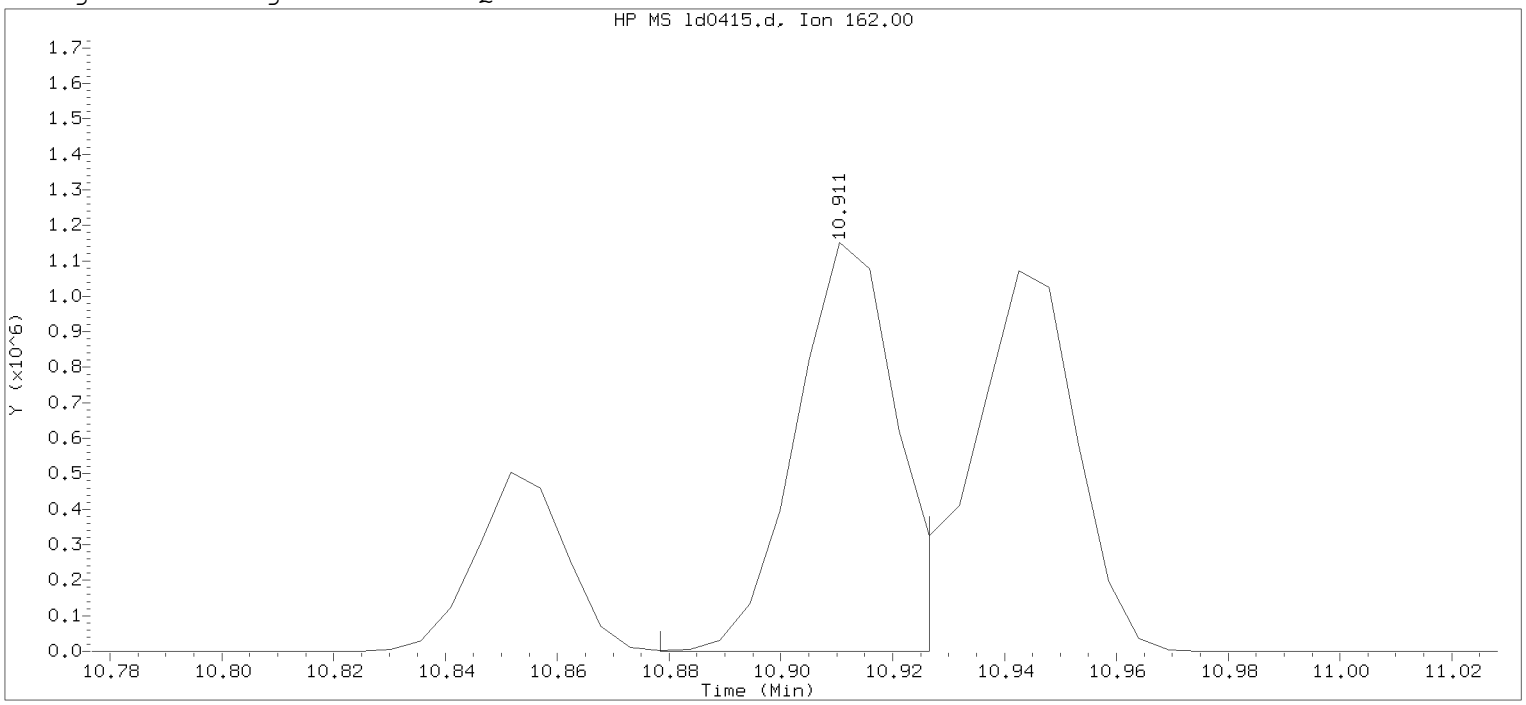
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

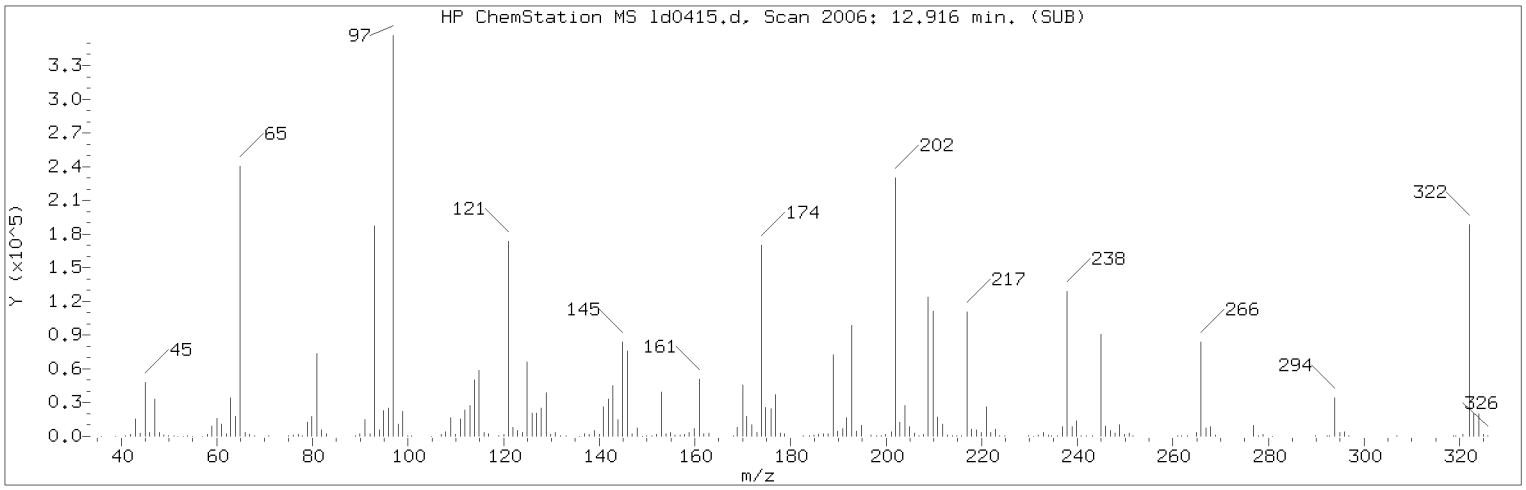
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

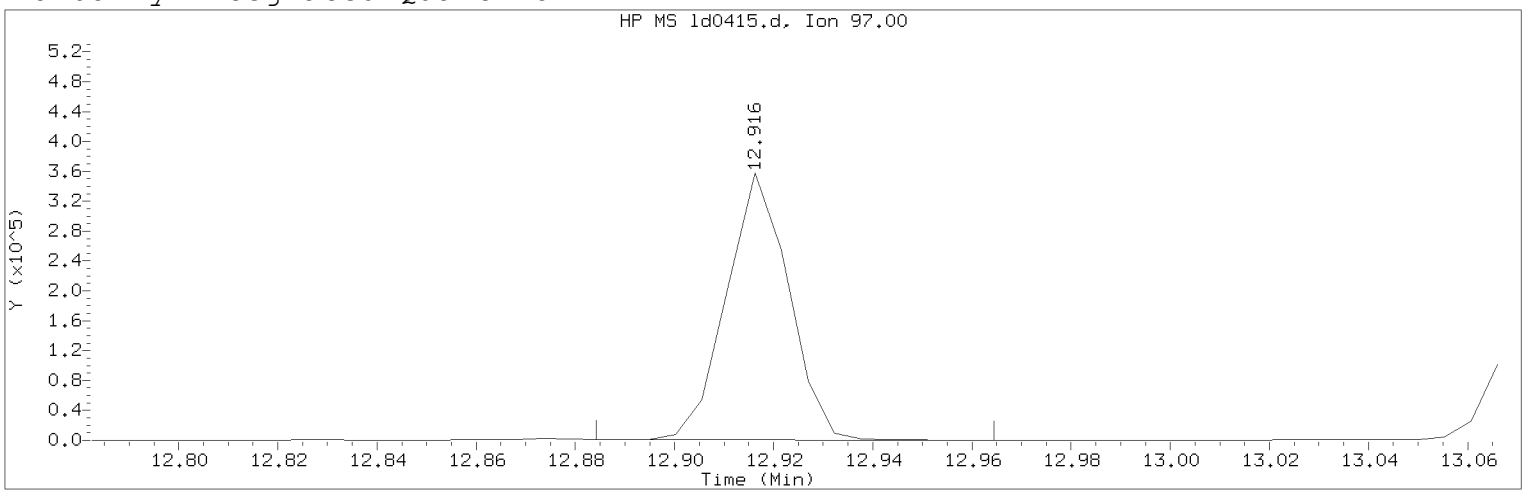
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1631		
Retention Time (minutes)	: 10.911		
Quant Ion	: 162.00		
Area	: 1413643		
On-column Amount (ng/ul)	: 13.3220		
Integration start scan	: 1624	Integration stop scan:	1633
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

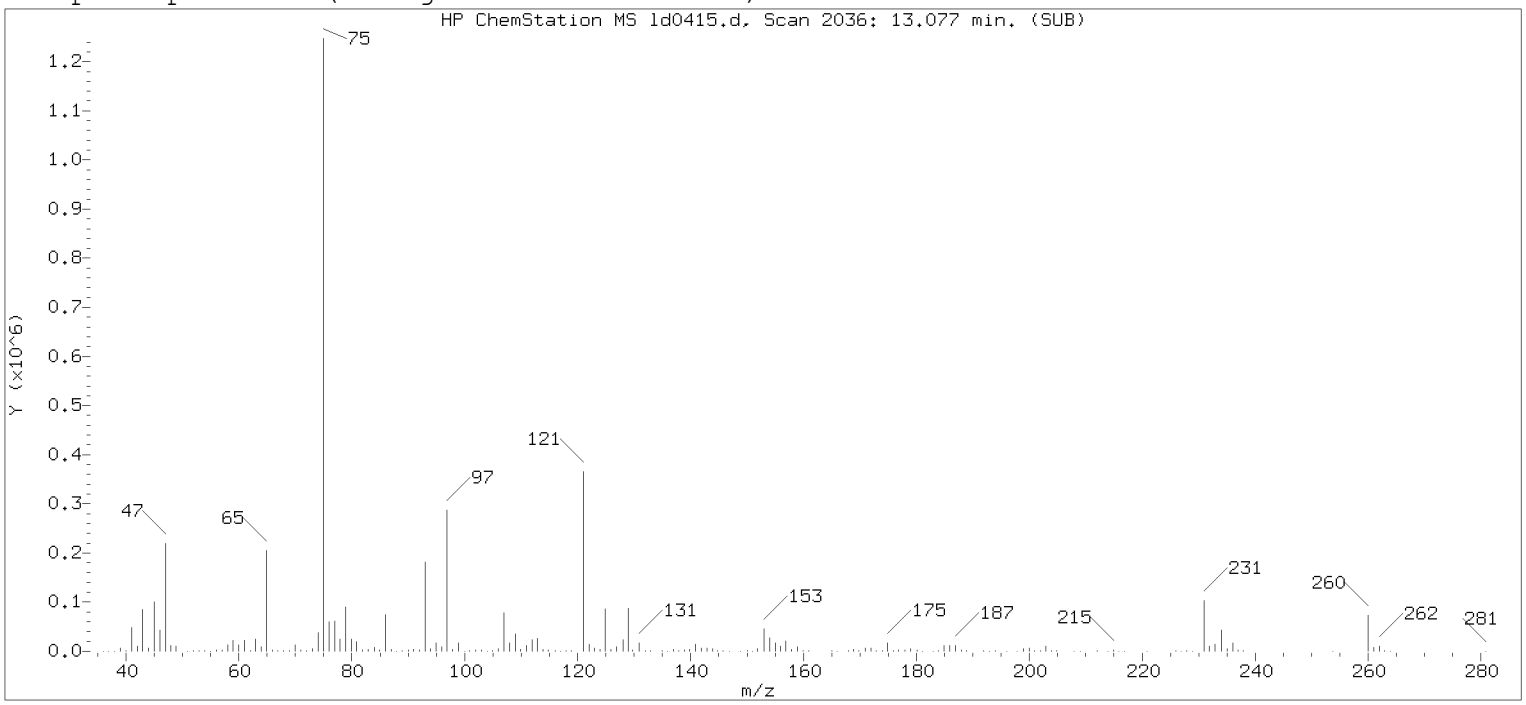
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 310636M
On-Column Amount (ng/ul) : 12.9199
Integration start scan : 1999 Integration stop scan: 2014
Y at integration start : 1134 Y at integration end: 0

Reason for manual integration: improper integration

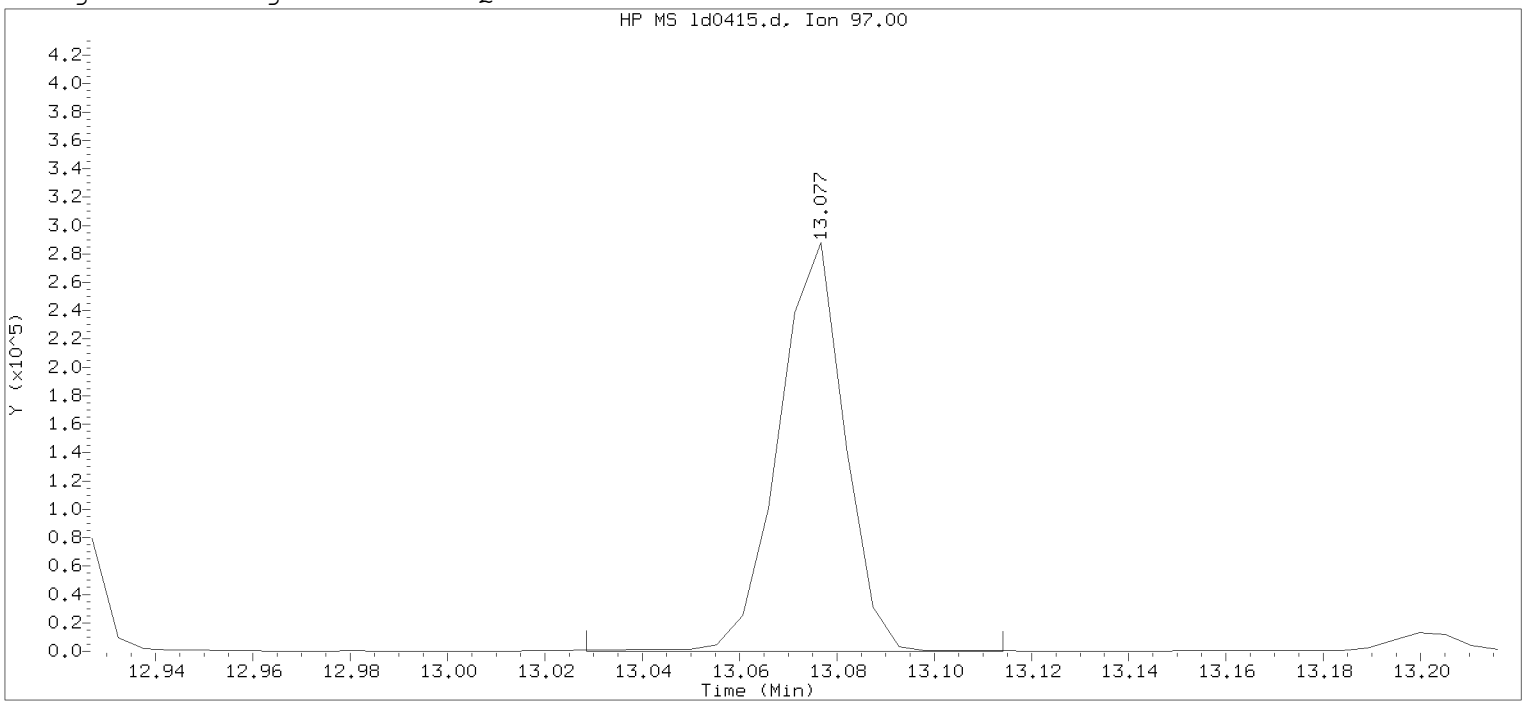
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 269969		
On-column Amount (ng/ul)	: 10.6965		
Integration start scan	: 2026	Integration stop scan:	2042
Y at integration start	: 0	Y at integration end:	0

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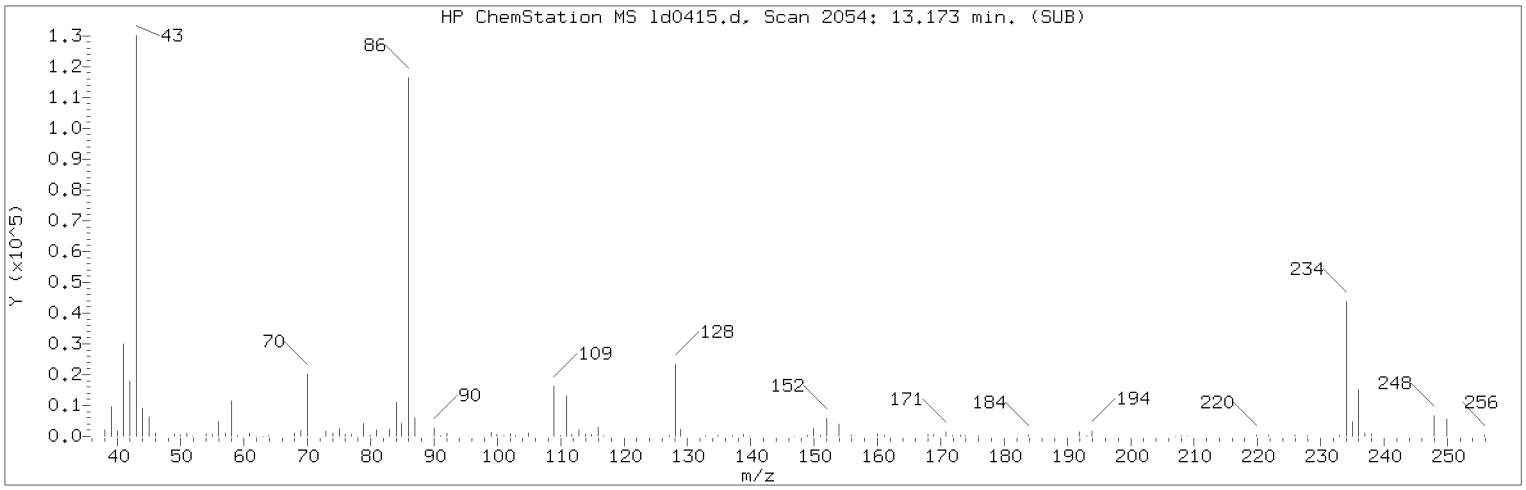
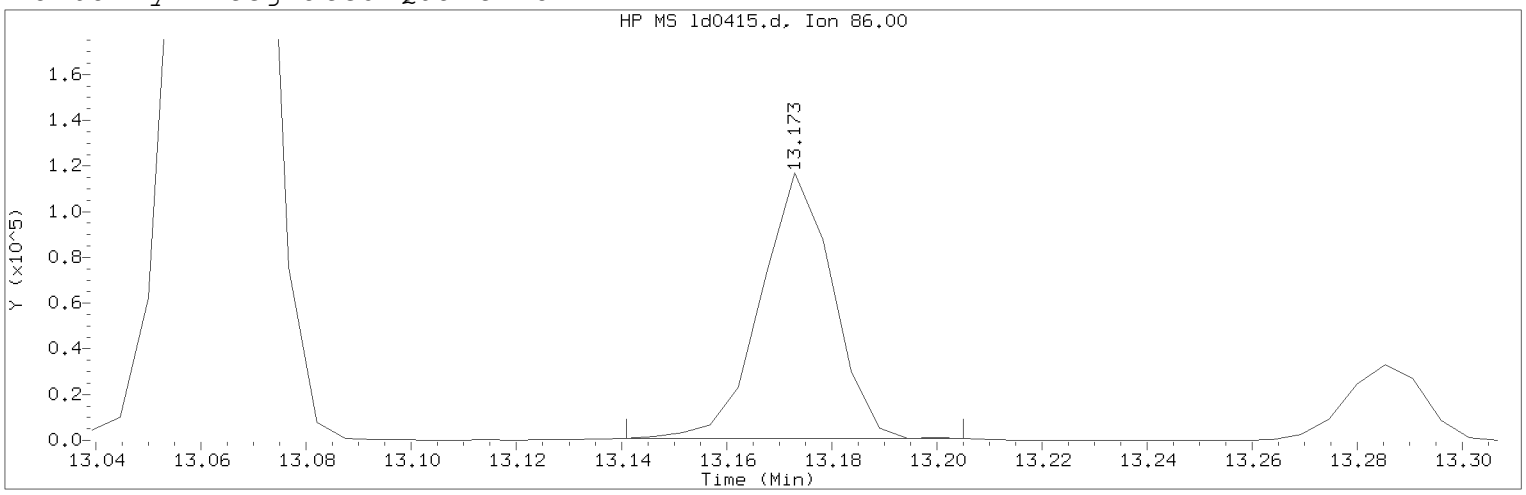
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

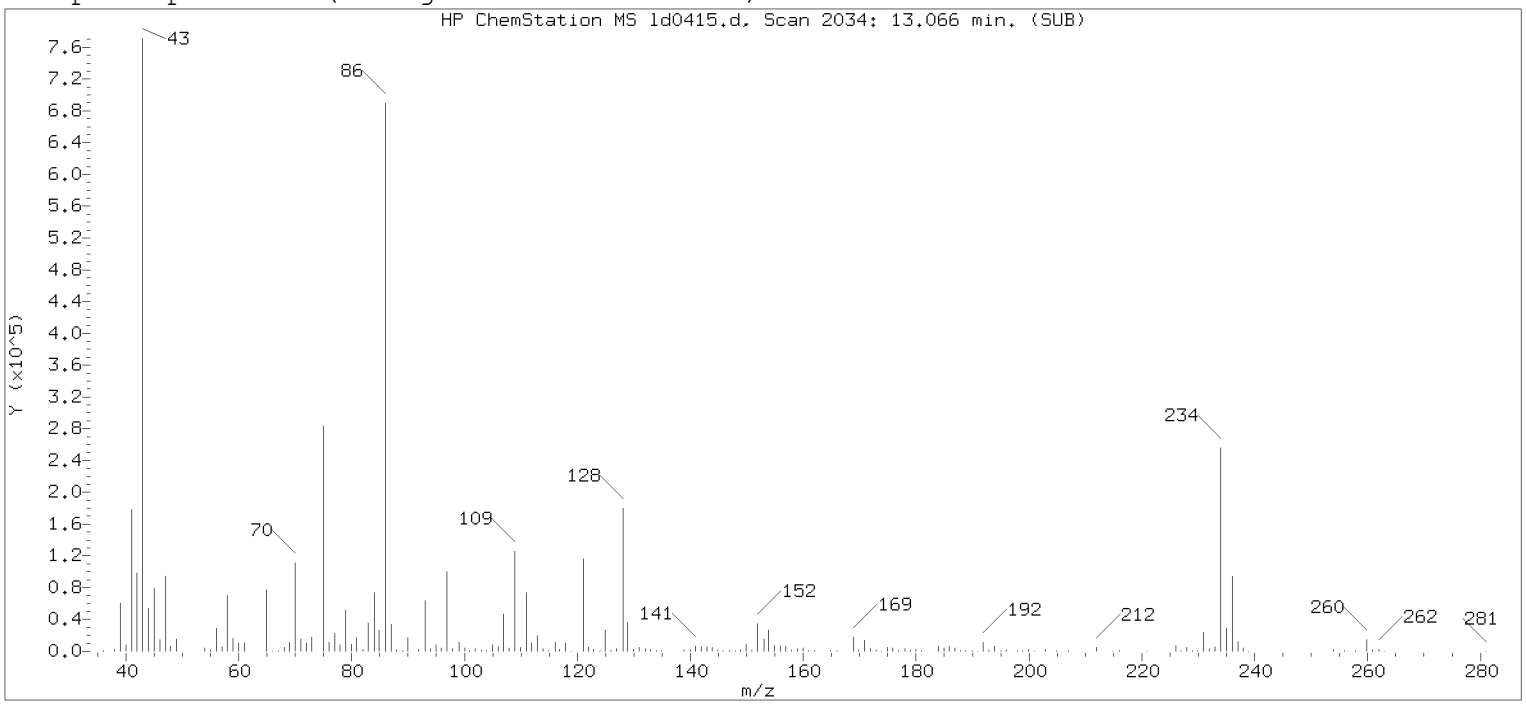
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2054		
Retention Time (minutes)	: 13.173		
Quant Ion	: 86.00		
Area (flag)	: 109576M		
On-Column Amount (ng/ul)	: 2.1603		
Integration start scan	: 2047	Integration stop scan:	2059
Y at integration start	: 763	Y at integration end:	945

Reason for manual integration: improper integration

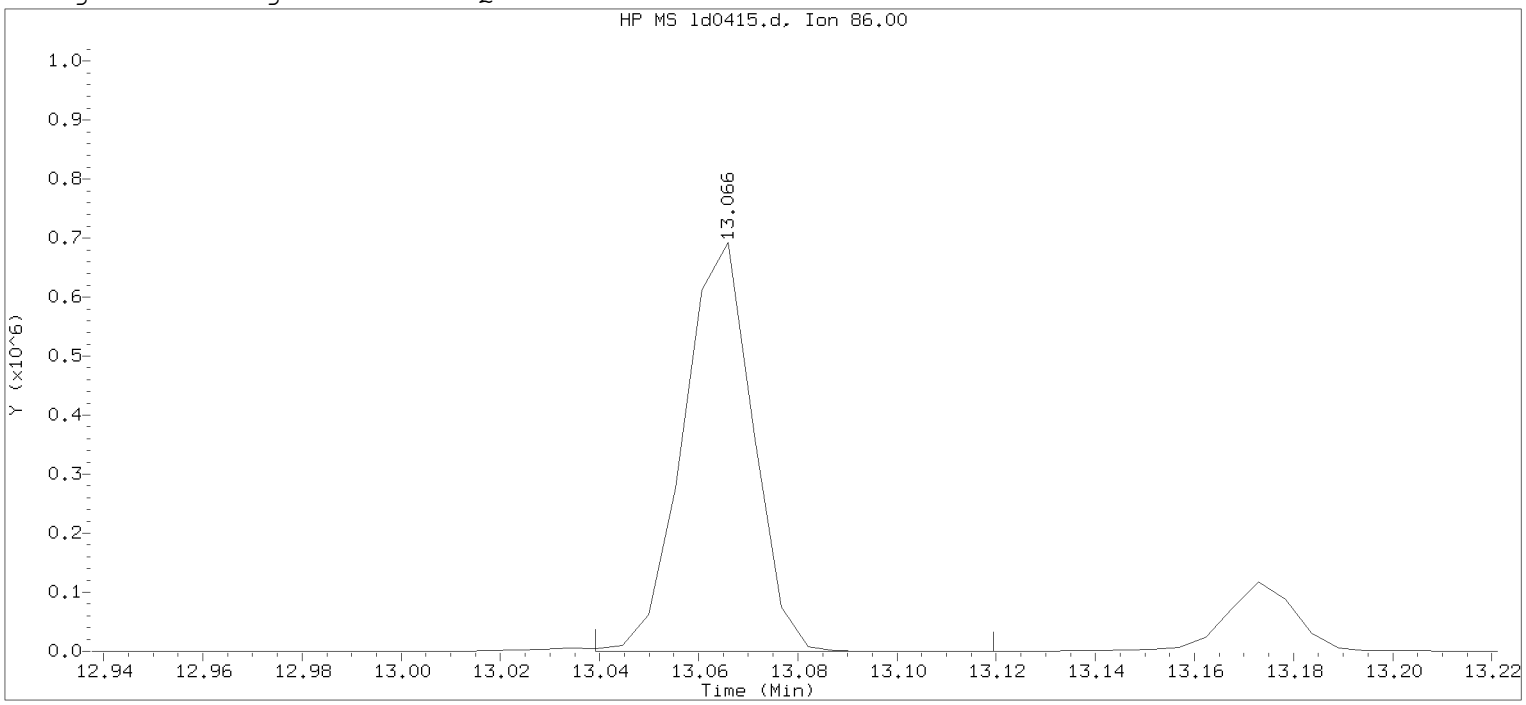
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 673721		
On-column Amount (ng/ul)	: 12.6970		
Integration start scan	: 2028	Integration stop scan:	2043
Y at integration start	: 0	Y at integration end:	0

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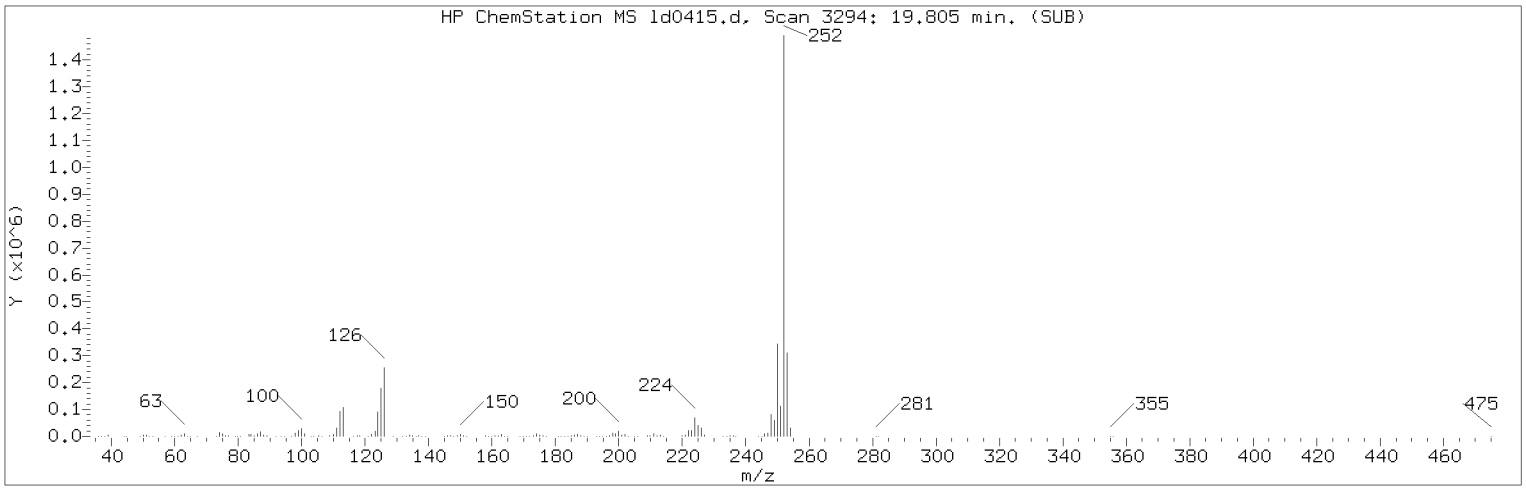
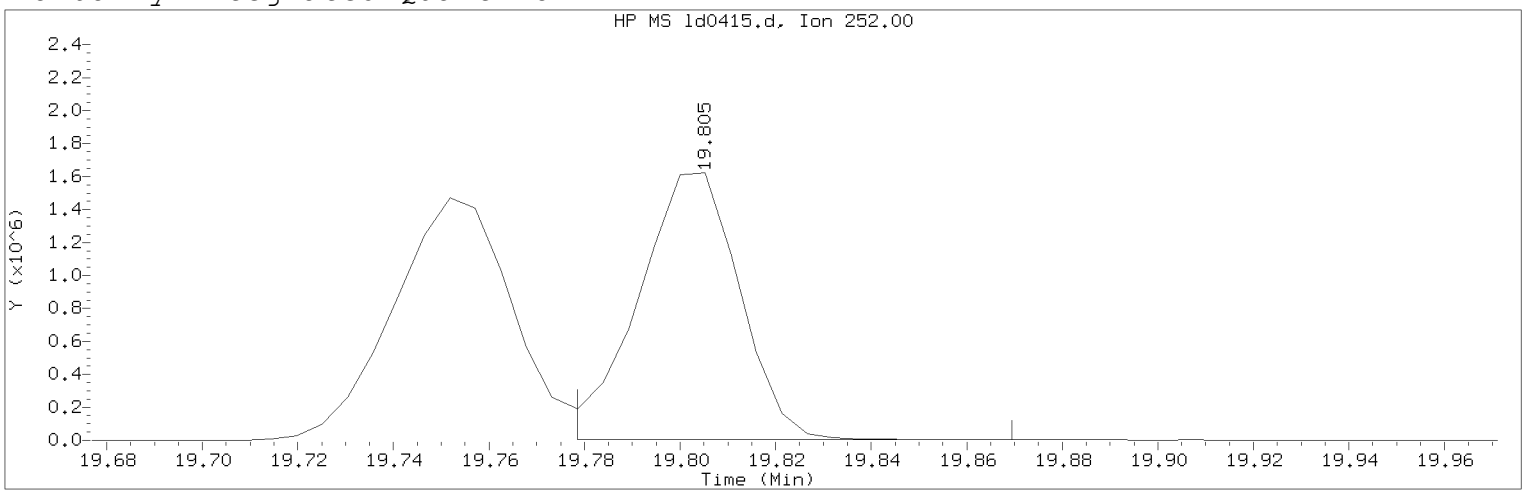
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

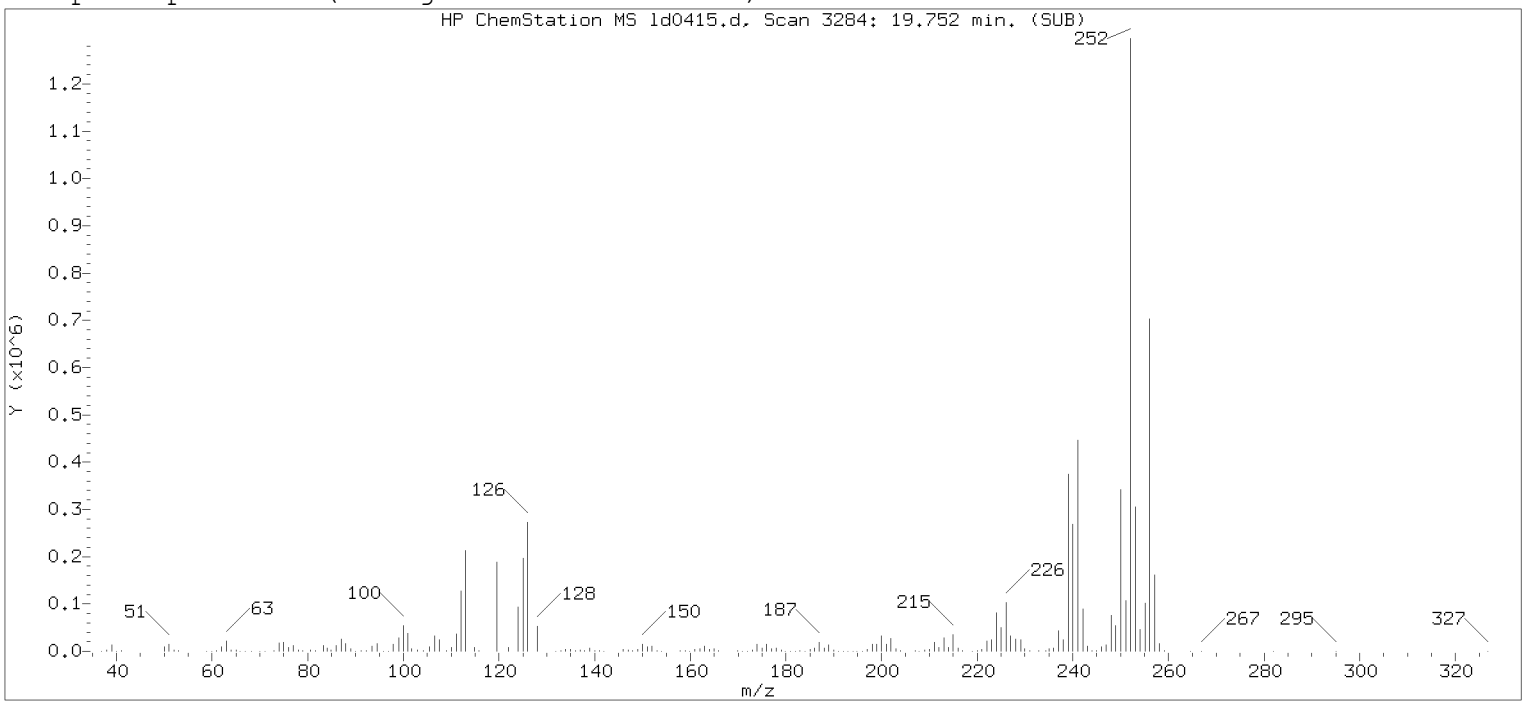
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3294
Retention Time (minutes) : 19.805
Quant Ion : 252.00
Area (flag) : 2407845M
On-Column Amount (ng/ul) : 13.3147
Integration start scan : 3288 Integration stop scan: 3305
Y at integration start : 2646 Y at integration end: 3200

Reason for manual integration: improper integration

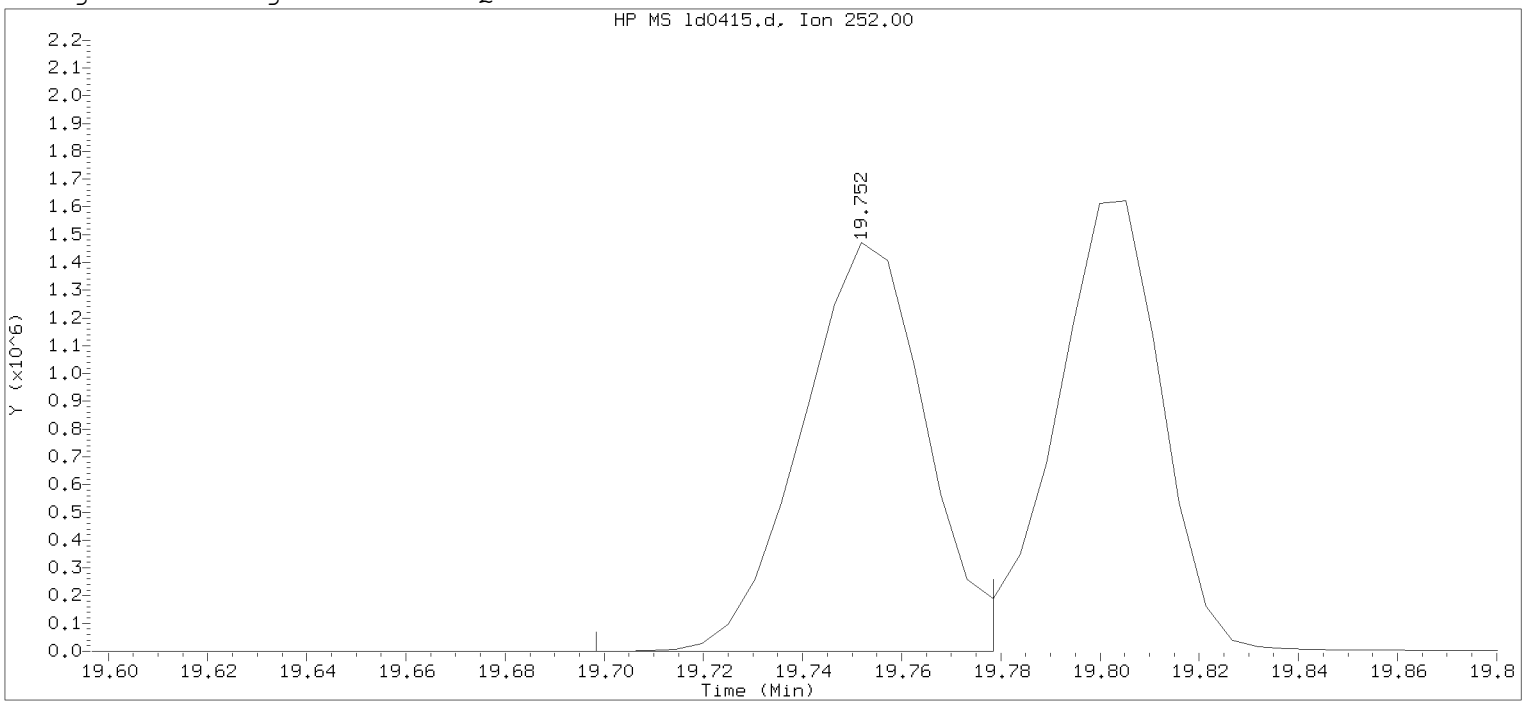
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

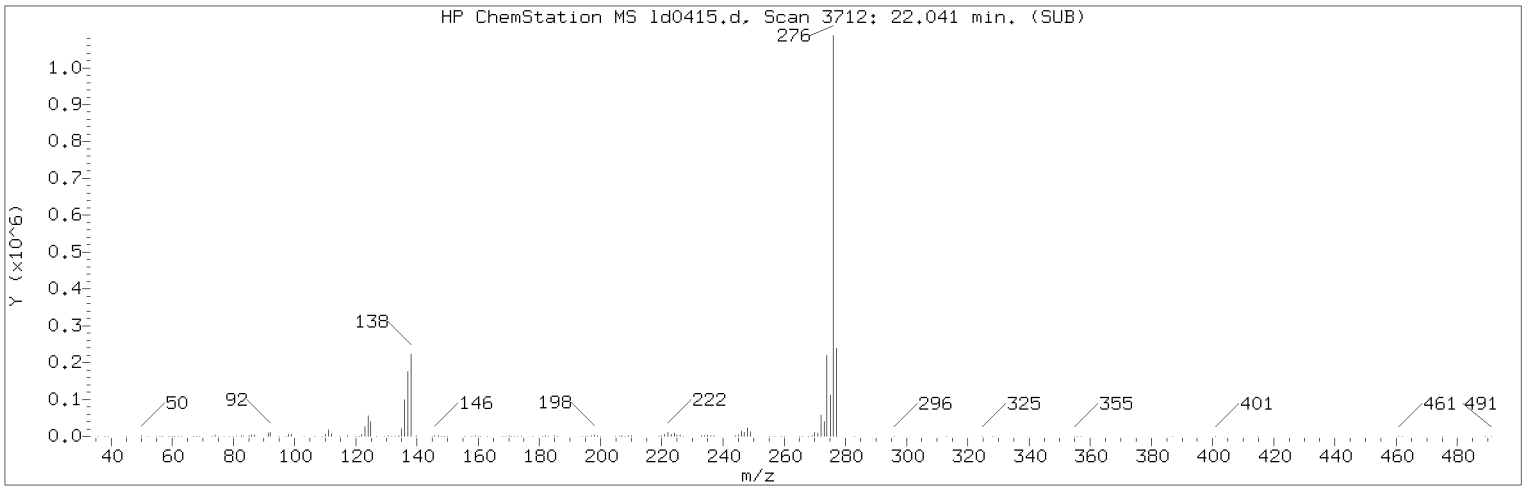
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

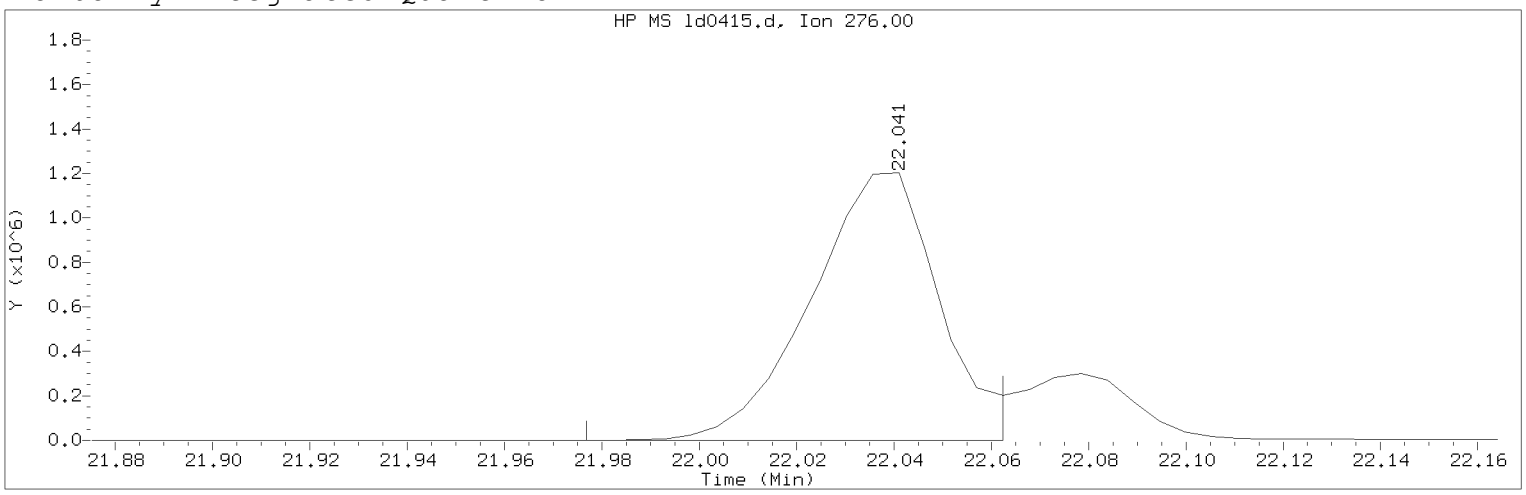
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3284		
Retention Time (minutes)	: 19.752		
Quant Ion	: 252.00		
Area	: 2532431		
On-column Amount (ng/ul)	: 13.4579		
Integration start scan	: 3273	Integration stop scan:	3288
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

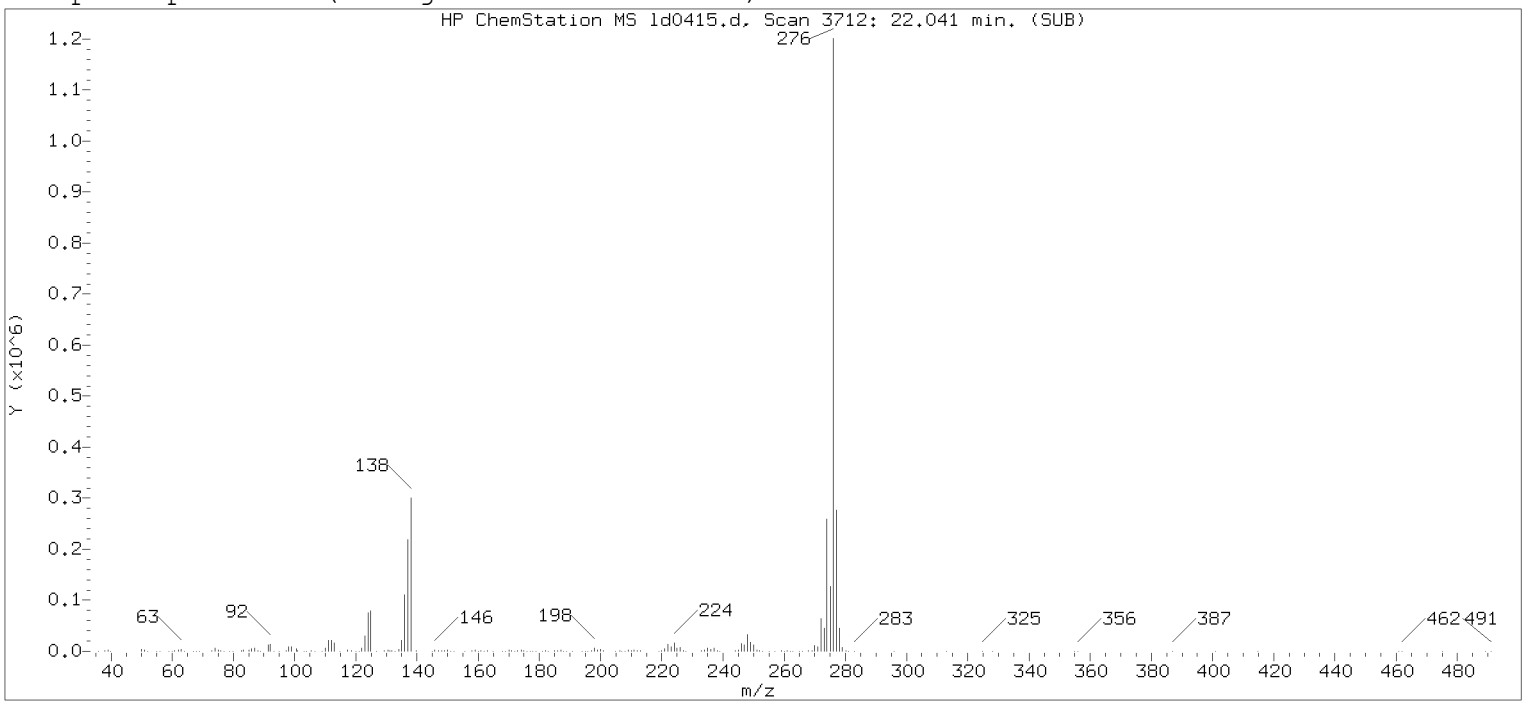
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3712
Retention Time (minutes) : 22.041
Quant Ion : 276.00
Area (flag) : 2208804M
On-Column Amount (ng/ul) : 13.7646
Integration start scan : 3699 Integration stop scan: 3715
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

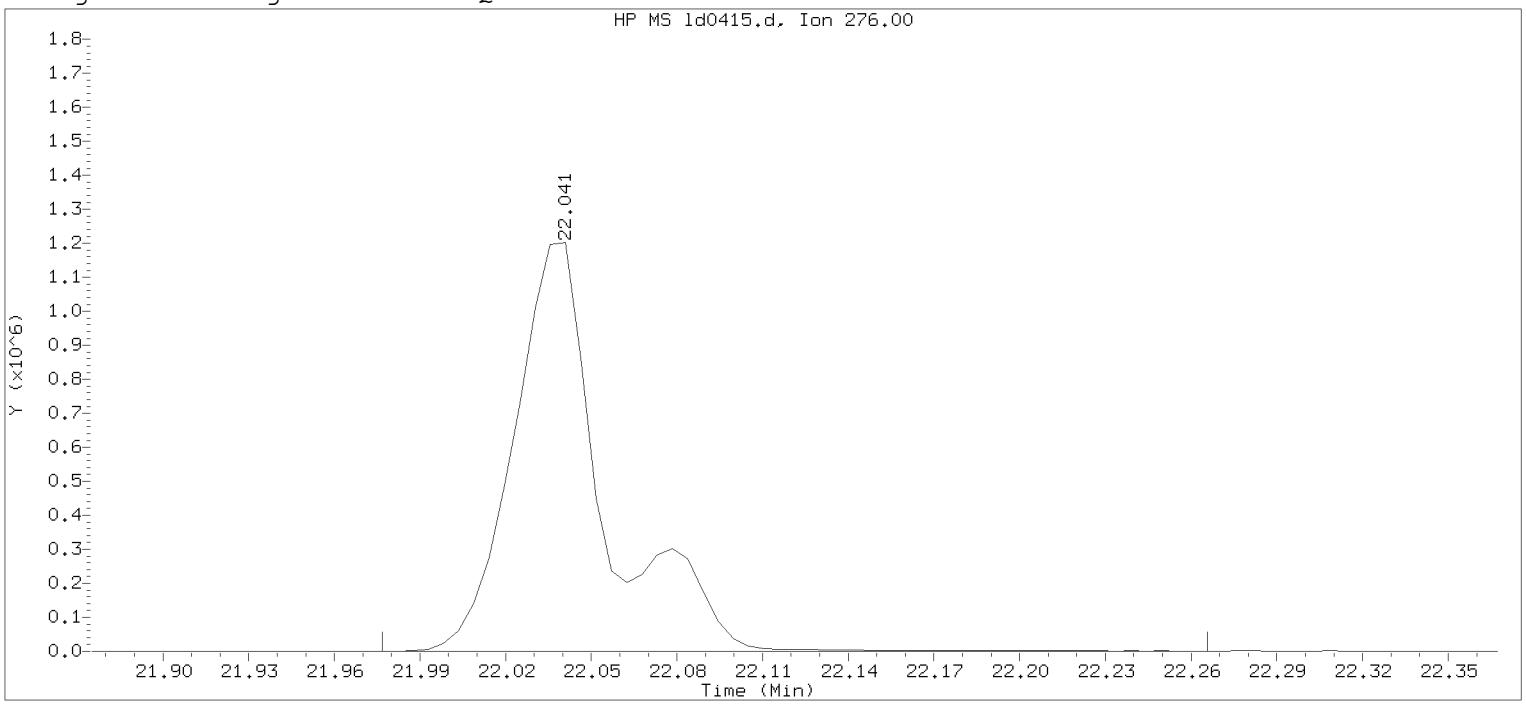
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



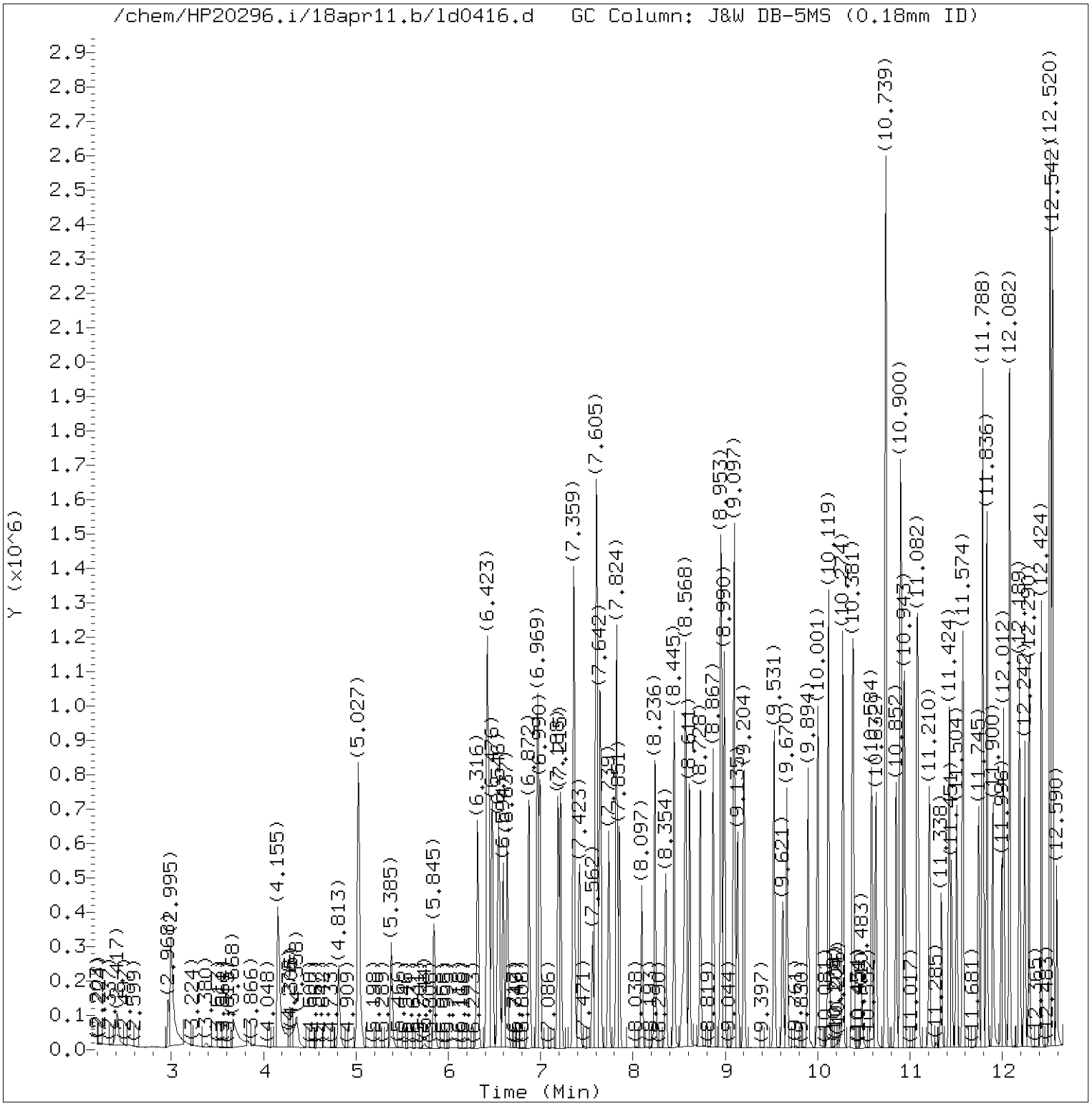
Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3712		
Retention Time (minutes)	: 22.041		
Quant Ion	: 276.00		
Area	: 2679567		
On-column Amount (ng/ul)	: 15.8249		
Integration start scan	: 3699	Integration stop scan:	3753
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user name: ATransue



Total Ion Chromatogram (TIC)

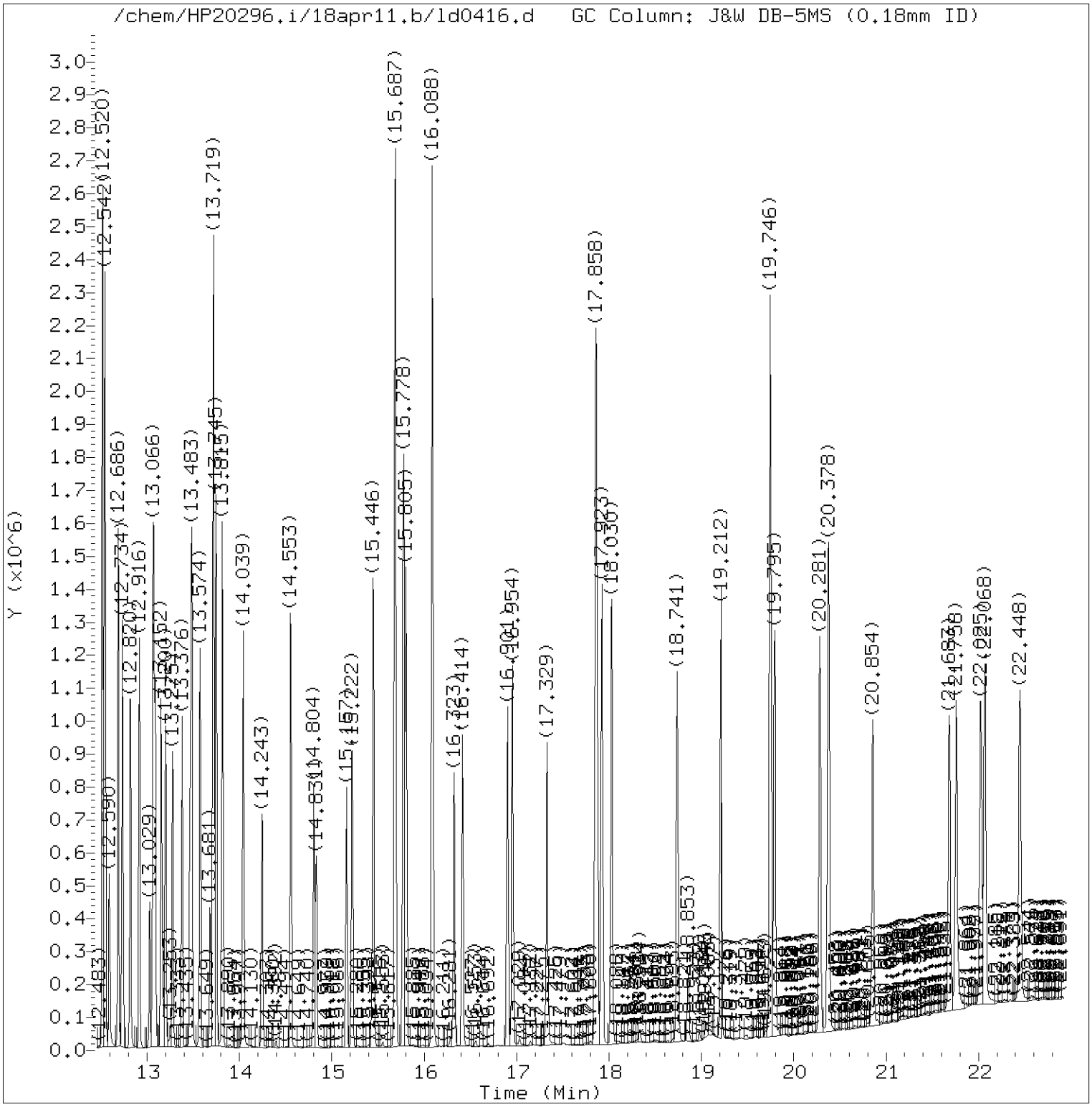
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.417	88	91632	3.233
5) N-Nitrosodimethylamine	(1)	2.962	74	149554	3.465
6) Pyridine	(1)	2.995	79	270200	3.509
8) 2-Picoline	(1)	4.155	93	273501	3.513
9) N-Nitrosomethylethylamine	(1)	4.358	88	108012	3.461
10) Methyl methanesulfonate	(1)	4.813	80	133421	3.530
12)$2-Fluorophenol	(1)	5.027	112	434884	7.326
14) N-Nitrosodiethylamine	(1)	5.385	102	105157	3.634
43) Total Cresols	(1)			435690	7.390
16) Ethyl methanesulfonate	(1)	5.845	109	113189	3.592
17) Benzaldehyde	(1)	6.316	77	211365	3.589
18)$Phenol-d6	(1)	6.423	99	577605	7.420
19) Phenol	(1)	6.439	94	332478	3.710
20) Aniline	(1)	6.476	93	381051	3.688
21) a-methylstyrene	(1)	6.551	118	85485	3.787
23) bis(2-Chloroethyl)ether	(1)	6.594	93	250443	3.754
24) 2-Chlorophenol	(1)	6.637	128	212812	3.660
25) 1,3-Dichlorobenzene	(1)	6.872	146	249168	3.796
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	216786	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	249243	3.752
28) Benzyl alcohol	(1)	7.188	108	143342	3.693
29) 1,2-Dichlorobenzene	(1)	7.215	146	234054	3.700
31) Indene	(1)	7.354	115	351468	3.792
32) 2-Methylphenol	(1)	7.364	108	211447	3.688
100) Isosafrole	(3)			188586	3.535
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	350332	3.699
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	350332	3.699
36) N-Nitrosopyrrolidine	(1)	7.562	100	111912	3.565
37) Acetophenone	(1)	7.594	105	326868	3.739
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	182754	3.667
38) 4-Methylphenol	(1)	7.610	108	224243	3.703
40) N-Nitrosomorpholine	(1)	7.637	56	148215	3.558
41) o-Toluidine	(1)	7.648	106	377825	3.726
44) Hexachloroethane	(1)	7.739	117	101866	3.596
45)$Nitrobenzene-d5	(2)	7.824	82	530449	7.356
46) Nitrobenzene	(2)	7.851	77	271293	3.688
125) 2,4_2,6-Dinitrotoluenes	(3)			239009	7.317
50) N-Nitrosopiperidine	(2)	8.097	114	109537	3.624
52) Isophorone	(2)	8.242	82	468175	3.641
53) 2-Nitrophenol	(2)	8.354	139	108439	3.648

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	231770	3.637
58) Benzoic acid	(2)	8.568	105	229387M	7.406
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	112255	3.560
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	308734	3.694
62) 2,4-Dichlorophenol	(2)	8.734	162	179204	3.612
151) Diallate trans/cis	(4)			226931	3.652
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	201763	3.650
68)*Naphthalene-d8	(2)	8.953	136	836120	5.000
69) Naphthalene	(2)	8.990	128	646580	3.742
70) 4-Chloroaniline	(2)	9.097	127	256050	3.631
71) 2,6-Dichlorophenol	(2)	9.097	162	180986	3.683
72) Hexachloropropene	(2)	9.135	213	140443	3.511
74) Hexachlorobutadiene	(2)	9.204	225	125549	3.746
78) Quinoline	(2)	9.531	129	392401	3.565
79) Caprolactam	(2)	9.621	113	54428	3.499
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	172154	3.175
83) 4-Chloro-3-methylphenol	(2)	9.894	107	200203	3.677
85) Safrole	(2)	10.001	162	166384	3.590
86) 2-Methylnaphthalene	(2)	10.119	142	429669	3.743
87) 1-Methylnaphthalene	(2)	10.274	142	390682	3.710
88) Hexachlorocyclopentadiene	(3)	10.376	237	118886	3.468
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	209332	3.630
91) cis-Isosafrole	(3)	10.483	162	29561	0.589
93) 2,4,6-Trichlorophenol	(3)	10.584	196	131104	3.621
95) 2,4,5-Trichlorophenol	(3)	10.632	196	140983	3.709
96)$2-Fluorobiphenyl	(3)	10.739	172	972065	7.376
97) trans-Isosafrole	(3)	10.852	162	159025	2.946
98) 1,1'-Biphenyl	(3)	10.894	154	505511	3.719
99) 2-Chloronaphthalene	(3)	10.911	162	430991	3.731
101) 1-Chloronaphthalene	(3)	10.943	162	389519M	3.646
103) Diphenyl ether	(3)	11.076	170	279705	3.684
104) 2-Nitroaniline	(3)	11.092	138	121862	3.605
108) 1,4-Naphthoquinone	(3)	11.210	158	160480	3.516
109) 1,4-Dinitrobenzene	(3)	11.344	168	60701	3.379
110) Dimethylphthalate	(3)	11.429	163	474935	3.671
111) 1,3-Dinitrobenzene	(3)	11.451	168	69943	3.634
113) 2,6-Dinitrotoluene	(3)	11.510	165	102550	3.733
114) Acenaphthylene	(3)	11.574	152	598671	3.729
117) 3-Nitroaniline	(3)	11.745	138	107657	3.719
118)*Acenaphthene-d10	(3)	11.788	164	423912	5.000

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on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	417608	3.668
120) 2,4-Dinitrophenol	(3)	11.900	184	103377	6.259
121) 4-Nitrophenol	(3)	11.996	109	69937	3.428
122) Pentachlorobenzene	(3)	12.018	250	172560	3.670
124) Dibenzofuran	(3)	12.076	168	579980	3.667
123) 2,4-Dinitrotoluene	(3)	12.082	165	136459	3.584
126) 1-Naphthylamine	(3)	12.189	143	398346	3.540
127) 2,3,4,6-Tetrachlorophenol	(3)	12.242	232	111550	3.772
128) 2-Naphthylamine	(3)	12.290	143	371079	3.481
129) Diethylphthalate	(3)	12.424	149	451021	3.542
130) Thionazin	(3)	12.515	107	77339	3.568
131) Fluorene	(3)	12.520	166	469205	3.798
133) 5-Nitro-o-toluidine	(3)	12.542	152	123614	3.673
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	224880	3.673
134) 4-Nitroaniline	(3)	12.553	138	108847	3.721
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	71262	3.226
136) N-Nitrosodiphenylamine	(4)	12.686	169	382764	3.749
137) NDPA as diphenylamine	(4)	12.686	169	382764	3.749
139) 1,2-Diphenylhydrazine	(4)	12.734	77	527610	3.703
140)$2,4,6-Tribromophenol	(3)	12.820	330	107746	7.353
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	87231M	3.600
144) 1,3,5-Trinitrobenzene	(4)	13.029	213	44335	3.258
145) Diallate (peak 1)	(4)	13.061	86	194060	3.009
146) Phorate	(4)	13.071	75	343413	3.758
147) Phenacetin	(4)	13.087	108	237413	3.679
148) 4-Bromophenyl-phenylether	(4)	13.152	248	125088	3.666
149) Diallate (peak 2)	(4)	13.173	86	32871M	0.643
150) Hexachlorobenzene	(4)	13.200	284	125605	3.584
152) Dimethoate	(4)	13.275	87	196320	3.570
153) Atrazine	(4)	13.382	200	127874	3.702
154) Pentachlorophenol	(4)	13.462	266	72197	3.364
156) Pentachloronitrobenzene	(4)	13.478	237	59316	3.547
155) 4-Aminobiphenyl	(4)	13.483	169	423371	3.642
157) Pronamide	(4)	13.574	173	214439	3.724
158)*Phenanthrene-d10	(4)	13.719	188	834381	5.000
159) Dinoseb	(4)	13.724	211	112738	3.260
160) Phenanthrene	(4)	13.745	178	676165	3.675
162) Anthracene	(4)	13.815	178	688038	3.730
168) Carbazole	(4)	14.039	167	587720	3.599
169) Methyl parathion	(4)	14.243	109	142602	3.402

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on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.553	149	778295	3.541
172) Parathion	(4)	14.804	109	91374	3.368
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	61477	2.822
227) Total PAHs	(6)			11128057	66.438
174) Octachlorostyrene	(4)	15.157	308	47041	3.589
176) Isodrin	(4)	15.222	193	79486	3.487
178) Fluoranthene	(4)	15.446	202	757906	3.663
179) Benzidine	(5)	15.687	184	1327791	10.428
180)*Pyrene-d10	(5)	15.778	212	864134	5.000
182) Pyrene	(5)	15.805	202	796146	3.622
184)$Terphenyl-d14	(5)	16.088	244	1008418	7.277
187) p-Dimethylaminoazobenzene	(5)	16.323	225	118907	3.545
190) Chlorobenzilate	(5)	16.414	139	231107	3.529
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	461122	3.330
193) Butylbenzylphthalate	(5)	16.954	149	355577	3.481
196) 2-Acetylaminofluorene	(5)	17.329	181	267876	3.314
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	239642	3.391
200) Benzo(a)anthracene	(5)	17.858	228	723930	3.686
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	144154	3.359
201) Chrysene	(5)	17.923	228	707477	3.724
204) bis(2-Ethylhexyl)phthalate	(5)	18.030	149	499327	3.460
208) 6-Methylchrysene	(5)	18.736	242	464826	3.475
210) Di-n-octylphthalate	(6)	19.212	149	835146	3.406
211) Benzo(b)fluoranthene	(6)	19.746	252	702149	3.673
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	285763	3.624
213) Benzo(k)fluoranthene	(6)	19.795	252	693189M	3.766
216) Benzo(a)pyrene	(6)	20.281	252	629087	3.658
218)*Perylene-d12	(6)	20.378	264	779658	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	292657	3.499
222) Dibenz(a,h)acridine	(6)	21.683	279	502824	3.440
223) Dibenz(a,j)acridine	(6)	21.758	279	521393	3.512
224) Indeno(1,2,3-cd)pyrene	(6)	22.025	276	585026M	3.582
225) Dibenz(a,h)anthracene	(6)	22.068	278	598366	3.606
226) Benzo(g,h,i)perylene	(6)	22.448	276	618163	3.663

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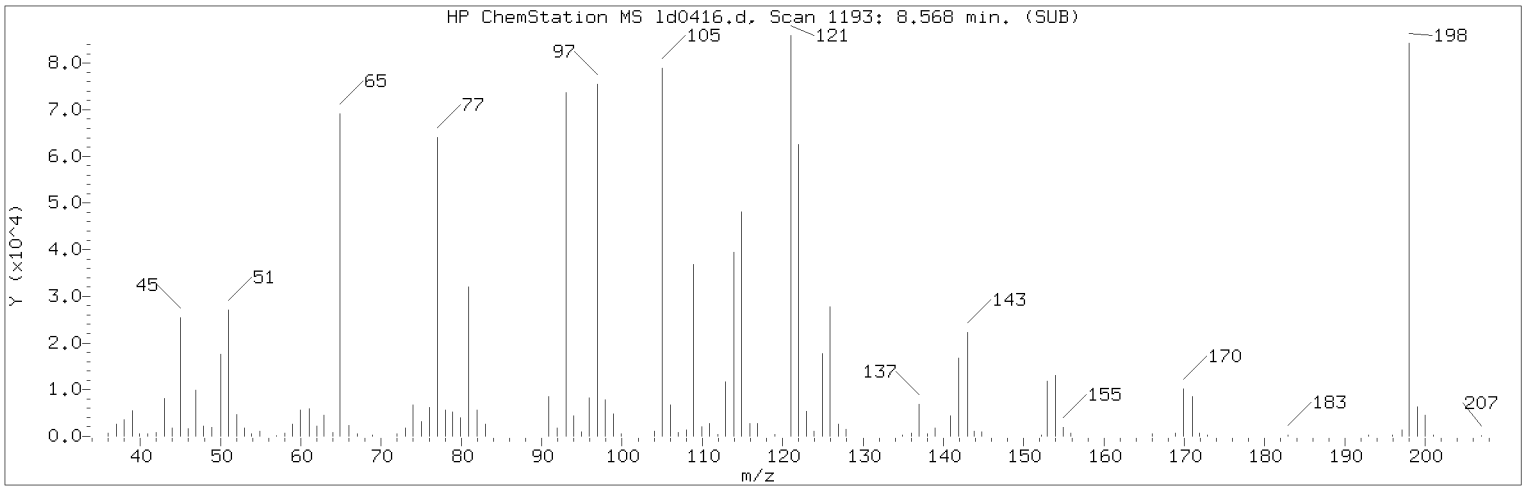
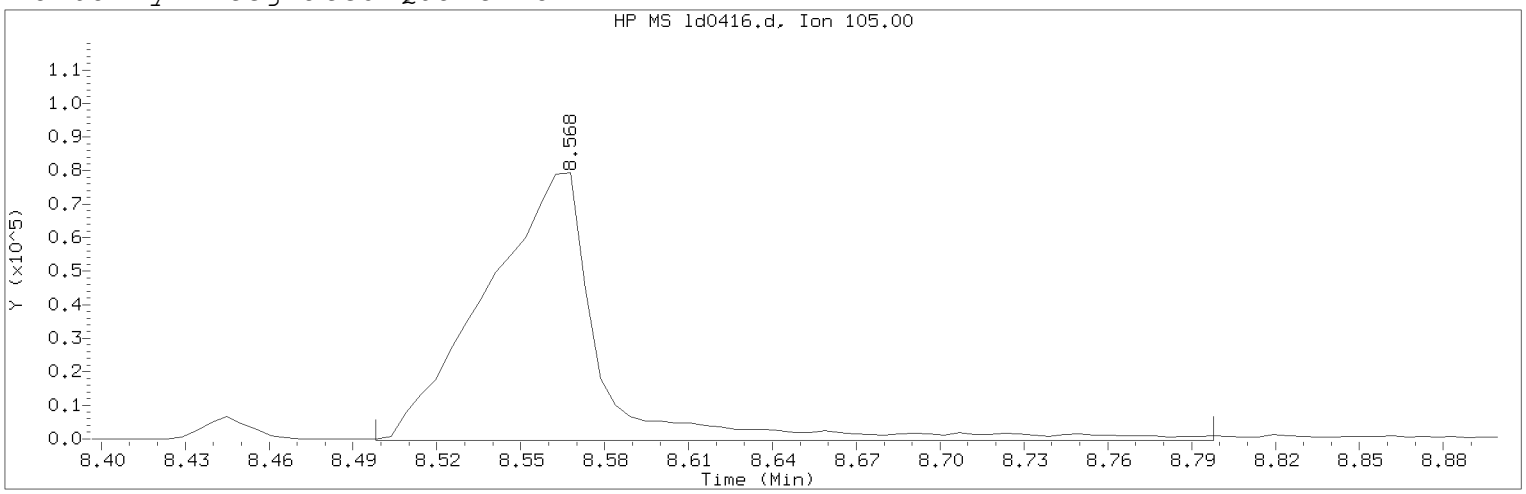
Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

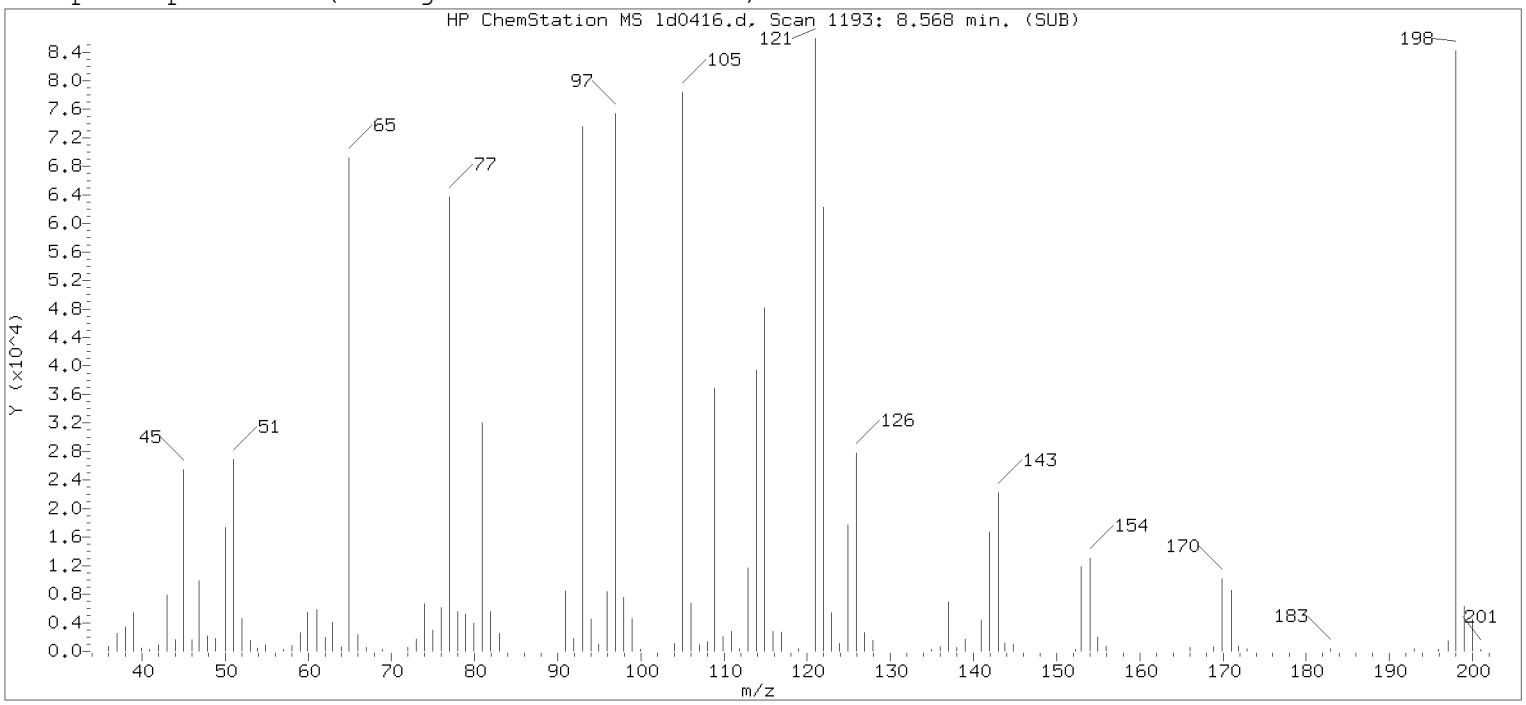
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1193
Retention Time (minutes) : 8.568
Quant Ion : 105.00
Area (flag) : 229387M
On-Column Amount (ng/ul) : 7.4060
Integration start scan : 1179 Integration stop scan: 1235
Y at integration start : -417 Y at integration end: -417

Reason for manual integration: improper integration

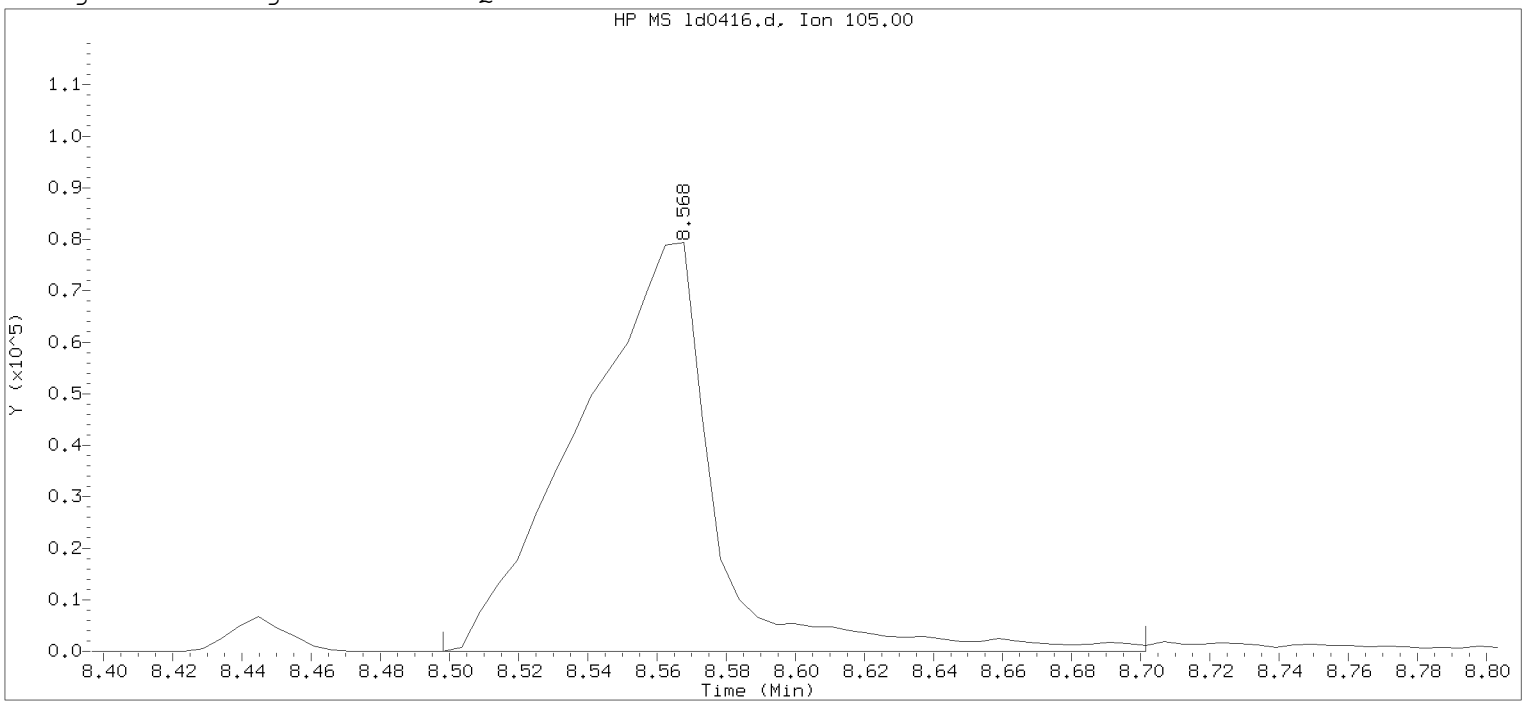
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

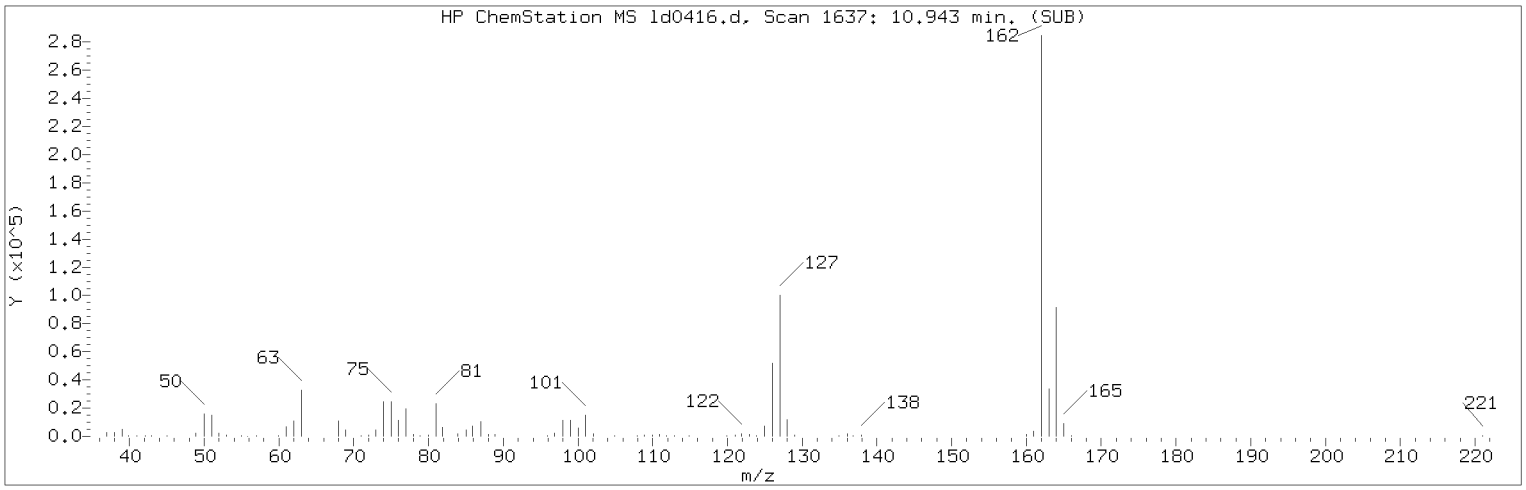
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

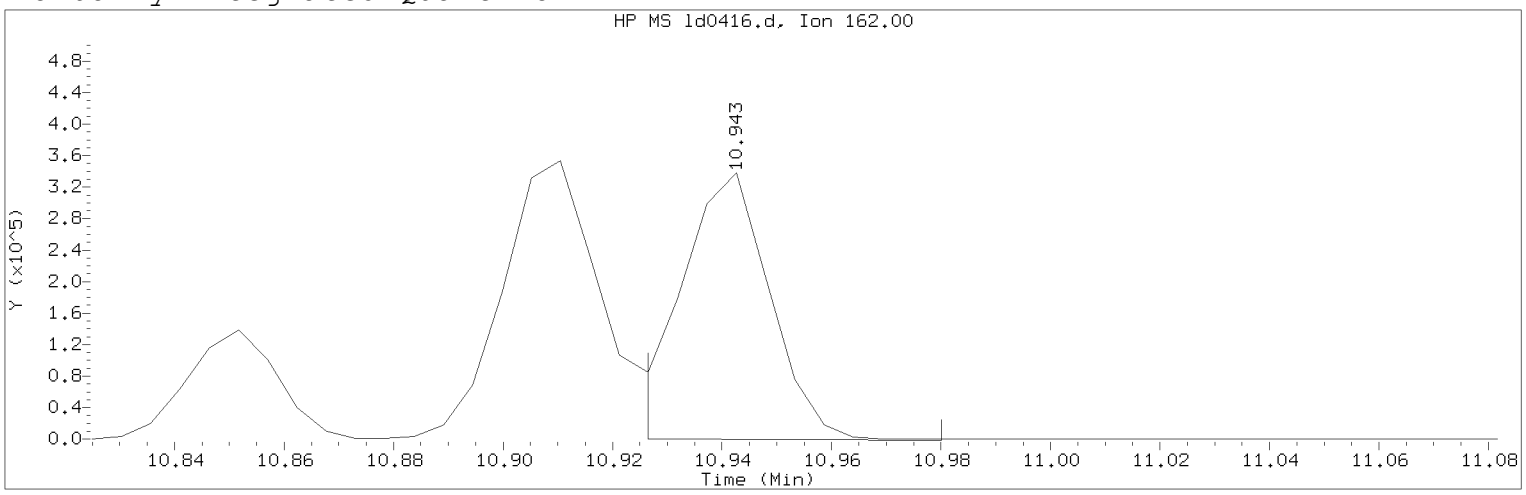
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1193		
Retention Time (minutes)	: 8.568		
Quant Ion	: 105.00		
Area	: 215134		
On-column Amount (ng/ul)	: 7.4128		
Integration start scan	: 1179	Integration stop scan:	1217
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ART

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

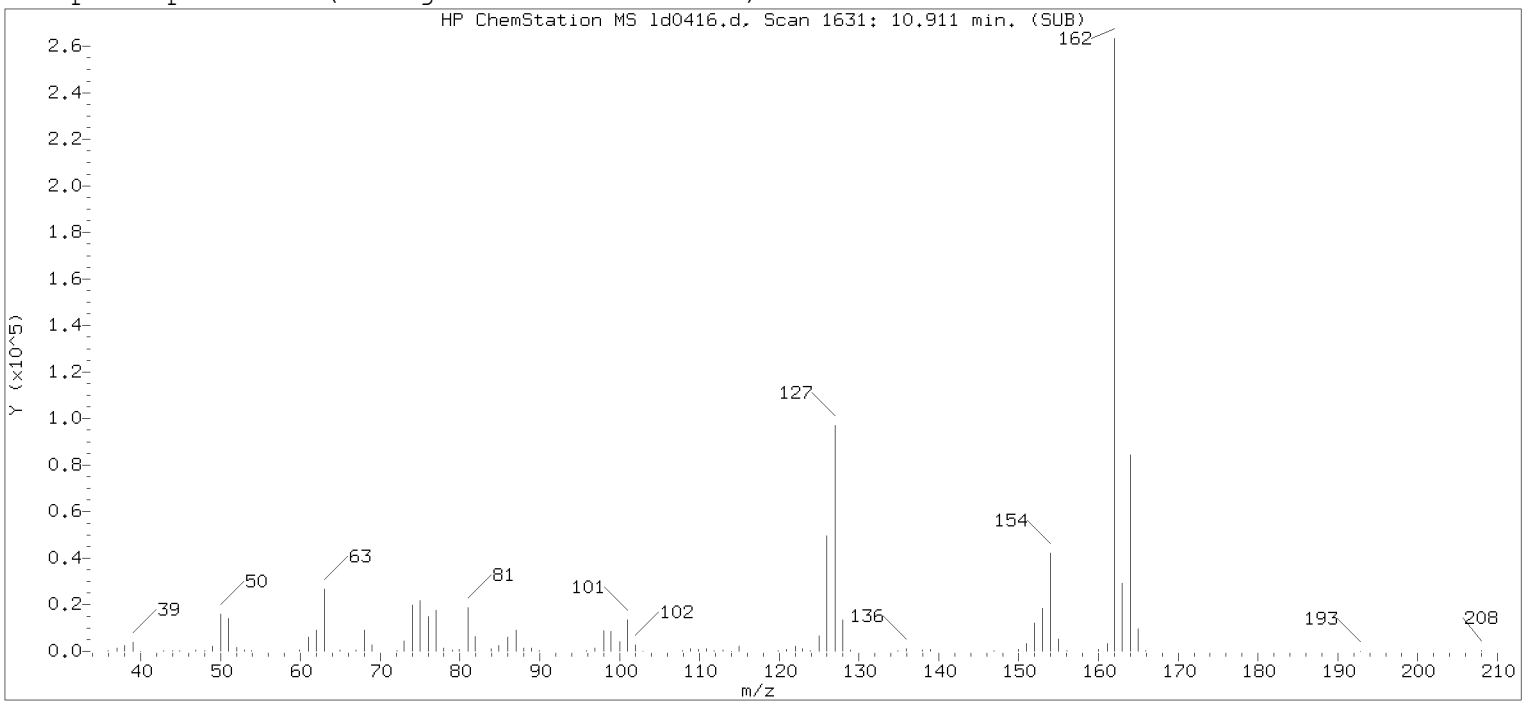
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1637
Retention Time (minutes) : 10.943
Quant Ion : 162.00
Area (flag) : 389519M
On-Column Amount (ng/ul) : 3.6457
Integration start scan : 1633 Integration stop scan: 1643
Y at integration start : -163 Y at integration end: -1434

Reason for manual integration: improper integration

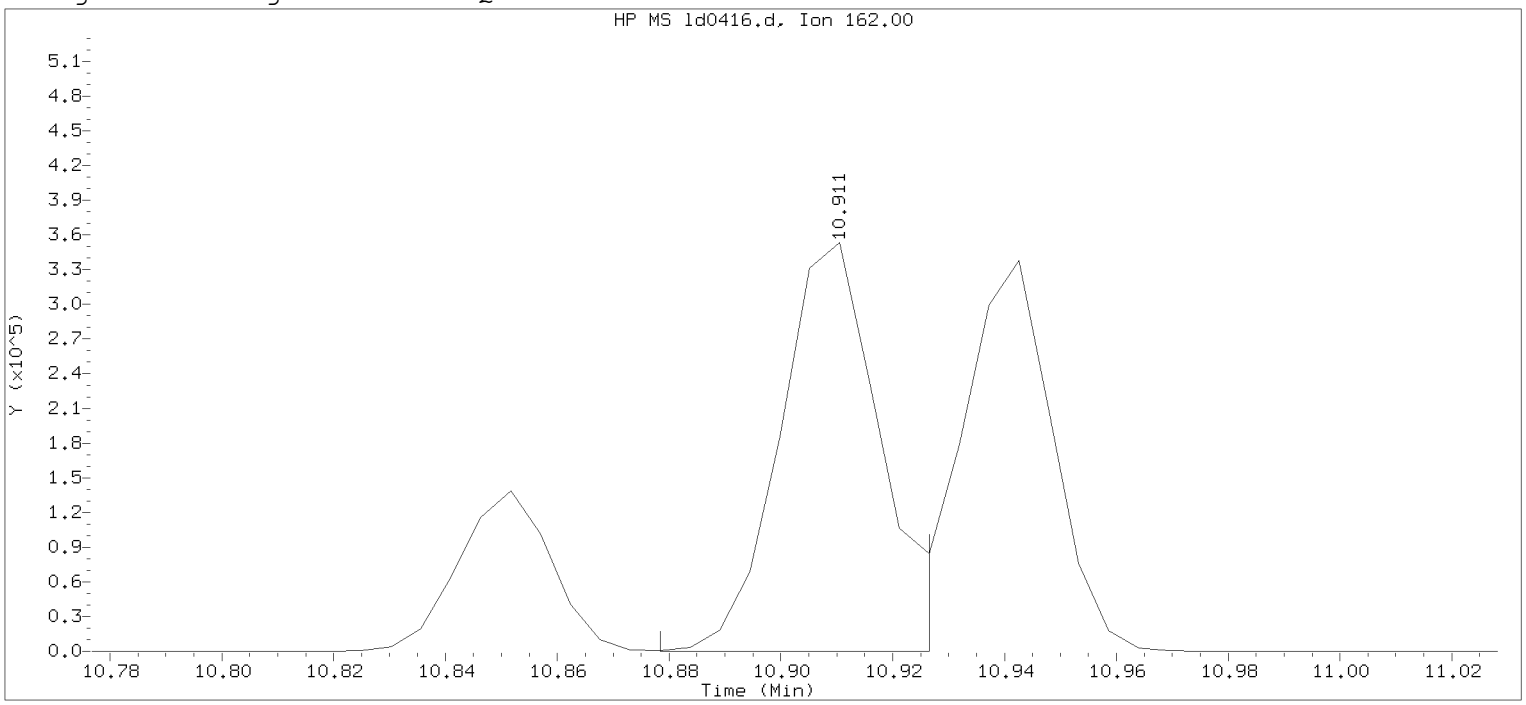
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

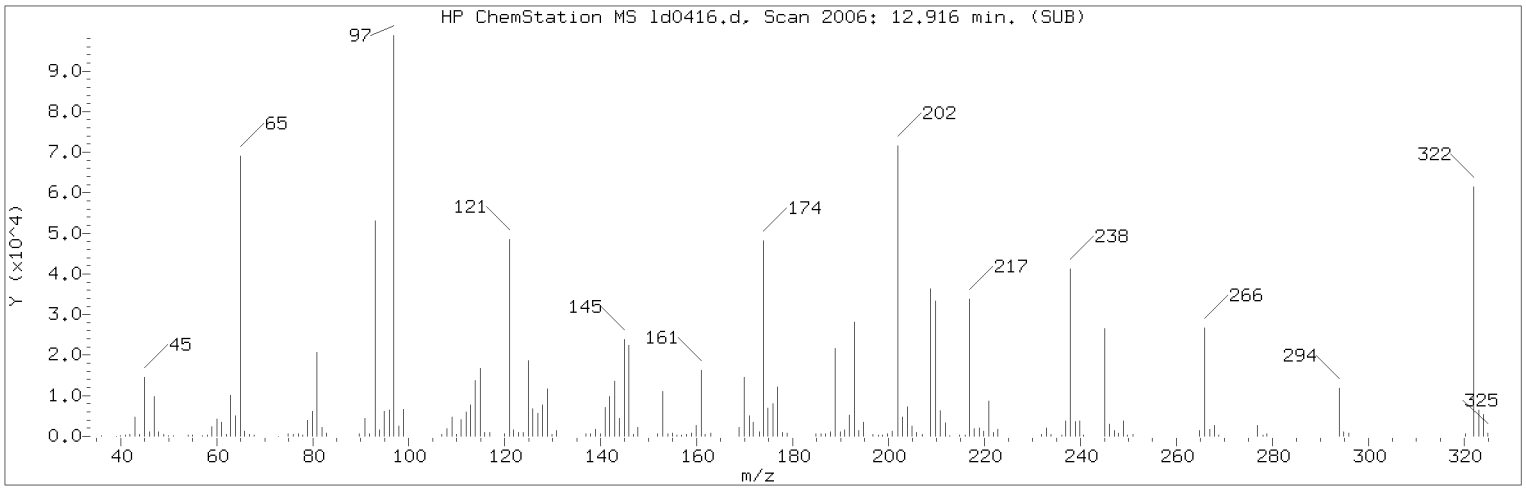
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

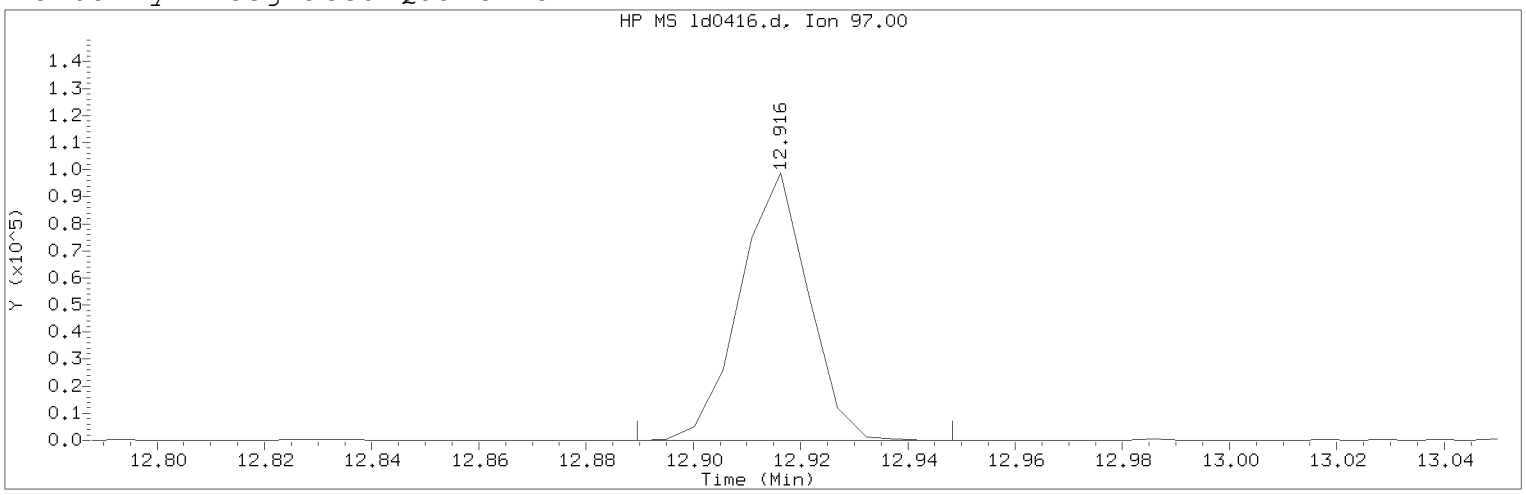
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1631
Retention Time (minutes) : 10.911
Quant Ion : 162.00
Area : 430991
On-column Amount (ng/ul) : 4.0344
Integration start scan : 1624 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user Analyst 2.5

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

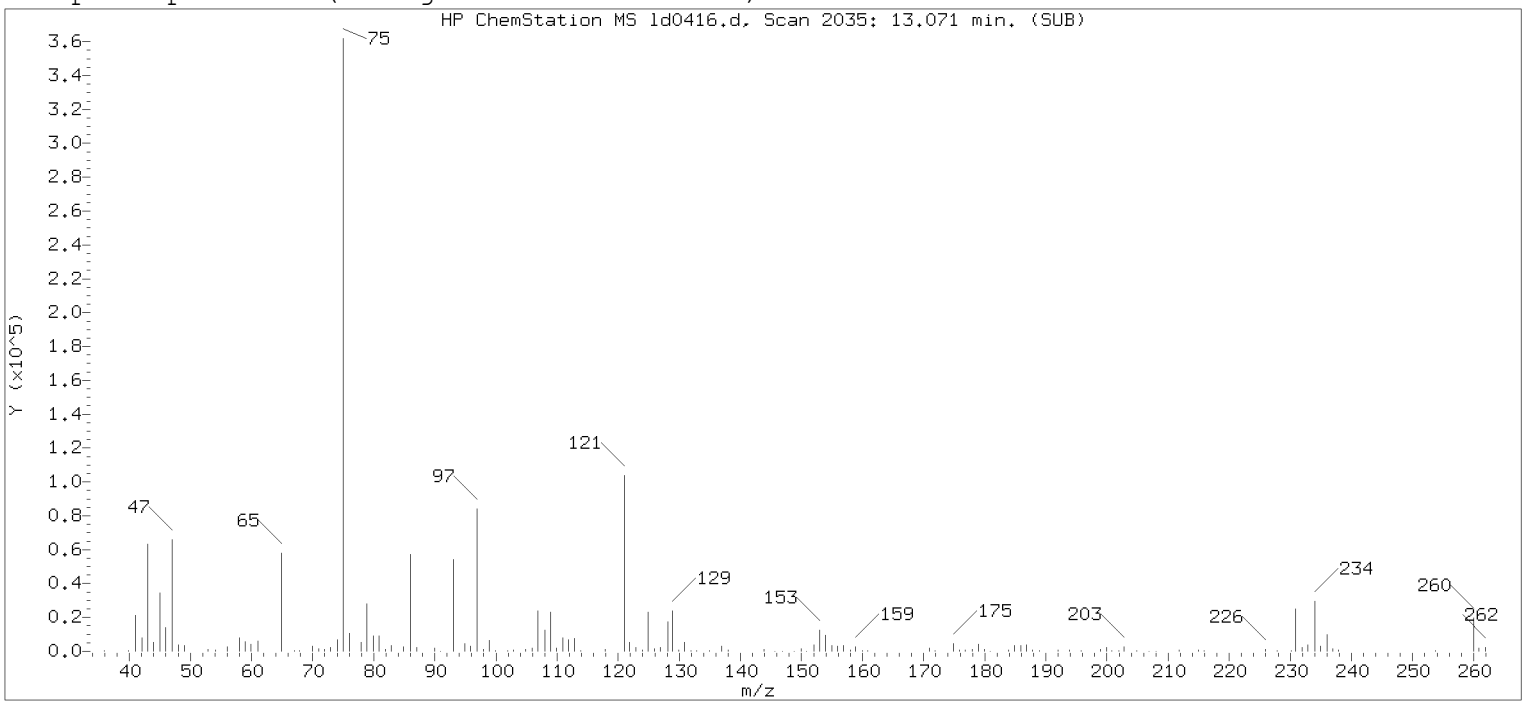
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 87231M
On-Column Amount (ng/ul) : 3.5997
Integration start scan : 2000 Integration stop scan: 2011
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

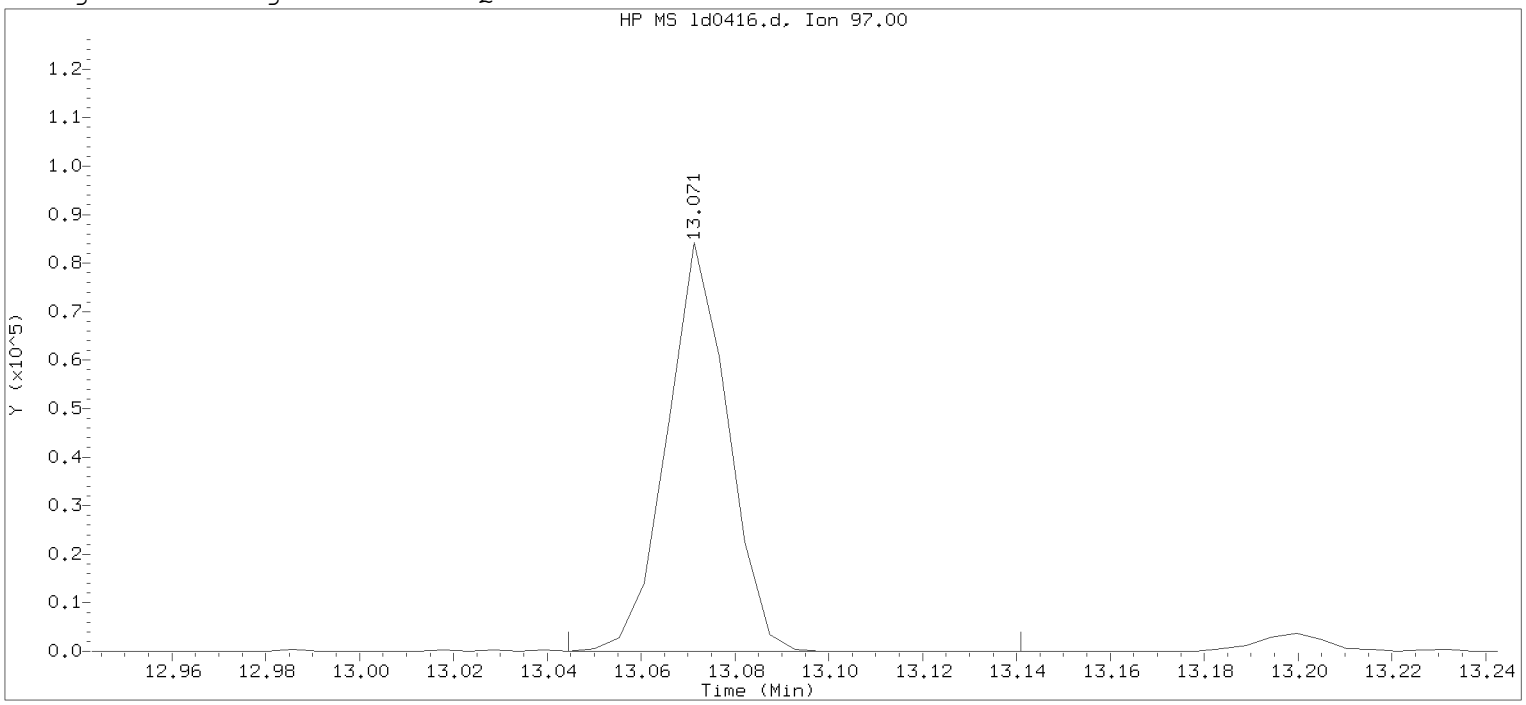
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

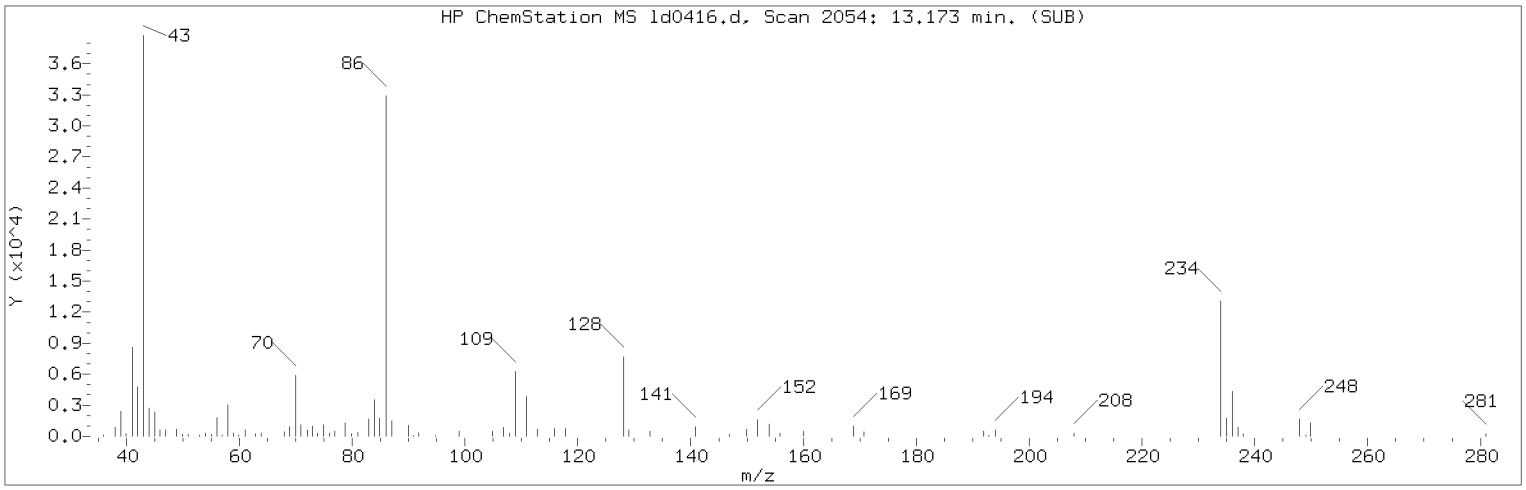
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

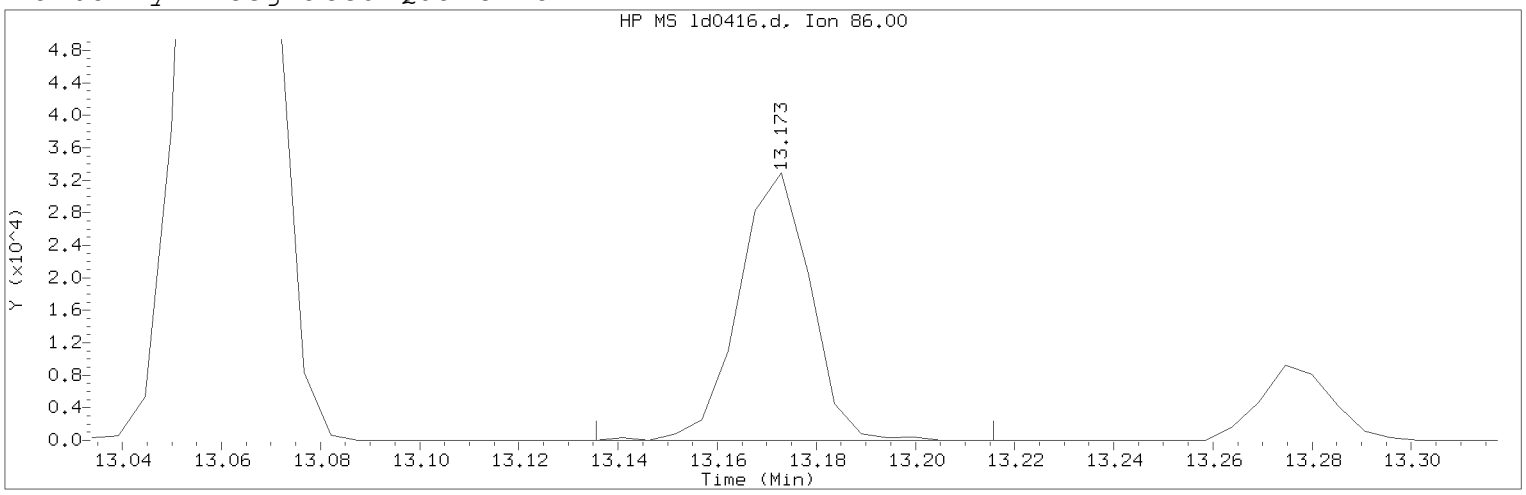
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 75883		
On-column Amount (ng/ul)	: 2.9831		
Integration start scan	: 2029	Integration stop scan:	2047
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user analyst 2

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

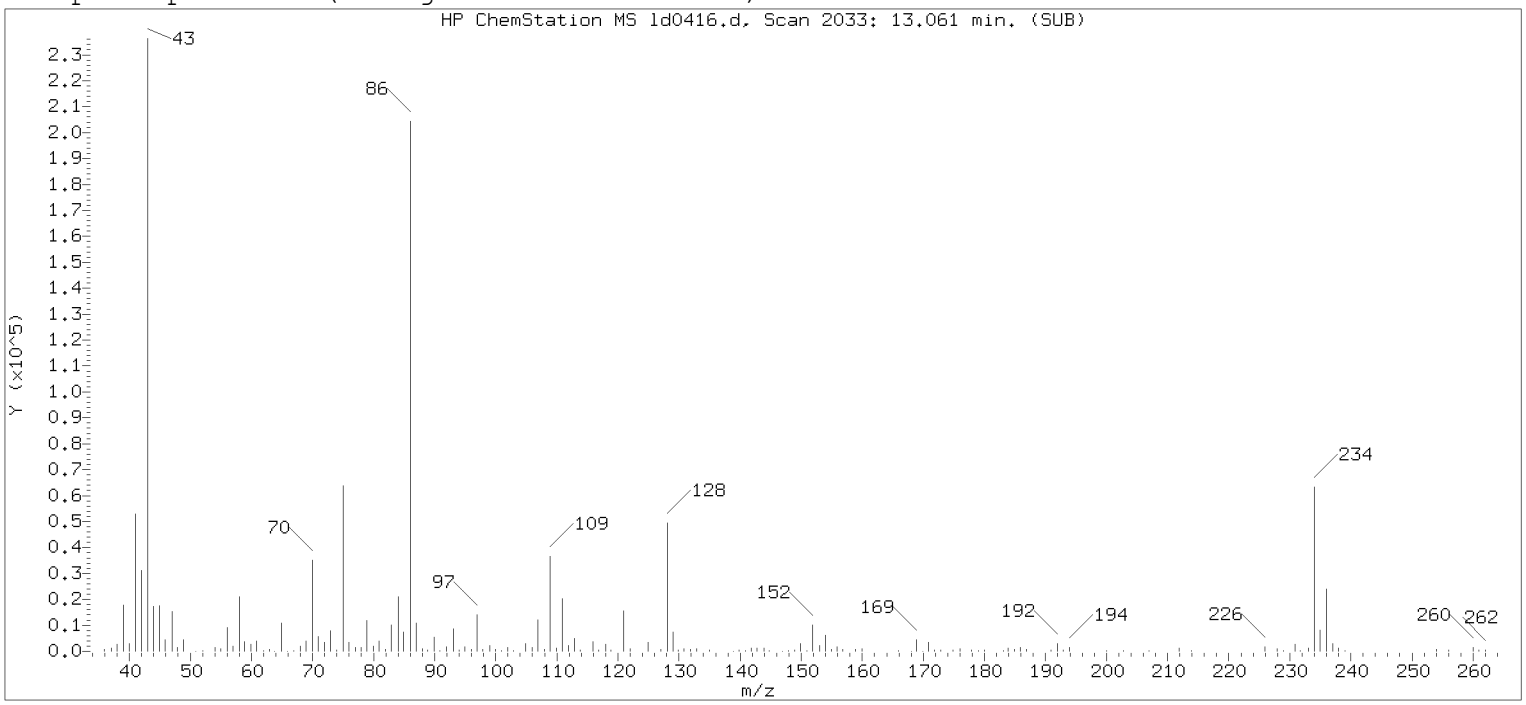
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2054		
Retention Time (minutes)	: 13.173		
Quant Ion	: 86.00		
Area (flag)	: 32871M		
On-Column Amount (ng/ul)	: 0.6430		
Integration start scan	: 2046	Integration stop scan:	2061
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

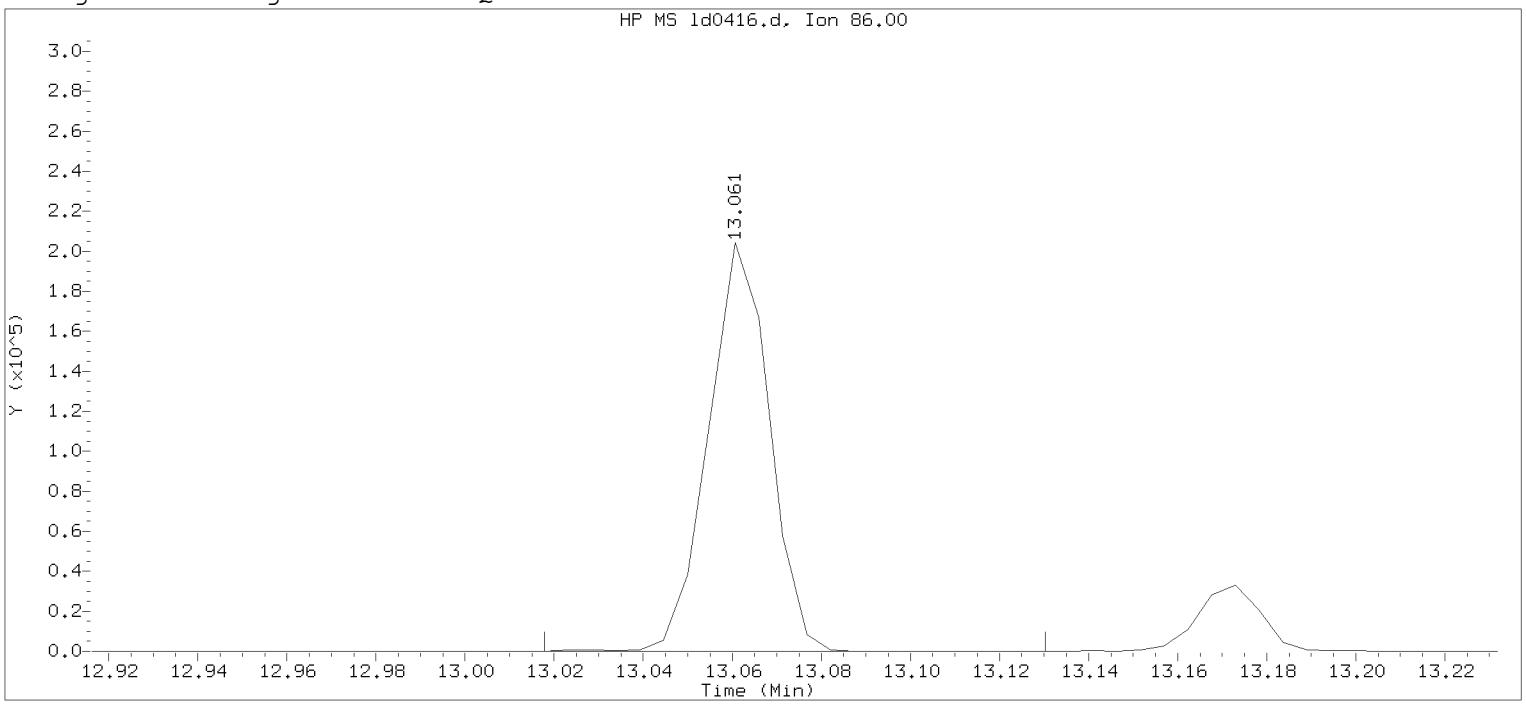
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

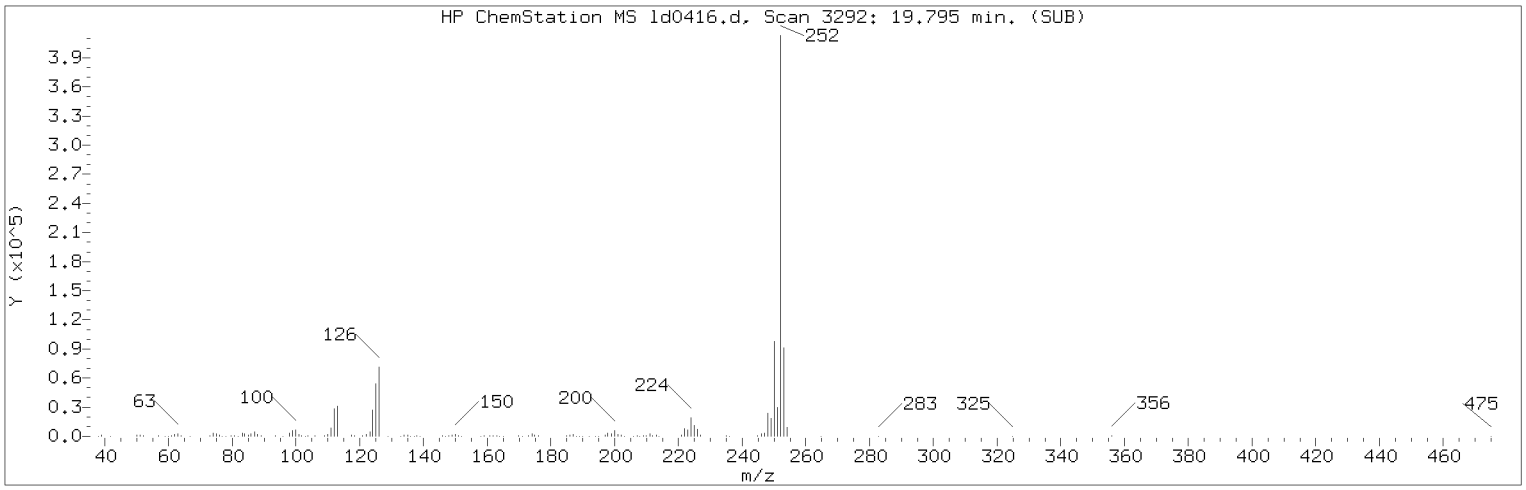
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

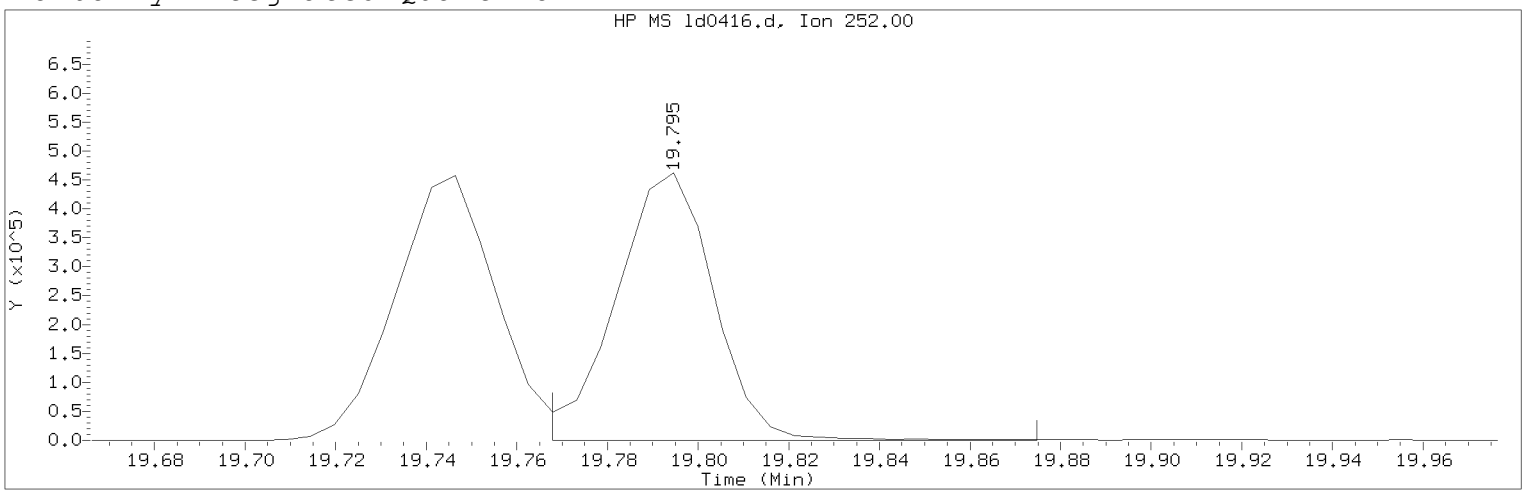
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 194060		
On-column Amount (ng/ul)	: 3.6287		
Integration start scan	: 2024	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ART

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

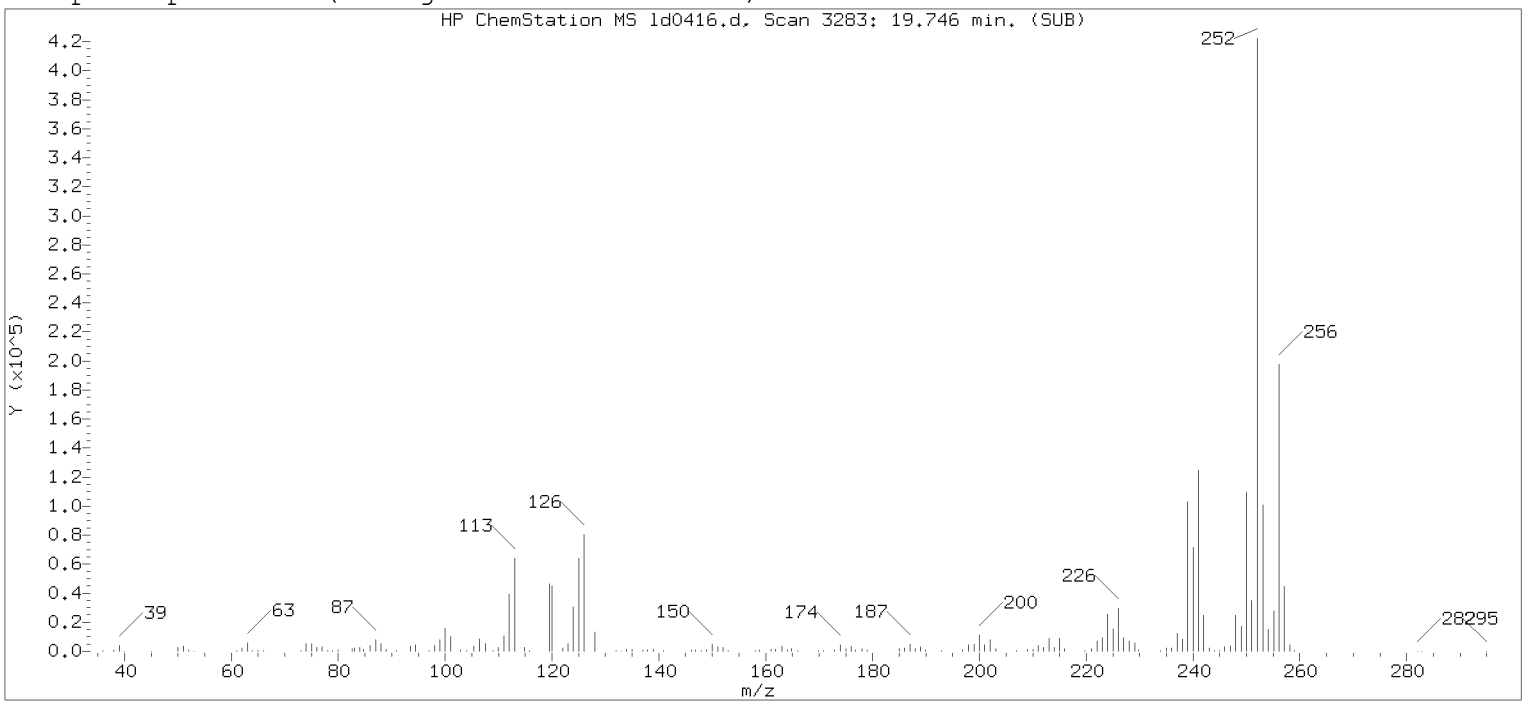
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3292
Retention Time (minutes) : 19.795
Quant Ion : 252.00
Area (flag) : 693189M
On-Column Amount (ng/ul) : 3.7659
Integration start scan : 3286 Integration stop scan: 3306
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

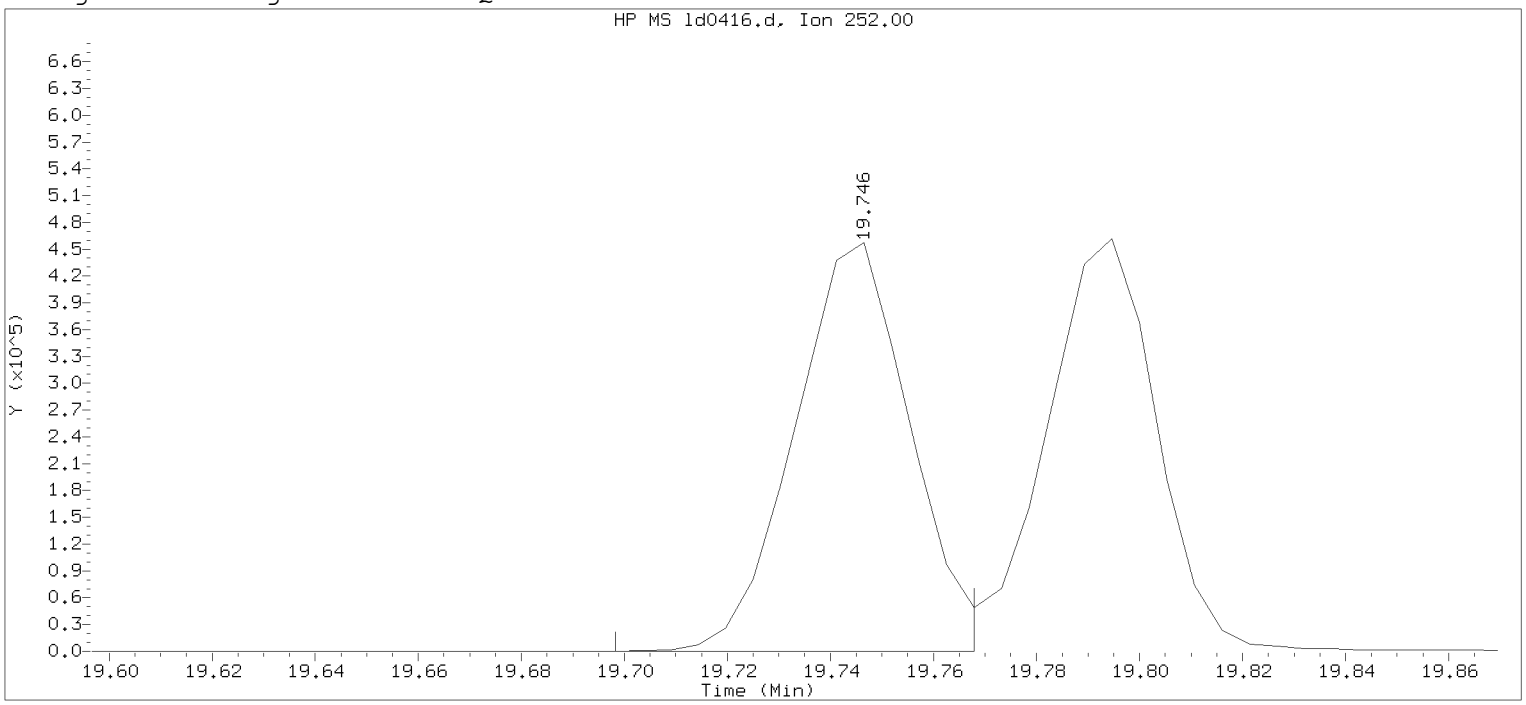
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

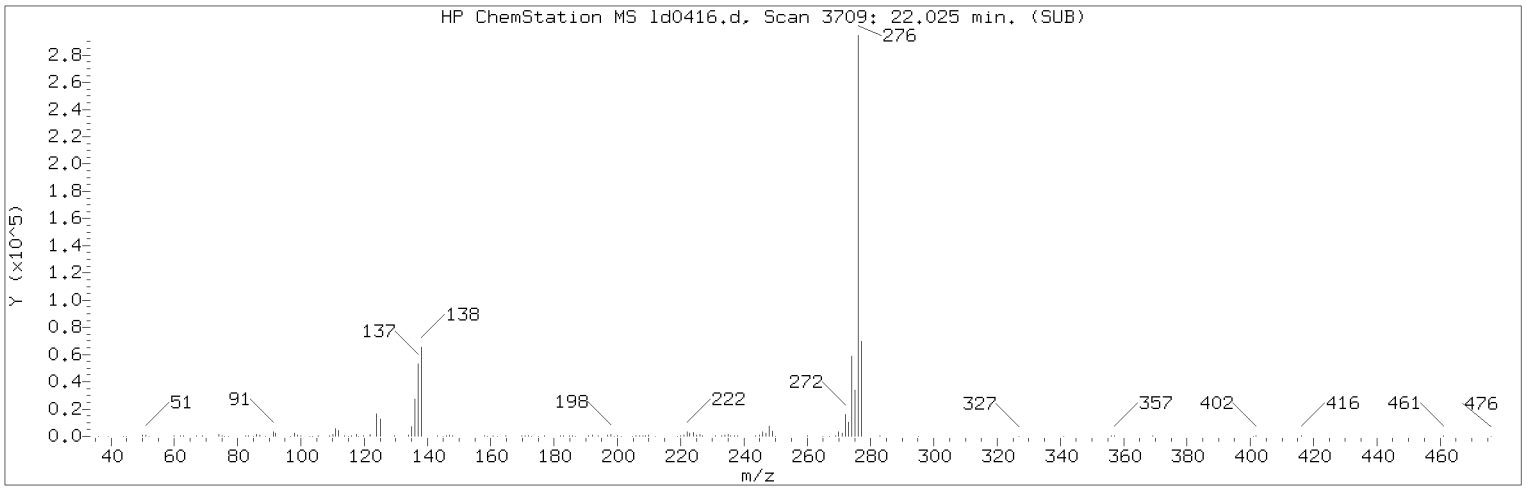
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

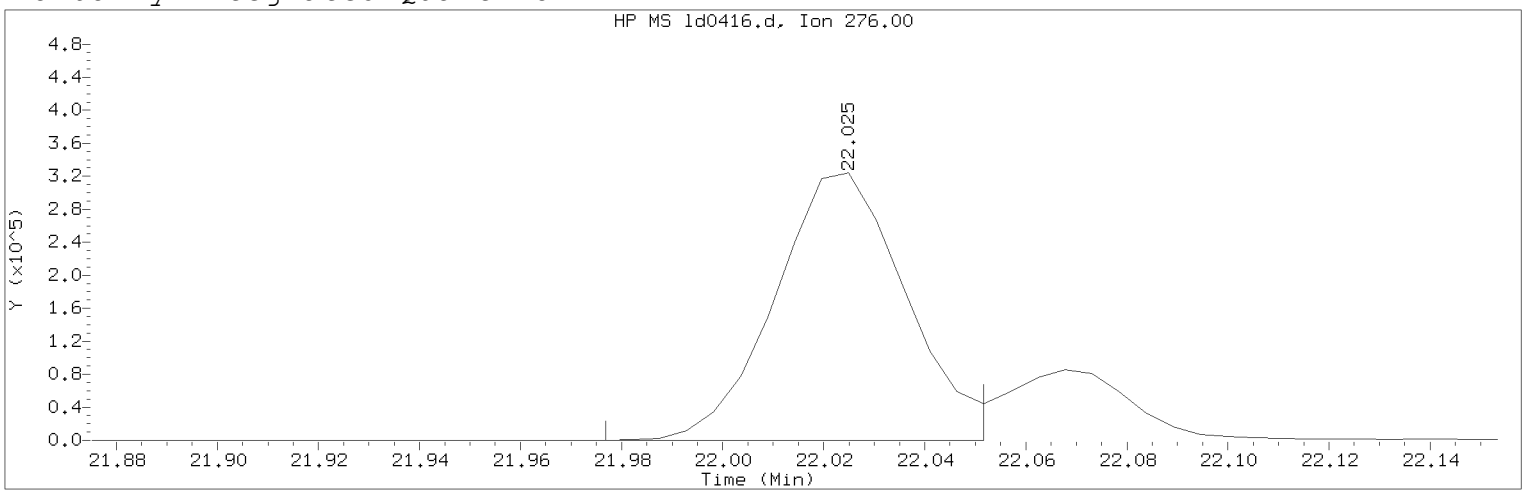
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3283		
Retention Time (minutes)	: 19.746		
Quant Ion	: 252.00		
Area	: 702149		
On-column Amount (ng/ul)	: 3.6659		
Integration start scan	: 3273	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

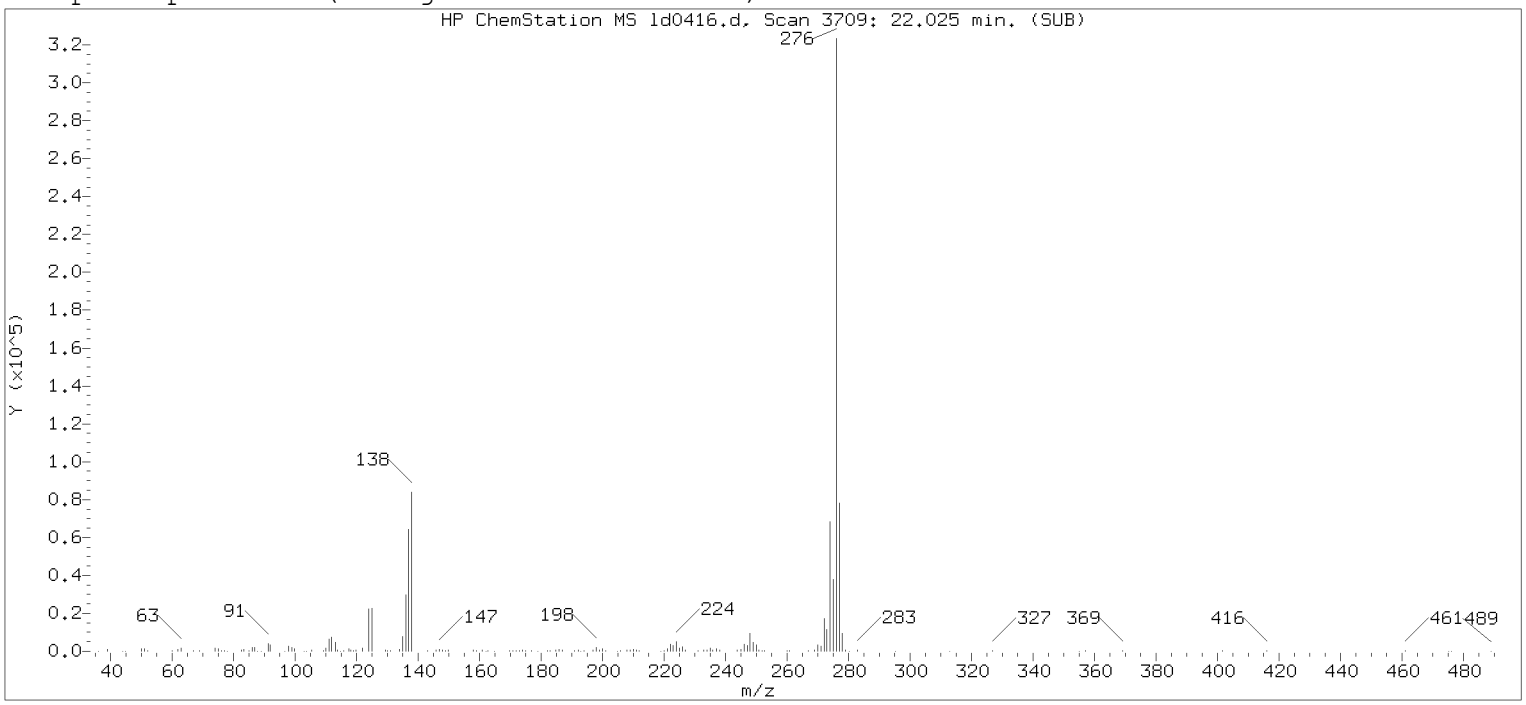
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3709
Retention Time (minutes) : 22.025
Quant Ion : 276.00
Area (flag) : 585026M
On-Column Amount (ng/ul) : 3.5818
Integration start scan : 3699 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

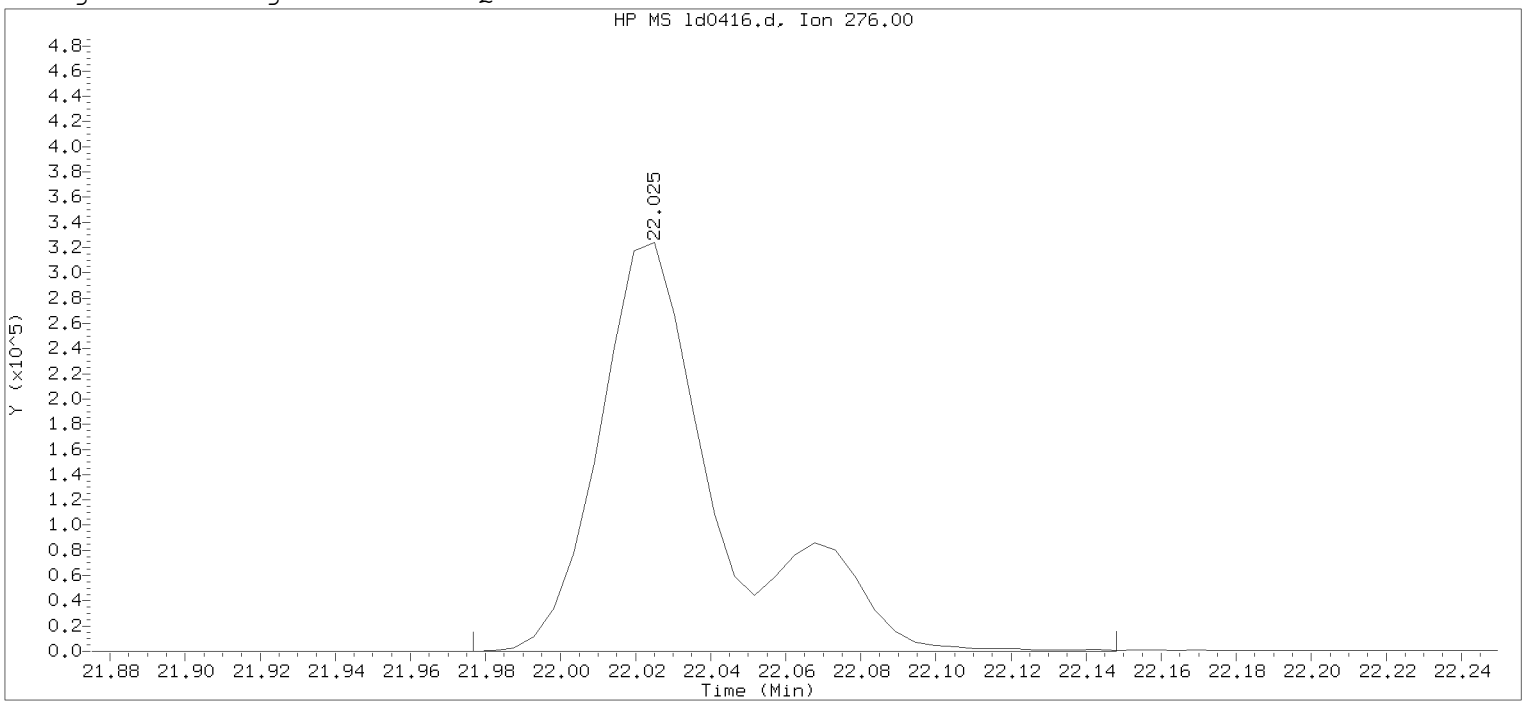
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



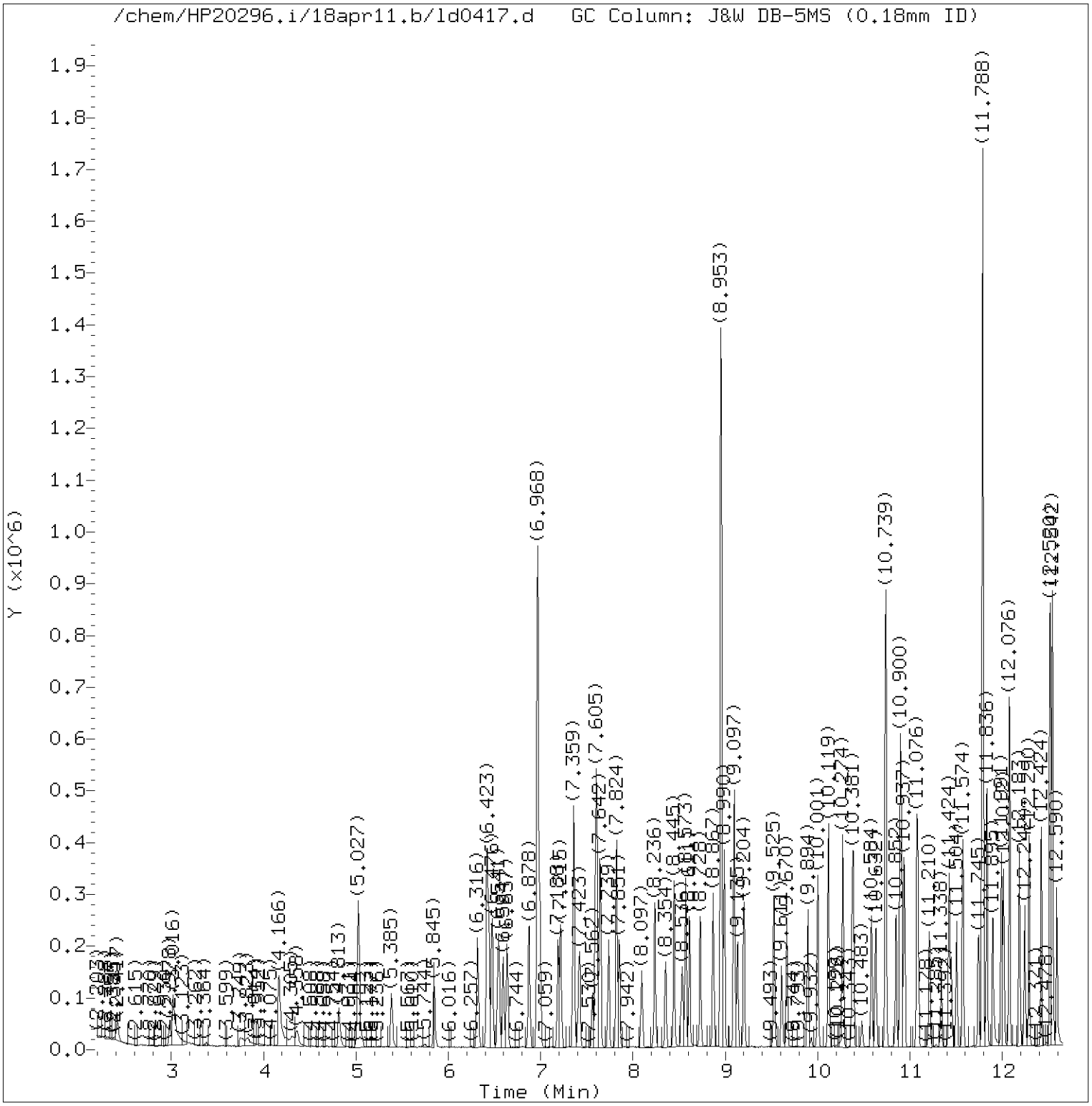
Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3709		
Retention Time (minutes)	: 22.025		
Quant Ion	: 276.00		
Area	: 724870		
On-column Amount (ng/ul)	: 4.2058		
Integration start scan	: 3699	Integration stop scan:	3731
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ART



Total Ion Chromatogram (TIC)

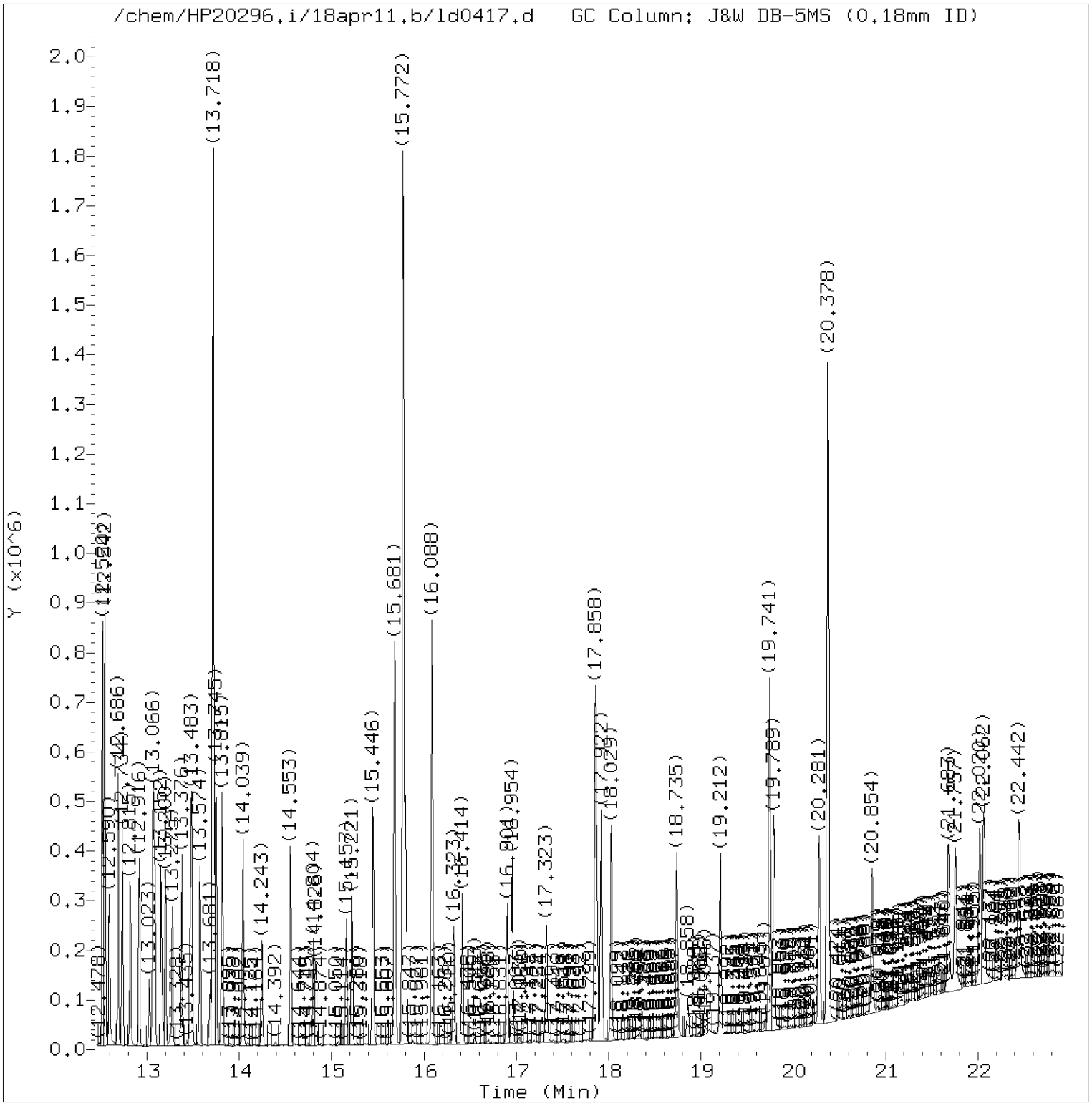
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.417	88	35833M	1.359
5) N-Nitrosodimethylamine	(1)	2.978	74	46207	1.151
6) Pyridine	(1)	3.016	79	89782	1.254
8) 2-Picoline	(1)	4.160	93	88578	1.223
9) N-Nitrosomethylethylamine	(1)	4.358	88	35649	1.228
10) Methyl methanesulfonate	(1)	4.813	80	43659	1.242
12)$2-Fluorophenol	(1)	5.027	112	140703	2.549
14) N-Nitrosodiethylamine	(1)	5.385	102	33400	1.241
43) Total Cresols	(1)			141666	2.584
16) Ethyl methanesulfonate	(1)	5.845	109	37329	1.274
17) Benzaldehyde	(1)	6.316	77	65451	1.195
18)$Phenol-d6	(1)	6.418	99	187215	2.586
19) Phenol	(1)	6.439	94	108504	1.302
20) Aniline	(1)	6.476	93	124049	1.291
21) a-methylstyrene	(1)	6.551	118	24880	1.185
23) bis(2-Chloroethyl)ether	(1)	6.594	93	82049	1.323
24) 2-Chlorophenol	(1)	6.637	128	70742	1.308
25) 1,3-Dichlorobenzene	(1)	6.878	146	80624	1.321
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	201608	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	82362	1.333
28) Benzyl alcohol	(1)	7.188	108	41302	1.144
29) 1,2-Dichlorobenzene	(1)	7.215	146	76651	1.303
31) Indene	(1)	7.354	115	101263	1.175
32) 2-Methylphenol	(1)	7.364	108	69056	1.295
100) Isosafrole	(3)			62670	1.256
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	119640	1.358
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	119640	1.358
36) N-Nitrosopyrrolidine	(1)	7.562	100	36591	1.253
37) Acetophenone	(1)	7.594	105	103307	1.271
38) 4-Methylphenol	(1)	7.605	108	72610	1.289
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	59781	1.290
40) N-Nitrosomorpholine	(1)	7.637	56	48342	1.248
41) o-Toluidine	(1)	7.648	106	125179	1.327
44) Hexachloroethane	(1)	7.733	117	33439	1.269
45)$Nitrobenzene-d5	(2)	7.824	82	173441	2.587
46) Nitrobenzene	(2)	7.851	77	88596	1.296
125) 2,4_2,6-Dinitrotoluenes	(3)			73888	2.418
50) N-Nitrosopiperidine	(2)	8.097	114	35022	1.246
52) Isophorone	(2)	8.236	82	149916	1.254
53) 2-Nitrophenol	(2)	8.354	139	34123	1.235

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	76262	1.288
58) Benzoic acid	(2)	8.536	105	73947M	4.298
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	37650	1.284
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	99630	1.282
62) 2,4-Dichlorophenol	(2)	8.734	162	58777	1.274
151) Diallate trans/cis	(4)			73596	1.276
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	67280	1.309
68)*Naphthalene-d8	(2)	8.953	136	777233	5.000
69) Naphthalene	(2)	8.990	128	217823	1.356
70) 4-Chloroaniline	(2)	9.092	127	83551	1.275
71) 2,6-Dichlorophenol	(2)	9.097	162	57396	1.257
72) Hexachloropropene	(2)	9.135	213	45963	1.236
74) Hexachlorobutadiene	(2)	9.204	225	41189	1.322
78) Quinoline	(2)	9.530	129	126222	1.234
79) Caprolactam	(2)	9.611	113	17966	1.242
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	53753	1.066
83) 4-Chloro-3-methylphenol	(2)	9.894	107	62932	1.243
85) Safrole	(2)	10.001	162	53579	1.244
86) 2-Methylnaphthalene	(2)	10.119	142	146464	1.373
87) 1-Methylnaphthalene	(2)	10.274	142	129490	1.323
88) Hexachlorocyclopentadiene	(3)	10.376	237	37419	1.167
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	71583	1.327
91) cis-Isosafrole	(3)	10.483	162	9941	0.212
93) 2,4,6-Trichlorophenol	(3)	10.584	196	41026	1.212
95) 2,4,5-Trichlorophenol	(3)	10.627	196	46179	1.299
96)$2-Fluorobiphenyl	(3)	10.739	172	329358	2.672
97) trans-Isosafrole	(3)	10.852	162	52729	1.044
98) 1,1'-Biphenyl	(3)	10.894	154	174850	1.376
99) 2-Chloronaphthalene	(3)	10.910	162	145782	1.350
101) 1-Chloronaphthalene	(3)	10.937	162	131882M	1.320
103) Diphenyl ether	(3)	11.076	170	92979	1.310
104) 2-Nitroaniline	(3)	11.092	138	38117	1.206
108) 1,4-Naphthoquinone	(3)	11.210	158	49542	1.161
109) 1,4-Dinitrobenzene	(3)	11.338	168	18246	1.086
110) Dimethylphthalate	(3)	11.424	163	157629	1.303
111) 1,3-Dinitrobenzene	(3)	11.451	168	20615	1.145
113) 2,6-Dinitrotoluene	(3)	11.504	165	31588	1.230
114) Acenaphthylene	(3)	11.574	152	198335	1.321
117) 3-Nitroaniline	(3)	11.745	138	33049	1.221
118)*Acenaphthene-d10	(3)	11.788	164	396437	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	140135	1.316
120) 2,4-Dinitrophenol	(3)	11.900	184	39202	2.538
121) 4-Nitrophenol	(3)	11.991	109	41795	2.190
122) Pentachlorobenzene	(3)	12.018	250	57166	1.300
124) Dibenzofuran	(3)	12.076	168	196118	1.326
123) 2,4-Dinitrotoluene	(3)	12.082	165	42300	1.188
126) 1-Naphthylamine	(3)	12.183	143	130295	1.238
127) 2,3,4,6-Tetrachlorophenol	(3)	12.242	232	34083	1.232
128) 2-Naphthylamine	(3)	12.290	143	132645	1.330
129) Diethylphthalate	(3)	12.424	149	151801	1.275
130) Thionazin	(3)	12.515	107	25360	1.251
131) Fluorene	(3)	12.520	166	151329	1.310
133) 5-Nitro-o-toluidine	(3)	12.542	152	38984	1.239
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	77457	1.353
134) 4-Nitroaniline	(3)	12.547	138	35082	1.282
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	42223	2.065
136) N-Nitrosodiphenylamine	(4)	12.686	169	124158	1.313
137) NDPA as diphenylamine	(4)	12.686	169	124158	1.313
139) 1,2-Diphenylhydrazine	(4)	12.734	77	174399	1.322
140)$2,4,6-Tribromophenol	(3)	12.820	330	34436	2.513
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	29747M	1.326
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	13223	1.050
145) Diallate (peak 1)	(4)	13.061	86	63739	1.067
146) Phorate	(4)	13.071	75	108609	1.284
147) Phenacetin	(4)	13.087	108	74841	1.253
148) 4-Bromophenyl-phenylether	(4)	13.152	248	43367	1.373
149) Diallate (peak 2)	(4)	13.173	86	9857M	0.208
150) Hexachlorobenzene	(4)	13.200	284	43261	1.334
152) Dimethoate	(4)	13.275	87	58729	1.154
153) Atrazine	(4)	13.376	200	43456	1.359
154) Pentachlorophenol	(4)	13.462	266	21869	1.101
156) Pentachloronitrobenzene	(4)	13.478	237	18238	1.178
155) 4-Aminobiphenyl	(4)	13.483	169	139727	1.298
157) Pronamide	(4)	13.574	173	65695	1.232
158)*Phenanthrene-d10	(4)	13.713	188	772431	5.000
159) Dinoseb	(4)	13.724	211	32130	1.004
160) Phenanthrene	(4)	13.745	178	226892	1.332
162) Anthracene	(4)	13.815	178	227274	1.331
168) Carbazole	(4)	14.039	167	192011	1.270
169) Methyl parathion	(4)	14.243	109	41665	1.074

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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.553	149	239209	1.175
172) Parathion	(4)	14.804	109	25843	1.029
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	16127	0.800
227) Total PAHs	(6)			3679438	23.617
174) Octachlorostyrene	(4)	15.157	308	15870	1.308
176) Isodrin	(4)	15.221	193	28283	1.340
178) Fluoranthene	(4)	15.446	202	247085	1.290
179) Benzidine	(5)	15.681	184	393183	3.330
180)*Pyrene-d10	(5)	15.772	212	801267	5.000
182) Pyrene	(5)	15.799	202	267607	1.313
184)$Terphenyl-d14	(5)	16.088	244	339478	2.642
187) p-Dimethylaminoazobenzene	(5)	16.323	225	34249	1.101
190) Chlorobenzilate	(5)	16.414	139	72078	1.187
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	130271	1.014
193) Butylbenzylphthalate	(5)	16.954	149	108162	1.142
196) 2-Acetylaminofluorene	(5)	17.323	181	76800	1.025
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	72729	1.110
200) Benzo(a)anthracene	(5)	17.858	228	235153	1.291
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	41420	1.041
201) Chrysene	(5)	17.922	228	233997	1.328
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	150085	1.122
208) 6-Methylchrysene	(5)	18.741	242	151769	1.224
210) Di-n-octylphthalate	(6)	19.212	149	241010	1.054
211) Benzo(b)fluoranthene	(6)	19.741	252	231955	1.301
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	85700	1.165
213) Benzo(k)fluoranthene	(6)	19.789	252	230033M	1.340
216) Benzo(a)pyrene	(6)	20.281	252	207318	1.292
218)*Perylene-d12	(6)	20.378	264	727312	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	93704	1.201
222) Dibenz(a,h)acridine	(6)	21.683	279	166856	1.224
223) Dibenz(a,j)acridine	(6)	21.757	279	165710	1.196
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	187482M	1.230
225) Dibenz(a,h)anthracene	(6)	22.062	278	201907	1.304
226) Benzo(g,h,i)perylene	(6)	22.442	276	199159	1.265

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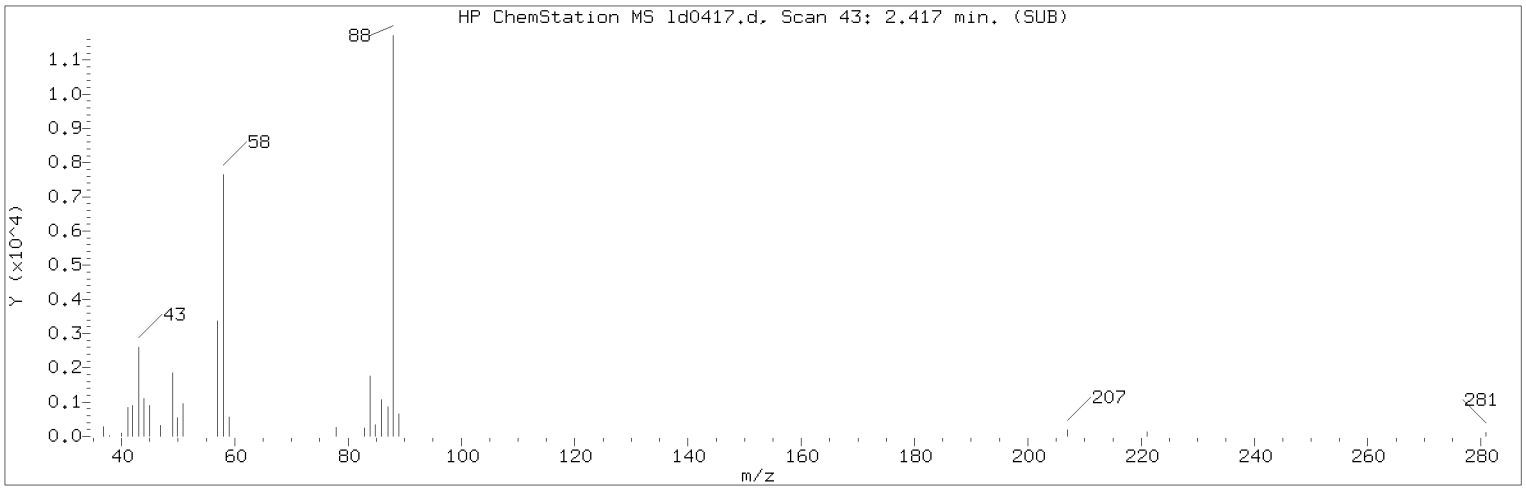
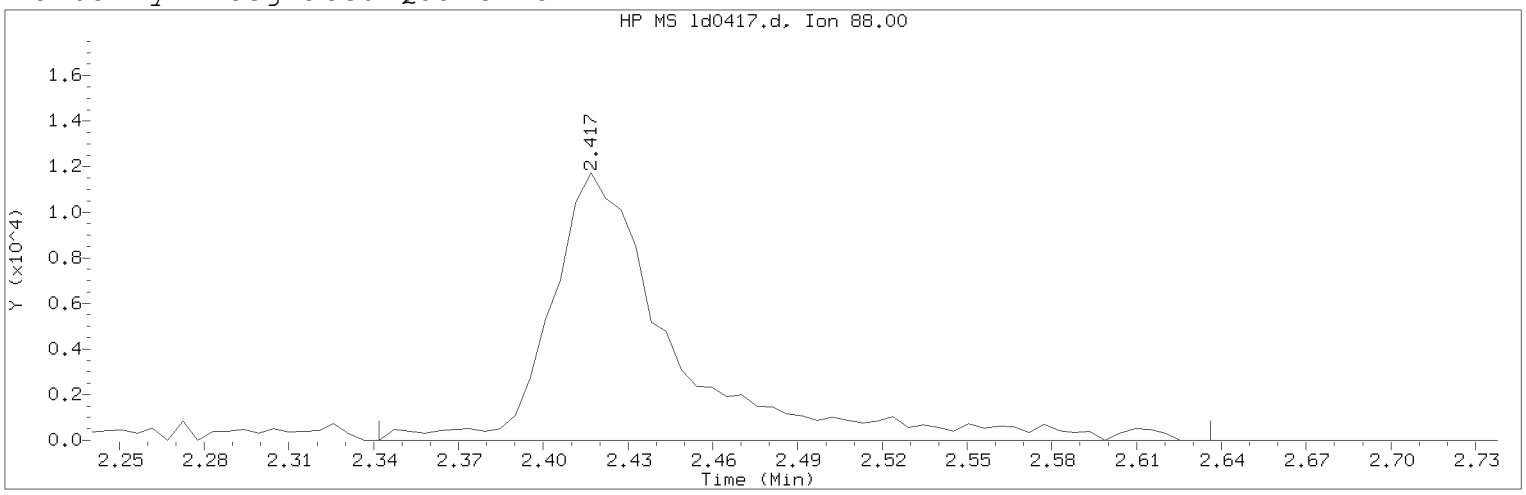
Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

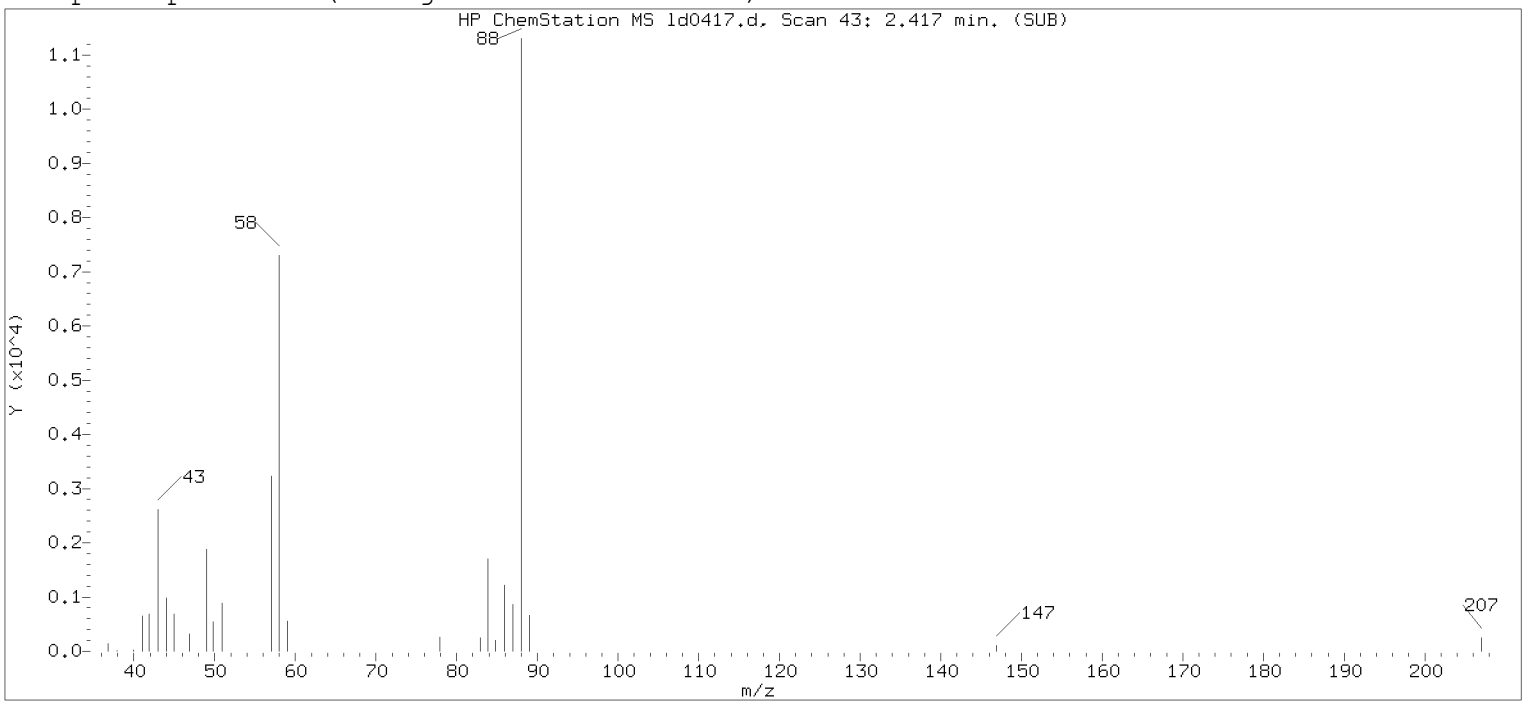
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 43
Retention Time (minutes) : 2.417
Quant Ion : 88.00
Area (flag) : 35833M
On-Column Amount (ng/ul) : 1.3594
Integration start scan : 28 Integration stop scan: 83
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

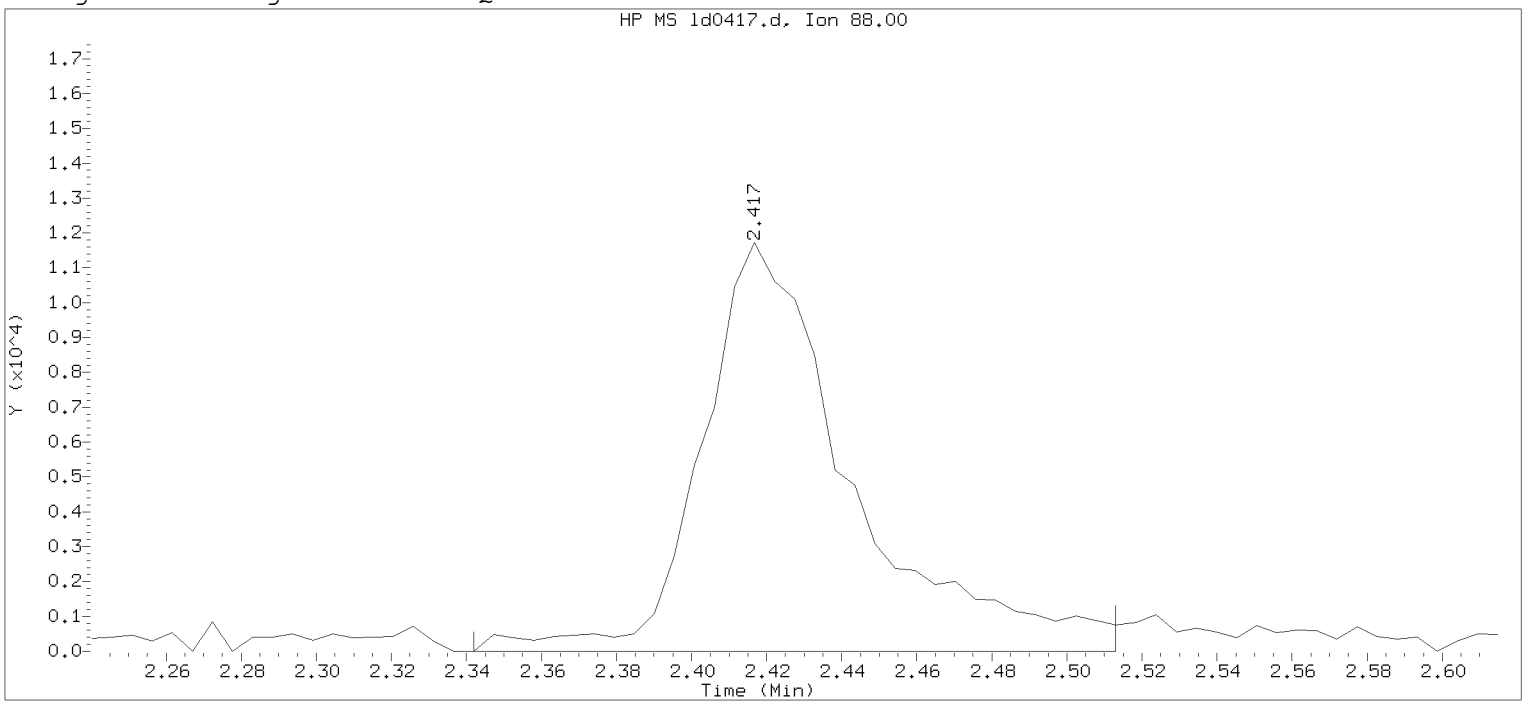
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

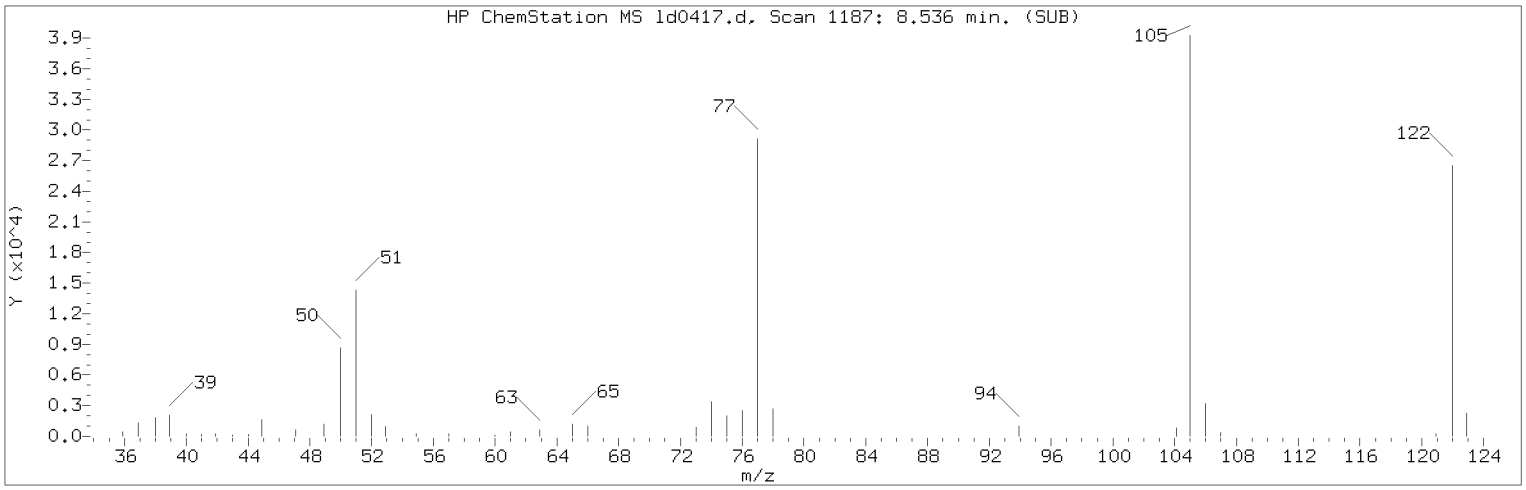
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

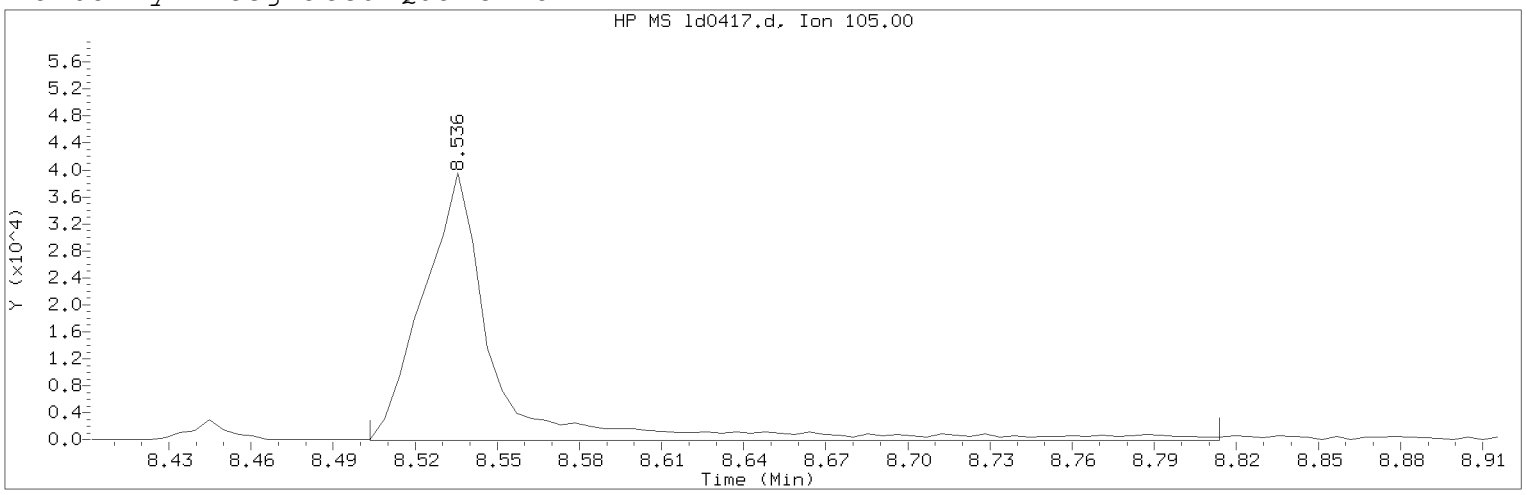
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 43		
Retention Time (minutes)	: 2.417		
Quant Ion	: 88.00		
Area	: 32404		
On-column Amount (ng/ul)	: 1.2453		
Integration start scan	: 28	Integration stop scan:	60
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user name: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

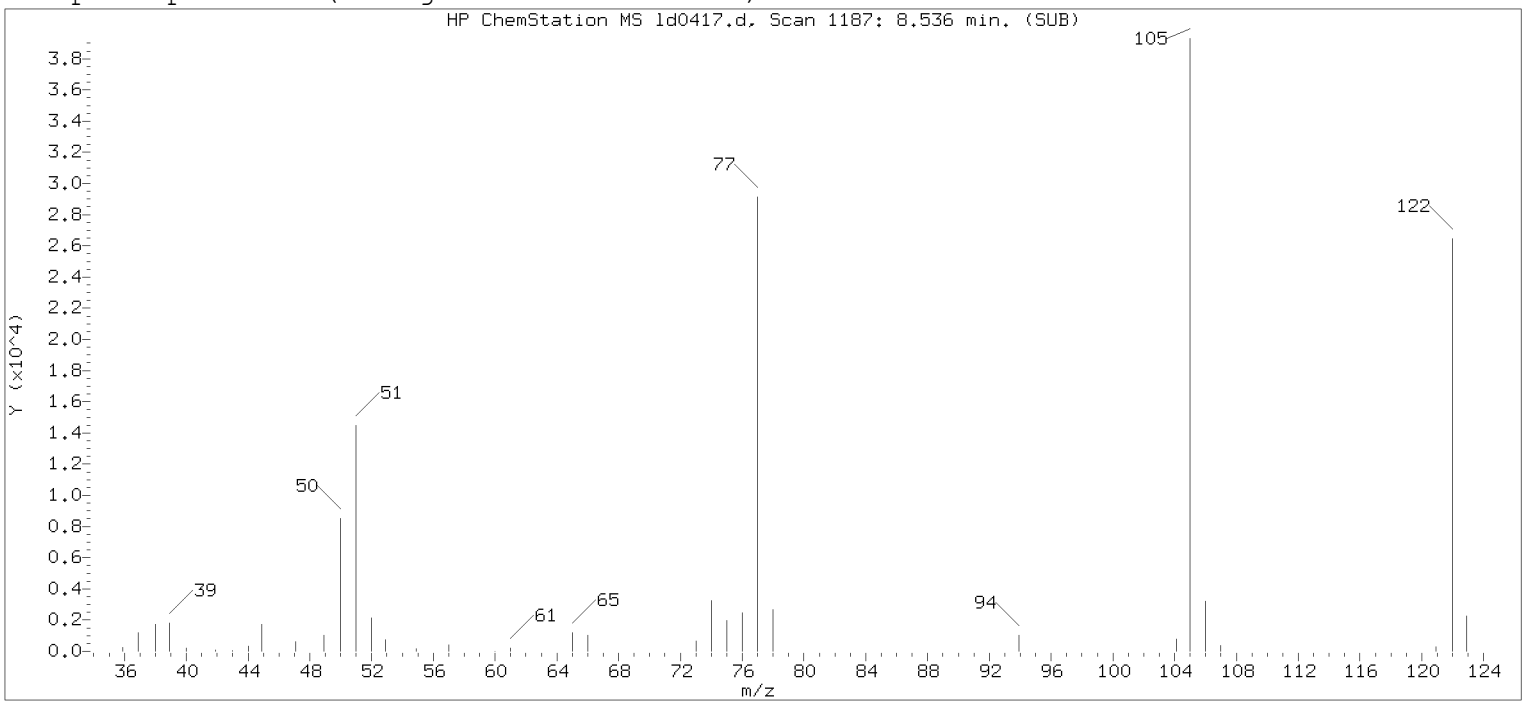
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1187
Retention Time (minutes) : 8.536
Quant Ion : 105.00
Area (flag) : 73947M
On-Column Amount (ng/ul) : 4.2984
Integration start scan : 1180 Integration stop scan: 1238
Y at integration start : -62 Y at integration end: -62

Reason for manual integration: improper integration

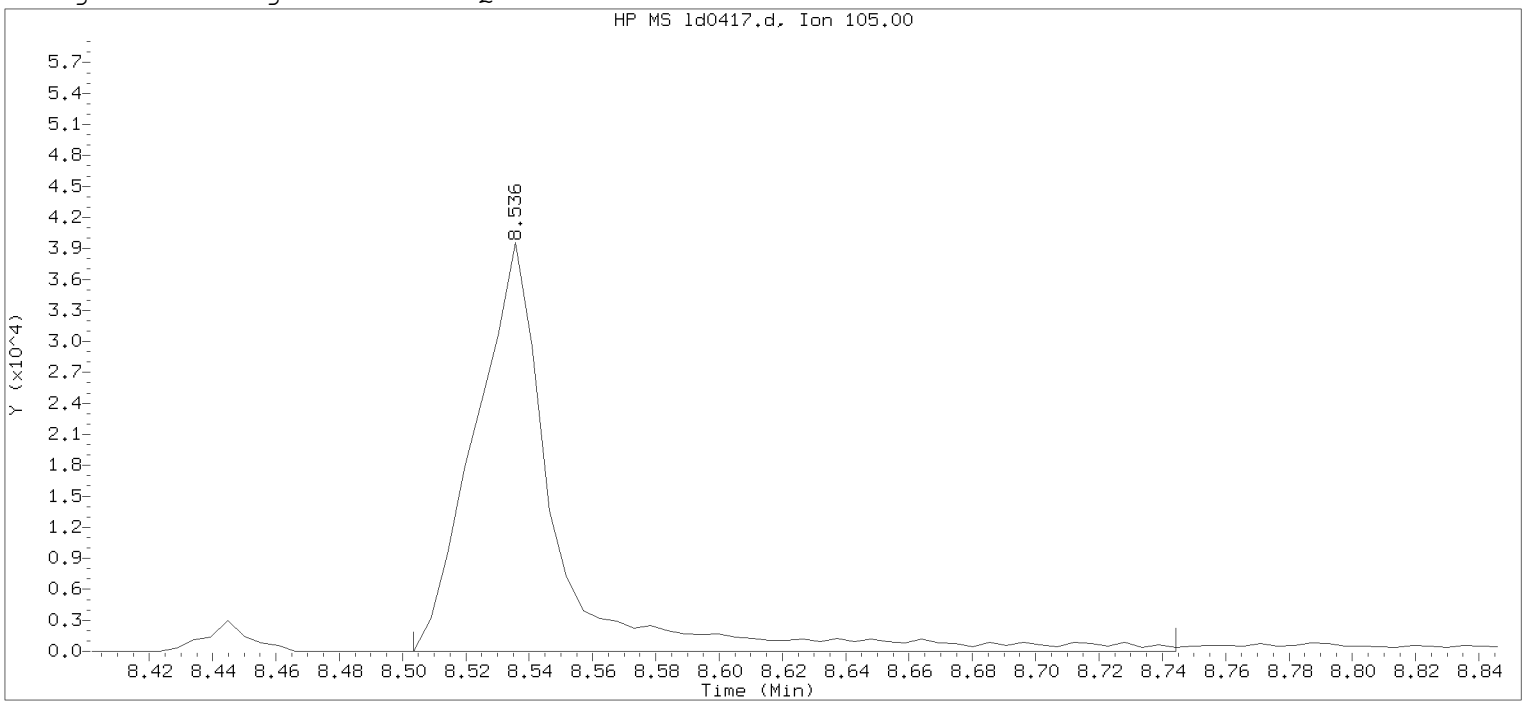
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

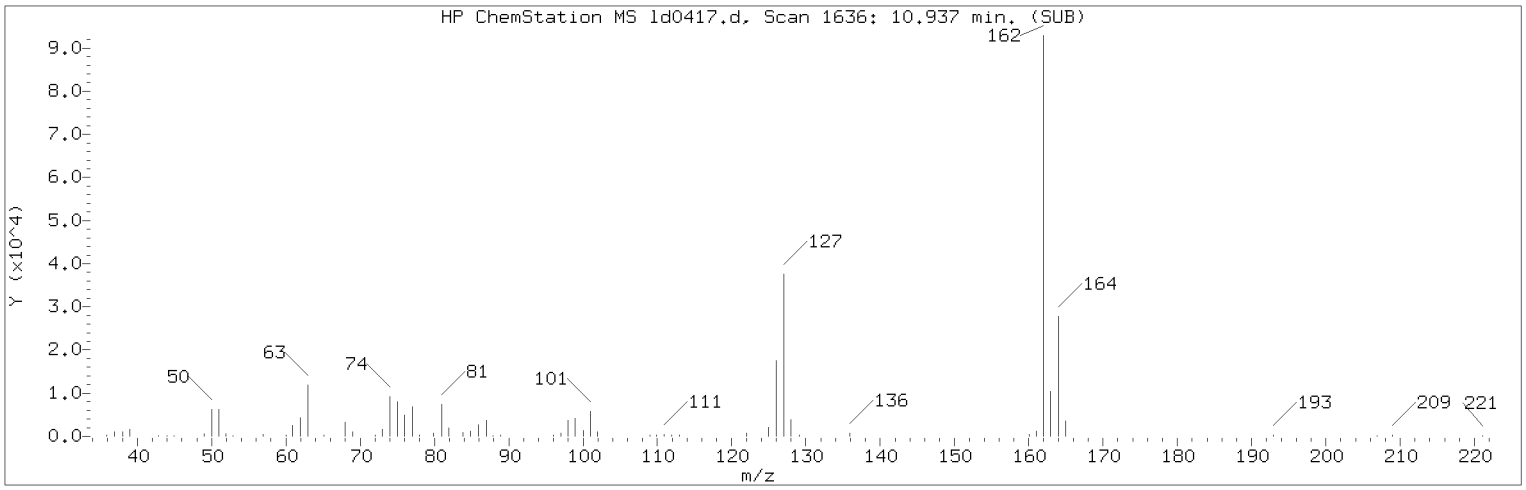
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

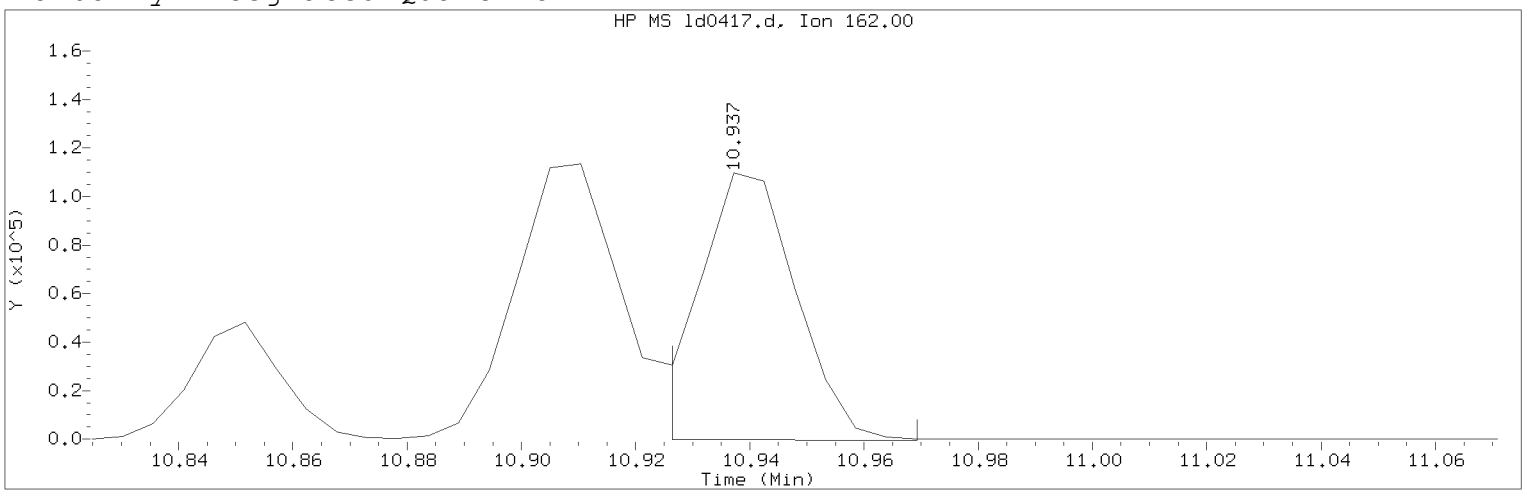
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1187		
Retention Time (minutes)	: 8.536		
Quant Ion	: 105.00		
Area	: 70404		
On-column Amount (ng/ul)	: 4.6564		
Integration start scan	: 1180	Integration stop scan:	1225
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

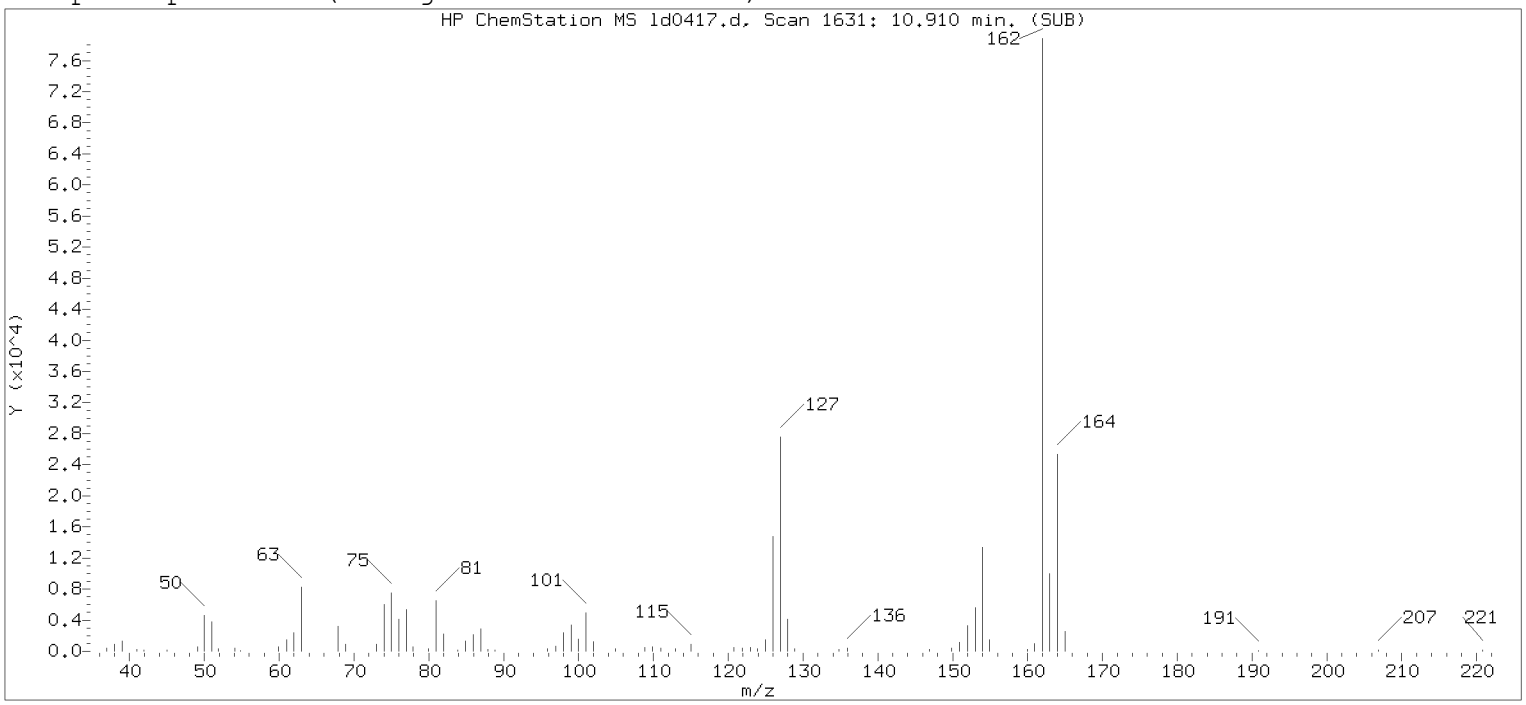
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 131882M
On-Column Amount (ng/ul) : 1.3199
Integration start scan : 1633 Integration stop scan: 1641
Y at integration start : -283 Y at integration end: -441

Reason for manual integration: improper integration

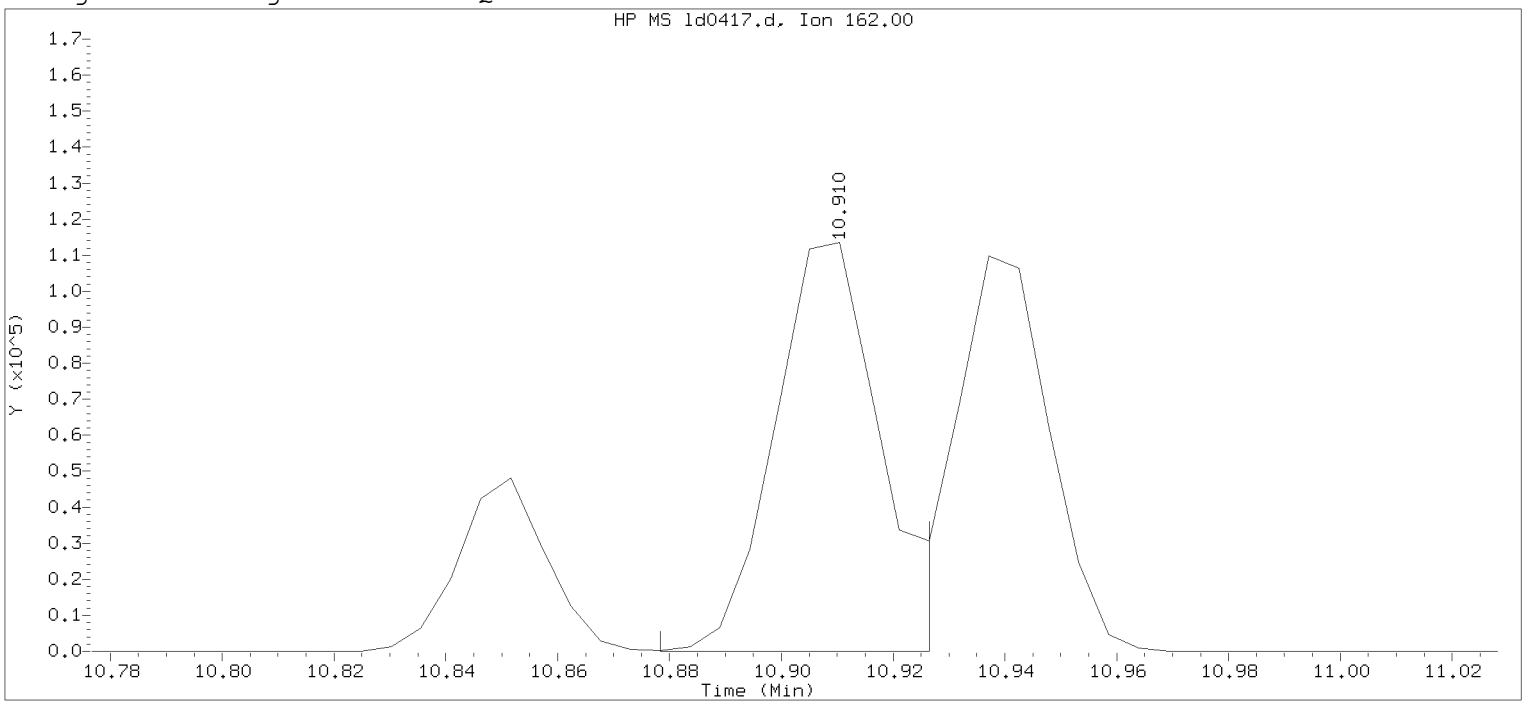
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

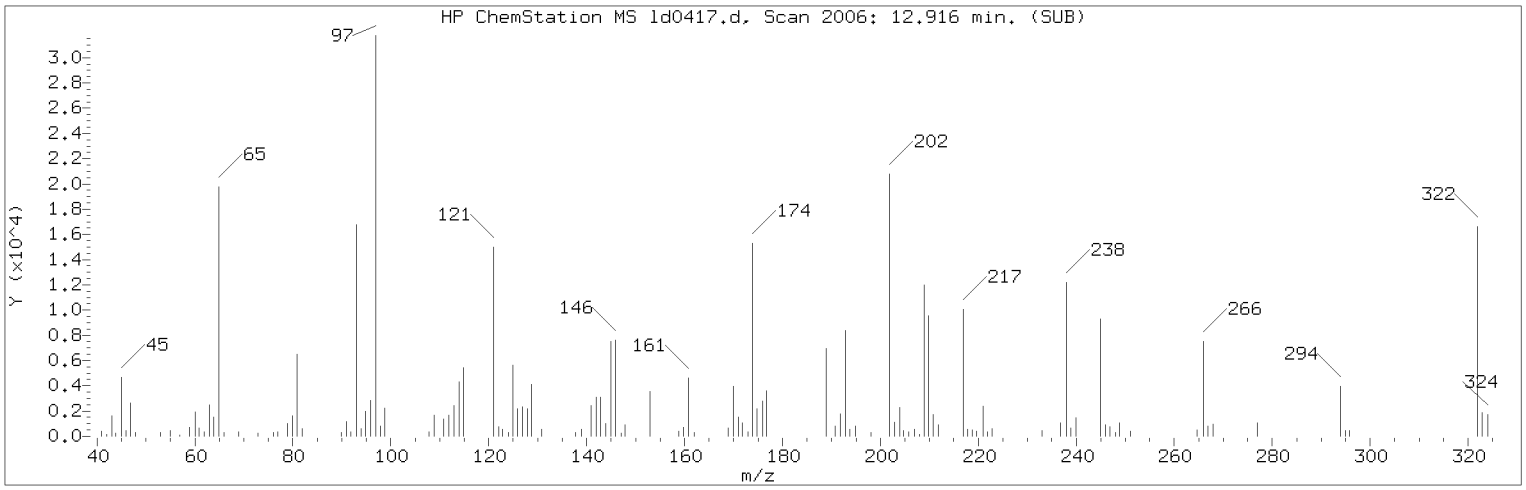
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

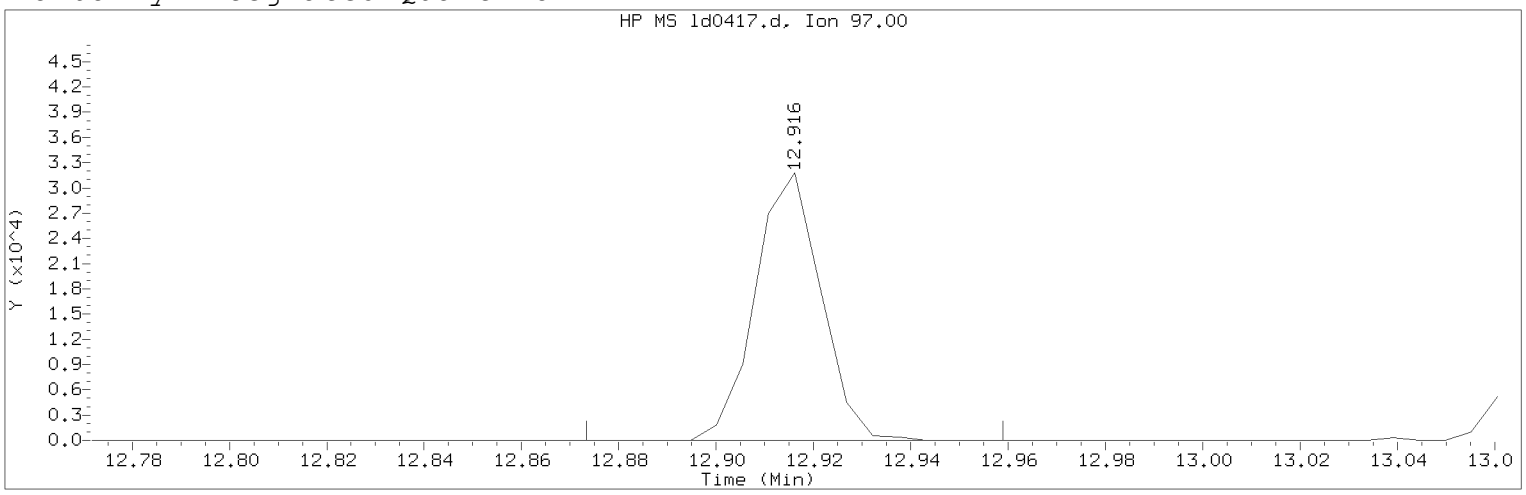
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1631		
Retention Time (minutes)	: 10.910		
Quant Ion	: 162.00		
Area	: 145782		
On-column Amount (ng/ul)	: 1.4592		
Integration start scan	: 1624	Integration stop scan:	1633
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

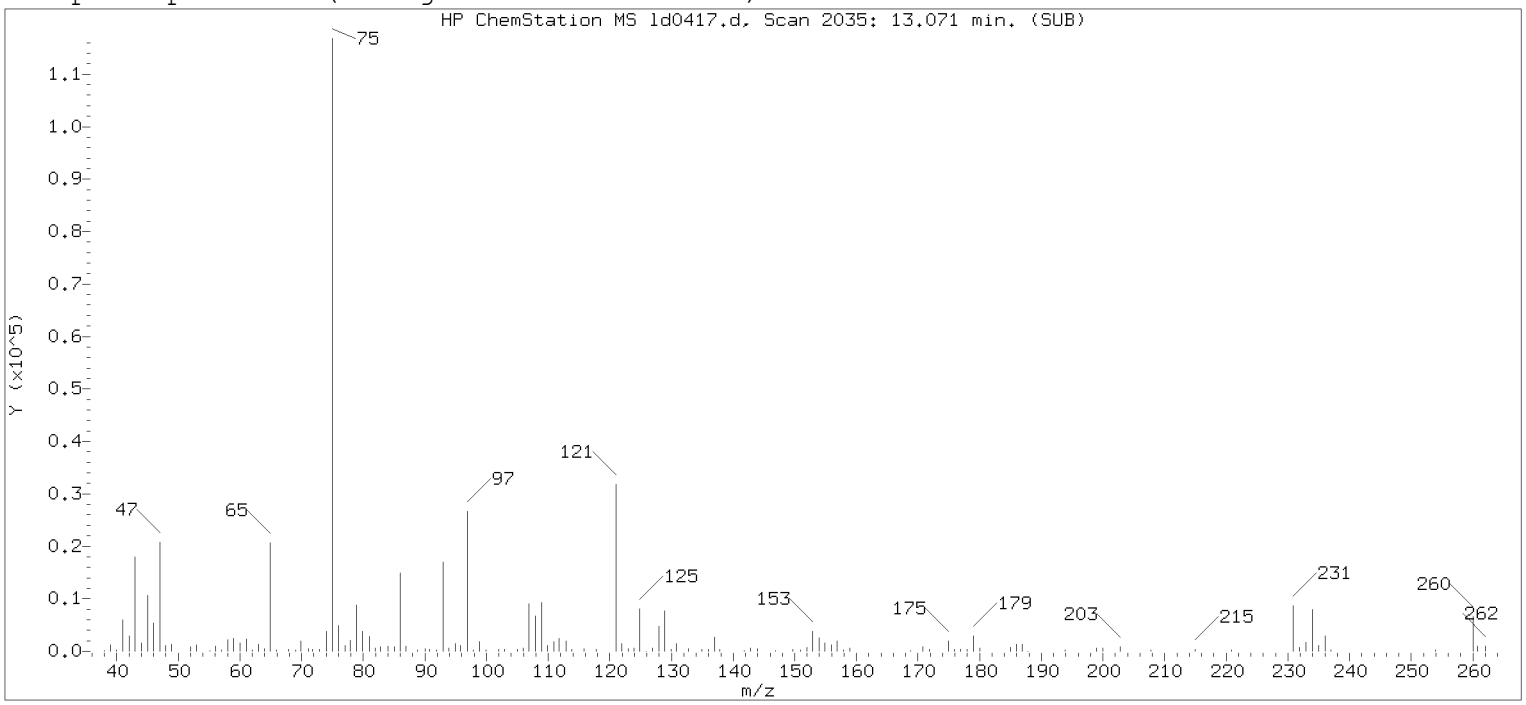
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 29747M
On-Column Amount (ng/ul) : 1.3260
Integration start scan : 1997 Integration stop scan: 2013
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

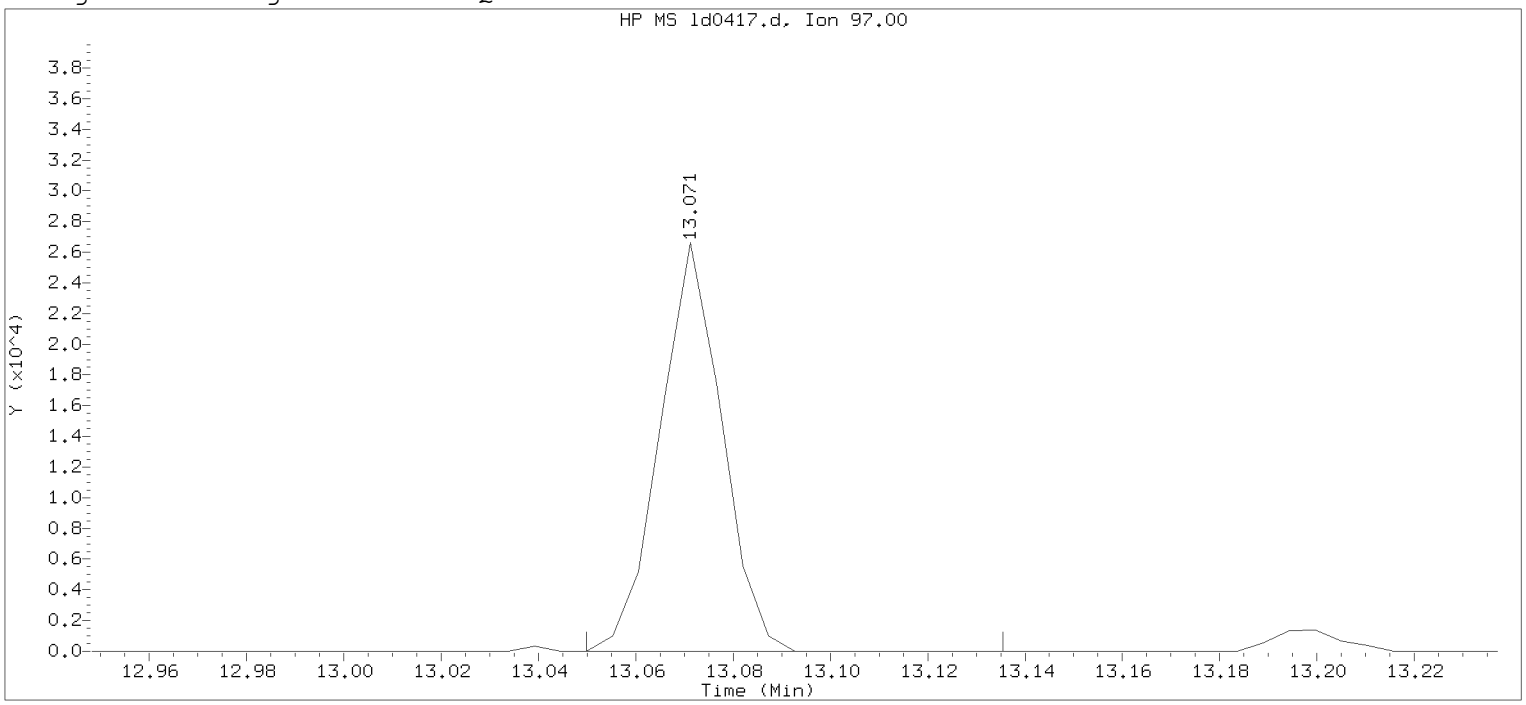
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

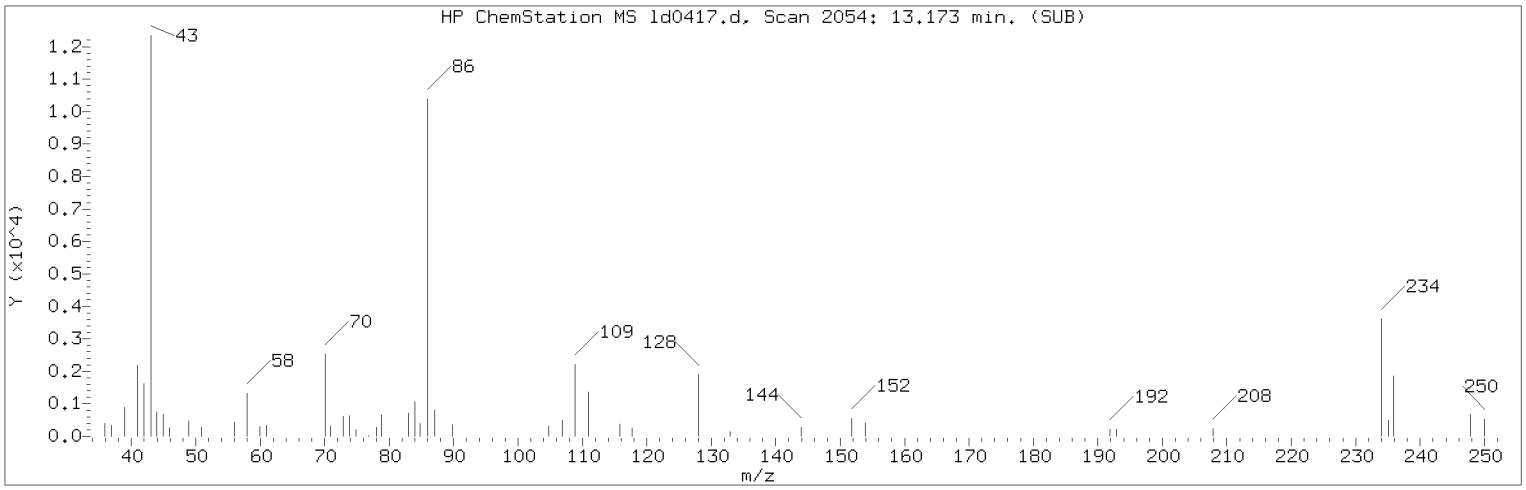
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

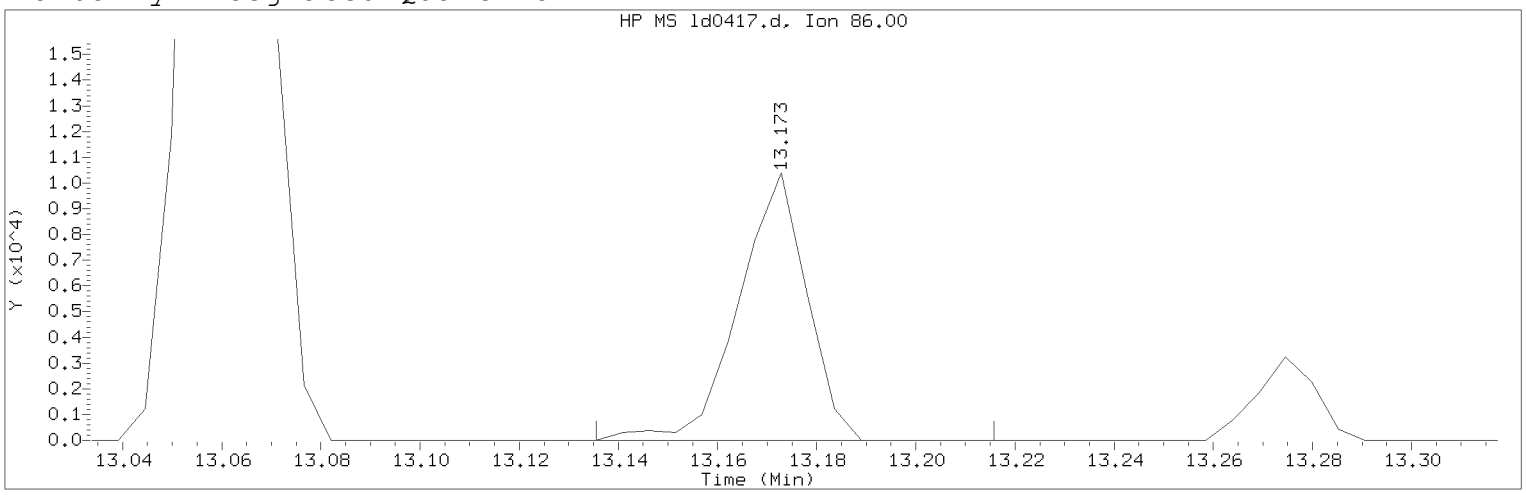
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 23553		
On-column Amount (ng/ul)	: 1.0002		
Integration start scan	: 2030	Integration stop scan:	2046
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user analyst

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

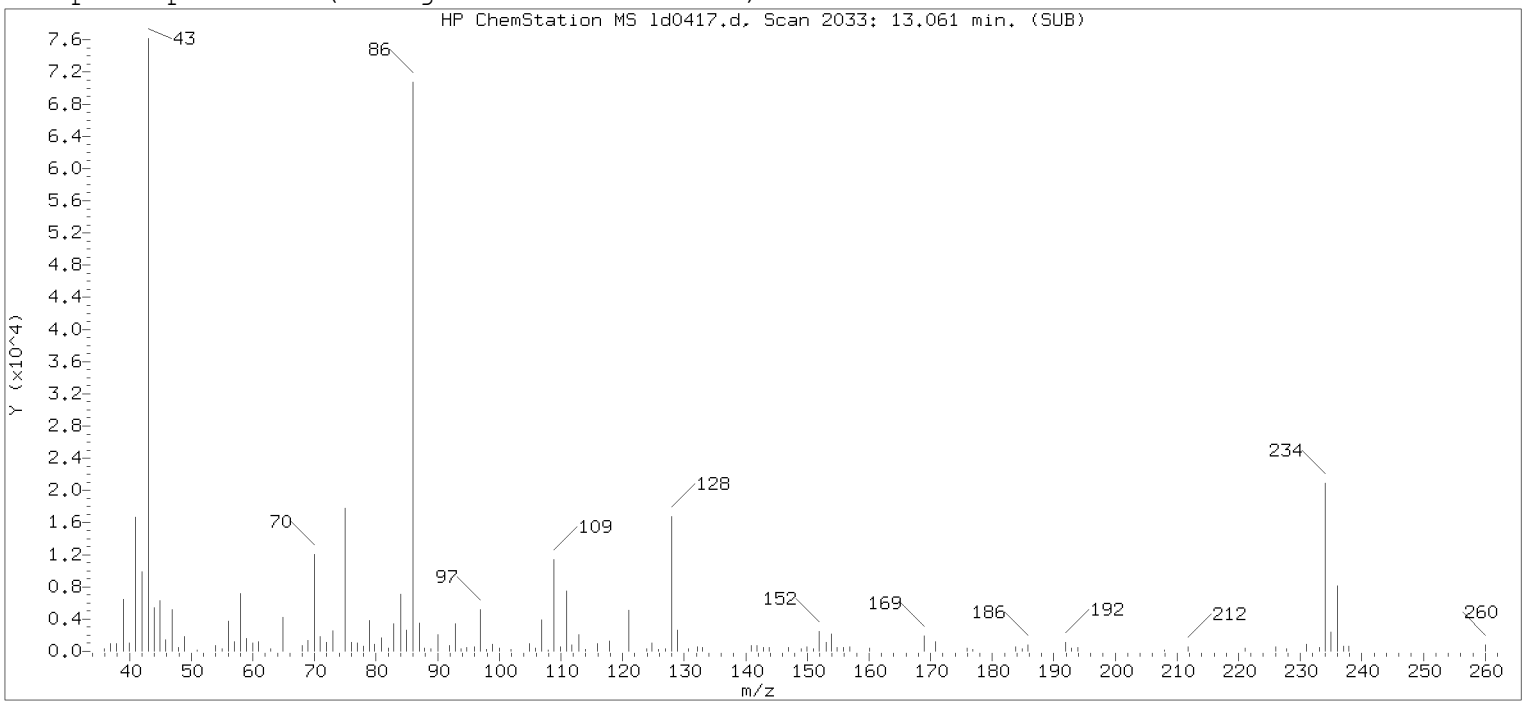
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 9857M
On-Column Amount (ng/ul) : 0.2083
Integration start scan : 2046 Integration stop scan: 2061
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

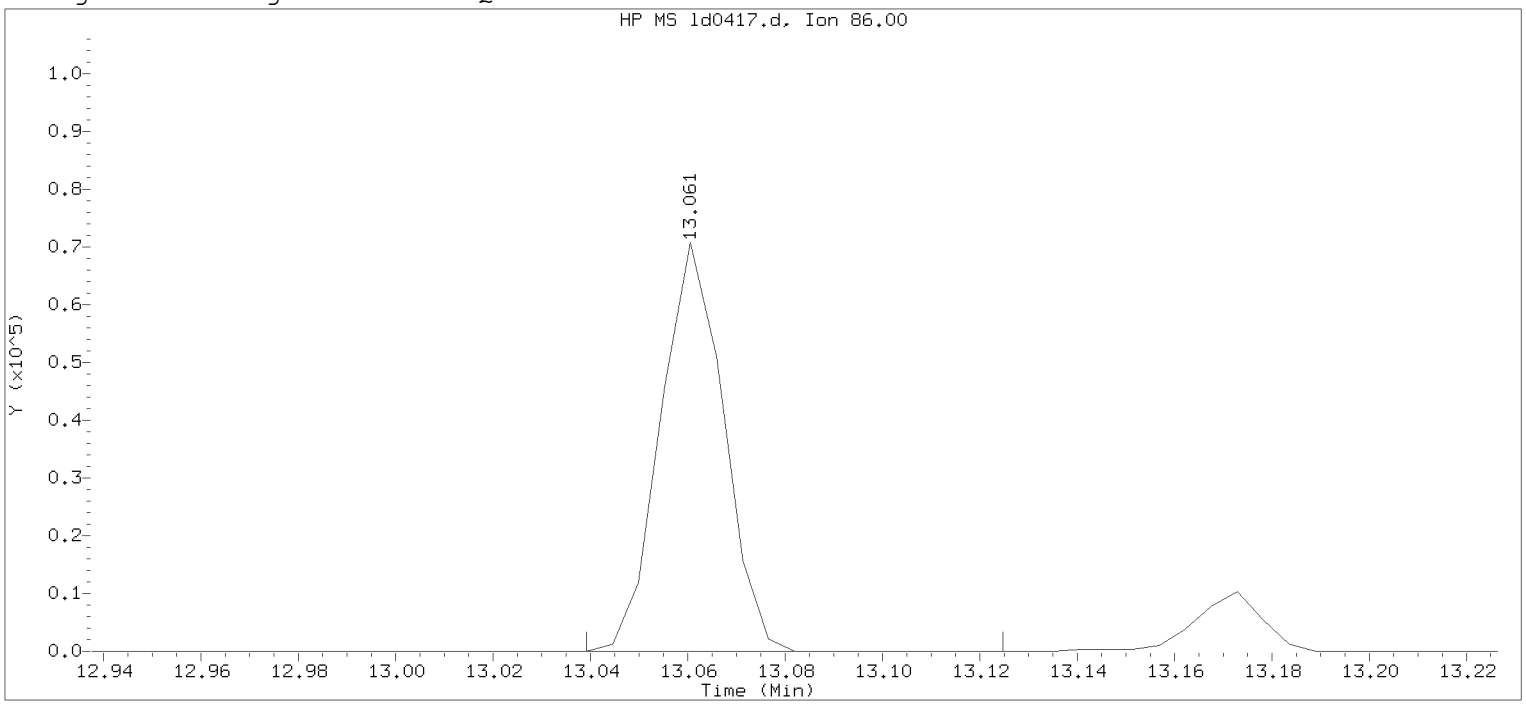
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

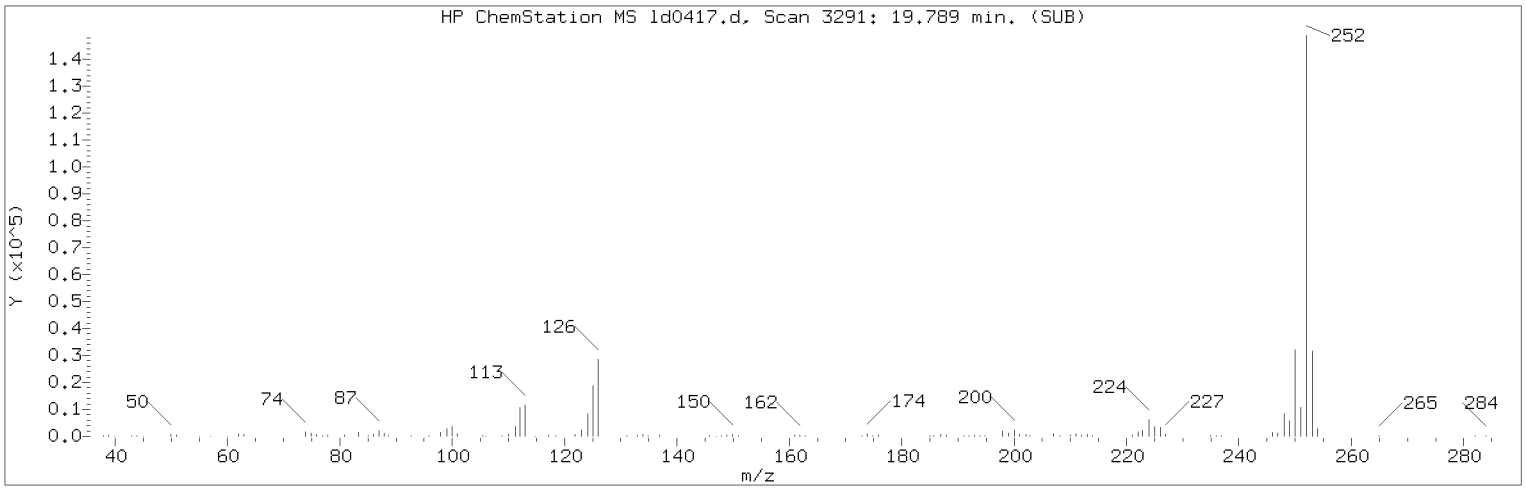
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

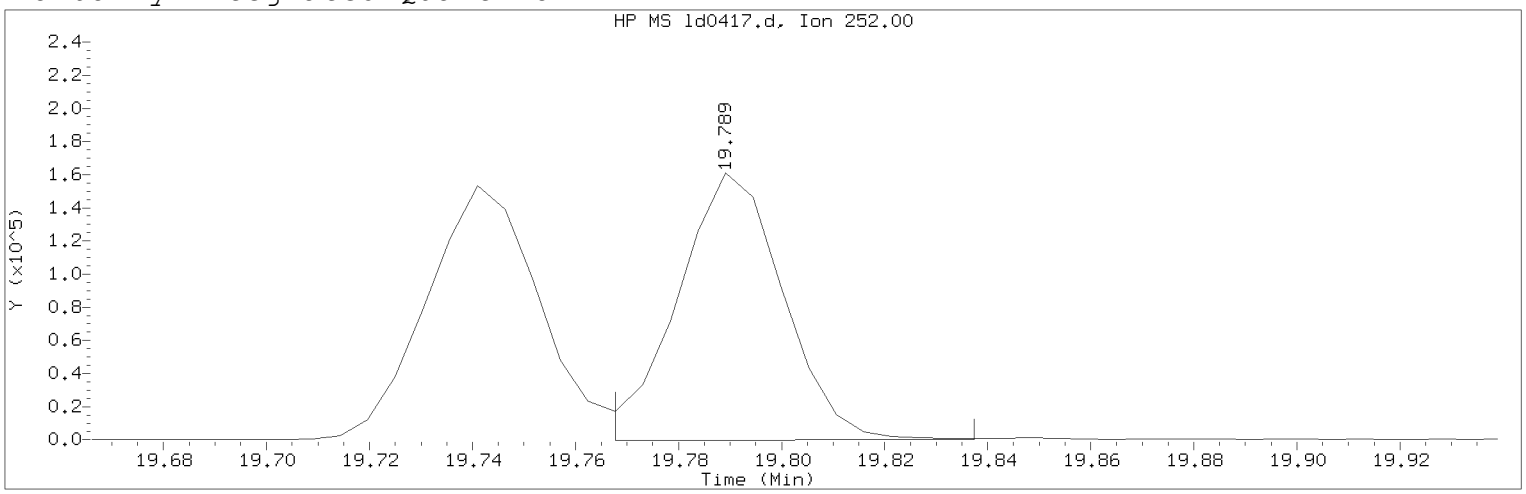
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 63739		
On-column Amount (ng/ul)	: 1.2874		
Integration start scan	: 2028	Integration stop scan:	2044
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user name: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

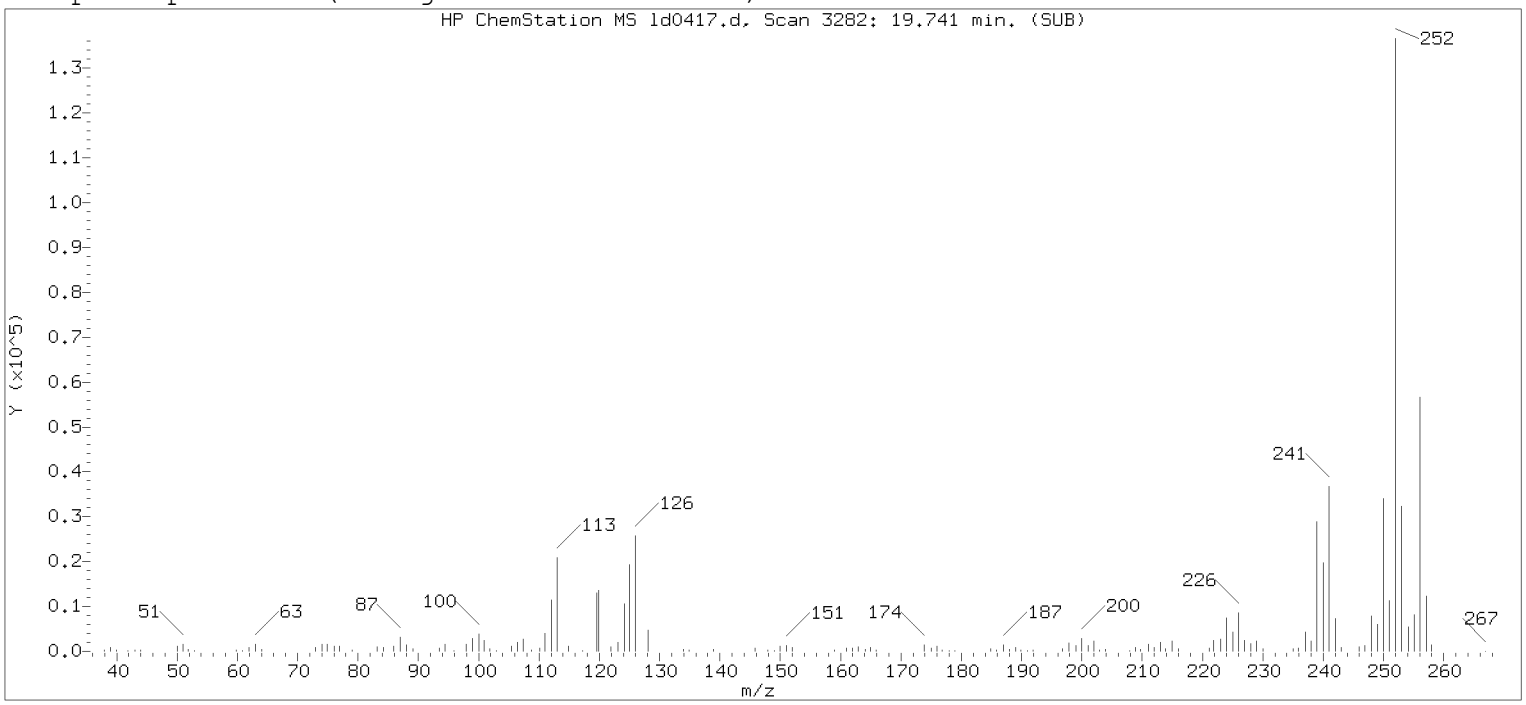
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 230033M
On-Column Amount (ng/ul) : 1.3397
Integration start scan : 3286 Integration stop scan: 3299
Y at integration start : -248 Y at integration end: 229

Reason for manual integration: improper integration

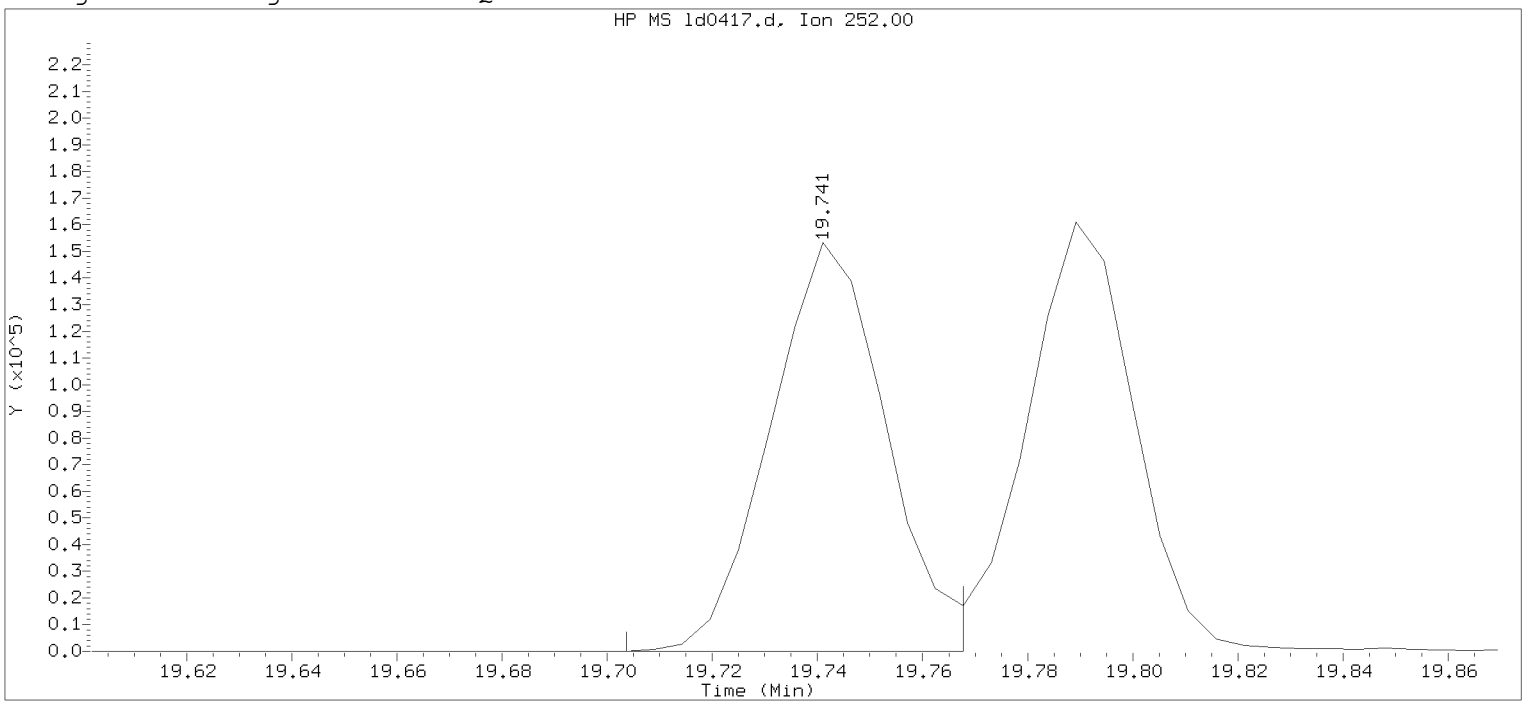
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

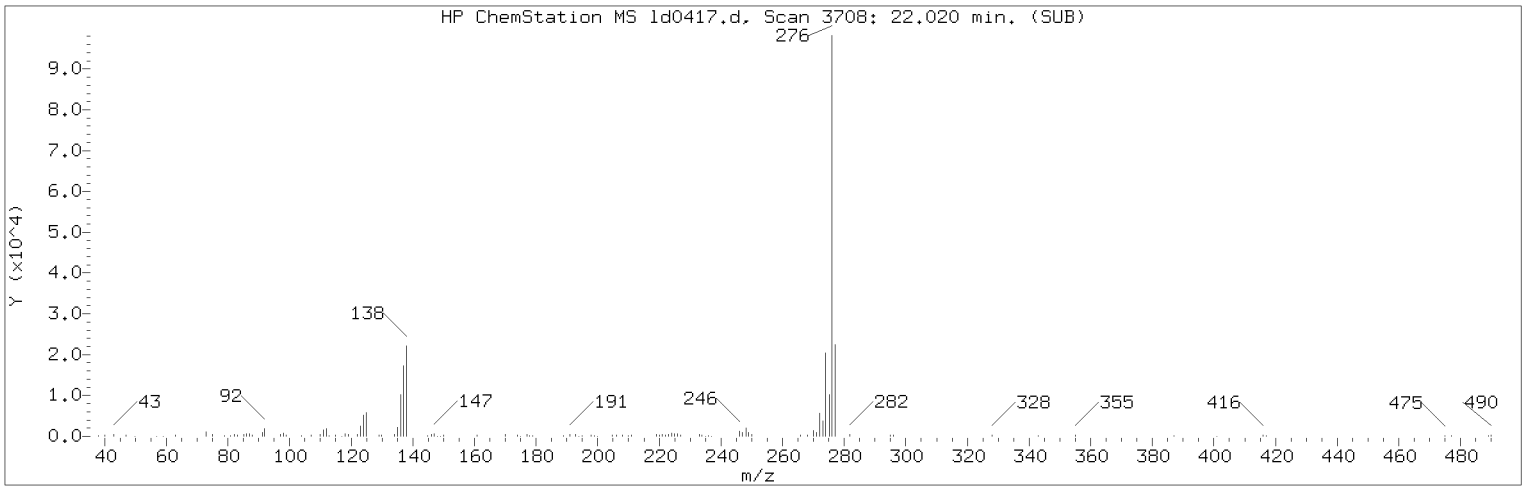
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

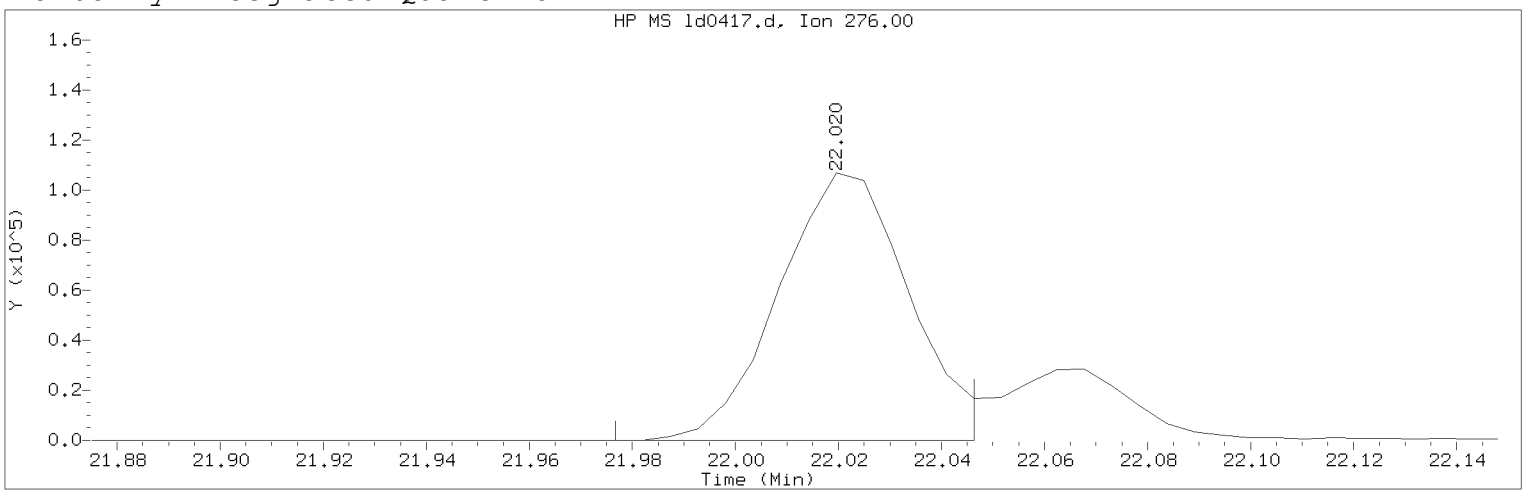
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 231955		
On-column Amount (ng/ul)	: 1.2982		
Integration start scan	: 3274	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

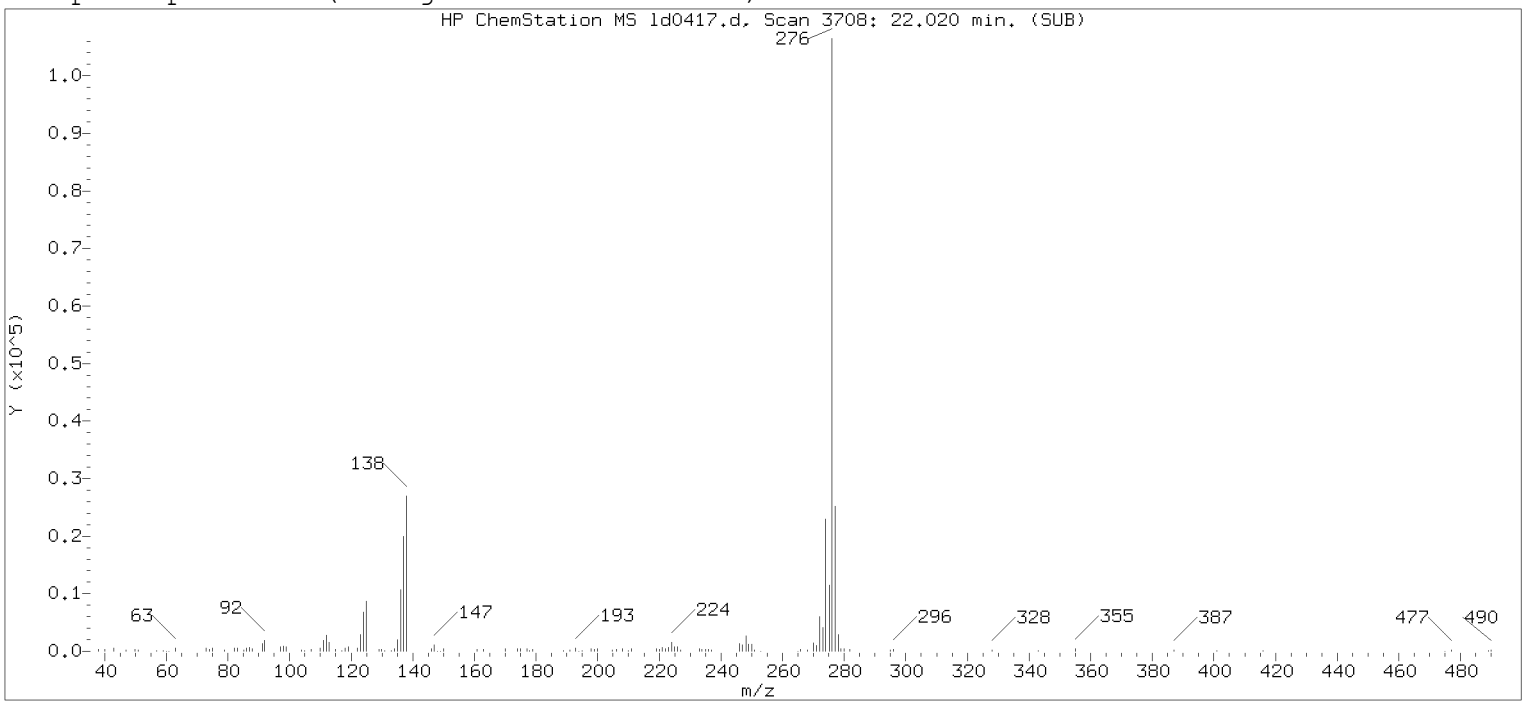
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3708
Retention Time (minutes) : 22.020
Quant Ion : 276.00
Area (flag) : 187482M
On-Column Amount (ng/ul) : 1.2305
Integration start scan : 3699 Integration stop scan: 3712
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

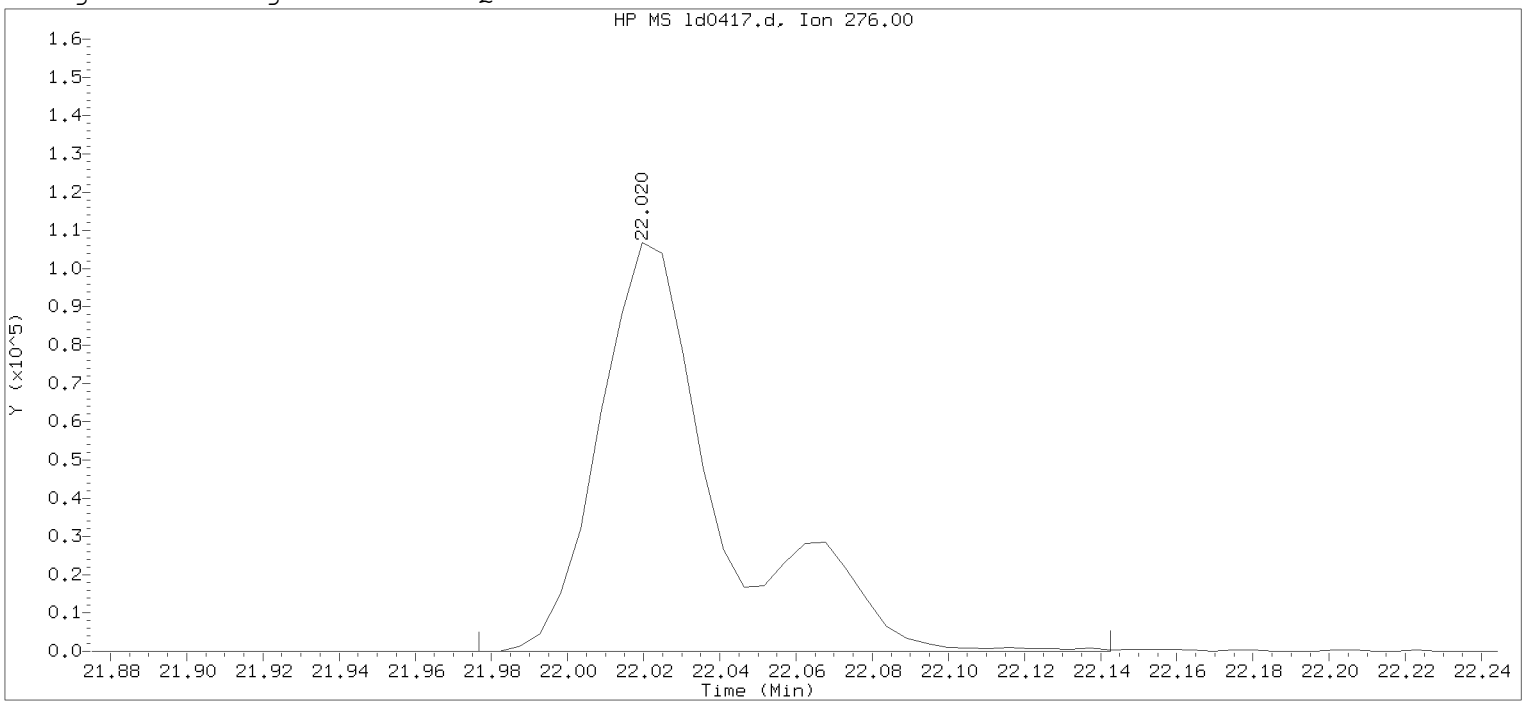
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3708		
Retention Time (minutes)	: 22.020		
Quant Ion	: 276.00		
Area	: 235976		
On-column Amount (ng/ul)	: 1.4677		
Integration start scan	: 3699	Integration stop scan:	3730
Y at integration start	: 0	Y at integration end:	0

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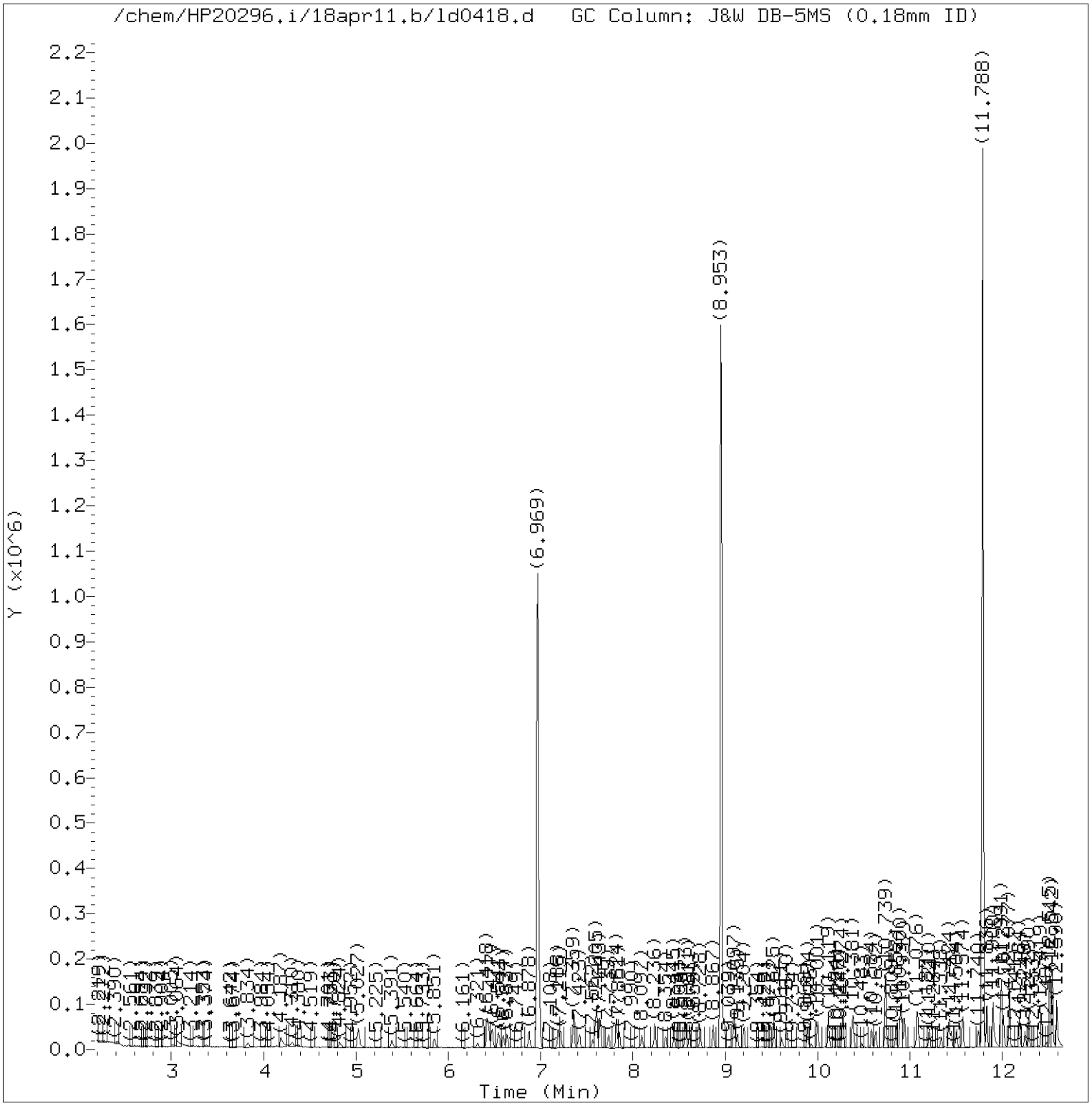
Target 3.5 esignature user ART ana [illegible]



Total Ion Chromatogram (TIC)

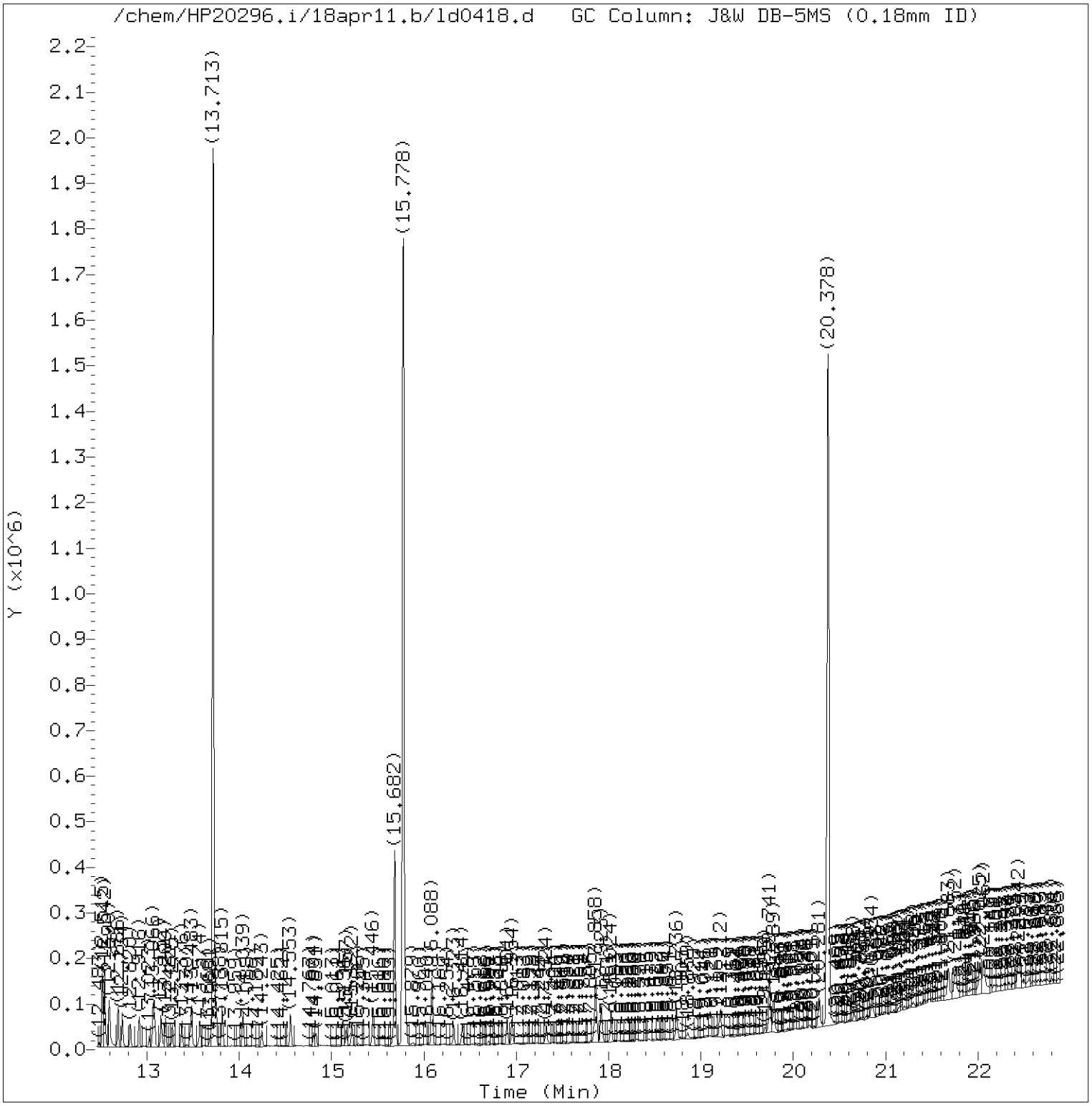
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.433	88	5492M	0.189
5) N-Nitrosodimethylamine	(1)	3.021	74	7404M	0.167
6) Pyridine	(1)	3.085	79	16320M	0.206
8) 2-Picoline	(1)	4.187	93	14709M	0.184
9) N-Nitrosomethylethylamine	(1)	4.380	88	6058M	0.189
10) Methyl methanesulfonate	(1)	4.824	80	6375M	0.164
12)$2-Fluorophenol	(1)	5.027	112	22122	0.363
14) N-Nitrosodiethylamine	(1)	5.391	102	5266	0.177
43) Total Cresols	(1)			24174	0.399
16) Ethyl methanesulfonate	(1)	5.851	109	7115	0.220
17) Benzaldehyde	(1)	6.311	77	3152	0.052
18)$Phenol-d6	(1)	6.418	99	30382	0.380
19) Phenol	(1)	6.439	94	17715	0.192
20) Aniline	(1)	6.477	93	19290	0.182
21) a-methylstyrene	(1)	6.551	118	3554	0.153
23) bis(2-Chloroethyl)ether	(1)	6.594	93	12839	0.187
24) 2-Chlorophenol	(1)	6.637	128	10778	0.180
25) 1,3-Dichlorobenzene	(1)	6.872	146	11832	0.175
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	222764	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	12308	0.180
28) Benzyl alcohol	(1)	7.188	108	7963	0.200
29) 1,2-Dichlorobenzene	(1)	7.220	146	12087	0.186
31) Indene	(1)	7.354	115	15685	0.165
32) 2-Methylphenol	(1)	7.364	108	11749	0.199
100) Isosafrole	(3)			11242	0.205
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	19439	0.200
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	19439	0.200
36) N-Nitrosopyrrolidine	(1)	7.562	100	6350	0.197
37) Acetophenone	(1)	7.594	105	13010	0.145
38) 4-Methylphenol	(1)	7.605	108	12425	0.200
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	10515	0.205
40) N-Nitrosomorpholine	(1)	7.637	56	9472	0.221
41) o-Toluidine	(1)	7.648	106	20130	0.193
44) Hexachloroethane	(1)	7.733	117	4915	0.169
45)$Nitrobenzene-d5	(2)	7.824	82	28860	0.392
46) Nitrobenzene	(2)	7.851	77	14349	0.191
125) 2,4_2,6-Dinitrotoluenes	(3)			11938	0.357
50) N-Nitrosopiperidine	(2)	8.097	114	6424	0.208
52) Isophorone	(2)	8.236	82	26625	0.203
53) 2-Nitrophenol	(2)	8.354	139	5430	0.179

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	13003	0.200
58) Benzoic acid	(2)	8.546	105	1809M	2.685
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	6611	0.205
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	18216	0.213
62) 2,4-Dichlorophenol	(2)	8.728	162	9617	0.190
151) Diallate trans/cis	(4)			13376	0.213
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	11103	0.197
68)*Naphthalene-d8	(2)	8.953	136	854280	5.000
69) Naphthalene	(2)	8.990	128	36359	0.206
70) 4-Chloroaniline	(2)	9.092	127	15074	0.209
71) 2,6-Dichlorophenol	(2)	9.097	162	10173	0.203
72) Hexachloropropene	(2)	9.135	213	6774	0.166
74) Hexachlorobutadiene	(2)	9.204	225	6403	0.187
78) Quinoline	(2)	9.525	129	24382	0.217
79) Caprolactam	(2)	9.611	113	2788	0.175
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	10054	0.181
83) 4-Chloro-3-methylphenol	(2)	9.894	107	10688	0.192
85) Safrole	(2)	10.001	162	9448	0.200
86) 2-Methylnaphthalene	(2)	10.119	142	24403	0.208
87) 1-Methylnaphthalene	(2)	10.274	142	23464	0.218
88) Hexachlorocyclopentadiene	(3)	10.376	237	6282	0.179
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	12972	0.219
91) cis-Isosafrole	(3)	10.483	162	1755	0.034
93) 2,4,6-Trichlorophenol	(3)	10.584	196	7032	0.189
95) 2,4,5-Trichlorophenol	(3)	10.627	196	6943	0.178
96)$2-Fluorobiphenyl	(3)	10.739	172	59491	0.440
97) trans-Isosafrole	(3)	10.852	162	9487	0.171
98) 1,1'-Biphenyl	(3)	10.894	154	23059	0.165
99) 2-Chloronaphthalene	(3)	10.905	162	24485	0.207
101) 1-Chloronaphthalene	(3)	10.937	162	25748M	0.235
103) Diphenyl ether	(3)	11.076	170	17357	0.223
104) 2-Nitroaniline	(3)	11.087	138	6857	0.198
108) 1,4-Naphthoquinone	(3)	11.210	158	7732	0.165
109) 1,4-Dinitrobenzene	(3)	11.338	168	3262	0.177
110) Dimethylphthalate	(3)	11.424	163	28591	0.215
111) 1,3-Dinitrobenzene	(3)	11.451	168	3118	0.158
113) 2,6-Dinitrotoluene	(3)	11.504	165	5195	0.184
114) Acenaphthylene	(3)	11.574	152	34694	0.211
117) 3-Nitroaniline	(3)	11.745	138	5178	0.174
118)*Acenaphthene-d10	(3)	11.788	164	434849	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	26641	0.228
120) 2,4-Dinitrophenol	(3)	11.900	184	15746	0.929
121) 4-Nitrophenol	(3)	11.991	109	15880	0.759
122) Pentachlorobenzene	(3)	12.018	250	10761	0.223
124) Dibenzofuran	(3)	12.077	168	37074	0.229
123) 2,4-Dinitrotoluene	(3)	12.082	165	6743	0.173
126) 1-Naphthylamine	(3)	12.184	143	21246	0.184
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	5164	0.170
128) 2-Naphthylamine	(3)	12.290	143	23223	0.212
129) Diethylphthalate	(3)	12.424	149	27822	0.213
130) Thionazin	(3)	12.515	107	5268	0.237
131) Fluorene	(3)	12.520	166	28209	0.223
133) 5-Nitro-o-toluidine	(3)	12.542	152	6840	0.198
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	14242	0.227
134) 4-Nitroaniline	(3)	12.547	138	5679	0.189
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	16584	0.744
136) N-Nitrosodiphenylamine	(4)	12.686	169	22983	0.223
137) NDPA as diphenylamine	(4)	12.686	169	22983	0.223
139) 1,2-Diphenylhydrazine	(4)	12.734	77	31737	0.221
140)$2,4,6-Tribromophenol	(3)	12.820	330	5803	0.386
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	5094M	0.208
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1870	0.136
145) Diallate (peak 1)	(4)	13.061	86	11520	0.177
146) Phorate	(4)	13.071	75	19764	0.214
147) Phenacetin	(4)	13.082	108	11215	0.172
148) 4-Bromophenyl-phenylether	(4)	13.152	248	7664	0.223
149) Diallate (peak 2)	(4)	13.173	86	1856M	0.036
150) Hexachlorobenzene	(4)	13.200	284	8452	0.239
152) Dimethoate	(4)	13.275	87	9216	0.166
153) Atrazine	(4)	13.376	200	5938	0.170
154) Pentachlorophenol	(4)	13.467	266	3408	0.157
156) Pentachloronitrobenzene	(4)	13.478	237	2740	0.162
155) 4-Aminobiphenyl	(4)	13.483	169	23642	0.202
157) Pronamide	(4)	13.574	173	10577	0.182
158)*Phenanthrene-d10	(4)	13.713	188	841976	5.000
159) Dinoseb	(4)	13.729	211	4630M	0.133
160) Phenanthrene	(4)	13.745	178	42538	0.229
162) Anthracene	(4)	13.815	178	40094	0.215
168) Carbazole	(4)	14.039	167	35570	0.216
169) Methyl parathion	(4)	14.243	109	6566	0.155

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	41784	0.188
172) Parathion	(4)	14.799	109	3930	0.144
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	2488	0.113
227) Total PAHs	(6)			660970	3.942
174) Octachlorostyrene	(4)	15.163	308	2947	0.223
176) Isodrin	(4)	15.222	193	5594	0.243
178) Fluoranthene	(4)	15.446	202	44594	0.214
179) Benzidine	(5)	15.682	184	207079	1.637
180)*Pyrene-d10	(5)	15.772	212	858273	5.000
182) Pyrene	(5)	15.805	202	51918	0.238
184)$Terphenyl-d14	(5)	16.088	244	61187	0.445
187) p-Dimethylaminoazobenzene	(5)	16.323	225	5807	0.174
190) Chlorobenzilate	(5)	16.414	139	11797	0.181
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	21670	0.158
193) Butylbenzylphthalate	(5)	16.954	149	16458	0.162
196) 2-Acetylaminofluorene	(5)	17.324	181	12069	0.150
198) 3,3'-Dichlorobenzidine	(5)	17.848	252	12622	0.180
200) Benzo(a)anthracene	(5)	17.858	228	41572	0.213
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	7492	0.176
201) Chrysene	(5)	17.923	228	41813	0.222
204) bis(2-Ethylhexyl)phthalate	(5)	18.024	149	23621	0.165
208) 6-Methylchrysene	(5)	18.736	242	26806	0.202
210) Di-n-octylphthalate	(6)	19.212	149	37574	0.157
211) Benzo(b)fluoranthene	(6)	19.741	252	40317	0.216
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	14661	0.190
213) Benzo(k)fluoranthene	(6)	19.789	252	41484M	0.230
216) Benzo(a)pyrene	(6)	20.281	252	35793	0.213
218)*Perylene-d12	(6)	20.378	264	762938	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	17784	0.217
222) Dibenz(a,h)acridine	(6)	21.677	279	29703	0.208
223) Dibenz(a,j)acridine	(6)	21.752	279	30638	0.211
224) Indeno(1,2,3-cd)pyrene	(6)	22.025	276	35016M	0.219
225) Dibenz(a,h)anthracene	(6)	22.062	278	34790	0.214
226) Benzo(g,h,i)perylene	(6)	22.442	276	37271	0.226

M = Compound was manually integrated.
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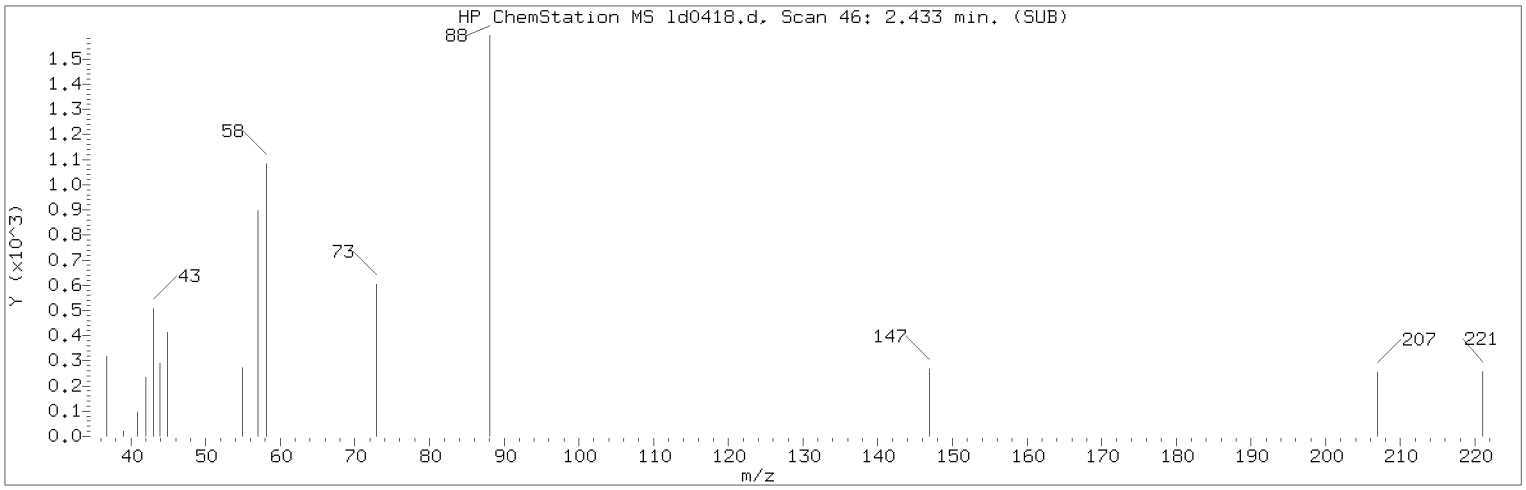
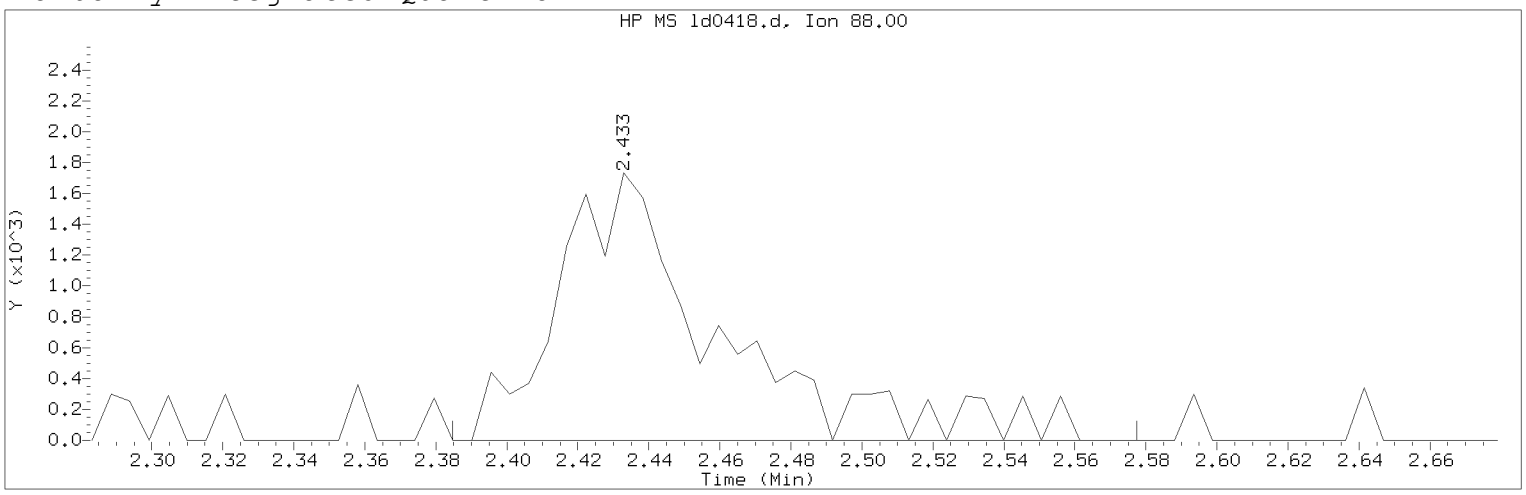
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

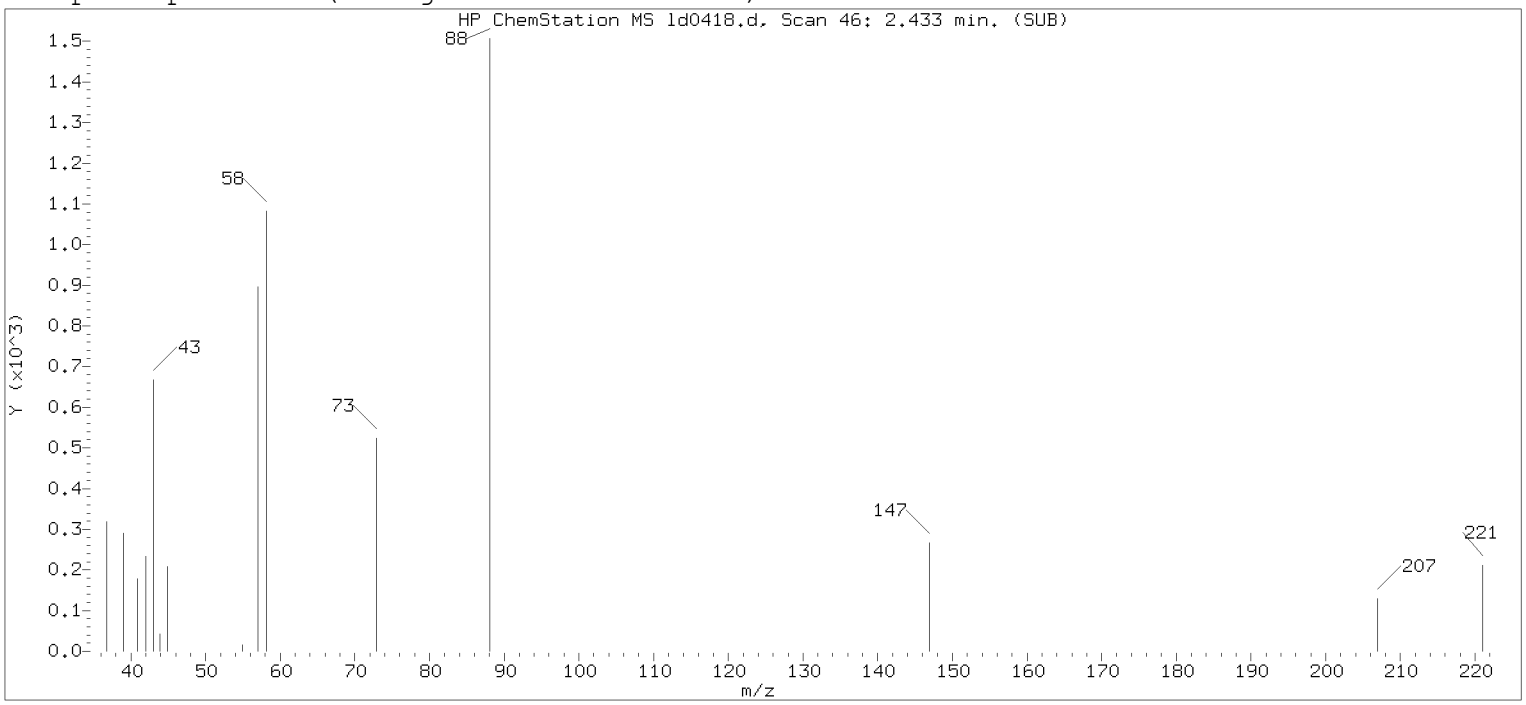
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.433
Quant Ion : 88.00
Area (flag) : 5492M
On-Column Amount (ng/ul) : 0.1886
Integration start scan : 36 Integration stop scan: 72
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

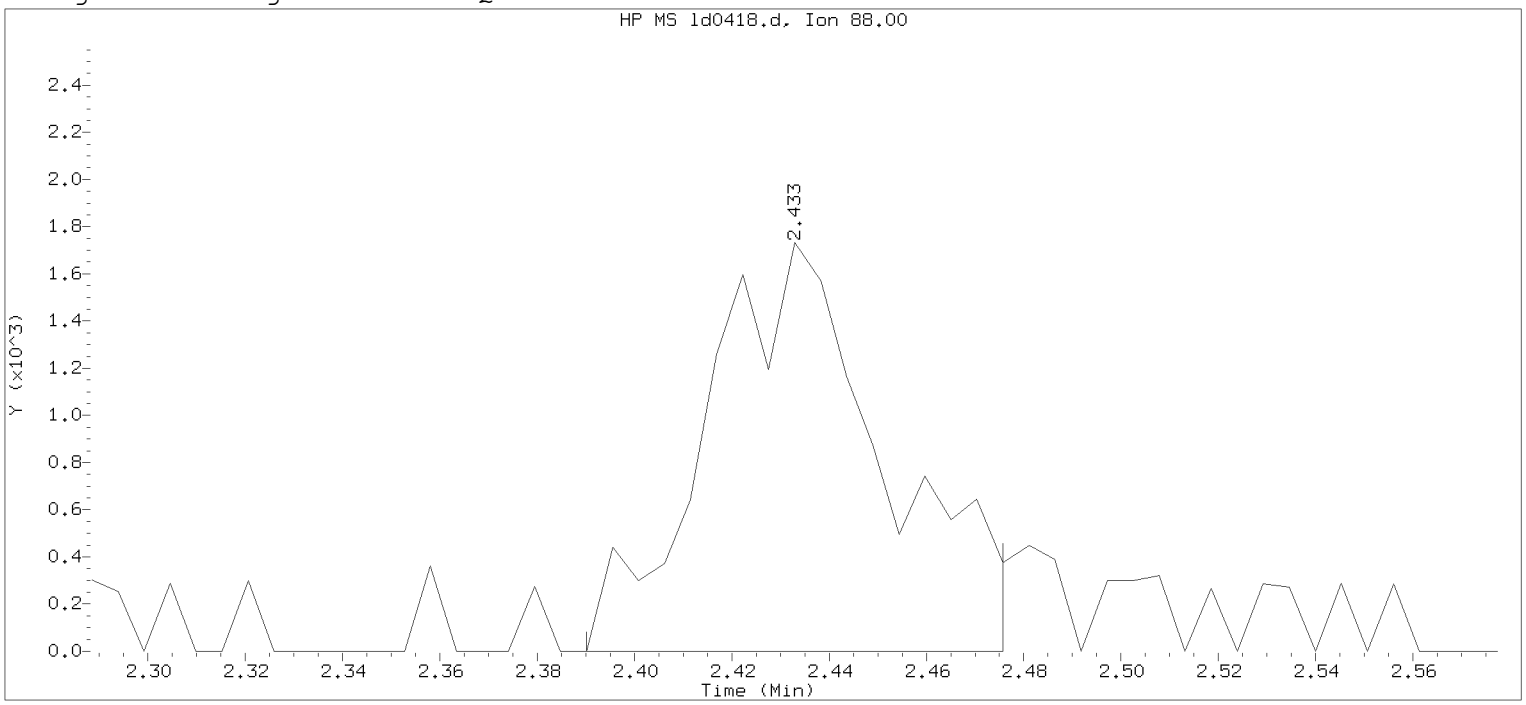
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

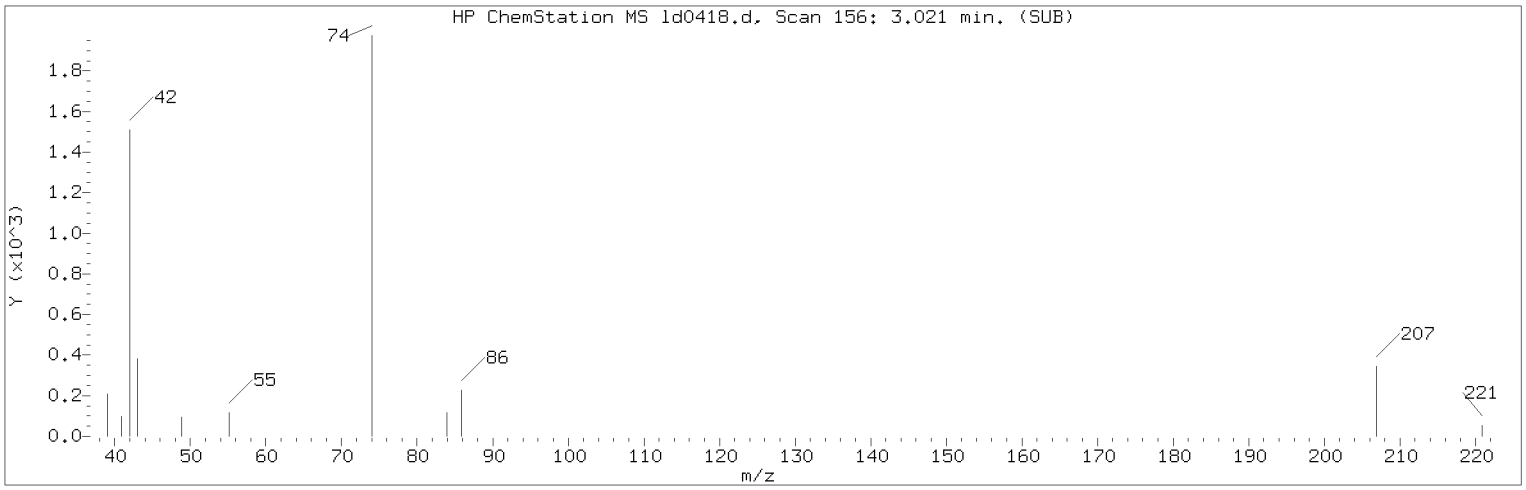
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

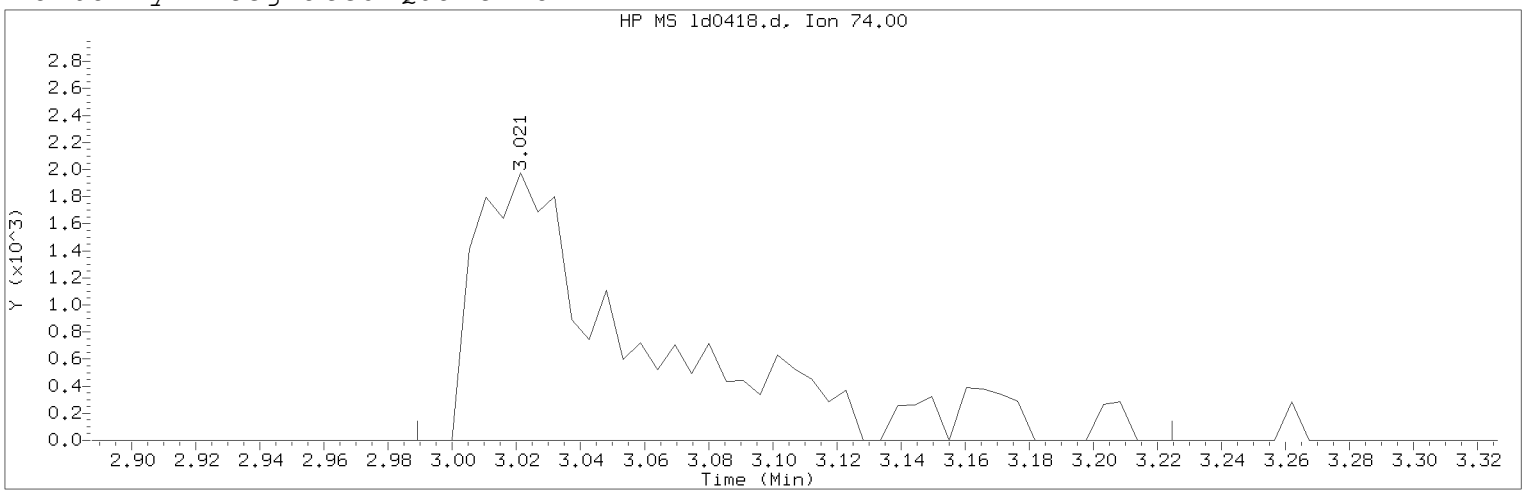
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 2.433		
Quant Ion	: 88.00		
Area	: 4420		
On-column Amount (ng/ul)	: 0.1537		
Integration start scan	: 37	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user name: ATransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

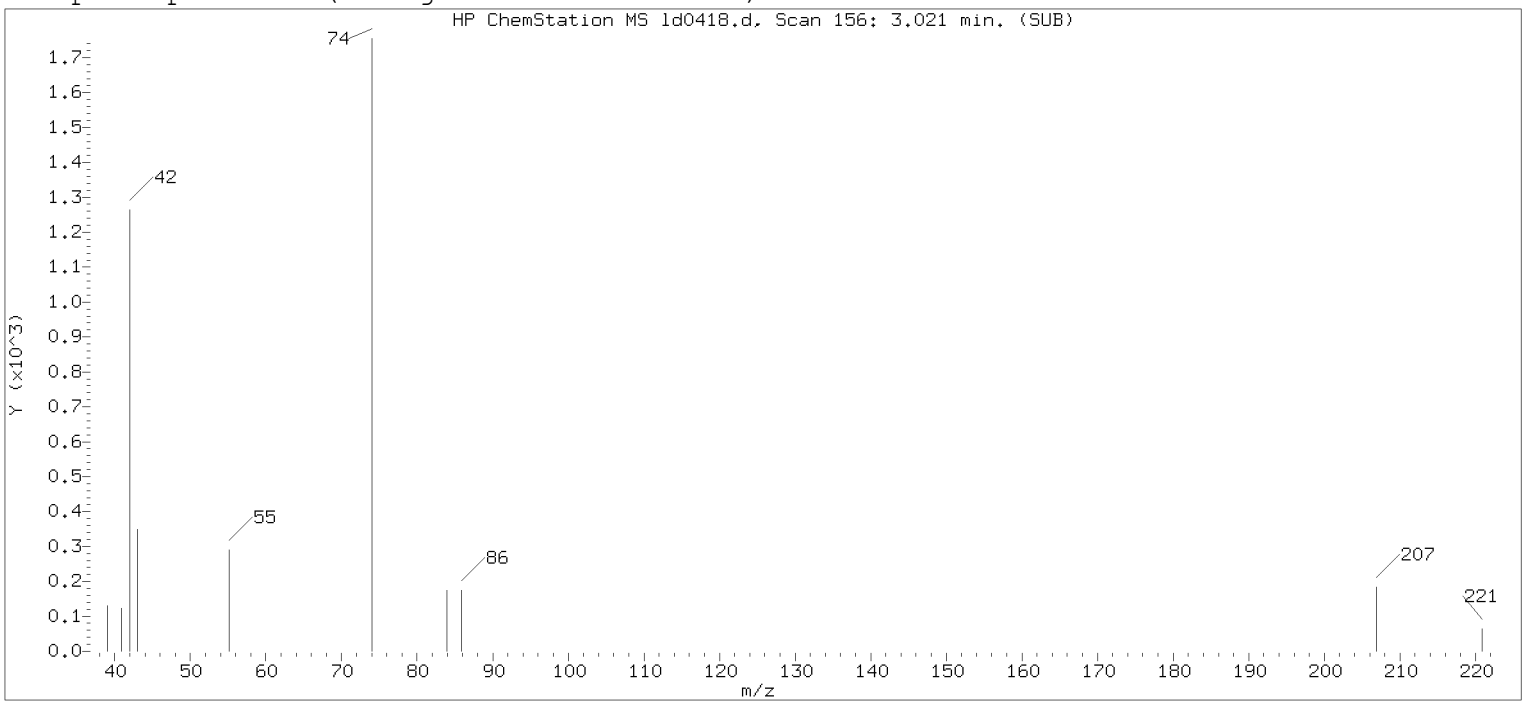
Compound Number : 5
Compound Name : N-Nitrosodimethylamine
Scan Number : 156
Retention Time (minutes) : 3.021
Quant Ion : 74.00
Area (flag) : 7404M
On-Column Amount (ng/ul) : 0.1670
Integration start scan : 149 Integration stop scan: 193
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

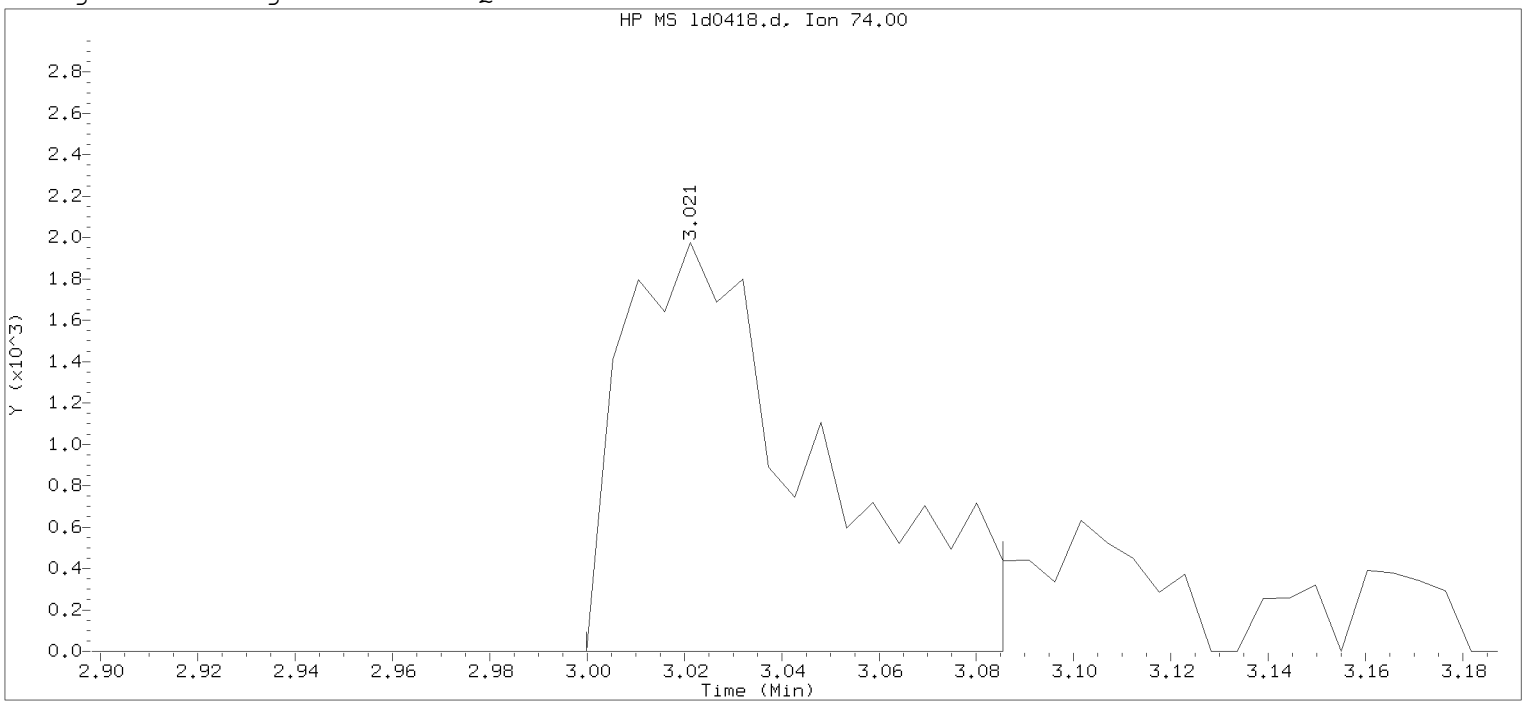
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

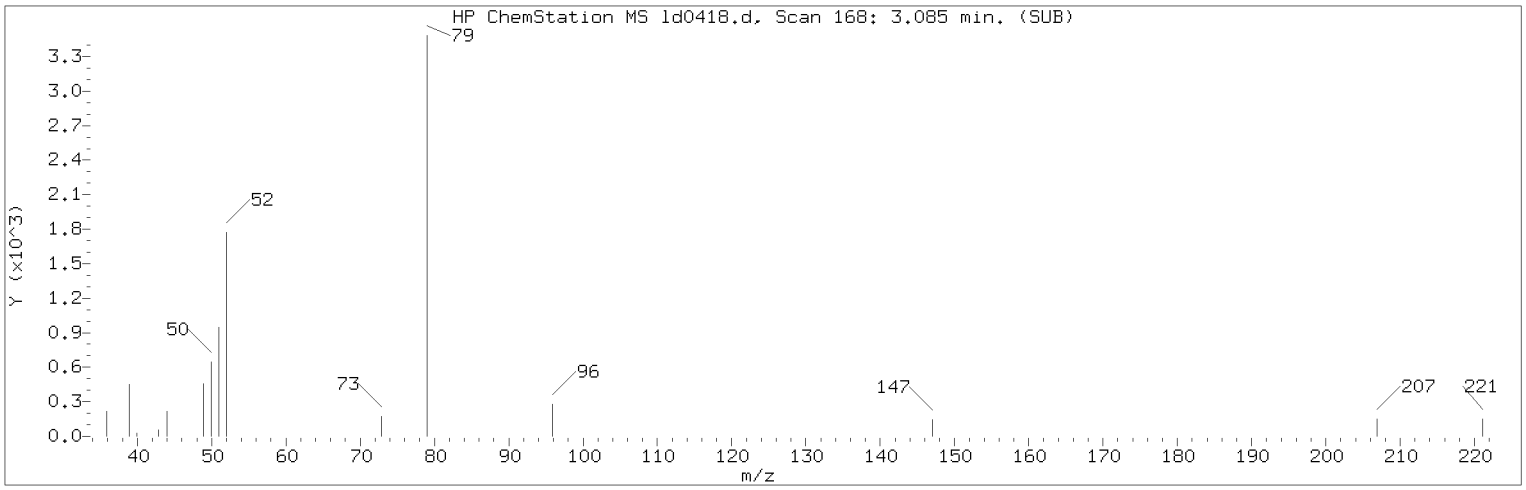
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

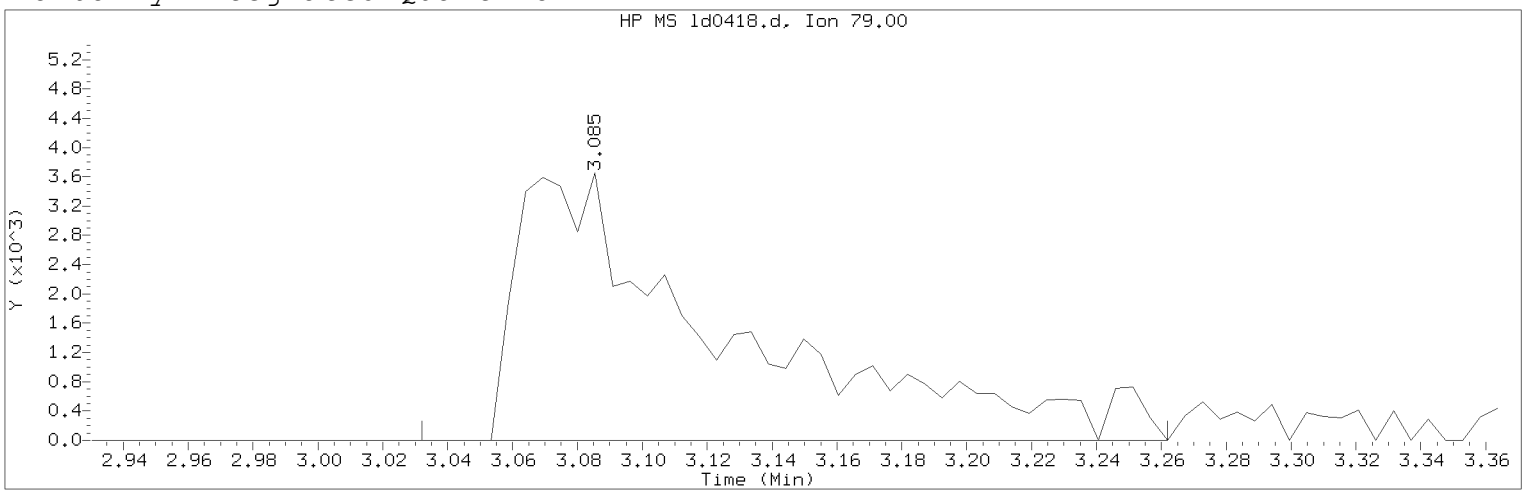
Compound Number	: 5		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 156		
Retention Time (minutes)	: 3.021		
Quant Ion	: 74.00		
Area	: 5464		
On-column Amount (ng/ul)	: 0.1237		
Integration start scan	: 151	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

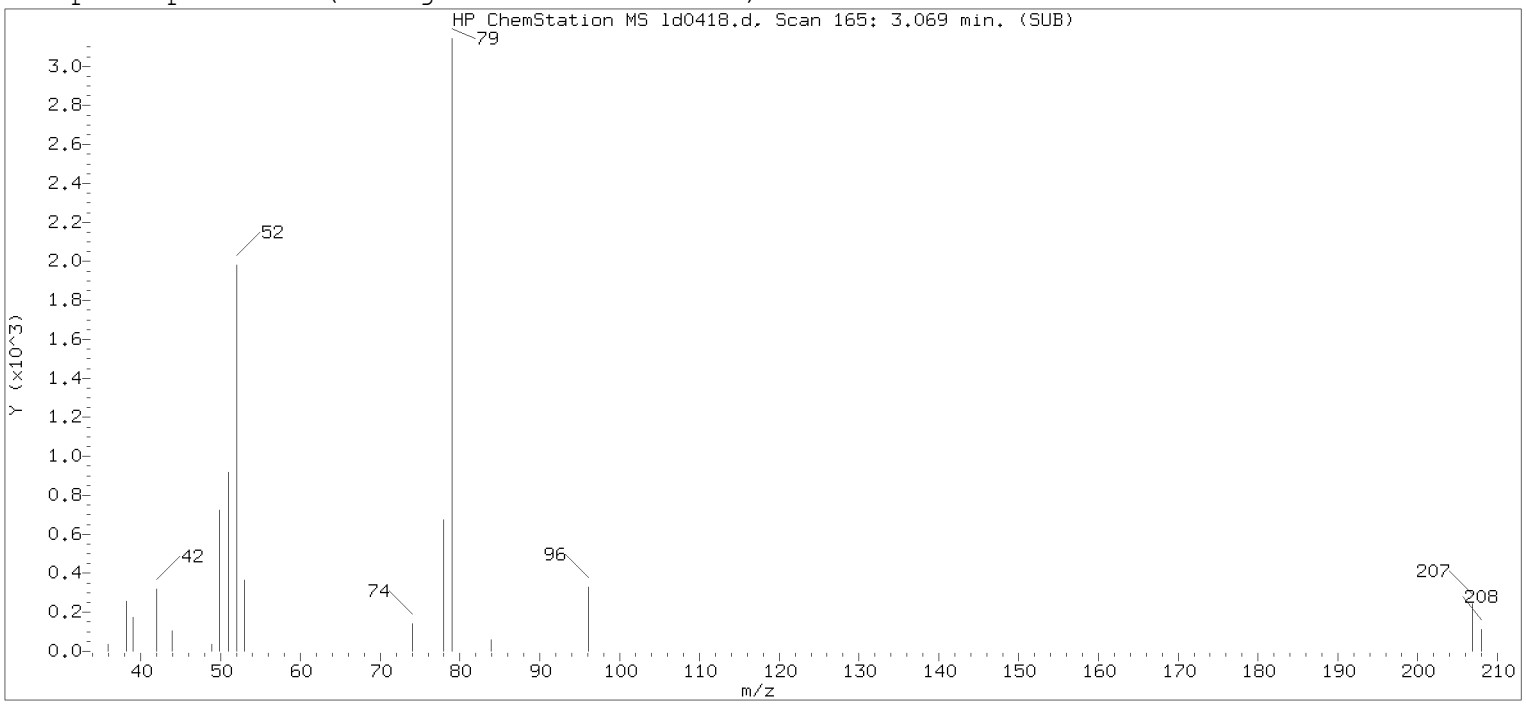
Compound Number : 6
Compound Name : Pyridine
Scan Number : 168
Retention Time (minutes) : 3.085
Quant Ion : 79.00
Area (flag) : 16320M
On-Column Amount (ng/ul) : 0.2062
Integration start scan : 157 Integration stop scan: 200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

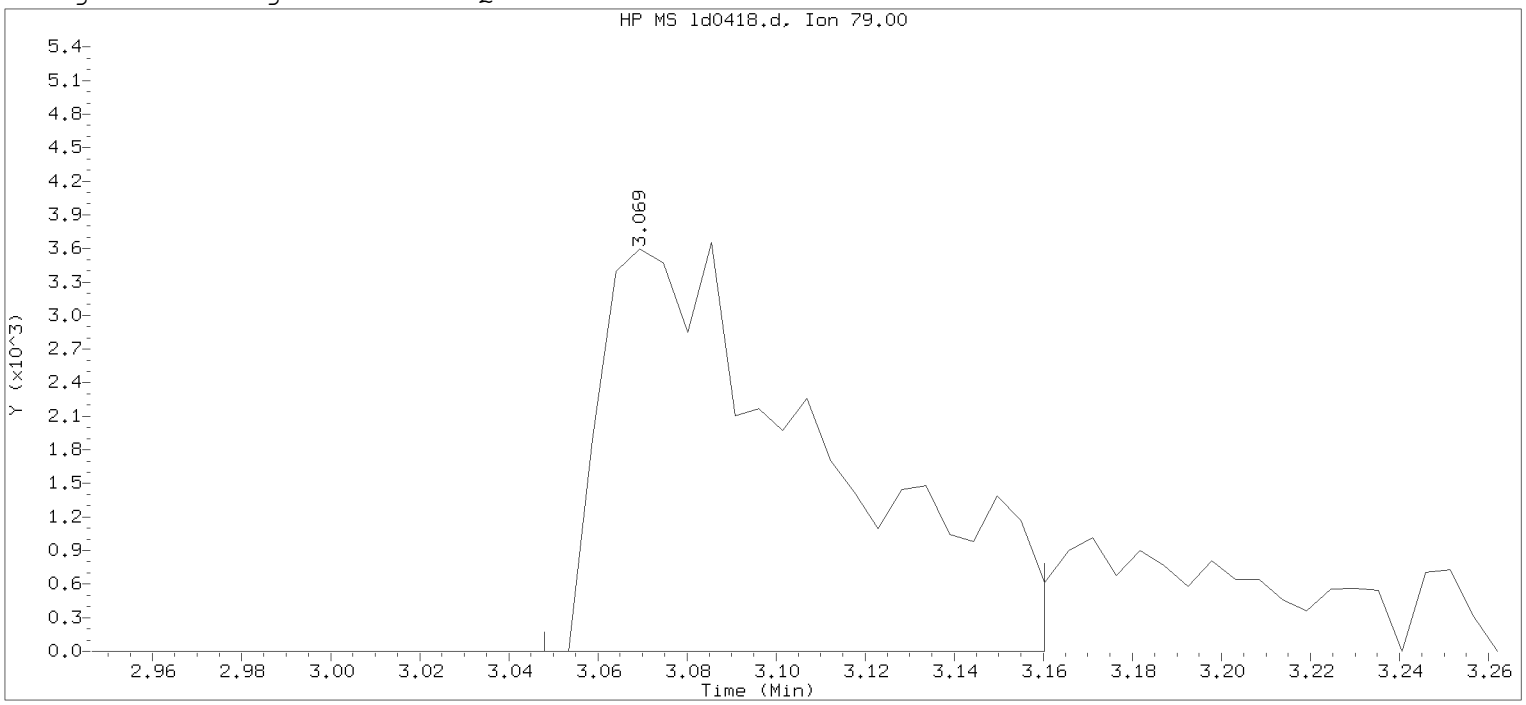
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

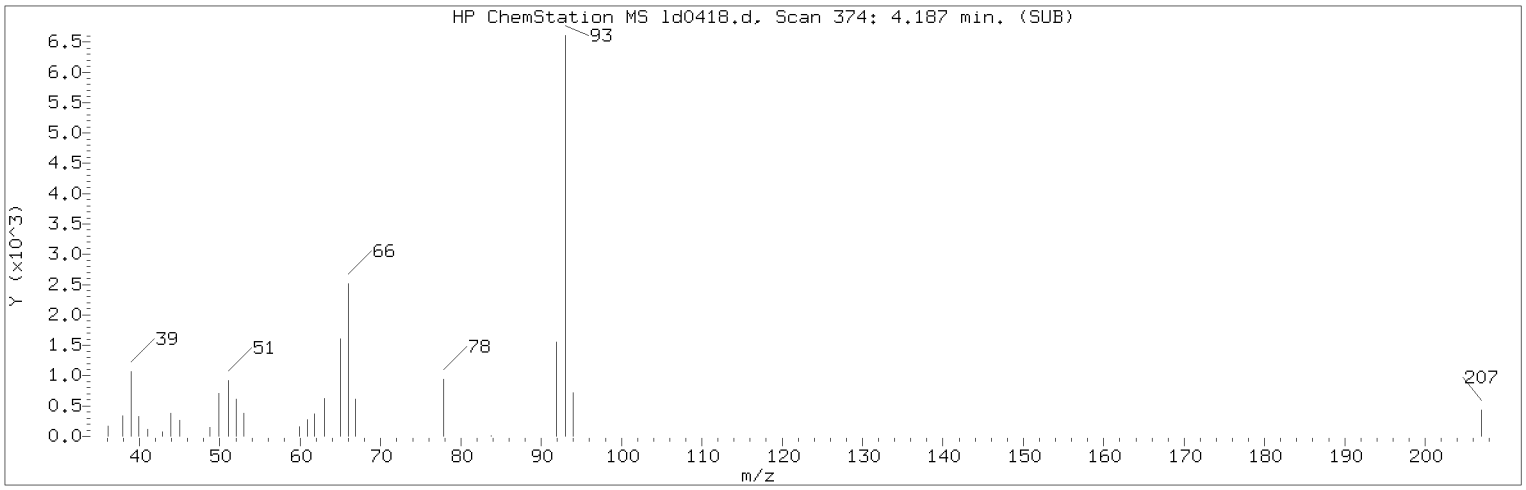
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

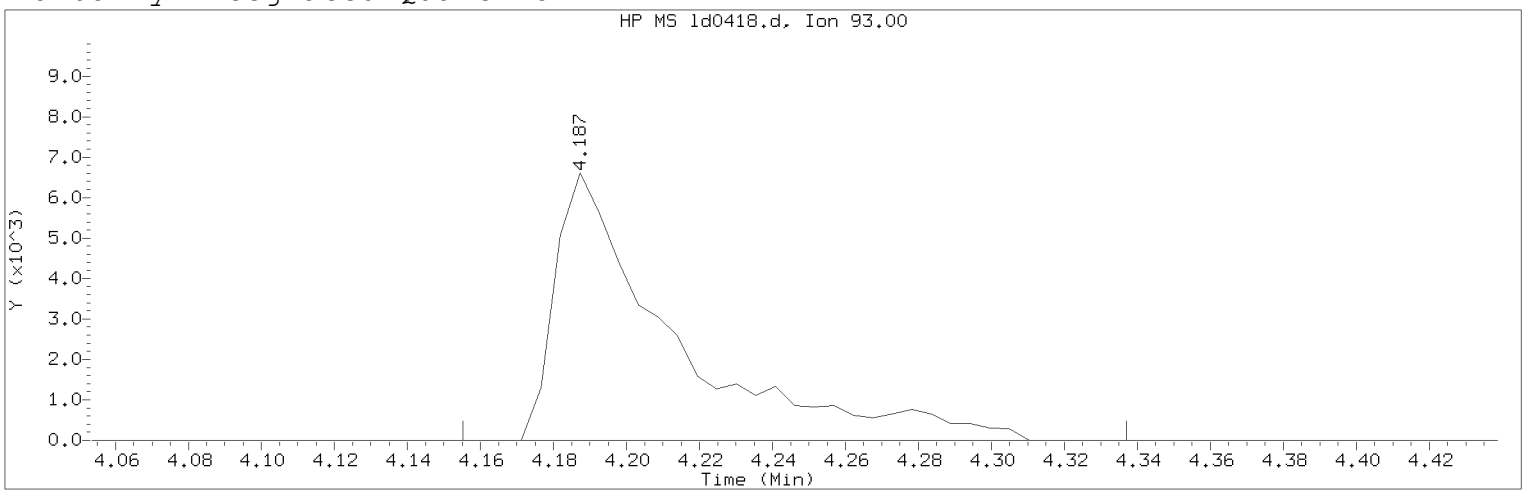
Compound Number	: 6		
Compound Name	: Pyridine		
Scan Number	: 165		
Retention Time (minutes)	: 3.069		
Quant Ion	: 79.00		
Area	: 12640		
On-column Amount (ng/ul)	: 0.1604		
Integration start scan	: 160	Integration stop scan:	181
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

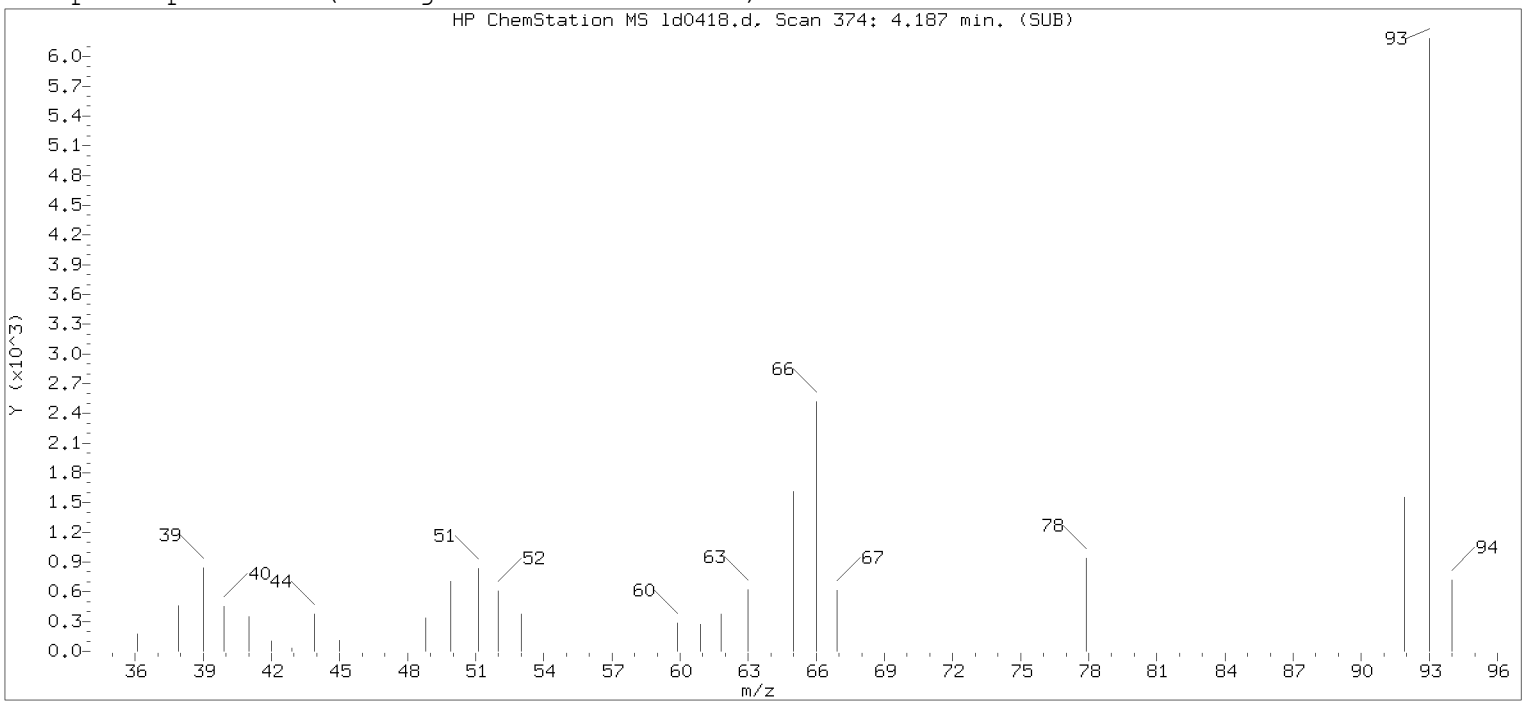
Compound Number : 8
Compound Name : 2-Picoline
Scan Number : 374
Retention Time (minutes) : 4.187
Quant Ion : 93.00
Area (flag) : 14709M
On-Column Amount (ng/ul) : 0.1838
Integration start scan : 367 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

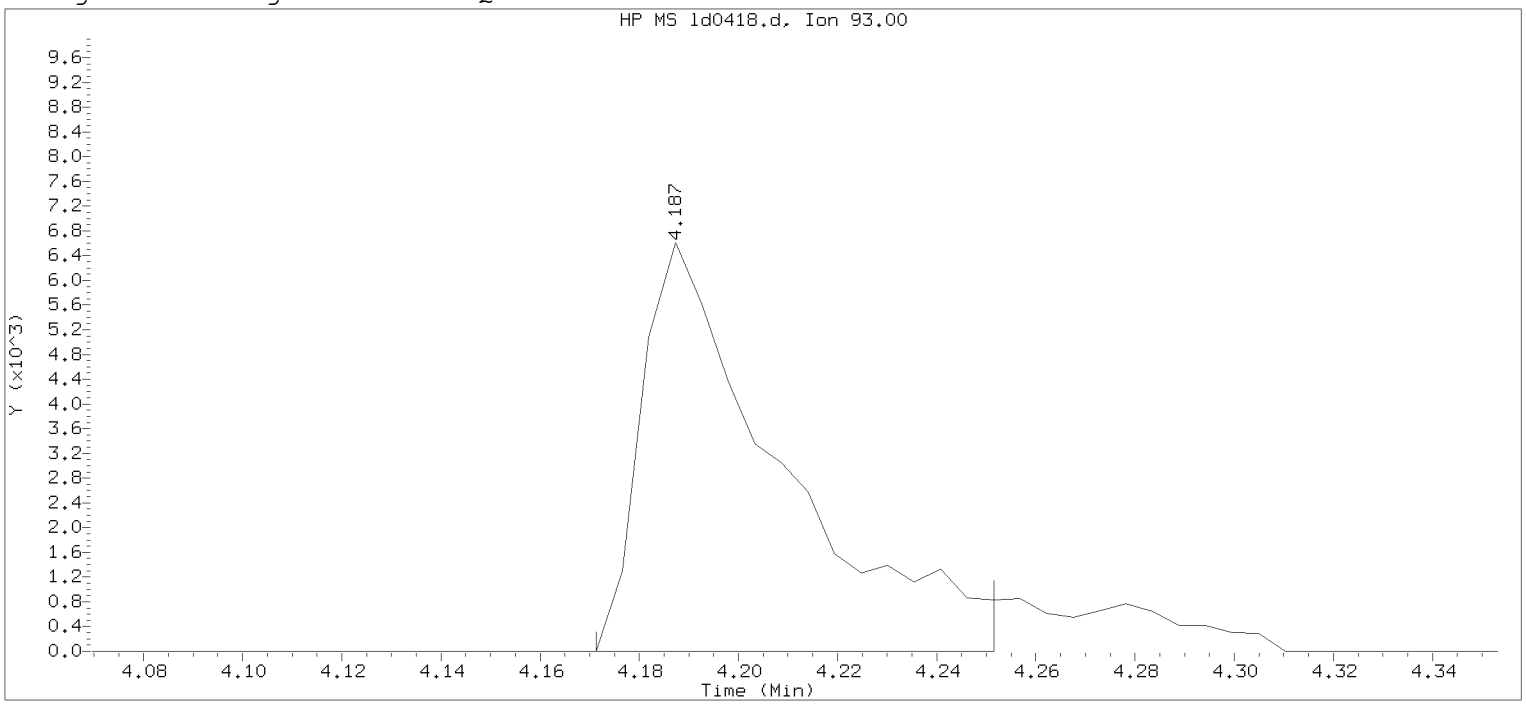
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

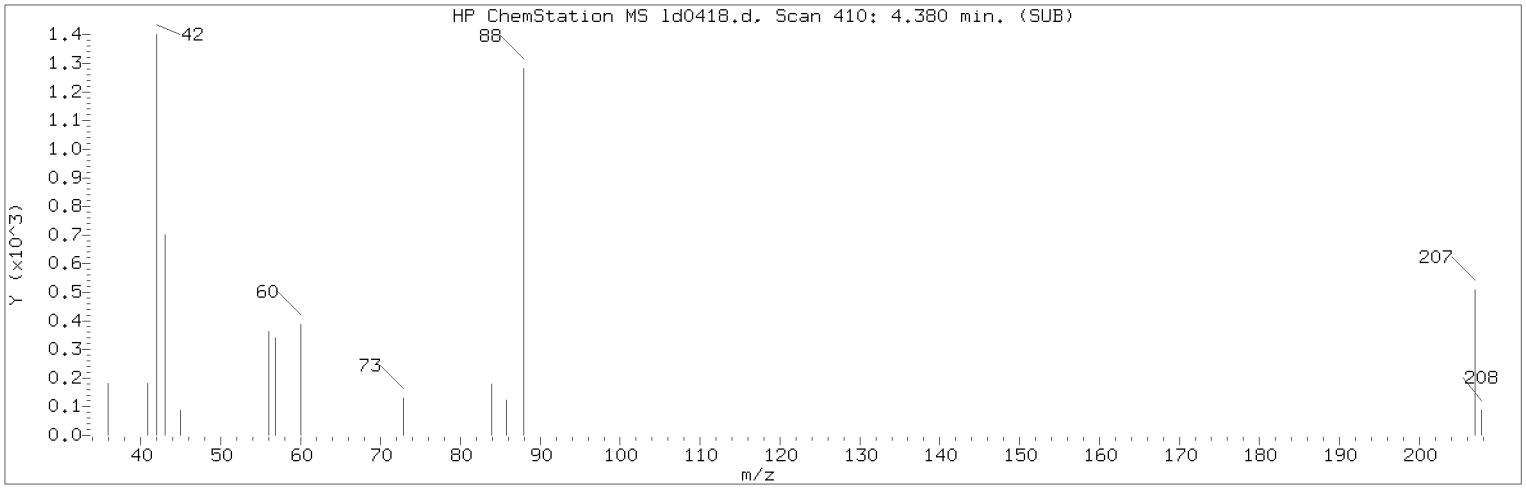
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

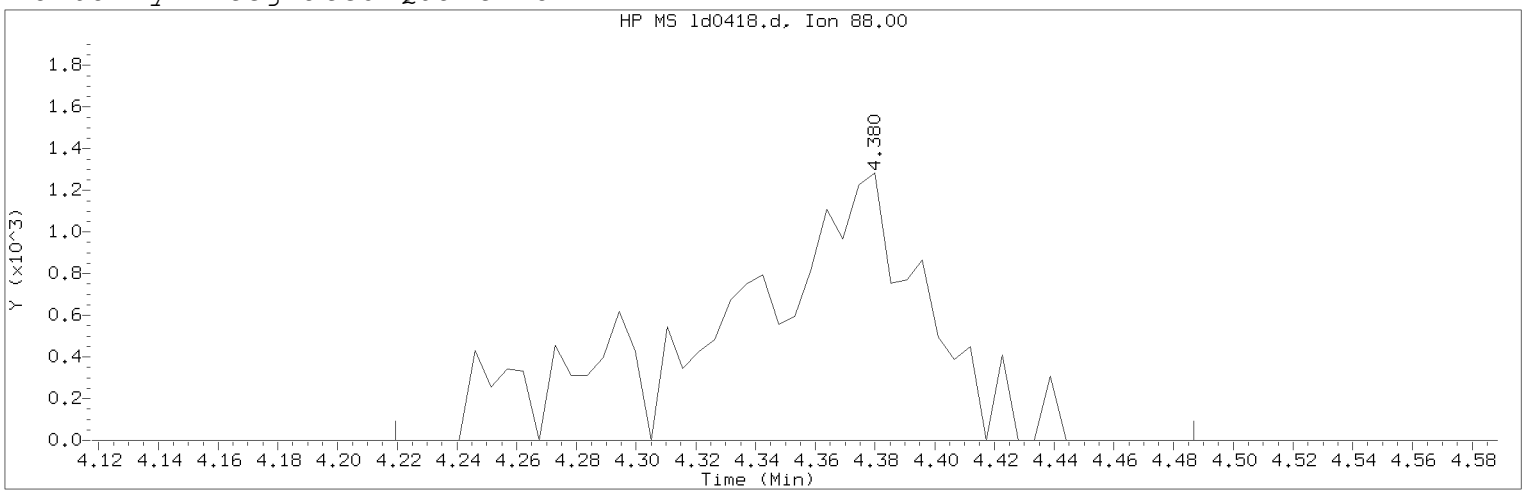
Compound Number	: 8		
Compound Name	: 2-Picoline		
Scan Number	: 374		
Retention Time (minutes)	: 4.187		
Quant Ion	: 93.00		
Area	: 12808		
On-column Amount (ng/ul)	: 0.1558		
Integration start scan	: 370	Integration stop scan:	385
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user name: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

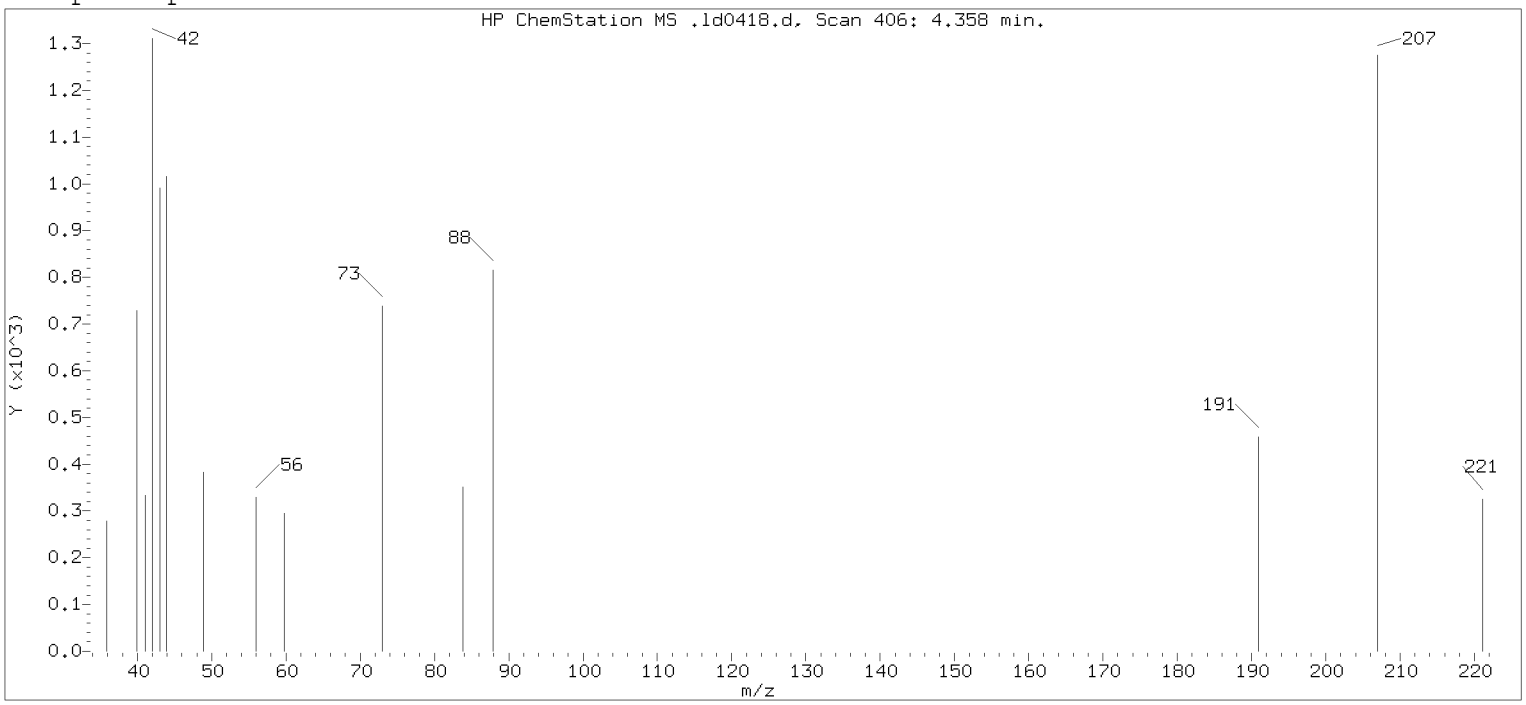
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 410
Retention Time (minutes) : 4.380
Quant Ion : 88.00
Area (flag) : 6058M
On-Column Amount (ng/ul) : 0.1889
Integration start scan : 379 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

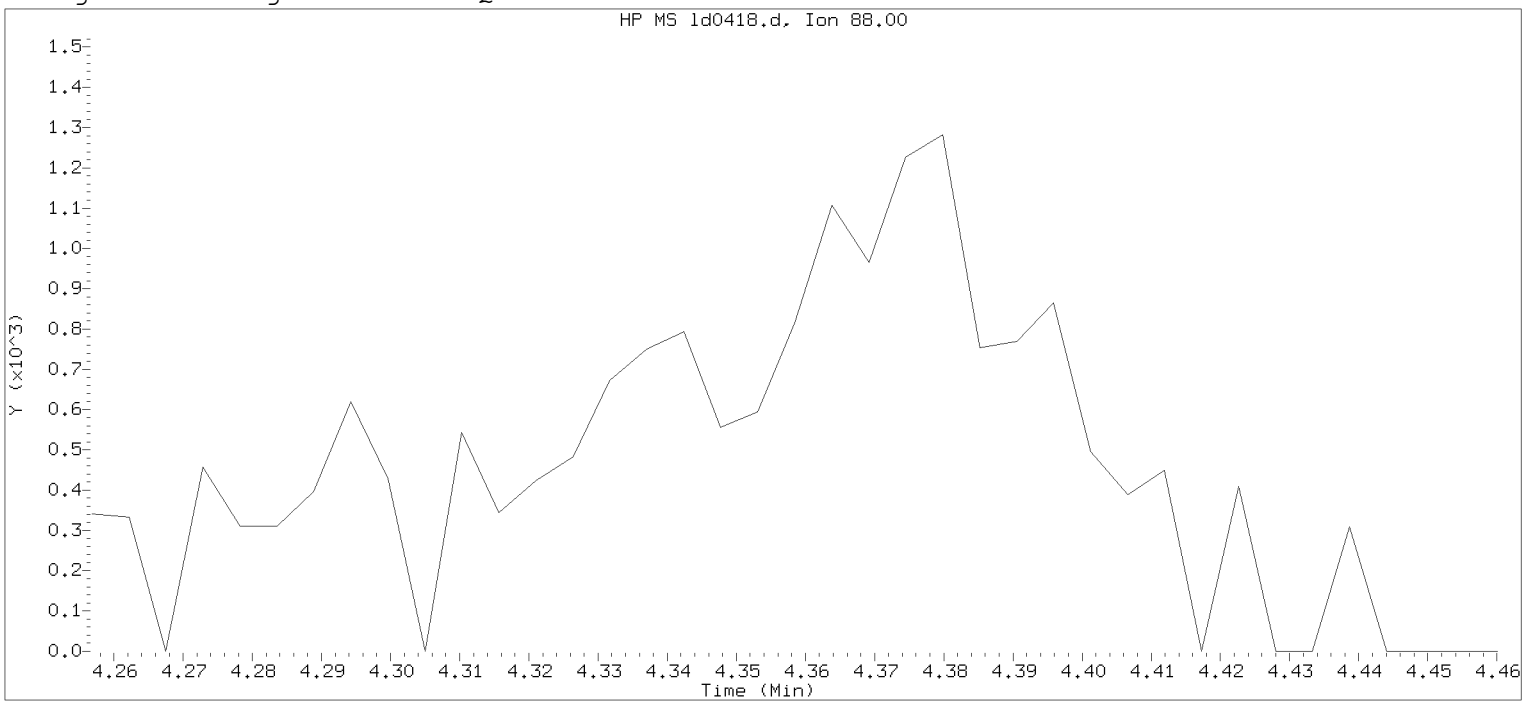
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

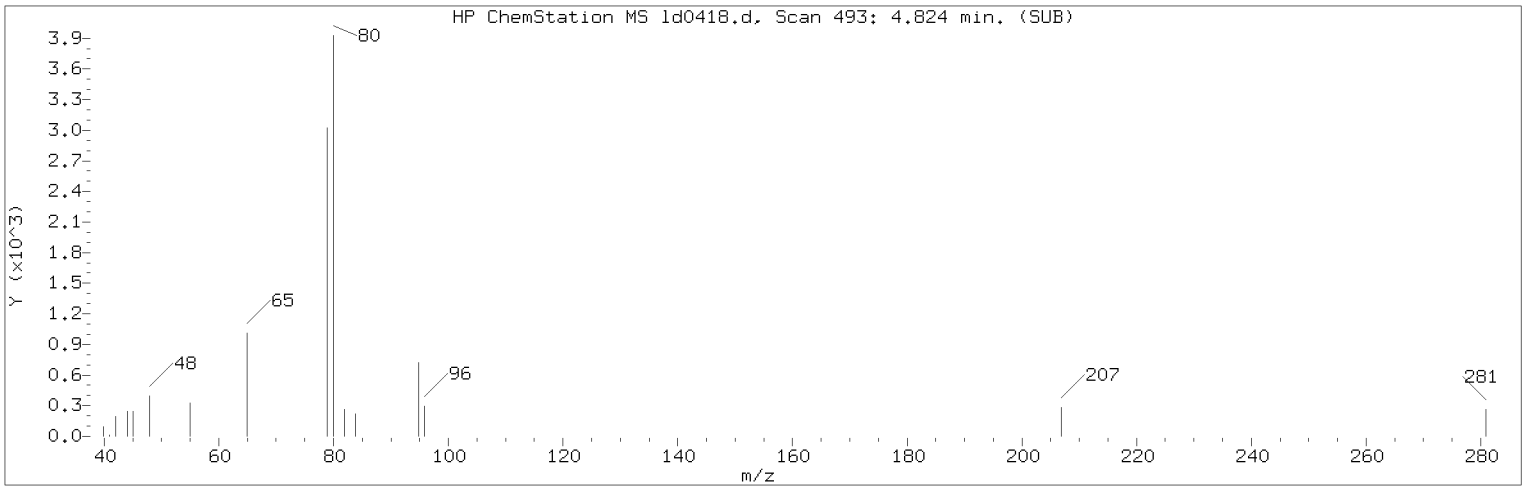
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

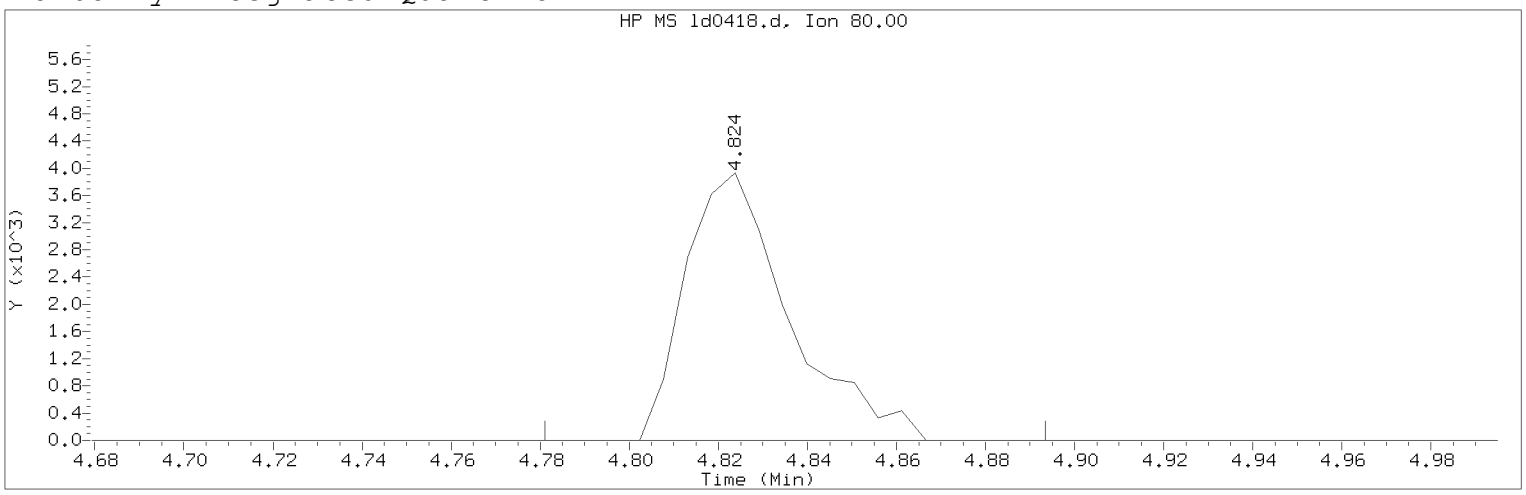
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.358
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ap[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

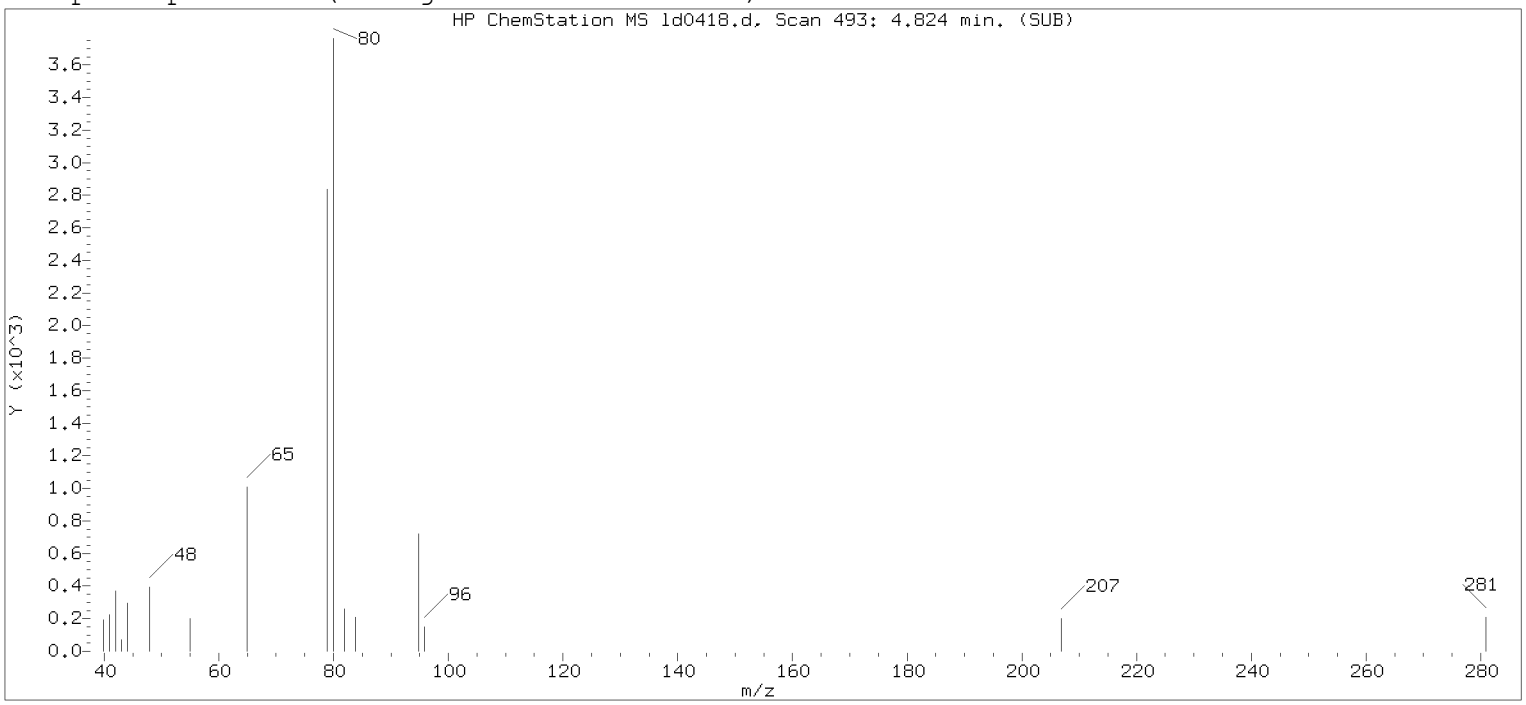
Compound Number : 10
Compound Name : Methyl methanesulfonate
Scan Number : 493
Retention Time (minutes) : 4.824
Quant Ion : 80.00
Area (flag) : 6375M
On-Column Amount (ng/ul) : 0.1641
Integration start scan : 484 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

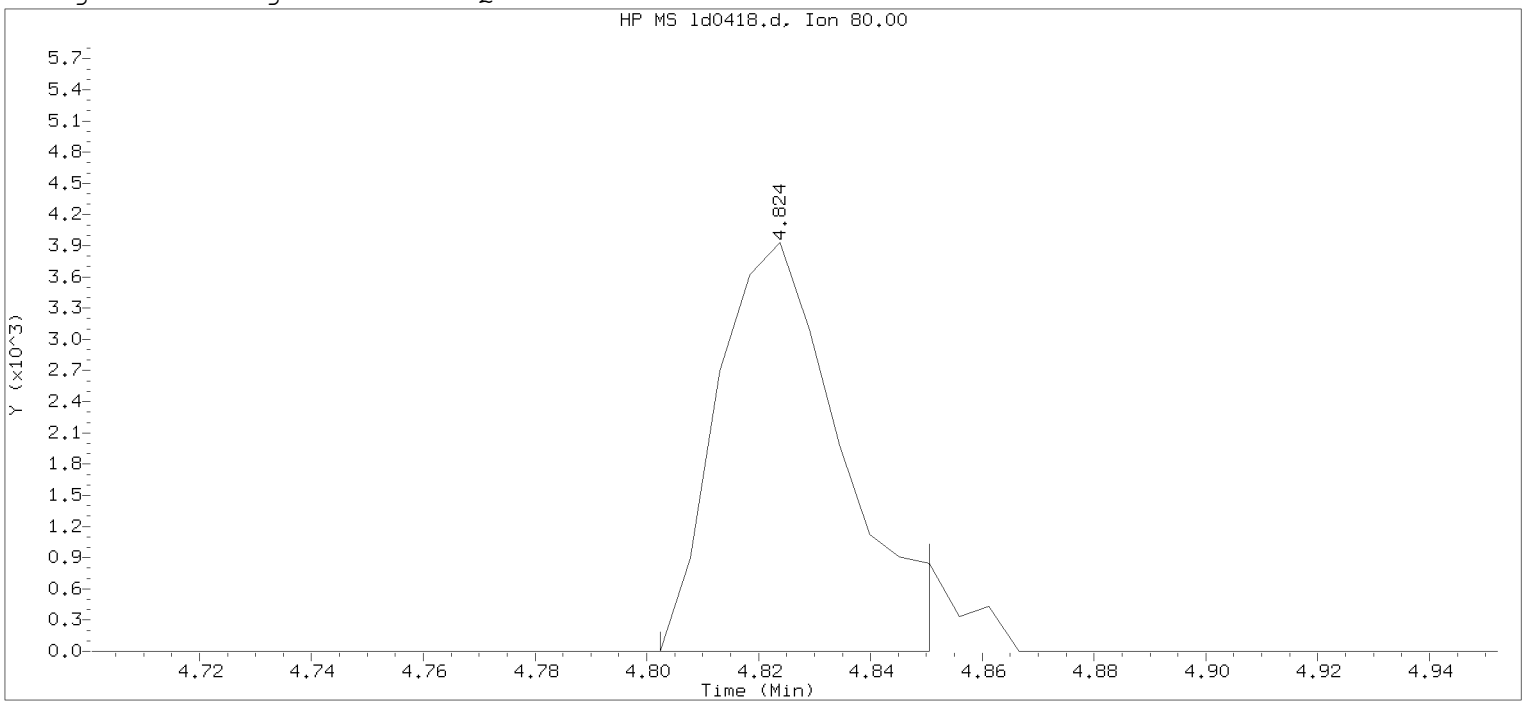
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

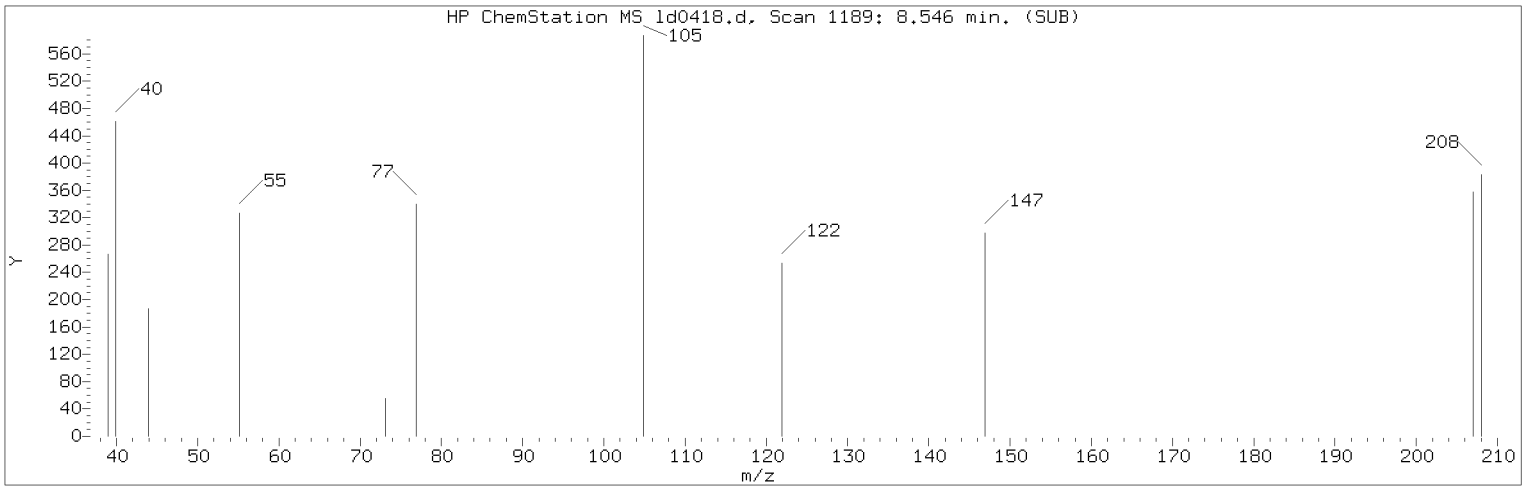
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

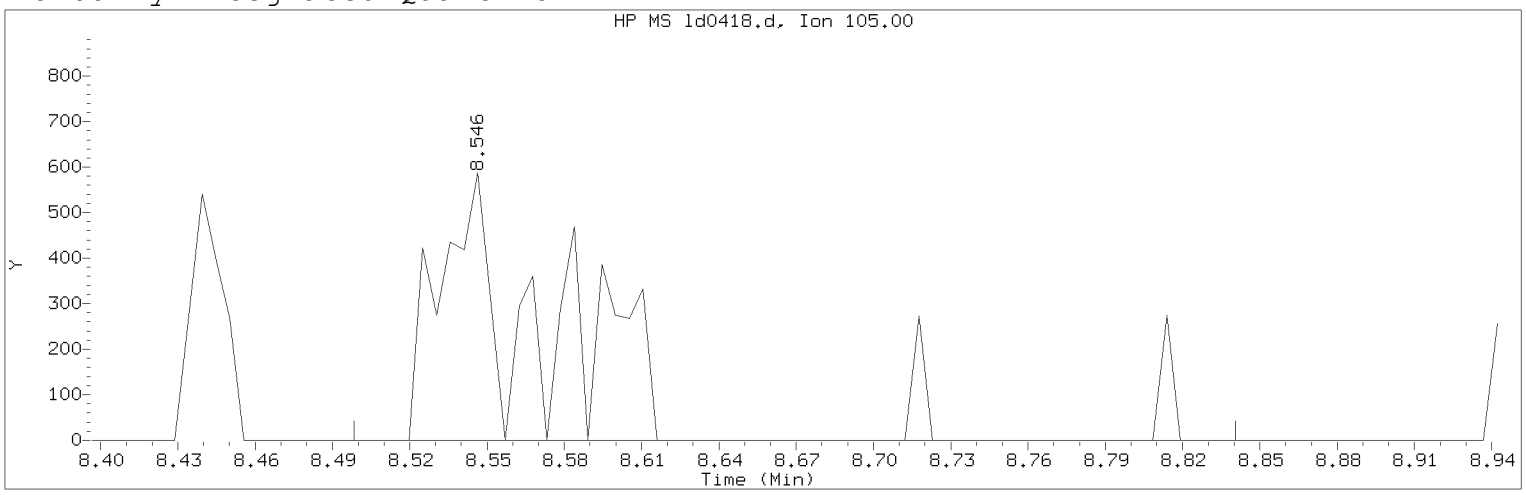
Compound Number	: 10
Compound Name	: Methyl methanesulfonate
Scan Number	: 493
Retention Time (minutes)	: 4.824
Quant Ion	: 80.00
Area	: 5993
On-column Amount (ng/ul)	: 0.1538
Integration start scan	: 488 Integration stop scan: 497
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

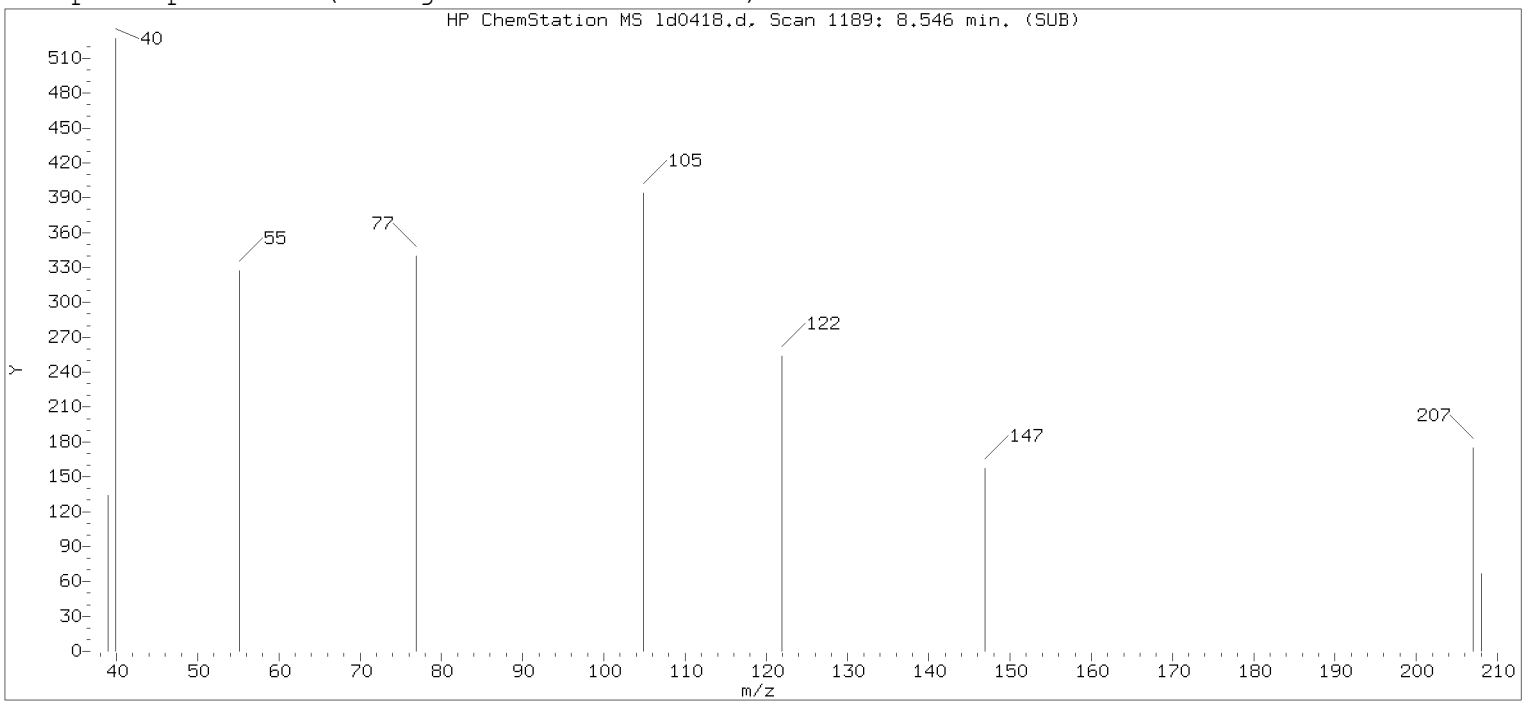
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1189
Retention Time (minutes) : 8.546
Quant Ion : 105.00
Area (flag) : 1809M
On-Column Amount (ng/ul) : 2.6853
Integration start scan : 1179 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

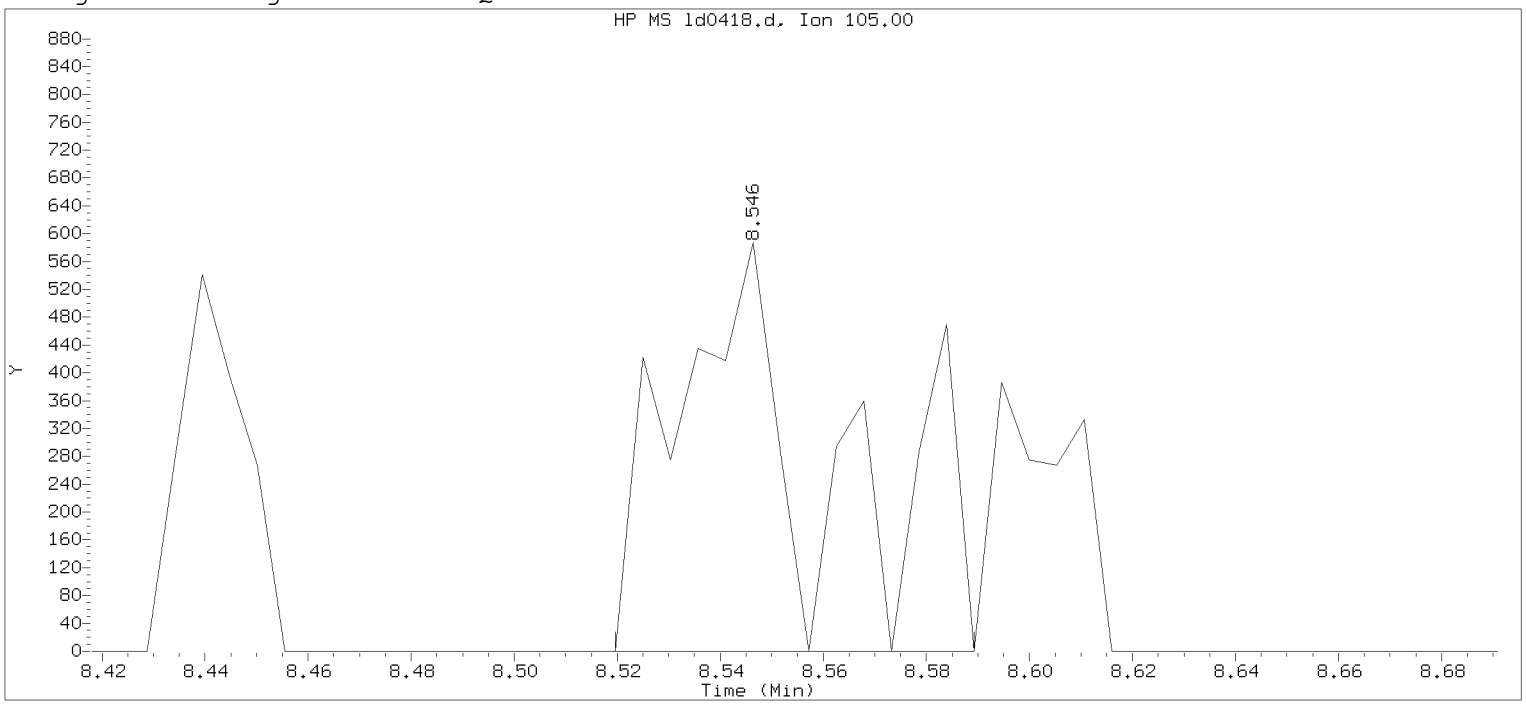
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

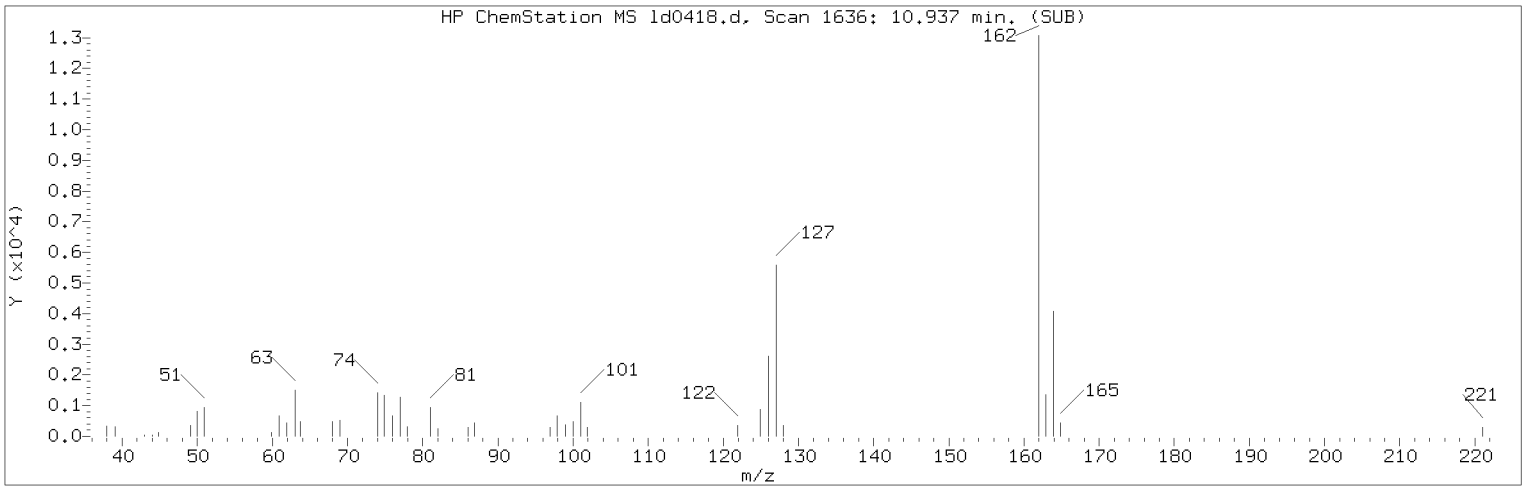
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

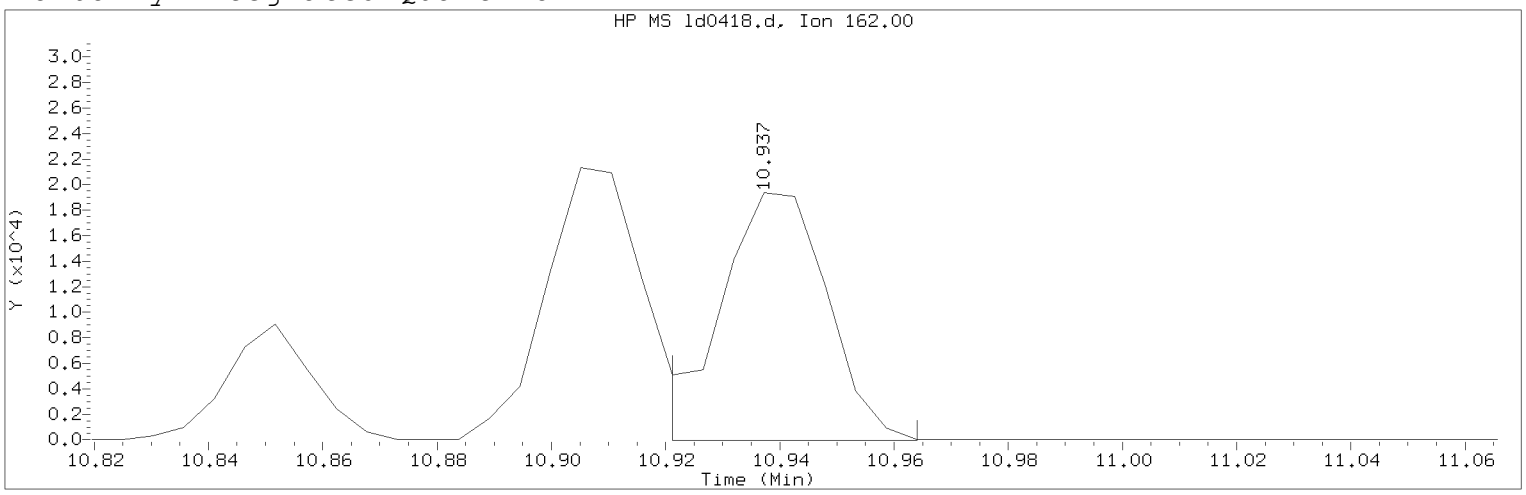
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1189		
Retention Time (minutes)	: 8.546		
Quant Ion	: 105.00		
Area	: 1229		
On-column Amount (ng/ul)	: 3.2237		
Integration start scan	: 1183	Integration stop scan:	1196
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user analyst

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

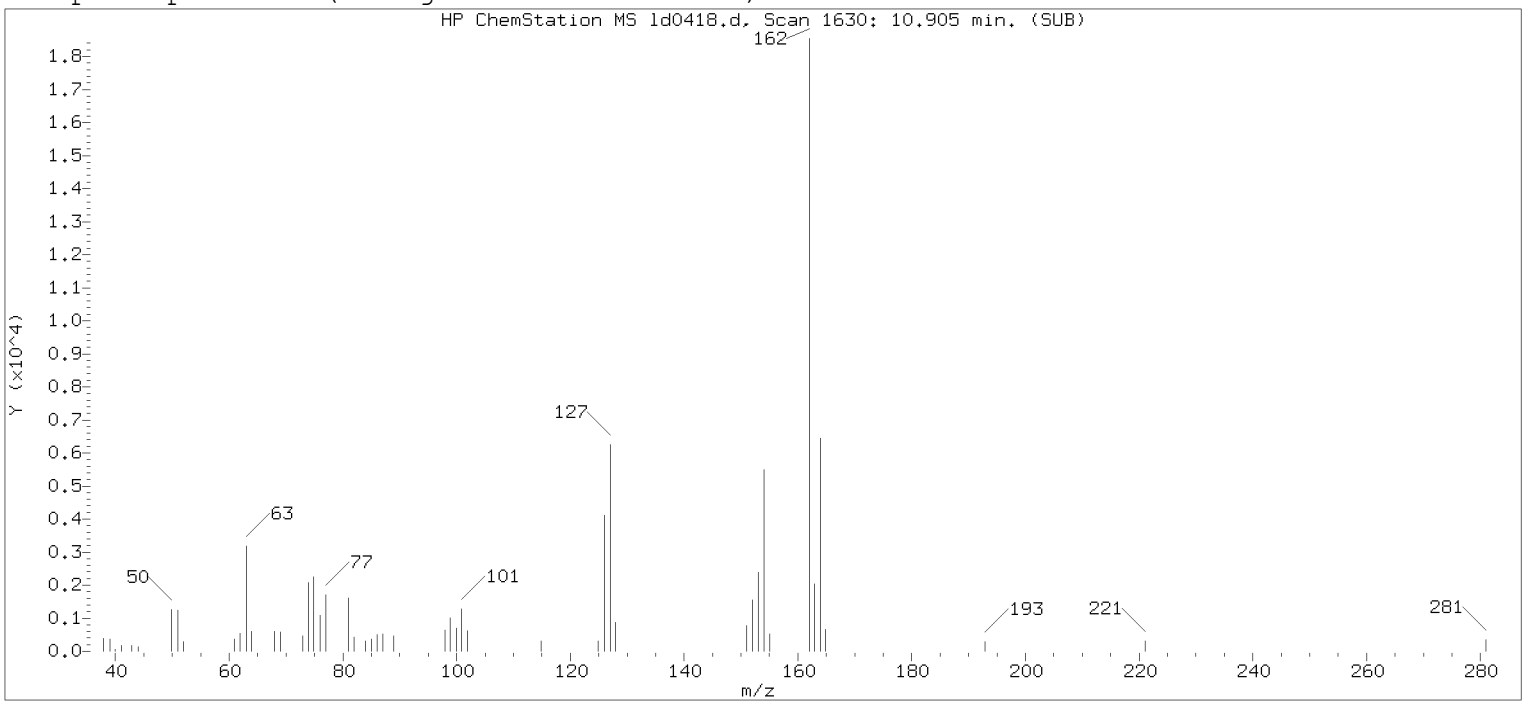
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 25748M
On-Column Amount (ng/ul) : 0.2349
Integration start scan : 1632 Integration stop scan: 1640
Y at integration start : -30 Y at integration end: -30

Reason for manual integration: improper integration

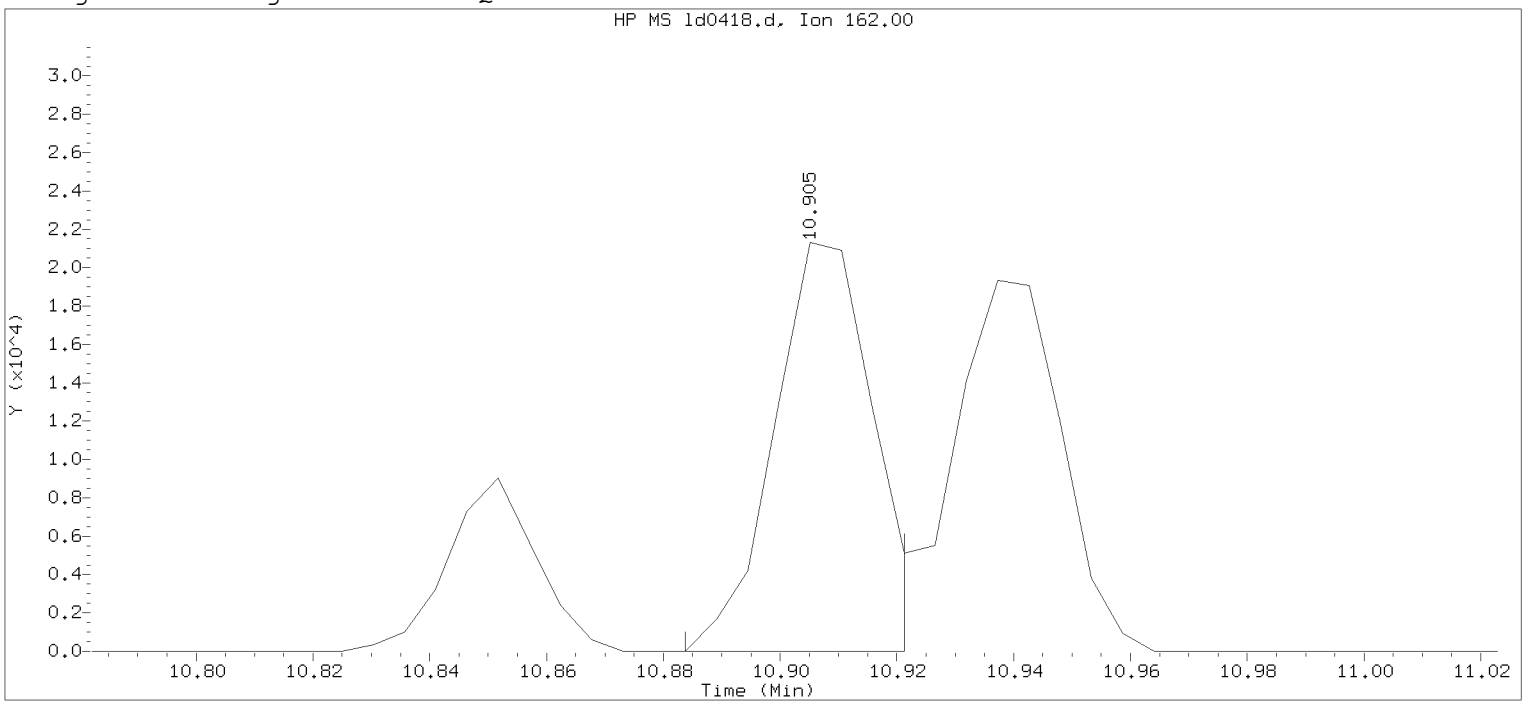
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1630		
Retention Time (minutes)	: 10.905		
Quant Ion	: 162.00		
Area	: 24485		
On-column Amount (ng/ul)	: 0.2234		
Integration start scan	: 1625	Integration stop scan:	1632
Y at integration start	: 0	Y at integration end:	0

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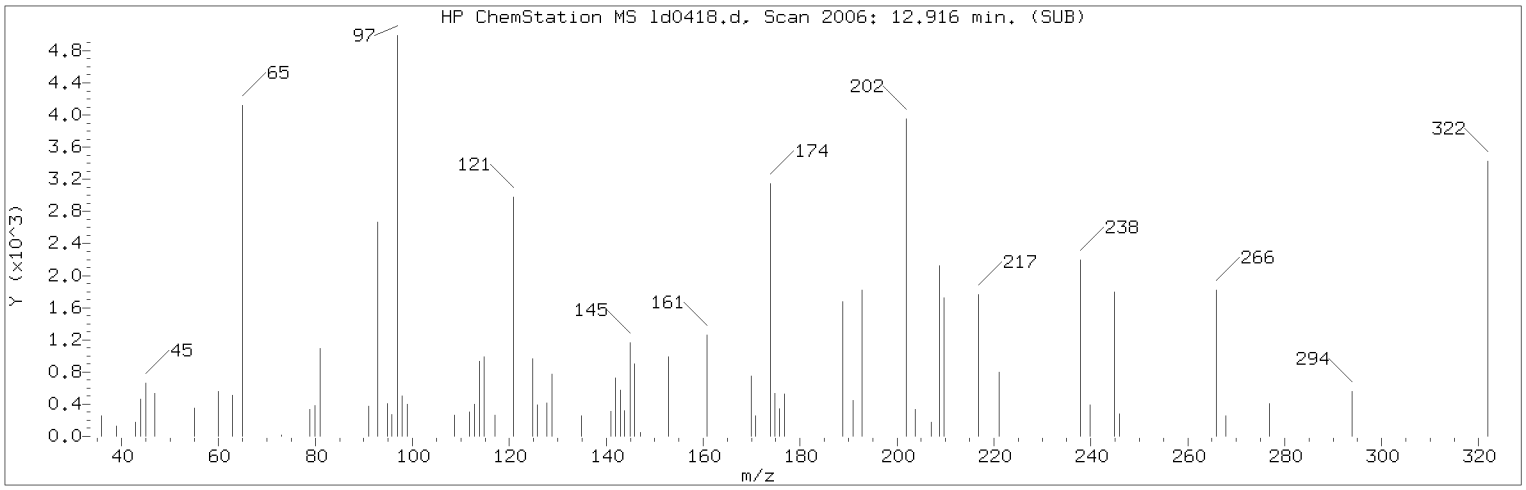
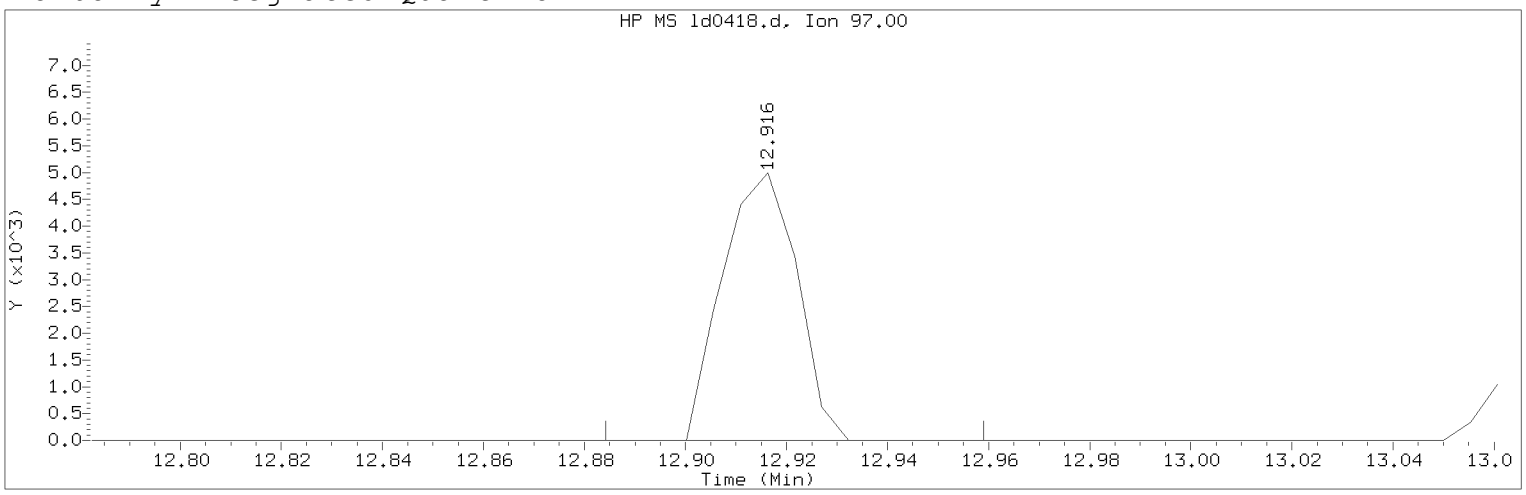
Target 3.5 esignature user name: Page 591

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

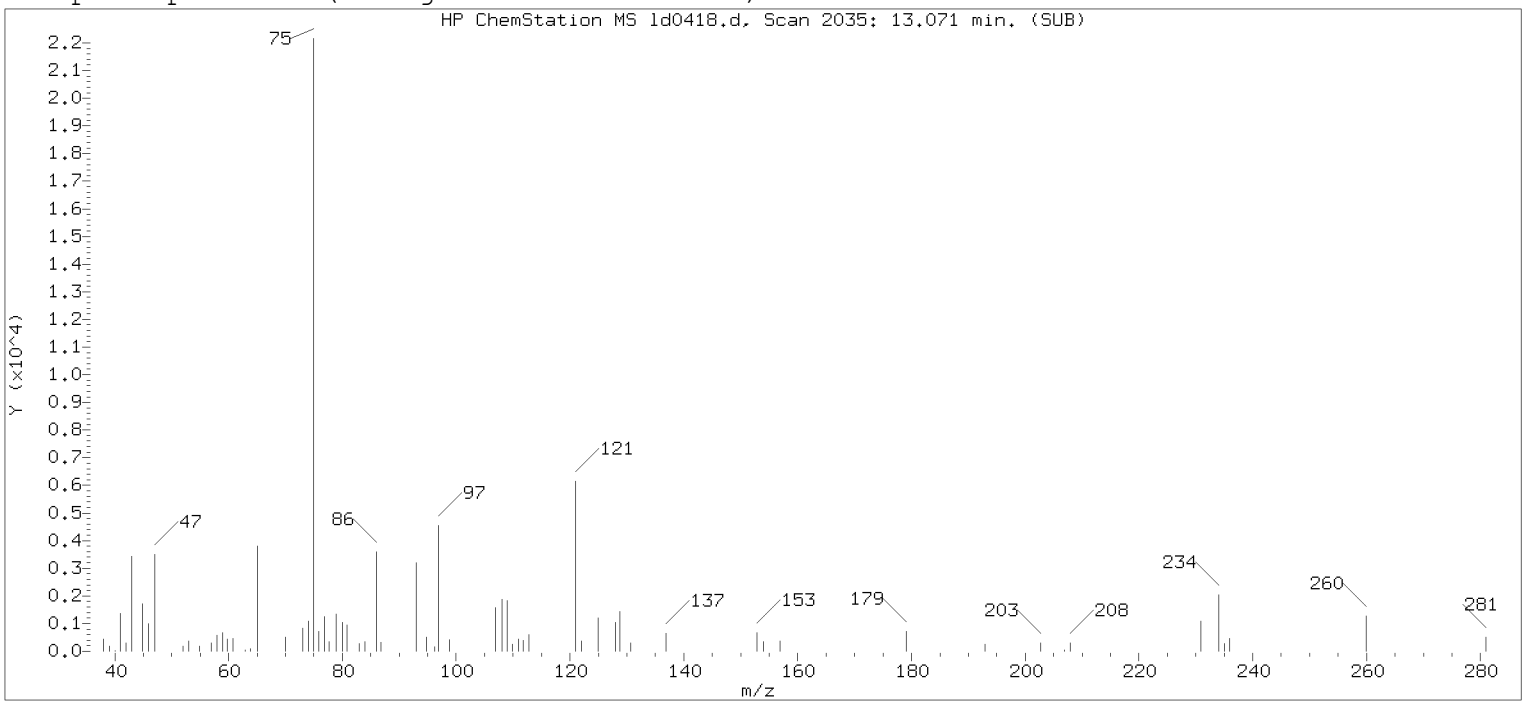
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 5094M
On-Column Amount (ng/ul) : 0.2083
Integration start scan : 1999 Integration stop scan: 2013
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

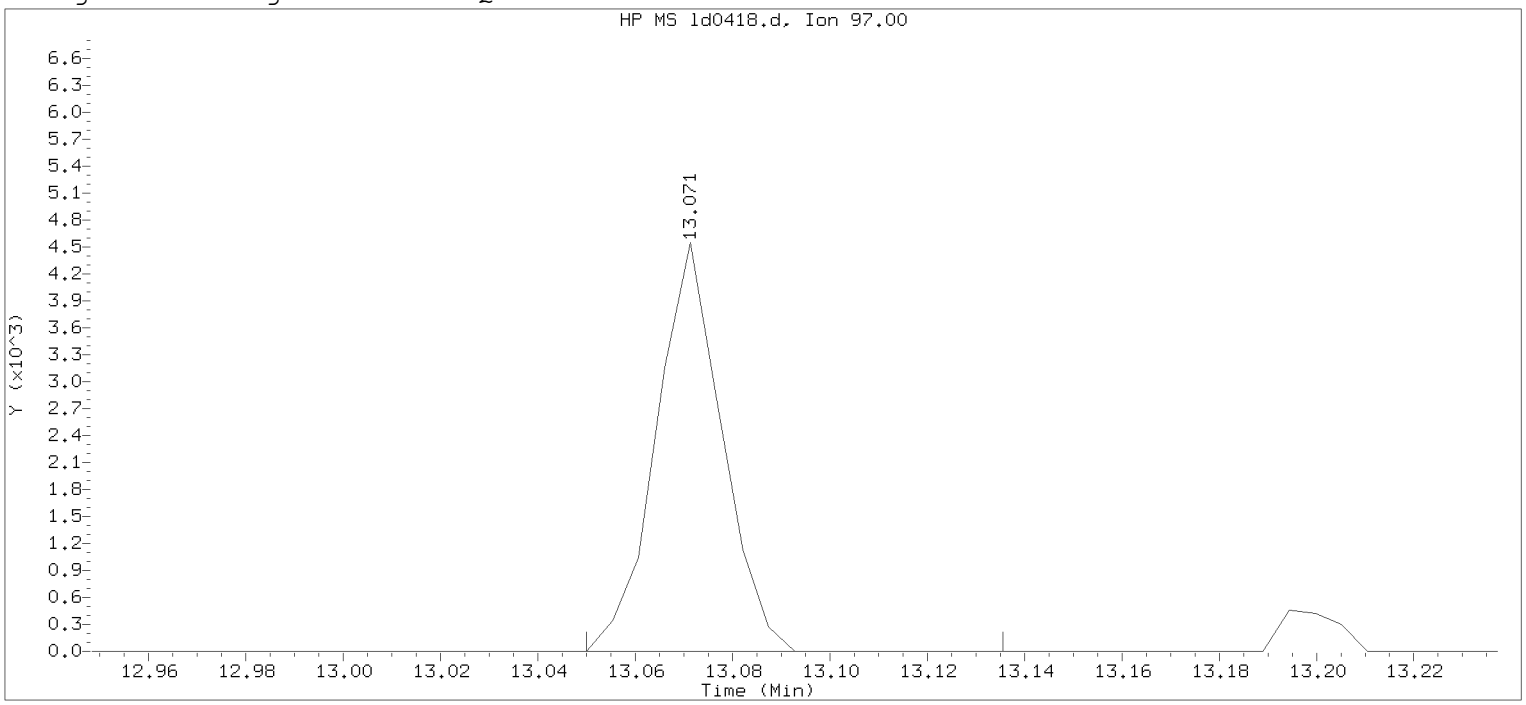
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

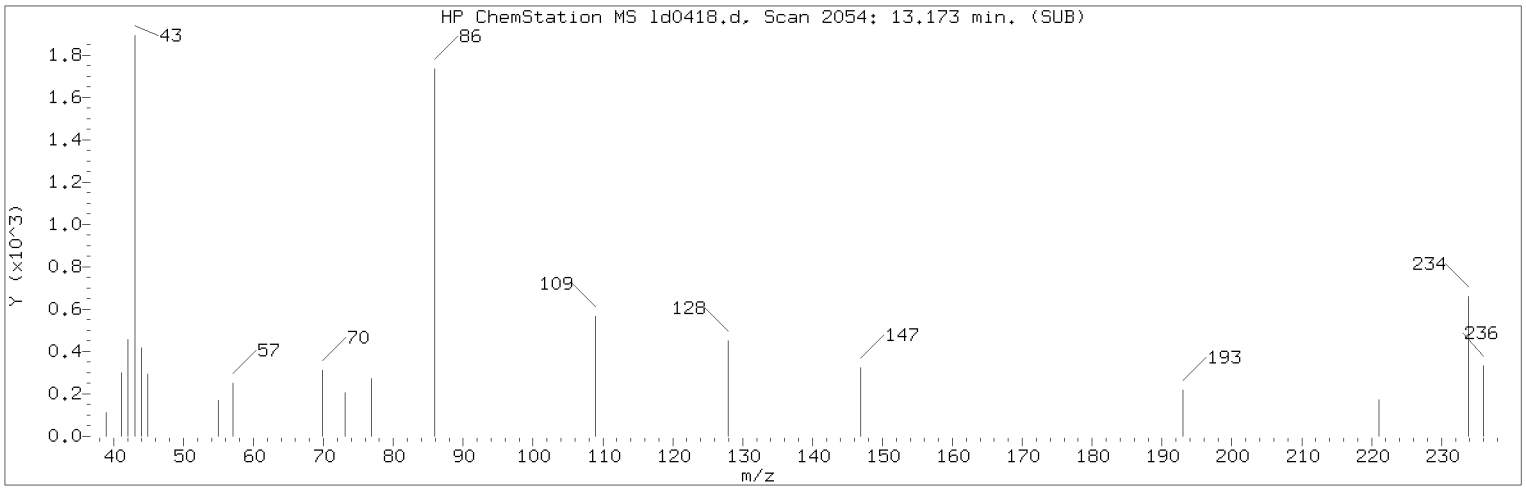
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

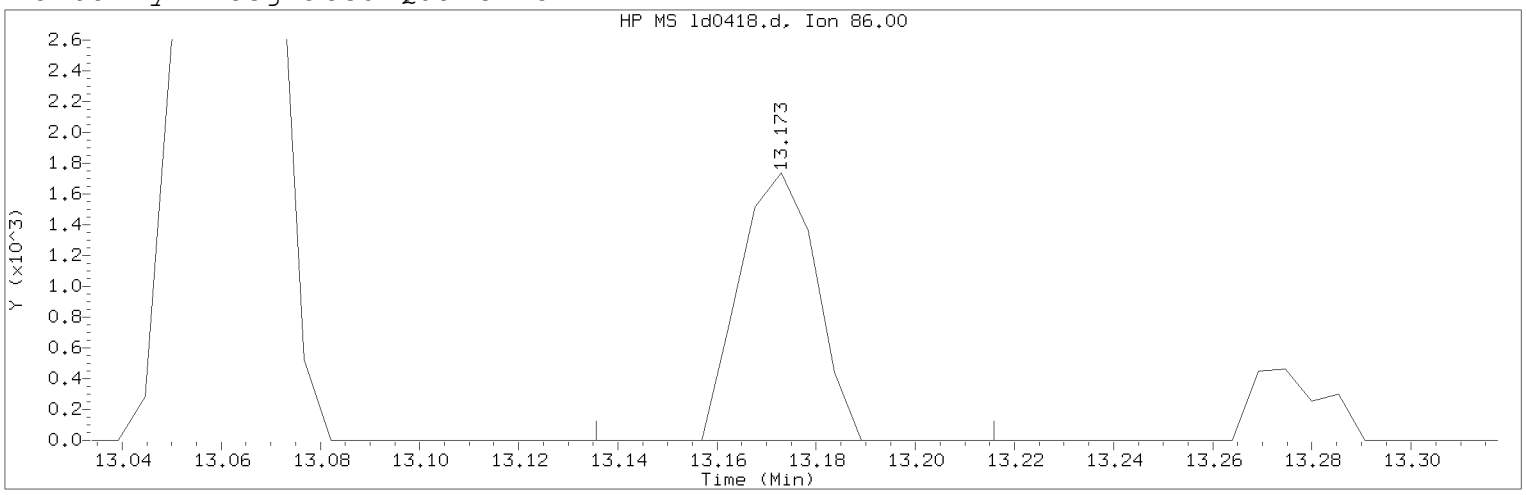
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 4266		
On-column Amount (ng/ul)	: 0.1662		
Integration start scan	: 2030	Integration stop scan:	2046
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

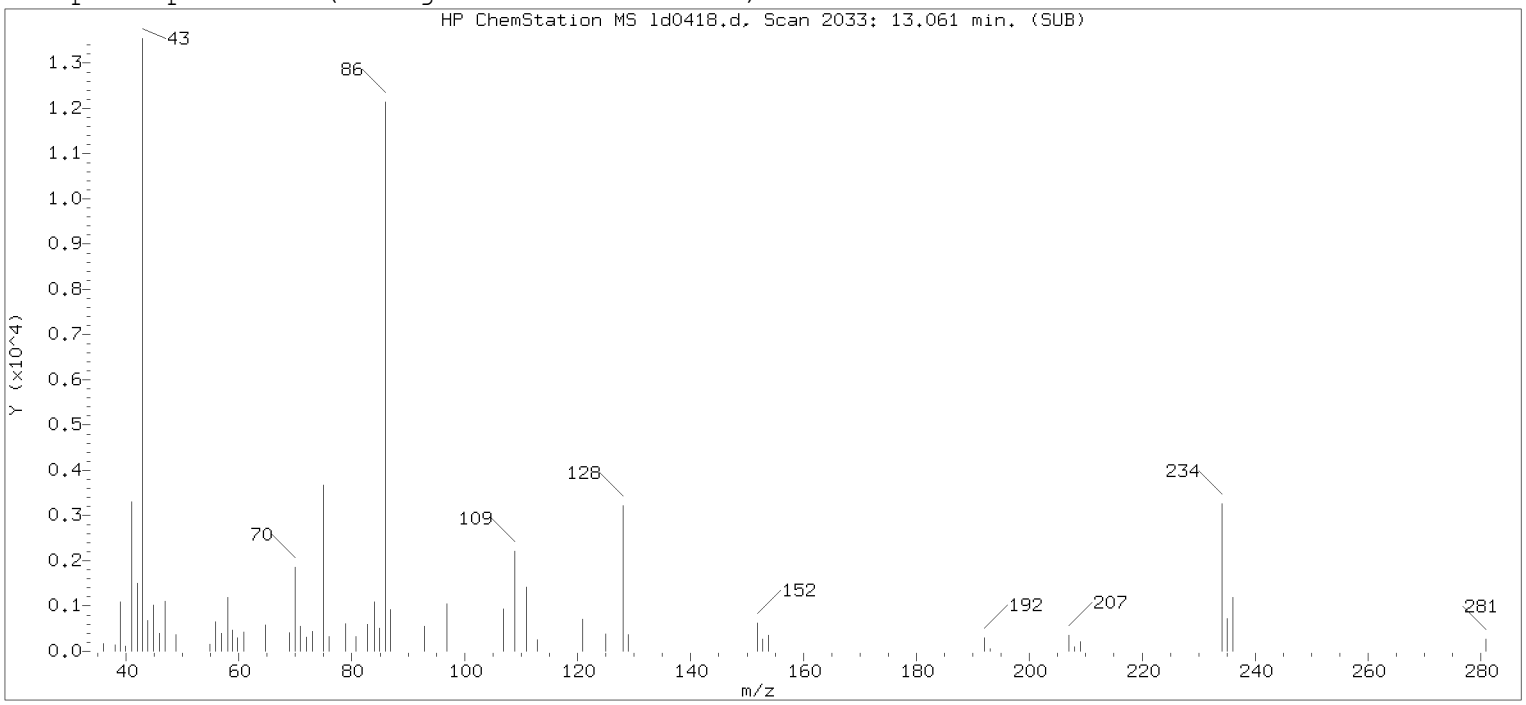
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 1856M
On-Column Amount (ng/ul) : 0.0360
Integration start scan : 2046 Integration stop scan: 2061
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

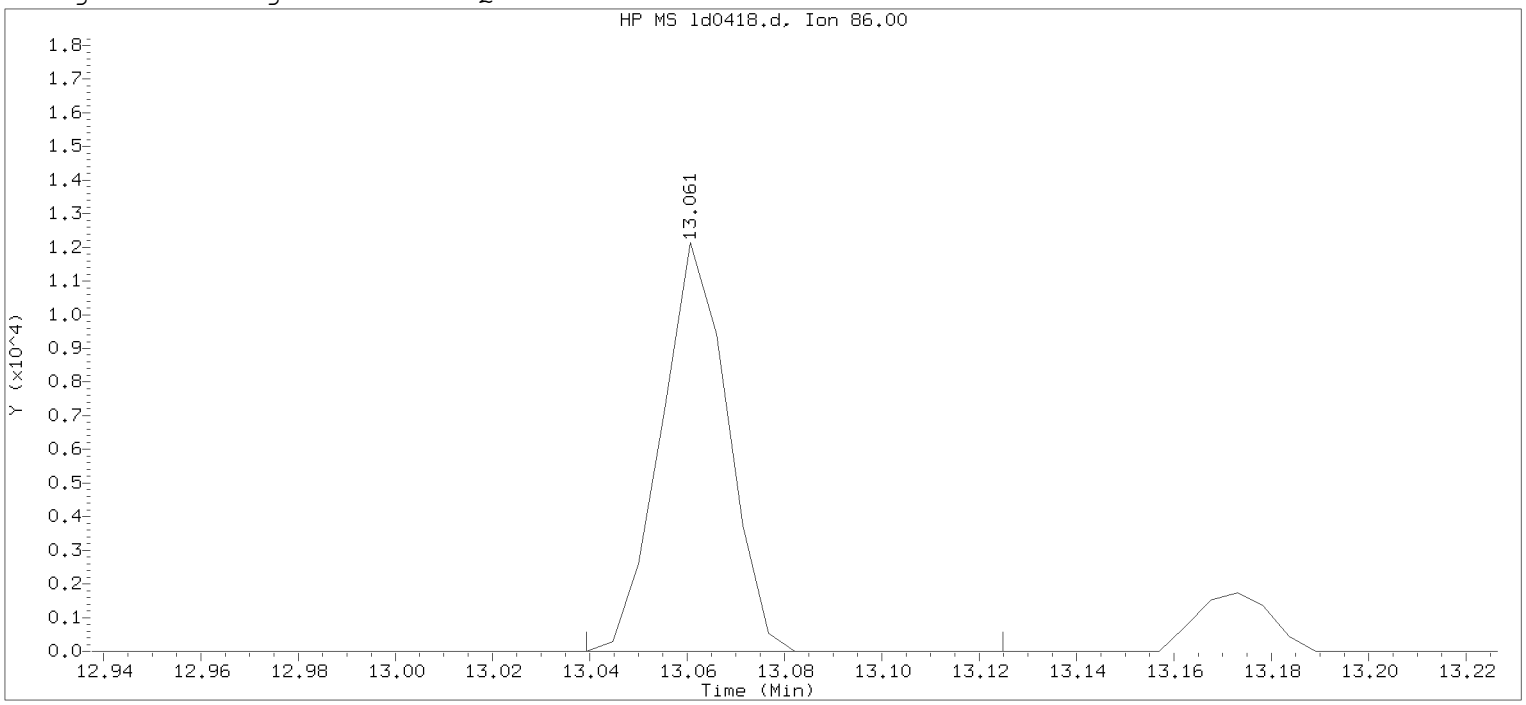
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

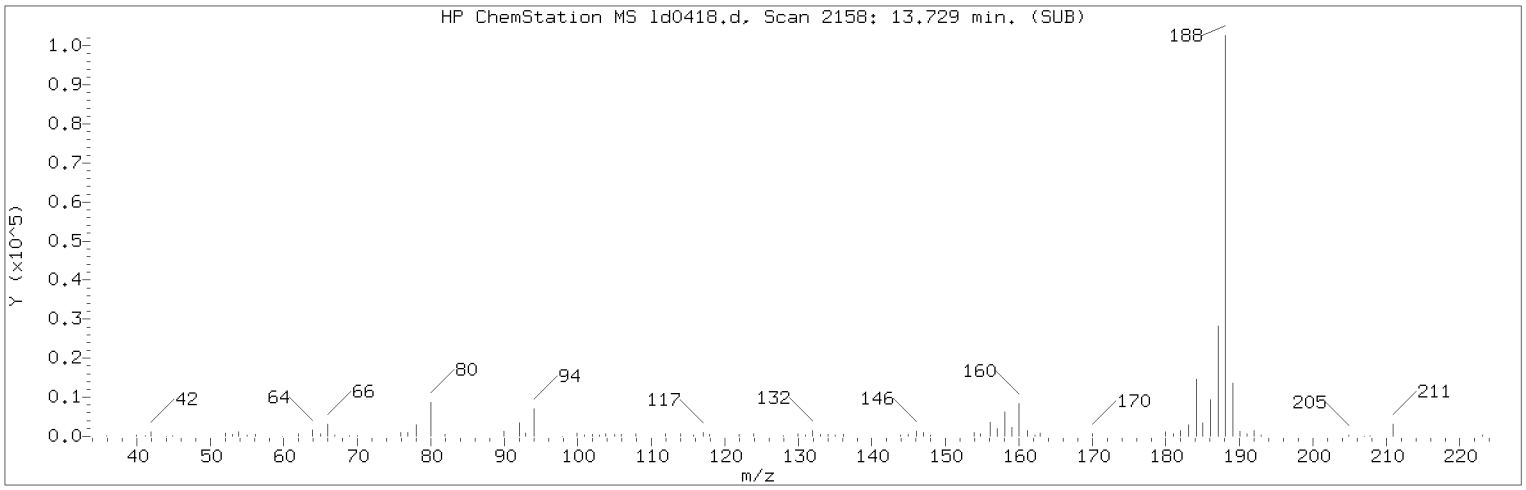
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

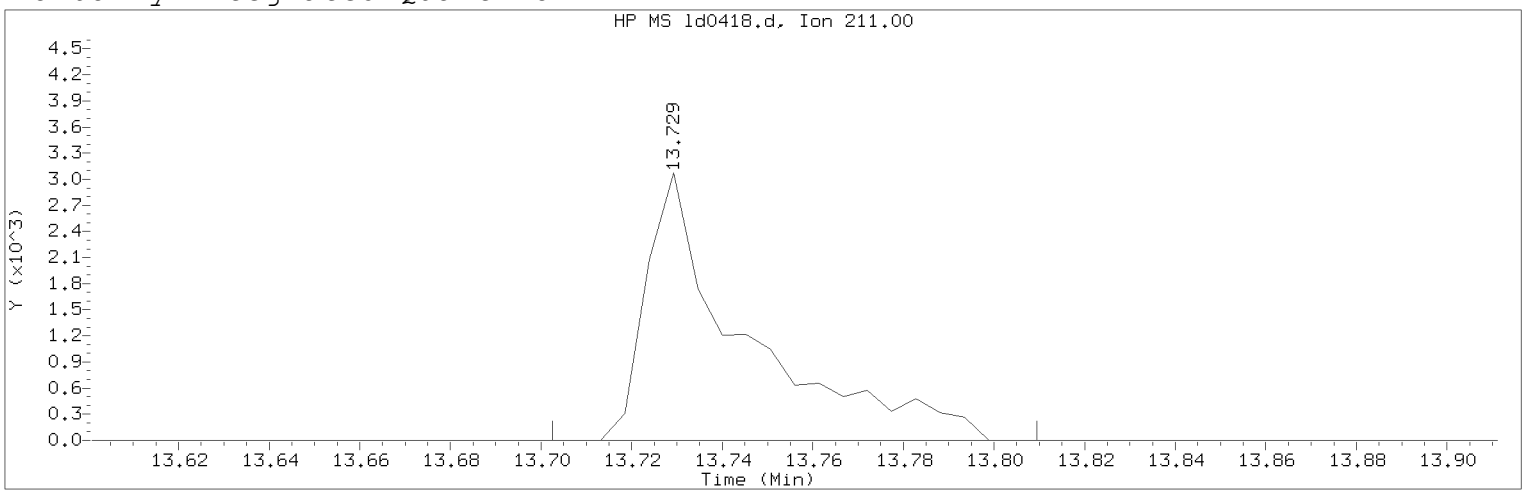
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 11520		
On-column Amount (ng/ul)	: 0.2135		
Integration start scan	: 2028	Integration stop scan	: 2044
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user name: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

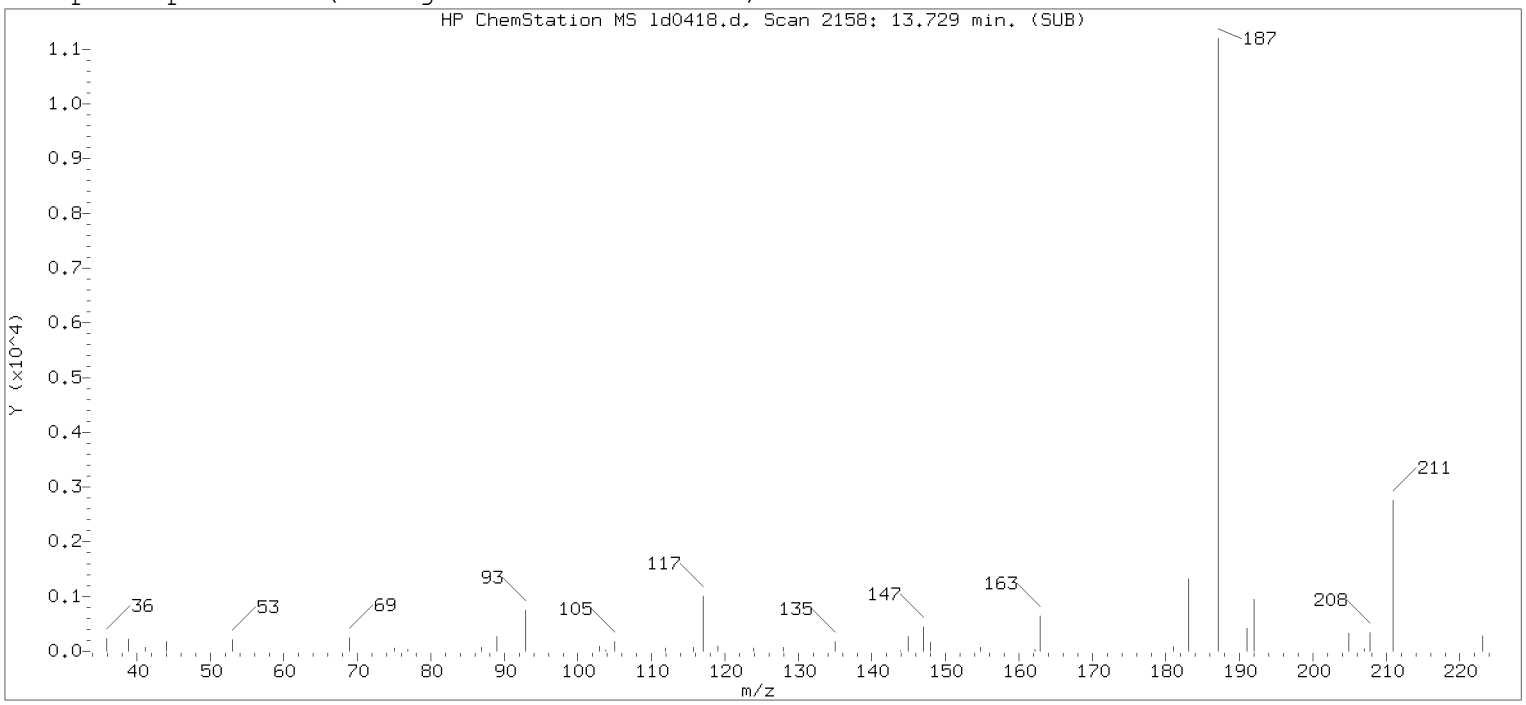
Compound Number : 159
Compound Name : Dinoseb
Scan Number : 2158
Retention Time (minutes) : 13.729
Quant Ion : 211.00
Area (flag) : 4630M
On-Column Amount (ng/ul) : 0.1327
Integration start scan : 2152 Integration stop scan: 2172
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

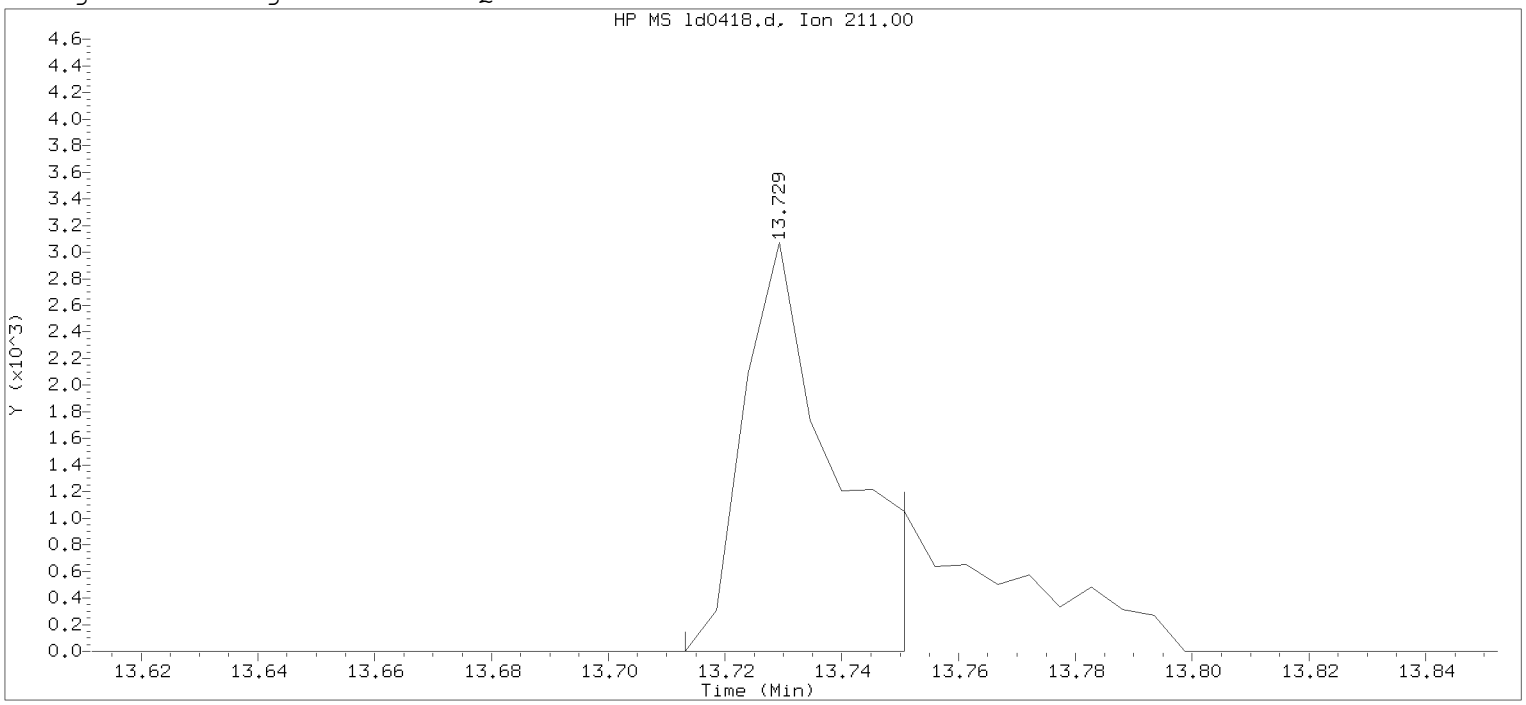
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

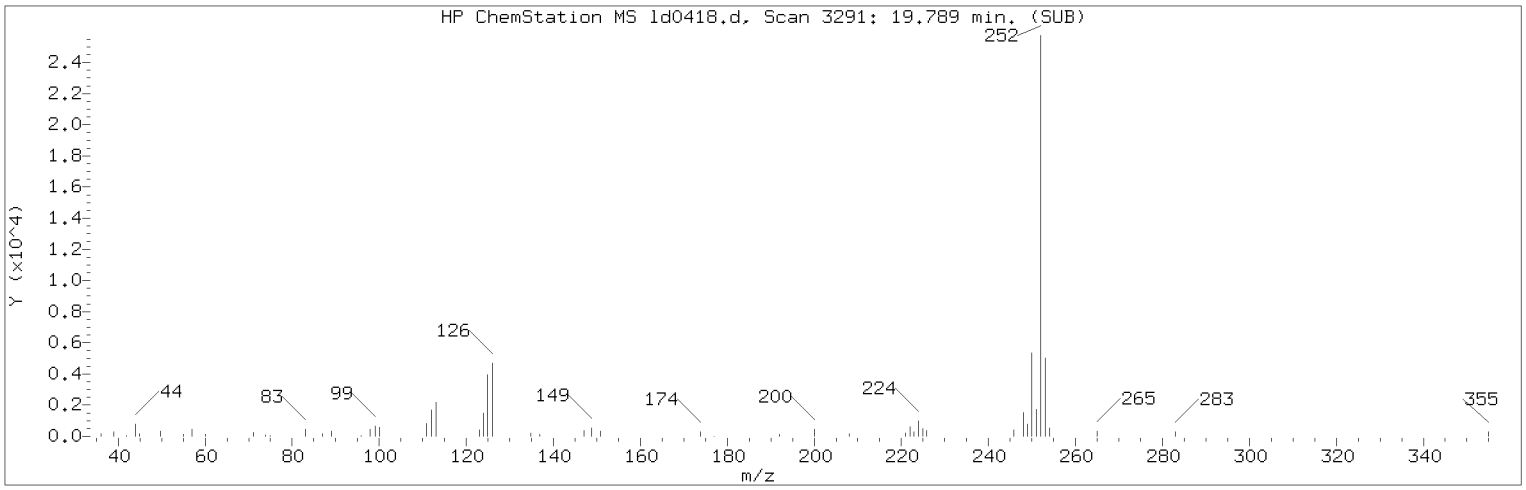
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

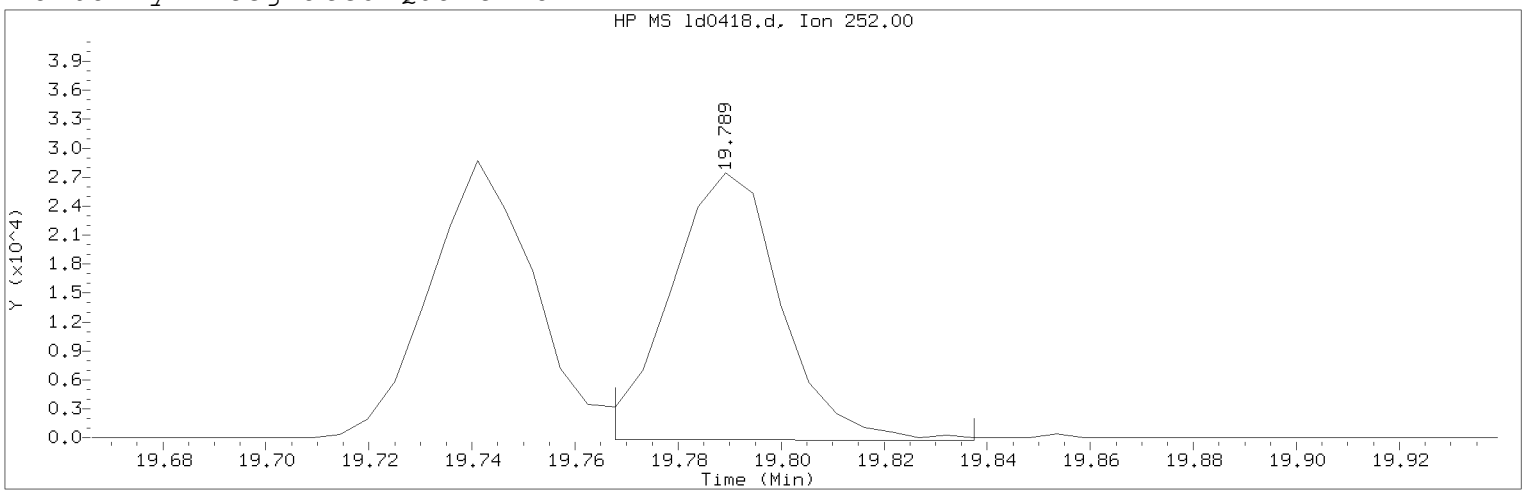
Compound Number	: 159		
Compound Name	: Dinoseb		
Scan Number	: 2158		
Retention Time (minutes)	: 13.729		
Quant Ion	: 211.00		
Area	: 3256		
On-column Amount (ng/ul)	: 0.0919		
Integration start scan	: 2154	Integration stop scan:	2161
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

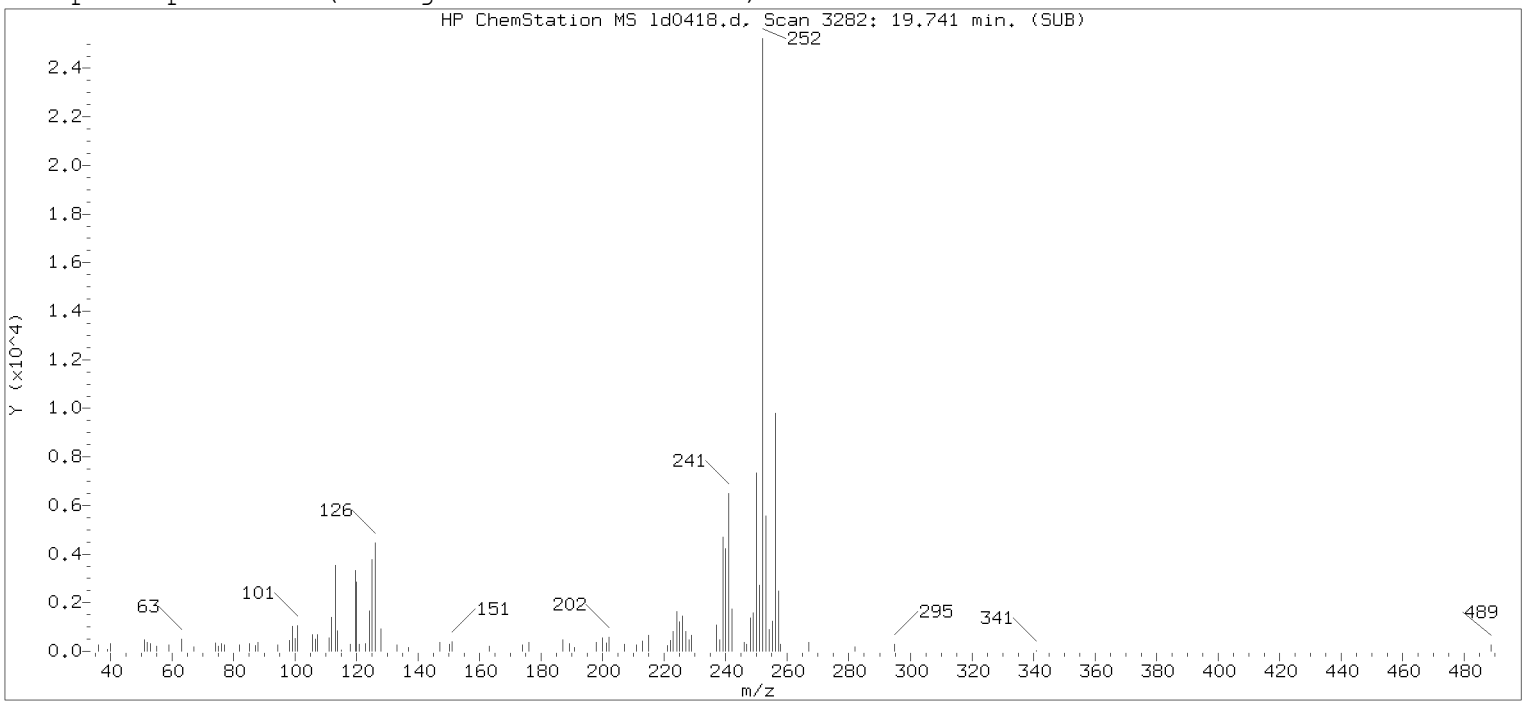
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 41484M
On-Column Amount (ng/ul) : 0.2303
Integration start scan : 3286 Integration stop scan: 3299
Y at integration start : -207 Y at integration end: -251

Reason for manual integration: improper integration

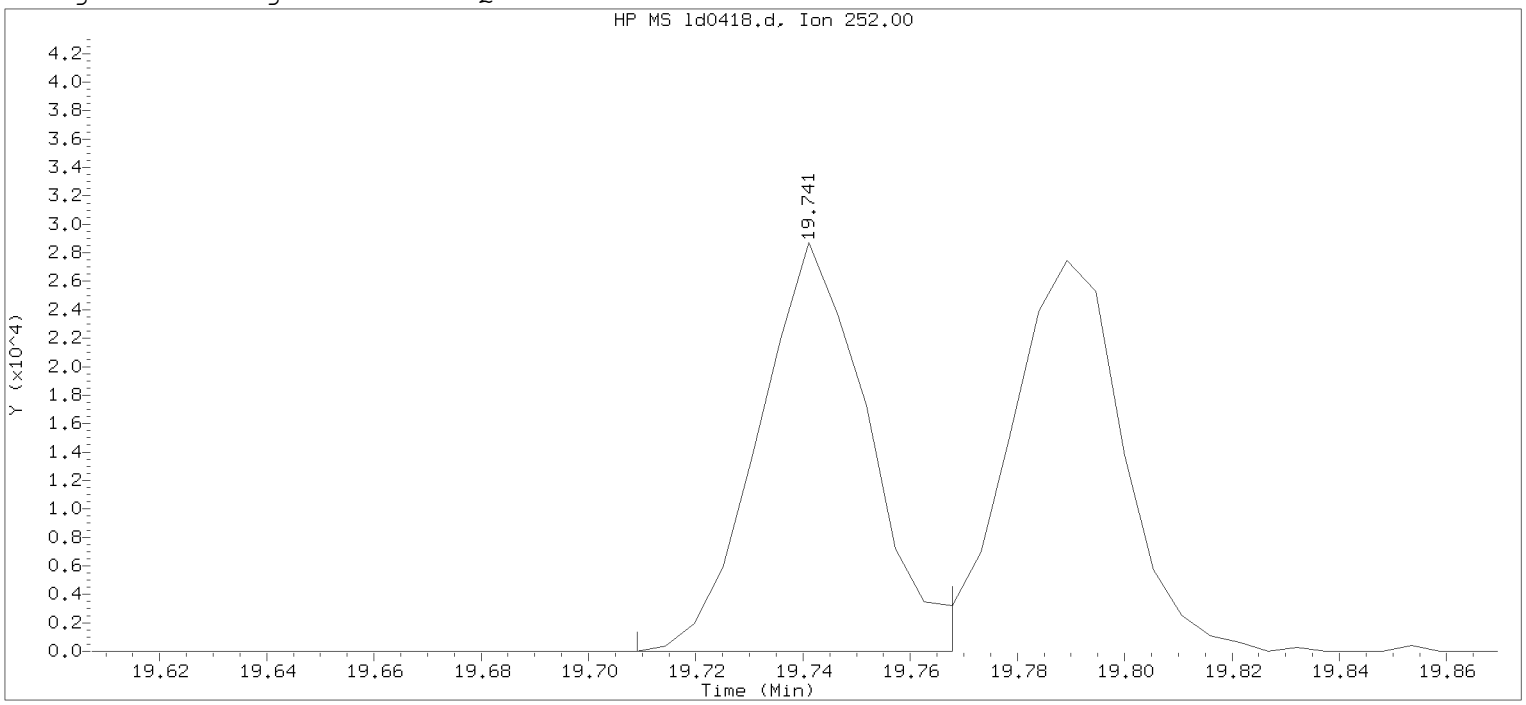
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

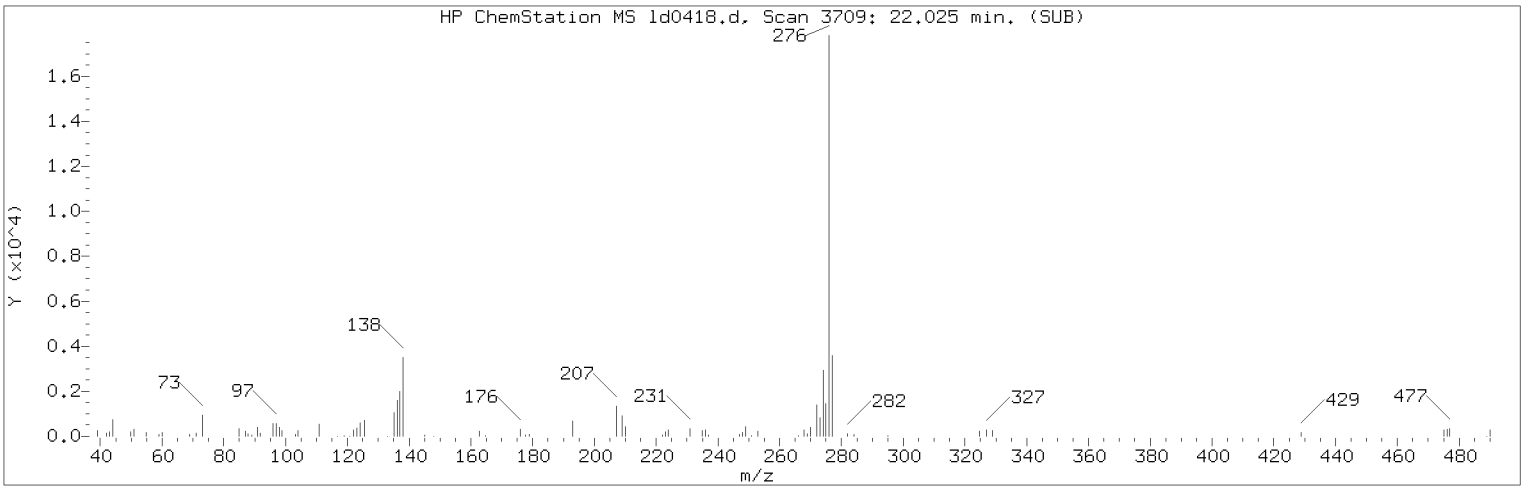
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

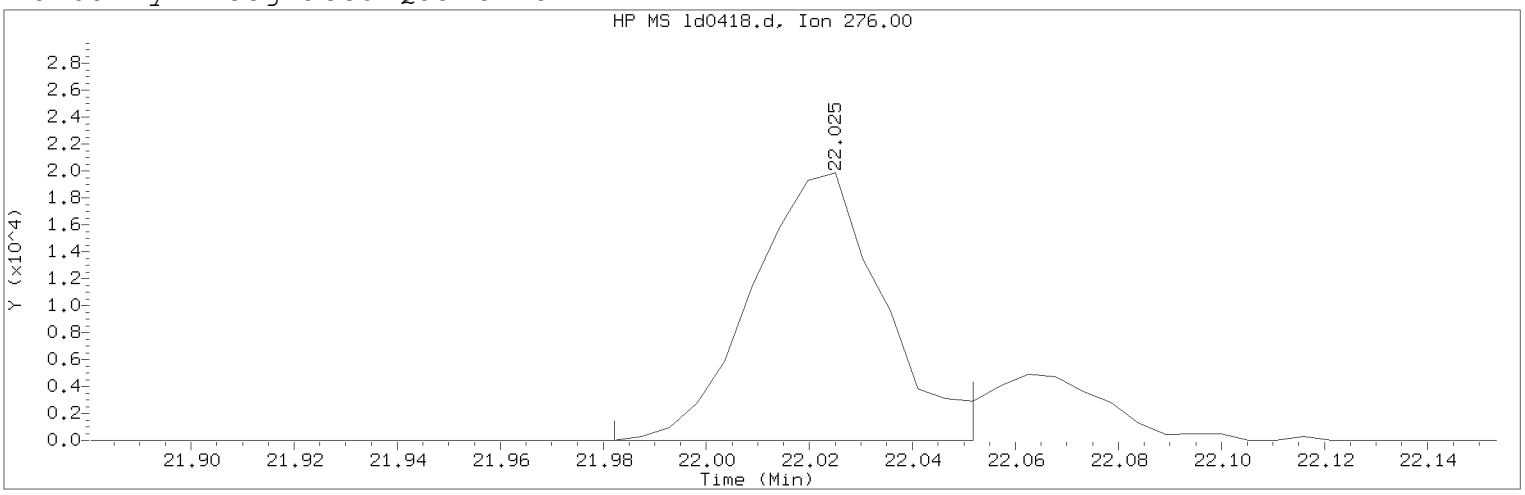
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 40317		
On-column Amount (ng/ul)	: 0.2151		
Integration start scan	: 3275	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

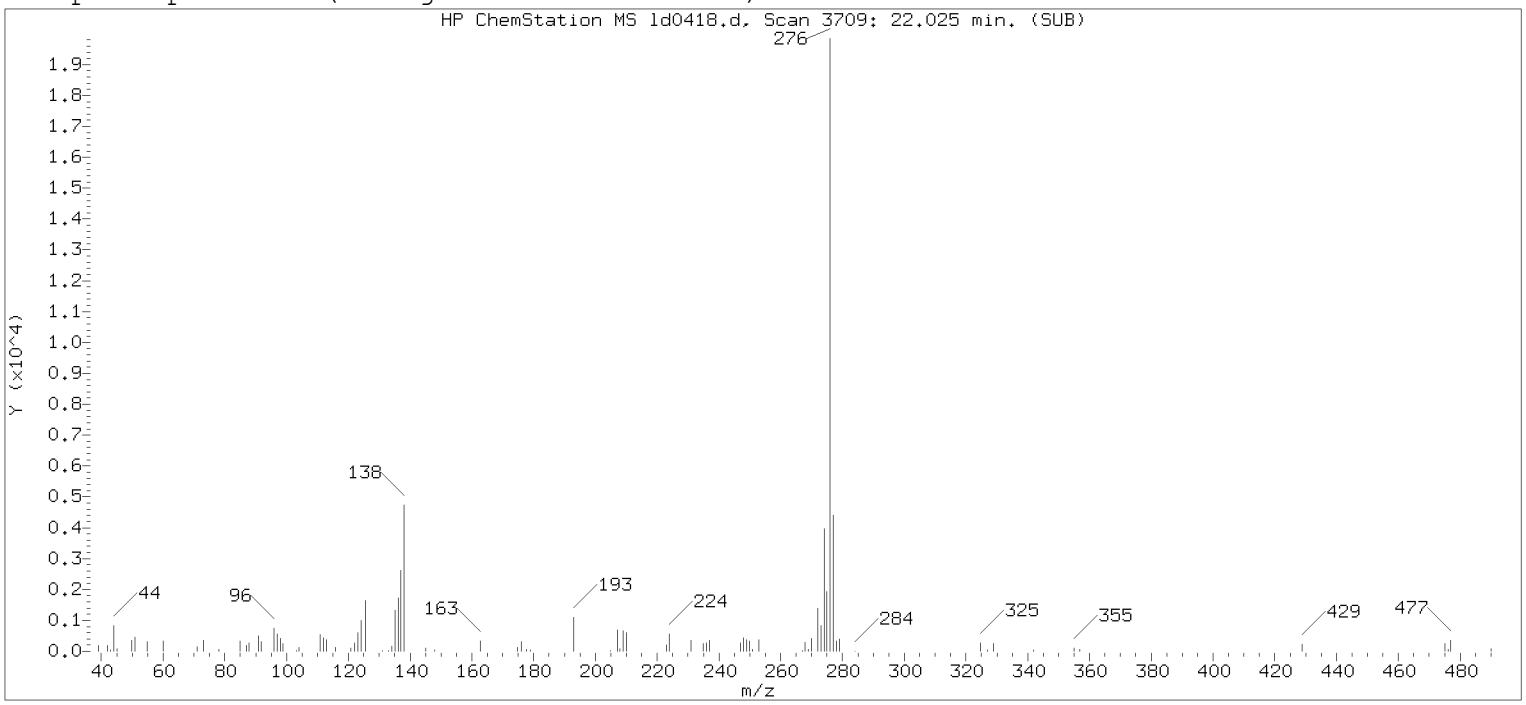
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3709
Retention Time (minutes) : 22.025
Quant Ion : 276.00
Area (flag) : 35016M
On-Column Amount (ng/ul) : 0.2191
Integration start scan : 3700 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

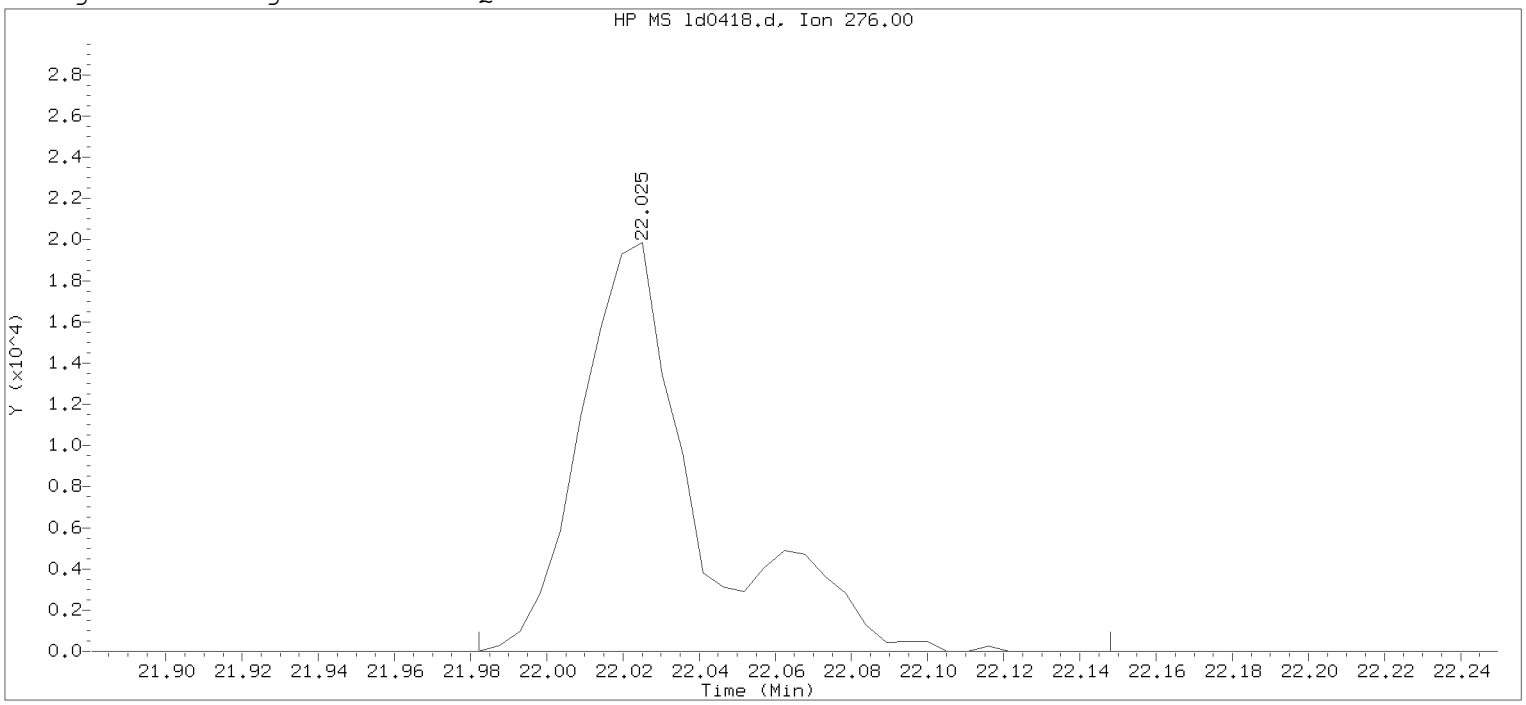
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



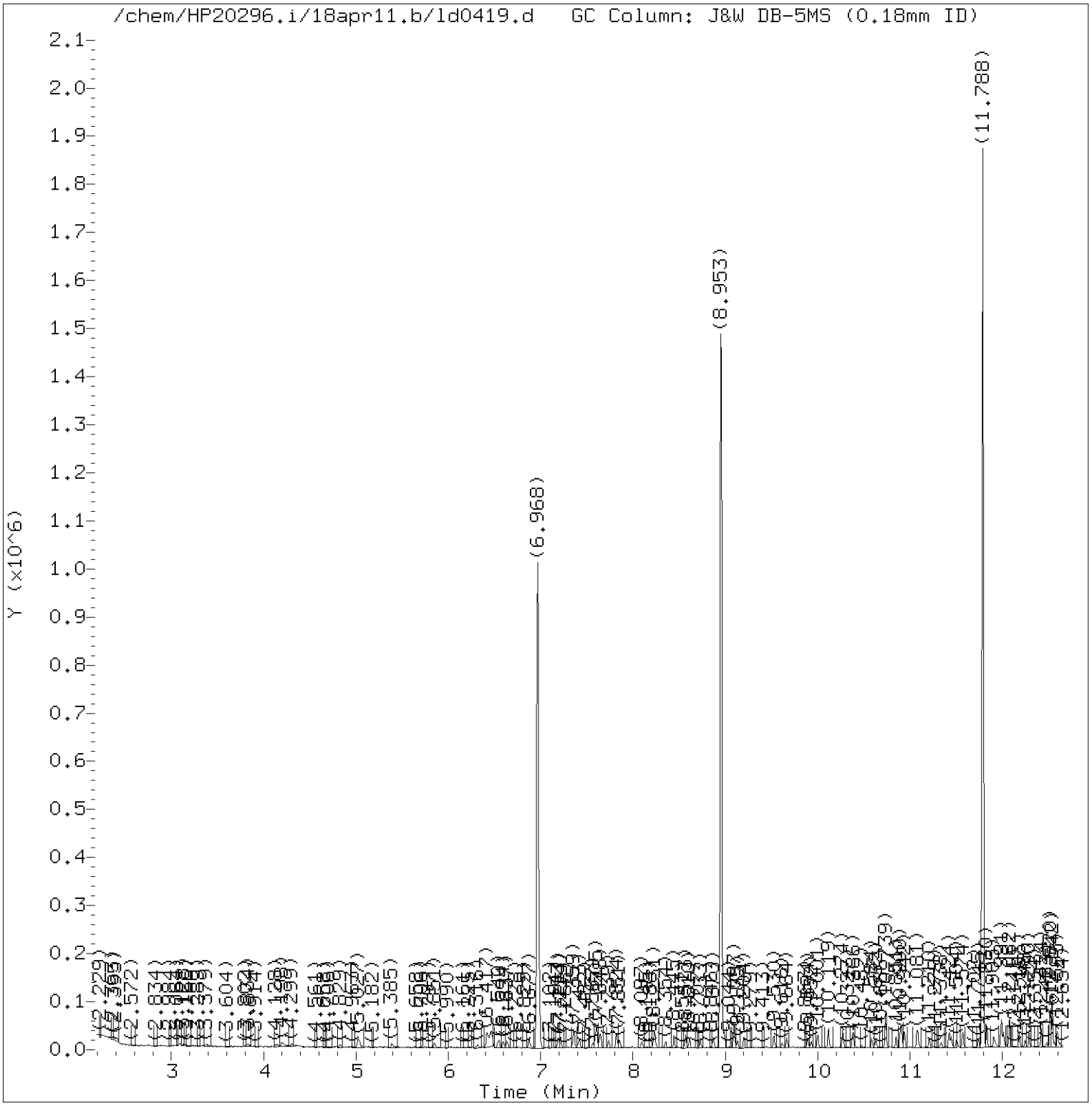
Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3709		
Retention Time (minutes)	: 22.025		
Quant Ion	: 276.00		
Area	: 42411		
On-column Amount (ng/ul)	: 0.2515		
Integration start scan	: 3700	Integration stop scan:	3731
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ashley.transue



Total Ion Chromatogram (TIC)

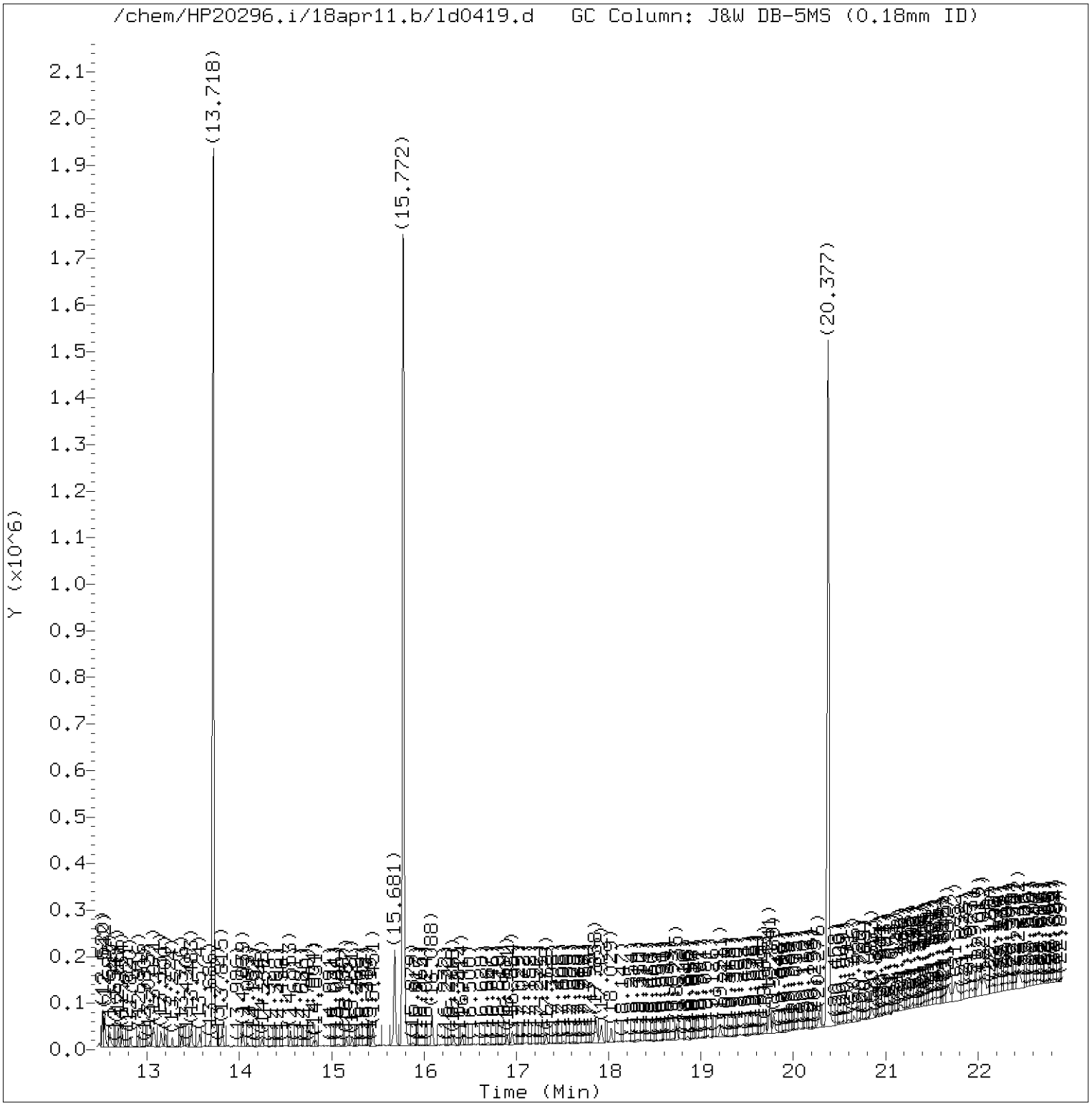
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.433	88	4809M	0.167
5) N-Nitrosodimethylamine	(1)	3.042	74	3110	0.071
6) Pyridine	(1)	3.107	79	7447M	0.095
8) 2-Picoline	(1)	4.198	93	6688M	0.085
9) N-Nitrosomethylethylamine	(1)	4.380	88	2517M	0.079
10) Methyl methanesulfonate	(1)	4.824	80	2936	0.077
12)$2-Fluorophenol	(1)	5.027	112	10387	0.172
14) N-Nitrosodiethylamine	(1)	5.396	102	2062	0.070
43) Total Cresols	(1)			12471	0.208
16) Ethyl methanesulfonate	(1)	5.856	109	2806	0.088
17) Benzaldehyde	(1)	6.316	77	1651M	0.028
18)$Phenol-d6	(1)	6.417	99	14721	0.186
19) Phenol	(1)	6.439	94	8341	0.092
20) Aniline	(1)	6.476	93	9272	0.088
21) a-methylstyrene	(1)	6.551	118	1653	0.072
23) bis(2-Chloroethyl)ether	(1)	6.594	93	5947	0.088
24) 2-Chlorophenol	(1)	6.637	128	5720	0.097
25) 1,3-Dichlorobenzene	(1)	6.877	146	6440	0.097
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	220096	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	6333	0.094
28) Benzyl alcohol	(1)	7.193	108	3628	0.092
29) 1,2-Dichlorobenzene	(1)	7.214	146	5828	0.091
31) Indene	(1)	7.353	115	8170	0.087
32) 2-Methylphenol	(1)	7.364	108	5811	0.100
100) Isosafrole	(3)			5144	0.097
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	10907	0.113
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	10907	0.113
36) N-Nitrosopyrrolidine	(1)	7.567	100	3156	0.099
37) Acetophenone	(1)	7.594	105	6495	0.073
38) 4-Methylphenol	(1)	7.600	108	6660	0.108
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	4500	0.089
40) N-Nitrosomorpholine	(1)	7.642	56	4189	0.099
41) o-Toluidine	(1)	7.648	106	9904	0.096
44) Hexachloroethane	(1)	7.739	117	2433	0.085
45)$Nitrobenzene-d5	(2)	7.824	82	13645	0.187
46) Nitrobenzene	(2)	7.856	77	7169	0.096
125) 2,4_2,6-Dinitrotoluenes	(3)			5389	0.168
50) N-Nitrosopiperidine	(2)	8.097	114	3385	0.111
52) Isophorone	(2)	8.241	82	12518	0.096
53) 2-Nitrophenol	(2)	8.354	139	2446	0.081

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	6133	0.095
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	3130	0.098
57) bis(2-Chloroethoxy)methane	(2)	8.610	93	9139	0.108
62) 2,4-Dichlorophenol	(2)	8.733	162	4862	0.097
151) Diallate trans/cis	(4)			6123	0.099
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	5669	0.101
68)*Naphthalene-d8	(2)	8.953	136	847103	5.000
70) 4-Chloroaniline	(2)	9.092	127	7160	0.100
71) 2,6-Dichlorophenol	(2)	9.097	162	4401	0.088
72) Hexachloropropene	(2)	9.135	213	3484	0.086
74) Hexachlorobutadiene	(2)	9.204	225	3359	0.099
78) Quinoline	(2)	9.530	129	11421	0.102
79) Caprolactam	(2)	9.611	113	966M	0.061
80) N-Nitrosodi-n-butylamine	(2)	9.669	84	4709	0.086
83) 4-Chloro-3-methylphenol	(2)	9.894	107	5297	0.096
85) Safrole	(2)	10.001	162	4373	0.093
88) Hexachlorocyclopentadiene	(3)	10.375	237	2599	0.076
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	6659	0.116
91) cis-Isosafrole	(3)	10.477	162	835	0.017
93) 2,4,6-Trichlorophenol	(3)	10.589	196	3505	0.097
95) 2,4,5-Trichlorophenol	(3)	10.632	196	3775	0.100
96)$2-Fluorobiphenyl	(3)	10.739	172	28896	0.220
97) trans-Isosafrole	(3)	10.851	162	4309	0.080
98) 1,1'-Biphenyl	(3)	10.894	154	11008	0.081
101) 1-Chloronaphthalene	(3)	10.937	162	12077M	0.114
103) Diphenyl ether	(3)	11.076	170	7965	0.105
104) 2-Nitroaniline	(3)	11.092	138	2952	0.088
108) 1,4-Naphthoquinone	(3)	11.210	158	3917	0.086
109) 1,4-Dinitrobenzene	(3)	11.344	168	1105M	0.062
110) Dimethylphthalate	(3)	11.424	163	13914	0.108
111) 1,3-Dinitrobenzene	(3)	11.445	168	1886M	0.098
113) 2,6-Dinitrotoluene	(3)	11.504	165	2517	0.092
117) 3-Nitroaniline	(3)	11.745	138	2327	0.081
118)*Acenaphthene-d10	(3)	11.788	164	422017	5.000
120) 2,4-Dinitrophenol	(3)	11.911	184	6095M	0.371
121) 4-Nitrophenol	(3)	11.991	109	6718	0.331
122) Pentachlorobenzene	(3)	12.018	250	5134	0.110
124) Dibenzofuran	(3)	12.076	168	17625	0.112
123) 2,4-Dinitrotoluene	(3)	12.082	165	2872	0.076
126) 1-Naphthylamine	(3)	12.189	143	10745	0.096

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	2339	0.079
128) 2-Naphthylamine	(3)	12.290	143	11817	0.111
129) Diethylphthalate	(3)	12.424	149	13045	0.103
130) Thionazin	(3)	12.515	107	2382	0.110
133) 5-Nitro-o-toluidine	(3)	12.542	152	2695	0.080
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	7058	0.116
134) 4-Nitroaniline	(3)	12.547	138	2673	0.092
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	6596M	0.301
136) N-Nitrosodiphenylamine	(4)	12.686	169	10715	0.106
137) NDPA as diphenylamine	(4)	12.686	169	10715	0.106
139) 1,2-Diphenylhydrazine	(4)	12.734	77	14921	0.106
140)$2,4,6-Tribromophenol	(3)	12.820	330	2540	0.174
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	2437M	0.101
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1129	0.084
145) Diallate (peak 1)	(4)	13.060	86	5296	0.083
146) Phorate	(4)	13.071	75	8657	0.095
147) Phenacetin	(4)	13.082	108	5446	0.085
148) 4-Bromophenyl-phenylether	(4)	13.151	248	3605	0.106
149) Diallate (peak 2)	(4)	13.173	86	827M	0.016
152) Dimethoate	(4)	13.269	87	4382	0.080
153) Atrazine	(4)	13.376	200	2955	0.086
154) Pentachlorophenol	(4)	13.467	266	1148	0.054
156) Pentachloronitrobenzene	(4)	13.472	237	1259	0.076
155) 4-Aminobiphenyl	(4)	13.483	169	11145	0.097
157) Pronamide	(4)	13.574	173	4616	0.081
158)*Phenanthrene-d10	(4)	13.718	188	827942	5.000
159) Dinoseb	(4)	13.734	211	1057M	0.031
168) Carbazole	(4)	14.039	167	17431	0.108
169) Methyl parathion	(4)	14.248	109	3032	0.073
170) Di-n-butylphthalate	(4)	14.553	149	20337	0.093
172) Parathion	(4)	14.804	109	1701	0.063
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	1100M	0.051
174) Octachlorostyrene	(4)	15.162	308	1507	0.116
176) Isodrin	(4)	15.216	193	3557	0.157
179) Benzidine	(5)	15.681	184	98345	0.804
180)*Pyrene-d10	(5)	15.772	212	830375	5.000
184)$Terphenyl-d14	(5)	16.088	244	29397	0.221
187) p-Dimethylaminoazobenzene	(5)	16.323	225	2224	0.069
190) Chlorobenzilate	(5)	16.414	139	5530	0.088
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	10209	0.077

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

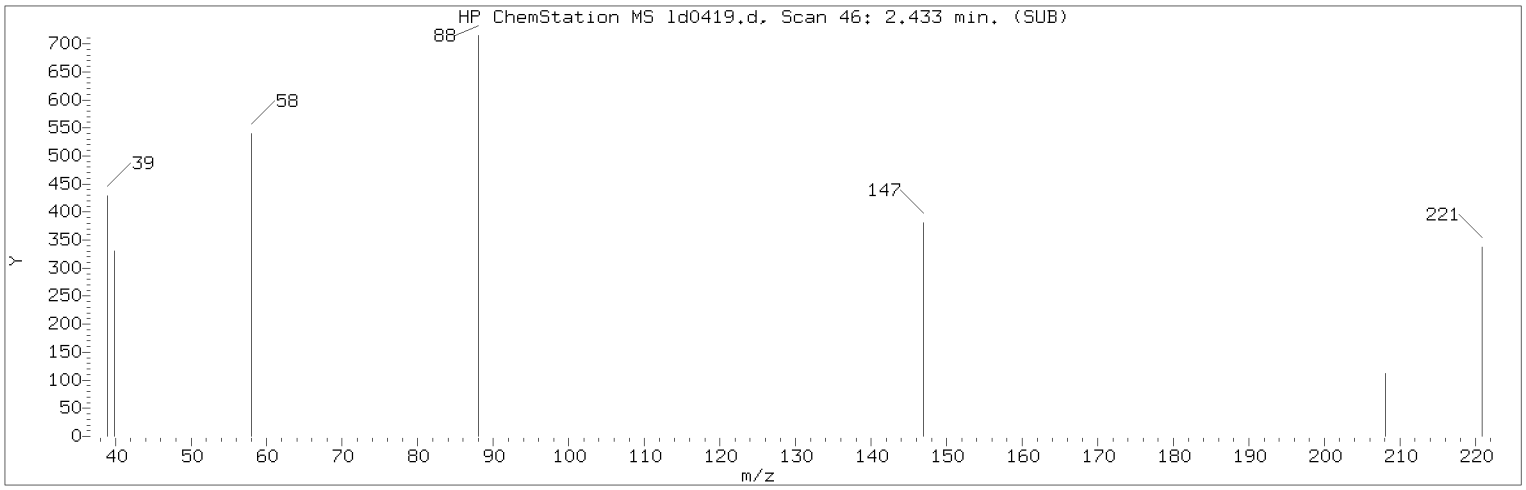
Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
193) Butylbenzylphthalate	(5)	16.954	149	8514	0.087
196) 2-Acetylaminofluorene	(5)	17.323	181	5831	0.075
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	5961	0.088
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	3002	0.073
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	11220	0.081
208) 6-Methylchrysene	(5)	18.735	242	11992	0.093
210) Di-n-octylphthalate	(6)	19.211	149	17883	0.077
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.741	256	6456	0.086
218)*Perylene-d12	(6)	20.377	264	741028	5.000
220) 3-Methylcholanthrene	(6)	20.853	268	8933	0.112
222) Dibenz(a,h)acridine	(6)	21.682	279	14185	0.102
223) Dibenz(a,j)acridine	(6)	21.757	279	14851	0.105

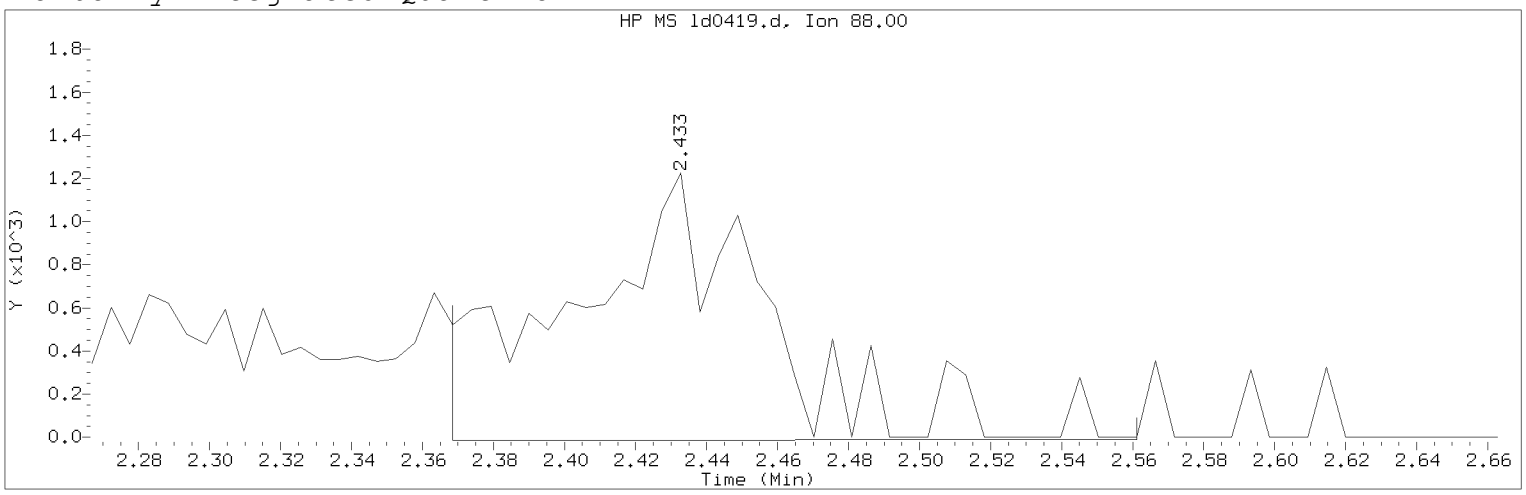
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

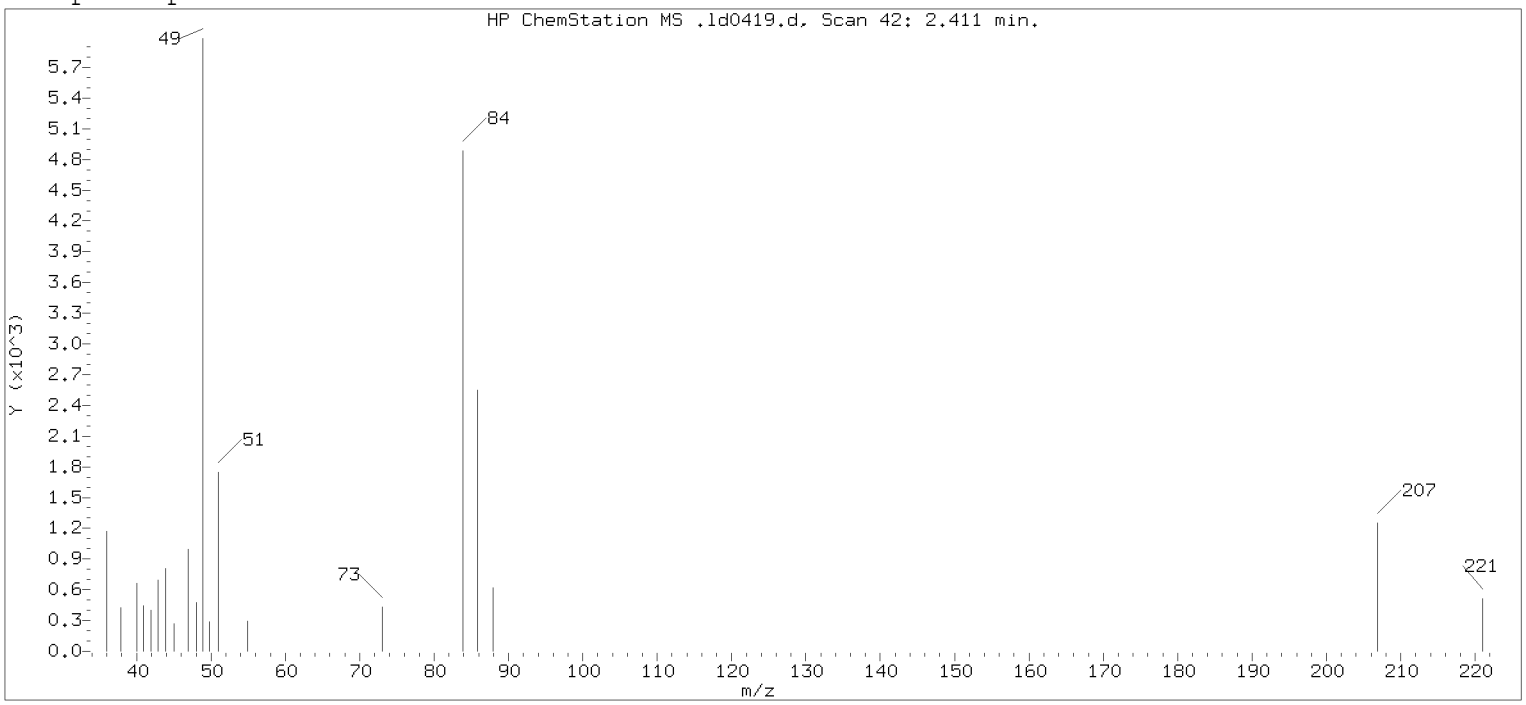
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.433
Quant Ion : 88.00
Area (flag) : 4809M
On-Column Amount (ng/ul) : 0.1671
Integration start scan : 33 Integration stop scan: 69
Y at integration start : -14 Y at integration end: -10

Reason for manual integration: missed peak

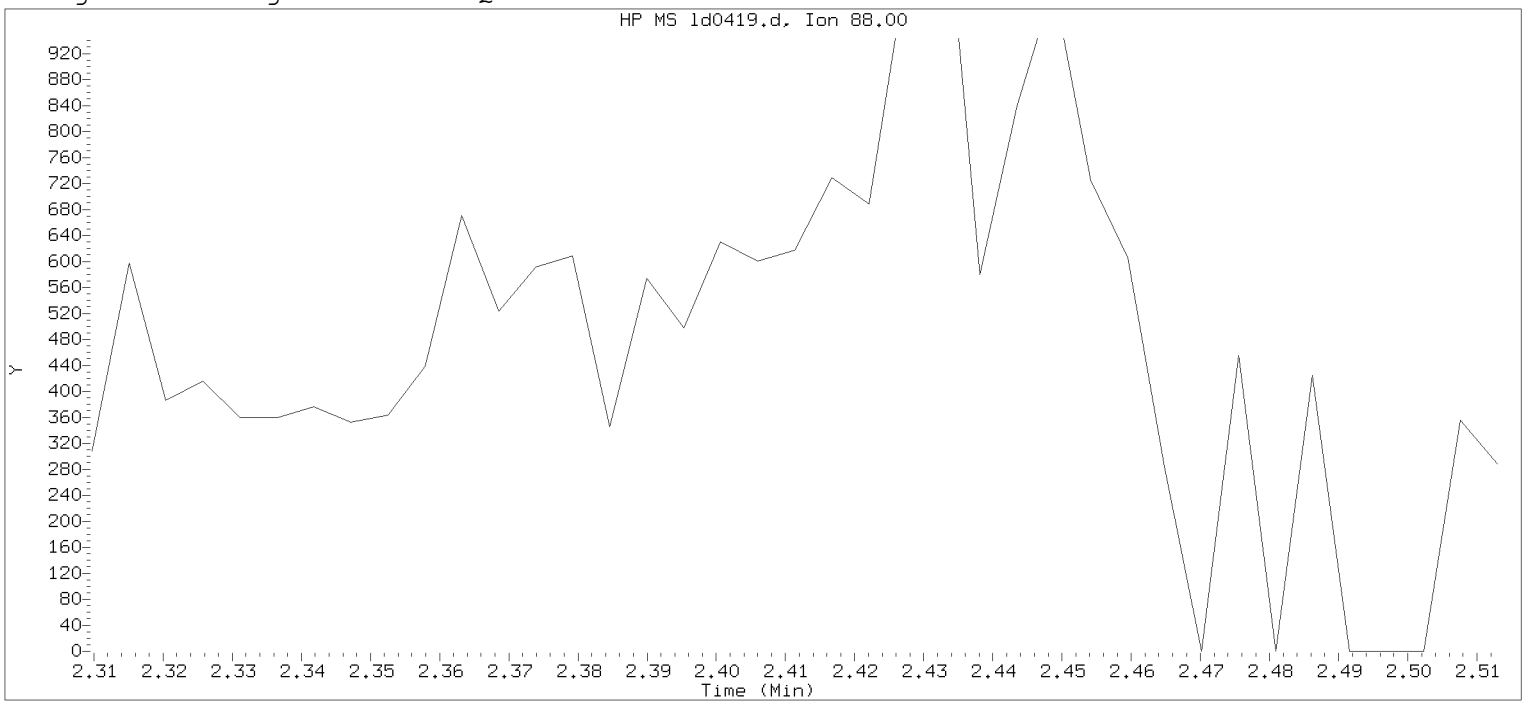
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

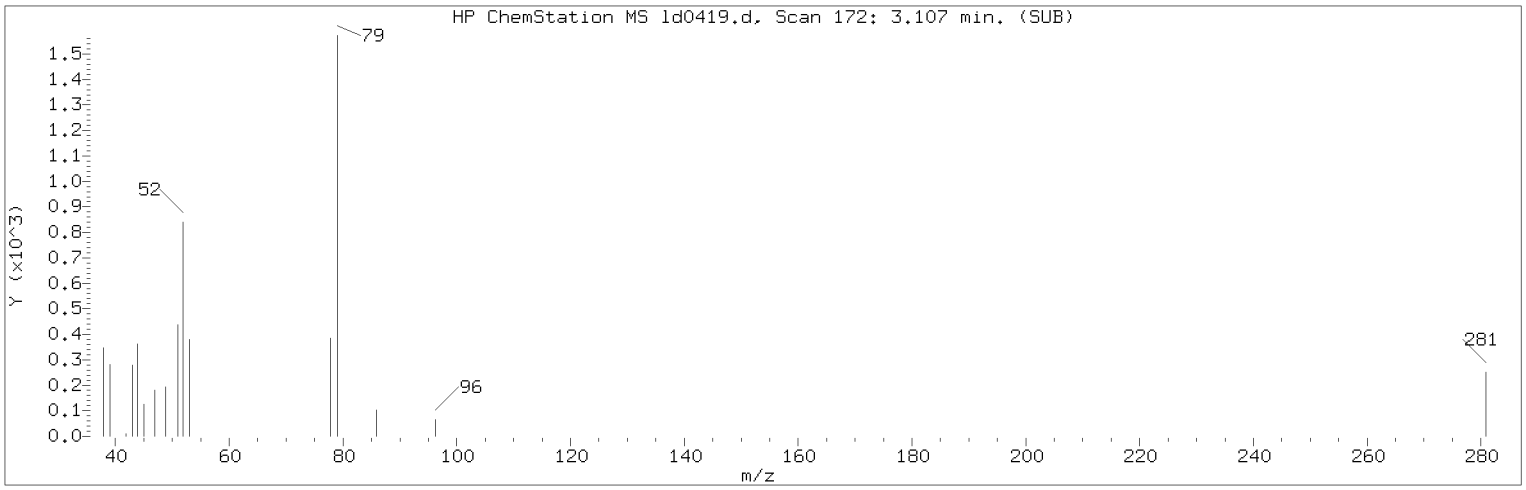
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

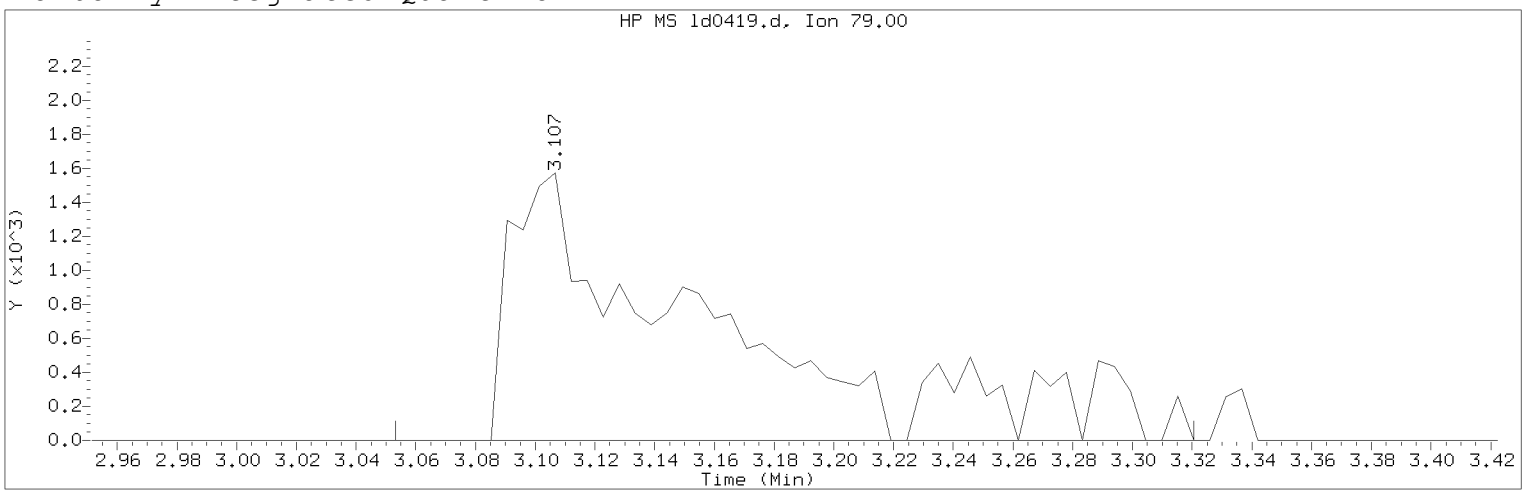
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.411
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

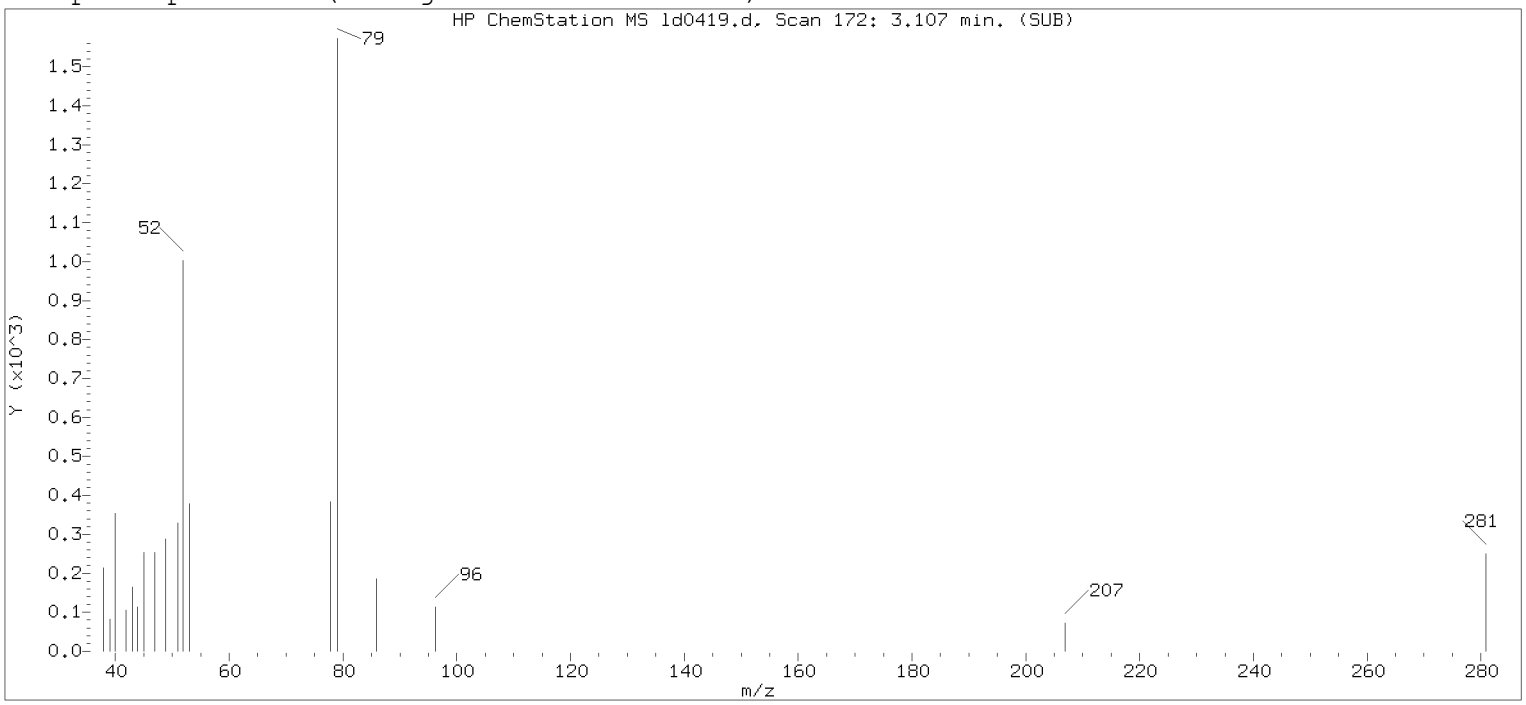
Compound Number : 6
Compound Name : Pyridine
Scan Number : 172
Retention Time (minutes) : 3.107
Quant Ion : 79.00
Area (flag) : 7447M
On-Column Amount (ng/ul) : 0.0953
Integration start scan : 161 Integration stop scan: 211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

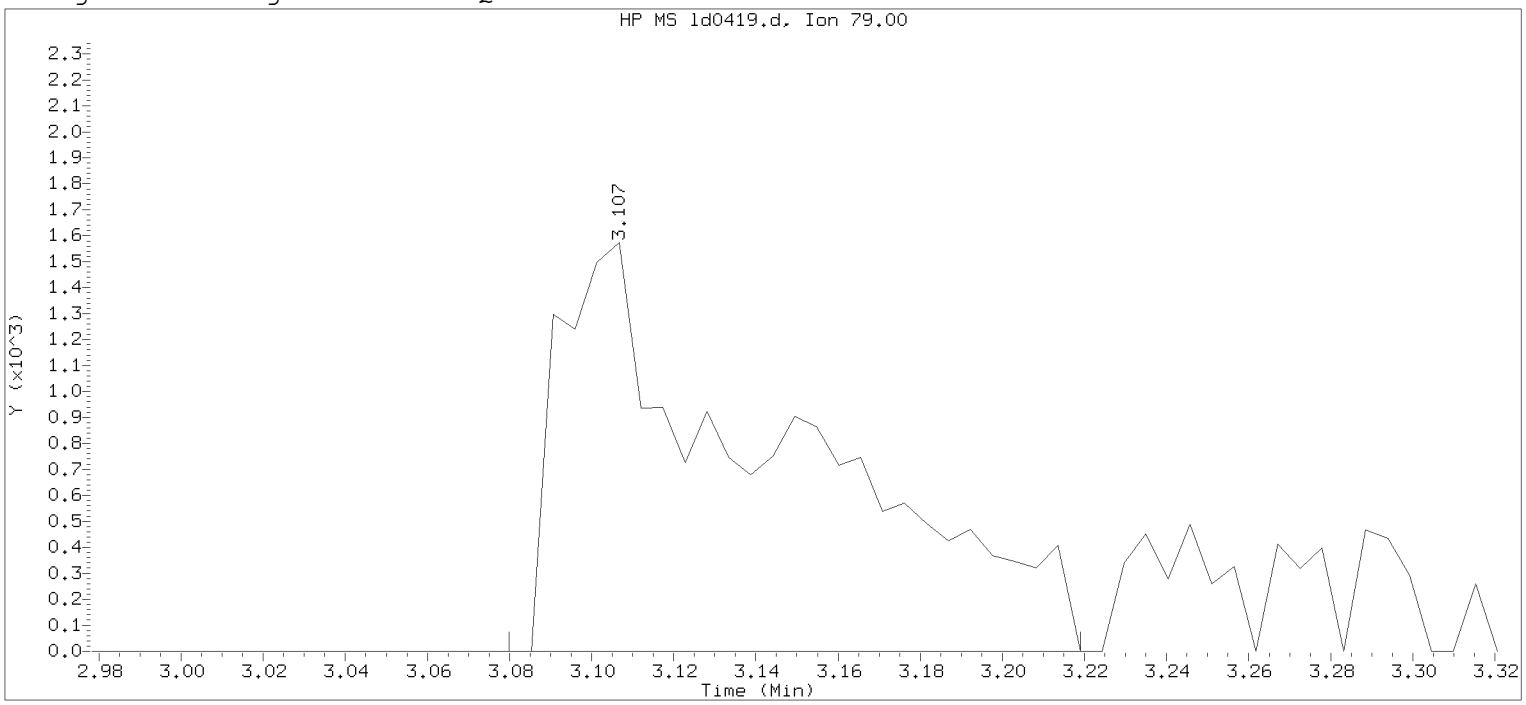
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

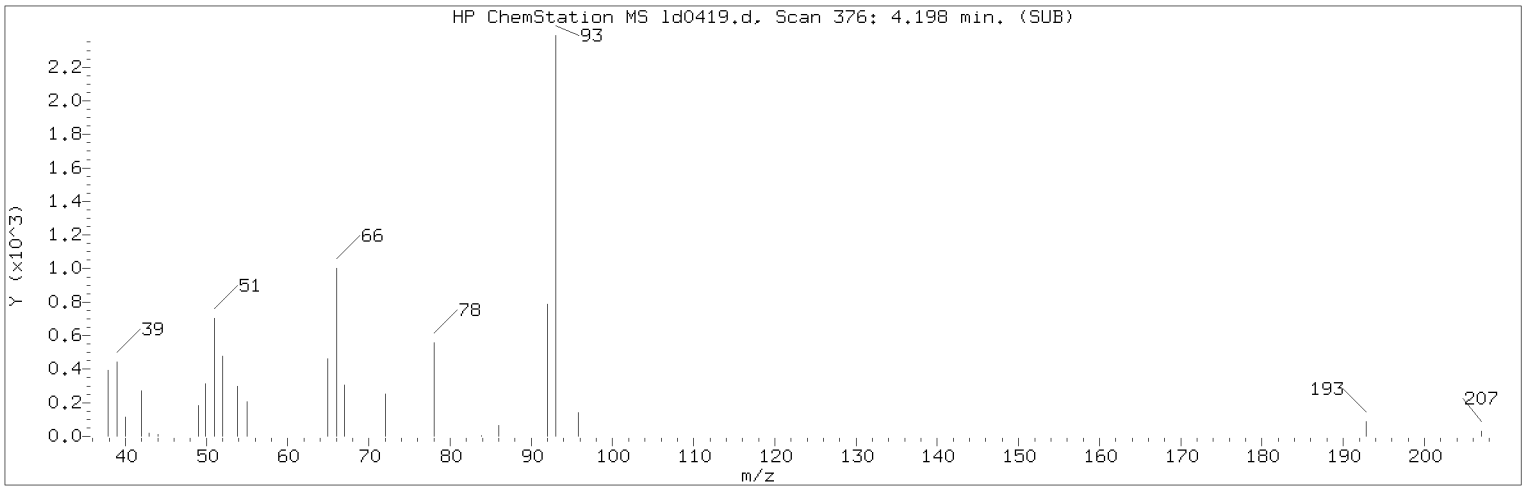
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

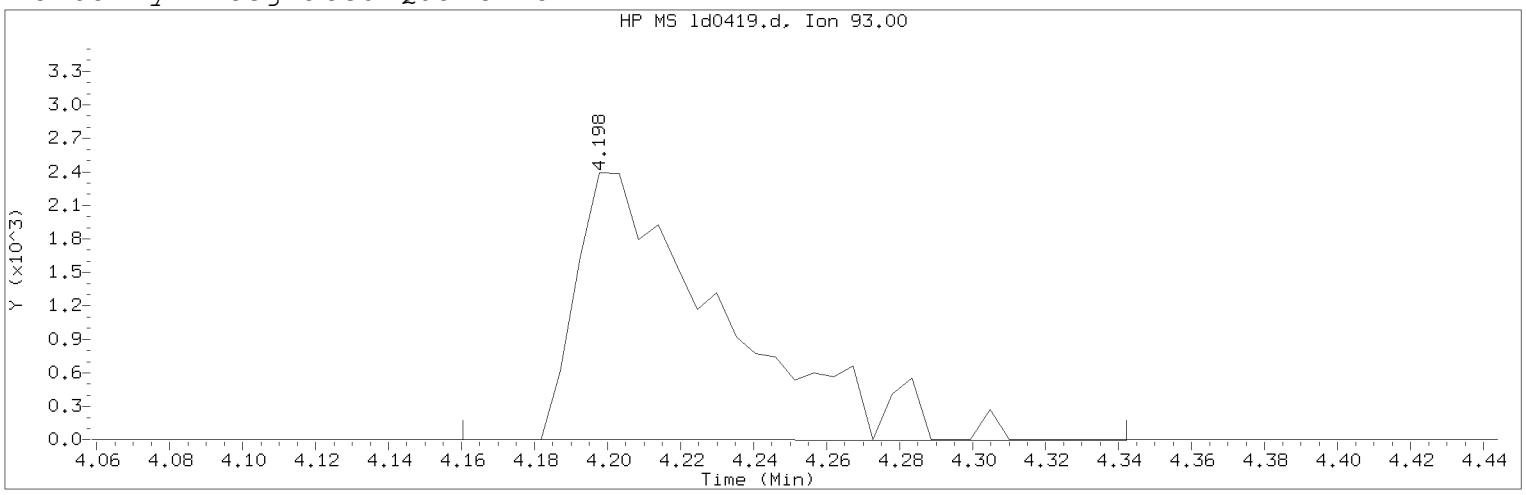
Compound Number	: 6		
Compound Name	: Pyridine		
Scan Number	: 172		
Retention Time (minutes)	: 3.107		
Quant Ion	: 79.00		
Area	: 5929		
On-column Amount (ng/ul)	: 0.0762		
Integration start scan	: 166	Integration stop scan:	192
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

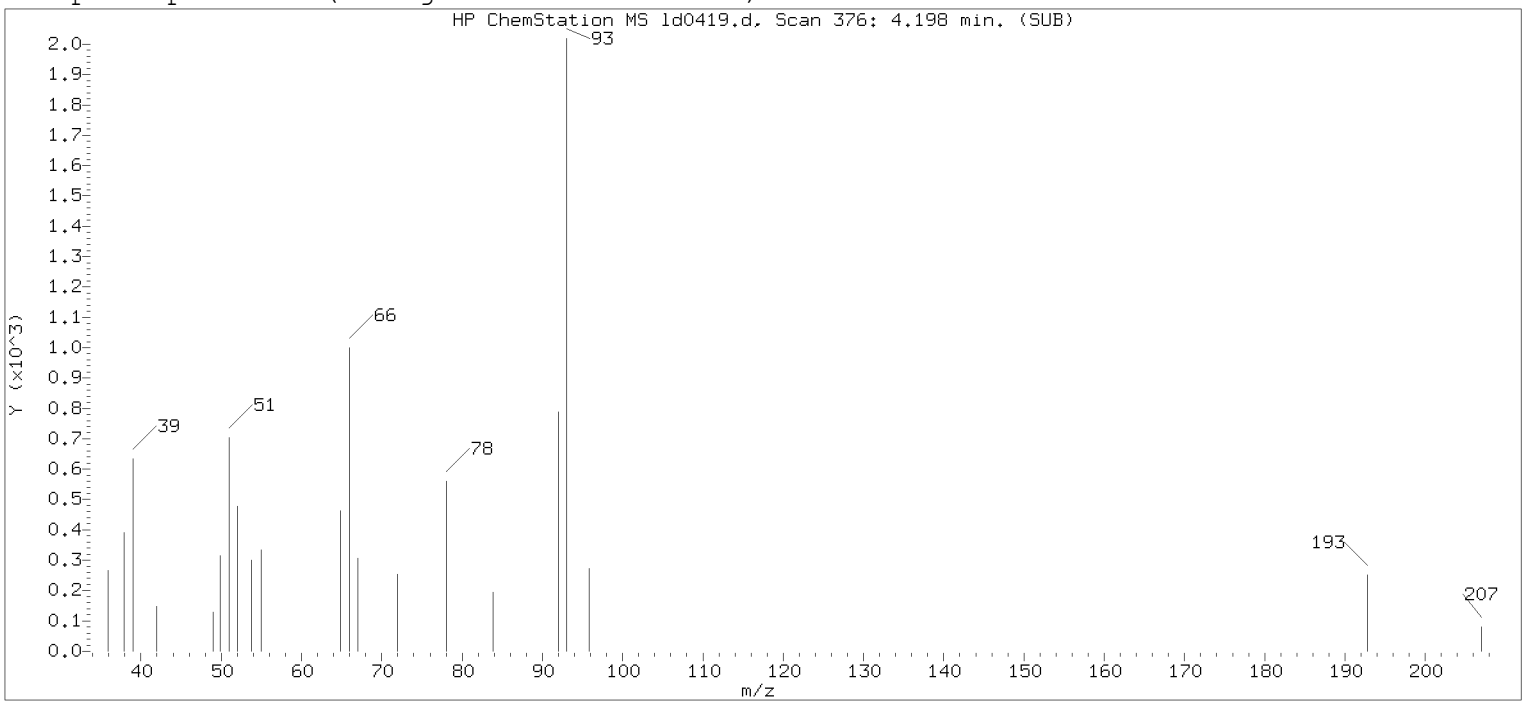
Compound Number : 8
Compound Name : 2-Picoline
Scan Number : 376
Retention Time (minutes) : 4.198
Quant Ion : 93.00
Area (flag) : 6688M
On-Column Amount (ng/ul) : 0.0846
Integration start scan : 368 Integration stop scan: 402
Y at integration start : 2 Y at integration end: -3

Reason for manual integration: improper integration

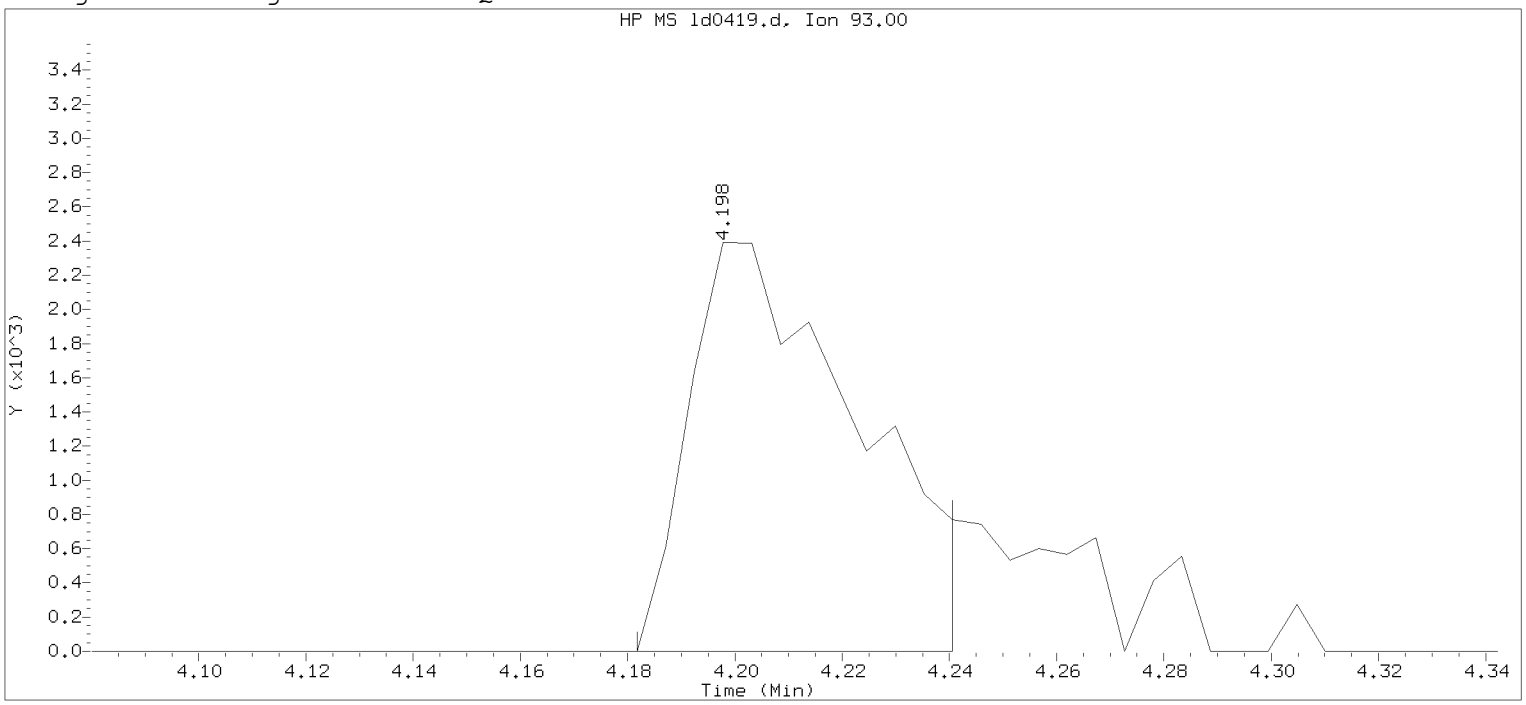
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

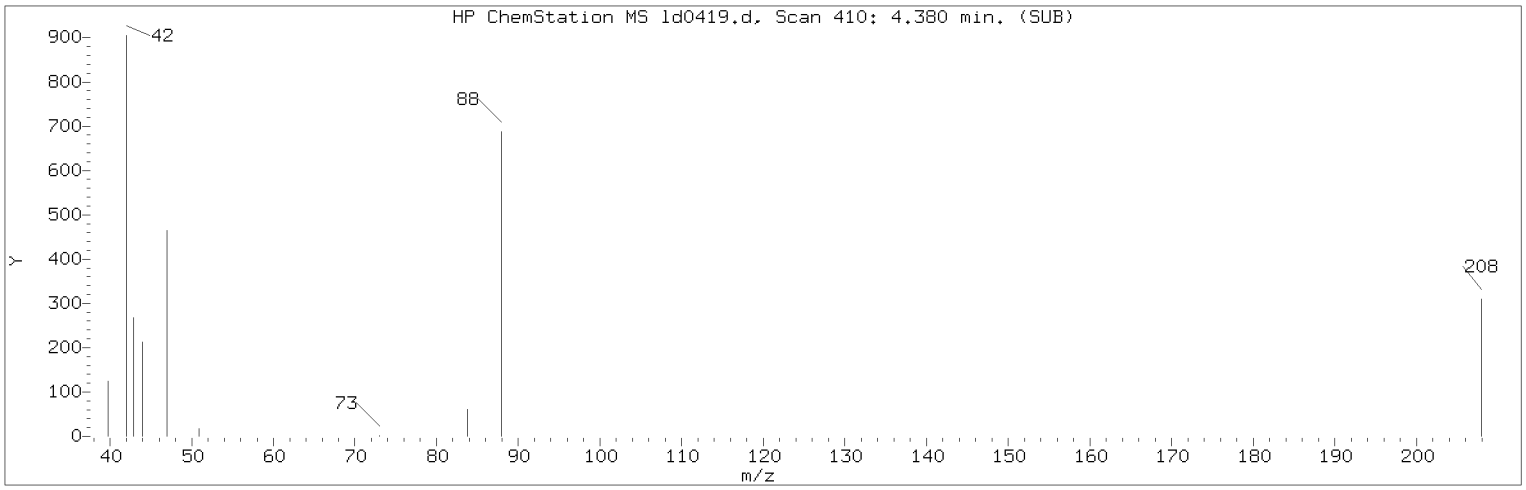
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

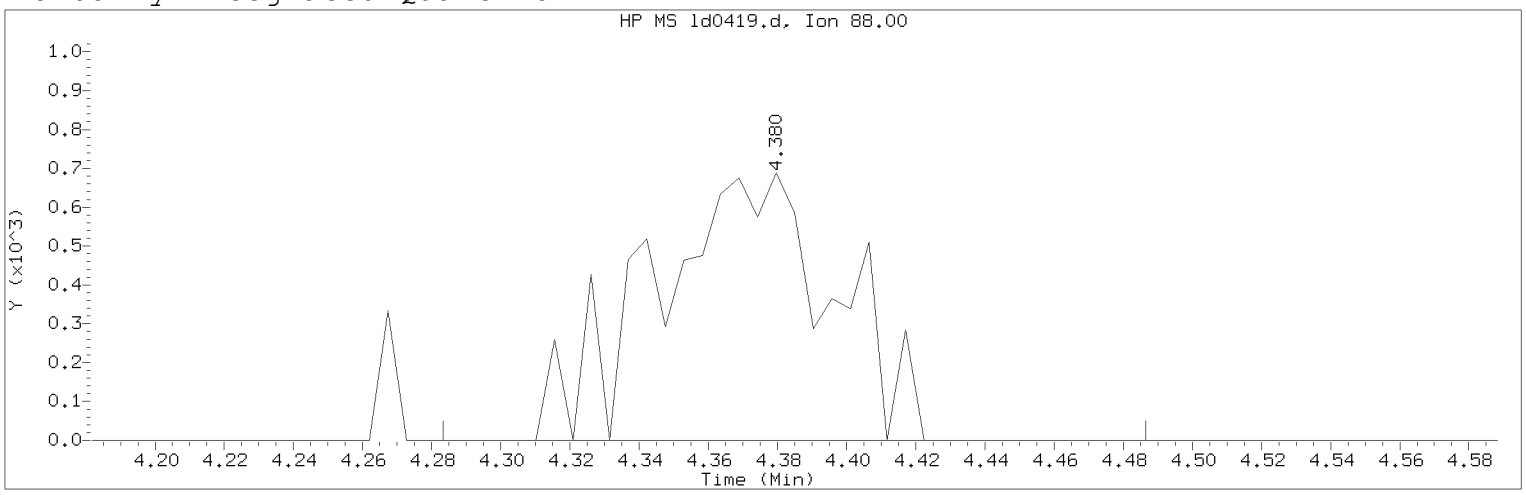
Compound Number	: 8		
Compound Name	: 2-Picoline		
Scan Number	: 376		
Retention Time (minutes)	: 4.198		
Quant Ion	: 93.00		
Area	: 5162		
On-column Amount (ng/ul)	: 0.0635		
Integration start scan	: 372	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

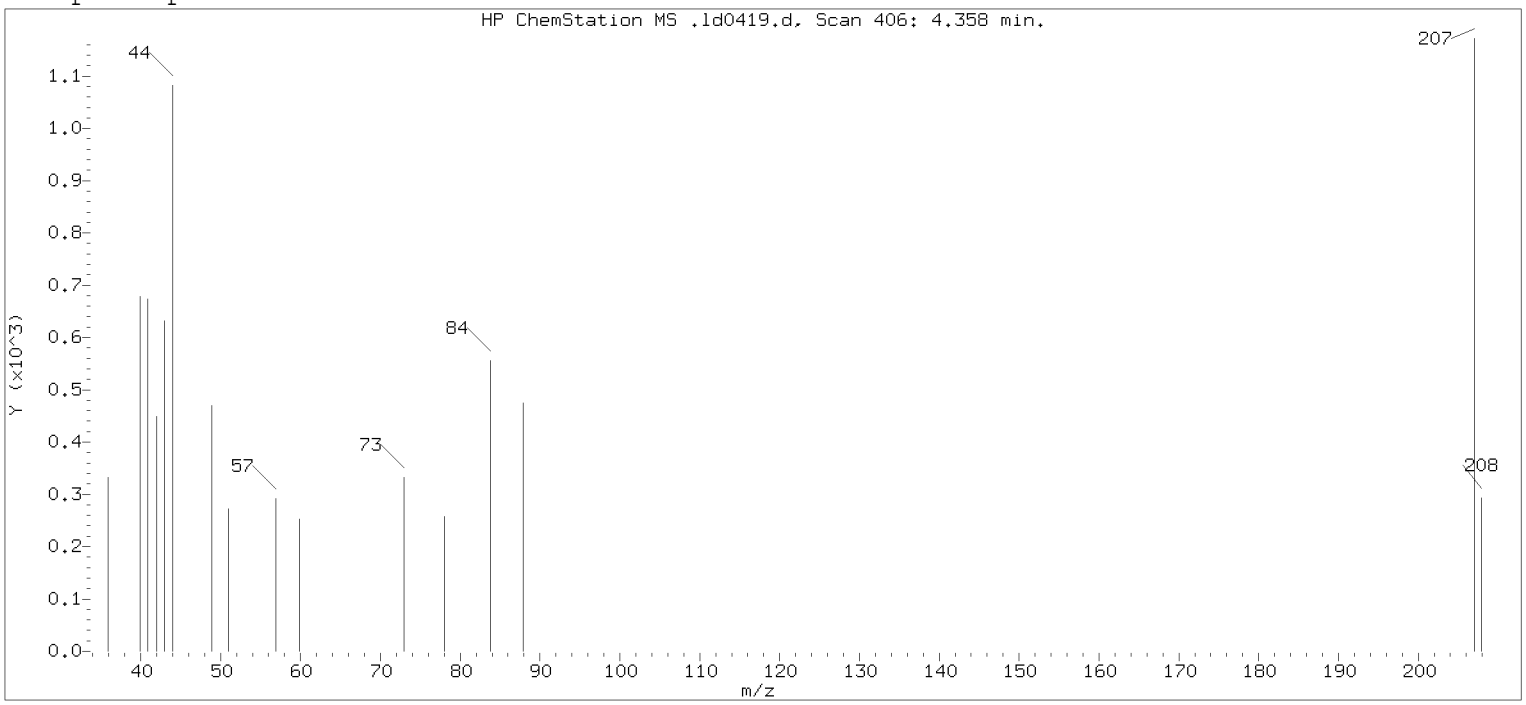
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 410
Retention Time (minutes) : 4.380
Quant Ion : 88.00
Area (flag) : 2517M
On-Column Amount (ng/ul) : 0.0794
Integration start scan : 391 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

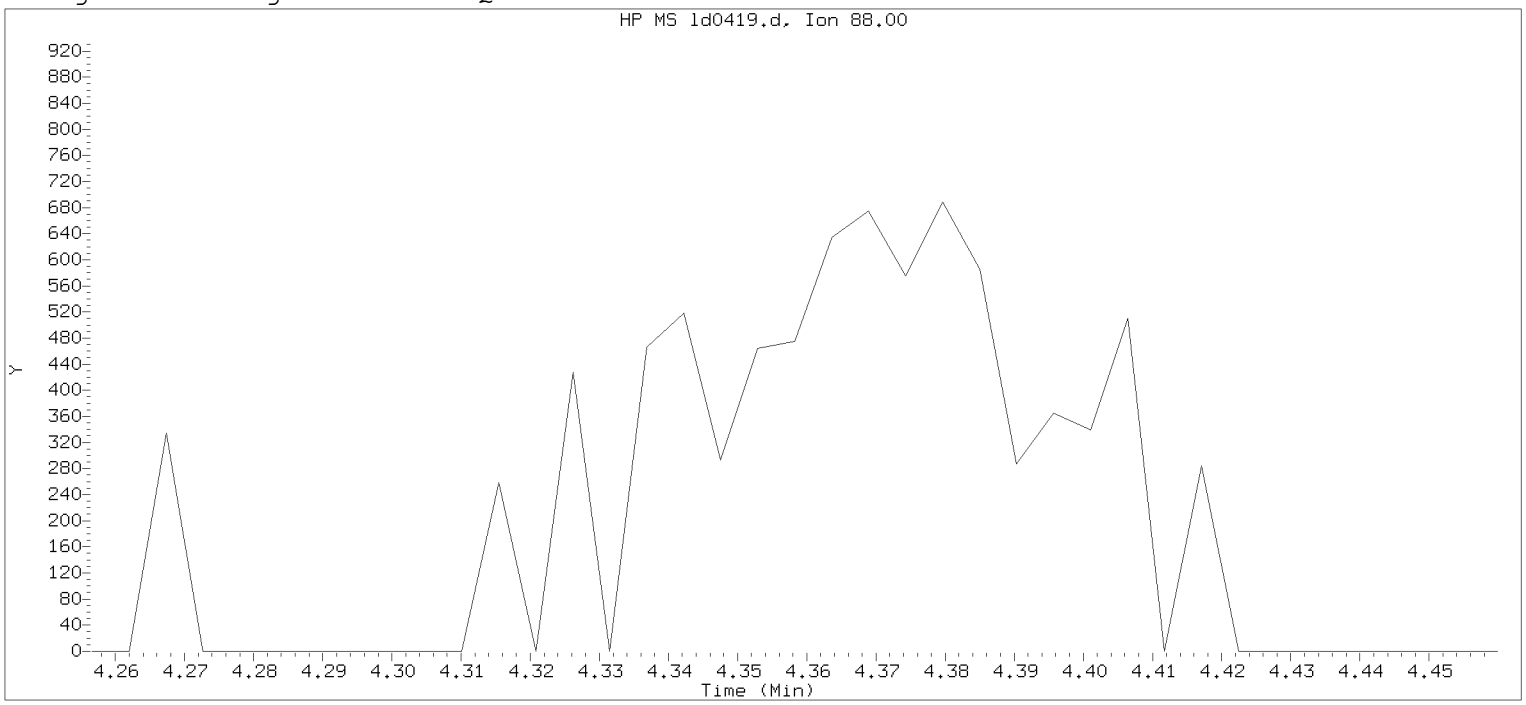
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

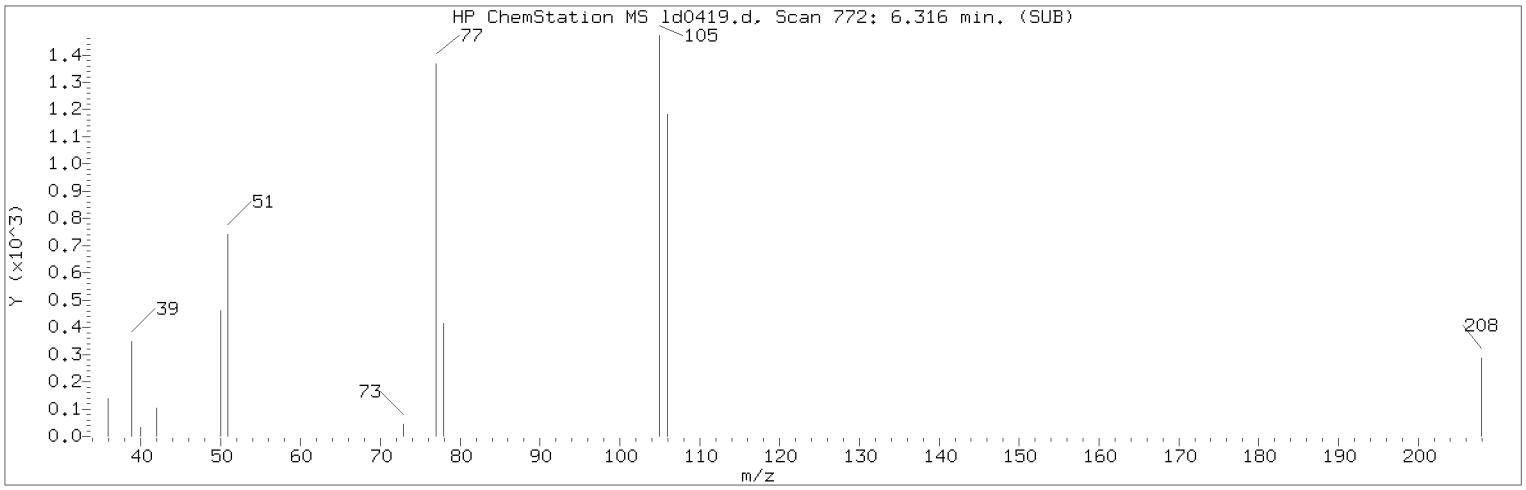
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

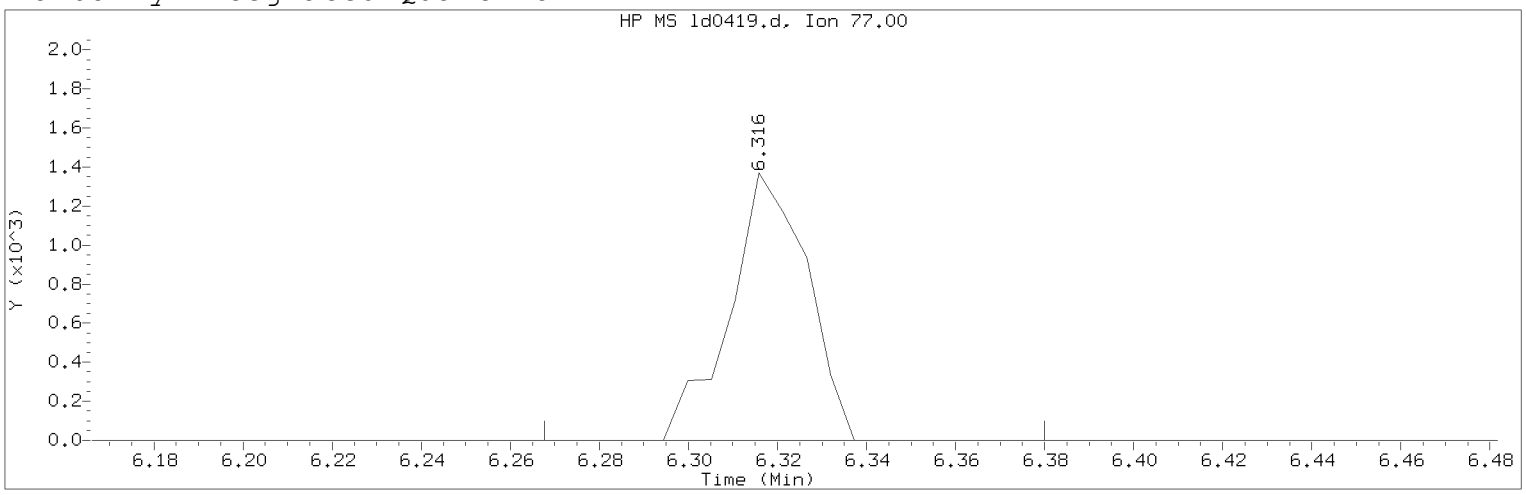
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.358
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ap[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

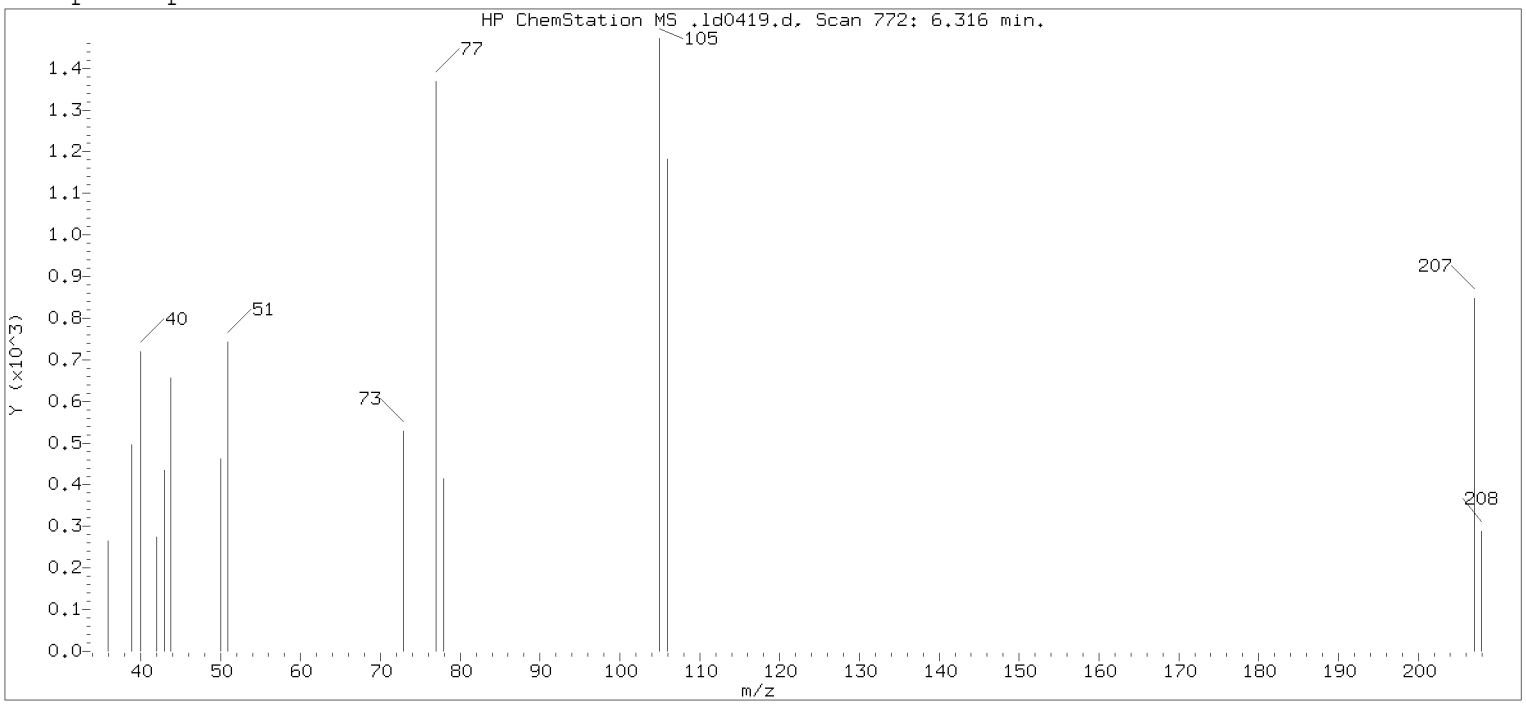
Compound Number : 17
Compound Name : Benzaldehyde
Scan Number : 772
Retention Time (minutes) : 6.316
Quant Ion : 77.00
Area (flag) : 1651M
On-Column Amount (ng/ul) : 0.0276
Integration start scan : 762 Integration stop scan: 783
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

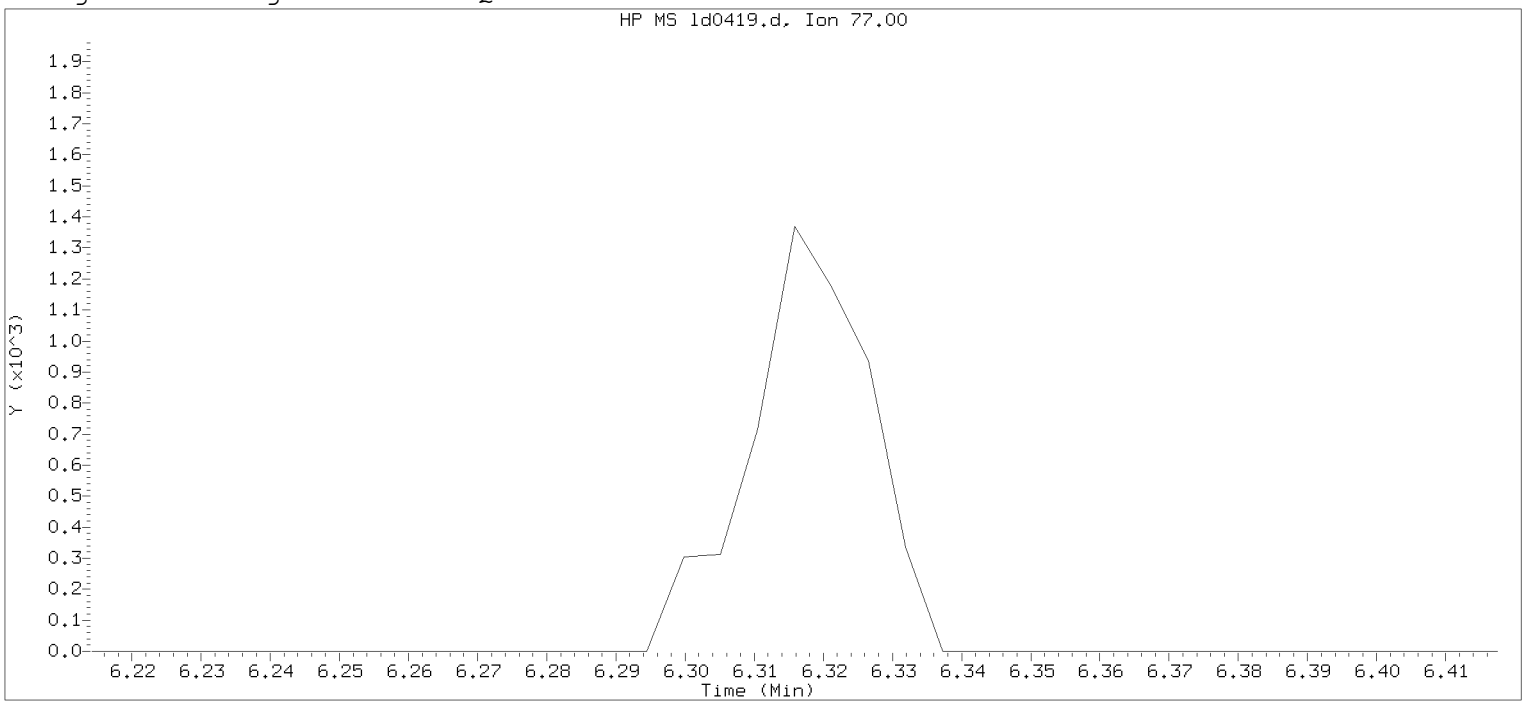
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

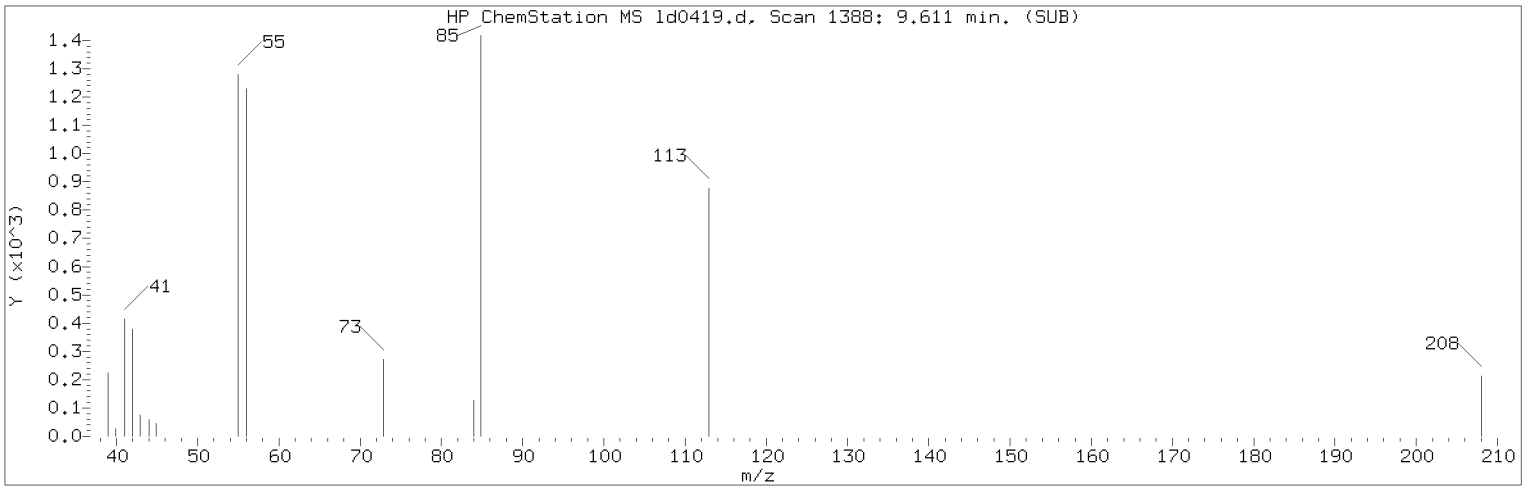
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

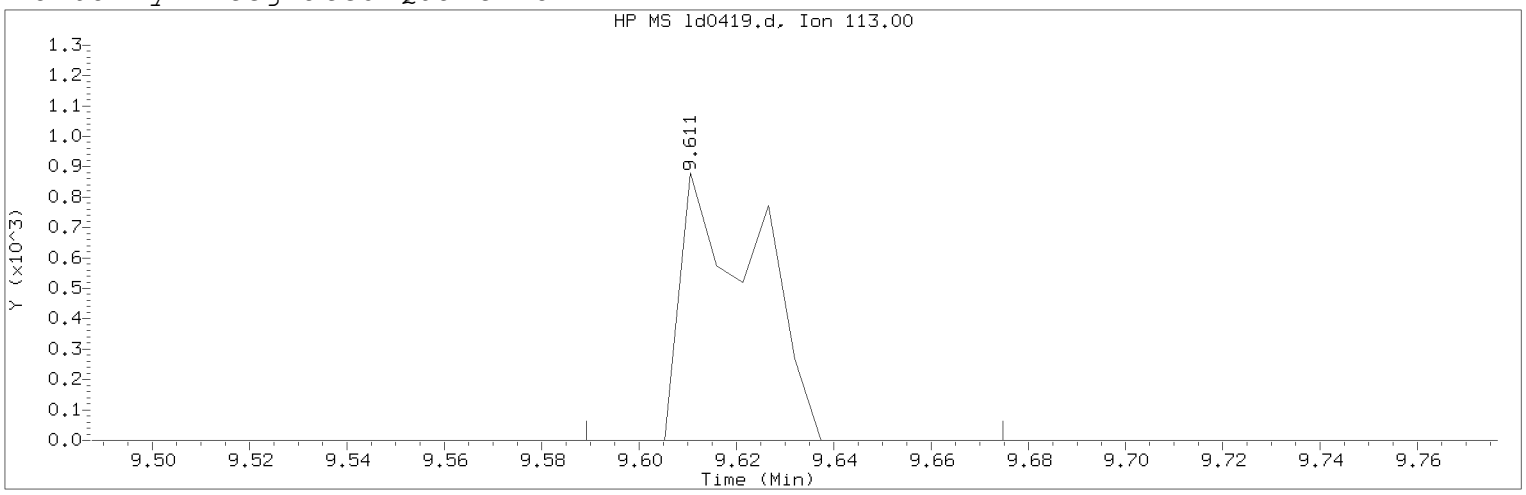
Compound Number : 17
Compound Name : Benzaldehyde
Expected RT (minutes) : 6.316
Quant Ion : 77.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ap[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

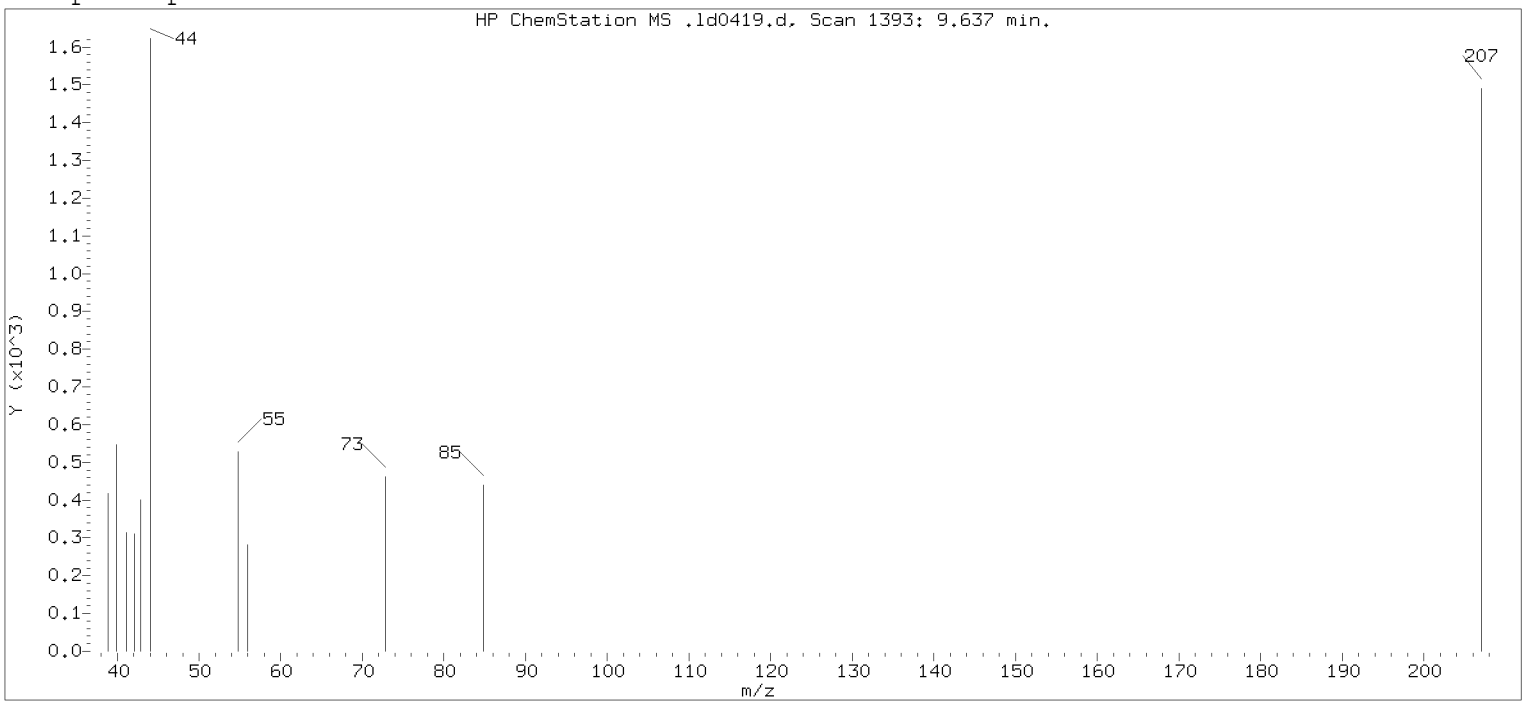
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1388
Retention Time (minutes) : 9.611
Quant Ion : 113.00
Area (flag) : 966M
On-Column Amount (ng/ul) : 0.0613
Integration start scan : 1383 Integration stop scan: 1399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

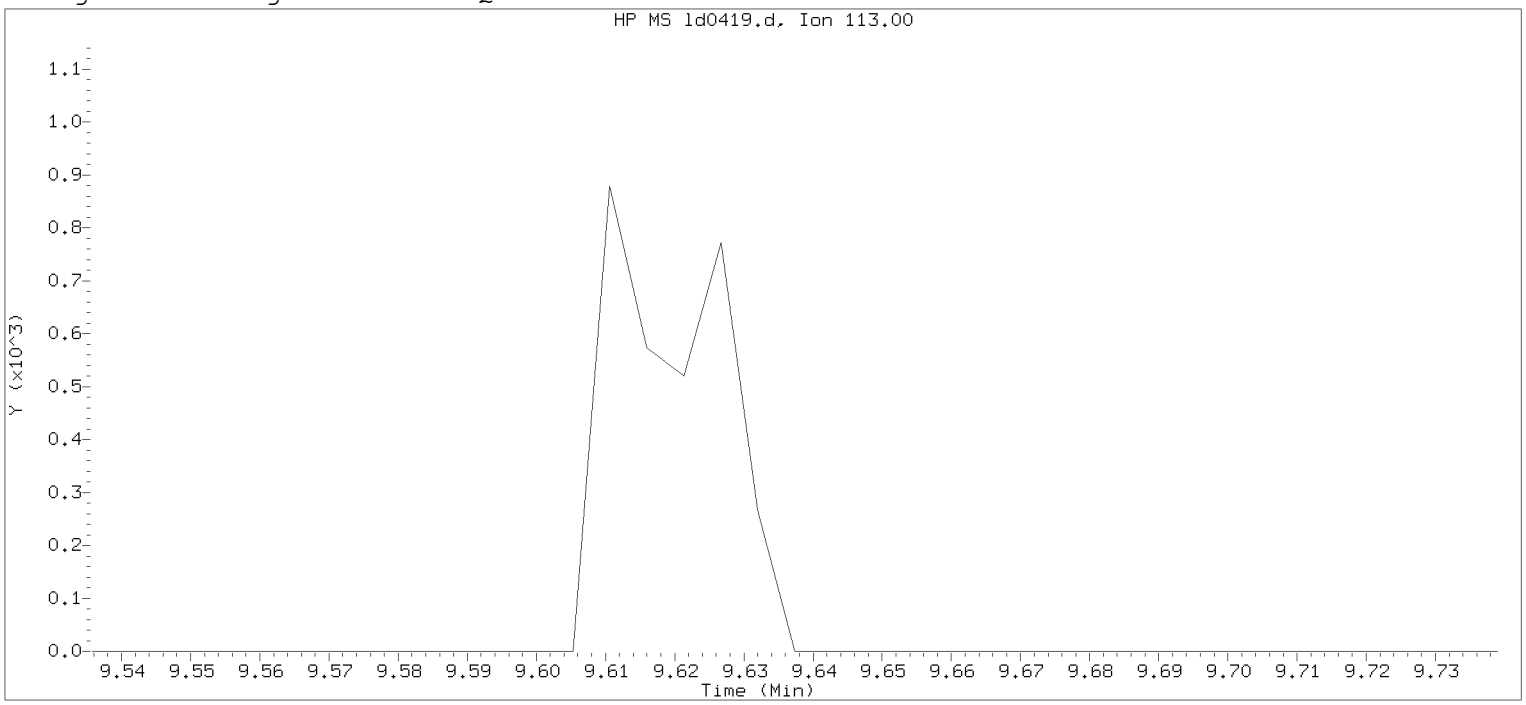
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

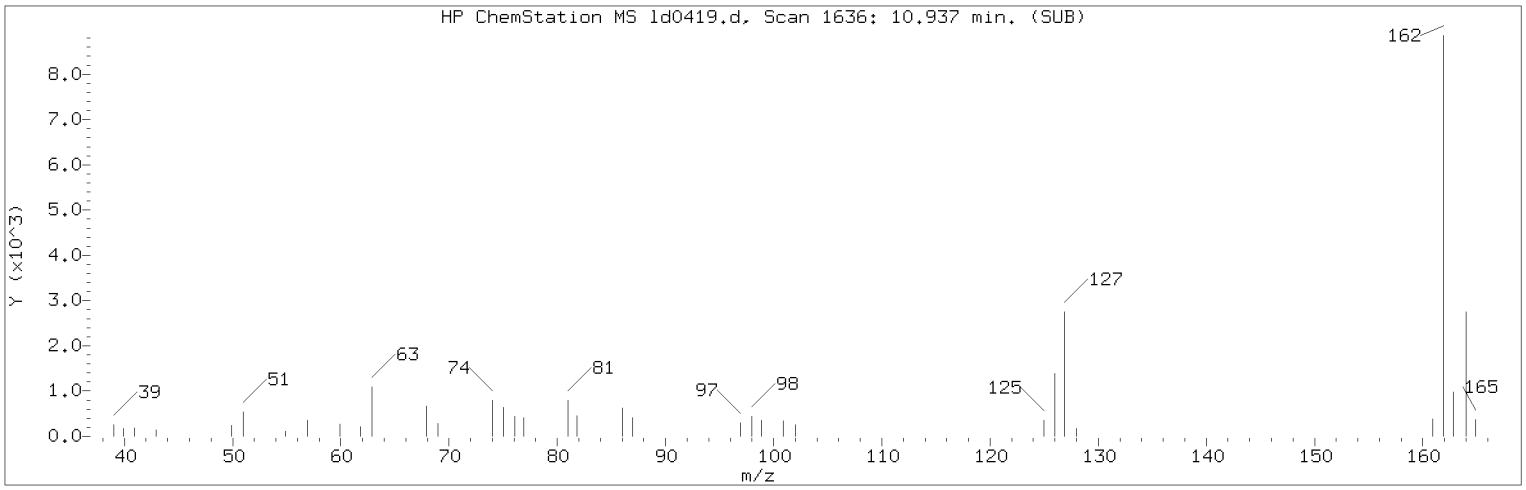
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

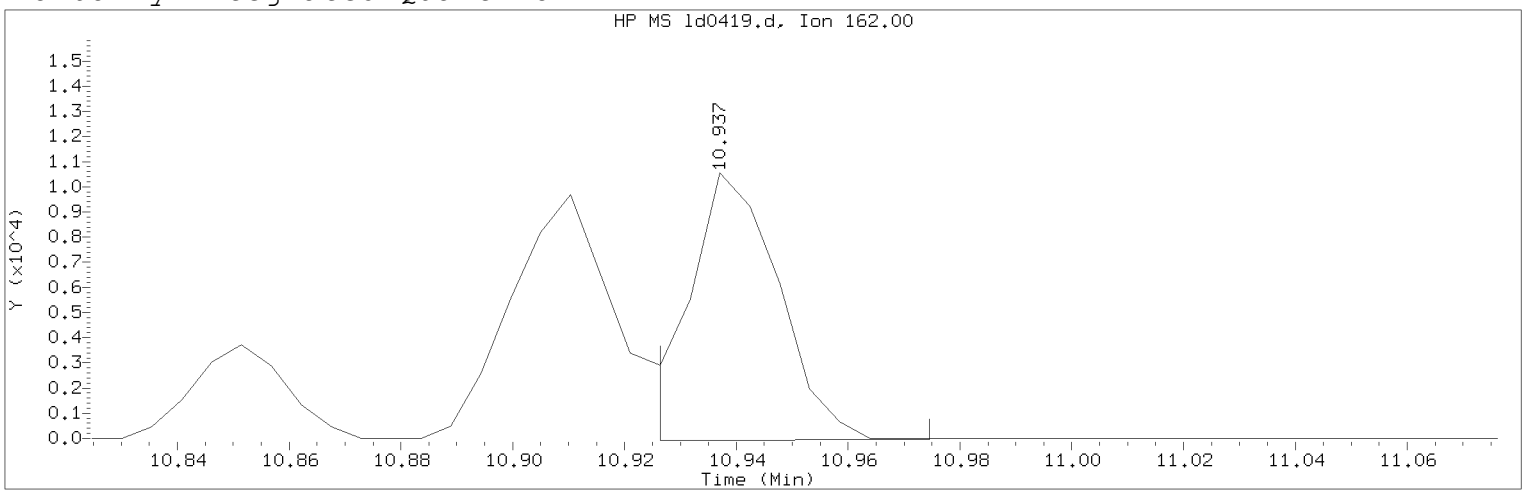
Compound Number : 79
Compound Name : Caprolactam
Expected RT (minutes) : 9.637
Quant Ion : 113.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: ATransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

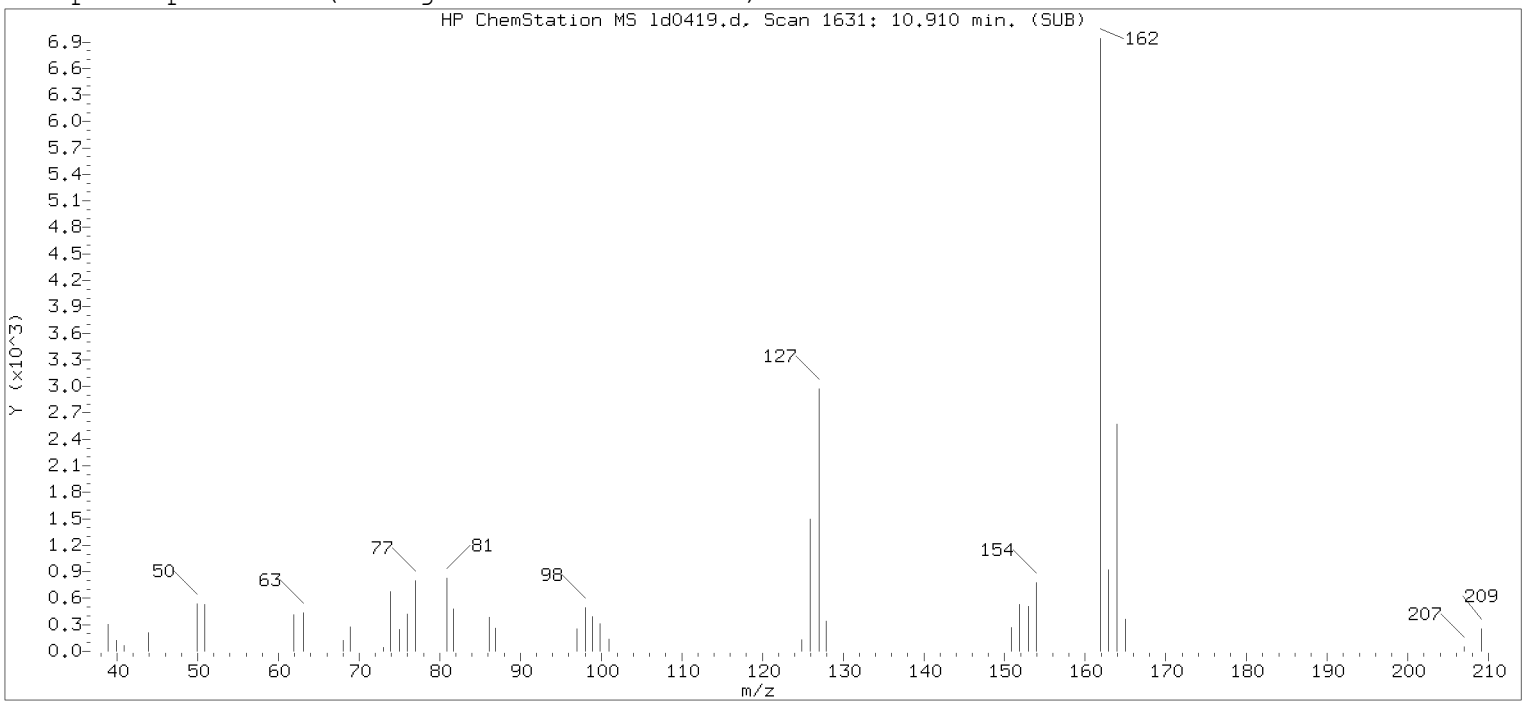
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 12077M
On-Column Amount (ng/ul) : 0.1136
Integration start scan : 1633 Integration stop scan: 1642
Y at integration start : -76 Y at integration end: -54

Reason for manual integration: improper integration

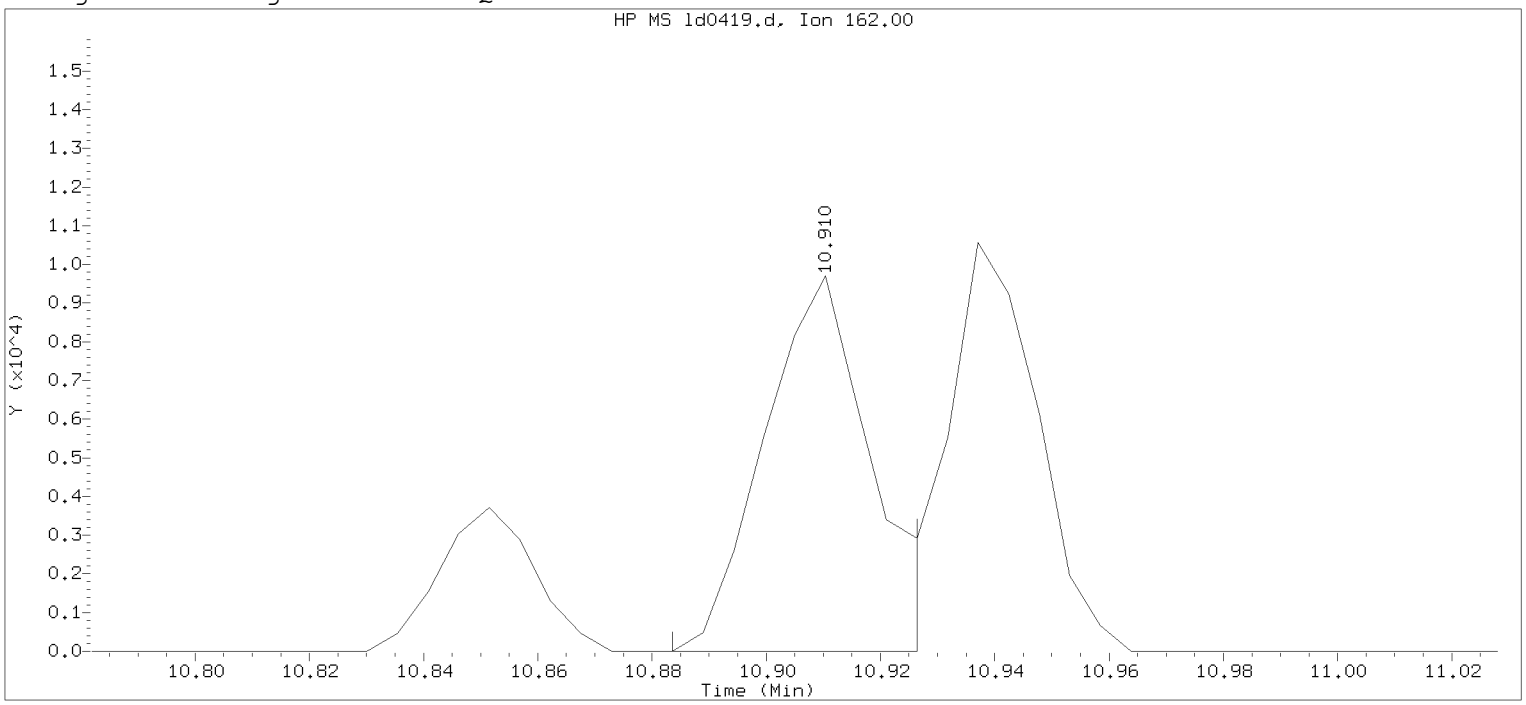
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

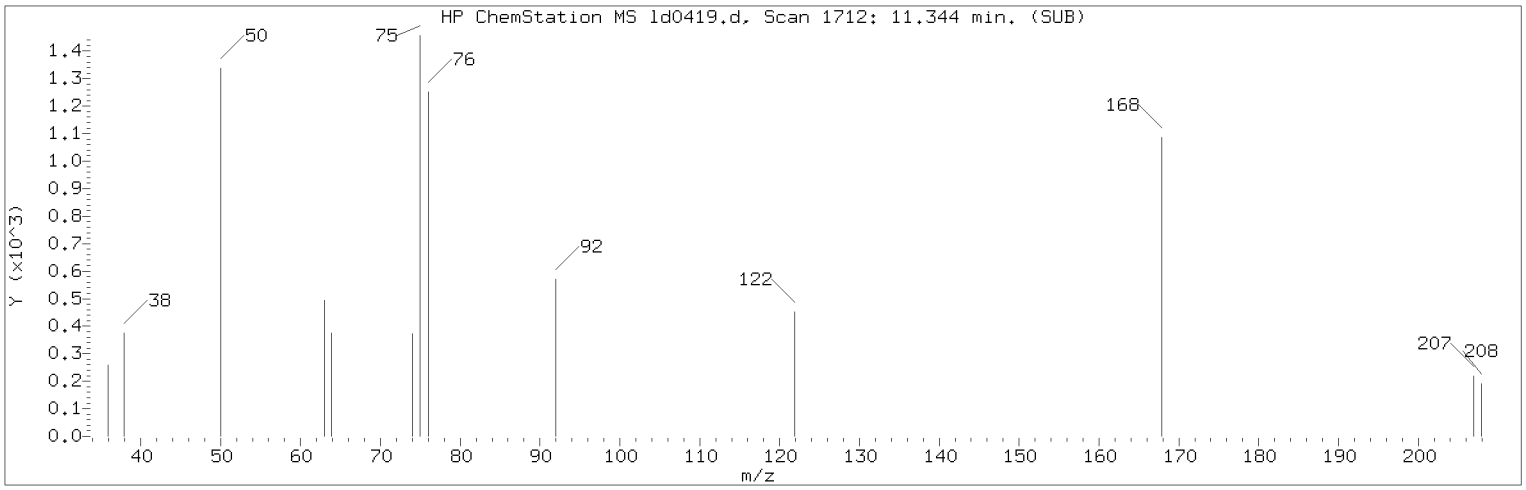
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

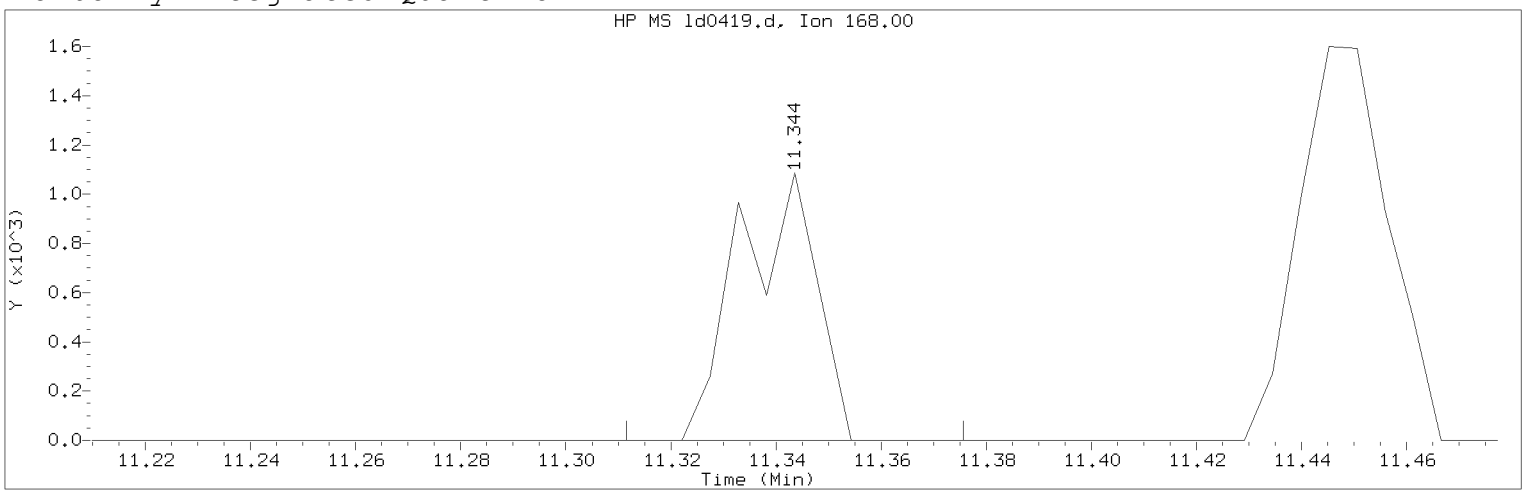
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1631
Retention Time (minutes) : 10.910
Quant Ion : 162.00
Area : 12159
On-column Amount (ng/ul) : 0.1143
Integration start scan : 1625 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: Page 621

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

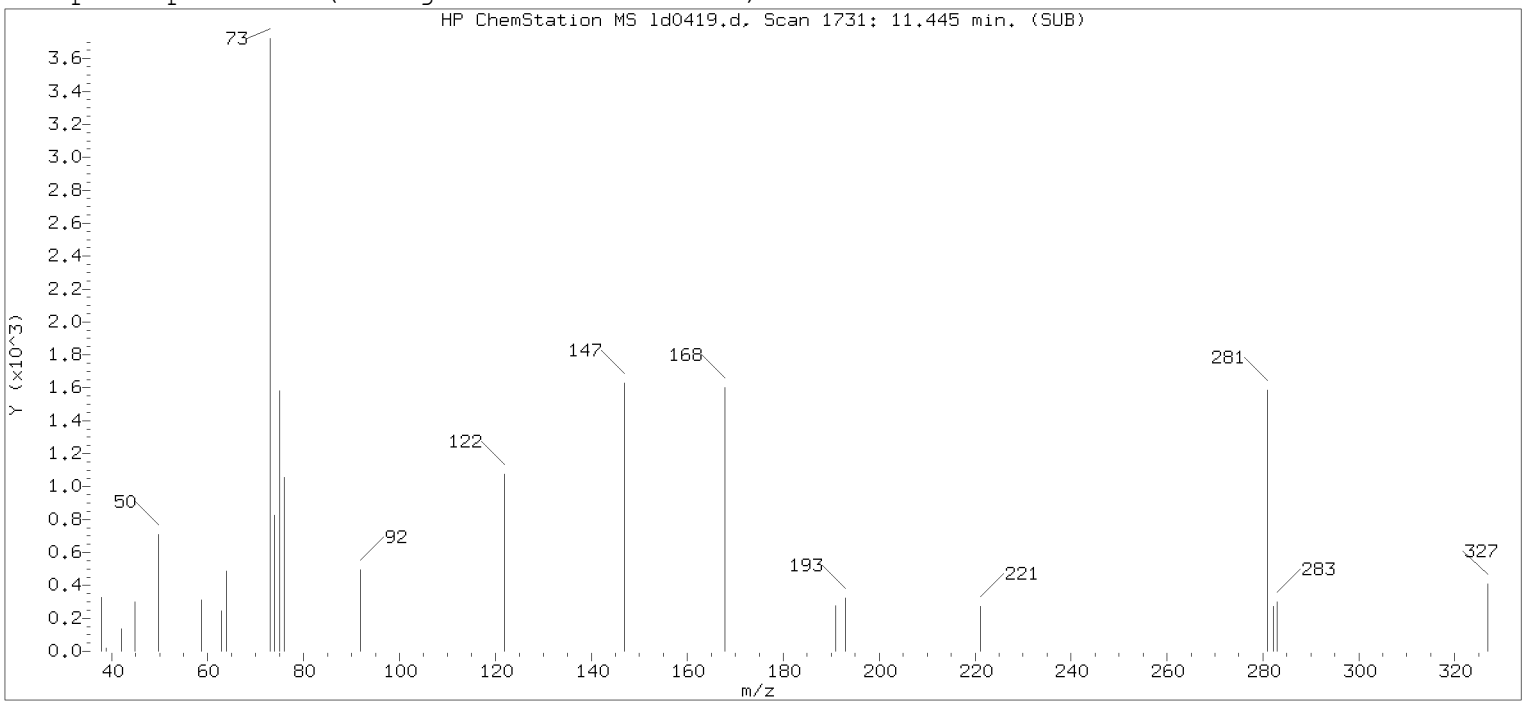
Compound Number : 109
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1712
Retention Time (minutes) : 11.344
Quant Ion : 168.00
Area (flag) : 1105M
On-Column Amount (ng/ul) : 0.0618
Integration start scan : 1705 Integration stop scan: 1717
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

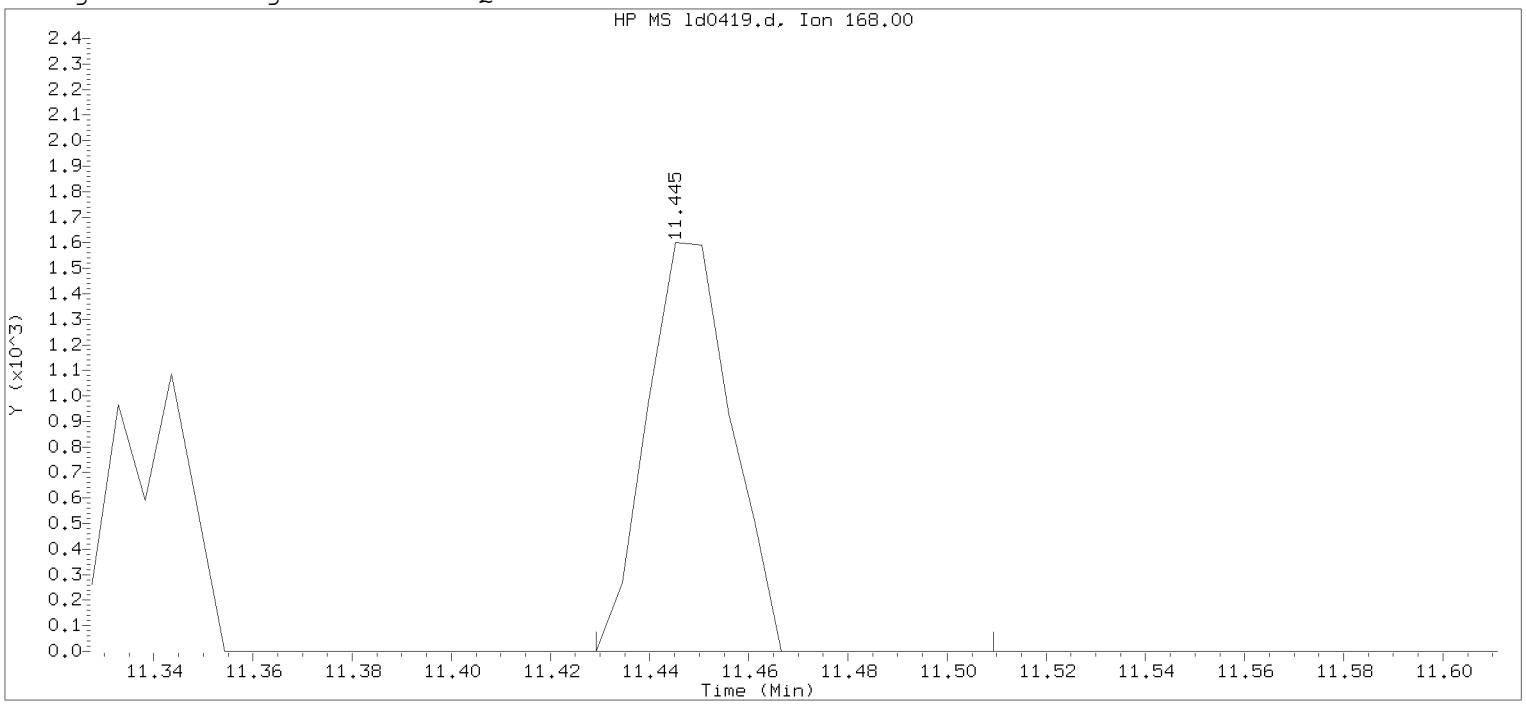
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

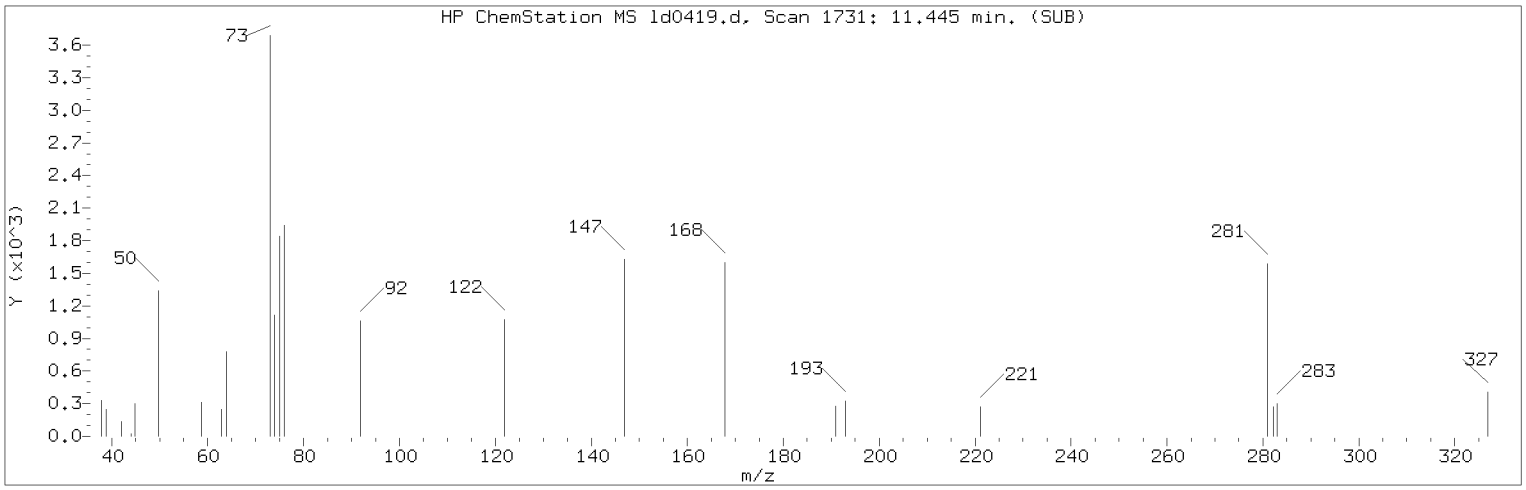
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

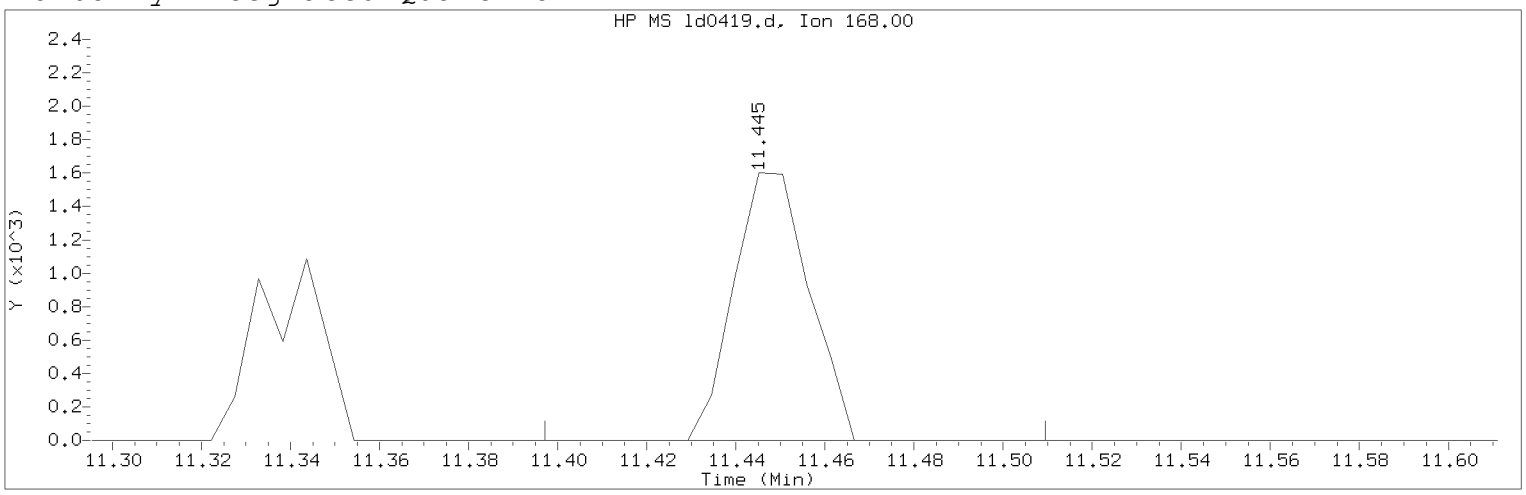
Compound Number	: 109		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1731		
Retention Time (minutes)	: 11.445		
Quant Ion	: 168.00		
Area	: 1886		
On-column Amount (ng/ul)	: 0.1024		
Integration start scan	: 1727	Integration stop scan:	1742
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

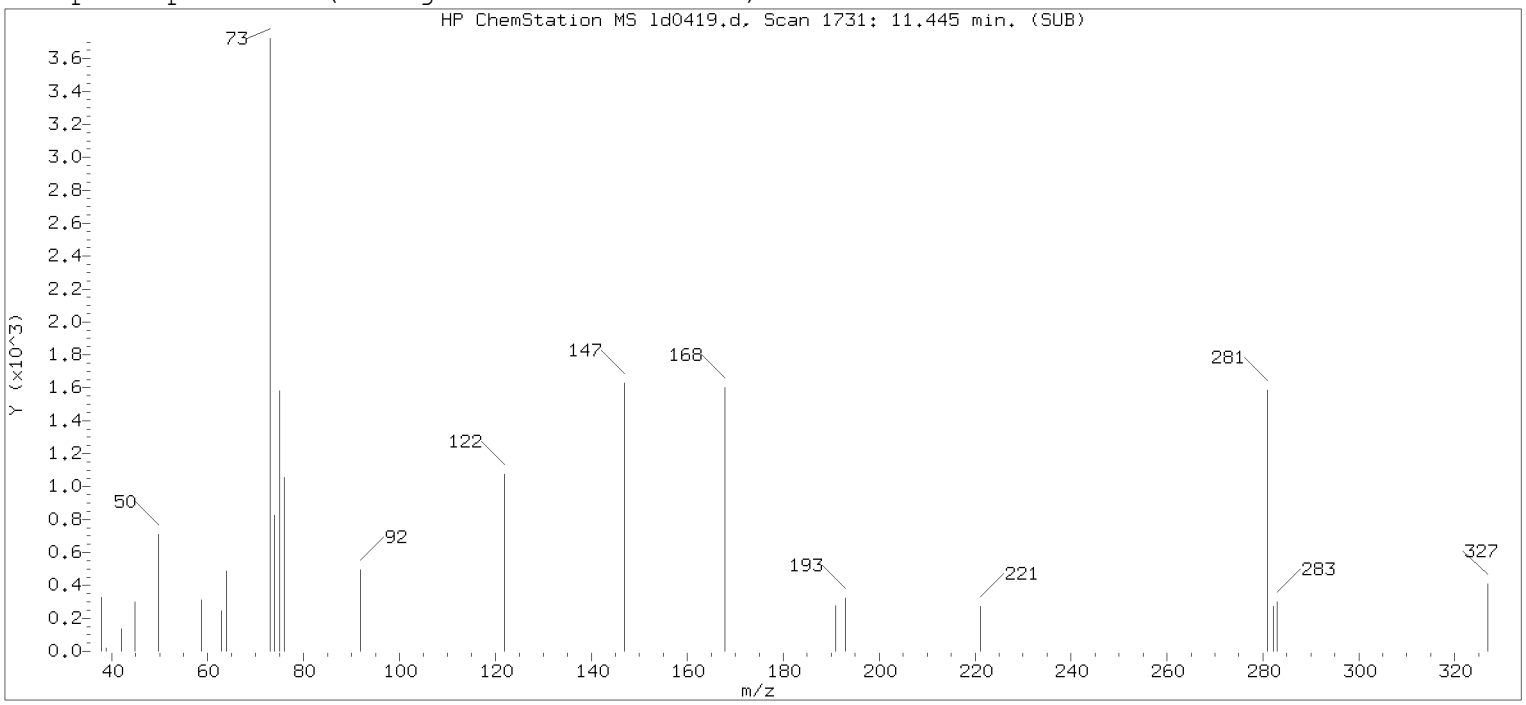
Compound Number : 111
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1731
Retention Time (minutes) : 11.445
Quant Ion : 168.00
Area (flag) : 1886M
On-Column Amount (ng/ul) : 0.0984
Integration start scan : 1721 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

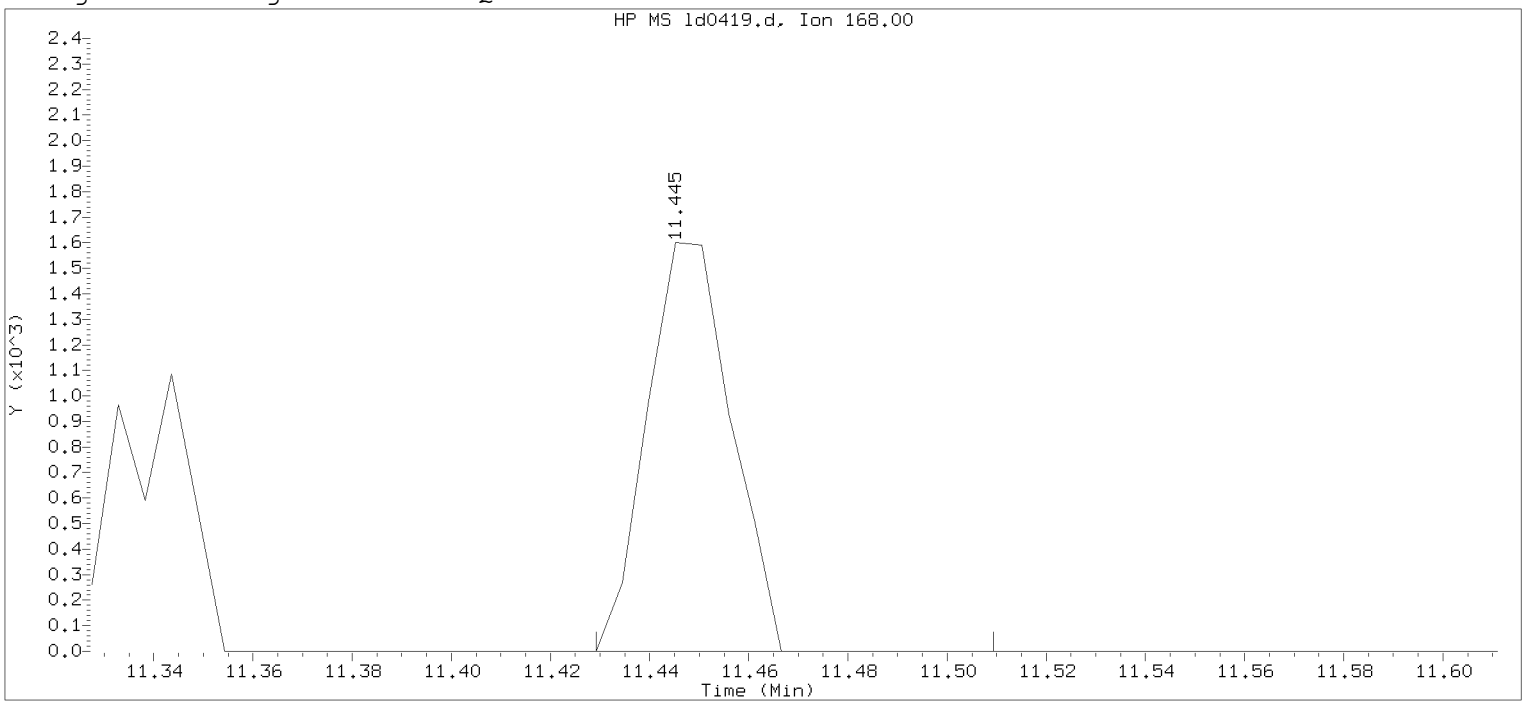
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

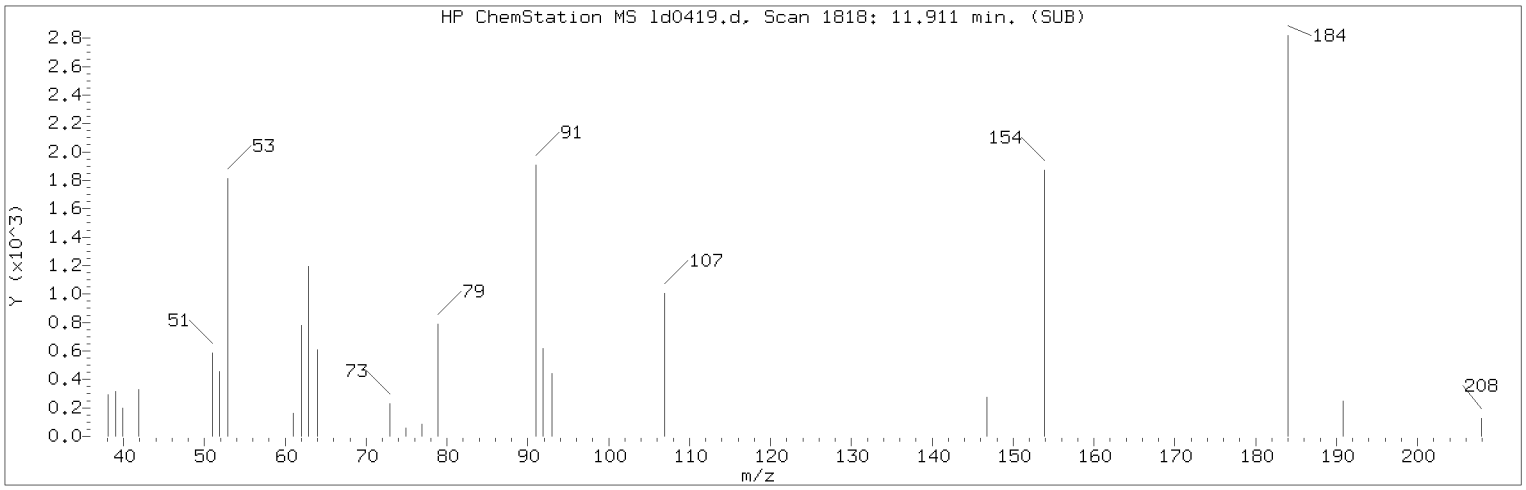
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

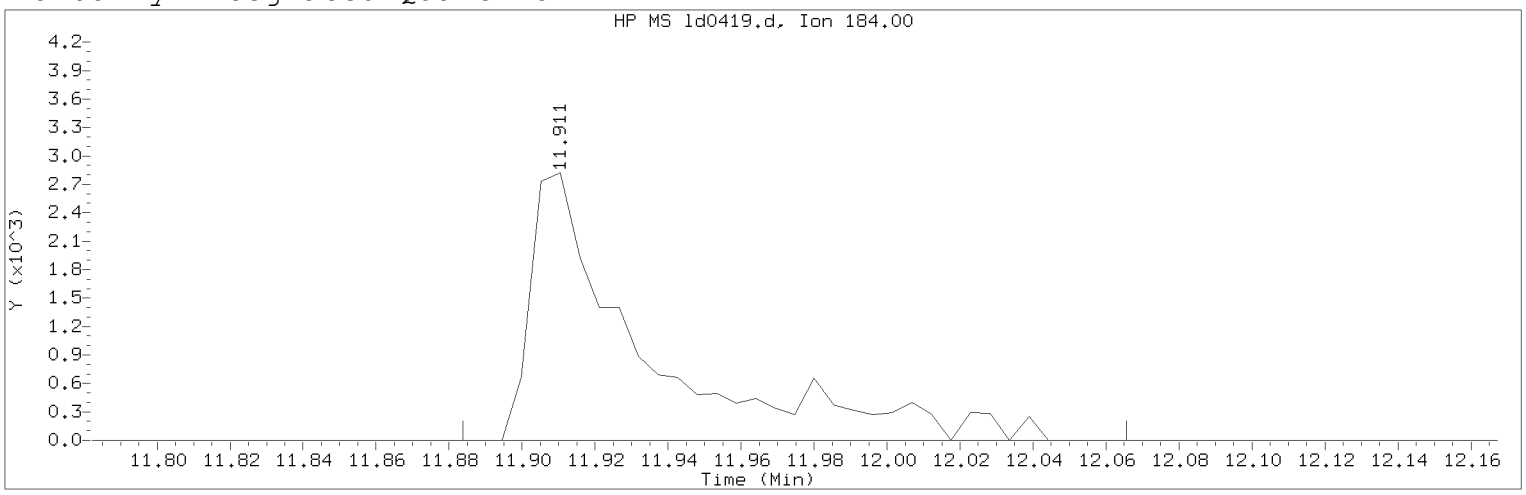
Compound Number	: 111		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1731		
Retention Time (minutes)	: 11.445		
Quant Ion	: 168.00		
Area	: 1886		
On-column Amount (ng/ul)	: 0.0906		
Integration start scan	: 1727	Integration stop scan:	1742
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user Analyst 2

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

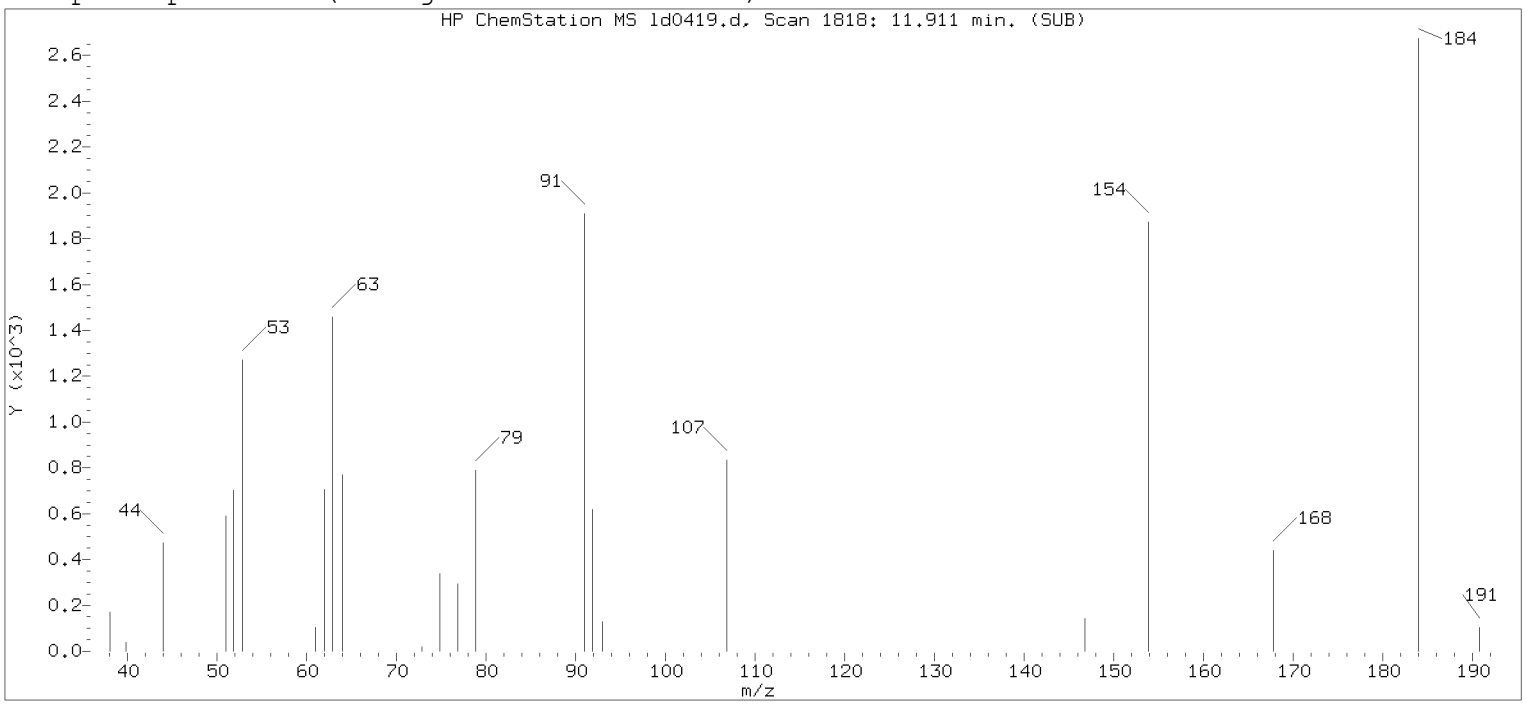
Compound Number : 120
Compound Name : 2,4-Dinitrophenol
Scan Number : 1818
Retention Time (minutes) : 11.911
Quant Ion : 184.00
Area (flag) : 6095M
On-Column Amount (ng/ul) : 0.3707
Integration start scan : 1812 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

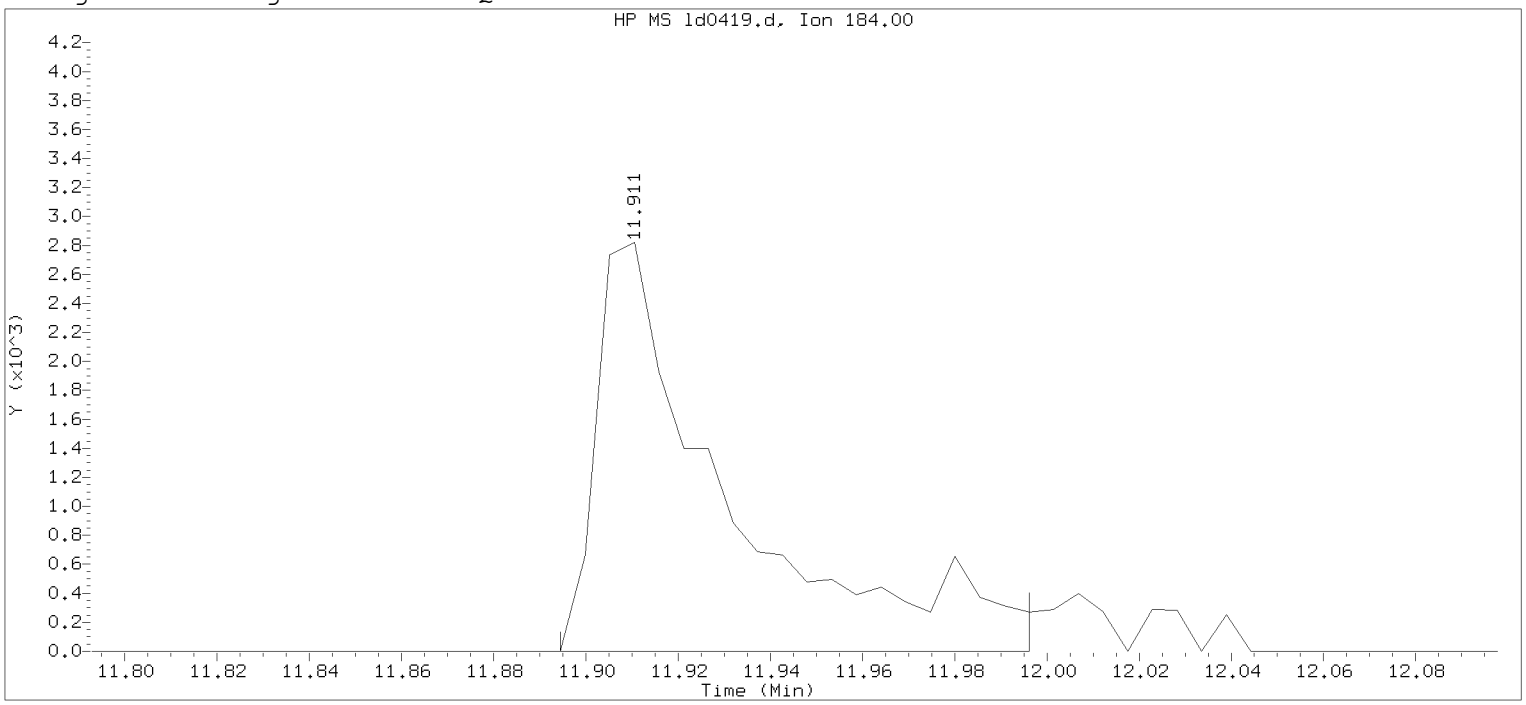
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

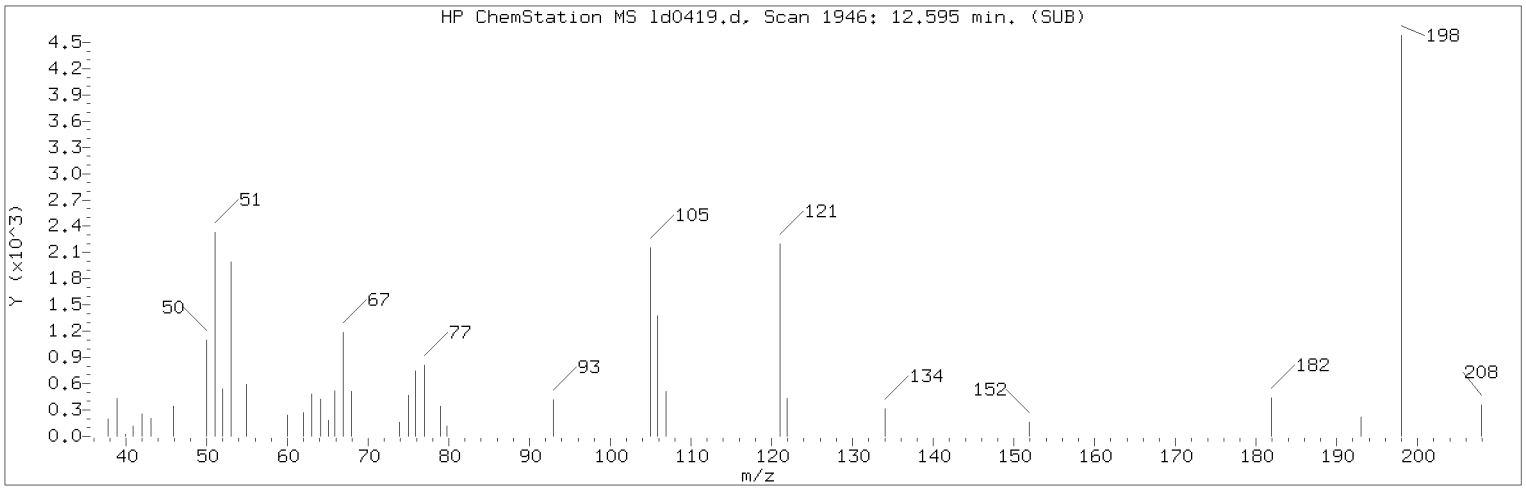
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

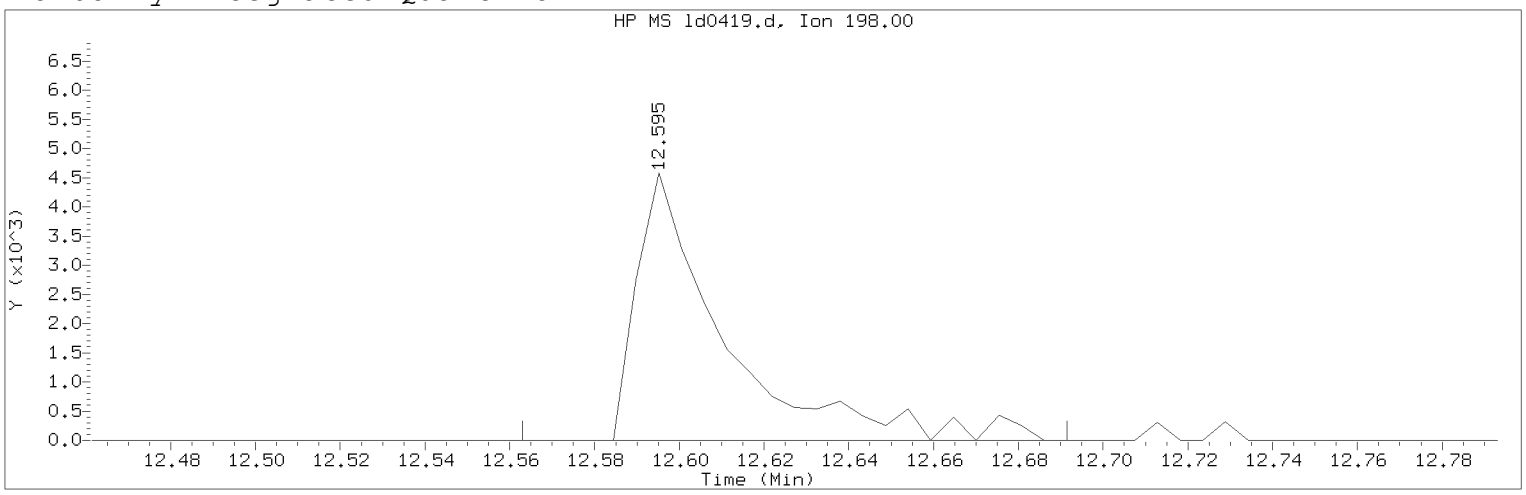
Compound Number	: 120		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1818		
Retention Time (minutes)	: 11.911		
Quant Ion	: 184.00		
Area	: 5478		
On-column Amount (ng/ul)	: 0.3490		
Integration start scan	: 1814	Integration stop scan:	1833
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

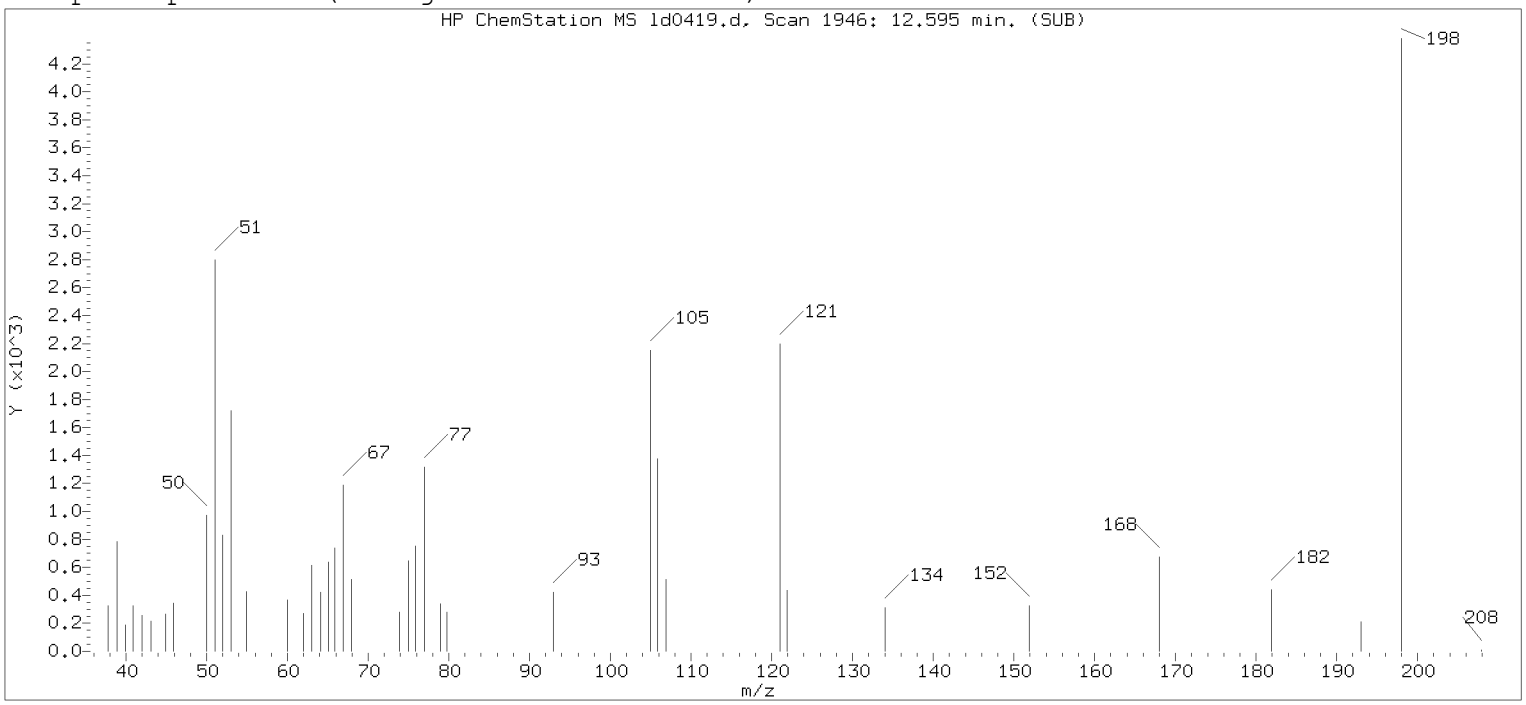
Compound Number : 135
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1946
Retention Time (minutes) : 12.595
Quant Ion : 198.00
Area (flag) : 6596M
On-Column Amount (ng/ul) : 0.3009
Integration start scan : 1939 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

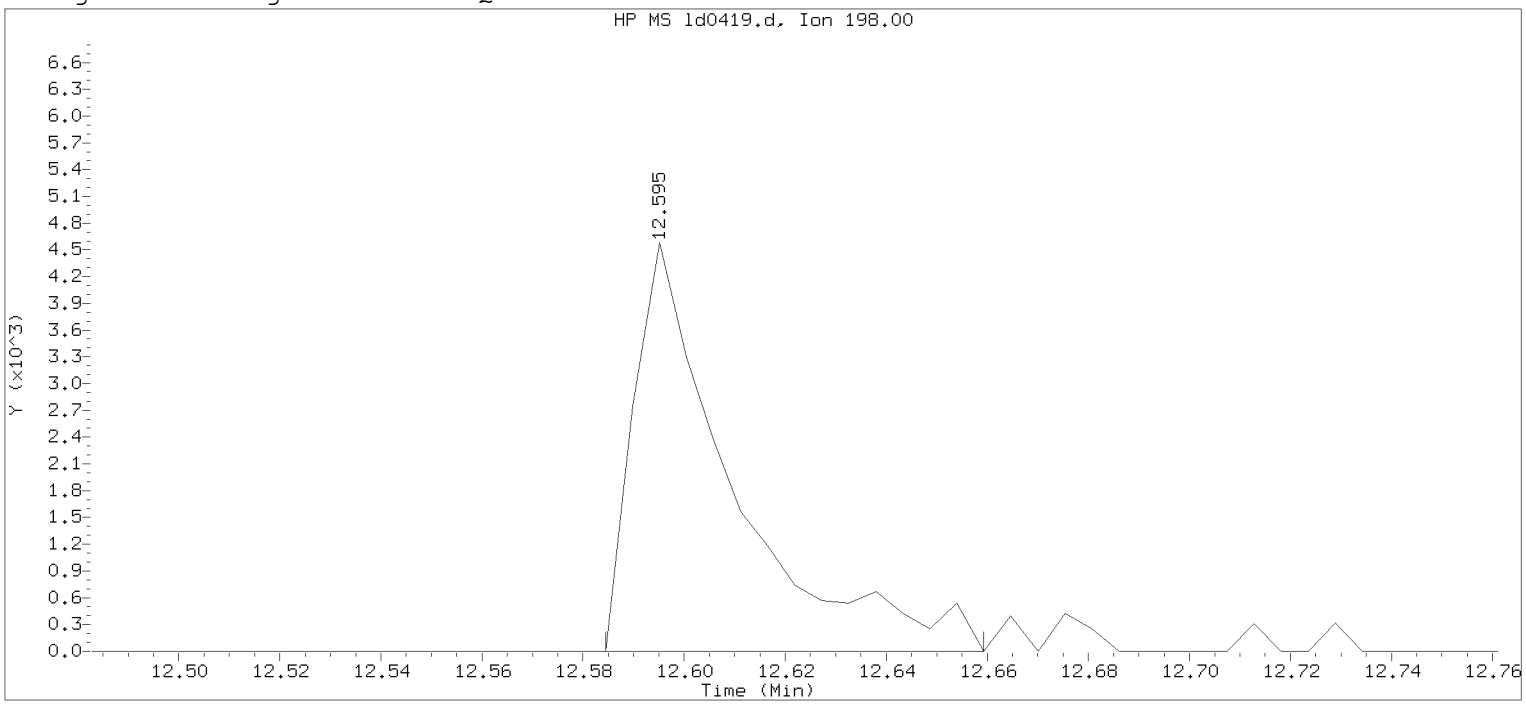
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

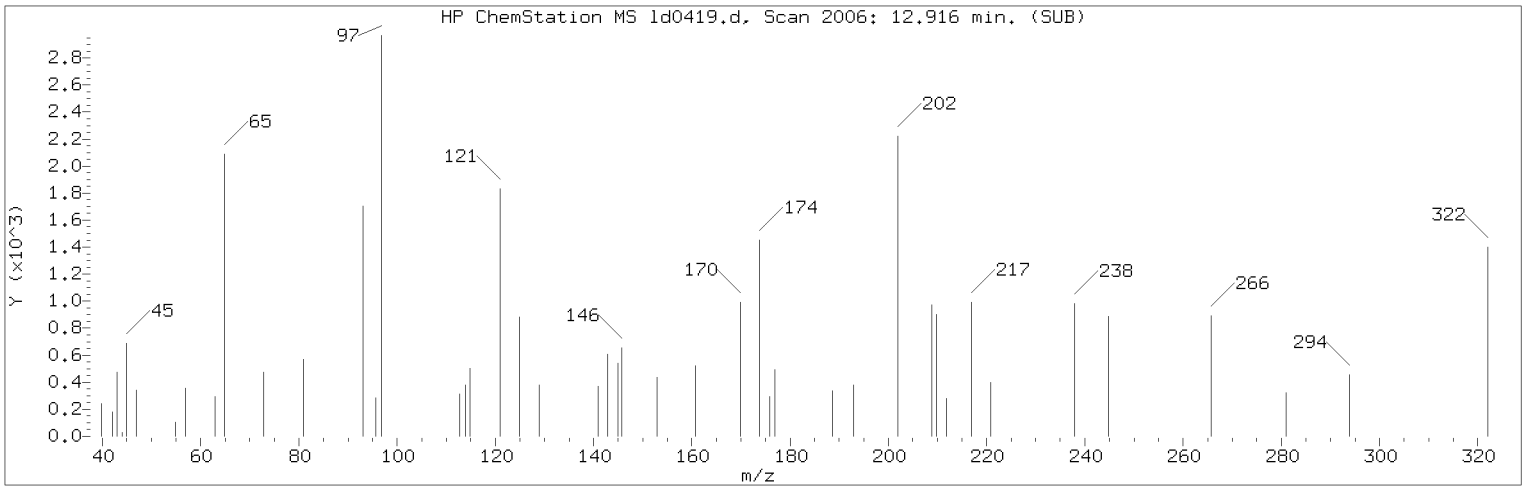
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

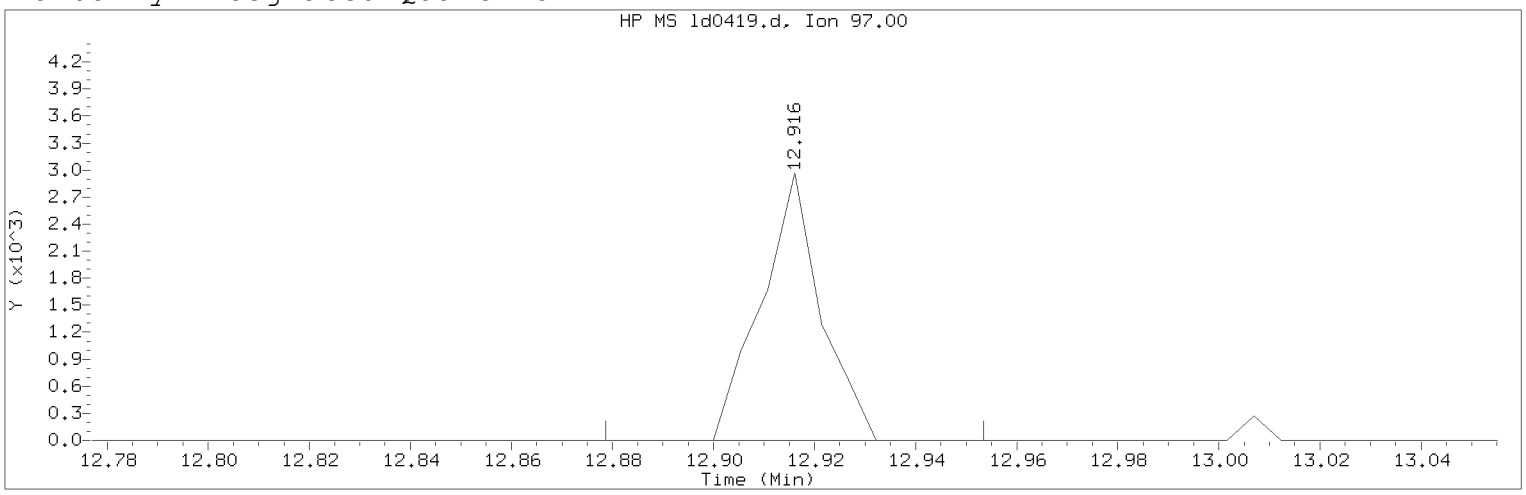
Compound Number	: 135		
Compound Name	: 4,6-Dinitro-2-methylphenol		
Scan Number	: 1946		
Retention Time (minutes)	: 12.595		
Quant Ion	: 198.00		
Area	: 6250		
On-column Amount (ng/ul)	: 0.2871		
Integration start scan	: 1943	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

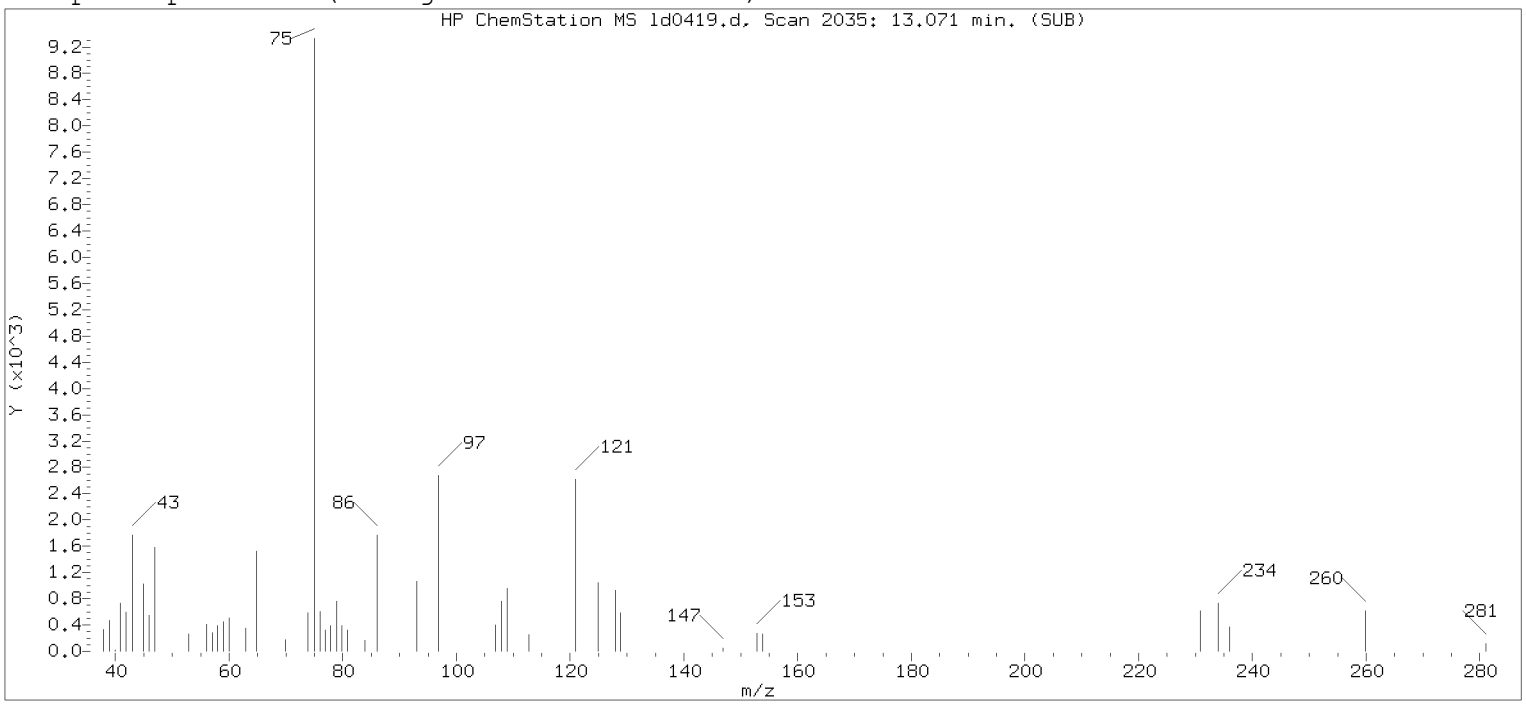
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 2437M
On-Column Amount (ng/ul) : 0.1013
Integration start scan : 1998 Integration stop scan: 2012
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

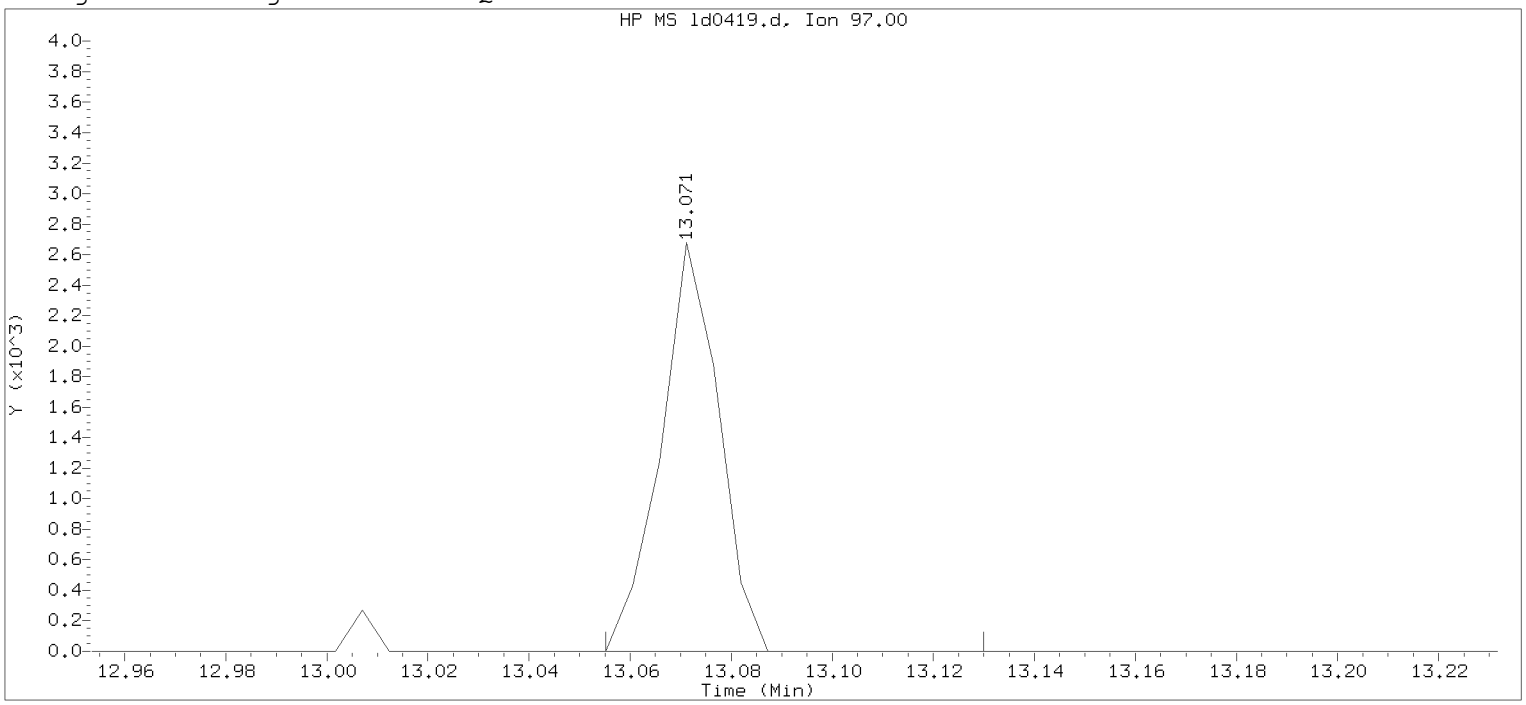
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

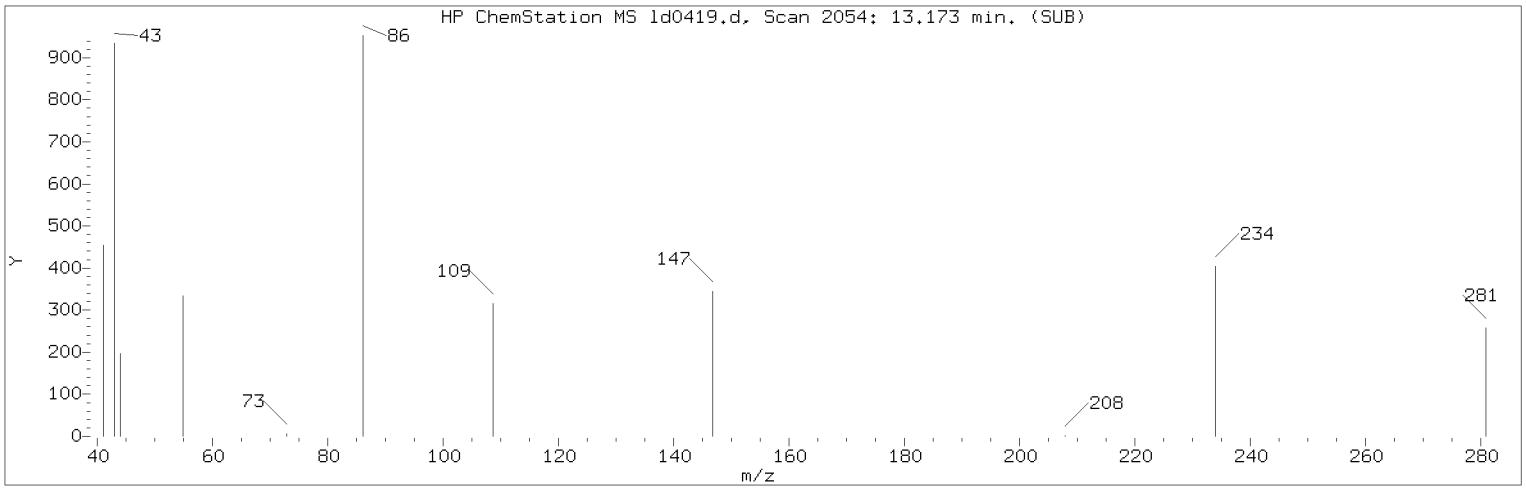
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

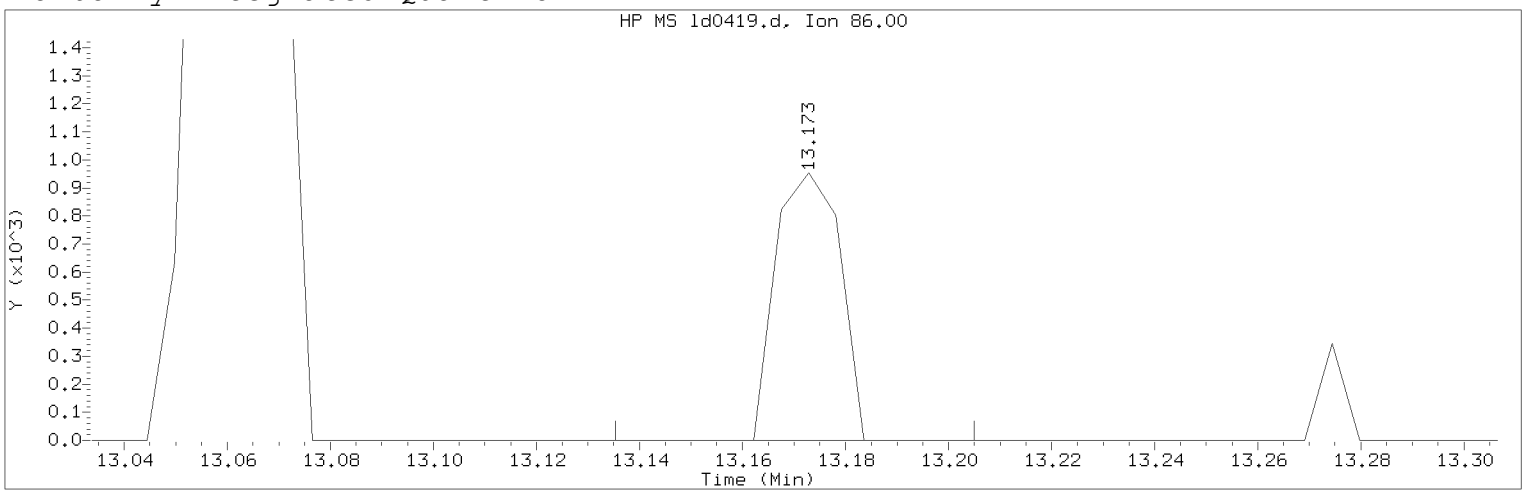
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 2145		
On-column Amount (ng/ul)	: 0.0850		
Integration start scan	: 2031	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

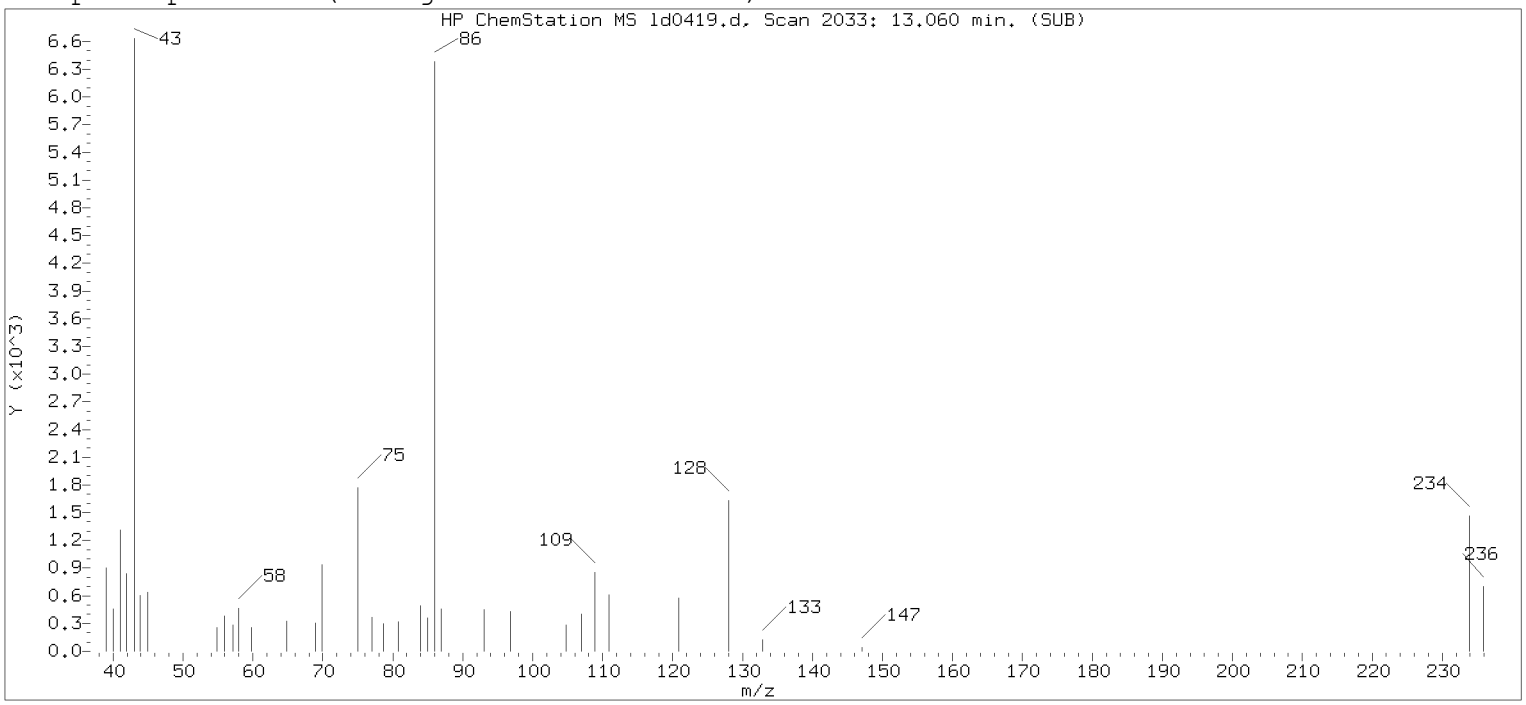
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 827M
On-Column Amount (ng/ul) : 0.0163
Integration start scan : 2046 Integration stop scan: 2059
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

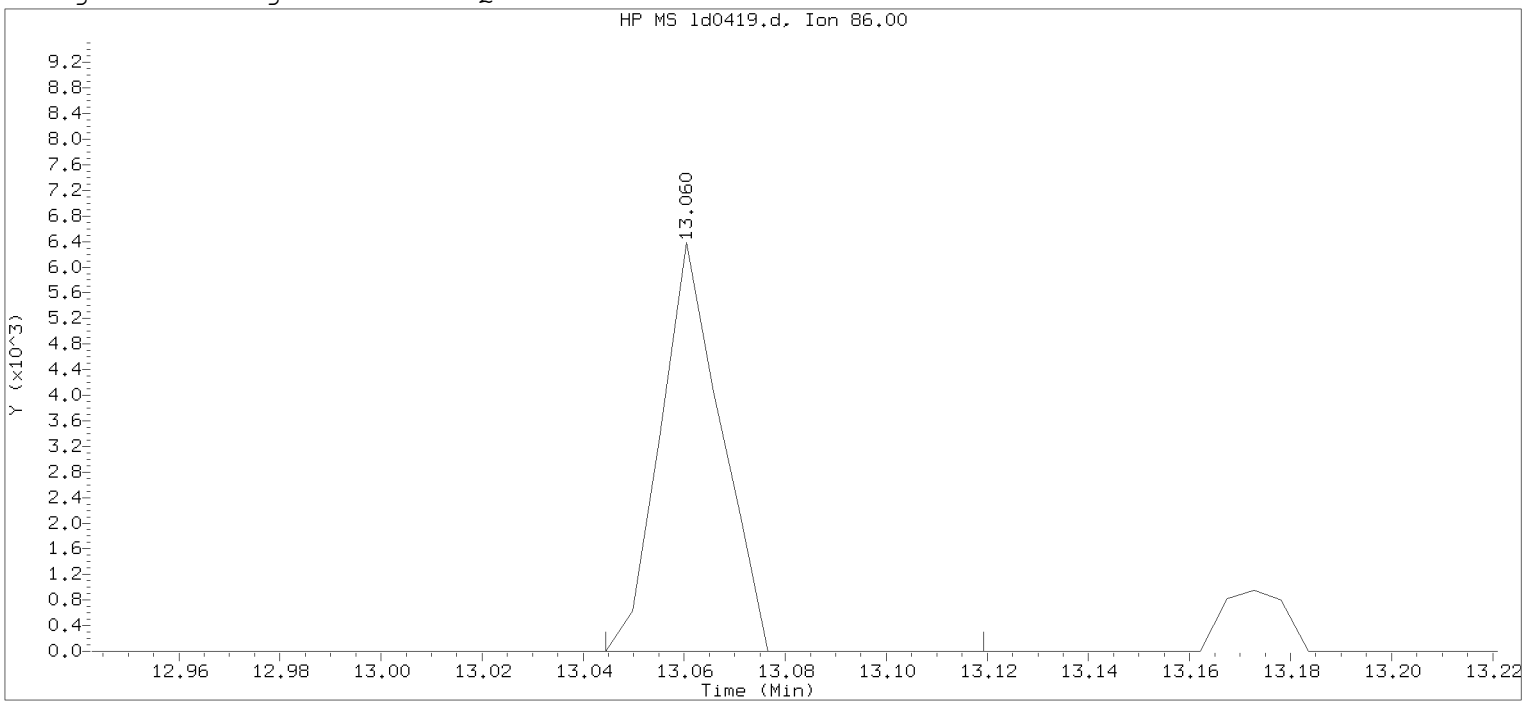
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

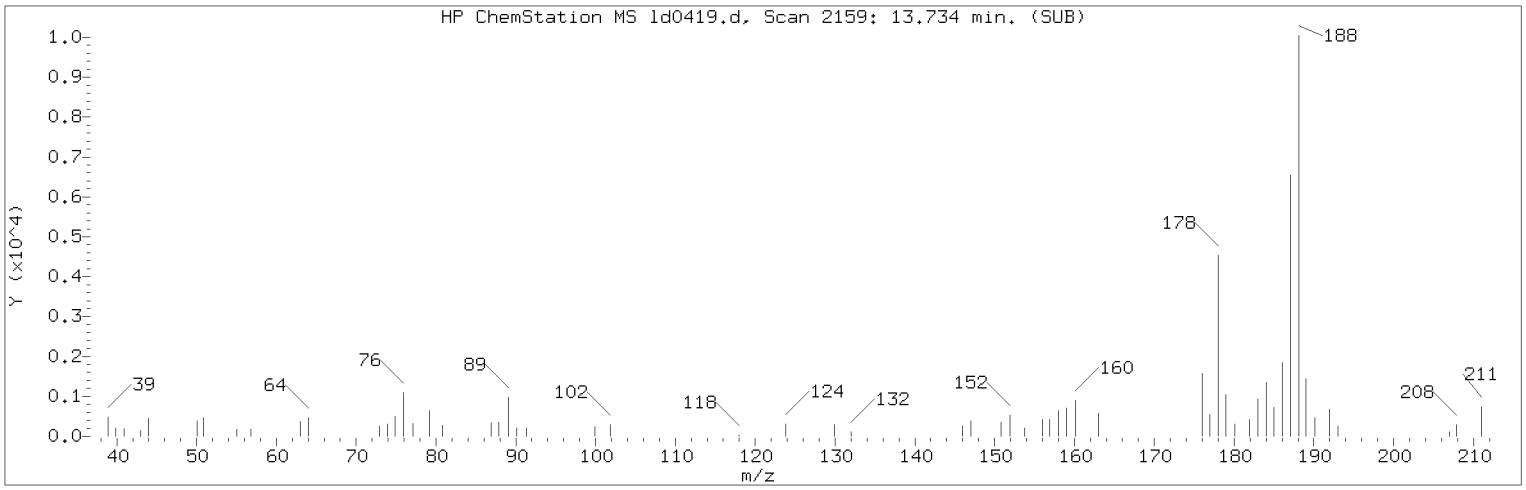
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

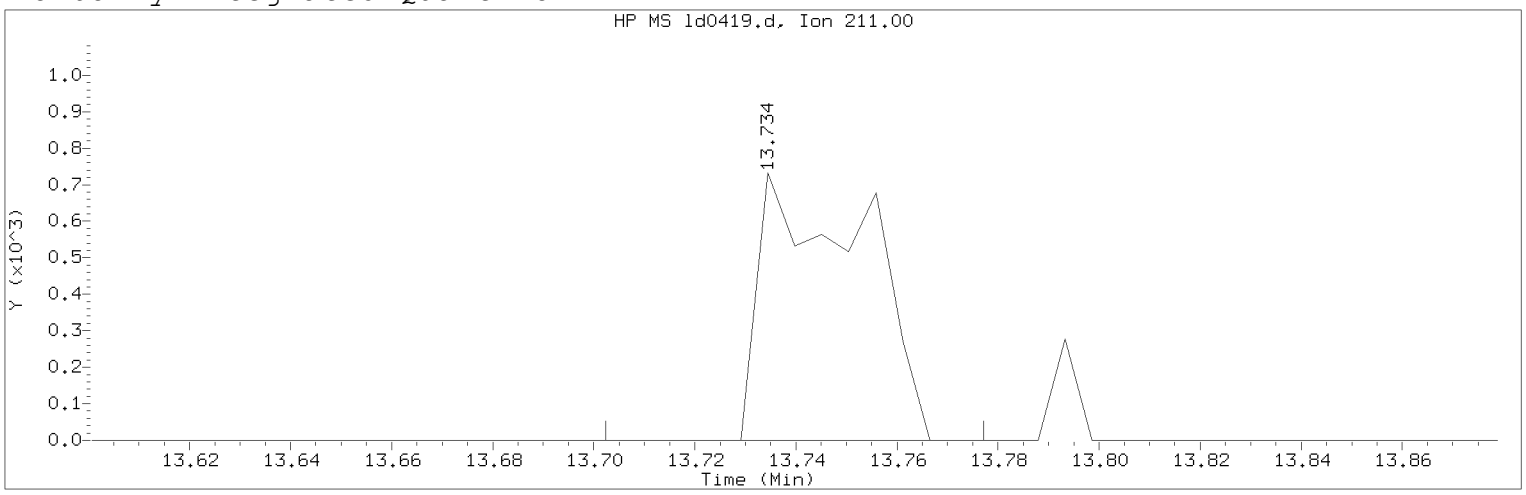
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.060		
Quant Ion	: 86.00		
Area	: 5296		
On-column Amount (ng/ul)	: 0.0998		
Integration start scan	: 2029	Integration stop scan:	2043
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

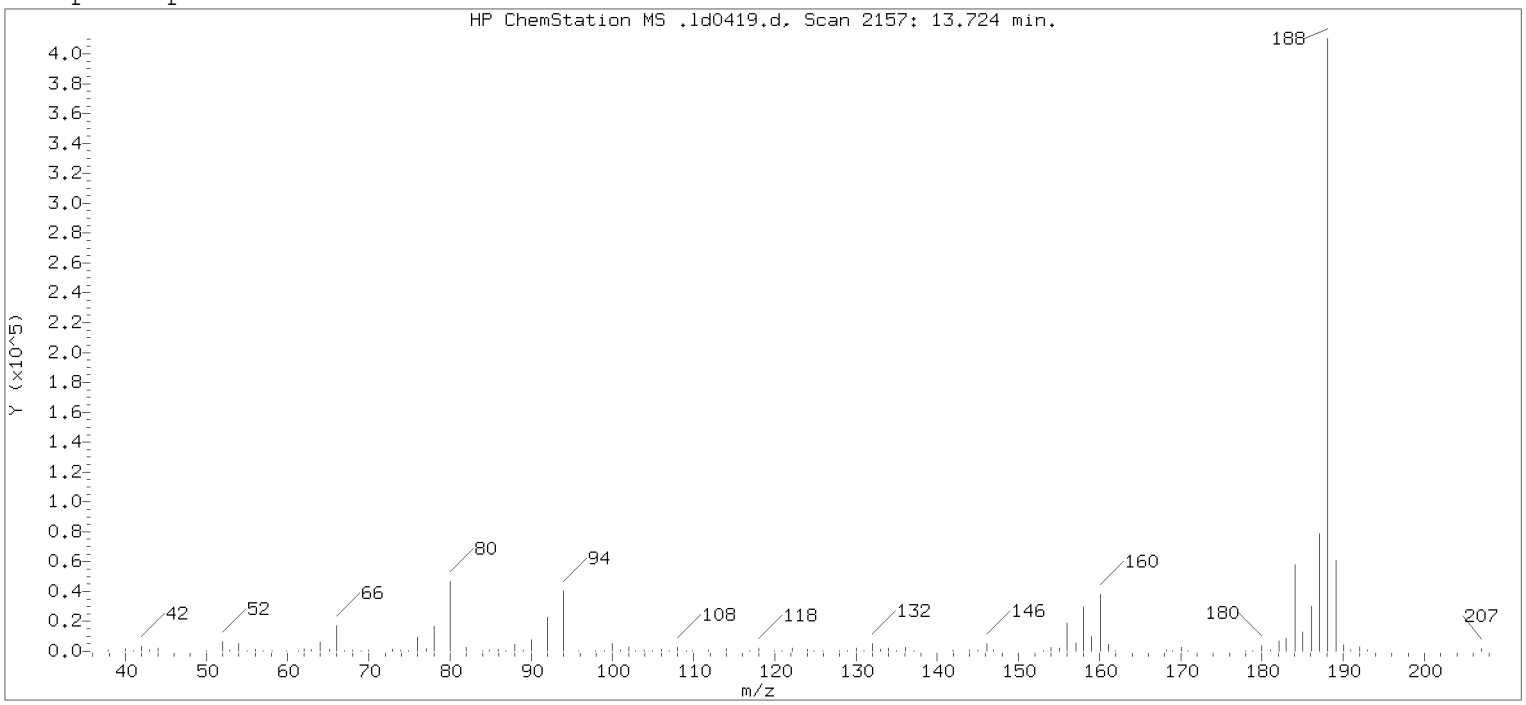
Compound Number : 159
Compound Name : Dinoseb
Scan Number : 2159
Retention Time (minutes) : 13.734
Quant Ion : 211.00
Area (flag) : 1057M
On-Column Amount (ng/ul) : 0.0308
Integration start scan : 2152 Integration stop scan: 2166
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

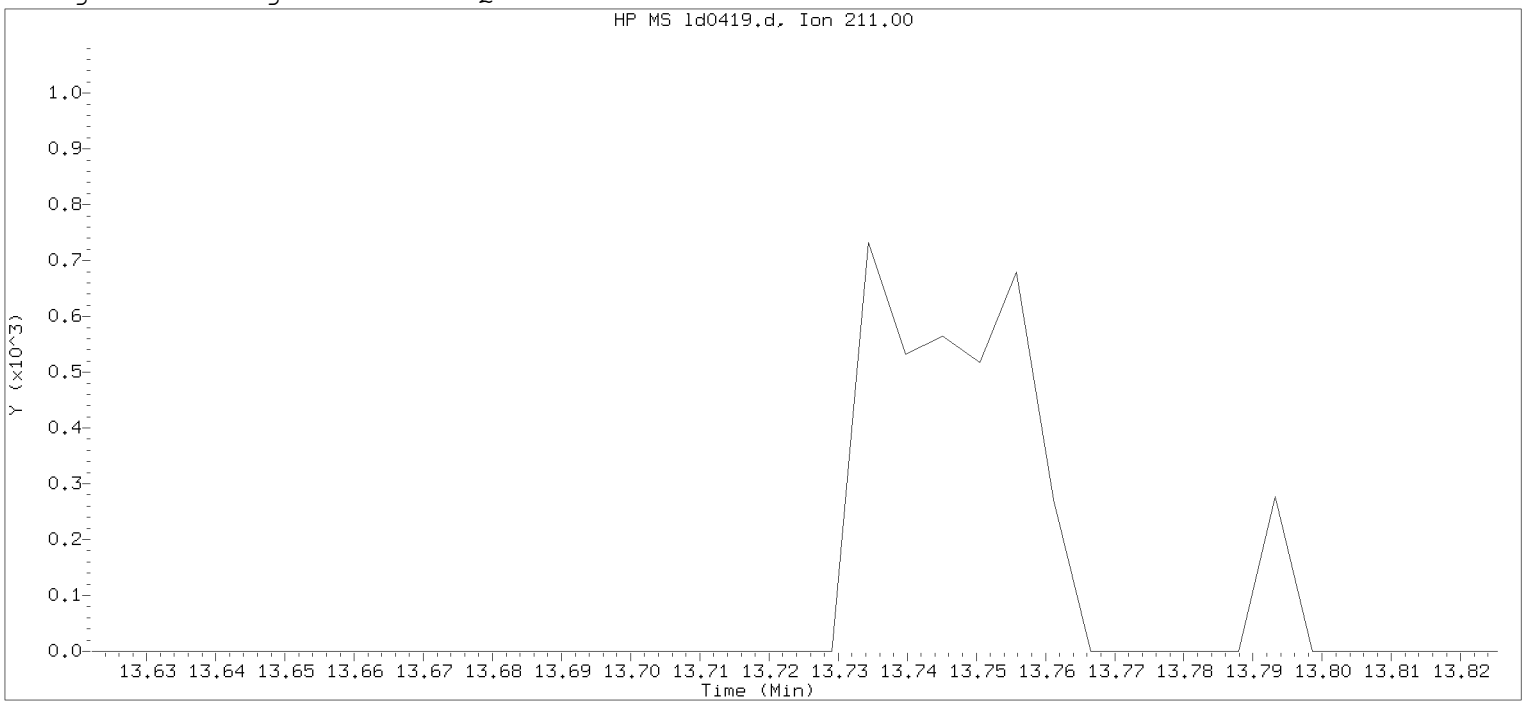
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

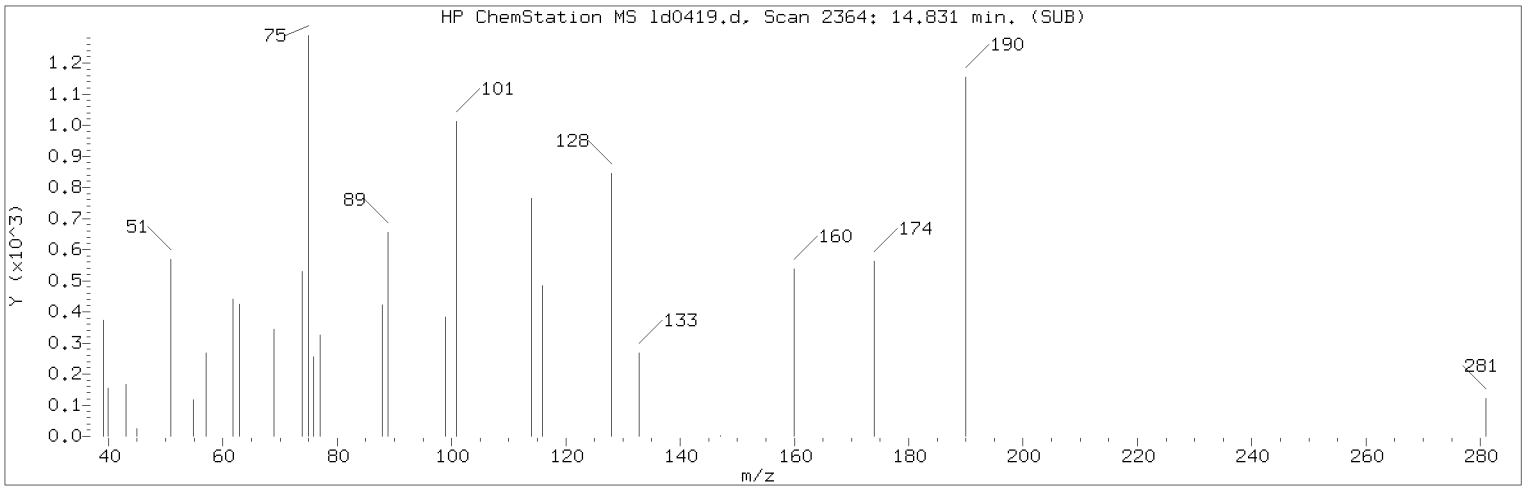
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

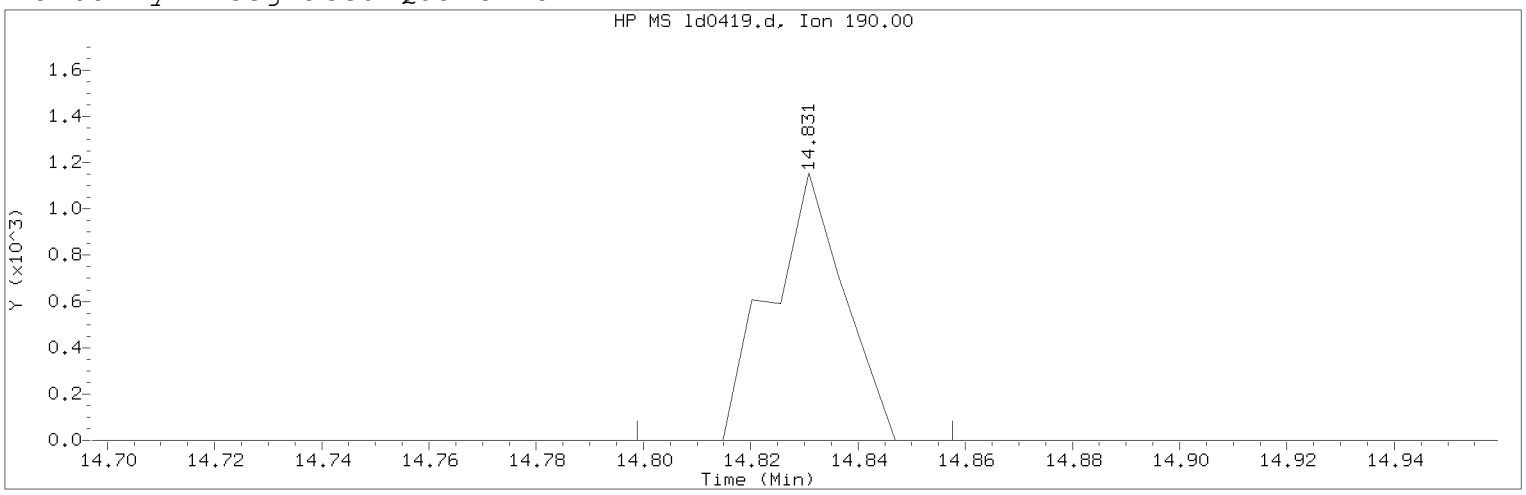
Compound Number : 159
Compound Name : Dinoseb
Expected RT (minutes) : 13.724
Quant Ion : 211.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

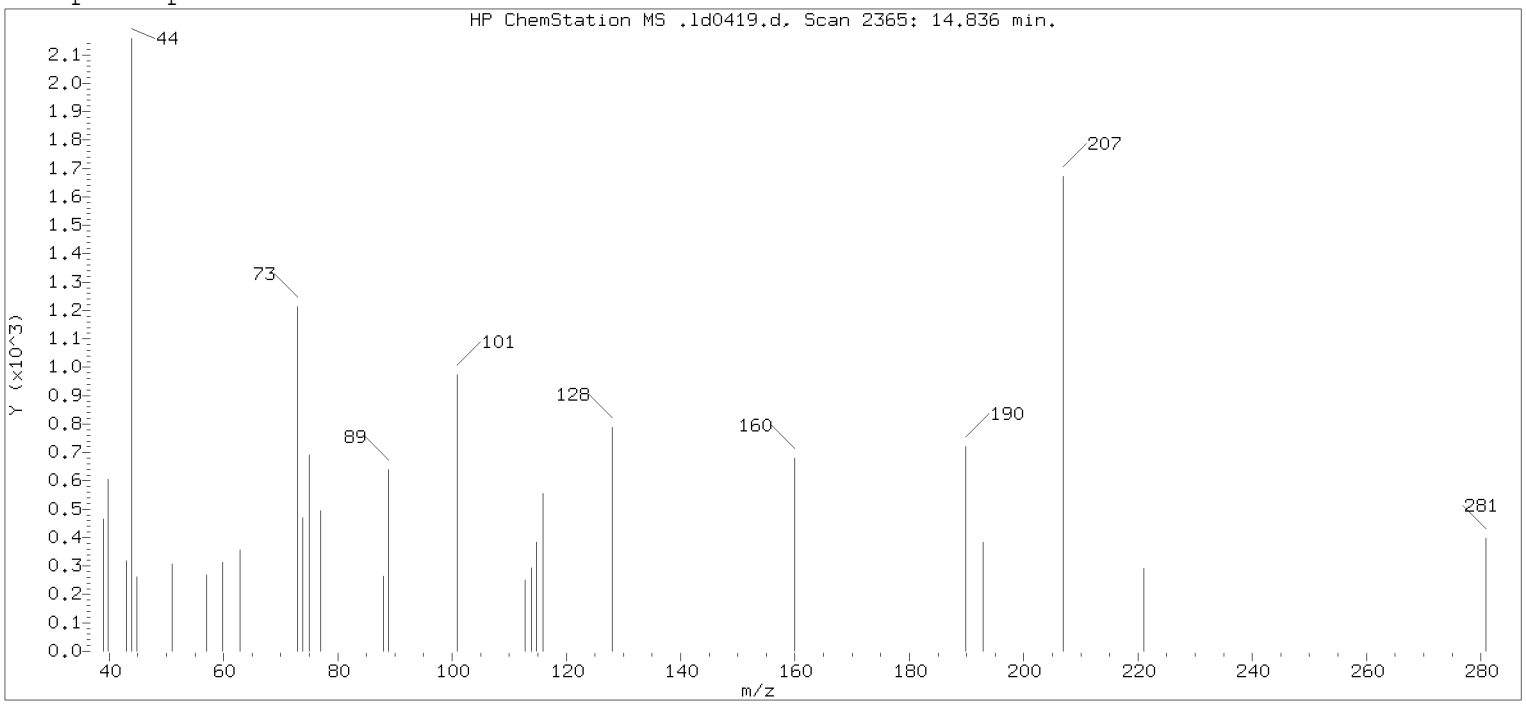
Compound Number : 173
Compound Name : 4-Nitroquinoline-1-oxide
Scan Number : 2364
Retention Time (minutes) : 14.831
Quant Ion : 190.00
Area (flag) : 1100M
On-Column Amount (ng/ul) : 0.0509
Integration start scan : 2357 Integration stop scan: 2368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

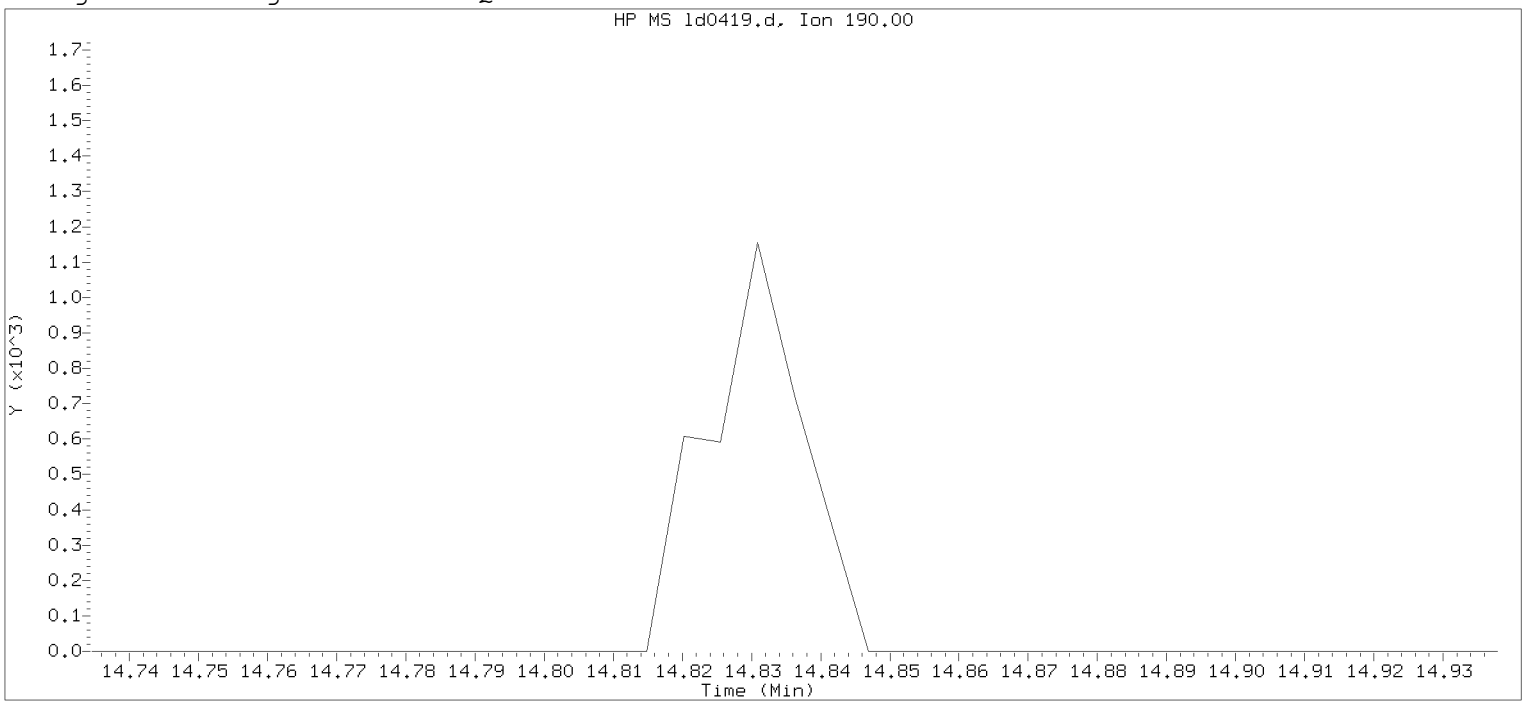
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



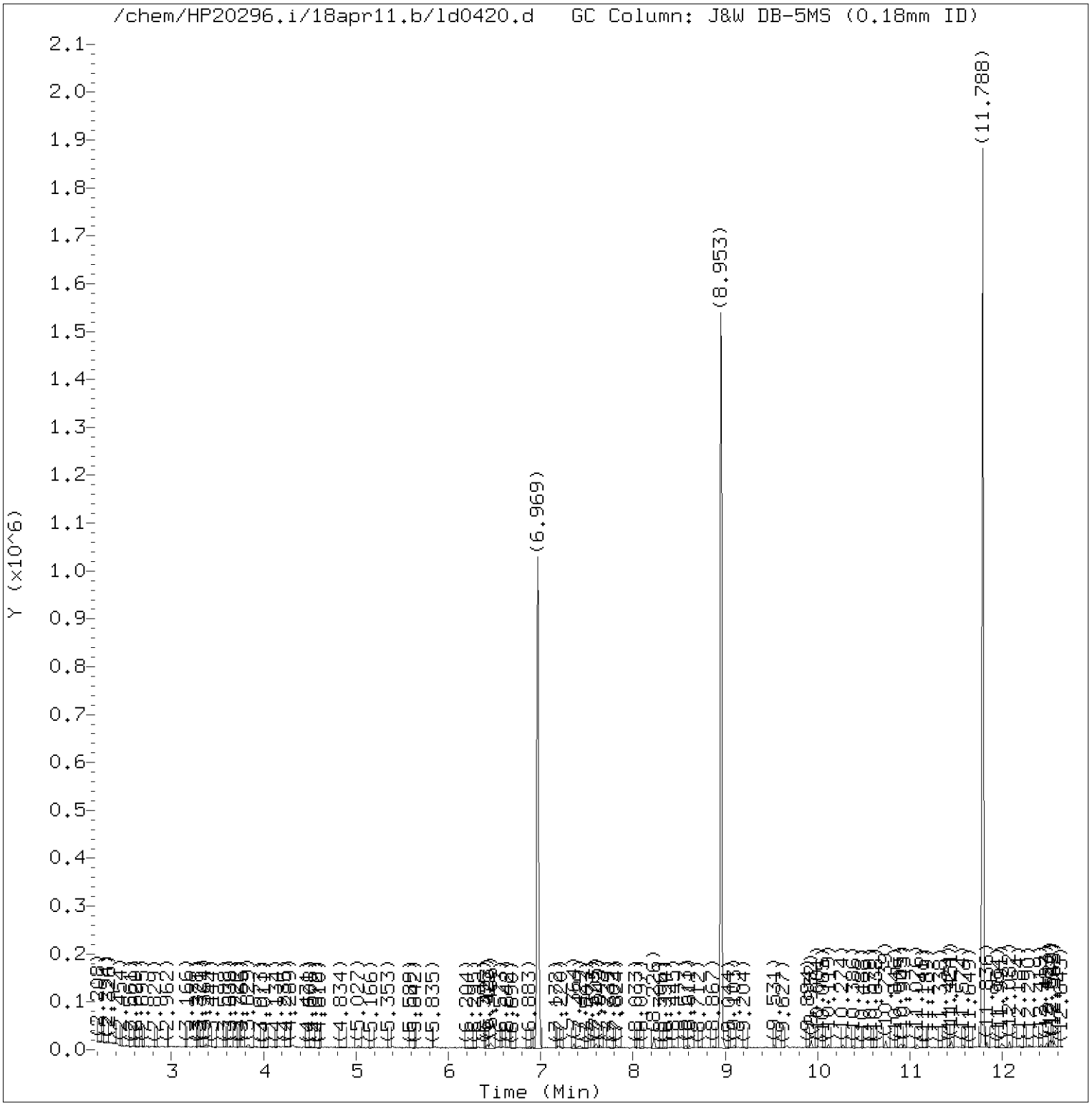
Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compound Number : 173
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 14.836
Quant Ion : 190.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: ARTransue



Total Ion Chromatogram (TIC)

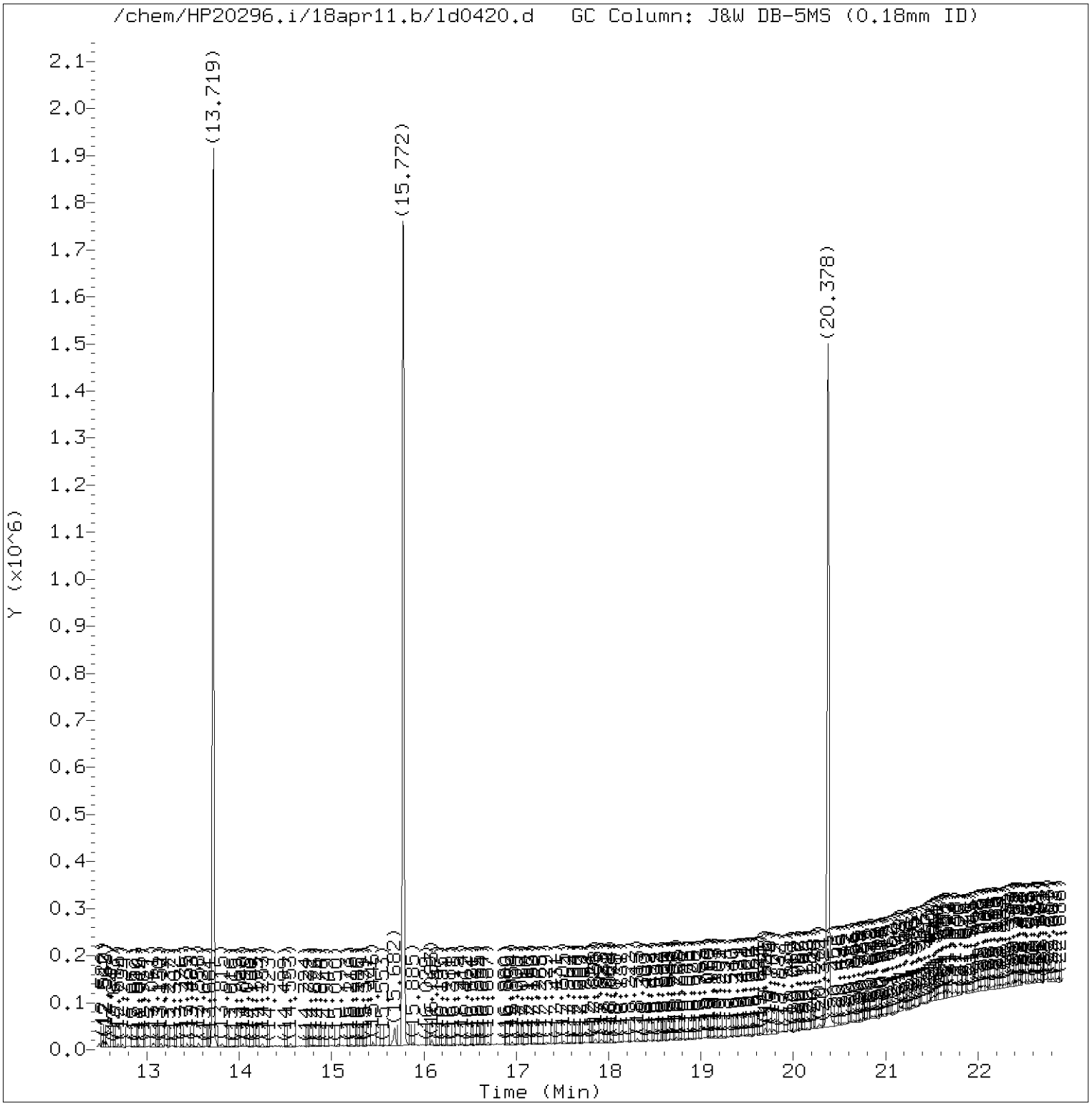
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

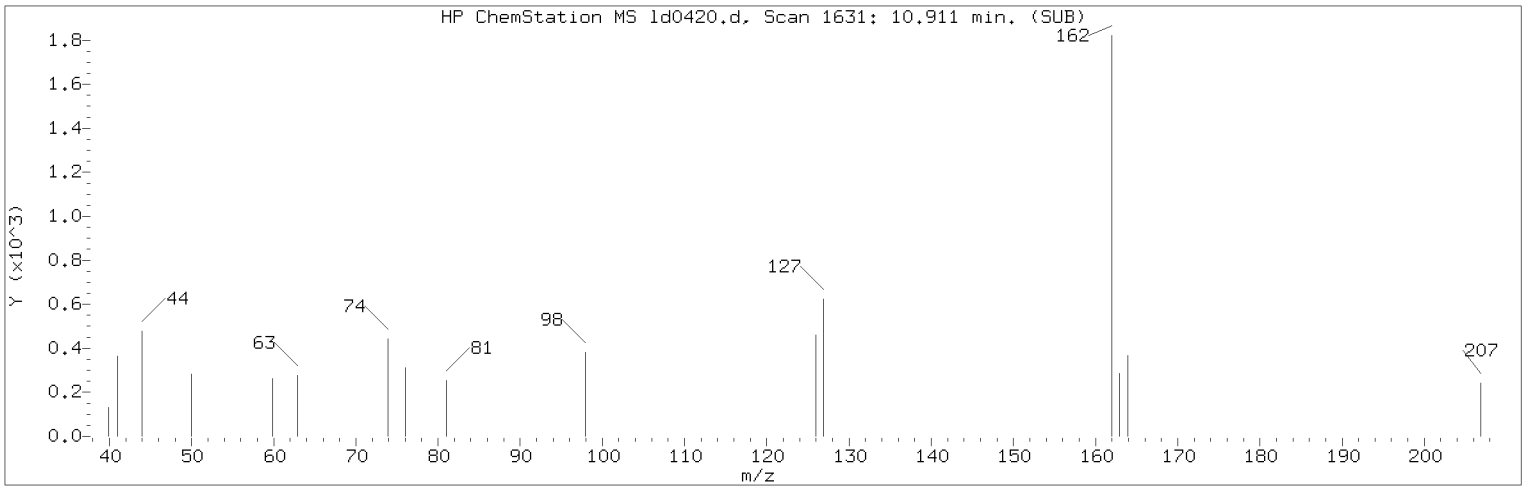
Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	215106	5.000
45)$Nitrobenzene-d5	(2)	7.819	82	2760	0.037
68)*Naphthalene-d8	(2)	8.953	136	853867	5.000
69) Naphthalene	(2)	8.990	128	3645	0.021
86) 2-Methylnaphthalene	(2)	10.119	142	2527	0.022
87) 1-Methylnaphthalene	(2)	10.274	142	2204	0.020
96)$2-Fluorobiphenyl	(3)	10.739	172	6223	0.047
99) 2-Chloronaphthalene	(3)	10.911	162	2391M	0.021
114) Acenaphthylene	(3)	11.579	152	3138	0.019
118)*Acenaphthene-d10	(3)	11.788	164	426102	5.000
119) Acenaphthene	(3)	11.836	153	2595	0.023
131) Fluorene	(3)	12.520	166	2742	0.022
150) Hexachlorobenzene	(4)	13.200	284	593	0.017
158)*Phenanthrene-d10	(4)	13.719	188	825161	5.000
160) Phenanthrene	(4)	13.745	178	4633	0.025
162) Anthracene	(4)	13.815	178	3455	0.019
227) Total PAHs	(6)			64547	0.393
178) Fluoranthene	(4)	15.446	202	4216	0.021
180)*Pyrene-d10	(5)	15.772	212	830500	5.000
182) Pyrene	(5)	15.805	202	5149	0.024
184)$Terphenyl-d14	(5)	16.088	244	6189	0.046
200) Benzo(a)anthracene	(5)	17.858	228	4163	0.022
201) Chrysene	(5)	17.928	228	3818	0.021
211) Benzo(b)fluoranthene	(6)	19.741	252	3766	0.021
213) Benzo(k)fluoranthene	(6)	19.789	252	4296M	0.024
216) Benzo(a)pyrene	(6)	20.281	252	3327M	0.020
218)*Perylene-d12	(6)	20.378	264	746641	5.000
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	3718	0.024
225) Dibenz(a,h)anthracene	(6)	22.068	278	3436	0.022
226) Benzo(g,h,i)perylene	(6)	22.442	276	3719	0.023

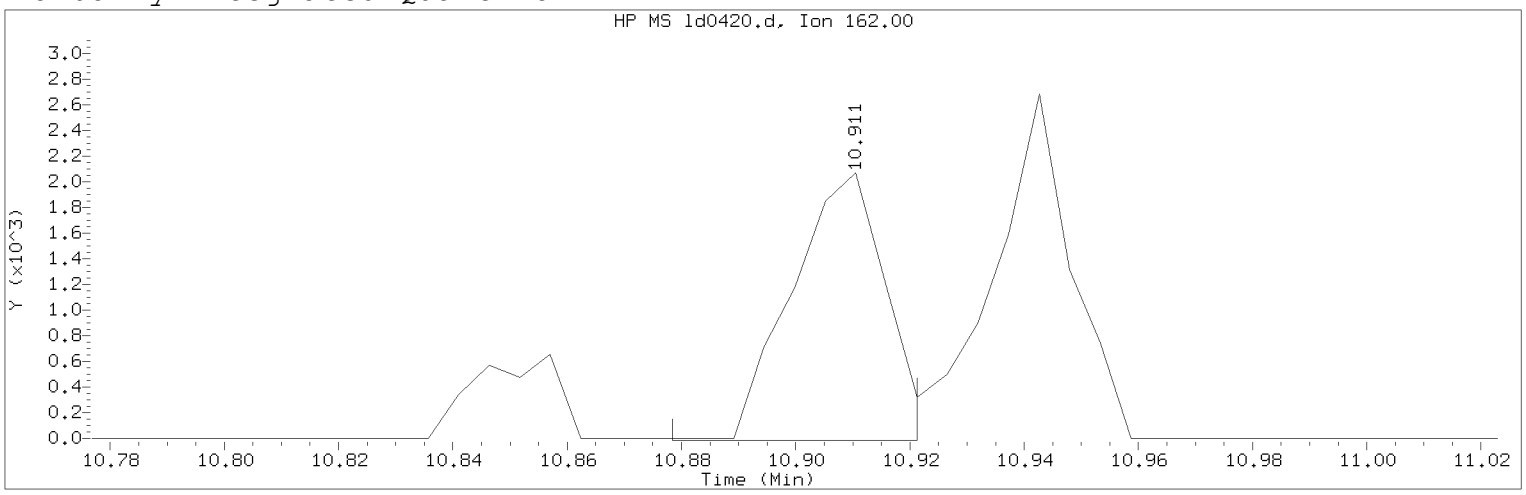
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

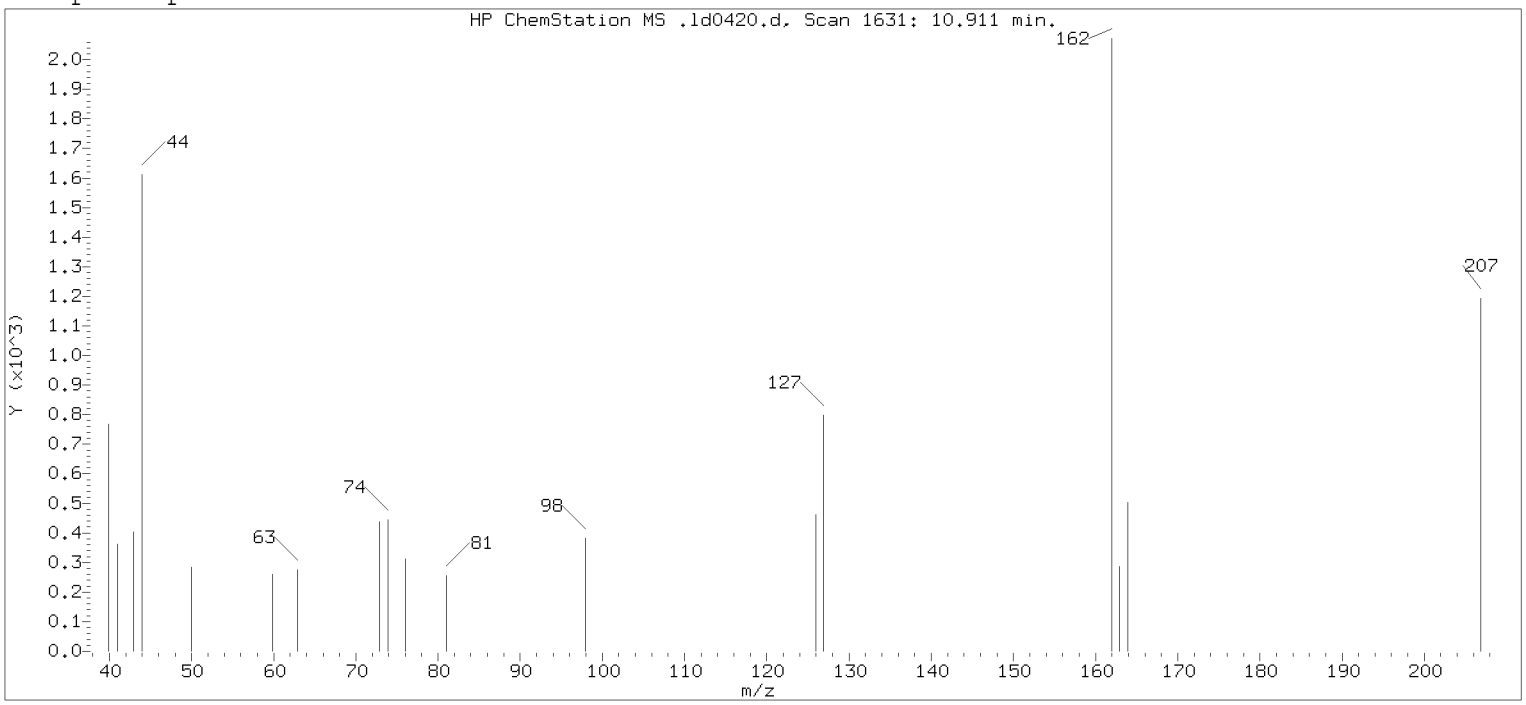
Compound Number : 99
Compound Name : 2-Chloronaphthalene
Scan Number : 1631
Retention Time (minutes) : 10.911
Quant Ion : 162.00
Area (flag) : 2391M
On-Column Amount (ng/ul) : 0.0206
Integration start scan : 1624 Integration stop scan: 1632
Y at integration start : -13 Y at integration end: -13

Reason for manual integration: missed peak

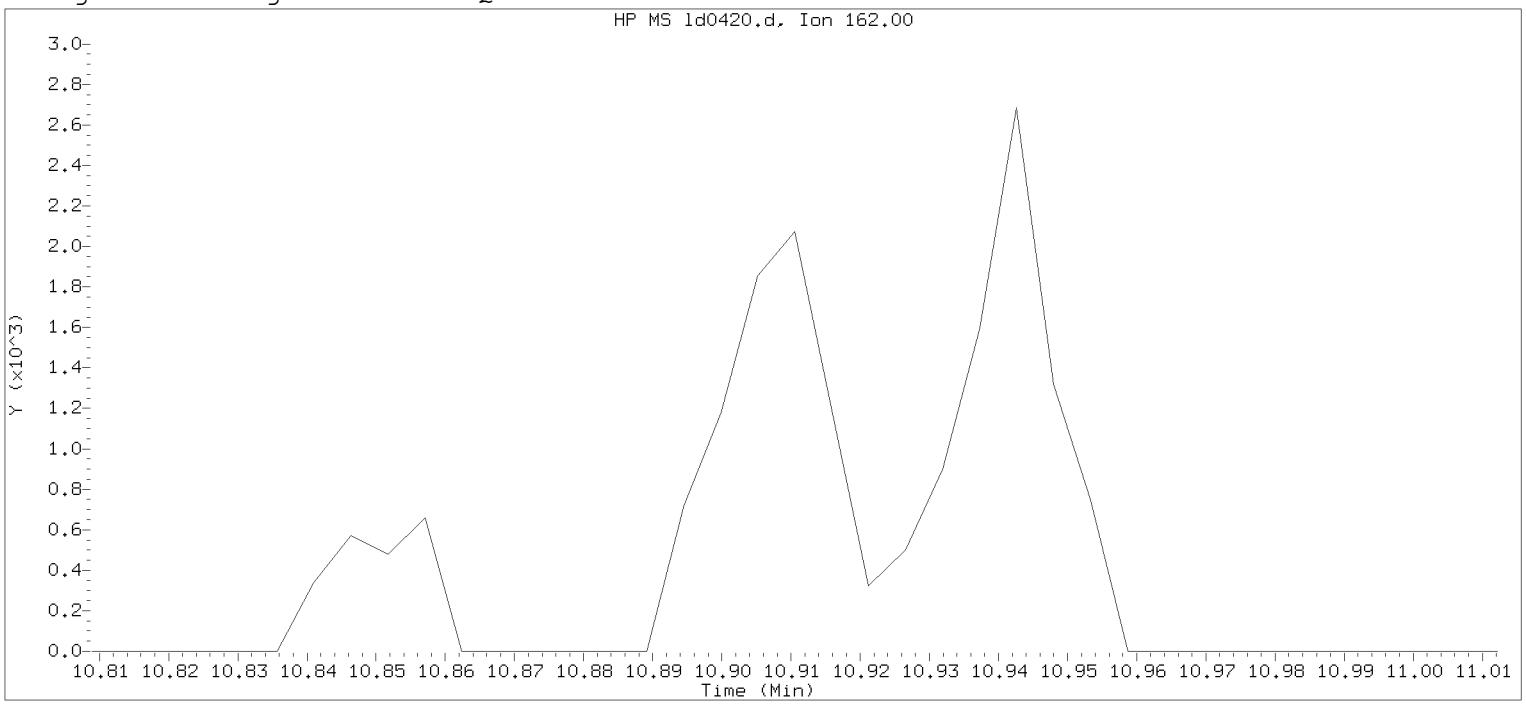
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

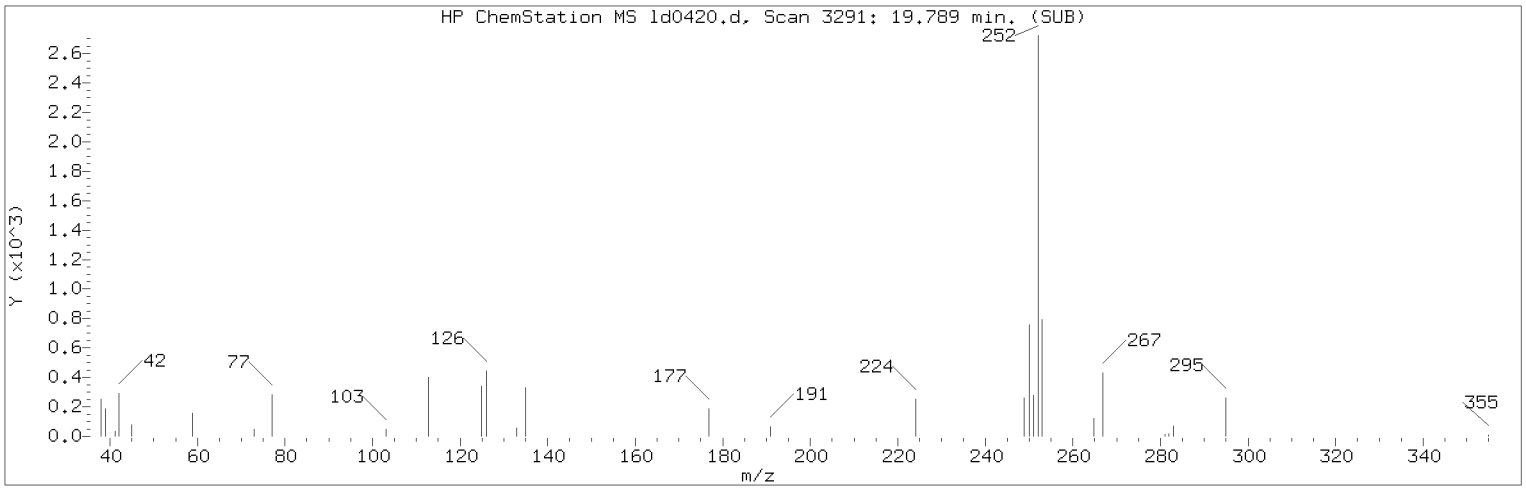
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

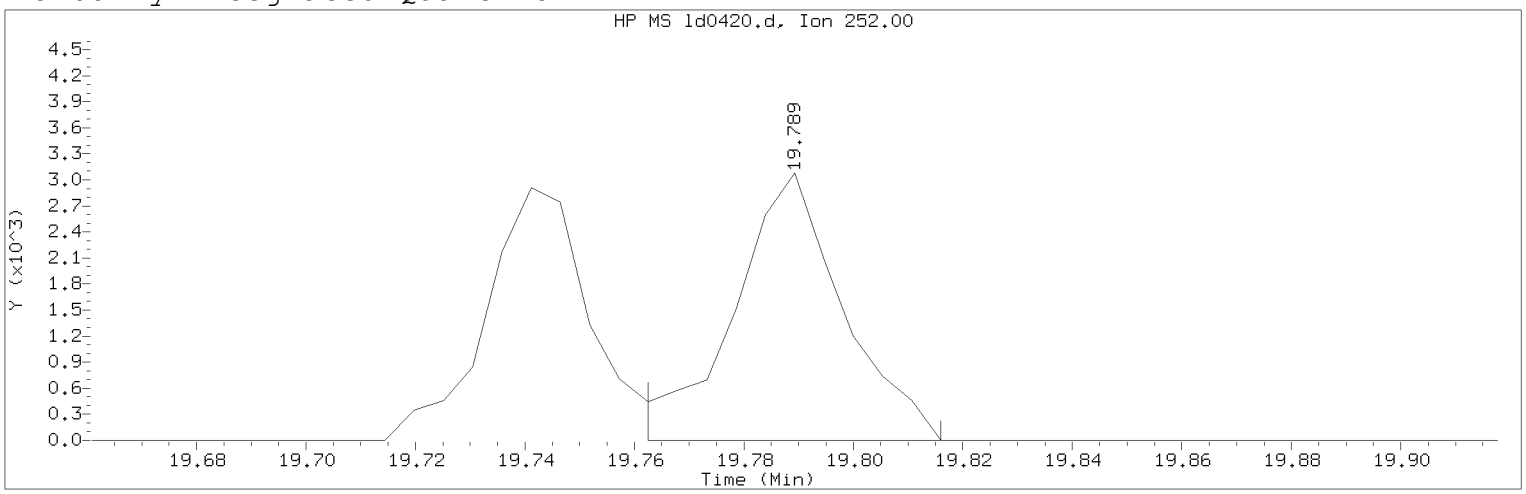
Compound Number : 99
Compound Name : 2-Chloronaphthalene
Expected RT (minutes) : 10.910
Quant Ion : 162.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ap[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

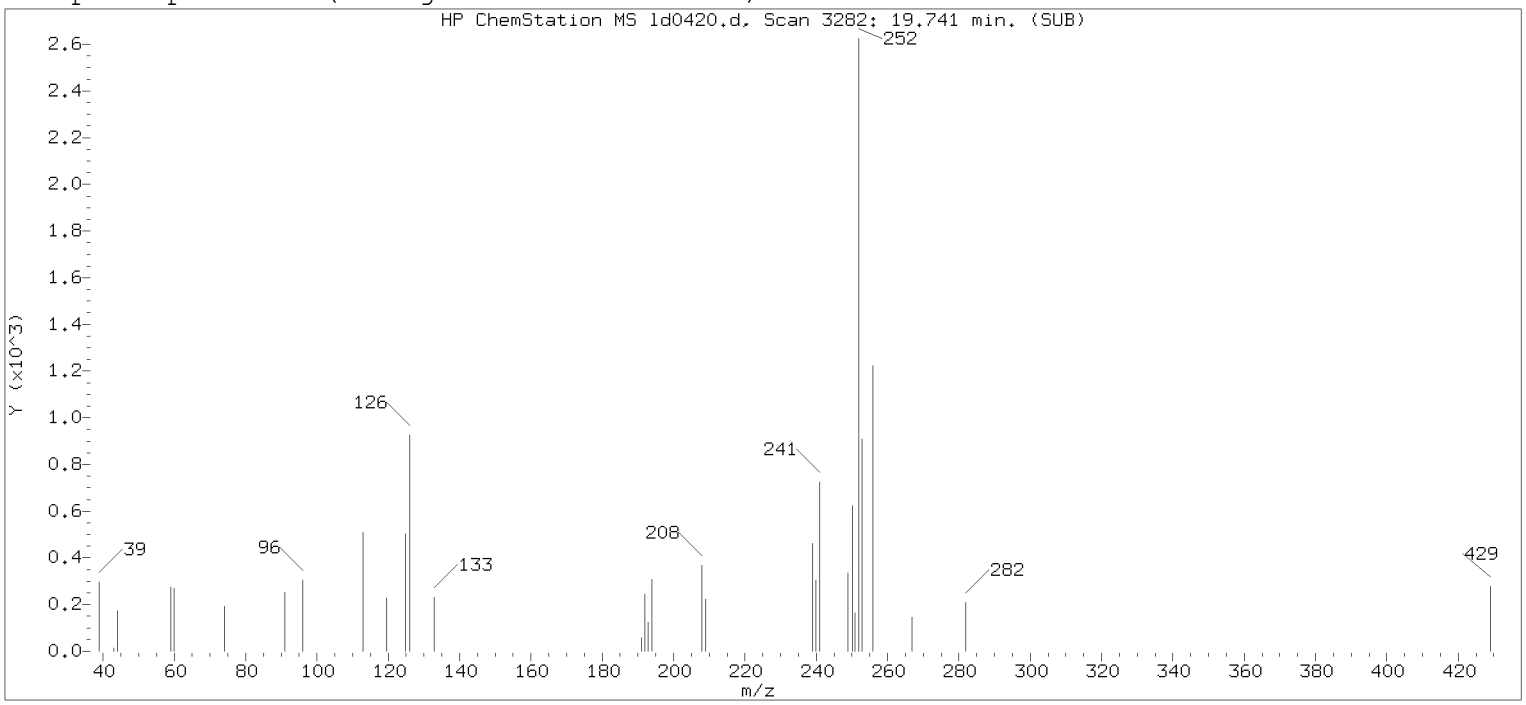
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 4296M
On-Column Amount (ng/ul) : 0.0244
Integration start scan : 3285 Integration stop scan: 3295
Y at integration start : -1 Y at integration end: 2

Reason for manual integration: improper integration

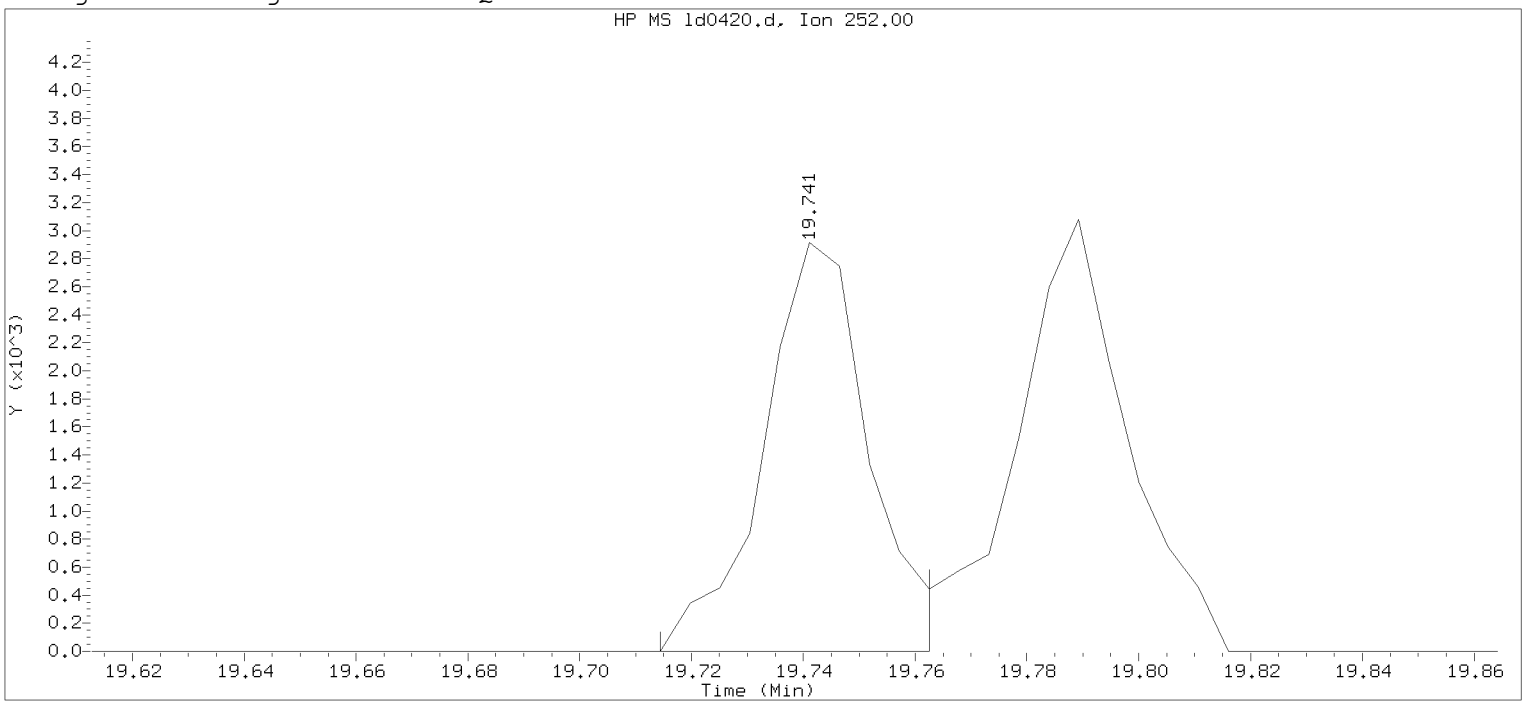
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

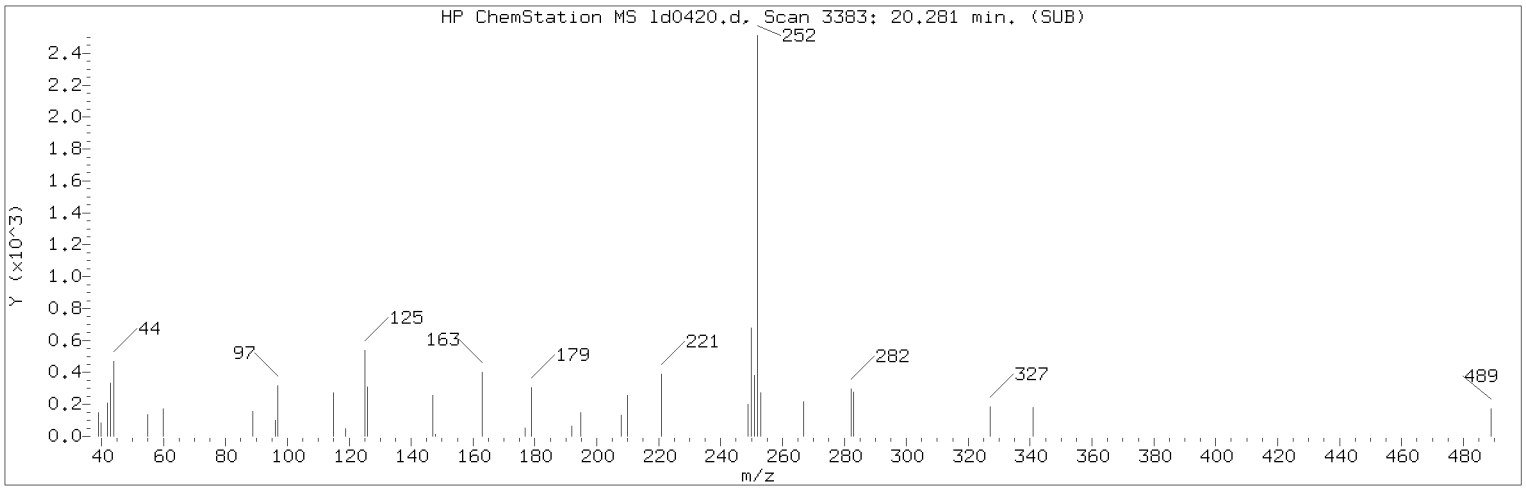
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

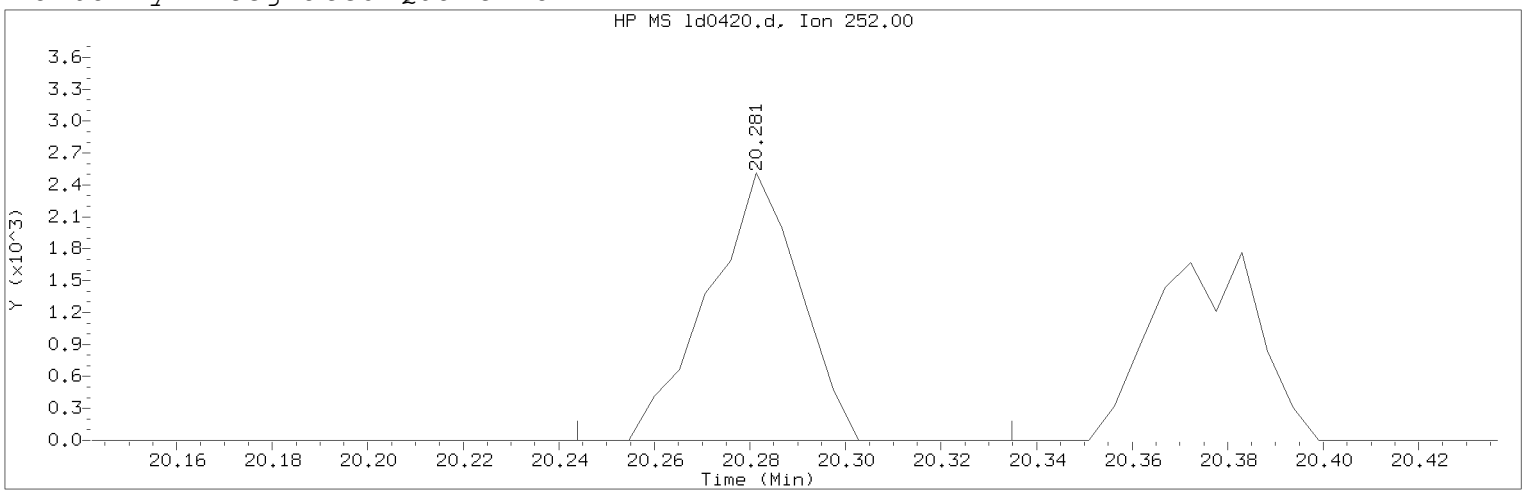
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 3766		
On-column Amount (ng/ul)	: 0.0205		
Integration start scan	: 3276	Integration stop scan:	3285
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

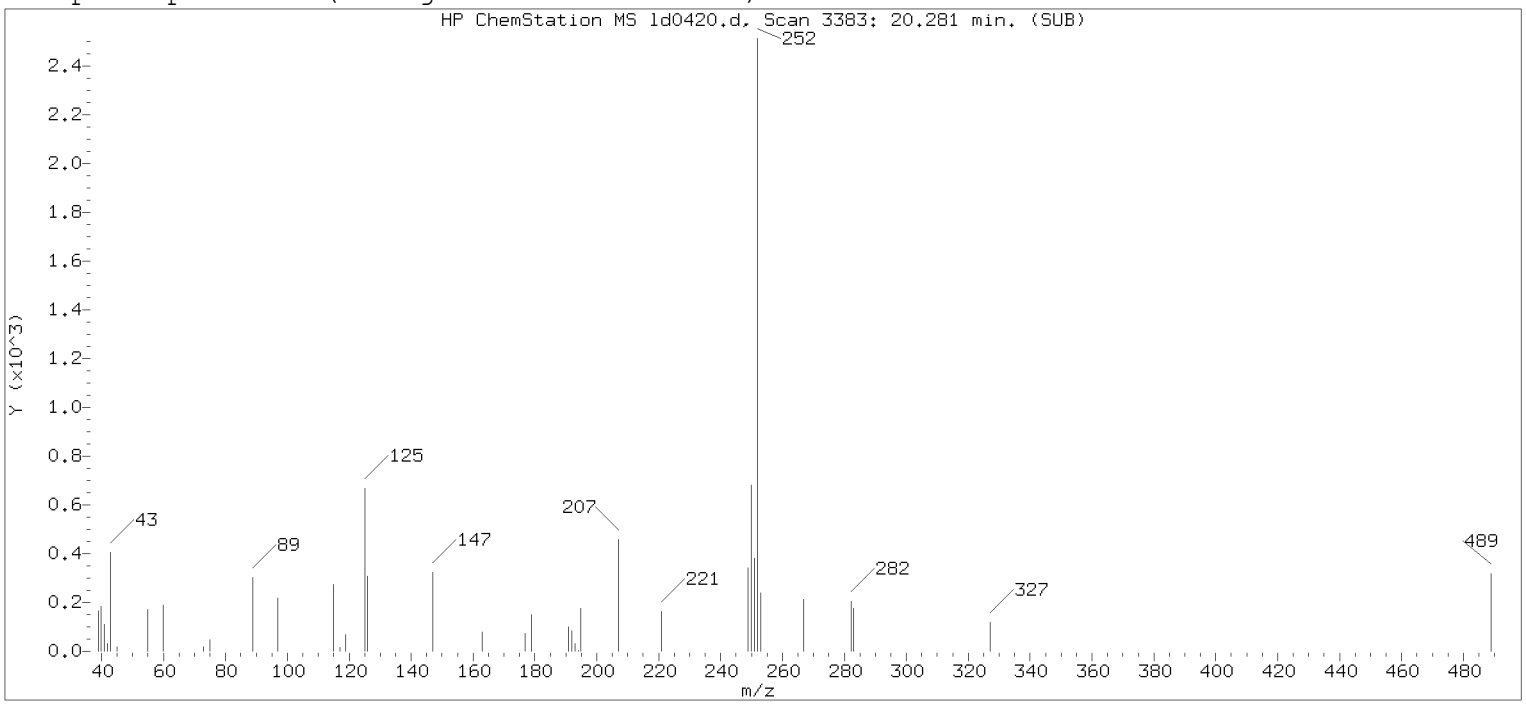
Compound Number : 216
Compound Name : Benzo(a)pyrene
Scan Number : 3383
Retention Time (minutes) : 20.281
Quant Ion : 252.00
Area (flag) : 3327M
On-Column Amount (ng/ul) : 0.0202
Integration start scan : 3375 Integration stop scan: 3392
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

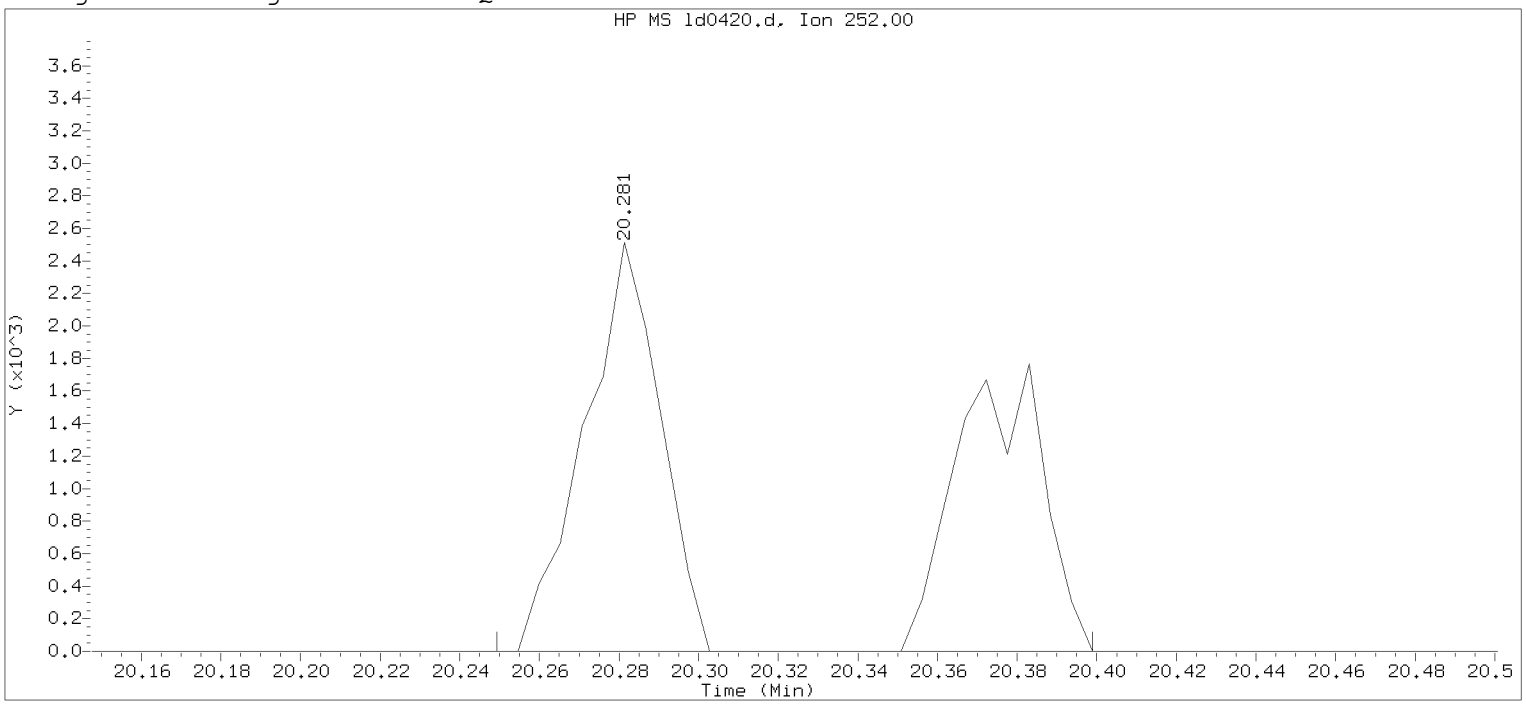
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



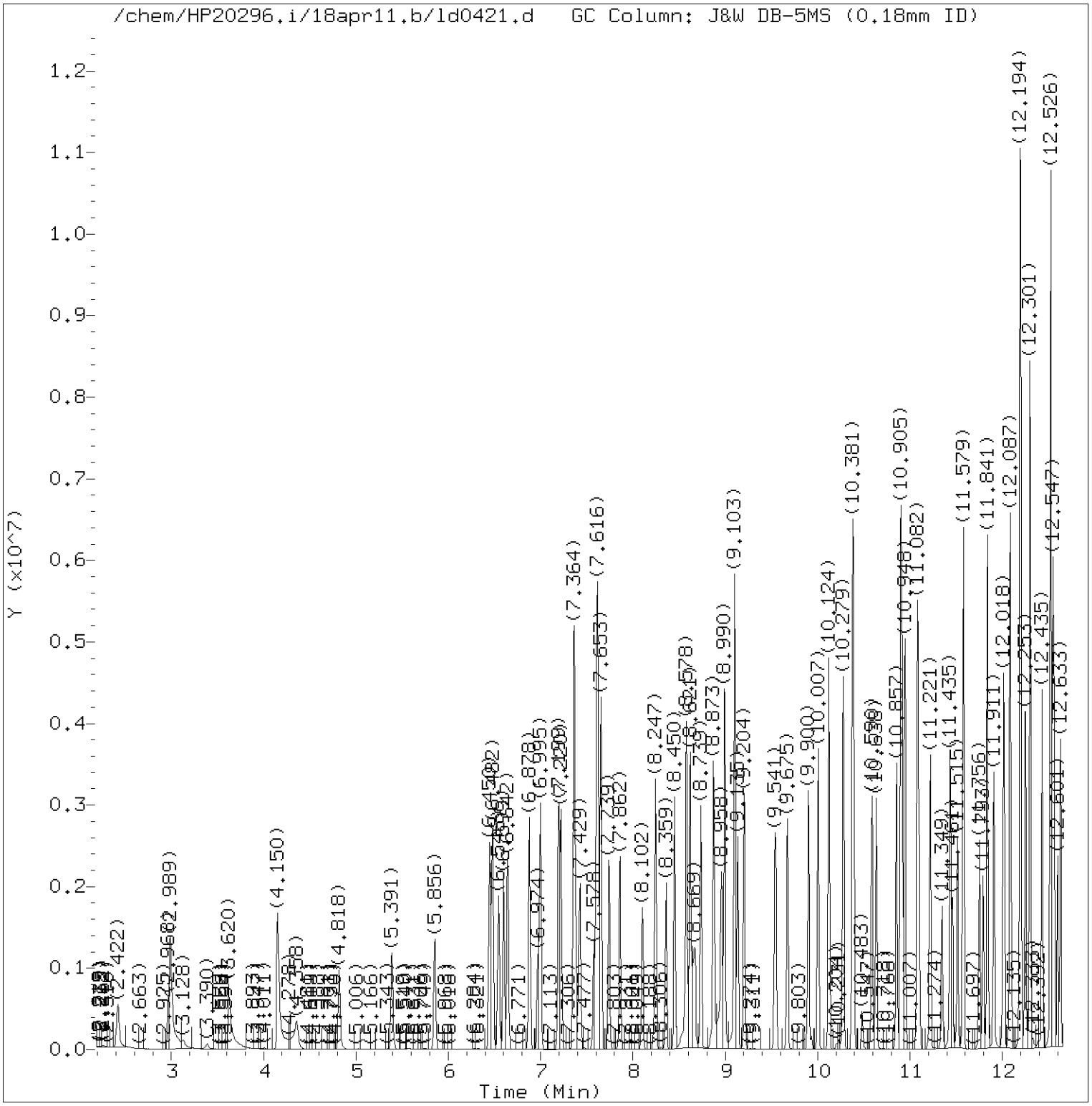
Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Compound Number	: 216		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3383		
Retention Time (minutes)	: 20.281		
Quant Ion	: 252.00		
Area	: 6035		
On-column Amount (ng/ul)	: 0.0346		
Integration start scan	: 3376	Integration stop scan:	3404
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue



Total Ion Chromatogram (TIC)

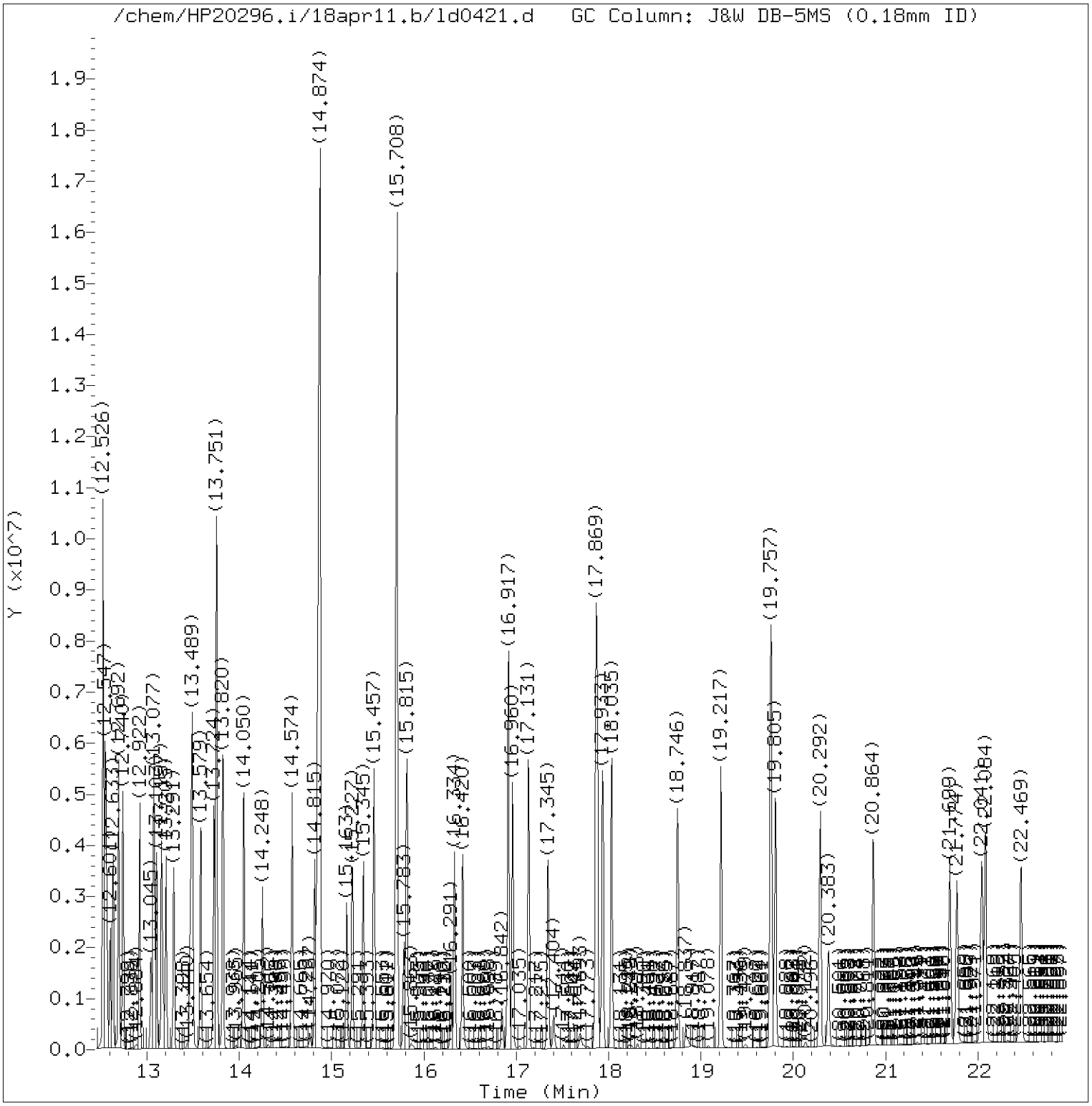
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.422	88	487279	14.729
5) N-Nitrosodimethylamine	(1)	2.968	74	611775	12.145
6) Pyridine	(1)	2.989	79	1057169	11.762
8) 2-Picoline	(1)	4.150	93	1071723	11.793
9) N-Nitrosomethylethylamine	(1)	4.358	88	422634	11.604
10) Methyl methanesulfonate	(1)	4.818	80	532797	12.077
14) N-Nitrosodiethylamine	(1)	5.391	102	416051	12.317
43) Total Cresols	(1)	5.660	100	1694138	24.623
16) Ethyl methanesulfonate	(1)	5.856	109	443402	12.054
19) Phenol	(1)	6.450	94	1304791	12.475
20) Aniline	(1)	6.482	93	1496739	12.410
23) bis(2-Chloroethyl)ether	(1)	6.599	93	941914	12.097
24) 2-Chlorophenol	(1)	6.642	128	855272	12.601
25) 1,3-Dichlorobenzene	(1)	6.878	146	956228	12.480
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	253033	5.000
27) 1,4-Dichlorobenzene	(1)	7.001	146	988253	12.745
28) Benzyl alcohol	(1)	7.199	108	617204	13.624
29) 1,2-Dichlorobenzene	(1)	7.220	146	943098	12.774
31) Indene	(1)	7.359	115	1657930	15.326
32) 2-Methylphenol	(1)	7.370	108	826533	12.350
100) Isosafrole	(3)	7.383	162	787801	12.638
35) bis(2-Chloroisopropyl)ether	(1)	7.429	45	1348541	12.200
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.429	45	1348541	12.200
36) N-Nitrosopyrrolidine	(1)	7.578	100	448305	12.234
37) Acetophenone	(1)	7.605	105	1311258	12.849
39) N-Nitroso-di-n-propylamine	(1)	7.621	70	713762	12.269
38) 4-Methylphenol	(1)	7.621	108	867605	12.273
40) N-Nitrosomorpholine	(1)	7.648	56	575940	11.846
41) o-Toluidine	(1)	7.653	106	1440114	12.168
44) Hexachloroethane	(1)	7.739	117	386812	11.700
46) Nitrobenzene	(2)	7.862	77	1031643	12.305
125) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	950574	24.961
50) N-Nitrosopiperidine	(2)	8.102	114	414601	12.033
52) Isophorone	(2)	8.247	82	1893207	12.919
53) 2-Nitrophenol	(2)	8.359	139	441643	13.037
55) 2,4-Dimethylphenol	(2)	8.450	107	798786	10.999
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	436658	12.148
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	1182885	12.417
58) Benzoic acid	(2)	8.669	105	1593380M	31.641
62) 2,4-Dichlorophenol	(2)	8.739	162	718082	12.698

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
151) Diallate trans/cis	(4)	8.775	86	823707	11.232
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	795259	12.621
68)*Naphthalene-d8	(2)	8.958	136	953023	5.000
69) Naphthalene	(2)	8.996	128	2473208	12.558
71) 2,6-Dichlorophenol	(2)	9.103	162	698375	12.470
70) 4-Chloroaniline	(2)	9.103	127	1018259	12.668
72) Hexachloropropene	(2)	9.135	213	580357	12.729
74) Hexachlorobutadiene	(2)	9.204	225	478891	12.536
78) Quinoline	(2)	9.541	129	1564292	12.469
80) N-Nitrosodi-n-butylamine	(2)	9.675	84	659697	10.674
83) 4-Chloro-3-methylphenol	(2)	9.900	107	805192	12.975
85) Safrole	(2)	10.007	162	636184	12.042
86) 2-Methylnaphthalene	(2)	10.124	142	1661350	12.698
87) 1-Methylnaphthalene	(2)	10.279	142	1544258	12.865
88) Hexachlorocyclopentadiene	(3)	10.381	237	1059748	26.538
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	808103	12.031
91) cis-Isosafrole	(3)	10.483	162	90904	1.555
93) 2,4,6-Trichlorophenol	(3)	10.590	196	539189	12.784
95) 2,4,5-Trichlorophenol	(3)	10.638	196	568218	12.835
97) trans-Isosafrole	(3)	10.857	162	696897	11.082
98) 1,1'-Biphenyl	(3)	10.900	154	2019671	12.758
99) 2-Chloronaphthalene	(3)	10.916	162	1672227	12.429
101) 1-Chloronaphthalene	(3)	10.948	162	1918410M	15.415
103) Diphenyl ether	(3)	11.082	170	1394091	15.765
104) 2-Nitroaniline	(3)	11.103	138	494834	12.568
108) 1,4-Naphthoquinone	(3)	11.221	158	824950	15.518
109) 1,4-Dinitrobenzene	(3)	11.349	168	254696	12.171
110) Dimethylphthalate	(3)	11.435	163	1794260	11.905
111) 1,3-Dinitrobenzene	(3)	11.461	168	282971	12.624
113) 2,6-Dinitrotoluene	(3)	11.515	165	405143	12.661
114) Acenaphthylene	(3)	11.579	152	2566706	13.726
117) 3-Nitroaniline	(3)	11.756	138	437942	12.990
118)*Acenaphthene-d10	(3)	11.793	164	493774	5.000
119) Acenaphthene	(3)	11.841	153	1692353	12.763
120) 2,4-Dinitrophenol	(3)	11.911	184	491672	25.559
121) 4-Nitrophenol	(3)	12.012	109	288409	12.135
122) Pentachlorobenzene	(3)	12.023	250	660614	12.061
124) Dibenzofuran	(3)	12.087	168	2244556	12.184
123) 2,4-Dinitrotoluene	(3)	12.093	165	545431	12.300
126) 1-Naphthylamine	(3)	12.200	143	3063439	23.370

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Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	594710	17.263
128) 2-Naphthylamine	(3)	12.301	143	3014886	24.277
129) Diethylphthalate	(3)	12.435	149	1774643	11.965
131) Fluorene	(3)	12.526	166	1751560	12.171
130) Thionazin	(3)	12.526	107	309594	12.261
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	842228	11.808
133) 5-Nitro-o-toluidine	(3)	12.558	152	502295	12.815
134) 4-Nitroaniline	(3)	12.569	138	428584	12.577
135) 4,6-Dinitro-2-methylphenol	(4)	12.601	198	325165	12.212
136) N-Nitrosodiphenylamine	(4)	12.697	169	1476179	11.993
137) NDPA as diphenylamine	(4)	12.697	169	1476179	11.993
139) 1,2-Diphenylhydrazine	(4)	12.740	77	2096671	12.207
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	332794M	11.393
144) 1,3,5-Trinitrobenzene	(4)	13.045	213	196110	11.956
145) Diallate (peak 1)	(4)	13.066	86	634147	8.156
146) Phorate	(4)	13.077	75	1315873	11.945
147) Phenacetin	(4)	13.103	108	979328	12.589
148) 4-Bromophenyl-phenylether	(4)	13.157	248	468038	11.380
149) Diallate (peak 2)	(4)	13.178	86	189560M	3.076
150) Hexachlorobenzene	(4)	13.205	284	481622	11.402
152) Dimethoate	(4)	13.291	87	835628	12.605
154) Pentachlorophenol	(4)	13.472	266	342570	13.242
156) Pentachloronitrobenzene	(4)	13.483	237	237483	11.779
155) 4-Aminobiphenyl	(4)	13.494	169	1943709	13.871
157) Pronamide	(4)	13.585	173	846079	12.188
158)*Phenanthrene-d10	(4)	13.719	188	1005811	5.000
159) Dinoseb	(4)	13.729	211	503686	12.084
160) Phenanthrene	(4)	13.756	178	2663427	12.009
162) Anthracene	(4)	13.820	178	2708432	12.182
168) Carbazole	(4)	14.050	167	2477235	12.584
169) Methyl parathion	(4)	14.248	109	666855	13.196
170) Di-n-butylphthalate	(4)	14.574	149	3214181	12.130
172) Parathion	(4)	14.815	109	419718	12.835
173) 4-Nitroquinoline-1-oxide	(4)	14.874	190	4442437	169.164
227) Total PAHs	(6)	15.000	100	44192512	223.882
176) Isodrin	(4)	15.227	193	315886	11.496
178) Fluoranthene	(4)	15.462	202	3018275	12.100
179) Benzidine	(5)	15.708	184	8803974	58.818
180)*Pyrene-d10	(5)	15.783	212	1015793	5.000
182) Pyrene	(5)	15.815	202	3058230	11.835

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on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) p-Dimethylaminoazobenzene	(5)	16.334	225	600693	15.236
190) Chlorobenzilate	(5)	16.420	139	965023	12.535
192) 3,3'-Dimethylbenzidine	(5)	16.917	212	3808514	23.395
193) Butylbenzylphthalate	(5)	16.960	149	1496910	12.468
196) 2-Acetylaminofluorene	(5)	17.345	181	1182747	12.447
198) 3,3'-Dichlorobenzidine	(5)	17.858	252	1062440	12.789
200) Benzo(a)anthracene	(5)	17.869	228	2903735	12.577
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.880	231	601071	11.913
201) Chrysene	(5)	17.933	228	2737303	12.257
204) bis(2-Ethylhexyl)phthalate	(5)	18.035	149	2135778	12.590
208) 6-Methylchrysene	(5)	18.746	242	1893349	12.041
210) Di-n-octylphthalate	(6)	19.217	149	3667697	12.530
211) Benzo(b)fluoranthene	(6)	19.757	252	2791758	12.233
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.757	256	1192736	12.668
213) Benzo(k)fluoranthene	(6)	19.811	252	2688786M	12.235
216) Benzo(a)pyrene	(6)	20.292	252	2579997	12.564
218)*Perylene-d12	(6)	20.383	264	930825	5.000
220) 3-Methylcholanthrene	(6)	20.870	268	1351578	13.536
222) Dibenz(a,h)acridine	(6)	21.699	279	2094454	12.002
223) Dibenz(a,j)acridine	(6)	21.774	279	1946396	10.981
224) Indeno(1,2,3-cd)pyrene	(6)	22.041	276	2414505M	12.382
225) Dibenz(a,h)anthracene	(6)	22.084	278	2525832	12.751
226) Benzo(g,h,i)perylene	(6)	22.469	276	2412796	11.974

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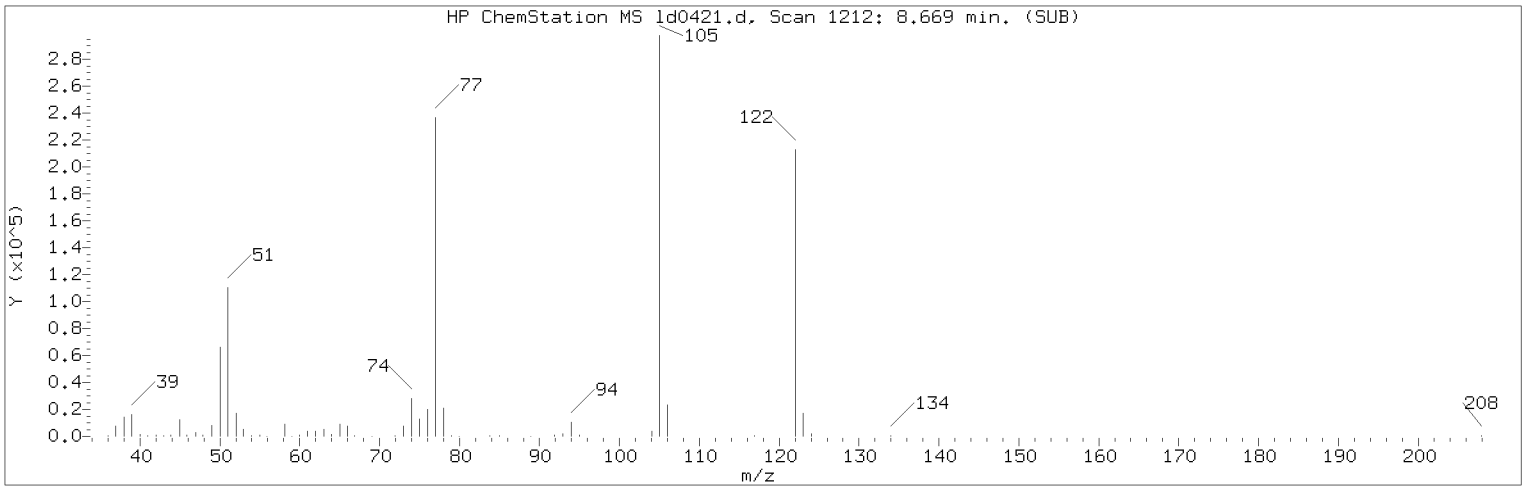
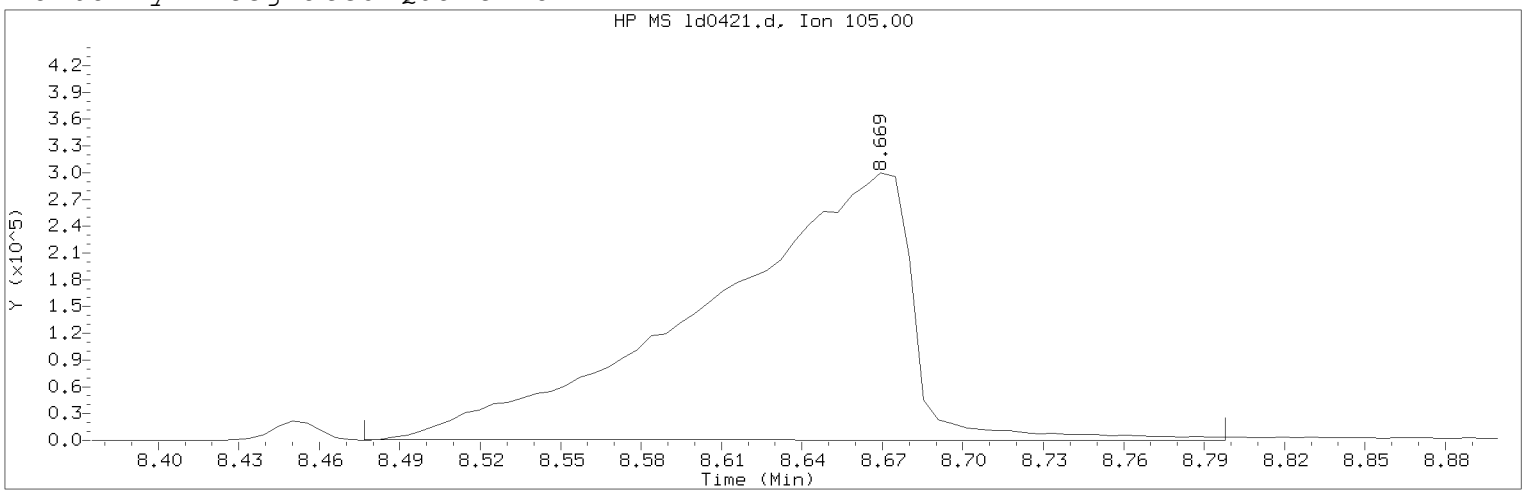
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

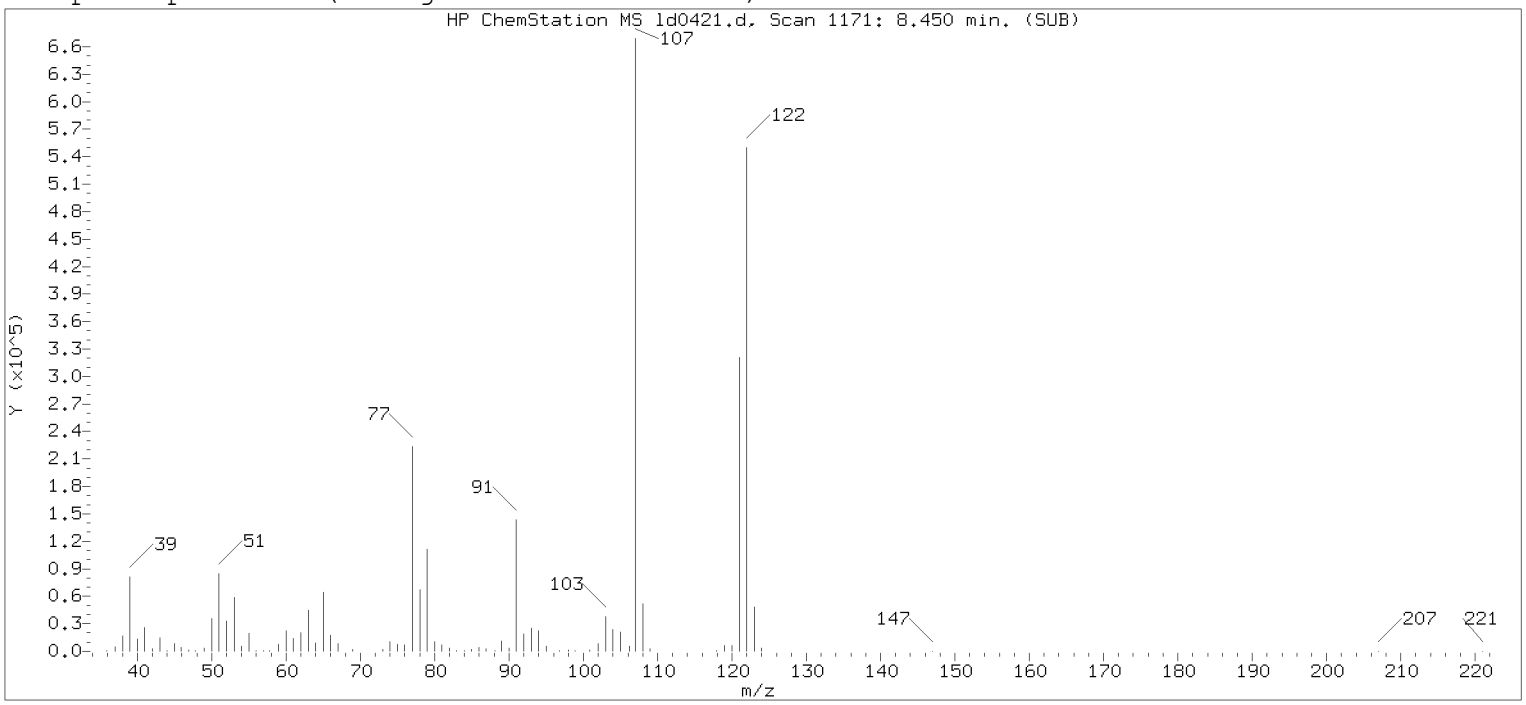
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1212
Retention Time (minutes) : 8.669
Quant Ion : 105.00
Area (flag) : 1593380M
On-Column Amount (ng/ul) : 31.6408
Integration start scan : 1175 Integration stop scan: 1235
Y at integration start : 458 Y at integration end: 168

Reason for manual integration: improper integration

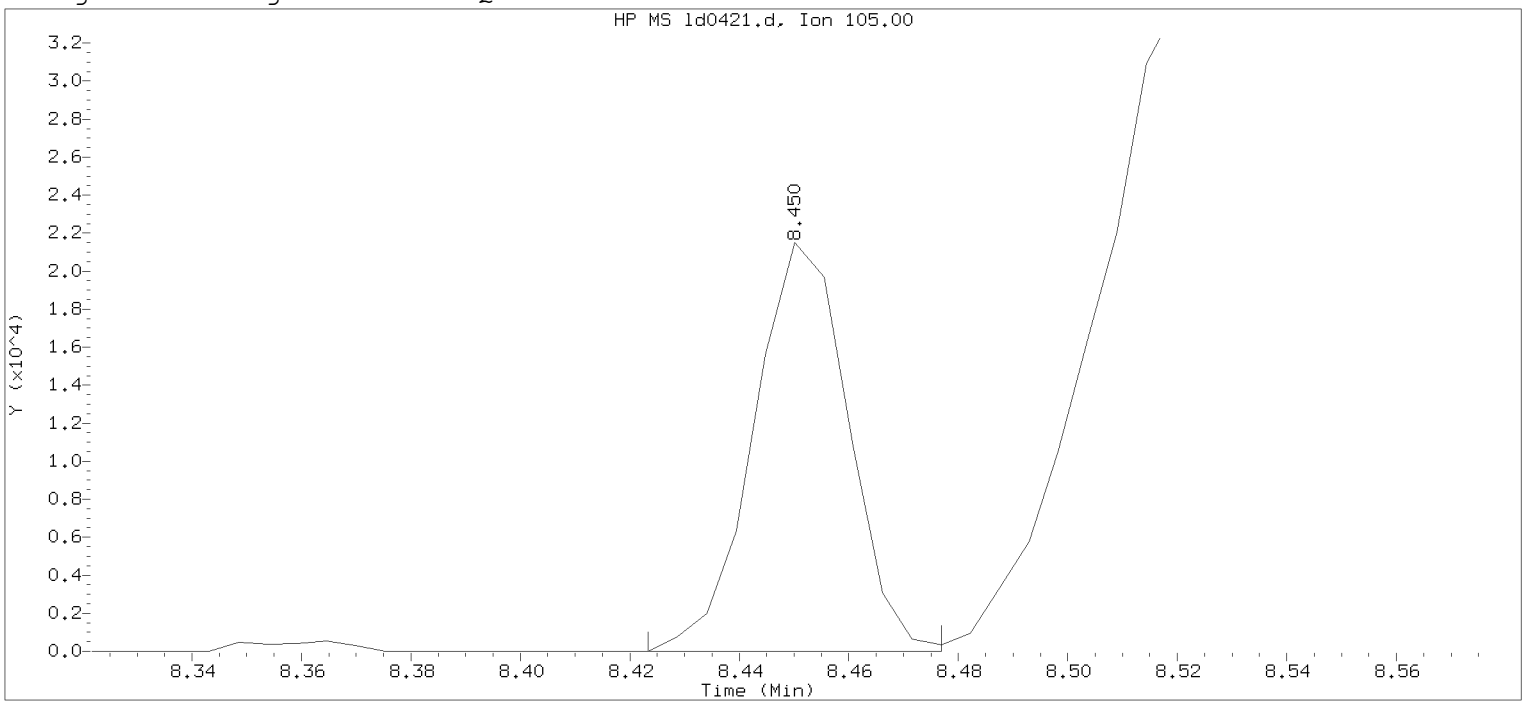
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

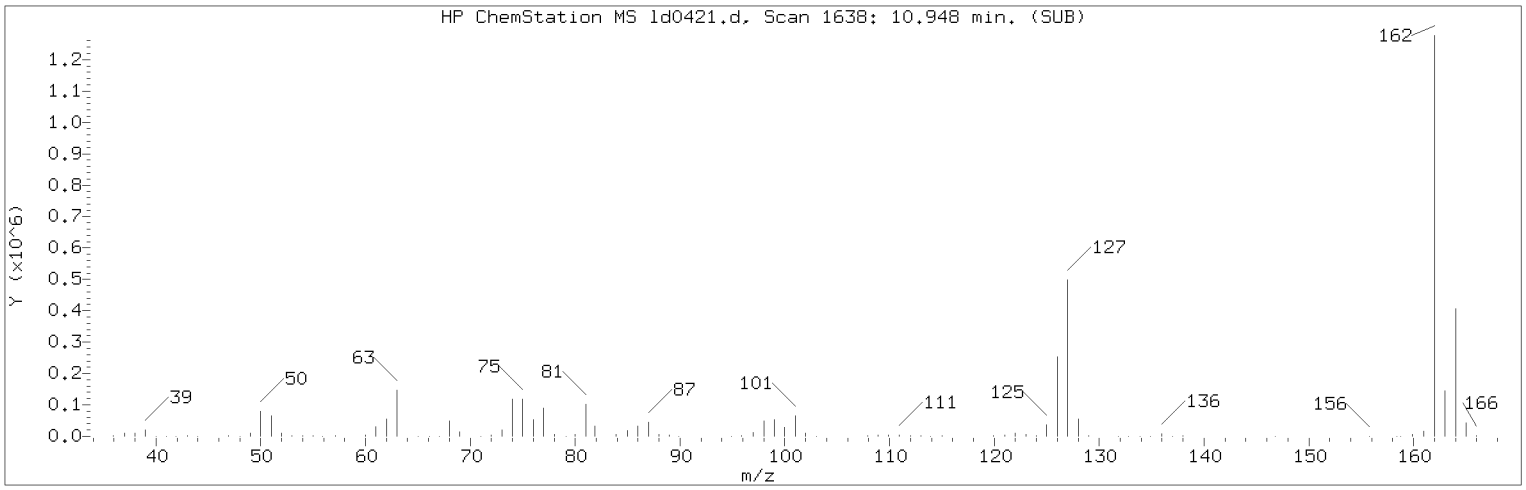
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

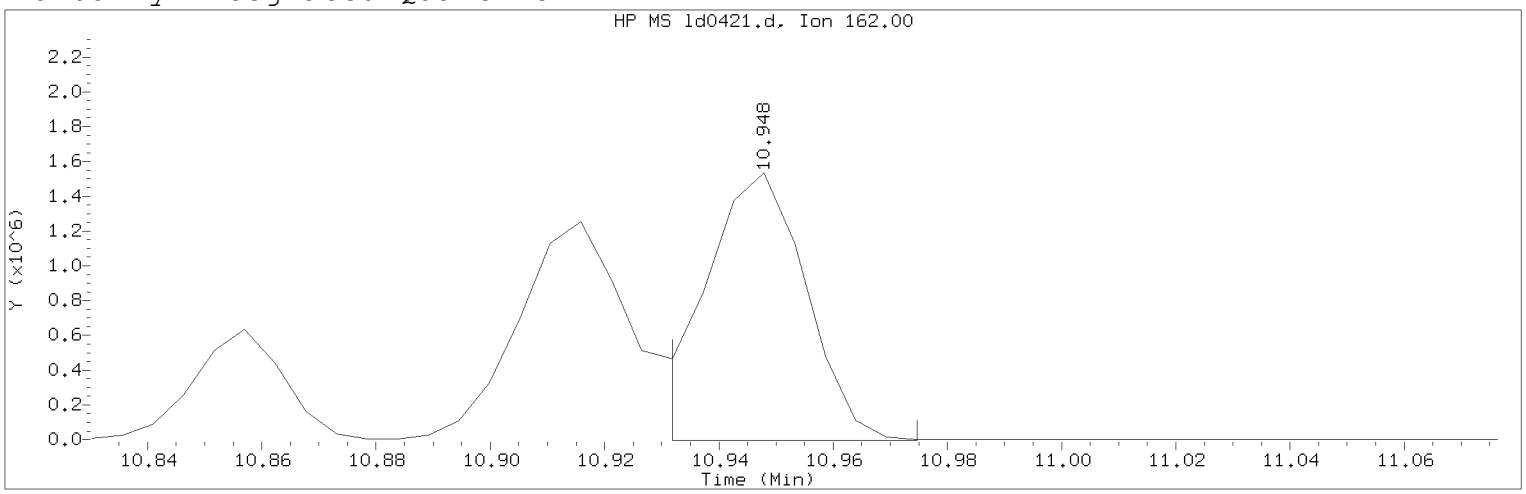
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1171		
Retention Time (minutes)	: 8.450		
Quant Ion	: 105.00		
Area	: 25864		
On-column Amount (ng/ul)	: 3.6338		
Integration start scan	: 1165	Integration stop scan:	1175
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

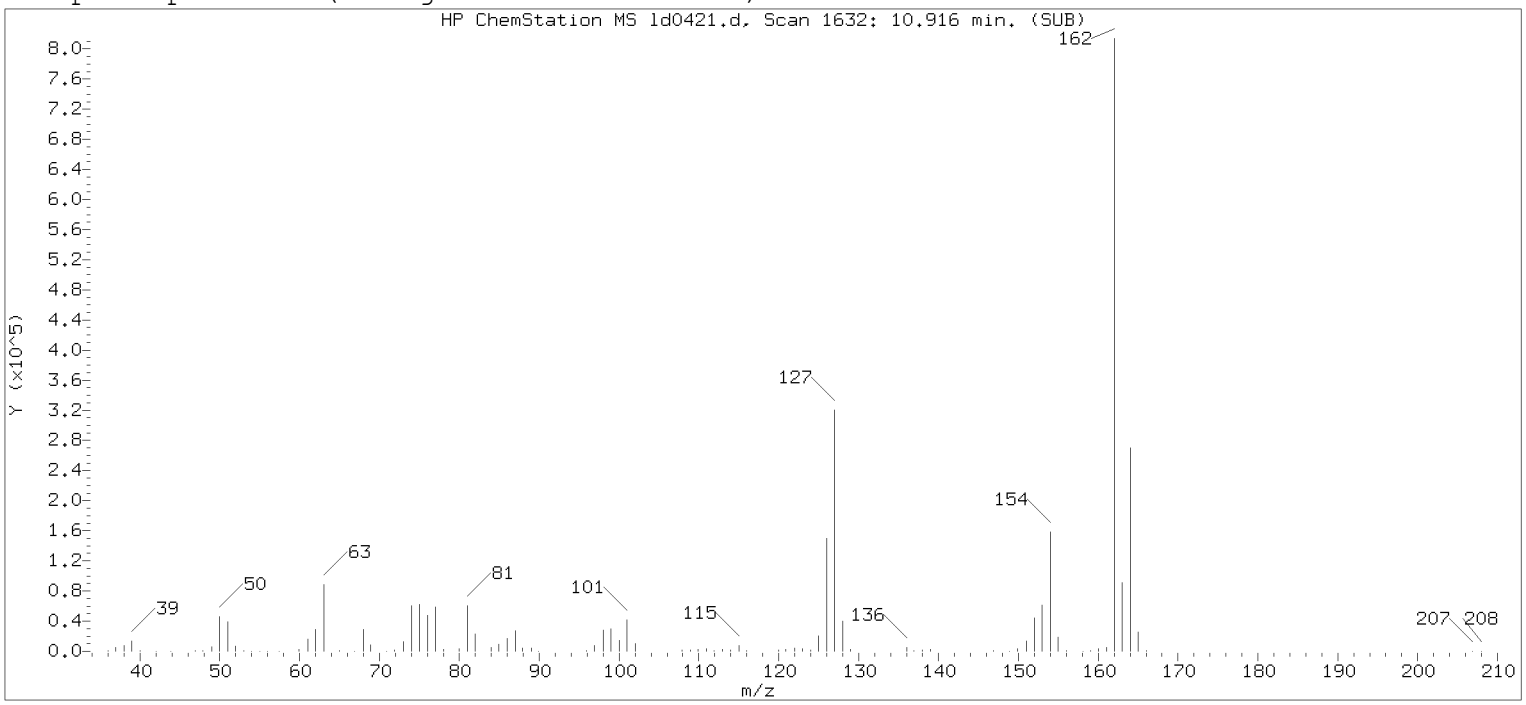
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 1918410M
On-Column Amount (ng/ul) : 15.4151
Integration start scan : 1634 Integration stop scan: 1642
Y at integration start : -3292 Y at integration end: -3292

Reason for manual integration: improper integration

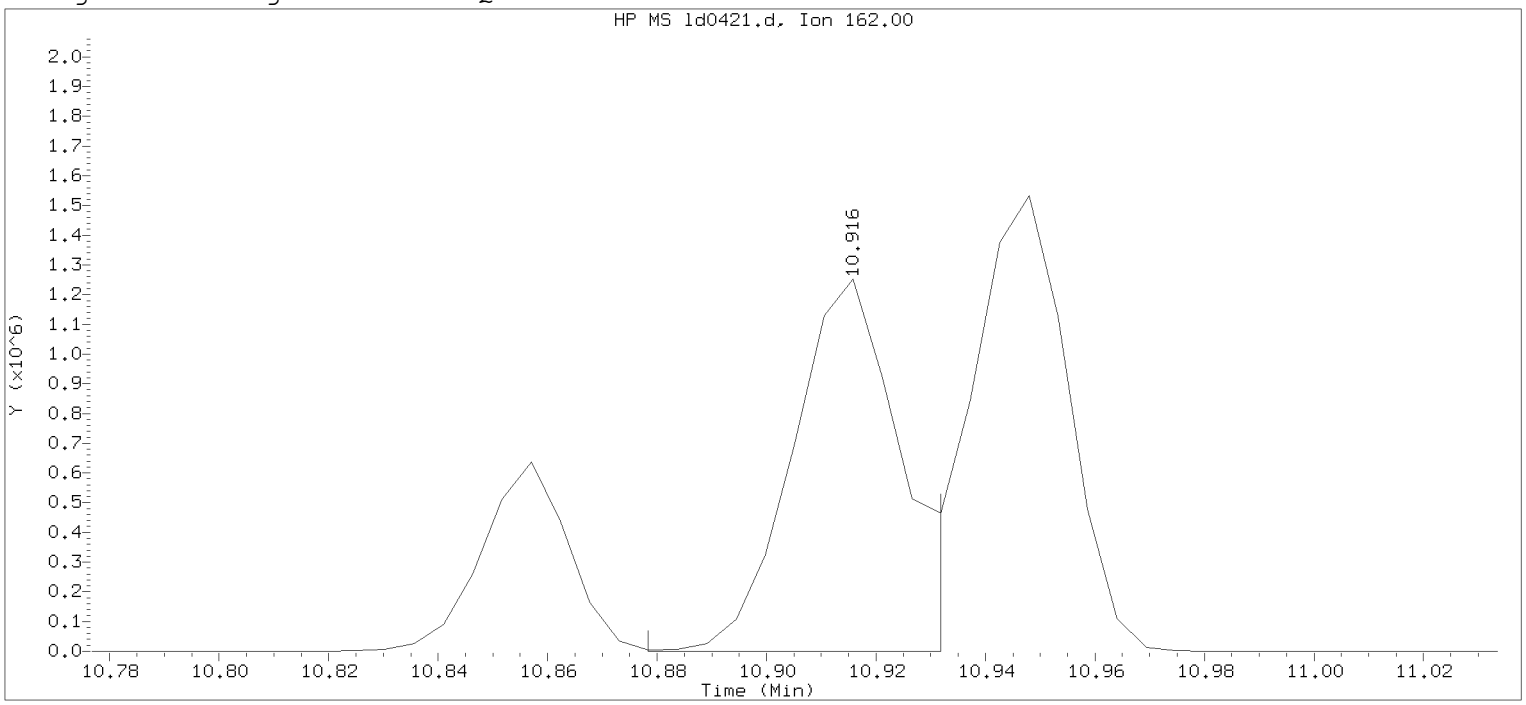
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

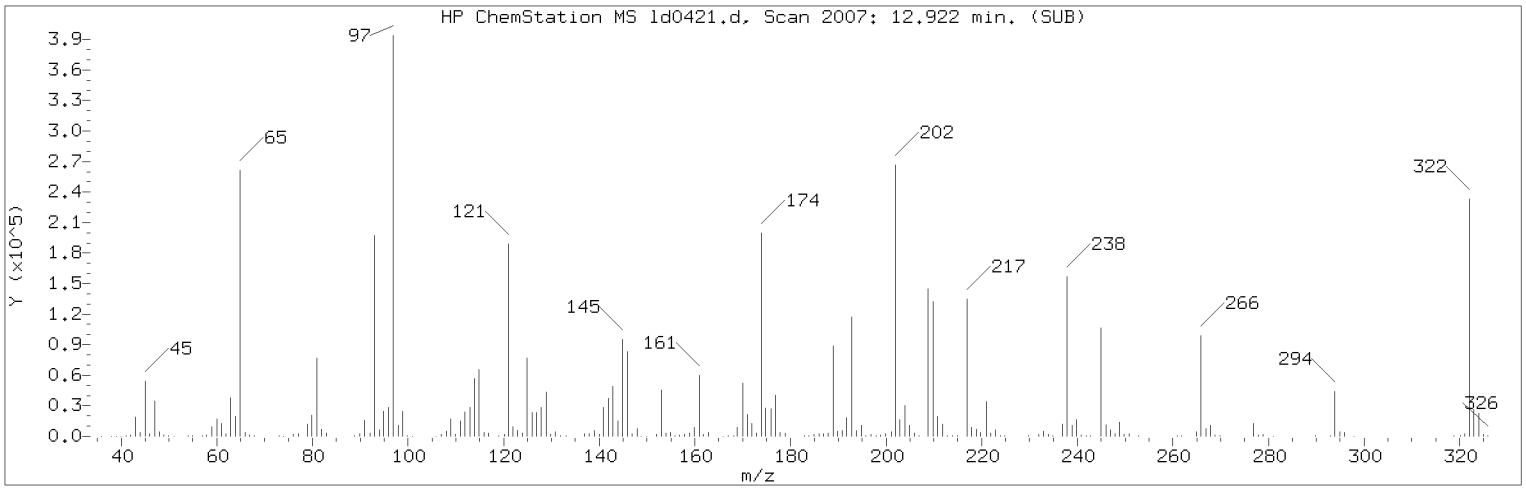
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

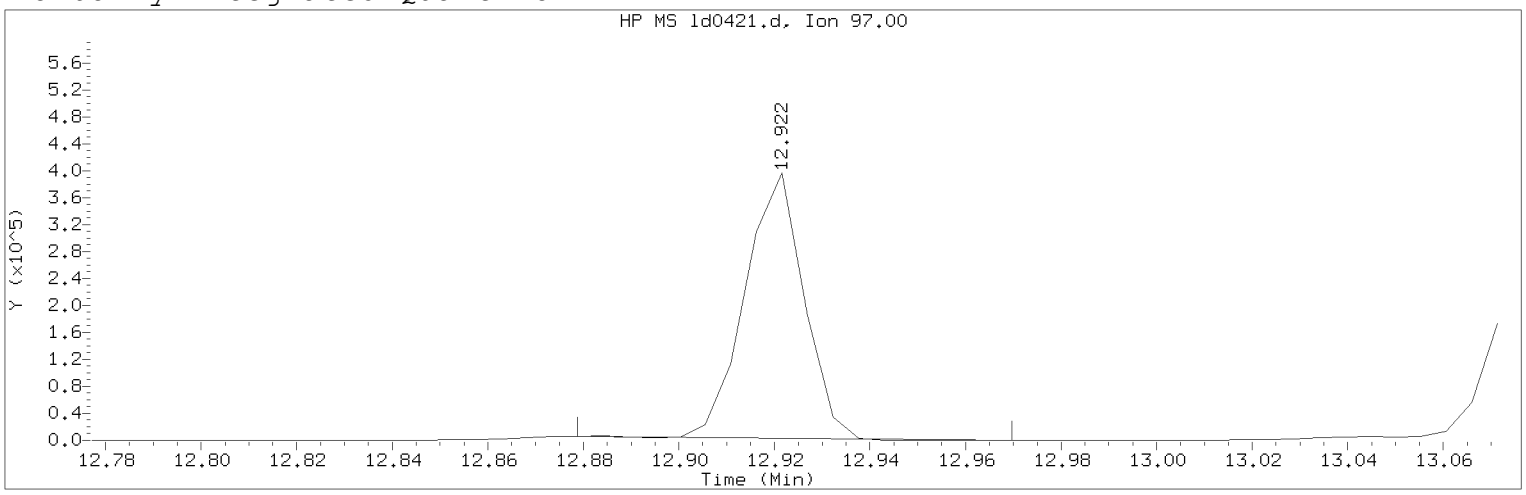
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1632		
Retention Time (minutes)	: 10.916		
Quant Ion	: 162.00		
Area	: 1672227		
On-column Amount (ng/ul)	: 13.4387		
Integration start scan	: 1624	Integration stop scan:	1634
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

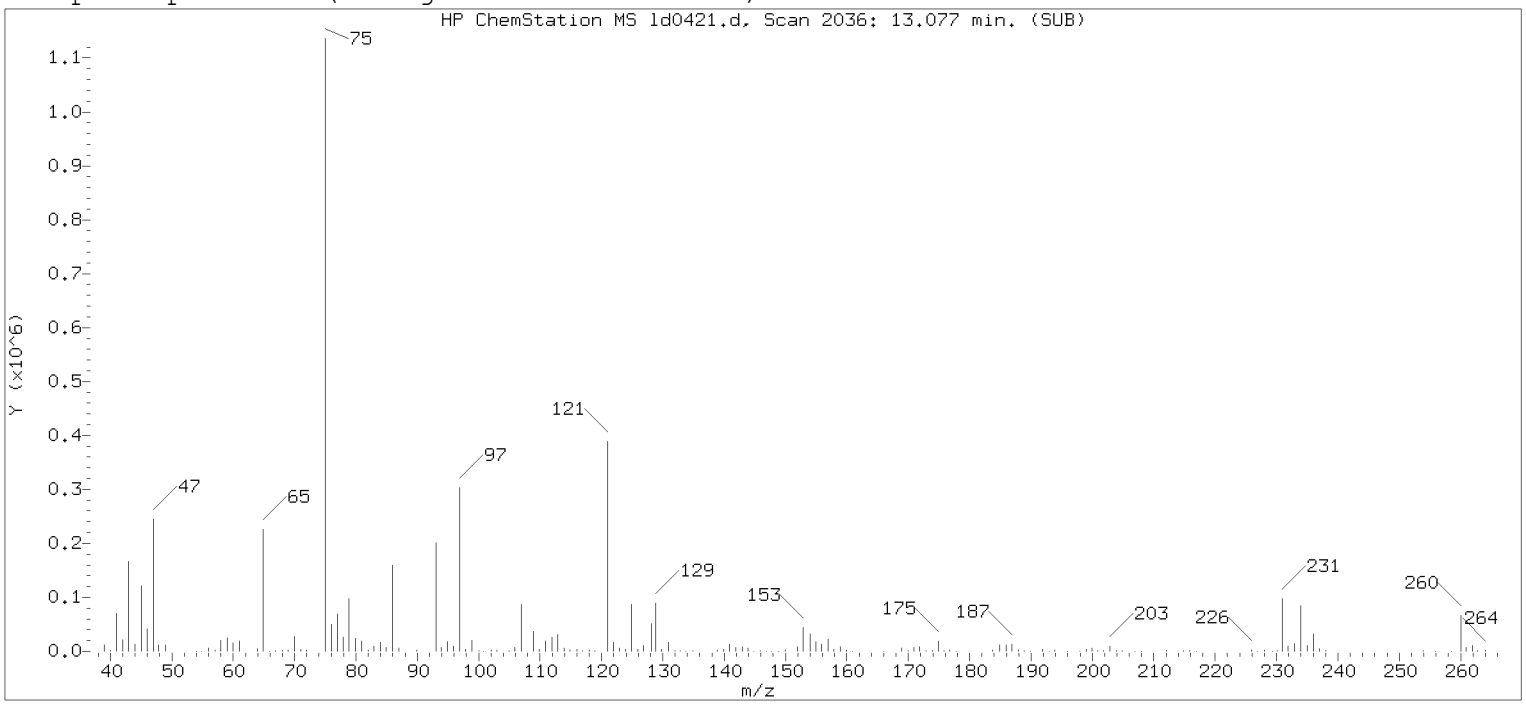
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 332794M
On-Column Amount (ng/ul) : 11.3925
Integration start scan : 1998 Integration stop scan: 2015
Y at integration start : 5896 Y at integration end: 0

Reason for manual integration: improper integration

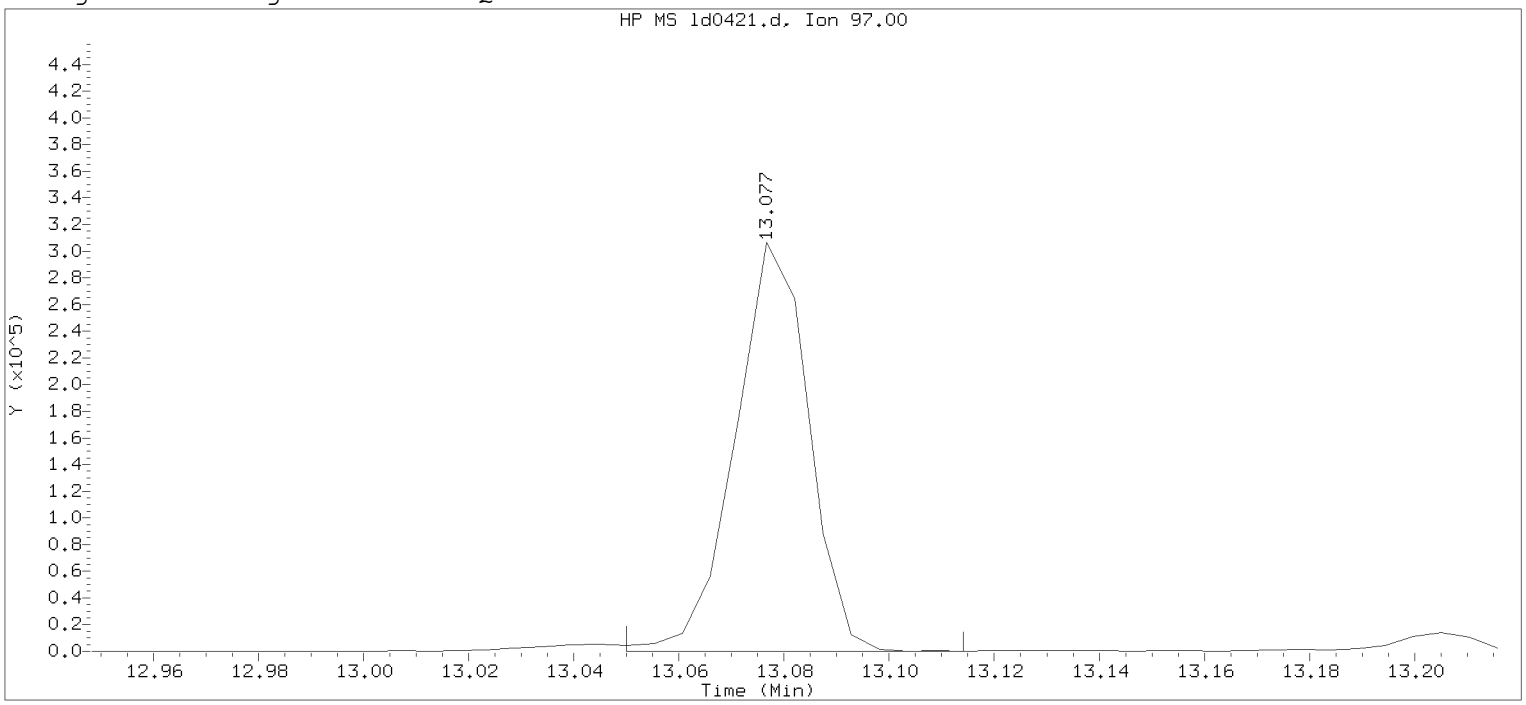
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

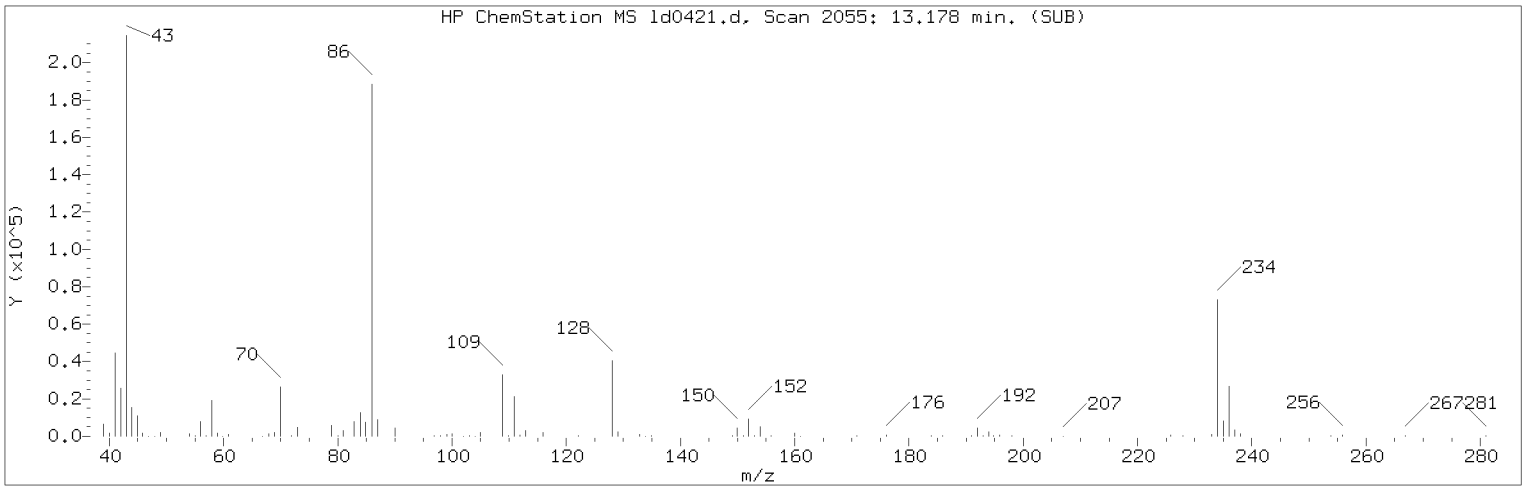
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

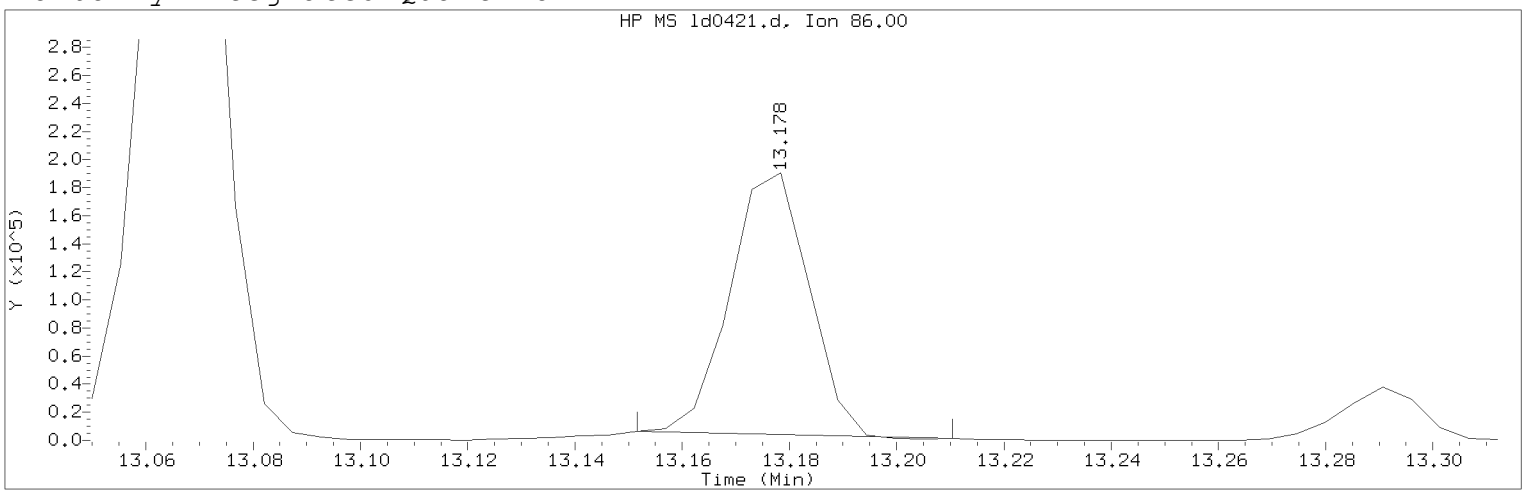
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 296943		
On-column Amount (ng/ul)	: 9.6836		
Integration start scan	: 2030	Integration stop scan:	2042
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

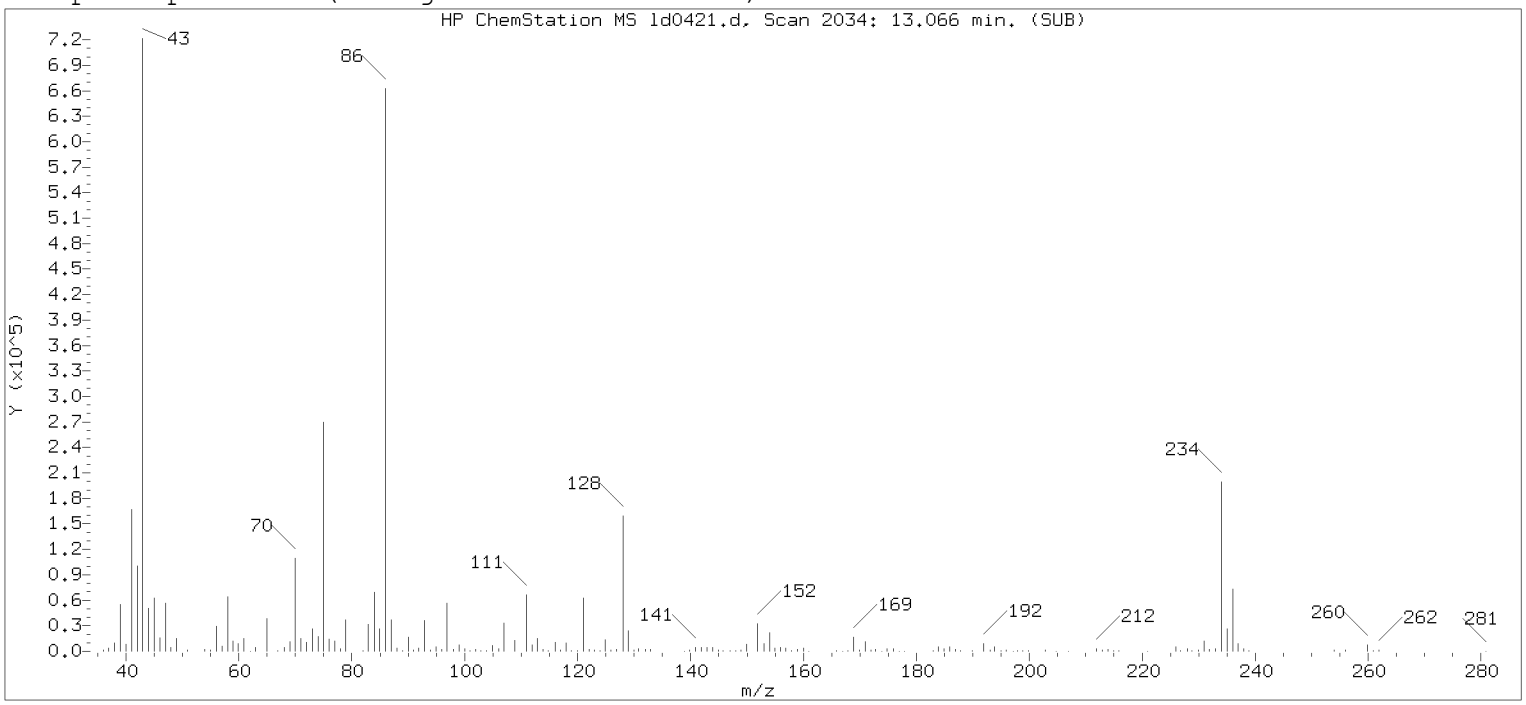
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2055
Retention Time (minutes) : 13.178
Quant Ion : 86.00
Area (flag) : 189560M
On-Column Amount (ng/ul) : 3.0759
Integration start scan : 2049 Integration stop scan: 2060
Y at integration start : 6592 Y at integration end: 1178

Reason for manual integration: improper integration

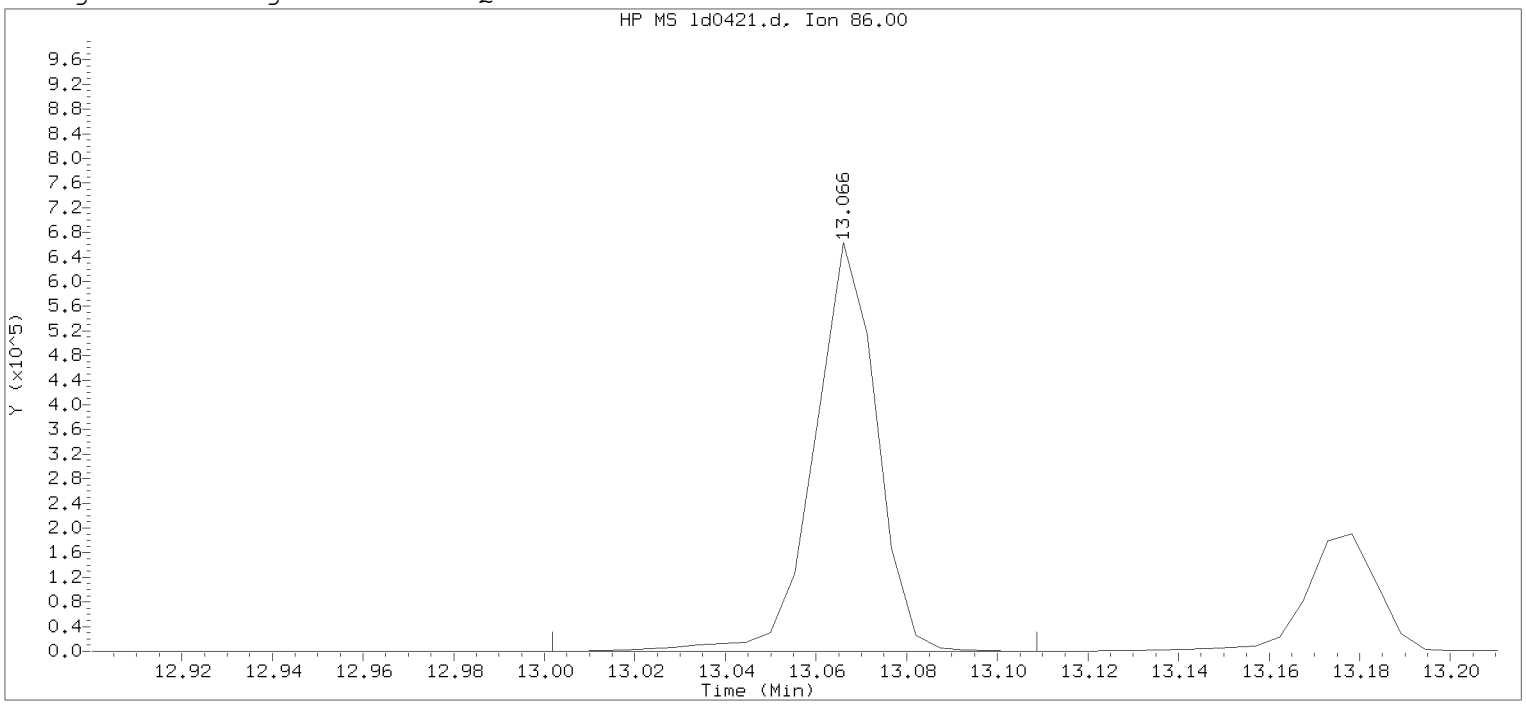
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

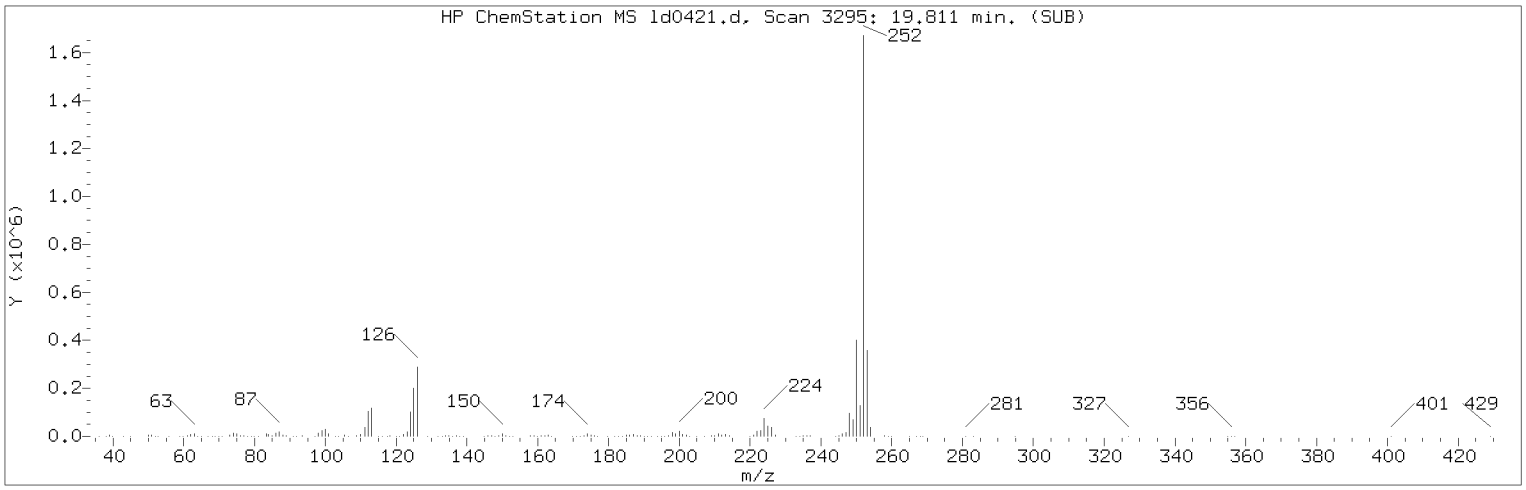
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

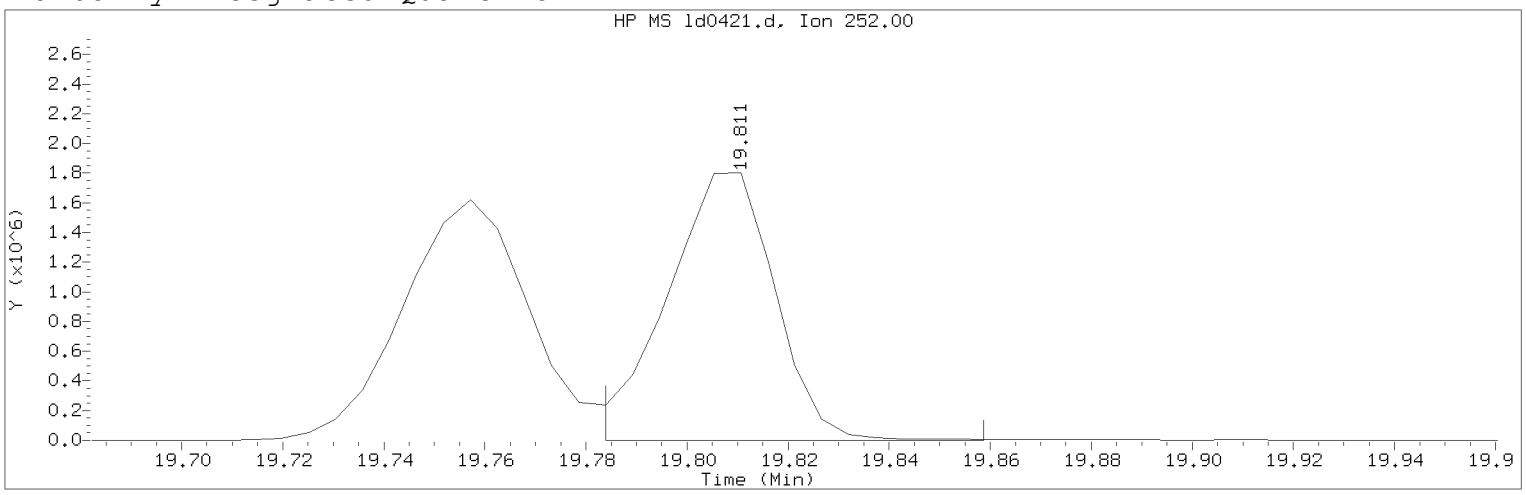
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 634147		
On-column Amount (ng/ul)	: 9.8367		
Integration start scan	: 2021	Integration stop scan:	2041
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user name: ATransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

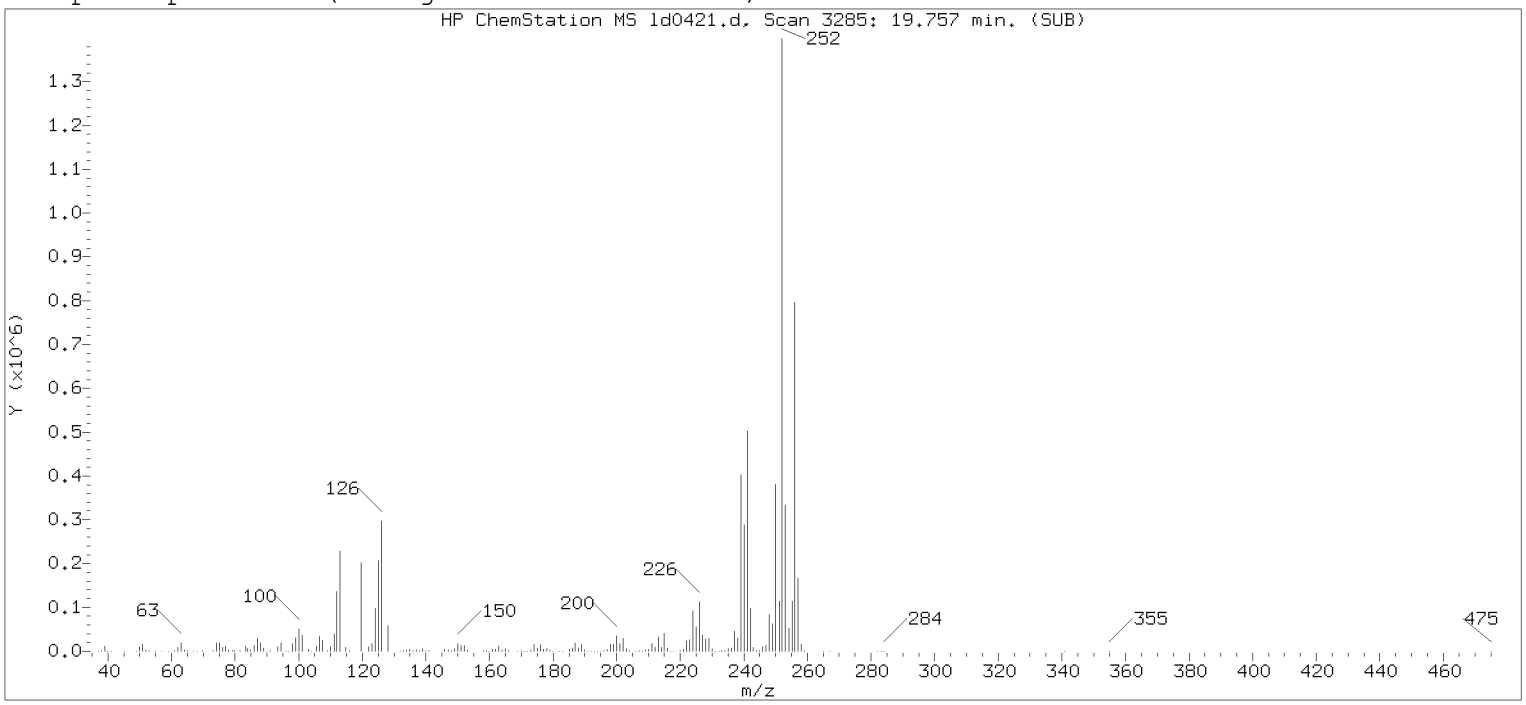
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3295
Retention Time (minutes) : 19.811
Quant Ion : 252.00
Area (flag) : 2688786M
On-Column Amount (ng/ul) : 12.2352
Integration start scan : 3289 Integration stop scan: 3303
Y at integration start : -117 Y at integration end: -117

Reason for manual integration: improper integration

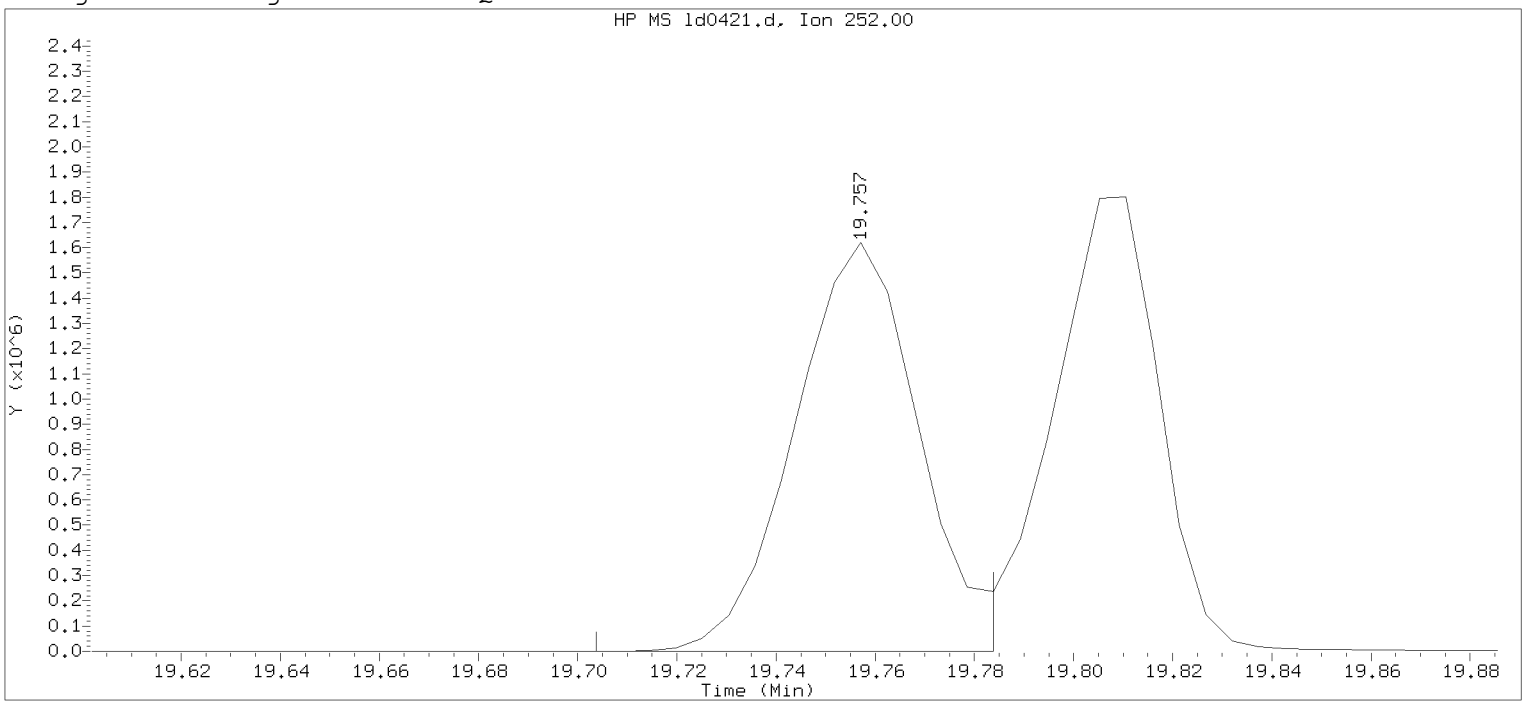
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

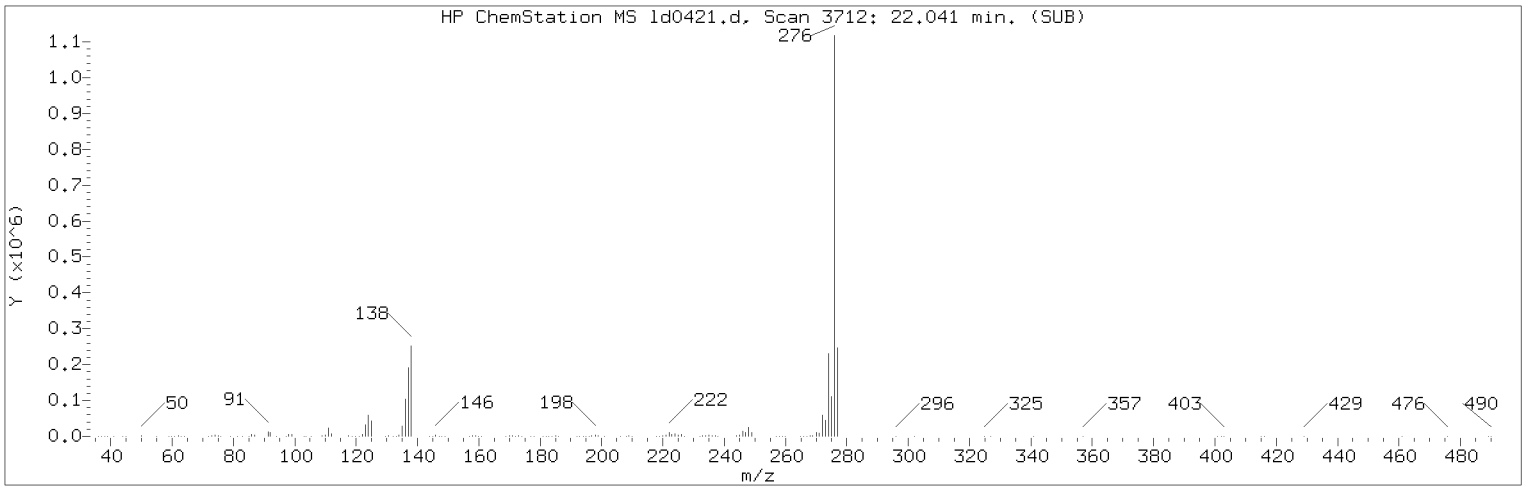
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

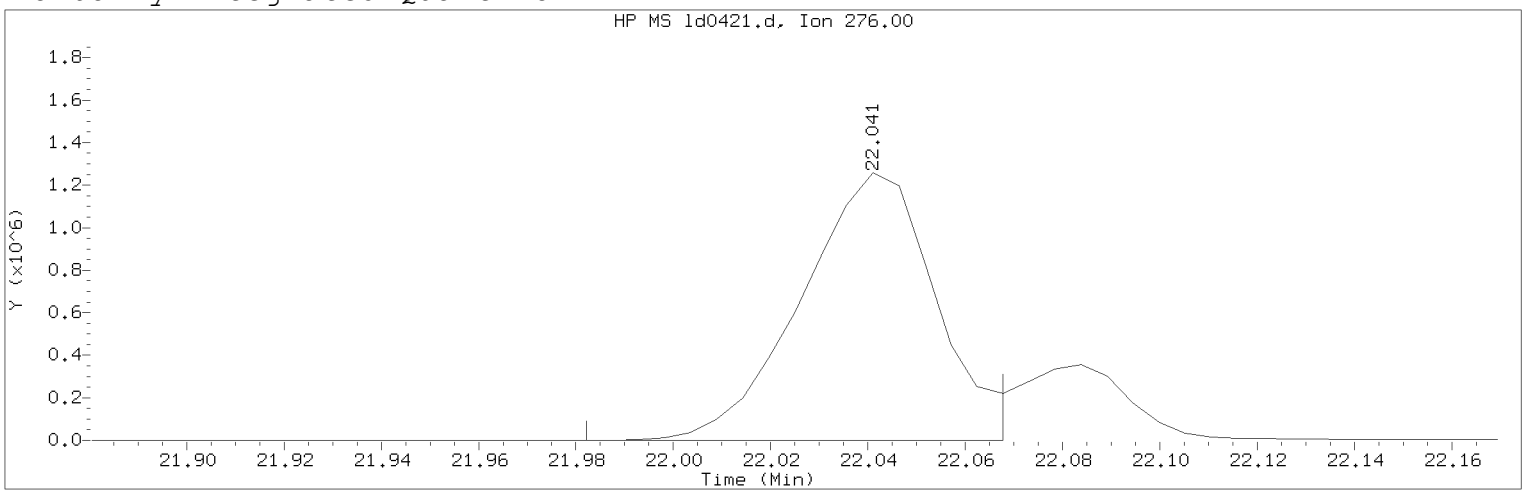
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3285		
Retention Time (minutes)	: 19.757		
Quant Ion	: 252.00		
Area	: 2791758		
On-column Amount (ng/ul)	: 12.2087		
Integration start scan	: 3274	Integration stop scan:	3289
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

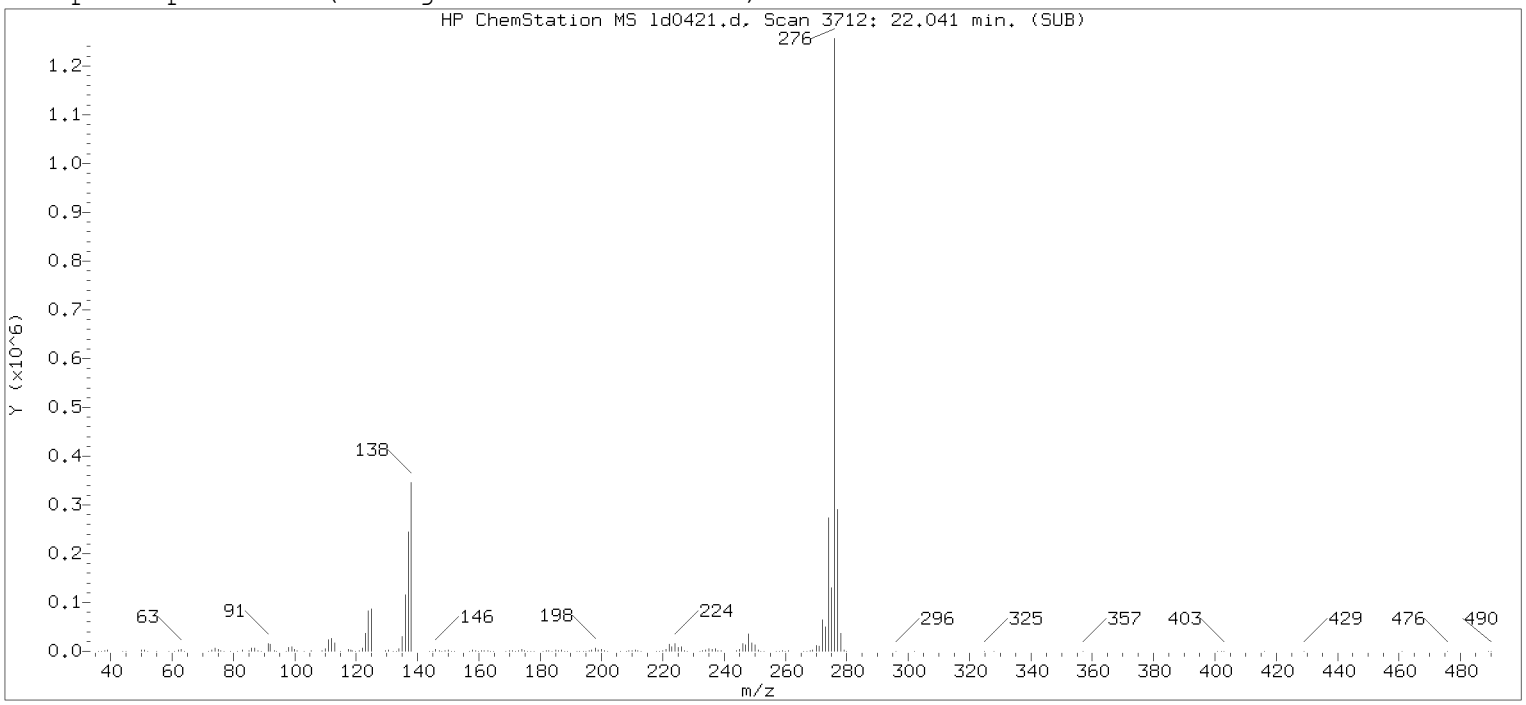
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3712
Retention Time (minutes) : 22.041
Quant Ion : 276.00
Area (flag) : 2414505M
On-Column Amount (ng/ul) : 12.3819
Integration start scan : 3700 Integration stop scan: 3716
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

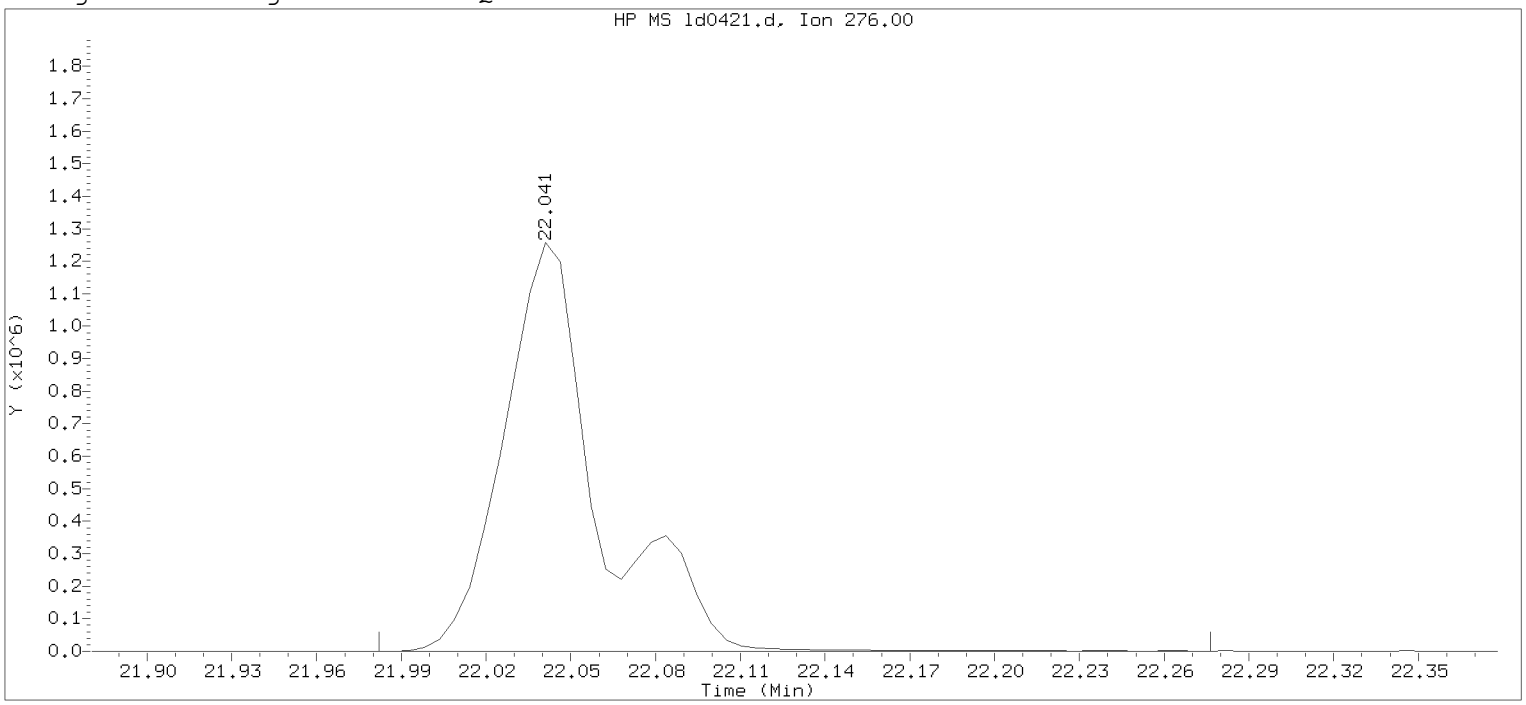
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



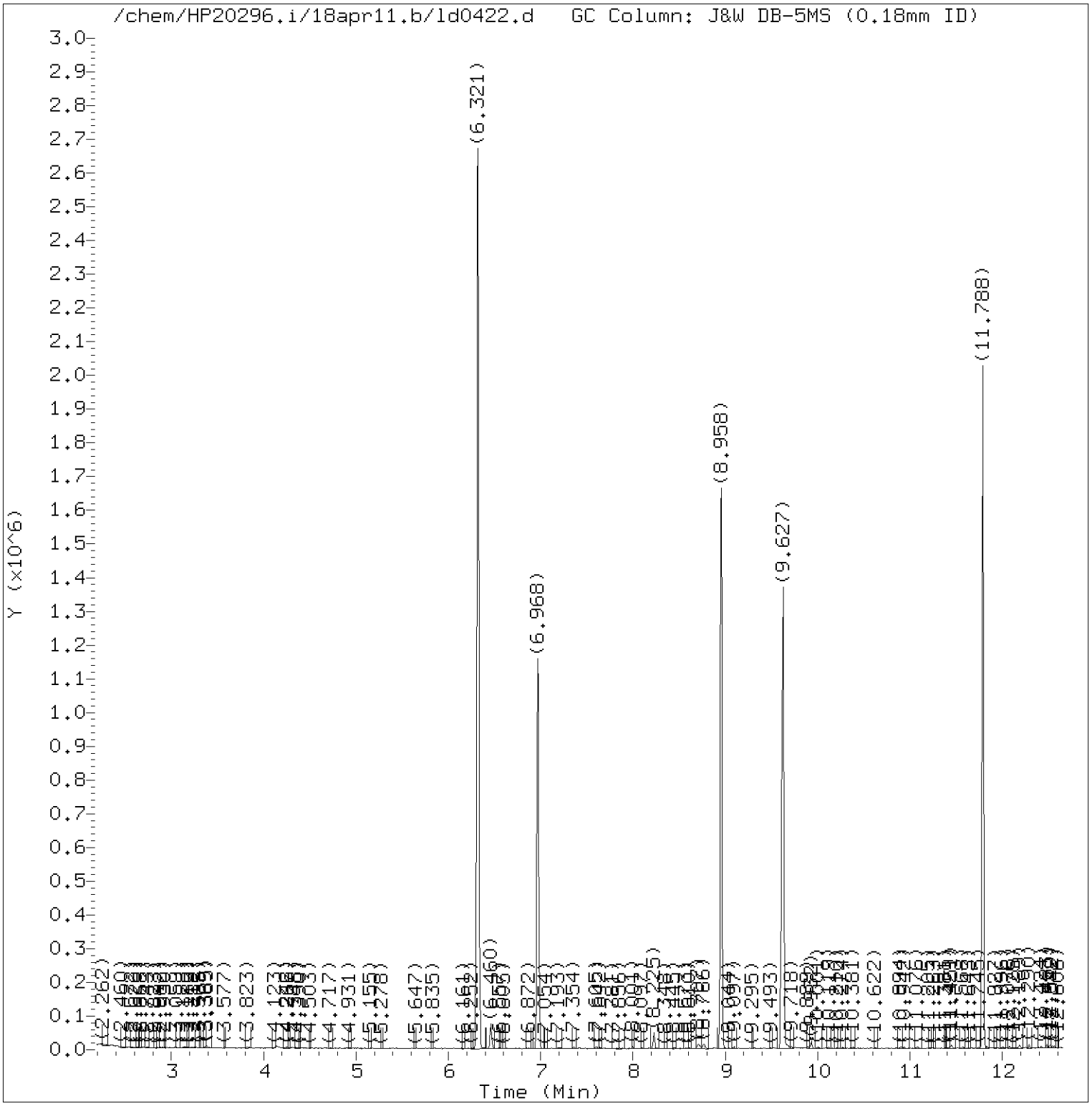
Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3712		
Retention Time (minutes)	: 22.041		
Quant Ion	: 276.00		
Area	: 2946612		
On-column Amount (ng/ul)	: 14.3203		
Integration start scan	: 3700	Integration stop scan:	3755
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: ashley.transue



Total Ion Chromatogram (TIC)

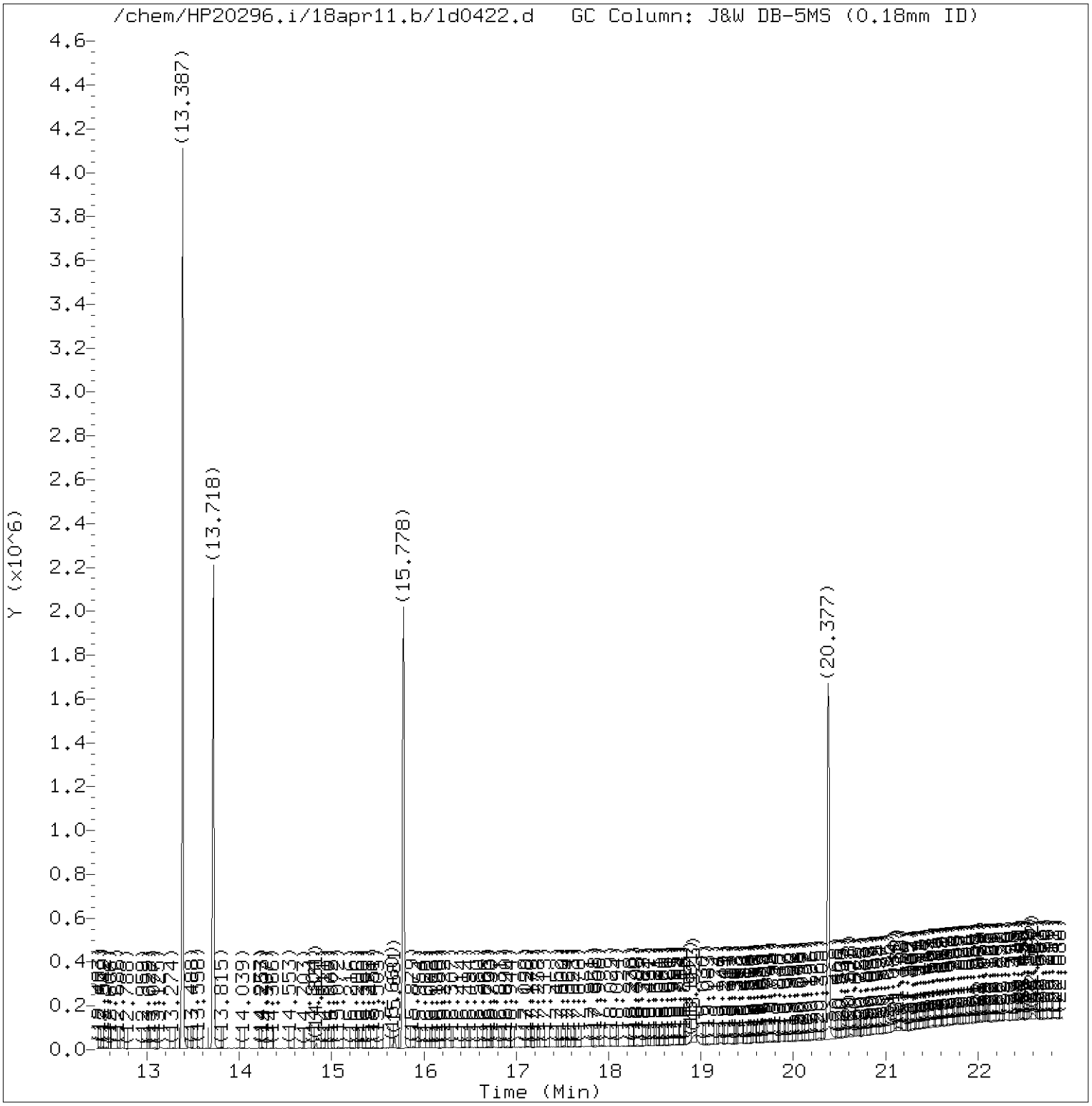
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

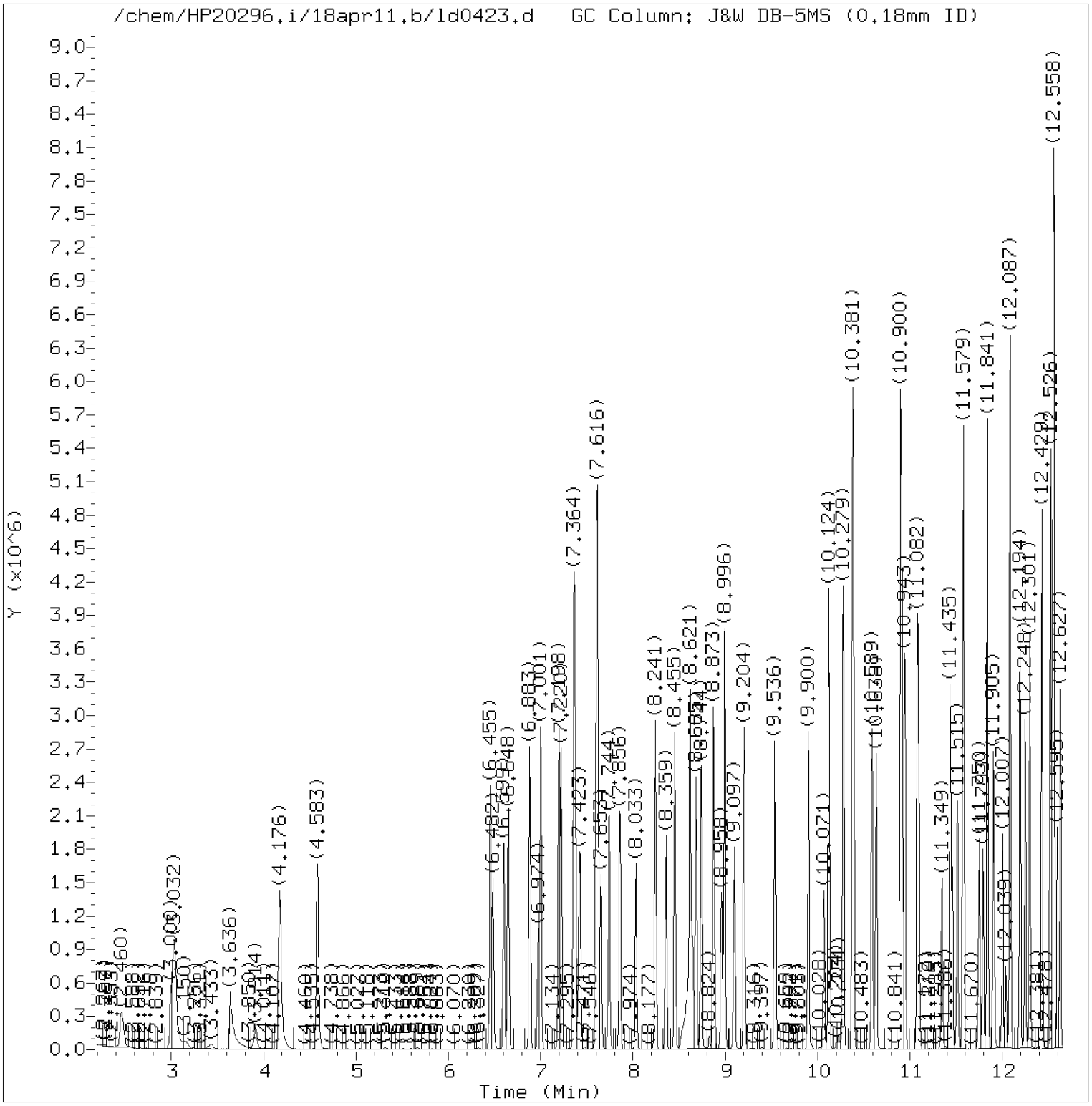
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
17) Benzaldehyde	(1)	6.321	77	839075	12.516
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	246757	5.000
68)*Naphthalene-d8	(2)	8.958	136	936542	5.000
79) Caprolactam	(2)	9.627	113	210928	12.105
118)*Acenaphthene-d10	(3)	11.788	164	470619	5.000
153) Atrazine	(4)	13.387	200	497799	12.945
158)*Phenanthrene-d10	(4)	13.718	188	928842	5.000
180)*Pyrene-d10	(5)	15.778	212	926796	5.000
218)*Perylene-d12	(6)	20.377	264	853557	5.000

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

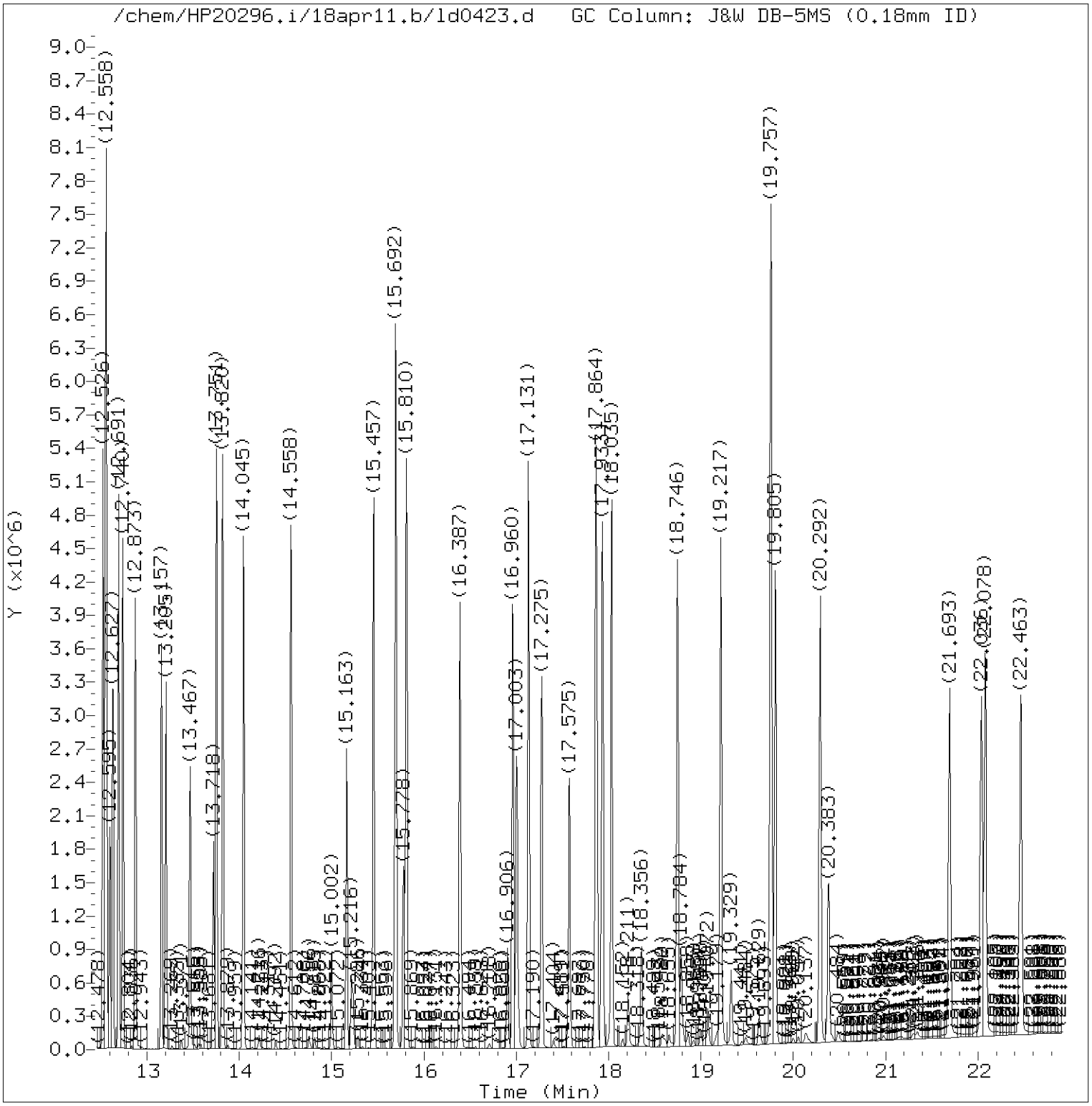
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icval15
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

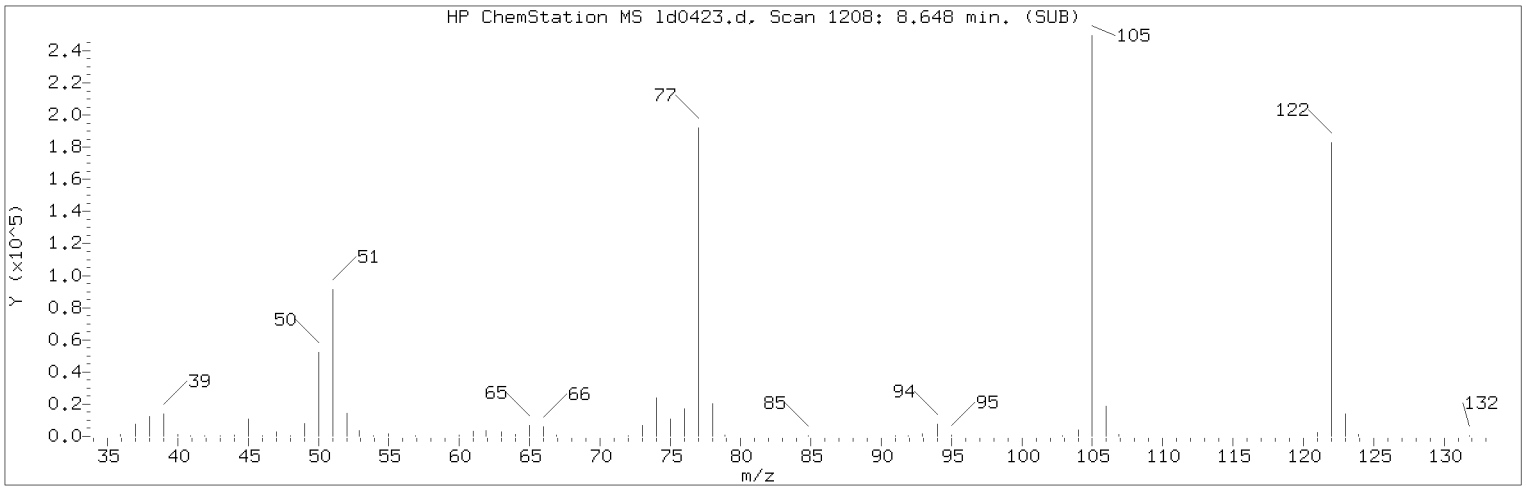
Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.460	88	344448	12.148
26)*1,4-Dichlorobenzene-d4	(1)	6.974	152	216865	5.000
58) Benzoic acid	(2)	8.648	105	1115551M	26.543
68)*Naphthalene-d8	(2)	8.958	136	809576	5.000
101) 1-Chloronaphthalene	(3)	10.948	162	1343643M	13.061
103) Diphenyl ether	(3)	11.082	170	964182	13.190
118)*Acenaphthene-d10	(3)	11.793	164	408165	5.000
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	399961	14.045
158)*Phenanthrene-d10	(4)	13.718	188	798260	5.000
180)*Pyrene-d10	(5)	15.778	212	835845	5.000
218)*Perylene-d12	(6)	20.383	264	749000	5.000

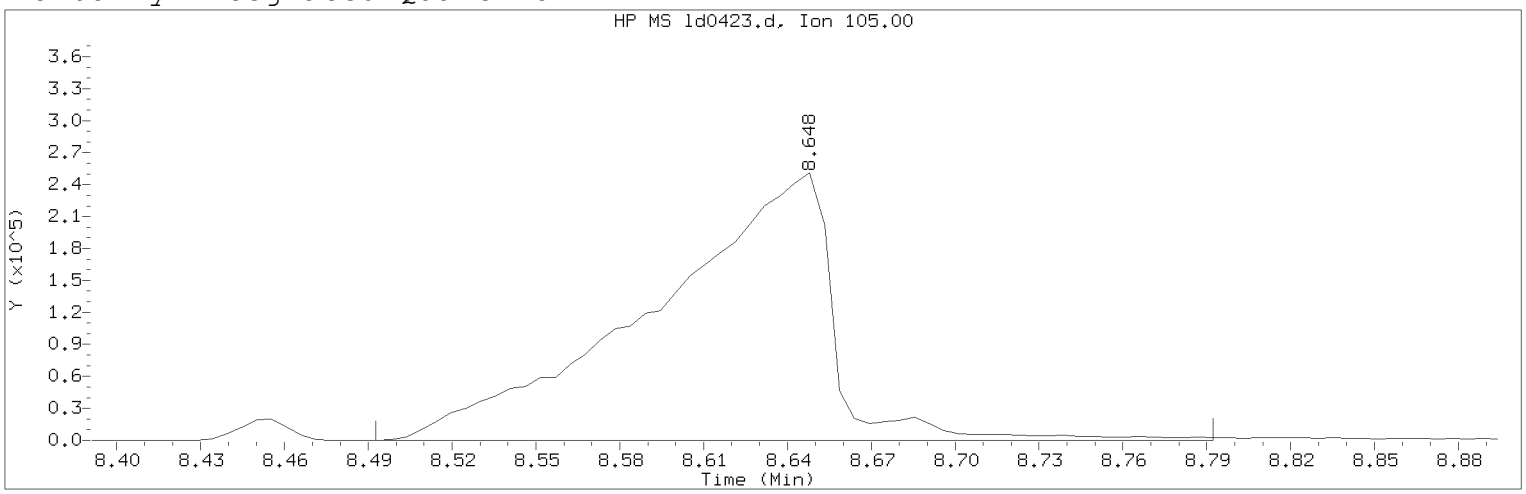
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

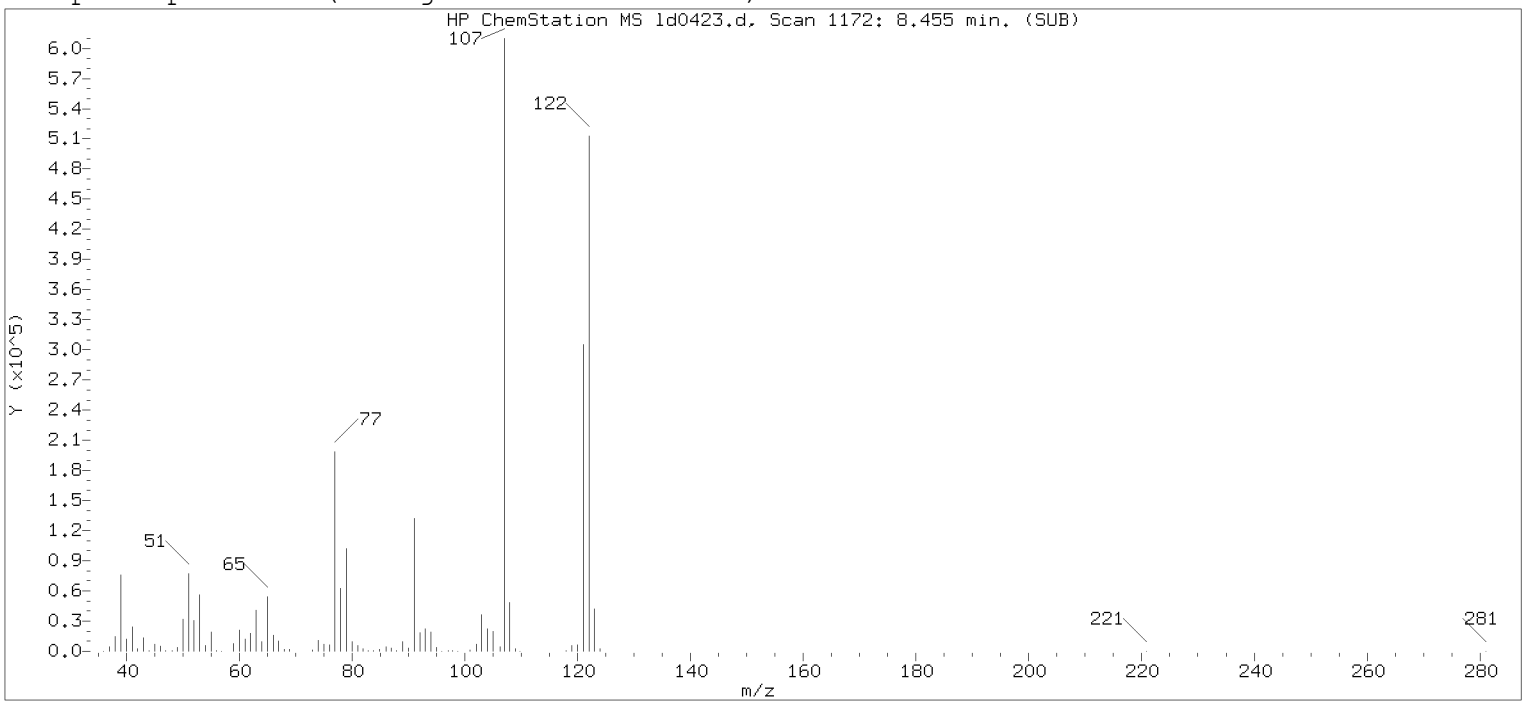
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1208
Retention Time (minutes) : 8.648
Quant Ion : 105.00
Area (flag) : 1115551M
On-Column Amount (ng/ul) : 26.5431
Integration start scan : 1178 Integration stop scan: 1234
Y at integration start : 97 Y at integration end: 97

Reason for manual integration: improper integration

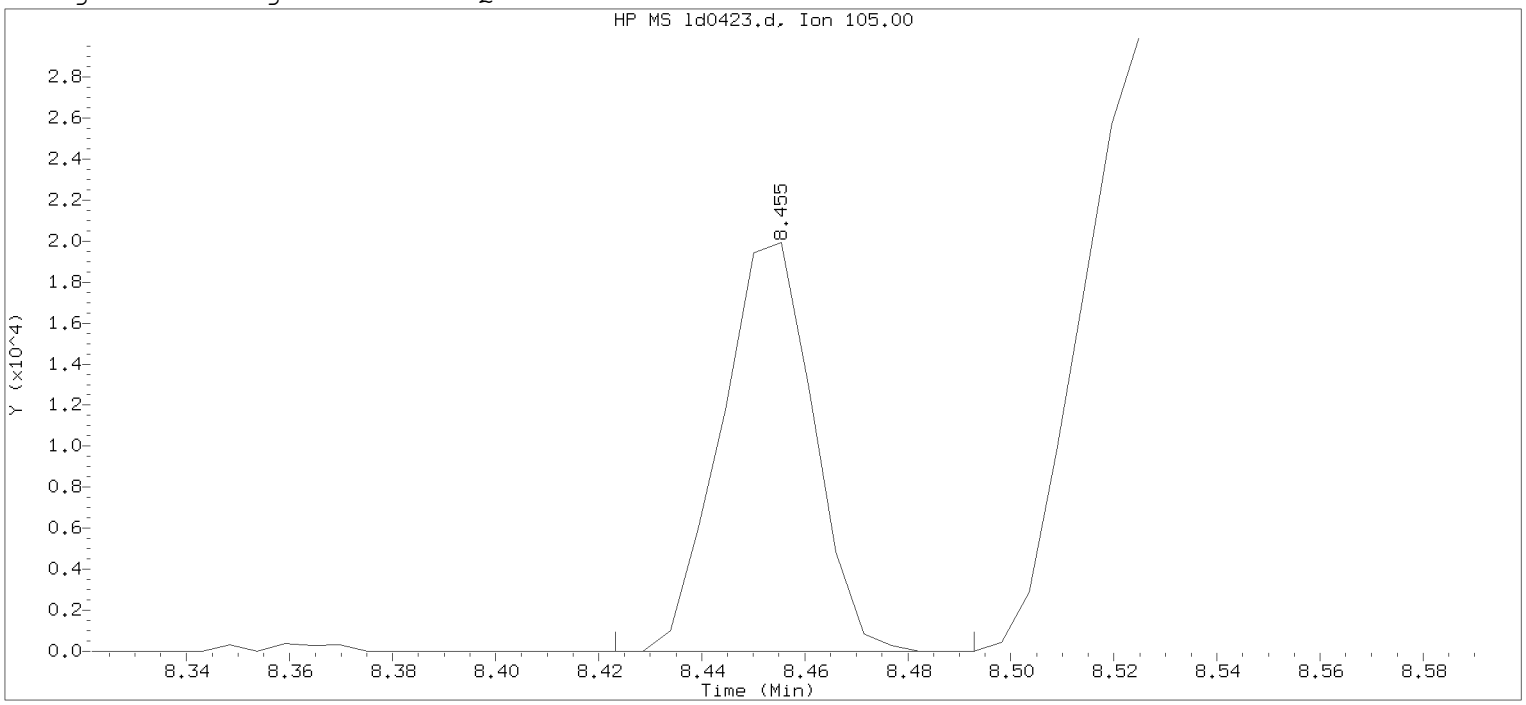
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

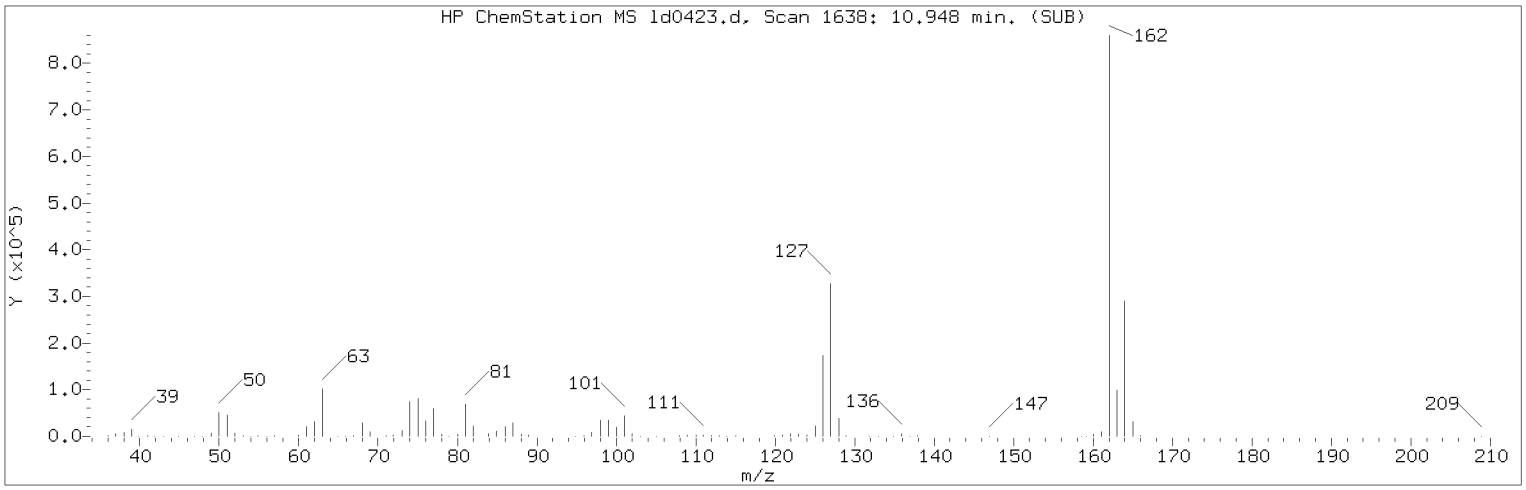
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 15:05 Unknown

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

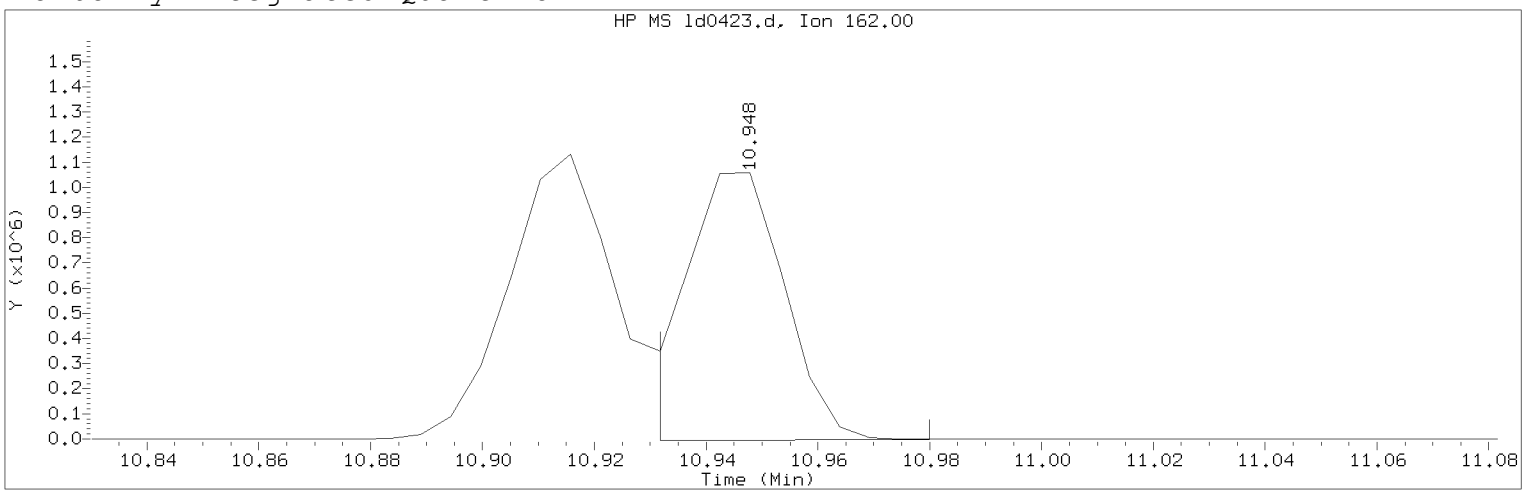
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1172		
Retention Time (minutes)	: 8.455		
Quant Ion	: 105.00		
Area	: 24686		
On-column Amount (ng/ul)	: 3.6875		
Integration start scan	: 1165	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:26.
Target 3.5 esignature user name: ATransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

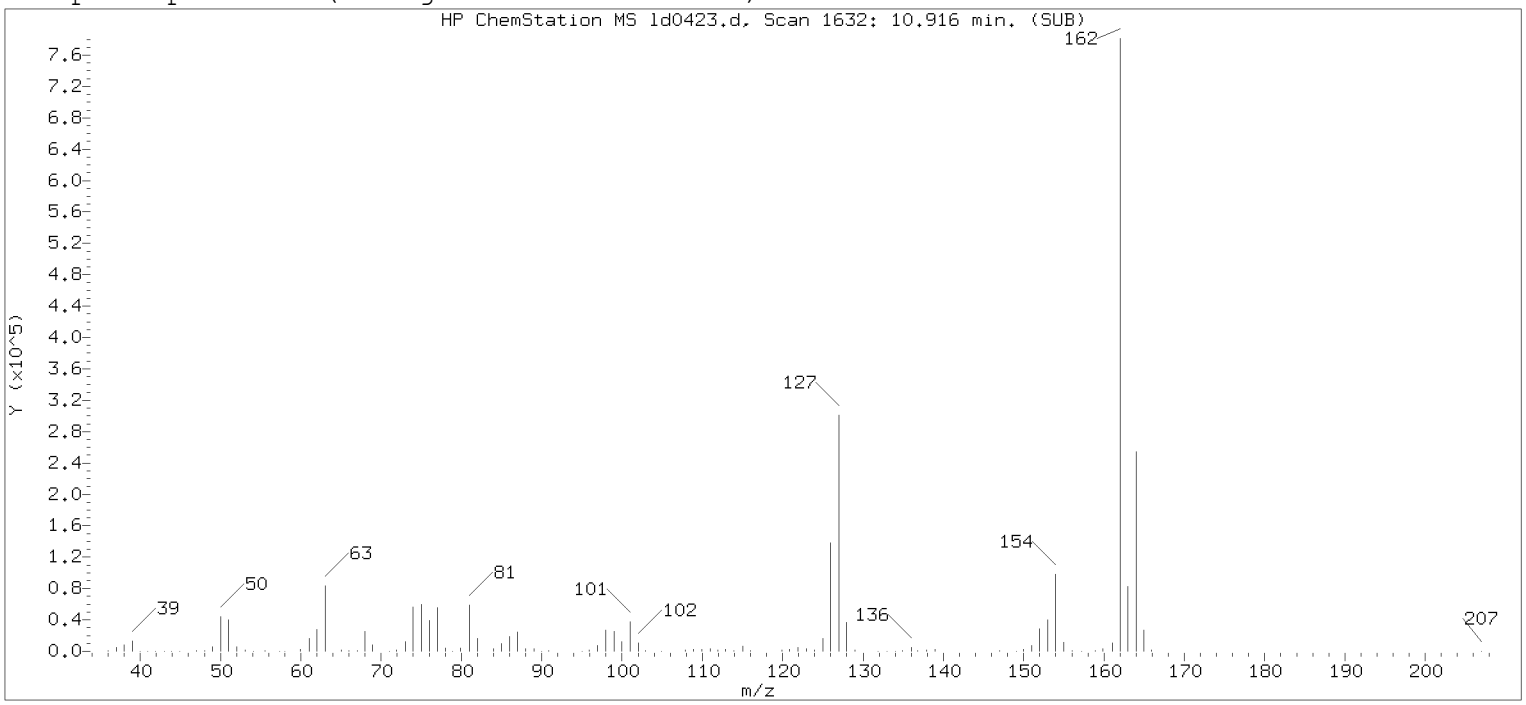
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 1343643M
On-Column Amount (ng/ul) : 13.0611
Integration start scan : 1634 Integration stop scan: 1643
Y at integration start : -5388 Y at integration end: -2518

Reason for manual integration: improper integration

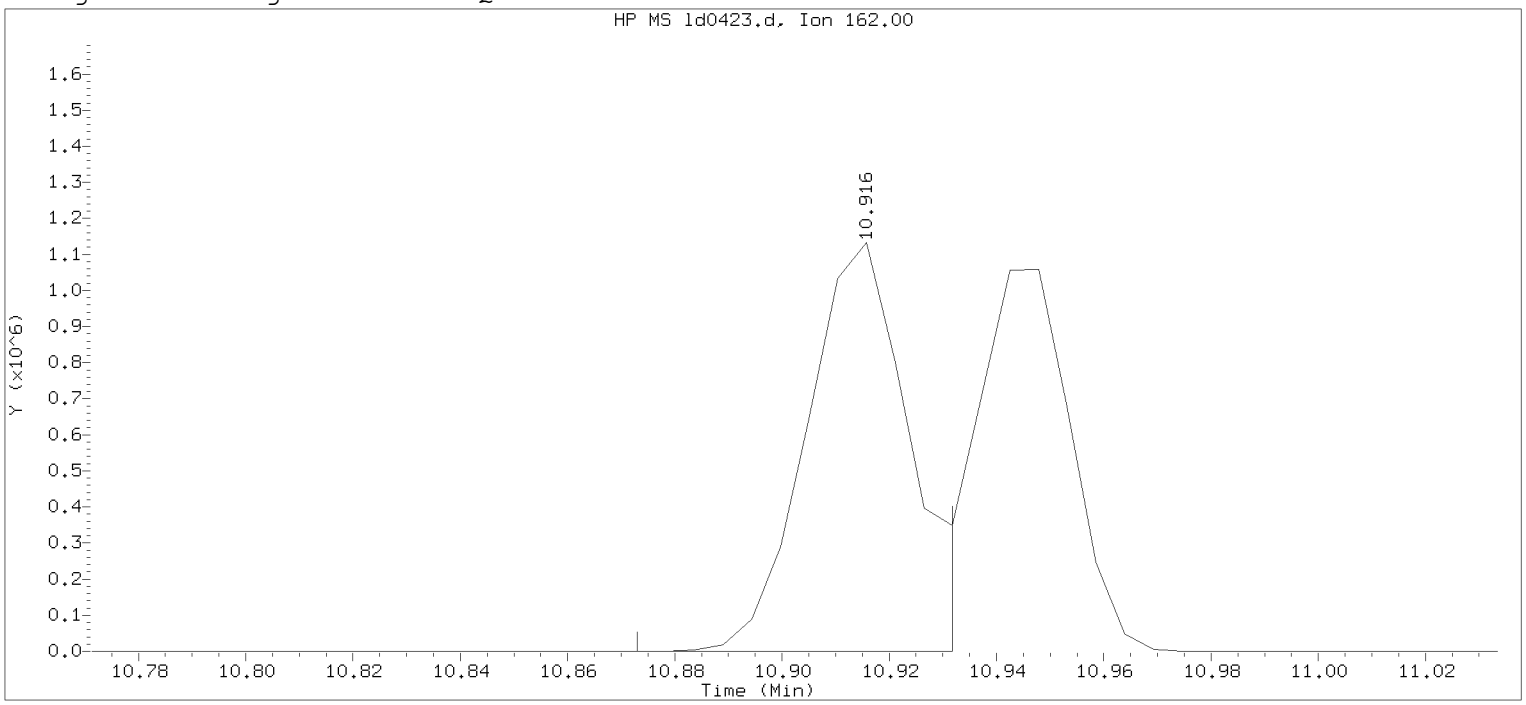
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 15:05 Unknown

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1632
Retention Time (minutes) : 10.916
Quant Ion : 162.00
Area : 1470542
On-column Amount (ng/ul) : 14.2966
Integration start scan : 1623 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:26.
Target 3.5 esignature user name: Page 674

Data File: /chem/HP20296.i/18apr18a.b/ld0740.d

Date : 18-APR-2018 19:15

Client ID: DFTPP

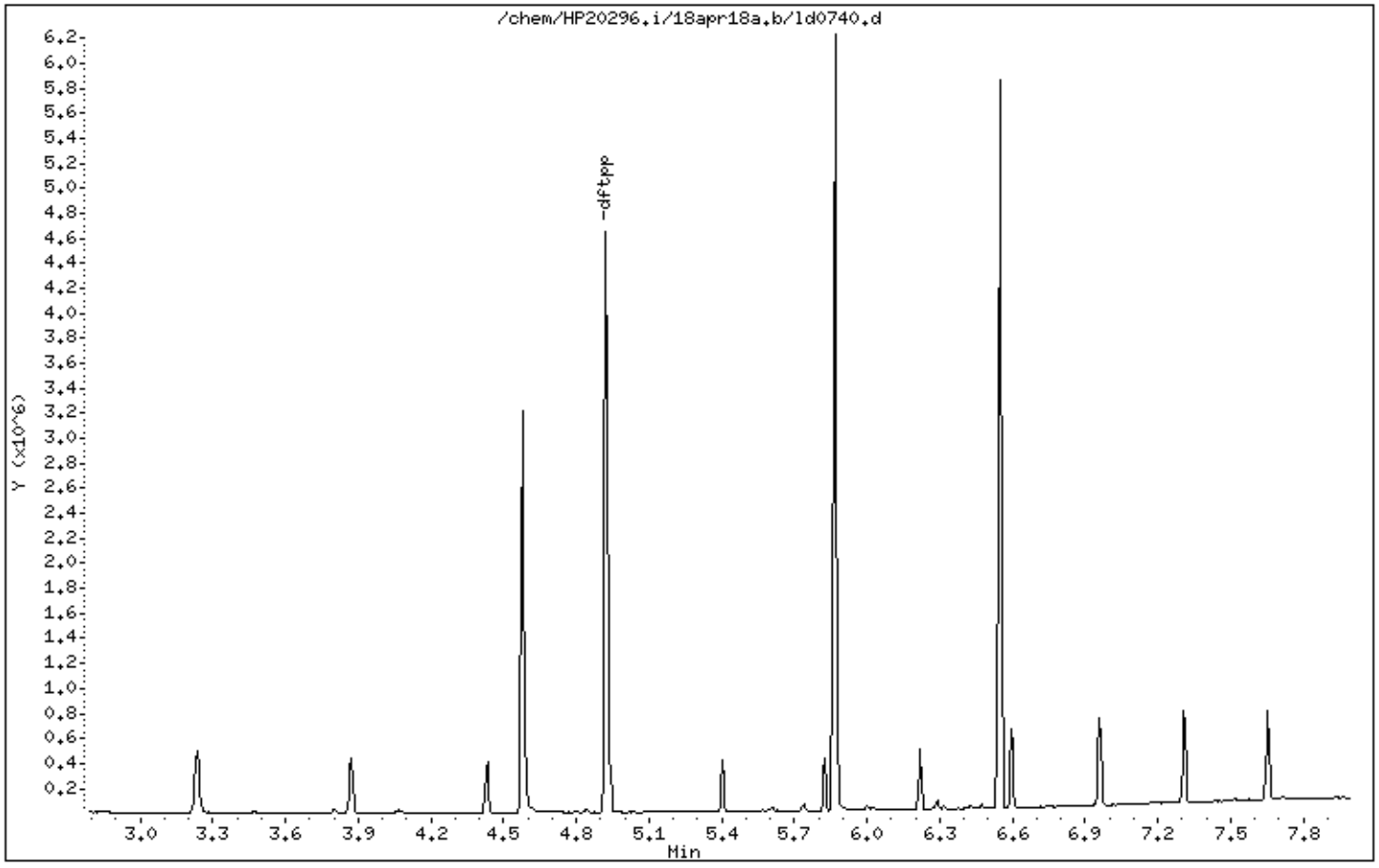
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 04/18/2018 at 20:16.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP20296.i/18apr18a.b/ld0740.d

Date : 18-APR-2018 19:15

Client ID: DFTPP

Instrument: HP20296.i

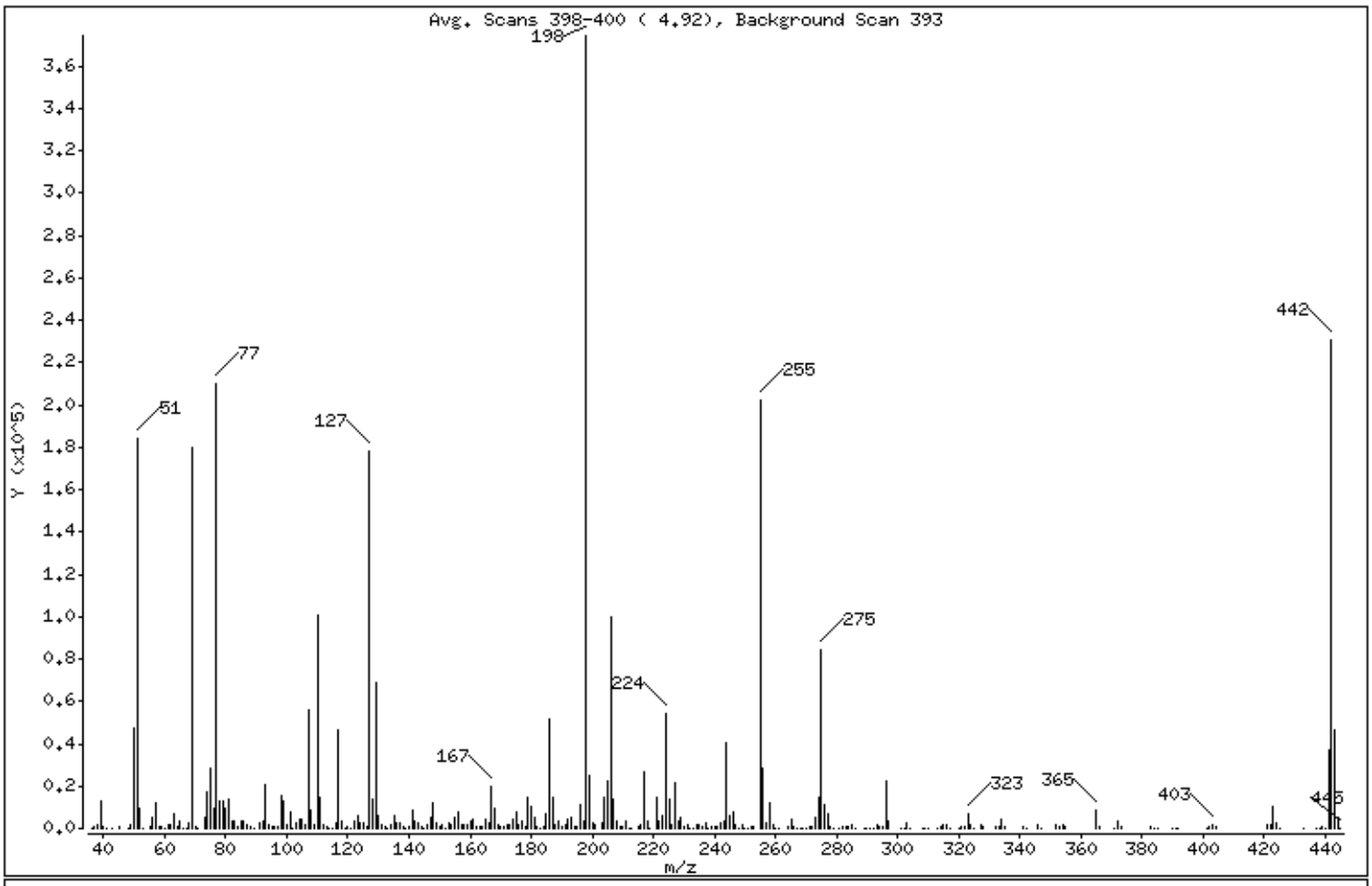
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	49.15
68	Less than 2.00% of mass 69	0.73 (1.51)
69	Mass 69 relative abundance	47.99
70	Less than 2.00% of mass 69	0.25 (0.51)
127	10.00 - 80.00% of mass 198	47.60
197	Less than 2.00% of mass 198	1.02
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	22.48
365	Greater than 1.00% of mass 198	2.29
441	0.01 - 24.00% of mass 442	9.87 (16.03)
442	50.00 - 99.99% of mass 198	61.57
443	15.00 - 24.00% of mass 442	12.30 (19.99)

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:16.
Target 3.5 esignature user ID: art12405

Date : 18-APR-2018 19:15

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0740.d
Spectrum: Avg. Scans 398-400 (4.92), Background Scan 393
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	53	121.00	111	199.00	25384	284.00	595
37.00	776	122.00	3298	200.00	2238	285.00	1359
38.00	2105	123.00	5790	201.00	2067	286.00	310
39.00	13312	124.00	2603	203.00	3011	289.00	278
40.00	570	125.00	2453	204.00	14668	290.00	200
41.00	291	126.00	480	205.00	22280	291.00	105
43.00	232	127.00	178176	206.00	99864	292.00	349
45.00	466	128.00	13793	207.00	13795	293.00	1721
48.00	97	129.00	68912	208.00	3072	294.00	693
49.00	1473	130.00	5985	209.00	1101	295.00	598
50.00	47224	131.00	1416	210.00	954	296.00	22592
51.00	183936	132.00	674	211.00	3322	297.00	3366
52.00	9313	133.00	170	212.00	334	301.00	251
53.00	381	134.00	1887	213.00	282	302.00	407
55.00	828	135.00	6086	215.00	909	303.00	2574
56.00	5252	136.00	2569	216.00	2032	304.00	422
57.00	12072	137.00	2774	217.00	27024	308.00	302
58.00	500	138.00	583	218.00	3802	309.00	204
59.00	472	139.00	384	219.00	389	310.00	88
60.00	209	140.00	1094	221.00	14903	313.00	258
61.00	2107	141.00	8502	222.00	3699	314.00	813
62.00	2115	142.00	3371	223.00	6252	315.00	2101
63.00	6740	143.00	2163	224.00	54440	316.00	1496
64.00	971	144.00	717	225.00	13826	317.00	93
65.00	3562	145.00	418	226.00	1627	320.00	107
66.00	398	146.00	1504	227.00	21840	321.00	740
67.00	111	147.00	5349	228.00	3133	322.00	563
68.00	2714	148.00	11703	229.00	4800	323.00	7006
69.00	179584	149.00	2820	230.00	600	324.00	1373
70.00	924	150.00	464	231.00	1954	325.00	218
71.00	135	151.00	1598	232.00	239	327.00	1521
73.00	4942	152.00	312	233.00	384	328.00	600
74.00	17456	153.00	2979	234.00	1567	332.00	602
75.00	28120	154.00	2134	235.00	1843	333.00	584
76.00	9366	155.00	5210	236.00	1085	334.00	4091

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:16.
Target 3.5 esignature user ID: art12405

Date : 18-APR-2018 19:15

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0740.d
Spectrum: Avg. Scans 398-400 (4.92), Background Scan 393
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	210112	156.00	7567	237.00	2188	335.00	1088
78.00	13338	157.00	1728	238.00	192	341.00	1057
79.00	13181	158.00	1631	239.00	948	342.00	298
80.00	9684	159.00	1378	240.00	642	346.00	1336
81.00	13510	160.00	3036	241.00	1102	347.00	241
82.00	3679	161.00	4488	242.00	2918	352.00	1843
83.00	3758	162.00	1282	243.00	3199	353.00	1255
84.00	632	163.00	453	244.00	40120	354.00	1843
85.00	3210	164.00	567	245.00	5935	355.00	507
86.00	3584	165.00	4072	246.00	8104	365.00	8586
87.00	1831	166.00	2773	247.00	1495	366.00	1174
88.00	775	167.00	19488	248.00	417	371.00	298
89.00	411	168.00	9617	249.00	1449	372.00	3133
91.00	2664	169.00	1749	250.00	326	373.00	664
92.00	3505	170.00	575	251.00	424	383.00	874
93.00	20768	171.00	815	252.00	567	384.00	280
94.00	1373	172.00	1908	253.00	1211	385.00	94
95.00	604	173.00	1961	255.00	202432	390.00	291
96.00	968	174.00	4039	256.00	28744	391.00	133
97.00	754	175.00	7534	257.00	2493	392.00	152
98.00	15399	176.00	2029	258.00	11657	401.00	238
99.00	12982	177.00	3156	259.00	1874	402.00	1171
100.00	1395	178.00	1284	260.00	194	403.00	1879
101.00	7477	179.00	14420	261.00	316	404.00	597
102.00	329	180.00	10108	264.00	509	421.00	1418
103.00	2281	181.00	4749	265.00	4619	422.00	1351
104.00	4128	182.00	865	266.00	576	423.00	10568
105.00	4643	183.00	363	267.00	378	424.00	2869
106.00	1441	184.00	1152	268.00	229	425.00	365
107.00	55632	185.00	7143	269.00	93	433.00	111
108.00	8651	186.00	51464	270.00	220	437.00	101
109.00	1620	187.00	14982	271.00	572	438.00	388
110.00	100944	188.00	1441	272.00	661	439.00	575
111.00	15029	189.00	3360	273.00	5582	440.00	98
112.00	1883	190.00	763	274.00	14877	441.00	36944

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:16.
Target 3.5 esignature user ID: art12405

Date : 18-APR-2018 19:15

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

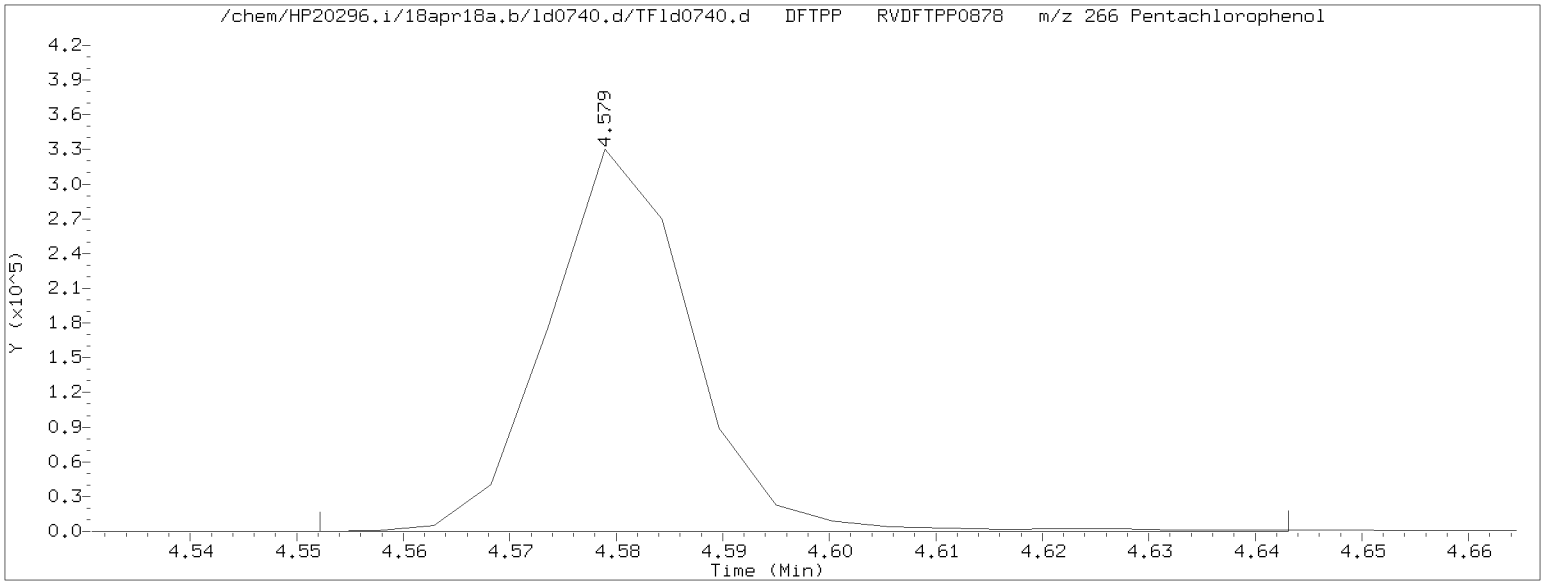
Data File: ld0740.d
Spectrum: Avg. Scans 398-400 (4.92), Background Scan 393
Location of Maximum: 198.00
Number of points: 308

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	570	191.00	1839	275.00	84144	442.00	230400
114.00	98	192.00	4315	276.00	10857	443.00	46056
115.00	153	193.00	5317	277.00	7304	444.00	4249
116.00	2745	194.00	1265	278.00	1187	445.00	240
117.00	46144	195.00	941	279.00	240		
118.00	3396	196.00	11361	281.00	429		
119.00	369	197.00	3803	282.00	475		
120.00	787	198.00	374336	283.00	999		

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:16.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

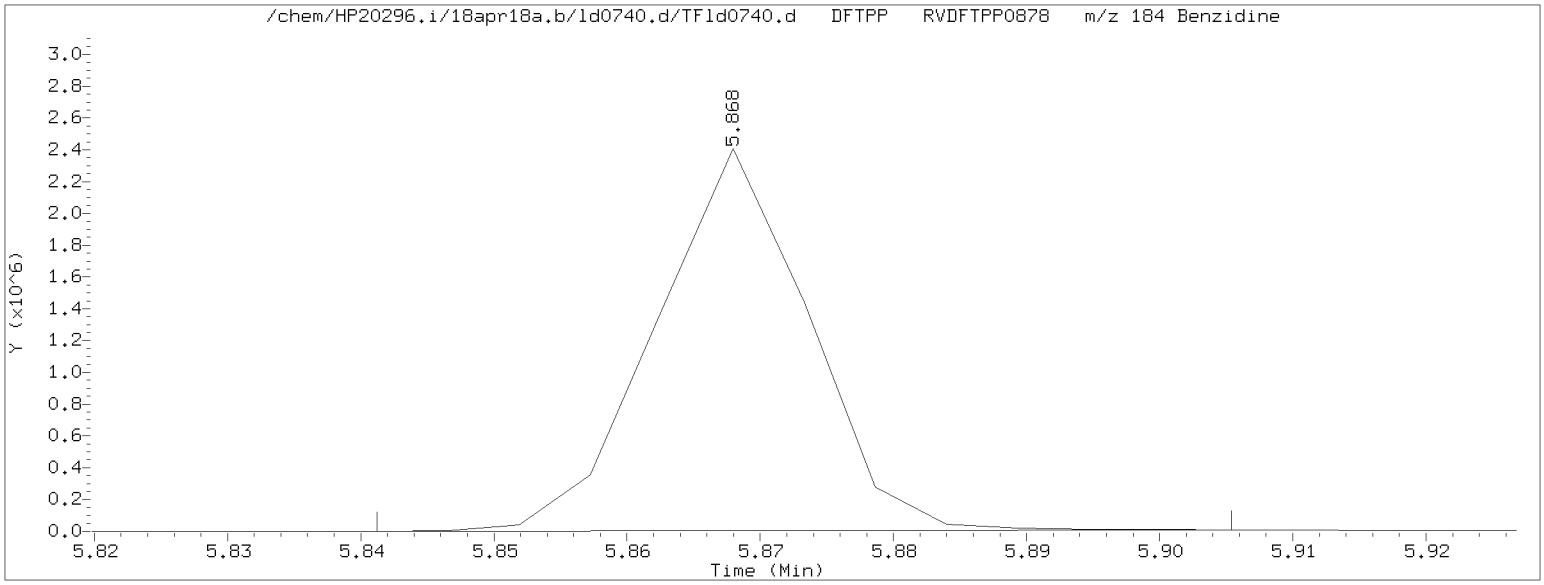
Instrument ID: HP20296.i Injection Date: 18-APR-2018 19:15 Operator: art12405



Pentachlorophenol EICP peak height = 330304 EICP peak height at 10% = 33030 Pentachlorophenol EICP area = 307633

Pentachlorophenol EICP peak apex (min.) = 4.579
RT at 10% of front half of EICP (min.) = 4.567 'Front' peak width (min.) = 0.0117666667
RT at 10% of back half of EICP (min.) = 4.594 'Tailing' peak width (min.) = 0.0151833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0151833333}{0.0117666667} = 1.290$$



Benzidine EICP peak height = 2404615 EICP peak height at 10% = 240462 Benzidine EICP area = 1915652

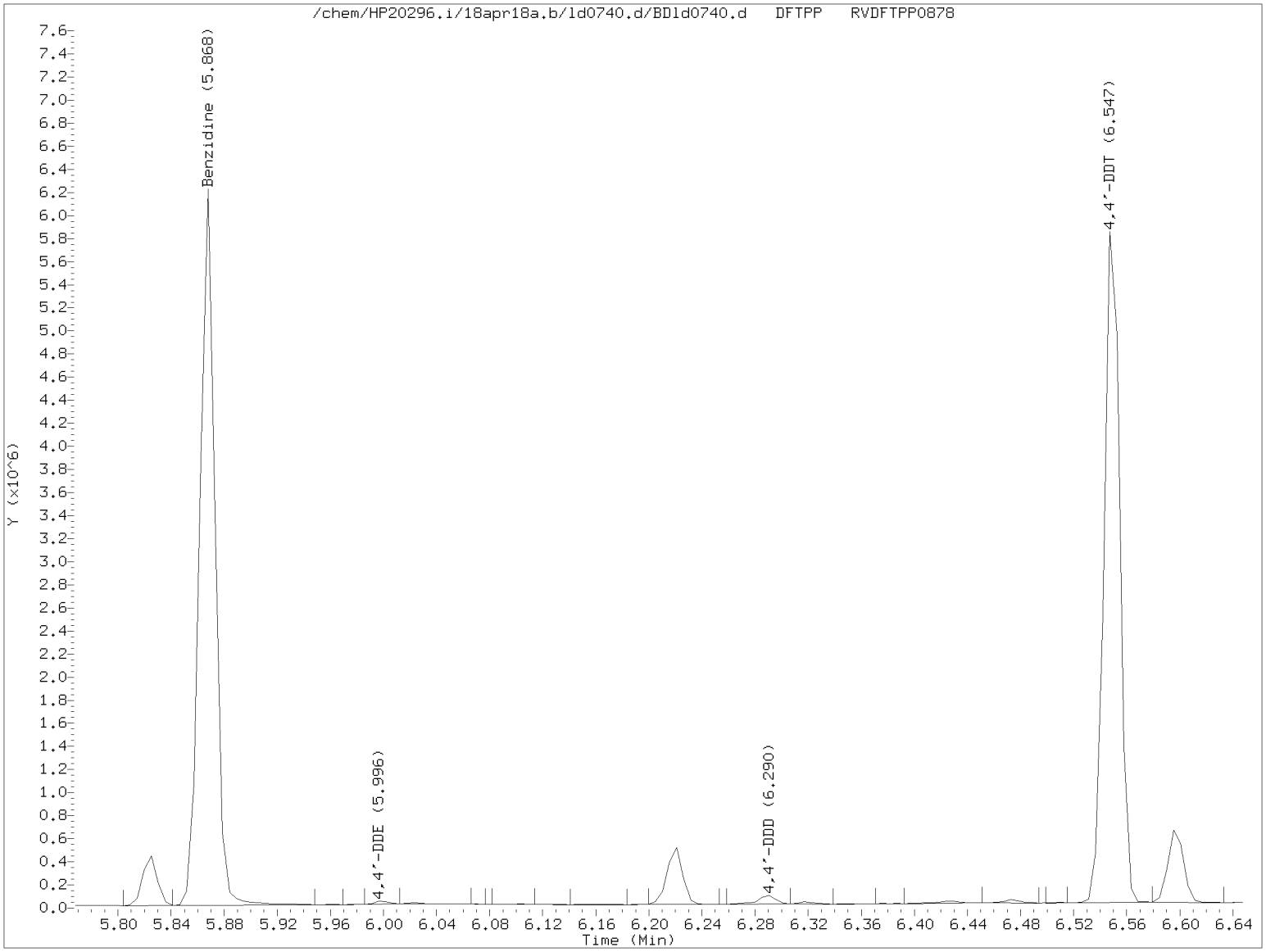
Benzidine EICP peak apex (min.) = 5.868
RT at 10% of front half of EICP (min.) = 5.855 'Front' peak width (min.) = 0.0125666667
RT at 10% of back half of EICP (min.) = 5.879 'Tailing' peak width (min.) = 0.0114833333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0114833333}{0.0125666667} = 0.914$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

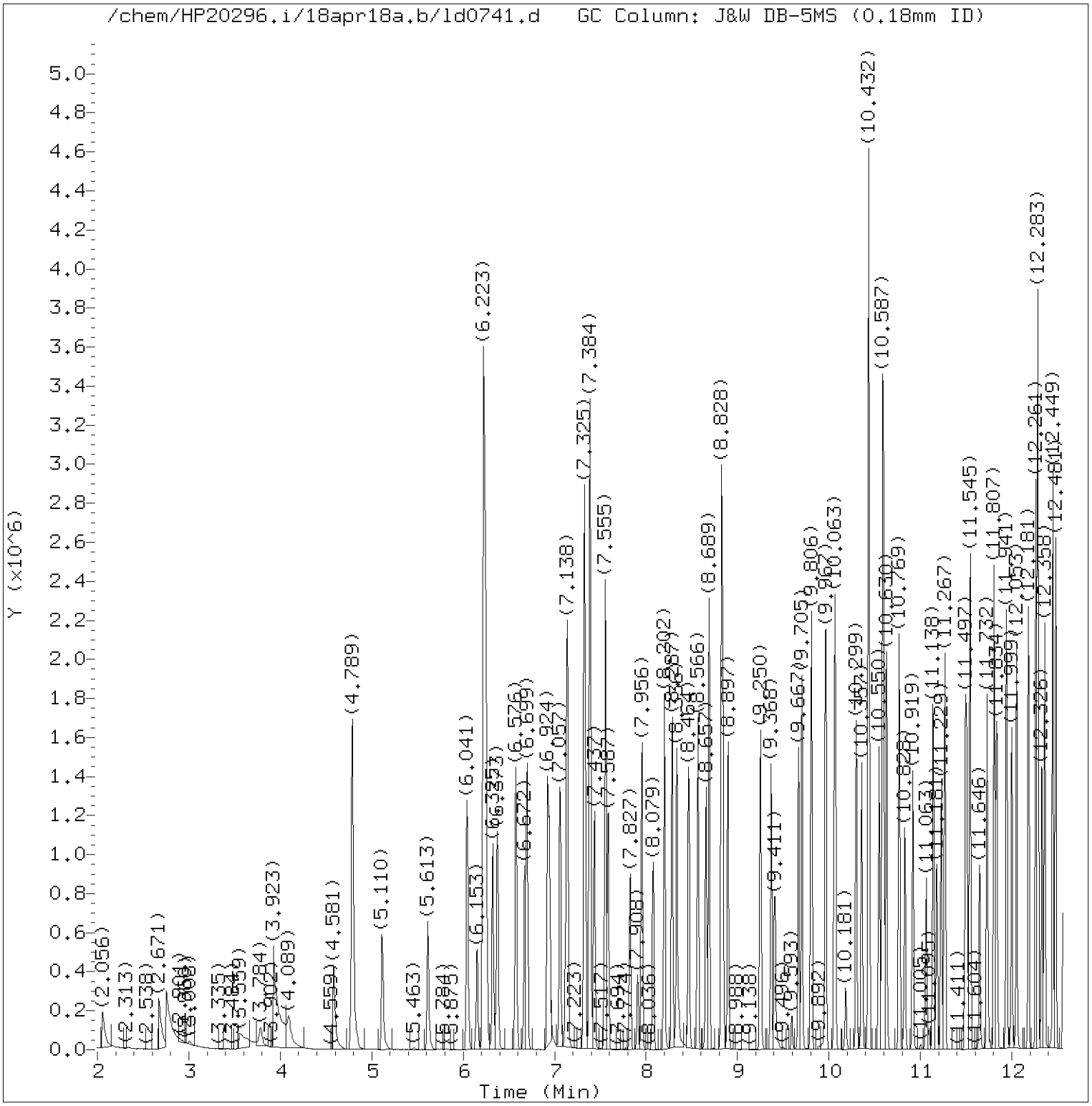
Instrument ID: HP20296.i Injection Date: 18-APR-2018 19:15 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{17237 + 68767}{17237 + 68767 + 4864861} \times 100 = 1.7$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

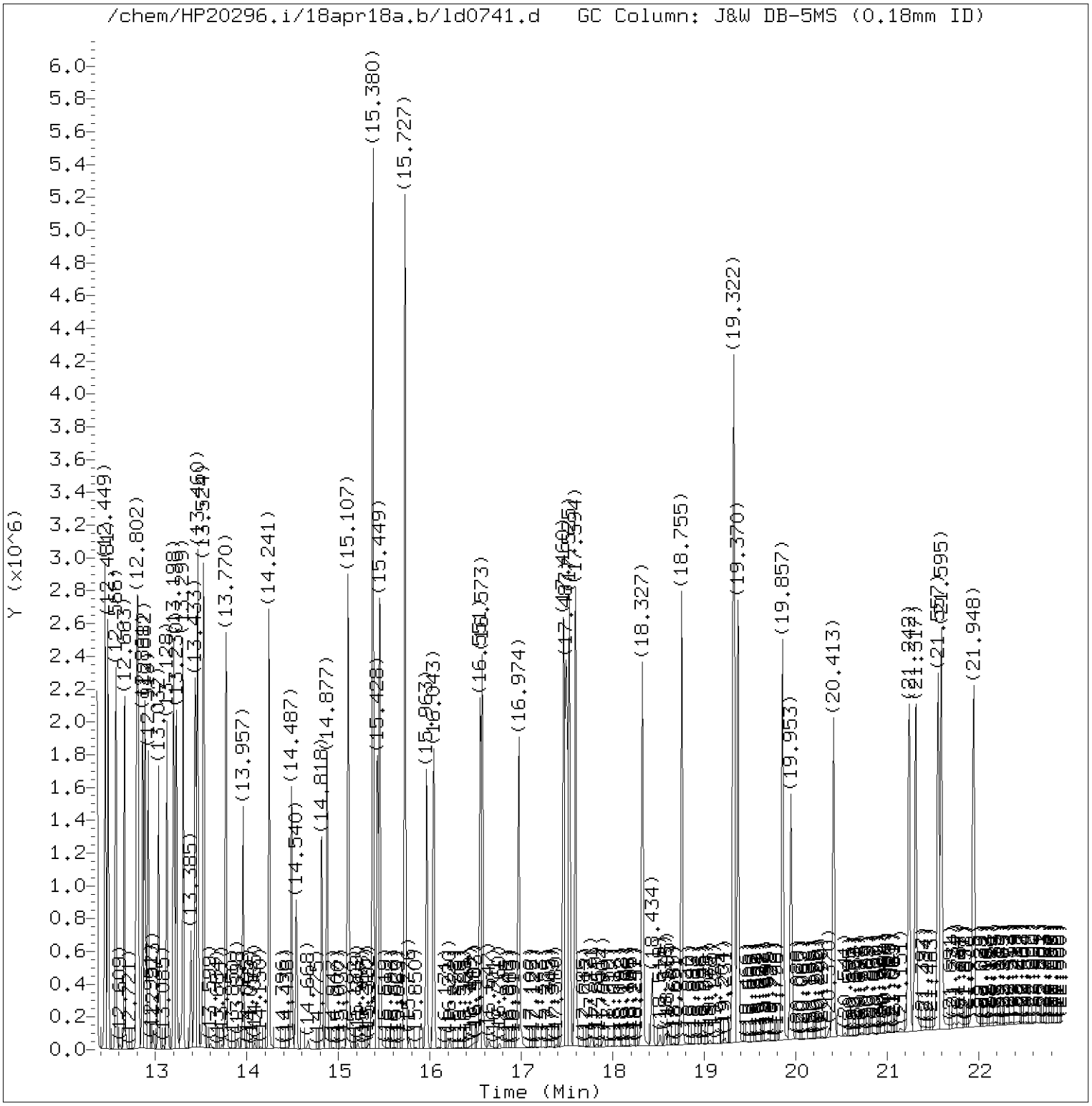
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.056	88	173730	6.841
5) N-Nitrosodimethylamine	(1)	2.671	74	275678	7.130
6) Pyridine	(1)	2.752	79	437237	6.338
8) 2-Picoline	(1)	3.923	93	441670	6.332
9) N-Nitrosomethylethylamine	(1)	4.094	88	204380	7.311
10) Methyl methanesulfonate	(1)	4.581	80	257125	7.593
12)$2-Fluorophenol	(1)	4.789	112	812615	15.280
14) N-Nitrosodiethylamine	(1)	5.110	102	195797	7.552
16) Ethyl methanesulfonate	(1)	5.613	109	210312	7.449
43) Total Cresols	(1)			842306	15.936
17) Benzaldehyde	(1)	6.041	77	397652	7.536
20) Aniline	(1)	6.223	93	707215	7.640
18)$Phenol-d6	(1)	6.223	99	1052976	15.099
19) Phenol	(1)	6.239	94	619570	7.717
21) a-methylstyrene	(1)	6.255	118	138542	6.851
23) bis(2-Chloroethyl)ether	(1)	6.325	93	451628	7.557
24) 2-Chlorophenol	(1)	6.373	128	400127	7.680
25) 1,3-Dichlorobenzene	(1)	6.576	146	449750	7.647
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	194220	5.000
27) 1,4-Dichlorobenzene	(1)	6.699	146	457473	7.687
29) 1,2-Dichlorobenzene	(1)	6.924	146	439254	7.751
28) Benzyl alcohol	(1)	6.945	108	213264	6.133
31) Indene	(1)	7.057	115	567712	6.837
35) bis(2-Chloroisopropyl)ether	(1)	7.132	45	686815	8.095
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.132	45	686815	8.095
32) 2-Methylphenol	(1)	7.138	108	397990	7.747
36) N-Nitrosopyrrolidine	(1)	7.319	100	216842	7.709
37) Acetophenone	(1)	7.325	105	622968	7.953
39) N-Nitroso-di-n-propylamine	(1)	7.335	70	348657	7.808
100) Isosafrole	(3)			348615	7.614
41) o-Toluidine	(1)	7.384	106	688426	7.578
38) 4-Methylphenol	(1)	7.389	108	444316	8.189
40) N-Nitrosomorpholine	(1)	7.389	56	270765	7.256
44) Hexachloroethane	(1)	7.437	117	184978	7.289
45)$Nitrobenzene-d5	(2)	7.555	82	996329	16.168
46) Nitrobenzene	(2)	7.587	77	508308	8.087
50) N-Nitrosopiperidine	(2)	7.827	114	197819	7.658
52) Isophorone	(2)	7.956	82	861689	7.843
125) 2,4_2,6-Dinitrotoluenes	(3)			429377	15.335
53) 2-Nitrophenol	(2)	8.079	139	191513	7.541

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.202	107	423128	7.771
59) O,O,O-Triethylphosphorothioate	(2)	8.287	198	203340	7.545
57) bis(2-Chloroethoxy)methane	(2)	8.336	93	552652	7.738
58) Benzoic acid	(2)	8.362	105	159674	6.524
62) 2,4-Dichlorophenol	(2)	8.464	162	344274	8.121
65) 1,2,4-Trichlorobenzene	(2)	8.566	180	379199	8.027
68)*Naphthalene-d8	(2)	8.657	136	714477	5.000
69) Naphthalene	(2)	8.689	128	1162882	7.876
151) Diallate trans/cis	(4)			403901	7.368
71) 2,6-Dichlorophenol	(2)	8.828	162	333665	7.947
72) Hexachloropropene	(2)	8.828	213	270812	7.923
70) 4-Chloroaniline	(2)	8.838	127	463513	7.692
74) Hexachlorobutadiene	(2)	8.897	225	237202	8.283
78) Quinoline	(2)	9.250	129	696330	7.404
80) N-Nitrosodi-n-butylamine	(2)	9.368	84	303696	6.554
79) Caprolactam	(2)	9.405	113	105646	7.948
83) 4-Chloro-3-methylphenol	(2)	9.667	107	363689	7.817
85) Safrole	(2)	9.705	162	296831	7.495
86) 2-Methylnaphthalene	(2)	9.806	142	769642	7.846
87) 1-Methylnaphthalene	(2)	9.967	142	697247	7.748
88) Hexachlorocyclopentadiene	(3)	10.058	237	232020	7.884
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.069	216	390639	7.892
91) cis-Isosafrole	(3)	10.181	162	55572	1.290
93) 2,4,6-Trichlorophenol	(3)	10.299	196	250457	8.058
95) 2,4,5-Trichlorophenol	(3)	10.357	196	259973	7.969
96)$2-Fluorobiphenyl	(3)	10.432	172	1754205	15.507
97) trans-Isosafrole	(3)	10.550	162	293043	6.324
98) 1,1'-Biphenyl	(3)	10.587	154	957835	8.210
99) 2-Chloronaphthalene	(3)	10.598	162	757266	7.638
101) 1-Chloronaphthalene	(3)	10.630	162	691354	7.538
103) Diphenyl ether	(3)	10.769	170	510181	7.829
104) 2-Nitroaniline	(3)	10.828	138	218307	7.524
108) 1,4-Naphthoquinone	(3)	10.919	158	290919	7.426
109) 1,4-Dinitrobenzene	(3)	11.063	168	110463	7.163
110) Dimethylphthalate	(3)	11.138	163	842166	7.583
111) 1,3-Dinitrobenzene	(3)	11.181	168	127181	7.699
113) 2,6-Dinitrotoluene	(3)	11.229	165	185959	7.886
114) Acenaphthylene	(3)	11.267	152	1090812	7.915
118)*Acenaphthene-d10	(3)	11.491	164	363882	5.000
117) 3-Nitroaniline	(3)	11.507	138	192453	7.746

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.545	153	742284	7.596
120) 2,4-Dinitrophenol	(3)	11.646	184	129494	9.134
122) Pentachlorobenzene	(3)	11.732	250	319727	7.921
124) Dibenzofuran	(3)	11.807	168	1046424	7.708
121) 4-Nitrophenol	(3)	11.828	109	123906	7.075
123) 2,4-Dinitrotoluene	(3)	11.839	165	243418	7.449
126) 1-Naphthylamine	(3)	11.941	143	720504	7.459
127) 2,3,4,6-Tetrachlorophenol	(3)	11.999	232	207369	8.168
128) 2-Naphthylamine	(3)	12.053	143	695735	7.602
129) Diethylphthalate	(3)	12.181	149	825422	7.552
131) Fluorene	(3)	12.261	166	833846	7.863
130) Thionazin	(3)	12.283	107	136361	7.328
132) 4-Chlorophenyl-phenylether	(3)	12.288	204	414845	7.893
133) 5-Nitro-o-toluidine	(3)	12.331	152	223051	7.722
134) 4-Nitroaniline	(3)	12.358	138	202758	8.074
135) 4,6-Dinitro-2-methylphenol	(4)	12.363	198	128661M	6.595
137) NDPA as diphenylamine	(4)	12.449	169	671558M	7.447
136) N-Nitrosodiphenylamine	(4)	12.449	169	670755M	7.438
139) 1,2-Diphenylhydrazine	(4)	12.481	77	956679M	7.603
140)$2,4,6-Tribromophenol	(3)	12.566	330	208682	16.590
142) Tetraethyldithiopyrophosphate	(4)	12.657	97	165437	7.730
145) Diallate (peak 1)	(4)	12.791	86	343493M	6.030
146) Phorate	(4)	12.807	75	863315M	10.697
144) 1,3,5-Trinitrobenzene	(4)	12.818	213	86621M	7.208
147) Phenacetin	(4)	12.861	108	444884M	7.806
148) 4-Bromophenyl-phenylether	(4)	12.882	248	225524M	7.485
149) Diallate (peak 2)	(4)	12.898	86	60408M	1.338
150) Hexachlorobenzene	(4)	12.919	284	232957	7.528
152) Dimethoate	(4)	13.032	87	357483M	7.360
153) Atrazine	(4)	13.128	200	240097M	7.870
156) Pentachloronitrobenzene	(4)	13.198	237	116415	7.882
154) Pentachlorophenol	(4)	13.203	266	131069M	6.916
155) 4-Aminobiphenyl	(4)	13.230	169	770142	7.502
157) Pronamide	(4)	13.299	173	397383	7.814
158)*Phenanthrene-d10	(4)	13.433	188	736883M	5.000
159) Dinoseb	(4)	13.444	211	200047	6.551
160) Phenanthrene	(4)	13.460	178	1224423M	7.536
162) Anthracene	(4)	13.524	178	1258847M	7.728
168) Carbazole	(4)	13.770	167	1120414	7.769
169) Methyl parathion	(4)	13.957	109	273830	7.396

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.241	149	1431901M	7.376
172) Parathion	(4)	14.487	109	175273	7.316
173) 4-Nitroquinoline-1-oxide	(4)	14.540	190	92144	4.789
174) Octachlorostyrene	(4)	14.818	308	83621	7.223
176) Isodrin	(4)	14.877	193	152955	7.598
227) Total PAHs	(6)			21570812	139.512
178) Fluoranthene	(4)	15.107	202	1442209M	7.892
179) Benzidine	(5)	15.380	184	2582472	21.921
180)*Pyrene-d10	(5)	15.428	212	799510	5.000
182) Pyrene	(5)	15.455	202	1504047	7.395
184)$Terphenyl-d14	(5)	15.727	244	1952870	15.231
187) p-Dimethylaminoazobenzene	(5)	15.968	225	235489	7.589
190) Chlorobenzilate	(5)	16.043	139	442210	7.298
192) 3,3'-Dimethylbenzidine	(5)	16.551	212	934185	7.291
193) Butylbenzylphthalate	(5)	16.573	149	684744	7.246
196) 2-Acetylaminofluorene	(5)	16.974	181	555274	7.424
200) Benzo(a)anthracene	(5)	17.460	228	1425895	7.847
198) 3,3'-Dichlorobenzidine	(5)	17.487	252	505253	7.727
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.503	231	298008	7.504
201) Chrysene	(5)	17.525	228	1378721	7.844
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	149	990984	7.422
208) 6-Methylchrysene	(5)	18.327	242	928631	7.503
210) Di-n-octylphthalate	(6)	18.755	149	1722637	7.063
211) Benzo(b)fluoranthene	(6)	19.322	252	1458553	7.670
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.327	256	575888	7.341
213) Benzo(k)fluoranthene	(6)	19.370	252	1379665	7.535
216) Benzo(a)pyrene	(6)	19.857	252	1327680	7.760
218)*Perylene-d12	(6)	19.953	264	775587	5.000
220) 3-Methylcholanthrene	(6)	20.418	268	629735	7.569
222) Dibenz(a,h)acridine	(6)	21.242	279	1091797	7.508
223) Dibenz(a,j)acridine	(6)	21.317	279	1087632	7.364
224) Indeno(1,2,3-cd)pyrene	(6)	21.557	276	1273558M	7.838
225) Dibenz(a,h)anthracene	(6)	21.595	278	1300492	7.879
226) Benzo(g,h,i)perylene	(6)	21.948	276	1300009	7.743

M = Compound was manually integrated.
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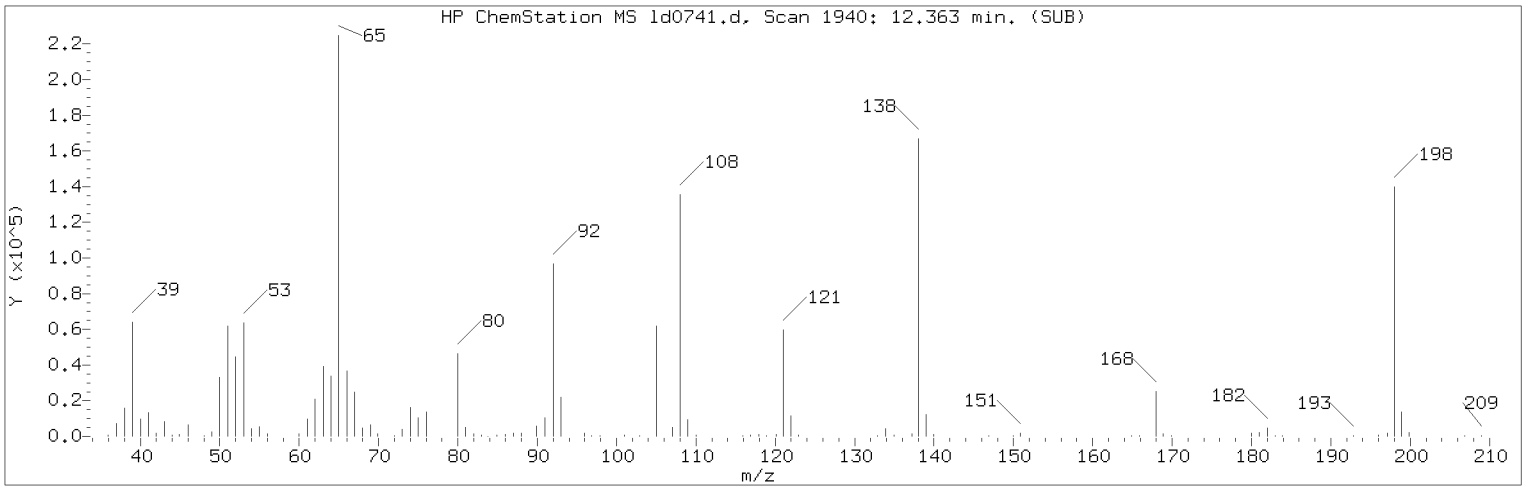
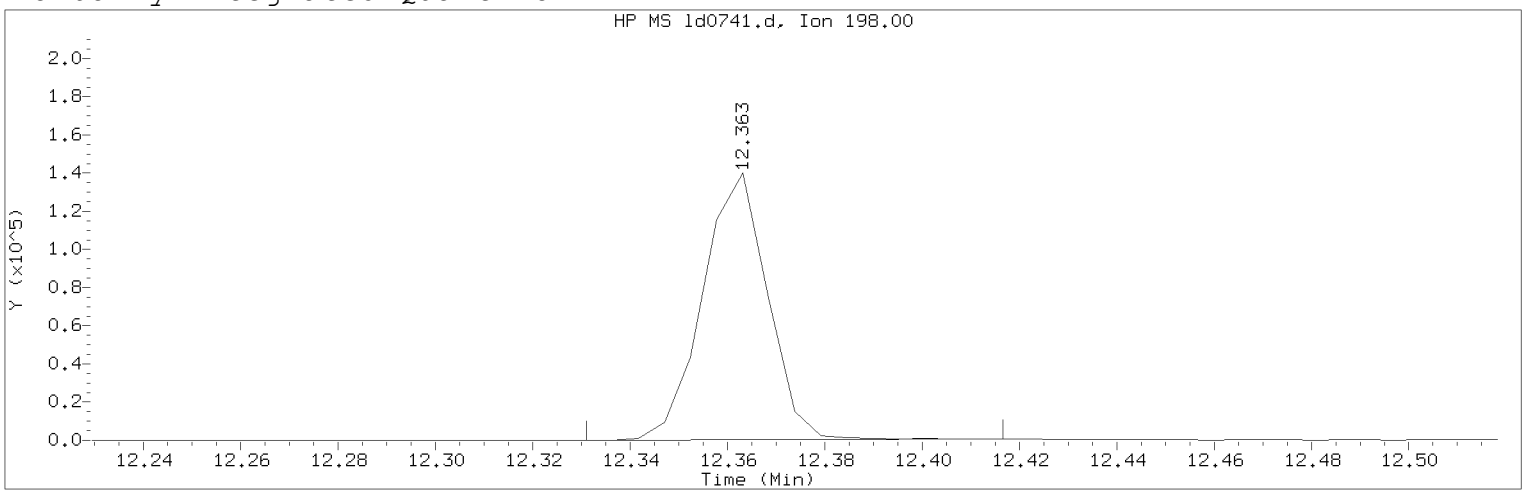
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

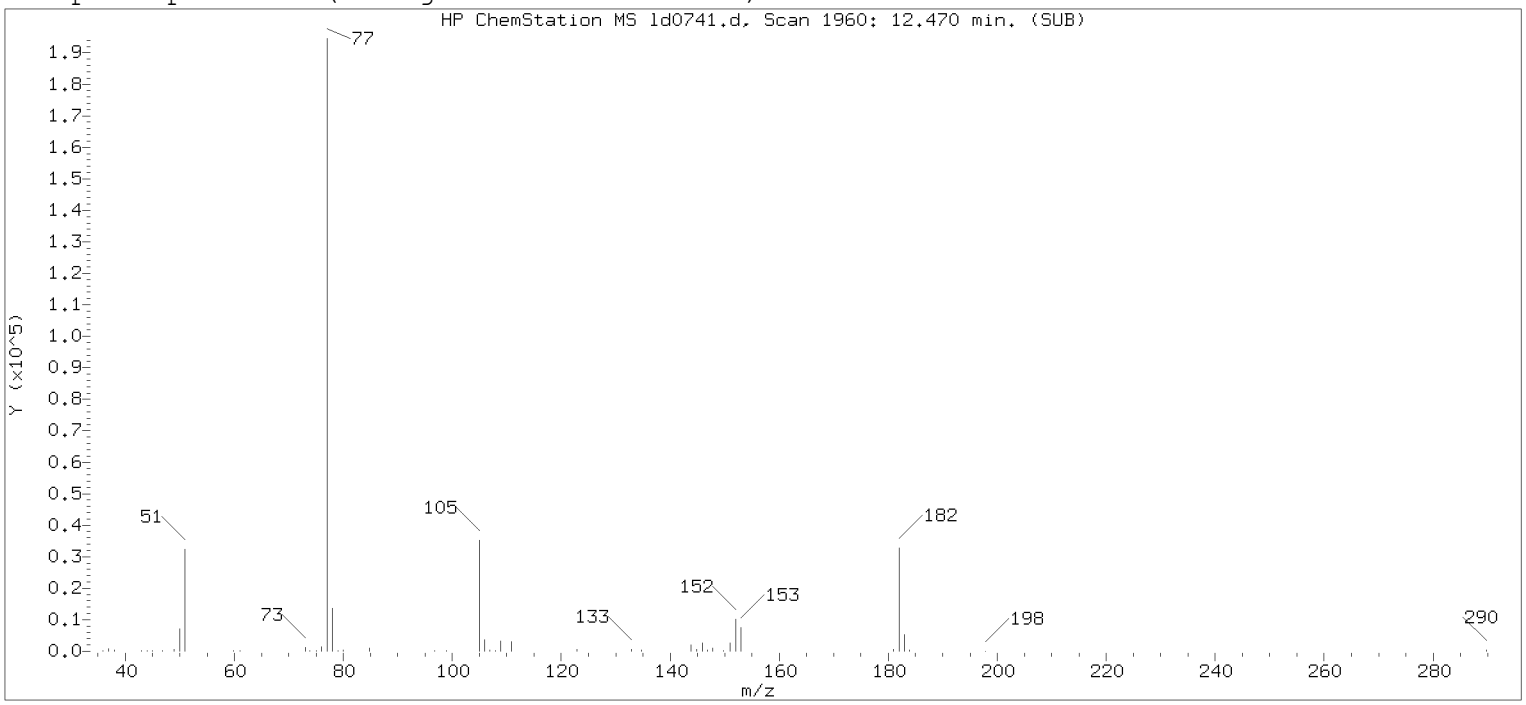
Compound Number : 135
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1940
Retention Time (minutes) : 12.363
Quant Ion : 198.00
Area (flag) : 128661M
On-Column Amount (ng/ul) : 6.5952
Integration start scan : 1933 Integration stop scan: 1949
Y at integration start : 0 Y at integration end: 753

Reason for manual integration: improper integration

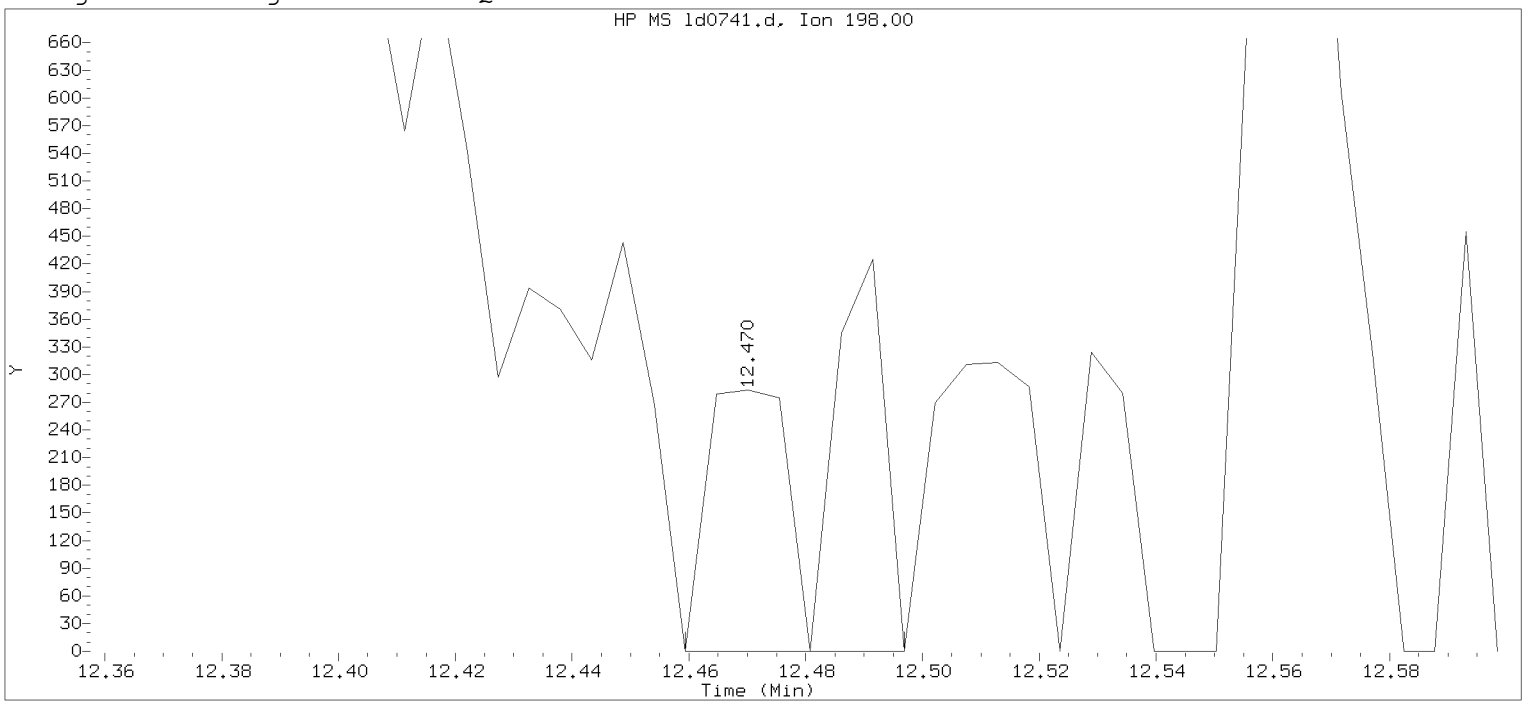
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

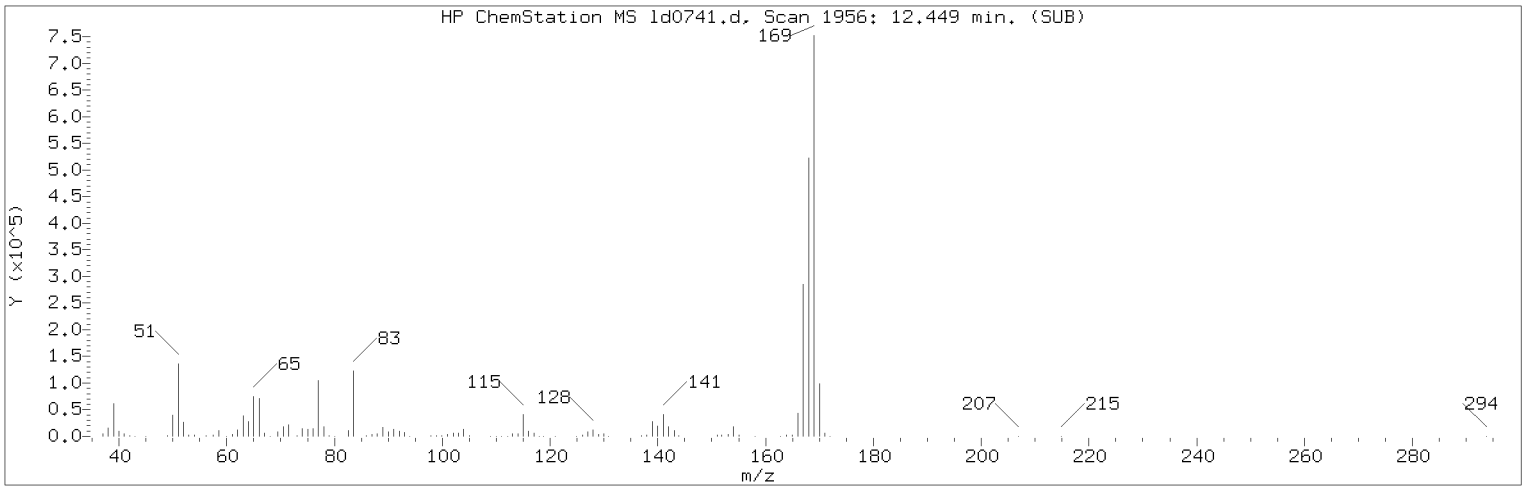
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

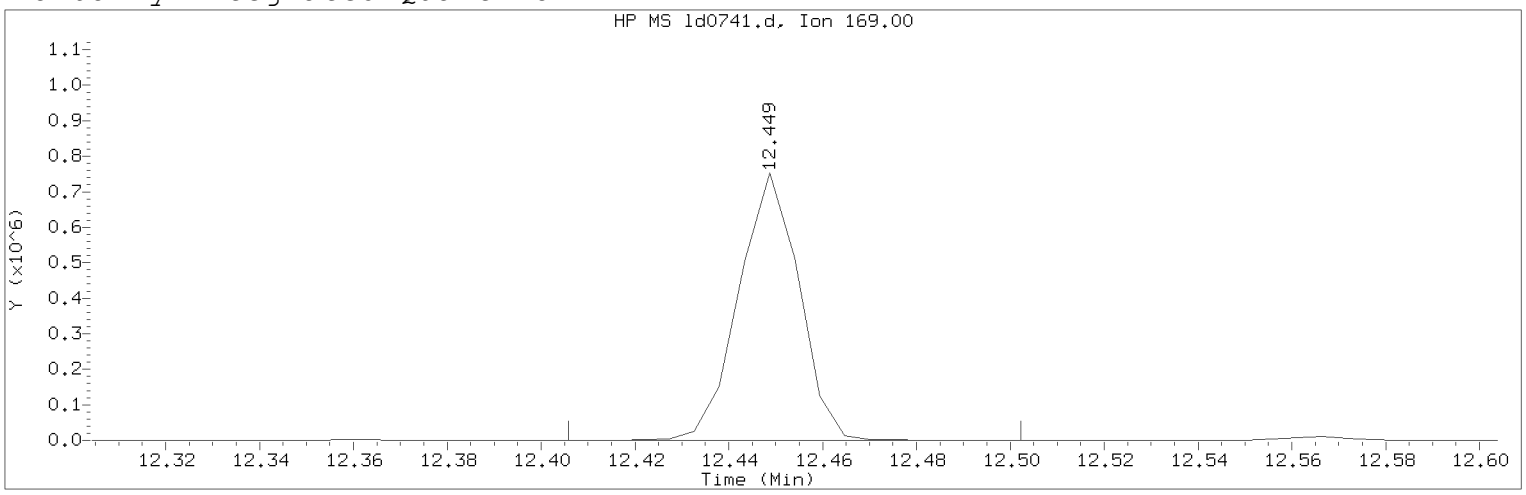
Compound Number : 135
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1960
Retention Time (minutes) : 12.470
Quant Ion : 198.00
Area : 515
On-column Amount (ng/ul) : 2.9071
Integration start scan : 1957 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART at 2018-04-18 20:57:39

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

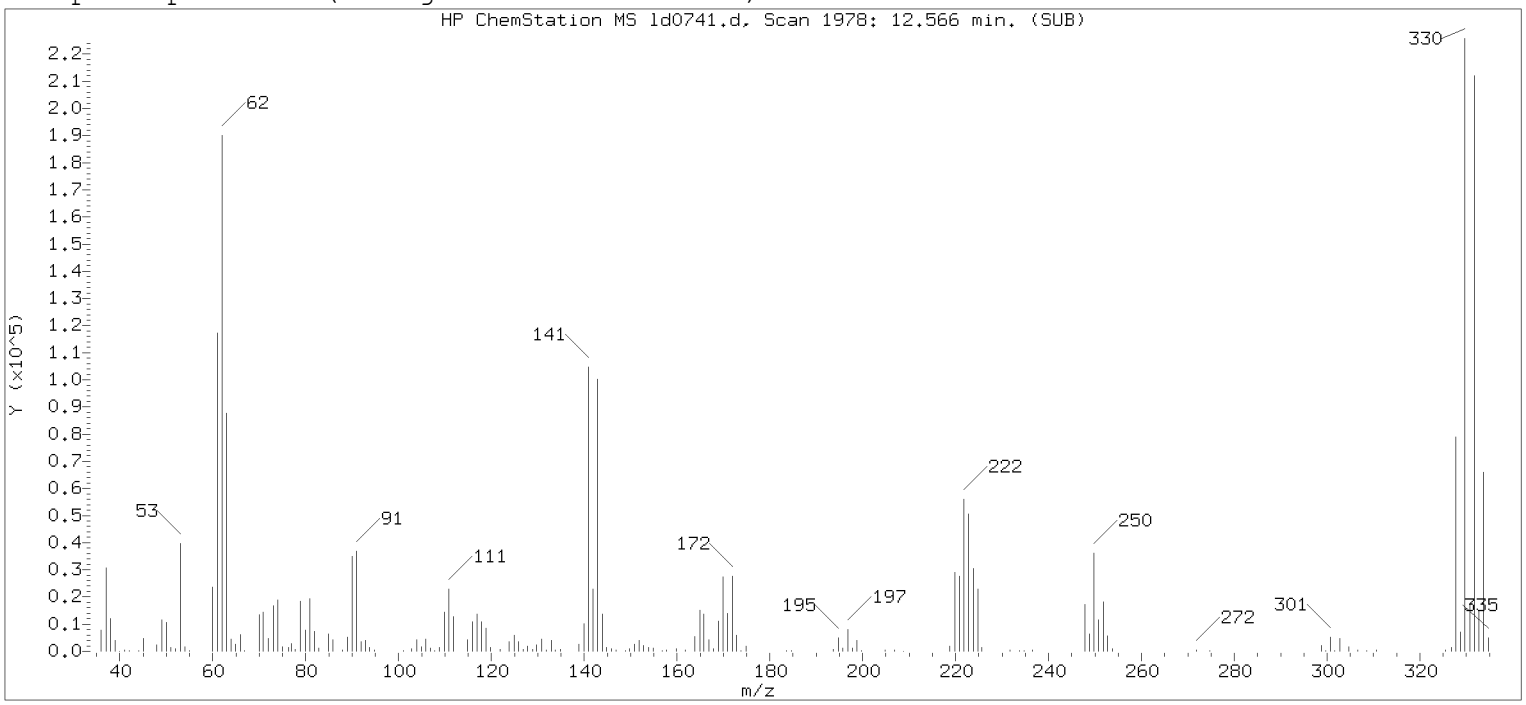
Compound Number : 137
Compound Name : NDPA as diphenylamine
Scan Number : 1956
Retention Time (minutes) : 12.449
Quant Ion : 169.00
Area (flag) : 671558M
On-Column Amount (ng/ul) : 7.4472
Integration start scan : 1947 Integration stop scan: 1965
Y at integration start : 0 Y at integration end: 386

Reason for manual integration: improper integration

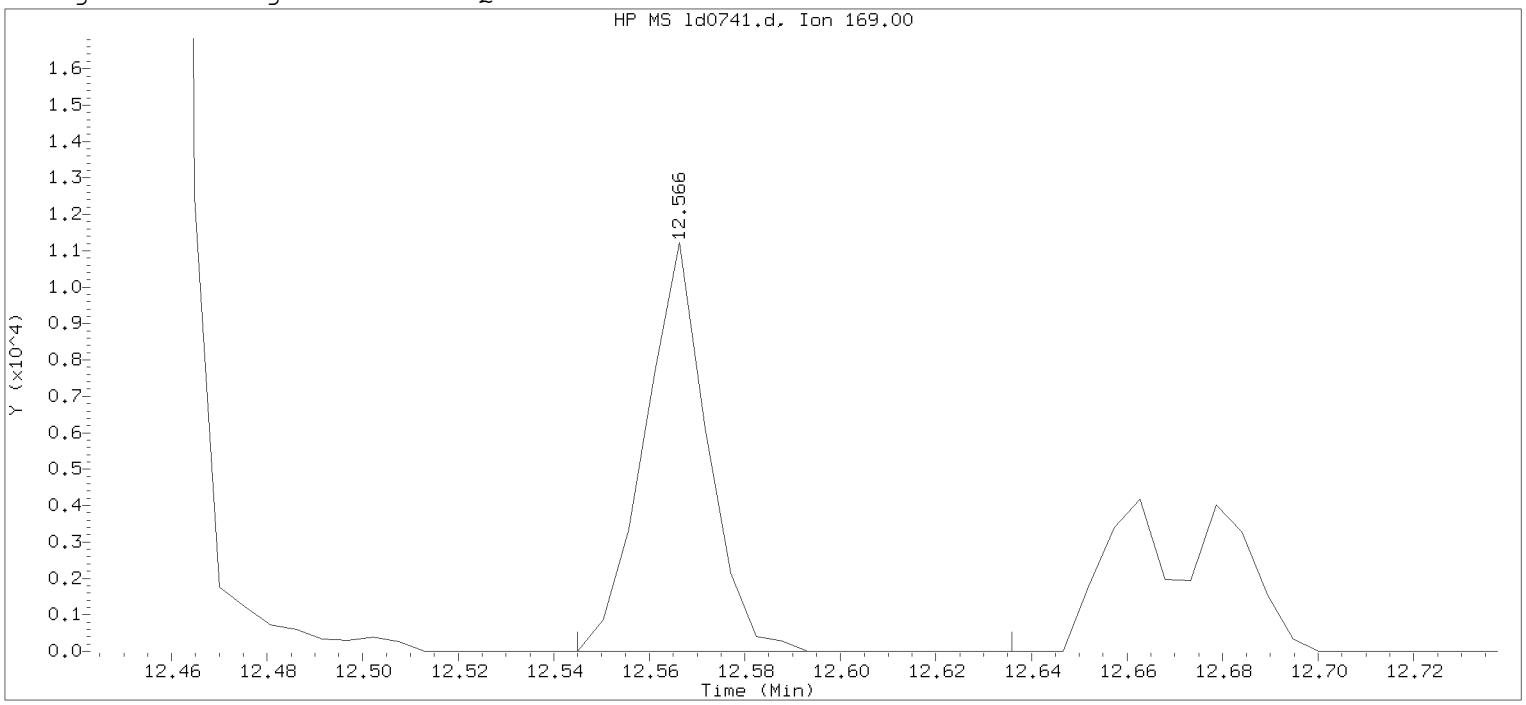
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

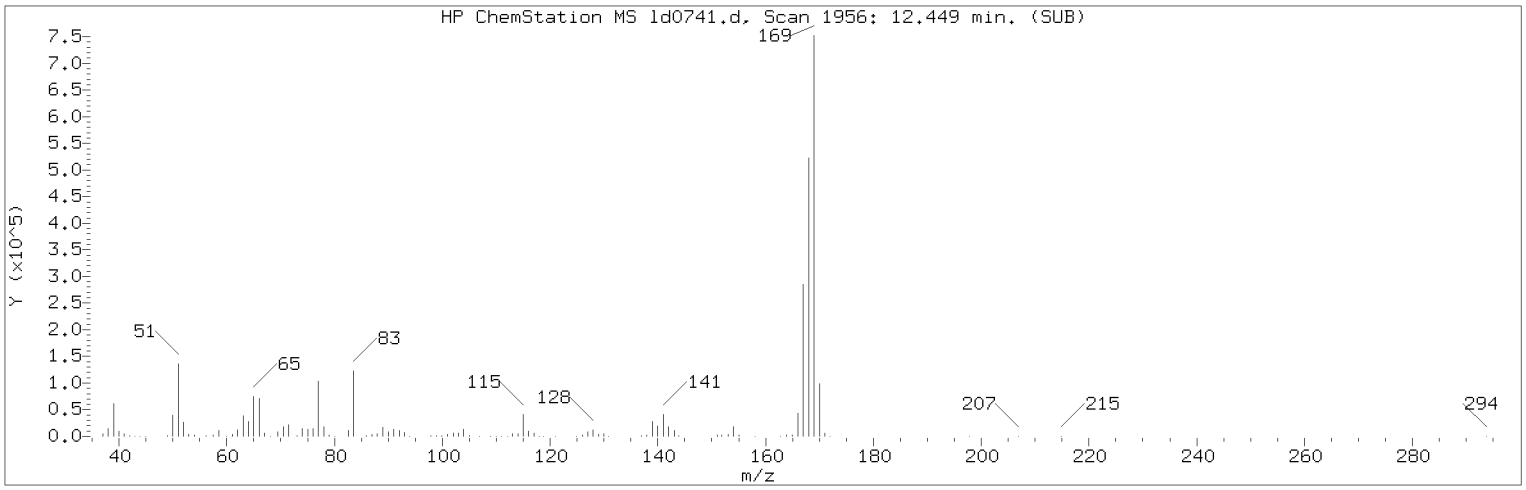
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

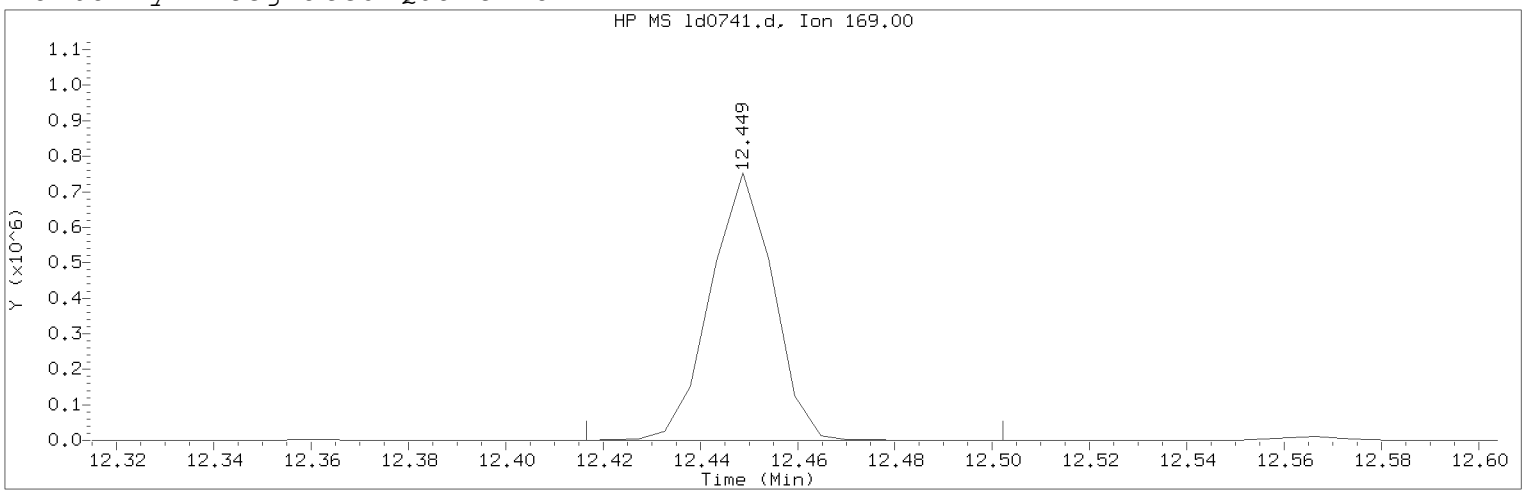
Compound Number	: 137		
Compound Name	: NDPA as diphenylamine		
Scan Number	: 1978		
Retention Time (minutes)	: 12.566		
Quant Ion	: 169.00		
Area	: 10278		
On-column Amount (ng/ul)	: 12.5344		
Integration start scan	: 1973	Integration stop scan:	1990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

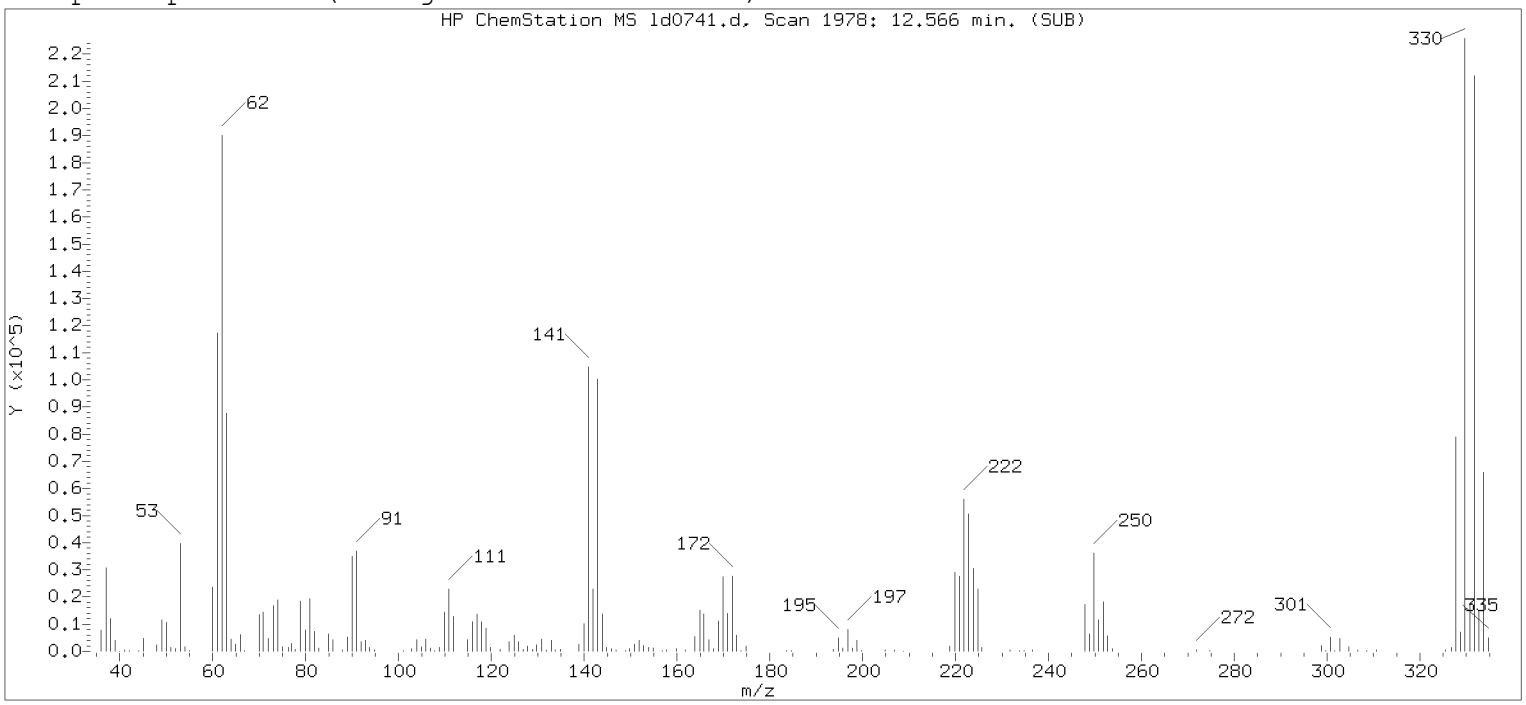
Compound Number : 136
Compound Name : N-Nitrosodiphenylamine
Scan Number : 1956
Retention Time (minutes) : 12.449
Quant Ion : 169.00
Area (flag) : 670755M
On-Column Amount (ng/ul) : 7.4383
Integration start scan : 1949 Integration stop scan: 1965
Y at integration start : 340 Y at integration end: 386

Reason for manual integration: improper integration

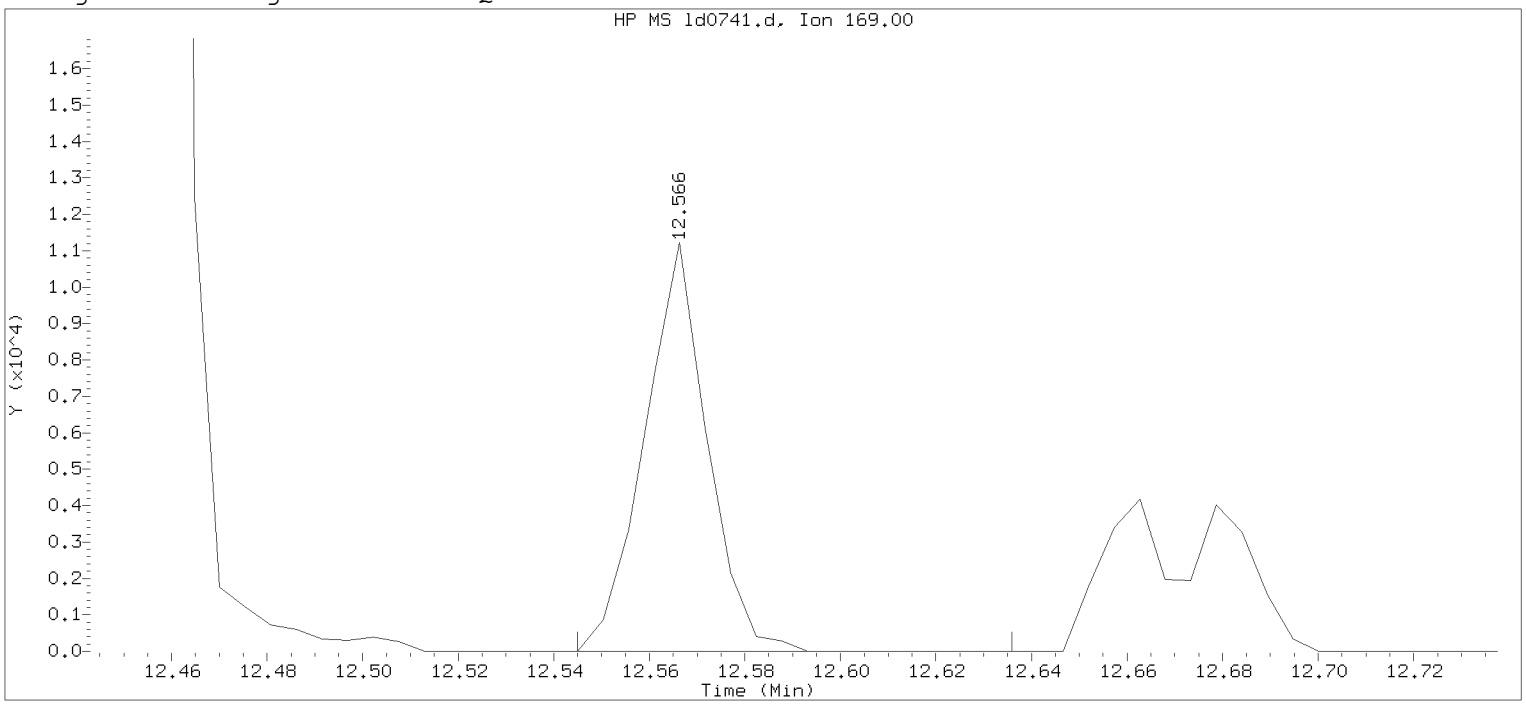
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

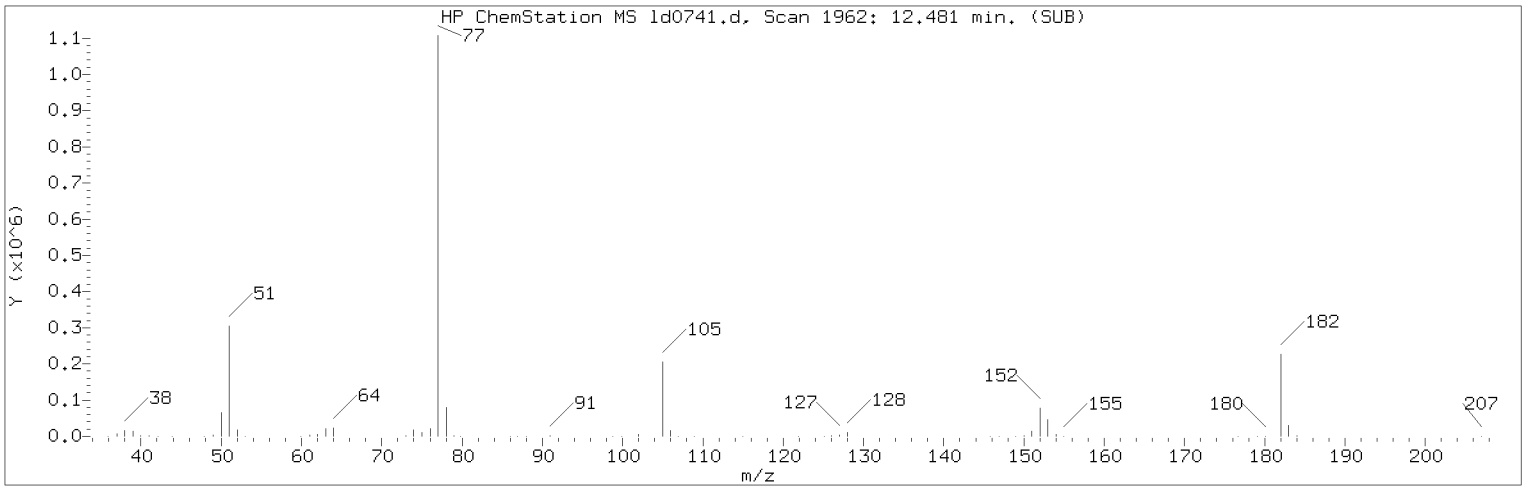
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

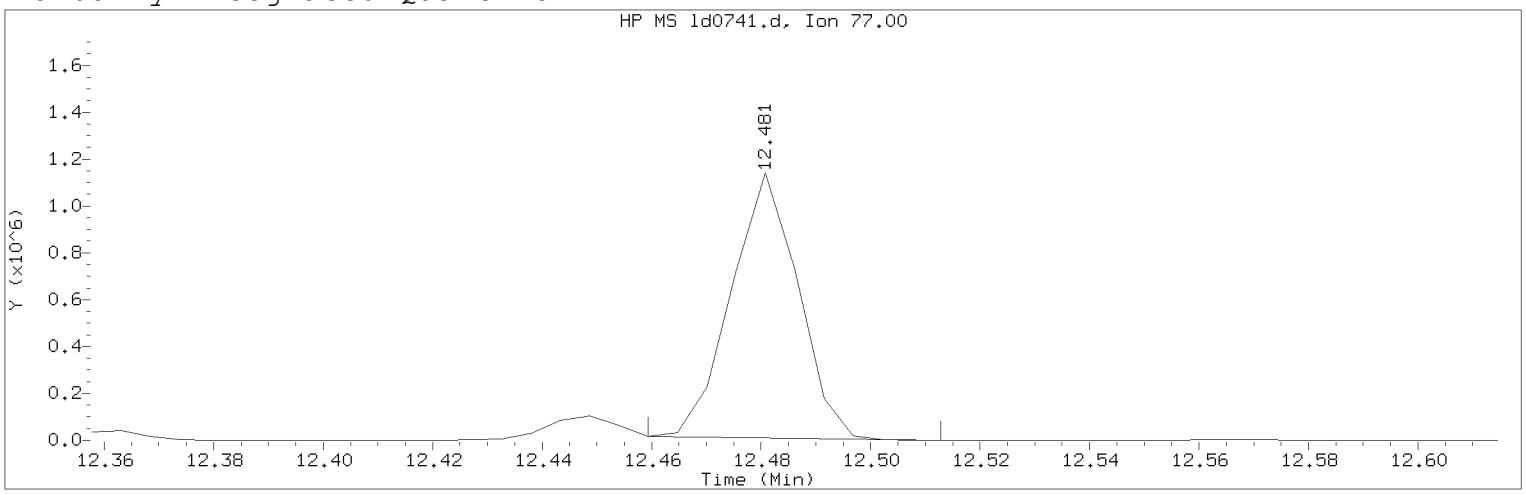
Compound Number	: 136		
Compound Name	: N-Nitrosodiphenylamine		
Scan Number	: 1978		
Retention Time (minutes)	: 12.566		
Quant Ion	: 169.00		
Area	: 10278		
On-column Amount (ng/ul)	: 12.5344		
Integration start scan	: 1973	Integration stop scan:	1990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

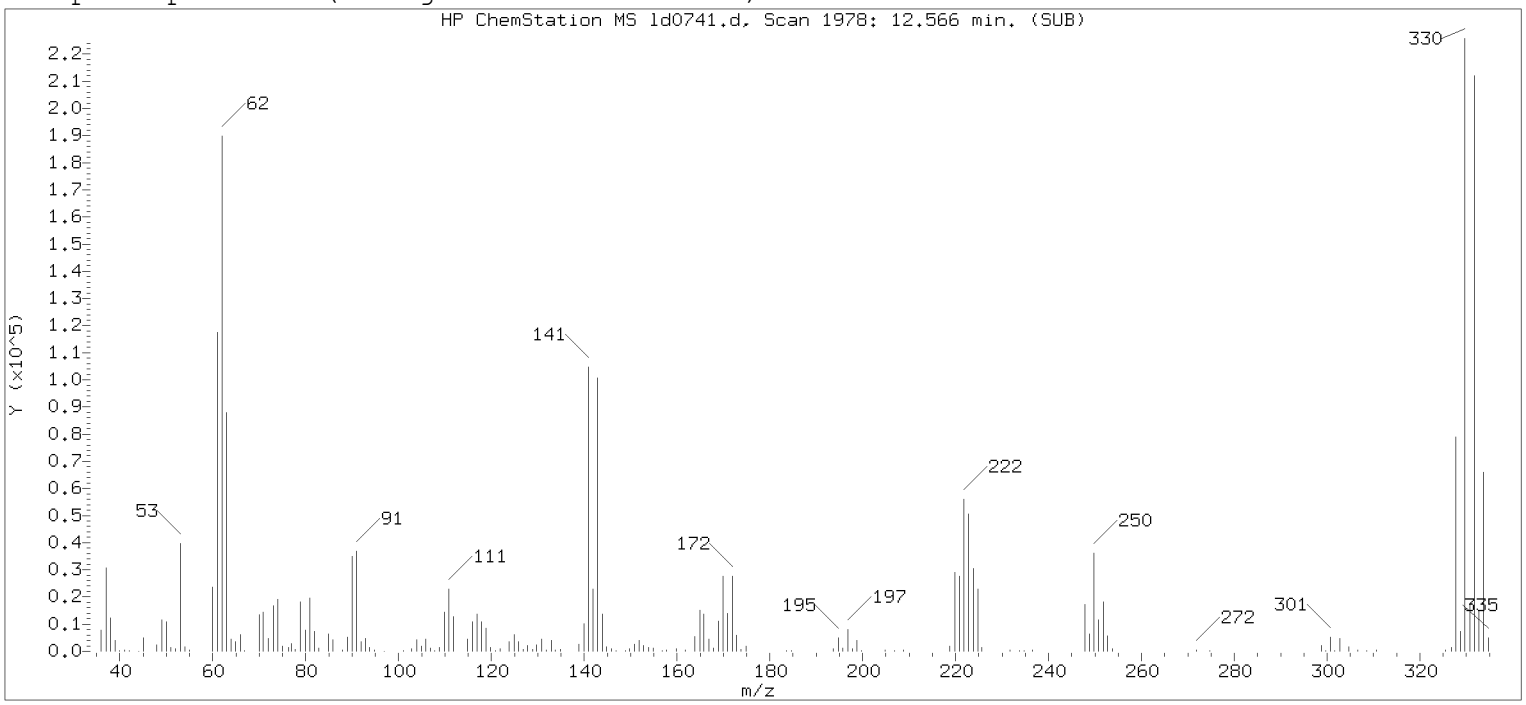
Compound Number : 139
Compound Name : 1,2-Diphenylhydrazine
Scan Number : 1962
Retention Time (minutes) : 12.481
Quant Ion : 77.00
Area (flag) : 956679M
On-Column Amount (ng/ul) : 7.6028
Integration start scan : 1957 Integration stop scan: 1967
Y at integration start : 16800 Y at integration end: 752

Reason for manual integration: improper integration

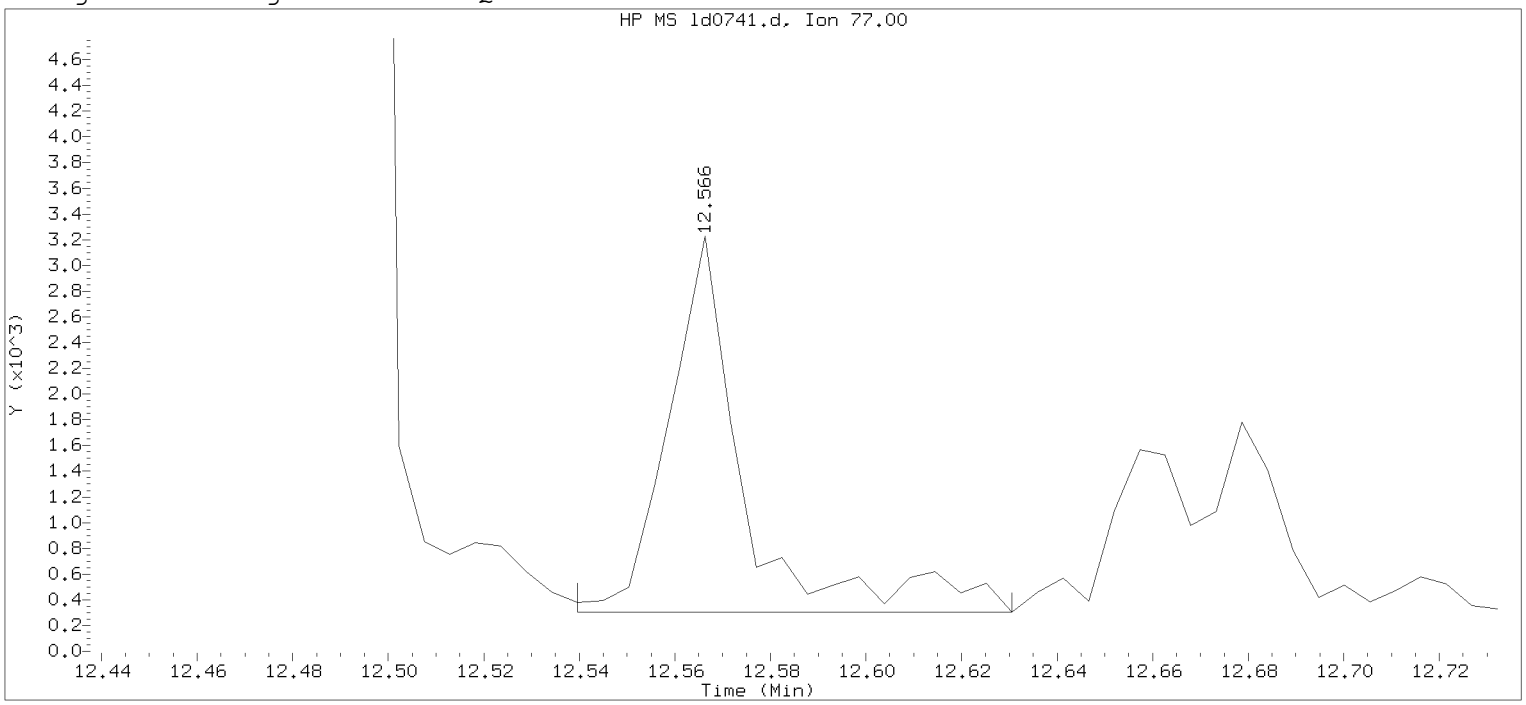
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

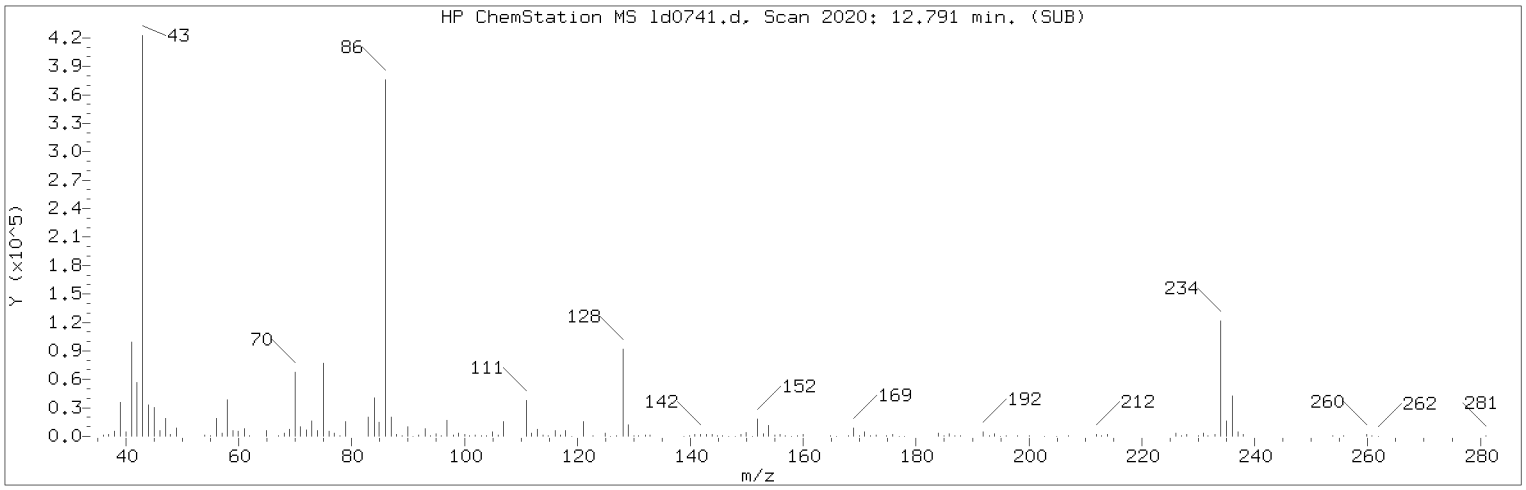
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

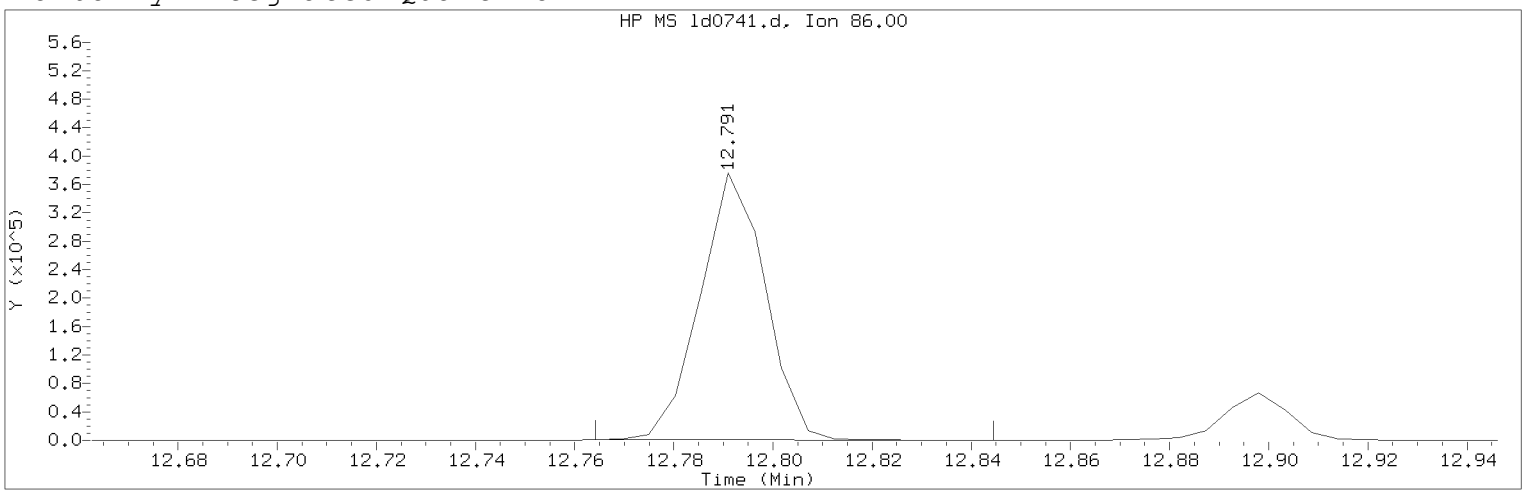
Compound Number	: 139		
Compound Name	: 1,2-Diphenylhydrazine		
Scan Number	: 1978		
Retention Time (minutes)	: 12.566		
Quant Ion	: 77.00		
Area	: 3205		
On-column Amount (ng/ul)	: 2.8011		
Integration start scan	: 1972	Integration stop scan:	1989
Y at integration start	: 306	Y at integration end:	306

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:46

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

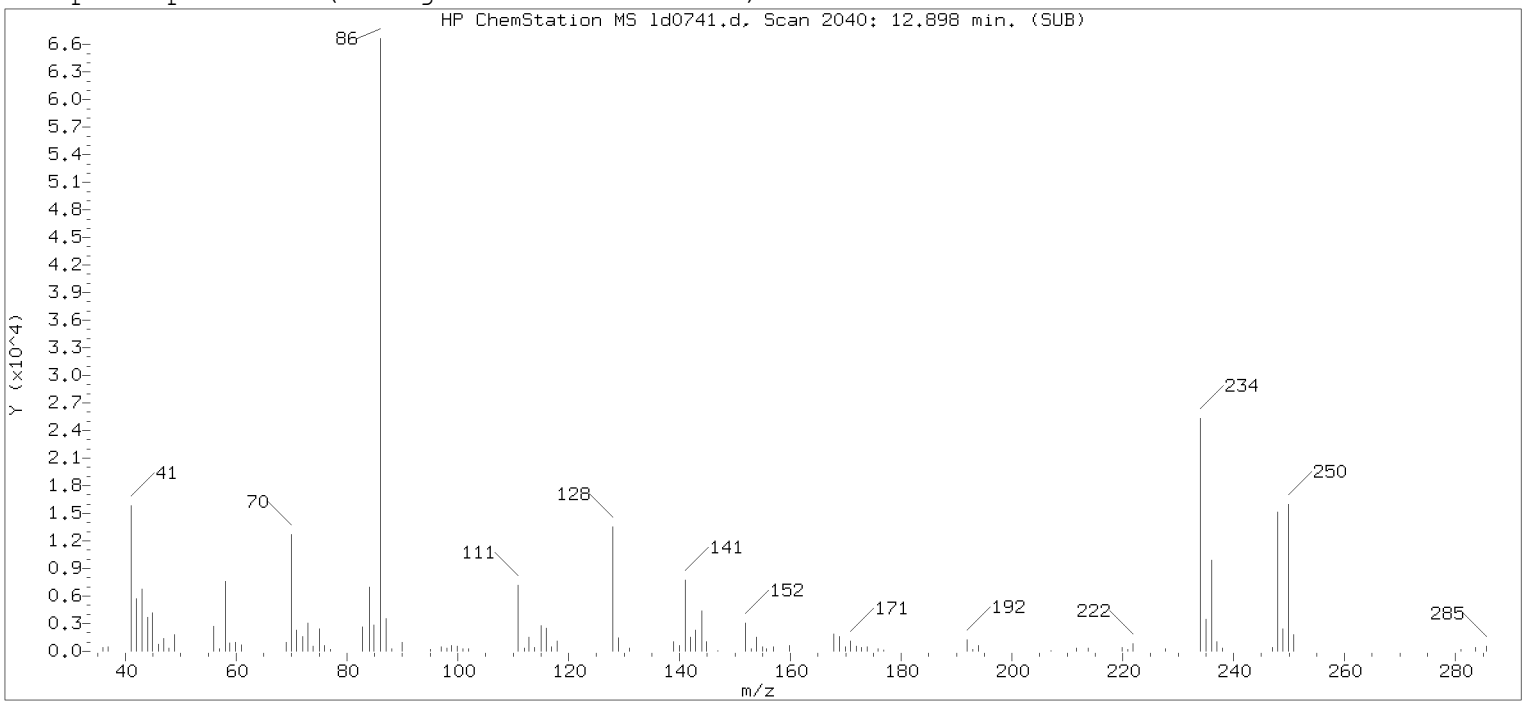
Compound Number : 145
Compound Name : Diallate (peak 1)
Scan Number : 2020
Retention Time (minutes) : 12.791
Quant Ion : 86.00
Area (flag) : 343493M
On-Column Amount (ng/ul) : 6.0299
Integration start scan : 2014 Integration stop scan: 2029
Y at integration start : 562 Y at integration end: 0

Reason for manual integration: improper integration

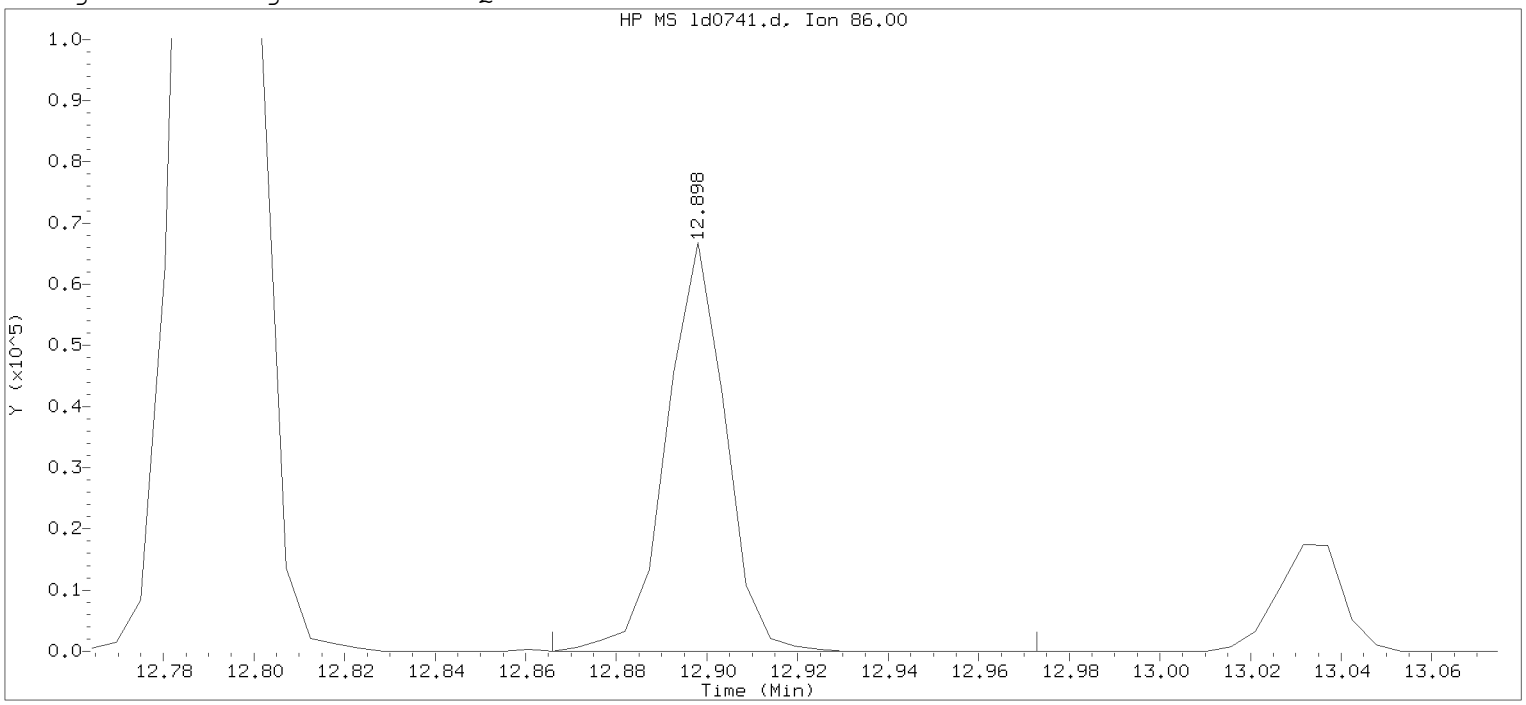
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

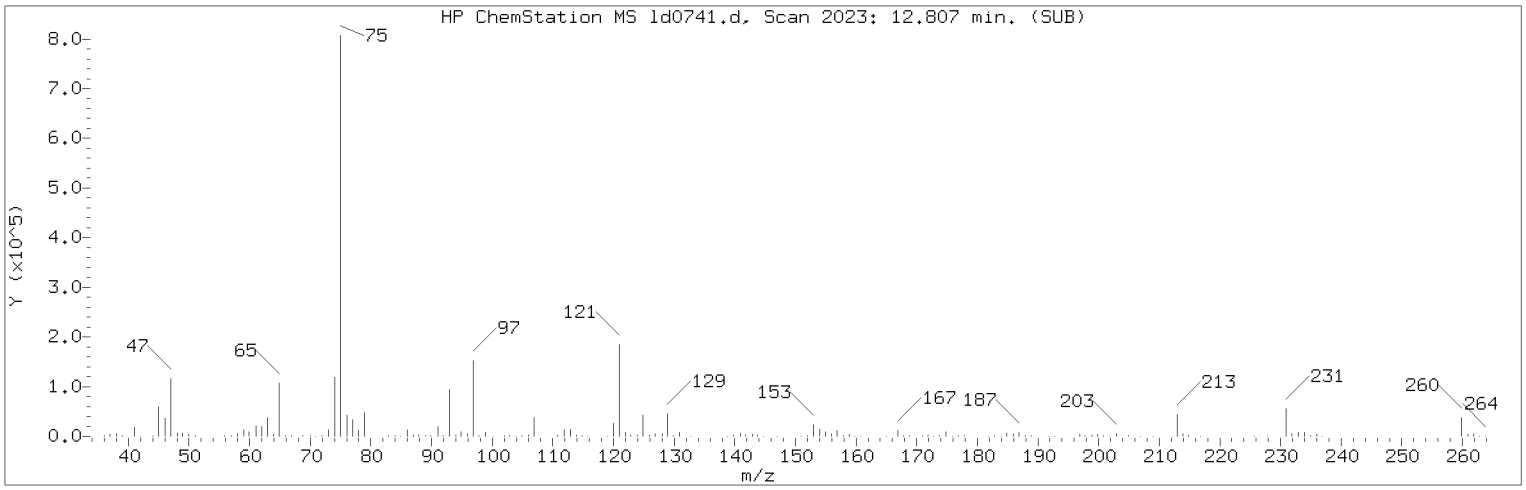
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

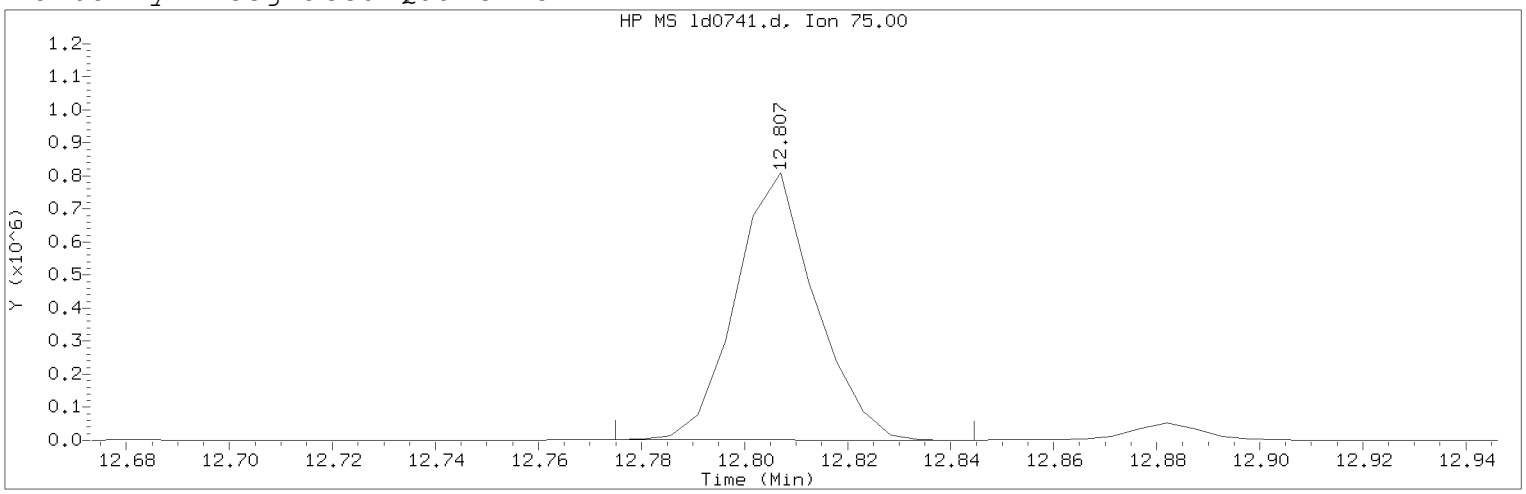
Compound Number	: 145		
Compound Name	: Diallate (peak 1)		
Scan Number	: 2040		
Retention Time (minutes)	: 12.898		
Quant Ion	: 86.00		
Area	: 60318		
On-column Amount (ng/ul)	: 116.4376		
Integration start scan	: 2033	Integration stop scan:	2053
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

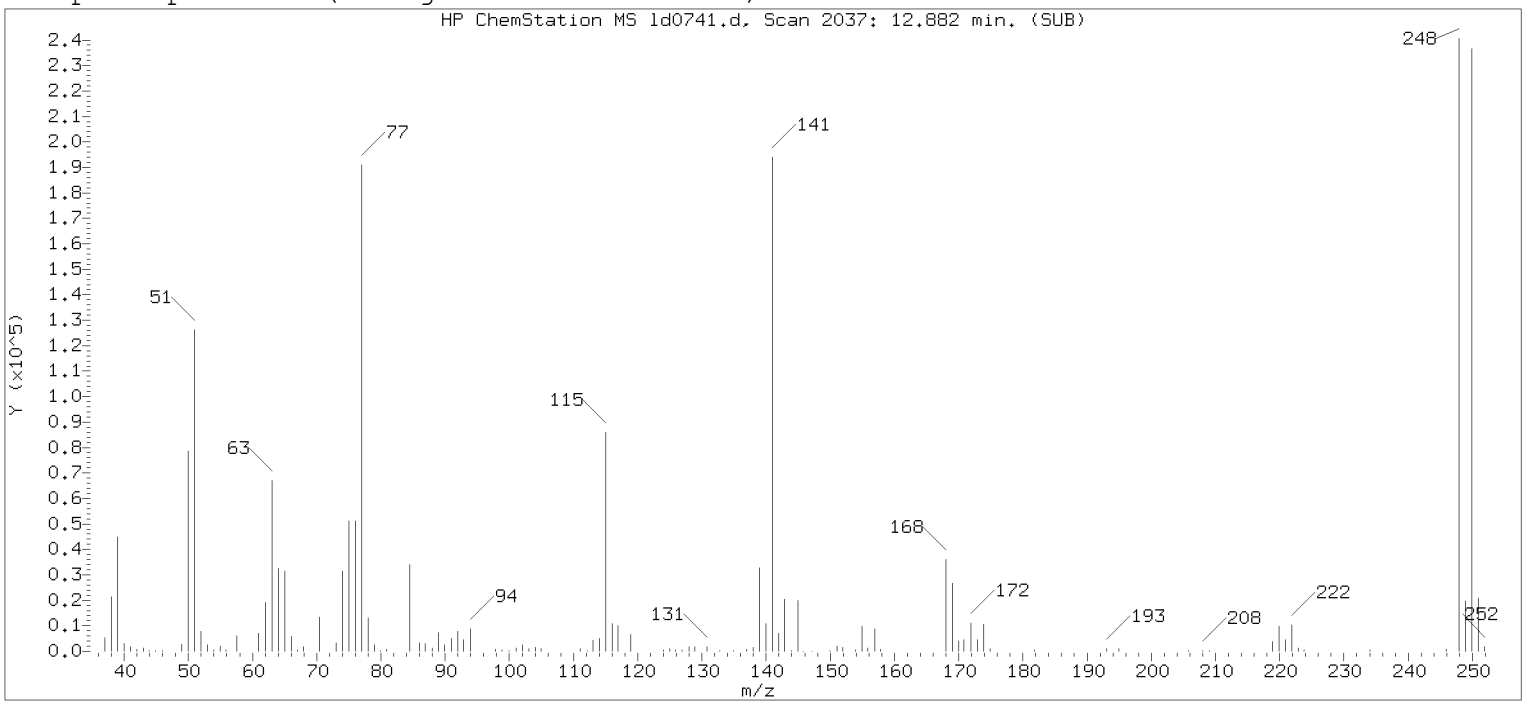
Compound Number : 146
Compound Name : Phorate
Scan Number : 2023
Retention Time (minutes) : 12.807
Quant Ion : 75.00
Area (flag) : 863315M
On-Column Amount (ng/ul) : 10.6969
Integration start scan : 2016 Integration stop scan: 2029
Y at integration start : 1951 Y at integration end: 689

Reason for manual integration: improper integration

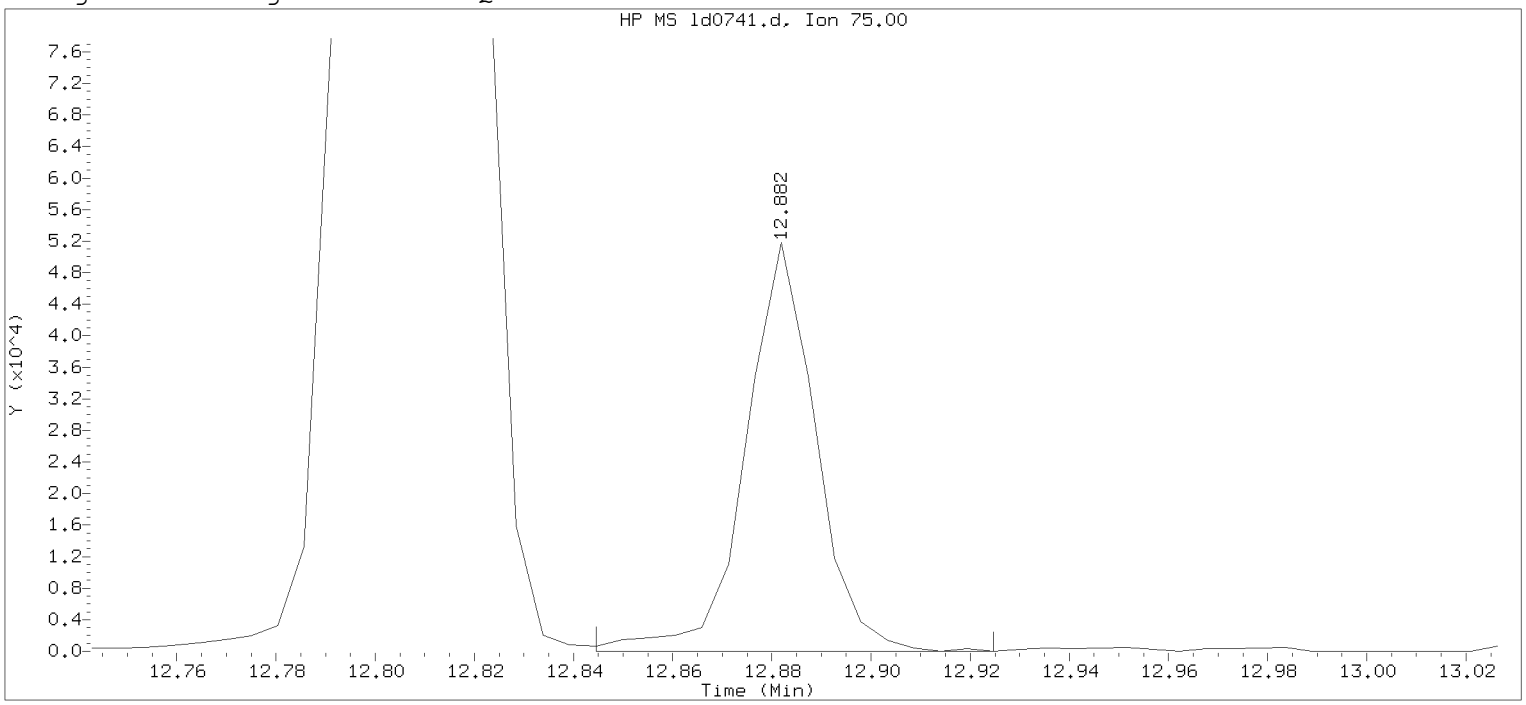
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

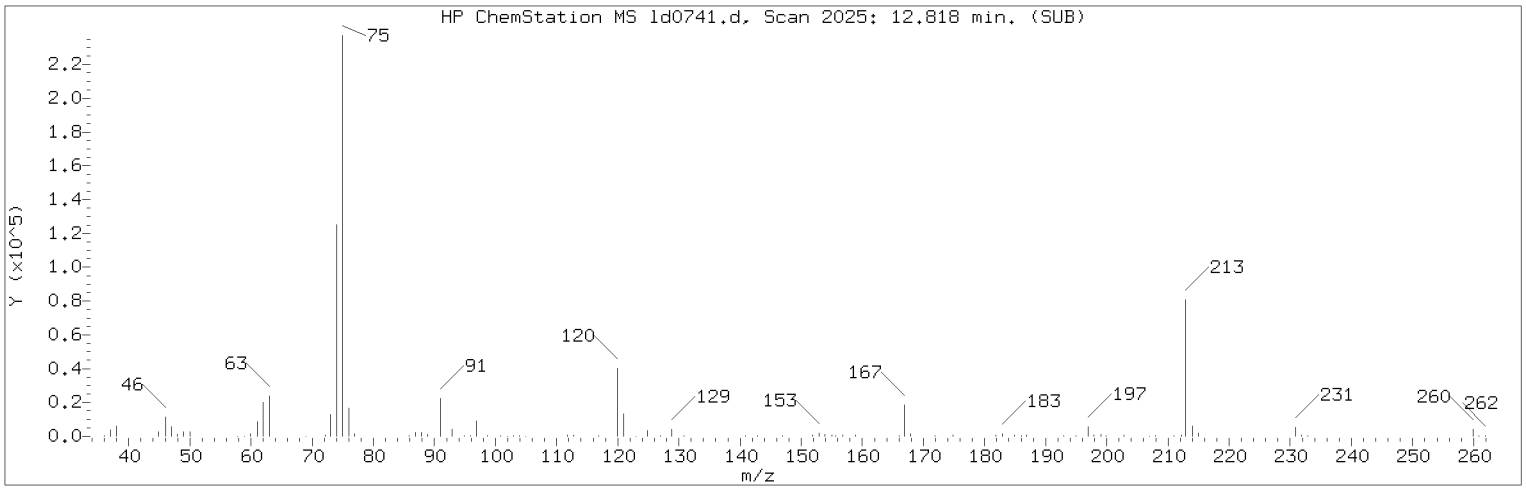
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

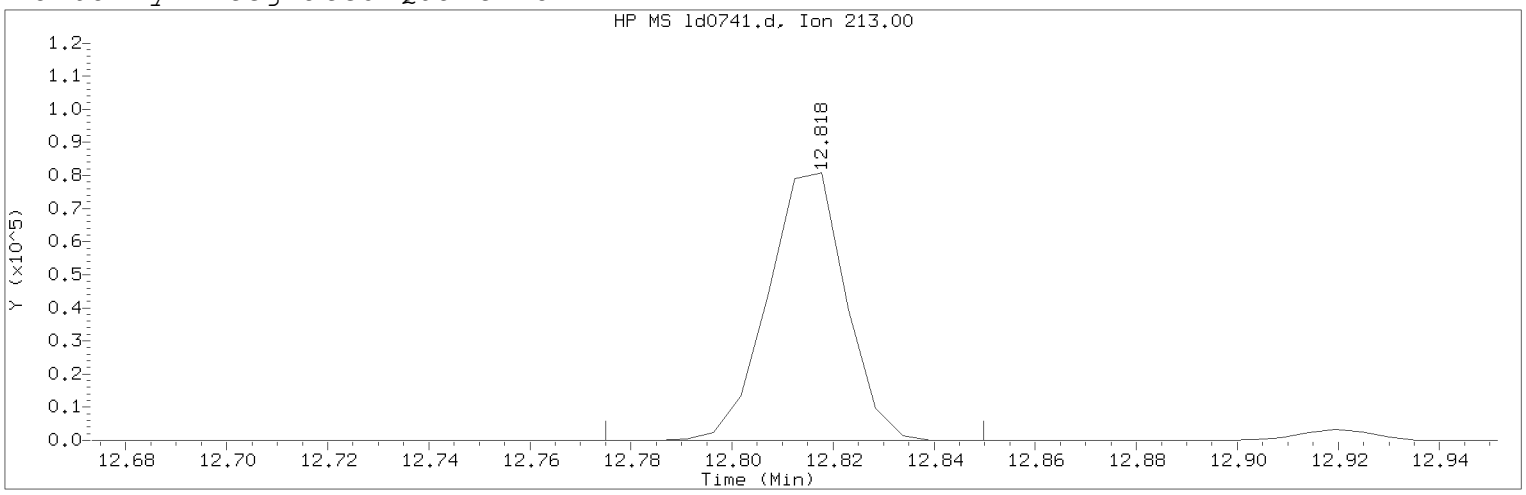
Compound Number	: 146		
Compound Name	: Phorate		
Scan Number	: 2037		
Retention Time (minutes)	: 12.882		
Quant Ion	: 75.00		
Area	: 50994		
On-column Amount (ng/ul)	: 69.4804		
Integration start scan	: 2029	Integration stop scan:	2044
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

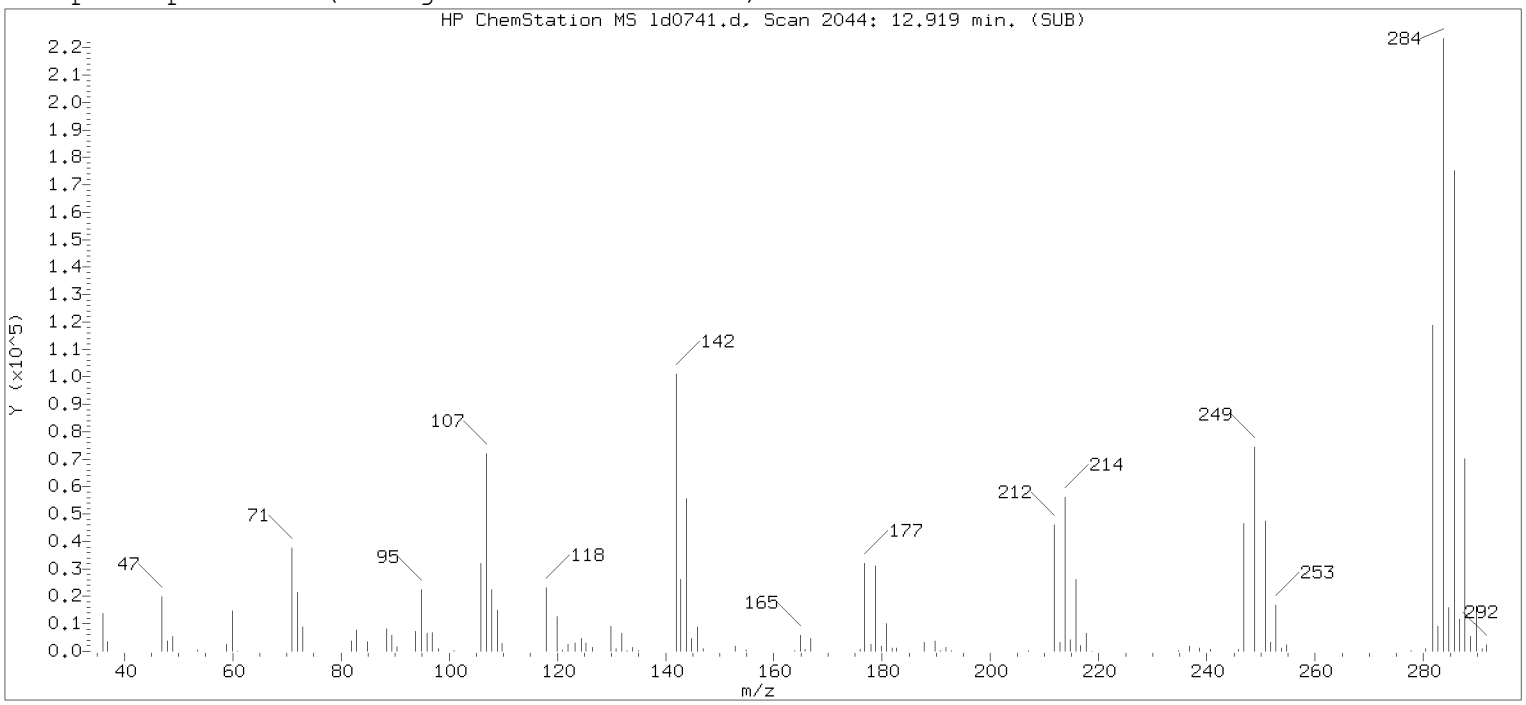
Compound Number	: 144
Compound Name	: 1,3,5-Trinitrobenzene
Scan Number	: 2025
Retention Time (minutes)	: 12.818
Quant Ion	: 213.00
Area (flag)	: 86621M
On-Column Amount (ng/ul)	: 7.2080
Integration start scan	: 2016 Integration stop scan: 2030
Y at integration start	: 0 Y at integration end: 0

Reason for manual integration: improper integration

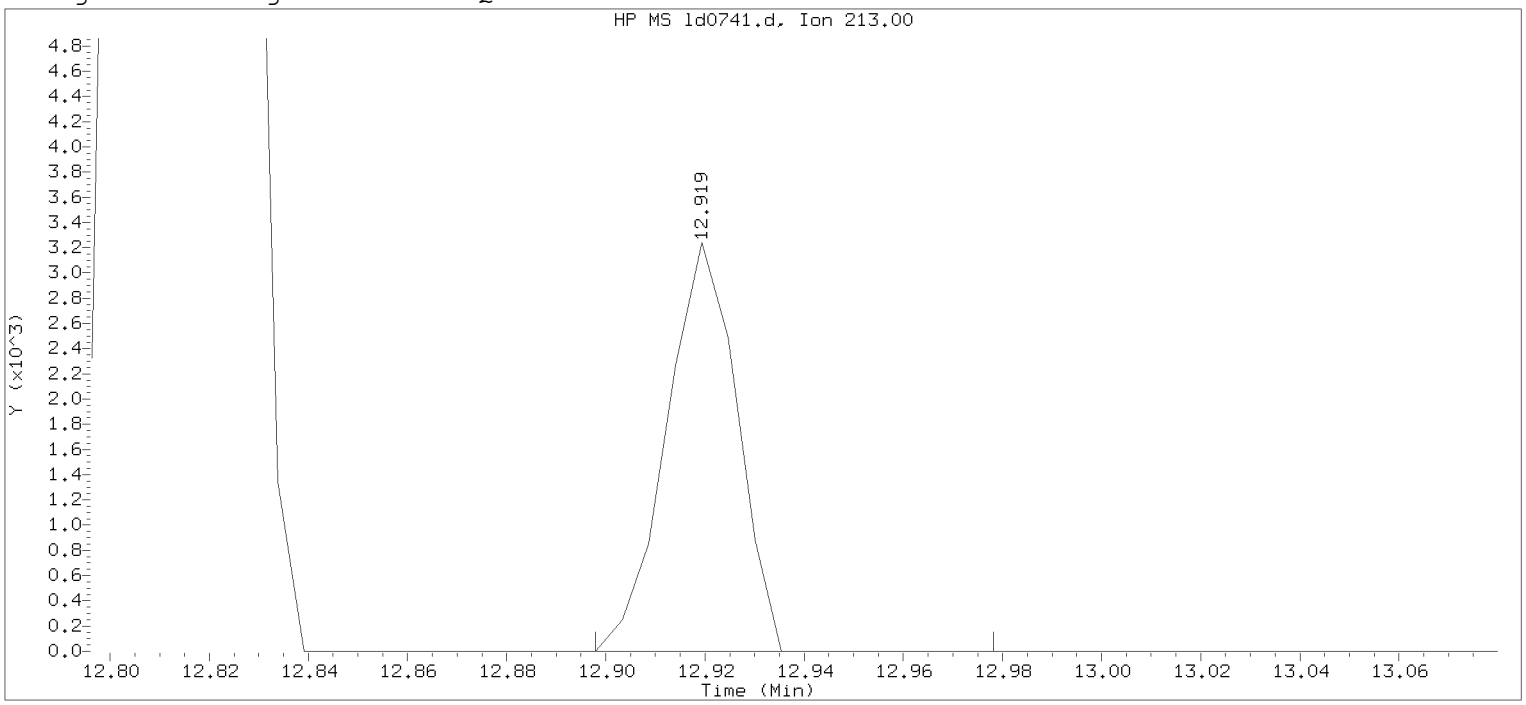
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

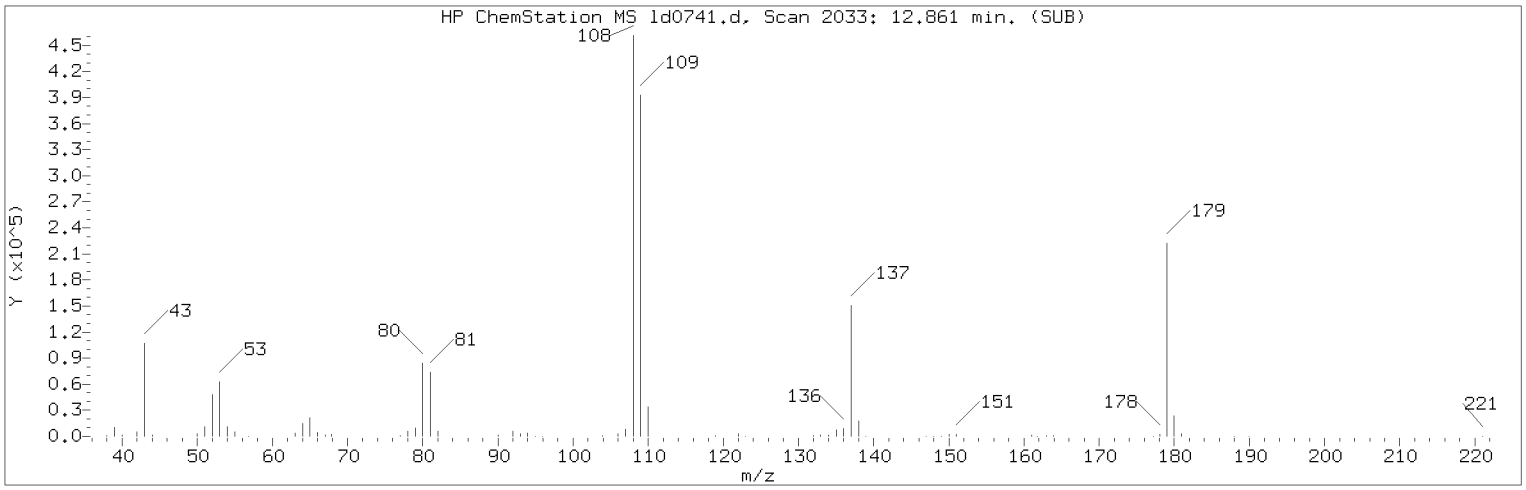
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

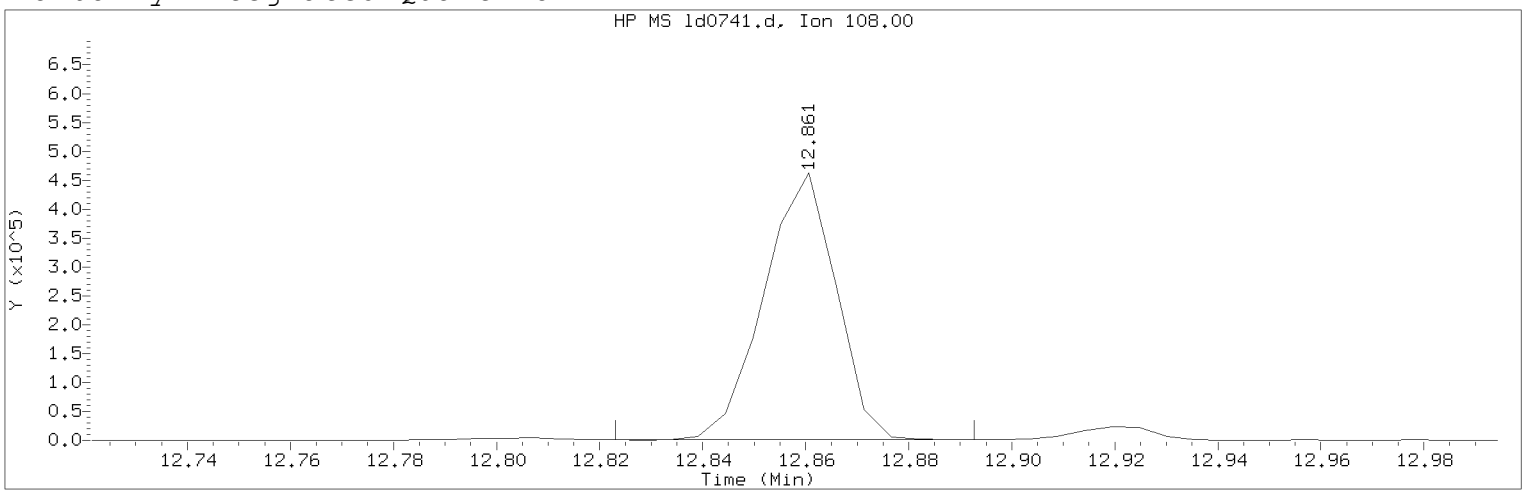
Compound Number	: 144		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 2044		
Retention Time (minutes)	: 12.919		
Quant Ion	: 213.00		
Area	: 3206		
On-column Amount (ng/ul)	: 29.3398		
Integration start scan	: 2039	Integration stop scan:	2054
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user name: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

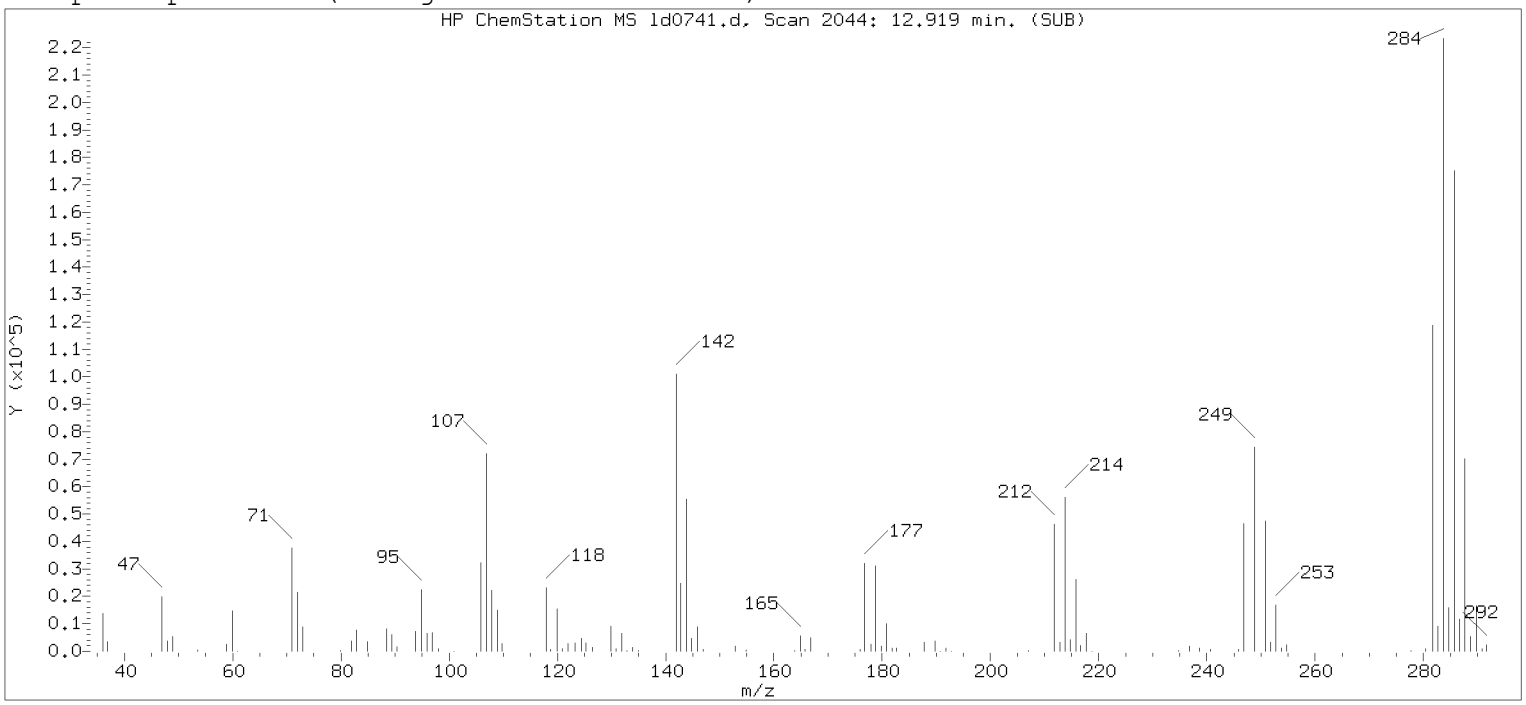
Compound Number : 147
Compound Name : Phenacetin
Scan Number : 2033
Retention Time (minutes) : 12.861
Quant Ion : 108.00
Area (flag) : 444884M
On-Column Amount (ng/ul) : 7.8058
Integration start scan : 2025 Integration stop scan: 2038
Y at integration start : 756 Y at integration end: 1368

Reason for manual integration: improper integration

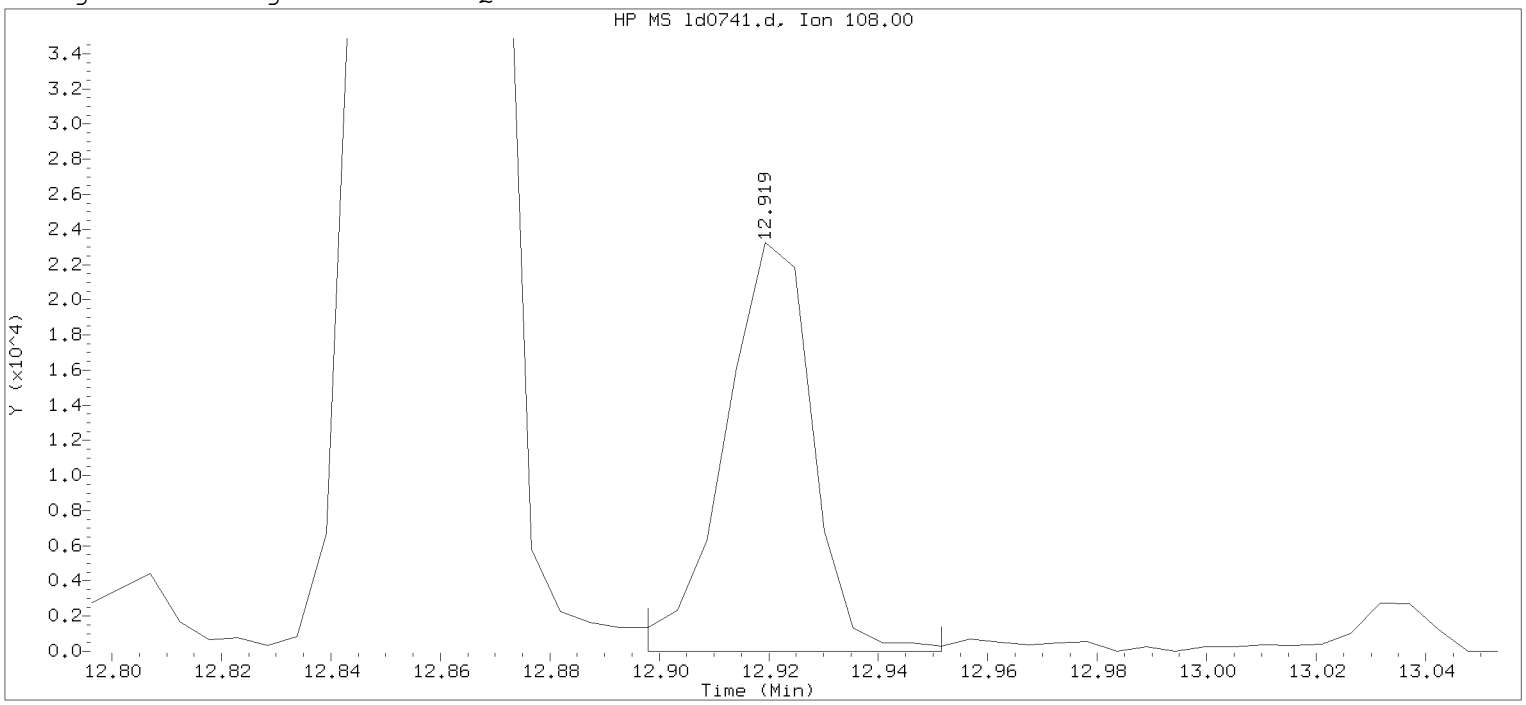
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

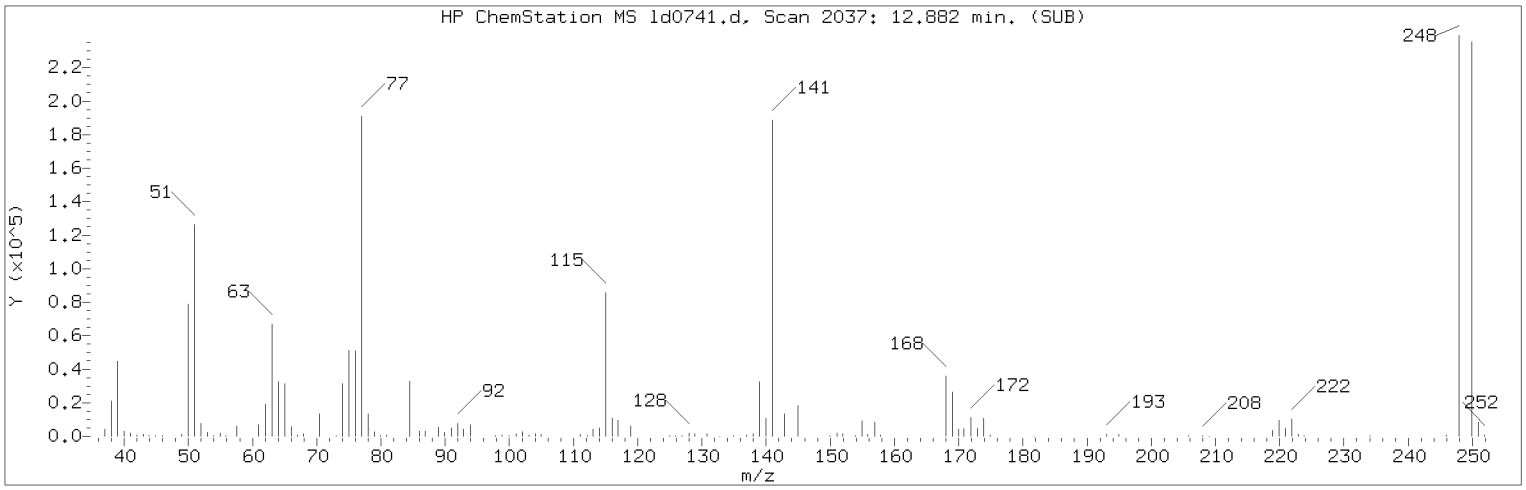
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

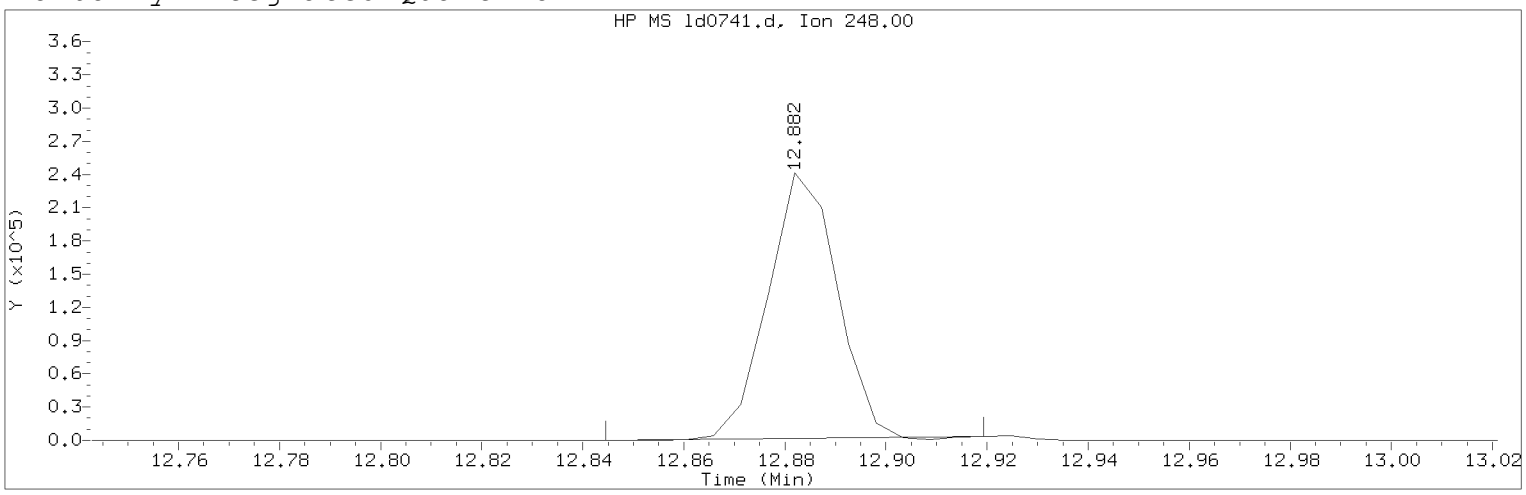
Compound Number	: 147		
Compound Name	: Phenacetin		
Scan Number	: 2044		
Retention Time (minutes)	: 12.919		
Quant Ion	: 108.00		
Area	: 25604		
On-column Amount (ng/ul)	: 49.4003		
Integration start scan	: 2039	Integration stop scan:	2049
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

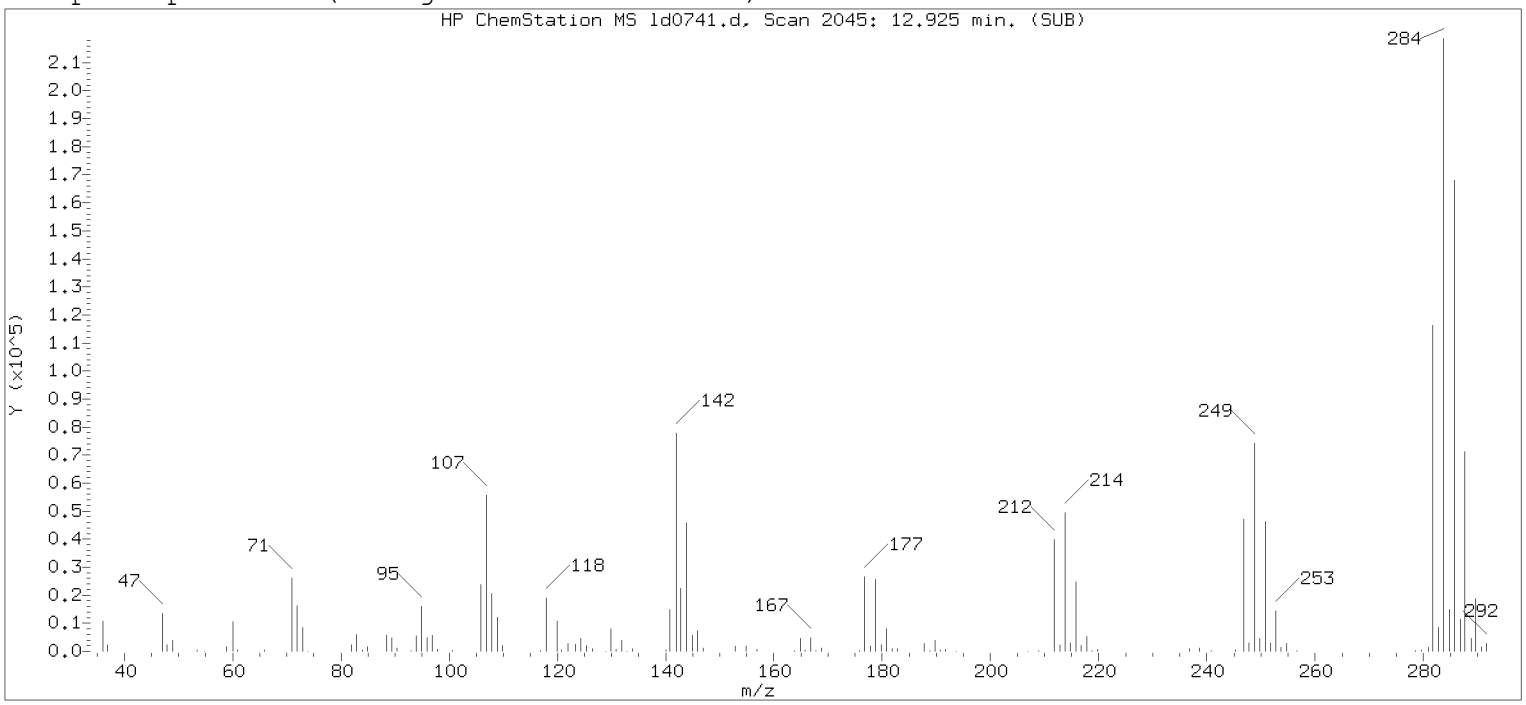
Compound Number : 148
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 2037
Retention Time (minutes) : 12.882
Quant Ion : 248.00
Area (flag) : 225524M
On-Column Amount (ng/ul) : 7.4848
Integration start scan : 2029 Integration stop scan: 2043
Y at integration start : 0 Y at integration end: 3723

Reason for manual integration: improper integration

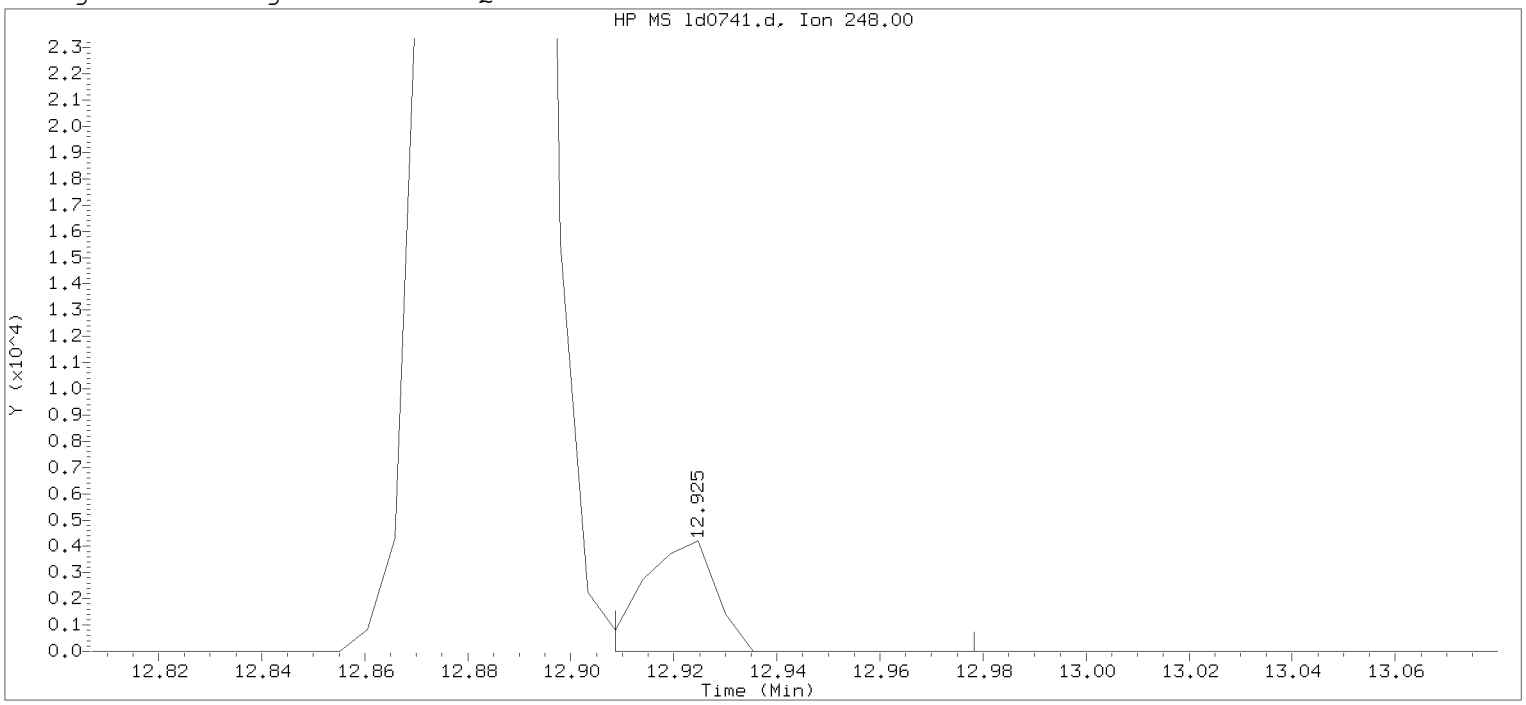
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

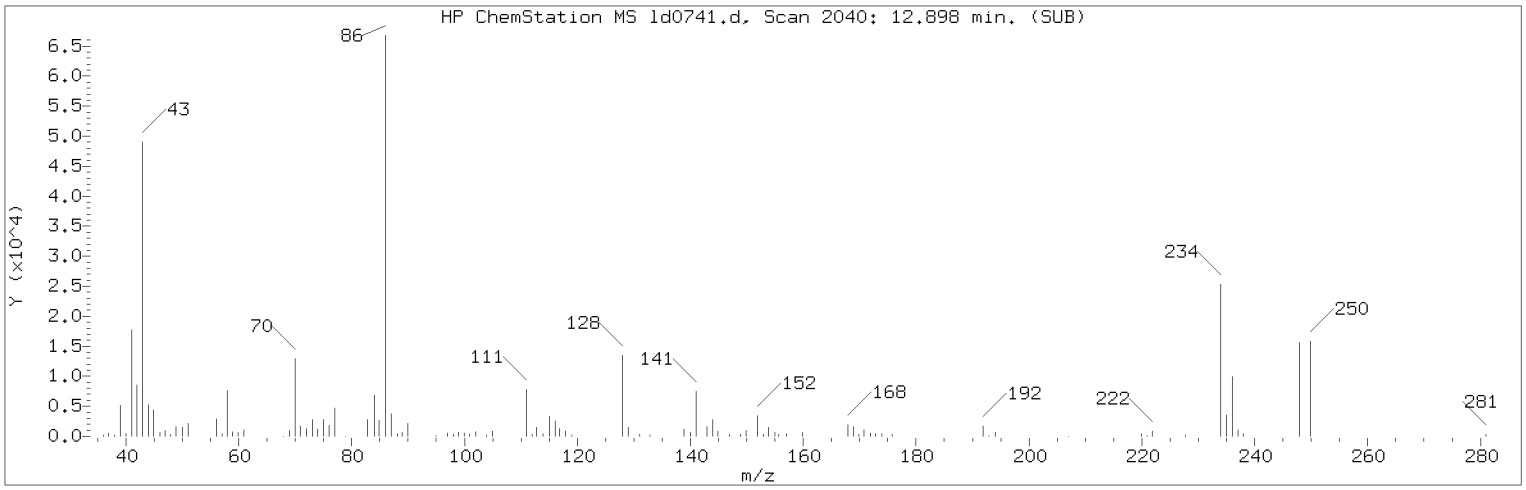
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

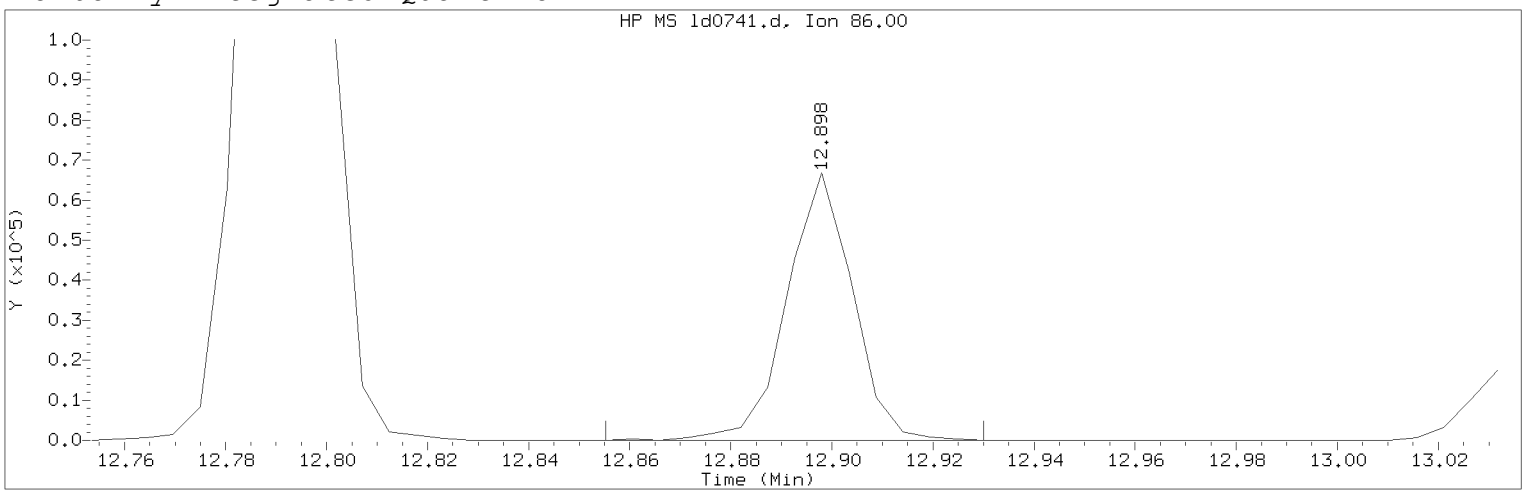
Compound Number : 148
Compound Name : 4-Bromophenyl-phenylether
Scan Number : 2045
Retention Time (minutes) : 12.925
Quant Ion : 248.00
Area : 4004
On-column Amount (ng/ul) : 14.6141
Integration start scan : 2041 Integration stop scan: 2054
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

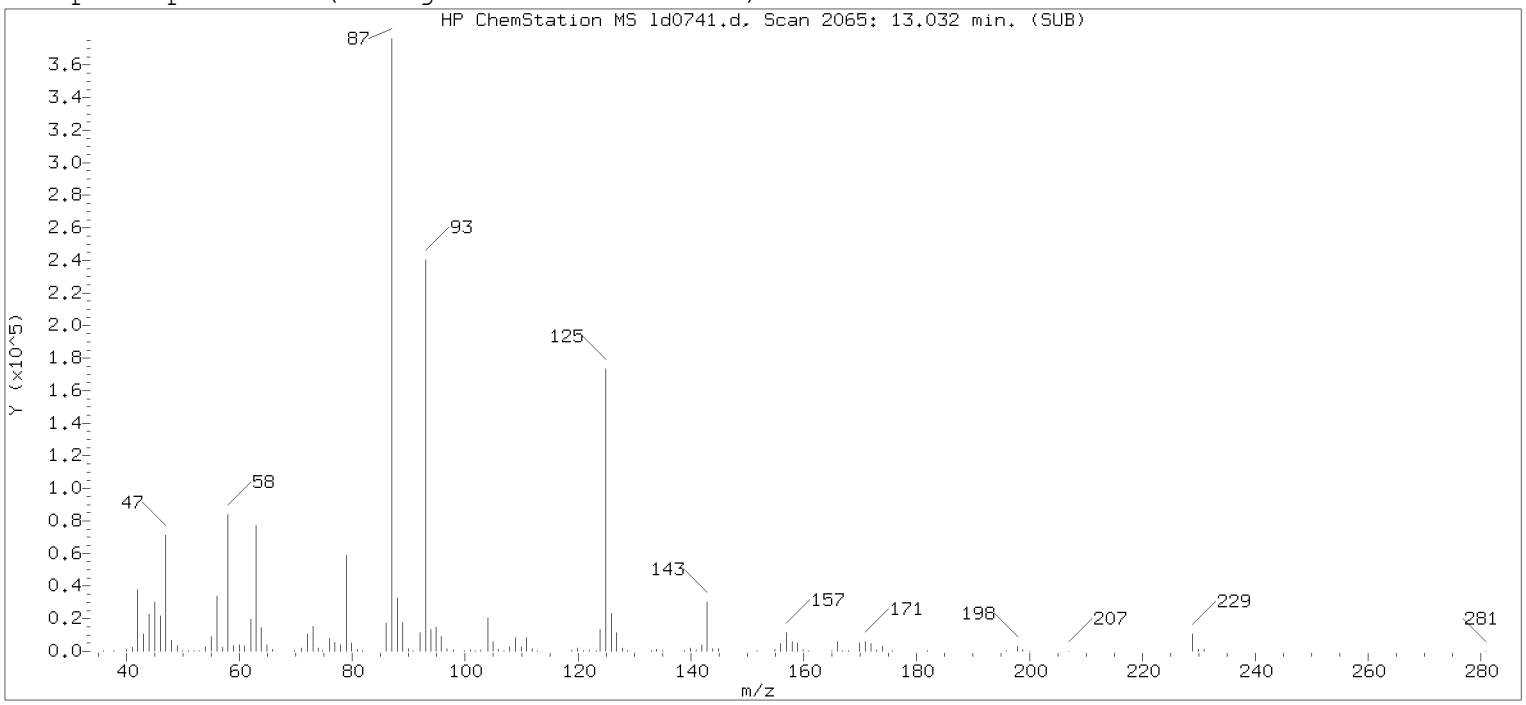
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2040
Retention Time (minutes) : 12.898
Quant Ion : 86.00
Area (flag) : 60408M
On-Column Amount (ng/ul) : 1.3380
Integration start scan : 2031 Integration stop scan: 2045
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

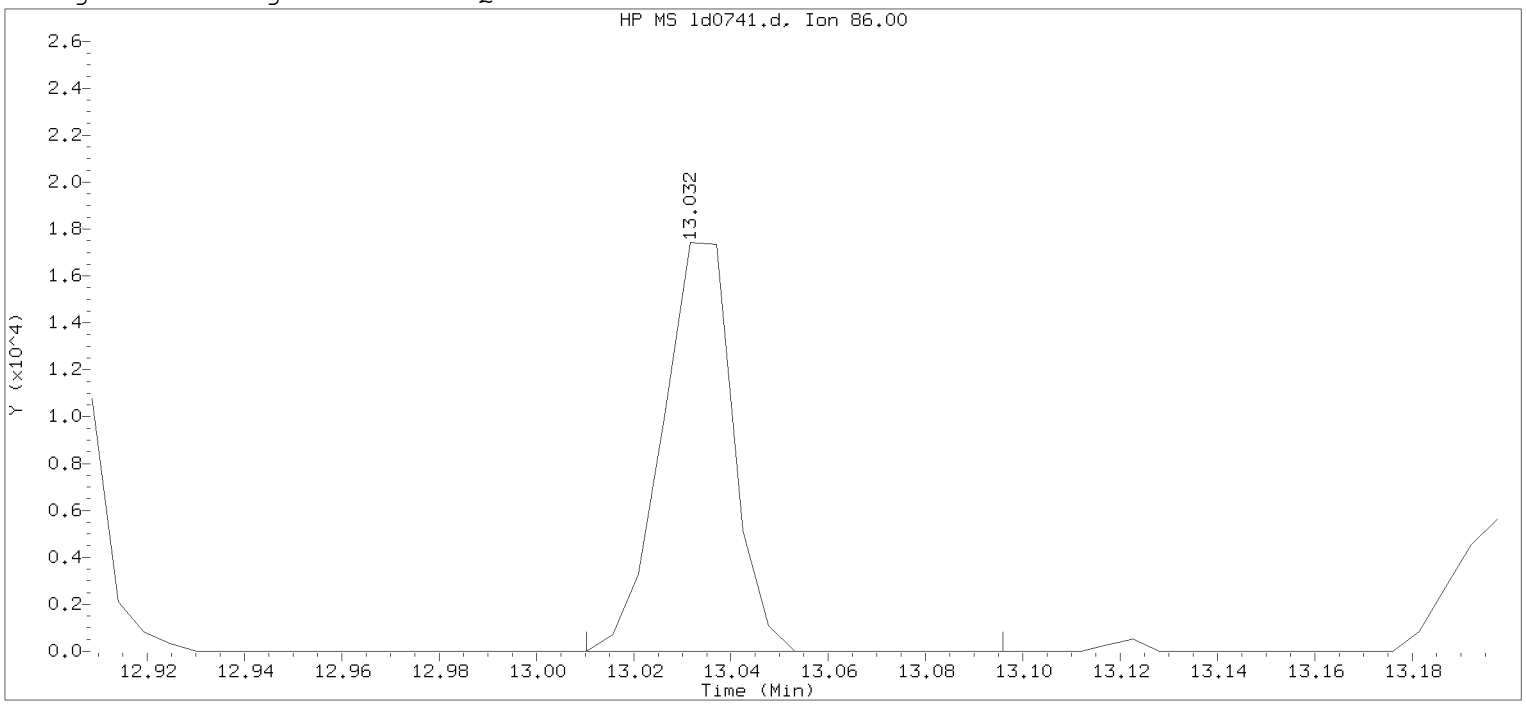
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

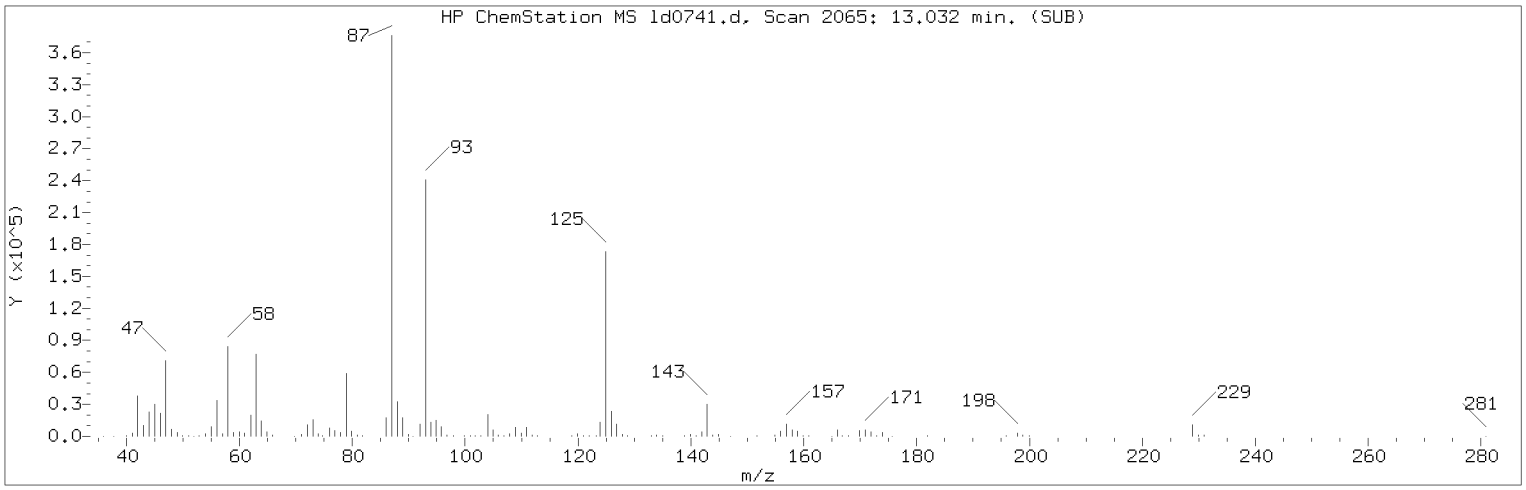
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

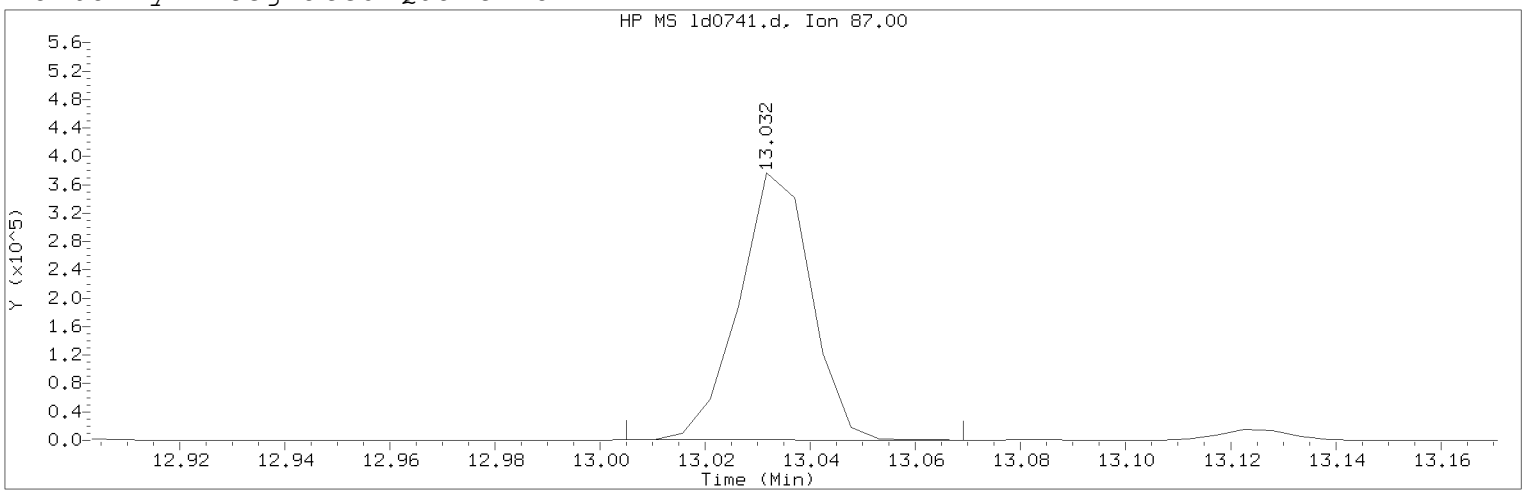
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2065		
Retention Time (minutes)	: 13.032		
Quant Ion	: 86.00		
Area	: 17667		
On-column Amount (ng/ul)	: 43.0313		
Integration start scan	: 2060	Integration stop scan:	2076
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 2057

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

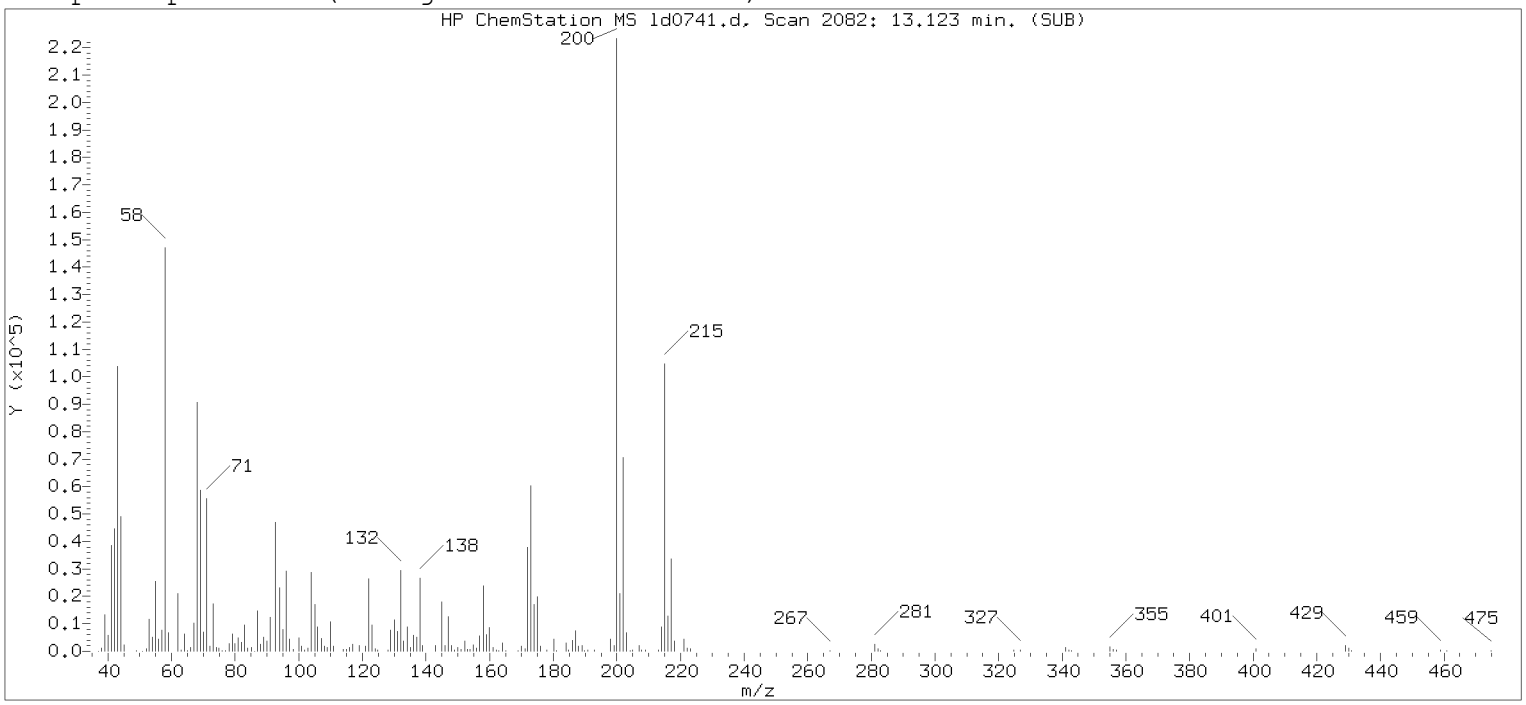
Compound Number : 152
Compound Name : Dimethoate
Scan Number : 2065
Retention Time (minutes) : 13.032
Quant Ion : 87.00
Area (flag) : 357483M
On-Column Amount (ng/ul) : 7.3603
Integration start scan : 2059 Integration stop scan: 2071
Y at integration start : 496 Y at integration end: 379

Reason for manual integration: improper integration

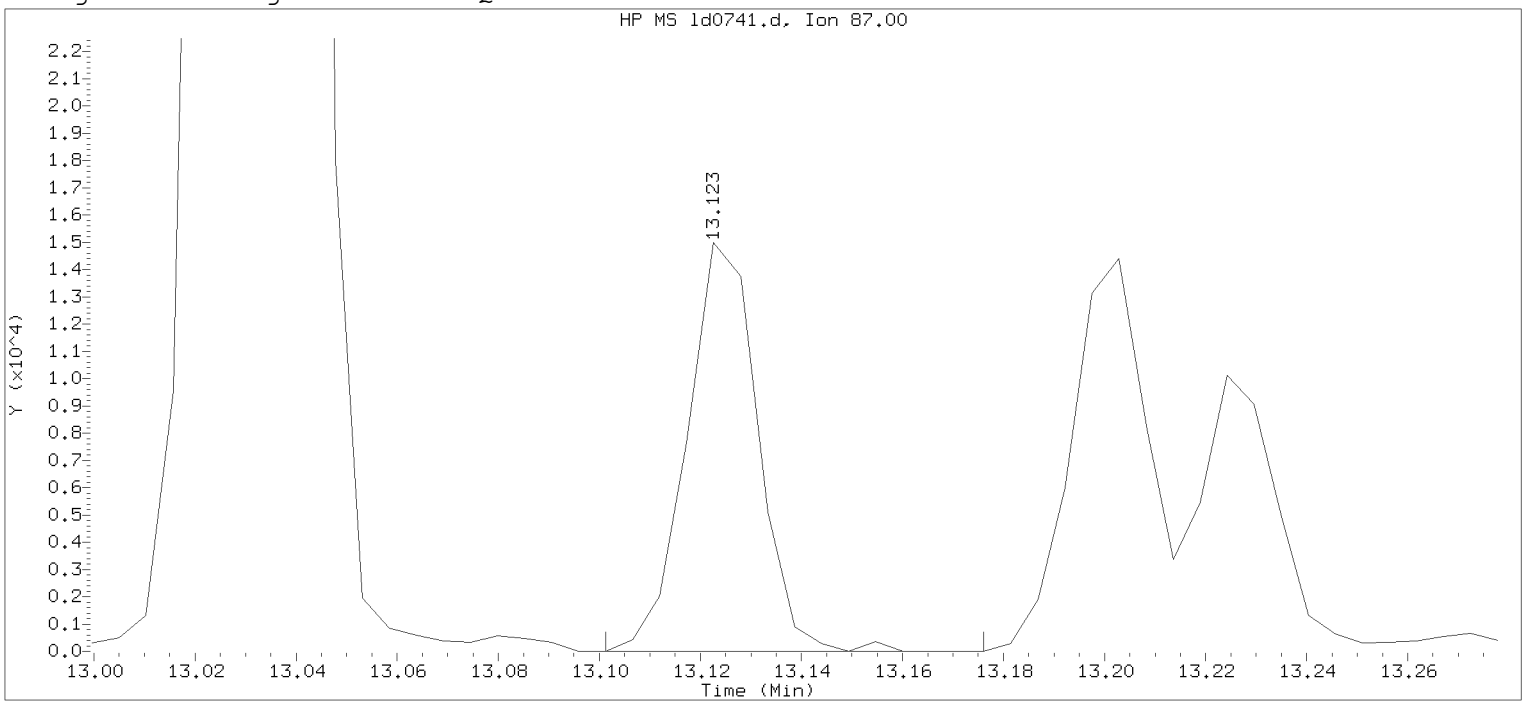
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

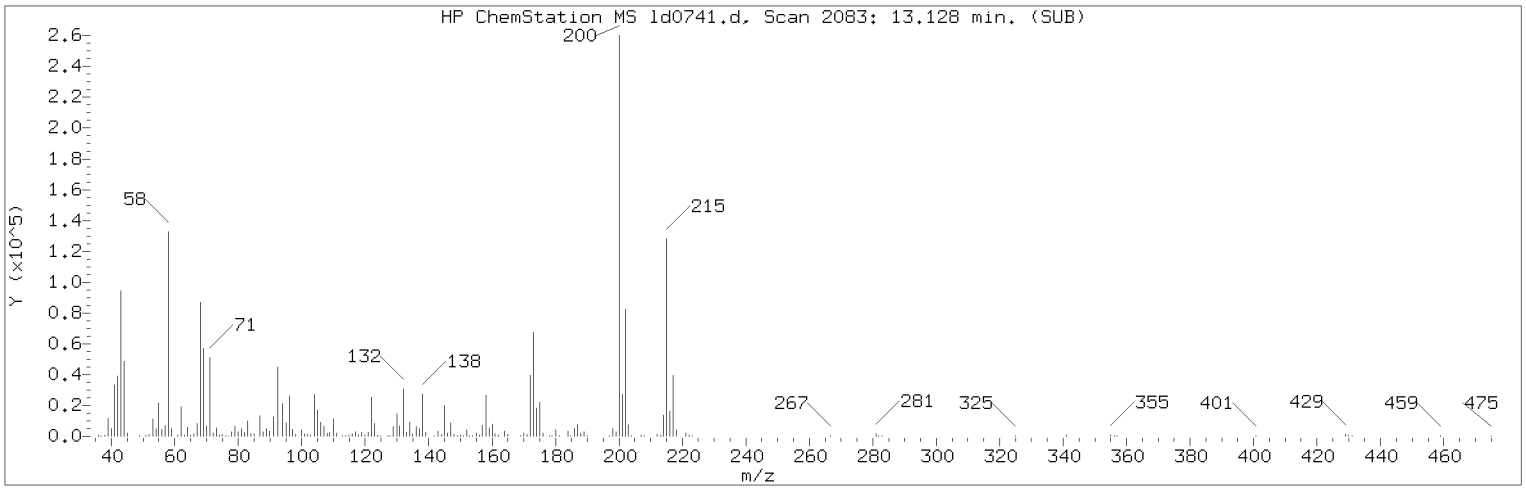
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

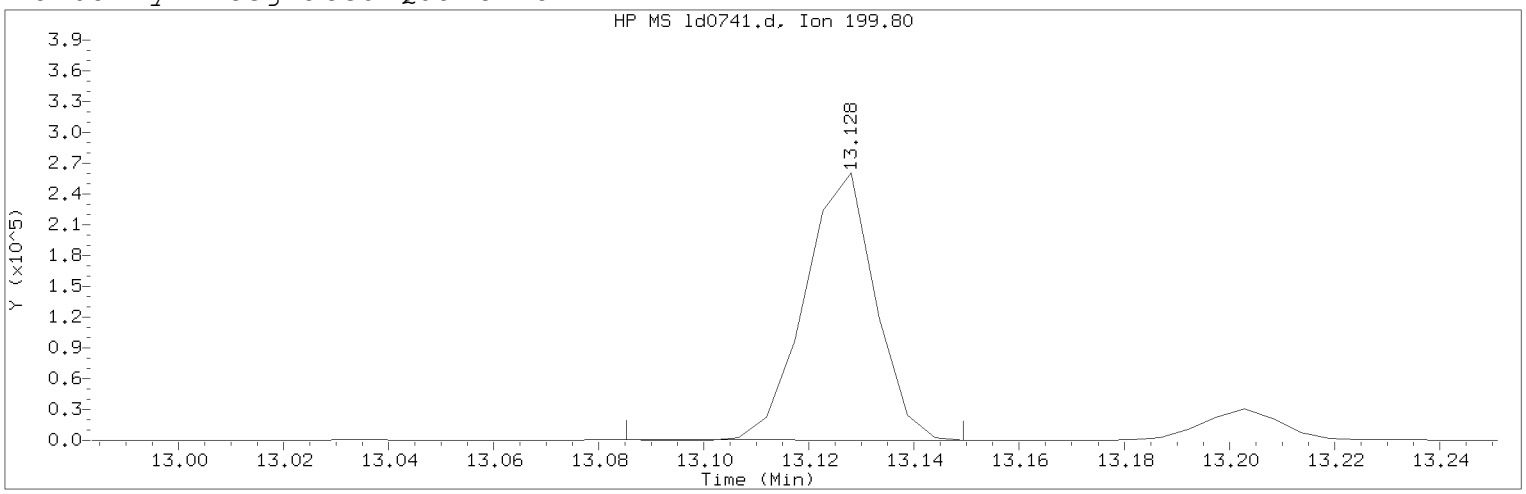
Compound Number	: 152		
Compound Name	: Dimethoate		
Scan Number	: 2082		
Retention Time (minutes)	: 13.123		
Quant Ion	: 87.00		
Area	: 14585		
On-column Amount (ng/ul)	: 33.0237		
Integration start scan	: 2077	Integration stop scan:	2091
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

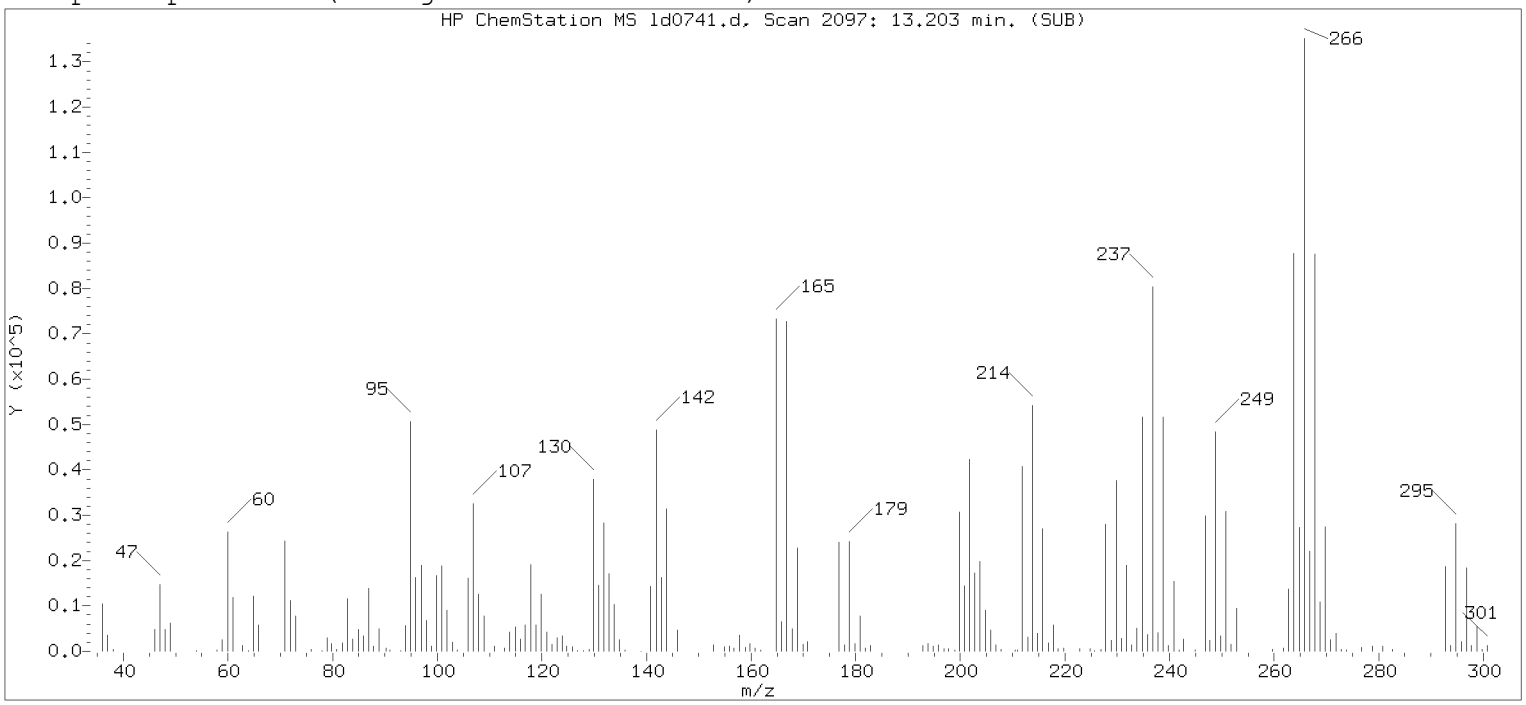
Compound Number : 153
Compound Name : Atrazine
Scan Number : 2083
Retention Time (minutes) : 13.128
Quant Ion : 200.00
Area (flag) : 240097M
On-Column Amount (ng/ul) : 7.8703
Integration start scan : 2074 Integration stop scan: 2086
Y at integration start : 417 Y at integration end: 265

Reason for manual integration: improper integration

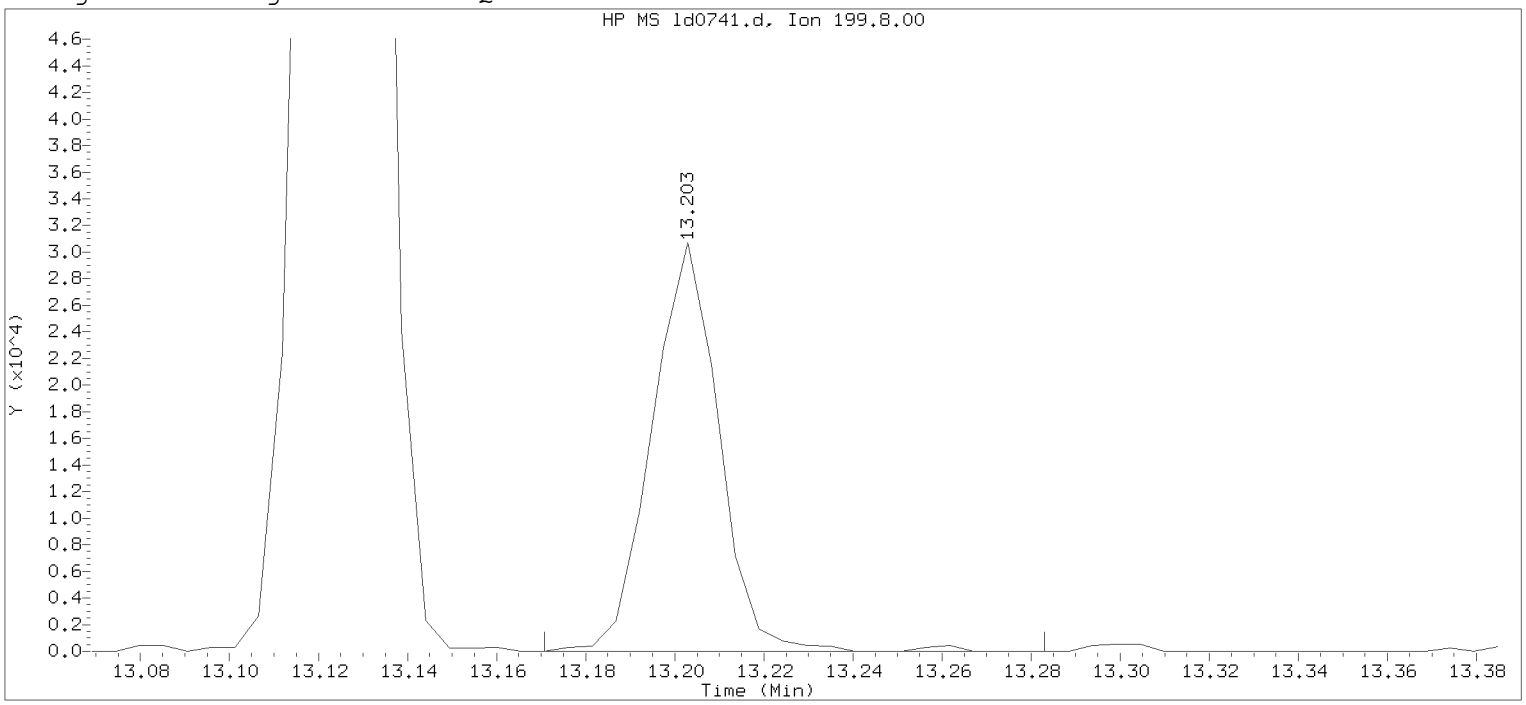
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

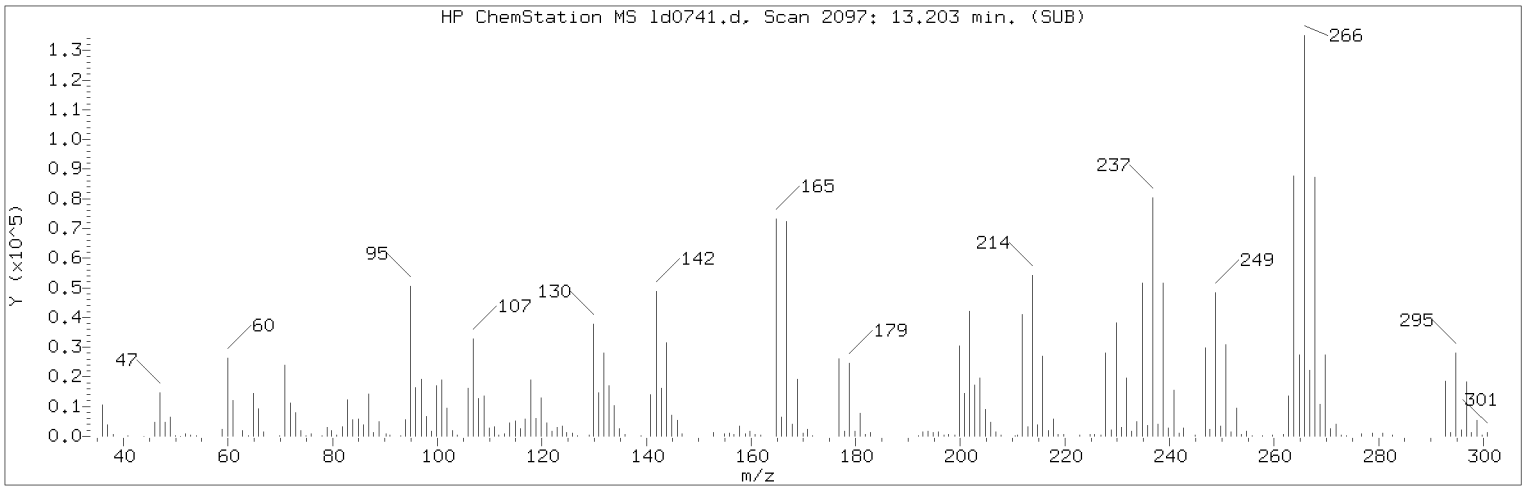
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

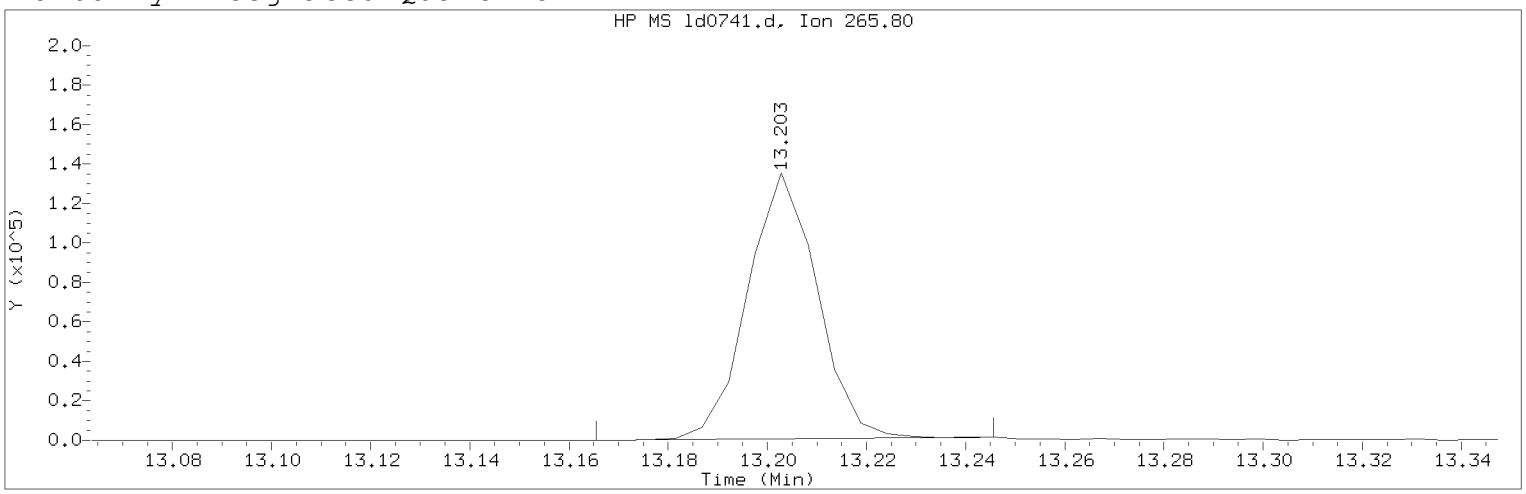
Compound Number	: 153		
Compound Name	: Atrazine		
Scan Number	: 2097		
Retention Time (minutes)	: 13.203		
Quant Ion	: 200.00		
Area	: 32020		
On-column Amount (ng/ul)	: 115.4228		
Integration start scan	: 2090	Integration stop scan:	2111
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

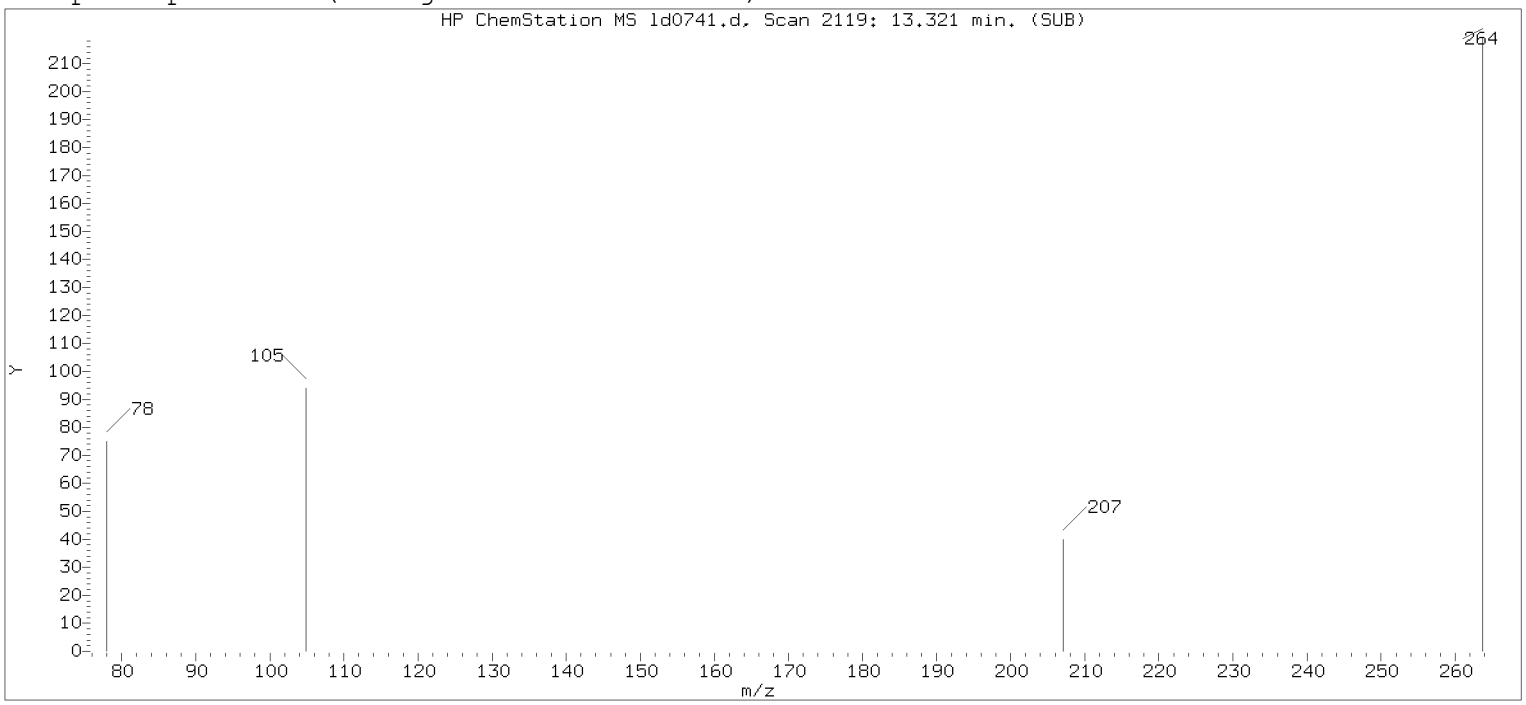
Compound Number : 154
Compound Name : Pentachlorophenol
Scan Number : 2097
Retention Time (minutes) : 13.203
Quant Ion : 266.00
Area (flag) : 131069M
On-Column Amount (ng/ul) : 6.9156
Integration start scan : 2089 Integration stop scan: 2104
Y at integration start : 0 Y at integration end: 1555

Reason for manual integration: improper integration

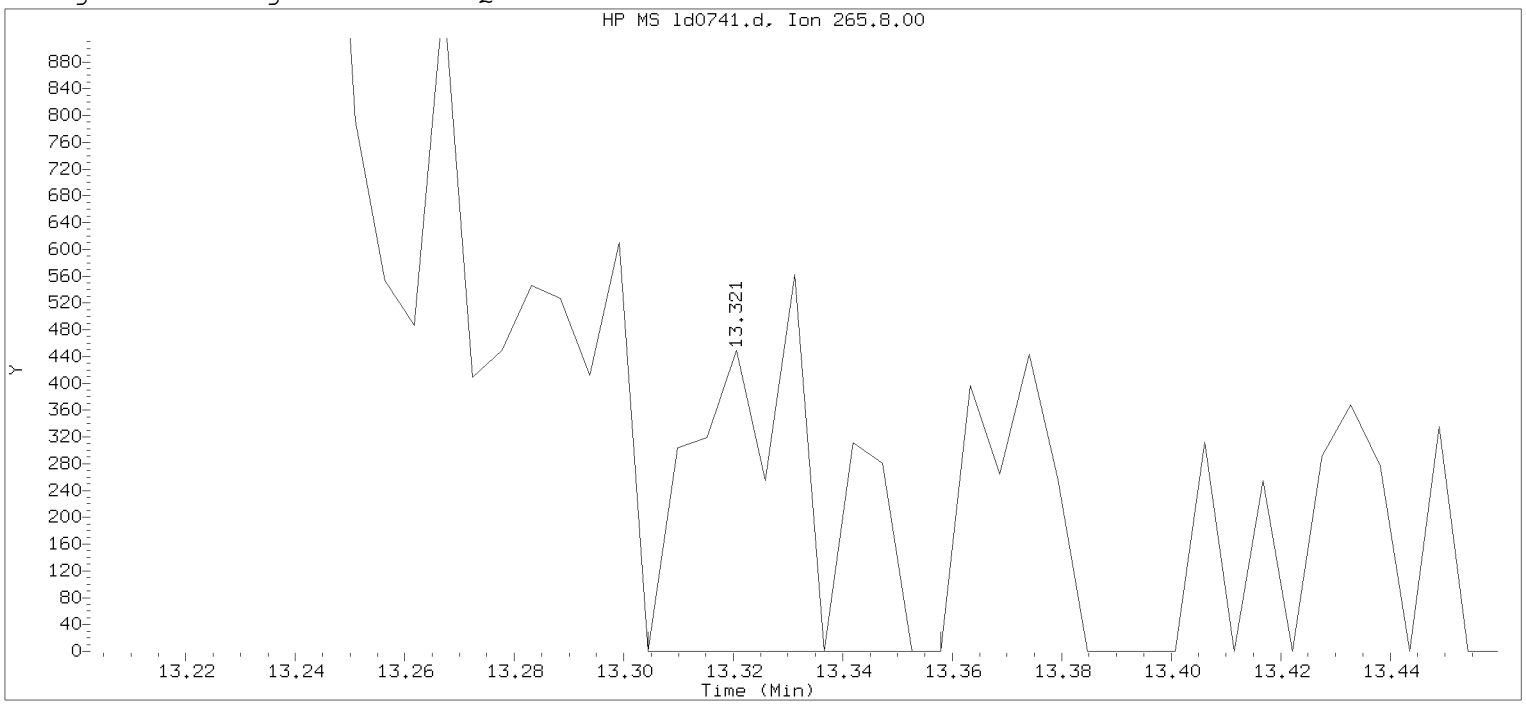
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

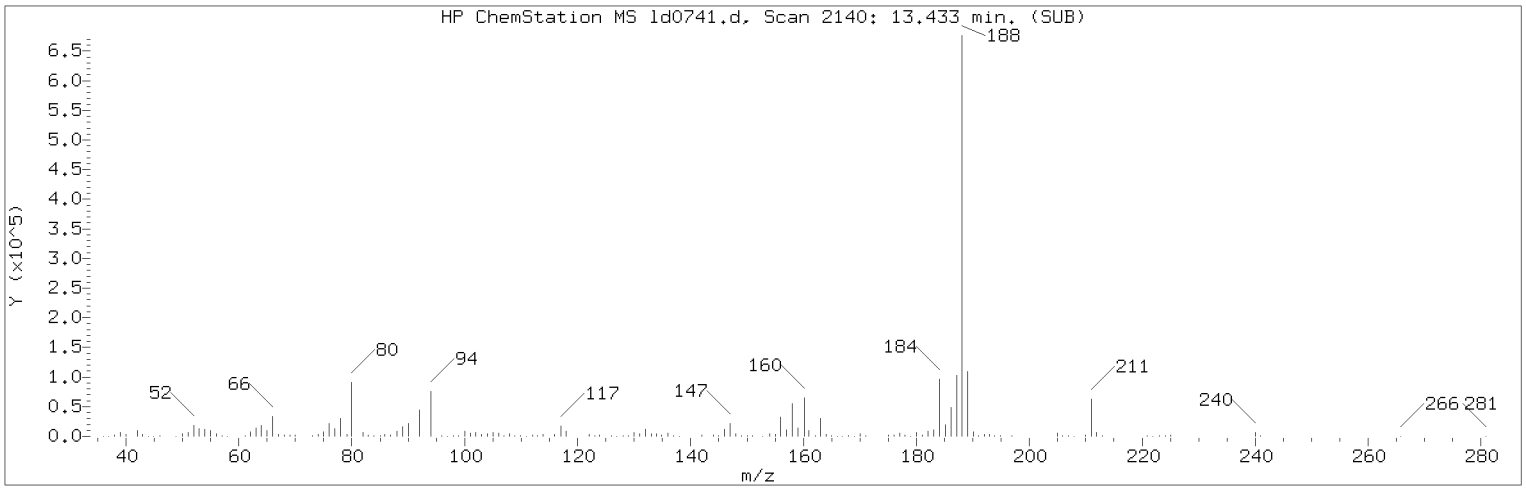
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

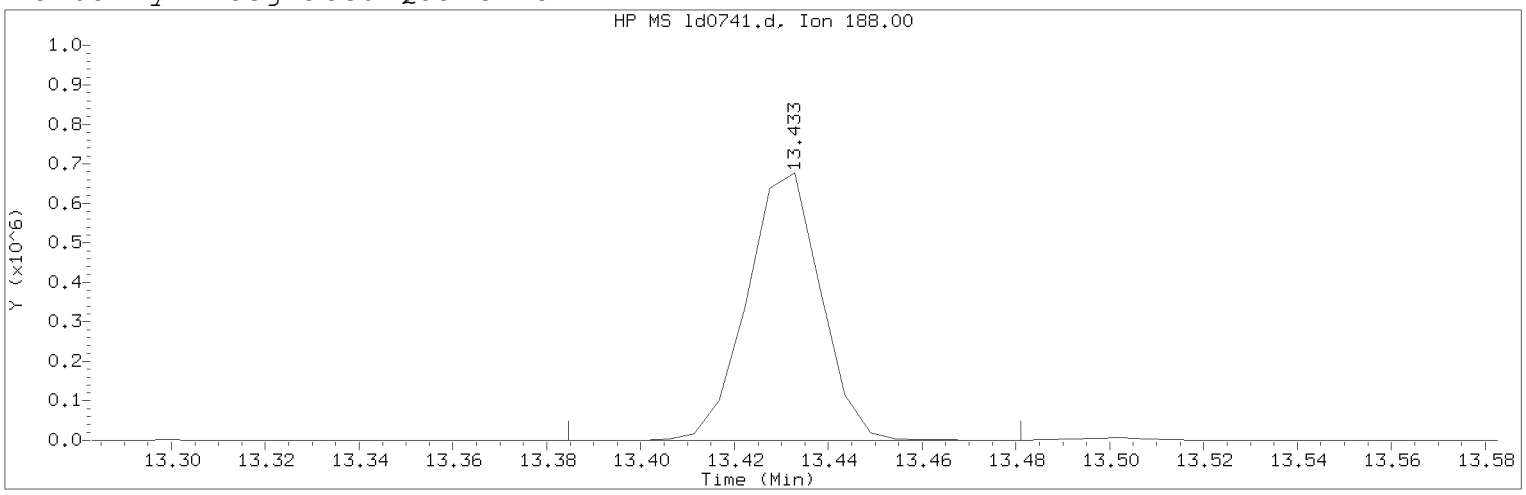
Compound Number	: 154		
Compound Name	: Pentachlorophenol		
Scan Number	: 2119		
Retention Time (minutes)	: 13.321		
Quant Ion	: 266.00		
Area	: 796		
On-column Amount (ng/ul)	: 4.6197		
Integration start scan	: 2115	Integration stop scan:	2125
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user name: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

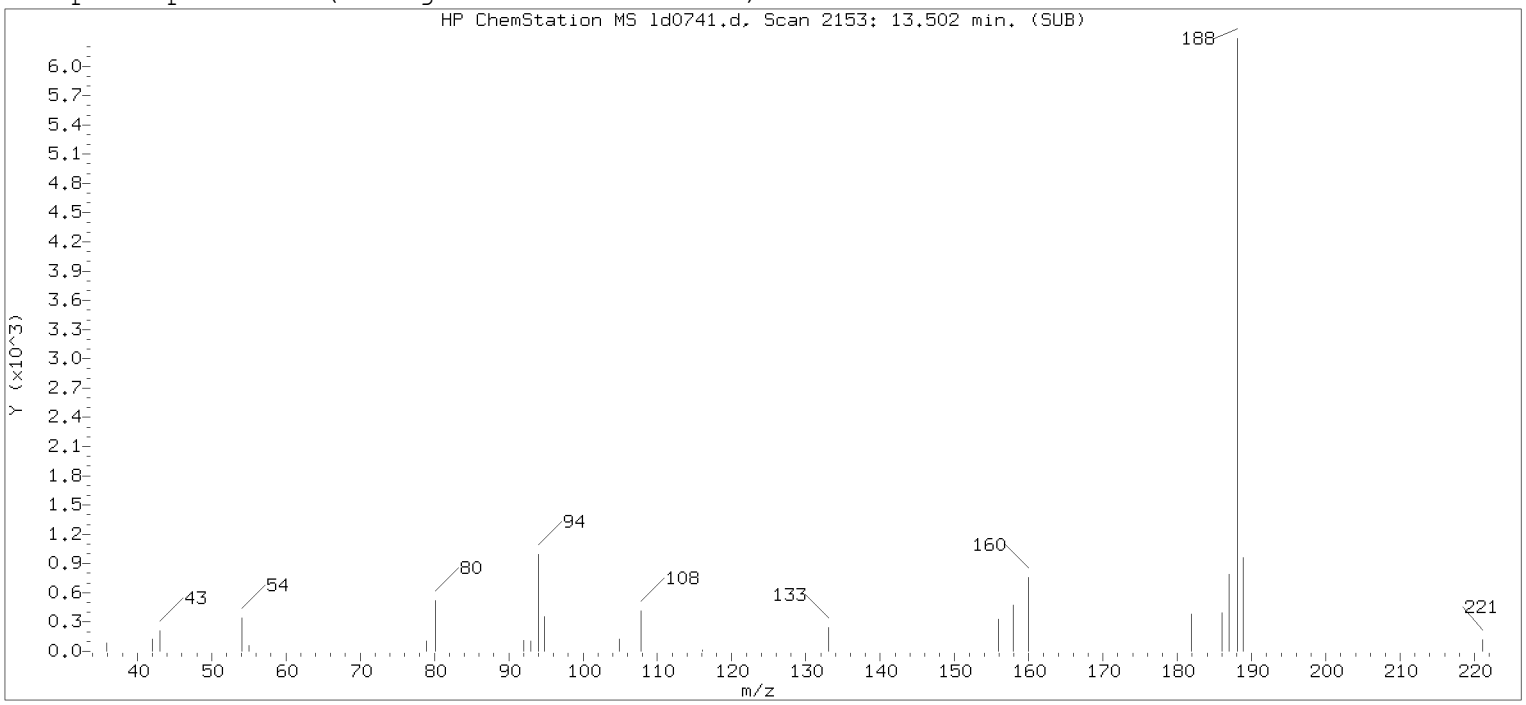
Compound Number : 158
Compound Name : Phenanthrene-d10
Scan Number : 2140
Retention Time (minutes) : 13.433
Quant Ion : 188.00
Area (flag) : 736883M
On-Column Amount (ng/ul) : 5.0000
Integration start scan : 2130 Integration stop scan: 2148
Y at integration start : 276 Y at integration end: 301

Reason for manual integration: improper integration

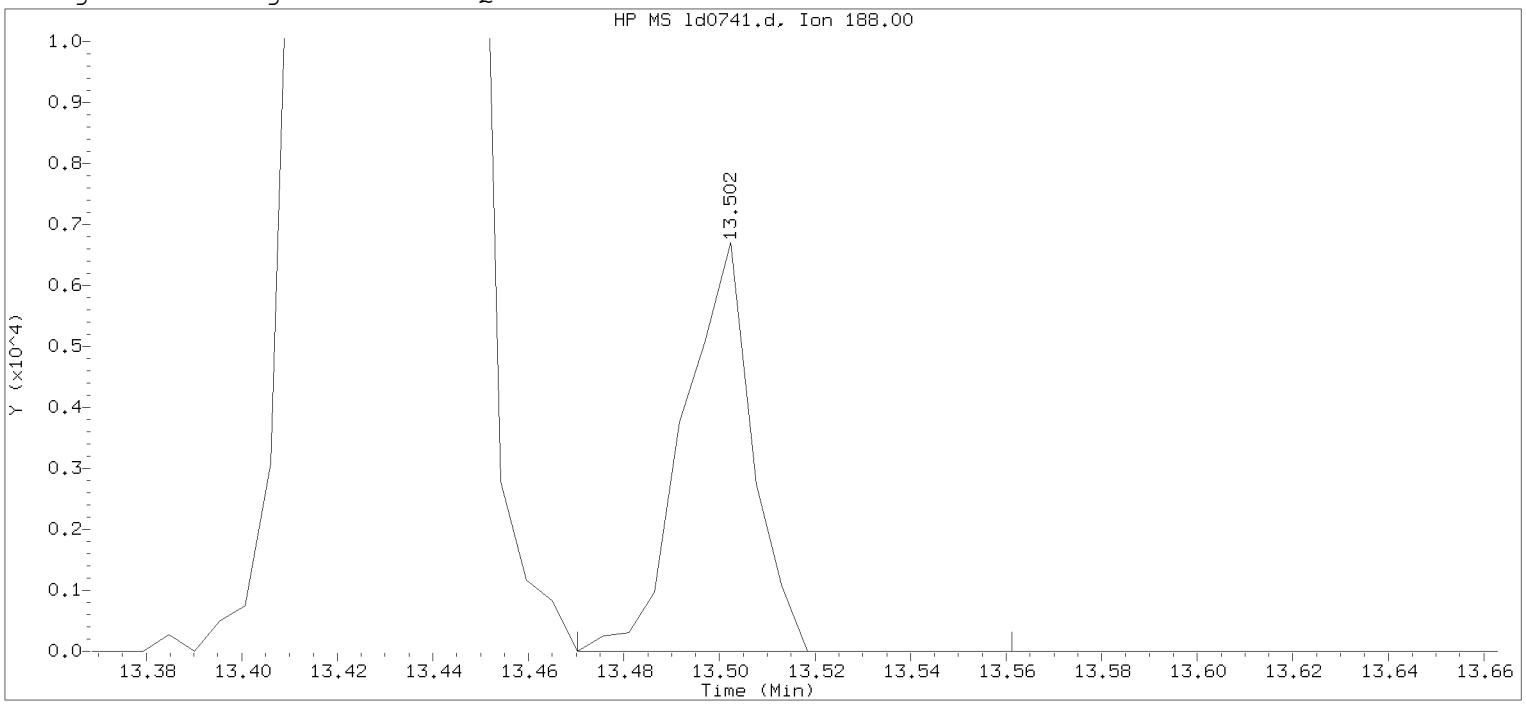
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

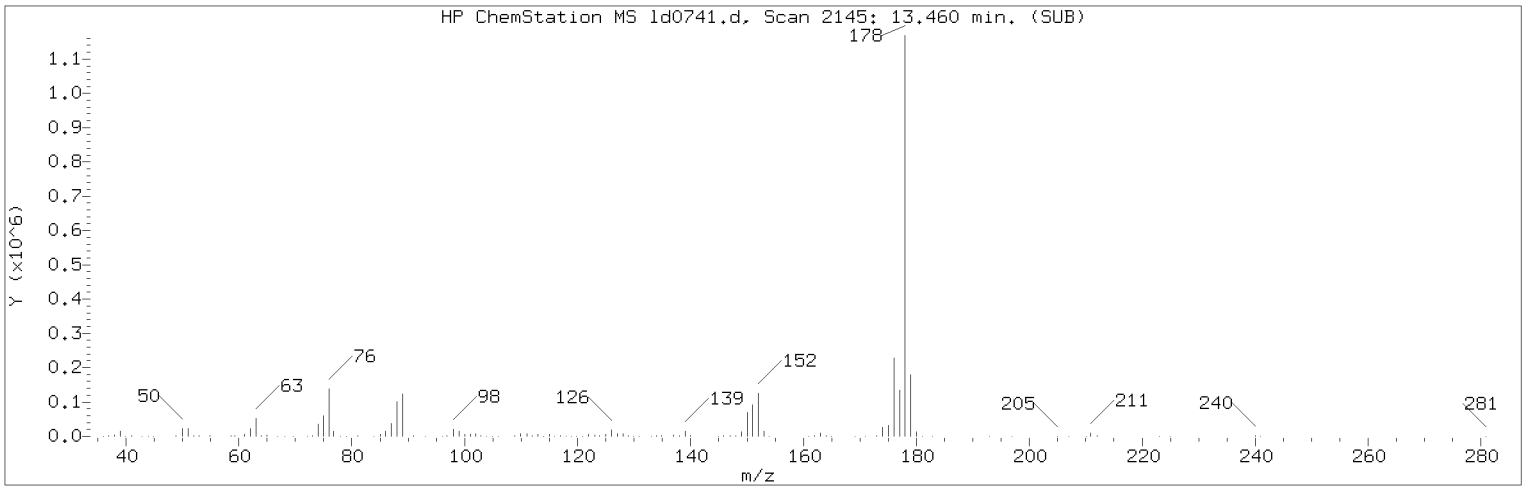
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

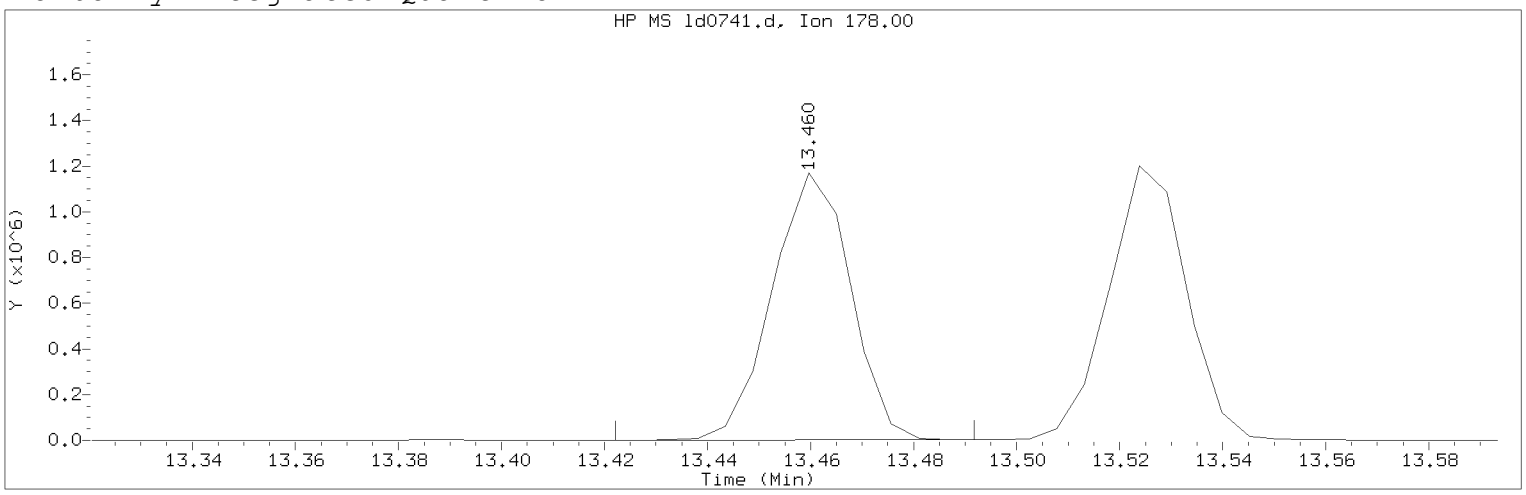
Compound Number	: 158		
Compound Name	: Phenanthrene-d10		
Scan Number	: 2153		
Retention Time (minutes)	: 13.502		
Quant Ion	: 188.00		
Area	: 6701		
On-column Amount (ng/ul)	: 5.0000		
Integration start scan	: 2146	Integration stop scan:	2163
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

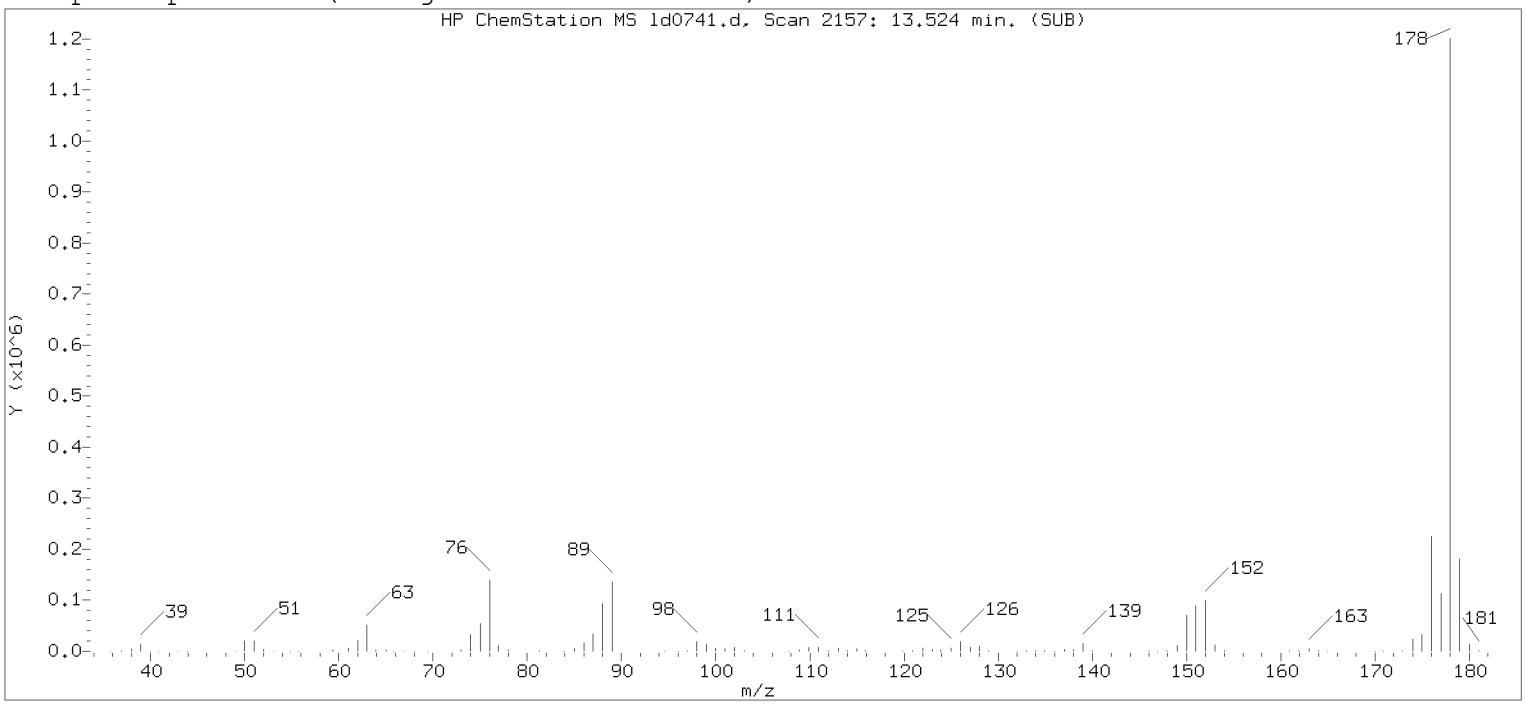
Compound Number : 160
Compound Name : Phenanthrene
Scan Number : 2145
Retention Time (minutes) : 13.460
Quant Ion : 178.00
Area (flag) : 1224423M
On-Column Amount (ng/ul) : 7.5358
Integration start scan : 2137 Integration stop scan: 2150
Y at integration start : 847 Y at integration end: 2208

Reason for manual integration: improper integration

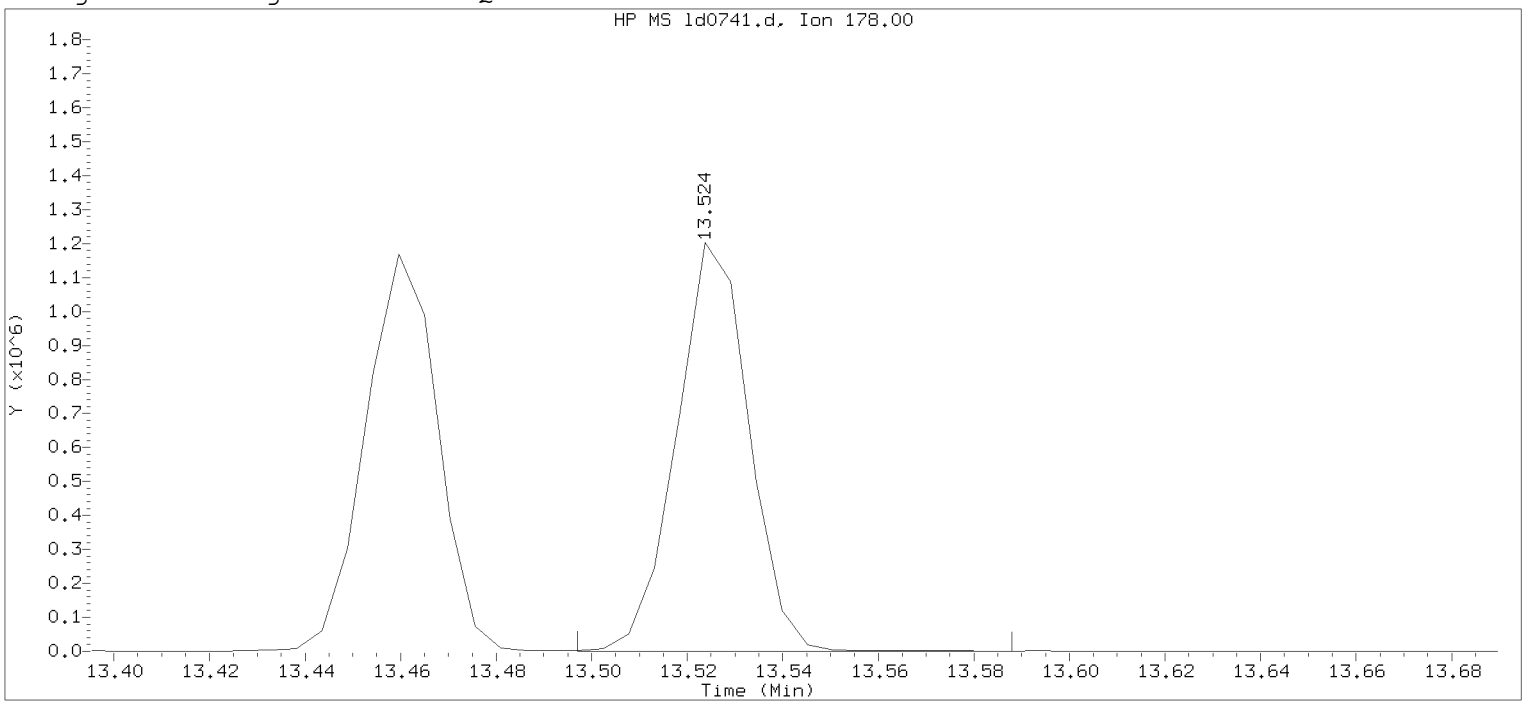
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

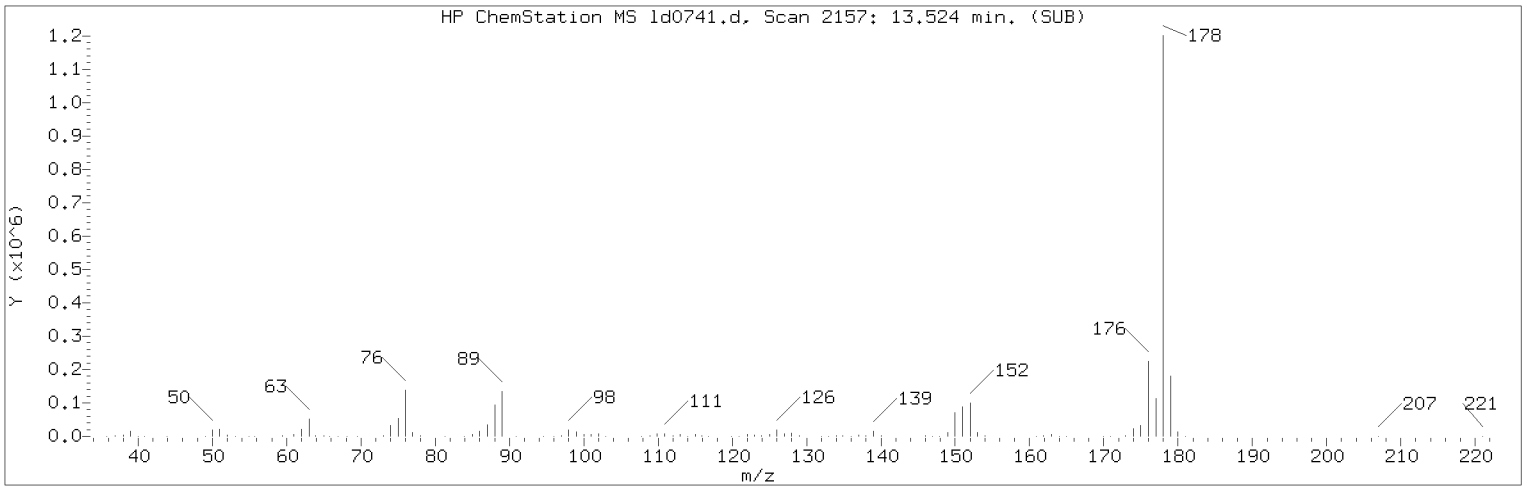
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

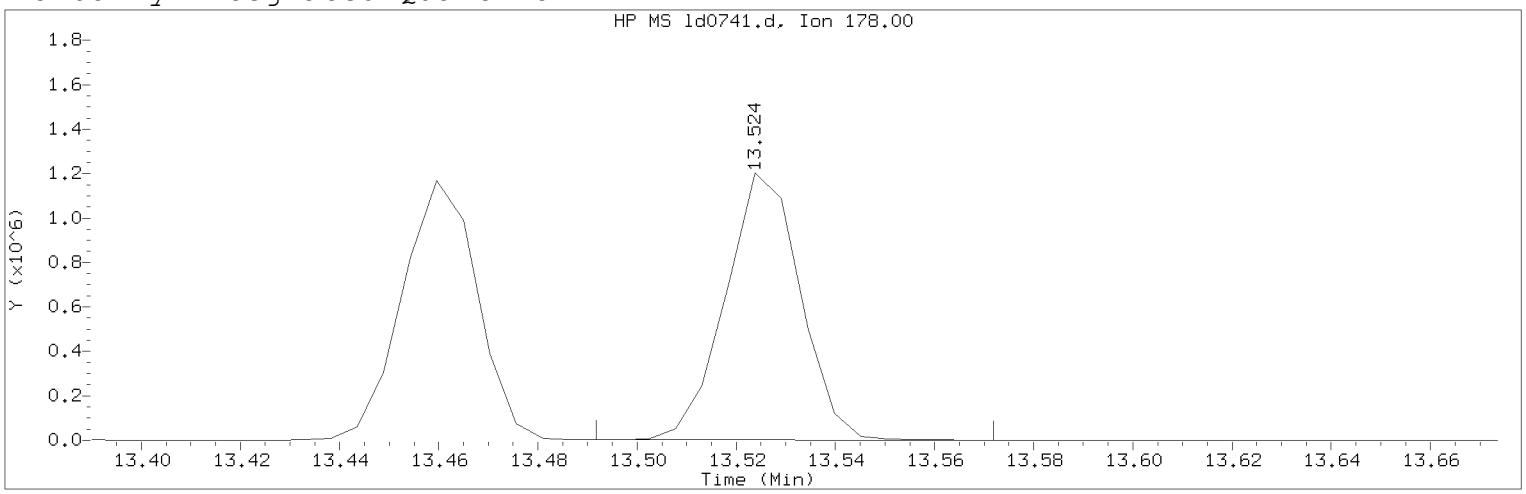
Compound Number	: 160		
Compound Name	: Phenanthrene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.524		
Quant Ion	: 178.00		
Area	: 1267258		
On-column Amount (ng/ul)	: 857.6588		
Integration start scan	: 2151	Integration stop scan:	2168
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

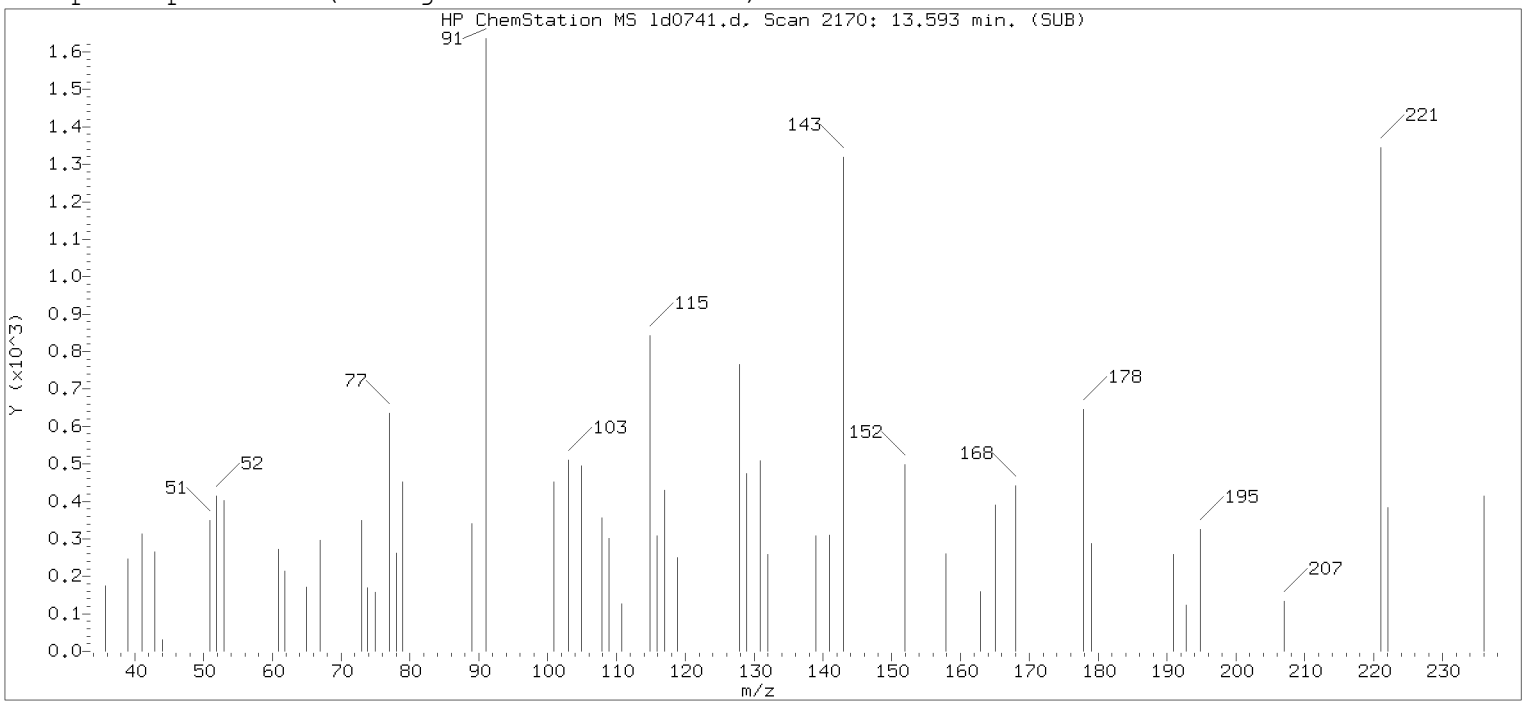
Compound Number : 162
Compound Name : Anthracene
Scan Number : 2157
Retention Time (minutes) : 13.524
Quant Ion : 178.00
Area (flag) : 1258847M
On-Column Amount (ng/ul) : 7.7284
Integration start scan : 2150 Integration stop scan: 2165
Y at integration start : 2208 Y at integration end: 1213

Reason for manual integration: improper integration

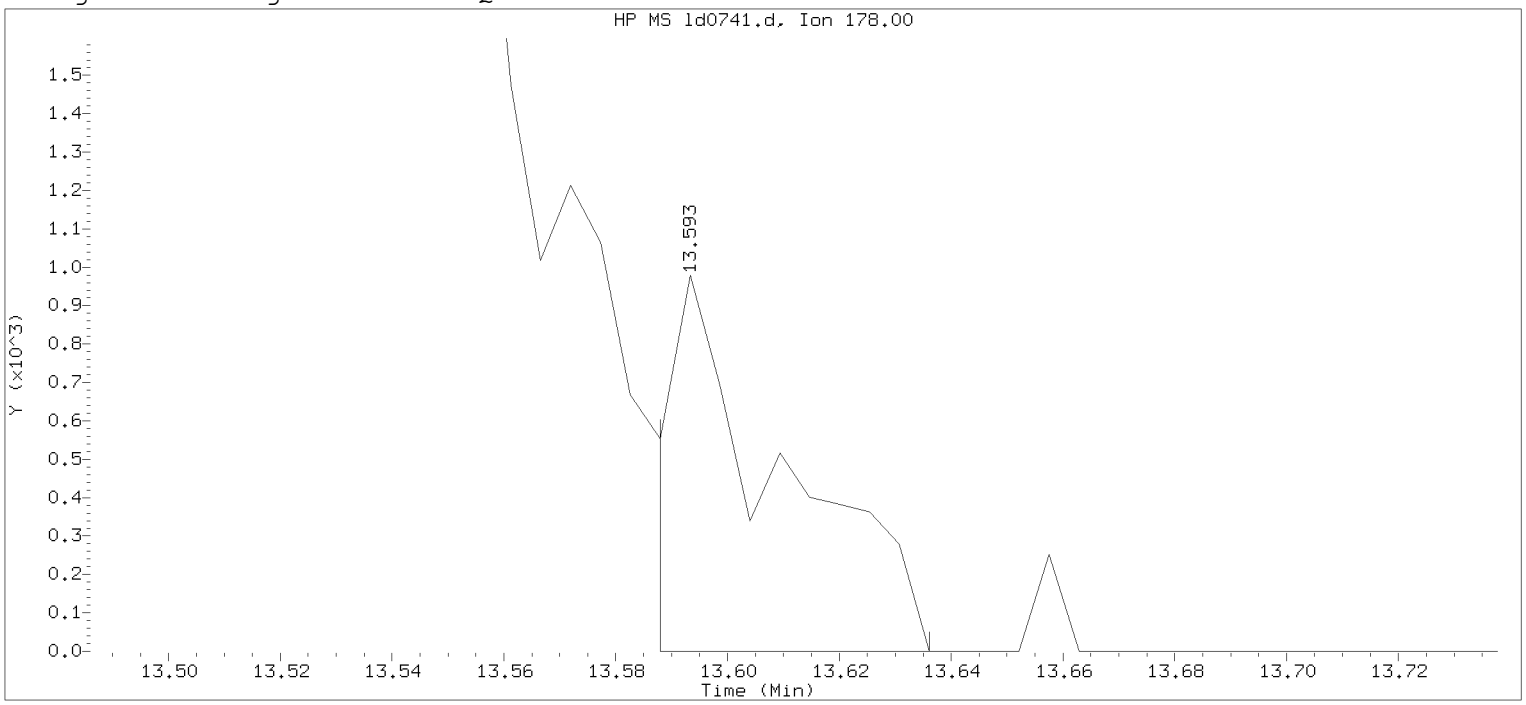
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

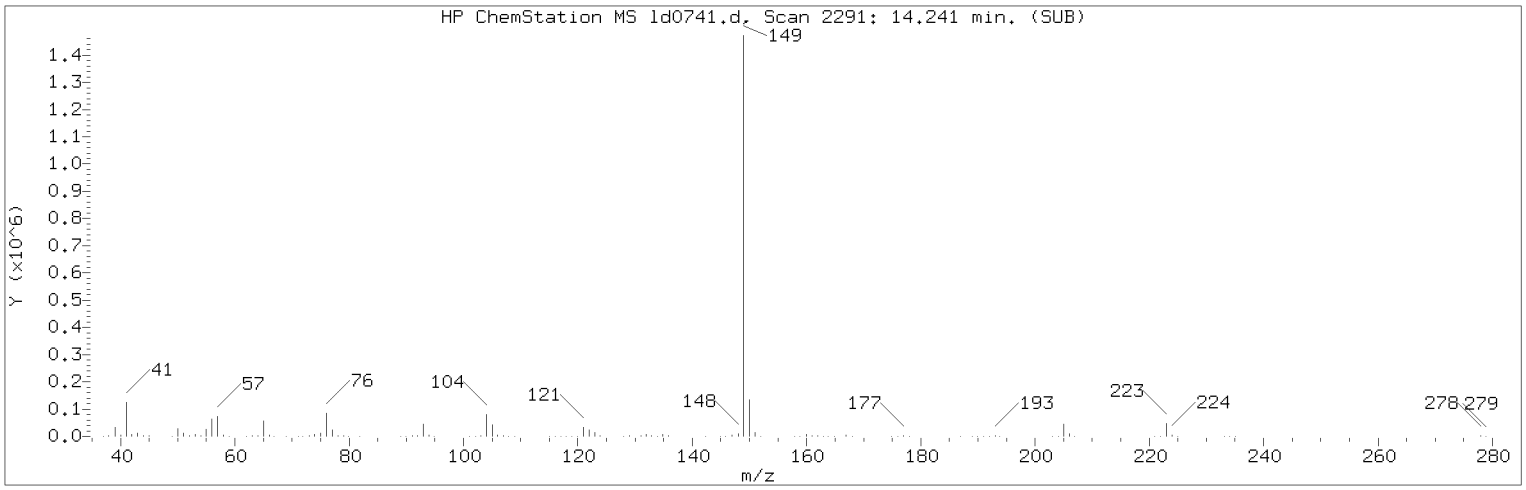
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

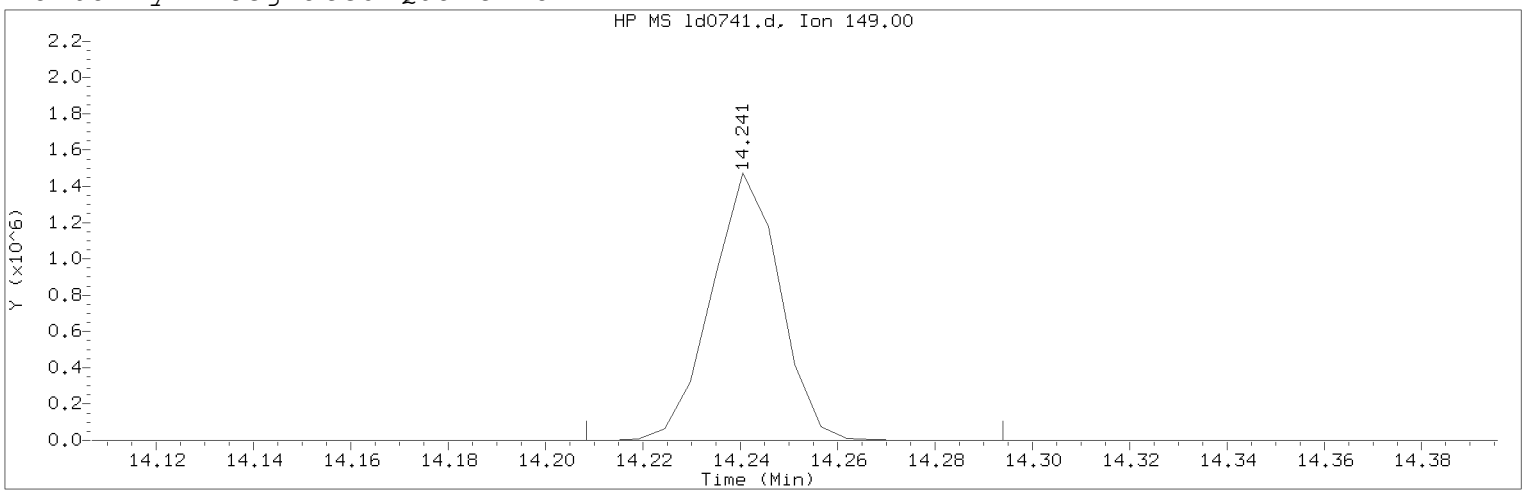
Compound Number	: 162		
Compound Name	: Anthracene		
Scan Number	: 2170		
Retention Time (minutes)	: 13.593		
Quant Ion	: 178.00		
Area	: 1357		
On-column Amount (ng/ul)	: 0.9168		
Integration start scan	: 2168	Integration stop scan:	2177
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

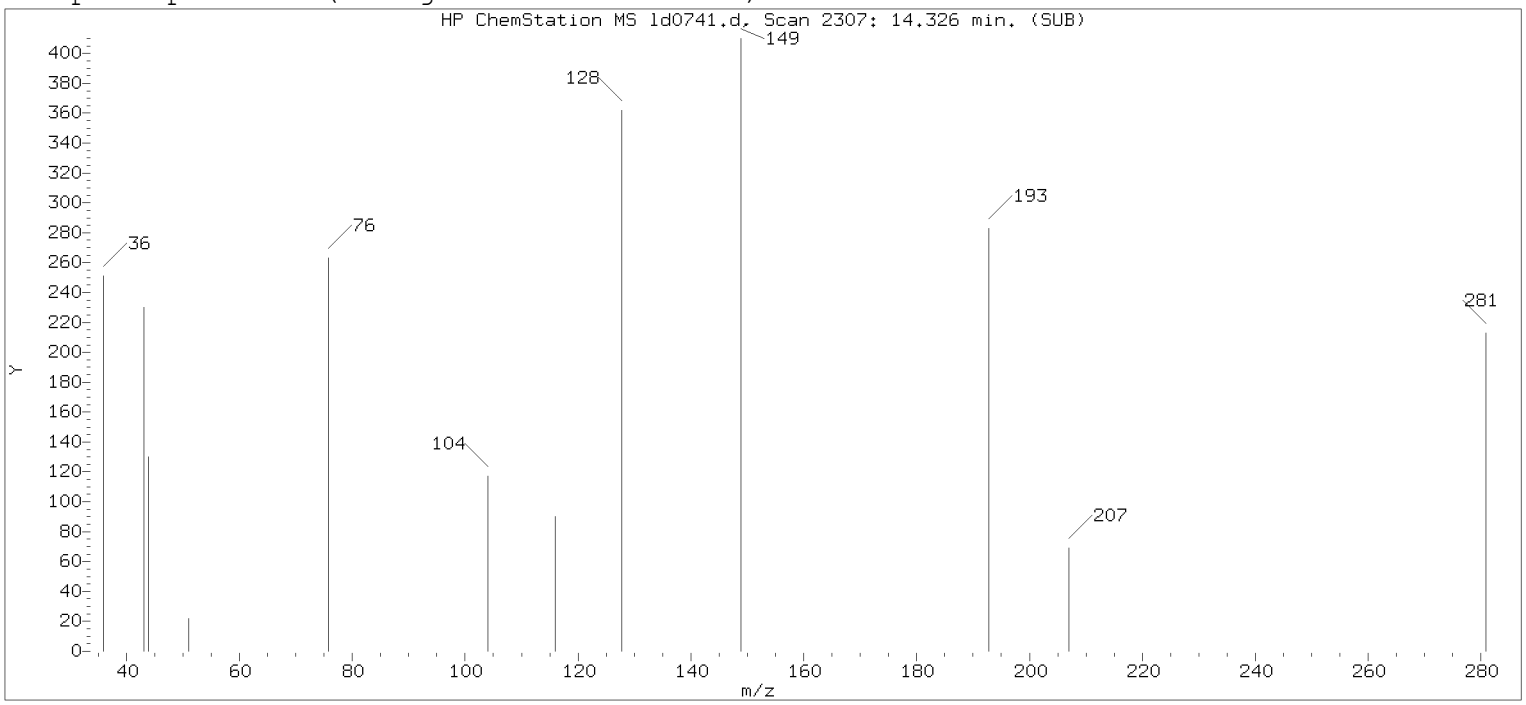
Compound Number : 170
Compound Name : Di-n-butylphthalate
Scan Number : 2291
Retention Time (minutes) : 14.241
Quant Ion : 149.00
Area (flag) : 1431901M
On-Column Amount (ng/ul) : 7.3757
Integration start scan : 2284 Integration stop scan: 2300
Y at integration start : 1112 Y at integration end: 909

Reason for manual integration: improper integration

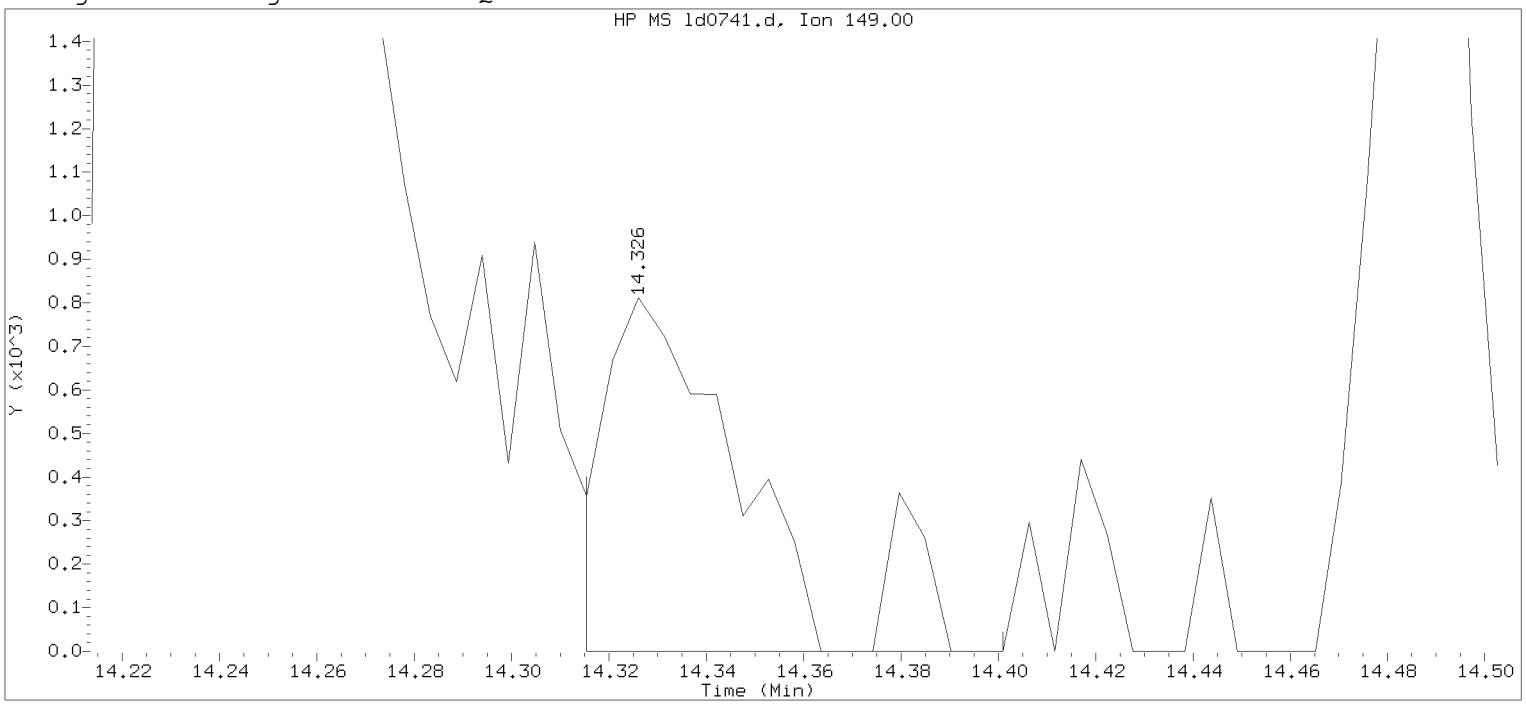
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

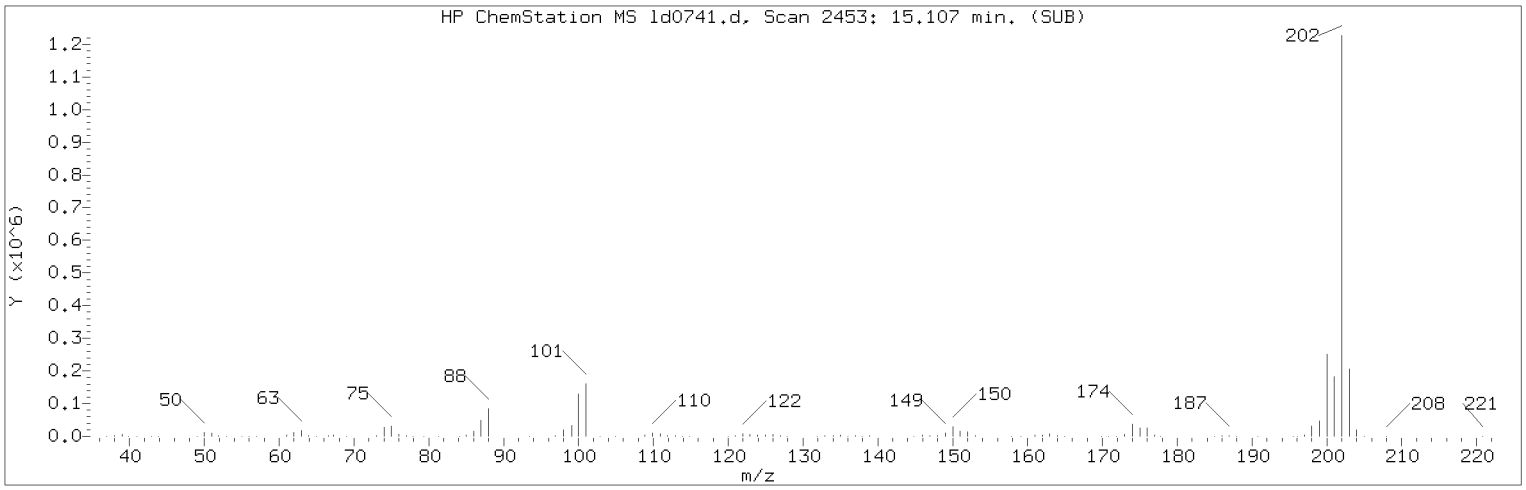
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

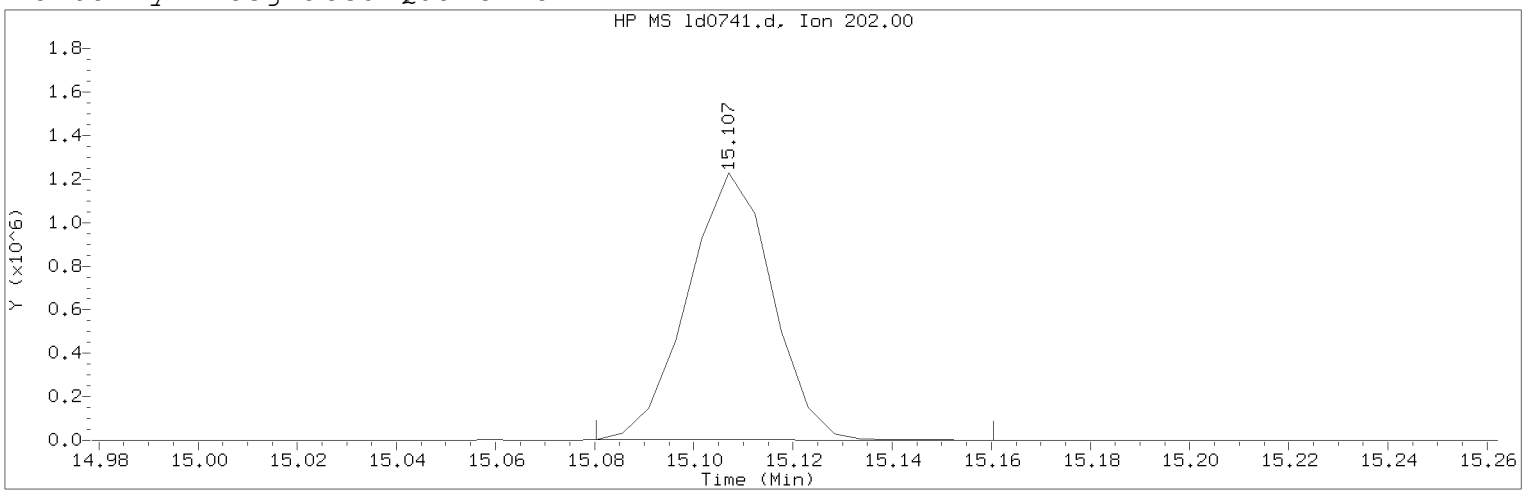
Compound Number	: 170		
Compound Name	: Di-n-butylphthalate		
Scan Number	: 2307		
Retention Time (minutes)	: 14.326		
Quant Ion	: 149.00		
Area	: 1650		
On-column Amount (ng/ul)	: 0.9350		
Integration start scan	: 2304	Integration stop scan:	2320
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

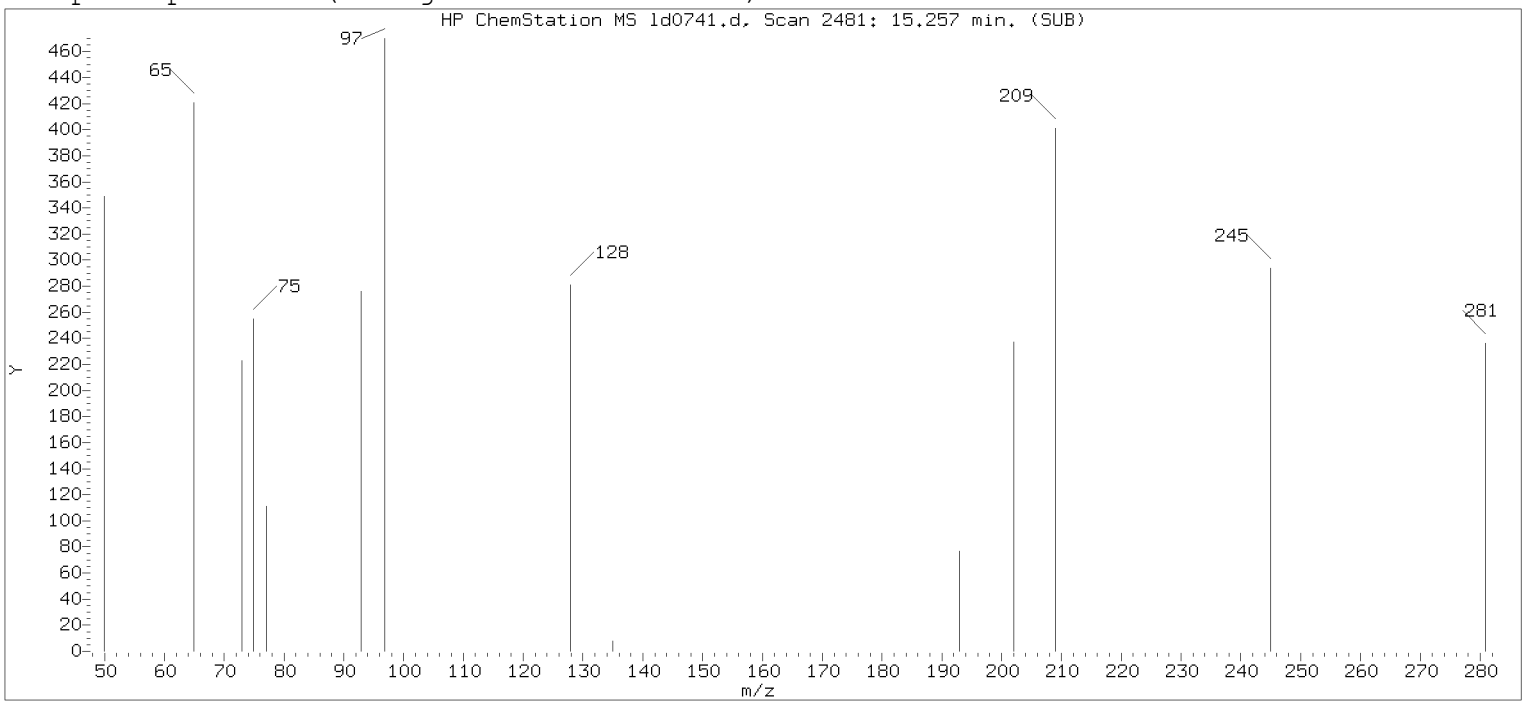
Compound Number : 178
Compound Name : Fluoranthene
Scan Number : 2453
Retention Time (minutes) : 15.107
Quant Ion : 202.00
Area (flag) : 1442209M
On-Column Amount (ng/ul) : 7.8920
Integration start scan : 2447 Integration stop scan: 2462
Y at integration start : 4249 Y at integration end: 1091

Reason for manual integration: improper integration

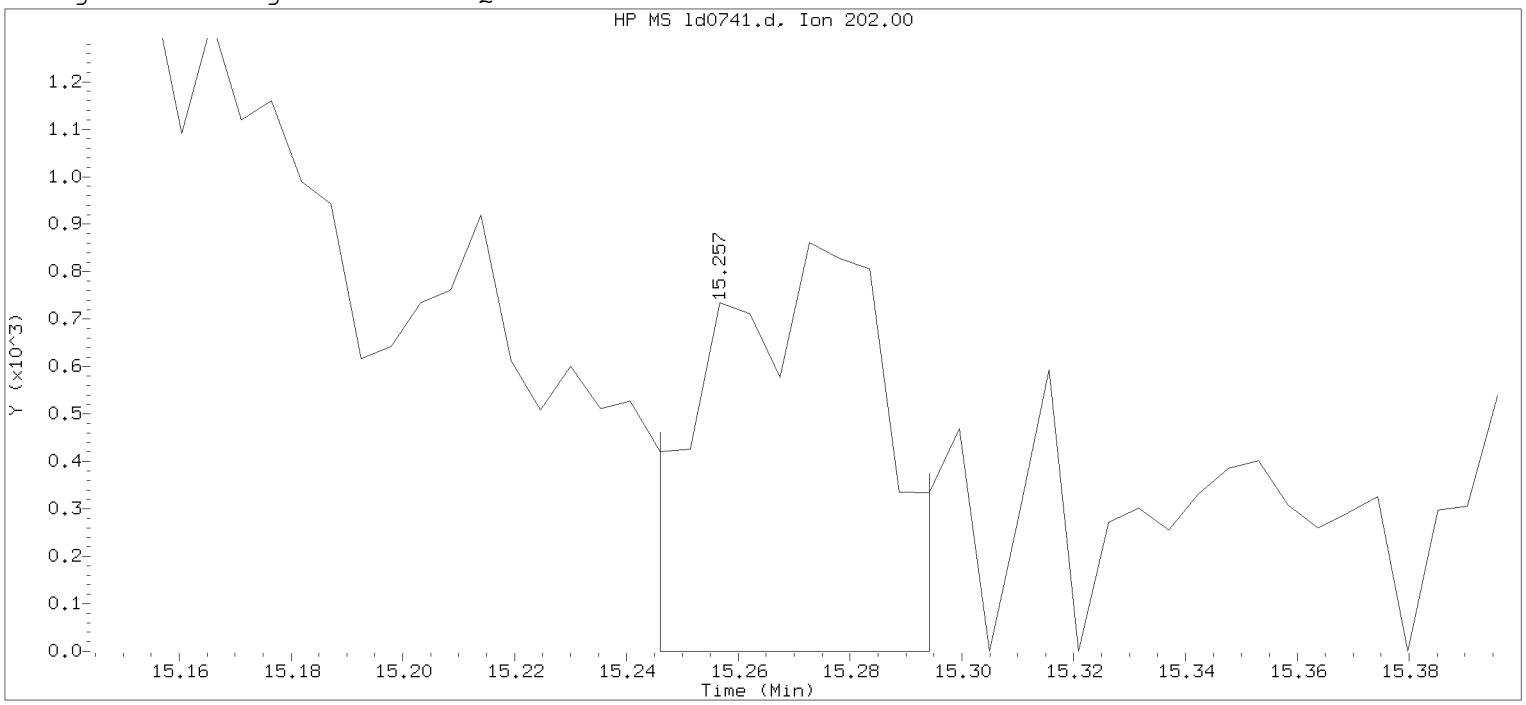
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

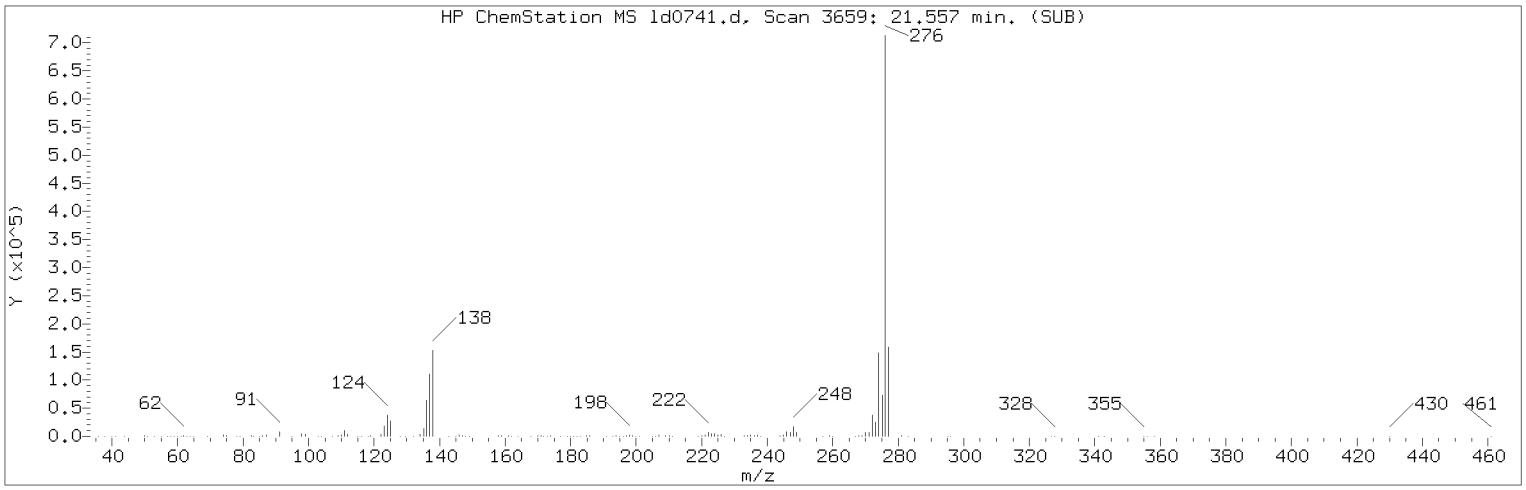
Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

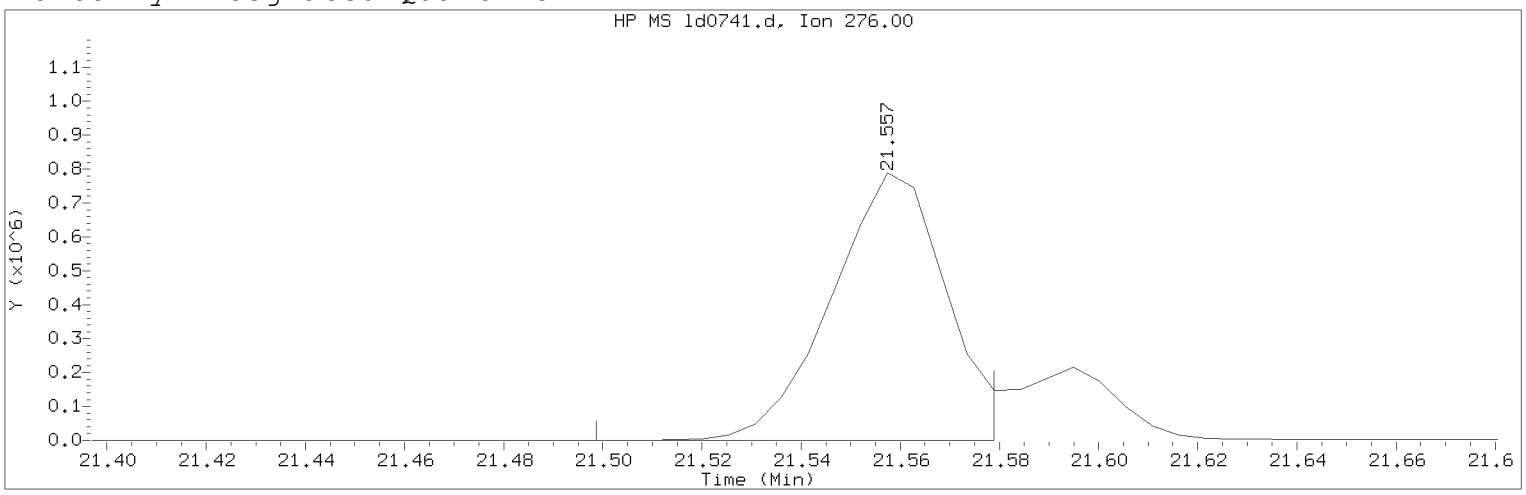
Compound Number	: 178		
Compound Name	: Fluoranthene		
Scan Number	: 2481		
Retention Time (minutes)	: 15.257		
Quant Ion	: 202.00		
Area	: 1815		
On-column Amount (ng/ul)	: 1.0925		
Integration start scan	: 2478	Integration stop scan:	2487
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART04 at 20:57

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:56
Date, time and analyst ID of latest file update: 18-Apr-2018 20:56 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

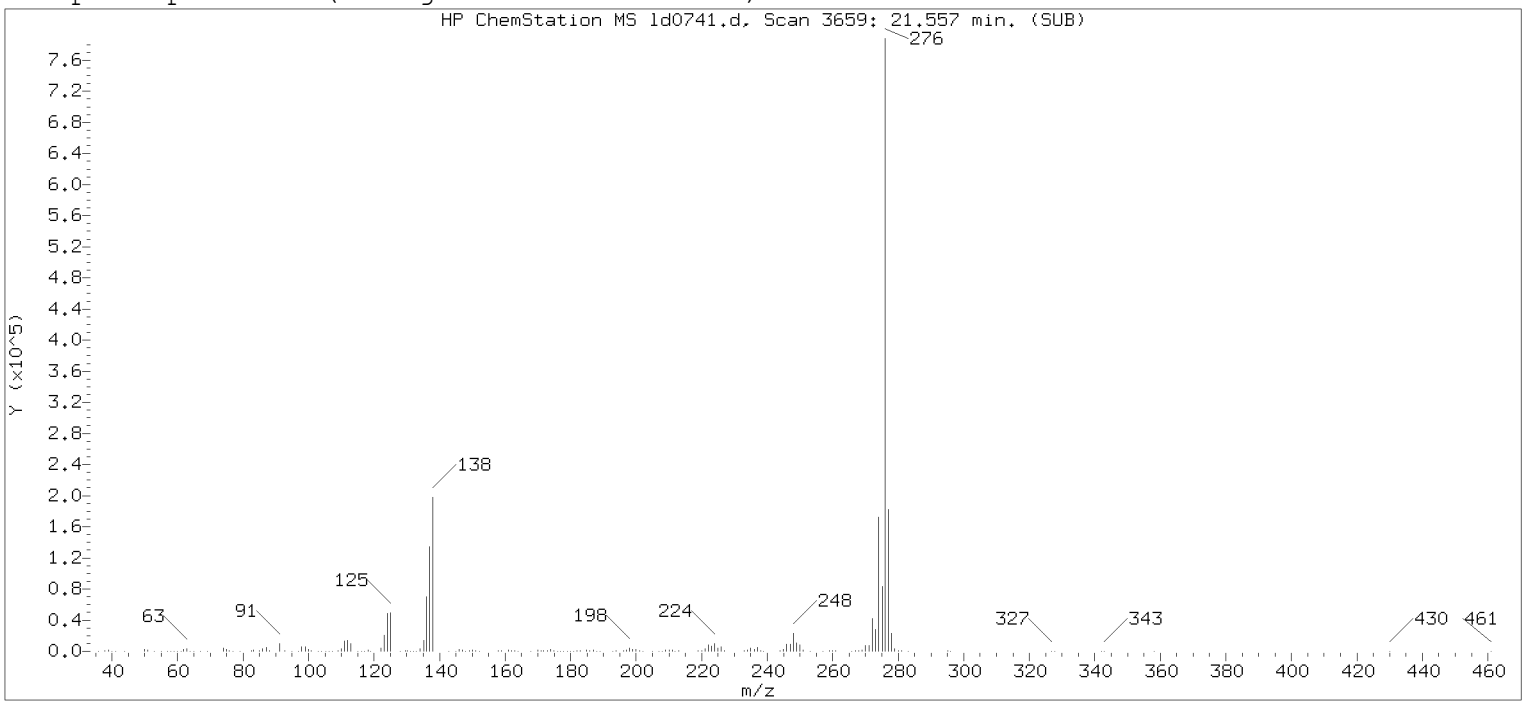
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3659
Retention Time (minutes) : 21.557
Quant Ion : 276.00
Area (flag) : 1273558M
On-Column Amount (ng/ul) : 7.8382
Integration start scan : 3647 Integration stop scan: 3662
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

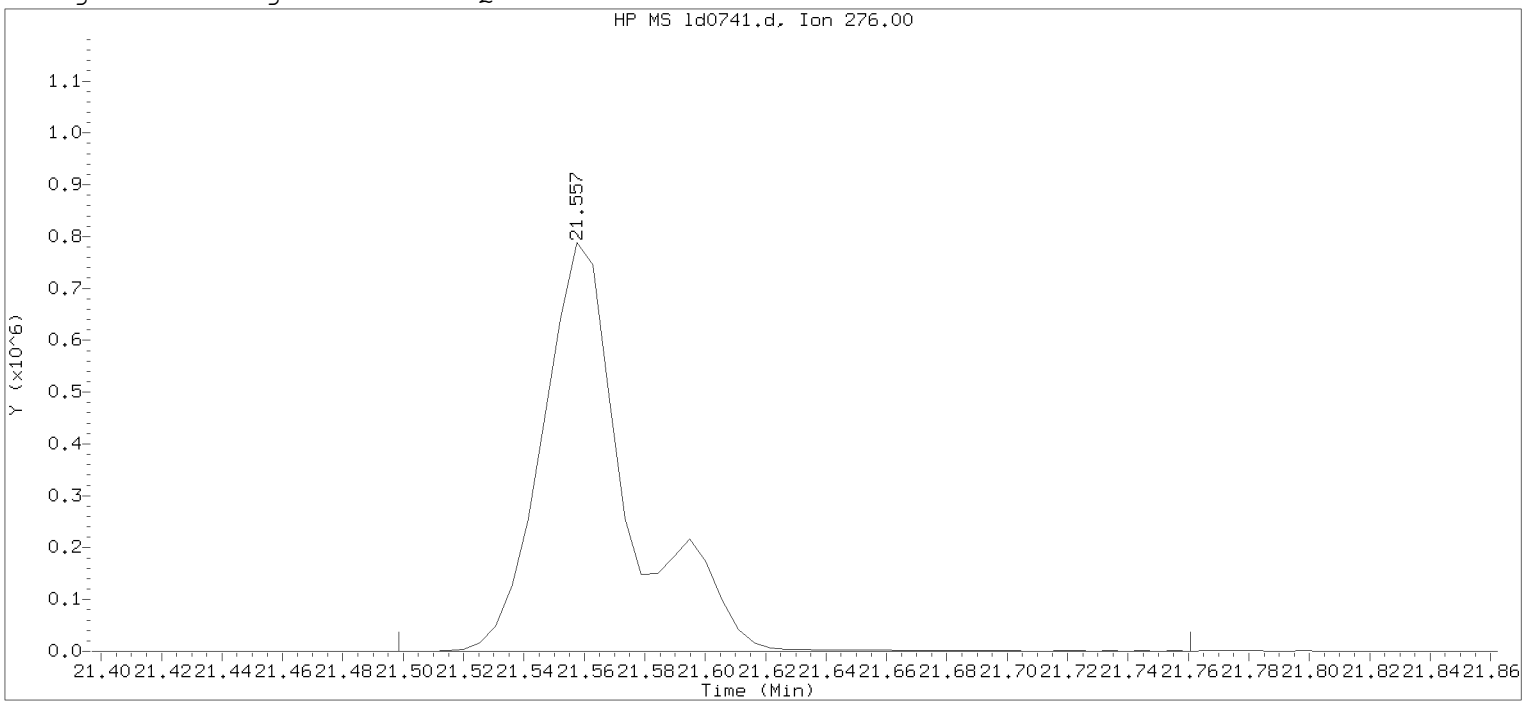
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/18/2018 at 20:57.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/19/2018 at 11:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr18a.b/ld0741.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 19:39 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-APR-2018 20:07
Date, time and analyst ID of latest file update: 18-Apr-2018 20:07 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3659		
Retention Time (minutes)	: 21.557		
Quant Ion	: 276.00		
Area	: 1568363		
On-column Amount (ng/ul)	: 9.6526		
Integration start scan	: 3647	Integration stop scan:	3696
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/18/2018 at 20:57.
Target 3.5 esignature user ART at 20:57

Raw QC Data

Semivolatiles by GC/MS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0745.d Injection date and time: **18-APR-2018 22:02**
Data file Sample Info. Line: SBLKWB106;SBLKWB106;1;3;BLANK;;DRAPERMINI; Instrument ID: **HP20296.i** Batch: **18106WAB**
Date, time and analyst ID of latest file update: 19-Apr-2018 08:32 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672(0.000)	876	152	154827 (-20)	5.00	
68) Naphthalene-d8	8.651(0.005)	1246	136	579016 (-19)	5.00	
118) Acenaphthene-d10	11.491(0.000)	1777	164	293921 (-19)	5.00	
158) Phenanthrene-d10	13.427(0.005)	2139	188	588377 (-20)	5.00	
180) Pyrene-d10	15.417(0.011)	2511	212	605277 (-24)	5.00	
218) Perylene-d12	19.947(0.005)	3358	264	603887 (-22)	5.00	

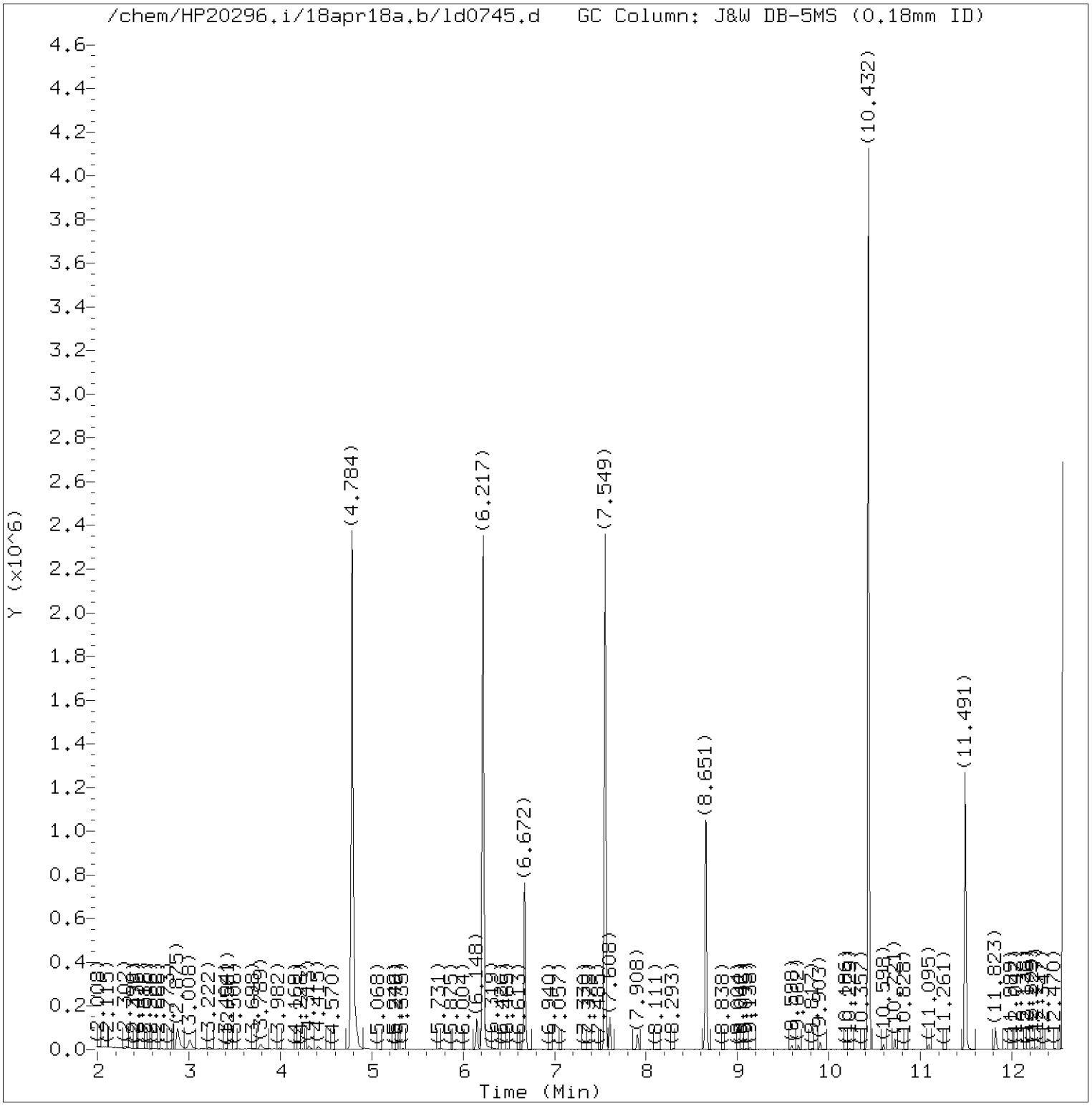
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.549(0.000)	82	1053706	21.100	84%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432(0.000)	172	1501760	16.435	66%		39 - 105
184) Terphenyl-d14	(5)	15.727(-0.001)	244	2383505	24.555	98%		27 - 116

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)			Not Detected					0.2
104) 2-Nitroaniline	(3)			Not Detected					0.2
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.2
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.2
129) Diethylphthalate	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)			Not Detected					0.3
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 09:57. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

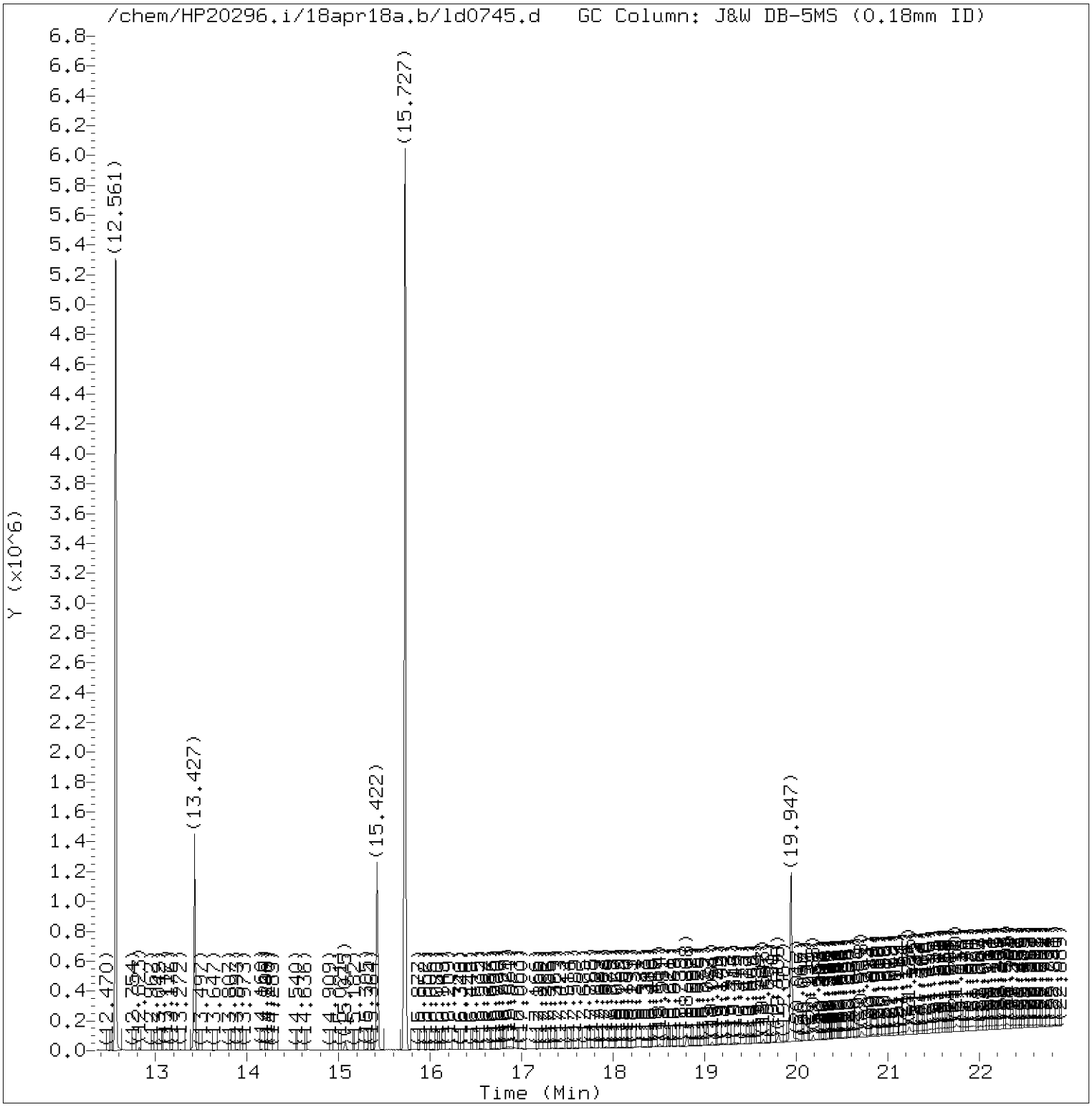
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0745.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:02 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:32 bhs10208

Sample Name: SBLKWB106 Lab Sample ID: SBLKWB106

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0745.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:02 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:32 bhs10208

Sample Name: SBLKWB106 Lab Sample ID: SBLKWB106

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0745.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:02 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:32 bhs10208

Sample Name: SBLKWB106 Lab Sample ID: SBLKWB106

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	154827	5.000
45)$Nitrobenzene-d5	(2)	7.549	82	1053706	21.100
68)*Naphthalene-d8	(2)	8.651	136	579016	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1501760	16.435
118)*Acenaphthene-d10	(3)	11.491	164	293921	5.000
158)*Phenanthrene-d10	(4)	13.427	188	588377	5.000
180)*Pyrene-d10	(5)	15.417	212	605277	5.000
184)$Terphenyl-d14	(5)	15.727	244	2383505	24.555
218)*Perylene-d12	(6)	19.947	264	603887	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr18a.b/ld0752.d
Data file Sample Info. Line: R0403MS;9553122;1;3;MS;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Injection date and time: **19-APR-2018 01:20**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.678	(-0.006)	877	152	154466	(-20)	5.00	
68) Naphthalene-d8	8.657	(0.000)	1247	136	577615	(-19)	5.00	
118) Acenaphthene-d10	11.497	(-0.005)	1778	164	294596	(-19)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	608063	(-17)	5.00	
180) Pyrene-d10	15.428	(0.000)	2513	212	624346	(-22)	5.00	
218) Perylene-d12	19.953	(0.000)	3359	264	630281	(-19)	5.00	

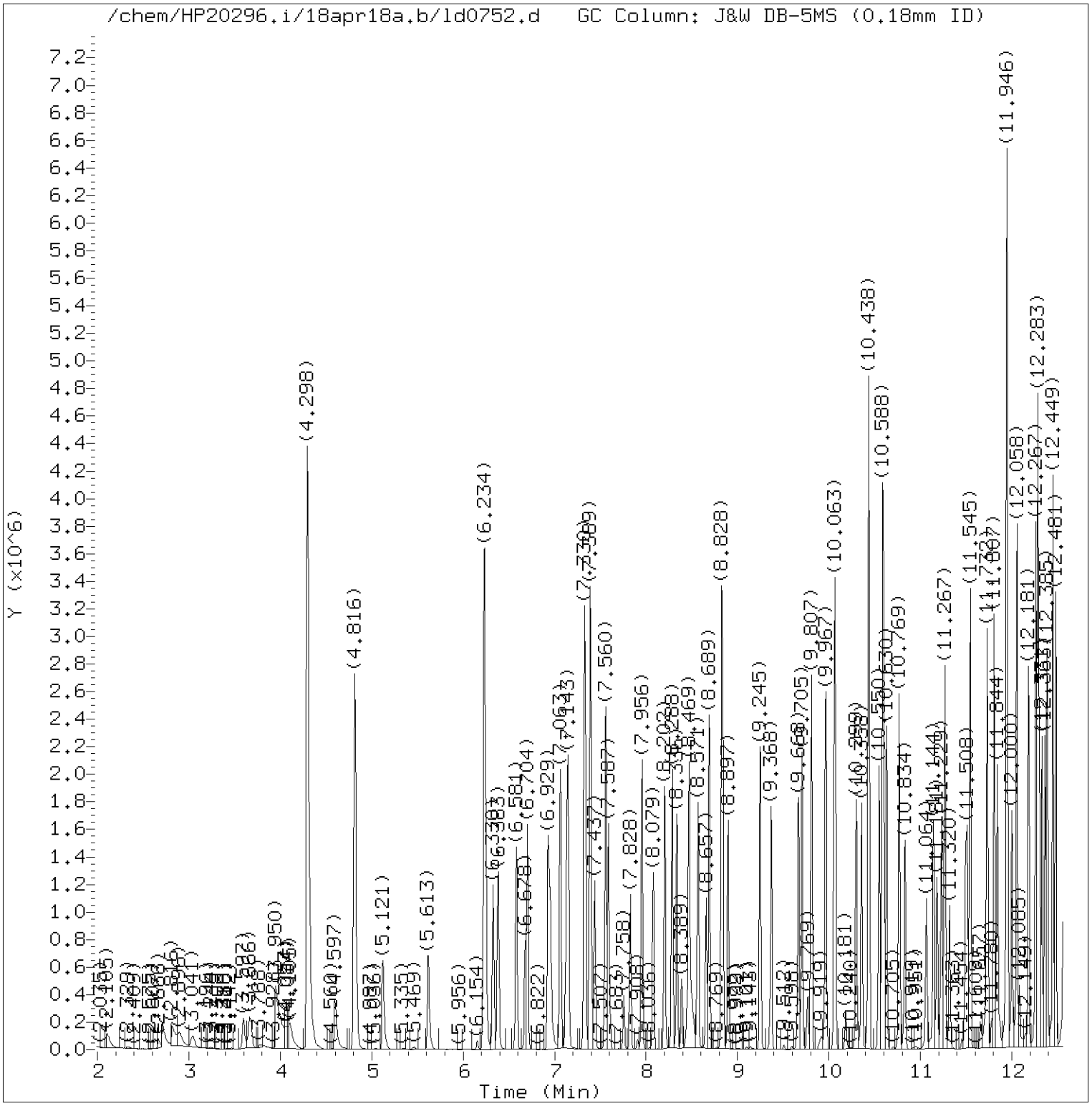
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.560	(-0.001)	82	1146937	23.022	92%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.438	(0.000)	172	1968740	21.496	86%		39 - 105
184) Terphenyl-d14	(5)	15.728	(0.000)	244	1206775	12.052	48%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.587	(-0.000)	77	638970	12.575	50.30			0.2
104) 2-Nitroaniline	(3)	10.834	(-0.000)	138	306775	13.059	52.24			0.2
113) 2,6-Dinitrotoluene	(3)	11.229	(0.000)	165	254738	13.343	53.37			0.2
123) 2,4-Dinitrotoluene	(3)	11.844	(0.000)	165	329586	12.458	49.83			0.2
129) Diethylphthalate	(3)	12.181	(0.000)	149	972714	10.992	43.97			0.1
134) 4-Nitroaniline	(3)	12.363	(0.000)	138	251467	12.369	49.48			0.3
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	(0.000)	149	1297877	12.448	49.79			0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:36. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

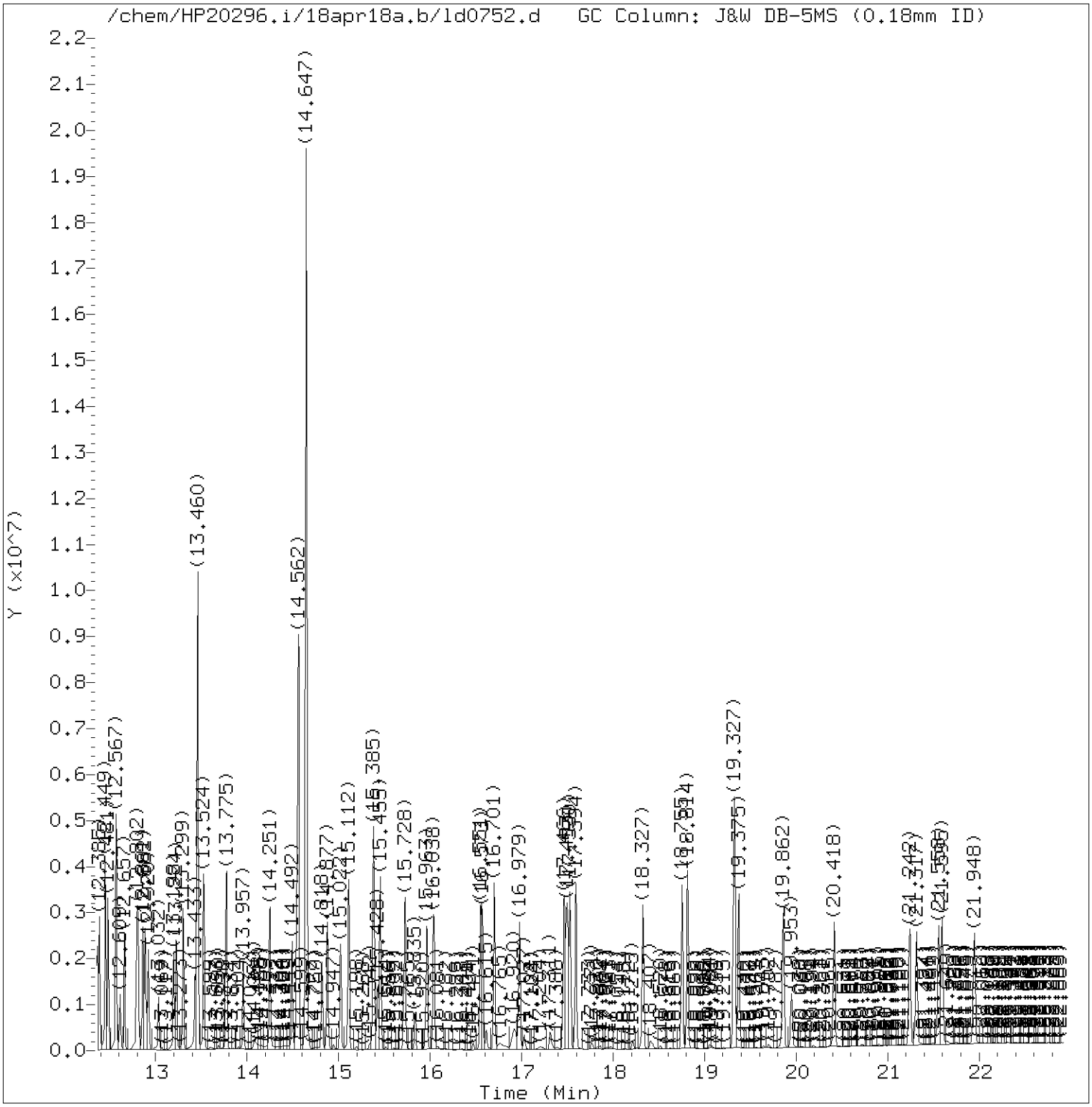
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0752.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:20 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MS Lab Sample ID: 9553122

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0752.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:20 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MS Lab Sample ID: 9553122

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0752.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:20 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MS Lab Sample ID: 9553122

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.678	152	154466	5.000
45)$Nitrobenzene-d5	(2)	7.560	82	1146937	23.022
46) Nitrobenzene	(2)	7.587	77	638970	12.575
68)*Naphthalene-d8	(2)	8.657	136	577615	5.000
96)$2-Fluorobiphenyl	(3)	10.438	172	1968740	21.496
104) 2-Nitroaniline	(3)	10.834	138	306775	13.059
113) 2,6-Dinitrotoluene	(3)	11.229	165	254738	13.343
118)*Acenaphthene-d10	(3)	11.497	164	294596	5.000
123) 2,4-Dinitrotoluene	(3)	11.844	165	329586	12.458
129) Diethylphthalate	(3)	12.181	149	972714	10.992
134) 4-Nitroaniline	(3)	12.363	138	251467	12.369
158)*Phenanthrene-d10	(4)	13.428	188	608063	5.000
180)*Pyrene-d10	(5)	15.428	212	624346	5.000
184)$Terphenyl-d14	(5)	15.728	244	1206775	12.052
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	149	1297877	12.448
218)*Perylene-d12	(6)	19.953	264	630281	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208

R0403MSD

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

9553123

Data file: /chem/HP20296.i/18apr18a.b/ld0753.d
Data file Sample Info. Line: R0403MSD;9553123;1;3;MSD;;DRAPERMINI;
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Injection date and time: **19-APR-2018 01:48**
Instrument ID: **HP20296.i** Batch: **18106WAB**

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.678	(-0.005)	877	152	155152	(-20)	5.00	
68) Naphthalene-d8	8.662	(-0.005)	1248	136	570723	(-20)	5.00	
118) Acenaphthene-d10	11.497	(-0.005)	1778	164	293553	(-19)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	603040	(-18)	5.00	
180) Pyrene-d10	15.428	(0.000)	2513	212	609061	(-24)	5.00	
218) Perylene-d12	19.953	(0.000)	3359	264	626004	(-19)	5.00	

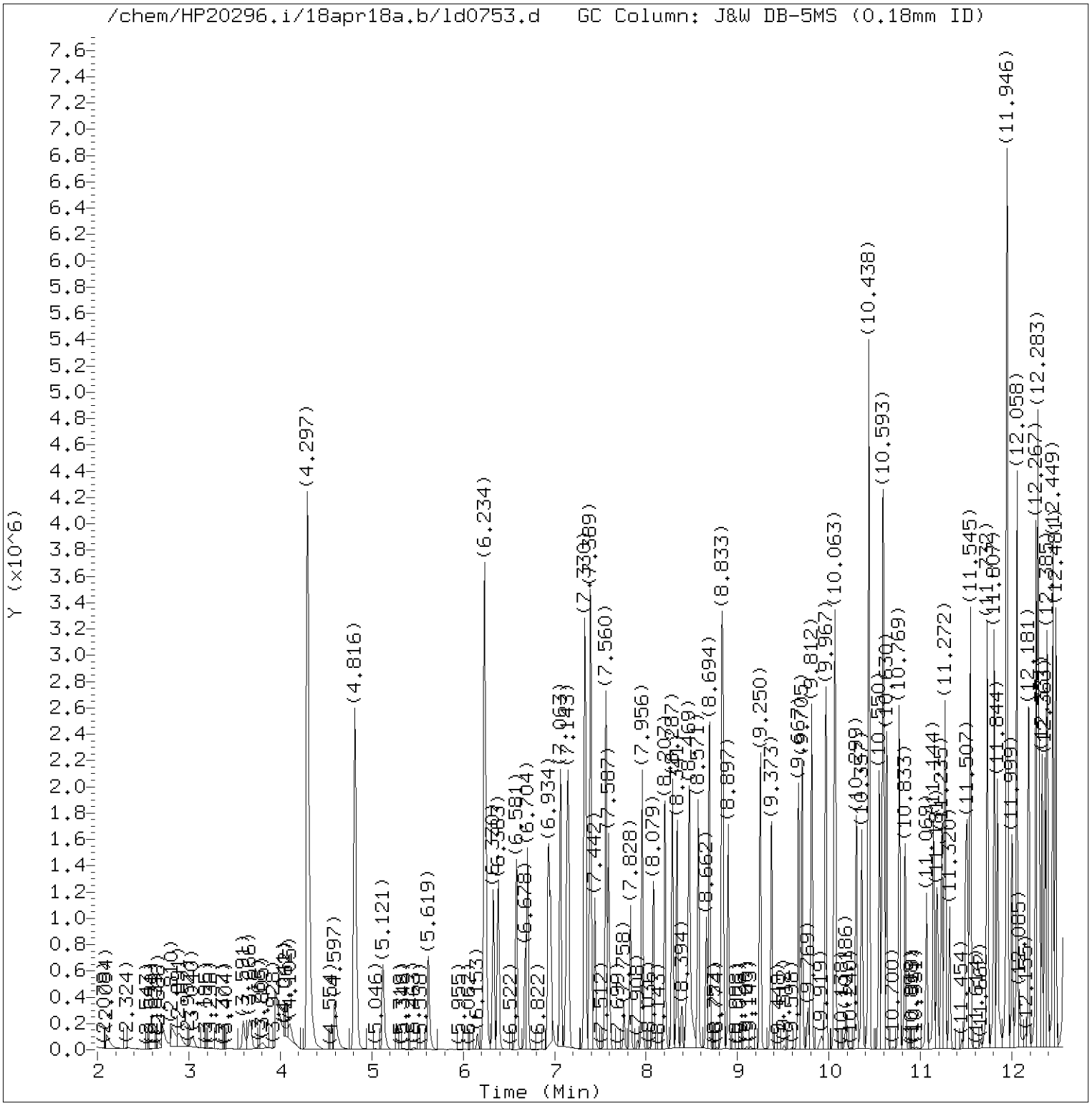
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.560	(0.000)	82	1183663	24.047	96%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.438	(0.000)	172	2032805	22.275	89%		39 - 105
184) Terphenyl-d14	(5)	15.727	(0.000)	244	1200087	12.286	49%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.587	(0.000)	77	652223	12.990	52.17			0.2
104) 2-Nitroaniline	(3)	10.833	(-0.000)	138	317273	13.554	54.43			0.2
113) 2,6-Dinitrotoluene	(3)	11.235	(-0.000)	165	262319	13.789	55.38			0.2
123) 2,4-Dinitrotoluene	(3)	11.844	(0.000)	165	349863	13.271	53.30			0.2
129) Diethylphthalate	(3)	12.187	(0.000)	149	989894	11.226	45.08			0.1
134) 4-Nitroaniline	(3)	12.363	(0.000)	138	259855	12.827	51.51			0.3
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	(0.000)	149	1336943	13.144	52.79			0.4

Total number of targets = 7

Digitally signed by Brandon H. Smith on 04/19/2018 at 10:36. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

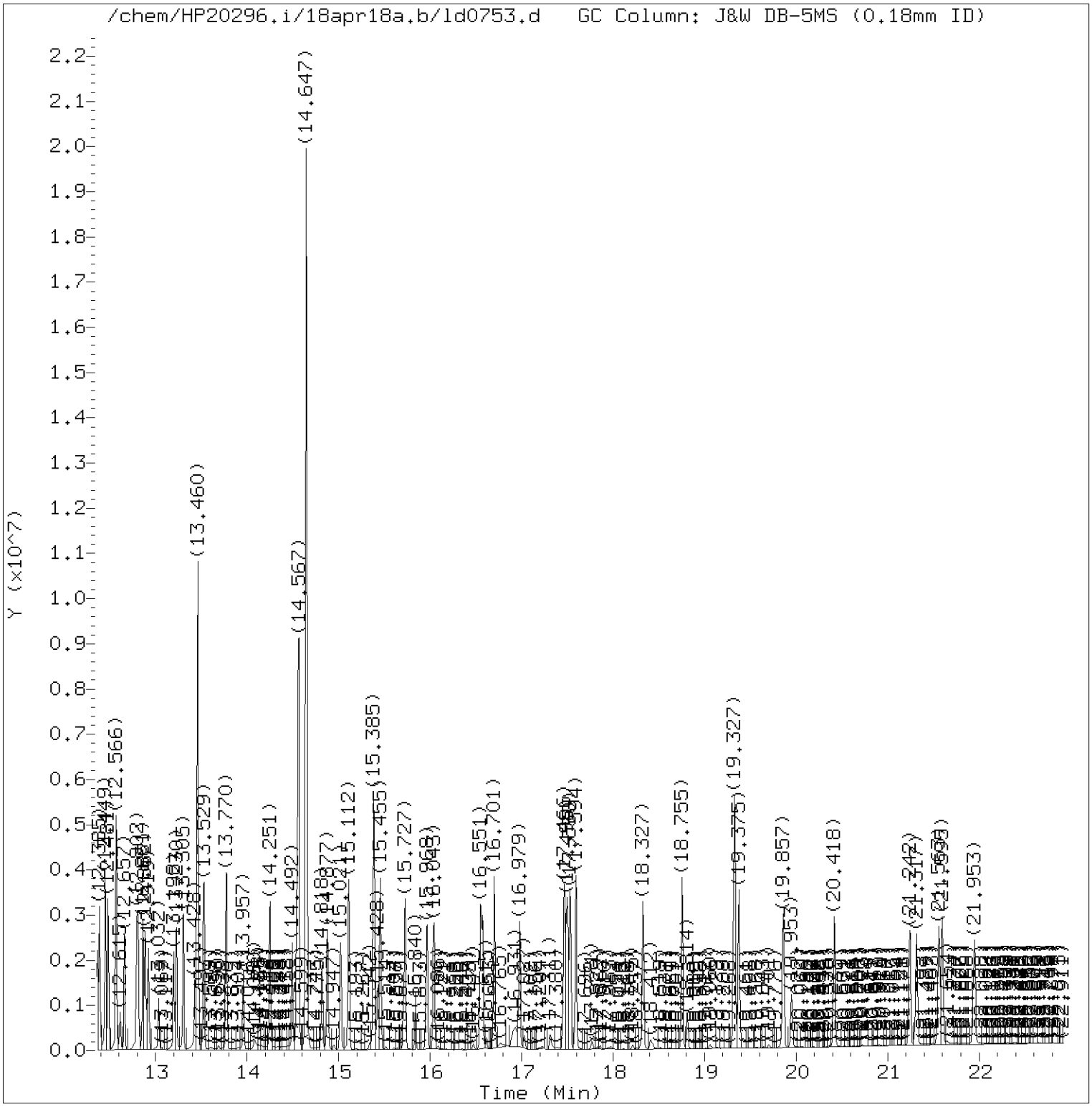
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0753.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:48 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MSD Lab Sample ID: 9553123

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0753.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:48 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MSD Lab Sample ID: 9553123

Digitally signed by Brandon H. Smith
on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0753.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 01:48 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 10:36 bhs10208

Sample Name: R0403MSD Lab Sample ID: 9553123

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.678	152	155152	5.000
45)$Nitrobenzene-d5	(2)	7.560	82	1183663	24.047
46) Nitrobenzene	(2)	7.587	77	652223	12.990
68)*Naphthalene-d8	(2)	8.662	136	570723	5.000
96)$2-Fluorobiphenyl	(3)	10.438	172	2032805	22.275
104) 2-Nitroaniline	(3)	10.833	138	317273	13.554
113) 2,6-Dinitrotoluene	(3)	11.235	165	262319	13.789
118)*Acenaphthene-d10	(3)	11.497	164	293553	5.000
123) 2,4-Dinitrotoluene	(3)	11.844	165	349863	13.271
129) Diethylphthalate	(3)	12.187	149	989894	11.226
134) 4-Nitroaniline	(3)	12.363	138	259855	12.827
158)*Phenanthrene-d10	(4)	13.428	188	603040	5.000
180)*Pyrene-d10	(5)	15.428	212	609061	5.000
184)$Terphenyl-d14	(5)	15.727	244	1200087	12.286
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	149	1336943	13.144
218)*Perylene-d12	(6)	19.953	264	626004	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/19/2018 at 10:36.
Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

106WBLCS

Data file: /chem/HP20296.i/18apr18a.b/ld0746.d Injection date and time: **18-APR-2018 22:30**
Data file Sample Info. Line: 106WBLCS;106WBLCS;1;3;LCS;;DRAPERMINI; Instrument ID: **HP20296.i** Batch: **18106WAB**
Date, time and analyst ID of latest file update: 19-Apr-2018 08:33 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr18a.b/ld0745.d**

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: **22228M**
Calibration date and time (Last Method Edit): 19-APR-2018 07:05
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr18a.b/ld0741.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.672	(0.000)	876	152	146083	(-25)	5.00	
68) Naphthalene-d8	8.657	(0.000)	1247	136	558976	(-22)	5.00	
118) Acenaphthene-d10	11.491	(0.000)	1777	164	282546	(-22)	5.00	
158) Phenanthrene-d10	13.428	(0.005)	2139	188	587846	(-20)	5.00	
180) Pyrene-d10	15.423	(0.005)	2512	212	602452	(-25)	5.00	
218) Perylene-d12	19.948	(0.005)	3358	264	613985	(-21)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.555	(0.000)	82	1093607	22.684	91%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.432	(0.000)	172	1795047	20.436	82%		39 - 105
184) Terphenyl-d14	(5)	15.728	(0.000)	244	2303604	23.843	95%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
46) Nitrobenzene	(2)	7.582	(0.000)	77	607148	12.347	49.39			0.2
104) 2-Nitroaniline	(3)	10.828	(-0.000)	138	300228	13.325	53.30			0.2
113) 2,6-Dinitrotoluene	(3)	11.229	(-0.000)	165	251800	13.752	55.01			0.2
123) 2,4-Dinitrotoluene	(3)	11.839	(0.000)	165	335032	13.204	52.82			0.2
129) Diethylphthalate	(3)	12.181	(0.000)	149	932779	10.990	43.96			0.1
134) 4-Nitroaniline	(3)	12.363	(-0.000)	138	242010	12.412	49.65			0.3
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	(-0.000)	149	1339885	13.318	53.27			0.4

Total number of targets = 7

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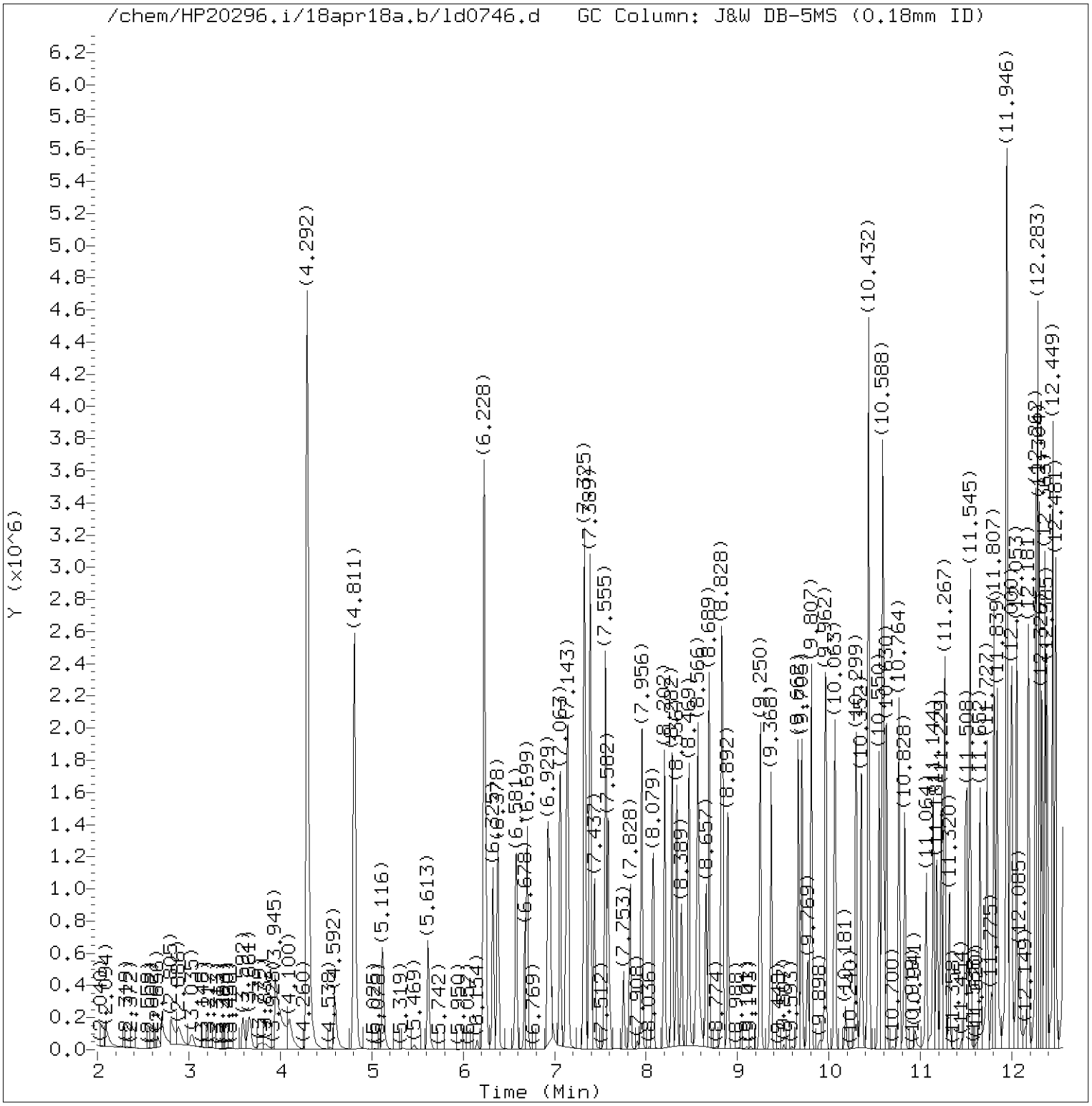
Secondary review performed and digitally signed by Chad A. Moline on 04/20/2018 at 08:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

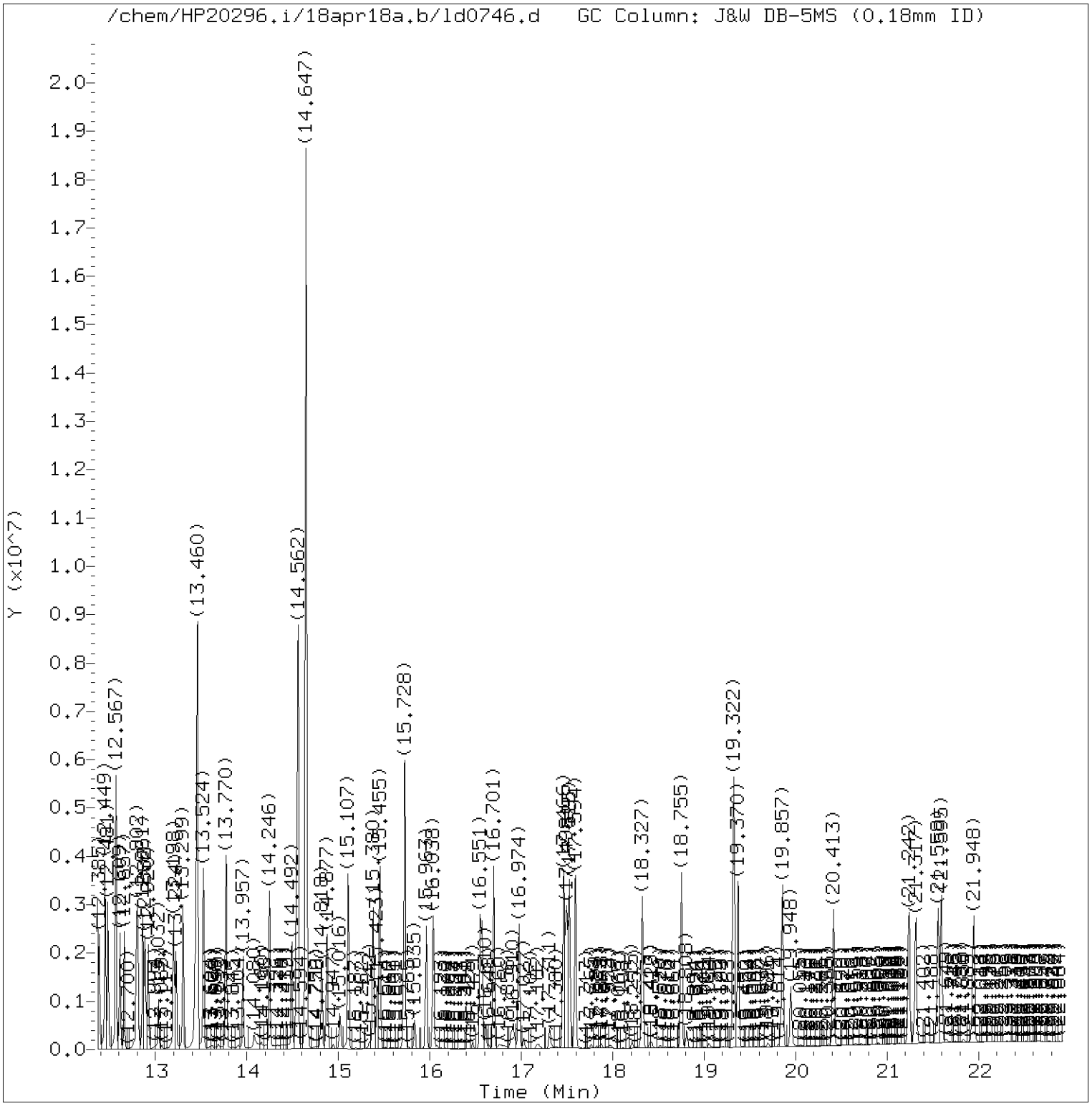
Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0746.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:30 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:33 bhs10208

Sample Name: 106WBLCS Lab Sample ID: 106WBLCS

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0746.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:30 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:33 bhs10208

Sample Name: 106WBLCS Lab Sample ID: 106WBLCS

Digitally signed by Brandon H. Smith
on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr18a.b/ld0746.d Instrument ID: HP20296.i
Injection date and time: 18-APR-2018 22:30 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr18a.b/rv8270d.m Sublist used: 22228M
Calibration date and time: 19-APR-2018 07:05
Date, time and analyst ID of latest file update: 19-Apr-2018 08:33 bhs10208

Sample Name: 106WBLCS Lab Sample ID: 106WBLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.672	152	146083	5.000
45)$Nitrobenzene-d5	(2)	7.555	82	1093607	22.684
46) Nitrobenzene	(2)	7.582	77	607148	12.347
68)*Naphthalene-d8	(2)	8.657	136	558976	5.000
96)$2-Fluorobiphenyl	(3)	10.432	172	1795047	20.436
104) 2-Nitroaniline	(3)	10.828	138	300228	13.325
113) 2,6-Dinitrotoluene	(3)	11.229	165	251800	13.752
118)*Acenaphthene-d10	(3)	11.491	164	282546	5.000
123) 2,4-Dinitrotoluene	(3)	11.839	165	335032	13.204
129) Diethylphthalate	(3)	12.181	149	932779	10.990
134) 4-Nitroaniline	(3)	12.363	138	242010	12.412
158)*Phenanthrene-d10	(4)	13.428	188	587846	5.000
180)*Pyrene-d10	(5)	15.423	212	602452	5.000
184)$Terphenyl-d14	(5)	15.728	244	2303604	23.843
204) bis(2-Ethylhexyl)phthalate	(5)	17.594	149	1339885	13.318
218)*Perylene-d12	(6)	19.948	264	613985	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/19/2018 at 09:57.
Target 3.5 esignature user ID: bhs10208

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 11067 Osvaldo Sanchez Reviewed by: AM 4/17/18 Start Date: 4/16/18 Start time: 1630

18106WAB026

Tech 1: OSanchez Tech 2: Kwon

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9553122MS	R0403	250	SS1809626A	1.0	MS1809626B MS1810126B	1.0 1.0	1	✓	✓	153B	Clear
9553123MSD	R0403	249	SS1809626A	1.0	MS1809626B MS1810126B	1.0 1.0	1	✓	✓	153B	Clear
BLANKA	SBLKWB106	250	SS1809626A	1.0			1	✓	✓		tap H2o
LCSA	106WBLCS	250	SS1809626A	1.0	MS1809626B MS1810126B	1.0 1.0	1	✓	✓		tap H2o

Solvent Used	Lot No.
10N NaOH	4708B00
Methylene Chloride	180784
Sodium Sulfate	181038
Sulfuric Acid	179162

Spike Solutions: Witness:
MS1809626B APPIX #1 MINI SPIKE
MS1810126B MINI SEP. LCS SPIKE #1
SS1809626A MINI SEP. BNA SURROGATE

(8) Sample split to 18106WAW026. WS3991 4/17/18

Sample #			Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
(8) 1	9551275	R	CSW06	249	SS1809626A	1.0	1	✓	✓	153B	Brown tint	14241	21568	04/20/2018	N
2	9553120	R	R0402	248	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N
3	9553121BKG	R	R0403	250	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N
4	9553124	R	R0404	241	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N
5	9553125	R	R0405	249	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N
6	9553126	R	R0406	248	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N
7	9553127	R	R0407	248	SS1809626A	1.0	1	✓	✓	153B	Clear	14241	22228	04/23/2018	N

RAF04 Page 744 of 744

PIA Kwon 4/16/18

Bench# 7	Bench# 6	Bench#			
Rack ID: F		Work Station	tumble	Micro Temp 100?	
Internal Standard	RVIST)1038	Balance #	25996		

R-VAP ID 3	90 C	R-VAP ID 1	99 C	R-VAP ID	C			
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	18106WAB026

DF = Dilution Factor FV = Final Volume Page 1 of 1 Documented temps are NIST corrected.

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater Samples
Collected on 04/09/18-04/10/18

SDG# RAF05-V.2

GROUP	SAMPLE NUMBERS
1930456	9553131-9553141

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **06/07/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

2425 New Holland Pike, Lancaster, PA 17601 | 717-656-2300 | Fax: 717-656-2681 | www.LancasterLabs.com

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Sample Reference List for SDG Number RAF05
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9553131	5W8B	04/09/2018 09:35	04/11/2018 09:20
9553132	5W5B	04/09/2018 12:05	04/11/2018 09:20
9553133	5W7B	04/09/2018 11:10	04/11/2018 09:20
9553134	5W7B Matrix Spike	04/09/2018 11:10	04/11/2018 09:20
9553135	5W7B Matrix Spike Dup	04/09/2018 11:10	04/11/2018 09:20
9553136	5W7B Duplicate	04/09/2018 11:10	04/11/2018 09:20
9553137	5WC21	04/10/2018 10:15	04/11/2018 09:20
9553138	5WDUP	04/10/2018 10:20	04/11/2018 09:20
9553139	5WC22	04/09/2018 12:55	04/11/2018 09:20
9553140	5WC23	04/10/2018 09:15	04/11/2018 09:20
9553141	5W12A	04/09/2018 10:10	04/11/2018 09:20

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Sample pH Log

SDG: RAF05

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Cl- Present?	Corrective Substance	CS Lot #	Record Date	Employee
9553131	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 4:40:02PM	12665
9553132	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 3:18:32PM	1532
9553133	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 4:40:43PM	12665
9553134	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 3:28:39PM	1532
9553135	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 3:13:16PM	1532
9553137	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 2:39:07PM	1532
9553138	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 3:31:15PM	1532
9553139	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 3:20:09PM	1532
9553140	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 4:32:55PM	12665
9553141	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/12/2018 2:40:30PM	1532

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

06024 Antimony
06025 Arsenic
06026 Barium
06027 Beryllium
06028 Cadmium
06031 Chromium
06032 Cobalt
06033 Copper
06035 Lead
06039 Nickel
06041 Selenium
06042 Silver
06045 Thallium
06048 Vanadium
06049 Zinc

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 24, 2018 13:56

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1930456
SDG: RAF05
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	04/09/2018 09:35	9553131
5W5B Grab Groundwater	04/09/2018 12:05	9553132
5W7B Grab Groundwater	04/09/2018 11:10	9553133
5W7B Matrix Spike Grab Groundwater	04/09/2018 11:10	9553134
5W7B Matrix Spike Dup Grab Groundwater	04/09/2018 11:10	9553135
5W7B Duplicate Grab Groundwater	04/09/2018 11:10	9553136
5WC21 Grab Groundwater	04/10/2018 10:15	9553137
5WDUP Grab Groundwater	04/10/2018 10:20	9553138
5WC22 Grab Groundwater	04/09/2018 12:55	9553139
5WC23 Grab Groundwater	04/10/2018 09:15	9553140
5W12A Grab Groundwater	04/09/2018 10:10	9553141

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU-5
ELLE Group #: 1930456

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 6020A, Metals

Batch #: 181031063904A (Sample number(s): 9553131-9553141 UNSPK: 9553133 BKG: 9553133)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Copper, Nickel

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Sample Description: **5W8B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 09:35
SDG#: RAF05-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553131
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 17:56	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W5B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:05
SDG#: RAF05-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553132
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	22.4	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	10.9 J	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	6	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06026	Barium	SW-846 6020A	6	181031063904D	04/16/2018 18:00	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	6	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06031	Chromium	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	6	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06033	Copper	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06035	Lead	SW-846 6020A	6	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06039	Nickel	SW-846 6020A	6	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06041	Selenium	SW-846 6020A	6	181031063904B	04/16/2018 18:00	Choon Y Tian	1
06042	Silver	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06045	Thallium	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	5	181031063904A	04/16/2018 18:00	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	181031063904A	05/04/2018 16:33	Bradley M Berlot	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 09:02	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W5B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:05
SDG#: RAF05-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553132
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553133
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	33.9	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	1.0 J	1.0	5.0	1
06032	Cobalt	7440-48-4	1.9 J	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	0.55 J	0.20	2.0	1
06039	Nickel	7440-02-0	3.3 J	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 17:38	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 17:38	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06045	Thallium	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181031063904A	04/16/2018 17:38	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 08:47	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553133
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Matrix Spike Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553134
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	6.3	0.40	2.0	1
06025	Arsenic	7440-38-2	10.6	2.0	10.0	1
06026	Barium	7440-39-3	85.2	1.0	10.0	1
06027	Beryllium	7440-41-7	4.2	0.20	1.0	1
06028	Cadmium	7440-43-9	5.2	0.20	1.0	1
06031	Chromium	7440-47-3	51.2	1.0	5.0	1
06032	Cobalt	7440-48-4	250	1.0	5.0	1
06033	Copper	7440-50-8	52.2	1.0	5.0	1
06035	Lead	7439-92-1	16.2	0.20	2.0	1
06039	Nickel	7440-02-0	55.3	2.0	10.0	1
06041	Selenium	7782-49-2	10.5	3.0	10.0	1
06042	Silver	7440-22-4	52.5	0.20	2.0	1
06045	Thallium	7440-28-0	2.0	0.20	1.0	1
06048	Vanadium	7440-62-2	50.4	1.0	10.0	1
06049	Zinc	7440-66-6	535	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00084 J	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 17:47	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 17:47	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06045	Thallium	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181031063904A	04/16/2018 17:47	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 08:52	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Matrix Spike Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553134
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553135
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	6.1	0.40	2.0	1
06025	Arsenic	7440-38-2	11.0	2.0	10.0	1
06026	Barium	7440-39-3	88.7	1.0	10.0	1
06027	Beryllium	7440-41-7	4.3	0.20	1.0	1
06028	Cadmium	7440-43-9	5.0	0.20	1.0	1
06031	Chromium	7440-47-3	52.4	1.0	5.0	1
06032	Cobalt	7440-48-4	244	1.0	5.0	1
06033	Copper	7440-50-8	51.4	1.0	5.0	1
06035	Lead	7439-92-1	16.2	0.20	2.0	1
06039	Nickel	7440-02-0	55.4	2.0	10.0	1
06041	Selenium	7782-49-2	10.3	3.0	10.0	1
06042	Silver	7440-22-4	52.5	0.20	2.0	1
06045	Thallium	7440-28-0	2.1	0.20	1.0	1
06048	Vanadium	7440-62-2	50.2	1.0	10.0	1
06049	Zinc	7440-66-6	545	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00088 J	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 17:50	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 17:50	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06045	Thallium	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181031063904A	04/16/2018 17:50	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 08:54	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553135
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Sample Description: **5W7B Duplicate Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553136
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	33.3	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	1.0 J	1.0	5.0	1
06032	Cobalt	7440-48-4	1.8 J	1.0	5.0	1
06033	Copper	7440-50-8	1.0 J	1.0	5.0	1
06035	Lead	7439-92-1	0.55 J	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 17:44	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 17:44	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06045	Thallium	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181031063904A	04/16/2018 17:44	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 08:49	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5W7B Duplicate Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 11:10
SDG#: RAF05-03DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553136
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC21 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:15
SDG#: RAF05-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553137
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	13.0	1.0	10.0	1
06027	Beryllium	7440-41-7	0.59 J	0.20	1.0	1
06028	Cadmium	7440-43-9	0.32 J	0.20	1.0	1
06031	Chromium	7440-47-3	1.9 J	1.0	5.0	1
06032	Cobalt	7440-48-4	41.9	1.0	5.0	1
06033	Copper	7440-50-8	1.6 J	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	21.9	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	31.5	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	2	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 18:09	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	2	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	2	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 18:09	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06045	Thallium	SW-846 6020A	2	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 18:09	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	181031063904A	05/04/2018 16:35	Bradley M Berlot	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 09:04	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC21 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:15
SDG#: RAF05-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553137
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WDUP Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:20
SDG#: RAF05-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553138
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	12.7	1.0	10.0	1
06027	Beryllium	7440-41-7	0.60 J	0.20	1.0	1
06028	Cadmium	7440-43-9	0.29 J	0.20	1.0	1
06031	Chromium	7440-47-3	1.7 J	1.0	5.0	1
06032	Cobalt	7440-48-4	41.3	1.0	5.0	1
06033	Copper	7440-50-8	1.6 J	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	21.8	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	20.5 J	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	2	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 18:12	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	2	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	2	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 18:12	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06045	Thallium	SW-846 6020A	2	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 18:12	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	181031063904A	05/04/2018 16:37	Bradley M Berlot	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 09:07	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WDUP Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 10:20
SDG#: RAF05-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553138
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC22 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:55
SDG#: RAF05-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553139
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	28.4	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	4.9 J	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	3.8 J	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	2	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 18:15	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	2	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	2	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 18:15	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06045	Thallium	SW-846 6020A	2	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 18:15	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	181031063904A	04/16/2018 18:15	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 09:09	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC22 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 12:55
SDG#: RAF05-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553139
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC23 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 09:15
SDG#: RAF05-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553140
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	23.4	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	1.8 J	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	2.1 J	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.00020	0.0020	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181031063904D	04/16/2018 18:18	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06041	Selenium	SW-846 6020A	3	181031063904B	04/16/2018 18:18	Choon Y Tian	1
06042	Silver	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06045	Thallium	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181031063904A	04/16/2018 18:18	Choon Y Tian	1
06049	Zinc	SW-846 6020A	2	181031063904A	04/16/2018 18:18	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181030571307	04/18/2018 09:12	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC23 Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/10/2018 09:15
SDG#: RAF05-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553140
ELLE Group #: 1930456
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181030571307	04/18/2018 01:45	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5W12A Grab Groundwater**
2Qtr 2018 Corrective Action Annual Monitoring
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 04/11/2018 09:20
Collection Date/Time: 04/09/2018 10:10
SDG#: RAF05-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9553141
ELLE Group #: 1930456
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	3	181031063904A	04/16/2018 18:21	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181031063904	04/15/2018 23:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930456
Reported: 05/24/2018 13:56

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 181030571307	Sample number(s): 9553132-9553140		
Mercury	N.D.	0.00020	0.0020
	ug/l	ug/l	ug/l
Batch number: 181031063904A	Sample number(s): 9553131-9553141		
Antimony	N.D.	0.40	2.0
Arsenic	N.D.	2.0	10.0
Beryllium	N.D.	0.20	1.0
Cadmium	N.D.	0.20	1.0
Chromium	N.D.	1.0	5.0
Cobalt	N.D.	1.0	5.0
Copper	N.D.	1.0	5.0
Lead	N.D.	0.20	2.0
Nickel	N.D.	2.0	10.0
Silver	N.D.	0.20	2.0
Thallium	N.D.	0.20	1.0
Vanadium	N.D.	1.0	10.0
Zinc	13.9 J	7.3	30.0
Batch number: 181031063904B	Sample number(s): 9553132-9553140		
Selenium	N.D.	3.0	10.0
Batch number: 181031063904D	Sample number(s): 9553132-9553140		
Barium	N.D.	1.0	10.0

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 181030571307	Sample number(s): 9553132-9553140								
Mercury	0.00100	0.000895			90		80-114		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 181031063904A	Sample number(s): 9553131-9553141								
Antimony	6.00	6.36			106		80-120		
Arsenic	10	10.17			102		80-120		
Beryllium	4.00	3.91			98		90-112		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930456
Reported: 05/24/2018 13:56

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.06			101		84-120		
Chromium	50	47.05			94		90-112		
Cobalt	250	233.3			93		86-113		
Copper	50	47.45			95		89-120		
Lead	15	14.19			95		90-110		
Nickel	50	50.87			102		90-114		
Silver	50	49.2			98		88-113		
Thallium	2.00	1.89			94		80-120		
Vanadium	50	45.03			90		90-112		
Zinc	500	530.4			106		90-113		
Batch number: 181031063904B	Sample number(s): 9553132-9553140								
Selenium	10	9.74			97		90-113		
Batch number: 181031063904D	Sample number(s): 9553132-9553140								
Barium	50	49.23			98		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 181030571307	Sample number(s): 9553132-9553140 UNSPK: 9553133									
Mercury	N.D.	0.00100	0.000843	0.00100	0.000881	84	88	80-120	4	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 181031063904A	Sample number(s): 9553131-9553141 UNSPK: 9553133									
Antimony	N.D.	6.00	6.25	6.00	6.11	104	102	75-125	2	20
Arsenic	N.D.	10	10.58	10	11.01	106	110	75-125	4	20
Beryllium	N.D.	4.00	4.21	4.00	4.27	105	107	75-125	1	20
Cadmium	N.D.	5.00	5.22	5.00	4.99	104	100	75-125	5	20
Chromium	1.04	50	51.18	50	52.39	100	103	75-125	2	20
Cobalt	1.93	250	250.1	250	244.3	99	97	75-125	2	20
Copper	N.D.	50	52.15	50	51.37	104	103	75-125	2	20
Lead	0.549	15	16.23	15	16.24	105	105	75-125	0	20
Nickel	3.28	50	55.29	50	55.44	104	104	75-125	0	20
Silver	N.D.	50	52.45	50	52.48	105	105	75-125	0	20
Thallium	N.D.	2.00	1.96	2.00	2.09	98	104	75-125	6	20
Vanadium	N.D.	50	50.4	50	50.22	101	100	75-125	0	20
Zinc	N.D.	500	535	500	544.7	107	109	75-125	2	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1930456
Reported: 05/24/2018 13:56

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 181031063904B	Sample number(s): 9553132-9553140 UNSPK: 9553133									
Selenium	N.D.	10	10.54	10	10.26	105	103	75-125	3	20
Batch number: 181031063904D	Sample number(s): 9553132-9553140 UNSPK: 9553133									
Barium	33.93	50	85.17	50	88.68	102	110	75-125	4	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 181030571307	Sample number(s): 9553132-9553140 BKG: 9553133			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 181031063904A	Sample number(s): 9553131-9553141 BKG: 9553133			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.04	1.05	1 (1)	20
Cobalt	1.93	1.83	5 (1)	20
Copper	N.D.	1.01	200* (1)	20
Lead	0.549	0.552	0 (1)	20
Nickel	3.28	N.D.	200* (1)	20
Silver	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Vanadium	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 181031063904B	Sample number(s): 9553132-9553140 BKG: 9553133			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 181031063904D	Sample number(s): 9553132-9553140 BKG: 9553133			
Barium	33.93	33.3	2 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1930456/9553131-41

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU5 **Event:** 2Qtr 2018 Corrective Action Annual Monitoring Event **DAA JN:** B03204-18A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS! **Carrier:** ~~1Z 237 301 01 9375 9700~~ **Tracking Number:** 1Z 754 02X YO 5756 2878 **Invoice** 1Z 754 02X 40 5561 0480 **Copy to Consultant:** YES **Bill:** CLIENT OTHER **Preserved and shipped on ice:** YES		

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Box 4 - Sample Type	G	G	G	G
Box 3 - Filtered/Unfiltered	U	U	U	U
Required pH of Sample	<2	<2	<2	
Box 2 - Preservative	A	B	B	H
Box 5 - Sample Container Type	3-40ml V	1-500ml P	1-500ml P	2-250mL AG

Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge Appendix J Analyte List	8260C/5030C 25 ml purge Appendix K Analyte List	(Metals-Total) 6020A(3020A)/ 7470A	Cobalt only-Total 6020A/3020A	8270D/3510C (Semivolatiles)	
5W8B	04/09	0935	GW	4	X			X		upgradient monitoring well
5W5B	04/09	1205	GW	6	X	X	X		X	
5W7B	04/09	1110	GW	18	X	X	X		X	
5WC21	04/10	0815	GW	6	X	X	X		X	USE FOR QC
5WDUP	04/10	1020	GW	6	X	X	X		X	
5WC22	04/09	1255	GW	6	X	X	X		X	
5WC23	04/10	0915	GW	6	X	X	X		X	
5W12A	04/09	1010	GW	4	X			X		plume well
Trip Blank 1	04/09	—	T	2	X	X				
Trip Blank 2	04/09	—	T	2	X	X				

GENERAL NOTES:
1. See attached analyte list.
2. Report permit required LOQ/MDL or lab MDL if higher than permit MDL. Report Results to MDL with "J" Flags.
3. VELAP accreditation required.
4. Project specific MDL/QLs attached.

5 (cobalt QC = 5ug/l) (LCS = 1ug/l) Jw 3/22/18

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition X Yes ___ No Custody Seal Intact X Yes ___ No Temperature upon arrival 04-4 Received on Ice X Yes ___ No
Describe problems if any

Sampler Name (Print): Ken Coddington	Date: 4-9-18	#1 Relinquished by (Signature):	Date: 4/10/18	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print):	Date: 4/9/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/11/18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 920	

4-25 3/22/2018 JS

1930456

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020A (ICP/MS)/3020A

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL (µg/l)
1.	Antimony	7440-36-0	2	0.4
2.	Arsenic	7440-38-2	10	2
3.	Barium	7440-39-3	10	1
4.	Beryllium	7440-41-7	1	0.2
5.	Cadmium	7440-43-9	1	0.2
6.	Chromium	7440-47-3	5	1
7.	Cobalt	7440-48-4	5	1
8.	Copper	7440-50-8	5	1
9.	Lead	7440-92-1	2	0.2
10.	Nickel	7440-02-0	10	2
11.	Selenium	7782-49-2	10	3
12.	Silver	7440-22-4	2	0.2
13.	Thallium	7440-28-0	1	0.2
14.	Vanadium	7440-62-2	10	1
15.	Zinc	7440-66-6	30	7.3
Method SW 7470A/CVAA				
16.	Mercury	7439-97-6	2	0.2

Final Report must list the project required MDLs listed above. Report results between the project required QL noted above and MDL above as estimated value. Report lab's current MDL, if higher than listed above.

. **Note: # 6 added on Jan 2004 due To 4Q2003 detection.**

Reviewed:
Revised and updated 1/15/2004 JCF.
Revised and updated 10/1/06.
Reviewed 4 Q 2006 -3/30/2018 12:44 PM
10/9/2007 JCF – 2007 switched to semiannual monitoring 2/4 Q.
Revised and updated 2/12/2010 kfc
QLs and MDLs noted above reflect permit modification data Nov 5, 2009. JCF
Revised 4/2017 due to class 1 permit mod dec 2016.

.t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-5\hwmu5 - coc rev 2010\hwmu 5 - appendix k cap target analtye list - rev 2017.doc

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Sample Administration Receipt Documentation Log

Doc Log ID: 213415

Group Number(s): 1930456

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/11/2018 9:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 17:26 on 04/11/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.4	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF05

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9553131	5W8B	X		1	
9553132	5W5B	X		1	
9553133	5W7B	X		1	Background/Unspiked
9553134	5W7B Matrix Spike	X		1	Matrix Spike
9553135	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9553136	5W7B Duplicate	X		1	Duplicate
9553137	5WC21	X		1	
9553138	5WDUP	X		1	Field Duplicate Sample
9553139	5WC22	X		1	
9553140	5WC23	X		1	
9553141	5W12A	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

For noncompliant preparation/method blanks, corrective action is not required if the sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF05

ICP Metals

Fraction: Metals in Liquid

Sample Duplicate

Batch#: 181031063904A (Sample number(s): 9553131-9553141, UNSPK: 9553133, BKG: 9553133)
The duplicate RPD for the following analyte(s) is outside the acceptance window: Copper, Nickel

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553131 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553132 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	22.4			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	10.9	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553133BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	33.9			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	B		MS
7440-48-4	Cobalt	1.9	B		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.55	B		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.3	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553134MS % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	6.3			MS
7440-38-2	Arsenic	10.6			MS
7440-39-3	Barium	85.2			MS
7440-41-7	Beryllium	4.2			MS
7440-43-9	Cadmium	5.2			MS
7440-47-3	Chromium	51.2			MS
7440-48-4	Cobalt	250			MS
7440-50-8	Copper	52.2			MS
7439-92-1	Lead	16.2			MS
7439-97-6	Mercury	0.84	B		CV
7440-02-0	Nickel	55.3			MS
7782-49-2	Selenium	10.5			MS
7440-22-4	Silver	52.5			MS
7440-28-0	Thallium	2.0			MS
7440-62-2	Vanadium	50.4			MS
7440-66-6	Zinc	535			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553135MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	6.1			MS
7440-38-2	Arsenic	11.0			MS
7440-39-3	Barium	88.7			MS
7440-41-7	Beryllium	4.3			MS
7440-43-9	Cadmium	5.0			MS
7440-47-3	Chromium	52.4			MS
7440-48-4	Cobalt	244			MS
7440-50-8	Copper	51.4			MS
7439-92-1	Lead	16.2			MS
7439-97-6	Mercury	0.88	B		CV
7440-02-0	Nickel	55.4			MS
7782-49-2	Selenium	10.3			MS
7440-22-4	Silver	52.5			MS
7440-28-0	Thallium	2.1			MS
7440-62-2	Vanadium	50.2			MS
7440-66-6	Zinc	545			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553136DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	33.3			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	B		MS
7440-48-4	Cobalt	1.8	B		MS
7440-50-8	Copper	1.0	B		MS
7439-92-1	Lead	0.55	B		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553137 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	13.0			MS
7440-41-7	Beryllium	0.59	B		MS
7440-43-9	Cadmium	0.32	B		MS
7440-47-3	Chromium	1.9	B		MS
7440-48-4	Cobalt	41.9			MS
7440-50-8	Copper	1.6	B		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	21.9			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	31.5			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553138 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	12.7			MS
7440-41-7	Beryllium	0.60	B		MS
7440-43-9	Cadmium	0.29	B		MS
7440-47-3	Chromium	1.7	B		MS
7440-48-4	Cobalt	41.3			MS
7440-50-8	Copper	1.6	B		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	21.8			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	20.5	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553139 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	28.4			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	4.9	B		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3.8	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553140 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	23.4			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.8	B		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	2.1	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9553141 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/11/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAF05
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Antimony	181031063904	9553131
Arsenic		9553132
Barium		9553133BKG
Beryllium		9553134MS
Cadmium		9553135MSD
Chromium		9553136DUP
Cobalt		9553137
Copper		9553138
Lead		9553139
Nickel		9553140
Selenium		9553141
Silver		P10363DB
Thallium		P10363DQ
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: RAF05
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Mercury	181030571307	9553132
		9553133BKG
		9553134MS
		9553135MSD
		9553136DUP
		9553137
		9553138
		9553139
		9553140
		P10371GB
		P10371GQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF05

Method: MS
Run Name: 1810609E03
Calibration Date(s): 04/16/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	54.95	109.9	25.0	25.14	100.6	25.0	26.28	105.1
Arsenic	75	500.0	536.50	107.3	250.0	261.40	104.6	250.0	263.60	105.4
Barium	137	500.0	523.00	104.6	250.0	261.10	104.4	250.0	267.60	107.0
Beryllium	9	50.0	51.91	103.8	25.0	26.04	104.2	25.0	26.19	104.8
Cadmium	111	50.0	53.07	106.1	25.0	26.60	106.4	25.0	26.75	107.0
Chromium	52	500.0	506.40	101.3	250.0	251.40	100.6	250.0	255.20	102.1
Cobalt	59	500.0	530.70	106.1	250.0	251.60	100.6	250.0	250.90	100.4
Copper	63	500.0	495.60	99.1	250.0	248.00	99.2	250.0	250.60	100.2
Lead	208	50.0	50.34	100.7	25.0	25.99	104.0	25.0	25.44	101.8
Nickel	60	500.0	537.50	107.5	250.0	267.40	107.0	250.0	269.10	107.6
Selenium	78	50.0	51.37	102.7	25.0	25.49	102.0	25.0	25.07	100.3
Silver	107	50.0	53.57	107.1	25.0	26.92	107.7	25.0	26.89	107.6
Thallium	203	50.0	51.00	102.0	25.0	25.35	101.4	25.0	25.10	100.4
Vanadium	51	500.0	495.30	99.1	250.0	242.90	97.2	250.0	246.50	98.6
Zinc	66	500.0	532.50	106.5	250.0	262.50	105.0	250.0	269.30	107.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1810609E03
Calibration Date(s): 04/16/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	25.50	102.0			
Arsenic	75				250.0	267.50	107.0			
Barium	137				250.0	258.50	103.4			
Beryllium	9				25.0	25.99	104.0			
Cadmium	111				25.0	26.76	107.0			
Chromium	52				250.0	261.10	104.4			
Cobalt	59				250.0	253.90	101.6			
Copper	63				250.0	255.40	102.2			
Lead	208				25.0	25.85	103.4			
Nickel	60				250.0	274.80	109.9			
Selenium	78				25.0	24.28	97.1			
Silver	107				25.0	27.24	109.0			
Thallium	203				25.0	26.02	104.1			
Vanadium	51				250.0	253.10	101.2			
Zinc	66				250.0	269.70	107.9			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF05

Method: MS
Run Name: 1812406E05
Calibration Date(s): 05/04/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Chromium										
Cobalt										
Copper										
Lead										
Nickel										
Selenium										
Silver										
Thallium										
Vanadium										
Zinc	66	500.0	486.56	97.3	250.0	245.09	98.0	250.0	260.56	104.2

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.49	99.6	1.0	0.97	97.0	1.0	0.95	95.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0	1.0	0.94	94.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0	1.0	0.93	93.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF05

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1810609E03
Calibration Date(s): 04/16/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	2.0	1.88	94.0	2.10	105.0
Arsenic	75	4.0	3.55	88.8	3.32	83.0
Barium	137	4.0	3.78	94.5	3.97	99.3
Beryllium	9	1.0	1.07	107.0	1.08	108.0
Cadmium	111	1.0	1.06	106.0	0.91	91.0
Chromium	52	4.0	3.77	94.3	3.84	96.0
Cobalt	59	1.0	0.99	99.0	0.98	98.0
Copper	63	4.0	3.71	92.8	3.82	95.5
Lead	208	2.0	2.01	100.5	2.02	101.0
Nickel	60	4.0	3.99	99.8	4.42	110.5
Selenium	78	4.0	3.83	95.8	3.72	93.0
Silver	107	1.0	1.04	104.0	1.13	113.0
Thallium	203	1.0	1.01	101.0	0.95	95.0
Vanadium	51	1.0	1.03	103.0	1.06	106.0
Zinc	66	30.0	33.15	110.5	33.13	110.4

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF05

Method: MS
Run Name: 1812406E05
Calibration Date(s): 05/04/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Chromium						
Cobalt						
Copper						
Lead						
Nickel						
Selenium						
Silver						
Thallium						
Vanadium						
Zinc	66	30.0	30.15	100.5	33.86	112.9

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF05

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.17	85.0	0.18	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF05

Method: MS
Run Name: 1810609E03
Calibration Date(s): 04/16/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony	121	0.34	U	0.34	U	0.43	B	0.34	U	121	0.400	U	181031063904A
Arsenic	75	0.40	U	0.40	U	0.40	U	0.40	U	75	2.000	U	181031063904A
Barium	137	0.51	U	0.51	U	0.51	U	0.51	U	137	1.000	U	181031063904A
Beryllium	9	0.10	B	0.051	B	0.034	U	0.063	B	9	0.200	U	181031063904A
Cadmium	111	0.10	U	0.10	U	0.10	U	0.10	U	111	0.200	U	181031063904A
Chromium	52	0.50	U	0.50	U	0.50	U	0.50	U	52	1.000	U	181031063904A
Cobalt	59	0.10	U	0.10	U	0.10	U	0.10	U	59	1.000	U	181031063904A
Copper	63	0.40	U	0.40	U	0.40	U	0.40	U	63	1.000	U	181031063904A
Lead	208	0.021	U	0.021	U	0.021	U	0.021	U	208	0.200	U	181031063904A
Nickel	60	0.26	U	0.26	U	0.26	U	0.26	U	60	2.000	U	181031063904A
Selenium	78	0.66	U	0.66	U	0.66	U	0.66	U	78	3.000	U	181031063904A
Silver	107	0.088	U	0.088	U	0.088	U	0.088	U	107	0.200	U	181031063904A
Thallium	203	0.16	B	0.098	U	0.098	U	0.10	B	203	0.200	U	181031063904A
Vanadium	51	0.15	U	0.15	U	0.15	U	0.15	U	51	1.000	U	181031063904A
Zinc	66	3.1	U	3.1	U	3.1	U	3.1	U				

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF05

Method: MS
Run Name: 1812406E05
Calibration Date(s): 05/04/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony													
Arsenic													
Barium													
Beryllium													
Cadmium													
Chromium													
Cobalt													
Copper													
Lead													
Nickel													
Selenium													
Silver													
Thallium													
Vanadium													
Zinc	66	3.1	U	3.1	U	3.1	U			66	13.885	B	181031063904A

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF05

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury		0.050	U	0.050	U	0.050	U	0.050	U		0.200	U	181030571307

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U	0.050	U	0.050	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U	0.050	U	0.050	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF05

Method: CV
Run Name: 1810801M07
Calibration Date(s): 04/18/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF05

Instrument ID: 11332
Run Name: 1810609E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	104500	104.5	102300.0	102.3
Antimony	121	0	0	1		1.1	
Arsenic	75	0	100	1		100.6	100.6
Barium	137	0	0	1		1.2	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		91.6	91.6
Calcium	44	300000	300000	309100	103.0	300700.0	100.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	1		216.4	108.2
Cobalt	59	0	205	1		189.7	92.5
Copper	63	0	200	1		185.5	92.8
Iron	57	250000	250000	259300	103.7	253000.0	101.2
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	102700	102.7	101600.0	101.6
Molybdenum	98	2000	2000	2152	107.6	2083.0	104.2
Nickel	60	0	200	1		195.9	98.0
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	114100	114.1	111700.0	111.7
Selenium	78	0	100	0		88.0	88.0
Silver	107	0	50	0		47.6	95.2
Sodium	23	250000	250000	271100	108.4	261800.0	104.7
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.2	
Titanium	47	2000	2000	2320	116.0	2236.0	111.8
Vanadium	51	0	200	0		223.3	111.7
Zinc	66	0	100	2		89.0	89.0

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF05

Instrument ID: 11332
Run Name: 1810609E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	106000	106.0	102000.0	102.0
Antimony	121	0	0	1		1.4	
Arsenic	75	0	100	1		103.2	103.2
Barium	137	0	0	1		1.4	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		96.3	96.3
Calcium	44	300000	300000	313100	104.4	300300.0	100.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	1		226.1	113.1
Cobalt	59	0	205	1		199.0	97.1
Copper	63	0	200	1		192.1	96.1
Iron	57	250000	250000	266300	106.5	258500.0	103.4
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	105100	105.1	102200.0	102.2
Molybdenum	98	2000	2000	2093	104.7	2168.0	108.4
Nickel	60	0	200	1		204.6	102.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	115100	115.1	111100.0	111.1
Selenium	78	0	100	0		84.6	84.6
Silver	107	0	50	0		49.1	98.2
Sodium	23	250000	250000	276500	110.6	267600.0	107.0
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.1	
Titanium	47	2000	2000	2393	119.7	2290.0	114.5
Vanadium	51	0	200	0		224.8	112.4
Zinc	66	0	100	3		92.7	92.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF05

Instrument ID: 19204
Run Name: 1812406E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	106189	106.2	104025.6	104.0
Antimony							
Arsenic							
Barium							
Beryllium							
Cadmium							
Calcium	44	300000	300000	288995	96.3	276796.8	92.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt							
Copper							
Iron	57	250000	250000	260293	104.1	247441.9	99.0
Lead							
Magnesium	24	100000	100000	104030	104.0	100323.2	100.3
Molybdenum	98	2000	2000	2125	106.3	2101.5	105.1
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	109459	109.5	105425.7	105.4
Selenium							
Silver							
Sodium	23	250000	250000	259593	103.8	248182.9	99.3
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2180	109.0	2107.4	105.4
Vanadium							
Zinc	66	0	100	2		97.2	97.2

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF05

Instrument ID: 19204
Run Name: 1812406E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	107123	107.1	103511.4	103.5
Antimony							
Arsenic							
Barium							
Beryllium							
Cadmium							
Calcium	44	300000	300000	285205	95.1	284957.1	95.0
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt							
Copper							
Iron	57	250000	250000	255724	102.3	253736.0	101.5
Lead							
Magnesium	24	100000	100000	105045	105.0	103862.1	103.9
Molybdenum	98	2000	2000	2099	105.0	2118.8	105.9
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	109144	109.1	107360.0	107.4
Selenium							
Silver							
Sodium	23	250000	250000	259096	103.6	258558.5	103.4
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2180	109.0	2165.7	108.3
Vanadium							
Zinc	66	0	100	3		99.3	99.3

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9553133BKG Matrix Spike Lab Sample ID: 9553134MS Matrix Spike Duplicate Lab Sample ID: 9553135MSD
Batch Number(s): 181031063904, 181030571307

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Antimony	121	0.4000	U	6.2530		6.1130		6.0000	6.0000	UG/L	104		102		2		75 - 125	20	MS
Arsenic	75	2.0000	U	10.5800		11.0100		10.0000	10.0000	UG/L	106		110		4		75 - 125	20	MS
Barium	137	33.9300		85.1700		88.6800		50.0000	50.0000	UG/L	102		110		4		75 - 125	20	MS
Beryllium	9	0.2000	U	4.2130		4.2660		4.0000	4.0000	UG/L	105		107		1		75 - 125	20	MS
Cadmium	111	0.2000	U	5.2210		4.9880		5.0000	5.0000	UG/L	104		100		5		75 - 125	20	MS
Chromium	52	1.0360	B	51.1800		52.3900		50.0000	50.0000	UG/L	100		103		2		75 - 125	20	MS
Cobalt	59	1.9320	B	250.1000		244.3000		250.0000	250.0000	UG/L	99		97		2		75 - 125	20	MS
Copper	63	1.0000	U	52.1500		51.3700		50.0000	50.0000	UG/L	104		103		2		75 - 125	20	MS
Lead	208	0.5494	B	16.2300		16.2400		15.0000	15.0000	UG/L	105		105		0		75 - 125	20	MS
Mercury		0.2000	U	0.8429	B	0.8808	B	1.0000	1.0000	UG/L	84		88		4		80 - 120	20	CV
Nickel	60	3.2780	B	55.2900		55.4400		50.0000	50.0000	UG/L	104		104		0		75 - 125	20	MS
Selenium	78	3.0000	U	10.5400		10.2600		10.0000	10.0000	UG/L	105		103		3		75 - 125	20	MS
Silver	107	0.2000	U	52.4500		52.4800		50.0000	50.0000	UG/L	105		105		0		75 - 125	20	MS
Thallium	203	0.2000	U	1.9640		2.0850		2.0000	2.0000	UG/L	98		104		6		75 - 125	20	MS
Vanadium	51	1.0000	U	50.4000		50.2200		50.0000	50.0000	UG/L	101		100		0		75 - 125	20	MS
Zinc	66	7.3000	U	535.0000		544.7000		500.0000	500.0000	UG/L	107		109		2		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.
If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9553133BKG Duplicate Lab Sample ID: 9553136DUP
Batch Number(s): 181031063904, 181030571307
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121		0.4000	U	0.4000	U			MS
Arsenic	75		2.0000	U	2.0000	U			MS
Barium	137	10.0	33.9300		33.3000		2		MS
Beryllium	9		0.2000	U	0.2000	U			MS
Cadmium	111		0.2000	U	0.2000	U			MS
Chromium	52		1.0360	B	1.0490	B	1		MS
Cobalt	59		1.9320	B	1.8310	B	5		MS
Copper	63		1.0000	U	1.0090	B	200		MS
Lead	208		0.5494	B	0.5515	B	0		MS
Mercury			0.2000	U	0.2000	U			CV
Nickel	60		3.2780	B	2.0000	U	200		MS
Selenium	78		3.0000	U	3.0000	U			MS
Silver	107		0.2000	U	0.2000	U			MS
Thallium	203		0.2000	U	0.2000	U			MS
Vanadium	51		1.0000	U	1.0000	U			MS
Zinc	66		7.3000	U	7.3000	U			MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAF05
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Antimony	121	181031063904	UG/L	6.000	6.360		80 - 120	106	MS	Yes
Arsenic	75	181031063904	UG/L	10.000	10.170		80 - 120	102	MS	Yes
Barium	137	181031063904	UG/L	50.000	49.230		80 - 120	98	MS	Yes
Beryllium	9	181031063904	UG/L	4.000	3.911		90 - 112	98	MS	Yes
Cadmium	111	181031063904	UG/L	5.000	5.060		84 - 120	101	MS	Yes
Chromium	52	181031063904	UG/L	50.000	47.050		90 - 112	94	MS	Yes
Cobalt	59	181031063904	UG/L	250.000	233.300		86 - 113	93	MS	Yes
Copper	63	181031063904	UG/L	50.000	47.450		89 - 120	95	MS	Yes
Lead	208	181031063904	UG/L	15.000	14.190		90 - 110	95	MS	Yes
Mercury		181030571307	UG/L	1.000	0.895	B	80 - 114	90	CV	Yes
Nickel	60	181031063904	UG/L	50.000	50.870		90 - 114	102	MS	Yes
Selenium	78	181031063904	UG/L	10.000	9.741	B	90 - 113	97	MS	Yes
Silver	107	181031063904	UG/L	50.000	49.200		88 - 113	98	MS	Yes
Thallium	203	181031063904	UG/L	2.000	1.886		80 - 120	94	MS	Yes
Vanadium	51	181031063904	UG/L	50.000	45.030		90 - 112	90	MS	Yes
Zinc	66	181031063904	UG/L	500.000	530.400		90 - 113	106	MS	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAF05
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9553133BKG Serial Dilution Lab Sample ID: 9553133L
Batch Number(s): 181031063904
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Antimony	121	0.4000	U	2.0000	U			MS
Arsenic	75	2.0000	U	10.0000	U			MS
Barium	137	33.9300		30.8650	B	9		MS
Beryllium	9	0.2000	U	1.0000	U			MS
Cadmium	111	0.2000	U	1.0000	U			MS
Chromium	52	1.0360	B	5.0000	U	100		MS
Cobalt	59	1.9320	B	5.0000	U	100		MS
Copper	63	1.0000	U	5.0000	U			MS
Lead	208	0.5494	B	1.0000	U	100		MS
Nickel	60	3.2780	B	10.0000	U	100		MS
Selenium	78	3.0000	U	15.0000	U			MS
Silver	107	0.2000	U	1.0000	U			MS
Thallium	203	0.2000	U	1.0000	U			MS
Vanadium	51	1.0000	U	5.0000	U			MS
Zinc	66	7.3000	U	36.5000	U			MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Method: MS
Instrument ID: 11332
Date: 04/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.34
Arsenic	75		0.40
Barium	137		0.51
Beryllium	9		0.034
Cadmium	111		0.10
Chromium	52		0.50
Cobalt	59		0.10
Copper	63		0.40
Lead	208		0.021
Nickel	60		0.26
Selenium	78		0.66
Silver	107		0.088
Thallium	203		0.098
Vanadium	51		0.15
Zinc	66		1.7

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Instrument ID: 19204
Date: 04/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Chromium			
Cobalt			
Copper			
Lead			
Nickel			
Selenium			
Silver			
Thallium			
Vanadium			
Zinc	66		3.1

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Instrument ID: 17384
Date: 04/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.050

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF05
Matrix: WATER

Method: MS
Date: 04/2016

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		2.0	0.40
Arsenic	75		10.0	2.0
Barium	137		10.0	1.0
Beryllium	9		1.0	0.20
Cadmium	111		1.0	0.20
Chromium	52		5.0	1.0
Cobalt	59		5.0	1.0
Copper	63		5.0	1.0
Lead	208		2.0	0.20
Nickel	60		10.0	2.0
Selenium	78		10.0	3.0
Silver	107		2.0	0.20
Thallium	203		1.0	0.20
Vanadium	51		10.0	1.0
Zinc				

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF05
Matrix: WATER

Method: MS
Date: 05/2017

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony				
Arsenic				
Barium				
Beryllium				
Cadmium				
Chromium				
Cobalt				
Copper				
Lead				
Nickel				
Selenium				
Silver				
Thallium				
Vanadium				
Zinc	66		30.0	7.3

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF05
Matrix: WATER

Method: CV
Date: 03/2018

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		2.0	0.20

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 181031063904

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9553131	04/15/2018	50.00	50
9553132	04/15/2018	50.00	50
9553137	04/15/2018	50.00	50
9553138	04/15/2018	50.00	50
9553139	04/15/2018	50.00	50
9553140	04/15/2018	50.00	50
9553141	04/15/2018	50.00	50
9553133BKG	04/15/2018	50.00	50
9553136DUP	04/15/2018	50.00	50
9553135MSD	04/15/2018	50.00	50
9553134MS	04/15/2018	50.00	50
P10363DB	04/15/2018	50.00	50
P10363DQ	04/15/2018	1.00	1

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

Method: CV
Batch Number: 181030571307

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9553132	04/18/2018	40.00	40
9553137	04/18/2018	40.00	40
9553138	04/18/2018	40.00	40
9553139	04/18/2018	40.00	40
9553140	04/18/2018	40.00	40
9553133BKG	04/18/2018	40.00	40
9553136DUP	04/18/2018	40.00	40
9553135MSD	04/18/2018	40.00	40
9553134MS	04/18/2018	40.00	40
P10371GB	04/18/2018	40.00	40
P10371GQ	04/18/2018	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF05

Method: MS
Instrument ID: 11332
Run Name: 1810609E03

Run Start Date: 04/16/2018
Run End Date: 04/16/2018

| Lab Sample ID | D/F | Time | Analytes | | |

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF05

Method: MS
Instrument ID: 19204
Run Name: 1812406E05

Run Start Date: 05/04/2018
Run End Date: 05/04/2018

Lab Sample ID	D/F	Time	Analytes																													
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN														
S0	1.00	16:07																X														
S	1.00	16:09																X														
CCS	1.00	16:11																X														
CCS	1.00	16:13																X														
ICV	1.00	16:15																X														
ICB	1.00	16:16																X														
LLC	1.00	16:18																X														
ICSA	1.00	16:20																X														
ICSAB	1.00	16:22																X														
ZZZZZZ	1.00	16:24																														
CCV	1.00	16:26																X														
CCB	1.00	16:27																X														
P10363DB	1.00	16:29																X														
9553133A	1.00	16:31																														
9553132	1.00	16:33																X														
9553137	1.00	16:35																X														
9553138	1.00	16:37																X														
LLC	1.00	16:39																X														
ICSA	1.00	16:40																X														
ICSAB	1.00	16:42																X														
ZZZZZZ	1.00	16:44																														
CCV	1.00	16:46																X														
CCB	1.00	16:48																X														

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF05

Method: CV
Instrument ID: 17384
Run Name: 1810801M07

Run Start Date: 04/18/2018
Run End Date: 04/18/2018

Lab Sample ID	D/F	Time	Analytes																													
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN														
S0	1.00	05:58										X																				
S0.2	1.00	06:00										X																				
S0.5	1.00	06:02										X																				
S1.0	1.00	06:04										X																				
S2.5	1.00	06:06										X																				
S5.0	1.00	06:08										X																				
ICV	1.00	06:14										X																				
ICB	1.00	06:16										X																				
CRA	1.00	06:18										X																				
CCV	1.00	06:20										X																				
CCB	1.00	06:22										X																				
ZZZZZZ	1.00	06:30																														
ZZZZZZ	1.00	06:32																														
ZZZZZZ	1.00	06:35																														
ZZZZZZ	1.00	06:37																														
ZZZZZZ	1.00	06:40																														
ZZZZZZ	1.00	06:43																														
ZZZZZZ	1.00	06:45																														
ZZZZZZ	1.00	06:48																														
ZZZZZZ	1.00	06:50																														
ZZZZZZ	1.00	06:53																														
CCV	1.00	06:55										X																				
CCB	1.00	06:58										X																				
ZZZZZZ	1.00	07:00																														
ZZZZZZ	1.00	07:03																														
ZZZZZZ	1.00	07:05																														
ZZZZZZ	1.00	07:08																														
ZZZZZZ	1.00	07:10																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:18																														
ZZZZZZ	1.00	07:20																														
ZZZZZZ	1.00	07:23																														
CCV	1.00	07:25										X																				
CCB	1.00	07:28										X																				
ZZZZZZ	1.00	07:31																														
ZZZZZZ	1.00	07:33																														
ZZZZZZ	1.00	07:36																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF05

Method: CV
Instrument ID: 17384
Run Name: 1810801M07

Run Start Date: 04/18/2018
Run End Date: 04/18/2018

Lab Sample ID	D/F	Time	Analytes																																		
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																			
ZZZZZZ	1.00	07:38																																			
ZZZZZZ	1.00	07:41																																			
ZZZZZZ	1.00	07:43																																			
ZZZZZZ	1.00	07:46																																			
ZZZZZZ	1.00	07:48																																			
ZZZZZZ	1.00	07:51																																			
ZZZZZZ	1.00	07:53																																			
CCV	1.00	07:56										X																									
CCB	1.00	07:58										X																									
ZZZZZZ	1.00	08:01																																			
ZZZZZZ	1.00	08:03																																			
ZZZZZZ	1.00	08:06																																			
ZZZZZZ	1.00	08:09																																			
ZZZZZZ	1.00	08:11																																			
ZZZZZZ	1.00	08:14																																			
ZZZZZZ	1.00	08:16																																			
ZZZZZZ	1.00	08:19																																			
ZZZZZZ	1.00	08:21																																			
ZZZZZZ	1.00	08:24																																			
CCV	1.00	08:26										X																									
CCB	1.00	08:29										X																									
ZZZZZZ	1.00	08:31																																			
ZZZZZZ	1.00	08:34																																			
ZZZZZZ	1.00	08:36																																			
ZZZZZZ	1.00	08:39																																			
P10371GB	1.00	08:41										X																									
P10371GQ	1.00	08:44										X																									
9553133BKG	1.00	08:47										X																									
9553136DUP	1.00	08:49										X																									
9553134MS	1.00	08:52										X																									
9553135MSD	1.00	08:54										X																									
CCV	1.00	08:57										X																									
CCB	1.00	08:59										X																									
9553132	1.00	09:02										X																									
9553137	1.00	09:04										X																									
9553138	1.00	09:07										X																									
9553139	1.00	09:09										X																									
9553140	1.00	09:12										X																									

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF05

Method: CV
Instrument ID: 17384
Run Name: 1810801M07

Run Start Date: 04/18/2018
Run End Date: 04/18/2018

Lab Sample ID	D/F	Time	Analytes																													
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN														
ZZZZZZ	1.00	09:15																														
ZZZZZZ	1.00	09:17																														
ZZZZZZ	1.00	09:20																														
ZZZZZZ	1.00	09:22																														
ZZZZZZ	1.00	09:25																														
CCV	1.00	09:36										X																				
CCB	1.00	09:38										X																				
ZZZZZZ	1.00	09:41																														
ZZZZZZ	200.00	09:57																														
ZZZZZZ	1.00	10:00																														
ZZZZZZ	1.00	10:02																														
ZZZZZZ	1.00	10:05																														
ZZZZZZ	1.00	10:07																														
ZZZZZZ	1.00	10:10																														
ZZZZZZ	1.00	10:12																														
ZZZZZZ	1.00	10:15																														
ZZZZZZ	1.00	10:17																														
CCV	1.00	10:20										X																				
CCB	1.00	10:22										X																				
ZZZZZZ	1.00	10:25																														
ZZZZZZ	1.00	10:27																														
ZZZZZZ	1.00	10:30																														
ZZZZZZ	1.00	10:32																														
ZZZZZZ	1.00	10:35																														
ZZZZZZ	1.00	10:37																														
ZZZZZZ	1.00	10:40																														
ZZZZZZ	1.00	10:42																														
ZZZZZZ	1.00	10:45																														
ZZZZZZ	1.00	10:48																														
CCV	1.00	10:50										X																				
CCB	1.00	10:53										X																				
CRA	1.00	10:55										X																				
CCV	1.00	10:58										X																				
CCB	1.00	11:00										X																				

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 15
ICP-MS TUNE
SDG No.: RAF05
Matrix: WATER

Instrument ID: 11332
Date: 04/16/2018

Analyte	Mass	Avg. Measured Mass (amu)	Avg. Peak Width at 5% Peak Height (amu)	%RSD
Lithium	6.000	6.10	0.70	1.7
Magnesium	24.000	24.05	0.65	2.6
Rhodium	103.000	103.05	0.65	1.3
Indium	115.000	115.05	0.65	1.3
Cerium	140.000	140.05	0.60	1.7
Lead	208.000	208.05	0.65	1.5
Uranium	238.000	238.05	0.65	1.2

Comments:

_____
_____
_____
_____

QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF05

Instrument ID: 11332
Run Name: 1810609E03

Start Date: 04/16/2018
End Date: 04/16/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,AS,CD,CO,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE	TB-2-159	BA

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element TB-2-159	Q	Element BI-2-209	Q	Element	Q
S0	16:55	100		100		100		100		100		100			
S	16:58	96		102		98		97		97		94			
CCS	17:01	98		96		97		100		98		98			
CCS	17:04	96		97		98		98		98		97			
ICV	17:07	95		99		98		95		97		96			
ICB	17:10	96		95		97		98		98		98			
LLC	17:13	100		96		100		102		102		100			
ICSA	17:16	81		83		88		88		76		83			
ICSAB	17:19	82		87		92		89		75		82			
ZZZZZZ	17:22														
CCV	17:26	98		102		97		97		98		96			
CCB	17:29	95		97		94		98		97		96			
P10363DB	17:32	97		99		96		98		99		99			
P10363DQ	17:35	98		101		97		98		98		98			
9553133BKG	17:38	95		99		93		96		97		95			
9553133A	17:41	95		100		98		96		99		96			
9553136DUP	17:44	97		98		98		99		99		98			
9553134MS	17:47	95		100		93		95		96		92			
9553135MSD	17:50	93		99		92		96		96		92			
9553133L	17:53	94		96		93		98		95		96			
9553131	17:56							97							
9553132	18:00	97		100		93		97		101		97			
CCV	18:03	91		96		93		92		95		94			
CCB	18:06	91		93		87		93		93		92			
9553137	18:09	95		101		92		95		100		94			
9553138	18:12	95		104		90		93		99		93			
9553139	18:15	93		100		90		93		97		91			
9553140	18:18	94		102		90		92		97		89			
9553141	18:21							93							
9553141	18:24														
LLC	18:27	91		95		91		93		94		93			

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF05

Instrument ID: 11332
Run Name: 1810609E03

Start Date: 04/16/2018
End Date: 04/16/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,AS,CD,CO,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE	TB-2-159	BA

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element TB-2-159	Q	Element BI-2-209	Q	Element	Q
ICSA	18:30	76		84		80		87		74		80			
ICSAB	18:33	78		87		81		84		74		79			
ZZZZZZ	18:37														
CCV	18:40	89		99		87		91		93		92			
CCB	18:43	87		93		82		90		92		92			

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF05

Instrument ID: 19204 Start Date: 05/04/2018
Run Name: 1812406E05 End Date: 05/04/2018

Standard	Elements Applies to	Standard	Elements Applies to
IN-1-115	ZN		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	16:07	100													
S	16:09	101													
CCS	16:11	105													
CCS	16:13	104													
ICV	16:15	106													
ICB	16:16	108													
LLC	16:18	114													
ICSA	16:20	101													
ICSAB	16:22	101													
ZZZZZZ	16:24														
CCV	16:26	110													
CCB	16:27	110													
P10363DB	16:29	112													
9553133A	16:31	115													
9553132	16:33	113													
9553137	16:35	108													
9553138	16:37	111													
LLC	16:39	114													
ICSA	16:40	104													
ICSAB	16:42	103													
ZZZZZZ	16:44														
CCV	16:46	111													
CCB	16:48	115													

LEGEND:
BKG = Background MS = Matrix Spike
DUP = Duplicate MSD = Matrix Spike Duplicate
L = Serial Dilution A = Post Digest Spike
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium LI = Lithium
BI = Bismuth SC = Scandium
GE = Germanium TB = Terbium
HO = Holmium Y = Yttrium
IN = Indium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18D16G03.E03

Run Name: 1810609E03

Analyst: 1242

Reviewed By:	Reviewed Date
Nina C Haller	05/24/2018 09:15
Tara L Snyder	05/04/2018 12:31

Verified By:	Verified Date
Deborah A Krady	05/04/2018 12:40
Nina C Haller	05/24/2018 12:15
Parker D Lindstrom	05/07/2018 13:01

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
TB-2		159
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1810609E03 Date/Time: 04/16/2018 16:55:00
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	24.66690	-1034630000	0.00398	-0.00128	-0.00271
B	11	0.00000	21088.60000	-18360100	0.07314	0.03849	-0.11177
NA	23	0.00000	13147.00000	28026100	0.63111	0.23261	-0.86346
MG	24	0.00000	93.33750	407163000	-0.02280	0.06712	-0.04432
AL	27	0.00000	46.66870	1114830000	-0.69046	1.14196	-0.45149
K	39	0.00000	14551.90000	1951170000	9.13569	-11.17615	2.03880
CA	44	0.00000	70.00290	1168870000	-9.91832	2.81414	7.10414
SC-1	45	75008.30000	0.00000	1.557	75471.20000	73680.30000	75873.40000
SC-2	45	46724.60000	0.00000	1.740	46343.30000	46172.40000	47658.00000
SC-3	45	1782510	0	1.944	1817130	1747800	1782610
TI	47	0.00000	10.00040	-4664020000	0.42657	-0.41880	-0.00777
V	51	0.00000	43.33500	1332680000	-0.02563	-0.00292	0.02854
CR	52	0.00000	420.02300	526892000	-0.05242	0.00509	0.04732
MN	55	0.00000	76.67110	-20654500000	-0.08656	0.12012	-0.03356
FE	57	0.00000	146.67300	-3552750000	-0.23928	-2.15440	2.39372
CO	59	0.00000	286.68200	15934900000	-0.02128	0.02673	-0.00545
NI	60	0.00000	50.00220	14856100000	0.00176	-0.03802	0.03626
CU	63	0.00000	263.34500	-692998000	-0.01252	0.04894	-0.03642
ZN	66	0.00000	26.66770	-17518400000	-0.09625	0.13678	-0.04053
GE-1	72	78584.10000	0.00000	2.751	79114.00000	76206.10000	80432.20000
GE-2	72	102693.00000	0.00000	2.202	100613.00000	102367.00000	105099.00000
GE-3	72	1251280	0	2.370	1270350	1217120	1266380
AS	75	0.00000	274.00500	939062000	-0.22185	0.42518	-0.20333
SE	78	0.00000	0.44445	2415620000	0.00713	0.00815	-0.01528
SR	88	0.00000	16.66730	3374820000	0.02439	-0.02963	0.00524
MO	98	0.00000	70.00330	-3110450000	-0.02094	0.00019	0.02075
AG	107	0.00000	6.66693	12089000000	0.00166	-0.00317	0.00151
CD	111	0.00000	52.00060	-2759530000	0.03683	-0.02508	-0.01175
IN-1	115	94352.60000	0.00000	2.229	96546.00000	92354.40000	94157.50000
IN-2	115	45033.90000	0.00000	1.616	44297.90000	45050.90000	45753.10000
SN	120	0.00000	216.67600	-984517000	0.11325	-0.01104	-0.10222
SB	121	0.00000	33.33490	-750000000	-0.00590	-0.02855	0.03446
BA	137	0.00000	6.66693	3194790000	-0.03400	0.06799	-0.03400
TB-2	159	152270.00000	0.00000	1.317	151231.00000	150996.00000	154582.00000
TL	203	0.00000	50.00260	4647990000	-0.02136	0.00767	0.01369
PB	208	0.00000	256.67800	-2017820000	-0.00630	0.00163	0.00467
BI-2	209	107070.00000	0.00000	1.348	107928.00000	105404.00000	107878.00000
U	238	0.00000	76.67020	-904927000	0.00241	-0.00105	-0.00136

Run Name: 1810609E03 Date/Time: 04/16/2018 16:58:00
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44644.10000	0.00000	2.321	43453.10000	45139.10000	45340.20000
SC-3	45	1820910	0	2.120	1831330	1778160	1853250
AL	27	10000.00000	369791.00000	0.991	10059.25012	9885.52829	10055.21179
B	11	1000.00000	1493840.00000	1.706	1012.88611	1006.46006	980.65481
BE	9	100.00000	173855.00000	1.317	100.96603	100.53374	98.50001
CA	44	10000.00000	38113.50000	1.544	10172.92457	9875.80321	9951.27996
CR	52	1000.00000	1031310.00000	1.728	1018.34589	997.61684	984.03305
FE	57	10000.00000	199446.00000	1.508	10168.01197	9876.52218	9955.47635
K	39	10000.00000	697378.00000	2.024	10126.80280	9766.61123	10106.62890
MG	24	10000.00000	1111260.00000	1.538	9998.31371	9847.09479	10154.69005
MN	55	1000.00000	515098.00000	1.864	1021.36698	991.49630	987.12478
NA	23	10000.00000	2231890.00000	0.792	10041.80896	9908.64646	10049.53815
TI	47	1000.00000	22787.40000	4.365	1047.71059	962.05178	990.23170
V	51	1000.00000	854678.00000	1.875	1019.47961	998.44774	982.07822
IN-1	115	92438.50000	0.00000	1.927	94370.60000	92083.40000	90861.40000
IN-2	115	43590.60000	0.00000	1.334	42970.40000	43677.80000	44123.50000
AG	107	100.00000	203909.00000	2.417	102.55161	99.70545	97.74352
AS	75	1000.00000	95651.10000	0.818	1008.51561	992.20375	999.28097
CD	111	100.00000	23520.60000	1.966	102.26739	98.76754	98.96505
CO	59	1000.00000	1934100.00000	1.088	989.10795	1000.03831	1010.85719
CU	63	1000.00000	1510340.00000	0.425	1004.89071	997.87825	997.23021
MO	98	100.00000	87727.50000	1.128	100.51978	98.70563	100.77424
NI	60	1000.00000	507093.00000	1.621	1018.41153	993.72708	987.86701
SB	121	100.00000	44918.50000	1.576	101.73309	99.61453	98.65226
SE	78	100.00000	2848.99000	2.480	100.93257	97.18930	101.87843
SN	120	100.00000	66317.00000	2.515	102.78730	97.90098	99.31104
SR	88	100.00000	54661.30000	1.173	100.23972	101.03461	98.72588
ZN	66	1000.00000	165402.00000	1.005	1011.60230	994.16001	994.23498
TB-2	159	147355.00000	0.00000	1.178	146046.00000	146694.00000	149325.00000
BA	137	1000.00000	191393.00000	0.718	1000.43678	992.61613	1006.94075
BI-2	209	100142.00000	0.00000	0.191	99980.40000	100353.00000	100092.00000
PB	208	100.00000	424388.00000	0.587	100.56965	99.39730	100.03216
TL	203	100.00000	132470.00000	1.443	99.32165	99.02057	101.65650
U	238	100.00000	491276.00000	0.418	100.12104	99.53411	100.34404
SC-1	45	74052.50000	0.00000	1.048	73559.40000	74947.40000	73650.80000
GE-1	72	76625.20000	0.00000	2.196	74687.10000	77473.00000	77715.40000
GE-2	72	99413.90000	0.00000	1.053	98840.20000	98779.30000	100622.00000
GE-3	72	1280640	0	2.340	1299060	1246060	1296810

Run Name: 1810609E03 Date/Time: 04/16/2018 17:01:00
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	45821.70000	0.00000	2.732	44467.30000	46062.30000	46935.60000
SC-3	45	1710140	0	1.133	1724880	1717340	1688210
AL	27	0.79750	76.67030	76.765	0.14609	0.88545	1.36098
B	11	29.60000	61165.90000	0.920	29.40618	29.91052	29.47975
BE	9	0.19380	340.00700	0.712	0.19322	0.19535	0.19277
CA	44	0.43450	70.00390	627.618	0.95548	2.86331	-2.51531
CR	52	0.04981	463.36200	182.654	0.12730	-0.05037	0.07249
FE	57	1.31400	170.00900	50.814	2.06075	0.77441	1.10710
K	39	5.51000	14632.10000	331.760	26.33747	-1.91467	-7.89354
MG	24	0.18990	113.33800	63.349	0.19085	0.06919	0.30978
MN	55	0.05888	106.67200	63.791	0.03275	0.10192	0.04198
NA	23	2.02300	13357.30000	25.294	1.77793	1.68031	2.61136
TI	47	1.30200	40.00180	59.040	1.78378	1.70754	0.41590
V	51	0.05412	90.00390	32.188	0.03405	0.06522	0.06311
IN-1	115	91210.80000	0.00000	3.606	94772.40000	88287.60000	90572.50000
IN-2	115	45215.70000	0.00000	1.500	44546.20000	45198.70000	45902.10000
AG	107	0.01730	43.33500	41.439	0.01123	0.02521	0.01546
AS	75	-0.17780	257.33800	-114.848	-0.09248	-0.03017	-0.41081
CD	111	-0.04213	42.00050	-23.086	-0.03961	-0.03392	-0.05287
CO	59	0.07223	433.35800	60.100	0.02359	0.08602	0.10707
CU	63	0.14580	493.36600	27.359	0.10326	0.18235	0.15182
MO	98	0.08420	146.67300	41.520	0.10154	0.04395	0.10710
NI	60	0.16490	136.67300	41.819	0.23279	0.09493	0.16692
SB	121	1.20100	593.37800	15.304	1.06189	1.13146	1.40921
SE	78	0.00846	0.66667	10.021	0.00755	0.00923	0.00861
SN	120	0.27820	410.02200	55.895	0.19966	0.17759	0.45727
SR	88	0.03498	36.66860	104.831	0.00618	0.07626	0.02250
ZN	66	0.89570	180.01100	30.021	1.20515	0.71897	0.76302
TB-2	159	148614.00000	0.00000	1.727	147294.00000	151571.00000	146978.00000
BA	137	0.31280	66.66930	43.063	0.43649	0.16921	0.33272
BI-2	209	105014.00000	0.00000	1.368	104309.00000	104066.00000	106668.00000
PB	208	0.03398	403.35100	28.773	0.02940	0.02733	0.04521
TL	203	0.17310	290.01700	42.727	0.08787	0.21171	0.21986
U	238	0.03322	246.68000	24.834	0.02841	0.02851	0.04275
SC-1	45	72396.50000	0.00000	0.715	72182.30000	72020.50000	72986.70000
GE-1	72	74559.70000	0.00000	1.964	73298.80000	76165.60000	74214.60000
GE-2	72	101285.00000	0.00000	2.578	98698.10000	103920.00000	101236.00000
GE-3	72	1254140	0	1.584	1275920	1249470	1237020

Run Name: 1810609E03 Date/Time: 04/16/2018 17:04:00
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44730.90000	0.00000	1.377	44024.90000	45159.20000	45008.70000
SC-3	45	1732510	0	0.807	1723390	1748600	1725540
AL	27	0.40450	60.00250	173.449	-0.11452	0.12529	1.20281
B	11	16.54000	43671.50000	1.108	16.71582	16.35053	16.56038
BE	9	0.01335	46.00050	32.554	0.01714	0.01429	0.00861
CA	44	15.81000	126.67300	103.605	30.45491	18.85765	-1.87342
CR	52	0.01736	420.02500	511.521	-0.02487	0.11940	-0.04244
FE	57	-2.33600	93.33810	-22.196	-2.93528	-2.04558	-2.02894
K	39	5.68000	14308.20000	301.056	24.18642	2.40038	-9.54733
MG	24	0.00573	90.00410	4690.390	0.01829	-0.26927	0.26818
MN	55	-0.00727	70.00290	-910.567	-0.04424	-0.04671	0.06914
NA	23	1.99100	13030.20000	12.506	2.22711	1.73104	2.01416
TI	47	-0.12580	6.66692	-201.669	0.02615	0.01497	-0.41880
V	51	0.01400	53.33560	123.571	-0.00071	0.00966	0.03306
IN-1	115	92599.40000	0.00000	2.747	90977.60000	95531.60000	91289.10000
IN-2	115	44066.40000	0.00000	1.380	43364.30000	44427.30000	44407.50000
AG	107	0.01788	43.33550	32.081	0.02148	0.01127	0.02090
AS	75	-0.11820	256.67100	-83.080	-0.08245	-0.22929	-0.04292
CD	111	-0.00395	50.00050	-1908.810	-0.00057	-0.08094	0.06967
CO	59	0.03207	343.35000	76.395	0.01255	0.05956	0.02411
CU	63	0.08829	393.35600	67.301	0.03079	0.14947	0.08460
MO	98	-0.03201	40.00180	-33.739	-0.04267	-0.03230	-0.02108
NI	60	0.20340	153.34000	38.491	0.14262	0.29172	0.17574
SB	121	0.17770	113.33800	38.621	0.12987	0.14690	0.25634
SE	78	0.03217	1.33334	147.342	0.03228	-0.01528	0.07952
SN	120	-0.08920	153.34000	-31.715	-0.12072	-0.08093	-0.06597
SR	88	0.00030	16.66730	12582.500	-0.02963	0.04219	-0.01167
ZN	66	0.54380	116.67200	35.509	0.75597	0.49686	0.37844
TB-2	159	149114.00000	0.00000	0.974	150269.00000	149589.00000	147484.00000
BA	137	0.13820	33.33490	93.705	0.01724	0.27485	0.12263
BI-2	209	103362.00000	0.00000	0.101	103328.00000	103278.00000	103479.00000
PB	208	0.01192	300.01300	77.198	0.01194	0.02112	0.00271
TL	203	0.00853	60.00280	149.056	0.00122	0.02320	0.00116
U	238	0.00251	86.67090	120.822	0.00317	0.00515	-0.00080
SC-1	45	71445.20000	0.00000	1.839	69959.70000	72454.80000	71921.00000
GE-1	72	75002.30000	0.00000	3.025	72514.90000	76959.80000	75532.20000
GE-2	72	99984.50000	0.00000	1.829	101883.00000	98233.80000	99836.90000
GE-3	72	1231620	0	0.946	1221480	1229050	1244340

Run Name: 1810609E03 Date/Time: 04/16/2018 17:07:00
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	44192.30000	0.00000	0.103	44236.20000	44195.50000	44145.30000
SC-3	45	1761510	0	0.470	1767370	1752050	1765120
AL	27	5083.00000	186108.00000	1.830	5001.89884	5063.46491	5184.72060
B	11	545.70000	798091.00000	1.459	538.57137	554.27235	544.15327
BE	9	51.91000	87323.20000	0.596	51.56072	52.15146	52.01585
CA	44	4940.00000	18674.00000	4.291	4767.45856	4875.49380	5176.61870
CR	52	506.40000	517334.00000	1.051	500.47913	510.71297	508.11467
FE	57	5067.00000	100122.00000	0.846	5038.97076	5116.12475	5045.26199
K	39	5141.00000	361604.00000	1.920	5037.73347	5149.78568	5234.56402
MG	24	4858.00000	534433.00000	0.405	4862.16546	4875.48039	4836.76502
MN	55	516.90000	263657.00000	0.889	518.78110	511.62954	520.20100
NA	23	5003.00000	1111660.00000	2.227	4876.27392	5083.76439	5050.33194
TI	47	521.70000	11779.10000	2.892	505.05869	525.47736	534.52365
V	51	495.30000	419187.00000	1.440	488.49400	494.75405	502.71987
IN-1	115	92551.60000	0.00000	1.429	91148.50000	92729.00000	93777.30000
IN-2	115	42627.40000	0.00000	1.776	43447.20000	42479.80000	41955.10000
AG	107	53.57000	106819.00000	3.438	52.16494	52.90266	55.65912
AS	75	536.50000	50285.00000	3.474	519.42178	533.66553	556.38331
CD	111	53.07000	12228.70000	1.939	51.92042	53.37917	53.90779
CO	59	530.70000	1003600.00000	1.860	519.39743	537.54945	535.18950
CU	63	495.60000	731994.00000	1.834	489.02899	491.78790	505.96597
MO	98	52.21000	44810.40000	3.821	51.64632	50.55713	54.42547
NI	60	537.50000	266558.00000	1.967	527.52251	536.50481	548.58558
SB	121	54.95000	24144.10000	3.618	53.23824	54.47514	57.12846
SE	78	51.37000	1464.98000	4.617	53.96089	49.30759	50.83283
SN	120	52.38000	34064.00000	2.738	50.88973	53.75176	52.49043
SR	88	51.38000	27467.10000	3.028	49.63068	51.92917	52.59781
ZN	66	532.50000	86130.70000	1.605	525.55290	529.84637	542.03050
TB-2	159	147544.00000	0.00000	0.971	148474.00000	145894.00000	148264.00000
BA	137	523.00000	100228.00000	0.169	522.33237	524.01299	522.69834
BI-2	209	102505.00000	0.00000	0.460	102957.00000	102015.00000	102543.00000
PB	208	50.34000	218813.00000	0.308	50.16532	50.45294	50.40952
TL	203	51.00000	69174.40000	2.447	51.19856	52.13466	49.66322
U	238	49.34000	248181.00000	1.225	49.11431	48.88970	50.03057
SC-1	45	72560.90000	0.00000	1.315	71659.00000	73560.00000	72463.70000
GE-1	72	75897.70000	0.00000	0.175	76015.60000	75753.40000	75923.90000
GE-2	72	100252.00000	0.00000	0.748	99886.20000	99755.20000	101114.00000
GE-3	72	1271160	0	1.268	1289570	1259570	1264350

Run Name: 1810609E03 Date/Time: 04/16/2018 17:10:00
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44995.50000	0.00000	0.569	45079.00000	44708.30000	45199.10000
SC-3	45	1694230	0	0.921	1676710	1706650	1699320
AL	27	0.57690	66.66940	25.221	0.66335	0.40883	0.65839
B	11	23.73000	52551.00000	2.493	24.33429	23.15179	23.70489
BE	9	0.10340	190.67000	6.613	0.09549	0.10706	0.10758
CA	44	-6.22700	43.33500	-134.158	3.30717	-12.26464	-9.72607
CR	52	-0.00381	400.02300	-308.723	-0.00456	0.00831	-0.01516
FE	57	-0.53090	130.00600	-411.377	-3.03044	1.01011	0.42746
K	39	6.45700	14455.30000	267.771	24.52873	4.77072	-9.92887
MG	24	-0.23800	63.33570	-56.092	-0.26832	-0.35375	-0.09194
MN	55	-0.02699	60.00230	-144.831	-0.06576	0.01241	-0.02762
NA	23	-2.30200	12146.10000	-68.940	-3.30252	-0.47326	-3.13174
TI	47	0.74400	26.66770	68.643	0.45028	1.33376	0.44797
V	51	0.08333	113.33800	15.265	0.09086	0.06865	0.09049
IN-1	115	91613.70000	0.00000	1.572	90109.60000	91751.20000	92980.30000
IN-2	115	44223.70000	0.00000	1.352	44538.50000	43533.90000	44598.70000
AG	107	0.01450	36.66810	49.704	0.02083	0.00665	0.01600
AS	75	-0.09454	260.00500	-130.209	-0.09201	-0.21893	0.02731
CD	111	-0.01031	48.66720	-284.287	0.01880	-0.00994	-0.03981
CO	59	0.07572	430.02400	60.433	0.03374	0.06890	0.12450
CU	63	0.04891	333.35200	121.734	-0.01985	0.08306	0.08352
MO	98	0.03909	103.33800	128.319	-0.01008	0.03716	0.09018
NI	60	0.11840	110.00600	14.476	0.13635	0.10220	0.11676
SB	121	0.33130	183.34200	25.708	0.38619	0.37444	0.23315
SE	78	0.02381	1.11111	150.987	-0.01528	0.05546	0.03126
SN	120	0.02457	230.01200	62.230	0.00731	0.02996	0.03643
SR	88	0.01227	23.33420	166.422	0.02410	-0.01131	0.02403
ZN	66	0.30240	76.66980	64.649	0.37686	0.44970	0.08065
TB-2	159	149858.00000	0.00000	0.893	148577.00000	149749.00000	151247.00000
BA	137	0.24060	53.33600	50.374	0.38061	0.17168	0.16964
BI-2	209	104814.00000	0.00000	2.534	101765.00000	106051.00000	106625.00000
PB	208	0.01681	326.68200	63.950	0.00603	0.01686	0.02753
TL	203	0.15890	270.01200	21.378	0.12068	0.18568	0.17031
U	238	0.01399	146.67400	21.523	0.01746	0.01232	0.01218
SC-1	45	70794.40000	0.00000	1.449	69617.10000	71498.60000	71267.60000
GE-1	72	75177.10000	0.00000	1.487	73994.60000	75320.40000	76216.30000
GE-2	72	101389.00000	0.00000	1.085	101348.00000	102508.00000	100310.00000
GE-3	72	1215200	0	1.709	1213810	1236630	1195150

Run Name: 1810609E03 Date/Time: 04/16/2018 17:13:00
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	46915.60000	0.00000	0.834	46494.10000	47266.80000	46985.90000
SC-3	45	1705310	0	1.425	1721970	1716520	1677430
AL	27	194.90000	7622.48000	3.480	190.23085	202.69510	191.82420
B	11	116.30000	180602.00000	0.968	115.08757	116.67515	117.26465
BE	9	1.06900	1764.13000	5.246	1.01844	1.06078	1.12955
CA	44	370.80000	1553.48000	15.852	376.14575	426.80007	309.59327
CR	52	3.77300	4510.98000	4.893	3.56028	3.88969	3.86923
FE	57	193.50000	4200.84000	3.935	191.96757	186.81396	201.80212
K	39	385.80000	42312.50000	7.341	417.58170	363.20975	376.63271
MG	24	189.10000	22176.00000	3.167	182.20867	193.17878	191.85520
MN	55	3.94500	2213.60000	6.281	3.66003	4.11130	4.06298
NA	23	366.80000	98750.40000	3.449	381.35017	358.02500	361.19651
TI	47	29.91000	726.71200	9.455	28.65236	33.15056	27.93107
V	51	1.02800	966.74300	6.503	1.05268	1.07889	0.95224
IN-1	115	94454.20000	0.00000	0.641	93801.20000	94998.00000	94563.30000
IN-2	115	46133.80000	0.00000	1.385	45755.90000	45773.90000	46871.50000
AG	107	1.04100	2253.62000	3.215	1.07602	1.03824	1.00928
AS	75	3.55200	639.35400	2.110	3.53185	3.48943	3.63511
CD	111	1.06200	317.34000	11.657	0.92170	1.10787	1.15614
CO	59	0.99280	2323.64000	8.900	1.01455	1.06826	0.89559
CU	63	3.71200	6198.41000	7.893	3.95174	3.79873	3.38541
MO	98	0.87760	886.74100	15.816	0.73808	0.87900	1.01577
NI	60	3.98800	2190.27000	6.615	4.26370	3.96149	3.73804
SB	121	1.87800	926.73400	9.750	1.66861	2.00734	1.95867
SE	78	3.83300	112.00100	7.968	4.15928	3.78784	3.55368
SN	120	3.66600	2787.10000	3.622	3.65902	3.80159	3.53622
SR	88	2.03400	1193.43000	8.324	2.21941	1.88737	1.99568
ZN	66	33.15000	5828.21000	2.221	33.14703	33.88269	32.41038
TB-2	159	154814.00000	0.00000	1.224	156220.00000	152658.00000	155562.00000
BA	137	3.78100	766.71900	7.226	3.46562	3.95080	3.92595
BI-2	209	107084.00000	0.00000	2.427	108534.00000	108635.00000	104084.00000
PB	208	2.01400	9388.56000	3.038	2.02126	1.94976	2.07153
TL	203	1.01200	1483.49000	7.771	0.94715	1.09942	0.98915
U	238	0.97110	5178.05000	3.887	0.93800	1.01222	0.96305
SC-1	45	72879.00000	0.00000	1.016	72634.50000	73710.60000	72292.00000
GE-1	72	76317.60000	0.00000	0.643	75986.00000	76881.20000	76085.60000
GE-2	72	103280.00000	0.00000	1.083	104261.00000	102063.00000	103515.00000
GE-3	72	1218660	0	0.778	1207710	1224130	1224140

Run Name: 1810609E03 Date/Time: 04/16/2018 17:16:00
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	37835.80000	0.00000	1.206	37845.50000	37374.60000	38287.20000
SC-3	45	1486810	0	2.285	1451790	1488990	1519660
AL	27	104500.00000	3274910.00000	1.651	102711.64463	106151.07489	104660.85607
B	11	26.31000	49202.50000	4.132	27.50666	26.03538	25.38474
BE	9	0.02023	49.33390	25.027	0.01440	0.02353	0.02276
CA	44	309100.00000	996780.00000	1.461	304120.94433	312986.71519	310063.59910
CR	52	1.17900	1370.13000	7.455	1.08711	1.18682	1.26235
FE	57	259300.00000	4380920.00000	0.516	257804.76150	260384.94253	259714.59186
K	39	114100.00000	6622170.00000	2.033	111436.10218	115627.59886	115256.33597
MG	24	102700.00000	9665550.00000	1.968	103287.01550	104285.33666	100394.45849
MN	55	9.74000	4314.24000	2.068	9.77415	9.92243	9.52395
NA	23	271100.00000	50995600.00000	0.789	268810.88911	273068.21627	271320.12918
TI	47	2320.00000	44814.50000	1.217	2307.81081	2352.12340	2299.64560
V	51	0.10790	113.33800	37.470	0.11743	0.06362	0.14280
IN-1	115	83491.20000	0.00000	4.181	82386.00000	80686.50000	87401.10000
IN-2	115	39768.40000	0.00000	2.464	39119.60000	39290.30000	40895.30000
AG	107	0.40850	766.72400	5.804	0.39571	0.39398	0.43589
AS	75	0.66820	300.00600	11.486	0.74762	0.66251	0.59444
CD	111	0.30810	112.00100	8.189	0.27899	0.32412	0.32113
CO	59	0.91580	1866.88000	13.289	1.05537	0.83208	0.85996
CU	63	0.95640	1550.16000	7.599	0.89373	1.03606	0.93935
MO	98	2152.00000	1720470.00000	2.188	2137.20361	2204.32374	2113.57707
NI	60	1.02100	516.69600	7.909	1.09136	0.93305	1.03983
SB	121	1.29700	560.03900	15.143	1.51700	1.13937	1.23432
SE	78	0.17520	4.88891	12.226	0.16854	0.19922	0.15799
SN	120	-0.02622	176.67500	-296.949	-0.11612	0.01724	0.02019
SR	88	10.43000	5214.60000	7.986	9.61705	11.28129	10.38861
ZN	66	1.79600	293.34900	29.928	2.33721	1.78969	1.26218
TB-2	159	115281.00000	0.00000	0.809	114282.00000	116130.00000	115430.00000
BA	137	1.34900	206.67700	41.245	1.98733	1.09320	0.96661
BI-2	209	88862.00000	0.00000	1.238	88529.30000	90090.50000	87966.30000
PB	208	0.21280	1013.39000	9.535	0.22076	0.18975	0.22790
TL	203	0.16880	240.01300	17.429	0.13547	0.19127	0.17955
U	238	0.06507	346.68600	32.795	0.05220	0.05330	0.08971
SC-1	45	61688.40000	0.00000	2.907	60633.20000	60673.20000	63758.90000
GE-1	72	67869.70000	0.00000	2.300	69146.80000	66129.90000	68332.40000
GE-2	72	91444.90000	0.00000	0.545	91303.70000	91032.60000	91998.30000
GE-3	72	1163780	0	1.905	1143540	1160320	1187470

Run Name: 1810609E03 Date/Time: 04/16/2018 17:19:00
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	38296.90000	0.00000	3.196	38316.90000	37063.40000	39510.40000
SC-3	45	1544150	0	0.549	1538980	1539540	1553940
AL	27	102300.00000	3244070.00000	2.133	100177.54010	104536.36781	102176.62656
B	11	22.05000	45801.10000	2.061	22.49545	22.06925	21.58712
BE	9	0.01719	46.66710	29.610	0.02093	0.01139	0.01924
CA	44	300700.00000	981297.00000	3.002	293881.75963	310955.63543	297343.20592
CR	52	216.40000	191616.00000	3.730	212.02159	225.69895	211.43257
FE	57	253000.00000	4322980.00000	3.862	251128.53356	263562.84916	244291.17968
K	39	111700.00000	6558730.00000	1.539	109925.94073	113362.80763	111705.13324
MG	24	101600.00000	9674800.00000	4.056	98143.22831	106138.89206	100407.13805
MN	55	228.80000	101129.00000	2.570	228.73741	234.73634	222.97725
NA	23	261800.00000	49808600.00000	3.739	259347.82994	272536.60625	253409.39927
TI	47	2236.00000	43703.70000	2.135	2254.24174	2271.65289	2181.66290
V	51	223.30000	163719.00000	2.741	220.08751	230.38306	219.49811
IN-1	115	86694.10000	0.00000	1.813	86647.00000	88288.80000	85146.50000
IN-2	115	40169.80000	0.00000	1.378	40222.90000	39591.60000	40694.80000
AG	107	47.60000	89441.60000	3.254	46.15267	49.23186	47.40438
AS	75	100.60000	9089.93000	0.563	101.05049	99.98067	100.83564
CD	111	91.60000	19863.70000	1.907	90.09392	91.19574	93.51633
CO	59	189.70000	338268.00000	2.062	186.67608	194.13327	188.35308
CU	63	185.50000	258360.00000	0.374	184.71432	186.05546	185.68640
MO	98	2083.00000	1682880.00000	1.817	2043.69094	2086.27714	2119.18864
NI	60	195.90000	91579.30000	1.658	193.61901	199.61648	194.45637
SB	121	1.09700	483.36000	1.847	1.11128	1.10561	1.07371
SE	78	88.00000	2351.11000	1.355	86.73102	88.15684	89.09856
SN	120	-0.08279	143.34000	-44.812	-0.07250	-0.05192	-0.12395
SR	88	10.45000	5277.97000	4.813	10.12627	11.03396	10.20457
ZN	66	88.98000	13584.30000	1.356	87.63128	89.96372	89.33669
TB-2	159	114934.00000	0.00000	0.889	115362.00000	113768.00000	115673.00000
BA	137	1.21900	186.67600	34.036	0.83370	1.65807	1.16421
BI-2	209	88015.60000	0.00000	1.911	88408.90000	86171.70000	89466.20000
PB	208	0.18290	893.38500	13.204	0.21046	0.16533	0.17299
TL	203	0.15100	216.67800	33.391	0.09293	0.18403	0.17595
U	238	0.05635	306.68500	14.508	0.06151	0.04692	0.06061
SC-1	45	60957.60000	0.00000	2.054	59899.40000	62340.30000	60633.10000
GE-1	72	68107.70000	0.00000	0.900	68674.30000	68191.20000	67457.60000
GE-2	72	90303.20000	0.00000	2.373	88846.60000	89298.50000	92764.50000
GE-3	72	1188440	0	2.421	1213910	1157230	1194180

Run Name: 1810609E03 Date/Time: 04/16/2018 17:22:00
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44152.30000	0.00000	1.259	44577.20000	43523.40000	44356.10000
SC-3	45	1810340	0	1.538	1833570	1817970	1779470
AL	27	6.35500	276.68400	28.482	4.74731	6.00136	8.31592
B	11	8.28400	33544.60000	1.072	8.37292	8.19531	8.28227
BE	9	0.00868	40.00040	9.407	0.00953	0.00859	0.00791
CA	44	24.12000	156.67400	33.532	16.70055	22.92003	32.74129
CR	52	0.01620	413.36000	511.975	-0.00995	-0.05051	0.10907
FE	57	24.26000	616.70900	40.317	17.11131	20.26770	35.40889
K	39	11.32000	14518.50000	81.731	20.93047	2.47517	10.54908
MG	24	4.26600	556.70200	36.310	2.71229	4.27452	5.80984
MN	55	-0.04463	50.00220	-42.124	-0.04546	-0.06301	-0.02543
NA	23	19.92000	16797.90000	10.130	21.69271	20.34872	17.72403
TI	47	0.76300	26.66820	66.370	0.46009	0.48137	1.34768
V	51	0.07038	100.00500	74.069	0.01042	0.09583	0.10490
IN-1	115	89681.60000	0.00000	0.988	89155.00000	90704.40000	89185.50000
IN-2	115	43181.60000	0.00000	3.617	41479.50000	43515.90000	44549.40000
AG	107	0.02312	53.33540	21.319	0.01745	0.02631	0.02562
AS	75	-0.21020	242.67100	-53.283	-0.15818	-0.13387	-0.33885
CD	111	0.04559	60.66740	56.153	0.01811	0.04989	0.06876
CO	59	0.00556	286.68100	601.725	-0.01841	-0.00872	0.04382
CU	63	0.06748	353.35500	23.829	0.08162	0.04999	0.07084
MO	98	2.09200	1886.90000	8.394	1.88922	2.18581	2.20030
NI	60	0.13630	116.67200	33.030	0.09125	0.18129	0.13629
SB	121	0.04743	53.33540	101.054	0.02198	0.01760	0.10271
SE	78	0.07313	2.44445	18.529	0.05752	0.08013	0.08175
SN	120	-0.12040	130.00500	-97.425	-0.19121	0.01495	-0.18517
SR	88	0.00064	16.66730	4376.670	-0.02963	0.02536	0.00618
ZN	66	0.95020	180.00900	33.340	1.24221	0.99508	0.61339
TB-2	159	147463.00000	0.00000	2.241	149121.00000	143658.00000	149610.00000
BA	137	0.10490	26.66770	55.891	0.17255	0.07320	0.06894
BI-2	209	101331.00000	0.00000	1.937	101342.00000	99362.60000	103288.00000
PB	208	0.00796	276.67900	124.975	0.00163	0.01943	0.00282
TL	203	-0.01073	33.33470	-170.177	-0.01299	-0.02777	0.00855
U	238	-0.00117	66.66950	-102.046	-0.00252	-0.00023	-0.00077
SC-1	45	67125.30000	0.00000	3.219	65979.70000	69618.30000	65777.80000
GE-1	72	71371.80000	0.00000	2.680	70533.70000	73560.50000	70021.20000
GE-2	72	100559.00000	0.00000	1.188	99232.30000	101551.00000	100895.00000
GE-3	72	1288120	0	0.189	1285890	1290710	1287750

Run Name: 1810609E03 Date/Time: 04/16/2018 17:26:00
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	45567.00000	0.00000	1.002	45550.00000	46032.10000	45118.90000
SC-3	45	1821170	0	1.033	1799540	1833820	1830150
AL	27	2468.00000	93185.10000	3.668	2456.30079	2384.57941	2564.39433
B	11	259.80000	404157.00000	1.856	265.37591	256.61358	257.51021
BE	9	26.04000	45308.20000	1.182	26.39231	25.93998	25.80471
CA	44	2538.00000	9927.54000	7.301	2324.54593	2639.18925	2651.35893
CR	52	251.40000	265012.00000	1.882	246.04309	253.20790	254.98124
FE	57	2520.00000	51416.40000	2.773	2507.90680	2457.65116	2595.73245
K	39	2446.00000	184812.00000	0.580	2439.74193	2435.22916	2461.75378
MG	24	2381.00000	270126.00000	1.332	2366.17747	2359.84837	2417.65473
MN	55	255.10000	134223.00000	2.322	254.22697	249.75567	261.48980
NA	23	2374.00000	550479.00000	1.270	2364.24071	2349.30889	2407.35328
TI	47	254.90000	5938.24000	4.276	251.64488	246.02206	267.08259
V	51	242.90000	211979.00000	1.797	239.56500	241.33597	247.85357
IN-1	115	91510.00000	0.00000	1.811	89596.40000	92461.90000	92471.70000
IN-2	115	43722.20000	0.00000	0.457	43946.60000	43656.90000	43563.20000
AG	107	26.92000	55064.70000	0.869	26.66365	27.12574	26.95776
AS	75	261.40000	25278.10000	1.021	262.20148	258.44359	263.60838
CD	111	26.60000	6312.96000	0.534	26.54825	26.48764	26.75829
CO	59	251.60000	488182.00000	1.494	248.21256	250.87838	255.63374
CU	63	248.00000	375949.00000	0.508	246.62690	248.42724	249.05074
MO	98	25.60000	22574.10000	1.645	25.19014	26.03121	25.57290
NI	60	267.40000	136049.00000	0.425	266.36946	268.60826	267.15976
SB	121	25.14000	11352.20000	1.975	25.15101	25.62998	24.63700
SE	78	25.49000	719.13300	2.401	26.18389	25.27834	25.01833
SN	120	26.16000	17556.20000	3.395	25.35304	26.00739	27.11038
SR	88	25.07000	13757.90000	3.255	25.83210	25.16233	24.20835
ZN	66	262.50000	43571.40000	1.818	260.75629	258.85270	267.90537
TB-2	159	149267.00000	0.00000	0.057	149292.00000	149336.00000	149172.00000
BA	137	261.10000	50617.50000	0.439	262.35099	260.15047	260.70028
BI-2	209	102827.00000	0.00000	0.555	102258.00000	103400.00000	102823.00000
PB	208	25.99000	113419.00000	1.610	26.41252	25.57629	25.97156
TL	203	25.35000	34510.90000	2.961	26.04238	24.55136	25.44928
U	238	25.41000	128232.00000	1.458	25.35445	25.06992	25.80451
SC-1	45	69142.20000	0.00000	1.822	69598.20000	67717.20000	70111.10000
GE-1	72	71137.10000	0.00000	1.413	70886.00000	70281.50000	72243.90000
GE-2	72	100595.00000	0.00000	0.518	101186.00000	100401.00000	100199.00000
GE-3	72	1298010	0	0.800	1309910	1290800	1293310

Run Name: 1810609E03 Date/Time: 04/16/2018 17:29:00
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44369.80000	0.00000	2.977	42981.70000	44516.90000	45610.90000
SC-3	45	1723440	0	0.345	1719610	1730290	1720430
AL	27	0.69660	70.00310	136.463	1.31667	-0.39786	1.17094
B	11	12.42000	37702.10000	2.039	12.15991	12.66535	12.43968
BE	9	0.05120	108.00100	33.496	0.04401	0.03881	0.07077
CA	44	-5.05700	46.66840	-117.283	1.59359	-6.97137	-9.79637
CR	52	-0.00610	393.35600	-1370.800	-0.09662	0.06837	0.00994
FE	57	0.56890	150.00700	233.960	1.33203	-0.96789	1.34245
K	39	4.75500	14114.90000	381.914	23.78490	2.87376	-12.39273
MG	24	-0.34860	50.00210	-52.811	-0.33570	-0.17130	-0.53883
MN	55	-0.05830	43.33520	-47.993	-0.06201	-0.08426	-0.02866
NA	23	2.39300	13003.50000	126.369	4.12353	4.15516	-1.09854
TI	47	0.31800	16.66730	81.258	0.49269	0.02123	0.44015
V	51	0.01421	53.33610	178.184	0.00044	-0.00124	0.04344
IN-1	115	89010.40000	0.00000	0.991	90020.70000	88390.80000	88619.80000
IN-2	115	44023.10000	0.00000	1.918	43062.50000	44357.90000	44648.90000
AG	107	0.01471	36.66810	40.857	0.02165	0.01129	0.01120
AS	75	-0.18190	250.67100	-165.970	-0.50925	-0.12229	0.08556
CD	111	-0.05690	37.33370	-51.652	-0.03357	-0.04724	-0.08992
CO	59	0.06508	406.68900	29.103	0.08694	0.05479	0.05350
CU	63	0.01470	280.01500	87.551	0.01878	0.00029	0.02504
MO	98	0.03236	96.67070	84.425	0.04996	0.04624	0.00089
NI	60	0.11950	110.00600	58.226	0.10436	0.19543	0.05876
SB	121	0.25160	146.67500	24.436	0.22148	0.32238	0.21107
SE	78	0.03317	1.33334	126.500	0.05682	-0.01528	0.05796
SN	120	-0.07297	163.34100	-101.960	-0.01216	-0.05083	-0.15594
SR	88	0.00706	20.00080	525.011	0.04447	0.00634	-0.02963
ZN	66	0.04286	33.33460	205.670	-0.03333	0.02251	0.13941
TB-2	159	148192.00000	0.00000	1.382	148029.00000	146230.00000	150317.00000
BA	137	0.17360	40.00210	28.865	0.12205	0.17663	0.22213
BI-2	209	102317.00000	0.00000	0.580	101675.00000	102431.00000	102845.00000
PB	208	0.01801	323.34900	58.356	0.01770	0.02867	0.00767
TL	203	0.08030	156.67600	44.807	0.03900	0.10490	0.09699
U	238	0.00934	120.00600	106.920	0.00947	0.01925	-0.00071
SC-1	45	67812.00000	0.00000	0.848	67708.50000	67295.50000	68431.90000
GE-1	72	69749.80000	0.00000	1.131	70644.70000	69156.30000	69448.40000
GE-2	72	99269.00000	0.00000	1.688	97922.30000	98739.20000	101145.00000
GE-3	72	1227500	0	1.103	1214890	1225790	1241820

Run Name: 1810609E03 Date/Time: 04/16/2018 17:32:00
Tube Number: 13 Batch: 181031063904A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	45537.30000	0.00000	2.334	44938.70000	46764.80000	44908.60000
SC-3	45	1768300	0	1.116	1780900	1778430	1745560
AL	27	2.48100	140.00700	52.479	2.01262	3.95222	1.47704
B	11	8.72700	33400.80000	2.093	8.92373	8.69430	8.56259
BE	9	0.01433	48.66710	46.839	0.02200	0.01145	0.00954
CA	44	214.30000	896.73300	24.965	220.06274	158.09963	264.63640
CR	52	0.02372	433.35900	254.216	-0.01300	-0.00915	0.09331
FE	57	5.76700	260.01200	17.293	5.45426	6.88343	4.96388
K	39	12.97000	15072.50000	111.025	28.72818	0.50847	9.66535
MG	24	5.95000	763.38200	22.891	7.33355	4.60994	5.90741
MN	55	2.07500	1166.76000	16.173	1.68942	2.30359	2.23103
NA	23	50.93000	24343.30000	1.475	50.87622	50.21357	51.71240
TI	47	-0.13380	6.66692	-184.529	0.01710	0.00008	-0.41880
V	51	0.02470	63.33620	59.676	0.03319	0.00767	0.03324
IN-1	115	90885.40000	0.00000	1.562	92497.60000	89818.00000	90340.50000
IN-2	115	44140.20000	0.00000	0.424	44338.10000	44116.60000	43965.90000
AG	107	0.01133	30.00120	112.357	0.02576	0.00168	0.00656
AS	75	0.06891	275.33900	747.642	0.66222	-0.19060	-0.26489
CD	111	-0.00158	50.66720	-1058.970	0.01148	0.00419	-0.02040
CO	59	-0.05150	180.00800	-16.450	-0.04172	-0.05655	-0.05625
CU	63	0.11450	433.36200	11.275	0.11755	0.12554	0.10028
MO	98	-0.00945	60.00310	-240.237	-0.00978	-0.03198	0.01341
NI	60	0.40440	256.67900	17.695	0.48637	0.37238	0.35444
SB	121	0.08256	70.00350	141.836	0.03784	-0.00563	0.21546
SE	78	0.01633	0.88889	80.465	0.03150	0.00881	0.00867
SN	120	-0.04417	183.34200	-298.166	-0.15480	-0.07925	0.10152
SR	88	0.26510	163.34300	61.034	0.42016	0.27776	0.09737
ZN	66	17.94000	3030.48000	10.268	19.52352	15.91717	18.37074
TB-2	159	150018.00000	0.00000	2.246	150197.00000	146562.00000	153296.00000
BA	137	0.75280	153.34100	21.586	0.94008	0.64899	0.66922
BI-2	209	105635.00000	0.00000	2.040	105467.00000	103569.00000	107869.00000
PB	208	0.01419	316.68200	21.233	0.01726	0.01406	0.01124
TL	203	0.01685	73.33640	124.214	0.02199	-0.00617	0.03473
U	238	-0.00362	56.66960	-84.870	-0.00106	-0.00278	-0.00703
SC-1	45	69024.40000	0.00000	1.966	69486.00000	70090.60000	67496.60000
GE-1	72	71727.60000	0.00000	1.432	72907.90000	71238.90000	71036.00000
GE-2	72	99494.40000	0.00000	2.810	99585.30000	96653.80000	102244.00000
GE-3	72	1278680	0	1.730	1303860	1269790	1262390

Run Name: 1810609E03 Date/Time: 04/16/2018 17:35:00
Tube Number: 14 Batch: 181031063904A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	45767.90000	0.00000	2.467	46914.70000	44657.90000	45731.30000
SC-3	45	1802160	0	1.030	1819180	1782350	1804960
AL	27	1878.00000	71206.00000	2.626	1831.20216	1929.47846	1873.28701
B	11	236.40000	365787.00000	1.382	233.12798	239.66087	236.37408
BE	9	3.91100	6755.76000	2.534	4.02385	3.83684	3.87337
CA	44	4070.00000	15943.60000	1.564	4058.62053	4138.33212	4012.54285
CR	52	47.05000	50107.50000	5.354	44.13786	48.50049	48.50266
FE	57	948.30000	19518.70000	1.606	936.99569	965.61482	942.30079
K	39	9477.00000	678102.00000	3.102	9143.34487	9696.04542	9593.41824
MG	24	1774.00000	202043.00000	2.700	1718.63250	1806.26243	1795.96817
MN	55	49.09000	25990.20000	2.554	47.78421	50.28480	49.19592
NA	23	9254.00000	2118220.00000	1.512	9227.75271	9405.78314	9129.88849
TI	47	235.60000	5518.04000	3.720	240.13408	225.52252	241.21606
V	51	45.03000	39501.00000	0.958	44.57027	45.08897	45.42717
IN-1	115	91427.00000	0.00000	0.263	91153.50000	91604.90000	91522.70000
IN-2	115	43973.90000	0.00000	2.886	44755.30000	44656.20000	42510.10000
AG	107	49.20000	101203.00000	2.045	48.33927	48.96682	50.30928
AS	75	10.17000	1245.40000	7.516	10.41244	9.31588	10.78662
CD	111	5.06000	1248.74000	2.065	5.09659	4.94200	5.14118
CO	59	233.30000	455180.00000	2.721	232.10958	227.66161	240.18307
CU	63	47.45000	72506.90000	2.915	45.97684	47.64551	48.72070
MO	98	47.72000	42254.80000	3.680	45.69701	48.70383	48.77189
NI	60	50.87000	26053.60000	4.305	50.45065	48.92340	53.24179
SB	121	6.36000	2913.80000	1.728	6.41643	6.43070	6.23363
SE	78	9.74100	274.89300	4.009	9.35959	10.14000	9.72364
SN	120	49.17000	32997.90000	1.401	48.56589	49.01541	49.91882
SR	88	37.20000	20507.30000	5.511	35.19880	37.11982	39.29608
ZN	66	530.40000	88483.30000	2.600	524.59433	520.53555	546.18874
TB-2	159	148893.00000	0.00000	0.513	149530.00000	149103.00000	148047.00000
BA	137	49.23000	9527.39000	3.650	51.17196	48.88967	47.62514
BI-2	209	104710.00000	0.00000	0.747	103811.00000	105084.00000	105235.00000
PB	208	14.19000	63171.70000	0.793	14.28283	14.21683	14.06342
TL	203	1.88600	2660.40000	4.542	1.98277	1.85753	1.81888
U	238	0.00100	80.00360	206.627	0.00309	0.00093	-0.00103
SC-1	45	68763.80000	0.00000	1.240	67788.60000	69367.80000	69135.10000
GE-1	72	73065.00000	0.00000	2.468	71449.30000	75009.30000	72736.40000
GE-2	72	100636.00000	0.00000	1.400	100259.00000	102195.00000	99453.60000
GE-3	72	1278420	0	1.053	1283460	1288630	1263170

Run Name: 1810609E03 Date/Time: 04/16/2018 17:38:00
Tube Number: 15 Batch: 181031063904A
Sample Number: **9553133** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44446.50000	0.00000	0.739	44085.40000	44526.50000	44727.60000
SC-3	45	1756430	0	1.266	1771690	1766680	1730930
AL	27	359.10000	13267.20000	4.088	342.39079	365.04193	369.88441
B	11	16.71000	44512.20000	1.447	16.47465	16.69914	16.95784
BE	9	0.13900	257.33800	3.674	0.13334	0.14325	0.14045
CA	44	7577.00000	28775.80000	0.886	7524.31223	7652.91862	7555.37834
CR	52	1.03600	1463.47000	7.742	0.94697	1.06016	1.10203
FE	57	4.08500	220.01200	74.345	4.17140	7.07872	1.00660
K	39	817.50000	69467.30000	3.001	845.80480	804.44484	802.26594
MG	24	3946.00000	436626.00000	1.158	3998.88628	3915.41808	3924.92995
MN	55	69.79000	35867.20000	1.622	70.99871	68.75216	69.62678
NA	23	6088.00000	1357620.00000	2.306	6190.52977	5927.83615	6145.13136
TI	47	0.01981	10.00040	2211.000	-0.41880	0.02113	0.45711
V	51	0.12410	146.67300	42.296	0.12953	0.06913	0.17369
IN-1	115	87885.90000	0.00000	2.598	87138.60000	90448.80000	86070.30000
IN-2	115	43245.60000	0.00000	0.687	42912.40000	43482.10000	43342.20000
AG	107	0.03638	80.00310	35.954	0.04166	0.04599	0.02149
AS	75	0.08027	270.67200	90.681	0.15895	0.01532	0.06653
CD	111	0.06025	64.00070	45.842	0.08823	0.03301	0.05952
CO	59	1.93200	3980.79000	6.330	1.86372	1.85820	2.07278
CU	63	0.94410	1666.84000	10.868	1.05544	0.85350	0.92342
MO	98	0.06084	120.00500	97.666	0.02722	0.02586	0.12945
NI	60	3.27800	1696.85000	3.871	3.41055	3.26575	3.15759
SB	121	0.10050	76.67000	46.338	0.08674	0.06233	0.15238
SE	78	0.28090	8.00002	25.080	0.23299	0.24783	0.36175
SN	120	0.18990	333.35400	6.456	0.20402	0.18202	0.18363
SR	88	22.45000	12189.60000	1.029	22.23142	22.43543	22.69253
ZN	66	4.66100	790.05200	11.796	5.00376	4.02690	4.95260
TB-2	159	148075.00000	0.00000	0.396	148732.00000	147889.00000	147603.00000
BA	137	33.93000	6531.98000	3.357	32.84897	35.11990	33.83100
BI-2	209	101956.00000	0.00000	1.078	101149.00000	101513.00000	103207.00000
PB	208	0.54940	2616.89000	1.350	0.54098	0.55512	0.55195
TL	203	0.05862	126.67300	60.321	0.03191	0.09872	0.04523
U	238	0.02205	183.34300	45.442	0.01161	0.03160	0.02294
SC-1	45	67262.50000	0.00000	1.852	65939.00000	68411.90000	67436.60000
GE-1	72	70061.70000	0.00000	1.250	70715.40000	70403.40000	69066.30000
GE-2	72	97730.50000	0.00000	0.970	98707.80000	96814.50000	97669.40000
GE-3	72	1252550	0	2.164	1283840	1236090	1237720

Run Name: 1810609E03
Tube Number: 16
Sample Number: **9553133**

Date/Time: 04/16/2018 17:41:00
Batch: 181031063904A
Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44192.70000	0.00000	0.755	43814.60000	44317.00000	44446.40000
SC-3	45	1785080	0	0.389	1778350	1792230	1784640
AL	27	554.90000	20356.30000	0.608	555.86187	551.17848	557.73308
B	11	109.60000	179390.00000	0.549	108.94529	110.00508	109.97180
BE	9	1.09700	1893.48000	1.887	1.11411	1.10186	1.07374
CA	44	7956.00000	30038.60000	2.779	7919.74991	7755.46366	8193.20478
CR	52	5.03700	5538.10000	0.500	5.00781	5.05413	5.04805
FE	57	193.70000	3960.76000	1.150	191.86105	196.17999	193.06762
K	39	1204.00000	95245.70000	1.140	1188.42962	1213.77951	1210.24143
MG	24	4120.00000	453244.00000	1.588	4044.82647	4148.02069	4166.05354
MN	55	71.10000	36331.40000	1.474	71.29838	72.03796	69.97012
NA	23	6488.00000	1437890.00000	0.504	6465.43879	6525.67263	6473.47137
TI	47	30.20000	690.05200	21.182	37.58484	26.54461	26.46571
V	51	1.03500	916.73800	11.459	0.90545	1.05962	1.13866
IN-1	115	92361.60000	0.00000	0.042	92328.00000	92404.30000	92352.50000
IN-2	115	43205.10000	0.00000	2.292	42083.80000	43960.00000	43571.40000
AG	107	1.10200	2233.63000	0.696	1.09907	1.11040	1.09579
AS	75	3.59800	603.35200	6.676	3.32247	3.70654	3.76440
CD	111	1.13900	314.67300	9.043	1.25031	1.12020	1.04686
CO	59	2.88300	5794.85000	7.027	3.06078	2.66237	2.92551
CU	63	5.11900	7912.74000	2.586	5.24464	4.98080	5.13282
MO	98	1.02200	953.40900	9.265	1.10465	0.91843	1.04146
NI	60	6.46300	3293.90000	4.671	6.80967	6.26081	6.31744
SB	121	1.98000	913.40300	4.986	1.86659	2.04897	2.02331
SE	78	4.17000	119.11200	2.655	4.08526	4.12873	4.29504
SN	120	4.09000	2887.11000	4.249	4.27247	3.92654	4.07031
SR	88	23.58000	12786.80000	0.362	23.63752	23.48078	23.61760
ZN	66	36.07000	5941.62000	4.128	34.42372	37.32657	36.45077
TB-2	159	150444.00000	0.00000	0.618	149556.00000	150368.00000	151409.00000
BA	137	36.50000	7139.05000	2.265	36.63434	35.61653	37.25431
BI-2	209	103119.00000	0.00000	1.321	101551.00000	104013.00000	103792.00000
PB	208	2.48600	11102.50000	1.849	2.51069	2.51347	2.43248
TL	203	1.02600	1446.82000	10.068	1.14133	0.99712	0.94103
U	238	9.80600	49673.10000	1.748	9.75258	9.66706	9.99731
SC-1	45	69966.20000	0.00000	0.488	70332.10000	69656.80000	69909.70000
GE-1	72	73560.50000	0.00000	2.051	75200.90000	72232.20000	73248.20000
GE-2	72	100195.00000	0.00000	1.916	98506.20000	102284.00000	99795.00000
GE-3	72	1259380	0	1.266	1270650	1266350	1241130

Run Name: 1810609E03 Date/Time: 04/16/2018 17:44:00
Tube Number: 17 Batch: 181031063904A
Sample Number: **9553136** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	45416.50000	0.00000	1.220	44837.60000	45941.70000	45470.20000
SC-3	45	1747330	0	1.316	1753180	1721960	1766840
AL	27	353.80000	13353.90000	1.582	357.92043	347.44732	356.11299
B	11	13.35000	39534.70000	2.873	13.48889	13.64861	12.91910
BE	9	0.10310	196.00300	6.140	0.10742	0.10598	0.09581
CA	44	7358.00000	28552.00000	1.120	7405.66523	7263.06724	7405.84938
CR	52	1.04900	1506.82000	17.007	1.25292	0.92128	0.97296
FE	57	-0.09753	140.00700	-1367.780	0.98700	0.30742	-1.58703
K	39	789.20000	69002.00000	4.896	825.42896	748.54208	793.64302
MG	24	3863.00000	436731.00000	0.561	3887.58276	3854.57537	3846.77571
MN	55	66.36000	34851.10000	3.356	66.49083	64.07704	68.52526
NA	23	5891.00000	1342860.00000	1.828	5799.77430	5862.58292	6009.65103
TI	47	-0.12750	6.66692	-395.686	0.45496	-0.41880	-0.41880
V	51	0.12420	150.00700	26.989	0.09161	0.12235	0.15858
IN-1	115	92391.70000	0.00000	2.184	90101.90000	93909.00000	93164.20000
IN-2	115	44528.40000	0.00000	1.098	44097.40000	45059.80000	44427.90000
AG	107	0.00969	26.66770	76.881	0.01622	0.00158	0.01127
AS	75	-0.16610	254.67100	-203.070	-0.35529	-0.36652	0.22326
CD	111	0.02719	58.00070	52.446	0.03798	0.03258	0.01102
CO	59	1.83100	3900.74000	4.184	1.79956	1.91822	1.77494
CU	63	1.00900	1816.86000	4.804	1.05528	0.95865	1.01368
MO	98	-0.02861	43.33530	-60.364	-0.03197	-0.04396	-0.00991
NI	60	1.92800	1046.75000	17.640	2.26357	1.58358	1.93640
SB	121	0.08781	73.33670	74.115	0.01642	0.14384	0.10319
SE	78	0.24310	7.33335	34.677	0.29686	0.14598	0.28660
SN	120	-0.14070	120.00500	-27.356	-0.12400	-0.11352	-0.18481
SR	88	21.85000	12216.30000	1.764	21.61531	21.64903	22.29903
ZN	66	5.70500	990.07300	4.684	6.00080	5.63540	5.48039
TB-2	159	150911.00000	0.00000	1.068	152726.00000	149651.00000	150357.00000
BA	137	33.30000	6531.97000	3.940	31.78712	34.03672	34.08168
BI-2	209	104723.00000	0.00000	1.599	103520.00000	106636.00000	104015.00000
PB	208	0.55150	2696.90000	2.399	0.55011	0.53902	0.56538
TL	203	0.07528	153.34100	18.730	0.08151	0.08518	0.05914
U	238	0.02308	193.34300	14.649	0.02283	0.01982	0.02657
SC-1	45	67429.50000	0.00000	2.483	65577.00000	68833.80000	67877.80000
GE-1	72	70604.60000	0.00000	3.109	68704.80000	73007.90000	70101.20000
GE-2	72	100630.00000	0.00000	4.126	96098.50000	104253.00000	101540.00000
GE-3	72	1243190	0	0.523	1246190	1235740	1247650

Run Name: 1810609E03 Date/Time: 04/16/2018 17:47:00
Tube Number: 18 Batch: 181031063904A
Sample Number: **9553134** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44292.70000	0.00000	1.545	43503.40000	44657.30000	44717.50000
SC-3	45	1778260	0	1.335	1794780	1788950	1751050
AL	27	2386.00000	87590.50000	0.759	2392.25778	2400.89797	2366.10457
B	11	263.30000	399715.00000	0.462	264.58894	262.16016	263.24360
BE	9	4.21300	7177.99000	1.443	4.24809	4.24792	4.14268
CA	44	11500.00000	43500.10000	1.211	11551.50984	11347.46419	11613.86916
CR	52	51.18000	52748.00000	3.161	52.70598	49.48362	51.36077
FE	57	1028.00000	20470.10000	0.846	1033.19604	1032.92200	1017.99518
K	39	10810.00000	746576.00000	0.871	10909.94161	10726.62015	10781.03140
MG	24	5809.00000	640573.00000	1.203	5761.08546	5889.66625	5777.86962
MN	55	118.10000	60431.60000	2.132	117.27529	120.90854	116.07078
NA	23	15440.00000	3411970.00000	1.021	15615.94718	15311.65631	15392.80835
TI	47	248.10000	5621.39000	3.271	239.62638	255.80112	248.88525
V	51	50.40000	42791.10000	1.779	49.59789	50.22734	51.36698
IN-1	115	87580.20000	0.00000	1.435	88368.30000	88241.70000	86130.60000
IN-2	115	42572.70000	0.00000	2.678	42807.30000	41333.60000	43577.20000
AG	107	52.45000	104455.00000	1.902	52.48142	53.44053	51.44526
AS	75	10.58000	1242.74000	9.245	9.96653	11.70356	10.05592
CD	111	5.22100	1246.74000	4.606	5.46843	4.98808	5.20605
CO	59	250.10000	472396.00000	2.038	247.70252	255.94251	246.62627
CU	63	52.15000	77144.00000	2.407	50.90459	53.41476	52.13377
MO	98	51.84000	44412.10000	4.763	49.99422	54.64129	50.87341
NI	60	55.29000	27433.30000	0.772	55.76946	55.17692	54.94087
SB	121	6.25300	2773.75000	1.695	6.30322	6.13106	6.32429
SE	78	10.54000	284.89300	2.566	10.63434	10.74770	10.23281
SN	120	51.75000	33599.20000	3.824	51.16113	53.95519	50.12983
SR	88	63.30000	33788.80000	2.166	62.62598	64.87976	62.40055
ZN	66	535.00000	86415.80000	2.630	522.49759	550.25242	532.32683
TB-2	159	146434.00000	0.00000	0.865	145966.00000	145468.00000	147867.00000
BA	137	85.17000	16204.60000	2.933	82.31081	86.93828	86.25780
BI-2	209	98564.70000	0.00000	1.174	99859.40000	97630.80000	98204.00000
PB	208	16.23000	67971.40000	2.197	15.90884	16.61271	16.16111
TL	203	1.96400	2607.06000	5.509	2.02478	1.83933	2.02865
U	238	0.03021	216.67800	30.583	0.03033	0.02091	0.03939
SC-1	45	65144.70000	0.00000	3.144	62803.00000	66602.50000	66028.50000
GE-1	72	67916.90000	0.00000	0.890	67679.00000	68604.20000	67467.40000
GE-2	72	97539.30000	0.00000	0.364	97147.70000	97629.50000	97840.70000
GE-3	72	1260530	0	2.087	1253310	1289700	1238580

Run Name: 1810609E03 Date/Time: 04/16/2018 17:50:00
Tube Number: 19 Batch: 181031063904A
Sample Number: **9553135** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	43333.10000	0.00000	2.172	42259.20000	43724.20000	44015.80000
SC-3	45	1771470	0	1.963	1810990	1757830	1745590
AL	27	2416.00000	86758.30000	0.791	2437.71066	2400.99394	2410.20531
B	11	272.00000	410537.00000	1.346	272.23934	268.16552	275.46940
BE	9	4.26600	7238.68000	2.021	4.26201	4.18148	4.35380
CA	44	12170.00000	45018.60000	1.430	12217.95115	12316.96811	11978.48221
CR	52	52.39000	52818.20000	0.746	52.74557	51.97011	52.44288
FE	57	1034.00000	20123.00000	5.490	1098.31565	1011.52252	991.53101
K	39	11350.00000	766612.00000	3.244	11147.19506	11122.92261	11772.40426
MG	24	5941.00000	640723.00000	2.048	6043.91660	5806.78835	5972.64039
MN	55	124.20000	62169.40000	1.217	125.67414	122.65508	124.27400
NA	23	16130.00000	3486160.00000	2.257	16345.27093	15707.89512	16331.32085
TI	47	253.50000	5614.77000	4.039	262.92702	254.99947	242.61850
V	51	50.22000	41711.00000	0.584	50.56353	50.05462	50.05574
IN-1	115	86671.00000	0.00000	2.689	87258.20000	84102.70000	88652.20000
IN-2	115	43241.30000	0.00000	1.371	43394.90000	42586.80000	43742.20000
AG	107	52.48000	106162.00000	1.279	52.71444	52.99658	51.71930
AS	75	11.01000	1304.74000	4.515	10.65743	10.78365	11.57464
CD	111	4.98800	1211.40000	1.146	5.01486	5.02688	4.92235
CO	59	244.30000	468890.00000	1.838	242.44205	249.47596	241.12206
CU	63	51.37000	77201.00000	1.626	50.54095	52.21183	51.36006
MO	98	50.99000	44405.60000	1.570	51.05273	51.76582	50.16829
NI	60	55.44000	27934.20000	1.754	54.93338	56.56412	54.83113
SB	121	6.11300	2753.74000	3.969	5.83638	6.29063	6.21139
SE	78	10.26000	274.67000	3.596	10.22437	9.91399	10.64903
SN	120	52.73000	34785.80000	2.331	51.46921	53.92614	52.78121
SR	88	62.40000	33846.10000	2.139	61.35480	61.93708	63.90253
ZN	66	544.70000	89399.20000	0.610	542.32580	543.33325	548.52206
TB-2	159	146900.00000	0.00000	1.620	144356.00000	147271.00000	149072.00000
BA	137	88.68000	16925.50000	1.492	88.56939	90.06131	87.42228
BI-2	209	98211.20000	0.00000	1.191	97045.10000	99384.50000	98204.00000
PB	208	16.24000	67769.00000	1.583	16.28924	15.95693	16.46271
TL	203	2.08500	2753.78000	8.264	2.14689	2.21728	1.89001
U	238	0.02626	196.67600	13.275	0.02743	0.02234	0.02901
SC-1	45	64920.70000	0.00000	2.677	65878.70000	62915.00000	65968.30000
GE-1	72	67967.30000	0.00000	3.053	68644.00000	65638.10000	69619.70000
GE-2	72	98160.80000	0.00000	0.074	98244.90000	98123.50000	98114.00000
GE-3	72	1255510	0	2.223	1284360	1253520	1228650

Run Name: 1810609E03 Date/Time: 04/16/2018 17:53:00
Tube Number: 20 Batch: 181031063904A
Sample Number: **9553133** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	43737.50000	0.00000	1.101	43192.20000	43914.80000	44105.40000
SC-3	45	1704400	0	1.707	1671880	1713350	1727970
AL	27	71.46000	2633.69000	5.894	68.40035	69.72928	76.26815
B	11	13.70000	39037.40000	3.284	14.04330	13.86029	13.18871
BE	9	0.02891	70.66740	23.867	0.02188	0.03567	0.02918
CA	44	1469.00000	5544.73000	11.300	1346.27878	1657.92501	1403.17792
CR	52	0.14310	536.70000	60.308	0.24278	0.09436	0.09227
FE	57	-0.17560	133.33900	-352.506	0.25425	-0.88512	0.10400
K	39	170.20000	25007.80000	9.148	187.89502	163.87975	158.73293
MG	24	776.90000	84657.80000	1.368	777.09682	766.13670	787.39856
MN	55	13.75000	7008.87000	1.361	13.94626	13.57606	13.71369
NA	23	1153.00000	263077.00000	0.716	1143.90611	1159.54576	1156.30147
TI	47	0.47450	20.00100	93.214	0.03472	0.91937	0.46950
V	51	0.01156	50.00210	103.893	0.01229	0.02319	-0.00080
IN-1	115	87921.60000	0.00000	0.693	87310.90000	88529.20000	87924.80000
IN-2	115	43932.30000	0.00000	2.604	45059.90000	42772.00000	43965.10000
AG	107	0.01477	36.66840	41.368	0.01107	0.02182	0.01142
AS	75	-0.24680	243.33800	-56.361	-0.34624	-0.08783	-0.30642
CD	111	-0.00932	48.66720	-236.803	0.01609	-0.02366	-0.02040
CO	59	0.34650	953.41000	12.407	0.29687	0.37314	0.36938
CU	63	0.14460	476.69700	33.119	0.15140	0.18878	0.09372
MO	98	0.07769	136.67300	17.338	0.06640	0.07407	0.09259
NI	60	0.45070	280.01400	44.553	0.45798	0.24640	0.64773
SB	121	0.06758	63.33610	97.810	0.07919	-0.00356	0.12712
SE	78	0.01742	0.88889	162.572	-0.01528	0.03360	0.03393
SN	120	0.03684	236.67800	11.973	0.03280	0.03617	0.04154
SR	88	4.41400	2446.99000	2.302	4.32567	4.39078	4.52489
ZN	66	1.38100	256.68000	18.269	1.65758	1.32322	1.16316
TB-2	159	145117.00000	0.00000	1.597	147153.00000	142596.00000	145602.00000
BA	137	6.17300	1170.10000	2.232	6.24547	6.01407	6.25948
BI-2	209	102939.00000	0.00000	0.293	103110.00000	102591.00000	103115.00000
PB	208	0.12460	790.04600	18.900	0.11055	0.11139	0.15176
TL	203	0.00624	56.66900	134.801	0.01596	0.00148	0.00129
U	238	0.00390	93.33810	155.233	-0.00273	0.00528	0.00914
SC-1	45	64562.00000	0.00000	2.549	63557.40000	66461.40000	63667.20000
GE-1	72	69046.20000	0.00000	1.524	67970.60000	70072.10000	69095.80000
GE-2	72	99245.50000	0.00000	0.370	98829.90000	99523.90000	99382.80000
GE-3	72	1226060	0	0.916	1215000	1225730	1237460

Run Name: 1810609E03 Date/Time: 04/16/2018 17:56:00
Tube Number: 21 Batch: 181031063904A
Sample Number: **9553131** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44366.30000	0.00000	0.275	44306.00000	44506.90000	44286.10000
SC-3	45	1735340	0	0.242	1730930	1735810	1739280
AL	27	112.80000	4190.84000	3.128	112.99039	116.27297	109.22197
B	11	18.81000	46929.00000	1.974	19.24020	18.57448	18.62234
BE	9	0.15580	282.00500	7.651	0.16708	0.15691	0.14332
CA	44	1952.00000	7449.04000	7.418	1794.11481	1983.75273	2078.54341
CR	52	0.36930	776.72400	35.824	0.52009	0.27277	0.31517
FE	57	17.24000	480.03200	31.328	19.28076	11.11070	21.31542
K	39	1399.00000	108866.00000	1.340	1391.46737	1385.61844	1420.61677
MG	24	1703.00000	188168.00000	1.680	1733.69386	1676.88115	1699.35347
MN	55	48.35000	24824.40000	2.184	49.27316	47.19707	48.57097
NA	23	3619.00000	810670.00000	2.494	3691.86259	3518.04988	3647.20839
TI	47	-0.27130	3.33346	-94.139	-0.41880	-0.41880	0.02352
V	51	0.09704	123.33900	18.817	0.11686	0.08091	0.09335
IN-1	115	87141.00000	0.00000	2.927	84201.20000	88449.20000	88772.60000
IN-2	115	43595.30000	0.00000	0.923	43615.30000	43183.40000	43987.10000
AG	107	0.02297	53.33620	44.144	0.01154	0.02653	0.03085
AS	75	-0.45940	221.33700	-50.893	-0.70568	-0.24047	-0.43233
CD	111	0.16290	88.66760	12.038	0.14295	0.16373	0.18215
CO	59	0.83880	1900.21000	10.644	0.92146	0.74414	0.85094
CU	63	0.40260	863.39300	10.261	0.36719	0.39261	0.44797
MO	98	0.00641	73.33620	435.773	0.00274	-0.01950	0.03598
NI	60	1.37100	743.38600	18.111	1.58006	1.43756	1.09685
SB	121	0.04686	53.33570	96.991	0.06192	-0.00420	0.08287
SE	78	0.47320	13.11110	28.571	0.49859	0.32715	0.59397
SN	120	-0.15210	110.00500	-45.141	-0.22767	-0.13516	-0.09354
SR	88	10.01000	5484.75000	3.536	9.66574	10.37254	9.98281
ZN	66	4.51800	773.38700	10.976	4.98107	3.99474	4.57816
TB-2	159	149441.00000	0.00000	1.251	151379.00000	149296.00000	147648.00000
BA	137	83.84000	16281.30000	1.611	85.17188	83.88157	82.46943
BI-2	209	103442.00000	0.00000	2.362	106081.00000	102986.00000	101260.00000
PB	208	0.10400	703.37300	22.663	0.10809	0.07865	0.12526
TL	203	0.00613	56.66900	83.072	0.00027	0.00868	0.00943
U	238	0.00639	106.67200	66.249	0.00847	0.00917	0.00152
SC-1	45	64119.70000	0.00000	2.987	61908.60000	65214.70000	65235.80000
GE-1	72	66780.50000	0.00000	1.503	65728.50000	66884.10000	67729.00000
GE-2	72	98741.80000	0.00000	1.403	98176.20000	97729.00000	100320.00000
GE-3	72	1238730	0	2.128	1208560	1257300	1250350

Run Name: 1810609E03 Date/Time: 04/16/2018 18:00:00
Tube Number: 22 Batch: 181031063904A
Sample Number: **9553132** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	45296.50000	0.00000	3.135	44527.30000	44426.80000	46935.20000
SC-3	45	1783820	0	1.686	1816780	1757880	1776800
AL	27	7.94700	343.35300	9.532	8.82147	7.48534	7.53504
B	11	9.99800	35522.30000	2.792	9.79068	10.31544	9.88793
BE	9	0.02434	66.00070	44.782	0.02359	0.03559	0.01384
CA	44	32940.00000	127185.00000	2.076	33132.37640	33500.20941	32175.79465
CR	52	0.43030	856.73300	22.652	0.53502	0.34219	0.41383
FE	57	6.08100	263.34700	68.147	5.06638	10.63903	2.53846
K	39	2079.00000	158203.00000	3.818	2075.54887	2160.17544	2001.56190
MG	24	14620.00000	1647410.00000	2.274	14800.26187	14821.35407	14235.25062
MN	55	17.79000	9373.70000	3.170	18.43137	17.36069	17.58930
NA	23	7160.00000	1624710.00000	2.075	7327.29616	7111.95389	7042.08299
TI	47	0.02179	10.00040	2023.410	0.02113	0.46304	-0.41880
V	51	0.10860	136.67400	43.904	0.11604	0.05764	0.15213
IN-1	115	87908.40000	0.00000	0.115	87846.30000	88025.30000	87853.50000
IN-2	115	43838.30000	0.00000	2.338	44026.00000	42732.70000	44756.30000
AG	107	0.02132	50.00190	41.332	0.02596	0.02685	0.01116
AS	75	-0.08053	258.67100	-272.073	-0.18529	0.17131	-0.22763
CD	111	0.01193	53.33390	446.438	-0.02910	0.07212	-0.00723
CO	59	0.04790	370.02200	150.125	0.00508	0.13092	0.00770
CU	63	0.94720	1696.84000	8.166	0.99169	0.85792	0.99210
MO	98	-0.00582	63.33610	-930.548	-0.04319	-0.03052	0.05626
NI	60	0.60000	353.35200	27.417	0.51003	0.78986	0.50015
SB	121	0.06842	63.33610	47.603	0.10479	0.04195	0.05851
SE	78	1.47000	40.22240	10.320	1.63474	1.33646	1.43760
SN	120	-0.00647	206.67700	-1233.580	0.02607	0.05192	-0.09740
SR	88	71.55000	39321.90000	3.711	69.08666	74.36217	71.19540
ZN	66	10.37000	1750.19000	8.114	11.27981	10.20721	9.62065
TB-2	159	153636.00000	0.00000	0.892	152163.00000	154872.00000	153872.00000
BA	137	22.41000	4480.99000	5.609	21.17247	23.68616	22.38843
BI-2	209	103779.00000	0.00000	1.930	101593.00000	104215.00000	105528.00000
PB	208	0.16270	963.38800	16.669	0.18045	0.13143	0.17608
TL	203	-0.00855	36.66820	-105.264	0.00184	-0.01361	-0.01388
U	238	0.00637	106.67100	127.553	0.00949	-0.00285	0.01246
SC-1	45	65472.80000	0.00000	0.863	65576.10000	64863.00000	65979.10000
GE-1	72	68785.00000	0.00000	1.620	67759.90000	69971.00000	68624.30000
GE-2	72	99642.00000	0.00000	2.243	97941.90000	98810.50000	102174.00000
GE-3	72	1266710	0	0.857	1272880	1254170	1273070

Run Name: 1810609E03 Date/Time: 04/16/2018 18:03:00
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	42470.00000	0.00000	0.466	42440.00000	42289.00000	42680.90000
SC-3	45	1710110	0	0.812	1699340	1725770	1705210
AL	27	2493.00000	87742.10000	2.605	2556.16574	2497.21152	2426.44187
B	11	257.40000	376198.00000	0.637	259.01462	255.73954	257.48812
BE	9	26.19000	42777.20000	1.335	26.59010	25.96343	26.00798
CA	44	2574.00000	9383.76000	5.202	2709.13859	2441.26277	2572.74351
CR	52	255.20000	250718.00000	0.477	254.00332	256.43710	255.15109
FE	57	2512.00000	47775.80000	3.129	2576.15634	2424.38061	2535.81863
K	39	2470.00000	173826.00000	1.446	2442.96200	2455.68524	2510.19685
MG	24	2427.00000	256597.00000	0.728	2408.67958	2444.01882	2427.55738
MN	55	259.20000	127086.00000	1.475	256.86890	257.04069	263.57427
NA	23	2380.00000	514356.00000	0.861	2356.59825	2395.92843	2386.17164
TI	47	258.20000	5608.10000	3.181	264.11145	248.83655	261.70327
V	51	246.50000	200510.00000	2.291	240.27182	251.26859	247.99925
IN-1	115	87689.50000	0.00000	2.025	86119.40000	89617.50000	87331.40000
IN-2	115	41505.30000	0.00000	1.065	41766.70000	40994.90000	41754.30000
AG	107	26.89000	52232.60000	1.075	27.19200	26.61512	26.87129
AS	75	263.60000	24198.10000	1.753	258.38365	266.98570	265.60890
CD	111	26.75000	6026.14000	0.770	26.89530	26.83462	26.51180
CO	59	250.90000	462186.00000	0.915	248.91295	253.41490	250.38634
CU	63	250.60000	360500.00000	0.995	248.69677	253.39337	249.59265
MO	98	26.53000	22210.20000	2.736	25.81729	26.51149	27.26875
NI	60	269.10000	129965.00000	2.287	265.65649	276.21204	265.45132
SB	121	26.28000	11262.20000	4.912	25.60656	27.77311	25.47465
SE	78	25.07000	678.24100	3.521	24.70432	26.08115	24.43557
SN	120	26.07000	16611.70000	1.250	25.74485	26.39635	26.06917
SR	88	25.64000	13354.10000	4.633	24.27613	26.17475	26.46307
ZN	66	269.30000	42430.90000	1.812	263.79775	273.08880	271.03609
TB-2	159	144521.00000	0.00000	0.936	143061.00000	145733.00000	144770.00000
BA	137	267.60000	50229.80000	2.084	273.62251	262.60786	266.59777
BI-2	209	100979.00000	0.00000	0.341	101333.00000	100959.00000	100646.00000
PB	208	25.44000	109050.00000	0.333	25.40506	25.37918	25.53711
TL	203	25.10000	33571.60000	2.757	25.78677	25.12320	24.40297
U	238	24.97000	123754.00000	0.632	24.79456	25.09970	25.01738
SC-1	45	64823.60000	0.00000	1.037	64060.00000	65085.70000	65325.00000
GE-1	72	67692.80000	0.00000	3.408	67709.60000	69991.70000	65376.90000
GE-2	72	95255.30000	0.00000	2.261	92773.30000	96360.40000	96632.30000
GE-3	72	1213140	0	2.482	1240750	1181030	1217650

Run Name: 1810609E03 Date/Time: 04/16/2018 18:06:00
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	42302.90000	0.00000	2.986	41276.40000	43714.00000	41918.40000
SC-3	45	1655560	0	0.427	1662800	1655190	1648690
AL	27	0.03769	43.33490	1654.820	0.54356	-0.65912	0.22865
B	11	11.31000	34732.20000	1.058	11.17514	11.38665	11.37799
BE	9	0.03196	73.33420	28.432	0.02333	0.03110	0.04145
CA	44	-3.42600	50.00240	-334.209	8.06791	-14.82904	-3.51919
CR	52	-0.01700	363.35300	-157.471	-0.00064	-0.00247	-0.04790
FE	57	-0.78130	116.67200	-302.189	1.13379	-3.41862	-0.05935
K	39	3.06100	13350.50000	569.748	21.91495	-12.48264	-0.24883
MG	24	-0.05365	80.00370	-1018.270	-0.60842	0.48373	-0.03628
MN	55	0.00765	73.33710	567.115	0.04630	0.01594	-0.03929
NA	23	-3.08400	11248.60000	-69.942	-2.68420	-5.41453	-1.15584
TI	47	0.04695	10.00040	1011.290	0.53034	0.02931	-0.41880
V	51	0.02251	56.66910	176.322	0.06571	-0.01232	0.01413
IN-1	115	82162.70000	0.00000	2.097	82789.70000	80214.30000	83484.10000
IN-2	115	41754.90000	0.00000	3.010	42129.90000	40353.40000	42781.50000
AG	107	0.01402	33.33460	78.317	0.00191	0.02332	0.01682
AS	75	0.01605	255.33800	1485.980	0.23522	0.05089	-0.23798
CD	111	0.04898	59.33400	103.205	-0.00312	0.05222	0.09784
CO	59	0.02160	303.35100	302.222	-0.02034	0.09682	-0.01168
CU	63	0.03273	293.34900	175.802	0.05720	-0.03300	0.07399
MO	98	0.01156	73.33750	558.305	-0.00625	0.08313	-0.04220
NI	60	0.05593	73.33640	45.378	0.02716	0.07516	0.06548
SB	121	0.42740	213.34300	44.127	0.25102	0.62618	0.40498
SE	78	0.02932	1.11111	192.087	-0.01528	0.09260	0.01064
SN	120	-0.05102	170.00700	-175.774	-0.11492	-0.08963	0.05150
SR	88	0.00888	20.00080	227.616	-0.01070	0.02967	0.00766
ZN	66	1.86100	320.01800	9.726	2.03398	1.67312	1.87737
TB-2	159	141124.00000	0.00000	1.005	140472.00000	140149.00000	142752.00000
BA	137	0.16610	36.66810	83.143	0.02082	0.29565	0.18176
BI-2	209	98177.10000	0.00000	1.980	95935.10000	99404.10000	99192.10000
PB	208	0.00924	273.34700	98.766	0.01968	0.00277	0.00528
TL	203	0.07748	146.67400	12.668	0.06710	0.07874	0.08661
U	238	0.01451	140.00800	38.883	0.01729	0.01823	0.00802
SC-1	45	60683.40000	0.00000	2.584	61657.40000	61518.00000	58874.80000
GE-1	72	62965.70000	0.00000	1.755	64171.60000	62001.10000	62724.40000
GE-2	72	95477.90000	0.00000	2.125	93279.10000	95877.40000	97277.30000
GE-3	72	1185600	0	0.860	1189620	1193180	1174000

Run Name: 1810609E03 Date/Time: 04/16/2018 18:09:00
Tube Number: 25 Batch: 181031063904A
Sample Number: **9553137** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44500.30000	0.00000	2.694	43603.70000	45861.80000	44035.30000
SC-3	45	1805560	0	1.279	1781780	1827920	1806960
AL	27	2122.00000	78228.50000	2.362	2176.38168	2077.61133	2112.02573
B	11	20.69000	51568.60000	3.344	21.40969	20.02852	20.64633
BE	9	0.59470	1049.38000	7.461	0.63808	0.54940	0.59652
CA	44	57880.00000	219586.00000	1.146	58311.19277	57118.57356	58218.23523
CR	52	1.86900	2320.29000	11.033	2.05413	1.90552	1.64665
FE	57	33.41000	803.39000	9.889	35.62710	34.99287	29.61436
K	39	2326.00000	172324.00000	1.299	2341.72127	2291.39954	2345.57860
MG	24	23070.00000	2554370.00000	2.465	22784.76886	22693.84813	23720.94639
MN	55	4387.00000	2252780.00000	1.429	4330.54721	4375.50476	4454.37101
NA	23	19160.00000	4250110.00000	2.063	19257.07078	18726.87603	19499.67517
TI	47	-0.41870	0.00000	0.000	-0.41880	-0.41880	-0.41880
V	51	0.14760	166.67600	28.950	0.19139	0.14543	0.10602
IN-1	115	86651.40000	0.00000	1.595	88105.80000	85356.40000	86492.10000
IN-2	115	42975.80000	0.00000	1.753	43273.30000	43535.30000	42119.00000
AG	107	0.01859	43.33500	96.450	0.01659	0.00174	0.03743
AS	75	0.63210	320.67300	42.889	0.36676	0.62074	0.90870
CD	111	0.32120	124.00200	10.286	0.28310	0.33983	0.34084
CO	59	41.93000	80171.70000	4.286	40.46188	41.39477	43.93404
CU	63	1.55000	2557.04000	12.361	1.67909	1.32972	1.64061
MO	98	-0.00778	60.00230	-246.081	-0.01961	0.01431	-0.01804
NI	60	21.94000	11018.40000	2.585	22.58024	21.49506	21.75167
SB	121	0.05620	56.66890	43.648	0.04054	0.08447	0.04361
SE	78	1.51800	40.88910	12.088	1.31067	1.58149	1.66058
SN	120	0.07075	253.34700	63.421	0.03206	0.06024	0.11994
SR	88	70.10000	37777.00000	1.740	68.86474	70.12404	71.30394
ZN	66	24.22000	3974.09000	1.393	23.84608	24.30703	24.50368
TB-2	159	152715.00000	0.00000	1.801	150418.00000	155764.00000	151965.00000
BA	137	12.98000	2580.38000	5.472	13.63524	12.22680	13.09080
BI-2	209	100661.00000	0.00000	1.906	98981.00000	102752.00000	100251.00000
PB	208	0.03184	376.68500	39.950	0.03165	0.01922	0.04466
TL	203	0.11530	200.01000	37.814	0.12507	0.06766	0.15321
U	238	0.10830	606.71100	21.117	0.12754	0.11438	0.08303
SC-1	45	64565.10000	0.00000	0.862	65004.20000	63939.00000	64752.00000
GE-1	72	66053.60000	0.00000	2.436	65195.50000	67910.30000	65055.20000
GE-2	72	98777.10000	0.00000	1.232	98114.50000	98035.10000	100182.00000
GE-3	72	1273030	0	0.926	1268440	1286410	1264220

Run Name: 1810609E03 Date/Time: 04/16/2018 18:12:00
Tube Number: 26 Batch: 181031063904A
Sample Number: **9553138** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44306.60000	0.00000	2.041	43263.50000	44868.60000	44787.80000
SC-3	45	1845010	0	2.069	1836280	1886790	1811970
AL	27	2075.00000	76176.50000	2.546	2121.33248	2017.55439	2086.55368
B	11	17.50000	47917.30000	4.056	17.58767	16.74499	18.15559
BE	9	0.59750	1077.38000	4.107	0.59361	0.57511	0.62374
CA	44	56940.00000	215079.00000	1.942	57351.68664	55681.91490	57773.86969
CR	52	1.74400	2183.62000	2.288	1.70300	1.78259	1.74785
FE	57	9.66900	330.01800	16.630	9.04289	8.46866	11.49691
K	39	2254.00000	166715.00000	1.163	2246.46247	2232.40352	2283.16884
MG	24	22750.00000	2508040.00000	2.681	23420.21108	22226.50120	22606.05973
MN	55	4188.00000	2141150.00000	0.857	4229.61710	4168.51898	4166.36521
NA	23	18730.00000	4138390.00000	1.198	18654.33433	18554.96769	18983.45778
TI	47	0.17460	13.33380	294.444	0.48675	-0.41880	0.45593
V	51	0.14060	160.00700	10.974	0.15705	0.12643	0.13841
IN-1	115	84623.20000	0.00000	2.055	83043.30000	84340.20000	86486.10000
IN-2	115	42047.00000	0.00000	1.373	41468.20000	42050.10000	42622.60000
AG	107	0.00357	13.33380	214.326	0.00199	-0.00317	0.01188
AS	75	0.76200	326.00700	14.160	0.70211	0.69739	0.88655
CD	111	0.29140	114.66800	15.007	0.24208	0.30642	0.32556
CO	59	41.33000	77348.30000	0.414	41.51901	41.19015	41.27378
CU	63	1.59200	2563.70000	8.021	1.73863	1.53372	1.50406
MO	98	-0.02975	40.00150	-2.184	-0.02911	-0.02977	-0.03040
NI	60	21.77000	10694.80000	1.855	22.21870	21.66441	21.43264
SB	121	0.04381	50.00250	182.584	-0.00141	0.13617	-0.00332
SE	78	1.34800	35.55570	6.929	1.26125	1.44682	1.33550
SN	120	-0.19840	76.67020	-23.433	-0.20707	-0.23997	-0.14821
SR	88	68.24000	35982.00000	2.950	69.02917	69.74736	65.95730
ZN	66	18.41000	2963.79000	3.733	17.70650	18.46261	19.07836
TB-2	159	151378.00000	0.00000	0.776	152203.00000	151897.00000	150034.00000
BA	137	12.65000	2493.70000	12.166	11.19802	14.26290	12.48968
BI-2	209	99112.10000	0.00000	1.224	97720.60000	99948.70000	99667.00000
PB	208	0.09365	630.03800	24.794	0.11735	0.07095	0.09263
TL	203	0.11710	200.01000	27.250	0.09618	0.15378	0.10120
U	238	0.13760	740.05600	16.533	0.13563	0.11596	0.16134
SC-1	45	63276.40000	0.00000	1.966	62582.60000	64713.20000	62533.50000
GE-1	72	63323.50000	0.00000	2.032	62010.30000	63376.90000	64583.30000
GE-2	72	99694.00000	0.00000	0.885	98689.80000	100048.00000	100344.00000
GE-3	72	1302290	0	0.738	1298180	1313270	1295400

Run Name: 1810609E03 Date/Time: 04/16/2018 18:15:00
Tube Number: 27 Batch: 181031063904A
Sample Number: **9553139** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	43350.00000	0.00000	3.336	41717.50000	43865.00000	44467.40000
SC-3	45	1779460	0	2.321	1778710	1738530	1821140
AL	27	20.89000	793.39000	4.931	21.36396	19.70825	21.59727
B	11	19.34000	48860.00000	4.317	19.75670	19.87740	18.37470
BE	9	0.04439	100.00100	2.534	0.04560	0.04338	0.04420
CA	44	130300.00000	481389.00000	1.810	133022.18341	129134.17006	128767.22911
CR	52	0.50590	896.73000	22.653	0.43116	0.63780	0.44862
FE	57	15.05000	426.69100	15.382	16.07980	12.39658	16.66698
K	39	3782.00000	264402.00000	2.604	3895.54662	3733.76560	3717.32337
MG	24	39070.00000	4212890.00000	2.995	40413.58585	38543.28433	38259.39475
MN	55	2576.00000	1288330.00000	1.267	2613.11341	2551.87120	2562.84255
NA	23	23320.00000	5033330.00000	4.227	24458.52629	22766.52076	22736.44116
TI	47	-0.12100	6.66692	-426.116	-0.41880	0.47433	-0.41880
V	51	0.35390	333.35300	5.824	0.37748	0.34474	0.33942
IN-1	115	85229.60000	0.00000	1.622	84649.90000	84231.40000	86807.40000
IN-2	115	42023.10000	0.00000	2.343	42089.70000	42972.50000	41007.10000
AG	107	0.01530	36.66840	92.549	0.00699	0.03165	0.00726
AS	75	0.22680	276.00500	251.764	-0.30476	0.15483	0.83040
CD	111	0.10180	71.33410	77.141	0.09415	0.02731	0.18382
CO	59	4.91900	9433.80000	3.495	4.74315	4.92632	5.08672
CU	63	0.36330	773.38900	16.912	0.35233	0.30803	0.42945
MO	98	0.07567	130.00700	105.445	0.12378	0.11966	-0.01644
NI	60	3.82200	1916.88000	7.525	3.98972	3.98581	3.48957
SB	121	0.05072	53.33540	108.833	0.04369	0.10911	-0.00062
SE	78	0.39160	10.66670	35.393	0.29141	0.54977	0.33363
SN	120	-0.09836	140.00600	-35.512	-0.13040	-0.10357	-0.06112
SR	88	120.20000	63298.50000	5.603	117.91147	114.94599	127.80835
ZN	66	5.18200	850.06400	8.340	5.35520	4.68989	5.50062
TB-2	159	147459.00000	0.00000	1.584	145336.00000	147077.00000	149962.00000
BA	137	28.39000	5444.74000	2.038	27.73367	28.81914	28.62321
BI-2	209	97065.00000	0.00000	1.085	98103.10000	95996.80000	97095.00000
PB	208	0.02598	340.01600	58.083	0.03966	0.00980	0.02850
TL	203	0.02941	83.33730	64.230	0.04942	0.01189	0.02693
U	238	0.81570	3954.17000	3.607	0.84801	0.79046	0.80866
SC-1	45	63152.00000	0.00000	1.823	62261.20000	62742.70000	64452.10000
GE-1	72	65347.10000	0.00000	0.907	64844.40000	65196.50000	66000.60000
GE-2	72	96434.60000	0.00000	0.891	97389.70000	95725.10000	96188.90000
GE-3	72	1251240	0	1.911	1278620	1234470	1240620

Run Name: 1810609E03 Date/Time: 04/16/2018 18:18:00
Tube Number: 28 Batch: 181031063904A
Sample Number: **9553140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44031.90000	0.00000	0.581	43774.60000	44286.10000	44035.10000
SC-3	45	1817350	0	3.861	1853850	1861730	1736460
AL	27	22.46000	863.39200	6.447	22.23387	21.14537	24.01440
B	11	18.07000	48003.60000	7.205	17.28239	17.34998	19.56973
BE	9	0.01932	58.66730	26.444	0.01492	0.02492	0.01811
CA	44	137500.00000	516303.00000	2.055	136060.28490	135763.29593	140798.46346
CR	52	-0.00531	390.02100	-284.611	-0.01290	0.01209	-0.01512
FE	57	31.32000	753.39100	15.335	35.46128	32.44150	26.05428
K	39	3746.00000	266296.00000	1.508	3686.67883	3753.19438	3799.04682
MG	24	45940.00000	5034110.00000	0.808	46122.39668	45508.47918	46177.65197
MN	55	1417.00000	719918.00000	1.133	1401.66491	1414.76911	1433.61641
NA	23	27940.00000	6128200.00000	0.766	27760.96282	28175.85737	27877.79005
TI	47	0.32100	16.66730	158.411	0.02869	0.90815	0.02604
V	51	0.31530	306.68200	22.357	0.23817	0.37638	0.33136
IN-1	115	85262.70000	0.00000	2.349	82963.80000	86196.20000	86628.20000
IN-2	115	41535.10000	0.00000	1.007	41448.30000	41167.10000	41990.00000
AG	107	0.01226	30.00140	41.794	0.01746	0.00722	0.01211
AS	75	0.26460	276.67200	139.191	0.68172	0.12814	-0.01592
CD	111	0.05374	60.00070	48.791	0.06309	0.07401	0.02412
CO	59	1.75900	3503.94000	6.447	1.81493	1.83378	1.62856
CU	63	0.12530	423.35600	1.256	0.12359	0.12559	0.12670
MO	98	0.13050	173.34200	14.973	0.11489	0.15244	0.12426
NI	60	2.07700	1050.08000	6.115	2.04098	1.97204	2.21817
SB	121	0.00603	33.33460	577.255	-0.00138	-0.02449	0.04396
SE	78	0.29630	8.22225	32.784	0.19333	0.38630	0.30938
SN	120	-0.18600	83.33770	-5.103	-0.17520	-0.19025	-0.19276
SR	88	113.60000	59141.60000	1.695	111.78930	115.60832	113.26498
ZN	66	0.50040	103.33900	20.184	0.41657	0.61257	0.47197
TB-2	159	147187.00000	0.00000	0.366	146776.00000	147796.00000	146988.00000
BA	137	23.39000	4477.65000	5.780	22.84285	24.92600	22.39064
BI-2	209	95163.60000	0.00000	0.420	95442.90000	95341.90000	94706.10000
PB	208	0.00623	253.34600	194.538	0.00028	0.02016	-0.00177
TL	203	0.07059	133.34100	13.245	0.07555	0.05981	0.07641
U	238	1.11000	5248.04000	2.332	1.10284	1.13826	1.08784
SC-1	45	63433.20000	0.00000	2.459	61678.50000	64662.80000	63958.30000
GE-1	72	63376.50000	0.00000	0.979	63447.80000	63958.30000	62723.40000
GE-2	72	96612.40000	0.00000	0.539	97075.50000	96048.10000	96713.50000
GE-3	72	1253060	0	0.310	1248670	1256050	1254440

Run Name: 1810609E03 Date/Time: 04/16/2018 18:21:00
Tube Number: 29 Batch: 181031063904A
Sample Number: **9553141** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	44403.30000	0.00000	2.502	43603.40000	43935.20000	45671.30000
SC-3	45	1773730	0	0.323	1772730	1779900	1768570
AL	27	18.70000	733.40200	24.770	21.21944	13.35364	21.52527
B	11	12.56000	38995.20000	1.537	12.77587	12.41189	12.48262
BE	9	0.02177	61.33400	27.827	0.02099	0.01614	0.02818
CA	44	50720.00000	192016.00000	1.193	50794.15362	51287.29987	50083.24654
CR	52	0.76350	1180.10000	19.123	0.93194	0.68544	0.67306
FE	57	18.07000	496.69400	7.405	18.67670	18.99247	16.53324
K	39	1831.00000	138261.00000	3.020	1889.81711	1823.25997	1780.02708
MG	24	22680.00000	2505850.00000	1.124	22755.53111	22884.27053	22392.62853
MN	55	1.04100	606.70100	1.095	1.02999	1.04085	1.05279
NA	23	6978.00000	1552550.00000	1.545	7063.25632	7014.79781	6857.07058
TI	47	0.90520	30.00110	3.611	0.92893	0.91875	0.86791
V	51	0.16770	183.34300	23.596	0.14348	0.21335	0.14624
IN-1	115	87258.50000	0.00000	0.440	87180.20000	87675.30000	86920.00000
IN-2	115	41925.50000	0.00000	1.964	42109.80000	41025.70000	42641.20000
AG	107	0.01547	36.66810	35.979	0.01206	0.01246	0.02190
AS	75	0.04740	259.33800	163.481	0.06302	0.11588	-0.03671
CD	111	0.04836	59.33390	139.909	-0.02948	0.09311	0.08144
CO	59	-0.04298	186.67600	-11.061	-0.04170	-0.03901	-0.04825
CU	63	0.11020	406.68800	62.223	0.12586	0.03513	0.16957
MO	98	-0.00962	56.66940	-320.853	-0.04165	0.01990	-0.00710
NI	60	0.37080	226.67800	28.182	0.31301	0.49144	0.30792
SB	121	0.00533	33.33490	642.603	-0.02554	-0.00066	0.04220
SE	78	0.11680	3.55557	64.529	0.03435	0.18212	0.13406
SN	120	-0.16130	100.00500	-18.432	-0.13048	-0.18980	-0.16375
SR	88	60.87000	32004.40000	1.476	61.36684	61.40951	59.83270
ZN	66	5.71800	933.40600	8.367	5.47770	6.26909	5.40755
TB-2	159	145035.00000	0.00000	0.745	144640.00000	146257.00000	144207.00000
BA	137	47.55000	8963.62000	2.400	46.45691	47.47092	48.73378
BI-2	209	100148.00000	0.00000	0.179	100353.00000	100068.00000	100021.00000
PB	208	0.02668	353.35000	65.068	0.03279	0.00709	0.04017
TL	203	-0.00267	43.33510	-429.749	0.00984	-0.00515	-0.01270
U	238	0.10620	593.37300	1.242	0.10528	0.10562	0.10771
SC-1	45	65309.20000	0.00000	1.649	66129.80000	65708.40000	64089.30000
GE-1	72	65185.70000	0.00000	0.986	65869.40000	65094.70000	64593.00000
GE-2	72	97593.10000	0.00000	1.495	97419.40000	96228.60000	99131.20000
GE-3	72	1249730	0	1.708	1255210	1226170	1267800

Run Name: 1810609E03 Date/Time: 04/16/2018 18:24:00
Tube Number: 30 Batch: 181031063904A
Sample Number: **9553141** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	42918.10000	0.00000	0.968	42540.40000	43362.80000	42851.10000
SC-3	45	1750700	0	1.923	1776480	1712610	1763010
AL	27	1.88400	110.00400	15.886	1.91052	1.57288	2.16963
B	11	2.25900	23908.70000	4.012	2.24346	2.35632	2.17703
BE	9	0.00507	32.66700	80.193	0.00912	0.00511	0.00099
CA	44	5568.00000	20433.30000	1.431	5527.17165	5516.81071	5659.69059
CR	52	0.01145	396.68600	720.175	-0.04271	-0.02930	0.10634
FE	57	-1.25600	110.00500	-114.172	0.36553	-2.35662	-1.77845
K	39	203.80000	26748.00000	11.668	230.97225	186.81205	193.61119
MG	24	2568.00000	274402.00000	1.312	2529.01540	2587.89740	2586.78035
MN	55	0.14020	140.00600	38.716	0.12217	0.09716	0.20115
NA	23	743.80000	170778.00000	0.815	738.09724	743.13914	750.15901
TI	47	0.95170	30.00140	48.755	1.42308	0.93641	0.49550
V	51	0.04913	80.00400	49.094	0.02550	0.04819	0.07372
IN-1	115	84938.40000	0.00000	0.442	84592.50000	85337.40000	84885.50000
IN-2	115	42528.80000	0.00000	2.237	41488.50000	42743.30000	43354.60000
AG	107	0.00520	16.66730	110.701	0.00199	0.01184	0.00176
AS	75	-0.10990	248.00400	-361.510	0.34792	-0.36400	-0.31374
CD	111	-0.02016	44.66710	-174.603	-0.05356	-0.02353	0.01661
CO	59	-0.02860	216.67700	-83.916	-0.04017	-0.00101	-0.04462
CU	63	-0.00586	240.01200	-367.218	-0.00193	0.01343	-0.02909
MO	98	-0.03804	33.33490	-46.819	-0.04111	-0.01890	-0.05413
NI	60	0.02665	60.00250	162.214	0.07049	0.02540	-0.01595
SB	121	-0.02622	20.00080	-300.153	-0.07166	0.06464	-0.07166
SE	78	0.03563	1.33334	71.401	0.01030	0.03542	0.06118
SN	120	-0.15320	106.67100	-13.786	-0.17535	-0.13327	-0.15109
SR	88	6.41400	3433.92000	4.167	6.71987	6.22305	6.30055
ZN	66	1.94700	340.01700	15.439	1.68661	1.87919	2.27608
TB-2	159	144084.00000	0.00000	2.102	141777.00000	147514.00000	142960.00000
BA	137	5.09800	960.07700	4.412	5.01706	4.92506	5.35231
BI-2	209	100655.00000	0.00000	0.778	99756.40000	101018.00000	101190.00000
PB	208	-0.00268	230.01100	-219.873	-0.00691	-0.00519	0.00405
TL	203	-0.00031	46.66860	-1454.870	0.00253	-0.00543	0.00199
U	238	0.01444	143.34200	48.774	0.01402	0.00761	0.02168
SC-1	45	62863.20000	0.00000	0.646	62401.10000	63023.90000	63164.60000
GE-1	72	65890.40000	0.00000	0.779	66483.00000	65608.70000	65579.40000
GE-2	72	98278.50000	0.00000	1.754	96472.20000	98457.40000	99905.80000
GE-3	72	1254610	0	2.433	1287460	1227130	1249250

Run Name: 1810609E03 Date/Time: 04/16/2018 18:27:00
Tube Number: 31
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	42326.30000	0.00000	1.496	41807.90000	42138.90000	43032.10000
SC-3	45	1696790	0	0.626	1699020	1706130	1685210
AL	27	204.10000	7195.55000	3.515	210.53456	205.42939	196.36831
B	11	102.80000	161084.00000	1.484	104.28824	102.76490	101.23639
BE	9	1.07700	1768.80000	2.962	1.07186	1.11154	1.04843
CA	44	410.60000	1543.49000	8.078	431.49455	427.97040	372.36757
CR	52	3.83800	4130.81000	5.508	3.88896	4.01975	3.60619
FE	57	201.30000	3934.13000	12.062	201.94619	225.29122	176.73732
K	39	421.00000	40463.20000	4.076	434.99053	401.84448	426.11546
MG	24	191.70000	20286.20000	2.116	187.80031	191.47718	195.90145
MN	55	4.22600	2133.59000	2.409	4.18995	4.34104	4.14726
NA	23	389.80000	93909.20000	2.425	400.39492	386.60649	382.30432
TI	47	29.52000	646.71000	7.134	31.91129	27.93822	28.71510
V	51	1.06300	900.06800	11.628	1.17609	0.93096	1.08056
IN-1	115	86297.30000	0.00000	0.543	85902.90000	86173.40000	86815.70000
IN-2	115	41893.50000	0.00000	1.609	41210.80000	41910.90000	42559.00000
AG	107	1.13400	2230.28000	6.989	1.06536	1.22094	1.11690
AS	75	3.32300	559.35000	7.722	3.60700	3.10776	3.25434
CD	111	0.91400	254.67100	1.973	0.89382	0.92847	0.91979
CO	59	0.97900	2083.58000	13.034	1.12584	0.91634	0.89490
CU	63	3.82200	5791.53000	2.671	3.88764	3.87500	3.70484
MO	98	0.96100	873.39500	13.757	1.10552	0.93151	0.84605
NI	60	4.41600	2196.94000	7.031	4.70273	4.45842	4.08612
SB	121	2.10400	940.07500	13.812	1.90767	1.96728	2.43825
SE	78	3.72100	99.33400	7.345	4.01420	3.67520	3.47346
SN	120	4.04200	2767.08000	13.214	4.51374	4.14979	3.46197
SR	88	2.08400	1110.10000	13.695	1.98352	2.40674	1.86352
ZN	66	33.13000	5287.98000	5.400	34.70849	33.49668	31.18766
TB-2	159	142424.00000	0.00000	0.729	141434.00000	142331.00000	143505.00000
BA	137	3.96600	740.05500	7.078	3.94039	3.69896	4.25868
BI-2	209	99435.40000	0.00000	0.873	99789.50000	98445.90000	100071.00000
PB	208	2.02300	8758.32000	2.414	1.96668	2.05184	2.05065
TL	203	0.94780	1293.45000	9.296	0.98019	0.84808	1.01512
U	238	1.01000	4997.96000	5.232	1.06849	0.99625	0.96557
SC-1	45	62790.40000	0.00000	1.914	63246.50000	63698.10000	61426.50000
GE-1	72	65095.30000	0.00000	2.714	63105.60000	66482.30000	65698.10000
GE-2	72	93839.20000	0.00000	0.833	93087.10000	93782.60000	94647.80000
GE-3	72	1205330	0	0.894	1217740	1198340	1199890

Run Name: 1810609E03 Date/Time: 04/16/2018 18:30:00
Tube Number: 32
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	35692.90000	0.00000	0.349	35770.00000	35549.20000	35759.70000
SC-3	45	1489140	0	0.624	1499760	1485180	1482490
AL	27	106000.00000	3134950.00000	2.719	103191.25996	105977.96167	108955.24912
B	11	14.27000	34796.30000	4.114	13.91595	14.94422	13.93902
BE	9	0.01461	41.33370	34.032	0.01487	0.00952	0.01945
CA	44	313100.00000	952751.00000	3.023	302233.44922	319182.02413	318005.10180
CR	52	1.39100	1466.81000	13.595	1.29380	1.60877	1.27008
FE	57	266300.00000	4244410.00000	0.350	265806.26179	267377.88113	265723.75464
K	39	115100.00000	6299200.00000	0.717	114138.72579	115302.33096	115733.37762
MG	24	105100.00000	9337470.00000	1.020	104328.39153	104665.35281	106330.42883
MN	55	9.27100	3877.40000	2.836	9.52555	9.00045	9.28592
NA	23	276500.00000	49071700.00000	2.219	269988.95570	277321.82631	282174.78442
TI	47	2393.00000	43603.80000	2.003	2341.72813	2398.84605	2436.94624
V	51	0.06408	76.66980	57.974	0.06864	0.09875	0.02486
IN-1	115	75470.50000	0.00000	2.254	74256.80000	77415.30000	74739.50000
IN-2	115	39207.60000	0.00000	1.336	38738.80000	39773.30000	39110.50000
AG	107	0.42560	786.72200	5.975	0.39963	0.42677	0.45045
AS	75	0.68670	297.33900	36.683	0.97105	0.59772	0.49138
CD	111	0.28450	105.33500	12.411	0.32220	0.25220	0.27911
CO	59	0.88570	1790.20000	10.922	0.79359	0.87691	0.98647
CU	63	0.76440	1266.78000	12.601	0.87437	0.69479	0.72418
MO	98	2093.00000	1650690.00000	1.976	2048.64126	2100.98829	2130.26296
NI	60	1.00900	503.36300	7.606	1.05863	0.92057	1.04767
SB	121	1.16700	500.03000	5.754	1.13154	1.12466	1.24425
SE	78	0.07187	2.00001	107.054	0.13039	-0.01528	0.10051
SN	120	-0.04332	163.34100	-124.284	-0.02904	-0.10287	0.00193
SR	88	10.32000	5087.89000	1.339	10.35052	10.44177	10.17025
ZN	66	2.93900	460.02700	22.647	3.65448	2.82642	2.33777
TB-2	159	112756.00000	0.00000	1.061	111383.00000	113310.00000	113574.00000
BA	137	1.19700	180.01200	21.445	1.41776	1.25720	0.91520
BI-2	209	86017.50000	0.00000	1.912	85386.50000	87884.40000	84781.50000
PB	208	0.19140	903.38600	2.905	0.19778	0.18787	0.18846
TL	203	0.15260	213.34500	30.898	0.20376	0.11091	0.14302
U	238	0.06527	336.68800	20.775	0.08092	0.05733	0.05755
SC-1	45	51426.10000	0.00000	0.571	51503.00000	51673.90000	51101.30000
GE-1	72	56116.50000	0.00000	1.198	56032.80000	56826.60000	55490.20000
GE-2	72	87695.80000	0.00000	0.696	87005.20000	87920.40000	88161.90000
GE-3	72	1146460	0	1.351	1129750	1149270	1160340

Run Name: 1810609E03 Date/Time: 04/16/2018 18:33:00
Tube Number: 33
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	36491.60000	0.00000	3.119	35177.80000	37153.70000	37143.40000
SC-3	45	1544920	0	0.990	1560720	1543880	1530170
AL	27	102000.00000	3081860.00000	2.322	104651.47918	100075.36518	101307.10174
B	11	11.39000	32501.90000	2.838	11.10753	11.31441	11.74131
BE	9	0.01402	42.00040	2.009	0.01373	0.01403	0.01429
CA	44	300300.00000	933912.00000	1.818	304560.07617	294141.62465	302182.04126
CR	52	226.10000	190771.00000	2.264	231.96189	223.03565	223.15938
FE	57	258500.00000	4211690.00000	1.342	262383.17507	257569.11044	255649.65866
K	39	111100.00000	6217240.00000	1.338	112749.08558	110677.33110	109866.89872
MG	24	102200.00000	9281730.00000	1.934	104517.67432	101030.32892	101159.26959
MN	55	232.10000	97764.30000	2.744	239.33667	229.91184	227.20559
NA	23	267600.00000	48551100.00000	1.189	271300.84269	266037.73161	265571.58951
TI	47	2290.00000	42654.00000	2.034	2323.05820	2236.51743	2309.64904
V	51	224.80000	157062.00000	1.067	226.86621	225.27025	222.15097
IN-1	115	76262.30000	0.00000	1.339	76278.00000	77275.30000	75233.50000
IN-2	115	37923.50000	0.00000	1.711	38618.80000	37334.50000	37817.20000
AG	107	49.11000	87131.00000	1.593	48.31971	49.88406	49.13353
AS	75	103.20000	8793.72000	4.934	98.11674	108.29992	103.30244
CD	111	96.28000	19698.00000	4.086	92.28421	100.14908	96.41921
CO	59	199.00000	334875.00000	2.689	192.87446	202.85759	201.20595
CU	63	192.10000	252528.00000	2.033	187.88821	195.60984	192.75905
MO	98	2168.00000	1652950.00000	3.803	2088.98781	2161.13097	2253.47947
NI	60	204.60000	90294.30000	3.508	198.34816	212.45859	203.12661
SB	121	1.42900	586.70300	12.190	1.51245	1.22883	1.54602
SE	78	84.57000	1987.94000	1.110	84.82210	85.35111	83.52666
SN	120	-0.09187	130.00700	-53.140	-0.14765	-0.07114	-0.05685
SR	88	10.09000	4811.08000	6.867	9.43233	10.03552	10.81445
ZN	66	92.73000	13364.10000	3.041	93.32782	95.20092	89.65789
TB-2	159	112424.00000	0.00000	0.972	111576.00000	113657.00000	112040.00000
BA	137	1.38100	206.67900	20.138	1.48427	1.59198	1.06562
BI-2	209	84375.90000	0.00000	0.533	84157.20000	84077.60000	84892.80000
PB	208	0.18030	846.71800	2.287	0.18467	0.17647	0.17980
TL	203	0.14670	203.34400	29.393	0.12637	0.11753	0.19624
U	238	0.06591	333.35300	17.387	0.05809	0.06058	0.07907
SC-1	45	51068.80000	0.00000	2.358	50760.70000	52397.20000	50048.60000
GE-1	72	55269.80000	0.00000	1.314	54446.90000	55821.70000	55540.80000
GE-2	72	87169.10000	0.00000	1.398	85977.00000	87116.10000	88414.20000
GE-3	72	1180430	0	3.328	1225670	1154870	1160750

Run Name: 1810609E03 Date/Time: 04/16/2018 18:37:00
Tube Number: 34
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	40761.20000	0.00000	2.858	40834.70000	39561.10000	41887.90000
SC-3	45	1714440	0	2.074	1673590	1738390	1731330
AL	27	10.40000	393.35400	23.365	9.13734	8.86004	13.20100
B	11	0.69300	21237.50000	47.893	1.07070	0.55957	0.44845
BE	9	0.01199	43.33380	110.342	0.01183	0.02531	-0.00115
CA	44	15.86000	116.67200	70.429	19.83649	3.24561	24.49871
CR	52	0.09273	453.35900	73.698	0.01416	0.12563	0.13840
FE	57	29.04000	656.71000	28.333	19.86966	31.49089	35.76963
K	39	28.59000	14475.10000	65.827	50.13370	20.27869	15.34879
MG	24	8.44400	940.07100	23.934	6.47848	8.33805	10.51636
MN	55	-0.01479	60.00230	-161.122	-0.03655	0.01068	-0.01853
NA	23	30.24000	17582.40000	16.855	32.96390	33.40332	24.36381
TI	47	1.64200	43.33550	69.915	1.50005	0.57150	2.85473
V	51	0.06330	86.67040	35.687	0.06694	0.08385	0.03911
IN-1	115	78788.90000	0.00000	1.947	79821.60000	77026.10000	79519.00000
IN-2	115	40712.50000	0.00000	1.306	40103.80000	41086.90000	40946.90000
AG	107	0.01435	33.33460	75.958	0.01815	0.02285	0.00205
AS	75	0.04709	252.00400	633.893	-0.15940	-0.08864	0.38931
CD	111	0.04096	56.00050	73.853	0.07240	0.03841	0.01207
CO	59	0.03204	316.68600	74.657	0.04209	0.00473	0.04929
CU	63	0.09596	373.35400	43.226	0.11181	0.04888	0.12718
MO	98	1.94200	1653.51000	14.423	1.85746	1.71433	2.25488
NI	60	0.10920	96.67210	80.971	0.14053	0.00935	0.17765
SB	121	0.01538	36.66810	469.831	-0.04745	-0.00076	0.09434
SE	78	0.12150	3.33334	43.704	0.12024	0.06898	0.17516
SN	120	-0.16180	96.67150	-4.565	-0.17041	-0.15790	-0.15735
SR	88	0.03576	33.33460	64.066	0.04993	0.04803	0.00933
ZN	66	2.00400	333.35200	13.243	2.21030	1.70463	2.09721
TB-2	159	137489.00000	0.00000	1.265	135751.00000	137487.00000	139228.00000
BA	137	0.09669	23.33430	33.468	0.07945	0.13402	0.07661
BI-2	209	96594.80000	0.00000	0.900	97034.60000	97156.60000	95593.30000
PB	208	0.00128	236.67800	623.828	-0.00552	-0.00072	0.01008
TL	203	0.02734	80.00360	59.181	0.01138	0.02689	0.04373
U	238	-0.00474	46.66890	-67.997	-0.00829	-0.00200	-0.00393
SC-1	45	56075.70000	0.00000	0.328	56283.20000	55931.70000	56012.30000
GE-1	72	58611.50000	0.00000	2.839	60312.30000	58535.00000	56987.30000
GE-2	72	92804.90000	0.00000	0.751	92564.90000	92259.80000	93590.10000
GE-3	72	1220960	0	1.582	1208060	1243170	1211650

Run Name: 1810609E03 Date/Time: 04/16/2018 18:40:00
Tube Number: 35
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	41486.90000	0.00000	2.714	40293.50000	41637.00000	42530.10000
SC-3	45	1768680	0	1.044	1788620	1765220	1752190
AL	27	2507.00000	86188.20000	0.730	2525.91955	2506.81291	2489.33610
B	11	247.50000	374989.00000	0.230	247.38122	247.09188	248.18772
BE	9	25.99000	43910.90000	0.816	26.04120	26.16984	25.75537
CA	44	2522.00000	8976.76000	3.132	2598.00121	2440.29710	2526.67776
CR	52	261.10000	250494.00000	1.350	264.97646	260.15619	258.11346
FE	57	2604.00000	48354.50000	3.364	2704.84502	2542.88575	2565.96588
K	39	2537.00000	174026.00000	2.373	2580.97016	2562.04238	2468.51343
MG	24	2438.00000	251784.00000	1.087	2459.42834	2446.41518	2408.41202
MN	55	265.50000	127102.00000	2.183	270.87862	266.12963	259.34410
NA	23	2454.00000	517702.00000	1.766	2501.00377	2446.49291	2415.37863
TI	47	262.40000	5564.75000	2.867	267.99231	265.44911	253.87509
V	51	253.10000	201043.00000	1.243	255.78285	253.82557	249.62410
IN-1	115	82348.30000	0.00000	2.111	84099.20000	82322.30000	80623.50000
IN-2	115	40851.50000	0.00000	3.882	39023.20000	41678.80000	41852.70000
AG	107	27.24000	52028.80000	3.643	28.37833	26.53911	26.81311
AS	75	267.50000	24149.30000	2.474	274.37446	261.17330	266.96833
CD	111	26.76000	5928.76000	3.134	27.72527	26.25707	26.28915
CO	59	253.90000	459917.00000	4.636	267.55034	247.41044	246.91616
CU	63	255.40000	361330.00000	3.336	265.16863	249.78053	251.13311
MO	98	26.73000	22003.20000	2.909	27.61242	26.15872	26.40710
NI	60	274.80000	130564.00000	3.119	283.87521	266.82742	273.78370
SB	121	25.50000	10758.50000	4.949	25.49465	24.23842	26.76160
SE	78	24.28000	616.46100	5.848	23.13720	25.87079	23.84012
SN	120	26.63000	16678.40000	4.758	28.08506	25.76802	26.03832
SR	88	25.33000	12983.70000	0.924	25.47310	25.05541	25.44709
ZN	66	269.70000	41795.20000	3.382	280.04901	262.76972	266.35116
TB-2	159	142263.00000	0.00000	0.471	141806.00000	143033.00000	141950.00000
BA	137	258.50000	47769.60000	1.317	257.50521	255.72765	262.30961
BI-2	209	98057.30000	0.00000	0.711	97903.70000	97449.70000	98818.60000
PB	208	25.85000	107602.00000	1.601	25.83704	25.44186	26.26939
TL	203	26.02000	33785.40000	1.087	25.75354	26.31710	25.99069
U	238	25.67000	123522.00000	0.589	25.81744	25.51519	25.66616
SC-1	45	58650.20000	0.00000	1.410	59577.90000	57990.30000	58382.30000
GE-1	72	59364.70000	0.00000	3.539	59900.20000	61146.10000	57047.80000
GE-2	72	93560.90000	0.00000	2.121	91324.70000	94245.80000	95112.20000
GE-3	72	1255550	0	1.888	1238080	1282530	1246040

Run Name: 1810609E03 Date/Time: 04/16/2018 18:43:00
Tube Number: 36
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	40473.70000	0.00000	2.410	39420.40000	40654.40000	41346.40000
SC-3	45	1664580	0	1.451	1682120	1674610	1637020
AL	27	1.17900	80.00400	88.550	1.85140	-0.02357	1.70867
B	11	6.66000	28657.90000	4.036	6.89227	6.36561	6.72210
BE	9	0.06281	122.66900	31.651	0.04034	0.07811	0.07000
CA	44	-4.96900	43.33520	-175.609	-2.63244	-14.62706	2.34950
CR	52	0.00928	373.35400	945.786	-0.07024	-0.00535	0.10342
FE	57	0.40410	133.34000	488.740	2.65319	-0.39421	-1.04655
K	39	0.29970	12603.20000	6202.870	20.58488	-3.74586	-15.94042
MG	24	0.41380	123.33800	127.550	-0.19155	0.77824	0.65458
MN	55	-0.02168	56.66930	-142.620	-0.05472	0.00656	-0.01690
NA	23	3.61600	12116.10000	11.471	4.04346	3.58889	3.21484
TI	47	0.88620	26.66820	127.624	1.56889	1.50856	-0.41880
V	51	0.06761	90.00520	55.288	0.03133	0.10600	0.06552
IN-1	115	77021.60000	0.00000	0.236	77146.40000	77105.40000	76813.00000
IN-2	115	40324.50000	0.00000	4.308	38318.70000	41347.50000	41307.30000
AG	107	0.00904	23.33450	85.425	0.00241	0.01751	0.00718
AS	75	0.11550	255.33800	85.420	0.20121	0.13755	0.00764
CD	111	-0.01226	44.00050	-228.874	-0.02084	-0.03504	0.01908
CO	59	0.05489	353.35200	49.371	0.08604	0.04196	0.03669
CU	63	0.01242	253.34700	55.652	0.01188	0.01959	0.00579
MO	98	0.06182	113.33800	52.896	0.02675	0.06725	0.09147
NI	60	0.02586	56.66960	128.616	0.03934	0.05027	-0.01202
SB	121	0.30380	156.67500	33.805	0.23243	0.42153	0.25744
SE	78	0.01277	0.66667	380.345	0.06885	-0.01528	-0.01528
SN	120	-0.06174	156.67400	-29.300	-0.04307	-0.07919	-0.06299
SR	88	-0.00982	10.00040	-8.908	-0.00881	-0.01034	-0.01032
ZN	66	0.08311	36.66810	33.871	0.05061	0.09924	0.09948
TB-2	159	140235.00000	0.00000	2.008	137295.00000	140501.00000	142909.00000
BA	137	0.09296	23.33450	122.311	-0.03400	0.18522	0.12765
BI-2	209	98631.80000	0.00000	1.314	97196.40000	99717.70000	98981.20000
PB	208	0.00891	273.34500	122.167	0.02112	0.00021	0.00541
TL	203	0.10250	180.01000	24.517	0.08911	0.13147	0.08687
U	238	0.00262	83.33680	250.975	-0.00200	-0.00028	0.01013
SC-1	45	54318.30000	0.00000	3.776	54877.40000	52045.10000	56032.30000
GE-1	72	54657.70000	0.00000	1.264	54978.70000	53864.70000	55129.70000
GE-2	72	92086.70000	0.00000	2.406	89834.20000	92160.60000	94265.40000
GE-3	72	1177460	0	2.136	1173710	1204270	1154390

Instrument Tuning Report (ICPMS #11332)

File Name:	default.tun
File Path:	C:\elandata\Tuning
Sample Date/Time:	4/16/2018 3:17:00AM
Number of Replicates:	6
Method File:	c:\elandata\Method\dailytune.mth

Measured Mass must be within +/- 0.1 amu of the Exact Mass.

Measured Peak Width must be > or = to 0.640 AND < or = to 0.660.

Analyte	EXACT MASS	MEAS. MASS	Mass DAC	RES. DAC	MEAS. PK. WIDTH
Ce	140.000	140.050	0	0	0.600
In	115.000	115.050	0	0	0.650
Li	6.000	6.100	0	0	0.700
Mg	24.000	24.050	0	0	0.650
Pb	208.000	208.050	0	0	0.650
Rh	103.000	103.050	0	0	0.650
U	238.000	238.050	0	0	0.650

Summary: Verify that the RSD is less than 5 for the following masses.

Mass	Meas. Intens. Mean	Meas. Intens. RSD
140.000	81119.000	1.690
115.000	81517.000	1.320
6.000	35645.000	1.670
24.000	42313.000	2.550
208.000	32643.000	1.490
103.000	79054.000	1.290
238.000	62289.000	1.190

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18E04E00.E05

Run Name: 1812406E05

Analyst: 25839

Reviewed By:	Reviewed Date
Bradley M Berlot	05/04/2018 17:16
Nina C Haller	05/23/2018 14:56

Verified By:	Verified Date
Nina C Haller	05/24/2018 08:39
Parker D Lindstrom	05/07/2018 13:01

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208
	U	238

Run Name: 1812406E05 Date/Time: 05/04/2018 16:07:47
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	73746.67000	0.000	-4.43829	4.03617	0.40212
MG	24	0.00000	133.34000	0.000	-0.68241	1.30452	-0.62211
AL	27	0.00000	76.67000	0.000	-0.78306	-1.64614	2.42921
K	39	0.00000	6774.85000	0.000	2.40598	1.73553	-4.14151
CA	44	0.00000	10.00000	0.000	-0.12097	0.07168	0.04929
SC-1	45	19194.16000	0.00000	0.000	19471.25000	19030.51000	19080.72000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	20.00000	0.000	-0.00068	0.00040	0.00028
CR	52	0.00000	66.67000	0.000	-0.01383	0.08030	-0.06646
MN	55	0.00000	13.33000	0.000	-0.06546	0.03286	0.03260
FE	57	0.00000	16.67000	0.000	0.30937	1.37607	-1.68544
CO	59	0.00000	23.33000	0.000	-0.00315	-0.01309	0.01624
NI	60	0.00000	16.67000	0.000	0.07828	-0.02269	-0.05559
CU	63	0.00000	123.34000	0.000	0.03242	-0.02879	-0.00363
ZN	66	0.00000	16.67000	0.000	-0.17469	0.24343	-0.06874
GE-1	72	56172.92000	0.00000	0.000	55276.83000	57573.87000	55668.07000
AS	75	0.00000	5.33000	0.000	-0.05916	-0.02451	0.08367
SR	88	0.00000	13.33000	0.000	-0.01653	-0.06667	0.08320
MO	98	0.00000	43.33000	0.000	-0.03803	0.05959	-0.02157
AG	107	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	0.00000	1.33000	0.000	0.00512	-0.01018	0.00506
IN-1	115	21373.75000	0.00000	0.000	21223.99000	21593.56000	21303.70000
SN	120	0.00000	50.00000	0.000	0.03036	-0.06005	0.02969
SB	121	0.00000	6.67000	0.000	-0.02217	0.04435	-0.02217
BA	137	0.00000	3.33000	0.000	-0.03362	0.06723	-0.03362
TB-1	159	105403.22000	0.00000	0.000	104899.82000	105161.58000	106148.27000
TL	203	0.00000	13.33000	0.000	-0.00371	0.00746	-0.00375
PB	208	0.00000	73.33000	0.000	-0.00133	-0.00052	0.00186
BI-1	209	77578.73000	0.00000	0.000	78372.53000	75709.47000	78654.18000
U	238	0.00000	10.00000	0.000	-0.00291	0.00298	-0.00007

Run Name: 1812406E05 Date/Time: 05/04/2018 16:09:36
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	19975.19000	0.00000	0.000	20172.10000	19661.43000	20092.03000
AL	27	10000.00000	102413.92000	1.800	9797.17495	10117.54752	10085.27754
CA	44	10000.00000	12341.30000	1.900	9814.97900	10193.73229	9991.28871
CR	52	1000.00000	572765.68000	2.000	983.77806	1022.15405	994.06789
FE	57	10000.00000	102866.90000	1.300	9853.07737	10051.47266	10095.44997
K	39	10000.00000	216943.20000	0.300	10007.67089	10023.55195	9968.77716
MG	24	10000.00000	383064.40000	2.200	9786.11168	10216.68907	9997.19925
MN	55	1000.00000	213551.91000	0.400	1002.12806	995.14383	1002.72811
NA	23	10000.00000	895682.83000	2.200	9908.99545	10246.23976	9844.76478
TI	47	1000.00000	9753.01000	2.200	1024.88117	991.03002	984.08881
V	51	1000.00000	441603.07000	1.500	1000.77480	1014.23995	984.98526
IN-1	115	21686.17000	0.00000	0.000	21693.99000	21324.14000	22040.38000
AG	107	100.00000	124401.68000	1.200	99.08949	101.41825	99.49226
AS	75	1000.00000	56960.97000	1.600	997.20356	1016.96955	985.82689
BA	137	1000.00000	99570.34000	2.000	989.77759	1023.36779	986.85462
CD	111	100.00000	13361.87000	0.500	99.80482	100.51488	99.68029
CO	59	1000.00000	1045718.50000	1.900	992.72028	1021.73358	985.54615
CU	63	1000.00000	863427.31000	0.900	1006.88897	1003.43040	989.68063
MO	98	100.00000	61385.94000	3.500	99.86581	103.56146	96.57273
NI	60	1000.00000	305276.02000	1.800	987.56976	1020.28097	992.14927
SB	121	100.00000	30197.78000	2.400	102.64275	99.39629	97.96096
SN	120	100.00000	34529.34000	2.400	98.73884	102.81889	98.44227
SR	88	100.00000	20395.88000	3.200	97.81563	98.46347	103.72090
ZN	66	1000.00000	96078.29000	1.800	986.11635	1020.02018	993.86347
BI-1	209	79333.91000	0.00000	0.000	81266.72000	77990.27000	78744.73000
PB	208	100.00000	308447.44000	2.100	97.54107	101.10126	101.35767
TL	203	100.00000	96962.82000	2.600	97.01932	101.20143	101.77925
U	238	100.00000	355504.24000	1.900	98.12506	101.96141	99.91354
GE-1	72	57464.17000	0.00000	0.000	57654.87000	57393.71000	57343.93000
TB-1	159	105361.13000	0.00000	0.000	103573.86000	105616.20000	106893.33000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:11:27
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20585.87000	0.00000	0.000	20662.74000	20562.37000	20532.49000
AL	27	0.11000	83.34000	3895.900	-4.02137	-0.20621	4.55860
CA	44	12.56300	26.67000	191.900	7.23795	-8.43920	38.89060
CR	52	0.35300	280.01000	16.900	0.41879	0.30271	0.33730
FE	57	2.08400	40.00000	119.400	3.95389	3.03694	-0.73959
K	39	-25.95500	6704.84000	0.000	-16.63995	-16.47192	-44.75346
MG	24	-0.16700	136.67000	0.000	-0.09483	1.19064	-1.59674
MN	55	0.01000	16.67000	920.300	-0.02018	0.11652	-0.06546
NA	23	-72.32600	72987.55000	0.000	-92.21418	-80.59360	-44.16899
TI	47	0.66500	6.67000	173.200	0.00000	0.00000	1.99518
V	51	0.11400	73.33000	29.000	0.14988	0.08485	0.10707
IN-1	115	22467.01000	0.00000	0.000	22073.48000	22563.99000	22763.56000
AG	107	0.04100	53.33000	38.100	0.02369	0.05407	0.04594
AS	75	0.33500	25.33000	23.000	0.42237	0.27615	0.30634
BA	137	0.12800	16.67000	114.900	0.16369	-0.03362	0.25337
CD	111	0.02900	5.33000	156.100	0.07806	0.01860	-0.01018
CO	59	0.04300	70.00000	172.700	0.12761	0.00488	-0.00447
CU	63	0.17200	283.35000	64.400	0.27594	0.05527	0.18593
MO	98	0.08600	100.00000	35.000	0.05675	0.11663	0.08391
NI	60	0.15500	66.67000	47.500	0.20185	0.07033	0.19404
SB	121	0.55300	180.01000	10.500	0.49848	0.61449	0.54580
SN	120	0.53900	246.68000	64.000	0.16595	0.60507	0.84711
SR	88	0.01300	16.67000	577.000	0.07797	-0.06667	0.02683
ZN	66	0.26000	43.33000	116.800	0.33660	-0.07466	0.51942
BI-1	209	80479.66000	0.00000	0.000	80262.78000	80281.42000	80894.78000
PB	208	0.00800	100.00000	151.200	0.02056	-0.00188	0.00431
TL	203	0.02000	33.33000	78.000	0.01643	0.00623	0.03641
U	238	0.02800	110.01000	72.700	0.04991	0.01099	0.02191
GE-1	72	58687.98000	0.00000	0.000	57223.12000	58748.41000	60092.40000
TB-1	159	105062.78000	0.00000	0.000	105513.82000	105415.70000	104258.81000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:13:17
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20115.17000	0.00000	0.000	20592.49000	19631.25000	20121.77000
AL	27	-0.94200	70.00000	0.000	-4.00849	4.13175	-2.94983
CA	44	21.08300	36.67000	176.300	-0.57389	-0.18876	64.01267
CR	52	0.27800	230.01000	27.200	0.26822	0.35835	0.20801
FE	57	1.51700	33.33000	265.300	0.20075	-1.68544	6.03581
K	39	-4.92700	6998.34000	0.000	-9.07944	-25.56570	19.86394
MG	24	-1.18700	93.34000	0.000	-2.86902	-0.17481	-0.51821
MN	55	-0.00300	13.33000	0.000	-0.02003	-0.01780	0.02753
NA	23	-50.35500	73094.10000	0.000	-77.56121	-15.91022	-57.59269
TI	47	1.36600	13.33000	45.700	0.99469	2.08678	1.01795
V	51	-0.02500	10.00000	0.000	-0.00321	-0.04713	-0.02466
IN-1	115	22251.18000	0.00000	0.000	22023.94000	23075.92000	21653.69000
AG	107	0.01600	20.00000	100.600	0.01583	0.00000	0.03220
AS	75	0.06400	9.33000	76.800	0.00868	0.10294	0.08078
BA	137	-0.03400	0.00000	0.000	-0.03362	-0.03362	-0.03362
CD	111	-0.01000	0.00000	0.000	-0.01018	-0.01018	-0.01018
CO	59	0.00600	30.00000	494.300	0.03380	-0.02269	0.00604
CU	63	0.04700	170.01000	88.500	0.09440	0.02906	0.01730
MO	98	-0.01300	36.67000	0.000	-0.03924	-0.02539	0.02659
NI	60	0.00900	20.00000	936.600	0.10567	-0.05559	-0.02278
SB	121	0.20600	70.00000	44.500	0.23872	0.10233	0.27635
SN	120	0.07100	76.67000	100.300	0.10956	-0.01116	0.11398
SR	88	-0.00400	13.33000	0.000	0.02997	0.02557	-0.06667
ZN	66	0.33000	50.00000	50.600	0.44024	0.41220	0.13803
BI-1	209	79853.54000	0.00000	0.000	78947.24000	80241.41000	80371.96000
PB	208	-0.01100	40.00000	0.000	-0.00801	-0.00828	-0.01790
TL	203	0.01300	26.67000	43.200	0.00657	0.01643	0.01638
U	238	0.00600	30.00000	89.900	0.01122	0.00265	0.00264
GE-1	72	58774.81000	0.00000	0.000	60042.17000	57985.17000	58297.09000
TB-1	159	106565.14000	0.00000	0.000	106732.56000	105545.79000	107417.06000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:15:07
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20689.13000	0.00000	0.000	21633.53000	20662.49000	19771.37000
AL	27	4940.31700	52402.06000	3.300	4756.32217	4998.17001	5066.45953
CA	44	4756.52100	6077.96000	5.100	4574.47809	4664.34089	5030.74370
CR	52	496.83500	294478.32000	4.000	478.64118	493.51106	518.35251
FE	57	4897.90500	52146.57000	3.200	4760.58000	4860.90866	5072.22742
K	39	4896.93200	113601.36000	5.100	4623.86293	4957.09755	5109.83569
MG	24	4930.84800	195432.57000	5.300	4679.09551	4911.48393	5201.96458
MN	55	499.09500	110259.54000	4.300	482.22923	491.63513	523.41967
NA	23	4644.35100	472971.66000	4.600	4405.77295	4706.71647	4820.56467
TI	47	490.07800	4954.21000	2.900	501.90792	493.76125	474.56448
V	51	493.77100	225647.14000	3.400	475.45471	496.89577	508.96206
IN-1	115	22627.53000	0.00000	0.000	22288.37000	21446.19000	24148.03000
AG	107	49.27700	63815.55000	6.300	51.27531	50.87377	45.68155
AS	75	503.61700	29868.30000	5.900	513.56375	526.94350	470.34286
BA	137	493.68200	51155.04000	7.600	486.46419	534.18336	460.39737
CD	111	47.59200	6621.98000	5.300	48.49875	49.54068	44.73615
CO	59	493.37900	537108.64000	6.100	499.75687	519.91658	460.46370
CU	63	496.36600	446282.88000	5.500	506.20189	517.36518	465.53000
MO	98	48.68900	31148.74000	6.300	50.77769	50.09993	45.19072
NI	60	495.56700	157475.54000	6.400	508.73975	518.82682	459.13395
SB	121	50.11300	15751.16000	7.000	52.07968	52.21549	46.04320
SN	120	48.44100	17456.13000	3.900	48.88498	50.07702	46.36043
SR	88	47.43300	10066.58000	7.900	48.22484	50.71668	43.35857
ZN	66	486.55800	48693.84000	5.100	498.06993	503.49209	458.11158
BI-1	209	81143.18000	0.00000	0.000	81678.73000	82614.15000	79136.66000
PB	208	50.14700	158243.41000	2.000	49.95378	49.26064	51.22666
TL	203	49.89100	49474.19000	4.000	49.78932	47.92367	51.95881
U	238	48.39100	175902.31000	4.200	48.50878	46.27866	50.38626
GE-1	72	59199.65000	0.00000	0.000	61537.61000	58747.90000	57313.45000
TB-1	159	108771.77000	0.00000	0.000	109216.69000	110990.42000	106108.21000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:16:57
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20282.05000	0.00000	0.000	20822.56000	20392.19000	19631.41000
AL	27	0.21500	83.33000	1339.100	2.51087	-3.01414	1.14808
CA	44	7.59000	20.00000	183.100	14.89603	-8.43920	16.31192
CR	52	0.28500	236.68000	12.600	0.28067	0.32335	0.25176
FE	57	-0.71500	10.00000	0.000	-0.75276	-1.68544	0.29309
K	39	-26.48500	6588.07000	0.000	-41.49657	-25.47754	-12.48190
MG	24	-1.73100	73.33000	0.000	-2.62694	-1.32700	-1.23779
MN	55	0.01100	16.67000	616.600	0.06932	-0.06546	0.02985
NA	23	-88.29600	70523.81000	0.000	-119.17059	-99.74579	-45.97174
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.01200	26.67000	566.400	0.08320	-0.04713	-0.00105
IN-1	115	23094.87000	0.00000	0.000	23545.89000	22984.50000	22754.22000
AG	107	0.03300	43.33000	94.500	0.01481	0.01517	0.06894
AS	75	0.12600	13.33000	67.900	0.03431	0.20310	0.13920
BA	137	0.06100	10.00000	156.900	0.05887	-0.03362	0.15779
CD	111	-0.00100	1.33000	0.000	-0.01018	-0.01018	0.01835
CO	59	0.01000	36.67000	131.700	0.02134	-0.00465	0.01376
CU	63	0.05800	186.67000	250.000	0.02558	0.21553	-0.06784
MO	98	0.00600	50.00000	1281.900	-0.01130	-0.05596	0.08398
NI	60	0.17100	73.34000	93.200	0.03491	0.34619	0.13171
SB	121	0.28000	96.67000	72.400	0.16085	0.16532	0.51447
SN	120	0.20800	130.01000	47.800	0.09297	0.26300	0.26715
SR	88	-0.00500	13.33000	0.000	-0.02147	-0.02037	0.02687
ZN	66	0.31100	50.00000	79.800	0.59222	0.11992	0.22210
BI-1	209	80613.66000	0.00000	0.000	80885.17000	80422.14000	80533.68000
PB	208	-0.00500	60.00000	0.000	-0.01158	-0.00512	0.00125
TL	203	0.01000	23.33000	221.200	-0.01415	0.02654	0.01632
U	238	0.00200	16.67000	338.200	-0.00015	0.00819	-0.00291
GE-1	72	58370.00000	0.00000	0.000	59882.01000	58256.19000	56971.79000
TB-1	159	105964.47000	0.00000	0.000	106864.99000	107023.80000	104004.63000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:18:46
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21046.29000	0.00000	0.000	21103.12000	21383.38000	20652.37000
AL	27	213.38600	2386.92000	8.400	203.08940	234.10305	202.96601
CA	44	360.32600	480.03000	17.300	336.95881	430.89917	313.11944
CR	52	4.53400	2810.34000	3.900	4.67158	4.59241	4.33701
FE	57	225.56300	2463.62000	3.500	222.88809	234.47613	219.32442
K	39	388.15500	16007.65000	5.500	372.90358	379.20306	412.35735
MG	24	209.32600	8592.31000	3.000	215.64961	203.01361	209.31523
MN	55	4.42400	1010.07000	15.100	3.65843	4.87839	4.73631
NA	23	294.85500	106289.90000	8.000	281.90035	280.73866	321.92745
TI	47	34.97600	360.02000	32.600	24.26639	46.93975	33.72223
V	51	1.10400	536.70000	17.700	1.08889	1.30670	0.91658
IN-1	115	24295.05000	0.00000	0.000	23898.70000	24404.78000	24581.67000
AG	107	0.99700	1390.13000	11.300	0.97011	1.12145	0.90061
AS	75	3.58200	234.67000	0.600	3.60058	3.58634	3.55985
BA	137	3.89800	440.02000	34.400	2.60890	3.80340	5.28193
CD	111	1.05500	159.33000	25.200	1.19871	0.74800	1.21794
CO	59	1.01600	1216.76000	1.900	1.03586	0.99691	1.01488
CU	63	4.26400	4264.03000	4.600	4.22785	4.47691	4.08593
MO	98	0.98500	726.72000	8.400	0.88989	1.04374	1.02135
NI	60	3.70800	1286.76000	4.700	3.89771	3.67015	3.55665
SB	121	1.91800	656.71000	11.600	1.84124	1.74374	2.16940
SN	120	3.93500	1576.80000	4.600	4.14187	3.82095	3.84353
SR	88	1.92300	453.36000	23.300	2.20463	2.15753	1.40546
ZN	66	30.14500	3260.42000	10.600	33.73699	27.66814	29.02935
BI-1	209	82386.38000	0.00000	0.000	79970.47000	84916.11000	82272.57000
PB	208	2.07100	6700.82000	8.900	2.28190	1.95068	1.97976
TL	203	1.14300	1163.43000	12.500	1.17252	0.98777	1.26857
U	238	1.02500	3793.98000	5.500	1.07137	1.04034	0.96265
GE-1	72	60155.98000	0.00000	0.000	57313.00000	61296.22000	61858.73000
TB-1	159	109429.02000	0.00000	0.000	108522.97000	108614.47000	111149.61000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:20:36
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	19718.04000	0.00000	0.000	19771.77000	19030.45000	20351.90000
AL	27	106189.22600	1072248.26000	3.000	104282.60433	109857.22083	104427.85335
CA	44	288995.45200	351614.26000	3.000	284634.20295	299126.65370	283225.50051
CR	52	1.33600	823.39000	9.400	1.46621	1.32647	1.21532
FE	57	260293.48400	2641749.86000	2.000	262769.21944	263884.00892	254227.22227
K	39	109459.05000	2273357.67000	3.600	106765.42082	113948.21114	107663.51915
MG	24	104030.45100	3929314.63000	4.600	101987.97141	109492.45266	100610.92816
MN	55	3.74900	803.38000	5.300	3.57793	3.96564	3.70390
NA	23	259592.96700	21047727.19000	3.700	260246.02744	268854.19631	249678.67771
TI	47	2180.09000	20982.98000	1.200	2156.14082	2207.81522	2176.31479
V	51	0.00600	23.33000	412.200	-0.02426	0.02417	0.01954
IN-1	115	21675.96000	0.00000	0.000	21563.13000	21853.11000	21611.63000
AG	107	0.41300	513.36000	4.200	0.39611	0.43074	0.41136
AS	75	0.28000	21.33000	19.300	0.32868	0.28822	0.22204
BA	137	1.14100	116.67000	65.500	1.98624	0.56427	0.87323
CD	111	0.17400	24.67000	64.200	0.09520	0.30177	0.12501
CO	59	0.94100	1006.74000	9.900	1.02549	0.84078	0.95597
CU	63	0.84000	850.05000	11.200	0.79849	0.77447	0.94746
MO	98	2124.86700	1303393.44000	2.700	2068.61576	2123.32366	2182.66236
NI	60	1.27500	406.69000	31.300	0.99858	1.73221	1.09482
SB	121	1.10300	340.02000	28.000	0.77727	1.39120	1.14109
SN	120	0.14200	100.00000	122.500	0.02756	0.34179	0.05626
SR	88	9.68500	1986.85000	6.900	9.26244	10.45383	9.34005
ZN	66	2.43200	250.01000	45.100	3.69863	1.78791	1.80984
BI-1	209	74775.63000	0.00000	0.000	74916.76000	73026.97000	76383.15000
PB	208	0.15900	533.36000	19.800	0.16796	0.12362	0.18447
TL	203	0.15700	156.68000	6.100	0.14965	0.15389	0.16792
U	238	0.05400	190.01000	10.200	0.04772	0.05514	0.05843
GE-1	72	56781.55000	0.00000	0.000	55447.25000	57643.98000	57253.43000
TB-1	159	103357.30000	0.00000	0.000	104012.80000	102708.26000	103350.85000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:22:27
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20515.60000	0.00000	0.000	19431.06000	21673.52000	20442.22000
AL	27	104025.55000	1091205.84000	6.100	108867.77799	96901.31787	106307.55502
CA	44	276796.77100	350049.72000	4.500	289803.32360	265076.63554	275510.35408
CR	52	200.26600	117627.17000	6.100	212.79728	188.48418	199.51558
FE	57	247441.90300	2610013.51000	4.100	256646.44295	236392.39266	249286.87315
K	39	105425.65000	2275170.70000	5.800	111888.96106	99643.78635	104744.20389
MG	24	100323.23400	3938050.67000	5.800	106318.89484	94594.05986	100056.74619
MN	55	195.57400	42841.72000	4.100	202.80909	187.05683	196.85747
NA	23	248182.91500	20914061.36000	5.700	261662.15647	233652.03091	249234.55724
TI	47	2107.40400	21066.27000	6.100	2255.14002	2022.76079	2044.31225
V	51	205.15000	92885.20000	5.600	217.32396	194.53795	203.58775
IN-1	115	21493.60000	0.00000	0.000	21403.73000	22003.55000	21073.51000
AG	107	49.80100	61393.01000	2.100	49.54405	48.92557	50.93452
AS	75	104.72400	5917.69000	0.500	104.39894	104.45808	105.31357
BA	137	1.05000	106.67000	31.100	0.78030	0.95605	1.41316
CD	111	99.21300	13135.69000	2.400	98.22883	97.52933	101.87996
CO	59	200.09900	207405.73000	1.500	199.43227	197.43053	203.43317
CU	63	198.89000	170267.53000	2.100	197.69844	195.49451	203.47844
MO	98	2101.53200	1277843.26000	2.000	2110.19326	2056.26260	2138.14098
NI	60	200.21100	60589.72000	1.200	201.16201	197.55738	201.91341
SB	121	0.99100	303.35000	11.500	1.11883	0.95712	0.89809
SN	120	0.08800	80.00000	123.200	0.17576	-0.03310	0.12114
SR	88	10.38600	2113.56000	14.700	11.61971	10.86587	8.67115
ZN	66	97.22000	9269.38000	3.600	97.19160	93.71682	100.75307
BI-1	209	73174.78000	0.00000	0.000	72484.85000	73690.59000	73348.89000
PB	208	0.20600	656.70000	11.600	0.19215	0.23398	0.19310
TL	203	0.18300	176.68000	15.600	0.18900	0.15237	0.20891
U	238	0.06200	213.34000	15.200	0.05865	0.07278	0.05489
GE-1	72	58263.32000	0.00000	0.000	59791.91000	56772.35000	58225.69000
TB-1	159	102958.67000	0.00000	0.000	102638.54000	102969.55000	103267.91000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:24:17
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	21056.27000	0.00000	0.000	21162.90000	21483.57000	20522.34000
AL	27	3.98000	126.67000	209.400	12.49068	-4.16573	3.61368
CA	44	4.47600	16.67000	262.400	14.52076	-8.43920	7.34520
CR	52	0.26400	233.34000	27.900	0.22477	0.34946	0.21858
FE	57	13.40800	163.34000	13.200	12.99827	11.87512	15.34923
K	39	-4.11000	7341.78000	0.000	-12.03719	3.95581	-4.24976
MG	24	2.97800	266.68000	53.100	4.75081	1.71228	2.47073
MN	55	-0.00600	13.33000	0.000	-0.02125	-0.02191	0.02571
NA	23	-17.30100	79396.53000	0.000	-14.42451	-29.67115	-7.80732
TI	47	2.26900	23.33000	24.300	2.90363	1.90686	1.99617
V	51	-0.04000	3.33000	0.000	-0.02576	-0.04713	-0.04713
IN-1	115	23689.77000	0.00000	0.000	23847.03000	24117.44000	23104.85000
AG	107	0.00500	6.67000	86.600	0.00731	0.00723	0.00000
AS	75	0.03300	8.00000	189.200	0.03268	0.09439	-0.02912
BA	137	0.02800	6.67000	191.100	-0.03362	0.05668	0.06063
CD	111	0.01300	3.33000	163.200	0.03066	-0.01018	0.01792
CO	59	0.00100	26.67000	2038.100	-0.00530	-0.01409	0.02218
CU	63	-0.01400	123.34000	0.000	-0.00817	-0.05138	0.01797
MO	98	1.67800	1166.75000	41.600	1.09944	1.48200	2.45258
NI	60	0.03500	30.00000	230.300	-0.05559	0.06222	0.09813
SB	121	0.02900	16.67000	63.600	0.03806	0.00761	0.04000
SN	120	0.10100	93.34000	71.700	0.08991	0.03510	0.17921
SR	88	-0.02200	10.00000	0.000	0.06722	-0.06667	-0.06667
ZN	66	0.20600	40.00000	78.800	0.39323	0.10608	0.11839
BI-1	209	81162.57000	0.00000	0.000	79859.17000	80753.98000	82874.56000
PB	208	-0.01400	33.33000	0.000	-0.01464	-0.01475	-0.01189
TL	203	-0.00400	10.00000	0.000	-0.00391	-0.01415	0.00559
U	238	0.00000	10.00000	0.000	-0.00012	0.00262	-0.00291
GE-1	72	61065.90000	0.00000	0.000	61035.63000	59430.45000	62731.62000
TB-1	159	108924.08000	0.00000	0.000	110739.48000	107999.84000	108032.92000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:26:07
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21480.05000	0.00000	0.000	22324.34000	21112.92000	21002.89000
AL	27	2555.23600	28192.48000	2.500	2486.74252	2566.93677	2612.02893
CA	44	2470.34800	3290.44000	6.000	2596.54424	2308.63401	2505.86716
CR	52	260.97100	160723.47000	2.800	252.77805	267.23853	262.89582
FE	57	2557.19000	28286.43000	3.400	2479.67818	2651.51689	2540.37488
K	39	2523.67500	64491.24000	4.000	2408.76421	2560.37543	2601.88426
MG	24	2549.60100	105100.44000	2.500	2480.78672	2605.03201	2562.98345
MN	55	260.01000	59689.92000	2.600	254.26158	258.49674	267.27126
NA	23	2488.95100	301455.37000	6.100	2316.46071	2549.36808	2601.02383
TI	47	270.02200	2833.67000	4.700	278.95930	275.56020	255.54638
V	51	260.08700	123448.98000	3.200	250.80588	262.91270	266.54229
IN-1	115	23489.32000	0.00000	0.000	23105.51000	23376.33000	23986.13000
AG	107	25.50500	34365.20000	2.600	26.22709	24.92948	25.35874
AS	75	260.03300	16050.61000	0.100	259.65260	260.16409	260.28217
BA	137	257.79700	27797.20000	4.200	268.99375	257.01011	247.38656
CD	111	25.98900	3759.11000	7.600	28.09183	25.71064	24.16333
CO	59	256.83000	290862.75000	3.500	266.52539	254.84858	249.11641
CU	63	254.91700	238488.90000	1.100	257.38352	255.51127	251.85745
MO	98	26.09100	17389.25000	1.300	25.83603	26.48936	25.94669
NI	60	258.55800	85500.11000	2.000	262.80074	259.93334	252.93984
SB	121	24.56600	8038.93000	4.600	25.81734	23.61173	24.26956
SN	120	25.59300	9613.06000	4.700	25.14329	26.94997	24.68708
SR	88	25.87100	5717.84000	9.200	27.94485	26.39053	23.27651
ZN	66	245.08600	25515.70000	2.200	249.51515	246.62041	239.12315
BI-1	209	83615.31000	0.00000	0.000	84171.07000	83609.49000	83065.36000
PB	208	25.88900	84247.38000	0.800	25.79286	26.12609	25.74827
TL	203	25.64100	26225.52000	2.500	26.26788	24.96497	25.69073
U	238	24.87400	93237.87000	1.400	25.24986	24.55492	24.81837
GE-1	72	60657.59000	0.00000	0.000	60674.12000	60895.46000	60403.18000
TB-1	159	110447.38000	0.00000	0.000	111676.01000	109369.99000	110296.13000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:27:58
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21226.45000	0.00000	0.000	21633.58000	20702.65000	21343.13000
AL	27	1.71700	103.33000	71.000	0.31997	2.57059	2.25939
CA	44	16.72100	33.33000	138.400	21.50803	-8.43920	37.09295
CR	52	0.34600	283.35000	39.000	0.26560	0.50199	0.27086
FE	57	2.93700	50.00000	112.700	1.00769	6.75818	1.04434
K	39	-21.34100	7018.28000	0.000	-10.72375	-27.37029	-25.92990
MG	24	-0.54100	126.67000	0.000	0.22874	-2.62114	0.76997
MN	55	-0.00600	13.33000	0.000	-0.02221	0.02492	-0.02163
NA	23	-70.89000	75356.73000	0.000	-97.86251	-47.73027	-67.07747
TI	47	0.98900	10.00000	173.200	0.00000	2.96818	0.00000
V	51	0.04600	43.33000	145.100	-0.02623	0.10580	0.05883
IN-1	115	23569.18000	0.00000	0.000	22985.17000	23846.43000	23875.94000
AG	107	0.01700	23.33000	64.400	0.01517	0.00731	0.02920
AS	75	0.05700	9.33000	125.500	0.13684	0.03268	0.00064
BA	137	-0.00200	3.33000	0.000	0.06112	-0.03362	-0.03362
CD	111	0.00300	2.00000	396.900	-0.01018	0.01705	0.00342
CO	59	0.03000	60.00000	61.700	0.04948	0.01209	0.02941
CU	63	0.08300	213.34000	44.300	0.11717	0.08663	0.04426
MO	98	0.14800	146.67000	43.200	0.08242	0.15098	0.20991
NI	60	0.10400	53.33000	140.600	0.00622	0.27207	0.03366
SB	121	0.20200	73.33000	44.600	0.25906	0.24890	0.09815
SN	120	0.19900	130.00000	37.400	0.12617	0.27453	0.19497
SR	88	-0.03600	6.67000	0.000	0.02593	-0.06667	-0.06667
ZN	66	0.27400	46.67000	56.300	0.41452	0.29859	0.10892
BI-1	209	81890.72000	0.00000	0.000	80031.96000	81498.13000	84142.07000
PB	208	-0.01700	23.33000	0.000	-0.01466	-0.01799	-0.01819
TL	203	0.00600	20.00000	8.700	0.00629	0.00593	0.00529
U	238	0.00400	26.67000	181.600	0.01382	-0.00017	-0.00026
GE-1	72	60935.09000	0.00000	0.000	61978.80000	61828.21000	58998.26000
TB-1	159	107359.30000	0.00000	0.000	108434.38000	108351.47000	105292.06000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:29:47
Tube Number: 13 Batch: 181031063904A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21740.39000	0.00000	0.000	22134.21000	22254.24000	20832.71000
AL	27	1.39900	103.34000	270.300	1.01898	5.35652	-2.17847
CA	44	258.27200	356.69000	47.100	357.45630	122.57214	294.78659
CR	52	0.43900	350.02000	19.300	0.38290	0.53689	0.39765
FE	57	19.87300	240.01000	26.400	19.37315	14.89620	25.34985
K	39	-20.72900	7194.98000	0.000	-23.24339	-27.92141	-11.02152
MG	24	8.95500	523.36000	26.600	10.50973	6.21476	10.14127
MN	55	2.10900	503.36000	15.800	1.92107	1.91035	2.49422
NA	23	-48.35700	79165.31000	0.000	-63.76078	-63.29490	-18.01559
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00600	20.00000	0.000	0.03460	-0.00649	-0.04713
IN-1	115	23889.50000	0.00000	0.000	23936.57000	24646.78000	23085.16000
AG	107	0.01700	23.33000	47.900	0.02185	0.02122	0.00755
AS	75	-0.01100	5.33000	0.000	-0.09503	0.05943	0.00391
BA	137	0.30200	36.67000	48.200	0.14833	0.31980	0.43803
CD	111	0.03000	6.00000	42.100	0.01695	0.04251	0.03201
CO	59	0.01600	43.33000	243.000	-0.01403	0.00255	0.05814
CU	63	0.20800	336.68000	40.400	0.11724	0.28294	0.22485
MO	98	0.01700	60.00000	69.400	0.01725	0.02904	0.00521
NI	60	0.28300	113.34000	25.400	0.30054	0.20379	0.34444
SB	121	0.14900	56.67000	66.300	0.03784	0.18182	0.22673
SN	120	0.27700	160.01000	52.600	0.27294	0.13324	0.42467
SR	88	0.18300	56.67000	75.100	0.24456	0.27878	0.02553
ZN	66	13.88500	1486.79000	4.400	13.49992	13.56369	14.59072
BI-1	209	85211.07000	0.00000	0.000	84524.93000	86785.36000	84322.93000
PB	208	0.01700	136.67000	48.000	0.01830	0.00830	0.02450
TL	203	0.00500	20.00000	187.200	-0.00447	0.01413	0.00525
U	238	0.00100	13.33000	262.100	0.00237	-0.00034	-0.00026
GE-1	72	62216.42000	0.00000	0.000	60805.50000	64898.29000	60945.47000
TB-1	159	110996.11000	0.00000	0.000	109639.89000	110566.36000	112782.07000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:31:37
Tube Number: 14 Batch: 181031063904A
Sample Number: **9553133** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21817.32000	0.00000	0.000	21704.24000	21553.53000	22194.19000
AL	27	567.00500	6428.11000	7.400	521.06632	577.30690	602.64206
CA	44	8464.03800	11407.37000	5.000	8389.64872	8922.18254	8080.28266
CR	52	5.60200	3580.50000	3.200	5.40665	5.75275	5.64603
FE	57	213.10600	2413.60000	2.700	208.61076	210.98317	219.72507
K	39	1235.20700	36013.31000	1.800	1230.59219	1259.24022	1215.78919
MG	24	4398.88100	184116.37000	3.500	4319.97732	4576.00283	4300.66435
MN	55	72.39500	16891.78000	5.100	75.65990	73.19077	68.33352
NA	23	6562.46100	670857.57000	1.300	6637.44390	6578.81899	6471.11902
TI	47	37.74800	403.36000	32.000	31.14513	30.41257	51.68615
V	51	1.12200	563.36000	23.000	0.89069	1.40094	1.07381
IN-1	115	24624.31000	0.00000	0.000	25421.77000	24400.08000	24051.08000
AG	107	0.91900	1296.77000	5.900	0.85713	0.94304	0.95672
AS	75	3.85300	255.33000	7.800	3.91827	3.52464	4.11533
BA	137	34.84500	3947.30000	10.300	35.60649	37.99146	30.93581
CD	111	1.01600	155.33000	13.100	0.87090	1.13396	1.04258
CO	59	2.81800	3373.77000	2.200	2.80788	2.88388	2.76224
CU	63	5.01800	5057.57000	5.500	4.72683	5.27068	5.05679
MO	98	1.01300	753.38000	21.000	0.77670	1.18878	1.07483
NI	60	5.89200	2063.52000	4.800	6.20376	5.65066	5.82206
SB	121	1.90400	656.71000	30.500	1.36228	1.83242	2.51638
SN	120	3.78600	1540.12000	5.200	3.78588	3.58972	3.98387
SR	88	25.46500	5904.54000	2.700	24.84780	25.32387	26.22380
ZN	66	33.90300	3713.87000	7.000	32.32715	32.76236	36.62041
BI-1	209	84325.70000	0.00000	0.000	83326.74000	84976.45000	84673.90000
PB	208	2.69100	8901.36000	1.900	2.72008	2.63042	2.72193
TL	203	1.10800	1156.76000	2.200	1.09526	1.09297	1.13557
U	238	9.85500	37262.00000	0.700	9.78164	9.90750	9.87686
GE-1	72	62764.59000	0.00000	0.000	61607.30000	63212.99000	63473.49000
TB-1	159	114134.24000	0.00000	0.000	114293.10000	114260.47000	113849.15000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:33:28
Tube Number: 15 Batch: 181031063904A
Sample Number: **9553132** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22197.69000	0.00000	0.000	21954.09000	21593.66000	23045.33000
AL	27	9.26700	193.34000	51.900	14.42648	8.47053	4.90490
CA	44	37031.29500	50714.90000	4.300	37204.38921	38524.57152	35364.92527
CR	52	0.99900	713.38000	10.600	1.11777	0.91233	0.96831
FE	57	13.47300	173.34000	35.700	8.04608	17.20220	15.16971
K	39	2331.22500	62146.85000	5.300	2406.32834	2399.92970	2187.41701
MG	24	17013.31300	723625.95000	3.900	17288.03412	17487.01977	16264.88374
MN	55	20.61500	4894.20000	13.000	20.13525	23.50612	18.20444
NA	23	7785.14800	793256.39000	4.100	7828.12187	8082.73022	7444.59178
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.11000	76.67000	25.300	0.09708	0.14138	0.09025
IN-1	115	24160.01000	0.00000	0.000	23566.69000	24937.09000	23976.25000
AG	107	0.01400	20.00000	51.600	0.02219	0.01398	0.00727
AS	75	0.07200	10.67000	103.700	0.06651	0.14923	0.00024
BA	137	24.80700	2757.01000	4.000	23.71672	25.03160	25.67252
CD	111	0.02100	4.67000	75.200	0.03115	0.00284	0.03044
CO	59	0.13500	183.34000	23.000	0.17088	0.11867	0.11568
CU	63	0.94900	1050.07000	17.100	0.98475	0.77155	1.09117
MO	98	0.05100	83.33000	44.400	0.03364	0.04204	0.07606
NI	60	0.72800	266.68000	31.000	0.54725	0.65654	0.98136
SB	121	0.08800	36.67000	129.600	0.03878	0.00663	0.21748
SN	120	0.22700	143.34000	43.100	0.33290	0.20564	0.14109
SR	88	81.93700	18610.62000	1.700	83.52746	80.98405	81.29874
ZN	66	10.87400	1183.43000	10.800	11.41555	11.68377	9.52280
BI-1	209	83186.71000	0.00000	0.000	83548.93000	81980.53000	84030.67000
PB	208	0.16100	600.04000	12.000	0.14501	0.18277	0.15629
TL	203	0.01900	33.33000	32.800	0.01522	0.02576	0.01506
U	238	0.02200	93.34000	25.800	0.02647	0.02430	0.01568
GE-1	72	63691.93000	0.00000	0.000	62882.10000	64749.04000	63444.65000
TB-1	159	112661.76000	0.00000	0.000	114444.11000	114130.30000	109410.87000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:35:20
Tube Number: 16 Batch: 181031063904A
Sample Number: **9553137** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22167.74000	0.00000	0.000	21904.12000	21123.01000	23476.09000
AL	27	2423.64000	27557.89000	5.900	2479.23268	2531.43894	2260.24929
CA	44	66305.60400	90595.88000	5.100	66913.47319	69320.46383	62682.87460
CR	52	2.97400	1960.19000	10.800	2.96761	3.29649	2.65681
FE	57	35.99000	430.02000	3.300	34.66780	36.93151	36.37066
K	39	2530.21000	66638.63000	5.900	2531.14768	2678.79463	2380.68747
MG	24	28604.14100	1214123.65000	4.100	28809.38370	29668.57645	27334.46348
MN	55	4832.67400	1143298.05000	4.600	4870.73963	5034.47490	4592.80710
NA	23	23062.88800	2176889.81000	6.200	23508.31256	24222.50160	21457.84870
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.19700	120.01000	14.000	0.22133	0.16700	0.20335
IN-1	115	23164.90000	0.00000	0.000	22133.45000	23866.60000	23494.66000
AG	107	0.02000	26.67000	18.300	0.01575	0.02191	0.02226
AS	75	0.66300	46.00000	14.400	0.76496	0.57490	0.65032
BA	137	15.56200	1656.83000	12.800	16.00467	13.38005	17.30027
CD	111	0.27200	40.00000	25.500	0.32715	0.19384	0.29379
CO	59	50.05000	55877.64000	4.400	52.50138	48.27765	49.36977
CU	63	2.11000	2076.87000	15.700	2.18156	1.74946	2.39961
MO	98	0.00600	50.00000	724.500	0.05640	-0.02691	-0.01116
NI	60	23.70200	7745.30000	1.700	24.11554	23.70026	23.29016
SB	121	0.06100	26.67000	32.900	0.07518	0.03801	0.06954
SN	120	0.40100	203.35000	52.500	0.30719	0.64306	0.25408
SR	88	81.02600	17626.25000	5.200	85.76299	77.56571	79.74823
ZN	66	31.50600	3247.10000	8.100	32.76946	28.57990	33.16739
BI-1	209	82202.30000	0.00000	0.000	81579.10000	81709.74000	83318.05000
PB	208	0.05100	240.01000	45.600	0.07659	0.04495	0.03126
TL	203	0.13500	150.01000	23.100	0.13627	0.16606	0.10368
U	238	0.16400	613.37000	10.100	0.16393	0.18004	0.14705
GE-1	72	63250.26000	0.00000	0.000	62922.67000	62862.37000	63965.75000
TB-1	159	113134.77000	0.00000	0.000	115190.97000	112297.82000	111915.53000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:37:12
Tube Number: 17 Batch: 181031063904A
Sample Number: **9553138** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22271.10000	0.00000	0.000	21743.68000	23015.36000	22054.26000
AL	27	2269.71300	25975.86000	3.300	2355.58948	2220.75701	2232.79292
CA	44	62678.70500	86143.87000	3.500	65109.19541	60748.25085	62178.66981
CR	52	2.40100	1613.48000	16.700	1.94779	2.54572	2.70938
FE	57	12.29500	160.01000	44.200	9.03252	9.28497	18.56890
K	39	2440.65400	64943.19000	3.000	2488.65974	2355.41487	2477.88875
MG	24	25777.24200	1100275.45000	2.800	26302.15705	24951.69553	26077.87490
MN	55	4490.14300	1068412.72000	2.800	4608.44849	4358.12850	4503.85222
NA	23	21892.06300	2084458.36000	1.200	22186.86432	21708.24206	21781.08342
TI	47	0.31400	3.33000	173.200	0.94202	0.00000	0.00000
V	51	0.07600	60.00000	98.900	0.09848	-0.00783	0.13747
IN-1	115	23809.79000	0.00000	0.000	23025.45000	24377.19000	24026.73000
AG	107	0.00200	3.33000	173.200	0.00000	0.00715	0.00000
AS	75	0.72700	51.33000	9.200	0.79778	0.71704	0.66550
BA	137	14.40700	1580.15000	4.200	13.77540	14.97529	14.46888
CD	111	0.45200	68.00000	27.800	0.42686	0.58906	0.34110
CO	59	44.51200	51103.60000	3.700	46.43879	43.52936	43.56751
CU	63	1.74000	1790.18000	9.800	1.54591	1.86437	1.81004
MO	98	-0.01200	40.00000	0.000	-0.02529	-0.02784	0.01692
NI	60	21.82700	7335.12000	0.400	21.82132	21.74516	21.91534
SB	121	-0.01200	3.33000	0.000	0.00902	-0.02217	-0.02217
SN	120	0.10000	93.34000	59.500	0.15303	0.11057	0.03579
SR	88	72.73800	16278.11000	3.100	75.26576	71.08889	71.86057
ZN	66	20.47200	2176.89000	10.500	20.41380	18.34601	22.65646
BI-1	209	82024.25000	0.00000	0.000	80805.81000	83427.17000	81839.76000
PB	208	0.11300	436.68000	16.400	0.09665	0.10826	0.13283
TL	203	0.08900	103.34000	76.300	0.16808	0.05449	0.04582
U	238	0.13700	513.37000	14.400	0.11858	0.15756	0.13341
GE-1	72	62828.73000	0.00000	0.000	62721.49000	63123.84000	62640.85000
TB-1	159	112382.93000	0.00000	0.000	111233.49000	113628.29000	112287.01000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:39:02
Tube Number: 18
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22471.34000	0.00000	0.000	22094.07000	22214.38000	23105.56000
AL	27	201.40200	2406.94000	4.700	205.11817	208.35976	190.72820
CA	44	367.49300	520.03000	20.000	387.44411	429.04644	285.98839
CR	52	4.43400	2933.71000	7.400	4.80391	4.18062	4.31654
FE	57	205.68200	2396.92000	7.600	222.48464	202.90807	191.65316
K	39	388.53800	17101.96000	2.400	395.86306	391.89484	377.85651
MG	24	203.02700	8902.49000	2.200	200.61853	208.20230	200.25929
MN	55	3.99900	976.73000	2.400	3.91485	3.97752	4.10495
NA	23	236.30500	108062.63000	15.100	253.54007	260.01160	195.36471
TI	47	34.37500	376.69000	9.400	38.01227	33.19609	31.91572
V	51	0.98400	513.36000	31.800	0.62848	1.21531	1.10789
IN-1	115	24420.02000	0.00000	0.000	23699.34000	25210.63000	24350.09000
AG	107	0.97300	1363.45000	3.300	0.94886	0.96111	1.00940
AS	75	3.83400	252.00000	7.600	4.04931	3.95188	3.50080
BA	137	3.73000	423.35000	37.500	2.35548	3.68075	5.15354
CD	111	1.11300	169.33000	12.500	1.08560	1.26456	0.98966
CO	59	1.00400	1210.10000	1.800	0.98352	1.01367	1.01625
CU	63	4.42900	4447.42000	0.800	4.39188	4.45876	4.43567
MO	98	1.01900	750.05000	22.200	1.21116	0.76977	1.07527
NI	60	4.28600	1490.12000	15.200	4.23071	3.66378	4.96219
SB	121	1.82800	630.04000	17.500	1.88726	2.11470	1.48224
SN	120	4.03200	1623.48000	2.300	4.04521	4.11826	3.93319
SR	88	2.63700	620.04000	11.800	2.49323	2.42416	2.99305
ZN	66	33.86200	3673.86000	12.000	36.49934	29.19619	35.89021
BI-1	209	83026.52000	0.00000	0.000	82191.76000	84676.21000	82211.59000
PB	208	2.09300	6837.52000	3.600	2.13510	2.13855	2.00627
TL	203	1.05200	1083.41000	16.200	1.05085	1.22249	0.88142
U	238	1.04000	3877.33000	6.700	1.02604	0.97741	1.11538
GE-1	72	64173.19000	0.00000	0.000	65460.94000	62821.68000	64236.94000
TB-1	159	112419.62000	0.00000	0.000	111323.62000	116456.20000	109479.03000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:40:52
Tube Number: 19
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20528.95000	0.00000	0.000	19100.65000	20532.21000	21953.98000
AL	27	107123.23400	1122123.86000	9.200	118030.36902	104631.20169	98708.13133
CA	44	285204.61400	360403.97000	6.600	303249.55087	286525.72868	265838.56212
CR	52	1.53800	976.74000	1.700	1.55852	1.50934	1.54673
FE	57	255724.05200	2694088.60000	7.300	274519.06362	255319.81120	237333.28178
K	39	109143.85200	2354550.33000	6.500	116266.16673	109094.49092	102070.89686
MG	24	105044.80400	4123199.00000	6.100	111952.18526	104002.98549	99179.24148
MN	55	3.32400	743.38000	32.600	3.99985	2.07602	3.89760
NA	23	259095.88300	21826403.01000	6.300	276033.38992	257535.56191	243718.69623
TI	47	2180.28200	21770.40000	8.500	2389.73096	2111.23116	2039.88389
V	51	0.03400	36.67000	42.300	0.04759	0.01895	0.03528
IN-1	115	22170.64000	0.00000	0.000	22034.22000	22183.70000	22294.01000
AG	107	0.39800	506.69000	4.600	0.37973	0.41646	0.39877
AS	75	0.42000	30.00000	16.000	0.35418	0.48844	0.41725
BA	137	1.01200	106.67000	49.300	0.46053	1.14443	1.43163
CD	111	0.19500	28.00000	45.200	0.19608	0.28248	0.10631
CO	59	1.00400	1096.75000	13.600	1.11602	1.04290	0.85161
CU	63	0.73500	776.71000	17.900	0.64152	0.88532	0.67741
MO	98	2098.61200	1316505.92000	3.400	2179.11844	2042.49861	2074.21825
NI	60	1.06600	350.02000	19.800	1.04052	1.28929	0.86844
SB	121	0.98200	310.02000	24.600	0.72758	1.20822	1.00883
SN	120	0.07000	76.67000	23.600	0.08090	0.05101	0.07824
SR	88	10.10900	2120.21000	6.100	9.40119	10.39305	10.53234
ZN	66	2.60900	273.35000	12.300	2.69385	2.87792	2.25533
BI-1	209	74098.69000	0.00000	0.000	72666.52000	73608.73000	76020.83000
PB	208	0.20800	666.70000	17.500	0.24824	0.19583	0.17870
TL	203	0.10400	106.67000	42.500	0.15472	0.08587	0.07193
U	238	0.05900	203.34000	41.100	0.08613	0.04862	0.04112
GE-1	72	59526.91000	0.00000	0.000	59569.96000	60433.51000	58577.27000
TB-1	159	105699.55000	0.00000	0.000	105323.94000	105465.87000	106308.84000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:42:44
Tube Number: 20
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	20679.16000	0.00000	0.000	20602.34000	20592.23000	20842.92000
AL	27	103511.44200	1096770.90000	1.000	104661.00952	103357.13353	102516.18421
CA	44	284957.07600	363828.25000	0.500	283963.37496	286531.30418	284376.54868
CR	52	206.29700	122392.52000	2.600	204.91844	212.17983	201.79342
FE	57	253735.96500	2701553.19000	2.000	256922.63551	256543.12373	247742.13670
K	39	107359.95000	2340149.65000	0.700	106691.24908	108139.02516	107249.57471
MG	24	103862.11100	4117989.21000	1.300	104017.74259	105101.27512	102467.31502
MN	55	204.40000	45194.45000	2.700	202.38531	210.59156	200.22441
NA	23	258558.53300	22002974.67000	1.300	258217.74472	261979.55847	255478.29528
TI	47	2165.72700	21860.70000	4.200	2242.41466	2188.74855	2066.01897
V	51	211.73200	96818.15000	1.800	210.23783	216.16958	208.78975
IN-1	115	22017.15000	0.00000	0.000	21854.03000	21792.96000	22404.45000
AG	107	49.97900	63102.82000	4.500	51.74174	50.76249	47.43302
AS	75	106.81500	6183.11000	2.600	103.88365	109.48738	107.07441
BA	137	1.15600	120.01000	26.800	1.46113	1.16555	0.84114
CD	111	97.58300	13235.78000	2.600	97.08175	100.29054	95.37786
CO	59	201.66800	214117.04000	2.500	202.24842	206.44782	196.30898
CU	63	195.83200	171751.11000	1.800	197.84355	197.83820	191.81323
MO	98	2118.76300	1320015.21000	2.200	2172.41727	2082.38701	2101.48542
NI	60	198.32300	61482.30000	1.500	198.41589	201.16612	195.38654
SB	121	1.06500	333.35000	20.400	0.83236	1.26324	1.09992
SN	120	0.18800	116.67000	95.100	0.22665	0.34314	-0.00708
SR	88	9.73800	2026.86000	10.400	10.84303	9.50596	8.86476
ZN	66	99.26900	9696.29000	3.800	100.14607	102.49921	95.16154
BI-1	209	74898.90000	0.00000	0.000	74946.50000	74071.71000	75678.49000
PB	208	0.16800	560.03000	37.900	0.23652	0.11112	0.15582
TL	203	0.13600	136.67000	50.300	0.14958	0.19569	0.06151
U	238	0.06600	230.01000	8.800	0.06854	0.06938	0.05900
GE-1	72	60309.78000	0.00000	0.000	60242.01000	61408.19000	59279.15000
TB-1	159	105530.80000	0.00000	0.000	107859.00000	105353.40000	103380.00000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:44:34
Tube Number: 21
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	21406.70000	0.00000	0.000	21143.13000	21893.72000	21183.24000
AL	27	6.17300	153.34000	143.100	14.35587	7.35608	-3.19285
CA	44	16.73600	33.33000	51.200	22.20270	21.15220	6.85274
CR	52	0.31700	270.01000	46.700	0.34055	0.45216	0.15859
FE	57	17.98200	216.68000	16.000	15.76760	16.94334	21.23531
K	39	-1.76400	7518.48000	0.000	-12.63639	8.46137	-1.11721
MG	24	2.86900	266.68000	13.200	3.27834	2.80332	2.52664
MN	55	0.00700	16.67000	341.700	0.02303	0.02000	-0.02129
NA	23	-30.04400	79604.19000	0.000	-0.58689	-37.71697	-51.82871
TI	47	1.91400	20.00000	50.500	0.96878	1.87113	2.90084
V	51	-0.03300	6.67000	0.000	-0.02574	-0.04713	-0.02578
IN-1	115	23919.48000	0.00000	0.000	23866.70000	24356.36000	23535.39000
AG	107	0.00500	6.67000	173.200	0.00000	0.01431	0.00000
AS	75	0.01200	6.67000	434.400	0.00067	-0.03251	0.06672
BA	137	-0.00300	3.33000	0.000	-0.03362	-0.03362	0.05891
CD	111	0.02200	4.67000	38.700	0.01702	0.01648	0.03120
CO	59	0.00300	30.00000	266.100	-0.00532	0.00285	0.01255
CU	63	0.08300	216.68000	66.800	0.02329	0.09209	0.13238
MO	98	1.62500	1146.75000	21.600	1.30582	1.56833	2.00095
NI	60	0.05400	36.67000	129.000	0.09322	-0.02642	0.09531
SB	121	0.01700	13.33000	257.000	-0.02217	0.06629	0.00834
SN	120	0.07200	83.34000	89.000	0.03702	0.03331	0.14652
SR	88	-0.06700	0.00000	0.000	-0.06667	-0.06667	-0.06667
ZN	66	0.11100	30.00000	230.000	0.01446	-0.08202	0.40075
BI-1	209	80741.47000	0.00000	0.000	80140.76000	79901.73000	82181.93000
PB	208	-0.02100	10.00000	0.000	-0.02430	-0.01787	-0.02117
TL	203	-0.00700	6.67000	0.000	-0.01415	-0.00391	-0.00420
U	238	0.00200	16.67000	344.400	-0.00013	-0.00291	0.00795
GE-1	72	63404.02000	0.00000	0.000	63253.75000	63995.81000	62962.50000
TB-1	159	108282.65000	0.00000	0.000	107157.31000	108160.53000	109530.10000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:46:23
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21817.02000	0.00000	0.000	21032.82000	21953.81000	22464.42000
AL	27	2603.75300	29170.63000	4.700	2733.80239	2490.55364	2586.90219
CA	44	2638.35700	3567.18000	3.100	2548.51628	2706.93830	2659.61672
CR	52	265.86600	166321.34000	2.300	272.30965	265.12564	260.16353
FE	57	2657.44700	29845.74000	4.400	2791.10067	2587.98447	2593.25546
K	39	2586.16100	66936.64000	4.100	2682.67195	2602.95316	2472.85933
MG	24	2603.20000	108982.43000	3.900	2648.08528	2673.28529	2488.22831
MN	55	262.49300	61164.27000	5.300	278.62421	255.25961	253.59370
NA	23	2537.81700	310548.47000	6.300	2713.61625	2495.98504	2403.85002
TI	47	276.62500	2940.38000	11.900	312.64832	248.21139	269.01635
V	51	264.45800	127509.99000	3.000	273.48303	258.72865	261.16373
IN-1	115	23728.64000	0.00000	0.000	24219.86000	22957.26000	24008.81000
AG	107	26.30400	35777.91000	4.500	25.25095	27.59074	26.06952
AS	75	266.40500	16605.13000	2.700	267.55586	273.08121	258.57680
BA	137	257.08400	27994.11000	4.300	248.86967	269.78126	252.60011
CD	111	25.65700	3750.43000	2.900	25.14991	26.50545	25.31699
CO	59	266.22000	304533.23000	2.800	259.95902	274.30879	264.39249
CU	63	257.89600	243637.47000	2.800	252.56377	266.08683	255.03801
MO	98	26.49400	17843.09000	4.000	25.92960	25.83389	27.71969
NI	60	263.16100	87888.16000	2.600	259.36782	270.99216	259.12260
SB	121	24.97700	8252.30000	4.200	24.15337	26.17167	24.60551
SN	120	25.91300	9833.25000	0.300	25.82456	25.99220	25.92149
SR	88	26.57800	5934.59000	5.500	25.86456	28.26486	25.60489
ZN	66	260.55800	27408.47000	1.400	256.97246	260.37954	264.32113
BI-1	209	82372.41000	0.00000	0.000	82030.76000	82030.73000	83055.75000
PB	208	26.30500	84333.46000	2.900	26.76805	25.42889	26.71904
TL	203	26.41600	26613.03000	1.400	26.56416	26.69430	25.99014
U	238	25.43700	93932.71000	1.400	25.34494	25.12901	25.83784
GE-1	72	63280.22000	0.00000	0.000	63875.25000	63504.05000	62461.35000
TB-1	159	109558.46000	0.00000	0.000	111424.97000	107739.29000	109511.12000

Run Name: 1812406E05 Date/Time: 05/04/2018 16:48:13
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21753.90000	0.00000	0.000	20352.03000	22594.99000	22314.67000
AL	27	1.34400	100.00000	339.800	6.58616	-1.75310	-0.80250
CA	44	-1.21100	10.00000	0.000	-8.43920	-1.27096	6.07739
CR	52	0.27600	246.68000	25.200	0.34136	0.20283	0.28504
FE	57	2.79200	50.00000	33.200	3.08575	1.75261	3.53642
K	39	-28.88500	7001.59000	0.000	-8.02332	-47.31365	-31.31769
MG	24	-1.49500	90.00000	0.000	-2.09125	-0.16622	-2.22649
MN	55	-0.00900	13.33000	0.000	-0.01949	0.01735	-0.02353
NA	23	-85.75100	75804.63000	0.000	-38.19728	-94.02817	-125.02682
TI	47	0.94700	10.00000	97.000	1.00644	0.00000	1.83584
V	51	-0.02000	13.33000	0.000	-0.04713	0.01292	-0.02687
IN-1	115	24547.45000	0.00000	0.000	24137.28000	24237.40000	25267.67000
AG	107	0.01200	16.67000	92.700	0.00000	0.02157	0.01380
AS	75	0.12300	14.00000	90.500	0.25195	0.06204	0.05563
BA	137	0.02500	6.67000	202.900	-0.03362	0.05623	0.05257
CD	111	-0.00600	0.67000	0.000	-0.01018	0.00322	-0.01018
CO	59	0.00000	26.67000	13607.200	0.02885	-0.00558	-0.02269
CU	63	0.08500	226.68000	119.300	-0.02023	0.09325	0.18295
MO	98	0.05900	90.00000	29.600	0.07508	0.05989	0.04056
NI	60	0.09700	53.33000	100.000	0.09155	0.00302	0.19741
SB	121	0.27800	103.34000	44.600	0.15637	0.27419	0.40423
SN	120	0.10100	96.67000	20.700	0.11311	0.11206	0.07657
SR	88	-0.03800	6.67000	0.000	-0.02258	-0.06667	-0.02455
ZN	66	0.37900	60.00000	137.900	0.94758	-0.08156	0.27196
BI-1	209	83009.75000	0.00000	0.000	82583.80000	81367.10000	85078.35000
PB	208	-0.00400	66.67000	0.000	0.00061	-0.00218	-0.00919
TL	203	-0.00400	10.00000	0.000	-0.00424	-0.00410	-0.00453
U	238	0.00500	30.00000	48.900	0.00519	0.00257	0.00758
GE-1	72	63220.53000	0.00000	0.000	61698.37000	64127.38000	63835.85000
TB-1	159	111370.27000	0.00000	0.000	113004.15000	109672.56000	111434.09000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

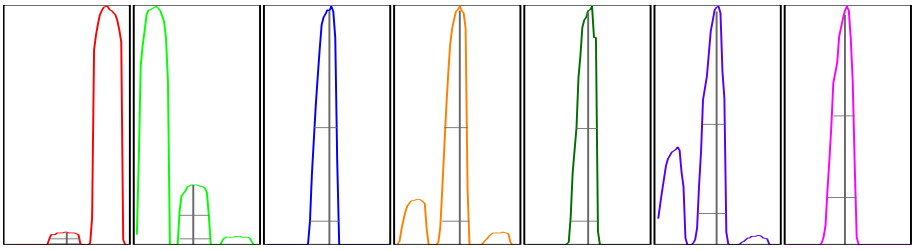
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		9135	9135.21			NaN	-	
24		21402	21401.73			NaN	-	
103		57032	57032.47			NaN	-	
115		59287	59286.99			NaN	-	
140		62331	62331.06			NaN	-	
208		29489	29489.44			NaN	-	
238		60914	60914.48			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	2.76	5.00				
24	0.70	5.00				
103	1.11	5.00				
115	0.93	5.00				
140	0.98	5.00				
208	1.77	5.00				
238	1.79	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	9492	9216	9185	8890	8894
24	21618	21442	21386	21355	21207
103	56094	56685	57522	57306	57556
115	58801	58887	60141	59096	59510
140	61563	61803	62812	62569	62908
208	29101	28847	29677	29649	30173
238	59712	60062	61026	61311	62461

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1321.23	6.00	5.9 - 6.1		0.72	0.789	0.900	
24	3162.31	23.90	23.9 - 24.1		0.70	0.782	0.900	
103	10644.10	103.05	102.9 - 103.1		0.55	0.687	0.900	
115	11269.66	115.05	114.9 - 115.1		0.54	0.672	0.900	
140	12147.59	140.00	139.9 - 140.1		0.52	0.656	0.900	
208	5800.71	207.95	207.9 - 208.1		0.53	0.676	0.900	
238	11879.08	237.90	237.9 - 238.1		0.51	0.681	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1	0.0 V	Omega Lens	6.1 V	Deflect	16.8 V				
Extract 2	-160.0 V	Cell Entrance	-30 V	Plate Bias	-40 V				
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias	-75 V	Cell Exit	-50 V						

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

Mercury Run Data Report

Data File Name: 1810801.M07

Run Name: 1810801M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 354

Method Reference Name(s):

Reviewed By	Reviewed Date
Damary Valentin	04/18/2018 11:36AM
Nina C Haller	05/24/2018 9:31AM
Tara L Snyder	04/18/2018 12:54PM

Verified By:	Verified Date
Nina C Haller	05/24/2018 9:31AM
Tara L Snyder	04/18/2018 12:59PM

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 04/18/2018 05:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	342.0

2 Burn Date/Time: 04/18/2018 06:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1444.0

3 Burn Date/Time: 04/18/2018 06:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3709.0

4 Burn Date/Time: 04/18/2018 06:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6795.0

5 Burn Date/Time: 04/18/2018 06:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	16900.0

6 Burn Date/Time: 04/18/2018 06:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	34809.0

CorrelationCoefficient = 1.00000
Slope = 6895.1989200000
Y-Intercept = 93.8616600000

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 04/18/2018 06:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4940	17293.0

8 Burn Date/Time: 04/18/2018 06:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
0.0117	170.0

9 Burn Date/Time: 04/18/2018 06:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1723	1278.0

10 Burn Date/Time: 04/18/2018 06:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9664	6756.0

11 Burn Date/Time: 04/18/2018 06:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
0.0159	199.0

12 Burn Date/Time: 04/18/2018 06:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0141	-8.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 04/18/2018 06:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8724	6107.0		

14 Burn Date/Time: 04/18/2018 06:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552810	U*********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0043	60.0		

15 Burn Date/Time: 04/18/2018 06:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552810	D*********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0020	103.0		

16 Burn Date/Time: 04/18/2018 06:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552810	R*********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8789	6152.0		

17 Burn Date/Time: 04/18/2018 06:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552794	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0098	157.0		

18 Burn Date/Time: 04/18/2018 06:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552795	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0217	-60.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 04/18/2018 06:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552808	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0198	-47.0		

20 Burn Date/Time: 04/18/2018 06:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553080	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0060	131.0		

21 Burn Date/Time: 04/18/2018 06:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555521	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0074	38.0		

22 Burn Date/Time: 04/18/2018 06:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9495	6639.0

23 Burn Date/Time: 04/18/2018 06:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
0.0281	283.0

24 Burn Date/Time: 04/18/2018 07:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555522	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0085	31.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

25 Burn Date/Time: 04/18/2018 07:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555631	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0161	-22.0		

26 Burn Date/Time: 04/18/2018 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555634	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0179	-34.0		

27 Burn Date/Time: 04/18/2018 07:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9556442	**********	40	40	1.00	181030571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0114	168.0		

28 Burn Date/Time: 04/18/2018 07:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0172	-29.0		

29 Burn Date/Time: 04/18/2018 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8647	6054.0		

30 Burn Date/Time: 04/18/2018 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552316	U*********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0189	-41.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

31 Burn Date/Time: 04/18/2018 07:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552316	D*********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0176	-32.0		

32 Burn Date/Time: 04/18/2018 07:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552316	R*********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8805	6163.0		

33 Burn Date/Time: 04/18/2018 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552277	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0218	-61.0		

34 Burn Date/Time: 04/18/2018 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9377	6558.0

35 Burn Date/Time: 04/18/2018 07:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
0.0207	232.0

36 Burn Date/Time: 04/18/2018 07:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552408	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0202	-50.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 04/18/2018 07:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552497	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0167	-26.0		

38 Burn Date/Time: 04/18/2018 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552498	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0176	-32.0		

39 Burn Date/Time: 04/18/2018 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552499	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0173	-30.0		

40 Burn Date/Time: 04/18/2018 07:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552500	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0167	-26.0		

41 Burn Date/Time: 04/18/2018 07:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552501	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0186	-39.0		

42 Burn Date/Time: 04/18/2018 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552502	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0175	-31.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

43 Burn Date/Time: 04/18/2018 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552503	**********	40	40	1.00	181030571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0212	-57.0		

44 Burn Date/Time: 04/18/2018 07:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0161	-22.0		

45 Burn Date/Time: 04/18/2018 07:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8898	6227.0		

46 Burn Date/Time: 04/18/2018 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9440	6601.0

47 Burn Date/Time: 04/18/2018 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
0.0178	212.0

48 Burn Date/Time: 04/18/2018 08:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553579	U*********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0205	-52.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 04/18/2018 08:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553579	D*********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0192	-43.0		

50 Burn Date/Time: 04/18/2018 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553579	R*********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9187	6427.0		

51 Burn Date/Time: 04/18/2018 08:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555406	**********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0148	-13.0		

52 Burn Date/Time: 04/18/2018 08:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9555407	**********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0201	-49.0		

53 Burn Date/Time: 04/18/2018 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558418	**********	40	40	1.00	181060571401

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0176	-32.0		

54 Burn Date/Time: 04/18/2018 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0192	-43.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

55 Burn Date/Time: 04/18/2018 08:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9054	6335.0		

56 Burn Date/Time: 04/18/2018 08:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9556556	U*********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9550	13575.0		

57 Burn Date/Time: 04/18/2018 08:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9556556	D*********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9428	13491.0		

58 Burn Date/Time: 04/18/2018 08:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9408	6579.0

59 Burn Date/Time: 04/18/2018 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0090	27.0

60 Burn Date/Time: 04/18/2018 08:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9556556	R*********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.8565	19794.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

61 Burn Date/Time: 04/18/2018 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9551991	**********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0275	-100.0		

62 Burn Date/Time: 04/18/2018 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9551992	**********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0202	-50.0		

63 Burn Date/Time: 04/18/2018 08:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9551993	**********	40	40	1.00	181060571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0180	-35.0		

64 Burn Date/Time: 04/18/2018 08:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0182	-36.0		

65 Burn Date/Time: 04/18/2018 08:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8954	6266.0		

66 Burn Date/Time: 04/18/2018 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553133	U*********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0182	-36.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 04/18/2018 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553136	D*********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0147	-12.0		

68 Burn Date/Time: 04/18/2018 08:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553134	R*********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8429	5904.0		

69 Burn Date/Time: 04/18/2018 08:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553135	M*********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8808	6165.0		

70 Burn Date/Time: 04/18/2018 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9287	6496.0

71 Burn Date/Time: 04/18/2018 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0066	44.0

72 Burn Date/Time: 04/18/2018 09:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553132	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	-17.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

73 Burn Date/Time: 04/18/2018 09:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553137	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0143	-9.0		

74 Burn Date/Time: 04/18/2018 09:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553138	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	-17.0		

75 Burn Date/Time: 04/18/2018 09:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553139	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0160	-21.0		

76 Burn Date/Time: 04/18/2018 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553140	**********	40	40	1.00	181030571307

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0188	-40.0		

77 Burn Date/Time: 04/18/2018 09:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-3.0		

78 Burn Date/Time: 04/18/2018 09:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8829	6180.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 04/18/2018 09:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552656	U*********	40	40	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.5847	24817.0		

80 Burn Date/Time: 04/18/2018 09:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552656	D*********	40	40	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.5521	17694.0		

81 Burn Date/Time: 04/18/2018 09:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552656	R*********	40	40	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.6702	25407.0		

82 Burn Date/Time: 04/18/2018 09:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9350	6539.0

83 Burn Date/Time: 04/18/2018 09:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0083	32.0

84 Burn Date/Time: 04/18/2018 09:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552655	**********	40	40	1.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0000	663773.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

85 Burn Date/Time: 04/18/2018 09:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9552655	**********	40	40	200.00	181060571403

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4445	10054.0		

86 Burn Date/Time: 04/18/2018 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0147	191.0		

87 Burn Date/Time: 04/18/2018 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9488	6634.0		

88 Burn Date/Time: 04/18/2018 10:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554147	U*********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0330	317.0		

89 Burn Date/Time: 04/18/2018 10:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554147	D*********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0388	357.0		

90 Burn Date/Time: 04/18/2018 10:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554147	R*********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8905	6232.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

91 Burn Date/Time: 04/18/2018 10:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9553305	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0465	410.0		

92 Burn Date/Time: 04/18/2018 10:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554887	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0524	451.0		

93 Burn Date/Time: 04/18/2018 10:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554888	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0676	556.0		

94 Burn Date/Time: 04/18/2018 10:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9646	6743.0

95 Burn Date/Time: 04/18/2018 10:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0031	68.0

96 Burn Date/Time: 04/18/2018 10:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554895	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1001	780.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 04/18/2018 10:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9556522	**********	40	40	1.00	181030571402

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1867	1377.0		

98 Burn Date/Time: 04/18/2018 10:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0025	72.0		

99 Burn Date/Time: 04/18/2018 10:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8956	6267.0		

100 Burn Date/Time: 04/18/2018 10:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554301	U*********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0074	38.0		

101 Burn Date/Time: 04/18/2018 10:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554301	D*********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0040	62.0		

102 Burn Date/Time: 04/18/2018 10:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554301	R*********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8813	6169.0		

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 04/18/2018 10:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554295	**********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0053	53.0		

104 Burn Date/Time: 04/18/2018 10:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554297	**********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0017	101.0		

105 Burn Date/Time: 04/18/2018 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9554299	**********	40	40	1.00	181030571404

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0081	145.0		

106 Burn Date/Time: 04/18/2018 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9805	6853.0

107 Burn Date/Time: 04/18/2018 10:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0074	38.0

108 Burn Date/Time: 04/18/2018 10:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1781	1318.0

LANCASTER LABORATORIES

Run Name: 1810801M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 04/18/2018 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
0.9764	6825.0

110 Burn Date/Time: 04/18/2018 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0040	62.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 18 103 10639 04

Start Time: 4/15/18 23:00 **End Time:** 4/16/18 3:35 **Hot Block:** 12

Pipette ID: JU06758
Reflux Cap Lot#: 1712272-8056-KA

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	191695	3.00
ICP/MS Spike	1804017#4	0.50
LCS	1804017#4	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.									Batch alone
2)	LCSW	.									
3)	9553131	04/23/18 09:20	WW	N8			Y	802A	1709027	WMET04/B3	
4)	9553132	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET07/A4	
5)	**9553133U**	04/23/18 09:20	WW	N8			Y	802A	1709027	WMET04/A3	
6)	**9553134R**	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET07/D7	
7)	**9553135M**	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET49/F10	
8)	**9553136D**	04/23/18 09:20	WW	N8			Y	802A	1709027	WMET04/A4	
9)	9553137	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET49/E3	
10)	9553138FD	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET07/D4	
11)	9553139	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET07/D3	
12)	9553140	04/23/18 09:20	WW	N8			Y	802A	1709027	WMET04/C3	
13)	9553141	04/23/18 09:20	WW	N8			Y	802A	1712272	WMET49/A4	

Prep Employee:277 D/I _____

4/16/2018

v 1.1.0

Batch# 18 103 1063 904

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/13/18 13:51	277
2)	Sample Vol		4/16/18 2:32	277
3)	Final Vol	CLEAR	4/16/18 2:32	277
4)	Trial		4/16/18 2:32	277
5)	Upload Prep	US19PCC06785	4/16/18 4:36	277
6)	Upload Prep	US19PCC06785	4/16/18 4:38	277

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Original Entry Data	Original Entry Units	Original Entry Analyst	Data Changed Date/Time	Data Changed Analyst	Data Changed Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 103 1063 904

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9553131	04/23/18	N8	R0501	RAF05-01	50.0000	50.0000	1
9553132	04/23/18	N8	R0502	RAF05-02	50.0000	50.0000	1
9553133U	04/23/18	N8	R0503	RAF05-03BKG	50.0000	50.0000	1
9553134R	04/23/18	N8	R0503	RAF05-03MS	50.0000	50.0000	1
9553135M	04/23/18	N8	R0503	RAF05-03MSD	50.0000	50.0000	1
9553136D	04/23/18	N8	R0503	RAF05-03DUP	50.0000	50.0000	1
9553137	04/23/18	N8	R0504	RAF05-04	50.0000	50.0000	1
9553138FD	04/23/18	N8	R0505	RAF05-05FD	50.0000	50.0000	1
9553139	04/23/18	N8	R0506	RAF05-06	50.0000	50.0000	1
9553140	04/23/18	N8	R0507	RAF05-07	50.0000	50.0000	1
9553141	04/23/18	N8	R0508	RAF05-08	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 18 103 05713 07

Start Time: 4/18/18 1:45 **End Time:** 4/18/18 3:45 **Hot Block:** 10

Pipette ID: W/1000

Reflux Cap Lot#: 1712272-8056-KA

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	P18-106A	3.20
5%KMnO4	P18-096C	6.00
H2SO4	178260	2.00
HNO3	191695	1.00
LCS 40ppb Hg	P18-108A	1.00
NaCl/NH2OH.HCl	P18-086C	2.40
Spike 40ppb Hg	P18-108A	1.00

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.									Batch alone
2)	LCSW	.									
3)	9553132	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET24/D6	
4)	**9553133U**	04/23/18 09:20	WW	N8			Y	801A	1709027	WMET17/E7	
5)	**9553134R**	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET17/E3	
6)	**9553135M**	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET54/E10	
7)	**9553136D**	04/23/18 09:20	WW	N8			Y	801A	1709027	WMET17/E8	
8)	9553137	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET54/D10	
9)	9553138FD	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET17/B4	
10)	9553139	04/23/18 09:20	WW	N8			Y	801A	1712272	WMET17/F1	
11)	9553140	04/23/18 09:20	WW	N8			Y	801A	1709027	WMET17/F6	

Prep Employee:277 D/I _____

4/18/2018

v 1.1.0

Batch# 18 103 0571 307

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/13/18 15:09	277
2)	Sample Vol		4/18/18 4:02	277
3)	Final Vol	CLEAR	4/18/18 4:02	277
4)	Trial		4/18/18 4:02	277
5)	Upload Prep	US19PCC06785	4/18/18 4:02	277
6)	Upload Prep	US19PCC06785	4/18/18 4:04	277

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Data	Units	Analyst	Data Changed Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 103 0571 307

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
9553132	04/23/18	N8	R0502	RAF05-02	40.0000		40.0000	1
9553133U	04/23/18	N8	R0503	RAF05-03BKG	40.0000		40.0000	1
9553134R	04/23/18	N8	R0503	RAF05-03MS	40.0000		40.0000	1
9553135M	04/23/18	N8	R0503	RAF05-03MSD	40.0000		40.0000	1
9553136D	04/23/18	N8	R0503	RAF05-03DUP	40.0000		40.0000	1
9553137	04/23/18	N8	R0504	RAF05-04	40.0000		40.0000	1
9553138FD	04/23/18	N8	R0505	RAF05-05FD	40.0000		40.0000	1
9553139	04/23/18	N8	R0506	RAF05-06	40.0000		40.0000	1
9553140	04/23/18	N8	R0507	RAF05-07	40.0000		40.0000	1

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18093H	Hg 0.1mg/L Cal	15	4-10-18	H18-093B	0.20ml	1	6	191695
2		I					0.50			
3		J	Hg 1.0mg/L Cal			H18-093A	0.20			
4		K					0.25			
5		L					0.50			
6		M								
7	ICV	N	Hg 1.0mg/L Cont	15	4-16-18	H18-093C	0.25ml			
8	CCV	O	Hg 1.0mg/L Cal			H18-093A	0.20			
9	CRA	P	Hg 0.1mg/L Cont			H18-093D	0.20			
10	Hg 1.0mg/L InterCal	H18094A	Hg 10mg/L Cal	15	7-03-18	H18-003C	1.0ml			
11	0.1mg/L InterCal	B	10mg/L Cal	15	4-11-18	H18-094A				
12	1.0mg/L InterCont	C	10mg/L Cont	16	11-03-18	MKH5157392				
13	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-11-18	H18-094C				
14	Hg 5701 ICV	E					0.25ml			
15	CCV	F	Hg 1.0mg/L Cal			H18-094A	0.10			
16	CCV	G					0.10			
17	CCV	H					0.10			
18	CRA	I	Hg 0.1mg/L Cont			H18-094D	0.20			
19	Std Cal	J	Hg 0.1mg/L Cal			H18-094B	0.20			
20		K					0.50			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	3ml H_2SO_4	4	175000	3.2ml [illegible] 1ml KMnO4		H18-0340 H18-0472	100	0.2ug/L	DW354	4-03-18	4-10-18	RT
2							↓	0.50				
3							200	1000				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9							100	0.2				
10				To volume 15% HNO_3		H18-015A	10	1.0	DW354	4-04-18	4-11-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14				5ml Aqua Regia 15ml HNO_3		H18-0340 H18-0472	100	2.5ug/L				
15								1.0				
16								1.0				
17								1.0				
18								0.2				
19								0.2				
20							↓	0.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 Std Cal	H18-094A	Hg-1.0mg/L Cal	15	4-11-18	H18-094A	0.10 mL			
2	↓	M	↓	↓	↓	↓	0.25			
3	↓	N	↓	↓	↓	↓	0.50			
4	↓	O	—							
5	↓ ICV	P	Hg-1.0mg/L Cont	15	4-11-18	H18-094C	0.25ml			
6	Aqua Regia	Q	—					15	6	191695
7	Hg-1.0mg/L-InterCal	H18-096A	Hg-1.0mg/L Cal	15	7-02-18	H18002C	1.0ml			
8	0.1mg/L-InterCal	B	1.0mg/L Cal	15	4-13-18	H18-096A				
9	1.0mg/L-InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG657382				
10	0.1mg/L-InterCont	D	↓ 1.0mg/L Cont	15	4-13-18	H18-096C	↓			
11	Hg-5700 ICV	E	↓			↓	0.25ml	1	6	191695
12	CCV	F	Hg-1.0mg/L Cal			H18-096A	0.20			
13	CCA	G	Hg-0.1mg/L Cont			H18-096D	0.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H18-096B	0.20			
15	↓	I	↓			↓	0.50			
16	↓	J	Hg-1.0mg/L Cal			H18-096A	0.20			
17	↓	K	↓			↓	0.25			
18	↓	L	↓	↓	↓	↓	0.50			
19	↓	m	—							
20	↓ ICV	N	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml	↓	↓	↓

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10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
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XX – Other (footnote Manuf.)

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml 6M nitric		HI8-0942 HI8-047R	100	1.0ug/L	DU354	4-04-18	4-11-18	RT
2								2.5				
3								5.0				
4								0.0				
5								2.5				
6	45	6	1867L4									
7				~~3.2ml H2SO4 6ml HNO3~~		~~HI8-0340 HI8-047R~~	60	1:3			4-4-18	
8				To volume-15%	HNO3	HI8-015A	10	1.0	DU354	4-06-18	4-13-18	RT
9								0.1				
10								1.0				
11	2ml H2SO4	4	178260	3.2ml H2SO4 6ml HNO3		HI8-0340 HI8-047R		0.1				
12							100	2.5ug/L				
13							200	1.0				
14							100	0.2				
15								0.2				
16								0.5				
17							200	1.0				
18							100	2.5				
19								5.0				
20								0.0				
								2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 CCV	H18-096O	H18-1.0mg/L Cal	15	4-13-18	H18-096A	0.20ml	1	6	191695
2	CCA	P	Hg-0.1mg/L Cont			H18-096D	0.20			
3	ICV	Q	Hg-1.0mg/L Cont			H18-096C	0.25			
4	ICV	R					0.25			
5	Hg-5700 ICV	EE	Hg-1.0mg/L Cont			H18-096C	0.25			
6	CCV	FF	Hg-1.0mg/L Cal			H18-096A	0.20			
7	CCA	GG	Hg-0.1mg/L Cont			H18-096D	0.20			
8	Std Cal	HH	Hg-0.1mg/L Cal			H18-096B	0.20			
9		II					0.50			
10		JJ	Hg-1.0mg/L Cal			H18-096A	0.20			
11		KK					0.25			
12		LL					0.50			
13		MM								
14	ICV	NN	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml			
15	CCV	OO	Hg-1.0mg/L Cal			H18-096A	0.20			
16	CCA	PP	Hg-0.1mg/L Cont			H18-096D	0.20			
17	Stannous Chloride	H18-099A	$SnCl_2$	4	3-09-19	175798 #7	200.02			
18		B				#7+8	200.02			
19		C				#8	200.04			
20	Hg-1.0mg/L Inter Cal	H18-100A	Hg-10mg/L Cal	15	7-02-18	H18-002C	1.0ml			

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a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2mlH2SO4	4	178260	3.2mlK2S2O8 1mlKmno4		H18-034D H18-047R	200	1.0ug/L	DW354	4-06-18	4-13-18	RT
2	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
3							↓	2.5				
4	✓	✓	✓	✓	✓	✓	↓	2.5 ✓				
5							100	2.5				
6							200	1.0				
7							100	0.2				
8							↓	0.2				
9							✓	0.5				
10							200	1.0				
11							100	2.5				
12							↓	5.0				
13								0.0				
14							✓	2.5				
15							200	1.0				
16	✓	✓	✓	✓	✓	✓	100	0.2 ✓	✓	✓	✓	✓
17	200	Ic	186764				200	10.1	DW354	4-09-18	10-09-18	RT
18	↓	↓	↓				↓	↓	↓	↓	↓	↓
19	✓	✓	✓				✓		✓	✓	✓	✓
20				To volume 1% HNO3		H18-015A	10	1.0	DW354	4-10-18	4-17-18	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg0.1mg/L InterCal	H18100B	Hg 1.0mg/L Cal	15	4-17-18	H18-100A	1.0mL			
2	1.0mg/L InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG157392				
3	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-17-18	H18-100C				
4	Hg 5700 ICV	E					0.25 ml	1	4	191695
5	CCV	F	Hg 1.0mg/L Cal			H18-100A	0.20			
6	CRA	G	Hg 0.1mg/L Cont			H18-100D	0.20			
7	Std Cal	H	Hg 0.1mg/L Cal			H18-100B	0.20			
8		I					0.50			
9		J	Hg 1.0mg/L Cal			H18-100A	0.20			
10		K					0.25			
11		L					0.50			
12		m								
13	ICV	N	Hg 1.0mg/L Cont	15	4-17-18	H18-100C	0.25ml			
14	CCV	O	Hg 1.0mg/L Cal			H18-100A	0.20			
15	CRA	P	Hg 0.1mg/L Cont			H18-100D	0.20			
16	ICV	Q	Hg 1.0mg/L Cont			H18-100C	0.25			
17	Hg 1.0mg/L InterCal	H18102A	Hg 1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			
18	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-19-18	H18-102A				
19	1.0mg/L InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG157392				
20	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-19-18	H18-102C				

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To vol w/ 0.15% HNO3		H18-015A	10	0.1	DJ354	4-10-18	4-17-18	RT
2								1.0				
3								0.1				
4	2ml H2SO4	4	178260	3.2ml H2O2 1ml KMnO4		H18-037D H18-047A	100	2.5				
5							200	1.0				
6							100	0.2				
7								0.2				
8								0.5				
9							200	1.0				
10							10	2.5				
11								5.0				
12								0.0				
13								2.5				
14							200	1.0				
15							100	0.2				
16							100	2.5			4-19-18 DJ354	
17				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DJ354	4-12-18	4-19-18 ~~4-20~~	RT
18								0.1				
19								1.0				
20								0.1				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 ICV	H18102E	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
2	CCV	F	Hg 1.0 mg/L Cal			H18-102A	0.10			
3	CCV	G	↓			↓	0.10			
4	CCV	H	↓			↓	0.10			
5	CRA	I	Hg 0.1 mg/L Cont			H18-102D	0.20			
6	Std Cal	J	Hg 0.1 mg/L Cal			H18-102B	0.20			
7		K	↓			↓	0.50			
8		L	Hg 1.0 mg/L Cal			H18-102A	0.10			
9		M	↓			↓	0.25			
10	↓	N	↓	↓	↓	↓	0.50			
11	↓	O								
12	↓ ICV	P	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
13	Aqua Regia	↓ Q						15	6	1911695
14	Permanganate	R	KMnO4	6	10-23-18	177909 #2	100.01g			
15	↓	S	↓	↓	↓	↓	100.02g			
16	Hg 1.0 mg/L InterCal	H18103A	Hg 10 mg/L Cal	15	7-02-18	H18-002C	1.0ml			
17	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	4-20-18	H18-103A	↓			
18	1.0 mg/L InterCont	C	10 mg/L Cont	16	11-08-18	M2HG157390				
19	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	4-20-18	H18-103C	↓			
20	Hg 5700 ICV	↓ E	↓	↓	↓	↓	0.25ml	1	6	1911695

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml Ammon		H18-1029Q H18-0496Q	100	2.5ug/L	DL354	4-12-18	4-19-18	RT
2								1.0				
3								1.0				
4								1.0				
5								0.2				
6								0.2				
7								0.5				
8								1.0				
9								2.5				
10								5.0				
11								0.0				
12								2.5				
13	45	6	180764				60	1:3			4-12-18	
14							3000	5%			6-12-18	
15												
16				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DL354	4-13-18	4-20-18	RT
17								0.1				
18								1.0				
19								0.1				
20	2ml H2SO4	4	178260	3.2ml Na2S2O8 1ml Ammon		H18-1020Q H18-0496Q	100	2.5ug/L				

Footnotes

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared - Name (DV354 4-13-18)	Lot #	Standards/Reagents Used - Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	HNO_3 Used Vol (mL)	M•	Lot #
1	Hg 5700 ③ CCV	H18103F	Hg 1.0 mg/L Cal	15	4-26-18	H18-103A	0.20 mL	1	6	191695
2	CRA	G	Hg 0.1 mg/L Cont			H18-103D	0.20			
3	Std Cal	H	Hg 0.1 mg/L Cal			H18-103B	0.20			
4		I	↓			↓	0.50			
5		J	Hg 1.0 mg/L Cal			H18-103A	0.20			
6		K	↓			↓	0.25			
7		L	↓	↓	↓	↓	0.50 ↓			
8	↓	M								
9	ICV	N	Hg 1.0 mg/L Cont	15	4-20-18	H18-103C	0.25 mL			
10	CCV	O	Hg 1.0 mg/L Cal			H18-103A	0.20			
11	CRA	P	Hg 0.1 mg/L Cont	↓	↓	H18-103D	0.20 ↓			
12	Hg 5700 ICV									
13 (4-15-18 DV354)	CCV									
14	Hg 1.0 mg/L InterCal	H18105A	Hg 1.0 mg/L Cal	15	7-02-18	H18-002C	1.0 mL			
15	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	4-22-18	H18-105A				
16	1.0 mg/L InterCont	C	1.0 mg/L Cont	16	11-08-18	1M2HG645733				
17	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	4-22-18	H18-105C	↓			
18	Hg 5700 ICV	E	↓			↓	0.25 mL	1	6	191695
19	↓ CCV	F	Hg 1.0 mg/L Cal			H18-105A	0.20			
20	↓ CRA	G	Hg 0.1 mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	178260	3.2ml H_2SO_4 1ml $KMnO_4$	0.5	HI8-1022 HI8-0490	200	1.0ug/L	DU354	4-13-18	4-20-18	RT
2							100	0.2				
3							↓	0.2				
4								0.5				
5							200	1.0				
6							100	2.5				
7							↓	5.0				
8								0.0				
9							↓	2.5				
10							200	1.0				
11	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
12												
13												DU354 4-15
14				To vol in 0.15	HNO_3	HI8-0154						
15							10	1.0	DU354	4-15-18	4-22-18	RT
16							↓	0.1				
17				↓	↓	↓		1.0				
18	2ml H_2SO_4	4	178260	3.2ml H_2SO_4 1ml $KMnO_4$		HI8-1022 HI8-0490	↓	0.1				
19	↓	↓	↓	↓	↓	↓	100	2.5ug/L				
20							200	1.0				
							100	0.2 ↓				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18105H	Hg 0.1mg/L Cal	15	4-22-18	H18-105B	0.20ml	1	6	1911695
2	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
3	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
4	↓	K	↓	↓	↓	↓	0.25	↓	↓	↓
5	↓	L	↓	↓	↓	↓	0.50 ↓	↓	↓	↓
6	↓	M	—	—	—	—	—	↓	↓	↓
7	ICV	N	Hg 1.0mg/L Cont	15	4-22-18	H18-105C	0.25ml	↓	↓	↓
8	CCV	O	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
9	↓ CRA	↓ P	Hg 0.1mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓
10	Hg 1.0mg/L TalerCal	H18107A	Hg 10mg/L Cal	15	7-02-18	H18-092C	1.0ml	—		
11	0.1mg/L TalerCal	B	1.0mg/L Cal	15	4-24-18	H18-107A				
12	1.0mg/L TalerCont	C	10mg/L Cont	16	11-08-18	MKHG5[illegible]3				
13	↓ 0.1mg/L TalerCont	D	↓ 1.0mg/L Cont	15	4-24-18	H18-107C	↓			
14	Hg 5700 ICV	E	↓	↓	↓	↓	0.25ml	1	6	1911695
15	CCV	F	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
16	CRA	G	Hg 0.1mg/L Cont	↓	↓	H18-107D	0.20	↓	↓	↓
17	Std Cal	H	Hg 0.1mg/L Cal	↓	↓	H18-107B	0.20	↓	↓	↓
18	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
19	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
20	↓ ↓	K	↓	↓	↓	↓	0.25 ↓	↓	↓	↓

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8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
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XX – Other (footnote Manuf.)

a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	178260	3.2ml KaS_2O_8 1ml $KMnO_4$		H18-1020 H18-0726	100	0.2ug/L	DW354	4-15-18	4-22-18	RT
2							100	0.5				
3							200	1.0				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
10				To value/0.15% HNO_3		H18-015A	10	1.0	DW354	4-17-18	4-24-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14	2ml H_2SO_4	4	178260	3.2ml KaS_2O_8 1ml $KMnO_4$		H18-1020 H18-0726	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot # DIGSY 4-17-18	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18072	Hg 1.0mg/L Cont	15	4-24-18	H18-107B (3) H	0.50mL	1	6	191695
2	↓	M								
3	ICV	N	Hg 1.0mg/L Cont	15	4-24-18	H18-107C	0.25mL			
4	CCV	O	Hg 1.0mg/L Cal			H18-107A	0.20			
5	CRA	P	Hg 0.1mg/L Cont			H18-107D	0.20			
6	Hg 1.0mg/L InterCal	H18109A	Hg 10mg/L Cal	15	7-03-18	H18-002K	1.0mL			
7	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-26-18	H18-109A				
8	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG057302				
9	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-26-18	H18-109C				
10	Hg 5701 ICV	E	↓			↓	0.25mL			
11	CCV	F	Hg 1.0mg/L Cal			H18-109A	0.10			
12	CCV	G					0.10			
13	CCV	H	↓			↓	0.10			
14	CRA	I	Hg 0.1mg/L Cont			H18-109D	0.20			
15	Std Cal	J	Hg 0.1mg/L Cal			H18-109B	0.20			
16		K	↓			↓	0.50			
17		L	Hg 1.0mg/L Cal			H18-109A	0.10			
18		M					0.25			
19		N	↓	↓	↓	↓	0.50			
20	↓	O								

Key – Manufacturer (M•)

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml HCl	4	178240	3.2ml H2O 1ml HNO3		H18-102A H18-0726	100	5.0ug/L	DJ354	4-17-18	4-24-18	RT
2								0.0				
3								2.5				
4							200	1.0				
5							100	0.2				
6				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DJ354	4-19-18	4-26-18	RT
7								0.1				
8								1.0				
9								0.1				
10				5ml HCl w/ H2O 15ml HNO3		H18-1019 H18-0726	100	2.5ug/L				
11								1.0				
12								1.0				
13								1.0				
14								0.2				
15								0.2				
16								0.5				
17								1.0				
18								2.5				
19								5.0				
20								0.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Antimony	16C1	0.4	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.4	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.4	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.4	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.4	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	0.4	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Arsenic	16C1	2	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	2	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Barium	16C1	202		202		10	No action taken.
	16MW8	140		140		10	No action taken.
	16MW9	572		572		10	No action taken.
	16WC1A	276		276		10	No action taken.
	16WC1B	153		153		10	No action taken.
	16WC2B	116		116		10	No action taken.
	16-2	214		214		10	No action taken.
	16-3	768		768		10	No action taken.
	16-5	165		165		10	No action taken.
	16SPRING	233		233		10	No action taken.
	16WDUP	275		275		10	No action taken. Blind field duplicate of 16WC1A.
Beryllium	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.3	J	0.3	J	1	Result < QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Beryllium	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Cadmium	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.24	J	0.24	J	1	Result < QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Chromium	16C1	1	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	1.7	J	1.7	J	5	Result < QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	1	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Cobalt	16C1	1	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	1.1	J	1.1	J	5	Result < QL.
	16MW9	5.6		5.6		5	No action taken.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Cobalt	16WC1A	12.3		12.3		5	No action taken.
	16WC1B	4.5	J	4.5	J	5	Result < QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	12.4		12.4		5	No action taken. Blind field duplicate of 16WC1A.
Copper	16C1	1	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	4.8	J	4.8	J	5	Result < QL.
	16MW9	1	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	1	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Lead	16C1	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Nickel	16C1	2	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.8	J	3.8	J	10	Result < QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Nickel	16MW9	15.1		15.1		10	No action taken.
	16WC1A	12.1		12.1		10	No action taken.
	16WC1B	2.6	J	2.6	J	10	Result < QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	12.1		12.1		10	No action taken. Blind field duplicate of 16WC1A.
Selenium	16C1	3	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Silver	16C1	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WDUP	0.2	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Thallium	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Vanadium	16C1	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Vanadium	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Zinc	16C1	7.3	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	31.4		31.4		30	No action taken.
	16MW9	7.3	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	10.9	J	10.9	J	30	Result < QL.
	16WC1B	7.3	U	U		30	Analyte not detected at or above the DL or QL.
	16WC2B	30	U	U		30	Analyte not detected at or above the QL.
	16-2	30	U	U		30	Analyte not detected at or above the QL.
	16-3	30	U	U		30	Analyte not detected at or above the QL.
	16-5	30	U	U		30	Analyte not detected at or above the QL.
	16SPRING	30	U	U		30	Analyte not detected at or above the QL.
	16WDUP	13.8	J	13.8	J	30	Result < QL. Blind field duplicate of 16WC1A.
Method: 7470A							
Laboratory: ELLE, Lancaster, PA							
Mercury	16C1	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		2	Analyte not detected at or above the DL or QL.
	16WC1B	0.26	J	0.26	J	2	Result < QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		2	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acetone	16C1	3	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	3	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	3	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	3	U	U		10	Analyte not detected at or above the DL or QL.
Acetonitrile	16C1	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16MW8	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16MW9	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1A	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1B	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WDUP	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_2	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_3	31.7	U	U	J	100	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
Acrolein	16C1	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	16MW8	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	16MW9	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	16WC1A	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	16WC1B	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	16WDUP	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2. Blind field duplicate of 16WC1A.
	Trip_Blank_1	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	Trip_Blank_2	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
	Trip_Blank_3	5	U	U	J	25	Analyte not detected at or above the DL or QL. Aliquot pH < 2.
Acrylonitrile	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Acrylonitrile	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	Trip_Blank_2	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	Trip_Blank_3	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
Allyl chloride	16C1	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.82	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.82	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.82	U	U		10	Analyte not detected at or above the DL or QL.
Benzene	16C1	0.268	J	0.268	J	1	Result < QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.256	J	0.256	J	1	Result < QL.
	16WC1A	0.119	J	0.119	J	1	Result < QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.119	J	0.119	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Bromodichloromethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Bromodichloromethane	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Bromoform	16C1	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.106	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.106	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.106	U	U		1	Analyte not detected at or above the DL or QL.
2-Butanone	16C1	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_2	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_3	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
Carbon disulfide	16C1	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.4	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon disulfide	16WDUP	0.4	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.4	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.4	U	U		10	Analyte not detected at or above the DL or QL.
Carbon tetrachloride	16C1	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.16	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.16	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.16	U	U		1	Analyte not detected at or above the DL or QL.
Chloroethane	16C1	2.54		2.54	J	1	No action taken. CV %D > +/-20% (-29%).
	16MW8	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-29%).
	16MW9	1.31		1.31	J	1	No action taken. CV %D > +/-20% (-29%).
	16WC1A	0.686	J	0.686	J	1	Result < QL. CV %D > +/-20% (-29%).
	16WC1B	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-29%).
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.648	J	0.648	J	1	Result < QL. Blind field duplicate of 16WC1A. CV %D > +/-20% (-29%).
	Trip_Blank_1	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-29%).
	Trip_Blank_2	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-29%).
	Trip_Blank_3	0.1	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-29%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloroform	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Chloroprene	16C1	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.46	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.46	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.46	U	U		10	Analyte not detected at or above the DL or QL.
Dibromochloromethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dibromo-3-chloropropane	16C1	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	16MW8	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	16MW9	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	16WC1A	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	16WC1B	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2-Dibromo-3-chloropropane	16WDUP	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	Trip_Blank_2	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
	Trip_Blank_3	0.204	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (26%).
1,2-Dibromoethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,3-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,4-Dichlorobenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,4-Dichlorobenzene	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,4-Dichloro-2-butene	16C1	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1	U	U		10	Analyte not detected at or above the DL or QL.
Dichlorodifluoromethane	16C1	0.205	J	0.205	J	1	Result < QL.
	16MW8	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.148	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.148	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.148	U	U		1	Analyte not detected at or above the DL or QL.
1,1-Dichloroethane	16C1	5.86		5.86		1	No action taken.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethane	16MW8	0.309	J	0.309	J	1	Result < QL.
	16MW9	6.1		6.1		1	No action taken.
	16WC1A	2.41		2.41		1	No action taken.
	16WC1B	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	2.29		2.29		1	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.135	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.135	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichloroethane	16C1	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.147	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.147	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.147	U	U		1	Analyte not detected at or above the DL or QL.
1,1-Dichloroethene	16C1	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethene	16WDUP	0.223	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.223	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.223	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	16C1	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.162	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.162	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.162	U	U		1	Analyte not detected at or above the DL or QL.
1,2-Dichloropropane	16C1	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.107	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.107	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.107	U	U		1	Analyte not detected at or above the DL or QL.
1,3-Dichloropropane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,3-Dichloropropene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
trans-1,3-Dichloropropene	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Diethyl ether	16C1	43.9		43.9		12.5	Analyzed in dilution (1:2). Actual QL 31.3 ug/L.
	16MW8	10.8	J	10.8	J	12.5	Result < QL.
	16MW9	44.3		44.3		12.5	Analyzed in dilution (1:2). Actual QL 31.3 ug/L.
	16WC1A	14.9		14.9		12.5	No action taken.
	16WC1B	1.11	U	U		12.5	Analyte not detected at or above the DL or QL.
	16WC2B	13	U	U		12.5	Analyte not detected at or above the QL.
	16-2	13	U	U		12.5	Analyte not detected at or above the QL.
	16-3	13	U	U		12.5	Analyte not detected at or above the QL.
	16-5	13	U	U		12.5	Analyte not detected at or above the QL.
	16SPRING	13	U	U		12.5	Analyte not detected at or above the QL.
	16WDUP	14.2		14.2		12.5	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1.11	U	U		12.5	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	1.11	U	U		12.5	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	1.11	U	U		12.5	Analyte not detected at or above the DL or QL.
Dimethyl ether	16C1	7.2	J	7.2	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%).
	16MW8	0.332	J	0.332	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%).
	16MW9	1.41	J	1.41	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%).
	16WC1A	1.1	J	1.1	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%).
	16WC1B	0.308	J	0.308	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%).
	16WC2B	13	U	U	J	12.5	Analyte not detected at or above the QL. MS/MSD recovered low (73%/66%).
	16-2	13	U	U	J	12.5	Analyte not detected at or above the QL. MS/MSD recovered low (73%/66%).
	16-3	13	U	U	J	12.5	Analyte not detected at or above the QL. MS/MSD recovered low (73%/66%).
	16-5	13	U	U	J	12.5	Analyte not detected at or above the QL. MS/MSD recovered low (73%/66%).
	16SPRING	13	U	U	J	12.5	Analyte not detected at or above the QL. MS/MSD recovered low (73%/66%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dimethyl ether	16WDUP	1.16	J	1.16	J	12.5	Result < QL. MS/MSD/LCS recovered low (73%/66%/79%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U	J	12.5	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (73%/66%/79%).
	Trip_Blank_2	0.1	U	U	J	12.5	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (73%/66%/79%).
	Trip_Blank_3	0.1	U	U	J	12.5	Analyte not detected at or above the DL or QL. MS/MSD/LCS recovered low (73%/66%/79%).
1,4-Dioxane	16C1	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16MW8	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1B	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	45.5	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	45.5	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	45.5	U	U		200	Analyte not detected at or above the DL or QL.
Ethylbenzene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Ethyl methacrylate	16C1	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.81	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Ethyl methacrylate	16WDUP	0.81	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.81	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.81	U	U		10	Analyte not detected at or above the DL or QL.
Hexachlorobutadiene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Hexachloroethane	16C1	0.11	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.11	U	U		10	Analyte not detected at or above the DL or QL. Also analyzed by Method 8270D (ND).
	16MW9	0.11	U	U		10	Analyte not detected at or above the DL or QL. Also analyzed by Method 8270D (ND).
	16WC1A	0.11	U	U		10	Analyte not detected at or above the DL or QL. Also analyzed by Method 8270D (ND).
	16WC1B	0.11	U	U		10	Analyte not detected at or above the DL or QL. Also analyzed by Method 8270D (ND).
	16WDUP	0.11	U	U		10	Analyte not detected at or above the DL or QL. Also analyzed by Method 8270D (ND).
	Trip_Blank_1	0.11	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.11	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.11	U	U		10	Analyte not detected at or above the DL or QL.
2-Hexanone	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	Trip_Blank_2	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
	Trip_Blank_3	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (34%).
Isobutyl alcohol	16C1	10	U	U		200	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Isobutyl alcohol	16MW8	10	U	U		200	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		200	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		200	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		200	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10	U	U		200	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10	U	U		200	Analyte not detected at or above the DL or QL.
Methacrylonitrile	16C1	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	9.75	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	9.75	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	9.75	U	U		100	Analyte not detected at or above the DL or QL.
Bromomethane	16C1	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	16MW8	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	16MW9	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	16WC1A	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	16WC1B	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	16WDUP	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	Trip_Blank_2	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
	Trip_Blank_3	0.542	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-23%). LCS recovered low (78%).
Chloromethane	16C1	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	16MW8	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	16MW9	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	16WC1A	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	16WC1B	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20% (-33%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Chloromethane	16-2	1	U	U	J	1	Analyte not detected at or above the QL. MSD recovered low (68%).
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. MSD recovered low (68%).
	16-5	1	U	U	J	1	Analyte not detected at or above the QL. MSD recovered low (68%).
	16SPRING	1	U	U	J	1	Analyte not detected at or above the QL. MSD recovered low (68%).
	16WDUP	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	Trip_Blank_2	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
	Trip_Blank_3	0.2	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-33%). MSD recovered low (68%).
Iodomethane	16C1	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.58	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.58	U	U		10	Analyte not detected at or above the DL or QL.
Methyl methacrylate	16C1	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16MW8	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16MW9	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1A	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WC1B	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	16WDUP	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_2	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
	Trip_Blank_3	3.58	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (30%).
4-Methyl-2-pentanone	16C1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	16MW8	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	16MW9	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	16WC1A	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	16WC1B	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	16WDUP	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%). Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
4-Methyl-2-pentanone	Trip_Blank_1	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	Trip_Blank_2	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
	Trip_Blank_3	1	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (33%).
Dibromomethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Methylene chloride	16C1	0.847	J	0.847	J	1	Result < QL.
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.2	U	U		1	Analyte not detected at or above the DL or QL.
Naphthalene	16C1	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.126	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Naphthalene	Trip_Blank_1	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.126	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.126	U	U		1	Analyte not detected at or above the DL or QL.
Pentachloroethane	16C1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.8	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.8	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.8	U	U		10	Analyte not detected at or above the DL or QL.
2-Propanol	16C1	50	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	50	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	50	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	50	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	50	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	50	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Propionitrile	16C1	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16MW8	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16MW9	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1A	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WC1B	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	16WDUP	10.2	U	U		100	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	10.2	U	U		100	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	10.2	U	U		100	Analyte not detected at or above the DL or QL.
Styrene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Styrene	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,1,1,2-Tetrachloroethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2,2-Tetrachloroethane	16C1	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.184	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.184	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.184	U	U		1	Analyte not detected at or above the DL or QL.
Tetrachloroethene	16C1	0.25	J	0.25	J	1	Result < QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.117	J	0.117	J	1	Result < QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Tetrachloroethene	16WDUP	0.104	J	0.104	J	1	Result < QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.
Tetrahydrofuran	16C1	15.6	J	15.6	J	25	Result < QL. CV %D > +/-20% (24%). MS/MSD/LCS recovered high (146%/154%/128%).
	16MW8	2.29	J	2.29	J	25	Result < QL. CV %D > +/-20% (24%). MS/MSD/LCS recovered high (146%/154%/128%).
	16MW9	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16WC1A	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16WC1B	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	16WC2B	25	U	U		25	Analyte not detected at or above the QL.
	16-2	25	U	U		25	Analyte not detected at or above the QL.
	16-3	25	U	U		25	Analyte not detected at or above the QL.
	16-5	25	U	U		25	Analyte not detected at or above the QL.
	16SPRING	25	U	U		25	Analyte not detected at or above the QL.
	16WDUP	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	Trip_Blank_2	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
	Trip_Blank_3	2	U	U	J	25	Analyte not detected at or above the DL or QL. CV %D > +/-20% (24%).
Toluene	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2,4-Trichlorobenzene	16C1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.13	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.13	U	U		1	Analyte not detected at or above the DL or QL.
1,1,1-Trichloroethane	16C1	0.145	J	0.145	J	1	Result < QL. MS/MSD recovered high (126%/129%).
	16MW8	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.13	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.13	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.13	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2-Trichloroethane	16C1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.1	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Trichloroethene	16C1	0.206	J	0.206	J	1	Result < QL.
	16MW8	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.177	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.177	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.177	U	U		1	Analyte not detected at or above the DL or QL.
Trichlorofluoromethane	16C1	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.176	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.176	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.176	U	U		1	Analyte not detected at or above the DL or QL.
1,2,3-Trichloropropane	16C1	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.3	U	U		1	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,2,3-Trichloropropane	16WC1B	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	16WDUP	0.3	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.3	U	U		1	Analyte not detected at or above the DL or QL.
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW8	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16MW9	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC1B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.2	U	U		1	Analyte not detected at or above the DL or QL.
Vinyl acetate	16C1	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.29	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	3.29	U	U		10	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	3.29	U	U		10	Analyte not detected at or above the DL or QL.
Vinyl chloride	16C1	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	16MW8	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	16MW9	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	16WC1A	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Vinyl chloride	16WC1B	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	16WDUP	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%). Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	Trip_Blank_2	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
	Trip_Blank_3	0.153	U	U	J	1	Analyte not detected at or above the DL or QL. CV %D > +/-20% (-26%). LCS recovered low (74%).
Xylenes (Total)	16C1	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16MW8	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16MW9	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1A	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC1B	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	16WC2B	3	U	U		3	Analyte not detected at or above the QL.
	16-2	3	U	U		3	Analyte not detected at or above the QL.
	16-3	3	U	U		3	Analyte not detected at or above the QL.
	16-5	3	U	U		3	Analyte not detected at or above the QL.
	16SPRING	3	U	U		3	Analyte not detected at or above the QL.
	16WDUP	0.208	U	U		3	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	Trip_Blank_2	0.208	U	U		3	Analyte not detected at or above the DL or QL.
	Trip_Blank_3	0.208	U	U		3	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Acenaphthene	16C1	0.353	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.354	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.354	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.353	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.35	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.351	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Acenaphthylene	16C1	0.484	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.486	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.486	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.484	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.48	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.482	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Acetophenone	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Acetylaminofluorene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
4-Aminobiphenyl	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Aniline	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Aniline	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Anthracene	16C1	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.52	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.522	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Aramite	16C1	5.04	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%).
	16MW8	5.06	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%).
	16MW9	5.06	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%).
	16WC1A	5.04	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%).
	16WC1B	5	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%).
	16WDUP	5.02	U	U	J	15	Analyte not detected at or above the DL or QL. LCS recovered low (16%). Blind field duplicate of 16WC1A.
Benzo[a]anthracene	16C1	0.454	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.455	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.455	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.454	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.45	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.452	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[b]fluoranthene	16C1	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.21	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.2	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[k]fluoranthene	16C1	1.61	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.62	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.62	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.61	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Benzo[k]fluoranthene	16WC1B	1.6	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.61	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo[ghi]perylene	16C1	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.42	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.422	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Benzo(a)pyrene	16C1	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.52	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.52	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.51	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.51	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
1,4-Benzenediamine	16C1	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%).
	16MW8	75.9	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%).
	16MW9	75.9	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%).
	16WC1A	75.6	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%).
	16WC1B	75	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%).
	16WDUP	75.3	U	U	J	300	Analyte not detected at or above the DL or QL. LCS recovered low (20%). Blind field duplicate of 16WC1A.
Benzyl alcohol	16C1	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		30	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		30	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
bis(2-Chloroethoxy)methane	16C1	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
bis(2-Chloroethyl)ether	16C1	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
bis(2-Chloro-1-methylethyl)ether	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
bis(2-Ethylhexyl)phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
4-Bromophenyl phenyl ether	16C1	0.565	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.567	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.567	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.565	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.56	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.562	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Butyl benzyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
p-Chloroaniline	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
p-Chloroaniline	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Chlorobenzilate	16C1	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
p-Chloro-m-cresol	16C1	1.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.02	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.01	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
2-Chloronaphthalene	16C1	0.494	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.496	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.496	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.494	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.49	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.492	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Chlorophenol	16C1	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (40%/31%).
	16MW8	0.992	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (40%/31%).
	16MW9	0.992	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (40%/31%).
	16WC1A	0.988	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (40%/31%).
	16WC1B	0.98	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (40%/31%).
	16WDUP	0.984	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
4-Chlorophenyl phenyl ether	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
4-Chlorophenyl phenyl ether	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Chrysene	16C1	0.313	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.314	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.314	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.313	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.31	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.311	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Diallate	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dibenz(a,h)anthracene	16C1	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.385	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.385	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.38	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.382	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dibenzofuran	16C1	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.587	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.587	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.582	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Di-n-butyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Di-n-butyl phthalate	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3,3'-Dichlorobenzidine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4-Dichlorophenol	16C1	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (37%/34%).
	16MW8	1.61	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (37%/34%).
	16MW9	1.61	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (37%/34%).
	16WC1A	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (37%/34%).
	16WC1B	1.59	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (37%/34%).
	16WDUP	1.6	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
2,6-Dichlorophenol	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
Diethyl phthalate	16C1	2.02	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	2.01	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
O,O-Diethyl O-2-pyrazinyl	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
O,O-Diethyl O-2-pyrazinyl	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Dimethoate	16C1	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	3.04	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	3.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	3	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	3.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
p-(Dimethylamino)azobenzene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
7,12-Dimethylbenz[a]anthracene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3,3'-Dimethylbenzidine	16C1	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16MW8	25.3	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16MW9	25.3	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WC1A	25.2	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WC1B	25	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover.
	16WDUP	25.1	U	U	J	75	Analyte not detected at or above the DL or QL. MS/MSD did not recover. Blind field duplicate of 16WC1A.
a,a-Dimethylphenethylamine	16C1	5.04	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		50	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
a,a-Dimethylphenethylamine	16WC1A	5.04	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4-Dimethylphenol	16C1	0.998	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.998	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	0.99	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.994	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
Dimethyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
m-Dinitrobenzene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
4,6-Dinitro-o-cresol	16C1	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U	J	15	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U	J	15	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
2,4-Dinitrophenol	16C1	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	10.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,4-Dinitrophenol	16WC1B	10	U	U		30	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
2,4-Dinitrotoluene	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,6-Dinitrotoluene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Di-n-octyl phthalate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Diphenylamine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Diphenylamine	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Disulfoton	16C1	25.2	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	25.3	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	25.3	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	25.2	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1B	25	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	25.1	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Ethyl methanesulfonate	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Famphur	16C1	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%).
	16MW8	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%).
	16MW9	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%).
	16WC1A	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%).
	16WC1B	25	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%).
	16WDUP	25.1	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (10%). Blind field duplicate of 16WC1A.
Fluoranthene	16C1	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.425	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.423	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.42	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.422	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Fluorene	16C1	0.383	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.385	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.385	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.383	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Fluorene	16WC1B	0.38	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.382	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Hexachlorobenzene	16C1	0.877	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.881	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.881	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.877	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.87	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.873	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Hexachlorocyclopentadiene	16C1	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Hexachlorophene	16C1	89	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16MW8	100	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16MW9	89	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16WC1A	89	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16WC1B	100	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC).
	16WDUP	89	U	U	J	100	Analyte not detected at or above the DL or QL. Reported by Tentatively Identified Compound (TIC). Blind field duplicate of 16WC1A.
Hexachloropropene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Indeno[1,2,3-cd]pyrene	16C1	0.151	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.152	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.152	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.151	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.15	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.151	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Isodrin	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Isophorone	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Isosafrole	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Kepone	16C1	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%).
	16MW8	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%).
	16MW9	25.3	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%).
	16WC1A	25.2	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%).
	16WC1B	25	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%).
	16WDUP	25.1	U	U	J	50	Analyte not detected at or above the DL or QL. LCS recovered low (28%). Blind field duplicate of 16WC1A.
Methapyrilene	16C1	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16MW8	15.2	U	U		50	Analyte not detected at or above the DL or QL.
	16MW9	15.2	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1A	15.1	U	U		50	Analyte not detected at or above the DL or QL.
	16WC1B	15	U	U		50	Analyte not detected at or above the DL or QL.
	16WDUP	15.1	U	U		50	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
3-Methylcholanthrene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
3-Methylcholanthrene	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Methyl methane sulfonate	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Methylnaphthalene	16C1	0.292	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.294	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.294	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.292	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.291	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Methyl parathion	16C1	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.01	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	1	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Methylphenol	16C1	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U	J	5	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	0.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U	J	5	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
3 & 4-Methylphenol	16C1	0.504	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U	J	5	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
3 & 4-Methylphenol	16WC1B	0.5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U	J	5	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
1,4-Naphthoquinone	16C1	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%).
	16MW8	25.3	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%).
	16MW9	25.3	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%).
	16WC1A	25.2	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%).
	16WC1B	25	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%).
	16WDUP	25.1	U	U	J	60	Analyte not detected at or above the DL or QL. LCS recovered low (9%). Blind field duplicate of 16WC1A.
1-Naphthylamine	16C1	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2-Naphthylamine	16C1	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
o-Nitroaniline	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
m-Nitroaniline	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
p-Nitroaniline	16C1	0.736	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.739	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.739	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.736	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.73	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.733	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Nitrobenzene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
o-Nitrophenol	16C1	1.28	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	1.29	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	1.29	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	1.28	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	1.27	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	1.28	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
p-Nitrophenol	16C1	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW8	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16MW9	10.1	U	U		30	Analyte not detected at or above the DL or QL.
	16WC1A	10.1	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	10	U	U		30	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U	J	30	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
4-Nitroquinoline-1-oxide	16C1	20.2	U	U		60	Analyte not detected at or above the DL or QL.
	16MW8	20.2	U	U		60	Analyte not detected at or above the DL or QL.
	16MW9	20.2	U	U		60	Analyte not detected at or above the DL or QL.
	16WC1A	20.2	U	U		60	Analyte not detected at or above the DL or QL.
	16WC1B	20	U	U		60	Analyte not detected at or above the DL or QL.
	16WDUP	20.1	U	U		60	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodi-n-butylamine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
N-Nitrosodi-n-butylamine	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodiethylamine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodimethylamine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodiphenylamine	16C1	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.587	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.587	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.585	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.58	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.582	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosodipropylamine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosomethylethylamine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
N-Nitrosomethylethylamine	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosomorpholine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosopiperidine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
N-Nitrosopyrrolidine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
5-Nitroso-o-toluidine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Parathion	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Parathion	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachlorobenzene	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachloronitrobenzene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pentachlorophenol	16C1	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (22%/41%).
	16MW8	2.96	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (22%/41%).
	16MW9	2.96	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (22%/41%).
	16WC1A	2.94	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (22%/41%).
	16WC1B	2.92	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (22%/41%).
	16WDUP	2.93	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
Phenacetin	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Phenanthrene	16C1	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.526	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.524	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.52	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.522	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Phenol	16C1	0.776	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.779	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.779	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.776	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%).
	16WC1B	0.77	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.773	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). Blind field duplicate of 16WC1A.
Phorate	16C1	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%).
	16MW8	0.506	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%).
	16MW9	0.506	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%).
	16WC1A	0.504	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%).
	16WC1B	0.5	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%).
	16WDUP	0.502	U	U	J	10	Analyte not detected at or above the DL or QL. CV %D > +/-20% (22%). Blind field duplicate of 16WC1A.
2-Picoline	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pronamide	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pyrene	16C1	0.413	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.415	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.415	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.413	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.41	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.412	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Pyridine	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Pyridine	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Safrole	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Sulfotep	16C1	8.9	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported.
	16MW8	10	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported.
	16MW9	9.3	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported.
	16WC1A	9.3	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported.
	16WC1B	8.9	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported.
	16WDUP	8.9	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD/LCS did not recover; samples were reanalyzed outside holding time with acceptable recoveries. Original result reported. Blind field duplicate of 16WC1A.
1,2,4,5-Tetrachlorobenzene	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,3,4,6-Tetrachlorophenol	16C1	0.685	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (25%/34%).
	16MW8	0.688	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (25%/34%).
	16MW9	0.688	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (25%/34%).
	16WC1A	0.685	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (25%/34%).
	16WC1B	0.68	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (25%/34%).

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,3,4,6-Tetrachlorophenol	16WDUP	0.683	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
o-Toluidine	16C1	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	0.506	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	0.504	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	0.5	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	0.502	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4,5-Trichlorophenol	16C1	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (44%/37%).
	16MW8	0.82	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (44%/37%).
	16MW9	0.82	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (44%/37%).
	16WC1A	0.817	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (44%/37%).
	16WC1B	0.81	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (44%/37%).
	16WDUP	0.813	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
2,4,6-Trichlorophenol	16C1	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26%/26%).
	16MW8	0.638	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26%/26%).
	16MW9	0.638	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26%/26%).
	16WC1A	0.635	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogate recovered low (<10%). MS/MSD recovered low (26%/26%).
	16WC1B	0.63	U	U	J	10	Analyte not detected at or above the DL or QL. MS/MSD recovered low (26%/26%).
	16WDUP	0.633	U	U	J	10	Analyte not detected at or above the DL or QL. Acid surrogates recovered low (3%/9%/20%). MS/MSD recovered low (22%/41%). Blind field duplicate of 16WC1A.
O,O,O-Triethyl phosphorothioate	16C1	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	2.02	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	2	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	2.01	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
sym-Trinitrobenzene	16C1	5.04	U	U		15	Analyte not detected at or above the DL or QL.
	16MW8	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16MW9	5.06	U	U		15	Analyte not detected at or above the DL or QL.
	16WC1A	5.04	U	U		15	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
sym-Trinitrobenzene	16WC1B	5	U	U		15	Analyte not detected at or above the DL or QL.
	16WDUP	5.02	U	U		15	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
Method: 9012B							
Laboratory: ELLE, Lancaster, PA							
Cyanide	16C1	5	U	U		20	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U	J	20	Analyte not detected at or above the DL or QL. LCS recovered low (84%).
	16MW9	5	U	U		20	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		20	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		20	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		20	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes

Definitions:

Appendix IX monitoring events and compliance monitoring wells:
For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.
See separate table for Appendix IX monitoring event detection limits.
QL Denotes permit quantitation limit**.**
Q Denotes data qualifier.
U Denotes analyte not detected at or above laboratory detection limit (DL) or QL.
J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation limit/detection limit is estimated.
UA Denotes analyte not detected at or above adjusted sample detection limit /QL.
UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.
R Denotes result rejected.
Laboratory Data Qualifiers,
"U" and "<", denote not detected at or above the detection limit or QL.
B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:
Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, 2Q 2011, 2Q 2012, 2Q 2013. 2Q 2014, 2Q 2015, 2Q 2016, 2Q 2017

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:
QL Denotes permit quantitation limit**.**
Q Denotes data qualifier.
U Denotes analyte not detected at or above QL.
UA Denotes analyte not detected at or above adjusted sample QL. See data validation report for further explanation.
UN Denotes analyte concentration is less than five times the blank concentration. Analyte was not reliably detected due to blank contamination.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA"(i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated.
R Denotes result rejected. See data validation report for further explanation.
Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

SW-846 METHODS 6020A & 7470A INORGANIC DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 10-13, 2018 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected the groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16SPRING. Sample 16WDUP was submitted to the laboratory as a blind sample duplicate for sample 16WC1A. Validation of other required methods is presented on separate reports.

Samples 16C1, 16MW8, 16MW9, 16WC1A and 16WC1B (compliance wells) were analyzed for fifteen (15) metals by SW-846 Method 6020A and mercury by SW-846 Method 7470A. Samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING (plume wells) were analyzed for eleven (11) metals by SW-846 Method 6020A and mercury by SW-846 Method 7470A. The following information and attached table summarize the inorganic data validation results.

Techniques used for metals analysis include inductively coupled plasma ICP-Mass Spectrometry (ICP-MS) and cold vapor atomic absorption (CVAA). Samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were analyzed for antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium and zinc by ICP-MS Method 6020A and mercury by CVAA Method 7470A. The remaining plume monitoring well samples were analyzed for arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc by ICP-MS Method 6020A and mercury by CVAA Method 7470A. Total (T) concentrations were determined for the inorganic (metal) analytes.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania for the inorganic analyses. On behalf of RFAAP, ELLE submitted results to Draper Aden Associates in a final certificate of analysis which included sample analytical results as well as relevant documentation to verify and validate the results. ELLE is a VELAP accredited laboratory for the above analytes, methods and matrix as reported on the certificate of analysis.

The evaluation of ELLE's compliance with the method and validation of results presented here are based upon a limited review of QA/QC information including holding times, preservation procedures, instrument tuning, calibration and calibration verification data, QL standards, blank samples (method, calibration, and others), interference check sample, pre-digestion matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standard, and serial dilution results, where applicable. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. Applicable holding time and preservation criteria were met. The chain of custody was appropriately signed and dated by field and laboratory personnel.

Method 6020A (ICP-MS)

The revised certificate of analysis was received on July 19, 2018. The certificate of analysis appeared complete in their presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit quantitation limit (QL) or detection limit (DL). The original certificate of analysis was revised to report the project specific DLs and QLs.

QC documentation criteria were met. Applicable instrument tune, calibration and calibration verification requirements were met. Blank, interference check samples, pre-digestion MS/MSD, LCS, internal standard and serial dilution results were within control limits, except where noted below. No deviations from QA/QC control limits were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable, except for zinc.

Target analytes detected at or above the permit detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL should be considered estimated.

For this Appendix IX groundwater monitoring event, results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, and 16WDUP were reported to at or above the laboratory detection limit. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as "U." The reported concentration for target analytes detected less than the QL were validated and qualified "J" to note that the reported concentration should be considered estimated.

Sample results for 16-2, 16-3, 16-5, 16WC2B, and 16SPRING were reported at or above the permit required QL. Sample results unaffected by the data validation process, and not detected at or above the permit QL, were validated and reported as "U." No results were rejected based on the data validation criteria. All QLs were at or below the applicable groundwater protection standard (GPS).

Method 7470A (CVAA)

The revised certificate of analysis was received on July 19, 2018. The certificate of analysis appeared complete in their presentation and the data were of acceptable quality. The data set demonstrated the laboratory's ability to achieve the reported permit QL or DL for mercury. The original certificate of analysis was revised to report the project specific DLs and QLs.

QC documentation criteria were met. Instrument calibration and calibration verification criteria were met. QL standards, blank samples, MS/MSD, and LCS were analyzed as required and applicable criteria were met unless noted below. No deviations from QA/QC control limits were identified during the data review process.

Field duplicate/sample results exhibited acceptable precision, where applicable.

Target analytes detected at or above the permit detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table.

For samples 16-2, 16-3, 16-5, 16WC2B and 16SPRING, results were reported at or above the permit required QL. For this Appendix IX groundwater monitoring event, results for samples 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B were reported to at or above the permit detection limit. Sample results unaffected by the data validation process, and not detected at or above the detection limit or QL, were validated and reported as "U." No results were rejected based on the data validation criteria.

INORGANIC DATA EVALUATION FOR ICP/MS SW-846 METHOD 6020A

ELLE, Lancaster, Pennsylvania; SDG# RAF07-V.3
"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. DOCUMENTION COMPLETENESS CRITERIA:

Data Quality Objective: Representativeness

- ☑ Chain of custody – Custody transfers must be signed and dated
- ☑ Chain of custody properly and completely filled out including sampler signatures, date and time of sampling, sample ID, analysis requested

B. DETECTION LIMIT AND QUANTITATION LIMIT CRITERIA:

Data Quality Objective: Analytical Sensitivity

- ☑ Specific detection limit reported
- ☑ Specific quantitation limit reported
- ☑ Standard analyzed at the QL (LLQC), digested, 70-130% recovery, analyzed after MDL determination and as needed
- ☑ Method detection limit (MDL) less than QL
- ☑ VELAP accredited

C. INITIAL DEMONSTRATION OF CAPABILITY (IDOC) CRITERIA:

Data Quality Objective: Laboratory Method Sensitivity

- ☑ IDOC for analyst C. Tian submitted previously

D. SAMPLE AND STANDARD PREPARATION CRITERIA:

Data Quality Objective: Accuracy and Representativeness

- ☑ Digestion prior to analysis
- ☑ Digestion method: 3005A
- ☑ Samples and standards matrix matched or internal standard used

E. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

Data Quality Objective: Representativeness

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO_3)

F. INSTRUMENT TUNE CRITERIA:

Data Quality Objective: Verify Operating Conditions

- ☑ Prior to calibration
- ☑ Relative Standard Deviation (RSD) </=5%
- ☑ Resolution < 0.9 amu full width at 10% peak height (or lower)
- ☑ Mass calibration </=0.1 amu difference from true value

G. INITIAL CALIBRATION CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ 1 calibration blank and 3 standards,
- ☑ Linear curve fit with correlation coefficient $r \geq 0.998$
- ☑ Daily calibration following tuning and prior to sample analysis

H. INITIAL CALIBRATION VERIFICATION (ICV) CRITERIA:

Data Quality Objective: Laboratory Accuracy

- ☑ Daily following initial calibration, independent/second source used for ICV

- ☑ ICV concentration near mid-point of calibration curve, 90-110% recovery
- ☑ Low level ICV (LLICV) – prior to analysis, at QL concentration, 70-130% recovery

I. INITIAL CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Daily following ICV
- ☑ Interference free

J. CONTINUING CALIBRATION VERIFICATION (CCV) CRITERIA:

Data Quality Objective: Laboratory Analytical Accuracy

- ☑ CCV, prior to analysis, after every 10 samples, at end of analysis
- ☑ CCV recovery within 90-110%, mid-point of curve concentration
- ☑ Low level CCV (LLCCV), concentration at QL, prior to analysis, end of analysis, after every 10 samples, if necessary (70-130% R)

K. CONTINUING CALIBRATION BLANK CRITERIA:

Data Quality Objective: Laboratory Analytical Sensitivity/Instrument Drift/Contamination Evaluation

- ☑ Immediately after the CCV, 10 sample frequency
- ☑ Interference free

L. BLANK CRITERIA:

Data Quality Objective: Sensitivity/Instrument Drift/Contamination Evaluation

- N/A Trip Blank (check only if analyzed)
- ☑ Method/Other Lab Blanks (check only if analyzed), one per digestion batch
- ☑ Interference free

M. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

Data Quality Objective: Analytical Accuracy/Verification of Isobaric Interference Corrections

- ☑ At beginning of analytical run
- ☑ Recovery: 80-120% (ICSAB)

N. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

Data Quality Objective: Method Precision in Sample Matrix

- ☑ All analytes, one MSD or sample duplicate per batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ RPD ≤ 20 between MS and MSD results or sample and duplicate results
- ☑ MSD analyte recovery 75-125%

O. MATRIX SPIKE (MS) CRITERIA:

Data Quality Objective: Method Accuracy in Sample Matrix

- ☑ All analytes, one MS per digestion batch of 20 samples
- ☑ Spiked prior to sample preparation
- ☑ Recovery: 75-125%
- ☑ Post digestion spike if MS/MSD recoveries fail
- ☑ Recovery of post digestion spike analytes within 80-120%

P. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

Data Quality Objective: Laboratory Method Accuracy, Laboratory Performance

- ☑ LCS for all target analytes, one LCS per 20 sample batch
- ☑ LCS concentration at approximately mid-point of analytical curve
- ☑ Recovery within 80-120% for all analytes

Q. INTERNAL STANDARDS (IS) CRITERIA:

Data Quality Objective: Analytical Accuracy in Sample Matrix

- ☑ IS added to each sample and QC sample
- ☑ % Relative intensity (RI) within 70-125%

R. SERIAL DILUTION (DILUTION TEST) TEST CRITERIA:

Data Quality Objective: Accuracy in Sample Matrix

- ☑ <10% Difference (applicable when sample concentration >10X QL)

S. SAMPLE QUANTITATION AND GENERAL REPORTING CRITERIA:

Data Quality Objective: n/a

- ☑ Sample results reported within instrument linear dynamic range
- ☑ Sample results reported to the detection limit (compliance wells)
- ☑ Sample results reported to the quantitation limit (plume wells)

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

INORGANIC DATA EVALUATION FOR MERCURY BY COLD VAPOR AA SW-846 METHOD 7470A

ELLE, Lancaster, Pennsylvania; SDG# RAF07-V.3
"☑" denotes items were reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific detection limits/quantitation limit (QLs) for target analyte
- ☑ Standard analyzed at the QL (70-130% Recovery)
- ☑ VELAP accredited
- ☑ IDOC for analyst D. Valentin submitted previously

B. METHOD INFORMATION DOCUMENTATION:
- ☑ Mercury analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:
- ☑ 28 day holding time
- ☑ Adjust pH <2 w/ HNO_3

D. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 3 standards, correlation coefficient >0.995
- ☑ Instrument calibrated for every analytical sequence for every method

E. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:
- ☑ 10 sample frequency for CCV
- ☑ Recovery within 80-120%

F. BLANK SAMPLE CRITERIA:
- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed)
- ☑ Interference free

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:
- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ Recovery within 75-125% range
- ☑ One MS per batch of 20 samples
- ☑ MS added prior to digestion

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:
- ☑ LCS for mercury
- ☑ Recovery within 80-120%
- ☑ Independent source for LCS

J. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument calibration range
- ☑ Results reported to laboratory detection limit (compliance wells)
- ☑ Results reported to laboratory quantitation limit (plume wells)

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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SW-846 METHOD 8260C VOLATILE ORGANICS DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 10-13, 2018 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind field duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 66 volatile organic target analytes and samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for 20 volatile organic target analytes per USEPA SW-846 Method 8260C. The following information and attached table summarize the Method 8260C data validation results.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the SW-846 Method 8260C volatile analysis. ELLE is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificate of analysis. ELLE submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results (SDG# RAF06).

The evaluation of ELLE's compliance with Method 8260C and validation of the results were based on a review of the following items: QC deliverables package, QC history documentation, technical holding times and preservation requirements, instrument performance (tune) check, instrument calibration and calibration verification data, blank, surrogate spike, matrix spike and matrix spike duplicate (MS/MSD), laboratory control sample (LCS), internal standards results, and/or target analyte identification and quantitation. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples on ice and in good condition, with custody seals intact. The chain of custody (COC) was appropriately signed and dated by field and laboratory personnel. Technical holding time and preservation criteria were met, except where noted below.

The original certificate of analysis was received on June 12, 2018. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. The certificates of analysis demonstrated the ability of the laboratory to achieve the quantitation limit (QL) and method detection limit/detection (MDL/DL) for each target analyte, unless noted below.

QC deliverables package requirements were met. QC history documentation and instrument performance check criteria were met. Tuning, initial calibration, calibration verification, blanks, surrogates, MS/MSD, LCS and internal standards criteria were met, except where noted below. Sample results were verified and no transcription errors were observed.

Acrolein was analyzed using a sample aliquot adjusted to pH <2 SU. Acrolein was not detected at or above the detection limit or QL in any sample. Acrolein sample results were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. Acrolein is not a target analyte for the plume well samples.

Twelve analytes did not meet the continuing calibration verification (CV) standard percent difference/drift requirement (±20%) (see data validation report). For these 12 analytes, sample results not detected at or above the DL, were validated and qualified "UJ" due to the observed QC deficiency. For these 12 analytes detected at or above the DL, results were validated and qualified as "J" to note the result was considered estimated. The remaining CV standard criteria were met. The remaining CV standard criteria were met.

Bromomethane, dimethyl ether, and vinyl chloride recovered low in the LCS. For these three analytes, results not detected at or above the DL were validated and qualified "UJ" due to the observed QC deficiency. For these three analytes detected at or above the DL, results were validated and qualified as "J" to note the result was considered estimated. Tetrahydrofuran recovered high in the LCS. Detected tetrahydrofuran results above the DL were validated and qualified as "J" to note the result was considered estimated. The remaining LCS criteria were met.

Chloromethane and dimethyl ether recovered low in the MS and/or MSD. For these two analytes, sample results not detected at or above the DL were validated and qualified "UJ" due to the observed QC deficiency. For these two analytes, results detected at or above the DL were validated and qualified as "J" to note the result was considered estimated. Tetrahydrofuran and 1,1,1-trichloroethane recovered high in the MS/MSD. Detected results at or above the DL for tetrahydrofuran and 1,1,1-trichloroethane were validated and qualified as "J" to note the result was considered estimated. The remaining MS/MSD criteria were met.

For samples 16C1 and 16MW9, the initial results for diethyl ether exceeded the instrument calibration range. These samples were reanalyzed in dilution and diethyl ether results from the dilution analysis were reported for these samples.

Laboratory analysis was performed using a 25 ml purge volume for the analytes except 2-propanol. 2-Propanol analysis was performed using a 5 ml purge volume.

Field duplicate/sample results for 16WC1A exhibited acceptable precision, where applicable. A trip blank was submitted and analyzed for each day of sampling.

For compliance well samples 16C1, 16MW8, 16MW9, 16WC1A, 16WDUP, and 16WC1B, results were reported to at or above the permit detection limit for this Appendix IX monitoring event. Where permit MDLs were lower than the laboratory's current MDL study, results were reported to the laboratory MDL. For the remaining samples (plume wells), target analytes were reported to at or above the permit QL.

Target analytes detected at or above the detection limit or QL and/or analytical data that required a data validation qualifier due to quality control deviations noted above are summarized on the attached table. The reported concentration for target analytes detected less than the QL should be considered estimated.

Results for samples unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as "U." No results were rejected based on the data validation criteria.

SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS DATA VALIDATION

Comments: *Volatile organic analysis uses a purge and trap system to remove volatile organic target analytes from a 5 or 25 ml water sample (SW-846 5030C). Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1.	Was the case narrative present/signed by a lab representative?	☑ YES ☐ NO
2.	Was the Chain of Custody present/signed by a lab representative?	☑ YES ☐ NO
3.	Were the sample results included for the sample locations?	☑ YES ☐ NO
4.	Did the results correspond to the project specific analyte list?	☑ YES ☐ NO
5.	Were the analyte QLs reported on sample summary sheets in agreement with the MDL study?	☑ YES ☐ NO
6.	Were sample locations, analytes and QLs in agreement with the electronic deliverable (EDD)?	☑ YES ☐ NO
7.	Currently VELAP accredited?	☑ YES ☐ NO

Comments: QC deliverables package requirements were met. The Appendix IX monitoring target analyte list was modified per the 2014 permit modification.

B. QC HISTORY DOCUMENTATION CRITERIA:

1.	Was an instrument specific MDL study provided which included DL and QL values for the target analytes?	☑ YES ☐ NO
2.	Was the instrument calibration range provided?	☑ YES ☐ NO
3.	Were the instrument specific check sample data provided for the target analytes?	☑ YES ☐ NO

Comments: Except as noted above, QC history documentation was provided and met criteria. The laboratory analyzed a MDL check sample at 1 µg/l (5 ml purge) and at 0.1 µg/l (25 ml purge) for most target analytes.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1.	Was the 14-day sample collection to analysis holding time met?	☑ YES ☐ NO
2.	Were the samples received at ≤6°C, zero headspace?	☑ YES ☐ NO
3.	Were the sample pHs adjusted to < 2 with HCl?	☑ YES ☐ NO
4.	Were the sample pHs adjusted to 4-5 with HCl? (Acrolein only)	☐ YES ☑ NO
5.	Were samples analyzed unpreserved (2-chloroethyl vinyl only)	☑ NA ☐ YES ☐ NO

Comments: Technical holding time and sample preservation criteria were met except where noted above.

D. GC/MS INSTRUMENT PERFORMANCE (TUNING) CHECK CRITERIA:

1.	Was the instrument performance check solution analyzed at the beginning of each 12-hour period prior to standards/samples analysis?	☑ YES ☐ NO
2.	Was there documentation of the injection of 5-50 ng bromofluorobenzene (BFB)?	☑ YES ☐ NO
3.	Were the ion abundance criteria met?	☑ YES ☐ NO
4.	Were calibration, blank, and sample analyses performed within 12 hours of tuning?	☑ YES ☐ NO

Comments: Instrument performance check criteria were met.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria*:*

1.	Was the internal standard (IS) which was selected for target analyte RF calculation the IS which had the closest retention time?	☑ YES ☐ NO
2.	Were the target analytes included in the ICAL?	☑ YES ☐ NO
3.	Were any calibration levels removed from the curve that would negatively influence the data integrity?	☐ YES ☑ NO
4.	Did the ICALs consist of a minimum of 5 calibration levels?	☑ YES ☐ NO
5.	Was the lowest concentration calibration standard at or below the associated MCL?	☑ YES ☐ NO
6.	Was the calibration curve developed using the same purge volume used for sample analysis?	☑ YES ☐ NO
7	Were 8260C minimum Relative Response Factor (RRF) criteria met? *Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs*	☑ YES ☐ NO
8.	Was each target analyte %RSD ≤ 20%?	☐ YES ☑ NO
9.	Was the correlation coefficient >0.99 for target analytes with ≥20 % RSD? (*System recalibrated if >10% analytes fail above condition)*	☑ YES ☐ NO
10.	Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL?	☑ YES ☐ NO
11.	Was the recovery within 70-130%?	☑ YES ☐ NO
12.	Was the ICV standard prepared from a different source from the ICAL ?	☑ YES ☐ NO

Method Validation Performance Criteria:

1.	Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination?	☑ YES ☐ NO
2.	For linear regression curves, was the recalculated concentration of the low calibration point within ±30%?	☑ NA ☐ YES ☐ NO
3.	For quadratic curves, was a minimum six standards used?	☑ YES ☐ NO

Comments: Initial calibration criteria were met.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO
2. Were 8260C minimum Relative Response Factor (RRF) criteria met? *Refer to Table 4- SW-846 Method 8260C (Rev3 8/06) for specific analyte RRFs* ☑ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within ± 20%? ☐ YES ☑ NO

If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.

If "NO", list analytes that exceed these criteria: *See data validation report*

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within ± 20%? ☐ YES ☑ NO

Comments: The CV standard criteria were met except where noted above.

G. BLANK CRITERIA:

1. Was a method blank analyzed after the calibration standards, prior to sample analysis, and once for every 12-hour period beginning with the injection of BFB? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ YES ☐ NO
3. Were the trip blanks and method blanks interference free? ☑ YES ☐ NO
4. Was the level of blank contamination less than 5% of the regulatory limit associated with an analyte or less than 5% of the sample result for the same analyte, whichever is greater? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*
6. Did any result exceed the calibration range? ☑ YES ☐ NO
7. Were one or more blanks analyzed following the high concentration sample to prevent cross contamination? ☐ YES ☑ NO

Comments: Blank criteria were met or no data qualification was required.

H. SURROGATE CRITERIA:

SW-846 Criteria:

1. Were the following surrogates used? ☑ YES ☐ NO
   - dibromofluoromethane (80-120%)
   - 4-bromofluorobenzene (80-120%)
   - toluene-d8 (80-120%)
   - 1,2-dichloroethane-d4 (80-120%)
2. Were recoveries within specified ranges? ☑ YES ☐ NO

If "NO", corrective action is required. Flagging of the data as estimated is not acceptable until corrective action has been attempted

3. Were samples with surrogates outside the QC window reanalyzed as required? ☑ NA ☐ YES ☐ NO

Comments: Surrogate criteria were met.

I. MATRIX SPIKE, MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	*% R Water*	*% RPD Water*
1,1-dichloroethene	61-145	14
trichloroethene	71-120	14
benzene	76-127	11
toluene	76-125	13
chlorobenzene	75-130	13

1. Was a matrix spike and matrix spike duplicate (MS/MSD) analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. MS/MSD acceptance range: 75-125%; 70-130% poor purge analytes; RPD ≤20
5. Were analytes qualified as estimated due to MS/MSD criteria? ☑ YES ☐ NO
    - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except where noted above.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample batch analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? (No TICs) ☑ YES ☐ NO
3. List the LCS acceptance criteria: 80-120%; 70-130% for poor purge analytes
4. Were any analytes qualified as estimated? ☑ YES ☐ NO

Comments: LCS criteria were met except where noted above.

K. INTERNAL STANDARDS (IS) CRITERIA:

1. Were the following internal standards (IS) used? ☑ YES ☐ NO
   t-butyl alcohol-d_{10}, fluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
2. Were IS areas within - 50% to + 100% of the last CV? ☑ YES ☐ NO
3. Were IS RTs within ± 30 seconds of the last CV? ☑ YES ☐ NO
4. Were samples failing Items 2 and/or 3 above reanalyzed as required by the method? ☑ NA ☐ YES ☐ NO

Comments: Internal standards criteria were met.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met:
   * Characteristic ions maximize in the same scan or within one scan of each other
   * Characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL
   * Relative intensities of the ions between the standard and sample spectra within ± 30%
3. Were the reported analytes confirmed? ☑ YES ☐ NO

Comments: Target analyte identification criteria were met. See attached table for detected analytes. Identification criteria were met.

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should have been based on a calibration curve using the first or higher order regression fit of the five calibration points. (6 calibration points for 2nd order).

1. List the detected analytes whose %RSD was > 20%: *None*
   - Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of an analyte which exceeded the initial calibration range? ☑ YES ☐ NO
   -If so, was the sample reanalyzed at a higher dilution? ☑ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO
4. Were field sample duplicate RPDs <20 where applicable? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met, where applicable.

N. LIBRARY SEARCHES: Library searches were not requested with this data set.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

The initial demonstration of capability (IDOC) for analysts M. Krause, L. Pape, and D. Viray was submitted previously by the laboratory. No corrective action was taken.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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Engineering ♦ Surveying ♦ Environmental Services

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SW-846 METHOD 8270D SEMIVOLATILE DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 10-13, 2018 groundwater monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, 16WC1B, 16-2, 16-3, 16-5, 16WC2B, and 16Spring. Groundwater sample 16WDUP was submitted to the laboratory as a blind sample duplicate for 16WC1A.

Samples 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B (compliance monitoring wells) were analyzed for 114 semivolatile target analytes. Samples 16-2, 16-3, 16-5, 16WC2B, and 16Spring (plume wells) were analyzed for three semivolatile target analytes per USEPA SW-846 Method 8270D. The following information and attached table summarize the Method 8270D data validation results. Validation of other required methods are presented on separate reports.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania and to TestAmerica Canton, (TestAmerica), of North Canton, Ohio. Each laboratory is a VELAP accredited laboratory for the analytes, method and matrix as reported on the certificates of analysis. Both laboratories submitted results to Draper Aden Associates in a final certificate of analysis that included sample analytical results as well as relevant QA/QC and method performance criteria documentation to verify and validate the results. TestAmerica analyzed hexachlorophene and sulfotep only (Job Number: 240-94103-1). ELLE reported the remaining target analytes (SDG# RAF06).

The evaluation of each laboratory's compliance with Method 8270D and validation of the results was based on a review of the following items: QC deliverables package, QC history documentation, case narrative, technical holding time and preservation requirements, instrument performance (tune) check, instrument calibrations, blank analysis, surrogate spike recoveries, matrix spike and matrix spike duplicate (MS/MSD) analyses, laboratory control sample (LCS) data, and internal standard requirements. A review of the transcriptions from instrument data to sample summary sheets was performed. Calculation verifications were performed on ten percent of the data set, where applicable. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

Each laboratory received the samples on ice and in good condition, with custody seals intact. The chain of custody was appropriately signed and dated by field and laboratory personnel. Technical holding time and sample preservation were met.

The original certificate of analysis was received on June 12, 2018. Each certificate of analysis appeared complete and the data were of acceptable quality, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit required quantitation limit (QL) or detection limit (DL), unless noted below.

QC history documentation, instrument performance check (tuning) criteria, calibration, blank, surrogate, MS/MSD, LCS and internal standard requirements were met, except where noted below. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

Phorate did not meet the continuing calibration verification (CV) standard percent difference/drift requirement (±20%). Phorate was not detected at or above the detection limit or permit QL. Phorate results were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining CV standard criteria were met.

One acid surrogate recovered low (<10%) in sample 16WC1A and three acid surrogates recovered low in sample 16WDUP. 16WC1A and 16WDUP were re-extracted outside holding time criteria with similar surrogate recoveries; the original (in-hold) results were reported as the final results. The acid fraction analytes for 16WC1A and 16WDUP were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining surrogate criteria were met.

Six analytes recovered low in the MS/MSD (see data validation table). Five analytes recovered low in the LCS. 3,3'-Dimethylbenzidine did not recover in the MS/MSD. Sulfotep did not recover in the MS/MSD or LCS. Sulfotep was reanalyzed outside holding time with acceptable recovery. These analytes were not detected at or above the detection limit or permit QL in any sample. Associated results for these analytes were validated and qualified "UJ" to note that the DL and QL were estimated due to the observed QC deficiency. The remaining MS/MSD/LCS criteria were met or no data qualifications were required.

Hexachlorophene was not included in the calibration standards and was reported by the laboratory as a tentatively identified compound (TIC). Hexachlorophene was not detected in any sample and hexachlorophene results were qualified as estimated, "UJ" to note that the detection limit and QL are estimated due to the observed QC deficiency.

Hexachloroethane was analyzed by SW-846 Method 8260C and 8270D; however, final results were reported by 8260C.

Due to analytical limitations, 3-methylphenol and 4-methylphenol cannot be analyzed separately. 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The results reported for 3-methylphenol and 4-methylphenol represent the combined total for both compounds. N-Nitrosodiphenylamine decomposes during analysis to form diphenylamine. The results reported for diphenylamine represent the combined total for both compounds.

For this Appendix IX monitoring event, results for compliance wells (16C1, 16MW8, 16MW9, 16WC1A and 16WC1B) were reported to at or above the detection limit. The detection

limit was based on the current laboratory MDL study. For plume wells (16-2, 16-3, 16-5, 16WC2B, and 16Spring), results were reported to at or above the permit required QL. The sample results unaffected by the data validation process, and not detected at or above the detection limit and/or QL, were validated and reported as "U."

No target analytes were detected. No results were rejected based on the data validation criteria.

SW-846 METHOD 8270D (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Comments: *Semivolatile (a.k.a, base/neutral and acid extractables) analysis involves sample preparation using SW-846 Method 3510C. The semivolatile extracts are concentrated through evaporation. Target analytes are separated and quantified using a capillary column gas chromatograph (GC)/mass spectrometer (MS).*

A. QC DELIVERABLES PACKAGE:

1.	Was the case narrative present/signed by a lab representative?	☑ YES ☐ NO
2.	Was the Chain of Custody present/signed by a lab representative?	☑ YES ☐ NO
3.	Were the sample results included for the sample locations?	☑ YES ☐ NO
4.	Did the data correspond to the project specific analyte list?	☑ YES ☐ NO
5.	Were target analyte QLs reported on sample summary sheets in agreement with the instrument specific MDL study?	☑ YES ☐ NO

Comments: QC deliverables package criteria were met.

B. QC HISTORY DOCUMENTATION CRITERIA:

1.	Were instrument specific detection limits provided for the analytes?	☑ YES ☐ NO
2.	Were the instrument specific QLs for target analytes provided?	☑ YES ☐ NO
3.	Was calibration range specified for the target analytes?	☑ YES ☐ NO

Comments: QC history documentation criteria were met.

C. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

1.	Was the 7-day sample collection to extraction holding time met?	☑ YES ☐ NO
2.	Was the 40-day extraction to analysis holding time met?	☑ YES ☐ NO
3.	Were the samples received at ≤6°C?	☑ YES ☐ NO

Comments: The sample collection to extraction/analysis holding times and preservation criteria were met except where noted.

D. GC/MS INSTRUMENT PERFORMANCE CHECK CRITERIA:
(Tuning, Injection Port and Column Performance)

1.	Was analysis of the instrument performance check solution performed at the beginning of each 12-hour period of standard and/or sample analysis?	☑ YES ☐ NO
2.	Was there documentation of the injection of 50 ng of DFTPP?	☑ YES ☐ NO
3.	Were ion abundance criteria met?	☑ YES ☐ NO
4.	Was the injection port inertness verified by analysis of 4,4'-DDT?	☑ YES ☐ NO
5.	Was the degradation of DDT to DDE and DDD <20%?	☑ YES ☐ NO
	• If no, does associated data require qualification?	☑ NA ☐ YES ☐ NO

- Was the injection port inertness check acceptable? ☑ YES ☐ NO

6. Was column performance checked through the analysis of peak tailing (<2 tailing factor) of pentachlorophenol and benzidine? ☑ YES ☐ NO
   - If no, does associated data require qualification? ☑ NA ☐ YES ☐ NO
   - Was column performance check acceptable? ☑ YES ☐ NO

Comments: Instrument performance check criteria were met. Laboratory tune criteria windows are within those specified by 8270D.

E. INITIAL GC/MS CALIBRATION CRITERIA:

SW-846 Criteria:

1. Were the initial calibrations (ICAL) and any directly associated blanks and samples analyzed within 12-hours of the associated instrument performance (tune) check? ☑ YES ☐ NO
2. Were quantitation ions, used and listed on data, randomly checked against primary quantitation ions as required by Method 8270D and the RFP? ☑ YES ☐ NO
3. Were target analytes included in the ICAL? ☑ YES ☐ NO
4. Did the ICAL consist of a minimum of 5 calibration levels? ☑ YES ☐ NO
5. Was the lowest concentration calibration standard at or below the associated MCL, regulatory compliance, or action limit? ☑ YES ☐ NO
6. Were calibration standards dropped to meet calibration criteria? ☐ YES ☑ NO
7 Were 8270D minimum RRF criteria met?
   Relative Response Factor-range (RRF 0.010-0.900) ☑ YES ☐ NO
   **Refer to Table 4 of SW-846 Method 8270D (Rev4 2/07) for specific analyte RRFs*
8. Was each target analyte %RSD ≤ 20%? ☐ YES ☑ NO
9. Was the correlation coefficient or coefficient of determination >0.99 for target analytes with > 20% RSD? ☑ YES ☐ NO
   **System recalibrated if >10% analytes fail above condition*
10. Was an initial calibration verification (ICV) standard analyzed immediately following the ICAL? ☑ YES ☐ NO
11. Was the recovery within 70-130%? ☑ YES ☐ NO
12. Was the ICV standard prepared from a different source from the ICAL ? ☑ YES ☐ NO

Method Validation Performance Criteria:

1. Did target analytes and surrogates that have RSDs > 20% have ≥0.99 correlation coefficient or coefficient of determination? ☑ YES ☐ NO
2. For linear regression curves, was the recalculated concentration of the low calibration point within ±30%? ☑ NA ☐ YES ☐ NO
3. For quadratic curves, was a minimum six standards used? ☑ YES ☐ NO

Comments: Initial calibration criteria were met except where noted above.

F. CALIBRATION VERIFICATION CRITERIA:

SW-846 Criteria:

1. Was a calibration verification analyzed at the beginning

of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples? The calibration verification may be part of the ICAL or analyzed independently during another 12-hour analysis period. ☑ YES ☐ NO

2. Were 8260C minimum Relative Response Factor (RRF) criteria met?
Refer to Table 4- SW-846 Method 8260C (Rev4 2/07) for specific analyte RRFs ☑ YES ☐ NO
3. Did the target analytes and system monitoring analytes (surrogates) have the % D within ± 20%? ☐ YES ☑ NO
If criteria not met for more than 20% of analytes in the initial calibration, then corrective action must be taken prior to the analysis of samples.
If "NO", list analytes that exceed these criteria: *See data validation report.*

Draper Aden Associates Contractual Requirements:

1. Did the target analytes and system monitoring analytes (surrogates) have % Ds within ± 20%? ☐ YES ☑ NO

Comments: The CV standard criteria were met except where noted above.

G. BLANK CRITERIA:

1. Was a method/extraction blank analyzed on each GC/MS system used for sample analysis? ☑ YES ☐ NO
2. Was a trip blank analyzed with this sample batch? ☑ NA ☐ YES ☐ NO
3. Were the blank samples interference free? ☑ YES ☐ NO
4. Was the level of blank contamination > 5% of the MCL? ☑ NA ☐ YES ☐ NO
5. List target analytes detected in the blanks: *None*

Comments: Blank criteria were met.

H. SURROGATE CRITERIA:

1. Were the following surrogates used? ☑ YES ☐ NO
   - phenol - d_6 (10%-94%)
   - 2-fluorophenol (21%-100%)
   - 2,4,6-tribromophenol (10%-123%)
   - nitrobenzene – d_5 (43%-108%)
   - 2-fluorobiphenyl (43%-116%)
   - p-terphenyl - d_{14} (33%-141%)
2. Were recoveries within the specified ranges? ☐ YES ☑ NO
3. Were any two base/neutral or acid surrogates out of specification or did any one base/neutral or acid extractable surrogate have a recovery of less than 10%? ☑ YES ☐ NO
If yes, was a re-extraction and reanalysis performed to confirm that the non-compliance was due to sample matrix effects rather than laboratory deficiencies? ☑ YES ☐ NO

Comments: Surrogate recovery criteria were met except where noted above.

I. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) CRITERIA:

(MS/MSD Requirements - CLP Guidelines)

Analyte	% R Water	% RPD Water
Phenol	12-110	42
2-Chlorophenol	27-123	40
N-Nitroso-di-n-propylamine	41-116	38
4-Chloro-3-methylphenol	23-97	42
Acenaphthene	46-118	31
4-Nitrophenol	10-80	50
2,4-Dinitrotoluene	24-96	38
Pyrene	26-127	31

1. Was a MS/MSD analyzed per sample batch or every 20 samples, whichever may occur first? ☑ YES ☐ NO
2. Did the MS/MSD spike contain additional target analytes? ☑ YES ☐ NO
3. Was the MS/MSD analyzed on the specific project matrix? ☑ YES ☐ NO
4. List MS/MSD target analytes not within laboratory recovery ranges:
   See semivolatile certificate of analysis
5. Was a LCS analyzed to address failed MS spike criteria? ☑ YES ☐ NO
6. Did the LCS for the failed MS analyte(s) fall within the recovery ranges and was the problem identified as matrix interference? ☑ YES ☐ NO
7. Were analytes qualified as estimated due to MS/MSD criteria? ☑ YES ☐ NO
   - If yes, and the LCS for the analyte(s) recovered within control limits, matrix interference is suspected.

Comments: MS/MSD criteria were met except where noted above.

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

1. Was a LCS included in the sample analysis? ☑ YES ☐ NO
2. Did the LCS contain the required target analytes? ☑ YES ☐ NO
3. List the LCS target analytes and laboratory recovery range.
   See semivolatile certificate of analysis.
4. Were any analytes qualified as estimated due to LCS criteria? ☑ YES ☐ NO

Comments: LCS criteria were met except where noted above.

K. INTERNAL STANDARDS CRITERIA:

1. Were the following internal standards (IS) used? ☑ YES ☐ NO
   - 1,4-Dichlorobenzene-d_4
   - Naphthalene-d_8
   - Acenapththene-d_{10}
   - Phenanthrene-d_{10}
   - Pyrene-d_{10} (Chrysene-d_{12}-TestAmerica)
   - Perylene-d_{12}

2. Were IS areas within ± 50% of last CV? ☑ YES ☐ NO
3. Were IS RTs within ± 30 seconds of last CV? ☑ YES ☐ NO

Comments: Internal standard criteria were met or no data qualification was required.

L. TARGET ANALYTE IDENTIFICATION:

1. Were the RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT? ☑ NA YES ☐ NO
2. Check the sample spectra against the laboratory standard spectra to see that the following criteria were met: ☑ NA YES ☐ NO
   * Did characteristic ions maximize in the same scan or within one scan of each other?
   * Were the characteristic ions present in the standard spectra present in the sample spectra for analytes detected above the QL?
   * Were the relative ion intensities between the standard and sample spectra within ± 30%?
3. Were the reported analytes confirmed? ☑ NA YES ☐ NO

Comments*:* Target analyte identification criteria were met. No target analytes were detected at or above the detection limit or permit QL (compliance samples) or the permit QL (plume samples).

M. TARGET ANALYTE QUANTITATION:

* If the %RSD of an analyte was 20% or less, then the average relative response factor should have been used for quantitation.
* If the %RSD of an analyte was greater than 20%, then the quantitation should be based on a calibration curve using the first or higher order regression fit of the five calibration points (6 calibration points for 2nd order).

1. List the analytes detected above the QL whose %RSD was >20%: *None*
   a. Was quantitation based on a linear regression fit? ☑ NA ☐ YES ☐ NO
   b. Was the curve forced through the origin? ☑ NA ☐ YES ☐ NO
2. Did the initial analysis of any sample have a concentration of a target analyte that exceeded the initial calibration range? ☐ YES ☑ NO
   -If so, was the sample reanalyzed at a higher dilution? ☑ NA ☐ YES ☐ NO
3. Were the analyte concentrations that were recorded on the raw sample quantitation reports accurately transferred to the sample summary sheets? ☑ YES ☐ NO

Comments: Target analyte quantitation criteria were met.

N[JF1]. LIBRARY SEARCHES: Library searches were not requested with this data set.

O. CORRECTIVE ACTION TAKEN AND GENERAL COMMENTS:

Comments: The initial demonstration of capability (IDOC) for analysts (TestAmerica), B. Smith and A. Transue (ELLE) was submitted previously. No corrective action was taken.

REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and instrument data provided by the analyzing laboratory. Data were evaluated in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, where applicable). Where QA/QC criteria differed, the analytical method acceptance criteria were used. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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SW-846 METHOD 9012B DATA REVIEW SUMMARY

Draper Aden Associates performed a comprehensive manual review of the analytical results for the April 10-13, 2018 monitoring event at Hazardous Waste Management Unit 16 (HWMU 16) located at the Radford Army Ammunition Plant (RFAAP), Radford, Virginia. Draper Aden Associates collected groundwater samples from monitoring wells 16C1, 16MW8, 16MW9, 16WC1A, and 16WC1B. Sample 16WDUP was submitted to the laboratory as a blind field sample duplicate for 16WC1A.

The samples were analyzed for cyanide by SW-846 Method 9012B. The following information and attached table summarize the data validation results. Validation of other required methods is presented on separate reports.

Draper Aden Associates sent samples to Eurofins Lancaster Laboratories Environmental (ELLE), of Lancaster, Pennsylvania. ELLE performed the Method 9012B analysis. The laboratory submitted results to Draper Aden Associates in a final certificate of analysis, which included sample analytical results as well as relevant documentation to validate and verify the results. The laboratory is a VELAP accredited laboratory for the above analyte, method, and matrix reported.

The evaluation of ELLE's compliance with the analytical methods and validation of results presented here are based upon a limited review of quality assurance/quality control (QA/QC) information including holding times, preservation procedures, calibration standards, blank samples (method, calibration and other blanks), matrix spike/matrix spike duplicate (MS/MSD) or matrix spike/sample duplicate (MS/DUP), and laboratory control standard (LCS) results. A review of transcriptions from instrument data to sample summary sheets was performed. Calculation checks were performed on a minimum ten percent of the data set. The following information is intended to summarize data review results and any observed significant deviations from method and/or contractual requirements.

ELLE received the samples in good condition with custody seals intact. Technical holding time and preservation criteria were met.

The original certificate of analysis was received on June 12, 2018. The certificate of analysis appeared complete in its presentation and the data were of acceptable quality. Documentation was provided to demonstrate the ability of the laboratory to achieve the reported project quantitation limit (QL) or detection limit (DL) for cyanide.

QC history documentation, holding time, sample preservation, instrument calibration and calibration verification criteria were met. Blank, MS/MSD, and LCS samples were analyzed as required and results were within control limits, unless noted below. The blanks were interference free.

One LCS recovered low (applied to 16MW8 only). 16MW8 was re-extracted and reanalyzed outside the holding time criteria with acceptable LCS recovery. The original in-hold result was reported as the final result. Cyanide was not detected at or above the DL or QL in 16MW8 and the final result was validated and qualified "UJ" due to the observed QC deficiency.

Field duplicate/sample results exhibited acceptable precision, where applicable.

For this Appendix IX monitoring event, cyanide results were reported to at or above the detection limit. Cyanide was not detected at or above the laboratory detection limit or permit defined QL in any sample and sample results for cyanide were validated and reported as "U." No results were rejected based on data validation criteria.

INORGANIC DATA EVALUATION FOR CYANIDE BY SW-846 METHOD 9012B

ELLE, Lancaster, Pennsylvania; SDG# RAF06
Preparation Method: 9012B

"☑" denotes items reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:
- ☑ Specific detection limit for target analyte
- ☑ Specific QLs for target analyte
- ☑ VELAP accredited
- ☑ IDOC for analyst G. Baldree and B. White submitted previously

B. METHOD INFORMATION DOCUMENTATION:
- ☑ Cyanide analyzed by requested method

C. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:
- ☑ 14 day holding time
- ☑ Cool ≤6° C
- ☑ Adjust pH >12 w/ NaOH

D. INSTRUMENT CALIBRATION CRITERIA:
- ☑ 1 calibration blank and at least 3 standards; correlation coefficient ≥ 0.995

E. INITIAL / CONTINUING CALIBRATION VALIDATION CRITERIA:
- ☑ ICV, recovery 85-115%
- ☑ 10 sample frequency for CCV, recovery 85-115%

F. BLANK SAMPLE CRITERIA:
- ☑ Interference free
- ☑ ICB, then 10 sample frequency for CCB
- ☑ One preparation blank per sample batch

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:
- ☑ One MSD or sample duplicate for every 20 samples
- ☑ RPD ≤20 between MS and MSD or sample and duplicate results
- ☑ Recovery 75-125% for MSD

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:
- ☑ One MS sample for every 20 samples
- ☑ MS recovered within 75-125%
- ☑ Spike added prior to distillation

I. LABORATORY CONTROL SAMPLE (LCS) SAMPLE CRITERIA:
- ☑ One LCS sample for every 20 samples

☑ LCS recovered within 80-120%
☑ Spike added prior to distillation

J. SAMPLE RESULTS CRITERIA:

☑ Sample results reported within calibration range
☑ Sample results reported to the method detection limit

REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted using SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA, III, and subsequent updates) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017, where applicable). Validation of this data set is limited to review of items detailed in this data review report. Additionally, laboratory specific acceptance criteria and/or historical program acceptance criteria were used when no other acceptance criteria was available. Validation of this data set is limited to the items detailed in this report.

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Comprehensive Data Validation Report

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16 Monitoring Event: Second Quarter 2018

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Barium	16WC1A	276		276		10	No action taken.
	16WDUP	275		275		10	No action taken. Blind field duplicate of 16WC1A.
Cobalt	16WC1A	12.3		12.3		5	No action taken.
	16WDUP	12.4		12.4		5	No action taken. Blind field duplicate of 16WC1A.
Nickel	16WC1A	12.1		12.1		10	No action taken.
	16WDUP	12.1		12.1		10	No action taken. Blind field duplicate of 16WC1A.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethane	16WC1A	2.41		2.41		1	No action taken.
	16WDUP	2.29		2.29		1	No action taken. Blind field duplicate of 16WC1A.
Diethyl ether	16WC1A	14.9		14.9		12.5	No action taken.
	16WDUP	14.2		14.2		12.5	No action taken. Blind field duplicate of 16WC1A.

Definitions:
Data Validation Qualifiers:
QL Denotes permit quantitation limit. **Q** Denotes data qualifier.
J Denotes analyte reported at or above quantitation limit and associated result is estimated.

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 6020A		
Laboratory: ELLE, Lancaster, PA		
Antimony	2	0.4
Arsenic	10	2
Barium	10	1
Beryllium	1	0.2
Cadmium	1	0.2
Chromium	5	1
Cobalt	5	1
Copper	5	1
Lead	2	0.2
Nickel	10	2
Selenium	10	3
Silver	2	0.2
Thallium	1	0.2
Vanadium	10	1
Zinc	30	7.3
Method: 7470A		
Laboratory: ELLE, Lancaster, PA		
Mercury	2	0.2

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 8260C		
Laboratory: ELLE, Lancaster, PA		
Acetone	10	3
Acetonitrile	100	31.7
Acrolein	25	5
Acrylonitrile	10	1
Allyl chloride	10	0.82
Benzene	1	0.1
Bromodichloromethane	1	0.1
Bromoform	1	0.106
2-Butanone	10	1
Carbon disulfide	10	0.4
Carbon tetrachloride	1	0.1
Chloroethane	1	0.1
Chloroform	1	0.1
Chloroprene	10	0.46
Dibromochloromethane	1	0.1
1,2-Dibromo-3-chloropropane	1	0.204
1,2-Dibromoethane	1	0.1
1,2-Dichlorobenzene	1	0.1
1,3-Dichlorobenzene	1	0.1
1,4-Dichlorobenzene	1	0.1
trans-1,4-Dichloro-2-butene	10	1
Dichlorodifluoromethane	1	0.1
1,1-Dichloroethane	1	0.135
1,2-Dichloroethane	1	0.147
1,1-Dichloroethene	1	0.223
trans-1,2-Dichloroethene	1	0.162
1,2-Dichloropropane	1	0.107
1,3-Dichloropropane	1	0.1
trans-1,3-Dichloropropene	1	0.1
Diethyl ether	12.5	0.1
Dimethyl ether	12.5	0.1
1,4-Dioxane	200	45.5
Ethylbenzene	1	0.1
Ethyl methacrylate	10	0.81
Hexachlorobutadiene	1	0.1
Hexachloroethane	10	0.11
2-Hexanone	10	1
Isobutyl alcohol	200	10
Methacrylonitrile	100	9.75
Bromomethane	1	0.542
Chloromethane	1	0.2
Iodomethane	10	0.58
Methyl methacrylate	10	3.58
4-Methyl-2-pentanone	10	1
Dibromomethane	1	0.1
Methylene chloride	1	0.2
Naphthalene	1	0.126
Pentachloroethane	10	0.8
2-Propanol	100	50
Propionitrile	100	10.2

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Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 8260C		
Laboratory: ELLE, Lancaster, PA		
Styrene	1	0.1
1,1,1,2-Tetrachloroethane	1	0.1
1,1,2,2-Tetrachloroethane	1	0.184
Tetrachloroethene	1	0.1
Tetrahydrofuran	25	2
Toluene	1	0.1
1,2,4-Trichlorobenzene	1	0.13
1,1,1-Trichloroethane	1	0.13
1,1,2-Trichloroethane	1	0.1
Trichloroethene	1	0.177
Trichlorofluoromethane	1	0.176
1,2,3-Trichloropropane	1	0.3
1,1,2-Trichloro-1,2,2-Trifluoroethane	1	0.2
Vinyl acetate	10	3.29
Vinyl chloride	1	0.153
Xylenes (Total)	3	0.208

Summary of Quantitation Limits and Detection Limits
Radford Army Ammunition Plant (RFAAP), Radford, VA
Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
Acenaphthene	10	0.35
Acenaphthylene	10	0.48
Acetophenone	10	0.5
2-Acetylaminofluorene	10	2
4-Aminobiphenyl	10	0.5
Aniline	10	0.5
Anthracene	10	0.52
Aramite	15	5
Benzo[a]anthracene	10	0.45
Benzo[b]fluoranthene	10	1.2
Benzo[k]fluoranthene	10	1.6
Benzo[ghi]perylene	10	0.423
Benzo(a)pyrene	10	1.51
1,4-Benzenediamine	300	75.6
Benzyl alcohol	30	10.1
bis(2-Chloroethoxy)methane	5	0.504
bis(2-Chloroethyl)ether	5	0.504
bis(2-Chloro-1-methylethyl)ether	10	0.504
bis(2-Ethylhexyl)phthalate	10	2.02
4-Bromophenyl phenyl ether	10	0.5
Butyl benzyl phthalate	10	2.02
p-Chloroaniline	10	2.02
Chlorobenzilate	10	3.02
p-Chloro-m-cresol	10	1.02
2-Chloronaphthalene	10	0.494
2-Chlorophenol	10	0.988
4-Chlorophenyl phenyl ether	10	0.5
Chrysene	10	0.313
Diallate	10	1.01
Dibenz(a,h)anthracene	10	0.383
Dibenzofuran	10	0.585
Di-n-butyl phthalate	10	2.02
3,3'-Dichlorobenzidine	10	2.02
2,4-Dichlorophenol	10	1.6
2,6-Dichlorophenol	10	0.5
Diethyl phthalate	5	2
O,O-Diethyl O-2-pyrazinyl	10	2
Dimethoate	10	3
p-(Dimethylamino)azobenzene	10	0.504
7,12-Dimethylbenz[a]anthracene	10	0.504
3,3'-Dimethylbenzidine	75	25.2
a,a-Dimethylphenethylamine	50	5.04
2,4-Dimethylphenol	10	0.998
Dimethyl phthalate	10	2.02
m-Dinitrobenzene	10	2.02
4,6-Dinitro-o-cresol	15	5.04
2,4-Dinitrophenol	30	10.1
2,4-Dinitrotoluene	10	1
2,6-Dinitrotoluene	10	0.5
Di-n-octyl phthalate	10	2.02

Summary of Quantitation Limits and Detection Limits
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Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
Diphenylamine	10	0.504
Disulfoton	50	25.2
Ethyl methanesulfonate	10	0.504
Famphur	50	25.2
Fluoranthene	10	0.423
Fluorene	10	0.383
Hexachlorobenzene	10	0.877
Hexachlorocyclopentadiene	15	5.04
Hexachlorophene	100	10
Hexachloropropene	10	2.02
Indeno[1,2,3-cd]pyrene	10	0.151
Isodrin	10	0.504
Isophorone	10	0.504
Isosafrole	10	2.02
Kepone	50	25.2
Methapyrilene	50	15.1
3-Methylcholanthrene	10	0.504
Methyl methane sulfonate	10	1.01
2-Methylnaphthalene	10	0.292
Methyl parathion	10	1.01
2-Methylphenol	5	0.504
3 & 4-Methylphenol	5	0.504
1,4-Naphthoquinone	60	25.2
1-Naphthylamine	15	5.04
2-Naphthylamine	15	5.04
o-Nitroaniline	10	0.504
m-Nitroaniline	10	0.504
p-Nitroaniline	10	0.736
Nitrobenzene	10	0.504
o-Nitrophenol	10	1.28
p-Nitrophenol	30	10.1
4-Nitroquinoline-1-oxide	60	20.2
N-Nitrosodi-n-butylamine	10	2.02
N-Nitrosodiethylamine	10	0.504
N-Nitrosodimethylamine	10	2.02
N-Nitrosodiphenylamine	10	0.585
N-Nitrosodipropylamine	10	0.504
N-Nitrosomethylethylamine	10	2.02
N-Nitrosomorpholine	10	2.02
N-Nitrosopiperidine	10	0.504
N-Nitrosopyrrolidine	10	0.504
5-Nitroso-o-toluidine	10	0.504
Parathion	10	2.02
Pentachlorobenzene	10	0.504
Pentachloronitrobenzene	10	2.02
Pentachlorophenol	10	2.94
Phenacetin	10	0.504
Phenanthrene	10	0.524
Phenol	10	0.776
Phorate	10	0.504

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Appendix IX Monitoring Event
Monitoring Event: Second Quarter 2018

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Engineering ◆ Surveying ◆ Environmental Services

Analyte	Quantitation Limit/QL (ug/L)	Detection Limit/DL (ug/L)
Method: 8270D		
Laboratory: ELLE, Lancaster, PA		
2-Picoline	10	2.02
Pronamide	10	0.504
Pyrene	10	0.413
Pyridine	10	2.02
Safrole	10	2.02
Sulfotep	10	1
1,2,4,5-Tetrachlorobenzene	10	2.02
2,3,4,6-Tetrachlorophenol	10	0.685
o-Toluidine	10	0.504
2,4,5-Trichlorophenol	10	0.817
2,4,6-Trichlorophenol	10	0.635
O,O,O-Triethyl phosphorothioate	10	2.02
sym-Trinitrobenzene	15	5.04
Method: 9012B		
Laboratory: ELLE, Lancaster, PA		
Cyanide	20	5

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 04/10/18-04/13/18

SDG# RAF06

GROUP	SAMPLE NUMBERS
1931896	9558695-9558711

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **06/08/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF06
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9558695	16C1	04/13/2018 10:05	04/14/2018 11:50
9558696	16MW8	04/10/2018 14:20	04/14/2018 11:50
9558697	16MW9	04/13/2018 09:10	04/14/2018 11:50
9558698	16WC1A	04/12/2018 15:15	04/14/2018 11:50
9558699	16WC1A MS	04/12/2018 15:15	04/14/2018 11:50
9558700	16WC1A MSD	04/12/2018 15:15	04/14/2018 11:50
9558701	16WC1A DUP	04/12/2018 15:15	04/14/2018 11:50
9558702	16WDUP	04/12/2018 15:30	04/14/2018 11:50
9558703	16WC1B	04/12/2018 14:20	04/14/2018 11:50
9558704	16-2	04/10/2018 13:35	04/14/2018 11:50
9558705	16-3	04/12/2018 13:30	04/14/2018 11:50
9558706	16-5	04/10/2018 11:40	04/14/2018 11:50
9558707	16WC2B	04/10/2018 12:50	04/14/2018 11:50
9558708	16SPRING	04/10/2018 11:45	04/14/2018 11:50
9558709	Trip Blank 1	04/10/2018 00:00	04/14/2018 11:50
9558710	Trip Blank 2	04/10/2018 00:00	04/14/2018 11:50
9558711	Trip Blank 3	04/10/2018 00:00	04/14/2018 11:50

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Sample pH Log

SDG: RAF06

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Cl- Present?	Corrective Substance	CS Lot #	Record Date	Employee
9558695	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:54:47PM	12665
9558695	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:19AM	9052
9558695	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:56PM	10002
9558695	038E	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/25/2018 11:16:59AM	9052
9558695	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:03:04PM	12665
9558695	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:44PM	12665
9558696	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:54:05PM	12665
9558696	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:15AM	9052
9558696	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:49PM	10002
9558696	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:03:13PM	12665
9558696	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:53PM	12665
9558697	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:53:43PM	12665
9558697	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:15AM	9052
9558697	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:49PM	10002
9558697	038D	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/25/2018 11:16:57AM	9052
9558697	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:06PM	12665
9558697	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:25PM	12665
9558698	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:34:22PM	12665
9558698	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:15AM	9052
9558698	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:49PM	10002
9558698	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:16PM	12665
9558698	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:02:35PM	12665
9558699	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:55:35PM	12665
9558699	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:15AM	9052
9558699	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:49PM	10002
9558699	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:15AM	9052
9558699	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:49PM	12665
9558699	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:58PM	12665
9558700	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558700	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:49PM	10002
9558700	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558700	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:35PM	12665
9558700	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:18PM	12665
9558701	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:54:26PM	12665
9558702	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:55:56PM	12665
9558702	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558702	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:50PM	10002
9558702	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:27PM	12665

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Cl- Present?	Corrective Substance	CS Lot #	Record Date	Employee
9558702	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:09PM	12665
9558703	002A	>12	>12	PK	NA	NA	NA	NA	NA	Y	N	NA	NA	N	NA	NA	4/14/2018 5:55:14PM	12665
9558703	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558703	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/23/2018 3:47:50PM	10002
9558703	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:53PM	12665
9558703	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:01:01PM	12665
9558704	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:22:17AM	9052
9558704	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:36PM	12665
9558704	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:45PM	12665
9558705	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:22:15AM	9052
9558705	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:02PM	12665
9558705	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:10PM	12665
9558706	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:22:15AM	9052
9558706	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:19PM	12665
9558706	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 6:00:27PM	12665
9558707	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:22:15AM	9052
9558707	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 5:59:26PM	12665
9558707	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 5:59:43PM	12665
9558708	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:22:15AM	9052
9558708	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 5:59:35PM	12665
9558708	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/14/2018 5:35:47PM	12665
9558709	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558710	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052
9558711	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	4/24/2018 9:21:16AM	9052

Check Code Key

PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C
11997 VOCs- 5ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14241 SVOAs 8270D MINI

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

08255 Total Cyanide (water)

During the distillation step, complex cyanides are converted to hydrogen cyanide which readily reacts with chloramine T. Simple cyanides are converted to cyanogen chloride by reaction with chloramine T. This reacts with pyridine and barbituric acid to give a red colored complex determined colorimetrically.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 9012B Rev. 2, November 2004.

08256 Cyanide Water Distillation

The sample is acidified and distilled. Cyanide is released as hydrogen cyanide and is absorbed in a sodium hydroxide solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 9012B Rev. 2, November 2004.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: May 14, 2018 10:00

Project: RAAP - Radford, VA - HWMU16

Account #: 11200
Group Number: 1931896
SDG: RAF06
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
16C1 Grab Groundwater	04/13/2018 10:05	9558695
16MW8 Grab Groundwater	04/10/2018 14:20	9558696
16MW9 Grab Groundwater	04/13/2018 09:10	9558697
16WC1A Grab Groundwater	04/12/2018 15:15	9558698
16WC1A MS Grab Groundwater	04/12/2018 15:15	9558699
16WC1A MSD Grab Groundwater	04/12/2018 15:15	9558700
16WC1A DUP Grab Groundwater	04/12/2018 15:15	9558701
16WDUP Grab Groundwater	04/12/2018 15:30	9558702
16WC1B Grab Groundwater	04/12/2018 14:20	9558703
16-2 Grab Groundwater	04/10/2018 13:35	9558704
16-3 Grab Groundwater	04/12/2018 13:30	9558705
16-5 Grab Groundwater	04/10/2018 11:40	9558706
16WC2B Grab Groundwater	04/10/2018 12:50	9558707
16SPRING Grab Groundwater	04/10/2018 11:45	9558708
Trip Blank 1 Water	04/10/2018	9558709
Trip Blank 2 Water	04/10/2018	9558710
Trip Blank 3 Water	04/10/2018	9558711

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU16
ELLE Group #: 1931896

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C 25mL purge, GC/MS Volatiles

Sample #s: 9558703

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Sample #s: 9558709, 9558710, 9558711

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A targeted library search was performed yielding the following results: ethylene oxide and 1-propanol are non-detect.

Sample #s: 9558695

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The

calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane and tetrahydrofuran.

Sample #s: 9558697, 9558698, 9558702

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.

Sample #s: 9558696

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: tetrahydrofuran.

Sample #s: 9558699, 9558700

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Batch #: I181133AA (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711 UNSPK: 9558698)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Acetonitrile

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene, Freon 113, Allyl Chloride, trans-1,2-Dichloroethene, 2-Butanone, Tetrahydrofuran, 1,1,1-Trichloroethane, Trichloroethene, 4-Methyl-2-pentanone, Tetrachloroethene, 2-Hexanone, Ethylbenzene, Styrene, Hexachlorobutadiene, Xylene (Total)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Dimethyl ether

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9558695, 9558696, 9558697, 9558699, 9558700, 9558702, 9558703

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

Sample #s: 9558698

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

Batch #: 18106WAO026 (Sample number(s): 9558695-9558700, 9558702-9558703 UNSPK: 9558698)

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: 1,4-Naphthoquinone
The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: 2,3,4,6-Tetrachlorophenol, 3,3'-Dimethylbenzidine, 2,4,5-Trichlorophenol, 2-Chlorophenol, 2,4-Dichlorophenol, 2,4,6-Trichlorophenol, Pentachlorophenol

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 4-Methylphenol, 4-Chloro-3-methylphenol, Pentachlorophenol, 2-Methylphenol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9558698, 9558699, 9558702, MS

SW-846 9012B, Wet Chemistry

Sample #s: 9558696

The holding time was not met. The sample was originally analyzed on 4/20/2018, but the laboratory control standard (LCS) was out of specification at 73%. The sample was re-prepped and re-analyzed on 4/24/2018, but the LCS was out of specification again (89%). The sample was re-prepped and re-analyzed once more on 4/26/2018 with an acceptable LCS. The result for all three trials was non-detect. The initial trial is being reported.

Batch #: 18108117101A (Sample number(s): 9558696 UNSPK: P558570 BKG: P558570)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Total Cyanide (water)

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.268 J	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	2.54	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	0.205 J	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	5.86	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	7.20 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	43.9	2.78	31.3	2.5
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	0.847 J	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.250 J	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	15.6 J	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	0.145 J	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	0.206 J	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

*=This limit was used in the evaluation of the final result

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane and tetrahydrofuran.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	0.504	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.02	10.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.504	10.1	1
14241	Aniline	62-53-3	N.D.	0.504	10.1	1
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	2.02	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	5.04	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	5.04	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.504	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.504	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.504	10.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	0.998	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.04	15.1	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.02	10.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	15.1	1
14241	Hexachloroethane	67-72-1	N.D.	1.01	10.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	2.02	10.1	1
14241	Kepone	143-50-0	N.D.	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	1.01	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.504	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.504	5.04	1
14241	4-Methylphenol	106-44-5	N.D.	0.504	5.04	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1-Naphthylamine	134-32-7	N.D.	5.04	15.1	1
14241	2-Naphthylamine	91-59-8	N.D.	5.04	15.1	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.504	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	0.504	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	0.504	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.736	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.504	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	1.28	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.02	10.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.504	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.585	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.02	10.1	1
14241	Parathion	56-38-2	N.D.	2.02	10.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	0.504	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	0.504	10.1	1
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF06-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558695
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.685	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	0.504	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.04	15.1	1

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 11:19	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 07:31	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181142AA	04/24/2018 23:17	Don V Viray	2.5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 11:19	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 07:31	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	I181142AA	04/24/2018 23:17	Don V Viray	2.5
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 14:38	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101A	04/26/2018 16:36	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101A	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	0.309 J	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	0.332 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	10.8 J	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	2.29 J	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: tetrahydrofuran.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.354	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.486	10.1	1
14241	Acetophenone	98-86-2	N.D.	0.506	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.02	10.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.506	10.1	1
14241	Aniline	62-53-3	N.D.	0.506	10.1	1
14241	Anthracene	120-12-7	N.D.	0.526	10.1	1
14241	Aramite	140-57-8	N.D.	5.06	15.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.455	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.52	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.425	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.62	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.4	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.567	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	2.02	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.04	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.506	5.06	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.506	5.06	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.506	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.496	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.992	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.506	10.1	1
14241	Chrysene	218-01-9	N.D.	0.314	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.385	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.587	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.61	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.506	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethoate	60-51-5	N.D.	3.04	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.506	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.506	10.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.3	75.9	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.06	50.6	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	1.00	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.06	15.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.1	30.4	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.506	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.3	50.6	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.506	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.02	10.1	1
14241	Famphur	52-85-7	N.D.	25.3	50.6	1
14241	Fluoranthene	206-44-0	N.D.	0.425	10.1	1
14241	Fluorene	86-73-7	N.D.	0.385	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.881	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.06	15.2	1
14241	Hexachloroethane	67-72-1	N.D.	1.01	10.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.152	10.1	1
14241	Isodrin	465-73-6	N.D.	0.506	10.1	1
14241	Isophorone	78-59-1	N.D.	0.506	10.1	1
14241	Isosafrole	120-58-1	N.D.	2.02	10.1	1
14241	Kepone	143-50-0	N.D.	25.3	50.6	1
14241	Methapyrilene	91-80-5	N.D.	15.2	50.6	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	1.01	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.506	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.294	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.506	5.06	1
14241	4-Methylphenol	106-44-5	N.D.	0.506	5.06	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.3	60.7	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1-Naphthylamine	134-32-7	N.D.	5.06	15.2	1
14241	2-Naphthylamine	91-59-8	N.D.	5.06	15.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.506	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	0.506	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	0.506	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.739	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.506	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.506	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	1.29	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.4	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.7	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.506	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.02	10.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.506	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.587	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.506	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.506	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.02	10.1	1
14241	Parathion	56-38-2	N.D.	2.02	10.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.506	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.96	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.506	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.526	10.1	1
14241	Phenol	108-95-2	N.D.	0.779	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.9	304	1
14241	Phorate	298-02-2	N.D.	0.506	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	0.506	10.1	1
14241	Pyrene	129-00-0	N.D.	0.415	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF06-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558696
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.688	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	0.506	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.820	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.638	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.06	15.2	1

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

The holding time was not met. The sample was originally analyzed on 4/20/2018, but the laboratory control standard (LCS) was out of specification at 73%. The sample was re-prepped and re-analyzed on 4/24/2018, but the LCS was out of specification again (89%). The sample was re-prepped and re-analyzed once more on 4/26/2018 with an acceptable LCS. The result for all three trials was non-detect. The initial trial is being reported.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 11:40	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 06:27	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 11:40	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 06:27	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 15:06	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	2	18108117101A	04/20/2018 11:19	Brianna A White	1
08256	Cyanide Water Distillation	SW-846 9012B	1	18108117101A	04/18/2018 17:00	Barbara A Washington	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.256 J	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	1.31	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	6.10	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	1.41 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	44.3	2.78	31.3	2.5
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.354	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.486	10.1	1
14241	Acetophenone	98-86-2	N.D.	0.506	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.02	10.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.506	10.1	1
14241	Aniline	62-53-3	N.D.	0.506	10.1	1
14241	Anthracene	120-12-7	N.D.	0.526	10.1	1
14241	Aramite	140-57-8	N.D.	5.06	15.2	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.455	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.52	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.425	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.62	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.4	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.567	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	2.02	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.04	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.506	5.06	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.506	5.06	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.506	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.496	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.992	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.506	10.1	1
14241	Chrysene	218-01-9	N.D.	0.314	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.385	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.587	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.61	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.506	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethoate	60-51-5	N.D.	3.04	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.506	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.506	10.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.3	75.9	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.06	50.6	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	1.00	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.06	15.2	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.1	30.4	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.506	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.3	50.6	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.506	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.02	10.1	1
14241	Famphur	52-85-7	N.D.	25.3	50.6	1
14241	Fluoranthene	206-44-0	N.D.	0.425	10.1	1
14241	Fluorene	86-73-7	N.D.	0.385	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.881	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.06	15.2	1
14241	Hexachloroethane	67-72-1	N.D.	1.01	10.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.152	10.1	1
14241	Isodrin	465-73-6	N.D.	0.506	10.1	1
14241	Isophorone	78-59-1	N.D.	0.506	10.1	1
14241	Isosafrole	120-58-1	N.D.	2.02	10.1	1
14241	Kepone	143-50-0	N.D.	25.3	50.6	1
14241	Methapyrilene	91-80-5	N.D.	15.2	50.6	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	1.01	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.506	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.294	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.506	5.06	1
14241	4-Methylphenol	106-44-5	N.D.	0.506	5.06	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.3	60.7	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1-Naphthylamine	134-32-7	N.D.	5.06	15.2	1
14241	2-Naphthylamine	91-59-8	N.D.	5.06	15.2	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.506	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	0.506	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	0.506	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.739	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.506	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.506	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	1.29	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.4	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.7	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.506	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.02	10.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.506	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.587	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.506	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.506	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.02	10.1	1
14241	Parathion	56-38-2	N.D.	2.02	10.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.506	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.96	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.506	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.526	10.1	1
14241	Phenol	108-95-2	N.D.	0.779	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.9	304	1
14241	Phorate	298-02-2	N.D.	0.506	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	0.506	10.1	1
14241	Pyrene	129-00-0	N.D.	0.415	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF06-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558697
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.688	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	0.506	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.820	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.638	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.06	15.2	1
	The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.					
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 12:02	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 08:13	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181142AA	04/24/2018 23:39	Don V Viray	2.5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 12:02	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 08:13	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	I181142AA	04/24/2018 23:39	Don V Viray	2.5
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 15:34	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101A	04/26/2018 16:39	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101A	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.119 J	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	0.686 J	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	2.41	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	1.10 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	14.9	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.117 J	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.353	10.1	1
14241	Acenaphthylene	208-96-8	N.D.	0.484	10.1	1
14241	Acetophenone	98-86-2	N.D.	0.504	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.02	10.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.504	10.1	1
14241	Aniline	62-53-3	N.D.	0.504	10.1	1
14241	Anthracene	120-12-7	N.D.	0.524	10.1	1
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	N.D.	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	N.D.	2.02	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.504	5.04	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.504	5.04	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.504	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.504	10.1	1
14241	Chrysene	218-01-9	N.D.	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.383	10.1	1
14241	Dibenzofuran	132-64-9	N.D.	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.504	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.504	10.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	0.998	10.1	1
14241	Dimethylphthalate	131-11-3	N.D.	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.04	15.1	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.1	30.2	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.02	10.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	N.D.	0.423	10.1	1
14241	Fluorene	86-73-7	N.D.	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.04	15.1	1
14241	Hexachloroethane	67-72-1	N.D.	1.01	10.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	N.D.	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	2.02	10.1	1
14241	Kepone	143-50-0	N.D.	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	1.01	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.504	10.1	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.292	10.1	1
14241	2-Methylphenol	95-48-7	N.D.	0.504	5.04	1
14241	4-Methylphenol	106-44-5	N.D.	0.504	5.04	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1-Naphthylamine	134-32-7	N.D.	5.04	15.1	1
14241	2-Naphthylamine	91-59-8	N.D.	5.04	15.1	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.504	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	0.504	10.1	1
14241	3-Nitroaniline	99-09-2	N.D.	0.504	10.1	1
14241	4-Nitroaniline	100-01-6	N.D.	0.736	10.1	1
14241	Nitrobenzene	98-95-3	N.D.	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.504	10.1	1
14241	2-Nitrophenol	88-75-5	N.D.	1.28	10.1	1
14241	4-Nitrophenol	100-02-7	N.D.	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.02	10.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.504	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.585	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.02	10.1	1
14241	Parathion	56-38-2	N.D.	2.02	10.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	N.D.	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	N.D.	0.524	10.1	1
14241	Phenol	108-95-2	N.D.	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	0.504	10.1	1
14241	2-Picoline	109-06-8	N.D.	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	0.504	10.1	1
14241	Pyrene	129-00-0	N.D.	0.413	10.1	1
14241	Pyridine	110-86-1	N.D.	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558698
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.685	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	N.D.	0.504	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.04	15.1	1

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 12:24	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 04:40	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 12:24	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 04:40	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 13:15	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101B	04/26/2018 16:41	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101B	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	170		50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	41.8		3.00	10.0	1
11996	Acetonitrile	75-05-8	42.6	J	31.7	100	1
11996	Acrolein	107-02-8	43.4		5.00	25.0	1
11996	Acrylonitrile	107-13-1	33.1		1.00	10.0	1
11996	Allyl Chloride	107-05-1	6.28	J	0.820	10.0	1
11996	Benzene	71-43-2	5.93		0.100	1.00	1
11996	Bromodichloromethane	75-27-4	5.59		0.100	1.00	1
11996	Bromoform	75-25-2	4.05		0.106	1.00	1
11996	Bromomethane	74-83-9	4.28		0.542	1.00	1
11996	2-Butanone	78-93-3	53.9		1.00	10.0	1
11996	Carbon Disulfide	75-15-0	5.66	J	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	6.71		0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	6.43	J	0.460	10.0	1
11996	Chloroethane	75-00-3	4.59		0.100	1.00	1
11996	Chloroform	67-66-3	5.94		0.100	1.00	1
11996	Chloromethane	74-87-3	3.58		0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	6.75		0.204	1.00	1
11996	Dibromochloromethane	124-48-1	5.28		0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	5.53		0.100	1.00	1
11996	Dibromomethane	74-95-3	5.65		0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	30.8		1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	5.38		0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	5.46		0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	5.36		0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	4.64		0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	8.21		0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	5.65		0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	6.74		0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	6.13		0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	5.90		0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	5.53		0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	5.41		0.100	1.00	1
11996	Dimethyl ether	115-10-6	4.77	J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	156	J	45.5	200	1
11996	Ethyl ether	60-29-7	18.7		1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	5.32	J	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	5.96		0.100	1.00	1
11996	Freon 113	76-13-1	6.65		0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	6.00		0.100	1.00	1
11996	Hexachloroethane	67-72-1	6.08	J	0.110	10.0	1
11996	2-Hexanone	591-78-6	38.9		1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	138	J	10.0	200	1
11996	Methacrylonitrile	126-98-7	52.9	J	9.75	100	1
11996	Methyl Iodide	74-88-4	5.52	J	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	7.52	J	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	38.3		1.00	10.0	1
11996	Methylene Chloride	75-09-2	5.74		0.200	1.00	1
11996	Naphthalene	91-20-3	4.79		0.126	1.00	1
11996	Pentachloroethane	76-01-7	5.68	J	0.800	10.0	1
11996	Propionitrile	107-12-0	47.4	J	10.2	100	1
11996	Styrene	100-42-5	5.98		0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	5.81		0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	5.07		0.184	1.00	1
11996	Tetrachloroethene	127-18-4	6.26		0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	36.6		2.00	25.0	1
11996	Toluene	108-88-3	5.76		0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	4.80		0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	6.31		0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	5.65		0.100	1.00	1
11996	Trichloroethene	79-01-6	6.05		0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	6.09		0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	5.41		0.300	1.00	1
11996	Vinyl Acetate	108-05-4	13.9		3.29	10.0	1
11996	Vinyl Chloride	75-01-4	4.18		0.153	1.00	1
11996	Xylene (Total)	1330-20-7	17.6		0.208	3.00	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	53.7		0.369	10.5	1
14241	Acenaphthylene	208-96-8	57.7		0.506	10.5	1
14241	Acetophenone	98-86-2	52.3		0.527	10.5	1
14241	2-Acetylaminofluorene	53-96-3	N.D.		2.11	10.5	1
14241	4-Aminobiphenyl	92-67-1	N.D.		0.527	10.5	1
14241	Aniline	62-53-3	34.5		0.527	10.5	1
14241	Anthracene	120-12-7	53.9		0.549	10.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Aramite	140-57-8	N.D.	5.27	15.8	1
14241	Benzo(a)anthracene	56-55-3	53.1	0.475	10.5	1
14241	Benzo(a)pyrene	50-32-8	52.4	1.58	10.5	1
14241	Benzo(b)fluoranthene	205-99-2	53.6	1.27	10.5	1
14241	Benzo(g,h,i)perylene	191-24-2	50.8	0.443	10.5	1
14241	Benzo(k)fluoranthene	207-08-9	53.6	1.69	10.5	1
14241	Benzyl alcohol	100-51-6	48.4	10.5	31.6	1
14241	4-Bromophenyl-phenylether	101-55-3	52.5	0.591	10.5	1
14241	Butylbenzylphthalate	85-68-7	49.1	2.11	10.5	1
14241	Di-n-butylphthalate	84-74-2	51.7	2.11	10.5	1
14241	4-Chloro-3-methylphenol	59-50-7	26.7	1.07	10.5	1
14241	4-Chloroaniline	106-47-8	39.4	2.11	10.5	1
14241	Chlorobenzilate	510-15-6	N.D.	3.16	10.5	1
14241	bis(2-Chloroethoxy)methane	111-91-1	53.2	0.527	5.27	1
14241	bis(2-Chloroethyl)ether	111-44-4	48.6	0.527	5.27	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	53.2	0.527	10.5	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	47.4	0.517	10.5	1
14241	2-Chlorophenol	95-57-8	21.2	1.03	10.5	1
14241	4-Chlorophenyl-phenylether	7005-72-3	51.5	0.527	10.5	1
14241	Chrysene	218-01-9	53.1	0.327	10.5	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.05	10.5	1
14241	Dibenz(a,h)anthracene	53-70-3	54.4	0.401	10.5	1
14241	Dibenzofuran	132-64-9	52.6	0.612	10.5	1
14241	3,3'-Dichlorobenzidine	91-94-1	36.9	2.11	10.5	1
14241	2,4-Dichlorophenol	120-83-2	19.7	1.68	10.5	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.527	10.5	1
14241	Diethylphthalate	84-66-2	51.3	2.11	10.5	1
14241	Dimethoate	60-51-5	N.D.	3.16	10.5	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.527	10.5	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	52.8	0.527	10.5	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	26.4	79.1	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.27	52.7	1
14241	2,4-Dimethylphenol	105-67-9	44.1	1.04	10.5	1
14241	Dimethylphthalate	131-11-3	49.0	2.11	10.5	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	50.4	5.27	15.8	1
14241	1,3-Dinitrobenzene	99-65-0	54.2	2.11	10.5	1
14241	2,4-Dinitrophenol	51-28-5	97.2	10.5	31.6	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrotoluene	121-14-2	52.3	1.05	10.5	1
14241	2,6-Dinitrotoluene	606-20-2	54.1	0.527	10.5	1
14241	Disulfoton	298-04-4	N.D.	26.4	52.7	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.527	10.5	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	50.5	2.11	10.5	1
14241	Famphur	52-85-7	N.D.	26.4	52.7	1
14241	Fluoranthene	206-44-0	55.4	0.443	10.5	1
14241	Fluorene	86-73-7	52.9	0.401	10.5	1
14241	Hexachlorobenzene	118-74-1	51.9	0.918	10.5	1
14241	Hexachlorocyclopentadiene	77-47-4	96.9	5.27	15.8	1
14241	Hexachloroethane	67-72-1	39.0	1.05	10.5	1
14241	Hexachloropropene	1888-71-7	N.D.	2.11	10.5	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	52.7	0.158	10.5	1
14241	Isodrin	465-73-6	N.D.	0.527	10.5	1
14241	Isophorone	78-59-1	56.2	0.527	10.5	1
14241	Isosafrole	120-58-1	N.D.	2.11	10.5	1
14241	Kepone	143-50-0	N.D.	26.4	52.7	1
14241	Methapyrilene	91-80-5	N.D.	15.8	52.7	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.05	10.5	1
14241	Methyl parathion	298-00-0	N.D.	1.05	10.5	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.527	10.5	1
14241	2-Methylnaphthalene	91-57-6	50.8	0.306	10.5	1
14241	2-Methylphenol	95-48-7	28.0	0.527	5.27	1
14241	4-Methylphenol	106-44-5	24.2	0.527	5.27	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	26.4	63.3	1
14241	1-Naphthylamine	134-32-7	53.1	5.27	15.8	1
14241	2-Naphthylamine	91-59-8	52.8	5.27	15.8	1
14241	NDPA as diphenylamine	n.a.	53.8	0.527	10.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	53.7	0.527	10.5	1
14241	3-Nitroaniline	99-09-2	48.3	0.527	10.5	1
14241	4-Nitroaniline	100-01-6	46.2	0.770	10.5	1
14241	Nitrobenzene	98-95-3	55.0	0.527	10.5	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.527	10.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2-Nitrophenol	88-75-5	45.6	1.34	10.5	1
14241	4-Nitrophenol	100-02-7	34.9	10.5	31.6	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	21.1	63.3	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.527	10.5	1
14241	N-Nitrosodimethylamine	62-75-9	34.8	2.11	10.5	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.11	10.5	1
14241	N-Nitroso-di-n-propylamine	621-64-7	53.2	0.527	10.5	1
14241	N-Nitrosodiphenylamine	86-30-6	53.8	0.612	10.5	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.11	10.5	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.11	10.5	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.527	10.5	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.527	10.5	1
14241	Di-n-octylphthalate	117-84-0	50.5	2.11	10.5	1
14241	Parathion	56-38-2	N.D.	2.11	10.5	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.527	10.5	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.11	10.5	1
14241	Pentachlorophenol	87-86-5	11.7	3.08	10.5	1
14241	Phenacetin	62-44-2	N.D.	0.527	10.5	1
14241	Phenanthrene	85-01-8	53.5	0.549	10.5	1
14241	Phenol	108-95-2	14.5	0.812	10.5	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	79.1	316	1
14241	Phorate	298-02-2	N.D.	0.527	10.5	1
14241	2-Picoline	109-06-8	37.9	2.11	10.5	1
14241	Pronamide	23950-58-5	N.D.	0.527	10.5	1
14241	Pyrene	129-00-0	51.4	0.432	10.5	1
14241	Pyridine	110-86-1	22.3	2.11	10.5	1
14241	Safrole	94-59-7	N.D.	2.11	10.5	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	48.6	2.11	10.5	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	13.3	0.717	10.5	1
14241	Thionazin	297-97-2	N.D.	2.11	10.5	1
14241	o-Toluidine	95-53-4	31.2	0.527	10.5	1
14241	2,4,5-Trichlorophenol	95-95-4	23.2	0.854	10.5	1
14241	2,4,6-Trichlorophenol	88-06-2	13.6	0.665	10.5	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.11	10.5	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.27	15.8	1

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558699
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
statistical limits.						
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	0.19	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 12:46	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 05:01	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 05:44	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 12:46	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 05:01	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	I181133AA	04/24/2018 05:44	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 13:43	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101B	04/26/2018 16:43	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101B	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	170		50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Acetone	67-64-1	42.5		3.00	10.0	1
11996	Acetonitrile	75-05-8	41.3	J	31.7	100	1
11996	Acrolein	107-02-8	43.5		5.00	25.0	1
11996	Acrylonitrile	107-13-1	34.3		1.00	10.0	1
11996	Allyl Chloride	107-05-1	6.51	J	0.820	10.0	1
11996	Benzene	71-43-2	6.07		0.100	1.00	1
11996	Bromodichloromethane	75-27-4	5.65		0.100	1.00	1
11996	Bromoform	75-25-2	4.20		0.106	1.00	1
11996	Bromomethane	74-83-9	3.90		0.542	1.00	1
11996	2-Butanone	78-93-3	55.1		1.00	10.0	1
11996	Carbon Disulfide	75-15-0	5.73	J	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	6.77		0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	6.44	J	0.460	10.0	1
11996	Chloroethane	75-00-3	4.28		0.100	1.00	1
11996	Chloroform	67-66-3	6.01		0.100	1.00	1
11996	Chloromethane	74-87-3	3.41		0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	6.89		0.204	1.00	1
11996	Dibromochloromethane	124-48-1	5.39		0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	5.61		0.100	1.00	1
11996	Dibromomethane	74-95-3	5.73		0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	30.6		1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	5.57		0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	5.63		0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	5.53		0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	4.25		0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	8.38		0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	5.65		0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	6.89		0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	6.28		0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	5.95		0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	5.67		0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	5.59		0.100	1.00	1
11996	Dimethyl ether	115-10-6	4.40	J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	158	J	45.5	200	1
11996	Ethyl ether	60-29-7	18.9		1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	5.54	J	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	6.08		0.100	1.00	1
11996	Freon 113	76-13-1	6.70		0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	6.16		0.100	1.00	1
11996	Hexachloroethane	67-72-1	5.81	J	0.110	10.0	1
11996	2-Hexanone	591-78-6	39.1		1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	145	J	10.0	200	1
11996	Methacrylonitrile	126-98-7	53.5	J	9.75	100	1
11996	Methyl Iodide	74-88-4	5.68	J	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	7.35	J	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	37.8		1.00	10.0	1
11996	Methylene Chloride	75-09-2	5.81		0.200	1.00	1
11996	Naphthalene	91-20-3	5.18		0.126	1.00	1
11996	Pentachloroethane	76-01-7	5.84	J	0.800	10.0	1
11996	Propionitrile	107-12-0	46.7	J	10.2	100	1
11996	Styrene	100-42-5	6.15		0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	5.89		0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	5.19		0.184	1.00	1
11996	Tetrachloroethene	127-18-4	6.39		0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	38.5		2.00	25.0	1
11996	Toluene	108-88-3	5.86		0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	5.19		0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	6.43		0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	5.72		0.100	1.00	1
11996	Trichloroethene	79-01-6	6.23		0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	5.51		0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	5.54		0.300	1.00	1
11996	Vinyl Acetate	108-05-4	13.3		3.29	10.0	1
11996	Vinyl Chloride	75-01-4	3.95		0.153	1.00	1
11996	Xylene (Total)	1330-20-7	18.1		0.208	3.00	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	50.1		0.353	10.1	1
14241	Acenaphthylene	208-96-8	54.5		0.484	10.1	1
14241	Acetophenone	98-86-2	49.1		0.504	10.1	1
14241	2-Acetylaminofluorene	53-96-3	N.D.		2.02	10.1	1
14241	4-Aminobiphenyl	92-67-1	N.D.		0.504	10.1	1
14241	Aniline	62-53-3	31.6		0.504	10.1	1
14241	Anthracene	120-12-7	51.3		0.524	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Aramite	140-57-8	N.D.	5.04	15.1	1
14241	Benzo(a)anthracene	56-55-3	51.1	0.454	10.1	1
14241	Benzo(a)pyrene	50-32-8	49.9	1.51	10.1	1
14241	Benzo(b)fluoranthene	205-99-2	50.6	1.21	10.1	1
14241	Benzo(g,h,i)perylene	191-24-2	48.4	0.423	10.1	1
14241	Benzo(k)fluoranthene	207-08-9	50.0	1.61	10.1	1
14241	Benzyl alcohol	100-51-6	44.8	10.1	30.2	1
14241	4-Bromophenyl-phenylether	101-55-3	48.8	0.565	10.1	1
14241	Butylbenzylphthalate	85-68-7	48.5	2.02	10.1	1
14241	Di-n-butylphthalate	84-74-2	49.6	2.02	10.1	1
14241	4-Chloro-3-methylphenol	59-50-7	47.3	1.02	10.1	1
14241	4-Chloroaniline	106-47-8	34.4	2.02	10.1	1
14241	Chlorobenzilate	510-15-6	N.D.	3.02	10.1	1
14241	bis(2-Chloroethoxy)methane	111-91-1	49.1	0.504	5.04	1
14241	bis(2-Chloroethyl)ether	111-44-4	45.7	0.504	5.04	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	49.9	0.504	10.1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	44.3	0.494	10.1	1
14241	2-Chlorophenol	95-57-8	15.9	0.988	10.1	1
14241	4-Chlorophenyl-phenylether	7005-72-3	48.8	0.504	10.1	1
14241	Chrysene	218-01-9	51.8	0.313	10.1	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.01	10.1	1
14241	Dibenz(a,h)anthracene	53-70-3	51.5	0.383	10.1	1
14241	Dibenzofuran	132-64-9	49.4	0.585	10.1	1
14241	3,3'-Dichlorobenzidine	91-94-1	35.6	2.02	10.1	1
14241	2,4-Dichlorophenol	120-83-2	17.1	1.60	10.1	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.504	10.1	1
14241	Diethylphthalate	84-66-2	49.3	2.02	10.1	1
14241	Dimethoate	60-51-5	N.D.	3.02	10.1	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.504	10.1	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	50.0	0.504	10.1	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.2	75.6	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.04	50.4	1
14241	2,4-Dimethylphenol	105-67-9	42.5	0.998	10.1	1
14241	Dimethylphthalate	131-11-3	48.6	2.02	10.1	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	49.8	5.04	15.1	1
14241	1,3-Dinitrobenzene	99-65-0	52.9	2.02	10.1	1
14241	2,4-Dinitrophenol	51-28-5	102	10.1	30.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dinitrotoluene	121-14-2	50.1	1.01	10.1	1
14241	2,6-Dinitrotoluene	606-20-2	51.6	0.504	10.1	1
14241	Disulfoton	298-04-4	N.D.	25.2	50.4	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.504	10.1	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	49.0	2.02	10.1	1
14241	Famphur	52-85-7	N.D.	25.2	50.4	1
14241	Fluoranthene	206-44-0	51.9	0.423	10.1	1
14241	Fluorene	86-73-7	50.5	0.383	10.1	1
14241	Hexachlorobenzene	118-74-1	49.2	0.877	10.1	1
14241	Hexachlorocyclopentadiene	77-47-4	89.9	5.04	15.1	1
14241	Hexachloroethane	67-72-1	36.0	1.01	10.1	1
14241	Hexachloropropene	1888-71-7	N.D.	2.02	10.1	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	50.3	0.151	10.1	1
14241	Isodrin	465-73-6	N.D.	0.504	10.1	1
14241	Isophorone	78-59-1	51.9	0.504	10.1	1
14241	Isosafrole	120-58-1	N.D.	2.02	10.1	1
14241	Kepone	143-50-0	N.D.	25.2	50.4	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.4	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.01	10.1	1
14241	Methyl parathion	298-00-0	N.D.	1.01	10.1	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.504	10.1	1
14241	2-Methylnaphthalene	91-57-6	45.3	0.292	10.1	1
14241	2-Methylphenol	95-48-7	42.2	0.504	5.04	1
14241	4-Methylphenol	106-44-5	39.8	0.504	5.04	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.2	60.5	1
14241	1-Naphthylamine	134-32-7	44.4	5.04	15.1	1
14241	2-Naphthylamine	91-59-8	45.1	5.04	15.1	1
14241	NDPA as diphenylamine	n.a.	50.6	0.504	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	51.9	0.504	10.1	1
14241	3-Nitroaniline	99-09-2	45.1	0.504	10.1	1
14241	4-Nitroaniline	100-01-6	43.2	0.736	10.1	1
14241	Nitrobenzene	98-95-3	50.1	0.504	10.1	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.504	10.1	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2-Nitrophenol	88-75-5	41.6	1.28	10.1	1
14241	4-Nitrophenol	100-02-7	31.0	10.1	30.2	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.2	60.5	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.504	10.1	1
14241	N-Nitrosodimethylamine	62-75-9	31.1	2.02	10.1	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.02	10.1	1
14241	N-Nitroso-di-n-propylamine	621-64-7	50.0	0.504	10.1	1
14241	N-Nitrosodiphenylamine	86-30-6	50.6	0.585	10.1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.02	10.1	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.02	10.1	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.504	10.1	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.504	10.1	1
14241	Di-n-octylphthalate	117-84-0	48.1	2.02	10.1	1
14241	Parathion	56-38-2	N.D.	2.02	10.1	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.504	10.1	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.02	10.1	1
14241	Pentachlorophenol	87-86-5	20.9	2.94	10.1	1
14241	Phenacetin	62-44-2	N.D.	0.504	10.1	1
14241	Phenanthrene	85-01-8	49.5	0.524	10.1	1
14241	Phenol	108-95-2	19.0	0.776	10.1	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.6	302	1
14241	Phorate	298-02-2	N.D.	0.504	10.1	1
14241	2-Picoline	109-06-8	33.7	2.02	10.1	1
14241	Pronamide	23950-58-5	N.D.	0.504	10.1	1
14241	Pyrene	129-00-0	48.6	0.413	10.1	1
14241	Pyridine	110-86-1	20.6	2.02	10.1	1
14241	Safrole	94-59-7	N.D.	2.02	10.1	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	45.1	2.02	10.1	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	17.0	0.685	10.1	1
14241	Thionazin	297-97-2	N.D.	2.02	10.1	1
14241	o-Toluidine	95-53-4	27.7	0.504	10.1	1
14241	2,4,5-Trichlorophenol	95-95-4	18.9	0.817	10.1	1
14241	2,4,6-Trichlorophenol	88-06-2	13.0	0.635	10.1	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.02	10.1	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.04	15.1	1

The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558700
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor

statistical limits.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 13:07	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 05:23	Don V Viray	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 06:05	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 13:07	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 05:23	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	3	I181133AA	04/24/2018 06:05	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 14:11	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1A DUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF06-04DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558701
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101B	04/26/2018 16:44	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101B	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	0.119 J	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	0.648 J	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	2.29	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	1.16 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	14.2	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	0.104 J	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.351	10.0	1
14241	Acenaphthylene	208-96-8	N.D.	0.482	10.0	1
14241	Acetophenone	98-86-2	N.D.	0.502	10.0	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.01	10.0	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.502	10.0	1
14241	Aniline	62-53-3	N.D.	0.502	10.0	1
14241	Anthracene	120-12-7	N.D.	0.522	10.0	1
14241	Aramite	140-57-8	N.D.	5.02	15.1	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.452	10.0	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.51	10.0	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.20	10.0	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.422	10.0	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.61	10.0	1
14241	Benzyl alcohol	100-51-6	N.D.	10.0	30.1	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.562	10.0	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.01	10.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.01	10.0	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.01	10.0	1
14241	4-Chloroaniline	106-47-8	N.D.	2.01	10.0	1
14241	Chlorobenzilate	510-15-6	N.D.	3.01	10.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.502	5.02	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.502	5.02	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.502	10.0	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.492	10.0	1
14241	2-Chlorophenol	95-57-8	N.D.	0.984	10.0	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.502	10.0	1
14241	Chrysene	218-01-9	N.D.	0.311	10.0	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.00	10.0	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.382	10.0	1
14241	Dibenzofuran	132-64-9	N.D.	0.582	10.0	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.01	10.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.60	10.0	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.502	10.0	1
14241	Diethylphthalate	84-66-2	N.D.	2.01	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Dimethoate	60-51-5	N.D.	3.01	10.0	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.502	10.0	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.502	10.0	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.1	75.3	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.02	50.2	1
14241	2,4-Dimethylphenol	105-67-9	N.D.	0.994	10.0	1
14241	Dimethylphthalate	131-11-3	N.D.	2.01	10.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.02	15.1	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.01	10.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.0	30.1	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.00	10.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.502	10.0	1
14241	Disulfoton	298-04-4	N.D.	25.1	50.2	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.502	10.0	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.01	10.0	1
14241	Famphur	52-85-7	N.D.	25.1	50.2	1
14241	Fluoranthene	206-44-0	N.D.	0.422	10.0	1
14241	Fluorene	86-73-7	N.D.	0.382	10.0	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.873	10.0	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.02	15.1	1
14241	Hexachloroethane	67-72-1	N.D.	1.00	10.0	1
14241	Hexachloropropene	1888-71-7	N.D.	2.01	10.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.151	10.0	1
14241	Isodrin	465-73-6	N.D.	0.502	10.0	1
14241	Isophorone	78-59-1	N.D.	0.502	10.0	1
14241	Isosafrole	120-58-1	N.D.	2.01	10.0	1
14241	Kepone	143-50-0	N.D.	25.1	50.2	1
14241	Methapyrilene	91-80-5	N.D.	15.1	50.2	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.00	10.0	1
14241	Methyl parathion	298-00-0	N.D.	1.00	10.0	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.502	10.0	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.291	10.0	1
14241	2-Methylphenol	95-48-7	N.D.	0.502	5.02	1
14241	4-Methylphenol	106-44-5	N.D.	0.502	5.02	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.1	60.2	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1-Naphthylamine	134-32-7	N.D.	5.02	15.1	1
14241	2-Naphthylamine	91-59-8	N.D.	5.02	15.1	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.502	10.0	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	2-Nitroaniline	88-74-4	N.D.	0.502	10.0	1
14241	3-Nitroaniline	99-09-2	N.D.	0.502	10.0	1
14241	4-Nitroaniline	100-01-6	N.D.	0.733	10.0	1
14241	Nitrobenzene	98-95-3	N.D.	0.502	10.0	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.502	10.0	1
14241	2-Nitrophenol	88-75-5	N.D.	1.28	10.0	1
14241	4-Nitrophenol	100-02-7	N.D.	10.0	30.1	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.1	60.2	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.502	10.0	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.01	10.0	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.01	10.0	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.502	10.0	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.582	10.0	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.01	10.0	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.01	10.0	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.502	10.0	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.502	10.0	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.01	10.0	1
14241	Parathion	56-38-2	N.D.	2.01	10.0	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.502	10.0	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.01	10.0	1
14241	Pentachlorophenol	87-86-5	N.D.	2.93	10.0	1
14241	Phenacetin	62-44-2	N.D.	0.502	10.0	1
14241	Phenanthrene	85-01-8	N.D.	0.522	10.0	1
14241	Phenol	108-95-2	N.D.	0.773	10.0	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.3	301	1
14241	Phorate	298-02-2	N.D.	0.502	10.0	1
14241	2-Picoline	109-06-8	N.D.	2.01	10.0	1
14241	Pronamide	23950-58-5	N.D.	0.502	10.0	1
14241	Pyrene	129-00-0	N.D.	0.412	10.0	1
14241	Pyridine	110-86-1	N.D.	2.01	10.0	1
14241	Safrole	94-59-7	N.D.	2.01	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF06-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558702
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.01	10.0	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.683	10.0	1
14241	Thionazin	297-97-2	N.D.	2.01	10.0	1
14241	o-Toluidine	95-53-4	N.D.	0.502	10.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.813	10.0	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.633	10.0	1
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.01	10.0	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.02	15.1	1
	The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.					
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 13:29	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 06:48	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 13:29	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 06:48	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 16:02	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101A	04/26/2018 16:40	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101A	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	2-Propanol	67-63-0	N.D.	50	100	1
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	0.308 J	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acenaphthene	83-32-9	N.D.	0.350	10.0	1
14241	Acenaphthylene	208-96-8	N.D.	0.480	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Acetophenone	98-86-2	N.D.	0.500	10.0	1
14241	2-Acetylaminofluorene	53-96-3	N.D.	2.00	10.0	1
14241	4-Aminobiphenyl	92-67-1	N.D.	0.500	10.0	1
14241	Aniline	62-53-3	N.D.	0.500	10.0	1
14241	Anthracene	120-12-7	N.D.	0.520	10.0	1
14241	Aramite	140-57-8	N.D.	5.00	15.0	1
14241	Benzo(a)anthracene	56-55-3	N.D.	0.450	10.0	1
14241	Benzo(a)pyrene	50-32-8	N.D.	1.50	10.0	1
14241	Benzo(b)fluoranthene	205-99-2	N.D.	1.20	10.0	1
14241	Benzo(g,h,i)perylene	191-24-2	N.D.	0.420	10.0	1
14241	Benzo(k)fluoranthene	207-08-9	N.D.	1.60	10.0	1
14241	Benzyl alcohol	100-51-6	N.D.	10.0	30.0	1
14241	4-Bromophenyl-phenylether	101-55-3	N.D.	0.560	10.0	1
14241	Butylbenzylphthalate	85-68-7	N.D.	2.00	10.0	1
14241	Di-n-butylphthalate	84-74-2	N.D.	2.00	10.0	1
14241	4-Chloro-3-methylphenol	59-50-7	N.D.	1.01	10.0	1
14241	4-Chloroaniline	106-47-8	N.D.	2.00	10.0	1
14241	Chlorobenzilate	510-15-6	N.D.	3.00	10.0	1
14241	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.500	5.00	1
14241	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.500	5.00	1
14241	bis(2-Chloroisopropyl)ether	39638-32-9	N.D.	0.500	10.0	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
14241	2-Chloronaphthalene	91-58-7	N.D.	0.490	10.0	1
14241	2-Chlorophenol	95-57-8	N.D.	0.980	10.0	1
14241	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.500	10.0	1
14241	Chrysene	218-01-9	N.D.	0.310	10.0	1
14241	Diallate trans/cis	2303-16-4	N.D.	1.00	10.0	1
14241	Dibenz(a,h)anthracene	53-70-3	N.D.	0.380	10.0	1
14241	Dibenzofuran	132-64-9	N.D.	0.580	10.0	1
14241	3,3'-Dichlorobenzidine	91-94-1	N.D.	2.00	10.0	1
14241	2,4-Dichlorophenol	120-83-2	N.D.	1.59	10.0	1
14241	2,6-Dichlorophenol	87-65-0	N.D.	0.500	10.0	1
14241	Diethylphthalate	84-66-2	N.D.	2.00	10.0	1
14241	Dimethoate	60-51-5	N.D.	3.00	10.0	1
14241	p-Dimethylaminoazobenzene	60-11-7	N.D.	0.500	10.0	1
14241	7,12-Dimethylbenz[a]anthracene	57-97-6	N.D.	0.500	10.0	1
14241	3,3'-Dimethylbenzidine	119-93-7	N.D.	25.0	75.0	1
14241	a,a-Dimethylphenethylamine	122-09-8	N.D.	5.00	50.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2,4-Dimethylphenol	105-67-9	N.D.	0.990	10.0	1
14241	Dimethylphthalate	131-11-3	N.D.	2.00	10.0	1
14241	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5.00	15.0	1
14241	1,3-Dinitrobenzene	99-65-0	N.D.	2.00	10.0	1
14241	2,4-Dinitrophenol	51-28-5	N.D.	10.0	30.0	1
14241	2,4-Dinitrotoluene	121-14-2	N.D.	1.00	10.0	1
14241	2,6-Dinitrotoluene	606-20-2	N.D.	0.500	10.0	1
14241	Disulfoton	298-04-4	N.D.	25.0	50.0	1
14241	Ethyl methanesulfonate	62-50-0	N.D.	0.500	10.0	1
14241	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2.00	10.0	1
14241	Famphur	52-85-7	N.D.	25.0	50.0	1
14241	Fluoranthene	206-44-0	N.D.	0.420	10.0	1
14241	Fluorene	86-73-7	N.D.	0.380	10.0	1
14241	Hexachlorobenzene	118-74-1	N.D.	0.870	10.0	1
14241	Hexachlorocyclopentadiene	77-47-4	N.D.	5.00	15.0	1
14241	Hexachloroethane	67-72-1	N.D.	1.00	10.0	1
14241	Hexachloropropene	1888-71-7	N.D.	2.00	10.0	1
14241	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.150	10.0	1
14241	Isodrin	465-73-6	N.D.	0.500	10.0	1
14241	Isophorone	78-59-1	N.D.	0.500	10.0	1
14241	Isosafrole	120-58-1	N.D.	2.00	10.0	1
14241	Kepone	143-50-0	N.D.	25.0	50.0	1
14241	Methapyrilene	91-80-5	N.D.	15.0	50.0	1
	The QC window for methapyrilene is advisory due to the erratic performance of the compound. The quantitated result is estimated.					
14241	Methyl methanesulfonate	66-27-3	N.D.	1.00	10.0	1
14241	Methyl parathion	298-00-0	N.D.	1.00	10.0	1
14241	3-Methylcholanthrene	56-49-5	N.D.	0.500	10.0	1
14241	2-Methylnaphthalene	91-57-6	N.D.	0.290	10.0	1
14241	2-Methylphenol	95-48-7	N.D.	0.500	5.00	1
14241	4-Methylphenol	106-44-5	N.D.	0.500	5.00	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14241	1,4-Naphthoquinone	130-15-4	N.D.	25.0	60.0	1
14241	1-Naphthylamine	134-32-7	N.D.	5.00	15.0	1
14241	2-Naphthylamine	91-59-8	N.D.	5.00	15.0	1
14241	NDPA as diphenylamine	n.a.	N.D.	0.500	10.0	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	2-Nitroaniline	88-74-4	N.D.	0.500	10.0	1
14241	3-Nitroaniline	99-09-2	N.D.	0.500	10.0	1
14241	4-Nitroaniline	100-01-6	N.D.	0.730	10.0	1
14241	Nitrobenzene	98-95-3	N.D.	0.500	10.0	1
14241	5-Nitro-o-toluidine	99-55-8	N.D.	0.500	10.0	1
14241	2-Nitrophenol	88-75-5	N.D.	1.27	10.0	1
14241	4-Nitrophenol	100-02-7	N.D.	10.0	30.0	1
14241	4-Nitroquinoline-1-oxide	56-57-5	N.D.	20.0	60.0	1
14241	N-Nitrosodiethylamine	55-18-5	N.D.	0.500	10.0	1
14241	N-Nitrosodimethylamine	62-75-9	N.D.	2.00	10.0	1
14241	N-Nitrosodi-n-butylamine	924-16-3	N.D.	2.00	10.0	1
14241	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.500	10.0	1
14241	N-Nitrosodiphenylamine	86-30-6	N.D.	0.580	10.0	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
14241	N-Nitrosomethylethylamine	10595-95-6	N.D.	2.00	10.0	1
14241	N-Nitrosomorpholine	59-89-2	N.D.	2.00	10.0	1
14241	N-Nitrosopiperidine	100-75-4	N.D.	0.500	10.0	1
14241	N-Nitrosopyrrolidine	930-55-2	N.D.	0.500	10.0	1
14241	Di-n-octylphthalate	117-84-0	N.D.	2.00	10.0	1
14241	Parathion	56-38-2	N.D.	2.00	10.0	1
14241	Pentachlorobenzene	608-93-5	N.D.	0.500	10.0	1
14241	Pentachloronitrobenzene	82-68-8	N.D.	2.00	10.0	1
14241	Pentachlorophenol	87-86-5	N.D.	2.92	10.0	1
14241	Phenacetin	62-44-2	N.D.	0.500	10.0	1
14241	Phenanthrene	85-01-8	N.D.	0.520	10.0	1
14241	Phenol	108-95-2	N.D.	0.770	10.0	1
14241	1,4-Phenylenediamine	106-50-3	N.D.	75.0	300	1
14241	Phorate	298-02-2	N.D.	0.500	10.0	1
14241	2-Picoline	109-06-8	N.D.	2.00	10.0	1
14241	Pronamide	23950-58-5	N.D.	0.500	10.0	1
14241	Pyrene	129-00-0	N.D.	0.410	10.0	1
14241	Pyridine	110-86-1	N.D.	2.00	10.0	1
14241	Safrole	94-59-7	N.D.	2.00	10.0	1
14241	1,2,4,5-Tetrachlorobenzene	95-94-3	N.D.	2.00	10.0	1
14241	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.680	10.0	1
14241	Thionazin	297-97-2	N.D.	2.00	10.0	1
14241	o-Toluidine	95-53-4	N.D.	0.500	10.0	1
14241	2,4,5-Trichlorophenol	95-95-4	N.D.	0.810	10.0	1
14241	2,4,6-Trichlorophenol	88-06-2	N.D.	0.630	10.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF06-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558703
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	O,O,O-Triethylphosphorothioate	126-68-1	N.D.	2.00	10.0	1
14241	1,3,5-Trinitrobenzene	99-35-4	N.D.	5.00	15.0	1
	The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.					
Wet Chemistry	**SW-846 9012B**		**mg/l**	**mg/l**	**mg/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	0.0050	0.010	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	2-Propanol	SW-846 8260C	1	5181131AA	04/23/2018 13:51	Linda C Pape	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 07:10	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5181131AA	04/23/2018 13:51	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	I181133AA	04/24/2018 07:10	Don V Viray	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18106WAO026	04/20/2018 16:29	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAO026	04/17/2018 09:30	Joshua S Ruth	1
08255	Total Cyanide (water)	SW-846 9012B	1	18115117101B	04/26/2018 16:45	Gregory Baldree	1
08256	Cyanide Water Distillation	SW-846 9012B	3	18115117101B	04/25/2018 08:45	Nancy J Shoop	1

*=This limit was used in the evaluation of the final result

Sample Description: **16-2 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 13:35
SDG#: RAF06-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558704
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	G181132AA	04/23/2018 21:53	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181132AA	04/23/2018 21:53	Matthew S Krause	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18106WAY026	04/20/2018 16:57	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAY026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **16-3 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:30
SDG#: RAF06-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558705
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	G181132AA	04/23/2018 22:15	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181132AA	04/23/2018 22:15	Matthew S Krause	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18106WAY026	04/20/2018 17:25	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAY026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **16-5 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 11:40
SDG#: RAF06-09

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558706
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	G181132AA	04/23/2018 22:37	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181132AA	04/23/2018 22:37	Matthew S Krause	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18106WAY026	04/20/2018 17:53	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAY026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **16WC2B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 12:50
SDG#: RAF06-10

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558707
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	G181132AA	04/23/2018 22:59	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181132AA	04/23/2018 22:59	Matthew S Krause	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18106WAY026	04/20/2018 18:20	Brandon H Smith	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAY026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **16SPRING Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 11:45
SDG#: RAF06-11

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558708
ELLE Group #: 1931896
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	0.1	1
11996	2-Butanone	78-93-3	< 10	10	1.0	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	0.1	1
11996	Chloroethane	75-00-3	< 1.0	1.0	0.1	1
11996	Chloromethane	74-87-3	< 1.0	1.0	0.2	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	0.1	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	0.1	1
11996	Dimethyl ether	115-10-6	< 13	13	0.1	1
11996	Ethyl ether	60-29-7	< 13	13	0.1	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	0.1	1
11996	Freon 113	76-13-1	< 1.0	1.0	0.2	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	0.2	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	0.1	1
11996	Tetrahydrofuran	109-99-9	< 25	25	2.0	1
11996	Toluene	108-88-3	< 1.0	1.0	0.1	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	0.1	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	0.1	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	0.1	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	0.1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	2	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	0.5	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	G181132AA	04/23/2018 23:22	Matthew S Krause	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	G181132AA	04/23/2018 23:22	Matthew S Krause	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18106WAY026	04/21/2018 04:06	Ashley R Transue	1
11010	8270D BNA Extraction	SW-846 3510C	1	18106WAY026	04/17/2018 09:30	Joshua S Ruth	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-12TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558709
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	N.D.	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-12TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558709
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A targeted library search was performed yielding the following results: ethylene oxide and 1-propanol are non-detect.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-12TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558709
ELLE Group #: 1931896
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 03:36	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	I181133AA	04/24/2018 03:36	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 2 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-13TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558710
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	N.D.	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 2 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-13TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558710
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A targeted library search was performed yielding the following results: ethylene oxide and 1-propanol are non-detect.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 2 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-13TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558710
ELLE Group #: 1931896
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 03:57	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	I181133AA	04/24/2018 03:57	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 3 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-14TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558711
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Acetone	67-64-1	N.D.	3.00	10.0	1
11996	Acetonitrile	75-05-8	N.D.	31.7	100	1
11996	Acrolein	107-02-8	N.D.	5.00	25.0	1
11996	Acrylonitrile	107-13-1	N.D.	1.00	10.0	1
11996	Allyl Chloride	107-05-1	N.D.	0.820	10.0	1
11996	Benzene	71-43-2	N.D.	0.100	1.00	1
11996	Bromodichloromethane	75-27-4	N.D.	0.100	1.00	1
11996	Bromoform	75-25-2	N.D.	0.106	1.00	1
11996	Bromomethane	74-83-9	N.D.	0.542	1.00	1
11996	2-Butanone	78-93-3	N.D.	1.00	10.0	1
11996	Carbon Disulfide	75-15-0	N.D.	0.400	10.0	1
11996	Carbon Tetrachloride	56-23-5	N.D.	0.160	1.00	1
11996	2-Chloro-1,3-butadiene	126-99-8	N.D.	0.460	10.0	1
11996	Chloroethane	75-00-3	N.D.	0.100	1.00	1
11996	Chloroform	67-66-3	N.D.	0.100	1.00	1
11996	Chloromethane	74-87-3	N.D.	0.200	1.00	1
11996	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.204	1.00	1
11996	Dibromochloromethane	124-48-1	N.D.	0.100	1.00	1
11996	1,2-Dibromoethane	106-93-4	N.D.	0.100	1.00	1
11996	Dibromomethane	74-95-3	N.D.	0.100	1.00	1
11996	trans-1,4-Dichloro-2-butene	110-57-6	N.D.	1.00	10.0	1
11996	1,2-Dichlorobenzene	95-50-1	N.D.	0.100	1.00	1
11996	1,3-Dichlorobenzene	541-73-1	N.D.	0.100	1.00	1
11996	1,4-Dichlorobenzene	106-46-7	N.D.	0.100	1.00	1
11996	Dichlorodifluoromethane	75-71-8	N.D.	0.148	1.00	1
11996	1,1-Dichloroethane	75-34-3	N.D.	0.135	1.00	1
11996	1,2-Dichloroethane	107-06-2	N.D.	0.147	1.00	1
11996	1,1-Dichloroethene	75-35-4	N.D.	0.223	1.00	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.162	1.00	1
11996	1,2-Dichloropropane	78-87-5	N.D.	0.107	1.00	1
11996	1,3-Dichloropropane	142-28-9	N.D.	0.100	1.00	1
11996	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.100	1.00	1
11996	Dimethyl ether	115-10-6	N.D.	0.100	12.5	1
11996	1,4-Dioxane	123-91-1	N.D.	45.5	200	1
11996	Ethyl ether	60-29-7	N.D.	1.11	12.5	1
11996	Ethyl Methacrylate	97-63-2	N.D.	0.810	10.0	1
11996	Ethylbenzene	100-41-4	N.D.	0.100	1.00	1
11996	Freon 113	76-13-1	N.D.	0.200	1.00	1
11996	Hexachlorobutadiene	87-68-3	N.D.	0.100	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 3 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-14TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558711
ELLE Group #: 1931896
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	Hexachloroethane	67-72-1	N.D.	0.110	10.0	1
11996	2-Hexanone	591-78-6	N.D.	1.00	10.0	1
11996	Isobutyl Alcohol	78-83-1	N.D.	10.0	200	1
11996	Methacrylonitrile	126-98-7	N.D.	9.75	100	1
11996	Methyl Iodide	74-88-4	N.D.	0.580	10.0	1
11996	Methyl Methacrylate	80-62-6	N.D.	3.58	10.0	1
11996	4-Methyl-2-pentanone	108-10-1	N.D.	1.00	10.0	1
11996	Methylene Chloride	75-09-2	N.D.	0.200	1.00	1
11996	Naphthalene	91-20-3	N.D.	0.126	1.00	1
11996	Pentachloroethane	76-01-7	N.D.	0.800	10.0	1
11996	Propionitrile	107-12-0	N.D.	10.2	100	1
11996	Styrene	100-42-5	N.D.	0.100	1.00	1
11996	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.100	1.00	1
11996	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.184	1.00	1
11996	Tetrachloroethene	127-18-4	N.D.	0.100	1.00	1
11996	Tetrahydrofuran	109-99-9	N.D.	2.00	25.0	1
11996	Toluene	108-88-3	N.D.	0.100	1.00	1
11996	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.130	1.00	1
11996	1,1,1-Trichloroethane	71-55-6	N.D.	0.130	1.00	1
11996	1,1,2-Trichloroethane	79-00-5	N.D.	0.100	1.00	1
11996	Trichloroethene	79-01-6	N.D.	0.177	1.00	1
11996	Trichlorofluoromethane	75-69-4	N.D.	0.176	1.00	1
11996	1,2,3-Trichloropropane	96-18-4	N.D.	0.300	1.00	1
11996	Vinyl Acetate	108-05-4	N.D.	3.29	10.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.153	1.00	1
11996	Xylene (Total)	1330-20-7	N.D.	0.208	3.00	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A targeted library search was performed yielding the following results: ethylene oxide and 1-propanol are non-detect.

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 3 Water**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018
SDG#: RAF06-14TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558711
ELLE Group #: 1931896
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	I181133AA	04/24/2018 04:18	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	I181133AA	04/24/2018 04:18	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: G181132AA	Sample number(s): 9558704-9558708		
Benzene	< 1.0	1.0	0.1
2-Butanone	< 10	10	1.0
Carbon Tetrachloride	< 1.0	1.0	0.1
Chloroethane	< 1.0	1.0	0.1
Chloromethane	< 1.0	1.0	0.2
Dichlorodifluoromethane	< 1.0	1.0	0.1
1,1-Dichloroethane	< 1.0	1.0	0.1
1,1-Dichloroethene	< 1.0	1.0	0.1
Dimethyl ether	< 13	13	0.1
Ethyl ether	< 13	13	0.1
Ethylbenzene	< 1.0	1.0	0.1
Freon 113	< 1.0	1.0	0.2
Methylene Chloride	< 1.0	1.0	0.2
Tetrachloroethene	< 1.0	1.0	0.1
Tetrahydrofuran	< 25	25	2.0
Toluene	< 1.0	1.0	0.1
1,1,1-Trichloroethane	< 1.0	1.0	0.1
Trichloroethene	< 1.0	1.0	0.1
Trichlorofluoromethane	< 1.0	1.0	0.1
Xylene (Total)	< 3.0	3.0	0.1

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5181131AA	Sample number(s): 9558695-9558700,9558702-9558703		
2-Propanol	N.D.	50	100
Batch number: I181133AA	Sample number(s): 9558695-9558700,9558702-9558703,9558709-9558711		
Acetone	N.D.	3.00	10.0
Acetonitrile	N.D.	31.7	100
Acrolein	N.D.	5.00	25.0
Acrylonitrile	N.D.	1.00	10.0
Allyl Chloride	N.D.	0.820	10.0
Benzene	N.D.	0.100	1.00
Bromodichloromethane	N.D.	0.100	1.00
Bromoform	N.D.	0.106	1.00
Bromomethane	N.D.	0.542	1.00
2-Butanone	N.D.	1.00	10.0
Carbon Disulfide	N.D.	0.400	10.0
Carbon Tetrachloride	N.D.	0.160	1.00

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
2-Chloro-1,3-butadiene	N.D.	0.460	10.0
Chloroethane	N.D.	0.100	1.00
Chloroform	N.D.	0.100	1.00
Chloromethane	N.D.	0.200	1.00
1,2-Dibromo-3-chloropropane	N.D.	0.204	1.00
Dibromochloromethane	N.D.	0.100	1.00
1,2-Dibromoethane	N.D.	0.100	1.00
Dibromomethane	N.D.	0.100	1.00
trans-1,4-Dichloro-2-butene	N.D.	1.00	10.0
1,2-Dichlorobenzene	N.D.	0.100	1.00
1,3-Dichlorobenzene	N.D.	0.100	1.00
1,4-Dichlorobenzene	N.D.	0.100	1.00
Dichlorodifluoromethane	N.D.	0.148	1.00
1,1-Dichloroethane	N.D.	0.135	1.00
1,2-Dichloroethane	N.D.	0.147	1.00
1,1-Dichloroethene	N.D.	0.223	1.00
trans-1,2-Dichloroethene	N.D.	0.162	1.00
1,2-Dichloropropane	N.D.	0.107	1.00
1,3-Dichloropropane	N.D.	0.100	1.00
trans-1,3-Dichloropropene	N.D.	0.100	1.00
Dimethyl ether	N.D.	0.100	12.5
1,4-Dioxane	N.D.	45.5	200
Ethyl ether	N.D.	1.11	12.5
Ethyl Methacrylate	N.D.	0.810	10.0
Ethylbenzene	N.D.	0.100	1.00
Freon 113	N.D.	0.200	1.00
Hexachlorobutadiene	N.D.	0.100	1.00
Hexachloroethane	N.D.	0.110	10.0
2-Hexanone	N.D.	1.00	10.0
Isobutyl Alcohol	N.D.	10.0	200
Methacrylonitrile	N.D.	9.75	100
Methyl Iodide	N.D.	0.580	10.0
Methyl Methacrylate	N.D.	3.58	10.0
4-Methyl-2-pentanone	N.D.	1.00	10.0
Methylene Chloride	N.D.	0.200	1.00
Naphthalene	N.D.	0.126	1.00
Pentachloroethane	N.D.	0.800	10.0
Propionitrile	N.D.	10.2	100
Styrene	N.D.	0.100	1.00
1,1,1,2-Tetrachloroethane	N.D.	0.100	1.00
1,1,2,2-Tetrachloroethane	N.D.	0.184	1.00
Tetrachloroethene	N.D.	0.100	1.00
Tetrahydrofuran	N.D.	2.00	25.0
Toluene	N.D.	0.100	1.00
1,2,4-Trichlorobenzene	N.D.	0.130	1.00

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(1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
1,1,1-Trichloroethane	N.D.	0.130	1.00
1,1,2-Trichloroethane	N.D.	0.100	1.00
Trichloroethene	N.D.	0.177	1.00
Trichlorofluoromethane	N.D.	0.176	1.00
1,2,3-Trichloropropane	N.D.	0.300	1.00
Vinyl Acetate	N.D.	3.29	10.0
Vinyl Chloride	N.D.	0.153	1.00
Xylene (Total)	N.D.	0.208	3.00
Batch number: I181142AA	Sample number(s): 9558695,9558697		
Ethyl ether	N.D.	1.11	12.5

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: 18106WAY026	Sample number(s): 9558704-9558708		
Diethylphthalate	< 5	5	2
2,4-Dinitrotoluene	< 10	10	1
2,6-Dinitrotoluene	< 10	10	0.5

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 18106WAO026	Sample number(s): 9558695-9558700,9558702-9558703		
Acenaphthene	N.D.	0.350	10.0
Acenaphthylene	N.D.	0.480	10.0
Acetophenone	N.D.	0.500	10.0
2-Acetylaminofluorene	N.D.	2.00	10.0
4-Aminobiphenyl	N.D.	0.500	10.0
Aniline	N.D.	0.500	10.0
Anthracene	N.D.	0.520	10.0
Aramite	N.D.	5.00	15.0
Benzo(a)anthracene	N.D.	0.450	10.0
Benzo(a)pyrene	N.D.	1.50	10.0
Benzo(b)fluoranthene	N.D.	1.20	10.0
Benzo(g,h,i)perylene	N.D.	0.420	10.0
Benzo(k)fluoranthene	N.D.	1.60	10.0
Benzyl alcohol	N.D.	10.0	30.0
4-Bromophenyl-phenylether	N.D.	0.560	10.0
Butylbenzylphthalate	N.D.	2.00	10.0
Di-n-butylphthalate	N.D.	2.00	10.0
4-Chloro-3-methylphenol	N.D.	1.01	10.0
4-Chloroaniline	N.D.	2.00	10.0
Chlorobenzilate	N.D.	3.00	10.0
bis(2-Chloroethoxy)methane	N.D.	0.500	5.00
bis(2-Chloroethyl)ether	N.D.	0.500	5.00
bis(2-Chloroisopropyl)ether	N.D.	0.500	10.0

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
2-Chloronaphthalene	N.D.	0.490	10.0
2-Chlorophenol	N.D.	0.980	10.0
4-Chlorophenyl-phenylether	N.D.	0.500	10.0
Chrysene	N.D.	0.310	10.0
Diallate trans/cis	N.D.	1.00	10.0
Dibenz(a,h)anthracene	N.D.	0.380	10.0
Dibenzofuran	N.D.	0.580	10.0
3,3'-Dichlorobenzidine	N.D.	2.00	10.0
2,4-Dichlorophenol	N.D.	1.59	10.0
2,6-Dichlorophenol	N.D.	0.500	10.0
Diethylphthalate	N.D.	2.00	10.0
Dimethoate	N.D.	3.00	10.0
p-Dimethylaminoazobenzene	N.D.	0.500	10.0
7,12-Dimethylbenz[a]anthracene	N.D.	0.500	10.0
3,3'-Dimethylbenzidine	N.D.	25.0	75.0
a,a-Dimethylphenethylamine	N.D.	5.00	50.0
2,4-Dimethylphenol	N.D.	0.990	10.0
Dimethylphthalate	N.D.	2.00	10.0
4,6-Dinitro-2-methylphenol	N.D.	5.00	15.0
1,3-Dinitrobenzene	N.D.	2.00	10.0
2,4-Dinitrophenol	N.D.	10.0	30.0
2,4-Dinitrotoluene	N.D.	1.00	10.0
2,6-Dinitrotoluene	N.D.	0.500	10.0
Disulfoton	N.D.	25.0	50.0
Ethyl methanesulfonate	N.D.	0.500	10.0
bis(2-Ethylhexyl)phthalate	N.D.	2.00	10.0
Famphur	N.D.	25.0	50.0
Fluoranthene	N.D.	0.420	10.0
Fluorene	N.D.	0.380	10.0
Hexachlorobenzene	N.D.	0.870	10.0
Hexachlorocyclopentadiene	N.D.	5.00	15.0
Hexachloroethane	N.D.	1.00	10.0
Hexachloropropene	N.D.	2.00	10.0
Indeno(1,2,3-cd)pyrene	N.D.	0.150	10.0
Isodrin	N.D.	0.500	10.0
Isophorone	N.D.	0.500	10.0
Isosafrole	N.D.	2.00	10.0
Kepone	N.D.	25.0	50.0
Methapyrilene	N.D.	15.0	50.0
Methyl methanesulfonate	N.D.	1.00	10.0
Methyl parathion	N.D.	1.00	10.0
3-Methylcholanthrene	N.D.	0.500	10.0
2-Methylnaphthalene	N.D.	0.290	10.0
2-Methylphenol	N.D.	0.500	5.00
4-Methylphenol	N.D.	0.500	5.00

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
1,4-Naphthoquinone	N.D.	25.0	60.0
1-Naphthylamine	N.D.	5.00	15.0
2-Naphthylamine	N.D.	5.00	15.0
NDPA as diphenylamine	N.D.	0.500	10.0
2-Nitroaniline	N.D.	0.500	10.0
3-Nitroaniline	N.D.	0.500	10.0
4-Nitroaniline	N.D.	0.730	10.0
Nitrobenzene	N.D.	0.500	10.0
5-Nitro-o-toluidine	N.D.	0.500	10.0
2-Nitrophenol	N.D.	1.27	10.0
4-Nitrophenol	N.D.	10.0	30.0
4-Nitroquinoline-1-oxide	N.D.	20.0	60.0
N-Nitrosodiethylamine	N.D.	0.500	10.0
N-Nitrosodimethylamine	N.D.	2.00	10.0
N-Nitrosodi-n-butylamine	N.D.	2.00	10.0
N-Nitroso-di-n-propylamine	N.D.	0.500	10.0
N-Nitrosodiphenylamine	N.D.	0.580	10.0
N-Nitrosomethylethylamine	N.D.	2.00	10.0
N-Nitrosomorpholine	N.D.	2.00	10.0
N-Nitrosopiperidine	N.D.	0.500	10.0
N-Nitrosopyrrolidine	N.D.	0.500	10.0
Di-n-octylphthalate	N.D.	2.00	10.0
Parathion	N.D.	2.00	10.0
Pentachlorobenzene	N.D.	0.500	10.0
Pentachloronitrobenzene	N.D.	2.00	10.0
Pentachlorophenol	N.D.	2.92	10.0
Phenacetin	N.D.	0.500	10.0
Phenanthrene	N.D.	0.520	10.0
Phenol	N.D.	0.770	10.0
1,4-Phenylenediamine	N.D.	75.0	300
Phorate	N.D.	0.500	10.0
2-Picoline	N.D.	2.00	10.0
Pronamide	N.D.	0.500	10.0
Pyrene	N.D.	0.410	10.0
Pyridine	N.D.	2.00	10.0
Safrole	N.D.	2.00	10.0
1,2,4,5-Tetrachlorobenzene	N.D.	2.00	10.0
2,3,4,6-Tetrachlorophenol	N.D.	0.680	10.0
Thionazin	N.D.	2.00	10.0
o-Toluidine	N.D.	0.500	10.0
2,4,5-Trichlorophenol	N.D.	0.810	10.0
2,4,6-Trichlorophenol	N.D.	0.630	10.0
O,O,O-Triethylphosphorothioate	N.D.	2.00	10.0
1,3,5-Trinitrobenzene	N.D.	5.00	15.0

*- Outside of specification
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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 18108117101A	Sample number(s): 9558696		
Total Cyanide (water)	N.D.	0.0050	0.010
Batch number: 18115117101A	Sample number(s): 9558695,9558697,9558702		
Total Cyanide (water)	N.D.	0.0050	0.010
Batch number: 18115117101B	Sample number(s): 9558698-9558699,9558701,9558703		
Total Cyanide (water)	N.D.	0.0050	0.010

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: G181132AA	Sample number(s): 9558704-9558708								
Benzene	5.00	4.64	5.00	4.68	93	94	80-120	1	30
2-Butanone	37.5	35.23	37.5	35.93	94	96	59-141	2	30
Carbon Tetrachloride	5.00	4.59	5.00	4.61	92	92	71-139	0	30
Chloroethane	5.00	4.30	5.00	4.29	86	86	63-120	0	30
Chloromethane	5.00	3.93	5.00	4.06	79	81	47-120	3	30
Dichlorodifluoromethane	5.00	3.50	5.00	3.52	70	70	23-128	0	30
1,1-Dichloroethane	5.00	4.58	5.00	4.61	92	92	80-120	1	30
1,1-Dichloroethene	5.00	4.61	5.00	4.70	92	94	80-124	2	30
Dimethyl ether	5.00	5.20	5.00	5.13	104	103	70-130	1	30
Ethyl ether	5.00	4.78	5.00	4.86	96	97	62-120	2	30
Ethylbenzene	5.00	4.59	5.00	4.63	92	93	80-120	1	30
Freon 113	5.00	4.24	5.00	4.28	85	86	80-128	1	30
Methylene Chloride	5.00	4.28	5.00	4.30	86	86	80-120	1	30
Tetrachloroethene	5.00	4.44	5.00	4.62	89	92	80-120	4	30
Tetrahydrofuran	25	24.09	25	25.02	96	100	61-146	4	30
Toluene	5.00	4.62	5.00	4.68	92	94	80-120	1	30
1,1,1-Trichloroethane	5.00	4.60	5.00	4.57	92	91	78-126	1	30
Trichloroethene	5.00	4.62	5.00	4.62	92	92	80-120	0	30
Trichlorofluoromethane	5.00	4.33	5.00	4.35	87	87	52-143	0	30
Xylene (Total)	15	13.93	15	14.17	93	94	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5181131AA	Sample number(s): 9558695-9558700,9558702-9558703								
2-Propanol	150	159.74			106		40-153		
Batch number: I181133AA	Sample number(s): 9558695-9558700,9558702-9558703,9558709-9558711								
Acetone	37.5	38.6			103		68-141		
Acetonitrile	37.5	62.82			168*		56-157		

*- Outside of specification
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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Acrolein	37.5	41.45			111		39-141		
Acrylonitrile	25	30.85			123		59-151		
Allyl Chloride	5.00	5.74			115		64-120		
Benzene	5.00	5.37			107		80-120		
Bromodichloromethane	5.00	5.22			104		80-125		
Bromoform	5.00	4.32			86		57-141		
Bromomethane	5.00	3.92			78		62-125		
2-Butanone	37.5	49.72			133		59-141		
Carbon Disulfide	5.00	4.95			99		72-129		
Carbon Tetrachloride	5.00	5.68			114		71-139		
2-Chloro-1,3-butadiene	5.00	5.51			110		66-133		
Chloroethane	5.00	3.57			71		63-120		
Chloroform	5.00	5.40			108		80-120		
Chloromethane	5.00	3.53			71		47-120		
1,2-Dibromo-3-chloropropane	5.00	6.07			121		48-149		
Dibromochloromethane	5.00	5.34			107		73-135		
1,2-Dibromoethane	5.00	5.29			106		80-120		
Dibromomethane	5.00	5.36			107		80-122		
trans-1,4-Dichloro-2-butene	25	27.61			110		10-200		
1,2-Dichlorobenzene	5.00	5.15			103		80-120		
1,3-Dichlorobenzene	5.00	5.22			104		80-120		
1,4-Dichlorobenzene	5.00	5.12			102		80-120		
Dichlorodifluoromethane	5.00	3.86			77		23-128		
1,1-Dichloroethane	5.00	5.44			109		80-120		
1,2-Dichloroethane	5.00	5.19			104		68-137		
1,1-Dichloroethene	5.00	5.80			116		80-124		
trans-1,2-Dichloroethene	5.00	5.60			112		80-120		
1,2-Dichloropropane	5.00	5.44			109		80-120		
1,3-Dichloropropane	5.00	5.24			105		80-120		
trans-1,3-Dichloropropene	5.00	5.25			105		71-131		
Dimethyl ether	5.00	3.95			79		70-130		
1,4-Dioxane	125	149.25			119		59-162		
Ethyl ether	5.00	4.99			100		62-120		
Ethyl Methacrylate	5.00	5.23			105		67-139		
Ethylbenzene	5.00	5.41			108		80-120		
Freon 113	5.00	5.46			109		80-128		
Hexachlorobutadiene	5.00	5.62			112		74-120		
Hexachloroethane	5.00	4.81			96		62-127		
2-Hexanone	25	34.44			138		61-143		
Isobutyl Alcohol	125	129.1			103		57-154		
Methacrylonitrile	37.5	47.88			128		57-150		
Methyl Iodide	5.00	5.16			103		77-120		
Methyl Methacrylate	5.00	6.64			133		49-151		
4-Methyl-2-pentanone	25	33.92			136		67-140		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methylene Chloride	5.00	5.31			106		80-120		
Naphthalene	5.00	4.78			96		70-121		
Pentachloroethane	5.00	5.35			107		68-134		
Propionitrile	37.5	42.25			113		63-145		
Styrene	5.00	5.60			112		80-120		
1,1,1,2-Tetrachloroethane	5.00	5.43			109		76-131		
1,1,2,2-Tetrachloroethane	5.00	4.85			97		75-123		
Tetrachloroethene	5.00	5.64			113		80-120		
Tetrahydrofuran	25	32.12			128		61-146		
Toluene	5.00	5.33			107		80-120		
1,2,4-Trichlorobenzene	5.00	4.79			96		74-120		
1,1,1-Trichloroethane	5.00	5.54			111		78-126		
1,1,2-Trichloroethane	5.00	5.33			107		80-120		
Trichloroethene	5.00	5.46			109		80-120		
Trichlorofluoromethane	5.00	4.77			95		52-143		
1,2,3-Trichloropropane	5.00	5.24			105		80-125		
Vinyl Acetate	12.5	12.46			100		34-160		
Vinyl Chloride	5.00	3.71			74		56-120		
Xylene (Total)	15	16.41			109		80-120		
Batch number: I181142AA	Sample number(s): 9558695,9558697								
Ethyl ether	5.00	5.13	5.00	5.13	103	103	62-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18106WAY026	Sample number(s): 9558704-9558708								
Diethylphthalate	50	45.91			92		42-124		
2,4-Dinitrotoluene	50	49.19			98		56-128		
2,6-Dinitrotoluene	50	51.98			104		57-131		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18106WAO026	Sample number(s): 9558695-9558700,9558702-9558703								
Acenaphthene	50	50.11			100		49-123		
Acenaphthylene	50	54.02			108		67-111		
Acetophenone	50	46.81			94		53-118		
2-Acetylaminofluorene	50	47.35	50	51.3	95	103	42-146	8	30
4-Aminobiphenyl	50	23.07	50	21.82	46	44	10-126	6	30
Aniline	50	36.42			73		22-92		
Anthracene	50	50.65			101		55-126		
Aramite	50	8.03	50	10.49	16*	21*	70-130	27	30
Benzo(a)anthracene	50	52.76			106		63-124		
Benzo(a)pyrene	50	52.26			105		50-128		
Benzo(b)fluoranthene	50	50.39			101		58-127		
Benzo(g,h,i)perylene	50	49.48			99		51-124		
Benzo(k)fluoranthene	50	50.5			101		63-123		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzyl alcohol	50	45.83			92		50-113		
4-Bromophenyl-phenylether	50	49.81			100		53-127		
Butylbenzylphthalate	50	45.11			90		40-131		
Di-n-butylphthalate	50	48.13			96		58-119		
4-Chloro-3-methylphenol	50	51.49			103		50-130		
4-Chloroaniline	50	38.1			76		33-106		
Chlorobenzilate	50	33.79	50	36.63	68	73	10-124	8	30
bis(2-Chloroethoxy)methane	50	48.31			97		54-127		
bis(2-Chloroethyl)ether	50	43.84			88		48-119		
bis(2-Chloroisopropyl)ether	50	48.4			97		35-128		
2-Chloronaphthalene	50	43.91			88		41-123		
2-Chlorophenol	50	44.64			89		47-116		
4-Chlorophenyl-phenylether	50	48.46			97		45-124		
Chrysene	50	52.29			105		65-124		
Diallate trans/cis	50	46.11	50	47.66	92	95	36-123	3	30
Dibenz(a,h)anthracene	50	51.23			102		53-132		
Dibenzofuran	50	49.52			99		50-124		
3,3'-Dichlorobenzidine	50	34.34			69		32-106		
2,4-Dichlorophenol	50	49.94			100		53-126		
2,6-Dichlorophenol	50	43.11	50	46.5	86	93	40-125	8	30
Diethylphthalate	50	45.91			92		42-124		
Dimethoate	50	27.35	50	28.49	55	57	10-94	4	30
p-Dimethylaminoazobenzene	50	51.99	50	57.37	104	115	50-145	10	30
7,12-Dimethylbenz[a]anthracene	50	51.38			103		52-122		
3,3'-Dimethylbenzidine	100	16.74			17		10-58		
a,a-Dimethylphenethylamine	50	93	50	113.59	186*	227*	70-130	20	30
2,4-Dimethylphenol	50	45.1			90		41-103		
Dimethylphthalate	50	38.29			77		19-119		
4,6-Dinitro-2-methylphenol	50	46.78			94		50-132		
1,3-Dinitrobenzene	50	52.46			105		60-118		
2,4-Dinitrophenol	100	93.96			94		19-140		
2,4-Dinitrotoluene	50	49.19			98		56-128		
2,6-Dinitrotoluene	50	51.98			104		57-131		
Disulfoton	100	106.99	100	109.75	107	110	30-156	3	30
Ethyl methanesulfonate	50	40.9	50	43.45	82	87	38-117	6	30
bis(2-Ethylhexyl)phthalate	50	50.05			100		52-132		
Famphur	100	9.84	100	9.73	10*	10*	70-130	1	20
Fluoranthene	50	53.06			106		61-123		
Fluorene	50	49.73			99		48-124		
Hexachlorobenzene	50	48.25			96		57-123		
Hexachlorocyclopentadiene	100	77.2			77		10-104		
Hexachloroethane	50	35.59			71		19-105		
Hexachloropropene	50	26.99	50	28.47	54	57	10-105	5	30
Indeno(1,2,3-cd)pyrene	50	49.79			100		52-127		

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Isodrin	50	46.66	50	48.69	93	97	45-130	4	30
Isophorone	50	51.37			103		49-129		
Isosafrole	50	44.14	50	47.03	88	94	48-141	6	30
Kepone	100	27.73	100	27.17	28*	27*	70-130	2	30
Methapyrilene	400	459.96	400	489.47	115	122	18-159	6	30
Methyl methanesulfonate	50	33.85	50	35.85	68	72	34-99	6	30
Methyl parathion	50	43.71	50	43.72	87	87	31-125	0	30
3-Methylcholanthrene	50	50.97	50	54.99	102	110	50-163	8	30
2-Methylnaphthalene	50	45.83			92		42-120		
2-Methylphenol	50	45			90		46-113		
4-Methylphenol	50	45.42			91		42-115		
1,4-Naphthoquinone	100	8.98	100	14.94	9*	15*	70-130	50*	30
1-Naphthylamine	100	55.25			55		10-73		
2-Naphthylamine	100	52.23			52		10-68		
NDPA as diphenylamine	50	49.54			99		70-130		
2-Nitroaniline	50	50.48			101		54-133		
3-Nitroaniline	50	46.98			94		41-123		
4-Nitroaniline	50	43.1			86		46-114		
Nitrobenzene	50	49.49			99		43-128		
5-Nitro-o-toluidine	50	33.44	50	33.64	67	67	26-103	1	30
2-Nitrophenol	50	47.51			95		58-125		
4-Nitrophenol	50	34.69			69		10-96		
4-Nitroquinoline-1-oxide	500	438.06	500	462.95	88	93	31-111	6	30
N-Nitrosodiethylamine	50	40.88	50	44.61	82	89	39-117	9	30
N-Nitrosodimethylamine	50	31.85			64		10-113		
N-Nitrosodi-n-butylamine	50	39.1	50	41.29	78	83	33-113	5	30
N-Nitroso-di-n-propylamine	50	47.92			96		48-128		
N-Nitrosodiphenylamine	50	49.54			99		55-128		
N-Nitrosomethylethylamine	50	37.45	50	40.37	75	81	34-106	8	30
N-Nitrosomorpholine	50	40.06	50	42.05	80	84	37-103	5	30
N-Nitrosopiperidine	50	42.38	50	45.25	85	91	38-120	7	30
N-Nitrosopyrrolidine	50	42.22	50	44.88	84	90	36-117	6	30
Di-n-octylphthalate	50	49.12			98		51-134		
Parathion	50	46.15	50	49.23	92	98	40-140	6	30
Pentachlorobenzene	50	42.87	50	43.75	86	87	30-121	2	30
Pentachloronitrobenzene	50	45.15	50	47.26	90	95	41-132	5	30
Pentachlorophenol	50	44.85			90		50-127		
Phenacetin	50	49.77	50	51.77	100	104	38-134	4	30
Phenanthrene	50	50.42			101		54-122		
Phenol	50	28.19			56		10-92		
1,4-Phenylenediamine	1000	203.26	1000	179.47	20*	18*	70-130	12	30
Phorate	50	60.89	50	63.31	122	127	30-134	4	30
2-Picoline	50	31.95			64		41-87		
Pronamide	50	49.26	50	49.74	99	99	38-134	1	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Pyrene	50	49.39			99		54-123		
Pyridine	50	19.32			39		19-67		
Safrole	50	40.54	50	42.62	81	85	37-117	5	30
1,2,4,5-Tetrachlorobenzene	50	45.09			90		30-117		
2,3,4,6-Tetrachlorophenol	50	54.18			108		60-128		
Thionazin	50	44.46	50	47.61	89	95	32-131	7	30
o-Toluidine	50	31.56			63		13-100		
2,4,5-Trichlorophenol	50	53.94			108		59-129		
2,4,6-Trichlorophenol	50	51.87			104		61-130		
O,O,O-Triethylphosphorothioate	50	40.83	50	44.31	82	89	38-122	8	30
1,3,5-Trinitrobenzene	50	29.64	50	32.9	59	66	10-100	10	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18108117101A	Sample number(s): 9558696								
Total Cyanide (water)	0.200	0.169			84*		90-110		
Batch number: 18115117101A	Sample number(s): 9558695,9558697,9558702								
Total Cyanide (water)	0.200	0.198			99		90-110		
Batch number: 18115117101B	Sample number(s): 9558698-9558699,9558701,9558703								
Total Cyanide (water)	0.200	0.198			99		90-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5181131AA	Sample number(s): 9558695-9558700,9558702-9558703 UNSPK: 9558698									
2-Propanol	N.D.	150	167.59	150	171.3	112	114	40-153	2	30
Batch number: I181133AA	Sample number(s): 9558695-9558700,9558702-9558703,9558709-9558711 UNSPK: 9558698									
Acetone	N.D.	37.5	41.82	37.5	42.53	112	113	68-141	2	30
Acetonitrile	N.D.	37.5	42.62	37.5	41.3	114	110	56-157	3	30
Acrolein	N.D.	37.5	43.35	37.5	43.5	116	116	39-141	0	30
Acrylonitrile	N.D.	25	33.12	25	34.3	132	137	59-151	4	30
Allyl Chloride	N.D.	5.00	6.28	5.00	6.51	126*	130*	64-120	4	30
Benzene	0.119	5.00	5.93	5.00	6.07	116	119	80-120	2	30
Bromodichloromethane	N.D.	5.00	5.59	5.00	5.65	112	113	80-125	1	30
Bromoform	N.D.	5.00	4.05	5.00	4.20	81	84	57-141	4	30
Bromomethane	N.D.	5.00	4.28	5.00	3.90	86	78	62-125	10	30
2-Butanone	N.D.	37.5	53.93	37.5	55.12	144*	147*	59-141	2	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Carbon Disulfide	N.D.	5.00	5.66	5.00	5.73	113	115	72-129	1	30
Carbon Tetrachloride	N.D.	5.00	6.71	5.00	6.77	134	135	71-139	1	30
2-Chloro-1,3-butadiene	N.D.	5.00	6.43	5.00	6.44	129	129	66-133	0	30
Chloroethane	0.686	5.00	4.59	5.00	4.28	78	72	63-120	7	30
Chloroform	N.D.	5.00	5.94	5.00	6.01	119	120	80-120	1	30
Chloromethane	N.D.	5.00	3.58	5.00	3.41	72	68	47-120	5	30
1,2-Dibromo-3-chloropropane	N.D.	5.00	6.75	5.00	6.89	135	138	48-149	2	30
Dibromochloromethane	N.D.	5.00	5.28	5.00	5.39	106	108	73-135	2	30
1,2-Dibromoethane	N.D.	5.00	5.53	5.00	5.61	111	112	80-120	2	30
Dibromomethane	N.D.	5.00	5.65	5.00	5.73	113	115	80-122	1	30
trans-1,4-Dichloro-2-butene	N.D.	25	30.76	25	30.57	123	122	10-200	1	30
1,2-Dichlorobenzene	N.D.	5.00	5.38	5.00	5.57	108	111	80-120	4	30
1,3-Dichlorobenzene	N.D.	5.00	5.46	5.00	5.63	109	113	80-120	3	30
1,4-Dichlorobenzene	N.D.	5.00	5.36	5.00	5.53	107	111	80-120	3	30
Dichlorodifluoromethane	N.D.	5.00	4.64	5.00	4.25	93	85	23-128	9	30
1,1-Dichloroethane	2.41	5.00	8.21	5.00	8.38	116	119	80-120	2	30
1,2-Dichloroethane	N.D.	5.00	5.65	5.00	5.65	113	113	68-137	0	30
1,1-Dichloroethene	N.D.	5.00	6.74	5.00	6.89	135*	138*	80-124	2	30
trans-1,2-Dichloroethene	N.D.	5.00	6.13	5.00	6.28	123*	126*	80-120	2	30
1,2-Dichloropropane	N.D.	5.00	5.90	5.00	5.95	118	119	80-120	1	30
1,3-Dichloropropane	N.D.	5.00	5.53	5.00	5.67	111	113	80-120	2	30
trans-1,3-Dichloropropene	N.D.	5.00	5.41	5.00	5.59	108	112	71-131	3	30
Dimethyl ether	1.10	5.00	4.77	5.00	4.40	73	66*	70-130	8	30
1,4-Dioxane	N.D.	125	155.85	125	158.43	125	127	59-162	2	30
Ethyl ether	14.89	5.00	18.67	5.00	18.9	76	80	62-120	1	30
Ethyl Methacrylate	N.D.	5.00	5.32	5.00	5.54	106	111	67-139	4	30
Ethylbenzene	N.D.	5.00	5.96	5.00	6.08	119	122*	80-120	2	30
Freon 113	N.D.	5.00	6.65	5.00	6.70	133*	134*	80-128	1	30
Hexachlorobutadiene	N.D.	5.00	6.00	5.00	6.16	120	123*	74-120	3	30
Hexachloroethane	N.D.	5.00	6.08	5.00	5.81	122	116	62-127	4	30
2-Hexanone	N.D.	25	38.89	25	39.14	156*	157*	61-143	1	30
Isobutyl Alcohol	N.D.	125	138.23	125	145.47	111	116	57-154	5	30
Methacrylonitrile	N.D.	37.5	52.91	37.5	53.47	141	143	57-150	1	30
Methyl Iodide	N.D.	5.00	5.52	5.00	5.68	110	114	77-120	3	30
Methyl Methacrylate	N.D.	5.00	7.52	5.00	7.35	150	147	49-151	2	30
4-Methyl-2-pentanone	N.D.	25	38.29	25	37.83	153*	151*	67-140	1	30
Methylene Chloride	N.D.	5.00	5.74	5.00	5.81	115	116	80-120	1	30
Naphthalene	N.D.	5.00	4.79	5.00	5.18	96	104	70-121	8	30
Pentachloroethane	N.D.	5.00	5.68	5.00	5.84	114	117	68-134	3	30
Propionitrile	N.D.	37.5	47.35	37.5	46.67	126	124	63-145	1	30
Styrene	N.D.	5.00	5.98	5.00	6.15	120	123*	80-120	3	30
1,1,1,2-Tetrachloroethane	N.D.	5.00	5.81	5.00	5.89	116	118	76-131	1	30
1,1,2,2-Tetrachloroethane	N.D.	5.00	5.07	5.00	5.19	101	104	75-123	2	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Tetrachloroethene	0.117	5.00	6.26	5.00	6.39	123*	125*	80-120	2	30
Tetrahydrofuran	N.D.	25	36.59	25	38.52	146	154*	61-146	5	30
Toluene	N.D.	5.00	5.76	5.00	5.86	115	117	80-120	2	30
1,2,4-Trichlorobenzene	N.D.	5.00	4.80	5.00	5.19	96	104	74-120	8	30
1,1,1-Trichloroethane	N.D.	5.00	6.31	5.00	6.43	126	129*	78-126	2	30
1,1,2-Trichloroethane	N.D.	5.00	5.65	5.00	5.72	113	114	80-120	1	30
Trichloroethene	N.D.	5.00	6.05	5.00	6.23	121*	125*	80-120	3	30
Trichlorofluoromethane	N.D.	5.00	6.09	5.00	5.51	122	110	52-143	10	30
1,2,3-Trichloropropane	N.D.	5.00	5.41	5.00	5.54	108	111	80-125	2	30
Vinyl Acetate	N.D.	12.5	13.87	12.5	13.31	111	106	34-160	4	30
Vinyl Chloride	N.D.	5.00	4.18	5.00	3.95	84	79	56-120	6	30
Xylene (Total)	N.D.	15	17.58	15	18.08	117	121*	80-120	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18106WAY026	Sample number(s): 9558704-9558708 UNSPK: P06WYUS									
Diethylphthalate	< 5	52.74	51.26	50.4	49.27	97	98	42-124	4	30
2,4-Dinitrotoluene	< 10	52.74	52.34	50.4	50.07	99	99	56-128	4	30
2,6-Dinitrotoluene	< 10	52.74	54.06	50.4	51.58	103	102	57-131	5	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18106WAO026	Sample number(s): 9558695-9558700,9558702-9558703 UNSPK: 9558698									
Acenaphthene	N.D.	52.74	53.75	50.4	50.09	102	99	49-123	7	30
Acenaphthylene	N.D.	52.74	57.67	50.4	54.52	109	108	67-111	6	30
Acetophenone	N.D.	52.74	52.3	50.4	49.08	99	97	53-118	6	30
Aniline	N.D.	52.74	34.53	50.4	31.56	65	63	22-92	9	30
Anthracene	N.D.	52.74	53.88	50.4	51.3	102	102	55-126	5	30
Benzo(a)anthracene	N.D.	52.74	53.12	50.4	51.06	101	101	63-124	4	30
Benzo(a)pyrene	N.D.	52.74	52.38	50.4	49.92	99	99	50-128	5	30
Benzo(b)fluoranthene	N.D.	52.74	53.6	50.4	50.61	102	100	58-127	6	30
Benzo(g,h,i)perylene	N.D.	52.74	50.78	50.4	48.45	96	96	51-124	5	30
Benzo(k)fluoranthene	N.D.	52.74	53.57	50.4	49.96	102	99	63-123	7	30
Benzyl alcohol	N.D.	52.74	48.36	50.4	44.79	92	89	50-113	8	30
4-Bromophenyl-phenylether	N.D.	52.74	52.5	50.4	48.75	100	97	53-127	7	30
Butylbenzylphthalate	N.D.	52.74	49.1	50.4	48.48	93	96	40-131	1	30
Di-n-butylphthalate	N.D.	52.74	51.72	50.4	49.62	98	98	58-119	4	30
4-Chloro-3-methylphenol	N.D.	52.74	26.7	50.4	47.28	51	94	50-130	56*	30
4-Chloroaniline	N.D.	52.74	39.41	50.4	34.44	75	68	33-106	13	30
bis(2-Chloroethoxy)methane	N.D.	52.74	53.2	50.4	49.07	101	97	54-127	8	30
bis(2-Chloroethyl)ether	N.D.	52.74	48.63	50.4	45.67	92	91	48-119	6	30
bis(2-Chloroisopropyl)ether	N.D.	52.74	53.17	50.4	49.9	101	99	35-128	6	30
2-Chloronaphthalene	N.D.	52.74	47.43	50.4	44.27	90	88	41-123	7	30
2-Chlorophenol	N.D.	52.74	21.16	50.4	15.86	40*	31*	47-116	29	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	N.D.	52.74	51.51	50.4	48.77	98	97	45-124	5	30
Chrysene	N.D.	52.74	53.15	50.4	51.8	101	103	65-124	3	30
Dibenz(a,h)anthracene	N.D.	52.74	54.37	50.4	51.51	103	102	53-132	5	30
Dibenzofuran	N.D.	52.74	52.57	50.4	49.36	100	98	50-124	6	30
3,3'-Dichlorobenzidine	N.D.	52.74	36.87	50.4	35.62	70	71	32-106	3	30
2,4-Dichlorophenol	N.D.	52.74	19.71	50.4	17.12	37*	34*	53-126	14	30
Diethylphthalate	N.D.	52.74	51.26	50.4	49.27	97	98	42-124	4	30
7,12-Dimethylbenz[a]anthracene	N.D.	52.74	52.82	50.4	50.02	100	99	52-122	5	30
3,3'-Dimethylbenzidine	N.D.	105.49	N.D.	100.81	N.D.	0*	0*	10-58	0	30
2,4-Dimethylphenol	N.D.	52.74	44.06	50.4	42.53	84	84	41-103	4	30
Dimethylphthalate	N.D.	52.74	48.99	50.4	48.63	93	96	19-119	1	30
4,6-Dinitro-2-methylphenol	N.D.	52.74	50.41	50.4	49.81	96	99	50-132	1	30
1,3-Dinitrobenzene	N.D.	52.74	54.24	50.4	52.87	103	105	60-118	3	30
2,4-Dinitrophenol	N.D.	105.49	97.17	100.81	102.14	92	101	19-140	5	30
2,4-Dinitrotoluene	N.D.	52.74	52.34	50.4	50.07	99	99	56-128	4	30
2,6-Dinitrotoluene	N.D.	52.74	54.06	50.4	51.58	103	102	57-131	5	30
bis(2-Ethylhexyl)phthalate	N.D.	52.74	50.52	50.4	48.97	96	97	52-132	3	30
Fluoranthene	N.D.	52.74	55.35	50.4	51.88	105	103	61-123	6	30
Fluorene	N.D.	52.74	52.89	50.4	50.47	100	100	48-124	5	30
Hexachlorobenzene	N.D.	52.74	51.87	50.4	49.19	98	98	57-123	5	30
Hexachlorocyclopentadiene	N.D.	105.49	96.87	100.81	89.91	92	89	10-104	7	30
Hexachloroethane	N.D.	52.74	39.02	50.4	35.98	74	71	19-105	8	30
Indeno(1,2,3-cd)pyrene	N.D.	52.74	52.73	50.4	50.27	100	100	52-127	5	30
Isophorone	N.D.	52.74	56.22	50.4	51.94	107	103	49-129	8	30
2-Methylnaphthalene	N.D.	52.74	50.83	50.4	45.34	96	90	42-120	11	30
2-Methylphenol	N.D.	52.74	27.99	50.4	42.19	53	84	46-113	40*	30
4-Methylphenol	N.D.	52.74	24.18	50.4	39.84	46	79	42-115	49*	30
1-Naphthylamine	N.D.	105.49	53.09	100.81	44.37	50	44	10-73	18	30
2-Naphthylamine	N.D.	105.49	52.77	100.81	45.13	50	45	10-68	16	30
NDPA as diphenylamine	N.D.	52.74	53.82	50.4	50.58	102	100	70-130	6	30
2-Nitroaniline	N.D.	52.74	53.71	50.4	51.89	102	103	54-133	3	30
3-Nitroaniline	N.D.	52.74	48.31	50.4	45.07	92	89	41-123	7	30
4-Nitroaniline	N.D.	52.74	46.21	50.4	43.24	88	86	46-114	7	30
Nitrobenzene	N.D.	52.74	55.03	50.4	50.14	104	99	43-128	9	30
2-Nitrophenol	N.D.	52.74	45.57	50.4	41.64	86	83	58-125	9	30
4-Nitrophenol	N.D.	52.74	34.91	50.4	31.03	66	62	10-96	12	30
N-Nitrosodimethylamine	N.D.	52.74	34.76	50.4	31.11	66	62	10-113	11	30
N-Nitroso-di-n-propylamine	N.D.	52.74	53.22	50.4	50.03	101	99	48-128	6	30
N-Nitrosodiphenylamine	N.D.	52.74	53.82	50.4	50.58	102	100	55-128	6	30
Di-n-octylphthalate	N.D.	52.74	50.51	50.4	48.11	96	95	51-134	5	30
Pentachlorophenol	N.D.	52.74	11.72	50.4	20.9	22*	41*	50-127	56*	30
Phenanthrene	N.D.	52.74	53.52	50.4	49.45	101	98	54-122	8	30
Phenol	N.D.	52.74	14.48	50.4	19.05	27	38	10-92	27	30

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
2-Picoline	N.D.	52.74	37.92	50.4	33.68	72	67	41-87	12	30
Pyrene	N.D.	52.74	51.38	50.4	48.57	97	96	54-123	6	30
Pyridine	N.D.	52.74	22.27	50.4	20.55	42	41	19-67	8	30
1,2,4,5-Tetrachlorobenzene	N.D.	52.74	48.59	50.4	45.08	92	89	30-117	7	30
2,3,4,6-Tetrachlorophenol	N.D.	52.74	13.32	50.4	16.95	25*	34*	60-128	24	30
o-Toluidine	N.D.	52.74	31.22	50.4	27.67	59	55	13-100	12	30
2,4,5-Trichlorophenol	N.D.	52.74	23.21	50.4	18.9	44*	37*	59-129	20	30
2,4,6-Trichlorophenol	N.D.	52.74	13.56	50.4	13.03	26*	26*	61-130	4	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 18108117101A	Sample number(s): 9558696 UNSPK: P558570									
Total Cyanide (water)	N.D.	0.200	0.193			96		72-114		
Batch number: 18115117101A	Sample number(s): 9558695,9558697,9558702 UNSPK: P558570									
Total Cyanide (water)	N.D.	0.200	0.201			101		72-114		
Batch number: 18115117101B	Sample number(s): 9558698-9558699,9558701,9558703 UNSPK: 9558698									
Total Cyanide (water)	N.D.	0.200	0.192	0.200	0.164	96	82	72-114	16	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 18108117101A	Sample number(s): 9558696 BKG: P558570			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
Batch number: 18115117101A	Sample number(s): 9558695,9558697,9558702 BKG: P558570			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20
Batch number: 18115117101B	Sample number(s): 9558698-9558699,9558701,9558703 BKG: 9558698			
Total Cyanide (water)	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 2-Propanol
Batch number: 5181131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9558695	99	103	99	100
9558696	99	102	99	99
9558697	100	103	97	98
9558698	99	101	100	99
9558699	101	103	100	102
9558700	101	105	99	101
9558702	98	100	99	102
9558703	99	102	100	100
Blank	97	101	100	101
LCS	99	101	99	103
MS	101	103	100	102
MSD	101	105	99	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 8260C (25 ml)
Batch number: G181132AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9558704	99	101	99	97
9558705	99	100	100	98
9558706	99	98	99	97
9558707	98	99	99	97
9558708	100	100	99	97
Blank	99	99	100	98
LCS	100	102	99	98
LCSD	100	98	99	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 8260C (25 ml)
Batch number: I181133AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9558695	104	102	99	99
9558696	101	101	100	100
9558697	103	103	99	100
9558698	104	103	99	98
9558699	103	100	100	101
9558700	101	100	100	102
9558702	103	101	99	100
9558703	103	103	99	99
9558709	104	103	100	98
9558710	103	103	100	100

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Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931896
Reported: 05/14/2018 10:00

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: I181133AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9558711	104	103	100	100
Blank	102	103	100	98
LCS	102	100	100	99
MS	103	100	100	101
MSD	101	100	100	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SVOAs 8270D MINI
Batch number: 18106WAO026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9558695	42	45	87	77	75	90
9558696	37	39	87	72	75	76
9558697	39	34	77	68	73	86
9558698	12	4*	27	61	66	70
9558699	22	23	17*	98	90	86
9558700	32	11	26	93	89	86
9558702	9*	3*	20*	67	72	66
9558703	17	21	34	71	70	59
Blank	29	40	84	72	73	89
LCS	50	63	102	92	89	94
LCSD	42	56	99	92	86	92
MS	22	23	17*	98	90	86
MSD	32	11	26	93	89	86
Limits:	10-71	10-82	21-134	30-111	39-105	27-116

Analysis Name: 3 SVOCs 8270D
Batch number: 18106WAY026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9558704	72	74	92
9558705	82	81	83
9558706	81	80	93
9558707	78	76	87
9558708	88	84	98
Blank	72	73	89
LCS	92	89	94
MS	98	90	86
MSD	93	89	86
Limits:	30-111	39-105	27-116

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1931896/9558695-711

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Client: 0 **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2Q 2018 Annual Groundwater Monitoring Event **DAA JN:** B03204-18A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES WPS: 12.754-02X-Y0-5756-8970 **Carrier:** " " " 5713-5160 **Tracking Number:** " " " 5658-9155

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Box 4: Sample Type
G Grab; C Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER _____
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U				
Required pH of Sample	<2	<2		<2	<2	>12				
Box 2 - Preservative	A	A	H	B	B	E				
Box 5 - Sample Container Type	3-40mL V	3-40mL V	2-250mL AG	1-500 mL P		1-500 mL P				

Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge volume	8260C/5030C 5 ml purge volume for 2-propanol ONLY	8270D/3510C (Semivolatiles)	ICP/MS 6020A/3005A (Metals-Total)	7470A (Mercury-Total)	9012B(Cyanide)				
16C1	04/13	1005	GW	10	X	X	X	X	X	X				
16MW8	04/10	1420	GW	10	X	X	X	X	X	X				
16MW9	4/13	0910	GW	10	X	X	X	X	X	X				
16WC1A	04/12	1515	GW	30	X	X	X	X	X	X				
16WDUP	04/12	1530	GW	10	X	X	X	X	X	X				
16WC1B	04/12	1420	GW	10	X	X	X	X	X	X				
16-2	04/10	1335	GW	6	X		X	X	X					
16-3	04/12	1330	GW	6	X		X	X	X					
16-5	04/10	1140	GW	6	X		X	X	X					
16WC2B	04/10	1250	GW	6	X		X	X	X					
16SPRING	04/10	1145	GW	6	X		X	X	X					
Trip Blank 1	04/10	—	T	2	X									
Trip Blank 2	04/10	—	T	2	X									
Trip Blank 3	04/10	—	T	2	X									

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. Level 1 Deliverable with EDD.

USE FOR QC

one trip blnnk required per day

Delete if not required

Clients Special Instructions: level 1 with edd. See attached target analyte list.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 04/10/18	#1 Relinquished by (Signature):	Date: 4/13/18	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Ki-Tran Vo	Date: 4/10/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/14/18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name: ELLE	Time: 11:50	

4/3/18

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HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-18A

ANALYTICAL METHOD: 8260C/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

(*)

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING

1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5
15	Dimethyl ether	115-10-6	12.5
16	Methylene chloride	75-09-2	J
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1
20	Tetrahydrofuran		25

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF

17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014. KPO, location 16-1 removed 2014
20 added 04 2016 JCF

(*) report to at or above QL.

JCF 4/3/18

25 ml purge volume

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ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

THIS APPLIES TO WELLS 16-2, 16-3, 16-5, 16WC2B, 16SPRING *

No.	PARAMETER	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthate		5

Report to at or above the QL.
10/13- diethylphthate added 10/13.

* For these wells/analytes - report to at or above QL. JVR 4/3/2018

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* For these wells/analytes report to MDL w/ "J" flag. JK 4/3/18

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ANALYTICAL METHOD: 8260C/ GCMS/ Volatile (1 of 2 pages)
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

Analyte	CAS#	SecondaryName	TertiaryName
1. Acetone	67-64-1		
2. Acetonitrile	75-05-8		
3. Acrolein	107-02-8		
4. Acrylonitrile	107-13-1		
5. Allyl chloride	107-05-1		
6. Benzene	71-43-2		
7. Bromodichloromethane	75-27-4		
8. Bromoform	75-25-2	Tribromomethane	
9. Carbon disulfide	75-15-0		
10. Carbon tetrachloride	56-23-5		
11. Chloroethane	75-00-3	Ethyl chloride	
12. Chloroform	67-66-3	Trichloromethane	
13. Chloroprene	126-99-8		
14. Dibromochloromethane	124-48-1		
15. 1,2-Dibromo-3-chloropropane	96-12-8	DBCP	
16. 1,2-Dibromoethane	106-93-4	EDB	Ethylene dibromide
17. 1,2-Dichlorobenzene	95-50-1	o-Dichlorobenzene	
18. 1,3-Dichlorobenzene	541-73-1	m-Dichlorobenzene	
19. 1,4-Dichlorobenzene	106-46-7	p-Dichlorobenzene	
20. trans-1,4-Dichloro-2-butene	110-57-6		
21. Dichlorodifluoromethane	75-71-8		
22. 1,1-Dichloroethane	75-34-3		
23. 1,2-Dichloroethane	107-06-2		
24. 1,1-Dichloroethene	75-35-4		
25. trans-1,2-Dichloroethene	156-60-5		
26. 1,2-Dichloropropane	78-87-5		
27. 1,3-Dichloropropane	142-28-9		
28. trans-1,3-Dichloropropene	10061-02-6		
29. Diethyl ether	60-29-7		
30. Dimethyl ether	115-10-6		
31. 1,4-Dioxane	123-91-1		
32. Ethylbenzene	100-41-4		
33. Ethyl methacrylate	97-63-2		
34. Hexachlorobutadiene	87-68-3		
35. Hexachloroethane	67-72-1		
36. 2-Hexanone	591-78-6	Methyl butyl ketone	MBK
37. Isobutyl alcohol	78-83-1		
38. Methacrylonitrile	126-98-7		
39. Bromomethane	74-83-9	Methyl bromide	
40. Chloromethane	74-87-3	Methyl chloride	
41. 2-Butanone	78-93-3	Methyl ethyl ketone	MEK
42. Iodomethane	74-88-4	methyl iodide	
43. Methyl methacrylate	80-62-6		
44. 4-Methyl-2-pentanone	108-10-1	Methyl isobutyl	
45. Dibromomethane	74-95-3	Methylene bromide	
46. Methylene chloride	75-09-2		
47. Naphthalene	91-20-3		
48. Pentachloroethane	76-01-7		

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49. 2-Propanol	67-63-0	Isopropanol	
50. Propionitrile	107-12-0		
51. Styrene	100-42-5		
52. 1,1,1,2-Tetrachloroethane	630-20-6		
53. 1,1,2,2-Tetrachloroethane	79-34-5		
54. Tetrachloroethene	127-18-4	Tetrachloroethylene	
55. Tetrahydrofuran	109-99-9		
56. Toluene	108-88-3		
57. 1,2,4-Trichlorobenzene	120-82-1		
58. 1,1,1-Trichloroethane	71-55-6	Methylchloroform	
59. 1,1,2-Trichloroethane	79-00-5		
60. Trichloroethene	79-01-6	Trichloroethene	
61. Trichlorofluoromethane	75-69-4		
62. 1,2,3-Trichloropropane	96-18-4		
63. 1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	Freon-13	
64. Vinyl acetate	108-05-4		
65. Vinyl chloride	75-01-4		
66. Xylenes (Total)	1330-20-7		

Rev per July 2014 permit renewal. JCF 4-2015

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* For these wells/analytes - report to MDL w/ "J" flag JRJ 3/2/18

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ANALYTICAL METHOD: 8270D/ GCMS/ Semivolatile
THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC

	Analyte	CAS#	SecondaryName	TertiaryName
1.	Acenaphthene	83-32-9		
2.	Acenaphthylene	208-96-8		
3.	Acetophenone	98-86-2		
4.	2-Acetylaminofluorene	53-96-3		
5.	4-Aminobiphenyl	92-67-1		
6.	Aniline	62-53-3		
7.	Anthracene	120-12-7		
8.	Aramite	140-57-8		
9.	Benzo[a]anthracene	56-55-3		
10.	Benzo[b]fluoranthene	205-99-2		
11.	Benzo[k]fluoranthene	207-08-9		
12.	Benzo[ghi]perylene	191-24-2		
13.	Benzo(a)pyrene	50-32-8		
14.	1,4-Benzenediamine	106-50-3	p-Phenylenediamine	
15.	Benzyl alcohol	100-51-6		
16.	bis(2-Chloroethoxy)methane	111-91-1		
17.	bis(2-Chloroethyl)ether	111-44-4		
18.	bis(2-Chloro-1-methylethyl)ether	108-60-1		
19.	bis(2-Ethylhexyl)phthalate	117-81-7		
20.	4-Bromophenyl phenyl ether	101-55-3		
21.	Butyl benzyl phthalate	85-68-7		
22.	p-Chloroaniline	106-47-8	4-Chloroaniline	
23.	Chlorobenzilate	510-15-6		
24.	p-Chloro-m-cresol	59-50-7	4-Chloro-3-methylphenol	
25.	2-Chloronaphthalene	91-58-7		
26.	2-Chlorophenol	95-57-8		
27.	4-Chlorophenyl phenyl ether	7005-72-3		
28.	Chrysene	218-01-9		
29.	Diallate	2303-16-4		
30.	Dibenz(a,h)anthracene	53-70-3		
31.	Dibenzofuran	132-64-9		
32.	Di-n-butyl phthalate	84-74-2		
33.	3,3'-Dichlorobenzidine	91-94-1		
34.	2,4-Dichlorophenol	120-83-2		
35.	2,6-Dichlorophenol	87-65-0		
36.	Diethyl phthalate	84-66-2		
37.	O,O-Diethyl O-2-pyrazinyl	297-97-2	Thionazin	
38.	Dimethoate	60-51-5		
39.	p-(Dimethylamino)azobenzene	60-11-7		
40.	7,12-Dimethylbenz[a]anthracene	57-97-6		
41.	3,3'-Dimethylbenzidine	119-93-7		
42.	a,a-Dimethylphenethylamine	122-09-8		
43.	2,4-Dimethylphenol	105-67-9		
44.	Dimethyl phthalate	131-11-3		
45.	m-Dinitrobenzene	99-65-0	1,3-Dinitrobenzene	
46.	4,6-Dinitro-o-cresol	534-52-1	4,6-Dinitro-2-methylphenol	
47.	2,4-Dinitrophenol	51-28-5		
48.	2,4-Dinitrotoluene	121-14-2		
49.	2,6-Dinitrotoluene	606-20-2		
50.	Di-n-octyl phthalate	117-84-0		
51.	Diphenylamine	122-39-4		
52.	Disulfoton	298-04-4		
53.	Ethyl methanesulfonate	62-50-0		
54.	Famphur	52-85-7		
55.	Fluoranthene	206-44-0		

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56. Fluorene	86-73-7		
57. Hexachlorobenzene	118-74-1		
58. Hexachlorocyclopentadiene	77-47-4		
59. Hexachlorophene	70-30-4		
~~60. Hexachloropropene~~	~~1888-71-7~~	not required by ELLE. JVC 9/3/18	
61. Indeno[1,2,3-cd]pyrene	193-39-5		
62. Isodrin	465-73-6		
63. Isophorone	78-59-1		
64. Isosafrole	120-58-1		
65. Kepone	143-50-0		
66. Methapyrilene	91-80-5		
67. 3-Methylcholanthrene	56-49-5		
68. Methyl methane sulfonate	66-27-3		
69. 2-Methylnaphthalene	91-57-6		
70. Methyl parathion	298-00-0		
71. 2-Methylphenol	95-48-7	o-Cresol	
72. 3 & 4-Methylphenol	m 108-39-4 p	m-/p-Cresol	
73. 1,4-Naphthoquinone	130-15-4		
74. 1-Naphthylamine	134-32-7		
75. 2-Naphthylamine	91-59-8		
76. o-Nitroaniline	88-74-4	2-Nitroaniline	
77. m-Nitroaniline	99-09-2	3-Nitroaniline	
78. p-Nitroaniline	100-01-6	4-Nitroaniline	
79. Nitrobenzene	98-95-3		
80. o-Nitrophenol	88-75-5	2-Nitrophenol	
81. p-Nitrophenol	100-02-7	4-Nitrophenol	
82. 4-Nitroquinoline-1-oxide	56-57-5		
83. N-Nitrosodi-n-butylamine	924-16-3		
84. N-Nitrosodiethylamine	55-18-5		
85. N-Nitrosodimethylamine	62-75-9		
86. N-Nitrosodiphenylamine	86-30-6		
87. N-Nitrosodipropylamine	621-64-7		
88. N-Nitrosomethylethylamine	10595-95-6		
89. N-Nitrosomorpholine	59-89-2		
90. N-Nitrosopiperidine	100-75-4		
91. N-Nitrosopyrrolidine	930-55-2		
92. 5-Nitroso-o-toluidine	99-55-8		
93. Parathion	56-38-2		
94. Pentachlorobenzene	608-93-5		
95. Pentachloronitrobenzene	82-68-8		
96. Pentachlorophenol	87-86-5		
97. Phenacetin	62-44-2		
98. Phenanthrene	85-01-8		
99. Phenol	108-95-2		
100. Phorate	298-02-2		
101. 2-Picoline	931-19-1		
102. Pronamide	23950-58-5		
103. Pyrene	129-00-0		
104. Pyridine	110-86-1		
105. Safrole	94-59-7		
~~106. Sulfotep~~	~~3689-24-5~~	not required by ELLE. JVC 9/3/18	
107. 1,2,4,5-Tetrachlorobenzene	95-94-3		
108. 2,3,4,6-Tetrachlorophenol	58-90-2		
109. o-Toluidine	95-53-4		
110. 2,4,5-Trichlorophenol	95-95-4		
111. 2,4,6-Trichlorophenol	88-06-2		
112. O,O,O-Triethyl phosphorothioate	126-68-1		
113. sym-Trinitrobenzene	99-35-4	1,3,5-trinitrobenzene	

~~114.~~ HEXACHLOROETHANE ~~JCF 4/9/2013~~ report by 8260. JVC 9/3/18

1931896

HWMU16
Radford Army Ammunition Plant
Annual Appendix IX Groundwater Monitoring Event
DAA JN: B03204-18A

ANALYTICAL METHOD: 9012B
TYPE METHOD: CLO
CLASS: CYANIDE

*

THIS APPLIES TO 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B AND QC

No.	PARAMETER	CAS RN	Required LOQ/DL (µg/l)
1	Cyanide	57-12-5	20 / 5

These are Appendix IX wells. Report estimated results.

*

LOD revised 4Q2016 class 1 permit mod

report to MDL (5 µg/l) w/ "J" flag.

4/3/18

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Sample Administration Receipt Documentation Log

Doc Log ID: 213780

Group Number(s): 1931896

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/14/2018 11:50
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	6
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Zane Hollinger (10251) at 14:04 on 04/14/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	3.5	DT	Wet	Y	Bagged	N
2	DT42-01	1.2	DT	Wet	Y	Bagged	N
3	DT42-01	1.5	DT	Wet	Y	Bagged	N

General Comments: Trip Blank 3 containers do not have client labels on them like the other two Trip Blank samples

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
9558695	16C1	X		
9558696	16MW8	X		
9558697	16MW9	X		
9558698	16WC1A	X		Unspiked
9558699	16WC1A MS	X		Matrix Spike
9558700	16WC1A MSD	X		Matrix Spike Duplicate
9558702	16WDUP	X		Field Duplicate Sample
9558703	16WC1B	X		
9558704	16-2	X		
9558705	16-3	X		
9558706	16-5	X		
9558707	16WC2B	X		
9558708	16SPRING	X		
9558709	Trip Blank 1	X		Trip Blank
9558710	Trip Blank 2	X		Trip Blank
9558711	Trip Blank 3	X		Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Volatiles

Fraction: Volatiles by GC/MS

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 9558695-9558698, 9558709-9558711: Analysis: 11996)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch#: I181133AA (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711, UNSPK: 9558698)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Acetonitrile

MS/MSD

Batch#: I181133AA (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711, UNSPK: 9558698)
The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: Dimethyl ether
The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:1,1,1-Trichloroethane, Ethylbenzene, Hexachlorobutadiene, Styrene, Tetrahydrofuran, Xylene (Total)
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene, 2-Butanone, 2-Hexanone, 4-Methyl-2-pentanone, Allyl Chloride, Freon 113, Tetrachloroethene, trans-1,2-Dichloroethene, Trichloroethene

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Volatiles

Fraction: Volatiles by GC/MS

SAMPLE ANALYSIS:

Samples	2-Propanol	8260C (25 ml)
9558695	DF1	DF2.5; DF1
9558696	DF1	DF1
9558697	DF1	DF2.5; DF1
9558698	UNSPK/ DF1	UNSPK/ DF1
9558699	MS/ DF1	MS/ DF1
9558700	MSD/ DF1	MSD/ DF1
9558702	DF1	DF1
9558703	DF1	DF1
9558704		DF1
9558705		DF1
9558706		DF1
9558707		DF1
9558708		DF1
9558709		DF1
9558710		DF1
9558711		DF1

(Sample number(s): 9558699-9558700: Analysis: 11996)
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

(Sample number(s): 9558696: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
tetrahydrofuran.

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Volatiles

Fraction: Volatiles by GC/MS

(Sample number(s): 9558697-9558698, 9558702: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
chloroethane.

(Sample number(s): 9558695: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
chloroethane and tetrahydrofuran.

(Sample number(s): 9558709-9558711: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
A targeted library search was performed yielding the following results:
ethylene oxide and 1-propanol are non-detect.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Volatiles

Fraction: Volatiles by GC/MS

(Sample number(s): 9558703: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
2-Propanol	5181131AA	VBLK564	04/23/2018 09:46:00
		LCS564	04/23/2018 10:08:00
		9558695	04/23/2018 11:19:00
		9558696	04/23/2018 11:40:00
		9558697	04/23/2018 12:02:00
		9558698 UNSPK	04/23/2018 12:24:00
		9558699 MS	04/23/2018 12:46:00
		9558700 MSD	04/23/2018 13:07:00
		9558702	04/23/2018 13:29:00
		9558703	04/23/2018 13:51:00
8260C (25 ml)	G181132AA	VBLKG84	04/23/2018 21:23:00
		LCSG84	04/23/2018 19:54:00
		LCDG84	04/23/2018 20:17:00
		LCSG85	04/23/2018 20:39:00
		LCDG85	04/23/2018 21:01:00
		9558704	04/23/2018 21:53:00
		9558705	04/23/2018 22:15:00
		9558706	04/23/2018 22:37:00
		9558707	04/23/2018 22:59:00
		9558708	04/23/2018 23:22:00
8260C (25 ml)	I181133AA	VBLKI92	04/24/2018 00:03:00
		LCSI92	04/23/2018 22:38:00
		LCSI93	04/23/2018 23:41:00
		9558695	04/24/2018 07:31:00
		9558696	04/24/2018 06:27:00
		9558697	04/24/2018 08:13:00
		9558698 UNSPK	04/24/2018 04:40:00
		9558699 MS	04/24/2018 05:01:00
		9558699 MS	04/24/2018 05:44:00
		9558700 MSD	04/24/2018 05:23:00
		9558700 MSD	04/24/2018 06:05:00
		9558702	04/24/2018 06:48:00
		9558703	04/24/2018 07:10:00
		9558709	04/24/2018 03:36:00
		9558710	04/24/2018 03:57:00
		9558711	04/24/2018 04:18:00
8260C (25 ml)	I181142AA	VBLKI95	04/24/2018 22:56:00
		LCSI95	04/24/2018 21:31:00
		LCDI95	04/24/2018 21:52:00
		9558695	04/24/2018 23:17:00
		9558697	04/24/2018 23:39:00

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Fraction: Volatiles by GC/MS

Fraction: Volatiles by GC/MS

5181131AA / VBLK564 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Propanol	04/23/18	N.D.	ug/l	50	100

G181132AA / VBLKG84 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/23/18	N.D.	ug/l	0.1	1.0
Chloromethane	04/23/18	N.D.	ug/l	0.2	1.0
Chloroethane	04/23/18	N.D.	ug/l	0.1	1.0
Trichlorofluoromethane	04/23/18	N.D.	ug/l	0.1	1.0
Ethyl ether	04/23/18	N.D.	ug/l	0.1	13
1,1-Dichloroethene	04/23/18	N.D.	ug/l	0.1	1.0
Freon 113	04/23/18	N.D.	ug/l	0.2	1.0
Methylene Chloride	04/23/18	N.D.	ug/l	0.2	1.0
1,1-Dichloroethane	04/23/18	N.D.	ug/l	0.1	1.0
2-Butanone	04/23/18	N.D.	ug/l	1.0	10
Tetrahydrofuran	04/23/18	N.D.	ug/l	2.0	25
1,1,1-Trichloroethane	04/23/18	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	04/23/18	N.D.	ug/l	0.1	1.0
Benzene	04/23/18	N.D.	ug/l	0.1	1.0
Trichloroethene	04/23/18	N.D.	ug/l	0.1	1.0
Toluene	04/23/18	N.D.	ug/l	0.1	1.0
Tetrachloroethene	04/23/18	N.D.	ug/l	0.1	1.0
Ethylbenzene	04/23/18	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/23/18	N.D.	ug/l	0.1	3.0
Dimethyl ether	04/23/18	N.D.	ug/l	0.1	13

I181133AA / VBLKI92 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	04/24/18	N.D.	ug/l	0.1	1.0
Chloromethane	04/24/18	N.D.	ug/l	0.2	1.0
Vinyl Chloride	04/24/18	N.D.	ug/l	0.2	1.0
Bromomethane	04/24/18	N.D.	ug/l	0.5	1.0
Chloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Trichlorofluoromethane	04/24/18	N.D.	ug/l	0.2	1.0
Ethyl ether	04/24/18	N.D.	ug/l	1.1	13
Acrolein	04/24/18	N.D.	ug/l	5.0	25
1,1-Dichloroethene	04/24/18	N.D.	ug/l	0.2	1.0
Freon 113	04/24/18	N.D.	ug/l	0.2	1.0
Acetone	04/24/18	N.D.	ug/l	3.0	10
Methyl Iodide	04/24/18	N.D.	ug/l	0.6	10
Carbon Disulfide	04/24/18	N.D.	ug/l	0.4	10
Acetonitrile	04/24/18	N.D.	ug/l	32	100
Allyl Chloride	04/24/18	N.D.	ug/l	0.8	10
Methylene Chloride	04/24/18	N.D.	ug/l	0.2	1.0
Acrylonitrile	04/24/18	N.D.	ug/l	1.0	10
trans-1,2-Dichloroethene	04/24/18	N.D.	ug/l	0.2	1.0

Fraction: Volatiles by GC/MS

I181133AA / VBLKI92 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,1-Dichloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Vinyl Acetate	04/24/18	N.D.	ug/l	3.3	10
2-Chloro-1,3-butadiene	04/24/18	N.D.	ug/l	0.5	10
2-Butanone	04/24/18	N.D.	ug/l	1.0	10
Propionitrile	04/24/18	N.D.	ug/l	10	100
Methacrylonitrile	04/24/18	N.D.	ug/l	9.8	100
Tetrahydrofuran	04/24/18	N.D.	ug/l	2.0	25
Chloroform	04/24/18	N.D.	ug/l	0.1	1.0
1,1,1-Trichloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Carbon Tetrachloride	04/24/18	N.D.	ug/l	0.2	1.0
Isobutyl Alcohol	04/24/18	N.D.	ug/l	10	200
Benzene	04/24/18	N.D.	ug/l	0.1	1.0
1,2-Dichloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Trichloroethene	04/24/18	N.D.	ug/l	0.2	1.0
1,2-Dichloropropane	04/24/18	N.D.	ug/l	0.1	1.0
Dibromomethane	04/24/18	N.D.	ug/l	0.1	1.0
Methyl Methacrylate	04/24/18	N.D.	ug/l	3.6	10
1,4-Dioxane	04/24/18	N.D.	ug/l	45	200
Bromodichloromethane	04/24/18	N.D.	ug/l	0.1	1.0
4-Methyl-2-pentanone	04/24/18	N.D.	ug/l	1.0	10
Toluene	04/24/18	N.D.	ug/l	0.1	1.0
trans-1,3-Dichloropropene	04/24/18	N.D.	ug/l	0.1	1.0
Ethyl Methacrylate	04/24/18	N.D.	ug/l	0.8	10
1,1,2-Trichloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Tetrachloroethene	04/24/18	N.D.	ug/l	0.1	1.0
1,3-Dichloropropane	04/24/18	N.D.	ug/l	0.1	1.0
2-Hexanone	04/24/18	N.D.	ug/l	1.0	10
Dibromochloromethane	04/24/18	N.D.	ug/l	0.1	1.0
1,2-Dibromoethane	04/24/18	N.D.	ug/l	0.1	1.0
1,1,1,2-Tetrachloroethane	04/24/18	N.D.	ug/l	0.1	1.0
Ethylbenzene	04/24/18	N.D.	ug/l	0.1	1.0
Xylene (Total)	04/24/18	N.D.	ug/l	0.2	3.0
Styrene	04/24/18	N.D.	ug/l	0.1	1.0
Bromoform	04/24/18	N.D.	ug/l	0.1	1.0
1,1,2,2-Tetrachloroethane	04/24/18	N.D.	ug/l	0.2	1.0
trans-1,4-Dichloro-2-butene	04/24/18	N.D.	ug/l	1.0	10
1,2,3-Trichloropropane	04/24/18	N.D.	ug/l	0.3	1.0
Pentachloroethane	04/24/18	N.D.	ug/l	0.8	10
1,3-Dichlorobenzene	04/24/18	N.D.	ug/l	0.1	1.0
1,4-Dichlorobenzene	04/24/18	N.D.	ug/l	0.1	1.0
1,2-Dichlorobenzene	04/24/18	N.D.	ug/l	0.1	1.0
1,2-Dibromo-3-chloropropane	04/24/18	N.D.	ug/l	0.2	1.0
1,2,4-Trichlorobenzene	04/24/18	N.D.	ug/l	0.1	1.0
Hexachlorobutadiene	04/24/18	N.D.	ug/l	0.1	1.0
Naphthalene	04/24/18	N.D.	ug/l	0.1	1.0

Fraction: Volatiles by GC/MS

I181133AA / VBLKI92 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Hexachloroethane	04/24/18	N.D.	ug/l	0.1	10
Dimethyl ether	04/24/18	N.D.	ug/l	0.1	13

I181142AA / VBLKI95 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Ethyl ether	04/24/18	N.D.	ug/l	1.1	13

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF06
Matrix: LIQUID

Fraction: Volatiles by GC/MS

5181131AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLK564	101	80 - 120	101	80 - 120	97	80 - 120	100	80 - 120
LCS564	101	80 - 120	103	80 - 120	99	80 - 120	99	80 - 120
9558695	103	80 - 120	100	80 - 120	99	80 - 120	99	80 - 120
9558696	102	80 - 120	99	80 - 120	99	80 - 120	99	80 - 120
9558697	103	80 - 120	98	80 - 120	100	80 - 120	97	80 - 120
9558698 UNSPK	101	80 - 120	99	80 - 120	99	80 - 120	100	80 - 120
9558699 MS	103	80 - 120	102	80 - 120	101	80 - 120	100	80 - 120
9558700 MSD	105	80 - 120	101	80 - 120	101	80 - 120	99	80 - 120
9558702	100	80 - 120	102	80 - 120	98	80 - 120	99	80 - 120
9558703	102	80 - 120	100	80 - 120	99	80 - 120	100	80 - 120

G181132AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKG84	99	80 - 120	98	80 - 120	99	80 - 120	100	80 - 120
LCSG84	102	80 - 120	98	80 - 120	100	80 - 120	99	80 - 120
LCDG84	98	80 - 120	99	80 - 120	100	80 - 120	99	80 - 120
9558704	101	80 - 120	97	80 - 120	99	80 - 120	99	80 - 120
9558705	100	80 - 120	98	80 - 120	99	80 - 120	100	80 - 120
9558706	98	80 - 120	97	80 - 120	99	80 - 120	99	80 - 120
9558707	99	80 - 120	97	80 - 120	98	80 - 120	99	80 - 120
9558708	100	80 - 120	97	80 - 120	100	80 - 120	99	80 - 120

I181133AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKI92	103	80 - 120	98	80 - 120	102	80 - 120	100	80 - 120
LCSI92	100	80 - 120	99	80 - 120	102	80 - 120	100	80 - 120
9558695	102	80 - 120	99	80 - 120	104	80 - 120	99	80 - 120
9558696	101	80 - 120	100	80 - 120	101	80 - 120	100	80 - 120
9558697	103	80 - 120	100	80 - 120	103	80 - 120	99	80 - 120
9558698 UNSPK	103	80 - 120	98	80 - 120	104	80 - 120	99	80 - 120
9558699 MS	100	80 - 120	101	80 - 120	103	80 - 120	100	80 - 120
9558700 MSD	100	80 - 120	102	80 - 120	101	80 - 120	100	80 - 120
9558702	101	80 - 120	100	80 - 120	103	80 - 120	99	80 - 120
9558703	103	80 - 120	99	80 - 120	103	80 - 120	99	80 - 120
9558709	103	80 - 120	98	80 - 120	104	80 - 120	100	80 - 120
9558710	103	80 - 120	100	80 - 120	103	80 - 120	100	80 - 120
9558711	103	80 - 120	100	80 - 120	104	80 - 120	100	80 - 120

I181142AA	1,2-Dichloroethane-d4	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF06
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Sample	Spike Added % Recovery	10 ug/l Limits	Spike Added % Recovery	10 ug/l Limits	Spike Added % Recovery	10 ug/l Limits	Spike Added % Recovery	10 ug/l Limits
VBLKI95	102	80 - 120	99	80 - 120	103	80 - 120	101	80 - 120
LCSI95	99	80 - 120	100	80 - 120	104	80 - 120	100	80 - 120
LCDI95	100	80 - 120	100	80 - 120	103	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9558698 MS: 9558699 MSD: 9558700 **Analyte**	Batch: **5181131AA** (Sample number(s): 9558695-9558700, 9558702-9558703)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Propanol	150	N.D.	167.59	171.3	112	114	40-153	2	30

UNSPK: 9558698 MS: 9558699 MSD: 9558700 **Analyte**	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	4.64	4.25	93	85	23-128	9	30
Chloromethane	5.00	N.D.	3.58	3.41	72	68	47-120	5	30
Vinyl Chloride	5.00	N.D.	4.18	3.95	84	79	56-120	6	30
Bromomethane	5.00	N.D.	4.28	3.90	86	78	62-125	10	30
Chloroethane	5.00	0.686 J	4.59	4.28	78	72	63-120	7	30
Trichlorofluoromethane	5.00	N.D.	6.09	5.51	122	110	52-143	10	30
Ethyl ether	5.00	14.89	18.67	18.9	76	80	62-120	1	30
Acrolein	37.5	N.D.	43.35	43.5	116	116	39-141	0	30
1,1-Dichloroethene	5.00	N.D.	6.74	6.89	135 *	138 *	80-124	2	30
Freon 113	5.00	N.D.	6.65	6.70	133 *	134 *	80-128	1	30
Acetone	37.5	N.D.	41.82	42.53	112	113	68-141	2	30
Methyl Iodide	5.00	N.D.	5.52 J	5.68 J	110	114	77-120	3	30
Carbon Disulfide	5.00	N.D.	5.66 J	5.73 J	113	115	72-129	1	30
Acetonitrile	37.5	N.D.	42.62 J	41.3 J	114	110	56-157	3	30
Allyl Chloride	5.00	N.D.	6.28 J	6.51 J	126 *	130 *	64-120	4	30
Methylene Chloride	5.00	N.D.	5.74	5.81	115	116	80-120	1	30
Acrylonitrile	25	N.D.	33.12	34.3	132	137	59-151	4	30
trans-1,2-Dichloroethene	5.00	N.D.	6.13	6.28	123 *	126 *	80-120	2	30
1,1-Dichloroethane	5.00	2.41	8.21	8.38	116	119	80-120	2	30
Vinyl Acetate	12.5	N.D.	13.87	13.31	111	106	34-160	4	30
2-Chloro-1,3-butadiene	5.00	N.D.	6.43 J	6.44 J	129	129	66-133	0	30
2-Butanone	37.5	N.D.	53.93	55.12	144 *	147 *	59-141	2	30
Propionitrile	37.5	N.D.	47.35 J	46.67 J	126	124	63-145	1	30
Methacrylonitrile	37.5	N.D.	52.91 J	53.47 J	141	143	57-150	1	30
Tetrahydrofuran	25	N.D.	36.59	38.52	146	154 *	61-146	5	30
Chloroform	5.00	N.D.	5.94	6.01	119	120	80-120	1	30
1,1,1-Trichloroethane	5.00	N.D.	6.31	6.43	126	129 *	78-126	2	30
Carbon Tetrachloride	5.00	N.D.	6.71	6.77	134	135	71-139	1	30
Isobutyl Alcohol	125	N.D.	138.23 J	145.47 J	111	116	57-154	5	30
Benzene	5.00	0.119 J	5.93	6.07	116	119	80-120	2	30
1,2-Dichloroethane	5.00	N.D.	5.65	5.65	113	113	68-137	0	30
Trichloroethene	5.00	N.D.	6.05	6.23	121 *	125 *	80-120	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9558698 MS: 9558699 MSD: 9558700 **Analyte**	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,2-Dichloropropane	5.00	N.D.	5.90	5.95	118	119	80-120	1	30
Dibromomethane	5.00	N.D.	5.65	5.73	113	115	80-122	1	30
Methyl Methacrylate	5.00	N.D.	7.52 J	7.35 J	150	147	49-151	2	30
1,4-Dioxane	125	N.D.	155.85 J	158.43 J	125	127	59-162	2	30
Bromodichloromethane	5.00	N.D.	5.59	5.65	112	113	80-125	1	30
4-Methyl-2-pentanone	25	N.D.	38.29	37.83	153 *	151 *	67-140	1	30
Toluene	5.00	N.D.	5.76	5.86	115	117	80-120	2	30
trans-1,3-Dichloropropene	5.00	N.D.	5.41	5.59	108	112	71-131	3	30
Ethyl Methacrylate	5.00	N.D.	5.32 J	5.54 J	106	111	67-139	4	30
1,1,2-Trichloroethane	5.00	N.D.	5.65	5.72	113	114	80-120	1	30
Tetrachloroethene	5.00	0.117 J	6.26	6.39	123 *	125 *	80-120	2	30
1,3-Dichloropropane	5.00	N.D.	5.53	5.67	111	113	80-120	2	30
2-Hexanone	25	N.D.	38.89	39.14	156 *	157 *	61-143	1	30
Dibromochloromethane	5.00	N.D.	5.28	5.39	106	108	73-135	2	30
1,2-Dibromoethane	5.00	N.D.	5.53	5.61	111	112	80-120	2	30
1,1,1,2-Tetrachloroethane	5.00	N.D.	5.81	5.89	116	118	76-131	1	30
Ethylbenzene	5.00	N.D.	5.96	6.08	119	122 *	80-120	2	30
Xylene (Total)	15	N.D.	17.58	18.08	117	121 *	80-120	3	30
Styrene	5.00	N.D.	5.98	6.15	120	123 *	80-120	3	30
Bromoform	5.00	N.D.	4.05	4.20	81	84	57-141	4	30
1,1,2,2-Tetrachloroethane	5.00	N.D.	5.07	5.19	101	104	75-123	2	30
trans-1,4-Dichloro-2-butene	25	N.D.	30.76	30.57	123	122	10-200	1	30
1,2,3-Trichloropropane	5.00	N.D.	5.41	5.54	108	111	80-125	2	30
Pentachloroethane	5.00	N.D.	5.68 J	5.84 J	114	117	68-134	3	30
1,3-Dichlorobenzene	5.00	N.D.	5.46	5.63	109	113	80-120	3	30
1,4-Dichlorobenzene	5.00	N.D.	5.36	5.53	107	111	80-120	3	30
1,2-Dichlorobenzene	5.00	N.D.	5.38	5.57	108	111	80-120	4	30
1,2-Dibromo-3-chloropropane	5.00	N.D.	6.75	6.89	135	138	48-149	2	30
1,2,4-Trichlorobenzene	5.00	N.D.	4.80	5.19	96	104	74-120	8	30
Hexachlorobutadiene	5.00	N.D.	6.00	6.16	120	123 *	74-120	3	30
Naphthalene	5.00	N.D.	4.79	5.18	96	104	70-121	8	30
Hexachloroethane	5.00	N.D.	6.08 J	5.81 J	122	116	62-127	4	30
Dimethyl ether	5.00	1.10 J	4.77 J	4.40 J	73	66 *	70-130	8	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCS564	Batch: **5181131AA** (Sample number(s): 9558695-9558700, 9558702-9558703)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Propanol	150	159.74	NA	106	NA	40-153	NA	NA

LCS: LCSG84 LCSD: LCDG84	Batch: **G181132AA** (Sample number(s): 9558704-9558708)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	3.50	3.52	70	70	23-128	0	30
Chloromethane	5.00	3.93	4.06	79	81	47-120	3	30
Chloroethane	5.00	4.30	4.29	86	86	63-120	0	30
Trichlorofluoromethane	5.00	4.33	4.35	87	87	52-143	0	30
Ethyl ether	5.00	4.78 J	4.86 J	96	97	62-120	2	30
1,1-Dichloroethene	5.00	4.61	4.70	92	94	80-124	2	30
Freon 113	5.00	4.24	4.28	85	86	80-128	1	30
Methylene Chloride	5.00	4.28	4.30	86	86	80-120	1	30
1,1-Dichloroethane	5.00	4.58	4.61	92	92	80-120	1	30
2-Butanone	37.5	35.23	35.93	94	96	59-141	2	30
Tetrahydrofuran	25	24.09 J	25.02	96	100	61-146	4	30
1,1,1-Trichloroethane	5.00	4.60	4.57	92	91	78-126	1	30
Carbon Tetrachloride	5.00	4.59	4.61	92	92	71-139	0	30
Benzene	5.00	4.64	4.68	93	94	80-120	1	30
Trichloroethene	5.00	4.62	4.62	92	92	80-120	0	30
Toluene	5.00	4.62	4.68	92	94	80-120	1	30
Tetrachloroethene	5.00	4.44	4.62	89	92	80-120	4	30
Ethylbenzene	5.00	4.59	4.63	92	93	80-120	1	30
Xylene (Total)	15	13.93	14.17	93	94	80-120	2	30

LCS: LCSG85 LCSD: LCDG85	Batch: **G181132AA** (Sample number(s): 9558704-9558708)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dimethyl ether	5.00	5.20 J	5.13 J	104	103	70-130	1	30

LCS: LCSI92	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	3.86	NA	77	NA	23-128	NA	NA
Chloromethane	5.00	3.53	NA	71	NA	47-120	NA	NA
Vinyl Chloride	5.00	3.71	NA	74	NA	56-120	NA	NA
Bromomethane	5.00	3.92	NA	78	NA	62-125	NA	NA
Chloroethane	5.00	3.57	NA	71	NA	63-120	NA	NA
Trichlorofluoromethane	5.00	4.77	NA	95	NA	52-143	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSI92	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Ethyl ether	5.00	4.99 J	NA	100	NA	62-120	NA	NA
Acrolein	37.5	41.45	NA	111	NA	39-141	NA	NA
1,1-Dichloroethene	5.00	5.80	NA	116	NA	80-124	NA	NA
Freon 113	5.00	5.46	NA	109	NA	80-128	NA	NA
Acetone	37.5	38.6	NA	103	NA	68-141	NA	NA
Methyl Iodide	5.00	5.16 J	NA	103	NA	77-120	NA	NA
Carbon Disulfide	5.00	4.95 J	NA	99	NA	72-129	NA	NA
Allyl Chloride	5.00	5.74 J	NA	115	NA	64-120	NA	NA
Methylene Chloride	5.00	5.31	NA	106	NA	80-120	NA	NA
Acrylonitrile	25	30.85	NA	123	NA	59-151	NA	NA
trans-1,2-Dichloroethene	5.00	5.60	NA	112	NA	80-120	NA	NA
1,1-Dichloroethane	5.00	5.44	NA	109	NA	80-120	NA	NA
2-Chloro-1,3-butadiene	5.00	5.51 J	NA	110	NA	66-133	NA	NA
2-Butanone	37.5	49.72	NA	133	NA	59-141	NA	NA
Propionitrile	37.5	42.25 J	NA	113	NA	63-145	NA	NA
Methacrylonitrile	37.5	47.88 J	NA	128	NA	57-150	NA	NA
Tetrahydrofuran	25	32.12	NA	128	NA	61-146	NA	NA
Chloroform	5.00	5.40	NA	108	NA	80-120	NA	NA
1,1,1-Trichloroethane	5.00	5.54	NA	111	NA	78-126	NA	NA
Carbon Tetrachloride	5.00	5.68	NA	114	NA	71-139	NA	NA
Isobutyl Alcohol	125	129.1 J	NA	103	NA	57-154	NA	NA
Benzene	5.00	5.37	NA	107	NA	80-120	NA	NA
1,2-Dichloroethane	5.00	5.19	NA	104	NA	68-137	NA	NA
Trichloroethene	5.00	5.46	NA	109	NA	80-120	NA	NA
1,2-Dichloropropane	5.00	5.44	NA	109	NA	80-120	NA	NA
Dibromomethane	5.00	5.36	NA	107	NA	80-122	NA	NA
Methyl Methacrylate	5.00	6.64 J	NA	133	NA	49-151	NA	NA
1,4-Dioxane	125	149.25 J	NA	119	NA	59-162	NA	NA
Bromodichloromethane	5.00	5.22	NA	104	NA	80-125	NA	NA
4-Methyl-2-pentanone	25	33.92	NA	136	NA	67-140	NA	NA
Toluene	5.00	5.33	NA	107	NA	80-120	NA	NA
trans-1,3-Dichloropropene	5.00	5.25	NA	105	NA	71-131	NA	NA
Ethyl Methacrylate	5.00	5.23 J	NA	105	NA	67-139	NA	NA
1,1,2-Trichloroethane	5.00	5.33	NA	107	NA	80-120	NA	NA
Tetrachloroethene	5.00	5.64	NA	113	NA	80-120	NA	NA
1,3-Dichloropropane	5.00	5.24	NA	105	NA	80-120	NA	NA
2-Hexanone	25	34.44	NA	138	NA	61-143	NA	NA
Dibromochloromethane	5.00	5.34	NA	107	NA	73-135	NA	NA
1,2-Dibromoethane	5.00	5.29	NA	106	NA	80-120	NA	NA
1,1,1,2-Tetrachloroethane	5.00	5.43	NA	109	NA	76-131	NA	NA
Ethylbenzene	5.00	5.41	NA	108	NA	80-120	NA	NA
Xylene (Total)	15	16.41	NA	109	NA	80-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSI92	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Styrene	5.00	5.60	NA	112	NA	80-120	NA	NA
Bromoform	5.00	4.32	NA	86	NA	57-141	NA	NA
1,1,2,2-Tetrachloroethane	5.00	4.85	NA	97	NA	75-123	NA	NA
trans-1,4-Dichloro-2-butene	25	27.61	NA	110	NA	10-200	NA	NA
1,2,3-Trichloropropane	5.00	5.24	NA	105	NA	80-125	NA	NA
Pentachloroethane	5.00	5.35 J	NA	107	NA	68-134	NA	NA
1,3-Dichlorobenzene	5.00	5.22	NA	104	NA	80-120	NA	NA
1,4-Dichlorobenzene	5.00	5.12	NA	102	NA	80-120	NA	NA
1,2-Dichlorobenzene	5.00	5.15	NA	103	NA	80-120	NA	NA
1,2-Dibromo-3-chloropropane	5.00	6.07	NA	121	NA	48-149	NA	NA
1,2,4-Trichlorobenzene	5.00	4.79	NA	96	NA	74-120	NA	NA
Hexachlorobutadiene	5.00	5.62	NA	112	NA	74-120	NA	NA
Naphthalene	5.00	4.78	NA	96	NA	70-121	NA	NA

LCS: LCSI93	Batch: **I181133AA** (Sample number(s): 9558695-9558700, 9558702-9558703, 9558709-9558711)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Acetonitrile	37.5	62.82 J	NA	168 *	NA	56-157	NA	NA
Vinyl Acetate	12.5	12.46	NA	100	NA	34-160	NA	NA
Hexachloroethane	5.00	4.81 J	NA	96	NA	62-127	NA	NA
Dimethyl ether	5.00	3.95 J	NA	79	NA	70-130	NA	NA

LCS: LCSI95 LCSD: LCDI95	Batch: **I181142AA** (Sample number(s): 9558695, 9558697)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Ethyl ether	5.00	5.13 J	5.13 J	103	103	62-120	0	30

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ga19t01.d BFB Injection Date: 04/19/18

Instrument ID: HP16334 BFB Injection Time: 11:47

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.74
75	30.0 - 60.0% of mass 95	52.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.98
173	Less than 2.0% of mass 174	0.41 (0.47)1
174	Greater than 50.0% of mass 95	86.84
175	5.0 - 9.0% of mass 174	6.17 (7.11)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.87 (96.58)1
177	5.0 - 9.0% of mass 176	5.61 (6.69)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	ga19i01.d	04/19/18	12:22
02	VSTD10	ga19i02.d	04/19/18	12:44
03	VSTD5	ga19i03.d	04/19/18	13:06
04	VSTD2	ga19i04.d	04/19/18	13:28
05	VSTD1	ga19i05.d	04/19/18	13:51
06	VSTD.5	ga19i06.d	04/19/18	14:14
07	VSTD.2	ga19i07.d	04/19/18	14:37
08	MDL0.1 - MDL0.1	ga19m01.d	04/19/18	14:59
09	LCSG01	ga19v01.d	04/19/18	15:21
10	VSTD25	ga19i11.d	04/19/18	16:06
11	VSTD10	ga19i12.d	04/19/18	16:28
12	VSTD5	ga19i13.d	04/19/18	16:51
13	VSTD2	ga19i14.d	04/19/18	17:13
14	VSTD1	ga19i15.d	04/19/18	17:35
15	VSTD.5	ga19i16.d	04/19/18	17:57
16	VSTD.2	ga19i17.d	04/19/18	18:19
17	MDL0.1 - MDL0.1	ga19m11.d	04/19/18	18:42

FORM V VOA

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5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ga23t05.d BFB Injection Date: 04/23/18

Instrument ID: HP16334 BFB Injection Time: 18:48

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.12
75	30.0 - 60.0% of mass 95	51.73
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.58
173	Less than 2.0% of mass 174	0.78 (0.91)1
174	Greater than 50.0% of mass 95	86.42
175	5.0 - 9.0% of mass 174	6.64 (7.69)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.08 (98.45)1
177	5.0 - 9.0% of mass 176	5.78 (6.79)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ga23c05.d	04/23/18	19:10
02	VSTD10	ga23c06.d	04/23/18	19:32
03	LCSG84	ga23s41.d	04/23/18	19:54
04	LCSG86	ga23s51.d	04/23/18	19:54
05	LCDG84	ga23s42.d	04/23/18	20:17
06	LCDG86	ga23s52.d	04/23/18	20:17
07	LCSG85	ga23s43.d	04/23/18	20:39
08	LCSG87	ga23s53.d	04/23/18	20:39
09	LCDG85	ga23s44.d	04/23/18	21:01
10	LCDG87	ga23s54.d	04/23/18	21:01
11	VBLKG84	ga23b05.d	04/23/18	21:23
12	VBLKG86	ga23b10.d	04/23/18	21:23
13	9558704	ga23s45.d	04/23/18	21:53
14	9558705	ga23s46.d	04/23/18	22:15
15	9558706	ga23s47.d	04/23/18	22:37
16	9558707	ga23s48.d	04/23/18	22:59
17	9558708	ga23s49.d	04/23/18	23:22
18	9557222	ga23s55.d	04/24/18	00:07
19	9557224	ga23s56.d	04/24/18	00:29
20	9557224DL	ga23s57.d	04/24/18	00:51
21	9557212	ga23s58.d	04/24/18	01:14
22	9557272	ga23s59.d	04/24/18	01:36

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ga23t05.d BFB Injection Date: 04/23/18

Instrument ID: HP16334 BFB Injection Time: 18:48

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.12
75	30.0 - 60.0% of mass 95	51.73
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.58
173	Less than 2.0% of mass 174	0.78 (0.91)1
174	Greater than 50.0% of mass 95	86.42
175	5.0 - 9.0% of mass 174	6.64 (7.69)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.08 (98.45)1
177	5.0 - 9.0% of mass 176	5.78 (6.79)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9557216	ga23s60.d	04/24/18	01:58
24	9557217	ga23s61.d	04/24/18	02:20
25	9557219	ga23s62.d	04/24/18	02:42
26	9557221	ga23s63.d	04/24/18	03:05
27	9557223	ga23s64.d	04/24/18	03:27
28	9557270	ga23s65.d	04/24/18	03:49
29	9557271	ga23s66.d	04/24/18	04:11
30	9557271DL	ga23s67.d	04/24/18	04:33

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ia17t11.d BFB Injection Date: 04/17/18

Instrument ID: HP19930 BFB Injection Time: 17:38

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.03
75	30.0 - 60.0% of mass 95	50.15
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.04
173	Less than 2.0% of mass 174	0.57 (0.70)1
174	Greater than 50.0% of mass 95	81.35
175	5.0 - 9.0% of mass 174	5.76 (7.08)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.48 (96.48)1
177	5.0 - 9.0% of mass 176	4.96 (6.32)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	ia17i11.d	04/17/18	18:22
02	VSTD10	ia17i12.d	04/17/18	18:43
03	VSTD5	ia17i13.d	04/17/18	19:05
04	VSTD2	ia17i14.d	04/17/18	19:26
05	VSTD1	ia17i15.d	04/17/18	19:47
06	VSTD.5	ia17i16.d	04/17/18	20:09
07	VSTD.2	ia17i17.d	04/17/18	20:31
08	MDL0.1 - MDL0.1	ia17m11.d	04/17/18	20:52
09	LCSI01	ia17v11.d	04/17/18	21:13

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ia12t02.d BFB Injection Date: 04/12/18

Instrument ID: HP19930 BFB Injection Time: 09:49

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.14
75	30.0 - 60.0% of mass 95	52.73
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.36
173	Less than 2.0% of mass 174	0.67 (0.82)1
174	Greater than 50.0% of mass 95	81.96
175	5.0 - 9.0% of mass 174	5.90 (7.20)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.68 (97.22)1
177	5.0 - 9.0% of mass 176	5.29 (6.64)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	ia12i11.d	04/12/18	10:25
02	VSTD10	ia12i12.d	04/12/18	10:46
03	VSTD5	ia12i13.d	04/12/18	11:08
04	VSTD2	ia12i14.d	04/12/18	11:29
05	VSTD1	ia12i15.d	04/12/18	11:50
06	VSTD.5	ia12i16.d	04/12/18	12:11
07	VSTD.2	ia12i17.d	04/12/18	12:33
08	MDL0.1 - MDL0.1	ia12m11.d	04/12/18	12:55
09	LCSISM	ia12v11.d	04/12/18	13:16

FORM V VOA

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5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ia23t05.d BFB Injection Date: 04/23/18

Instrument ID: HP19930 BFB Injection Time: 20:52

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.00
75	30.0 - 60.0% of mass 95	50.64
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.62 (0.73)1
174	Greater than 50.0% of mass 95	84.67
175	5.0 - 9.0% of mass 174	6.00 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.77 (96.57)1
177	5.0 - 9.0% of mass 176	5.44 (6.66)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ia23c05.d	04/23/18	21:34
02	VSTD10	ia23c07.d	04/23/18	21:55
03	LCSI90	ia23s41.d	04/23/18	22:16
04	LCDI90	ia23s42.d	04/23/18	22:38
05	LCSI92	ia23s71.d	04/23/18	22:38
06	MDLI90 - MDLI90	ia23m41.d	04/23/18	22:59
07	MDLI92 - MDLI92	ia23m71.d	04/23/18	22:59
08	LCSI91	ia23s43.d	04/23/18	23:20
09	LCDI91	ia23s44.d	04/23/18	23:41
10	LCSI93	ia23s72.d	04/23/18	23:41
11	VBLKI90	ia23b41.d	04/24/18	00:03
12	VBLKI92	ia23b71.d	04/24/18	00:03
13	9557257	ia23s45.d	04/24/18	00:25
14	9557257DL	ia23s46.d	04/24/18	00:46
15	9557259	ia23s47.d	04/24/18	01:07
16	9557259DL	ia23s48.d	04/24/18	01:28
17	9557264	ia23s49.d	04/24/18	01:50
18	9557264DL	ia23s50.d	04/24/18	02:11
19	9557265	ia23s51.d	04/24/18	02:32
20	9557265DL	ia23s52.d	04/24/18	02:53
21	9557260DL	ia23s53.d	04/24/18	03:15
22	9558709	ia23s73.d	04/24/18	03:36

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ia23t05.d BFB Injection Date: 04/23/18

Instrument ID: HP19930 BFB Injection Time: 20:52

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.00
75	30.0 - 60.0% of mass 95	50.64
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.62 (0.73)1
174	Greater than 50.0% of mass 95	84.67
175	5.0 - 9.0% of mass 174	6.00 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.77 (96.57)1
177	5.0 - 9.0% of mass 176	5.44 (6.66)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9558710	ia23s74.d	04/24/18	03:57
24	9558711	ia23s75.d	04/24/18	04:18
25	9558698	ia23s76.d	04/24/18	04:40
26	9558699MS	ia23s77.d	04/24/18	05:01
27	9558700MSD	ia23s78.d	04/24/18	05:23
28	9558699MS1	ia23s79.d	04/24/18	05:44
29	9558700MSD1	ia23s80.d	04/24/18	06:05
30	9558696	ia23s81.d	04/24/18	06:27
31	9558702	ia23s82.d	04/24/18	06:48
32	9558703	ia23s83.d	04/24/18	07:10
33	9558695	ia23s84.d	04/24/18	07:31
34	9558697	ia23s86.d	04/24/18	08:13

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ia24t05.d BFB Injection Date: 04/24/18

Instrument ID: HP19930 BFB Injection Time: 20:06

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.35
75	30.0 - 60.0% of mass 95	53.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.85
173	Less than 2.0% of mass 174	0.71 (0.85)1
174	Greater than 50.0% of mass 95	83.21
175	5.0 - 9.0% of mass 174	5.98 (7.19)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.79 (97.10)1
177	5.0 - 9.0% of mass 176	5.27 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	ia24c05.d	04/24/18	20:49
02	VSTD10	ia24c06.d	04/24/18	21:10
03	LCSI95	ia24s41.d	04/24/18	21:31
04	LCSI97	ia24s71.d	04/24/18	21:31
05	LCDI95	ia24s42.d	04/24/18	21:52
06	LCDI97	ia24s72.d	04/24/18	21:52
07	LCSI96	ia24s43.d	04/24/18	22:13
08	LCSI98	ia24s73.d	04/24/18	22:13
09	LCDI96	ia24s44.d	04/24/18	22:34
10	LCDI98	ia24s74.d	04/24/18	22:34
11	VBLKI95	ia24b41.d	04/24/18	22:56
12	VBLKI97	ia24b71.d	04/24/18	22:56
13	9558695DL	ia24s45.d	04/24/18	23:17
14	9558697DL	ia24s46.d	04/24/18	23:39
15	9565132	ia24s75.d	04/25/18	00:00
16	9565154	ia24s76.d	04/25/18	00:21
17	9565133	ia24s77.d	04/25/18	00:42
18	9565160	ia24s78.d	04/25/18	01:03
19	9565134	ia24s79.d	04/25/18	01:24
20	9565135	ia24s80.d	04/25/18	01:46
21	9565136	ia24s81.d	04/25/18	02:07
22	9565137	ia24s82.d	04/25/18	02:28

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: ia24t05.d BFB Injection Date: 04/24/18

Instrument ID: HP19930 BFB Injection Time: 20:06

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.35
75	30.0 - 60.0% of mass 95	53.61
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.85
173	Less than 2.0% of mass 174	0.71 (0.85)1
174	Greater than 50.0% of mass 95	83.21
175	5.0 - 9.0% of mass 174	5.98 (7.19)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.79 (97.10)1
177	5.0 - 9.0% of mass 176	5.27 (6.52)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9565139	ia24s83.d	04/25/18	02:49
24	9565141	ia24s84.d	04/25/18	03:11
25	9565143	ia24s85.d	04/25/18	03:32
26	9565145	ia24s86.d	04/25/18	03:53
27	9565147	ia24s87.d	04/25/18	04:14
28	9565148	ia24s88.d	04/25/18	04:35
29	9565155	ia24s89.d	04/25/18	04:56
30	9565156	ia24s90.d	04/25/18	05:18
31	9565157	ia24s91.d	04/25/18	05:39
32	9565158	ia24s92.d	04/25/18	06:00
33	9565161	ia24s93.d	04/25/18	06:21

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: 5a16t01.d BFB Injection Date: 04/16/18

Instrument ID: HP26285 BFB Injection Time: 09:50

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.01
75	30.0 - 60.0% of mass 95	44.55
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.64
173	Less than 2.0% of mass 174	0.54 (0.58)1
174	Greater than 50.0% of mass 95	91.86
175	5.0 - 9.0% of mass 174	6.73 (7.33)1
176	Greater than 95.0%, but less than 101.0% of mass 174	89.93 (97.90)1
177	5.0 - 9.0% of mass 176	5.75 (6.40)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	5a16i01.d	04/16/18	10:41
02	VSTD100	5a16i02.d	04/16/18	11:02
03	VSTD50	5a16i03.d	04/16/18	11:24
04	VSTD20	5a16i04.d	04/16/18	11:45
05	VSTD4	5a16i06.d	04/16/18	12:28
06	VSTD10	5a16i08.d	04/16/18	13:11
07	0.5PPB - 0.5PPB	5a16m01.d	04/16/18	13:33
08	LG5ICV	5a16v01.d	04/16/18	13:55
09	VSTD1	5a16i09.d	04/16/18	14:44

FORM V VOA

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: 5a23t01.d BFB Injection Date: 04/23/18

Instrument ID: HP26285 BFB Injection Time: 08:39

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.69
75	30.0 - 60.0% of mass 95	44.60
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.67
173	Less than 2.0% of mass 174	0.47 (0.53)1
174	Greater than 50.0% of mass 95	87.30
175	5.0 - 9.0% of mass 174	6.30 (7.21)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.35 (96.63)1
177	5.0 - 9.0% of mass 176	5.53 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	5a23c01.d	04/23/18	09:25
02	VBLK564	5a23b01.d	04/23/18	09:46
03	VBLK565	5a23b05.d	04/23/18	09:46
04	LCS564	5a23s01.d	04/23/18	10:08
05	LCS565	5a23s31.d	04/23/18	10:08
06	9558695	5a23s02.d	04/23/18	11:19
07	9558696	5a23s03.d	04/23/18	11:40
08	9558697	5a23s04.d	04/23/18	12:02
09	9558698	5a23s05.d	04/23/18	12:24
10	9558699MS	5a23s06.d	04/23/18	12:46
11	9558700MSD	5a23s07.d	04/23/18	13:07
12	9558702	5a23s08.d	04/23/18	13:29
13	9558703	5a23s09.d	04/23/18	13:51
14	9563104	5a23sa2.d	04/23/18	14:12
15	9560740	5a23s33.d	04/23/18	14:34
16	9560731	5a23s34.d	04/23/18	14:56
17	9560731MS	5a23s35.d	04/23/18	15:17
18	9560731MSD	5a23s36.d	04/23/18	15:39
19	9560730	5a23s37.d	04/23/18	16:01
20	9560735	5a23s38.d	04/23/18	16:23
21	9560736	5a23s39.d	04/23/18	16:45
22	9560737	5a23s40.d	04/23/18	17:06

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID: 5a23t01.d BFB Injection Date: 04/23/18

Instrument ID: HP26285 BFB Injection Time: 08:39

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.69
75	30.0 - 60.0% of mass 95	44.60
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.67
173	Less than 2.0% of mass 174	0.47 (0.53)1
174	Greater than 50.0% of mass 95	87.30
175	5.0 - 9.0% of mass 174	6.30 (7.21)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.35 (96.63)1
177	5.0 - 9.0% of mass 176	5.53 (6.55)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9560738	5a23s41.d	04/23/18	17:28
24	9560739	5a23s42.d	04/23/18	17:49
25	9563100	5a23s43.d	04/23/18	18:11
26	9563101	5a23s44.d	04/23/18	18:33
27	9563102	5a23s45.d	04/23/18	18:54
28	9563102DL	5a23s46.d	04/23/18	19:16
29	9563103	5a23s47.d	04/23/18	19:38

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3259	0.3854	0.3898	0.3804	0.3879	0.3993	0.3570	0.3751	7	AVG #
Chloromethane	#0.3706	0.4078	0.3901	0.3675	0.3856	0.3786	0.3435	0.3777	5	AVG #
Vinyl Chloride	#0.3110	0.3477	0.3248	0.3178	0.3313	0.3328	0.3034	0.3241	5	AVG #
1,3-Butadiene	0.8398	0.8208	0.7810	0.7306	0.6168	0.5643	0.4739	0.6896	20	AVG
Bromomethane	#0.2093	0.2369	0.2156	0.2132	0.2198	0.2180	0.2042	0.2167	5	AVG #
Chloroethane	#0.1757	0.2128	0.1834	0.1806	0.1841	0.1839	0.1719	0.1846	7	AVG #
Dichlorofluoromethane	0.4531	0.4963	0.4510	0.4354	0.4376	0.4357	0.4081	0.4453	6	AVG
Trichlorofluoromethane	#0.3863	0.4252	0.4305	0.4262	0.4393	0.4402	0.4113	0.4227	4	AVG #
Ethyl ether	0.2060	0.2080	0.2130	0.2163	0.2188	0.2140	0.1989	0.2107	3	AVG
Freon 123a	0.2927	0.3179	0.3040	0.2967	0.3009	0.2997	0.2832	0.2993	4	AVG
Acrolein	1.6692	1.7493	1.6625	1.8028	1.8107	1.7780	1.6192	1.7274	4	AVG
1,1-Dichloroethene	#0.1979	0.2141	0.2056	0.2177	0.2065	0.2060	0.2010	0.2070	3	AVG #
Freon 113	#0.2119	0.2311	0.2371	0.2342	0.2402	0.2442	0.2347	0.2333	4	AVG #
Acetone	#3.0926	2.9920	2.7444	2.8562	2.7807	2.6267	2.4447	2.7910	8	AVG #
Methyl Iodide	0.3796	0.4232	0.3957	0.3947	0.4118	0.4110	0.3976	0.4020	4	AVG
Carbon Disulfide	#0.9273	0.8809	0.7997	0.7799	0.7901	0.7965	0.7738	0.8212	7	AVG #
Allyl Chloride	0.5013	0.4823	0.4724	0.4791	0.4794	0.4769	0.4699	0.4802	2	AVG
Methyl Acetate	#8.8525	7.5493	7.4423	7.8394	7.8655	7.7279	7.7931	7.8671	6	AVG #
Methylene Chloride	#0.3700	0.3039	0.2794	0.2588	0.2528	0.2518	0.2425	0.2799	16	AVG #
t-Butyl Alcohol	1.0510	0.9829	0.9825	0.9540	0.9737	0.8894	0.7895	0.9461	9	AVG
Acrylonitrile	2.7779	3.0392	2.9966	3.2860	3.3056	3.2410	3.0893	3.1051	6	AVG
trans-1,2-Dichloroethene	#0.2385	0.2601	0.2372	0.2341	0.2390	0.2415	0.2332	0.2405	4	AVG #
Methyl Tertiary Butyl Ether	#0.7178	0.7066	0.7068	0.7215	0.7368	0.7374	0.7189	0.7208	2	AVG #
n-Hexane	0.3797	0.3928	0.4123	0.4132	0.4133	0.4216	0.4106	0.4062	4	AVG
1,1-Dichloroethane	#0.4680	0.5180	0.4865	0.4928	0.4936	0.4959	0.4796	0.4906	3	AVG #
di-Isopropyl Ether	0.9920	1.0205	0.9901	1.0008	1.0165	1.0168	0.9959	1.0047	1	AVG
2-Chloro-1,3-Butadiene	0.4386	0.4726	0.4403	0.4429	0.4494	0.4569	0.4433	0.4491	3	AVG
Ethyl t-butyl ether	0.8578	0.8811	0.8707	0.8764	0.9051	0.9033	0.8800	0.8820	2	AVG
cis-1,2-Dichloroethene	#0.2463	0.2840	0.2687	0.2680	0.2756	0.2763	0.2696	0.2698	4	AVG #
2,2-Dichloropropane	0.3625	0.4156	0.4003	0.3987	0.4132	0.4176	0.4089	0.4024	5	AVG
2-Butanone	#4.5167	4.7814	4.6804	5.0621	5.0230	4.9159	4.6358	4.8022	4	AVG #
Propionitrile	1.1059	1.1890	1.1774	1.2130	1.1933	1.2403	1.1927	1.1874	3	AVG
Methacrylonitrile	3.4434	3.7390	3.5778	3.9524	3.9806	3.9371	3.7105	3.7630	5	AVG
Bromochloromethane	0.1154	0.1189	0.1232	0.1261	0.1289	0.1284	0.1262	0.1239	4	AVG
Tetrahydrofuran	1.1135	1.1172	1.0704	1.1943	1.1862	1.1912	1.1291	1.1431	4	AVG
Chloroform	#0.4596	0.4868	0.4577	0.4628	0.4749	0.4742	0.4676	0.4691	2	AVG #
1,1,1-Trichloroethane	#0.3691	0.4061	0.3928	0.3969	0.4010	0.4059	0.4017	0.3962	3	AVG #
Cyclohexane	#0.4528	0.4623	0.4785	0.4774	0.4861	0.4917	0.4779	0.4752	3	AVG #
Cyclohexane(2)	#0.3452	0.4203	0.3723	0.3692	0.3676	0.3798	0.3650	0.3742	6	AVG #
Cyclohexane(3)	#0.1329	0.1350	0.1391	0.1387	0.1411	0.1428	0.1388	0.1383	2	AVG #
1,1-Dichloropropene	0.3477	0.3835	0.3722	0.3676	0.3726	0.3758	0.3666	0.3694	3	AVG
Carbon Tetrachloride	#0.2856	0.3073	0.3203	0.3239	0.3322	0.3439	0.3396	0.3218	6	AVG #
Isobutyl Alcohol	0.4383	0.3671	0.3791	0.3616	0.3720	0.3696	0.3446	0.3760	8	AVG
Benzene	#0.9803	1.0835	1.0118	1.0044	1.0195	1.0264	1.0133	1.0199	3	AVG #
1,2-Dichloroethane	#0.3980	0.3788	0.3532	0.3519	0.3503	0.3479	0.3471	0.3610	5	AVG #
t-Amyl methyl ether	0.7185	0.7316	0.7491	0.7401	0.7622	0.7711	0.7673	0.7485	3	AVG
n-Heptane	0.4698	0.4740	0.5052	0.4906	0.4888	0.4961	0.4964	0.4887	3	AVG
n-Butanol	0.2656	0.2781	0.2921	0.3142	0.3183	0.3157	0.2993	0.2976	7	AVG
Trichloroethene	#0.2585	0.2752	0.2675	0.2690	0.2702	0.2739	0.2705	0.2693	2	AVG #
Methylcyclohexane	#0.4074	0.4373	0.4679	0.4675	0.4737	0.4773	0.4698	0.4573	6	AVG #
1,2-Dichloropropane	#0.2726	0.2891	0.2796	0.2750	0.2896	0.2891	0.2866	0.2831	3	AVG #
Methyl Methacrylate	5.9467	6.8698	6.9455	7.6033	7.7977	7.6277	7.3776	7.1669	9	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.1372	0.1320	0.1312	0.1339	0.1358	0.1372	0.1384	0.1351	2	AVG
1,4-Dioxane	0.0344	0.0418	0.0586	0.0594	0.0574	0.0576	0.0538	0.0519	19	AVG
Bromodichloromethane	#0.2903	0.3248	0.3228	0.3266	0.3424	0.3538	0.3594	0.3314	7	AVG #
2-Nitropropane	1.9672	2.1856	2.2404	2.5585	2.7039	2.7869	2.7421	2.4549	13	AVG
cis-1,3-Dichloropropene	#0.3548	0.3851	0.3900	0.4090	0.4325	0.4422	0.4532	0.4096	9	AVG #
4-Methyl-2-Pentanone	#10.762	11.580	11.552	12.492	12.461	12.322	11.413	11.797	5	AVG #
Toluene	#0.8251	0.8989	0.8343	0.8330	0.8466	0.8591	0.8505	0.8496	3	AVG #
trans-1,3-Dichloropropene	#0.3986	0.4352	0.4385	0.4549	0.4859	0.5025	0.5101	0.4608	9	AVG #
Ethyl Methacrylate	0.3761	0.3999	0.4022	0.4141	0.4304	0.4431	0.4424	0.4155	6	AVG
1,1,2-Trichloroethane	#0.2516	0.2606	0.2533	0.2556	0.2564	0.2583	0.2580	0.2562	1	AVG #
Tetrachloroethene	#0.3785	0.4175	0.3887	0.3903	0.3905	0.3983	0.3944	0.3940	3	AVG #
1,3-Dichloropropane	0.4783	0.4643	0.4576	0.4651	0.4666	0.4709	0.4647	0.4668	1	AVG
2-Hexanone	#7.3596	8.0145	8.2036	8.8413	8.9232	8.6905	8.0102	8.2918	7	AVG #
Dibromochloromethane	#0.2270	0.2519	0.2687	0.2805	0.3022	0.3182	0.3280	0.2823	13	AVG #
1,2-Dibromoethane	#0.2438	0.2344	0.2371	0.2433	0.2493	0.2525	0.2530	0.2448	3	AVG #
Chlorobenzene	#0.9363	1.0110	0.9820	0.9643	0.9684	0.9819	0.9683	0.9732	2	AVG #
1,1,1,2-Tetrachloroethane	0.2819	0.3055	0.3139	0.3243	0.3389	0.3516	0.3586	0.3249	8	AVG
Ethylbenzene	#1.6135	1.7797	1.6975	1.6669	1.6839	1.7070	1.6693	1.6882	3	AVG #
m+p-Xylene	#0.6120	0.6486	0.6372	0.6400	0.6461	0.6604	0.6551	0.6428	2	AVG #
o-Xylene	#0.5999	0.6564	0.6296	0.6282	0.6537	0.6662	0.6765	0.6443	4	AVG #
Styrene	#0.9311	1.0323	1.0479	1.0500	1.0854	1.1192	1.1374	1.0576	6	AVG #
Bromoform	#0.1209	0.1397	0.1483	0.1566	0.1768	0.1902	0.2047	0.1625	18	AVG #
Isopropylbenzene	#1.5169	1.7537	1.6768	1.6656	1.6998	1.7256	1.7103	1.6784	5	AVG #
1,1,2,2-Tetrachloroethane	#0.5664	0.5567	0.5904	0.5790	0.6022	0.6104	0.6089	0.5877	4	AVG #
Bromobenzene	0.7392	0.7694	0.7764	0.7478	0.7770	0.7932	0.7997	0.7718	3	AVG
1,2,3-Trichloropropane	0.1606	0.1609	0.1672	0.1632	0.1660	0.1688	0.1633	0.1643	2	AVG
n-Propylbenzene	3.4254	3.7711	3.6587	3.5339	3.6344	3.6506	3.4840	3.5940	3	AVG
2-Chlorotoluene	0.7136	0.7328	0.7264	0.6888	0.7233	0.7232	0.7123	0.7172	2	AVG
1,3,5-Trimethylbenzene	2.4140	2.6174	2.6023	2.5172	2.6053	2.6603	2.5971	2.5734	3	AVG
4-Chlorotoluene	0.7159	0.7522	0.7520	0.7431	0.7575	0.7613	0.7521	0.7477	2	AVG
tert-Butylbenzene	0.4805	0.5800	0.5373	0.5283	0.5343	0.5473	0.5524	0.5372	6	AVG
Pentachloroethane	0.3251	0.3651	0.3805	0.4112	0.4549	0.4750	0.5077	0.4171	16	AVG
1,2,4-Trimethylbenzene	2.4471	2.5690	2.6518	2.6057	2.6909	2.7186	2.6895	2.6246	4	AVG
sec-Butylbenzene	2.9712	3.3207	3.3232	3.2134	3.3592	3.3897	3.3033	3.2687	4	AVG
1,3-Dichlorobenzene	#1.4423	1.5023	1.5557	1.4958	1.5561	1.5852	1.5995	1.5338	4	AVG #
p-Isopropyltoluene	2.6293	2.8485	2.8826	2.7928	2.8965	2.9740	2.9481	2.8531	4	AVG
1,4-Dichlorobenzene	#1.5214	1.5575	1.5678	1.5253	1.5761	1.5896	1.6063	1.5634	2	AVG #
1,2,3-Trimethylbenzene	1.1477	1.1751	1.1728	1.1483	1.1924	1.2033	1.2212	1.1801	2	AVG
Benzyl Chloride		0.1592	0.1818	0.2064	0.2260	0.2471	0.2605	0.2135	18	AVG
n-Butylbenzene	1.4296	1.5446	1.5873	1.4956	1.5497	1.5756	1.5630	1.5351	4	AVG
1,2-Dichlorobenzene	#1.3802	1.4253	1.4498	1.4110	1.4656	1.5003	1.4987	1.4473	3	AVG #
1,2-Dibromo-3-chloropropane	#1.4739	1.5366	1.6541	1.7877	1.8841	2.0057	2.0577	1.7714	13	AVG #
1,3,5-Trichlorobenzene	1.1970	1.2626	1.3112	1.2520	1.2924	1.3224	1.3416	1.2828	4	AVG
1,2,4-Trichlorobenzene	#1.1159	1.1528	1.2143	1.1614	1.2060	1.2348	1.2450	1.1900	4	AVG #
Hexachlorobutadiene	0.5887	0.6422	0.6523	0.6077	0.6235	0.6380	0.6381	0.6272	4	AVG
Naphthalene	1.8702	1.8787	2.0217	1.9833	2.0350	2.0796	2.0560	1.9892	4	AVG
1,2,3-Trichlorobenzene	0.9453	0.9623	1.0642	1.0094	1.0289	1.0526	1.0597	1.0175	5	AVG
Dibromofluoromethane	0.2504	0.2499	0.2519	0.2518	0.2530	0.2529	0.2504	0.2515	1	AVG
Dibromofluoromethane(2)	0.2587	0.2576	0.2588	0.2582	0.2601	0.2604	0.2564	0.2586	1	AVG
1,2-Dichloroethane-d4	0.0533	0.0528	0.0543	0.0538	0.0537	0.0528	0.0524	0.0533	1	AVG
1,2-Dichloroethane-d4(2)	0.3082	0.3073	0.3076	0.3018	0.2997	0.2998	0.2962	0.3029	2	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 12:22 14:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i07.d RRF0.5= ga19i06.d RRF 1 = ga19i05.d
RRF 2 = ga19i04.d RRF 5 = ga19i03.d RRF 10= ga19i02.d RRF 25= ga19i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(3)	0.0334	0.0334	0.0338	0.0338	0.0327	0.0317	0.0337	0.0332	2	AVG
Toluene-d8	1.3463	1.3514	1.3329	1.3478	1.3322	1.3425	1.3347	1.3411	1	AVG
Toluene-d8(2)	0.8516	0.8548	0.8521	0.8555	0.8460	0.8567	0.8568	0.8534	0	AVG
4-Bromofluorobenzene	0.5126	0.5172	0.5157	0.5099	0.5108	0.5142	0.5129	0.5133	1	AVG
4-Bromofluorobenzene(2)	0.4359	0.4386	0.4383	0.4408	0.4359	0.4415	0.4398	0.4387	1	AVG

Average %RSD 5

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i01.d	VSTD025
/chem2/HP16334.i/18apr19i.b/ga19i02.d	VSTD010
/chem2/HP16334.i/18apr19i.b/ga19i03.d	VSTD005
/chem2/HP16334.i/18apr19i.b/ga19i04.d	VSTD002
/chem2/HP16334.i/18apr19i.b/ga19i05.d	VSTD001
/chem2/HP16334.i/18apr19i.b/ga19i06.d	VSTD0.5
/chem2/HP16334.i/18apr19i.b/ga19i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	ga19i01.d	ga19i02.d	ga19i03.d	ga19i04.d	ga19i05.d	ga19i06.d	ga19i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	221249	219199	212064	210083	224043	211767	225587	217713	3	Yes
Fluorobenzene	2071999	2172211	2151089	2150008	2094201	2057002	2046775	2106184	2	Yes
Chlorobenzene-d5	1603608	1651185	1639809	1622110	1587578	1537140	1539514	1597278	3	Yes
1,4-Dichlorobenzene-d4	918007	931947	919901	922950	894690	865930	862291	902245	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ga19i01.d	ga19i02.d	ga19i03.d	ga19i04.d	ga19i05.d	ga19i06.d	ga19i07.d	Avg. RT
t-Butyl Alcohol-d10	3.946	3.952	3.971	3.946	3.958	3.952	3.946	3.953
Fluorobenzene	7.482	7.482	7.488	7.482	7.482	7.482	7.476	7.482
Chlorobenzene-d5	11.018	11.018	11.018	11.018	11.018	11.018	11.018	11.018
1,4-Dichlorobenzene-d4	12.914	12.914	12.914	12.914	12.914	12.914	12.914	12.914

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/19/2018 at 20:12.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3751	0.3146	4.19	5	-16	#
# Chloromethane	0.3777	0.3276	4.34	5	-13	#
# Vinyl Chloride	0.3241	0.3007	4.64	5	-7	#
1,3-Butadiene	0.6896	0.4860	3.52	5	-30	
# Bromomethane	0.2167	0.2083	4.81	5	-4	#
# Chloroethane	0.1846	0.1724	4.67	5	-7	#
Dichlorofluoromethane	0.4453	0.4365	4.90	5	-2	
# Trichlorofluoromethane	0.4227	0.4201	4.97	5	-1	#
Ethyl ether	0.2107	0.2231	5.29	5	6	
Freon 123a	0.2993	0.3088	5.16	5	3	
Acrolein	1.7274	1.7358	37.68	37.5	0	
# 1,1-Dichloroethene	0.2070	0.2140	5.17	5	3	#
# Freon 113	0.2333	0.2303	4.94	5	-1	#
# Acetone	2.7910	2.6931	36.18	37.5	-4	#
Methyl Iodide	0.4020	0.3810	4.74	5	-5	
# Carbon Disulfide	0.8212	0.7399	4.51	5	-10	#
Allyl Chloride	0.4802	0.4881	5.08	5	2	
# Methyl Acetate	7.8671	7.4233	4.72	5	-6	#
# Methylene Chloride	0.2799	0.2513	4.49	5	-10	#
t-Butyl Alcohol	0.9461	0.9308	49.19	50	-2	
Acrylonitrile	3.1051	3.2821	26.43	25	6	
# trans-1,2-Dichloroethene	0.2405	0.2472	5.14	5	3	#
# Methyl Tertiary Butyl Ether	0.7208	0.7137	4.95	5	-1	#
n-Hexane	0.4062	0.4025	4.95	5	-1	
# 1,1-Dichloroethane	0.4906	0.4975	5.07	5	1	#
di-Isopropyl Ether	1.0047	1.0411	5.18	5	4	
2-Chloro-1,3-Butadiene	0.4491	0.4538	5.05	5	1	
Ethyl t-butyl ether	0.8820	0.8897	5.04	5	1	
# cis-1,2-Dichloroethene	0.2698	0.2840	5.26	5	5	#
2,2-Dichloropropane	0.4024	0.4115	5.11	5	2	
# 2-Butanone	4.8022	4.9760	38.86	37.5	4	#
Propionitrile	1.1874	1.1967	37.79	37.5	1	
Methacrylonitrile	3.7630	3.9286	39.15	37.5	4	
Bromochloromethane	0.1239	0.1247	5.03	5	1	
Tetrahydrofuran	1.1431	1.1603	25.38	25	2	
# Chloroform	0.4691	0.4740	5.05	5	1	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	1,1,1-Trichloroethane	0.3962	0.4011	5.06	5	1	#
#	Cyclohexane	0.4752	0.4878	5.13	5	3	#
	1,1-Dichloropropene	0.3694	0.3669	4.97	5	-1	
#	Carbon Tetrachloride	0.3218	0.3282	5.10	5	2	#
	Isobutyl Alcohol	0.3760	0.3671	122.05	125	-2	
#	Benzene	1.0199	1.0319	5.06	5	1	#
#	1,2-Dichloroethane	0.3610	0.3482	4.82	5	-4	#
	t-Amyl methyl ether	0.7485	0.7636	5.10	5	2	
	n-Heptane	0.4887	0.4950	5.06	5	1	
	n-Butanol	0.2976	0.3068	257.68	250	3	
#	Trichloroethene	0.2693	0.2712	5.04	5	1	#
#	Methylcyclohexane	0.4573	0.4711	5.15	5	3	#
#	1,2-Dichloropropane	0.2831	0.2944	5.20	5	4	#
	Methyl Methacrylate	7.1669	7.5741	5.28	5	6	
	Dibromomethane	0.1351	0.1373	5.08	5	2	
	1,4-Dioxane	0.0519	0.0632	152.35	125	22	
#	Bromodichloromethane	0.3314	0.3378	5.10	5	2	#
	2-Nitropropane	2.4549	2.2953	4.67	5	-7	
#	cis-1,3-Dichloropropene	0.4096	0.4170	5.09	5	2	#
#	4-Methyl-2-Pentanone	11.797	12.3982	26.27	25	5	#
#	Toluene	0.8496	0.8611	5.07	5	1	#
#	trans-1,3-Dichloropropene	0.4608	0.4713	5.11	5	2	#
	Ethyl Methacrylate	0.4155	0.4272	5.14	5	3	
#	1,1,2-Trichloroethane	0.2562	0.2637	5.15	5	3	#
#	Tetrachloroethene	0.3940	0.3989	5.06	5	1	#
	1,3-Dichloropropane	0.4668	0.4722	5.06	5	1	
#	2-Hexanone	8.2918	8.9620	27.02	25	8	#
#	Dibromochloromethane	0.2823	0.2901	5.14	5	3	#
#	1,2-Dibromoethane	0.2448	0.2534	5.18	5	4	#
#	Chlorobenzene	0.9732	0.9776	5.02	5	0	#
	1,1,1,2-Tetrachloroethane	0.3249	0.3344	5.15	5	3	
#	Ethylbenzene	1.6882	1.7165	5.08	5	2	#
#	m+p-Xylene	0.6428	0.6617	10.29	10	3	#
#	o-Xylene	0.6443	0.6551	5.08	5	2	#
#	Styrene	1.0576	1.1044	5.22	5	4	#
#	Bromoform	0.1625	0.1627	5.01	5	0	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 15:21

Lab File ID: ga19v01.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Isopropylbenzene	1.6784	1.7320	5.16	5	3	#
#	1,1,2,2-Tetrachloroethane	0.5877	0.5868	4.99	5	0	#
	Bromobenzene	0.7718	0.7612	4.93	5	-1	
	1,2,3-Trichloropropane	0.1643	0.1698	5.17	5	3	
	n-Propylbenzene	3.5940	3.6355	5.06	5	1	
	2-Chlorotoluene	0.7172	0.7072	4.93	5	-1	
	1,3,5-Trimethylbenzene	2.5734	2.5826	5.02	5	0	
	4-Chlorotoluene	0.7477	0.7485	5.01	5	0	
	tert-Butylbenzene	0.5372	0.5376	5.00	5	0	
	Pentachloroethane	0.4171	0.4298	5.15	5	3	
	1,2,4-Trimethylbenzene	2.6246	2.6637	5.07	5	1	
	sec-Butylbenzene	3.2687	3.3588	5.14	5	3	
#	1,3-Dichlorobenzene	1.5338	1.5175	4.95	5	-1	#
	p-Isopropyltoluene	2.8531	2.9287	5.13	5	3	
#	1,4-Dichlorobenzene	1.5634	1.5616	4.99	5	0	#
	1,2,3-Trimethylbenzene	1.1801	1.2116	5.13	5	3	
	Benzyl Chloride	0.2135	0.2187	5.12	5	2	
	n-Butylbenzene	1.5351	1.5299	4.98	5	0	
#	1,2-Dichlorobenzene	1.4473	1.4475	5.00	5	0	#
#	1,2-Dibromo-3-chloropropane	1.7714	1.9198	5.42	5	8	#
	1,3,5-Trichlorobenzene	1.2828	1.2607	4.91	5	-2	
#	1,2,4-Trichlorobenzene	1.1900	1.1608	4.88	5	-2	#
	Hexachlorobutadiene	0.6272	0.6187	4.93	5	-1	
	Naphthalene	1.9892	1.9533	4.91	5	-2	
	1,2,3-Trichlorobenzene	1.0175	1.0075	4.95	5	-1	

Average %Drift 3

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 04/19/18 04/19/18

Heated Purge: (Y/N) Y Calibration Times: 16:06 18:19

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ga19i17.d RRF0.5= ga19i16.d RRF 1 = ga19i15.d
RRF 2 = ga19i14.d RRF 5 = ga19i13.d RRF 10= ga19i12.d RRF 25= ga19i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dimethyl ether	0.3923	0.3678	0.3710	0.3091	0.3729	0.3597	0.3536	0.3609	7	AVG
Acetonitrile	1.4369	1.2953	1.1477	1.0949	1.1197	1.1262	1.1250	1.1922	11	AVG
Vinyl Acetate	0.4453	0.4268	0.4800	0.4949	0.5106	0.5166	0.5145	0.4841	7	AVG
Methyl Acrylate	0.1686	0.1763	0.1711	0.1797	0.1860	0.1901	0.1899	0.1803	5	AVG
1-Chlorobutane	0.5326	0.5488	0.5430	0.5136	0.5548	0.5570	0.5449	0.5421	3	AVG
Chloroacetonitrile	0.0078	0.0092	0.0088	0.0092	0.0100	0.0101	0.0104	0.0093	9	AVG
2-Chloroethyl vinyl ether	0.1372	0.1377	0.1384	0.1436	0.1516	0.1562	0.1575	0.1460	6	AVG
Cyclohexanone	0.2635	0.3074	0.3092	0.3241	0.3395	0.3437	0.3432	0.3186	9	AVG
Hexachloroethane	0.2911	0.3127	0.3133	0.3316	0.3882	0.4208	0.4607	0.3598	18	AVG

Average %RSD 8

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

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Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i11.d	VSTD025
/chem2/HP16334.i/18apr19i.b/ga19i12.d	VSTD010
/chem2/HP16334.i/18apr19i.b/ga19i13.d	VSTD005
/chem2/HP16334.i/18apr19i.b/ga19i14.d	VSTD002
/chem2/HP16334.i/18apr19i.b/ga19i15.d	VSTD001
/chem2/HP16334.i/18apr19i.b/ga19i16.d	VSTD0.5
/chem2/HP16334.i/18apr19i.b/ga19i17.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	ga19i11.d	ga19i12.d	ga19i13.d	ga19i14.d	ga19i15.d	ga19i16.d	ga19i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	210135	209976	219492	222162	208792	202412	193957	209561	5	Yes
Fluorobenzene	2060186	2073753	2054246	2051797	1995606	1951602	1904931	2013160	3	Yes
Chlorobenzene-d5	1608281	1594546	1566159	1555216	1510225	1475874	1433781	1534869	4	Yes
1,4-Dichlorobenzene-d4	893721	886505	874033	873380	846603	823717	808966	858132	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ga19i11.d	ga19i12.d	ga19i13.d	ga19i14.d	ga19i15.d	ga19i16.d	ga19i17.d	Avg. RT
t-Butyl Alcohol-d10	3.958	3.964	3.952	3.952	3.952	3.958	3.964	3.957
Fluorobenzene	7.488	7.488	7.482	7.482	7.482	7.482	7.482	7.484
Chlorobenzene-d5	11.018	11.018	11.018	11.018	11.018	11.018	11.018	11.018
1,4-Dichlorobenzene-d4	12.914	12.914	12.914	12.914	12.914	12.914	12.914	12.914

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/19/2018 at 20:12.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 04/19/18 Time: 19:04

Lab File ID: ga19v11.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3609	0.3706	5.13	5	3
Acetonitrile	1.1922	1.3239	41.64	37.5	11
Vinyl Acetate	0.4841	0.5220	13.48	12.5	8
Methyl Acrylate	0.1803	0.1980	27.46	25	10
1-Chlorobutane	0.5421	0.5465	5.04	5	1
Chloroacetonitrile	0.0093	0.0097	258.32	250	3
2-Chloroethyl vinyl ether	0.1460	0.1562	5.35	5	7
Cyclohexanone	0.3186	0.3302	129.53	125	4
Hexachloroethane	0.3598	0.3682	5.12	5	2
			Average %Drift		5

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date(s): 04/17/18 04/17/18

Heated Purge: (Y/N) Y Calibration Times: 18:22 20:31

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ia17i17.d RRF0.5= ia17i16.d RRF 1 = ia17i15.d
RRF 2 = ia17i14.d RRF 5 = ia17i13.d RRF 10= ia17i12.d RRF 25= ia17i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3264	0.3237	0.5227	0.5120	0.5116	0.5058	0.5198	0.4603	20	AVG #
Chloromethane	#0.3812	0.3522	0.4614	0.4584	0.4517	0.4386	0.4390	0.4261	10	AVG #
Vinyl Chloride	#0.3152	0.3011	0.4259	0.4198	0.4168	0.4030	0.4027	0.3835	14	AVG #
1,3-Butadiene	0.4023	0.3641	0.4411	0.4153	0.4146	0.3638	0.3378	0.3913	9	AVG
Bromomethane	#0.2496	0.2289	0.2951	0.2943	0.2819	0.2725	0.2648	0.2696	9	AVG #
Chloroethane	#0.2052	0.1817	0.2426	0.2387	0.2308	0.2213	0.2092	0.2185	10	AVG #
Dichlorofluoromethane	0.4625	0.4174	0.5670	0.5648	0.5450	0.5249	0.5112	0.5132	11	AVG
Trichlorofluoromethane	#0.3911	0.3638	0.5359	0.5278	0.5241	0.5097	0.5213	0.4820	15	AVG #
Ethyl ether	0.2183	0.2188	0.2394	0.2453	0.2493	0.2474	0.2460	0.2378	6	AVG
Freon 123a	0.2763	0.2662	0.3706	0.3713	0.3713	0.3661	0.3606	0.3403	14	AVG
Acrolein	2.2732	2.3289	2.3174	2.3893	2.4514	2.5656	2.4270	2.3932	4	AVG
1,1-Dichloroethene	#0.1829	0.1701	0.2467	0.2468	0.2493	0.2475	0.2474	0.2272	15	AVG #
Freon 113	#0.2161	0.1927	0.2873	0.2829	0.2848	0.2796	0.2801	0.2605	15	AVG #
Acetone	#3.8589	3.4855	3.4852	3.4625	3.3698	3.5038	3.4284	3.5134	5	AVG #
Methyl Iodide	0.3586	0.3483	0.4384	0.4479	0.4519	0.4507	0.4448	0.4201	11	AVG
Carbon Disulfide	#0.5306	0.4731	0.6519	0.6737	0.7136	0.7220	0.7331	0.6426	16	AVG #
Allyl Chloride	0.3250	0.3244	0.4281	0.4461	0.4629	0.4679	0.4758	0.4186	16	AVG
Methyl Acetate	#6.6584	8.8915	7.6077	8.6424	8.3219	8.9677	8.8883	8.2825	10	AVG #
Methylene Chloride	#0.2698	0.2527	0.2813	0.2869	0.2849	0.2860	0.2807	0.2775	4	AVG #
t-Butyl Alcohol	1.2030	1.1450	1.1758	1.2006	1.1744	1.2824	1.3166	1.2140	5	AVG
Acrylonitrile	2.9755	3.7664	3.8404	4.0289	4.1741	4.4695	4.3053	3.9371	12	AVG
trans-1,2-Dichloroethene	#0.2075	0.2053	0.2741	0.2828	0.2832	0.2832	0.2801	0.2595	14	AVG #
Methyl Tertiary Butyl Ether	#0.6001	0.5989	0.6587	0.7043	0.7237	0.7277	0.7220	0.6765	9	AVG #
n-Hexane		0.2746	0.4331	0.4514	0.4764	0.4782	0.4868	0.4334	19	AVG
1,1-Dichloroethane	#0.4325	0.4311	0.5354	0.5539	0.5566	0.5618	0.5571	0.5184	12	AVG #
di-Isopropyl Ether	0.7621	0.7880	0.9469	1.0074	1.0309	1.0400	1.0256	0.9430	13	AVG
2-Chloro-1,3-Butadiene		0.2921	0.4326	0.4647	0.4867	0.4875	0.4899	0.4422	17	AVG
Ethyl t-butyl ether	0.6227	0.6564	0.7549	0.8059	0.8534	0.8687	0.8679	0.7757	13	AVG
cis-1,2-Dichloroethene	#0.2378	0.2418	0.3004	0.3162	0.3219	0.3220	0.3178	0.2940	13	AVG #
2,2-Dichloropropane	0.2701	0.2617	0.3702	0.3959	0.4098	0.4142	0.4200	0.3631	19	AVG
2-Butanone	#4.1613	4.8281	5.4148	5.7157	5.9490	6.2859	6.0636	5.4883	14	AVG #
Propionitrile	1.4349	1.4396	1.5696	1.6125	1.6120	1.6598	1.6137	1.5632	6	AVG
Methacrylonitrile	4.3556	4.7505	4.9316	5.2801	5.3371	5.6582	5.3914	5.1006	9	AVG
Bromochloromethane	0.1057	0.1111	0.1289	0.1305	0.1303	0.1273	0.1279	0.1231	8	AVG
Tetrahydrofuran	1.3027	1.3465	1.4517	1.5313	1.5793	1.6460	1.5823	1.4914	9	AVG
Chloroform	#0.4228	0.4082	0.5072	0.5233	0.5214	0.5193	0.5116	0.4877	10	AVG #
1,1,1-Trichloroethane	#0.3228	0.3060	0.4203	0.4388	0.4503	0.4507	0.4544	0.4062	16	AVG #
Cyclohexane	#	0.3501	0.5386	0.5545	0.5730	0.5688	0.5773	0.5270	17	AVG #
Cyclohexane(2)	#	0.2863	0.4368	0.4459	0.4542	0.4537	0.4621	0.4232	16	AVG #
Cyclohexane(3)	#	0.1017	0.1573	0.1618	0.1684	0.1667	0.1706	0.1544	17	AVG #
1,1-Dichloropropene	0.2917	0.2866	0.4144	0.4189	0.4328	0.4341	0.4309	0.3871	17	AVG
Carbon Tetrachloride	#0.2569	0.2503	0.3518	0.3672	0.3873	0.3897	0.3983	0.3431	18	AVG #
Isobutyl Alcohol	0.4931	0.4558	0.4813	0.4833	0.4828	0.4976	0.5003	0.4849	3	AVG
Benzene	#0.9986	0.9710	1.2166	1.2521	1.2486	1.2423	1.2198	1.1641	11	AVG #
1,2-Dichloroethane	#0.3535	0.3202	0.3489	0.3438	0.3418	0.3392	0.3326	0.3400	3	AVG #
1,2-Dichloroethane(2)	#0.0188	0.0261	0.0299	0.0310	0.0305	0.0305	0.0302	0.0281	16	AVG #<-
t-Amyl methyl ether	0.5182	0.5598	0.6381	0.6786	0.7162	0.7298	0.7320	0.6532	13	AVG
n-Heptane	0.3405	0.3231	0.5024	0.4991	0.5148	0.5134	0.5288	0.4603	19	AVG
n-Butanol		0.2786	0.3170	0.3697	0.4081	0.4220	0.4198	0.3692	16	AVG
Trichloroethene	#0.2454	0.2336	0.3096	0.3168	0.3179	0.3200	0.3200	0.2948	13	AVG #
Methylcyclohexane	#	0.3237	0.5148	0.5324	0.5548	0.5515	0.5682	0.5076	18	AVG #
1,2-Dichloropropane	#0.2563	0.2578	0.3087	0.3228	0.3254	0.3236	0.3191	0.3020	10	AVG #

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date(s): 04/17/18 04/17/18

Heated Purge: (Y/N) Y Calibration Times: 18:22 20:31

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ia17i17.d RRF0.5= ia17i16.d RRF 1 = ia17i15.d
RRF 2 = ia17i14.d RRF 5 = ia17i13.d RRF 10= ia17i12.d RRF 25= ia17i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Methyl Methacrylate	5.7961	6.8051	8.1975	8.7952	9.7153	10.383	10.253	8.5635	20	AVG
Dibromomethane	0.1238	0.1222	0.1348	0.1395	0.1420	0.1425	0.1415	0.1352	6	AVG
1,4-Dioxane		0.0644	0.0891	0.0943	0.0935	0.0860	0.0810	0.0847	13	AVG
1,4-Dioxane(2)		0.0440	0.0621	0.0683	0.0683	0.0626	0.0593	0.0608	15	AVG
Bromodichloromethane	#0.2695	0.2594	0.3071	0.3312	0.3542	0.3654	0.3789	0.3237	14	AVG #
2-Nitropropane	2.1826	2.2794	2.4919	2.7899	3.0680	3.3206	3.2749	2.7725	17	AVG
cis-1,3-Dichloropropene	#	0.2882	0.3628	0.4093	0.4462	0.4638	0.4779	0.4080	18	AVG #
4-Methyl-2-Pentanone	#11.126	12.417	13.299	14.260	14.804	15.446	14.120	13.638	11	AVG #
Toluene	#0.8705	0.8189	1.0312	1.0544	1.0603	1.0463	1.0182	0.9857	10	AVG #
trans-1,3-Dichloropropene	#0.2992	0.3219	0.3838	0.4273	0.4761	0.4988	0.5110	0.4169	20	AVG #
Ethyl Methacrylate		0.3034	0.3508	0.4034	0.4545	0.4691	0.4681	0.4082	17	AVG
1,1,2-Trichloroethane	#0.2508	0.2550	0.2790	0.2926	0.2918	0.2913	0.2855	0.2780	6	AVG #
Tetrachloroethene	#0.3410	0.3343	0.4481	0.4473	0.4575	0.4549	0.4481	0.4187	13	AVG #
1,3-Dichloropropane	0.4473	0.4537	0.4946	0.5193	0.5237	0.5210	0.5039	0.4948	6	AVG
2-Hexanone	#7.4149	8.8158	9.4349	10.203	10.531	10.933	10.063	9.6280	12	AVG #
Dibromochloromethane	#0.1958	0.2168	0.2550	0.2805	0.3113	0.3229	0.3343	0.2738	20	AVG #
1,2-Dibromoethane	#0.2194	0.2261	0.2499	0.2602	0.2705	0.2751	0.2695	0.2530	9	AVG #
Chlorobenzene	#0.9605	0.9243	1.1260	1.1348	1.1340	1.1264	1.0923	1.0712	8	AVG #
1,1,1,2-Tetrachloroethane	0.2749	0.2793	0.3331	0.3579	0.3725	0.3800	0.3868	0.3407	14	AVG
Ethylbenzene	#1.5113	1.5027	1.9453	2.0195	2.0650	2.0550	1.9776	1.8680	13	AVG #
m+p-Xylene	#0.5423	0.5727	0.7626	0.7779	0.7956	0.7947	0.7783	0.7177	15	AVG #
o-Xylene	#0.5137	0.5372	0.7172	0.7598	0.7877	0.7858	0.7872	0.6984	17	AVG #
Styrene	#0.7369	0.8207	1.0918	1.1740	1.2402	1.2482	1.2344	1.0780	20	AVG #
Bromoform	#0.0927	0.1042	0.1197	0.1359	0.1582	0.1715	0.1871	0.1385	25	2NDDEG #
Isopropylbenzene	#1.2352	1.3416	1.8769	1.9930	2.0516	2.0546	1.9957	1.7927	20	AVG #
1,1,2,2-Tetrachloroethane	#0.6303	0.6497	0.6575	0.7234	0.7492	0.7494	0.7653	0.7035	8	AVG #
Bromobenzene	0.7104	0.6953	0.8187	0.8725	0.8813	0.9115	0.9499	0.8342	12	AVG
trans-1,4-Dichloro-2-butene	2.6758	2.8090	3.0842	3.4772	3.7763	4.1592	3.9536	3.4193	17	AVG
1,2,3-Trichloropropane	0.1671	0.1759	0.1829	0.1915	0.1920	0.1924	0.1880	0.1843	5	AVG
n-Propylbenzene	3.2107	3.2121	4.4276	4.6867	4.7024	4.7581	4.5442	4.2203	17	AVG
2-Chlorotoluene	0.6562	0.6492	0.8347	0.8734	0.8821	0.8968	0.8964	0.8127	14	AVG
1,3,5-Trimethylbenzene	2.1139	2.2210	2.9867	3.2046	3.2798	3.3144	3.2766	2.9139	18	AVG
4-Chlorotoluene	0.6599	0.6826	0.8562	0.8894	0.8861	0.9112	0.9020	0.8268	13	AVG
tert-Butylbenzene	0.4226	0.4408	0.6077	0.6515	0.6775	0.7035	0.7153	0.6027	20	AVG
Pentachloroethane	0.3212	0.3655	0.4377	0.4856	0.5218	0.5434	0.5792	0.4649	20	AVG
1,2,4-Trimethylbenzene	2.0924	2.2269	3.0082	3.2106	3.2647	3.3626	3.3173	2.9261	18	AVG
sec-Butylbenzene	2.6507	2.7556	3.9460	4.1386	4.2823	4.3451	4.2876	3.7723	20	AVG
1,3-Dichlorobenzene	#1.3462	1.3457	1.6429	1.7045	1.7315	1.7857	1.8502	1.6296	13	AVG #
p-Isopropyltoluene		2.2144	3.2009	3.4331	3.5638	3.7013	3.7128	3.3044	17	AVG
1,4-Dichlorobenzene	#1.4937	1.4313	1.6644	1.7270	1.7153	1.7775	1.8114	1.6601	9	AVG #
1,2,3-Trimethylbenzene	1.2026	1.1099	1.3430	1.3905	1.3898	1.4194	1.4531	1.3297	9	AVG
Benzyl Chloride	0.0982	0.1215	0.1425	0.1782	0.2209	0.2408	0.2635	0.1808	35	2NDDEG
n-Butylbenzene	1.0997	1.1403	1.6173	1.6937	1.7417	1.8212	1.8383	1.5646	20	AVG
1,2-Dichlorobenzene	#1.3277	1.3146	1.5297	1.5868	1.5796	1.6095	1.6318	1.5114	9	AVG #
1,2-Dibromo-3-chloropropane	#1.5445	1.4560	1.7069	1.7480	1.9509	2.2071	2.3269	1.8486	18	AVG #
1,3,5-Trichlorobenzene	0.9598	0.8683	1.0619	1.1294	1.1454	1.2442	1.2972	1.1009	14	AVG
1,2,4-Trichlorobenzene	#0.8394	0.7962	0.9080	0.9954	0.9961	1.0940	1.1231	0.9646	13	AVG #
Hexachlorobutadiene	0.2636	0.2485	0.3499	0.3659	0.3708	0.4093	0.4353	0.3490	20	AVG
Naphthalene	1.6401	1.5492	1.7390	1.9860	2.0318	2.1686	2.1133	1.8897	13	AVG
1,2,3-Trichlorobenzene	0.8269	0.7422	0.8135	0.8989	0.8714	0.9411	0.9157	0.8585	8	AVG
Dibromofluoromethane	0.2305	0.2344	0.2338	0.2332	0.2341	0.2339	0.2338	0.2334	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date(s): 04/17/18 04/17/18

Heated Purge: (Y/N) Y Calibration Times: 18:22 20:31

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

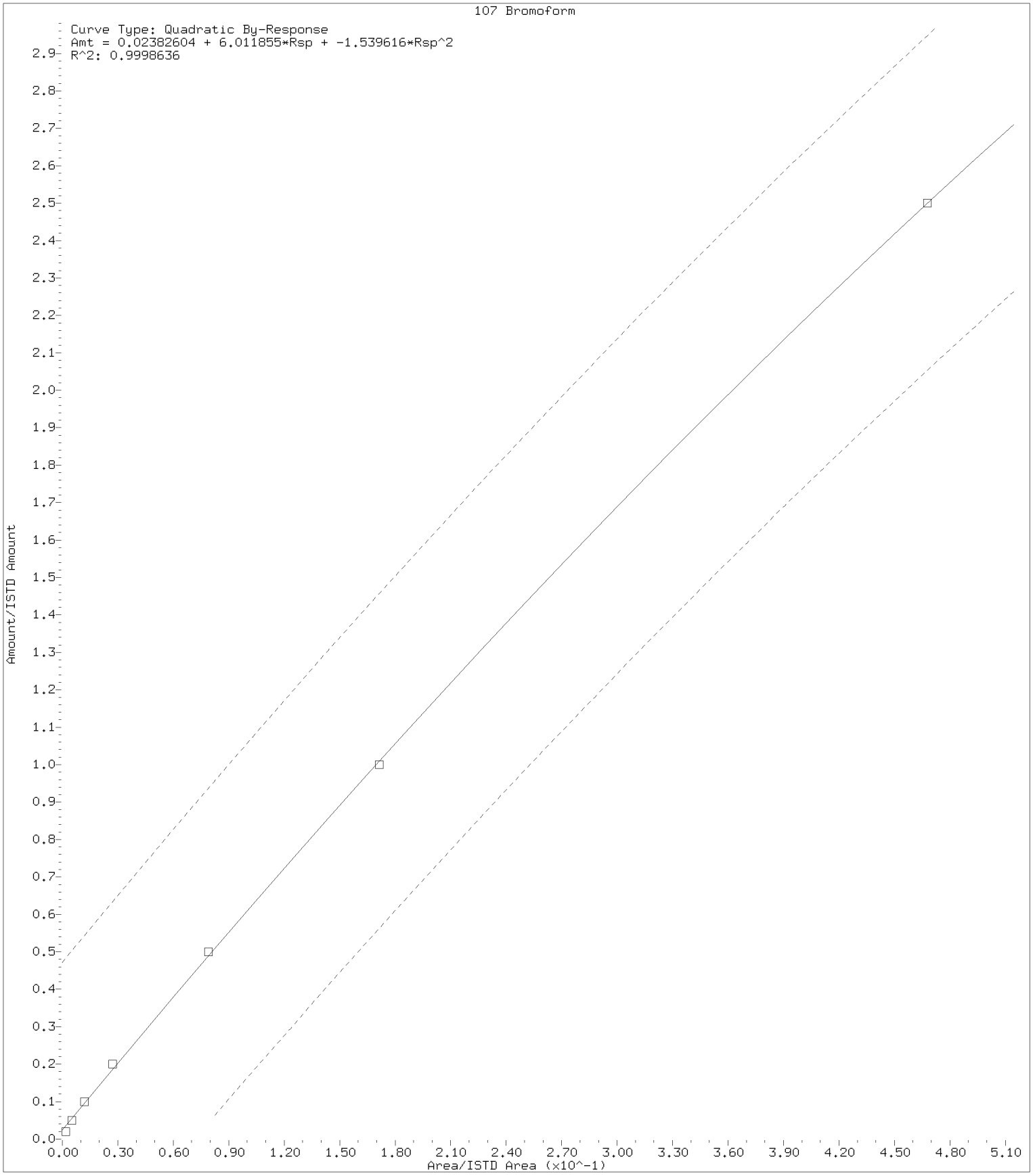
LAB FILE ID: RRF0.2= ia17i17.d RRF0.5= ia17i16.d RRF 1 = ia17i15.d
RRF 2 = ia17i14.d RRF 5 = ia17i13.d RRF 10= ia17i12.d RRF 25= ia17i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromofluoromethane(2)	0.2390	0.2410	0.2385	0.2393	0.2395	0.2405	0.2416	0.2399	0	AVG
1,2-Dichloroethane-d4	0.0515	0.0515	0.0506	0.0508	0.0505	0.0505	0.0501	0.0508	1	AVG
1,2-Dichloroethane-d4(2)	0.2564	0.2549	0.2528	0.2544	0.2482	0.2459	0.2455	0.2511	2	AVG
1,2-Dichloroethane-d4(3)	0.0322	0.0321	0.0321	0.0322	0.0318	0.0319	0.0319	0.0320	0	AVG
Toluene-d8	1.3672	1.3864	1.3766	1.3635	1.3482	1.3196	1.2897	1.3502	3	AVG
Toluene-d8(2)	0.8793	0.8878	0.8890	0.8726	0.8646	0.8469	0.8291	0.8670	3	AVG
4-Bromofluorobenzene	0.4788	0.4801	0.4857	0.4799	0.4777	0.4715	0.4636	0.4767	1	AVG
4-Bromofluorobenzene(2)	0.3911	0.3936	0.3951	0.3911	0.3894	0.3824	0.3730	0.3880	2	AVG

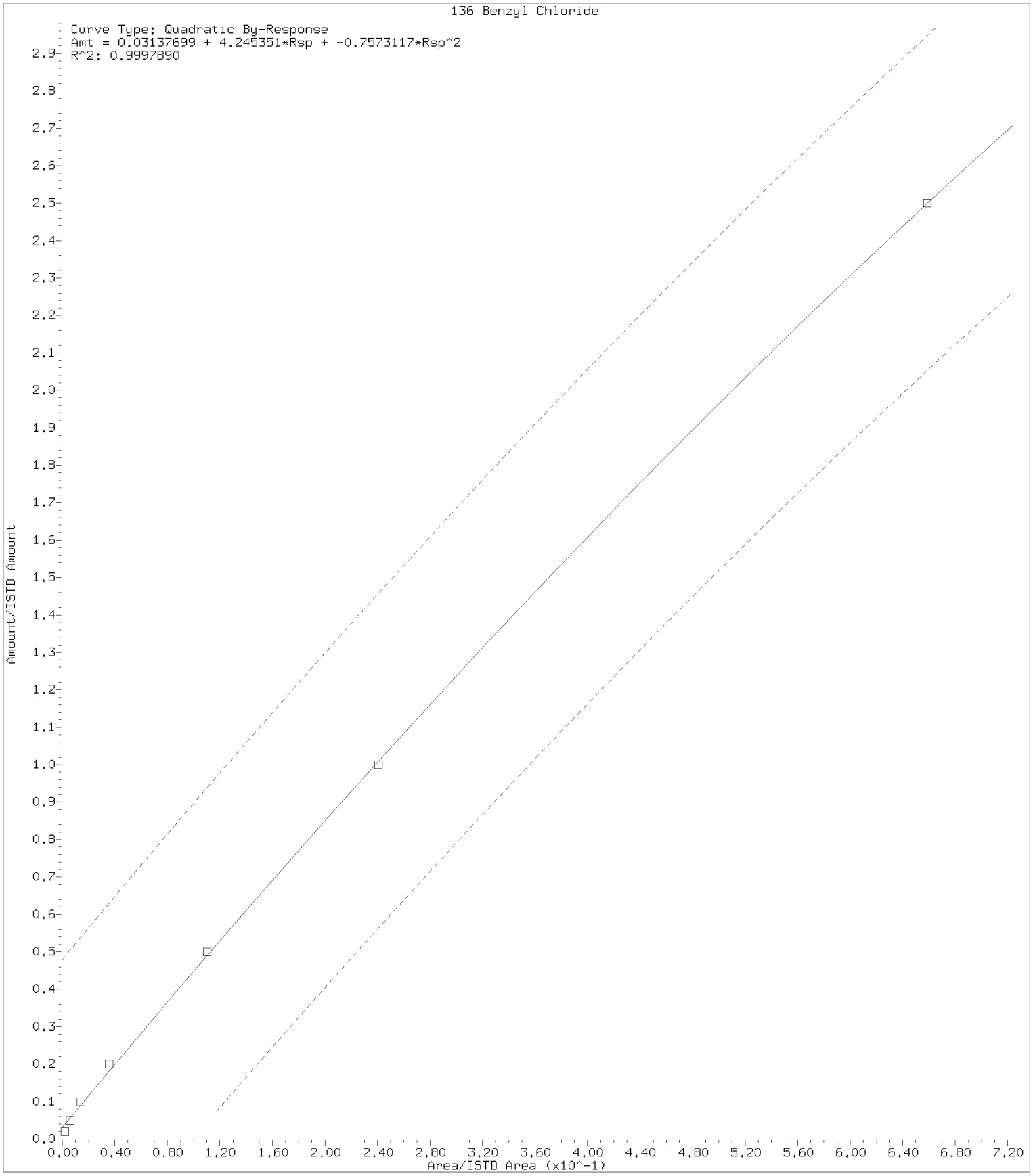
Average %RSD 13

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA



Digitally signed by Don V. Viray on 04/17/2018 at 21:46.
Target 3.5 esignature user ID: dvv10203



Digitally signed by Don V. Viray on 04/17/2018 at 21:46.
Target 3.5 esignature user ID: dvv10203

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19930.i/18apr17i.b/ia17i11.d	VSTD025
/chem2/HP19930.i/18apr17i.b/ia17i12.d	VSTD010
/chem2/HP19930.i/18apr17i.b/ia17i13.d	VSTD005
/chem2/HP19930.i/18apr17i.b/ia17i14.d	VSTD002
/chem2/HP19930.i/18apr17i.b/ia17i15.d	VSTD001
/chem2/HP19930.i/18apr17i.b/ia17i16.d	VSTD0.5
/chem2/HP19930.i/18apr17i.b/ia17i17.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	ia17i11.d	ia17i12.d	ia17i13.d	ia17i14.d	ia17i15.d	ia17i16.d	ia17i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	176652	176767	205139	179887	181349	175133	170762	180813	6	Yes
Fluorobenzene	2222731	2311353	2567461	2240910	2290474	2277458	2267597	2311141	5	Yes
Chlorobenzene-d5	1692122	1716032	1887166	1635026	1656015	1641937	1637484	1695112	5	Yes
1,4-Dichlorobenzene-d4	853465	873331	974826	848987	875534	866656	859157	878851	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ia17i11.d	ia17i12.d	ia17i13.d	ia17i14.d	ia17i15.d	ia17i16.d	ia17i17.d	Avg. RT
t-Butyl Alcohol-d10	4.135	4.123	4.135	4.123	4.129	4.135	4.141	4.132
Fluorobenzene	7.665	7.659	7.665	7.659	7.659	7.665	7.665	7.662
Chlorobenzene-d5	11.152	11.152	11.152	11.152	11.152	11.152	11.152	11.152
1,4-Dichlorobenzene-d4	13.036	13.036	13.036	13.036	13.036	13.036	13.036	13.036

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/17/2018 at 21:45.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 ICV Date: 04/17/18 Time: 21:13

Lab File ID: ia17v11.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4603	0.4769	5.18	5	4	#
# Chloromethane	0.4261	0.4370	5.13	5	3	#
# Vinyl Chloride	0.3835	0.4093	5.34	5	7	#
1,3-Butadiene	0.3913	0.3671	4.69	5	-6	
# Bromomethane	0.2696	0.2835	5.26	5	5	#
# Chloroethane	0.2185	0.2203	5.04	5	1	#
Dichlorofluoromethane	0.5132	0.5278	5.14	5	3	
# Trichlorofluoromethane	0.4820	0.5108	5.30	5	6	#
Ethyl ether	0.2378	0.2485	5.23	5	5	
Freon 123a	0.3403	0.3625	5.33	5	7	
Acrolein	2.3932	2.3111	36.21	37.5	-3	
# 1,1-Dichloroethene	0.2272	0.2614	5.75	5	15	#
# Freon 113	0.2605	0.2694	5.17	5	3	#
# Acetone	3.5134	3.3947	36.23	37.5	-3	#
Methyl Iodide	0.4201	0.4255	5.06	5	1	
# Carbon Disulfide	0.6426	0.6340	4.93	5	-1	#
Allyl Chloride	0.4186	0.4507	5.38	5	8	
# Methyl Acetate	8.2825	8.4981	5.13	5	3	#
# Methylene Chloride	0.2775	0.2836	5.11	5	2	#
t-Butyl Alcohol	1.2140	1.2206	50.27	50	1	
Acrylonitrile	3.9371	4.2443	26.95	25	8	
# trans-1,2-Dichloroethene	0.2595	0.2845	5.48	5	10	#
# Methyl Tertiary Butyl Ether	0.6765	0.6934	5.13	5	3	#
n-Hexane	0.4334	0.4367	5.04	5	1	
# 1,1-Dichloroethane	0.5184	0.5476	5.28	5	6	#
di-Isopropyl Ether	0.9430	1.0137	5.37	5	7	
2-Chloro-1,3-Butadiene	0.4422	0.4656	5.26	5	5	
Ethyl t-butyl ether	0.7757	0.8160	5.26	5	5	
# cis-1,2-Dichloroethene	0.2940	0.3231	5.50	5	10	#
2,2-Dichloropropane	0.3631	0.3959	5.45	5	9	
# 2-Butanone	5.4883	6.0590	41.40	37.5	10	#
Propionitrile	1.5632	1.6168	38.79	37.5	3	
Methacrylonitrile	5.1006	5.4439	40.02	37.5	7	
Bromochloromethane	0.1231	0.1281	5.20	5	4	
Tetrahydrofuran	1.4914	1.5987	26.80	25	7	
# Chloroform	0.4877	0.5093	5.22	5	4	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 ICV Date: 04/17/18 Time: 21:13

Lab File ID: ia17v11.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
#	1,1,1-Trichloroethane	0.4062	0.4367	5.38	5	8	#
#	Cyclohexane	0.5270	0.5393	5.12	5	2	#
	1,1-Dichloropropene	0.3871	0.4133	5.34	5	7	
#	Carbon Tetrachloride	0.3431	0.3728	5.43	5	9	#
	Isobutyl Alcohol	0.4849	0.4752	122.50	125	-2	
#	Benzene	1.1641	1.2237	5.26	5	5	#
#	1,2-Dichloroethane	0.3400	0.3305	4.86	5	-3	#
	t-Amyl methyl ether	0.6532	0.6906	5.29	5	6	
	n-Heptane	0.4603	0.4794	5.21	5	4	
	n-Butanol	0.3692	0.3653	247.34	250	-1	
#	Trichloroethene	0.2948	0.3100	5.26	5	5	#
#	Methylcyclohexane	0.5076	0.5282	5.20	5	4	#
#	1,2-Dichloropropane	0.3020	0.3163	5.24	5	5	#
	Methyl Methacrylate	8.5635	9.5668	5.59	5	12	
	Dibromomethane	0.1352	0.1372	5.08	5	2	
	1,4-Dioxane	0.0847	0.0940	138.81	125	11	
#	Bromodichloromethane	0.3237	0.3329	5.14	5	3	#
	2-Nitropropane	2.7725	2.3657	4.27	5	-15	
#	cis-1,3-Dichloropropene	0.4080	0.4019	4.92	5	-2	#
#	4-Methyl-2-Pentanone	13.638	14.7544	27.04	25	8	#
#	Toluene	0.9857	1.0325	5.24	5	5	#
#	trans-1,3-Dichloropropene	0.4169	0.4262	5.11	5	2	#
	Ethyl Methacrylate	0.4082	0.4195	5.14	5	3	
#	1,1,2-Trichloroethane	0.2780	0.2905	5.23	5	5	#
#	Tetrachloroethene	0.4187	0.4445	5.31	5	6	#
	1,3-Dichloropropane	0.4948	0.5022	5.08	5	2	
#	2-Hexanone	9.6280	10.5860	27.49	25	10	#
#	Dibromochloromethane	0.2738	0.2844	5.19	5	4	#
#	1,2-Dibromoethane	0.2530	0.2598	5.13	5	3	#
#	Chlorobenzene	1.0712	1.1116	5.19	5	4	#
	1,1,1,2-Tetrachloroethane	0.3407	0.3637	5.34	5	7	
#	Ethylbenzene	1.8680	2.0032	5.36	5	7	#
#	m+p-Xylene	0.7177	0.7755	10.80	10	8	#
#	o-Xylene	0.6984	0.7527	5.39	5	8	#
#	Styrene	1.0780	1.2085	5.61	5	12	#
#	Bromoform	0.1385	0.1401	4.38	5	-12	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 ICV Date: 04/17/18 Time: 21:13

Lab File ID: ia17v11.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Isopropylbenzene	1.7927	2.0202	5.63	5	13	#
# 1,1,2,2-Tetrachloroethane	0.7035	0.6934	4.93	5	-1	#
Bromobenzene	0.8342	0.8556	5.13	5	3	
trans-1,4-Dichloro-2-butene	3.4193	3.7345	27.30	25	9	
1,2,3-Trichloropropane	0.1843	0.1920	5.21	5	4	
n-Propylbenzene	4.2203	4.6587	5.52	5	10	
2-Chlorotoluene	0.8127	0.8676	5.34	5	7	
1,3,5-Trimethylbenzene	2.9139	3.2134	5.51	5	10	
4-Chlorotoluene	0.8268	0.8667	5.24	5	5	
tert-Butylbenzene	0.6027	0.6738	5.59	5	12	
Pentachloroethane	0.4649	0.5080	5.46	5	9	
1,2,4-Trimethylbenzene	2.9261	3.2472	5.55	5	11	
sec-Butylbenzene	3.7723	4.2638	5.65	5	13	
# 1,3-Dichlorobenzene	1.6296	1.6706	5.13	5	3	#
p-Isopropyltoluene	3.3044	3.5790	5.42	5	8	
# 1,4-Dichlorobenzene	1.6601	1.6940	5.10	5	2	#
1,2,3-Trimethylbenzene	1.3297	1.4394	5.41	5	8	
Benzyl Chloride	0.1808	0.1922	4.32	5	-14	
n-Butylbenzene	1.5646	1.7418	5.57	5	11	
# 1,2-Dichlorobenzene	1.5114	1.5778	5.22	5	4	#
# 1,2-Dibromo-3-chloropropane	1.8486	2.0792	5.62	5	12	#
1,3,5-Trichlorobenzene	1.1009	1.1606	5.27	5	5	
# 1,2,4-Trichlorobenzene	0.9646	0.9803	5.08	5	2	#
Hexachlorobutadiene	0.3490	0.3901	5.59	5	12	
Naphthalene	1.8897	1.9743	5.22	5	4	
1,2,3-Trichlorobenzene	0.8585	0.8624	5.02	5	0	
			Average %Drift		6	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date(s): 04/12/18 04/12/18

Heated Purge: (Y/N) Y Calibration Times: 10:25 12:33

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF0.2= ia12i17.d RRF0.5= ia12i16.d RRF 1 = ia12i15.d
RRF 2 = ia12i14.d RRF 5 = ia12i13.d RRF 10= ia12i12.d RRF 25= ia12i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1-Chlorobutane	0.5050	0.5436	0.5707	0.5503	0.6139	0.6096	0.6177	0.5730	7	AVG
2-Chloroethyl vinyl ether	0.0764	0.1015	0.1106	0.1207	0.1376	0.1383	0.1353	0.1172	20	AVG
Acetonitrile	1.3602	1.4040	1.3959	1.2621	1.3779	1.3415	1.3577	1.3570	3	AVG
Chloroacetonitrile	0.0064	0.0077	0.0082	0.0077	0.0083	0.0096	0.0084	0.0081	12	AVG
Cyclohexanone	0.2423	0.2671	0.3211	0.3454	0.4020	0.3962	0.3708	0.3350	18	AVG
Hexachloroethane	0.3730	0.3805	0.4186	0.4075	0.4893	0.5220		0.4318	14	AVG
Methyl Acrylate	0.1053	0.1275	0.1413	0.1480	0.1748	0.1815	0.1816	0.1514	19	AVG
Vinyl Acetate	0.2154	0.2809	0.3174	0.3423	0.4149	0.4482	0.4790	0.3569	27	2NDDEG
cis-1,4-Dichloro-2-butene	0.6476	0.6491	0.6065	0.8114	1.0889	1.2338		0.8396	31	2NDDEG
Dimethyl ether	0.4017	0.3642	0.3792	0.3723	0.3918	0.4004	0.3832	0.3847	4	AVG

Average %RSD 16

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

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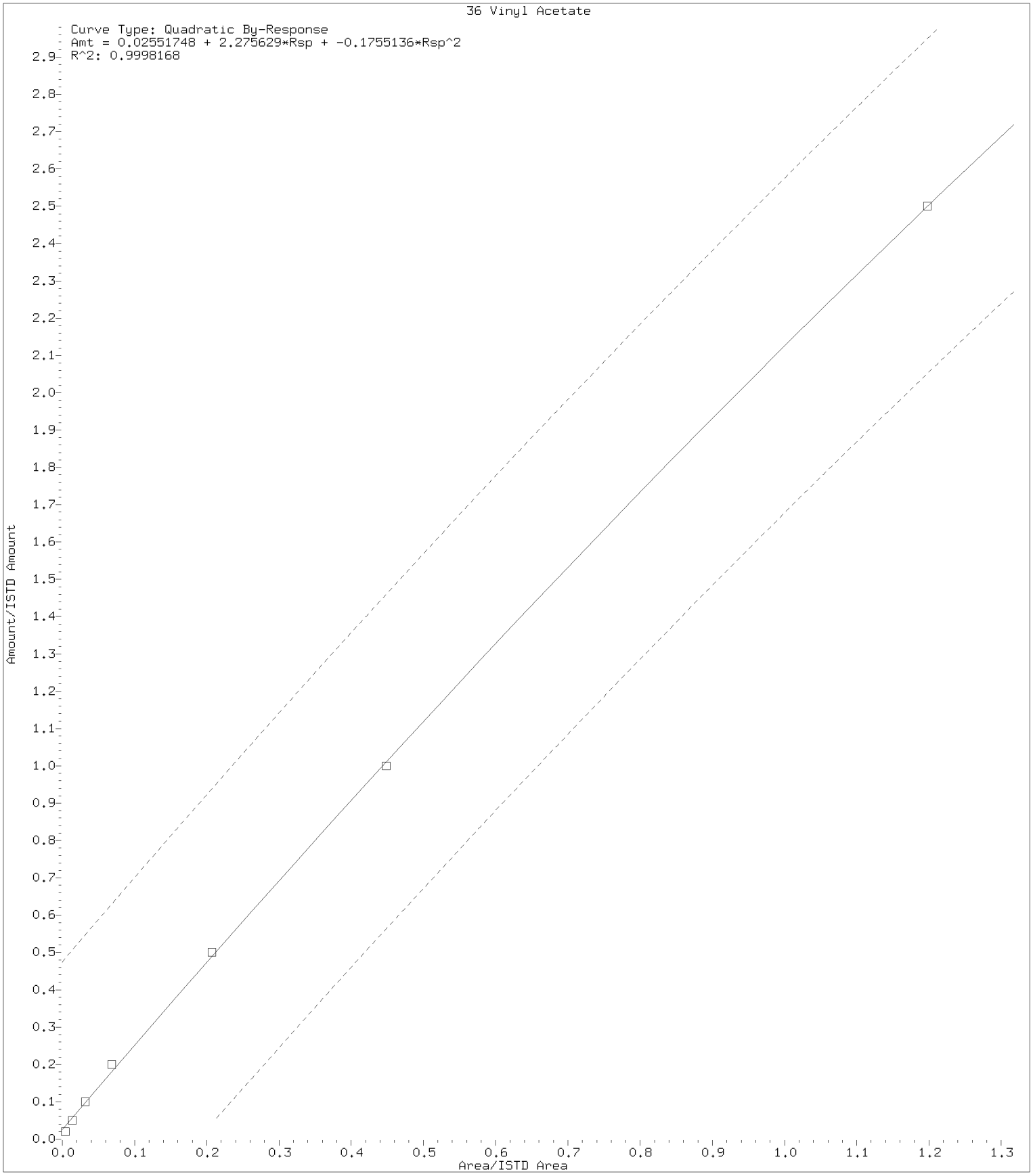
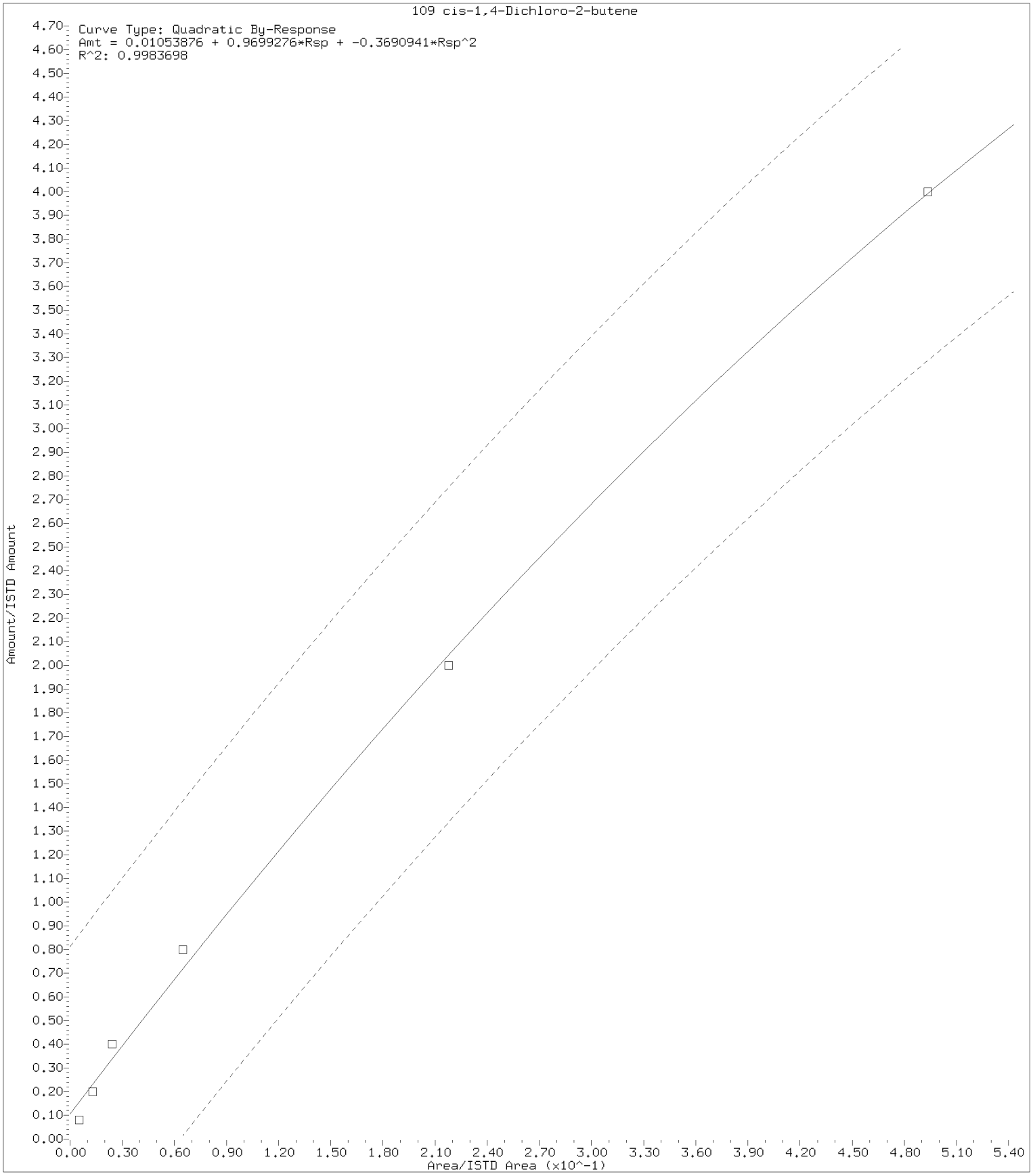


Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:18.
Target 3.5 esignature user ID: jkh09052



Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:18.
Target 3.5 esignature user ID: jkh09052

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19930.i/18apr12i.b/ia12i11.d	VSTD025
/chem2/HP19930.i/18apr12i.b/ia12i12.d	VSTD010
/chem2/HP19930.i/18apr12i.b/ia12i13.d	VSTD005
/chem2/HP19930.i/18apr12i.b/ia12i14.d	VSTD002
/chem2/HP19930.i/18apr12i.b/ia12i15.d	VSTD001
/chem2/HP19930.i/18apr12i.b/ia12i16.d	VSTD0.5
/chem2/HP19930.i/18apr12i.b/ia12i17.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	ia12i11.d	ia12i12.d	ia12i13.d	ia12i14.d	ia12i15.d	ia12i16.d	ia12i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	165803	200457	163048	172002	157015	159290	142827	165777	11	Yes
Fluorobenzene	2103815	2121433	2098955	2193233	2017792	2076704	1999757	2087384	3	Yes
1,4-Dichlorobenzene-d4	855294	865686	838215	889787	793592	827651	797500	838246	4	Yes
Chlorobenzene-d5	1626512	1632292	1578633	1678754	1509154	1572136	1519463	1588135	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ia12i11.d	ia12i12.d	ia12i13.d	ia12i14.d	ia12i15.d	ia12i16.d	ia12i17.d	Avg. RT
t-Butyl Alcohol-d10	4.135	4.117	4.123	4.123	4.129	4.129	4.129	4.126
Fluorobenzene	7.665	7.665	7.665	7.659	7.665	7.665	7.665	7.664
1,4-Dichlorobenzene-d4	13.036	13.036	13.036	13.036	13.036	13.036	13.036	13.036
Chlorobenzene-d5	11.158	11.152	11.152	11.152	11.158	11.158	11.158	11.156

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/12/2018 at 14:15.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 ICV Date: 04/12/18 Time: 13:16

Lab File ID: ia12v11.d Init. Calib. Date(s): 04/12/18 04/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
1-Chlorobutane	0.5730	0.5436	4.74	5	-5	
2-Chloroethyl vinyl ether	0.1172	0.1342	5.72	5	14	
Chloroacetonitrile	0.0081	0.0075	232.87	250	-7	
Cyclohexanone	0.3350	0.3678	137.25	125	10	
Hexachloroethane	0.4318	0.4851	5.62	5	12	
Methyl Acrylate	0.1514	0.1752	28.92	25	16	
Vinyl Acetate	0.3569	0.4580	12.71	12.5	2	
cis-1,4-Dichloro-2-butene	0.8396	1.7880	18.52	12.5	48	<-
Dimethyl ether	0.3847	0.3859	5.02	5	0	
			Average %Drift		13	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

page 1 of 1 FORM VII VOA

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 04/16/18 04/16/18

Heated Purge: (Y/N) Y Calibration Times: 10:41 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5a16i09.d RRF 4 = 5a16i06.d RRF 10= 5a16i08.d
RRF 20= 5a16i04.d RRF 50= 5a16i03.d RRF100= 5a16i02.d RRF300= 5a16i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD	
Dichlorodifluoromethane	#0.2446	0.3054	0.2991	0.3448	0.3111	0.3595	0.3714	0.3194	14	AVG	#
Chloromethane	#0.2522	0.2588	0.2270	0.2528	0.2299	0.2756	0.2602	0.2509	7	AVG	#
1,3-Butadiene	0.2595	0.2364	0.1864	0.2093	0.1742	0.1947	0.1808	0.2059	15	AVG	
Vinyl Chloride	#0.2377	0.2595	0.2298	0.2644	0.2323	0.2670	0.2597	0.2501	6	AVG	#
Bromomethane	#0.1852	0.2158	0.1900	0.2158	0.1870	0.2186	0.2037	0.2023	7	AVG	#
Chloroethane	#0.1177	0.1411	0.1261	0.1397	0.1240	0.1406	0.1276	0.1309	7	AVG	#
Dichlorofluoromethane	0.3881	0.4257	0.3596	0.3975	0.3789	0.4150	0.3820	0.3924	6	AVG	
n-Pentane	0.2224	0.2522	0.2298	0.2647	0.2422	0.2807	0.2637	0.2508	8	AVG	
Trichlorofluoromethane	#0.2548	0.3632	0.3183	0.3649	0.3238	0.3722	0.3778	0.3393	13	AVG	#
Ethyl ether	0.2103	0.2157	0.2110	0.2292	0.2071	0.2318	0.2124	0.2168	4	AVG	
Freon 123a	0.2330	0.2636	0.2686	0.2937	0.2690	0.2974	0.2882	0.2733	8	AVG	
Acrolein	2.1771	2.0634	2.1947	2.0769	1.7836	1.8403	1.8389	1.9964	9	AVG	
1,1-Dichloroethene	#0.1726	0.1956	0.1999	0.2348	0.2095	0.2377	0.2374	0.2125	12	AVG	#
1,1-Dichloroethene(2)	#0.0904	0.0955	0.0938	0.1120	0.0982	0.1136	0.1103	0.1020	10	AVG	#
Acetone	#0.7688	0.8083	0.8411	0.9038	0.7371	0.8528	0.8110	0.8176	7	AVG	#
Freon 113	#0.1739	0.2155	0.2225	0.2437	0.2258	0.2666	0.2671	0.2307	14	AVG	#
2-Propanol	0.5096	0.5442	0.4808	0.5649	0.4877	0.6069	0.5328	0.5324	8	AVG	
Methyl Iodide	0.3943	0.4539	0.4572	0.5065	0.4552	0.5228	0.5089	0.4712	9	AVG	
Carbon Disulfide	#0.4972	0.5634	0.5550	0.6990	0.6443	0.7446	0.7322	0.6337	15	AVG	#
Allyl Chloride	0.3439	0.3758	0.3379	0.3854	0.3536	0.3871	0.3807	0.3663	6	AVG	
Methyl Acetate	#0.3346	0.3375	0.2930	0.3306	0.2876	0.3436	0.3001	0.3181	7	AVG	#
Methylene Chloride	#0.2372	0.2536	0.2596	0.2837	0.2536	0.2876	0.2756	0.2644	7	AVG	#
t-Butyl alcohol	1.0761	1.0904	1.0865	1.1906	1.0676	1.2960	1.1733	1.1401	7	AVG	
Acrylonitrile	0.1360	0.1579	0.1479	0.1724	0.1425	0.1836	0.1573	0.1568	11	AVG	
trans-1,2-Dichloroethene	#0.2260	0.2374	0.2407	0.2744	0.2486	0.2763	0.2784	0.2546	8	AVG	#
Methyl Tertiary Butyl Ether	#0.6835	0.7318	0.7189	0.7998	0.7138	0.8157	0.7650	0.7469	6	AVG	#
n-Hexane	0.2551	0.3262	0.3195	0.3730	0.3199	0.4132	0.4098	0.3452	16	AVG	
1,1-Dichloroethane	#0.3991	0.4268	0.4312	0.4822	0.4335	0.4835	0.4763	0.4475	7	AVG	#
di-Isopropyl ether	0.7283	0.7932	0.8213	0.8753	0.7901	0.8823	0.8236	0.8163	6	AVG	
2-Chloro-1,3-butadiene	0.2568	0.3179	0.3306	0.3826	0.3546	0.3924	0.3880	0.3461	14	AVG	
Ethyl t-butyl ether	0.6419	0.7306	0.7414	0.8010	0.7213	0.8244	0.7793	0.7485	8	AVG	
cis-1,2-Dichloroethene	#0.2612	0.2831	0.2835	0.3116	0.2865	0.3229	0.3184	0.2953	8	AVG	#
2-Butanone	#0.1958	0.2225	0.2046	0.2383	0.1936	0.2539	0.2094	0.2169	10	AVG	#
2,2-Dichloropropane	0.2087	0.2408	0.2466	0.2932	0.2696	0.2936	0.2708	0.2605	12	AVG	
Propionitrile	1.3338	1.2990	1.3289	1.3584	1.2048	1.3243	1.3192	1.3098	4	AVG	
Methacrylonitrile	0.1646	0.1712	0.1639	0.1841	0.1633	0.1918	0.1729	0.1731	6	AVG	
Bromochloromethane	0.1348	0.1592	0.1465	0.1604	0.1468	0.1669	0.1647	0.1542	8	AVG	
Tetrahydrofuran	1.4029	1.3895	1.5917	1.4629	1.2697	1.3648	1.4842	1.4237	7	AVG	
Chloroform	#0.4074	0.4490	0.4494	0.4986	0.4464	0.5082	0.4974	0.4652	8	AVG	#
1,1,1-Trichloroethane	#0.3798	0.4377	0.4015	0.4617	0.4008	0.4503	0.4571	0.4270	8	AVG	#
Cyclohexane	#0.3046	0.3851	0.3770	0.4309	0.3897	0.4708	0.4629	0.4030	14	AVG	#
Cyclohexane(2)	#0.2555	0.3234	0.3211	0.3607	0.3272	0.3994	0.3962	0.3405	15	AVG	#
Cyclohexane(3)	#0.0865	0.1148	0.1152	0.1329	0.1220	0.1490	0.1467	0.1239	17	AVG	#
1,1-Dichloropropene	0.2932	0.3279	0.3267	0.3776	0.3452	0.3834	0.3825	0.3481	10	AVG	
Carbon Tetrachloride	#0.2345	0.2893	0.2952	0.3525	0.3308	0.3813	0.3988	0.3261	18	AVG	#
Isobutyl Alcohol	0.3609	0.3460	0.3468	0.3823	0.3281	0.4015	0.3562	0.3603	7	AVG	
Benzene	#1.0104	1.0797	1.0645	1.1853	1.0653	1.1846	1.1546	1.1063	6	AVG	#
1,2-Dichloroethane	#0.3590	0.3432	0.3223	0.3580	0.3199	0.3630	0.3411	0.3438	5	AVG	#
1,2-Dichloroethane(2)	#0.0201	0.0312	0.0295	0.0342	0.0308	0.0358	0.0342	0.0308	17	AVG	#<-
t-Amyl ethyl ether	0.2980	0.3808	0.3850	0.4243	0.3879	0.4402	0.4327	0.3927	12	AVG	
t-Amyl methyl ether	0.6519	0.7202	0.7282	0.8031	0.7236	0.8276	0.7913	0.7494	8	AVG	
n-Heptane	0.2535	0.3416	0.3216	0.3812	0.3258	0.4450	0.4263	0.3564	19	AVG	

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 04/16/18 04/16/18

Heated Purge: (Y/N) Y Calibration Times: 10:41 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 1 = 5a16i09.d RRF 4 = 5a16i06.d RRF 10= 5a16i08.d
RRF 20= 5a16i04.d RRF 50= 5a16i03.d RRF100= 5a16i02.d RRF300= 5a16i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
n-Butanol	0.2387	0.2601	0.2652	0.3044	0.2639	0.3440	0.2980	0.2820	13	AVG
Trichloroethene	#0.2566	0.2711	0.2756	0.3122	0.2817	0.3167	0.3150	0.2898	8	AVG #
Methylcyclohexane	#0.3640	0.4629	0.3954	0.4730	0.4483	0.4950	0.5207	0.4513	12	AVG #
Methylcyclohexane(2)	#0.1633	0.1974	0.1710	0.2052	0.1969	0.2214	0.2311	0.1981	12	AVG #
1,2-Dichloropropane	#0.2465	0.2701	0.2684	0.3012	0.2721	0.3044	0.2900	0.2790	7	AVG #
Dibromomethane	0.1748	0.1738	0.1748	0.1882	0.1727	0.1988	0.1934	0.1823	6	AVG
1,4-Dioxane		0.0735	0.0825	0.0764	0.0716	0.0800	0.0815	0.0776	6	AVG
Methyl Methacrylate	0.2036	0.2365	0.2435	0.2728	0.2509	0.2988	0.2783	0.2549	12	AVG
Bromodichloromethane	#0.2382	0.2799	0.3008	0.3572	0.3375	0.3942	0.3942	0.3288	18	AVG #
2-Nitropropane	0.0722	0.0845	0.0845	0.1069	0.0924	0.1242	0.1078	0.0961	19	AVG
2-Chloroethyl Vinyl Ether	0.1800	0.1997	0.2006	0.2271	0.2055	0.2450	0.2361	0.2134	11	AVG
cis-1,3-Dichloropropene	#0.3111	0.3825	0.4120	0.4732	0.4434	0.5105	0.4986	0.4331	16	AVG #
4-Methyl-2-pentanone	#0.3952	0.4303	0.4435	0.4806	0.4092	0.5108	0.4500	0.4456	9	AVG #
Toluene	#0.8533	0.8689	0.9147	0.9971	0.8895	1.0026	0.9876	0.9305	7	AVG #
trans-1,3-Dichloropropene	#0.3322	0.4176	0.4607	0.5364	0.5056	0.5928	0.5776	0.4890	19	AVG #
Ethyl Methacrylate	0.3915	0.4818	0.5246	0.5979	0.5494	0.6490	0.6146	0.5441	16	AVG
1,1,2-Trichloroethane	#0.3075	0.3280	0.3480	0.3683	0.3363	0.3805	0.3714	0.3486	8	AVG #
Tetrachloroethene	#0.4088	0.4125	0.4088	0.4536	0.4074	0.4809	0.4995	0.4388	9	AVG #
1,3-Dichloropropane	0.5006	0.5373	0.5548	0.5917	0.5277	0.6028	0.5750	0.5557	7	AVG
2-Hexanone	#0.4204	0.4578	0.4712	0.5079	0.4293	0.5292	0.4564	0.4675	8	AVG #
Dibromochloromethane	#0.2271	0.2788	0.3171	0.3812	0.3738	0.4494		0.3379	24	2NDDEG #
1,2-Dibromoethane	#0.3121	0.3464	0.3732	0.4072	0.3702	0.4298	0.4166	0.3794	11	AVG #
1-Chlorohexane	0.4497	0.4841	0.4648	0.5179	0.4573	0.5804	0.5652	0.5028	11	AVG
Chlorobenzene	#0.9965	1.0241	1.0577	1.1557	1.0452	1.2081	1.1771	1.0949	8	AVG #
1,1,1,2-Tetrachloroethane	0.2604	0.3119	0.3436	0.3843	0.3605	0.4276	0.4348	0.3604	17	AVG
Ethylbenzene	#1.5175	1.7114	1.7349	1.8817	1.6961	1.9736	1.8728	1.7697	9	AVG #
m+p-Xylene	#0.5843	0.6867	0.6820	0.7573	0.6803	0.7980	0.7776	0.7095	10	AVG #
o-Xylene	#0.5777	0.6530	0.6783	0.7422	0.6761	0.7976	0.7836	0.7012	11	AVG #
Styrene	#0.8397	0.9837	1.0851	1.2325	1.1303	1.3361	1.2799	1.1268	16	AVG #
Bromoform	#0.1195	0.1686	0.1973	0.2635	0.2698	0.3546		0.2289	37	2NDDEG #
Isopropylbenzene	#1.4126	1.6629	1.6717	1.8293	1.6145	1.9992	1.8797	1.7243	11	AVG #
Cyclohexanone	0.3791	0.3630	0.3873	0.3820	0.3957	0.4248	0.4101	0.3917	5	AVG
Bromobenzene	0.7800	0.8287	0.8617	0.9109	0.8359	0.9788	1.0703	0.8952	11	AVG
1,1,2,2-Tetrachloroethane	#0.8909	1.0056	1.0100	1.0878	0.9872	1.1749	1.1014	1.0368	9	AVG #
1,2,3-Trichloropropane	0.3011	0.2979	0.3014	0.3158	0.2844	0.3368	0.3241	0.3088	6	AVG
trans-1,4-Dichloro-2-butene	0.2037	0.2585	0.2606	0.2889	0.2629	0.3154	0.2754	0.2665	13	AVG
n-Propylbenzene	3.1778	3.7319	3.6206	3.8809	3.3835	4.0802	3.7567	3.6616	8	AVG
2-Chlorotoluene	0.6927	0.8047	0.7719	0.8211	0.7401	0.8632	0.9077	0.8002	9	AVG
4-Chlorotoluene	0.7191	0.8275	0.8213	0.8669	0.7825	0.9108	0.9502	0.8398	9	AVG
1,3,5-Trimethylbenzene	2.2357	2.5835	2.5766	2.7411	2.4348	3.0132	2.9529	2.6482	10	AVG
tert-Butylbenzene	0.5005	0.5891	0.5793	0.6090	0.5417	0.6860	0.7138	0.6028	13	AVG
Pentachloroethane		0.4276	0.4444	0.5057	0.4956	0.5867	0.6527	0.5188	17	AVG
1,2,4-Trimethylbenzene	2.1557	2.6398	2.6567	2.8314	2.5331	3.1588	3.0513	2.7181	12	AVG
sec-Butylbenzene	2.6668	3.2496	3.1767	3.4004	2.9756	3.8953	3.6165	3.2830	12	AVG
1,3-Dichlorobenzene	#1.4942	1.6490	1.6120	1.6957	1.5383	1.9059	1.9389	1.6906	10	AVG #
p-Isopropyltoluene	2.2059	2.7630	2.8033	3.0087	2.6462	3.4719	3.3178	2.8881	15	AVG
1,4-Dichlorobenzene	#1.4145	1.6234	1.6273	1.7161	1.5825	1.9418	1.9343	1.6914	11	AVG #
1,2,3-Trimethylbenzene	2.6085	2.8547	2.6687	2.8873	2.6915	3.1134	3.0162	2.8343	7	AVG
Benzyl Chloride	0.9638	1.3789	1.5274	1.9099	1.8717	2.3909	2.2273	1.7528	28	2NDDEG
1,3-Diethylbenzene	1.4924	1.7757	1.6597	1.8529	1.7415	2.0192	2.0656	1.8010	11	AVG
1,4-Diethylbenzene	1.5517	1.8384	1.6960	1.9044	1.7904	2.1426	2.1824	1.8723	12	AVG
1,2-Dichlorobenzene	#1.3838	1.5153	1.4995	1.5776	1.4379	1.7844	1.7576	1.5652	10	AVG #

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date(s): 04/16/18 04/16/18

Heated Purge: (Y/N) Y Calibration Times: 10:41 14:44

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

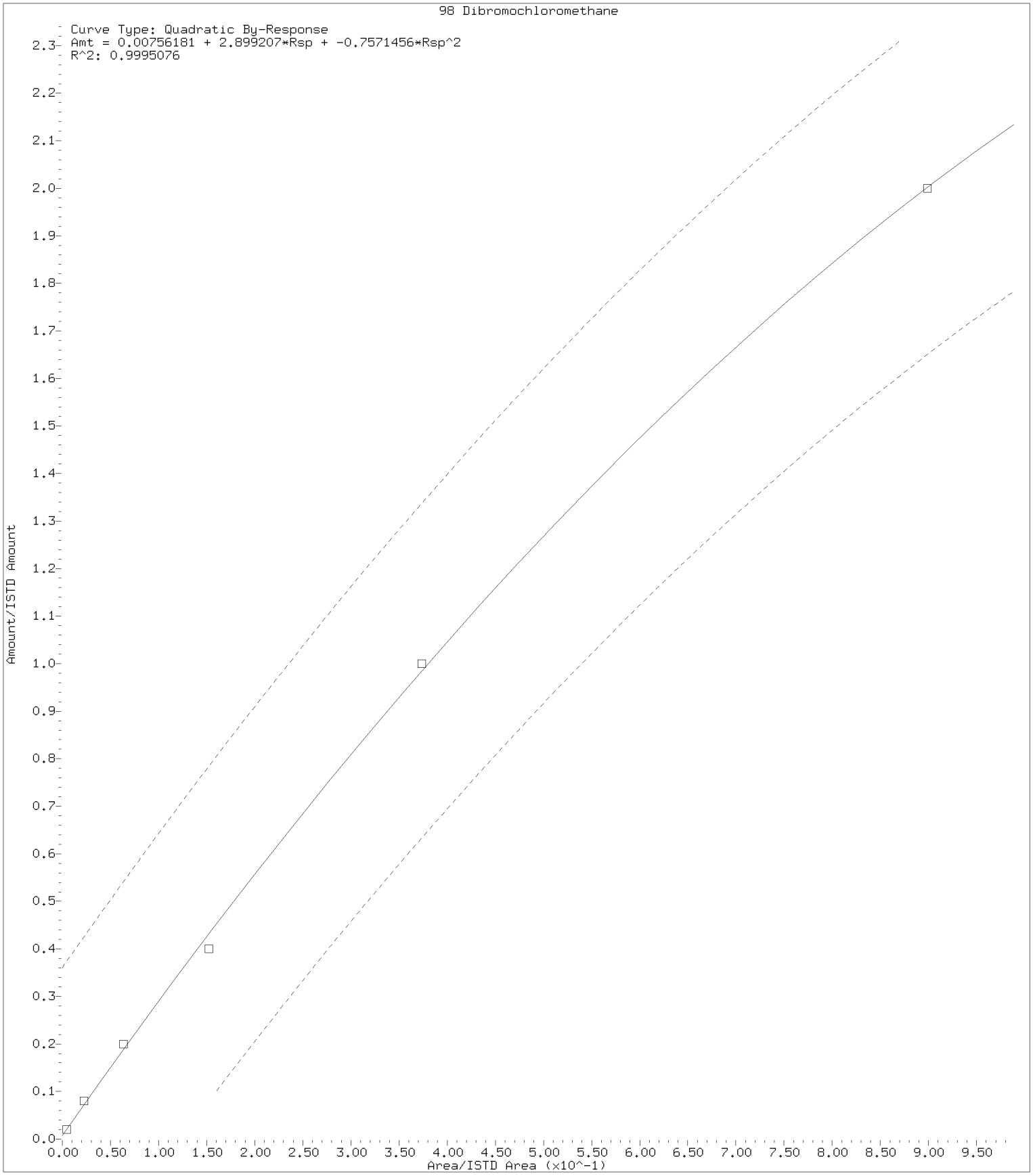
LAB FILE ID: RRF 1 = 5a16i09.d RRF 4 = 5a16i06.d RRF 10= 5a16i08.d
RRF 20= 5a16i04.d RRF 50= 5a16i03.d RRF100= 5a16i02.d RRF300= 5a16i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	% RSD	CAL. METHOD
n-Butylbenzene	1.1624	1.4516	1.3664	1.4749	1.2947	1.7529	1.6648	1.4525	14	AVG
1,2-Diethylbenzene	1.3530	1.5284	1.3824	1.5017	1.4198	1.6478	1.6993	1.5046	9	AVG
1,2-Dibromo-3-chloropropane#	0.1501	0.1785	0.1974	0.2224	0.2123	0.2784	0.2412	0.2115	20	AVG #
1,3,5-Trichlorobenzene	0.9577	1.1034	1.1021	1.1519	1.0330	1.3939	1.4521	1.1706	16	AVG
1,2,4-Trichlorobenzene #	0.8895	0.9947	0.9648	1.0161	0.9377	1.2603	1.3100	1.0533	16	AVG #
Hexachlorobutadiene	0.4011	0.4751	0.4130	0.4690	0.4205	0.6035		0.4637	16	AVG
Naphthalene	2.5396	3.1090	3.0310	3.3007	3.0834	3.8866	3.4471	3.1996	13	AVG
1,2,3-Trichlorobenzene	0.8210	0.9106	0.8508	0.9256	0.8408	1.1291	1.1391	0.9453	14	AVG
2-Methylnaphthalene		1.5588	1.4072	1.8092	1.7387	2.1376	2.1613	1.8021	17	AVG
Dibromofluoromethane	0.2575	0.2556	0.2488	0.2592	0.2590	0.2596	0.2634	0.2576	2	AVG
Dibromofluoromethane(2)	0.2560	0.2589	0.2549	0.2620	0.2644	0.2645	0.2659	0.2609	2	AVG
1,2-Dichloroethane-d4	0.0565	0.0593	0.0564	0.0590	0.0577	0.0584	0.0560	0.0576	2	AVG
1,2-Dichloroethane-d4(2)	0.2635	0.2616	0.2469	0.2586	0.2564	0.2596	0.2519	0.2569	2	AVG
1,2-Dichloroethane-d4(3)	0.0370	0.0365	0.0354	0.0371	0.0366	0.0370	0.0365	0.0366	2	AVG
Toluene-d8	1.2673	1.2438	1.2835	1.2637	1.2538	1.2336	1.2274	1.2533	2	AVG
Toluene-d8(2)	0.8210	0.8067	0.8295	0.8211	0.8218	0.8106	0.8298	0.8201	1	AVG
4-Bromofluorobenzene	0.4727	0.4745	0.4823	0.4834	0.4873	0.4884	0.4700	0.4798	2	AVG
4-Bromofluorobenzene(2)	0.4370	0.4309	0.4417	0.4447	0.4391	0.4386	0.4254	0.4368	2	AVG

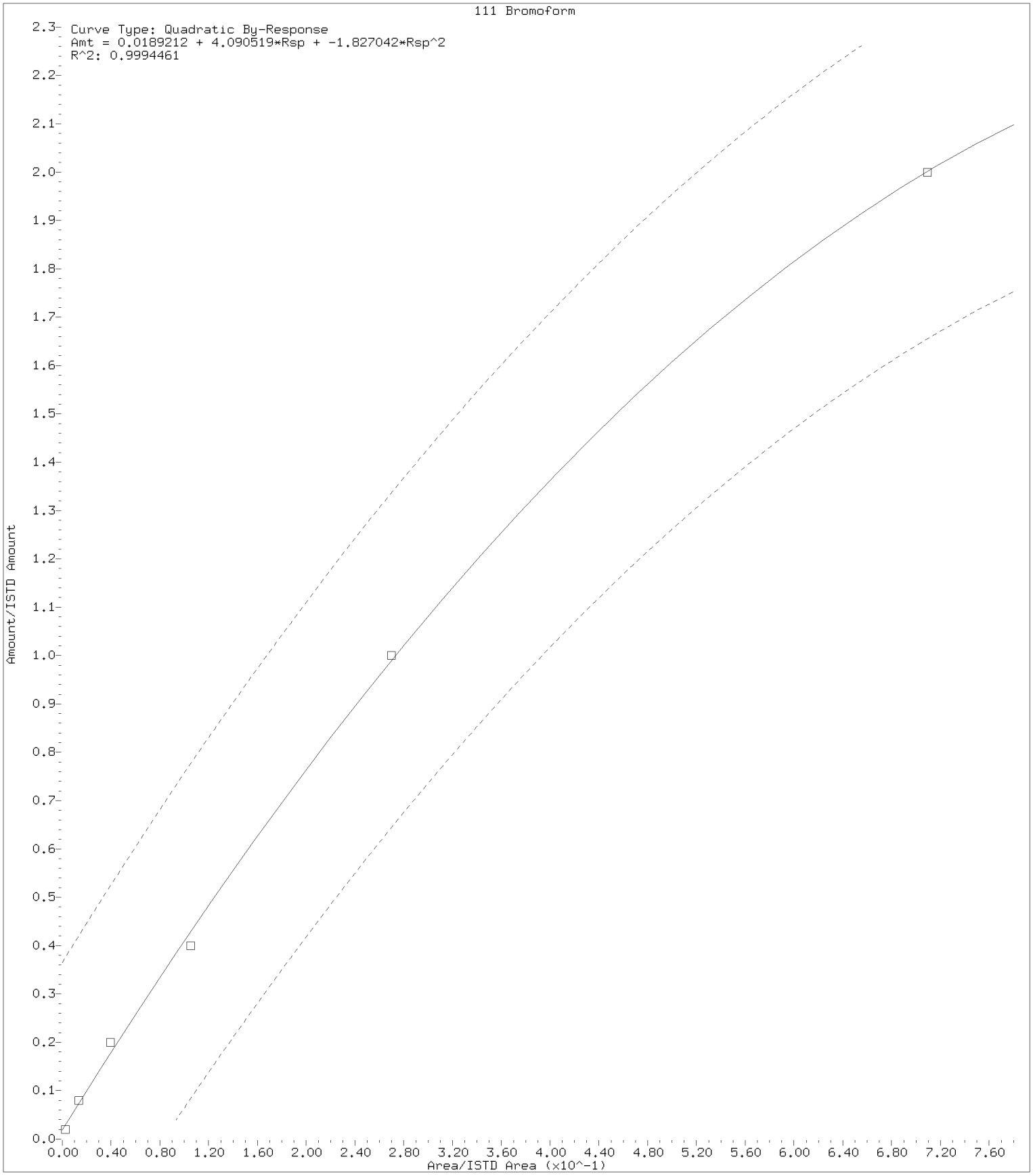
Average %RSD 10

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

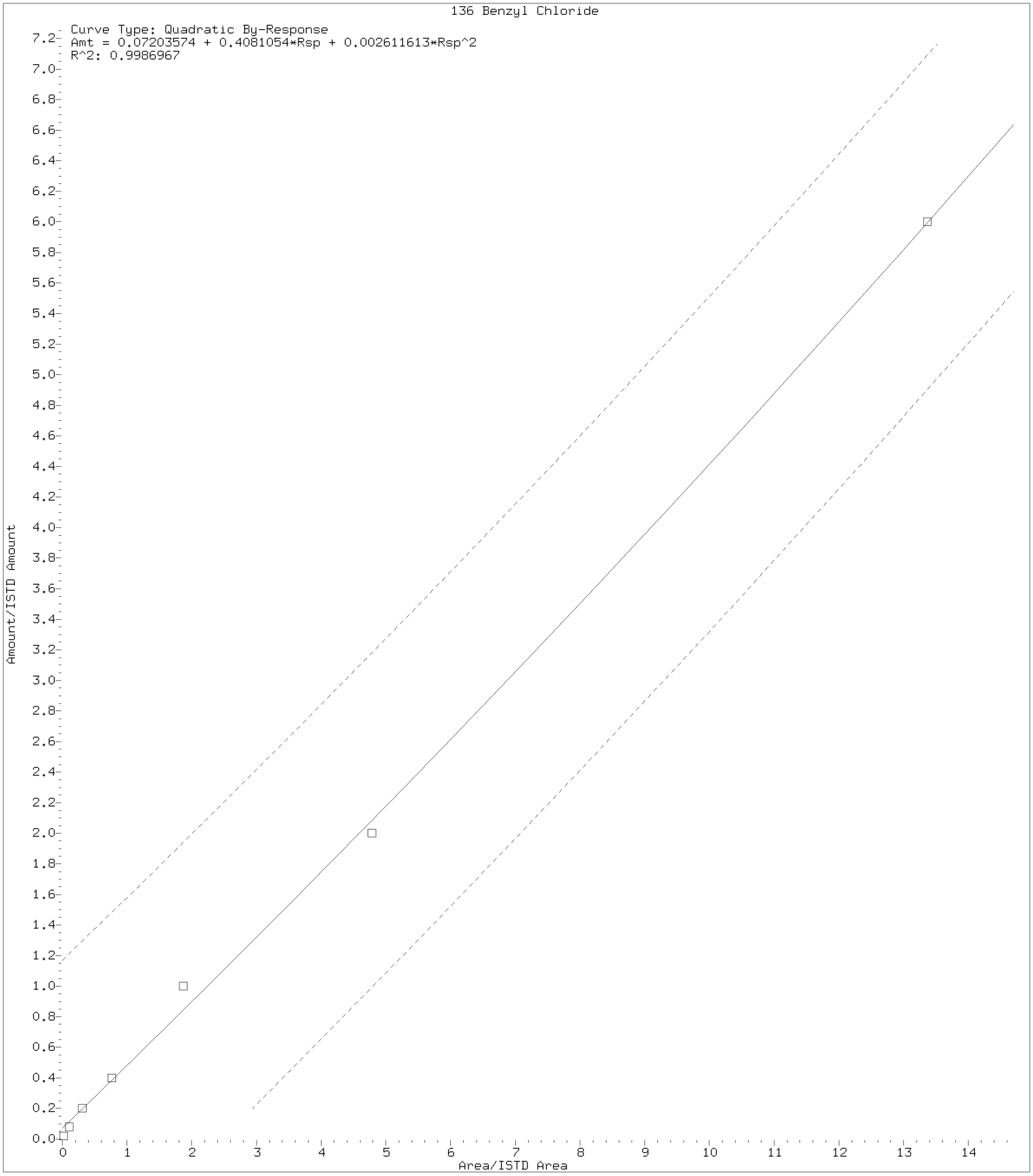
FORM VI VOA



Digitally signed by Kevin Kelly on 04/16/2018 at 16:06.
Target 3.5 esignature user ID: kk10002



Digitally signed by Kevin Kelly on 04/16/2018 at 16:06.
Target 3.5 esignature user ID: kk10002



Digitally signed by Kevin Kelly on 04/16/2018 at 16:06.
Target 3.5 esignature user ID: kk10002

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP26285.i/18apr16i.b/5a16i01.d	VSTD300
/chem2/HP26285.i/18apr16i.b/5a16i02.d	VSTD100
/chem2/HP26285.i/18apr16i.b/5a16i03.d	VSTD050
/chem2/HP26285.i/18apr16i.b/5a16i04.d	VSTD020
/chem2/HP26285.i/18apr16i.b/5a16i06.d	VSTD004
/chem2/HP26285.i/18apr16i.b/5a16i08.d	VSTD010
/chem2/HP26285.i/18apr16i.b/5a16i09.d	VSTD001

Area Summary

File ID:

Internal Standard Name	5a16i01.d	5a16i02.d	5a16i03.d	5a16i04.d	5a16i06.d	5a16i08.d	5a16i09.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	275770	340907	288622	299832	286697	231409	249571	281830	13	Yes
Fluorobenzene	1286695	1279710	1300793	1303303	1286804	1246382	1228576	1276038	2	Yes
Chlorobenzene-d5	1010797	998212	1012481	1010699	1011375	951225	949896	992098	3	Yes
1,4-Dichlorobenzene-d4	548553	577309	565770	565345	542360	525093	513340	548253	4	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	5a16i01.d	5a16i02.d	5a16i03.d	5a16i04.d	5a16i06.d	5a16i08.d	5a16i09.d	Avg. RT
t-Butyl alcohol-d10	3.563	3.563	3.569	3.569	3.563	3.563	3.563	3.565
Fluorobenzene	7.056	7.056	7.063	7.062	7.062	7.056	7.050	7.058
Chlorobenzene-d5	10.800	10.800	10.800	10.799	10.800	10.793	10.793	10.798
1,4-Dichlorobenzene-d4	12.799	12.799	12.799	12.799	12.799	12.793	12.793	12.797

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 04/16/2018 at 18:07.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 04/16/18 Time: 13:55

Lab File ID: 5a16v01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3194	0.3453	21.62	20	8	#
# Chloromethane	0.2509	0.2615	20.84	20	4	#
1,3-Butadiene	0.2059	0.2167	21.05	20	5	
# Vinyl Chloride	0.2501	0.2644	21.15	20	6	#
# Bromomethane	0.2023	0.2023	20.00	20	0	#
# Chloroethane	0.1309	0.1292	19.73	20	-1	#
Dichlorofluoromethane	0.3924	0.3572	18.20	20	-9	
n-Pentane	0.2508	0.2709	21.60	20	8	
# Trichlorofluoromethane	0.3393	0.3629	21.39	20	7	#
Ethyl ether	0.2168	0.2210	20.39	20	2	
Freon 123a	0.2733	0.3031	22.18	20	11	
Acrolein	1.9964	1.9511	146.60	150	-2	
# 1,1-Dichloroethene	0.2125	0.2565	24.14	20	21	#
# Acetone	0.8176	1.0354	189.96	150	27	#
# Freon 113	0.2307	0.2636	22.85	20	14	#
2-Propanol	0.5324	0.5529	155.77	150	4	
Methyl Iodide	0.4712	0.5007	21.25	20	6	
# Carbon Disulfide	0.6337	0.6459	20.38	20	2	#
Allyl Chloride	0.3663	0.4079	22.27	20	11	
# Methyl Acetate	0.3181	0.3350	21.06	20	5	#
# Methylene Chloride	0.2644	0.2906	21.98	20	10	#
t-Butyl alcohol	1.1401	1.1479	201.37	200	1	
Acrylonitrile	0.1568	0.1662	106.02	100	6	
# trans-1,2-Dichloroethene	0.2546	0.2879	22.62	20	13	#
# Methyl Tertiary Butyl Ether	0.7469	0.7719	20.67	20	3	#
n-Hexane	0.3452	0.3963	22.96	20	15	
# 1,1-Dichloroethane	0.4475	0.4863	21.73	20	9	#
di-Isopropyl ether	0.8163	0.8885	21.77	20	9	
2-Chloro-1,3-butadiene	0.3461	0.3951	22.83	20	14	
Ethyl t-butyl ether	0.7485	0.7825	20.91	20	5	
# cis-1,2-Dichloroethene	0.2953	0.3288	22.27	20	11	#
# 2-Butanone	0.2169	0.2495	172.55	150	15	#
2,2-Dichloropropane	0.2605	0.2893	22.21	20	11	
Propionitrile	1.3098	1.3680	156.67	150	4	
Methacrylonitrile	0.1731	0.1832	158.74	150	6	
Bromochloromethane	0.1542	0.1615	20.95	20	5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 04/16/18 Time: 13:55

Lab File ID: 5a16v01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.4237	1.4304	100.47	100	0	
#	Chloroform	0.4652	0.4978	21.40	20	7	#
#	1,1,1-Trichloroethane	0.4270	0.4627	21.67	20	8	#
#	Cyclohexane	0.4030	0.4709	23.37	20	17	#
	1,1-Dichloropropene	0.3481	0.3781	21.73	20	9	
#	Carbon Tetrachloride	0.3261	0.3609	22.14	20	11	#
	Isobutyl Alcohol	0.3603	0.3549	492.57	500	-1	
#	Benzene	1.1063	1.1869	21.46	20	7	#
#	1,2-Dichloroethane	0.3438	0.3523	20.49	20	2	#
	t-Amyl ethyl ether	0.3927	0.4225	21.52	20	8	
	t-Amyl methyl ether	0.7494	0.7848	20.95	20	5	
	n-Heptane	0.3564	0.4286	24.05	20	20	
	n-Butanol	0.2820	0.2730	968.10	1000	-3	
#	Trichloroethene	0.2898	0.3142	21.68	20	8	#
#	Methylcyclohexane	0.4513	0.5130	22.73	20	14	#
#	1,2-Dichloropropane	0.2790	0.3067	21.99	20	10	#
	Dibromomethane	0.1823	0.1923	21.10	20	5	
	1,4-Dioxane	0.0776	0.0684	440.58	500	-12	
	Methyl Methacrylate	0.2549	0.2722	21.35	20	7	
#	Bromodichloromethane	0.3288	0.3415	20.77	20	4	#
	2-Nitropropane	0.0961	0.0955	19.89	20	-1	
	2-Chloroethyl Vinyl Ether	0.2134	0.2166	20.30	20	1	
#	cis-1,3-Dichloropropene	0.4331	0.4580	21.15	20	6	#
#	4-Methyl-2-pentanone	0.4456	0.4681	105.05	100	5	#
#	Toluene	0.9305	1.0083	21.67	20	8	#
#	trans-1,3-Dichloropropene	0.4890	0.5067	20.72	20	4	#
	Ethyl Methacrylate	0.5441	0.5874	21.59	20	8	
#	1,1,2-Trichloroethane	0.3486	0.3817	21.90	20	10	#
#	Tetrachloroethene	0.4388	0.4765	21.72	20	9	#
	1,3-Dichloropropane	0.5557	0.5842	21.02	20	5	
#	2-Hexanone	0.4675	0.4978	106.49	100	6	#
#	Dibromochloromethane	0.3379	0.3704	21.03	20	5	#
#	1,2-Dibromoethane	0.3794	0.4043	21.32	20	7	#
	1-Chlorohexane	0.5028	0.5683	22.61	20	13	
#	Chlorobenzene	1.0949	1.1610	21.21	20	6	#
	1,1,1,2-Tetrachloroethane	0.3604	0.3874	21.50	20	7	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 04/16/18 Time: 13:55

Lab File ID: 5a16v01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Ethylbenzene	1.7697	1.9503	22.04	20	10	#
# m+p-Xylene	0.7095	0.7819	44.08	40	10	#
# o-Xylene	0.7012	0.7510	21.42	20	7	#
# Styrene	1.1268	1.2454	22.11	20	11	#
# Bromoform	0.2289	0.2412	19.83	20	-1	#
# Isopropylbenzene	1.7243	1.9497	22.61	20	13	#
Cyclohexanone	0.3917	0.3271	417.57	500	-16	
Bromobenzene	0.8952	0.9205	20.57	20	3	
# 1,1,2,2-Tetrachloroethane	1.0368	1.0726	20.69	20	3	#
1,2,3-Trichloropropane	0.3088	0.3242	21.00	20	5	
trans-1,4-Dichloro-2-butene	0.2665	0.3075	115.40	100	15	
n-Propylbenzene	3.6616	4.1283	22.55	20	13	
2-Chlorotoluene	0.8002	0.8516	21.29	20	6	
4-Chlorotoluene	0.8398	0.8890	21.17	20	6	
1,3,5-Trimethylbenzene	2.6482	2.8926	21.85	20	9	
tert-Butylbenzene	0.6028	0.6585	21.85	20	9	
Pentachloroethane	0.5188	0.5149	19.85	20	-1	
1,2,4-Trimethylbenzene	2.7181	2.9796	21.92	20	10	
sec-Butylbenzene	3.2830	3.7573	22.89	20	14	
# 1,3-Dichlorobenzene	1.6906	1.7365	20.54	20	3	#
p-Isopropyltoluene	2.8881	3.2922	22.80	20	14	
# 1,4-Dichlorobenzene	1.6914	1.7637	20.85	20	4	#
1,2,3-Trimethylbenzene	2.8343	3.0493	21.52	20	8	
Benzyl Chloride	1.7528	1.8610	18.86	20	-6	
1,3-Diethylbenzene	1.8010	1.9249	21.38	20	7	
1,4-Diethylbenzene	1.8723	2.0100	21.47	20	7	
# 1,2-Dichlorobenzene	1.5652	1.6184	20.68	20	3	#
n-Butylbenzene	1.4525	1.6097	22.16	20	11	
1,2-Diethylbenzene	1.5046	1.6004	21.27	20	6	
# 1,2-Dibromo-3-chloropropane	0.2115	0.2159	20.42	20	2	#
1,3,5-Trichlorobenzene	1.1706	1.2342	21.09	20	5	
# 1,2,4-Trichlorobenzene	1.0533	1.0638	20.20	20	1	#
Hexachlorobutadiene	0.4637	0.5233	22.57	20	13	
Naphthalene	3.1996	3.2584	20.37	20	2	
1,2,3-Trichlorobenzene	0.9453	0.9592	20.29	20	1	
2-Methylnaphthalene	1.8021	1.6386	18.19	20	-9	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 ICV Date: 04/16/18 Time: 13:55

Lab File ID: 5a16v01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
				Average %Drift	8

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i07.d
/chem2/HP16334.i/18apr19i.b/ga19i06.d
/chem2/HP16334.i/18apr19i.b/ga19i05.d
/chem2/HP16334.i/18apr19i.b/ga19i04.d
/chem2/HP16334.i/18apr19i.b/ga19i03.d
/chem2/HP16334.i/18apr19i.b/ga19i02.d
/chem2/HP16334.i/18apr19i.b/ga19i01.d

File /chem2/HP16334.i/18apr19i.b/ga19i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP16334.i/18apr23b.b/ga23c05.d

RT Summary

Internal Standard Name	File ID: ga23c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	3.952	3.952	Yes
Fluorobenzene	7.476	7.482	Yes
Chlorobenzene-d5	11.018	11.018	Yes
1,4-Dichlorobenzene-d4	12.908	12.914	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ga23c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	211556	219199	109600	438398	Yes
Fluorobenzene	2163507	2172211	1086106	4344422	Yes
Chlorobenzene-d5	1717367	1651185	825592	3302370	Yes
1,4-Dichlorobenzene-d4	982857	931947	465974	1863894	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/23/18 Time: 19:10

Lab File ID: ga23c05.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3751	0.3606	9.61	10	-4	#
# Chloromethane	0.3777	0.3605	9.55	10	-5	#
# Vinyl Chloride	0.3241	0.3214	9.92	10	-1	#
1,3-Butadiene	0.6896	0.5858	8.50	10	-15	
# Bromomethane	0.2167	0.2094	9.66	10	-3	#
# Chloroethane	0.1846	0.1771	9.59	10	-4	#
Dichlorofluoromethane	0.4453	0.4936	11.08	10	11	
# Trichlorofluoromethane	0.4227	0.4175	9.88	10	-1	#
Ethyl ether	0.2107	0.1901	9.02	10	-10	
Freon 123a	0.2993	0.2822	9.43	10	-6	
Acrolein	1.7274	1.7631	510.33	500	2	
# 1,1-Dichloroethene	0.2070	0.2002	9.67	10	-3	#
# Freon 113	0.2333	0.2281	9.78	10	-2	#
# Acetone	2.7910	2.2360	80.11	100	-20	#
Methyl Iodide	0.4020	0.3913	9.74	10	-3	
# Carbon Disulfide	0.8212	0.7495	9.13	10	-9	#
Allyl Chloride	0.4802	0.4183	8.71	10	-13	
# Methyl Acetate	7.8671	7.2223	9.18	10	-8	#
# Methylene Chloride	0.2799	0.2346	8.38	10	-16	#
t-Butyl Alcohol	0.9461	0.9194	194.36	200	-3	
Acrylonitrile	3.1051	3.0734	49.49	50	-1	
# trans-1,2-Dichloroethene	0.2405	0.2340	9.73	10	-3	#
# Methyl Tertiary Butyl Ether	0.7208	0.7000	9.71	10	-3	#
n-Hexane	0.4062	0.3916	9.64	10	-4	
# 1,1-Dichloroethane	0.4906	0.4640	9.46	10	-5	#
di-Isopropyl Ether	1.0047	0.9433	9.39	10	-6	
2-Chloro-1,3-Butadiene	0.4491	0.4364	9.72	10	-3	
Ethyl t-butyl ether	0.8820	0.8476	9.61	10	-4	
# cis-1,2-Dichloroethene	0.2698	0.2684	9.95	10	-1	#
2,2-Dichloropropane	0.4024	0.3951	9.82	10	-2	
# 2-Butanone	4.8022	4.9492	103.06	100	3	#
Propionitrile	1.1874	1.2734	214.50	200	7	
Methacrylonitrile	3.7630	4.0615	107.93	100	8	
Bromochloromethane	0.1239	0.1228	9.92	10	-1	
Tetrahydrofuran	1.1431	1.2414	108.60	100	9	
# Chloroform	0.4691	0.4645	9.90	10	-1	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/23/18 Time: 19:10

Lab File ID: ga23c05.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3962	0.3935	9.93	10	-1	#
# Cyclohexane	0.4752	0.4666	9.82	10	-2	#
# Cyclohexane(2)	0.3742	0.3617	9.67	10	-3	#
# Cyclohexane(3)	0.1383	0.1360	9.83	10	-2	#
1,1-Dichloropropene	0.3694	0.3652	9.88	10	-1	
# Carbon Tetrachloride	0.3218	0.3277	10.18	10	2	#
Isobutyl Alcohol	0.3760	0.3790	503.99	500	1	
# Benzene	1.0199	1.0086	9.89	10	-1	#
# 1,2-Dichloroethane	0.3610	0.3435	9.51	10	-5	#
t-Amyl methyl ether	0.7485	0.7493	10.01	10	0	
n-Heptane	0.4887	0.4717	9.65	10	-3	
n-Butanol	0.2976	0.3253	1092.99	1000	9	
# Trichloroethene	0.2693	0.2702	10.04	10	0	#
# Methylcyclohexane	0.4573	0.4514	9.87	10	-1	#
# 1,2-Dichloropropane	0.2831	0.2815	9.95	10	-1	#
Methyl Methacrylate	7.1669	7.7247	10.78	10	8	
Dibromomethane	0.1351	0.1377	10.19	10	2	
1,4-Dioxane	0.0519	0.0635	612.49	500	22	<-
# Bromodichloromethane	0.3314	0.3415	10.30	10	3	#
2-Nitropropane	2.4549	2.8636	116.65	100	17	
# cis-1,3-Dichloropropene	0.4096	0.4232	10.33	10	3	#
# 4-Methyl-2-Pentanone	11.797	12.8819	109.19	100	9	#
# Toluene	0.8496	0.8271	9.73	10	-3	#
# trans-1,3-Dichloropropene	0.4608	0.4572	9.92	10	-1	#
Ethyl Methacrylate	0.4155	0.4207	10.13	10	1	
# 1,1,2-Trichloroethane	0.2562	0.2497	9.74	10	-3	#
# Tetrachloroethene	0.3940	0.3869	9.82	10	-2	#
1,3-Dichloropropane	0.4668	0.4496	9.63	10	-4	
# 2-Hexanone	8.2918	9.0606	109.27	100	9	#
# Dibromochloromethane	0.2823	0.2951	10.45	10	5	#
# 1,2-Dibromoethane	0.2448	0.2474	10.11	10	1	#
# Chlorobenzene	0.9732	0.9510	9.77	10	-2	#
1,1,1,2-Tetrachloroethane	0.3249	0.3332	10.25	10	3	
# Ethylbenzene	1.6882	1.6589	9.83	10	-2	#
# m+p-Xylene	0.6428	0.6396	19.90	20	0	#
# o-Xylene	0.6443	0.6524	10.13	10	1	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/23/18 Time: 19:10

Lab File ID: ga23c05.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Styrene	1.0576	1.0969	10.37	10	4	#
#	Bromoform	0.1625	0.1772	10.91	10	9	#
#	Isopropylbenzene	1.6784	1.6874	10.05	10	1	#
#	1,1,2,2-Tetrachloroethane	0.5877	0.6015	10.23	10	2	#
	Bromobenzene	0.7718	0.7693	9.97	10	0	
	1,2,3-Trichloropropane	0.1643	0.1636	9.96	10	0	
	n-Propylbenzene	3.5940	3.5127	9.77	10	-2	
	2-Chlorotoluene	0.7172	0.6968	9.72	10	-3	
	1,3,5-Trimethylbenzene	2.5734	2.5513	9.91	10	-1	
	4-Chlorotoluene	0.7477	0.7306	9.77	10	-2	
	tert-Butylbenzene	0.5372	0.5512	10.26	10	3	
	Pentachloroethane	0.4171	0.4473	10.72	10	7	
	1,2,4-Trimethylbenzene	2.6246	2.6307	10.02	10	0	
	sec-Butylbenzene	3.2687	3.2480	9.94	10	-1	
#	1,3-Dichlorobenzene	1.5338	1.5269	9.95	10	0	#
	p-Isopropyltoluene	2.8531	2.8776	10.09	10	1	
#	1,4-Dichlorobenzene	1.5634	1.5443	9.88	10	-1	#
	1,2,3-Trimethylbenzene	1.1801	1.1512	9.75	10	-2	
	Benzyl Chloride	0.2135	0.2366	11.08	10	11	
	n-Butylbenzene	1.5351	1.5212	9.91	10	-1	
#	1,2-Dichlorobenzene	1.4473	1.4589	10.08	10	1	#
#	1,2-Dibromo-3-chloropropane	1.7714	2.0835	11.76	10	18	#
	1,3,5-Trichlorobenzene	1.2828	1.2639	9.85	10	-1	
#	1,2,4-Trichlorobenzene	1.1900	1.1815	9.93	10	-1	#
	Hexachlorobutadiene	0.6272	0.5971	9.52	10	-5	
	Naphthalene	1.9892	1.9935	10.02	10	0	
	1,2,3-Trichlorobenzene	1.0175	1.0118	9.94	10	-1	
	Dibromofluoromethane	0.2515	0.2525	10.04	10	0	
	Dibromofluoromethane(2)	0.2586	0.2589	10.01	10	0	
	1,2-Dichloroethane-d4	0.0533	0.0533	9.99	10	0	
	1,2-Dichloroethane-d4(2)	0.3029	0.2973	9.81	10	-2	
	1,2-Dichloroethane-d4(3)	0.0332	0.0343	10.33	10	3	
	Toluene-d8	1.3411	1.3202	9.84	10	-2	
	Toluene-d8(2)	0.8534	0.8400	9.84	10	-2	
	4-Bromofluorobenzene	0.5133	0.5049	9.84	10	-2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/23/18 Time: 19:10

Lab File ID: ga23c05.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene(2)	0.4387	0.4419	10.07	10	1

Average %Drift 4

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP16334.i/18apr19i.b/ga19i17.d
/chem2/HP16334.i/18apr19i.b/ga19i16.d
/chem2/HP16334.i/18apr19i.b/ga19i15.d
/chem2/HP16334.i/18apr19i.b/ga19i14.d
/chem2/HP16334.i/18apr19i.b/ga19i13.d
/chem2/HP16334.i/18apr19i.b/ga19i12.d
/chem2/HP16334.i/18apr19i.b/ga19i11.d

File /chem2/HP16334.i/18apr19i.b/ga19i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP16334.i/18apr23b.b/ga23c06.d

RT Summary

Internal Standard Name	File ID: ga23c06.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	3.952	3.964	Yes
Fluorobenzene	7.482	7.488	Yes
Chlorobenzene-d5	11.018	11.018	Yes
1,4-Dichlorobenzene-d4	12.908	12.914	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ga23c06.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	213102	209976	104988	419952	Yes
Fluorobenzene	2196117	2073753	1036876	4147506	Yes
Chlorobenzene-d5	1720689	1594546	797273	3189092	Yes
1,4-Dichlorobenzene-d4	934536	886505	443252	1773010	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/23/2018 at 19:57

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 04/23/18 Time: 19:32

Lab File ID: ga23c06.d Init. Calib. Date(s): 04/19/18 04/19/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3609	0.3850	10.67	10	7
Acetonitrile	1.1922	1.0813	362.79	400	-9
Vinyl Acetate	0.4841	0.4824	9.97	10	0
Methyl Acrylate	0.1803	0.1802	49.97	50	0
1-Chlorobutane	0.5421	0.5078	9.37	10	-6
Chloroacetonitrile	0.0093	0.0097	520.16	500	4
2-Chloroethyl vinyl ether	0.1460	0.1560	10.68	10	7
Cyclohexanone	0.3186	0.2802	439.73	500	-12
Hexachloroethane	0.3598	0.3965	11.02	10	10

Average %Drift 6

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19930.i/18apr17i.b/ia17i17.d
/chem2/HP19930.i/18apr17i.b/ia17i16.d
/chem2/HP19930.i/18apr17i.b/ia17i15.d
/chem2/HP19930.i/18apr17i.b/ia17i14.d
/chem2/HP19930.i/18apr17i.b/ia17i13.d
/chem2/HP19930.i/18apr17i.b/ia17i12.d
/chem2/HP19930.i/18apr17i.b/ia17i11.d

File /chem2/HP19930.i/18apr17i.b/ia17i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19930.i/18apr23c.b/ia23c05.d

RT Summary

Internal Standard Name	File ID: ia23c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.135	4.123	Yes
Fluorobenzene	7.665	7.659	Yes
Chlorobenzene-d5	11.146	11.152	Yes
1,4-Dichlorobenzene-d4	13.024	13.036	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ia23c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	147308	176767	88384	353534	Yes
Fluorobenzene	2057588	2311353	1155676	4622706	Yes
Chlorobenzene-d5	1548416	1716032	858016	3432064	Yes
1,4-Dichlorobenzene-d4	828420	873331	436666	1746662	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/23/2018 at 22:00

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/23/18 Time: 21:34

Lab File ID: ia23c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.4603	0.4449	9.67	10	-3	#
# Chloromethane	0.4261	0.2876	6.75	10	-33	#<-
# Vinyl Chloride	0.3835	0.2848	7.43	10	-26	#<-
1,3-Butadiene	0.3913	0.4106	10.49	10	5	
# Bromomethane	0.2696	0.2070	7.68	10	-23	#<-
# Chloroethane	0.2185	0.1557	7.13	10	-29	#<-
Dichlorofluoromethane	0.5132	0.4720	9.20	10	-8	
# Trichlorofluoromethane	0.4820	0.4734	9.82	10	-2	#
Ethyl ether	0.2378	0.2364	9.94	10	-1	
Freon 123a	0.3403	0.3763	11.06	10	11	
Acrolein	2.3932	2.6558	554.85	500	11	
# 1,1-Dichloroethene	0.2272	0.2498	10.99	10	10	#
# Freon 113	0.2605	0.2952	11.33	10	13	#
# Acetone	3.5134	3.7340	106.28	100	6	#
Methyl Iodide	0.4201	0.4580	10.90	10	9	
# Carbon Disulfide	0.6426	0.7043	10.96	10	10	#
Allyl Chloride	0.4186	0.4881	11.66	10	17	
# Methyl Acetate	8.2825	10.8939	13.15	10	32	#<-
# Methylene Chloride	0.2775	0.2862	10.31	10	3	#
t-Butyl Alcohol	1.2140	1.0240	168.71	200	-16	
Acrylonitrile	3.9371	4.8773	61.94	50	24	<-
# trans-1,2-Dichloroethene	0.2595	0.2802	10.80	10	8	#
# Methyl Tertiary Butyl Ether	0.6765	0.7175	10.61	10	6	#
n-Hexane	0.4334	0.4999	11.53	10	15	
# 1,1-Dichloroethane	0.5184	0.5672	10.94	10	9	#
di-Isopropyl Ether	0.9430	1.0623	11.26	10	13	
2-Chloro-1,3-Butadiene	0.4422	0.5096	11.52	10	15	
Ethyl t-butyl ether	0.7757	0.8487	10.94	10	9	
# cis-1,2-Dichloroethene	0.2940	0.3177	10.81	10	8	#
2,2-Dichloropropane	0.3631	0.4112	11.33	10	13	
# 2-Butanone	5.4883	7.1159	129.66	100	30	#<-
Propionitrile	1.5632	1.8834	240.97	200	20	
Methacrylonitrile	5.1006	6.1354	120.29	100	20	
Bromochloromethane	0.1231	0.1313	10.67	10	7	
Tetrahydrofuran	1.4914	1.8483	123.93	100	24	<-
# Chloroform	0.4877	0.5285	10.84	10	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/23/18 Time: 21:34

Lab File ID: ia23c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4062	0.4604	11.34	10	13	#
# Cyclohexane	0.5270	0.5946	11.28	10	13	#
# Cyclohexane(2)	0.4044	0.4590	11.35	10	13	#
# Cyclohexane(3)	0.1544	0.1725	11.17	10	12	#
1,1-Dichloropropene	0.3871	0.4378	11.31	10	13	
# Carbon Tetrachloride	0.3431	0.4027	11.74	10	17	#
Isobutyl Alcohol	0.4849	0.5393	556.12	500	11	
# Benzene	1.1641	1.2451	10.70	10	7	#
# 1,2-Dichloroethane	0.3400	0.3609	10.61	10	6	#
# 1,2-Dichloroethane(2)	0.0281	0.0305	10.82	10	8	#<-
t-Amyl methyl ether	0.6532	0.7254	11.10	10	11	
n-Heptane	0.4603	0.5590	12.14	10	21	<-
n-Butanol	0.3692	0.4462	1208.58	1000	21	<-
# Trichloroethene	0.2948	0.3250	11.03	10	10	#
# Methylcyclohexane	0.5076	0.5741	11.31	10	13	#
# 1,2-Dichloropropane	0.3020	0.3239	10.73	10	7	#
Methyl Methacrylate	8.5635	11.1526	13.02	10	30	<-
Dibromomethane	0.1352	0.1463	10.82	10	8	
1,4-Dioxane	0.0847	0.0946	558.76	500	12	
1,4-Dioxane(2)	0.0608	0.0157	128.90	500	-74	<-
# Bromodichloromethane	0.3237	0.3620	11.18	10	12	#
2-Nitropropane	2.7725	3.9608	142.86	100	43	<-
# cis-1,3-Dichloropropene	0.4080	0.4440	10.88	10	9	#
# 4-Methyl-2-Pentanone	13.6380	18.0835	132.59	100	33	#<-
# Toluene	0.9857	1.0220	10.37	10	4	#
# trans-1,3-Dichloropropene	0.4169	0.4673	11.21	10	12	#
Ethyl Methacrylate	0.4082	0.4628	11.34	10	13	
# 1,1,2-Trichloroethane	0.2780	0.2892	10.40	10	4	#
# Tetrachloroethene	0.4187	0.4622	11.04	10	10	#
1,3-Dichloropropane	0.4948	0.5239	10.59	10	6	
# 2-Hexanone	9.6280	12.8792	133.77	100	34	#<-
# Dibromochloromethane	0.2738	0.3116	11.38	10	14	#
# 1,2-Dibromoethane	0.2530	0.2710	10.71	10	7	#
# Chlorobenzene	1.0712	1.1113	10.37	10	4	#
1,1,1,2-Tetrachloroethane	0.3407	0.3805	11.17	10	12	
# Ethylbenzene	1.8680	2.0164	10.79	10	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/23/18 Time: 21:34

Lab File ID: ia23c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
	COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
#	m+p-Xylene	0.7177	0.7730	21.54	20	8	#
#	o-Xylene	0.6984	0.7739	11.08	10	11	#
#	Styrene	1.0780	1.2155	11.28	10	13	#
#	Bromoform	0.1385	0.1609	9.51	10	-5	#
#	Isopropylbenzene	1.7927	2.0404	11.38	10	14	#
#	1,1,2,2-Tetrachloroethane	0.7035	0.7250	10.31	10	3	#
	Bromobenzene	0.8342	0.8652	10.37	10	4	
	trans-1,4-Dichloro-2-butene	3.4193	3.6361	106.34	100	6	
	1,2,3-Trichloropropane	0.1843	0.1892	10.27	10	3	
	n-Propylbenzene	4.2203	4.5314	10.74	10	7	
	2-Chlorotoluene	0.8127	0.8464	10.42	10	4	
	1,3,5-Trimethylbenzene	2.9139	3.1719	10.89	10	9	
	4-Chlorotoluene	0.8268	0.8547	10.34	10	3	
	tert-Butylbenzene	0.6027	0.6611	10.97	10	10	
	Pentachloroethane	0.4649	0.5135	11.05	10	10	
	1,2,4-Trimethylbenzene	2.9261	3.1814	10.87	10	9	
	sec-Butylbenzene	3.7723	4.1559	11.02	10	10	
#	1,3-Dichlorobenzene	1.6296	1.7095	10.49	10	5	#
	p-Isopropyltoluene	3.3044	3.5178	10.65	10	6	
#	1,4-Dichlorobenzene	1.6601	1.6834	10.14	10	1	#
	1,2,3-Trimethylbenzene	1.3297	1.3550	10.19	10	2	
	Benzyl Chloride	0.1808	0.2225	9.38	10	-6	
	n-Butylbenzene	1.5646	1.7206	11.00	10	10	
#	1,2-Dichlorobenzene	1.5114	1.5554	10.29	10	3	#
#	1,2-Dibromo-3-chloropropane	1.8486	2.3219	12.56	10	26	#<-
	1,3,5-Trichlorobenzene	1.1009	1.1617	10.55	10	6	
#	1,2,4-Trichlorobenzene	0.9646	0.9943	10.31	10	3	#
	Hexachlorobutadiene	0.3490	0.4101	11.75	10	17	
	Naphthalene	1.8897	1.9453	10.29	10	3	
	1,2,3-Trichlorobenzene	0.8585	0.8442	9.83	10	-2	
	Dibromofluoromethane	0.2334	0.2386	10.22	10	2	
	Dibromofluoromethane(2)	0.2399	0.2437	10.16	10	2	
	1,2-Dichloroethane-d4	0.0508	0.0497	9.80	10	-2	
	1,2-Dichloroethane-d4(2)	0.2511	0.2642	10.52	10	5	
	1,2-Dichloroethane-d4(3)	0.0320	0.0327	10.23	10	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/23/18 Time: 21:34

Lab File ID: ia23c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Toluene-d8	1.3502	1.3151	9.74	10	-3
Toluene-d8(2)	0.8670	0.8515	9.82	10	-2
4-Bromofluorobenzene	0.4767	0.4791	10.05	10	0
4-Bromofluorobenzene(2)	0.3880	0.4002	10.32	10	3

Average %Drift 12

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19930.i/18apr12i.b/ia12i17.d
/chem2/HP19930.i/18apr12i.b/ia12i16.d
/chem2/HP19930.i/18apr12i.b/ia12i15.d
/chem2/HP19930.i/18apr12i.b/ia12i14.d
/chem2/HP19930.i/18apr12i.b/ia12i13.d
/chem2/HP19930.i/18apr12i.b/ia12i12.d
/chem2/HP19930.i/18apr12i.b/ia12i11.d

File /chem2/HP19930.i/18apr12i.b/ia12i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19930.i/18apr23c.b/ia23c07.d

RT Summary

Internal Standard Name	File ID: ia23c07.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.153	4.117	Yes
Fluorobenzene	7.671	7.665	Yes
1,4-Dichlorobenzene-d4	13.024	13.036	Yes
Chlorobenzene-d5	11.146	11.152	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ia23c07.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	132107	200457	100228	400914	Yes
Fluorobenzene	2104219	2121433	1060716	4242866	Yes
1,4-Dichlorobenzene-d4	808730	865686	432843	1731372	Yes
Chlorobenzene-d5	1558080	1632292	816146	3264584	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/23/2018 at 22:19

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/23/18 Time: 21:55

Lab File ID: ia23c07.d Init. Calib. Date(s): 04/12/18 04/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Vinyl Acetate	0.3569	0.4473	10.08	10	1	
1-Chlorobutane	0.5730	0.6247	10.90	10	9	
Hexachloroethane	0.4318	0.5127	11.87	10	19	
2-Chloroethyl vinyl ether	0.1172	0.1486	12.68	10	27	<-
Methyl Acrylate	0.1514	0.1884	62.21	50	24	
Acetonitrile	1.3570	1.7633	519.74	400	30	<-
Chloroacetonitrile	0.0081	0.0089	553.33	500	11	
Cyclohexanone	0.3350	0.4484	669.27	500	34	<-
Dimethyl ether	0.3847	0.3141	8.16	10	-18	

Average %Drift 19

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

page 1 of 1

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19930.i/18apr17i.b/ia17i17.d
/chem2/HP19930.i/18apr17i.b/ia17i16.d
/chem2/HP19930.i/18apr17i.b/ia17i15.d
/chem2/HP19930.i/18apr17i.b/ia17i14.d
/chem2/HP19930.i/18apr17i.b/ia17i13.d
/chem2/HP19930.i/18apr17i.b/ia17i12.d
/chem2/HP19930.i/18apr17i.b/ia17i11.d

File /chem2/HP19930.i/18apr17i.b/ia17i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19930.i/18apr24b.b/ia24c05.d

RT Summary

Internal Standard Name	File ID: ia24c05.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.135	4.123	Yes
Fluorobenzene	7.665	7.659	Yes
Chlorobenzene-d5	11.146	11.152	Yes
1,4-Dichlorobenzene-d4	13.024	13.036	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ia24c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	164438	176767	88384	353534	Yes
Fluorobenzene	2193337	2311353	1155676	4622706	Yes
Chlorobenzene-d5	1673291	1716032	858016	3432064	Yes
1,4-Dichlorobenzene-d4	878134	873331	436666	1746662	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

report generated on 04/24/2018 at 21:13

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/24/18 Time: 20:49

Lab File ID: ia24c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Dichlorodifluoromethane	0.4603	0.5622	12.21	10	22	#<-
#	Chloromethane	0.4261	0.4905	11.51	10	15	#
#	Vinyl Chloride	0.3835	0.4498	11.73	10	17	#
	1,3-Butadiene	0.3913	0.6625	16.93	10	69	<-
#	Bromomethane	0.2696	0.2998	11.12	10	11	#
#	Chloroethane	0.2185	0.2342	10.72	10	7	#
	Dichlorofluoromethane	0.5132	0.6417	12.50	10	25	<-
#	Trichlorofluoromethane	0.4820	0.5845	12.13	10	21	#<-
	Ethyl ether	0.2378	0.2417	10.17	10	2	
	Freon 123a	0.3403	0.3715	10.92	10	9	
	Acrolein	2.3932	2.4832	518.80	500	4	
#	1,1-Dichloroethene	0.2272	0.2554	11.24	10	12	#
#	Freon 113	0.2605	0.2919	11.21	10	12	#
#	Acetone	3.5134	3.5049	99.76	100	0	#
	Methyl Iodide	0.4201	0.4829	11.50	10	15	
#	Carbon Disulfide	0.6426	0.6803	10.59	10	6	#
	Allyl Chloride	0.4186	0.4907	11.72	10	17	
#	Methyl Acetate	8.2825	9.0325	10.91	10	9	#
#	Methylene Chloride	0.2775	0.2845	10.25	10	3	#
	t-Butyl Alcohol	1.2140	1.0833	178.47	200	-11	
	Acrylonitrile	3.9371	4.2890	54.47	50	9	
#	trans-1,2-Dichloroethene	0.2595	0.2832	10.91	10	9	#
#	Methyl Tertiary Butyl Ether	0.6765	0.7742	11.44	10	14	#
	n-Hexane	0.4334	0.4764	10.99	10	10	
#	1,1-Dichloroethane	0.5184	0.5747	11.09	10	11	#
	di-Isopropyl Ether	0.9430	1.0909	11.57	10	16	
	2-Chloro-1,3-Butadiene	0.4422	0.5341	12.08	10	21	<-
	Ethyl t-butyl ether	0.7757	0.9090	11.72	10	17	
#	cis-1,2-Dichloroethene	0.2940	0.3241	11.02	10	10	#
	2,2-Dichloropropane	0.3631	0.4274	11.77	10	18	
#	2-Butanone	5.4883	6.6618	121.38	100	21	#<-
	Propionitrile	1.5632	1.6269	208.15	200	4	
	Methacrylonitrile	5.1006	5.8740	115.16	100	15	
	Bromochloromethane	0.1231	0.1375	11.17	10	12	
	Tetrahydrofuran	1.4914	1.6966	113.76	100	14	
#	Chloroform	0.4877	0.5397	11.07	10	11	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/24/18 Time: 20:49

Lab File ID: ia24c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.4062	0.4692	11.55	10	16	#
# Cyclohexane	0.5270	0.5739	10.89	10	9	#
# Cyclohexane(2)	0.4044	0.4509	11.15	10	11	#
# Cyclohexane(3)	0.1544	0.1677	10.86	10	9	#
1,1-Dichloropropene	0.3871	0.4439	11.47	10	15	
# Carbon Tetrachloride	0.3431	0.4116	12.00	10	20	#
Isobutyl Alcohol	0.4849	0.4953	510.73	500	2	
# Benzene	1.1641	1.2360	10.62	10	6	#
# 1,2-Dichloroethane	0.3400	0.3815	11.22	10	12	#
# 1,2-Dichloroethane(2)	0.0281	0.0300	10.64	10	6	#<-
t-Amyl methyl ether	0.6532	0.7675	11.75	10	17	
n-Heptane	0.4603	0.5519	11.99	10	20	
n-Butanol	0.3692	0.4121	1116.26	1000	12	
# Trichloroethene	0.2948	0.3281	11.13	10	11	#
# Methylcyclohexane	0.5076	0.5698	11.23	10	12	#
# 1,2-Dichloropropane	0.3020	0.3282	10.87	10	9	#
Methyl Methacrylate	8.5635	10.7620	12.57	10	26	<-
Dibromomethane	0.1352	0.1474	10.90	10	9	
1,4-Dioxane	0.0847	0.0864	510.17	500	2	
1,4-Dioxane(2)	0.0608	0.0161	132.67	500	-73	<-
# Bromodichloromethane	0.3237	0.3679	11.37	10	14	#
2-Nitropropane	2.7725	4.1086	148.19	100	48	<-
# cis-1,3-Dichloropropene	0.4080	0.4517	11.07	10	11	#
# 4-Methyl-2-Pentanone	13.638	017.6486	129.40	100	29	#<-
# Toluene	0.9857	1.0329	10.48	10	5	#
# trans-1,3-Dichloropropene	0.4169	0.4763	11.43	10	14	#
Ethyl Methacrylate	0.4082	0.4615	11.30	10	13	
# 1,1,2-Trichloroethane	0.2780	0.2835	10.20	10	2	#
# Tetrachloroethene	0.4187	0.4812	11.49	10	15	#
1,3-Dichloropropane	0.4948	0.5150	10.41	10	4	
# 2-Hexanone	9.6280	12.6376	131.26	100	31	#<-
# Dibromochloromethane	0.2738	0.3122	11.40	10	14	#
# 1,2-Dibromoethane	0.2530	0.2709	10.71	10	7	#
# Chlorobenzene	1.0712	1.1260	10.51	10	5	#
1,1,1,2-Tetrachloroethane	0.3407	0.3865	11.35	10	13	
# Ethylbenzene	1.8680	2.0296	10.86	10	9	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/24/18 Time: 20:49

Lab File ID: ia24c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# m+p-Xylene	0.7177	0.7975	22.22	20	11	#
# o-Xylene	0.6984	0.7860	11.25	10	13	#
# Styrene	1.0780	1.2551	11.64	10	16	#
# Bromoform	0.1385	0.1596	9.44	10	-6	#
# Isopropylbenzene	1.7927	2.0403	11.38	10	14	#
# 1,1,2,2-Tetrachloroethane	0.7035	0.7062	10.04	10	0	#
Bromobenzene	0.8342	0.9123	10.94	10	9	
trans-1,4-Dichloro-2-butene	3.4193	3.3292	97.36	100	-3	
1,2,3-Trichloropropane	0.1843	0.1844	10.01	10	0	
n-Propylbenzene	4.2203	4.5292	10.73	10	7	
2-Chlorotoluene	0.8127	0.8650	10.64	10	6	
1,3,5-Trimethylbenzene	2.9139	3.2132	11.03	10	10	
4-Chlorotoluene	0.8268	0.8832	10.68	10	7	
tert-Butylbenzene	0.6027	0.6888	11.43	10	14	
Pentachloroethane	0.4649	0.5334	11.47	10	15	
1,2,4-Trimethylbenzene	2.9261	3.2230	11.01	10	10	
sec-Butylbenzene	3.7723	4.1875	11.10	10	11	
# 1,3-Dichlorobenzene	1.6296	1.7841	10.95	10	9	#
p-Isopropyltoluene	3.3044	3.6110	10.93	10	9	
# 1,4-Dichlorobenzene	1.6601	1.7548	10.57	10	6	#
1,2,3-Trimethylbenzene	1.3297	1.4066	10.58	10	6	
Benzyl Chloride	0.1808	0.2297	9.67	10	-3	
n-Butylbenzene	1.5646	1.7517	11.20	10	12	
# 1,2-Dichlorobenzene	1.5114	1.6054	10.62	10	6	#
# 1,2-Dibromo-3-chloropropane	1.8486	2.1817	11.80	10	18	#
1,3,5-Trichlorobenzene	1.1009	1.1708	10.64	10	6	
# 1,2,4-Trichlorobenzene	0.9646	0.9932	10.30	10	3	#
Hexachlorobutadiene	0.3490	0.4162	11.92	10	19	
Naphthalene	1.8897	1.8809	9.95	10	0	
1,2,3-Trichlorobenzene	0.8585	0.8389	9.77	10	-2	
Dibromofluoromethane	0.2334	0.2433	10.42	10	4	
Dibromofluoromethane(2)	0.2399	0.2496	10.40	10	4	
1,2-Dichloroethane-d4	0.0508	0.0510	10.05	10	0	
1,2-Dichloroethane-d4(2)	0.2511	0.2774	11.05	10	10	
1,2-Dichloroethane-d4(3)	0.0320	0.0324	10.12	10	1	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/24/18 Time: 20:49

Lab File ID: ia24c05.d Init. Calib. Date(s): 04/17/18 04/17/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Toluene-d8	1.3502	1.3247	9.81	10	-2
Toluene-d8(2)	0.8670	0.8523	9.83	10	-2
4-Bromofluorobenzene	0.4767	0.4677	9.81	10	-2
4-Bromofluorobenzene(2)	0.3880	0.4065	10.48	10	5

Average %Drift 12

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19930.i/18apr12i.b/ia12i17.d
/chem2/HP19930.i/18apr12i.b/ia12i16.d
/chem2/HP19930.i/18apr12i.b/ia12i15.d
/chem2/HP19930.i/18apr12i.b/ia12i14.d
/chem2/HP19930.i/18apr12i.b/ia12i13.d
/chem2/HP19930.i/18apr12i.b/ia12i12.d
/chem2/HP19930.i/18apr12i.b/ia12i11.d

File /chem2/HP19930.i/18apr12i.b/ia12i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19930.i/18apr24b.b/ia24c06.d

RT Summary

Internal Standard Name	File ID: ia24c06.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.141	4.117	Yes
Fluorobenzene	7.665	7.665	Yes
1,4-Dichlorobenzene-d4	13.024	13.036	Yes
Chlorobenzene-d5	11.146	11.152	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: ia24c06.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	154727	200457	100228	400914	Yes
Fluorobenzene	2177194	2121433	1060716	4242866	Yes
1,4-Dichlorobenzene-d4	856655	865686	432843	1731372	Yes
Chlorobenzene-d5	1637051	1632292	816146	3264584	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/24/2018 at 21:43

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19930 Calibration Date: 04/24/18 Time: 21:10

Lab File ID: ia24c06.d Init. Calib. Date(s): 04/12/18 04/12/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Vinyl Acetate	0.3569	0.4961	11.11	10	11	
1-Chlorobutane	0.5730	0.6684	11.67	10	17	
Hexachloroethane	0.4318	0.5319	12.32	10	23	<-
2-Chloroethyl vinyl ether	0.1172	0.1642	14.01	10	40	<-
Methyl Acrylate	0.1514	0.1940	64.04	50	28	
Acetonitrile	1.3570	1.5352	452.50	400	13	
Chloroacetonitrile	0.0081	0.0094	582.36	500	16	
Cyclohexanone	0.3350	0.4172	622.75	500	25	<-
Dimethyl ether	0.3847	0.5128	13.33	10	33	

Average %Drift 23

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

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Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP26285.i/18apr16i.b/5a16i09.d
/chem2/HP26285.i/18apr16i.b/5a16i06.d
/chem2/HP26285.i/18apr16i.b/5a16i08.d
/chem2/HP26285.i/18apr16i.b/5a16i04.d
/chem2/HP26285.i/18apr16i.b/5a16i03.d
/chem2/HP26285.i/18apr16i.b/5a16i02.d
/chem2/HP26285.i/18apr16i.b/5a16i01.d

File /chem2/HP26285.i/18apr16i.b/5a16i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP26285.i/18apr23a.b/5a23c01.d

RT Summary

Internal Standard Name	File ID: 5a23c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	3.502	3.569	Yes
Fluorobenzene	6.983	7.063	Yes
Chlorobenzene-d5	10.739	10.800	Yes
1,4-Dichlorobenzene-d4	12.744	12.799	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: 5a23c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	333394	288622	144311	577244	Yes
Fluorobenzene	1252499	1300793	650396	2601586	Yes
Chlorobenzene-d5	998222	1012481	506240	2024962	Yes
1,4-Dichlorobenzene-d4	565194	565770	282885	1131540	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 04/23/2018 at 09:56

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 04/23/18 Time: 09:25

Lab File ID: 5a23c01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3194	0.3689	57.75	50	15	#
# Chloromethane	0.2509	0.2479	49.40	50	-1	#
1,3-Butadiene	0.2059	0.1966	47.74	50	-5	
# Vinyl Chloride	0.2501	0.2507	50.13	50	0	#
# Bromomethane	0.2023	0.2068	51.11	50	2	#
# Chloroethane	0.1309	0.1356	51.78	50	4	#
n-Pentane	0.2508	0.2997	59.74	50	19	
# Trichlorofluoromethane	0.3393	0.3671	54.11	50	8	#
Ethyl ether	0.2168	0.2042	47.10	50	-6	
Freon 123a	0.2733	0.3161	57.82	50	16	
Acrolein	1.9964	1.7222	431.33	500	-14	
# 1,1-Dichloroethene	0.2125	0.2390	56.24	50	12	#
# 1,1-Dichloroethene(2)	0.1020	0.1148	56.28	50	13	#
# Acetone	0.8176	0.7855	96.07	100	-4	#
# Freon 113	0.2307	0.2826	61.23	50	22	#<-
2-Propanol	0.5324	0.6051	284.11	250	14	
Methyl Iodide	0.4712	0.5144	54.58	50	9	
# Carbon Disulfide	0.6337	0.7365	58.12	50	16	#
Allyl Chloride	0.3663	0.3779	51.58	50	3	
# Methyl Acetate	0.3181	0.3186	50.07	50	0	#
# Methylene Chloride	0.2644	0.2853	53.95	50	8	#
t-Butyl alcohol	1.1401	1.2238	268.37	250	7	
Acrylonitrile	0.1568	0.1725	55.03	50	10	
# trans-1,2-Dichloroethene	0.2546	0.2759	54.19	50	8	#
# Methyl Tertiary Butyl Ether	0.7469	0.8140	54.49	50	9	#
n-Hexane	0.3452	0.4074	59.00	50	18	
# 1,1-Dichloroethane	0.4475	0.4820	53.85	50	8	#
di-Isopropyl ether	0.8163	0.8673	53.13	50	6	
2-Chloro-1,3-butadiene	0.3461	0.3945	56.99	50	14	
Ethyl t-butyl ether	0.7485	0.7967	53.21	50	6	
# cis-1,2-Dichloroethene	0.2953	0.3174	53.74	50	7	#
# 2-Butanone	0.2169	0.2382	109.85	100	10	#
2,2-Dichloropropane	0.2605	0.3201	61.44	50	23	<-
Propionitrile	1.3098	1.3101	250.05	250	0	
Methacrylonitrile	0.1731	0.1841	132.91	125	6	
Bromochloromethane	0.1542	0.1610	52.22	50	4	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 04/23/18 Time: 09:25

Lab File ID: 5a23c01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
Tetrahydrofuran	1.4237	1.2556	88.20	100	-12	
# Chloroform	0.4652	0.5017	53.92	50	8	#
# 1,1,1-Trichloroethane	0.4270	0.4303	50.39	50	1	#
# Cyclohexane	0.4030	0.4783	59.34	50	19	#
# Cyclohexane(2)	0.3405	0.4011	58.90	50	18	#
# Cyclohexane(3)	0.1239	0.1481	59.79	50	20	#
1,1-Dichloropropene	0.3481	0.3837	55.12	50	10	
# Carbon Tetrachloride	0.3261	0.3889	59.64	50	19	#
Isobutyl Alcohol	0.3603	0.3918	679.69	625	9	
# Benzene	1.1063	1.1759	53.15	50	6	#
# 1,2-Dichloroethane	0.3438	0.3665	53.30	50	7	#
# 1,2-Dichloroethane(2)	0.0308	0.0339	54.97	50	10	#<-
t-Amyl ethyl ether	0.3927	0.4186	53.30	50	7	
t-Amyl methyl ether	0.7494	0.7953	53.06	50	6	
n-Heptane	0.3564	0.4305	60.39	50	21	<-
n-Butanol	0.2820	0.3256	1442.99	1250	15	
# Trichloroethene	0.2898	0.3084	53.20	50	6	#
# Methylcyclohexane	0.4513	0.5045	55.90	50	12	#
# Methylcyclohexane(2)	0.1981	0.2205	55.66	50	11	#
# 1,2-Dichloropropane	0.2790	0.3046	54.60	50	9	#
Dibromomethane	0.1823	0.1960	53.76	50	8	
1,4-Dioxane	0.0776	0.1071	862.85	625	38	<-
Methyl Methacrylate	0.2549	0.2832	55.56	50	11	
# Bromodichloromethane	0.3288	0.3840	58.38	50	17	#
2-Nitropropane	0.0961	0.1143	118.95	100	19	
2-Chloroethyl Vinyl Ether	0.2134	0.2257	52.88	50	6	
# cis-1,3-Dichloropropene	0.4331	0.4911	56.71	50	13	#
# 4-Methyl-2-pentanone	0.4456	0.4801	107.73	100	8	#
# Toluene	0.9305	0.9620	51.69	50	3	#
# trans-1,3-Dichloropropene	0.4890	0.5482	56.05	50	12	#
Ethyl Methacrylate	0.5441	0.6018	55.30	50	11	
# 1,1,2-Trichloroethane	0.3486	0.3708	53.19	50	6	#
# Tetrachloroethene	0.4388	0.4560	51.97	50	4	#
1,3-Dichloropropane	0.5557	0.5931	53.37	50	7	
# 2-Hexanone	0.4675	0.4911	105.06	100	5	#
# Dibromochloromethane	0.3379	0.4155	54.07	50	8	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 04/23/18 Time: 09:25

Lab File ID: 5a23c01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
# 1,2-Dibromoethane	0.3794	0.4114	54.22	50	8	#
1-Chlorohexane	0.5028	0.5452	54.22	50	8	
# Chlorobenzene	1.0949	1.1466	52.36	50	5	#
1,1,1,2-Tetrachloroethane	0.3604	0.3991	55.36	50	11	
# Ethylbenzene	1.7697	1.9296	54.52	50	9	#
# m+p-Xylene	0.7095	0.7627	107.51	100	8	#
# o-Xylene	0.7012	0.7637	54.45	50	9	#
# Styrene	1.1268	1.2614	55.97	50	12	#
# Bromoform	0.2289	0.3167	56.56	50	13	#
# Isopropylbenzene	1.7243	1.8994	55.08	50	10	#
Cyclohexanone	0.3917	0.2959	472.17	625	-24	<-
Bromobenzene	0.8952	0.9253	51.68	50	3	
# 1,1,2,2-Tetrachloroethane	1.0368	1.1433	55.14	50	10	#
1,2,3-Trichloropropane	0.3088	0.3278	53.08	50	6	
trans-1,4-Dichloro-2-butene	0.2665	0.3069	143.96	125	15	
n-Propylbenzene	3.6616	4.0560	55.38	50	11	
2-Chlorotoluene	0.8002	0.8333	52.07	50	4	
4-Chlorotoluene	0.8398	0.8793	52.36	50	5	
1,3,5-Trimethylbenzene	2.6482	2.8943	54.65	50	9	
tert-Butylbenzene	0.6028	0.6353	52.70	50	5	
Pentachloroethane	0.5188	0.5310	51.18	50	2	
1,2,4-Trimethylbenzene	2.7181	2.9286	53.87	50	8	
sec-Butylbenzene	3.2830	3.7304	56.81	50	14	
# 1,3-Dichlorobenzene	1.6906	1.7659	52.23	50	4	#
p-Isopropyltoluene	2.8881	3.2188	55.72	50	11	
# 1,4-Dichlorobenzene	1.6914	1.7899	52.91	50	6	#
1,2,3-Trimethylbenzene	2.8343	2.9648	52.30	50	5	
Benzyl Chloride	1.7528	2.0988	47.00	50	-6	
1,3-Diethylbenzene	1.8010	1.8642	51.75	50	4	
1,4-Diethylbenzene	1.8723	1.9991	53.39	50	7	
# 1,2-Dichlorobenzene	1.5652	1.6280	52.01	50	4	#
n-Butylbenzene	1.4525	1.6303	56.12	50	12	
1,2-Diethylbenzene	1.5046	1.5154	50.36	50	1	
# 1,2-Dibromo-3-chloropropane	0.2115	0.2590	61.23	50	22	#<-
1,3,5-Trichlorobenzene	1.1706	1.2391	52.92	50	6	
# 1,2,4-Trichlorobenzene	1.0533	1.1128	52.82	50	6	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP26285 Calibration Date: 04/23/18 Time: 09:25

Lab File ID: 5a23c01.d Init. Calib. Date(s): 04/16/18 04/16/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Hexachlorobutadiene	0.4637	0.5364	57.84	50	16
Naphthalene	3.1996	3.5171	54.96	50	10
1,2,3-Trichlorobenzene	0.9453	1.0041	53.11	50	6
2-Methylnaphthalene	1.8021	1.6788	46.58	50	-7
Dibromofluoromethane	0.2576	0.2617	50.80	50	2
Dibromofluoromethane(2)	0.2609	0.2650	50.78	50	2
1,2-Dichloroethane-d4	0.0576	0.0571	49.52	50	-1
1,2-Dichloroethane-d4(2)	0.2569	0.2696	52.47	50	5
1,2-Dichloroethane-d4(3)	0.0366	0.0364	49.72	50	-1
Toluene-d8	1.2533	1.2275	48.97	50	-2
Toluene-d8(2)	0.8201	0.7937	48.40	50	-3
4-Bromofluorobenzene	0.4798	0.4960	51.69	50	3
4-Bromofluorobenzene(2)	0.4368	0.4460	51.05	50	2

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ga23c05.d Date Analyzed: 04/23/18

Instrument ID: HP16334 Time Analyzed: 19:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	211556	3.952	2163507	7.476	1717367	11.018	982857	12.908
UPPER LIMIT	423112	4.452	4327014	7.976	3434734	11.518	1965714	13.408
LOWER LIMIT	105778	3.452	1081754	6.976	858684	10.518	491428	12.408
LAB SAMPLE ID								
01 LCSG84	233958	3.952	2215931	7.482	1713873	11.018	984768	12.908
02 LCSG86	233958	3.952	2215931	7.482	1713873	11.018	984768	12.908
03 LCDG84	234502	3.946	2269497	7.482	1742842	11.018	998461	12.908
04 LCDG86	234502	3.946	2269497	7.482	1742842	11.018	998461	12.908
05 LCSG85	225642	3.958	2246839	7.488	1734013	11.018	960019	12.914
06 LCSG87	225642	3.958	2246839	7.488	1734013	11.018	960019	12.914
07 LCDG85	233968	3.952	2239519	7.488	1736616	11.018	961866	12.908
08 LCDG87	233968	3.952	2239519	7.488	1736616	11.018	961866	12.908
09 VBLKG84	208009	3.958	2141411	7.488	1613141	11.018	900518	12.914
10 VBLKG86	208009	3.958	2141411	7.488	1613141	11.018	900518	12.914
11 9558704	203719	3.958	2100475	7.482	1601980	11.018	895063	12.908
12 9558705	206479	3.958	2081258	7.482	1592109	11.018	891161	12.908
13 9558706	210198	3.958	2056830	7.482	1570829	11.018	872522	12.914
14 9558707	173629	3.952	1977156	7.488	1529467	11.018	846921	12.908
15 9558708	197554	3.952	1989751	7.482	1535615	11.018	856338	12.908
16 9557222	184982	3.952	1987346	7.482	1531051	11.018	852697	12.908
17 9557224	180494	3.958	1948639	7.482	1503682	11.018	883571	12.908
18 9557224DL	194836	3.958	1964555	7.488	1509294	11.018	856053	12.908
19 9557212	184692	3.958	1987483	7.482	1545915	11.018	905209	12.908
20 9557272	194903	3.964	1967228	7.482	1522431	11.018	843535	12.908
21 9557216	190070	3.952	1964138	7.482	1519651	11.018	848486	12.908
22 9557217	177964	3.946	1974526	7.482	1525927	11.018	849421	12.908

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ga23c05.d Date Analyzed: 04/23/18

Instrument ID: HP16334 Time Analyzed: 19:10

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	211556	3.952	2163507	7.476	1717367	11.018	982857	12.908
UPPER LIMIT	423112	4.452	4327014	7.976	3434734	11.518	1965714	13.408
LOWER LIMIT	105778	3.452	1081754	6.976	858684	10.518	491428	12.408
LAB SAMPLE ID								
23 9557219	158751	3.964	2009001	7.488	1551324	11.018	871735	12.908
24 9557221	179674	3.964	1943025	7.482	1495146	11.018	839440	12.908
25 9557223	169452	3.958	1960669	7.482	1520754	11.018	847124	12.908
26 9557270	172201	3.952	1929175	7.482	1487122	11.018	825429	12.908
27 9557271	169622	3.964	1950306	7.488	1513286	11.018	844715	12.908
28 9557271DL	177208	3.952	1951692	7.482	1508484	11.018	849861	12.908

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ia23c05.d Date Analyzed: 04/23/18

Instrument ID: HP19930 Time Analyzed: 21:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	147308	4.135	2057588	7.665	1548416	11.146	828420	13.024
UPPER LIMIT	294616	4.635	4115176	8.165	3096832	11.646	1656840	13.524
LOWER LIMIT	73654	3.635	1028794	7.165	774208	10.646	414210	12.524
LAB SAMPLE ID								
01 LCSI90	149649	4.135	2099943	7.665	1553191	11.146	828419	13.024
02 LCDI90	140444	4.141	2191782	7.665	1617863	11.146	855355	13.024
03 LCSI92	140444	4.141	2191782	7.665	1617863	11.146	855355	13.024
04 MDLI90 - MD	136698	4.141	2123563	7.665	1547215	11.146	823428	13.024
05 MDLI92 - MD	136698	4.141	2123563	7.665	1547215	11.146	823428	13.024
06 LCSI91	137606	4.141	2206864	7.671	1627599	11.146	839784	13.024
07 LCDI91	128872	4.147	2181154	7.665	1594054	11.146	821027	13.024
08 LCSI93	141849	4.147	2181154	7.665	1594054	11.146	821027	13.024
09 VBLKI90	138581	4.147	2140562	7.671	1559512	11.152	817042	13.024
10 VBLKI92	138581	4.147	2140562	7.671	1559512	11.152	817042	13.024
11 9557257	123834	4.147	2078770	7.671	1514281	11.152	793535	13.024
12 9557257DL	130891	4.153	1984868	7.671	1453137	11.146	758830	13.024
13 9557259	109141	4.147	1963708	7.671	1422813	11.152	746606	13.024
14 9557259DL	121658	4.135	1941764	7.665	1402473	11.146	729010	13.024
15 9557264	115469	4.147	1922500	7.671	1392872	11.152	721453	13.024
16 9557264DL	113718	4.153	1965625	7.671	1422050	11.152	751577	13.024
17 9557265	111357	4.147	2019128	7.671	1474611	11.152	762397	13.024
18 9557265DL	132875	4.141	1970695	7.665	1414552	11.146	752014	13.024
19 9557260DL	121596	4.141	1961918	7.665	1421464	11.146	742700	13.024
20 9558709	114725	4.160	1886868	7.671	1373764	11.152	722911	13.024
21 9558710	95748	4.135	1941601	7.671	1393370	11.146	726836	13.024
22 9558711	108498	4.159	1804746	7.665	1307062	11.146	683993	13.024

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ia23c05.d Date Analyzed: 04/23/18

Instrument ID: HP19930 Time Analyzed: 21:34

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	147308	4.135	2057588	7.665	1548416	11.146	828420	13.024
UPPER LIMIT	294616	4.635	4115176	8.165	3096832	11.646	1656840	13.524
LOWER LIMIT	73654	3.635	1028794	7.165	774208	10.646	414210	12.524
LAB SAMPLE ID								
23 9558698	125890	4.184	1814308	7.671	1326348	11.152	699004	13.024
24 9558699MS	114409	4.153	1965579	7.665	1454953	11.146	778781	13.023
25 9558700MSD	117471	4.129	1973864	7.671	1462670	11.146	785233	13.024
26 9558699MS1	131837	4.147	2019520	7.671	1484095	11.146	768176	13.024
27 9558700MSD1	116244	4.135	2100007	7.665	1539872	11.146	789940	13.024
28 9558696	124108	4.135	2016397	7.665	1449300	11.146	756927	13.023
29 9558702	123851	4.141	1984527	7.665	1432488	11.146	762837	13.024
30 9558703	138577	4.172	1963548	7.665	1425386	11.146	752120	13.024
31 9558695	127528	4.135	1938734	7.665	1403706	11.146	741432	13.024
32 9558697	121934	4.135	1950537	7.665	1412639	11.146	739579	13.024

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ia24c05.d Date Analyzed: 04/24/18

Instrument ID: HP19930 Time Analyzed: 20:49

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	164438	4.135	2193337	7.665	1673291	11.146	878134	13.024
UPPER LIMIT	328876	4.635	4386674	8.165	3346582	11.646	1756268	13.524
LOWER LIMIT	82219	3.635	1096668	7.165	836646	10.646	439067	12.524
LAB SAMPLE ID								
01 LCSI95	170657	4.129	2225928	7.665	1666053	11.146	890359	13.023
02 LCSI97	170776	4.129	2225928	7.665	1666053	11.146	890359	13.023
03 LCDI95	151151	4.147	2198767	7.665	1646318	11.146	881940	13.024
04 LCDI97	151151	4.147	2198767	7.665	1646318	11.146	881940	13.024
05 LCSI96	160693	4.141	2191655	7.671	1623227	11.146	860208	13.024
06 LCSI98	160693	4.141	2191655	7.671	1623227	11.146	860208	13.024
07 LCDI96	160692	4.135	2202654	7.665	1641859	11.146	852423	13.024
08 LCDI98	160692	4.135	2202654	7.665	1641859	11.146	852423	13.024
09 VBLKI95	157754	4.135	2114543	7.671	1558450	11.146	830303	13.024
10 VBLKI97	157754	4.135	2114543	7.671	1558450	11.146	830303	13.024
11 9558695DL	135760	4.135	2087465	7.671	1547594	11.146	828373	13.024
12 9558697DL	151950	4.135	2082798	7.665	1548918	11.146	824045	13.023
13 9565132	134527	4.135	1961743	7.665	1462598	11.146	773991	13.024
14 9565154	154577	4.159	1955669	7.665	1453061	11.146	784021	13.024
15 9565133	136890	4.147	1974735	7.671	1454545	11.146	783018	13.024
16 9565160	126368	4.153	1932599	7.671	1445254	11.146	780897	13.023
17 9565134	143194	4.159	1962431	7.665	1460413	11.146	784902	13.023
18 9565135	133311	4.190	1900956	7.671	1415637	11.146	767662	13.024
19 9565136	140766	4.166	1937060	7.671	1443446	11.146	781550	13.024
20 9565137	121624	4.147	1909114	7.671	1446186	11.146	763660	13.023
21 9565139	121829	4.165	1908948	7.665	1421334	11.146	774025	13.024
22 9565141	128304	4.147	1925115	7.671	1438446	11.146	767419	13.024

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): ia24c05.d Date Analyzed: 04/24/18

Instrument ID: HP19930 Time Analyzed: 20:49

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	164438	4.135	2193337	7.665	1673291	11.146	878134	13.024
UPPER LIMIT	328876	4.635	4386674	8.165	3346582	11.646	1756268	13.524
LOWER LIMIT	82219	3.635	1096668	7.165	836646	10.646	439067	12.524
LAB SAMPLE ID								
23 9565143	125178	4.160	1851469	7.671	1372035	11.146	736453	13.024
24 9565145	124414	4.159	1850748	7.671	1377413	11.146	741076	13.024
25 9565147	126303	4.141	1908114	7.665	1407803	11.146	761252	13.024
26 9565148	136419	4.165	1873513	7.671	1384725	11.146	751229	13.023
27 9565155	133614	4.166	1891676	7.671	1406136	11.146	757400	13.024
28 9565156	123621	4.160	1911434	7.671	1421246	11.146	760865	13.024
29 9565157	126912	4.147	1874298	7.671	1382248	11.146	747771	13.024
30 9565158	132390	4.153	1852025	7.671	1368105	11.146	735483	13.024
31 9565161	140431	4.184	1825270	7.665	1349225	11.146	724208	13.024

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): 5a23c01.d Date Analyzed: 04/23/18

Instrument ID: HP26285 Time Analyzed: 09:25

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	333394	3.502	1252499	6.983	998222	10.738	565194	12.744
UPPER LIMIT	666788	4.002	2504998	7.483	1996444	11.238	1130388	13.244
LOWER LIMIT	166697	3.002	626250	6.483	499111	10.238	282597	12.244
LAB SAMPLE ID								
01 VBLK564	345384	3.502	1209467	6.983	934574	10.739	508070	12.744
02 VBLK565	345384	3.502	1209467	6.983	934574	10.739	508070	12.744
03 LCS564	342941	3.508	1229965	6.983	971440	10.738	549729	12.744
04 LCS565	342941	3.508	1229965	6.983	971440	10.738	549729	12.744
05 9558695	333915	3.502	1212282	6.989	943906	10.739	515407	12.744
06 9558696	321273	3.502	1188981	6.989	924028	10.745	497685	12.744
07 9558697	300473	3.508	1179760	6.989	922176	10.745	501168	12.744
08 9558698	317055	3.502	1150104	6.989	895288	10.745	481488	12.744
09 9558699MS	281798	3.502	1196835	6.989	948184	10.745	526767	12.744
10 9558700MSD	315757	3.508	1173265	6.989	933776	10.745	525324	12.744
11 9558702	331297	3.502	1200513	6.989	934791	10.745	511438	12.744
12 9558703	317468	3.508	1174662	6.989	914094	10.745	496995	12.744
13 9563104	314918	3.508	1183979	6.989	920406	10.745	496291	12.744
14 9560740	306935	3.508	1139265	6.990	884836	10.745	475281	12.744
15 9560731	326717	3.508	1141565	6.990	897596	10.745	485624	12.744
16 9560731MS	303198	3.508	1151478	6.989	913512	10.745	503813	12.750
17 9560731MSD	313317	3.508	1159633	6.989	918346	10.745	502654	12.750
18 9560730	284397	3.508	1192561	6.989	933768	10.745	502489	12.750
19 9560735	291160	3.508	1184418	6.995	906533	10.745	501719	12.750
20 9560736	293954	3.508	1157557	6.989	935351	10.745	512187	12.750
21 9560737	292684	3.508	1196807	6.989	945571	10.745	509662	12.750
22 9560738	341099	3.508	1173932	6.995	910900	10.745	497992	12.750

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAF06___

Lab File ID (Standard): 5a23c01.d Date Analyzed: 04/23/18

Instrument ID: HP26285 Time Analyzed: 09:25

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	333394	3.502	1252499	6.983	998222	10.738	565194	12.744
UPPER LIMIT	666788	4.002	2504998	7.483	1996444	11.238	1130388	13.244
LOWER LIMIT	166697	3.002	626250	6.483	499111	10.238	282597	12.244
LAB SAMPLE ID								
23 9560739	309764	3.508	1172953	6.995	916634	10.745	497415	12.750
24 9563100	306188	3.508	1162878	6.996	909498	10.745	487717	12.750
25 9563101	294234	3.508	1143656	6.995	892910	10.745	492848	12.750
26 9563102	336465	3.508	1150051	6.989	928895	10.745	519652	12.750
27 9563102DL	321886	3.508	1224682	6.995	959600	10.744	525948	12.750
28 9563103	316984	3.508	1172178	6.995	938433	10.745	515455	12.750

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.1	1.0	ug/l
Chloromethane	0.2	1.0	ug/l
Vinyl Chloride	0.2	1.0	ug/l
Bromomethane	0.5	1.0	ug/l
Chloroethane	0.1	1.0	ug/l
Trichlorofluoromethane	0.1	1.0	ug/l
Ethyl ether	0.1	13	ug/l
Acrolein	5.0	25	ug/l
1,1-Dichloroethene	0.1	1.0	ug/l
Freon 113	0.2	1.0	ug/l
Acetone	3.0	10	ug/l
Methyl Iodide	0.6	10	ug/l
Carbon Disulfide	0.4	10	ug/l
Acetonitrile	32	100	ug/l
Allyl Chloride	0.8	10	ug/l
Methylene Chloride	0.2	1.0	ug/l
Acrylonitrile	1.0	10	ug/l
trans-1,2-Dichloroethene	0.2	1.0	ug/l
1,1-Dichloroethane	0.1	1.0	ug/l
Vinyl Acetate	3.3	10	ug/l
2-Chloro-1,3-butadiene	0.5	10	ug/l
2-Butanone	1.0	10	ug/l
Propionitrile	10	100	ug/l
Methacrylonitrile	9.8	100	ug/l
Tetrahydrofuran	2.0	25	ug/l
Chloroform	0.1	1.0	ug/l
1,1,1-Trichloroethane	0.1	1.0	ug/l
Carbon Tetrachloride	0.1	1.0	ug/l
Isobutyl Alcohol	10	200	ug/l
Benzene	0.1	1.0	ug/l
1,2-Dichloroethane	0.1	1.0	ug/l
Trichloroethene	0.1	1.0	ug/l
1,2-Dichloropropane	0.1	1.0	ug/l
Dibromomethane	0.1	1.0	ug/l
Methyl Methacrylate	3.6	10	ug/l
1,4-Dioxane	45	200	ug/l
Bromodichloromethane	0.1	1.0	ug/l
4-Methyl-2-pentanone	1.0	10	ug/l
Toluene	0.1	1.0	ug/l
trans-1,3-Dichloropropene	0.1	1.0	ug/l
Ethyl Methacrylate	0.8	10	ug/l
1,1,2-Trichloroethane	0.1	1.0	ug/l
Tetrachloroethene	0.1	1.0	ug/l
1,3-Dichloropropane	0.1	1.0	ug/l
2-Hexanone	1.0	10	ug/l
Dibromochloromethane	0.1	1.0	ug/l
1,2-Dibromoethane	0.1	1.0	ug/l

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
1,1,1,2-Tetrachloroethane	0.1	1.0	ug/l
Ethylbenzene	0.1	1.0	ug/l
Xylene (Total)	0.1	3.0	ug/l
Styrene	0.1	1.0	ug/l
Bromoform	0.1	1.0	ug/l
1,1,2,2-Tetrachloroethane	0.2	1.0	ug/l
trans-1,4-Dichloro-2-butene	1.0	10	ug/l
1,2,3-Trichloropropane	0.3	1.0	ug/l
Pentachloroethane	0.8	10	ug/l
1,3-Dichlorobenzene	0.1	1.0	ug/l
1,4-Dichlorobenzene	0.1	1.0	ug/l
1,2-Dichlorobenzene	0.1	1.0	ug/l
1,2-Dibromo-3-chloropropane	0.2	1.0	ug/l
1,2,4-Trichlorobenzene	0.1	1.0	ug/l
Hexachlorobutadiene	0.1	1.0	ug/l
Naphthalene	0.1	1.0	ug/l
Hexachloroethane	0.1	10	ug/l
Dimethyl ether	0.1	13	ug/l

11997: 2-Propanol Analyte Name	Default MDL	Default LOQ	Units
2-Propanol	50	100	ug/l

R0601 Lancaster Laboratories 9558695
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23s02.d Injection date and time: **23-APR-2018 11:19**
Data file Sample Info. Line: R0601;9558695;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 11:38 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502	(0.000)	347	65	333915	(0)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1212282	(-3)	50.00	
101) Chlorobenzene-d5	10.739	(0.000)	1534	117	943906	(-5)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	515407	(-9)	50.00	

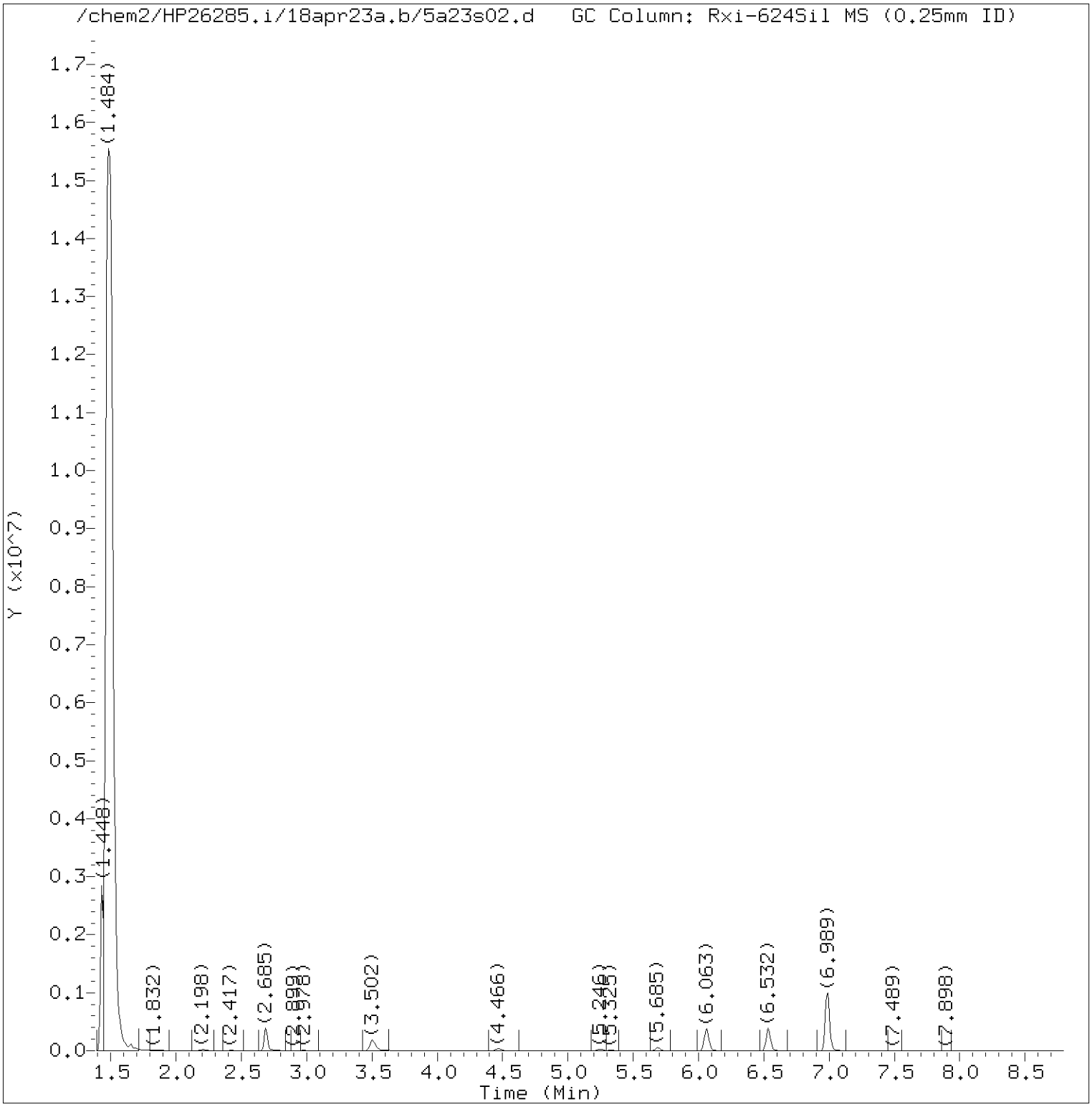
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	309273	49.526	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.532	(0.001)	102	72128	51.632	103%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1166332	49.296	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.000)	95	452081	49.911	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:29. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

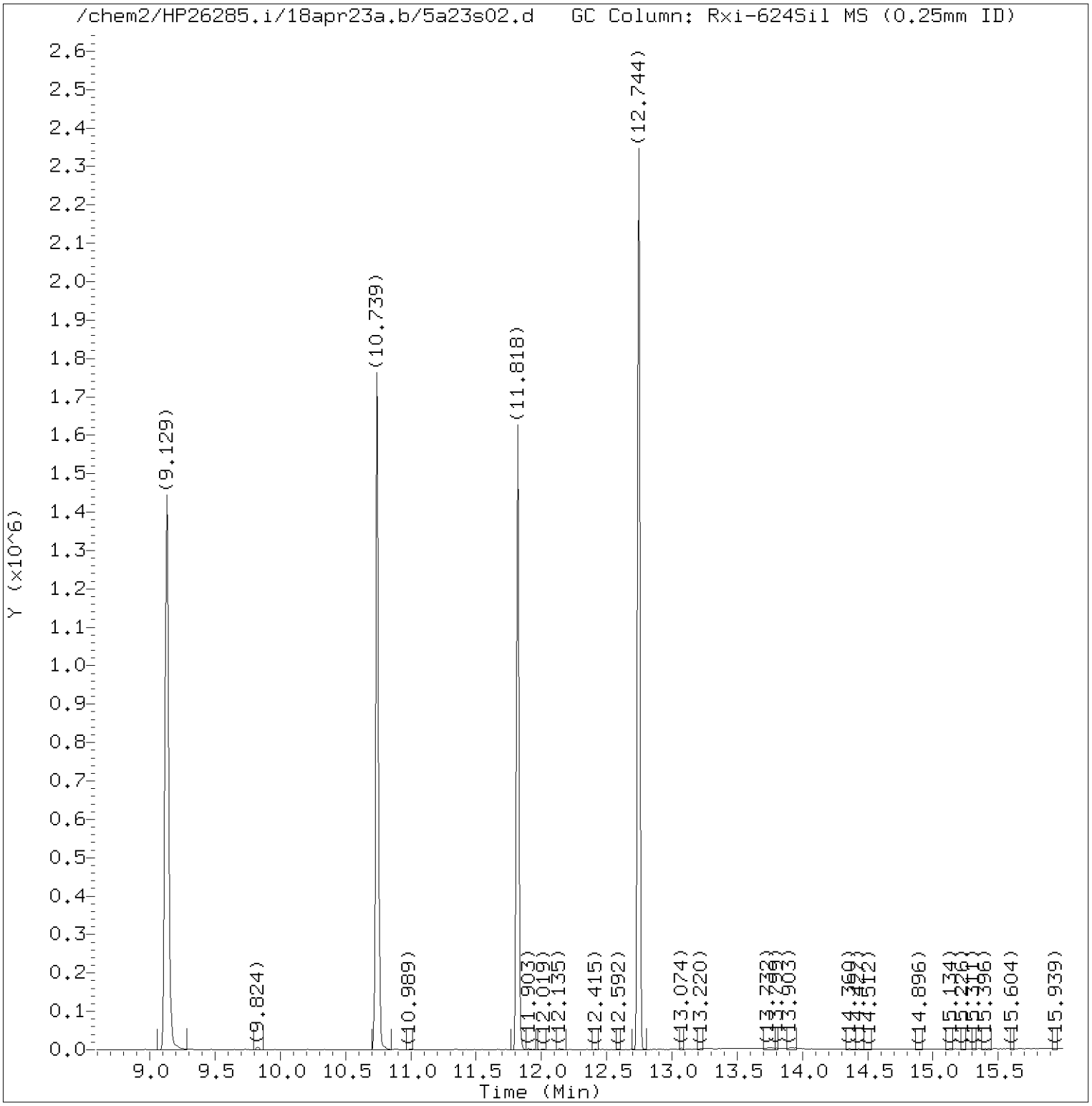
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s02.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:19 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:38 Unknown

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s02.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:19 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:38 Unknown

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s02.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:19 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:38 Unknown

Sample Name: R0601 Lab Sample ID: 9558695

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.502	65	333915	250.000
52)$Dibromofluoromethane	(2)	6.063	113	309273	49.526
57)$1,2-Dichloroethane-d4	(2)	6.532	102	72128	51.632
66)*Fluorobenzene	(2)	6.989	96	1212282	50.000
84)$Toluene-d8	(3)	9.129	98	1166332	49.296
101)*Chlorobenzene-d5	(3)	10.739	117	943906	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	452081	49.911
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	515407	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

R0601 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558695

Data file: /chem2/HP19930.i/18apr23c.b/ia23s84.d Injection date and time: **24-APR-2018 07:31**
Data file Sample Info. Line: R0601;9558695;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	127528	(-13)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	1938734	(-6)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1403706	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	741432	(-11)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769	(0.000)	113	470718	10.403	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	100132	10.173	102%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1883642	9.939	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	664395	9.928	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.898	(-0.000)	85	18251M	0.205	0.20		J	0.1	1
4) Dimethyl ether	(2)	1.965	(0.003)	45	536898	7.199	7.20		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)	2.623	(-0.000)	64	107612	2.540	2.54			0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)	3.154	(-0.000)	59	2104304	45.645	45.64		E	1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)	4.135	(-0.000)	84	45541	0.847	0.85		J	0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.220	(0.000)	63	588713	5.858	5.86			0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)	6.427	(-0.004)	71	59505	15.643	15.64		J	2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)	6.781	(-0.000)	97	11392	0.145	0.14		J	0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:40. Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558695

Data file: /chem2/HP19930.i/18apr23c.b/ia23s84.d Injection date and time: **24-APR-2018 07:31**
Data file Sample Info. Line: R0601;9558695;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

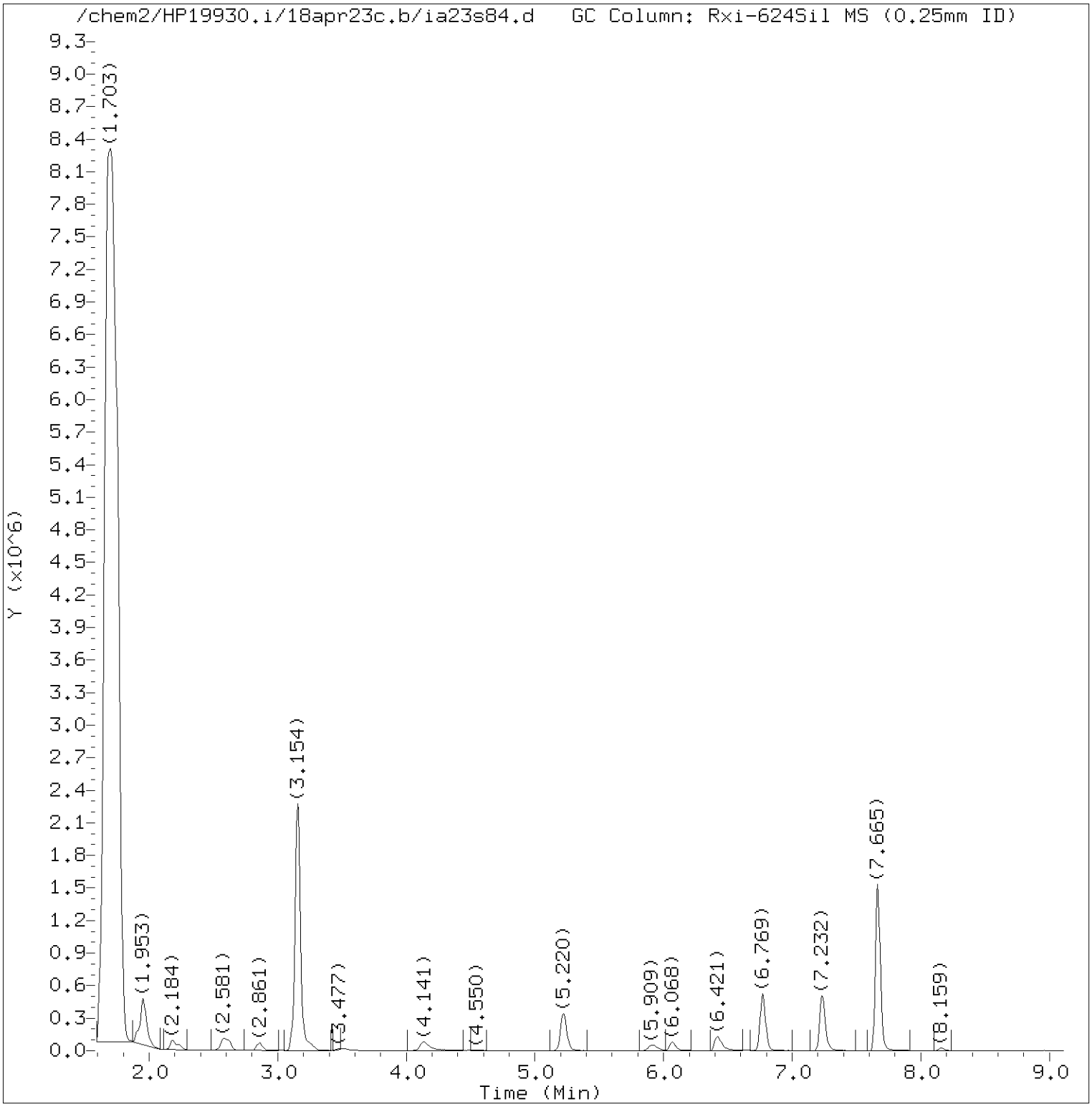
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)	7.262(-0.000)	78	60407	0.268	0.27		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)	8.153(-0.000)	95	11792	0.206	0.21		J	0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	14665	0.249	0.25		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:40. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

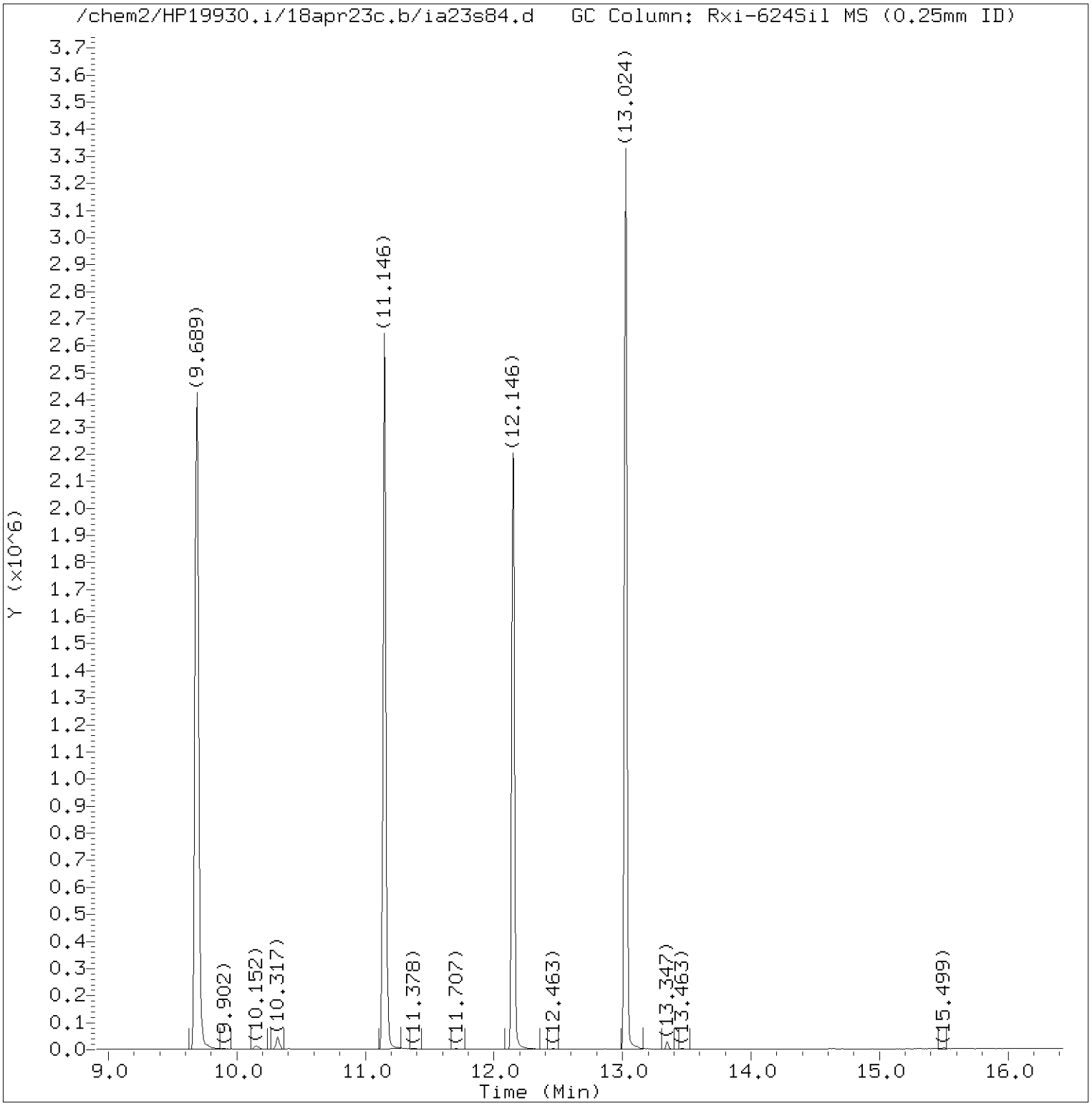
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

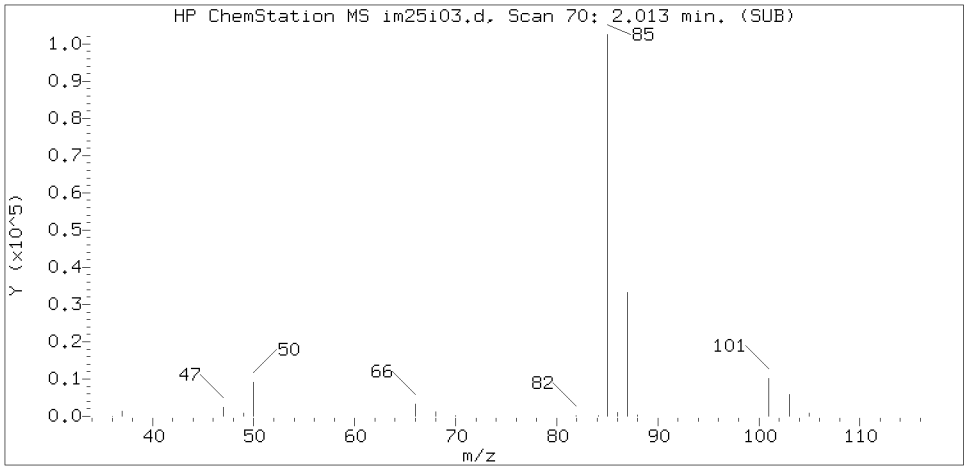
Sample Name: R0601 Lab Sample ID: 9558695

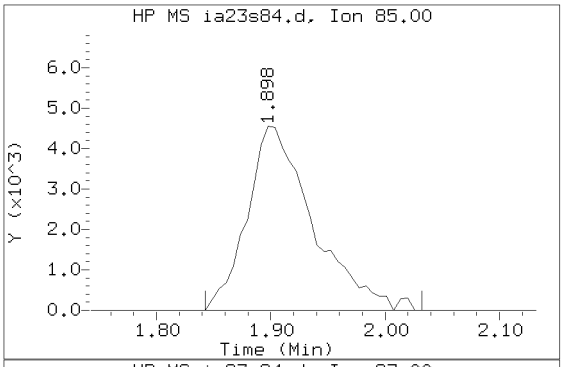
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.898	85	18251M	0.205
4) Dimethyl ether	(2)	1.965	45	536898	7.199
8) Chloroethane	(2)	2.623	64	107612	2.540
11) Ethyl ether	(2)	3.154	59	2104304	45.645
26)*t-Butyl Alcohol-d10	(1)	4.135	65	127528	50.000
23) Methylene Chloride	(2)	4.135	84	45541	0.847
33) 1,1-Dichloroethane	(2)	5.220	63	588713	5.858
48) Tetrahydrofuran	(1)	6.427	71	59505	15.643
50)$Dibromofluoromethane	(2)	6.769	113	470718	10.403
51) 1,1,1-Trichloroethane	(2)	6.781	97	11392	0.145
57)$1,2-Dichloroethane-d4	(2)	7.232	102	100132	10.173
58) Benzene	(2)	7.263	78	60407	0.268
63)*Fluorobenzene	(2)	7.665	96	1938734	10.000
67) Trichloroethene	(2)	8.153	95	11792	0.206
82)$Toluene-d8	(3)	9.689	98	1883642	9.939
89) Tetrachloroethene	(3)	10.317	166	14665	0.249
97)*Chlorobenzene-d5	(3)	11.146	117	1403706	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	664395	9.928
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	741432	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

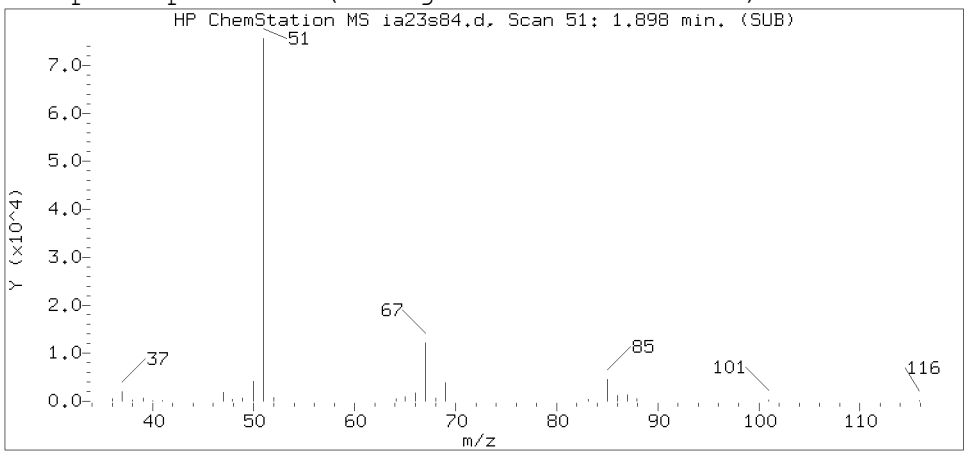
Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052

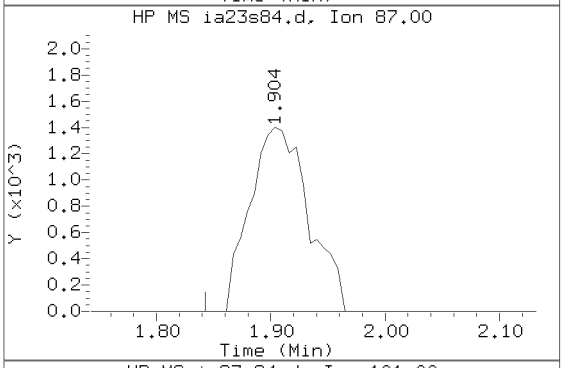
Reference Standard Spectrum for Dichlorodifluoromethane

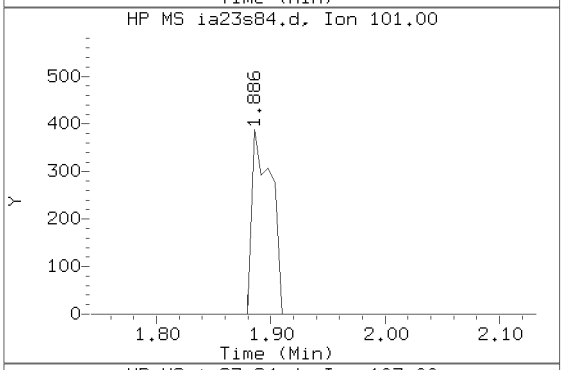




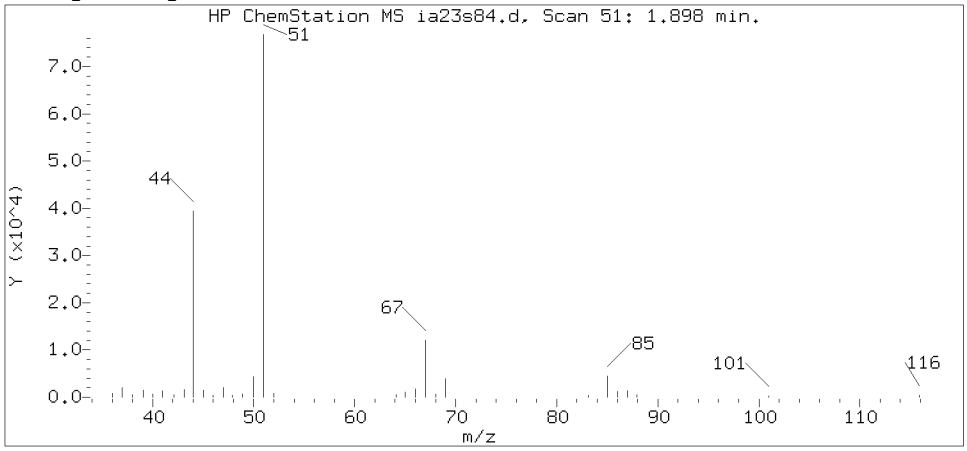
Sample Spectrum (Background Subtracted)

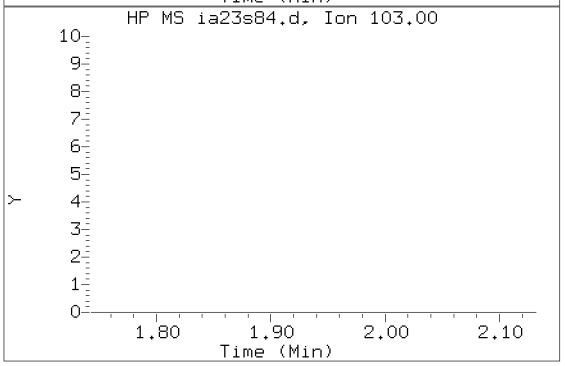






Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

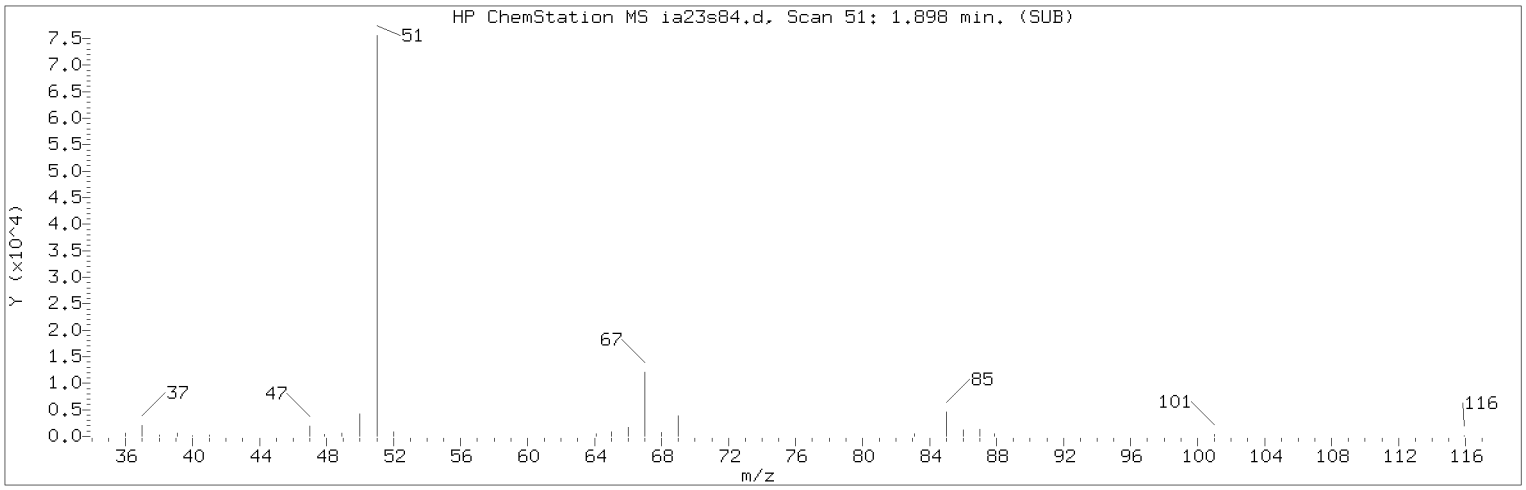
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

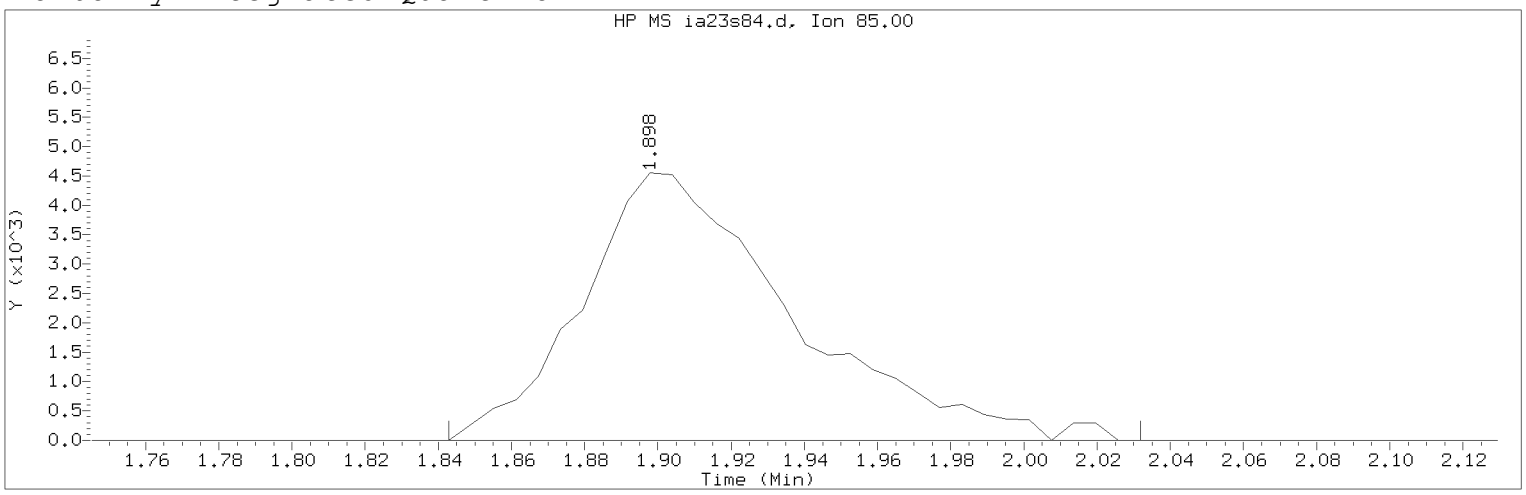
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 51
Retention Time (minutes): 1.898
Relative Retention Time :-0.00000
Quant Ion : 85.00
Area (flag) : 18251M
On-Column Amount (ng) : 0.2045

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

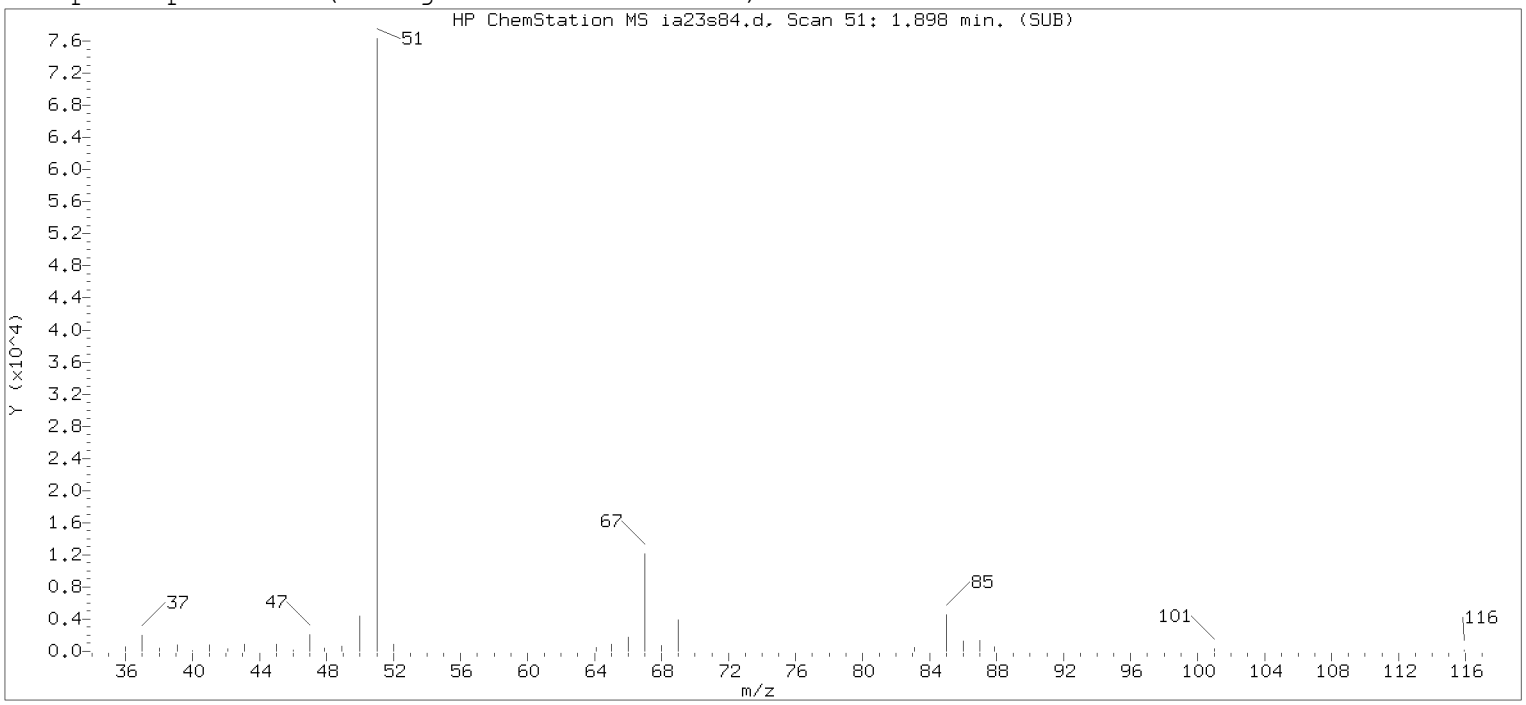
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 51
Retention Time (minutes): 1.898
Quant Ion : 85.00
Area (flag) : 18251M
On-Column Amount (ng) : 0.2045
Integration start scan : 41 Integration stop scan: 72
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

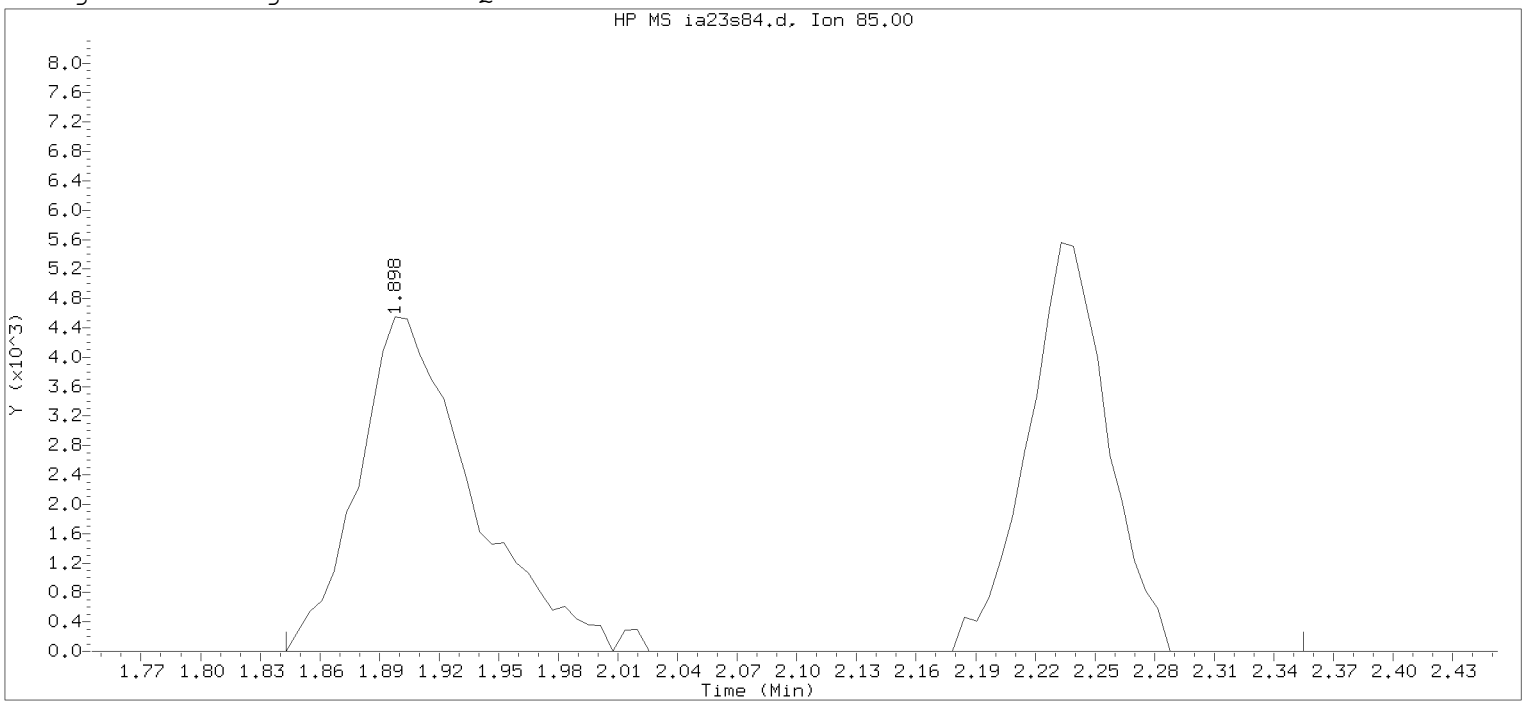
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:49 Automation

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 51
Retention Time (minutes): 1.898
Quant Ion : 85.00
Area : 33846
On-column Amount (ng) : 0.3793
Integration start scan : 41 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 0

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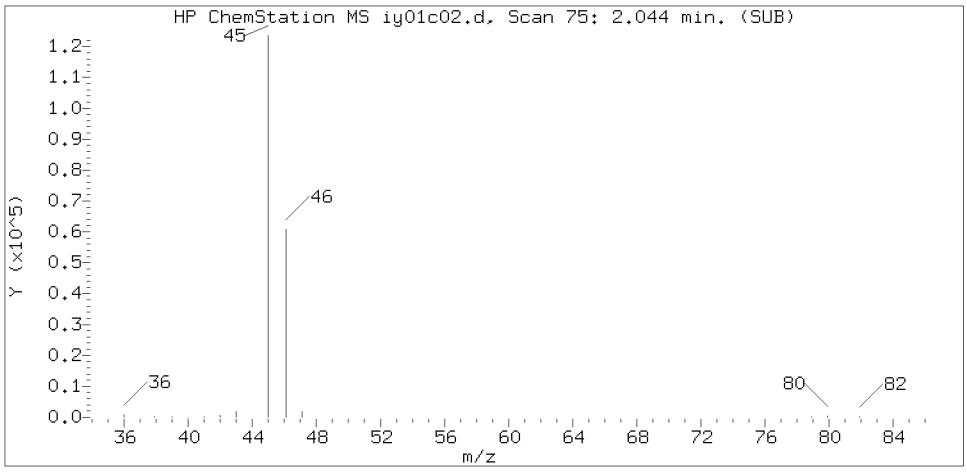
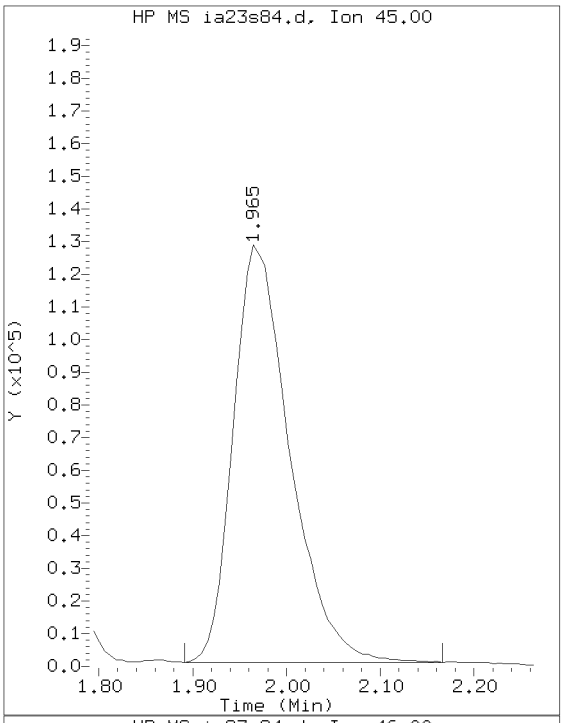
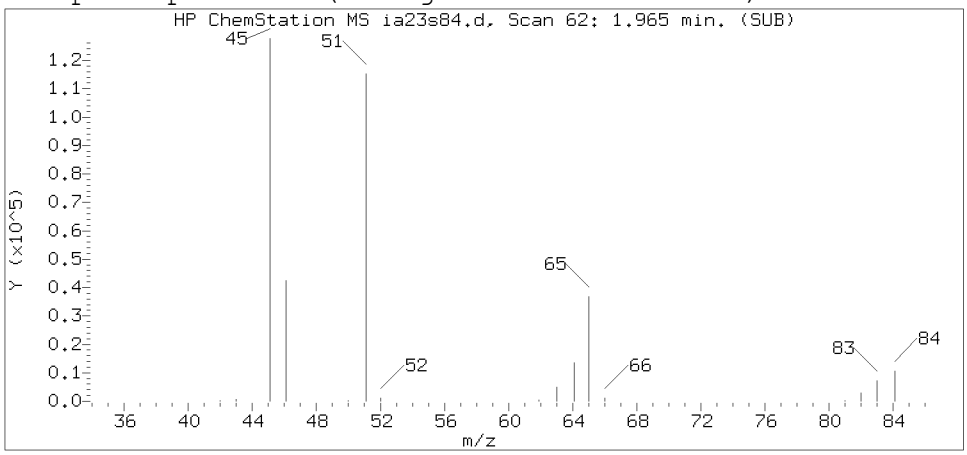
Target 3.5 esignature used. AE06 Page 226 of 2168

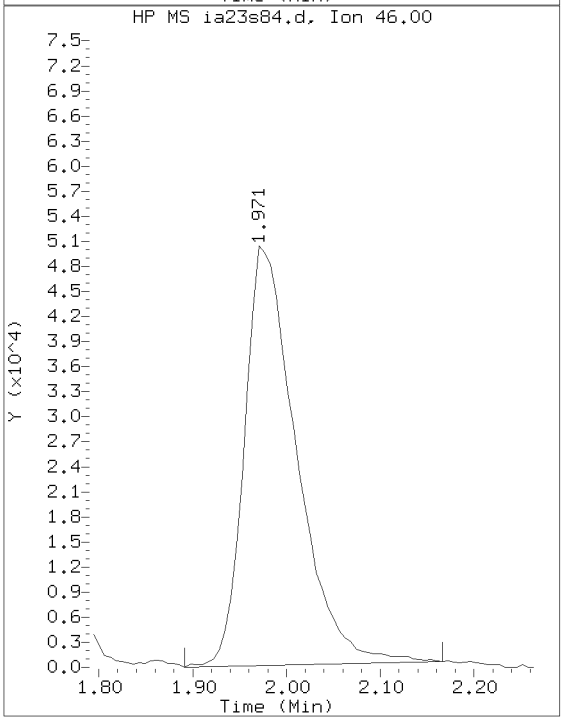
Reference Standard Spectrum for Dimethyl ether



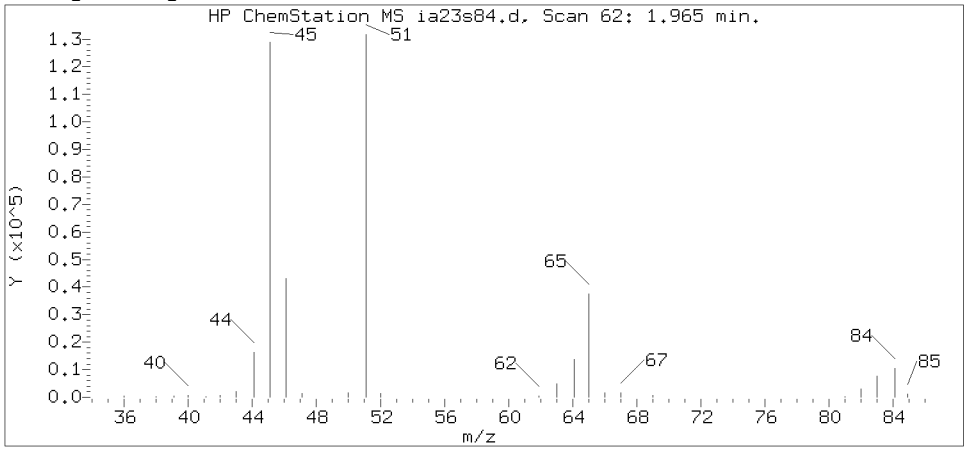


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 62
Retention Time (minutes)	: 1.965
Relative Retention Time	: 0.00318
Quant Ion	: 45.00
Area (flag)	: 536898
On-Column Amount (ng)	: 7.1989

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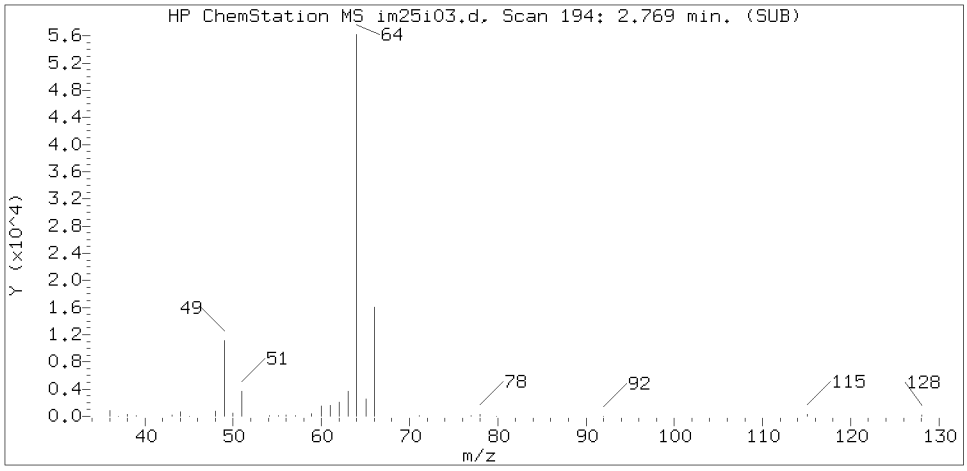
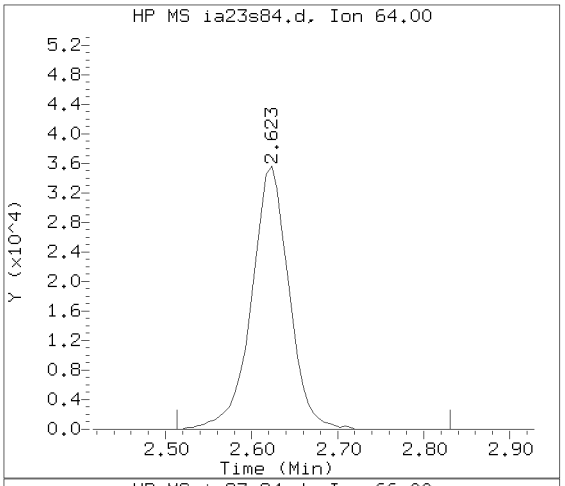
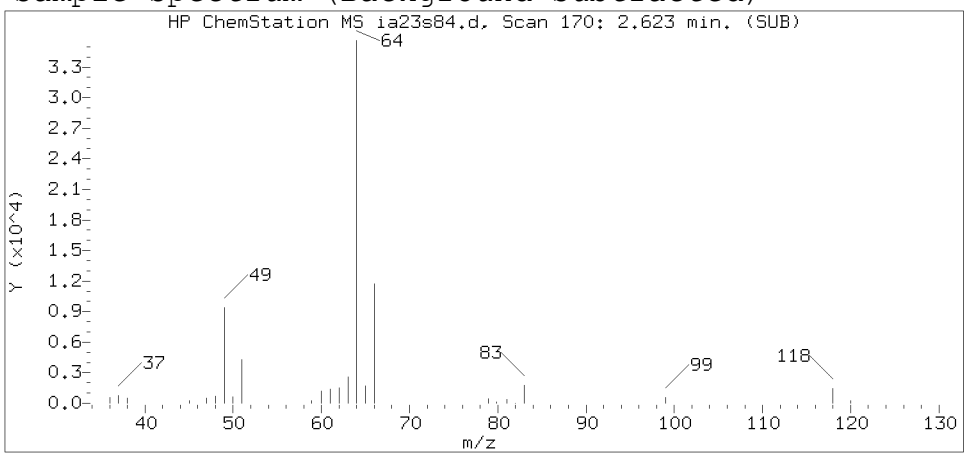
Target 3.5 esignature user ID: jkh09052

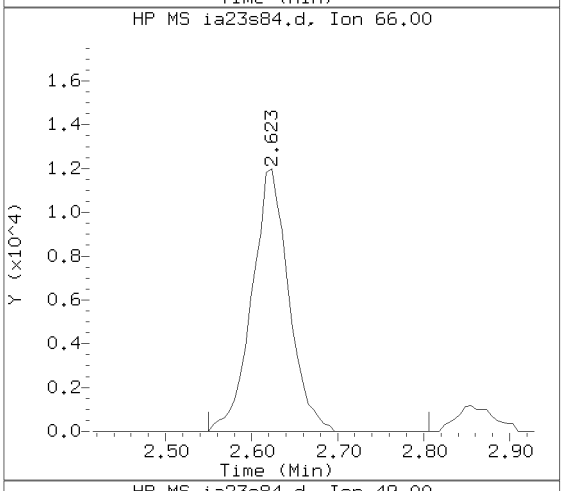
Reference Standard Spectrum for Chloroethane



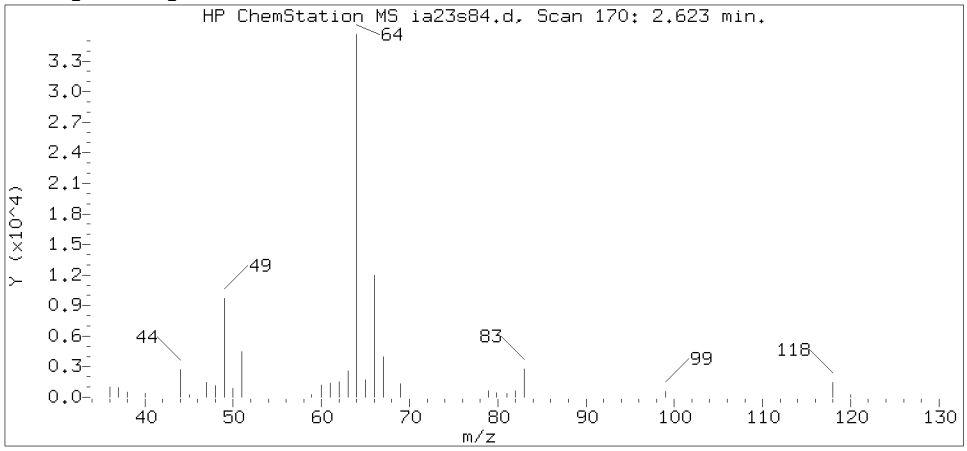


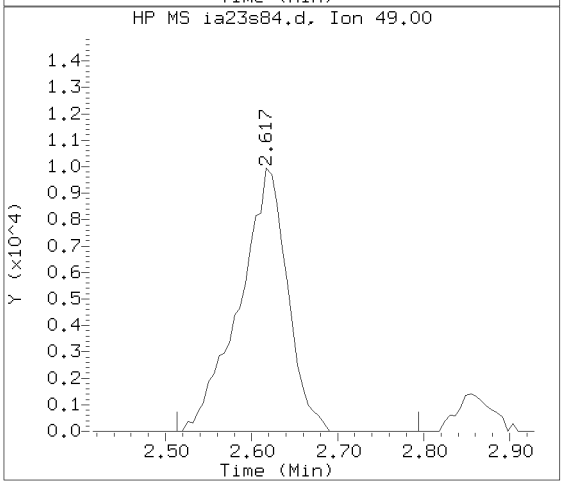
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 170
Retention Time (minutes): 2.623
Relative Retention Time :-0.00000
Quant Ion : 64.00
Area (flag) : 107612
On-Column Amount (ng) : 2.5402

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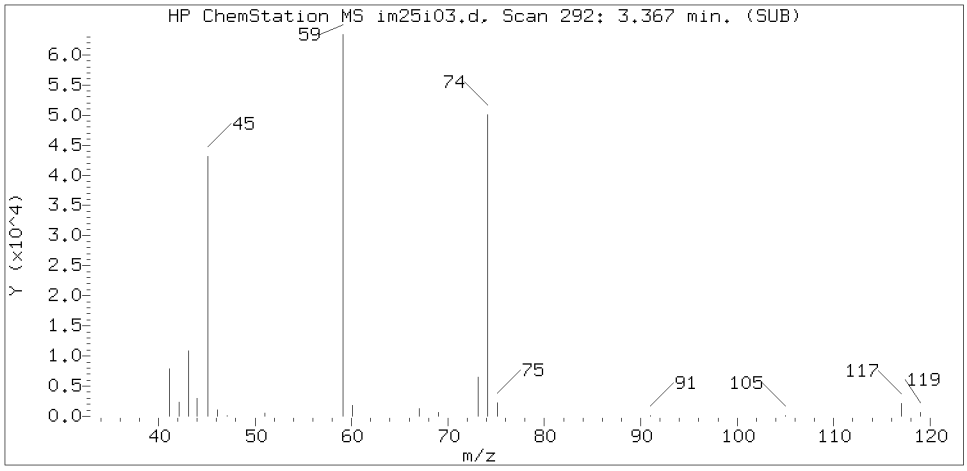
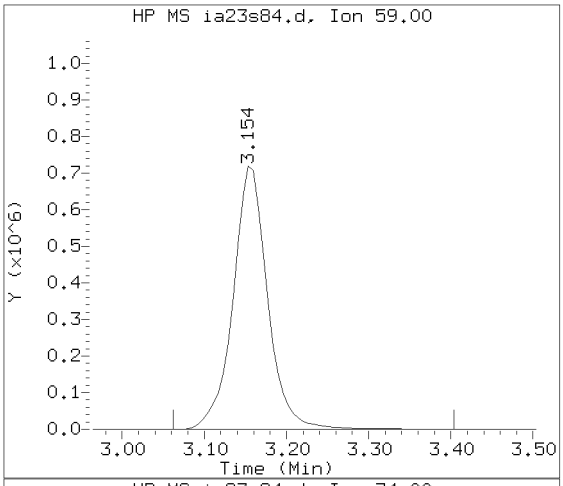
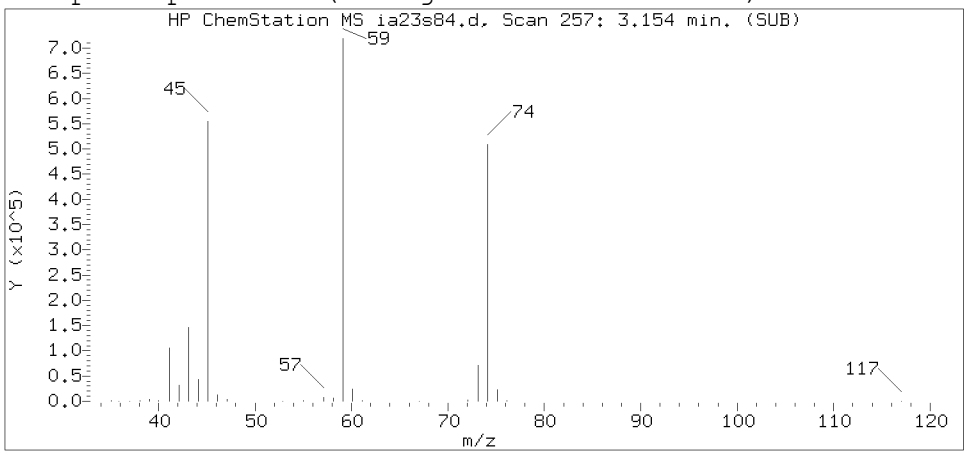
Target 3.5 esignature user ID: jkh09052

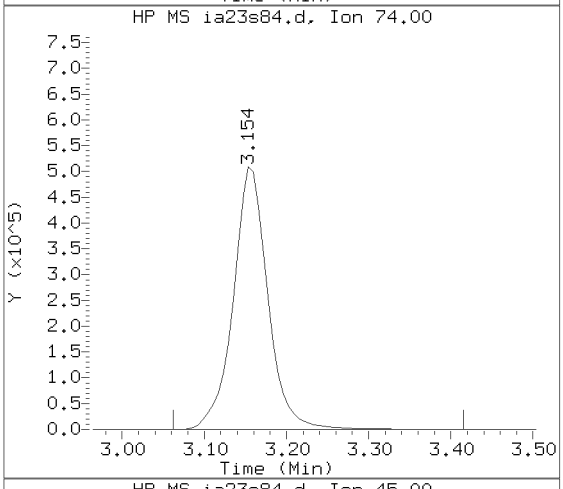
Reference Standard Spectrum for Ethyl ether



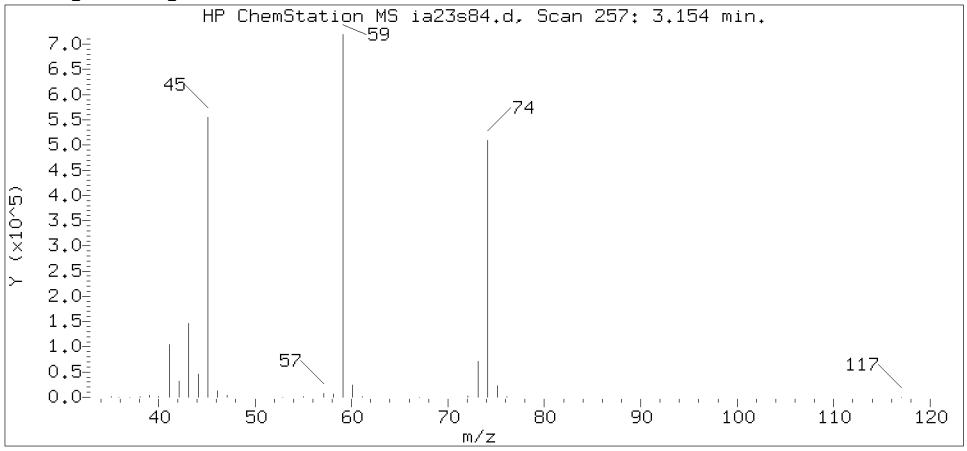


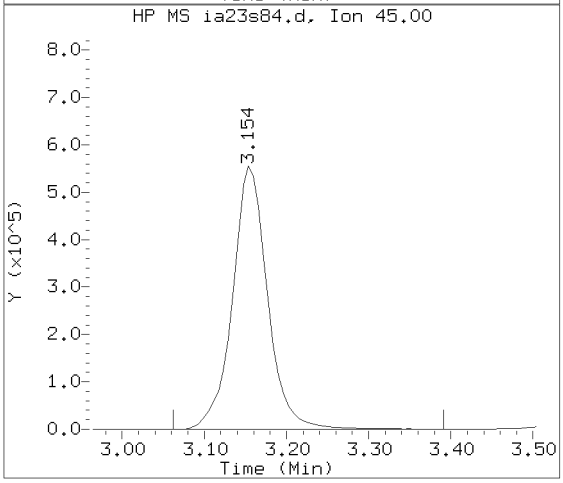
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 257
Retention Time (minutes): 3.154
Relative Retention Time :-0.00000
Quant Ion : 59.00
Area (flag) : 2104304
On-Column Amount (ng) : 45.6449

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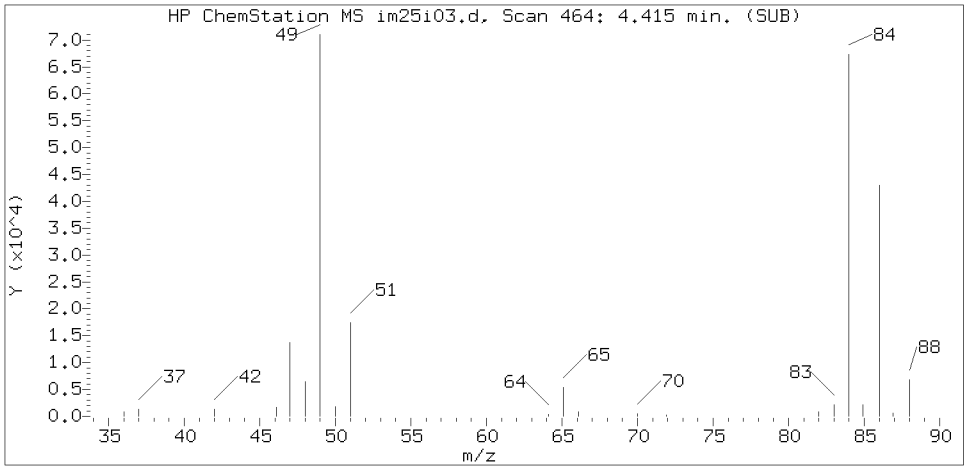
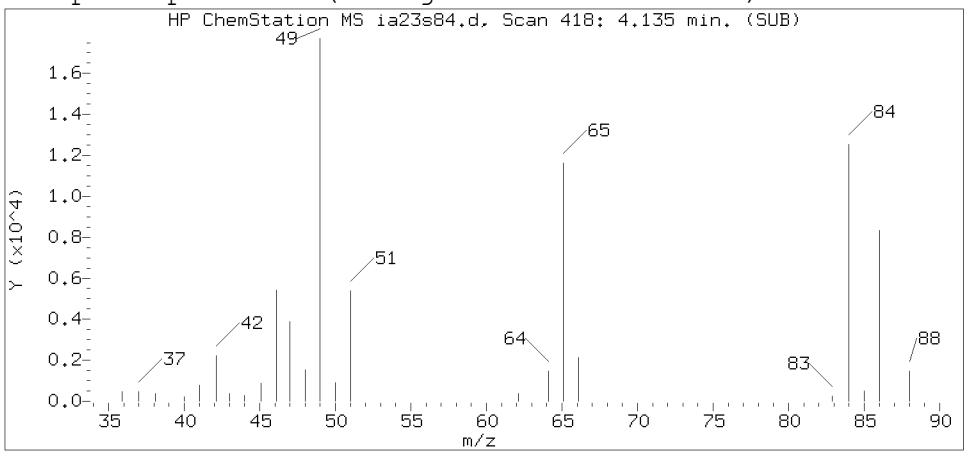
Target 3.5 esignature user ID: jkh09052

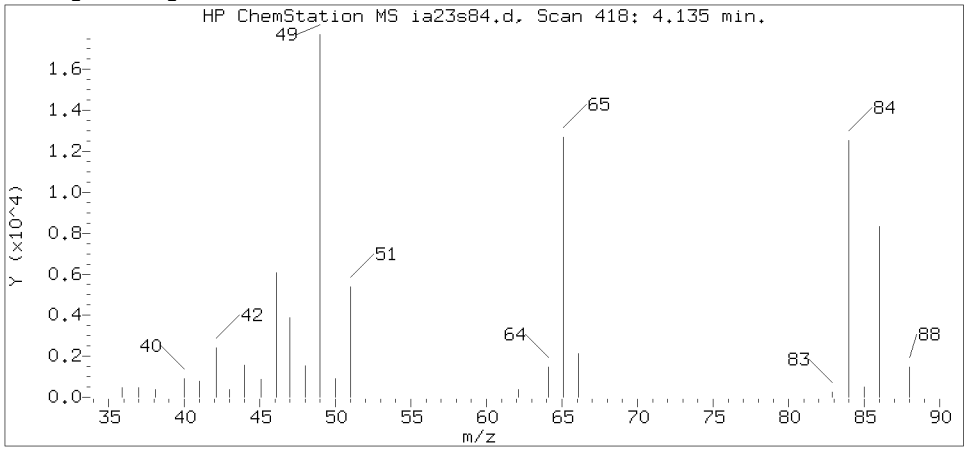
Reference Standard Spectrum for Methylene Chloride

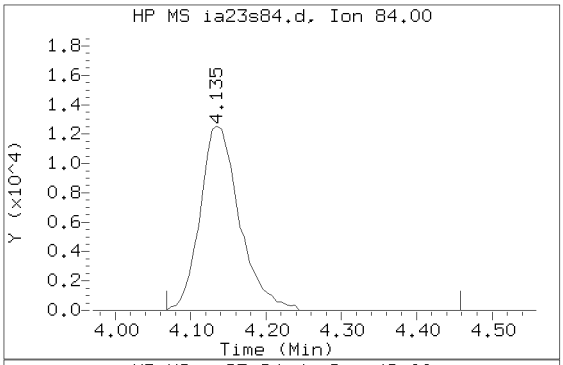


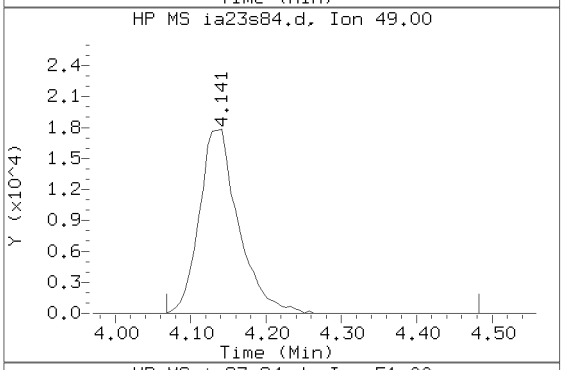
Sample Spectrum (Background Subtracted)

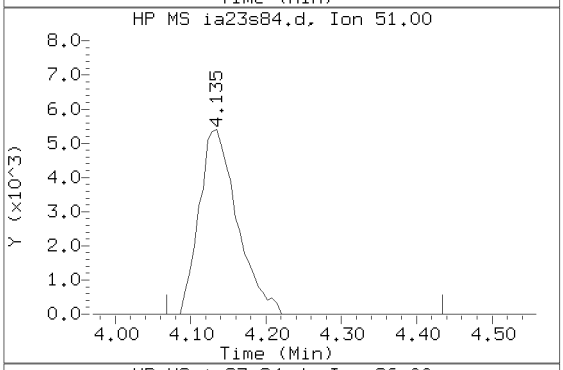


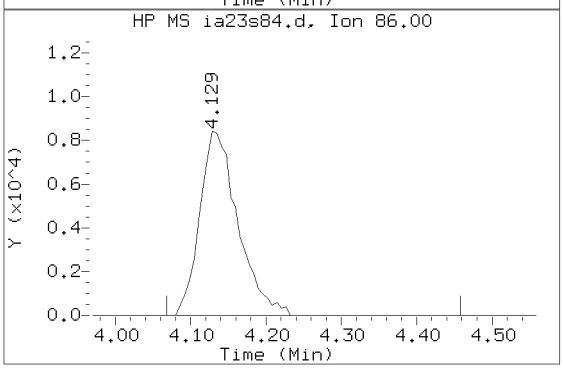
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 418
Retention Time (minutes): 4.135
Relative Retention Time :-0.00000
Quant Ion : 84.00
Area (flag) : 45541
On-Column Amount (ng) : 0.8466

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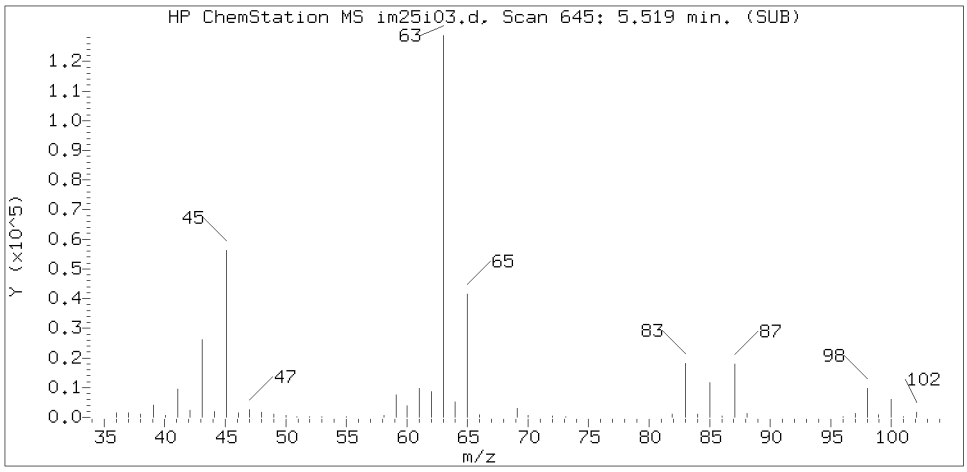
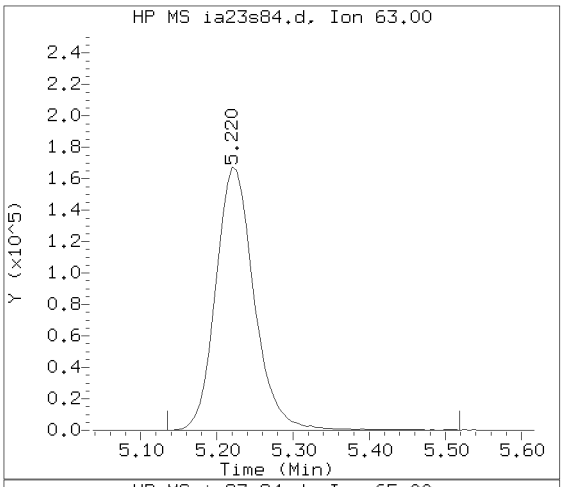
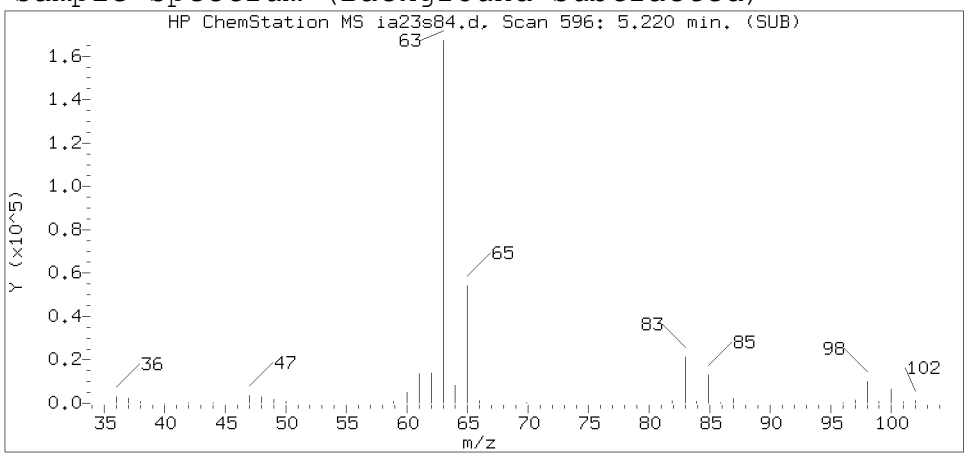
Target 3.5 esignature user ID: jkh09052

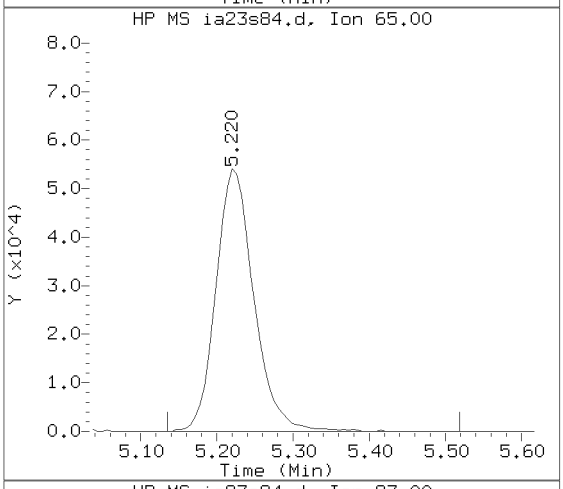
Reference Standard Spectrum for 1,1-Dichloroethane



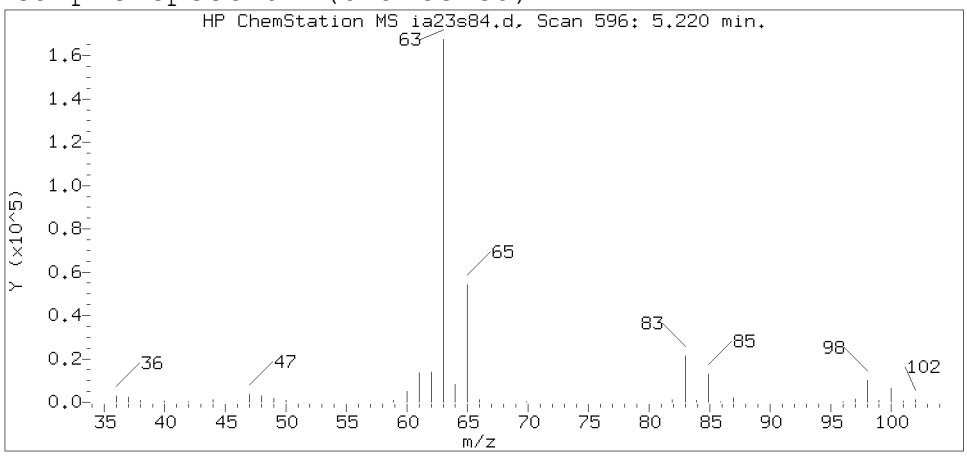


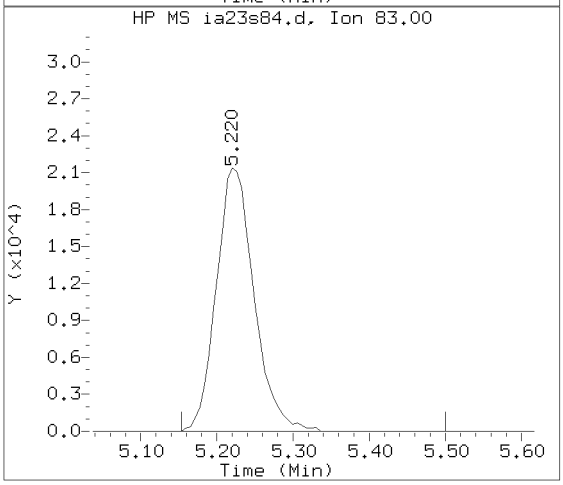
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number	: 33
Compound Name	: 1,1-Dichloroethane
Scan Number	: 596
Retention Time (minutes)	: 5.220
Relative Retention Time	: 0.00000
Quant Ion	: 63.00
Area (flag)	: 588713
On-Column Amount (ng)	: 5.8581

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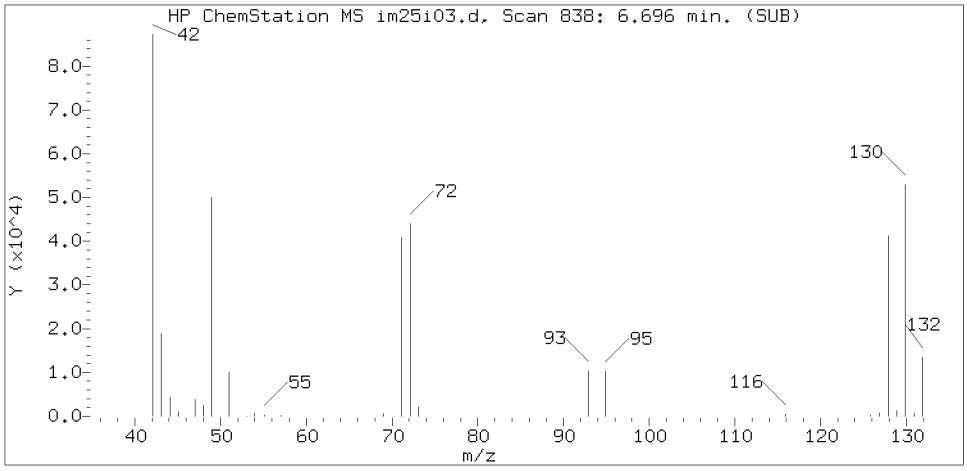
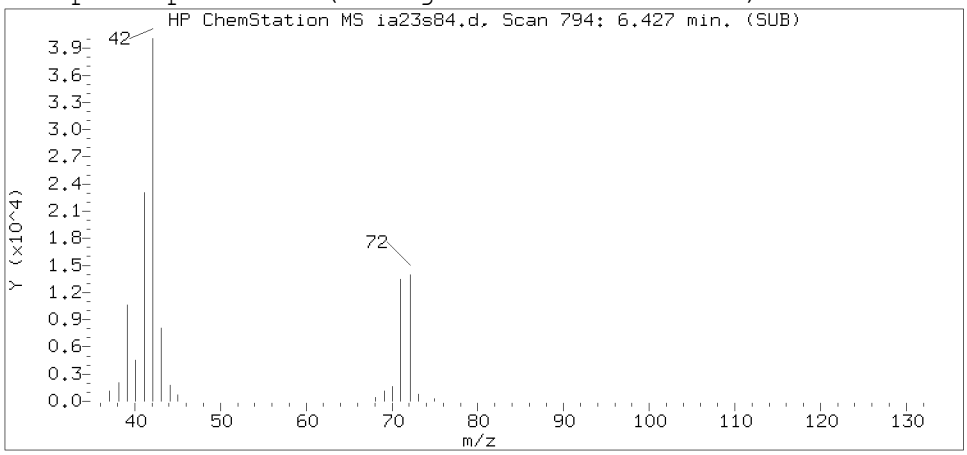
Target 3.5 esignature user ID: jkh09052

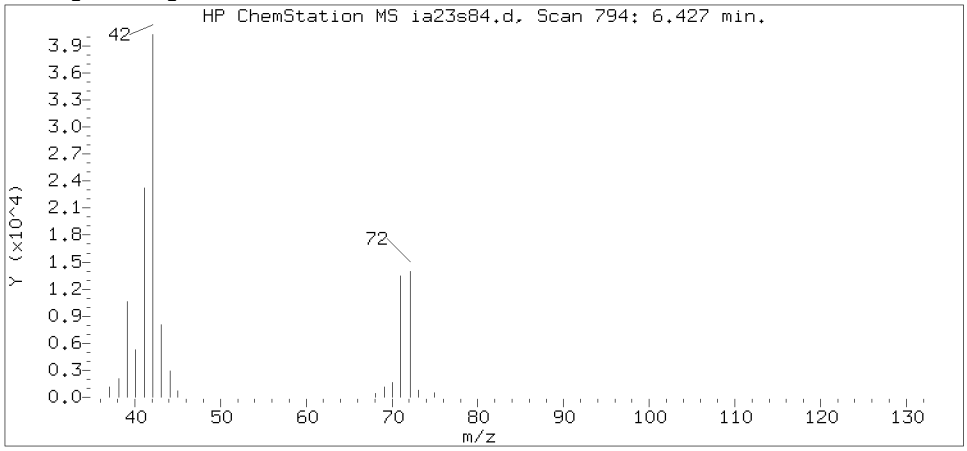
Reference Standard Spectrum for Tetrahydrofuran

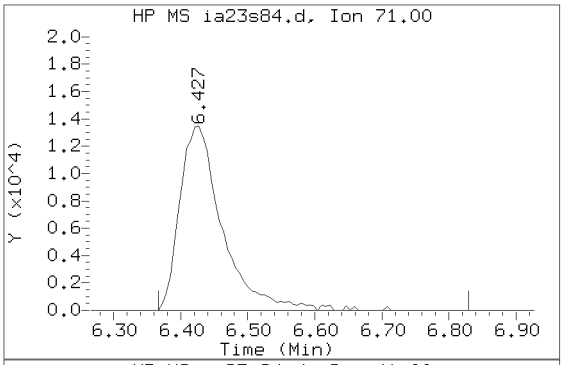


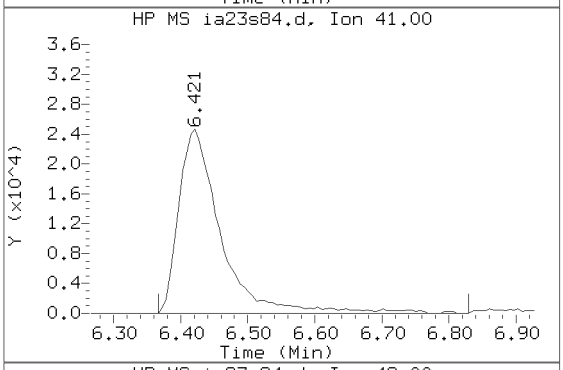
Sample Spectrum (Background Subtracted)

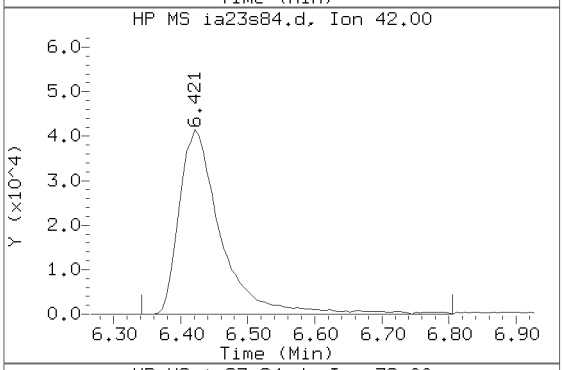


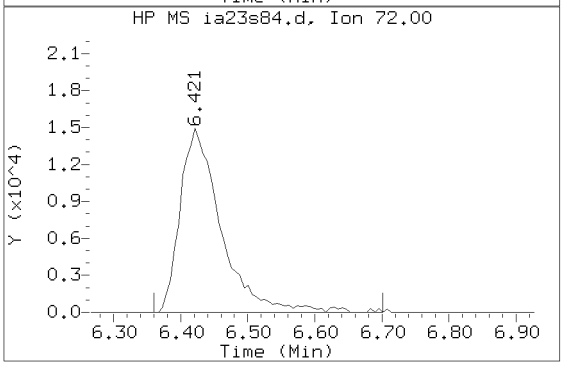
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 794
Retention Time (minutes): 6.427
Relative Retention Time :-0.00442
Quant Ion : 71.00
Area (flag) : 59505
On-Column Amount (ng) : 15.6431

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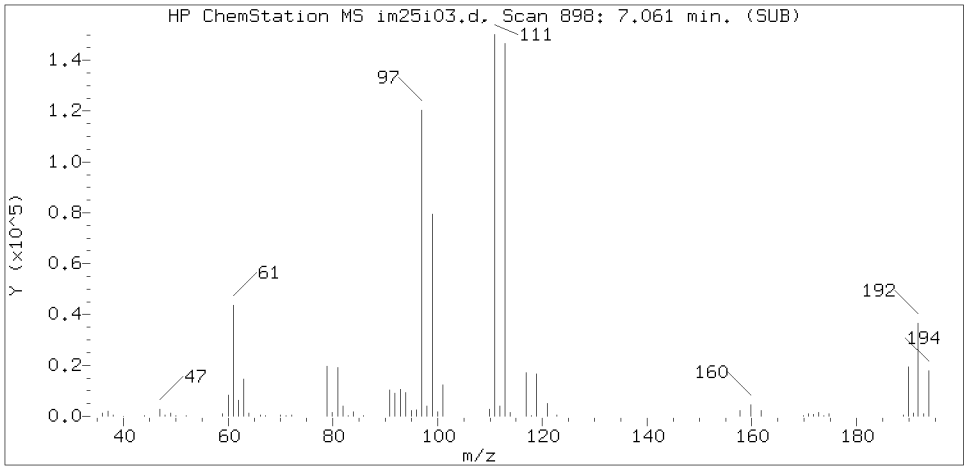
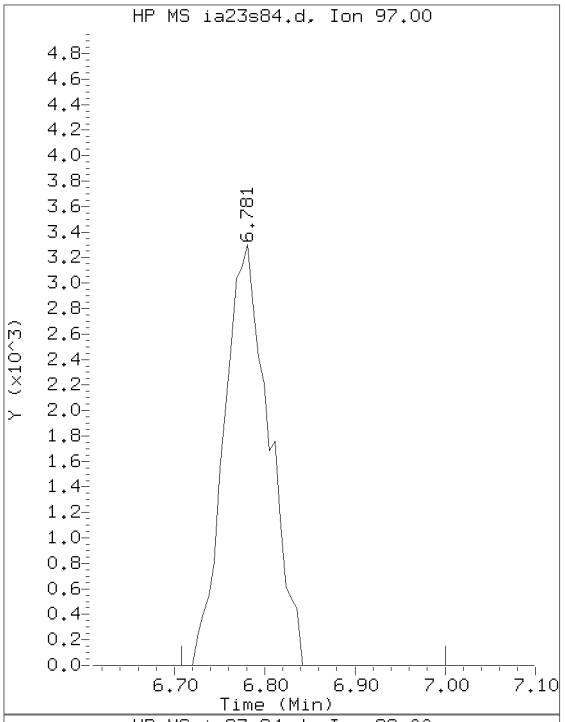
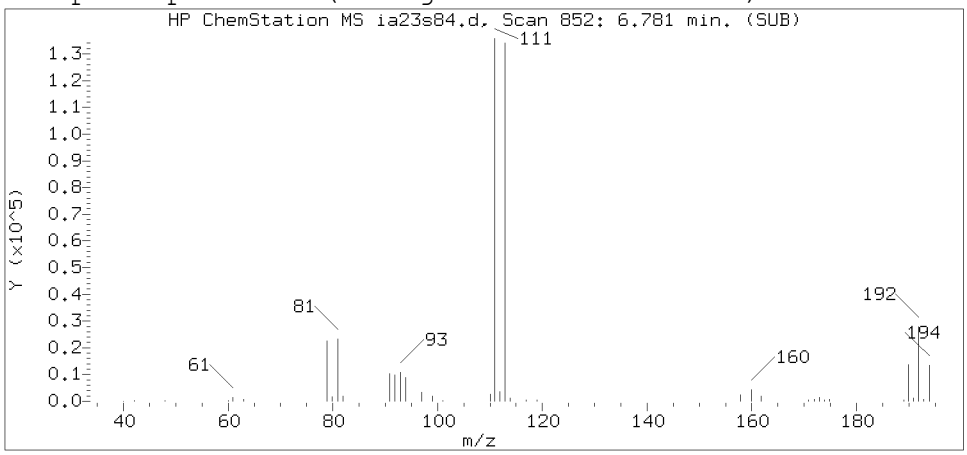
Target 3.5 esignature user ID: jkh09052

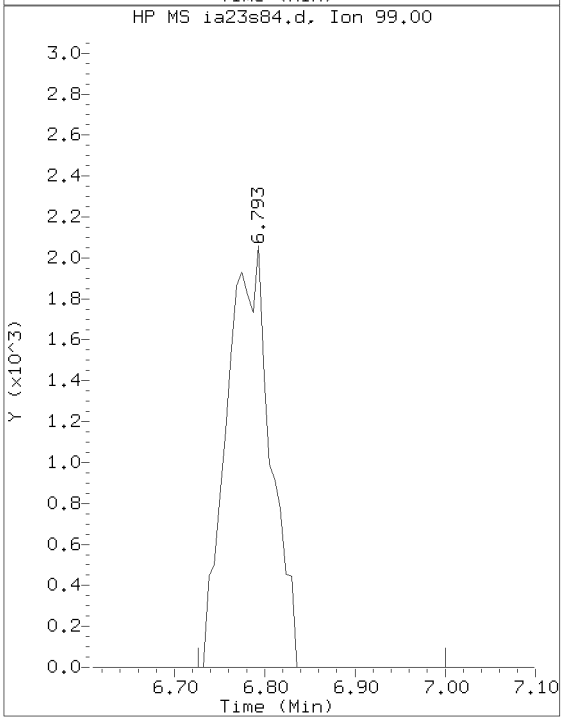
Reference Standard Spectrum for 1,1,1-Trichloroethane



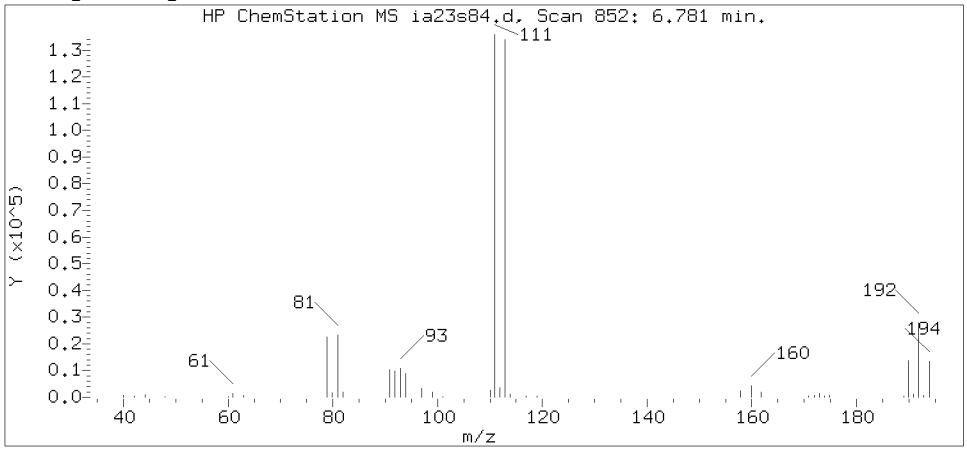


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 852
Retention Time (minutes): 6.781
Relative Retention Time :-0.00079
Quant Ion : 97.00
Area (flag) : 11392
On-Column Amount (ng) : 0.1447

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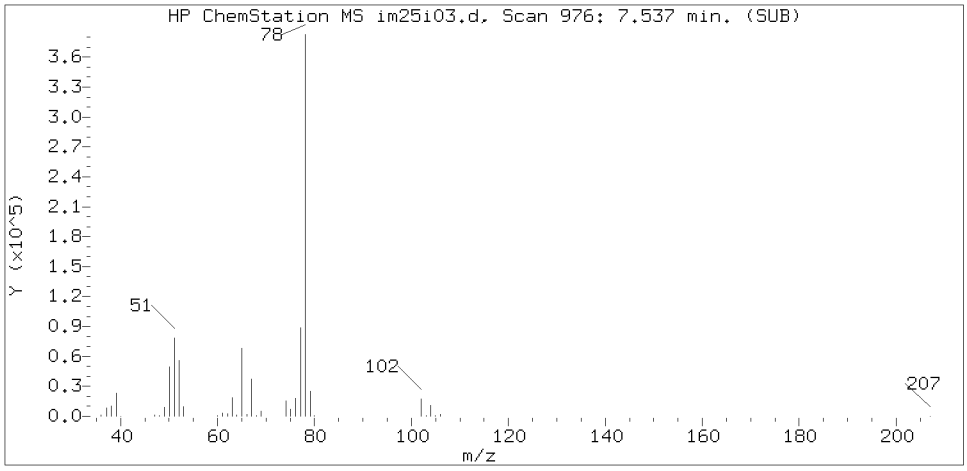
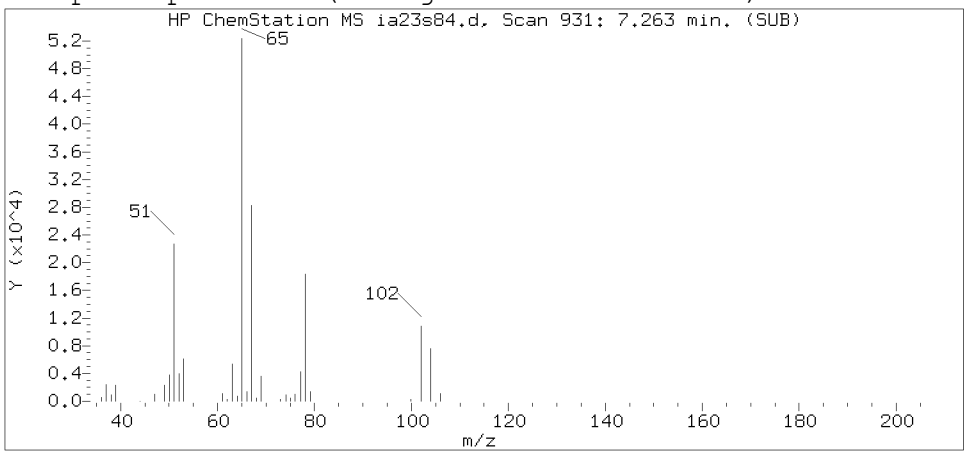
Target 3.5 esignature user ID: jkh09052

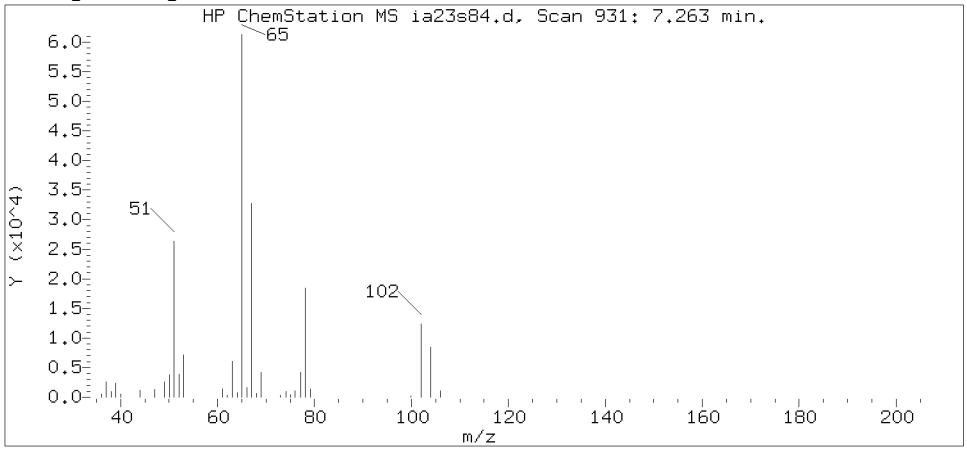
Reference Standard Spectrum for Benzene

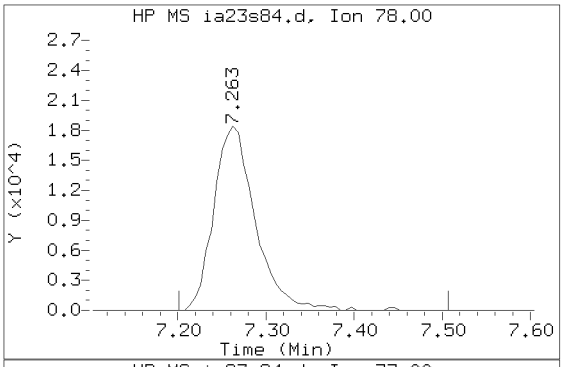


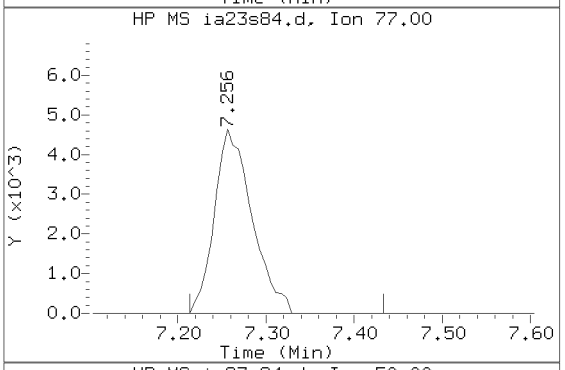
Sample Spectrum (Background Subtracted)

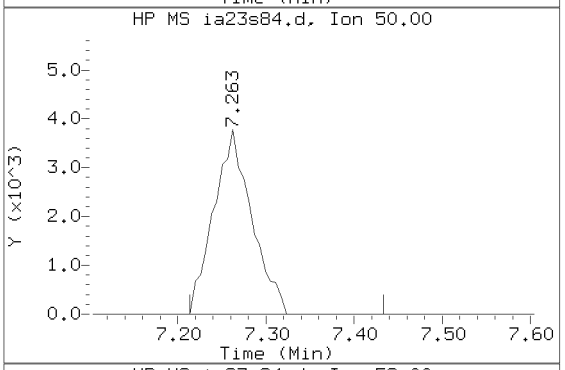


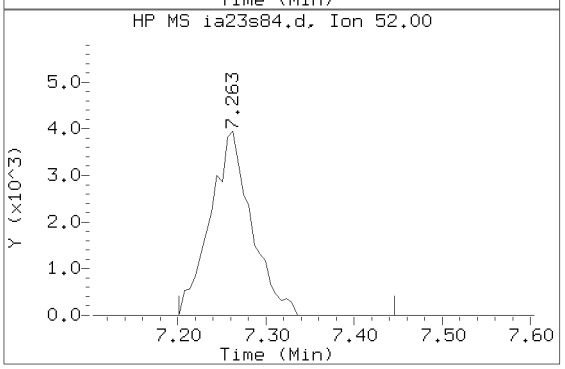
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

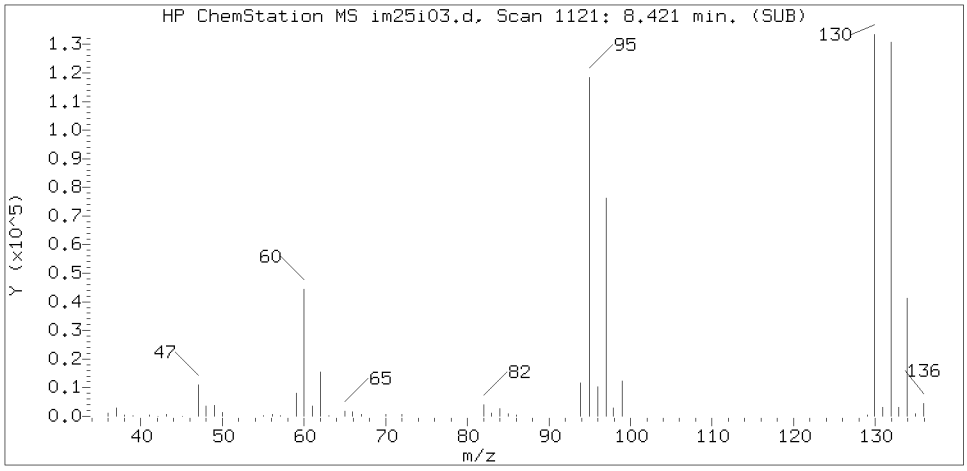
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

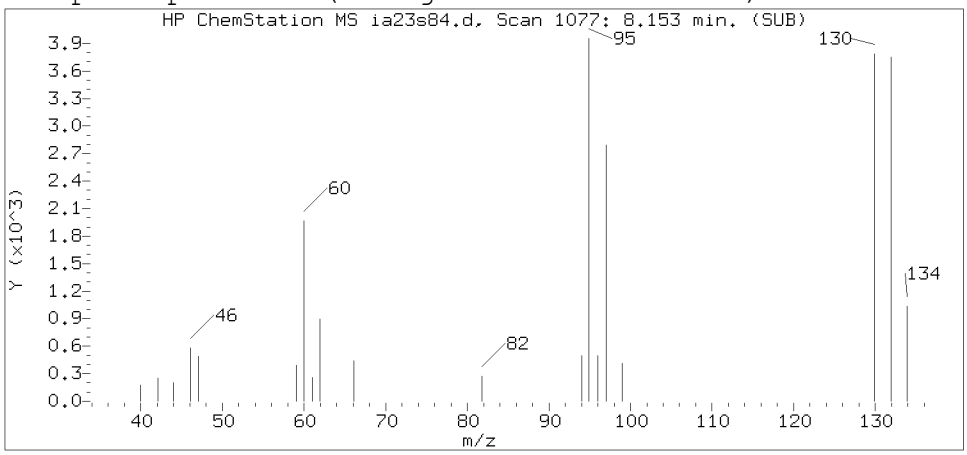
Compound Number : 58
Compound Name : Benzene
Scan Number : 931
Retention Time (minutes): 7.263
Relative Retention Time :-0.00079
Quant Ion : 78.00
Area (flag) : 60407
On-Column Amount (ng) : 0.2676

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:40.
Target 3.5 esignature user ID: jkh09052

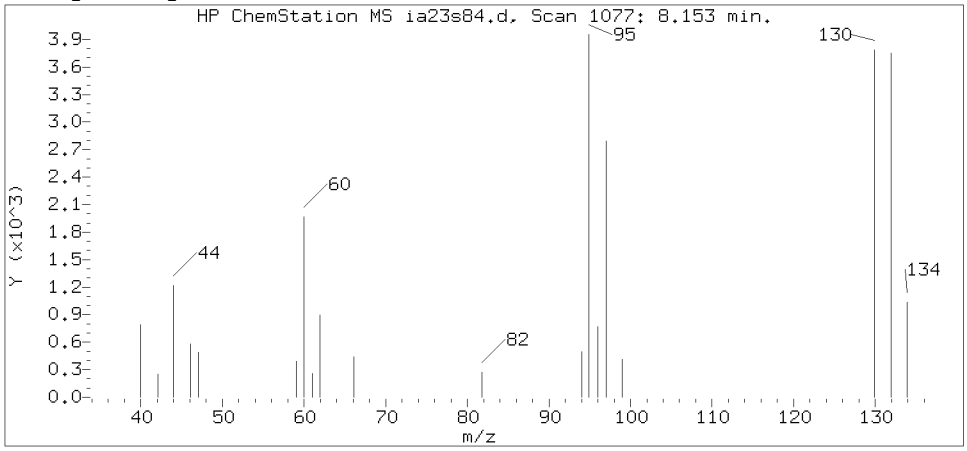
Reference Standard Spectrum for Trichloroethene

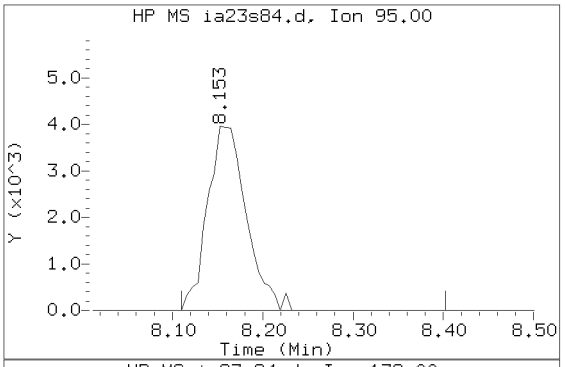


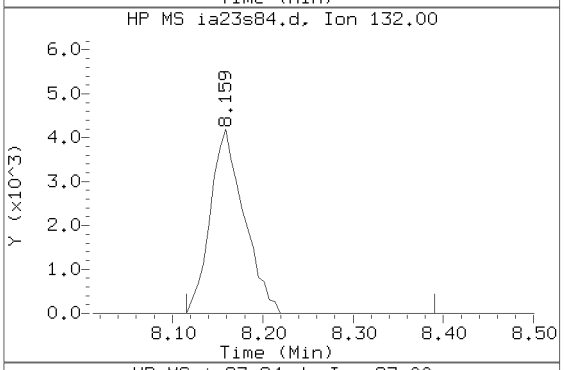
Sample Spectrum (Background Subtracted)

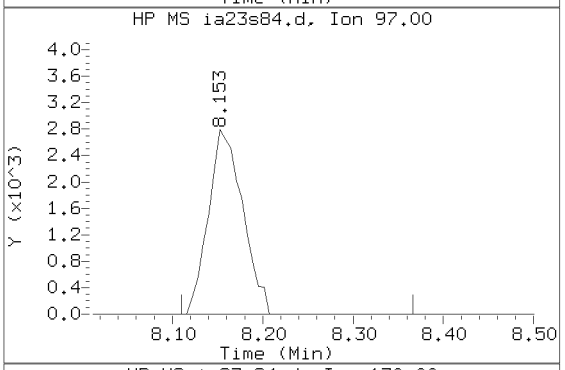


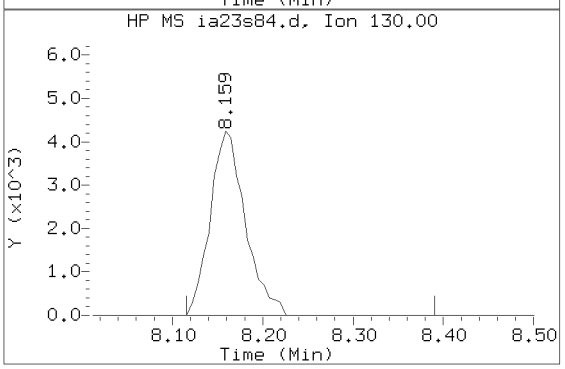
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1077
Retention Time (minutes): 8.153
Relative Retention Time :-0.00079
Quant Ion : 95.00
Area (flag) : 11792
On-Column Amount (ng) : 0.2063

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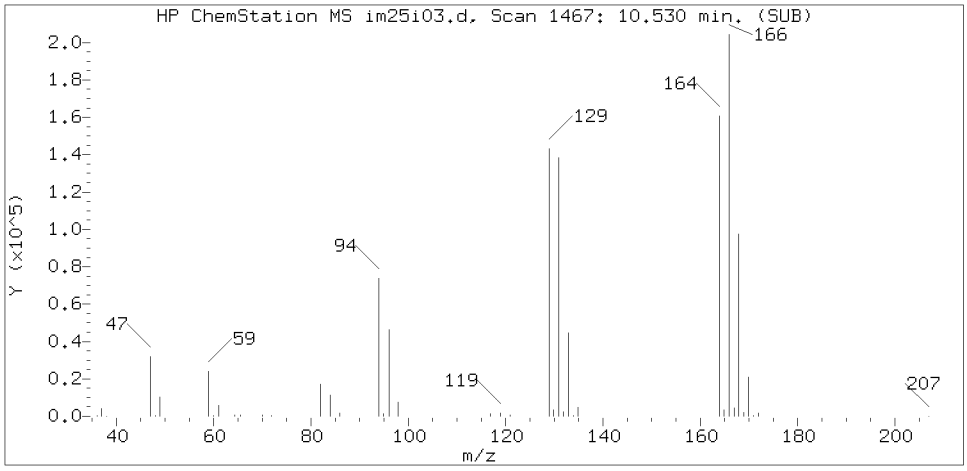
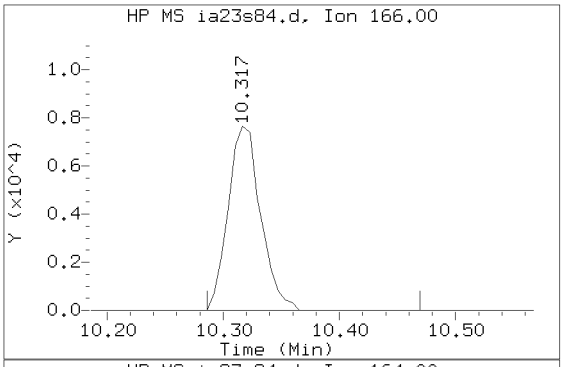
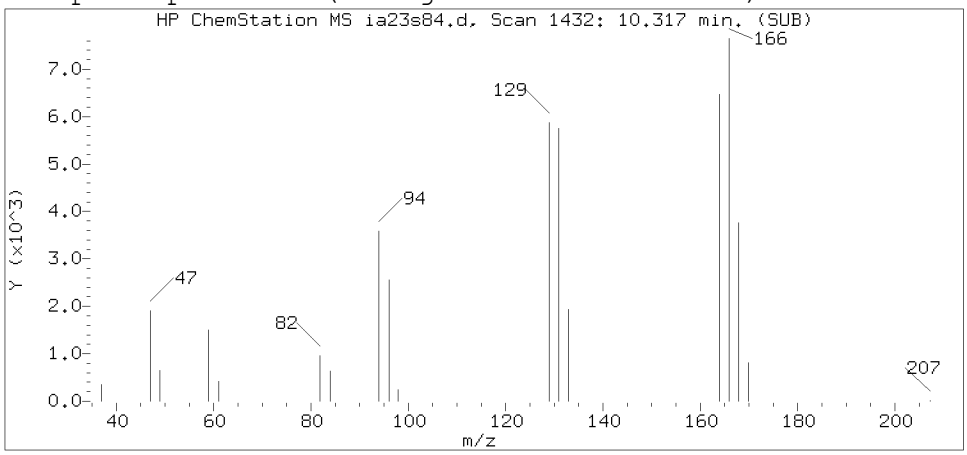
Target 3.5 esignature user ID: jkh09052

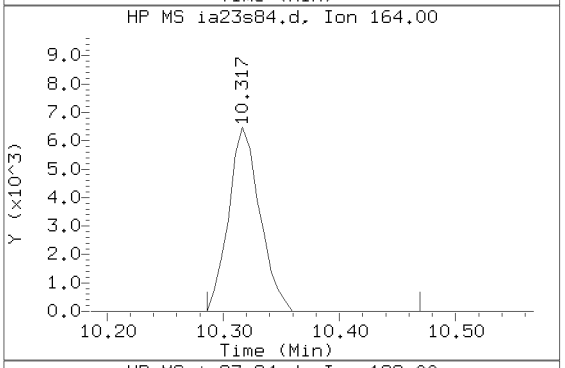
Reference Standard Spectrum for Tetrachloroethene

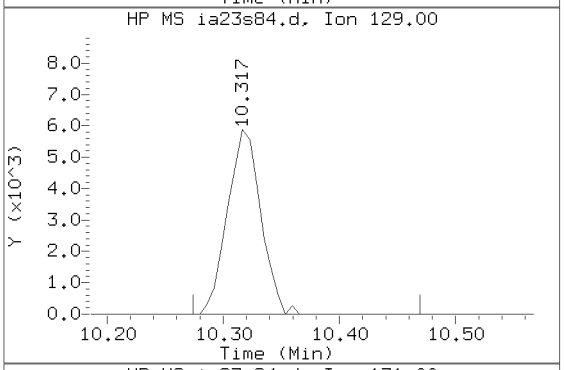




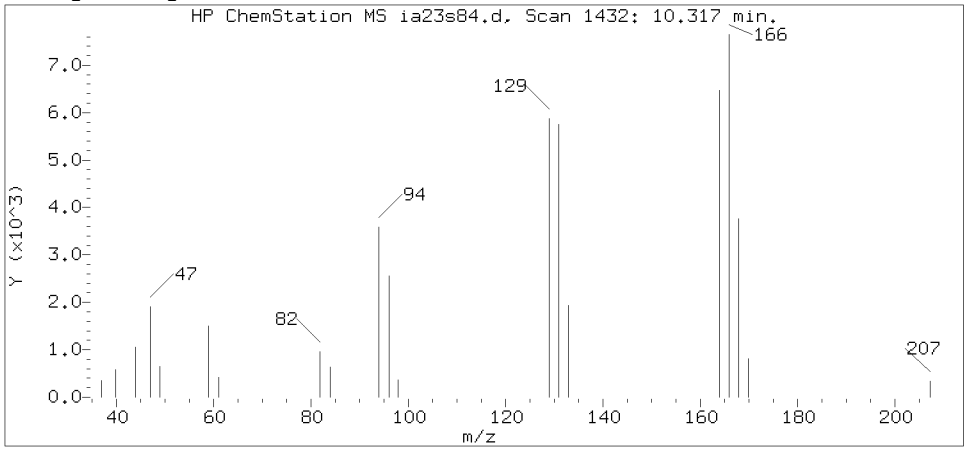
Sample Spectrum (Background Subtracted)

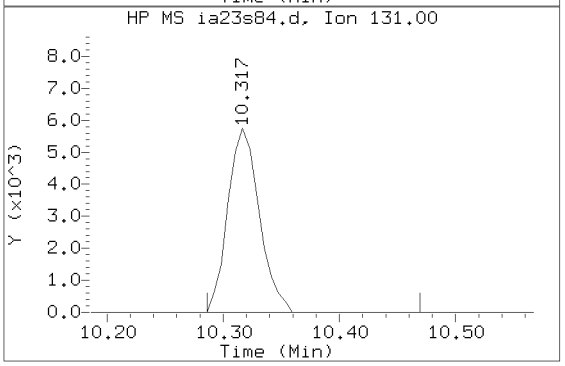






Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s84.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:28 jkh09052

Sample Name: R0601 Lab Sample ID: 9558695

Compound Number	: 89
Compound Name	: Tetrachloroethene
Scan Number	: 1432
Retention Time (minutes)	: 10.317
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 14665
On-Column Amount (ng)	: 0.2495

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Target 3.5 esignature user ID: jkh09052

R0601DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9558695DL

Data file: /chem2/HP19930.i/18apr24b.b/ia24s45.d Injection date and time: **24-APR-2018 23:17**
Data file Sample Info. Line: R0601DL;9558695DL;1;0;;RAF06;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: **038E** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **2.50**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Analysis Comments:9179; 9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	135760	(-17)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	2087465	(-5)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1547594	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	828373	(-6)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	510495	10.479	105%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(0.000)	102	105492	9.954	100%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	2098131	10.041	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	731805	9.918	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.4	3
4) Dimethyl ether	(2)	1.983	(-0.000)	45	309980	3.860	9.65		J	0.3	31
2) Chloromethane	(2)				Not Detected					0.5	1
5) Vinyl Chloride	(2)				Not Detected					0.4	3
7) Bromomethane	(2)				Not Detected					1	3
8) Chloroethane	(2)	2.629	(-0.000)	64	59197	1.298	3.24			0.3	1
10) Trichlorofluoromethane	(2)				Not Detected					0.4	3
11) Ethyl ether	(2)	3.166	(-0.000)	59	871493	17.557	43.89			3	31
13) Acrolein	(1)				Not Detected					13	63
15) 1,1-Dichloroethene	(2)				Not Detected					0.6	3
16) Freon 113	(2)				Not Detected					0.5	3
14) Acetone	(1)				Not Detected					8	25
17) Methyl Iodide	(2)				Not Detected					1	25
18) Carbon Disulfide	(2)				Not Detected					1	25
25) Acetonitrile	(1)				Not Detected					79	250
22) Allyl Chloride	(2)				Not Detected					2	25
23) Methylene Chloride	(2)	4.147	(-0.001)	84	17618	0.304	0.76		J	0.5	3
29) Acrylonitrile	(1)				Not Detected					3	25
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.4	3
33) 1,1-Dichloroethane	(2)	5.232	(-0.001)	63	220679	2.039	5.10			0.3	3
36) Vinyl Acetate	(2)				Not Detected					8	25
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					1	25
38) 2-Butanone	(1)				Not Detected					3	25
42) Propionitrile	(1)				Not Detected					26	250
45) Methacrylonitrile	(1)				Not Detected					24	250
48) Tetrahydrofuran	(1)	6.440	(-0.007)	71	25577	6.316	15.79		J	5	63
49) Chloroform	(2)				Not Detected					0.3	3
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	3
54) Carbon Tetrachloride	(2)				Not Detected					0.4	3
56) Isobutyl Alcohol	(1)				Not Detected					25	500

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s45.d Injection date and time: **24-APR-2018 23:17**
Data file Sample Info. Line: R0601DL;9558695DL;1;0;;RAF06;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: **038E** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **2.50**

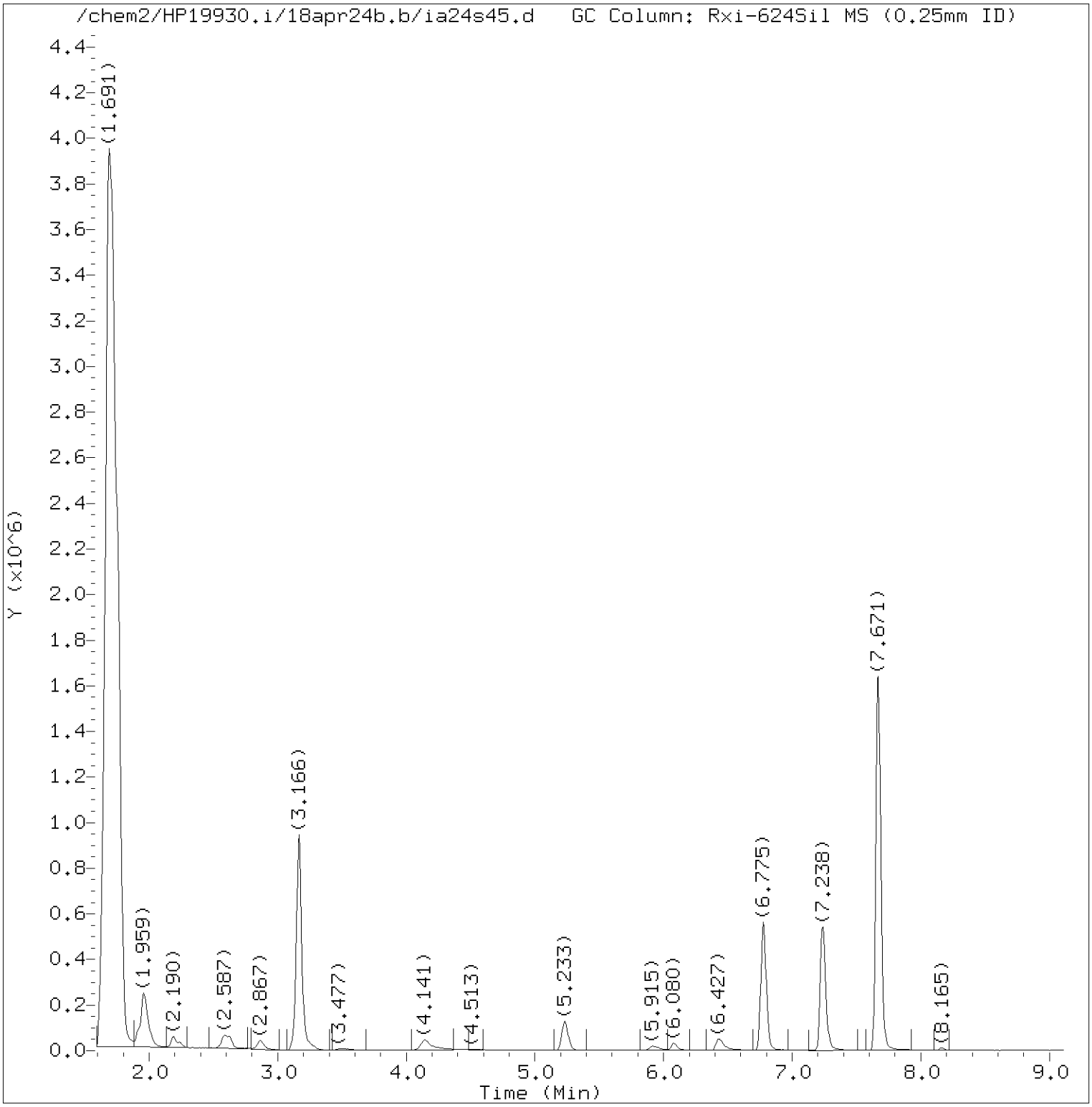
Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.3	3
59) 1,2-Dichloroethane	(2)				Not Detected					0.4	3
67) Trichloroethene	(2)				Not Detected					0.4	3
70) 1,2-Dichloropropane	(2)				Not Detected					0.3	3
71) Methyl Methacrylate	(1)				Not Detected					9	25
73) Dibromomethane	(2)				Not Detected					0.3	3
72) 1,4-Dioxane	(1)				Not Detected					110	500
74) Bromodichloromethane	(2)				Not Detected					0.3	3
81) 4-Methyl-2-Pentanone	(1)				Not Detected					3	25
83) Toluene	(3)				Not Detected					0.3	3
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	3
86) Ethyl Methacrylate	(3)				Not Detected					2	25
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.3	3
89) Tetrachloroethene	(3)				Not Detected					0.3	3
90) 1,3-Dichloropropane	(3)				Not Detected					0.3	3
91) 2-Hexanone	(1)				Not Detected					3	25
93) Dibromochloromethane	(3)				Not Detected					0.3	3
95) 1,2-Dibromoethane	(3)				Not Detected					0.3	3
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.3	3
100) Ethylbenzene	(3)				Not Detected					0.3	3
101) m+p-Xylene	(3)				Not Detected					0.3	1
104) o-Xylene	(3)				Not Detected					0.3	1
105) Xylene (Total)	(3)				Not Detected					0.5	8
106) Styrene	(3)				Not Detected					0.3	3
107) Bromoform	(3)				Not Detected					0.3	3
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	3
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					3	25
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.8	3
126) Pentachloroethane	(4)				Not Detected					2	25
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.3	3
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.3	3
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.3	3
142) Hexachloroethane	(4)				Not Detected					0.3	25
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.5	3
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	3
146) Hexachlorobutadiene	(4)				Not Detected					0.3	3
147) Naphthalene	(4)				Not Detected					0.3	3

Total number of targets = 67

Digitally signed by Don V. Viray on 04/25/2018 at 00:05. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

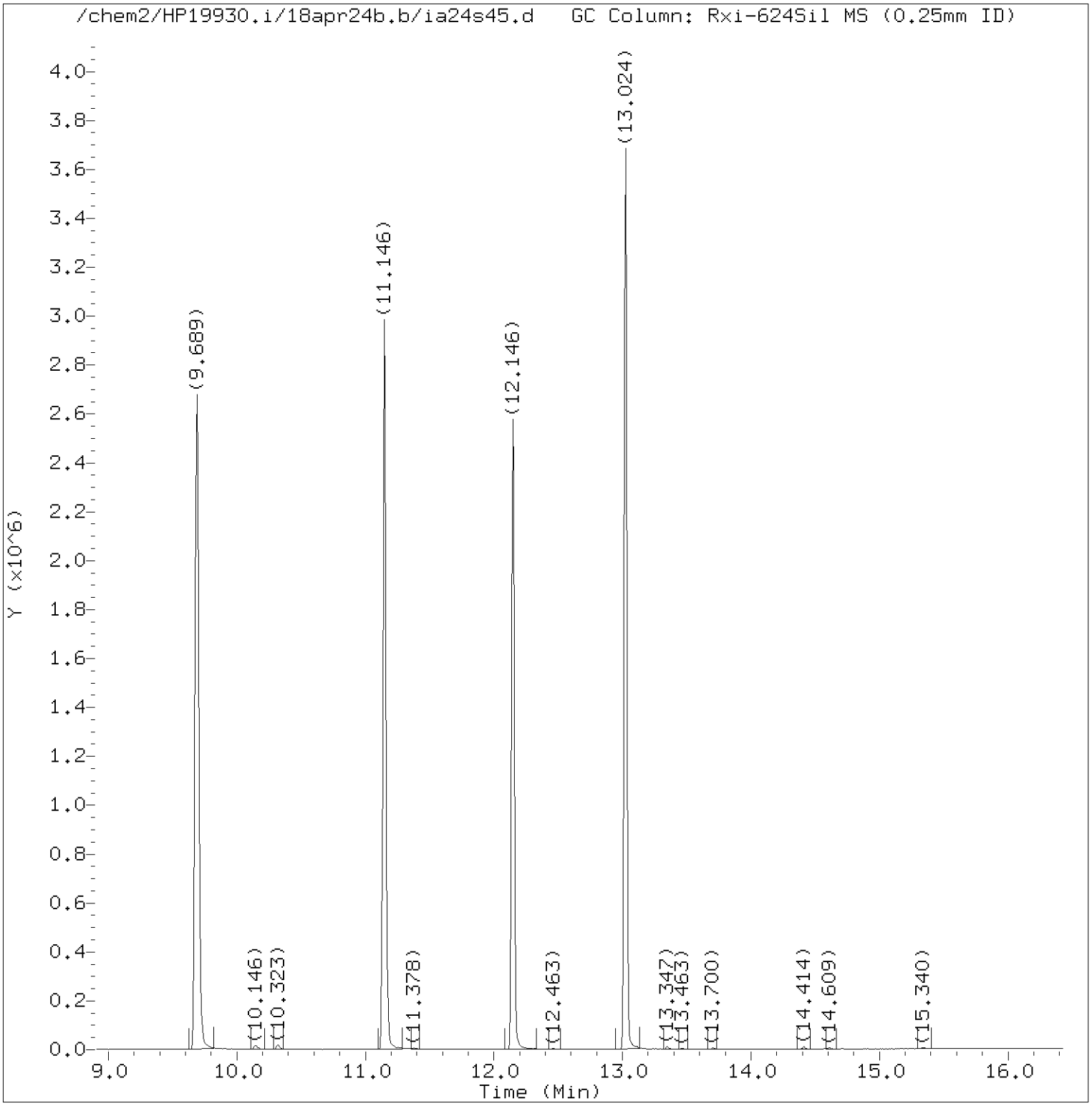
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

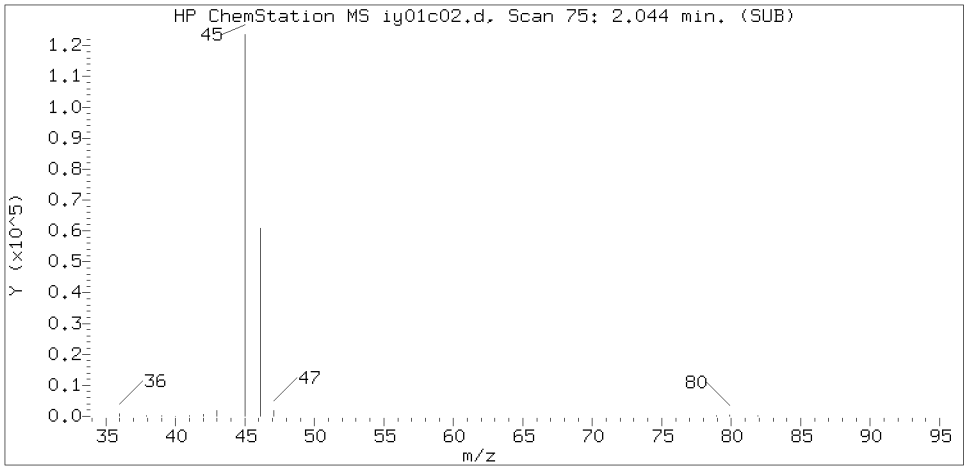
Sample Name: R0601DL Lab Sample ID: 9558695DL

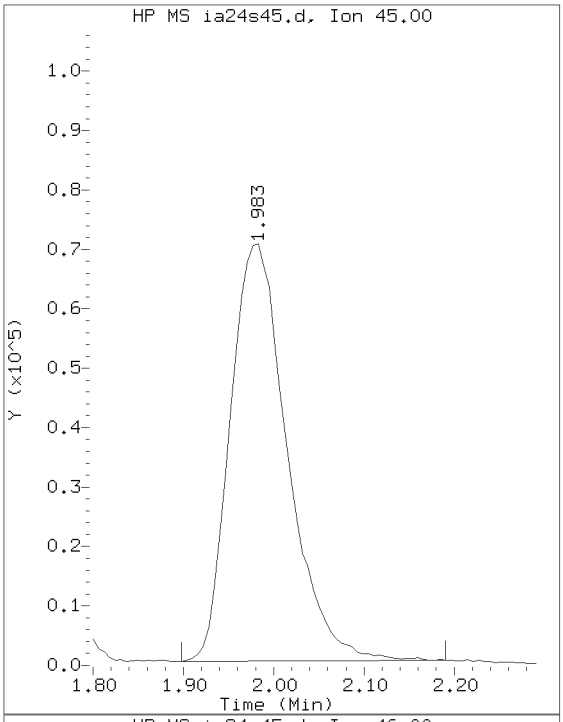
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	309980	3.860
8) Chloroethane	(2)	2.629	64	59197	1.298
11) Ethyl ether	(2)	3.166	59	871493	17.557
26)*t-Butyl Alcohol-d10	(1)	4.135	65	135760	50.000
23) Methylene Chloride	(2)	4.147	84	17618	0.304
33) 1,1-Dichloroethane	(2)	5.233	63	220679	2.039
48) Tetrahydrofuran	(1)	6.440	71	25577	6.316
50)$Dibromofluoromethane	(2)	6.775	113	510495	10.479
57)$1,2-Dichloroethane-d4	(2)	7.238	102	105492	9.954
63)*Fluorobenzene	(2)	7.671	96	2087465	10.000
82)$Toluene-d8	(3)	9.689	98	2098131	10.041
97)*Chlorobenzene-d5	(3)	11.146	117	1547594	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	731805	9.918
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	828373	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

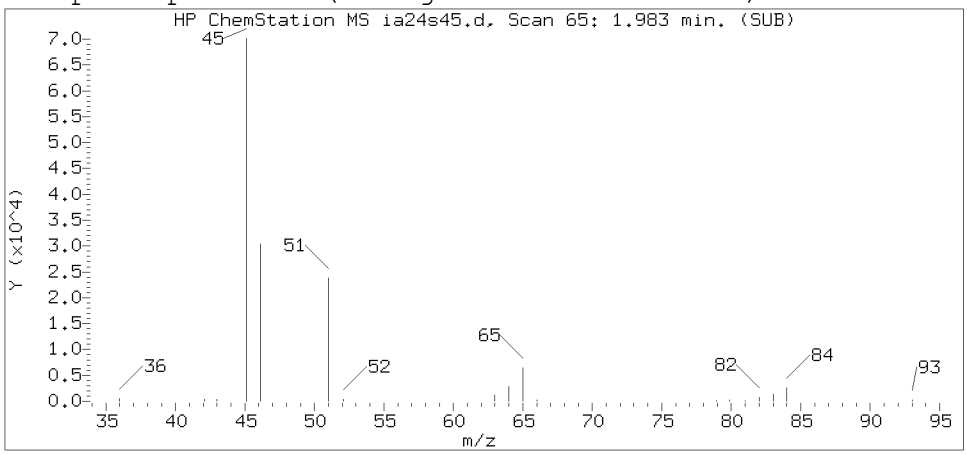
Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

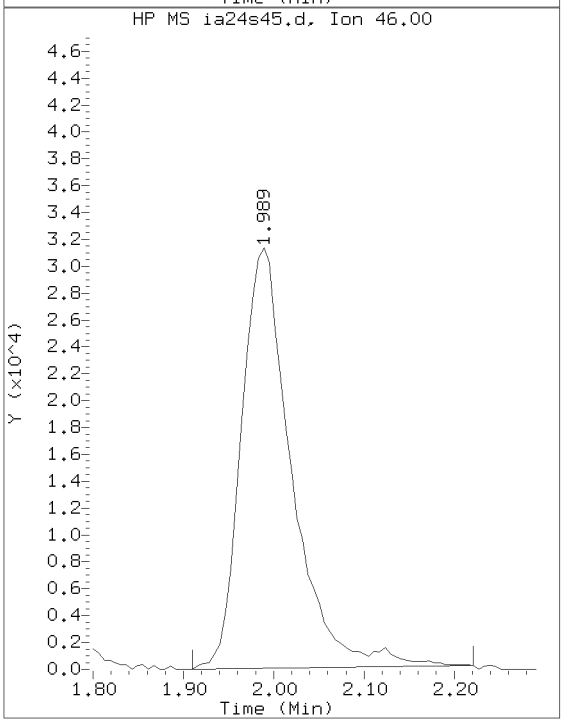
Reference Standard Spectrum for Dimethyl ether



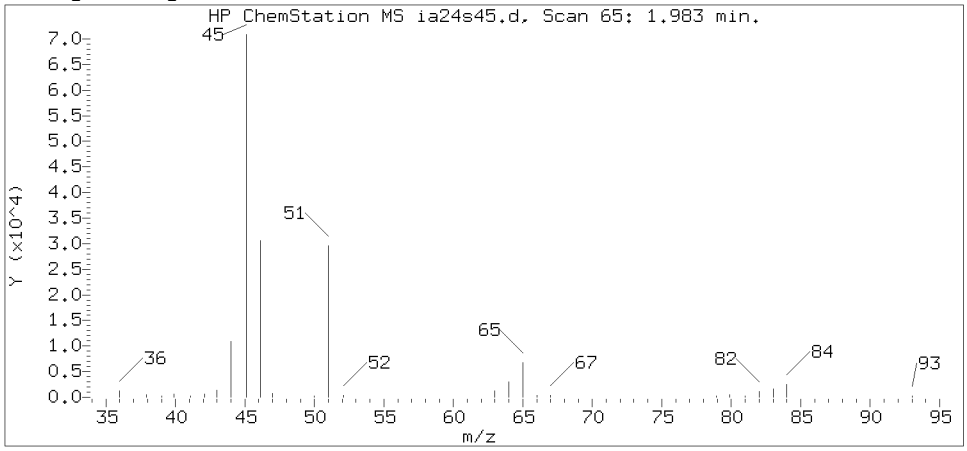


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

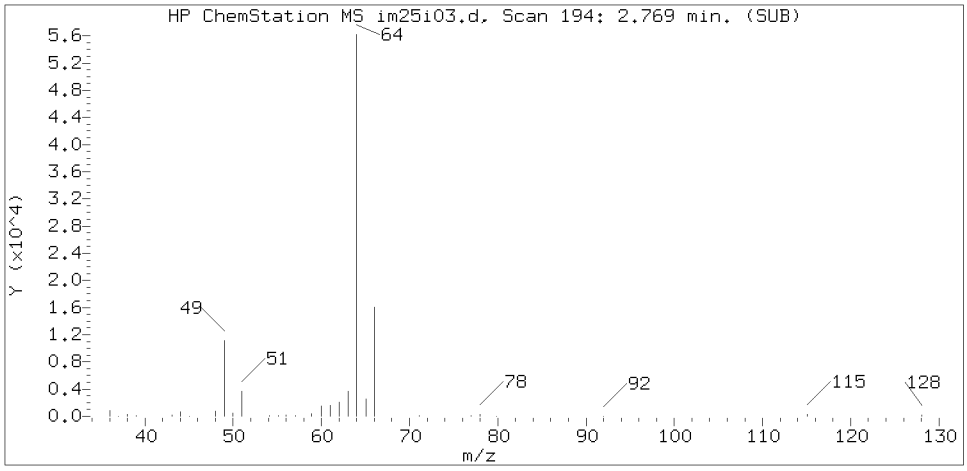
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

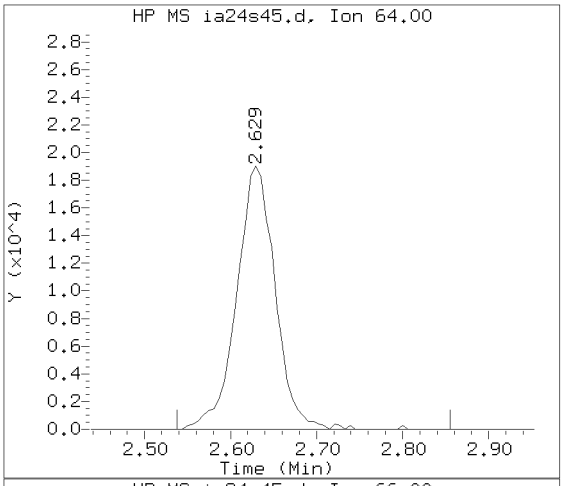
Sample Name: R0601DL Lab Sample ID: 9558695DL

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 65
Retention Time (minutes): 1.983
Relative Retention Time :-0.00059
Quant Ion : 45.00
Area (flag) : 309980
On-Column Amount (ng) : 3.8602

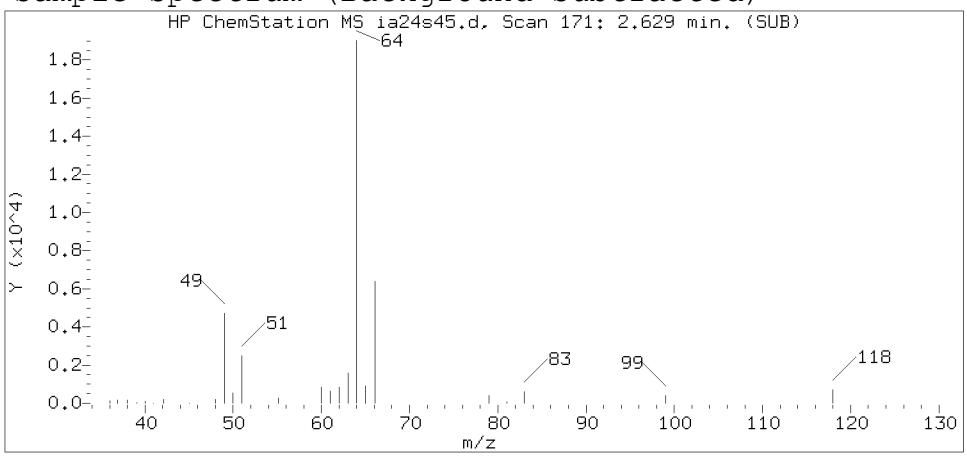
Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

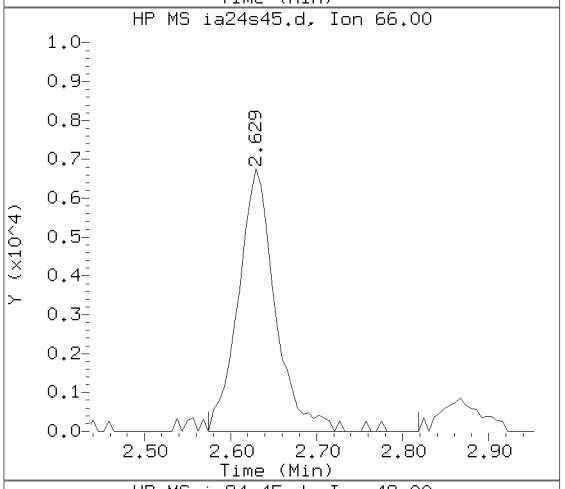
Reference Standard Spectrum for Chloroethane



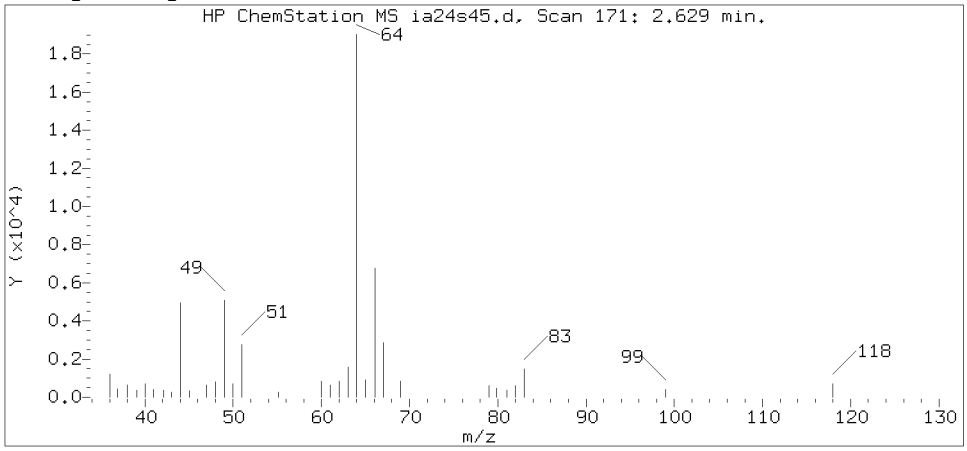


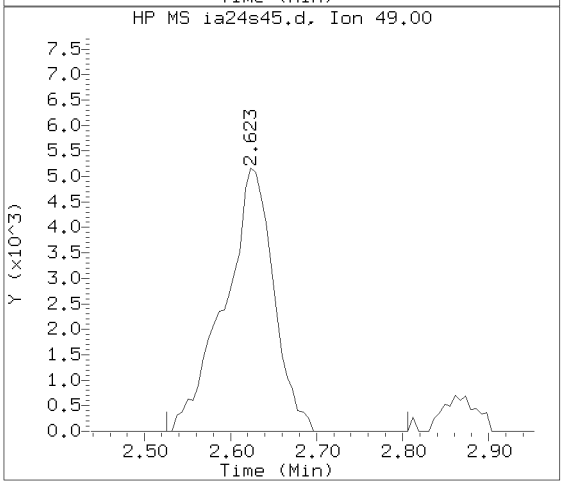
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

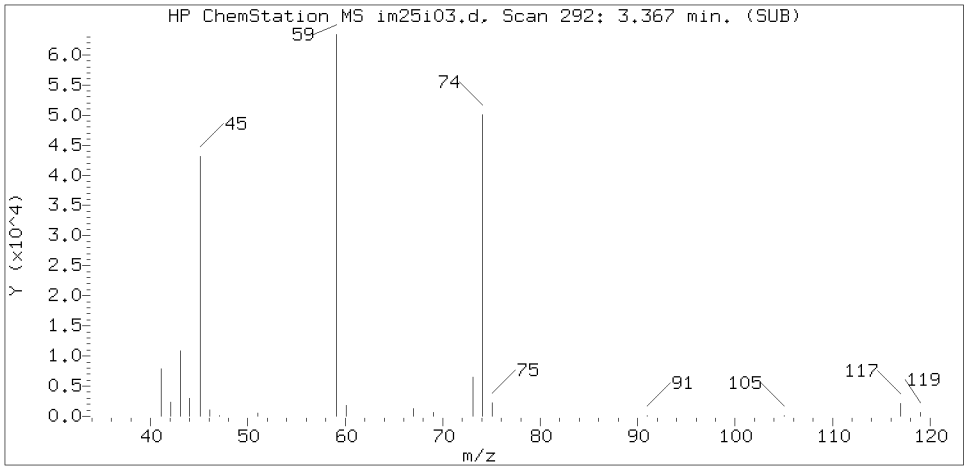
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

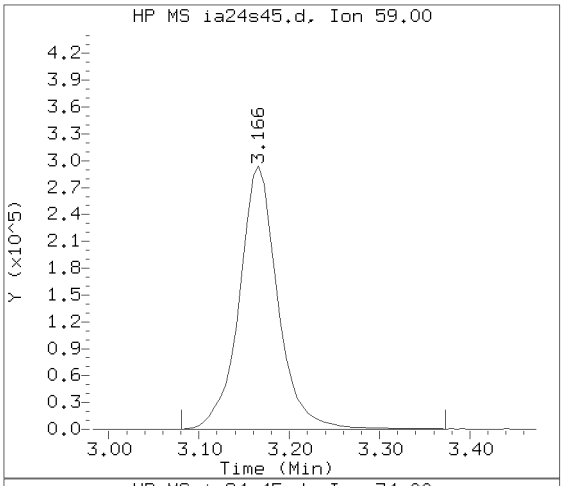
Sample Name: R0601DL Lab Sample ID: 9558695DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 171
Retention Time (minutes): 2.629
Relative Retention Time :-0.00054
Quant Ion : 64.00
Area (flag) : 59197
On-Column Amount (ng) : 1.2978

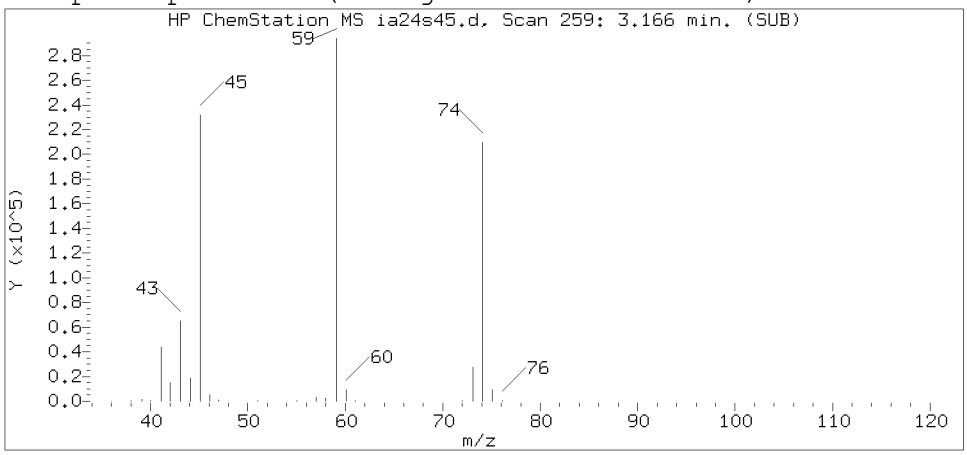
Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

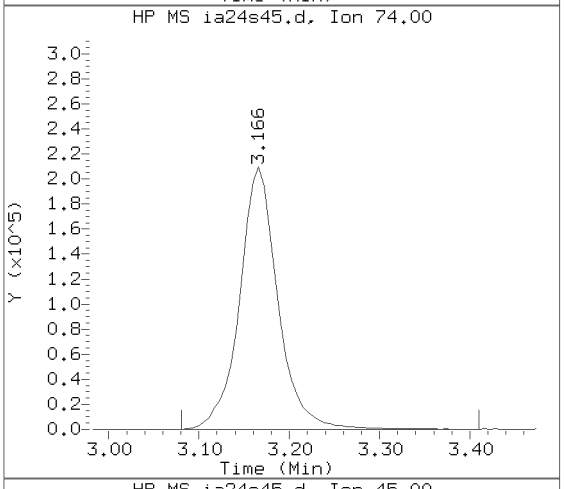
Reference Standard Spectrum for Ethyl ether



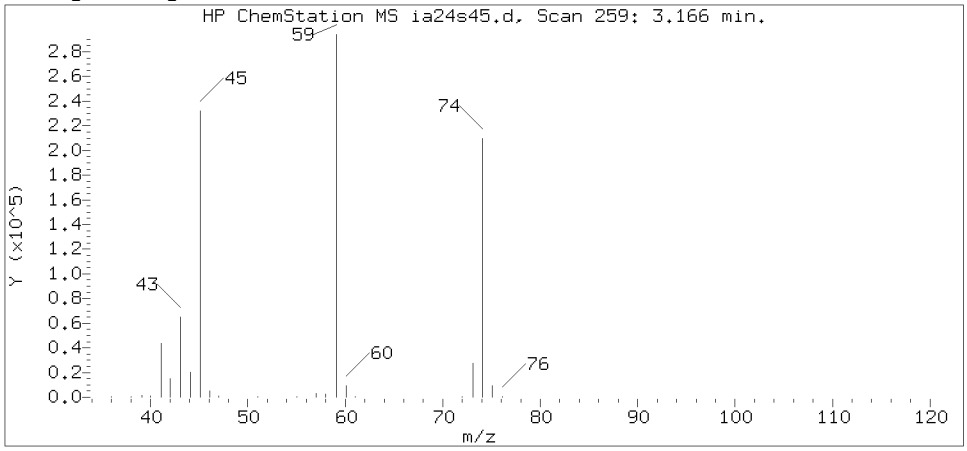


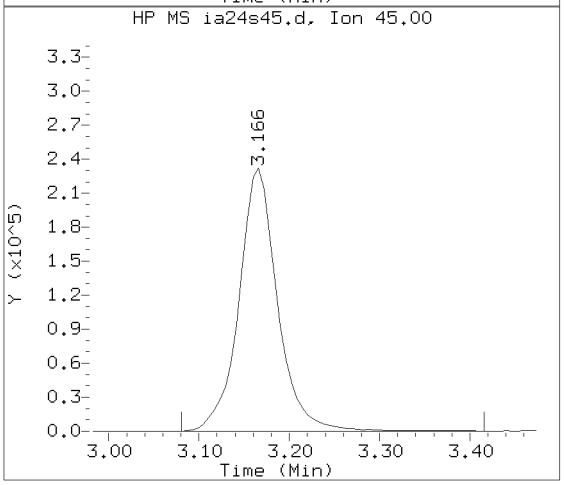
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

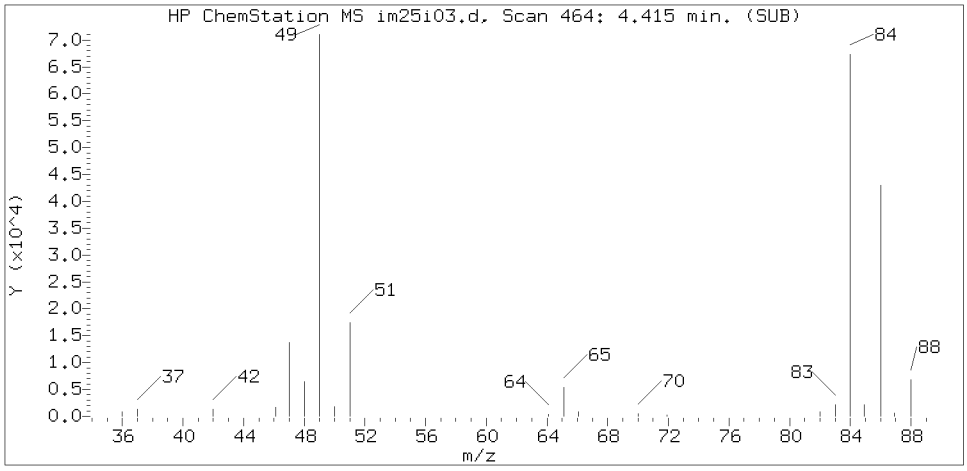
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

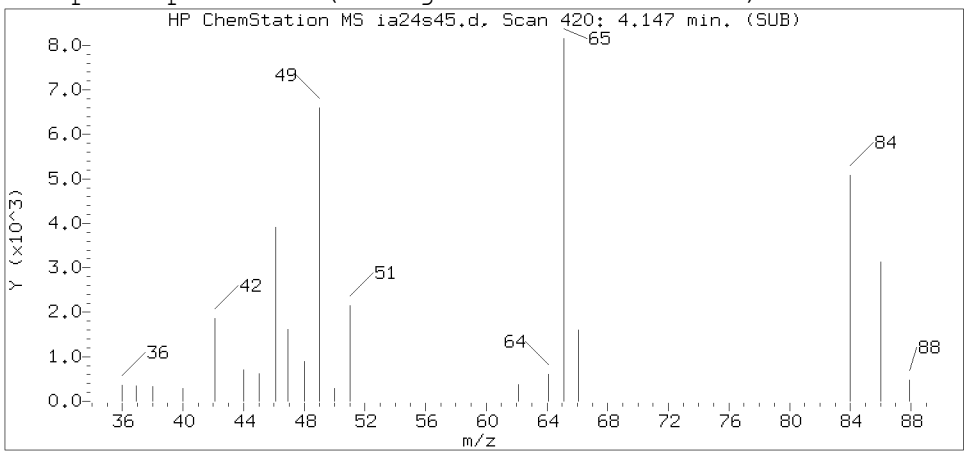
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 259
Retention Time (minutes): 3.166
Relative Retention Time :-0.00048
Quant Ion : 59.00
Area (flag) : 871493
On-Column Amount (ng) : 17.5569

Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

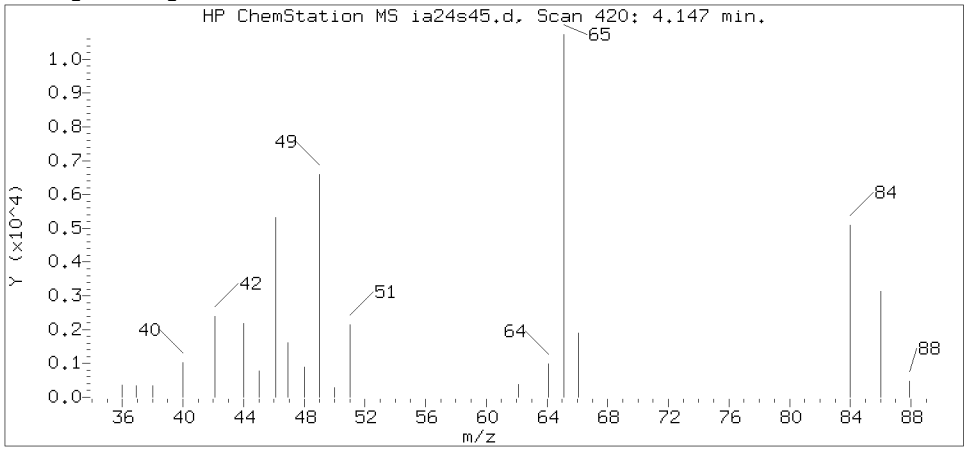
Reference Standard Spectrum for Methylene Chloride

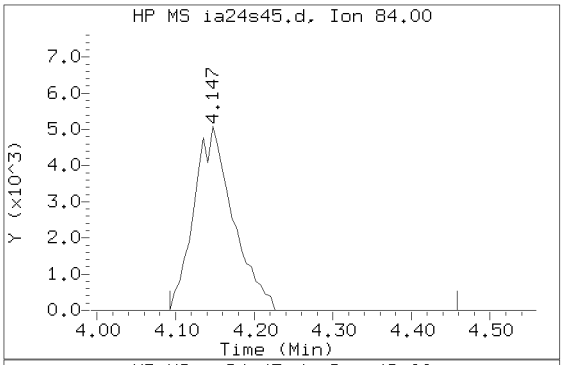


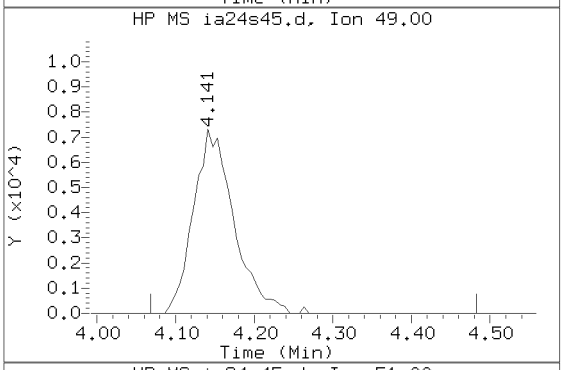
Sample Spectrum (Background Subtracted)

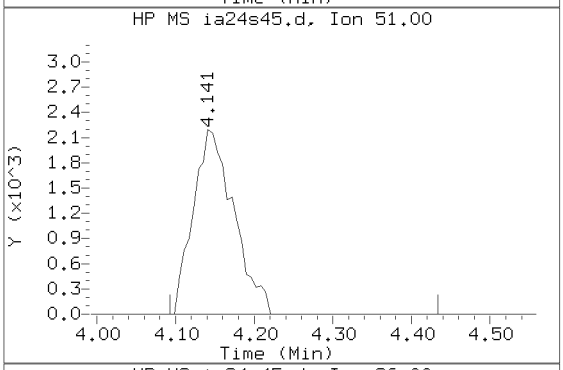


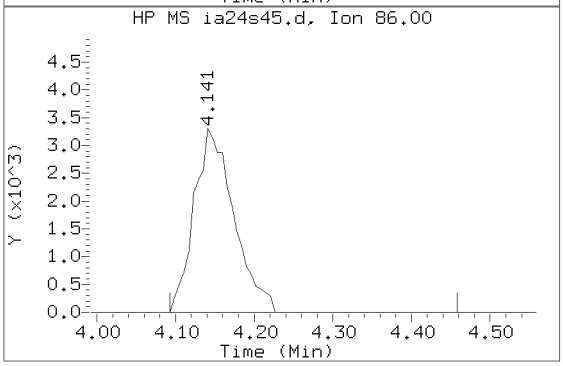
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 420
Retention Time (minutes): 4.147
Relative Retention Time :-0.00196
Quant Ion : 84.00
Area (flag) : 17618
On-Column Amount (ng) : 0.3042

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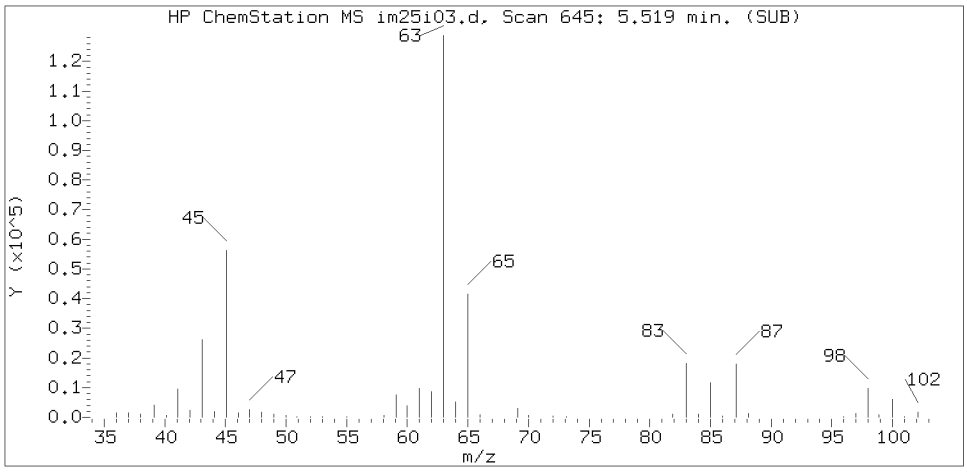
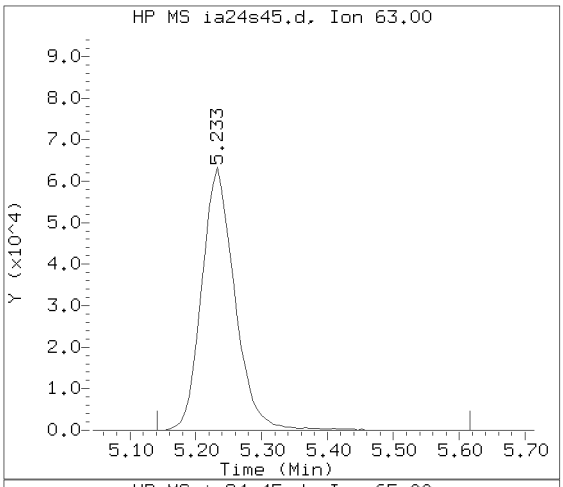
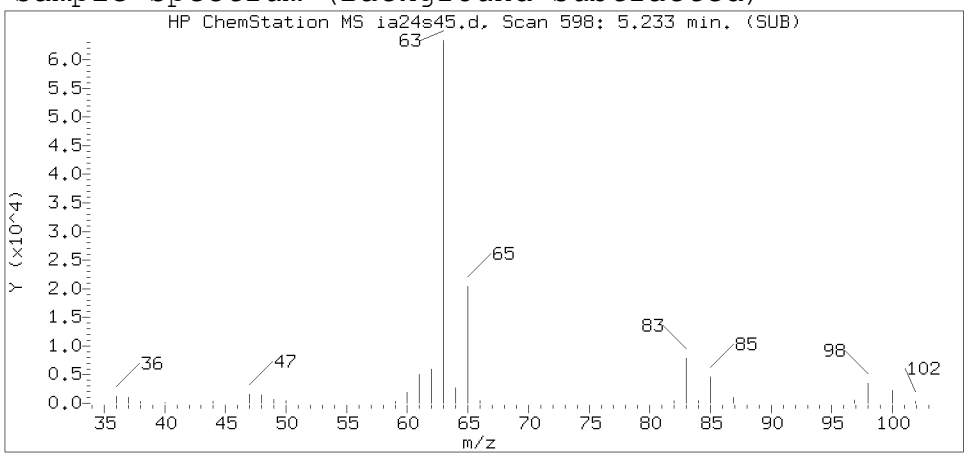
Target 3.5 esignature user ID: dvv10203

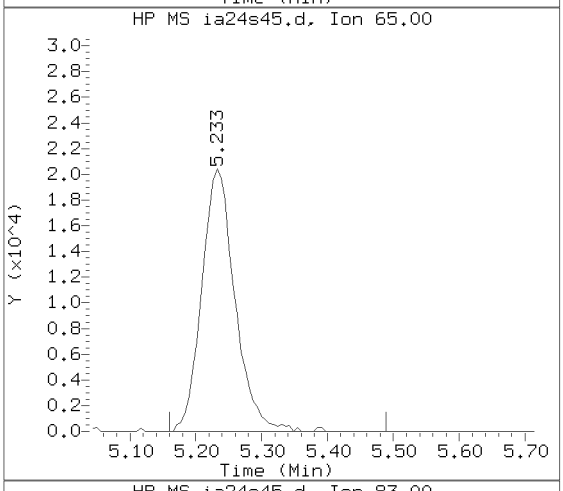
Reference Standard Spectrum for 1,1-Dichloroethane



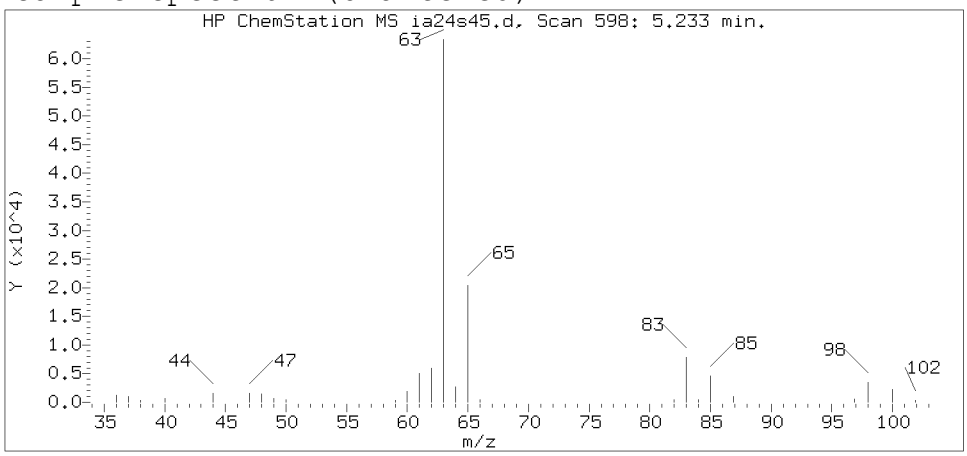


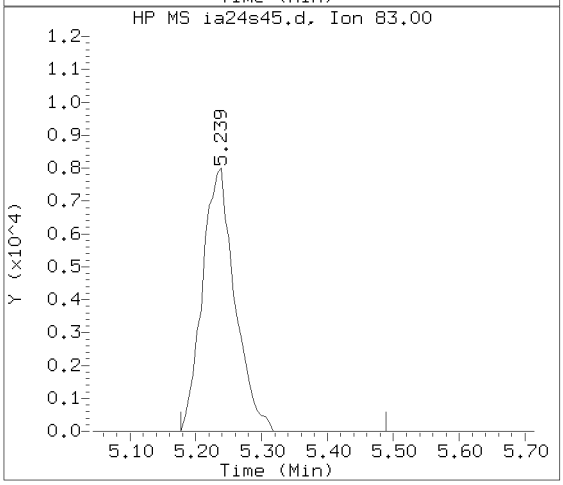
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

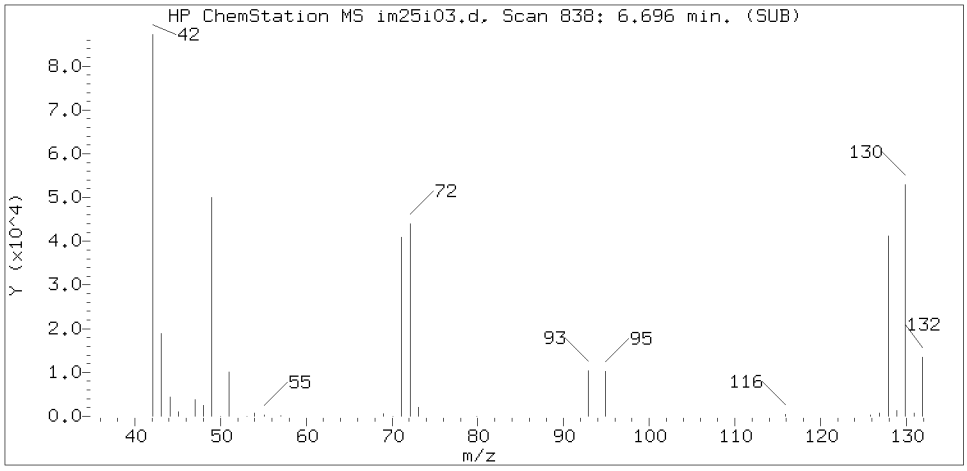
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

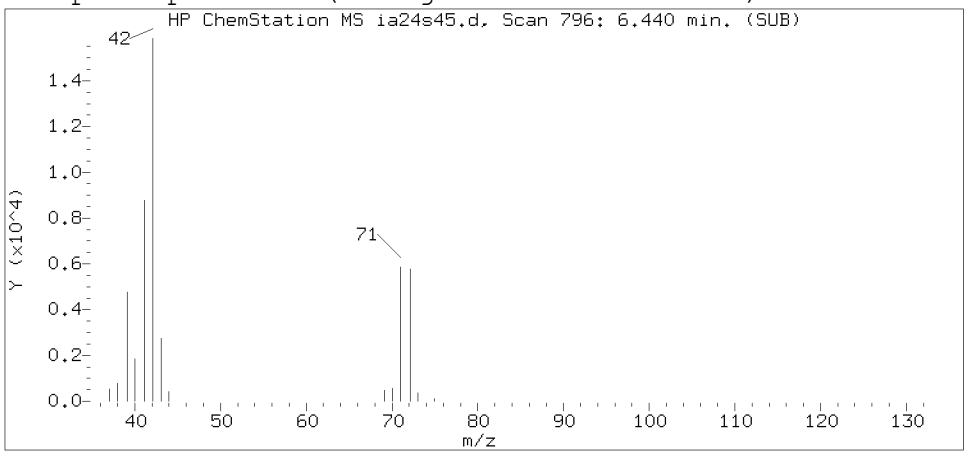
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 598
Retention Time (minutes): 5.233
Relative Retention Time :-0.00105
Quant Ion : 63.00
Area (flag) : 220679
On-Column Amount (ng) : 2.0395

Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

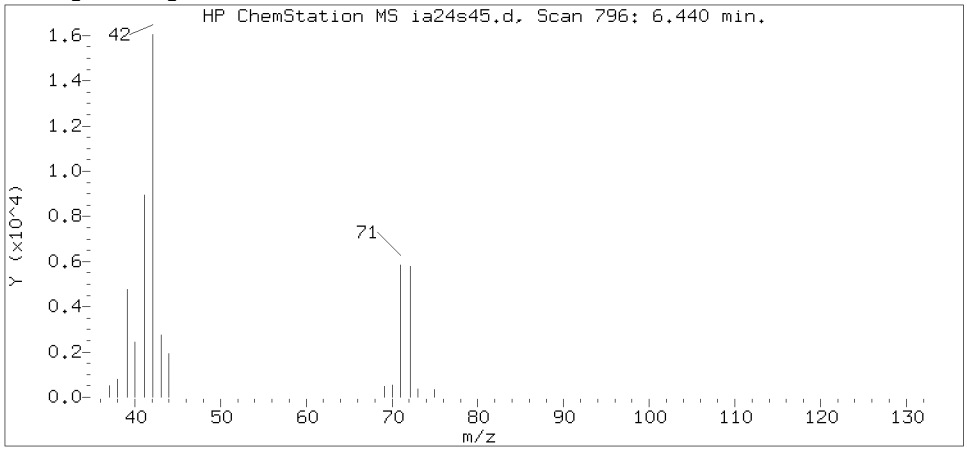
Reference Standard Spectrum for Tetrahydrofuran

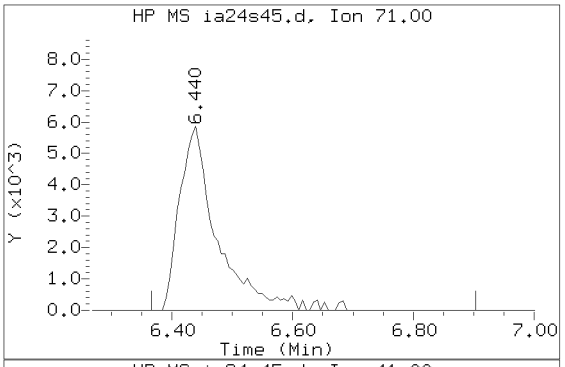


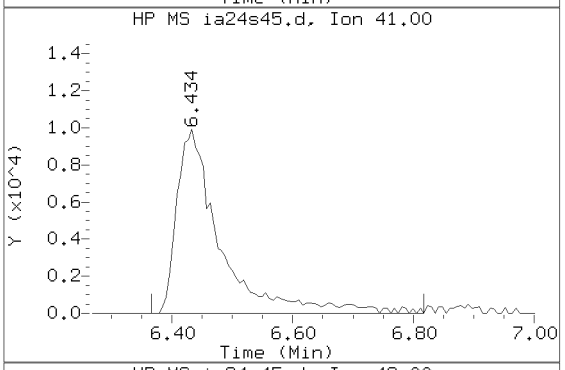
Sample Spectrum (Background Subtracted)

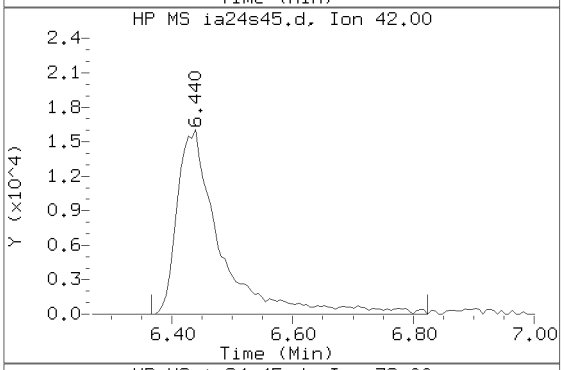


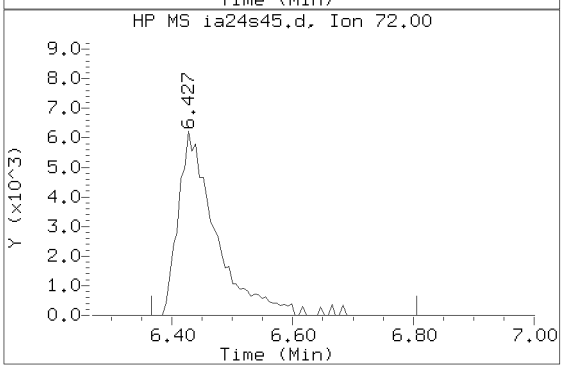
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr24b.b/ia24s45.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:17 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:03 dvv10203

Sample Name: R0601DL Lab Sample ID: 9558695DL

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 796
Retention Time (minutes): 6.440
Relative Retention Time :-0.00735
Quant Ion : 71.00
Area (flag) : 25577
On-Column Amount (ng) : 6.3161

Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

R0602 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558696

Data file: /chem2/HP26285.i/18apr23a.b/5a23s03.d Injection date and time: **23-APR-2018 11:40**
Data file Sample Info. Line: R0602;9558696;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 11:59 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502(0.000)	347	65	321273 (-4)	250.00	
66) Fluorobenzene	6.989(-0.006)	919	96	1188981 (-5)	50.00	
101) Chlorobenzene-d5	10.745(-0.006)	1535	117	924028 (-7)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744(0.000)	1863	152	497685 (-12)	50.00	

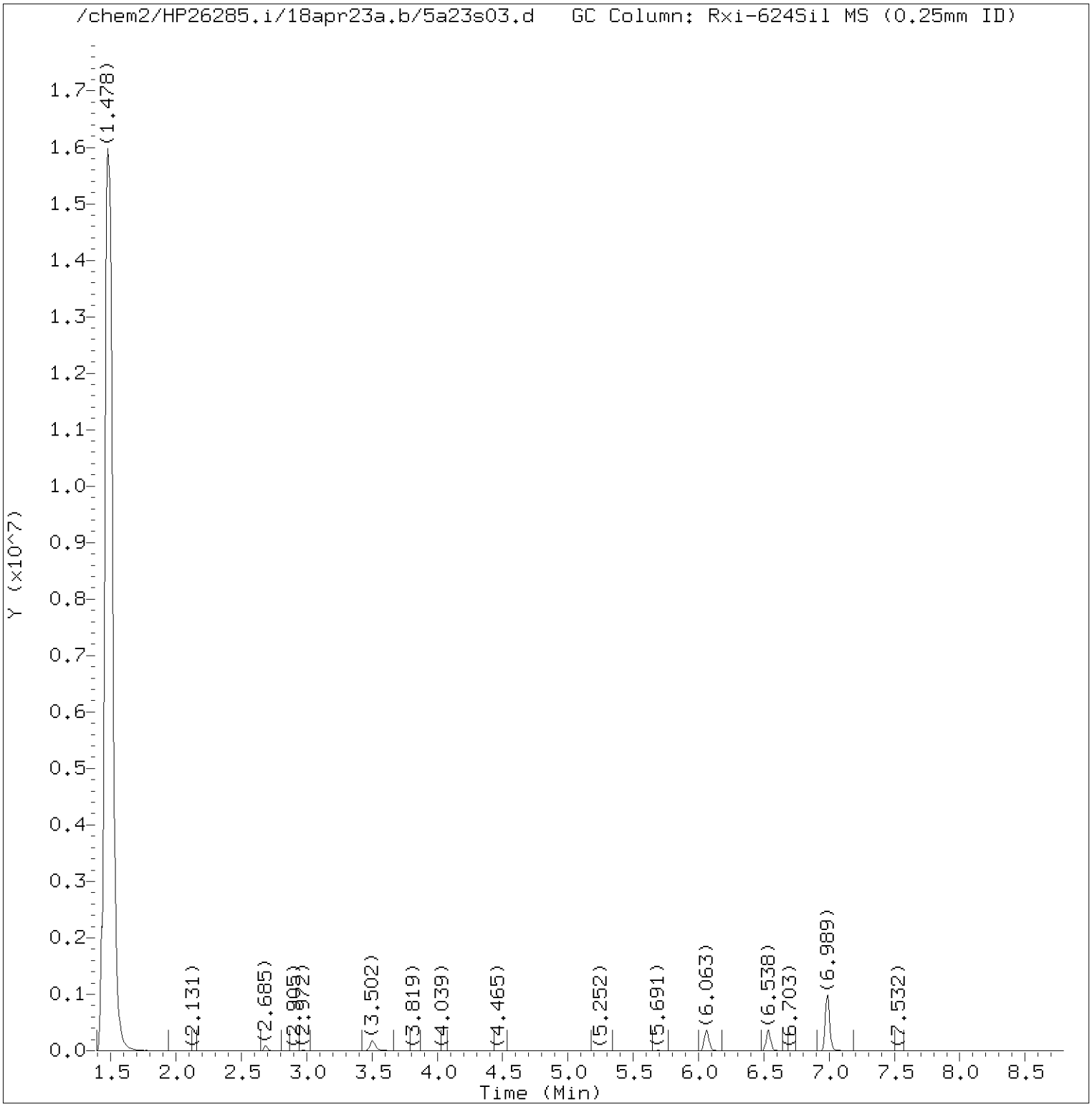
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063(0.000)	113	303351	49.530	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.532(0.001)	102	69657	50.840	102%		80 - 120
84) Toluene-d8	(3)	9.129(0.000)	98	1151134	49.700	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818(0.001)	95	438203	49.419	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)			Not Detected					50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:29. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

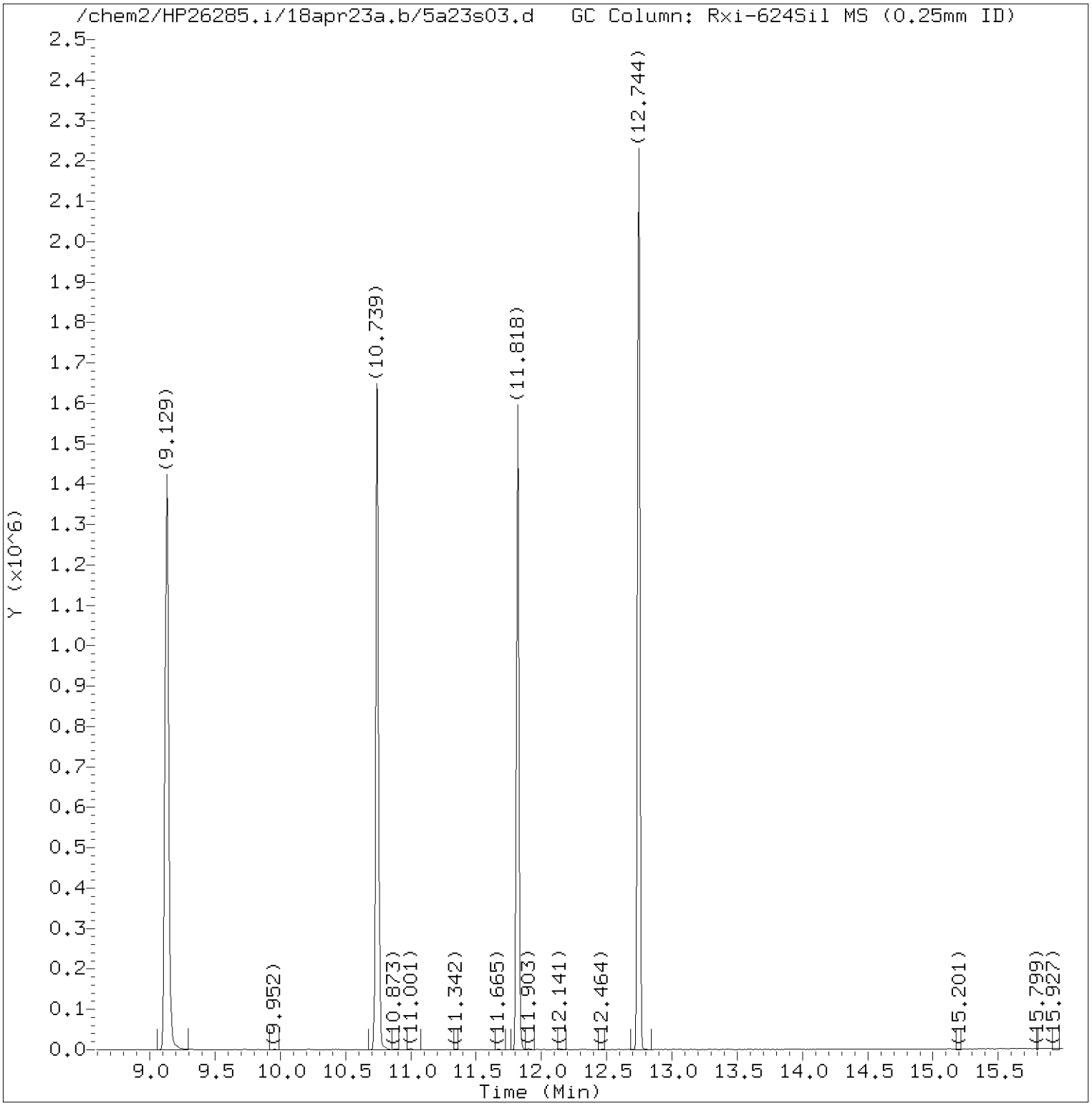
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s03.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:40 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:59 Unknown

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s03.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:40 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:59 Unknown

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s03.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 11:40 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 11:59 Unknown

Sample Name: R0602 Lab Sample ID: 9558696

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.502	65	321273	250.000
52)$Dibromofluoromethane	(2)	6.063	113	303351	49.530
57)$1,2-Dichloroethane-d4	(2)	6.532	102	69657	50.840
66)*Fluorobenzene	(2)	6.989	96	1188981	50.000
84)$Toluene-d8	(3)	9.129	98	1151134	49.700
101)*Chlorobenzene-d5	(3)	10.745	117	924028	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	438203	49.419
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	497685	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s81.d Injection date and time: **24-APR-2018 06:27**
Data file Sample Info. Line: R0602;9558696;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	124108	(-16)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	2016397	(-2)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1449300	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.023	(0.000)	1876	152	756927	(-9)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769	(0.000)	113	475382	10.102	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	103247	10.086	101%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1947902	9.954	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	689697	9.982	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)	1.971	(0.002)	45	25719	0.332	0.33		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)	3.153	(0.000)	59	518825	10.820	10.82		J	1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.226	(-0.000)	63	32332	0.309	0.31		J	0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)	6.433	(-0.005)	71	8465	2.287	2.29		J	2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s81.d Injection date and time: **24-APR-2018 06:27**
Data file Sample Info. Line: R0602;9558696;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

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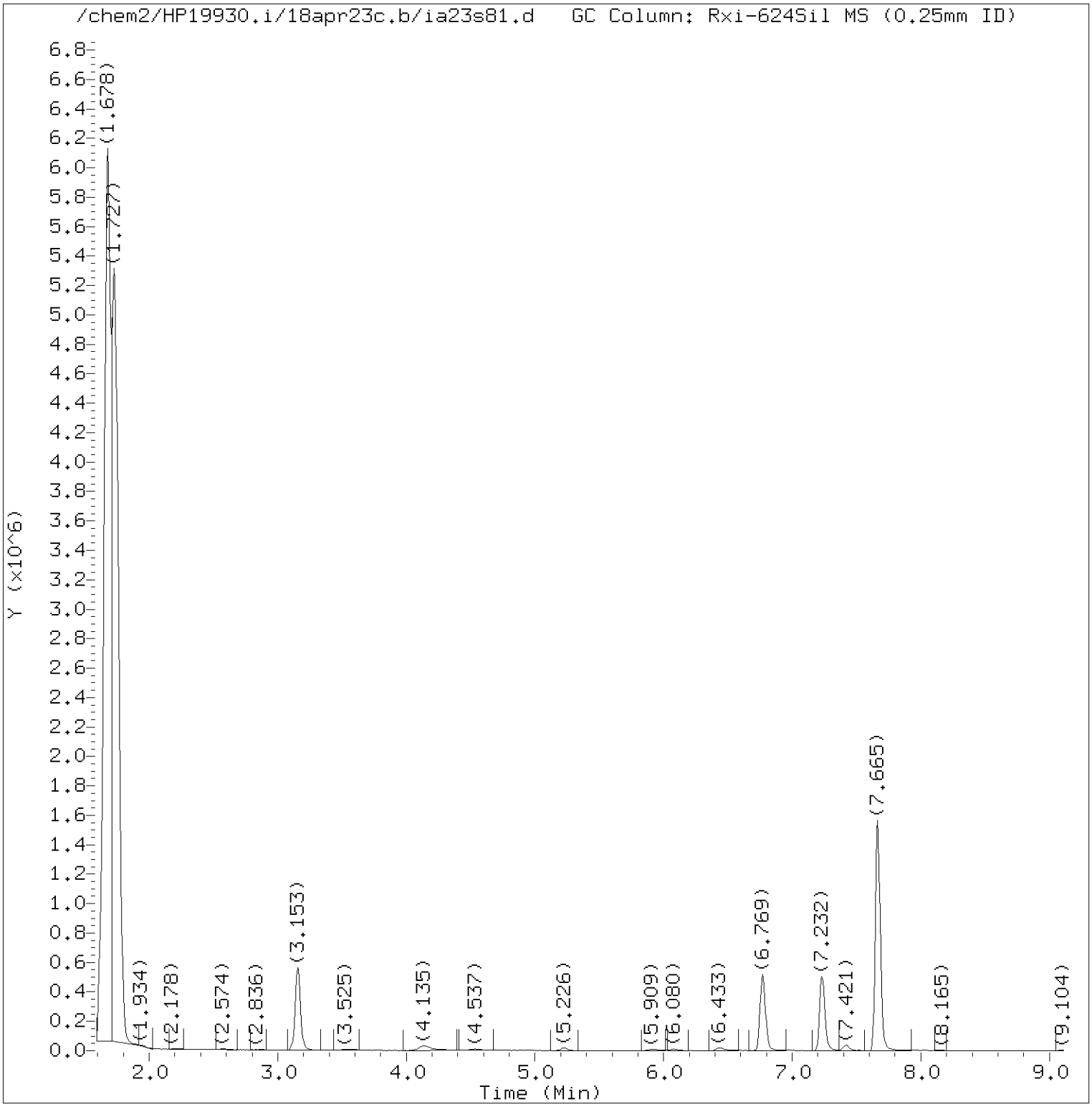
Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

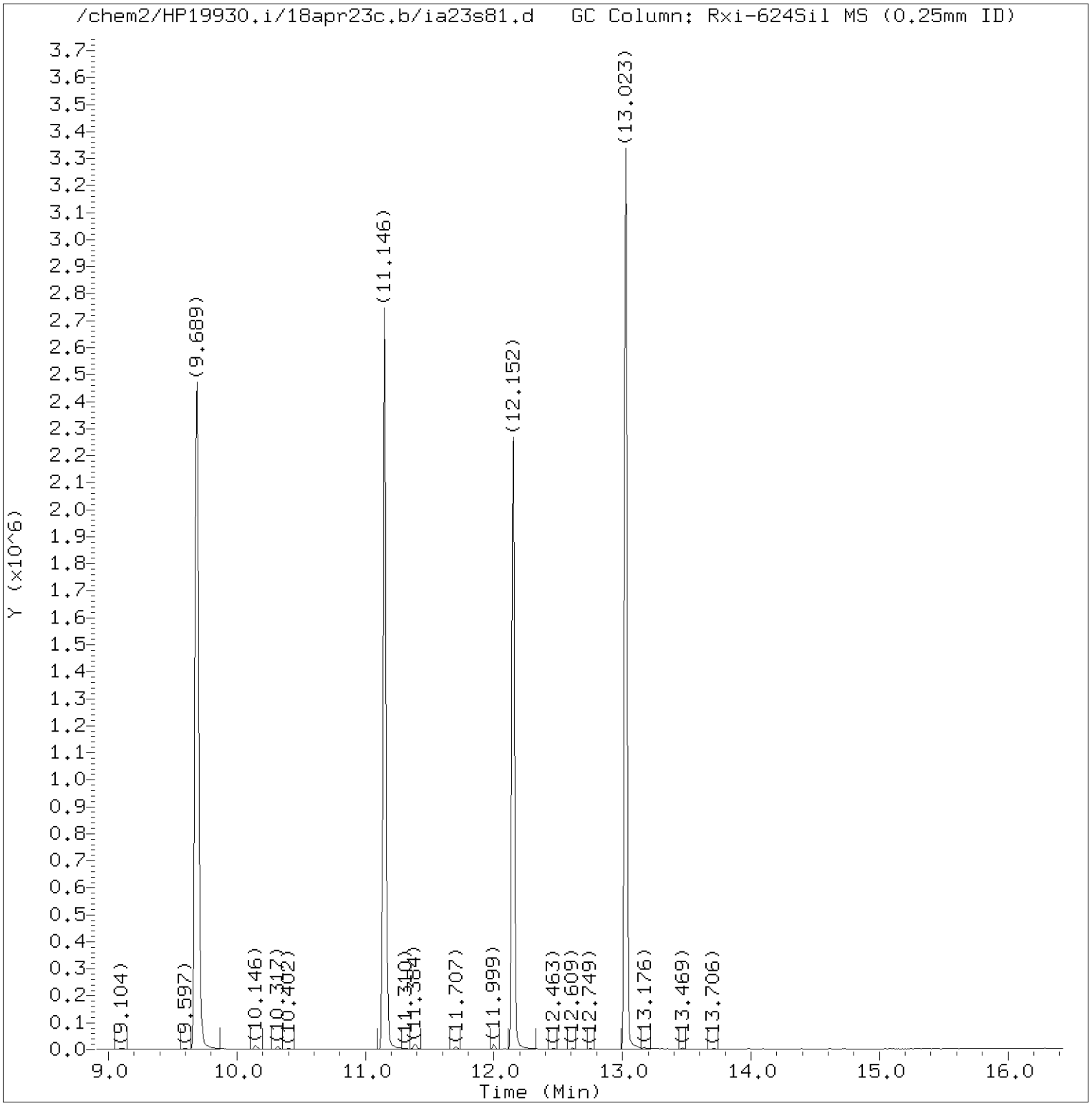
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.971	45	25719	0.332
11) Ethyl ether	(2)	3.153	59	518825	10.820
26)*t-Butyl Alcohol-d10	(1)	4.135	65	124108	50.000
33) 1,1-Dichloroethane	(2)	5.226	63	32332	0.309
48) Tetrahydrofuran	(1)	6.433	71	8465	2.287
50)$Dibromofluoromethane	(2)	6.769	113	475382	10.102
57)$1,2-Dichloroethane-d4	(2)	7.232	102	103247	10.086
63)*Fluorobenzene	(2)	7.665	96	2016397	10.000
82)$Toluene-d8	(3)	9.689	98	1947902	9.954
97)*Chlorobenzene-d5	(3)	11.146	117	1449300	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	689697	9.982
133)*1,4-Dichlorobenzene-d4	(4)	13.023	152	756927	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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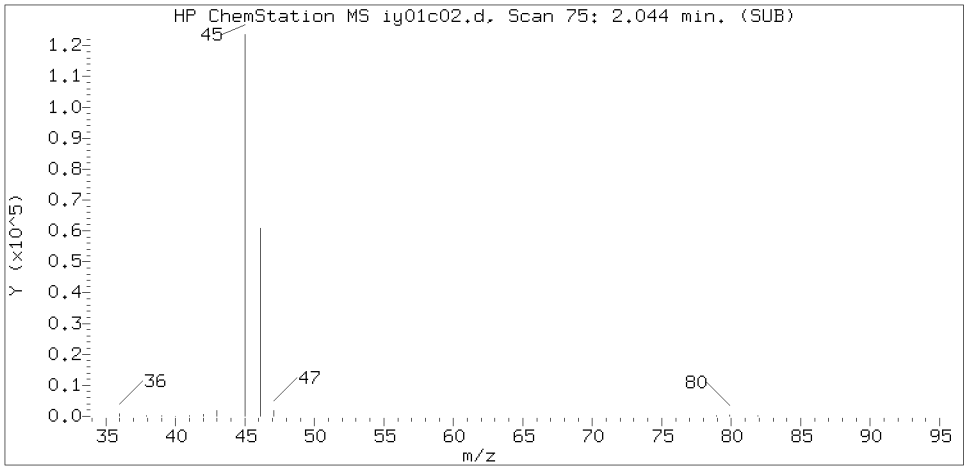
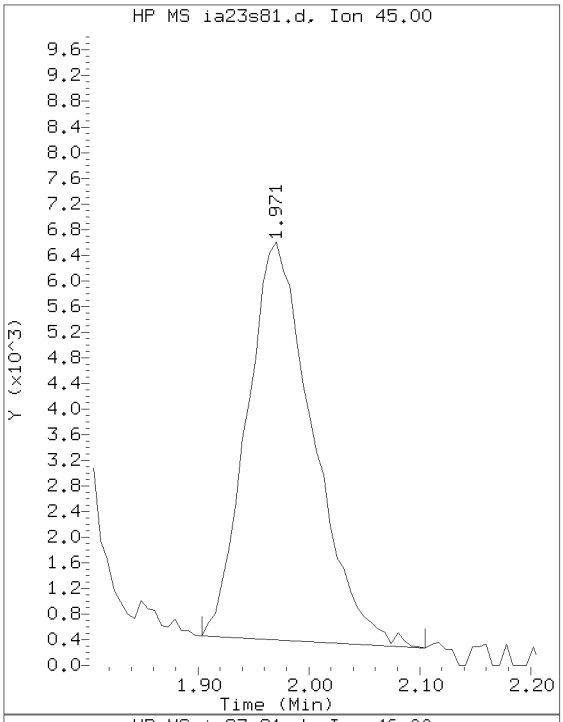
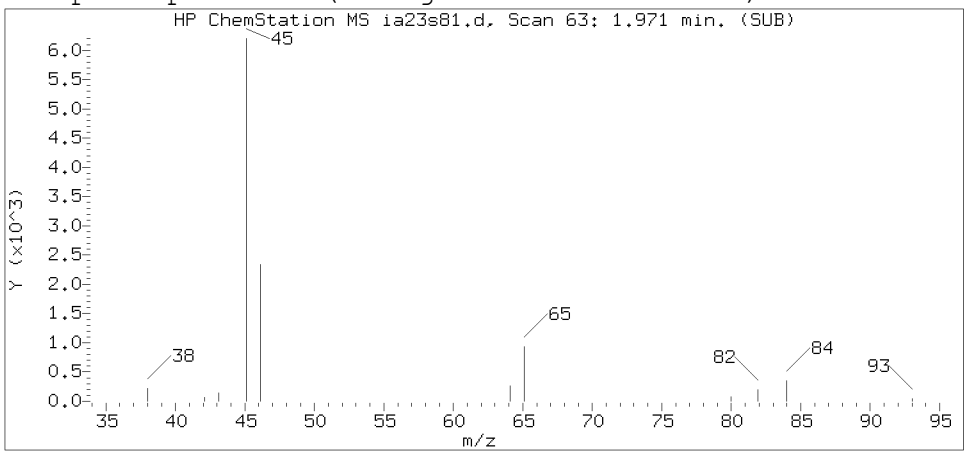
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

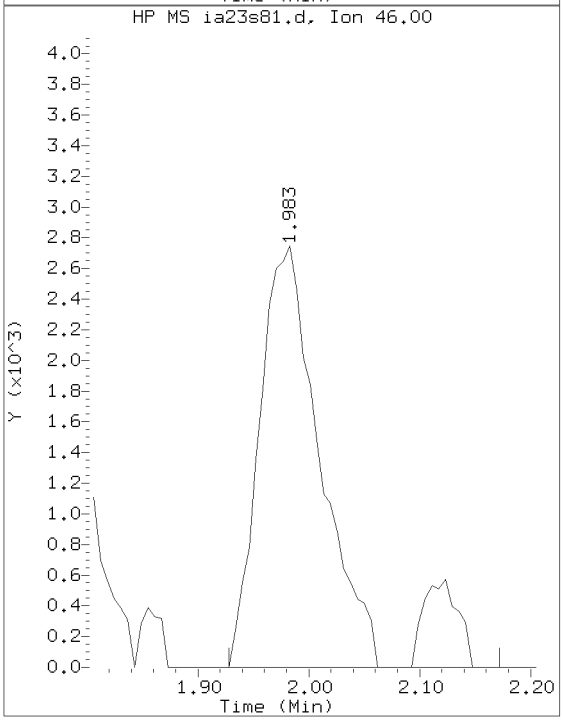
Reference Standard Spectrum for Dimethyl ether



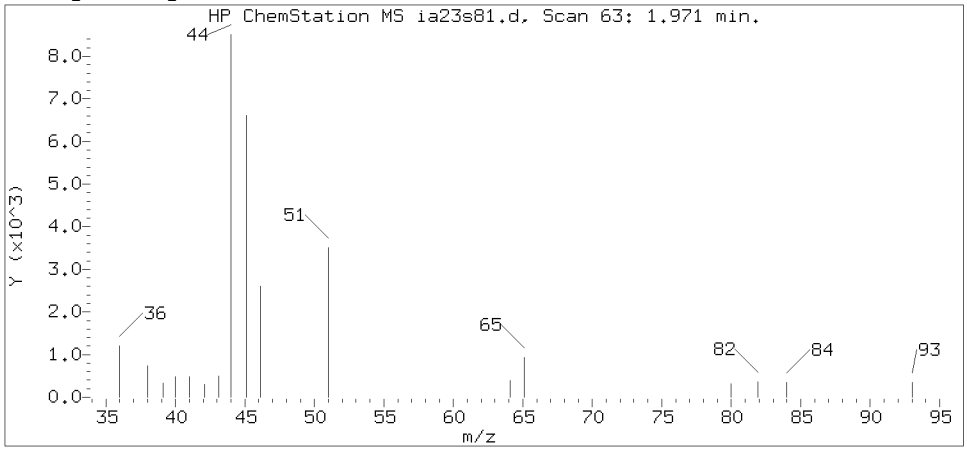


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

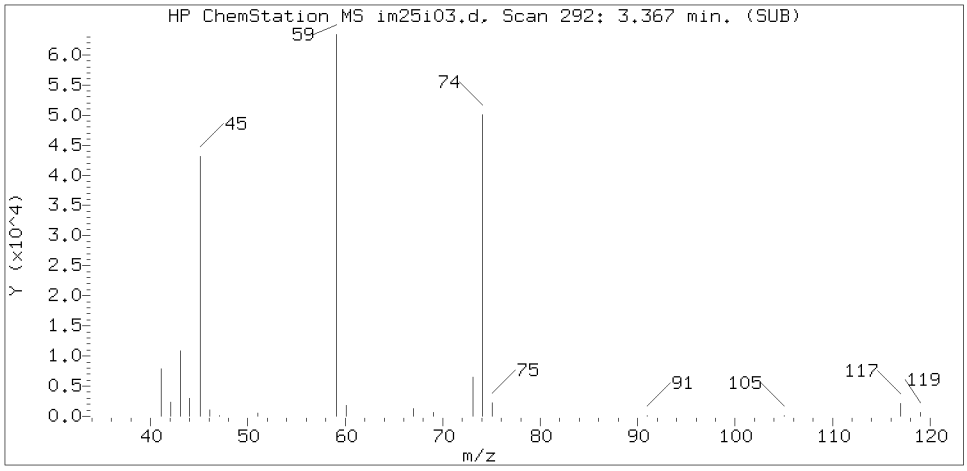
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

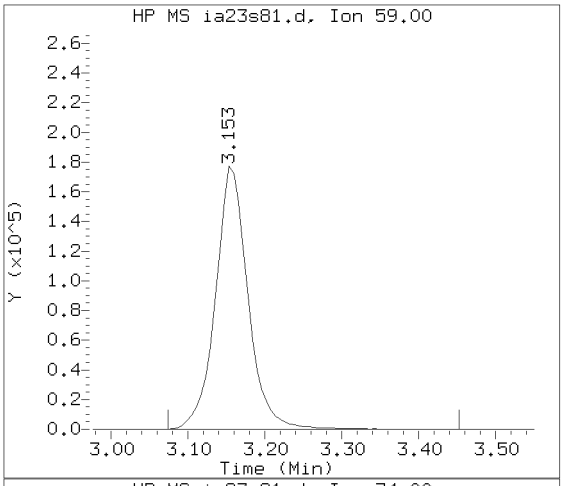
Sample Name: R0602 Lab Sample ID: 9558696

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 63
Retention Time (minutes)	: 1.971
Relative Retention Time	: 0.00240
Quant Ion	: 45.00
Area (flag)	: 25719
On-Column Amount (ng)	: 0.3316

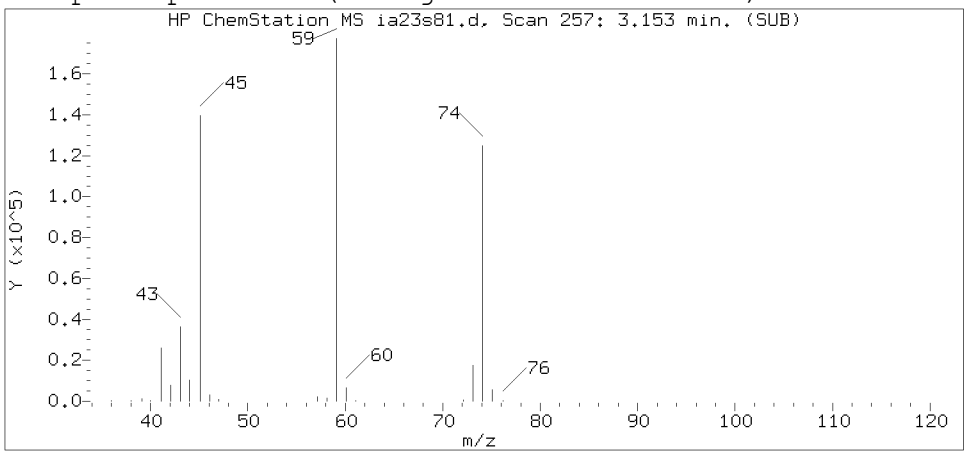
Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

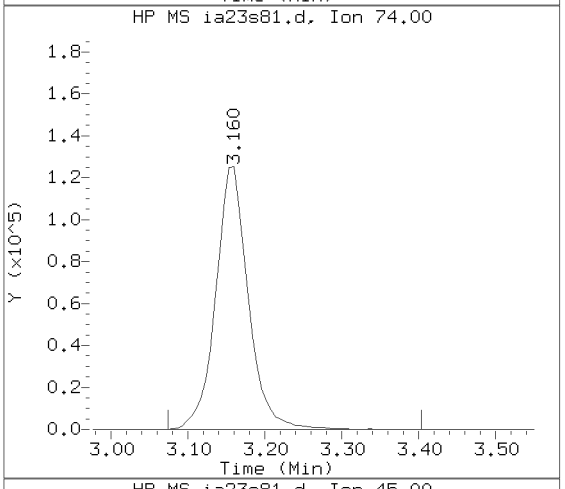
Reference Standard Spectrum for Ethyl ether



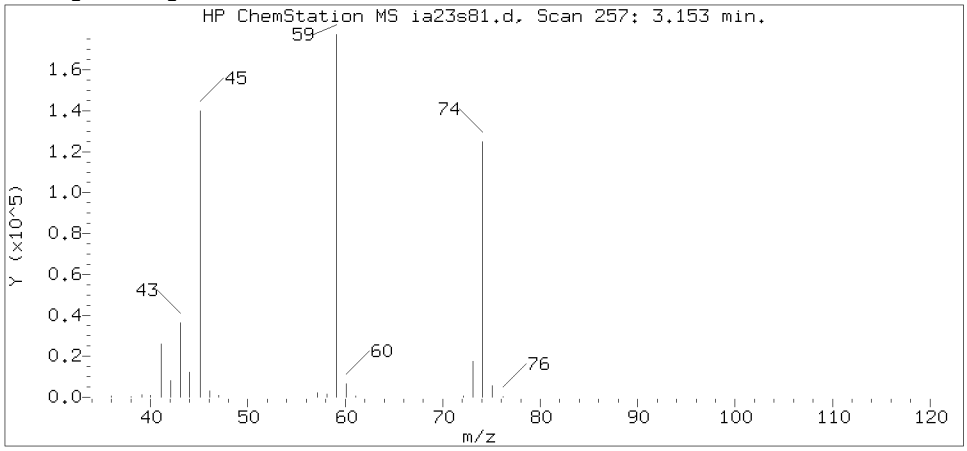


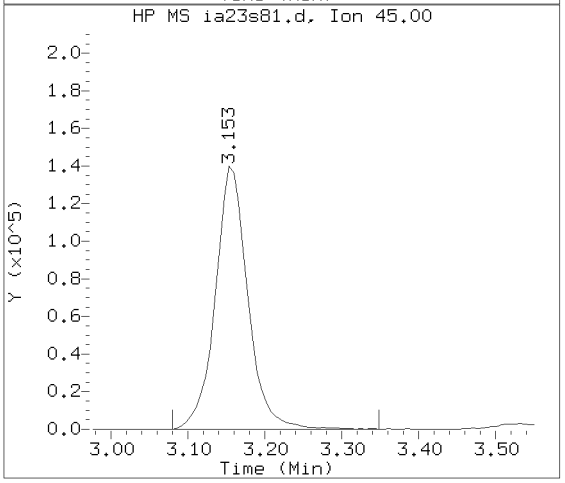
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 257
Retention Time (minutes)	: 3.153
Relative Retention Time	: 0.00001
Quant Ion	: 59.00
Area (flag)	: 518825
On-Column Amount (ng)	: 10.8205

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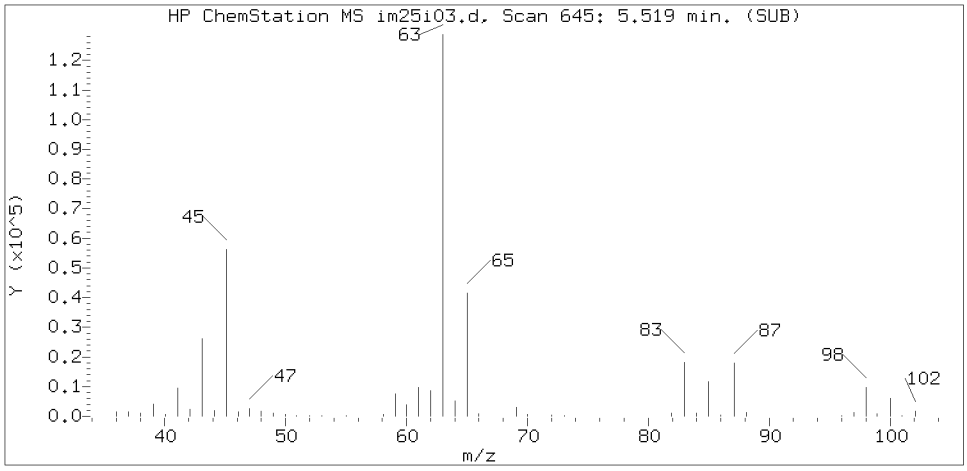
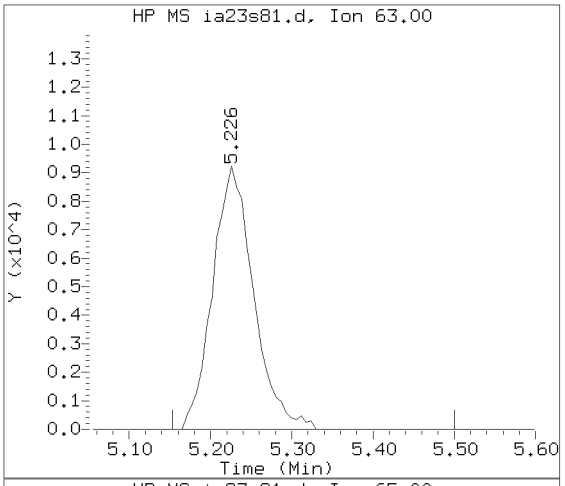
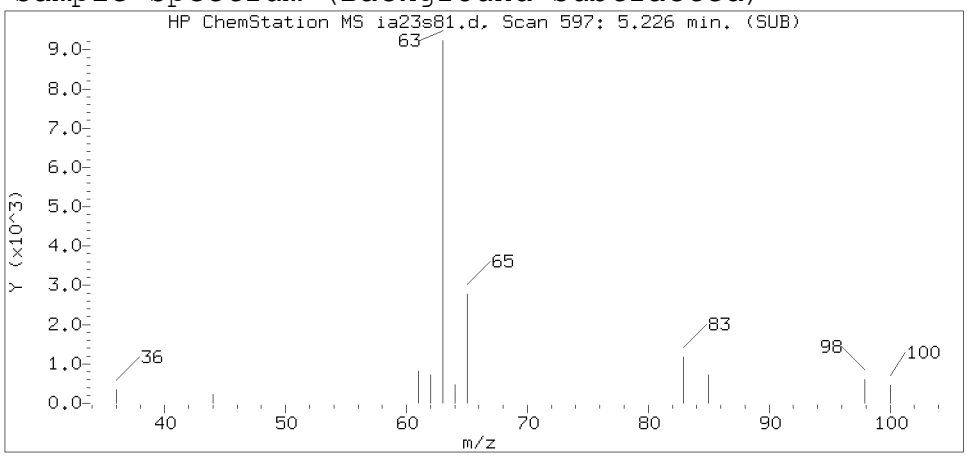
Target 3.5 esignature user ID: jkh09052

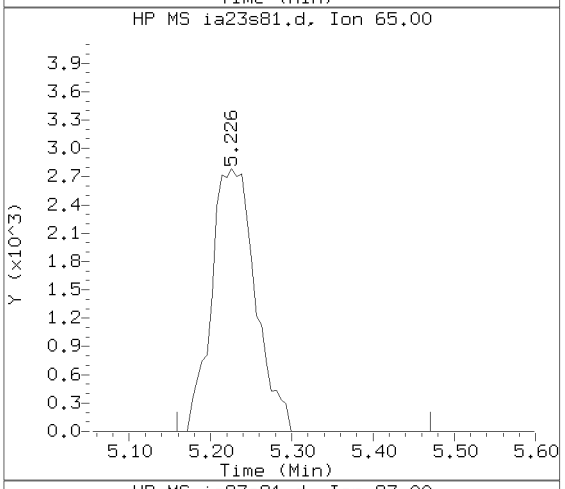
Reference Standard Spectrum for 1,1-Dichloroethane



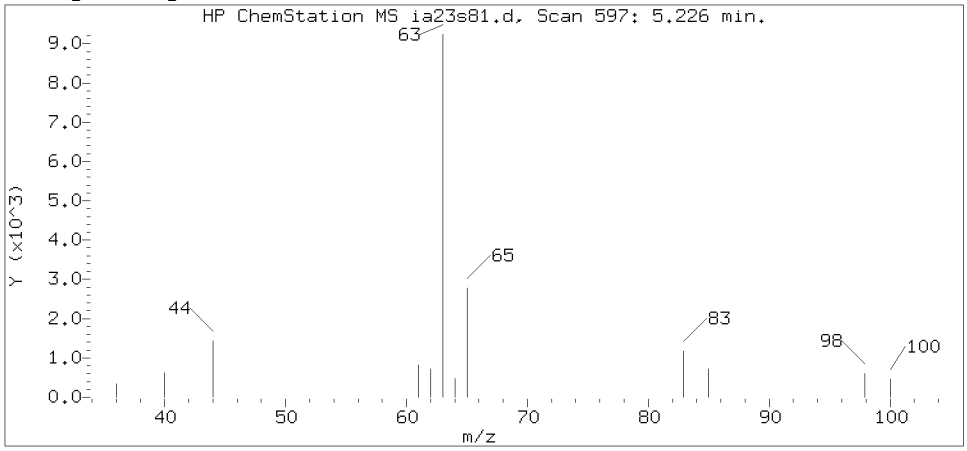


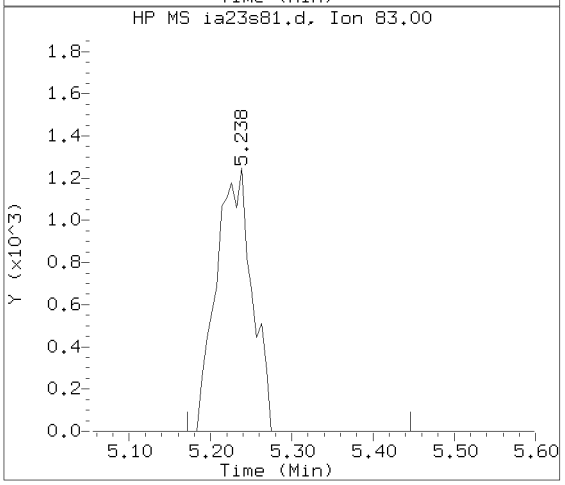
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

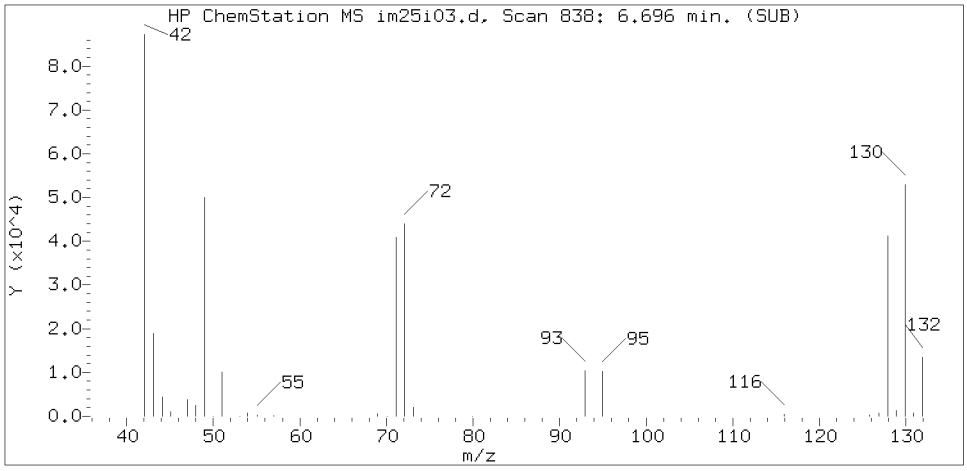
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

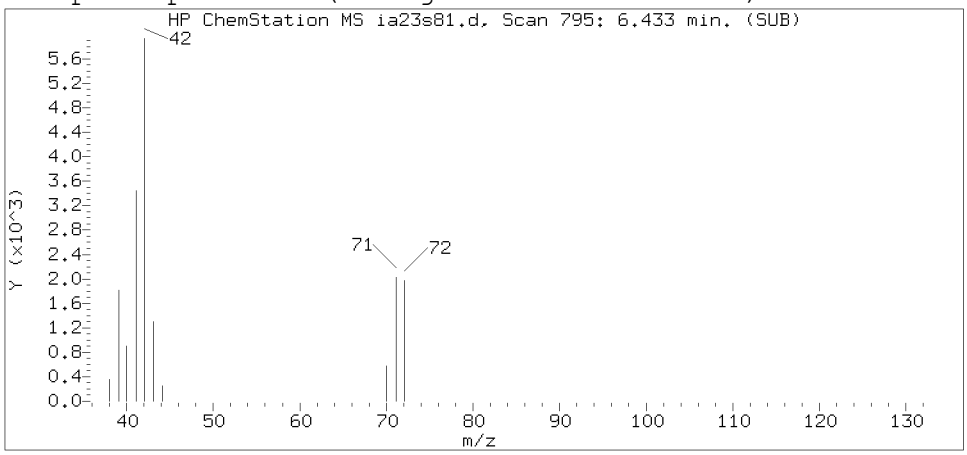
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 597
Retention Time (minutes): 5.226
Relative Retention Time :-0.00079
Quant Ion : 63.00
Area (flag) : 32332
On-Column Amount (ng) : 0.3093

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

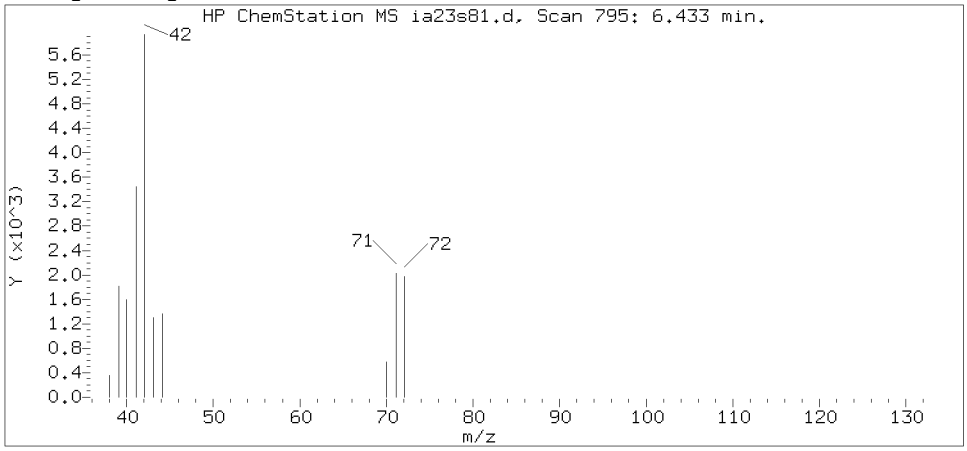
Reference Standard Spectrum for Tetrahydrofuran

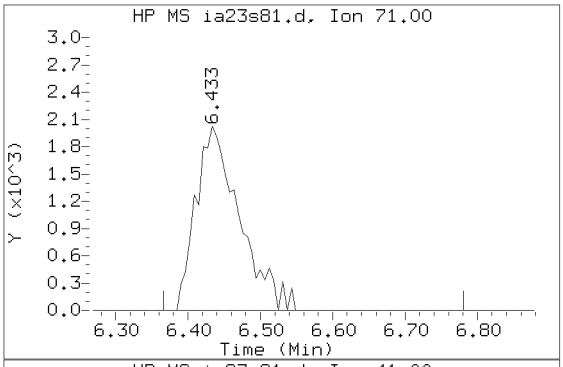


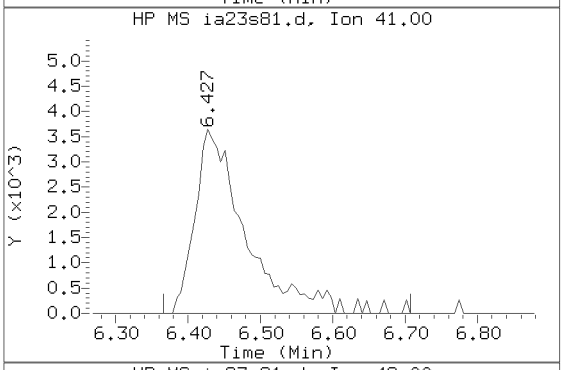
Sample Spectrum (Background Subtracted)

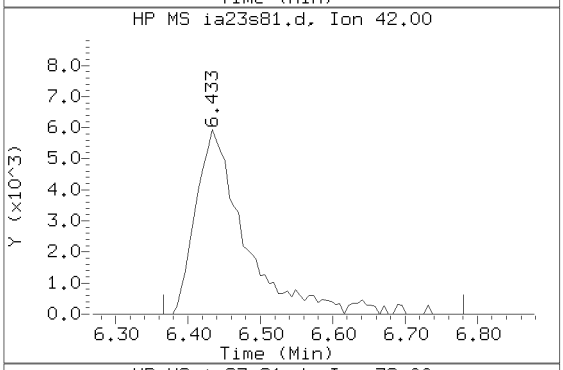


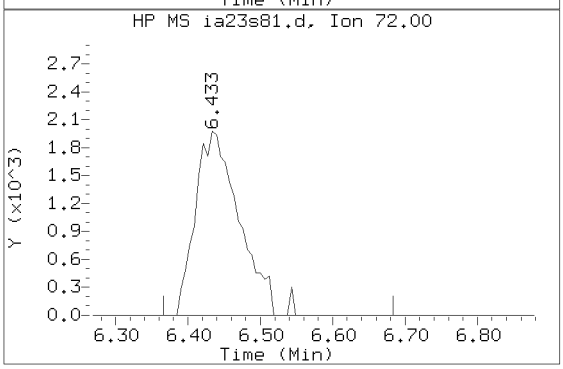
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s81.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:27 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:19 jkh09052

Sample Name: R0602 Lab Sample ID: 9558696

Compound Number : 48
Compound Name : Tetrahydrofuran
Scan Number : 795
Retention Time (minutes): 6.433
Relative Retention Time :-0.00592
Quant Ion : 71.00
Area (flag) : 8465
On-Column Amount (ng) : 2.2867

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

R0603 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558697

Data file: /chem2/HP26285.i/18apr23a.b/5a23s04.d Injection date and time: **23-APR-2018 12:02**
Data file Sample Info. Line: R0603;9558697;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:21 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:18
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.508 (-0.006)	348	65	300473 (-10)	250.00	
66) Fluorobenzene	6.989 (-0.006)	919	96	1179760 (-6)	50.00	
101) Chlorobenzene-d5	10.745 (-0.006)	1535	117	922176 (-8)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744 (0.000)	1863	152	501168 (-11)	50.00	

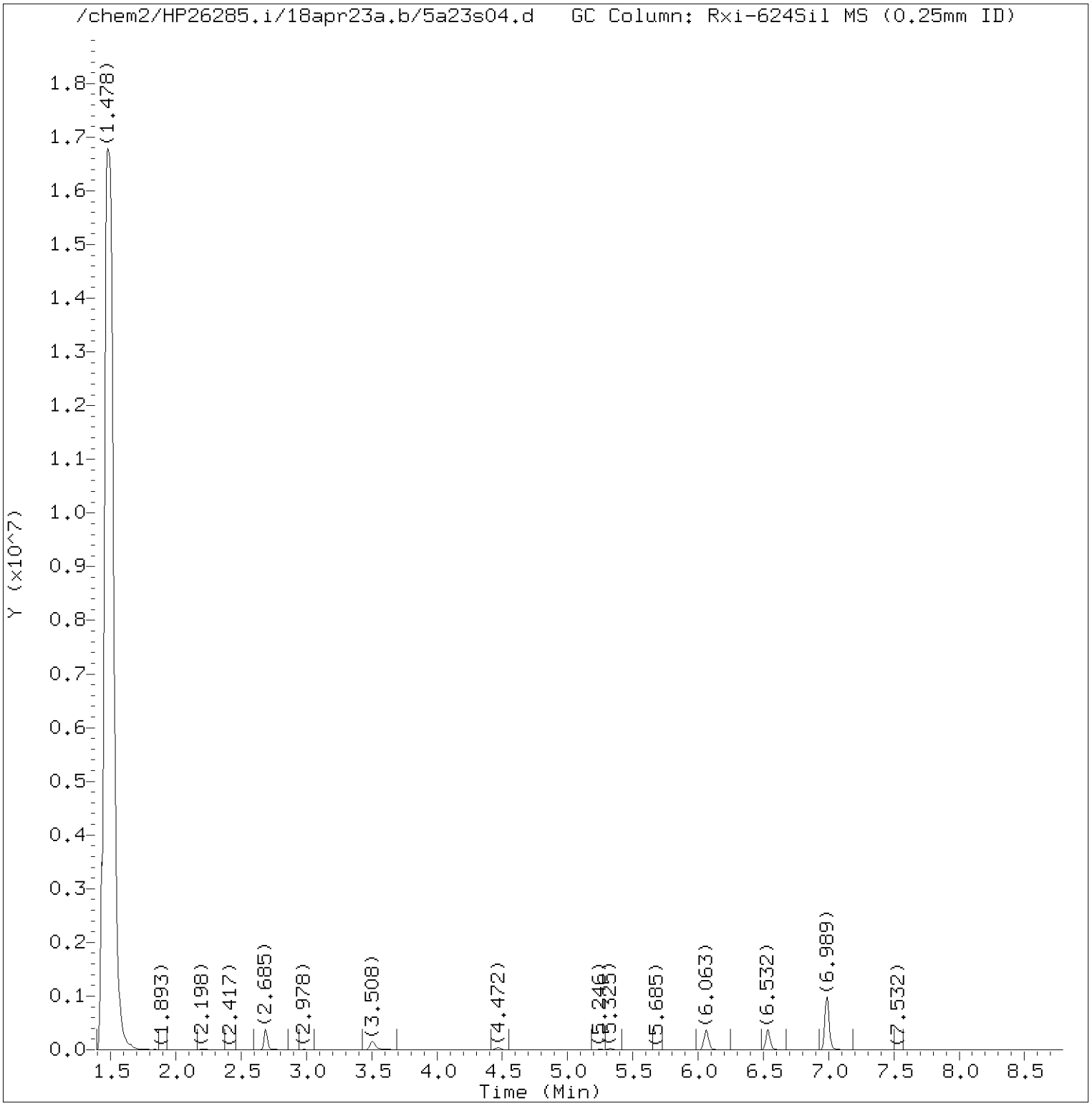
Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063 (0.000)	113	303069	49.870	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538 (0.000)	102	69695	51.265	103%		80 - 120
84) Toluene-d8	(3)	9.129 (0.000)	98	1123989	48.625	97%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818 (0.001)	95	434736	49.127	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)			Not Detected					50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:29. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

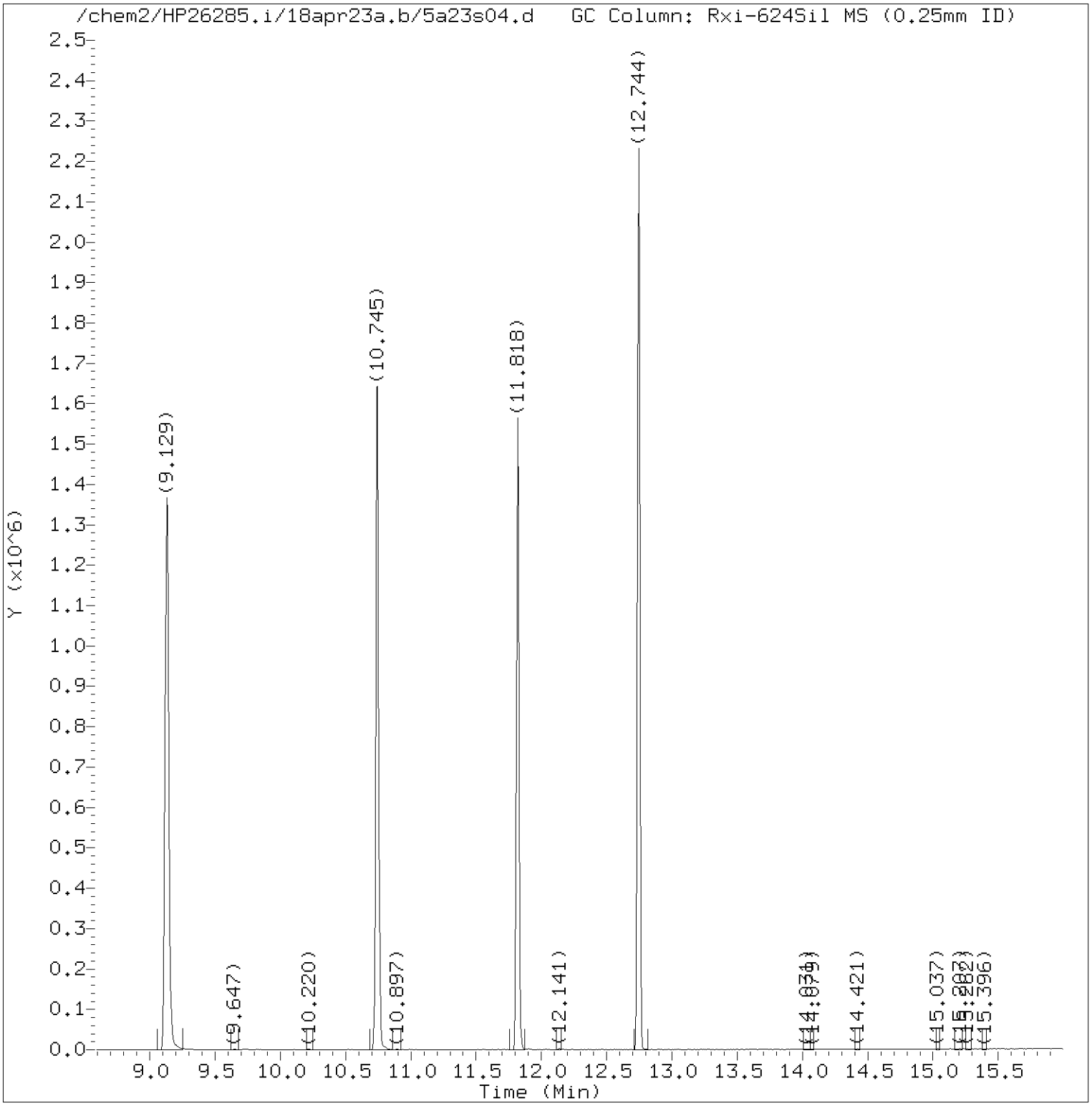
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s04.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:02 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:18
Date, time and analyst ID of latest file update: 23-Apr-2018 12:21 Unknown

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s04.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:02 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:18
Date, time and analyst ID of latest file update: 23-Apr-2018 12:21 Unknown

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s04.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:02 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:18
Date, time and analyst ID of latest file update: 23-Apr-2018 12:21 Unknown

Sample Name: R0603 Lab Sample ID: 9558697

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.508	65	300473	250.000
52)$Dibromofluoromethane	(2)	6.063	113	303069	49.870
57)$1,2-Dichloroethane-d4	(2)	6.538	102	69695	51.265
66)*Fluorobenzene	(2)	6.989	96	1179760	50.000
84)$Toluene-d8	(3)	9.129	98	1123989	48.625
101)*Chlorobenzene-d5	(3)	10.745	117	922176	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	434736	49.127
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	501168	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

R0603 Lancaster Laboratories 9558697
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s86.d Injection date and time: **24-APR-2018 08:13**
Data file Sample Info. Line: R0603;9558697;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	121934	(-17)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	1950537	(-5)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1412639	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	739579	(-11)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769	(0.000)	113	467875	10.278	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	102407	10.341	103%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1883473	9.875	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	670494	9.956	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)	1.959	(0.003)	45	106012	1.413	1.41		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)	2.629	(-0.000)	64	55871	1.311	1.31			0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)	3.160	(-0.000)	59	2106732	45.421	45.42		E	1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.226	(-0.000)	63	616659	6.099	6.10			0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

E = Compound concentration above calibration range.

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:42. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s86.d Injection date and time: **24-APR-2018 08:13**
Data file Sample Info. Line: R0603;9558697;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

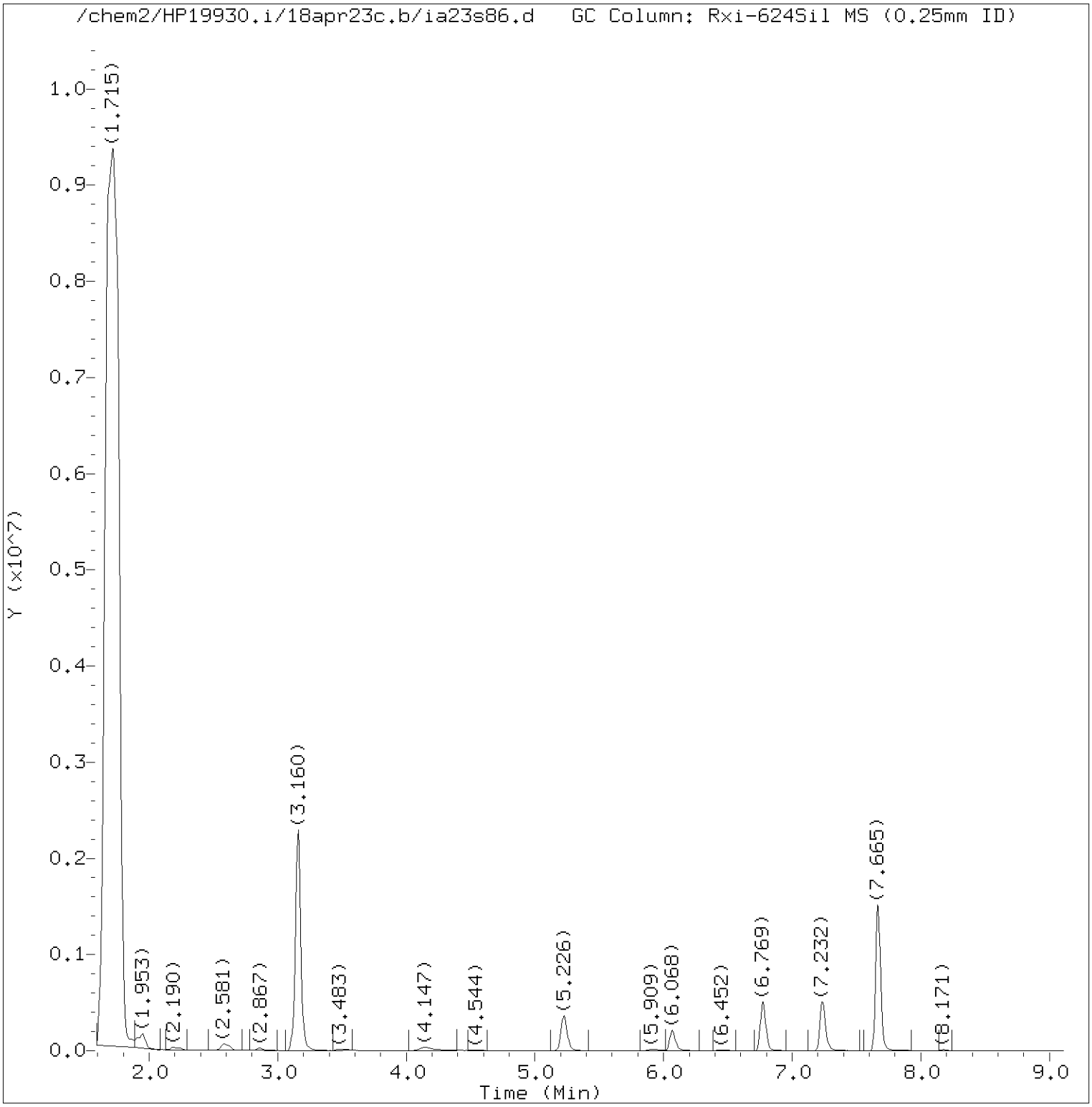
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)	7.262(-0.000)	78	58139	0.256	0.26		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:42. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

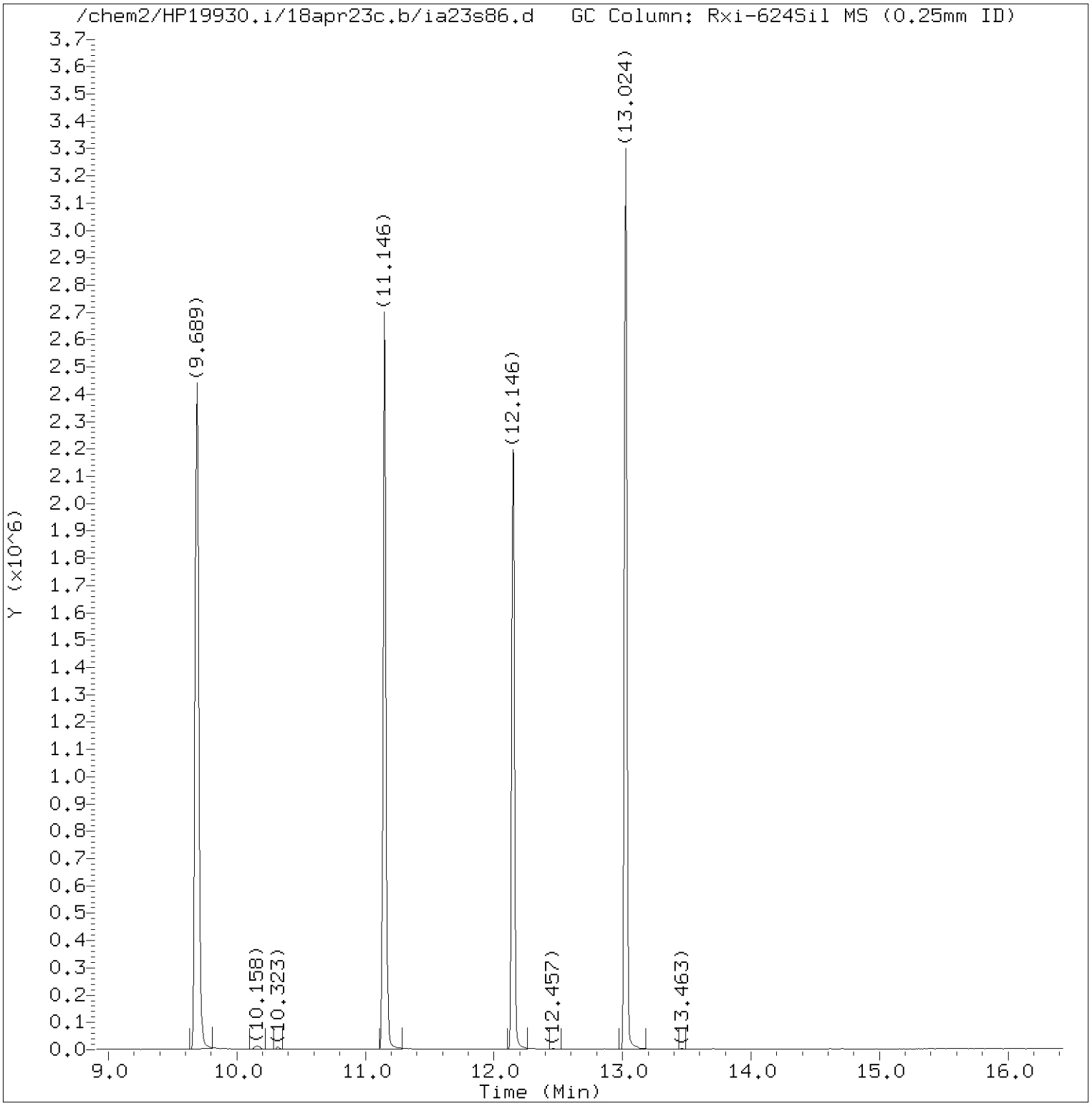
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

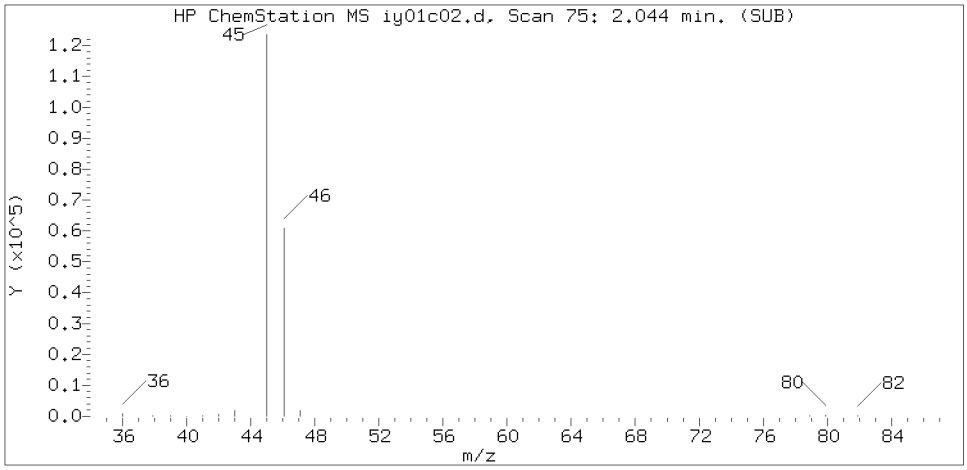
Sample Name: R0603 Lab Sample ID: 9558697

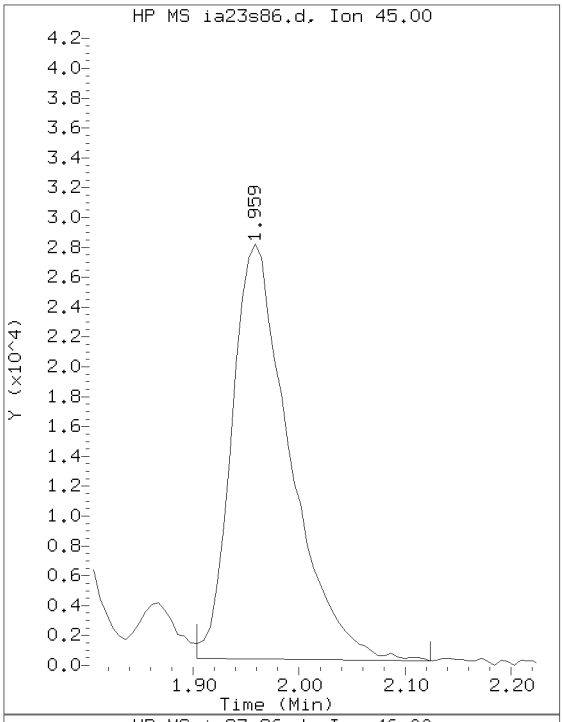
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.959	45	106012	1.413
8) Chloroethane	(2)	2.629	64	55871	1.311
11) Ethyl ether	(2)	3.160	59	2106732	45.421
26)*t-Butyl Alcohol-d10	(1)	4.135	65	121934	50.000
33) 1,1-Dichloroethane	(2)	5.226	63	616659	6.099
50)$Dibromofluoromethane	(2)	6.769	113	467875	10.278
57)$1,2-Dichloroethane-d4	(2)	7.232	102	102407	10.341
58) Benzene	(2)	7.263	78	58139	0.256
63)*Fluorobenzene	(2)	7.665	96	1950537	10.000
82)$Toluene-d8	(3)	9.689	98	1883473	9.875
97)*Chlorobenzene-d5	(3)	11.146	117	1412639	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	670494	9.956
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	739579	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

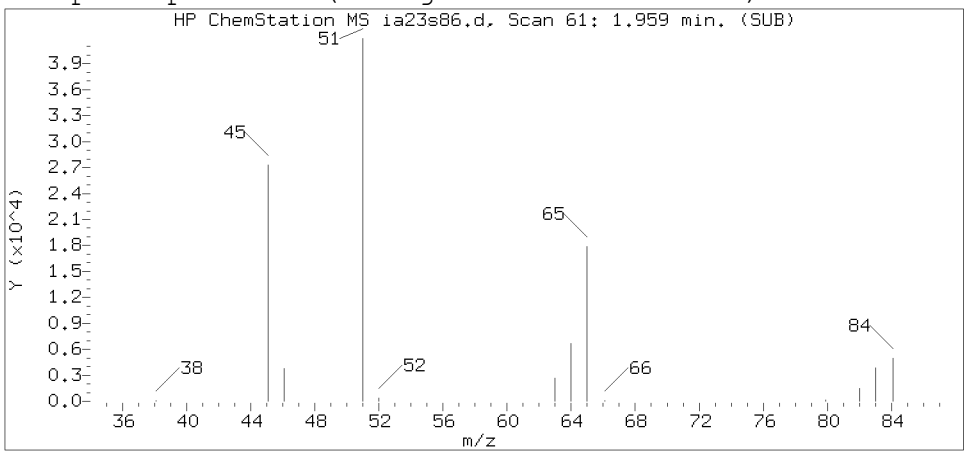
Digitally signed by Jennifer K. Howe
on 04/24/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

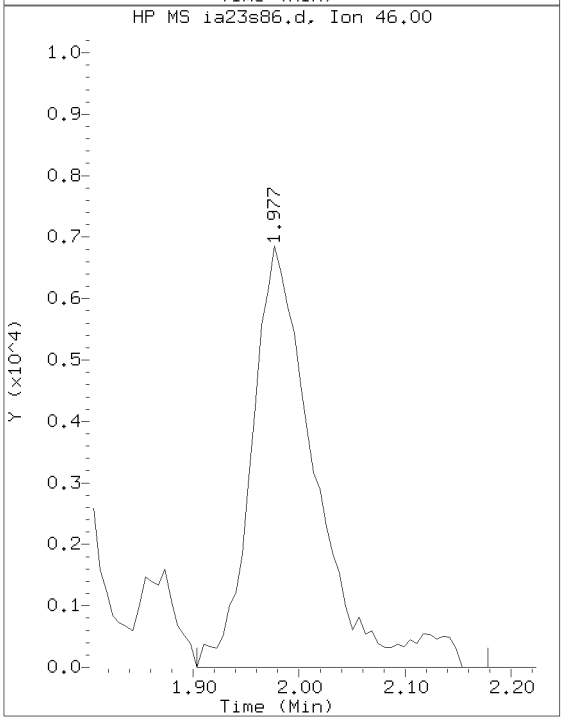
Reference Standard Spectrum for Dimethyl ether



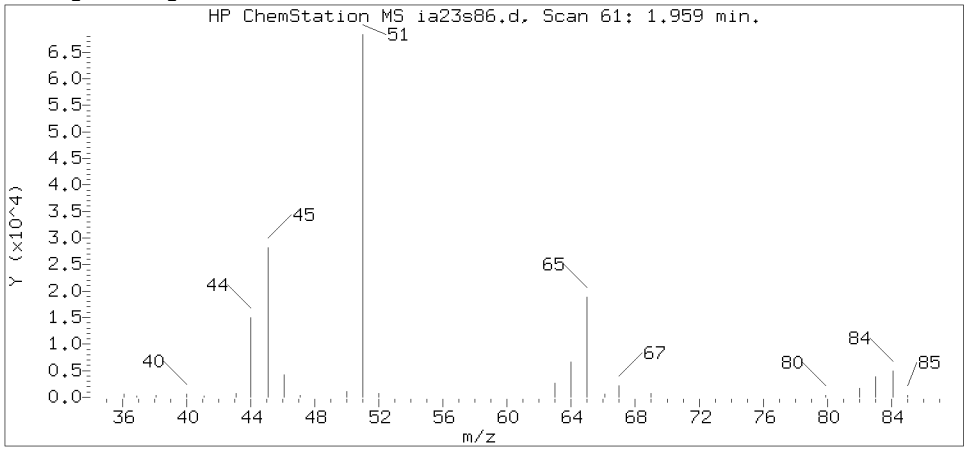


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 61
Retention Time (minutes)	: 1.959
Relative Retention Time	: 0.00398
Quant Ion	: 45.00
Area (flag)	: 106012
On-Column Amount (ng)	: 1.4128

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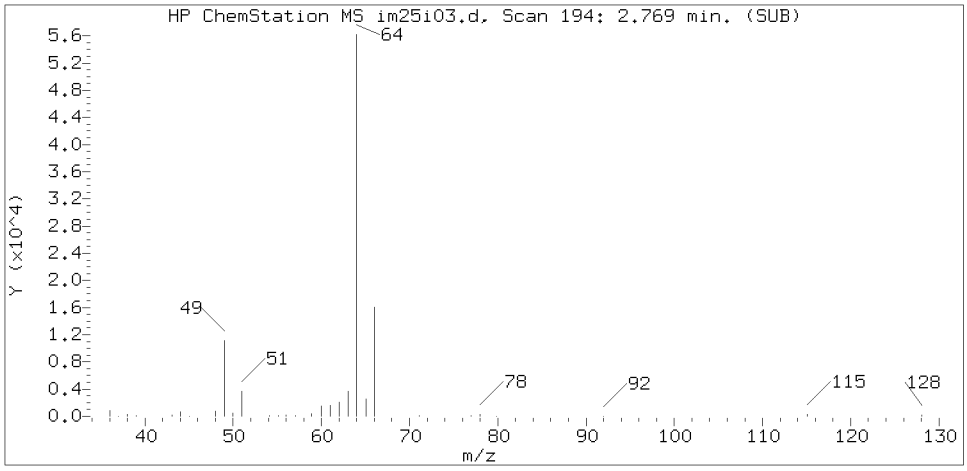
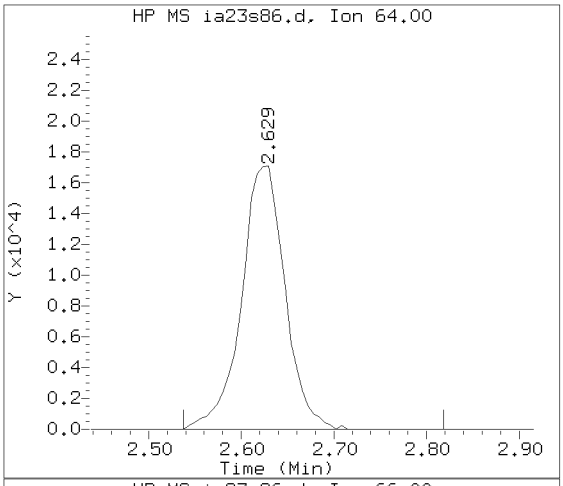
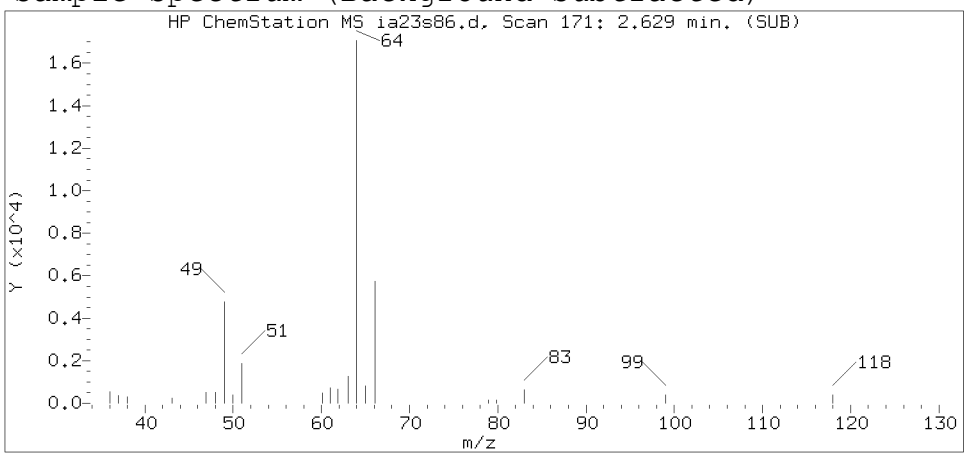
Target 3.5 esignature user ID: jkh09052

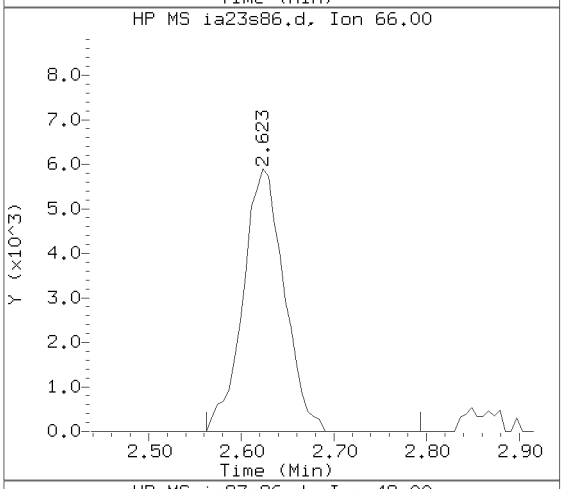
Reference Standard Spectrum for Chloroethane



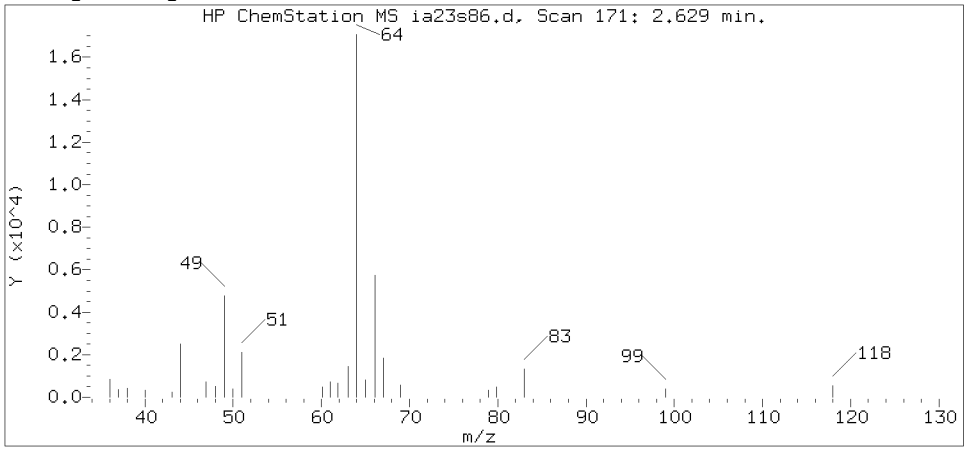


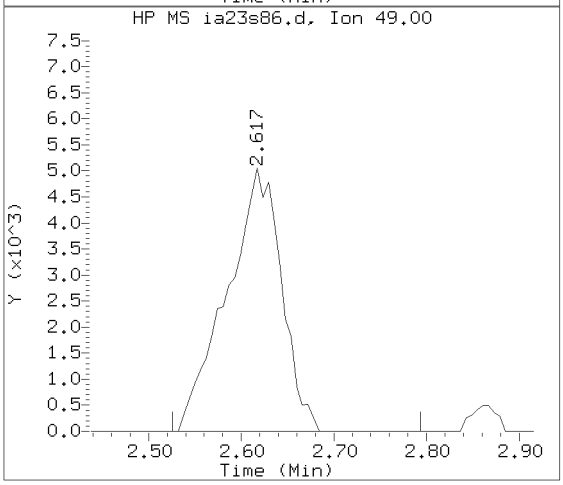
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 171
Retention Time (minutes): 2.629
Relative Retention Time :-0.00080
Quant Ion : 64.00
Area (flag) : 55871
On-Column Amount (ng) : 1.3109

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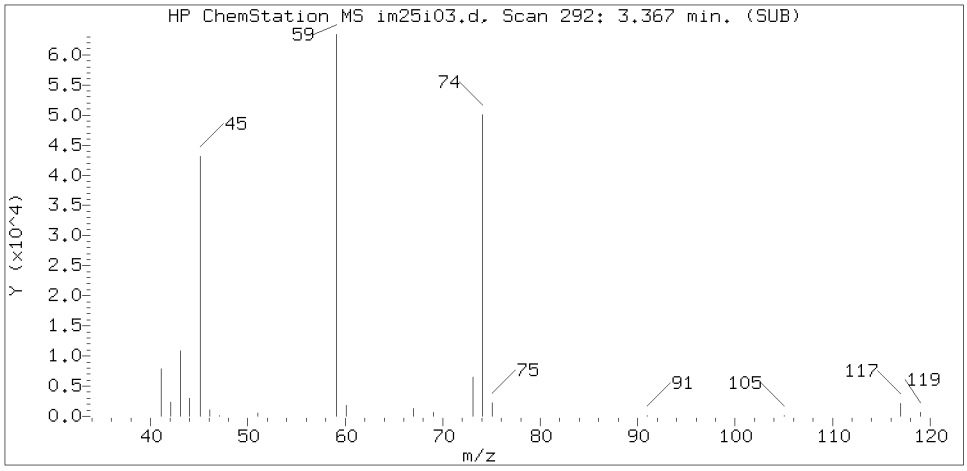
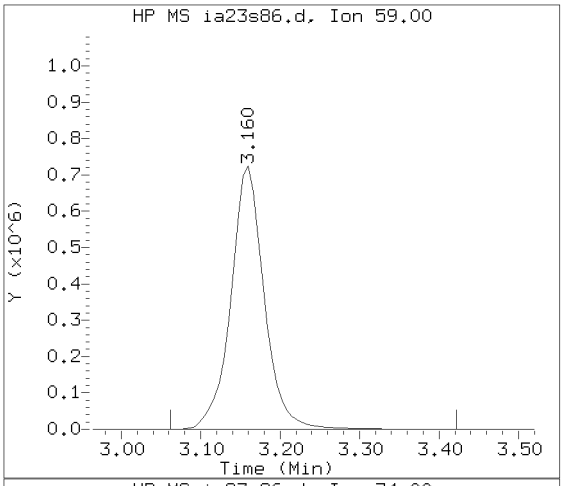
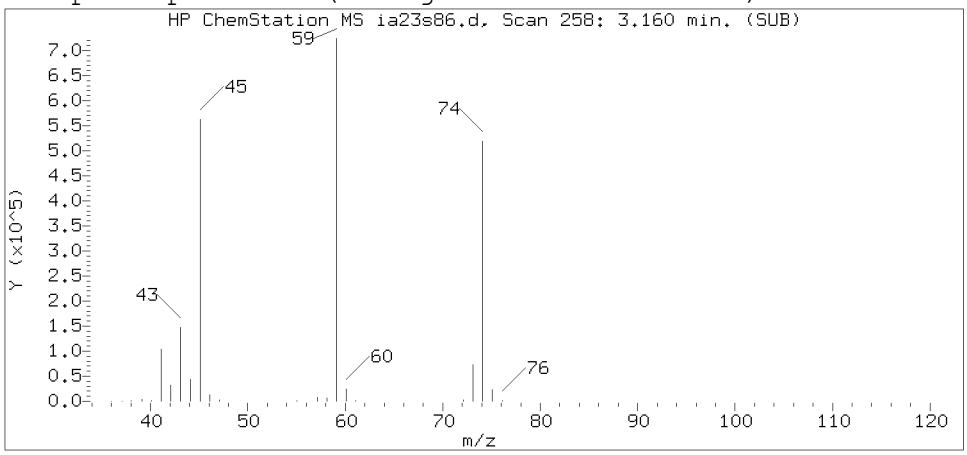
Target 3.5 esignature user ID: jkh09052

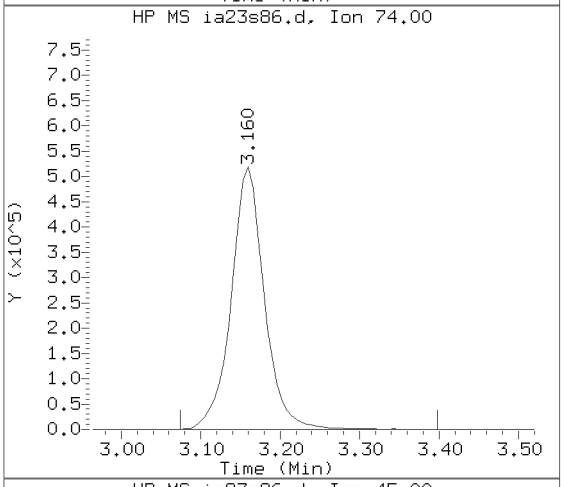
Reference Standard Spectrum for Ethyl ether



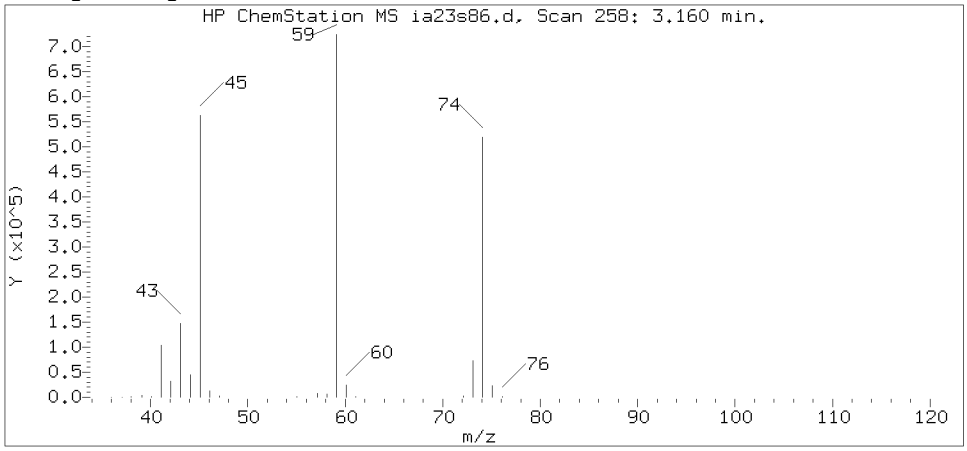


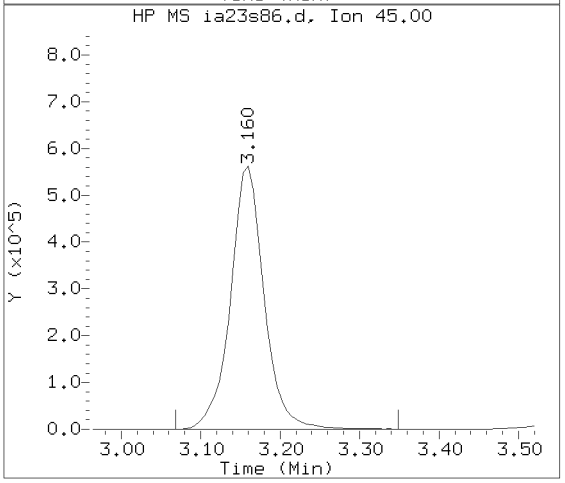
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 258
Retention Time (minutes): 3.160
Relative Retention Time :-0.00080
Quant Ion : 59.00
Area (flag) : 2106732
On-Column Amount (ng) : 45.4210

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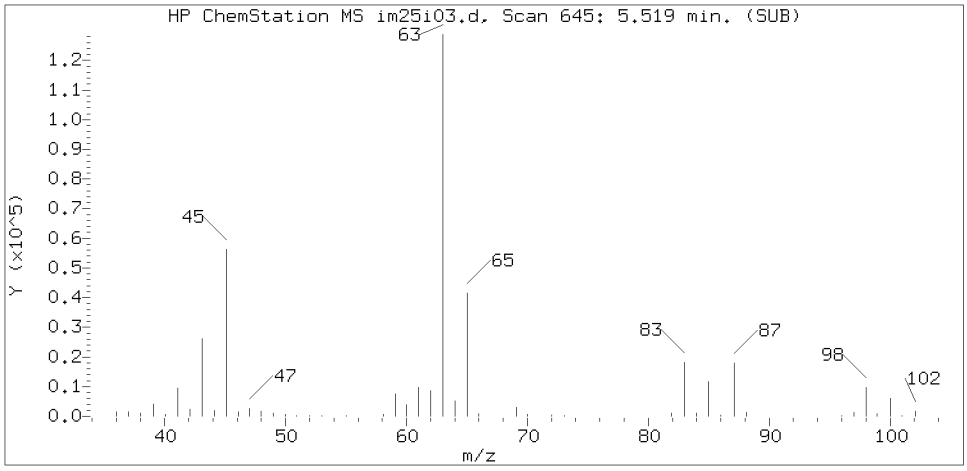
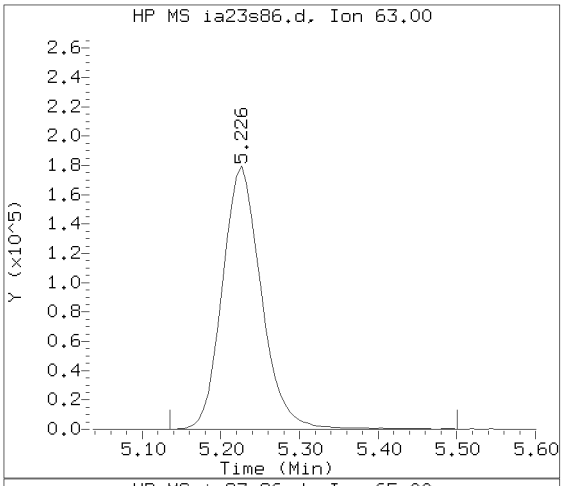
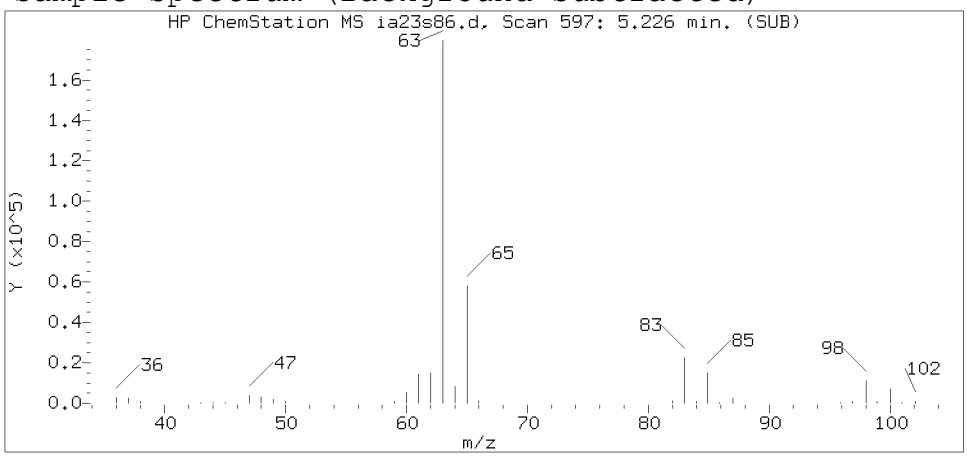
Target 3.5 esignature user ID: jkh09052

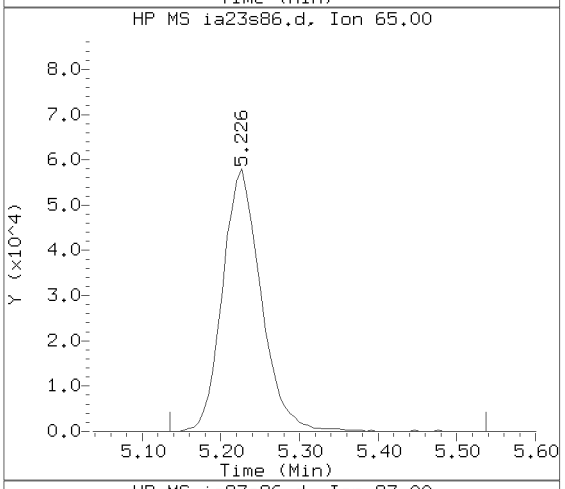
Reference Standard Spectrum for 1,1-Dichloroethane



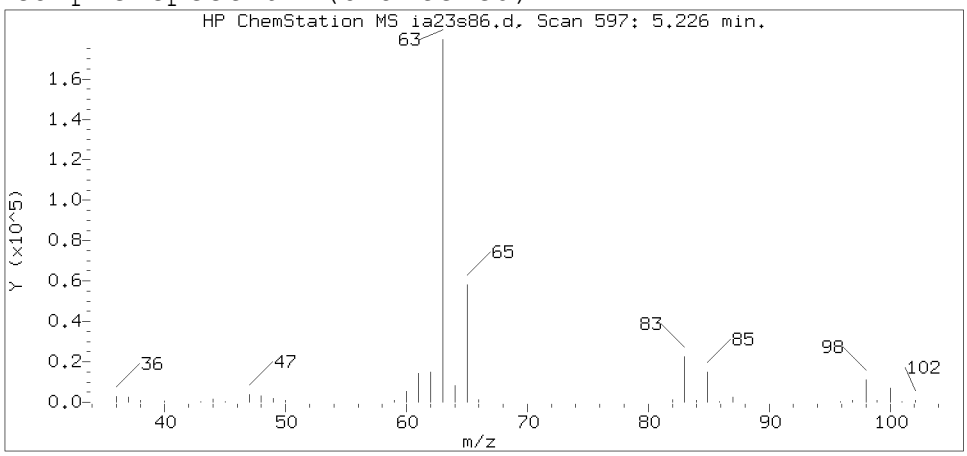


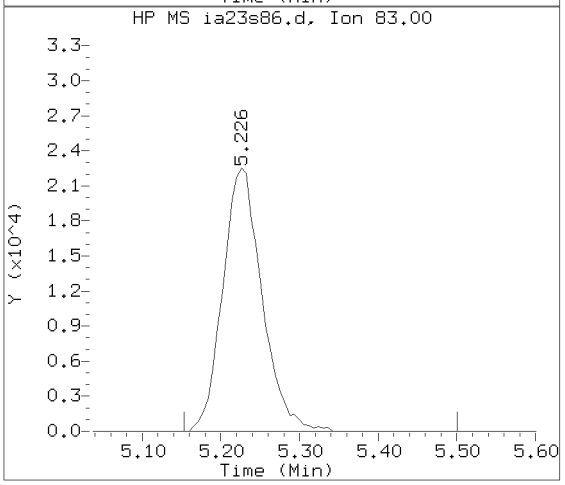
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 597
Retention Time (minutes): 5.226
Relative Retention Time :-0.00079
Quant Ion : 63.00
Area (flag) : 616659
On-Column Amount (ng) : 6.0991

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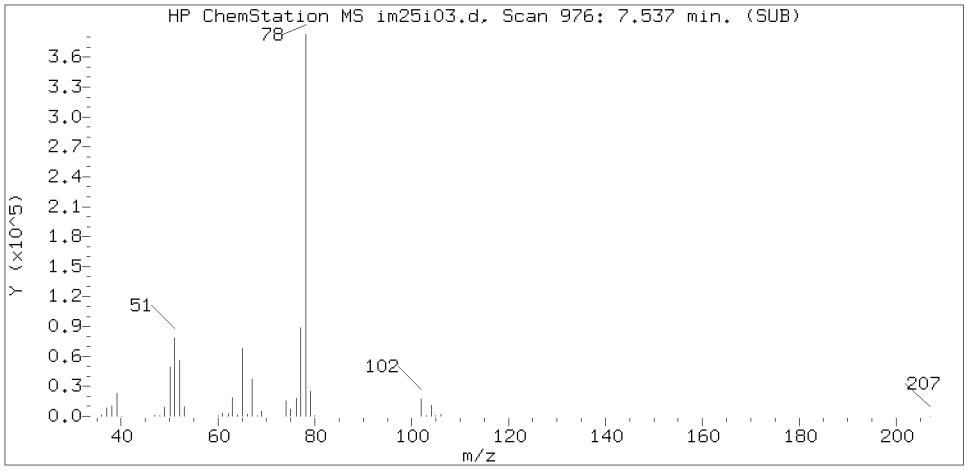
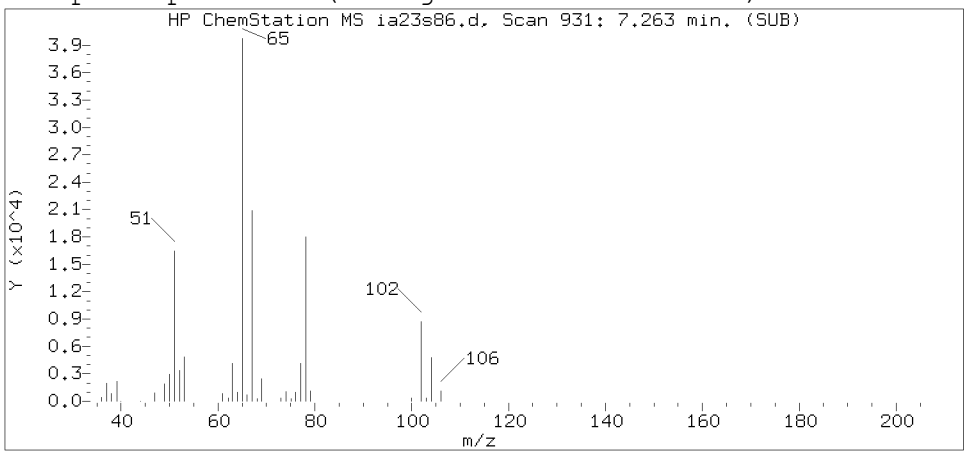
Target 3.5 esignature user ID: jkh09052

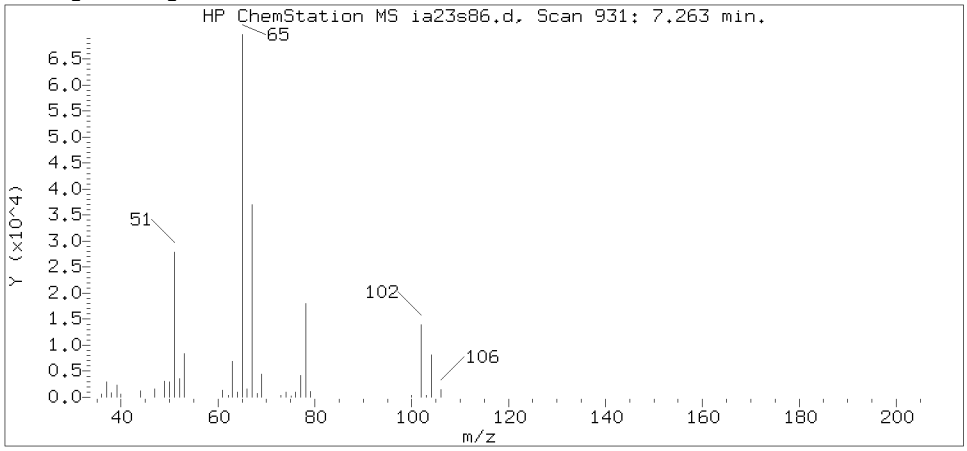
Reference Standard Spectrum for Benzene

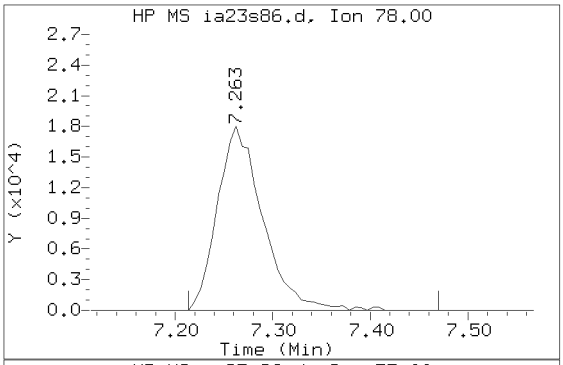


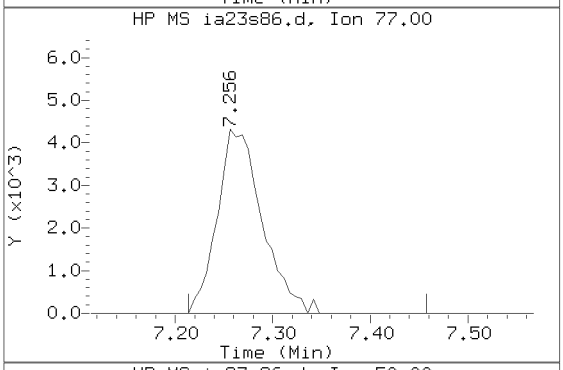
Sample Spectrum (Background Subtracted)

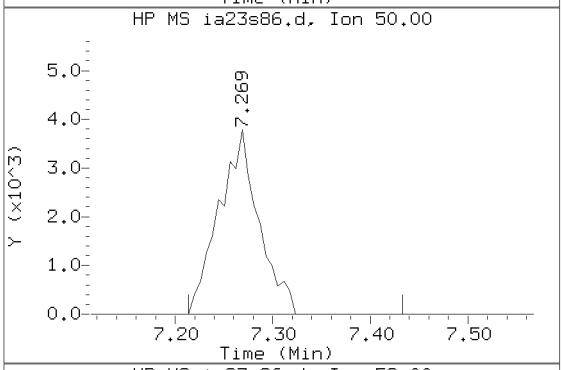


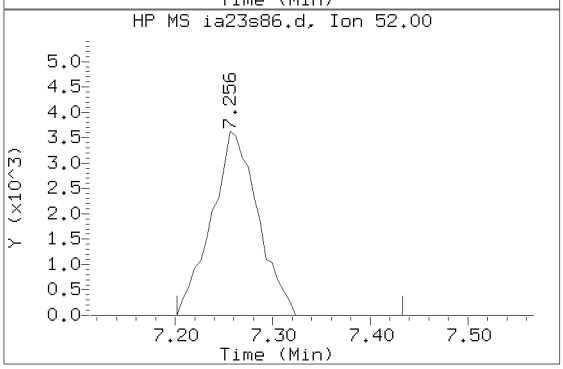
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s86.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 08:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 jkh09052

Sample Name: R0603 Lab Sample ID: 9558697

Compound Number : 58
Compound Name : Benzene
Scan Number : 931
Retention Time (minutes): 7.263
Relative Retention Time :-0.00079
Quant Ion : 78.00
Area (flag) : 58139
On-Column Amount (ng) : 0.2560

Digitally signed by Jennifer K. Howe on 04/24/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

R0603DL

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9558697DL

Data file: /chem2/HP19930.i/18apr24b.b/ia24s46.d Injection date and time: **24-APR-2018 23:39**
Data file Sample Info. Line: R0603DL;9558697DL;1;0;;RAF06;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: **038D** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **2.50**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Analysis Comments:9179; 9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	151950	(-8)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	2082798	(-5)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1548918	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.023	(0.000)	1876	152	824045	(-6)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(-0.001)	113	505111	10.391	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.001)	102	107537	10.170	102%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	2077874	9.936	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	723399	9.796	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.4	3
4) Dimethyl ether	(2)	1.958	(0.002)	45	59942M	0.748	1.87		J	0.3	31
2) Chloromethane	(2)				Not Detected					0.5	1
5) Vinyl Chloride	(2)				Not Detected					0.4	3
7) Bromomethane	(2)				Not Detected					1	3
8) Chloroethane	(2)	2.629	(-0.000)	64	30482	0.670	1.67			0.3	1
10) Trichlorofluoromethane	(2)				Not Detected					0.4	3
11) Ethyl ether	(2)	3.160	(0.000)	59	877744	17.722	44.31			3	31
13) Acrolein	(1)				Not Detected					13	63
15) 1,1-Dichloroethene	(2)				Not Detected					0.6	3
16) Freon 113	(2)				Not Detected					0.5	3
14) Acetone	(1)				Not Detected					8	25
17) Methyl Iodide	(2)				Not Detected					1	25
18) Carbon Disulfide	(2)				Not Detected					1	25
25) Acetonitrile	(1)				Not Detected					79	250
22) Allyl Chloride	(2)				Not Detected					2	25
23) Methylene Chloride	(2)				Not Detected					0.5	3
29) Acrylonitrile	(1)				Not Detected					3	25
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.4	3
33) 1,1-Dichloroethane	(2)	5.226	(-0.000)	63	229381	2.125	5.31			0.3	3
36) Vinyl Acetate	(2)				Not Detected					8	25
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					1	25
38) 2-Butanone	(1)				Not Detected					3	25
42) Propionitrile	(1)				Not Detected					26	250
45) Methacrylonitrile	(1)				Not Detected					24	250
48) Tetrahydrofuran	(1)				Not Detected					5	63
49) Chloroform	(2)				Not Detected					0.3	3
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.3	3
54) Carbon Tetrachloride	(2)				Not Detected					0.4	3
56) Isobutyl Alcohol	(1)				Not Detected					25	500

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 04/25/2018 at 00:05. Target 3.5 esignature user ID: dvv10203

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s46.d Injection date and time: **24-APR-2018 23:39**
Data file Sample Info. Line: R0603DL;9558697DL;1;0;;RAF06;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: **038D** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **2.50**

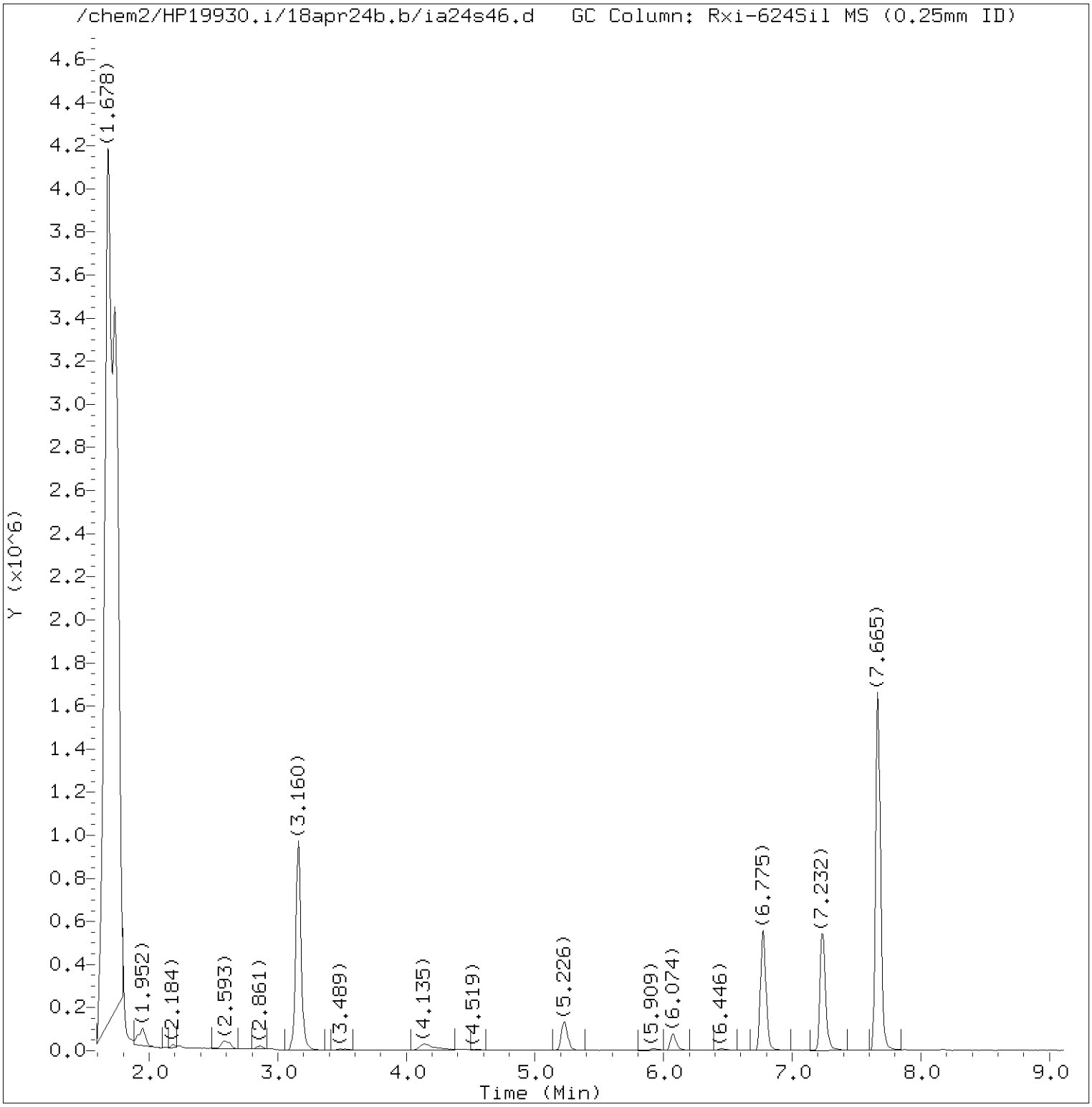
Volume Purged (Vt): 25 ml Sample Volume (Vo): 10 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.3	3
59) 1,2-Dichloroethane	(2)				Not Detected					0.4	3
67) Trichloroethene	(2)				Not Detected					0.4	3
70) 1,2-Dichloropropane	(2)				Not Detected					0.3	3
71) Methyl Methacrylate	(1)				Not Detected					9	25
73) Dibromomethane	(2)				Not Detected					0.3	3
72) 1,4-Dioxane	(1)				Not Detected					110	500
74) Bromodichloromethane	(2)				Not Detected					0.3	3
81) 4-Methyl-2-Pentanone	(1)				Not Detected					3	25
83) Toluene	(3)				Not Detected					0.3	3
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.3	3
86) Ethyl Methacrylate	(3)				Not Detected					2	25
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.3	3
89) Tetrachloroethene	(3)				Not Detected					0.3	3
90) 1,3-Dichloropropane	(3)				Not Detected					0.3	3
91) 2-Hexanone	(1)				Not Detected					3	25
93) Dibromochloromethane	(3)				Not Detected					0.3	3
95) 1,2-Dibromoethane	(3)				Not Detected					0.3	3
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.3	3
100) Ethylbenzene	(3)				Not Detected					0.3	3
101) m+p-Xylene	(3)				Not Detected					0.3	1
104) o-Xylene	(3)				Not Detected					0.3	1
105) Xylene (Total)	(3)				Not Detected					0.5	8
106) Styrene	(3)				Not Detected					0.3	3
107) Bromoform	(3)				Not Detected					0.3	3
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	3
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					3	25
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.8	3
126) Pentachloroethane	(4)				Not Detected					2	25
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.3	3
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.3	3
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.3	3
142) Hexachloroethane	(4)				Not Detected					0.3	25
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.5	3
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.3	3
146) Hexachlorobutadiene	(4)				Not Detected					0.3	3
147) Naphthalene	(4)				Not Detected					0.3	3

Total number of targets = 67

Digitally signed by Don V. Viray on 04/25/2018 at 00:05. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

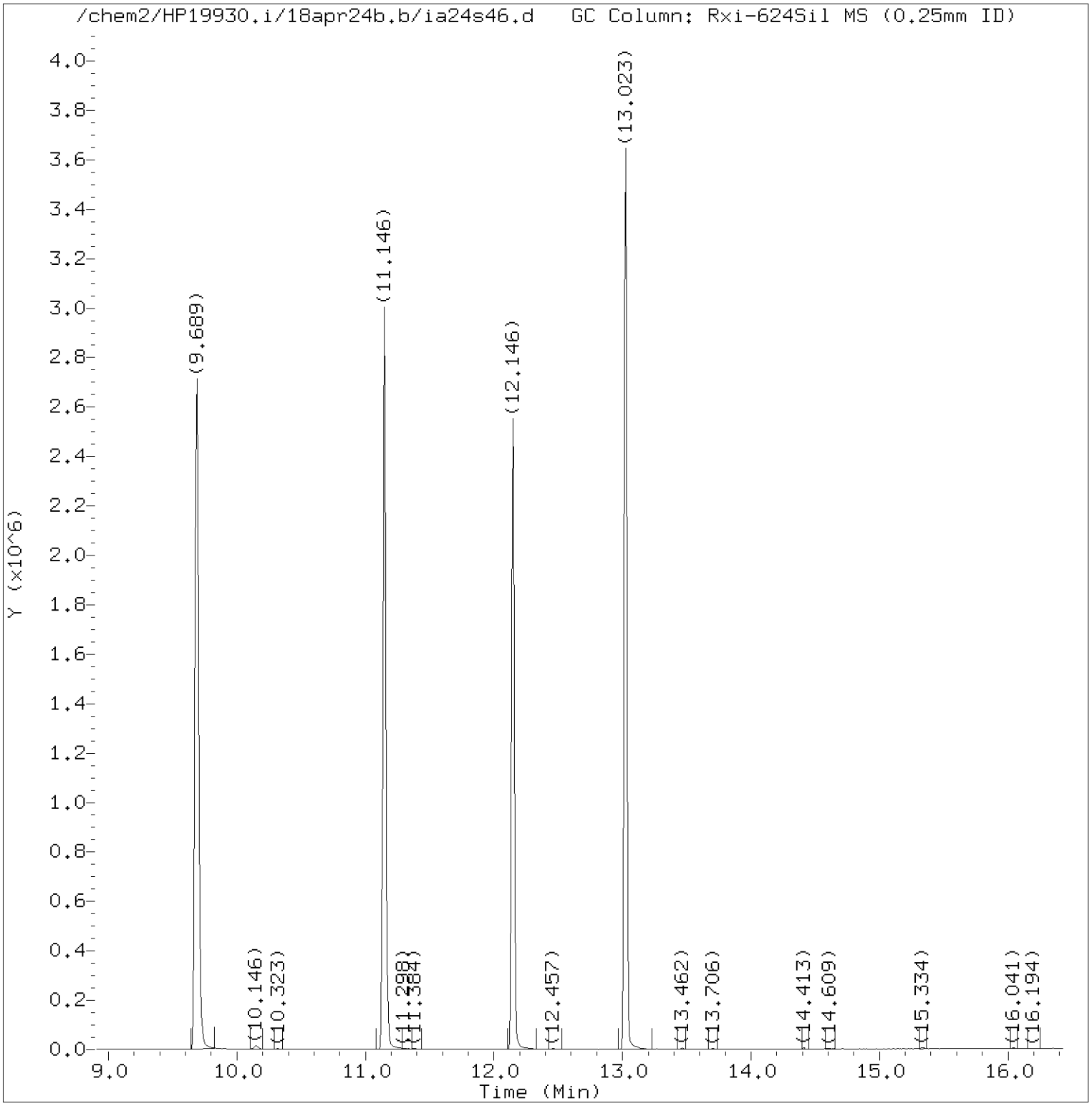
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Sample Name: R0603DL Lab Sample ID: 9558697DL

Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Sample Name: R0603DL Lab Sample ID: 9558697DL

Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

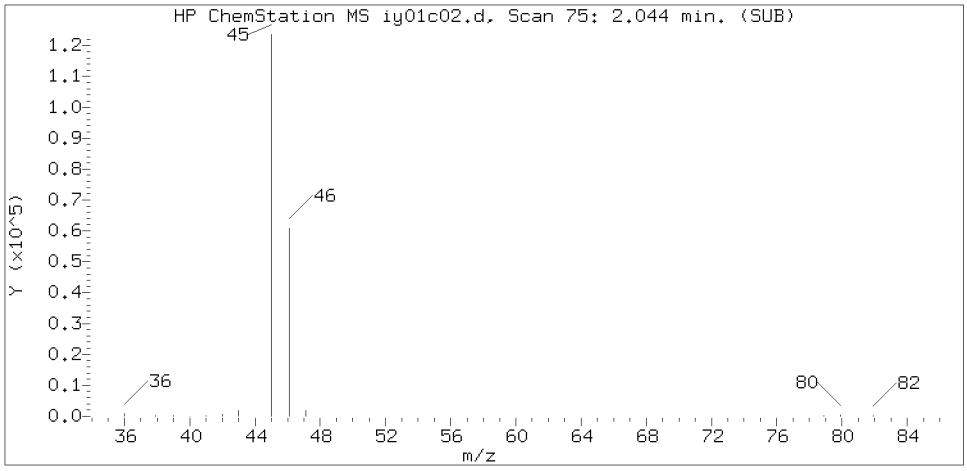
Sample Name: R0603DL Lab Sample ID: 9558697DL

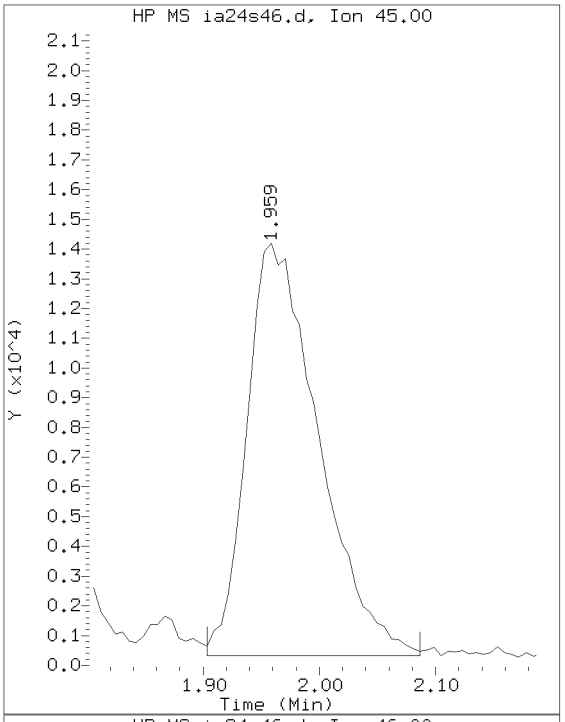
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.959	45	59942M	0.748
8) Chloroethane	(2)	2.629	64	30482	0.670
11) Ethyl ether	(2)	3.160	59	877744	17.722
26)*t-Butyl Alcohol-d10	(1)	4.135	65	151950	50.000
33) 1,1-Dichloroethane	(2)	5.226	63	229381	2.125
50)$Dibromofluoromethane	(2)	6.775	113	505111	10.391
57)$1,2-Dichloroethane-d4	(2)	7.238	102	107537	10.170
63)*Fluorobenzene	(2)	7.665	96	2082798	10.000
82)$Toluene-d8	(3)	9.689	98	2077874	9.936
97)*Chlorobenzene-d5	(3)	11.146	117	1548918	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	723399	9.796
133)*1,4-Dichlorobenzene-d4	(4)	13.023	152	824045	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

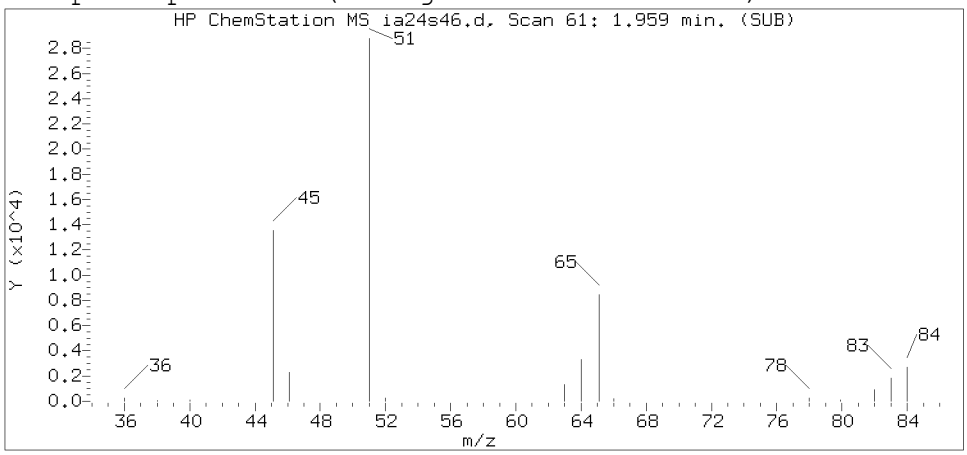
Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

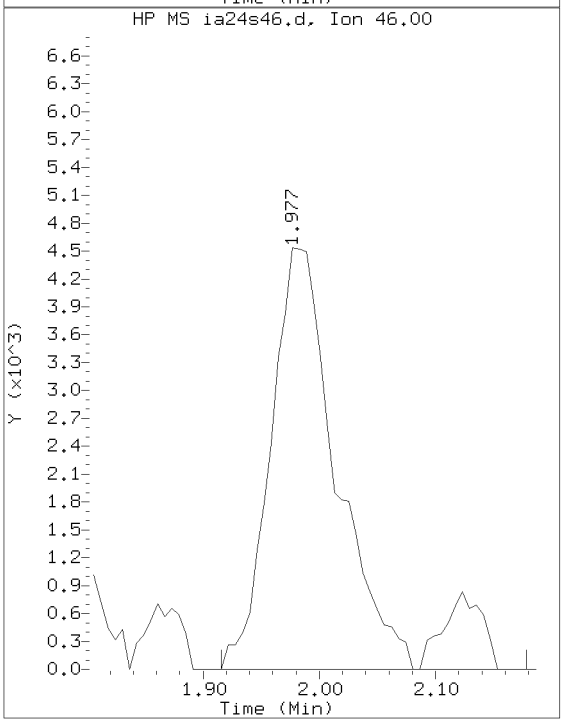
Reference Standard Spectrum for Dimethyl ether



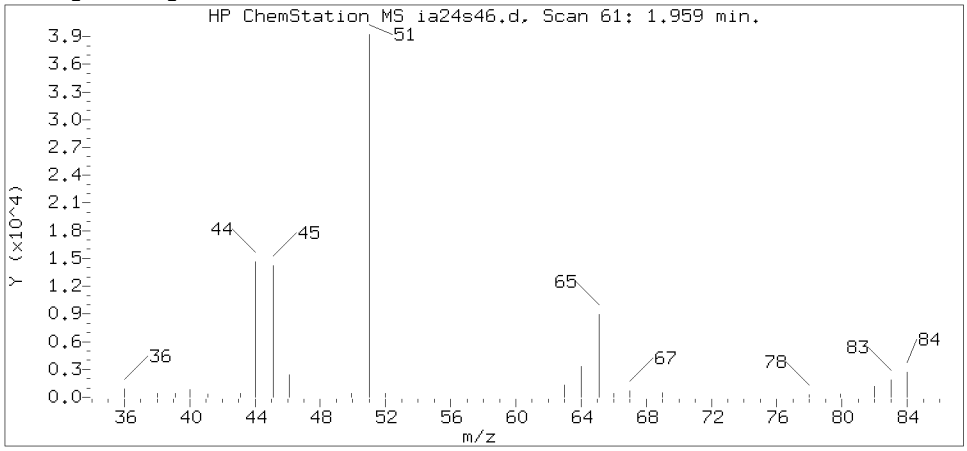


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

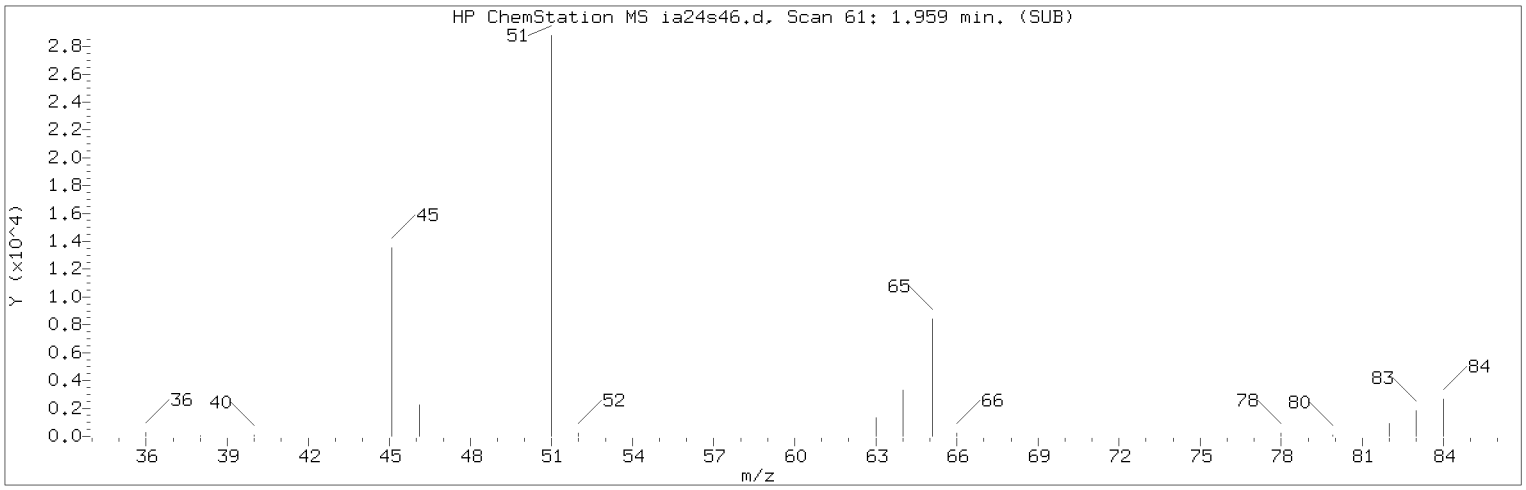
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Sample Name: R0603DL Lab Sample ID: 9558697DL

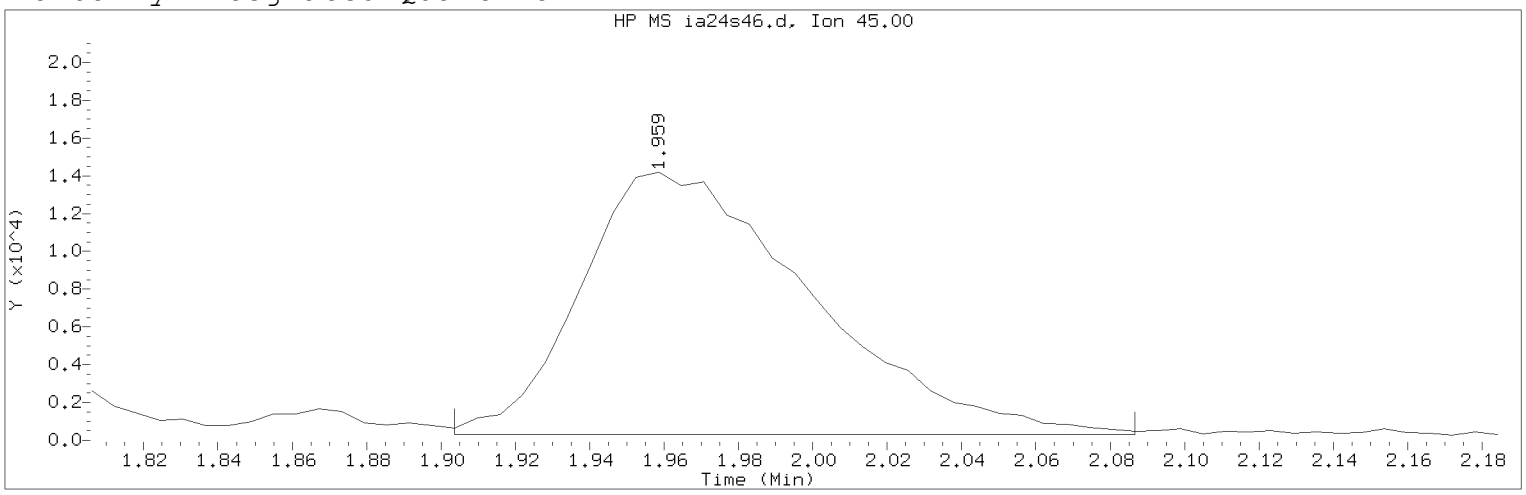
Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 61
Retention Time (minutes)	: 1.959
Relative Retention Time	: 0.00241
Quant Ion	: 45.00
Area (flag)	: 59942M
On-Column Amount (ng)	: 0.7481

Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Sample Name: R0603DL Lab Sample ID: 9558697DL

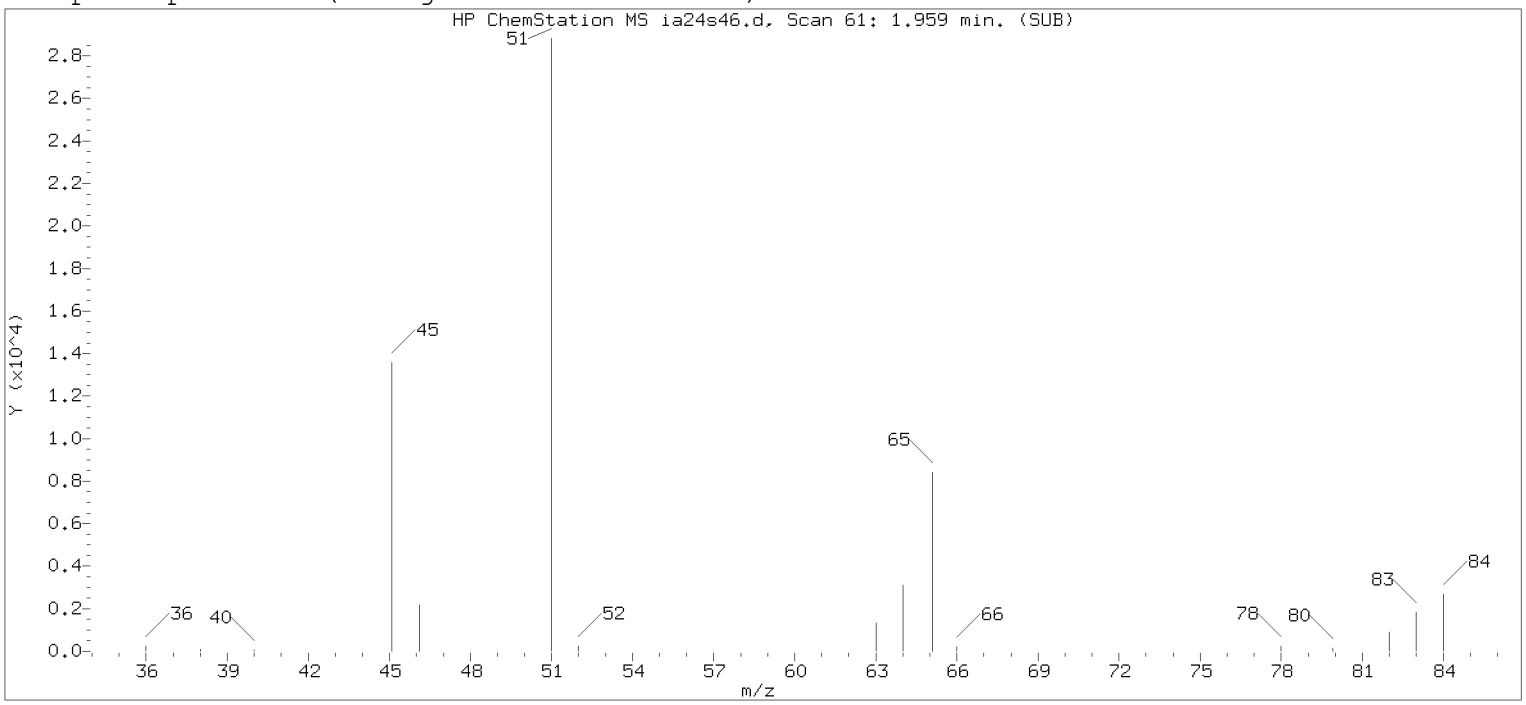
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 61
Retention Time (minutes): 1.959
Quant Ion : 45.00
Area (flag) : 59942M
On-Column Amount (ng) : 0.7481
Integration start scan : 51 Integration stop scan: 81
Y at integration start : 313 Y at integration end: 313

Reason for manual integration: improper integration

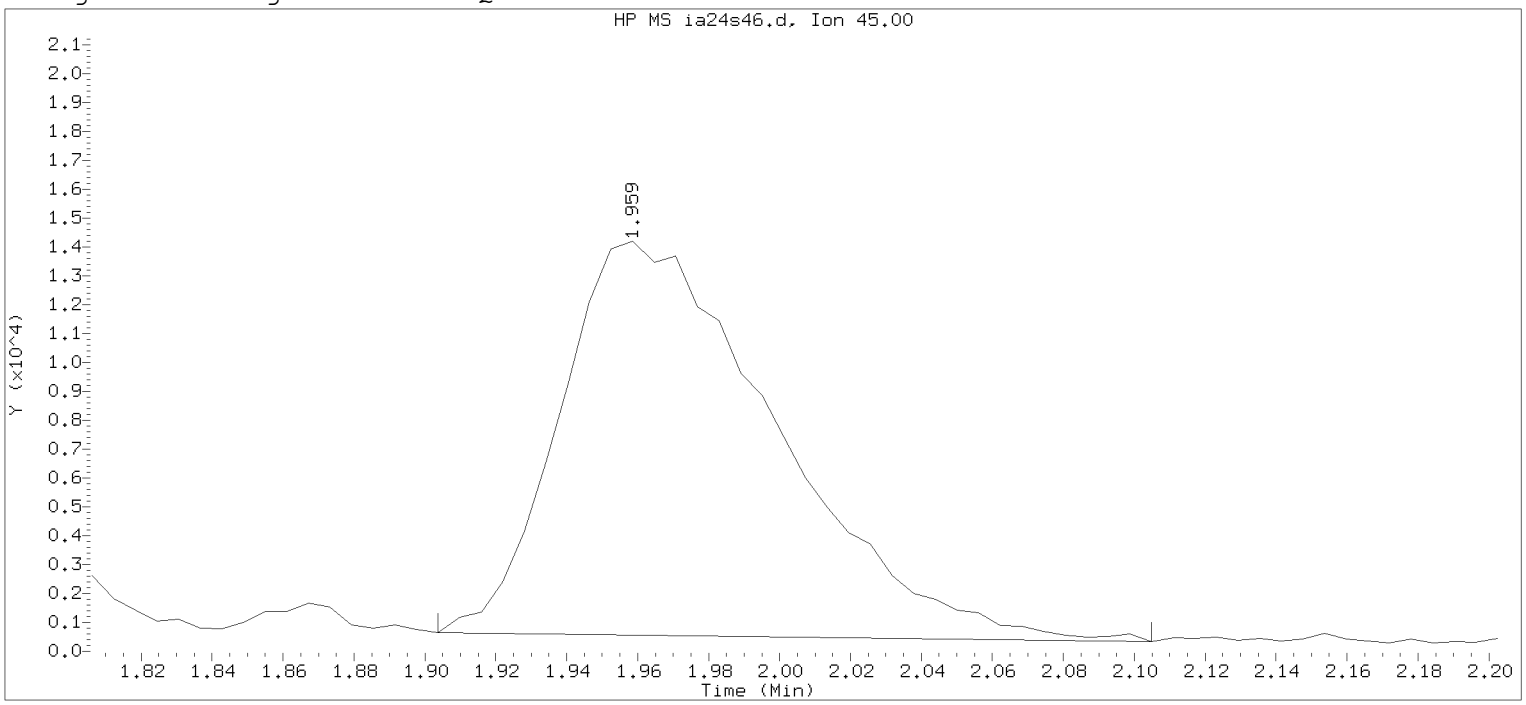
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

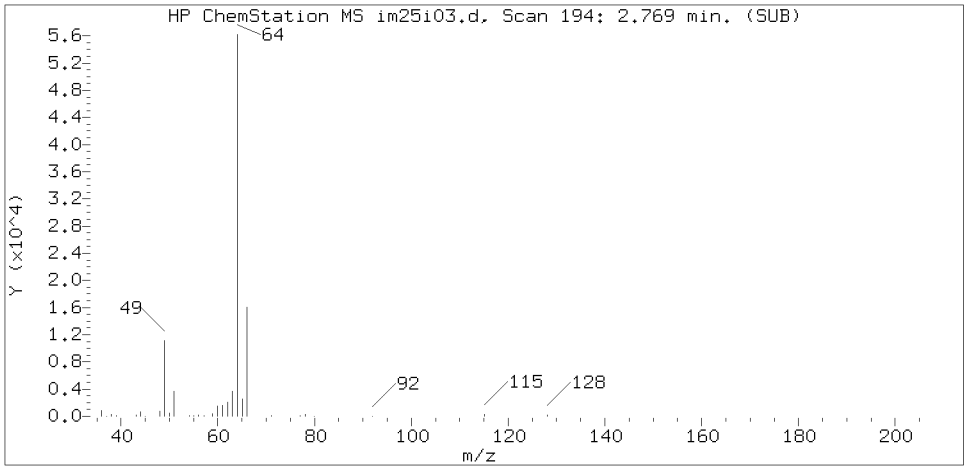
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:57 Automation

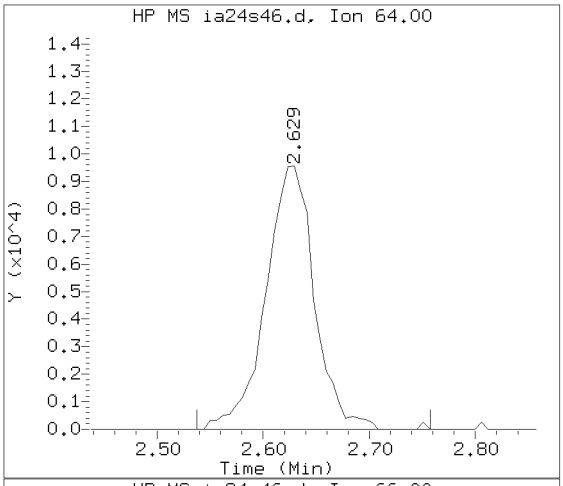
Sample Name: R0603DL Lab Sample ID: 9558697DL

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 61
Retention Time (minutes): 1.959
Quant Ion : 45.00
Area : 57987
On-column Amount (ng) : 0.7237
Integration start scan : 51 Integration stop scan: 84
Y at integration start : 637 Y at integration end: 333

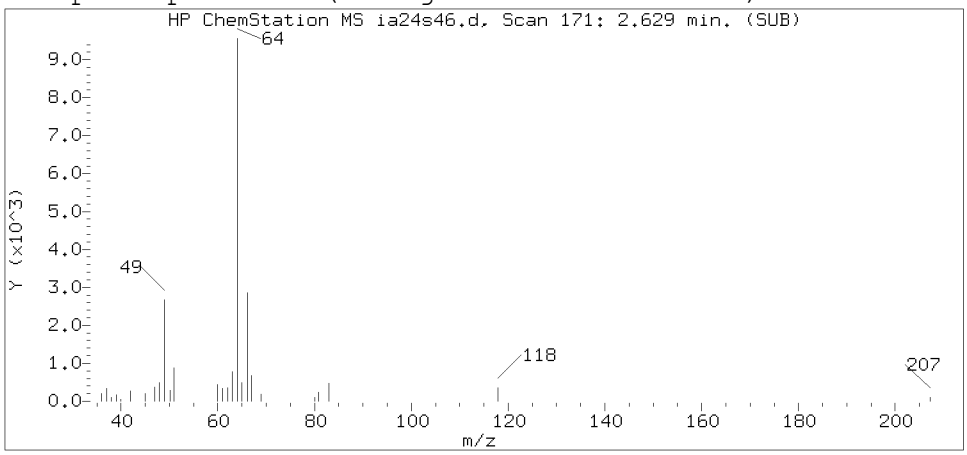
Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature used on 04/25/2018

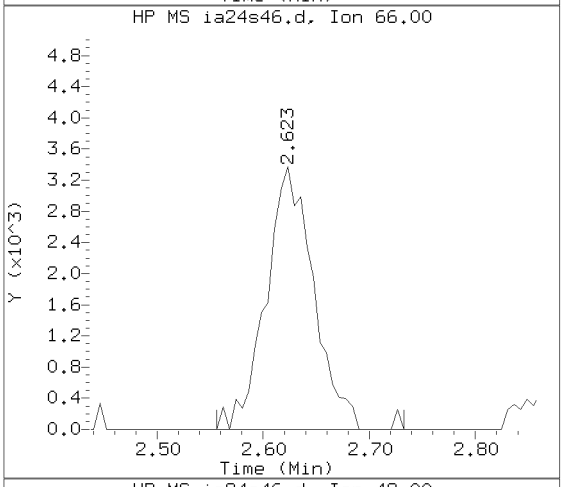
Reference Standard Spectrum for Chloroethane



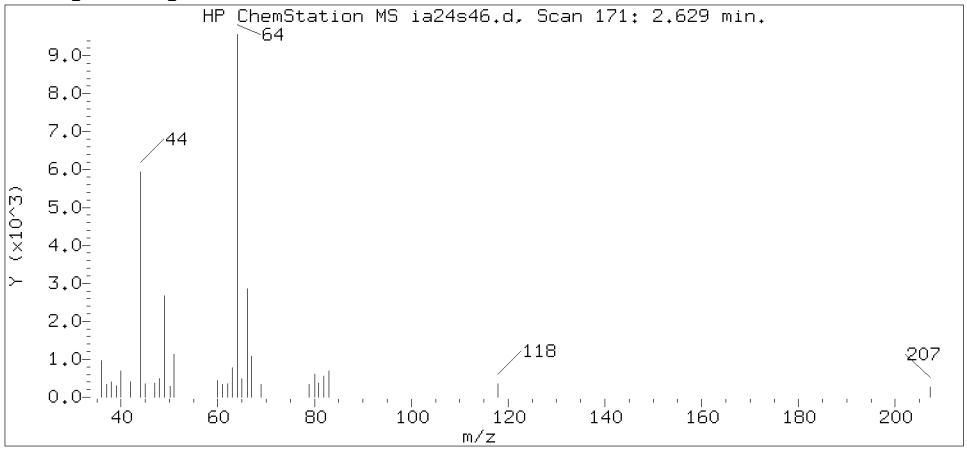


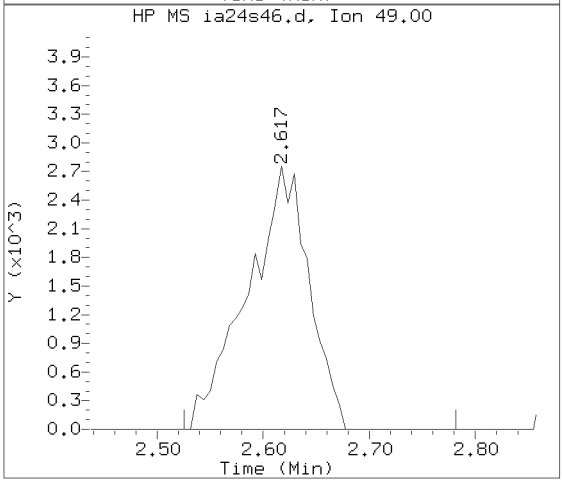
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

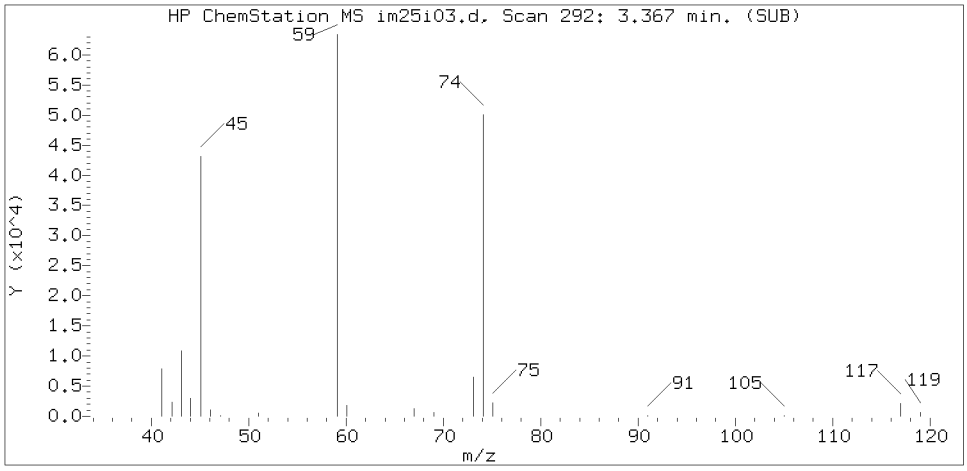
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

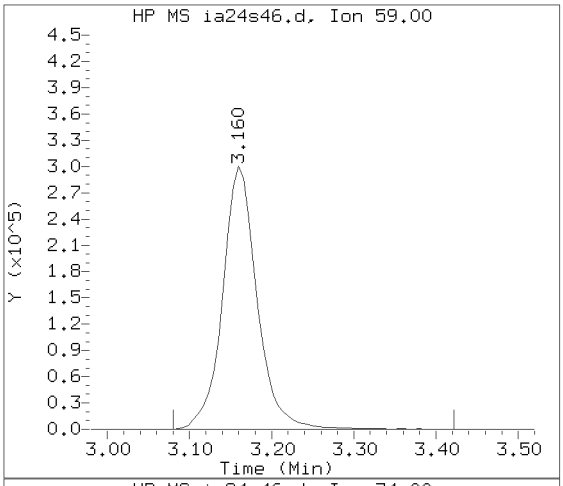
Sample Name: R0603DL Lab Sample ID: 9558697DL

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 171
Retention Time (minutes): 2.629
Relative Retention Time :-0.00079
Quant Ion : 64.00
Area (flag) : 30482
On-Column Amount (ng) : 0.6698

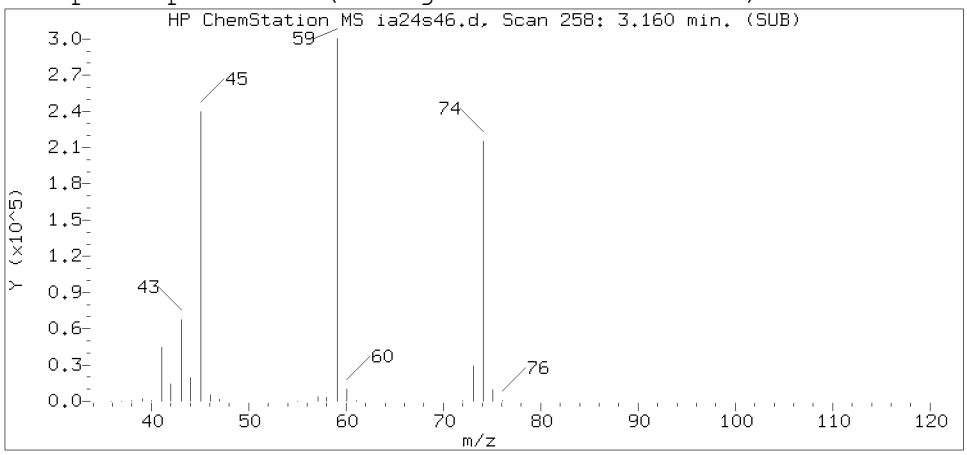
Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

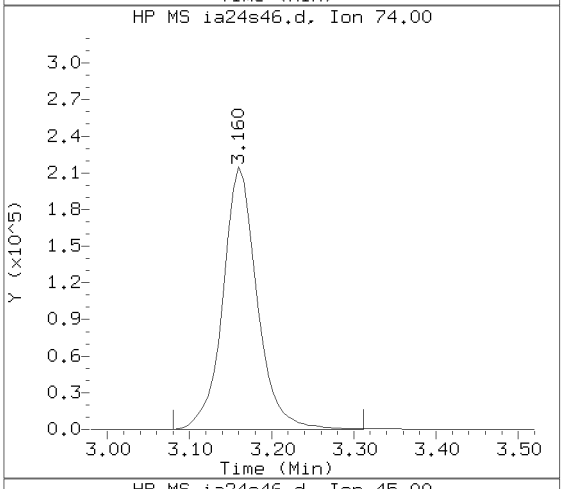
Reference Standard Spectrum for Ethyl ether



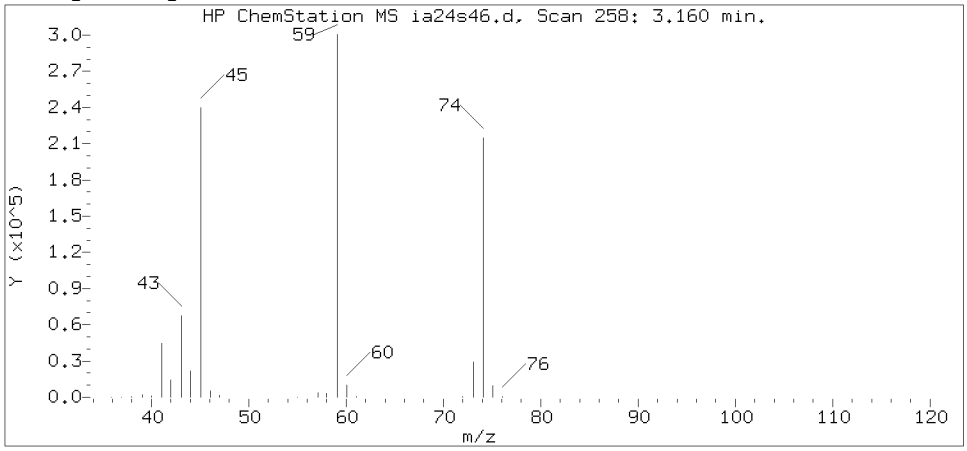


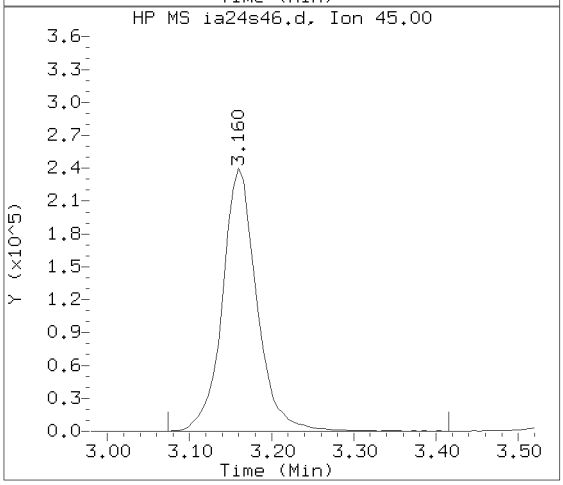
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

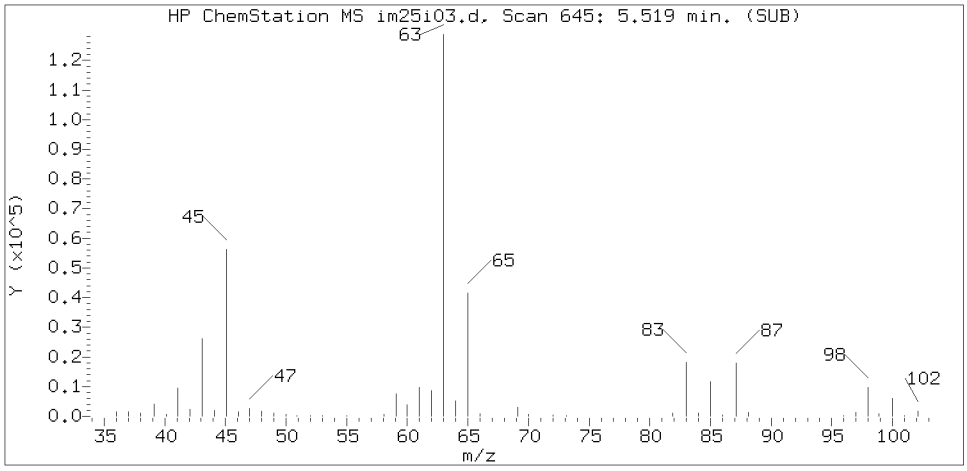
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

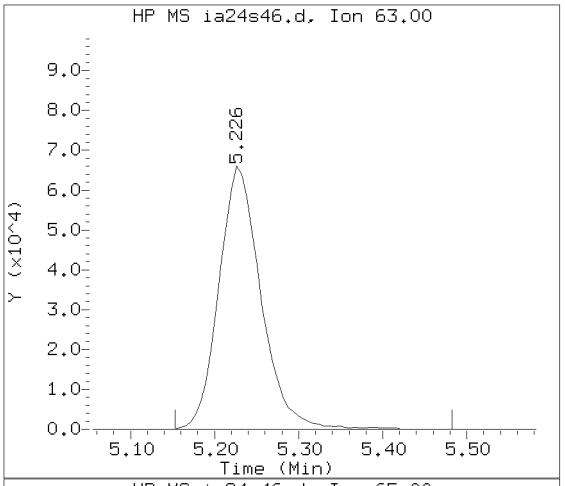
Sample Name: R0603DL Lab Sample ID: 9558697DL

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 258
Retention Time (minutes)	: 3.160
Relative Retention Time	: 0.00001
Quant Ion	: 59.00
Area (flag)	: 877744
On-Column Amount (ng)	: 17.7224

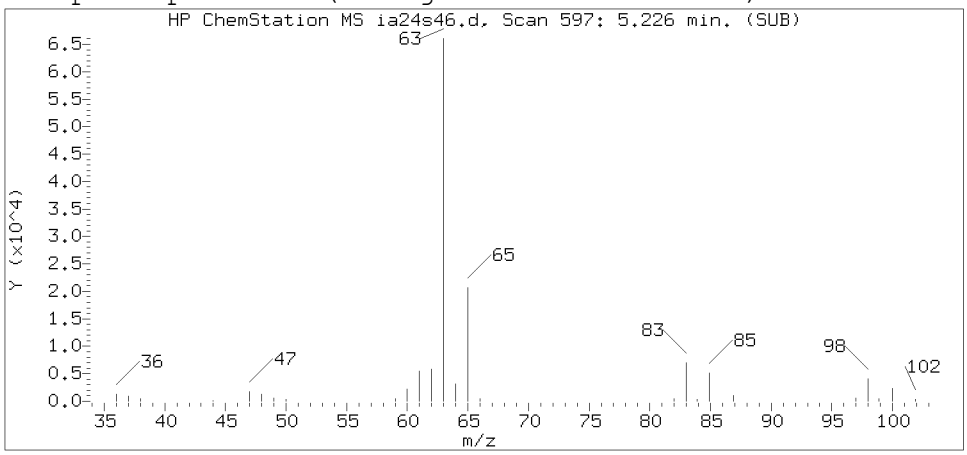
Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

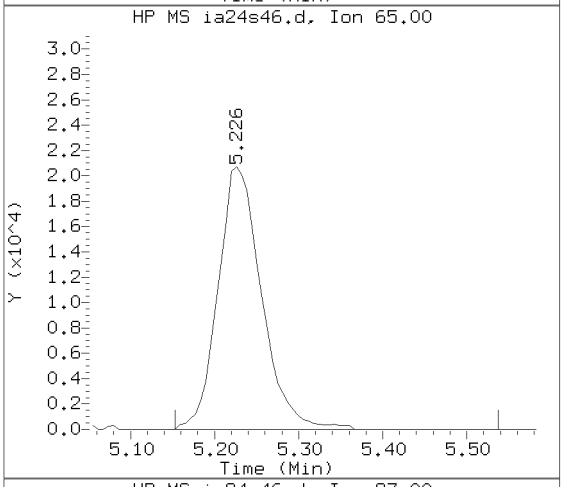
Reference Standard Spectrum for 1,1-Dichloroethane



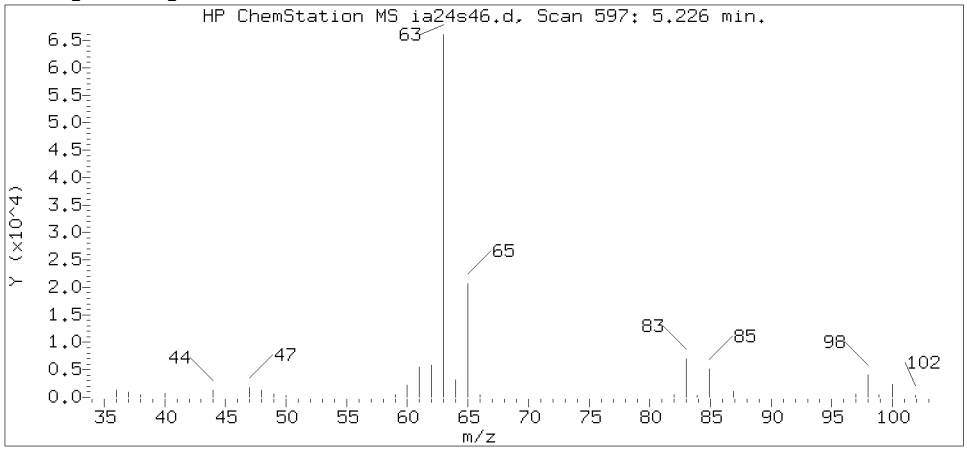


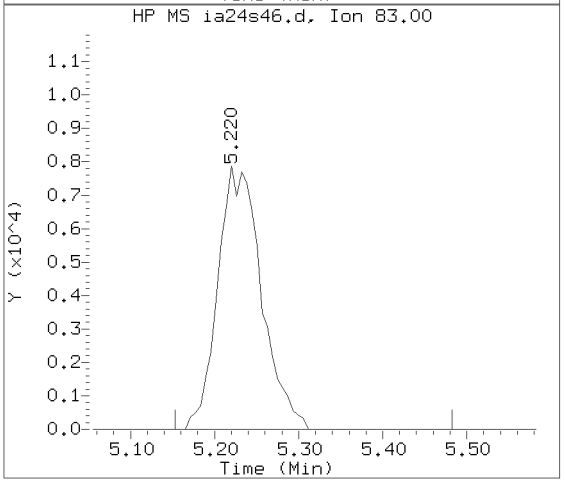
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr24b.b/ia24s46.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 23:39 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 25-Apr-2018 00:04 dvv10203

Sample Name: R0603DL Lab Sample ID: 9558697DL

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 597
Retention Time (minutes): 5.226
Relative Retention Time :-0.00079
Quant Ion : 63.00
Area (flag) : 229381
On-Column Amount (ng) : 2.1246

Digitally signed by Don V. Viray on 04/25/2018 at 00:05.
Target 3.5 esignature user ID: dvv10203

R0604 Lancaster Laboratories 9558698
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23s05.d Injection date and time: **23-APR-2018 12:24**
Data file Sample Info. Line: R0604;9558698;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:43 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502	(0.000)	347	65	317055	(-5)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1150104	(-8)	50.00	
101) Chlorobenzene-d5	10.745	(-0.006)	1535	117	895288	(-10)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	481488	(-15)	50.00	

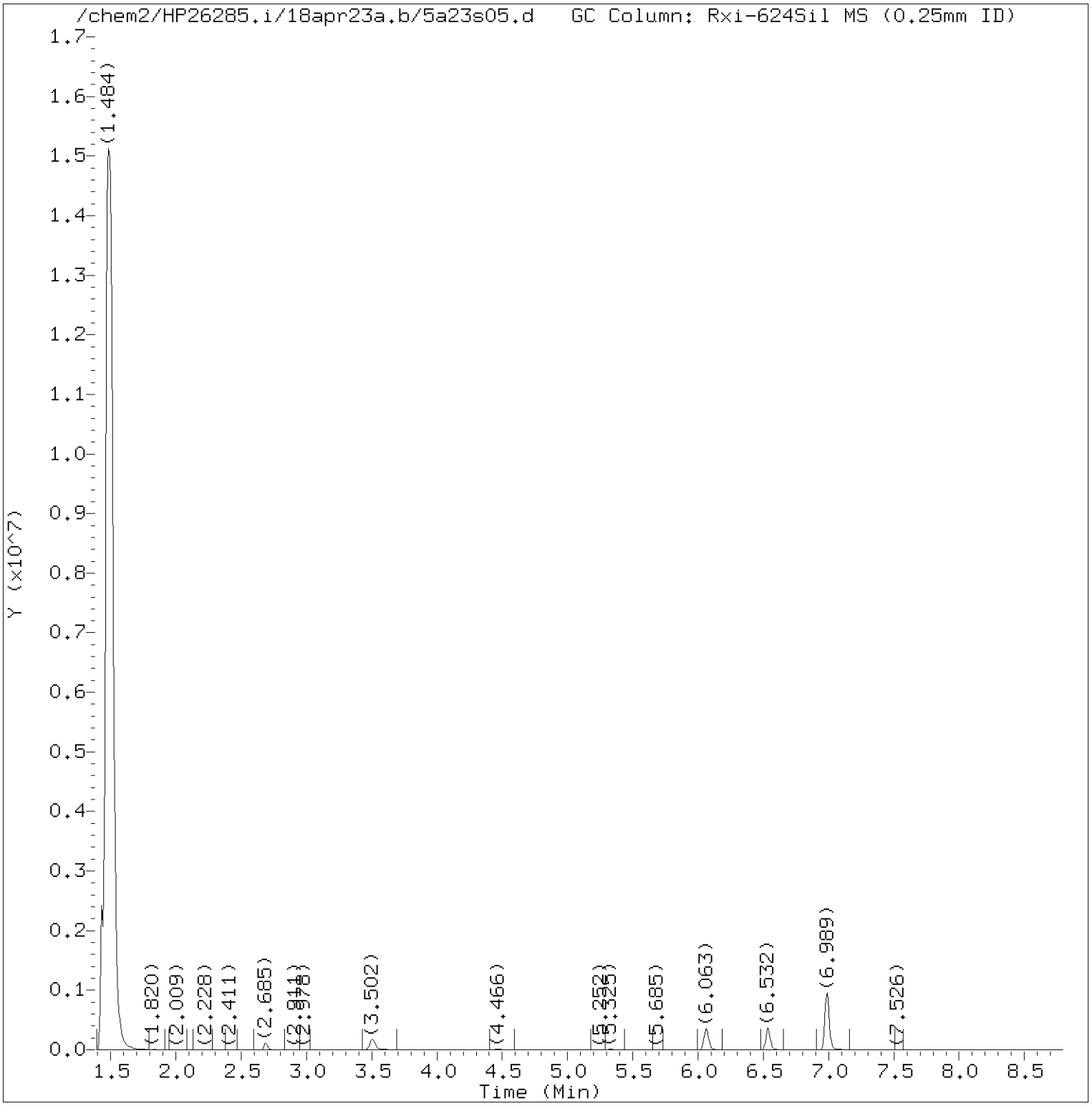
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	293155	49.483	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538	(0.000)	102	66911	50.487	101%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1118782	49.854	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.001)	95	423966	49.348	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:29. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

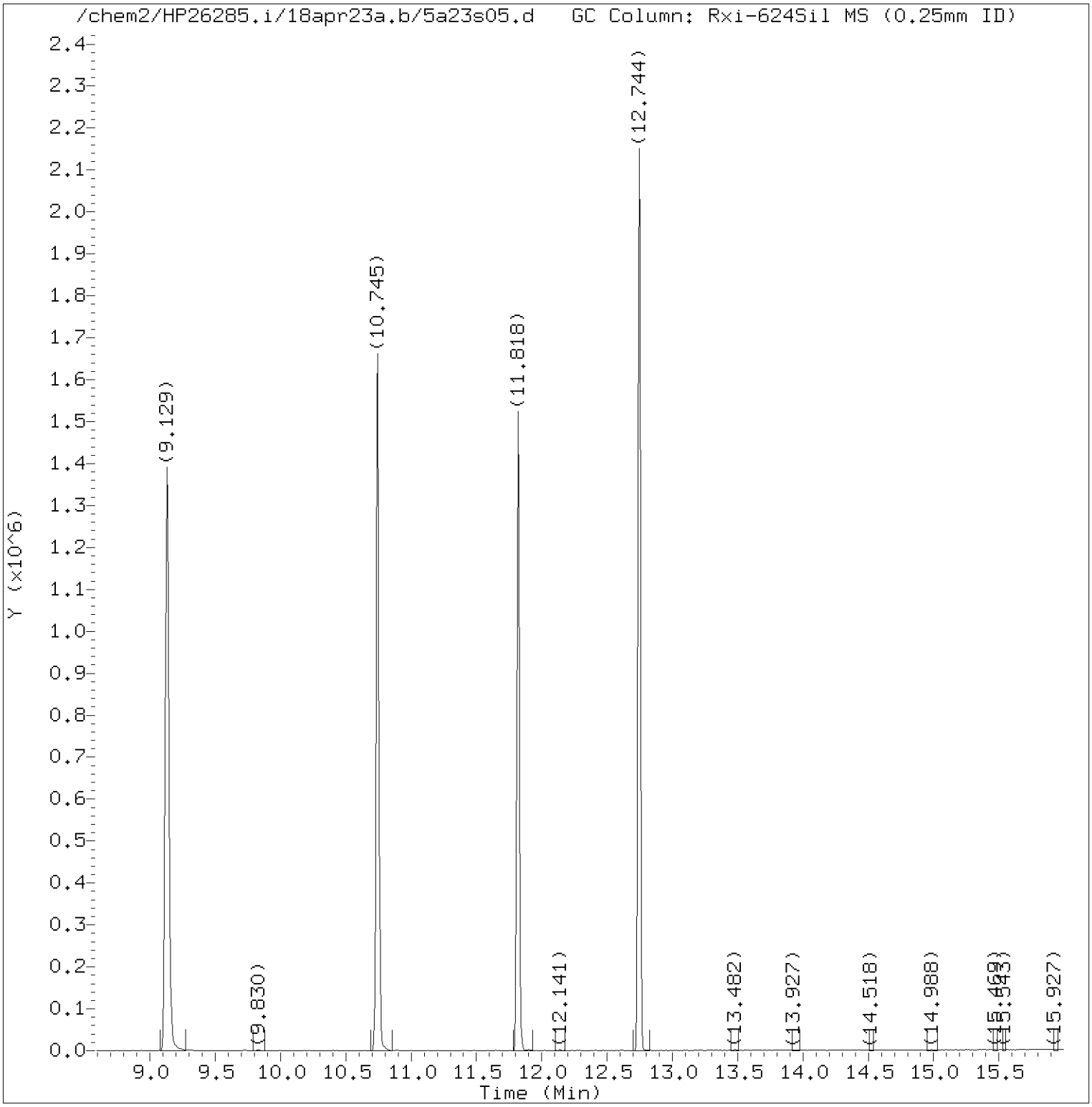
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s05.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 12:43 Unknown

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s05.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 12:43 Unknown

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s05.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 12:43 Unknown

Sample Name: R0604 Lab Sample ID: 9558698

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.502	65	317055	250.000
52)$Dibromofluoromethane	(2)	6.063	113	293155	49.483
57)$1,2-Dichloroethane-d4	(2)	6.538	102	66911	50.487
66)*Fluorobenzene	(2)	6.989	96	1150104	50.000
84)$Toluene-d8	(3)	9.129	98	1118782	49.854
101)*Chlorobenzene-d5	(3)	10.745	117	895288	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	423966	49.348
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	481488	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:29.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s76.d Injection date and time: **24-APR-2018 04:40**
Data file Sample Info. Line: R0604;9558698;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.184	(-0.049)	426	65	125890	(-15)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	1814308	(-12)	10.00	
97) Chlorobenzene-d5	11.152	(-0.006)	1569	117	1326348	(-14)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	699004	(-16)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	439687	10.384	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.001)	102	95105	10.325	103%		80 - 120
82) Toluene-d8	(3)	9.689	(0.000)	98	1764826	9.855	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.152	(0.000)	95	621914	9.835	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)	1.977	(0.001)	45	76826	1.101	1.10		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)	2.629	(-0.000)	64	27188	0.686	0.69			0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)	3.166	(-0.001)	59	642329	14.888	14.89			1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.232	(-0.001)	63	227065	2.414	2.41			0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s76.d Injection date and time: **24-APR-2018 04:40**
Data file Sample Info. Line: R0604;9558698;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

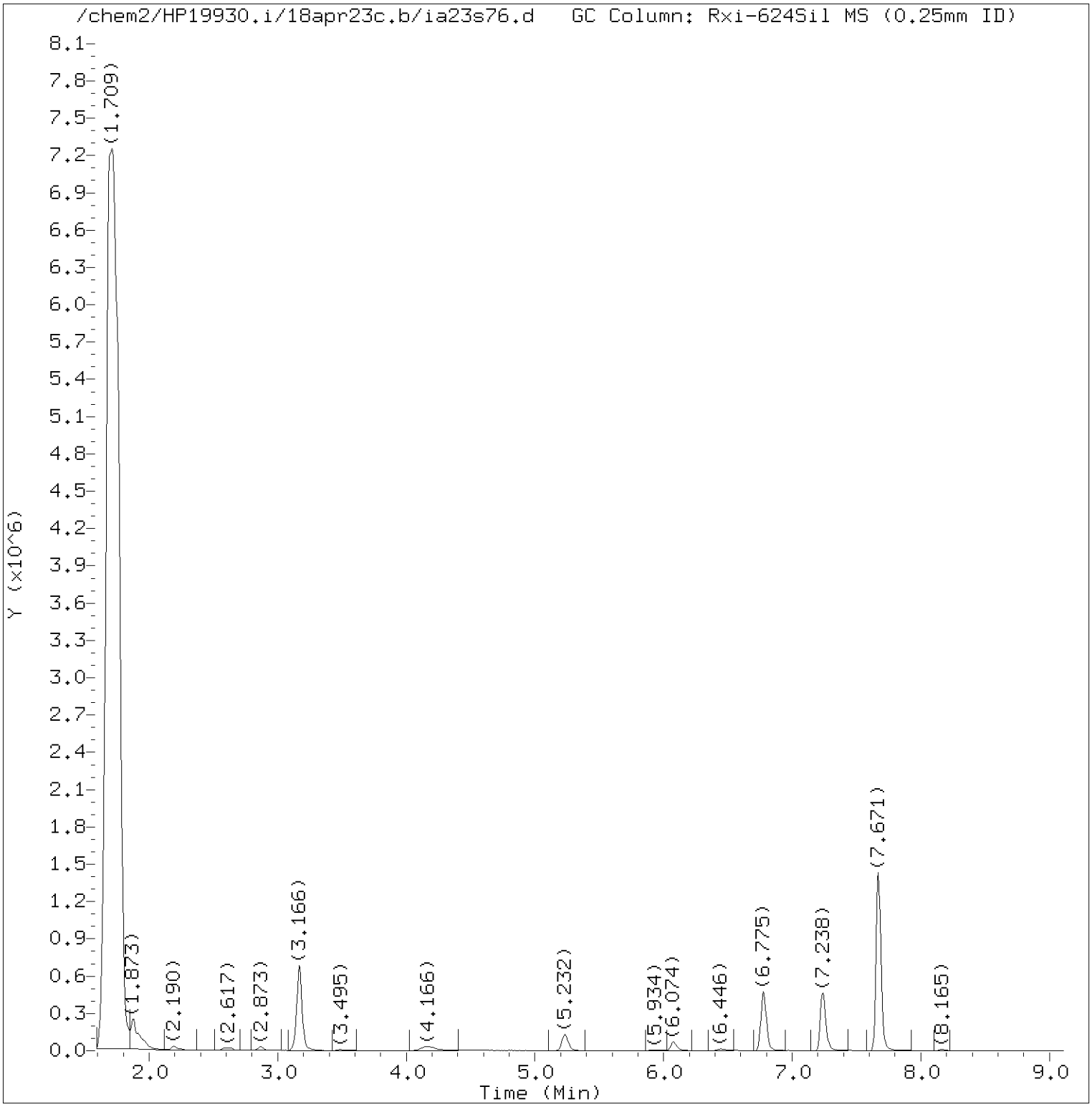
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)	7.269(-0.000)	78	25051	0.119	0.12		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	6525	0.117	0.12		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

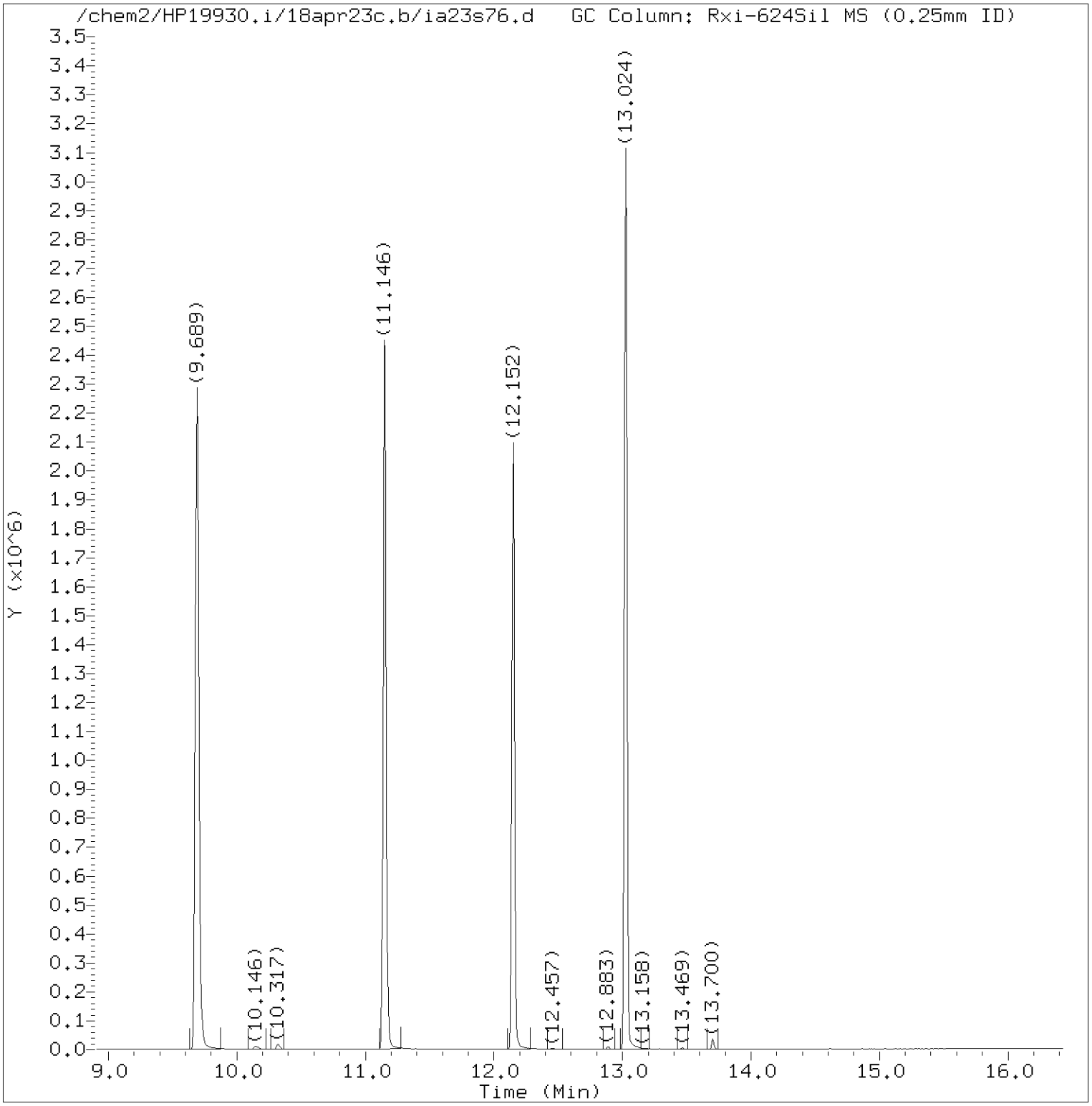
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Sample Name: R0604 Lab Sample ID: 9558698

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.977	45	76826	1.101
8) Chloroethane	(2)	2.629	64	27188	0.686
11) Ethyl ether	(2)	3.166	59	642329	14.888
26)*t-Butyl Alcohol-d10	(1)	4.184	65	125890	50.000
33) 1,1-Dichloroethane	(2)	5.232	63	227065	2.414
50)$Dibromofluoromethane	(2)	6.775	113	439687	10.384
57)$1,2-Dichloroethane-d4	(2)	7.238	102	95105	10.325
58) Benzene	(2)	7.269	78	25051	0.119
63)*Fluorobenzene	(2)	7.671	96	1814308	10.000
82)$Toluene-d8	(3)	9.689	98	1764826	9.855
89) Tetrachloroethene	(3)	10.317	166	6525	0.117
97)*Chlorobenzene-d5	(3)	11.152	117	1326348	10.000
111)$4-Bromofluorobenzene	(3)	12.152	95	621914	9.835
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	699004	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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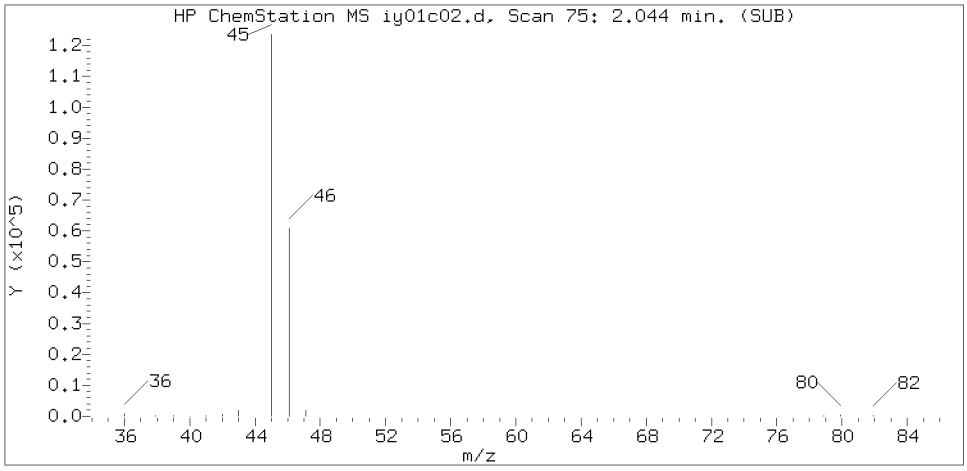
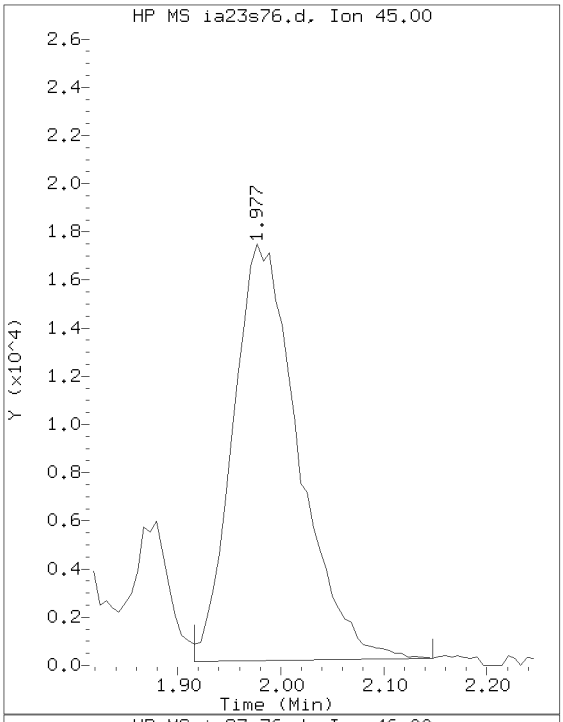
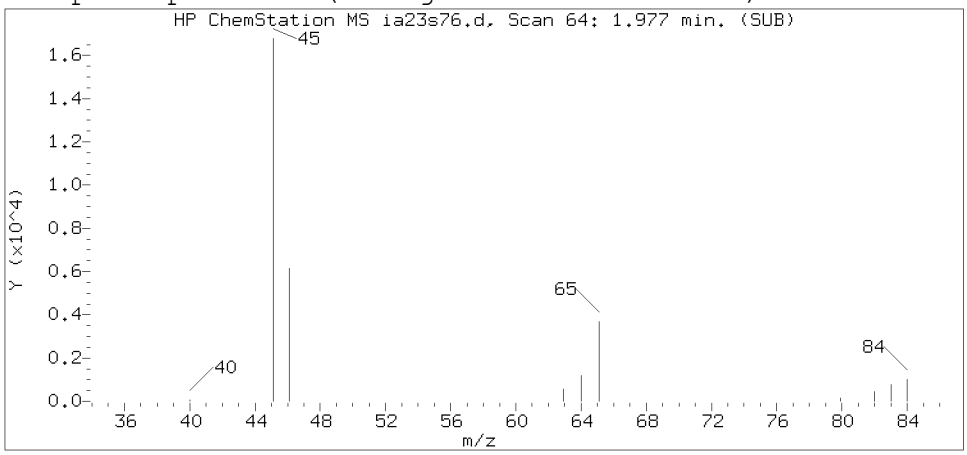
on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

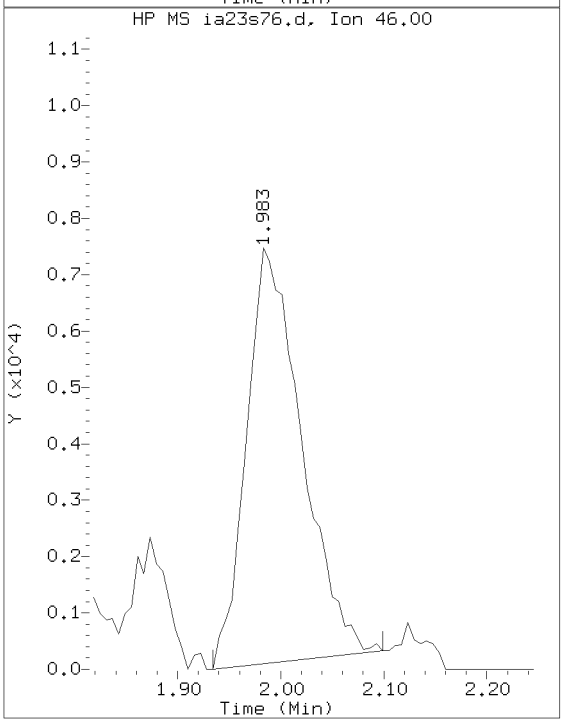
Reference Standard Spectrum for Dimethyl ether



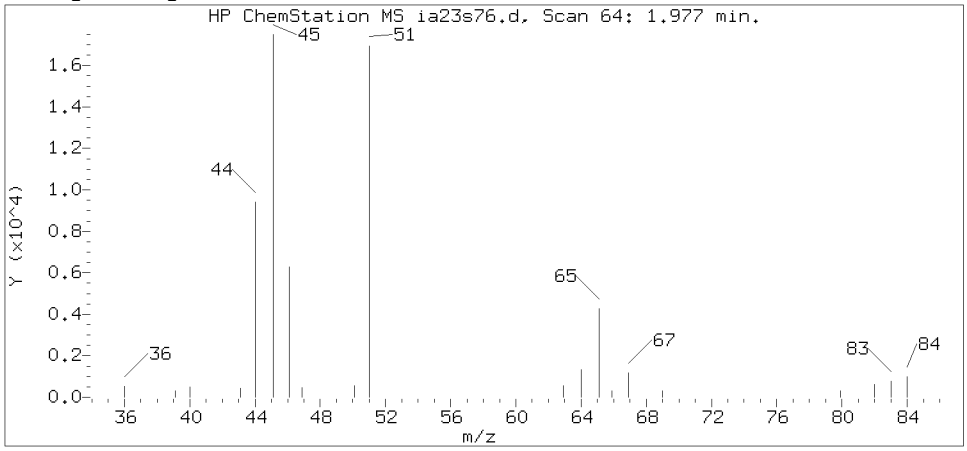


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

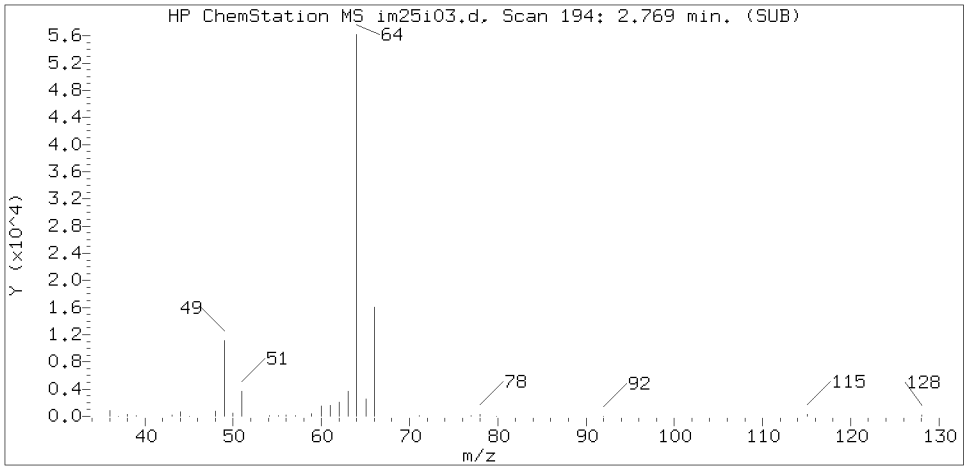
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

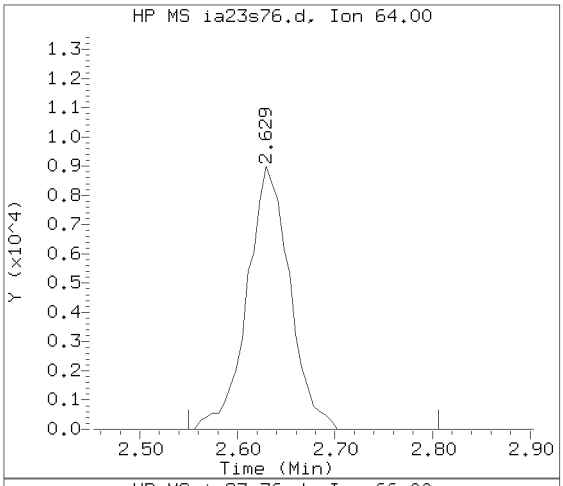
Sample Name: R0604 Lab Sample ID: 9558698

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 64
Retention Time (minutes)	: 1.977
Relative Retention Time	: 0.00180
Quant Ion	: 45.00
Area (flag)	: 76826
On-Column Amount (ng)	: 1.1007

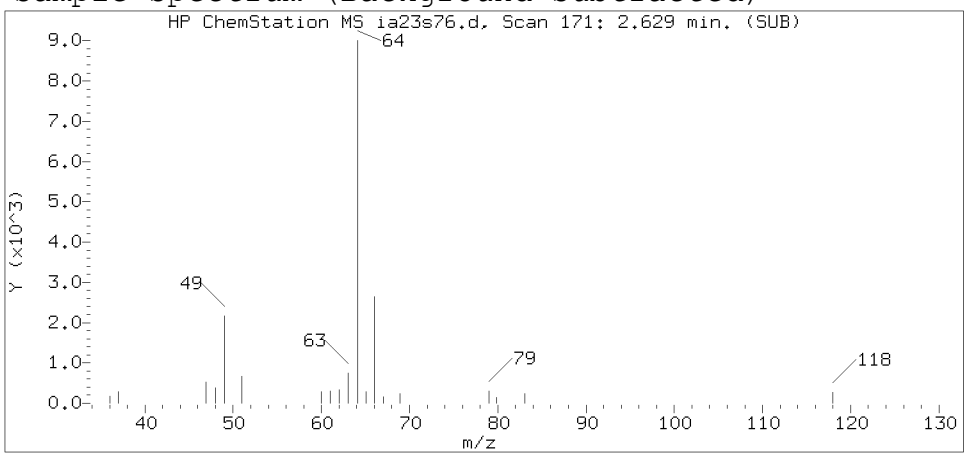
Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

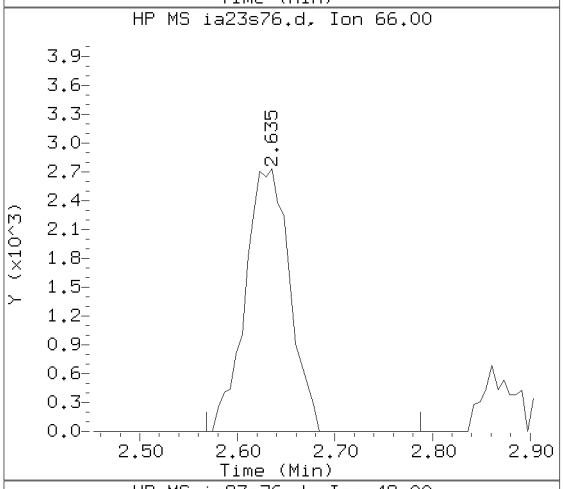
Reference Standard Spectrum for Chloroethane



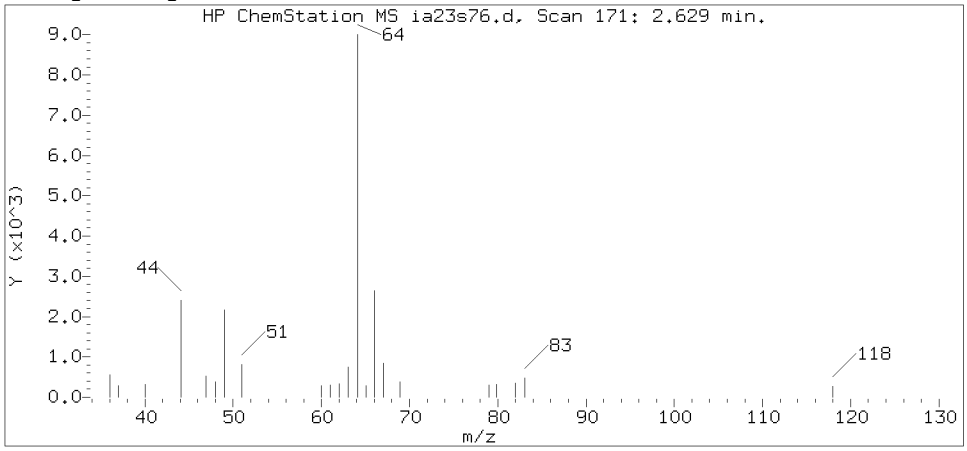


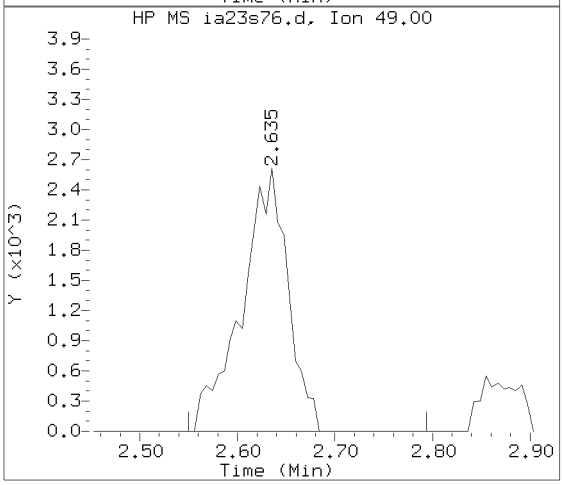
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

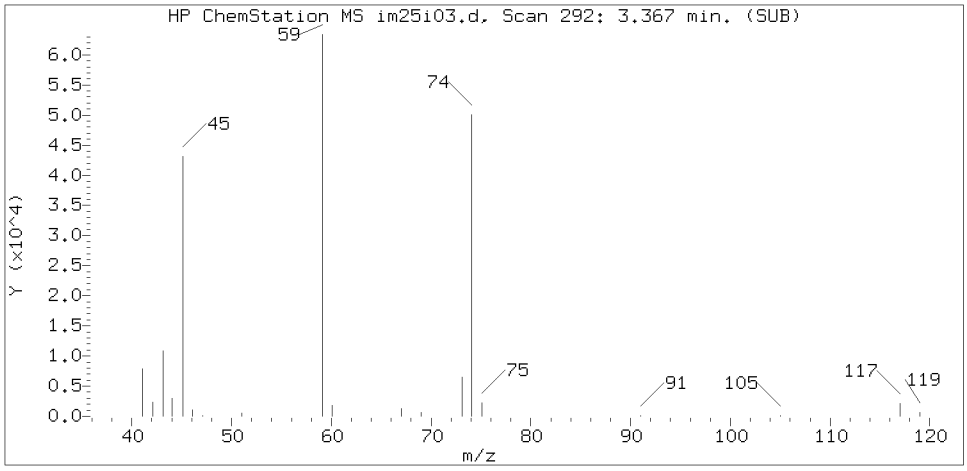
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

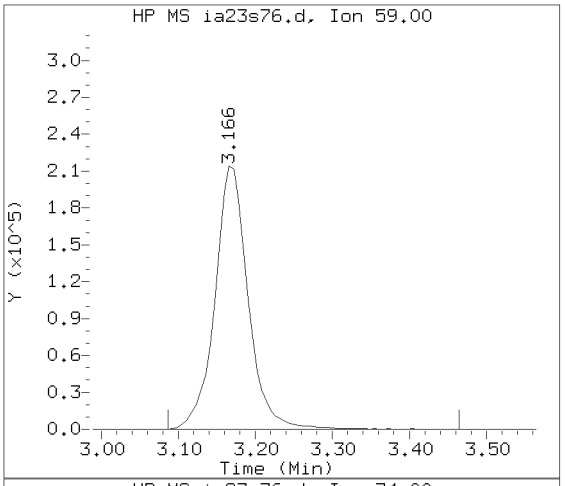
Sample Name: R0604 Lab Sample ID: 9558698

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 171
Retention Time (minutes): 2.629
Relative Retention Time :-0.00052
Quant Ion : 64.00
Area (flag) : 27188
On-Column Amount (ng) : 0.6858

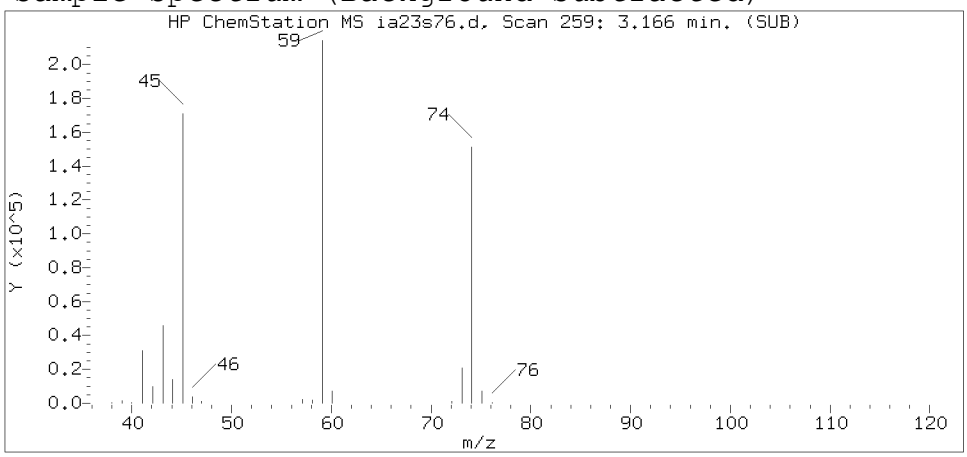
Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

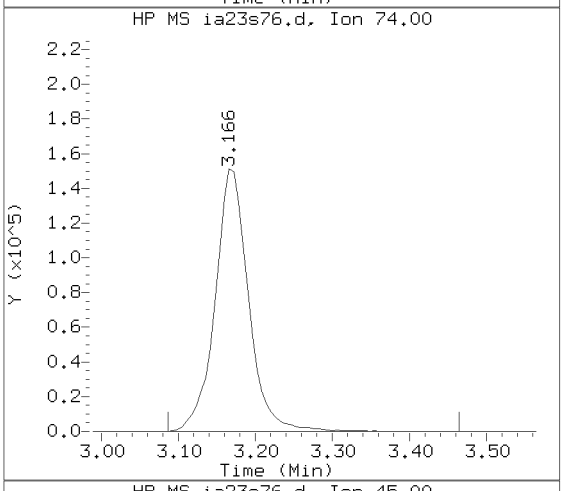
Reference Standard Spectrum for Ethyl ether



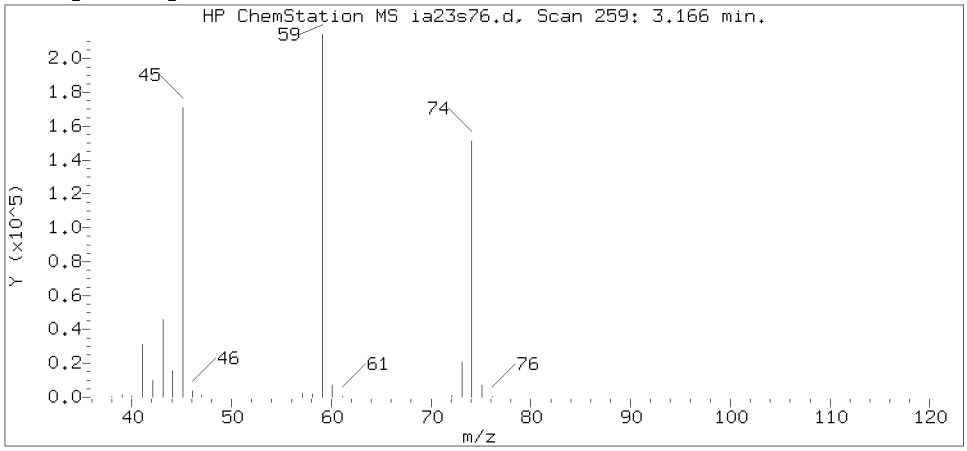


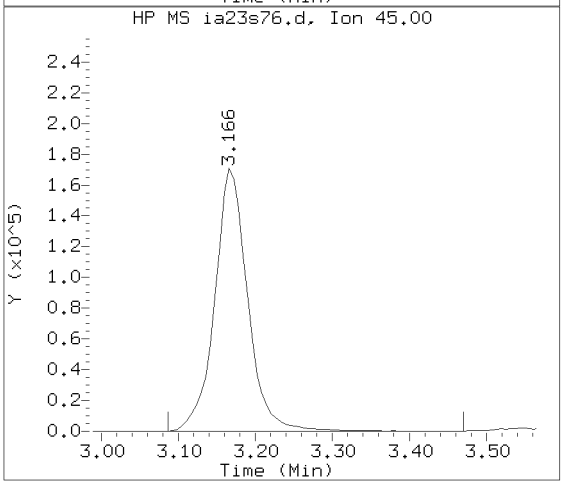
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

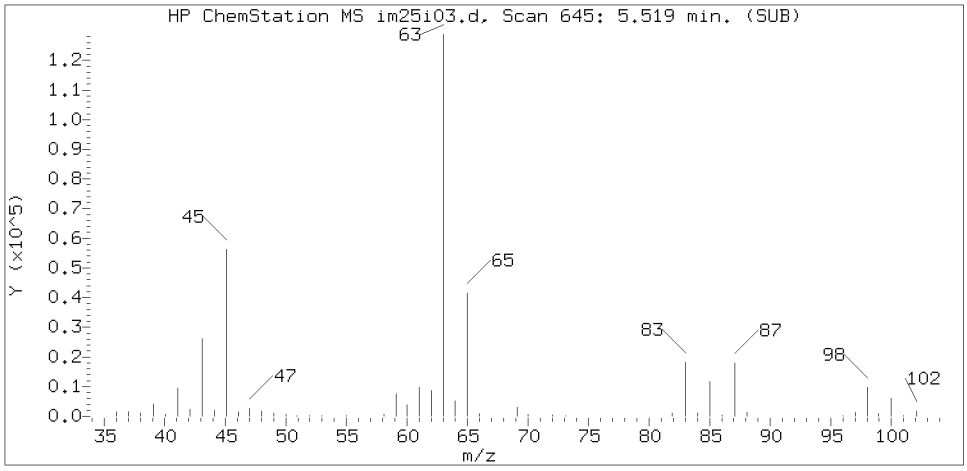
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

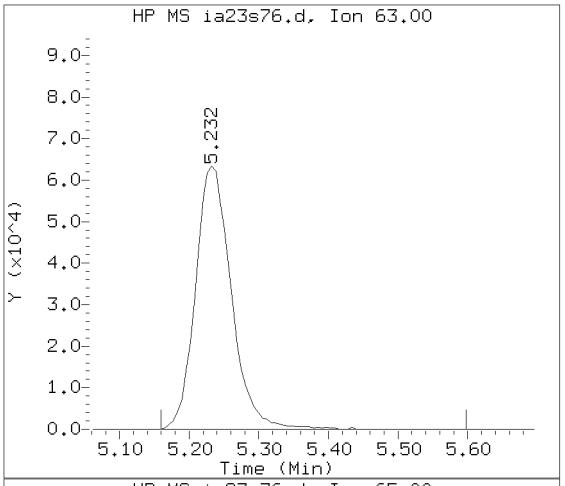
Sample Name: R0604 Lab Sample ID: 9558698

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 259
Retention Time (minutes): 3.166
Relative Retention Time :-0.00126
Quant Ion : 59.00
Area (flag) : 642329
On-Column Amount (ng) : 14.8884

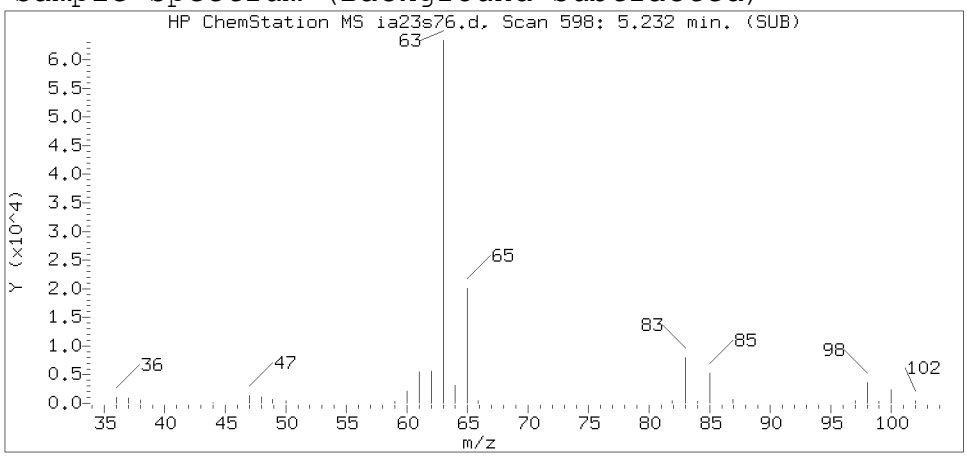
Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

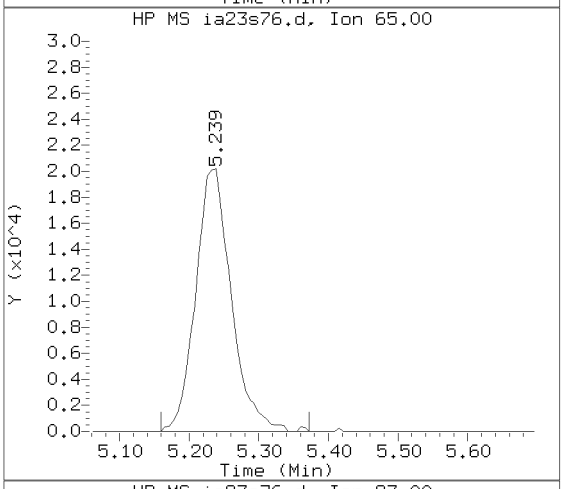
Reference Standard Spectrum for 1,1-Dichloroethane



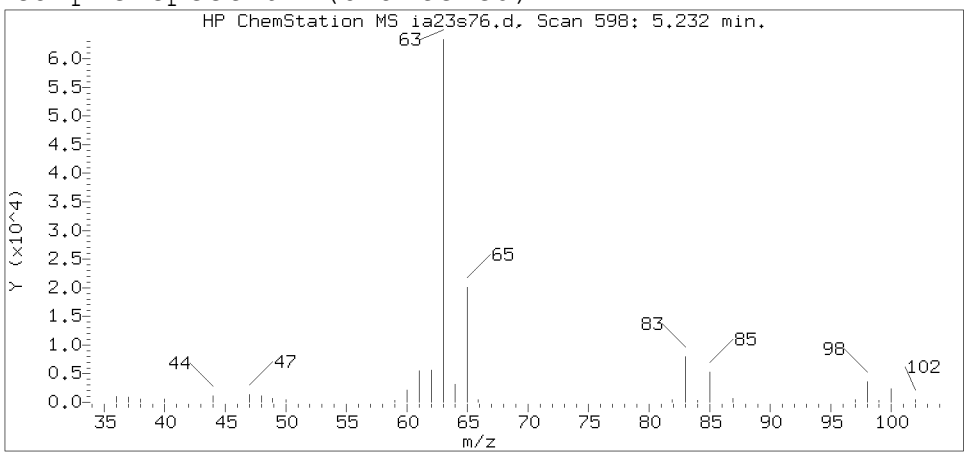


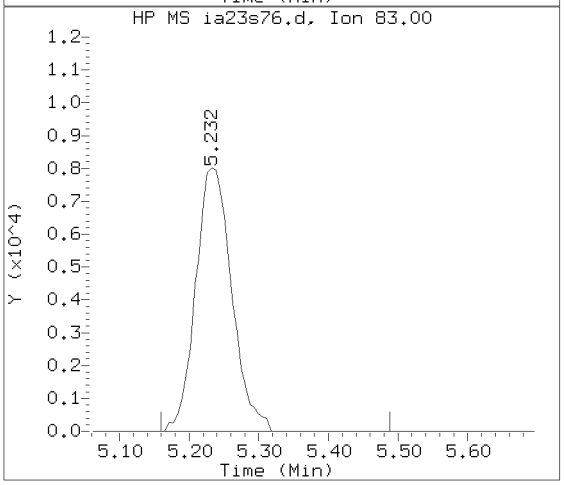
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Sample Name: R0604 Lab Sample ID: 9558698

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 598
Retention Time (minutes): 5.232
Relative Retention Time :-0.00104
Quant Ion : 63.00
Area (flag) : 227065
On-Column Amount (ng) : 2.4144

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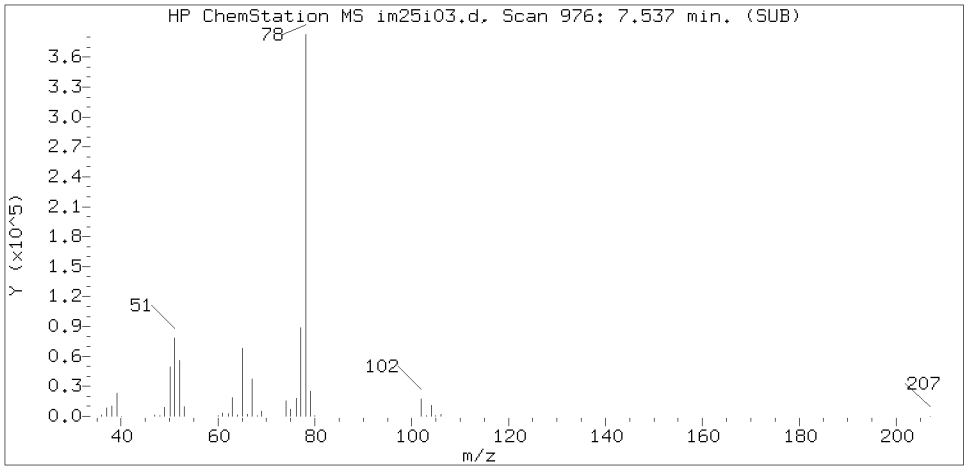
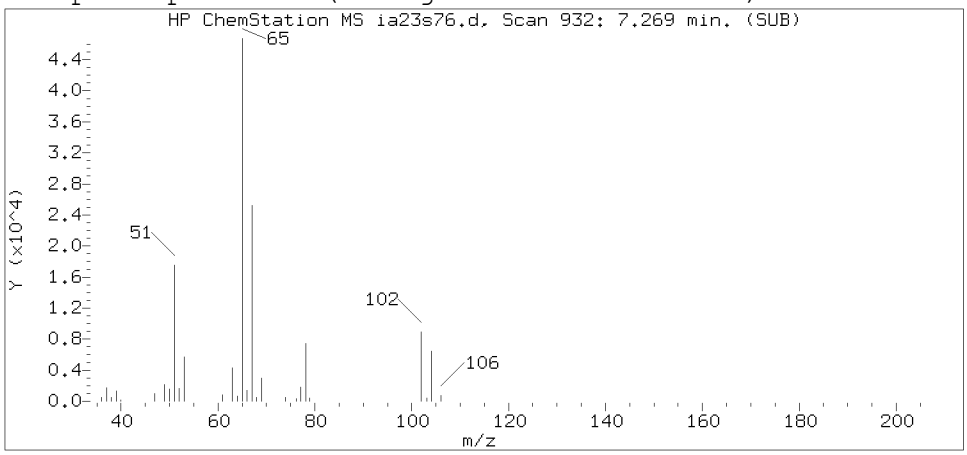
Target 3.5 esignature user ID: jkh09052

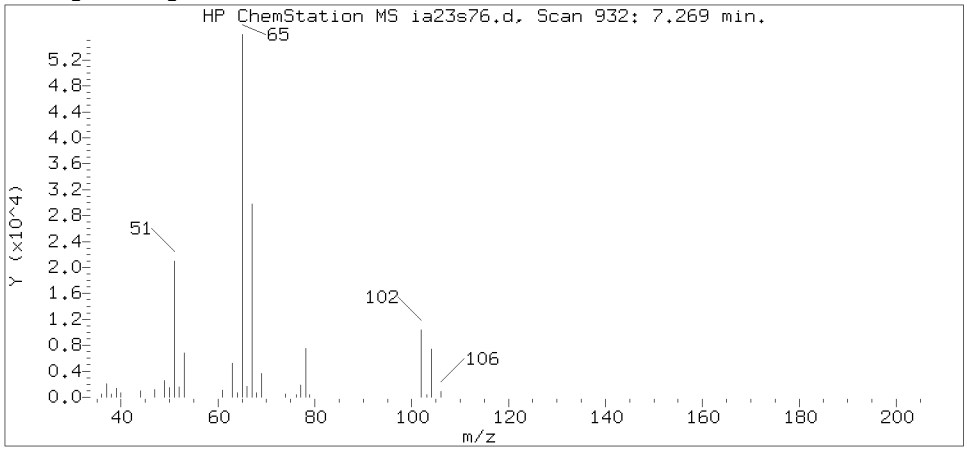
Reference Standard Spectrum for Benzene

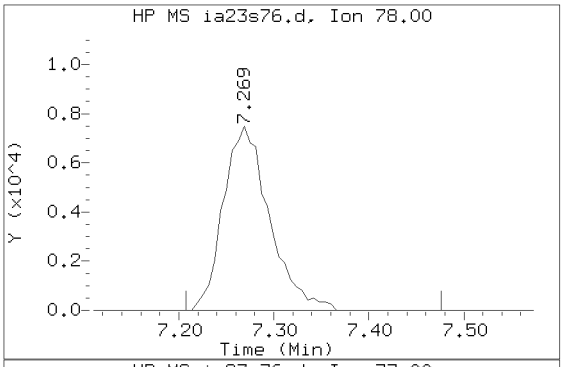


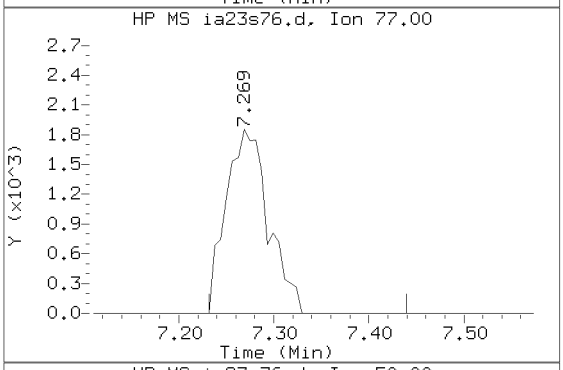
Sample Spectrum (Background Subtracted)

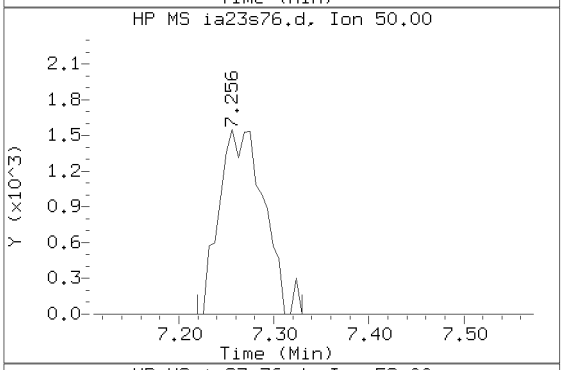


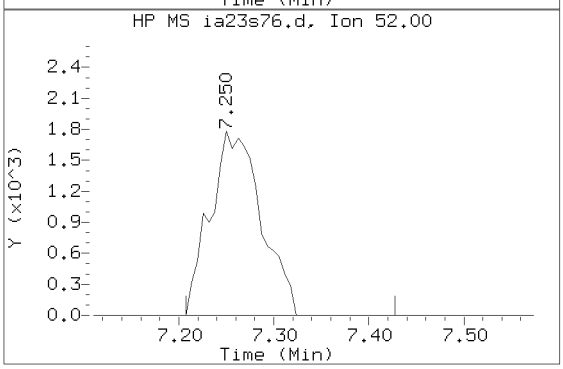
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

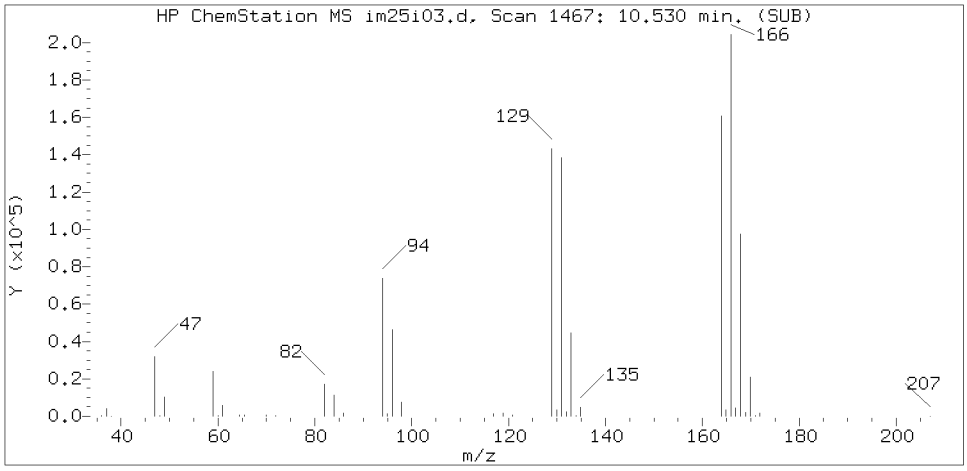
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

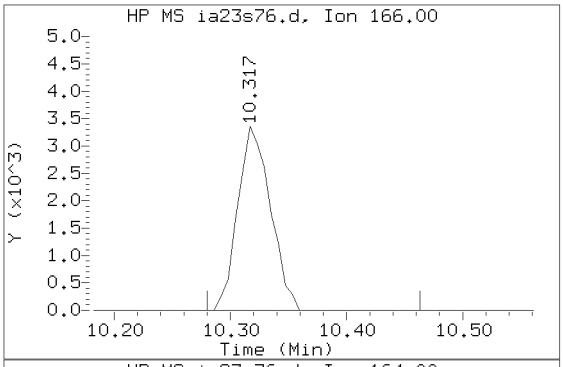
Sample Name: R0604 Lab Sample ID: 9558698

Compound Number : 58
Compound Name : Benzene
Scan Number : 932
Retention Time (minutes): 7.269
Relative Retention Time :-0.00084
Quant Ion : 78.00
Area (flag) : 25051
On-Column Amount (ng) : 0.1186

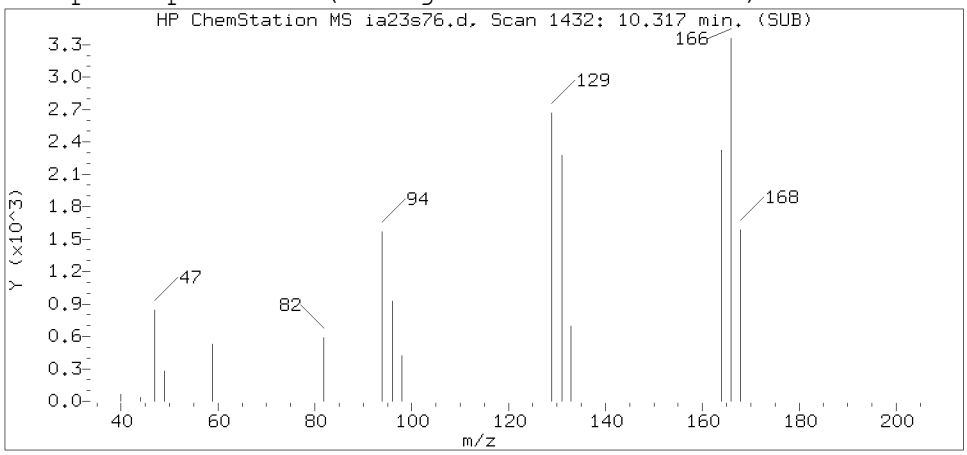
Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

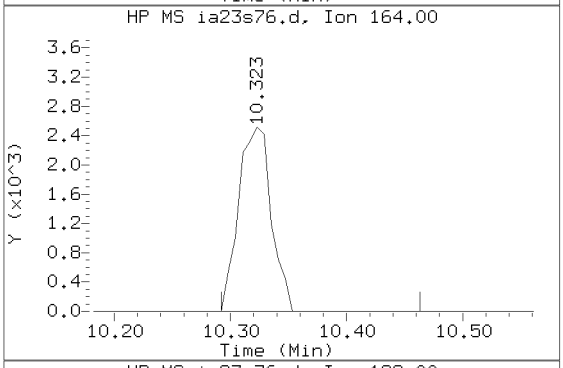
Reference Standard Spectrum for Tetrachloroethene

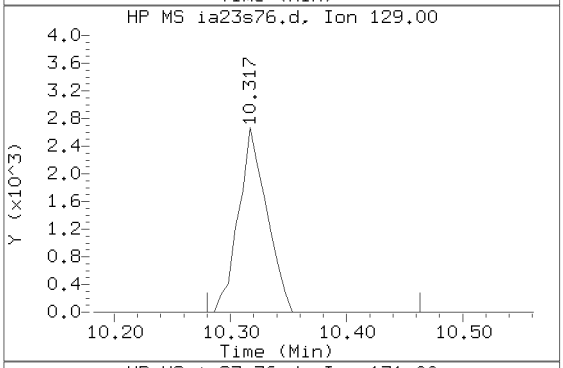




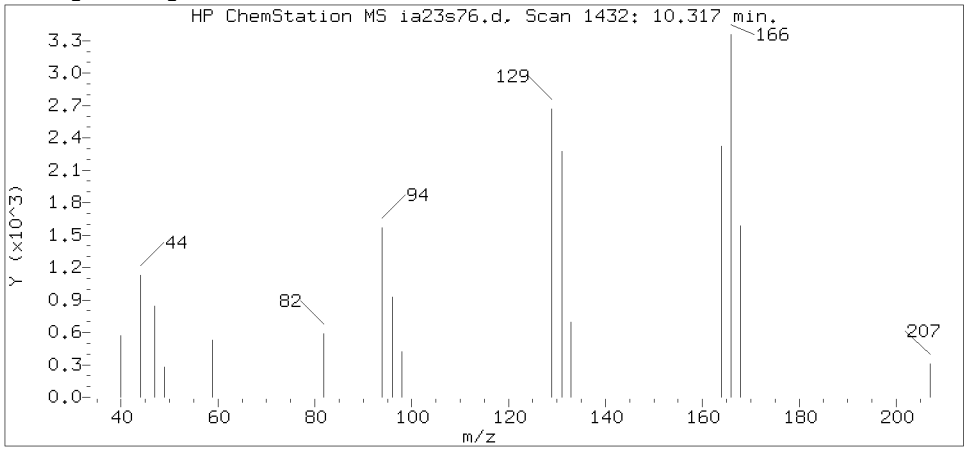
Sample Spectrum (Background Subtracted)

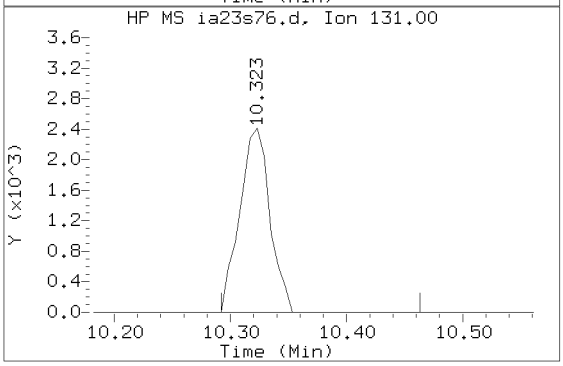






Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s76.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:40 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:15 jkh09052

Sample Name: R0604 Lab Sample ID: 9558698

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1432
Retention Time (minutes): 10.317
Relative Retention Time : 0.00051
Quant Ion : 166.00
Area (flag) : 6525
On-Column Amount (ng) : 0.1175

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:22.
Target 3.5 esignature user ID: jkh09052

R0605 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558702

Data file: /chem2/HP26285.i/18apr23a.b/5a23s08.d Injection date and time: **23-APR-2018 13:29**
Data file Sample Info. Line: R0605;9558702;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:48 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502	(0.000)	347	65	331297	(-1)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1200513	(-4)	50.00	
101) Chlorobenzene-d5	10.745	(-0.006)	1535	117	934791	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	511438	(-10)	50.00	

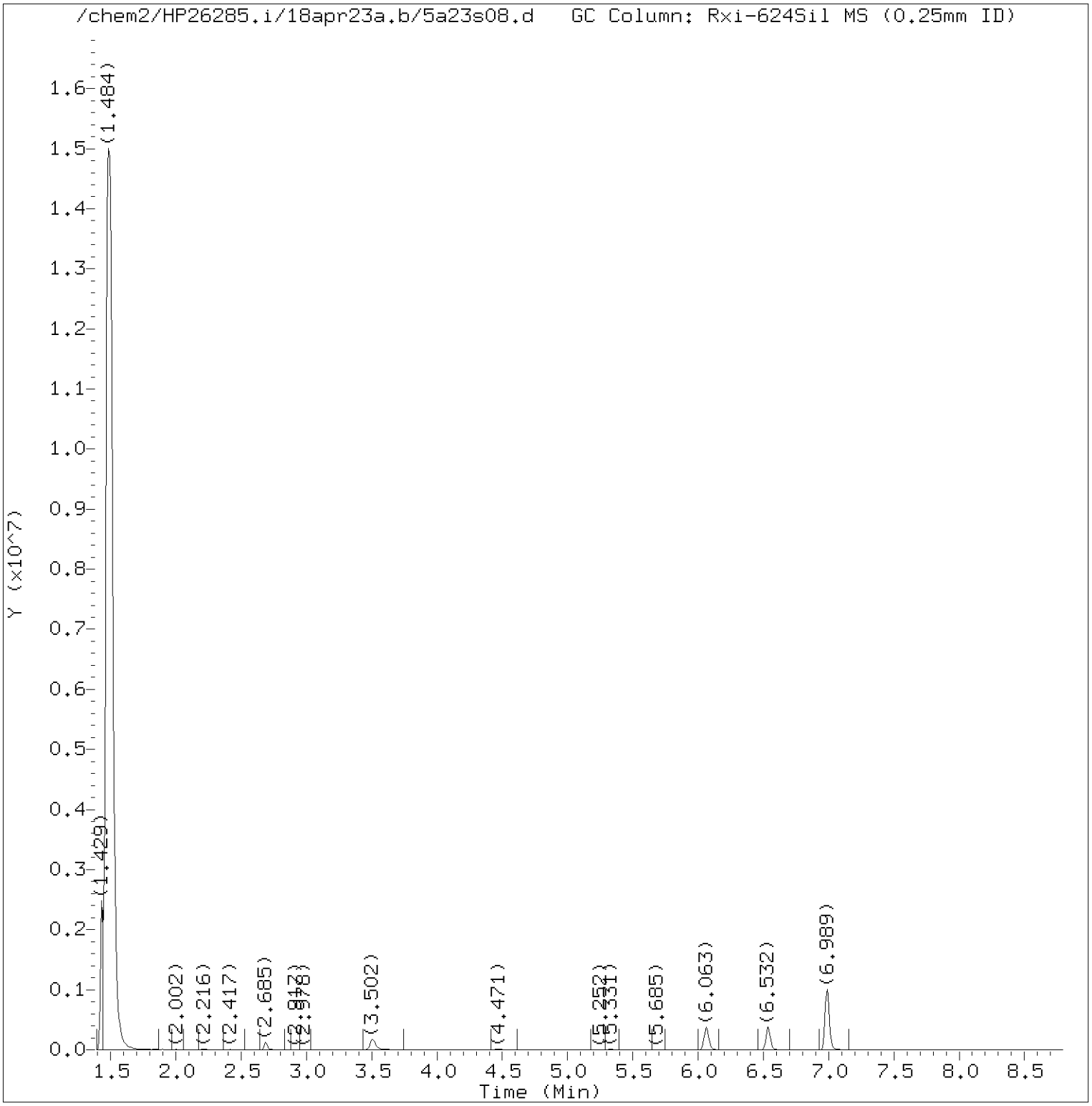
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	303309	49.047	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538	(0.000)	102	69099	49.948	100%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1165224	49.729	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.001)	95	455633	50.793	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

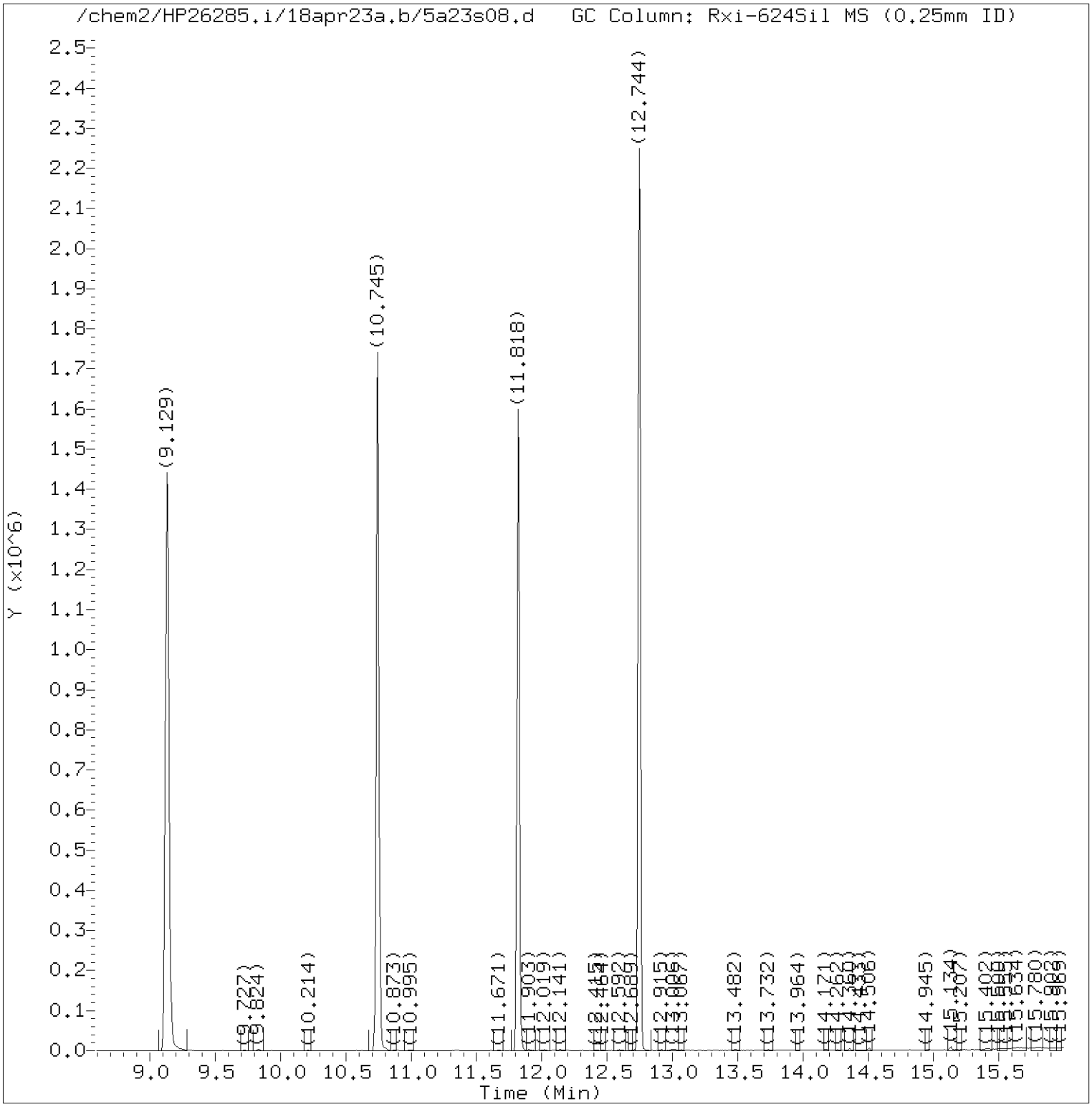
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s08.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:29 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:48 Unknown

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s08.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:29 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:48 Unknown

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s08.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:29 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:48 Unknown

Sample Name: R0605 Lab Sample ID: 9558702

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.502	65	331297	250.000
52)$Dibromofluoromethane	(2)	6.063	113	303309	49.047
57)$1,2-Dichloroethane-d4	(2)	6.538	102	69099	49.948
66)*Fluorobenzene	(2)	6.989	96	1200513	50.000
84)$Toluene-d8	(3)	9.129	98	1165224	49.729
101)*Chlorobenzene-d5	(3)	10.745	117	934791	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	455633	50.793
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	511438	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

R0605 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558702

Data file: /chem2/HP19930.i/18apr23c.b/ia23s82.d Injection date and time: **24-APR-2018 06:48**
Data file Sample Info. Line: R0605;9558702;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.141	(-0.006)	419	65	123851	(-16)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	1984527	(-4)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1432488	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	762837	(-8)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769	(0.000)	113	476515	10.289	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	101806	10.105	101%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1917489	9.914	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	682485	9.993	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)	1.971	(0.002)	45	88230M	1.156	1.16		J	0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)	2.623	(-0.000)	64	28110	0.648	0.65			0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)	3.154	(-0.000)	59	670380	14.206	14.21			1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.220	(0.000)	63	235245	2.287	2.29			0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34. Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558702

Data file: /chem2/HP19930.i/18apr23c.b/ia23s82.d Injection date and time: **24-APR-2018 06:48**
Data file Sample Info. Line: R0605;9558702;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

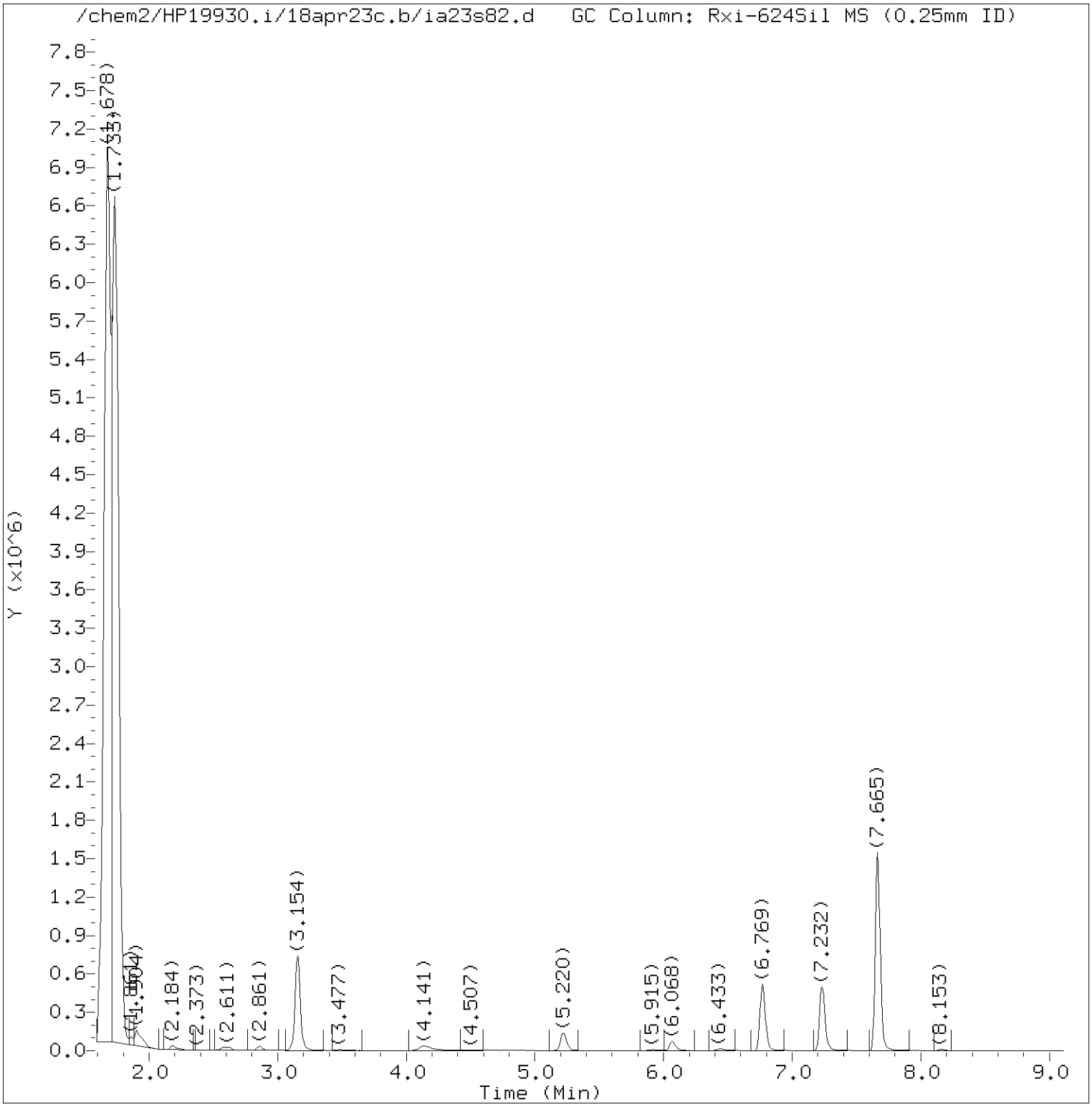
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
58) Benzene	(2)	7.262(-0.000)	78	27378	0.119	0.12		J	0.1	1
59) 1,2-Dichloroethane	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)			Not Detected					0.1	1
71) Methyl Methacrylate	(1)			Not Detected					4	10
73) Dibromomethane	(2)			Not Detected					0.1	1
72) 1,4-Dioxane	(1)			Not Detected					45	200
74) Bromodichloromethane	(2)			Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)			Not Detected					1	10
83) Toluene	(3)			Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)			Not Detected					0.1	1
86) Ethyl Methacrylate	(3)			Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	6210	0.104	0.10		J	0.1	1
90) 1,3-Dichloropropane	(3)			Not Detected					0.1	1
91) 2-Hexanone	(1)			Not Detected					1	10
93) Dibromochloromethane	(3)			Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)			Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.2	3
106) Styrene	(3)			Not Detected					0.1	1
107) Bromoform	(3)			Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)			Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)			Not Detected					0.3	1
126) Pentachloroethane	(4)			Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)			Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)			Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)			Not Detected					0.1	1
142) Hexachloroethane	(4)			Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)			Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)			Not Detected					0.1	1
146) Hexachlorobutadiene	(4)			Not Detected					0.1	1
147) Naphthalene	(4)			Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

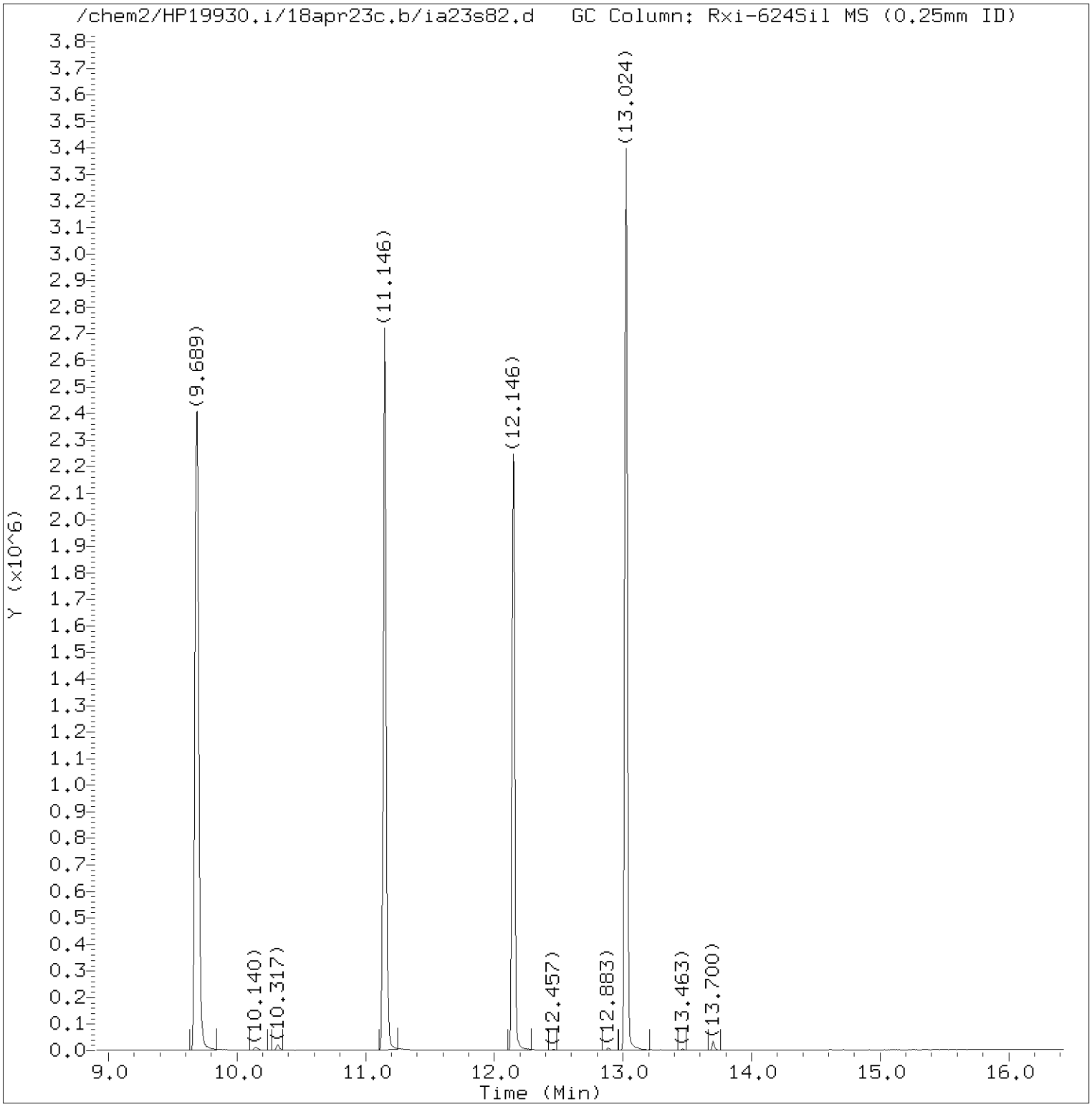
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

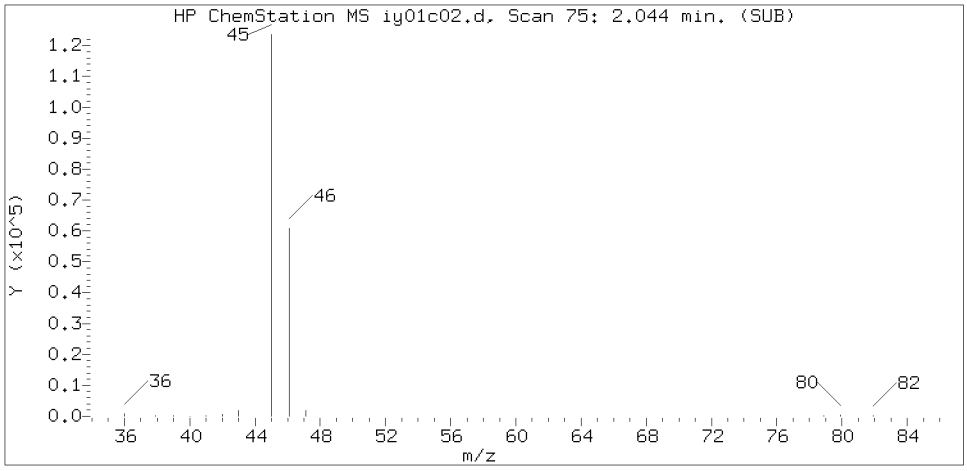
Sample Name: R0605 Lab Sample ID: 9558702

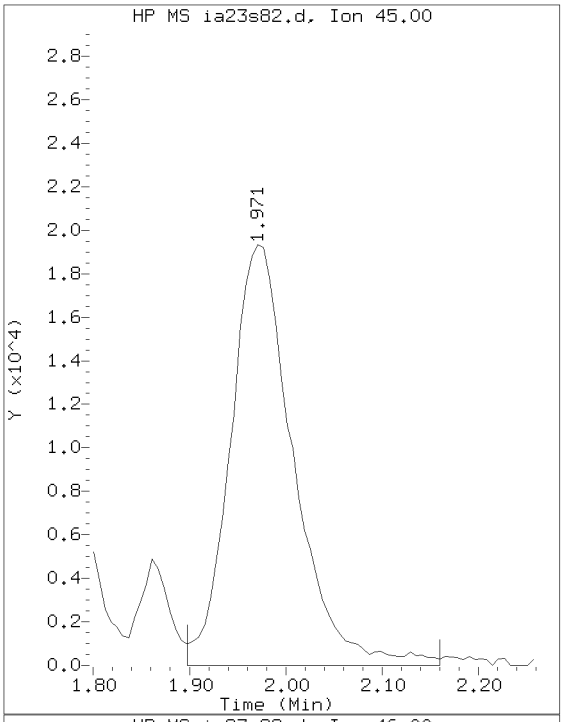
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.971	45	88230M	1.156
8) Chloroethane	(2)	2.623	64	28110	0.648
11) Ethyl ether	(2)	3.154	59	670380	14.206
26)*t-Butyl Alcohol-d10	(1)	4.141	65	123851	50.000
33) 1,1-Dichloroethane	(2)	5.220	63	235245	2.287
50)$Dibromofluoromethane	(2)	6.769	113	476515	10.289
57)$1,2-Dichloroethane-d4	(2)	7.232	102	101806	10.105
58) Benzene	(2)	7.263	78	27378	0.119
63)*Fluorobenzene	(2)	7.665	96	1984527	10.000
82)$Toluene-d8	(3)	9.689	98	1917489	9.914
89) Tetrachloroethene	(3)	10.317	166	6210	0.104
97)*Chlorobenzene-d5	(3)	11.146	117	1432488	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	682485	9.993
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	762837	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

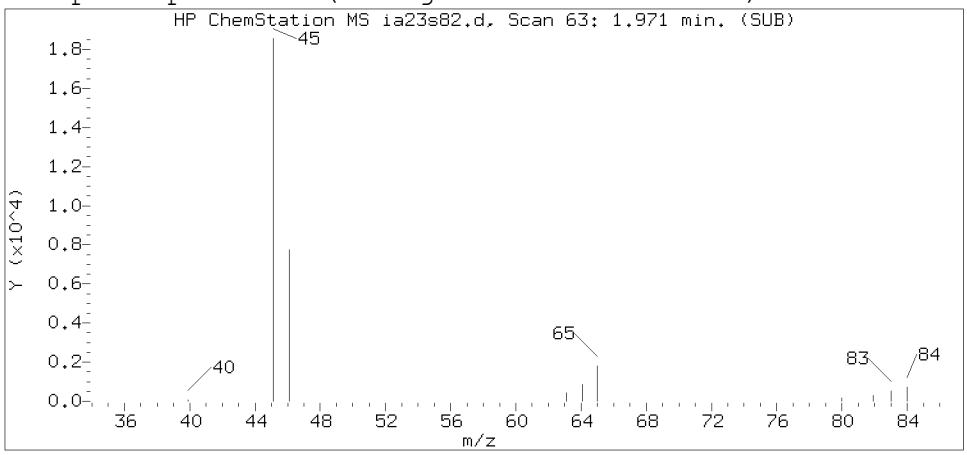
Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

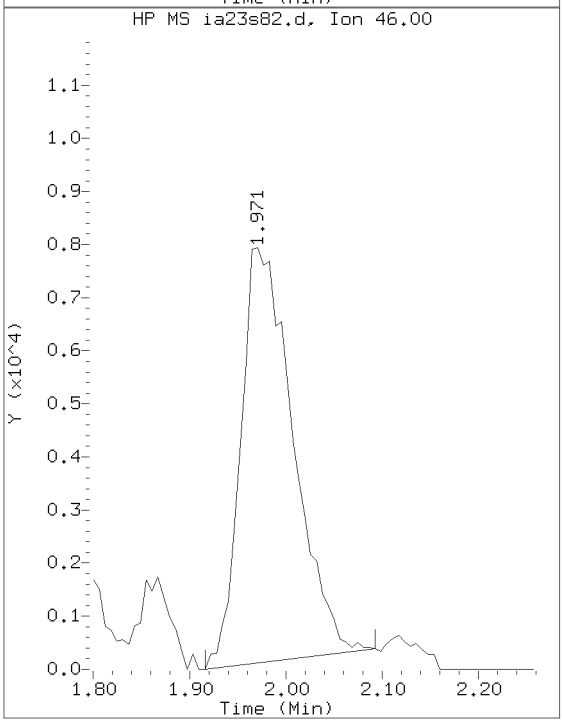
Reference Standard Spectrum for Dimethyl ether



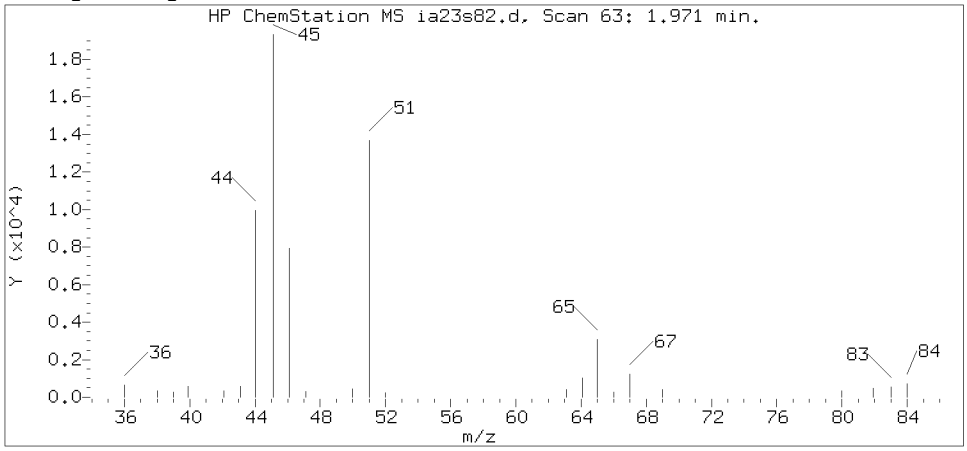


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

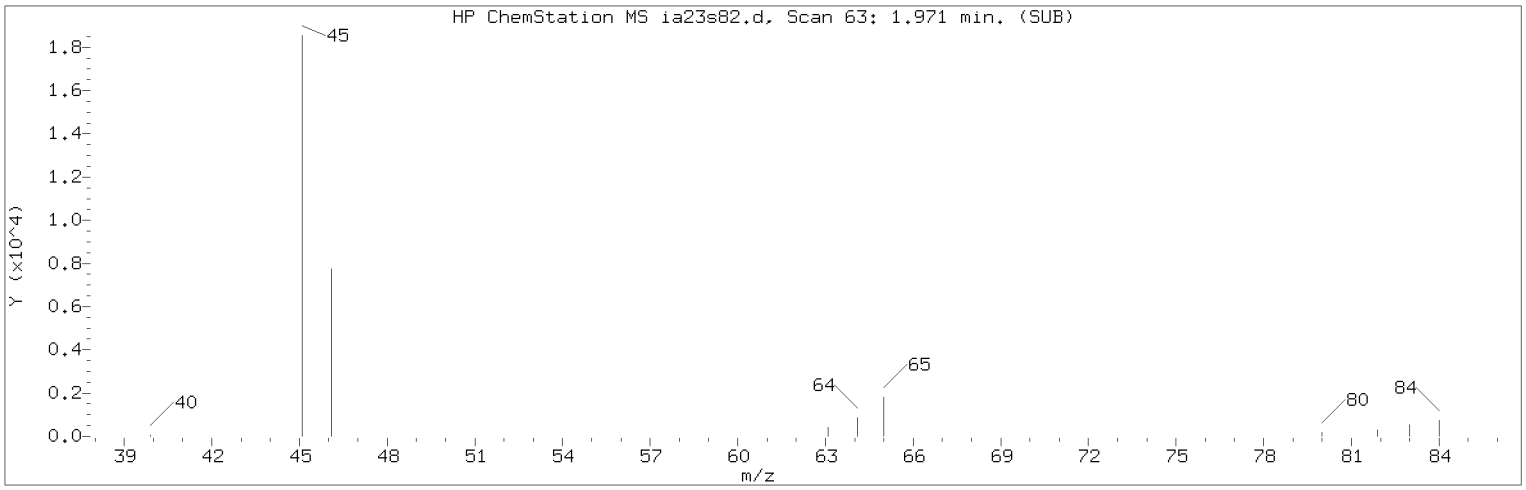
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

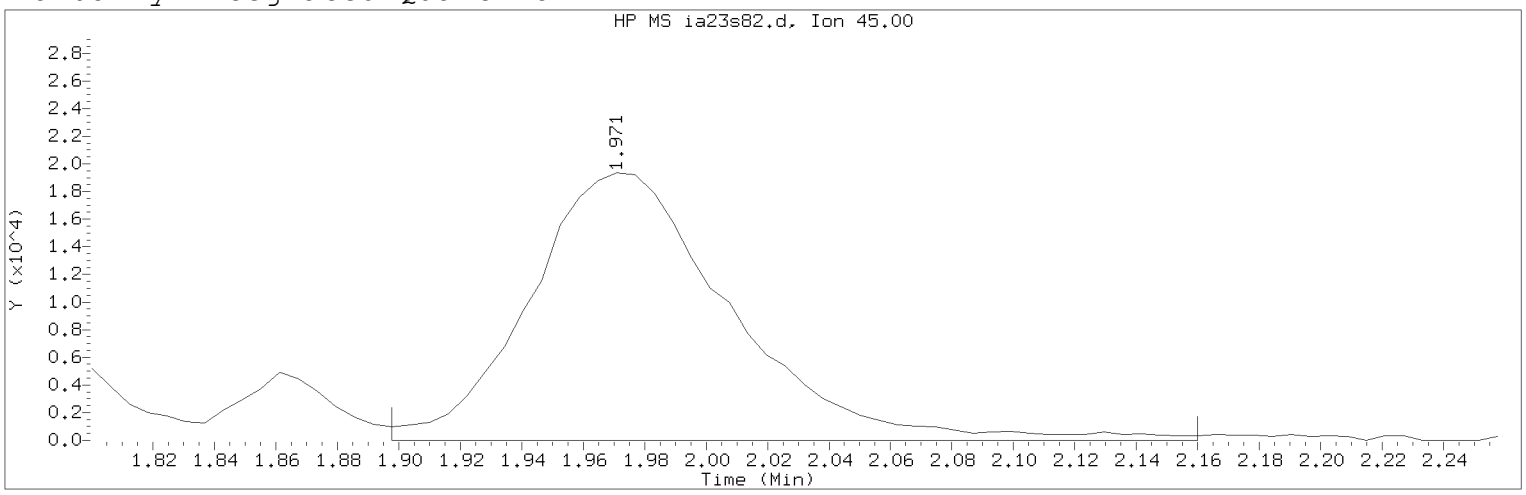
Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 63
Retention Time (minutes)	: 1.971
Relative Retention Time	: 0.00239
Quant Ion	: 45.00
Area (flag)	: 88230M
On-Column Amount (ng)	: 1.1557

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

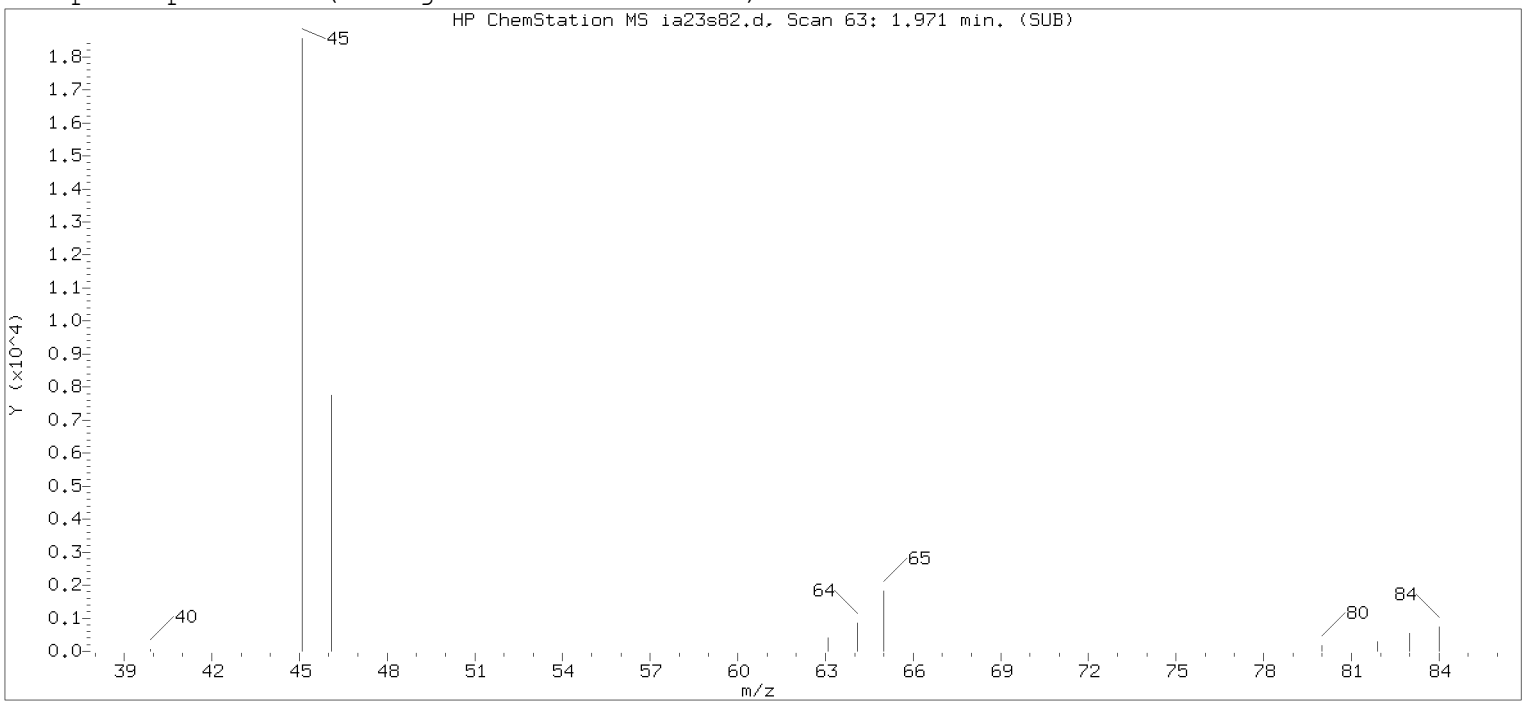
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 63
Retention Time (minutes): 1.971
Quant Ion : 45.00
Area (flag) : 88230M
On-Column Amount (ng) : 1.1557
Integration start scan : 50 Integration stop scan: 93
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

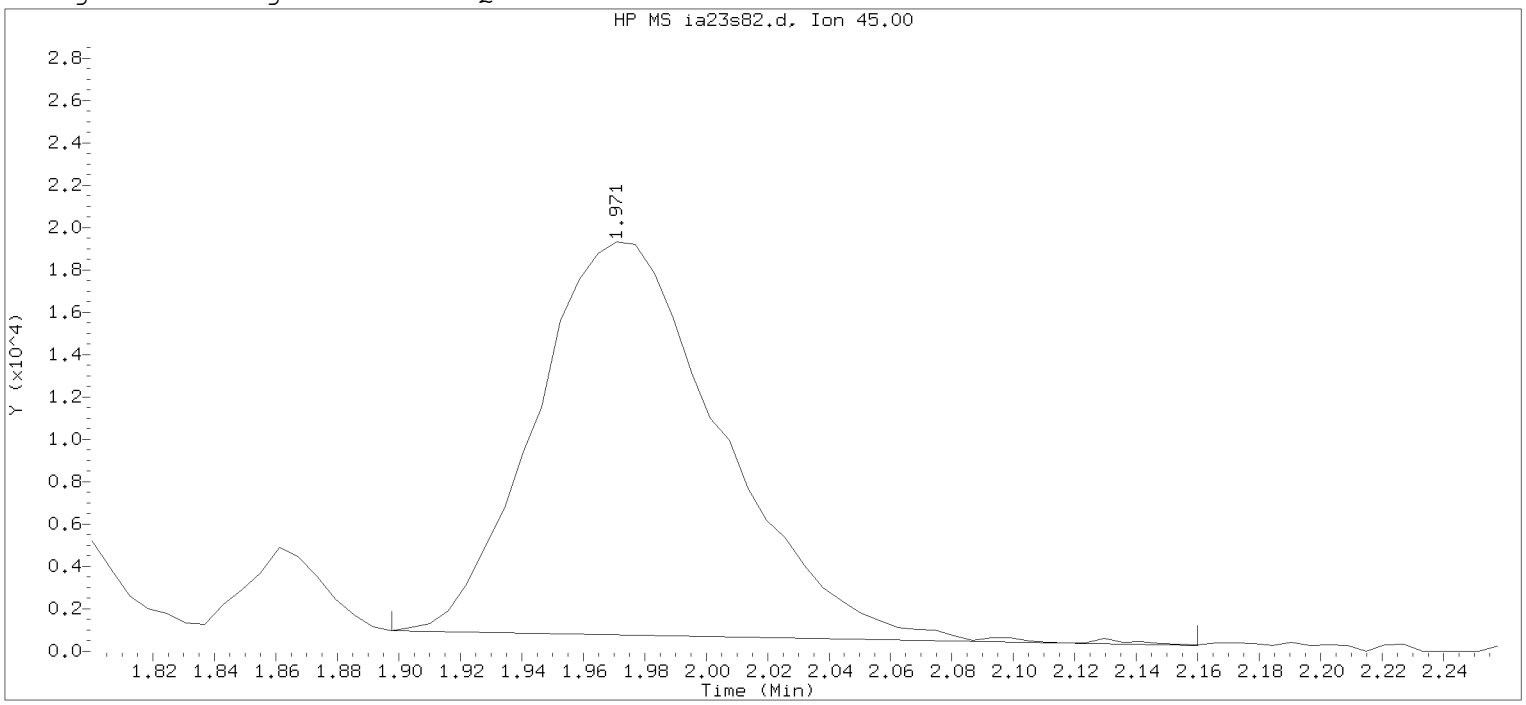
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

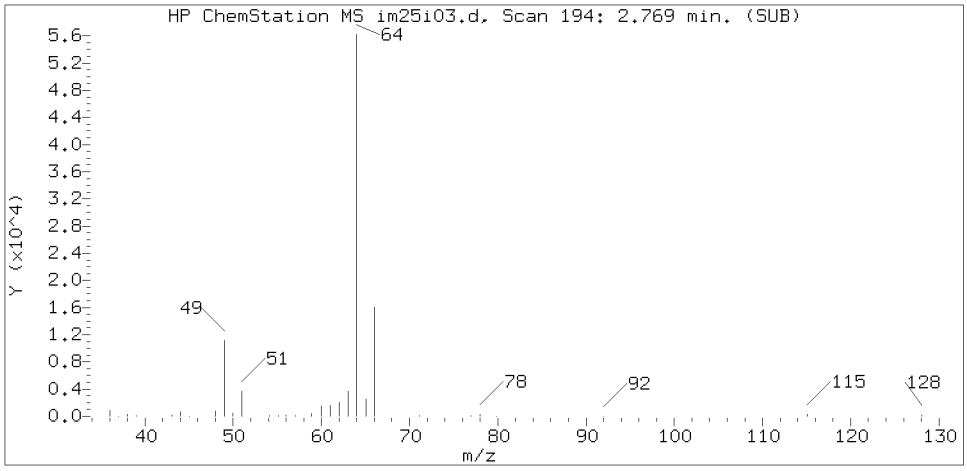
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:06 Automation

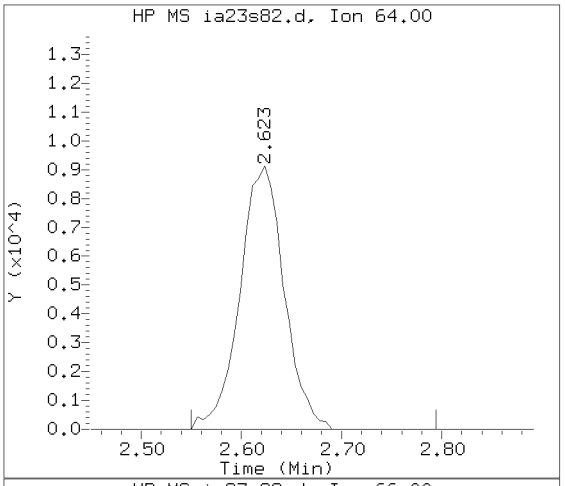
Sample Name: R0605 Lab Sample ID: 9558702

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 63		
Retention Time (minutes)	: 1.971		
Quant Ion	: 45.00		
Area	: 78127		
On-column Amount (ng)	: 1.0234		
Integration start scan	: 50	Integration stop scan:	93
Y at integration start	: 979	Y at integration end:	276

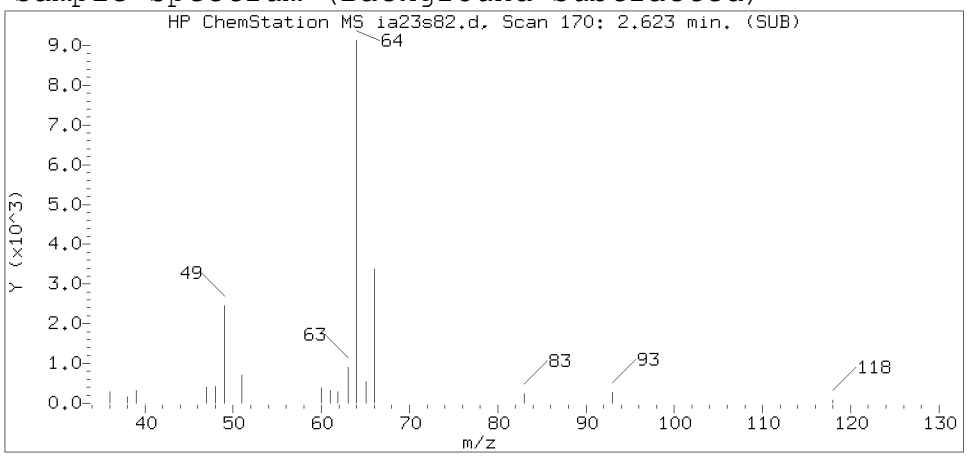
Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: JKHOWE

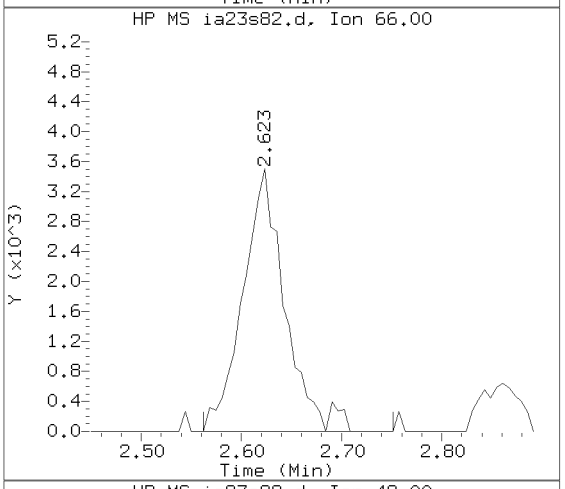
Reference Standard Spectrum for Chloroethane



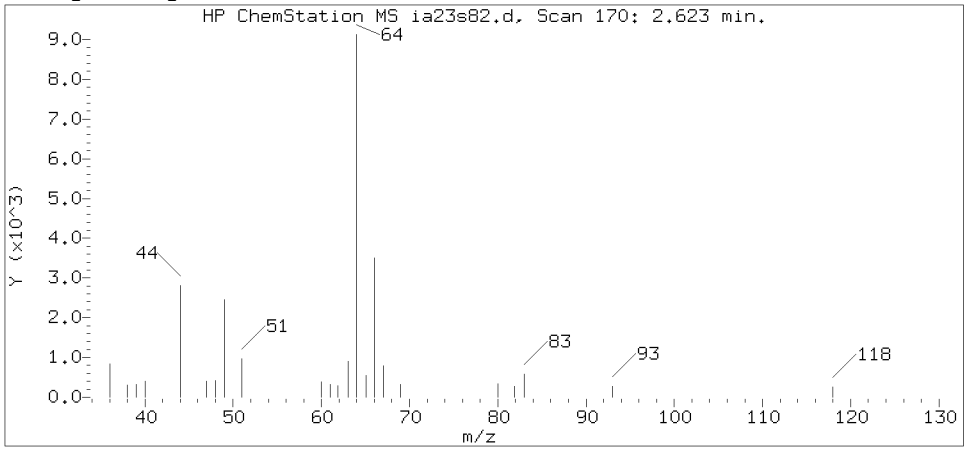


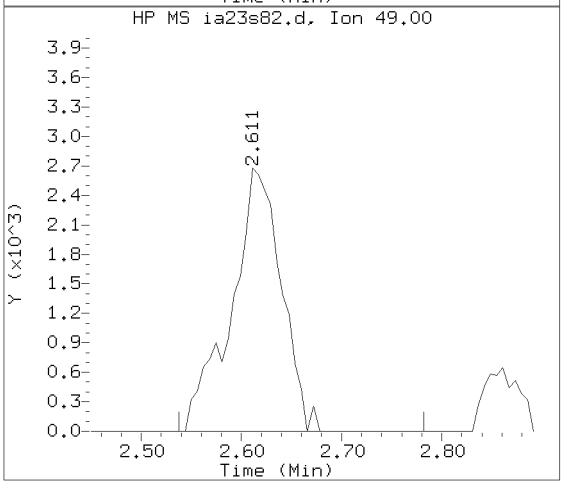
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

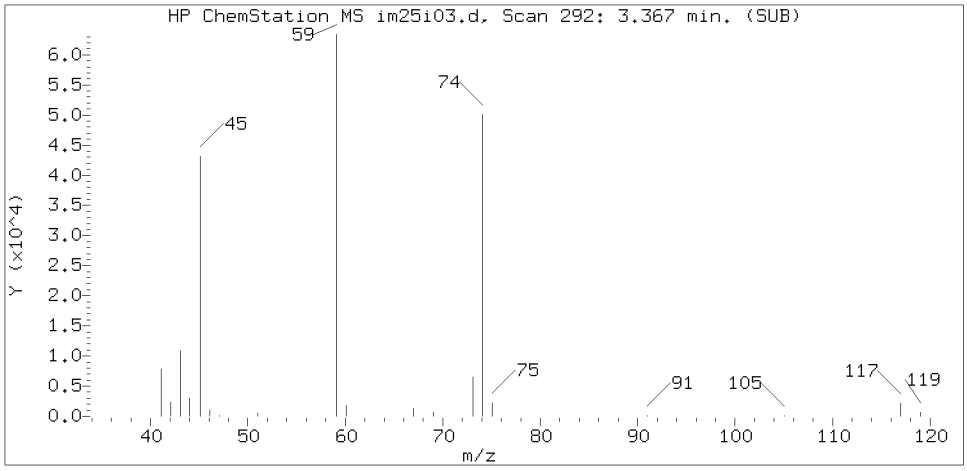
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

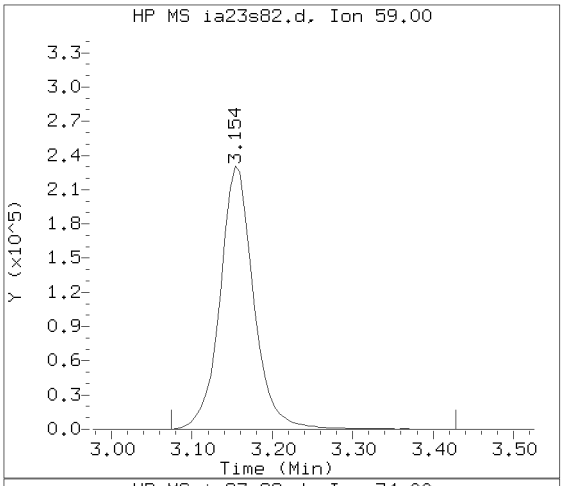
Sample Name: R0605 Lab Sample ID: 9558702

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 170
Retention Time (minutes): 2.623
Relative Retention Time :-0.00000
Quant Ion : 64.00
Area (flag) : 28110
On-Column Amount (ng) : 0.6482

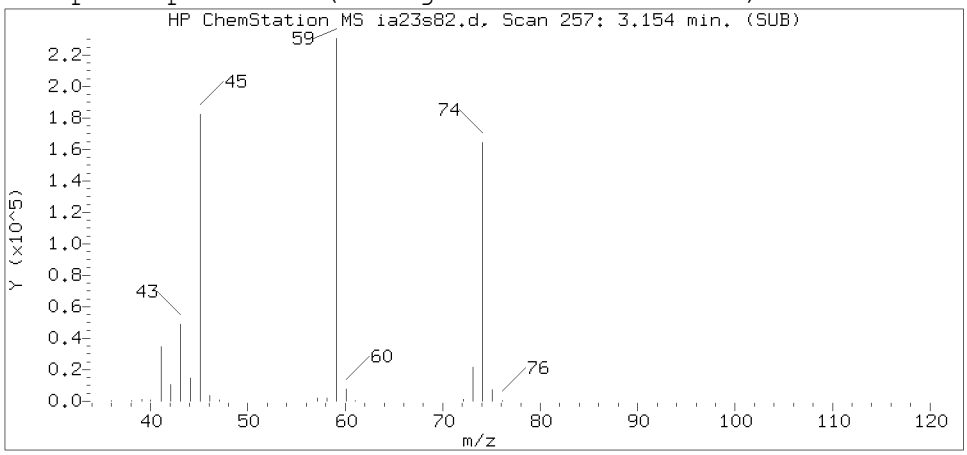
Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

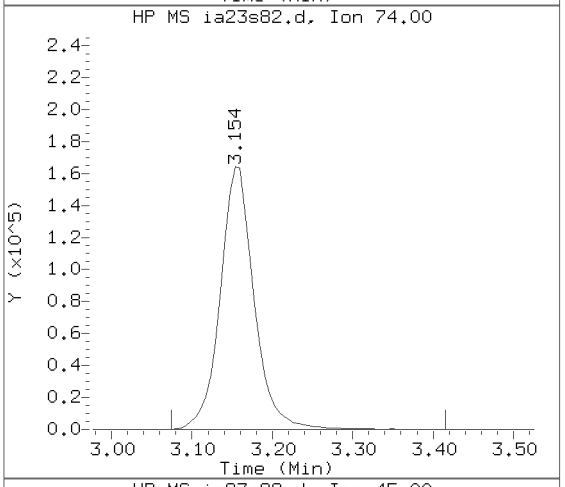
Reference Standard Spectrum for Ethyl ether



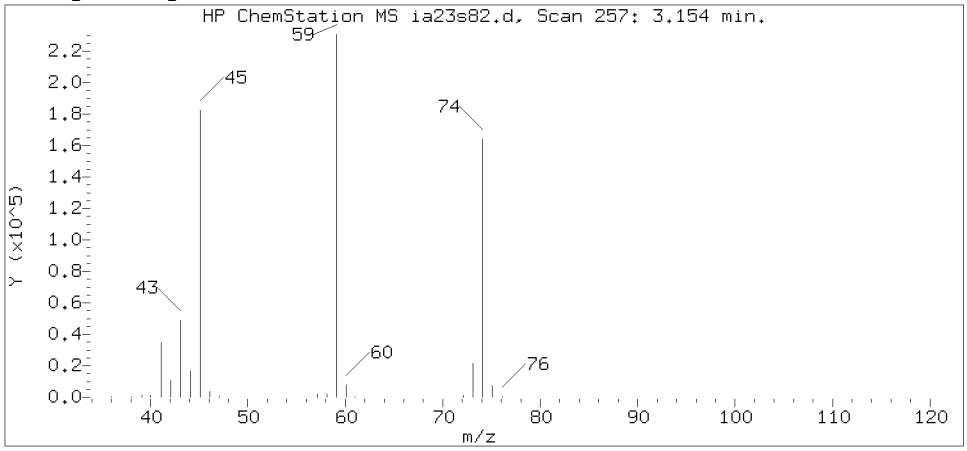


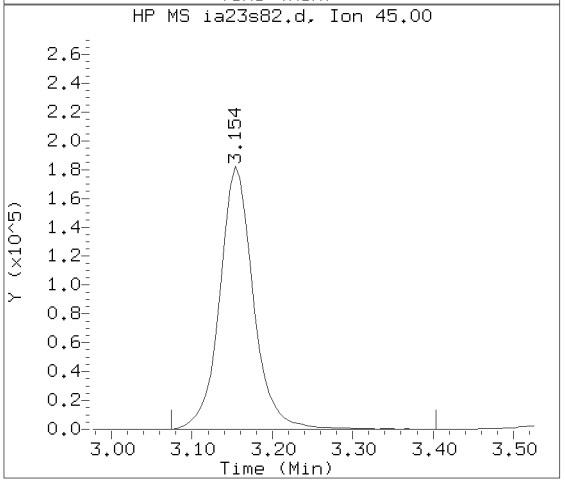
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

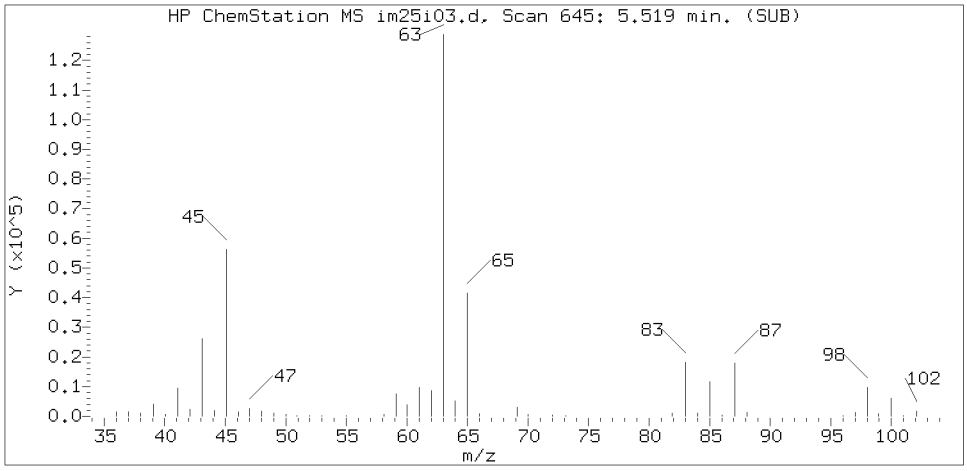
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

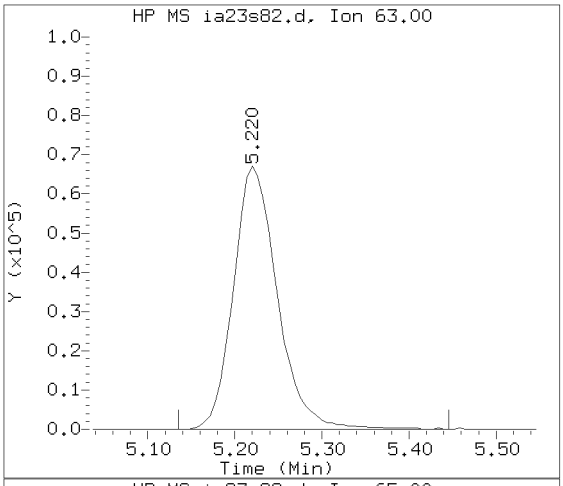
Sample Name: R0605 Lab Sample ID: 9558702

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 257
Retention Time (minutes): 3.154
Relative Retention Time :-0.00000
Quant Ion : 59.00
Area (flag) : 670380
On-Column Amount (ng) : 14.2058

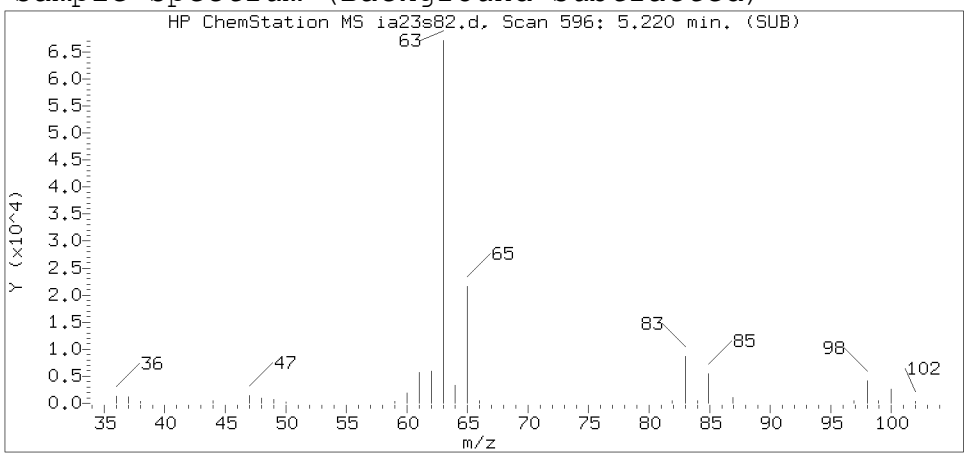
Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

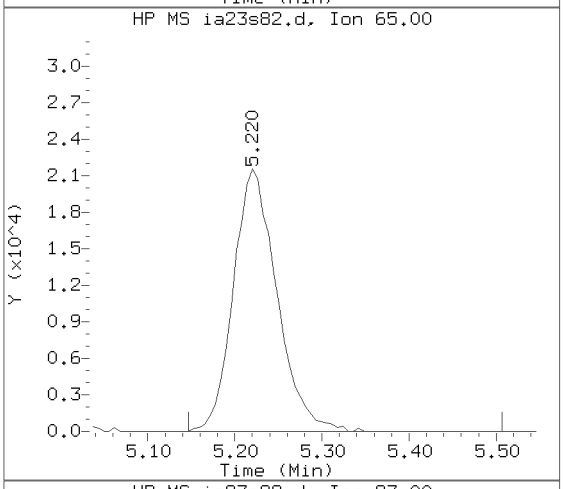
Reference Standard Spectrum for 1,1-Dichloroethane



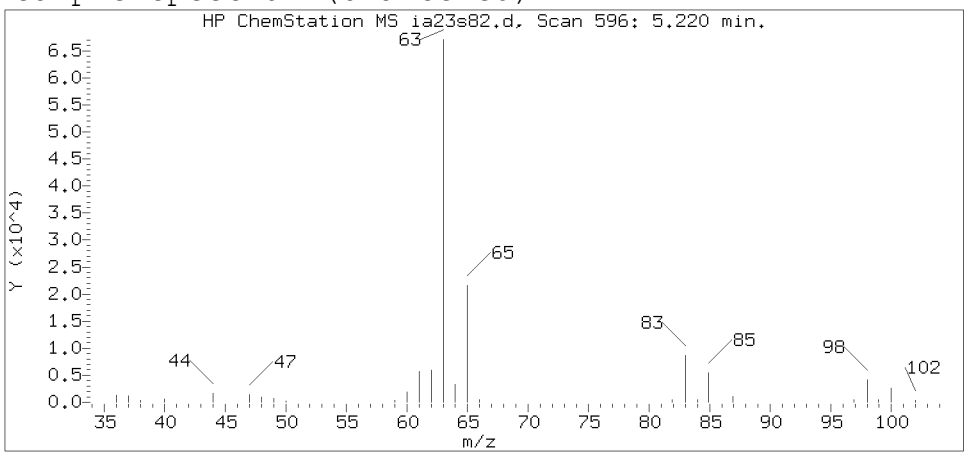


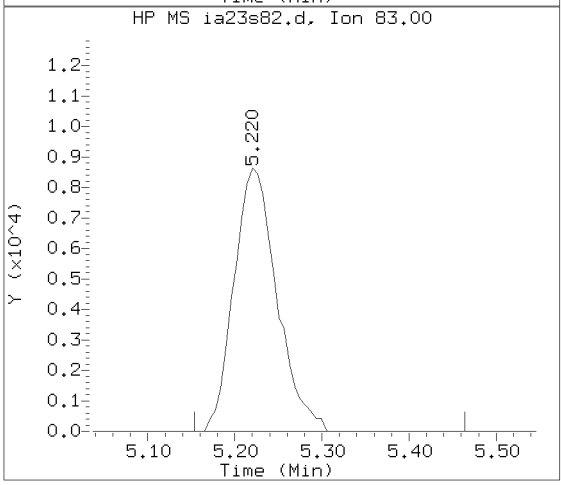
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

Compound Number	: 33
Compound Name	: 1,1-Dichloroethane
Scan Number	: 596
Retention Time (minutes)	: 5.220
Relative Retention Time	: 0.00000
Quant Ion	: 63.00
Area (flag)	: 235245
On-Column Amount (ng)	: 2.2868

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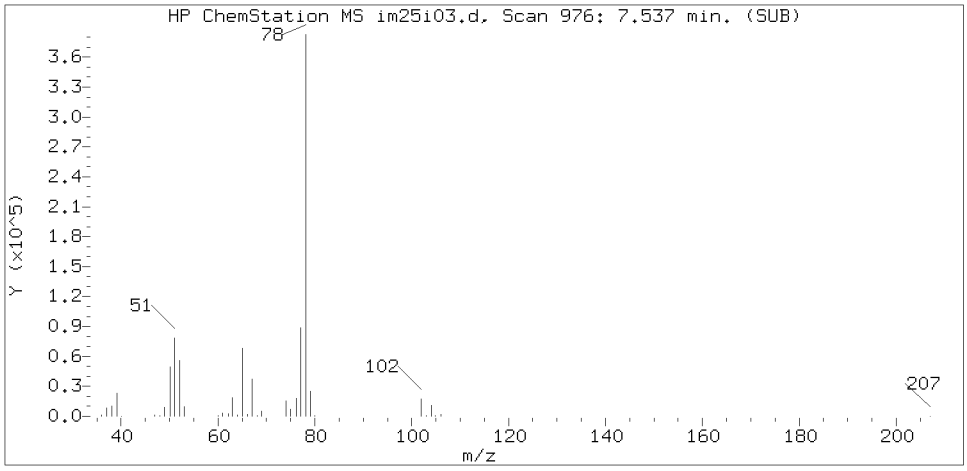
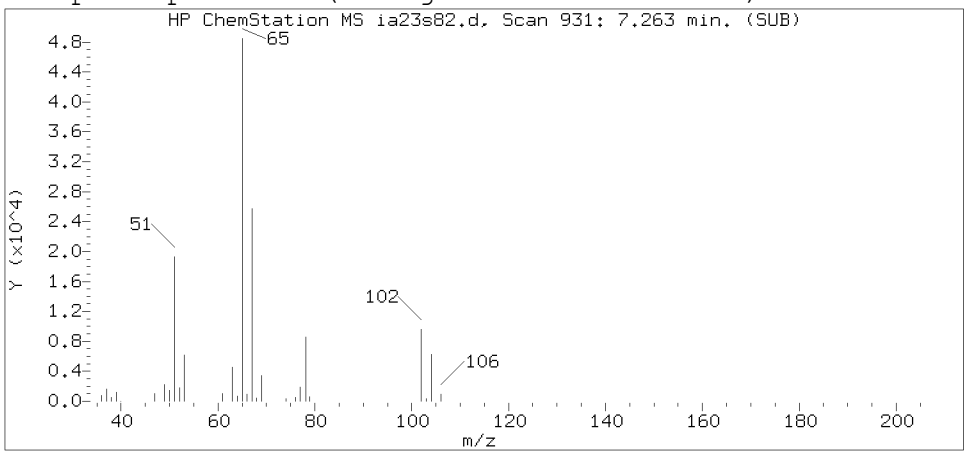
Target 3.5 esignature user ID: jkh09052

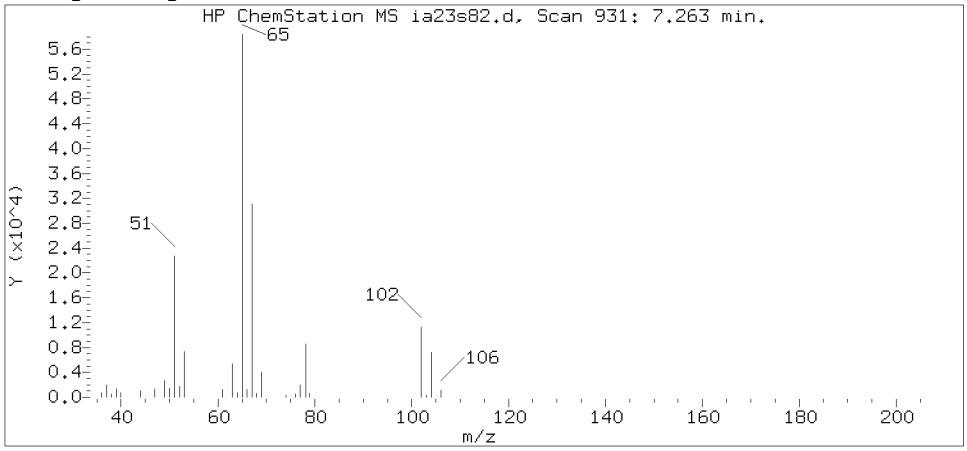
Reference Standard Spectrum for Benzene

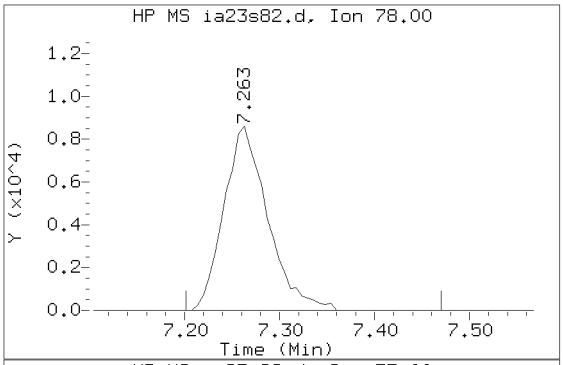


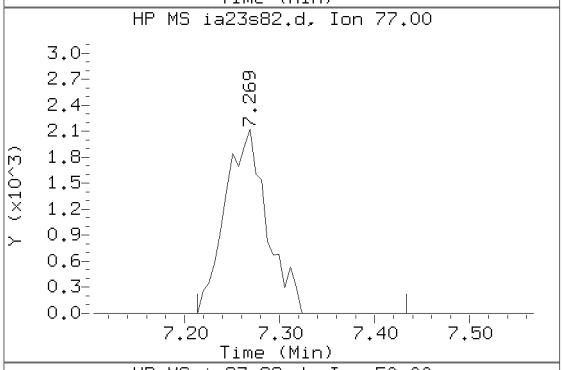
Sample Spectrum (Background Subtracted)

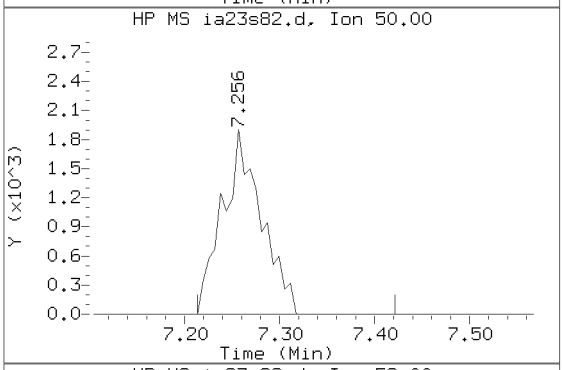


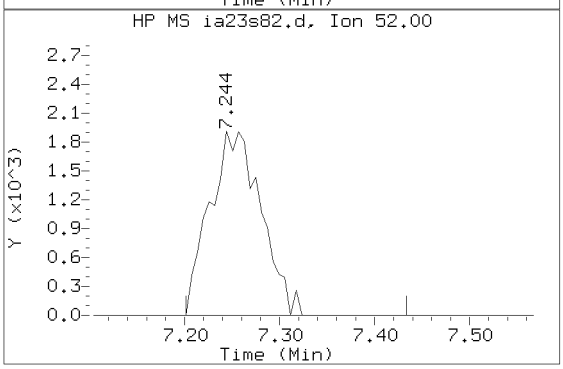
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

Compound Number : 58
Compound Name : Benzene
Scan Number : 931
Retention Time (minutes): 7.263
Relative Retention Time :-0.00079
Quant Ion : 78.00
Area (flag) : 27378
On-Column Amount (ng) : 0.1185

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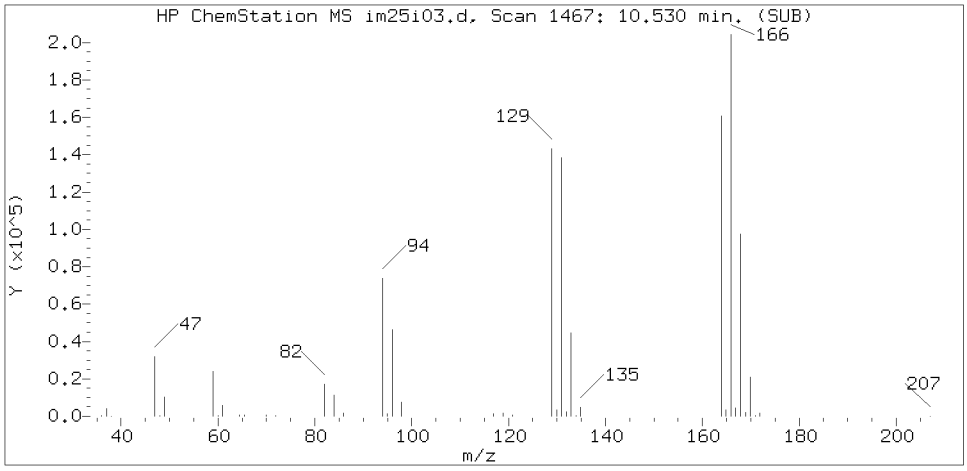
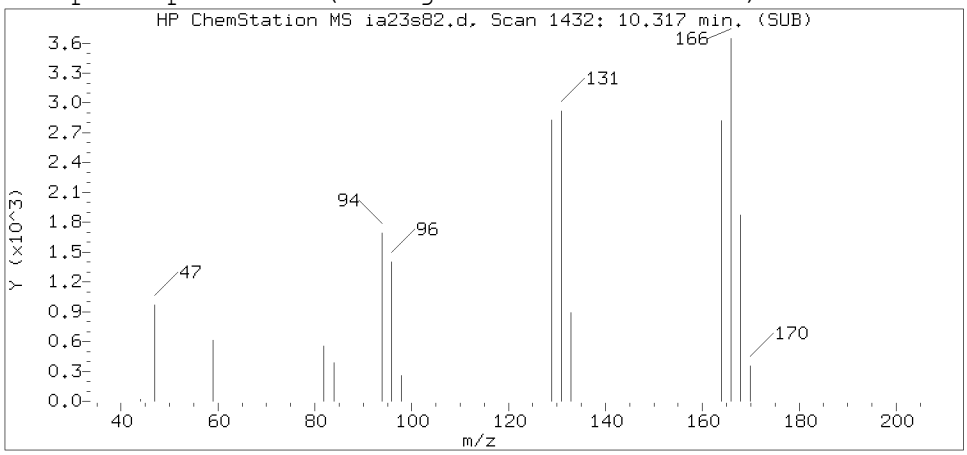
Target 3.5 esignature user ID: jkh09052

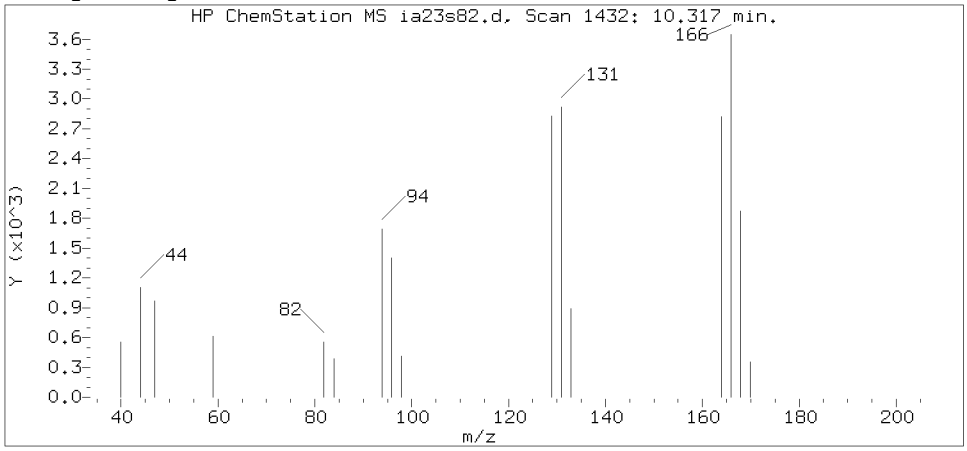
Reference Standard Spectrum for Tetrachloroethene

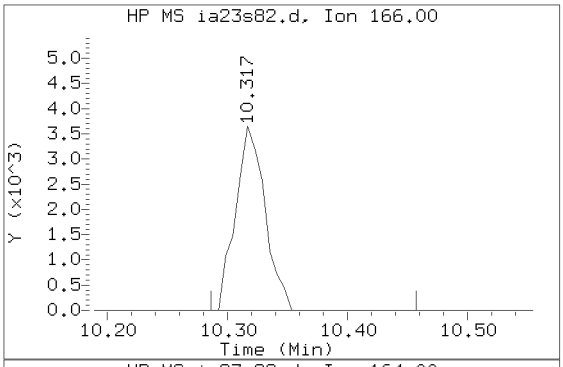


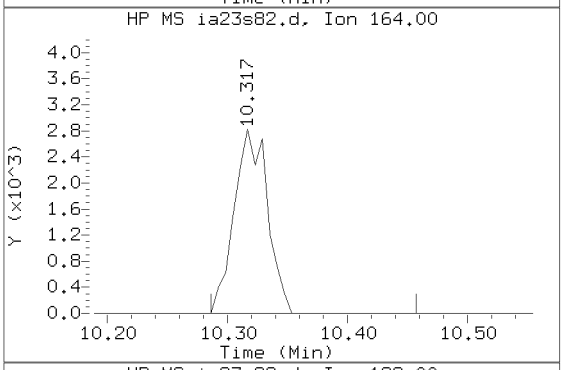
Sample Spectrum (Background Subtracted)

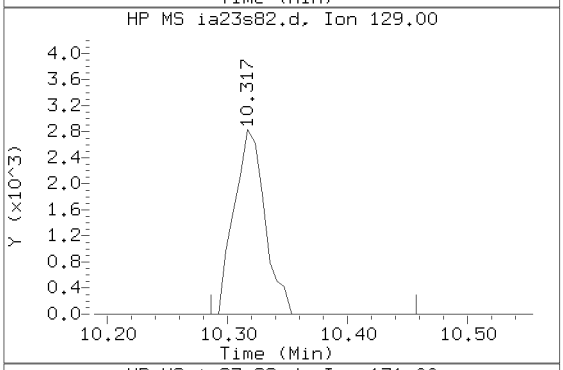


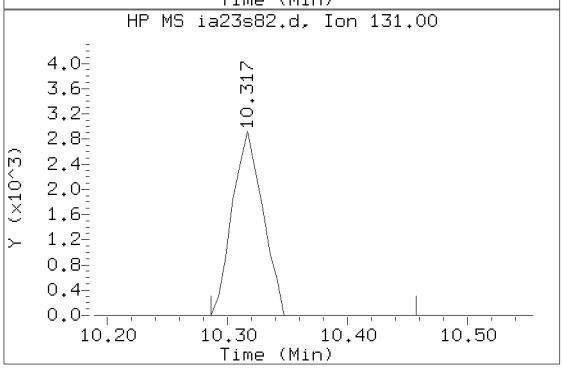
Sample Spectrum (Unaltered)











Data File: /chem2/HP19930.i/18apr23c.b/ia23s82.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:48 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:33 jkh09052

Sample Name: R0605 Lab Sample ID: 9558702

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1432
Retention Time (minutes): 10.317
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 6210
On-Column Amount (ng) : 0.1035

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

R0606 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558703

Data file: /chem2/HP26285.i/18apr23a.b/5a23s09.d Injection date and time: **23-APR-2018 13:51**
Data file Sample Info. Line: R0606;9558703;1;0;;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 15:17 kk10002

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.508	(-0.006)	348	65	317468	(-5)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1174662	(-6)	50.00	
101) Chlorobenzene-d5	10.745	(-0.006)	1535	117	914094	(-8)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	496995	(-12)	50.00	

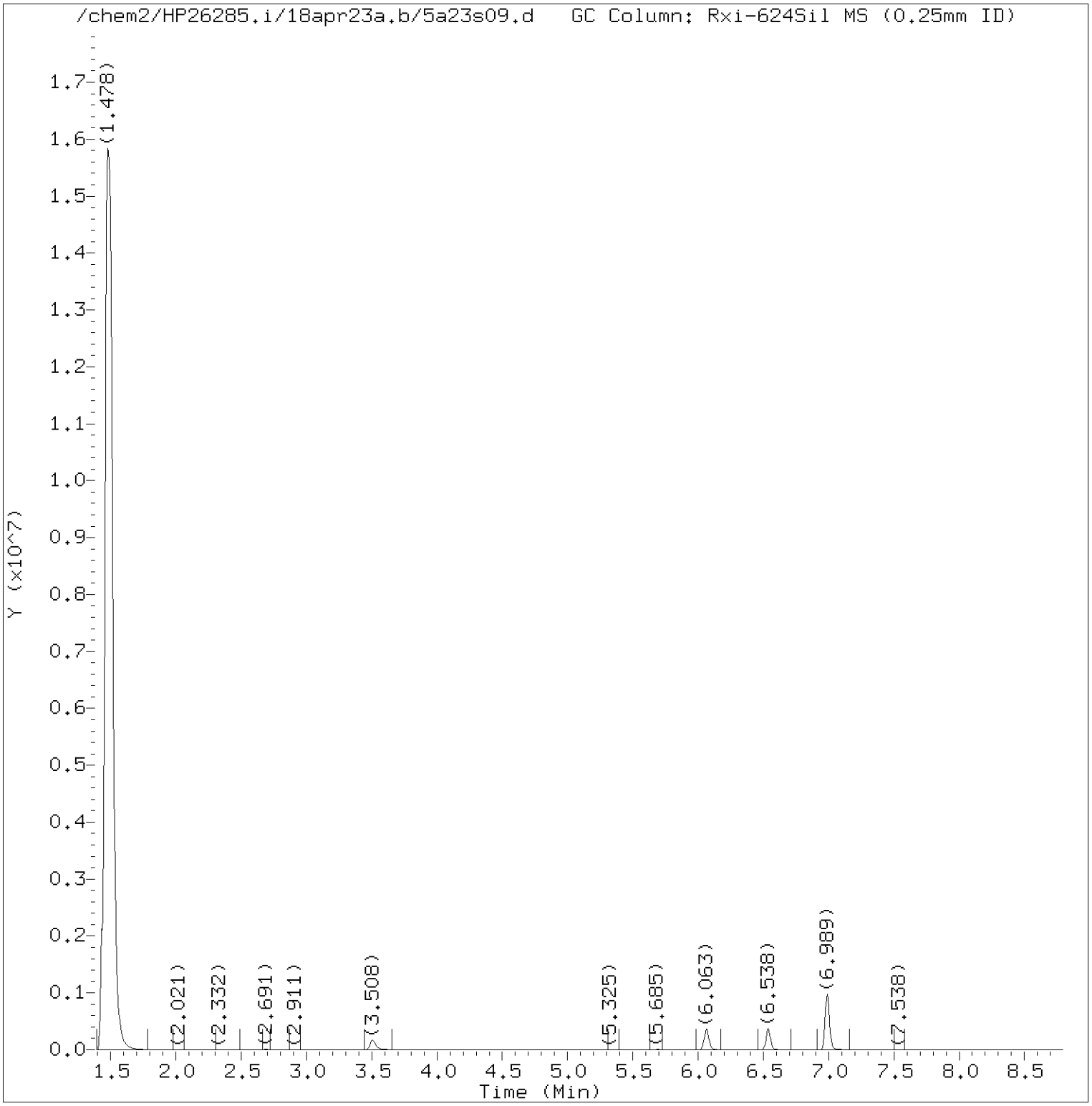
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	299861	49.557	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538	(0.000)	102	69121	51.064	102%		80 - 120
84) Toluene-d8	(3)	9.135	(0.000)	98	1145522	49.995	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.001)	95	440146	50.178	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)				Not Detected					50	100

Total number of targets = 1

Digitally signed by Kevin Kelly on 04/23/2018 at 15:18. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

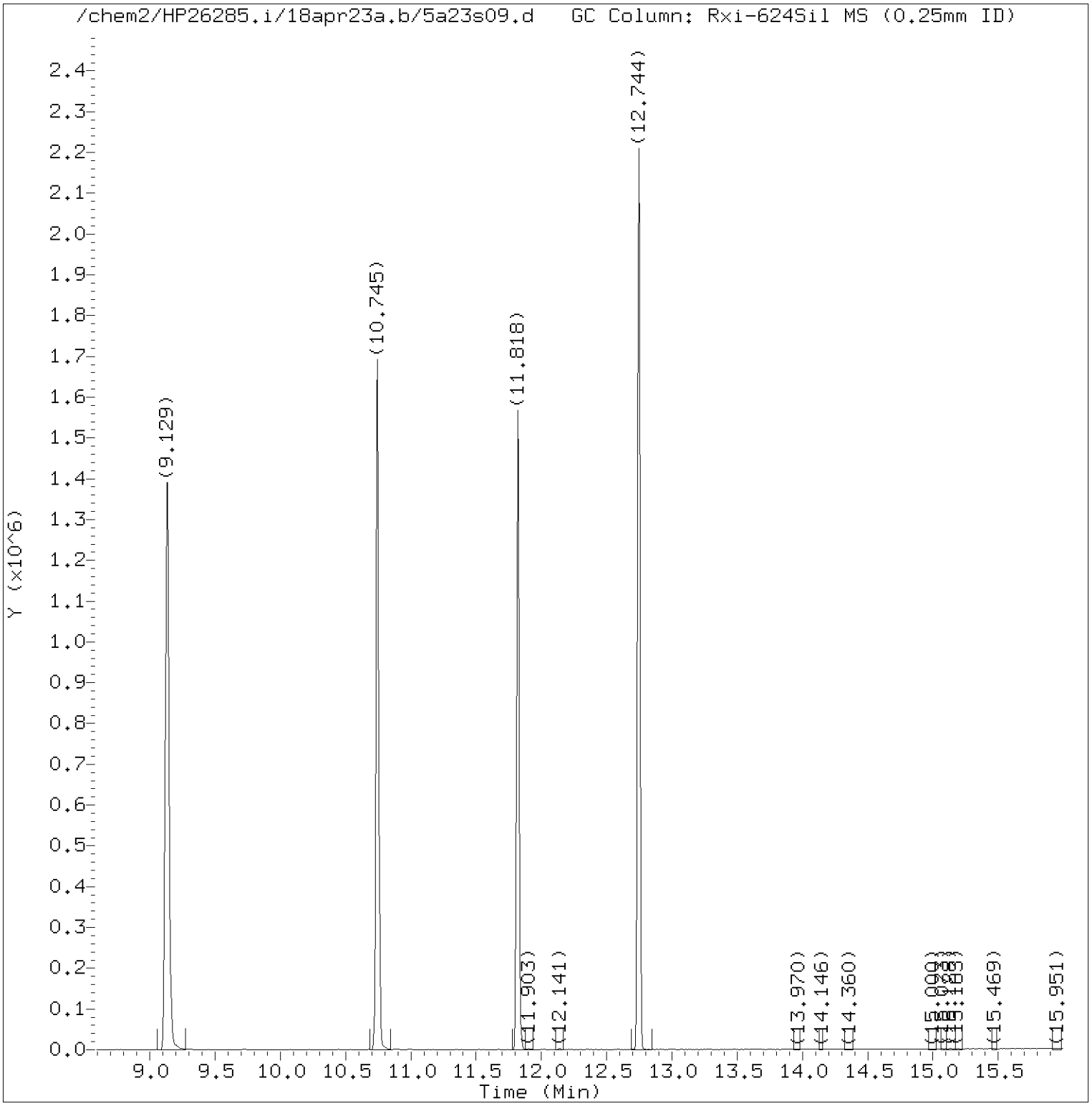
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s09.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:51 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 15:17 kk10002

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Kevin Kelly
on 04/23/2018 at 15:18.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s09.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:51 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 15:17 kk10002

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Kevin Kelly
on 04/23/2018 at 15:18.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s09.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:51 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 15:17 kk10002

Sample Name: R0606 Lab Sample ID: 9558703

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.508	65	317468	250.000
52)$Dibromofluoromethane	(2)	6.063	113	299861	49.557
57)$1,2-Dichloroethane-d4	(2)	6.538	102	69121	51.064
66)*Fluorobenzene	(2)	6.989	96	1174662	50.000
84)$Toluene-d8	(3)	9.135	98	1145522	49.995
101)*Chlorobenzene-d5	(3)	10.745	117	914094	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	440146	50.178
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	496995	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/23/2018 at 15:18.
Target 3.5 esignature user ID: kk10002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s83.d Injection date and time: **24-APR-2018 07:10**
Data file Sample Info. Line: R0606;9558703;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.172 (-0.037)	424	65	138577 (-6)	50.00	
63) Fluorobenzene	7.665 (0.000)	997	96	1963548 (-5)	10.00	
97) Chlorobenzene-d5	11.146 (0.000)	1568	117	1425386 (-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024 (0.000)	1876	152	752120 (-9)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769 (0.000)	113	470772	10.273	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232 (-0.001)	102	102288	10.261	103%		80 - 120
82) Toluene-d8	(3)	9.689 (-0.001)	98	1907584	9.912	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146 (0.000)	95	673143	9.906	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)	1.965 (0.003)	45	23245M	0.308	0.31		J	0.1	13
2) Chloromethane	(2)			Not Detected					0.2	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34. Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558703

Data file: /chem2/HP19930.i/18apr23c.b/ia23s83.d Injection date and time: **24-APR-2018 07:10**
Data file Sample Info. Line: R0606;9558703;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

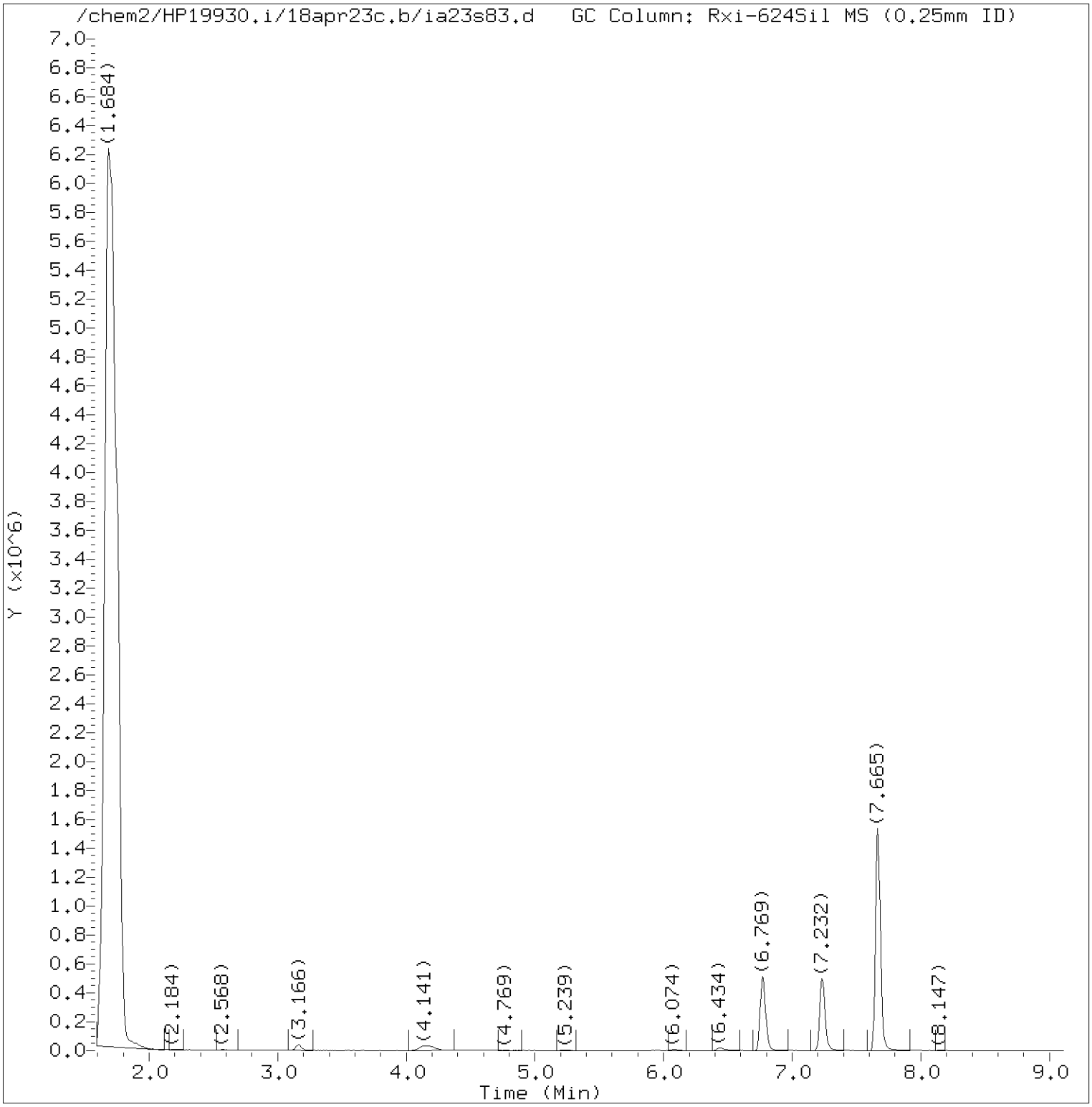
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

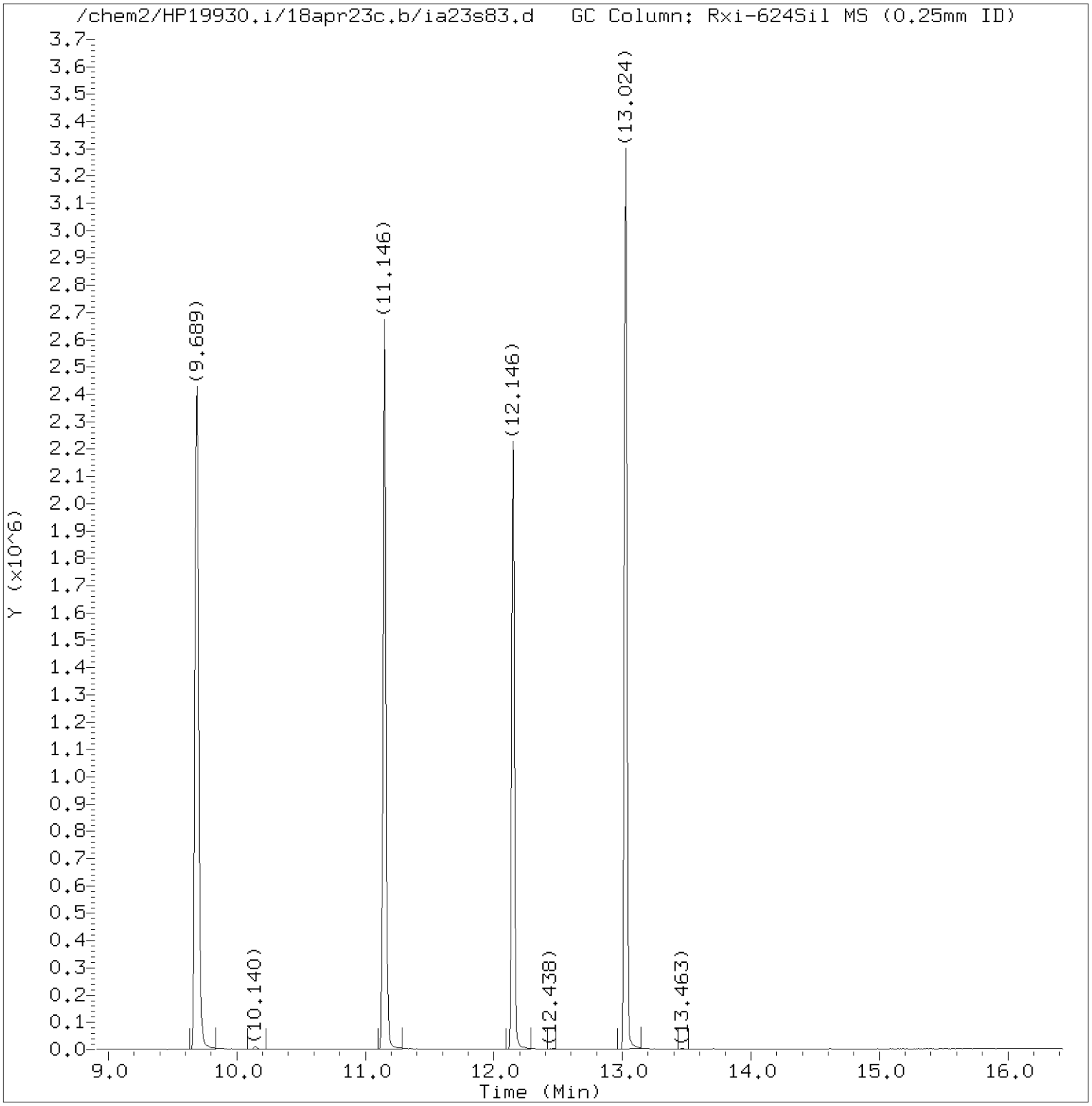
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

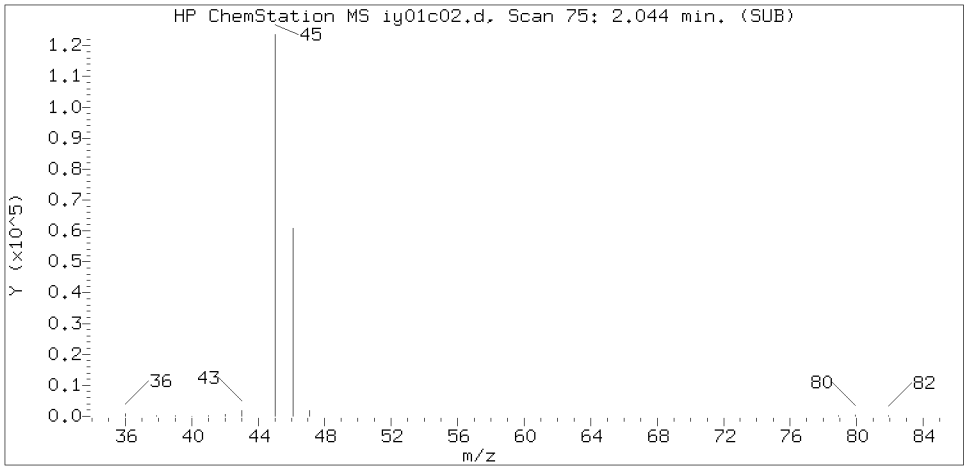
Sample Name: R0606 Lab Sample ID: 9558703

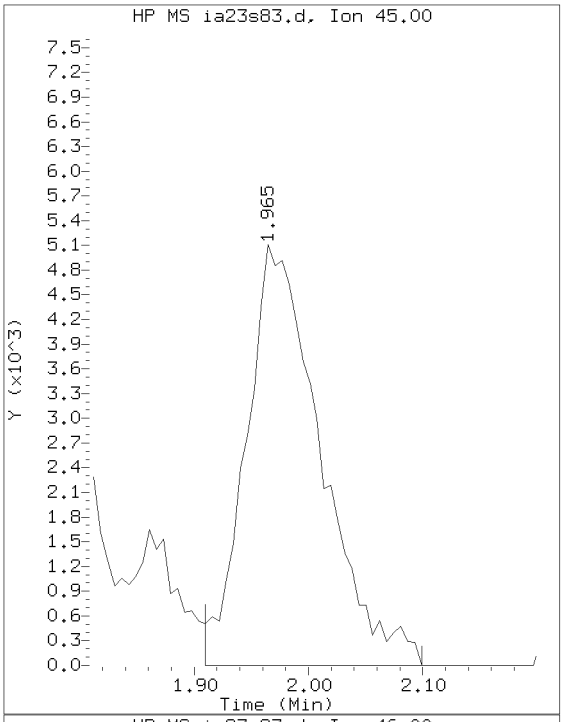
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.965	45	23245M	0.308
26)*t-Butyl Alcohol-d10	(1)	4.172	65	138577	50.000
50)$Dibromofluoromethane	(2)	6.769	113	470772	10.273
57)$1,2-Dichloroethane-d4	(2)	7.232	102	102288	10.261
63)*Fluorobenzene	(2)	7.665	96	1963548	10.000
82)$Toluene-d8	(3)	9.689	98	1907584	9.912
97)*Chlorobenzene-d5	(3)	11.146	117	1425386	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	673143	9.906
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	752120	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

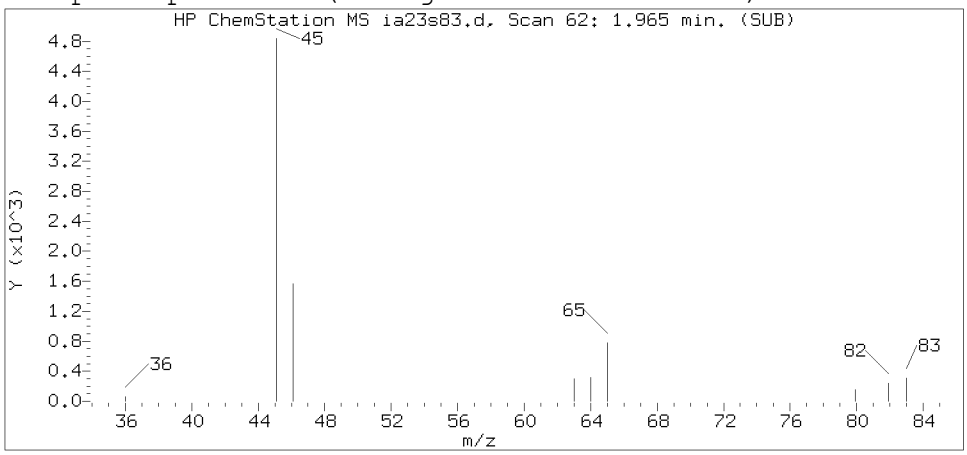
Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

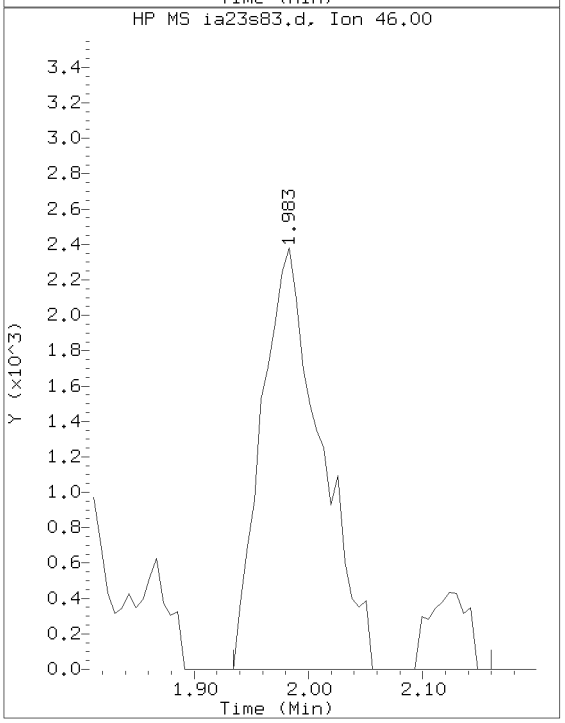
Reference Standard Spectrum for Dimethyl ether



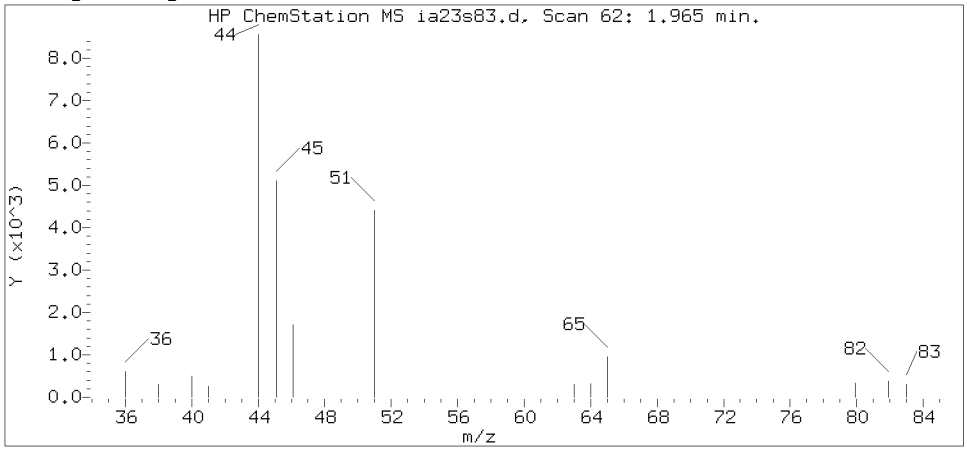


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

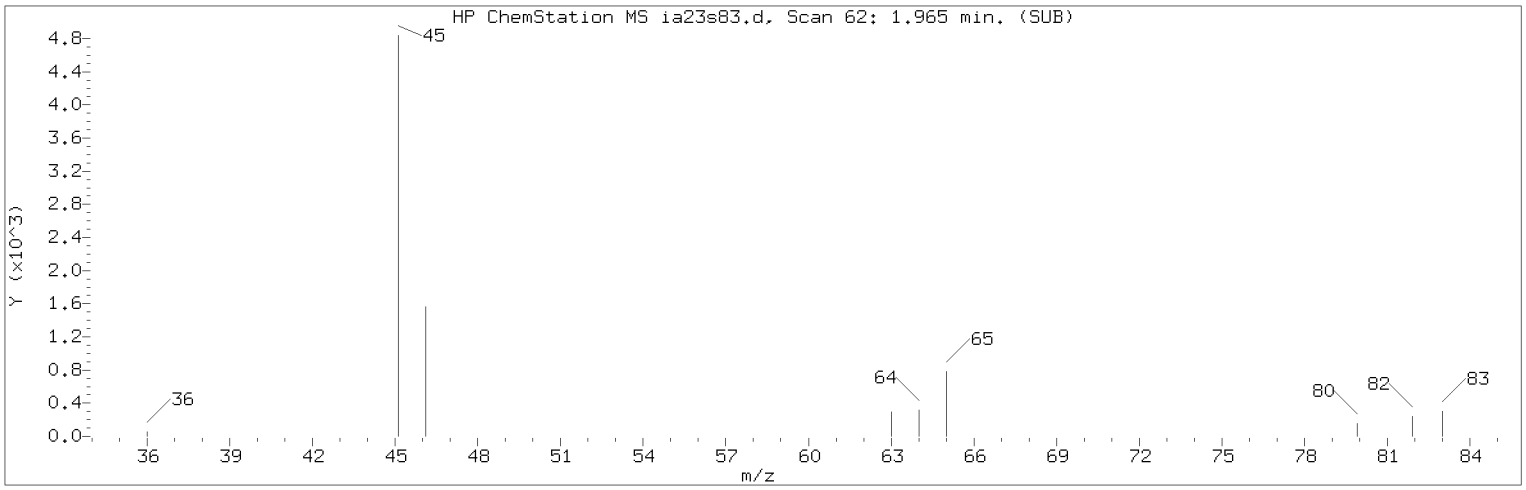
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Sample Name: R0606 Lab Sample ID: 9558703

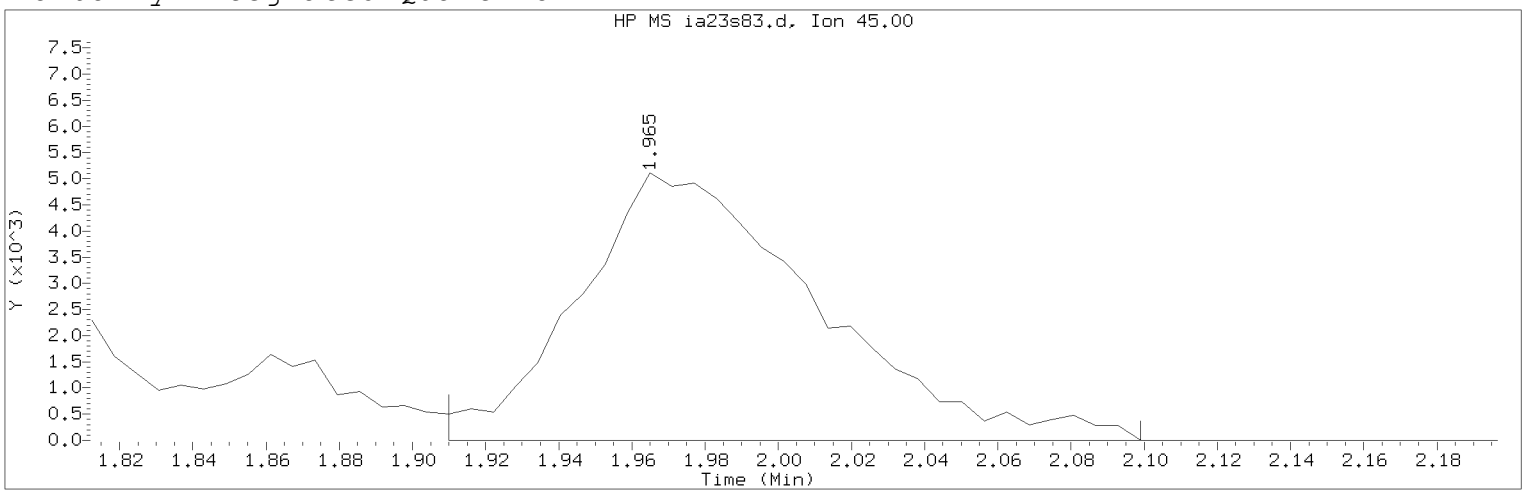
Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 62
Retention Time (minutes)	: 1.965
Relative Retention Time	: 0.00318
Quant Ion	: 45.00
Area (flag)	: 23245M
On-Column Amount (ng)	: 0.3077

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 25-Apr-2018 13:34 jkh09052

Sample Name: R0606 Lab Sample ID: 9558703

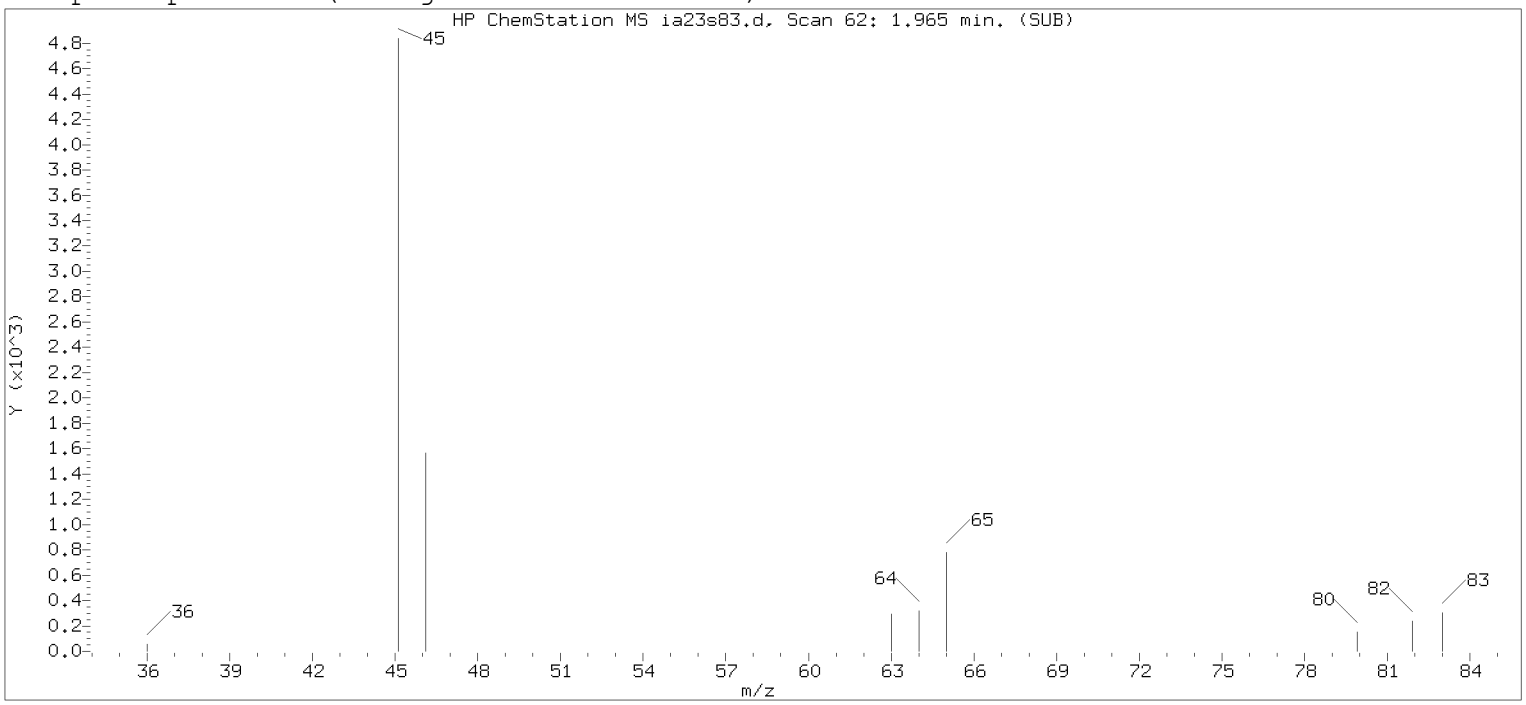
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 62
Retention Time (minutes): 1.965
Quant Ion : 45.00
Area (flag) : 23245M
On-Column Amount (ng) : 0.3077
Integration start scan : 52 Integration stop scan: 83
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

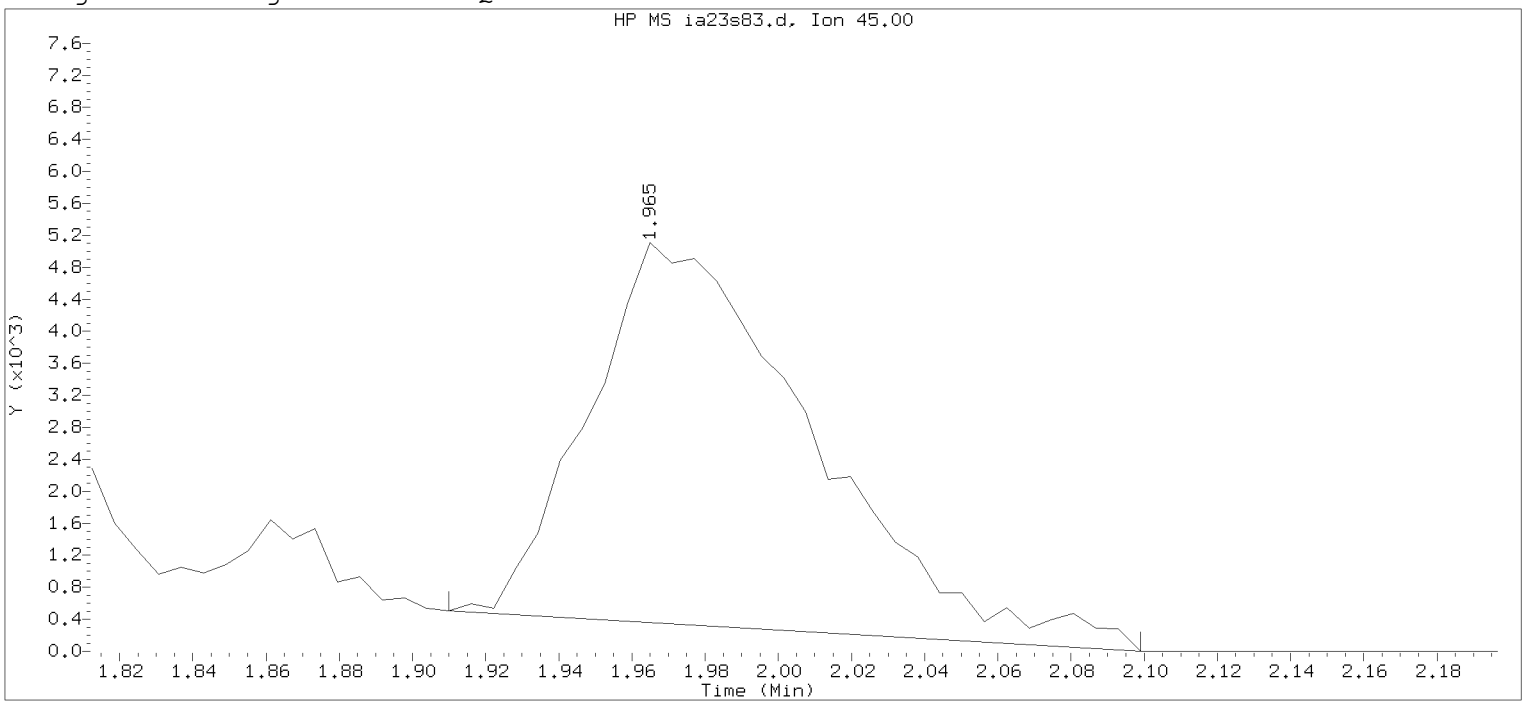
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s83.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 07:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:28 Automation

Sample Name: R0606 Lab Sample ID: 9558703

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 62		
Retention Time (minutes)	: 1.965		
Quant Ion	: 45.00		
Area	: 20279		
On-column Amount (ng)	: 0.2685		
Integration start scan	: 52	Integration stop scan:	83
Y at integration start	: 507	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:34.
Target 3.5 esignature user ID: JKHOWE

R0607 Lancaster Laboratories 9558704
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s45.d Injection date and time: **23-APR-2018 21:53**
Data file Sample Info. Line: R0607;9558704;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(-0.006)	389	65	203719	(-4)	50.00	
63) Fluorobenzene	7.482	(-0.006)	967	96	2100475	(-3)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1601980	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	895063	(-9)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	523419	9.910	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	113336	10.125	101%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2129444	9.912	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	801458	9.746	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.019	(0.000)	63	16357	0.159	0.16		J	0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

R0607 Lancaster Laboratories 9558704
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s45.d Injection date and time: **23-APR-2018 21:53**
Data file Sample Info. Line: R0607;9558704;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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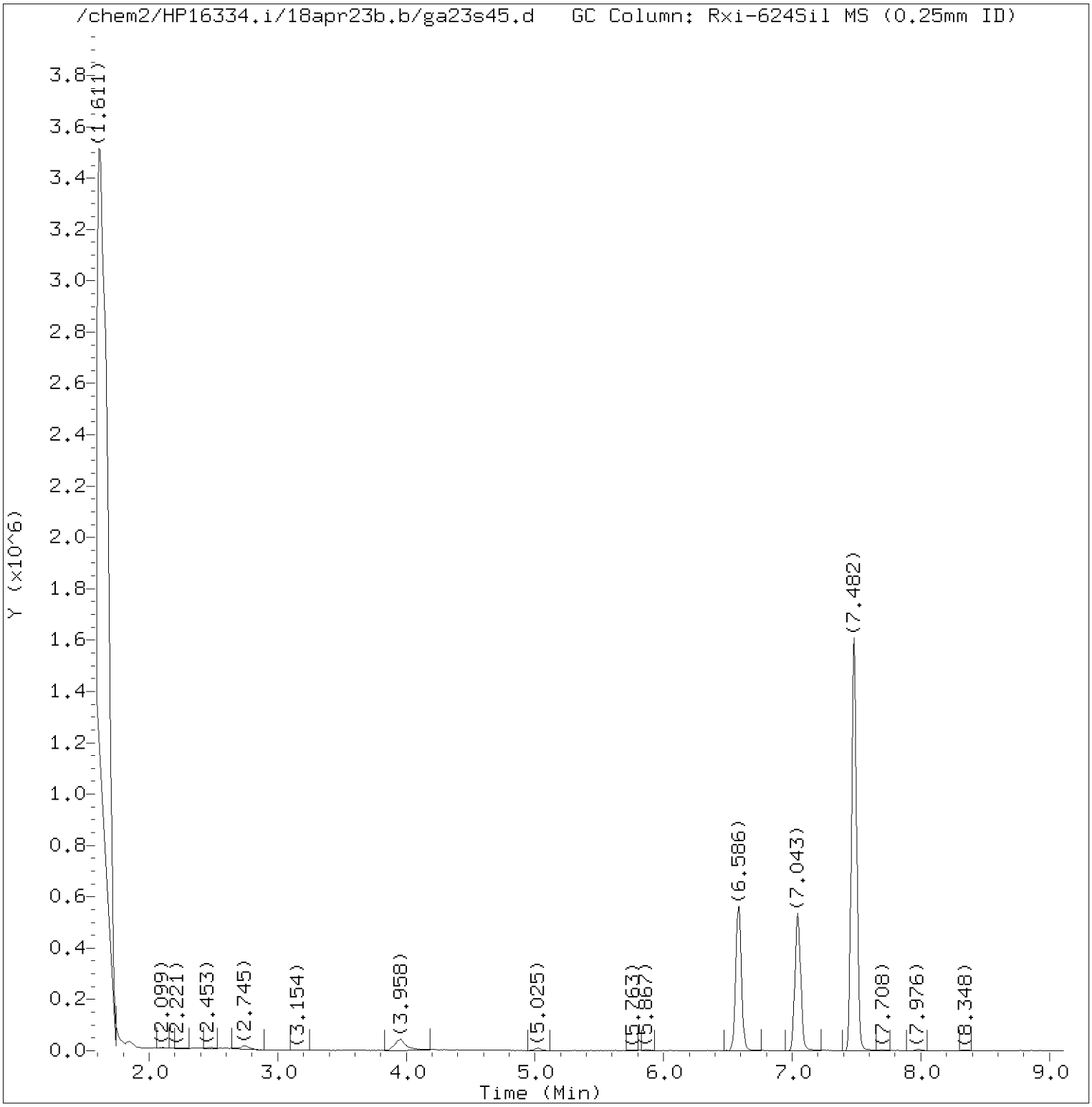
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

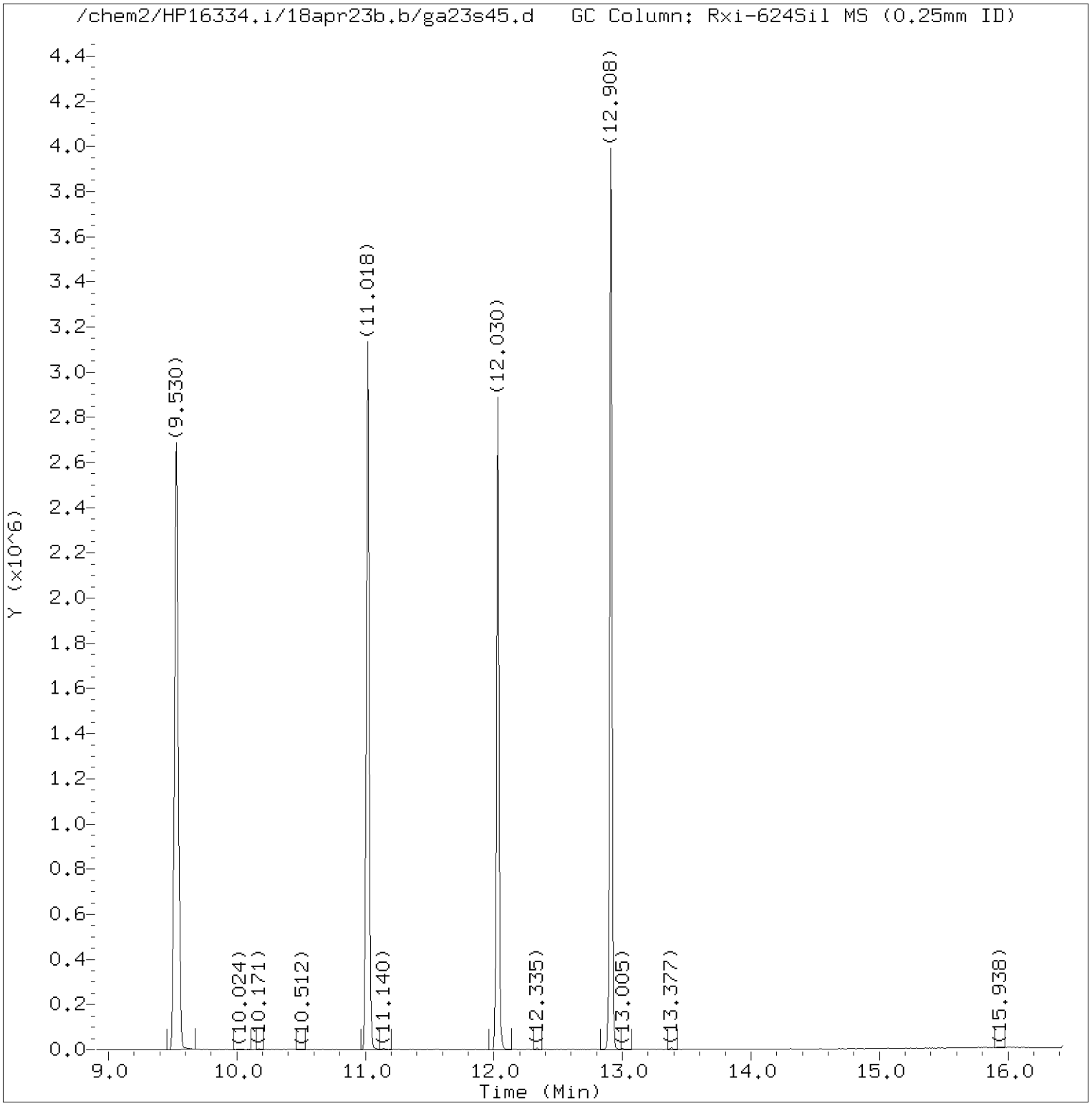
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s45.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:53 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

Sample Name: R0607 Lab Sample ID: 9558704

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s45.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:53 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

Sample Name: R0607 Lab Sample ID: 9558704

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s45.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:53 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

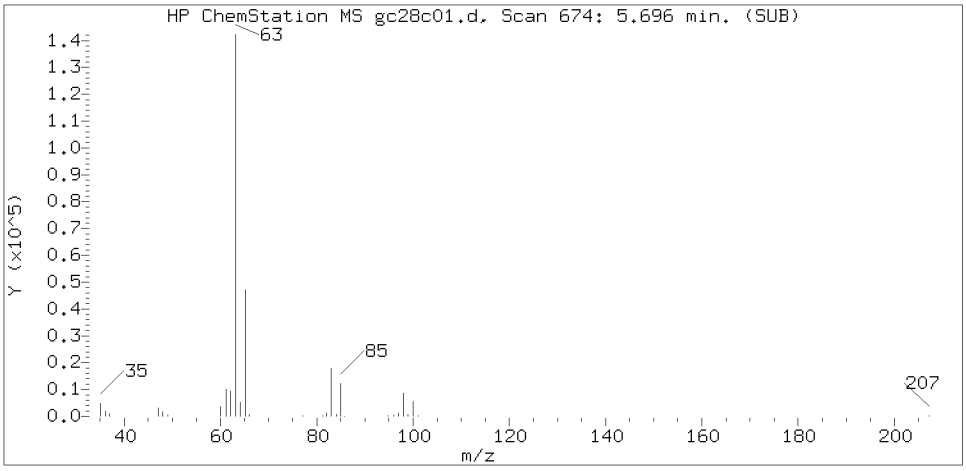
Sample Name: R0607 Lab Sample ID: 9558704

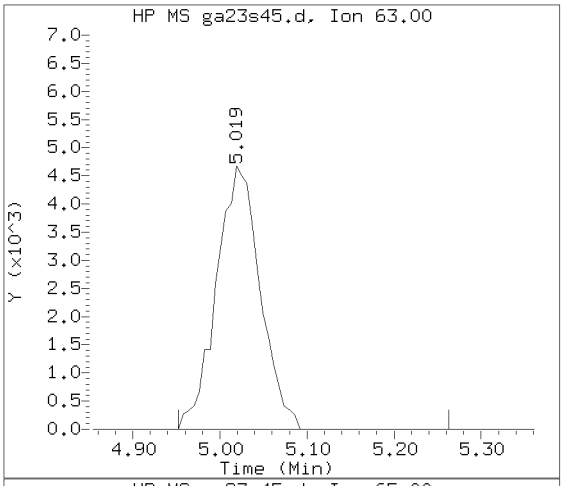
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.958	65	203719	50.000
33) 1,1-Dichloroethane	(2)	5.019	63	16357	0.159
50)$Dibromofluoromethane	(2)	6.586	113	523419	9.910
57)$1,2-Dichloroethane-d4	(2)	7.043	102	113336	10.125
63)*Fluorobenzene	(2)	7.482	96	2100475	10.000
82)$Toluene-d8	(3)	9.530	98	2129444	9.912
97)*Chlorobenzene-d5	(3)	11.018	117	1601980	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	801458	9.746
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	895063	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

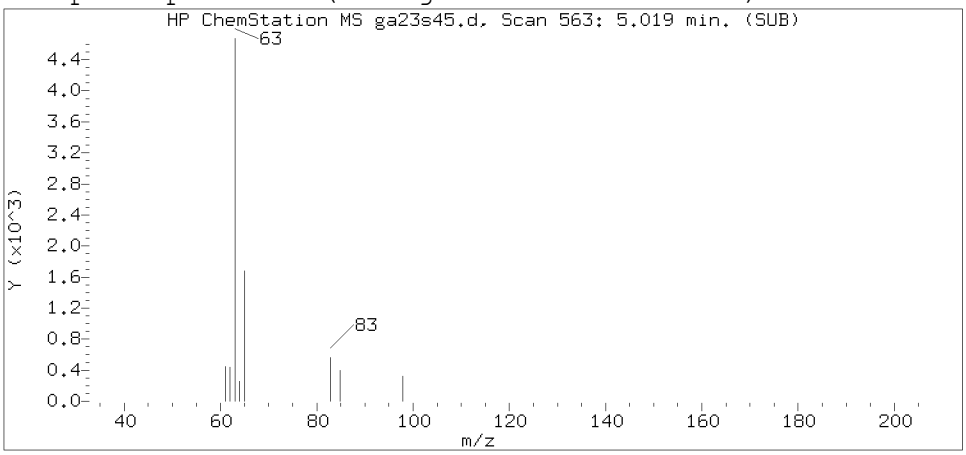
Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

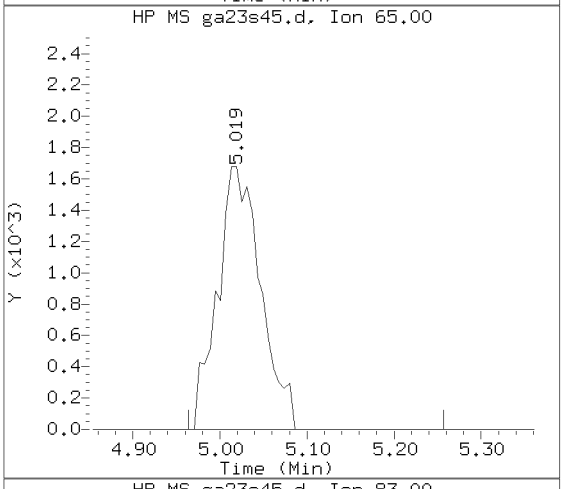
Reference Standard Spectrum for 1,1-Dichloroethane



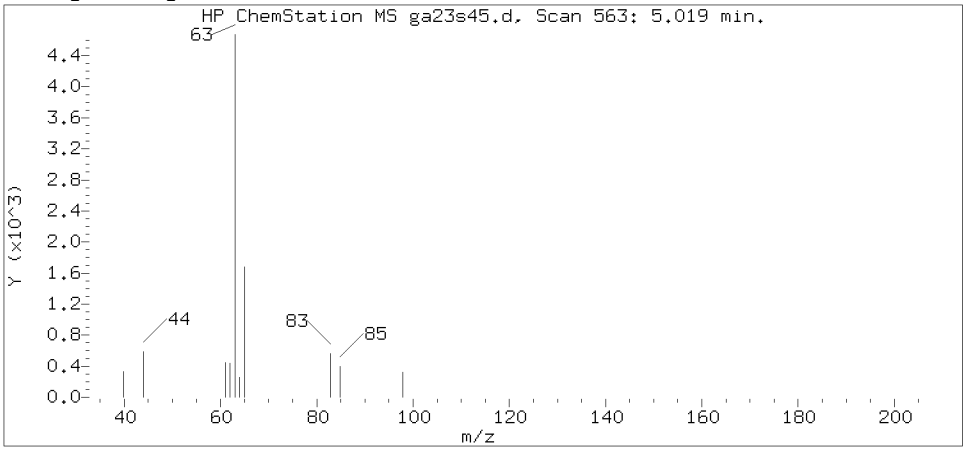


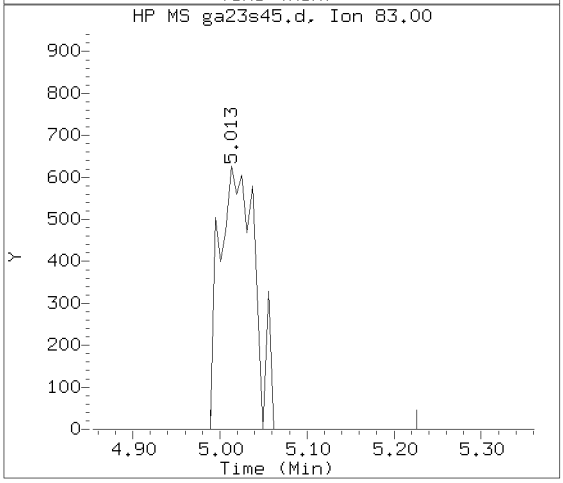
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr23b.b/ga23s45.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:53 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 22:09 Automation

Sample Name: R0607 Lab Sample ID: 9558704

Compound Number	: 33
Compound Name	: 1,1-Dichloroethane
Scan Number	: 563
Retention Time (minutes)	: 5.019
Relative Retention Time	: 0.00055
Quant Ion	: 63.00
Area (flag)	: 16357
On-Column Amount (ng)	: 0.1587

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

R0608 Lancaster Laboratories 9558705
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s46.d Injection date and time: **23-APR-2018 22:15**
Data file Sample Info. Line: R0608;9558705;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(-0.006)	389	65	206479	(-2)	50.00	
63) Fluorobenzene	7.482	(-0.006)	967	96	2081258	(-4)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1592109	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	891161	(-9)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.592	(-0.001)	113	516459	9.868	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	111216	10.028	100%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2135468	10.001	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	798697	9.773	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.831	(0.001)	85	20274	0.260	0.26		J	0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP16334.i/18apr23b.b/ga23s46.d Injection date and time: **23-APR-2018 22:15**
Data file Sample Info. Line: R0608;9558705;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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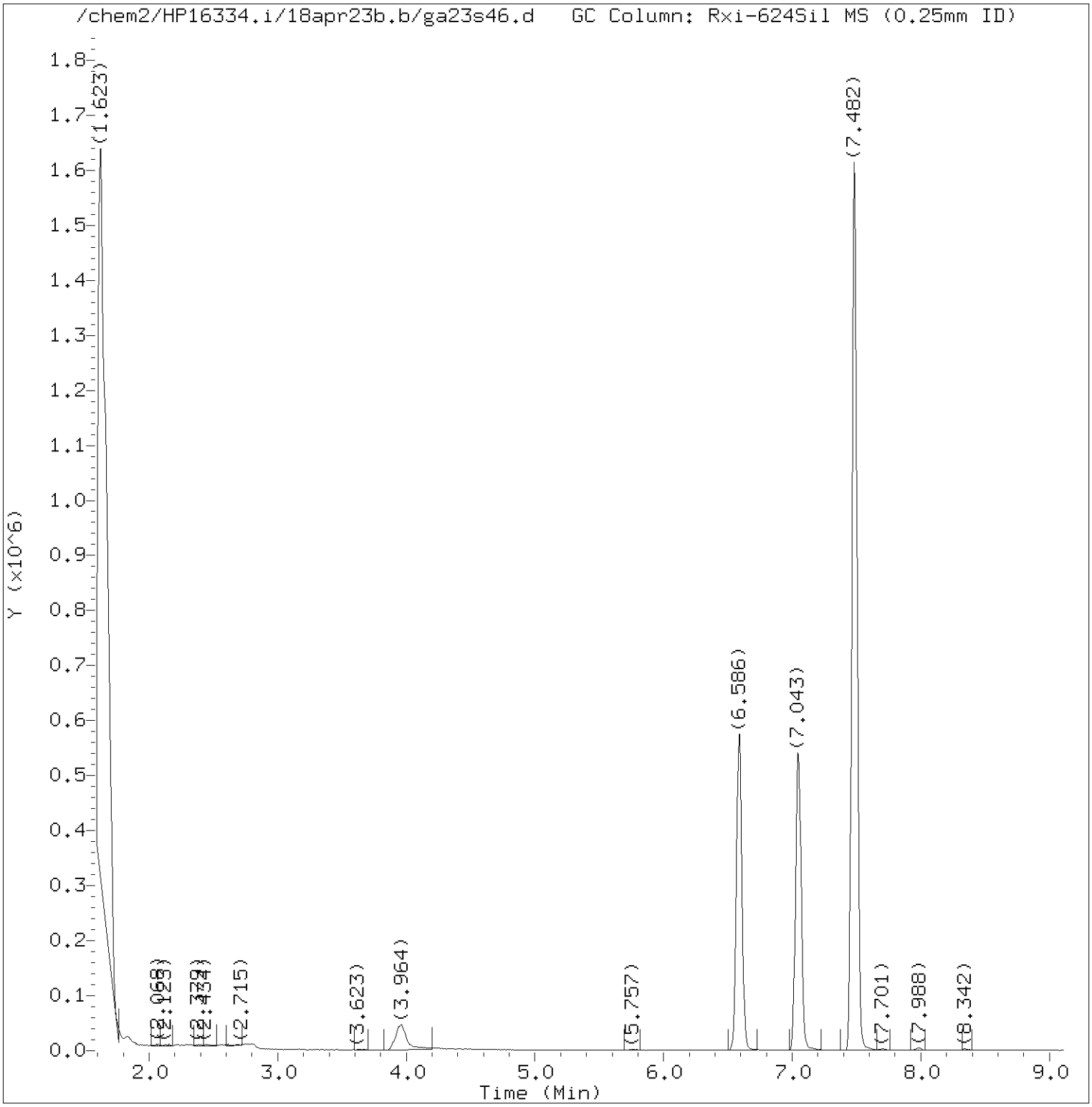
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

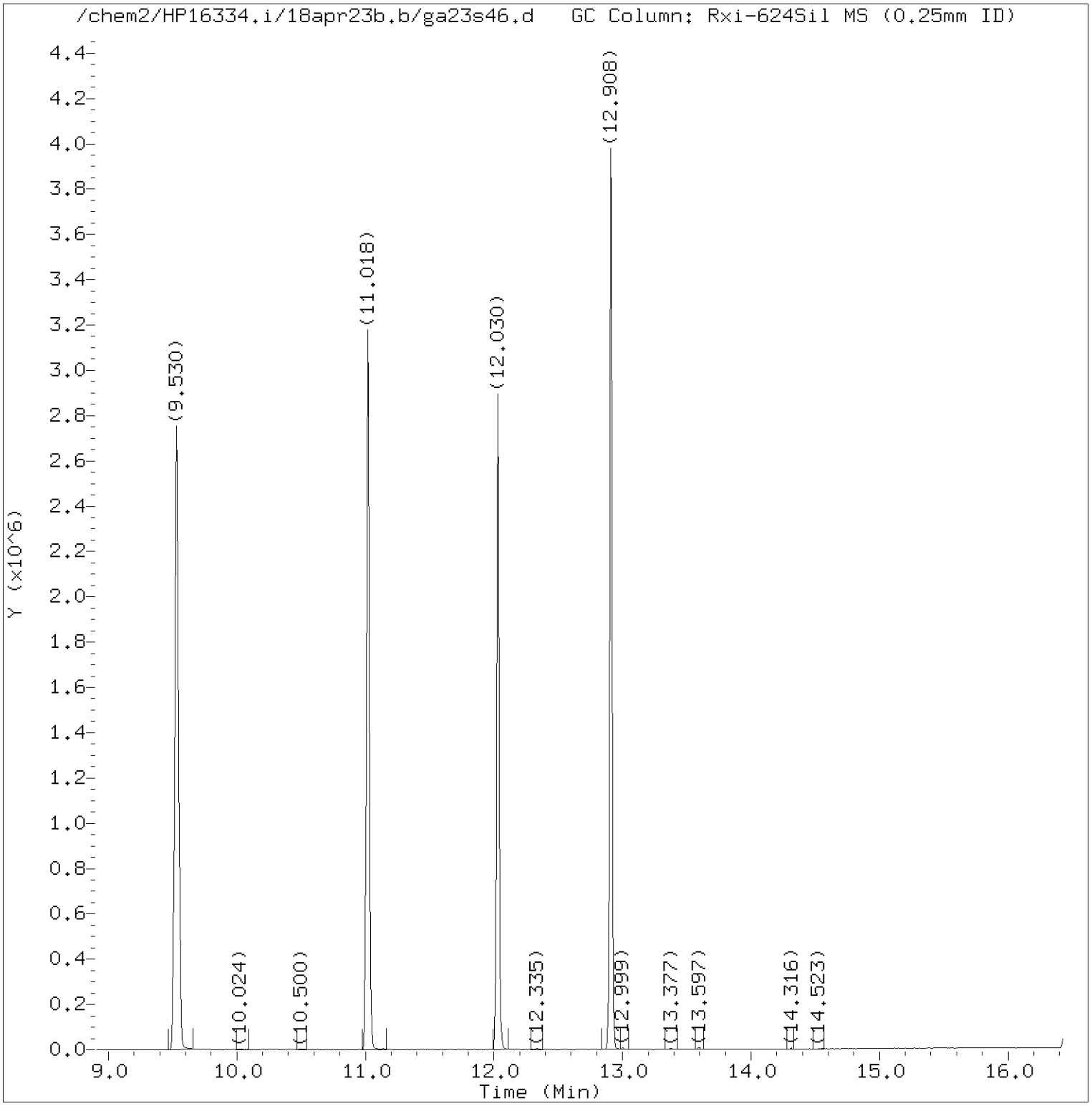
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s46.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:15 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0608 Lab Sample ID: 9558705

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s46.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:15 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0608 Lab Sample ID: 9558705

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s46.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:15 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0608 Lab Sample ID: 9558705

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	20274	0.260
26)*t-Butyl Alcohol-d10	(1)	3.958	65	206479	50.000
50)$Dibromofluoromethane	(2)	6.592	113	516459	9.868
57)$1,2-Dichloroethane-d4	(2)	7.043	102	111216	10.028
63)*Fluorobenzene	(2)	7.482	96	2081258	10.000
82)$Toluene-d8	(3)	9.530	98	2135468	10.001
97)*Chlorobenzene-d5	(3)	11.018	117	1592109	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	798697	9.773
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	891161	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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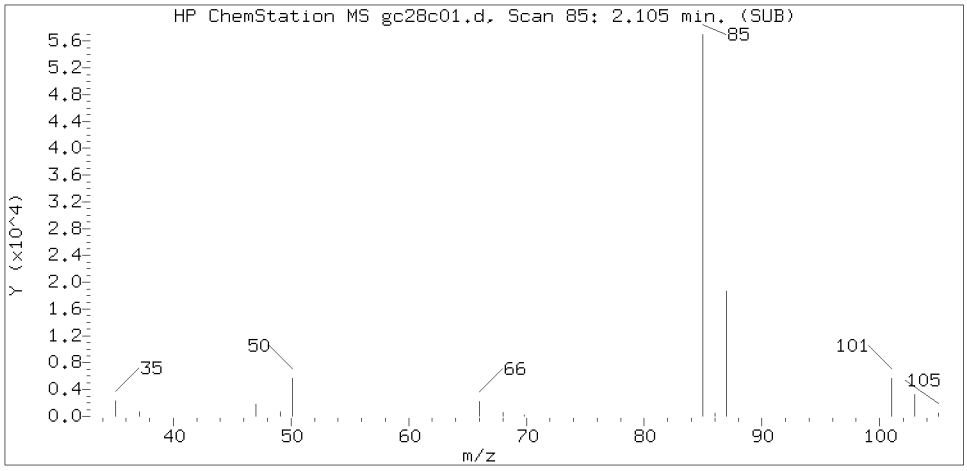
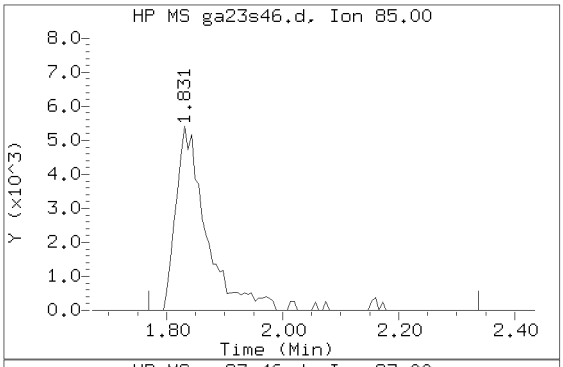
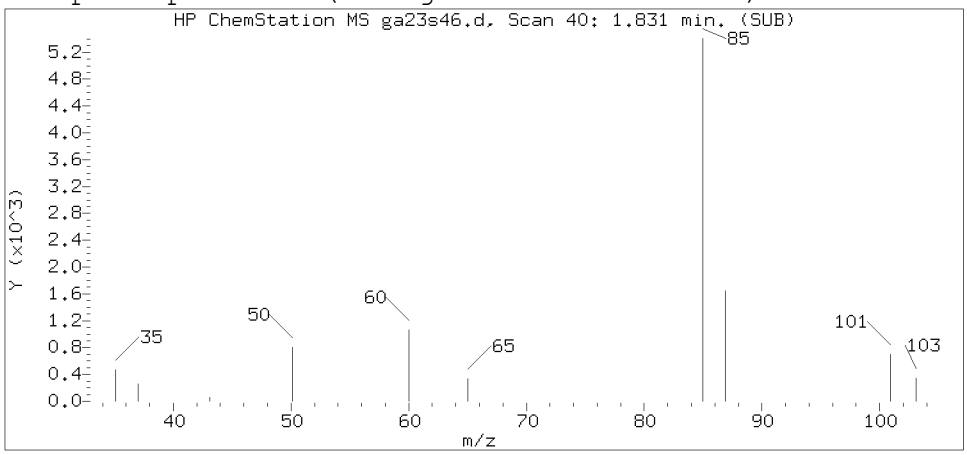
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

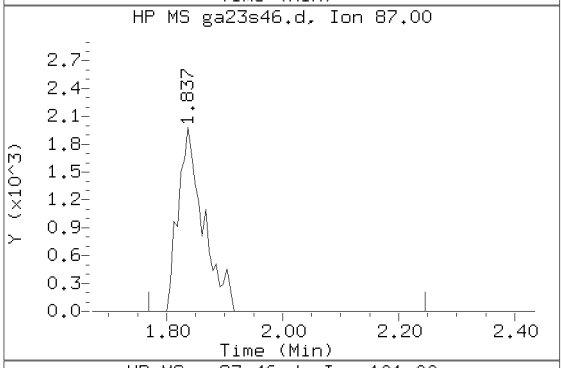
Reference Standard Spectrum for Dichlorodifluoromethane

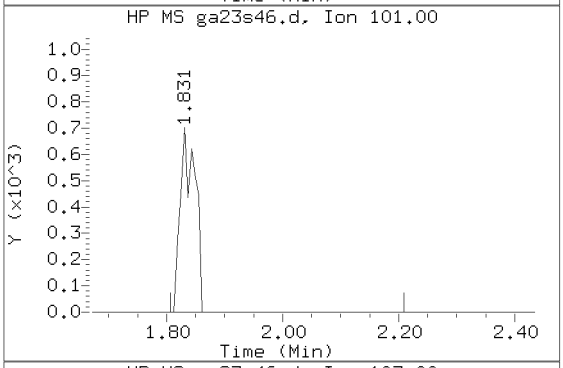




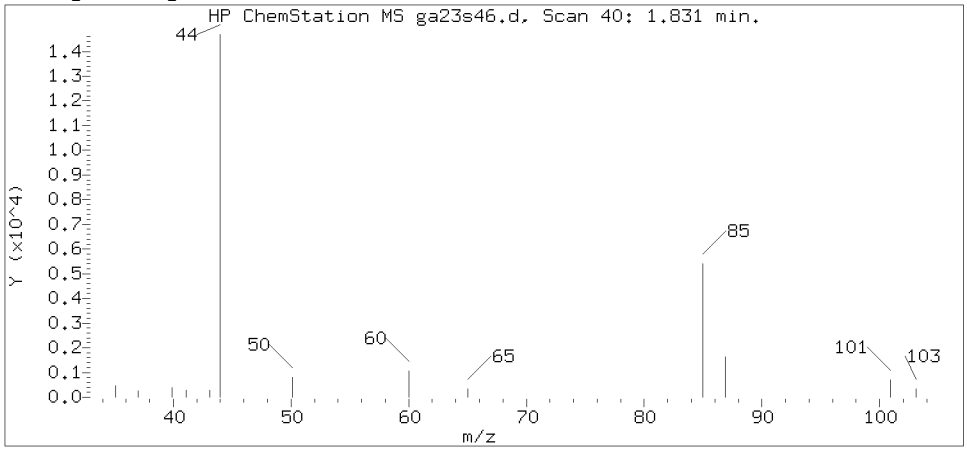
Sample Spectrum (Background Subtracted)

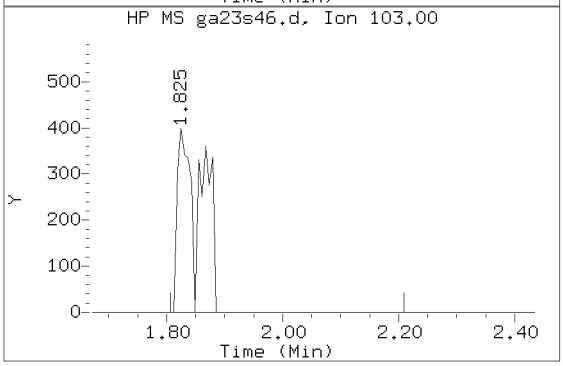






Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr23b.b/ga23s46.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:15 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0608 Lab Sample ID: 9558705

Compound Number	: 1
Compound Name	: Dichlorodifluoromethane
Scan Number	: 40
Retention Time (minutes)	: 1.831
Relative Retention Time	: 0.00184
Quant Ion	: 85.00
Area (flag)	: 20274
On-Column Amount (ng)	: 0.2597

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Target 3.5 esignature user ID: jkh09052

R0609 Lancaster Laboratories 9558706
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s47.d Injection date and time: **23-APR-2018 22:37**
Data file Sample Info. Line: R0609;9558706;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958 (-0.006)	389	65	210198 (-1)	50.00	
63) Fluorobenzene	7.482 (-0.006)	967	96	2056830 (-5)	10.00	
97) Chlorobenzene-d5	11.018 (0.000)	1547	117	1570829 (-9)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914 (-0.006)	1858	152	872522 (-11)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.592 (-0.001)	113	510144	9.863	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.055 (-0.001)	102	107663	9.823	98%		80 - 120
82) Toluene-d8	(3)	9.530 (-0.001)	98	2094810	9.944	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030 (-0.001)	95	785804	9.745	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP16334.i/18apr23b.b/ga23s47.d Injection date and time: **23-APR-2018 22:37**
Data file Sample Info. Line: R0609;9558706;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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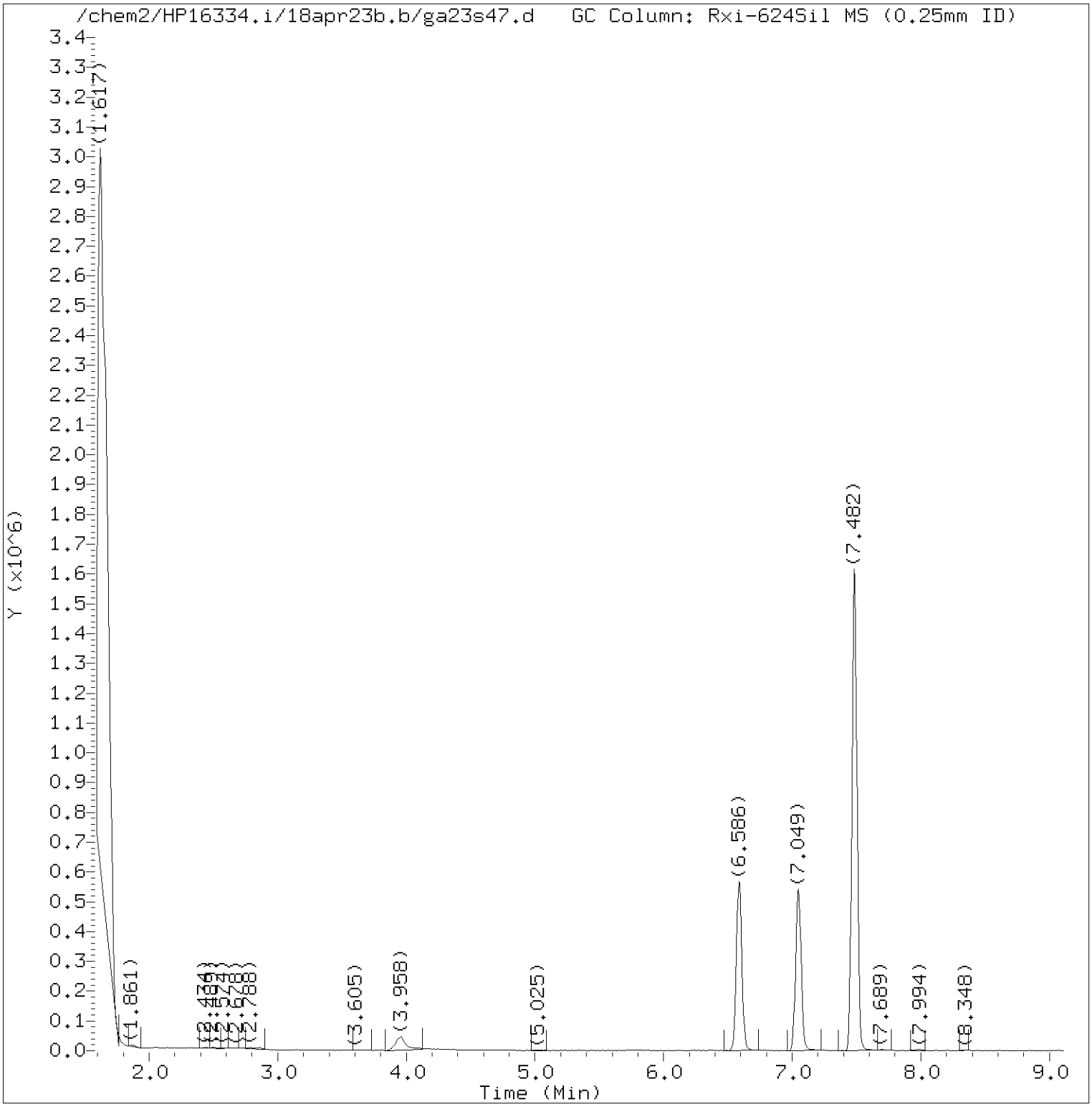
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

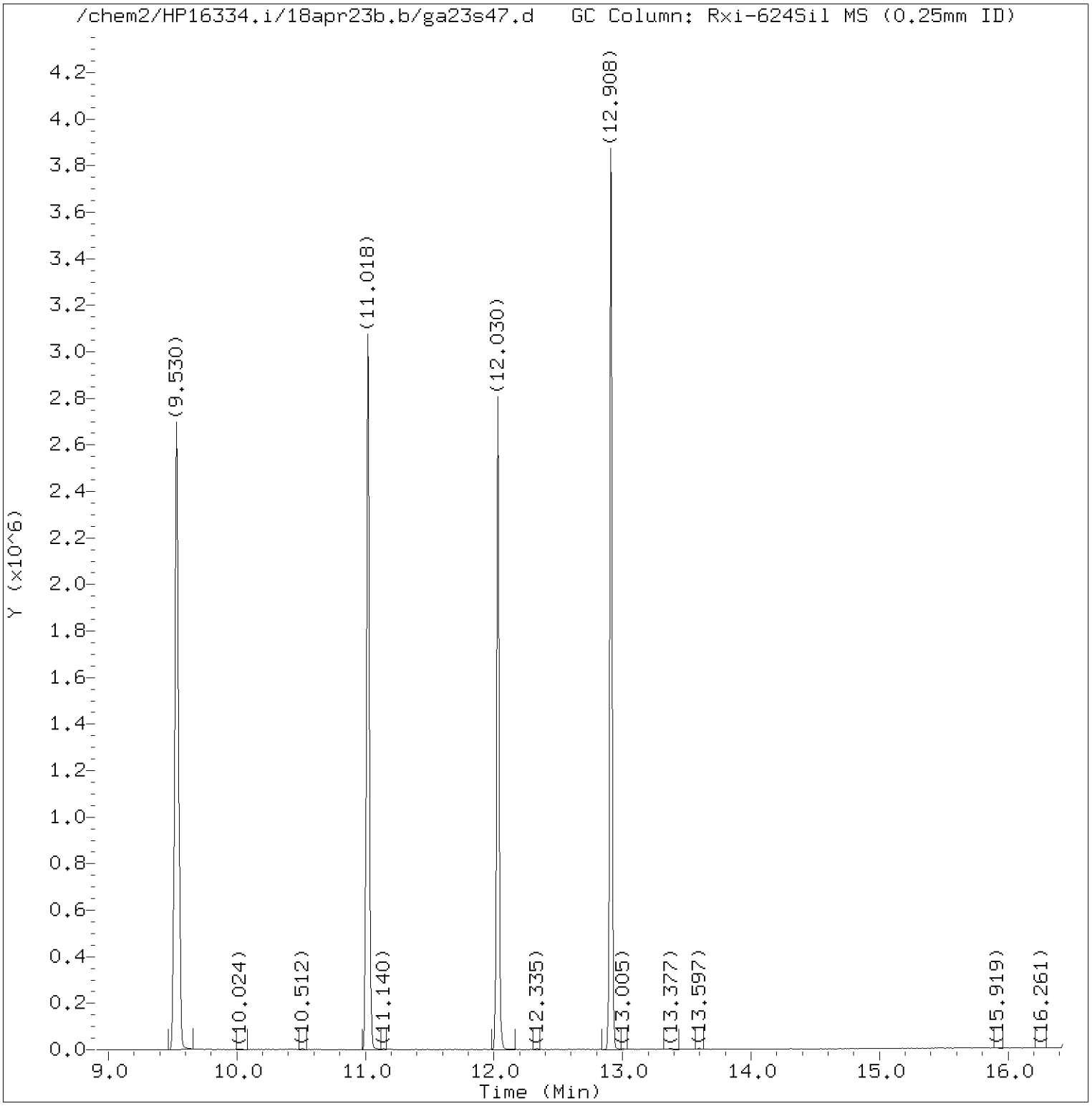
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s47.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:37 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0609 Lab Sample ID: 9558706

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s47.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:37 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0609 Lab Sample ID: 9558706

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s47.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:37 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:25 jkh09052

Sample Name: R0609 Lab Sample ID: 9558706

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.958	65	210198	50.000
50)$Dibromofluoromethane	(2)	6.592	113	510144	9.863
57)$1,2-Dichloroethane-d4	(2)	7.055	102	107663	9.823
63)*Fluorobenzene	(2)	7.482	96	2056830	10.000
82)$Toluene-d8	(3)	9.530	98	2094810	9.944
97)*Chlorobenzene-d5	(3)	11.018	117	1570829	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	785804	9.745
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	872522	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

R0610 Lancaster Laboratories 9558707
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s48.d Injection date and time: **23-APR-2018 22:59**
Data file Sample Info. Line: R0610;9558707;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.000)	388	65	173629	(-18)	50.00	
63) Fluorobenzene	7.488	(-0.012)	968	96	1977156	(-9)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1529467	(-11)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	846921	(-14)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.001)	113	487897	9.813	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.001)	102	104672	9.935	99%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2029847	9.896	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	762361	9.710	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)	6.598	(-0.000)	97	26423	0.337	0.34		J	0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP16334.i/18apr23b.b/ga23s48.d Injection date and time: **23-APR-2018 22:59**
Data file Sample Info. Line: R0610;9558707;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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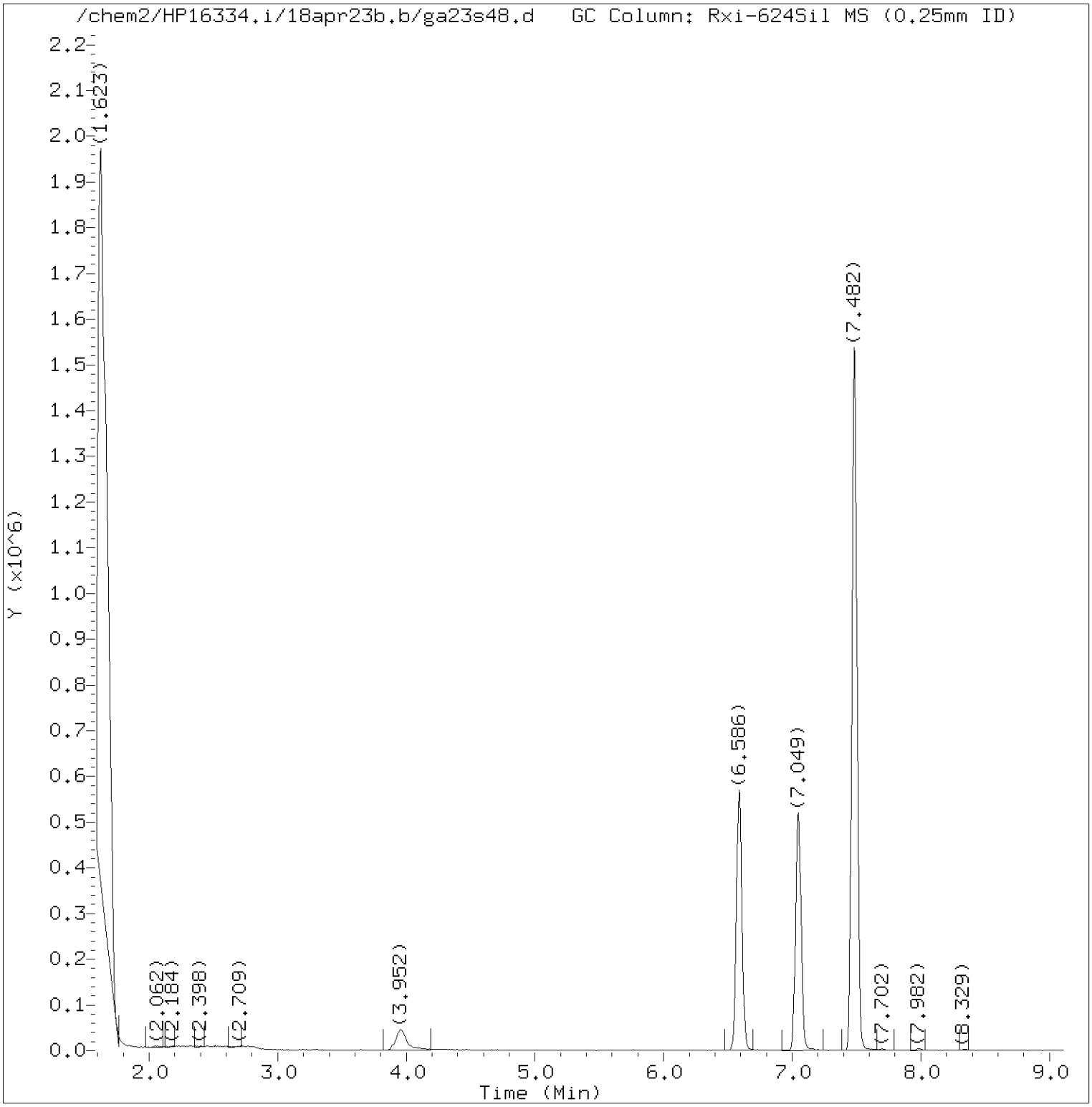
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

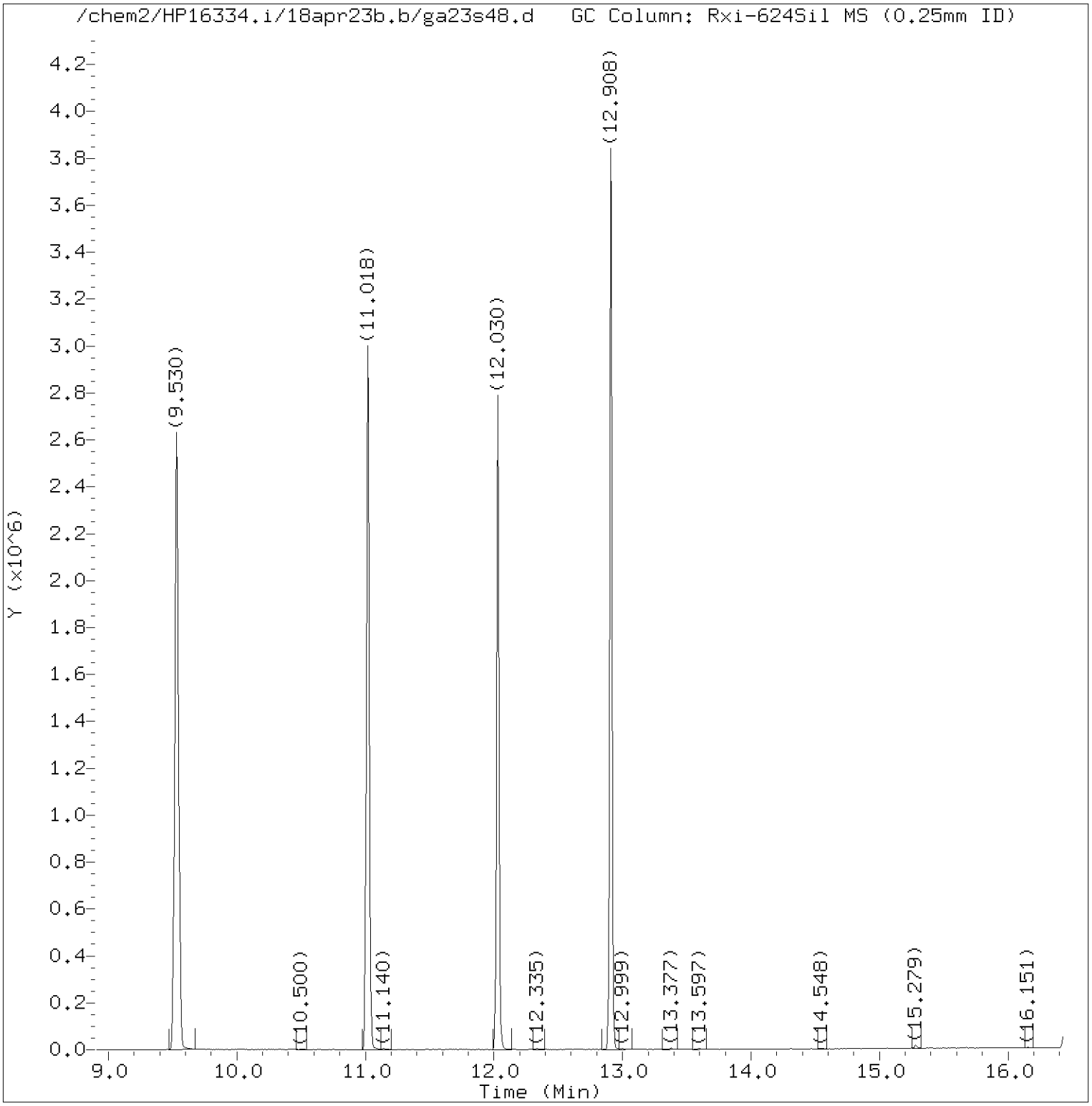
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s48.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:59 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Sample Name: R0610 Lab Sample ID: 9558707

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s48.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:59 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Sample Name: R0610 Lab Sample ID: 9558707

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s48.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:59 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Sample Name: R0610 Lab Sample ID: 9558707

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.952	65	173629	50.000
50)$Dibromofluoromethane	(2)	6.586	113	487897	9.813
51) 1,1,1-Trichloroethane	(2)	6.598	97	26423	0.337
57)$1,2-Dichloroethane-d4	(2)	7.049	102	104672	9.935
63)*Fluorobenzene	(2)	7.488	96	1977156	10.000
82)$Toluene-d8	(3)	9.530	98	2029847	9.896
97)*Chlorobenzene-d5	(3)	11.018	117	1529467	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	762361	9.710
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	846921	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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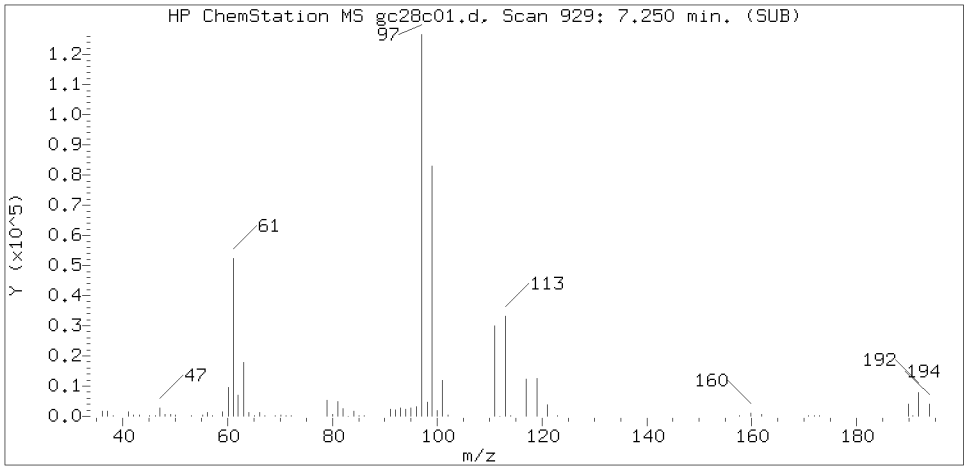
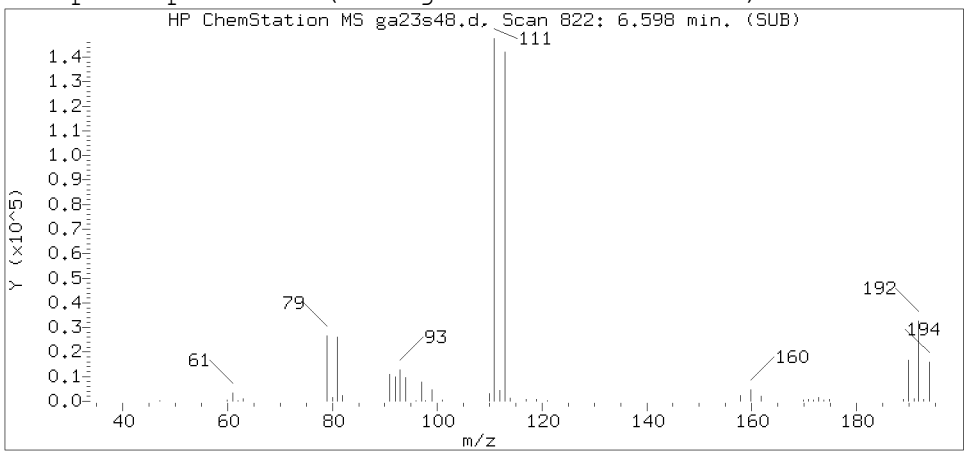
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

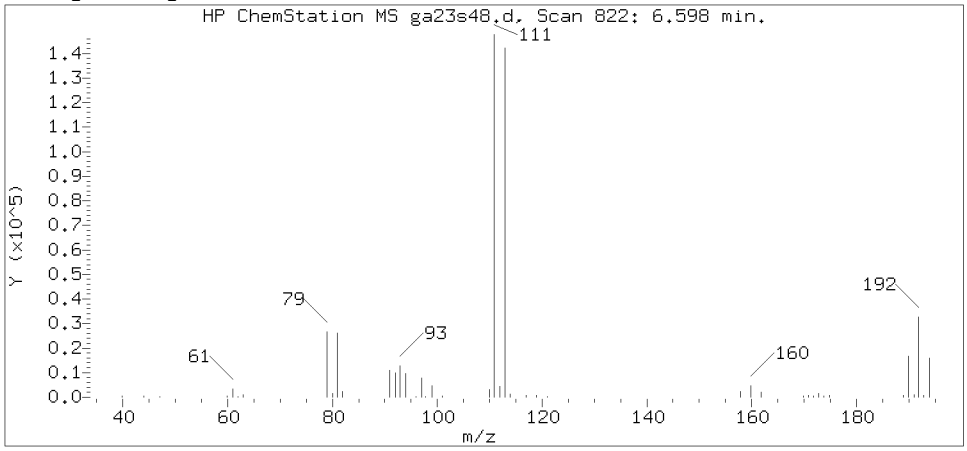
Reference Standard Spectrum for 1,1,1-Trichloroethane

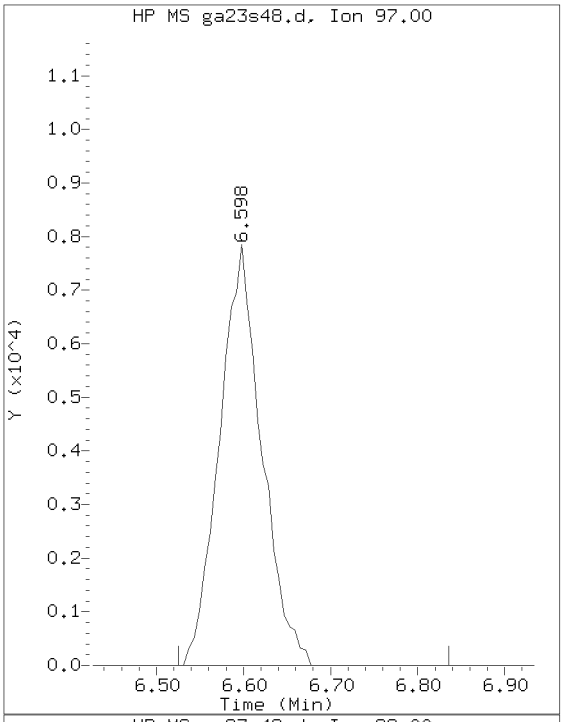


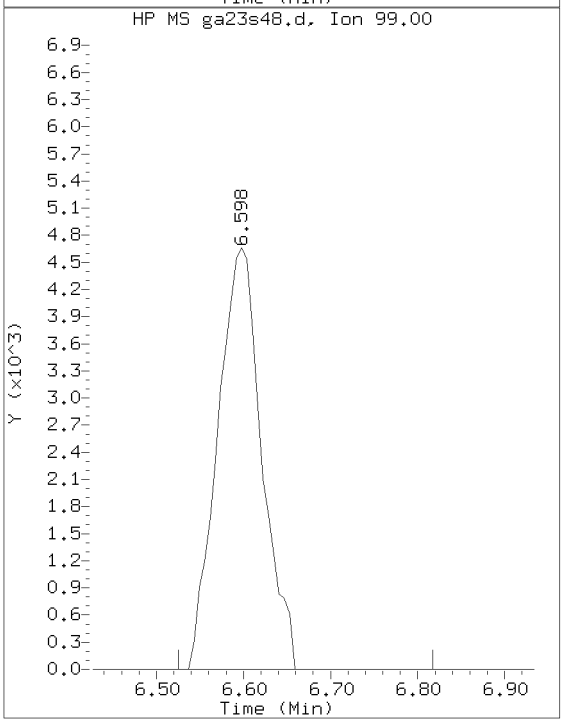
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP16334.i/18apr23b.b/ga23s48.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 22:59 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 24-Apr-2018 07:26 jkh09052

Sample Name: R0610 Lab Sample ID: 9558707

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 822
Retention Time (minutes): 6.598
Relative Retention Time :-0.00019
Quant Ion : 97.00
Area (flag) : 26423
On-Column Amount (ng) : 0.3373

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

R0611 Lancaster Laboratories 9558708
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s49.d Injection date and time: **23-APR-2018 23:22**
Data file Sample Info. Line: R0611;9558708;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.000)	388	65	197554	(-7)	50.00	
63) Fluorobenzene	7.482	(-0.006)	967	96	1989751	(-8)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1535615	(-11)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	856338	(-13)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	501373	10.020	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.000)	102	106214	10.017	100%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2039985	9.906	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	764323	9.696	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	1
8) Chloroethane	(2)				Not Detected					0.1	1
10) Trichlorofluoromethane	(2)				Not Detected					0.1	1
11) Ethyl ether	(2)				Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.1	1
16) Freon 113	(2)				Not Detected					0.2	1
23) Methylene Chloride	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)	5.031	(-0.001)	63	21244	0.218	0.22		J	0.1	1
38) 2-Butanone	(1)				Not Detected					1	10
48) Tetrahydrofuran	(1)				Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.1	1
58) Benzene	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.1	1
83) Toluene	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP16334.i/18apr23b.b/ga23s49.d Injection date and time: **23-APR-2018 23:22**
Data file Sample Info. Line: R0611;9558708;1;0;;RAF06;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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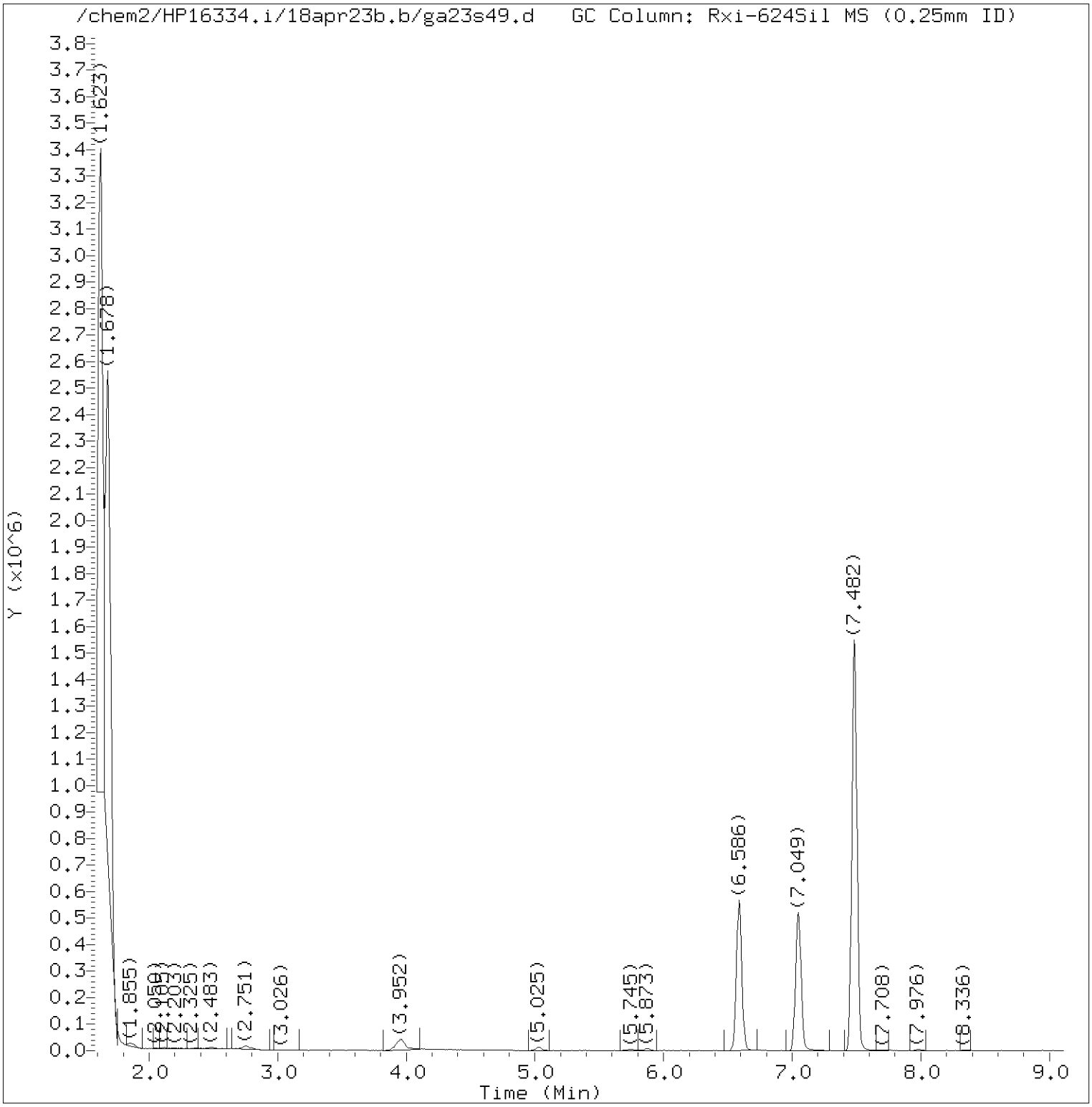
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

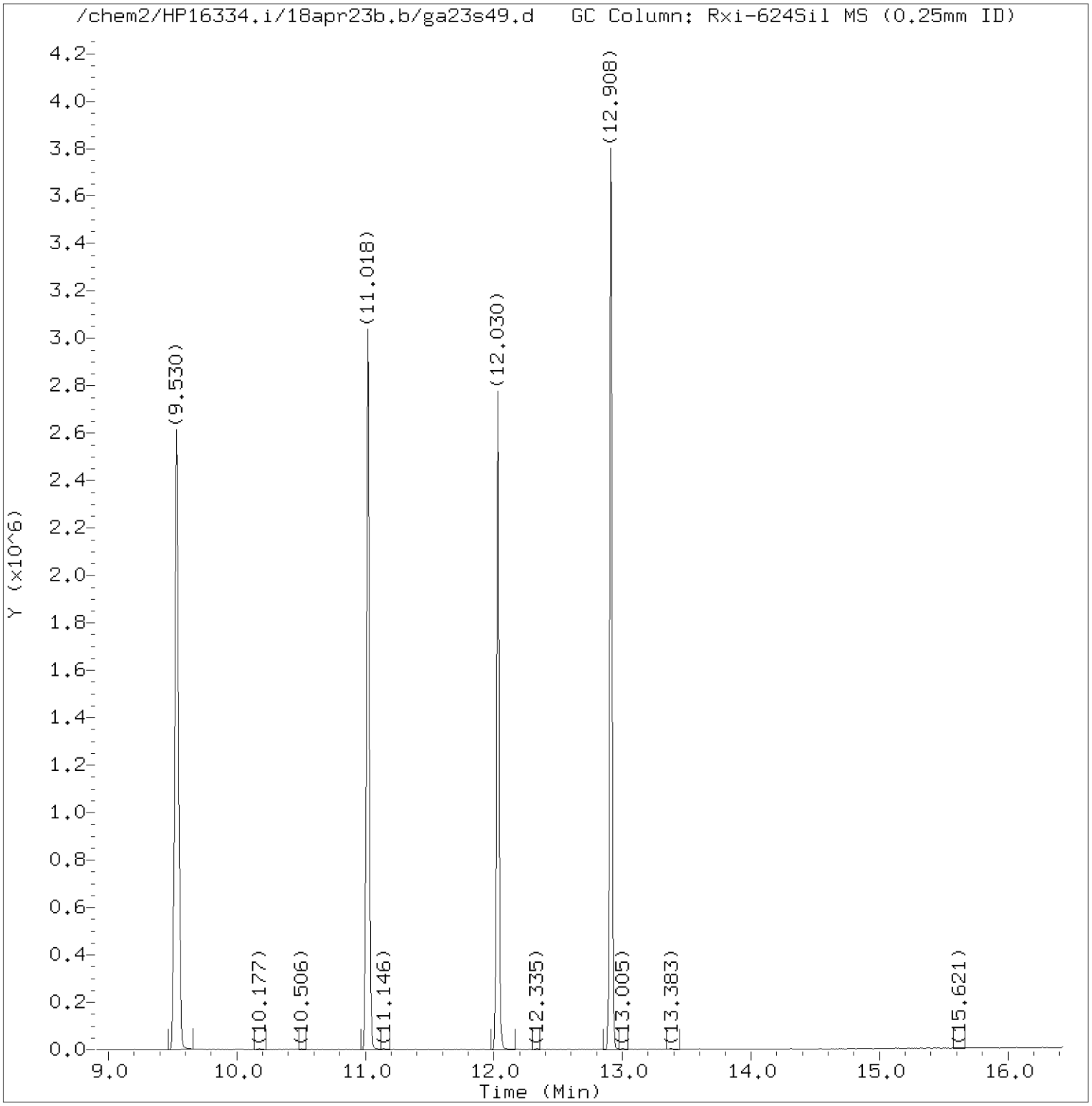
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s49.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 23:22 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

Sample Name: R0611 Lab Sample ID: 9558708

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s49.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 23:22 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

Sample Name: R0611 Lab Sample ID: 9558708

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s49.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 23:22 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

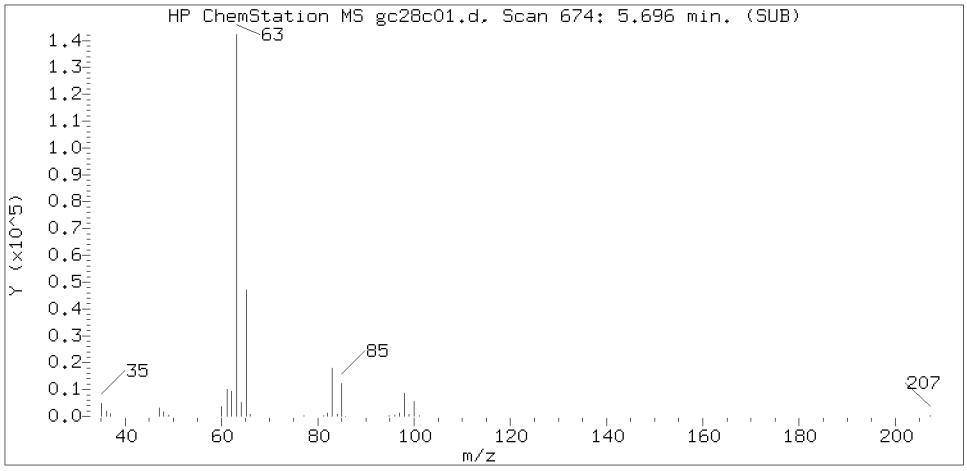
Sample Name: R0611 Lab Sample ID: 9558708

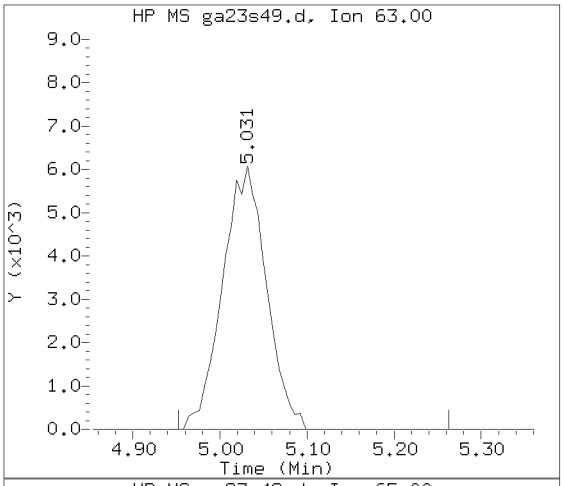
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.952	65	197554	50.000
33) 1,1-Dichloroethane	(2)	5.031	63	21244	0.218
50)$Dibromofluoromethane	(2)	6.586	113	501373	10.020
57)$1,2-Dichloroethane-d4	(2)	7.049	102	106214	10.017
63)*Fluorobenzene	(2)	7.482	96	1989751	10.000
82)$Toluene-d8	(3)	9.530	98	2039985	9.906
97)*Chlorobenzene-d5	(3)	11.018	117	1535615	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	764323	9.696
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	856338	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

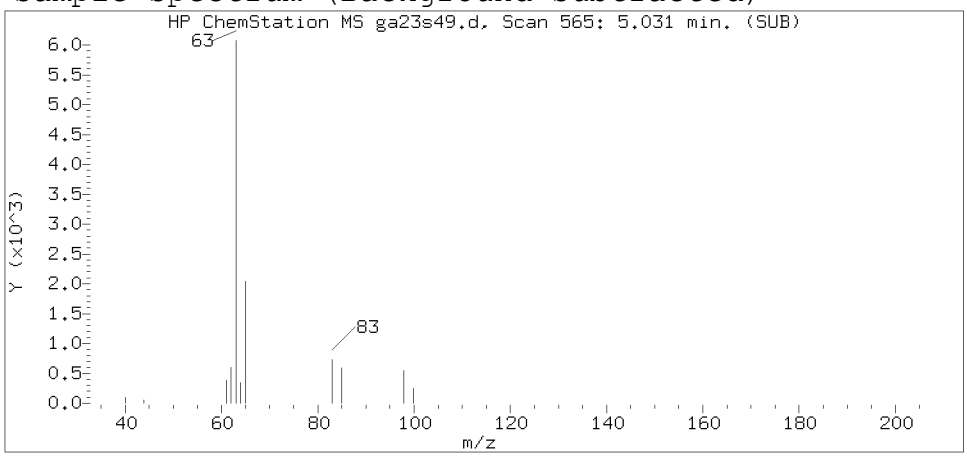
Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

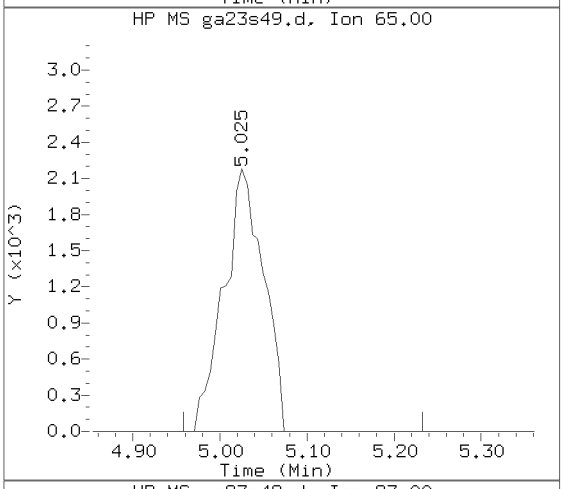
Reference Standard Spectrum for 1,1-Dichloroethane



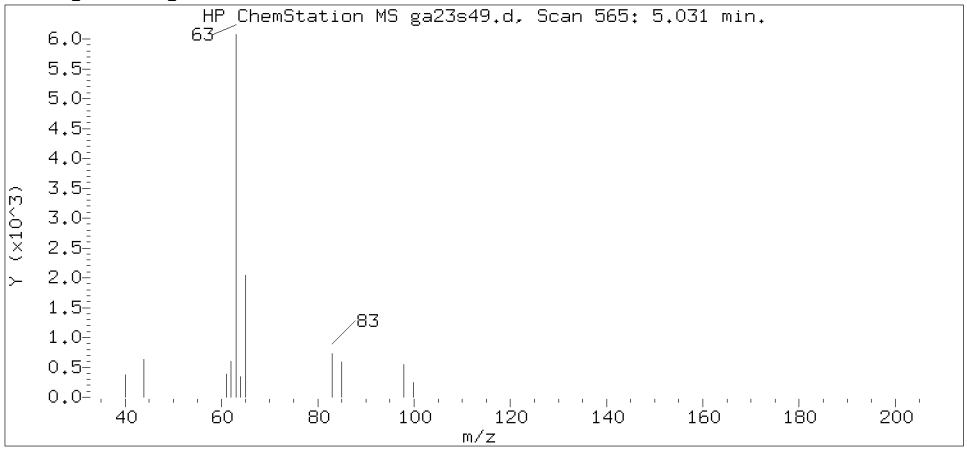


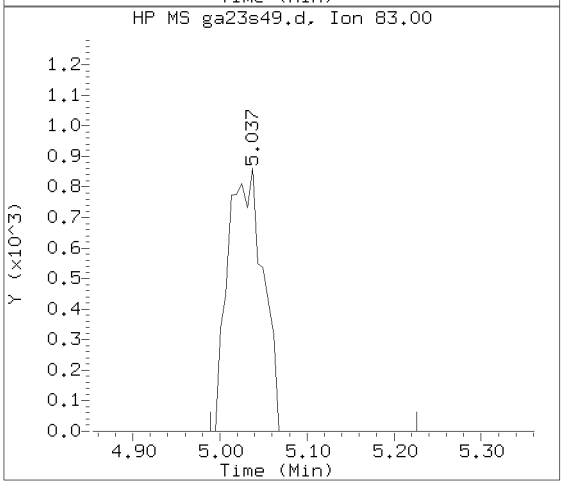
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/18apr23b.b/ga23s49.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 23:22 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 23:38 Automation

Sample Name: R0611 Lab Sample ID: 9558708

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 565
Retention Time (minutes): 5.031
Relative Retention Time :-0.00108
Quant Ion : 63.00
Area (flag) : 21244
On-Column Amount (ng) : 0.2176

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:26.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19930.i/18apr23c.b/ia23s73.d Injection date and time: **24-APR-2018 03:36**
Data file Sample Info. Line: R0612;9558709;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.160 (-0.024)	422	65	114725 (-22)	50.00	
63) Fluorobenzene	7.671 (-0.006)	998	96	1886868 (-8)	10.00	
97) Chlorobenzene-d5	11.152 (-0.006)	1569	117	1373764 (-11)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024 (0.000)	1876	152	722911 (-13)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775 (0.000)	113	456421	10.365	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238 (-0.001)	102	98594	10.292	103%		80 - 120
82) Toluene-d8	(3)	9.689 (0.000)	98	1846790	9.957	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.152 (0.000)	95	643352	9.823	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558709

Data file: /chem2/HP19930.i/18apr23c.b/ia23s73.d Injection date and time: **24-APR-2018 03:36**
Data file Sample Info. Line: R0612;9558709;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

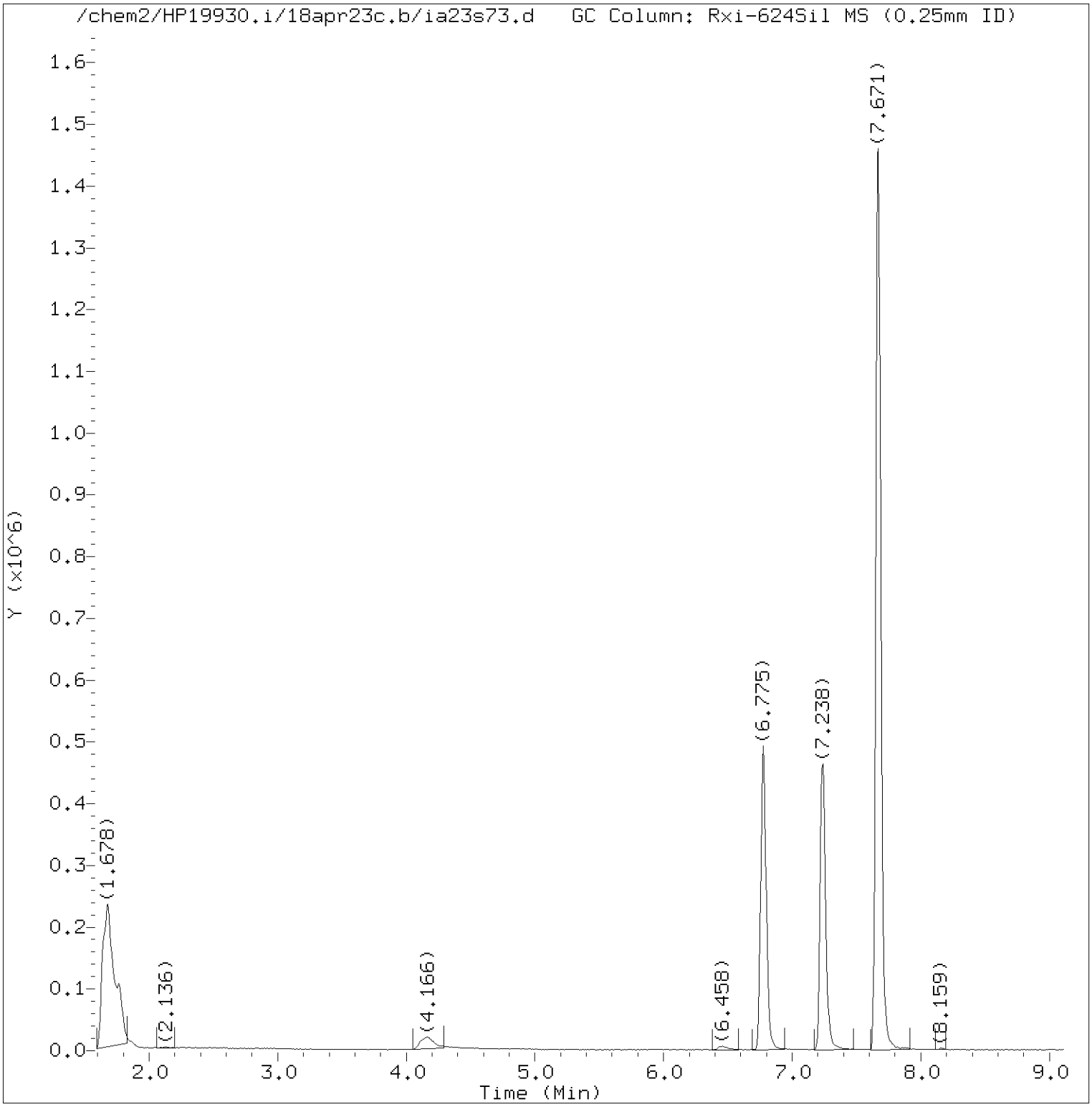
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

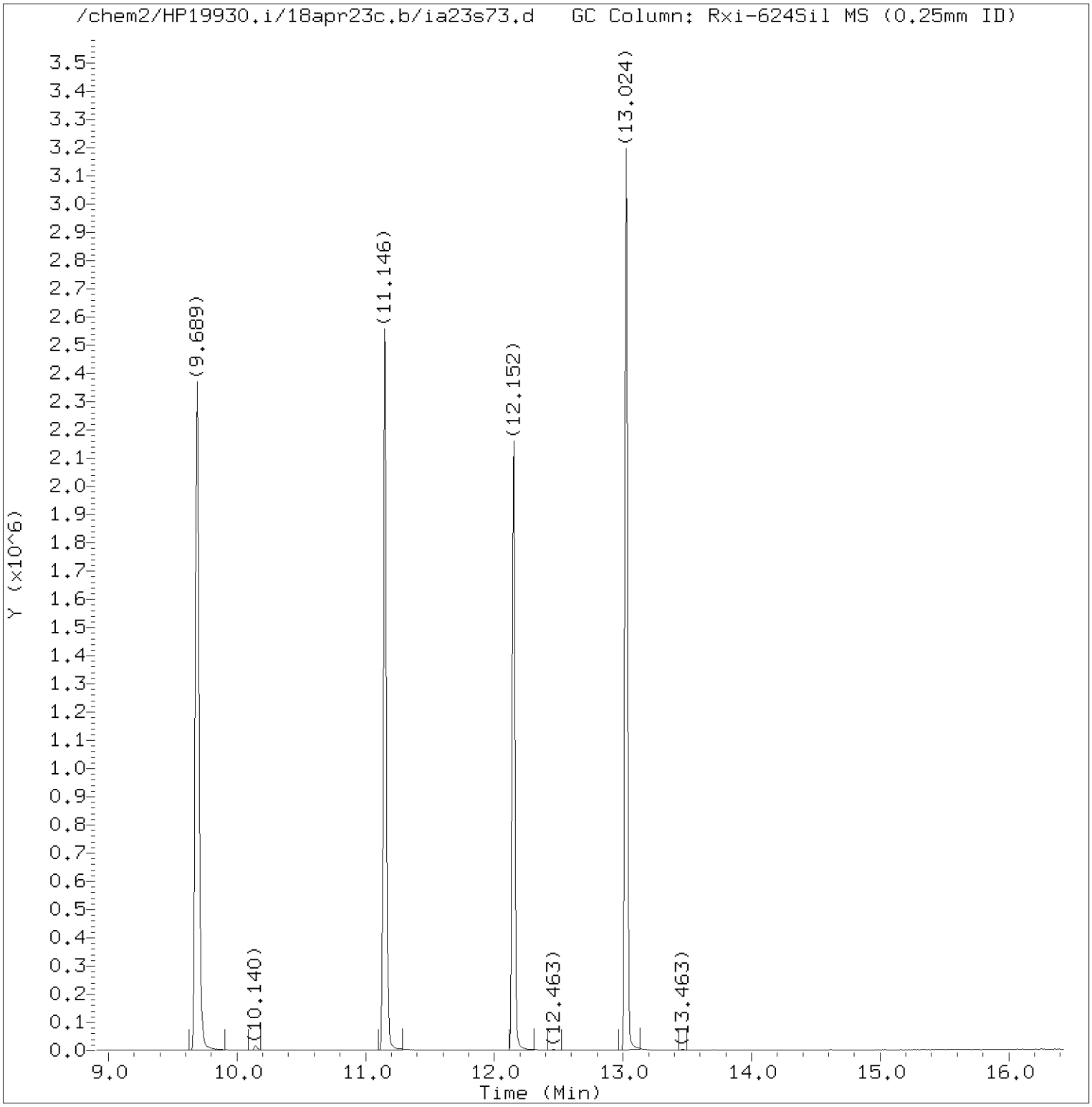
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s73.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:36 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0612 Lab Sample ID: 9558709

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s73.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:36 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0612 Lab Sample ID: 9558709

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s73.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:36 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0612 Lab Sample ID: 9558709

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.160	65	114725	50.000
50)$Dibromofluoromethane	(2)	6.775	113	456421	10.365
57)$1,2-Dichloroethane-d4	(2)	7.238	102	98594	10.292
63)*Fluorobenzene	(2)	7.671	96	1886868	10.000
82)$Toluene-d8	(3)	9.689	98	1846790	9.957
97)*Chlorobenzene-d5	(3)	11.152	117	1373764	10.000
111)$4-Bromofluorobenzene	(3)	12.152	95	643352	9.823
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	722911	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

R0613 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558710

Data file: /chem2/HP19930.i/18apr23c.b/ia23s74.d Injection date and time: **24-APR-2018 03:57**
Data file Sample Info. Line: R0613;9558710;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145 ;9159-ND

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	95748	(-35)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	1941601	(-6)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1393370	(-10)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	726836	(-12)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	464889	10.259	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.001)	102	101774	10.325	103%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1879656	9.991	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.152	(-0.001)	95	661334	9.955	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19930.i/18apr23c.b/ia23s74.d Injection date and time: **24-APR-2018 03:57**
Data file Sample Info. Line: R0613;9558710;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

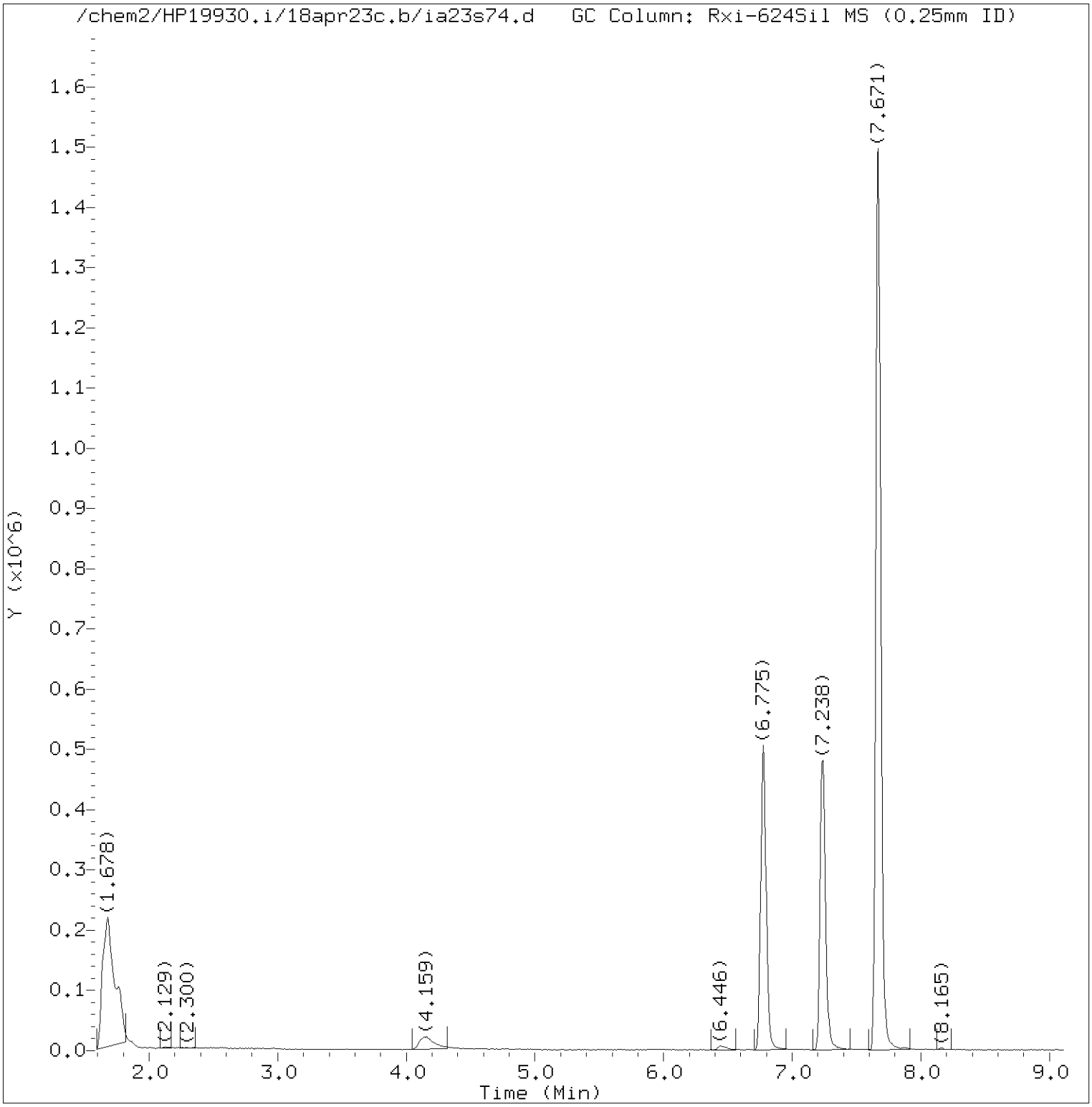
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

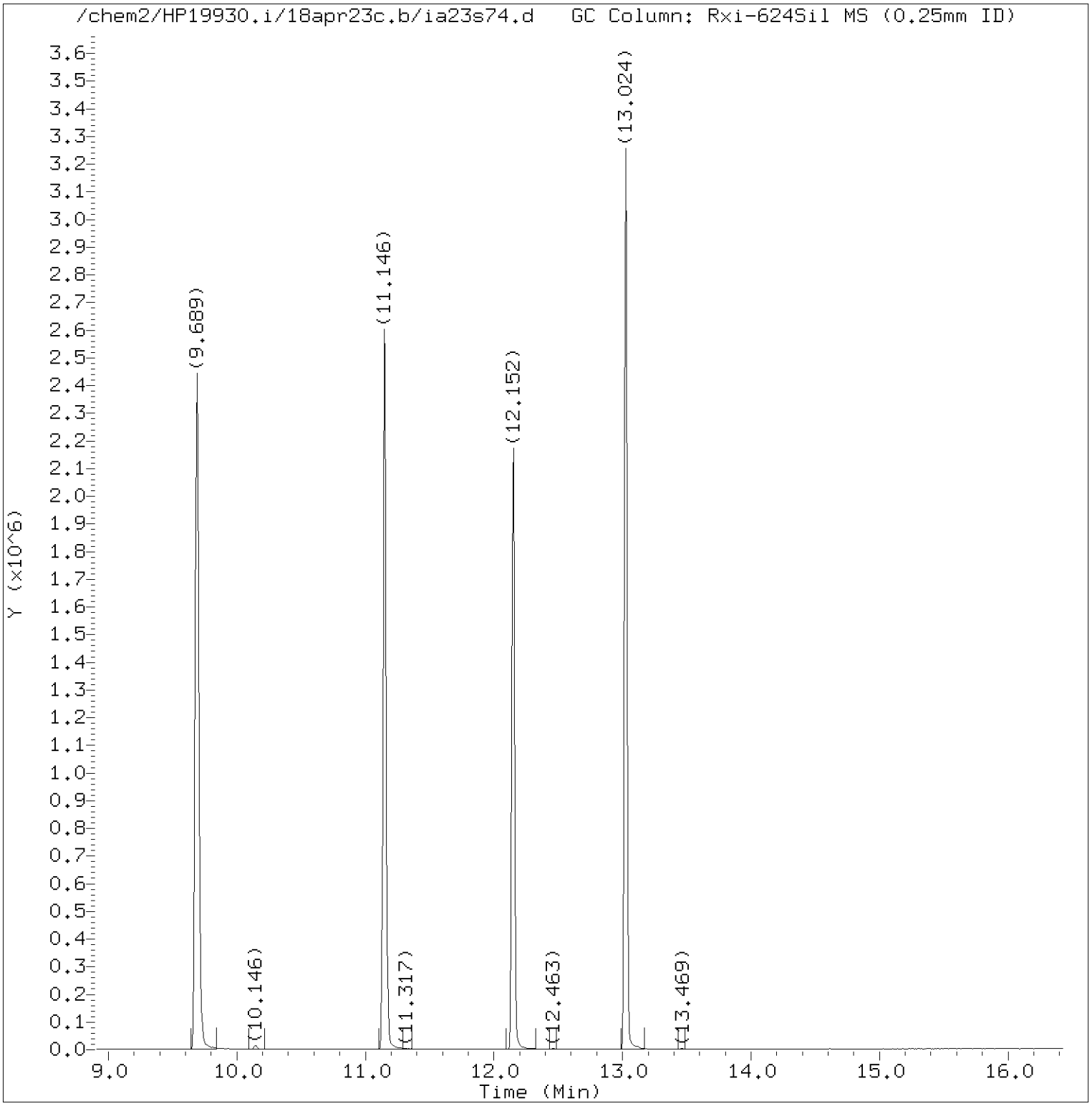
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s74.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:57 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0613 Lab Sample ID: 9558710

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s74.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:57 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0613 Lab Sample ID: 9558710

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s74.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 03:57 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:13 jkh09052

Sample Name: R0613 Lab Sample ID: 9558710

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.135	65	95748	50.000
50)$Dibromofluoromethane	(2)	6.775	113	464889	10.259
57)$1,2-Dichloroethane-d4	(2)	7.238	102	101774	10.325
63)*Fluorobenzene	(2)	7.671	96	1941601	10.000
82)$Toluene-d8	(3)	9.689	98	1879656	9.991
97)*Chlorobenzene-d5	(3)	11.146	117	1393370	10.000
111)$4-Bromofluorobenzene	(3)	12.152	95	661334	9.955
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	726836	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

R0614 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 9558711

Data file: /chem2/HP19930.i/18apr23c.b/ia23s75.d Injection date and time: **24-APR-2018 04:18**
Data file Sample Info. Line: R0614;9558711;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:14 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9159-ND

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.159	(-0.024)	422	65	108498	(-26)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	1804746	(-12)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1307062	(-16)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	683993	(-17)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(-0.001)	113	436626	10.366	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	93924	10.251	103%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1757676	9.960	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	625261	10.034	100%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19930.i/18apr23c.b/ia23s75.d Injection date and time: **24-APR-2018 04:18**
Data file Sample Info. Line: R0614;9558711;1;0;;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:14 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

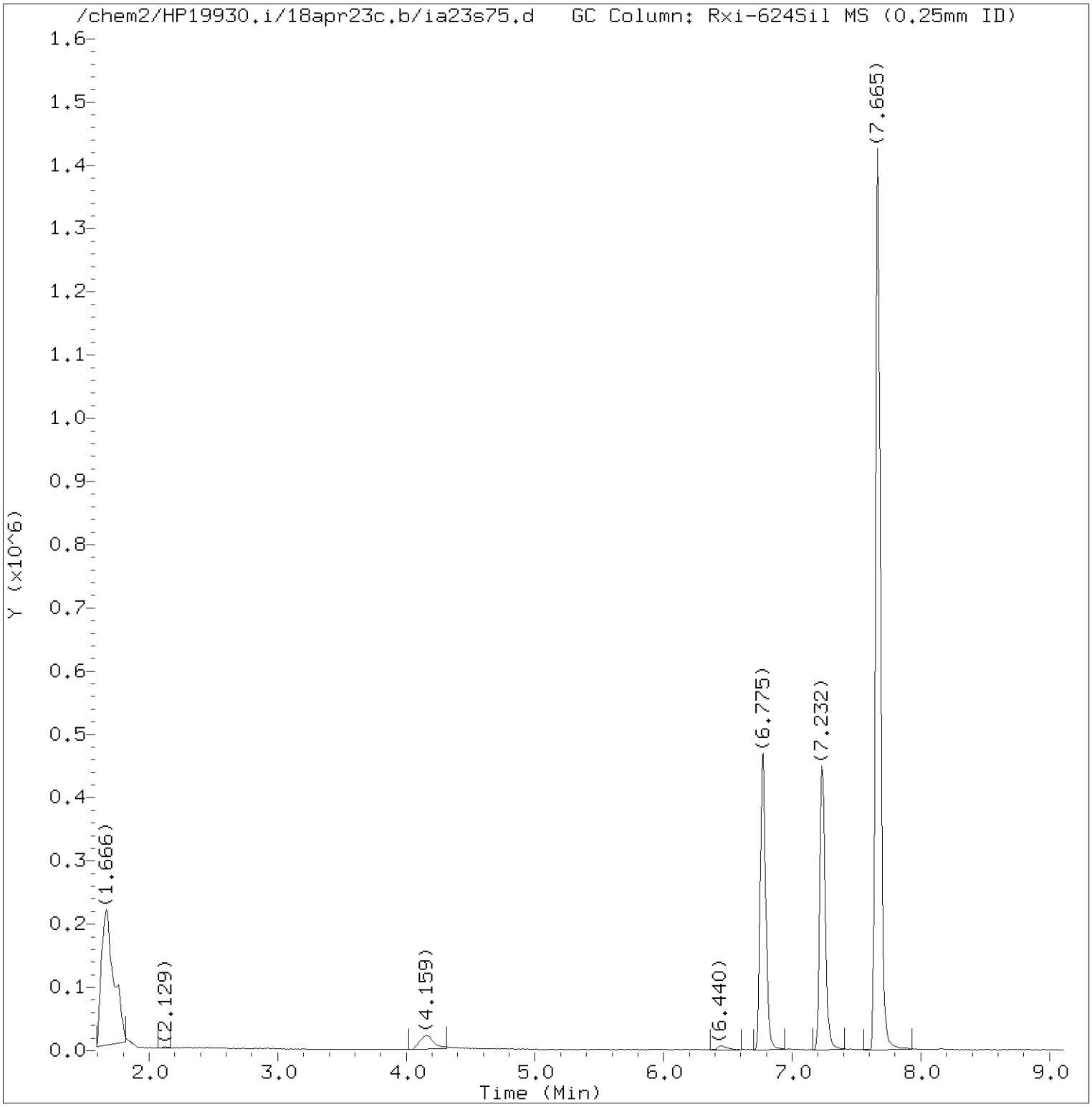
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

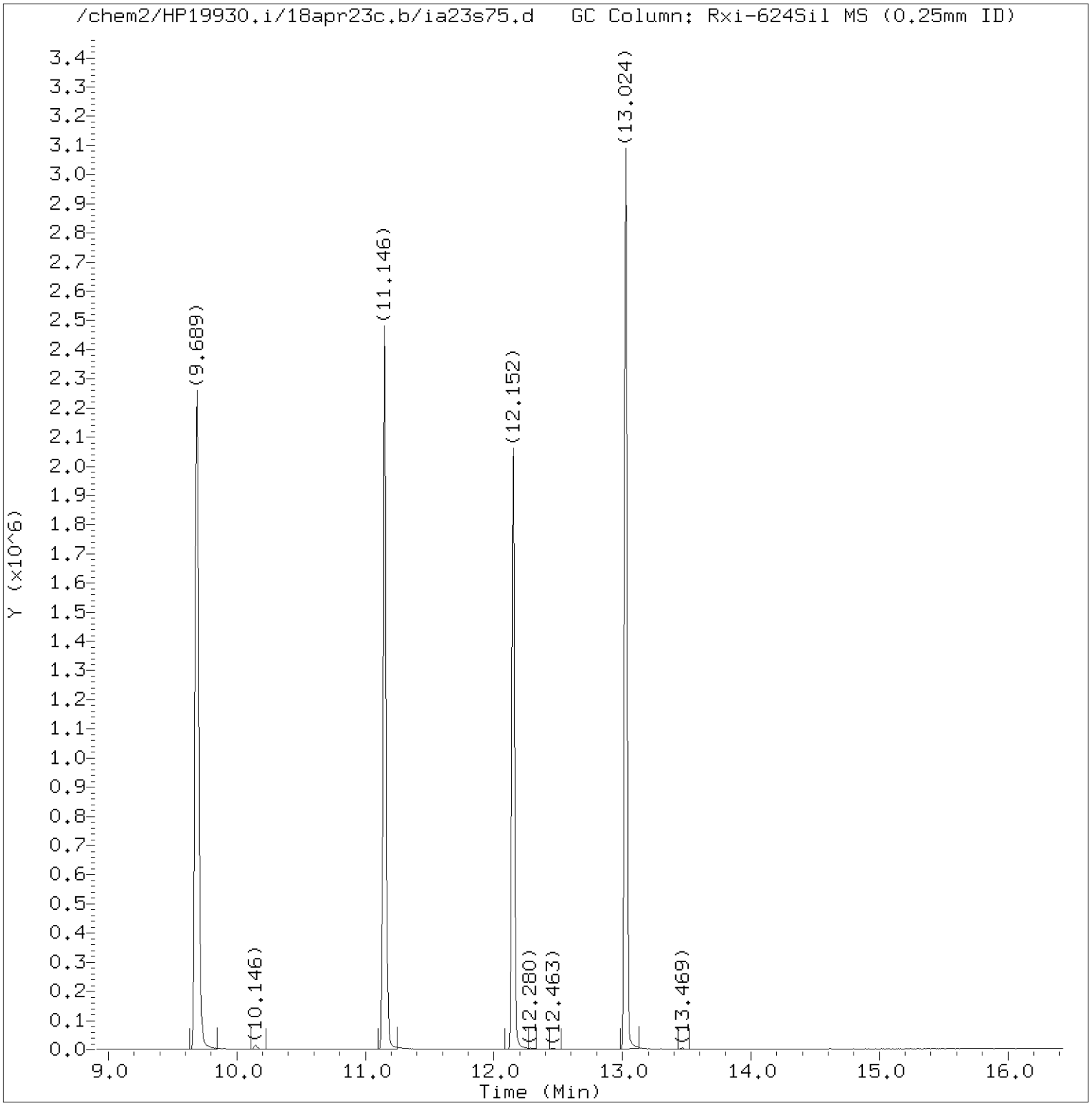
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s75.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:18 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:14 jkh09052

Sample Name: R0614 Lab Sample ID: 9558711

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s75.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:18 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:14 jkh09052

Sample Name: R0614 Lab Sample ID: 9558711

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s75.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 04:18 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:14 jkh09052

Sample Name: R0614 Lab Sample ID: 9558711

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.159	65	108498	50.000
50)$Dibromofluoromethane	(2)	6.775	113	436626	10.366
57)$1,2-Dichloroethane-d4	(2)	7.232	102	93924	10.251
63)*Fluorobenzene	(2)	7.665	96	1804746	10.000
82)$Toluene-d8	(3)	9.689	98	1757676	9.960
97)*Chlorobenzene-d5	(3)	11.146	117	1307062	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	625261	10.034
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	683993	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP16334 **HP #29**

Data Directory Path is - D:\DATA\18APR19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	GA19T01.D	BFB FEB13-18	04/19/2018	11:47		
JKH09052	GA19X00.D	BLK	04/19/2018	11:59		
JKH09052	GA19I01.D	VSTD025	04/19/2018	12:22		
JKH09052	GA19I02.D	VSTD010	04/19/2018	12:44		
JKH09052	GA19I03.D	VSTD005	04/19/2018	13:06		
JKH09052	GA19I04.D	VSTD002	04/19/2018	13:28		
JKH09052	GA19I05.D	VSTD001	04/19/2018	13:51		
JKH09052	GA19I06.D	VSTD0.5	04/19/2018	14:14		
JKH09052	GA19I07.D	VSTD0.2	04/19/2018	14:37		
JKH09052	GA19M01.D	MDL0.1	04/19/2018	14:59		
JKH09052	GA19V01.D	LCSG01	04/19/2018	15:21		
JKH09052	GA19X01.D	BLK	04/19/2018	15:44		
JKH09052	GA19I11.D	VSTD025	04/19/2018	16:06		
JKH09052	GA19I12.D	VSTD010	04/19/2018	16:28		
JKH09052	GA19I13.D	VSTD005	04/19/2018	16:51		
JKH09052	GA19I14.D	VSTD002	04/19/2018	17:13		
JKH09052	GA19I15.D	VSTD001	04/19/2018	17:35		
JKH09052	GA19I16.D	VSTD0.5	04/19/2018	17:57		
JKH09052	GA19I17.D	VSTD0.2	04/19/2018	18:19		
JKH09052	GA19M11.D	MDL0.1	04/19/2018	18:42		
JKH09052	GA19V11.D	LCSSMG	04/19/2018	19:04		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP16334 **HP #29**

Data Directory Path is - D:\DATA\18APR19I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	GA19T01.D	BFB FEB13-18	04/19/2018	11:47		
JKH09052	GA19X00.D	BLK	04/19/2018	11:59		
JKH09052	GA19I01.D	VSTD025	04/19/2018	12:22		
JKH09052	GA19I02.D	VSTD010	04/19/2018	12:44		
JKH09052	GA19I03.D	VSTD005	04/19/2018	13:06		
JKH09052	GA19I04.D	VSTD002	04/19/2018	13:28		
JKH09052	GA19I05.D	VSTD001	04/19/2018	13:51		
JKH09052	GA19I06.D	VSTD0.5	04/19/2018	14:14		
JKH09052	GA19I07.D	VSTD0.2	04/19/2018	14:37		
JKH09052	GA19M01.D	MDL0.1	04/19/2018	14:59		
JKH09052	GA19V01.D	LCSG01	04/19/2018	15:21		
JKH09052	GA19X01.D	BLK	04/19/2018	15:44		
JKH09052	GA19I11.D	VSTD025	04/19/2018	16:06		
JKH09052	GA19I12.D	VSTD010	04/19/2018	16:28		
JKH09052	GA19I13.D	VSTD005	04/19/2018	16:51		
JKH09052	GA19I14.D	VSTD002	04/19/2018	17:13		
JKH09052	GA19I15.D	VSTD001	04/19/2018	17:35		
JKH09052	GA19I16.D	VSTD0.5	04/19/2018	17:57		
JKH09052	GA19I17.D	VSTD0.2	04/19/2018	18:19		
JKH09052	GA19M11.D	MDL0.1	04/19/2018	18:42		
JKH09052	GA19V11.D	LCSSMG	04/19/2018	19:04		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19930 **HP #31**

Data Directory Path is - D:\DATA\18APR17I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	IA17T10.D	50NGBFB	04/17/2018	17:30	I181063AB	
DVV10203	IA17T11.D	50NGBFB	04/17/2018	17:38	I181063AB	
DVV10203	IA17X10.D	blk	04/17/2018	18:00		
DVV10203	IA17I11.D	VSTD025	04/17/2018	18:22		
DVV10203	IA17I12.D	VSTD010	04/17/2018	18:43		
DVV10203	IA17I13.D	VSTD005	04/17/2018	19:05		
DVV10203	IA17I14.D	VSTD002	04/17/2018	19:26		
DVV10203	IA17I15.D	VSTD001	04/17/2018	19:47		
DVV10203	IA17I16.D	VSTD0.5	04/17/2018	20:09		
DVV10203	IA17I17.D	VSTD0.2	04/17/2018	20:31		
DVV10203	IA17M11.D	MDL0.1	04/17/2018	20:52		
DVV10203	IA17V11.D	LCSI01	04/17/2018	21:13		
DVV10203	IA17V12.D	LCDI01	04/17/2018	21:34		
DVV10203	IA17C11.D	VSTD010	04/17/2018	22:09	I181074AA	
DVV10203	IA17S63.D	LCSI66	04/17/2018	22:30	I181074AA	
DVV10203	IA17S64.D	LCDI66	04/17/2018	22:51	I181074AA	
DVV10203	IA17B01.D	VBLKI63	04/17/2018	23:12	I181063AB	
DVV10203	IA17S03.D	9554687MS	04/17/2018	23:34	I181063AB	
DVV10203	IA17S04.D	9554688MSD	04/17/2018	23:55	I181063AB	
DVV10203	IA17S05.D	9554731	04/18/2018	00:17	I181063AB	
DVV10203	IA17S06.D	9554731DL	04/18/2018	00:38	I181063AB	10
DVV10203	IA17S33.D	9550222	04/18/2018	01:00	I181073AA	
DVV10203	IA17S34.D	9550221	04/18/2018	01:22	I181073AA	
DVV10203	IA17S35.D	9550217	04/18/2018	01:43	I181073AA	5
DVV10203	IA17S36.D	9550217DL	04/18/2018	02:04	I181073AA	50
DVV10203	IA17EC1.D	SECC010	04/18/2018	02:26	I181063AB	
DVV10203	IA17X61.D	BLK	04/18/2018	02:47	I181074AA	
DVV10203	IA17S65.D	9542988	04/18/2018	03:08	I181074AA	
DVV10203	IA17S66.D	9542991	04/18/2018	03:30	I181074AA	
DVV10203	IA17S67.D	9542989	04/18/2018	03:51	I181074AA	5
DVV10203	IA17S68.D	9542989DL	04/18/2018	04:13	I181074AA	50
DVV10203	IA17S69.D	9542990	04/18/2018	04:34	I181074AA	100
DVV10203	IA17S70.D	9542990DL	04/18/2018	04:55	I181074AA	1000
DVV10203	IA17S85.D	9543454	04/18/2018	05:16	I181075AA	
DVV10203	IA17S86.D	9543455	04/18/2018	05:38	I181075AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19930 **HP #31**

Data Directory Path is - D:\DATA\18APR12I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	IA12T02.D	BFB FEB13-18	04/12/2018	09:49		
jkh09052	iA12x01.D	blk	04/12/2018	10:04		
jkh09052	iA12i11.D	VSTD025	04/12/2018	10:25		
jkh09052	iA12i12.D	VSTD010	04/12/2018	10:46		
jkh09052	iA12i13.D	VSTD005	04/12/2018	11:08		
jkh09052	iA12i14.D	VSTD002	04/12/2018	11:29		
jkh09052	iA12i15.D	VSTD001	04/12/2018	11:50		
jkh09052	iA12i16.D	VSTD0.5	04/12/2018	12:11		
jkh09052	iA12i17.D	VSTD0.2	04/12/2018	12:33		
jkh09052	iA12m11.D	MDL0.1	04/12/2018	12:55		
jkh09052	iA12v11.D	LCSISM	04/12/2018	13:16		
jkh09052	iA12x02.D	blk	04/12/2018	15:14		
jkh09052	iA12v12.D	LCSISM	04/12/2018	15:35		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP26285 **HP #05**

Data Directory Path is - C:\DATA\18APR16I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	5A16T01.D	50NGBFB	04/16/2018	09:50		
lcp00895	5A16X01.D	BLK	04/16/2018	10:19		
lcp00895	5A16I01.D	VSTD300	04/16/2018	10:41		
lcp00895	5A16I02.D	VSTD100	04/16/2018	11:02		
lcp00895	5A16I03.D	VSTD050	04/16/2018	11:24		
lcp00895	5A16I04.D	VSTD020	04/16/2018	11:45		
lcp00895	5A16I05.D	VSTD010	04/16/2018	12:06		
lcp00895	5A16I06.D	VSTD004	04/16/2018	12:28		
lcp00895	5A16I07.D	VSTD001	04/16/2018	12:50		
lcp00895	5A16I08.D	VSTD010	04/16/2018	13:11		
lcp00895	5A16M01.D	0.5PPB	04/16/2018	13:33		
lcp00895	5A16V01.D	LG5ICV	04/16/2018	13:55		
lcp00895	5A16X02.D	BLK	04/16/2018	14:23		
lcp00895	5A16I09.D	VSTD001	04/16/2018	14:44		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP16334 **HP #29**

Data Directory Path is - d:\data\18apr23b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
msk07970	GA23T05.D	50NGBFB	04/23/2018	18:48	G181132AA	
msk07970	GA23C05.D	VSTD010	04/23/2018	19:10	G181132AA	
msk07970	GA23C06.D	VSTD010	04/23/2018	19:32	G181132AA	
msk07970	GA23S41.D	LCSG84	04/23/2018	19:54	G181132AA	
msk07970	GA23S42.D	LCDG84	04/23/2018	20:17	G181132AA	
msk07970	GA23S43.D	LCSG85	04/23/2018	20:39	G181132AA	
msk07970	GA23S44.D	LCDG85	04/23/2018	21:01	G181132AA	
msk07970	GA23B05.D	VBLKG84	04/23/2018	21:23	G181132AA	
msk07970	GA23S45.D	9558704	04/23/2018	21:53	G181132AA	
msk07970	GA23S46.D	9558705	04/23/2018	22:15	G181132AA	
msk07970	GA23S47.D	9558706	04/23/2018	22:37	G181132AA	
msk07970	GA23S48.D	9558707	04/23/2018	22:59	G181132AA	
msk07970	GA23S49.D	9558708	04/23/2018	23:22	G181132AA	
msk07970	GA23X85.D	VBLKG84	04/23/2018	23:44	G181132AA	
msk07970	GA23S55.D	9557222	04/24/2018	00:07	G181133AA	
msk07970	GA23S56.D	9557224	04/24/2018	00:29	G181133AA	500
msk07970	GA23S57.D	9557224DL	04/24/2018	00:51	G181133AA	5000
msk07970	GA23S58.D	9557212	04/24/2018	01:14	G181133AA	
msk07970	GA23S59.D	9557272	04/24/2018	01:36	G181133AA	
msk07970	GA23S60.D	9557216	04/24/2018	01:58	G181133AA	
msk07970	GA23S61.D	9557217	04/24/2018	02:20	G181133AA	
msk07970	GA23S62.D	9557219	04/24/2018	02:42	G181133AA	
msk07970	GA23S63.D	9557221	04/24/2018	03:05	G181133AA	
msk07970	GA23S64.D	9557223	04/24/2018	03:27	G181133AA	
msk07970	GA23S65.D	9557270	04/24/2018	03:49	G181133AA	
msk07970	GA23S66.D	9557271	04/24/2018	04:11	G181133AA	
msk07970	GA23S67.D	9557271DL	04/24/2018	04:33	G181133AA	10

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19930 **HP #31**

Data Directory Path is - D:\DATA\18APR23C\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR	
DVV10203	IA23T05.D	50NGBFB	04/23/2018	20:52	I181063AB		
DVV10203	IA23X71.D	BLK	04/23/2018	21:13	I181133AA		
DVV10203	IA23C05.D	VSTD010	04/23/2018	21:34	I181132AA		DVV1020
DVV10203	IA23S41.D	LCSI90	04/23/2018	22:16	I181132AA		
DVV10203	IA23S42.D	LCDI90	04/23/2018	22:38	I181132AA		
DVV10203	IA23M41.D	MDLI90	04/23/2018	22:59	I181132AA		
DVV10203	IA23S43.D	LCSI91	04/23/2018	23:20	I181132AA		
DVV10203	IA23S44.D	LCDI91	04/23/2018	23:41	I181132AA		
DVV10203	IA23B41.D	VBLKI90	04/24/2018	00:03	I181132AA		
DVV10203	IA23S45.D	9557257	04/24/2018	00:25	I181132AA	2	
DVV10203	IA23S46.D	9557257DL	04/24/2018	00:46	I181132AA	20	
DVV10203	IA23S47.D	9557259	04/24/2018	01:07	I181132AA		
DVV10203	IA23S48.D	9557259DL	04/24/2018	01:28	I181132AA	10	
DVV10203	IA23S49.D	9557264	04/24/2018	01:50	I181132AA	2	
DVV10203	IA23S50.D	9557264DL	04/24/2018	02:11	I181132AA	20	
DVV10203	IA23S51.D	9557265	04/24/2018	02:32	I181132AA		
DVV10203	IA23S52.D	9557265DL	04/24/2018	02:53	I181132AA	10	
DVV10203	IA23S53.D	9557260DL	04/24/2018	03:15	I181132AA	10	
DVV10203	IA23S73.D	9558709	04/24/2018	03:36	I181133AA		
DVV10203	IA23S74.D	9558710	04/24/2018	03:57	I181133AA		
DVV10203	IA23S75.D	9558711	04/24/2018	04:18	I181133AA		
DVV10203	IA23S76.D	9558698	04/24/2018	04:40	I181133AA		
DVV10203	IA23S77.D	9558699MS	04/24/2018	05:01	I181133AA		
DVV10203	IA23S78.D	9558700MSD	04/24/2018	05:23	I181133AA		
DVV10203	IA23S79.D	9558699MS	04/24/2018	05:44	I181133AA		
DVV10203	IA23S80.D	9558700MSD	04/24/2018	06:05	I181133AA		
DVV10203	IA23S81.D	9558696	04/24/2018	06:27	I181133AA		
DVV10203	IA23S82.D	9558702	04/24/2018	06:48	I181133AA		
DVV10203	IA23S83.D	9558703	04/24/2018	07:10	I181133AA		
DVV10203	IA23S84.D	9558695	04/24/2018	07:31	I181133AA		
DVV10203	IA23S85.D	9558695DL	04/24/2018	07:52	I181133AA	10	
DVV10203	IA23S86.D	9558697	04/24/2018	08:13	I181133AA		
DVV10203	IA23S87.D	9558697DL	04/24/2018	08:34	I181133AA	10	
DVV10203	IA23S88.D	9558695DL	04/24/2018	09:18	I181133AA	2.5	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19930 **HP #31**

Data Directory Path is - D:\DATA\18APR24B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	IA24T05.D	50NGBFB	04/24/2018	20:06	I181063AB	
DVV10203	IA24X41.D	BLK	04/24/2018	20:28	I181142AA	
DVV10203	IA24C05.D	VSTD010	04/24/2018	20:49	I181142AA	
DVV10203	IA24C06.D	VSTD010	04/24/2018	21:10	I181142AA	
DVV10203	IA24S41.D	LCSI95	04/24/2018	21:31	I181142AA	
DVV10203	IA24S42.D	LCDI95	04/24/2018	21:52	I181142AA	
DVV10203	IA24S43.D	LCSI96	04/24/2018	22:13	I181142AA	
DVV10203	IA24S44.D	LCDI96	04/24/2018	22:34	I181142AA	
DVV10203	IA24B41.D	VBLKI95	04/24/2018	22:56	I181142AA	
DVV10203	IA24S45.D	9558695DL	04/24/2018	23:17	I181142AA	2.5
DVV10203	IA24S46.D	9558697DL	04/24/2018	23:39	I181142AA	2.5
DVV10203	IA24S75.D	9565132	04/25/2018	00:00	I181143AA	
DVV10203	IA24S76.D	9565154	04/25/2018	00:21	I181143AA	
DVV10203	IA24S77.D	9565133	04/25/2018	00:42	I181143AA	
DVV10203	IA24S78.D	9565160	04/25/2018	01:03	I181143AA	
DVV10203	IA24S79.D	9565134	04/25/2018	01:24	I181143AA	
DVV10203	IA24S80.D	9565135	04/25/2018	01:46	I181143AA	
DVV10203	IA24S81.D	9565136	04/25/2018	02:07	I181143AA	
DVV10203	IA24S82.D	9565137	04/25/2018	02:28	I181143AA	
DVV10203	IA24S83.D	9565139	04/25/2018	02:49	I181143AA	
DVV10203	IA24S84.D	9565141	04/25/2018	03:11	I181143AA	
DVV10203	IA24S85.D	9565143	04/25/2018	03:32	I181143AA	
DVV10203	IA24S86.D	9565145	04/25/2018	03:53	I181143AA	
DVV10203	IA24S87.D	9565147	04/25/2018	04:14	I181143AA	
DVV10203	IA24S88.D	9565148	04/25/2018	04:35	I181143AA	
DVV10203	IA24S89.D	9565155	04/25/2018	04:56	I181143AA	
DVV10203	IA24S90.D	9565156	04/25/2018	05:18	I181143AA	
DVV10203	IA24S91.D	9565157	04/25/2018	05:39	I181143AA	
DVV10203	IA24S92.D	9565158	04/25/2018	06:00	I181143AA	
DVV10203	IA24S93.D	9565161	04/25/2018	06:21	I181143AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP26285 **HP #05**

Data Directory Path is - C:\DATA\18APR23a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lcp00895	5A23T01.D	50NGBFB	04/23/2018	08:39		
LCP00895	5A23X00.D	CBLK564	04/23/2018	09:03	5181131AA	
LCP00895	5A23C01.D	VSTD050	04/23/2018	09:25	5181131AA	
LCP00895	5A23B01.D	VBLK564	04/23/2018	09:46	5181131AA	
LCP00895	5A23S01.D	LCS564	04/23/2018	10:08	5181131AA	
LCP00895	5A23X02.D	CBLK564	04/23/2018	10:57	5181131AA	
LCP00895	5A23S02.D	9558695	04/23/2018	11:19	5181131AA	
LCP00895	5A23S03.D	9558696	04/23/2018	11:40	5181131AA	
LCP00895	5A23S04.D	9558697	04/23/2018	12:02	5181131AA	
LCP00895	5A23S05.D	9558698	04/23/2018	12:24	5181131AA	
LCP00895	5A23S06.D	9558699MS	04/23/2018	12:46	5181131AA	
LCP00895	5A23S07.D	9558700MSD	04/23/2018	13:07	5181131AA	
LCP00895	5A23S08.D	9558702	04/23/2018	13:29	5181131AA	
LCP00895	5A23S09.D	9558703	04/23/2018	13:51	5181131AA	
LCP00895	5A23SA2.D	9563104	04/23/2018	14:12	5181132AA	
LCP00895	5A23S33.D	9560740	04/23/2018	14:34	5181132AA	
LCP00895	5A23S34.D	9560731	04/23/2018	14:56	5181132AA	
LCP00895	5A23S35.D	9560731MS	04/23/2018	15:17	5181132AA	
LCP00895	5A23S36.D	9560731MSD	04/23/2018	15:39	5181132AA	
LCP00895	5A23S37.D	9560730	04/23/2018	16:01	5181132AA	
LCP00895	5A23S38.D	9560735	04/23/2018	16:23	5181132AA	
LCP00895	5A23S39.D	9560736	04/23/2018	16:45	5181132AA	
LCP00895	5A23S40.D	9560737	04/23/2018	17:06	5181132AA	
LCP00895	5A23S41.D	9560738	04/23/2018	17:28	5181132AA	
LCP00895	5A23S42.D	9560739	04/23/2018	17:49	5181132AA	
LCP00895	5A23S43.D	9563100	04/23/2018	18:11	5181132AA	
LCP00895	5A23S44.D	9563101	04/23/2018	18:33	5181132AA	
LCP00895	5A23S45.D	9563102	04/23/2018	18:54	5181132AA	
LCP00895	5A23S46.D	9563102DL	04/23/2018	19:16	5181132AA	10
LCP00895	5A23S47.D	9563103	04/23/2018	19:38	5181132AA	
LCP00895	5A23S48.D	9563103DL	04/23/2018	20:00	5181132AA	10

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

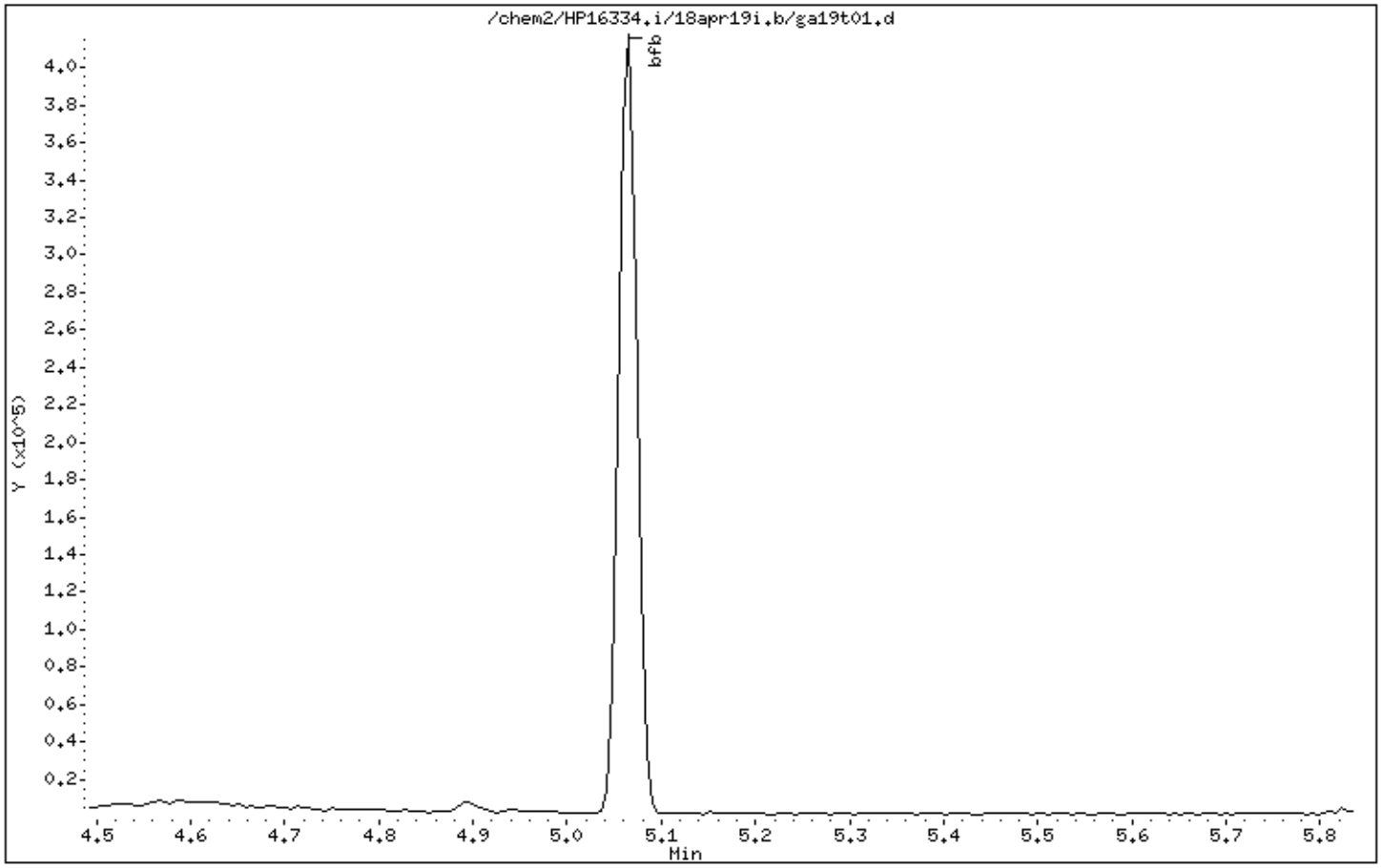
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

Instrument: HP16334.i

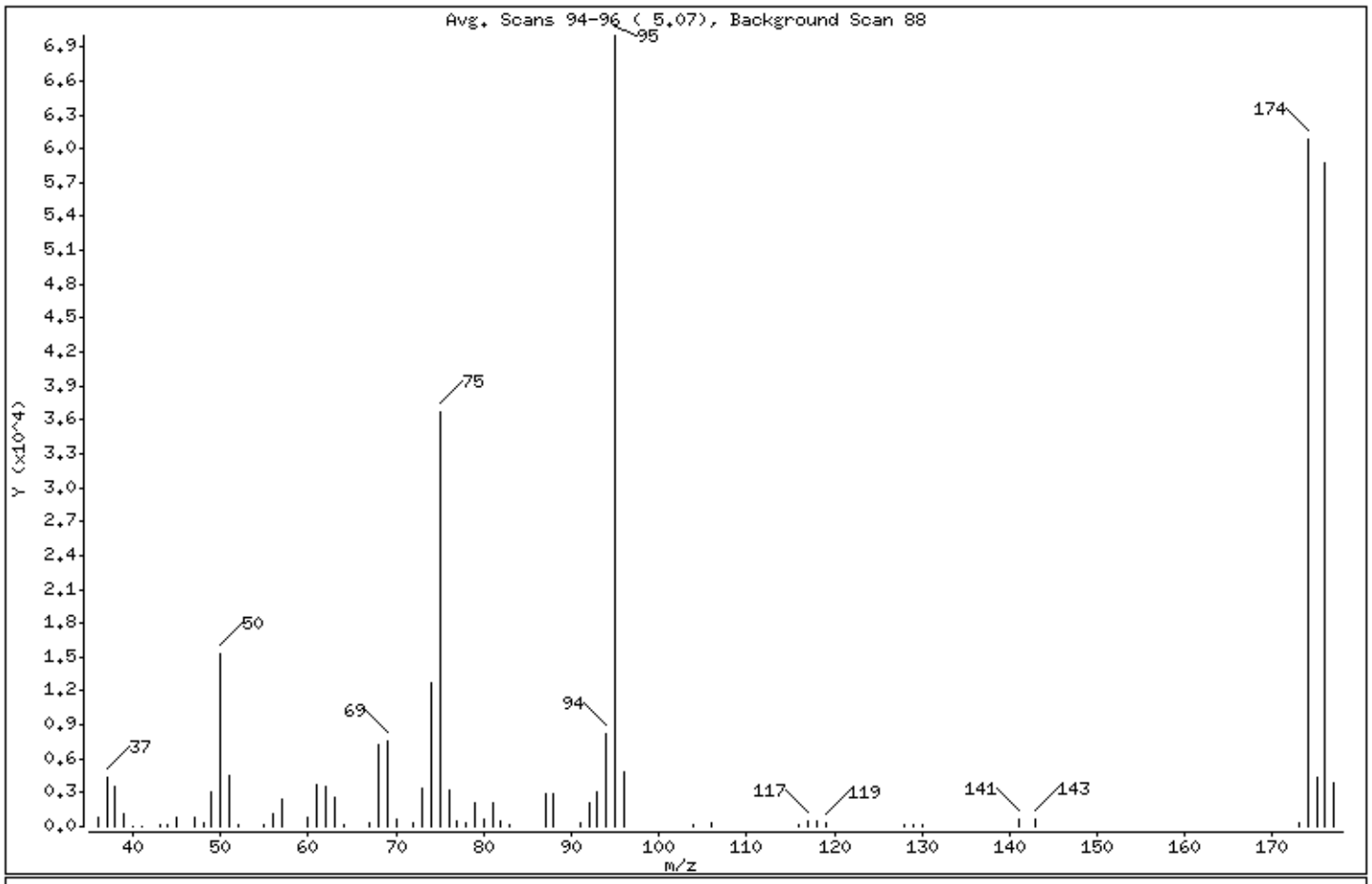
Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.74
75	30.00 - 60.00% of mass 95	52.48
96	5.00 - 9.00% of mass 95	6.98
173	Less than 2.00% of mass 174	0.41 (0.47)
174	50.00 - 100.00% of mass 95	86.84
175	5.00 - 9.00% of mass 174	6.17 (7.11)
176	95.00 - 101.00% of mass 174	83.87 (96.58)
177	5.00 - 9.00% of mass 176	5.61 (6.69)

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

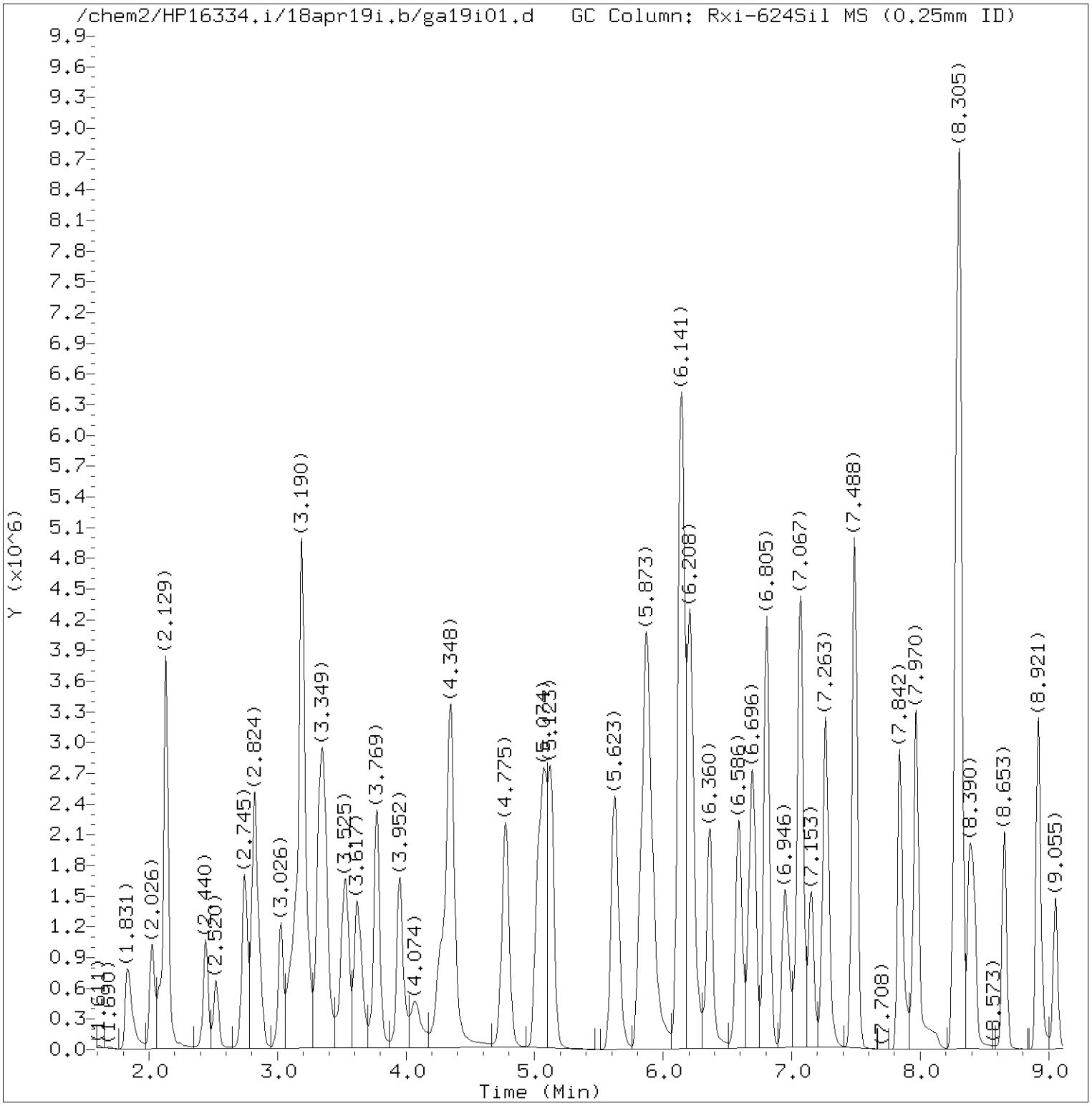
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ga19t01.d
Spectrum: Avg. Scans 94-96 (5.07), Background Scan 88
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	751	56.00	1165	77.00	444	106.00	374
37.00	4308	57.00	2369	78.00	334	116.00	213
38.00	3590	60.00	775	79.00	2080	117.00	485
39.00	1106	61.00	3780	80.00	659	118.00	412
40.00	80	62.00	3534	81.00	2037	119.00	302
41.00	61	63.00	2497	82.00	443	128.00	188
43.00	192	64.00	213	83.00	84	129.00	98
44.00	212	67.00	293	87.00	2948	130.00	193
45.00	740	68.00	7241	88.00	2832	141.00	703
47.00	799	69.00	7585	91.00	301	143.00	702
48.00	402	70.00	657	92.00	2163	173.00	286
49.00	3128	72.00	358	93.00	3063	174.00	60792
50.00	15218	73.00	3407	94.00	8246	175.00	4322
51.00	4581	74.00	12760	95.00	70008	176.00	58712
52.00	202	75.00	36736	96.00	4885	177.00	3929
55.00	209	76.00	3174	104.00	221		

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

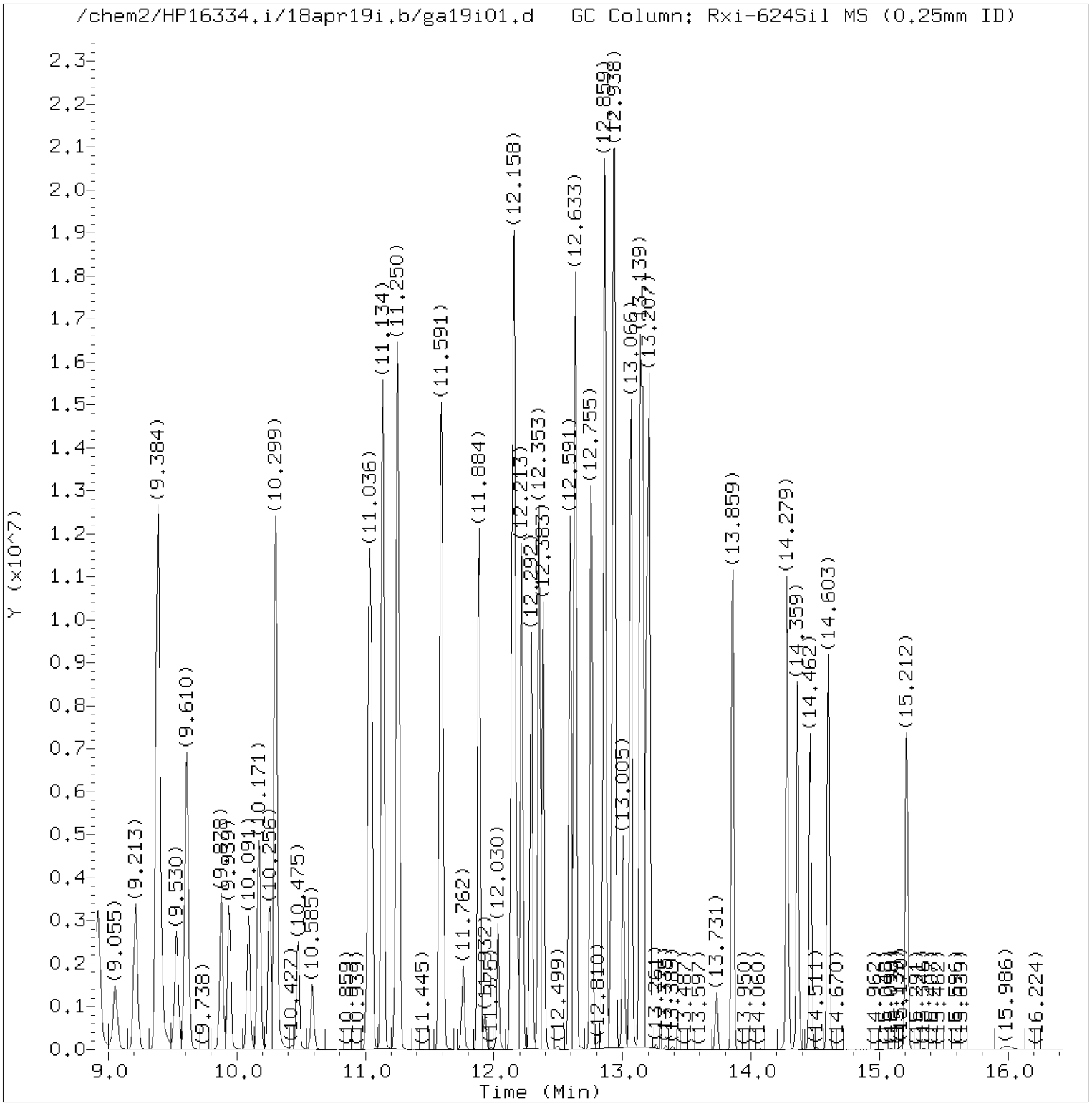
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	1849343	25.000
2) Chloromethane	(2)	2.020	50	1779238	25.000
5) Vinyl Chloride	(2)	2.129	62	1571531	25.000
6) 1,3-Butadiene	(2)	2.129	39	2454788M	25.000
7) Bromomethane	(2)	2.440	94	1057629	25.000
8) Chloroethane	(2)	2.520	64	890278	25.000
9) Dichlorofluoromethane	(2)	2.745	67	2113977	25.000
10) Trichlorofluoromethane	(2)	2.806	101	2130327M	25.000
11) Ethyl ether	(2)	3.026	59	1030308	25.000
12) Freon 123a	(2)	3.129	67	1466723	25.000
13) Acrolein	(1)	3.190	56	8956232	1250.000
15) 1,1-Dichloroethene	(2)	3.324	96	1041365	25.000
14) Acetone	(1)	3.343	43	2704389	250.000
16) Freon 113	(2)	3.367	101	1215525	25.000
17) Methyl Iodide	(2)	3.513	142	2059437	25.000
18) Carbon Disulfide	(2)	3.617	76	4008052	25.000
21) Methyl Acetate	(1)	3.739	43	862108M	25.000
22) Allyl Chloride	(2)	3.769	41	2434316	25.000
26)*t-Butyl Alcohol-d10	(1)	3.946	65	221249M	50.000
23) Methylene Chloride	(2)	3.952	84	1256340	25.000
28) t-Butyl Alcohol	(1)	4.074	59	1746673	500.000
29) Acrylonitrile	(1)	4.263	53	1708754	125.000
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	3723874	25.000
31) trans-1,2-Dichloroethene	(2)	4.348	96	1207771	25.000
32) n-Hexane	(2)	4.775	57	2126850M	25.000
33) 1,1-Dichloroethane	(2)	5.019	63	2484566	25.000
34) di-Isopropyl Ether	(2)	5.074	45	5158603	25.000
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	2296104	25.000
37) Ethyl t-butyl ether	(2)	5.623	59	4558525	25.000
38) 2-Butanone	(1)	5.824	43	5128350	250.000
39) cis-1,2-Dichloroethene	(2)	5.866	96	1396461	25.000
41) 2,2-Dichloropropane	(2)	5.885	77	2117990	25.000
42) Propionitrile	(1)	5.915	54	2638767	500.000
40) 1,2-Dichloroethene (Total)	(2)		96	2604232	50.000
45) Methacrylonitrile	(1)	6.141	67	4104743	250.000
47) Bromochloromethane	(2)	6.208	128	653776	25.000
48) Tetrahydrofuran	(1)	6.214	71	1249027	250.000
49) Chloroform	(2)	6.366	83	2422084	25.000

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	518734	10.000
50)$Dibromofluoromethane	(2)	6.586	111	531326	10.000
51) 1,1,1-Trichloroethane	(2)	6.592	97	2081038	25.000
52) Cyclohexane	(2)	6.696	56	2475766	25.000
52) Cyclohexane	(2)	6.696	84	1890685	25.000
52) Cyclohexane	(2)	6.696	69	718781	25.000
54) Carbon Tetrachloride	(2)	6.805	117	1759100	25.000
55) 1,1-Dichloropropene	(2)	6.805	75	1898815	25.000
56) Isobutyl Alcohol	(1)	6.946	41	1906137	1250.000
57)$1,2-Dichloroethane-d4	(2)	7.043	102	108673M	10.000
57)$1,2-Dichloroethane-d4	(2)	7.049	65	613726	10.000
57)$1,2-Dichloroethane-d4	(2)	7.043	104	69894	10.000
58) Benzene	(2)	7.074	78	5249138	25.000
59) 1,2-Dichloroethane	(2)	7.153	62	1798082	25.000
60) t-Amyl methyl ether	(2)	7.263	73	3974673	25.000
63)*Fluorobenzene	(2)	7.482	96	2071999	10.000
62) n-Heptane	(2)	7.494	43	2571265	25.000
65) n-Butanol	(1)	7.842	56	3311509	2500.000
67) Trichloroethene	(2)	7.970	95	1400954	25.000
69) Methylcyclohexane	(2)	8.281	83	2433720	25.000
70) 1,2-Dichloropropane	(2)	8.305	63	1484759	25.000
71) Methyl Methacrylate	(1)	8.384	69	816138	25.000
72) 1,4-Dioxane	(1)	8.390	88	297580M	1250.000
73) Dibromomethane	(2)	8.415	93	716941	25.000
74) Bromodichloromethane	(2)	8.653	83	1861915	25.000
76) 2-Nitropropane	(1)	8.921	41	3033389	250.000
80) cis-1,3-Dichloropropene	(2)	9.213	75	2347744	25.000
81) 4-Methyl-2-Pentanone	(1)	9.384	43	12625487M	250.000
82)$Toluene-d8	(3)	9.530	98	2140263	10.000
82)$Toluene-d8	(3)	9.530	100	1374009	10.000
83) Toluene	(3)	9.610	92	3409708	25.000
84) trans-1,3-Dichloropropene	(3)	9.878	75	2045084	25.000
86) Ethyl Methacrylate	(3)	9.939	69	1773774	25.000
88) 1,1,2-Trichloroethane	(3)	10.091	97	1034177	25.000
85) 1,3-Dichloropropene (total)	(3)		75	4392828	50.000
89) Tetrachloroethene	(3)	10.171	166	1581183	25.000
90) 1,3-Dichloropropane	(3)	10.256	76	1863067	25.000
91) 2-Hexanone	(1)	10.299	43	8861239M	250.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	1314760	25.000
95) 1,2-Dibromoethane	(3)	10.585	107	1014098	25.000
97)*Chlorobenzene-d5	(3)	11.018	117	1603608	10.000
98) Chlorobenzene	(3)	11.048	112	3881846	25.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	1437610	25.000
100) Ethylbenzene	(3)	11.134	91	6692153	25.000
101) m+p-Xylene	(3)	11.250	106	5252980	50.000
104) o-Xylene	(3)	11.585	106	2712075	25.000
106) Styrene	(3)	11.597	104	4560006	25.000
105) Xylene (Total)	(3)		106	7965055	75.000
107) Bromoform	(3)	11.762	173	820701	25.000
108) Isopropylbenzene	(3)	11.884	105	6856780	25.000
111)$4-Bromofluorobenzene	(3)	12.030	95	822456	10.000
111)$4-Bromofluorobenzene	(3)	12.030	174	705228	10.000
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	1397464M	25.000
114) Bromobenzene	(4)	12.146	156	1835312	25.000
116) 1,2,3-Trichloropropane	(4)	12.176	110	374830	25.000
117) n-Propylbenzene	(4)	12.213	91	7995929	25.000
119) 2-Chlorotoluene	(4)	12.292	126	1634842	25.000
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	5960494	25.000
122) 4-Chlorotoluene	(4)	12.383	126	1726077	25.000
125) tert-Butylbenzene	(4)	12.591	134	1267746	25.000
126) Pentachloroethane	(4)	12.627	167	1165194	25.000
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	6172405	25.000
128) sec-Butylbenzene	(4)	12.755	105	7581053	25.000
131) 1,3-Dichlorobenzene	(4)	12.859	146	3670990	25.000
132) p-Isopropyltoluene	(4)	12.865	119	6765848	25.000
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	918007	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	3686389	25.000
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	2802631	25.000
136) Benzyl Chloride	(4)	13.005	126	597818	25.000
138) n-Butylbenzene	(4)	13.158	92	3587064	25.000
139) 1,2-Dichlorobenzene	(4)	13.188	146	3439540	25.000
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	227631	25.000
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	3078991	25.000
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	2857378	25.000
146) Hexachlorobutadiene	(4)	14.365	225	1464541	25.000
147) Naphthalene	(4)	14.462	128	4718543	25.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	2432098	25.000

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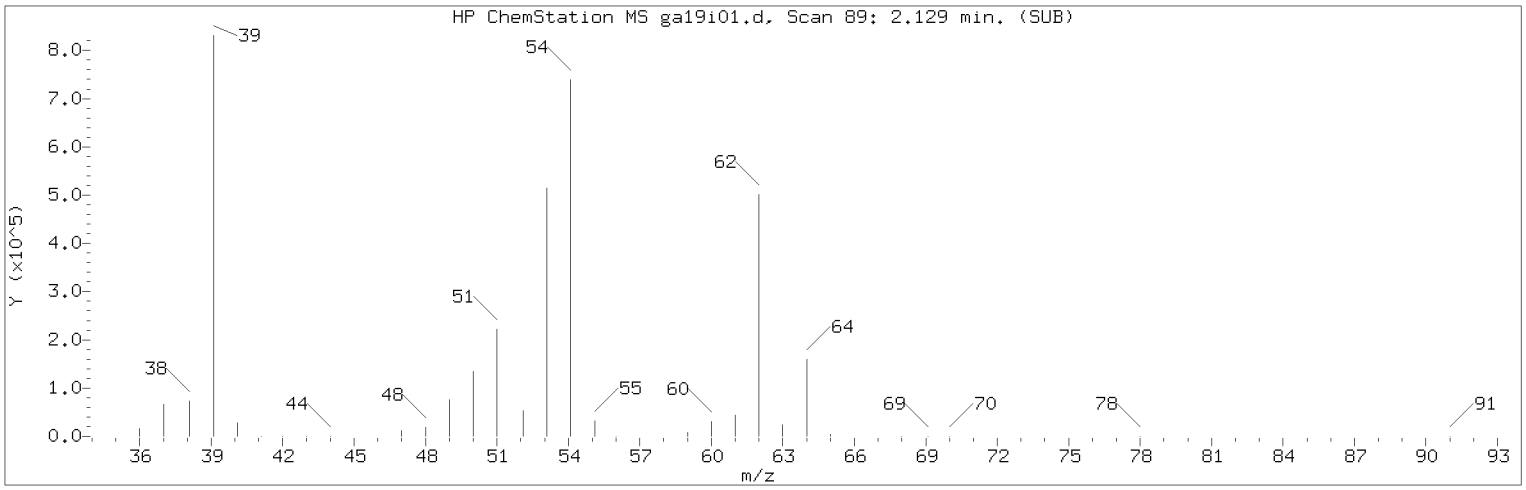
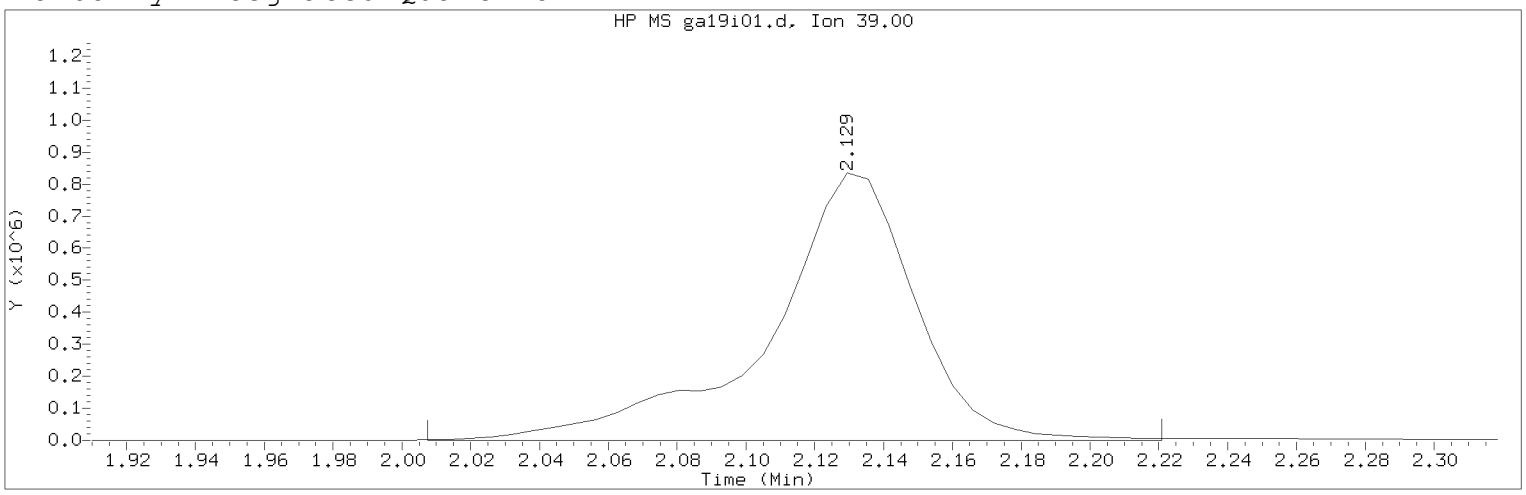
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

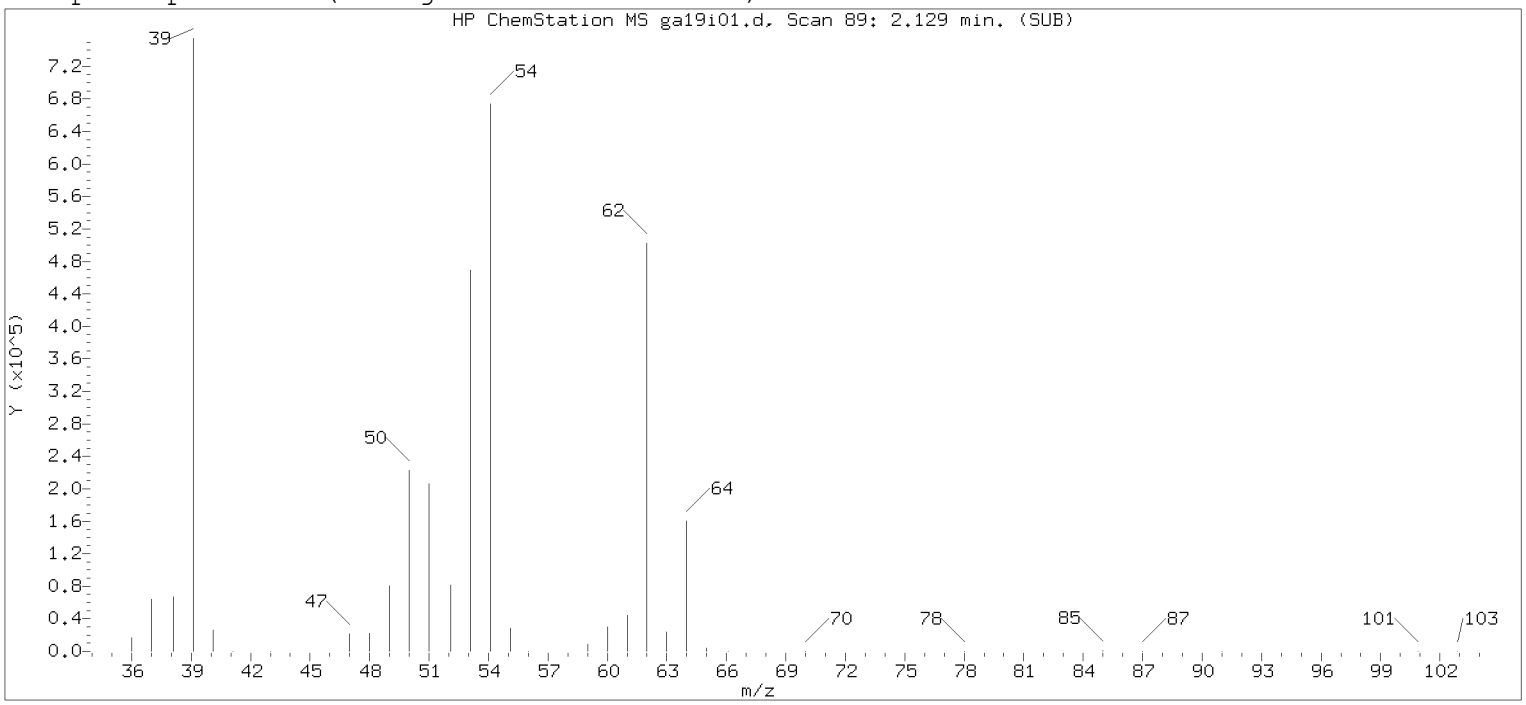
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area (flag) : 2454788M
On-Column Amount (ng) : 25.0000
Integration start scan : 68 Integration stop scan: 103
Y at integration start : 353 Y at integration end: 353

Reason for manual integration: improper integration

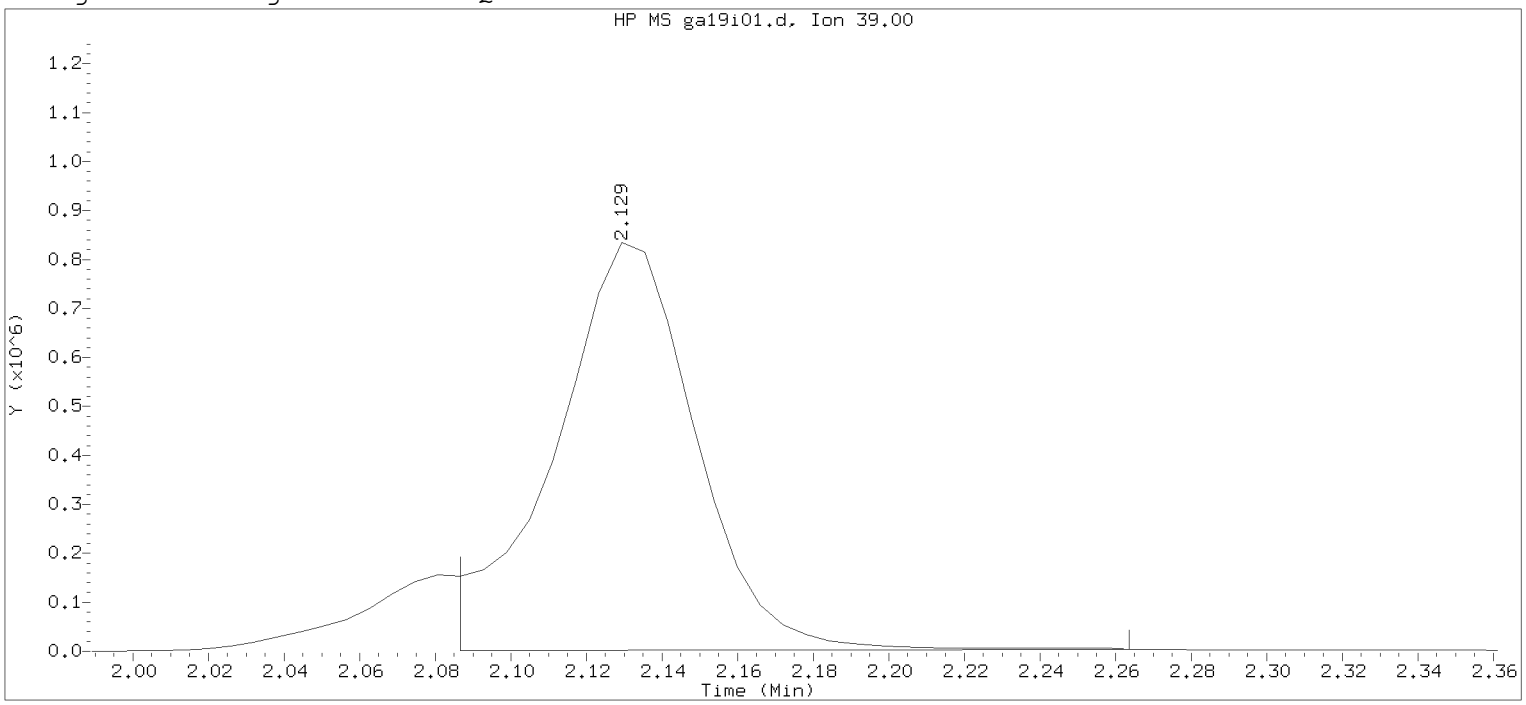
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

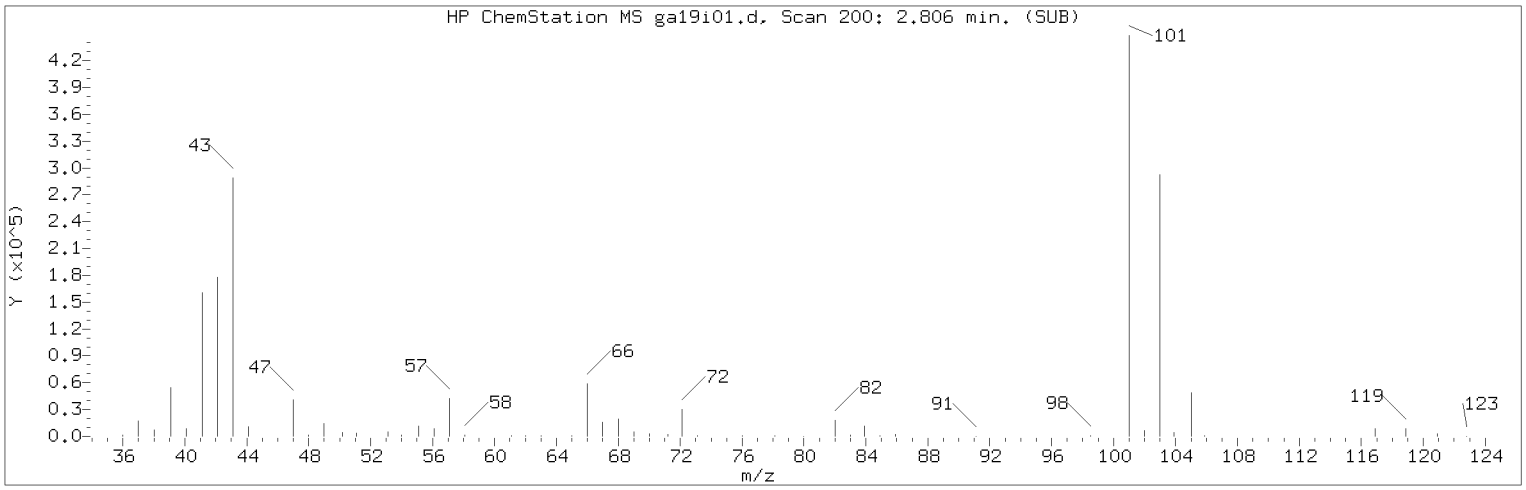
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

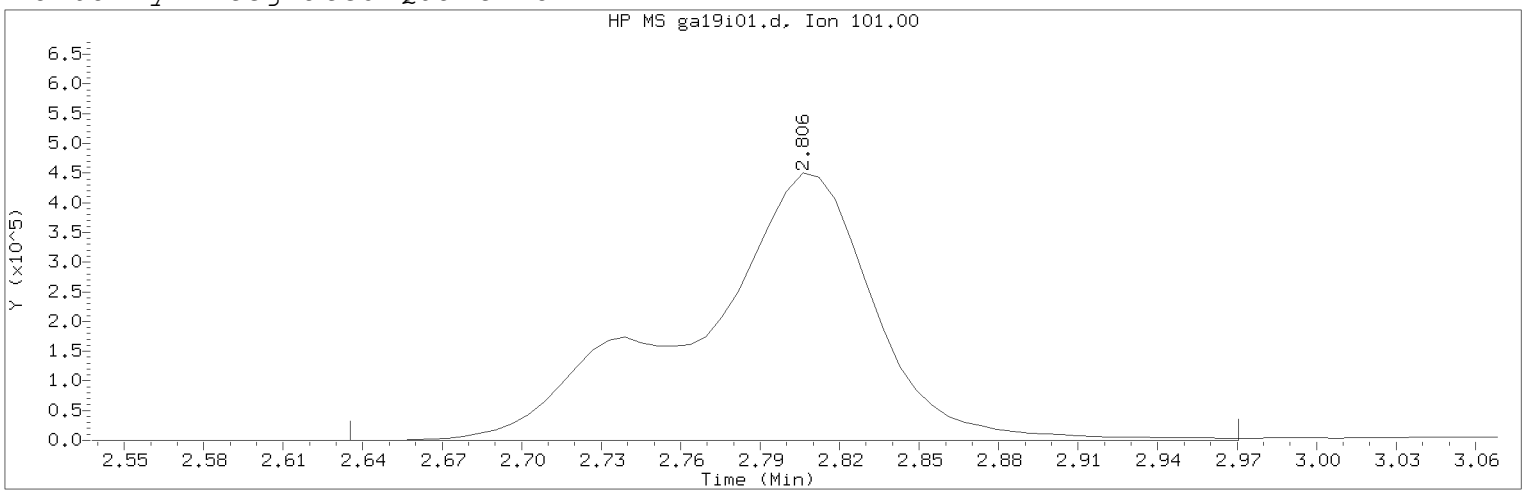
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area : 2150740
On-column Amount (ng) : 25.0000
Integration start scan : 81 Integration stop scan: 110
Y at integration start : 1801 Y at integration end: 4204

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. AE06 mdc 7/30/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

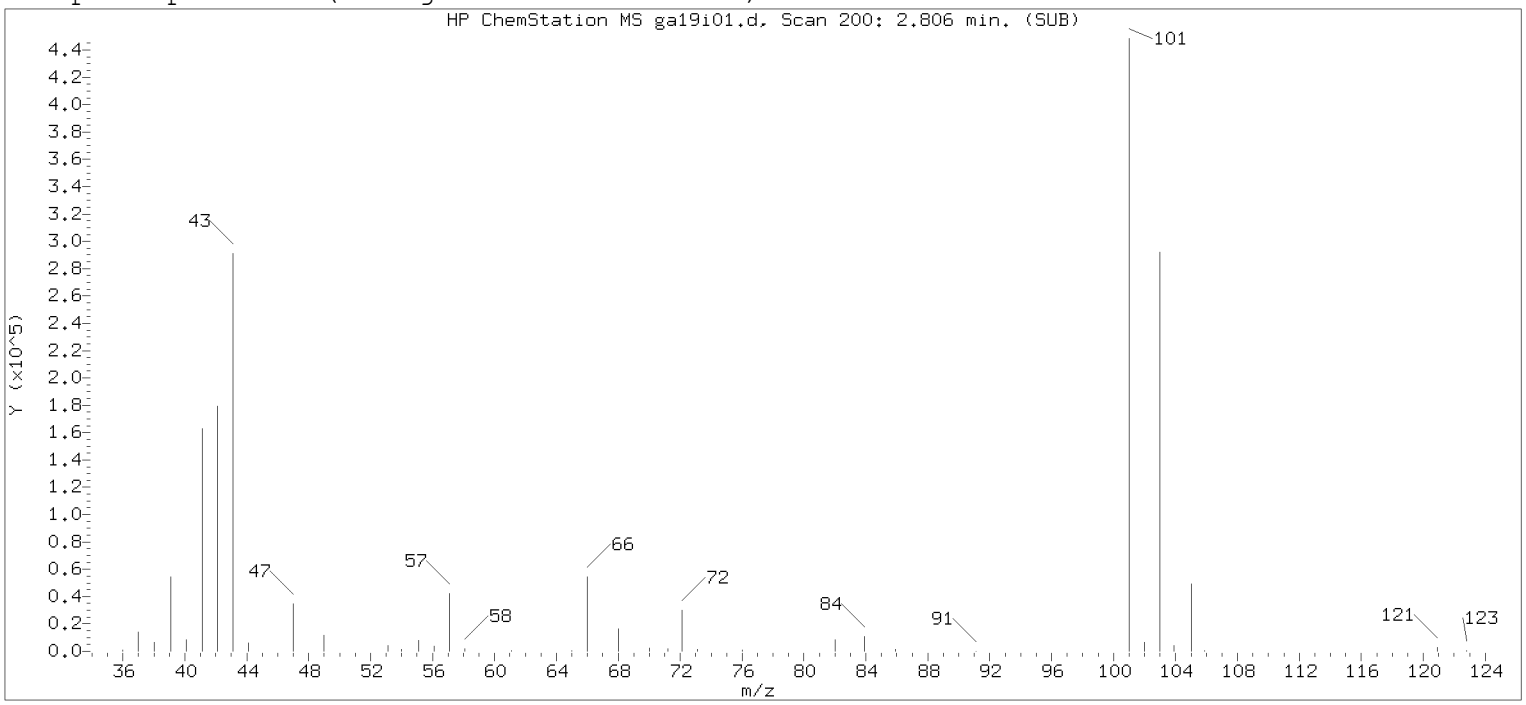
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 2130327M
On-Column Amount (ng) : 25.0000
Integration start scan : 171 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

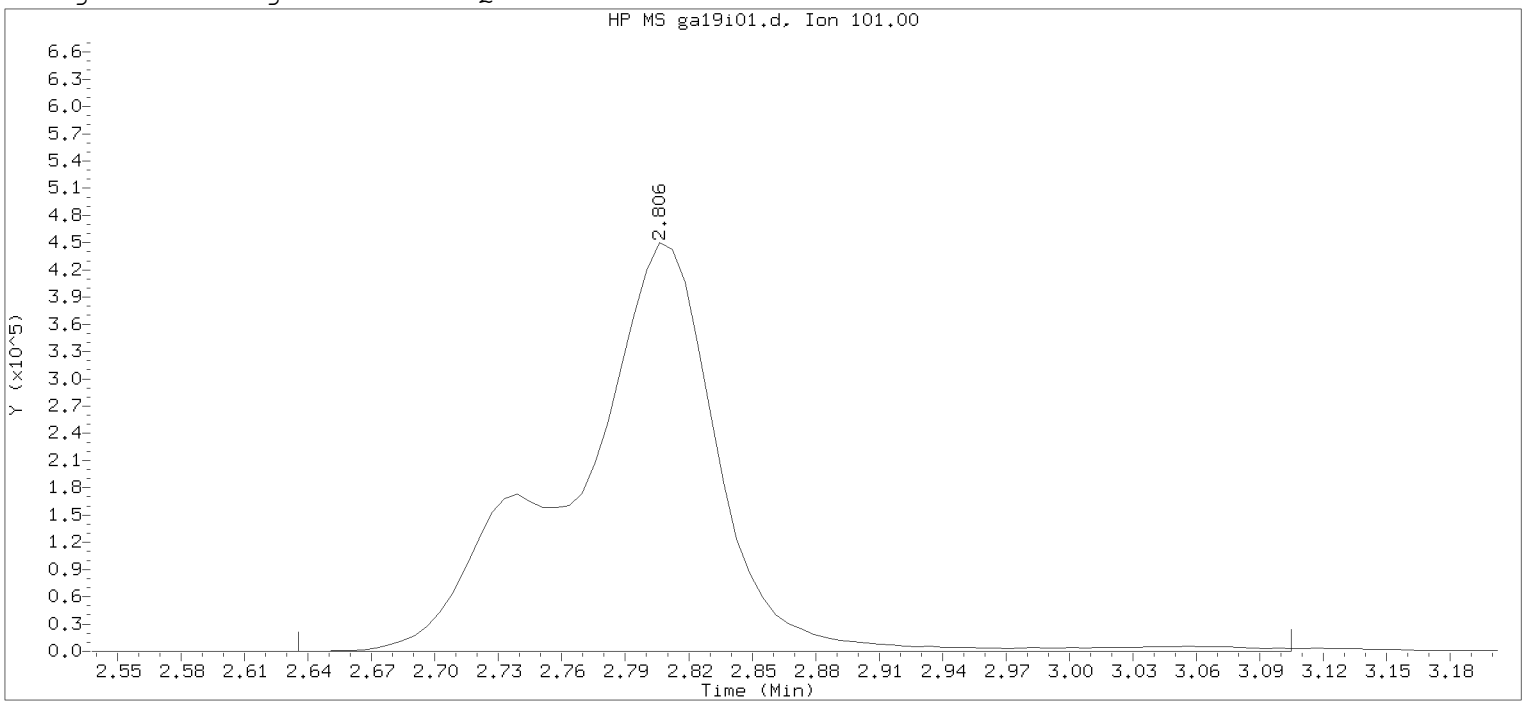
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

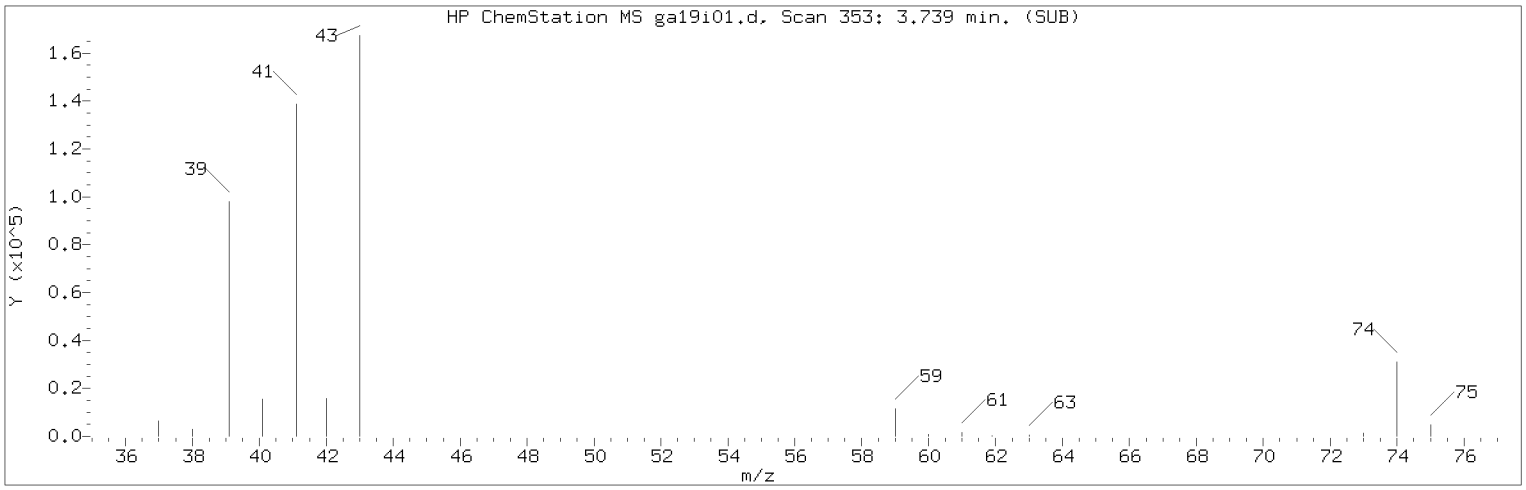
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

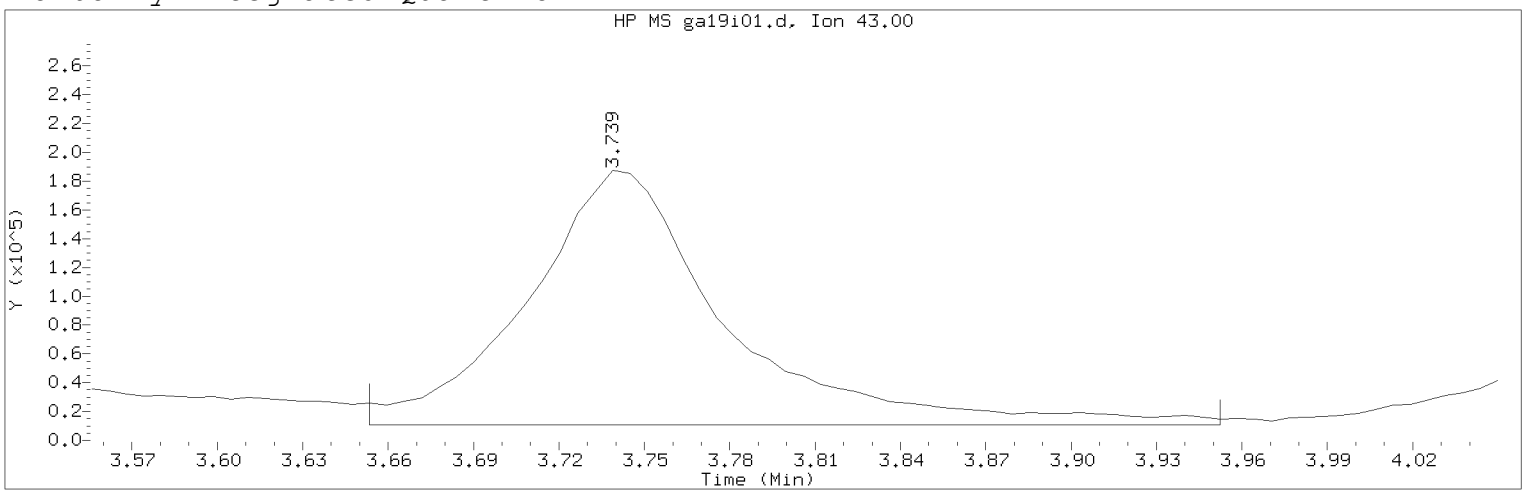
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area : 2163836
On-column Amount (ng) : 25.0000
Integration start scan : 171 Integration stop scan: 248
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

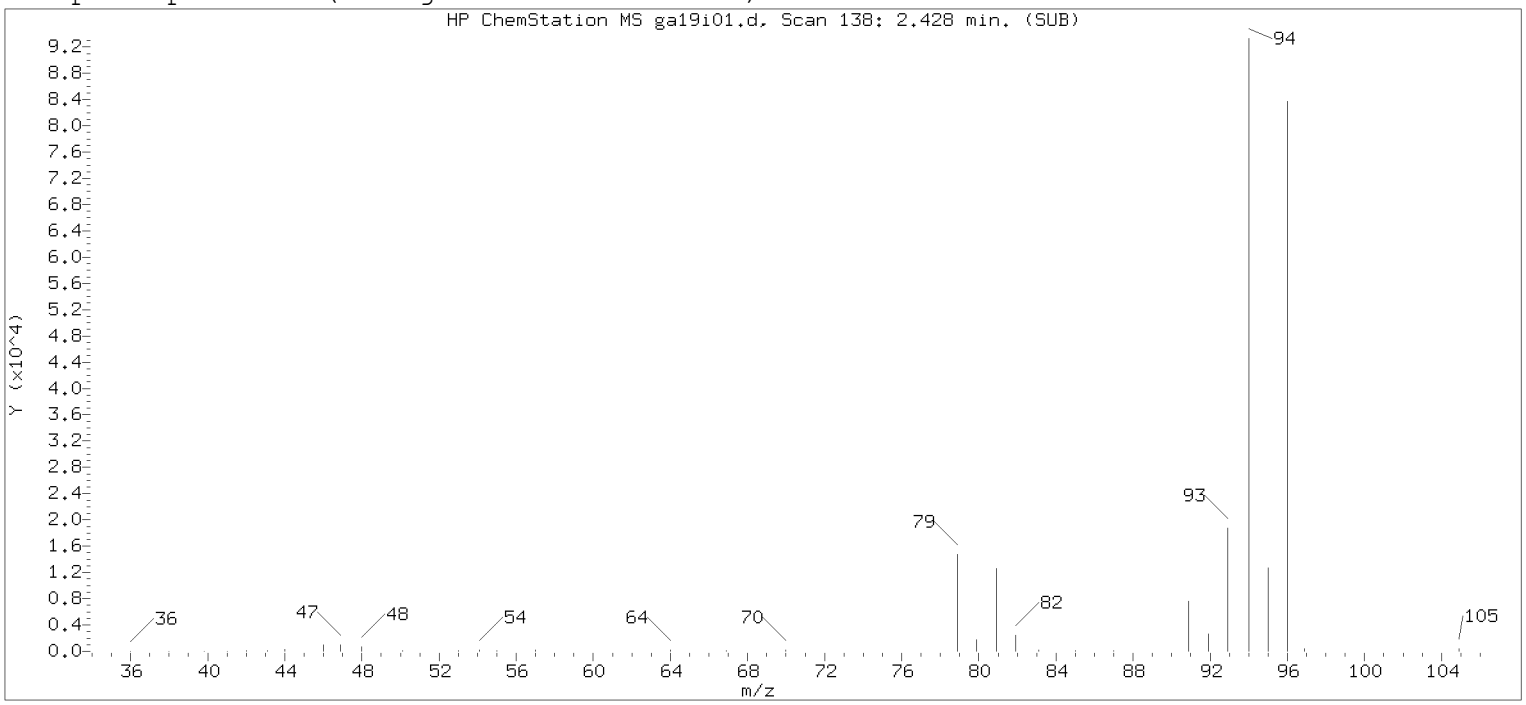
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 353
Retention Time (minutes): 3.739
Quant Ion : 43.00
Area (flag) : 862108M
On-Column Amount (ng) : 25.0000
Integration start scan : 338 Integration stop scan: 387
Y at integration start : 10565 Y at integration end: 10565

Reason for manual integration: improper integration

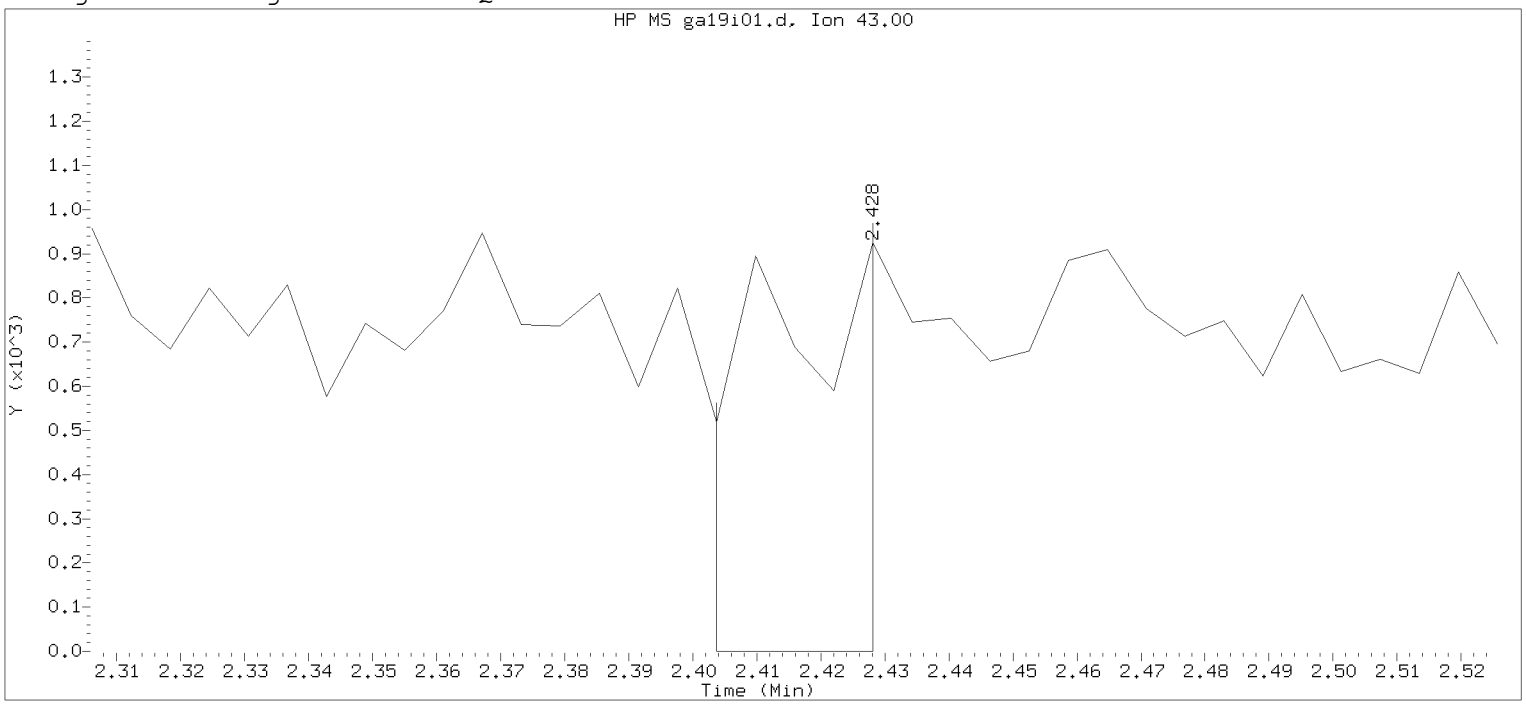
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

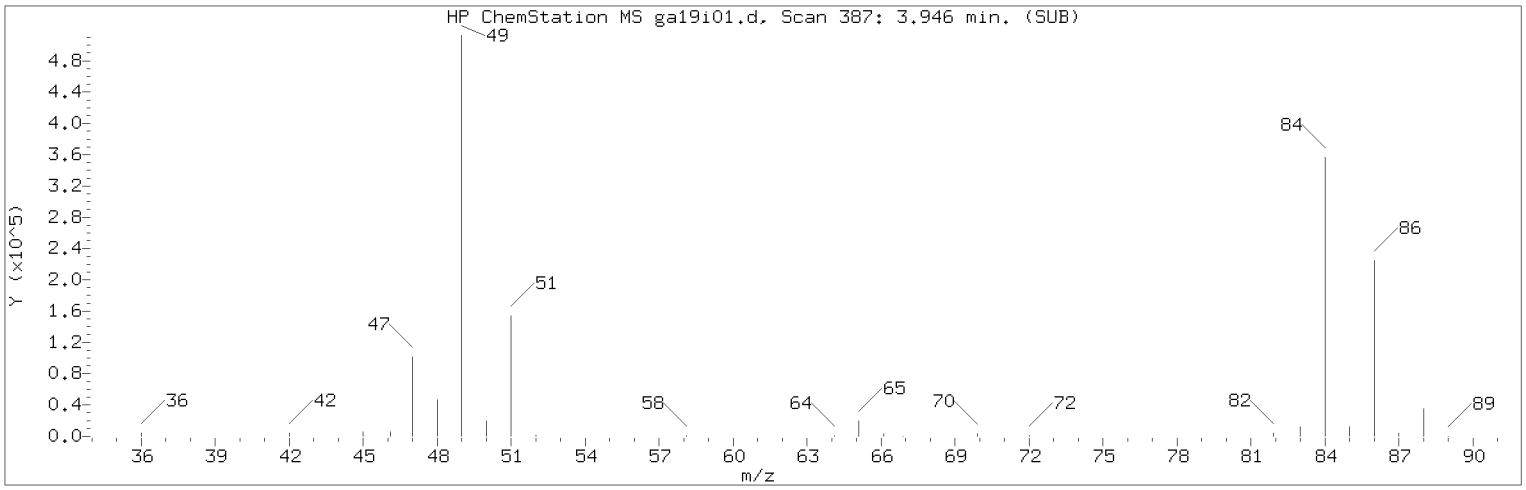
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

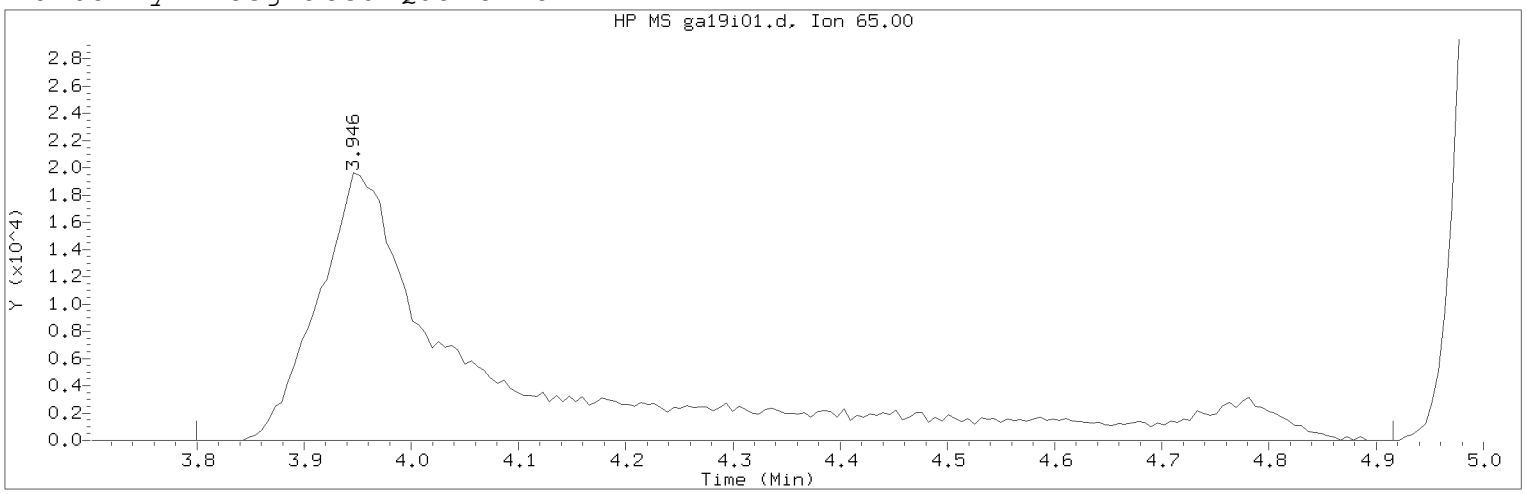
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 138
Retention Time (minutes): 2.428
Quant Ion : 43.00
Area : 1058
On-column Amount (ng) : 25.0000
Integration start scan : 133 Integration stop scan: 137
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

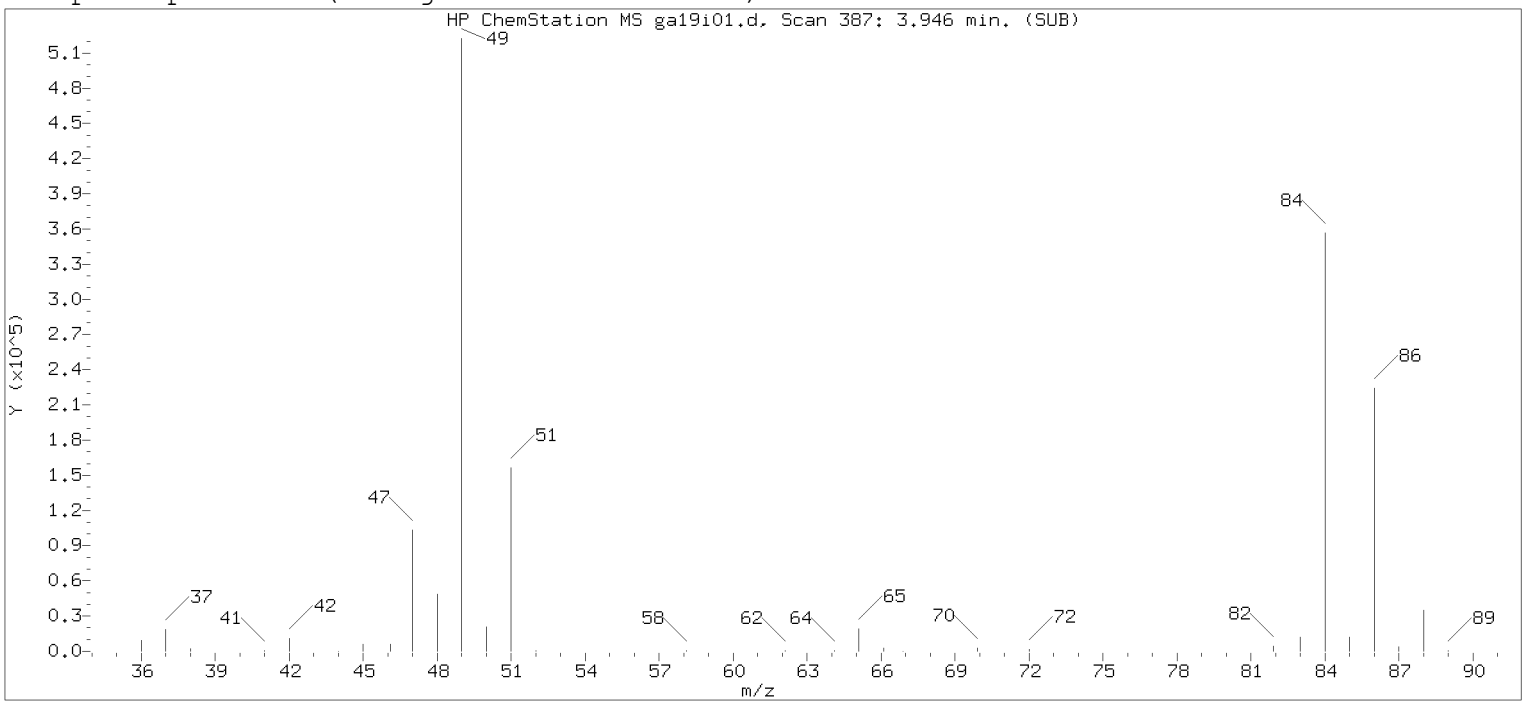
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 387
Retention Time (minutes): 3.946
Quant Ion : 65.00
Area (flag) : 221249M
On-Column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 545
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

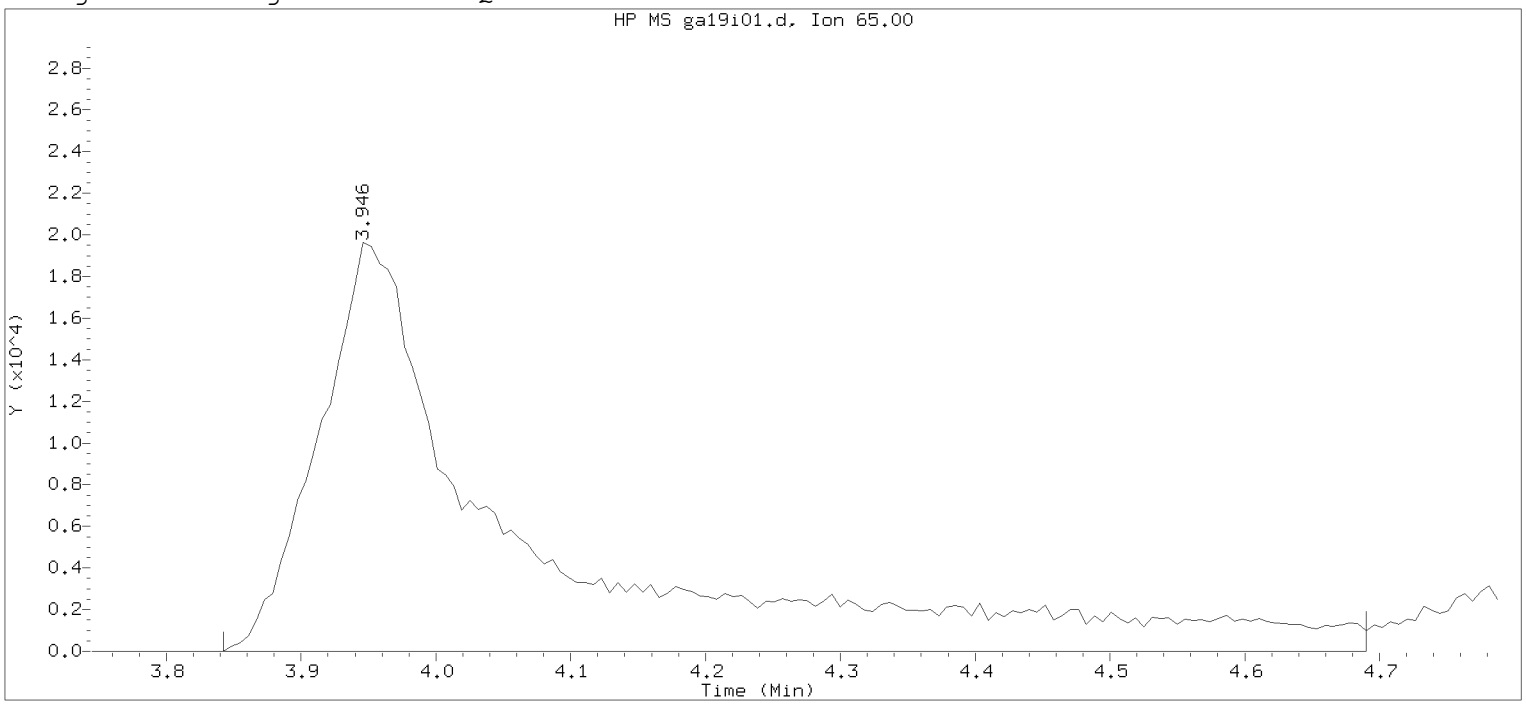
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

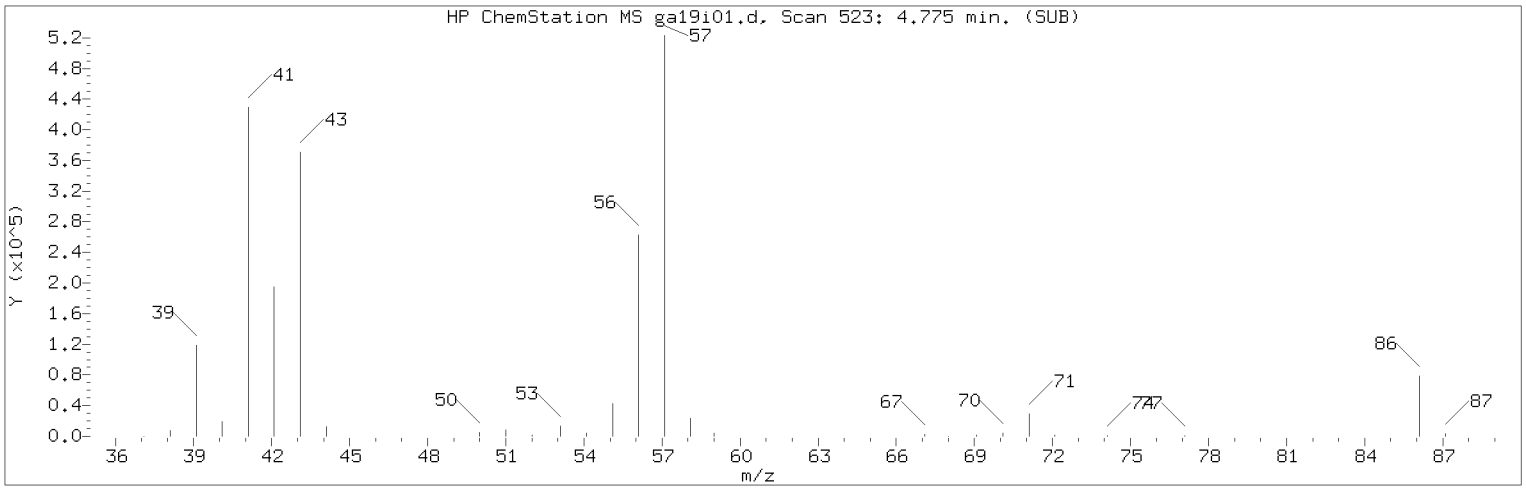
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

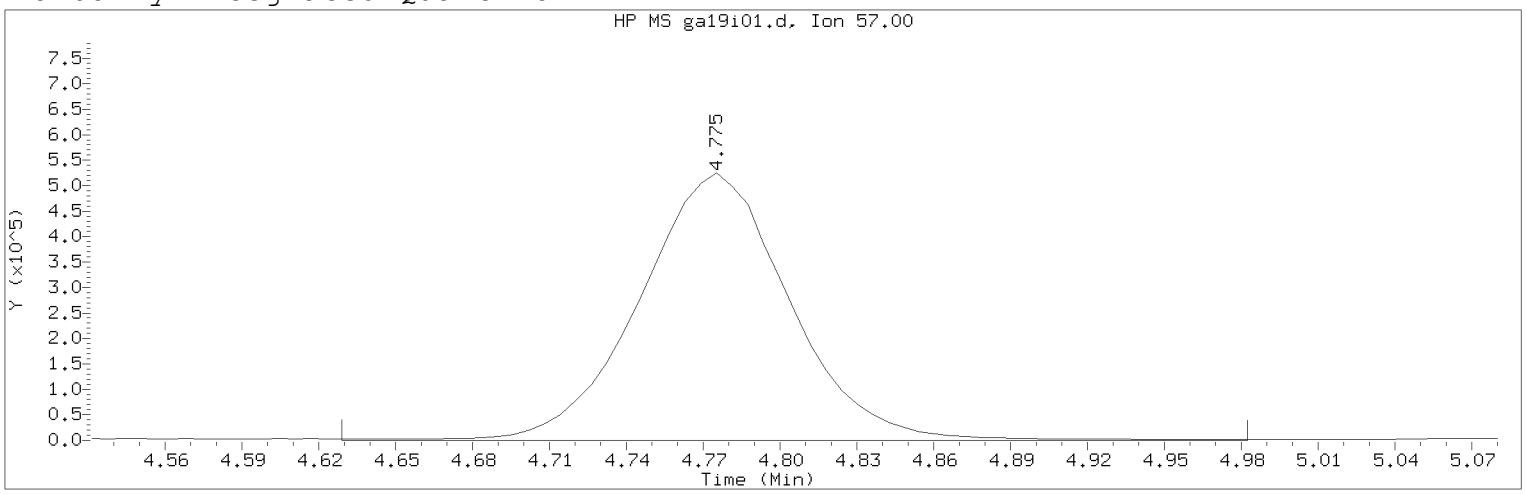
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 387		
Retention Time (minutes)	: 3.946		
Quant Ion	: 65.00		
Area	: 203887		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 369	Integration stop scan:	508
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Method: 7400

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

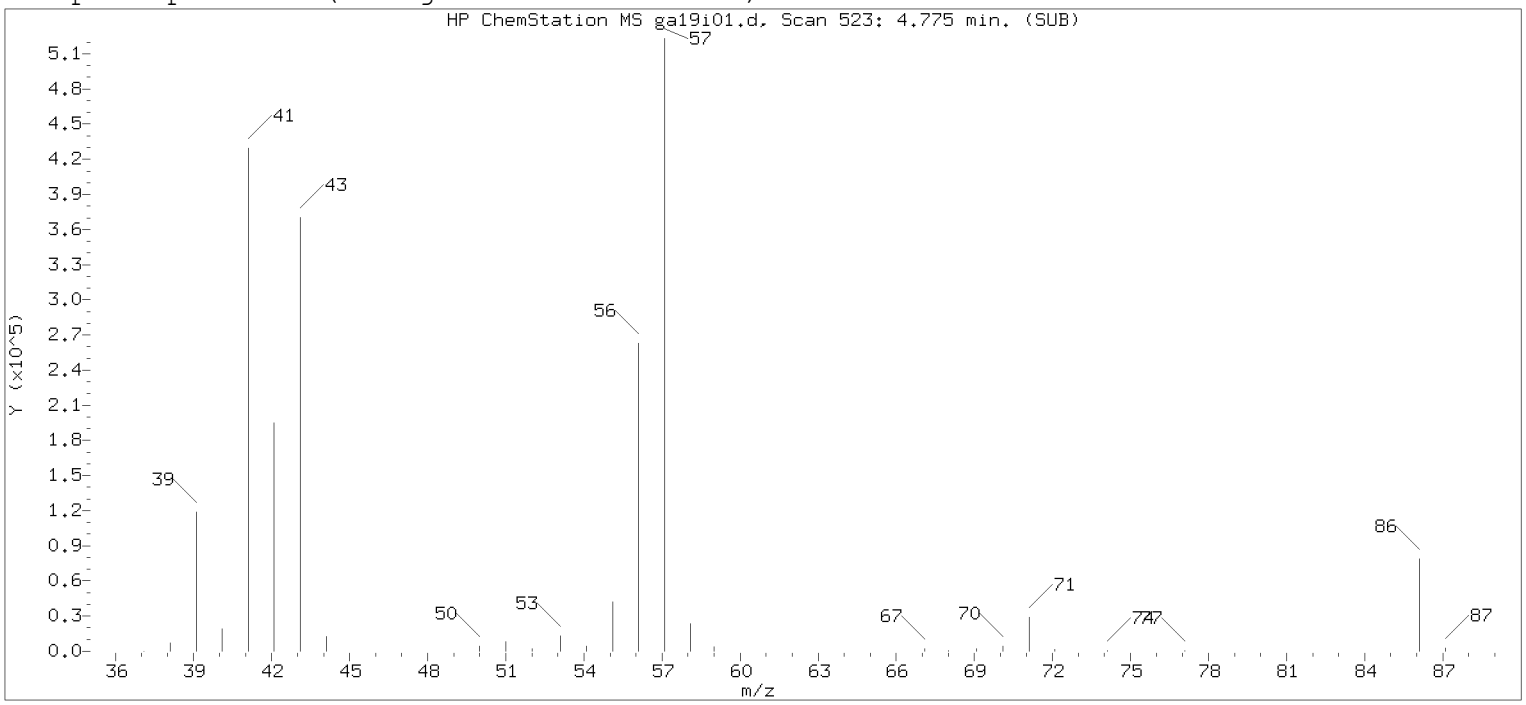
Compound Number : 32
Compound Name : n-Hexane
Scan Number : 523
Retention Time (minutes): 4.775
Quant Ion : 57.00
Area (flag) : 2126850M
On-Column Amount (ng) : 25.0000
Integration start scan : 498 Integration stop scan: 556
Y at integration start : 450 Y at integration end: 450

Reason for manual integration: improper integration

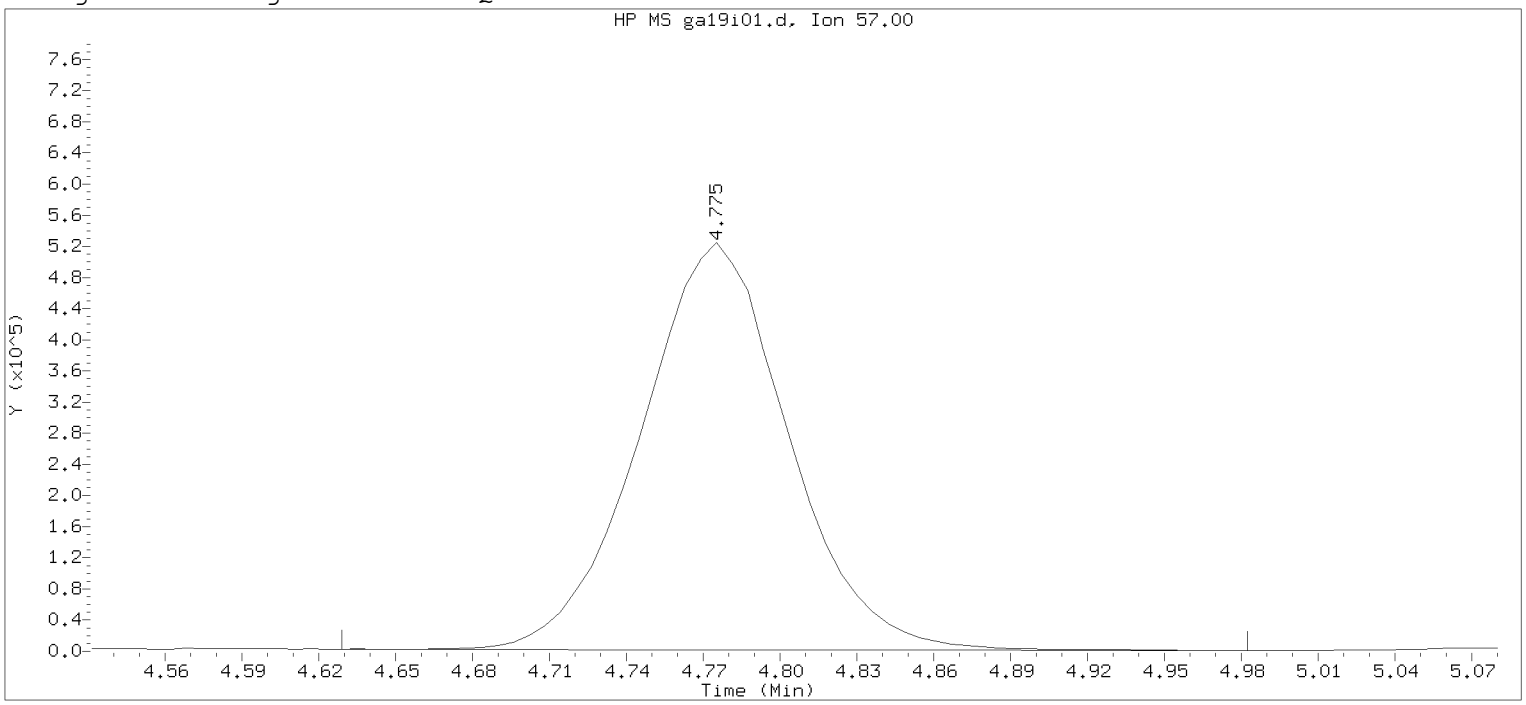
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

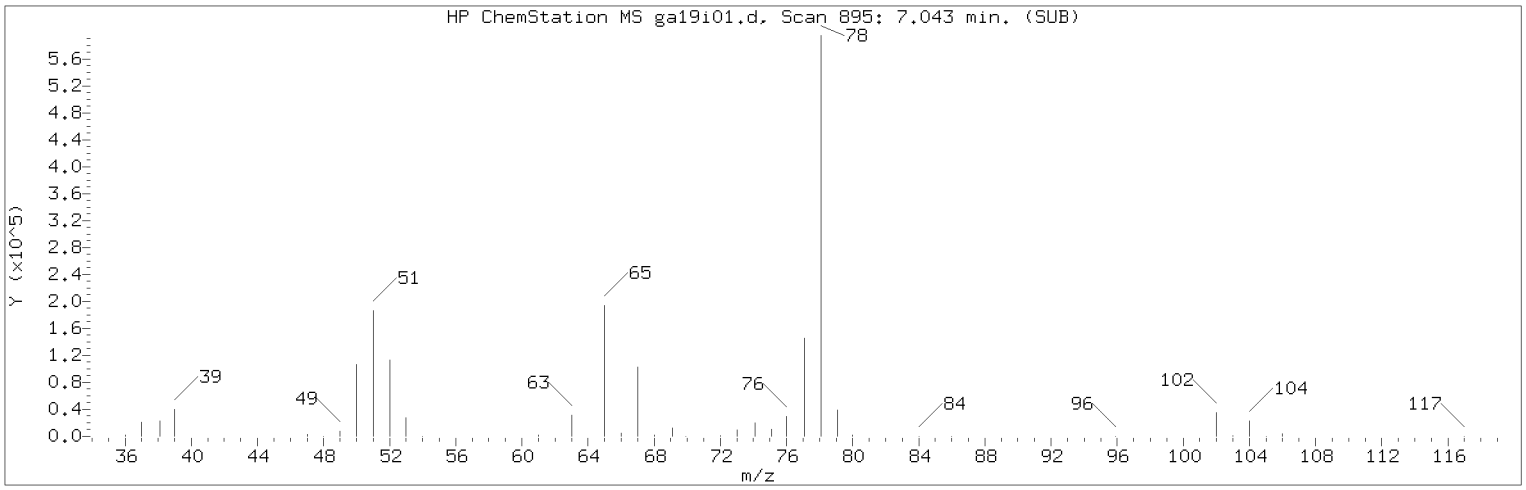
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

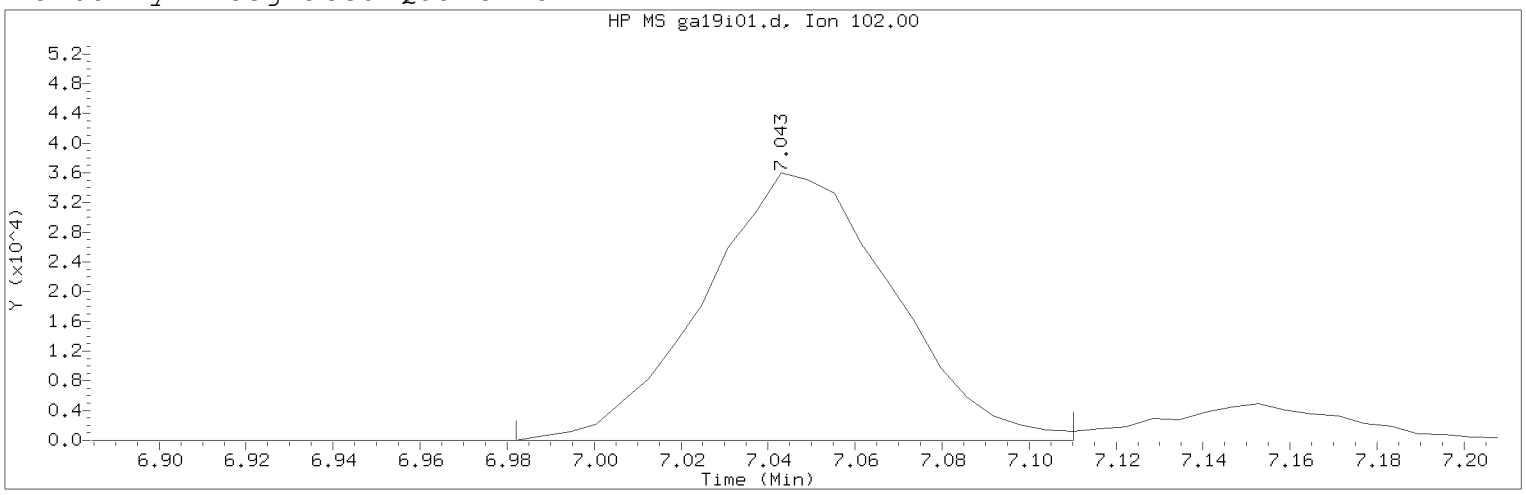
Compound Number : 32
Compound Name : n-Hexane
Scan Number : 523
Retention Time (minutes): 4.775
Quant Ion : 57.00
Area : 2101631
On-column Amount (ng) : 25.0000
Integration start scan : 498 Integration stop scan: 556
Y at integration start : 2508 Y at integration end: 726

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. m.d.c.7402

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

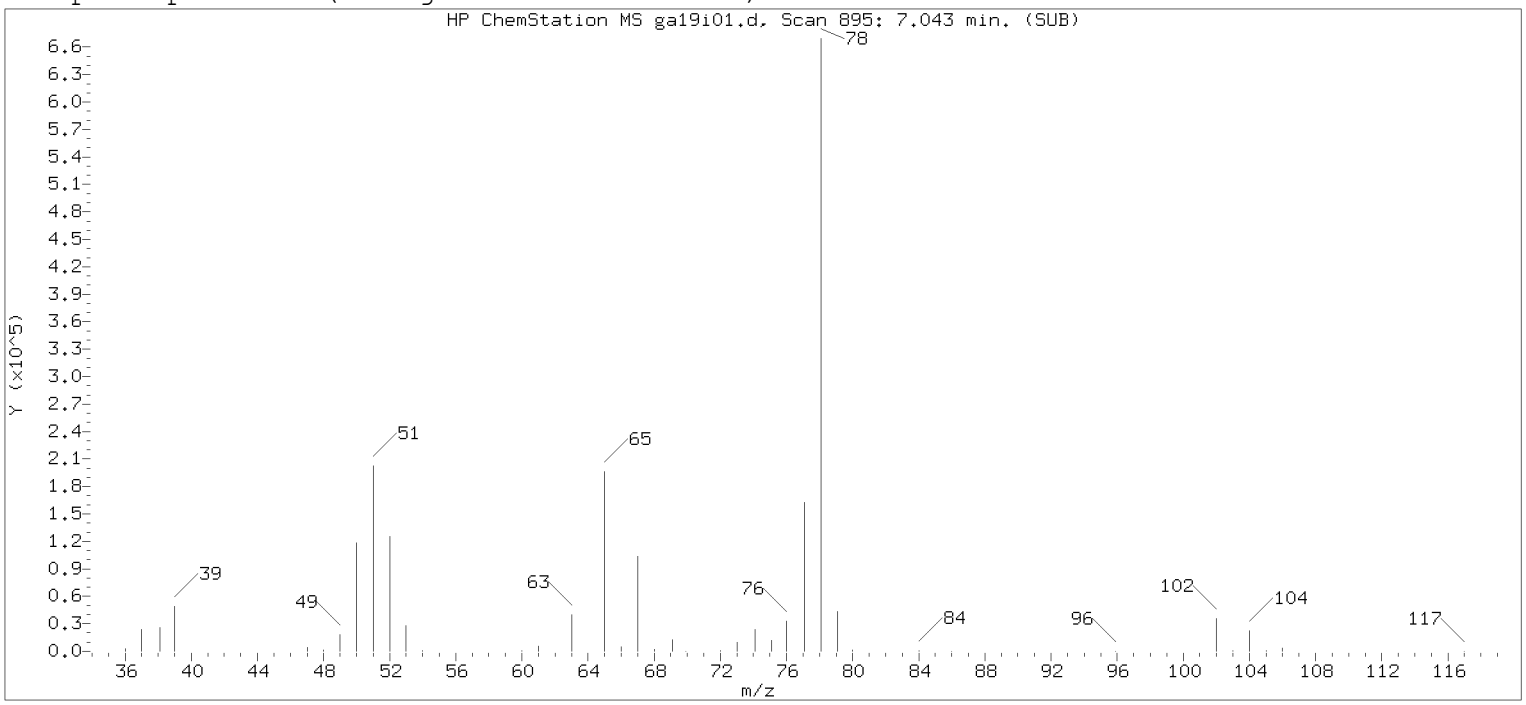
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 895
Retention Time (minutes): 7.043
Quant Ion : 102.00
Area (flag) : 108673M
On-Column Amount (ng) : 10.0000
Integration start scan : 884 Integration stop scan: 905
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

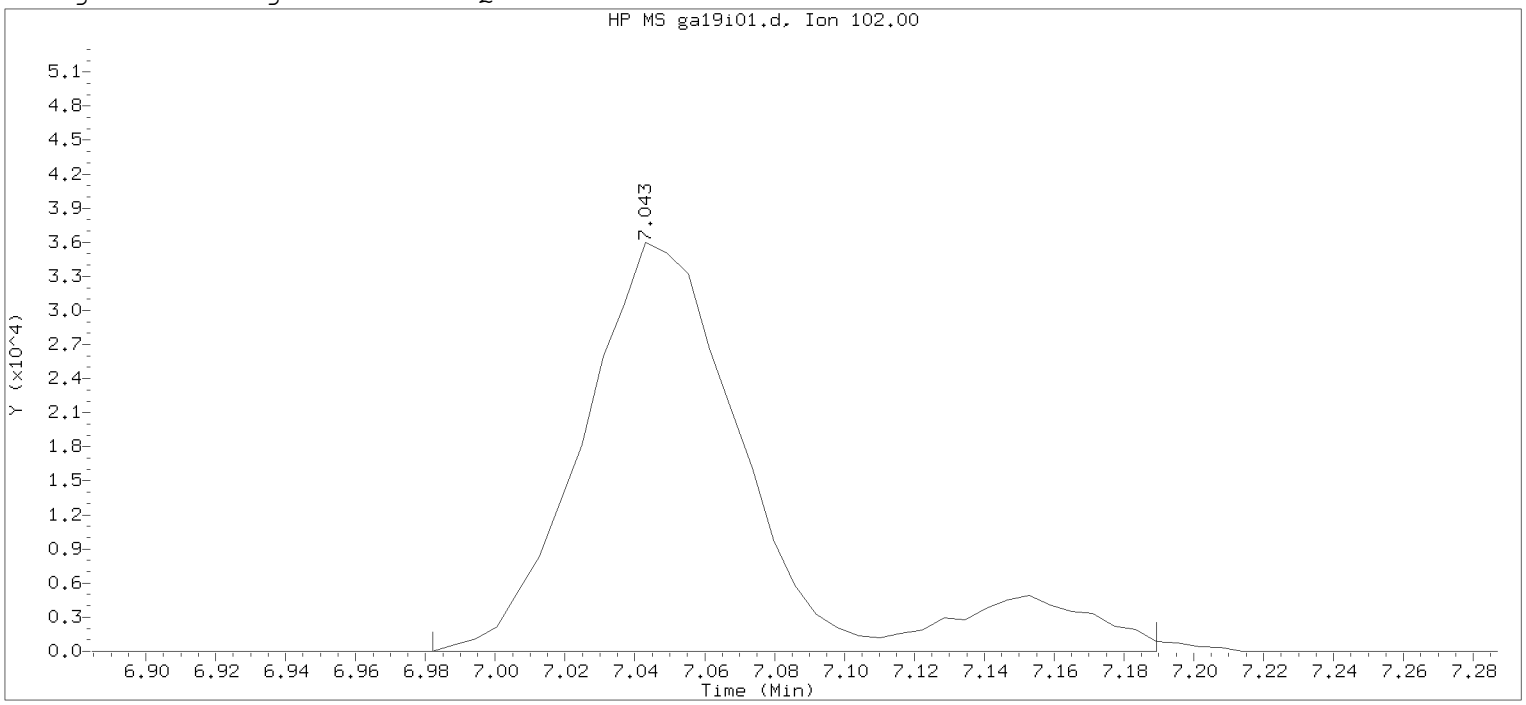
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

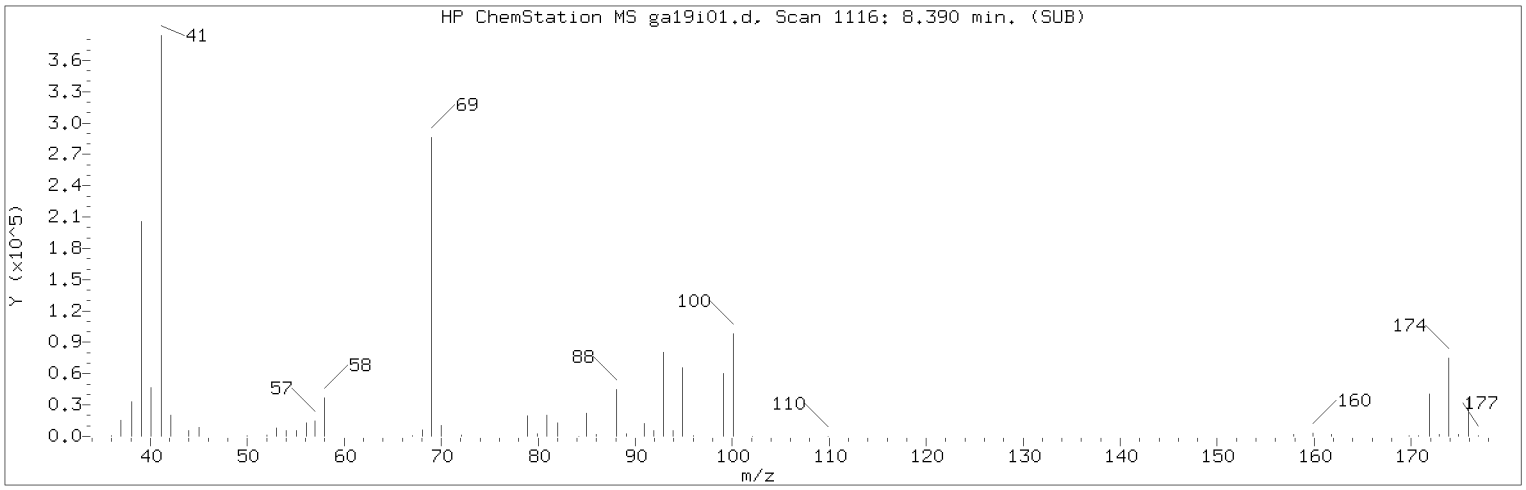
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

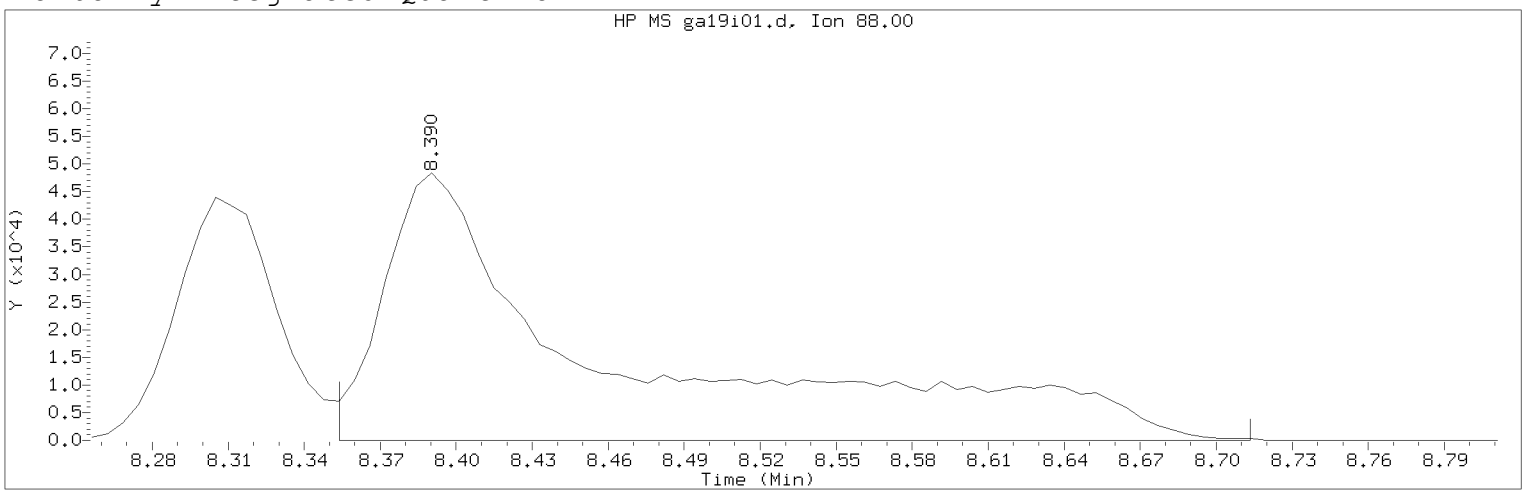
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 895
Retention Time (minutes): 7.043
Quant Ion : 102.00
Area : 122473
On-column Amount (ng) : 10.0000
Integration start scan : 884 Integration stop scan: 918
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. AE06 m.dll 7.4.0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

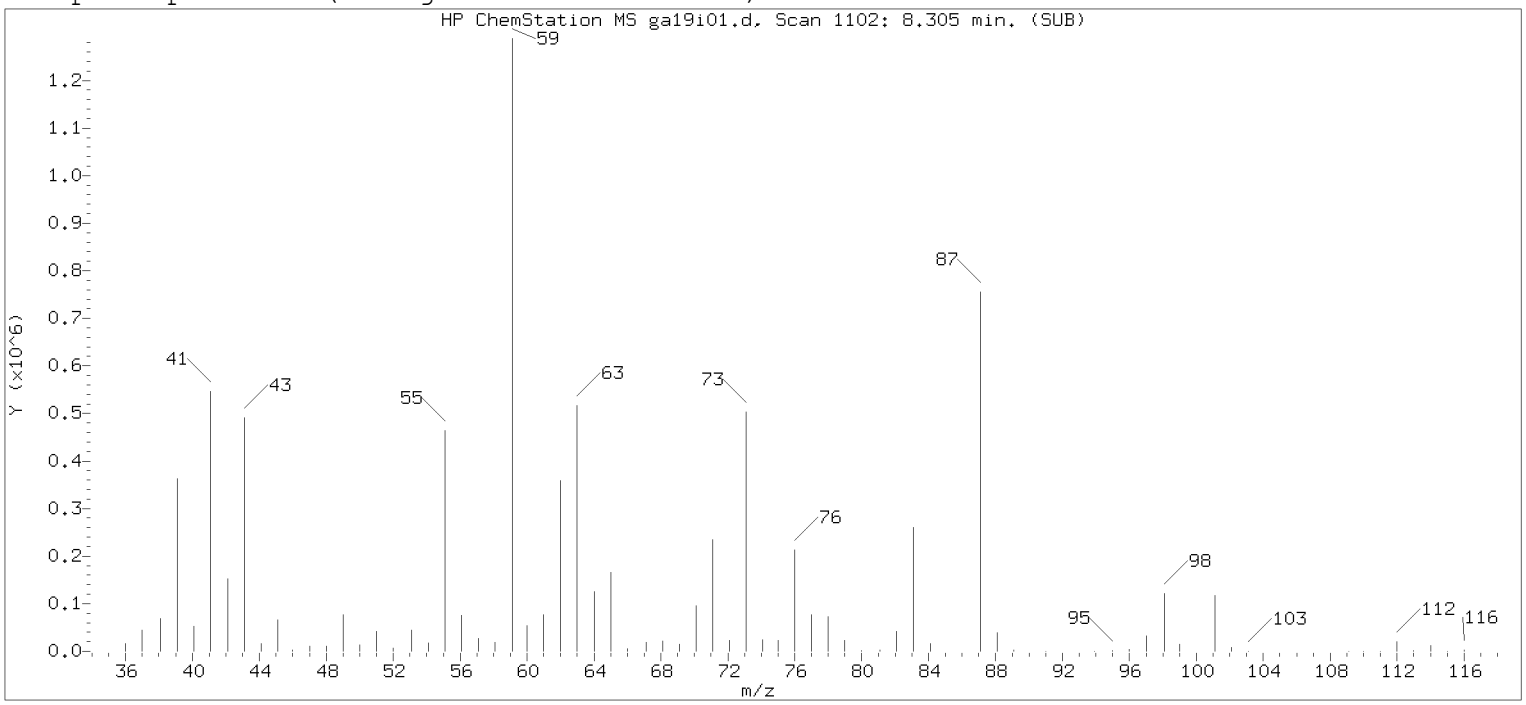
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 297580M
On-Column Amount (ng) : 1250.0000
Integration start scan : 1109 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

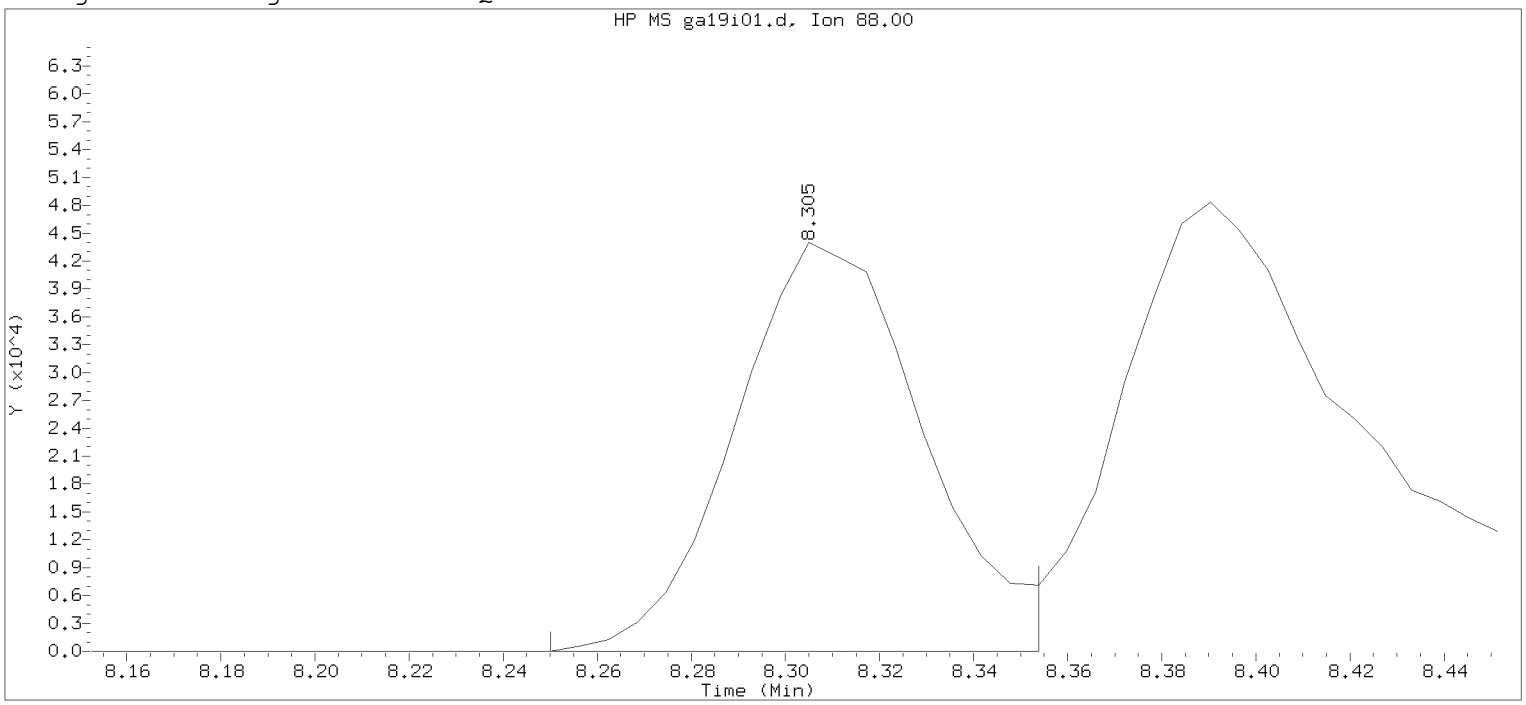
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

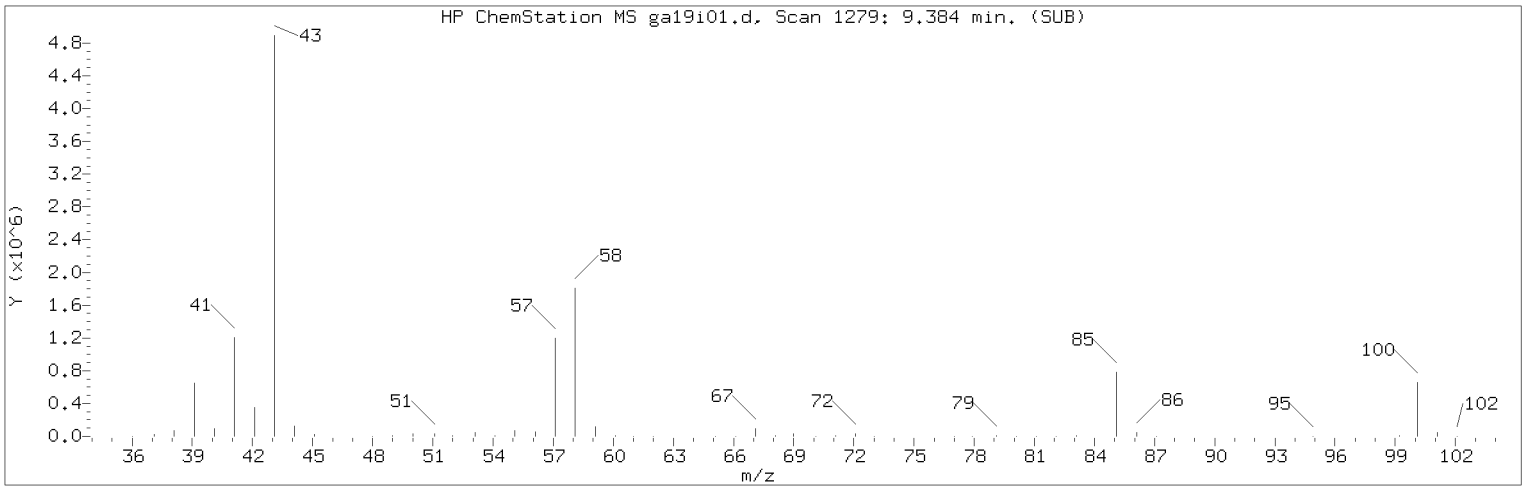
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

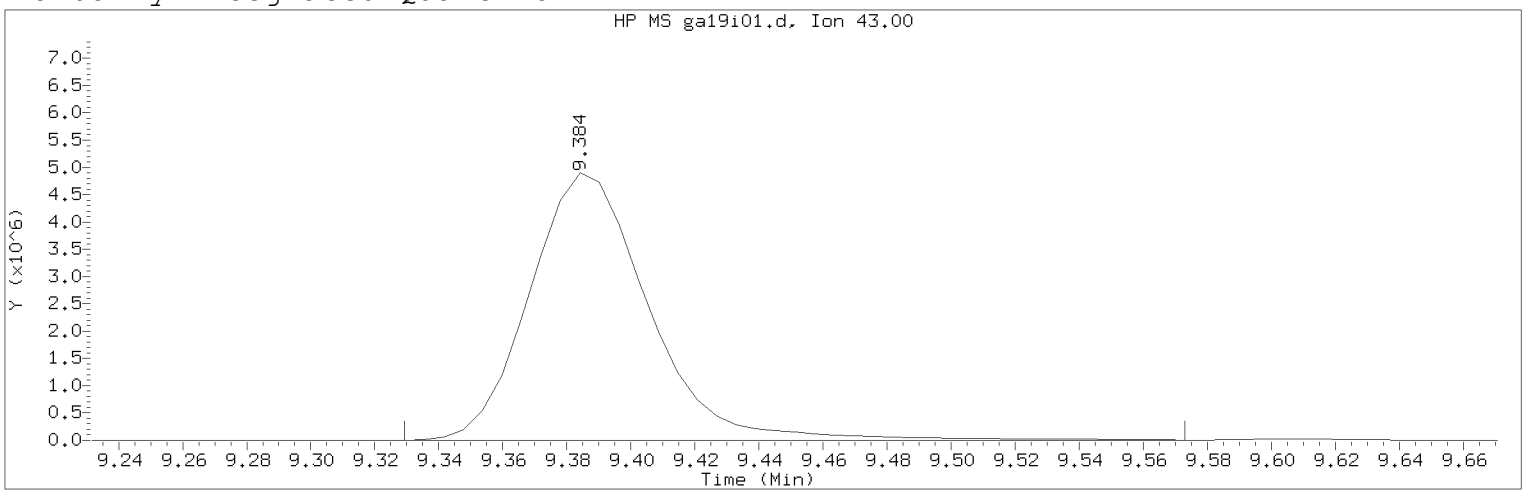
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 88.00		
Area	: 121426		
On-column Amount (ng)	: 1250.0000		
Integration start scan	: 1092	Integration stop scan:	1109
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Method: 7406

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

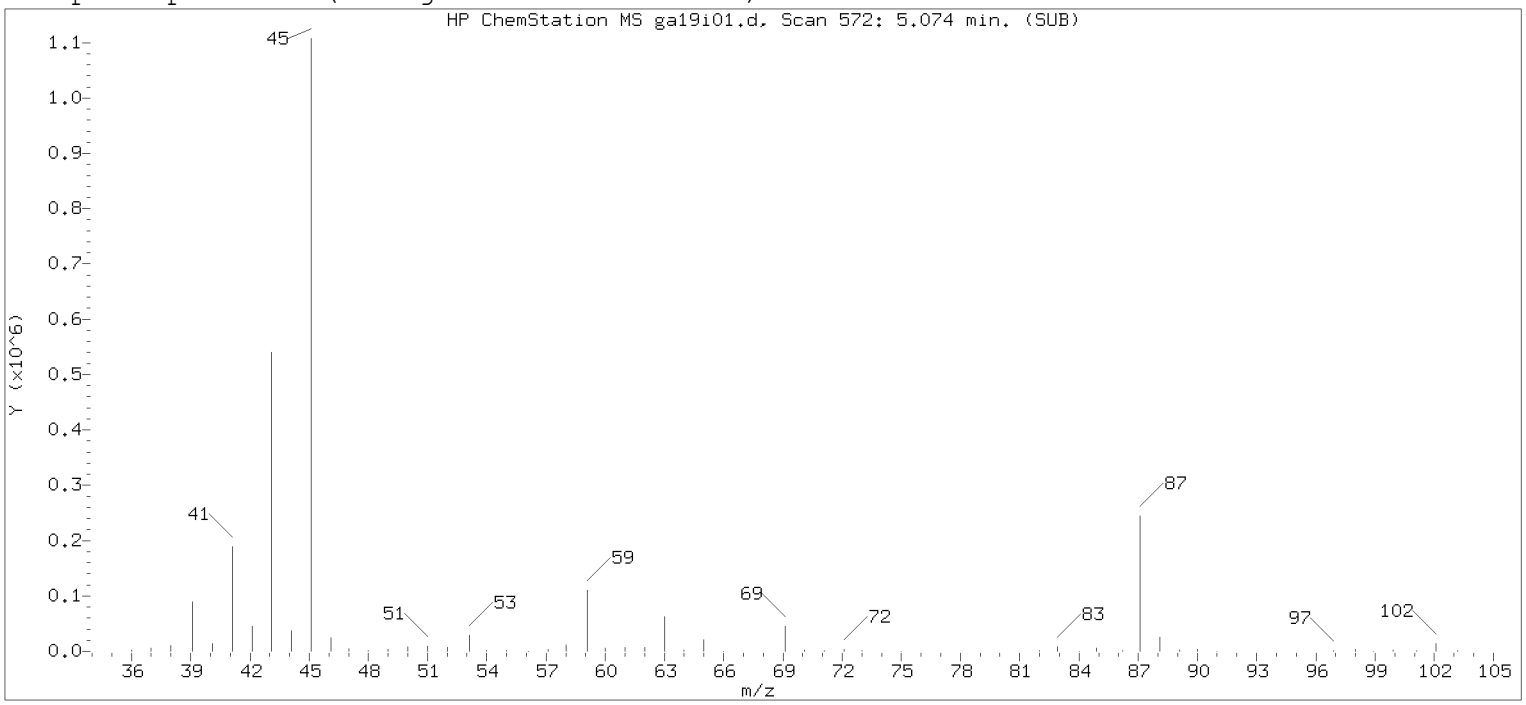
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 12625487M
On-Column Amount (ng) : 250.0000
Integration start scan : 1269 Integration stop scan: 1309
Y at integration start : 632 Y at integration end: 632

Reason for manual integration: improper integration

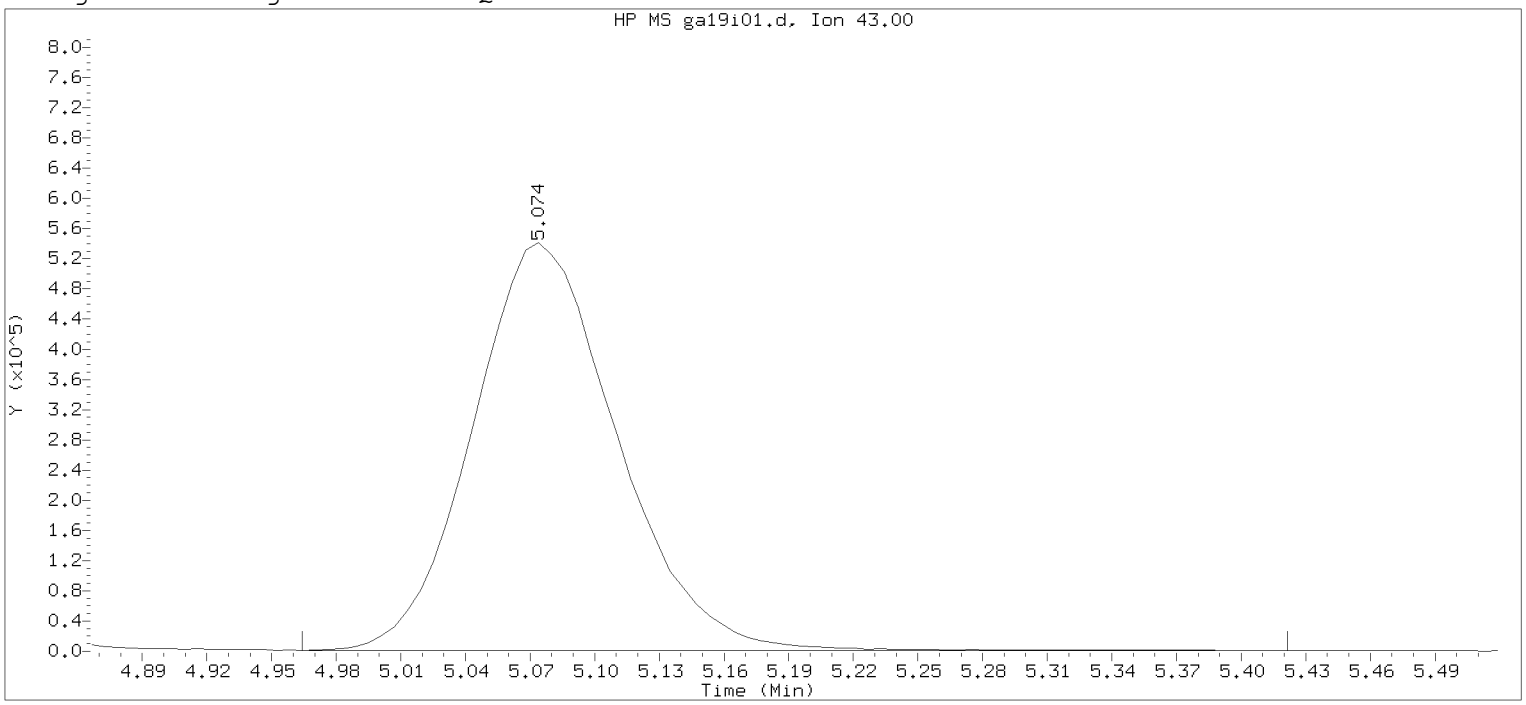
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

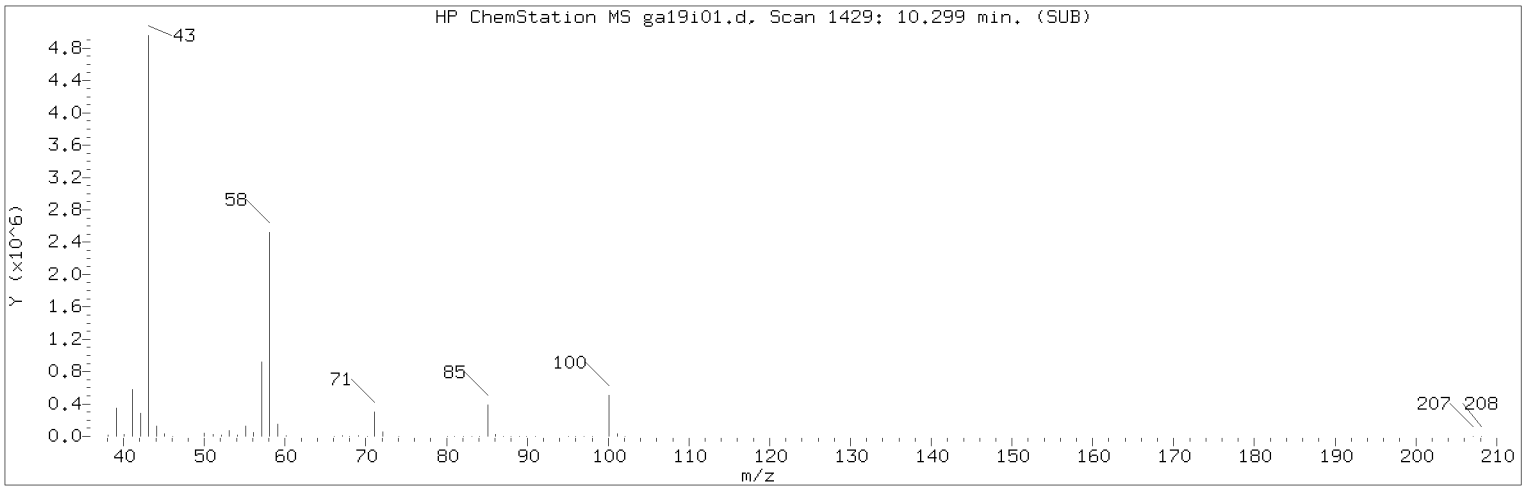
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

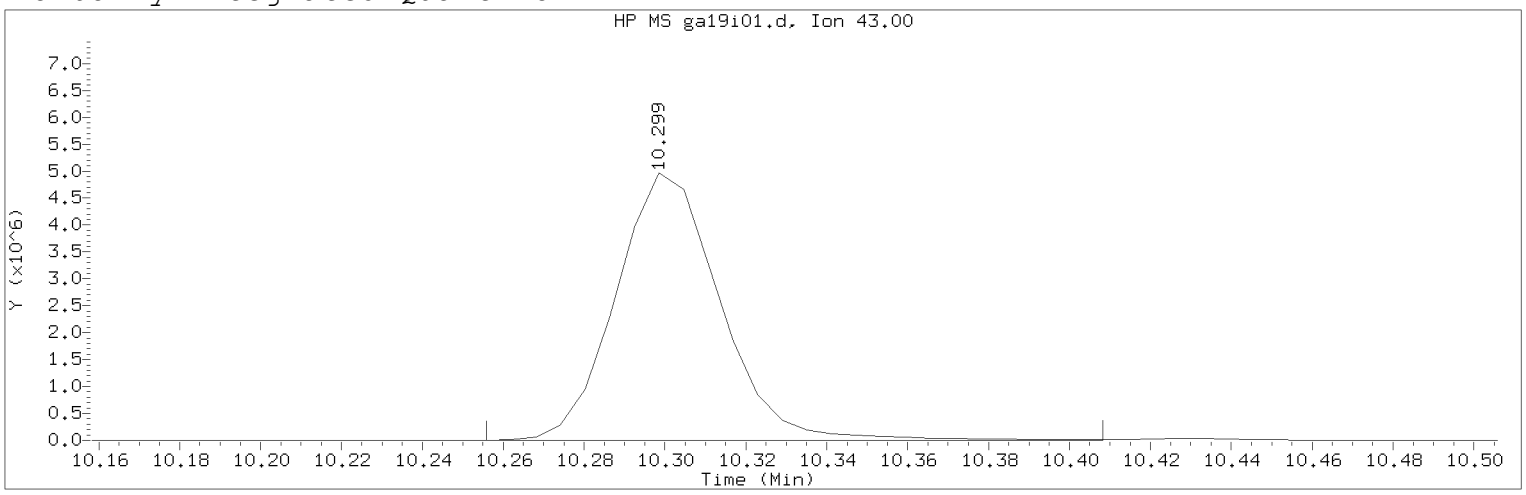
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 2516114
On-column Amount (ng) : 250.0000
Integration start scan : 553 Integration stop scan: 628
Y at integration start : 1185 Y at integration end: 789

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. AE06 mdl 07/30/2015

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

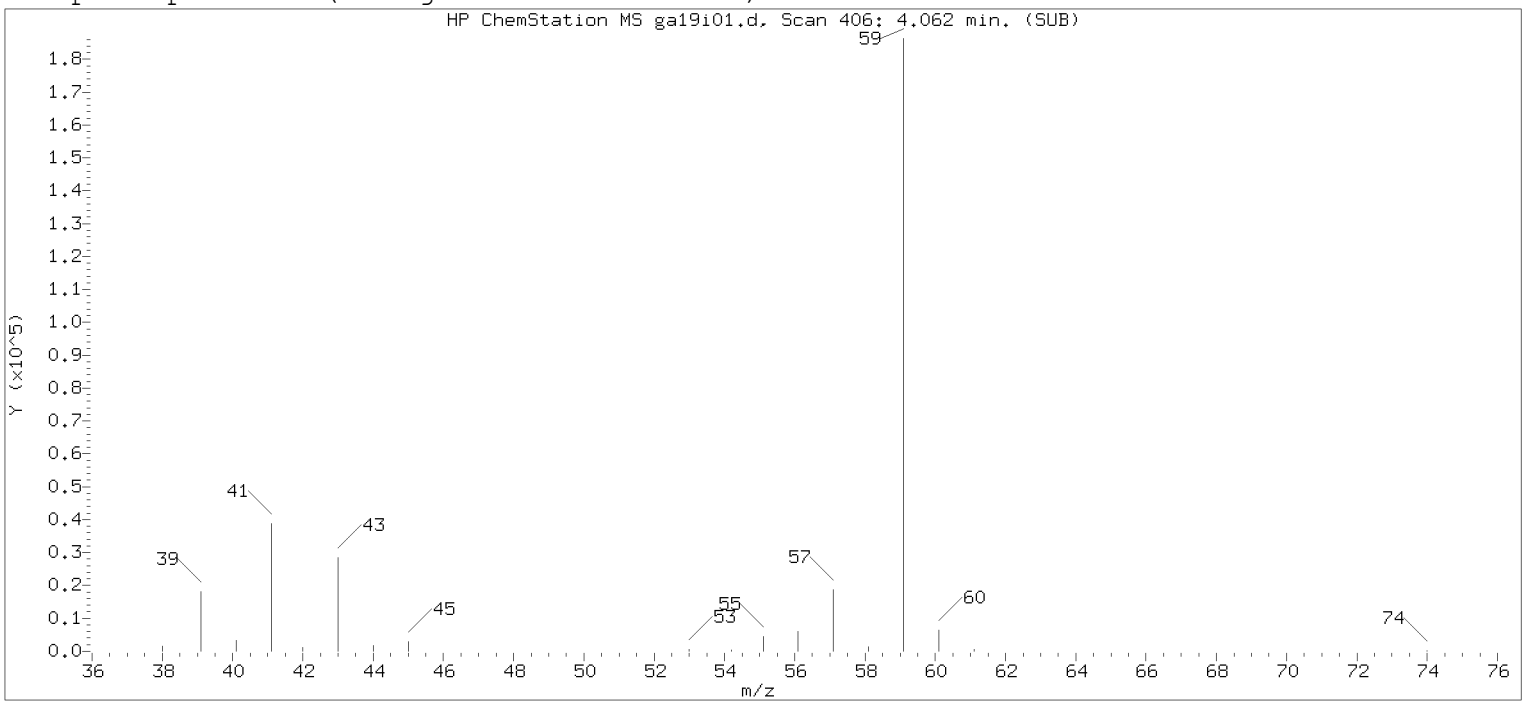
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 8861239M
On-Column Amount (ng) : 250.0000
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 389 Y at integration end: 389

Reason for manual integration: improper integration

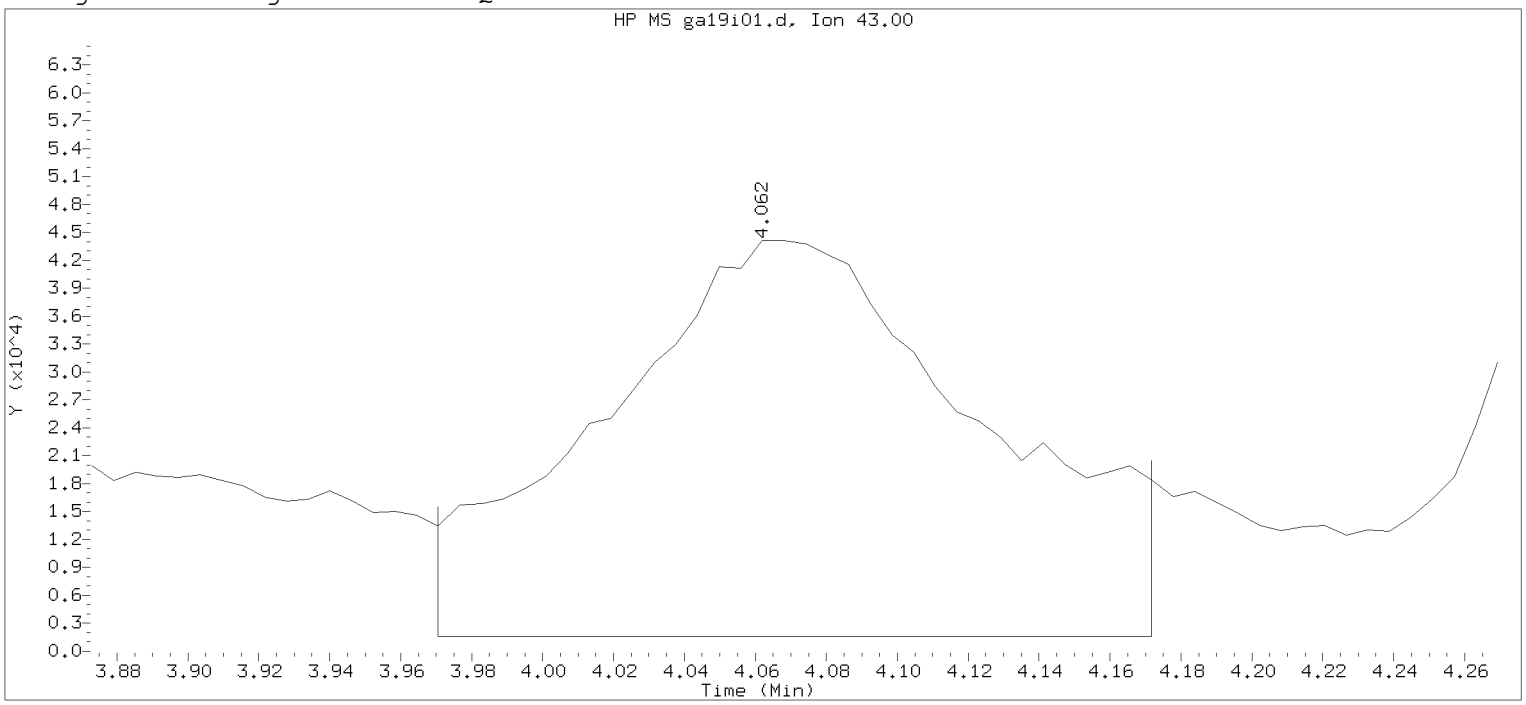
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

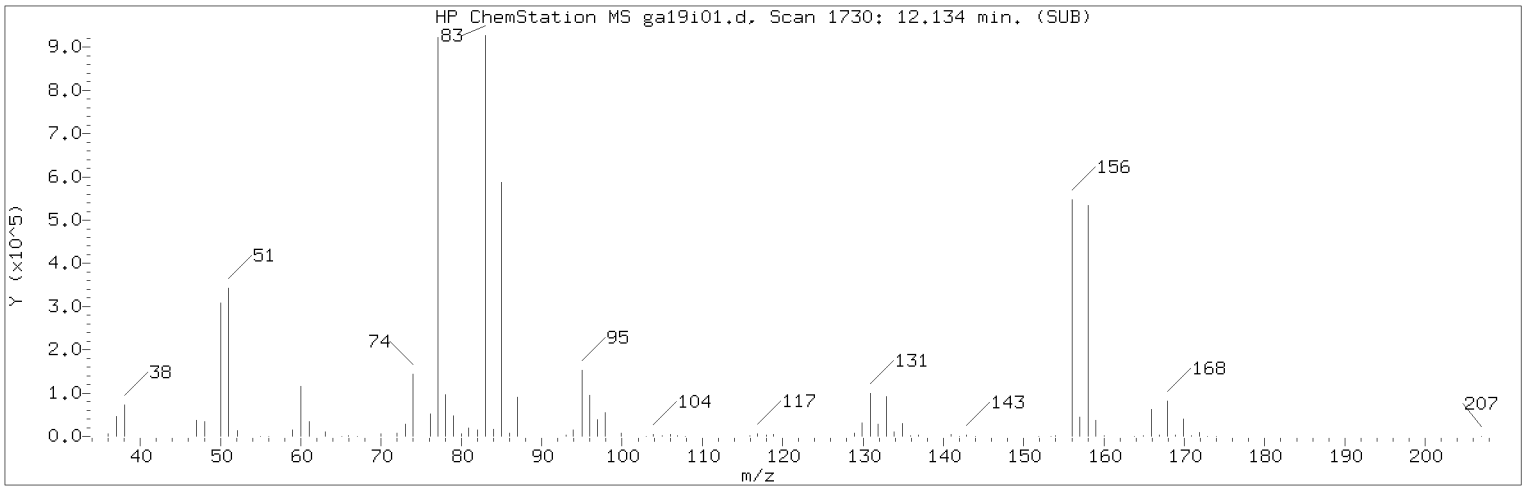
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

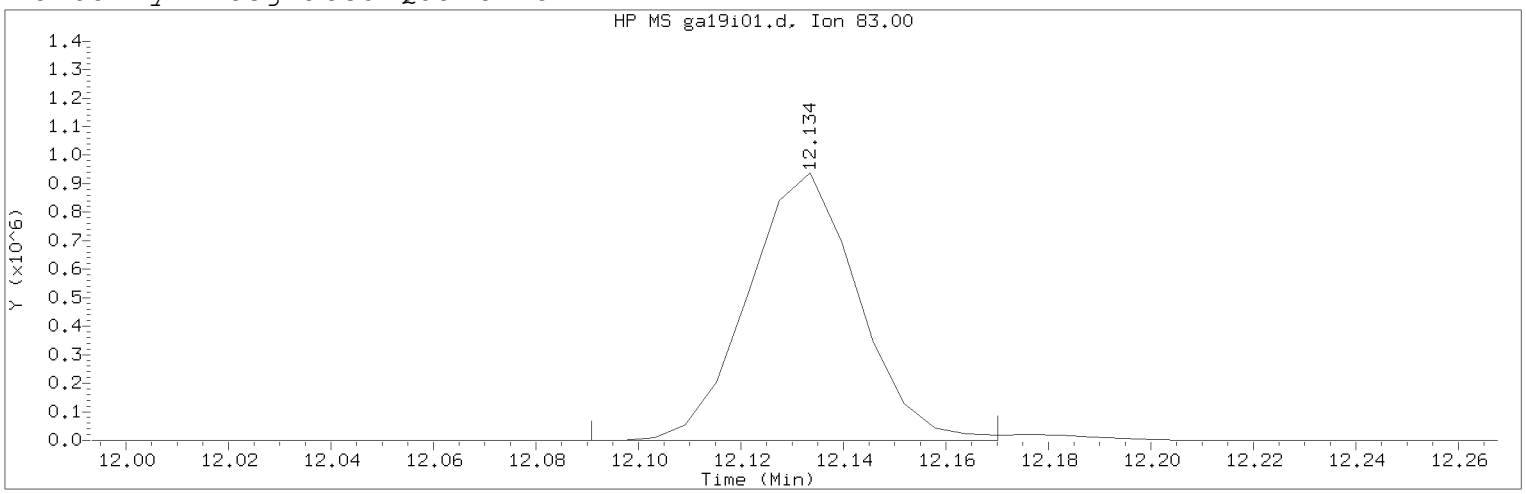
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 43.00
Area : 319163
On-column Amount (ng) : 250.0000
Integration start scan : 390 Integration stop scan: 423
Y at integration start : 1558 Y at integration end: 1558

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Method: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

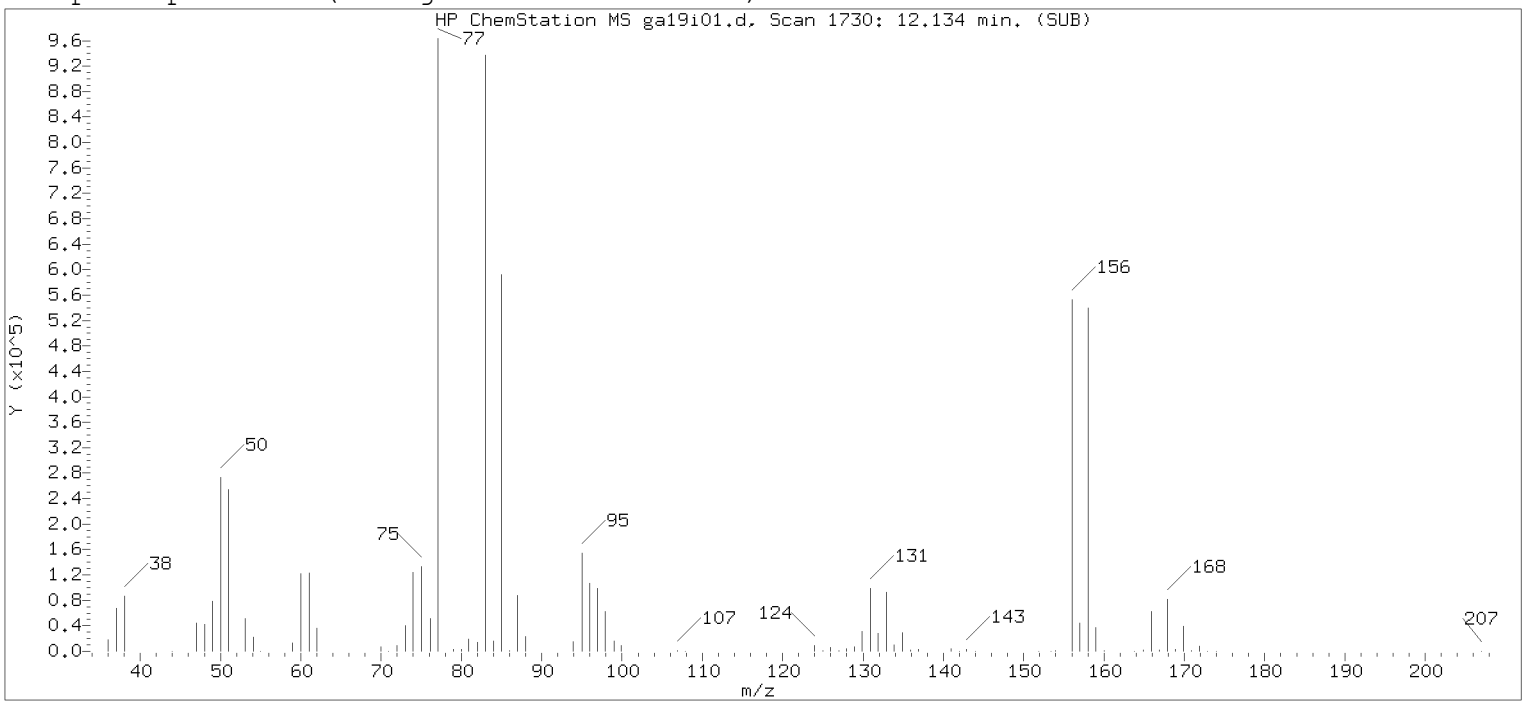
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 1397464M
On-Column Amount (ng) : 25.0000
Integration start scan : 1722 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

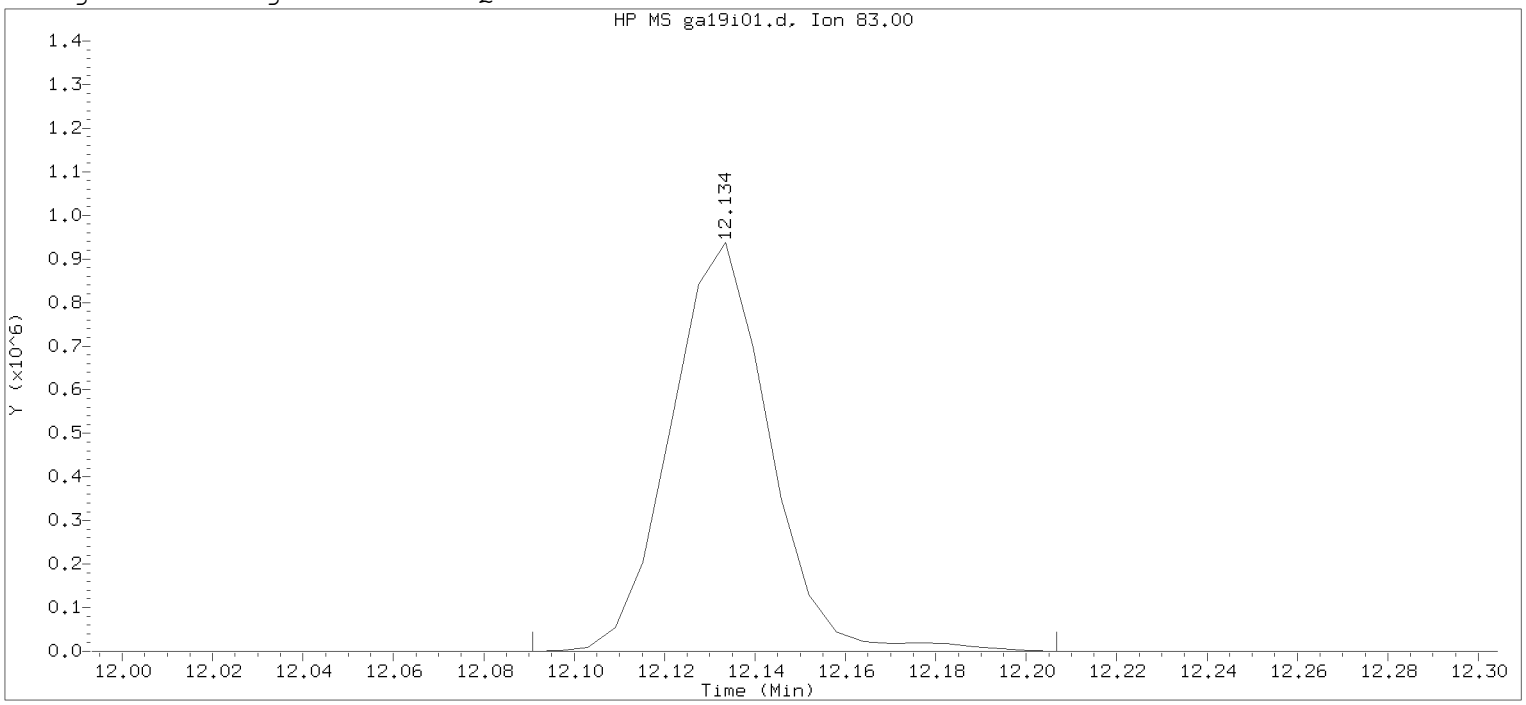
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



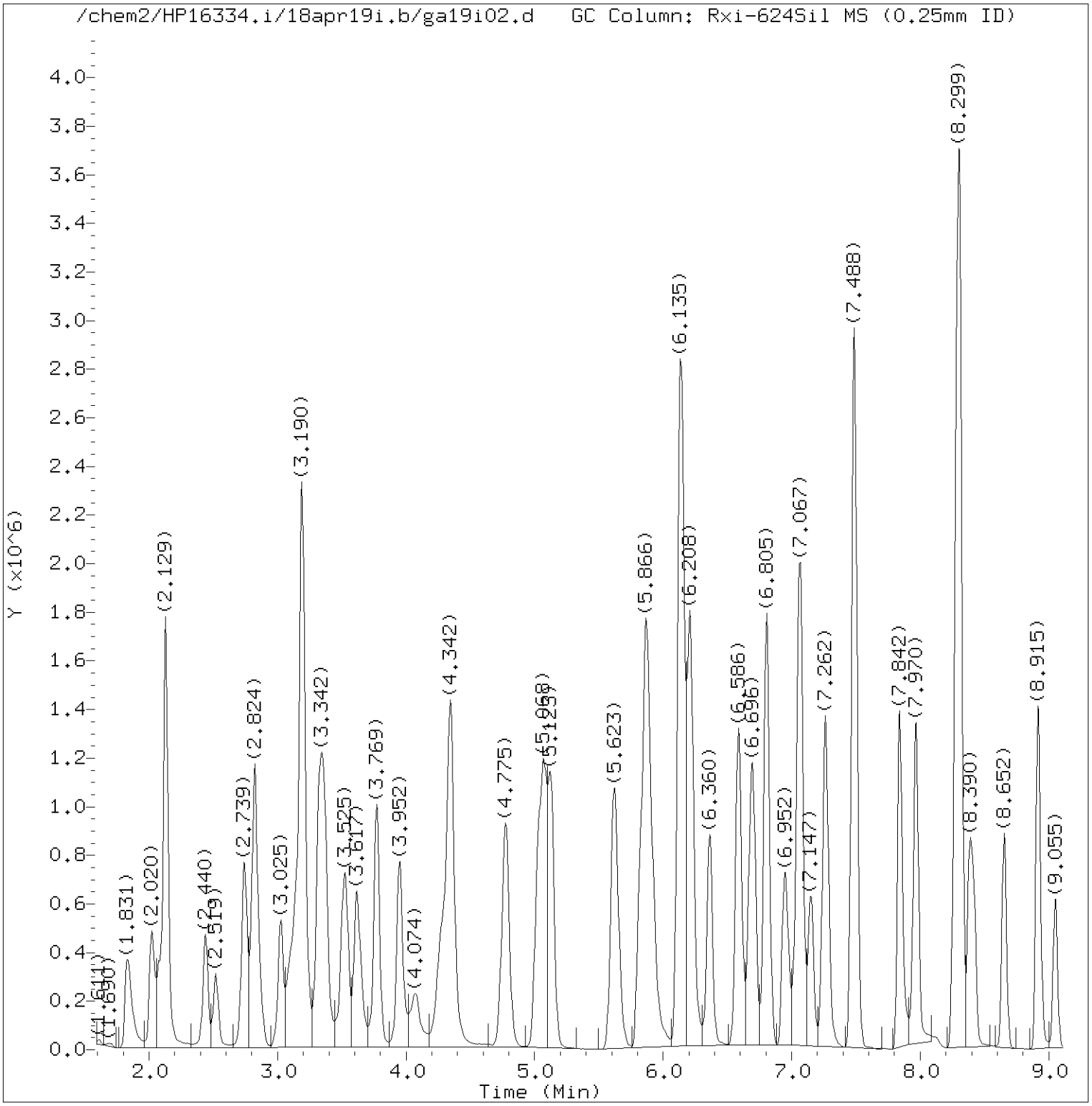
Data File: /chem2/HP16334.i/18apr19i.b/ga19i01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:22 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 12:38
Date, time and analyst ID of latest file update: 19-Apr-2018 12:38 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 1418149
On-column Amount (ng) : 25.0000
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Method: 7470



Total Ion Chromatogram (TIC)

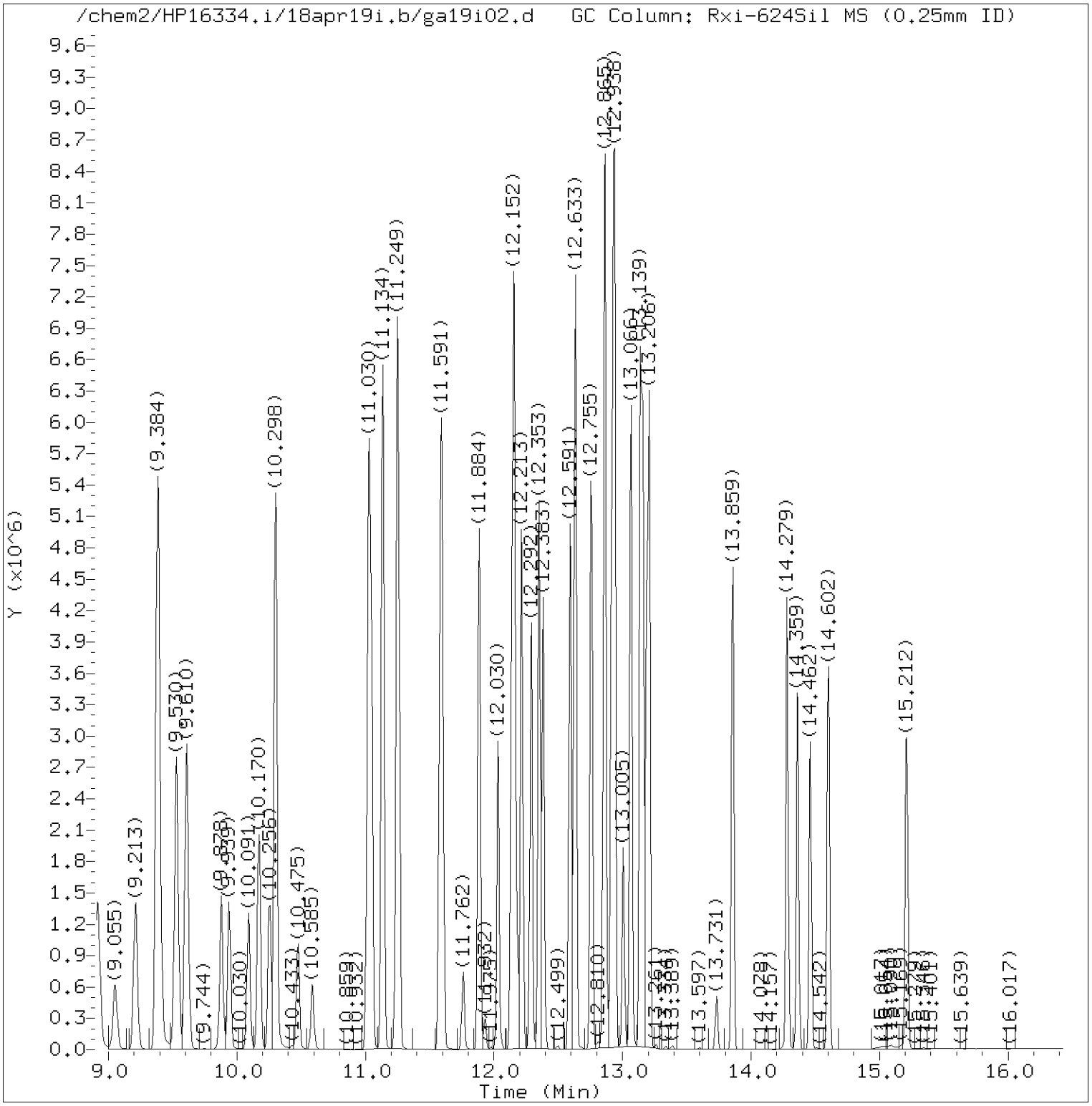
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	867459	10.560
2) Chloromethane	(2)	2.020	50	822489	10.487
5) Vinyl Chloride	(2)	2.129	62	722889	10.462
6) 1,3-Butadiene	(2)	2.129	39	1225843	10.871
7) Bromomethane	(2)	2.440	94	473509	10.327
8) Chloroethane	(2)	2.519	64	399550	10.339
9) Dichlorofluoromethane	(2)	2.745	67	946328	10.326
10) Trichlorofluoromethane	(2)	2.806	101	956285M	10.340
11) Ethyl ether	(2)	3.025	59	464763	10.365
12) Freon 123a	(2)	3.117	67	650928	10.283
13) Acrolein	(1)	3.190	56	3897371	523.371
15) 1,1-Dichloroethene	(2)	3.318	96	447547	10.123
14) Acetone	(1)	3.349	43	1151552	103.590
16) Freon 113	(2)	3.361	101	530460	10.199
17) Methyl Iodide	(2)	3.513	142	892813	10.166
18) Carbon Disulfide	(2)	3.617	76	1730265	10.145
21) Methyl Acetate	(1)	3.745	43	338790M	9.958
22) Allyl Chloride	(2)	3.769	41	1035977	10.074
23) Methylene Chloride	(2)	3.946	84	546940	10.187
26)*t-Butyl Alcohol-d10	(1)	3.952	65	219199	50.000
28) t-Butyl Alcohol	(1)	4.080	59	779790	211.902
29) Acrylonitrile	(1)	4.269	53	710419	51.198
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	1601834	10.127
31) trans-1,2-Dichloroethene	(2)	4.348	96	524574	10.176
32) n-Hexane	(2)	4.775	57	915834	10.132
33) 1,1-Dichloroethane	(2)	5.025	63	1077126	10.166
34) di-Isopropyl Ether	(2)	5.074	45	2208765	10.104
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	992527	10.152
37) Ethyl t-butyl ether	(2)	5.623	59	1962075	10.130
38) 2-Butanone	(1)	5.824	43	2155118	102.932
39) cis-1,2-Dichloroethene	(2)	5.866	96	600189	10.123
41) 2,2-Dichloropropane	(2)	5.885	77	907034	10.105
42) Propionitrile	(1)	5.921	54	1087481	203.915
40) 1,2-Dichloroethene (Total)	(2)		96	1124763	20.299
45) Methacrylonitrile	(1)	6.135	67	1726030	102.963
47) Bromochloromethane	(2)	6.208	128	278937	10.086
48) Tetrahydrofuran	(1)	6.214	71	522212	102.677
49) Chloroform	(2)	6.360	83	1029991	10.070

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	549270	10.050
50)$Dibromofluoromethane	(2)	6.586	111	565657	10.077
51) 1,1,1-Trichloroethane	(2)	6.592	97	881601	10.051
52) Cyclohexane	(2)	6.689	56	1068011	10.142
52) Cyclohexane	(2)	6.696	84	825057	10.199
52) Cyclohexane	(2)	6.696	69	310148	10.143
54) Carbon Tetrachloride	(2)	6.805	117	747093	10.063
55) 1,1-Dichloropropene	(2)	6.805	75	816391	10.125
56) Isobutyl Alcohol	(1)	6.952	41	810131	517.483
57)$1,2-Dichloroethane-d4	(2)	7.043	102	114605	10.030
57)$1,2-Dichloroethane-d4	(2)	7.043	65	651324	10.061
57)$1,2-Dichloroethane-d4	(2)	7.037	104	68857	9.689
58) Benzene	(2)	7.067	78	2229473	10.064
59) 1,2-Dichloroethane	(2)	7.153	62	755804	10.012
60) t-Amyl methyl ether	(2)	7.262	73	1674991	10.025
63)*Fluorobenzene	(2)	7.482	96	2172211	10.000
62) n-Heptane	(2)	7.494	43	1077641	9.997
65) n-Butanol	(1)	7.842	56	1383869	1026.533
67) Trichloroethene	(2)	7.970	95	594884	10.063
69) Methylcyclohexane	(2)	8.281	83	1036688	10.078
70) 1,2-Dichloropropane	(2)	8.305	63	628043	10.043
71) Methyl Methacrylate	(1)	8.384	69	334395	10.167
72) 1,4-Dioxane	(1)	8.390	88	126261M	517.060
73) Dibromomethane	(2)	8.415	93	298000	9.956
74) Bromodichloromethane	(2)	8.652	83	768427	9.920
76) 2-Nitropropane	(1)	8.915	41	1221787	100.812
80) cis-1,3-Dichloropropene	(2)	9.213	75	960653	9.877
81) 4-Methyl-2-Pentanone	(1)	9.384	43	5401892M	103.830
82)$Toluene-d8	(3)	9.530	98	2216725	10.029
82)$Toluene-d8	(3)	9.530	100	1414585	9.999
83) Toluene	(3)	9.610	92	1418514	10.050
84) trans-1,3-Dichloropropene	(3)	9.878	75	829727	9.925
86) Ethyl Methacrylate	(3)	9.939	69	731679	10.008
88) 1,1,2-Trichloroethane	(3)	10.091	97	426440	10.006
85) 1,3-Dichloropropene (total)	(3)		75	1790380	19.802
89) Tetrachloroethene	(3)	10.170	166	657662	10.049
90) 1,3-Dichloropropane	(3)	10.256	76	777575	10.066
91) 2-Hexanone	(1)	10.298	43	3809911M	104.074

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	525341	9.848
95) 1,2-Dibromoethane	(3)	10.585	107	416983	9.992
97)*Chlorobenzene-d5	(3)	11.018	117	1651185	10.000
98) Chlorobenzene	(3)	11.048	112	1621339	10.070
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	580478	9.901
100) Ethylbenzene	(3)	11.134	91	2818638	10.112
101) m+p-Xylene	(3)	11.249	106	2180827	20.080
104) o-Xylene	(3)	11.585	106	1100027	9.923
106) Styrene	(3)	11.597	104	1847971	9.919
105) Xylene (Total)	(3)		106	3280854	30.003
107) Bromoform	(3)	11.762	173	314090	9.633
108) Isopropylbenzene	(3)	11.884	105	2849333	10.045
111)$4-Bromofluorobenzene	(3)	12.030	95	848986	10.013
111)$4-Bromofluorobenzene	(3)	12.030	174	729017	10.020
113) 1,1,2,2-Tetrachloroethane	(4)	12.133	83	568890M	10.012
114) Bromobenzene	(4)	12.146	156	739206	9.959
116) 1,2,3-Trichloropropane	(4)	12.176	110	157314	10.165
117) n-Propylbenzene	(4)	12.213	91	3402211	10.234
119) 2-Chlorotoluene	(4)	12.292	126	673978	10.076
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	2479223	10.120
122) 4-Chlorotoluene	(4)	12.383	126	709530	10.061
125) tert-Butylbenzene	(4)	12.591	134	510020	9.953
126) Pentachloroethane	(4)	12.627	167	442688	9.667
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	2533554	10.054
128) sec-Butylbenzene	(4)	12.755	105	3158992	10.129
131) 1,3-Dichlorobenzene	(4)	12.859	146	1477303	9.955
132) p-Isopropyltoluene	(4)	12.865	119	2771578	10.044
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	931947	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	1481422	9.948
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	1121441	9.926
136) Benzyl Chloride	(4)	13.005	126	230287	9.736
138) n-Butylbenzene	(4)	13.158	92	1468416	10.040
139) 1,2-Dichlorobenzene	(4)	13.188	146	1398212	10.005
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	87929	9.872
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	1232435	9.928
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	1150774	9.959
146) Hexachlorobutadiene	(4)	14.365	225	594628	9.999
147) Naphthalene	(4)	14.462	128	1938040	10.057

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.602	180	981001	9.966

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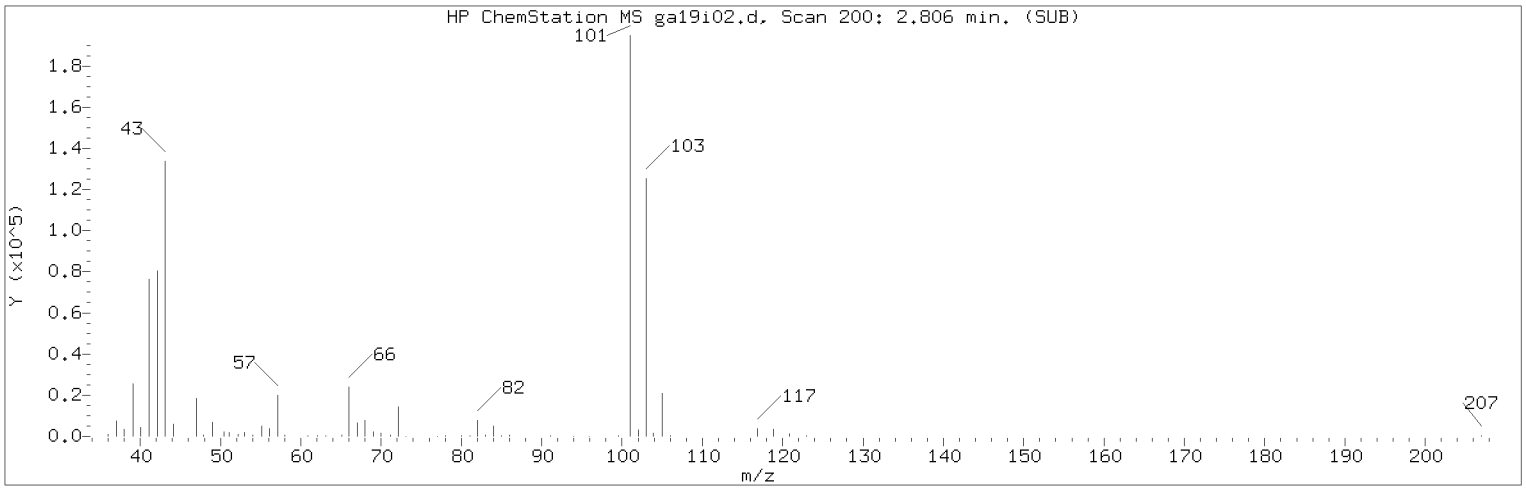
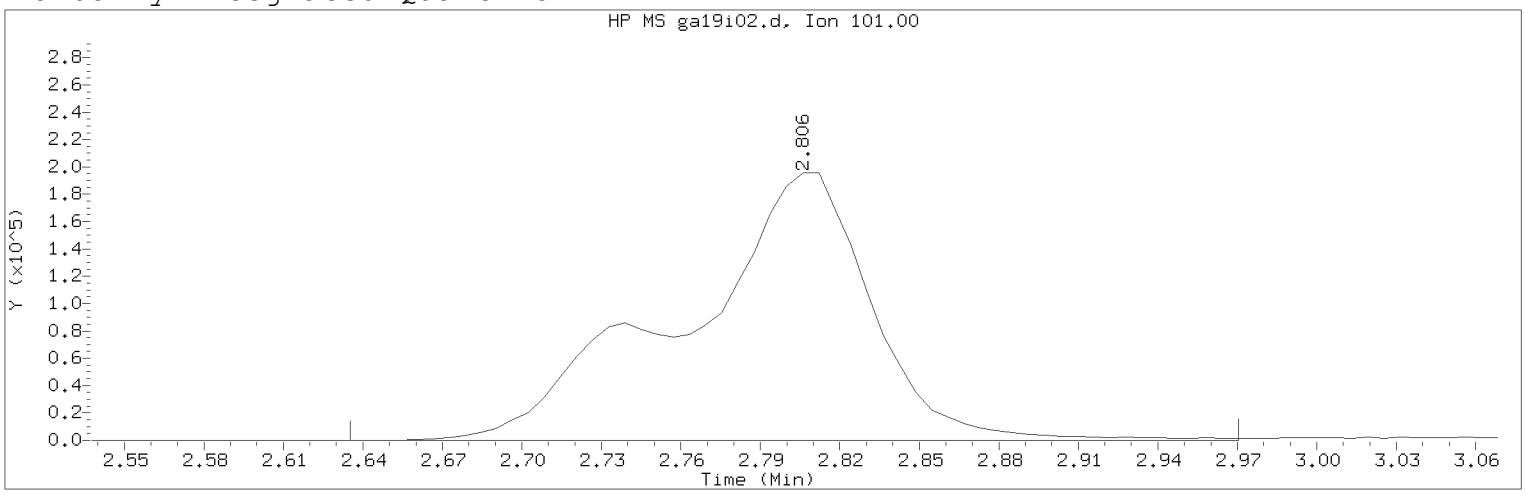
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

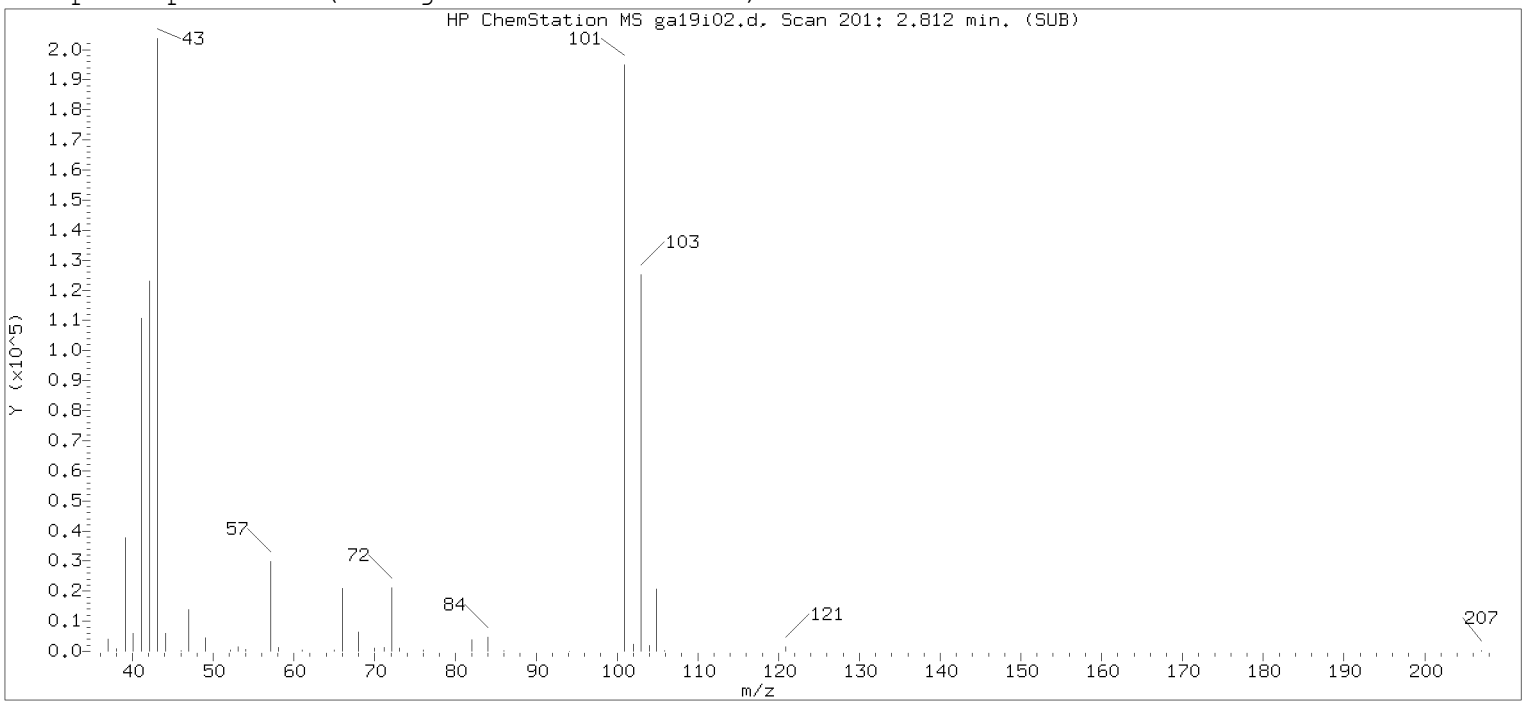
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 956285M
On-Column Amount (ng) : 10.3403
Integration start scan : 171 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

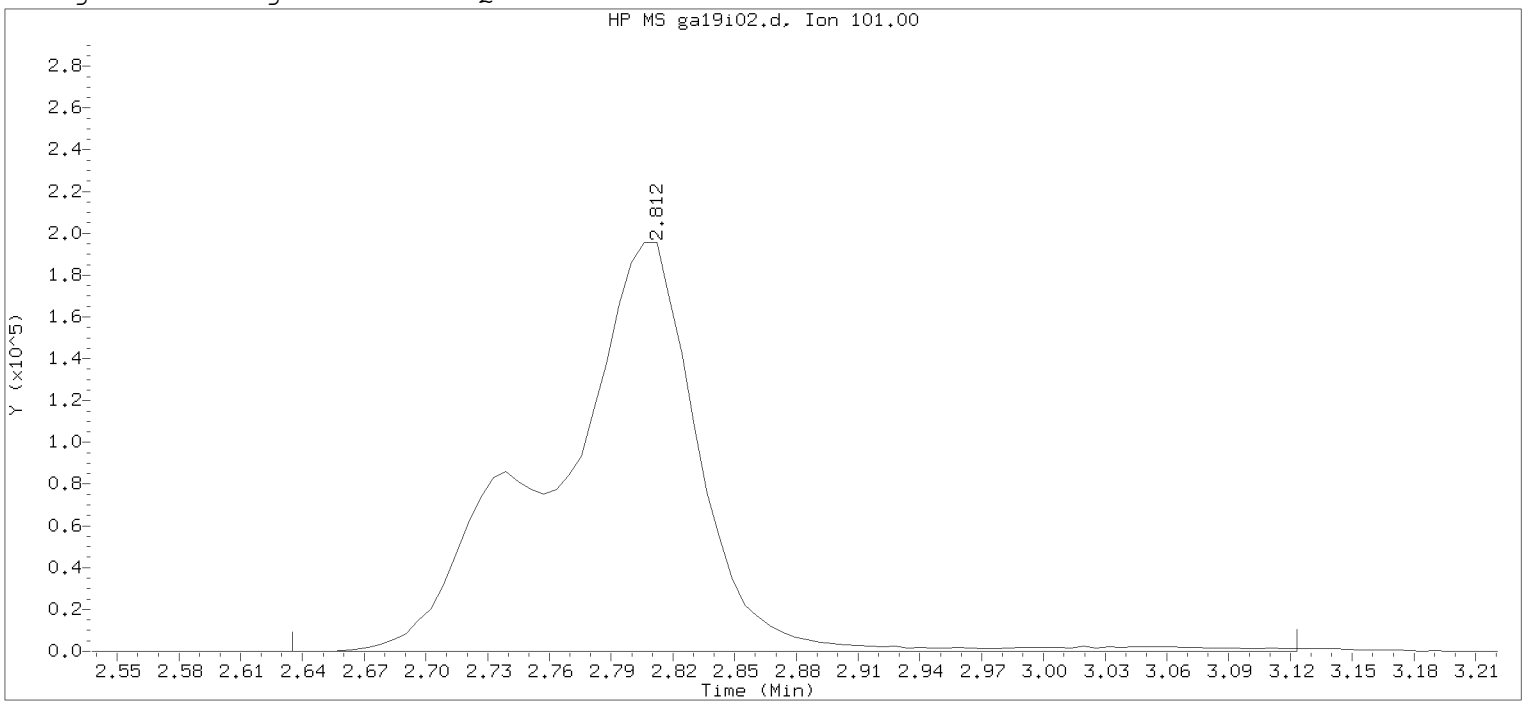
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

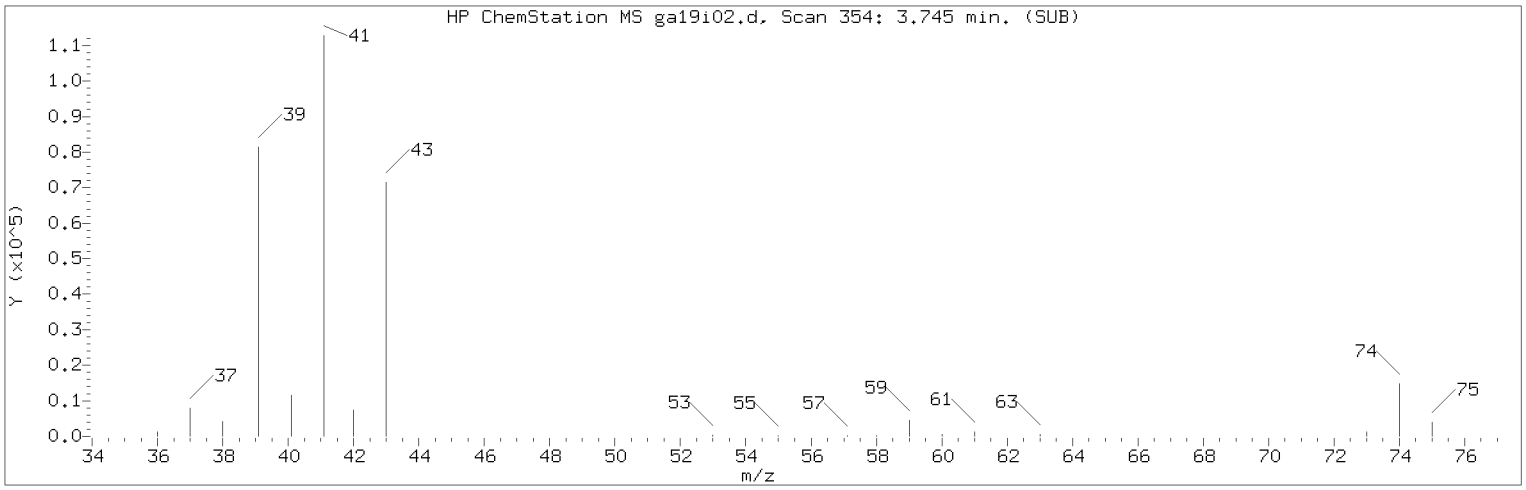
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

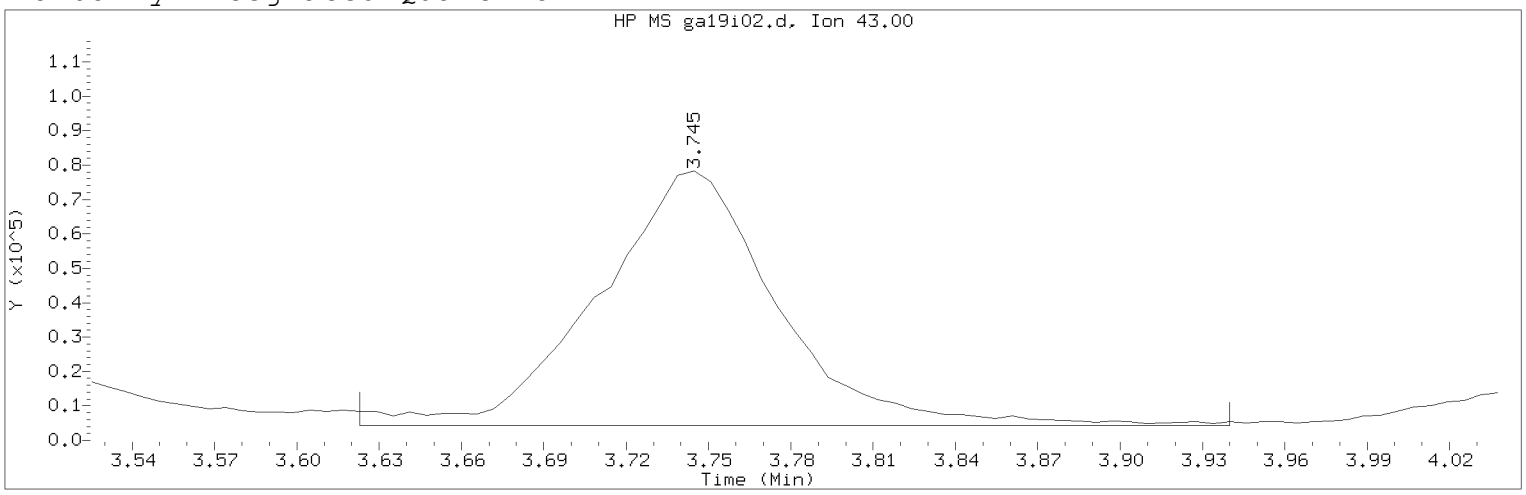
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area : 971712
On-column Amount (ng) : 10.3423
Integration start scan : 171 Integration stop scan: 251
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

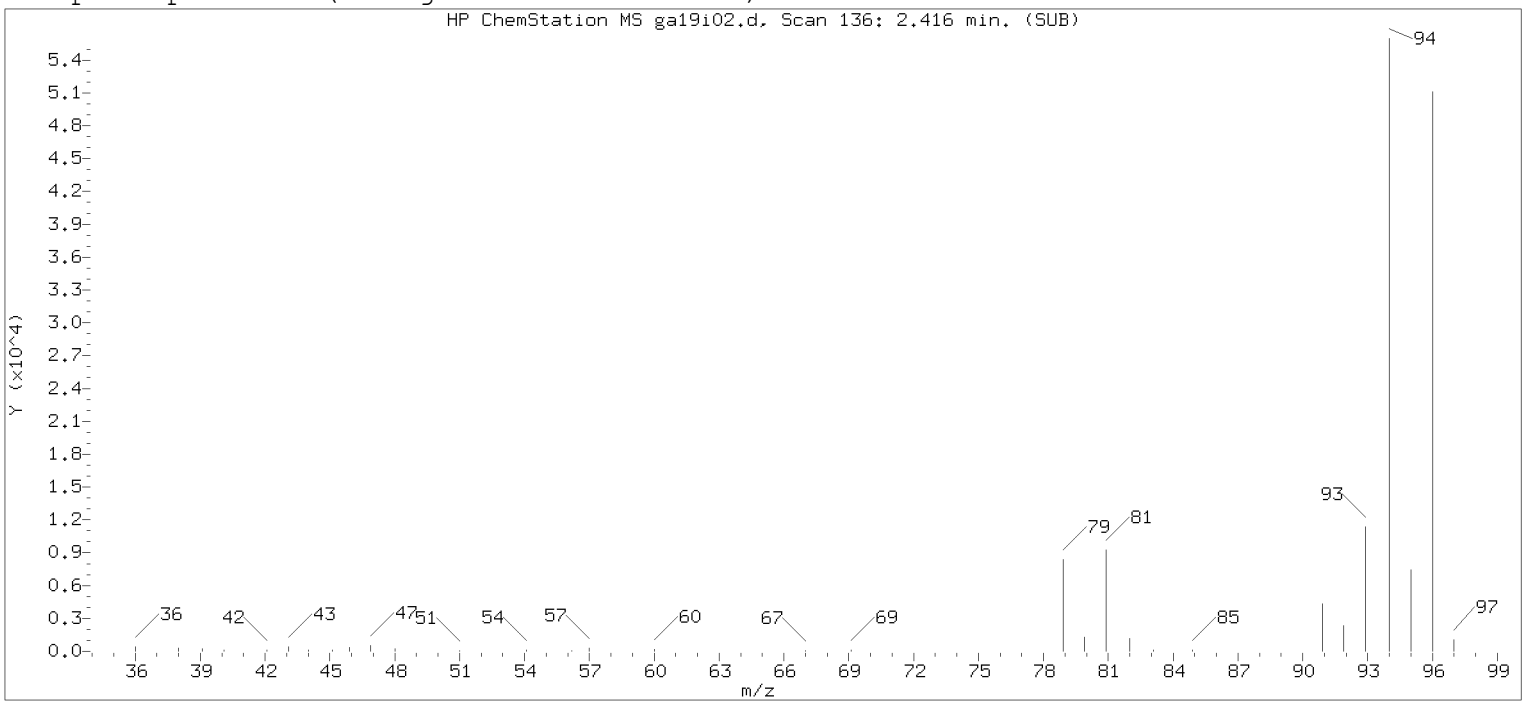
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 354
Retention Time (minutes): 3.745
Quant Ion : 43.00
Area (flag) : 338790M
On-Column Amount (ng) : 9.9580
Integration start scan : 333 Integration stop scan: 385
Y at integration start : 4238 Y at integration end: 4238

Reason for manual integration: improper integration

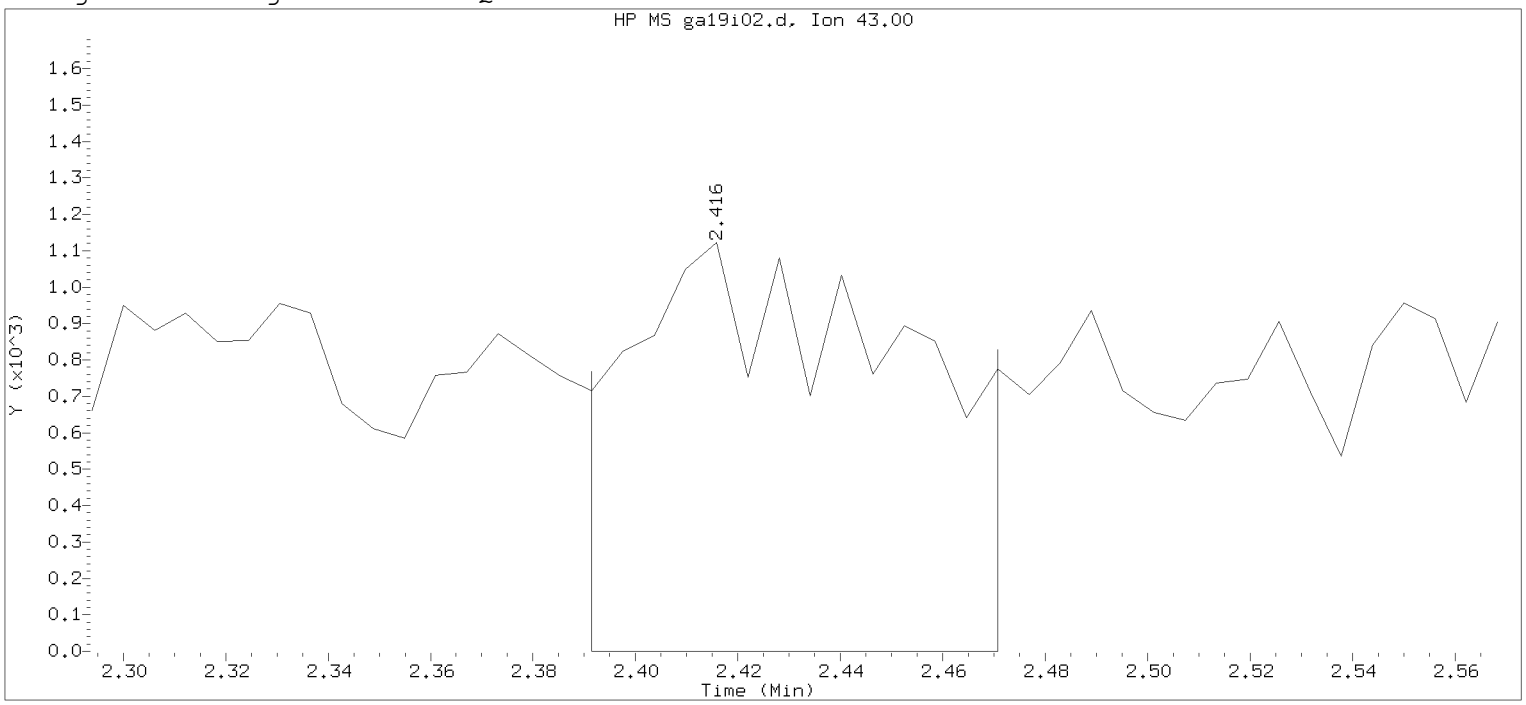
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

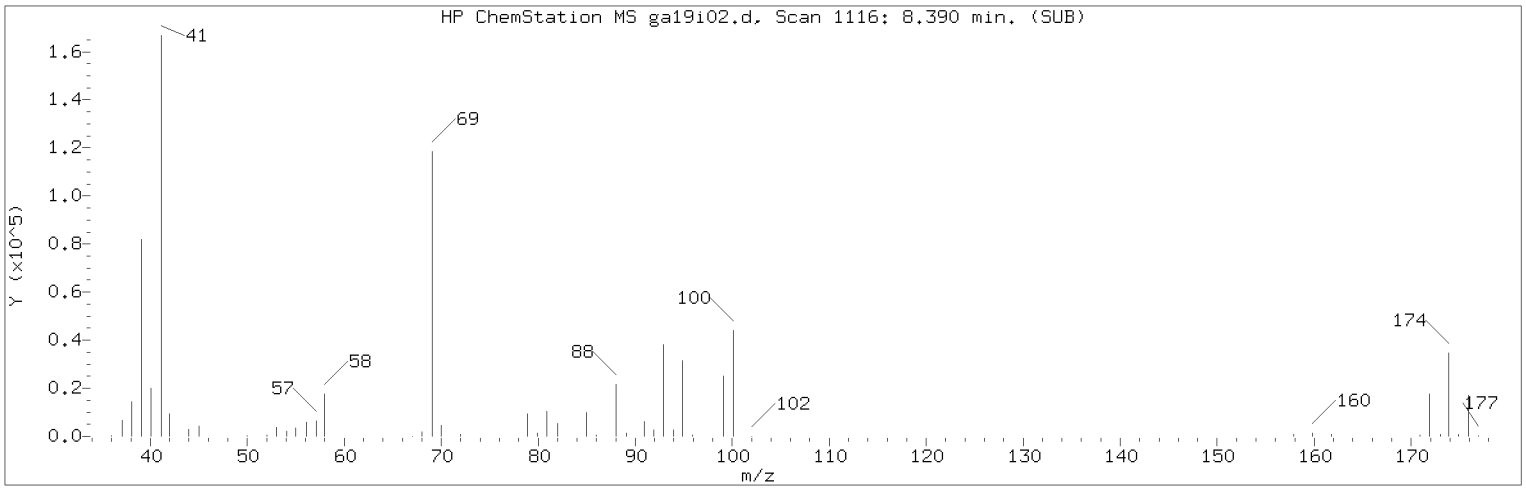
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

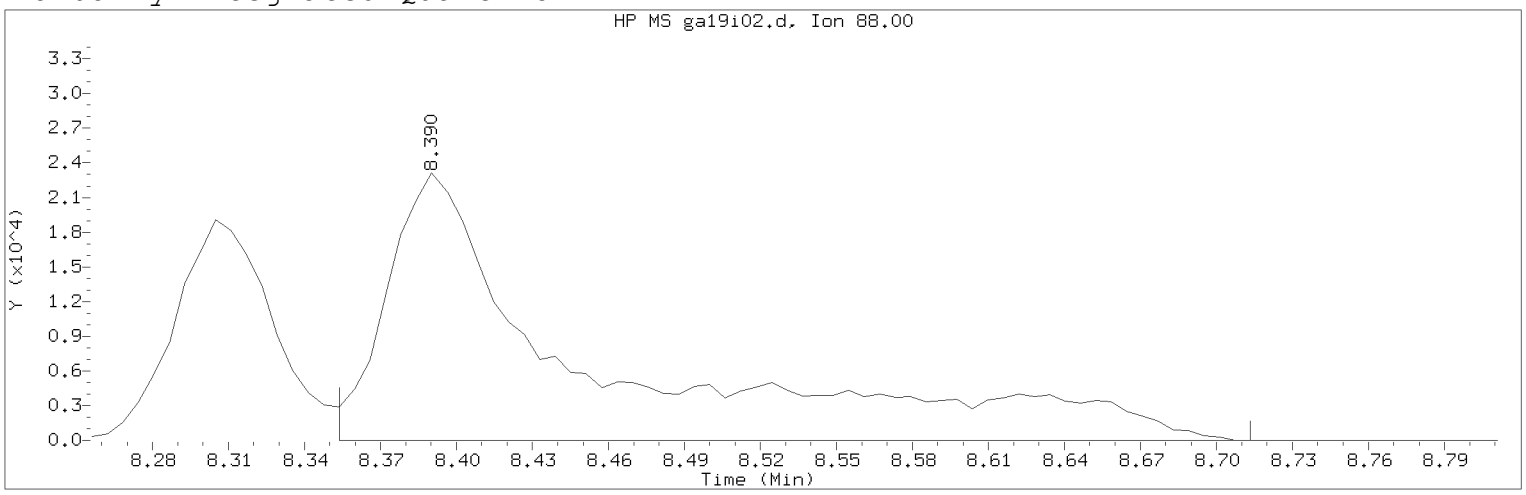
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 136
Retention Time (minutes): 2.416
Quant Ion : 43.00
Area : 4142
On-column Amount (ng) : 18.0207
Integration start scan : 131 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. mdl: 07422

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

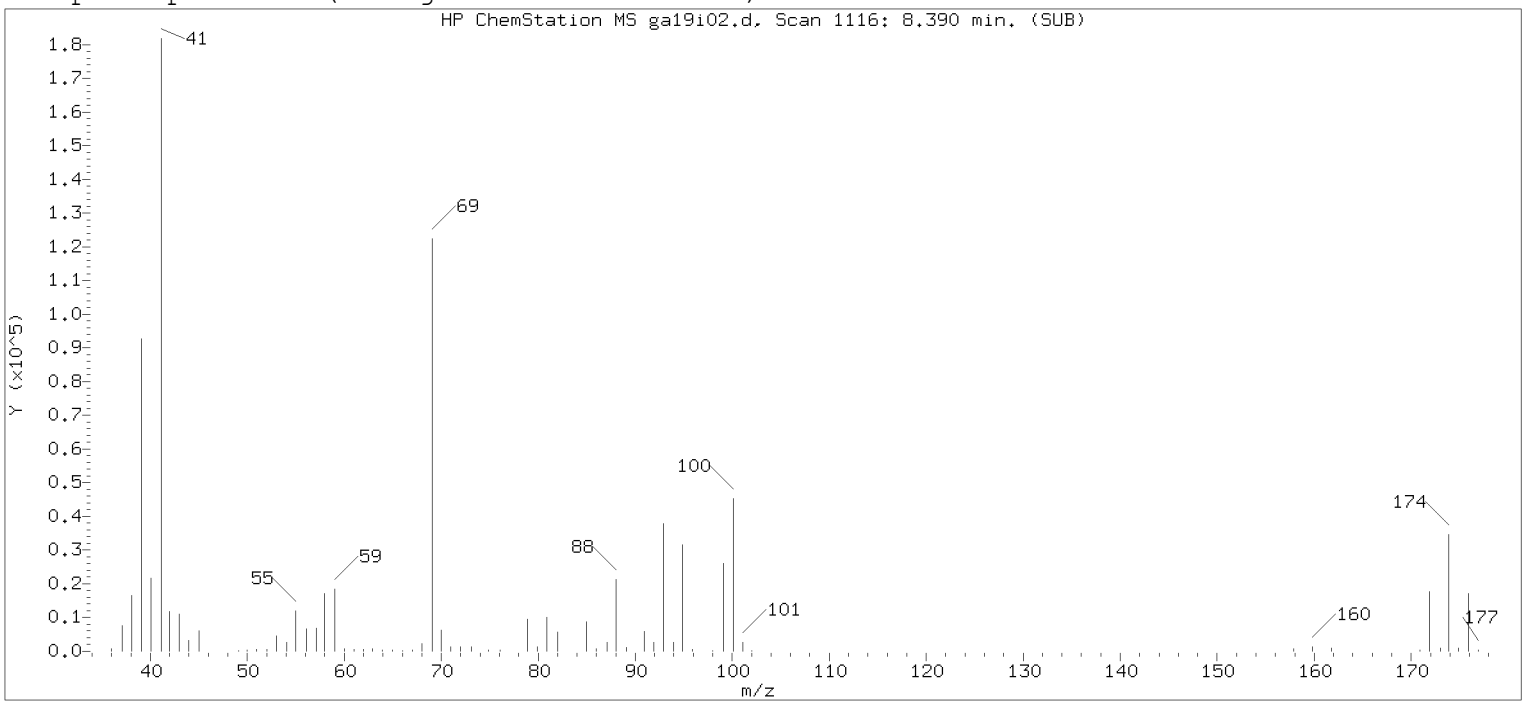
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 126261M
On-Column Amount (ng) : 517.0603
Integration start scan : 1109 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

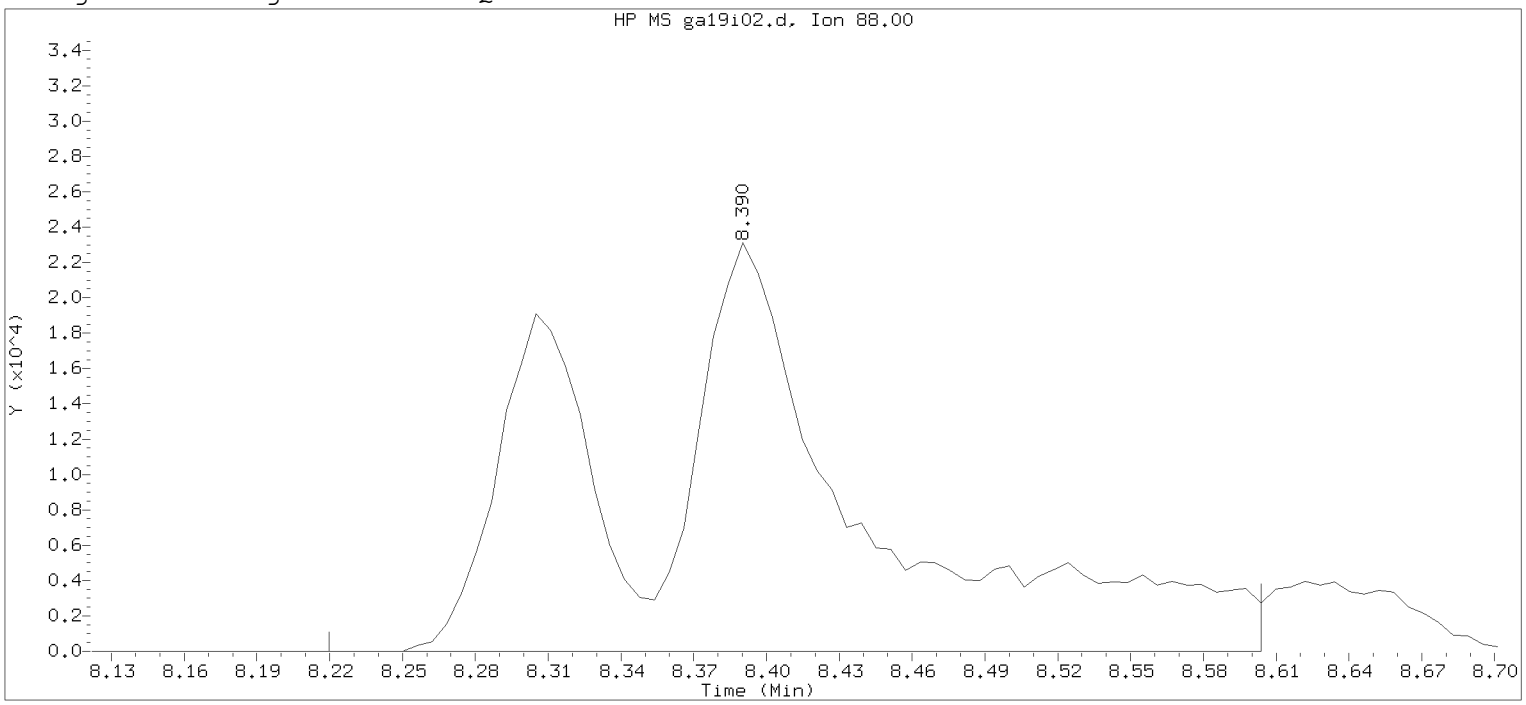
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

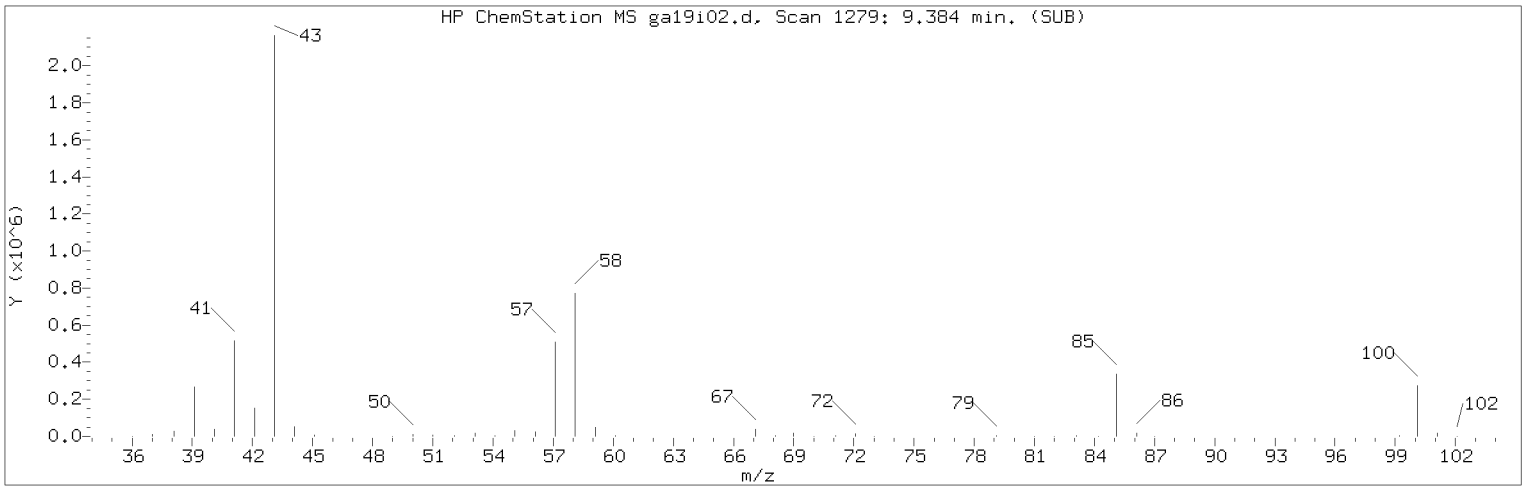
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

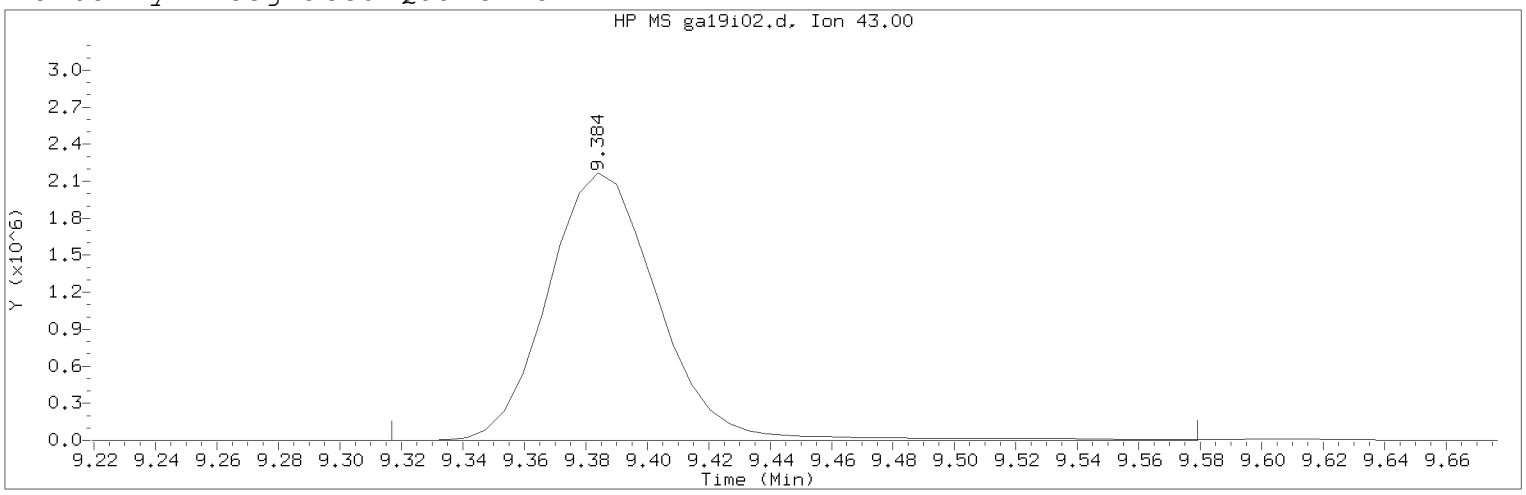
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1116		
Retention Time (minutes)	: 8.390		
Quant Ion	: 88.00		
Area	: 161580		
On-column Amount (ng)	: 755.7593		
Integration start scan	: 1087	Integration stop scan:	1150
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

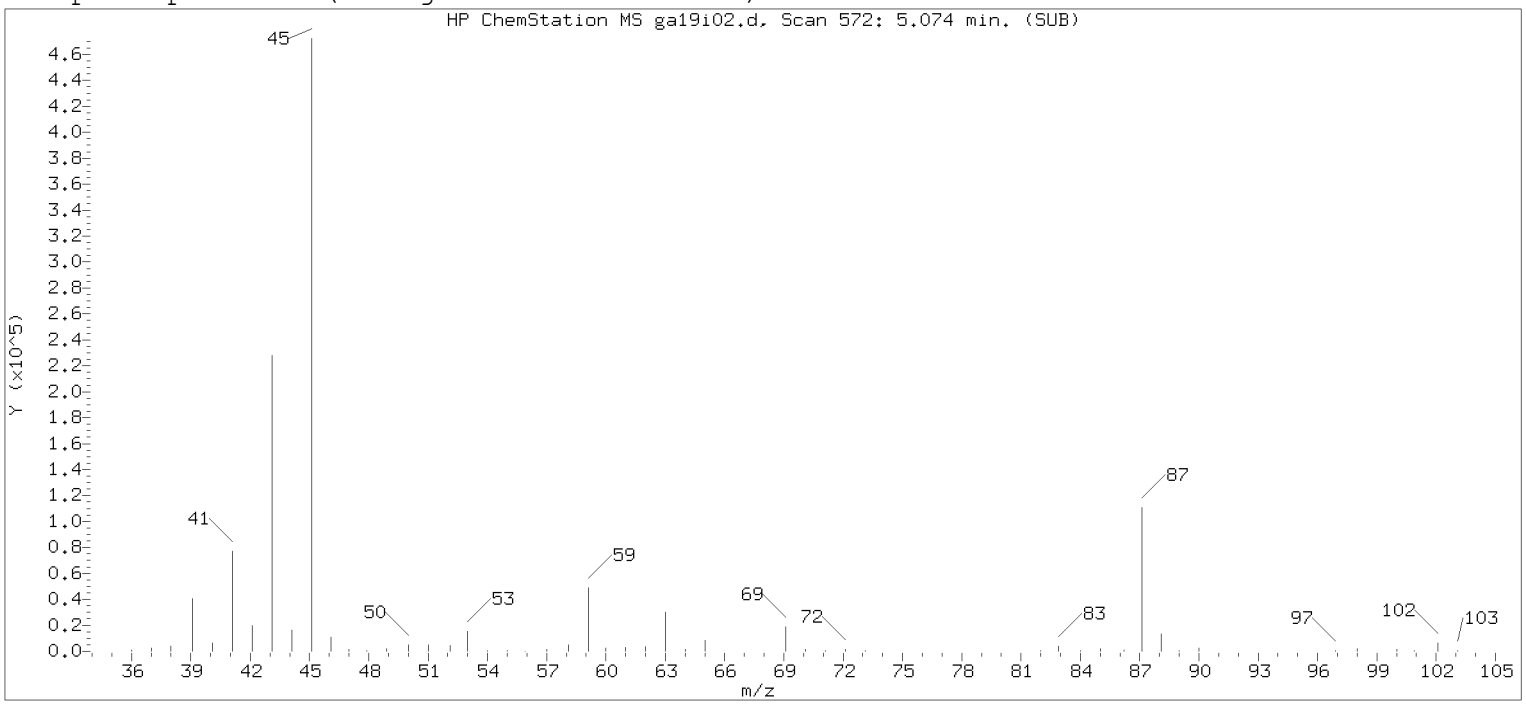
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 5401892M
On-Column Amount (ng) : 103.8297
Integration start scan : 1267 Integration stop scan: 1310
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

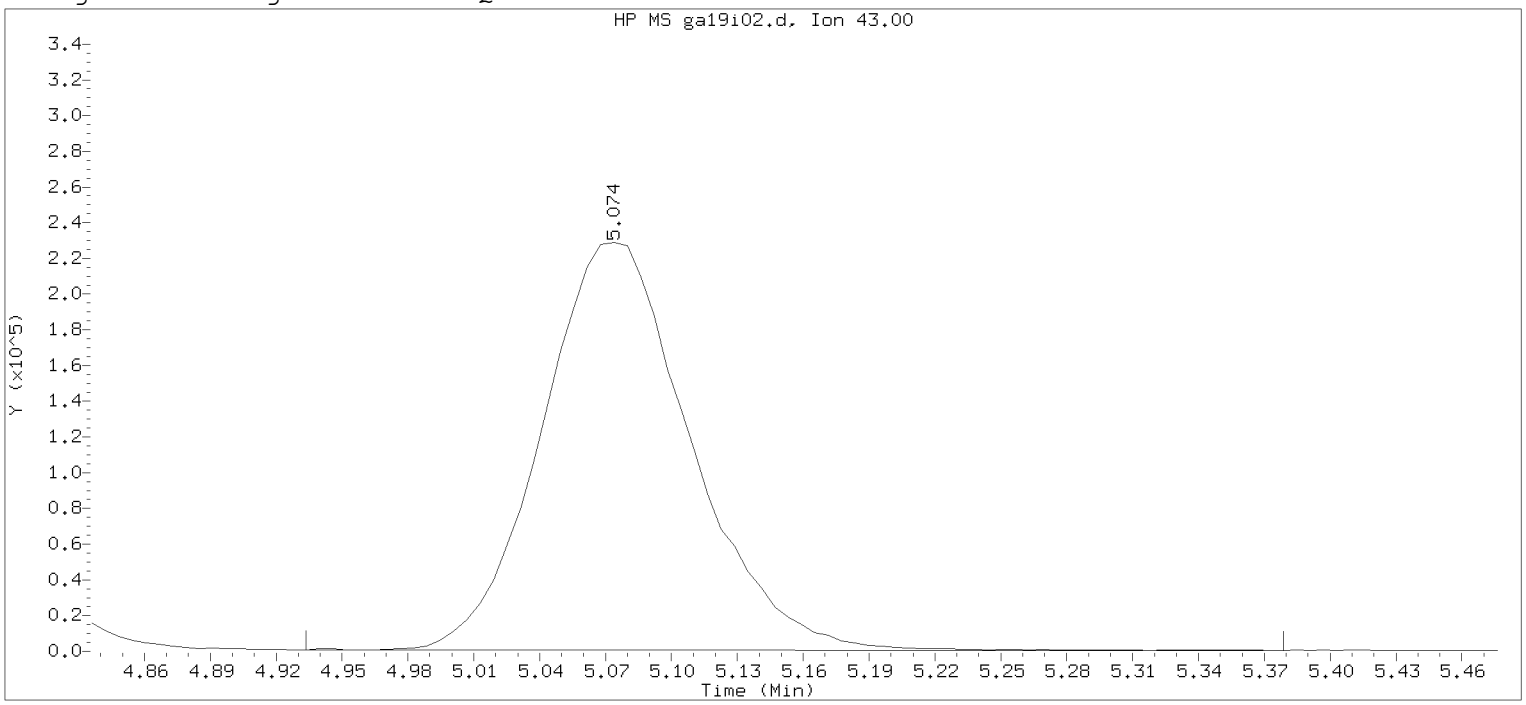
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 1073258
On-column Amount (ng) : 99.5928
Integration start scan : 548 Integration stop scan: 621
Y at integration start : 754 Y at integration end: 391

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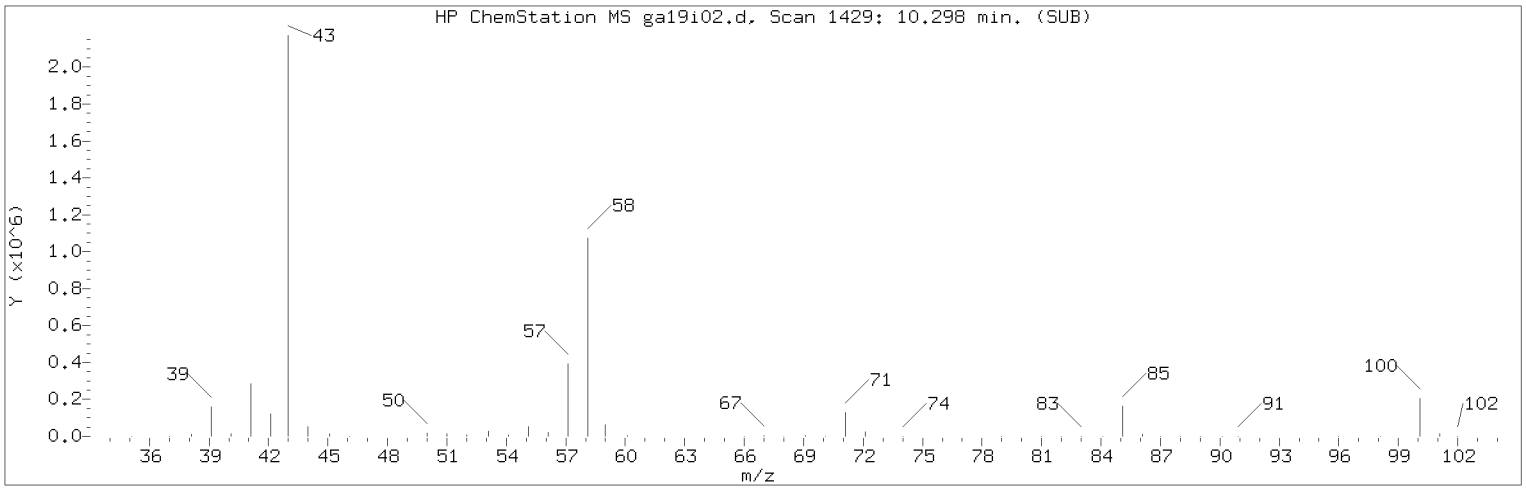
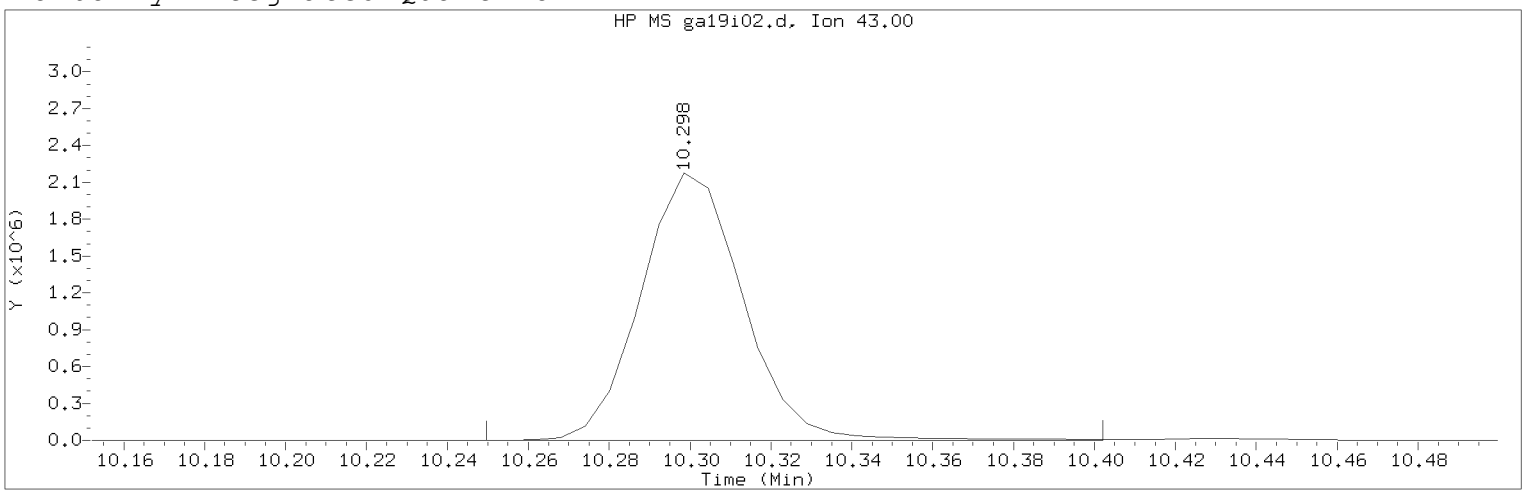
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

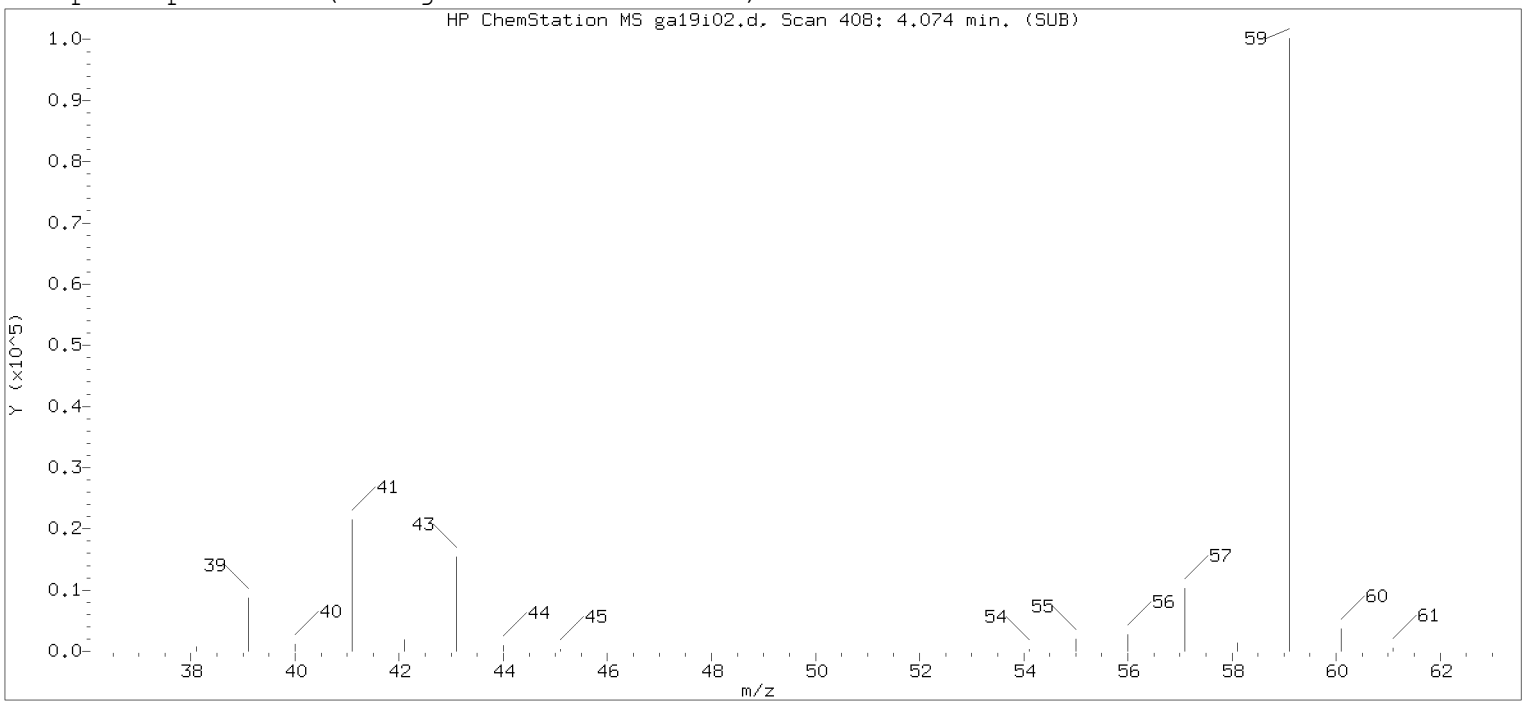
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.298
Quant Ion : 43.00
Area (flag) : 3809911M
On-Column Amount (ng) : 104.0737
Integration start scan : 1420 Integration stop scan: 1445
Y at integration start : 111 Y at integration end: 111

Reason for manual integration: improper integration

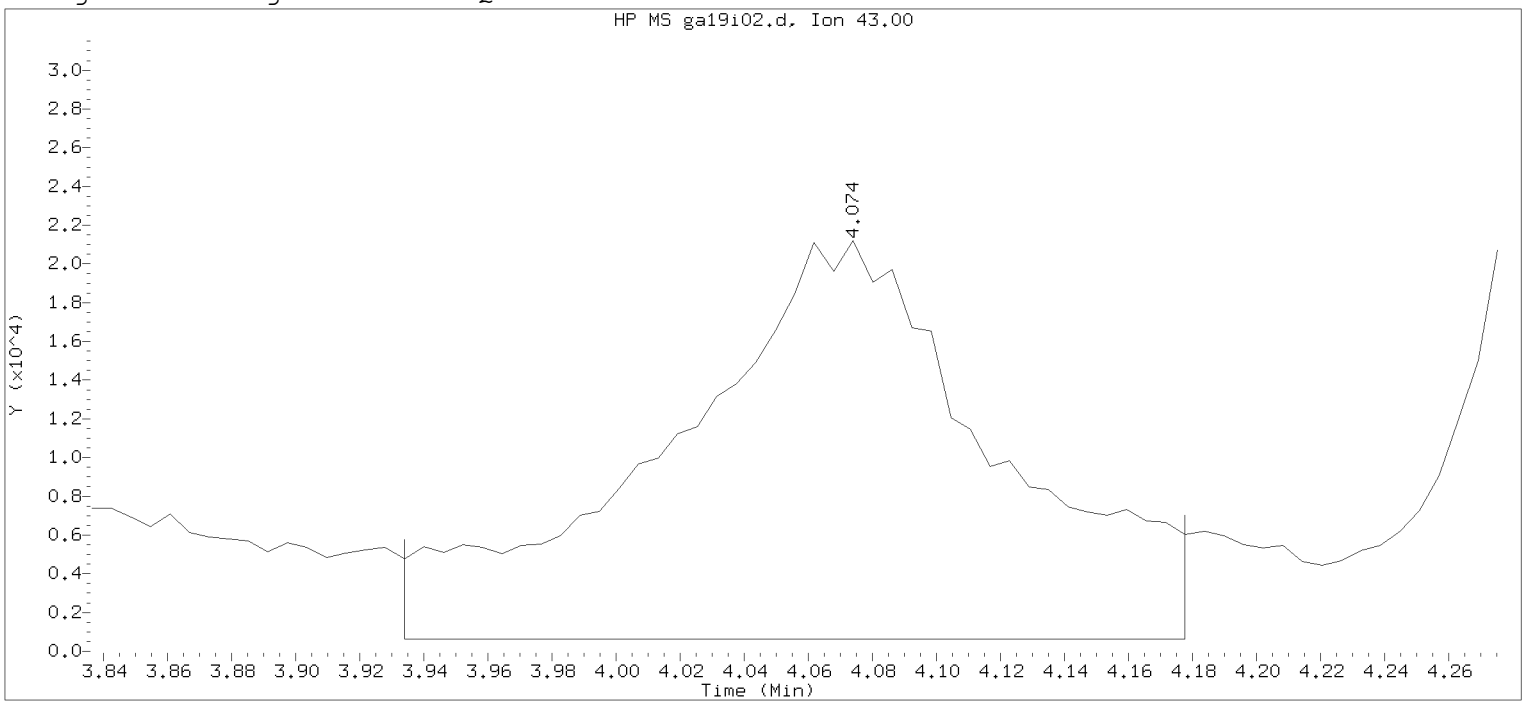
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 408
Retention Time (minutes): 4.074
Quant Ion : 43.00
Area : 146968
On-column Amount (ng) : 103.4182
Integration start scan : 384 Integration stop scan: 424
Y at integration start : 626 Y at integration end: 626

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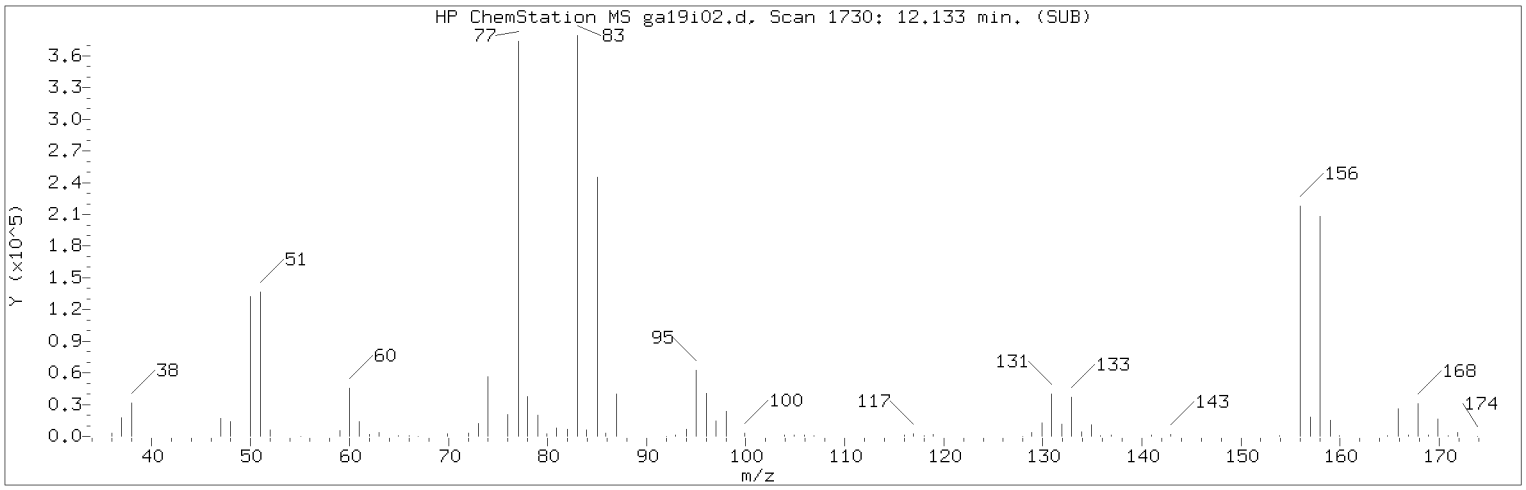
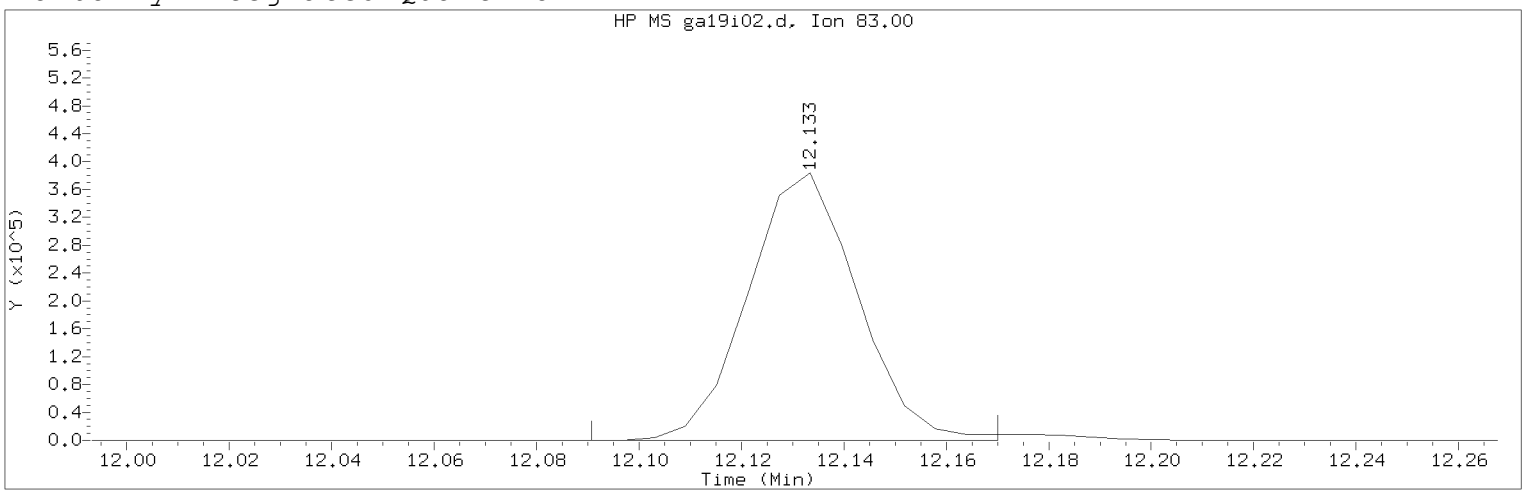
Target 3.5 esignature used. AE06 m.d.: 7/4/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

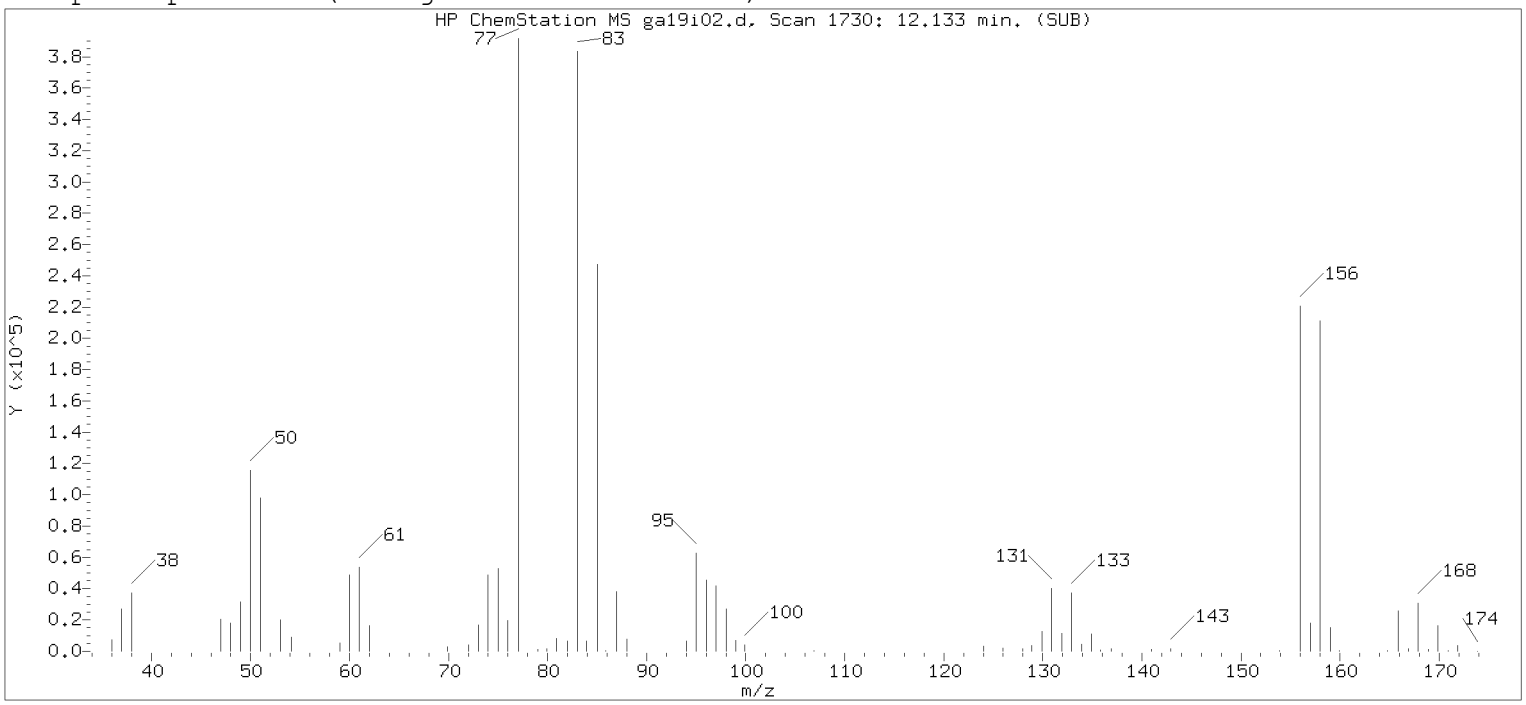
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.133
Quant Ion : 83.00
Area (flag) : 568890M
On-Column Amount (ng) : 10.0125
Integration start scan : 1722 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 65

Reason for manual integration: improper integration

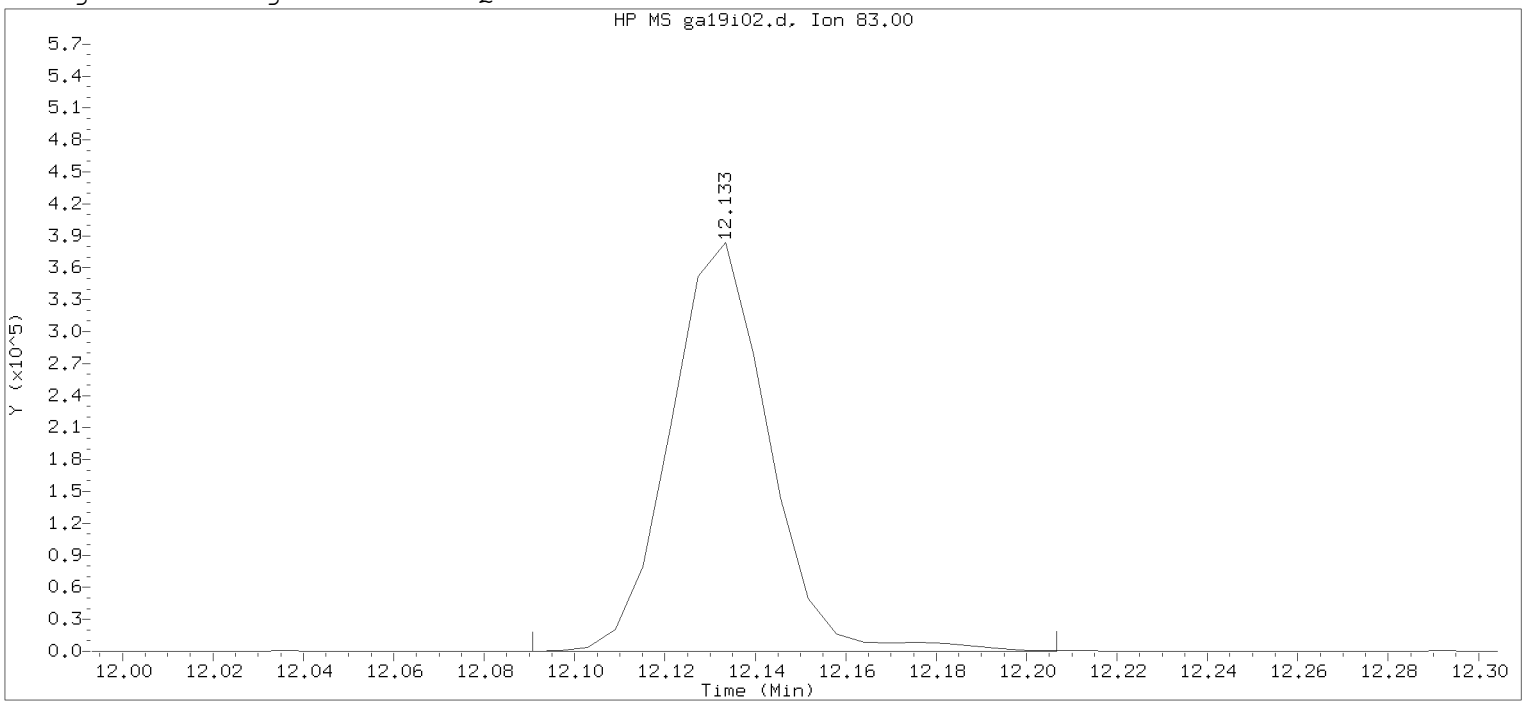
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:47.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



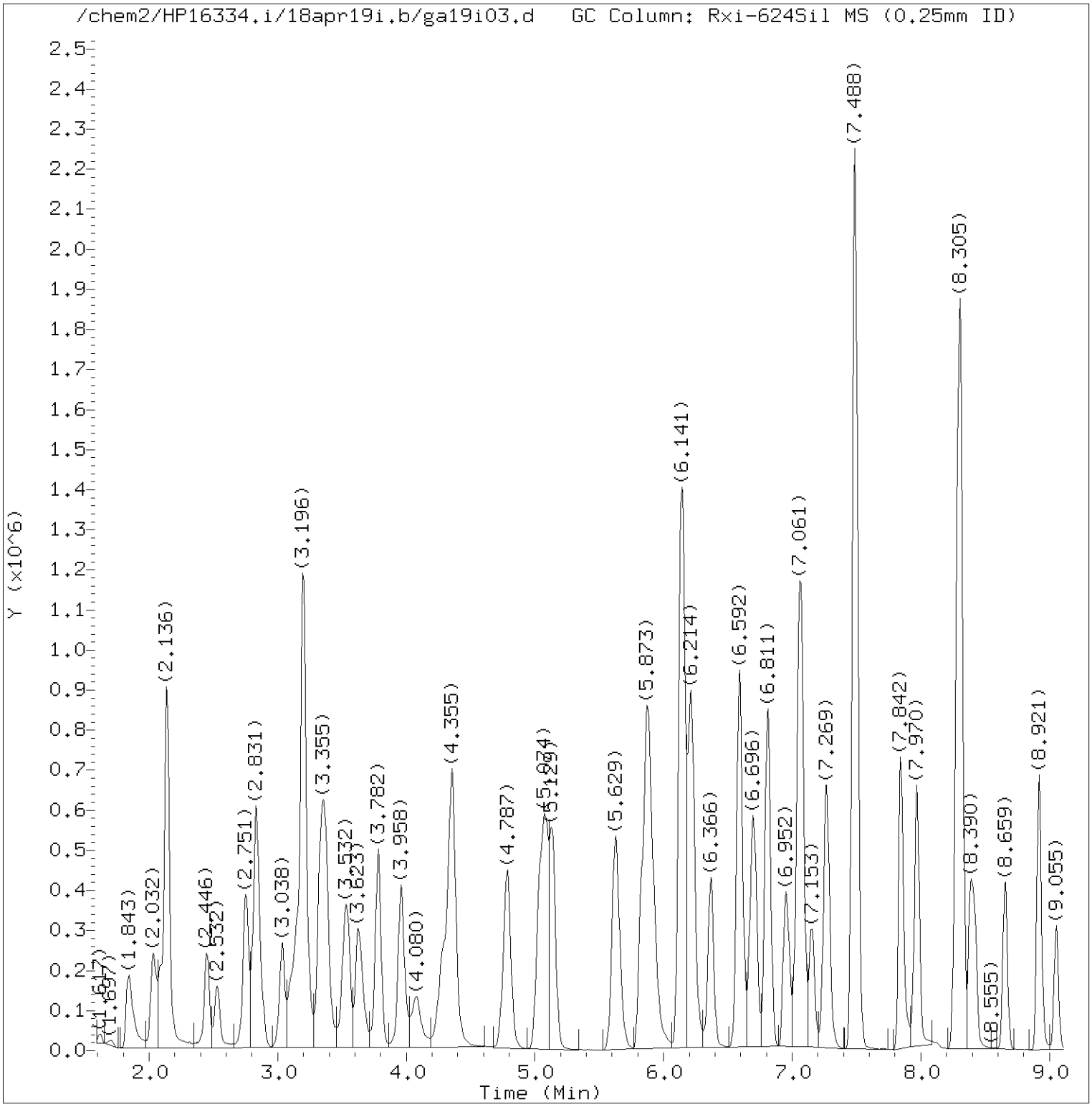
Data File: /chem2/HP16334.i/18apr19i.b/ga19i02.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 12:44 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:00
Date, time and analyst ID of latest file update: 19-Apr-2018 13:00 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.133
Quant Ion : 83.00
Area : 577289
On-column Amount (ng) : 10.0123
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 96

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:47.
Target 3.5 esignature used. Method: 7430



Total Ion Chromatogram (TIC)

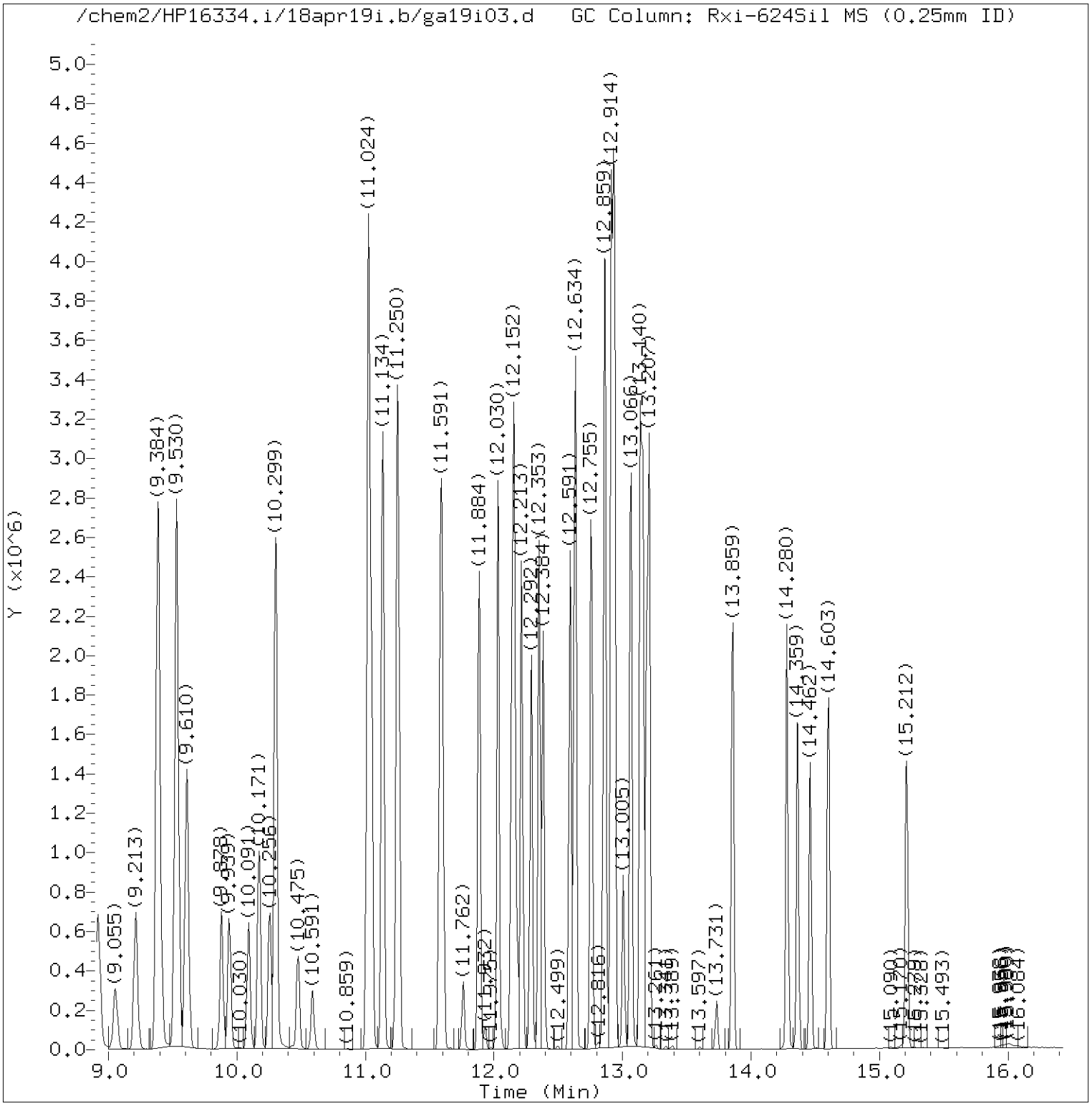
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.843	85	417203	5.085
2) Chloromethane	(2)	2.032	50	414757	5.222
5) Vinyl Chloride	(2)	2.136	62	356378	5.137
6) 1,3-Butadiene	(2)	2.136	39	663351M	5.590
7) Bromomethane	(2)	2.446	94	236409	5.136
8) Chloroethane	(2)	2.532	64	198000	5.115
9) Dichlorofluoromethane	(2)	2.751	67	470661	5.123
10) Trichlorofluoromethane	(2)	2.812	101	472523M	5.105
11) Ethyl ether	(2)	3.038	59	235320	5.196
12) Freon 123a	(2)	3.129	67	323672	5.108
13) Acrolein	(1)	3.196	56	1919900	260.760
15) 1,1-Dichloroethene	(2)	3.330	96	222059	5.048
14) Acetone	(1)	3.355	43	589695	53.121
16) Freon 113	(2)	3.379	101	258318	5.010
17) Methyl Iodide	(2)	3.519	142	442960	5.062
18) Carbon Disulfide	(2)	3.629	76	849766	5.021
21) Methyl Acetate	(1)	3.751	43	166799M	5.045
22) Allyl Chloride	(2)	3.782	41	515573	5.042
23) Methylene Chloride	(2)	3.958	84	271850	5.075
26)*t-Butyl Alcohol-d10	(1)	3.971	65	212064M	50.000
28) t-Butyl Alcohol	(1)	4.080	59	412964	110.124
29) Acrylonitrile	(1)	4.275	53	350503	25.729
30) Methyl Tertiary Butyl Ether	(2)	4.336	73	792450	5.039
31) trans-1,2-Dichloroethene	(2)	4.361	96	257096	5.024
32) n-Hexane	(2)	4.787	57	444493	4.977
33) 1,1-Dichloroethane	(2)	5.031	63	530841	5.039
34) di-Isopropyl Ether	(2)	5.080	45	1093343	5.034
35) 2-Chloro-1,3-Butadiene	(2)	5.141	53	483399	4.995
37) Ethyl t-butyl ether	(2)	5.629	59	973433	5.050
38) 2-Butanone	(1)	5.830	43	1065205	51.696
39) cis-1,2-Dichloroethene	(2)	5.873	96	296441	5.033
41) 2,2-Dichloropropane	(2)	5.891	77	444467	5.000
42) Propionitrile	(1)	5.928	54	506118	98.722
40) 1,2-Dichloroethene (Total)	(2)		96	553537	10.057
45) Methacrylonitrile	(1)	6.147	67	844141	51.348
47) Bromochloromethane	(2)	6.214	128	138690	5.043
48) Tetrahydrofuran	(1)	6.214	71	251549	50.743
49) Chloroform	(2)	6.366	83	510783	5.028

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) 1,1,1-Trichloroethane	(2)	6.592	97	431292	4.977
50)$Dibromofluoromethane	(2)	6.592	113	544328	10.038
50)$Dibromofluoromethane	(2)	6.586	111	559453	10.043
52) Cyclohexane	(2)	6.696	56	522771	5.009
52) Cyclohexane	(2)	6.696	84	395325	4.956
52) Cyclohexane	(2)	6.702	69	151811	5.009
54) Carbon Tetrachloride	(2)	6.811	117	357329	4.906
55) 1,1-Dichloropropene	(2)	6.811	75	400762	5.013
56) Isobutyl Alcohol	(1)	6.952	41	394402	256.843
57)$1,2-Dichloroethane-d4	(2)	7.049	102	115430	10.133
57)$1,2-Dichloroethane-d4	(2)	7.049	65	644780	10.038
57)$1,2-Dichloroethane-d4	(2)	7.043	104	70285	9.992
58) Benzene	(2)	7.074	78	1096523	4.999
59) 1,2-Dichloroethane	(2)	7.153	62	376712	5.026
60) t-Amyl methyl ether	(2)	7.269	73	819812	4.970
63)*Fluorobenzene	(2)	7.488	96	2151089	10.000
62) n-Heptane	(2)	7.500	43	525768	4.950
65) n-Butanol	(1)	7.842	56	675021M	511.576
67) Trichloroethene	(2)	7.970	95	290624	4.976
69) Methylcyclohexane	(2)	8.281	83	509485	5.001
70) 1,2-Dichloropropane	(2)	8.305	63	311487	5.020
71) Methyl Methacrylate	(1)	8.384	69	165361	5.129
72) 1,4-Dioxane	(1)	8.390	88	60823M	254.925
73) Dibromomethane	(2)	8.421	93	146012	4.950
74) Bromodichloromethane	(2)	8.659	83	368289	4.866
76) 2-Nitropropane	(1)	8.921	41	573397	49.264
80) cis-1,3-Dichloropropene	(2)	9.213	75	465166	4.885
81) 4-Methyl-2-Pentanone	(1)	9.384	43	2642519M	51.640
82)$Toluene-d8	(3)	9.530	98	2184587	9.968
82)$Toluene-d8	(3)	9.530	100	1387314	9.916
83) Toluene	(3)	9.610	92	694171	4.968
84) trans-1,3-Dichloropropene	(3)	9.878	75	398431	4.864
86) Ethyl Methacrylate	(3)	9.939	69	352849	4.906
88) 1,1,2-Trichloroethane	(3)	10.091	97	210222	4.978
85) 1,3-Dichloropropene (total)	(3)		75	863597	9.749
89) Tetrachloroethene	(3)	10.171	166	320176	4.951
90) 1,3-Dichloropropane	(3)	10.256	76	382596	4.992
91) 2-Hexanone	(1)	10.299	43	1892288M	52.236

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	247750	4.780
95) 1,2-Dibromoethane	(3)	10.591	107	204398	4.954
97)*Chlorobenzene-d5	(3)	11.018	117	1639809	10.000
98) Chlorobenzene	(3)	11.048	112	794031	4.977
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	277874	4.846
100) Ethylbenzene	(3)	11.134	91	1380634	4.992
101) m+p-Xylene	(3)	11.250	106	1059519	9.881
104) o-Xylene	(3)	11.579	106	535967	4.912
106) Styrene	(3)	11.597	104	889883	4.871
105) Xylene (Total)	(3)		106	1595486	14.793
107) Bromoform	(3)	11.762	173	144994	4.639
108) Isopropylbenzene	(3)	11.884	105	1393669	4.965
111)$4-Bromofluorobenzene	(3)	12.030	95	837615	9.965
111)$4-Bromofluorobenzene	(3)	12.030	174	714713	9.927
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	276992M	4.959
114) Bromobenzene	(4)	12.146	156	357365	4.918
116) 1,2,3-Trichloropropane	(4)	12.182	110	76345	4.998
117) n-Propylbenzene	(4)	12.213	91	1671661	5.062
119) 2-Chlorotoluene	(4)	12.292	126	332689	5.026
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	1198308	4.970
122) 4-Chlorotoluene	(4)	12.384	126	348401	5.003
125) tert-Butylbenzene	(4)	12.591	134	245761	4.905
126) Pentachloroethane	(4)	12.627	167	209242	4.747
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	1237700	4.984
128) sec-Butylbenzene	(4)	12.755	105	1545057	5.013
131) 1,3-Dichlorobenzene	(4)	12.859	146	715707	4.923
132) p-Isopropyltoluene	(4)	12.865	119	1332255	4.927
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	919901	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	724924	4.954
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	548457	4.945
136) Benzyl Chloride	(4)	13.005	126	103940	4.621
138) n-Butylbenzene	(4)	13.158	92	712786	4.958
139) 1,2-Dichlorobenzene	(4)	13.188	146	674105	4.924
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	39955	4.752
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	594445	4.900
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	554681	4.908
146) Hexachlorobutadiene	(4)	14.365	225	286762	4.923
147) Naphthalene	(4)	14.462	128	936001	4.947

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	473255	4.913

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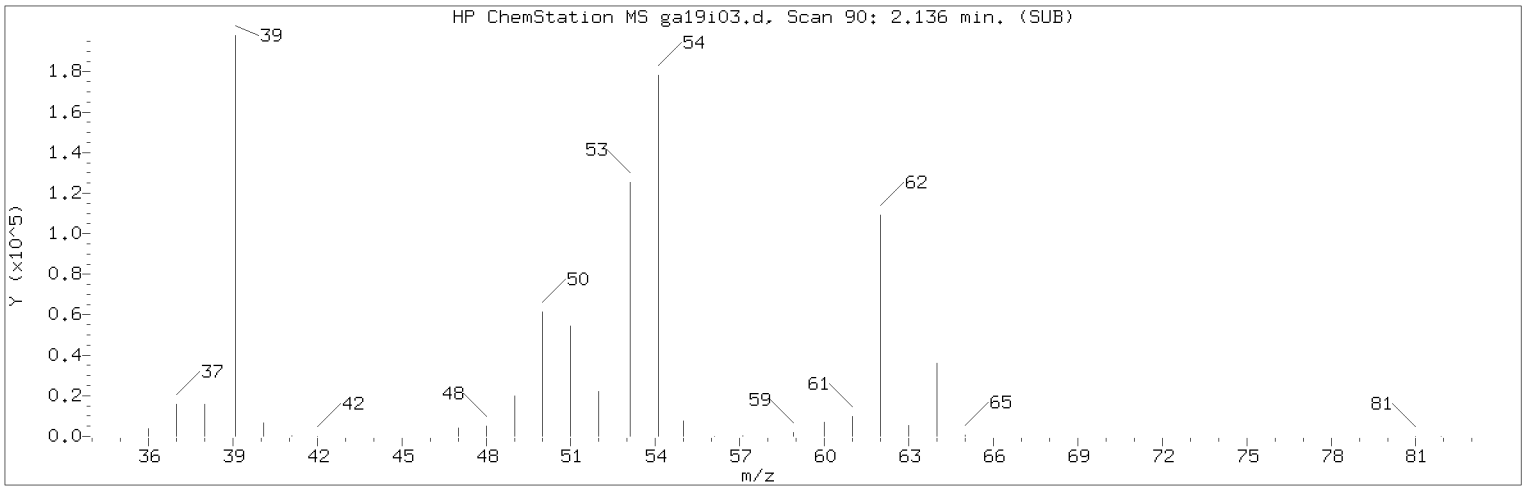
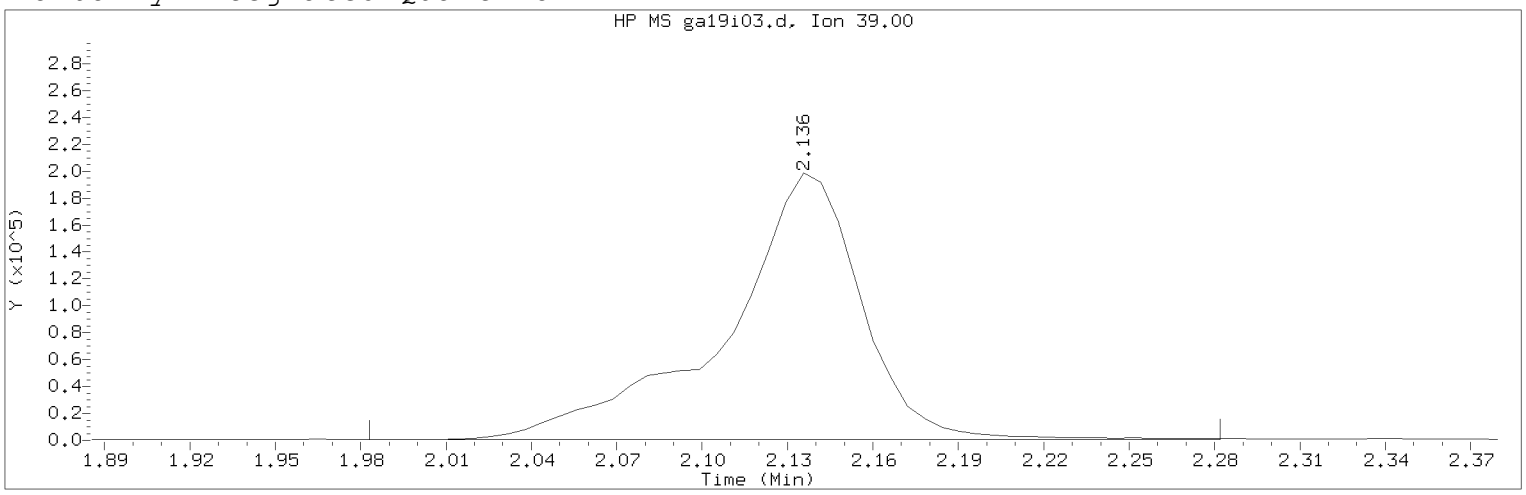
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

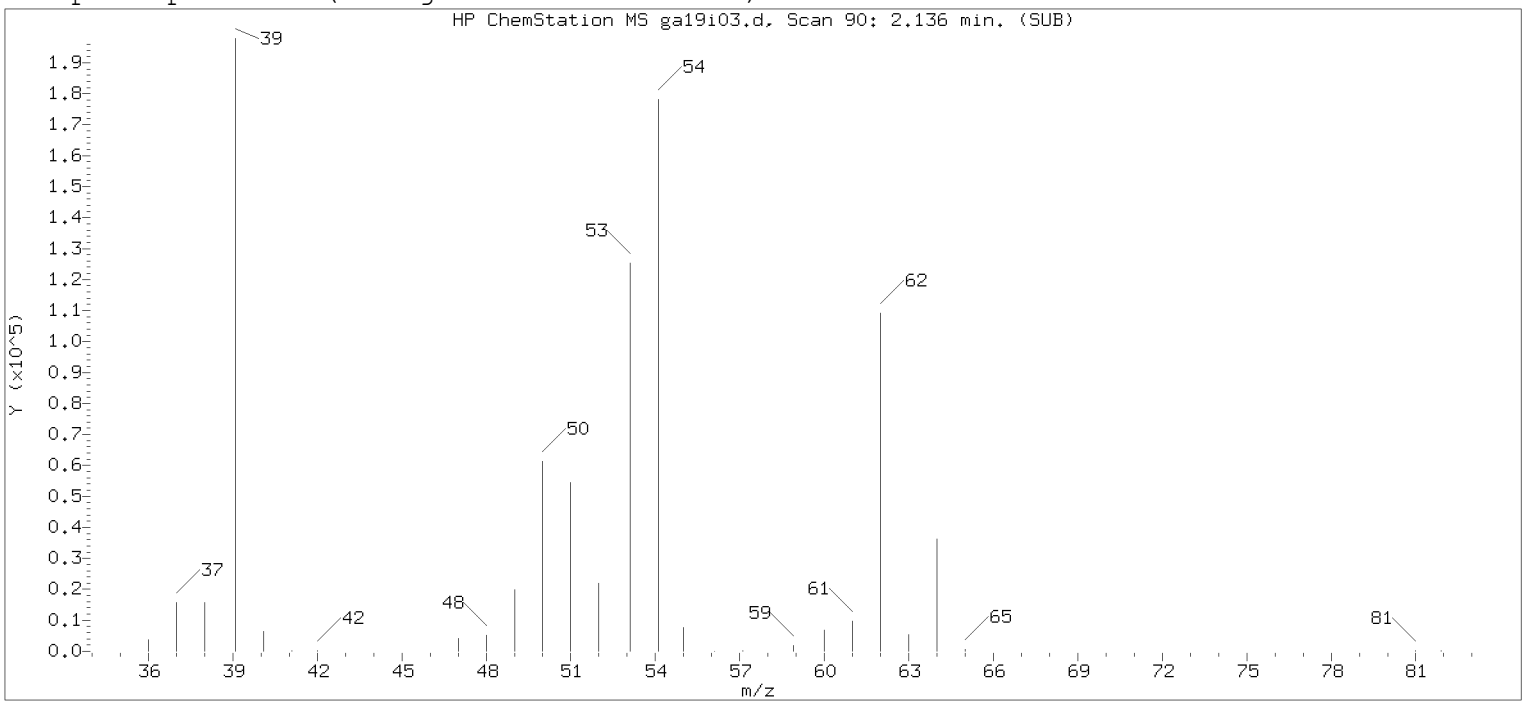
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 663351M
On-Column Amount (ng) : 5.5900
Integration start scan : 64 Integration stop scan: 113
Y at integration start : 316 Y at integration end: 316

Reason for manual integration: improper integration

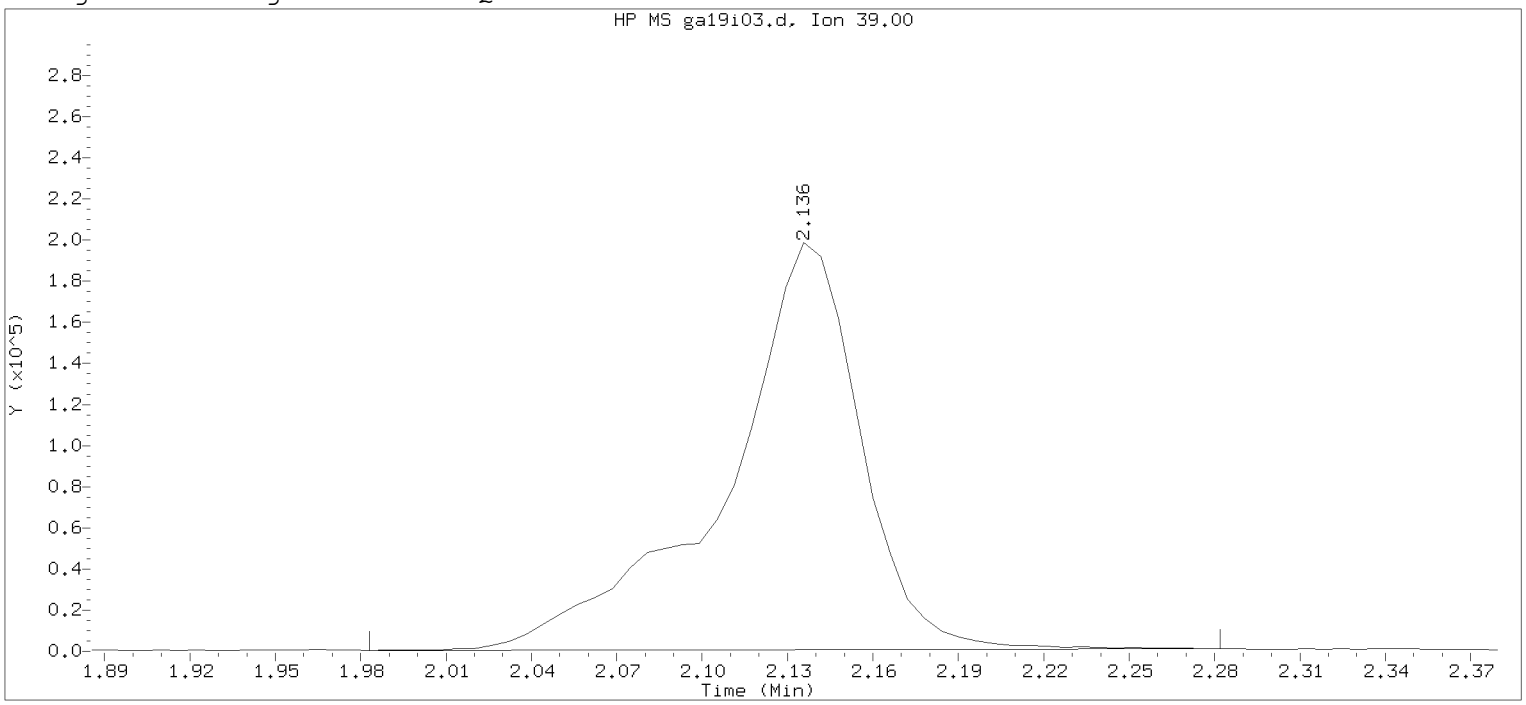
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

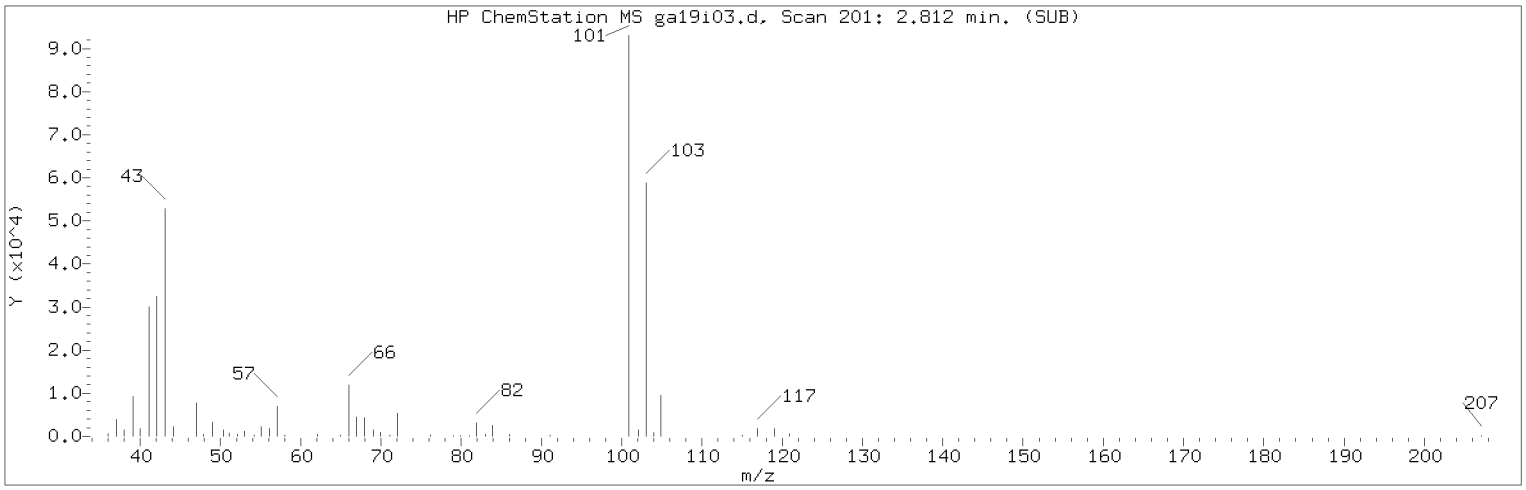
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

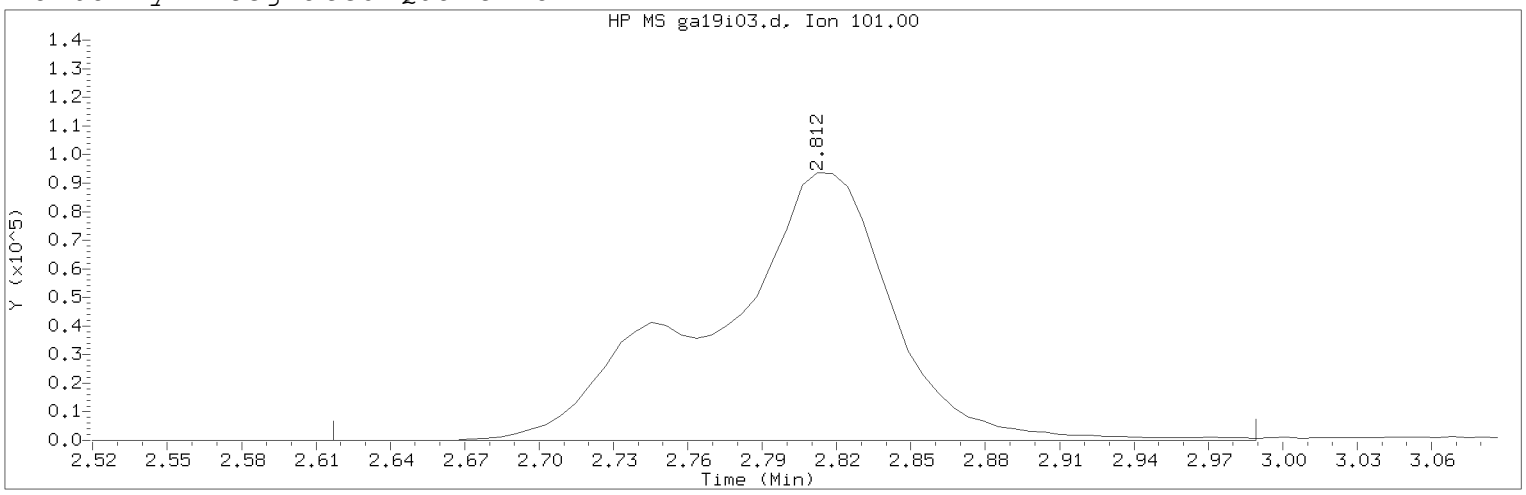
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 654429
On-column Amount (ng) : 5.7475
Integration start scan : 64 Integration stop scan: 113
Y at integration start : 412 Y at integration end: 1196

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

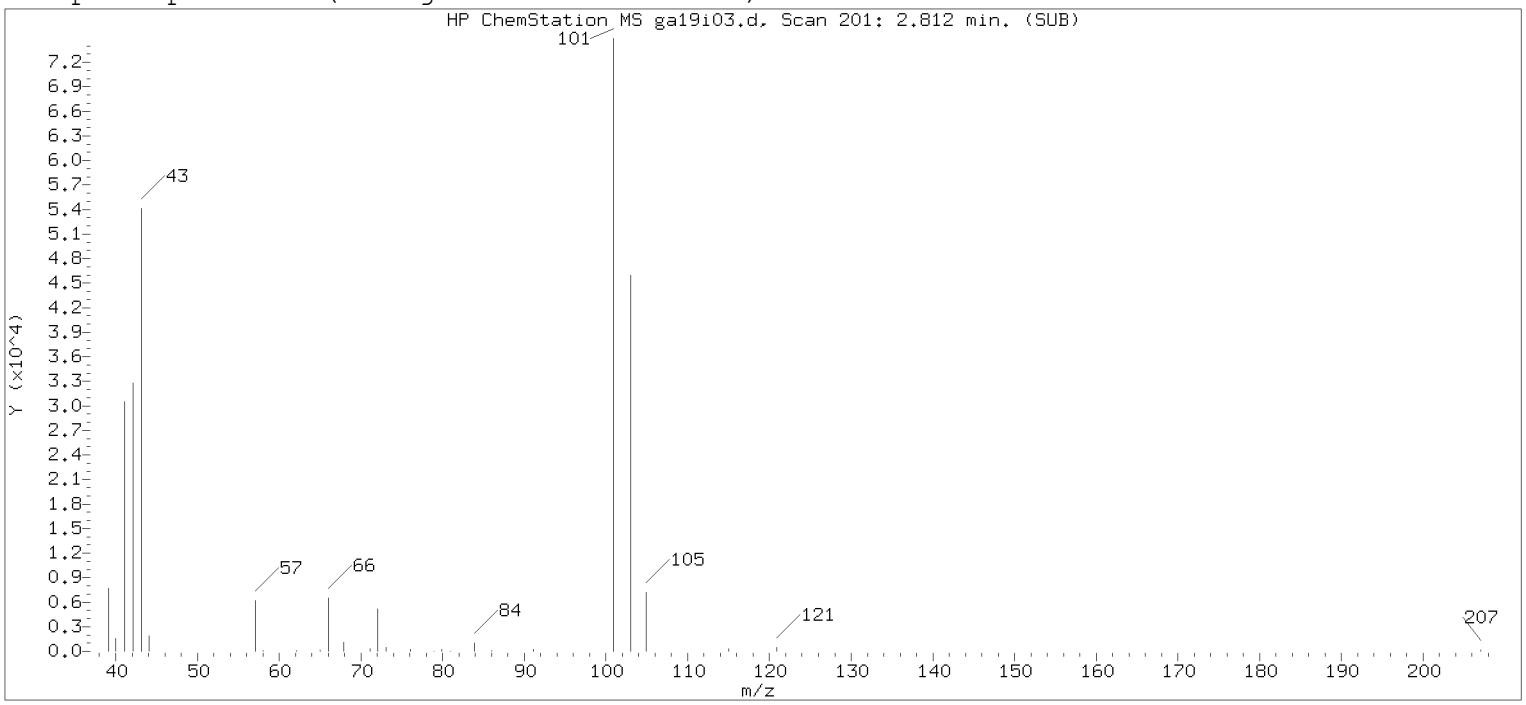
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area (flag) : 472523M
On-Column Amount (ng) : 5.1052
Integration start scan : 168 Integration stop scan: 229
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

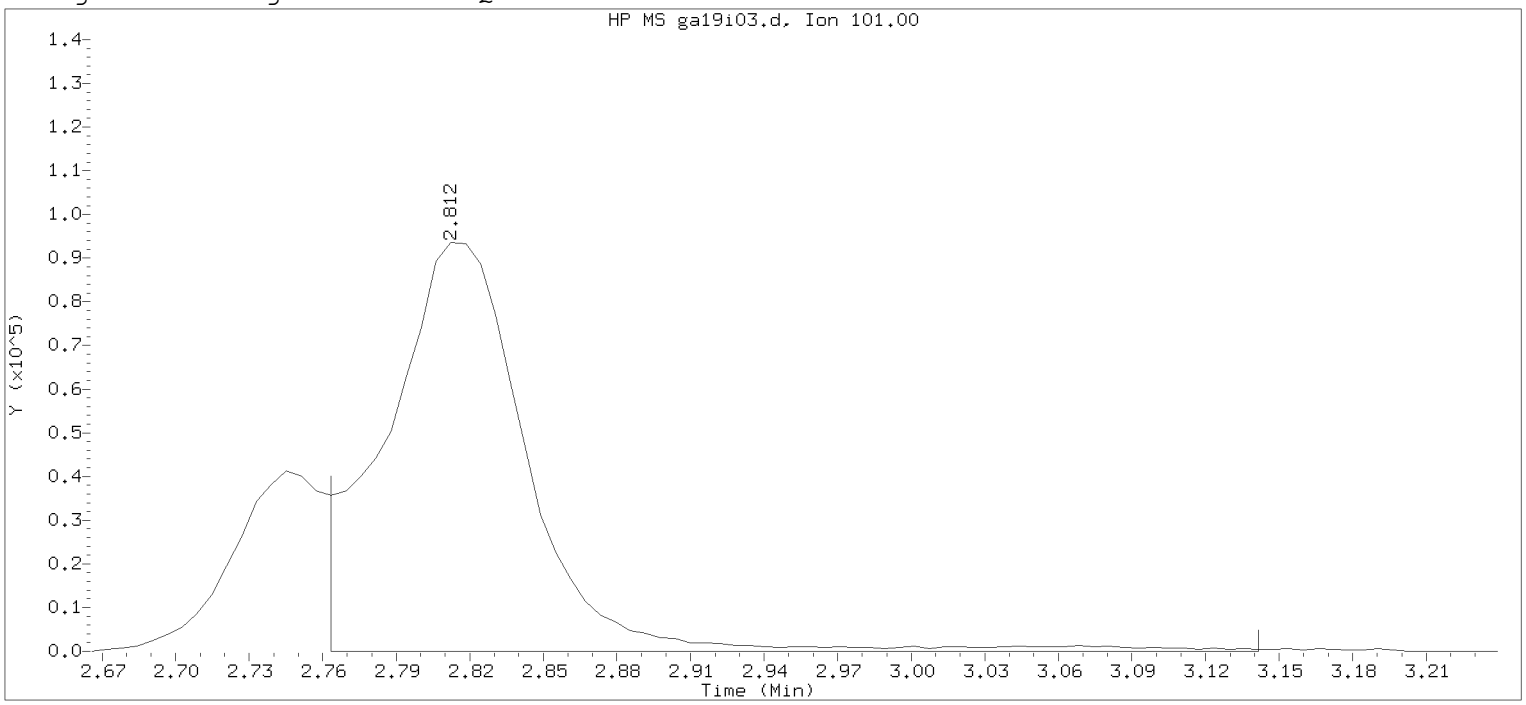
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 201
Retention Time (minutes): 2.812
Quant Ion : 101.00
Area : 374647
On-column Amount (ng) : 4.3061
Integration start scan : 192 Integration stop scan: 254
Y at integration start : 0 Y at integration end: 0

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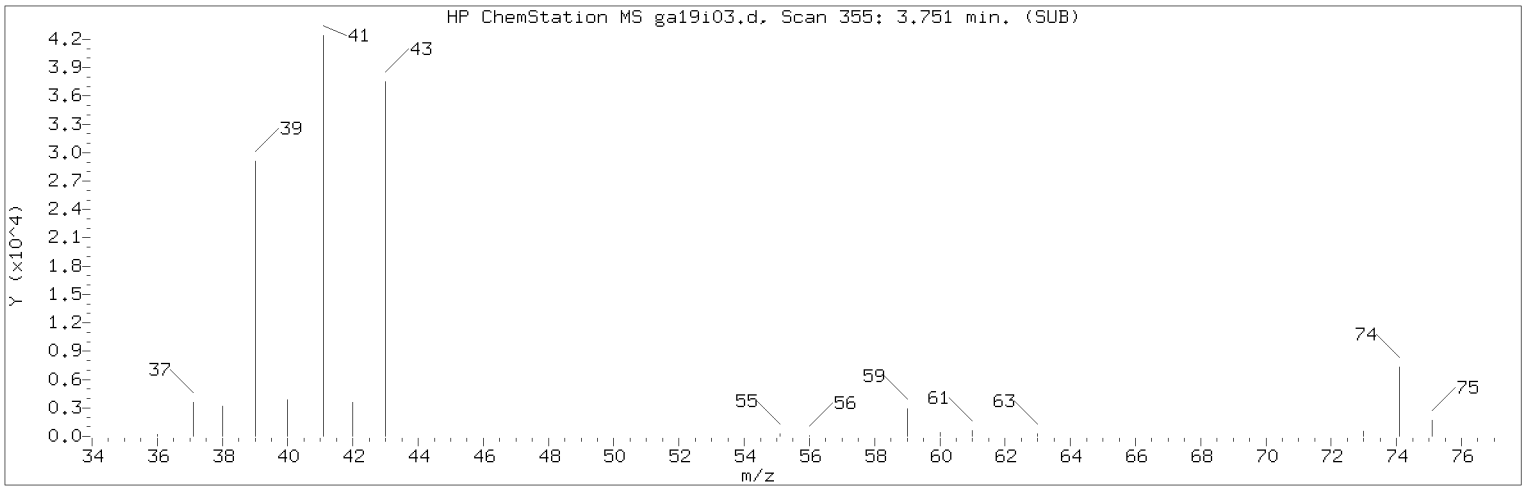
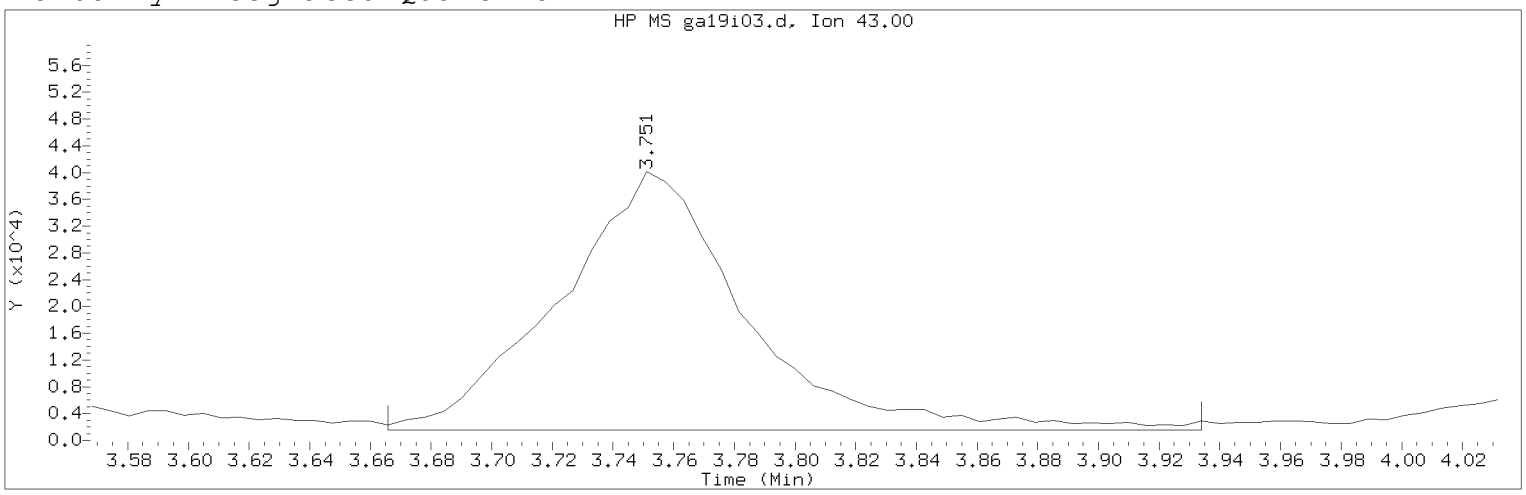
Target 3.5 esignature used. AE06 m.d.: 7.4.0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

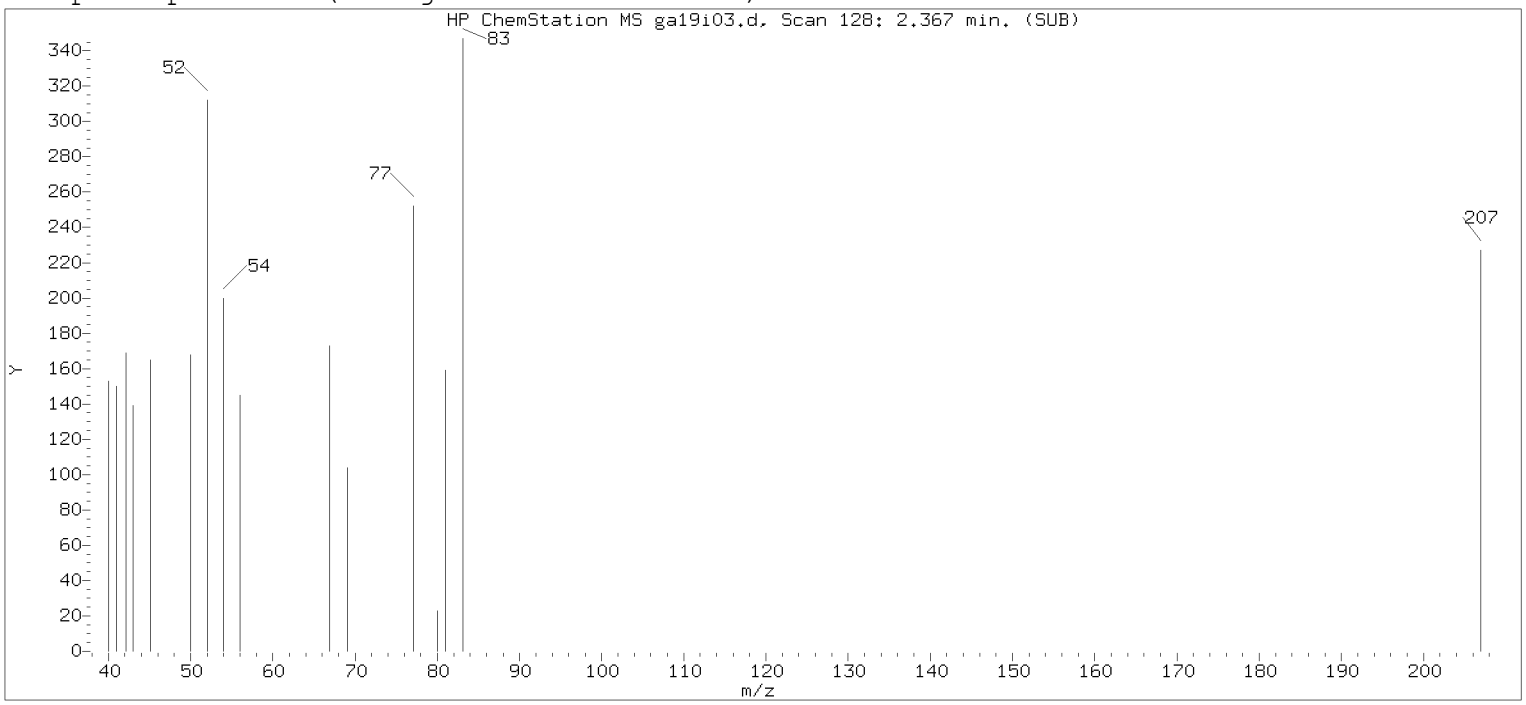
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 166799M
On-Column Amount (ng) : 5.0449
Integration start scan : 340 Integration stop scan: 384
Y at integration start : 1496 Y at integration end: 1496

Reason for manual integration: improper integration

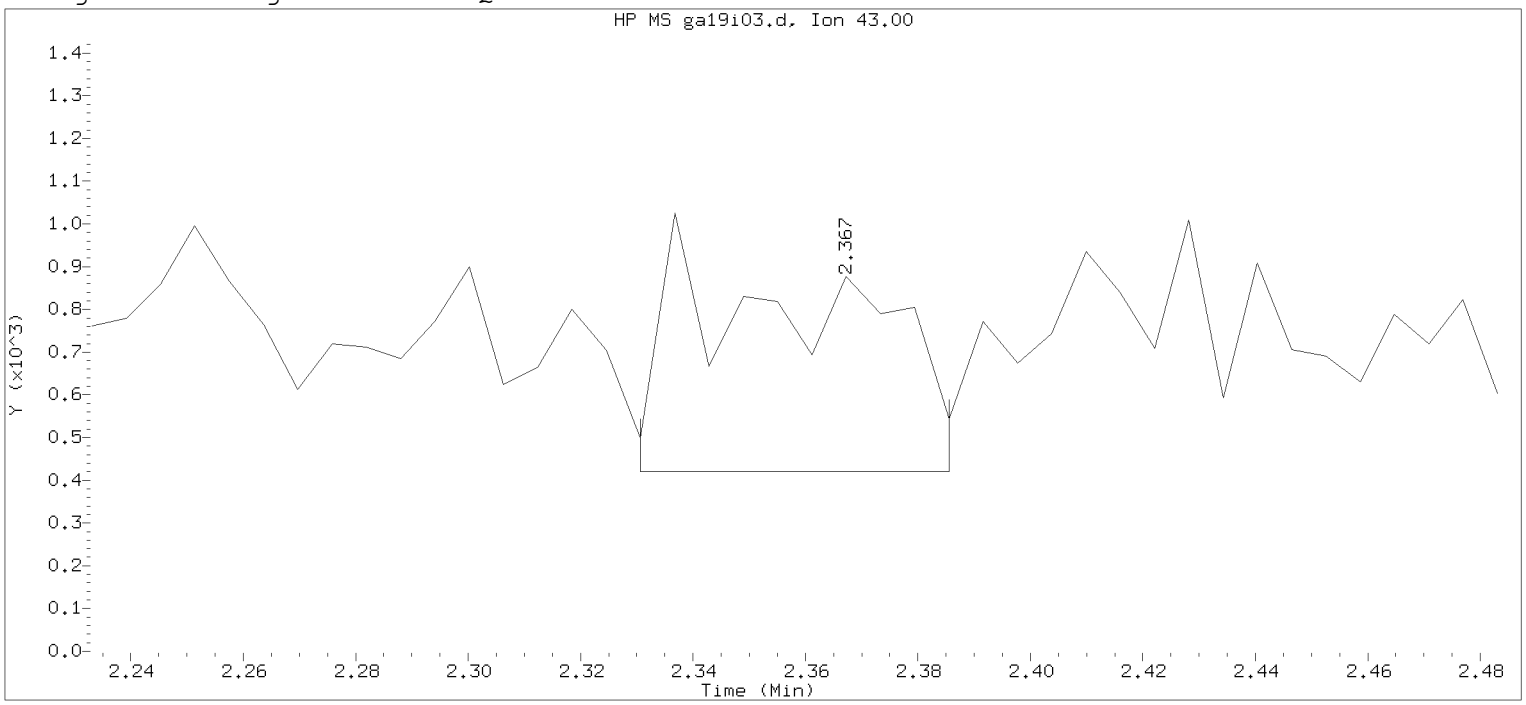
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 128
Retention Time (minutes): 2.367
Quant Ion : 43.00
Area : 1188
On-column Amount (ng) : 5.7616
Integration start scan : 121 Integration stop scan: 130
Y at integration start : 420 Y at integration end: 420

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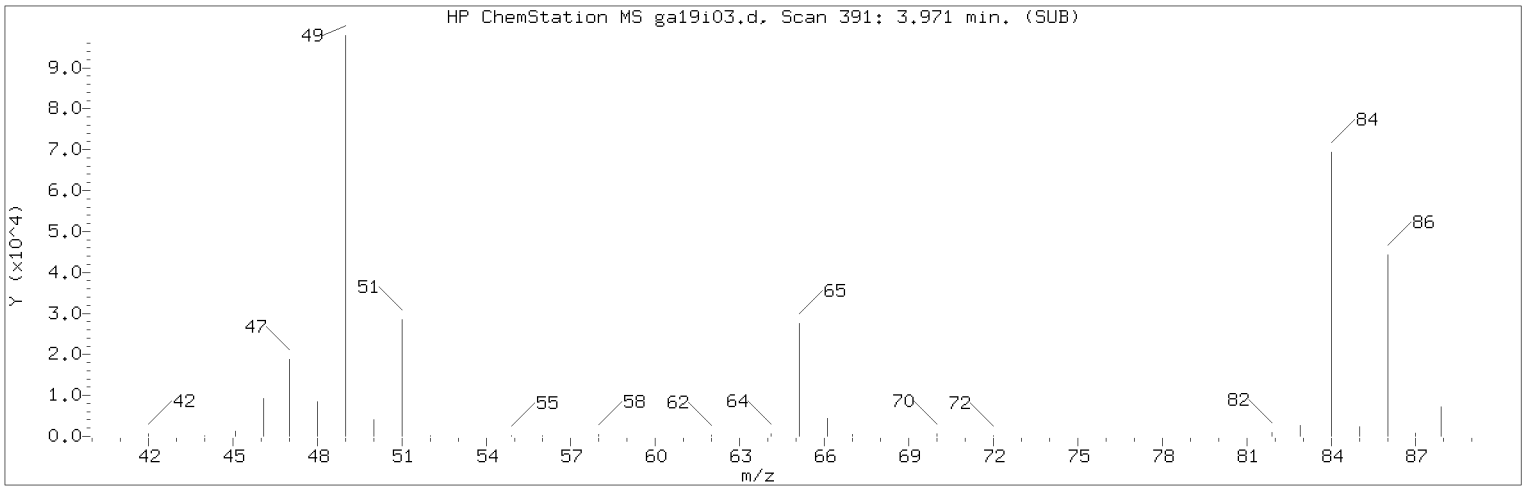
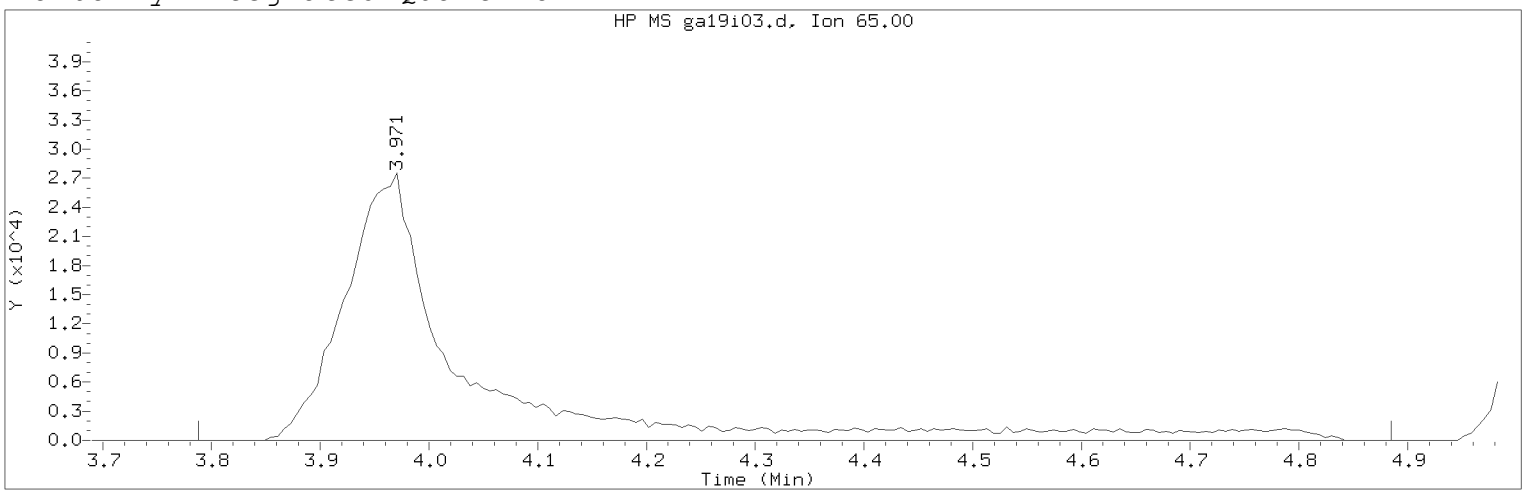
Target 3.5 esignature used. Adobe 7.0.7

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

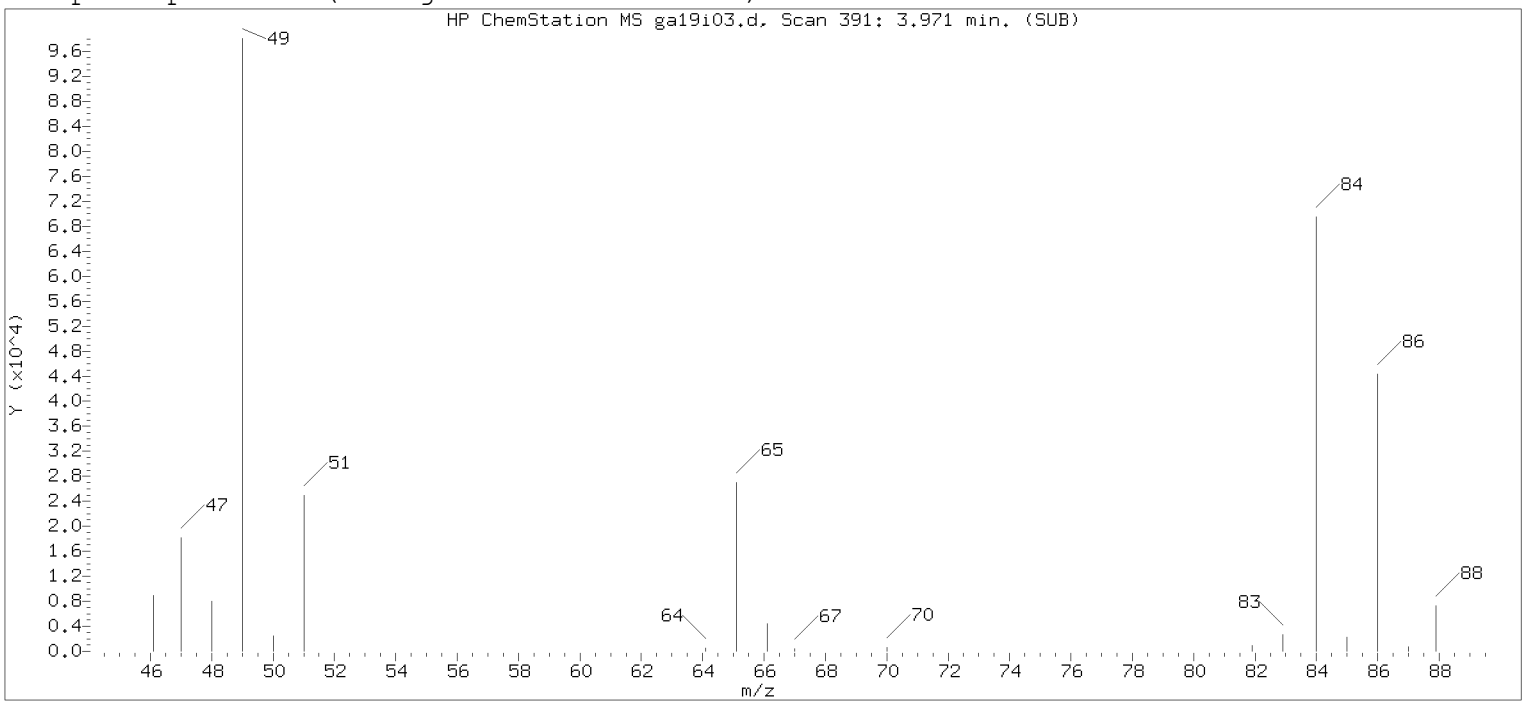
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 391
Retention Time (minutes): 3.971
Quant Ion : 65.00
Area (flag) : 212064M
On-Column Amount (ng) : 50.0000
Integration start scan : 360 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

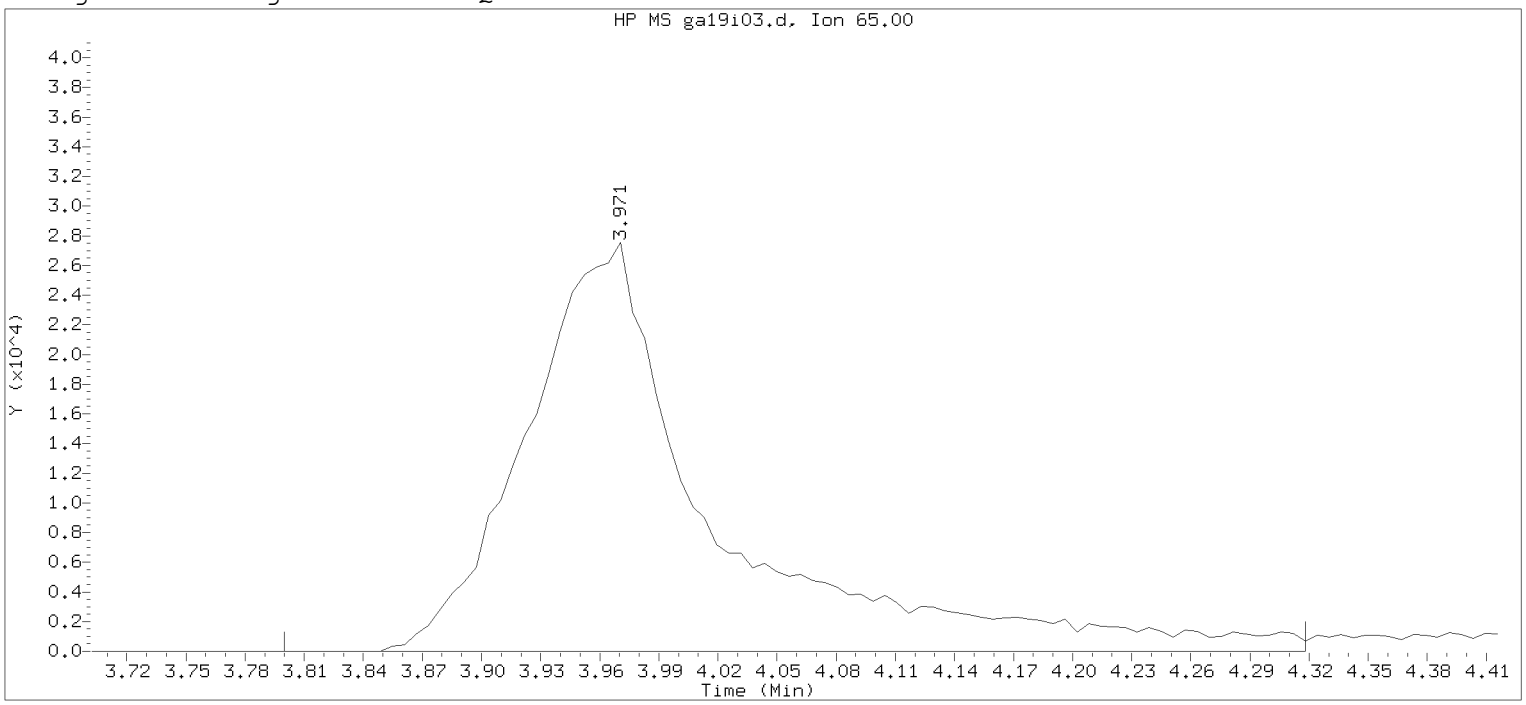
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

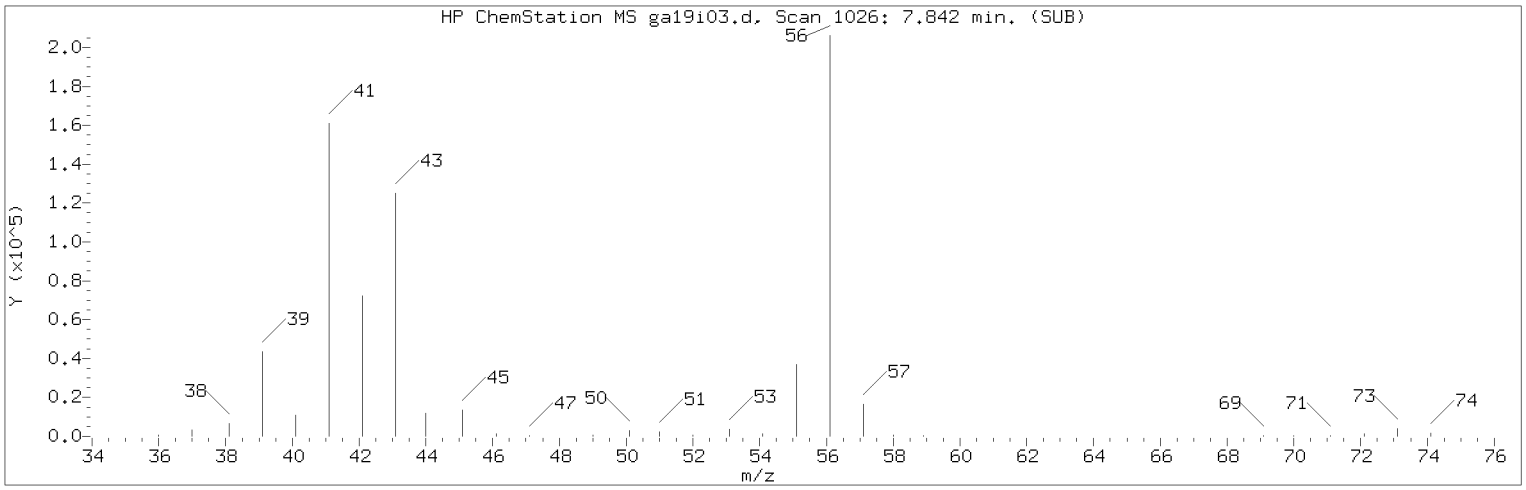
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

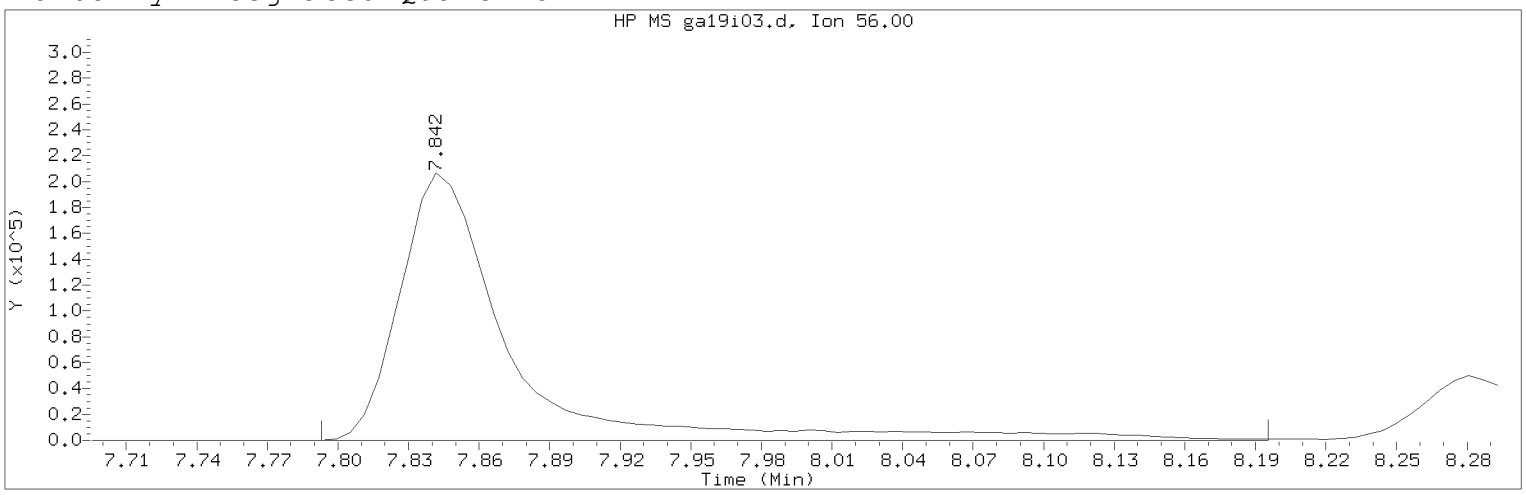
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 391
Retention Time (minutes): 3.971
Quant Ion : 65.00
Area : 181668
On-column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. mskrause 7440

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

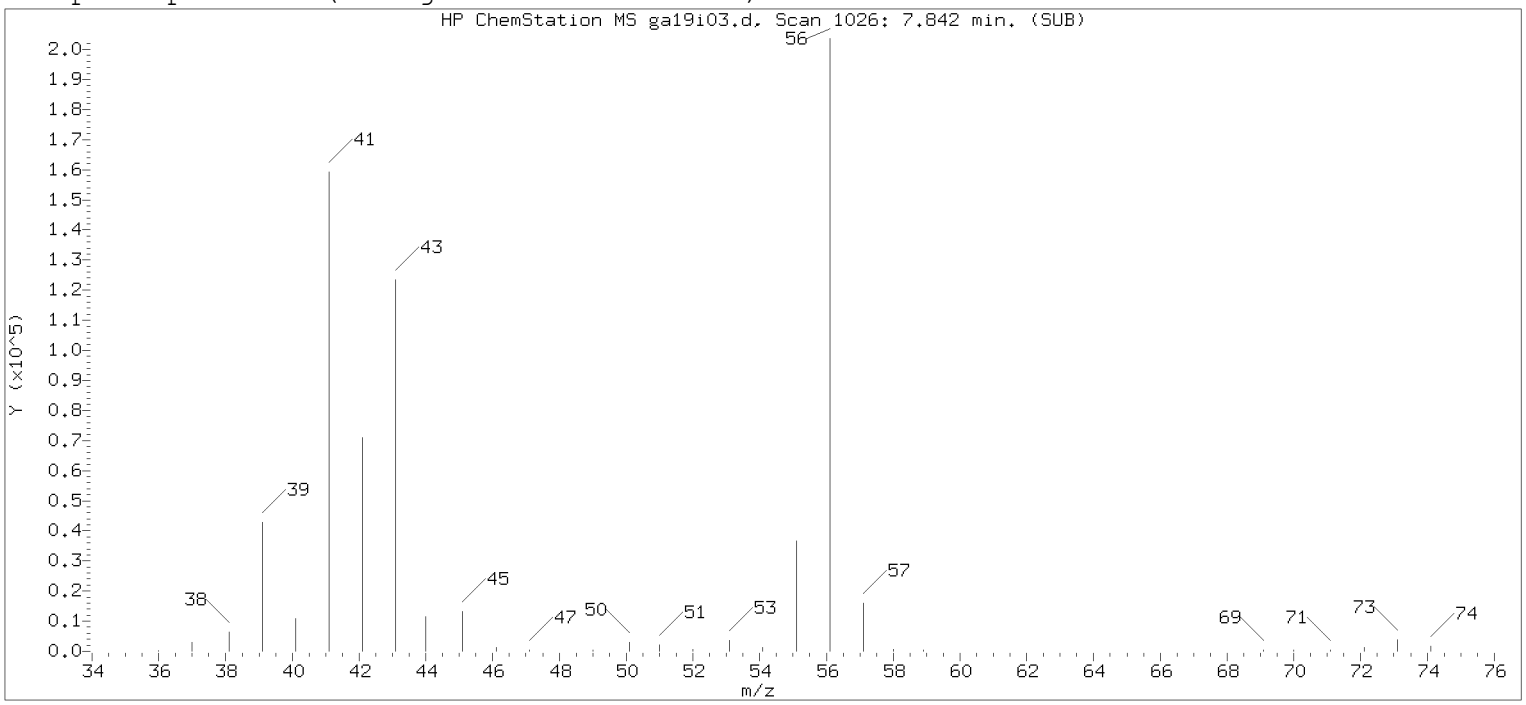
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1026
Retention Time (minutes): 7.842
Quant Ion : 56.00
Area (flag) : 675021M
On-Column Amount (ng) : 511.5760
Integration start scan : 1017 Integration stop scan: 1083
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

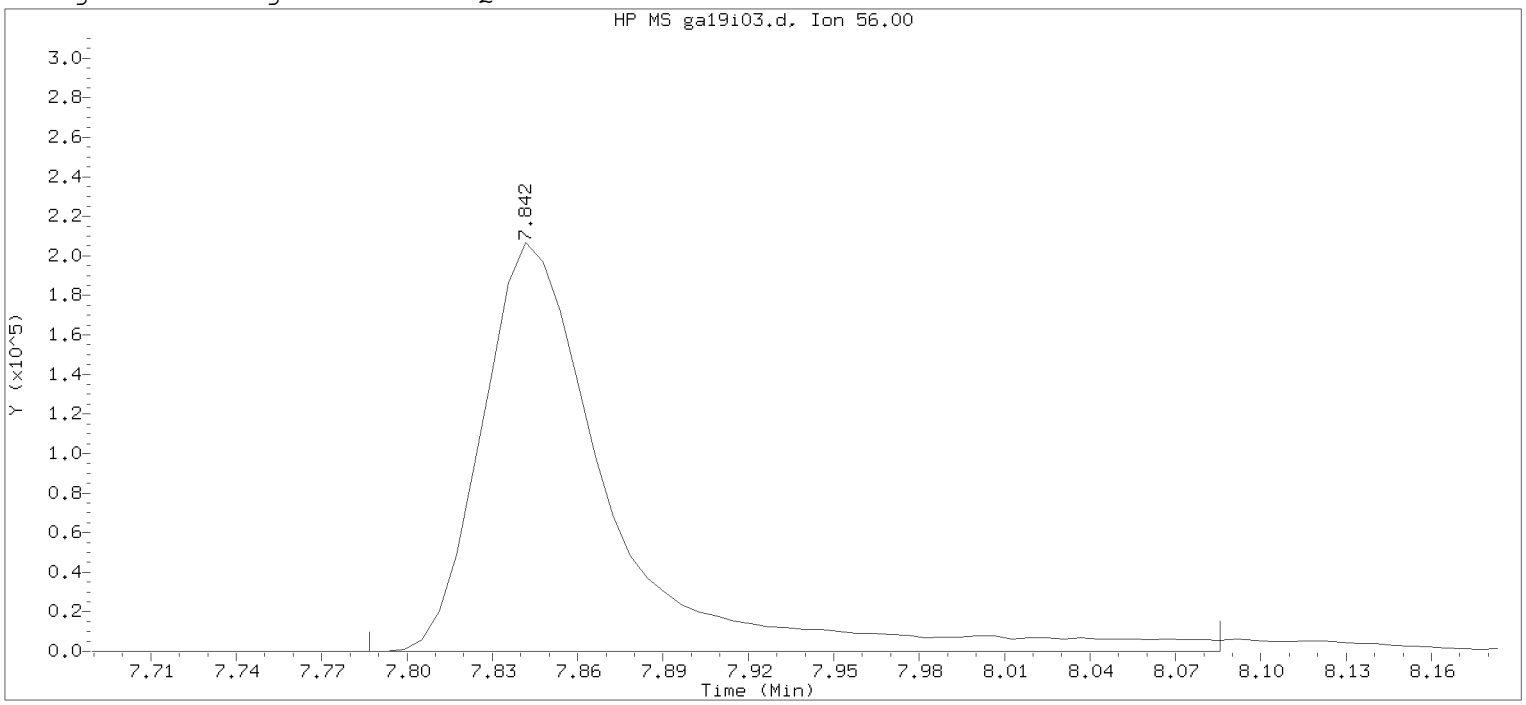
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

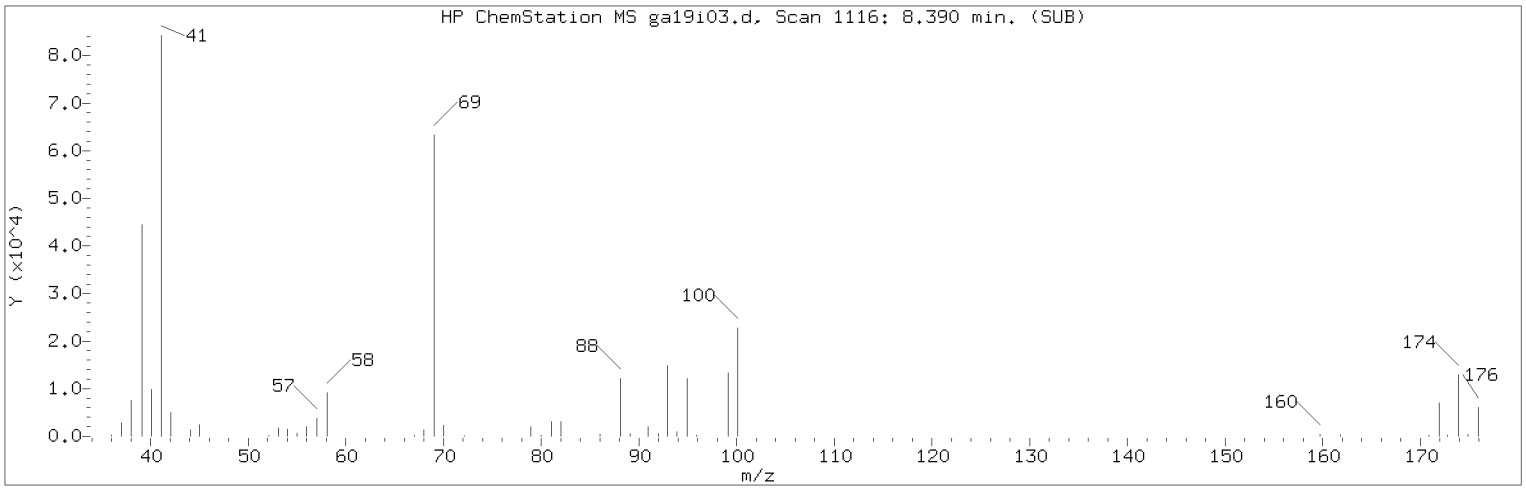
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

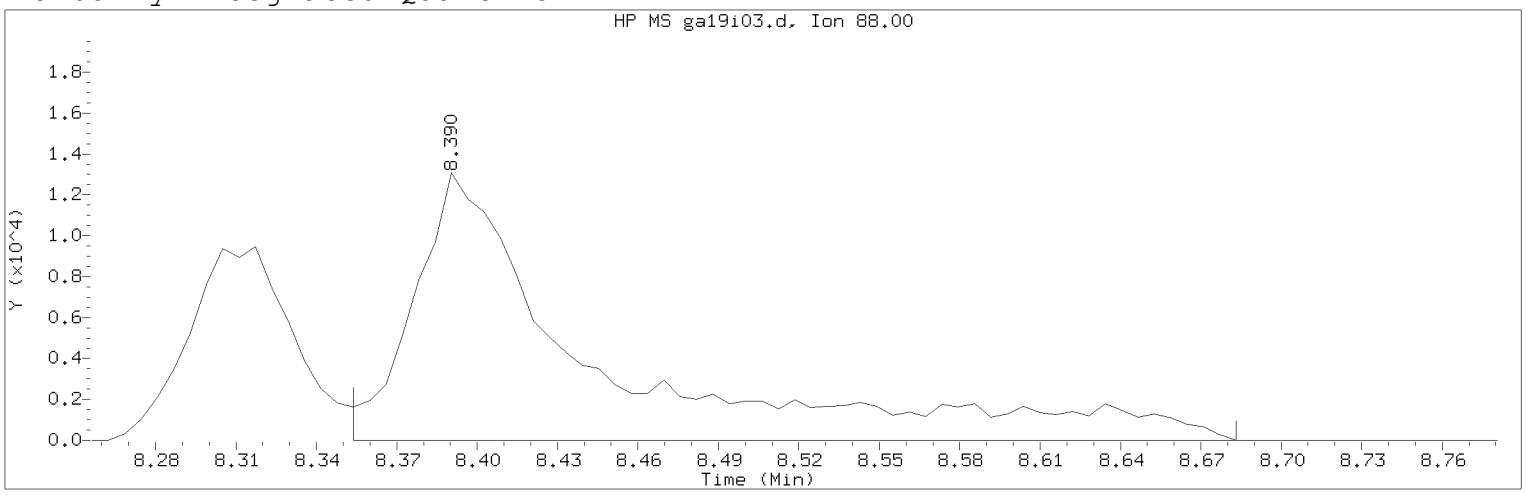
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1026
Retention Time (minutes): 7.842
Quant Ion : 56.00
Area : 652479
On-column Amount (ng) : 538.9205
Integration start scan : 1016 Integration stop scan: 1065
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

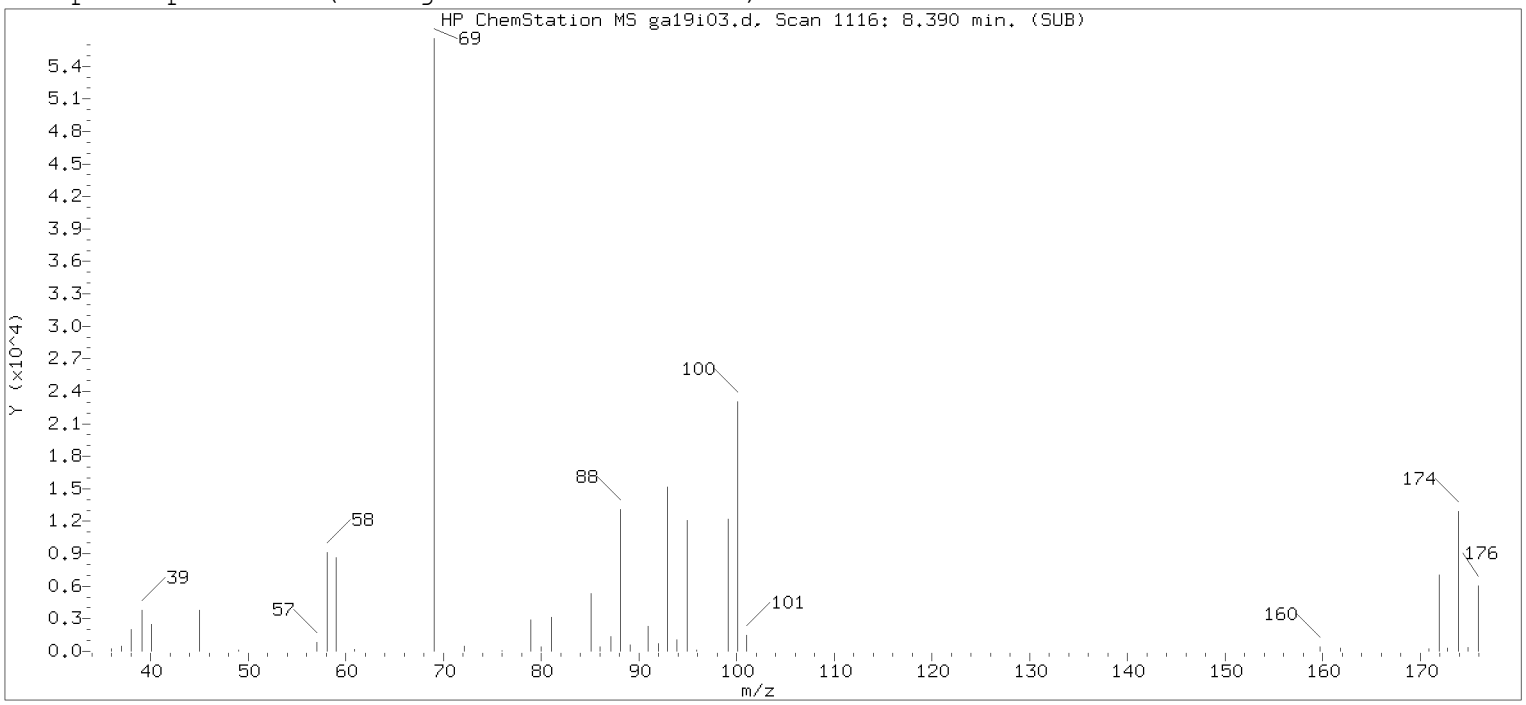
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 60823M
On-Column Amount (ng) : 254.9250
Integration start scan : 1109 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

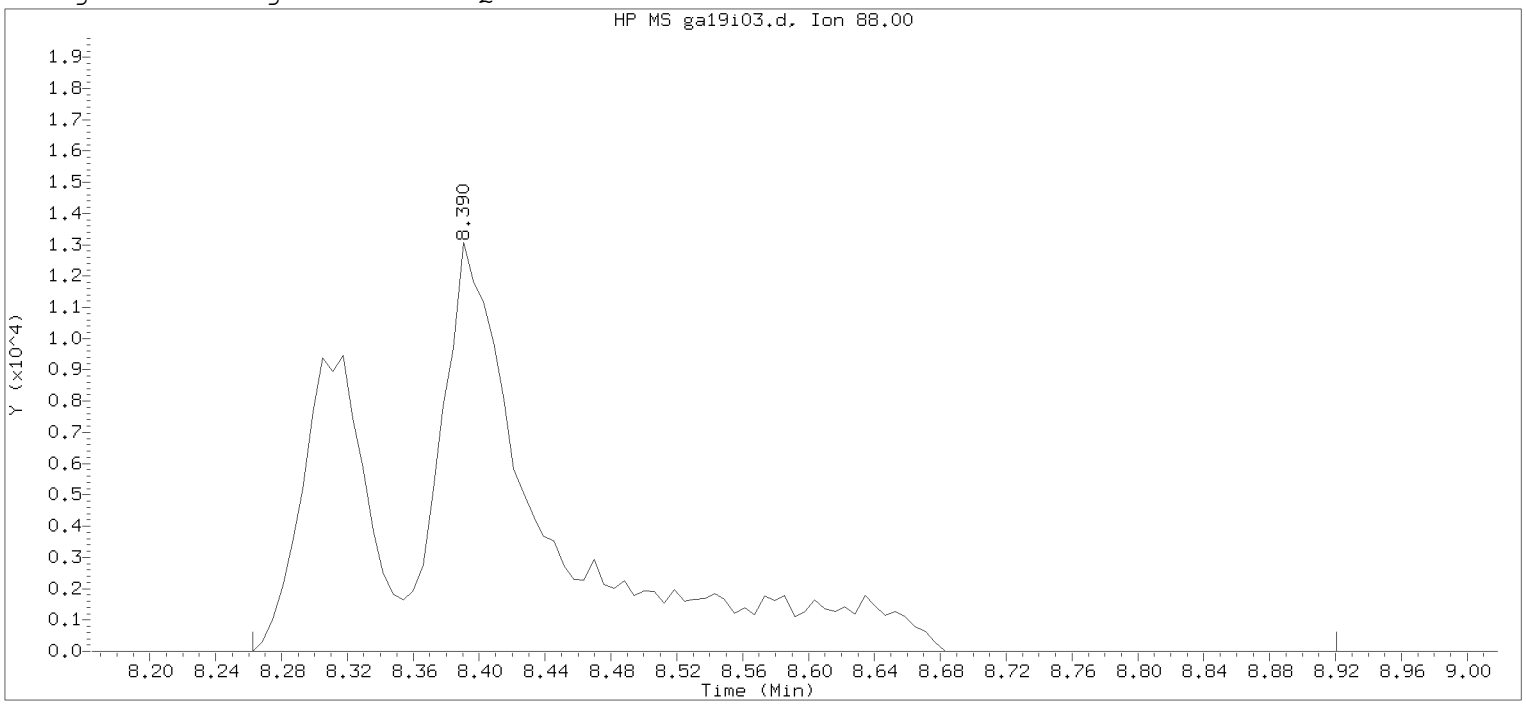
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

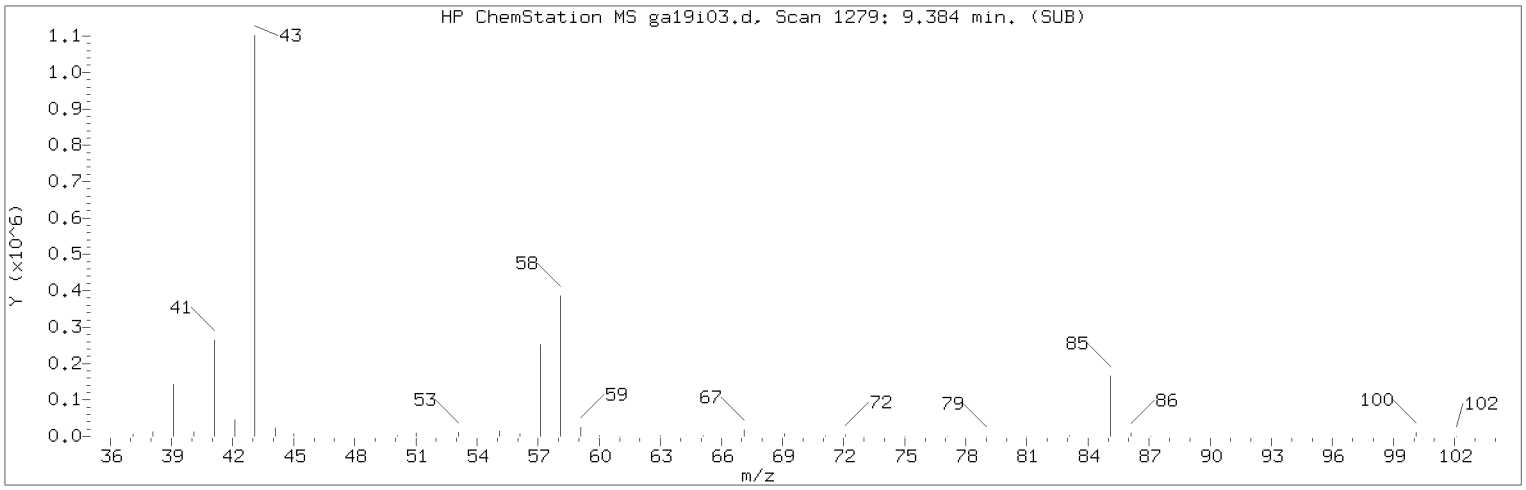
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

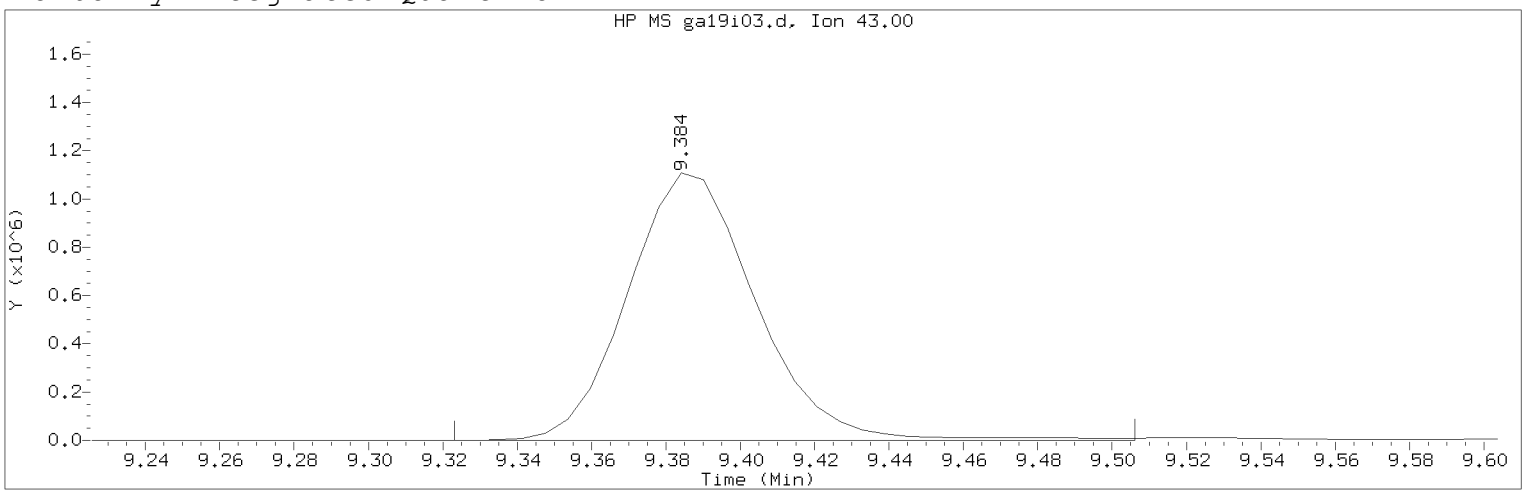
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1116		
Retention Time (minutes)	: 8.390		
Quant Ion	: 88.00		
Area	: 86101		
On-column Amount (ng)	: 369.6454		
Integration start scan	: 1094	Integration stop scan:	1202
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

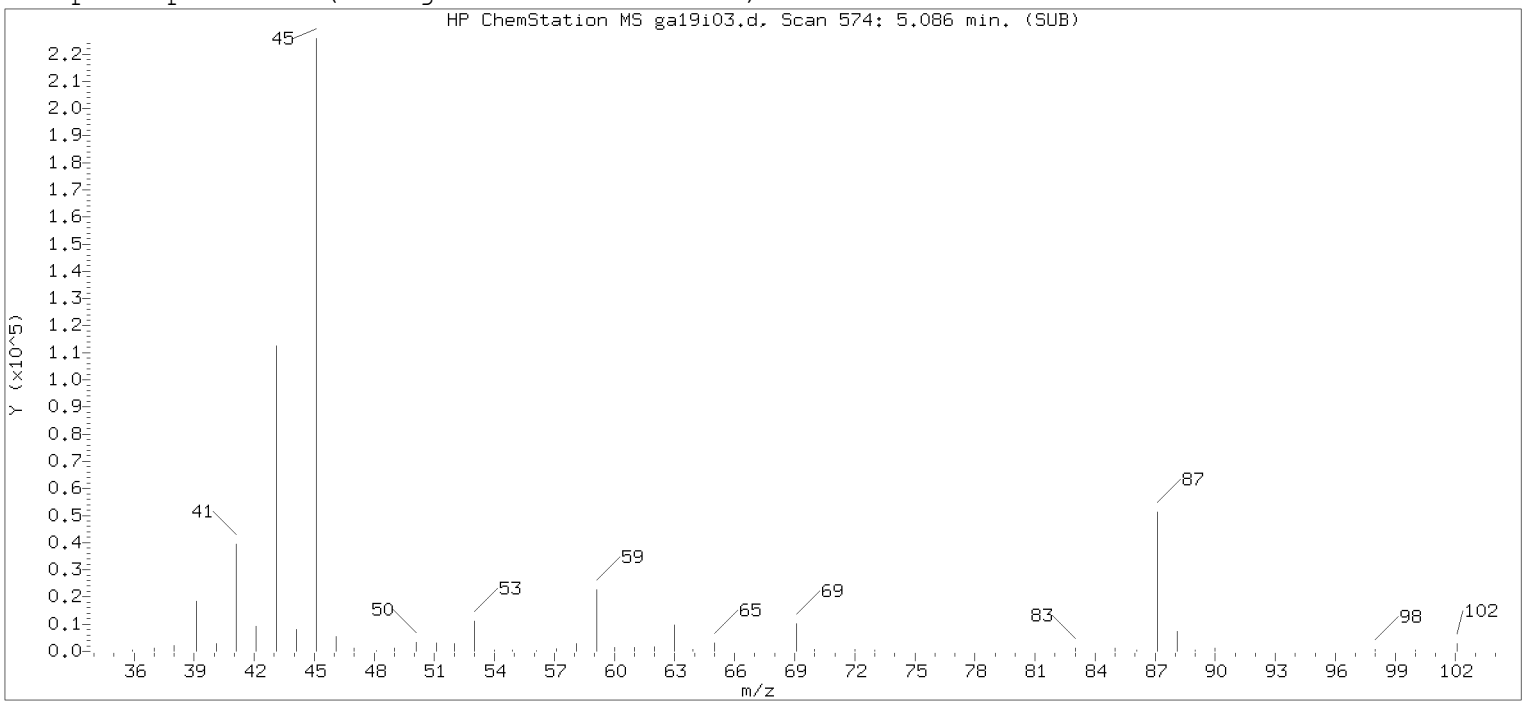
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 2642519M
On-Column Amount (ng) : 51.6398
Integration start scan : 1268 Integration stop scan: 1298
Y at integration start : 236 Y at integration end: 236

Reason for manual integration: improper integration

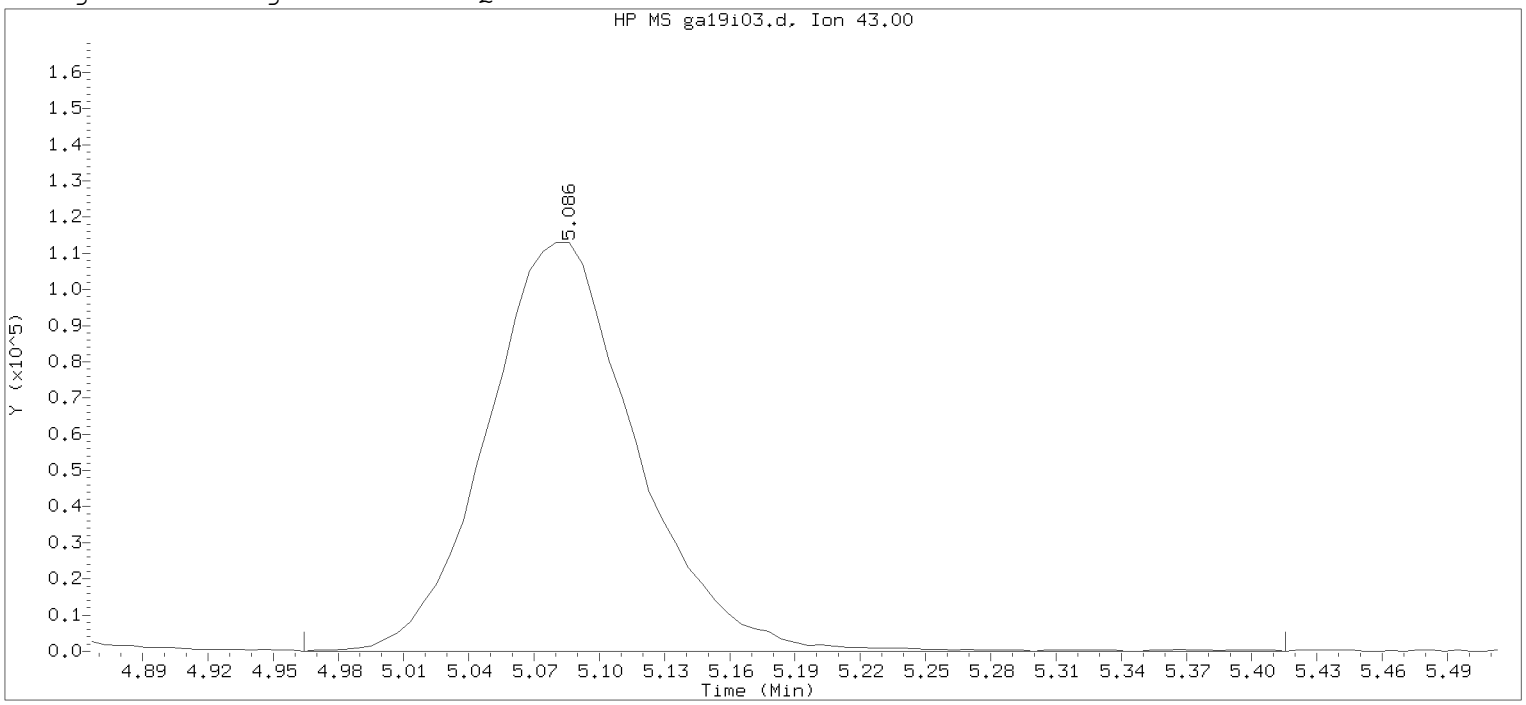
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 574
Retention Time (minutes): 5.086
Quant Ion : 43.00
Area : 538888
On-column Amount (ng) : 56.4469
Integration start scan : 553 Integration stop scan: 627
Y at integration start : 0 Y at integration end: 0

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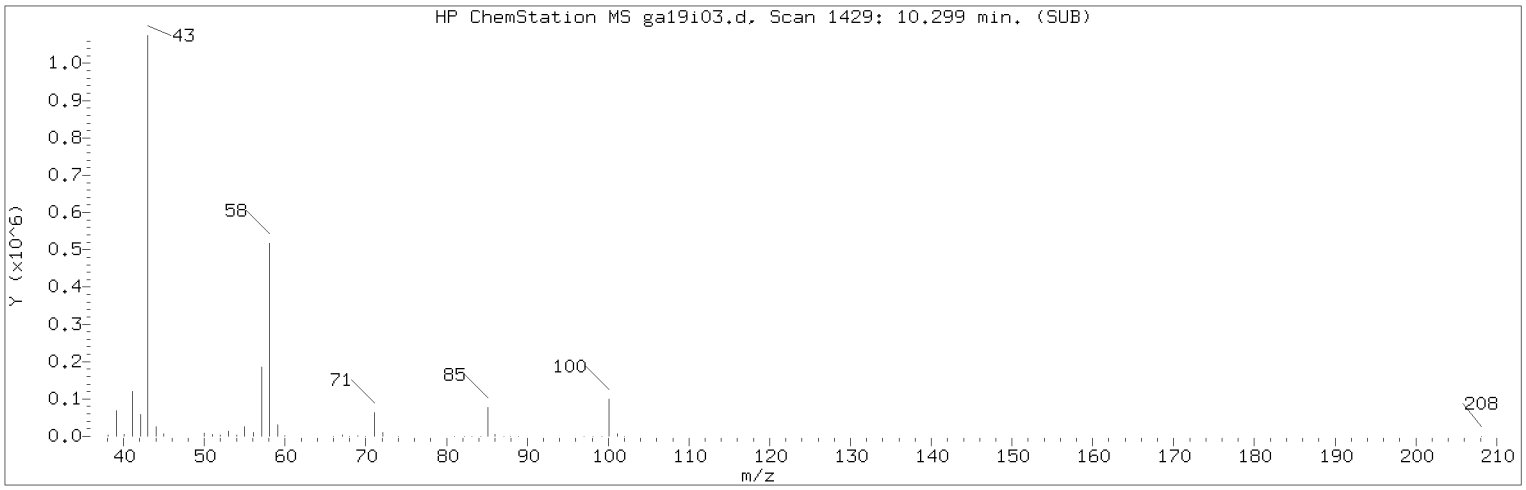
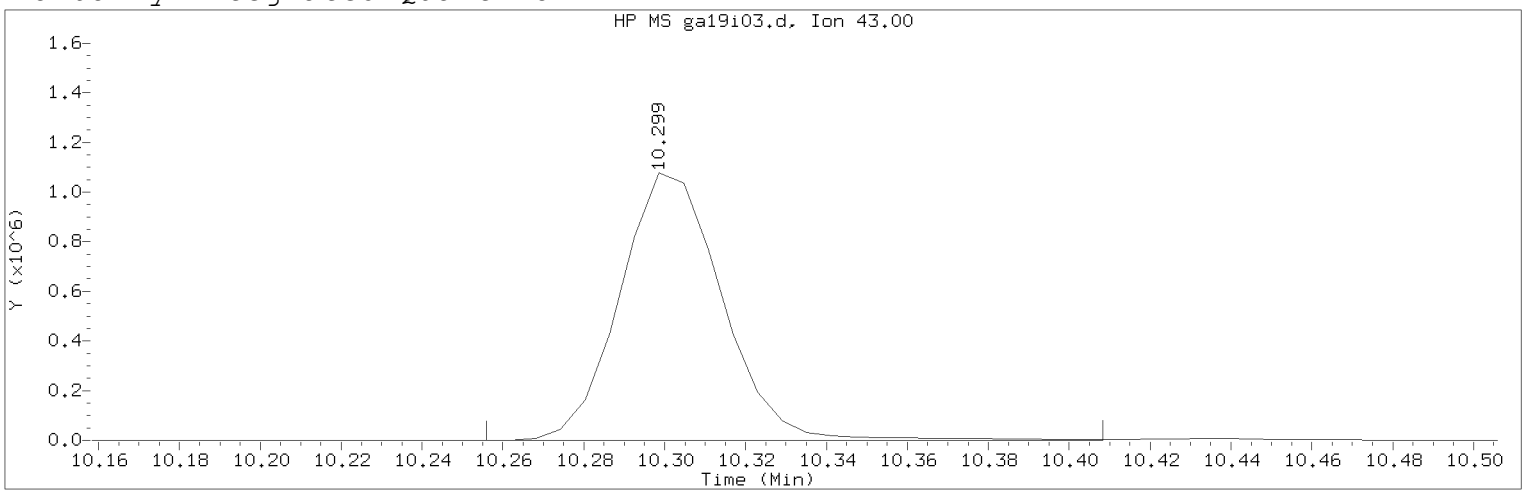
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

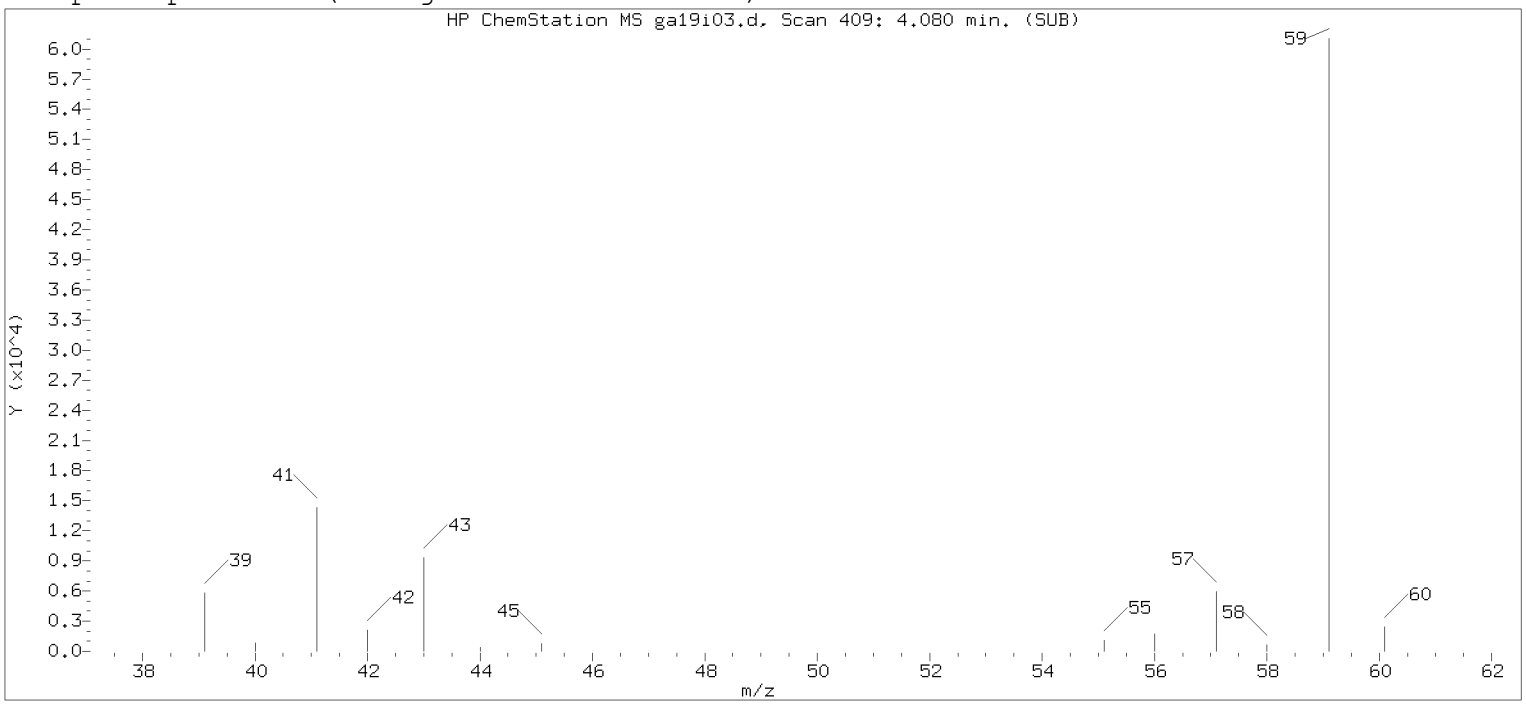
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 1892288M
On-Column Amount (ng) : 52.2355
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 25 Y at integration end: 25

Reason for manual integration: improper integration

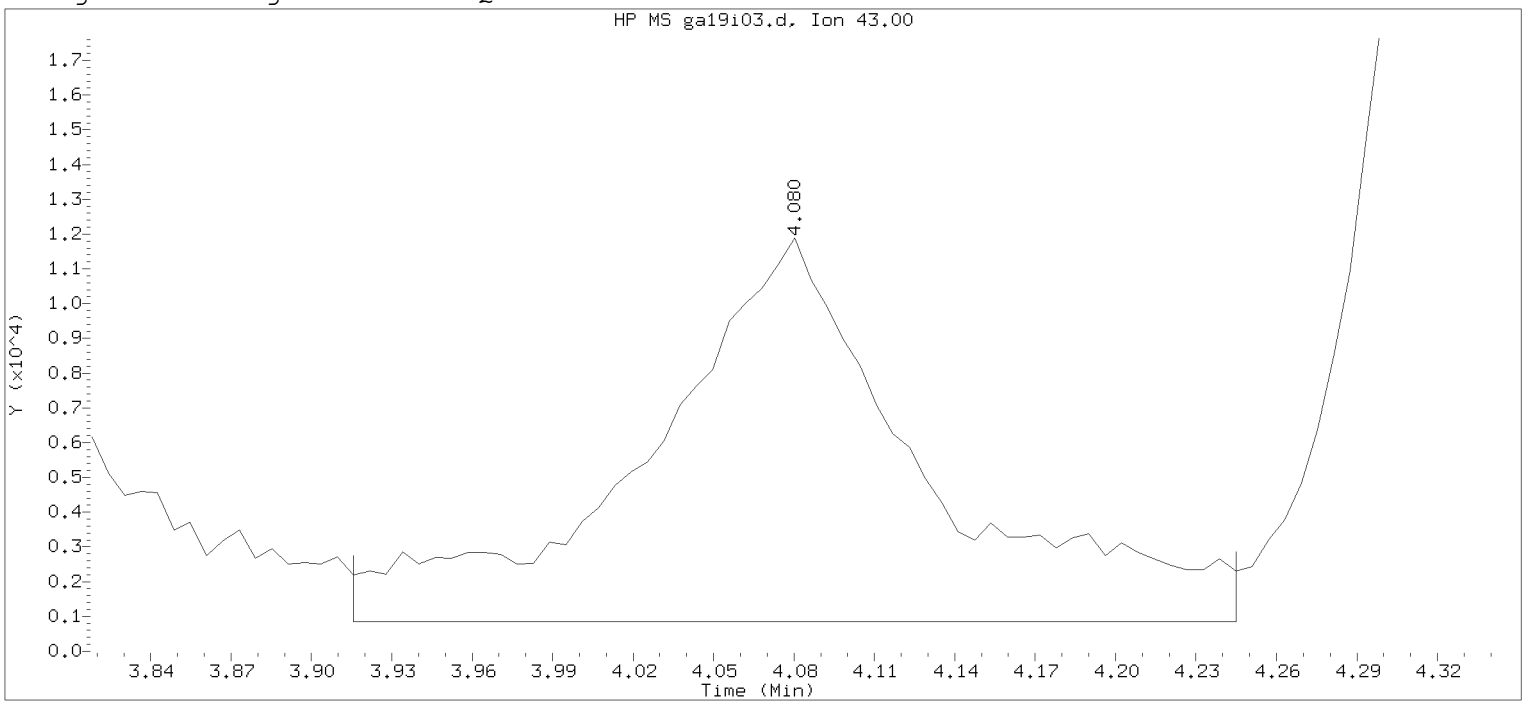
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 409
Retention Time (minutes): 4.080
Quant Ion : 43.00
Area : 78238
On-column Amount (ng) : 59.8710
Integration start scan : 381 Integration stop scan: 435
Y at integration start : 845 Y at integration end: 845

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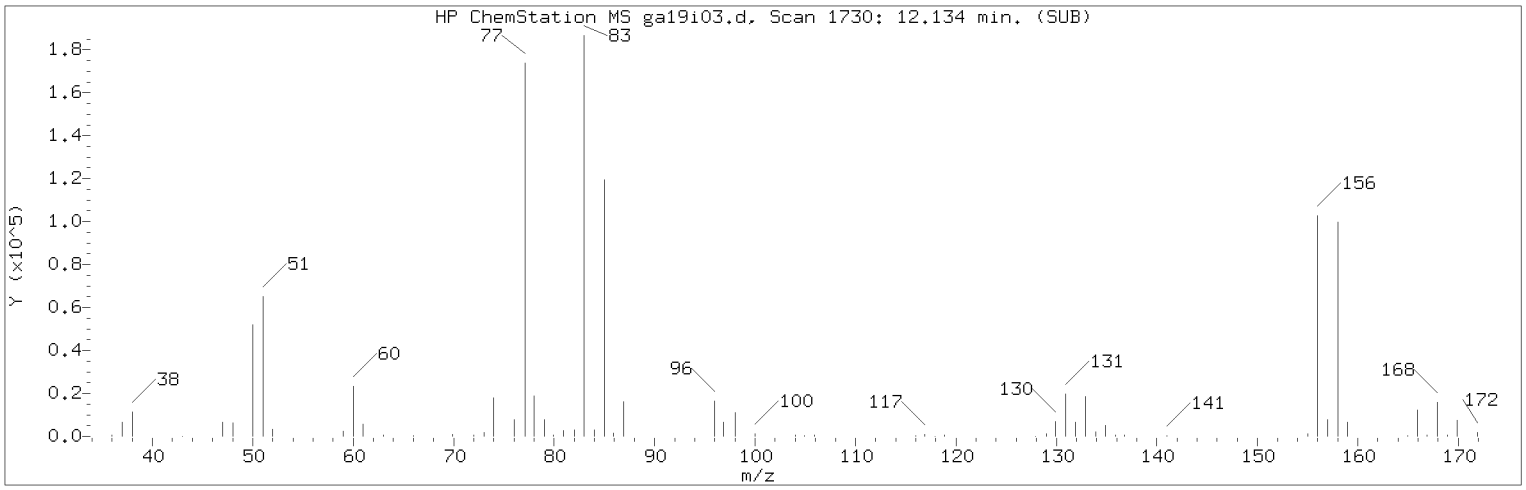
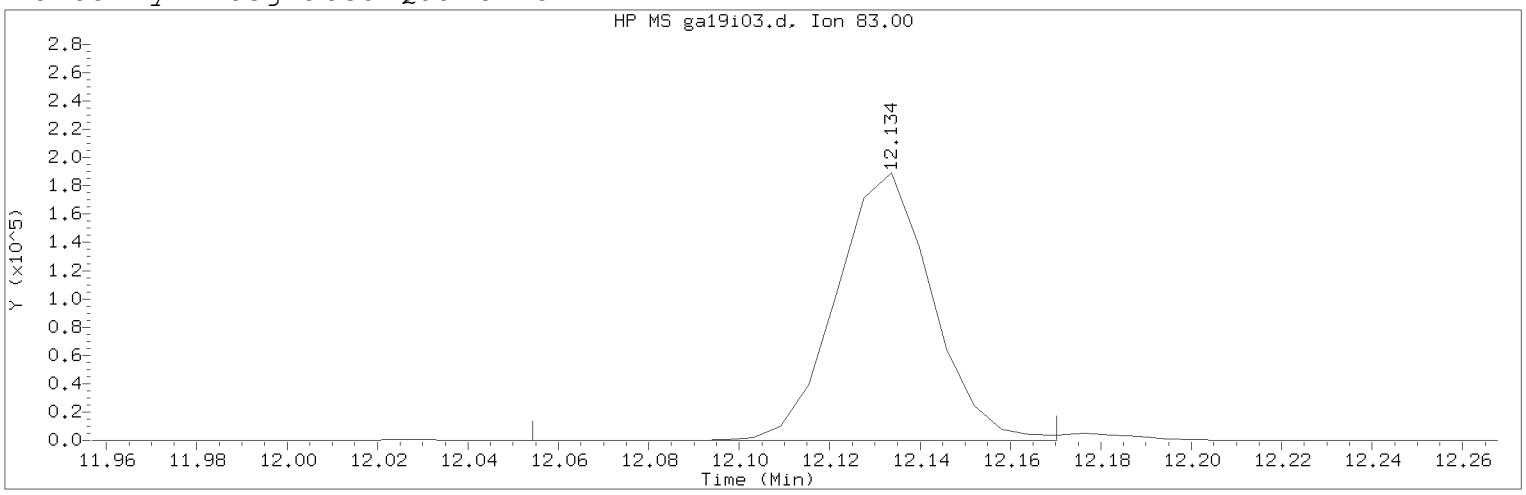
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

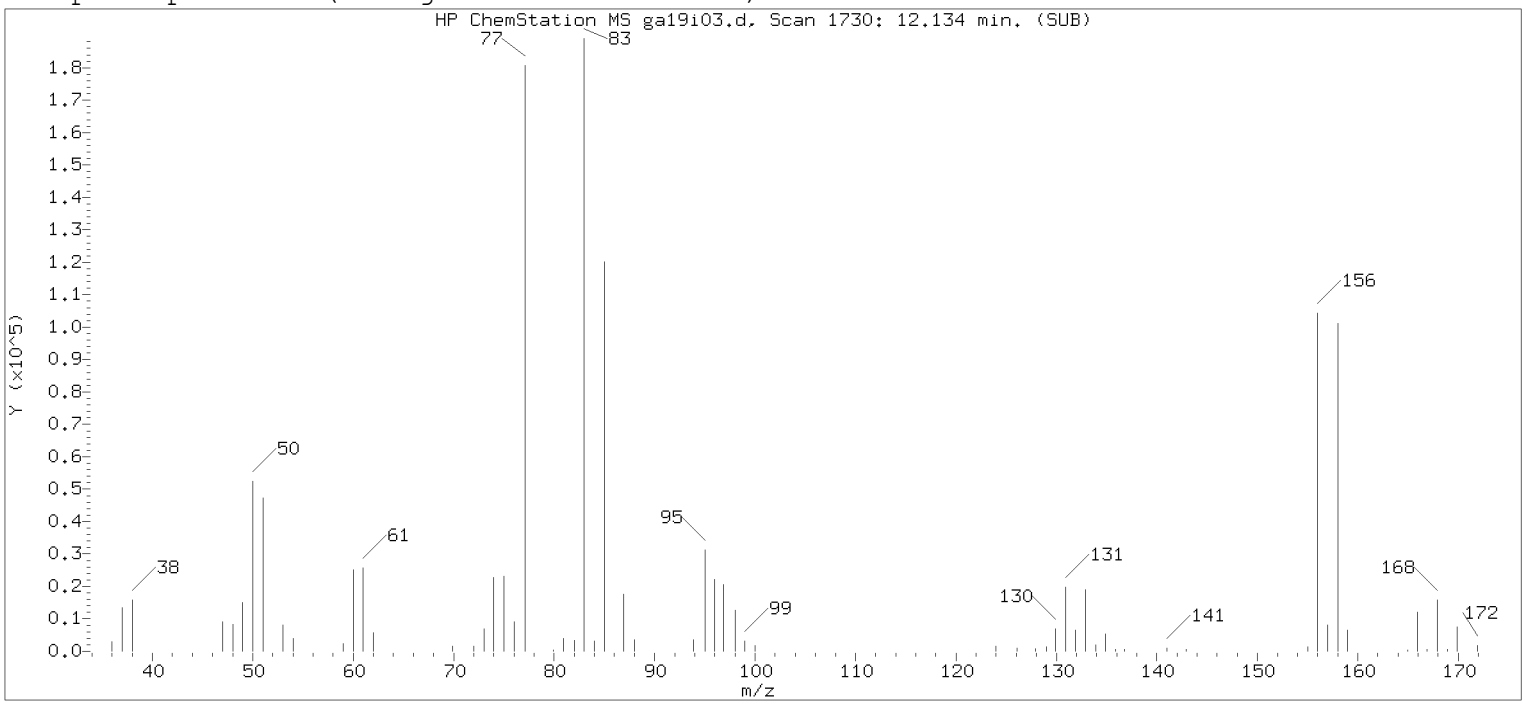
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 276992M
On-Column Amount (ng) : 4.9591
Integration start scan : 1716 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

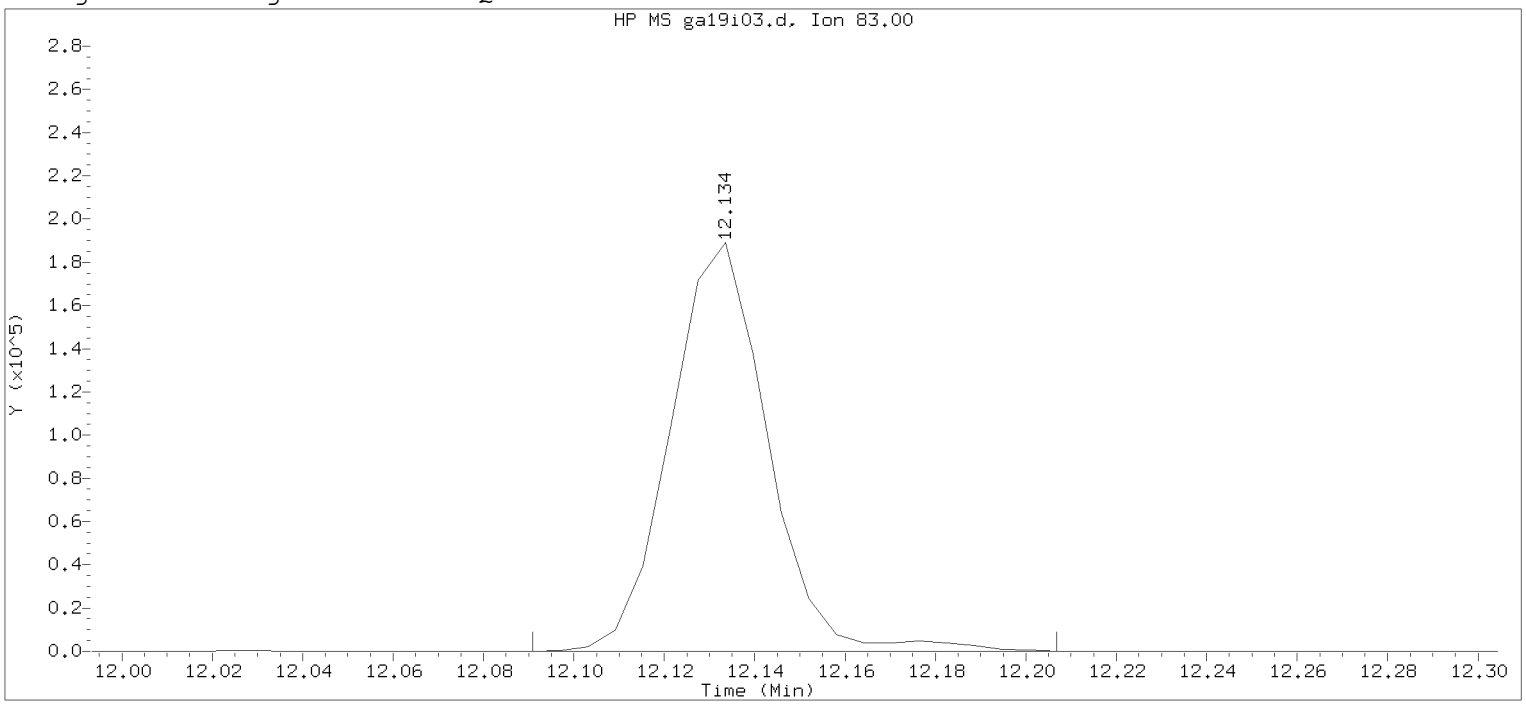
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i03.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:22
Date, time and analyst ID of latest file update: 19-Apr-2018 13:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 281626
On-column Amount (ng) : 4.9655
Integration start scan : 1722 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

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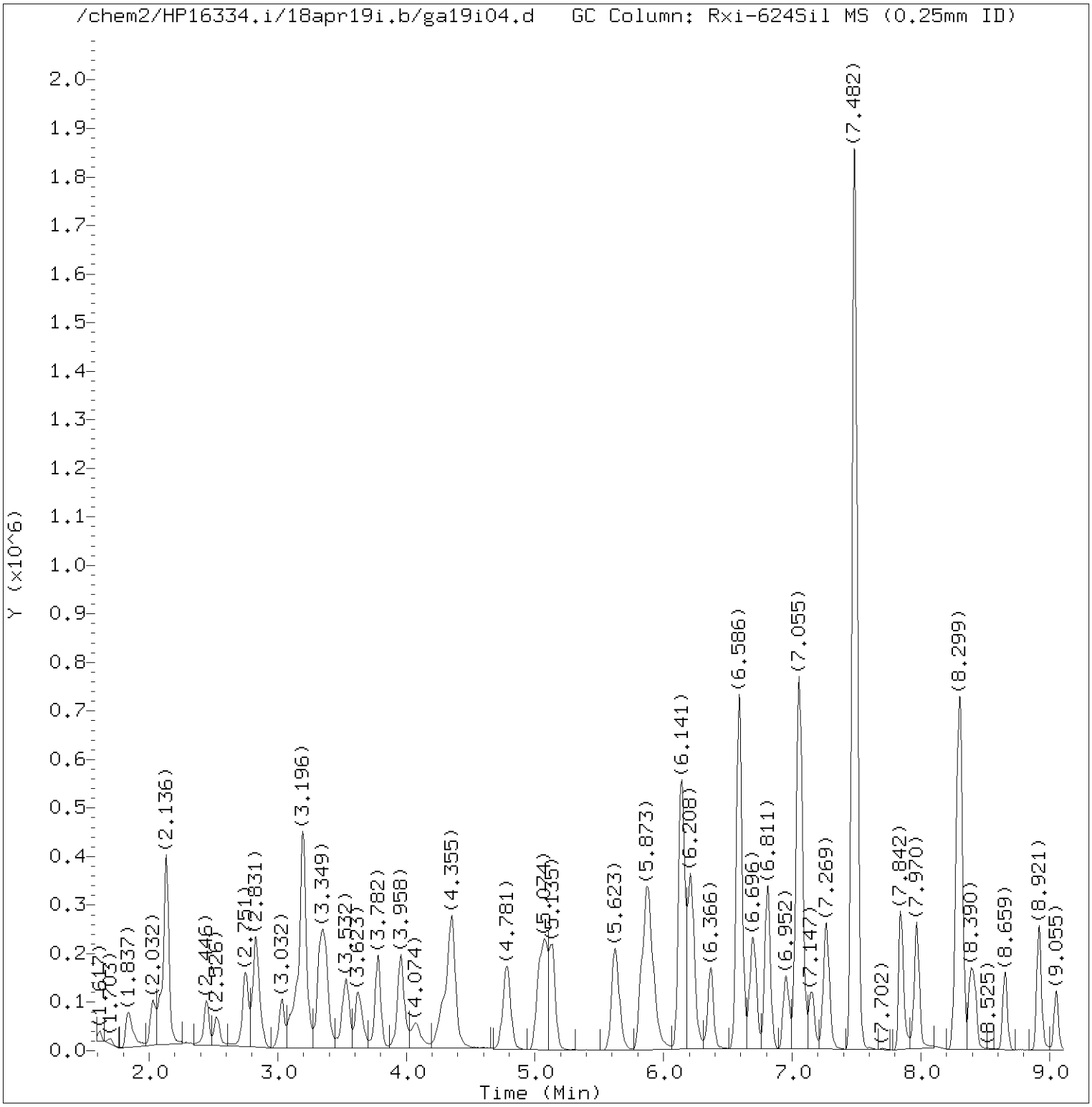
Target 3.5 esignature used. Page 7454



Total Ion Chromatogram (TIC)

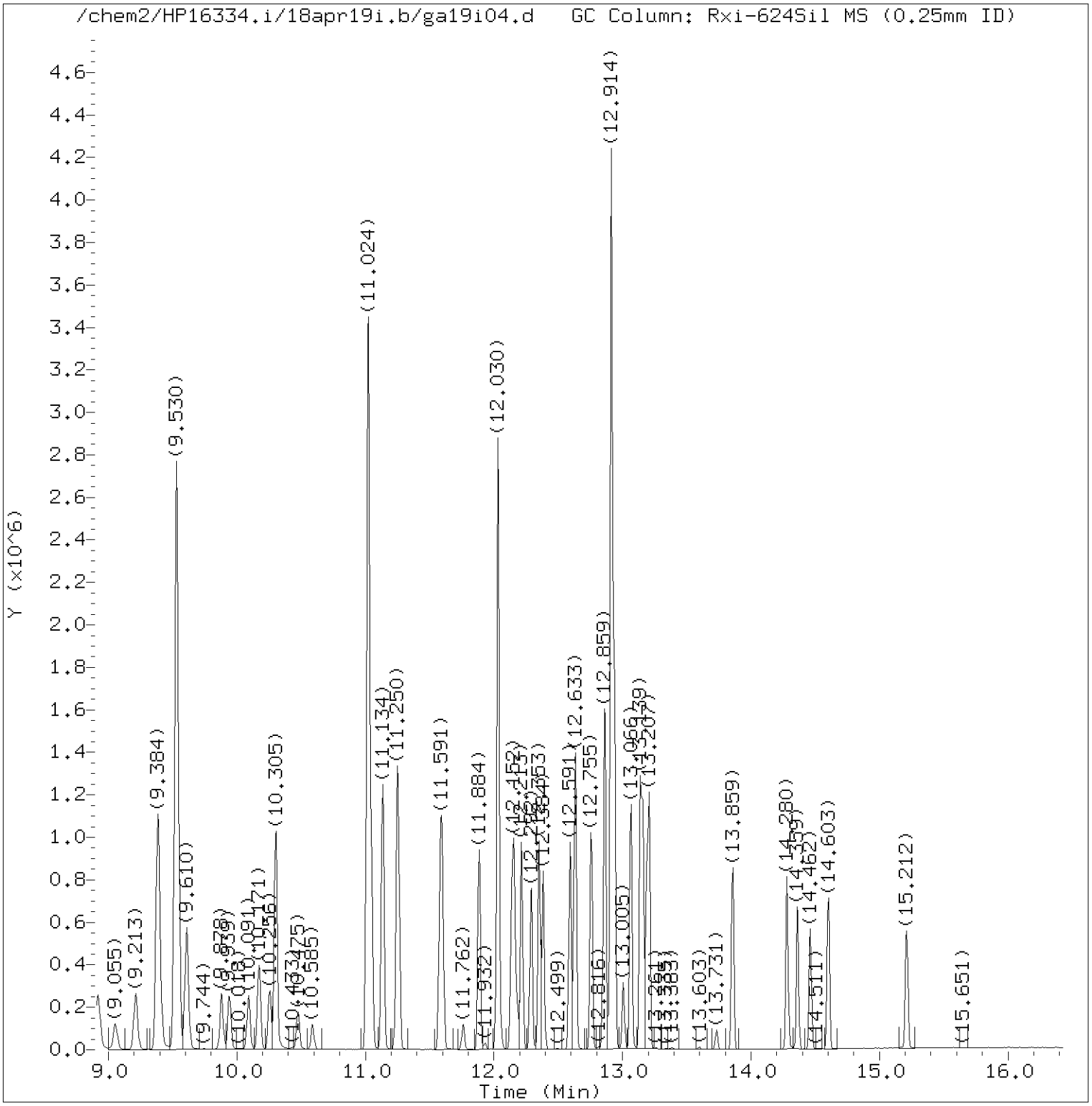
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	163581	1.996
2) Chloromethane	(2)	2.026	50	158007	1.993
5) Vinyl Chloride	(2)	2.136	62	136636	1.978
6) 1,3-Butadiene	(2)	2.136	39	314176M	2.450
7) Bromomethane	(2)	2.446	94	91666	1.994
8) Chloroethane	(2)	2.520	64	77640	2.005
9) Dichlorofluoromethane	(2)	2.751	67	187240	2.029
10) Trichlorofluoromethane	(2)	2.806	101	183283	1.986
11) Ethyl ether	(2)	3.038	59	93001	2.041
12) Freon 123a	(2)	3.123	67	127584	2.011
13) Acrolein	(1)	3.196	56	757463	102.859
15) 1,1-Dichloroethene	(2)	3.330	96	93613	2.095
14) Acetone	(1)	3.355	43	240015	21.338
16) Freon 113	(2)	3.373	101	100723	1.966
17) Methyl Iodide	(2)	3.519	142	169723	1.955
18) Carbon Disulfide	(2)	3.629	76	335356	1.987
21) Methyl Acetate	(1)	3.757	43	65877M	2.008
22) Allyl Chloride	(2)	3.782	41	206011	2.012
26)*t-Butyl Alcohol-d10	(1)	3.946	65	210083	50.000
23) Methylene Chloride	(2)	3.958	84	111270	2.058
28) t-Butyl Alcohol	(1)	4.074	59	160328	42.322
29) Acrylonitrile	(1)	4.269	53	138067	10.172
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	310233	1.980
31) trans-1,2-Dichloroethene	(2)	4.361	96	100679	1.976
32) n-Hexane	(2)	4.781	57	177664	1.993
33) 1,1-Dichloroethane	(2)	5.025	63	211913	2.010
34) di-Isopropyl Ether	(2)	5.080	45	430353	1.987
35) 2-Chloro-1,3-Butadiene	(2)	5.135	53	190468	1.977
37) Ethyl t-butyl ether	(2)	5.623	59	376848	1.967
38) 2-Butanone	(1)	5.830	43	425386	20.623
39) cis-1,2-Dichloroethene	(2)	5.873	96	115223	1.968
41) 2,2-Dichloropropane	(2)	5.891	77	171455	1.947
42) Propionitrile	(1)	5.928	54	203865	40.105
40) 1,2-Dichloroethene (Total)	(2)		96	215902	3.944
45) Methacrylonitrile	(1)	6.141	67	332133	20.294
48) Tetrahydrofuran	(1)	6.208	71	100358	20.325
47) Bromochloromethane	(2)	6.214	128	54202	1.979
49) Chloroform	(2)	6.366	83	199020	1.970

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	541432	9.992
50)$Dibromofluoromethane	(2)	6.586	111	555118	9.977
51) 1,1,1-Trichloroethane	(2)	6.592	97	170685	1.978
52) Cyclohexane	(2)	6.702	56	205295	1.976
52) Cyclohexane	(2)	6.702	84	158744	1.993
52) Cyclohexane	(2)	6.702	69	59651	1.977
54) Carbon Tetrachloride	(2)	6.805	117	139299	1.934
55) 1,1-Dichloropropene	(2)	6.811	75	158079	1.984
56) Isobutyl Alcohol	(1)	6.952	41	151913	99.896
57)$1,2-Dichloroethane-d4	(2)	7.049	102	115674	10.119
57)$1,2-Dichloroethane-d4	(2)	7.049	65	648945	10.081
57)$1,2-Dichloroethane-d4	(2)	7.049	104	72636	10.246
58) Benzene	(2)	7.074	78	431902	1.977
59) 1,2-Dichloroethane	(2)	7.147	62	151301	2.015
60) t-Amyl methyl ether	(2)	7.263	73	318225	1.947
63)*Fluorobenzene	(2)	7.482	96	2150008	10.000
62) n-Heptane	(2)	7.500	43	210974	1.990
65) n-Butanol	(1)	7.842	56	264019M	201.480
67) Trichloroethene	(2)	7.964	95	115687	1.986
69) Methylcyclohexane	(2)	8.281	83	201047	1.981
70) 1,2-Dichloropropane	(2)	8.305	63	118258	1.929
71) Methyl Methacrylate	(1)	8.384	69	63893	2.000
72) 1,4-Dioxane	(1)	8.397	88	24973M	104.182
73) Dibromomethane	(2)	8.415	93	57589	1.965
74) Bromodichloromethane	(2)	8.653	83	140423	1.890
76) 2-Nitropropane	(1)	8.921	41	215000	18.967
80) cis-1,3-Dichloropropene	(2)	9.213	75	175884	1.884
81) 4-Methyl-2-Pentanone	(1)	9.384	43	1049709M	20.525
82)$Toluene-d8	(3)	9.530	98	2186204	10.063
82)$Toluene-d8	(3)	9.530	100	1387666	10.020
83) Toluene	(3)	9.610	92	270241	1.966
84) trans-1,3-Dichloropropene	(3)	9.878	75	147580	1.863
86) Ethyl Methacrylate	(3)	9.939	69	134335	1.915
88) 1,1,2-Trichloroethane	(3)	10.091	97	82933	1.989
85) 1,3-Dichloropropene (total)	(3)		75	323464	3.747
89) Tetrachloroethene	(3)	10.177	166	126614	1.984
90) 1,3-Dichloropropane	(3)	10.256	76	150897	1.993
91) 2-Hexanone	(1)	10.305	43	742959M	20.522

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	91000	1.826
95) 1,2-Dibromoethane	(3)	10.591	107	78947	1.950
97)*Chlorobenzene-d5	(3)	11.018	117	1622110	10.000
98) Chlorobenzene	(3)	11.048	112	312851	1.987
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	105207	1.889
100) Ethylbenzene	(3)	11.134	91	540774	1.982
101) m+p-Xylene	(3)	11.250	106	415246	3.936
104) o-Xylene	(3)	11.585	106	203789	1.915
106) Styrene	(3)	11.597	104	340627	1.913
105) Xylene (Total)	(3)		106	619035	5.851
107) Bromoform	(3)	11.762	173	50807	1.720
108) Isopropylbenzene	(3)	11.884	105	540353	1.959
111)$4-Bromofluorobenzene	(3)	12.030	95	827180	9.961
111)$4-Bromofluorobenzene	(3)	12.030	174	715029	10.030
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	106873	1.929
114) Bromobenzene	(4)	12.146	156	138032	1.919
116) 1,2,3-Trichloropropane	(4)	12.182	110	30126	1.974
117) n-Propylbenzene	(4)	12.213	91	652319	1.977
119) 2-Chlorotoluene	(4)	12.292	126	127143	1.935
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	464651	1.940
122) 4-Chlorotoluene	(4)	12.384	126	137165	1.972
125) tert-Butylbenzene	(4)	12.591	134	97524	1.955
126) Pentachloroethane	(4)	12.627	167	75904	1.779
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	480980	1.947
128) sec-Butylbenzene	(4)	12.755	105	593165	1.938
131) 1,3-Dichlorobenzene	(4)	12.859	146	276108	1.919
132) p-Isopropyltoluene	(4)	12.865	119	515525	1.924
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	922950	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	281559	1.938
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	211959	1.928
136) Benzyl Chloride	(4)	13.005	126	38098	1.757
138) n-Butylbenzene	(4)	13.158	92	276070	1.935
139) 1,2-Dichlorobenzene	(4)	13.188	146	260453	1.921
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	15023	1.849
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	231114	1.923
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	214386	1.917
146) Hexachlorobutadiene	(4)	14.365	225	112176	1.939
147) Naphthalene	(4)	14.462	128	366089	1.946

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	186318	1.945

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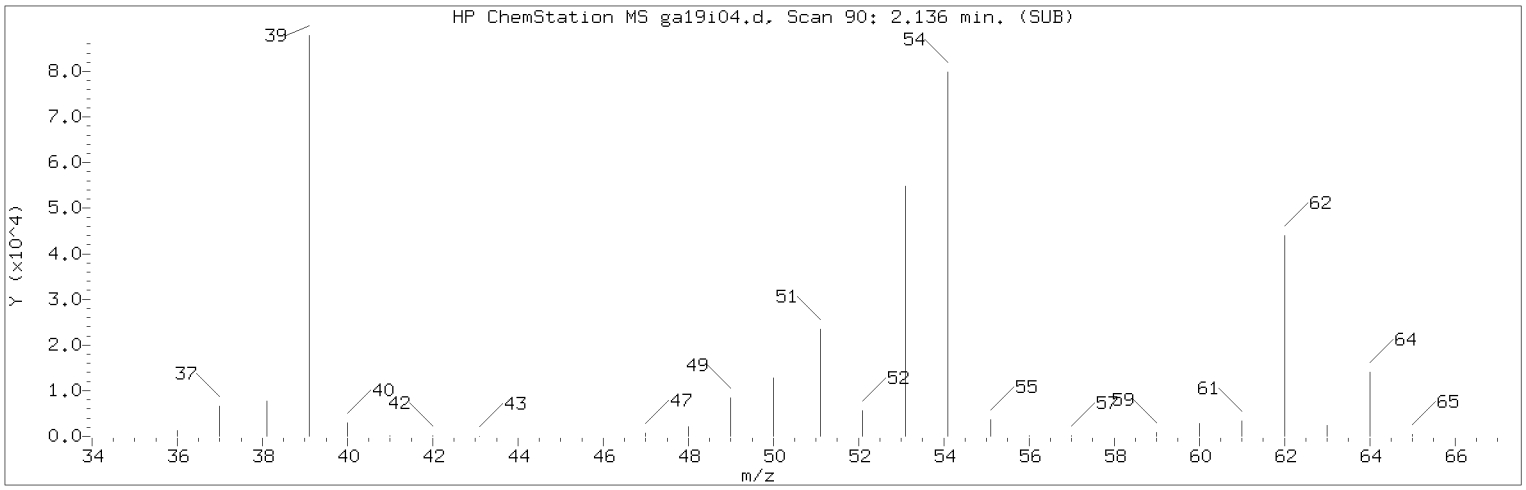
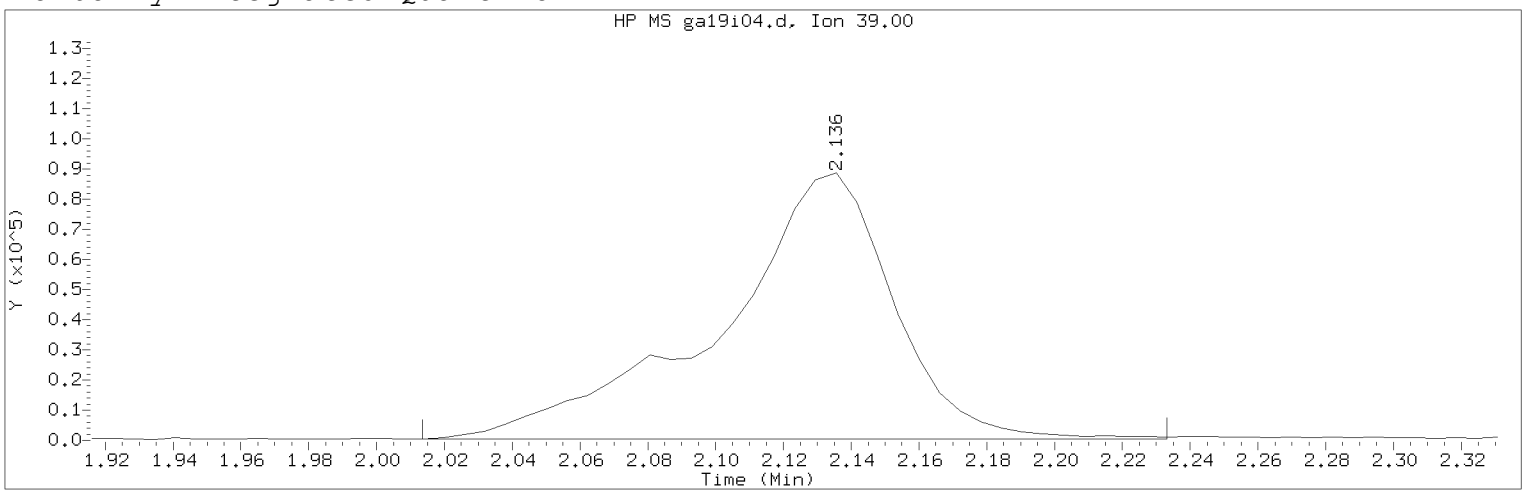
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

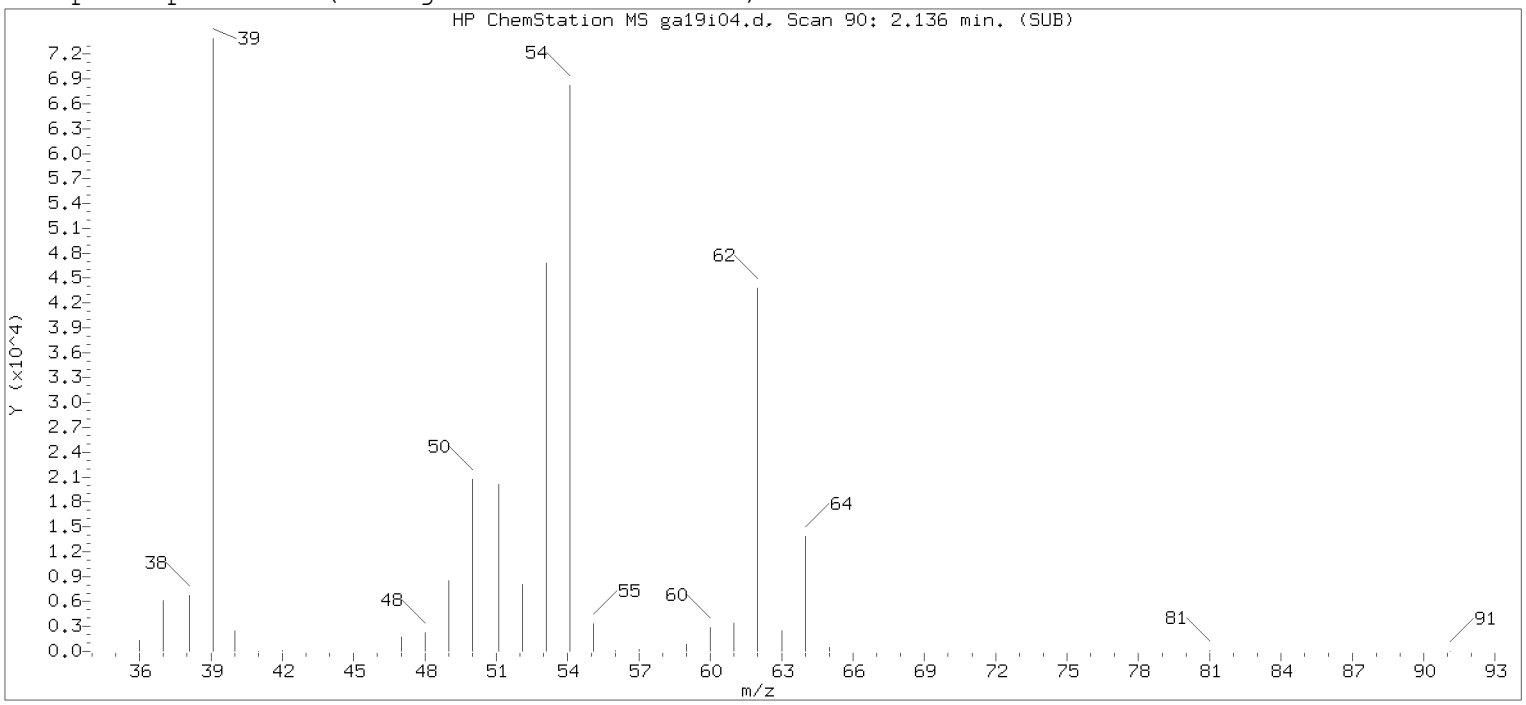
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 314176M
On-Column Amount (ng) : 2.4501
Integration start scan : 69 Integration stop scan: 105
Y at integration start : 354 Y at integration end: 354

Reason for manual integration: improper integration

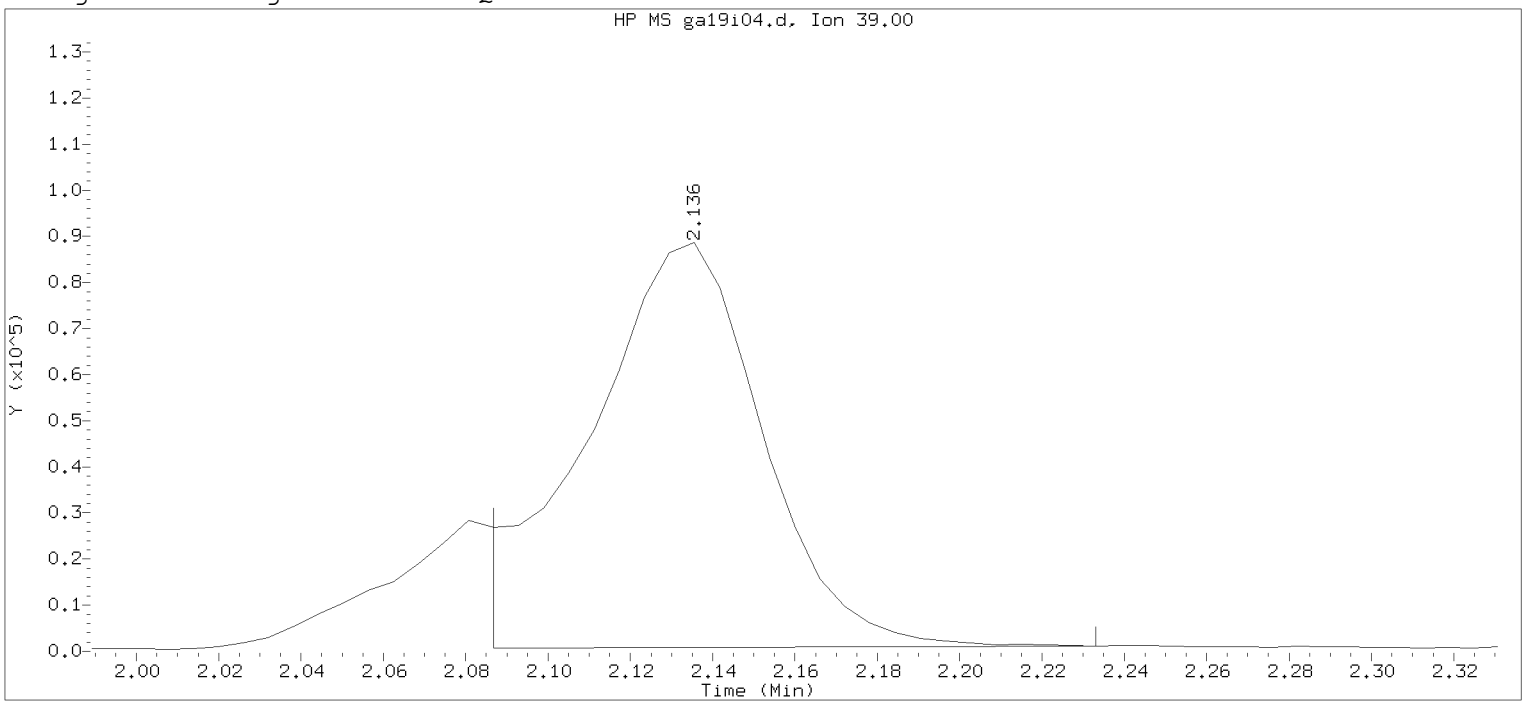
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

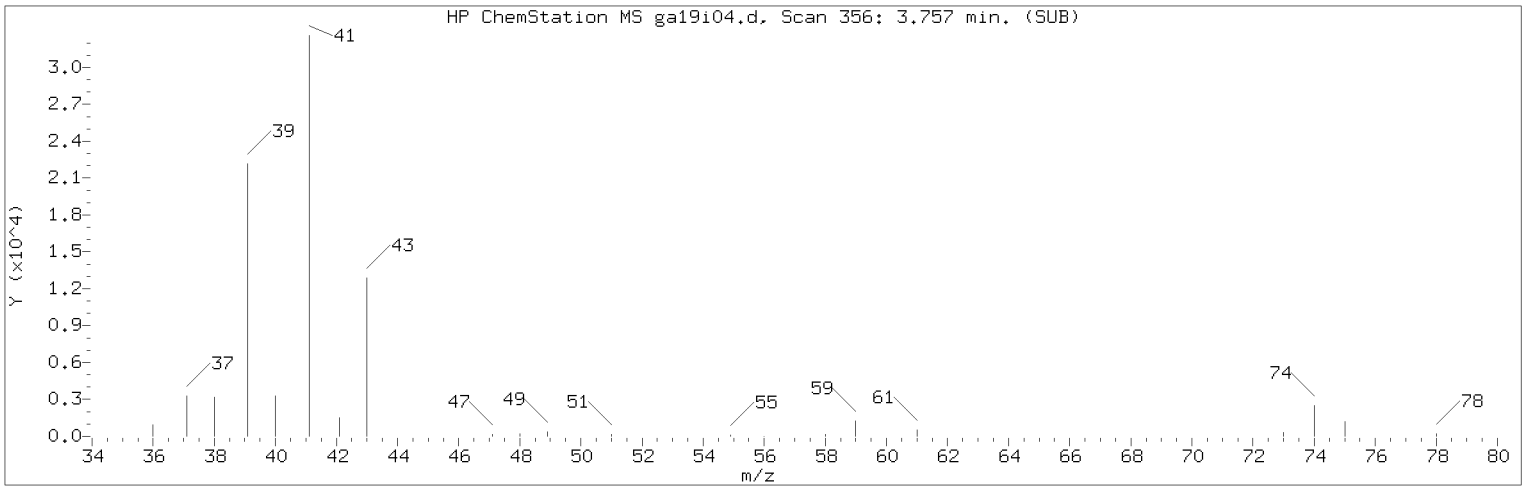
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

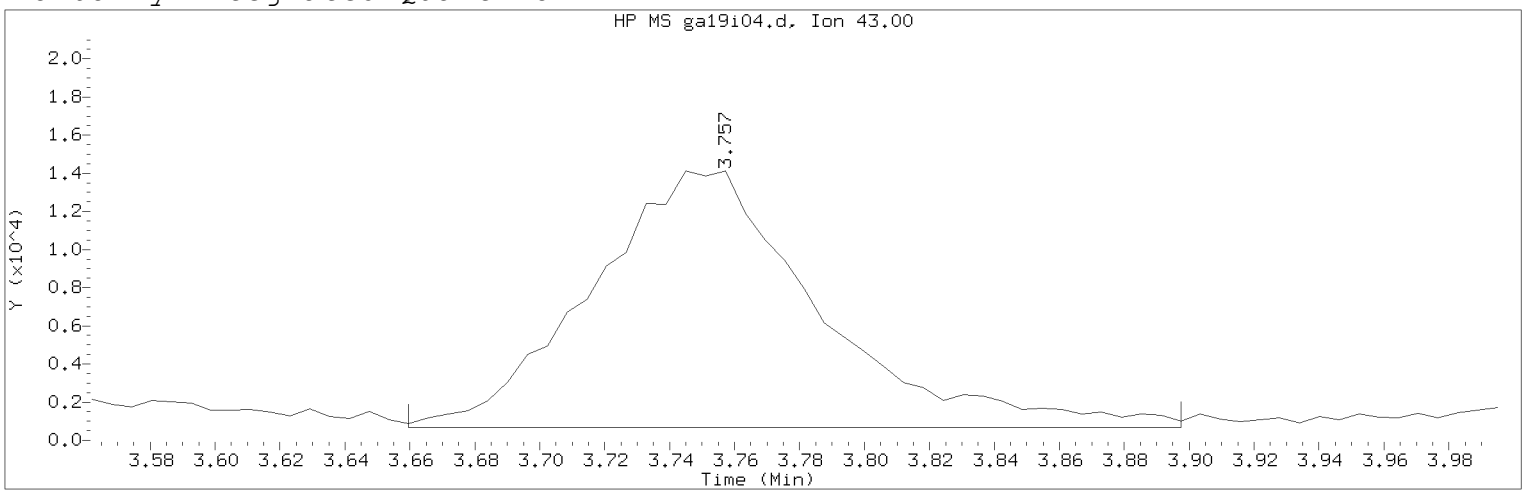
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 258868
On-column Amount (ng) : 2.1991
Integration start scan : 81 Integration stop scan: 105
Y at integration start : 656 Y at integration end: 1116

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature user id: MSK0747

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

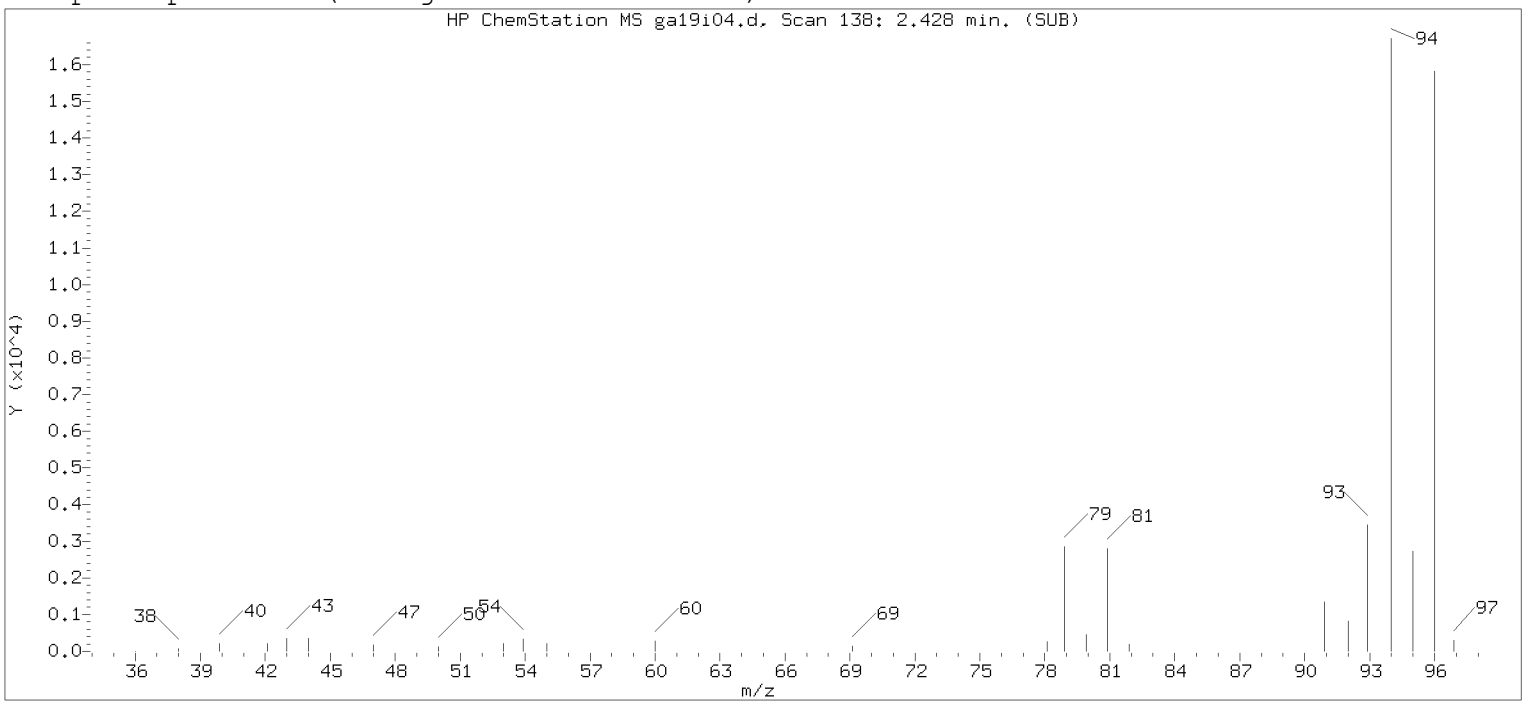
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 356
Retention Time (minutes): 3.757
Quant Ion : 43.00
Area (flag) : 65877M
On-Column Amount (ng) : 2.0084
Integration start scan : 339 Integration stop scan: 378
Y at integration start : 667 Y at integration end: 667

Reason for manual integration: improper integration

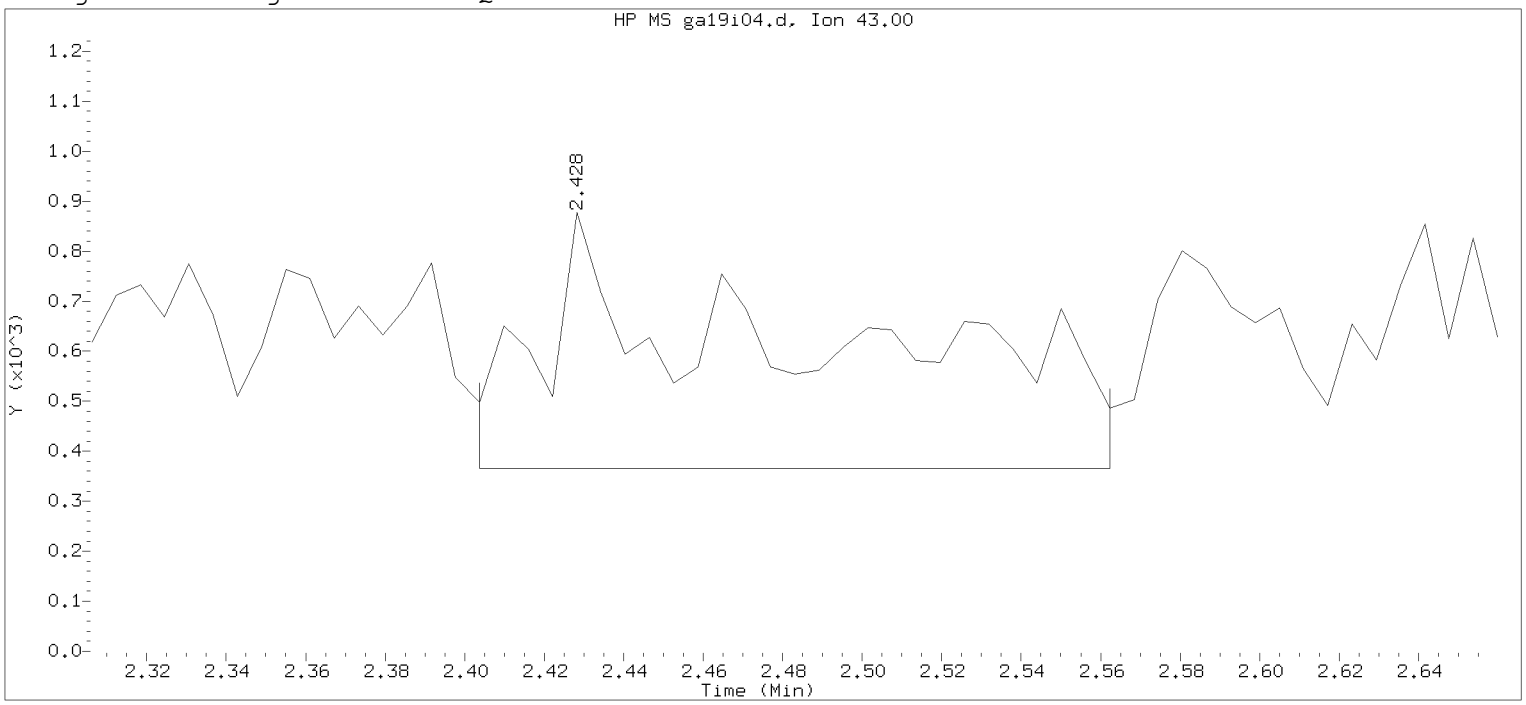
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 21		
Compound Name	: Methyl Acetate		
Scan Number	: 138		
Retention Time (minutes)	: 2.428		
Quant Ion	: 43.00		
Area	: 2402		
On-column Amount (ng)	: 5.0141		
Integration start scan	: 133	Integration stop scan:	159
Y at integration start	: 366	Y at integration end:	366

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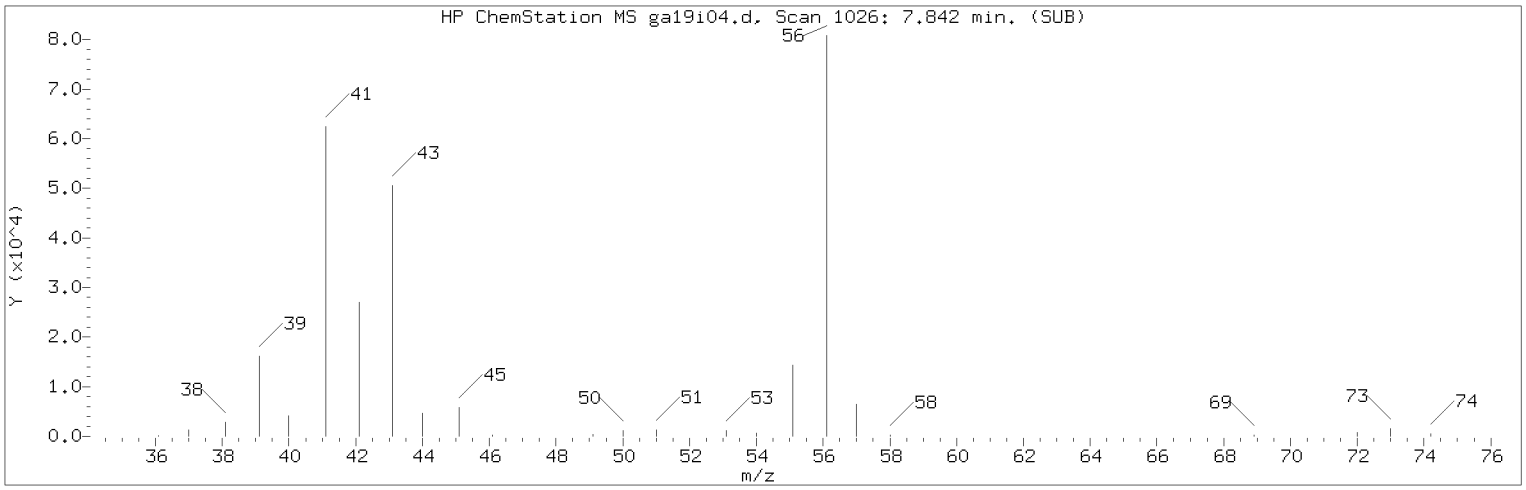
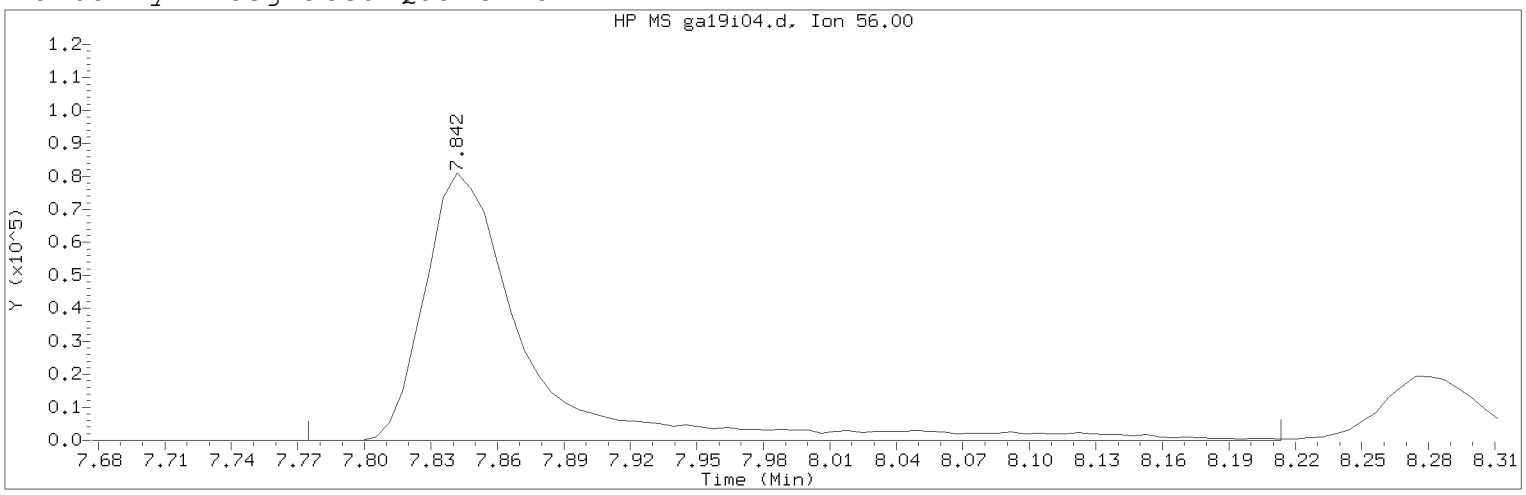
Target 3.5 esignature used. Page 7464

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

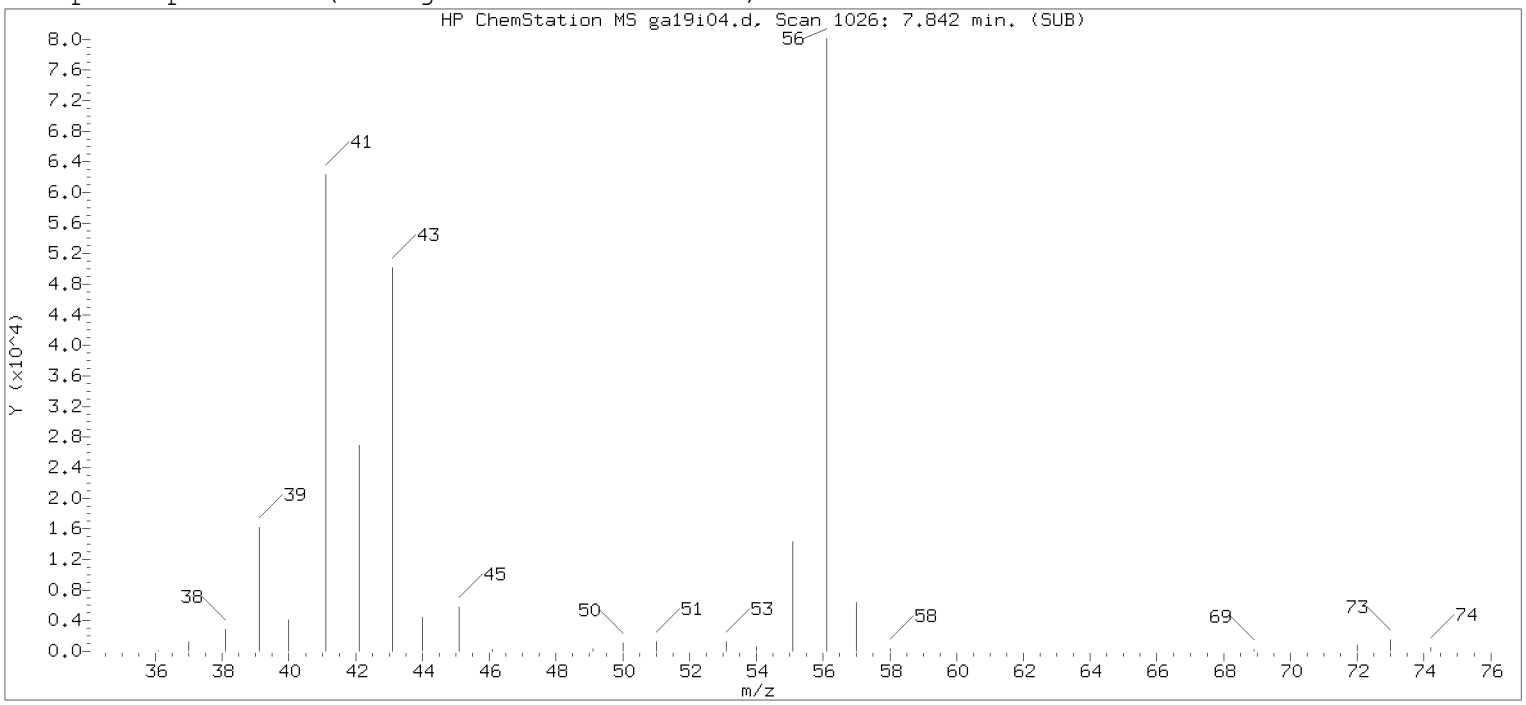
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1026
Retention Time (minutes): 7.842
Quant Ion : 56.00
Area (flag) : 264019M
On-Column Amount (ng) : 201.4799
Integration start scan : 1014 Integration stop scan: 1086
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

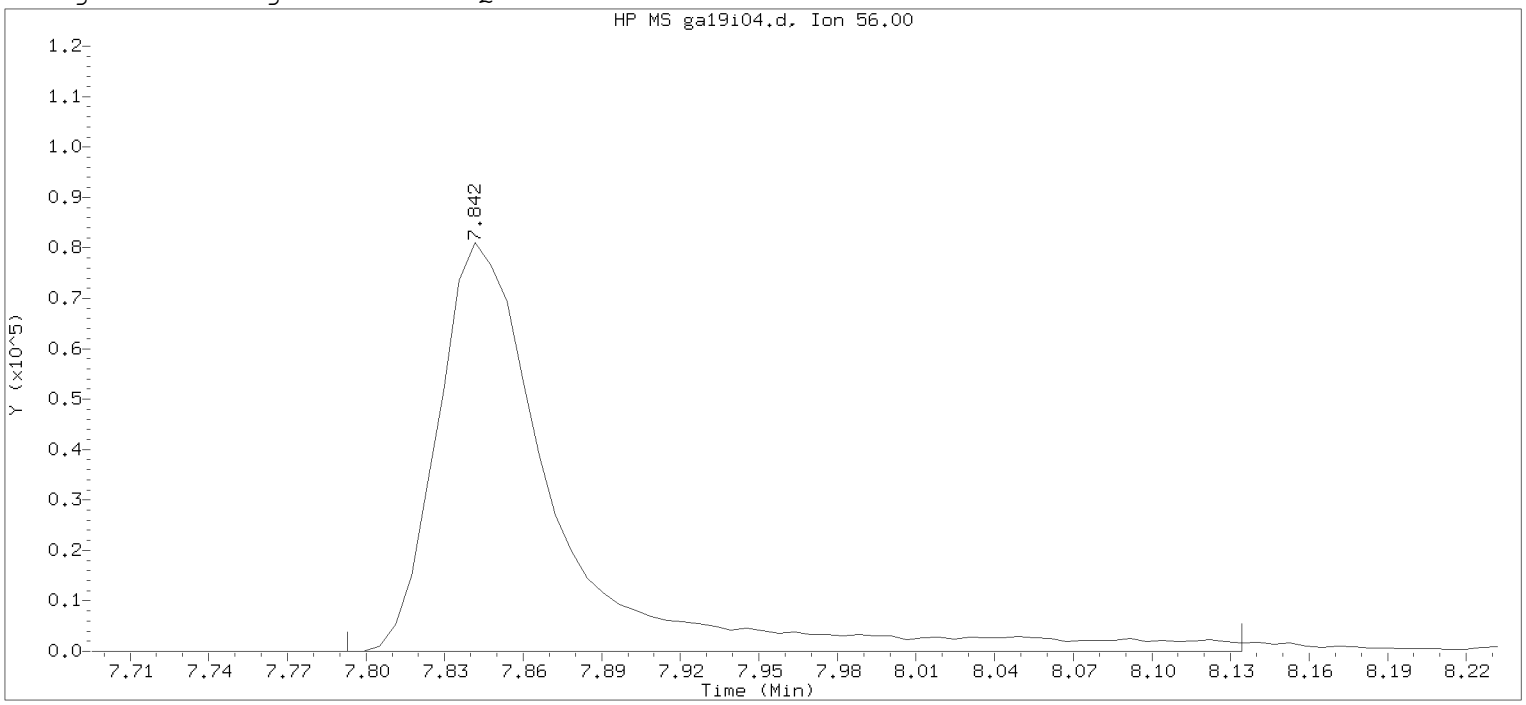
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1026		
Retention Time (minutes)	: 7.842		
Quant Ion	: 56.00		
Area	: 259385		
On-column Amount (ng)	: 188.7406		
Integration start scan	: 1017	Integration stop scan	: 1073
Y at integration start	: 0	Y at integration end	: 0

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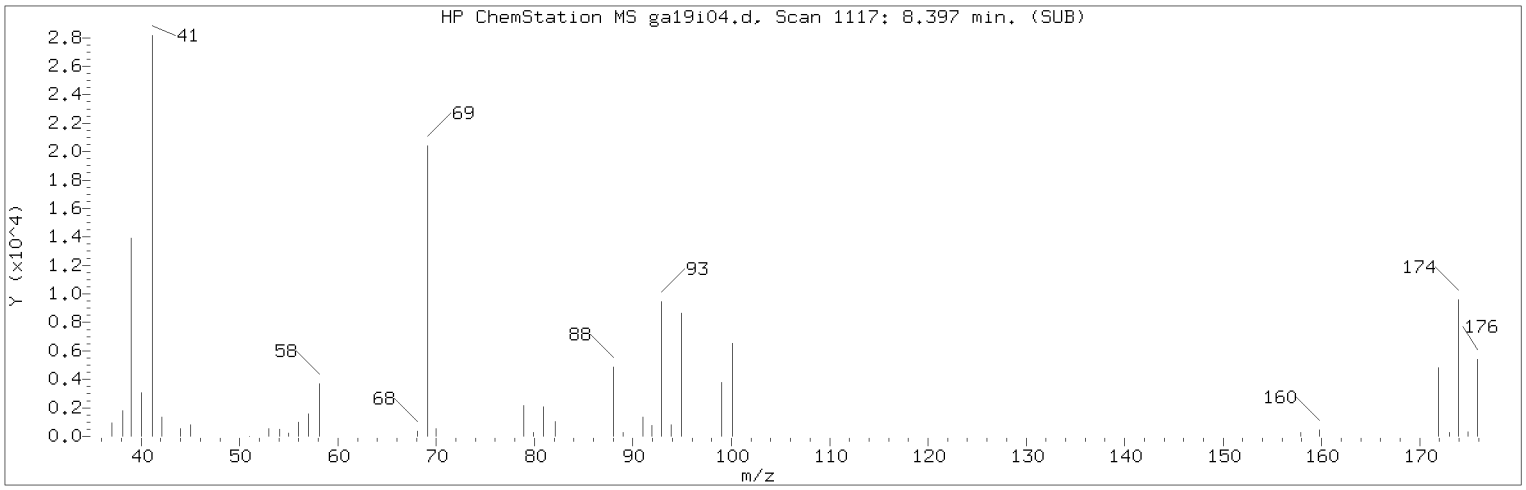
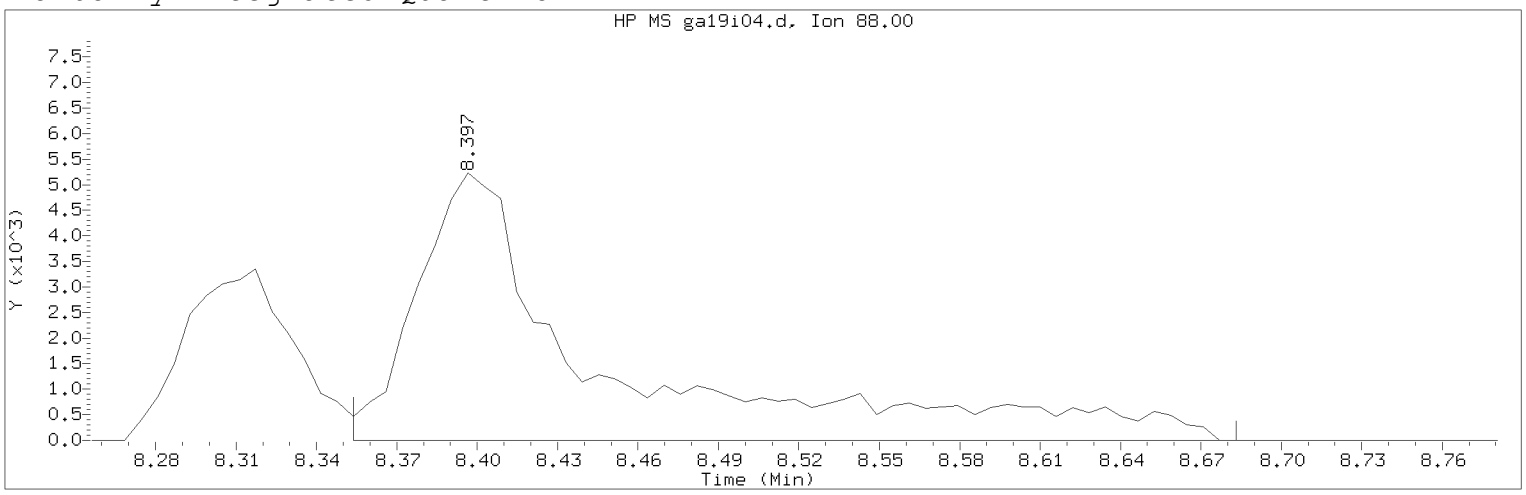
Target 3.5 esignature used. Reason: 7406

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

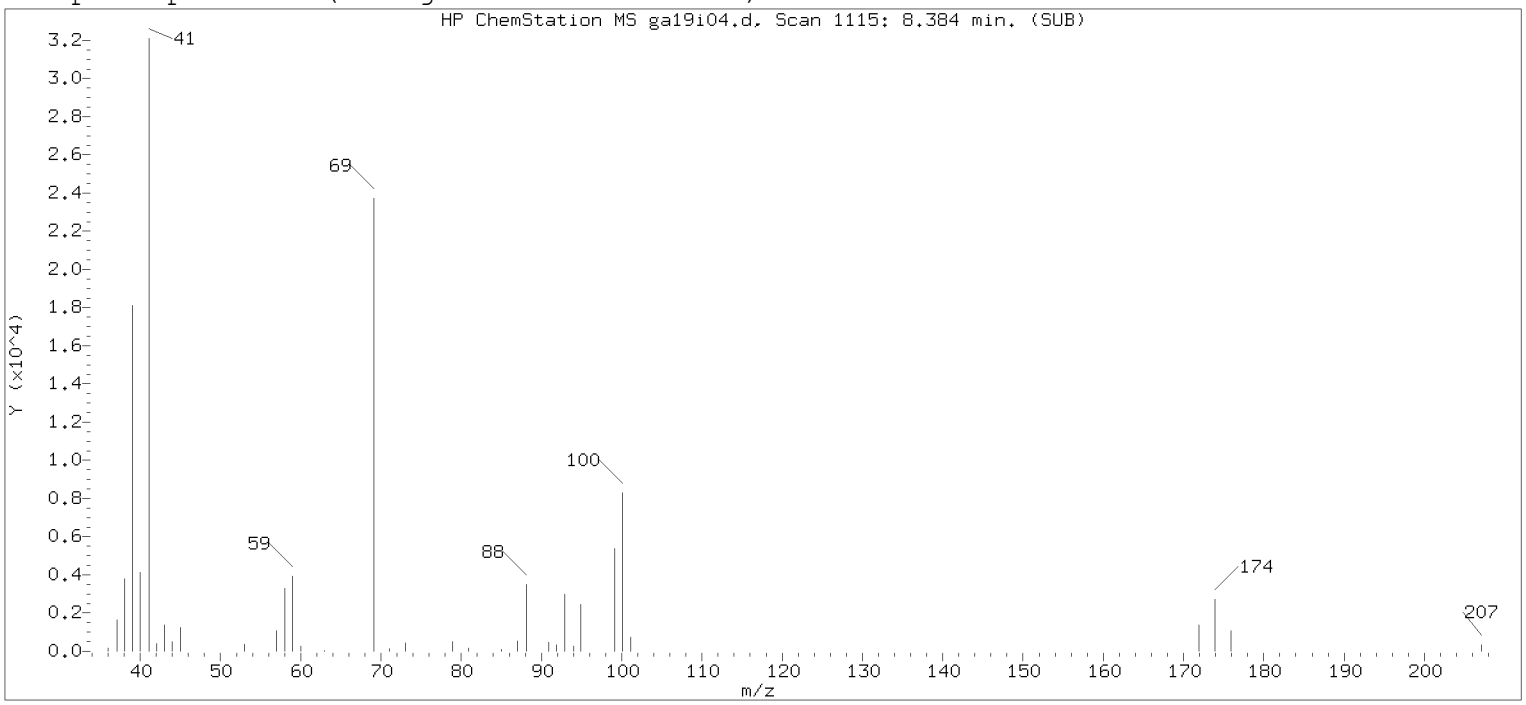
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1117
Retention Time (minutes): 8.397
Quant Ion : 88.00
Area (flag) : 24973M
On-Column Amount (ng) : 104.1824
Integration start scan : 1109 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

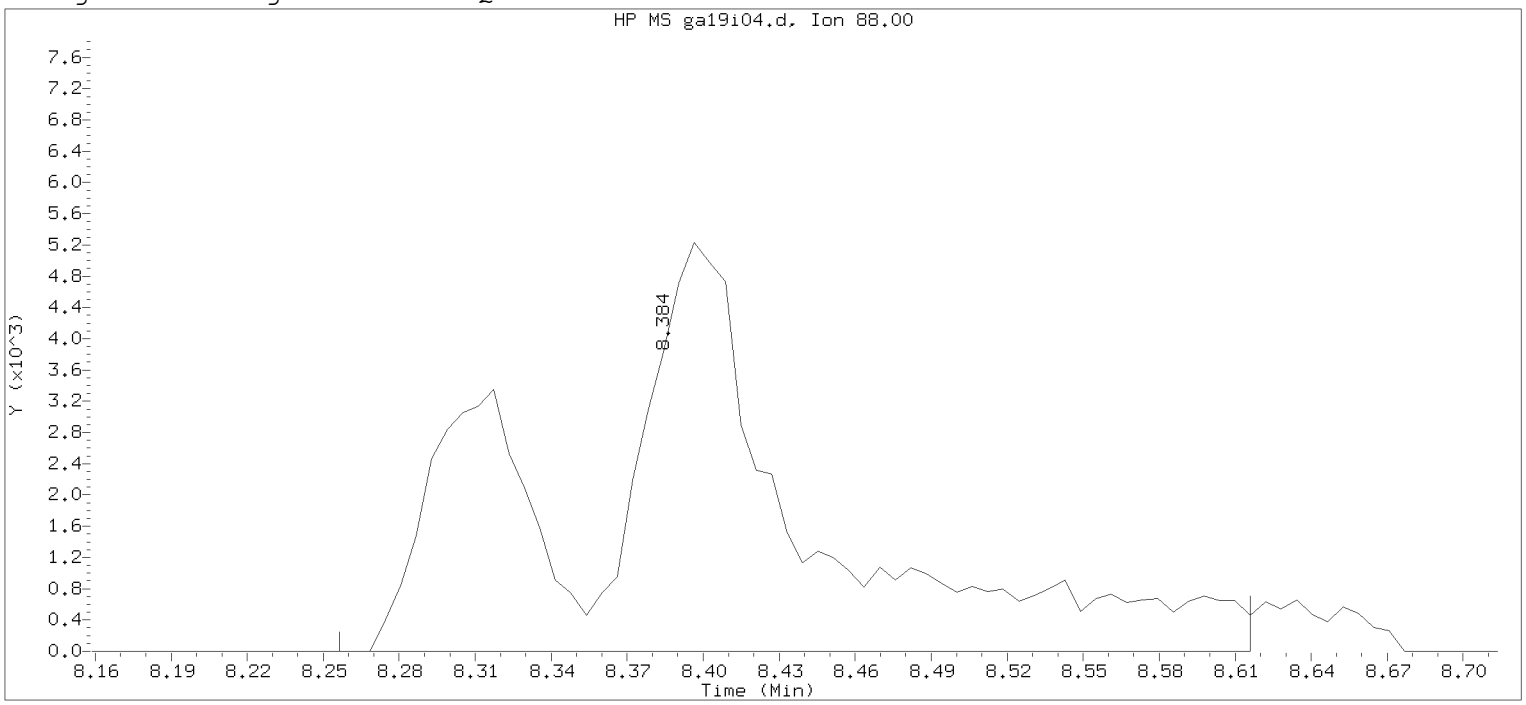
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1115		
Retention Time (minutes)	: 8.384		
Quant Ion	: 88.00		
Area	: 32625		
On-column Amount (ng)	: 115.0465		
Integration start scan	: 1093	Integration stop scan:	1152
Y at integration start	: 0	Y at integration end:	0

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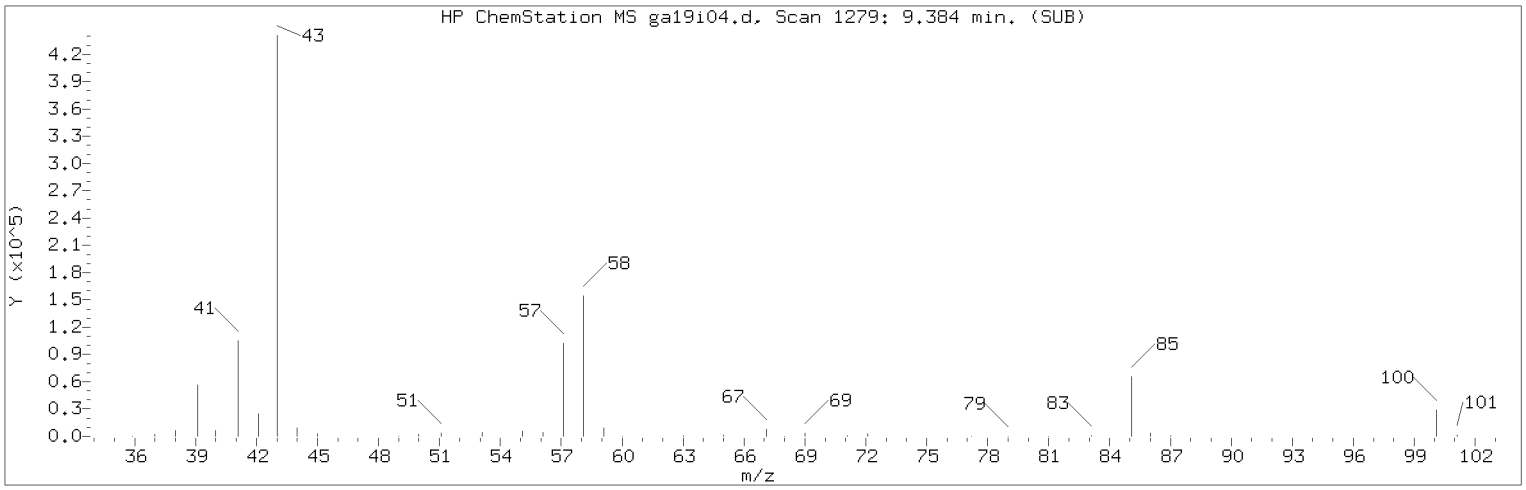
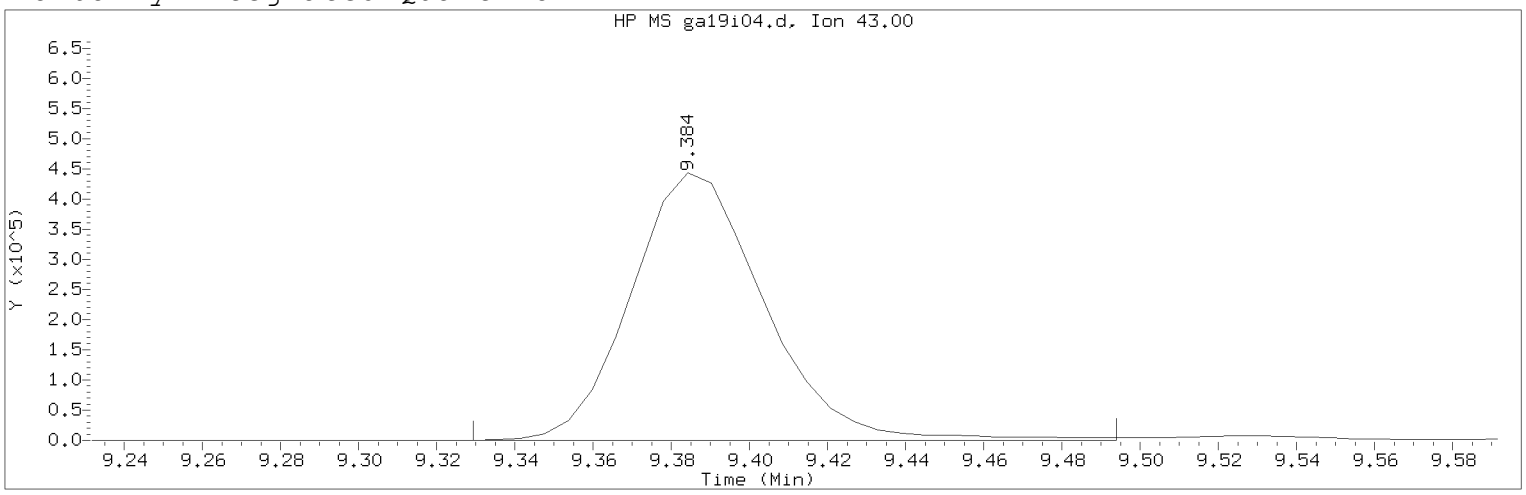
Target 3.5 esignature used. Page 7468

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

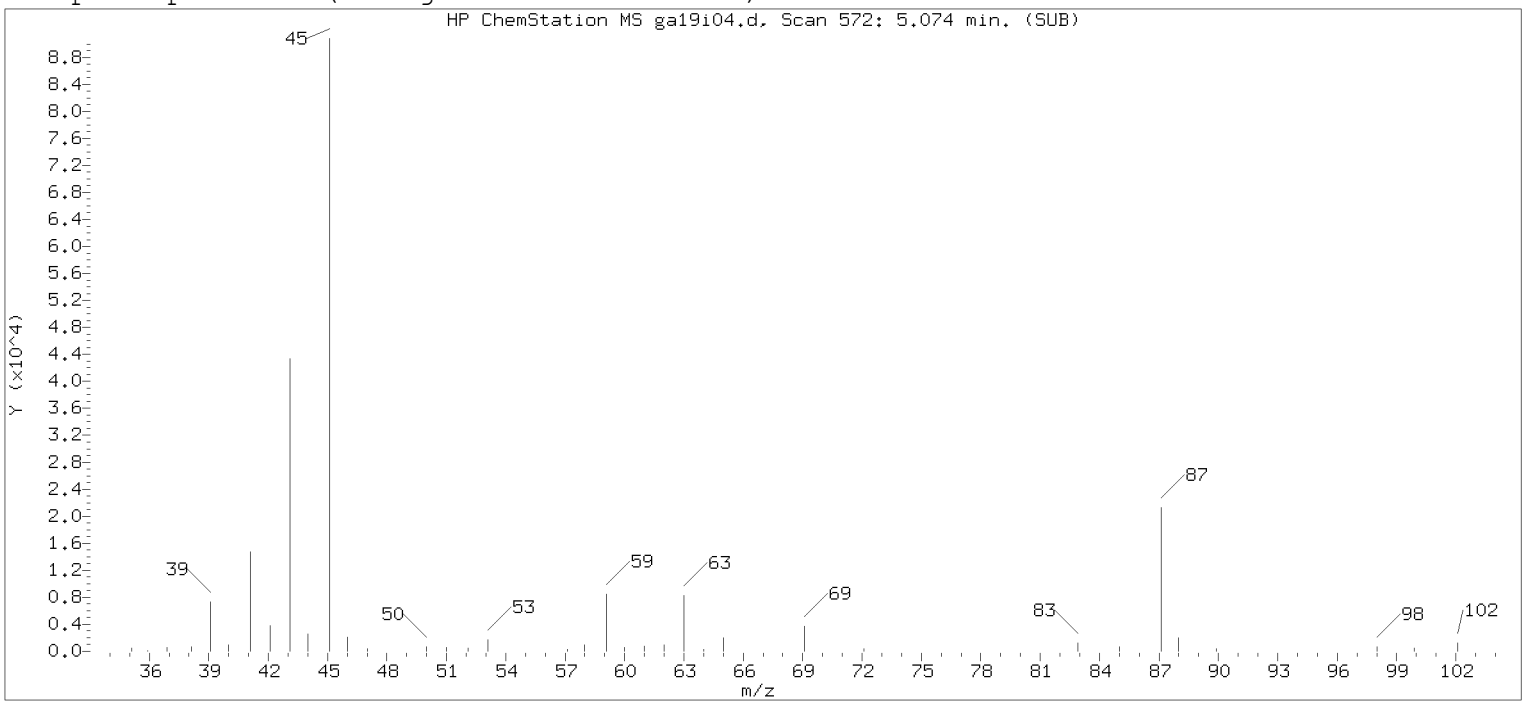
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 1049709M
On-Column Amount (ng) : 20.5254
Integration start scan : 1269 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

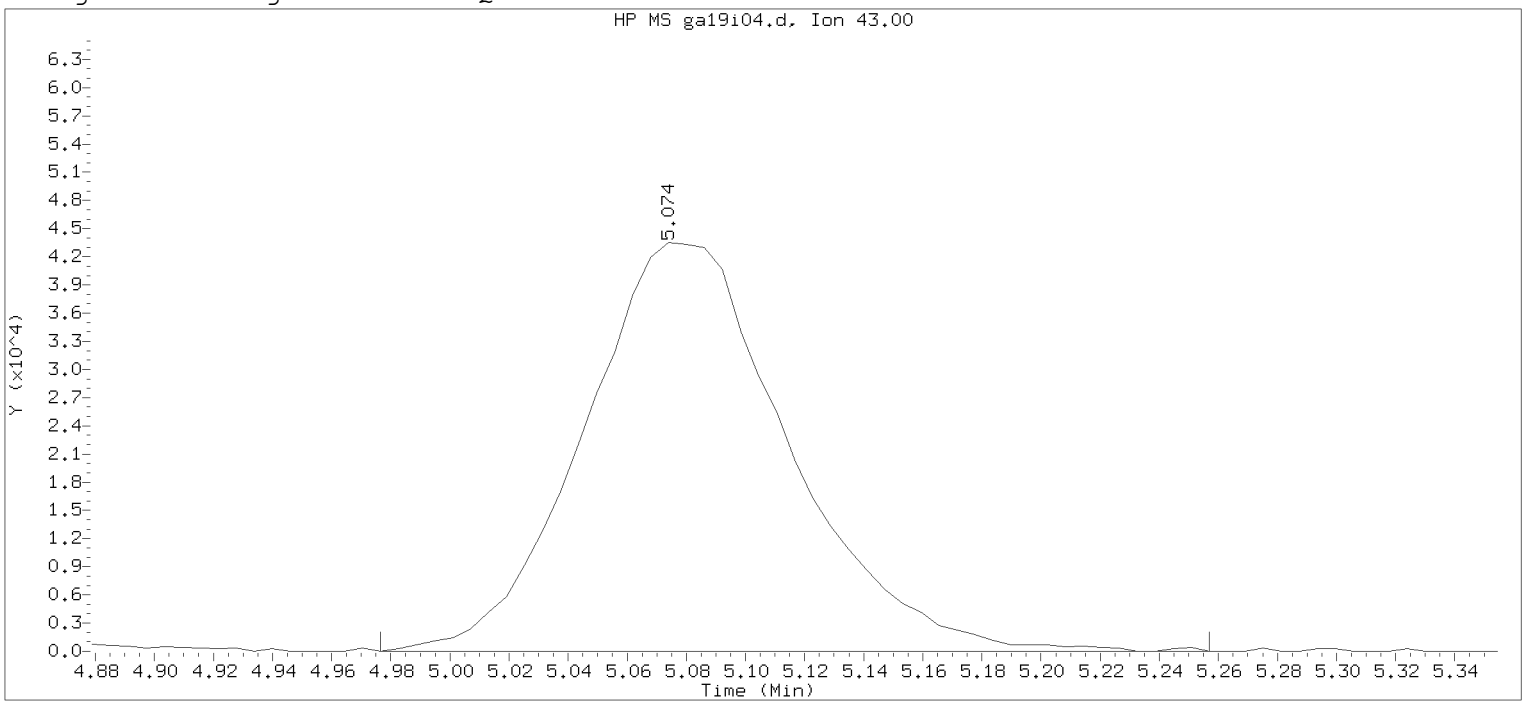
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

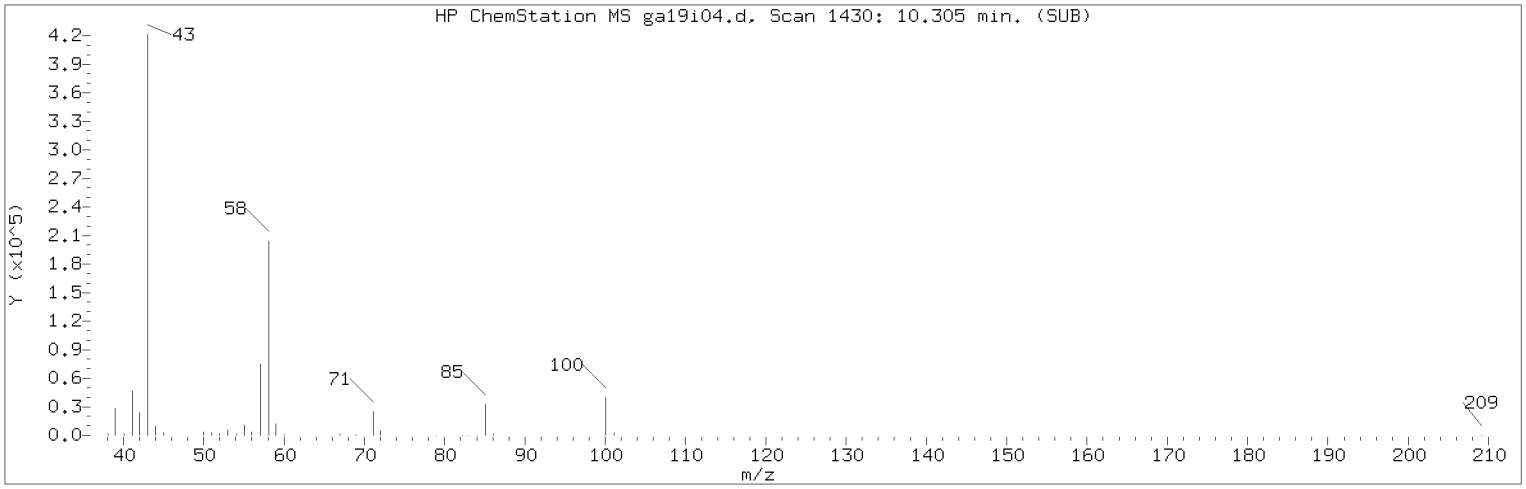
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

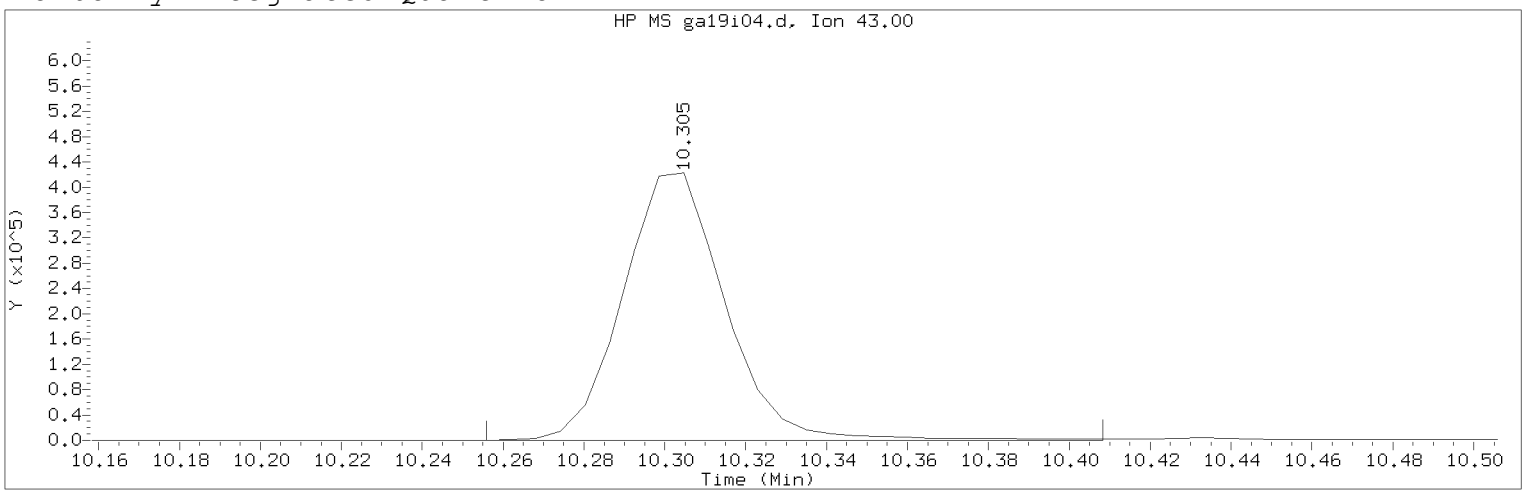
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 209575
On-column Amount (ng) : 19.2276
Integration start scan : 555 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

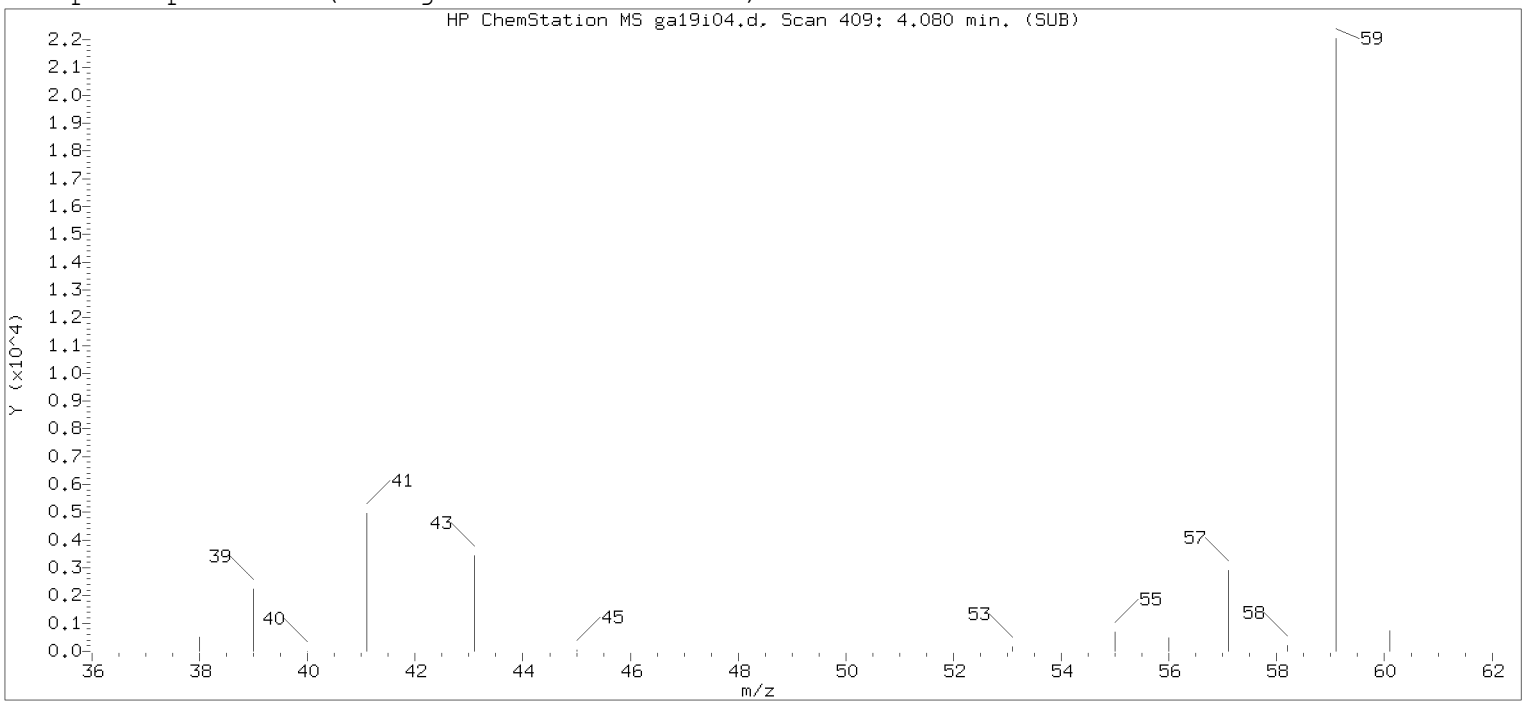
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 742959M
On-Column Amount (ng) : 20.5222
Integration start scan : 1421 Integration stop scan: 1446
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

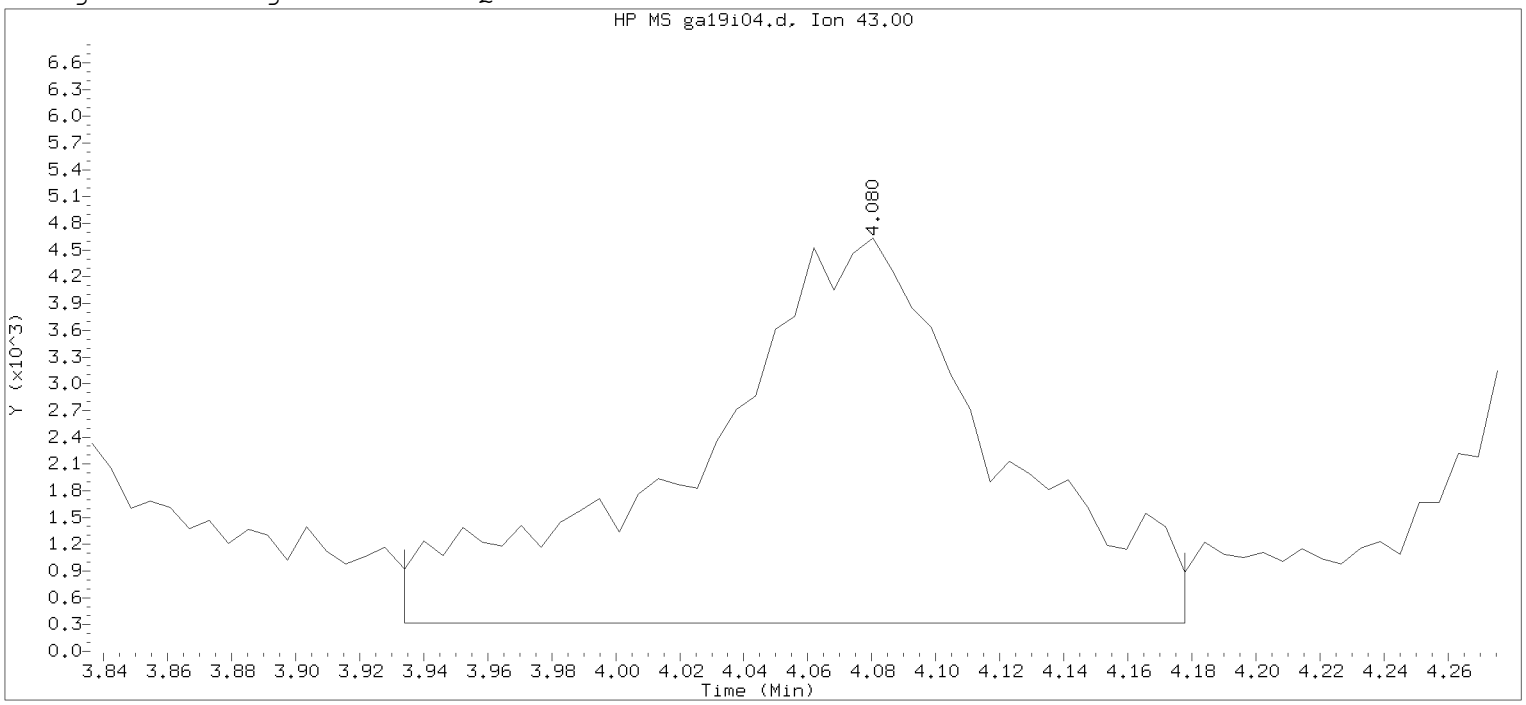
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



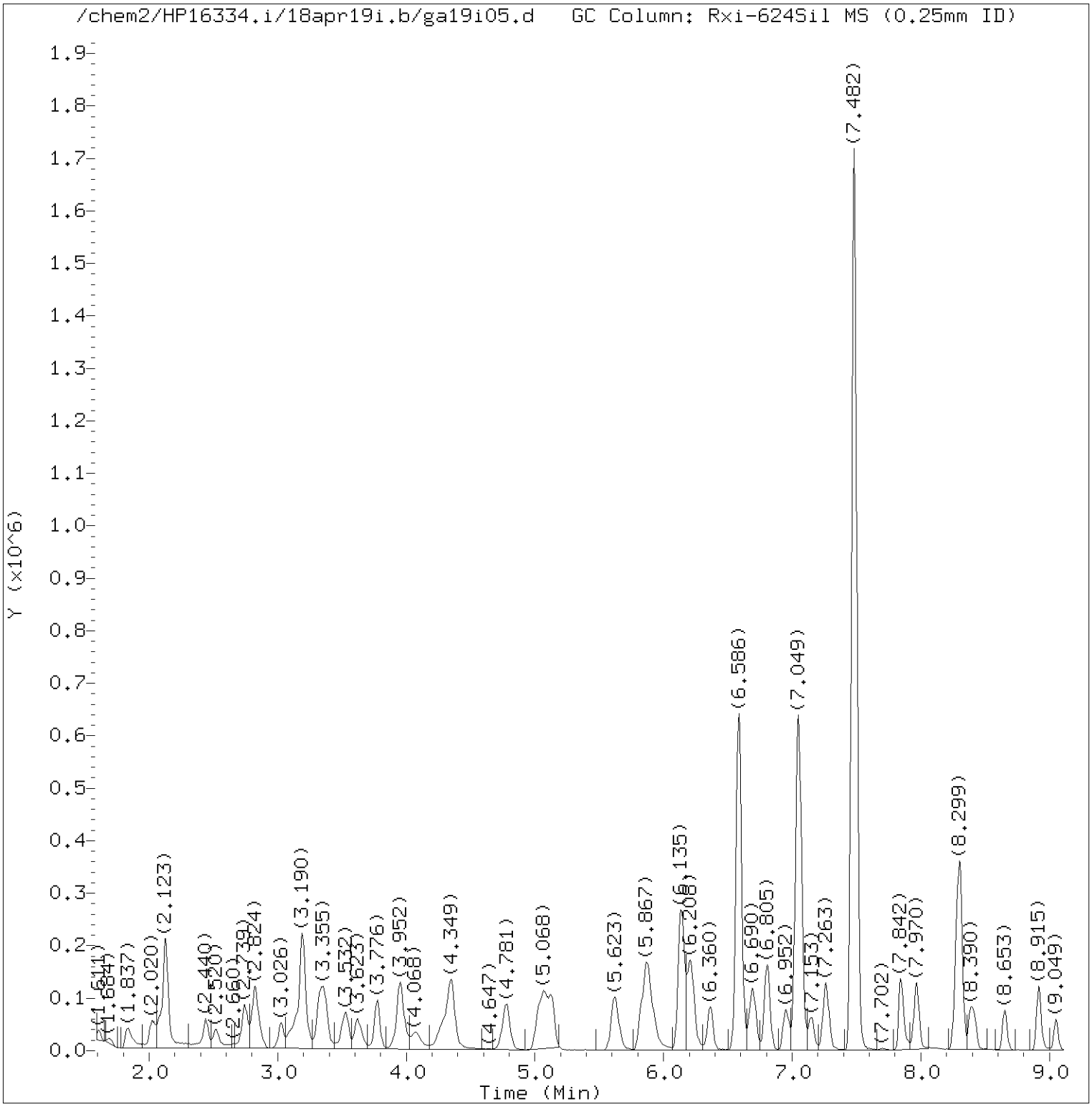
Data File: /chem2/HP16334.i/18apr19i.b/ga19i04.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 13:45
Date, time and analyst ID of latest file update: 19-Apr-2018 13:45 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 409
Retention Time (minutes): 4.080
Quant Ion : 43.00
Area : 28425
On-column Amount (ng) : 19.0941
Integration start scan : 384 Integration stop scan: 424
Y at integration start : 314 Y at integration end: 314

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

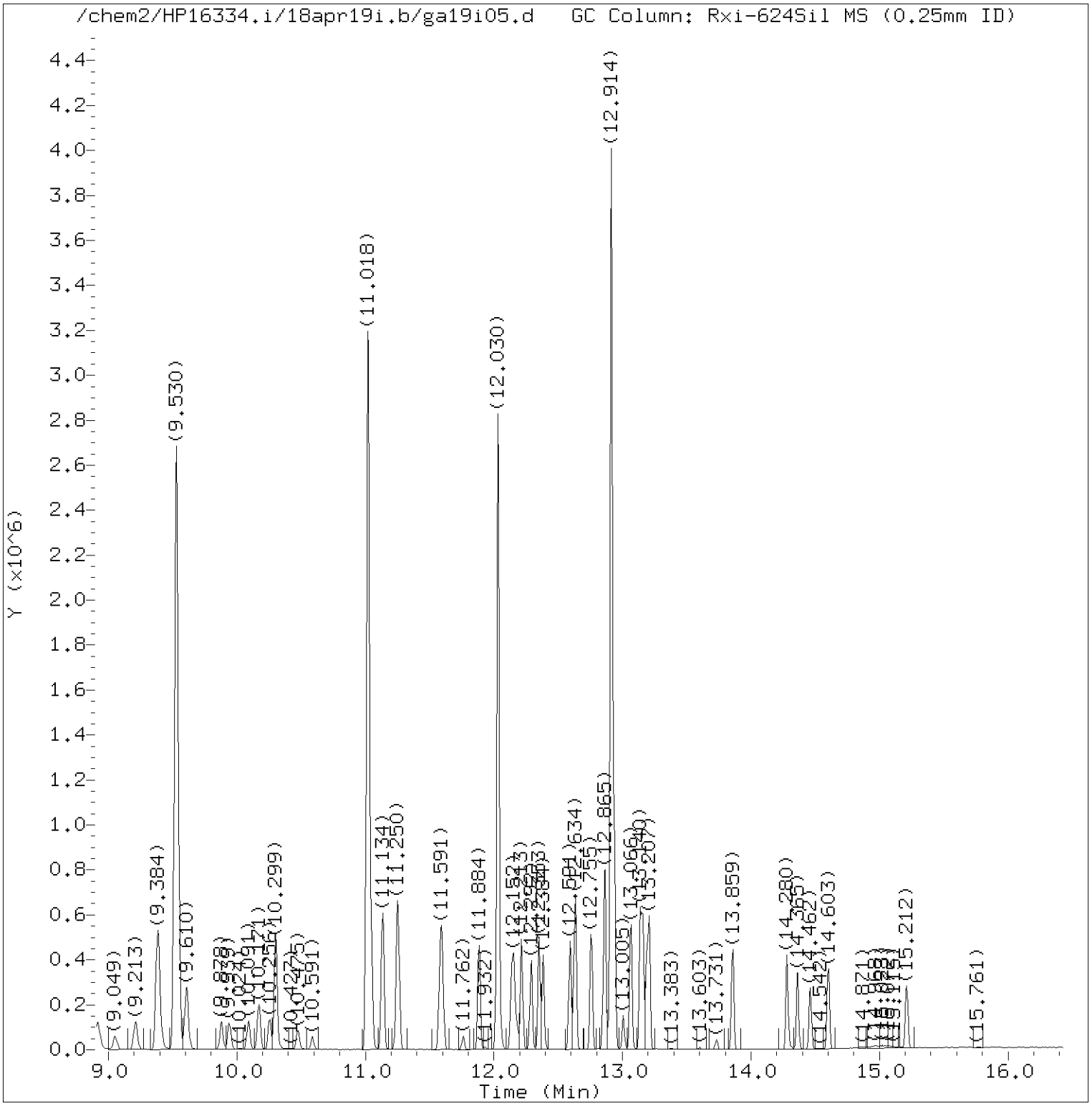
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	81639	1.018
2) Chloromethane	(2)	2.020	50	81693	1.046
6) 1,3-Butadiene	(2)	2.123	39	163567	1.233
5) Vinyl Chloride	(2)	2.130	62	68017	1.009
7) Bromomethane	(2)	2.440	94	45160	1.007
8) Chloroethane	(2)	2.526	64	38411	1.015
9) Dichlorofluoromethane	(2)	2.745	67	94444	1.040
10) Trichlorofluoromethane	(2)	2.800	101	90163M	1.002
11) Ethyl ether	(2)	3.026	59	44610	1.004
12) Freon 123a	(2)	3.117	67	63658	1.024
13) Acrolein	(1)	3.190	56	372481	47.922
15) 1,1-Dichloroethene	(2)	3.324	96	43056	0.991
14) Acetone	(1)	3.355	43	122973	10.200
16) Freon 113	(2)	3.367	101	49646	0.996
17) Methyl Iodide	(2)	3.513	142	82869	0.984
18) Carbon Disulfide	(2)	3.623	76	167464	1.015
21) Methyl Acetate	(1)	3.745	43	33348M	0.962
22) Allyl Chloride	(2)	3.776	41	98938	0.993
23) Methylene Chloride	(2)	3.952	84	58512	1.087
26)*t-Butyl Alcohol-d10	(1)	3.958	65	224043	50.000
28) t-Butyl Alcohol	(1)	4.074	59	88053	21.411
29) Acrylonitrile	(1)	4.269	53	67137	4.706
30) Methyl Tertiary Butyl Ether	(2)	4.318	73	148018	0.976
31) trans-1,2-Dichloroethene	(2)	4.361	96	49678	1.001
32) n-Hexane	(2)	4.781	57	86347	0.995
33) 1,1-Dichloroethane	(2)	5.019	63	101885	0.994
34) di-Isopropyl Ether	(2)	5.068	45	207356	0.986
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	92202	0.986
37) Ethyl t-butyl ether	(2)	5.623	59	182342	0.982
38) 2-Butanone	(1)	5.830	43	209722	9.624
39) cis-1,2-Dichloroethene	(2)	5.873	96	56271	0.989
41) 2,2-Dichloropropane	(2)	5.885	77	83841	0.982
42) Propionitrile	(1)	5.921	54	105513	19.569
40) 1,2-Dichloroethene (Total)	(2)		96	105949	1.990
45) Methacrylonitrile	(1)	6.135	67	160314	9.337
47) Bromochloromethane	(2)	6.208	128	25804	0.974
48) Tetrahydrofuran	(1)	6.220	71	47962	9.274
49) Chloroform	(2)	6.366	83	95852	0.979

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	527476	9.995
50)$Dibromofluoromethane	(2)	6.586	111	541929	10.000
51) 1,1,1-Trichloroethane	(2)	6.592	97	82262	0.983
52) Cyclohexane	(2)	6.696	56	100218	0.992
52) Cyclohexane	(2)	6.690	84	77976	1.004
52) Cyclohexane	(2)	6.696	69	29126	0.993
54) Carbon Tetrachloride	(2)	6.799	117	67080	0.965
55) 1,1-Dichloropropene	(2)	6.805	75	77941	1.003
56) Isobutyl Alcohol	(1)	6.952	41	84927	51.876
57)$1,2-Dichloroethane-d4	(2)	7.043	102	113675	10.167
57)$1,2-Dichloroethane-d4	(2)	7.043	65	644122	10.217
57)$1,2-Dichloroethane-d4	(2)	7.043	104	70681	10.188
58) Benzene	(2)	7.068	78	211887	0.997
59) 1,2-Dichloroethane	(2)	7.153	62	73971	1.009
60) t-Amyl methyl ether	(2)	7.263	73	156867	0.988
63)*Fluorobenzene	(2)	7.482	96	2094201	10.000
62) n-Heptane	(2)	7.494	43	105802	1.020
65) n-Butanol	(1)	7.842	56	130877	94.857
67) Trichloroethene	(2)	7.964	95	56030	0.990
69) Methylcyclohexane	(2)	8.275	83	97994	0.993
70) 1,2-Dichloropropane	(2)	8.305	63	58561	0.985
72) 1,4-Dioxane	(1)	8.384	88	13136M	51.103
71) Methyl Methacrylate	(1)	8.384	69	31122	0.930
73) Dibromomethane	(2)	8.421	93	27471	0.970
74) Bromodichloromethane	(2)	8.653	83	67601	0.947
76) 2-Nitropropane	(1)	8.921	41	100389	8.596
80) cis-1,3-Dichloropropene	(2)	9.213	75	81667	0.917
81) 4-Methyl-2-Pentanone	(1)	9.384	43	517626M	9.588
82)$Toluene-d8	(3)	9.530	98	2116094	9.962
82)$Toluene-d8	(3)	9.530	100	1352785	9.985
83) Toluene	(3)	9.610	92	132451	0.988
84) trans-1,3-Dichloropropene	(3)	9.884	75	69609	0.917
86) Ethyl Methacrylate	(3)	9.939	69	63854	0.943
88) 1,1,2-Trichloroethane	(3)	10.091	97	40207	0.988
85) 1,3-Dichloropropene (total)	(3)		75	151276	1.833
89) Tetrachloroethene	(3)	10.171	166	61708	0.990
90) 1,3-Dichloropropane	(3)	10.256	76	72648	0.984
91) 2-Hexanone	(1)	10.299	43	367593M	9.613

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	42666	0.897
95) 1,2-Dibromoethane	(3)	10.591	107	37637	0.960
97)*Chlorobenzene-d5	(3)	11.018	117	1587578	10.000
98) Chlorobenzene	(3)	11.049	112	155907	1.009
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	49828	0.930
100) Ethylbenzene	(3)	11.134	91	269486	1.007
101) m+p-Xylene	(3)	11.250	106	202327	1.967
104) o-Xylene	(3)	11.585	106	99953	0.967
106) Styrene	(3)	11.597	104	166356	0.963
105) Xylene (Total)	(3)		106	302280	2.935
107) Bromoform	(3)	11.762	173	23550	0.846
108) Isopropylbenzene	(3)	11.884	105	266204	0.989
111)$4-Bromofluorobenzene	(3)	12.030	95	818746	10.059
111)$4-Bromofluorobenzene	(3)	12.030	174	695895	9.979
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	52821M	0.987
114) Bromobenzene	(4)	12.146	156	69466	0.997
116) 1,2,3-Trichloropropane	(4)	12.176	110	14961	1.009
117) n-Propylbenzene	(4)	12.213	91	327336	1.018
119) 2-Chlorotoluene	(4)	12.292	126	64989	1.016
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	232829	1.002
122) 4-Chlorotoluene	(4)	12.384	126	67282	0.998
125) tert-Butylbenzene	(4)	12.591	134	48072M	0.995
126) Pentachloroethane	(4)	12.627	167	34040	0.853
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	237250	0.993
128) sec-Butylbenzene	(4)	12.755	105	297322	1.002
131) 1,3-Dichlorobenzene	(4)	12.859	146	139183	0.998
132) p-Isopropyltoluene	(4)	12.865	119	257905	0.994
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	894690	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	140270	0.997
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	104926	0.988
136) Benzyl Chloride	(4)	13.005	126	16267	0.810
138) n-Butylbenzene	(4)	13.158	92	142011	1.021
139) 1,2-Dichlorobenzene	(4)	13.188	146	129708	0.990
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	7412	0.881
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	117315	1.006
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	108644	1.002
146) Hexachlorobutadiene	(4)	14.365	225	58364	1.032
147) Naphthalene	(4)	14.462	128	180882	0.993

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

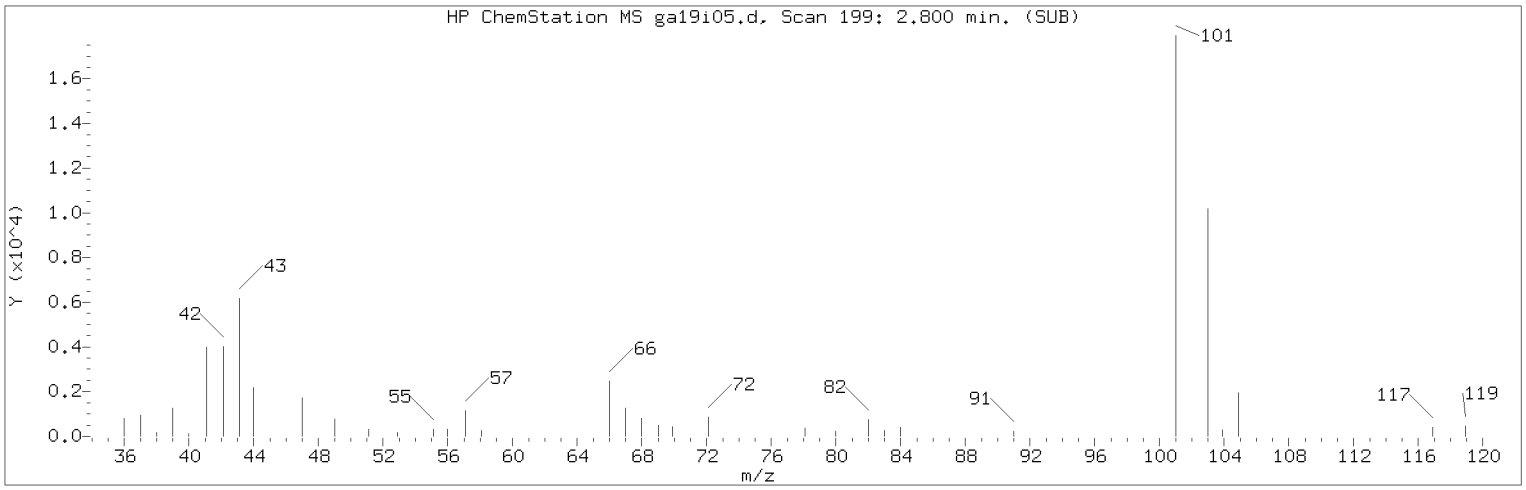
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

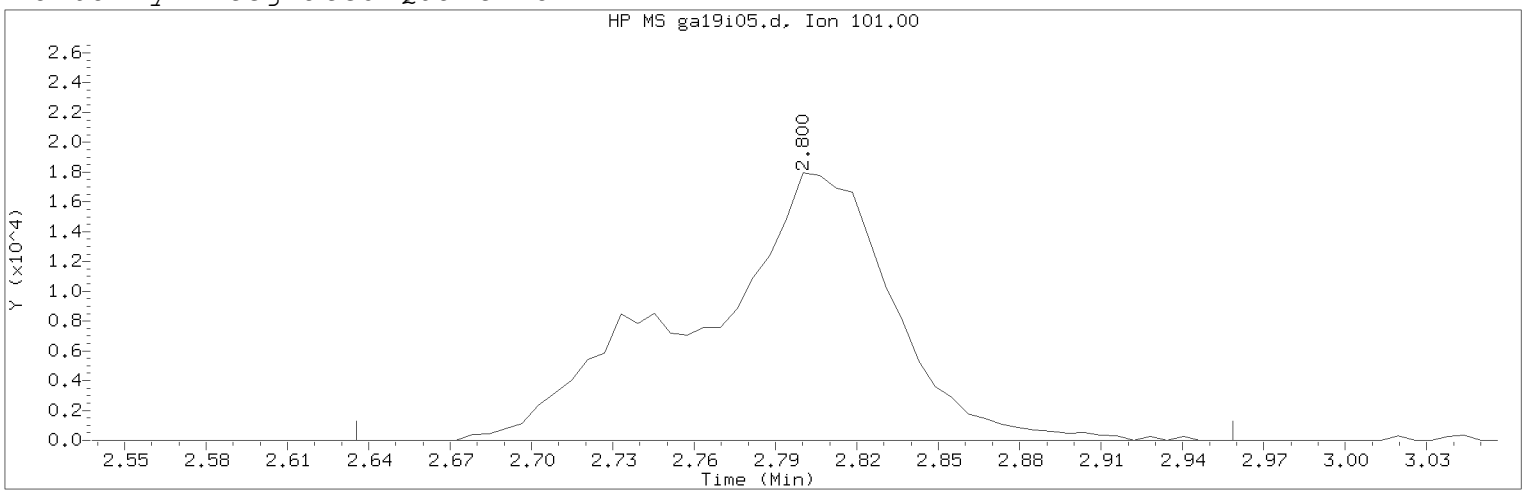
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	95212	1.020

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

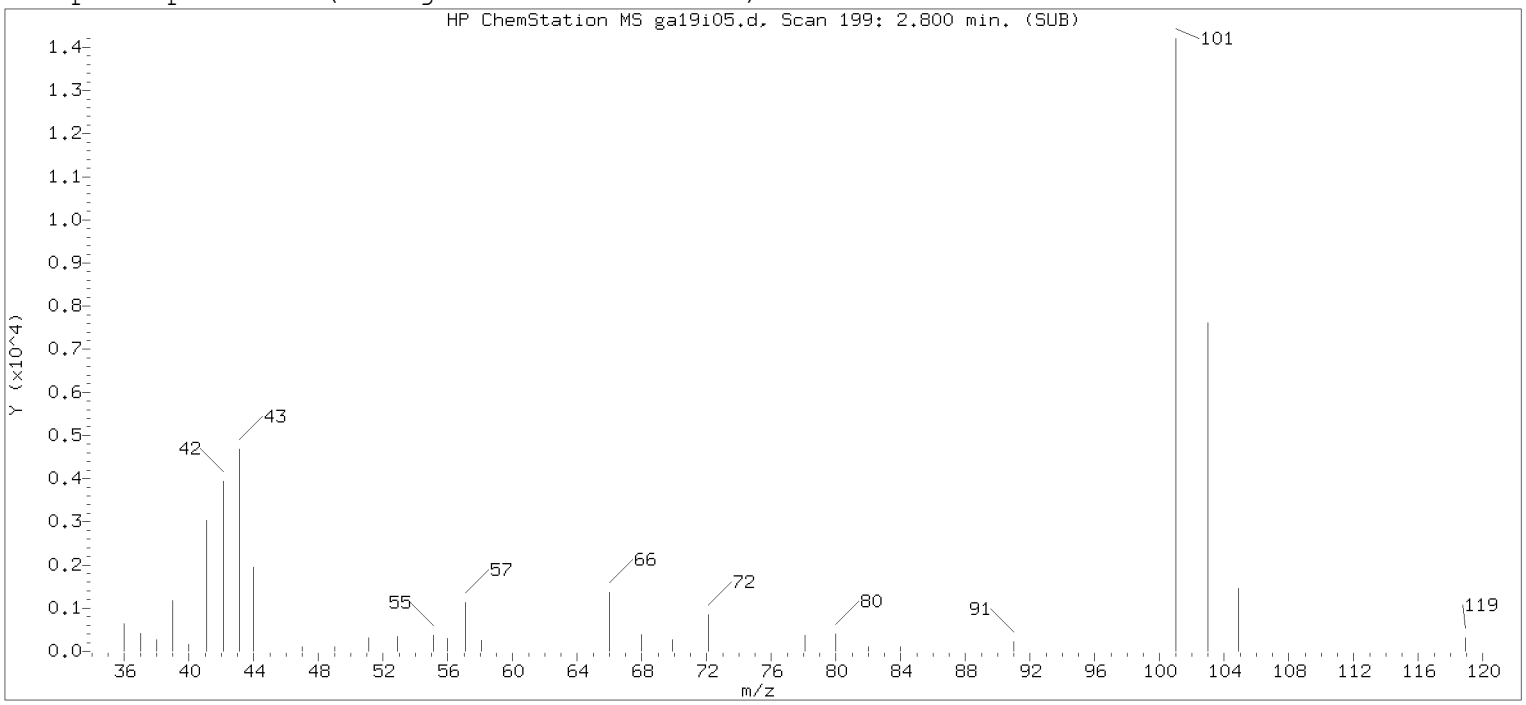
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area (flag) : 90163M
On-Column Amount (ng) : 1.0024
Integration start scan : 171 Integration stop scan: 224
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

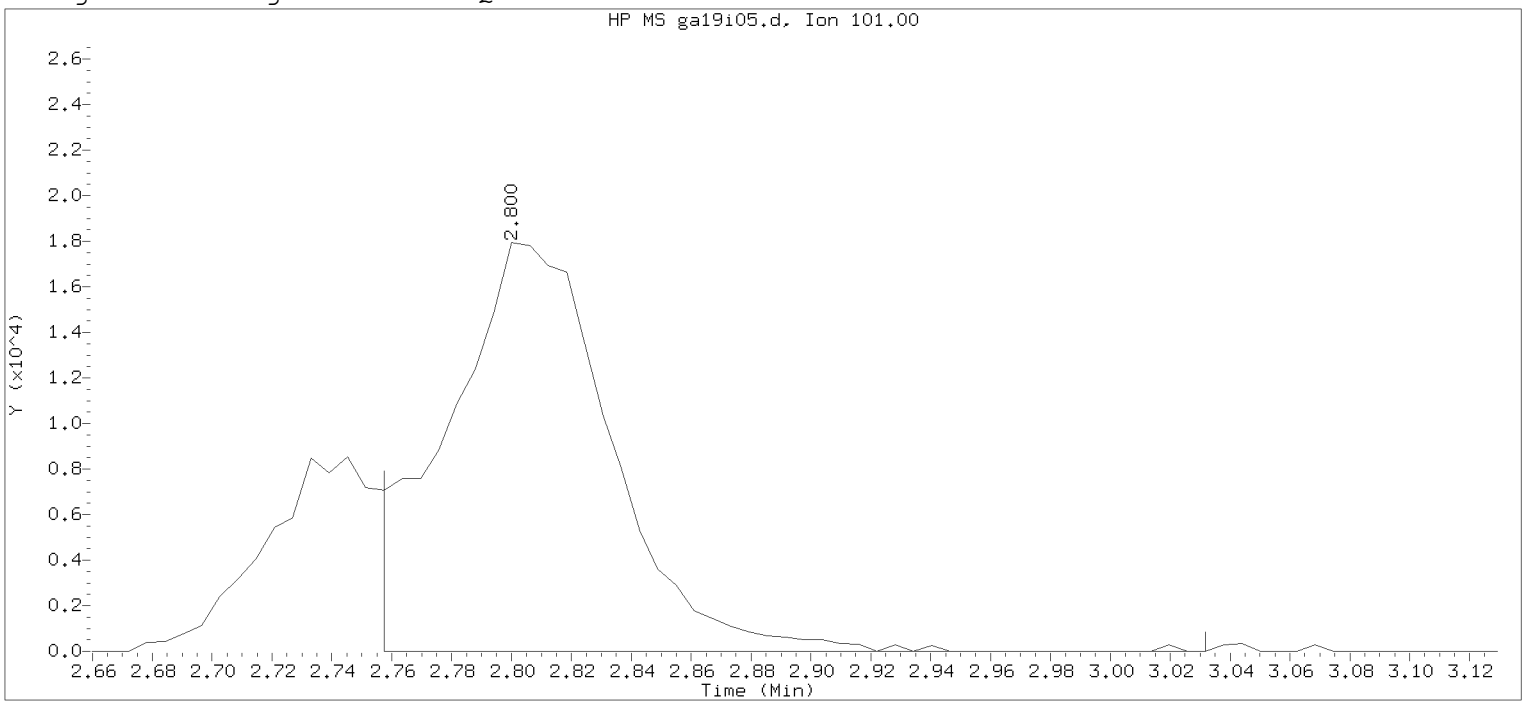
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

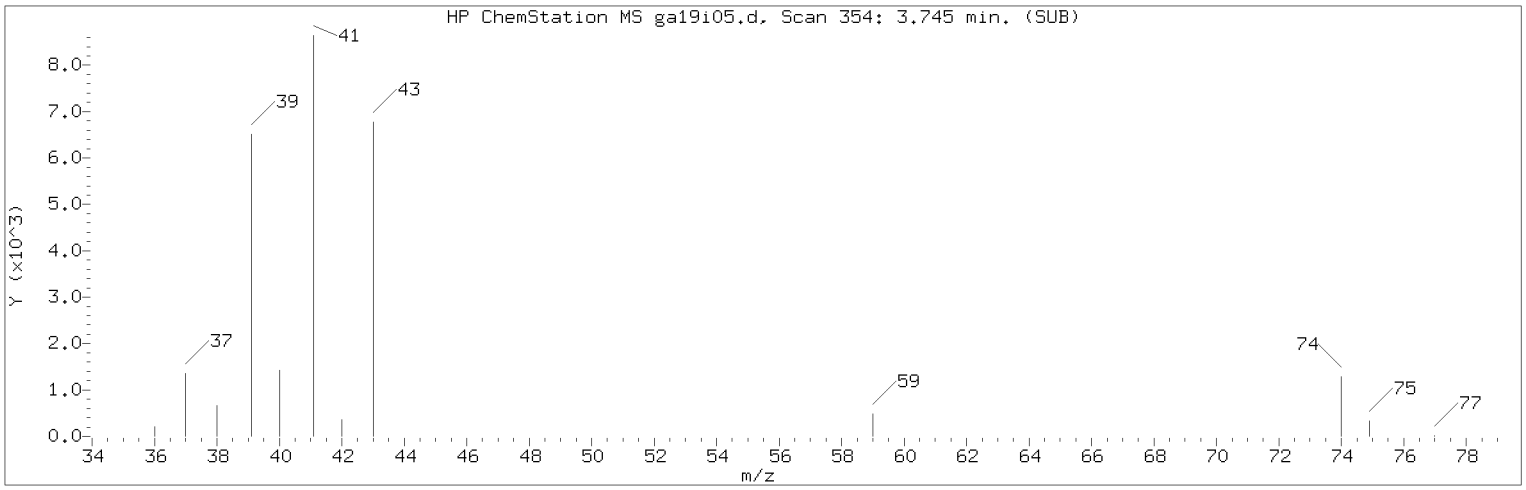
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

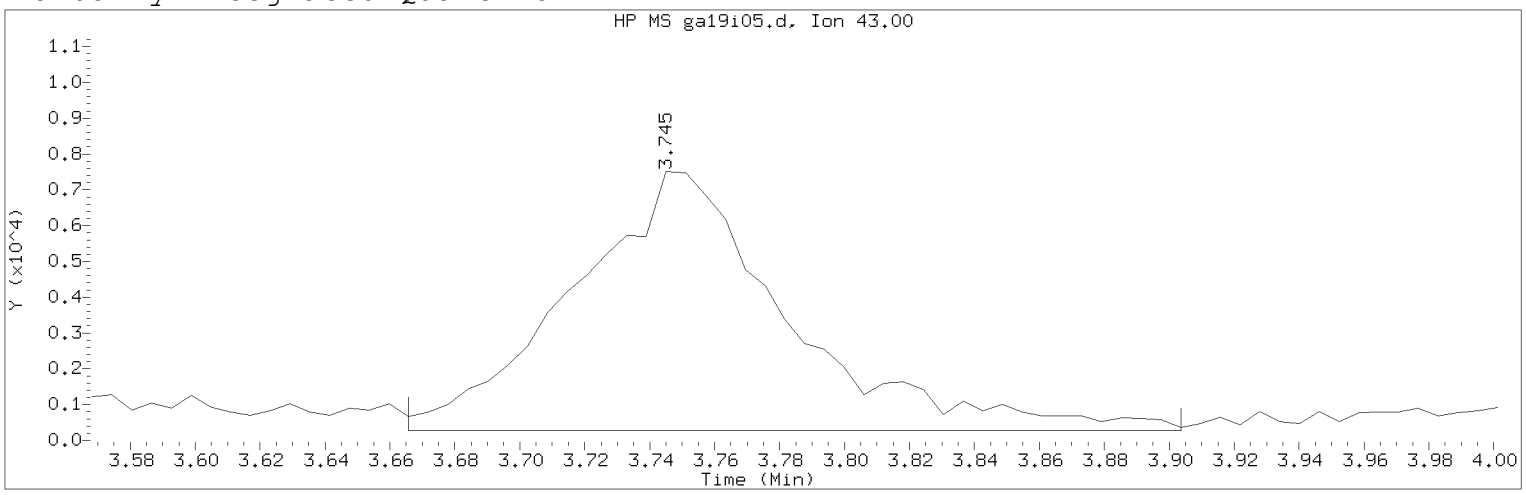
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area : 68618
On-column Amount (ng) : 0.8328
Integration start scan : 191 Integration stop scan: 236
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

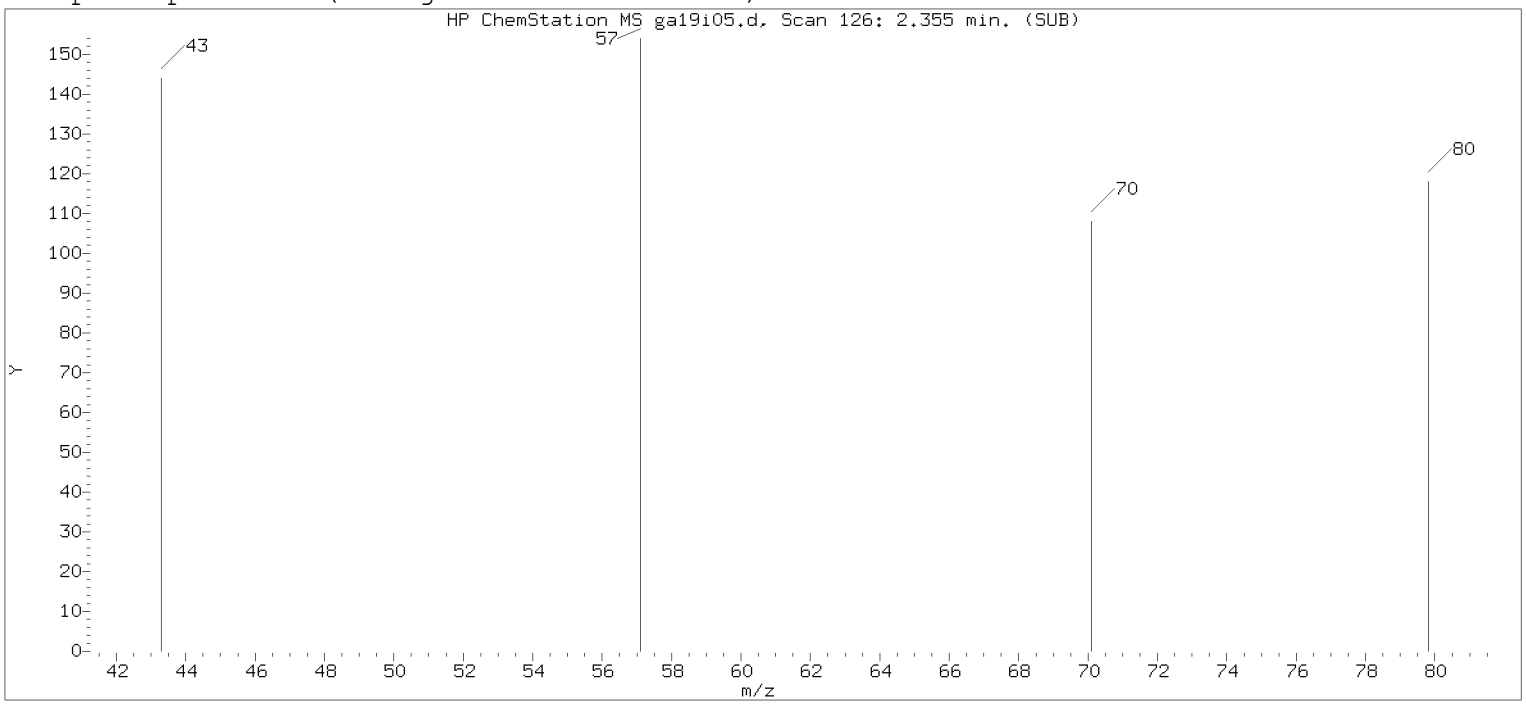
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 354
Retention Time (minutes): 3.745
Quant Ion : 43.00
Area (flag) : 33348M
On-Column Amount (ng) : 0.9623
Integration start scan : 340 Integration stop scan: 379
Y at integration start : 272 Y at integration end: 272

Reason for manual integration: improper integration

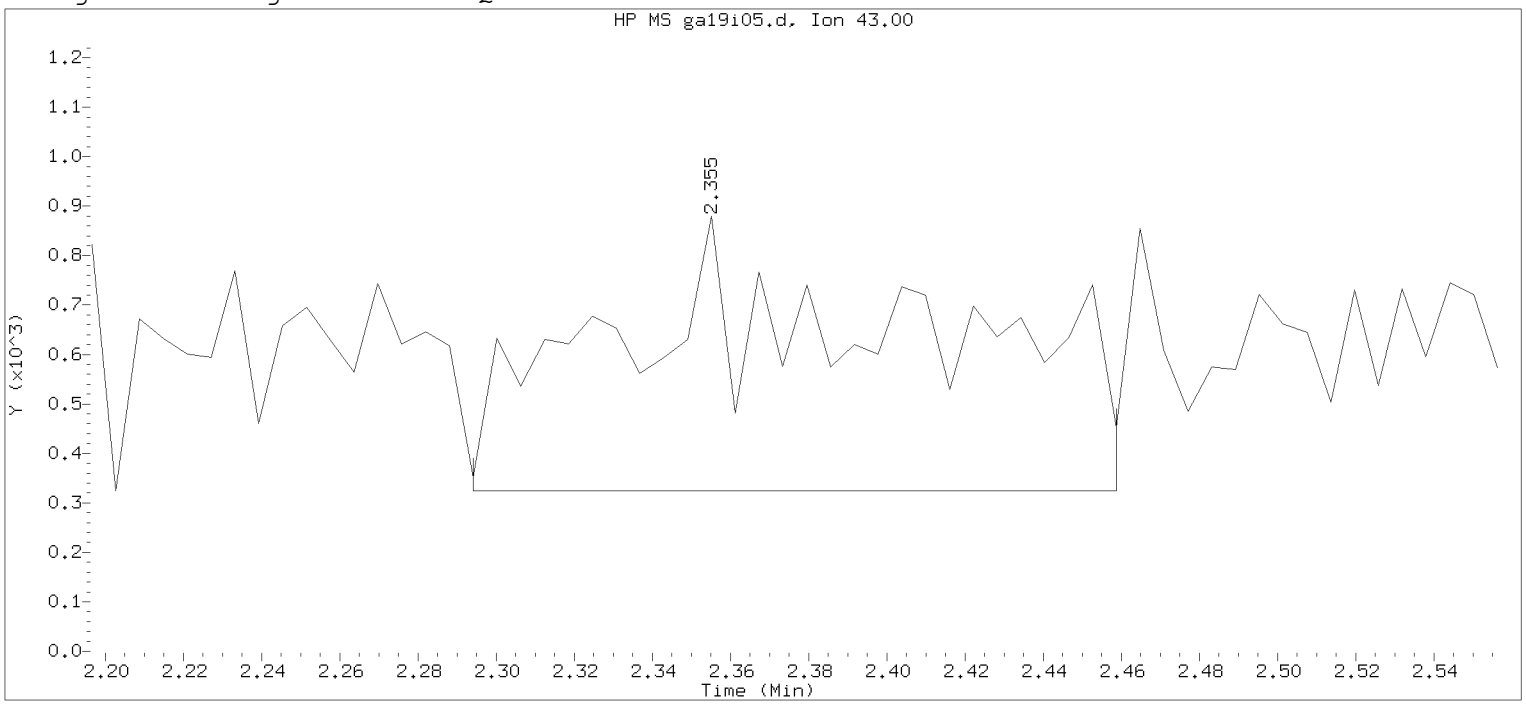
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

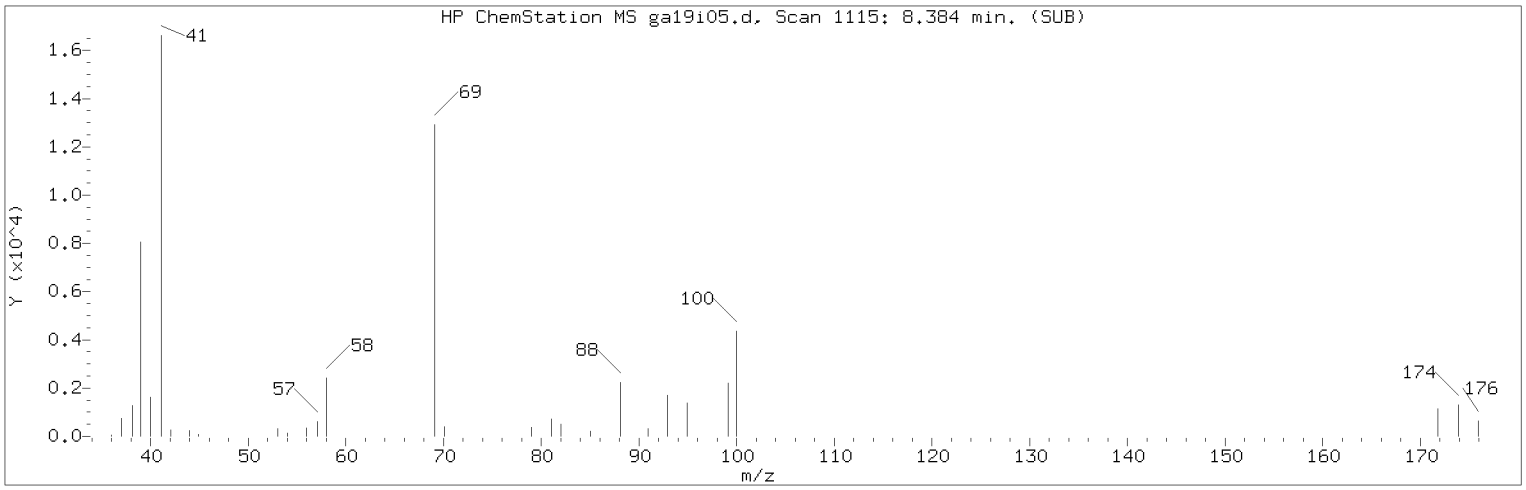
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

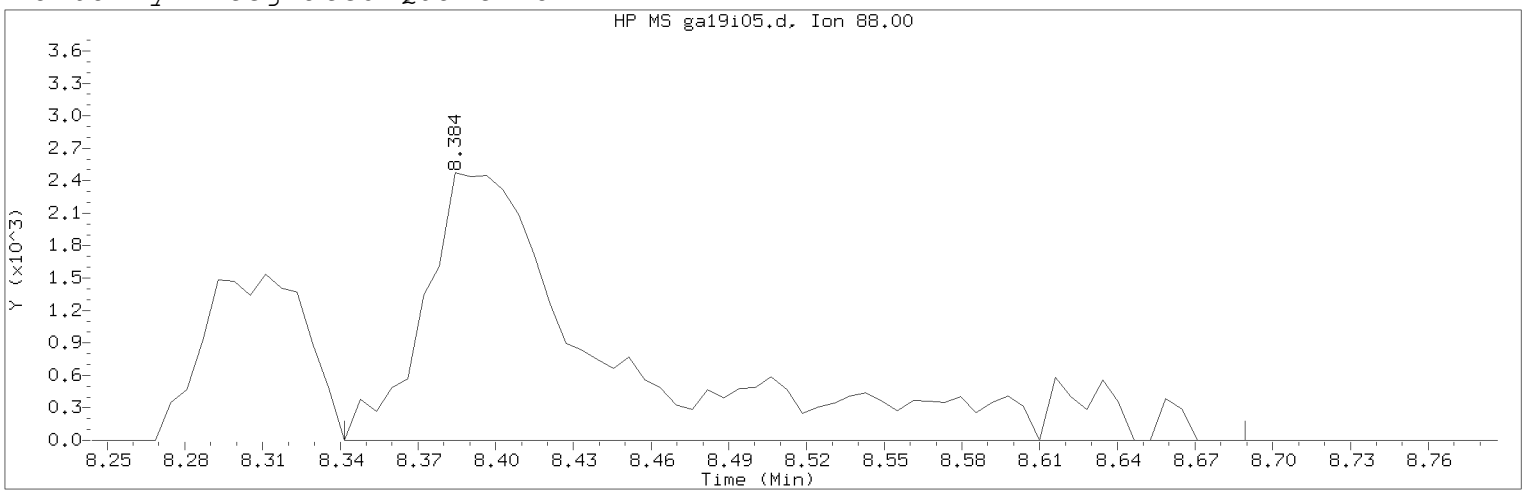
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 126
Retention Time (minutes): 2.355
Quant Ion : 43.00
Area : 3067
On-column Amount (ng) : 3.0010
Integration start scan : 115 Integration stop scan: 142
Y at integration start : 324 Y at integration end: 324

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7402

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

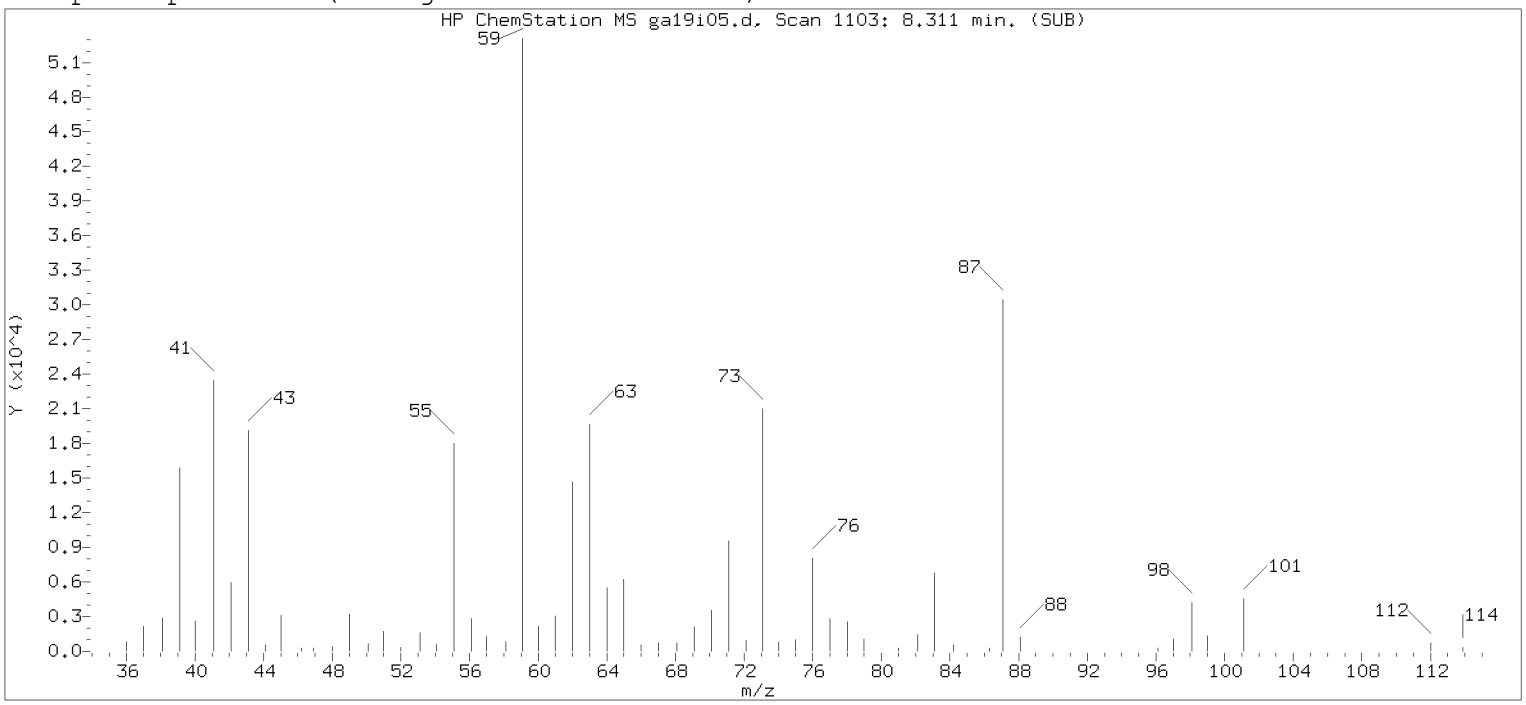
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1115
Retention Time (minutes): 8.384
Quant Ion : 88.00
Area (flag) : 13136M
On-Column Amount (ng) : 51.1028
Integration start scan : 1107 Integration stop scan: 1164
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

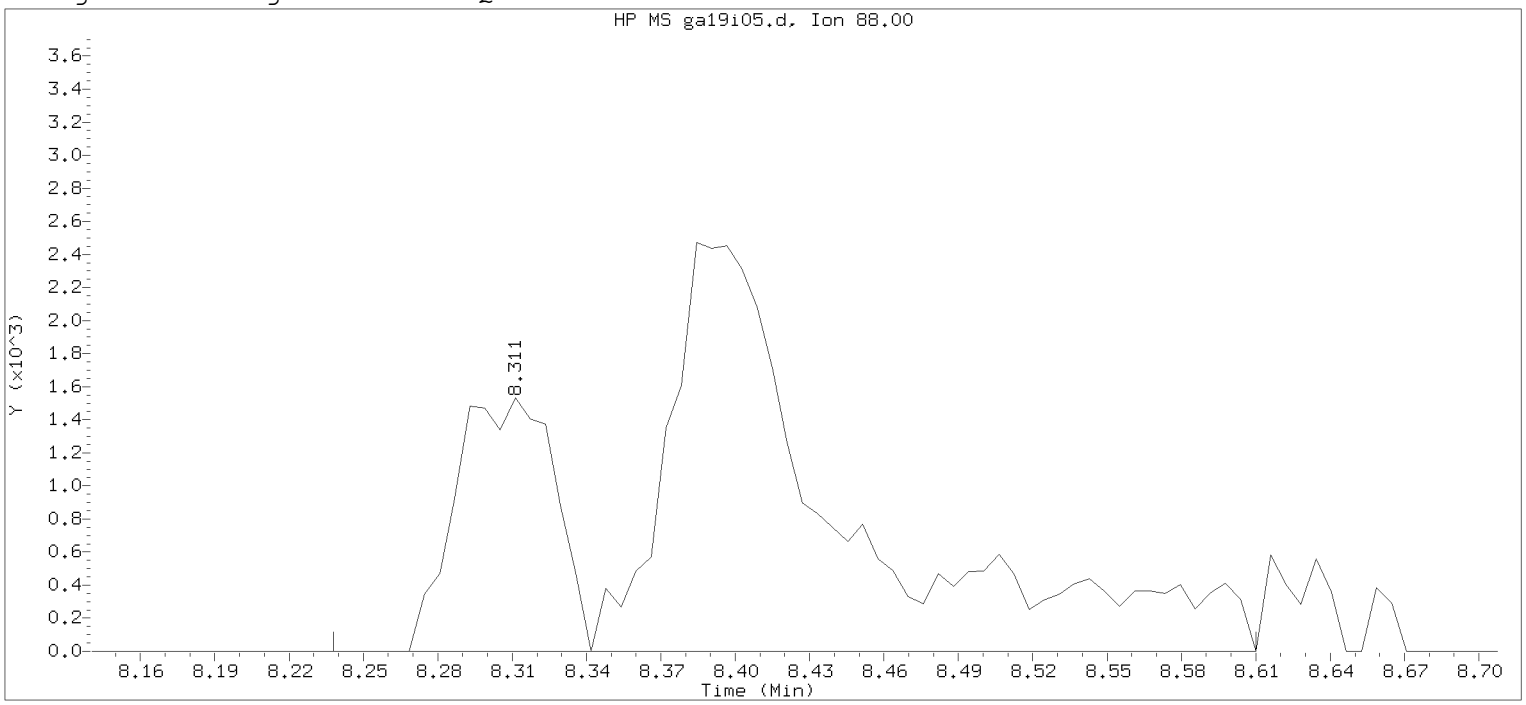
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

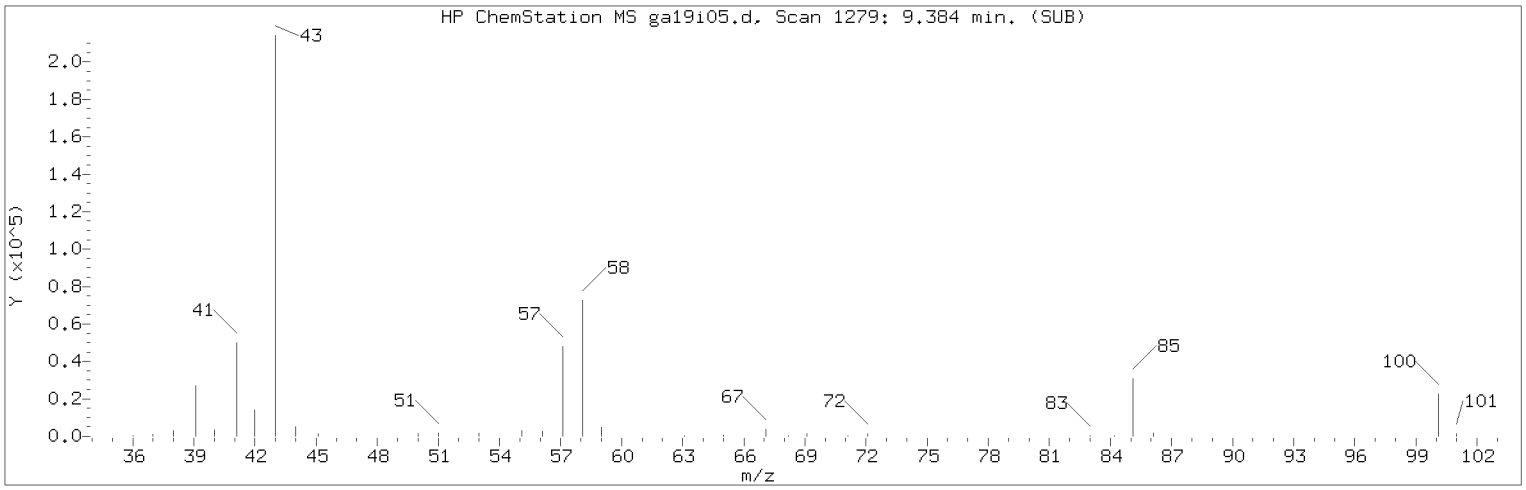
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

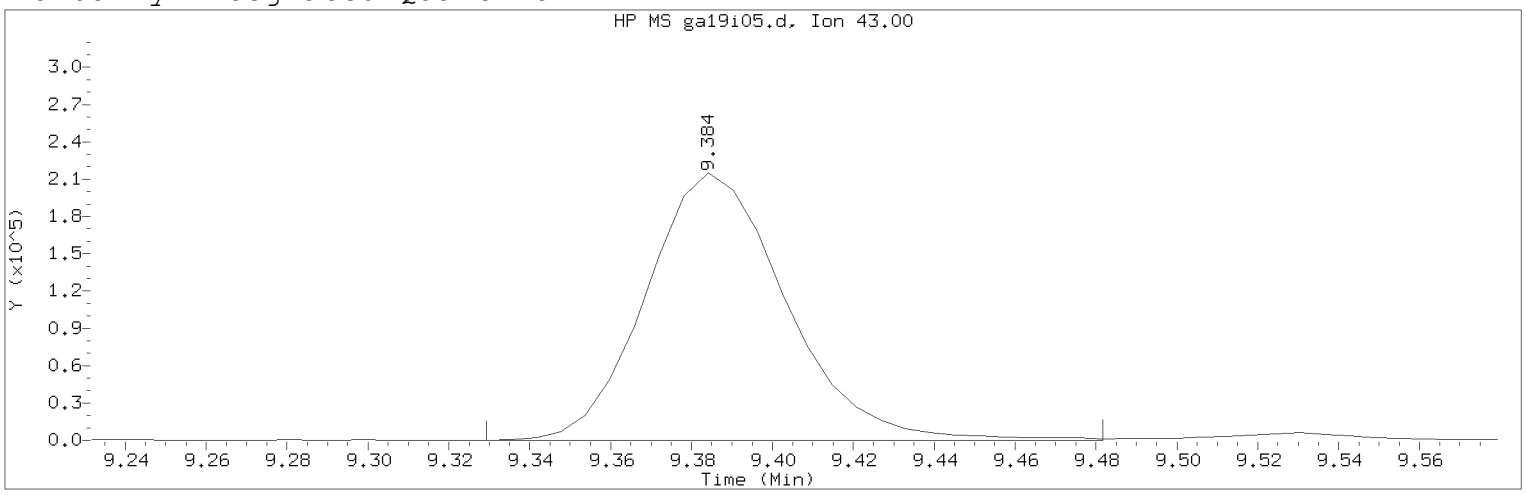
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 88.00		
Area	: 16368		
On-column Amount (ng)	: 53.2454		
Integration start scan	: 1090	Integration stop scan:	1151
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Reason: 7470

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

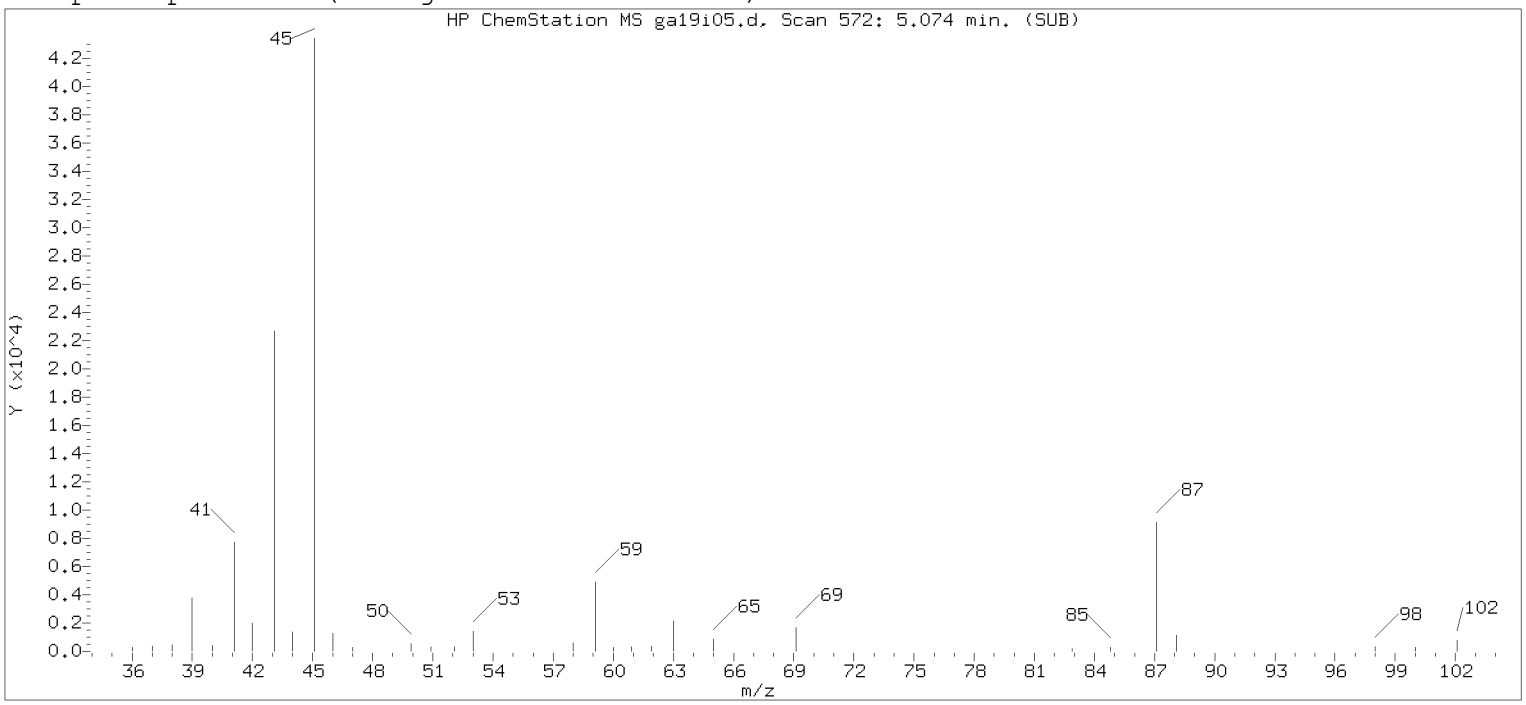
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 517626M
On-Column Amount (ng) : 9.5884
Integration start scan : 1269 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

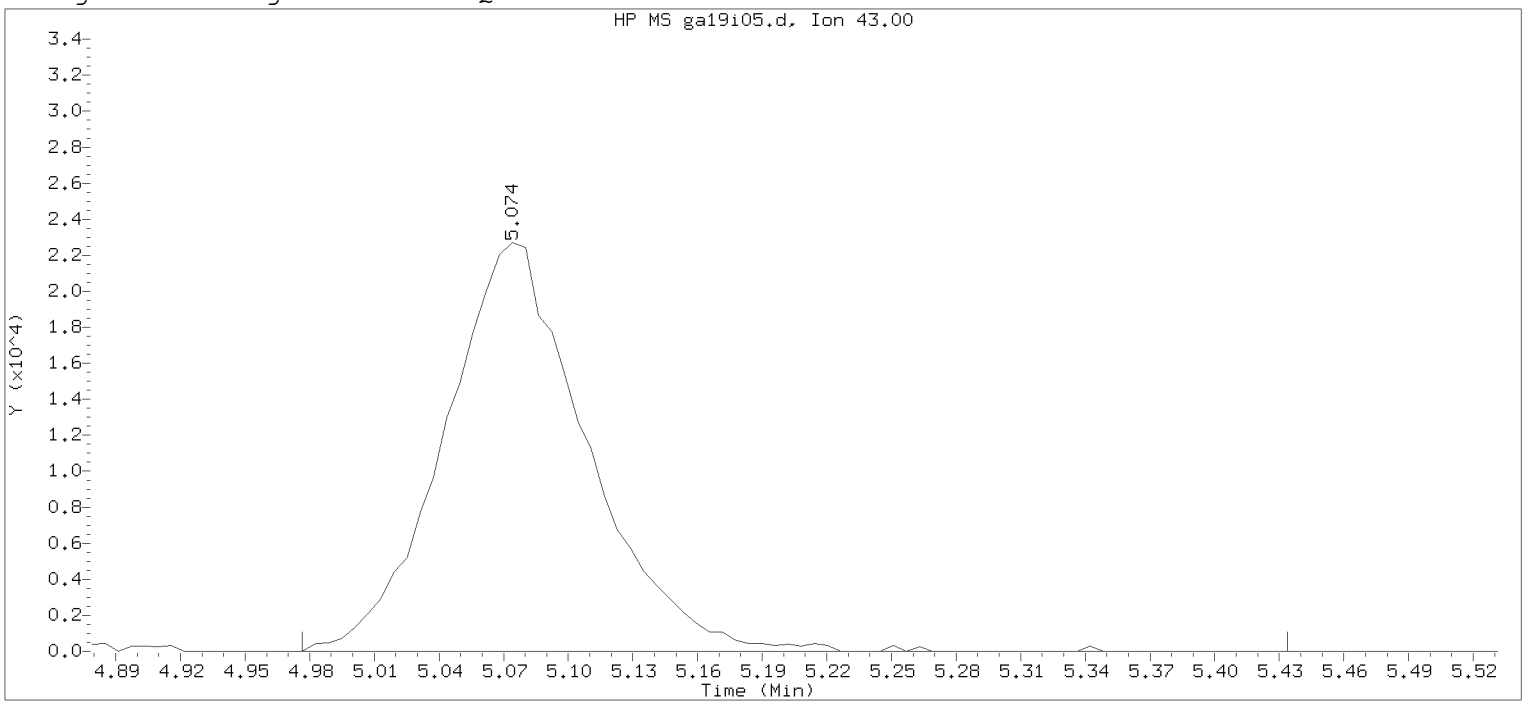
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

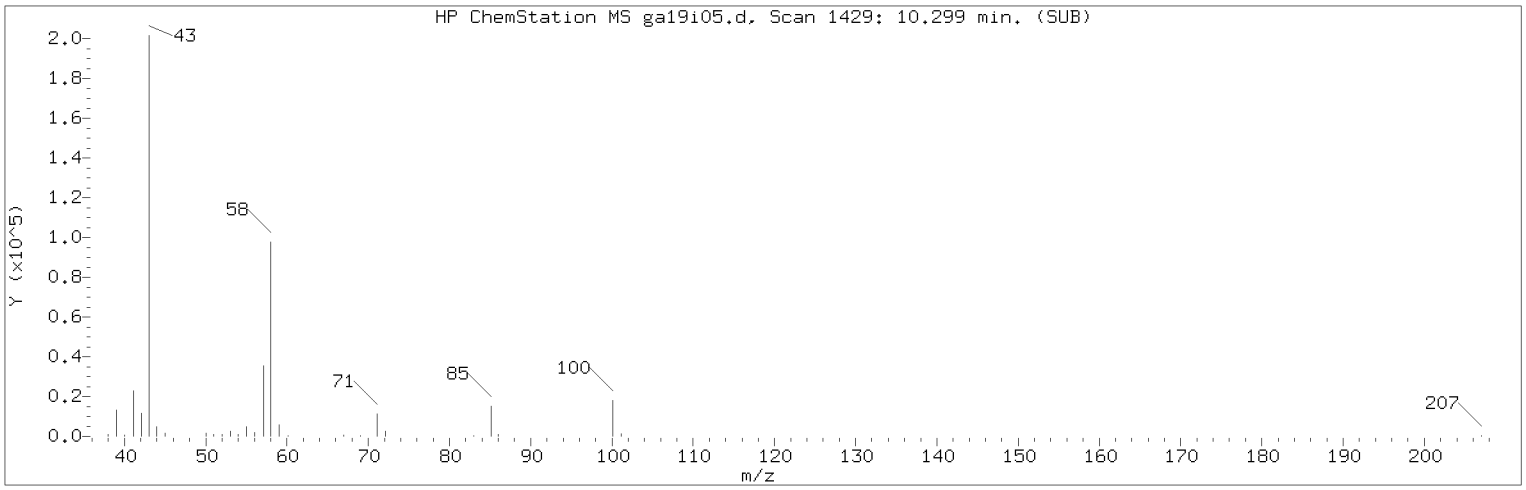
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

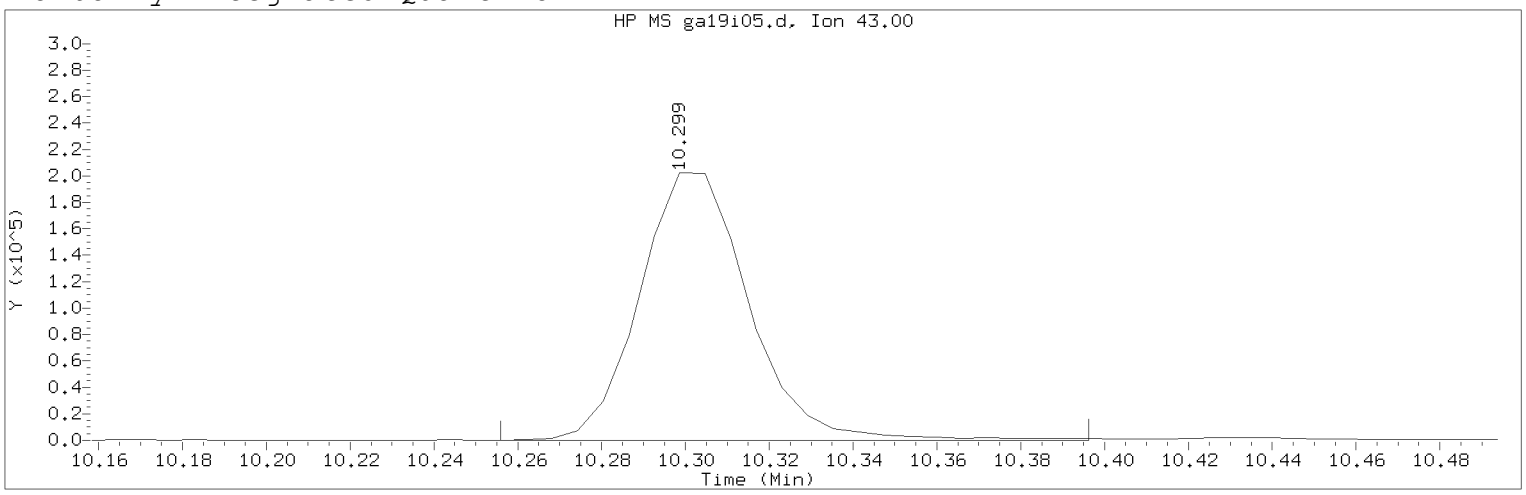
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 104459
On-column Amount (ng) : 9.1724
Integration start scan : 555 Integration stop scan: 630
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. m.s.k. 07460

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

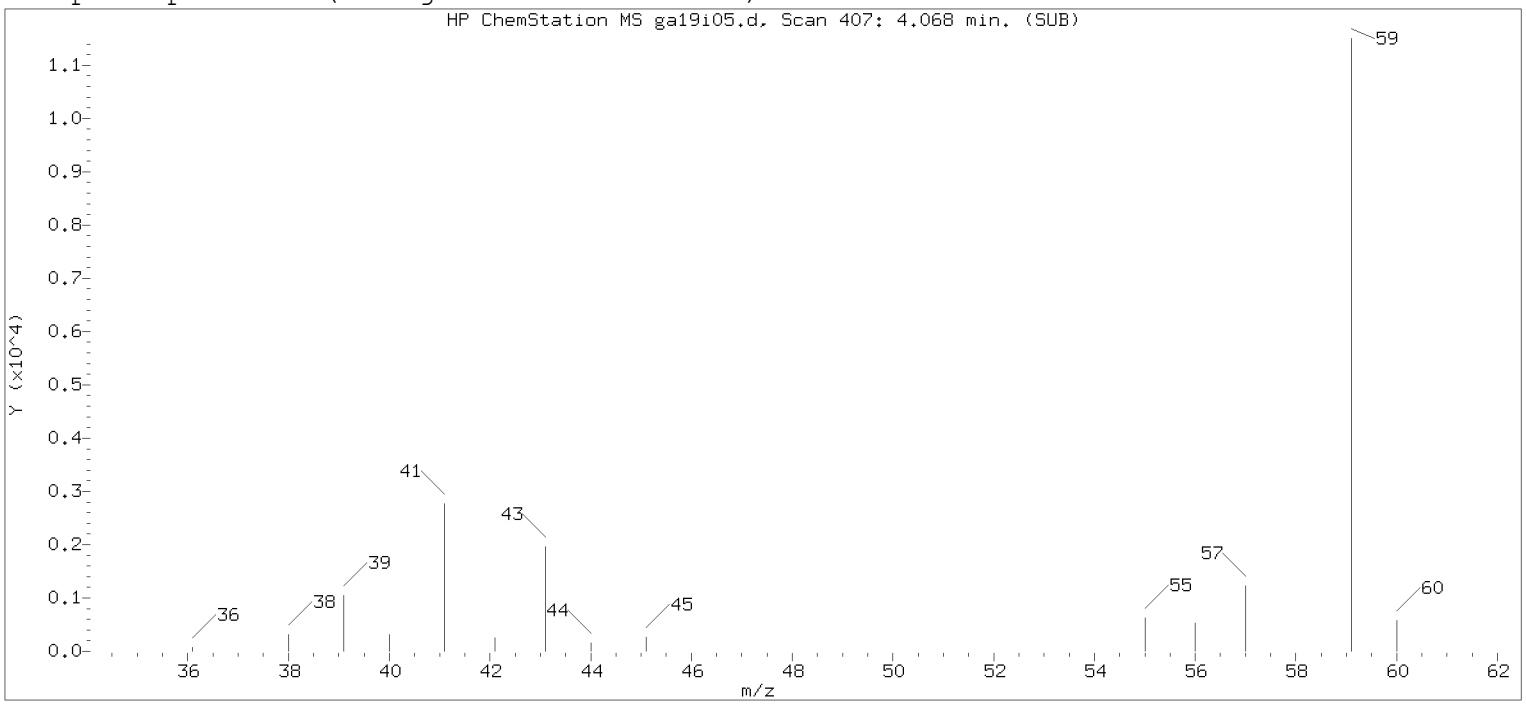
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 367593M
On-Column Amount (ng) : 9.6131
Integration start scan : 1421 Integration stop scan: 1444
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

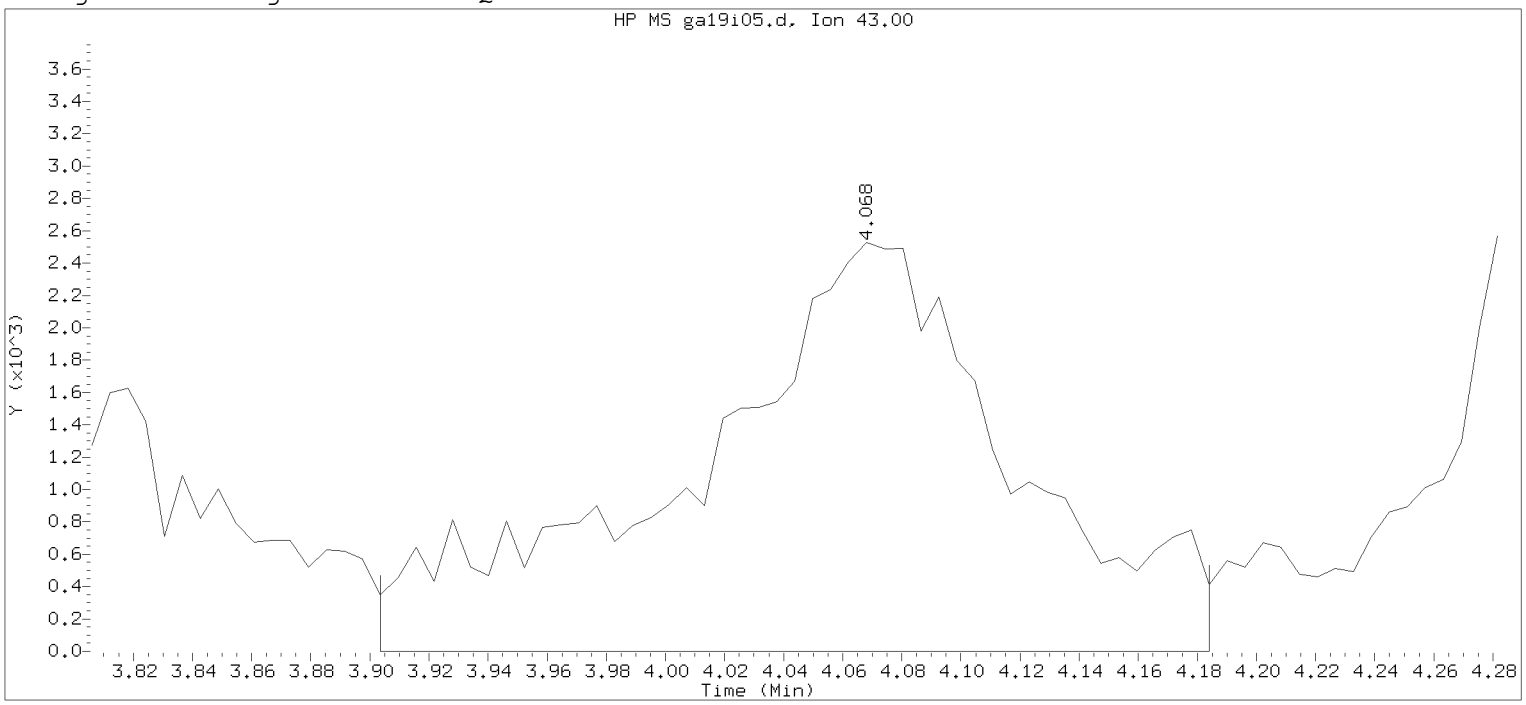
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

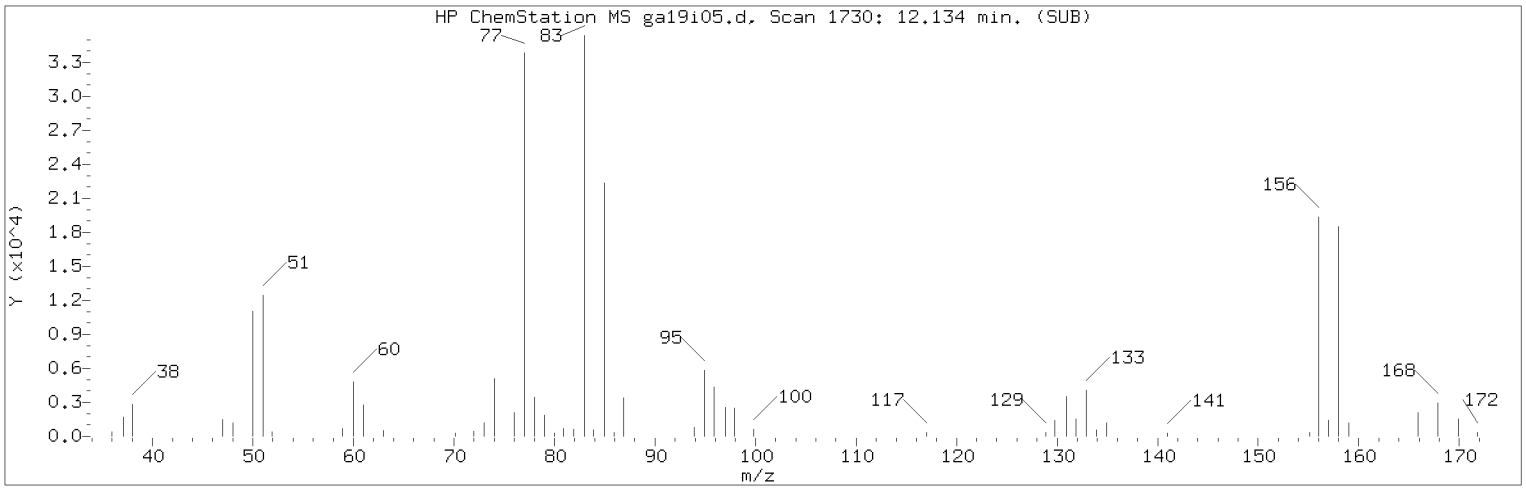
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

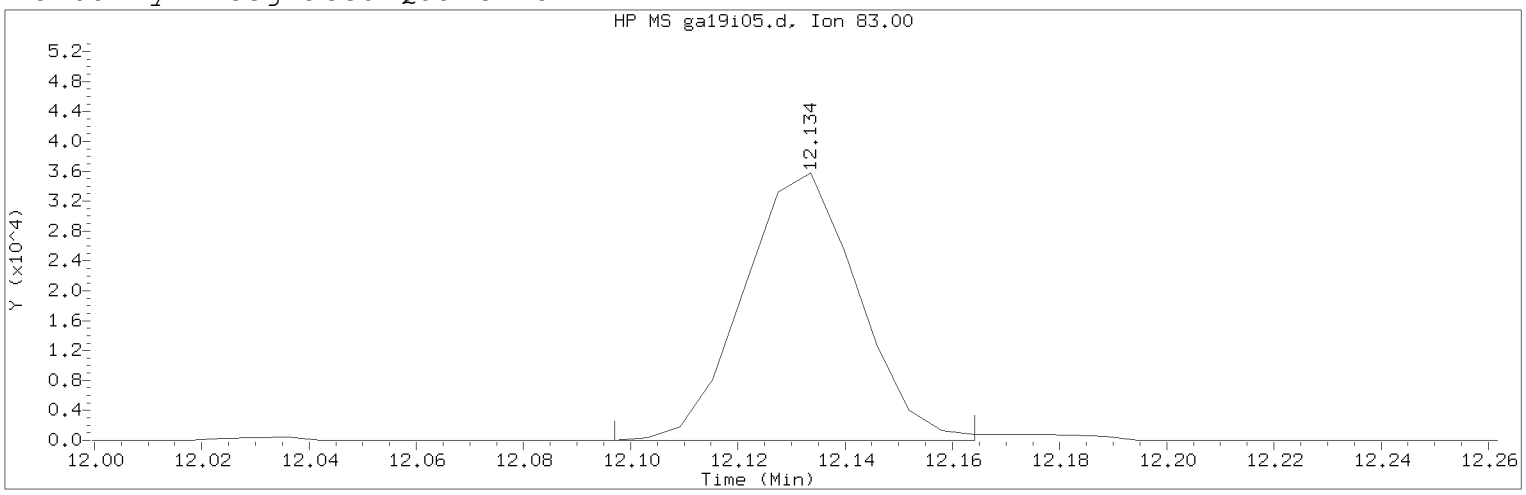
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 407		
Retention Time (minutes)	: 4.068		
Quant Ion	: 43.00		
Area	: 19259		
On-column Amount (ng)	: 11.6349		
Integration start scan	: 379	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

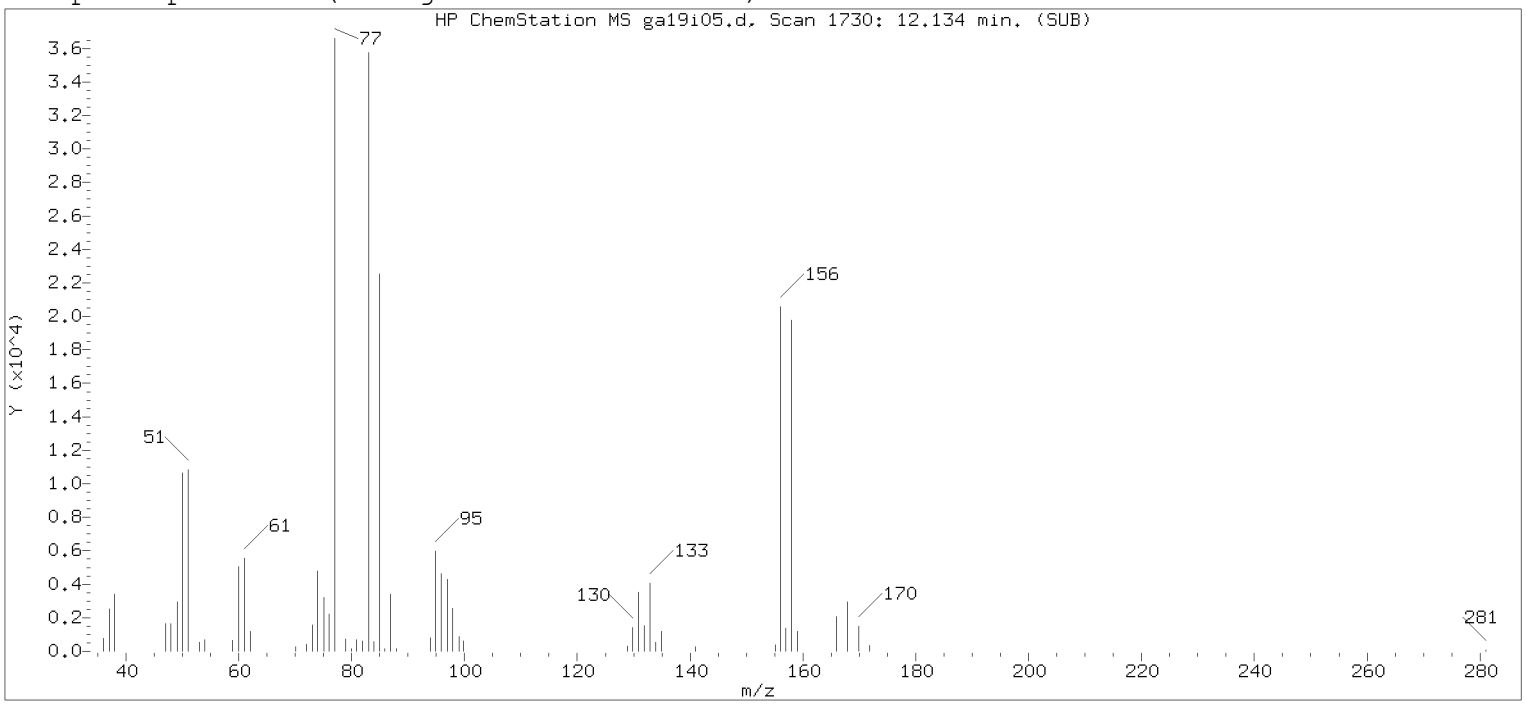
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 52821M
On-Column Amount (ng) : 0.9870
Integration start scan : 1723 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

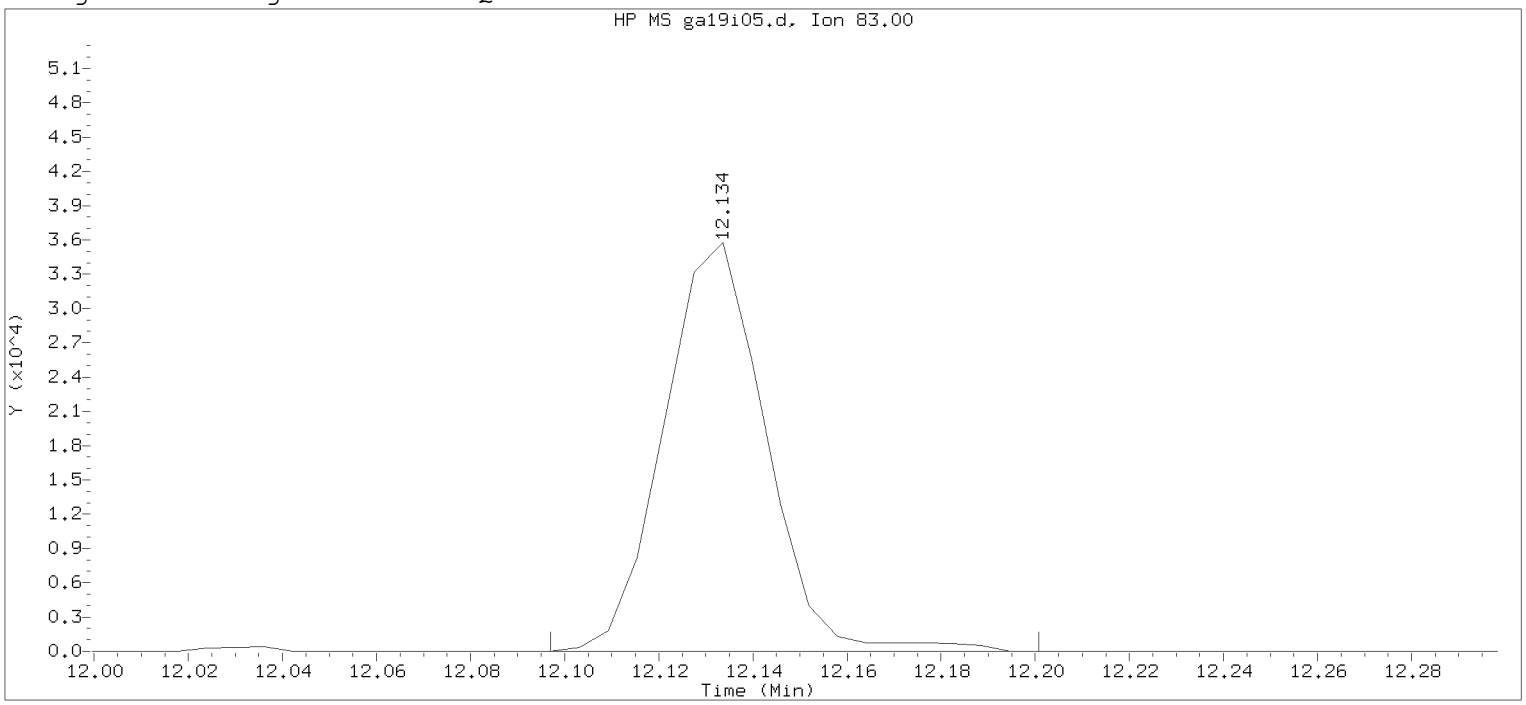
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

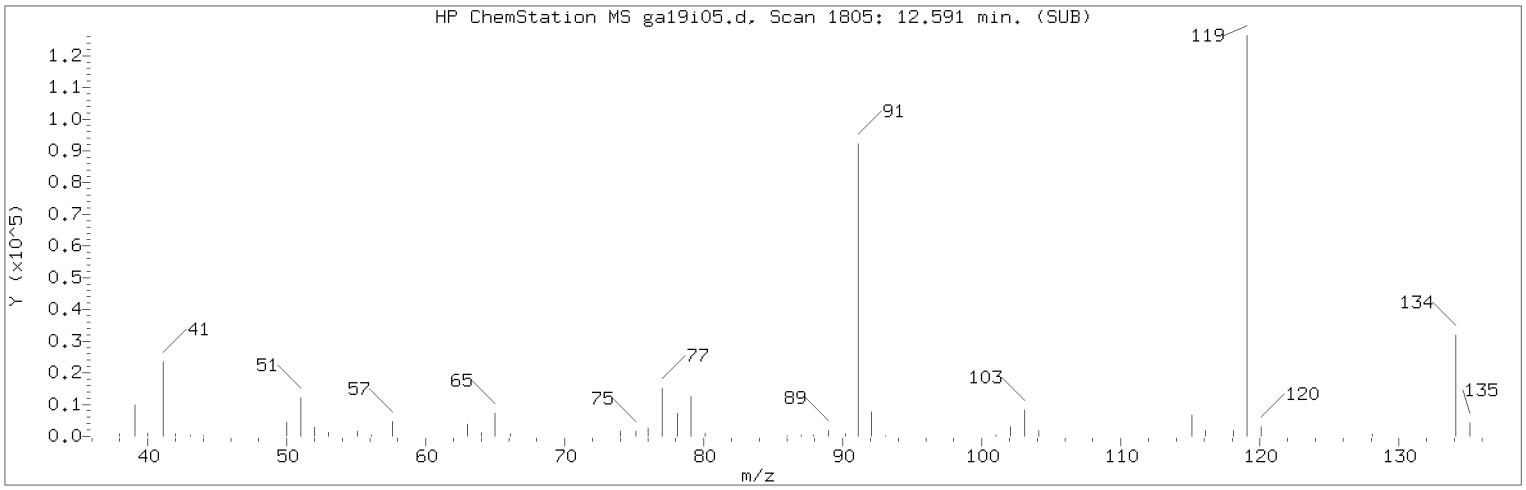
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

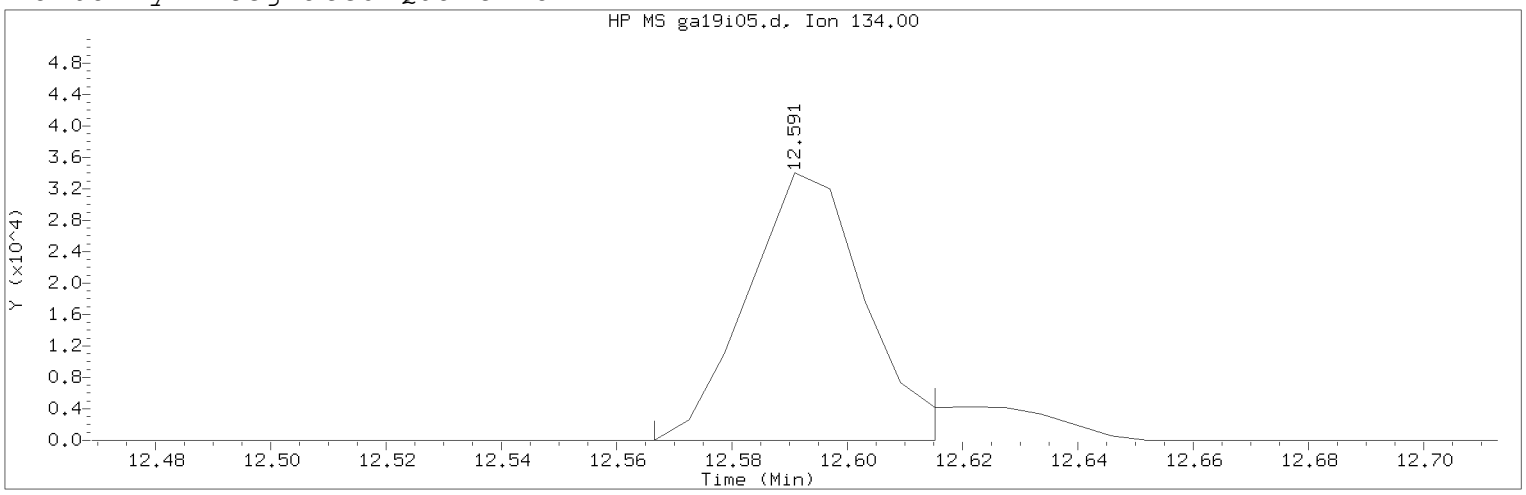
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 53790
On-column Amount (ng) : 0.9922
Integration start scan : 1723 Integration stop scan: 1740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. AE06 mdc 7400

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

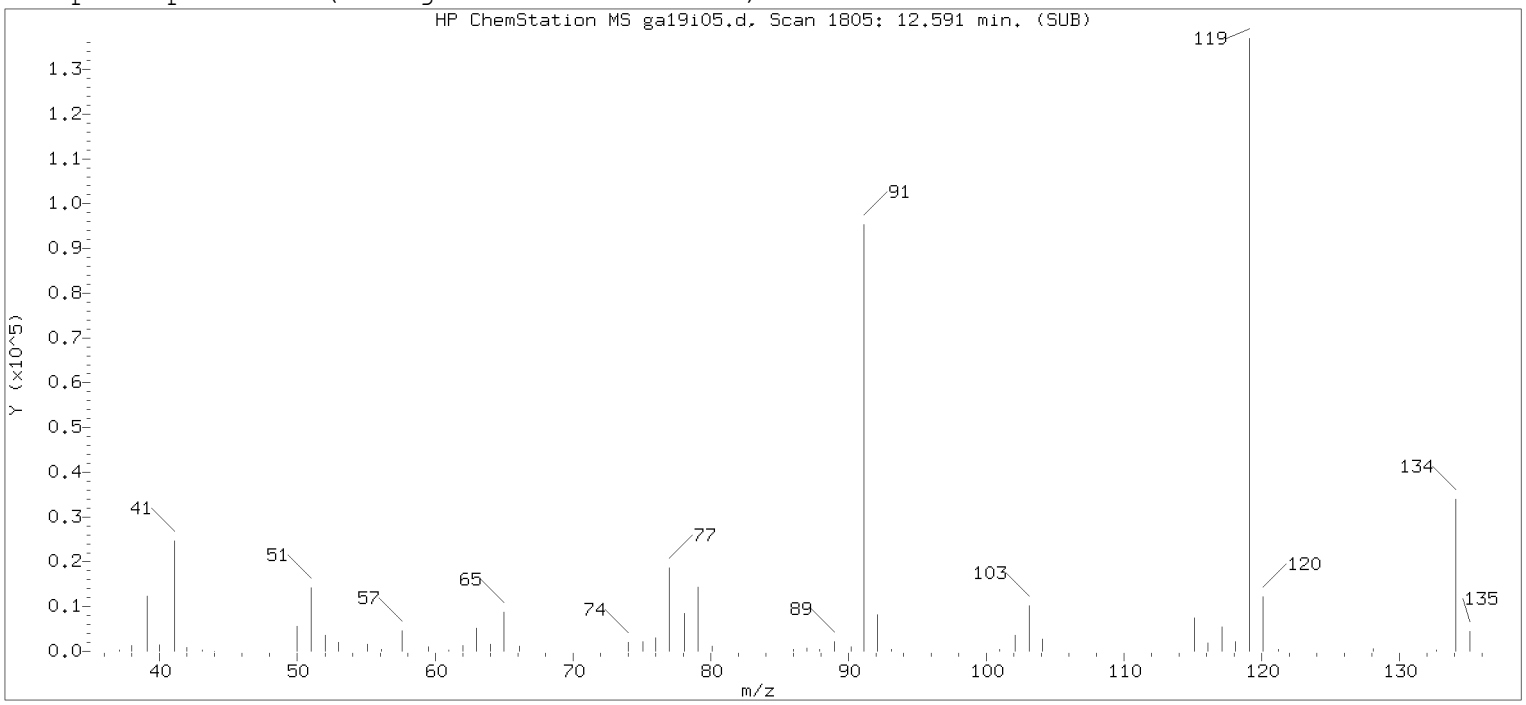
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 48072M
On-Column Amount (ng) : 0.9952
Integration start scan : 1800 Integration stop scan: 1808
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

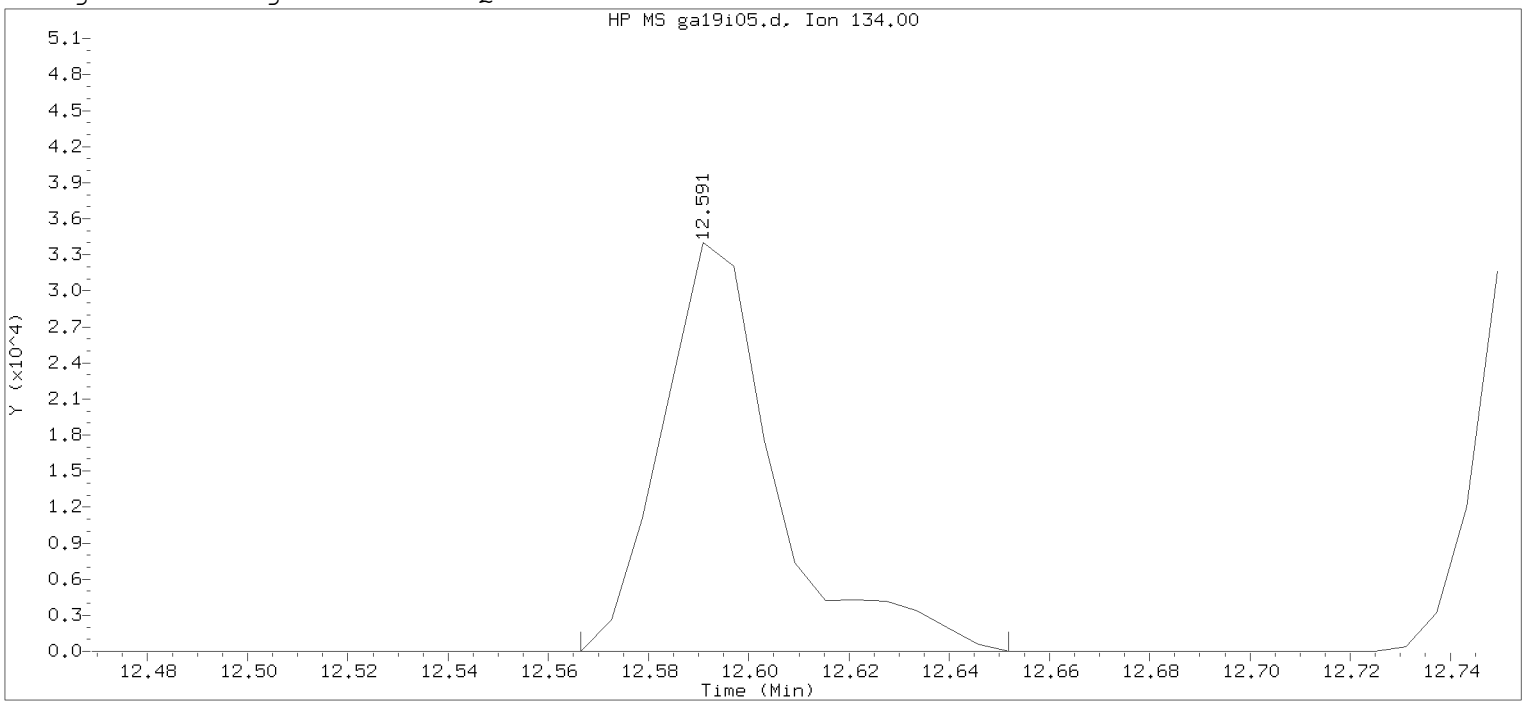
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



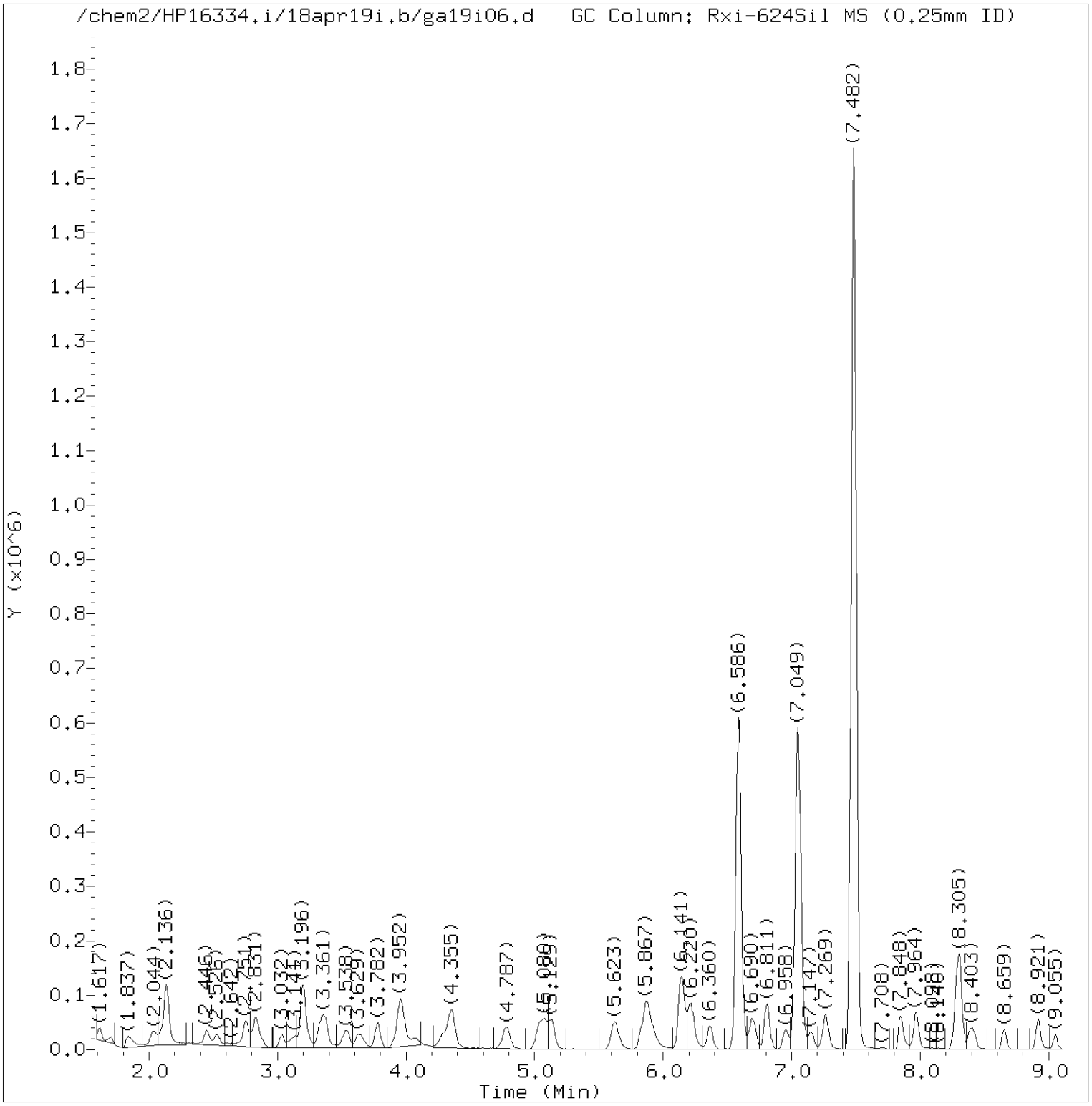
Data File: /chem2/HP16334.i/18apr19i.b/ga19i05.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 13:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:07
Date, time and analyst ID of latest file update: 19-Apr-2018 14:07 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area : 53318
On-column Amount (ng) : 1.0803
Integration start scan : 1800 Integration stop scan: 1814
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. mdl: 7402



Total Ion Chromatogram (TIC)

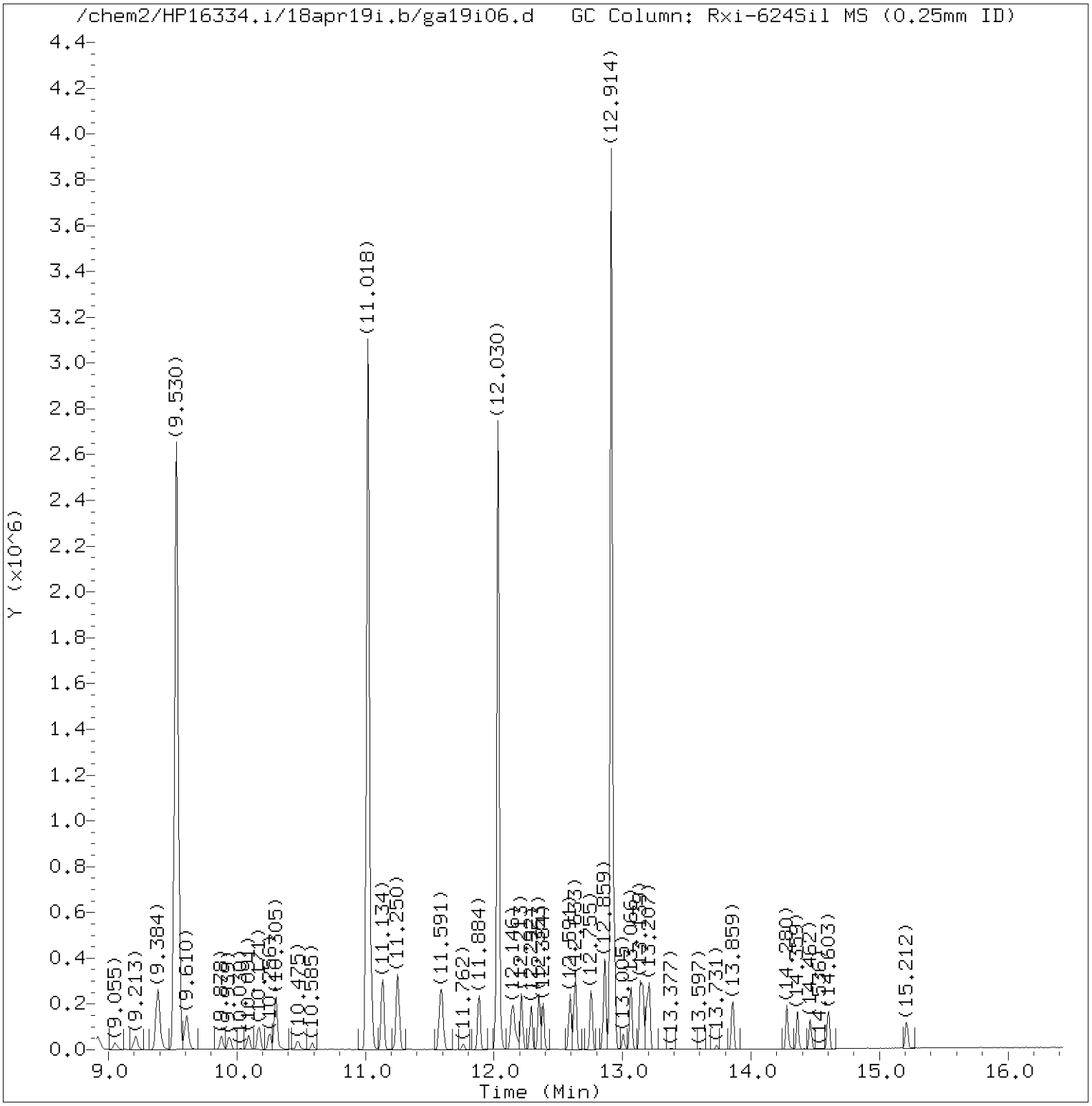
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	39636	0.503
2) Chloromethane	(2)	2.026	50	41943	0.538
5) Vinyl Chloride	(2)	2.136	62	35766	0.533
6) 1,3-Butadiene	(2)	2.136	39	84424M	0.618
7) Bromomethane	(2)	2.453	94	24361	0.543
8) Chloroethane	(2)	2.526	64	21885	0.572
9) Dichlorofluoromethane	(2)	2.751	67	51040	0.559
10) Trichlorofluoromethane	(2)	2.818	101	43732M	0.496
11) Ethyl ether	(2)	3.032	59	21390	0.492
12) Freon 123a	(2)	3.117	67	32697	0.529
13) Acrolein	(1)	3.202	56	185224	25.176
15) 1,1-Dichloroethene	(2)	3.330	96	22025	0.514
14) Acetone	(1)	3.355	43	63361M	5.458
16) Freon 113	(2)	3.367	101	23768	0.488
17) Methyl Iodide	(2)	3.526	142	43528	0.522
18) Carbon Disulfide	(2)	3.629	76	90603	0.548
21) Methyl Acetate	(1)	3.751	43	15987M	0.490
22) Allyl Chloride	(2)	3.782	41	49609	0.506
23) Methylene Chloride	(2)	3.952	84	31255	0.574
26)*t-Butyl Alcohol-d10	(1)	3.952	65	211767M	50.000
28) t-Butyl Alcohol	(1)	4.080	59	41631	10.585
29) Acrylonitrile	(1)	4.288	53	32180	2.405
30) Methyl Tertiary Butyl Ether	(2)	4.330	73	72677	0.490
31) trans-1,2-Dichloroethene	(2)	4.361	96	26754	0.540
32) n-Hexane	(2)	4.787	57	40399	0.478
33) 1,1-Dichloroethane	(2)	5.025	63	53279	0.524
34) di-Isopropyl Ether	(2)	5.086	45	104957	0.507
35) 2-Chloro-1,3-Butadiene	(2)	5.141	53	48609	0.524
37) Ethyl t-butyl ether	(2)	5.623	59	90626	0.497
38) 2-Butanone	(1)	5.830	43	101255	4.930
39) cis-1,2-Dichloroethene	(2)	5.873	96	29213	0.519
41) 2,2-Dichloropropane	(2)	5.897	77	42746	0.508
42) Propionitrile	(1)	5.934	54	50359	9.901
40) 1,2-Dichloroethene (Total)	(2)		96	55967	1.059
45) Methacrylonitrile	(1)	6.141	67	79180	4.899
47) Bromochloromethane	(2)	6.214	128	12233	0.475
48) Tetrahydrofuran	(1)	6.220	71	23658	4.866
49) Chloroform	(2)	6.360	83	50070	0.517

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.586	113	514049	9.931
50)$Dibromofluoromethane	(2)	6.586	111	529798	9.961
51) 1,1,1-Trichloroethane	(2)	6.598	97	41766	0.507
52) Cyclohexane	(2)	6.696	56	47547	0.483
52) Cyclohexane	(2)	6.696	84	43225	0.554
52) Cyclohexane	(2)	6.683	69	13885	0.485
54) Carbon Tetrachloride	(2)	6.805	117	31603	0.469
55) 1,1-Dichloropropene	(2)	6.805	75	39443	0.514
56) Isobutyl Alcohol	(1)	6.964	41	38865	25.097
57)$1,2-Dichloroethane-d4	(2)	7.049	102	108596	9.907
57)$1,2-Dichloroethane-d4	(2)	7.049	65	632092	10.172
57)$1,2-Dichloroethane-d4	(2)	7.049	104	68656	10.062
58) Benzene	(2)	7.067	78	111440	0.528
59) 1,2-Dichloroethane	(2)	7.153	62	38964	0.534
60) t-Amyl methyl ether	(2)	7.269	73	75245	0.485
63)*Fluorobenzene	(2)	7.482	96	2057002	10.000
62) n-Heptane	(2)	7.494	43	48752	0.482
65) n-Butanol	(1)	7.848	56	58896M	45.901
67) Trichloroethene	(2)	7.970	95	28309	0.508
69) Methylcyclohexane	(2)	8.281	83	44976	0.470
70) 1,2-Dichloropropane	(2)	8.305	63	29730	0.507
71) Methyl Methacrylate	(1)	8.390	69	14548	0.466
72) 1,4-Dioxane	(1)	8.397	88	4429M	19.091
73) Dibromomethane	(2)	8.415	93	13576	0.490
74) Bromodichloromethane	(2)	8.659	83	33410	0.480
76) 2-Nitropropane	(1)	8.921	41	46284	4.309
80) cis-1,3-Dichloropropene	(2)	9.213	75	39612	0.460
81) 4-Methyl-2-Pentanone	(1)	9.384	43	245229M	4.837
82)$Toluene-d8	(3)	9.530	98	2077352	10.084
82)$Toluene-d8	(3)	9.530	100	1313986	10.014
83) Toluene	(3)	9.610	92	69089	0.526
84) trans-1,3-Dichloropropene	(3)	9.878	75	33451	0.462
86) Ethyl Methacrylate	(3)	9.939	69	30738	0.474
88) 1,1,2-Trichloroethane	(3)	10.091	97	20029	0.507
85) 1,3-Dichloropropene (total)	(3)		75	73063	0.922
89) Tetrachloroethene	(3)	10.171	166	32089	0.526
90) 1,3-Dichloropropane	(3)	10.256	76	35685	0.499
91) 2-Hexanone	(1)	10.305	43	169720M	4.744

M = Compound was manually integrated.
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Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	19360	0.432
95) 1,2-Dibromoethane	(3)	10.591	107	18014	0.478
97)*Chlorobenzene-d5	(3)	11.018	117	1537140	10.000
98) Chlorobenzene	(3)	11.048	112	77699	0.516
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	23480	0.460
100) Ethylbenzene	(3)	11.134	91	136782	0.523
101) m+p-Xylene	(3)	11.250	106	99702	1.001
104) o-Xylene	(3)	11.579	106	50450	0.504
106) Styrene	(3)	11.597	104	79339	0.478
105) Xylene (Total)	(3)		106	150152	1.505
107) Bromoform	(3)	11.762	173	10734	0.412
108) Isopropylbenzene	(3)	11.884	105	134786	0.514
111)$4-Bromofluorobenzene	(3)	12.030	95	795004	10.073
111)$4-Bromofluorobenzene	(3)	12.030	174	674228	9.988
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	24104	0.471
114) Bromobenzene	(4)	12.146	156	33311	0.495
116) 1,2,3-Trichloropropane	(4)	12.176	110	6968	0.488
117) n-Propylbenzene	(4)	12.213	91	163274	0.521
119) 2-Chlorotoluene	(4)	12.292	126	31729	0.510
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	113325	0.503
122) 4-Chlorotoluene	(4)	12.384	126	32566	0.499
125) tert-Butylbenzene	(4)	12.591	134	25111M	0.531
126) Pentachloroethane	(4)	12.627	167	15809	0.422
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	111227	0.484
128) sec-Butylbenzene	(4)	12.755	105	143774	0.500
131) 1,3-Dichlorobenzene	(4)	12.859	146	65044	0.485
132) p-Isopropyltoluene	(4)	12.865	119	123331	0.493
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	865930	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	67434	0.496
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	50876	0.496
136) Benzyl Chloride	(4)	13.005	126	6891	0.373
138) n-Butylbenzene	(4)	13.158	92	66877	0.497
139) 1,2-Dichlorobenzene	(4)	13.188	146	61712	0.489
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	3254	0.422
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	54666	0.487
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	49913	0.479
146) Hexachlorobutadiene	(4)	14.365	225	27804	0.507
147) Naphthalene	(4)	14.462	128	81341	0.468

M = Compound was manually integrated.
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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	41666	0.467

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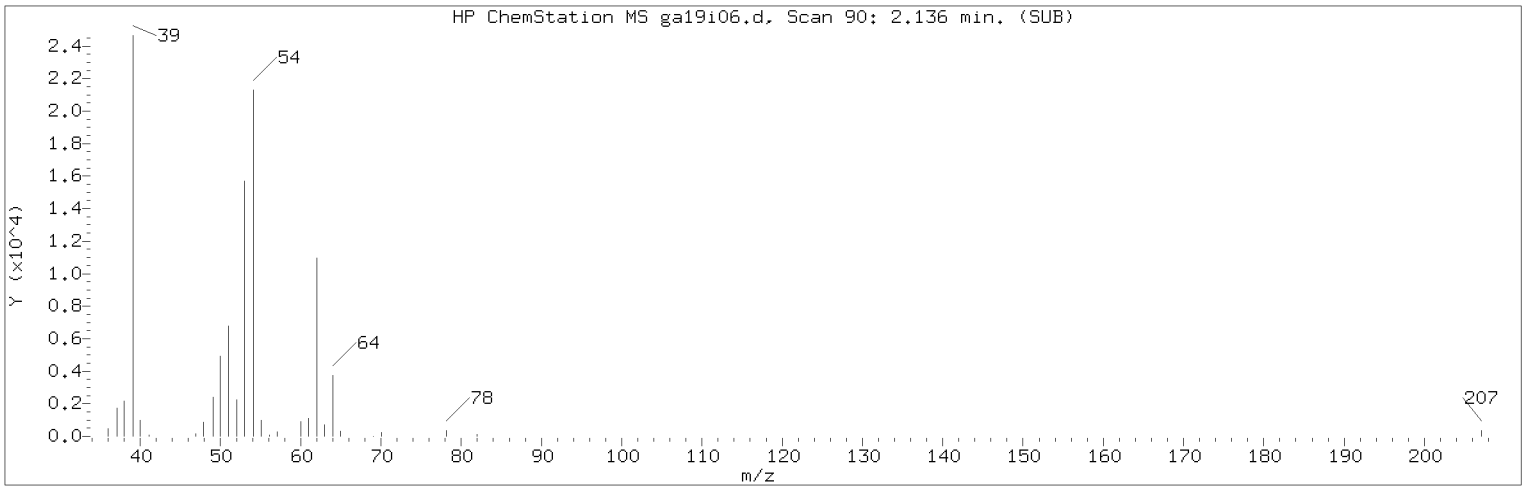
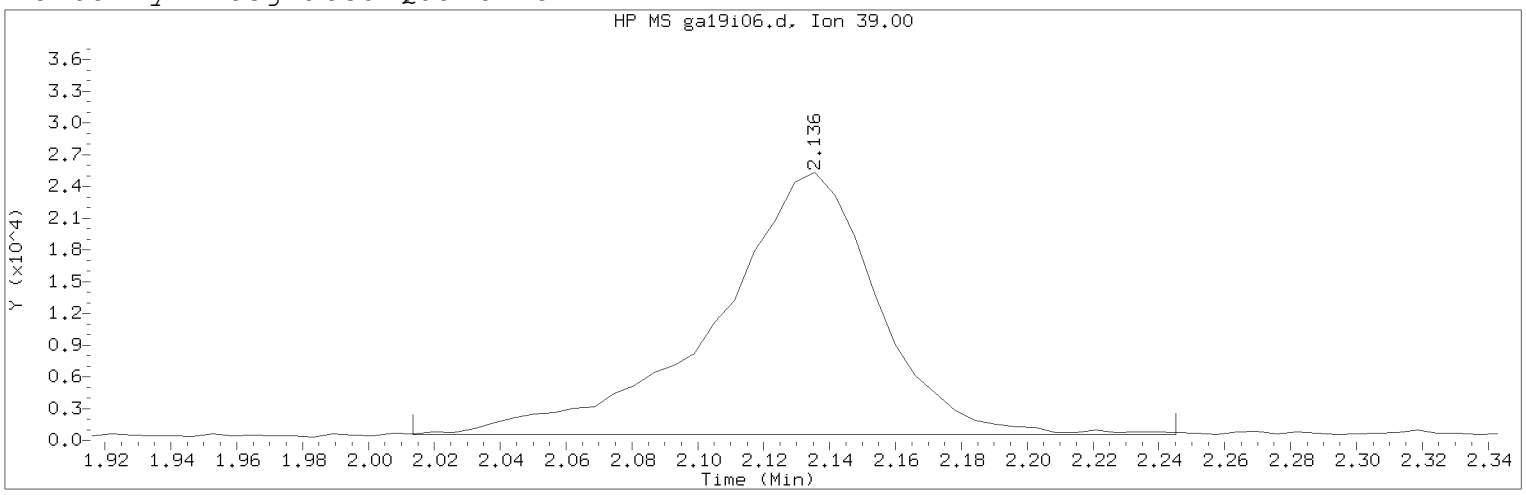
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

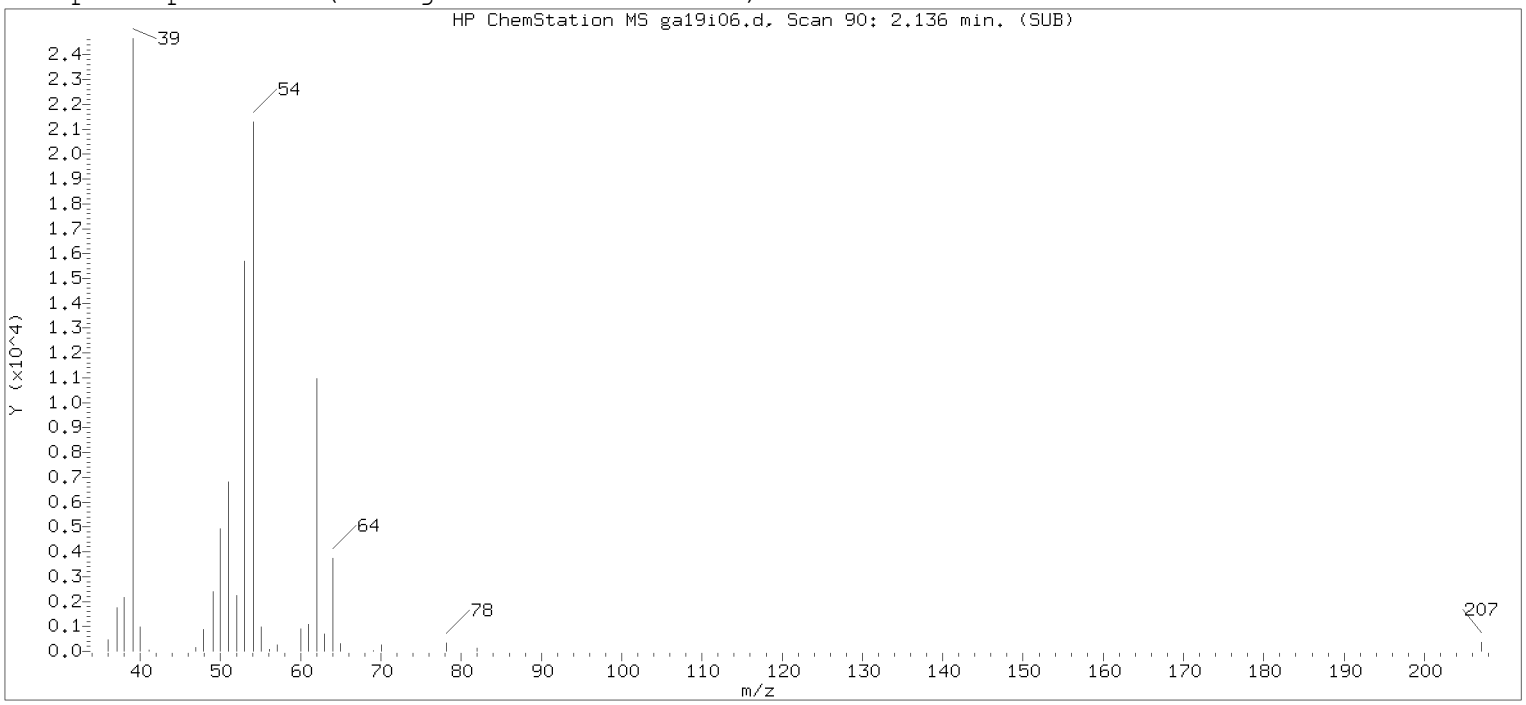
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area (flag) : 84424M
On-Column Amount (ng) : 0.6176
Integration start scan : 69 Integration stop scan: 107
Y at integration start : 555 Y at integration end: 555

Reason for manual integration: improper integration

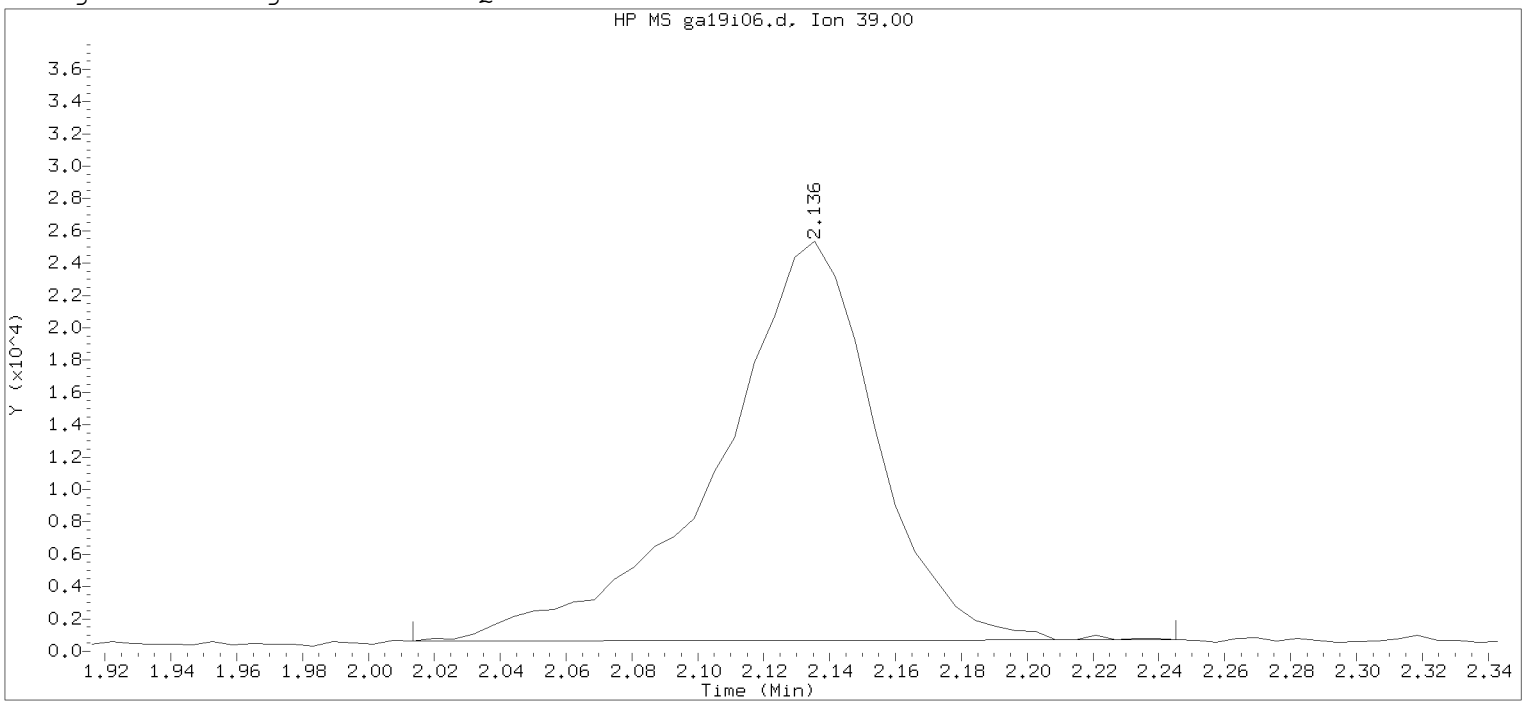
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 90
Retention Time (minutes): 2.136
Quant Ion : 39.00
Area : 82704
On-column Amount (ng) : 0.6390
Integration start scan : 69 Integration stop scan: 107
Y at integration start : 626 Y at integration end: 725

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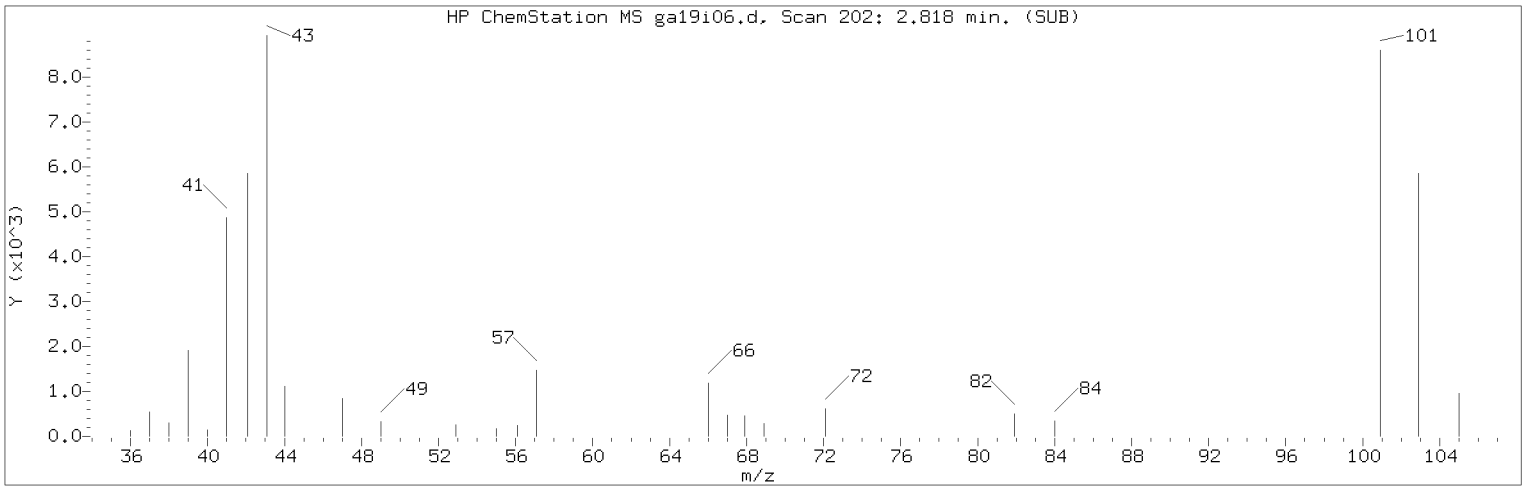
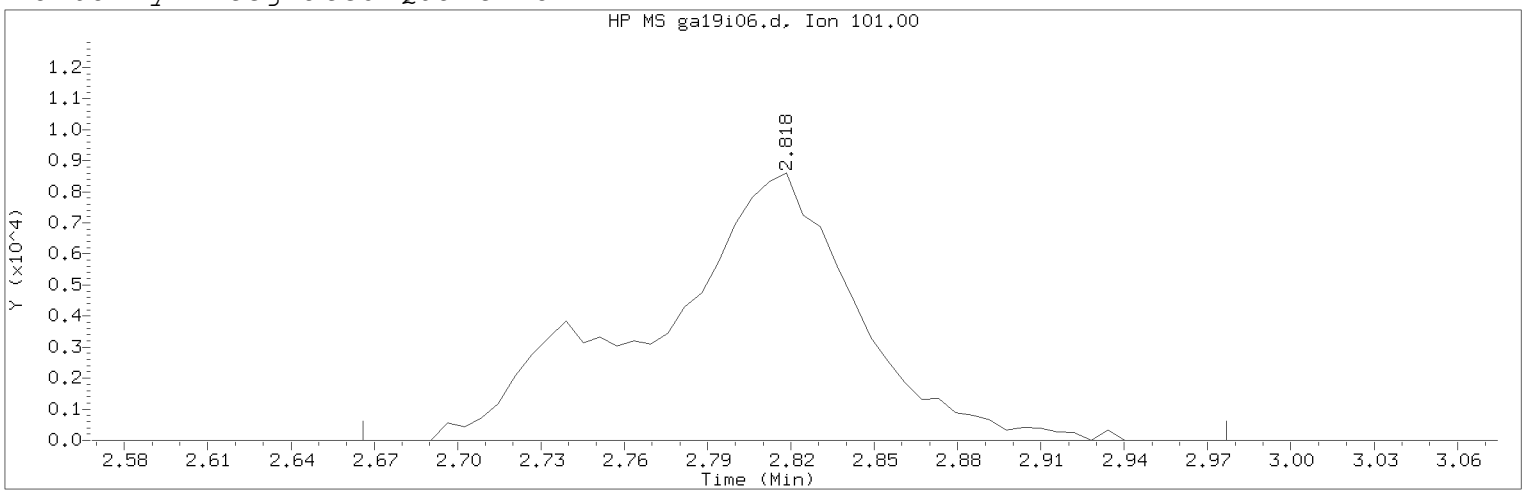
Target 3.5 esignature used. Page 750

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

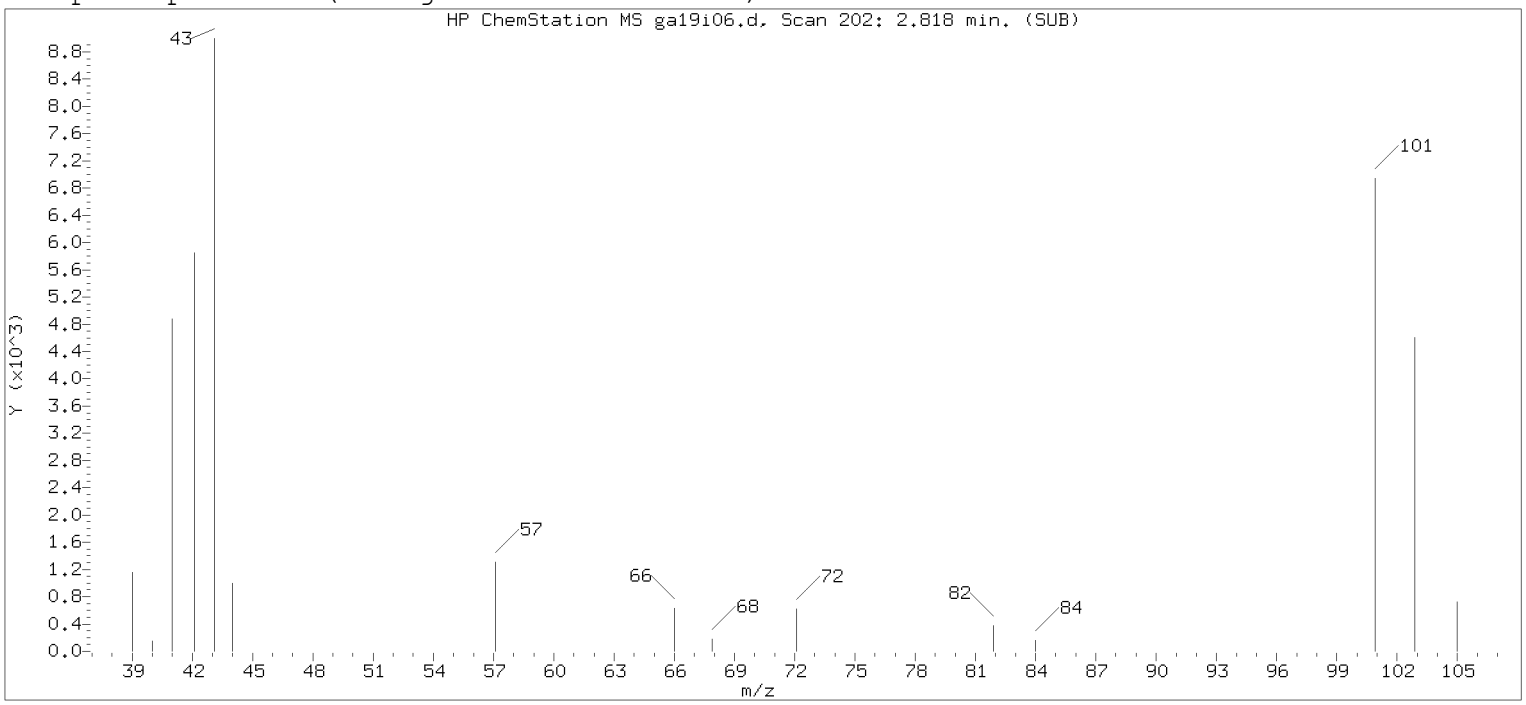
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 202
Retention Time (minutes): 2.818
Quant Ion : 101.00
Area (flag) : 43732M
On-Column Amount (ng) : 0.4958
Integration start scan : 176 Integration stop scan: 227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

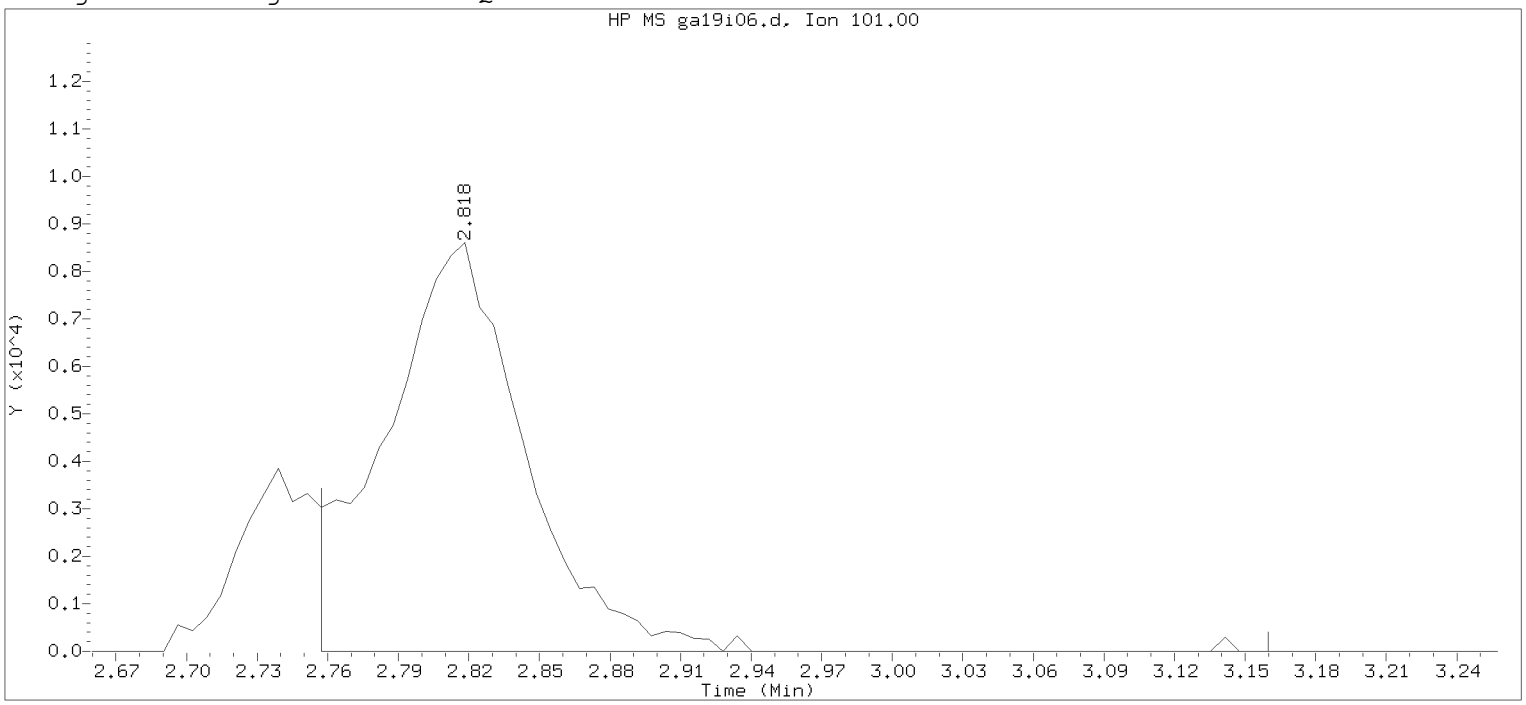
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 202
Retention Time (minutes): 2.818
Quant Ion : 101.00
Area : 35474
On-column Amount (ng) : 0.4475
Integration start scan : 191 Integration stop scan: 257
Y at integration start : 0 Y at integration end: 0

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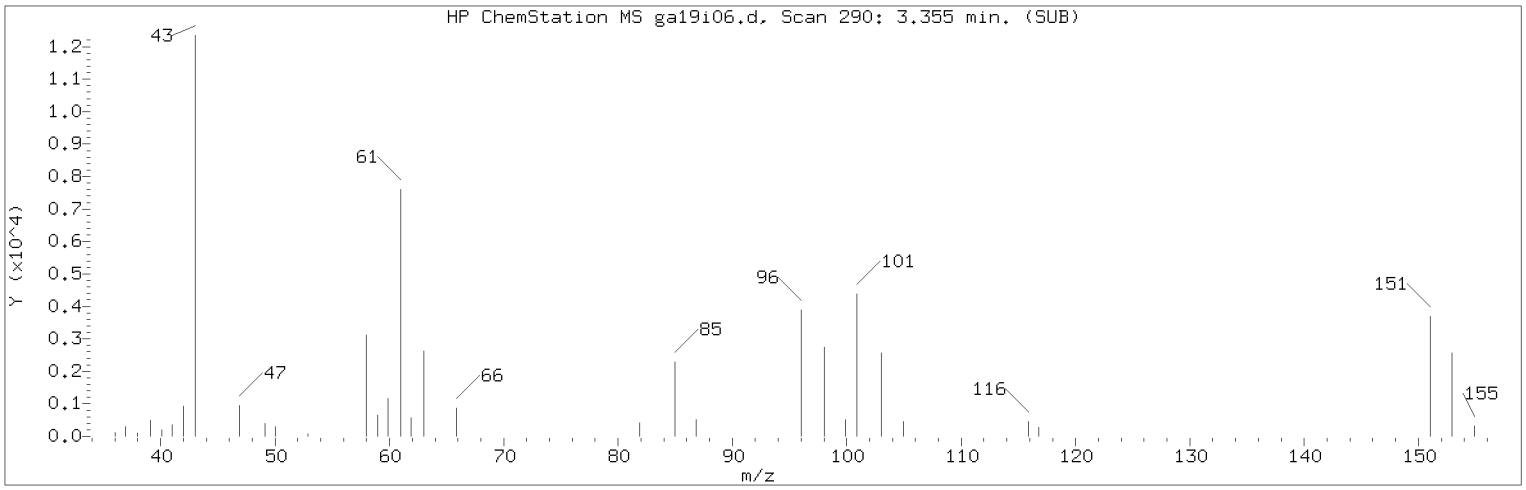
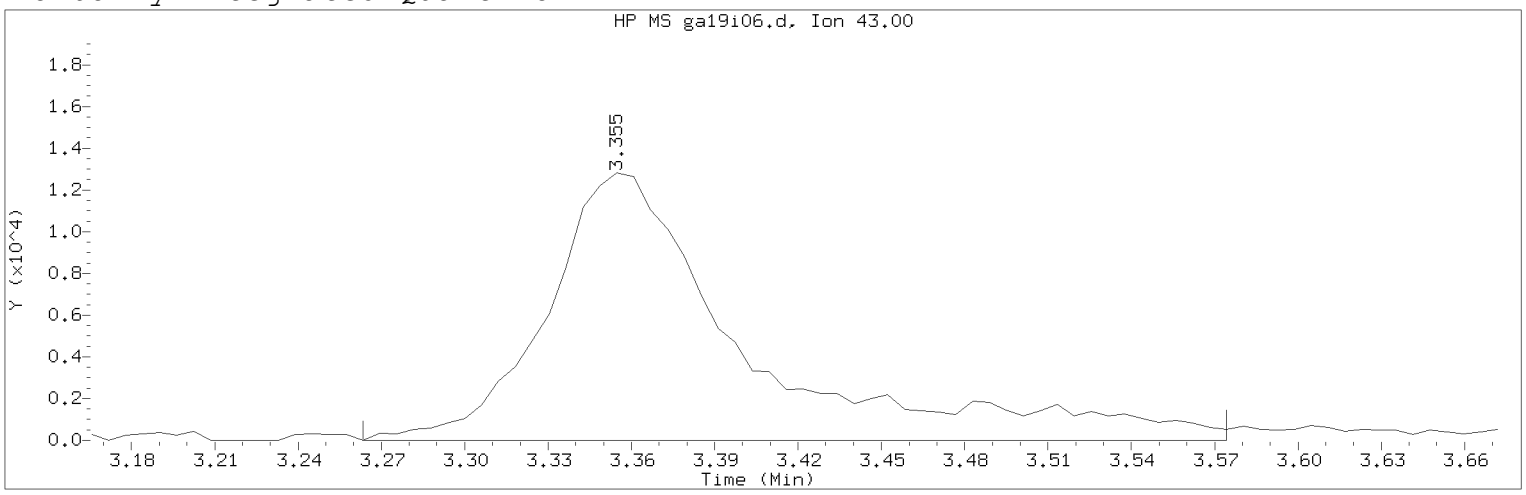
Target 3.5 esignature used. Method: 7502

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

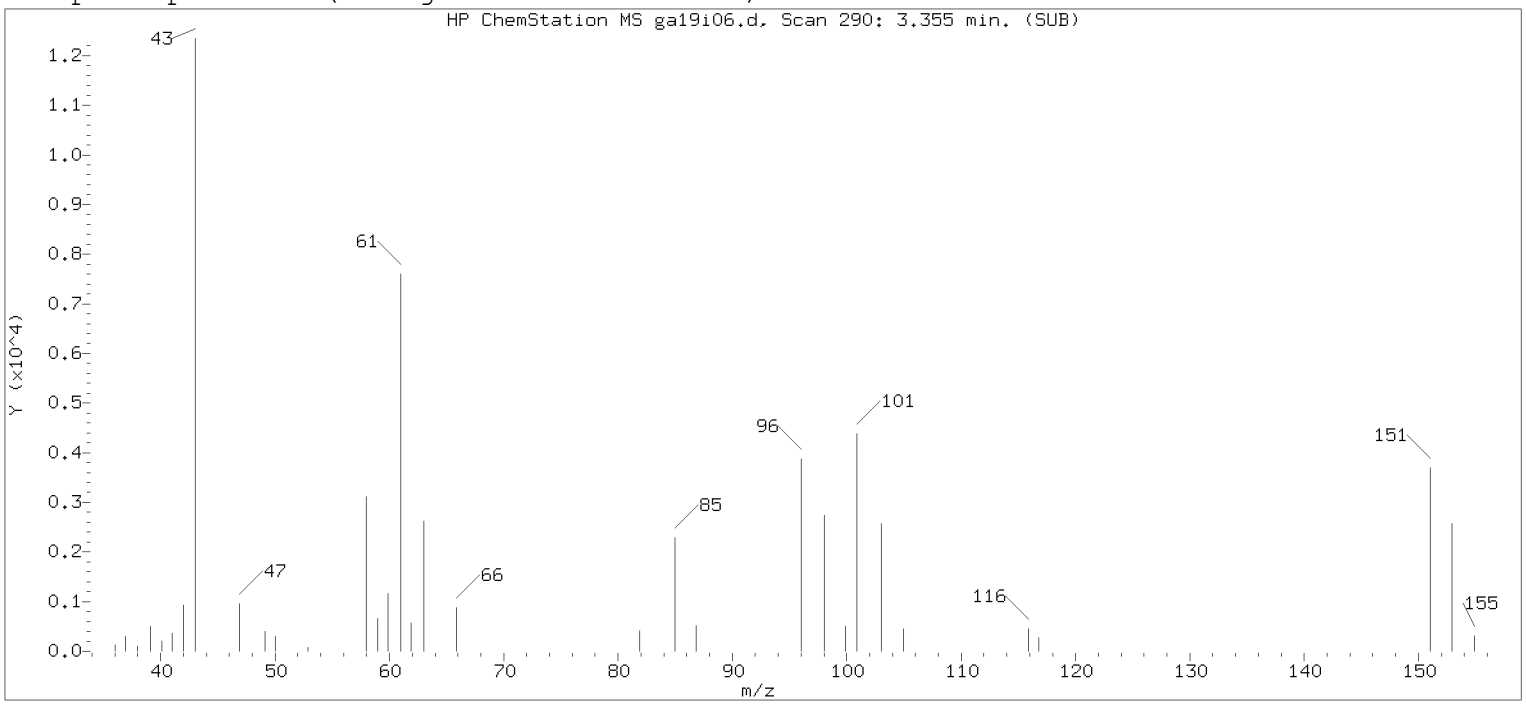
Compound Number : 14
Compound Name : Acetone
Scan Number : 290
Retention Time (minutes): 3.355
Quant Ion : 43.00
Area (flag) : 63361M
On-Column Amount (ng) : 5.4583
Integration start scan : 274 Integration stop scan: 325
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

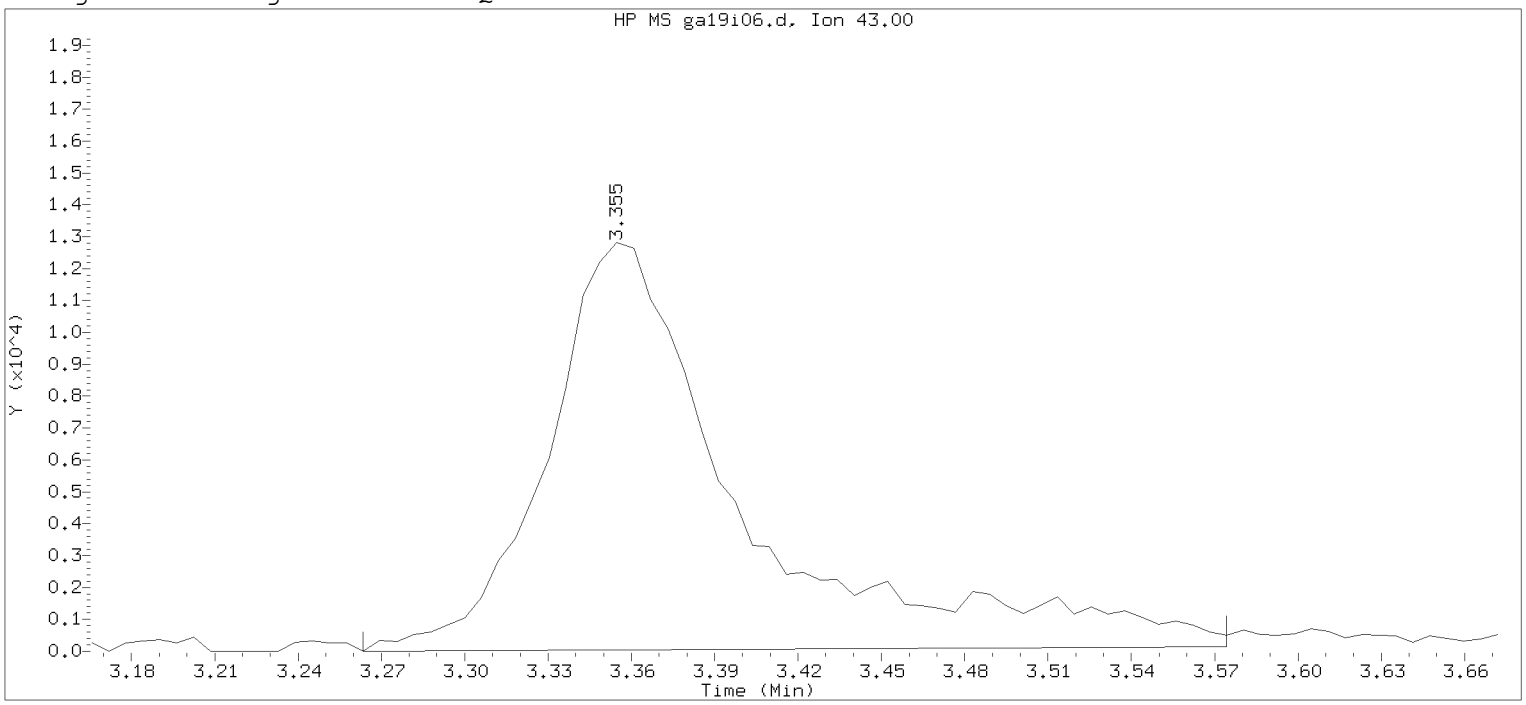
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

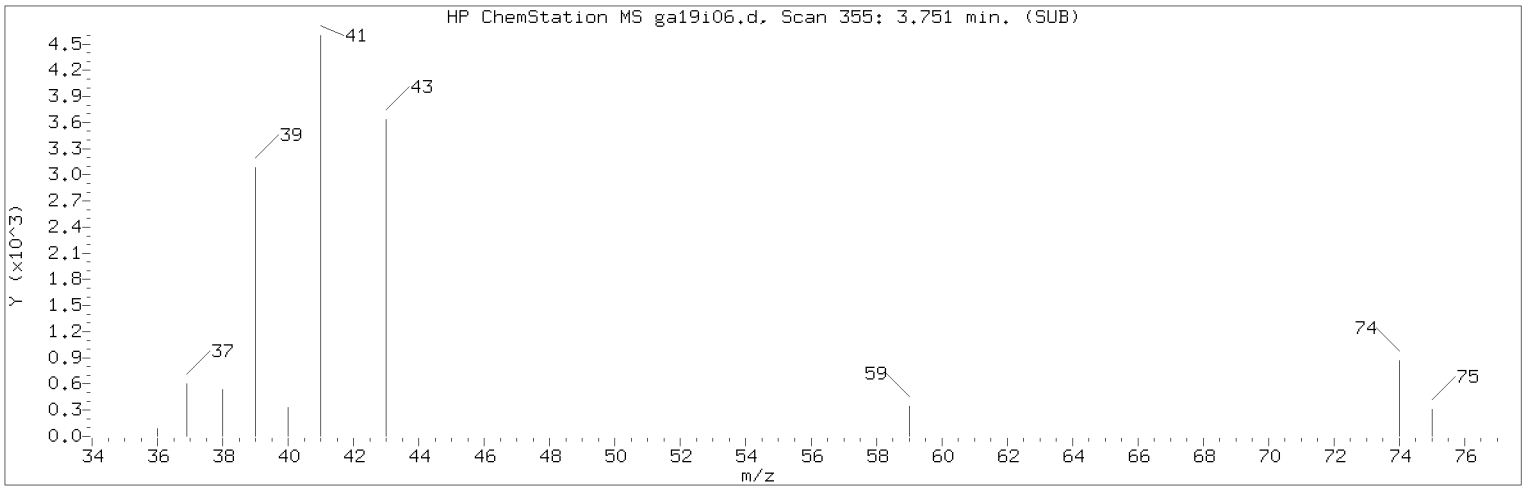
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

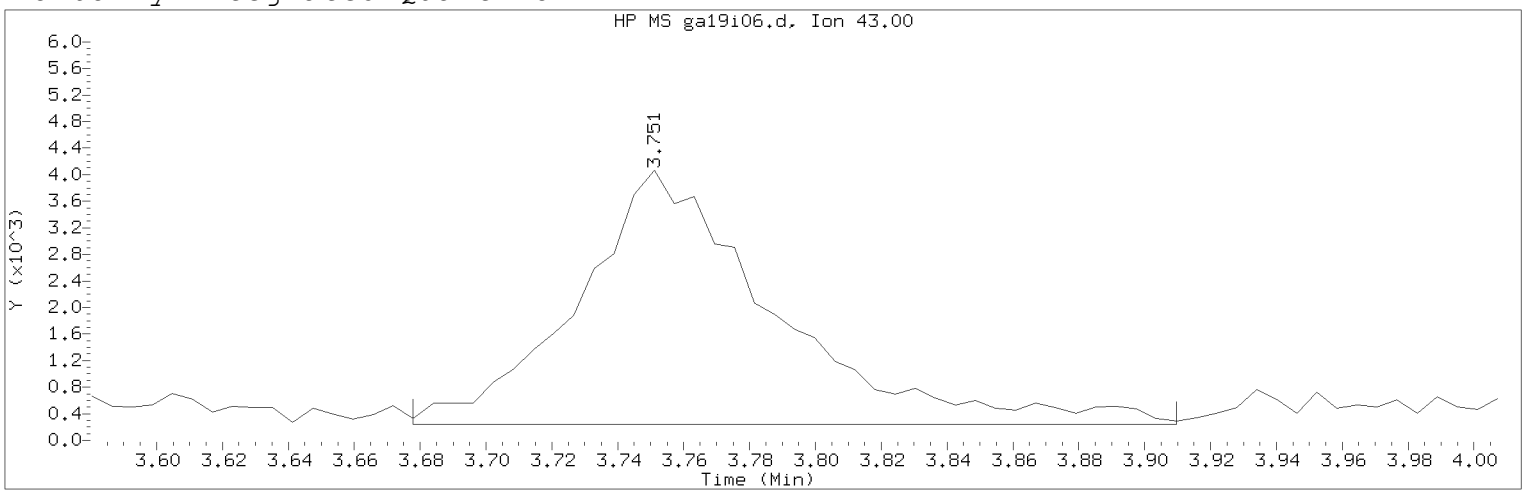
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 290		
Retention Time (minutes)	: 3.355		
Quant Ion	: 43.00		
Area	: 61896		
On-column Amount (ng)	: 5.5051		
Integration start scan	: 274	Integration stop scan:	325
Y at integration start	: 0	Y at integration end:	147

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. AE06 m.dc.7504

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

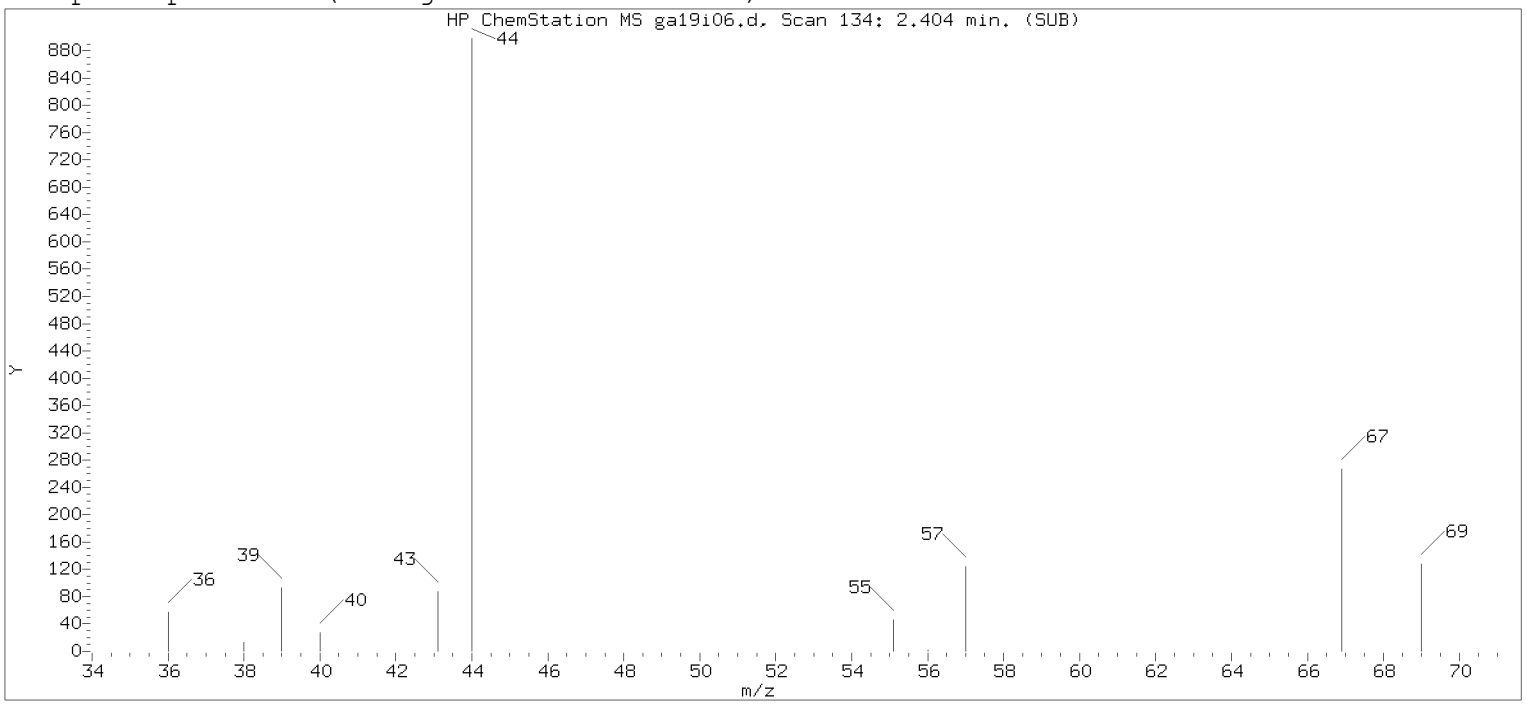
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 15987M
On-Column Amount (ng) : 0.4900
Integration start scan : 342 Integration stop scan: 380
Y at integration start : 239 Y at integration end: 239

Reason for manual integration: improper integration

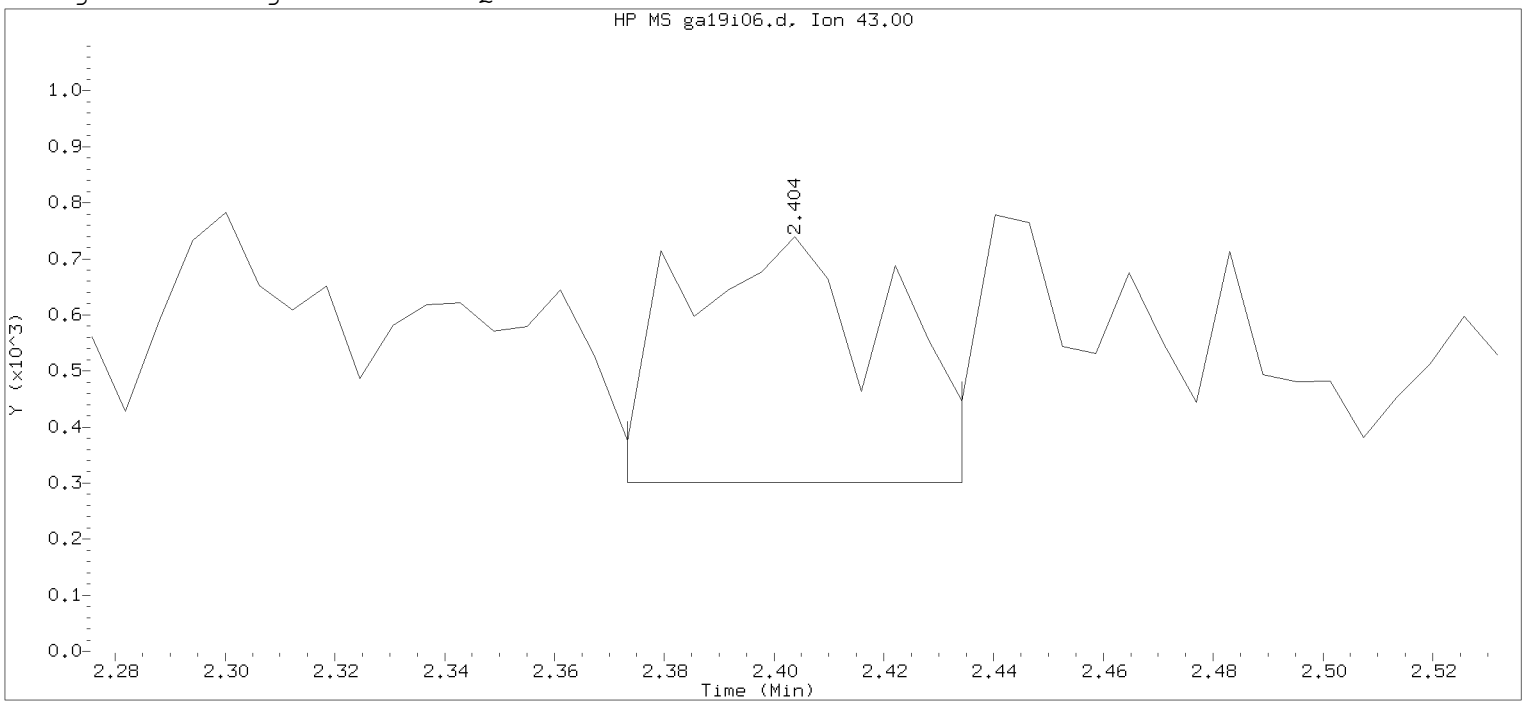
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

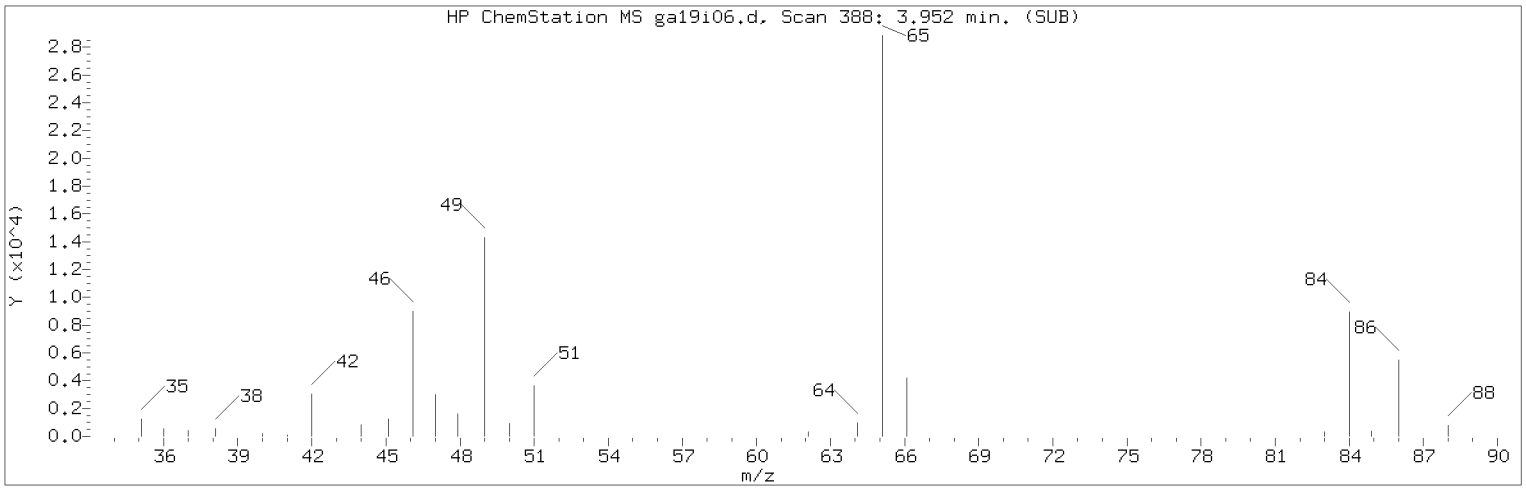
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

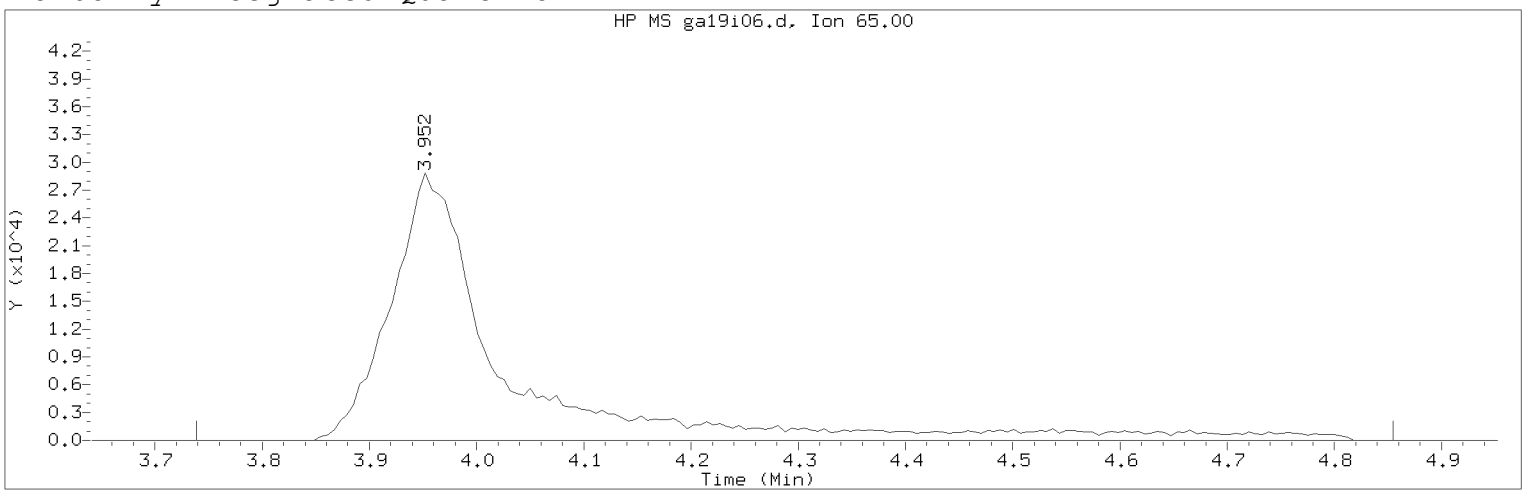
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 134
Retention Time (minutes): 2.404
Quant Ion : 43.00
Area : 1149
On-column Amount (ng) : 1.0225
Integration start scan : 128 Integration stop scan: 138
Y at integration start : 301 Y at integration end: 301

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. AE06 mdc 7506

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

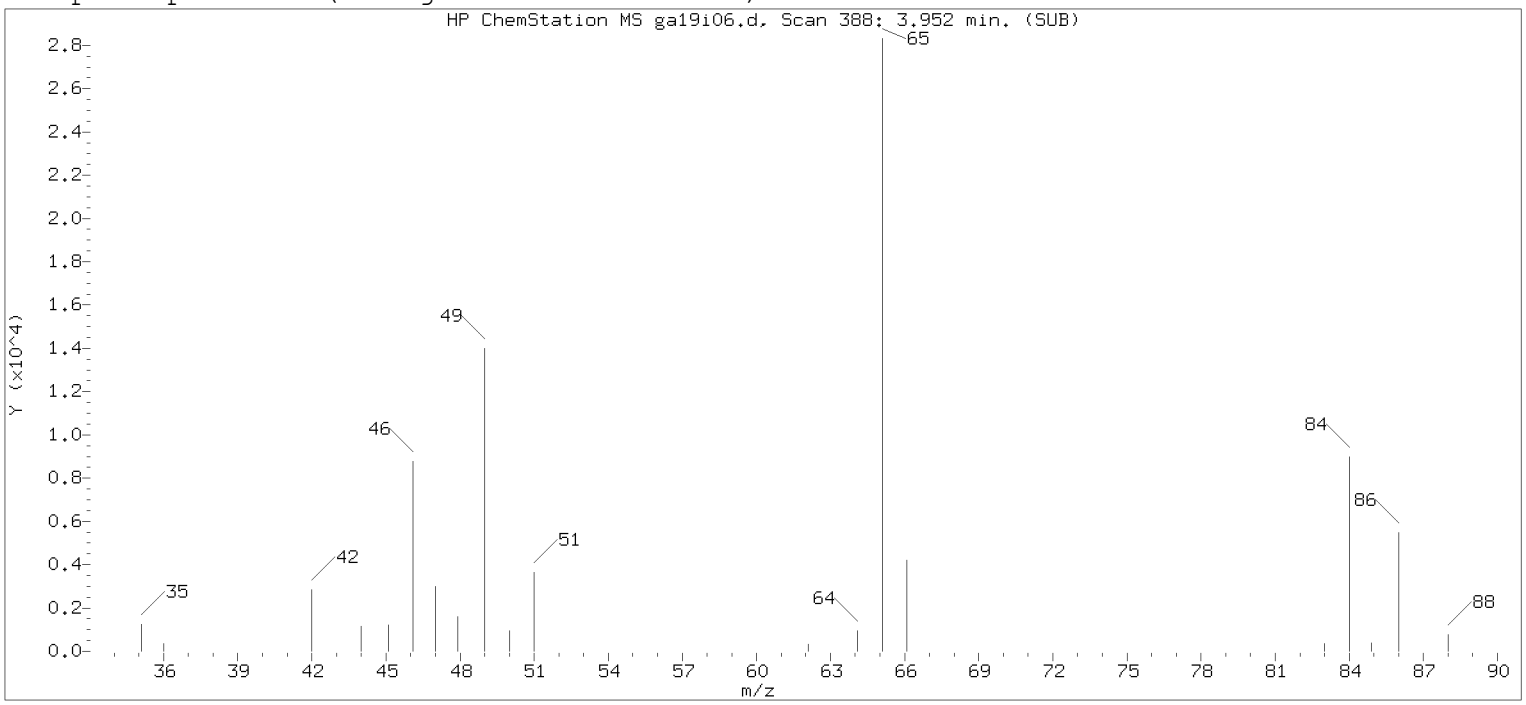
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 388
Retention Time (minutes): 3.952
Quant Ion : 65.00
Area (flag) : 211767M
On-Column Amount (ng) : 50.0000
Integration start scan : 352 Integration stop scan: 535
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

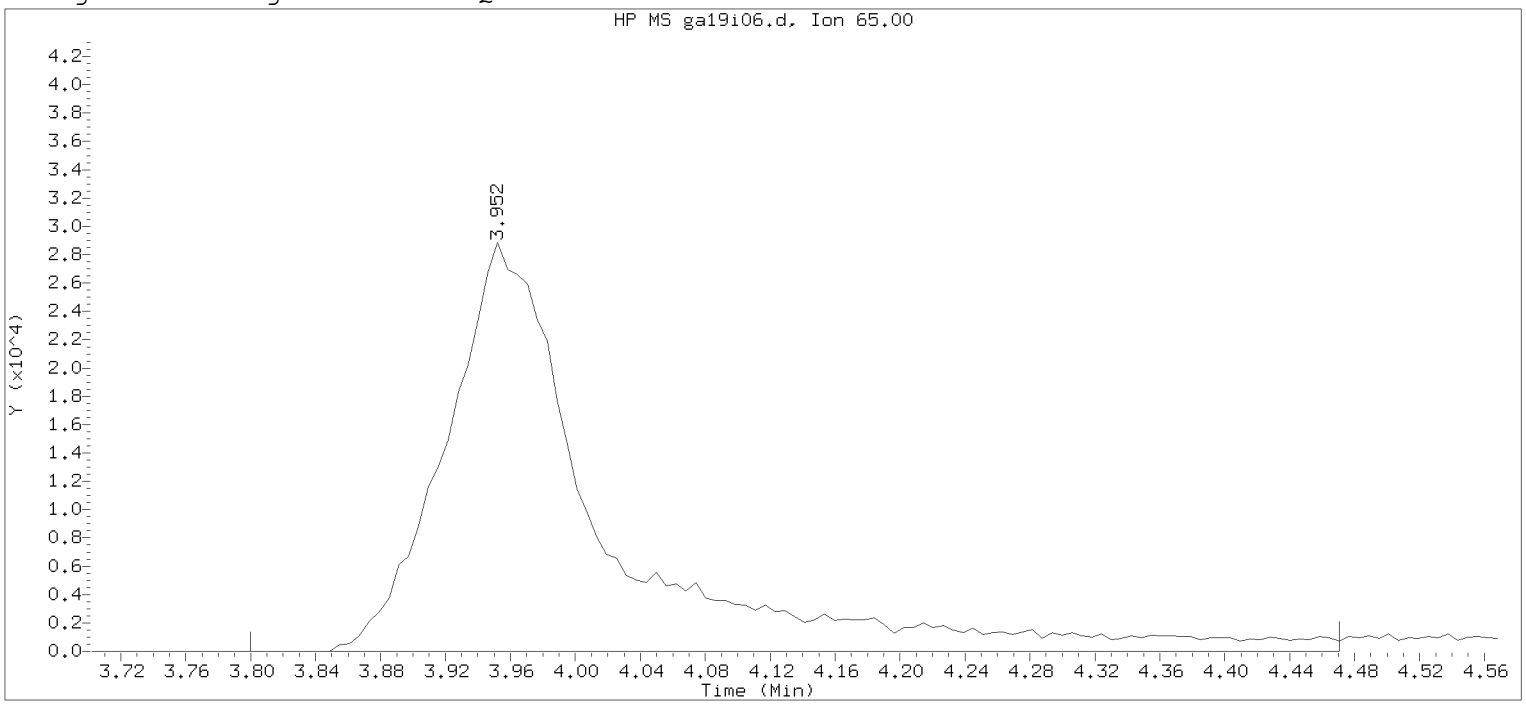
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

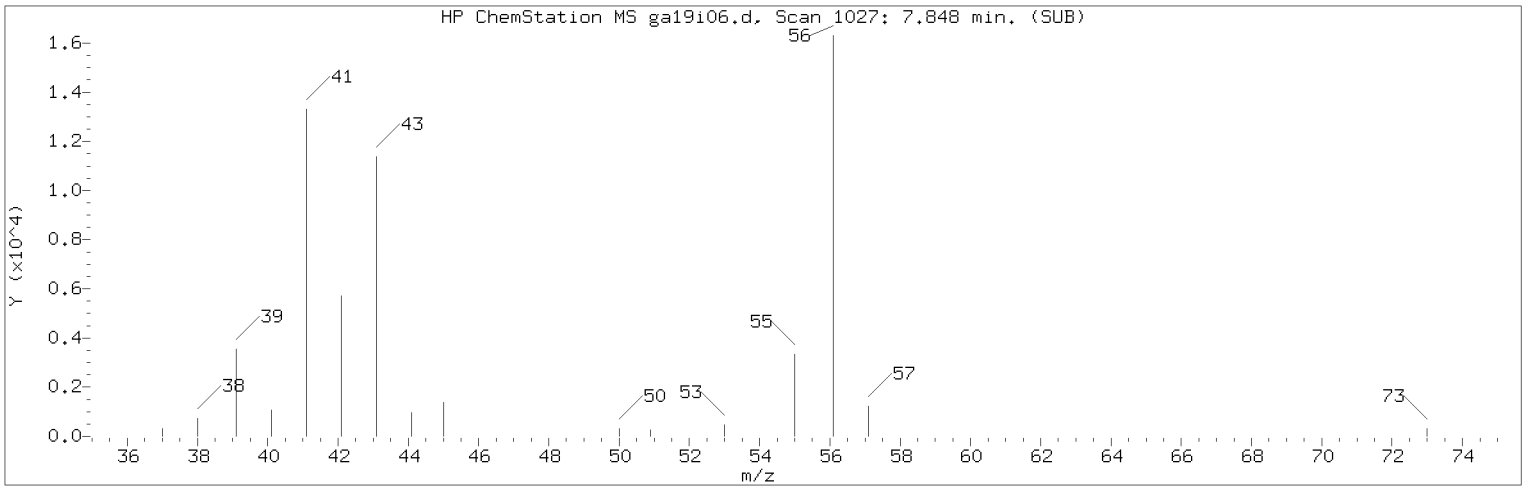
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

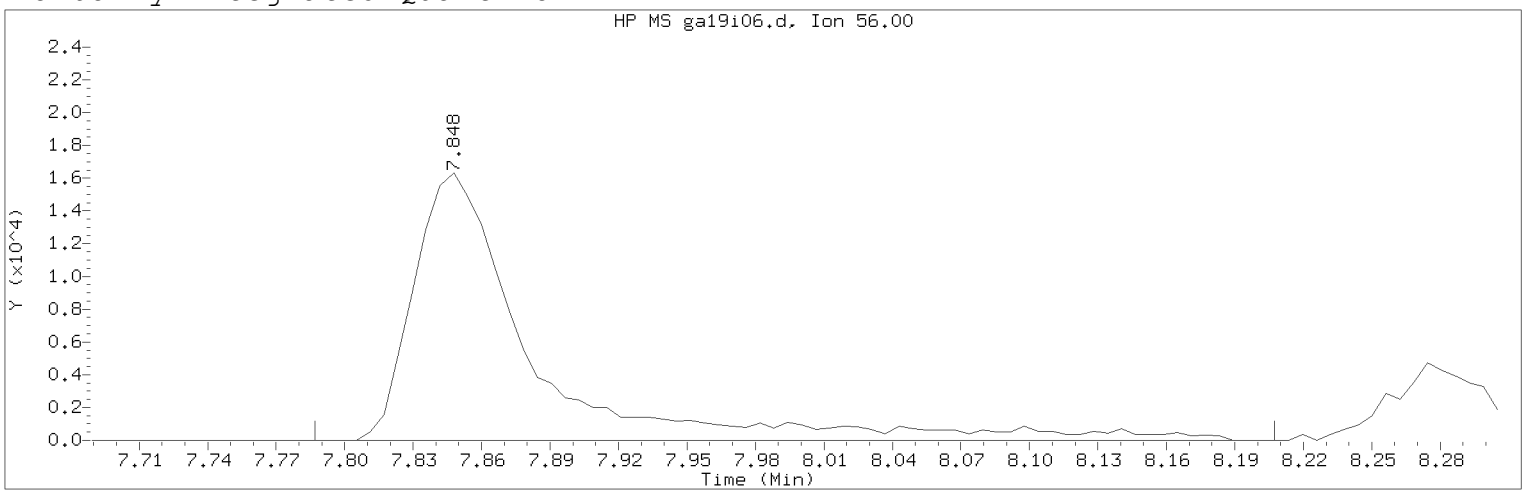
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 388
Retention Time (minutes): 3.952
Quant Ion : 65.00
Area : 194962
On-column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 472
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. AE06 m.d.c.750

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

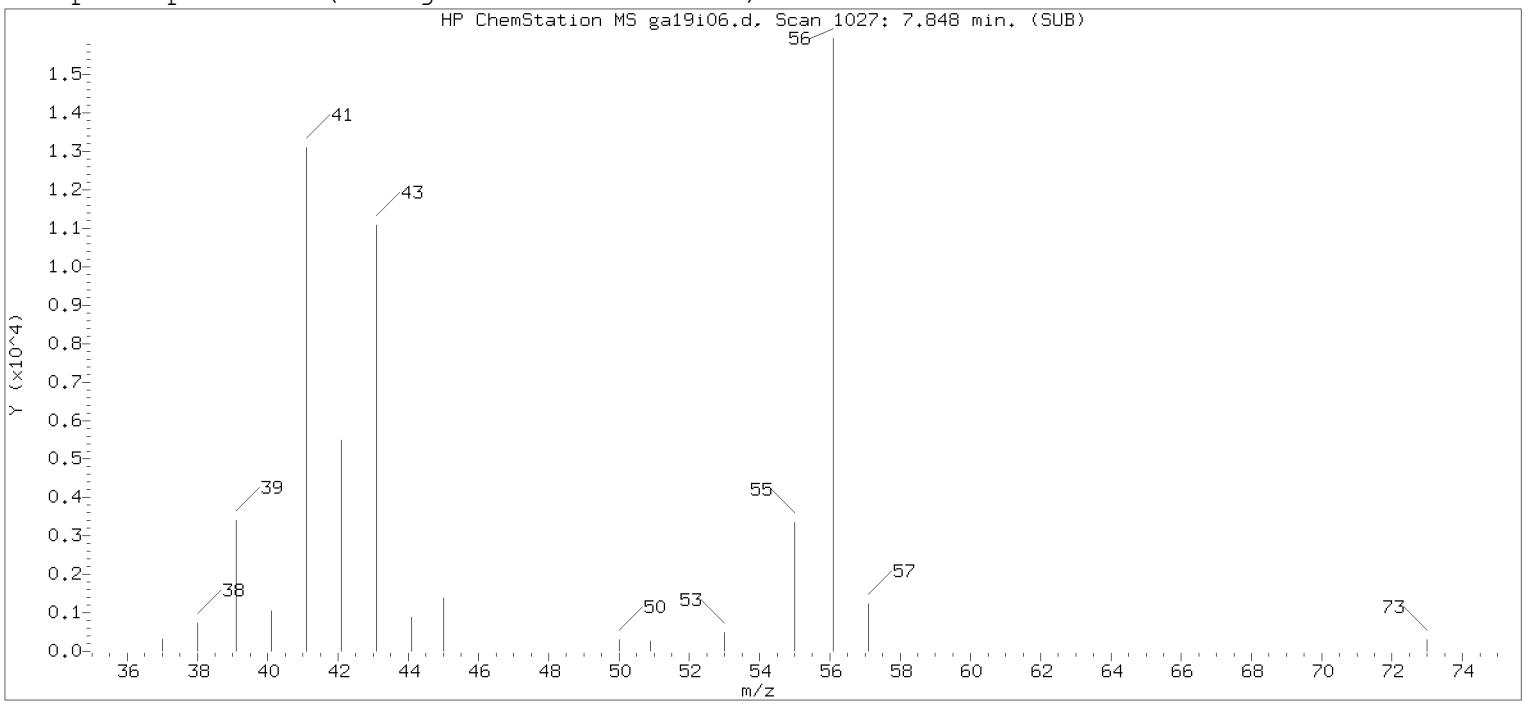
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area (flag) : 58896M
On-Column Amount (ng) : 45.9014
Integration start scan : 1016 Integration stop scan: 1085
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

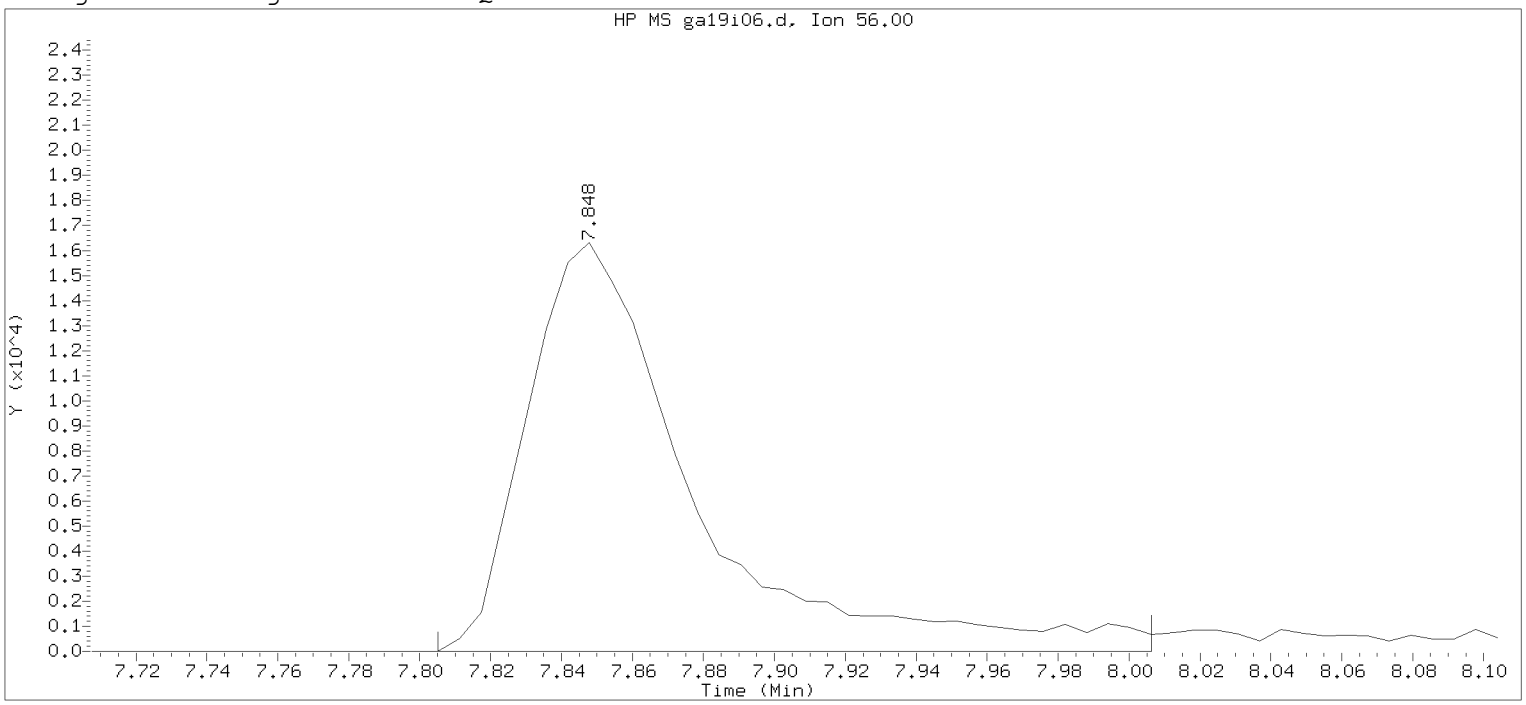
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

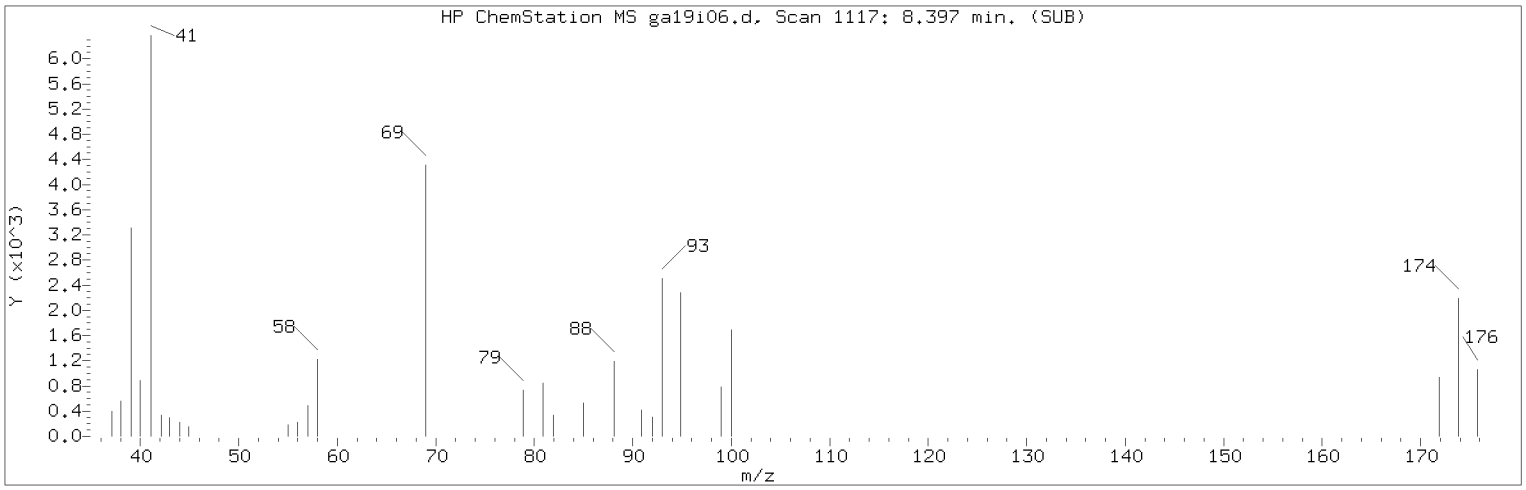
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

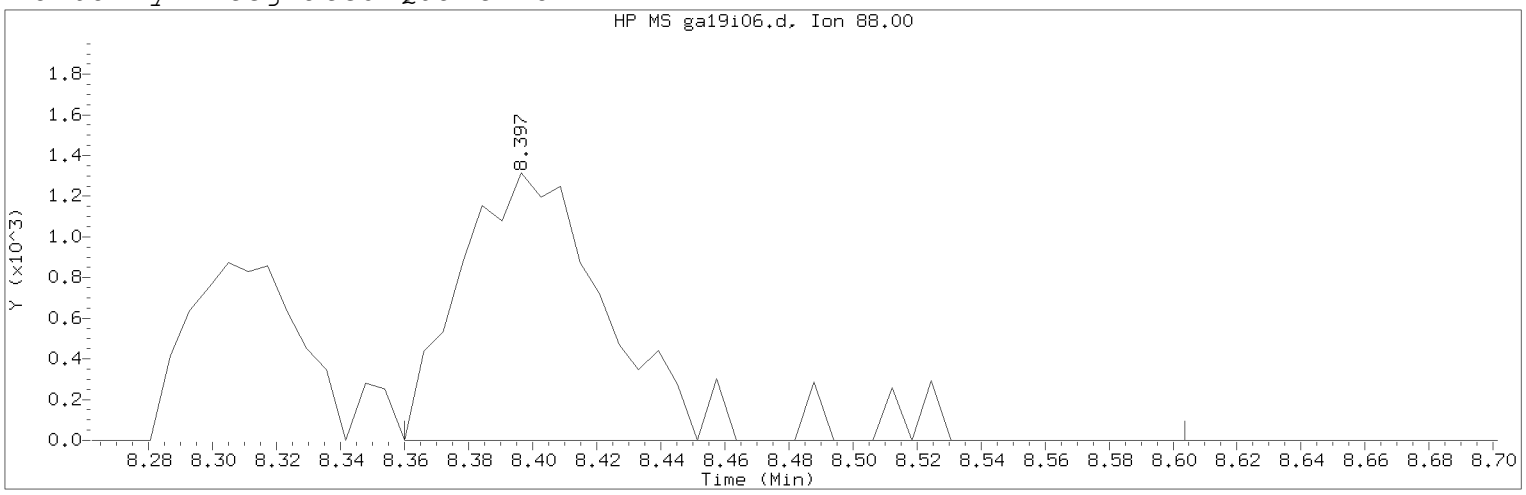
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area : 53011
On-column Amount (ng) : 43.5670
Integration start scan : 1019 Integration stop scan: 1052
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

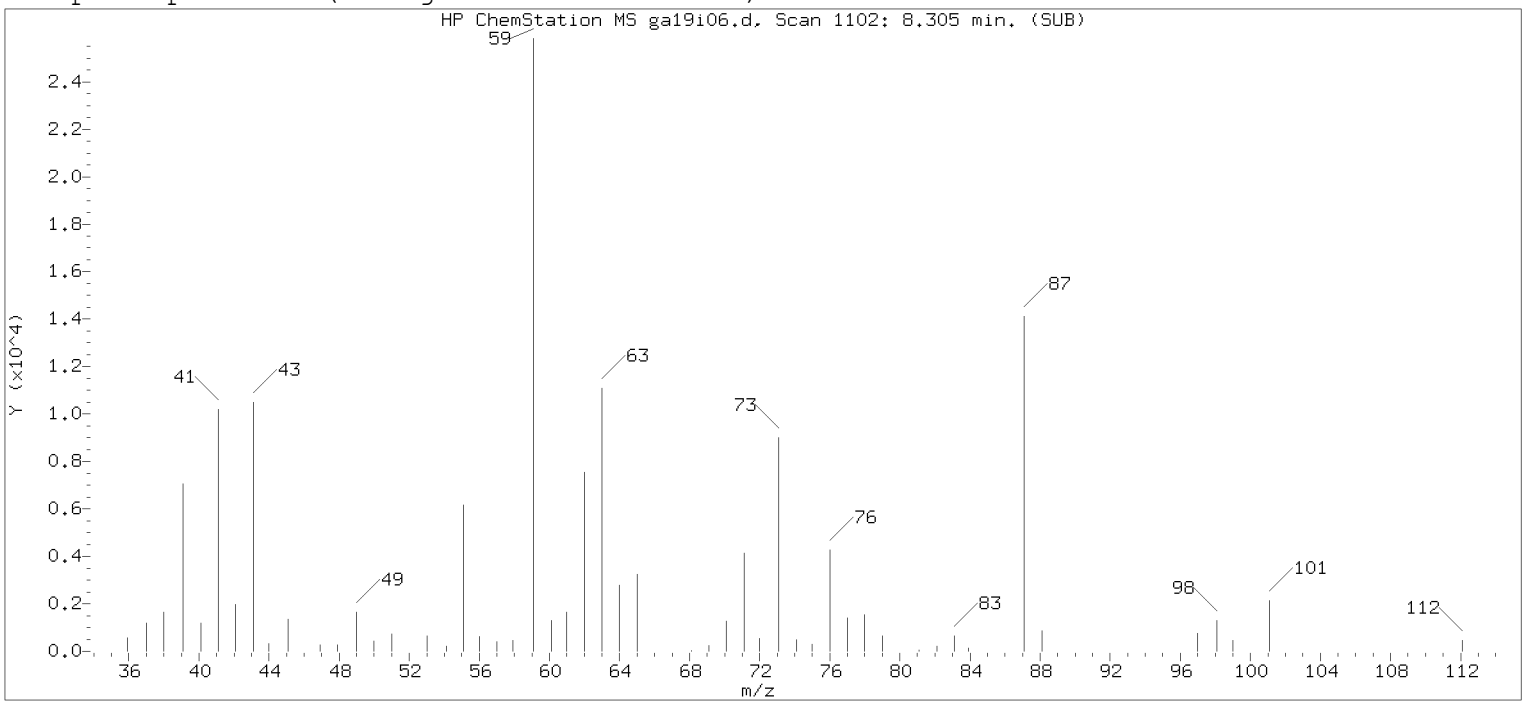
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1117
Retention Time (minutes): 8.397
Quant Ion : 88.00
Area (flag) : 4429M
On-Column Amount (ng) : 19.0907
Integration start scan : 1110 Integration stop scan: 1150
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

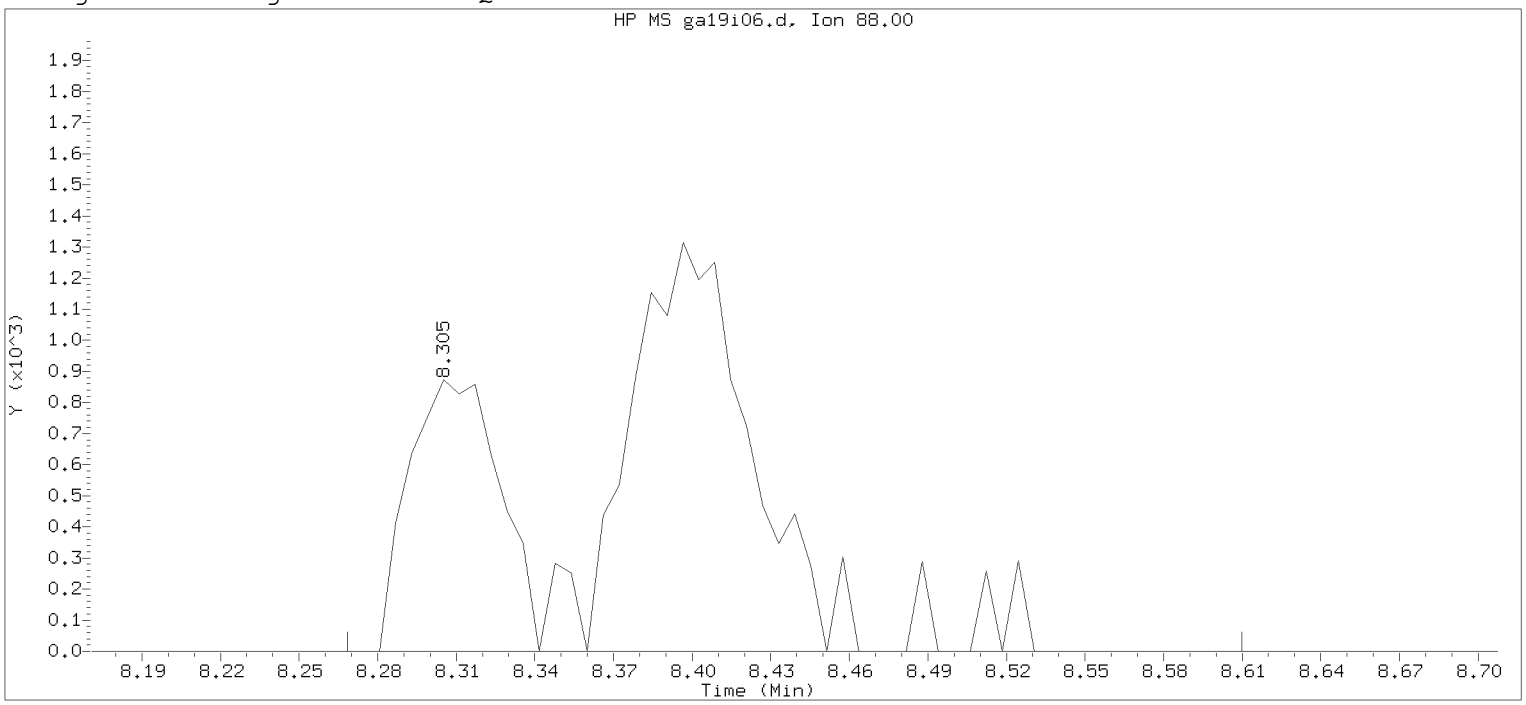
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 88.00
Area : 6743
On-column Amount (ng) : 25.2068
Integration start scan : 1095 Integration stop scan: 1151
Y at integration start : 0 Y at integration end: 0

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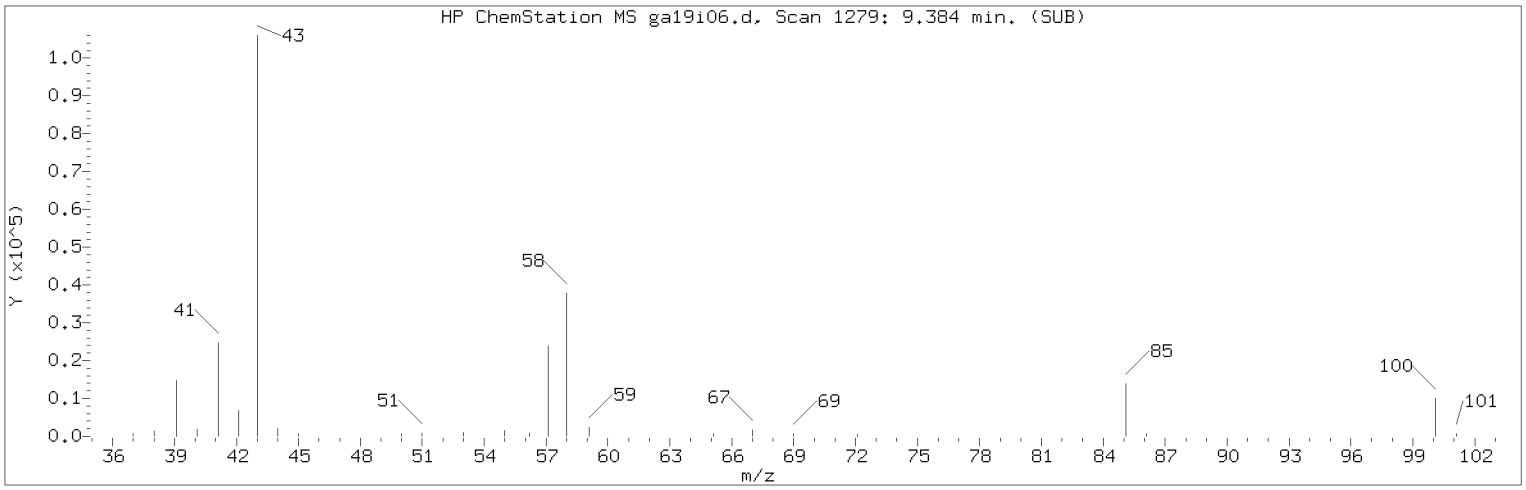
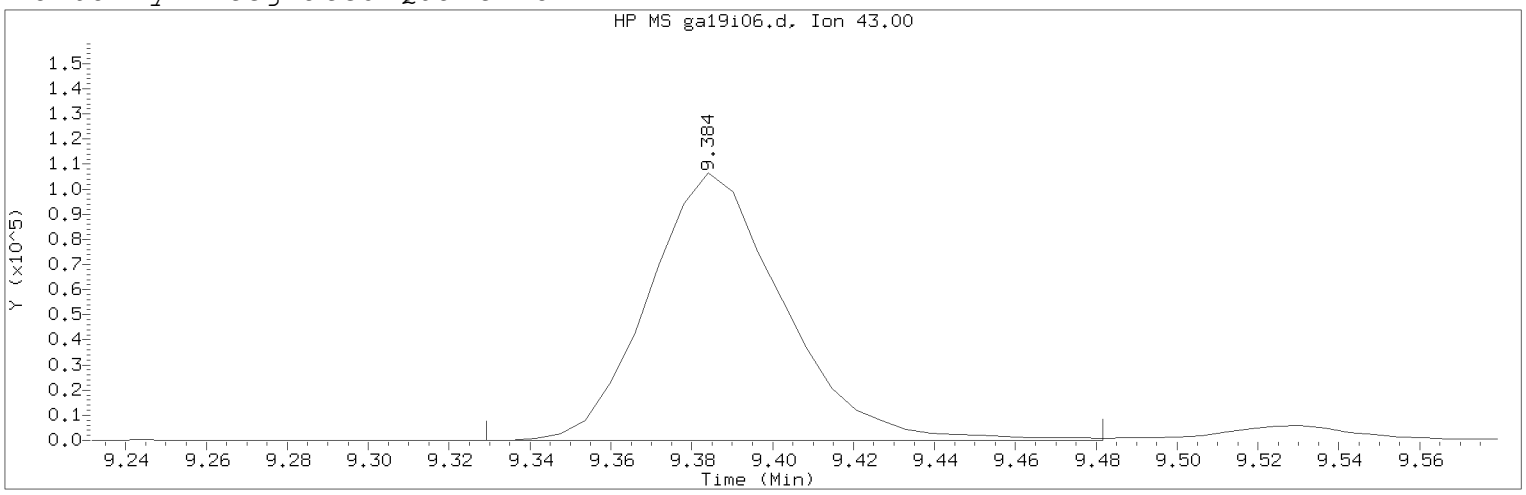
Target 3.5 esignature used. Page 512

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

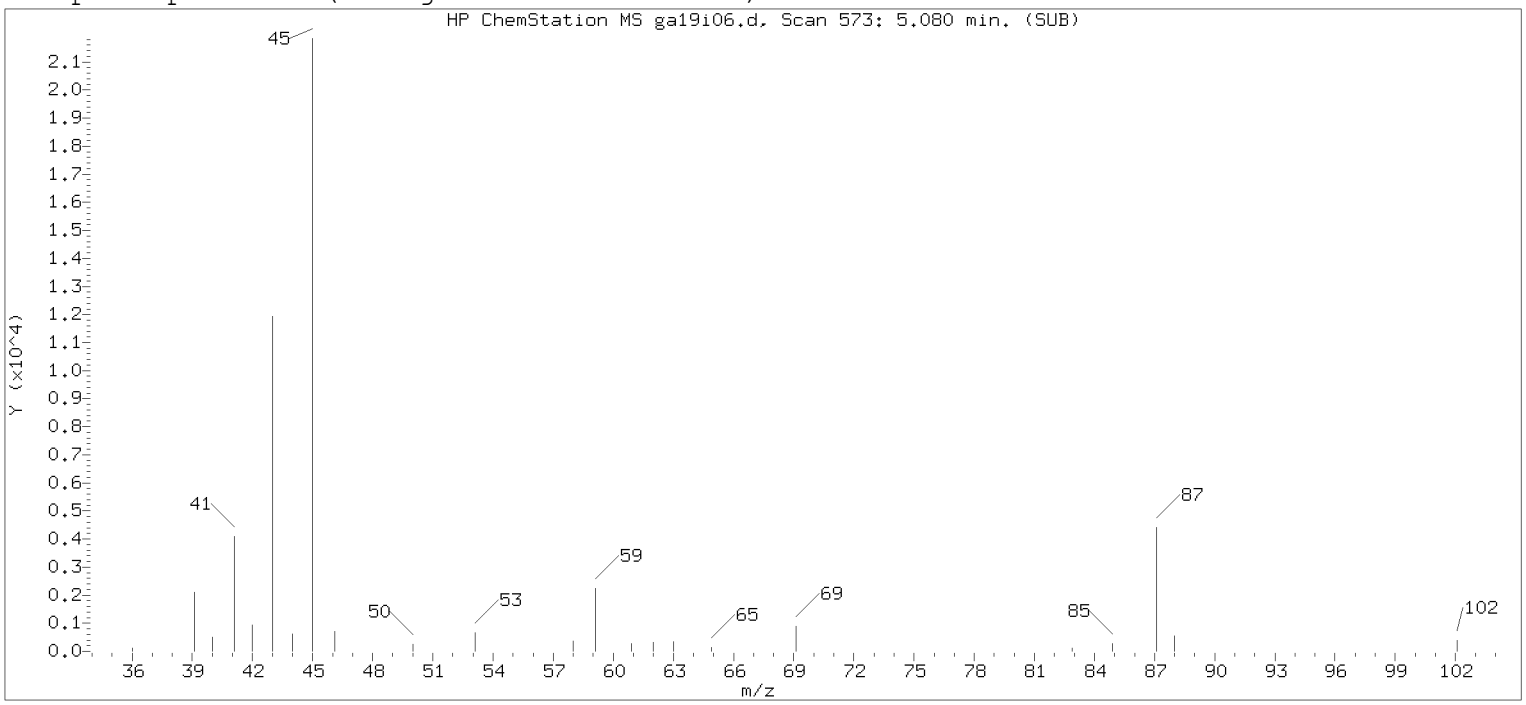
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 245229M
On-Column Amount (ng) : 4.8372
Integration start scan : 1269 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

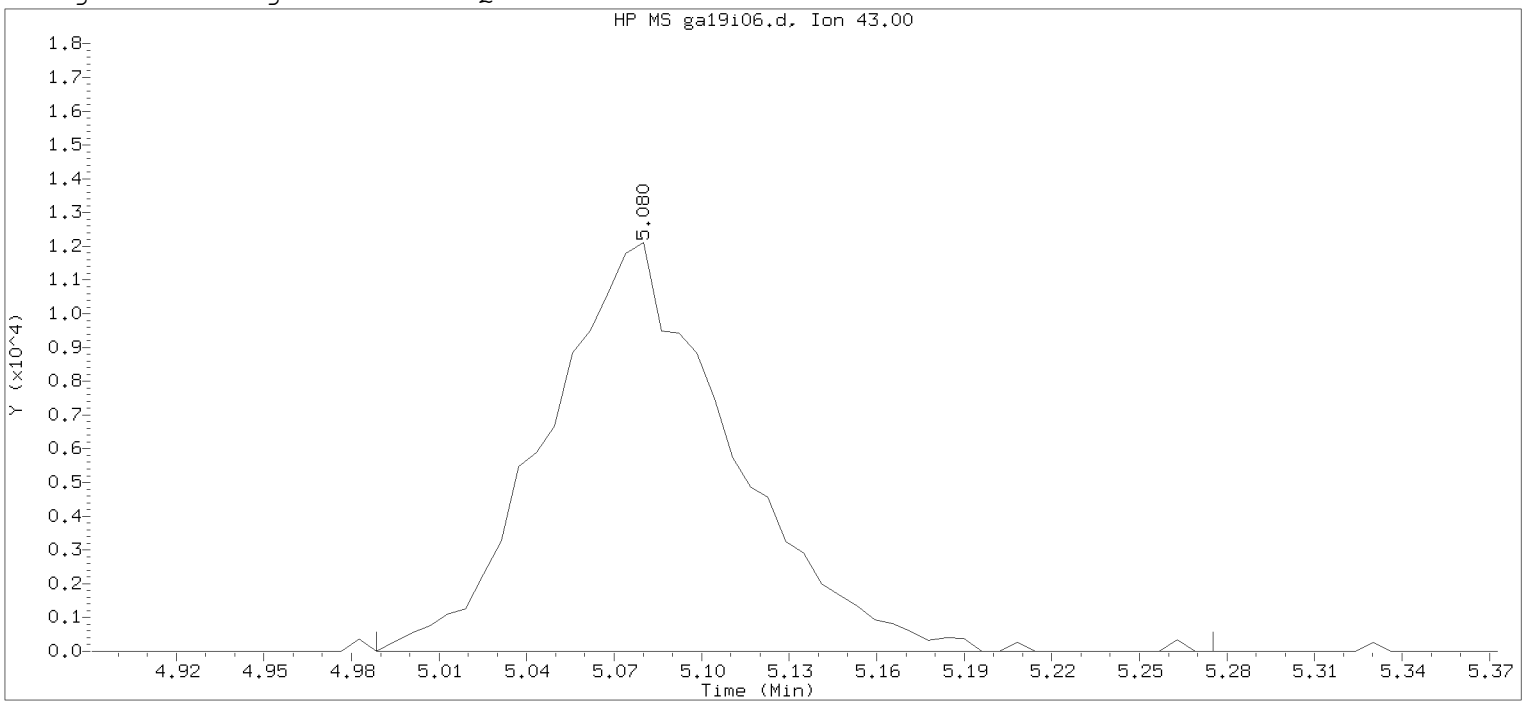
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 573
Retention Time (minutes): 5.080
Quant Ion : 43.00
Area : 53419
On-column Amount (ng) : 5.3211
Integration start scan : 557 Integration stop scan: 604
Y at integration start : 0 Y at integration end: 0

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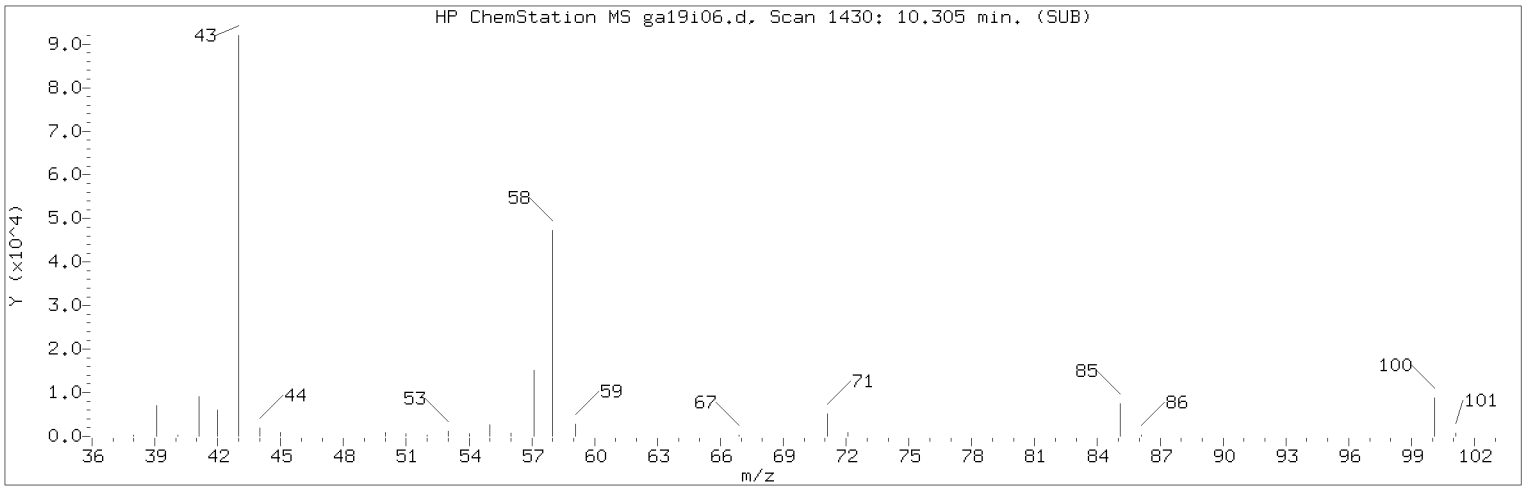
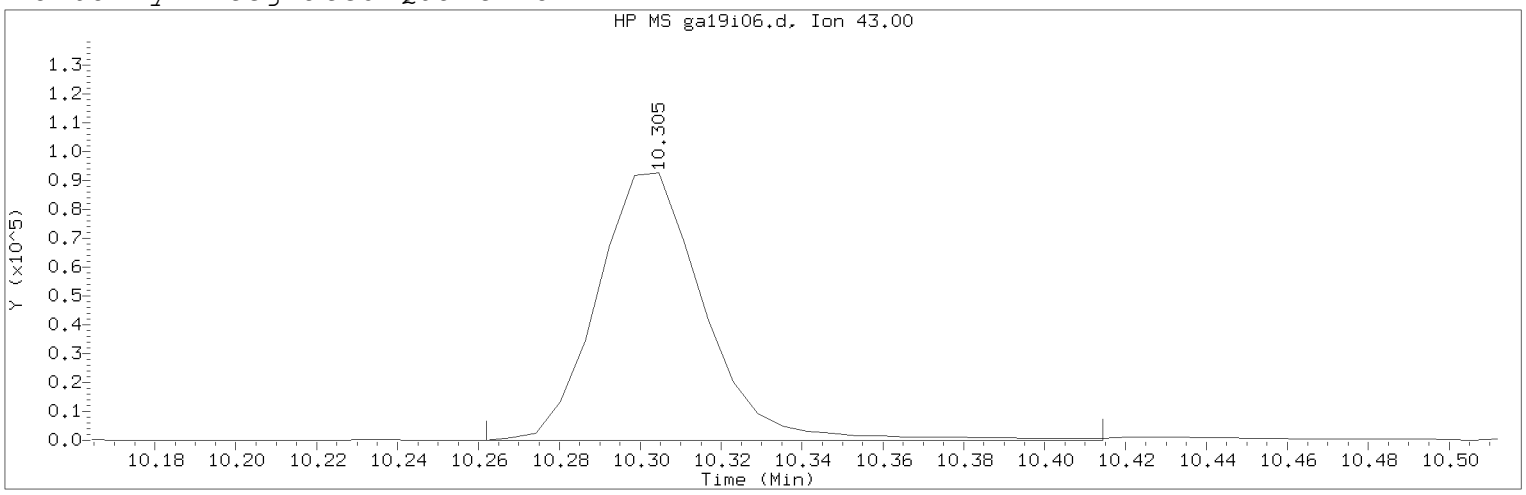
Target 3.5 esignature used. Page 7514

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

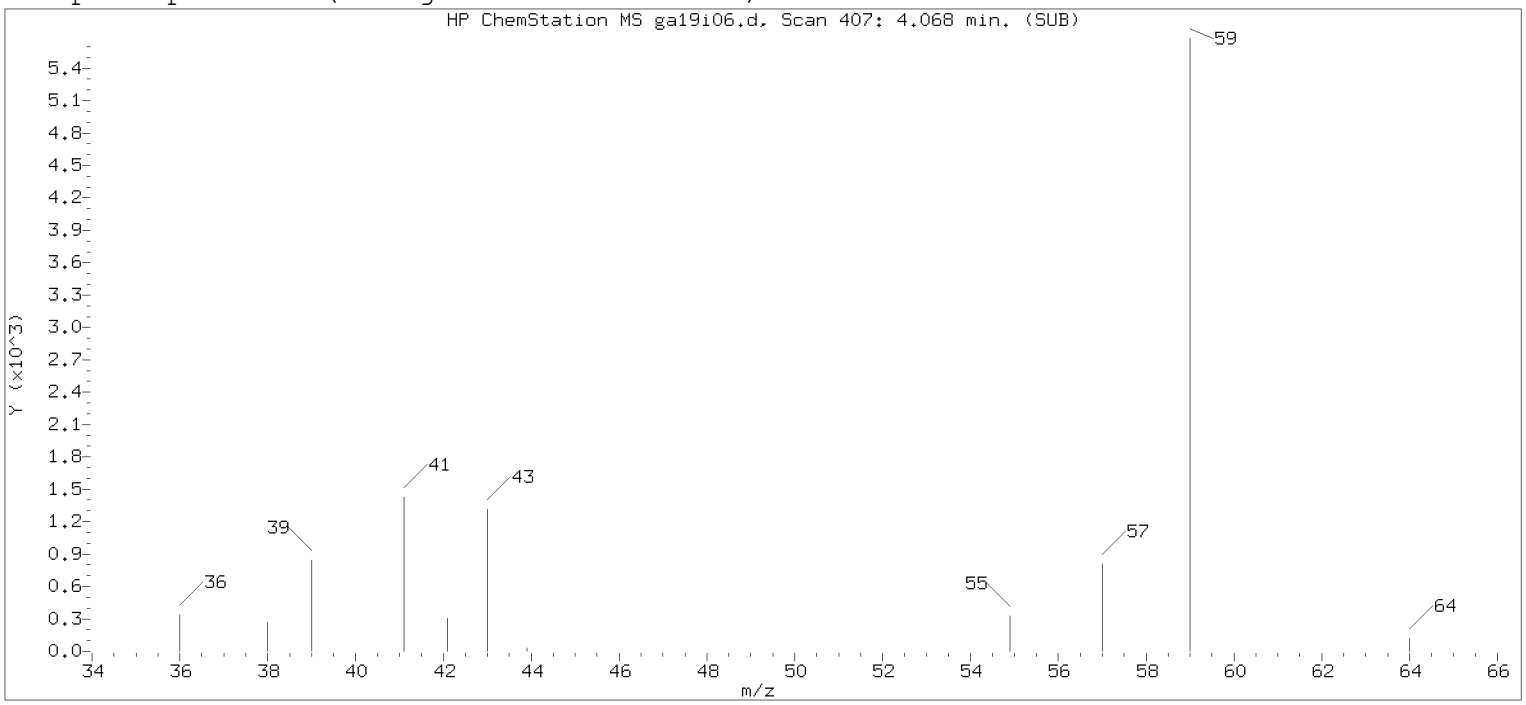
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 169720M
On-Column Amount (ng) : 4.7439
Integration start scan : 1422 Integration stop scan: 1447
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

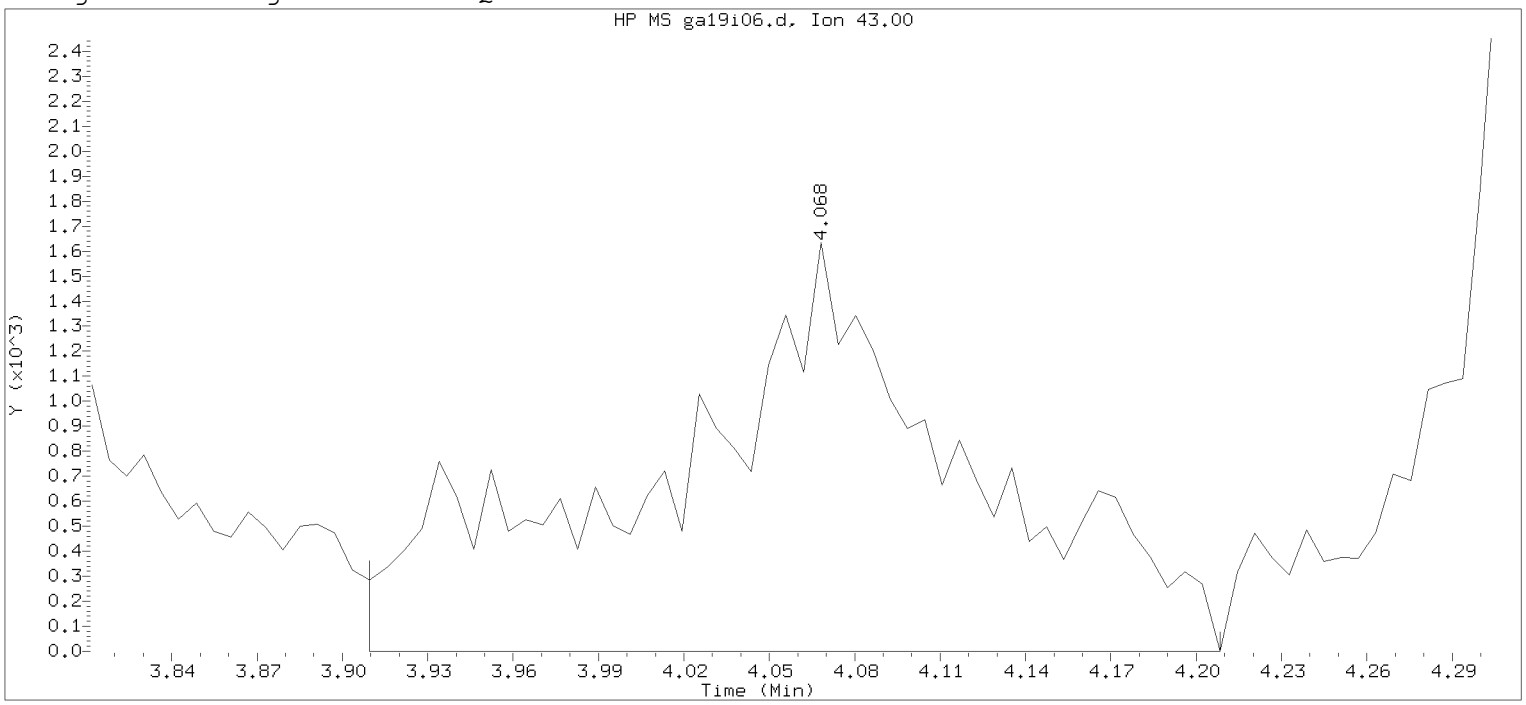
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

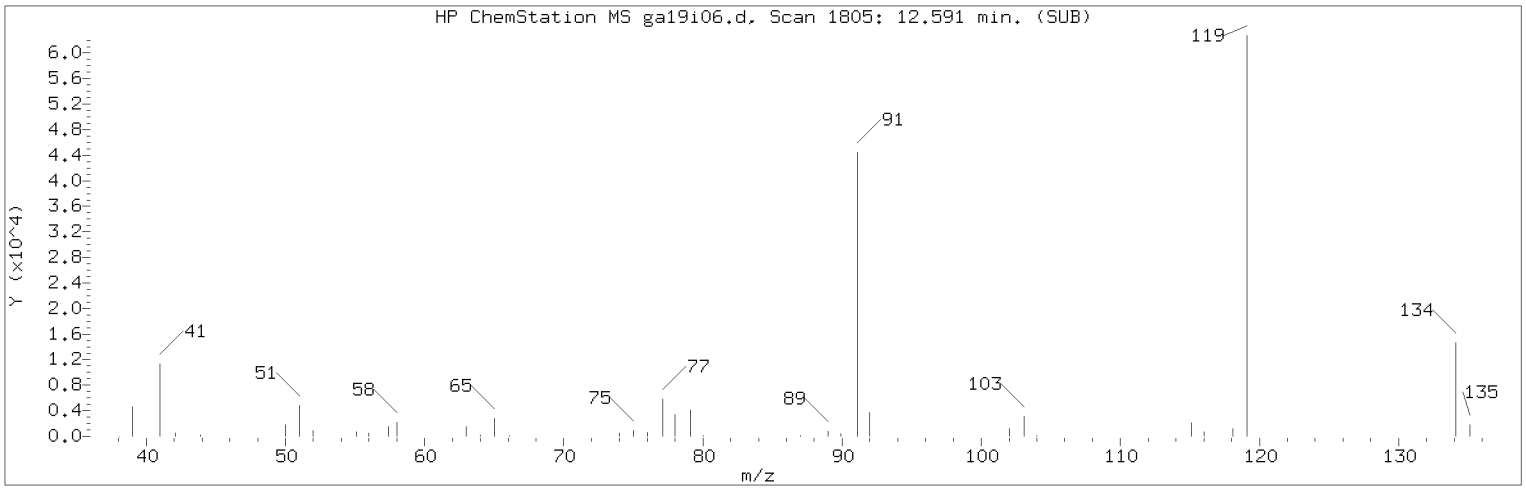
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

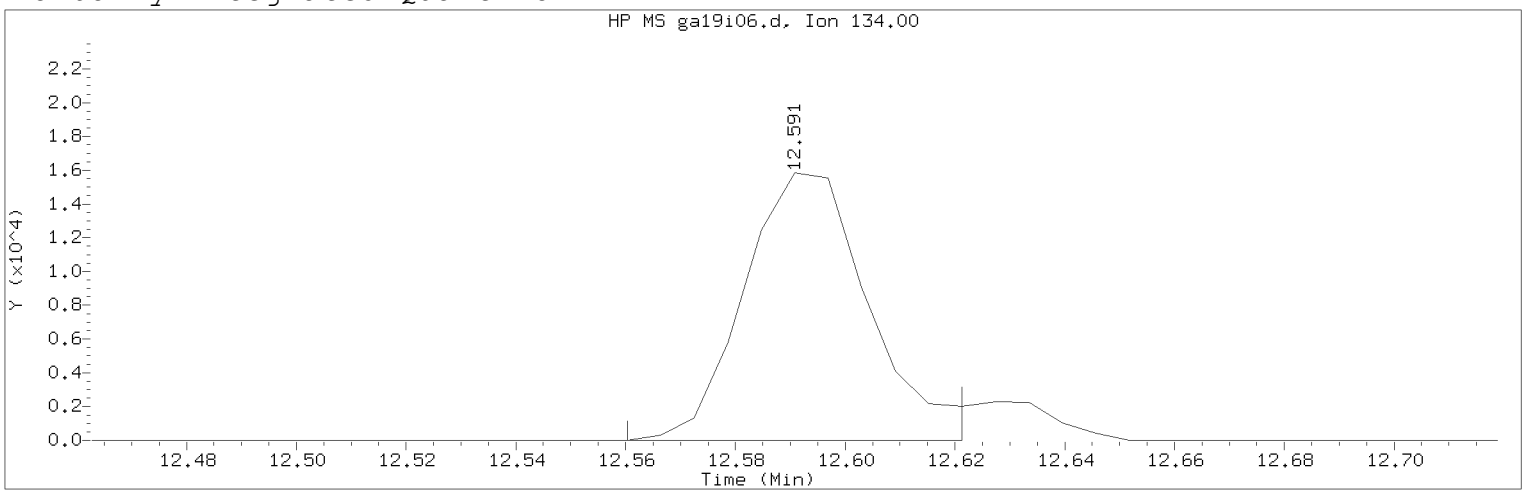
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 43.00
Area : 12213
On-column Amount (ng) : 7.5978
Integration start scan : 380 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Adobe 7.0.7

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

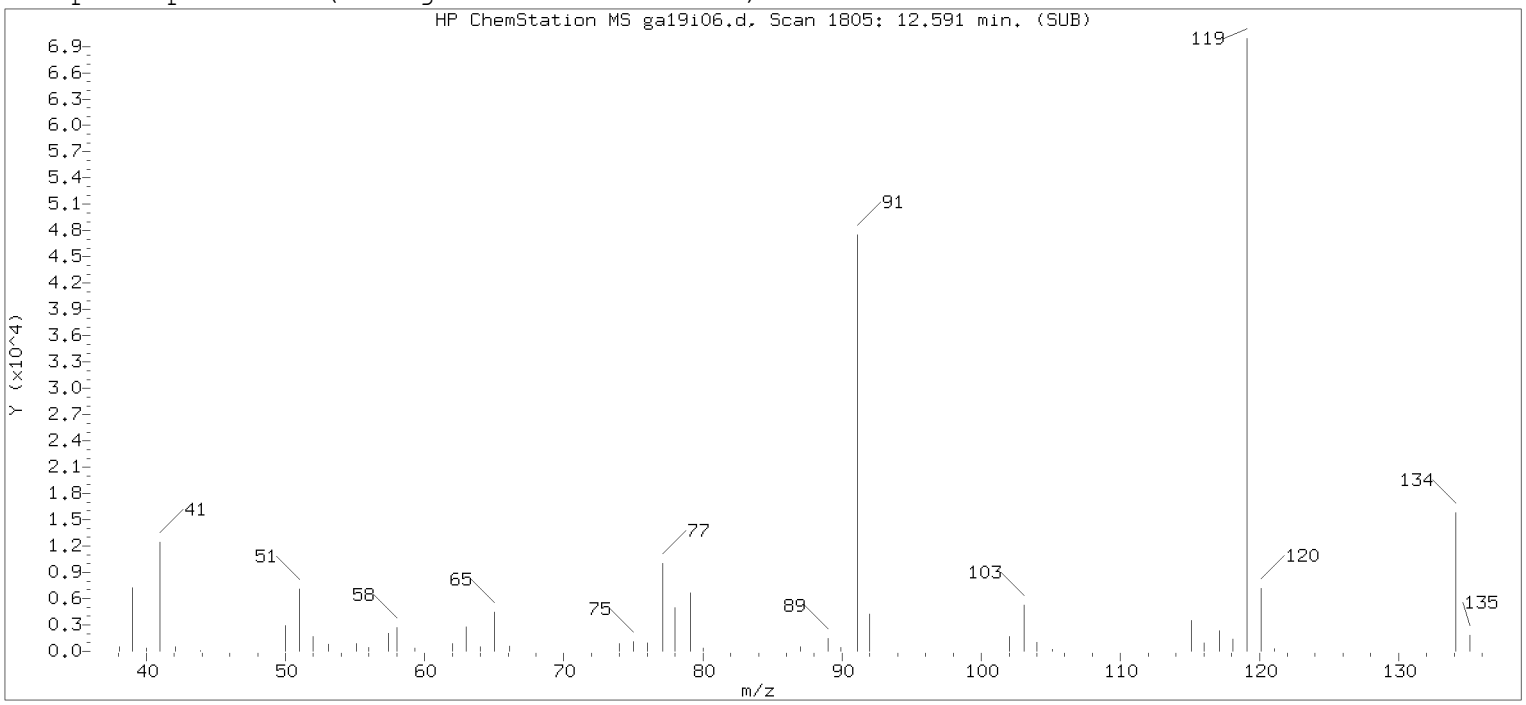
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 25111M
On-Column Amount (ng) : 0.5305
Integration start scan : 1799 Integration stop scan: 1809
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

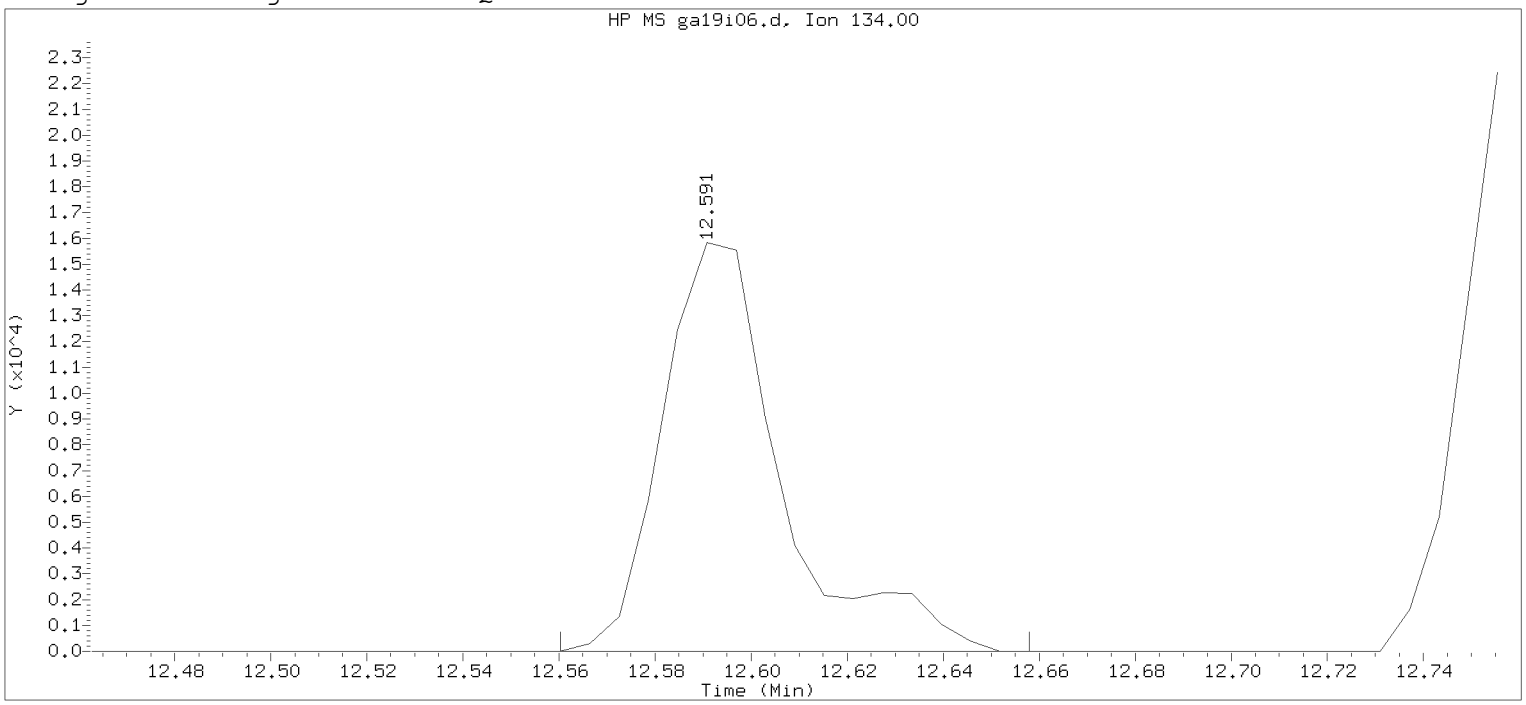
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



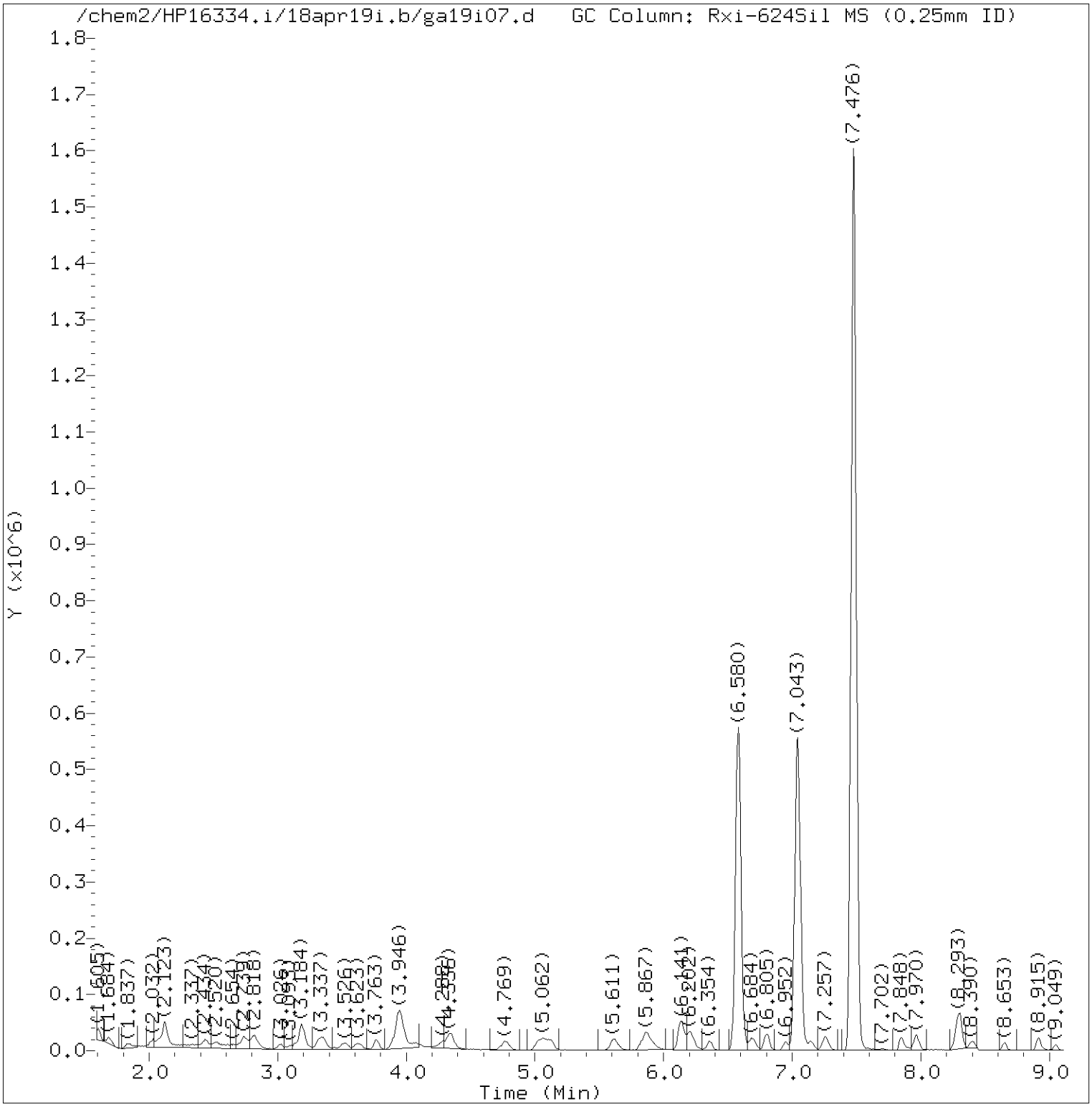
Data File: /chem2/HP16334.i/18apr19i.b/ga19i06.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:14 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:31
Date, time and analyst ID of latest file update: 19-Apr-2018 14:31 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area : 27286
On-column Amount (ng) : 0.5580
Integration start scan : 1799 Integration stop scan: 1815
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Reason: I am the author of this document



Total Ion Chromatogram (TIC)

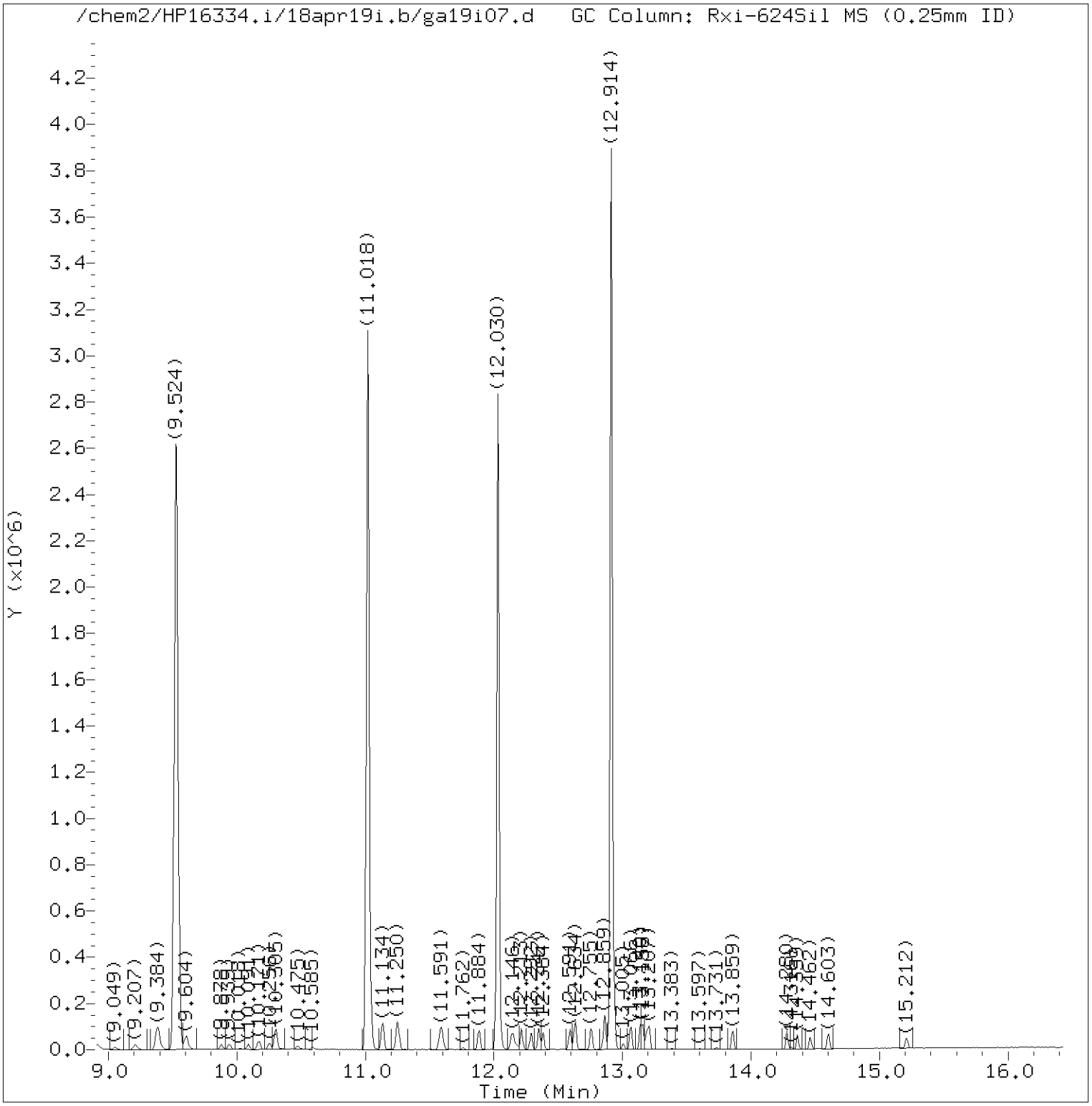
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.825	85	13339	0.174
2) Chloromethane	(2)	2.020	50	15171	0.196
6) 1,3-Butadiene	(2)	2.117	39	34377M	0.244
5) Vinyl Chloride	(2)	2.123	62	12731	0.192
7) Bromomethane	(2)	2.434	94	8569	0.193
8) Chloroethane	(2)	2.514	64	7192	0.190
9) Dichlorofluoromethane	(2)	2.739	67	18549	0.204
10) Trichlorofluoromethane	(2)	2.806	101	15812	0.183
11) Ethyl ether	(2)	3.026	59	8434	0.196
12) Freon 123a	(2)	3.111	67	11981M	0.196
13) Acrolein	(1)	3.184	56	75312	9.663
15) 1,1-Dichloroethene	(2)	3.318	96	8100	0.191
14) Acetone	(1)	3.337	43	27906M	2.216
16) Freon 113	(2)	3.355	101	8676	0.182
17) Methyl Iodide	(2)	3.501	142	15541	0.189
18) Carbon Disulfide	(2)	3.635	76	37961	0.226
21) Methyl Acetate	(1)	3.751	43	7988M	0.225
22) Allyl Chloride	(2)	3.763	41	20522	0.209
23) Methylene Chloride	(2)	3.940	84	15145	0.264
26)*t-Butyl Alcohol-d10	(1)	3.946	65	225587	50.000
28) t-Butyl Alcohol	(1)	4.074	59	18967	4.443
29) Acrylonitrile	(1)	4.275	53	12533	0.895
30) Methyl Tertiary Butyl Ether	(2)	4.318	73	29384	0.199
31) trans-1,2-Dichloroethene	(2)	4.349	96	9764	0.198
32) n-Hexane	(2)	4.763	57	15545	0.187
33) 1,1-Dichloroethane	(2)	5.019	63	19158	0.191
34) di-Isopropyl Ether	(2)	5.062	45	40610	0.197
35) 2-Chloro-1,3-Butadiene	(2)	5.123	53	17955	0.195
37) Ethyl t-butyl ether	(2)	5.611	59	35115	0.195
38) 2-Butanone	(1)	5.830	43	40756	1.881
39) cis-1,2-Dichloroethene	(2)	5.860	96	10082	0.183
41) 2,2-Dichloropropane	(2)	5.879	77	14839	0.180
42) Propionitrile	(1)	5.928	54	19959	3.726
40) 1,2-Dichloroethene (Total)	(2)		96	19846	0.381
45) Methacrylonitrile	(1)	6.135	67	31071	1.830
48) Tetrahydrofuran	(1)	6.202	71	10048	1.948
47) Bromochloromethane	(2)	6.208	128	4723	0.186
49) Chloroform	(2)	6.366	83	18815	0.196

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.580	113	512455	9.957
50)$Dibromofluoromethane	(2)	6.580	111	529522	10.005
51) 1,1,1-Trichloroethane	(2)	6.592	97	15110	0.186
52) Cyclohexane	(2)	6.684	56	18535	0.191
52) Cyclohexane	(2)	6.696	84	14129	0.184
52) Cyclohexane	(2)	6.684	69	5440	0.192
54) Carbon Tetrachloride	(2)	6.805	117	11692	0.177
55) 1,1-Dichloropropene	(2)	6.805	75	14233	0.188
56) Isobutyl Alcohol	(1)	6.958	41	19777M	11.657
57)$1,2-Dichloroethane-d4	(2)	7.043	102	109052	9.998
57)$1,2-Dichloroethane-d4	(2)	7.043	65	630819	10.173
57)$1,2-Dichloroethane-d4	(2)	7.037	104	68346	10.057
58) Benzene	(2)	7.061	78	40129	0.192
59) 1,2-Dichloroethane	(2)	7.147	62	16292	0.220
60) t-Amyl methyl ether	(2)	7.257	73	29412	0.192
63)*Fluorobenzene	(2)	7.476	96	2046775	10.000
62) n-Heptane	(2)	7.482	43	19233	0.192
65) n-Butanol	(1)	7.848	56	23969M	17.850
67) Trichloroethene	(2)	7.964	95	10583	0.192
69) Methylcyclohexane	(2)	8.275	83	16676	0.178
70) 1,2-Dichloropropane	(2)	8.305	63	11158	0.193
71) Methyl Methacrylate	(1)	8.378	69	5366	0.166
72) 1,4-Dioxane	(1)	8.390	88	1552M	6.632
73) Dibromomethane	(2)	8.415	93	5617	0.203
74) Bromodichloromethane	(2)	8.653	83	11883	0.175
76) 2-Nitropropane	(1)	8.915	41	17751	1.603
80) cis-1,3-Dichloropropene	(2)	9.207	75	14522	0.173
81) 4-Methyl-2-Pentanone	(1)	9.384	43	97110M	1.824
82)$Toluene-d8	(3)	9.524	98	2072635	10.039
82)$Toluene-d8	(3)	9.524	100	1310996	9.979
83) Toluene	(3)	9.610	92	25404	0.194
84) trans-1,3-Dichloropropene	(3)	9.878	75	12272	0.173
86) Ethyl Methacrylate	(3)	9.939	69	11580	0.181
88) 1,1,2-Trichloroethane	(3)	10.091	97	7746	0.196
85) 1,3-Dichloropropene (total)	(3)		75	26794	0.346
89) Tetrachloroethene	(3)	10.171	166	11655	0.192
90) 1,3-Dichloropropane	(3)	10.256	76	14727	0.205
91) 2-Hexanone	(1)	10.305	43	66409M	1.775

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Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.475	129	6989	0.161
95) 1,2-Dibromoethane	(3)	10.585	107	7508	0.199
97)*Chlorobenzene-d5	(3)	11.018	117	1539514	10.000
98) Chlorobenzene	(3)	11.042	112	28828	0.192
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	8679	0.173
100) Ethylbenzene	(3)	11.134	91	49680	0.191
101) m+p-Xylene	(3)	11.250	106	37686	0.381
104) o-Xylene	(3)	11.579	106	18471	0.186
106) Styrene	(3)	11.597	104	28668	0.176
107) Bromoform	(3)	11.756	173	3722	0.149
105) Xylene (Total)	(3)		106	56157	0.567
108) Isopropylbenzene	(3)	11.884	105	46705	0.181
111)$4-Bromofluorobenzene	(3)	12.030	95	789121	9.985
111)$4-Bromofluorobenzene	(3)	12.030	174	671071	9.936
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	9768	0.193
114) Bromobenzene	(4)	12.146	156	12748	0.192
116) 1,2,3-Trichloropropane	(4)	12.182	110	2769	0.195
117) n-Propylbenzene	(4)	12.213	91	59074	0.191
119) 2-Chlorotoluene	(4)	12.286	126	12307	0.199
121) 1,3,5-Trimethylbenzene	(4)	12.347	105	41631	0.188
122) 4-Chlorotoluene	(4)	12.384	126	12346	0.191
125) tert-Butylbenzene	(4)	12.591	134	8287	0.179
126) Pentachloroethane	(4)	12.627	167	5606	0.156
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	42203	0.186
128) sec-Butylbenzene	(4)	12.755	105	51241M	0.182
131) 1,3-Dichlorobenzene	(4)	12.859	146	24873	0.188
132) p-Isopropyltoluene	(4)	12.865	119	45344	0.184
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	862291	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	26238	0.195
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	19793	0.195
136) Benzyl Chloride	(4)	13.005	126	2469	0.134
138) n-Butylbenzene	(4)	13.158	92	24655	0.186
139) 1,2-Dichlorobenzene	(4)	13.188	146	23802	0.191
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	1330	0.166
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	20644	0.187
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	19244	0.188
146) Hexachlorobutadiene	(4)	14.359	225	10152	0.188
147) Naphthalene	(4)	14.462	128	32253	0.188

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on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	16303	0.186

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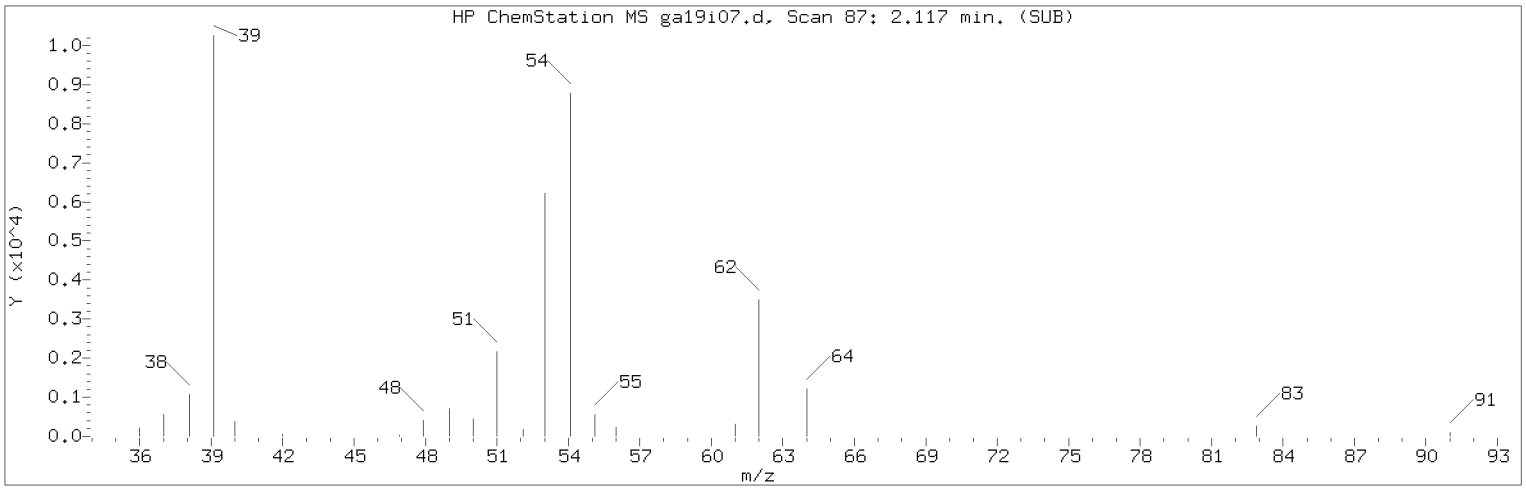
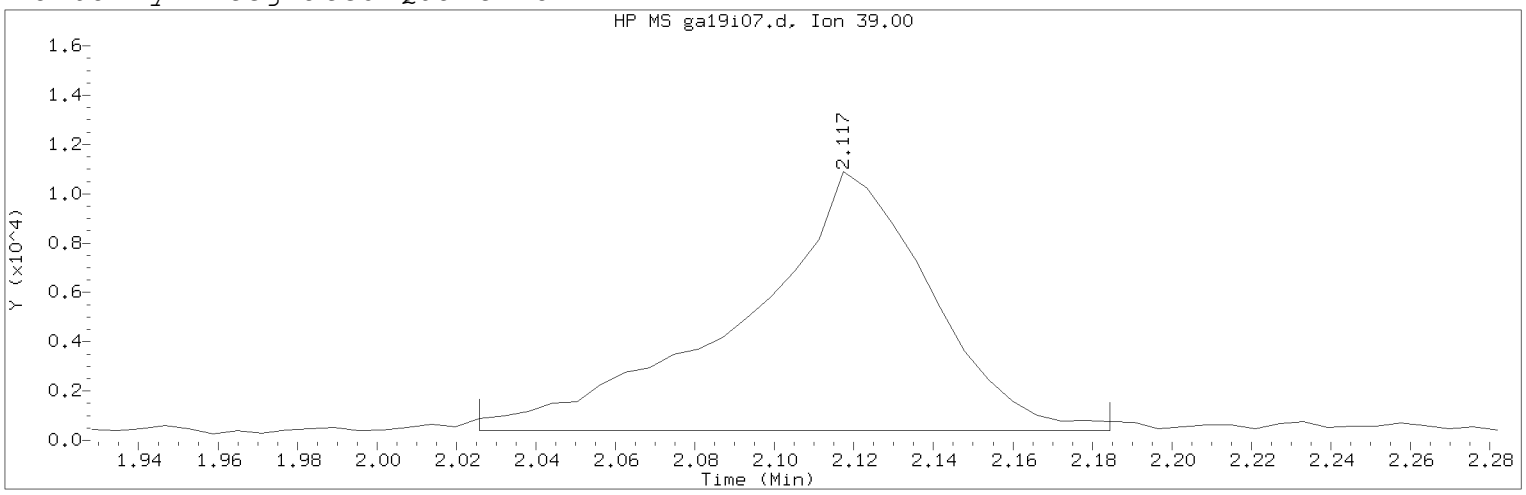
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

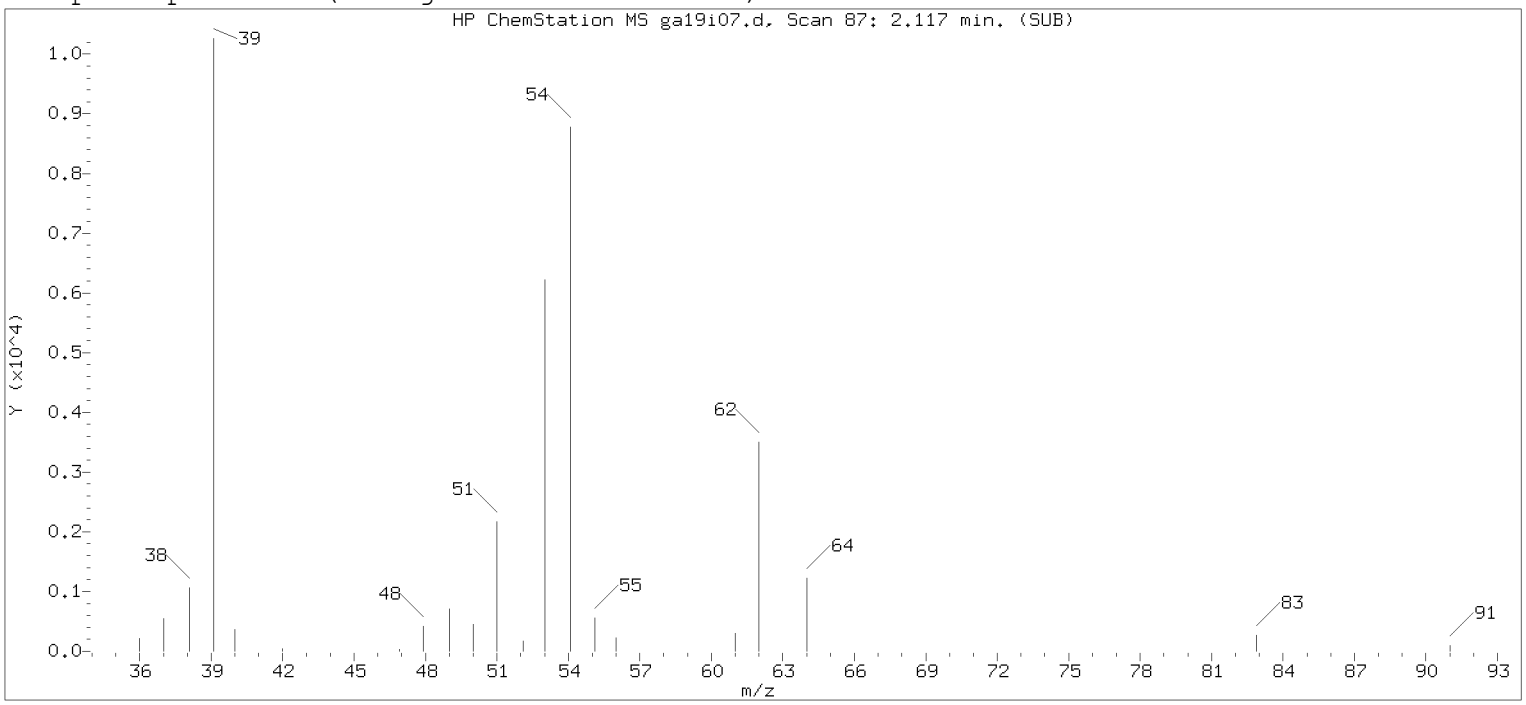
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 87
Retention Time (minutes): 2.117
Quant Ion : 39.00
Area (flag) : 34377M
On-Column Amount (ng) : 0.2436
Integration start scan : 71 Integration stop scan: 97
Y at integration start : 402 Y at integration end: 402

Reason for manual integration: improper integration

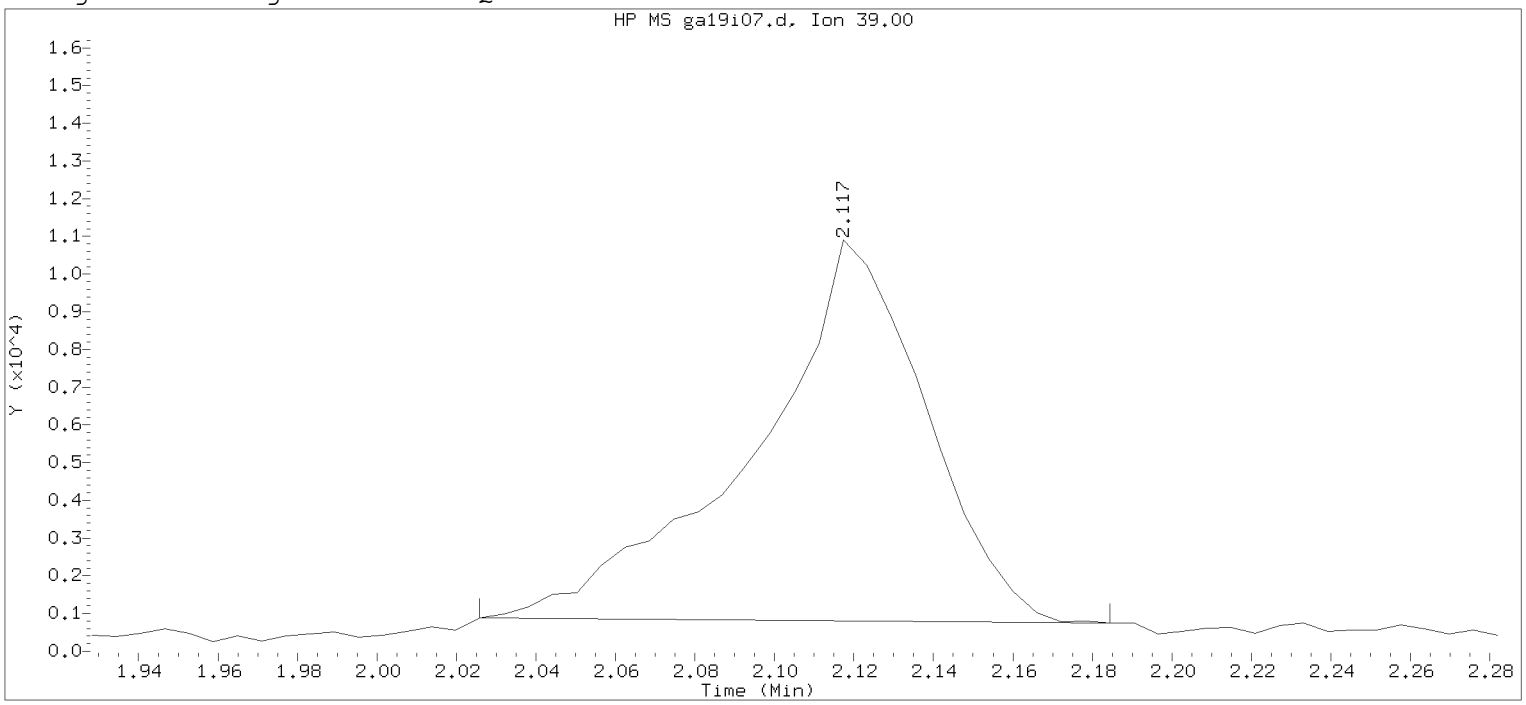
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 87
Retention Time (minutes): 2.117
Quant Ion : 39.00
Area : 30332
On-column Amount (ng) : 0.2297
Integration start scan : 71 Integration stop scan: 97
Y at integration start : 879 Y at integration end: 744

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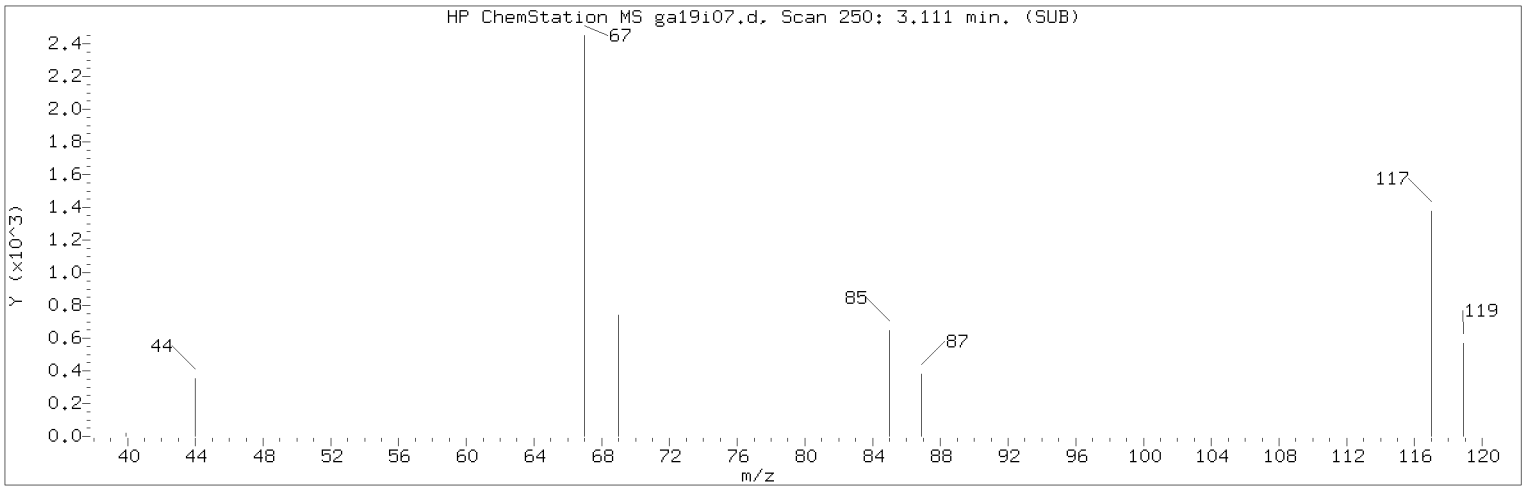
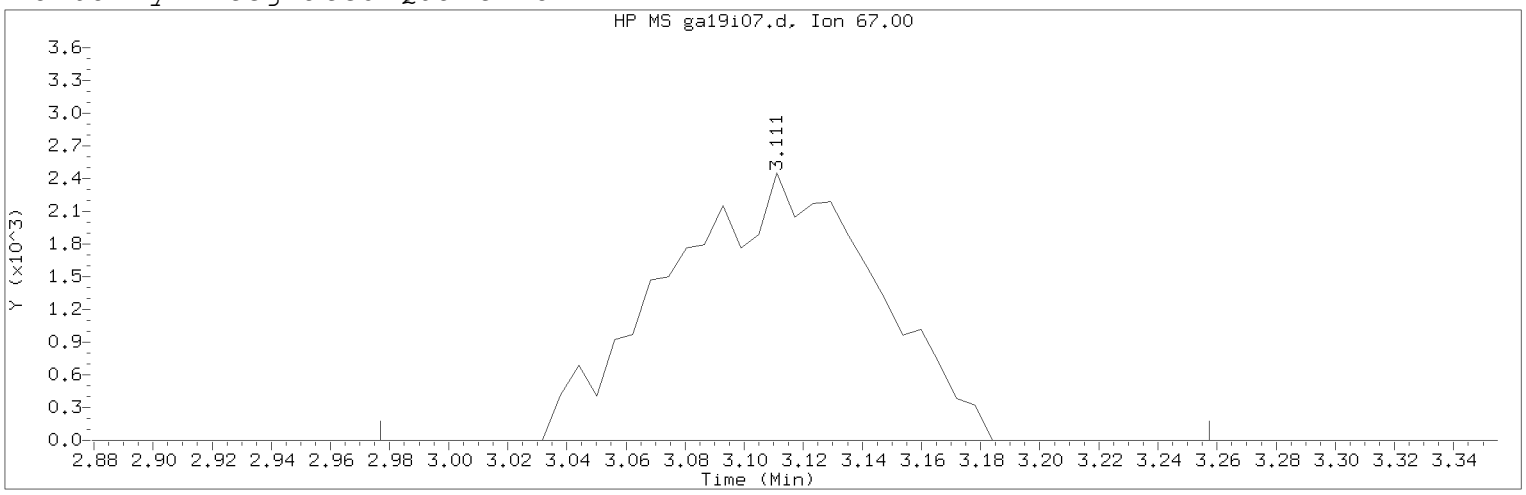
Target 3.5 esignature used. Method: 7500

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

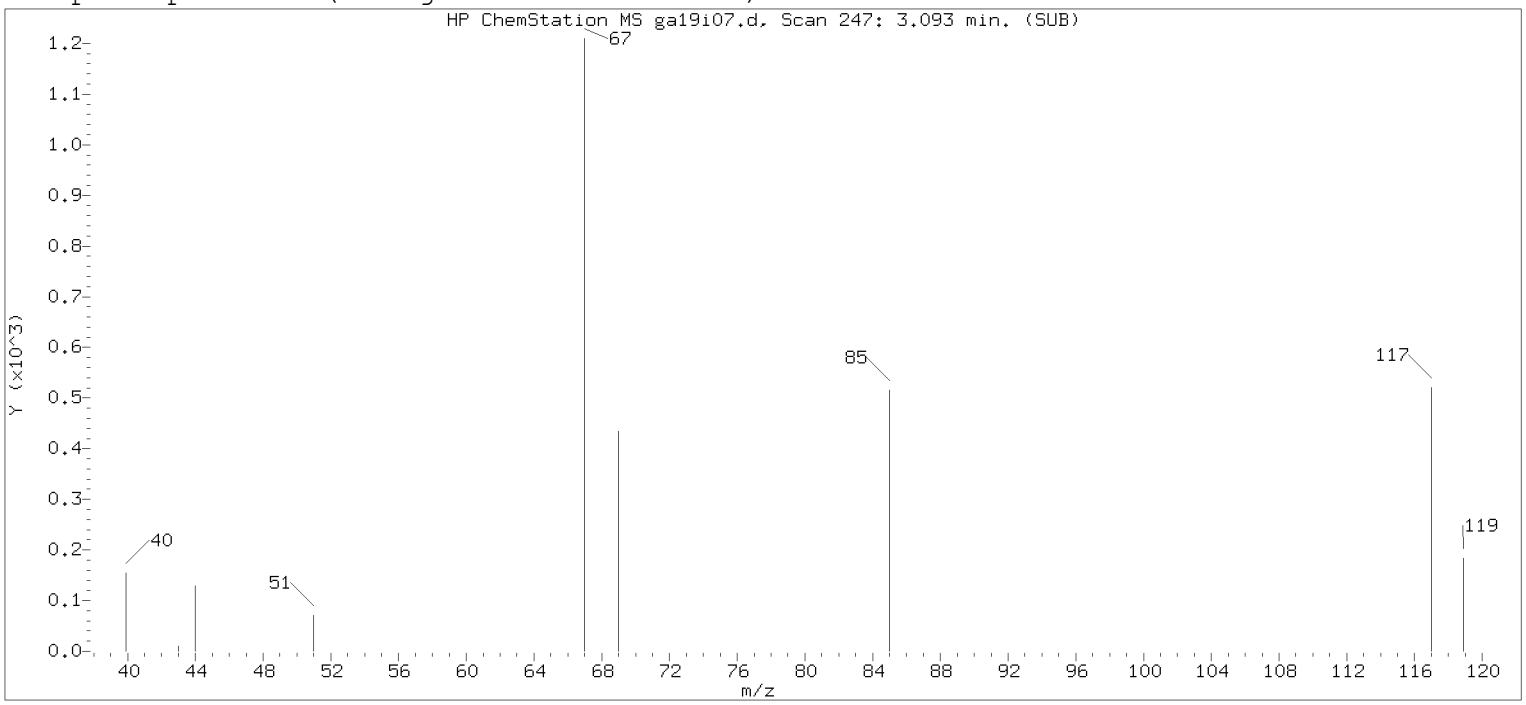
Compound Number : 12
Compound Name : Freon 123a
Scan Number : 250
Retention Time (minutes): 3.111
Quant Ion : 67.00
Area (flag) : 11981M
On-Column Amount (ng) : 0.1956
Integration start scan : 227 Integration stop scan: 273
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

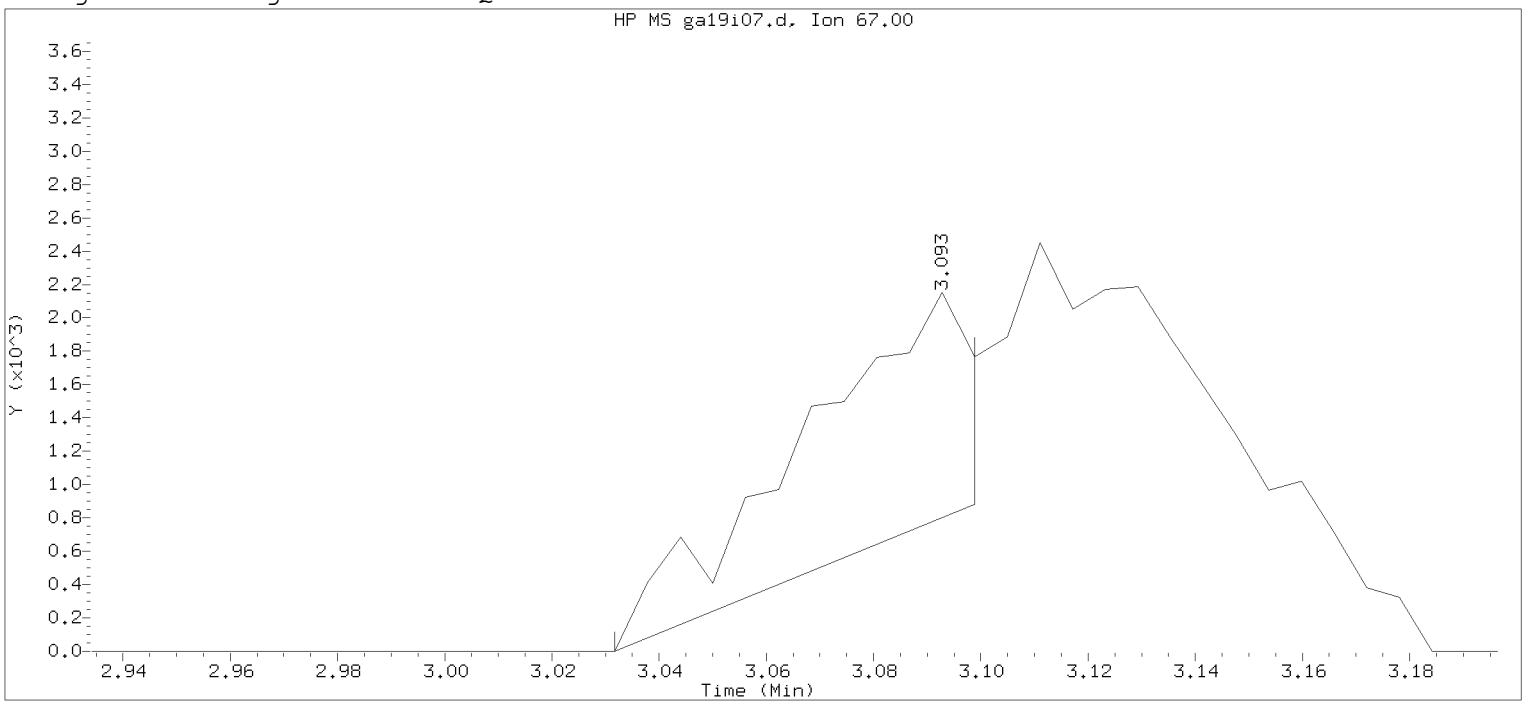
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 12
Compound Name : Freon 123a
Scan Number : 247
Retention Time (minutes): 3.093
Quant Ion : 67.00
Area : 2963
On-column Amount (ng) : 0.0541
Integration start scan : 236 Integration stop scan: 247
Y at integration start : 0 Y at integration end: 883

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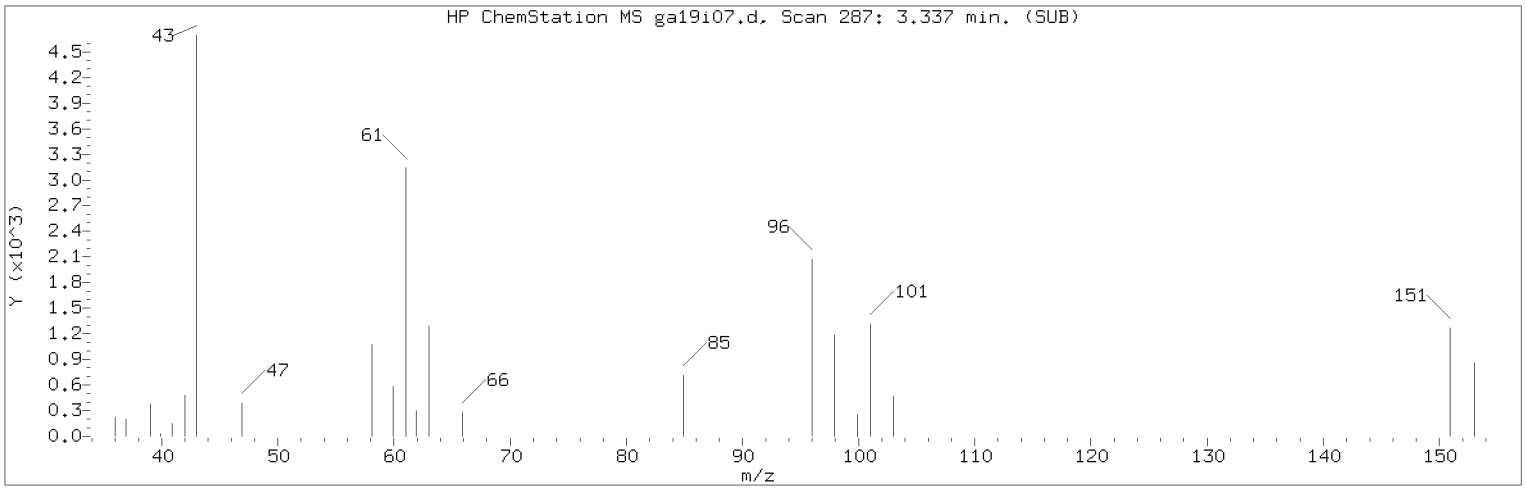
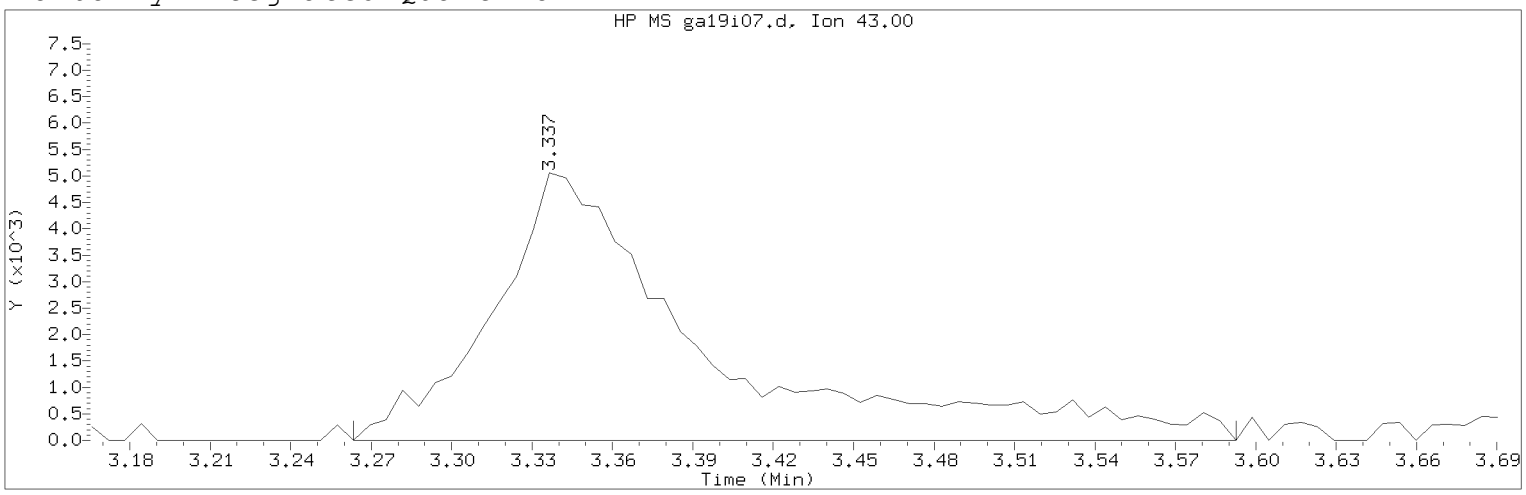
Target 3.5 esignature used. AE06 m.dd.yyyy

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

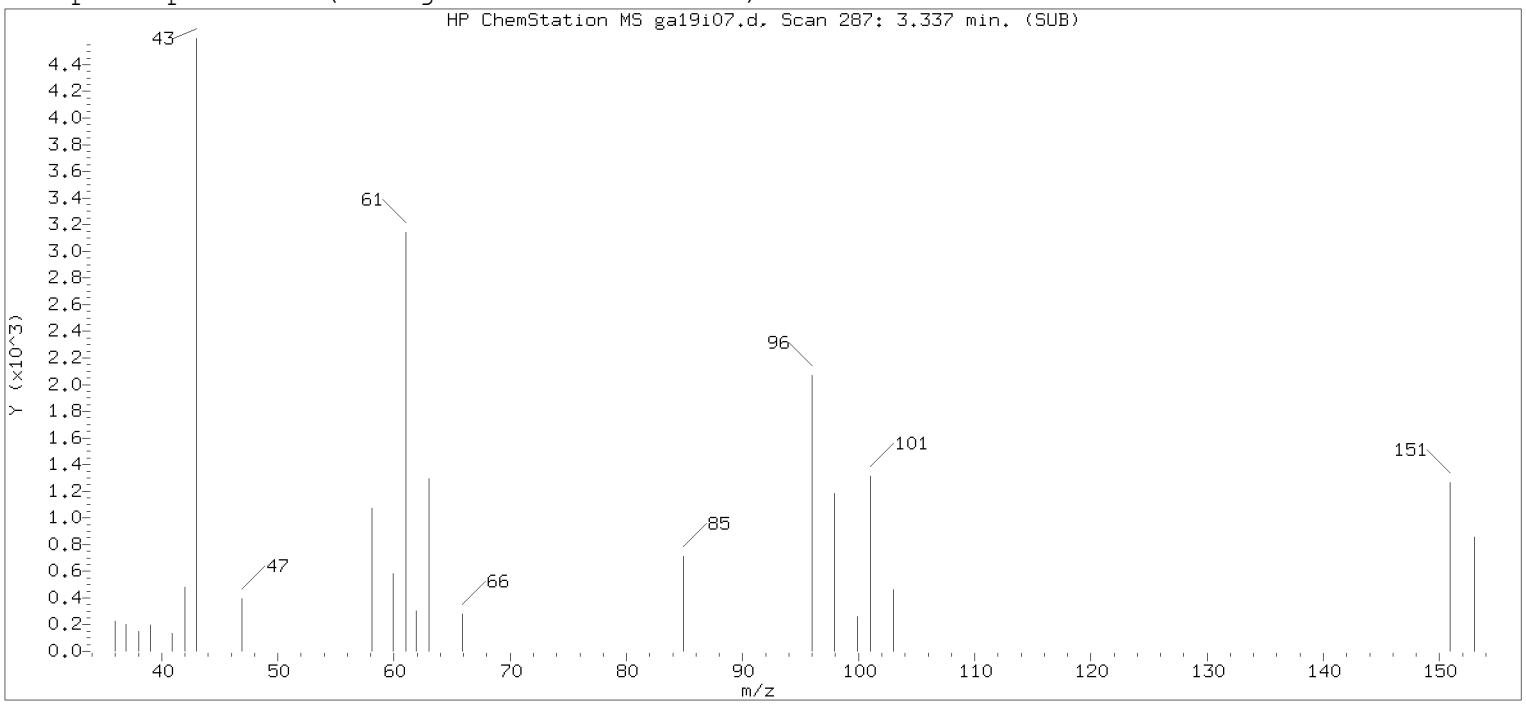
Compound Number : 14
Compound Name : Acetone
Scan Number : 287
Retention Time (minutes): 3.337
Quant Ion : 43.00
Area (flag) : 27906M
On-Column Amount (ng) : 2.2161
Integration start scan : 274 Integration stop scan: 328
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

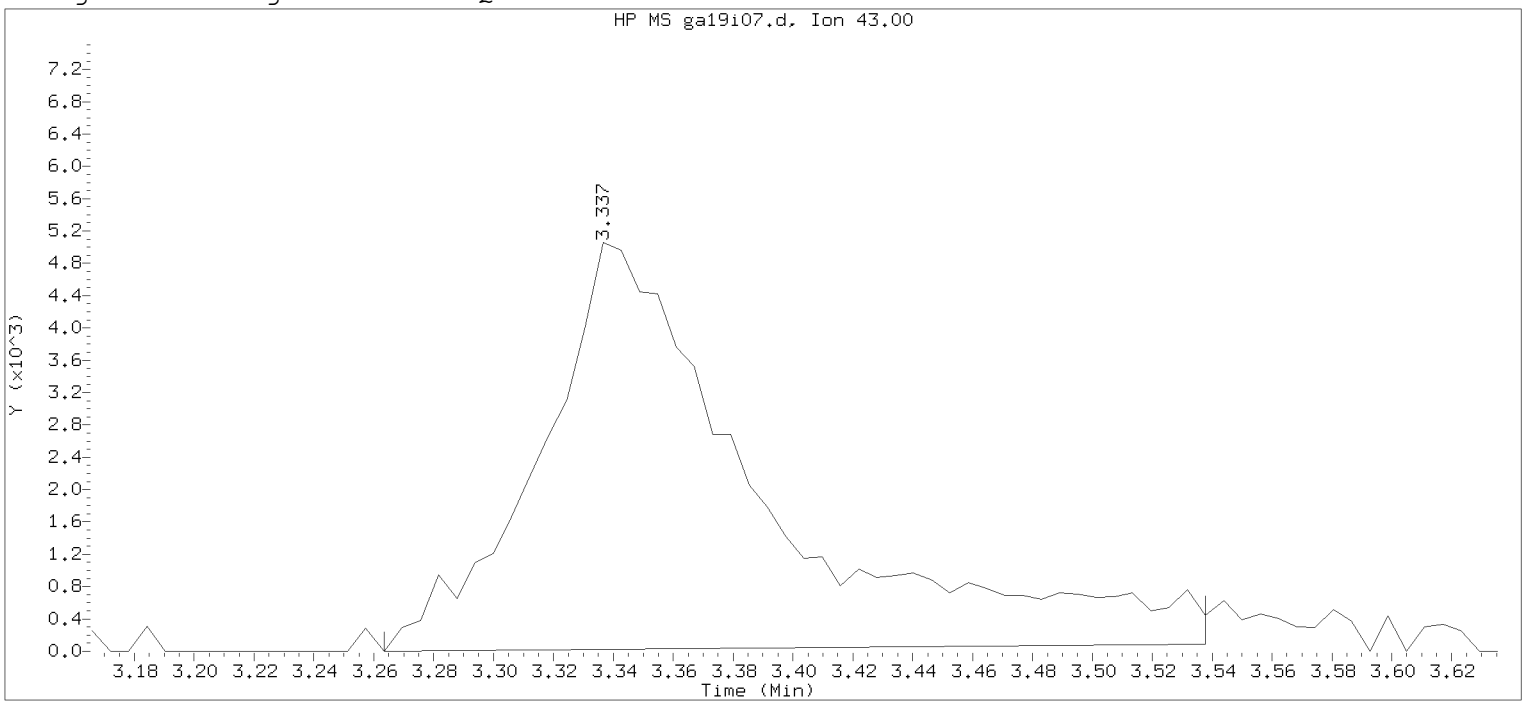
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

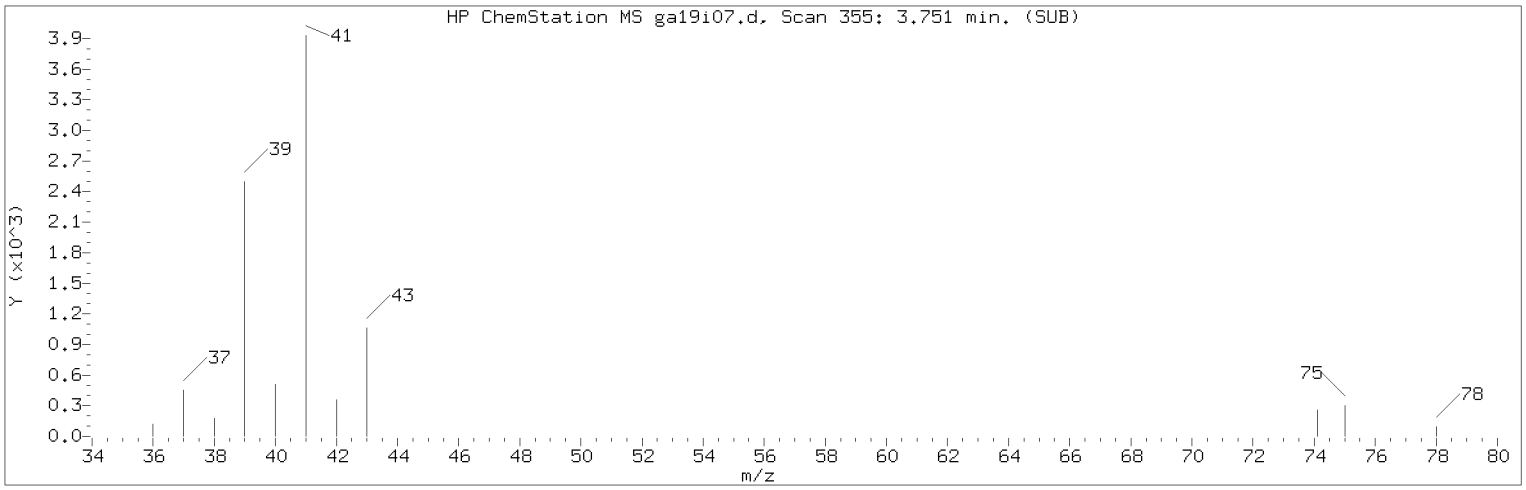
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

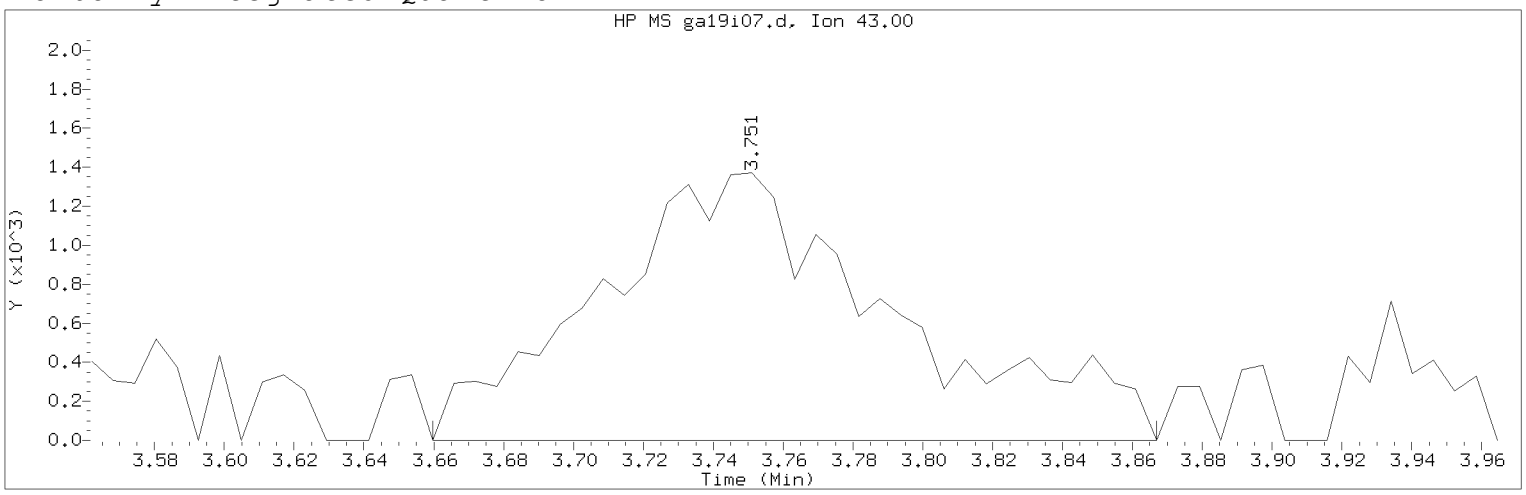
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 287		
Retention Time (minutes)	: 3.337		
Quant Ion	: 43.00		
Area	: 25842		
On-column Amount (ng)	: 1.9865		
Integration start scan	: 274	Integration stop scan:	319
Y at integration start	: 0	Y at integration end:	91

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

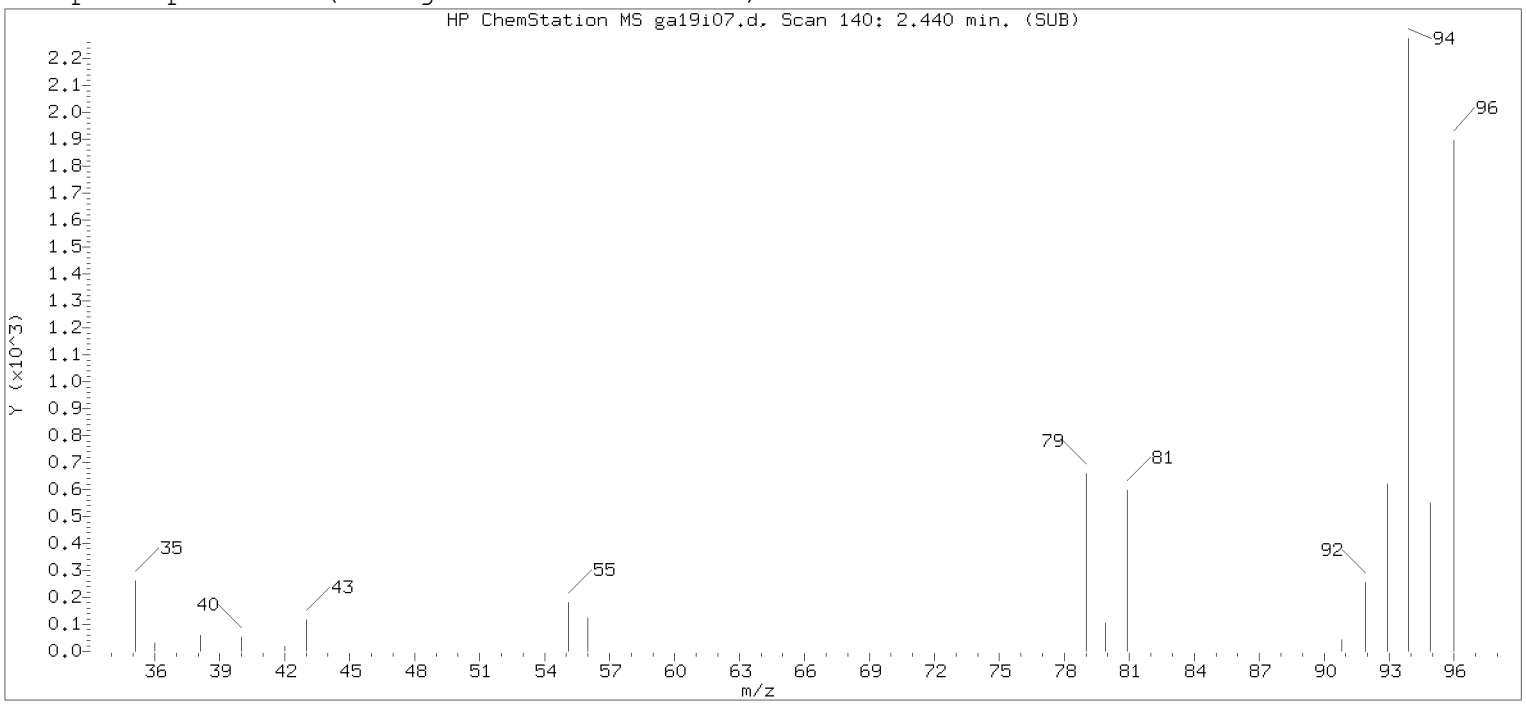
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 355
Retention Time (minutes): 3.751
Quant Ion : 43.00
Area (flag) : 7988M
On-Column Amount (ng) : 0.2250
Integration start scan : 339 Integration stop scan: 373
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

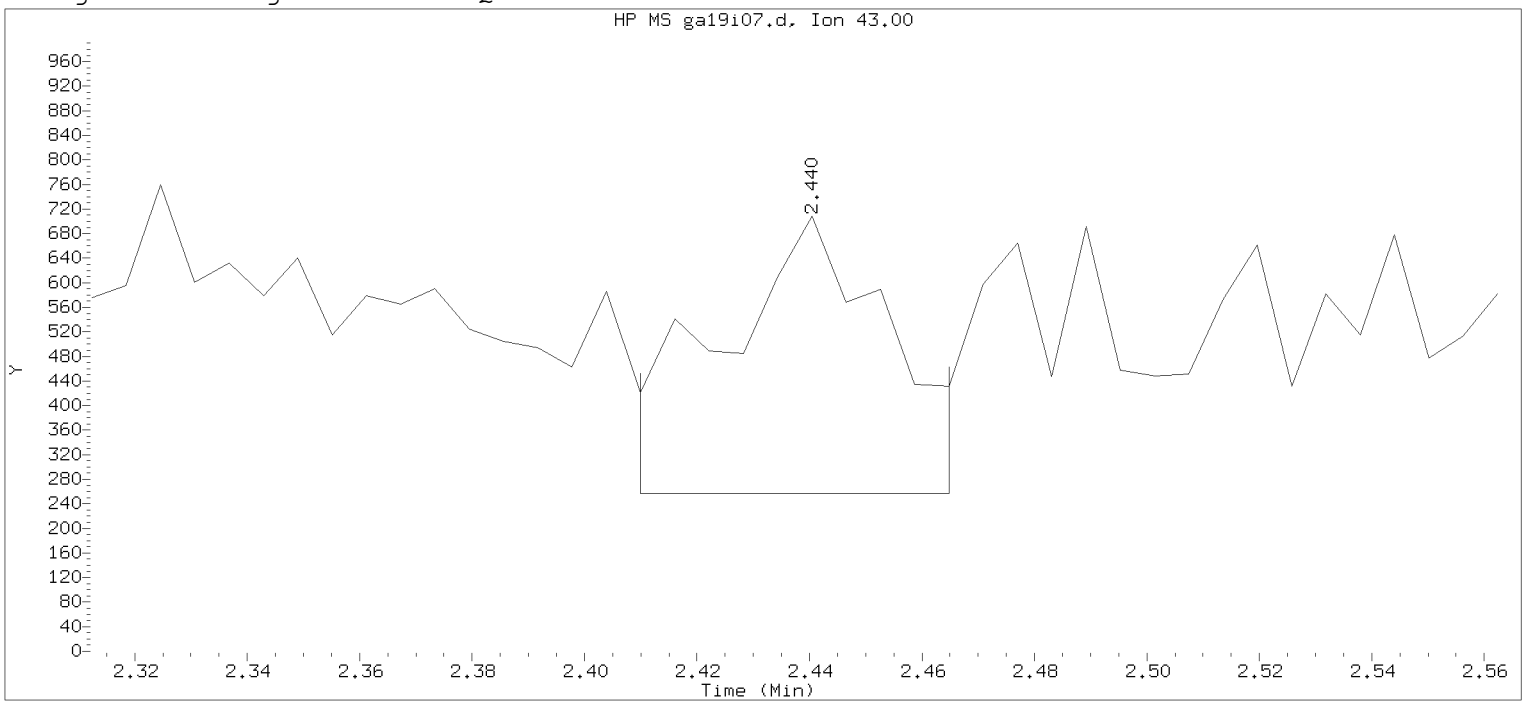
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

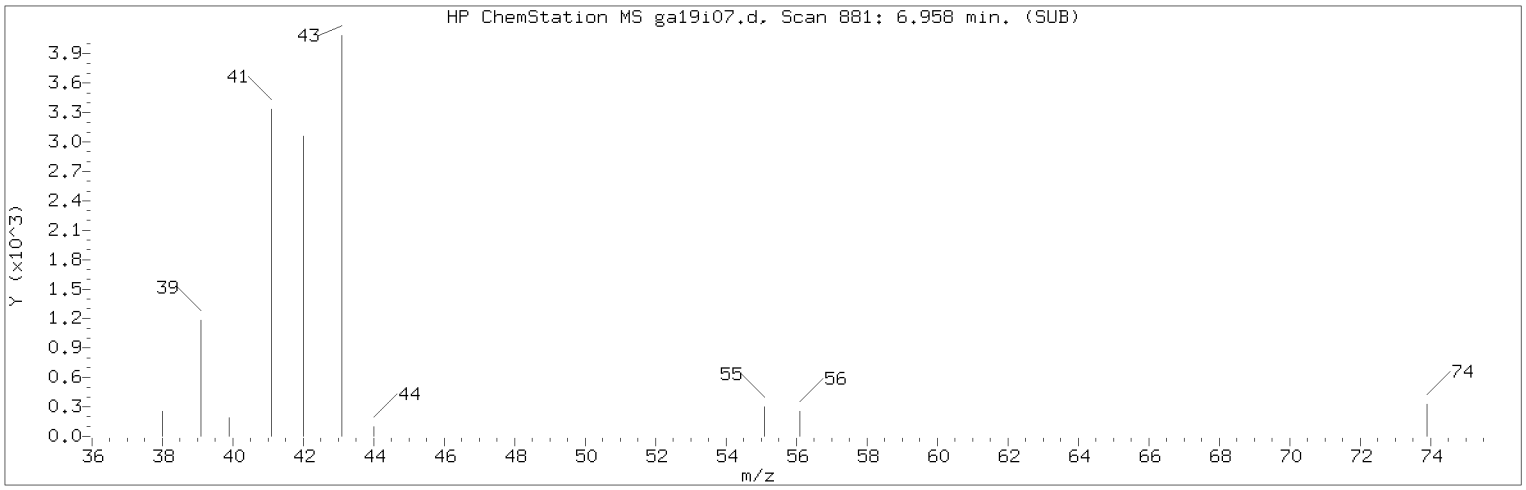
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

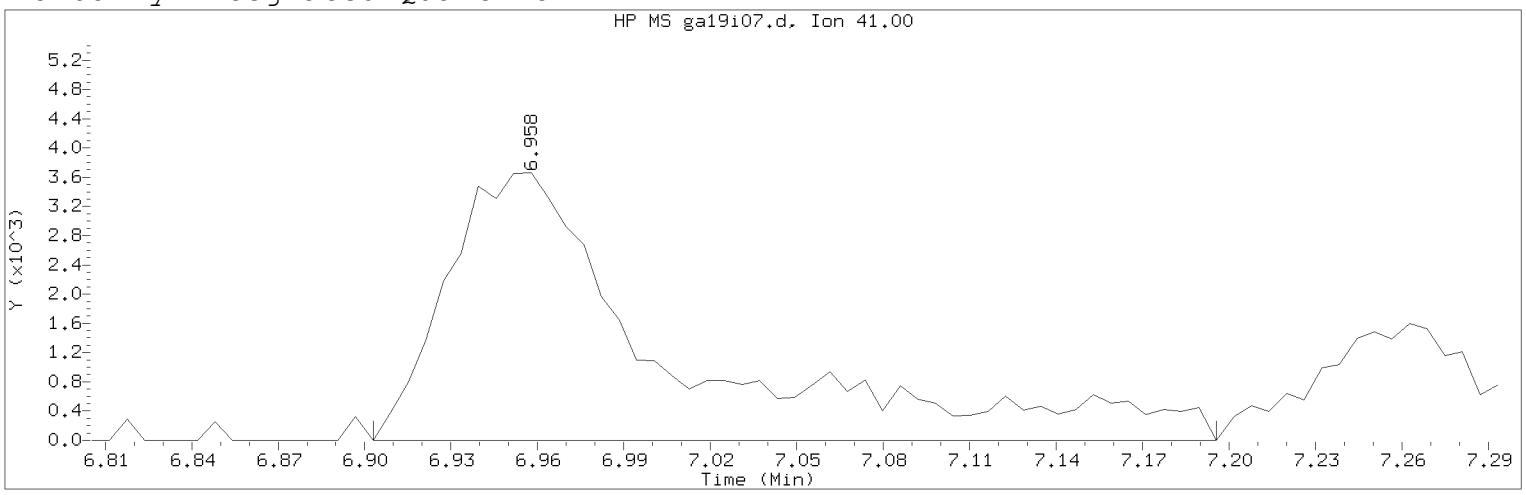
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 140
Retention Time (minutes): 2.440
Quant Ion : 43.00
Area : 928
On-column Amount (ng) : 0.5220
Integration start scan : 134 Integration stop scan: 143
Y at integration start : 257 Y at integration end: 257

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. m.s.k. 7532

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

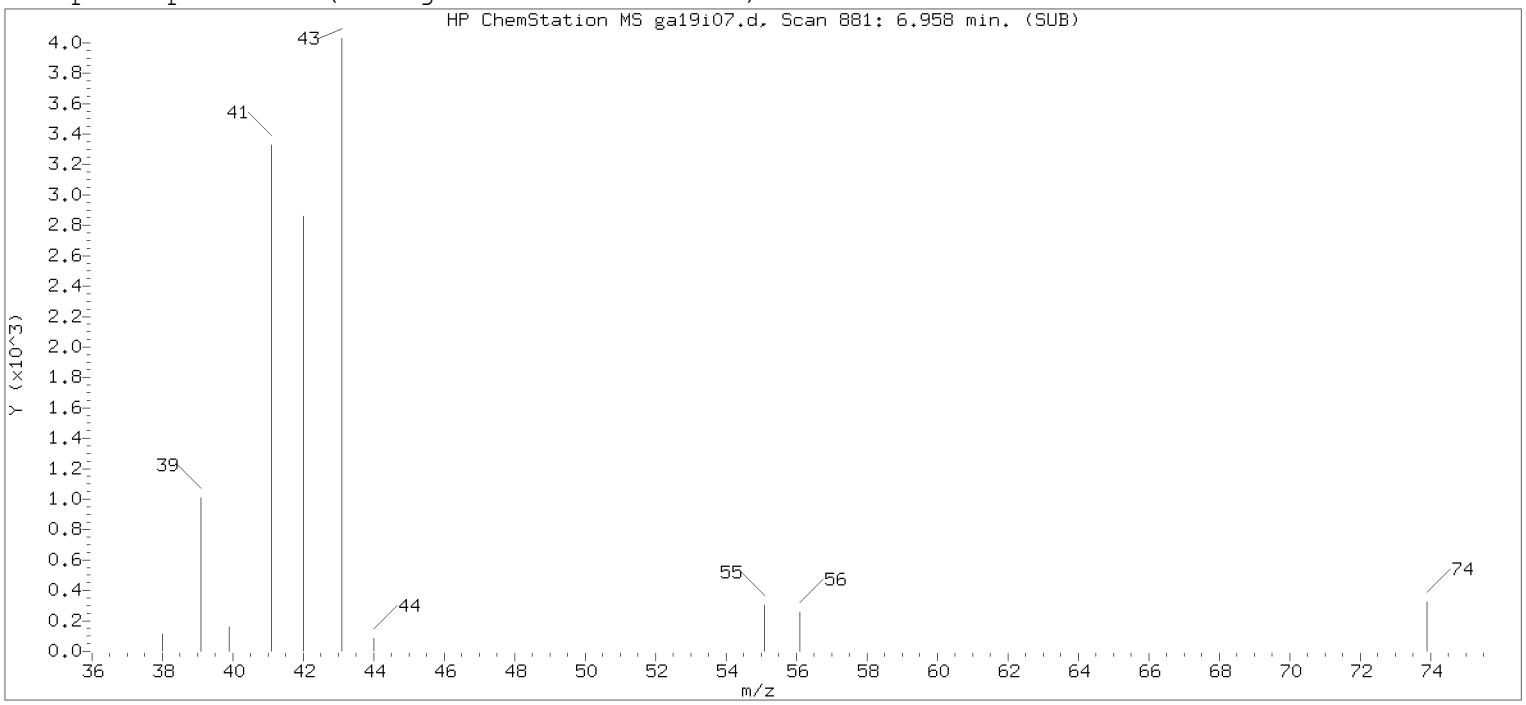
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 881
Retention Time (minutes): 6.958
Quant Ion : 41.00
Area (flag) : 19777M
On-Column Amount (ng) : 11.6573
Integration start scan : 871 Integration stop scan: 919
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

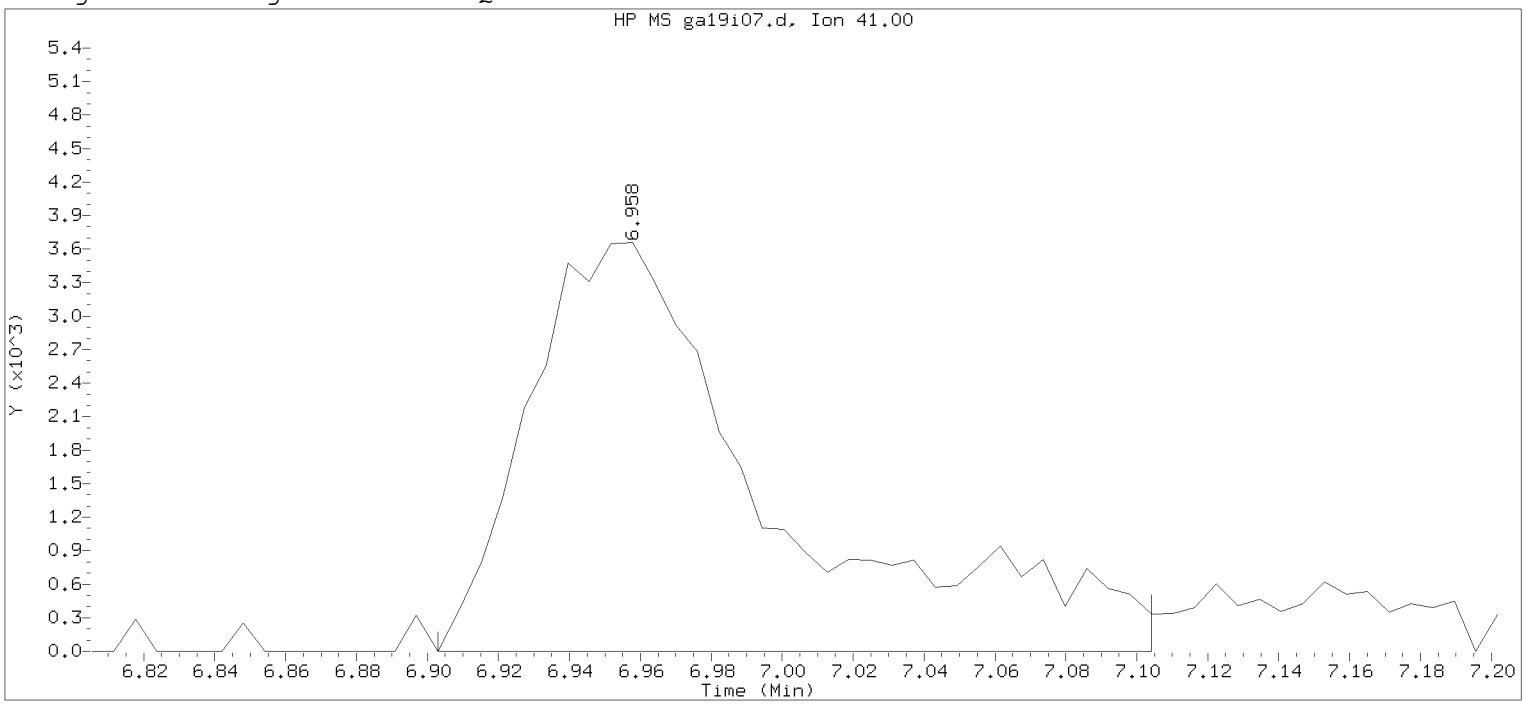
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

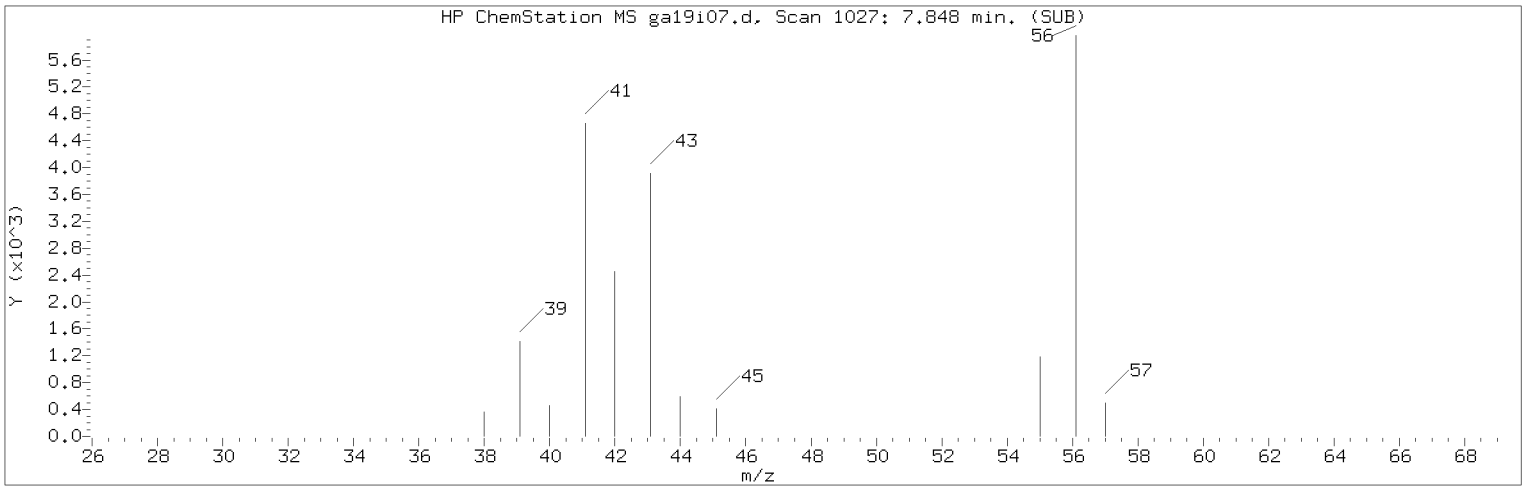
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

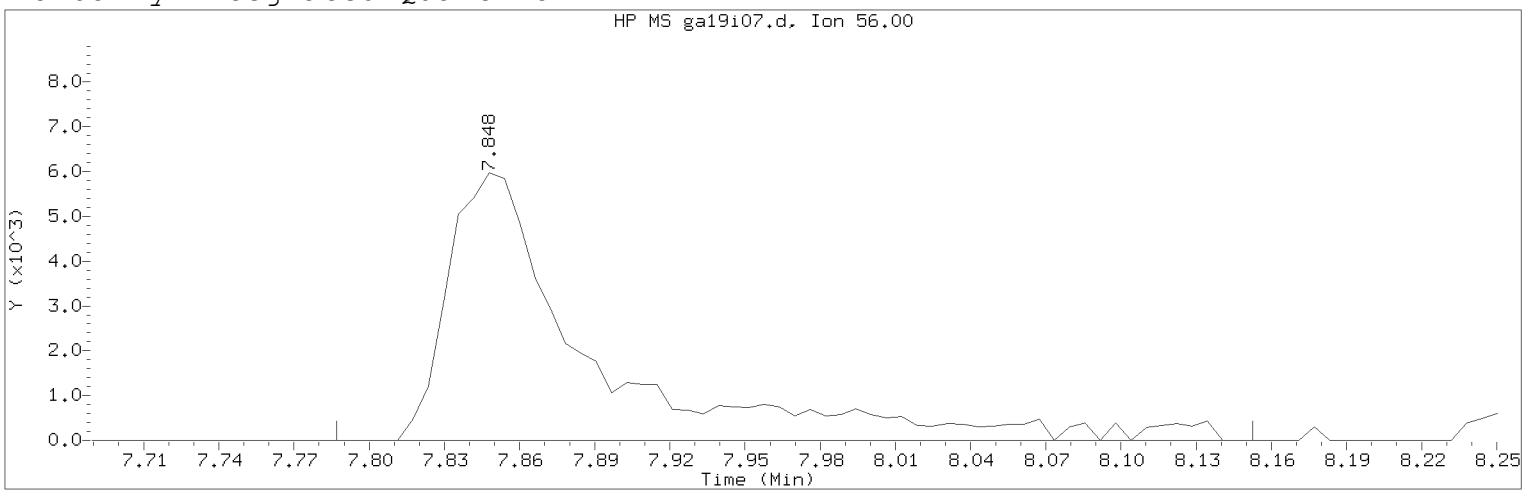
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 881
Retention Time (minutes): 6.958
Quant Ion : 41.00
Area : 17422
On-column Amount (ng) : 9.9997
Integration start scan : 871 Integration stop scan: 904
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7534

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

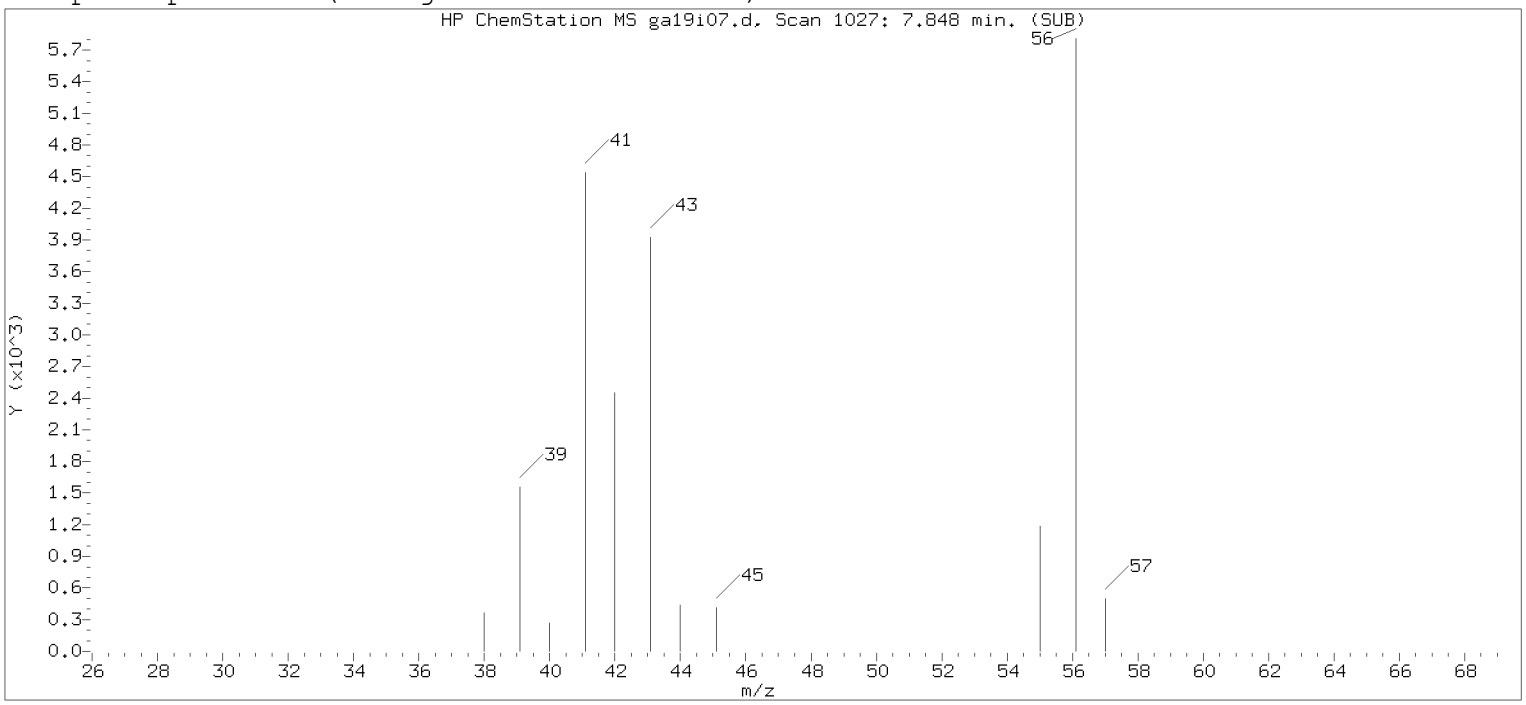
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1027
Retention Time (minutes): 7.848
Quant Ion : 56.00
Area (flag) : 23969M
On-Column Amount (ng) : 17.8503
Integration start scan : 1016 Integration stop scan: 1076
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

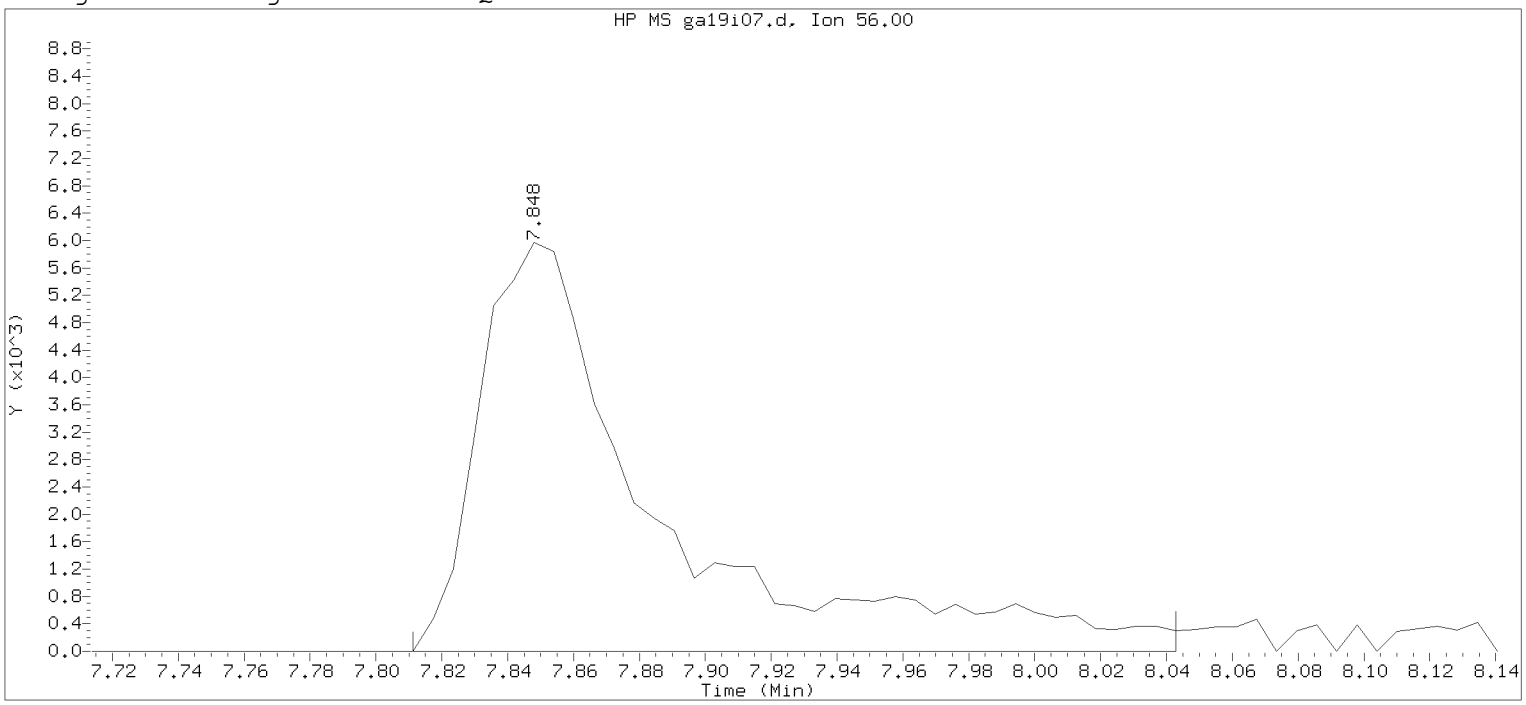
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

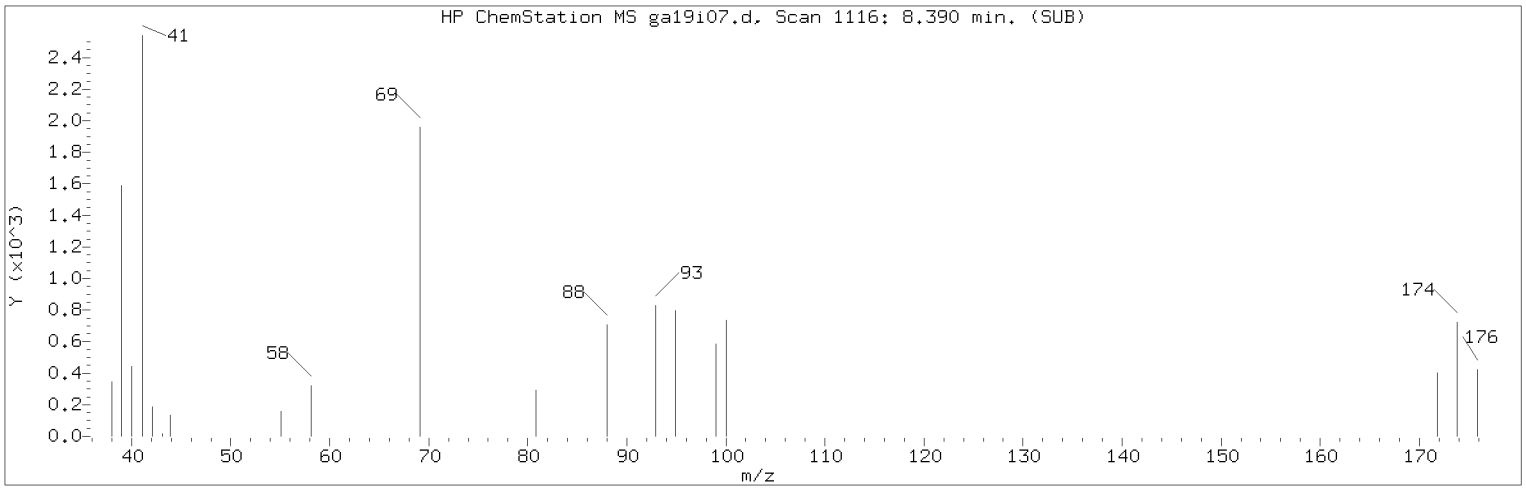
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

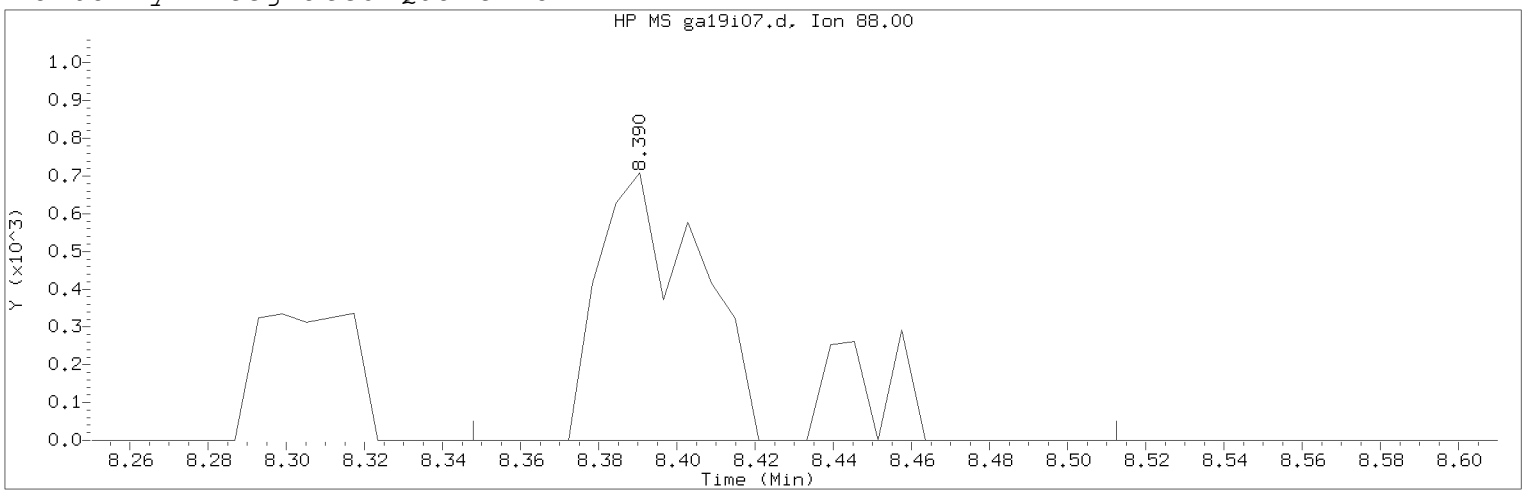
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1027		
Retention Time (minutes)	: 7.848		
Quant Ion	: 56.00		
Area	: 22339		
On-column Amount (ng)	: 16.3498		
Integration start scan	: 1020	Integration stop scan	: 1058
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Method: 7536

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

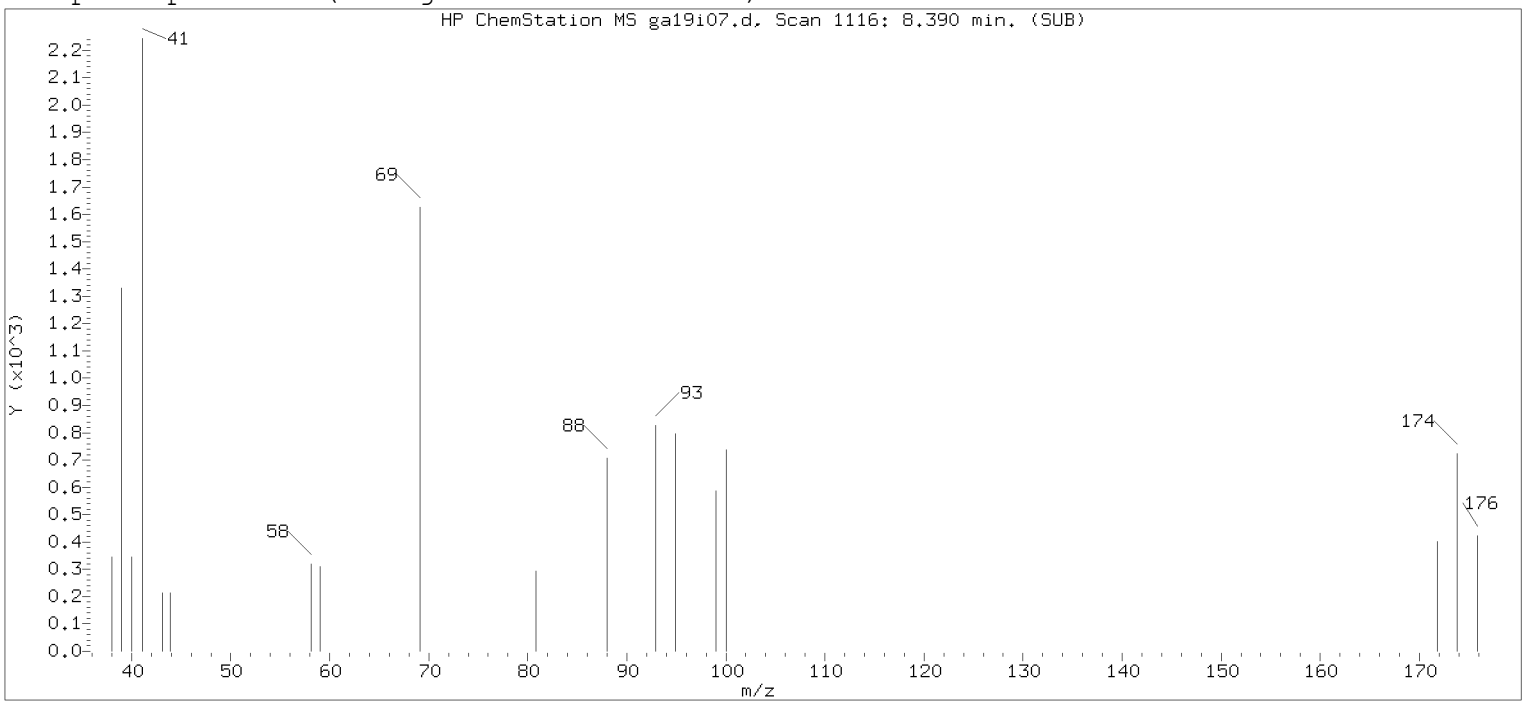
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 1552M
On-Column Amount (ng) : 6.6324
Integration start scan : 1108 Integration stop scan: 1135
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

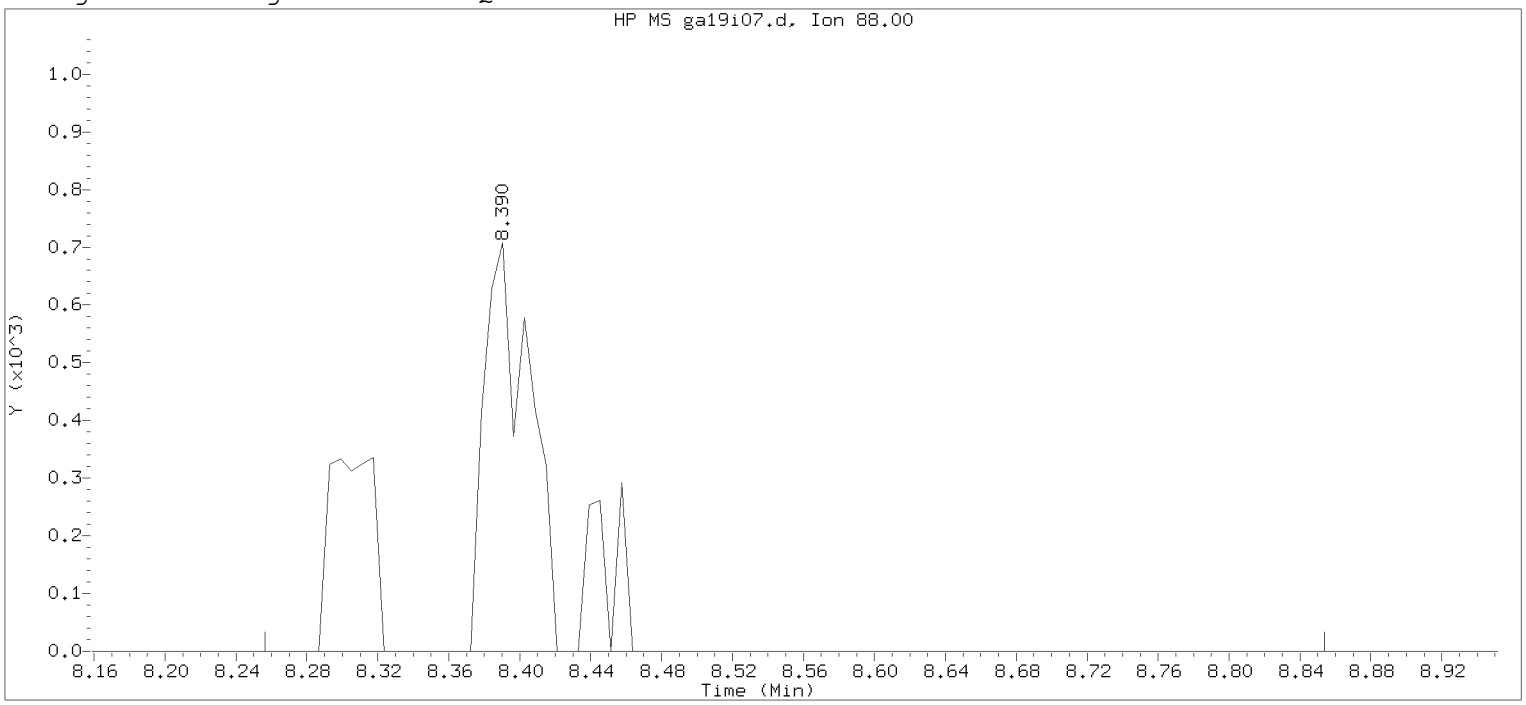
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

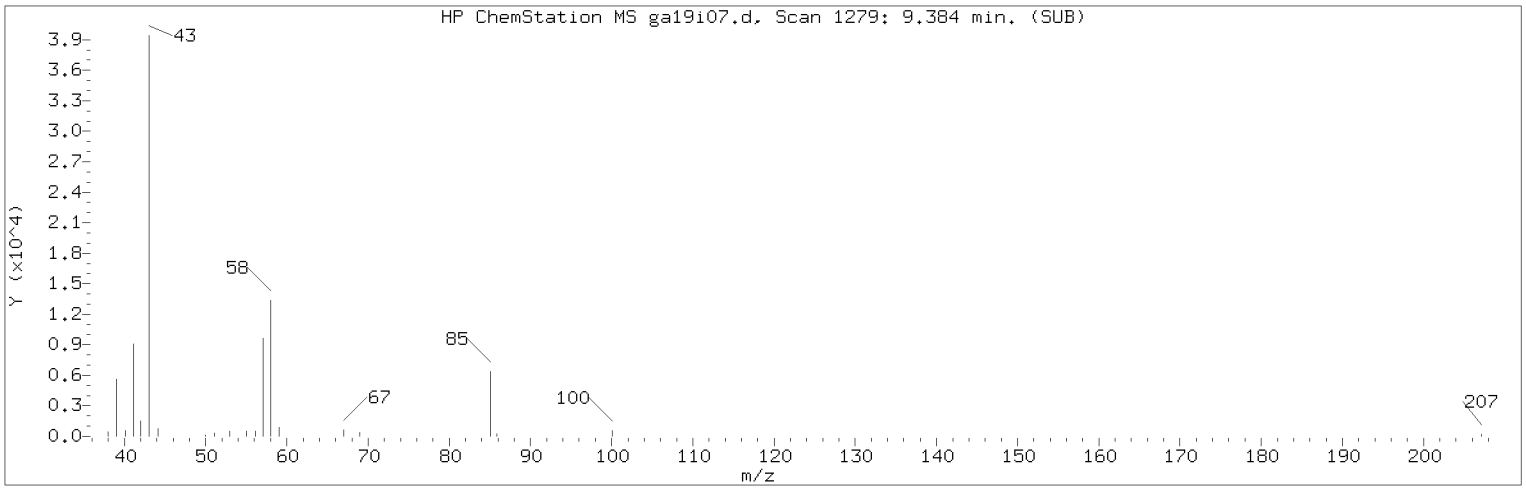
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

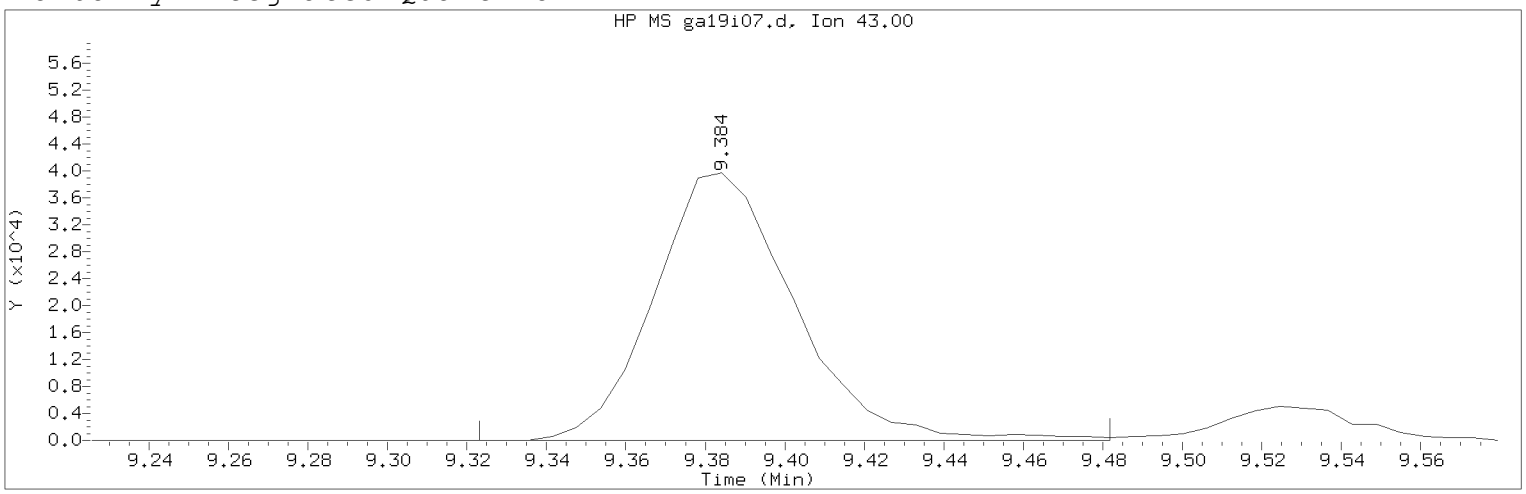
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1116		
Retention Time (minutes)	: 8.390		
Quant Ion	: 88.00		
Area	: 2149		
On-column Amount (ng)	: 6.9438		
Integration start scan	: 1093	Integration stop scan:	1191
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. AE06 m.d.e.7530

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

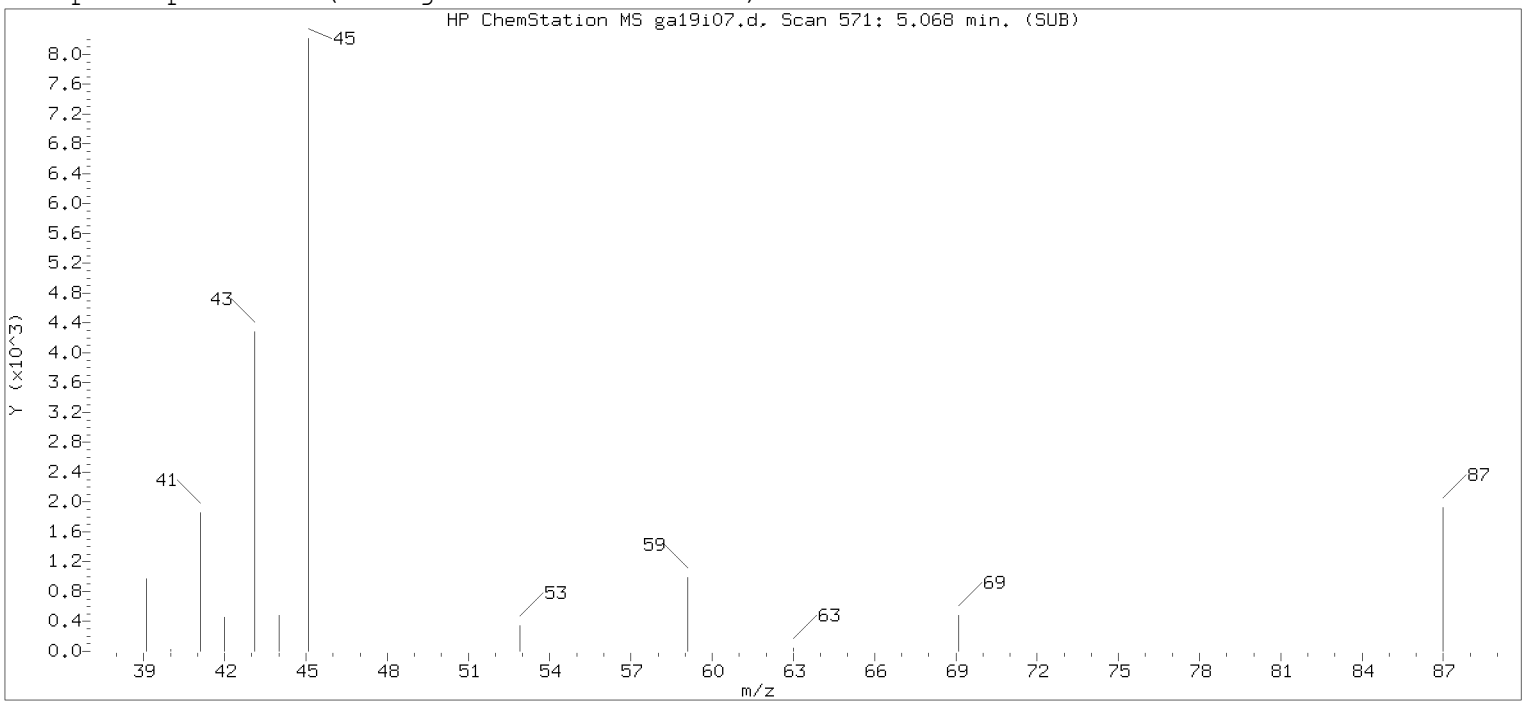
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 97110M
On-Column Amount (ng) : 1.8245
Integration start scan : 1268 Integration stop scan: 1294
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

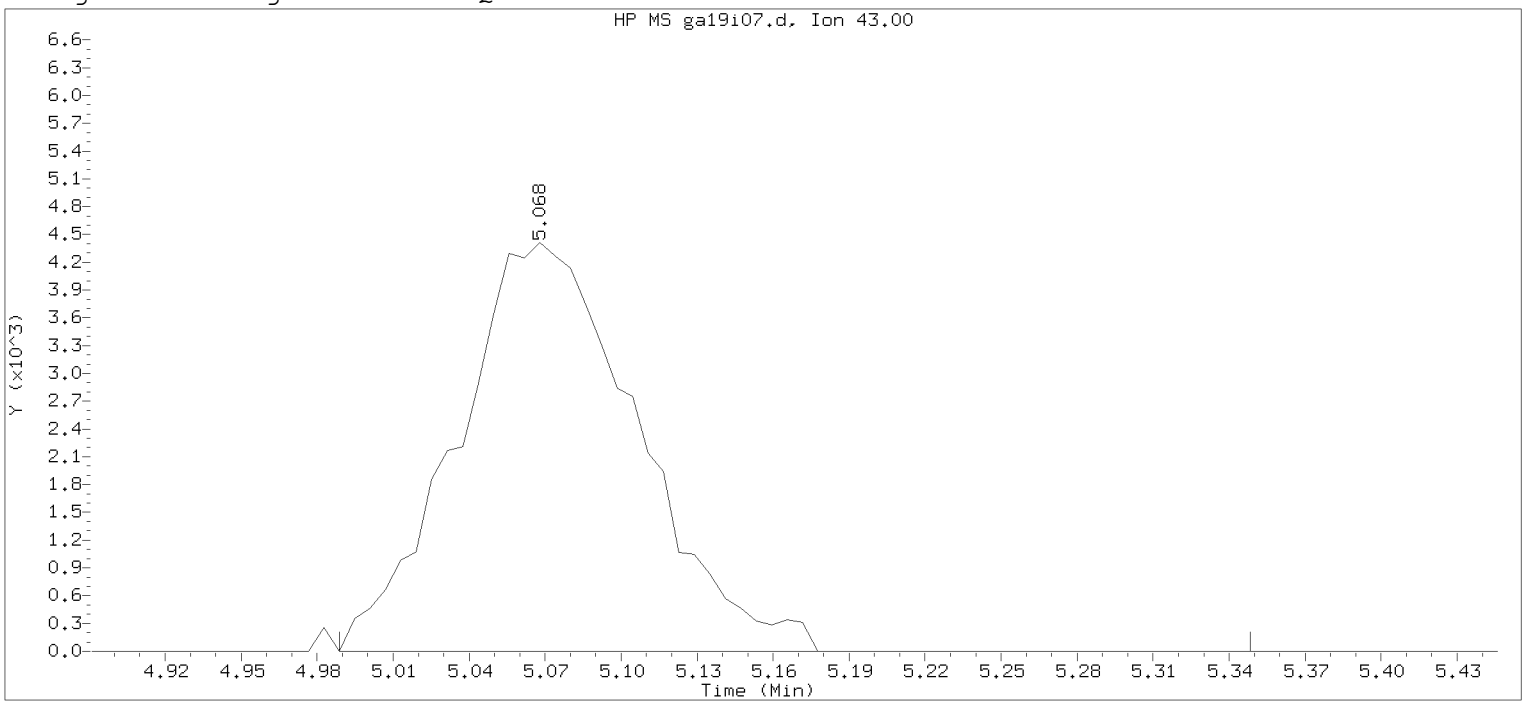
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

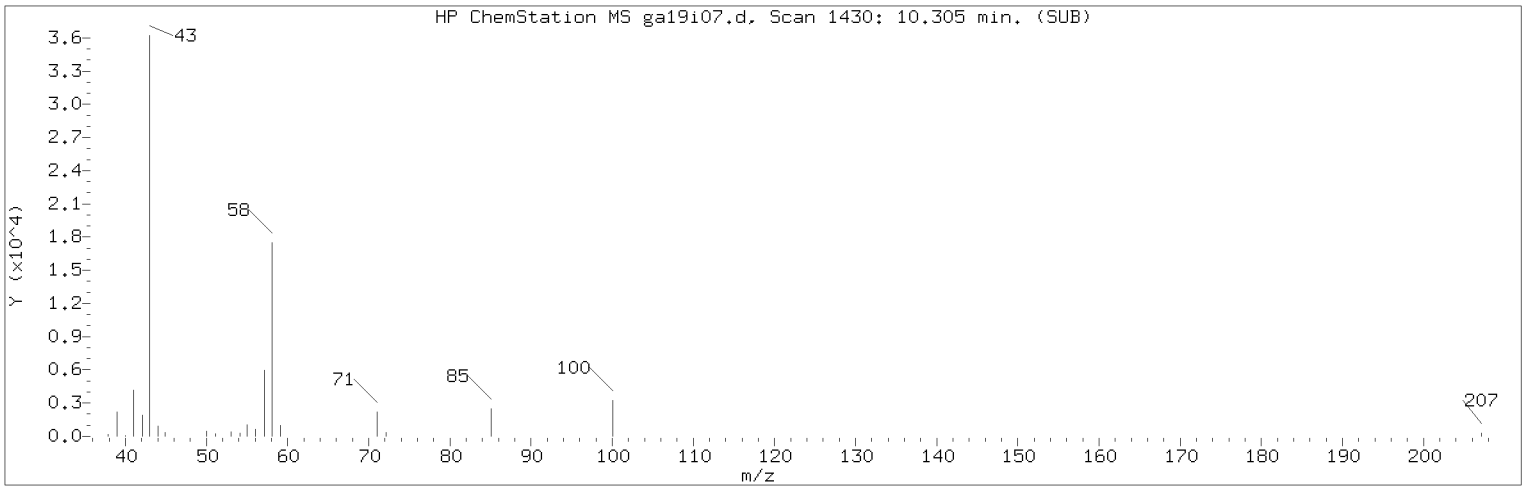
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

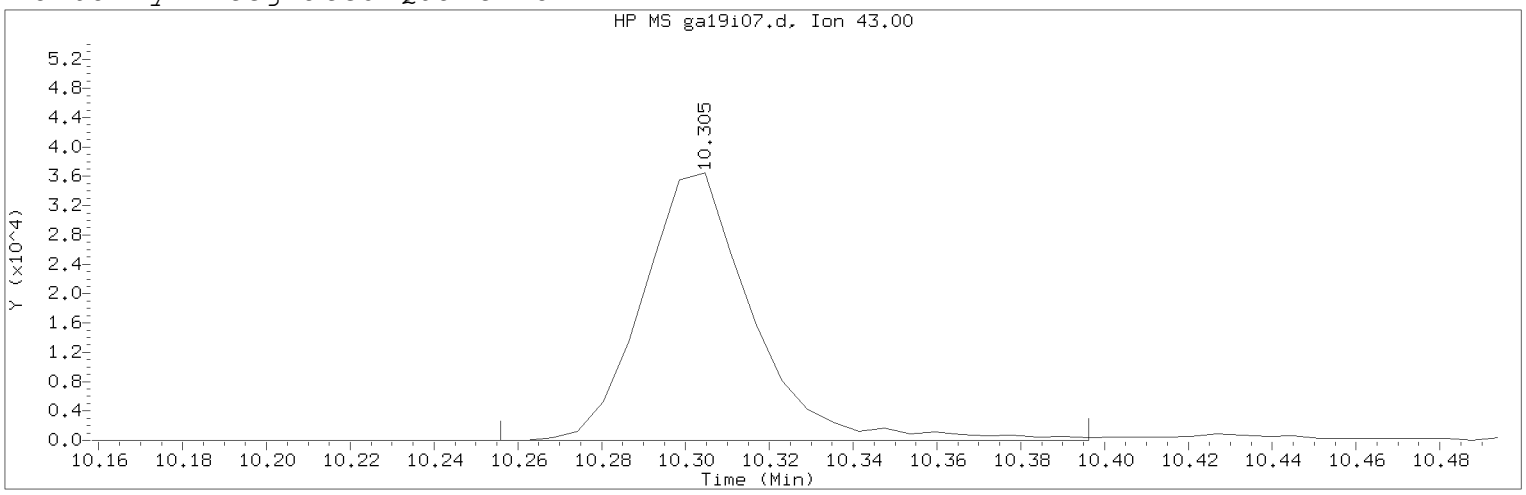
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 571
Retention Time (minutes): 5.068
Quant Ion : 43.00
Area : 21799
On-column Amount (ng) : 1.8933
Integration start scan : 557 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used for method 7540

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

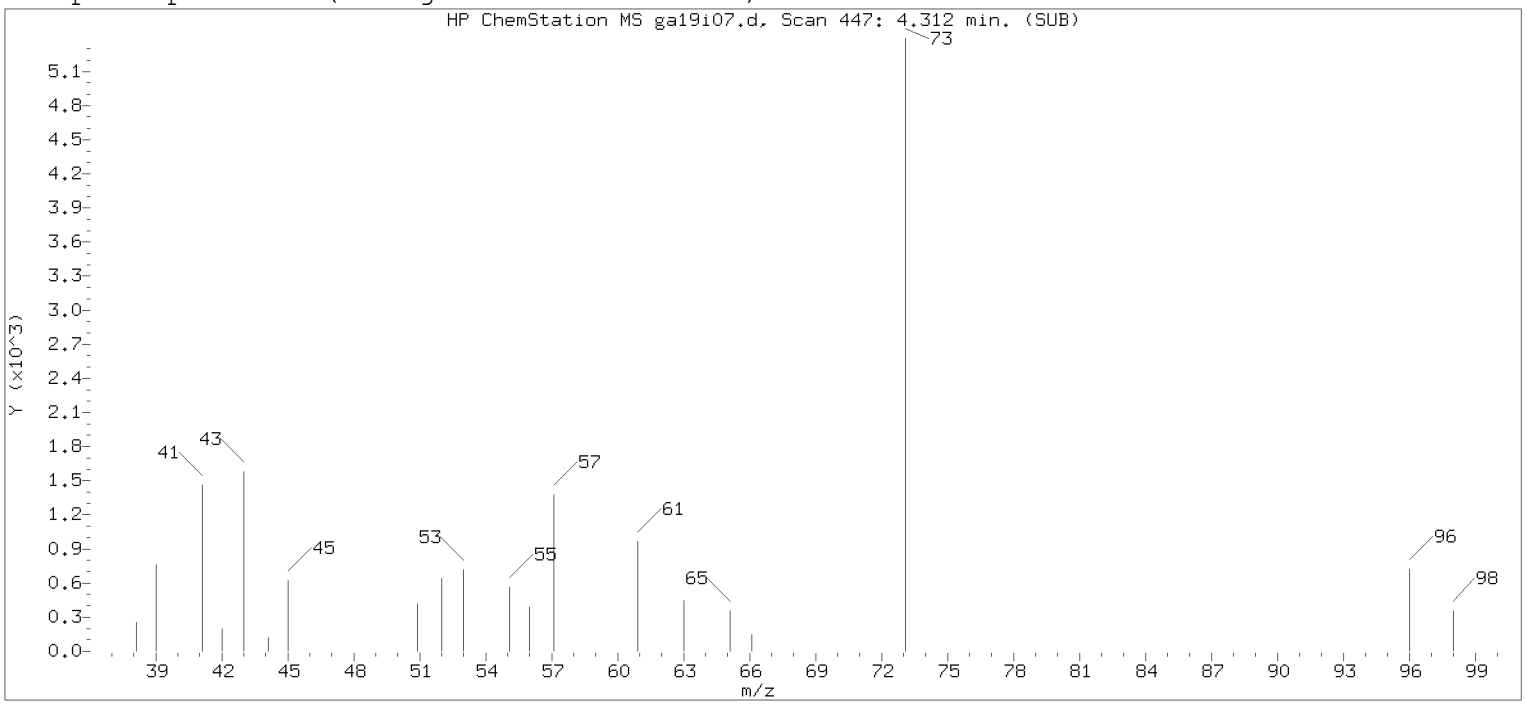
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 66409M
On-Column Amount (ng) : 1.7751
Integration start scan : 1421 Integration stop scan: 1444
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

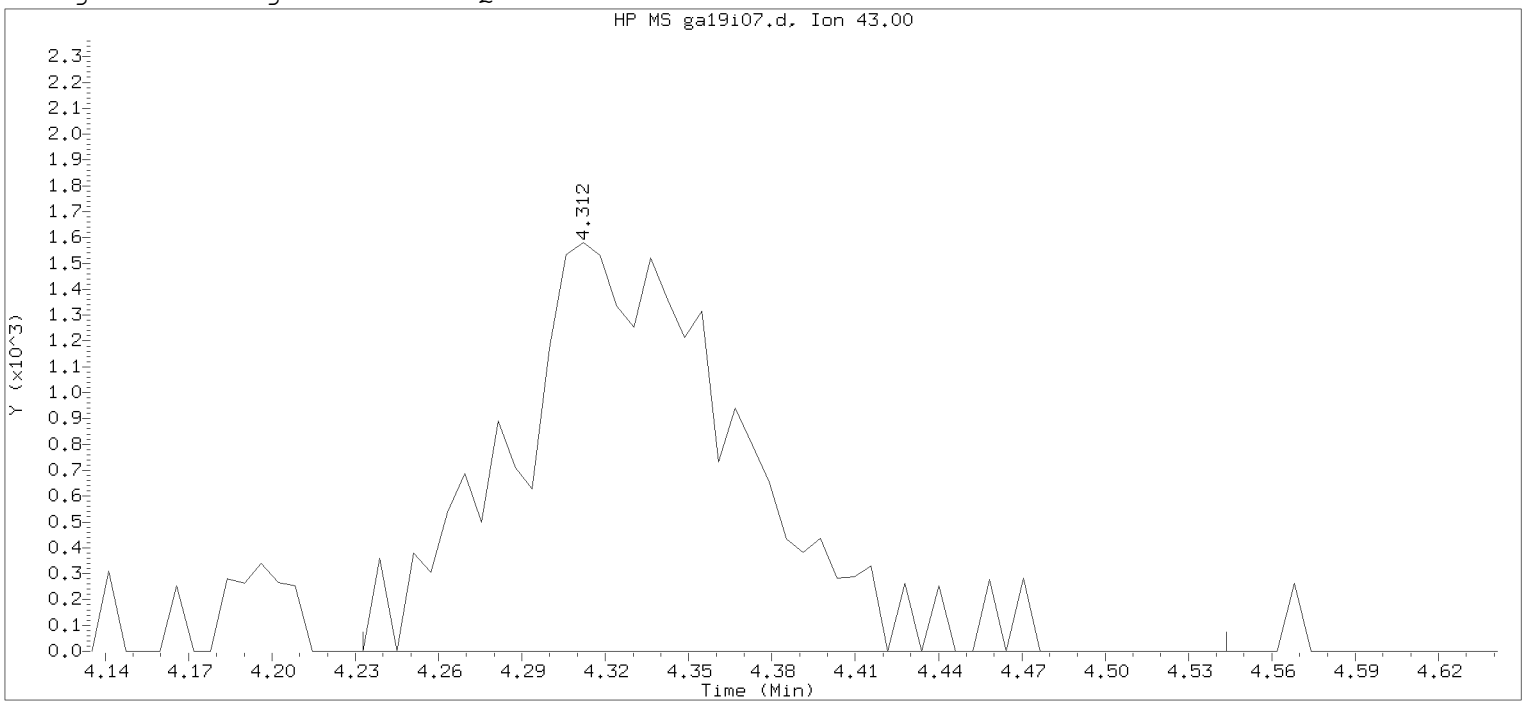
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

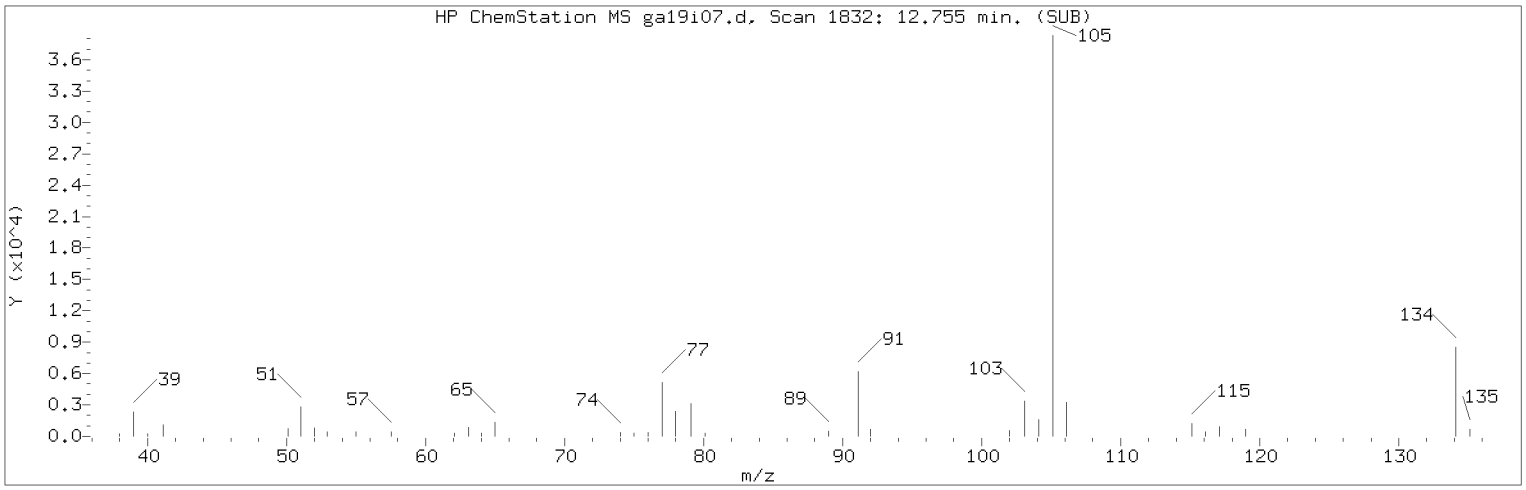
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

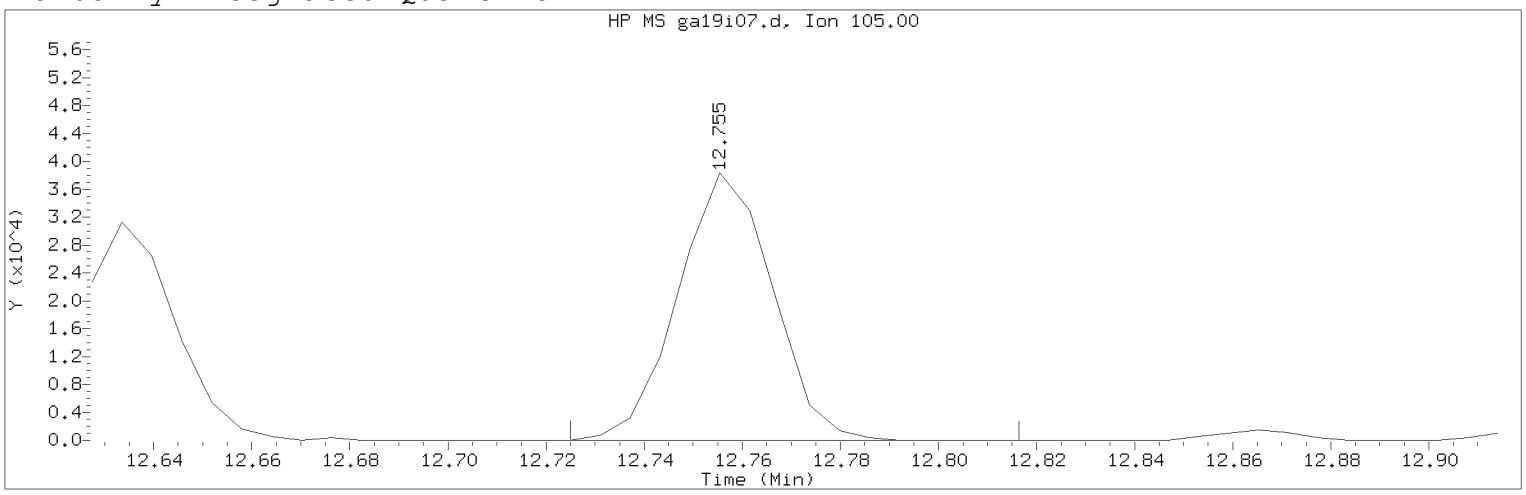
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 447		
Retention Time (minutes)	: 4.312		
Quant Ion	: 43.00		
Area	: 9206		
On-column Amount (ng)	: 4.0884		
Integration start scan	: 433	Integration stop scan:	484
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used. Adobe 7.0.7

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

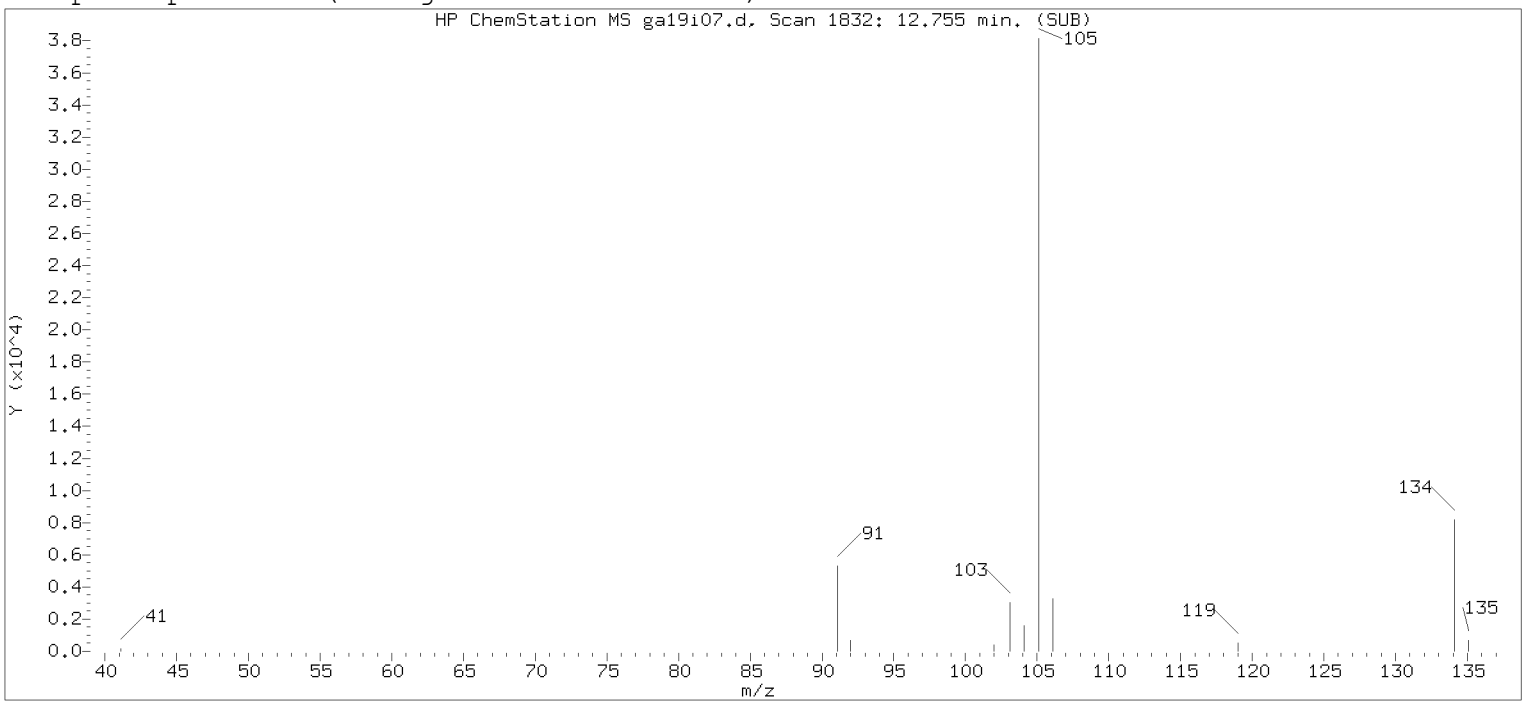
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area (flag) : 51241M
On-Column Amount (ng) : 0.1818
Integration start scan : 1826 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

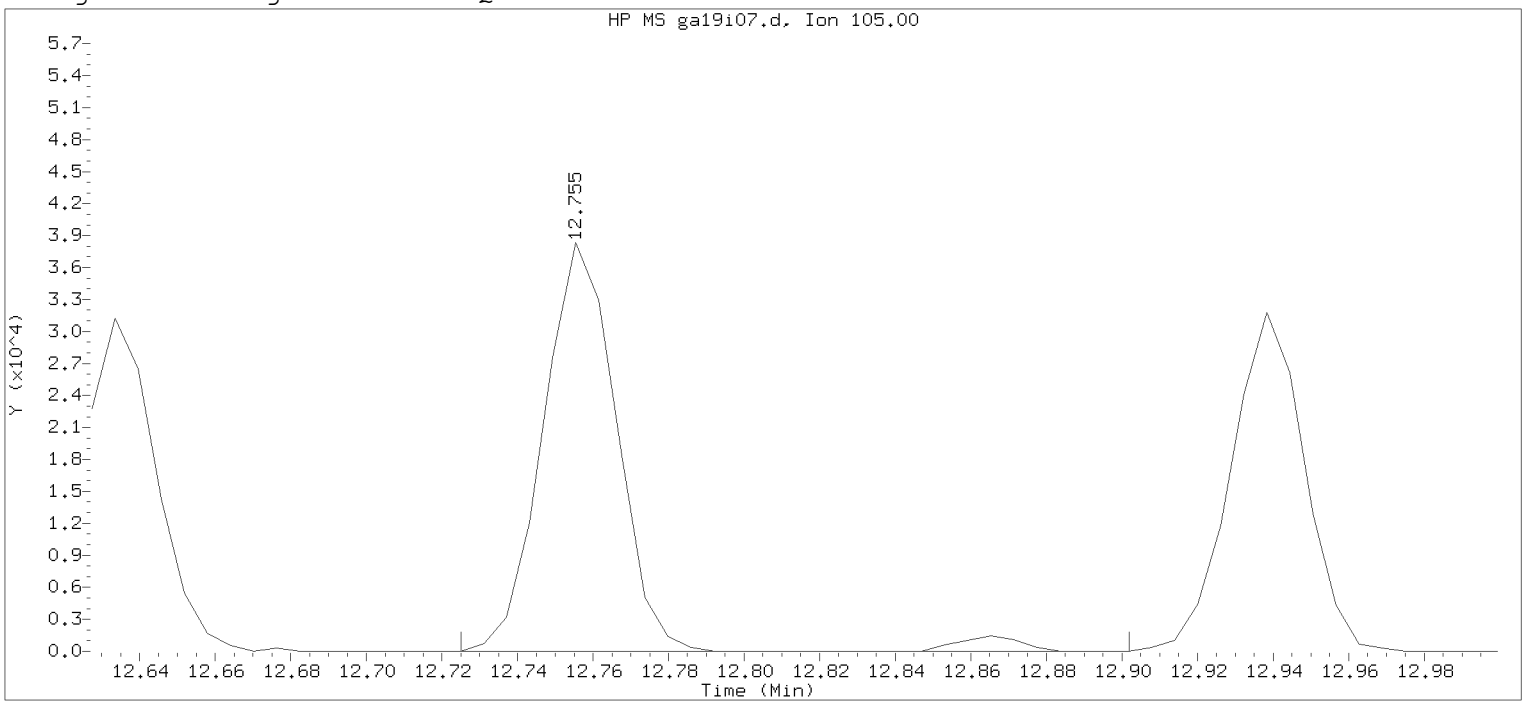
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:48.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:05.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



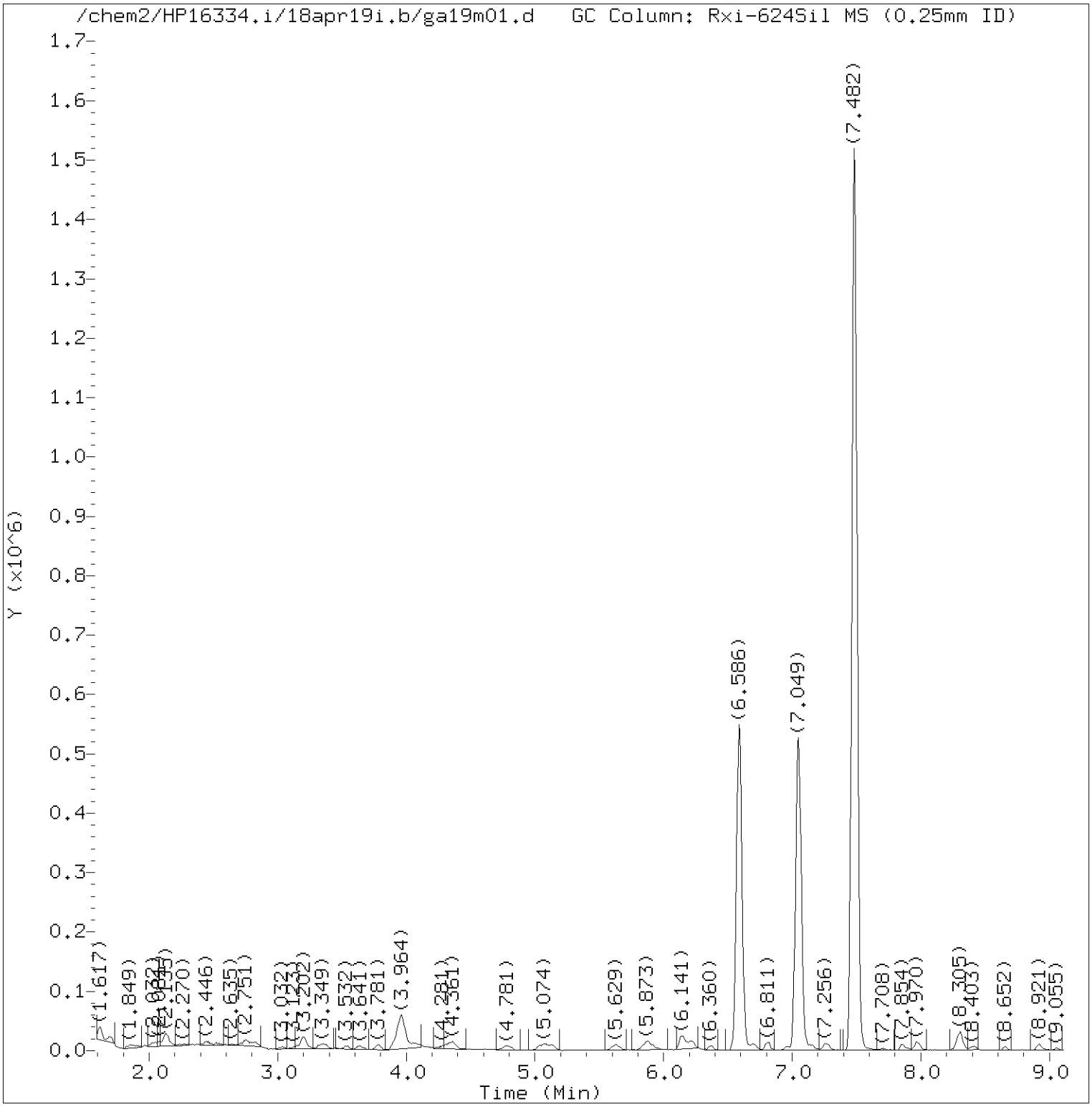
Data File: /chem2/HP16334.i/18apr19i.b/ga19i07.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:37 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 14:53 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 128		
Compound Name	: sec-Butylbenzene		
Scan Number	: 1832		
Retention Time (minutes)	: 12.755		
Quant Ion	: 105.00		
Area	: 52877		
On-column Amount (ng)	: 0.1868		
Integration start scan	: 1826	Integration stop scan:	1855
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:48.
Target 3.5 esignature used for mskr0754



Total Ion Chromatogram (TIC)

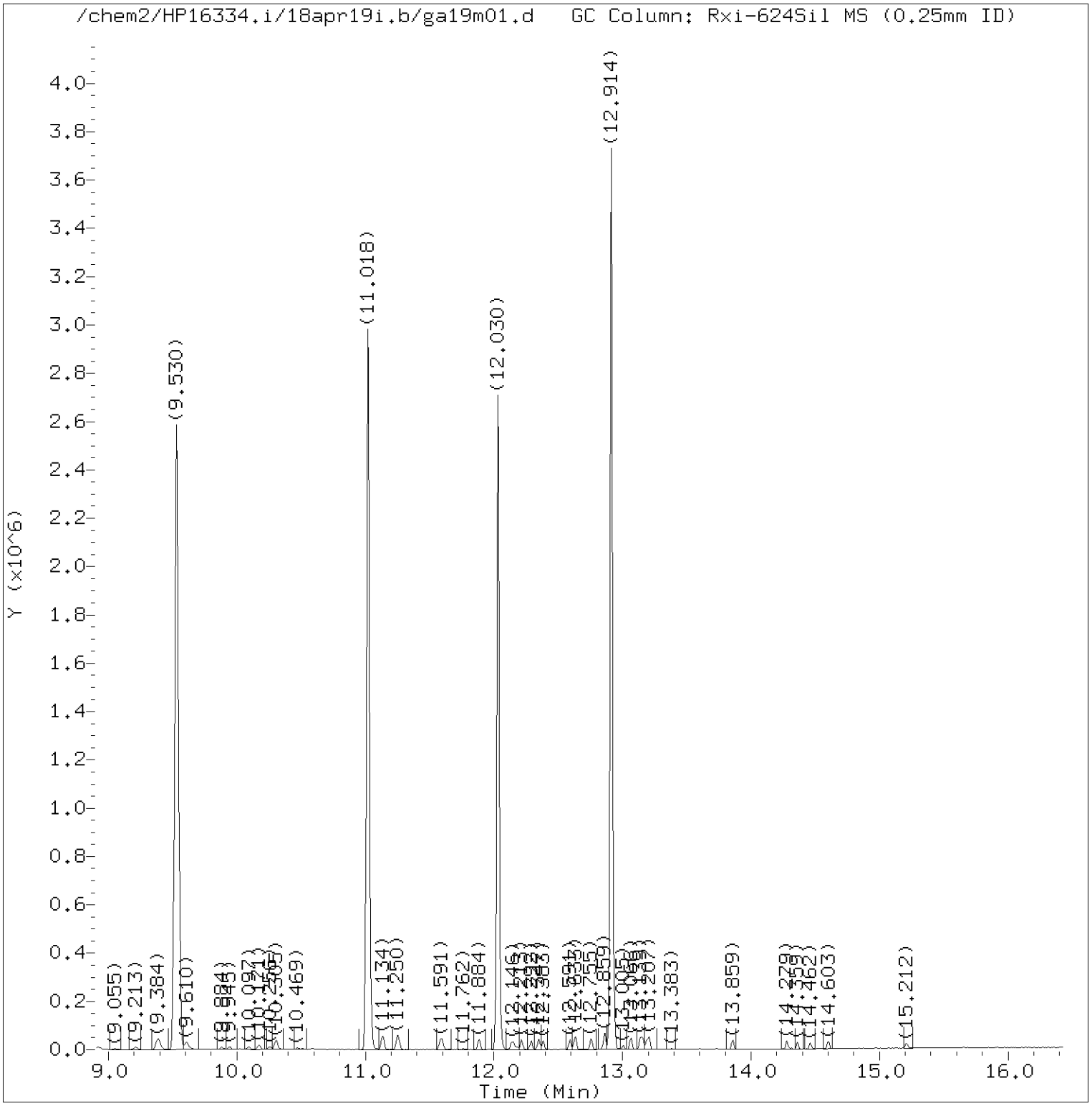
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.837	85	7416	0.100
2) Chloromethane	(2)	2.026	50	8287	0.111
5) Vinyl Chloride	(2)	2.129	62	6888	0.108
6) 1,3-Butadiene	(2)	2.129	39	18830M	0.138
7) Bromomethane	(2)	2.446	94	4920	0.115
8) Chloroethane	(2)	2.538	64	4044	0.111
9) Dichlorofluoromethane	(2)	2.751	67	10114	0.115
10) Trichlorofluoromethane	(2)	2.812	101	8791	0.105
11) Ethyl ether	(2)	3.032	59	4344	0.104
12) Freon 123a	(2)	3.129	67	5914M	0.100
13) Acrolein	(1)	3.202	56	38043	5.258
15) 1,1-Dichloroethene	(2)	3.343	96	3645	0.089
14) Acetone	(1)	3.367	43	16446	1.407
16) Freon 113	(2)	3.379	101	3750	0.081
17) Methyl Iodide	(2)	3.519	142	7300	0.092
18) Carbon Disulfide	(2)	3.623	76	19961M	0.123
21) Methyl Acetate	(1)	3.775	43	3487M	0.106
22) Allyl Chloride	(2)	3.788	41	10989	0.116
23) Methylene Chloride	(2)	3.952	84	9932	0.180
26)*t-Butyl Alcohol-d10	(1)	3.964	65	209443M	50.000
28) t-Butyl Alcohol	(1)	4.092	59	8796	2.219
29) Acrylonitrile	(1)	4.281	53	5679	0.437
30) Methyl Tertiary Butyl Ether	(2)	4.336	73	13847	0.097
31) trans-1,2-Dichloroethene	(2)	4.361	96	4371	0.092
32) n-Hexane	(2)	4.787	57	6480	0.081
33) 1,1-Dichloroethane	(2)	5.037	63	9045	0.093
34) di-Isopropyl Ether	(2)	5.086	45	20117	0.101
35) 2-Chloro-1,3-Butadiene	(2)	5.135	53	7750	0.087
37) Ethyl t-butyl ether	(2)	5.629	59	17412	0.100
38) 2-Butanone	(1)	5.830	43	20716	1.030
39) cis-1,2-Dichloroethene	(2)	5.879	96	5084	0.095
41) 2,2-Dichloropropane	(2)	5.891	77	7693	0.097
42) Propionitrile	(1)	5.934	54	8036M	1.616
40) 1,2-Dichloroethene (Total)	(2)		96	9455	0.187
45) Methacrylonitrile	(1)	6.147	67	14677	0.931
47) Bromochloromethane	(2)	6.220	128	1945	0.079
48) Tetrahydrofuran	(1)	6.226	71	4545	0.949
49) Chloroform	(2)	6.372	83	9149	0.099

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.592	113	493821	9.939
51) 1,1,1-Trichloroethane	(2)	6.604	97	6844	0.087
52) Cyclohexane	(2)	6.696	56	8341	0.089
55) 1,1-Dichloropropene	(2)	6.805	75	6574	0.090
54) Carbon Tetrachloride	(2)	6.811	117	5382	0.085
56) Isobutyl Alcohol	(1)	6.970	41	9833	6.243
57)$1,2-Dichloroethane-d4	(2)	7.043	102	103972	9.874
58) Benzene	(2)	7.074	78	20423	0.101
59) 1,2-Dichloroethane	(2)	7.153	62	9219	0.129
60) t-Amyl methyl ether	(2)	7.256	73	13873	0.094
63)*Fluorobenzene	(2)	7.482	96	1975906	10.000
62) n-Heptane	(2)	7.494	43	8736	0.090
65) n-Butanol	(1)	7.860	56	9524	7.639
67) Trichloroethene	(2)	7.970	95	4947	0.093
69) Methylcyclohexane	(2)	8.275	83	6138	0.068
70) 1,2-Dichloropropane	(2)	8.305	63	5507	0.098
71) Methyl Methacrylate	(1)	8.384	69	2369	0.079
73) Dibromomethane	(2)	8.427	93	2443	0.092
74) Bromodichloromethane	(2)	8.659	83	5967	0.091
76) 2-Nitropropane	(1)	8.915	41	8568	0.833
80) cis-1,3-Dichloropropene	(2)	9.213	75	7309	0.090
81) 4-Methyl-2-Pentanone	(1)	9.384	43	46864M	0.948
82)$Toluene-d8	(3)	9.530	98	2004422	10.082
83) Toluene	(3)	9.604	92	12237	0.097
84) trans-1,3-Dichloropropene	(3)	9.884	75	5993	0.088
86) Ethyl Methacrylate	(3)	9.945	69	5894	0.096
88) 1,1,2-Trichloroethane	(3)	10.091	97	4048	0.107
85) 1,3-Dichloropropene (total)	(3)		75	13302	0.178
89) Tetrachloroethene	(3)	10.171	166	5107	0.087
90) 1,3-Dichloropropane	(3)	10.256	76	6722	0.097
91) 2-Hexanone	(1)	10.305	43	31709M	0.913
93) Dibromochloromethane	(3)	10.475	129	3385	0.081
95) 1,2-Dibromoethane	(3)	10.591	107	3431	0.095
97)*Chlorobenzene-d5	(3)	11.018	117	1482426	10.000
98) Chlorobenzene	(3)	11.048	112	14281	0.099
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	4297	0.089
100) Ethylbenzene	(3)	11.134	91	23968	0.096
101) m+p-Xylene	(3)	11.256	106	18922	0.199

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

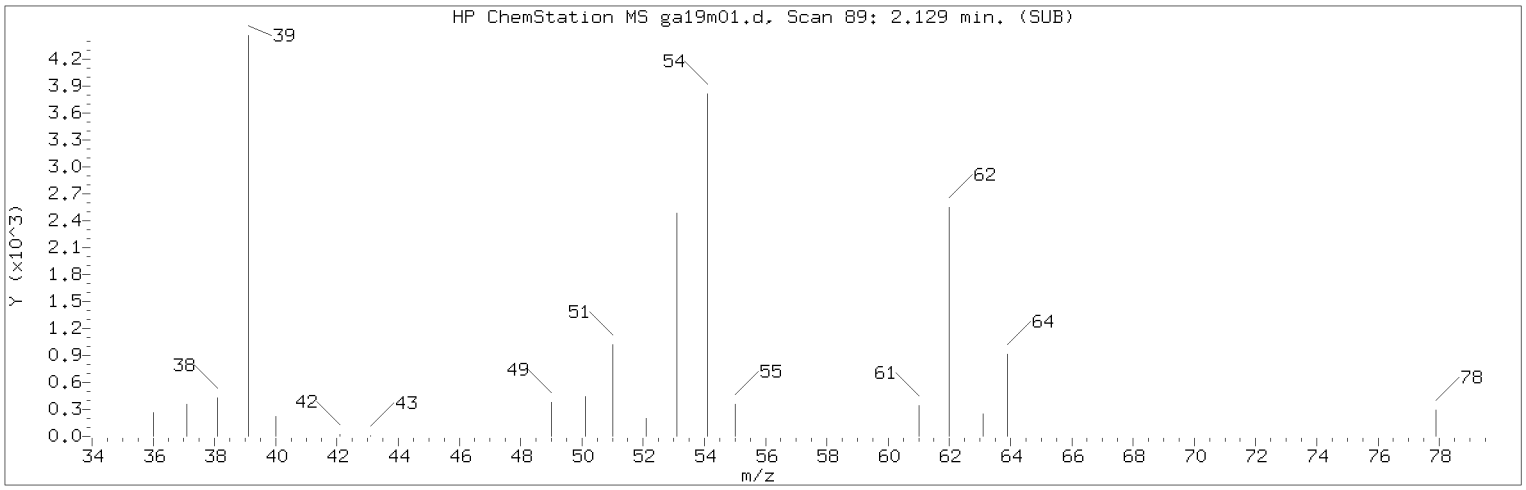
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.585	106	9038	0.095
106) Styrene	(3)	11.603	104	13763	0.088
105) Xylene (Total)	(3)		106	27960	0.293
107) Bromoform	(3)	11.762	173	1592	0.066
108) Isopropylbenzene	(3)	11.884	105	23383	0.094
111)$4-Bromofluorobenzene	(3)	12.030	95	761924	10.013
113) 1,1,2,2-Tetrachloroethane	(4)	12.127	83	4765	0.098
114) Bromobenzene	(4)	12.146	156	6107	0.095
116) 1,2,3-Trichloropropane	(4)	12.182	110	1071	0.079
117) n-Propylbenzene	(4)	12.213	91	27732	0.093
119) 2-Chlorotoluene	(4)	12.292	126	5453	0.092
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	19480	0.091
122) 4-Chlorotoluene	(4)	12.383	126	5787	0.093
125) tert-Butylbenzene	(4)	12.591	134	4029M	0.090
126) Pentachloroethane	(4)	12.627	167	2375	0.069
127) 1,2,4-Trimethylbenzene	(4)	12.640	105	19966	0.092
128) sec-Butylbenzene	(4)	12.755	105	23947M	0.088
131) 1,3-Dichlorobenzene	(4)	12.859	146	12904	0.101
132) p-Isopropyltoluene	(4)	12.865	119	20975	0.089
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	830067	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	12797	0.099
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	10395	0.106
136) Benzyl Chloride	(4)	12.999	126	1071	0.060
138) n-Butylbenzene	(4)	13.158	92	11824M	0.093
139) 1,2-Dichlorobenzene	(4)	13.188	146	12080	0.101
143) 1,2-Dibromo-3-chloropropane	(1)	13.737	155	347	0.047
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	10028	0.094
145) 1,2,4-Trichlorobenzene	(4)	14.279	180	9590	0.097
146) Hexachlorobutadiene	(4)	14.359	225	4720	0.091
147) Naphthalene	(4)	14.462	128	15274	0.093
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	7776	0.092

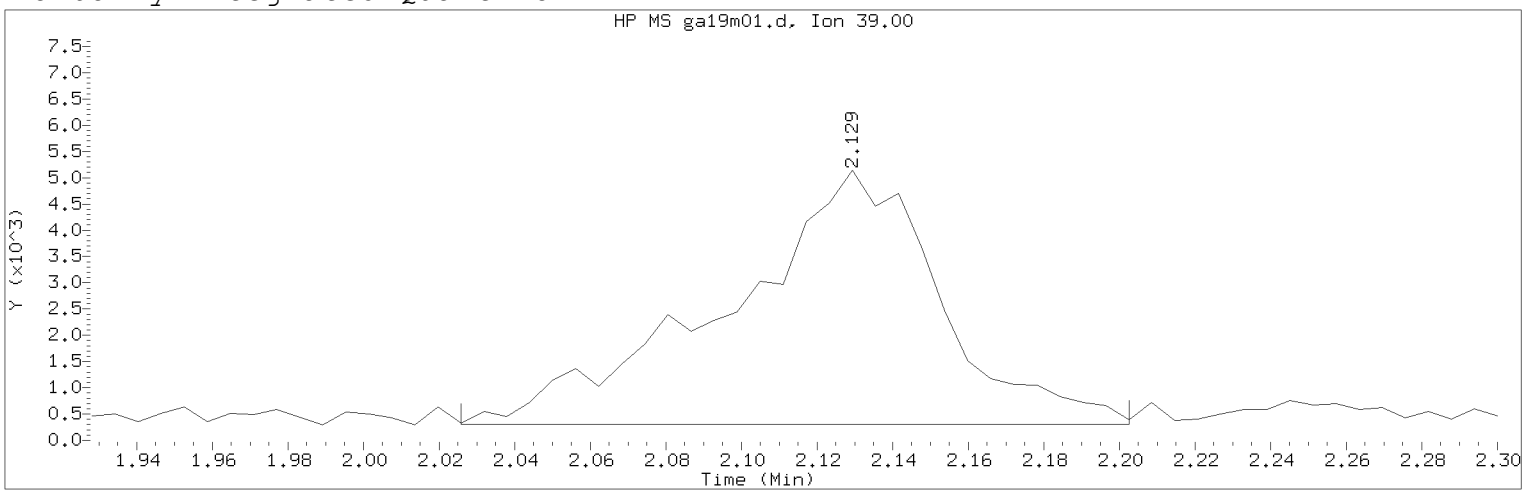
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

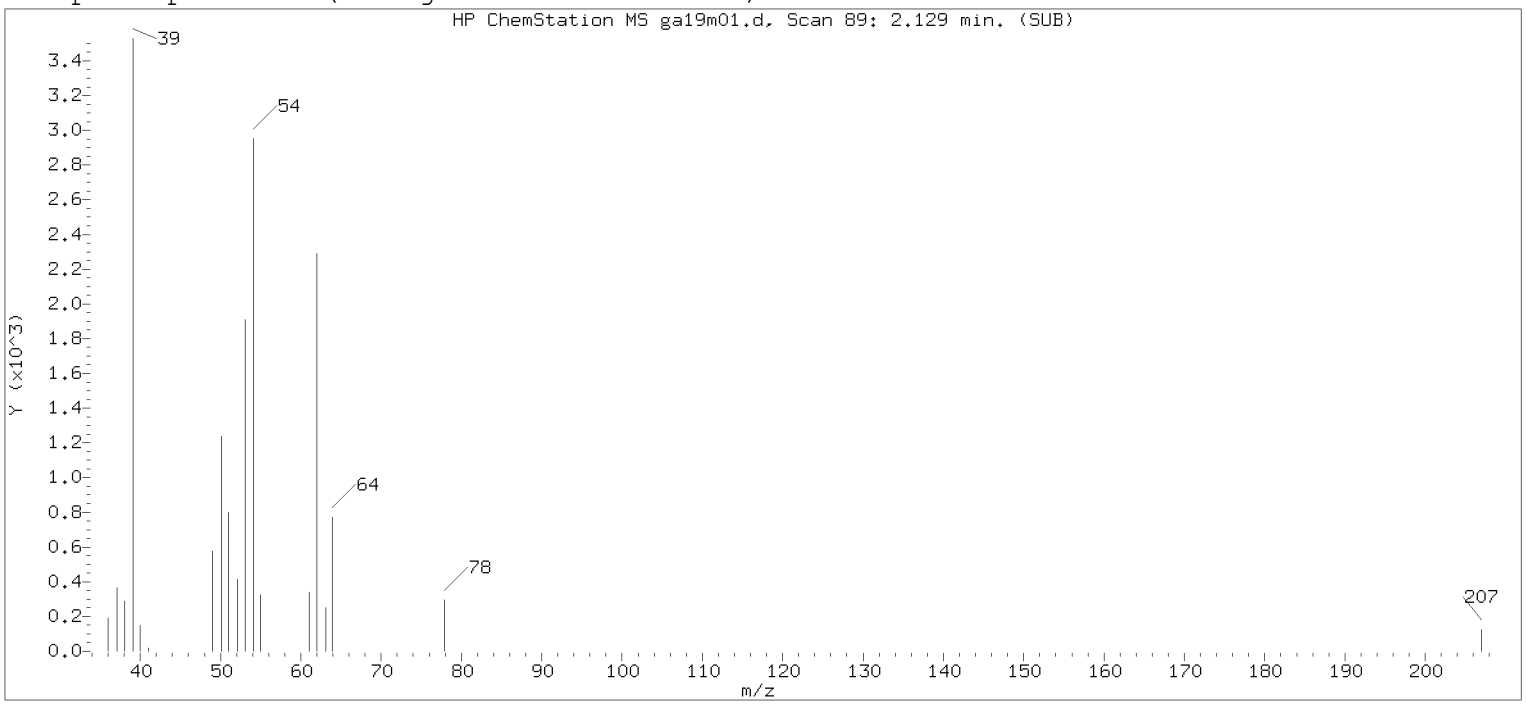
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area (flag) : 18830M
On-Column Amount (ng) : 0.1382
Integration start scan : 71 Integration stop scan: 100
Y at integration start : 304 Y at integration end: 304

Reason for manual integration: improper integration

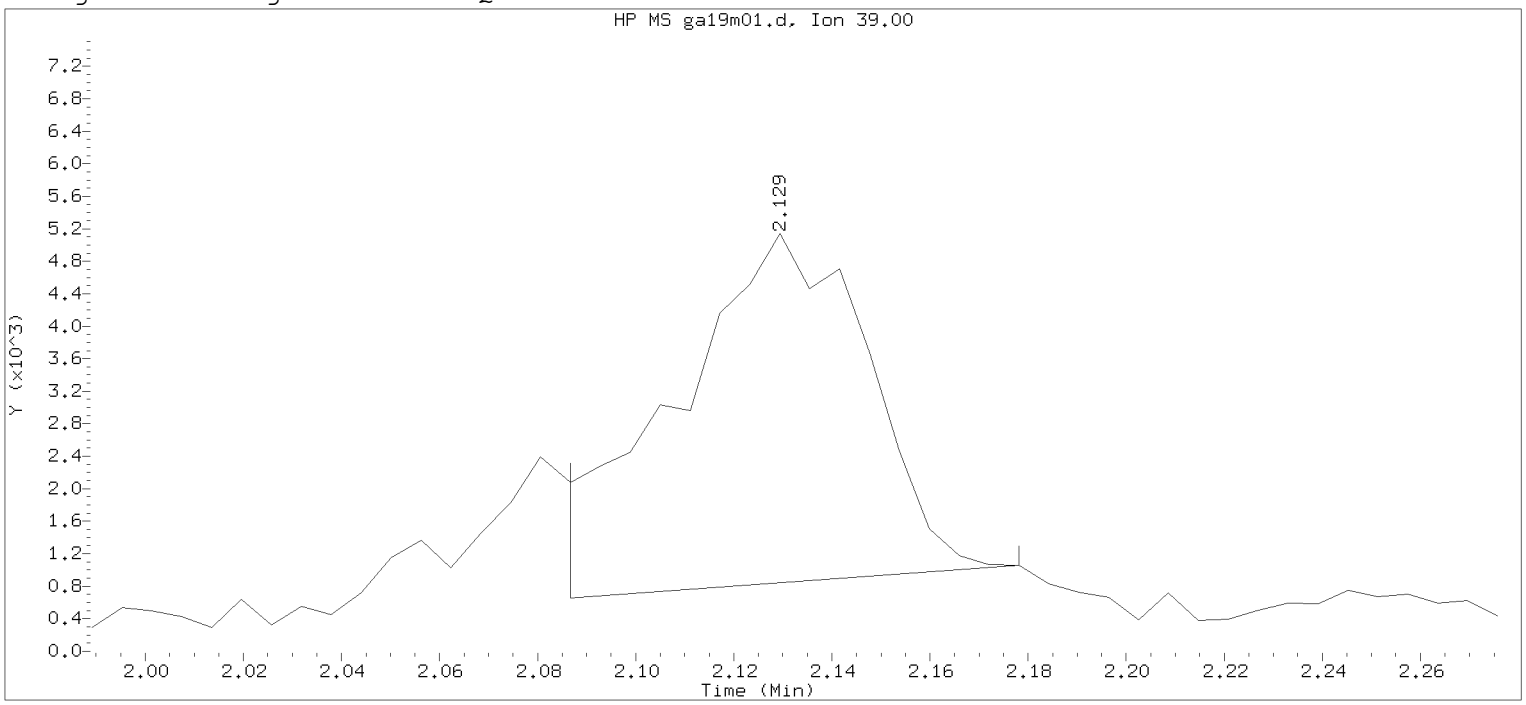
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 89
Retention Time (minutes): 2.129
Quant Ion : 39.00
Area : 11823
On-column Amount (ng) : 0.0927
Integration start scan : 81 Integration stop scan: 96
Y at integration start : 659 Y at integration end: 1055

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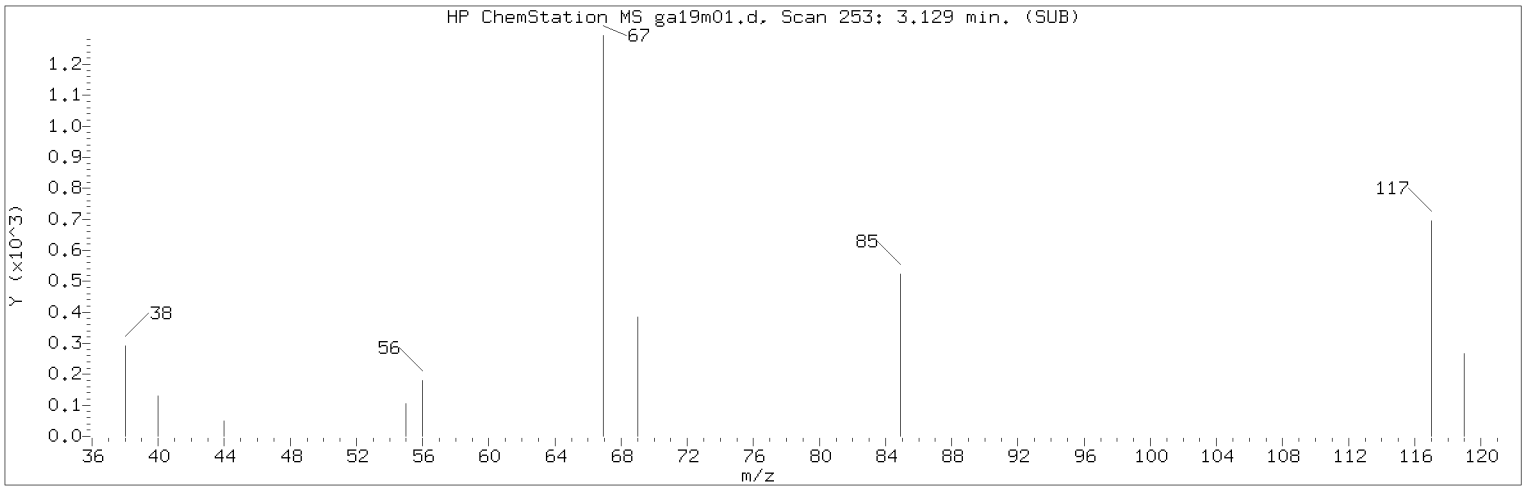
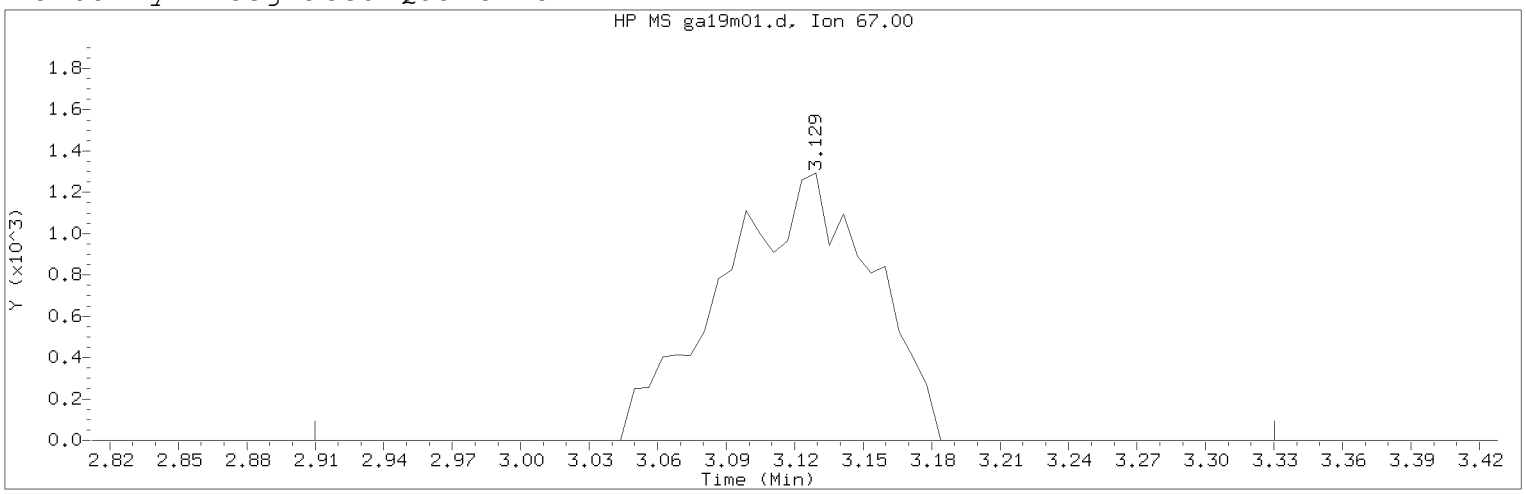
Target 3.5 esignature used. Page 7551

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

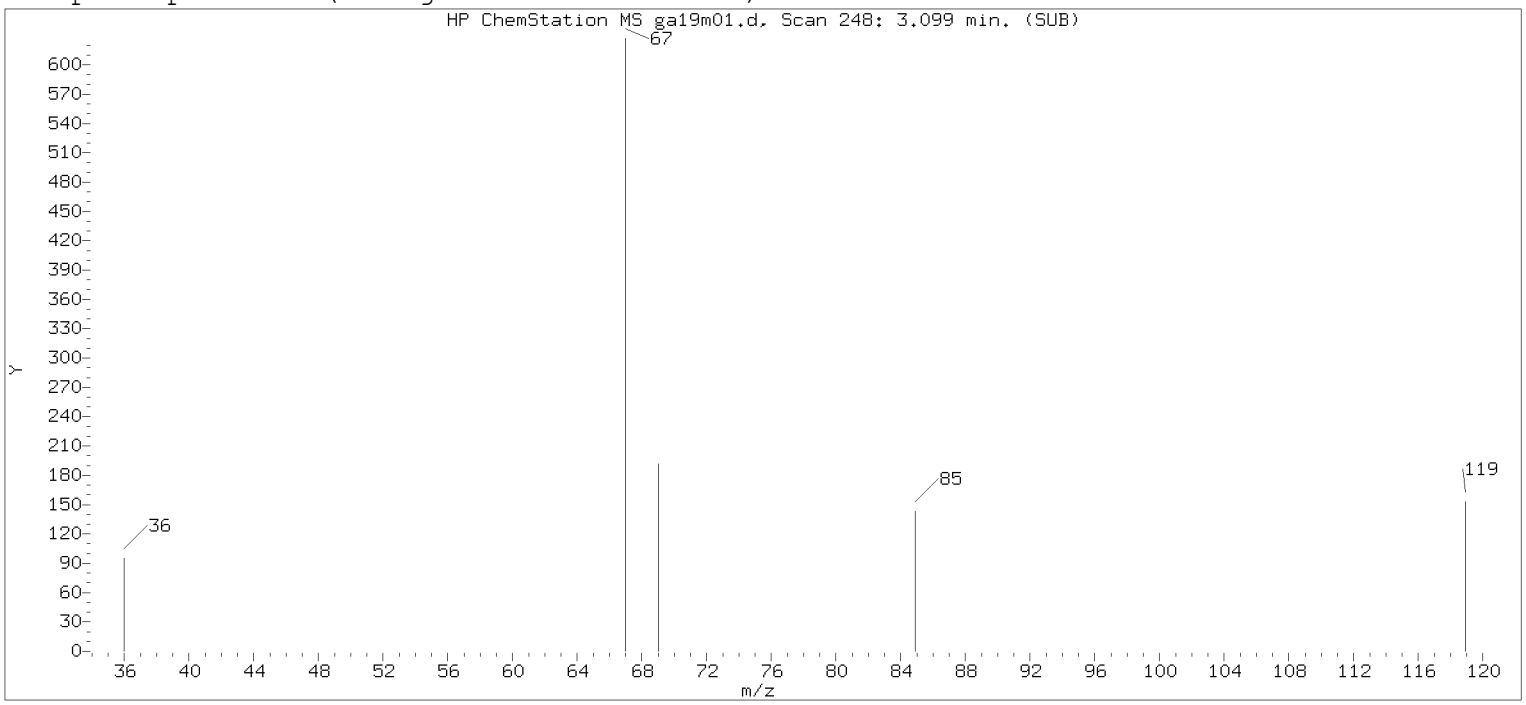
Compound Number : 12
Compound Name : Freon 123a
Scan Number : 253
Retention Time (minutes): 3.129
Quant Ion : 67.00
Area (flag) : 5914M
On-Column Amount (ng) : 0.1000
Integration start scan : 216 Integration stop scan: 285
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

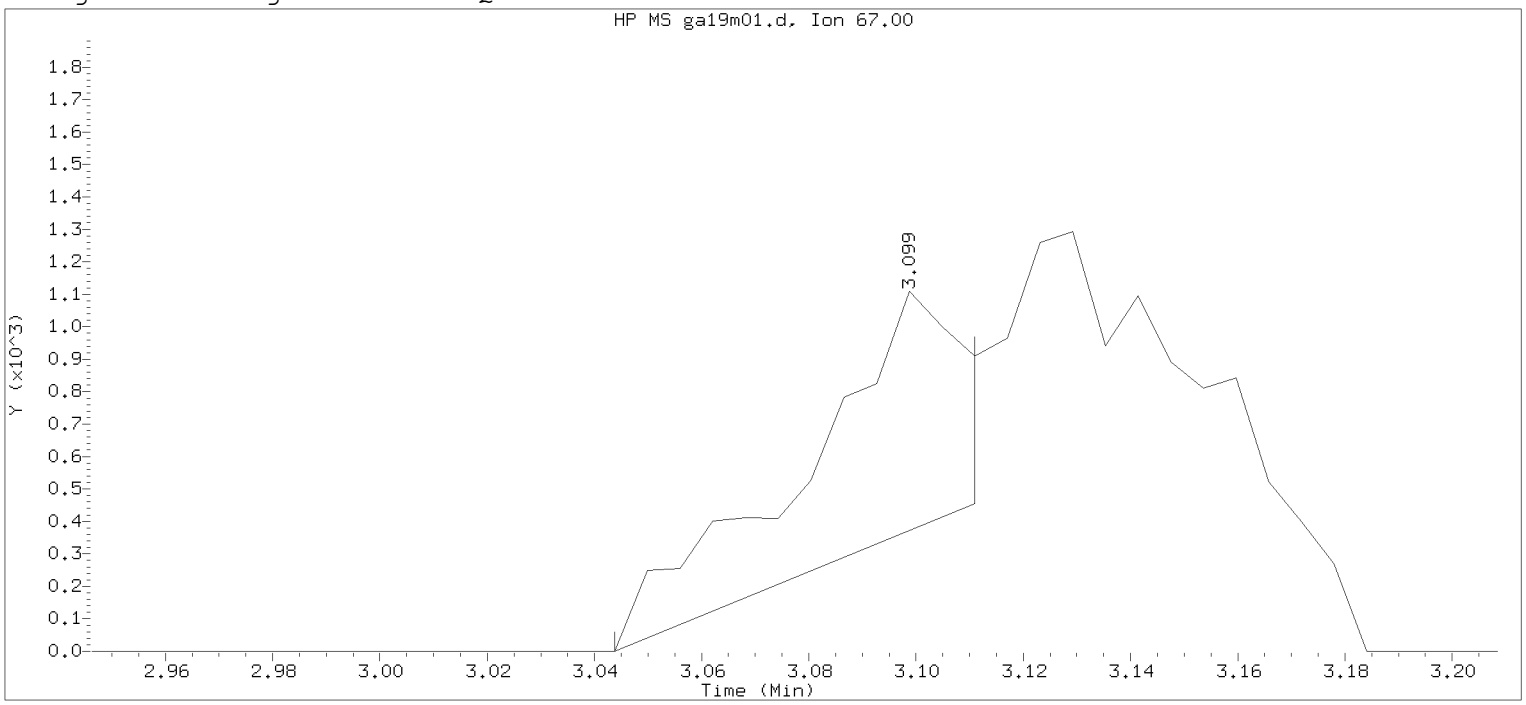
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

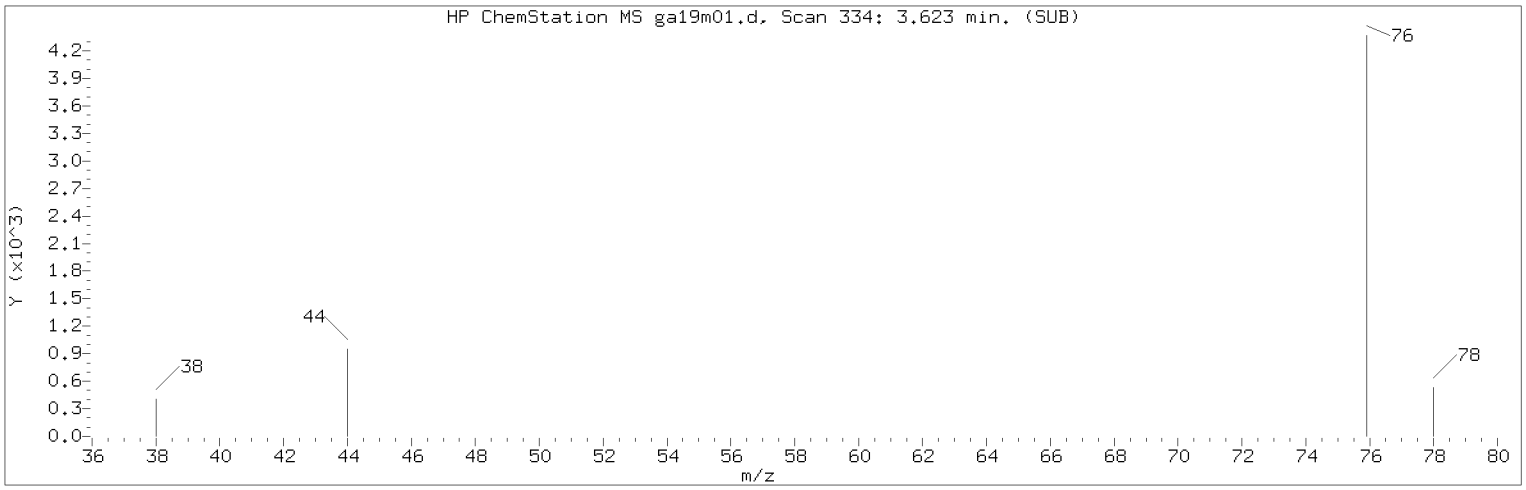
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

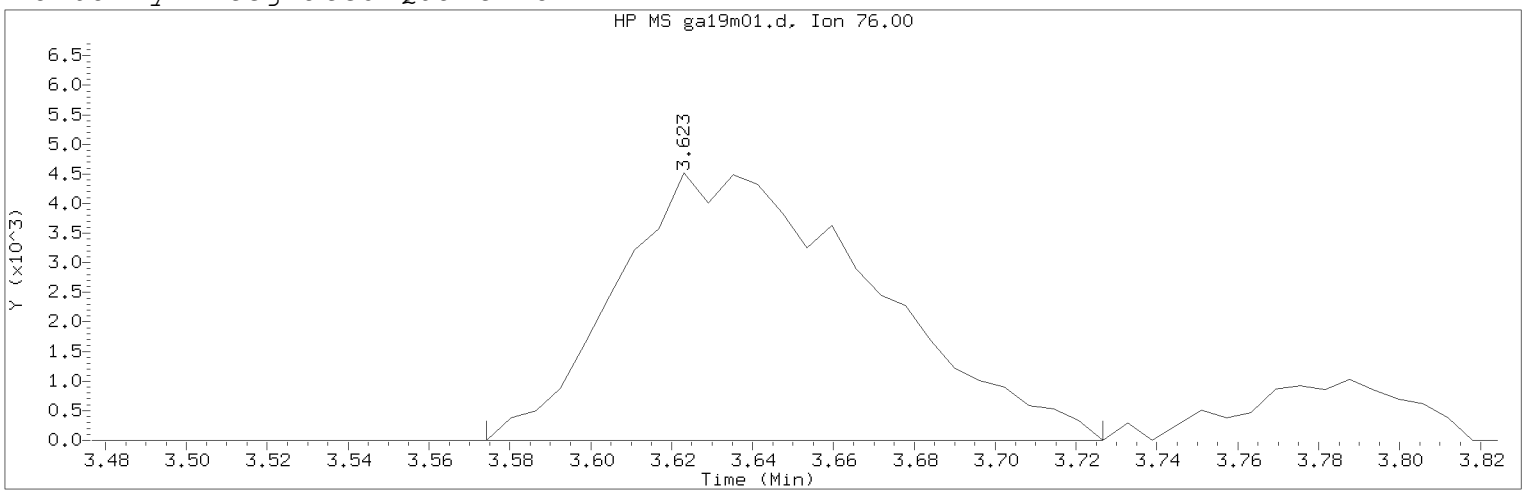
Compound Number : 12
Compound Name : Freon 123a
Scan Number : 248
Retention Time (minutes): 3.099
Quant Ion : 67.00
Area : 1437
On-column Amount (ng) : 0.0272
Integration start scan : 238 Integration stop scan: 249
Y at integration start : 0 Y at integration end: 454

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used in mdl0.1750

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

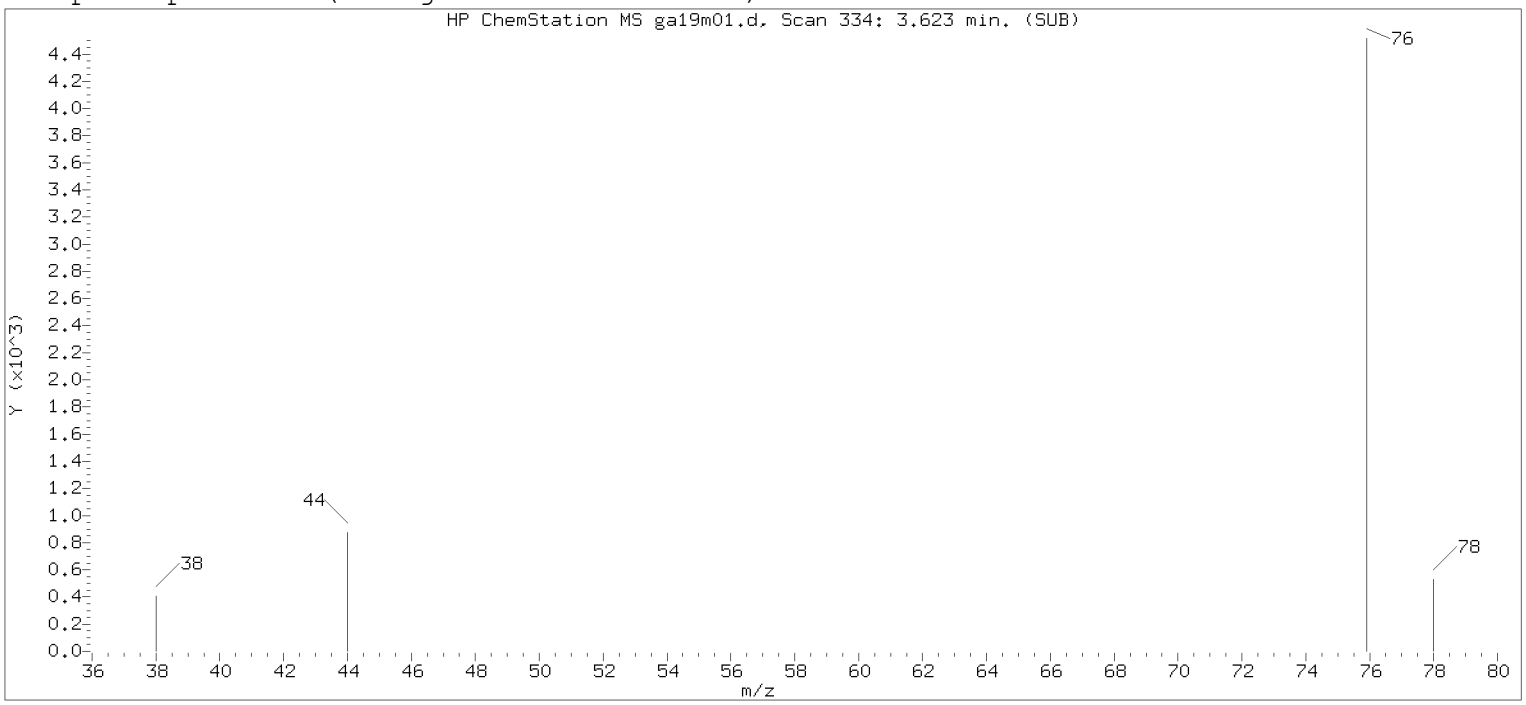
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 76.00
Area (flag) : 19961M
On-Column Amount (ng) : 0.1230
Integration start scan : 325 Integration stop scan: 350
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

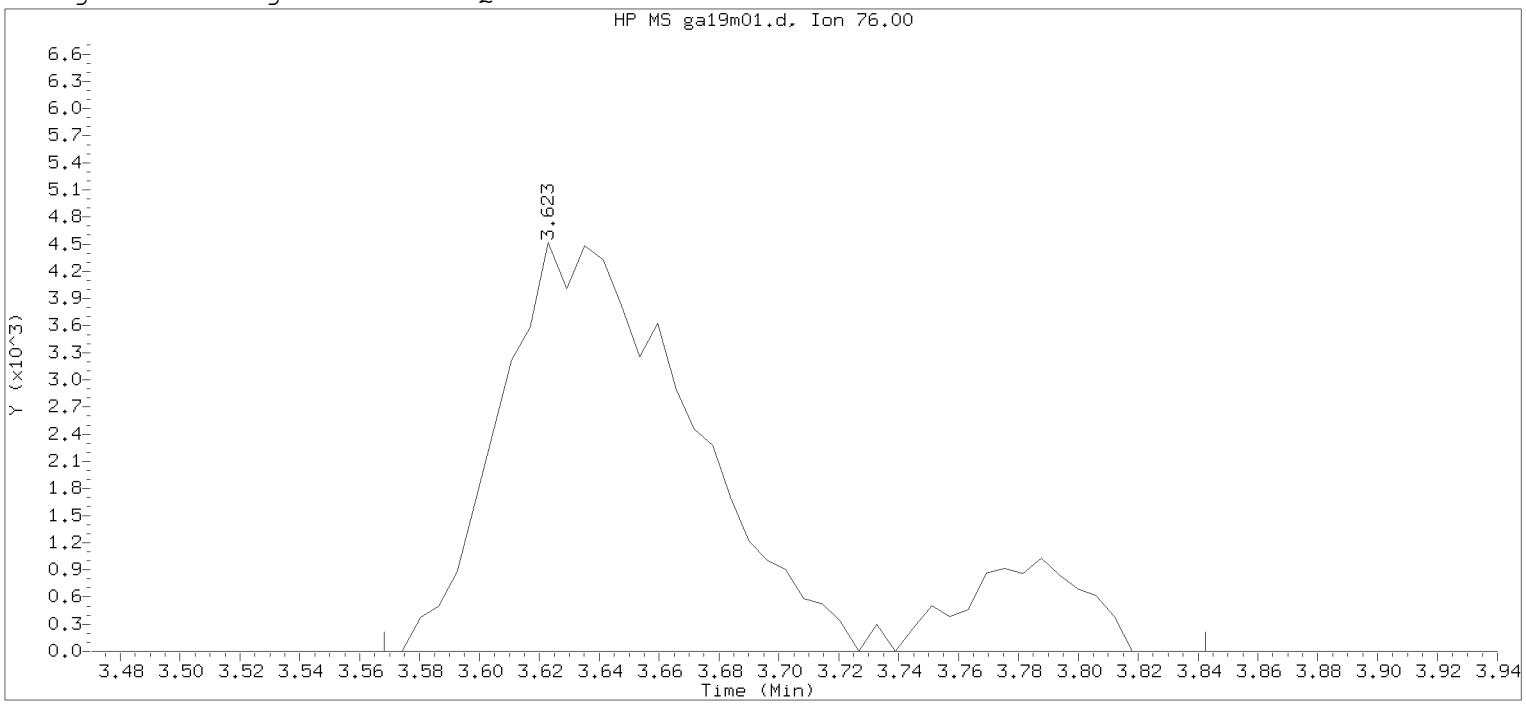
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

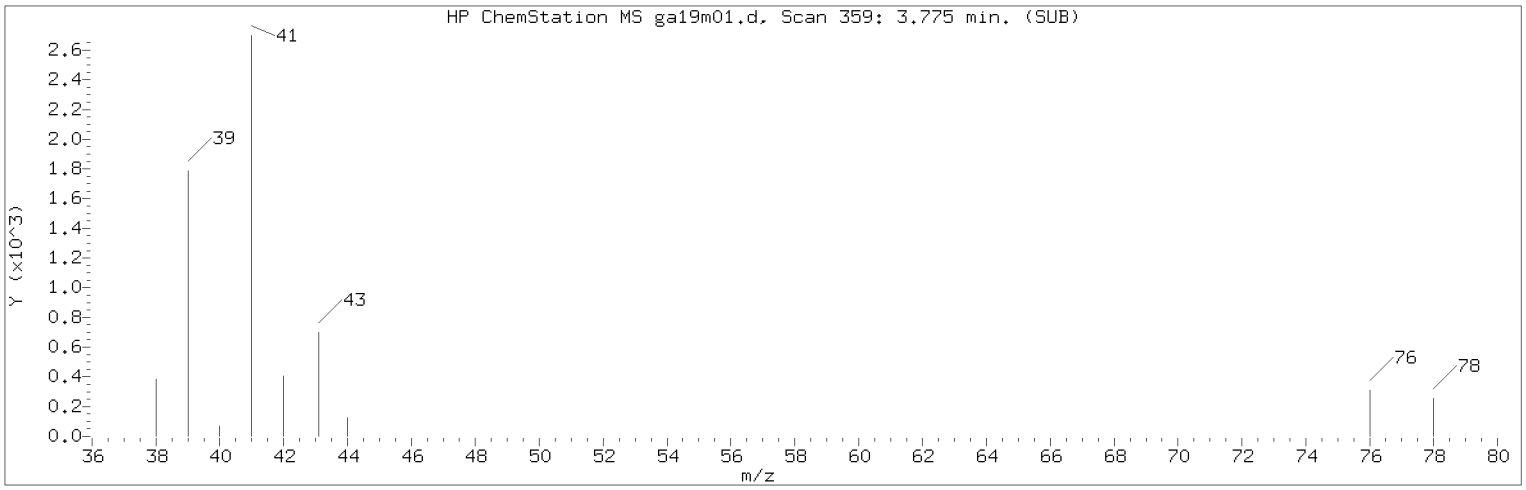
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

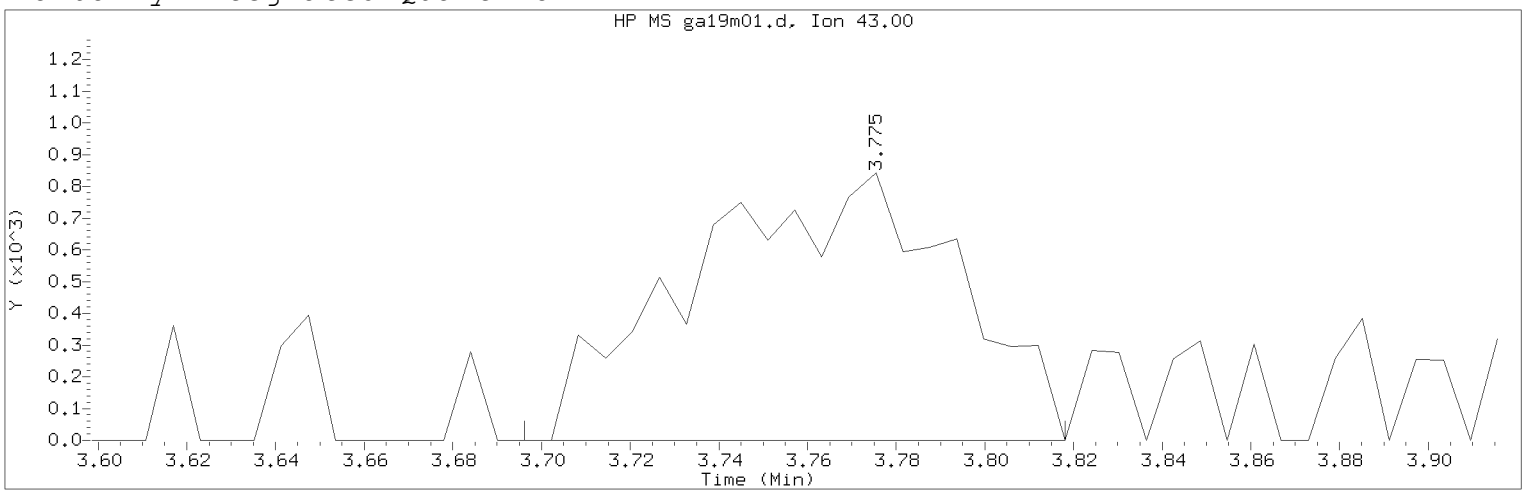
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 334
Retention Time (minutes): 3.623
Quant Ion : 76.00
Area : 22924
On-column Amount (ng) : 0.1413
Integration start scan : 324 Integration stop scan: 369
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

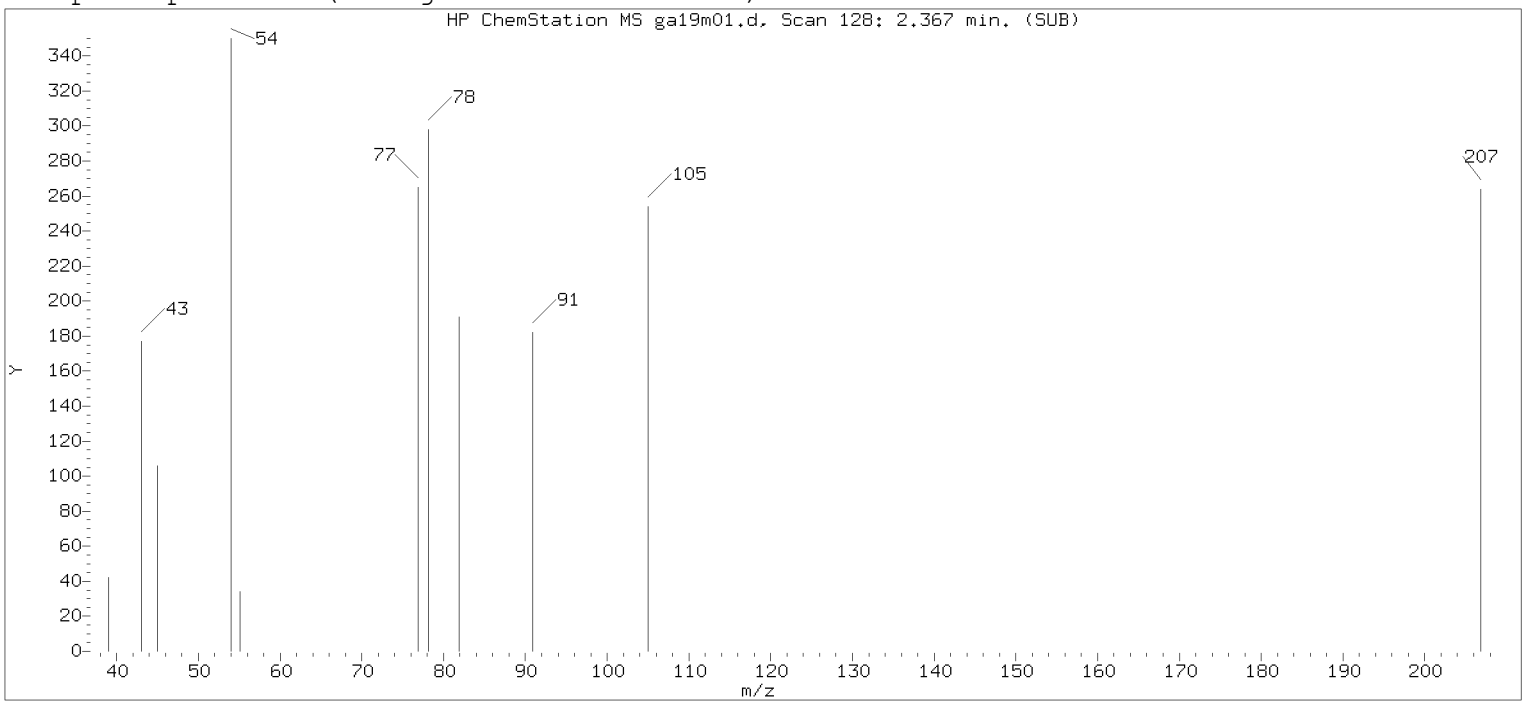
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 359
Retention Time (minutes): 3.775
Quant Ion : 43.00
Area (flag) : 3487M
On-Column Amount (ng) : 0.1058
Integration start scan : 345 Integration stop scan: 365
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

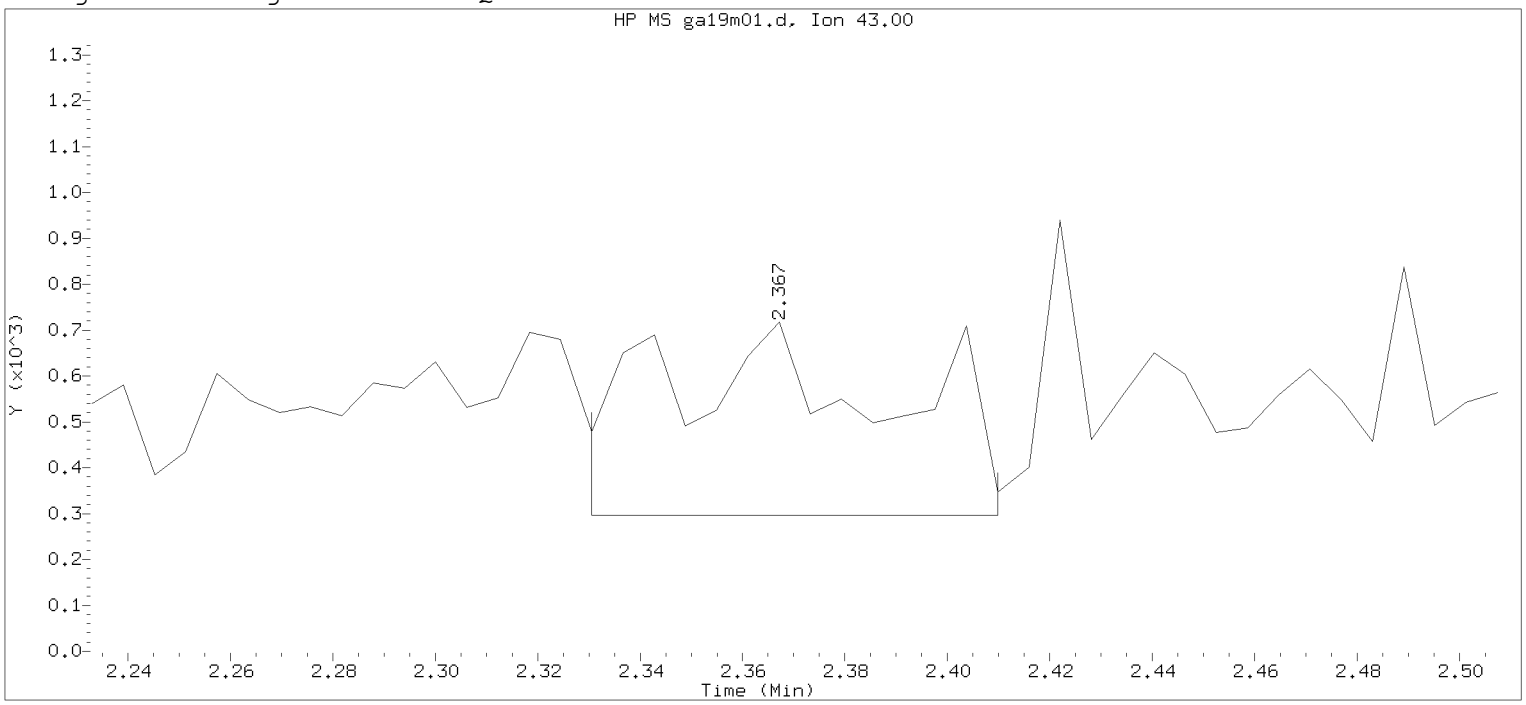
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

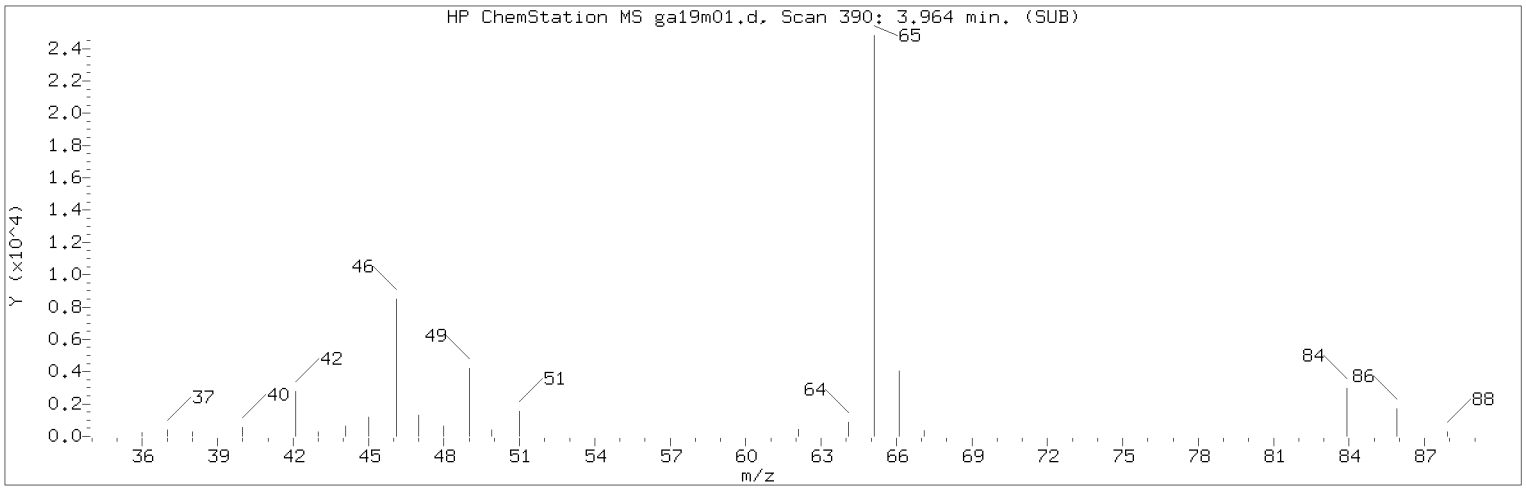
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

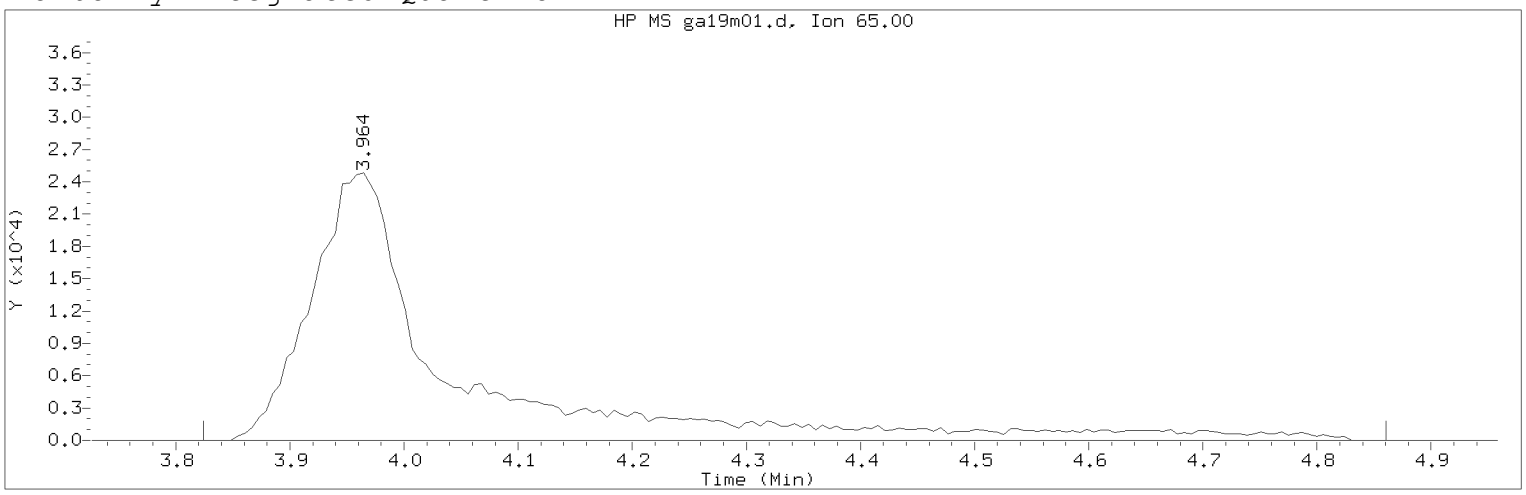
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 128
Retention Time (minutes): 2.367
Quant Ion : 43.00
Area : 1312
On-column Amount (ng) : 0.8499
Integration start scan : 121 Integration stop scan: 134
Y at integration start : 297 Y at integration end: 297

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used. mskrause750

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

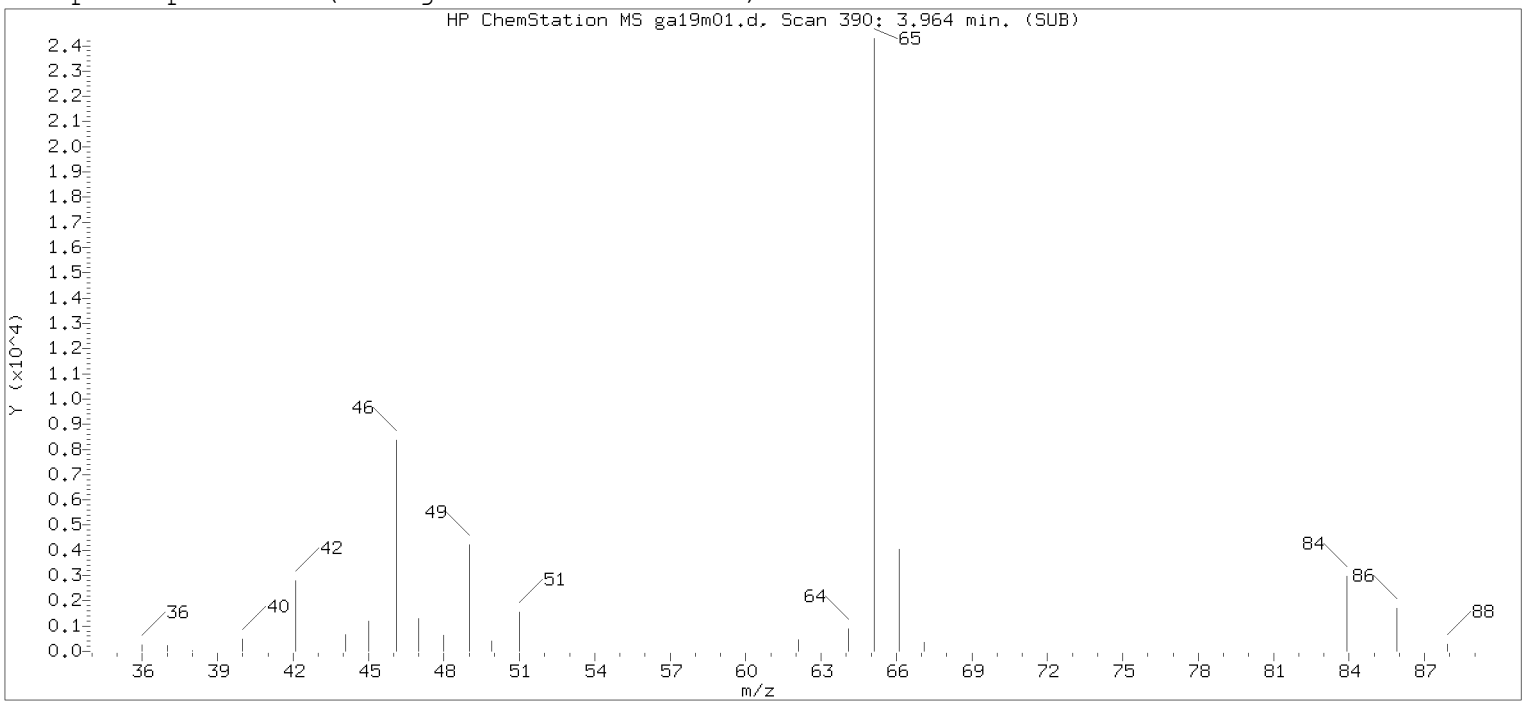
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 65.00
Area (flag) : 209443M
On-Column Amount (ng) : 50.0000
Integration start scan : 366 Integration stop scan: 536
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

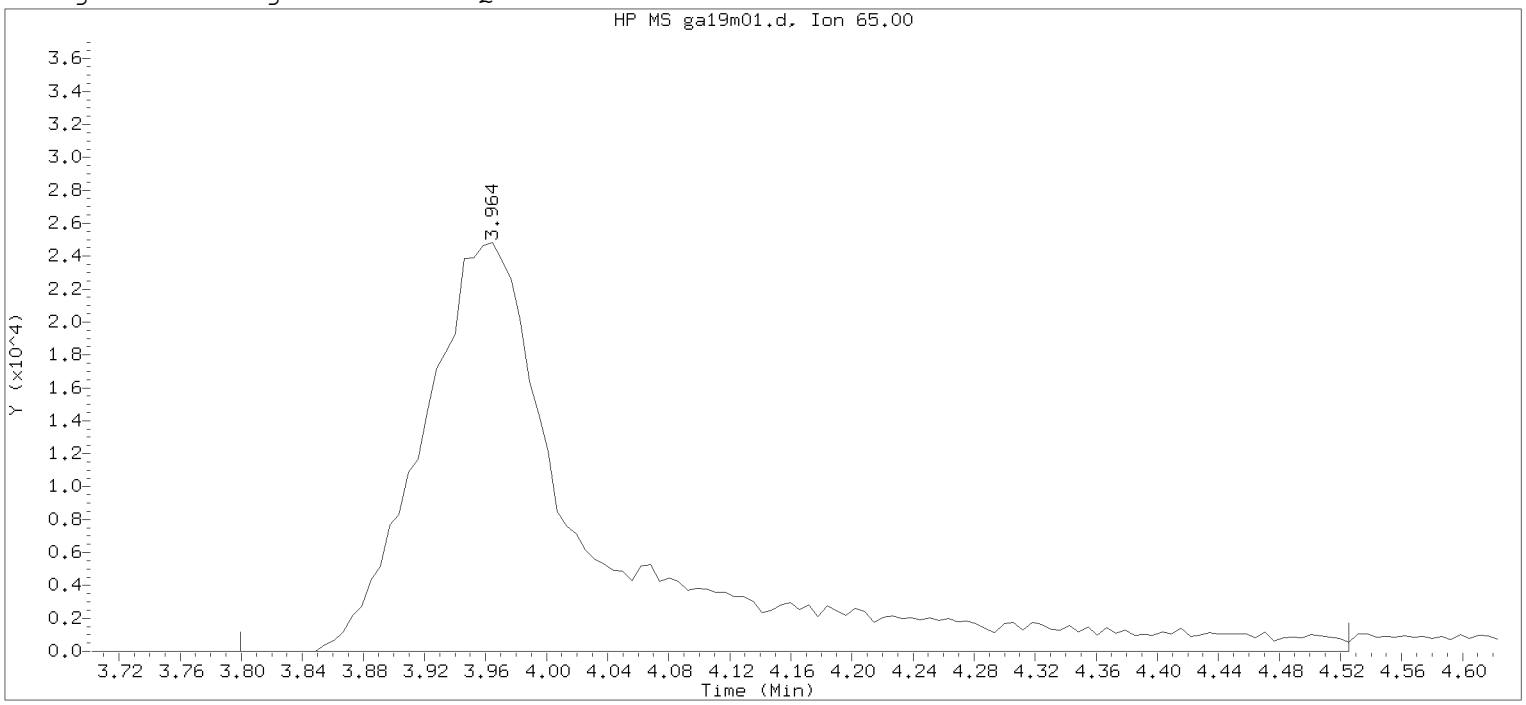
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 390
Retention Time (minutes): 3.964
Quant Ion : 65.00
Area : 195900
On-column Amount (ng) : 50.0000
Integration start scan : 362 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

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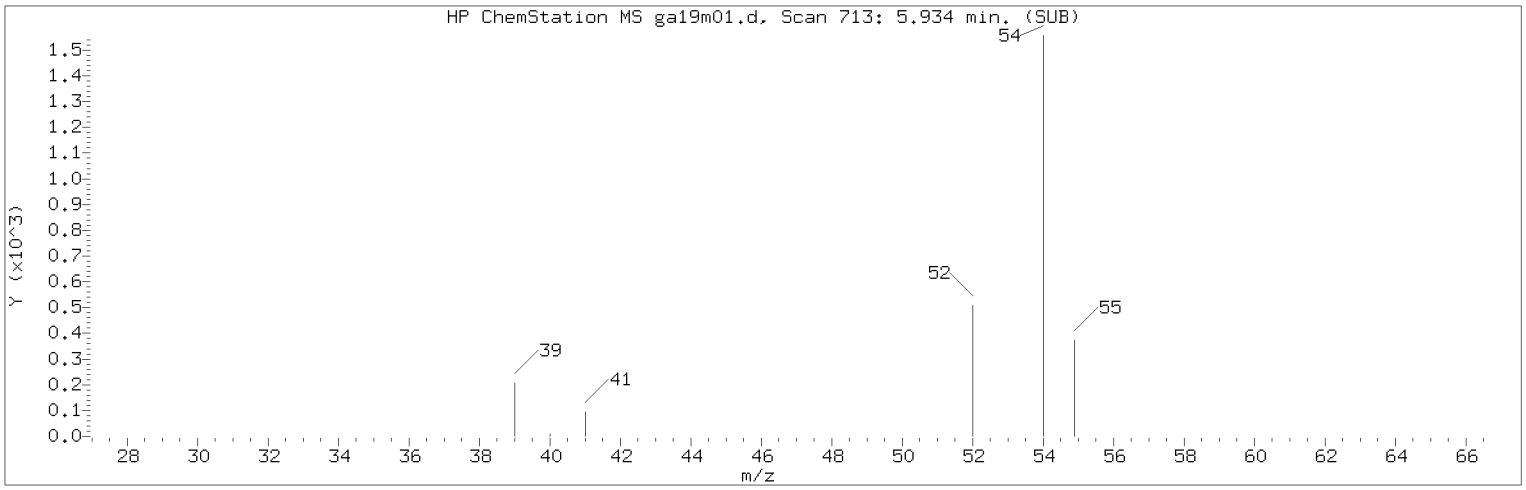
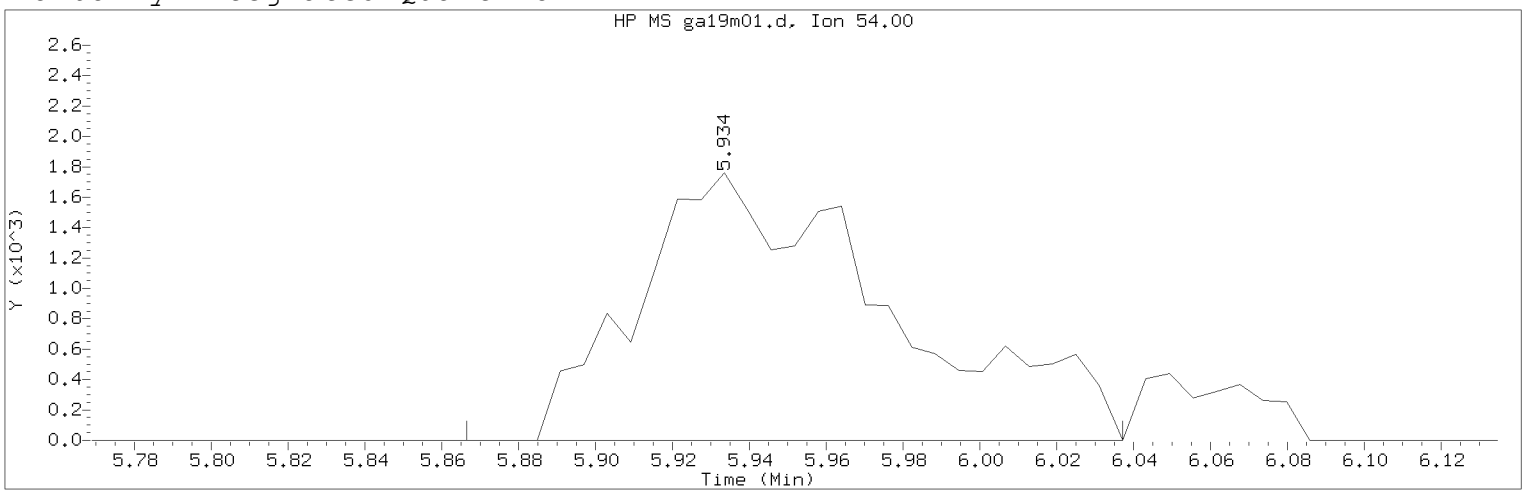
Target 3.5 esignature used. Page 750

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

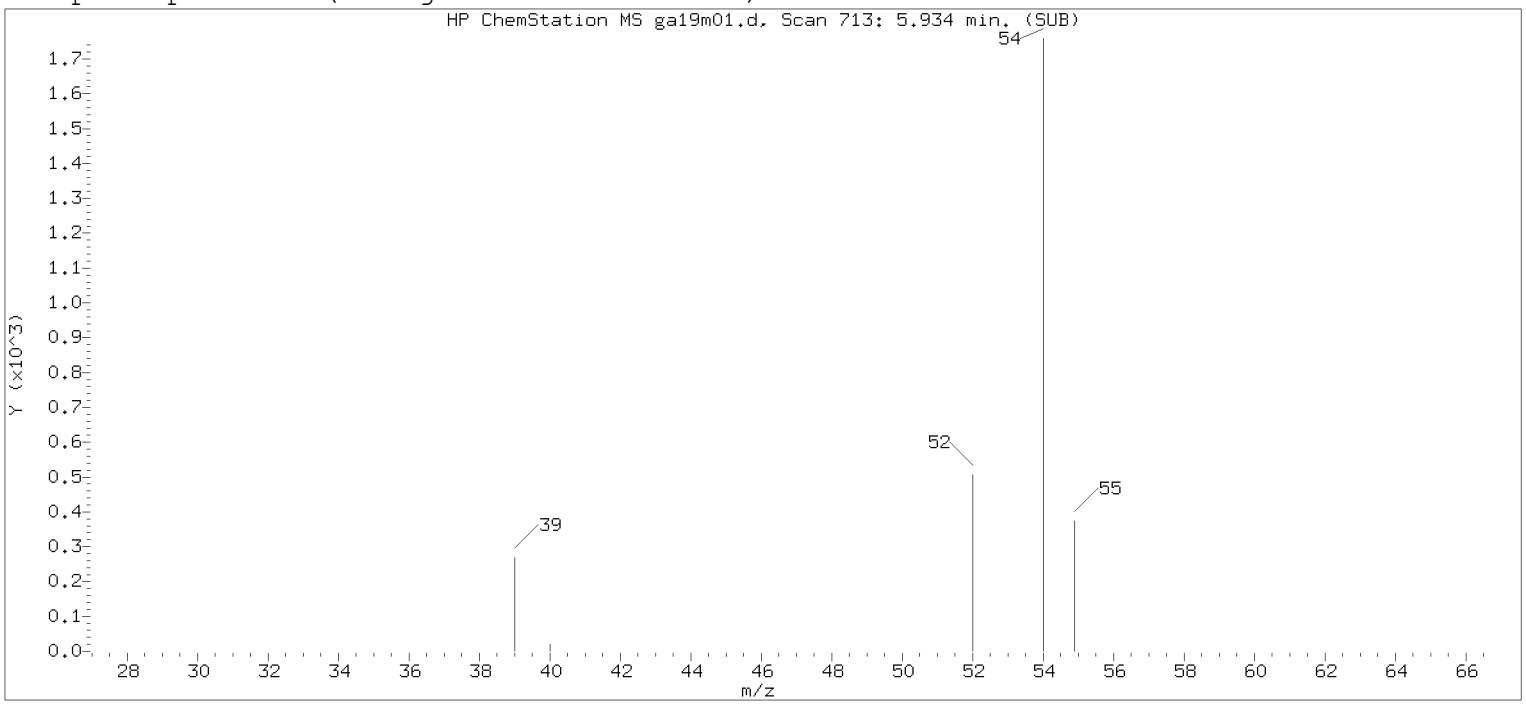
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 713
Retention Time (minutes): 5.934
Quant Ion : 54.00
Area (flag) : 8036M
On-Column Amount (ng) : 1.6157
Integration start scan : 701 Integration stop scan: 729
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

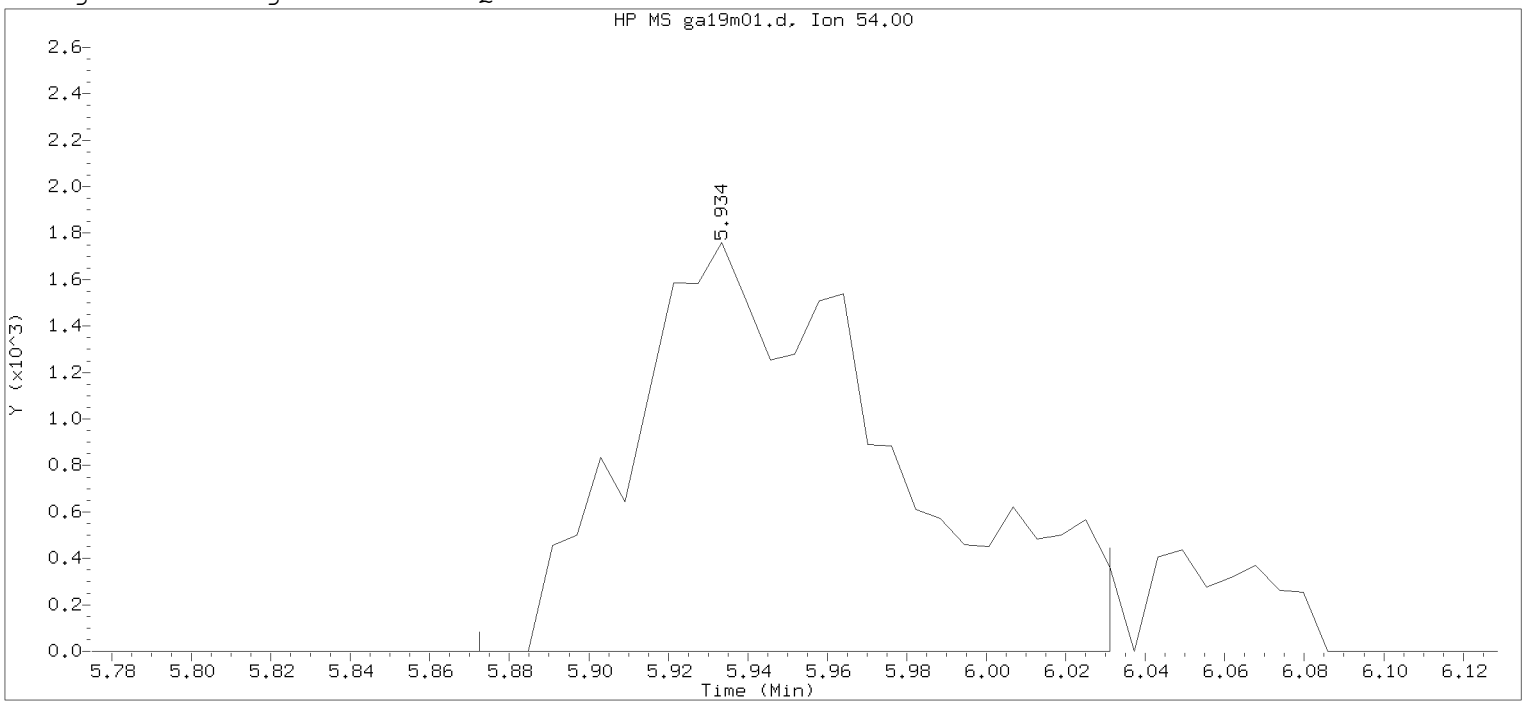
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

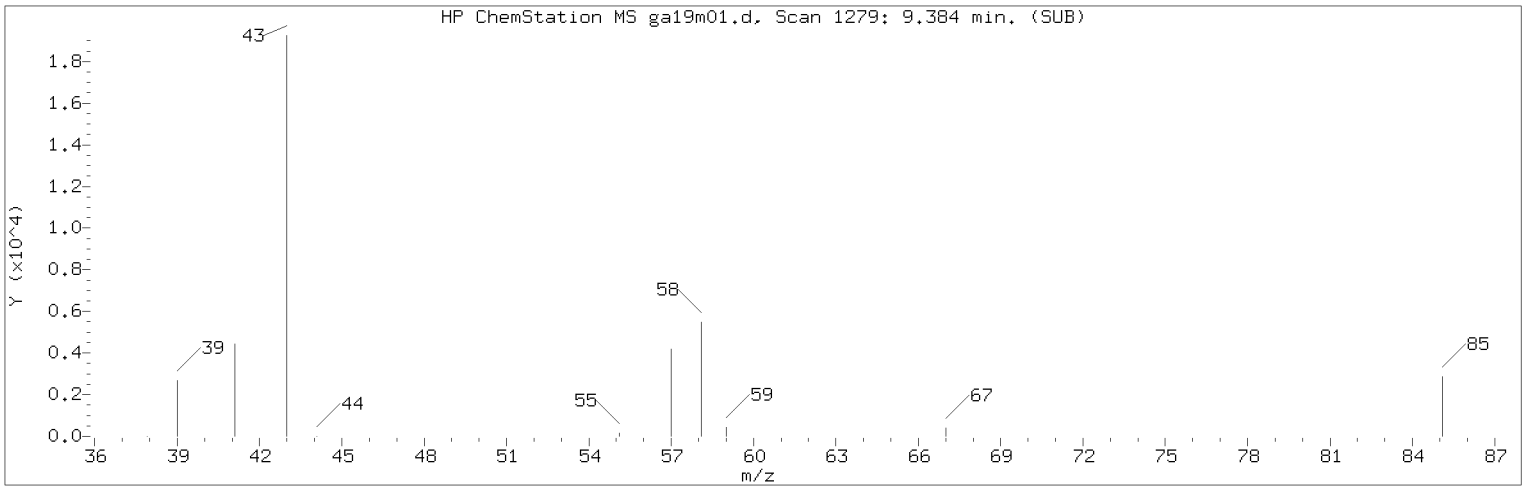
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

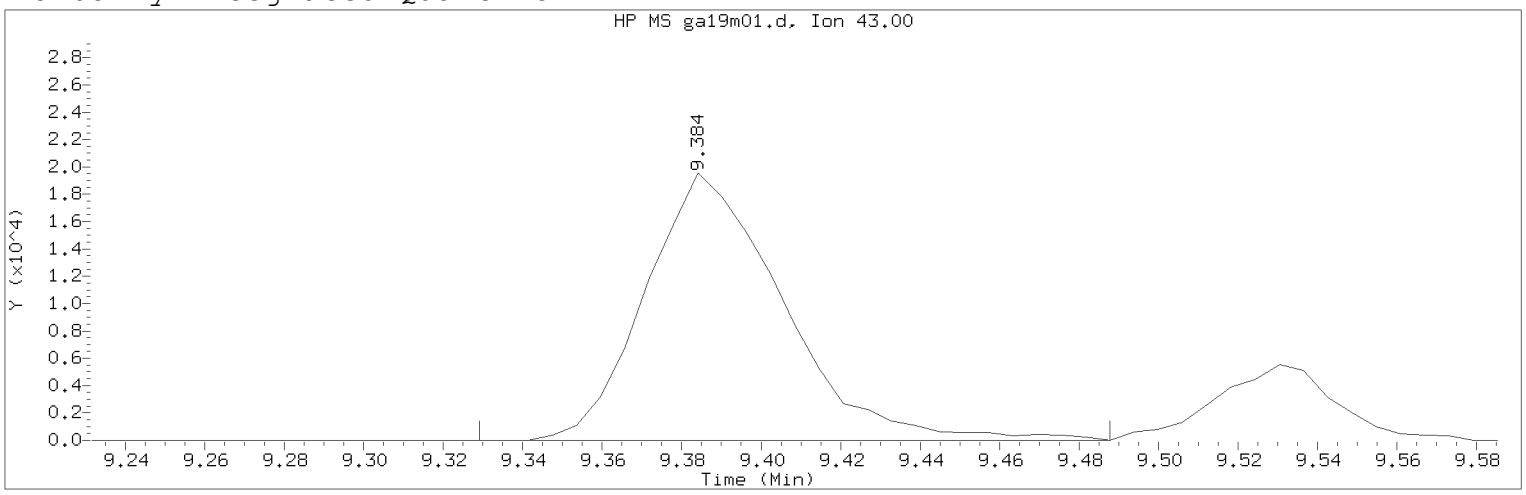
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 713
Retention Time (minutes): 5.934
Quant Ion : 54.00
Area : 7970
On-column Amount (ng) : 1.6340
Integration start scan : 702 Integration stop scan: 728
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used. mdl07561

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

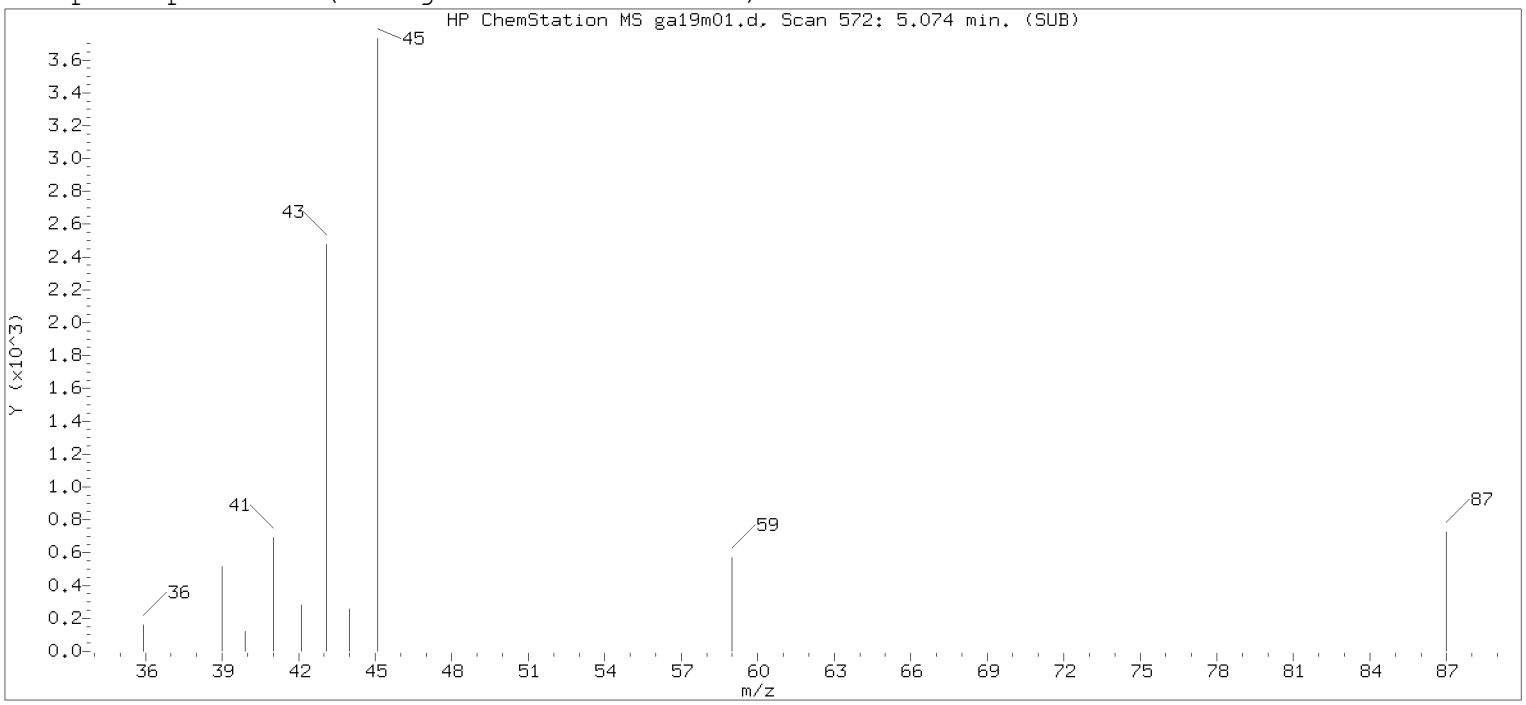
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 46864M
On-Column Amount (ng) : 0.9483
Integration start scan : 1269 Integration stop scan: 1295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

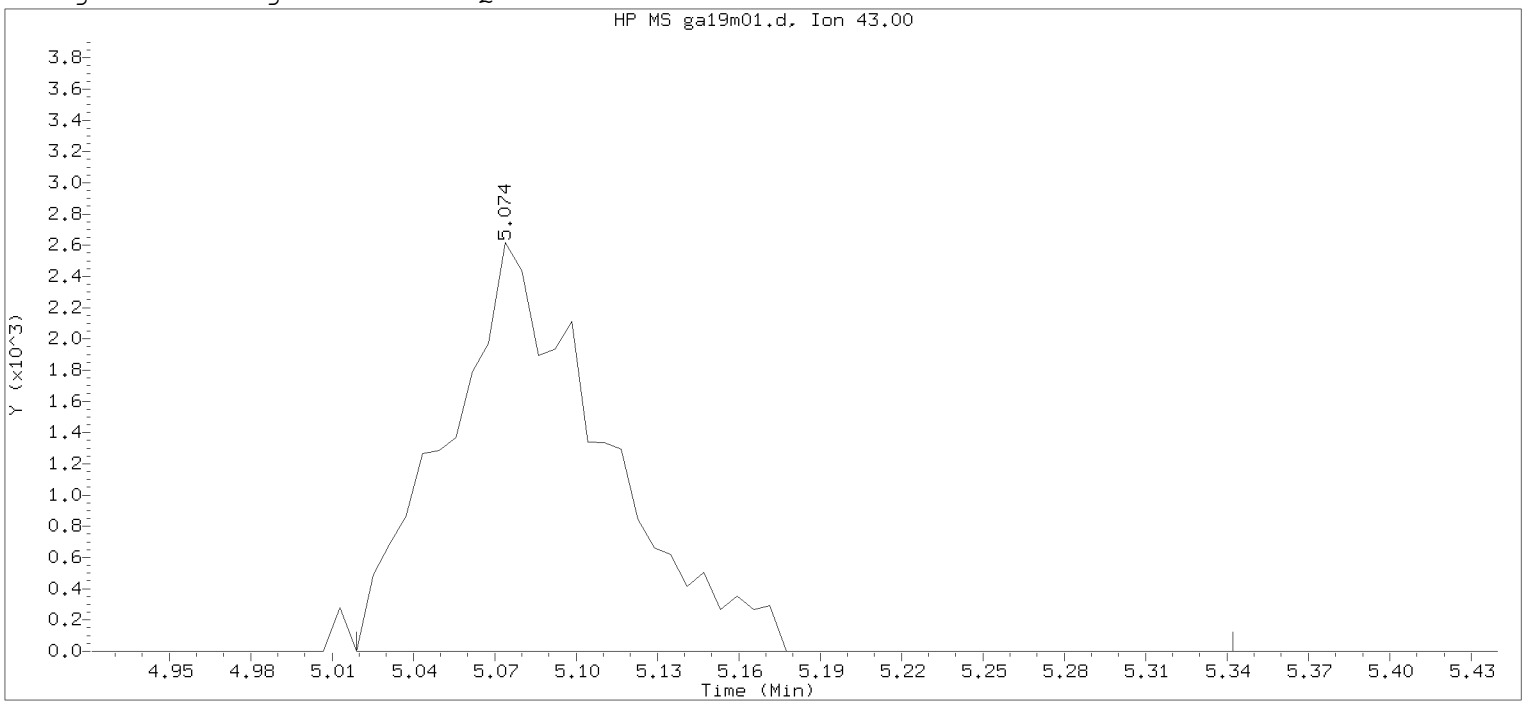
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

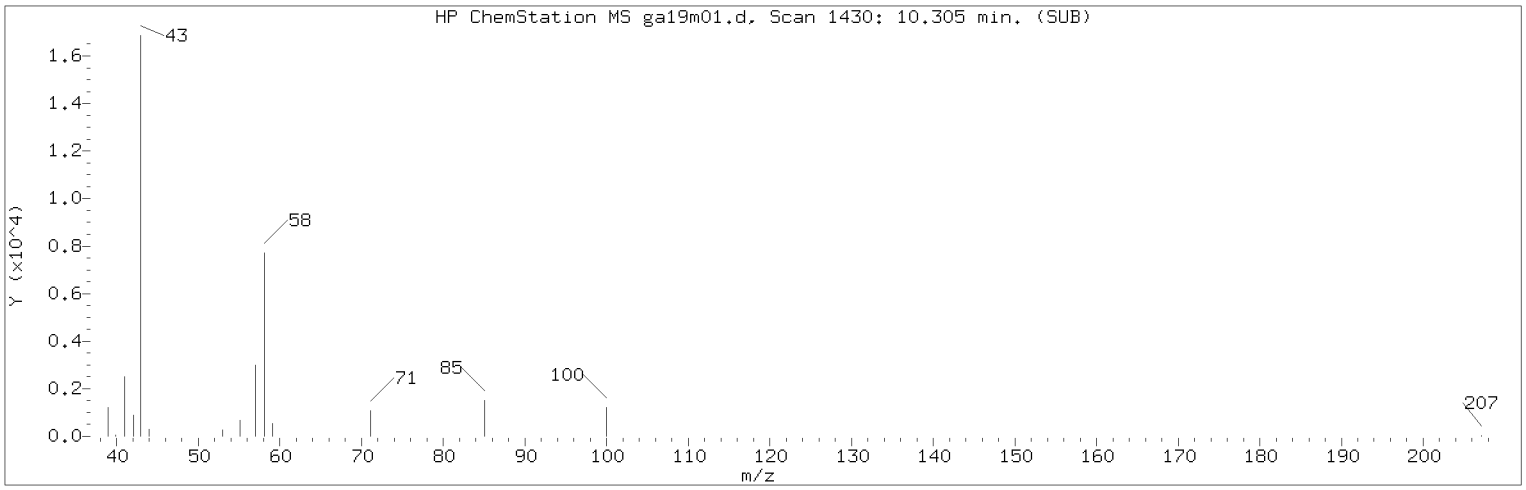
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

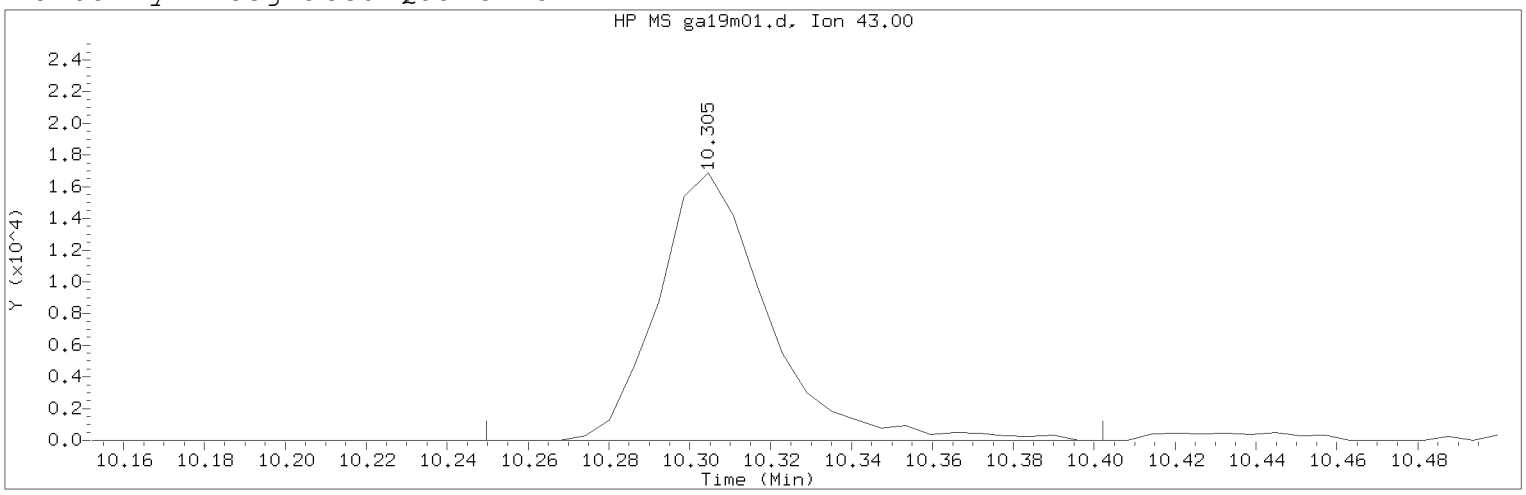
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 572
Retention Time (minutes): 5.074
Quant Ion : 43.00
Area : 10578
On-column Amount (ng) : 1.0580
Integration start scan : 562 Integration stop scan: 615
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

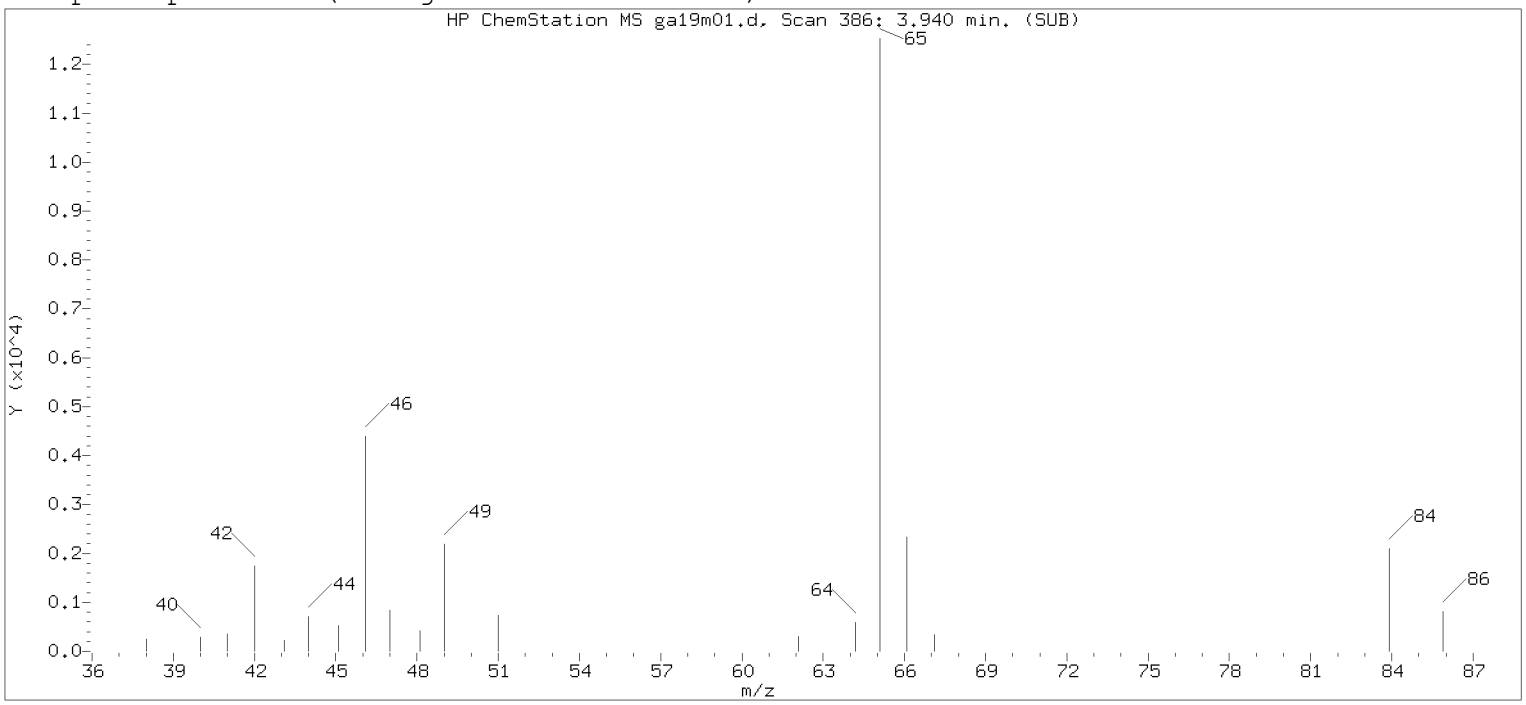
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1430
Retention Time (minutes): 10.305
Quant Ion : 43.00
Area (flag) : 31709M
On-Column Amount (ng) : 0.9129
Integration start scan : 1420 Integration stop scan: 1445
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

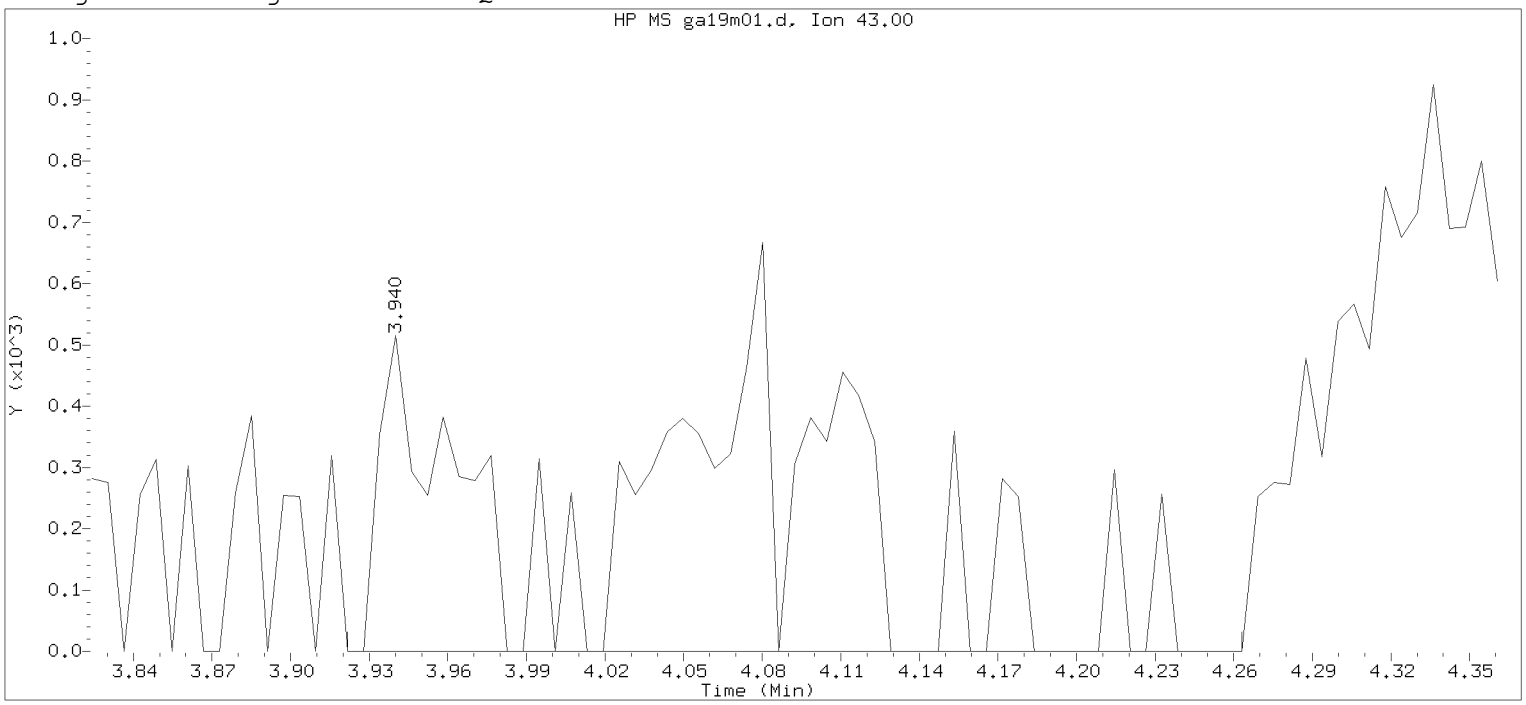
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

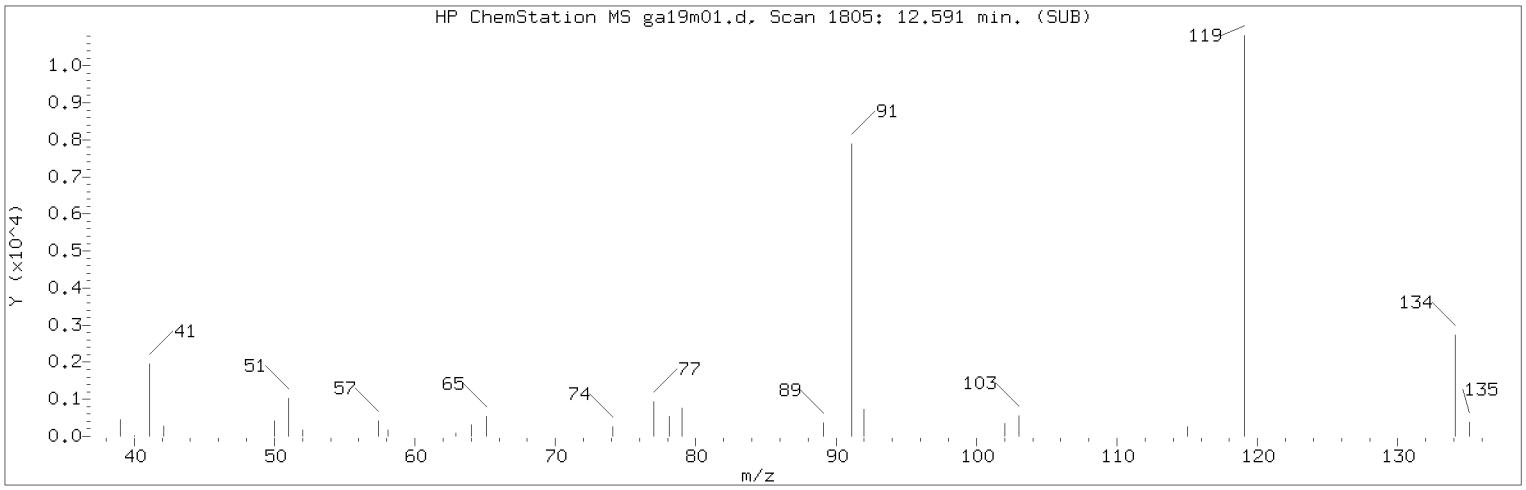
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

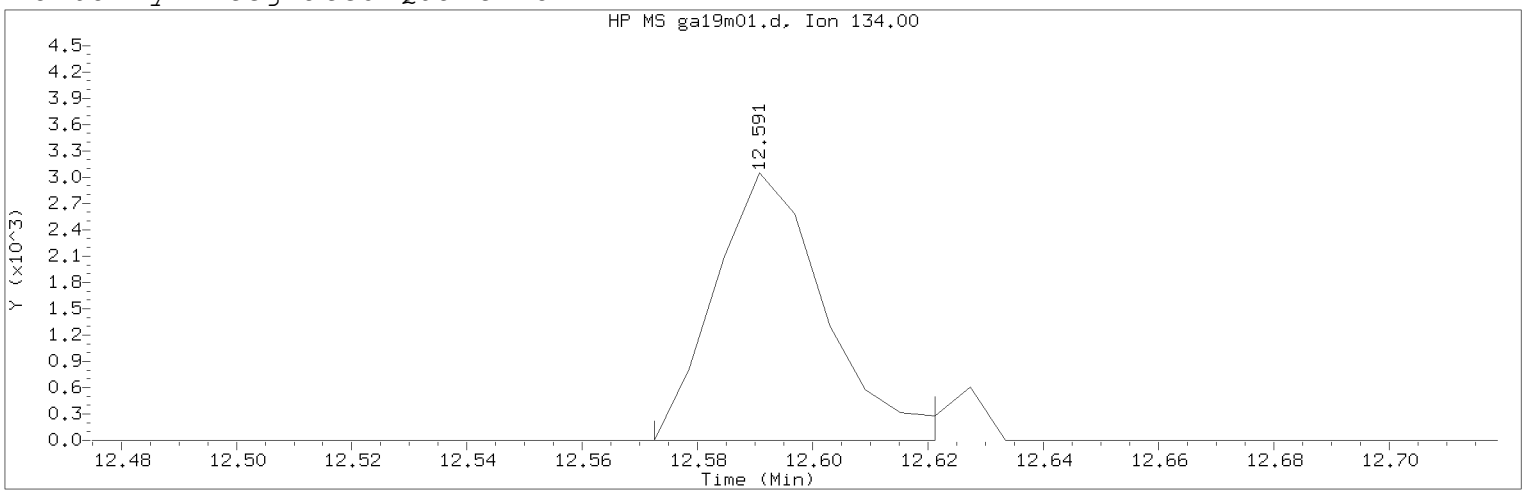
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 43.00
Area : 3897
On-column Amount (ng) : 1.9932
Integration start scan : 382 Integration stop scan: 438
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used. MSK 07565

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

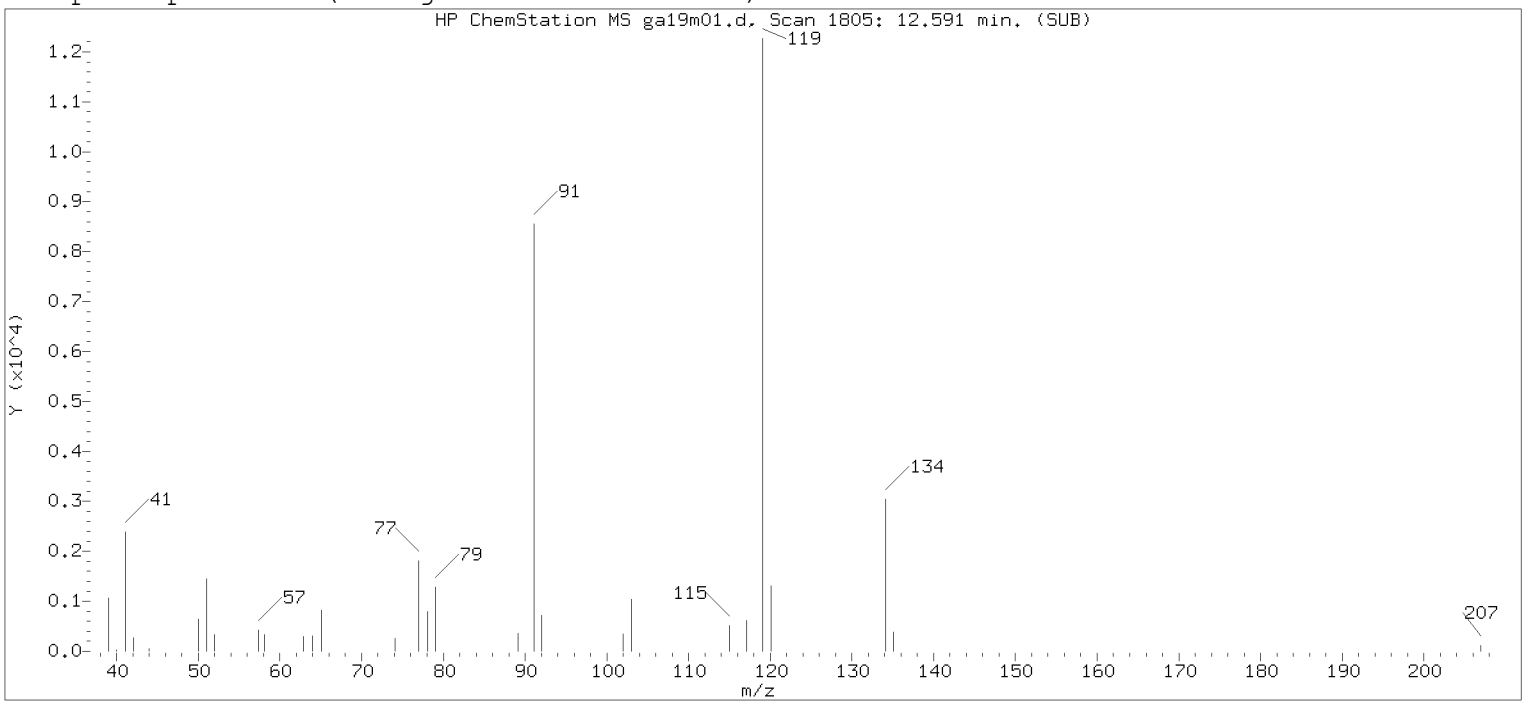
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area (flag) : 4029M
On-Column Amount (ng) : 0.0904
Integration start scan : 1801 Integration stop scan: 1809
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

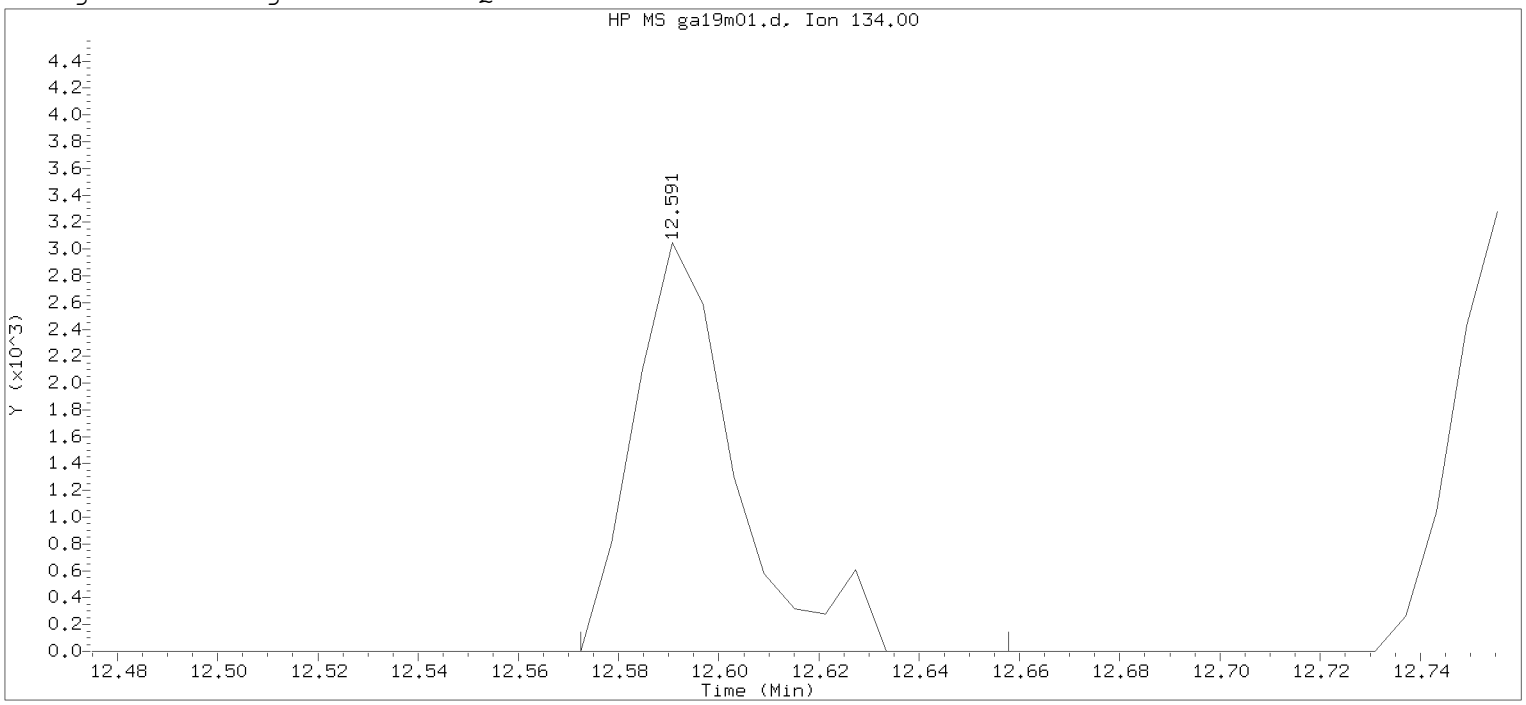
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

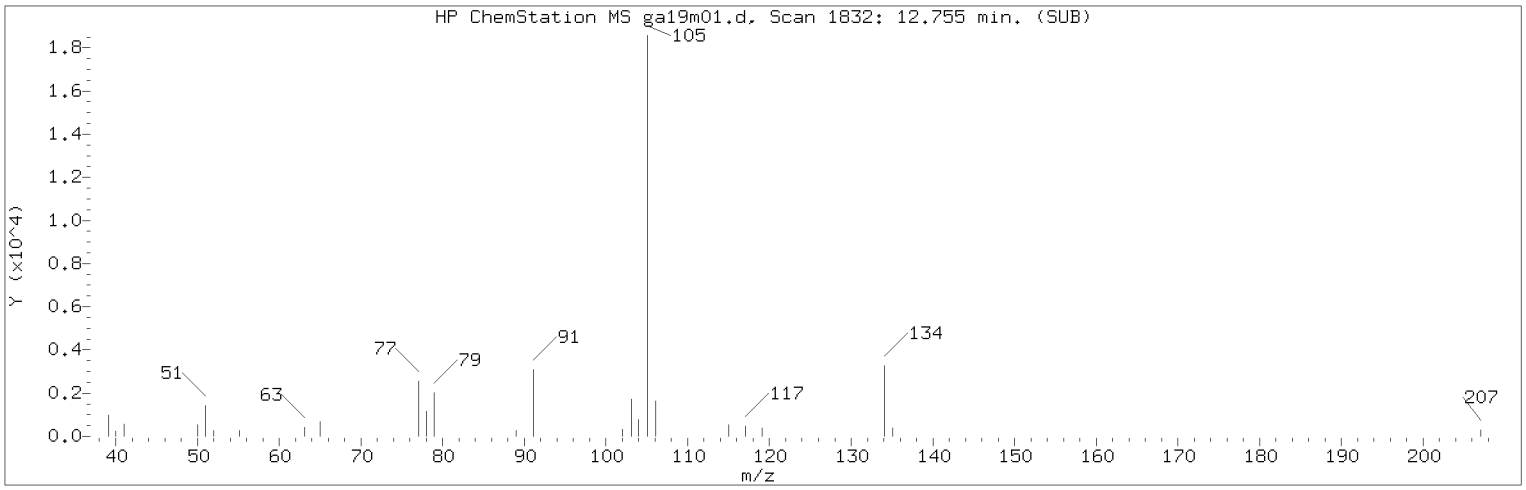
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

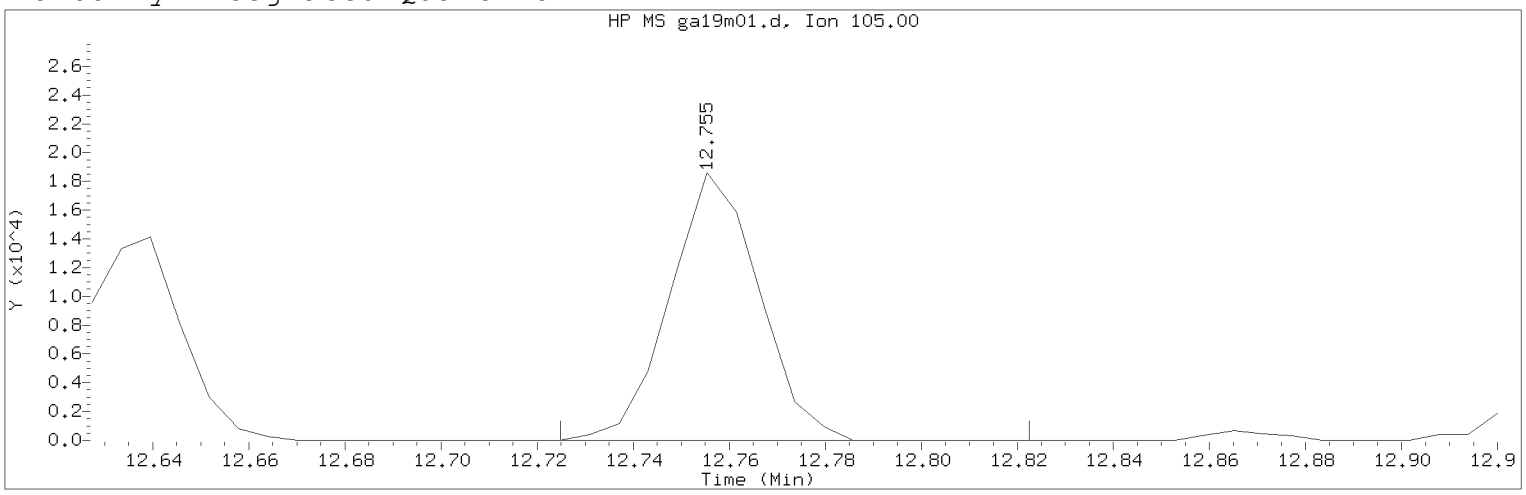
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1805
Retention Time (minutes): 12.591
Quant Ion : 134.00
Area : 4252
On-column Amount (ng) : 0.0927
Integration start scan : 1801 Integration stop scan: 1815
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used. mdl07570

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

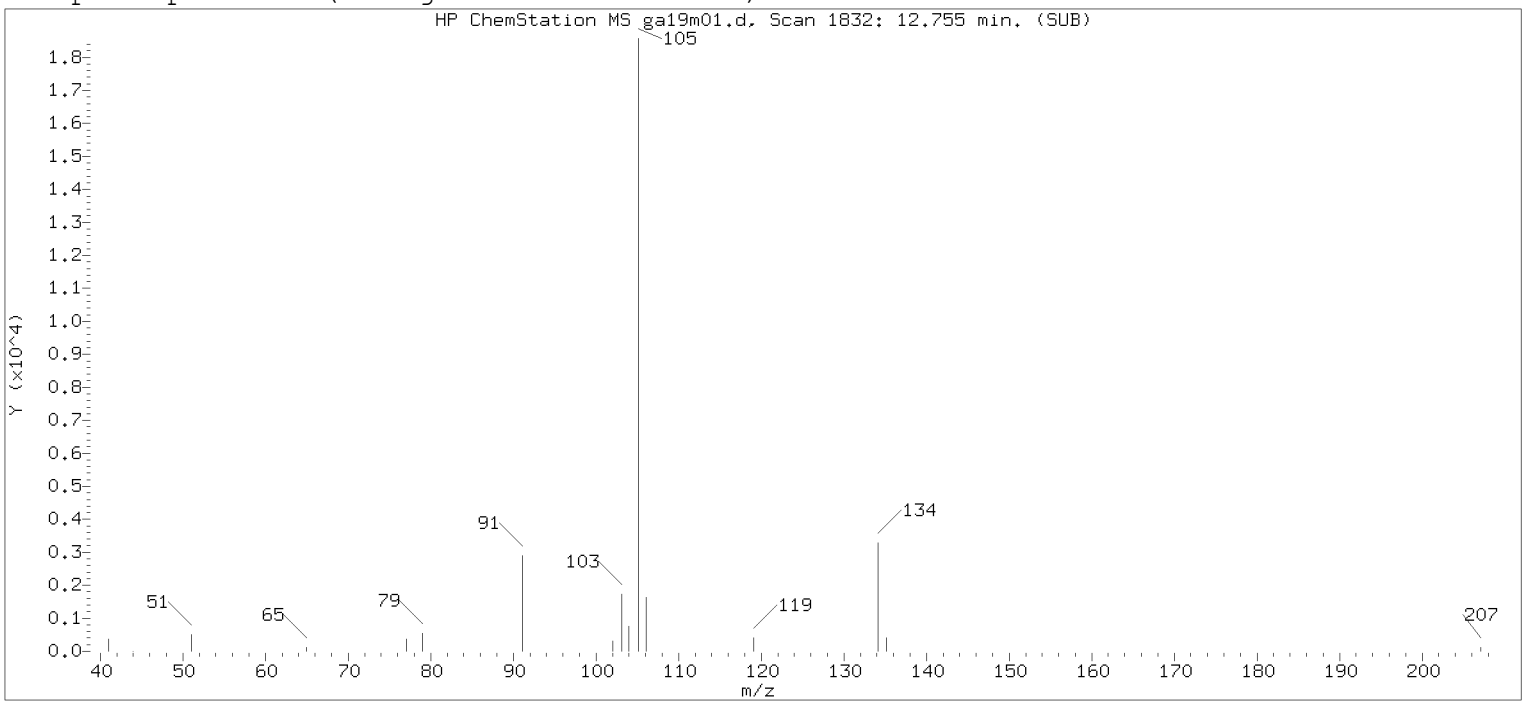
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area (flag) : 23947M
On-Column Amount (ng) : 0.0883
Integration start scan : 1826 Integration stop scan: 1842
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

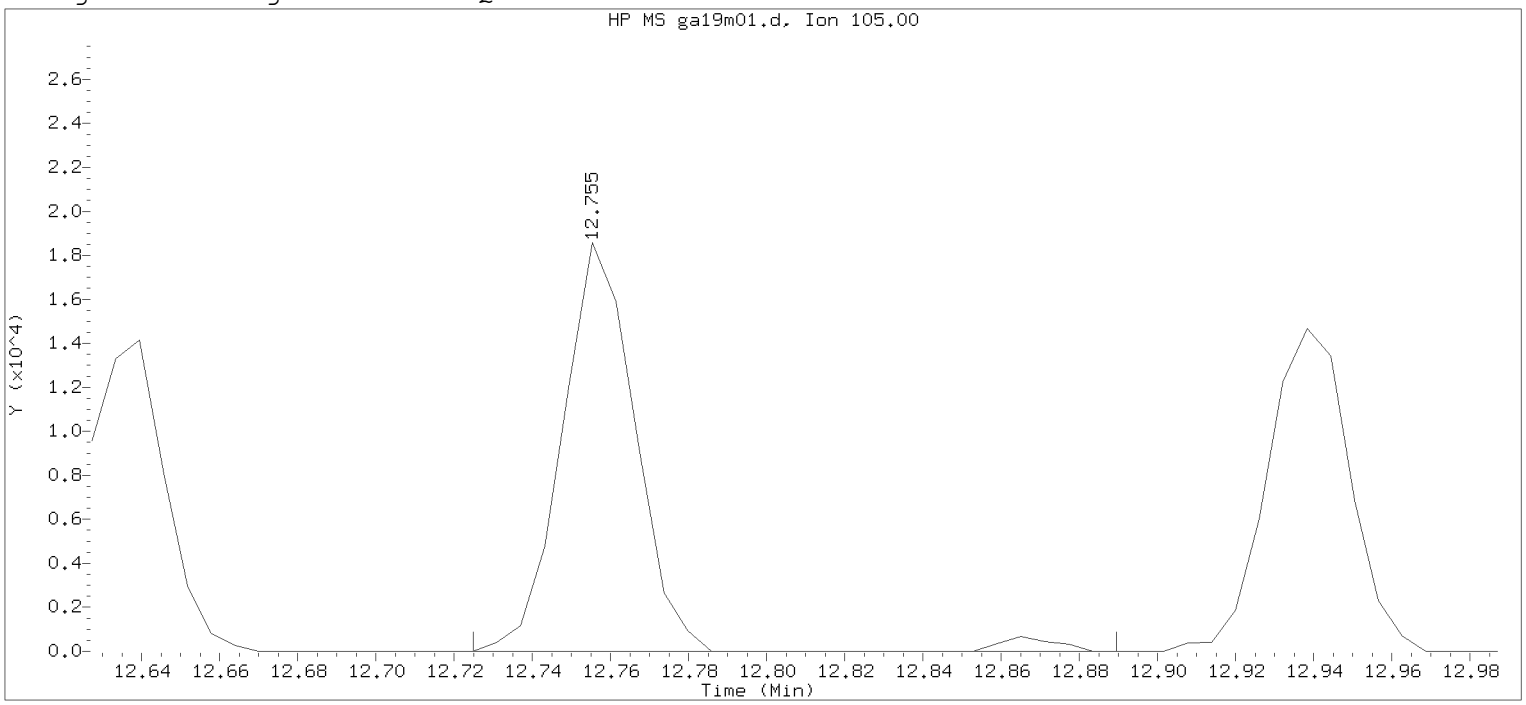
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

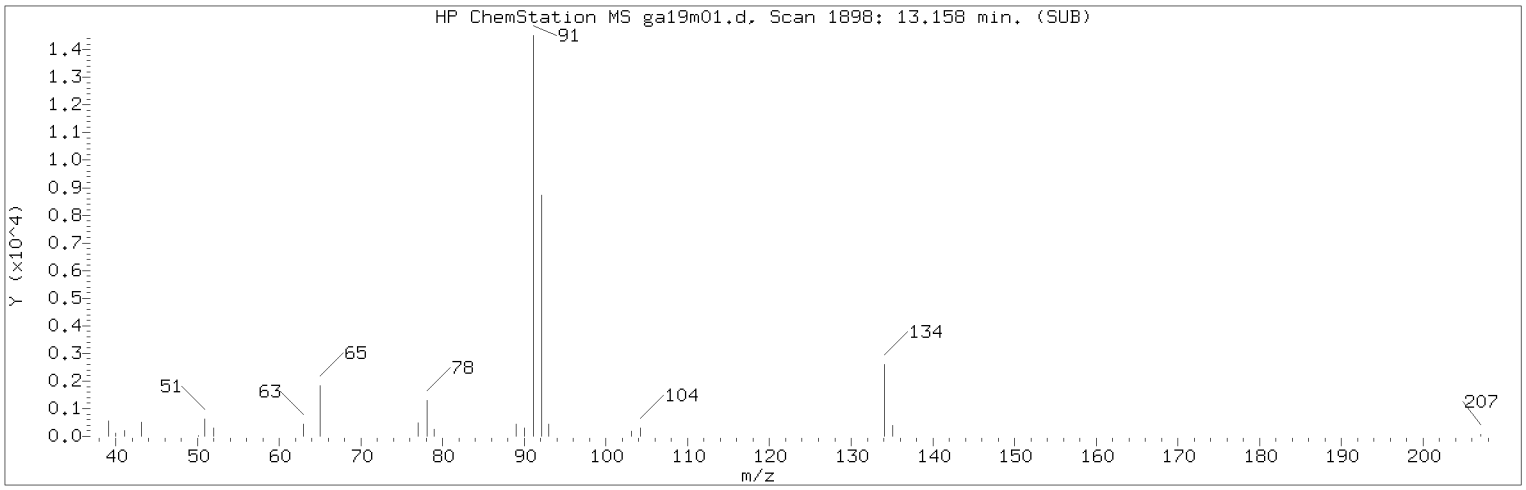
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

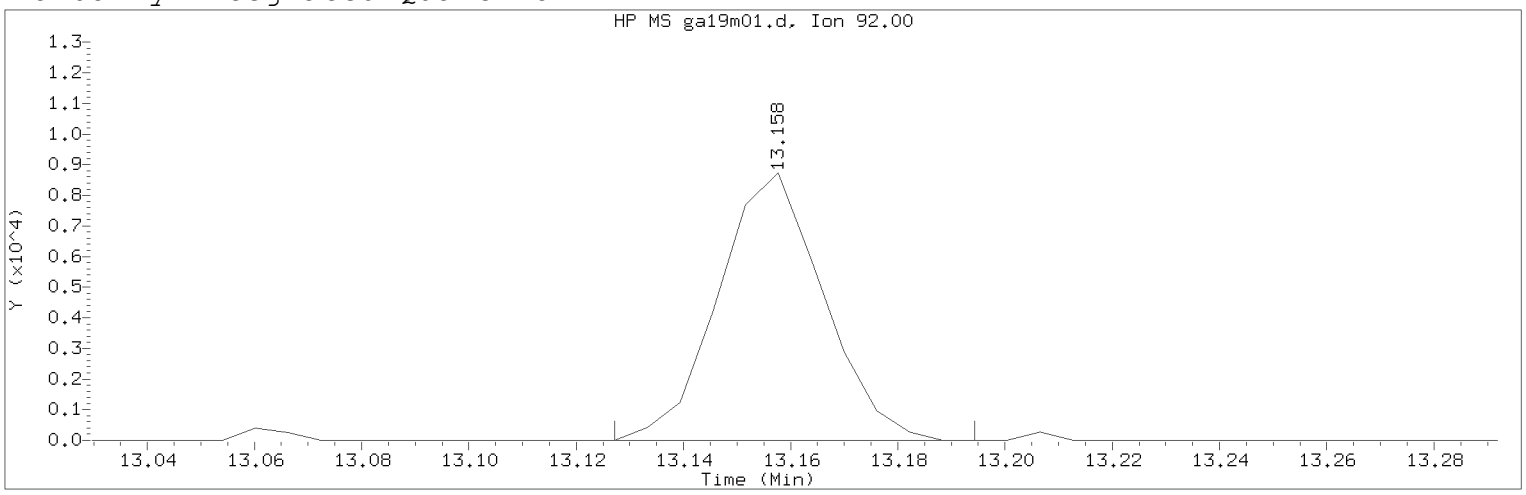
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1832
Retention Time (minutes): 12.755
Quant Ion : 105.00
Area : 24596
On-column Amount (ng) : 0.0903
Integration start scan : 1826 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used. Reason: MDL0.1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

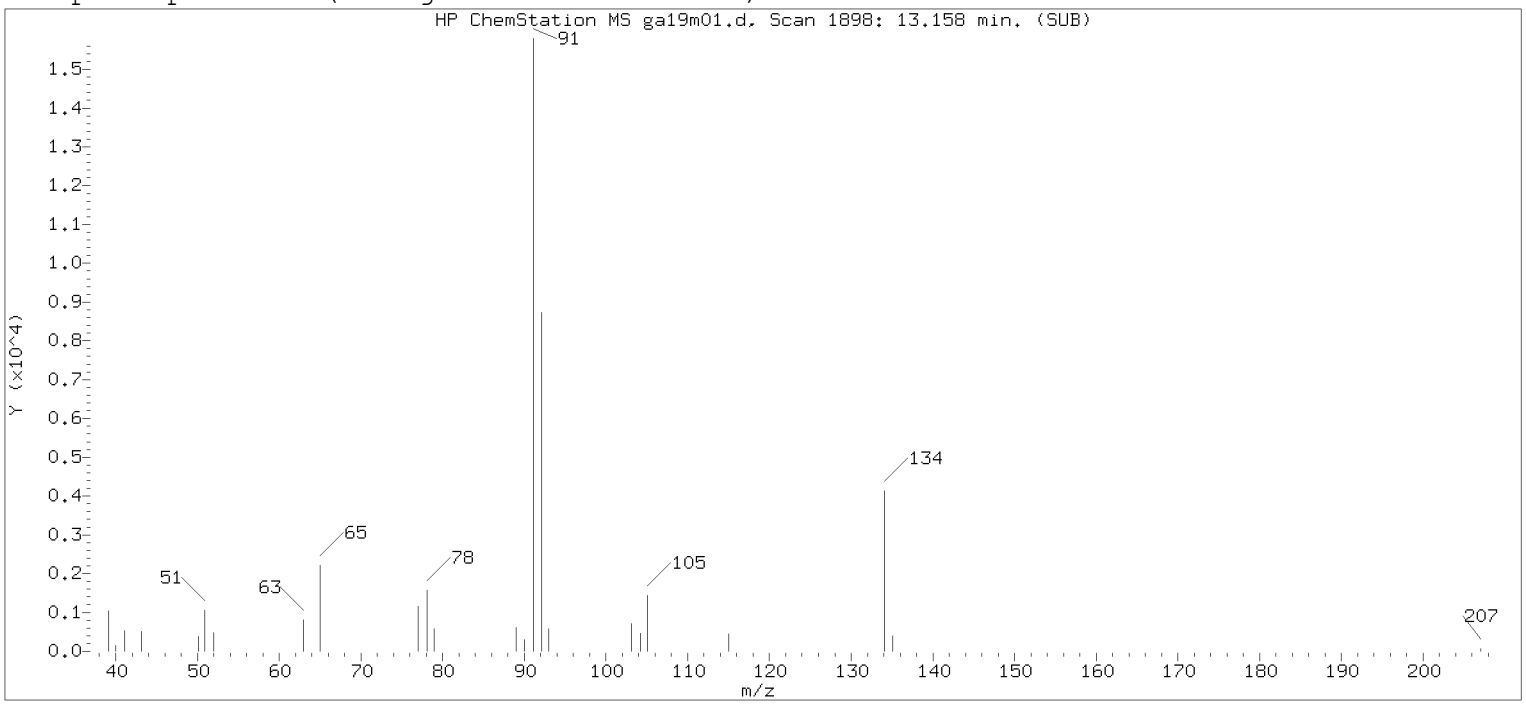
Compound Number : 138
Compound Name : n-Butylbenzene
Scan Number : 1898
Retention Time (minutes): 13.158
Quant Ion : 92.00
Area (flag) : 11824M
On-Column Amount (ng) : 0.0928
Integration start scan : 1892 Integration stop scan: 1903
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

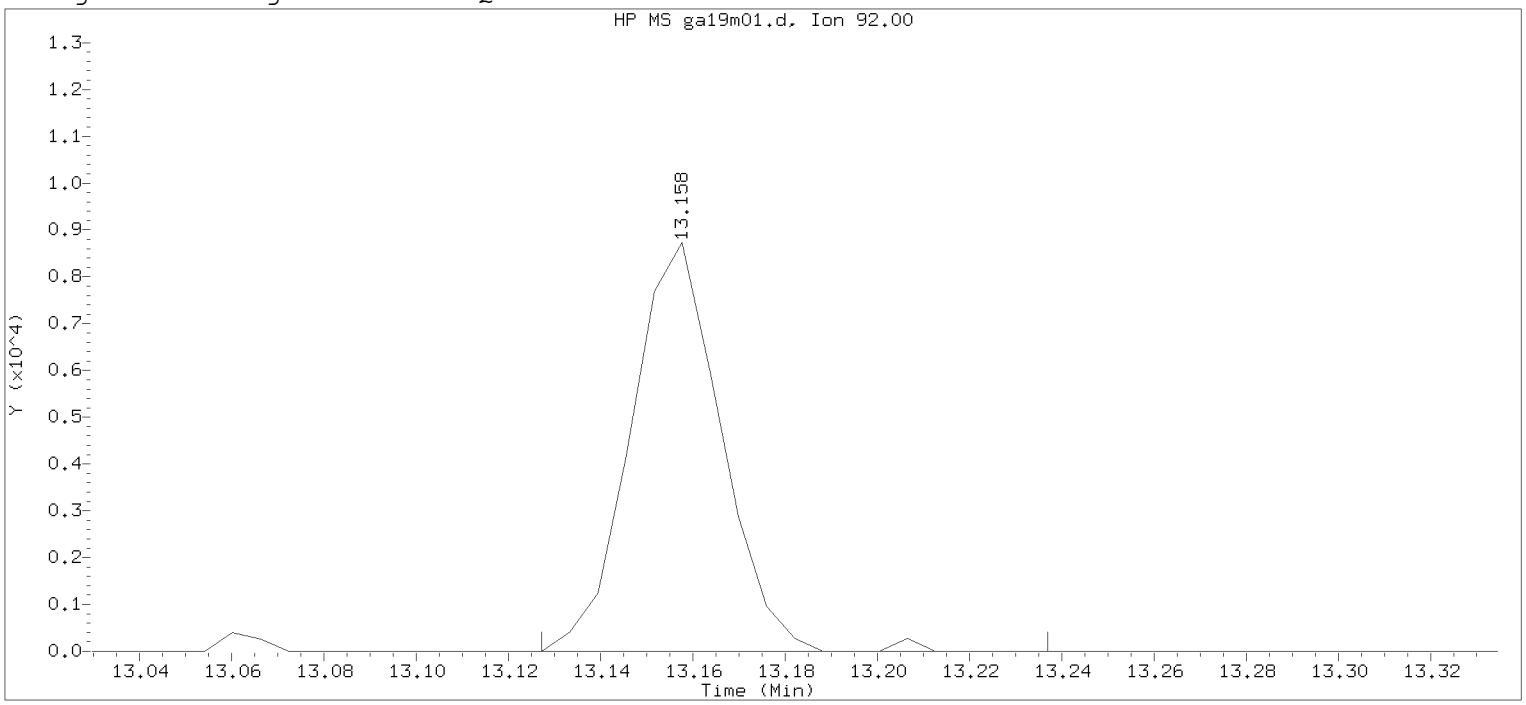
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



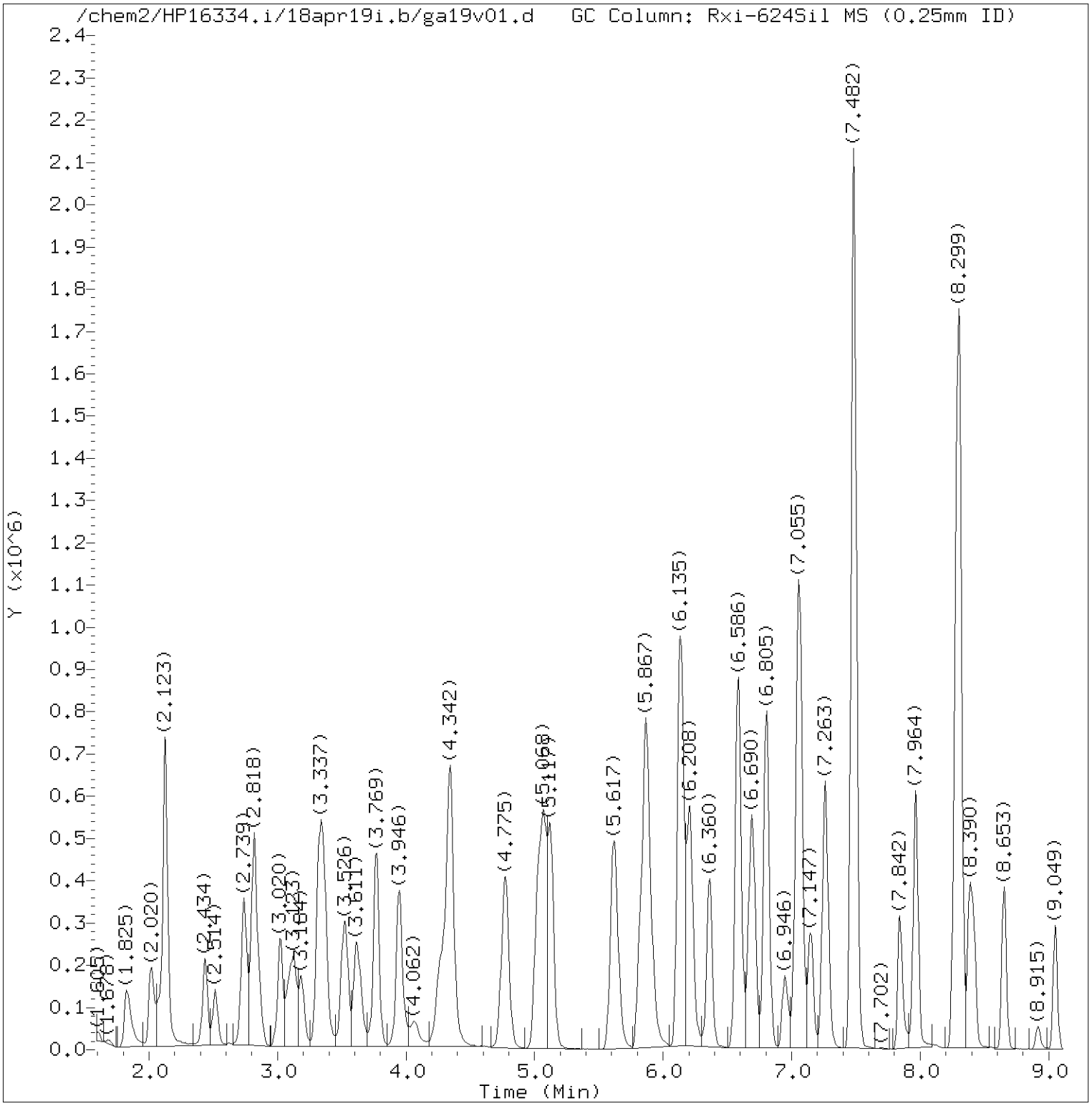
Data File: /chem2/HP16334.i/18apr19i.b/ga19m01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 14:59 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:15 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 138		
Compound Name	: n-Butylbenzene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.158		
Quant Ion	: 92.00		
Area	: 11923		
On-column Amount (ng)	: 0.0936		
Integration start scan	: 1892	Integration stop scan:	1910
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:50.
Target 3.5 esignature used for this report.



Total Ion Chromatogram (TIC)

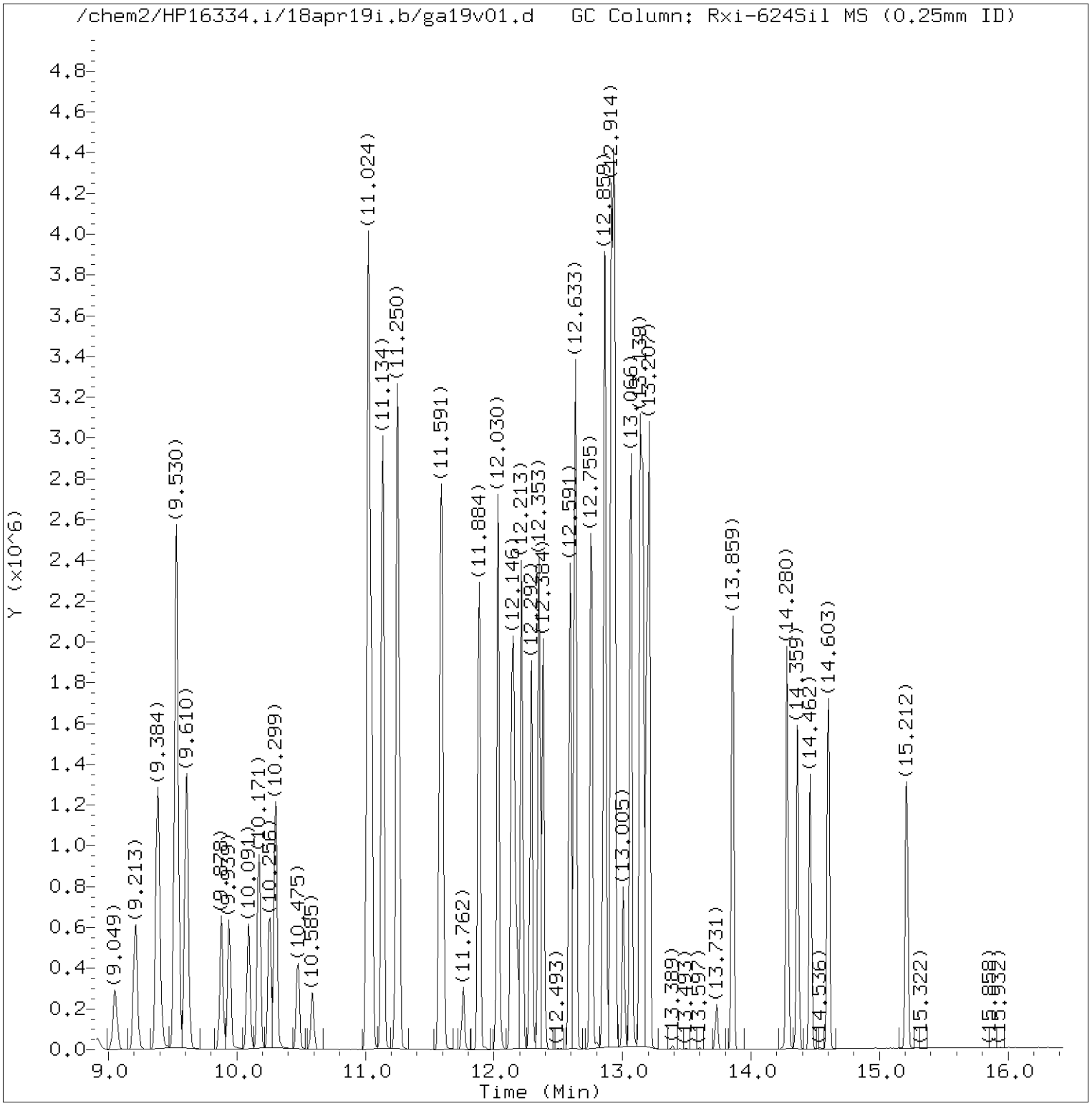
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.825	85	315819	4.194
2) Chloromethane	(2)	2.020	50	328840	4.337
5) Vinyl Chloride	(2)	2.123	62	301861	4.639
6) 1,3-Butadiene	(2)	2.123	39	487833M	3.523
7) Bromomethane	(2)	2.434	94	209114	4.806
8) Chloroethane	(2)	2.514	64	173069	4.669
9) Dichlorofluoromethane	(2)	2.739	67	438126	4.901
10) Trichlorofluoromethane	(2)	2.800	101	421677M	4.969
11) Ethyl ether	(2)	3.020	59	223931	5.294
12) Freon 123a	(2)	3.117	67	310010	5.159
13) Acrolein	(1)	3.184	56	258970	37.682
15) 1,1-Dichloroethene	(2)	3.318	96	214820	5.170
14) Acetone	(1)	3.337	43	401794	36.183
16) Freon 113	(2)	3.361	101	231202	4.935
17) Methyl Iodide	(2)	3.507	142	382467	4.739
18) Carbon Disulfide	(2)	3.611	76	742740	4.505
21) Methyl Acetate	(1)	3.739	43	147671M	4.718
22) Allyl Chloride	(2)	3.769	41	489975	5.082
23) Methylene Chloride	(2)	3.946	84	252305	4.490
26)*t-Butyl Alcohol-d10	(1)	3.946	65	198928	50.000
28) t-Butyl Alcohol	(1)	4.062	59	185169M	49.192
29) Acrylonitrile	(1)	4.263	53	326449	26.425
30) Methyl Tertiary Butyl Ether	(2)	4.324	73	716465	4.951
31) trans-1,2-Dichloroethene	(2)	4.349	96	248133	5.138
32) n-Hexane	(2)	4.769	57	404087	4.955
33) 1,1-Dichloroethane	(2)	5.019	63	499389	5.070
34) di-Isopropyl Ether	(2)	5.068	45	1045066	5.181
35) 2-Chloro-1,3-Butadiene	(2)	5.123	53	455521	5.052
37) Ethyl t-butyl ether	(2)	5.617	59	893072	5.043
38) 2-Butanone	(1)	5.818	43	742404	38.857
39) cis-1,2-Dichloroethene	(2)	5.867	96	285053	5.263
41) 2,2-Dichloropropane	(2)	5.885	77	413044	5.113
42) Propionitrile	(1)	5.921	54	178540	37.794
40) 1,2-Dichloroethene (Total)	(2)		96	533186	10.401
45) Methacrylonitrile	(1)	6.135	67	586127	39.150
47) Bromochloromethane	(2)	6.208	128	125163	5.033
48) Tetrahydrofuran	(1)	6.208	71	115408	25.376
49) Chloroform	(2)	6.360	83	475791	5.052

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) 1,1,1-Trichloroethane	(2)	6.586	97	402687	5.062
50)$Dibromofluoromethane	(2)	6.586	113	505912	10.021
52) Cyclohexane	(2)	6.690	56	489634	5.132
54) Carbon Tetrachloride	(2)	6.805	117	329477	5.099
55) 1,1-Dichloropropene	(2)	6.805	75	368339	4.966
56) Isobutyl Alcohol	(1)	6.946	41	182591	122.049
57)$1,2-Dichloroethane-d4	(2)	7.043	102	109267	10.213
58) Benzene	(2)	7.068	78	1035864	5.059
59) 1,2-Dichloroethane	(2)	7.147	62	349539	4.822
60) t-Amyl methyl ether	(2)	7.263	73	766564	5.101
63)*Fluorobenzene	(2)	7.482	96	2007665	10.000
62) n-Heptane	(2)	7.494	43	496857	5.064
65) n-Butanol	(1)	7.842	56	305112	257.675
67) Trichloroethene	(2)	7.964	95	272217	5.035
69) Methylcyclohexane	(2)	8.281	83	472864	5.151
70) 1,2-Dichloropropane	(2)	8.305	63	295484	5.199
71) Methyl Methacrylate	(1)	8.384	69	150670	5.284
72) 1,4-Dioxane	(1)	8.390	88	31438M	152.352
73) Dibromomethane	(2)	8.415	93	137829	5.082
74) Bromodichloromethane	(2)	8.653	83	339135	5.096
76) 2-Nitropropane	(1)	8.915	41	45660	4.675
80) cis-1,3-Dichloropropene	(2)	9.213	75	418567	5.091
81) 4-Methyl-2-Pentanone	(1)	9.384	43	1233176M	26.273
82)$Toluene-d8	(3)	9.530	98	2042820	9.972
83) Toluene	(3)	9.610	92	657668	5.068
84) trans-1,3-Dichloropropene	(3)	9.878	75	359969	5.114
86) Ethyl Methacrylate	(3)	9.939	69	326245	5.141
88) 1,1,2-Trichloroethane	(3)	10.091	97	201433	5.146
85) 1,3-Dichloropropene (total)	(3)		75	778536	10.205
89) Tetrachloroethene	(3)	10.171	166	304626	5.061
90) 1,3-Dichloropropane	(3)	10.256	76	360612	5.058
91) 2-Hexanone	(1)	10.299	43	891400M	27.021
93) Dibromochloromethane	(3)	10.475	129	221535	5.137
95) 1,2-Dibromoethane	(3)	10.585	107	193498	5.175
97)*Chlorobenzene-d5	(3)	11.018	117	1527466	10.000
98) Chlorobenzene	(3)	11.048	112	746626	5.023
99) 1,1,1,2-Tetrachloroethane	(3)	11.134	131	255407	5.146
100) Ethylbenzene	(3)	11.134	91	1310945	5.084

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

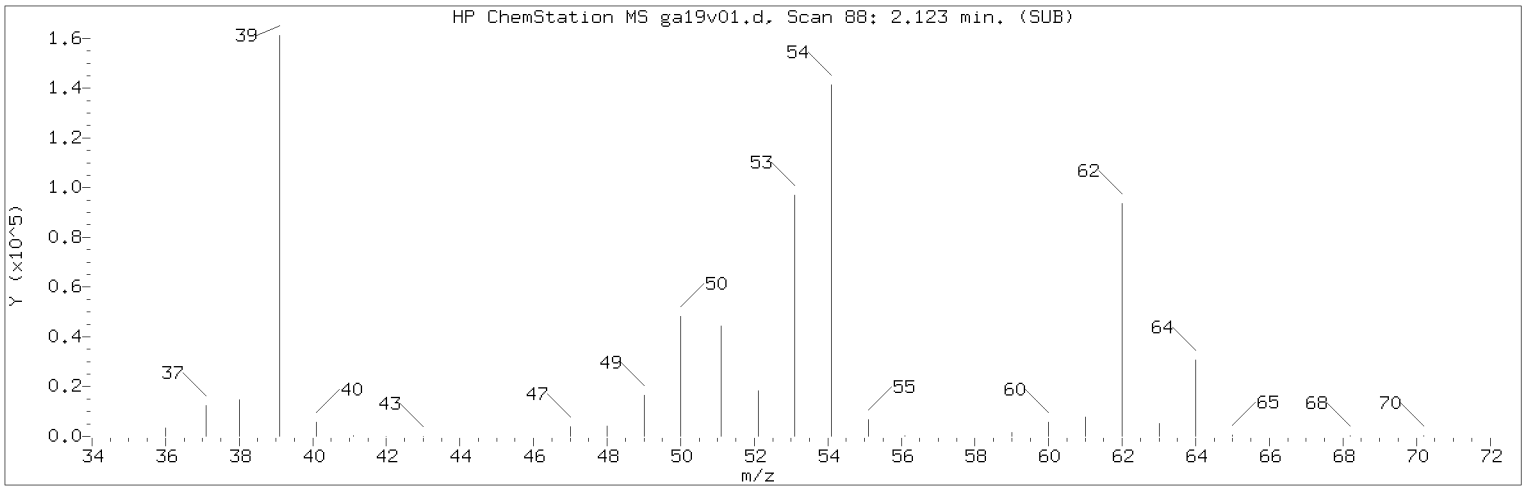
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.250	106	1010773	10.295
104) o-Xylene	(3)	11.579	106	500317	5.083
106) Styrene	(3)	11.597	104	843447	5.221
105) Xylene (Total)	(3)		106	1511090	15.378
107) Bromoform	(3)	11.762	173	124257	5.007
108) Isopropylbenzene	(3)	11.884	105	1322801	5.160
111)$4-Bromofluorobenzene	(3)	12.030	95	786691	10.033
113) 1,1,2,2-Tetrachloroethane	(4)	12.134	83	258665M	4.992
114) Bromobenzene	(4)	12.146	156	335518	4.931
116) 1,2,3-Trichloropropane	(4)	12.176	110	74833	5.167
117) n-Propylbenzene	(4)	12.213	91	1602450	5.058
119) 2-Chlorotoluene	(4)	12.292	126	311704	4.930
121) 1,3,5-Trimethylbenzene	(4)	12.353	105	1138343	5.018
122) 4-Chlorotoluene	(4)	12.384	126	329945	5.006
125) tert-Butylbenzene	(4)	12.591	134	236981	5.004
126) Pentachloroethane	(4)	12.627	167	189457	5.153
127) 1,2,4-Trimethylbenzene	(4)	12.633	105	1174122	5.074
128) sec-Butylbenzene	(4)	12.755	105	1480479	5.138
131) 1,3-Dichlorobenzene	(4)	12.859	146	668881	4.947
132) p-Isopropyltoluene	(4)	12.865	119	1290934	5.133
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	881563	10.000
134) 1,4-Dichlorobenzene	(4)	12.932	146	688345	4.994
135) 1,2,3-Trimethylbenzene	(4)	12.938	120	534045	5.133
136) Benzyl Chloride	(4)	13.005	126	96420	5.123
138) n-Butylbenzene	(4)	13.158	92	674364	4.983
139) 1,2-Dichlorobenzene	(4)	13.188	146	638029	5.001
143) 1,2-Dibromo-3-chloropropane	(1)	13.731	155	38191	5.419
144) 1,3,5-Trichlorobenzene	(4)	13.859	180	555700	4.914
145) 1,2,4-Trichlorobenzene	(4)	14.280	180	511638	4.877
146) Hexachlorobutadiene	(4)	14.365	225	272696	4.932
147) Naphthalene	(4)	14.462	128	860975	4.910
148) 1,2,3-Trichlorobenzene	(4)	14.603	180	444089	4.951

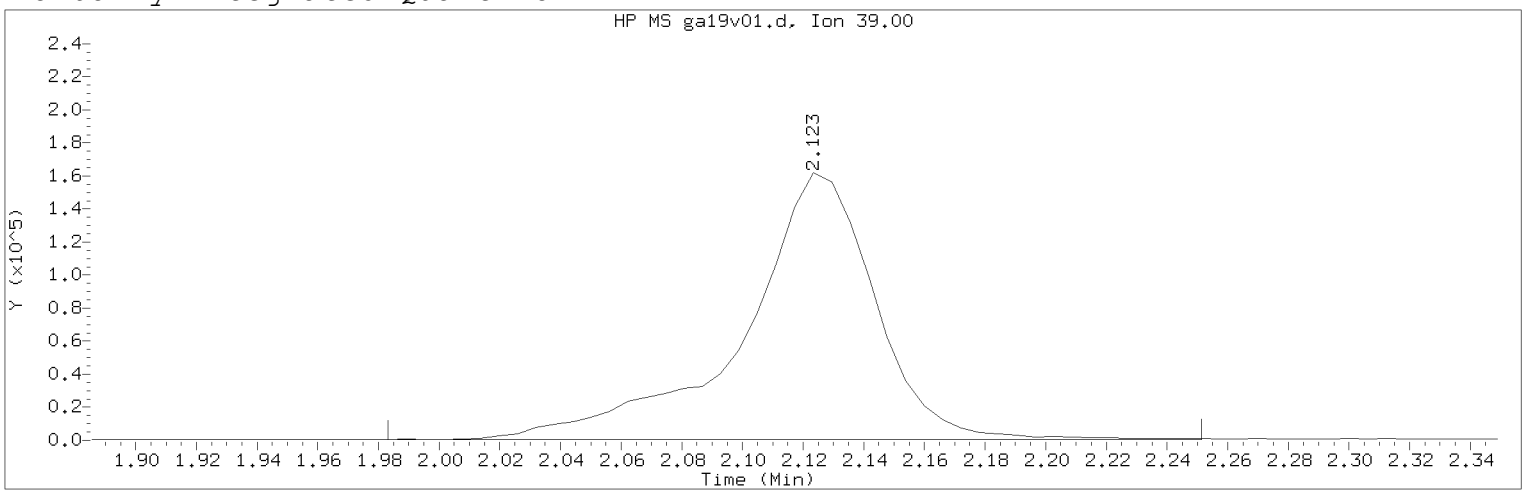
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

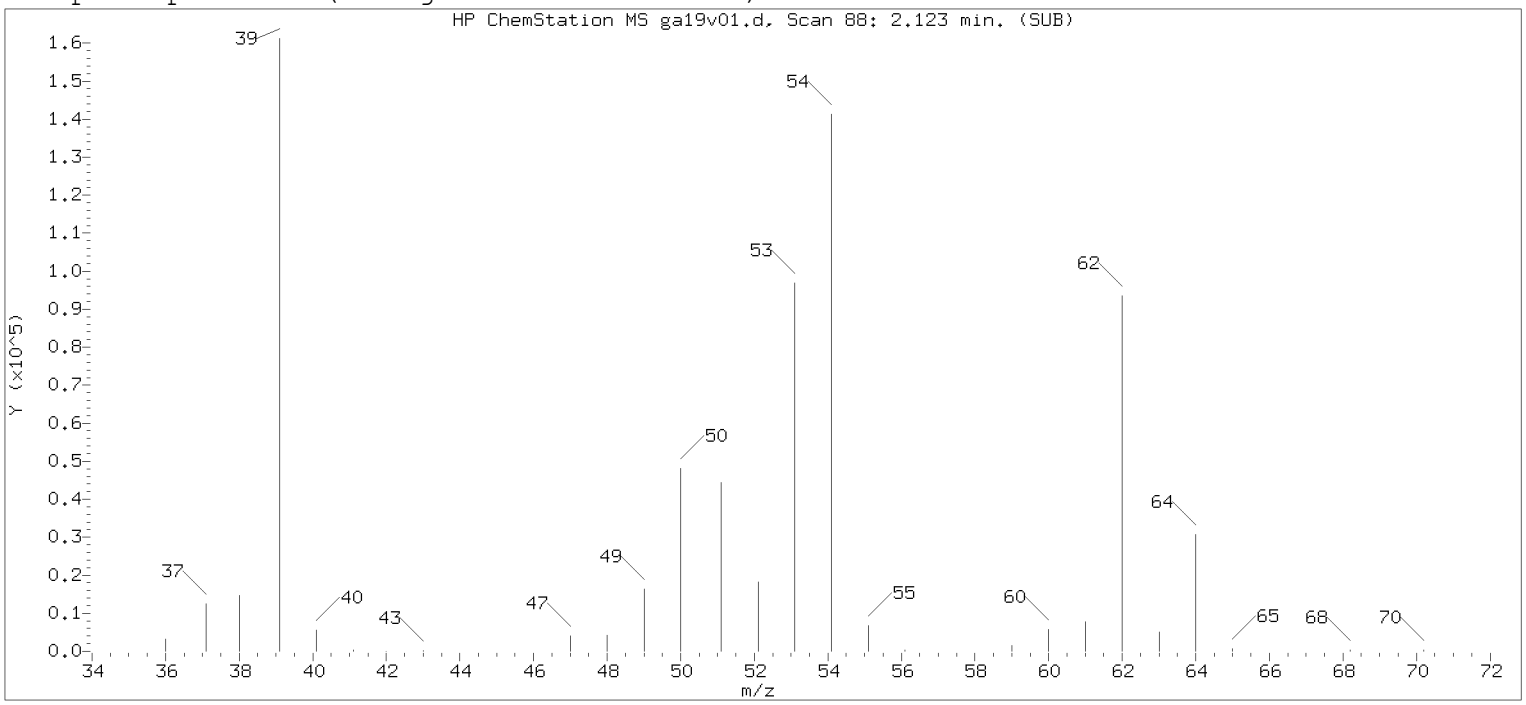
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 88
Retention Time (minutes): 2.123
Quant Ion : 39.00
Area (flag) : 487833M
On-Column Amount (ng) : 3.5235
Integration start scan : 64 Integration stop scan: 108
Y at integration start : 333 Y at integration end: 333

Reason for manual integration: improper integration

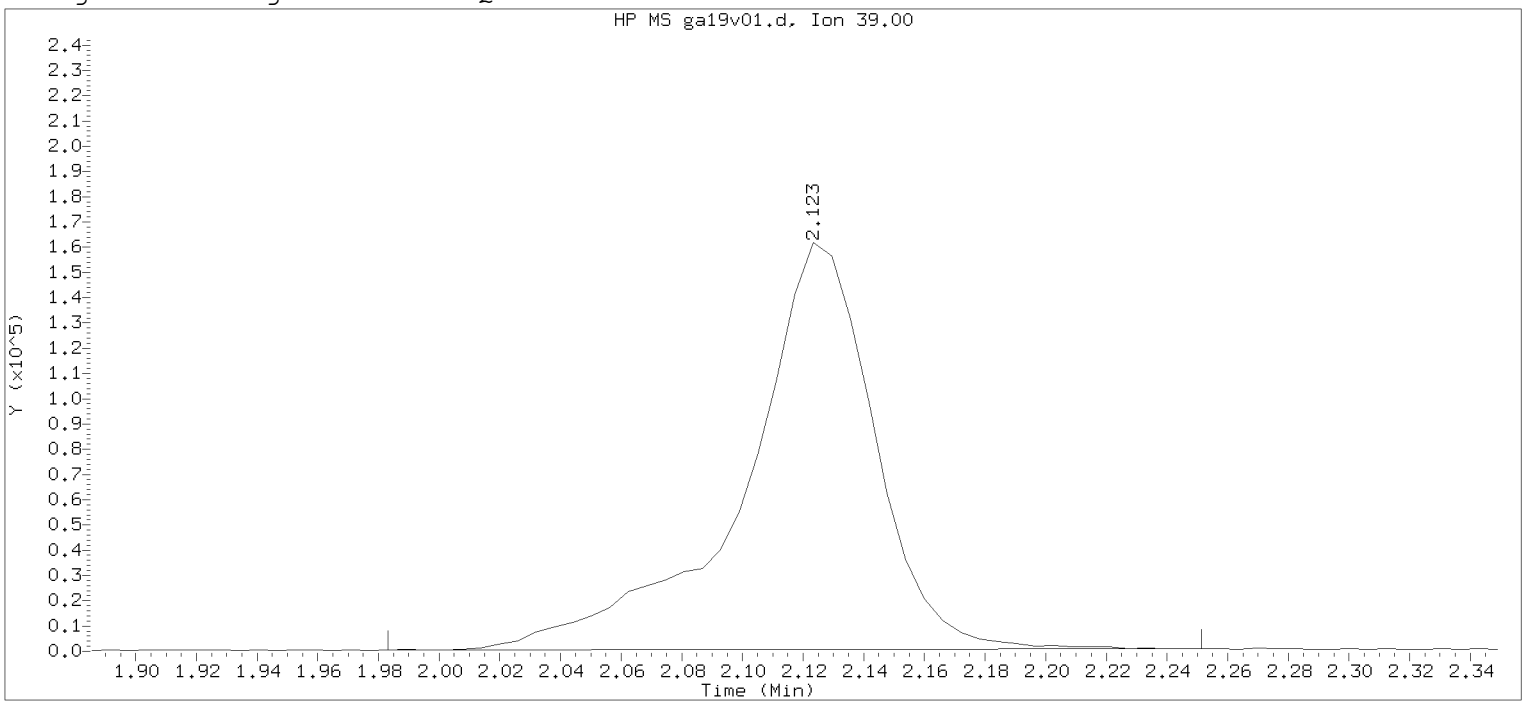
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

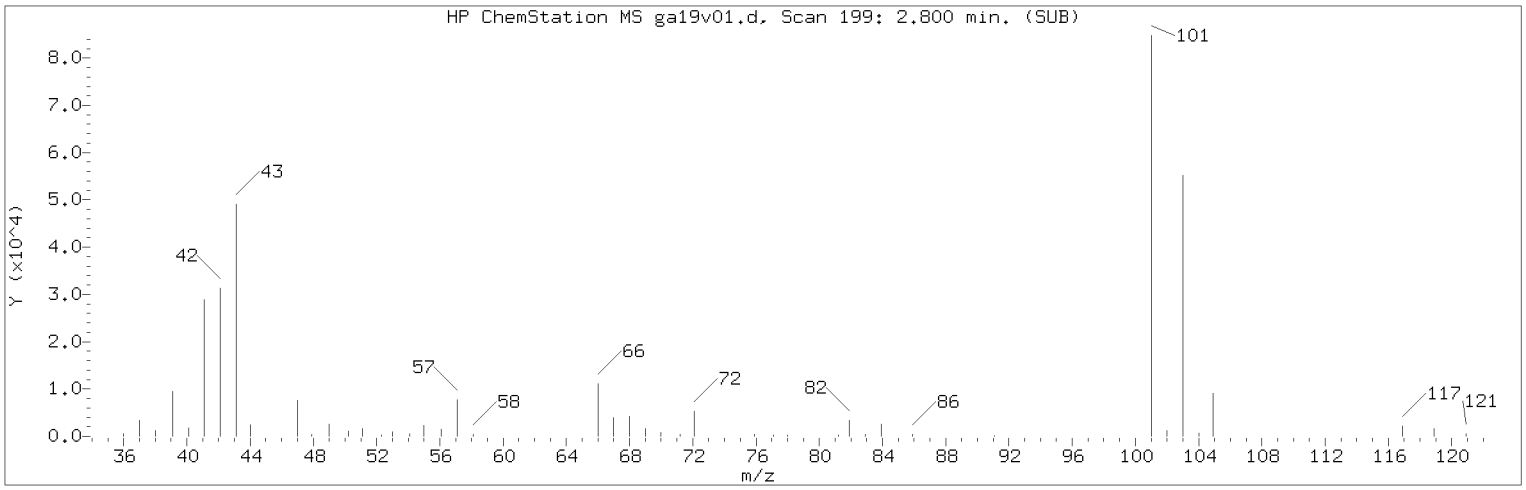
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

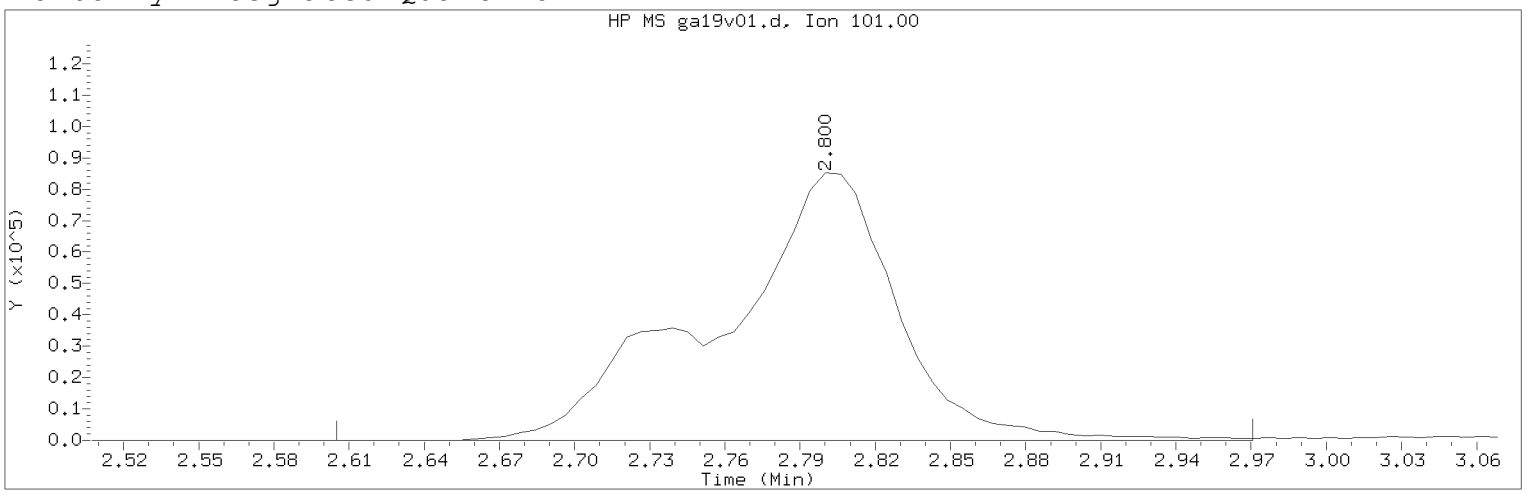
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 88
Retention Time (minutes): 2.123
Quant Ion : 39.00
Area : 481237
On-column Amount (ng) : 3.7153
Integration start scan : 64 Integration stop scan: 108
Y at integration start : 419 Y at integration end: 1048

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. AE06 mdc 7.5.0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

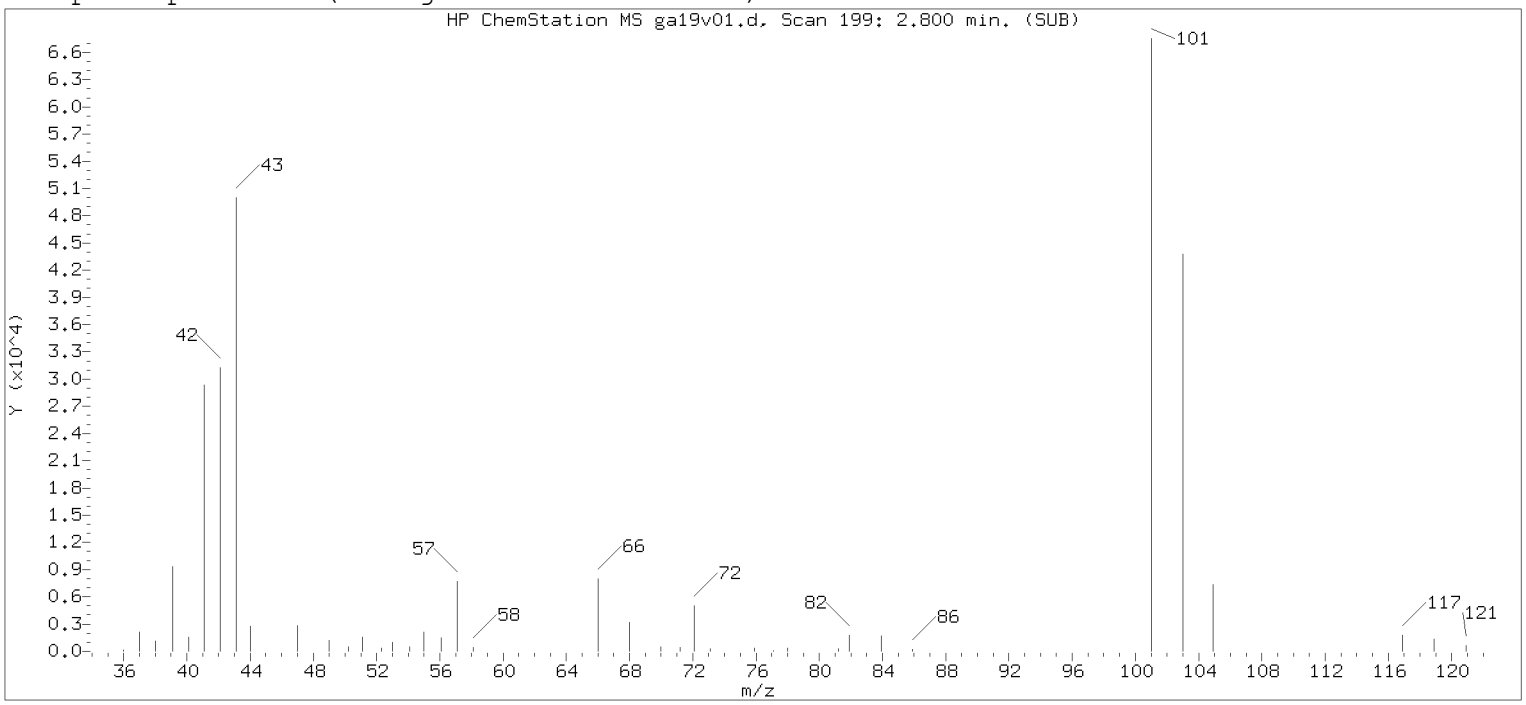
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area (flag) : 421677M
On-Column Amount (ng) : 4.9686
Integration start scan : 166 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

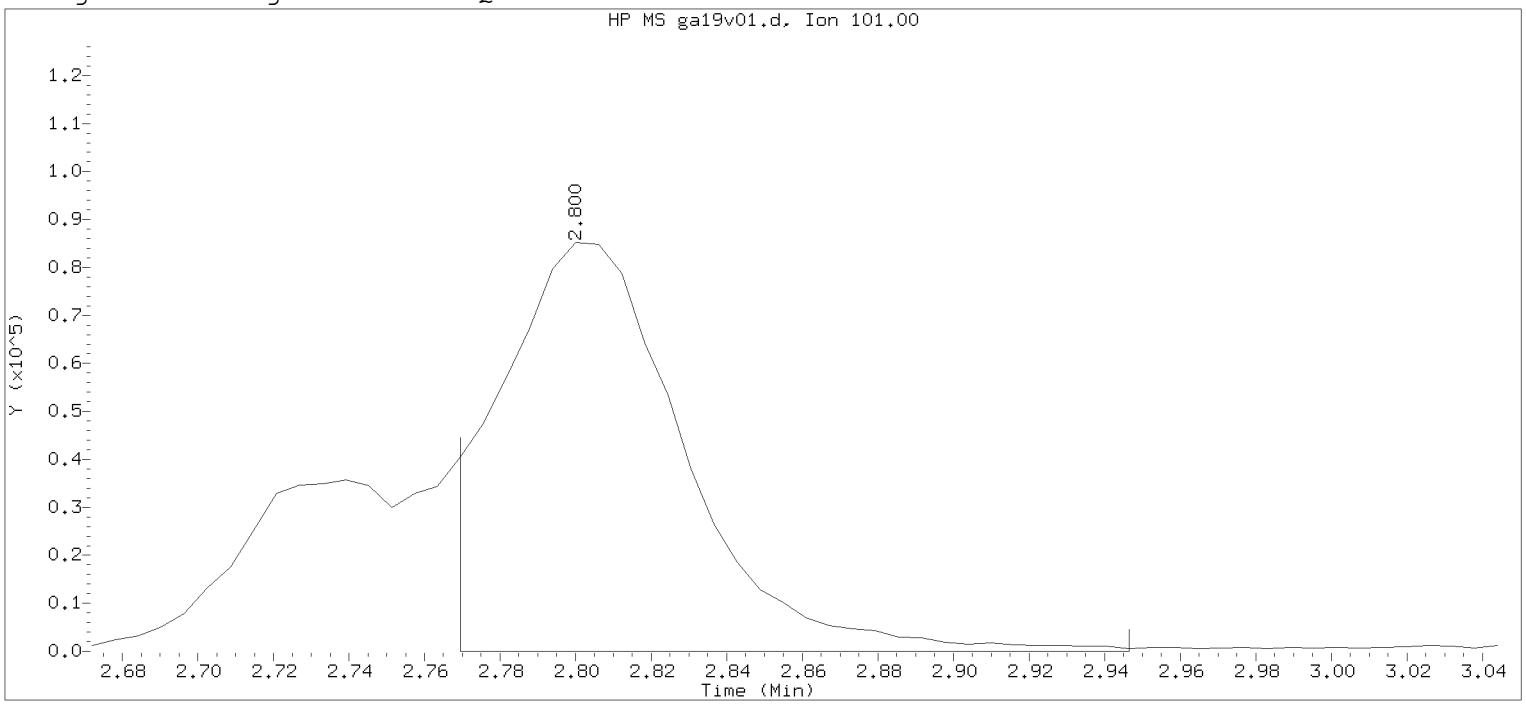
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

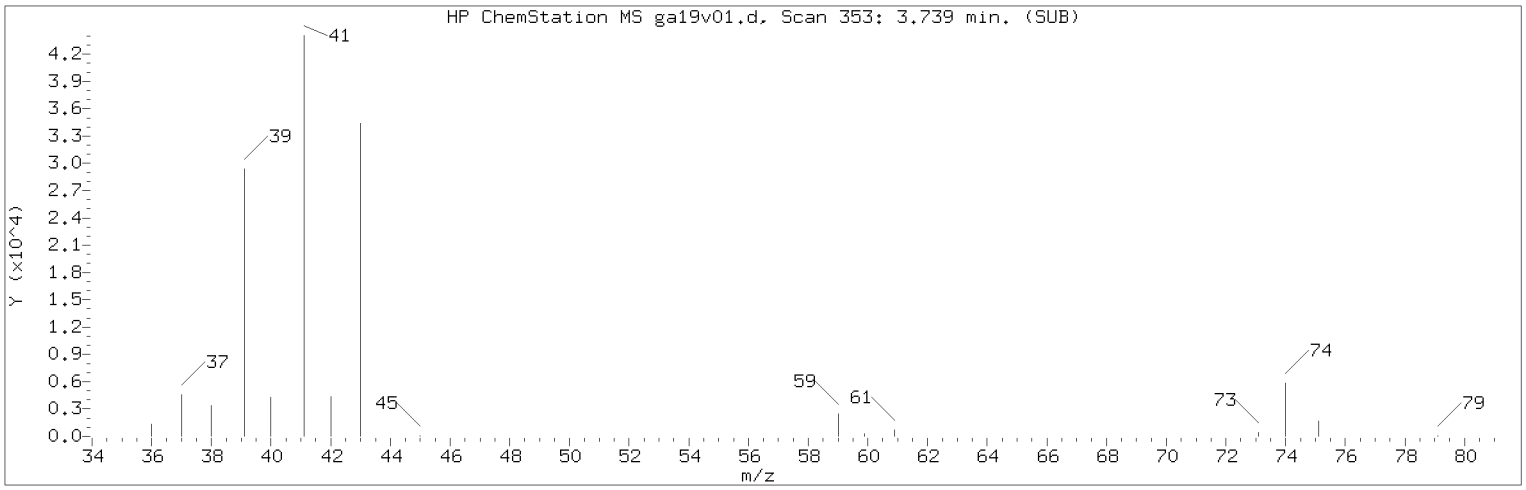
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

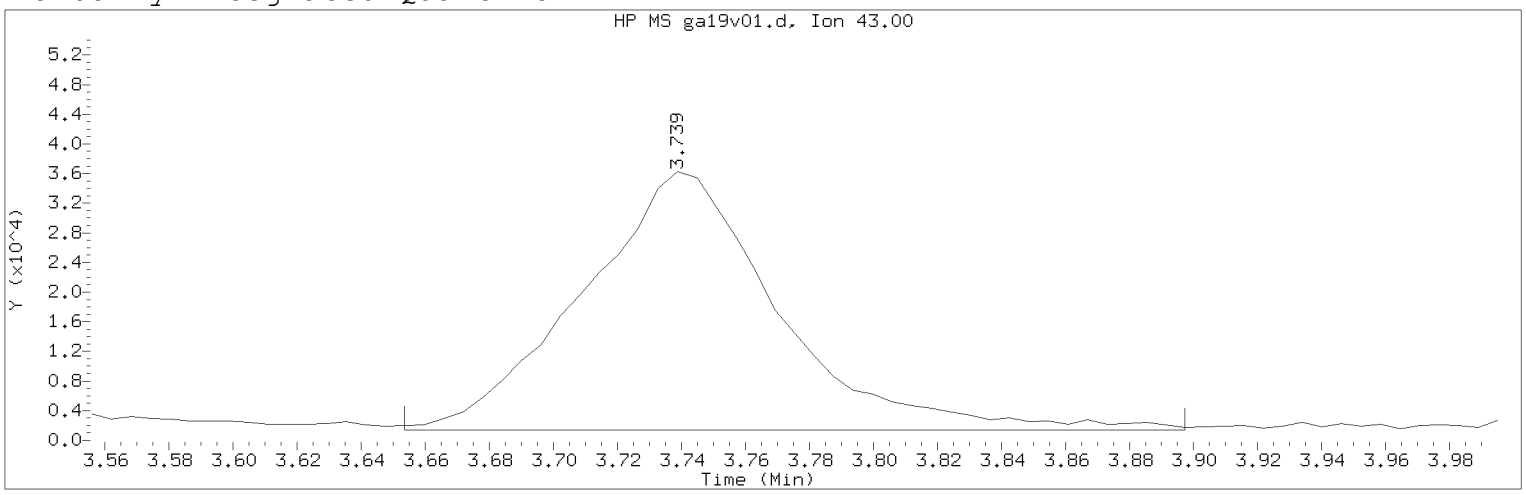
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 199
Retention Time (minutes): 2.800
Quant Ion : 101.00
Area : 286183
On-column Amount (ng) : 3.6977
Integration start scan : 193 Integration stop scan: 222
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

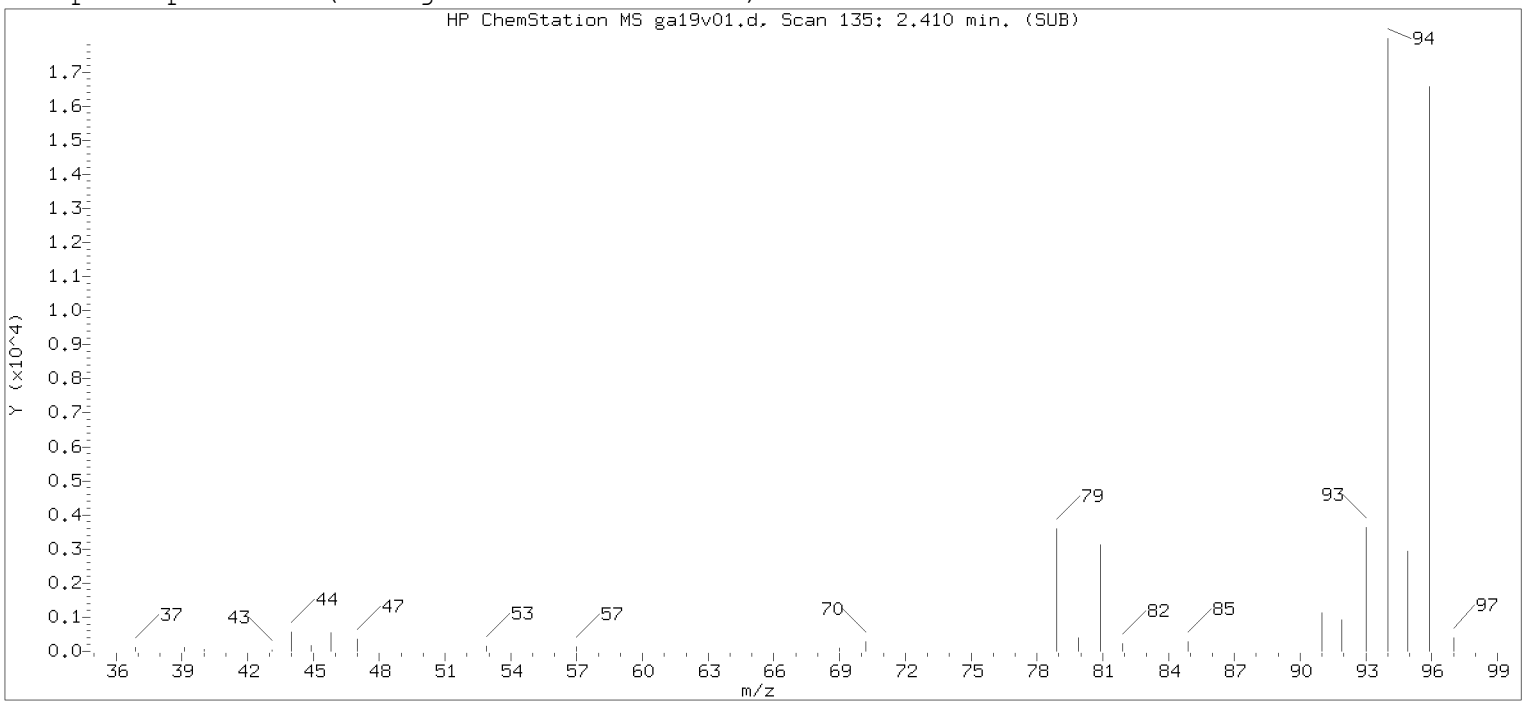
Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 353
Retention Time (minutes): 3.739
Quant Ion : 43.00
Area (flag) : 147671M
On-Column Amount (ng) : 4.7179
Integration start scan : 338 Integration stop scan: 378
Y at integration start : 1411 Y at integration end: 1411

Reason for manual integration: improper integration

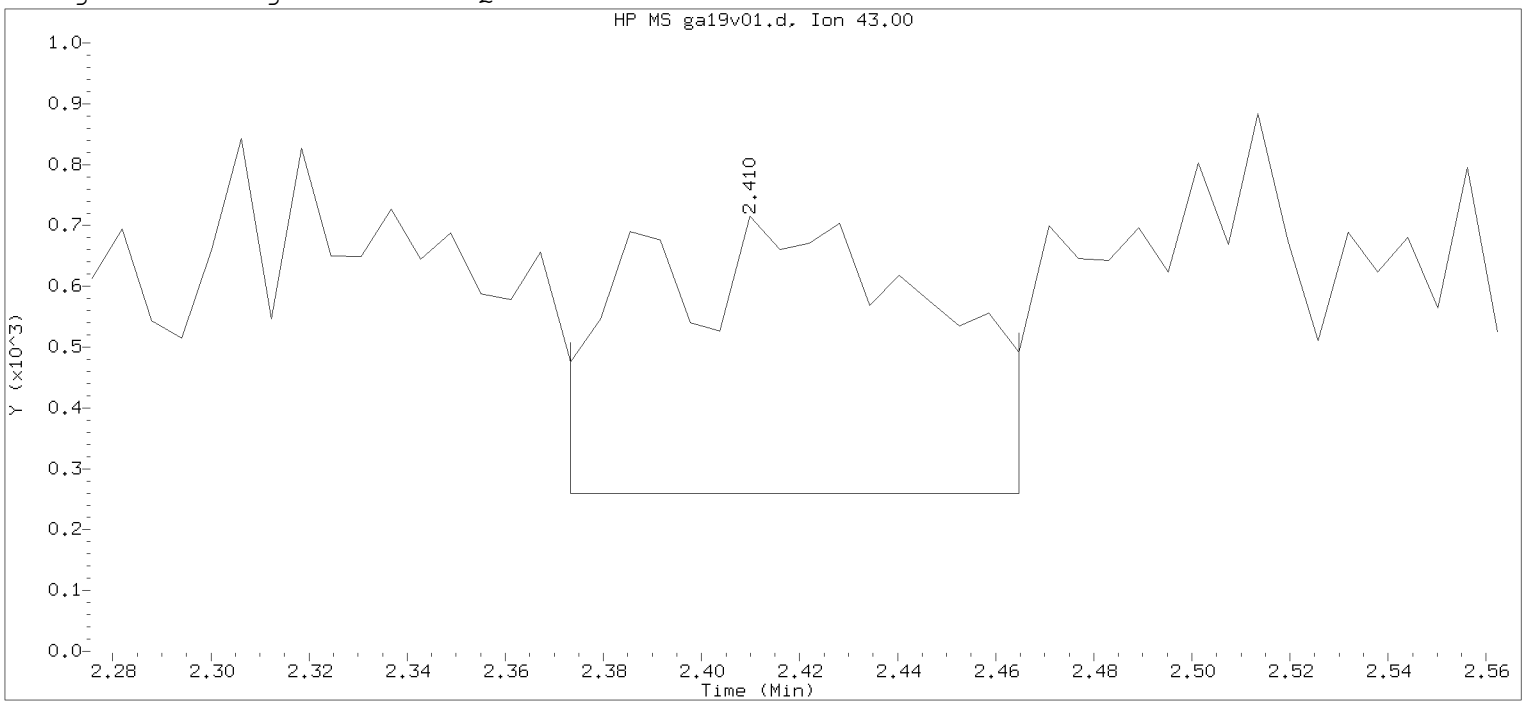
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number : 21
Compound Name : Methyl Acetate
Scan Number : 135
Retention Time (minutes): 2.410
Quant Ion : 43.00
Area : 1889
On-column Amount (ng) : 1.2055
Integration start scan : 128 Integration stop scan: 143
Y at integration start : 260 Y at integration end: 260

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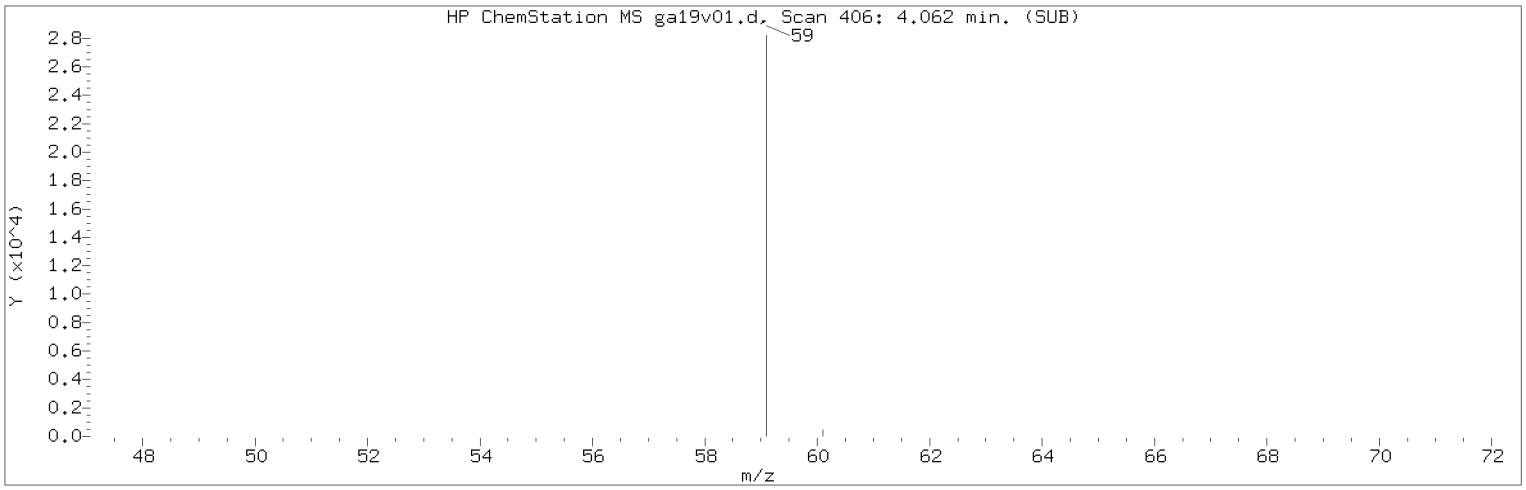
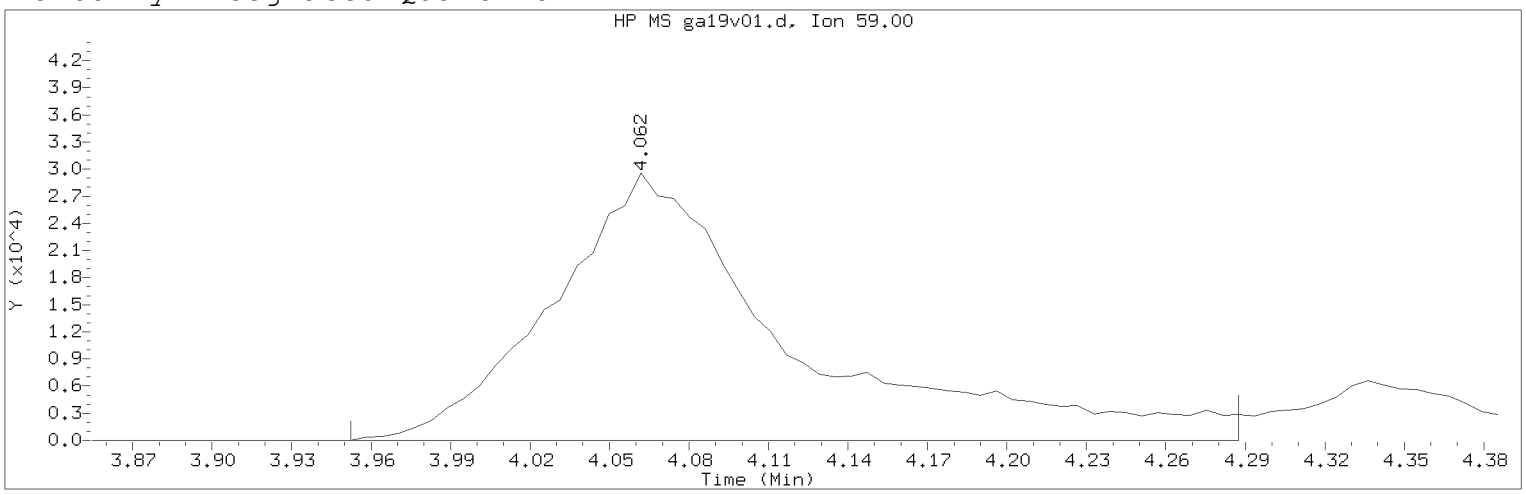
Target 3.5 esignature used. Page 7582

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

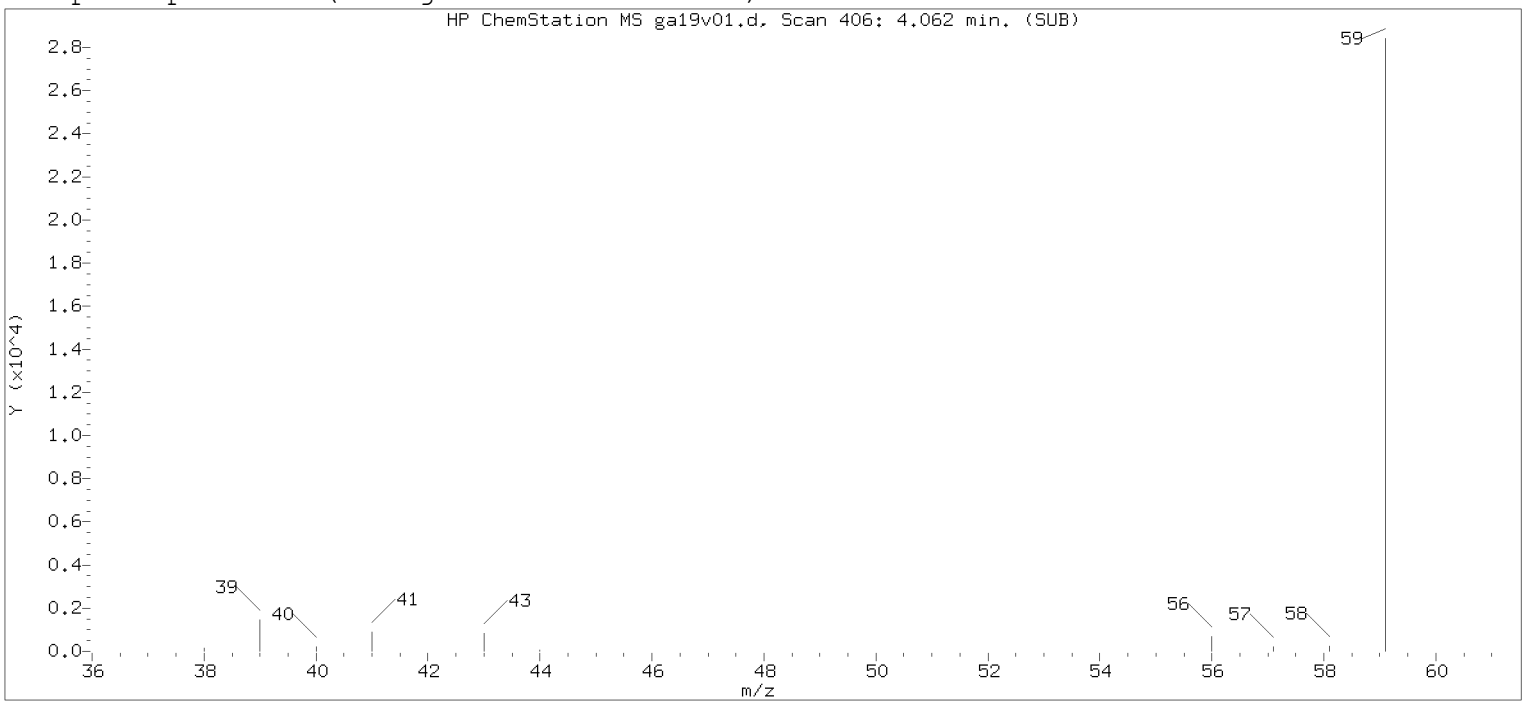
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 59.00
Area (flag) : 185169M
On-Column Amount (ng) : 49.1915
Integration start scan : 387 Integration stop scan: 442
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

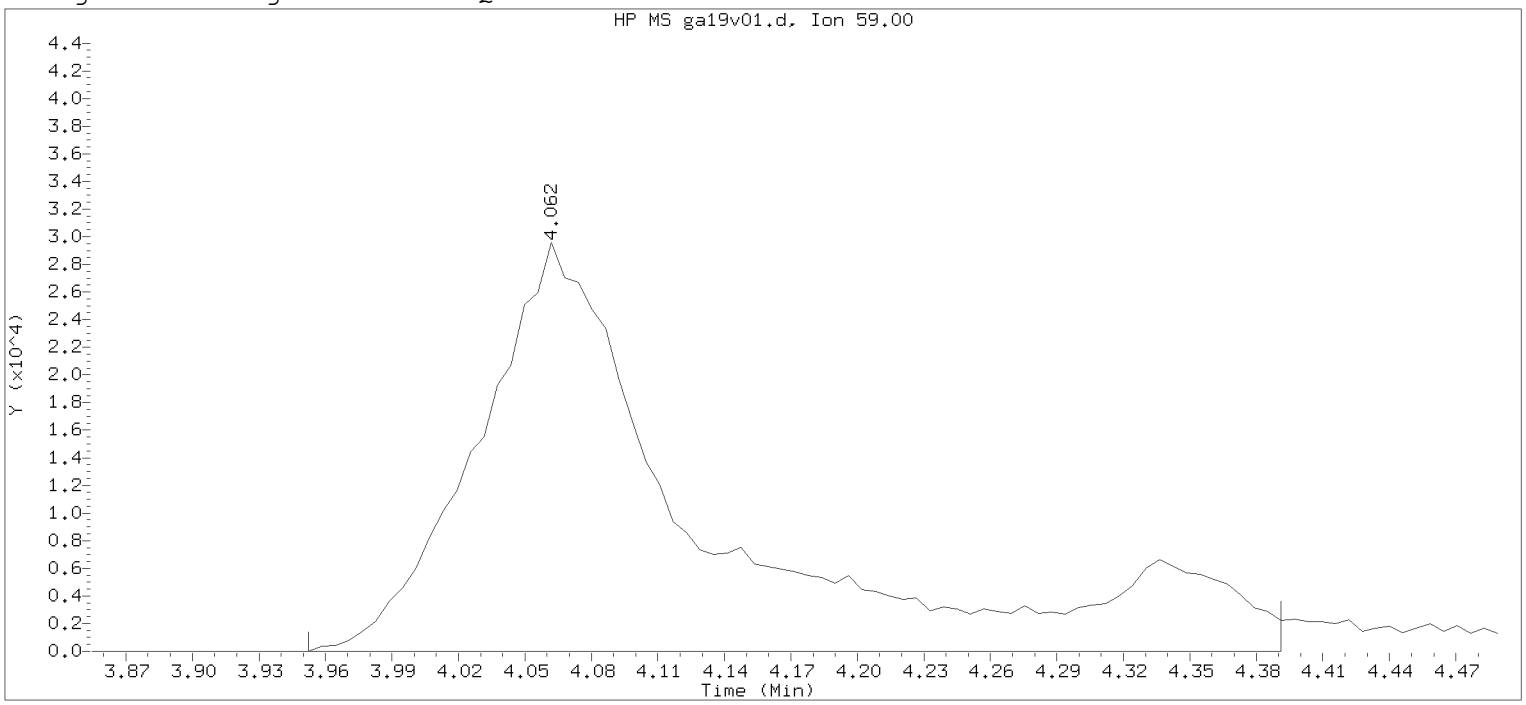
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 59.00
Area : 211798
On-column Amount (ng) : 53.7119
Integration start scan : 387 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

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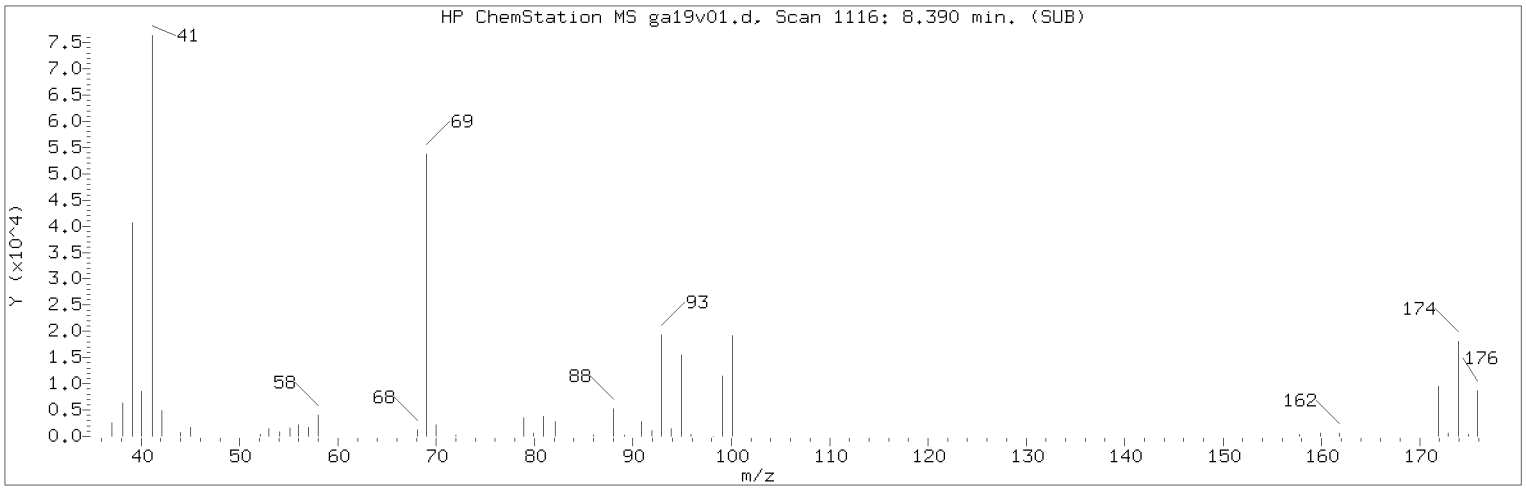
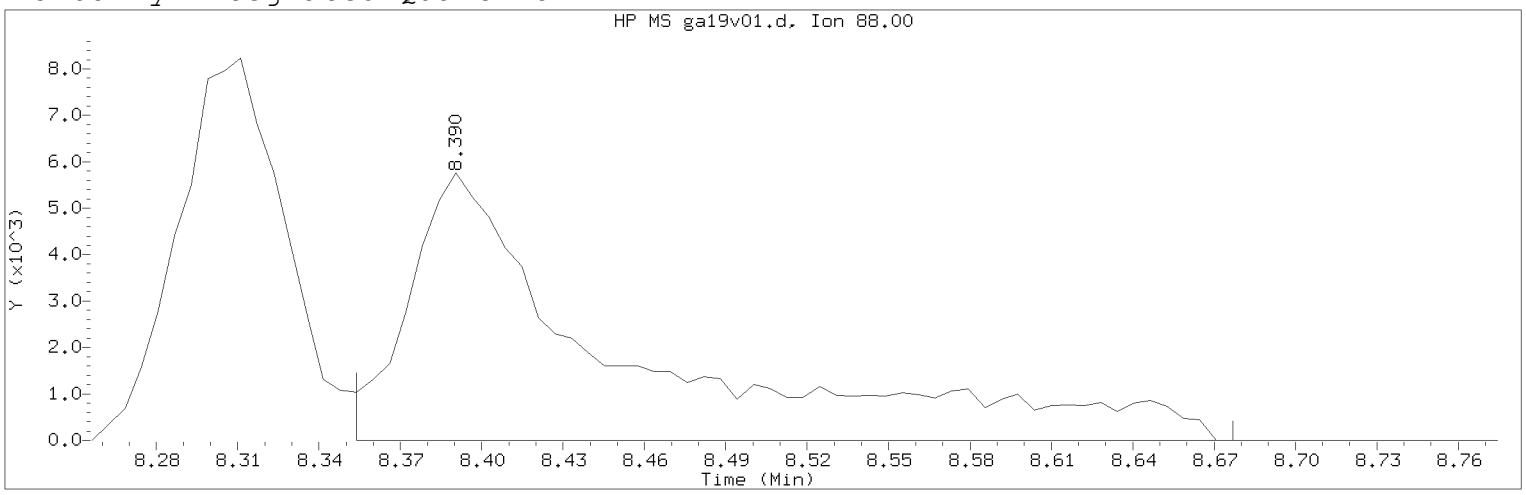
Target 3.5 esignature used. Method: 7540

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

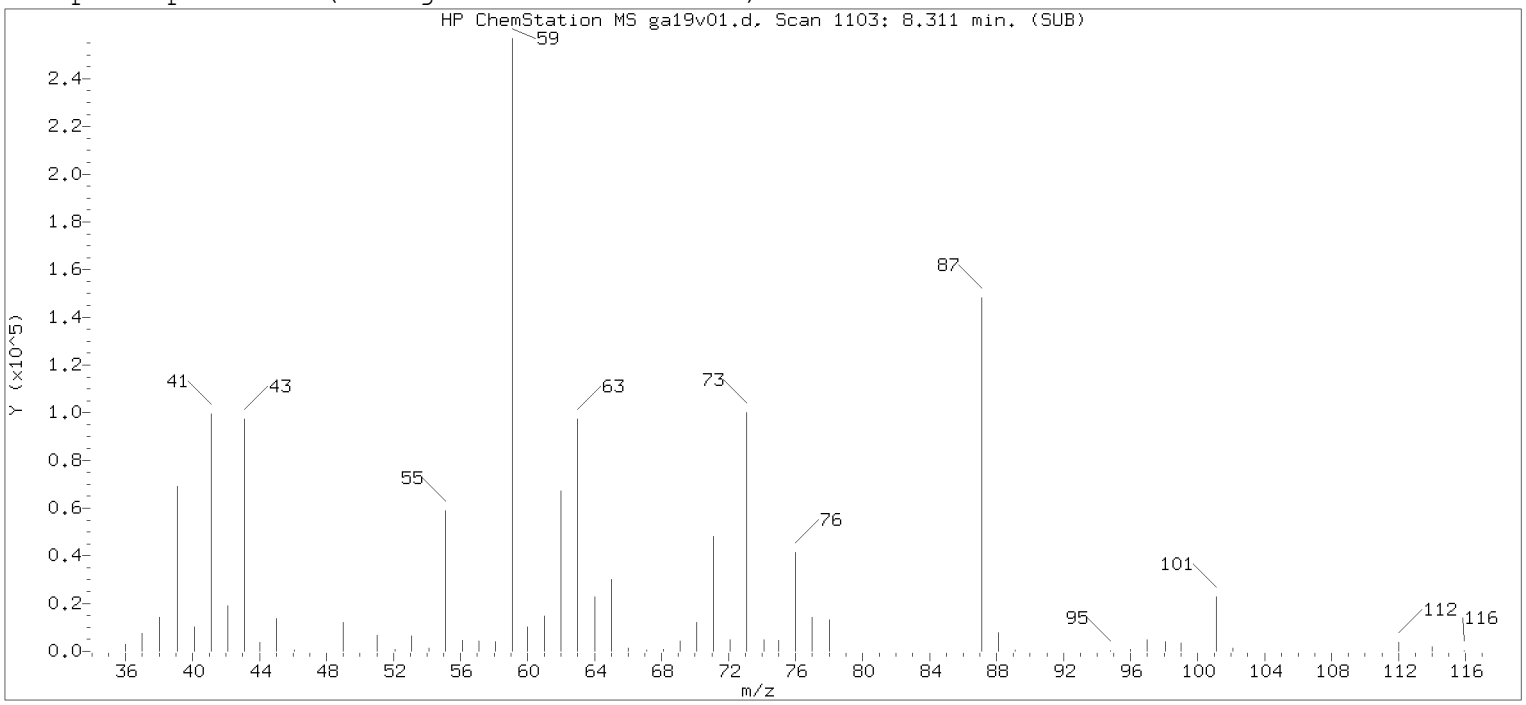
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1116
Retention Time (minutes): 8.390
Quant Ion : 88.00
Area (flag) : 31438M
On-Column Amount (ng) : 152.3523
Integration start scan : 1109 Integration stop scan: 1162
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

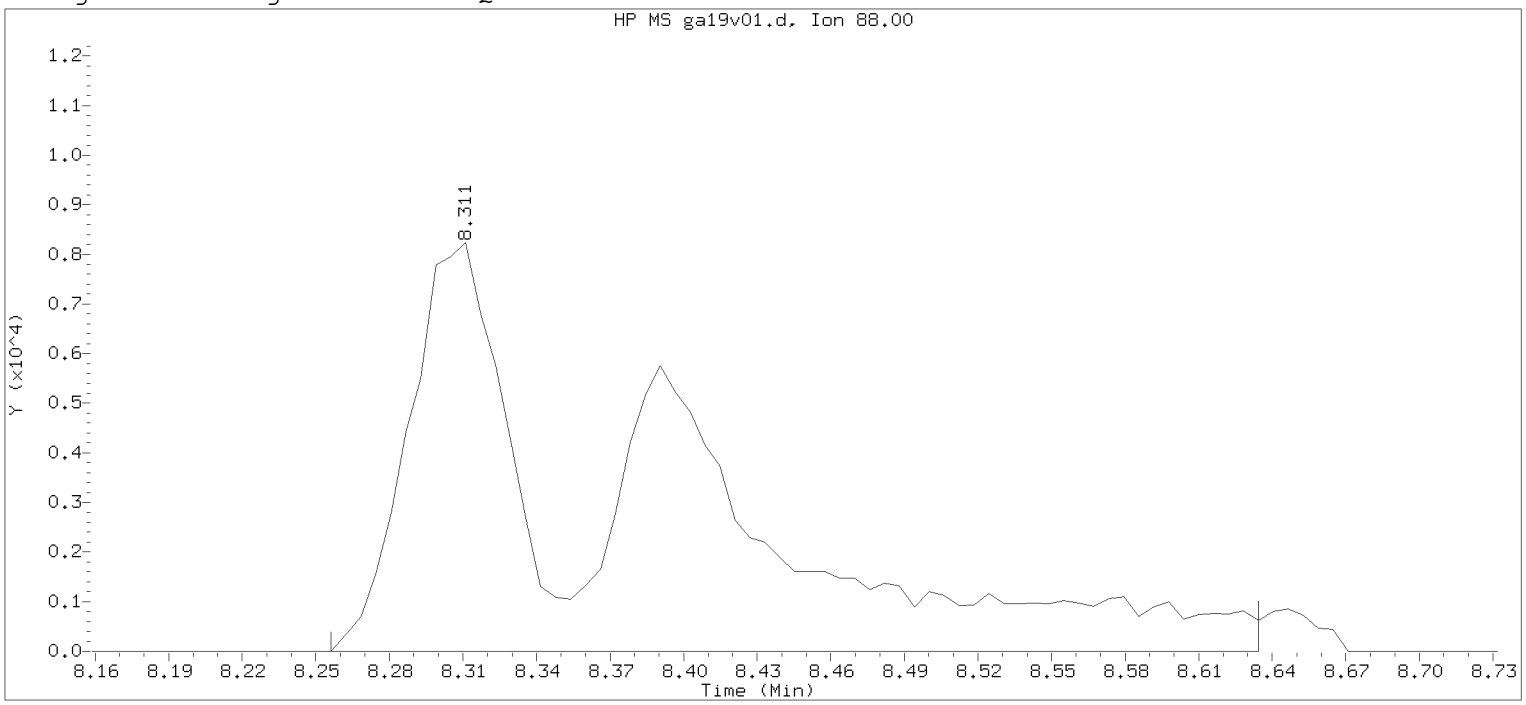
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

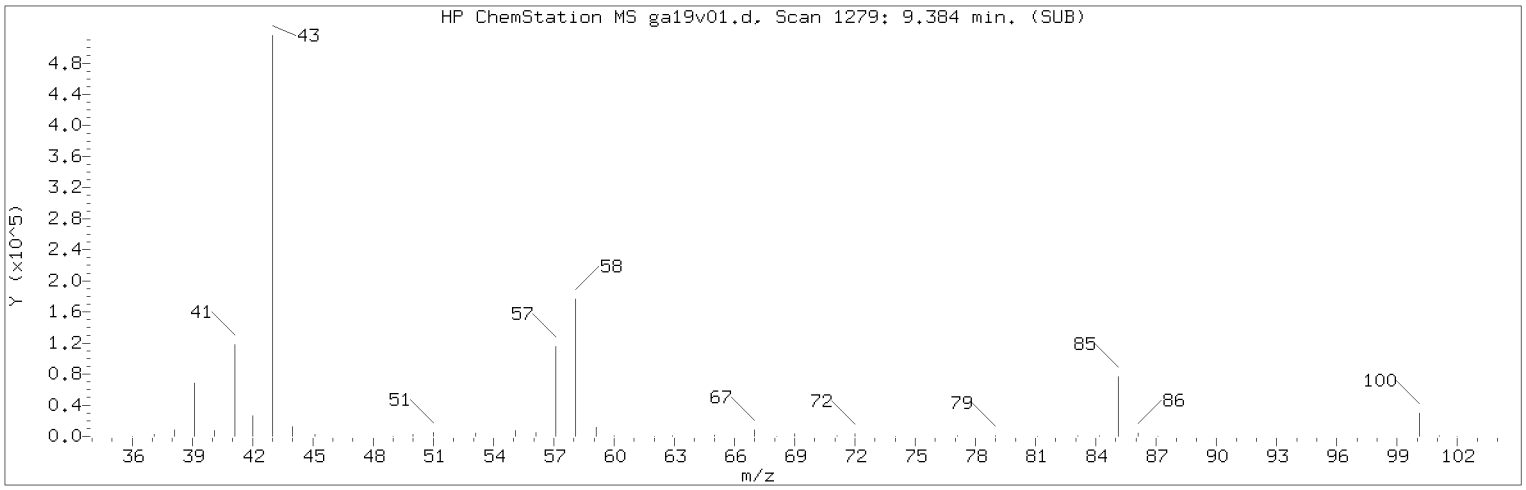
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

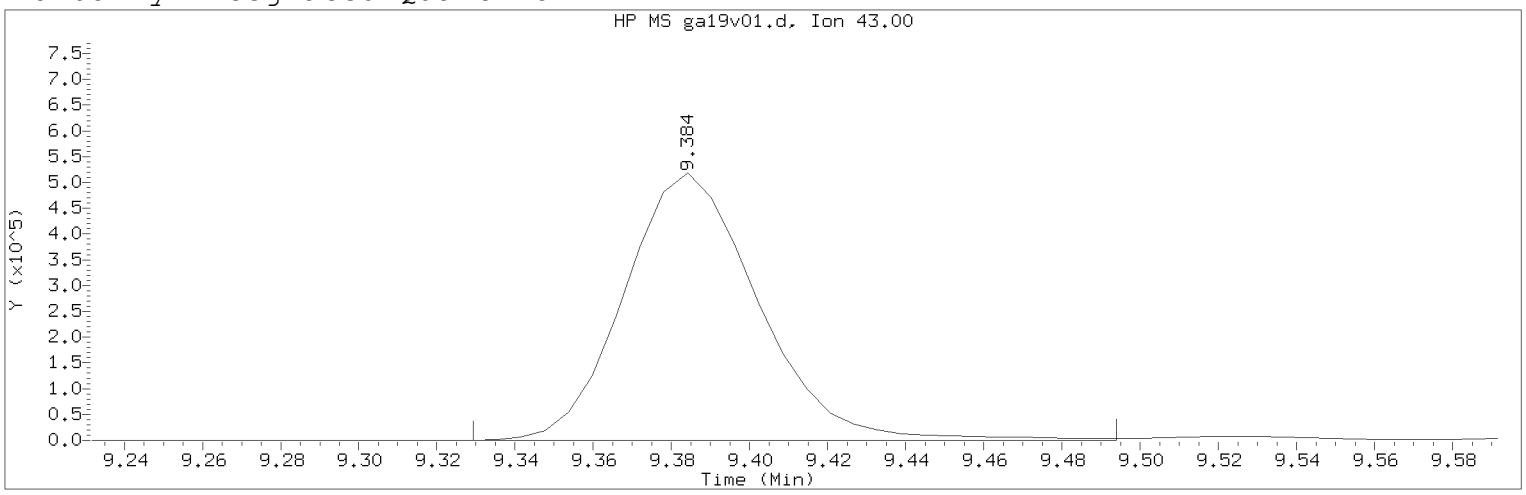
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 88.00
Area : 52493
On-column Amount (ng) : 192.3167
Integration start scan : 1093 Integration stop scan: 1155
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

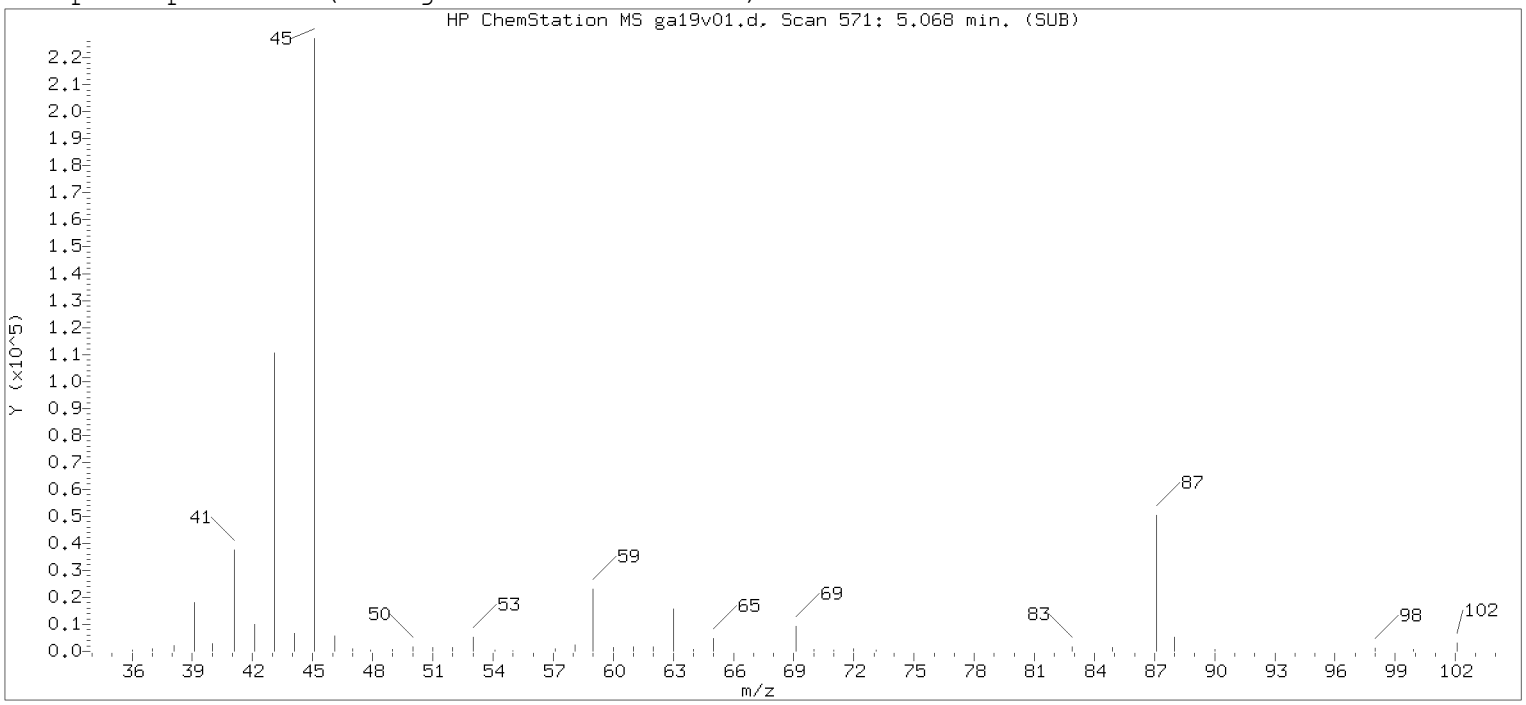
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1279
Retention Time (minutes): 9.384
Quant Ion : 43.00
Area (flag) : 1233176M
On-Column Amount (ng) : 26.2733
Integration start scan : 1269 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

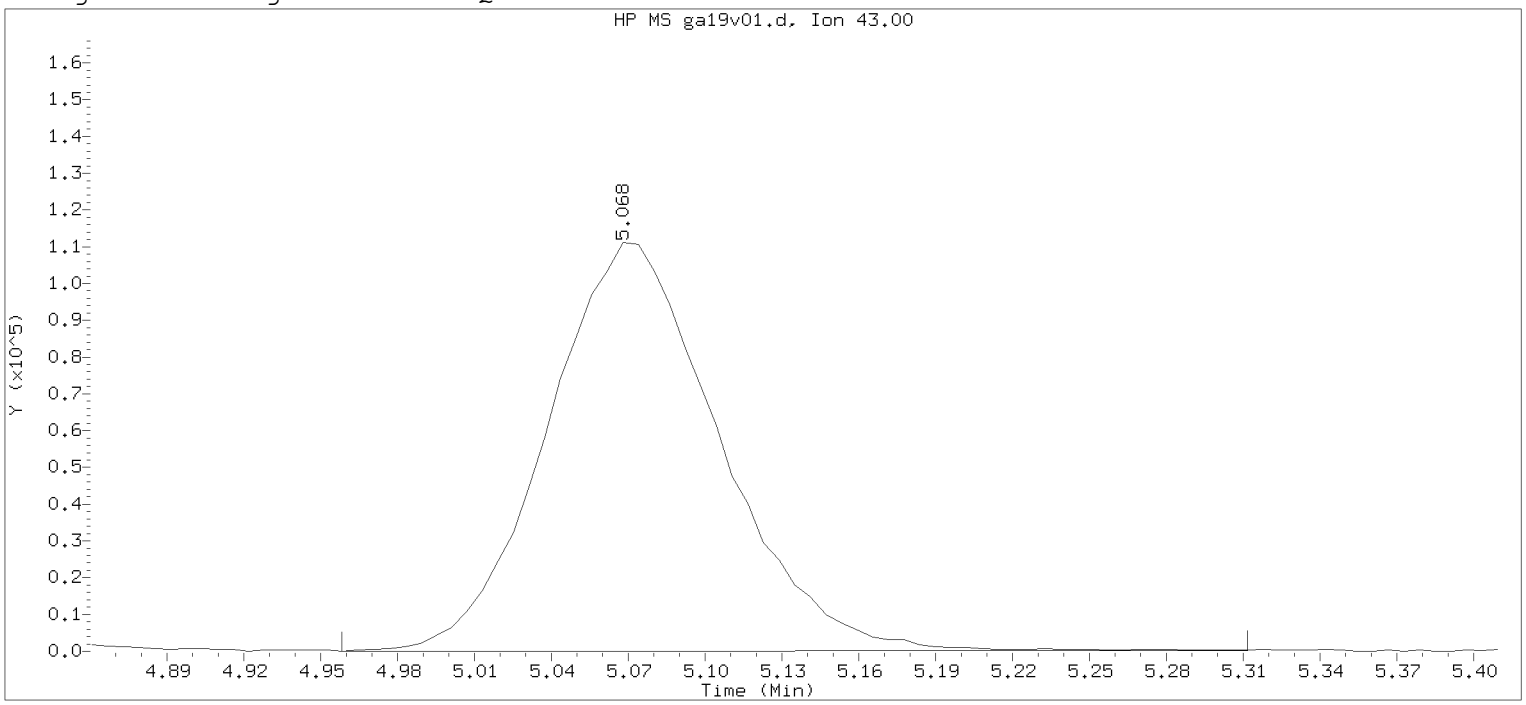
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

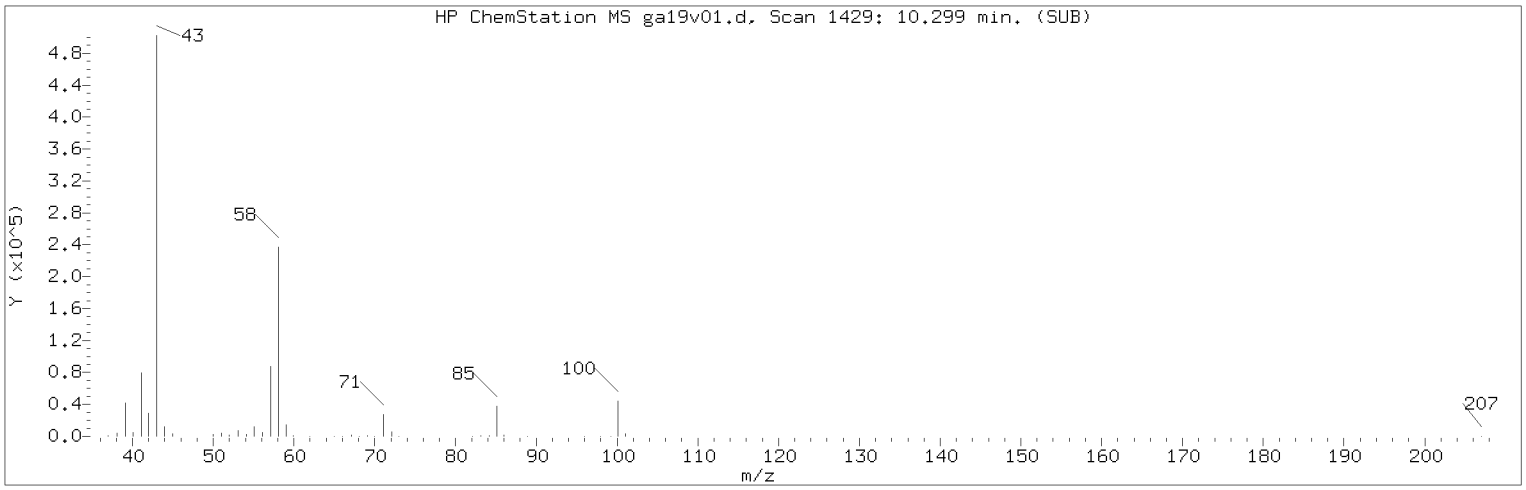
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

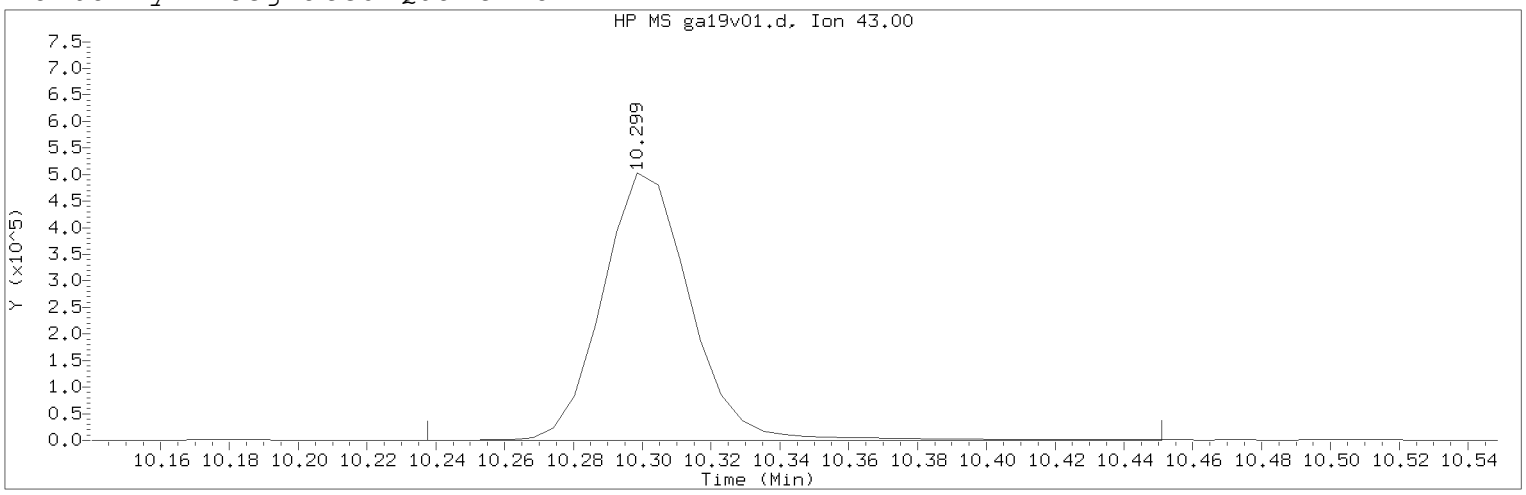
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 571
Retention Time (minutes): 5.068
Quant Ion : 43.00
Area : 518037
On-column Amount (ng) : 51.0227
Integration start scan : 552 Integration stop scan: 610
Y at integration start : 0 Y at integration end: 133

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. Method: 7580

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

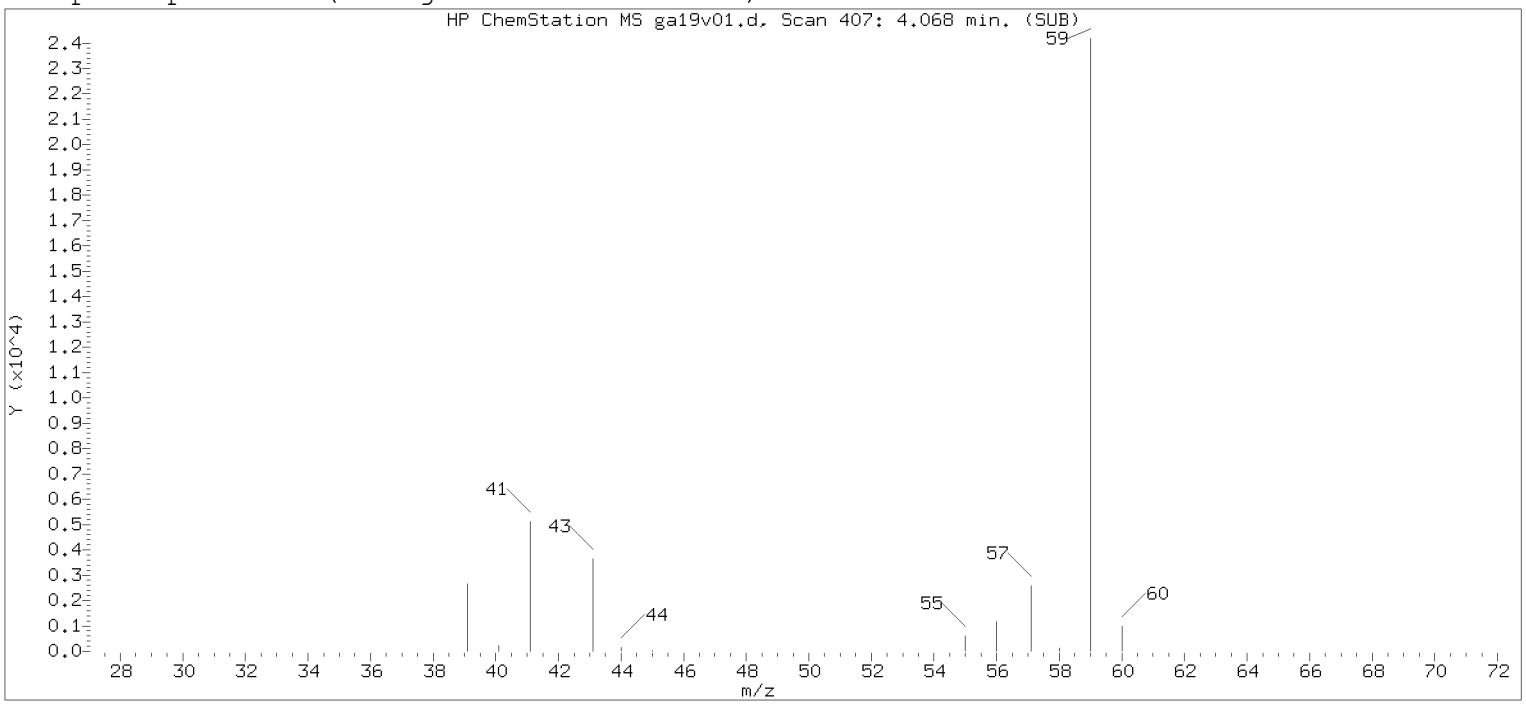
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1429
Retention Time (minutes): 10.299
Quant Ion : 43.00
Area (flag) : 891400M
On-Column Amount (ng) : 27.0207
Integration start scan : 1418 Integration stop scan: 1453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

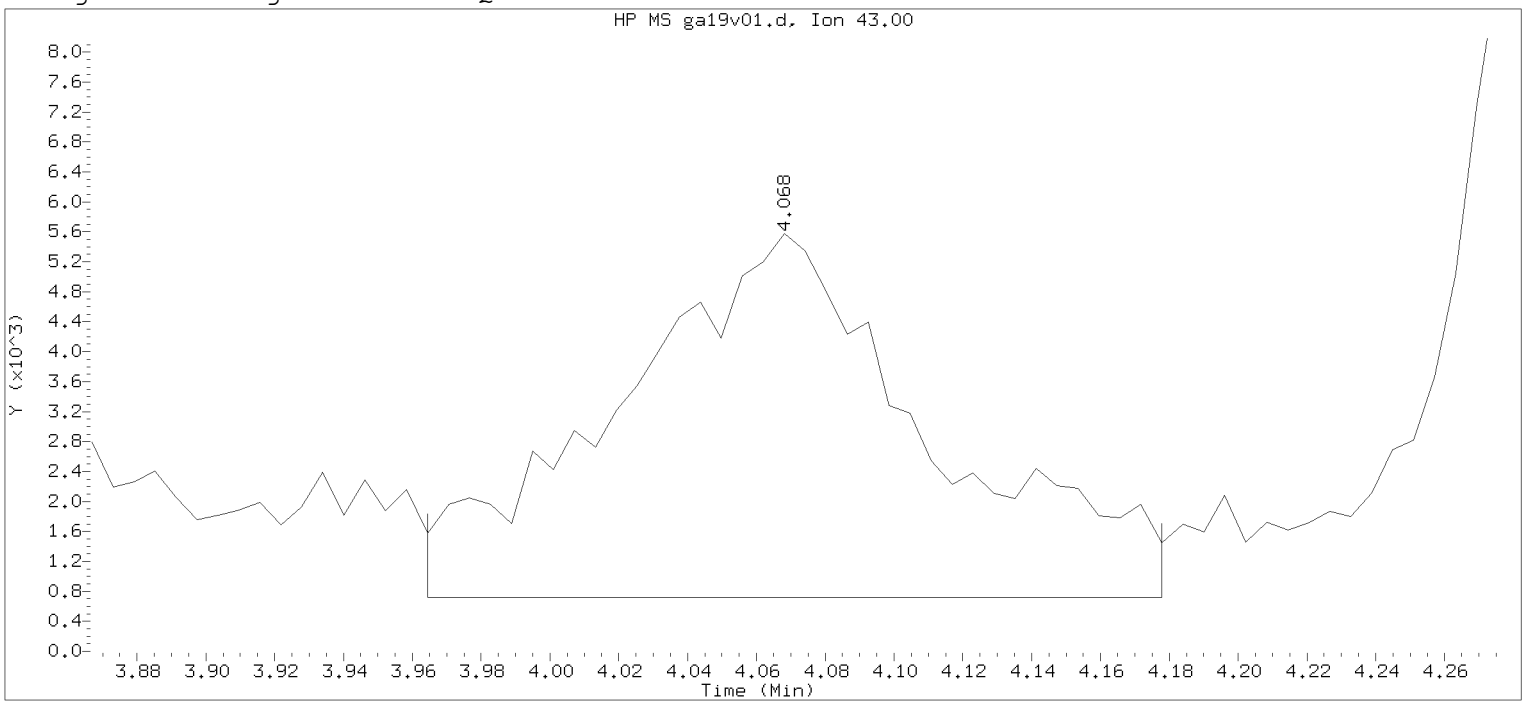
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

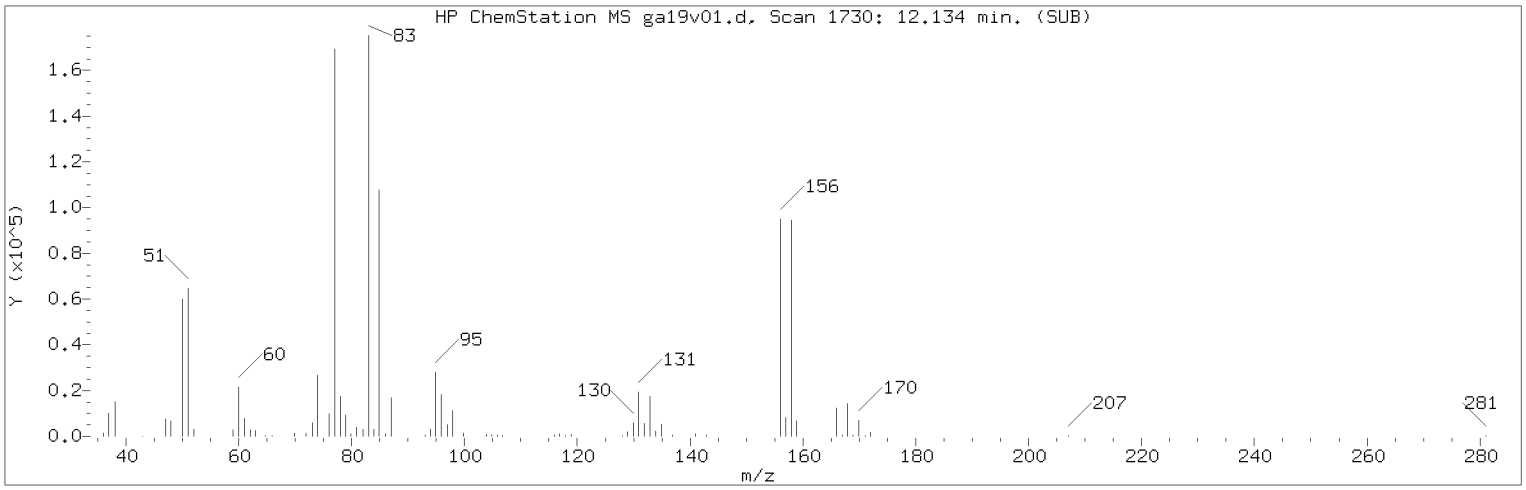
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

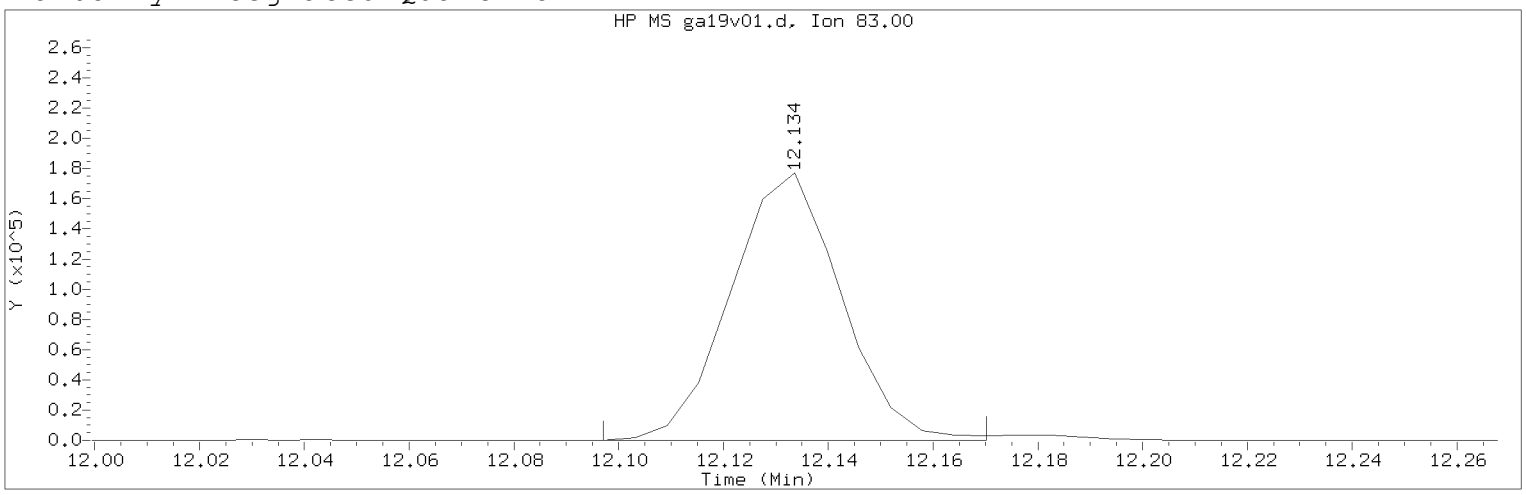
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 43.00
Area : 30590
On-column Amount (ng) : 15.4051
Integration start scan : 389 Integration stop scan: 424
Y at integration start : 719 Y at integration end: 719

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. Method: 7500

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:26 msk07970

Sample Name: LCSG01 Lab Sample ID: LCSG01

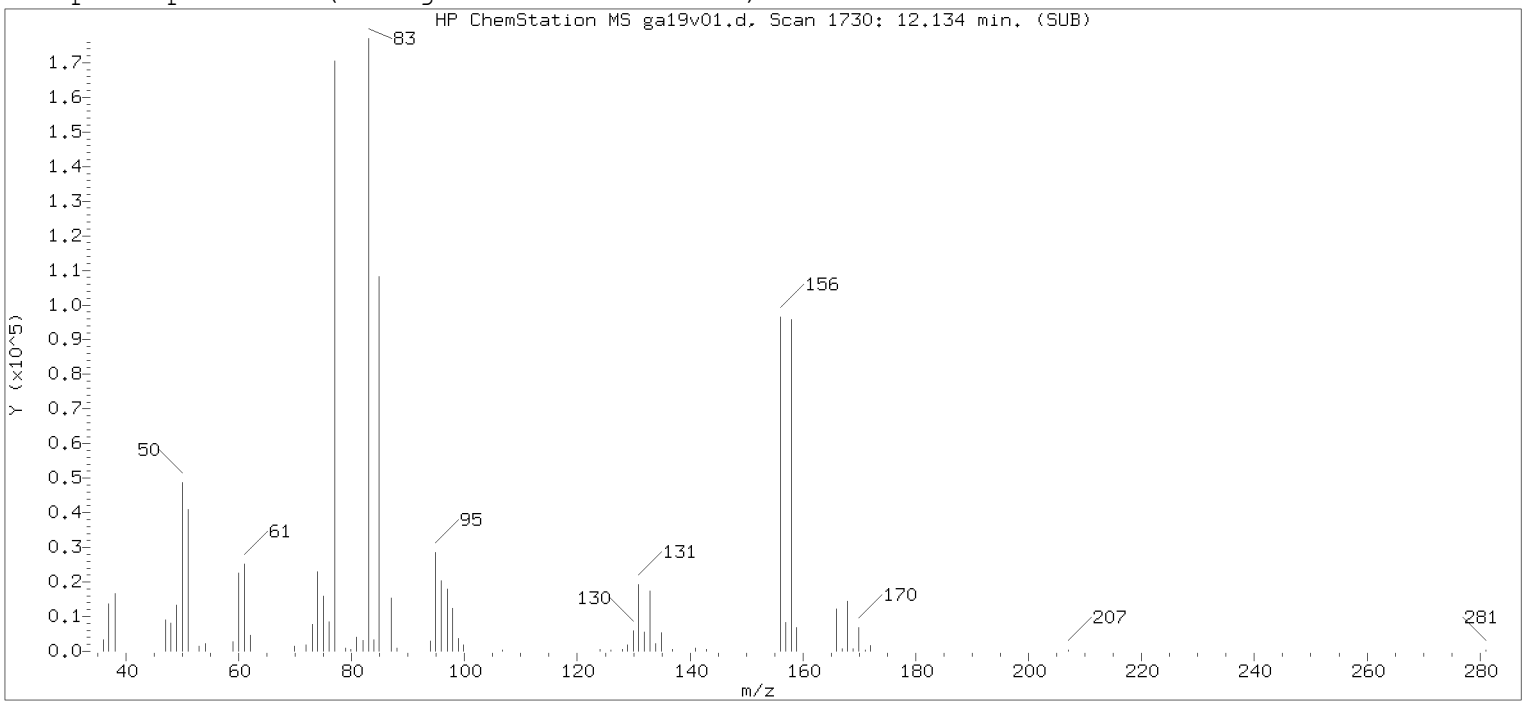
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area (flag) : 258665M
On-Column Amount (ng) : 4.9925
Integration start scan : 1723 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

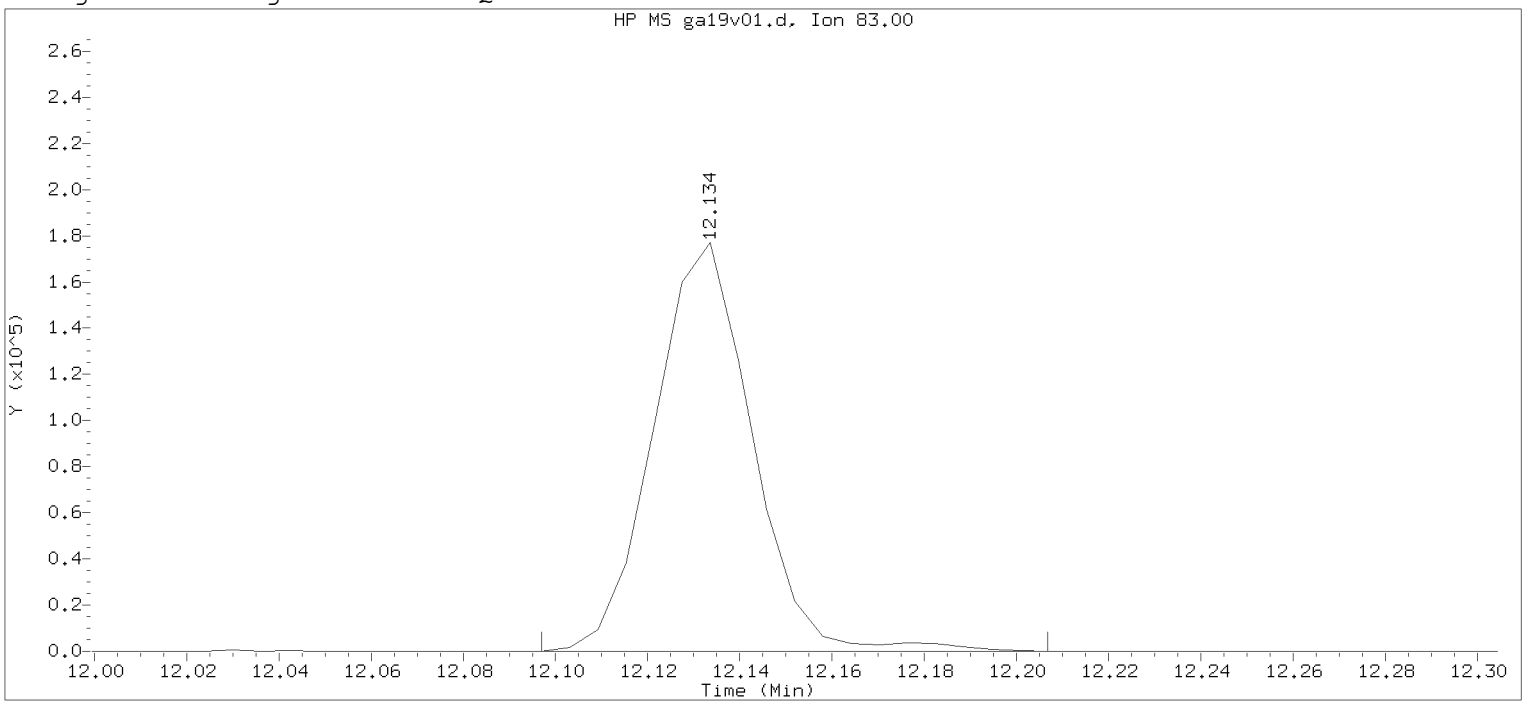
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:19.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v01.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 15:21 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 19-APR-2018 14:53
Date, time and analyst ID of latest file update: 19-Apr-2018 15:38 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1730
Retention Time (minutes): 12.134
Quant Ion : 83.00
Area : 262370
On-column Amount (ng) : 5.0165
Integration start scan : 1723 Integration stop scan: 1741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. Adobe 7.0.0

Data File: /chem2/HP16334.i/18apr23b.b/ga23t05.d

Date : 23-APR-2018 18:48

Client ID: BFB/feb13-18

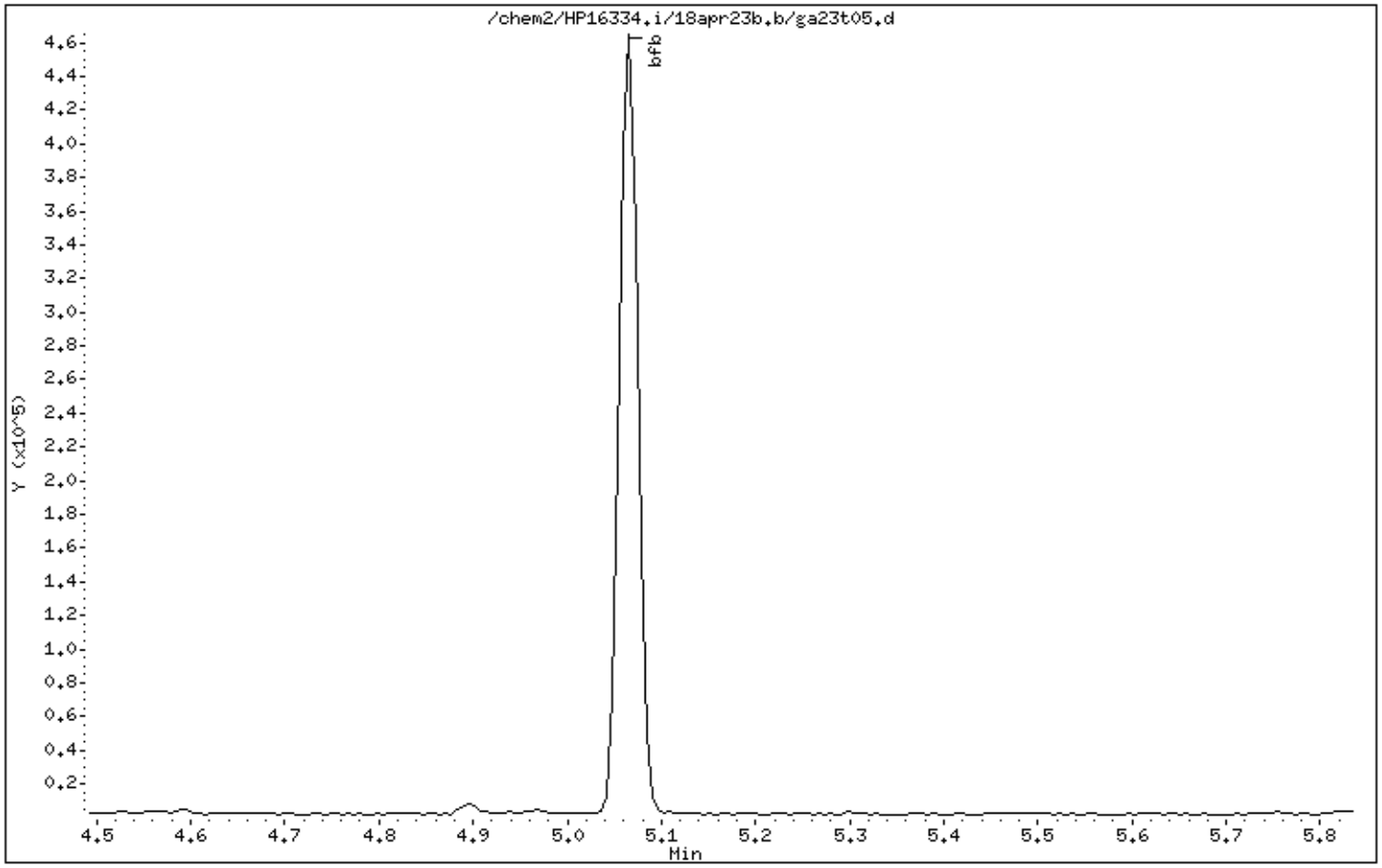
Instrument: HP16334.i

Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

Operator: msk07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 04/23/2018 at 22:05.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr23b.b/ga23t05.d

Date : 23-APR-2018 18:48

Client ID: BFB/feb13-18

Instrument: HP16334.i

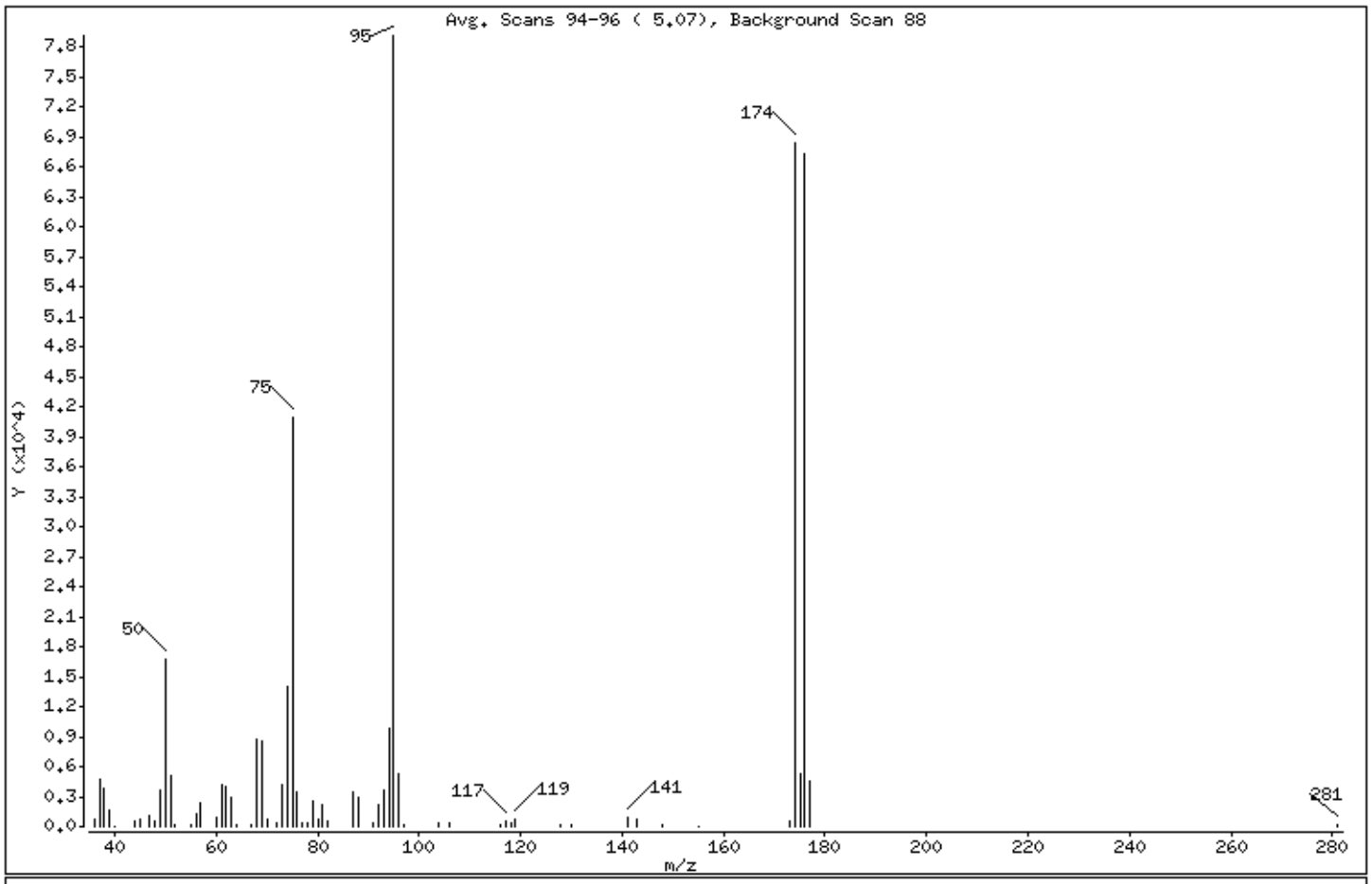
Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

Operator: msk07970

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.12
75	30.00 - 60.00% of mass 95	51.73
96	5.00 - 9.00% of mass 95	6.58
173	Less than 2.00% of mass 174	0.78 (0.91)
174	50.00 - 100.00% of mass 95	86.42
175	5.00 - 9.00% of mass 174	6.64 (7.69)
176	95.00 - 101.00% of mass 174	85.08 (98.45)
177	5.00 - 9.00% of mass 176	5.78 (6.79)

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:05.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr23b.b/ga23t05.d

Date : 23-APR-2018 18:48

Client ID: BFB/feb13-18

Instrument: HP16334.i

Sample Info: BFB/feb13-18;50NGBFB;1;3;;;;;;

Operator: msk07970

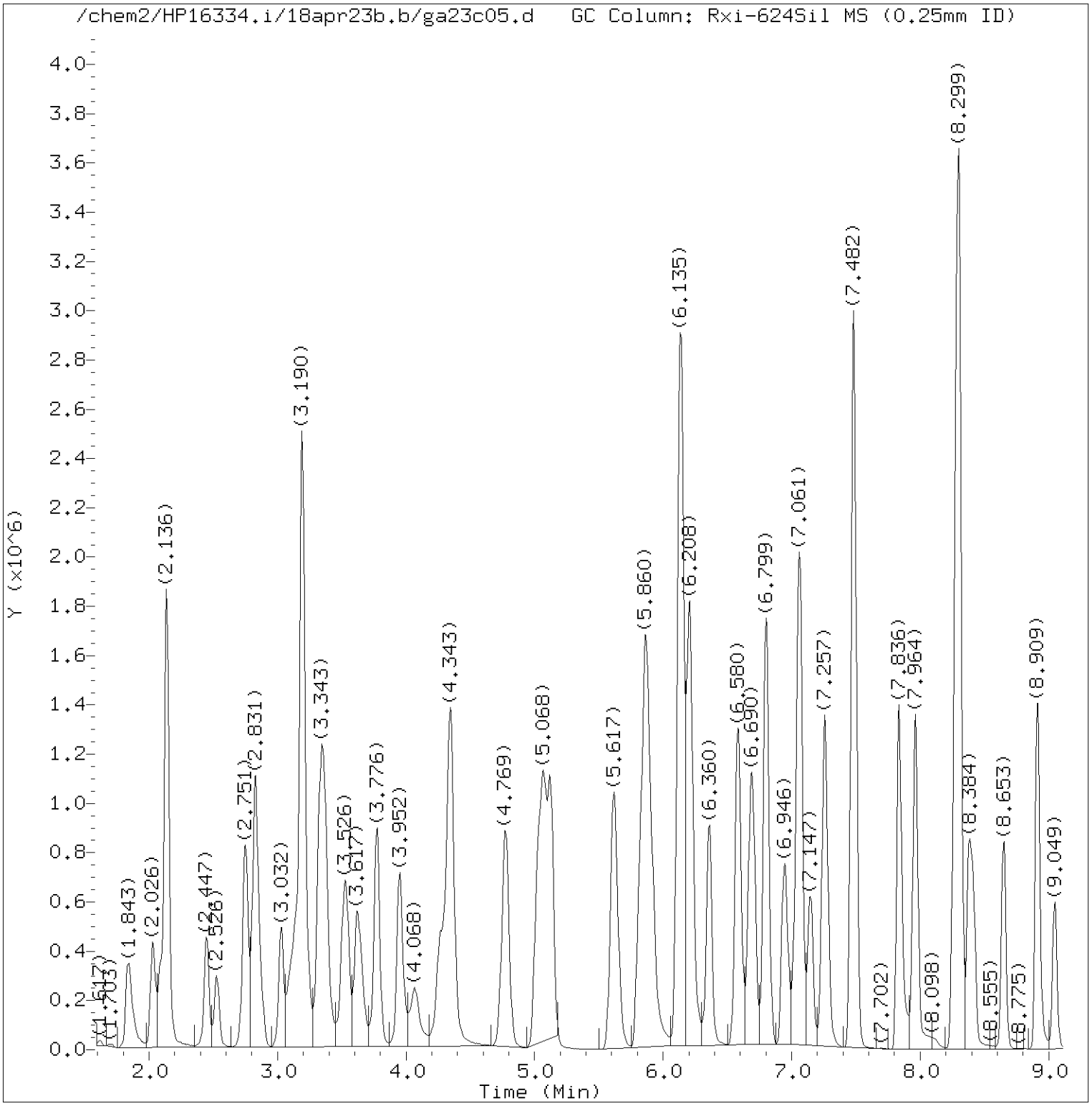
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ga23t05.d
Spectrum: Avg. Scans 94-96 (5.07), Background Scan 88
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	802	60.00	832	79.00	2578	117.00	541
37.00	4648	61.00	4104	80.00	729	118.00	379
38.00	3765	62.00	4071	81.00	2267	119.00	683
39.00	1549	63.00	2858	82.00	538	128.00	218
40.00	7	64.00	106	87.00	3413	130.00	208
44.00	528	67.00	216	88.00	2995	141.00	825
45.00	819	68.00	8732	91.00	382	143.00	770
47.00	1179	69.00	8616	92.00	2171	148.00	101
48.00	483	70.00	670	93.00	3658	155.00	89
49.00	3690	72.00	452	94.00	9761	173.00	620
50.00	16720	73.00	4193	95.00	79176	174.00	68424
51.00	5014	74.00	13969	96.00	5210	175.00	5260
52.00	195	75.00	40960	97.00	102	176.00	67360
55.00	239	76.00	3490	104.00	350	177.00	4573
56.00	1302	77.00	432	106.00	441	281.00	219
57.00	2283	78.00	352	116.00	243		

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:05.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

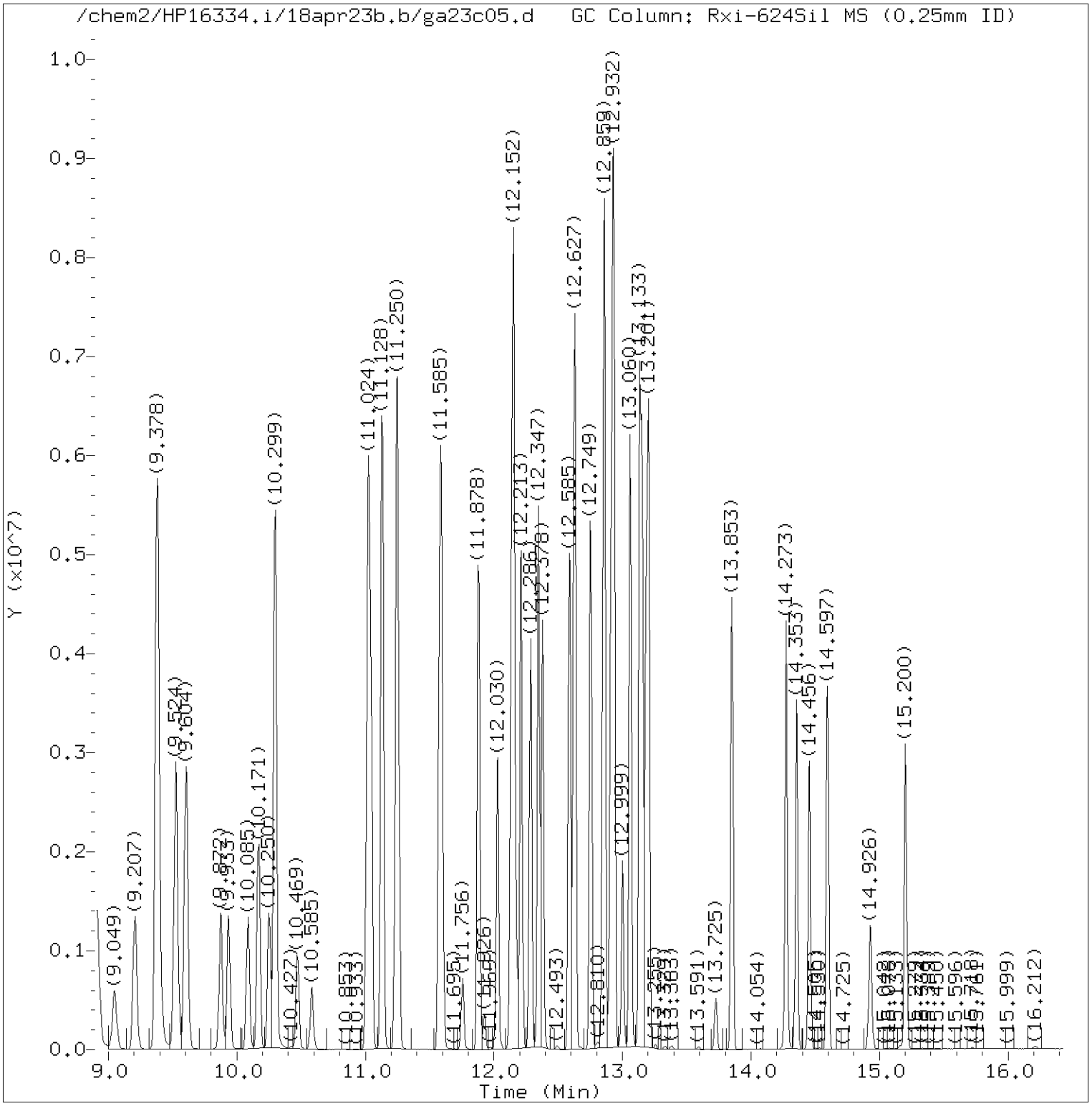
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.843	85	780187	9.614
2) Chloromethane	(2)	2.026	50	779945	9.545
5) Vinyl Chloride	(2)	2.136	62	695772	9.922
6) 1,3-Butadiene	(2)	2.136	39	1267450	8.495
7) Bromomethane	(2)	2.447	94	452991	9.662
8) Chloroethane	(2)	2.526	64	383183	9.593
9) Dichlorofluoromethane	(2)	2.751	67	1067875	11.084
10) Trichlorofluoromethane	(2)	2.812	101	689556	7.540
11) Ethyl ether	(2)	3.032	59	411179	9.020
12) Freon 123a	(2)	3.129	67	609654	9.415
13) Acrolein	(1)	3.190	56	3729931	510.335
15) 1,1-Dichloroethene	(2)	3.324	96	433220	9.675
14) Acetone	(1)	3.343	43	946086	80.114
16) Freon 113	(2)	3.367	101	493565	9.777
17) Methyl Iodide	(2)	3.513	142	846678	9.736
18) Carbon Disulfide	(2)	3.623	76	1621633	9.128
21) Methyl Acetate	(1)	3.745	43	346419	10.407
22) Allyl Chloride	(2)	3.776	41	904969	8.711
23) Methylene Chloride	(2)	3.952	84	510044	8.423
26)*t-Butyl Alcohol-d10	(1)	3.952	65	211554	50.000
28) t-Butyl Alcohol	(1)	4.068	59	778038	194.355
29) Acrylonitrile	(1)	4.263	53	650197	49.490
30) Methyl Tertiary Butyl Ether	(2)	4.324	73	1507214	9.665
31) trans-1,2-Dichloroethene	(2)	4.349	96	506189	9.727
32) n-Hexane	(2)	4.775	57	847121	9.639
33) 1,1-Dichloroethane	(2)	5.019	63	1003972	9.458
34) di-Isopropyl Ether	(2)	5.068	45	2040801	9.389
35) 2-Chloro-1,3-Butadiene	(2)	5.129	53	944171	9.716
37) Ethyl t-butyl ether	(2)	5.617	59	1833739	9.609
38) 2-Butanone	(1)	5.824	43	2094066	103.062
39) cis-1,2-Dichloroethene	(2)	5.860	96	580342	9.943
41) 2,2-Dichloropropane	(2)	5.879	77	854795	9.818
42) Propionitrile	(1)	5.915	54	1074778	213.933
40) 1,2-Dichloroethene (Total)	(2)		96	1086532	19.670
45) Methacrylonitrile	(1)	6.135	67	1718480	107.935
47) Bromochloromethane	(2)	6.208	128	265774	9.917
48) Tetrahydrofuran	(1)	6.208	71	525257	108.600
49) Chloroform	(2)	6.360	83	1004979	9.902

* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.580	113	546297	10.042
50)$Dibromofluoromethane	(2)	6.580	111	560169	10.013
51) 1,1,1-Trichloroethane	(2)	6.586	97	856093	9.987
52) Cyclohexane	(2)	6.684	56	1009088	9.814
52) Cyclohexane	(2)	6.690	84	782601	9.667
52) Cyclohexane	(2)	6.690	69	294287	9.833
55) 1,1-Dichloropropene	(2)	6.799	75	796393	9.964
54) Carbon Tetrachloride	(2)	6.799	117	709036	10.183
56) Isobutyl Alcohol	(1)	6.946	41	801848	503.989
57)$1,2-Dichloroethane-d4	(2)	7.043	102	115215	9.993
57)$1,2-Dichloroethane-d4	(2)	7.043	65	643186	9.813
57)$1,2-Dichloroethane-d4	(2)	7.043	104	74212	10.332
58) Benzene	(2)	7.068	78	2182123	9.889
59) 1,2-Dichloroethane	(2)	7.147	62	743124	9.514
60) t-Amyl methyl ether	(2)	7.257	73	1621206	10.011
63)*Fluorobenzene	(2)	7.476	96	2163489	10.000
62) n-Heptane	(2)	7.488	43	1020564	9.652
65) n-Butanol	(1)	7.836	56	1376265	1092.920
67) Trichloroethene	(2)	7.964	95	584655	10.036
69) Methylcyclohexane	(2)	8.275	83	976612	9.872
70) 1,2-Dichloropropane	(2)	8.299	63	609110	9.945
72) 1,4-Dioxane	(1)	8.299	88	48379	220.460
71) Methyl Methacrylate	(1)	8.378	69	327211	10.791
73) Dibromomethane	(2)	8.415	93	297866	10.191
74) Bromodichloromethane	(2)	8.653	83	738783	10.303
76) 2-Nitropropane	(1)	8.909	41	1211634	116.648
80) cis-1,3-Dichloropropene	(2)	9.207	75	915642	10.334
81) 4-Methyl-2-Pentanone	(1)	9.378	43	5440956	109.003
82)$Toluene-d8	(3)	9.524	98	2267261	9.844
82)$Toluene-d8	(3)	9.524	100	1442534	9.843
83) Toluene	(3)	9.604	92	1419601	9.729
84) trans-1,3-Dichloropropene	(3)	9.872	75	785197	9.922
86) Ethyl Methacrylate	(3)	9.933	69	723213	10.136
88) 1,1,2-Trichloroethane	(3)	10.085	97	428770	9.743
85) 1,3-Dichloropropene (total)	(3)		75	1700840	20.256
89) Tetrachloroethene	(3)	10.171	166	664479	9.819
90) 1,3-Dichloropropane	(3)	10.250	76	772082	9.631
91) 2-Hexanone	(1)	10.299	43	3872870	110.390

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.469	129	506759	10.451
95) 1,2-Dibromoethane	(3)	10.585	107	424839	10.106
97)*Chlorobenzene-d5	(3)	11.018	117	1717367	10.000
98) Chlorobenzene	(3)	11.042	112	1633180	9.772
99) 1,1,1,2-Tetrachloroethane	(3)	11.128	131	572260	10.255
100) Ethylbenzene	(3)	11.128	91	2848950	9.826
101) m+p-Xylene	(3)	11.250	106	2196990	19.902
104) o-Xylene	(3)	11.579	106	1120446	10.125
106) Styrene	(3)	11.597	104	1883783	10.372
107) Bromoform	(3)	11.756	173	304267	10.905
105) Xylene (Total)	(3)		106	3317436	30.028
108) Isopropylbenzene	(3)	11.878	105	2897947	10.054
111)$4-Bromofluorobenzene	(3)	12.024	95	867133	9.836
111)$4-Bromofluorobenzene	(3)	12.030	174	757785	10.058
113) 1,1,2,2-Tetrachloroethane	(4)	12.128	83	591158	10.234
114) Bromobenzene	(4)	12.140	156	756143	9.968
116) 1,2,3-Trichloropropane	(4)	12.176	110	160789	9.958
117) n-Propylbenzene	(4)	12.213	91	3452463	9.774
119) 2-Chlorotoluene	(4)	12.286	126	684845	9.715
121) 1,3,5-Trimethylbenzene	(4)	12.347	105	2507582	9.914
122) 4-Chlorotoluene	(4)	12.378	126	718057	9.771
125) tert-Butylbenzene	(4)	12.591	134	584021	11.062
126) Pentachloroethane	(4)	12.621	167	439621	10.724
127) 1,2,4-Trimethylbenzene	(4)	12.634	105	2585596	10.023
128) sec-Butylbenzene	(4)	12.749	105	3192318	9.937
131) 1,3-Dichlorobenzene	(4)	12.853	146	1500744	9.955
132) p-Isopropyltoluene	(4)	12.859	119	2828230	10.086
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	982857	10.000
134) 1,4-Dichlorobenzene	(4)	12.926	146	1517854	9.878
135) 1,2,3-Trimethylbenzene	(4)	12.932	120	1131456	9.755
136) Benzyl Chloride	(4)	12.999	126	232585	11.084
138) n-Butylbenzene	(4)	13.152	92	1495145	9.910
139) 1,2-Dichlorobenzene	(4)	13.182	146	1433902	10.080
143) 1,2-Dibromo-3-chloropropane	(1)	13.725	155	88153	11.762
144) 1,3,5-Trichlorobenzene	(4)	13.853	180	1242260	9.853
145) 1,2,4-Trichlorobenzene	(4)	14.273	180	1161234	9.928
146) Hexachlorobutadiene	(4)	14.359	225	586883	9.520
147) Naphthalene	(4)	14.456	128	1959299	10.021

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:10 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 8260W25-1
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
148) 1,2,3-Trichlorobenzene	(4)	14.597	180	994415	9.944

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

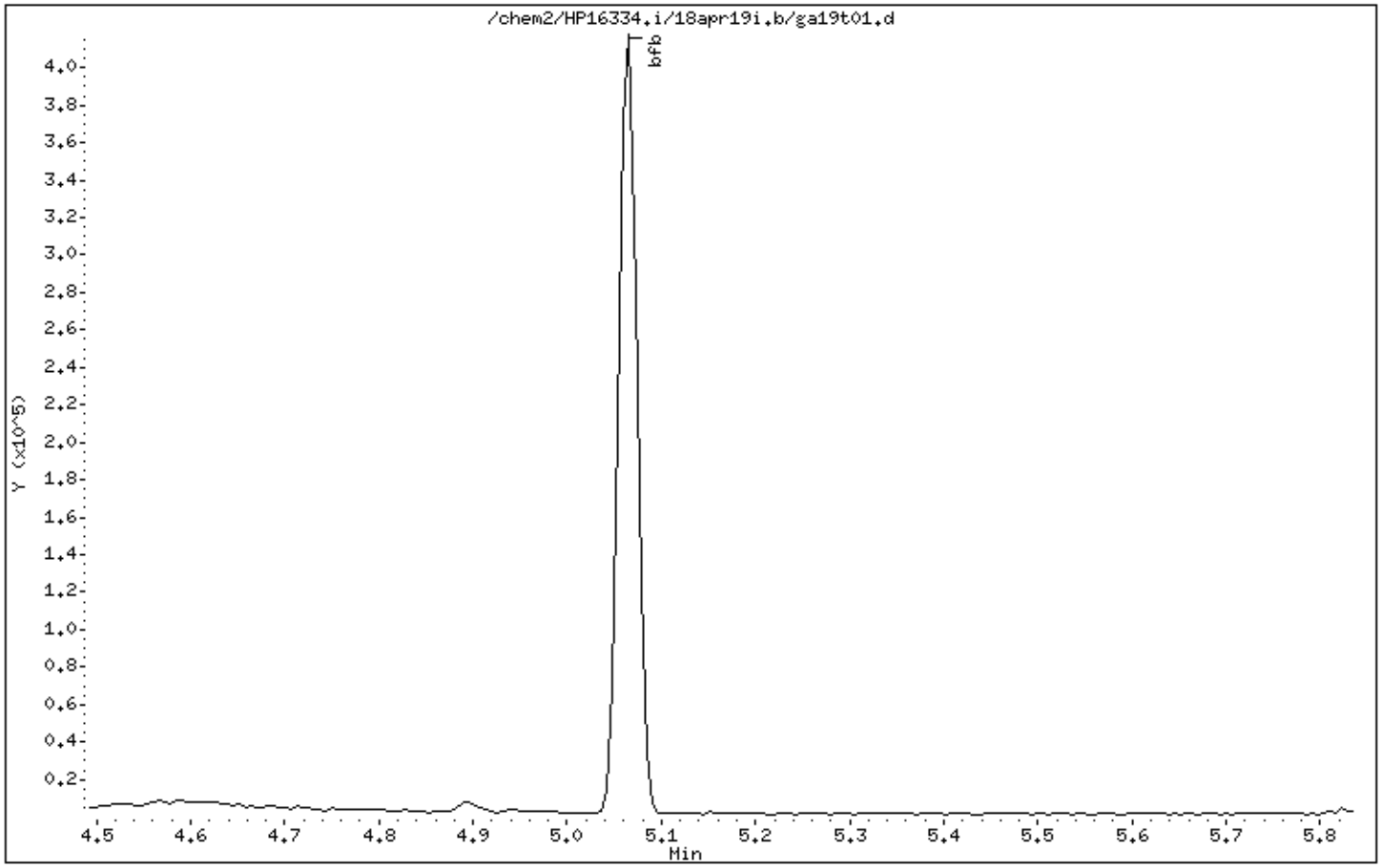
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

Instrument: HP16334.i

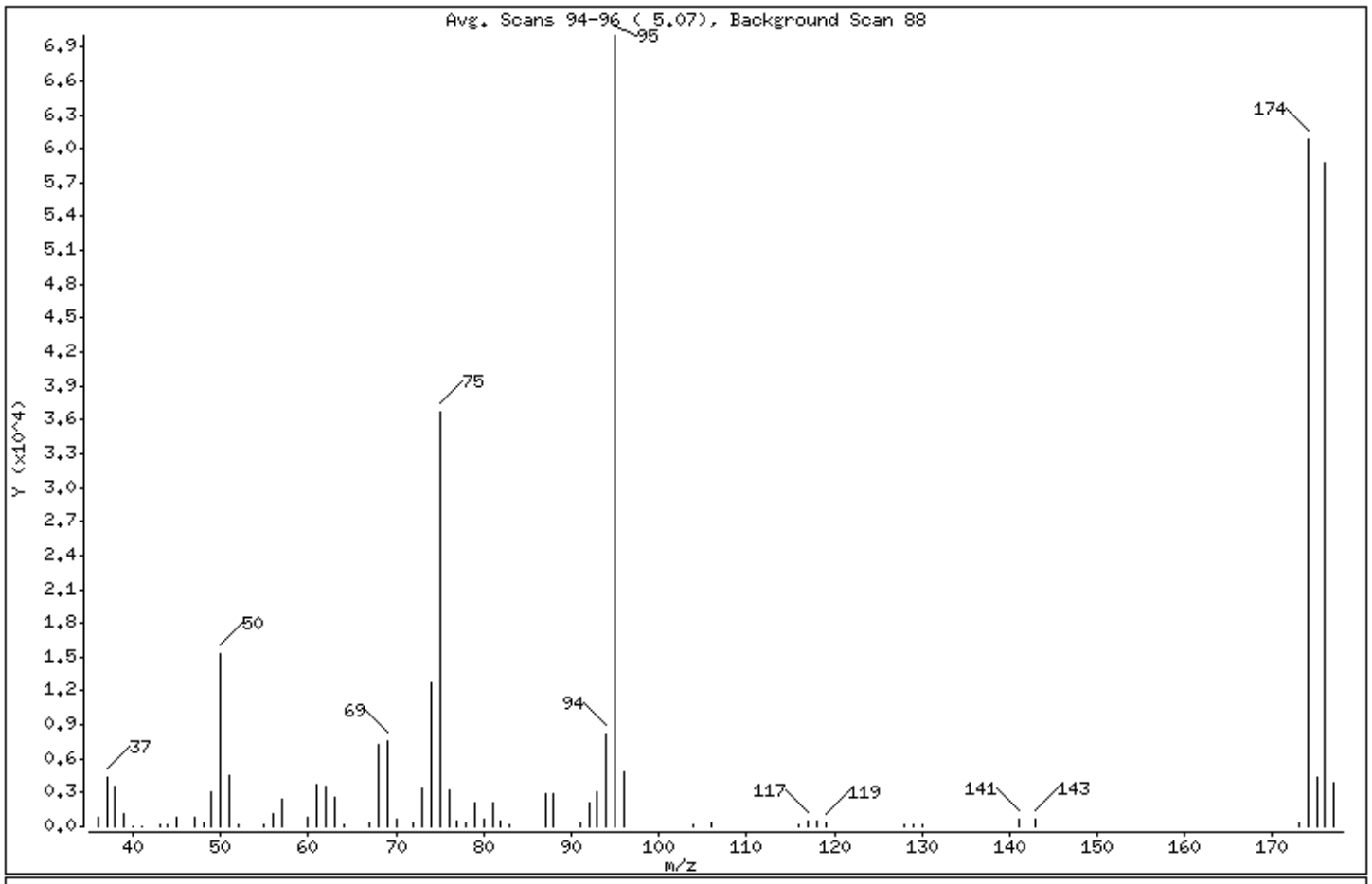
Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.74
75	30.00 - 60.00% of mass 95	52.48
96	5.00 - 9.00% of mass 95	6.98
173	Less than 2.00% of mass 174	0.41 (0.47)
174	50.00 - 100.00% of mass 95	86.84
175	5.00 - 9.00% of mass 174	6.17 (7.11)
176	95.00 - 101.00% of mass 174	83.87 (96.58)
177	5.00 - 9.00% of mass 176	5.61 (6.69)

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Data File: /chem2/HP16334.i/18apr19i.b/ga19t01.d

Date : 19-APR-2018 11:47

Client ID: 50ngBFB

Instrument: HP16334.i

Sample Info: 50ngBFB;BFB FEB13-18;1;3;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ga19t01.d
Spectrum: Avg. Scans 94-96 (5.07), Background Scan 88
Location of Maximum: 95.00
Number of points: 63

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	751	56.00	1165	77.00	444	106.00	374
37.00	4308	57.00	2369	78.00	334	116.00	213
38.00	3590	60.00	775	79.00	2080	117.00	485
39.00	1106	61.00	3780	80.00	659	118.00	412
40.00	80	62.00	3534	81.00	2037	119.00	302
41.00	61	63.00	2497	82.00	443	128.00	188
43.00	192	64.00	213	83.00	84	129.00	98
44.00	212	67.00	293	87.00	2948	130.00	193
45.00	740	68.00	7241	88.00	2832	141.00	703
47.00	799	69.00	7585	91.00	301	143.00	702
48.00	402	70.00	657	92.00	2163	173.00	286
49.00	3128	72.00	358	93.00	3063	174.00	60792
50.00	15218	73.00	3407	94.00	8246	175.00	4322
51.00	4581	74.00	12760	95.00	70008	176.00	58712
52.00	202	75.00	36736	96.00	4885	177.00	3929
55.00	209	76.00	3174	104.00	221		

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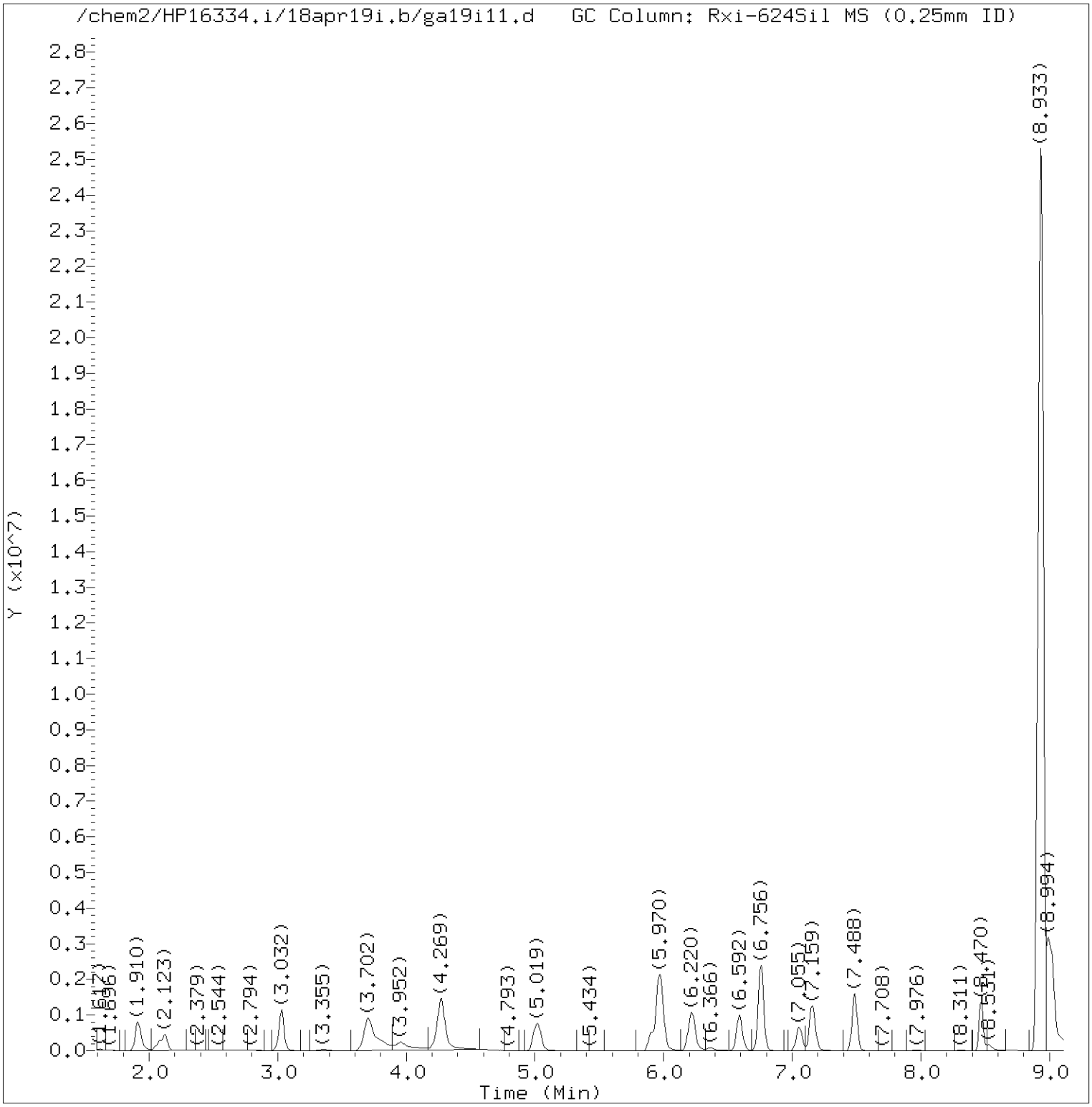
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

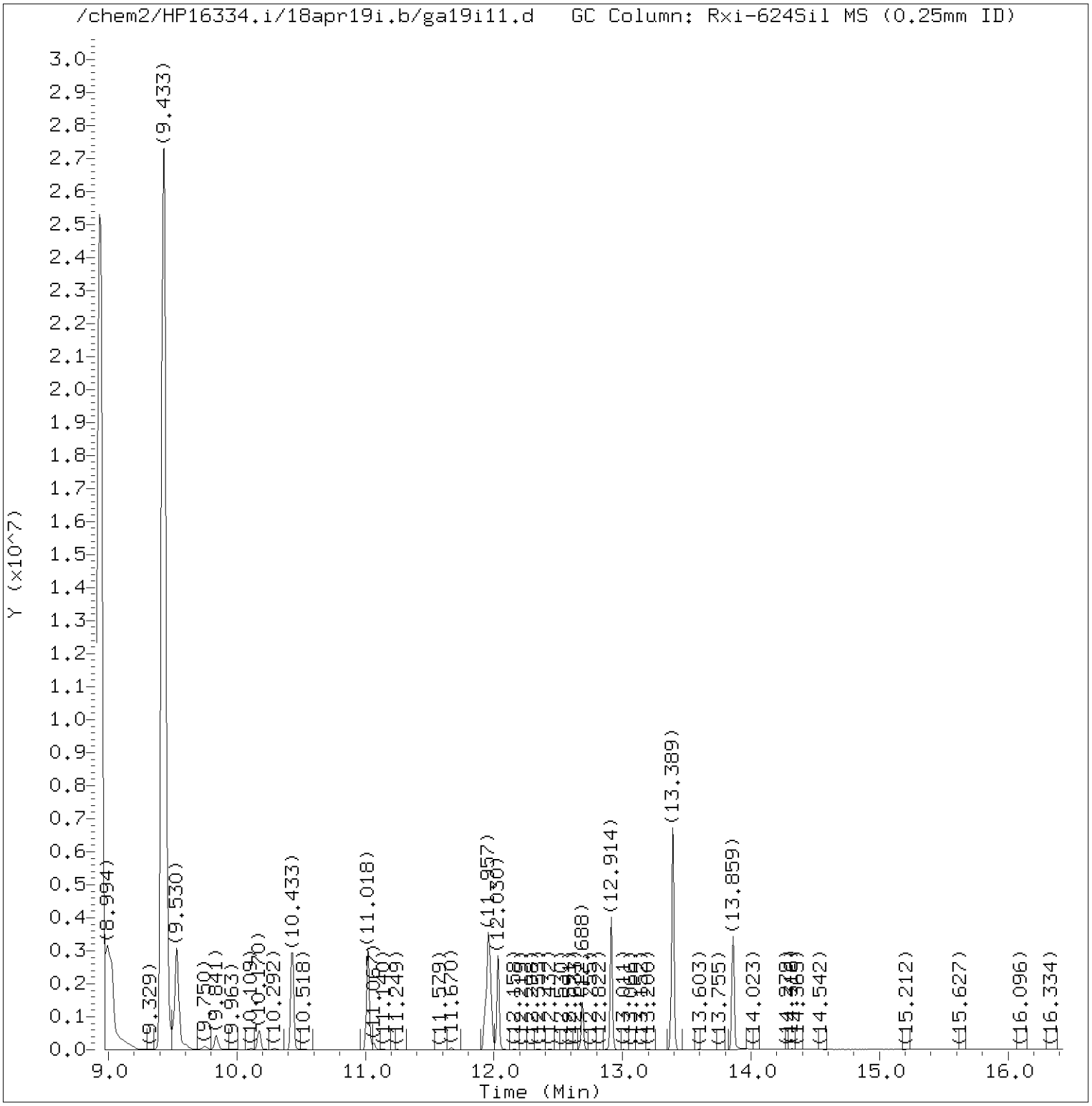
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

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on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	1821372M	25.000
25) Acetonitrile	(1)	3.702	41	4727988M	1000.000
26)*t-Butyl Alcohol-d10	(1)	3.958	65	210135	50.000
36) Vinyl Acetate	(2)	5.019	43	2649742M	25.000
43) Methyl Acrylate	(2)	5.970	55	4891548M	125.000
53) 1-Chlorobutane	(2)	6.756	56	2806253	25.000
63)*Fluorobenzene	(2)	7.488	96	2060186	10.000
77) Chloroacetonitrile	(2)	8.994	75	2668768M	1250.000
78) 2-Chloroethyl vinyl ether	(2)	9.024	63	811248M	25.000
97)*Chlorobenzene-d5	(3)	11.018	117	1608281	10.000
112) Cyclohexanone	(1)	11.957	55	1802868M	1250.000
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	893721	10.000
142) Hexachloroethane	(4)	13.389	117	1029368	25.000

M = Compound was manually integrated.
* = Compound is an internal standard.

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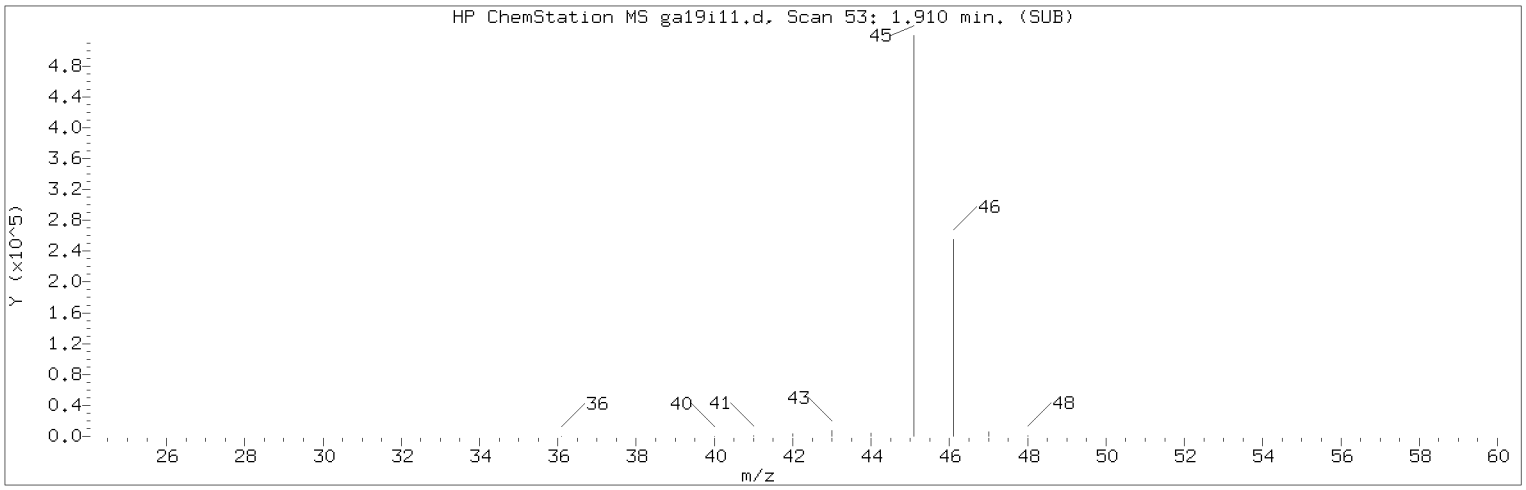
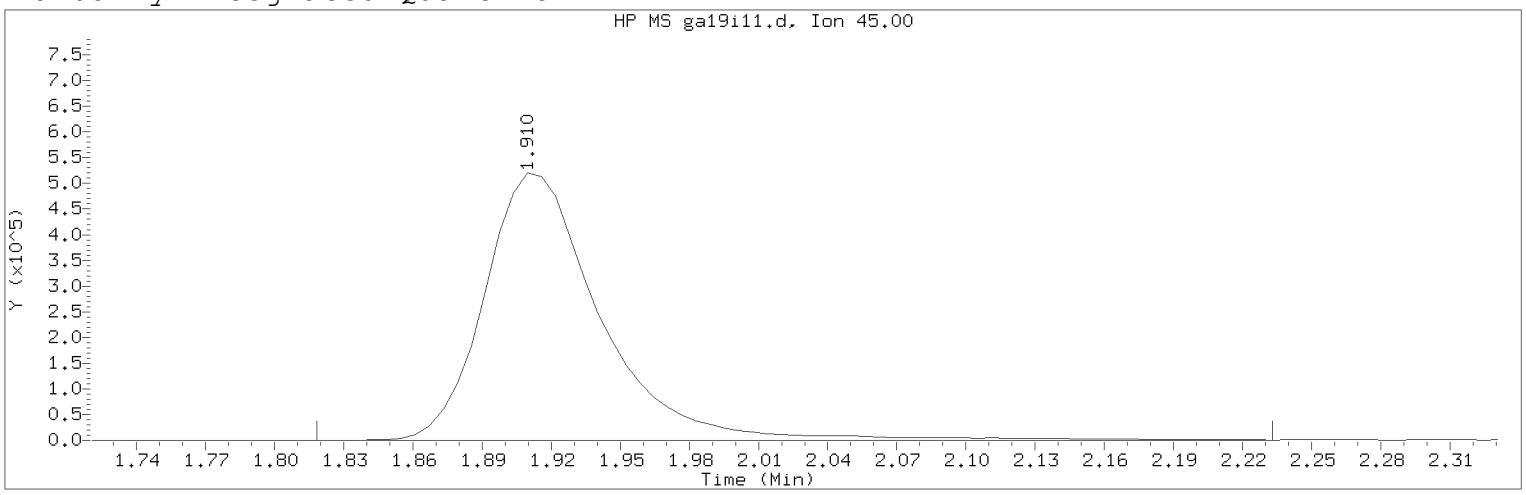
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

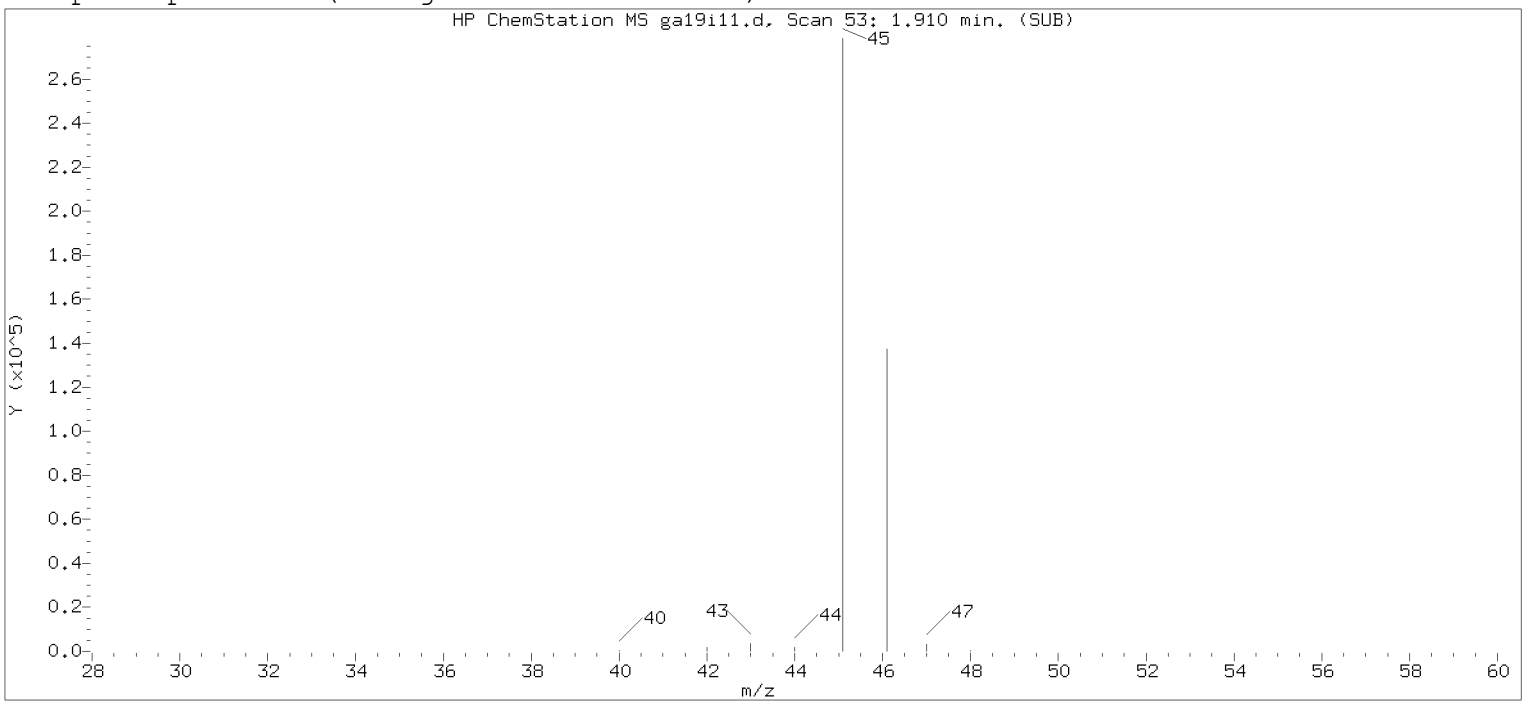
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area (flag) : 1821372M
On-Column Amount (ng) : 25.0000
Integration start scan : 37 Integration stop scan: 105
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

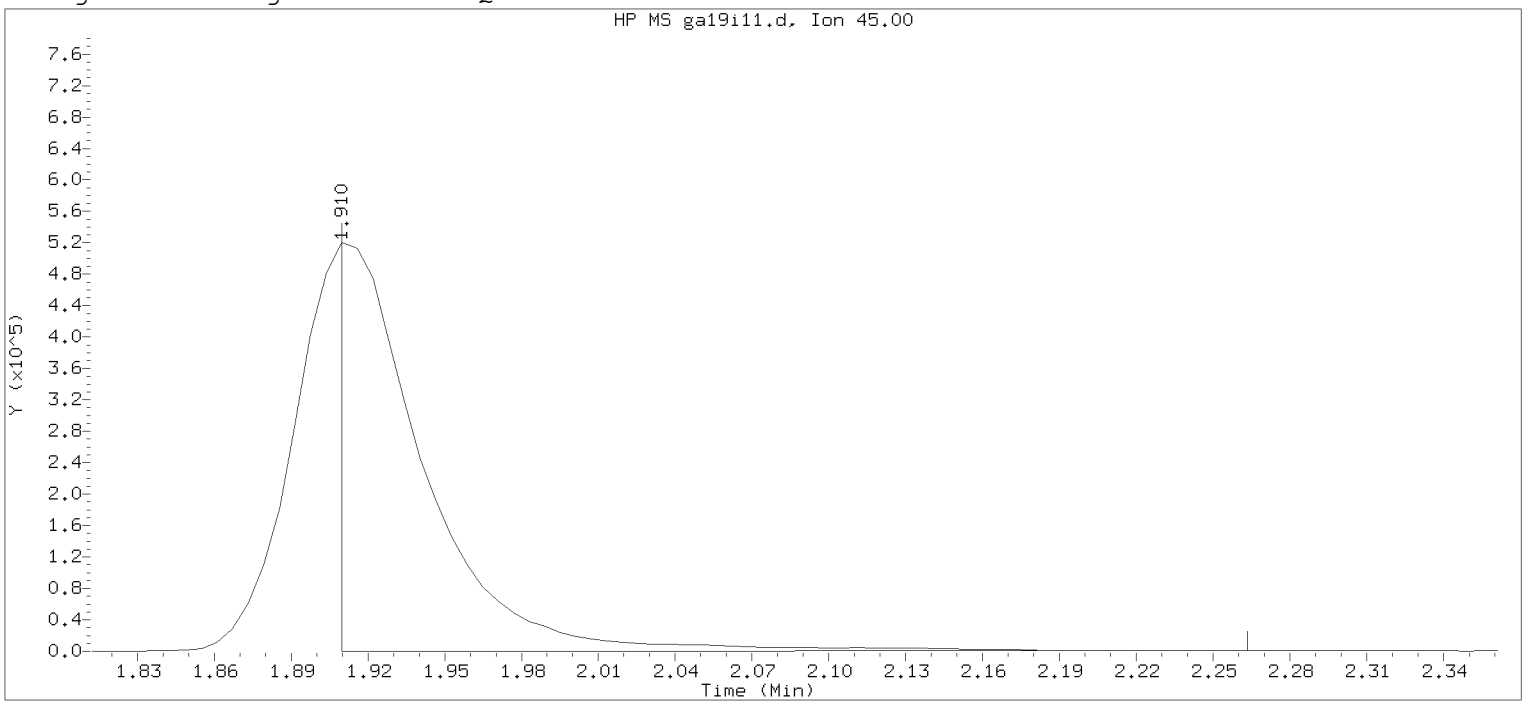
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area : 1141747
On-column Amount (ng) : 25.0000
Integration start scan : 52 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 899

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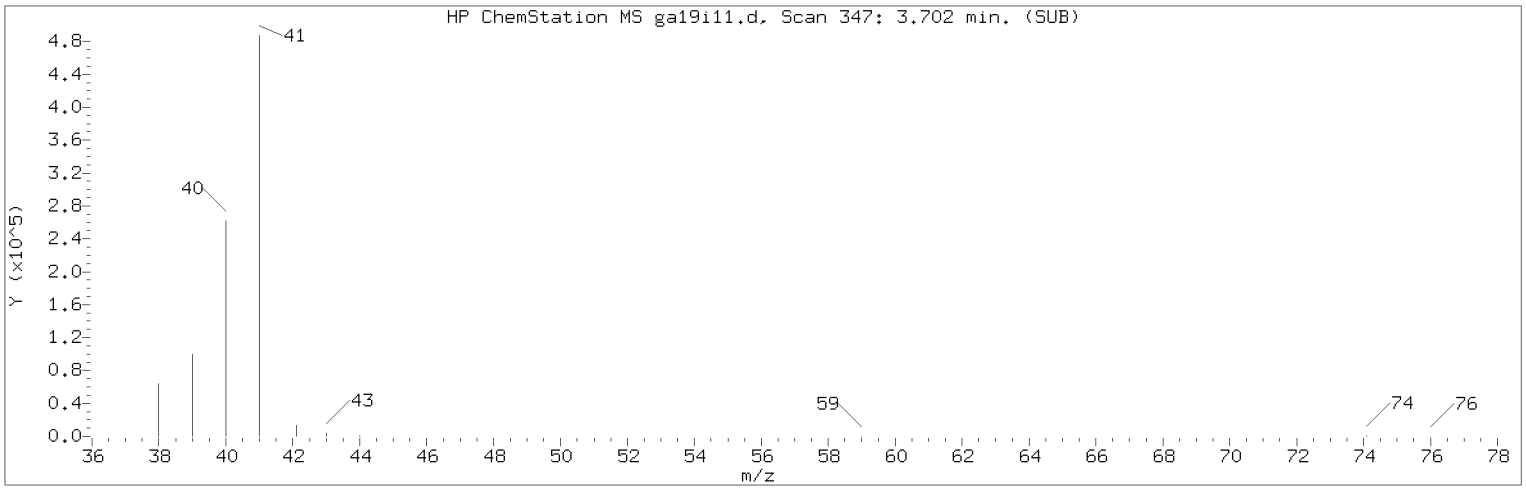
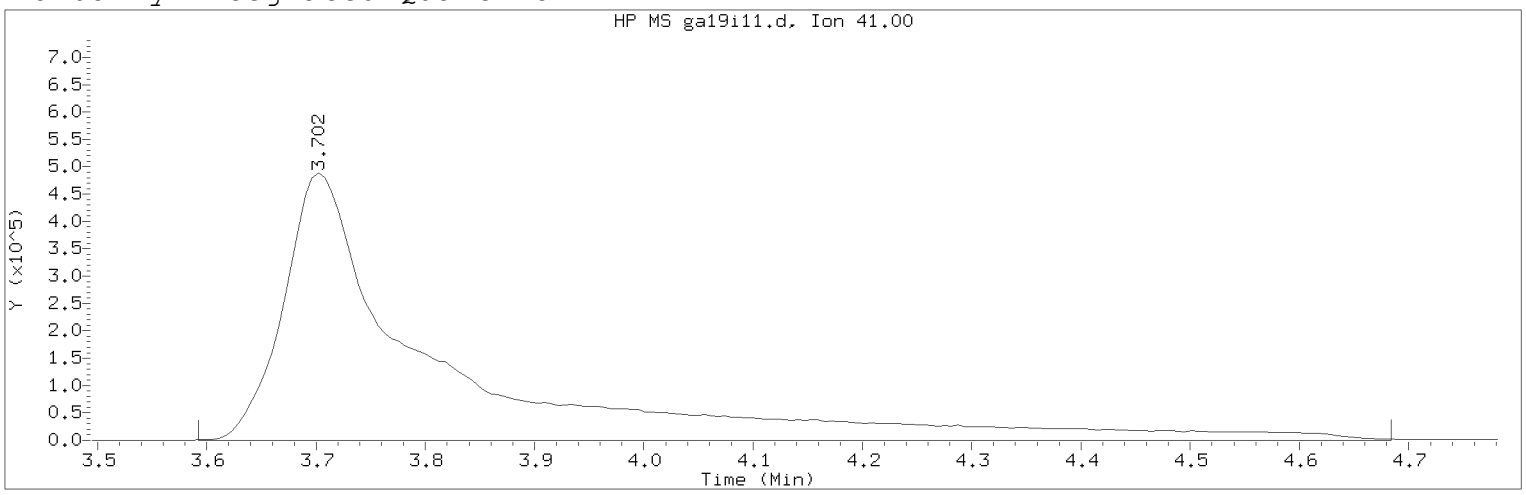
Target 3.5 esignature used. Page 7609

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

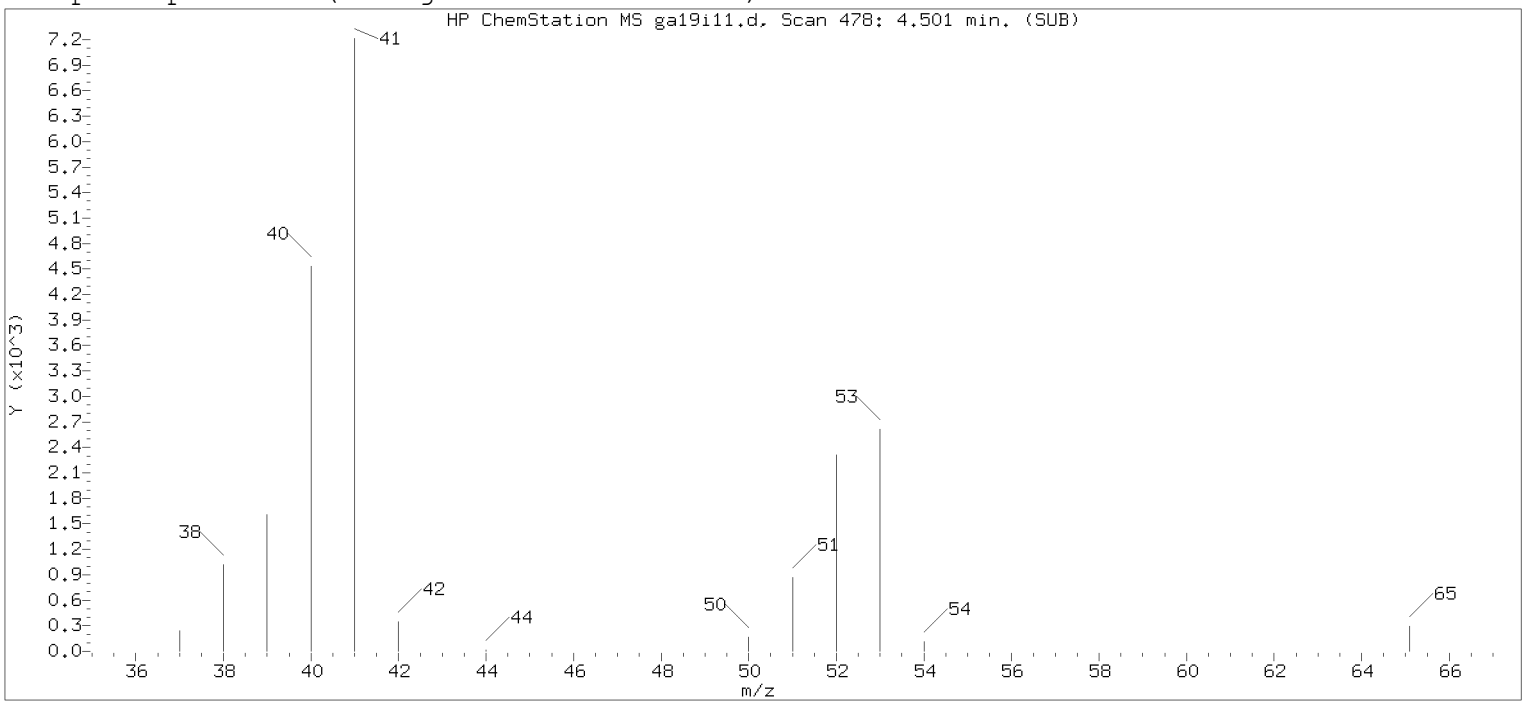
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 4727988M
On-Column Amount (ng) : 1000.0000
Integration start scan : 328 Integration stop scan: 507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

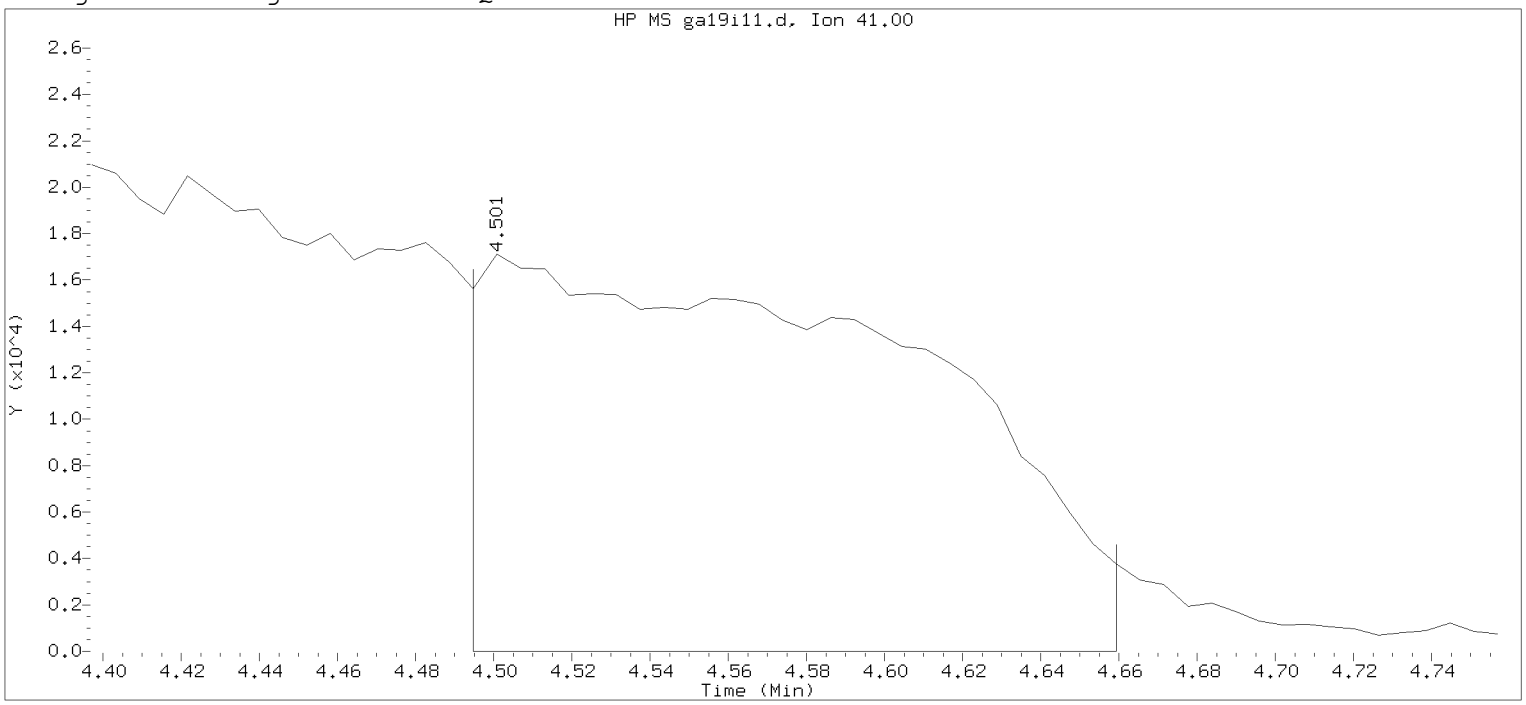
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 478
Retention Time (minutes): 4.501
Quant Ion : 41.00
Area : 129379
On-column Amount (ng) : 1000.0000
Integration start scan : 476 Integration stop scan: 503
Y at integration start : 0 Y at integration end: 0

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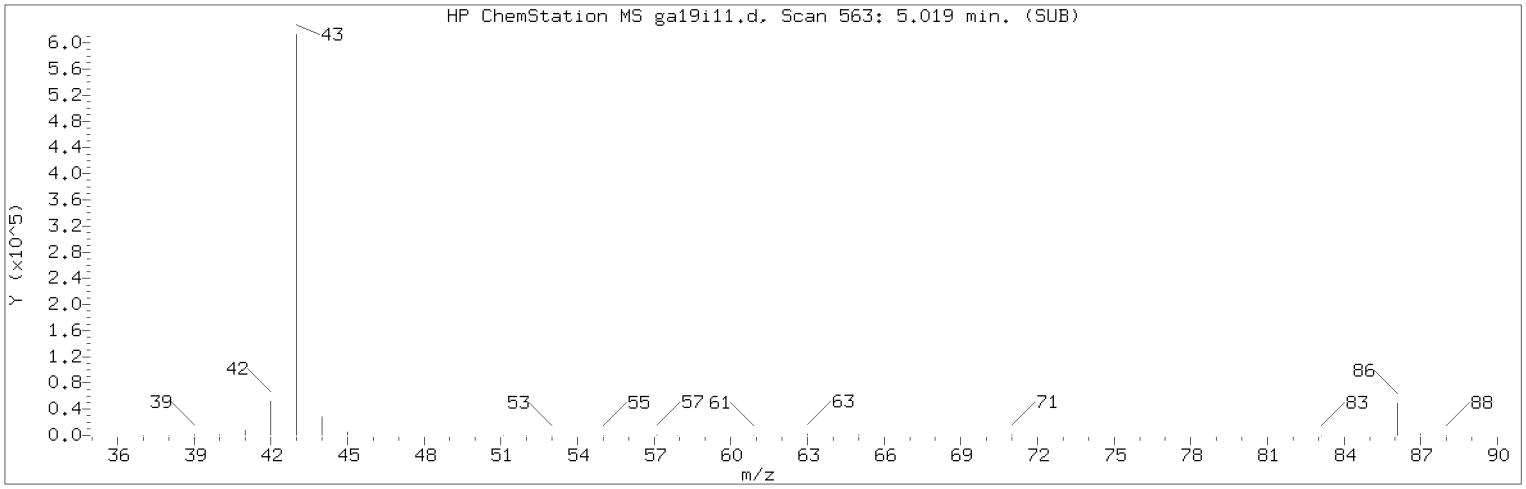
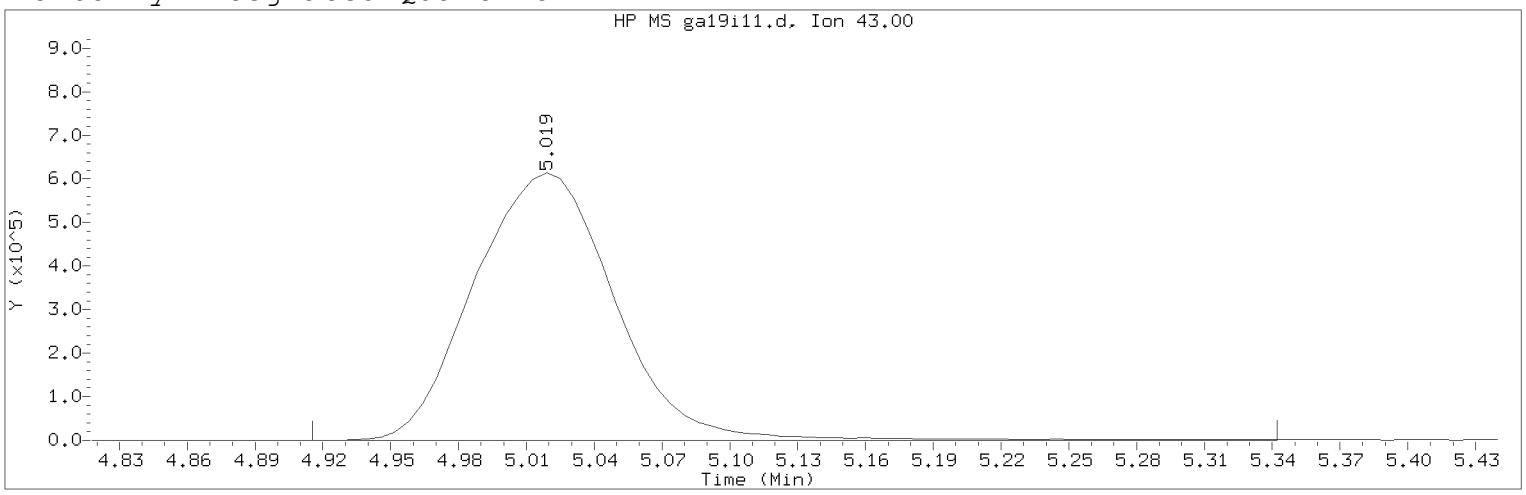
Target 3.5 esignature used. Page 7 of 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

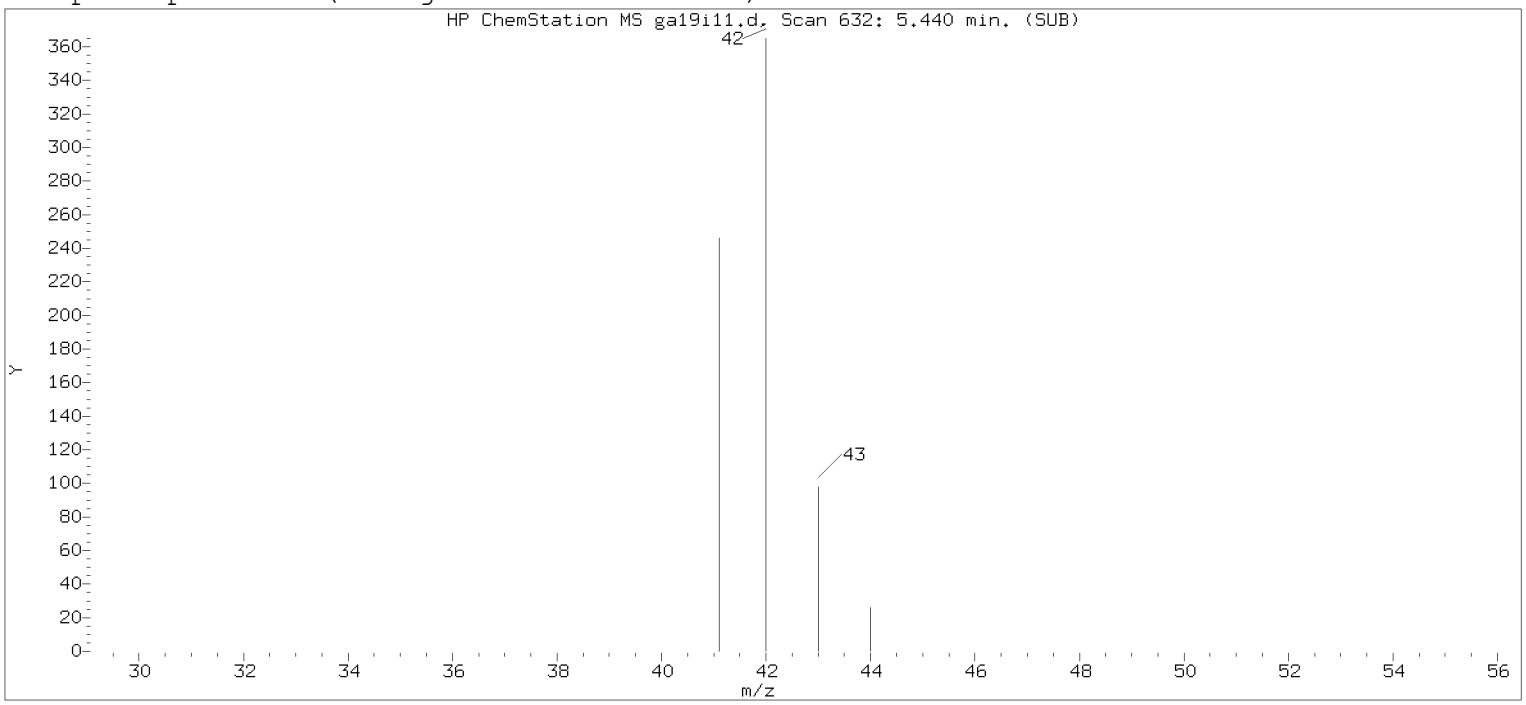
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 563
Retention Time (minutes): 5.019
Quant Ion : 43.00
Area (flag) : 2649742M
On-Column Amount (ng) : 25.0000
Integration start scan : 545 Integration stop scan: 615
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

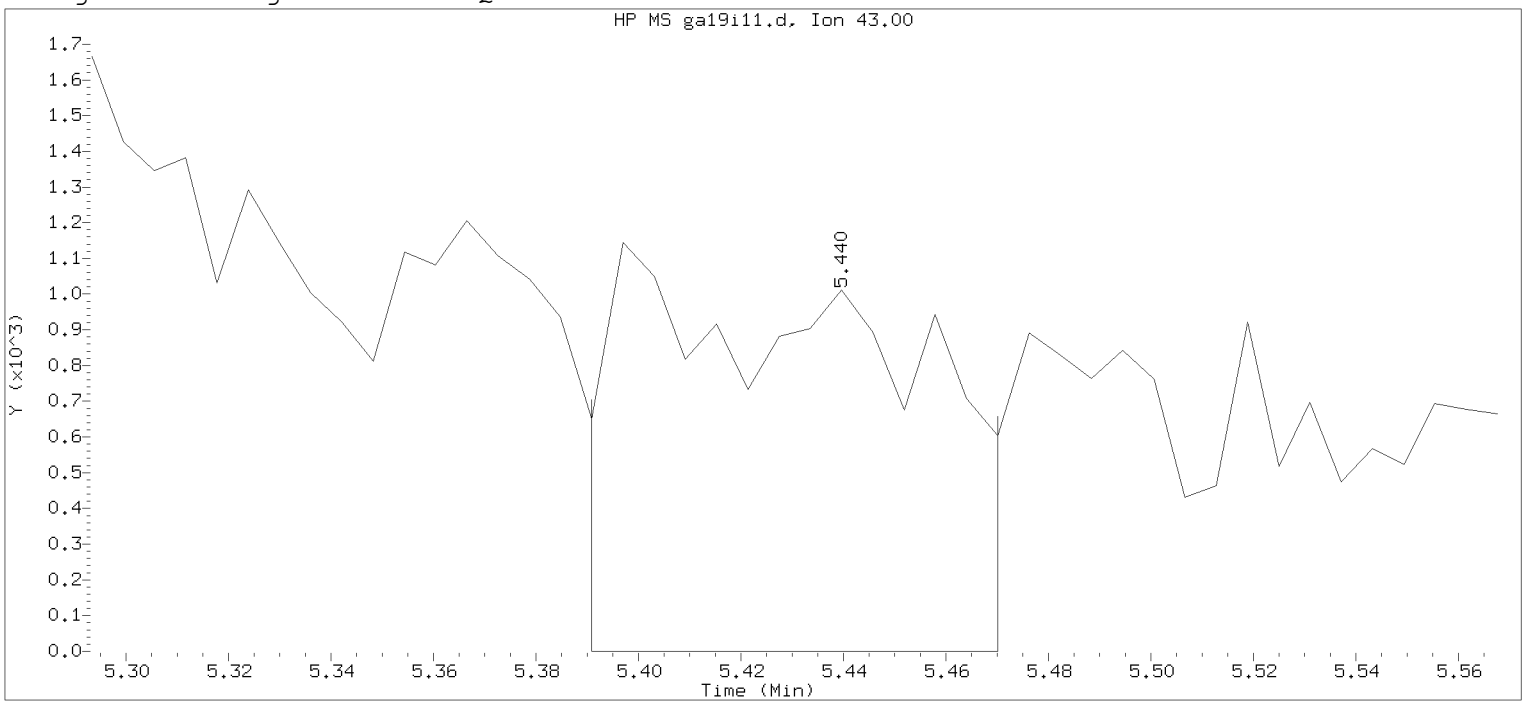
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 632
Retention Time (minutes): 5.440
Quant Ion : 43.00
Area : 4135
On-column Amount (ng) : 25.0000
Integration start scan : 623 Integration stop scan: 636
Y at integration start : 0 Y at integration end: 0

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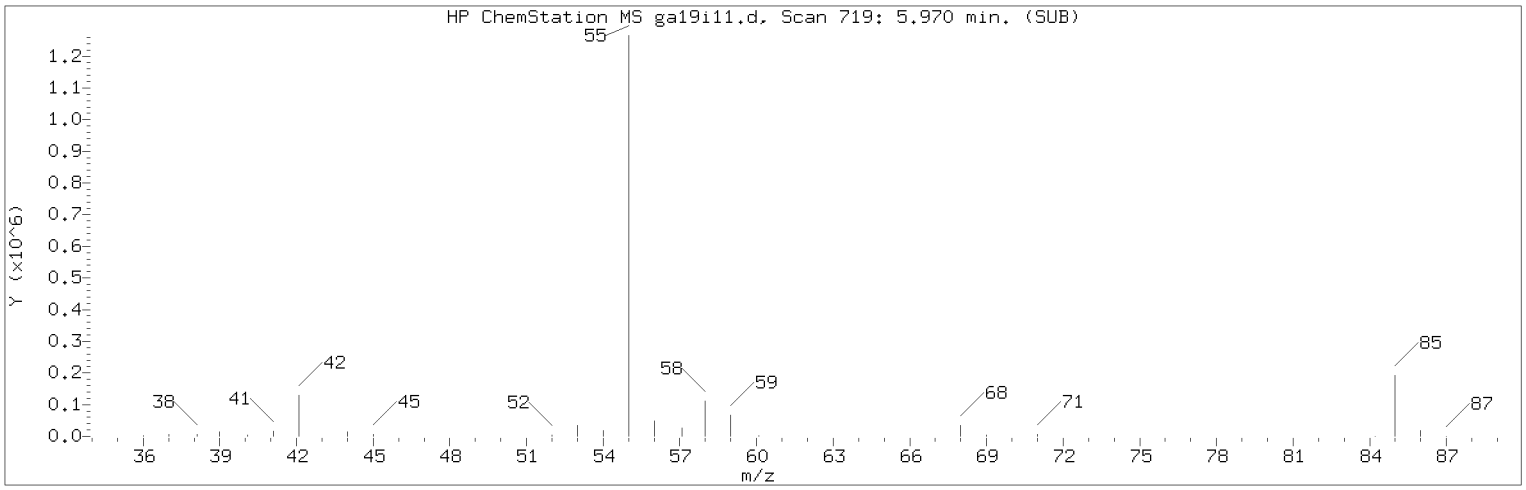
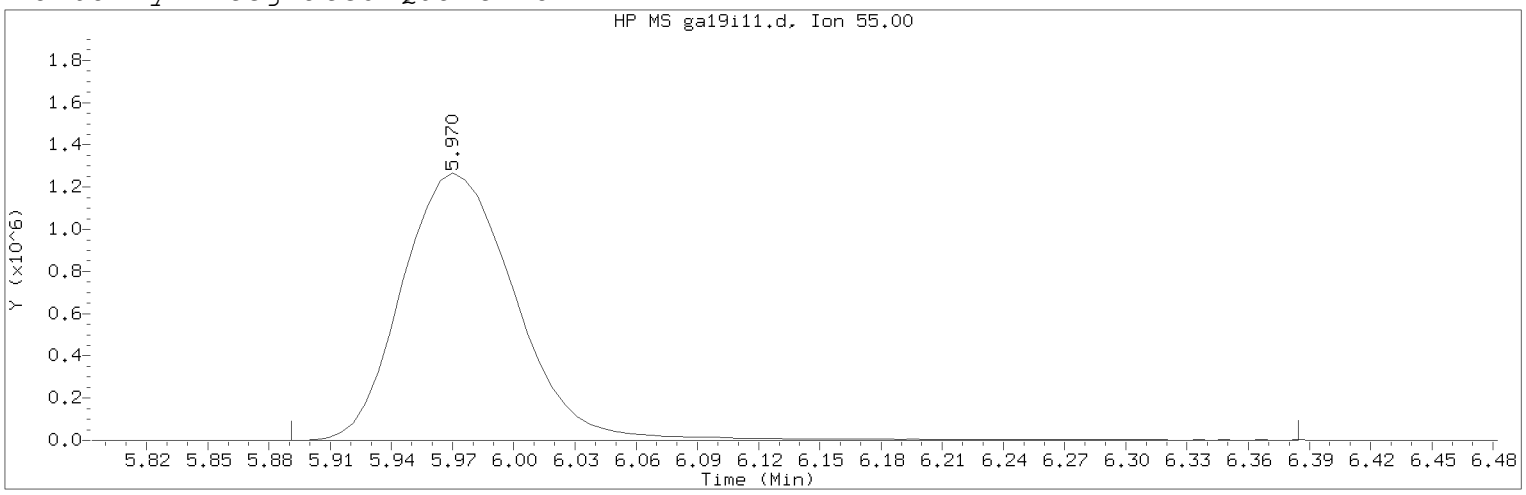
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

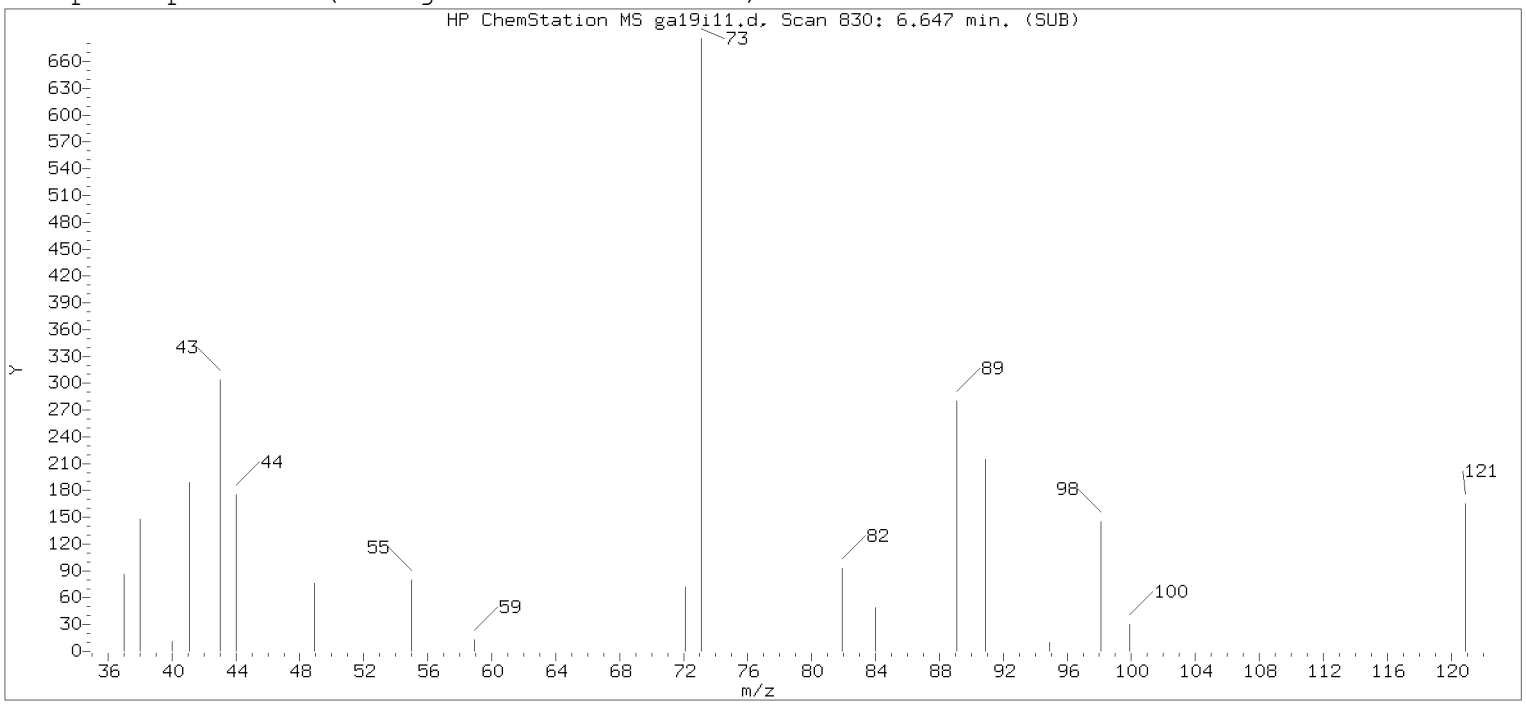
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 719
Retention Time (minutes): 5.970
Quant Ion : 55.00
Area (flag) : 4891548M
On-Column Amount (ng) : 125.0000
Integration start scan : 705 Integration stop scan: 786
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

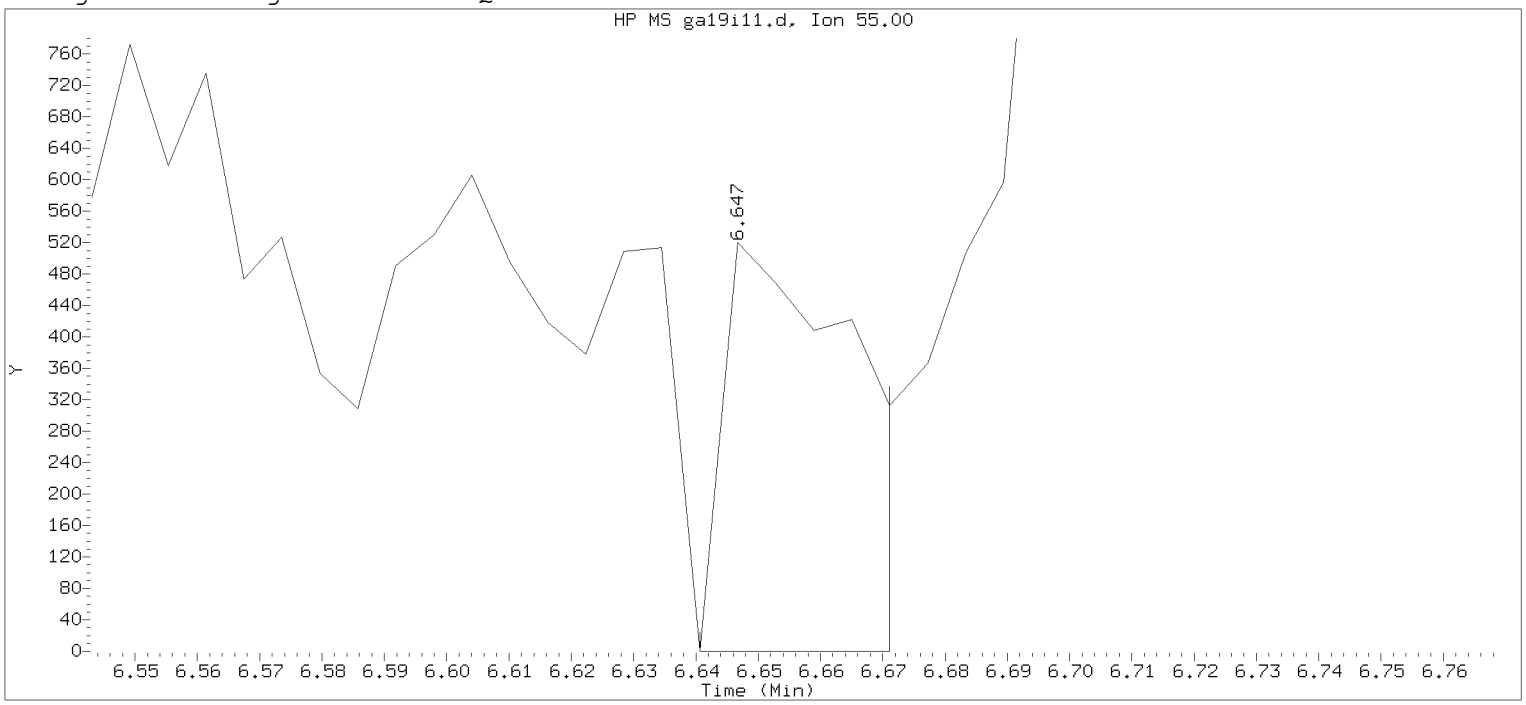
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

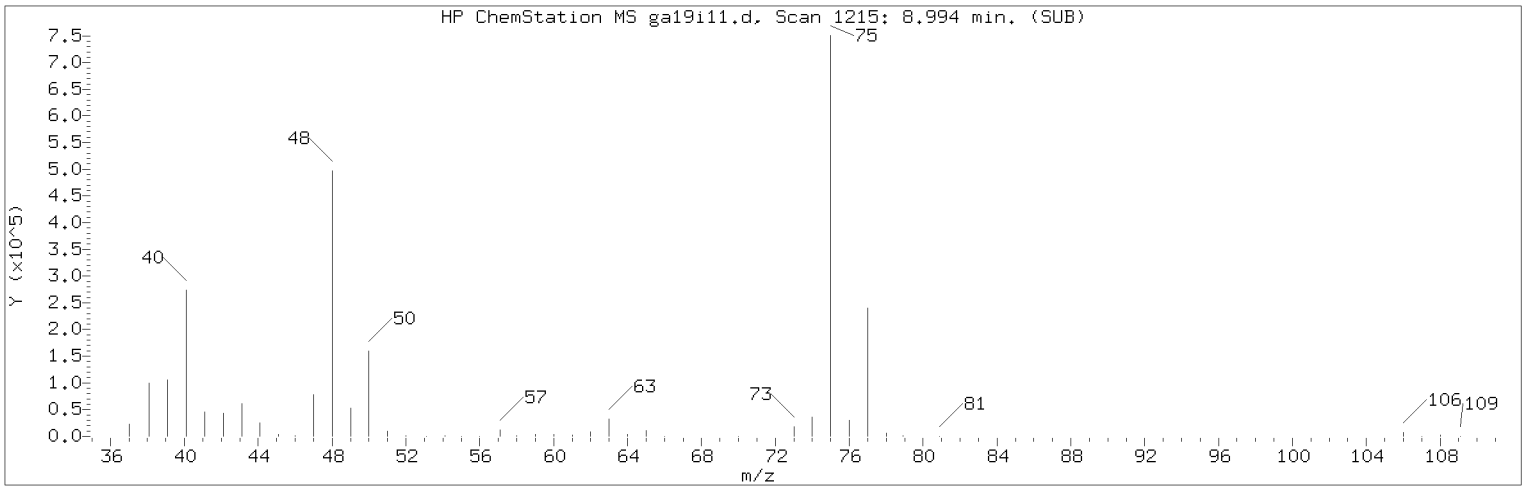
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

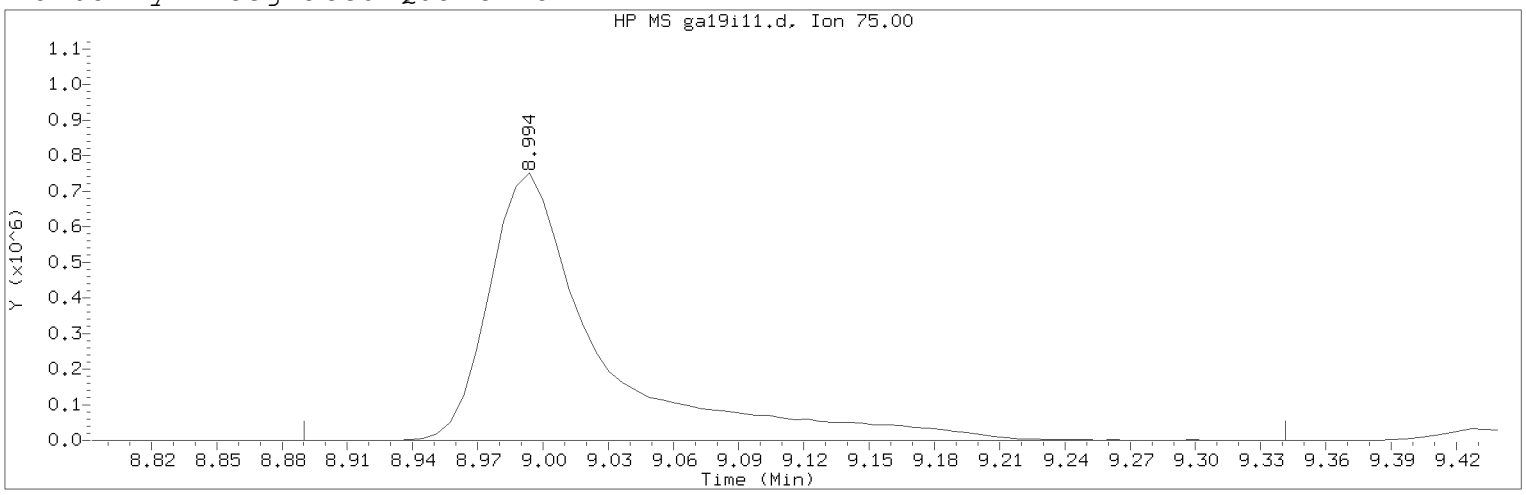
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 830
Retention Time (minutes): 6.647
Quant Ion : 55.00
Area : 722
On-column Amount (ng) : 125.0000
Integration start scan : 828 Integration stop scan: 833
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

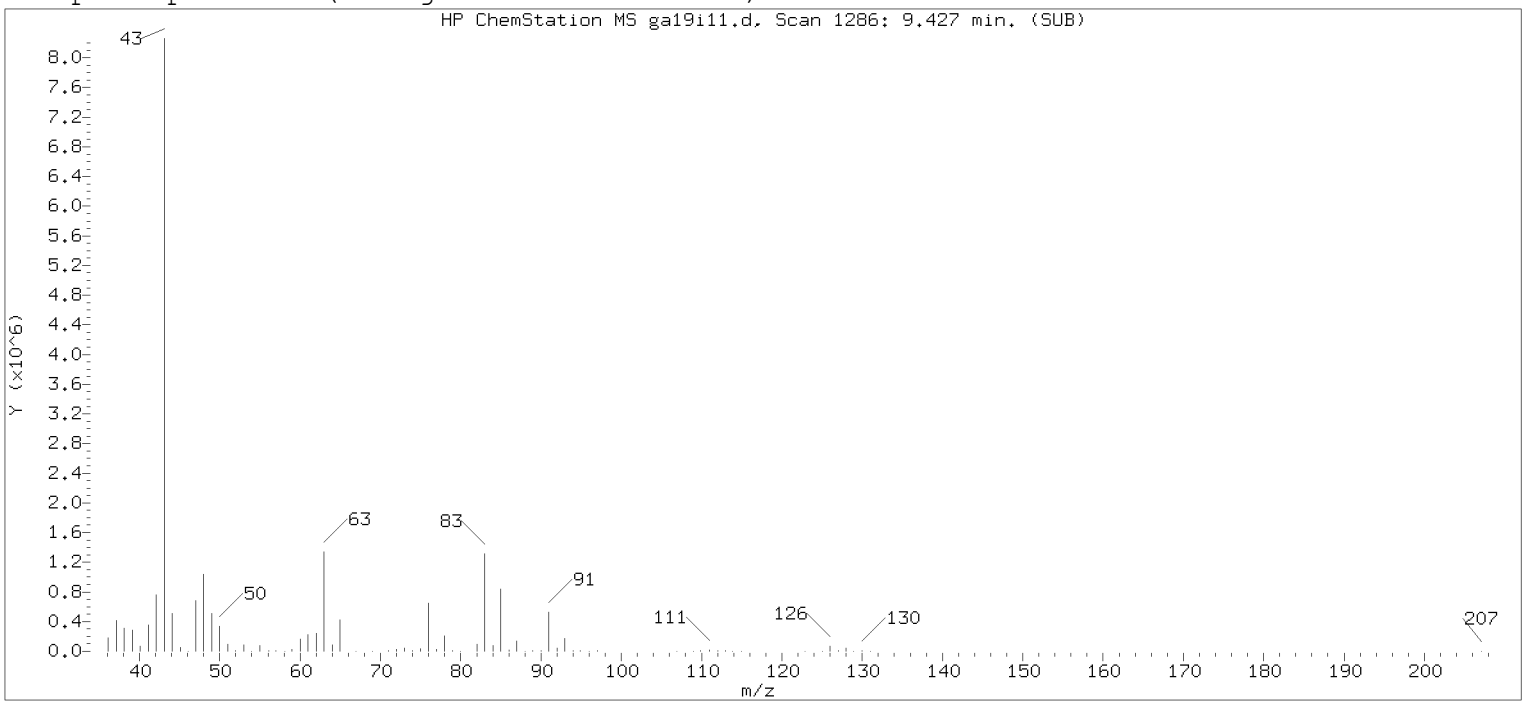
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1215
Retention Time (minutes): 8.994
Quant Ion : 75.00
Area (flag) : 2668768M
On-Column Amount (ng) : 1250.0000
Integration start scan : 1197 Integration stop scan: 1271
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

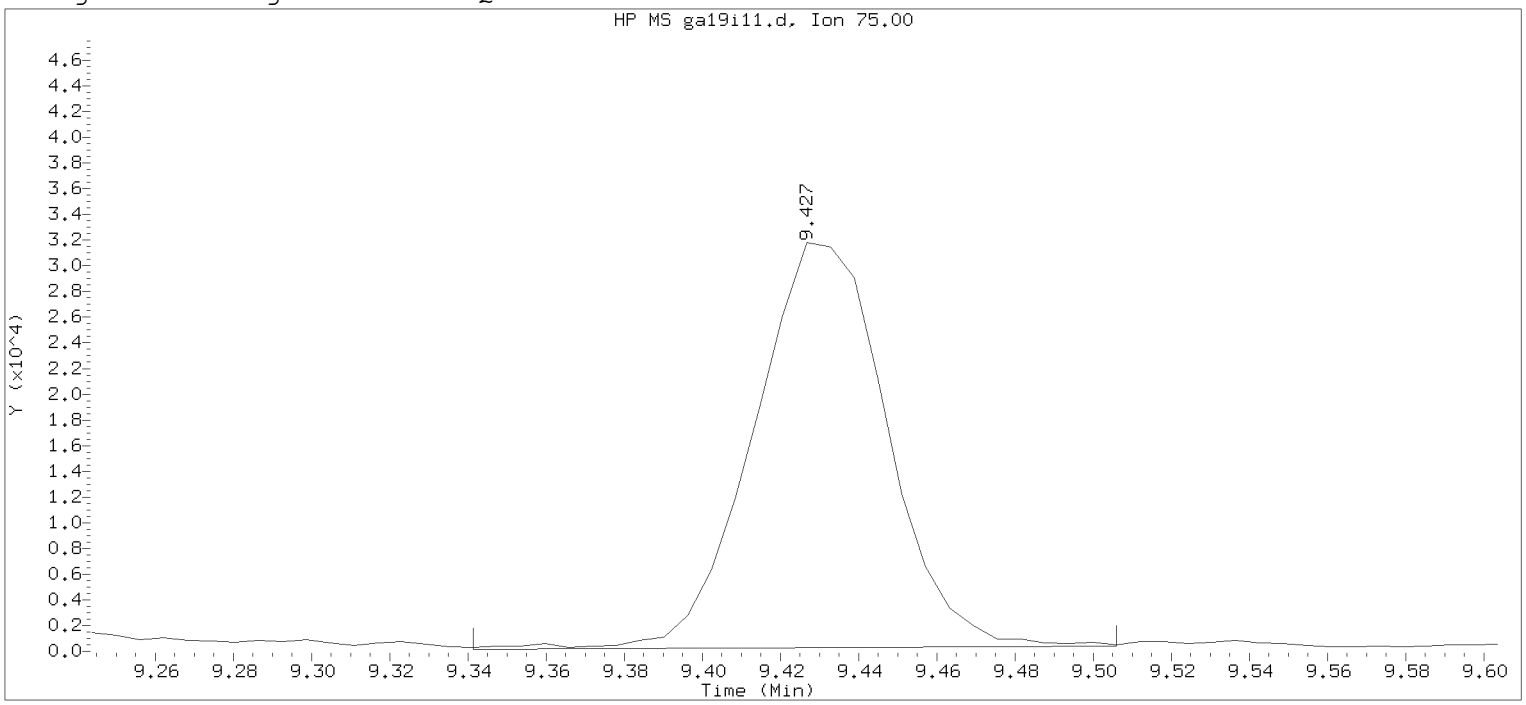
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

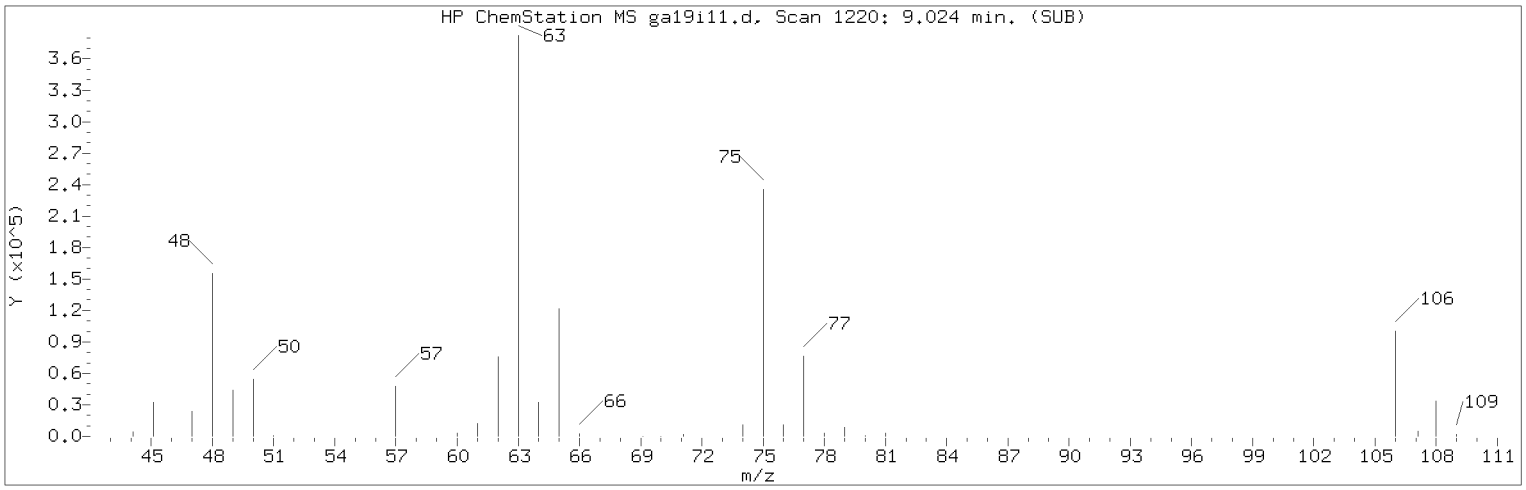
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

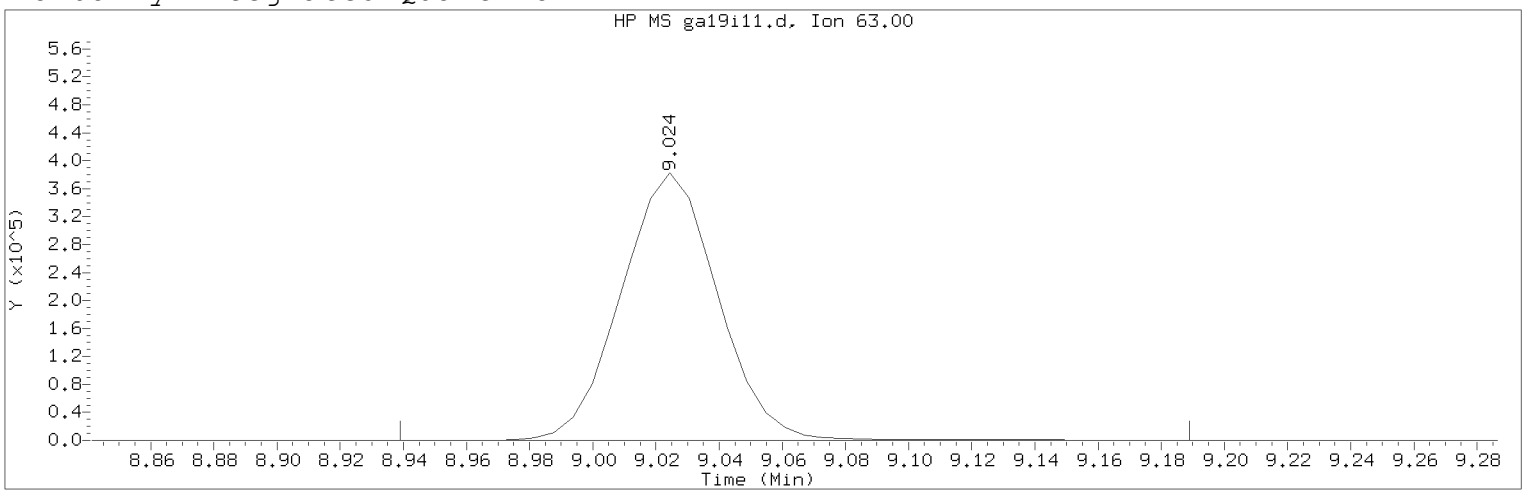
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 75.00
Area : 75039
On-column Amount (ng) : 1250.0000
Integration start scan : 1271 Integration stop scan: 1298
Y at integration start : 157 Y at integration end: 379

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature user id: mskrause7617

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

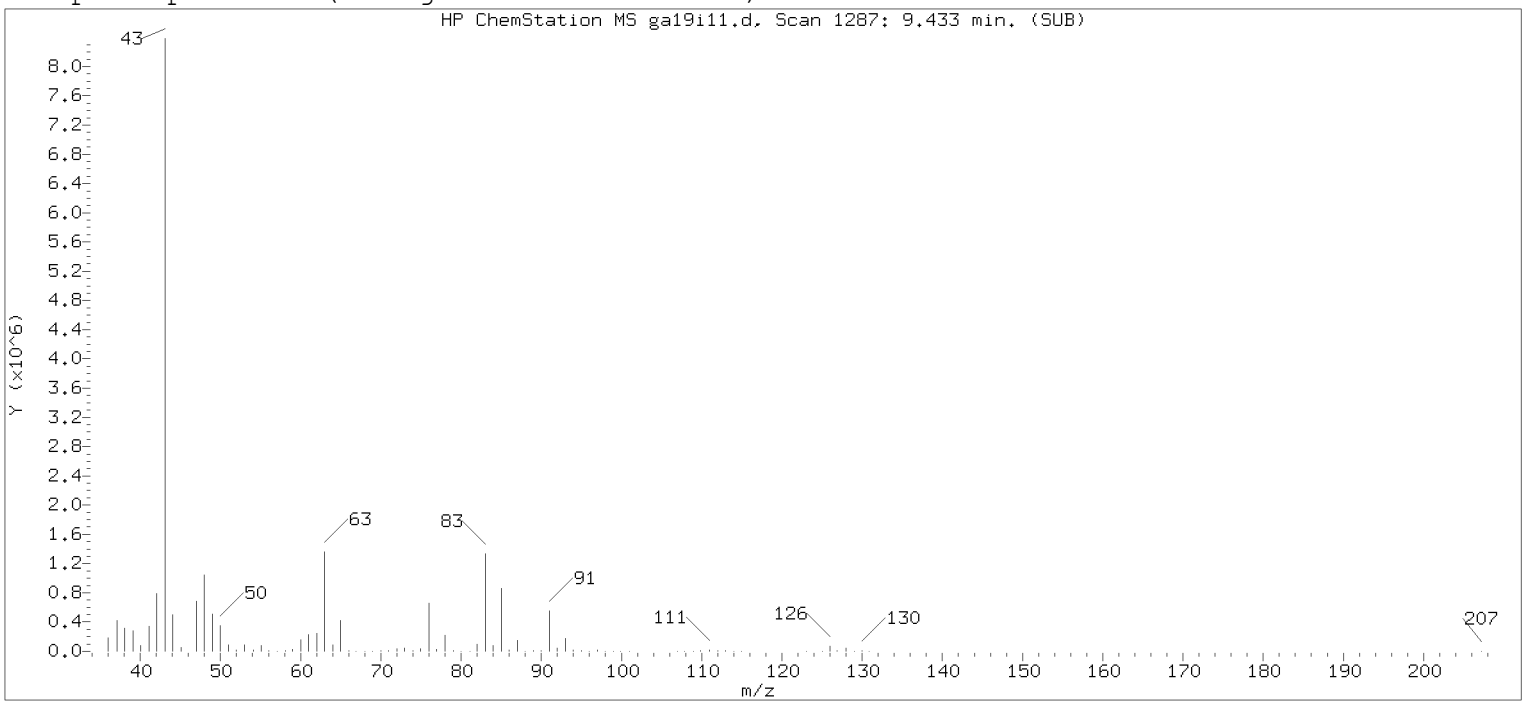
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1220
Retention Time (minutes): 9.024
Quant Ion : 63.00
Area (flag) : 811248M
On-Column Amount (ng) : 25.0000
Integration start scan : 1205 Integration stop scan: 1246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

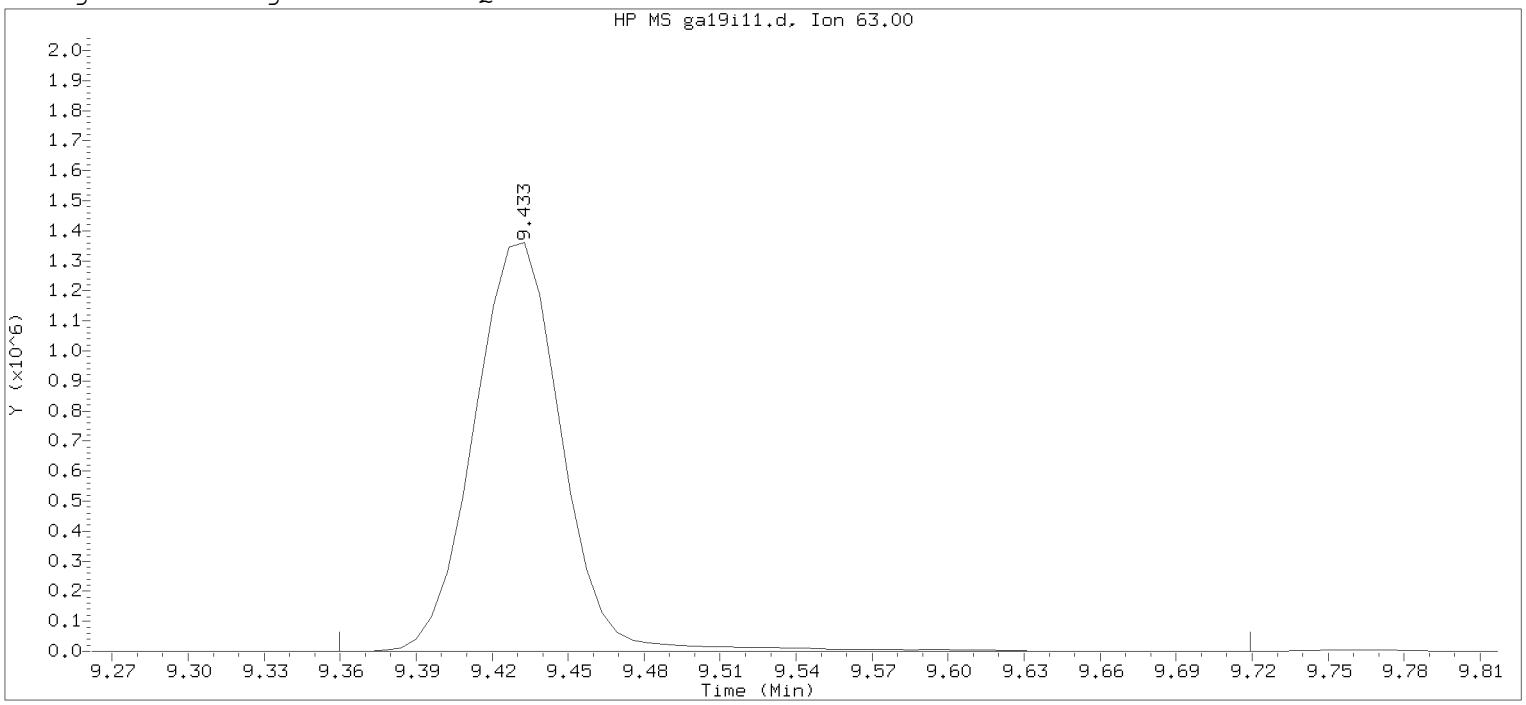
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

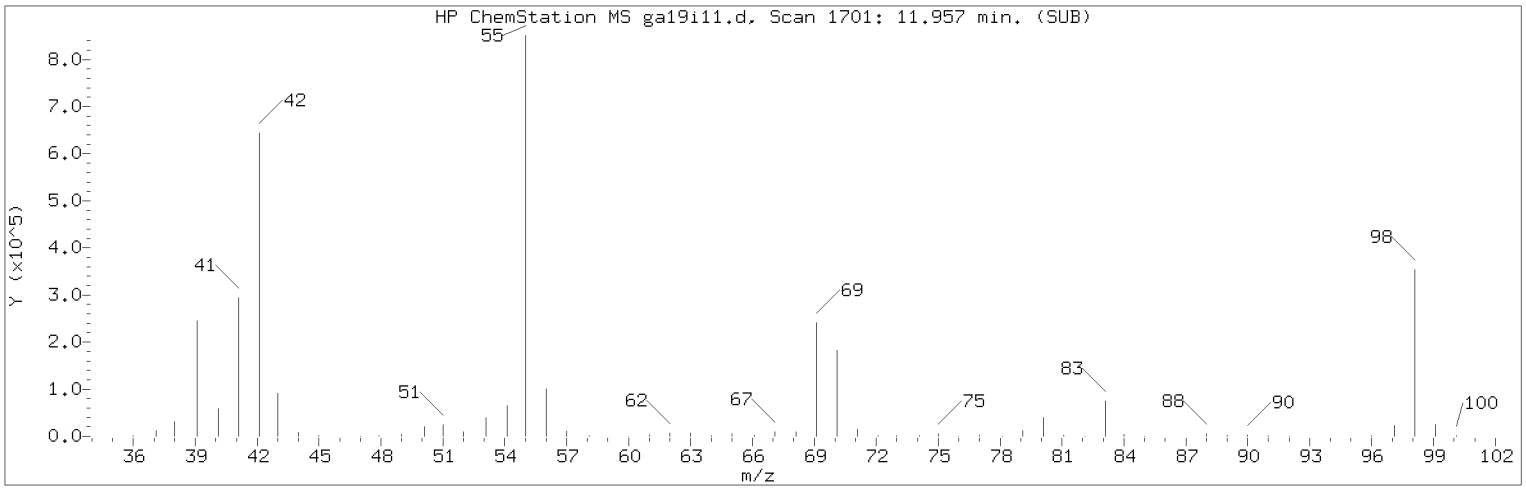
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

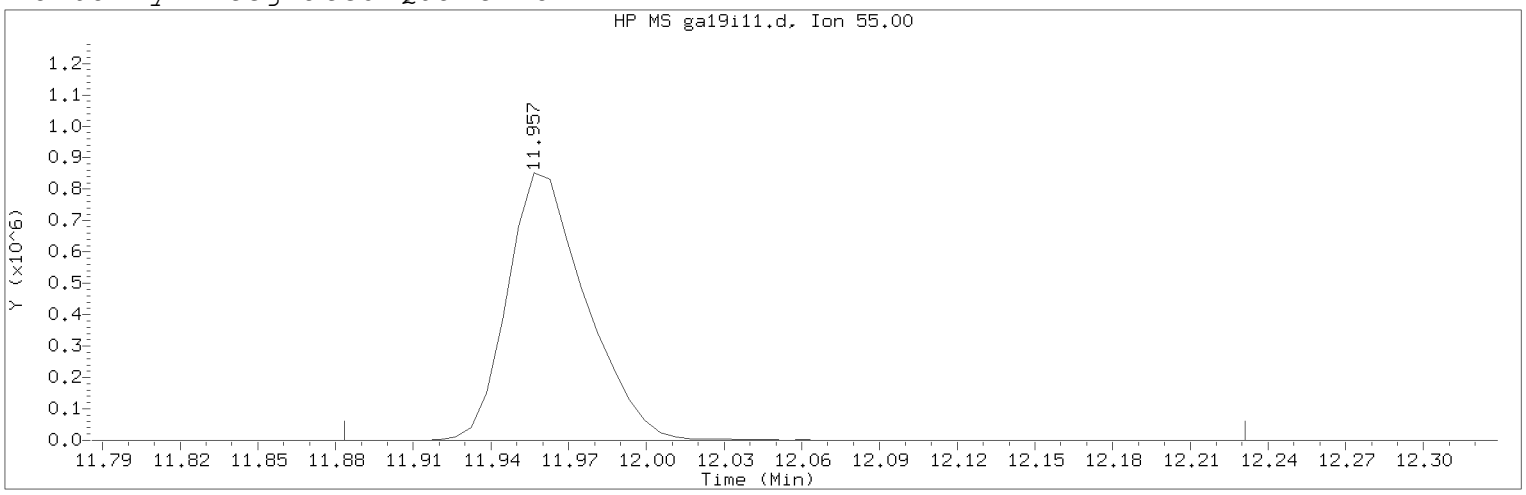
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1287
Retention Time (minutes): 9.433
Quant Ion : 63.00
Area : 3285695
On-column Amount (ng) : 25.0000
Integration start scan : 1274 Integration stop scan: 1333
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD025 Lab Sample ID: VSTD025

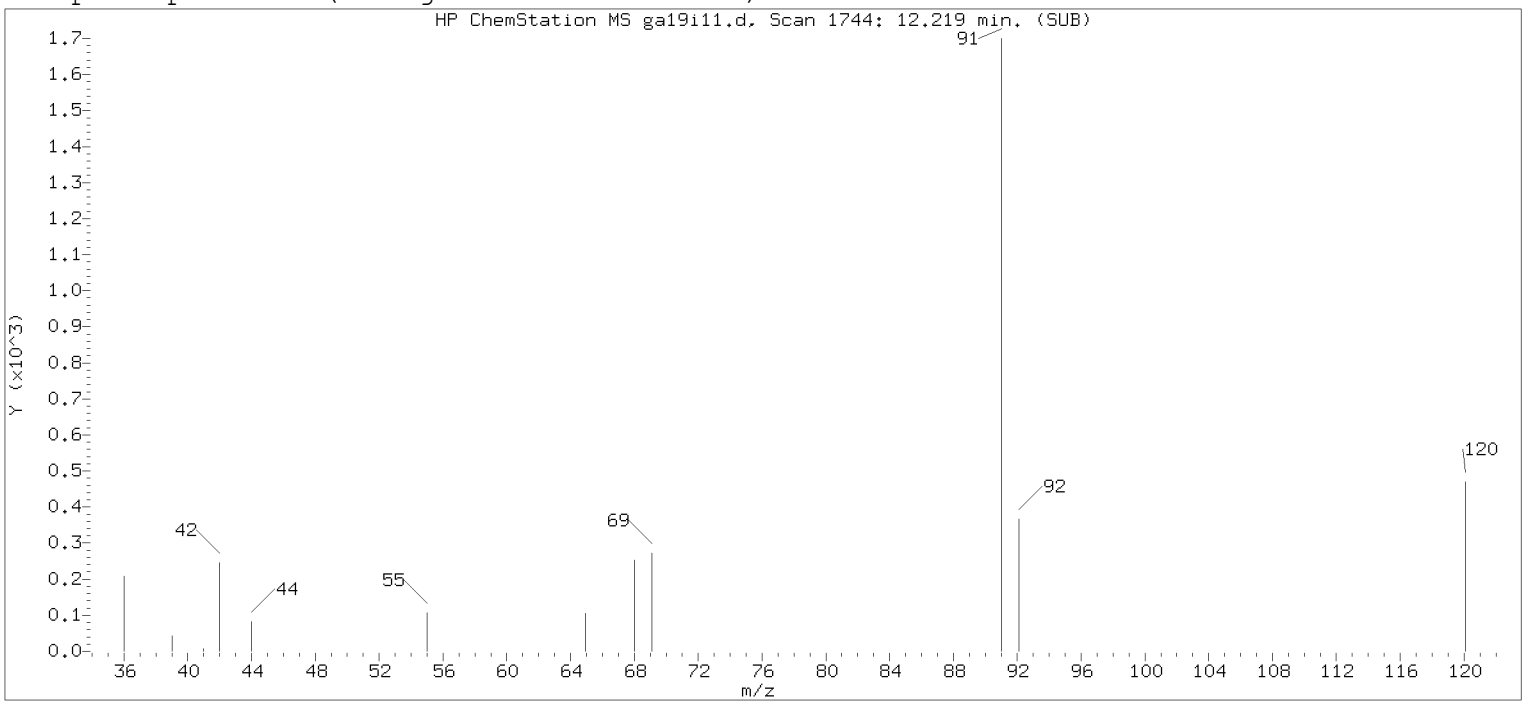
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 1802868M
On-Column Amount (ng) : 1250.0000
Integration start scan : 1688 Integration stop scan: 1745
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

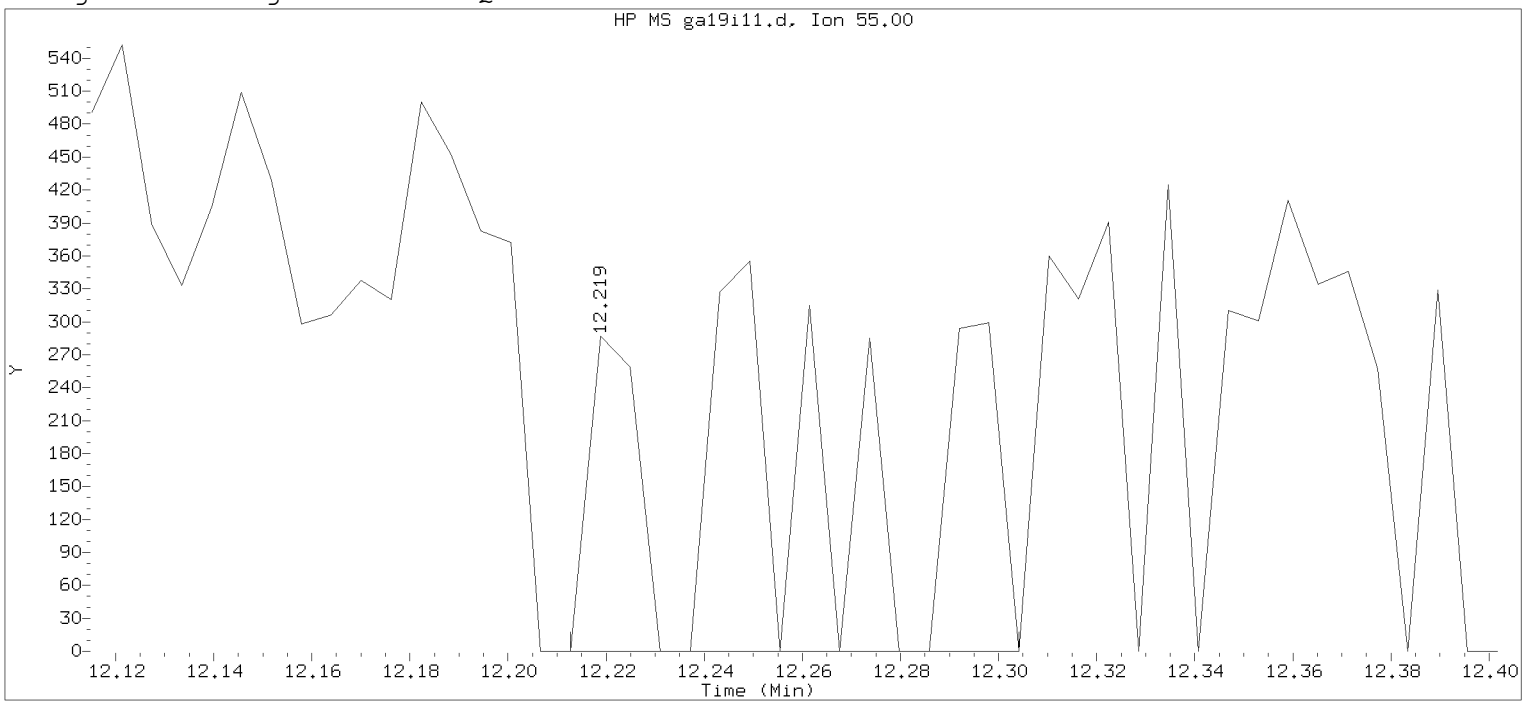
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



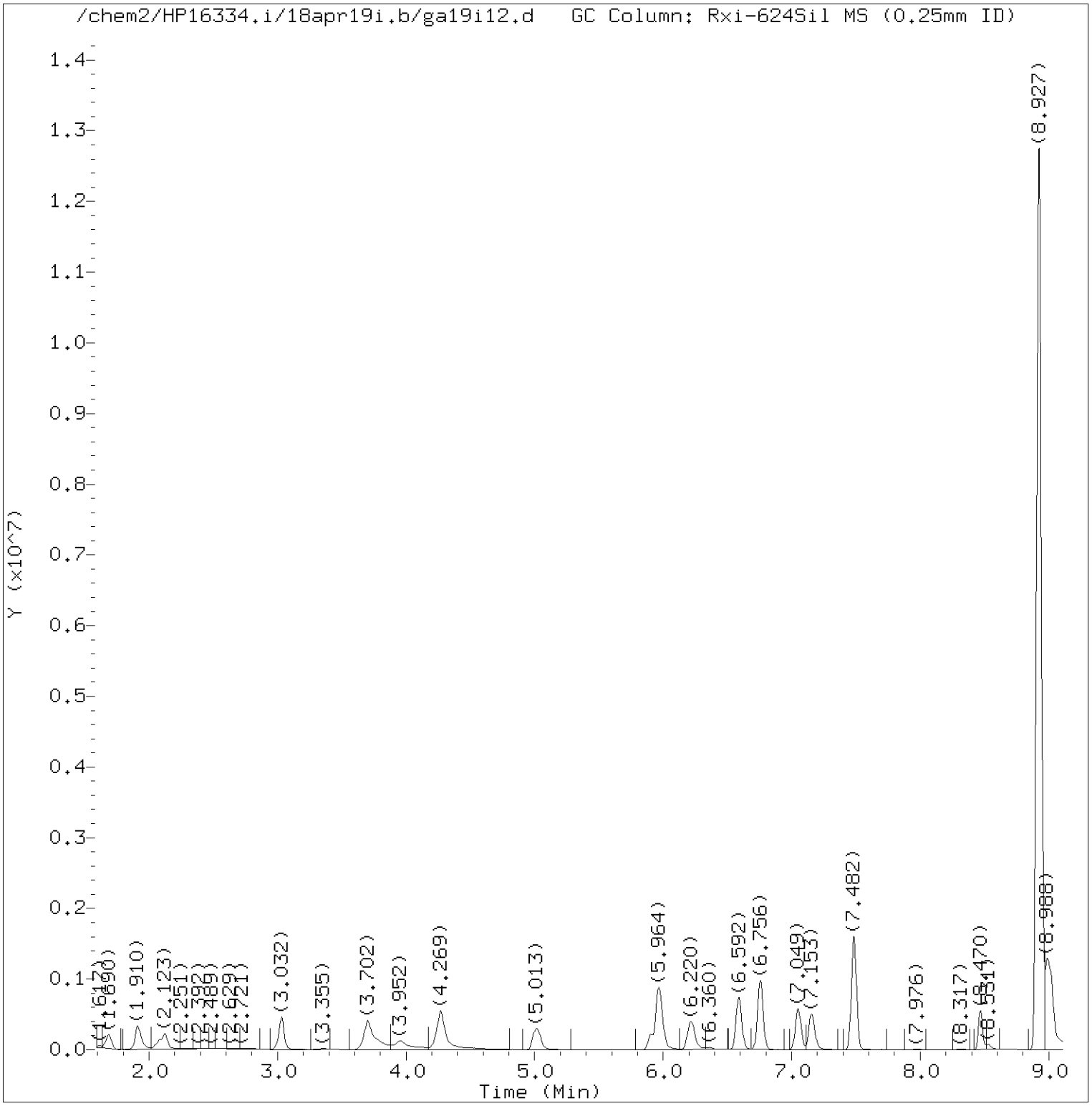
Data File: /chem2/HP16334.i/18apr19i.b/ga19i11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:06 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:22
Date, time and analyst ID of latest file update: 19-Apr-2018 16:22 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1744
Retention Time (minutes): 12.219
Quant Ion : 55.00
Area : 885
On-column Amount (ng) : 1250.0000
Integration start scan : 1742 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7621



Total Ion Chromatogram (TIC)

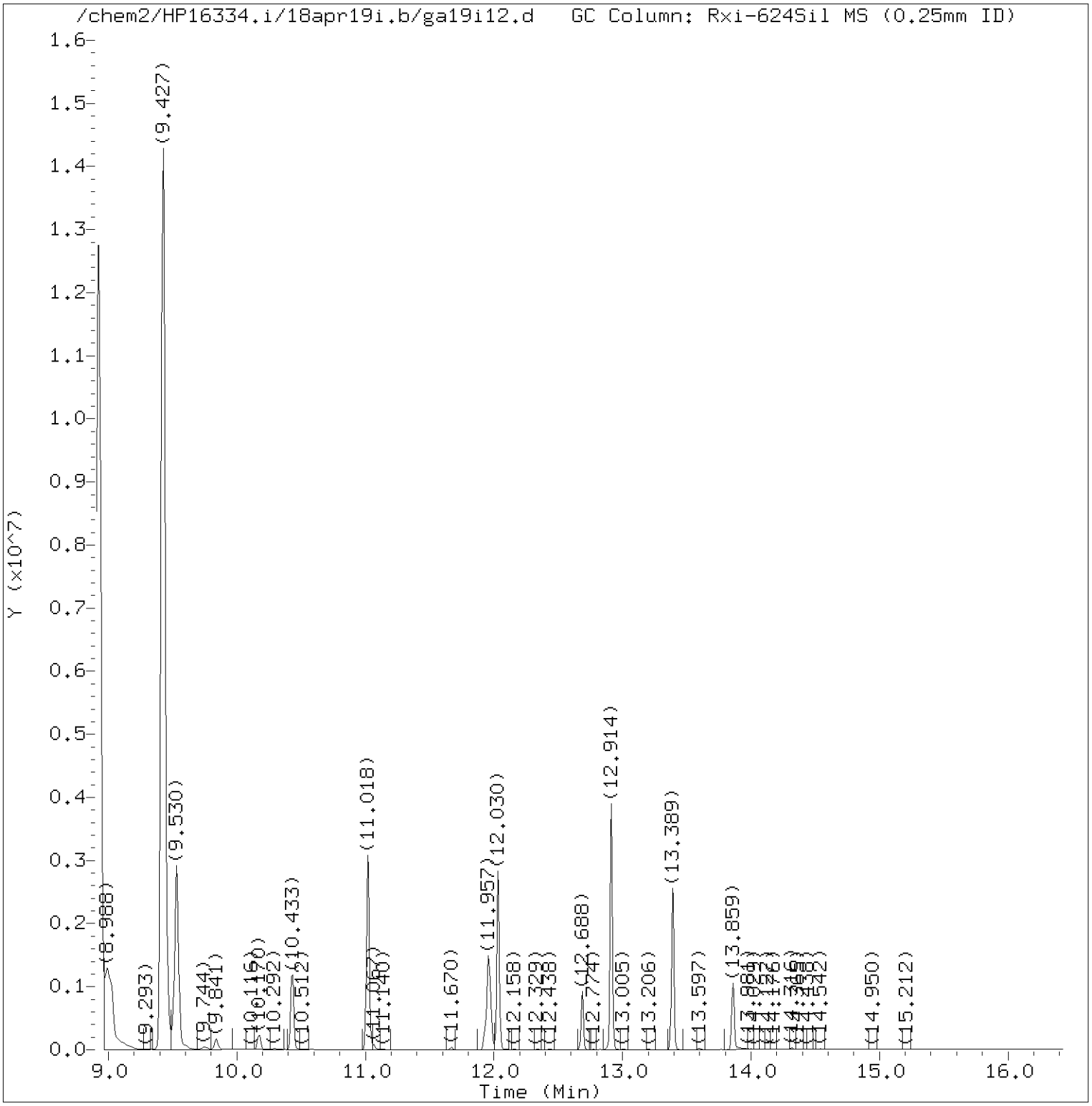
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

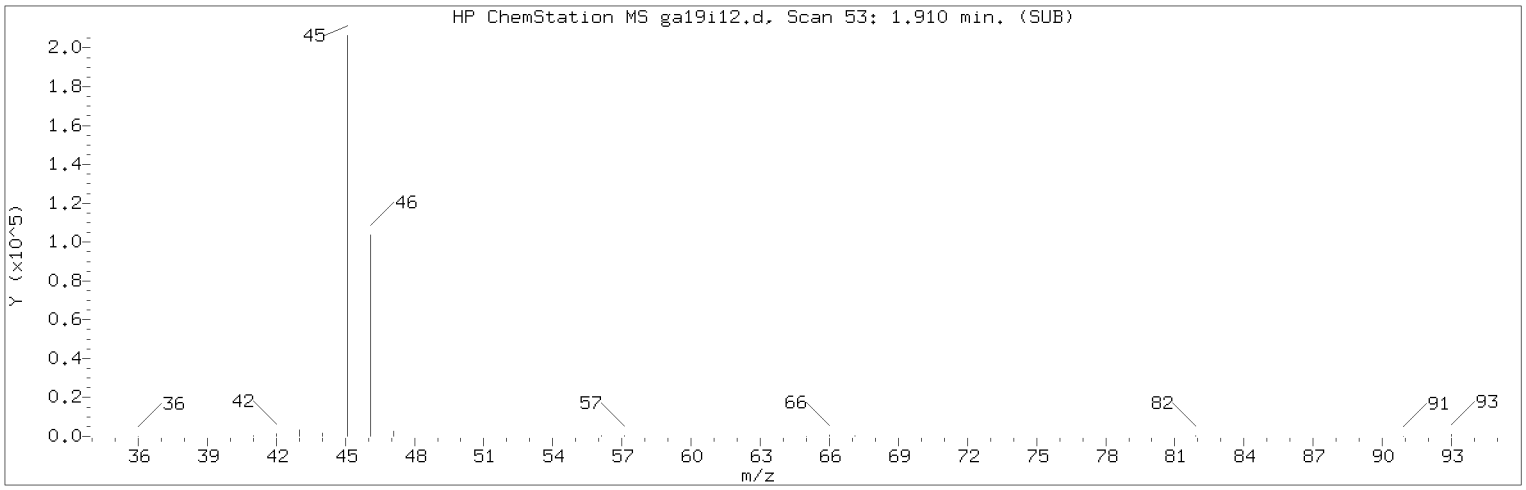
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	745970M	10.085
25) Acetonitrile	(1)	3.702	41	1891771M	400.212
26)*t-Butyl Alcohol-d10	(1)	3.964	65	209976	50.000
36) Vinyl Acetate	(2)	5.013	43	1071296M	10.021
43) Methyl Acrylate	(2)	5.964	55	1971594M	50.027
53) 1-Chlorobutane	(2)	6.756	56	1155073M	10.110
63)*Fluorobenzene	(2)	7.488	96	2073753	10.000
77) Chloroacetonitrile	(2)	8.994	75	1042499M	492.433
78) 2-Chloroethyl vinyl ether	(2)	9.024	63	323884M	9.958
97)*Chlorobenzene-d5	(3)	11.018	117	1594546	10.000
112) Cyclohexanone	(1)	11.957	55	721708M	500.384
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	886505	10.000
142) Hexachloroethane	(4)	13.389	117	373012	9.547

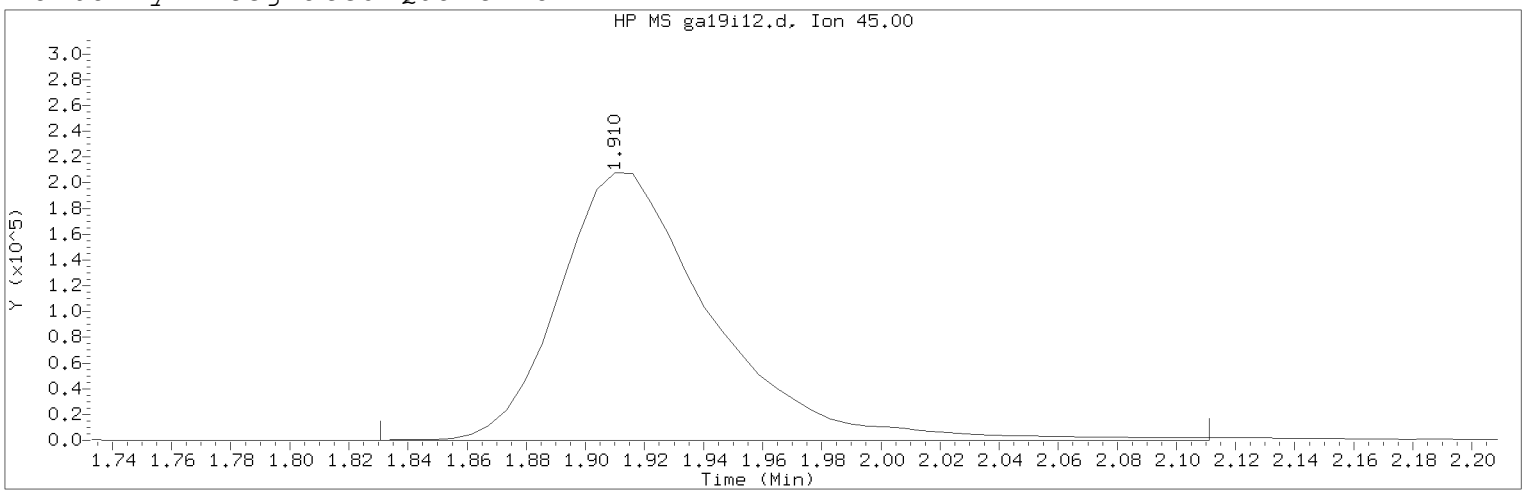
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

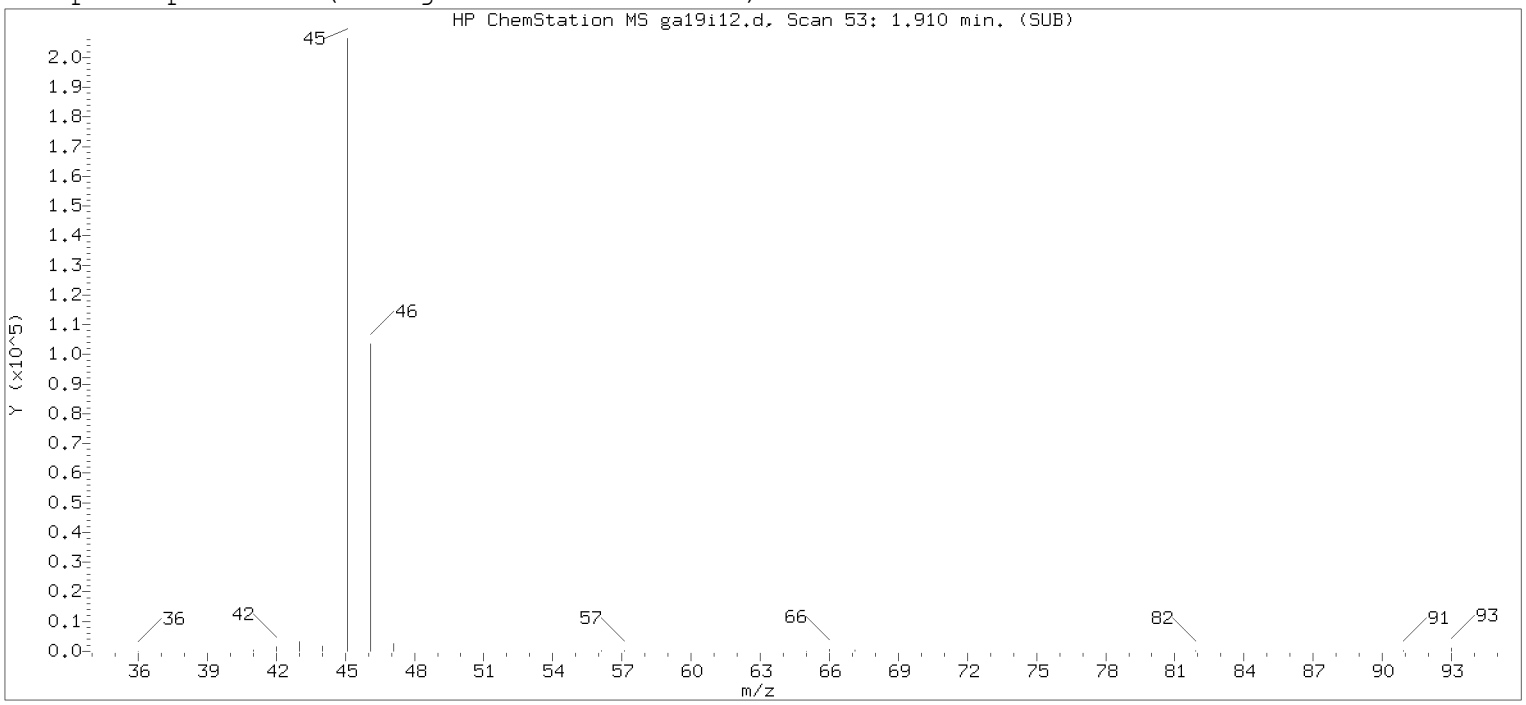
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area (flag) : 745970M
On-Column Amount (ng) : 10.0853
Integration start scan : 39 Integration stop scan: 85
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

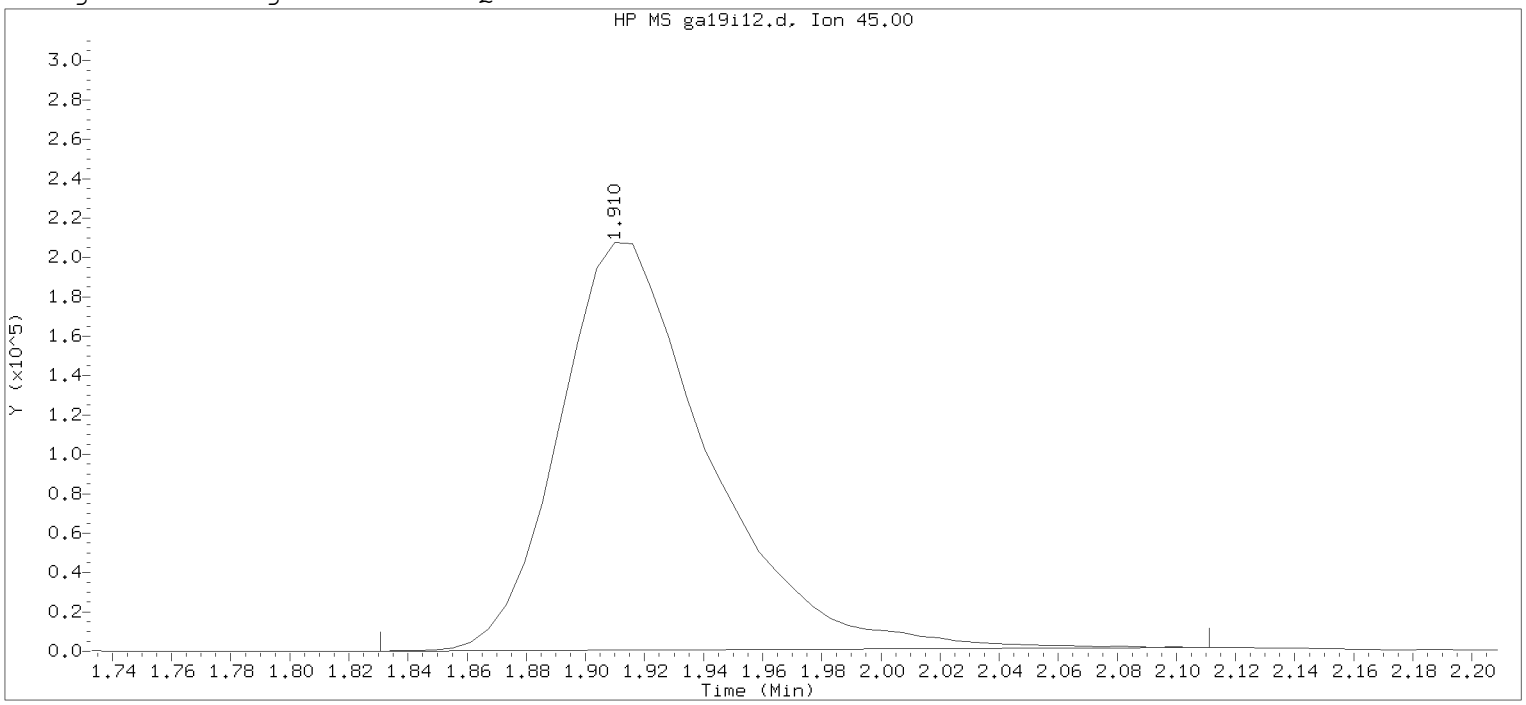
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

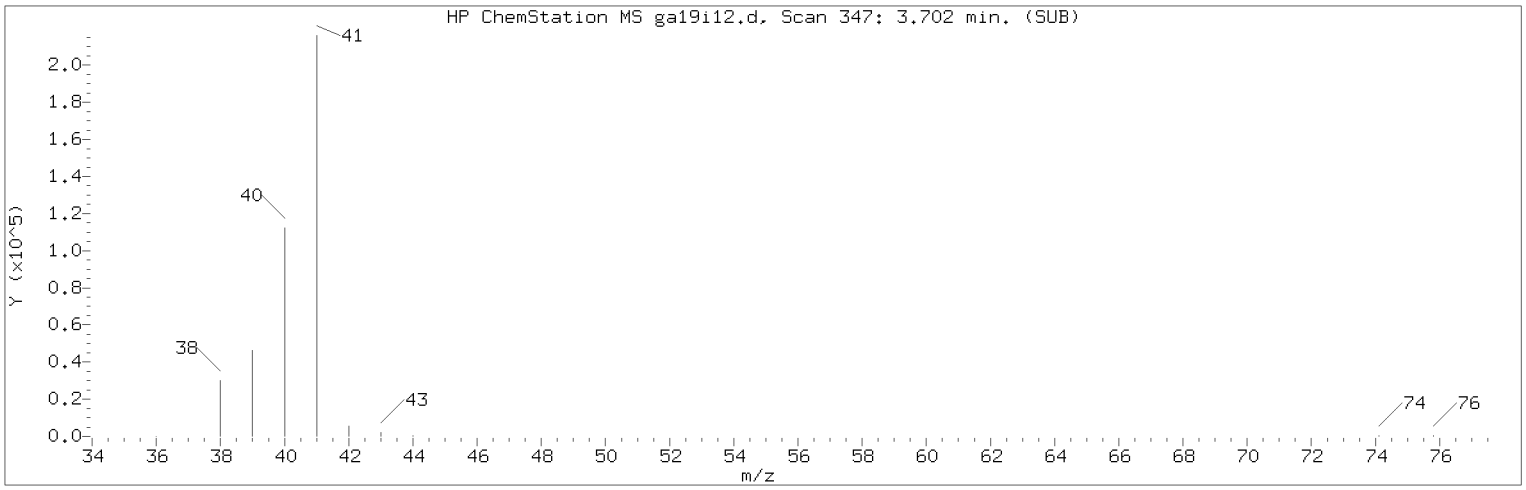
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

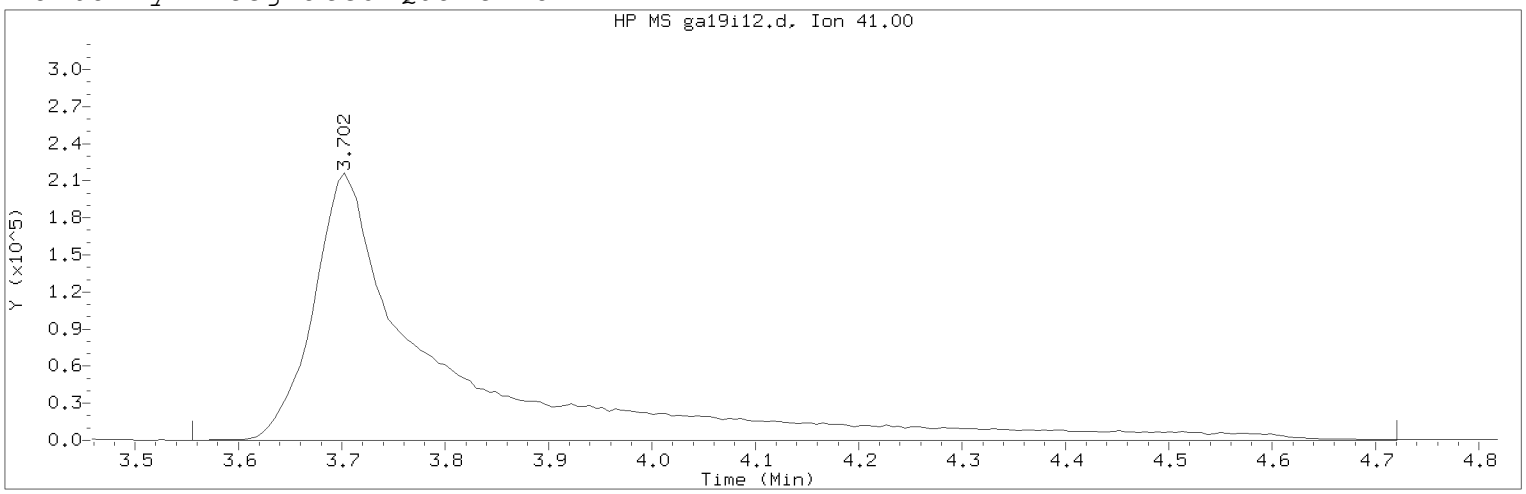
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area : 730377
On-column Amount (ng) : 25.0000
Integration start scan : 39 Integration stop scan: 85
Y at integration start : 0 Y at integration end: 1814

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

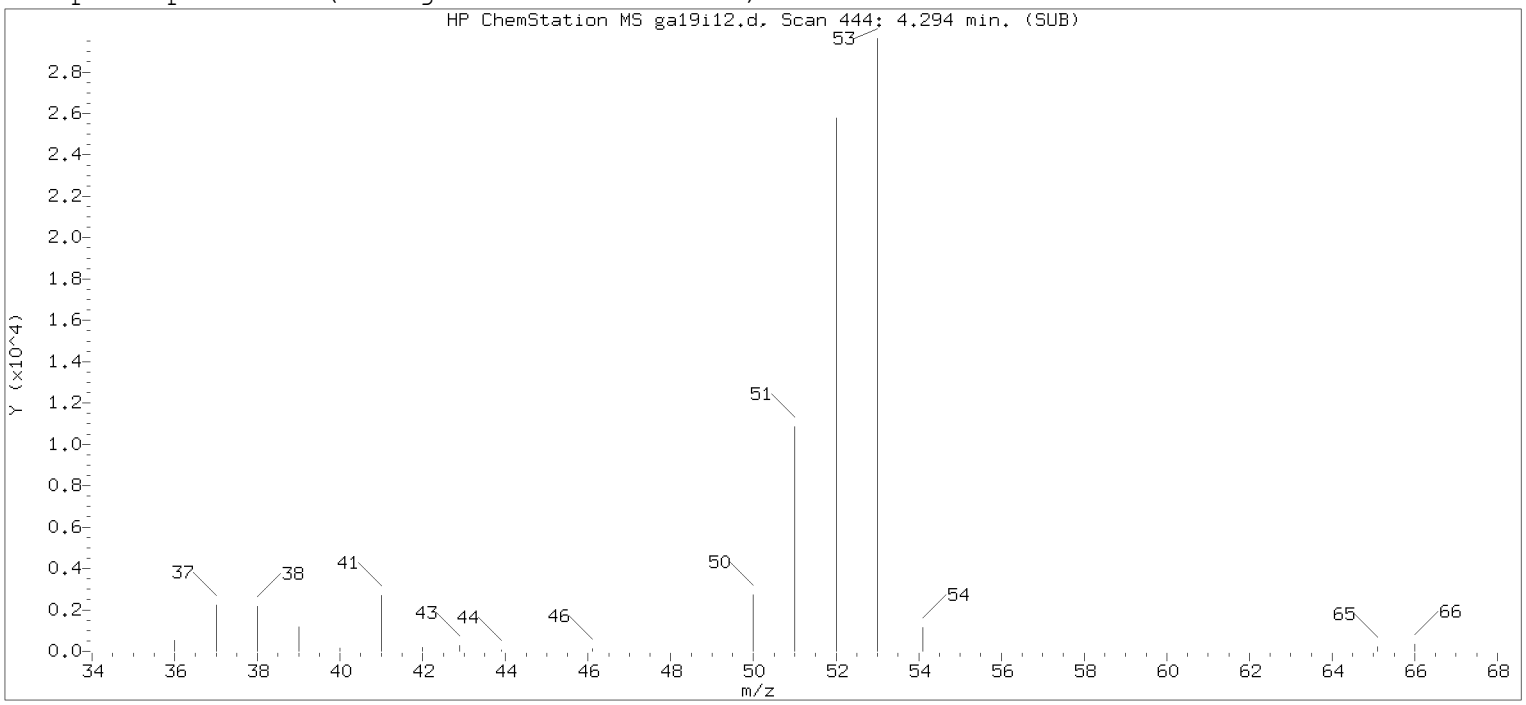
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 1891771M
On-Column Amount (ng) : 400.2123
Integration start scan : 322 Integration stop scan: 513
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

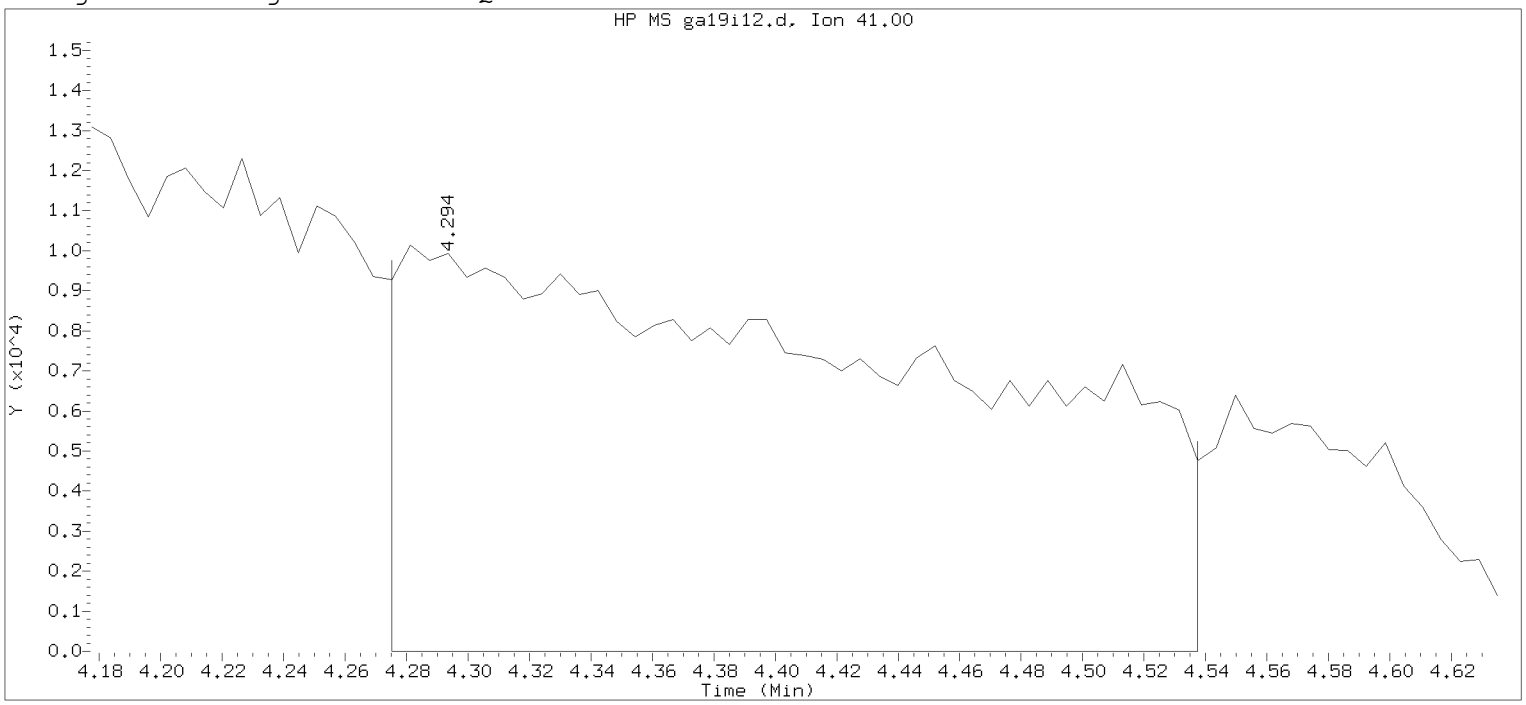
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

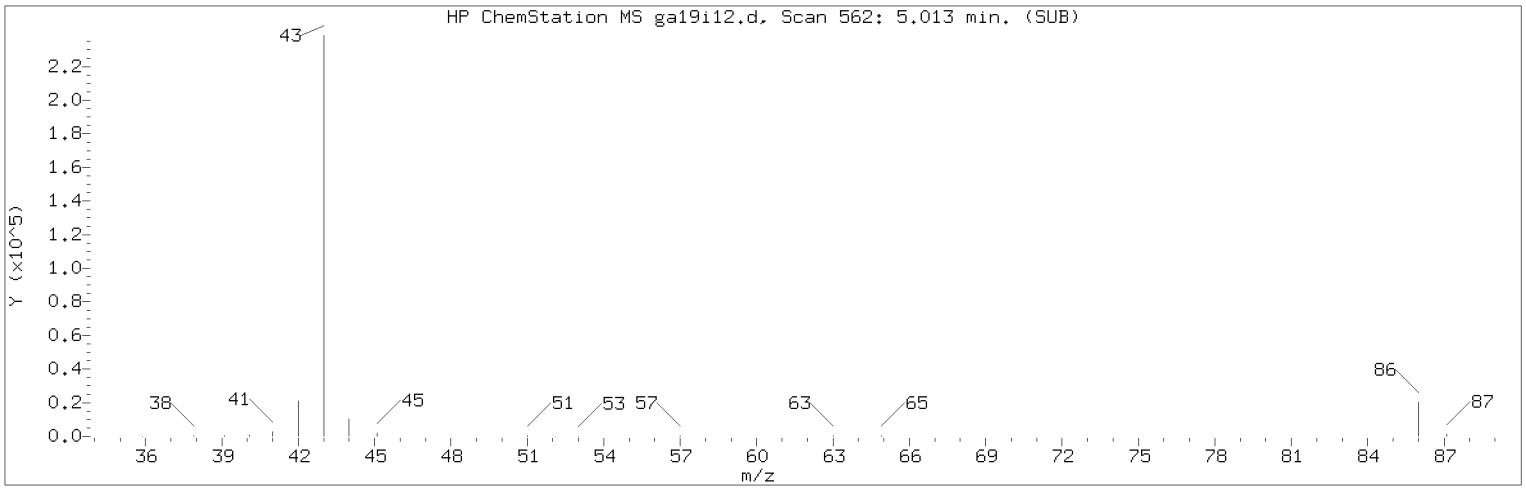
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

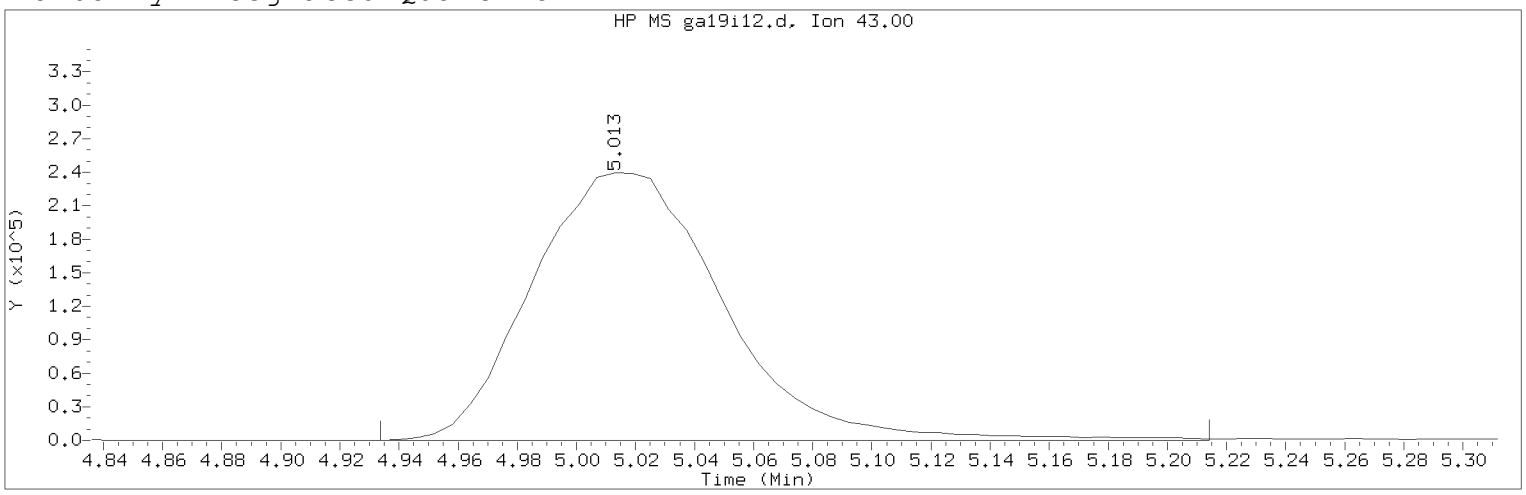
Compound Number	: 25
Compound Name	: Acetonitrile
Scan Number	: 444
Retention Time (minutes)	: 4.294
Quant Ion	: 41.00
Area	: 121117
On-column Amount (ng)	: 1000.0000
Integration start scan	: 440 Integration stop scan: 483
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

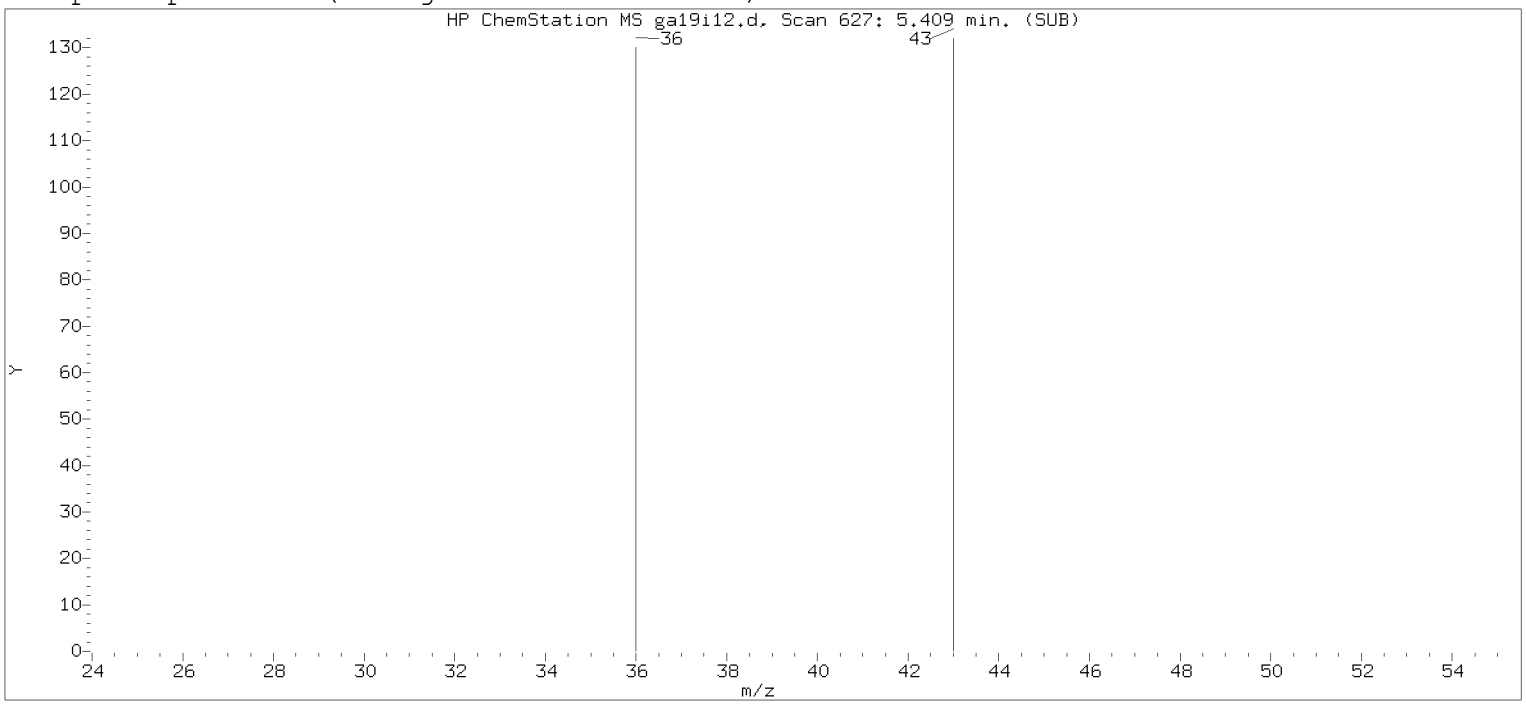
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 562
Retention Time (minutes): 5.013
Quant Ion : 43.00
Area (flag) : 1071296M
On-Column Amount (ng) : 10.0207
Integration start scan : 548 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

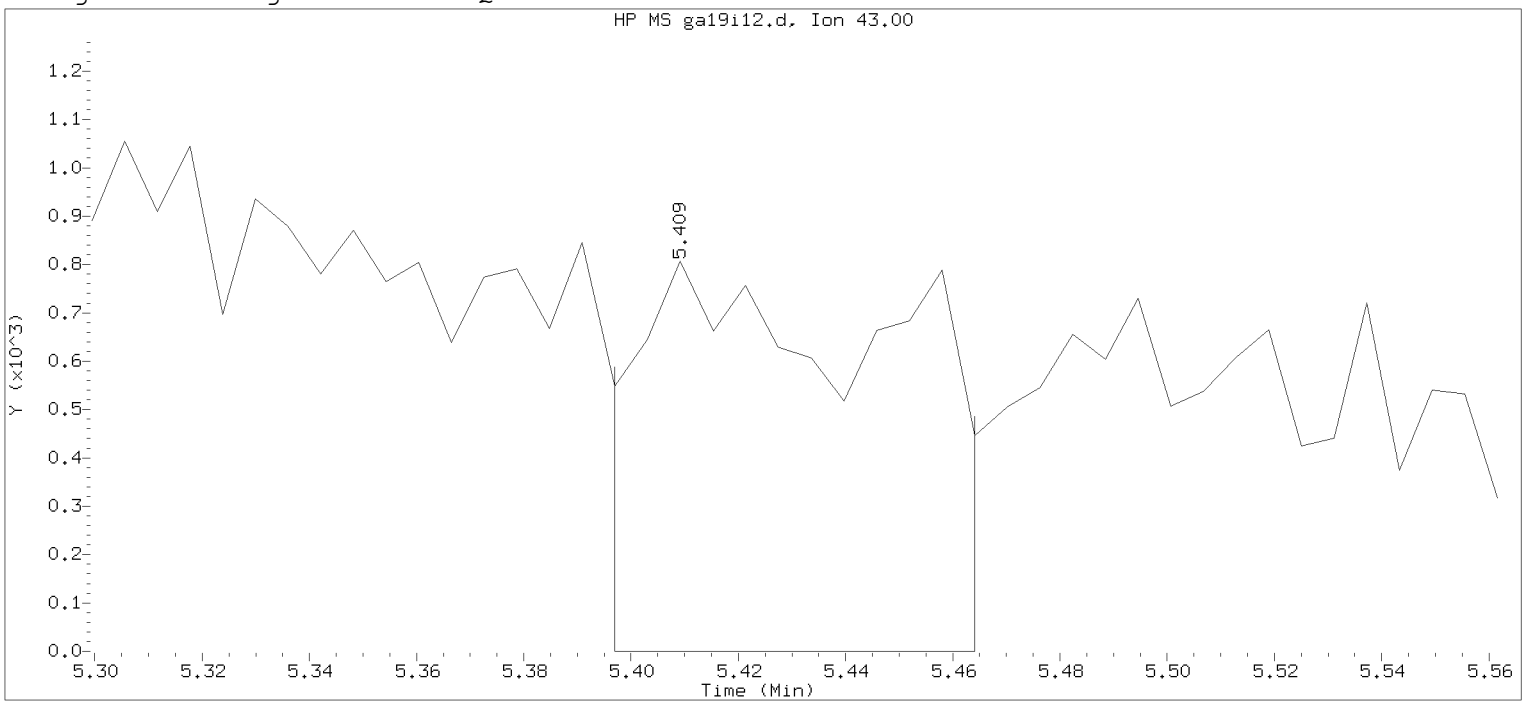
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

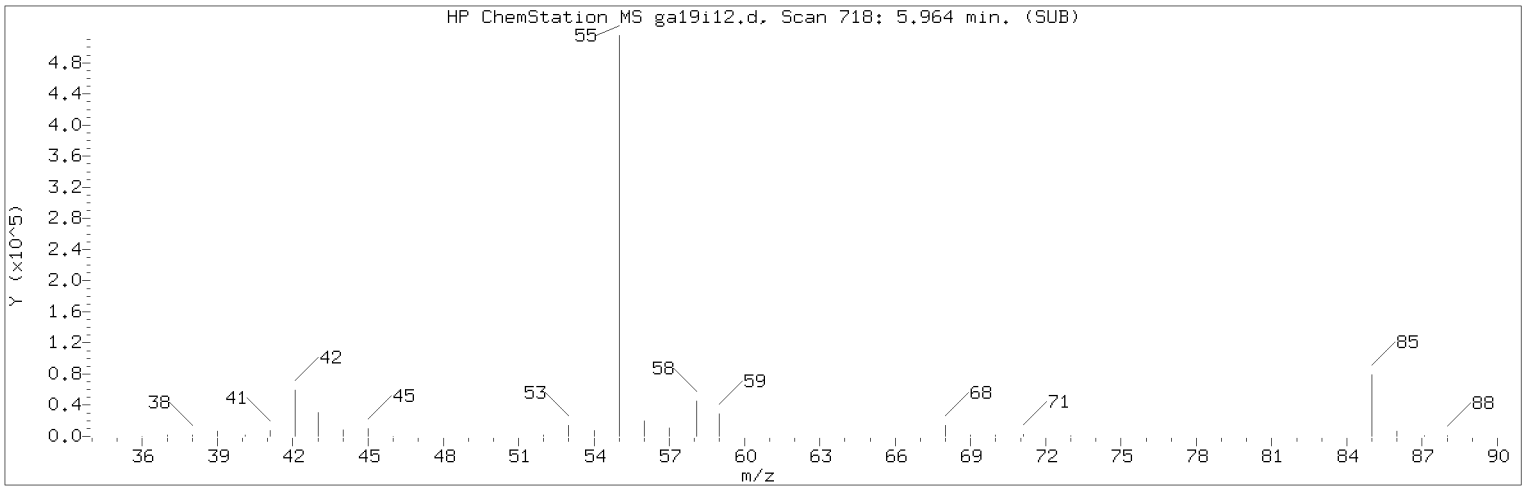
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

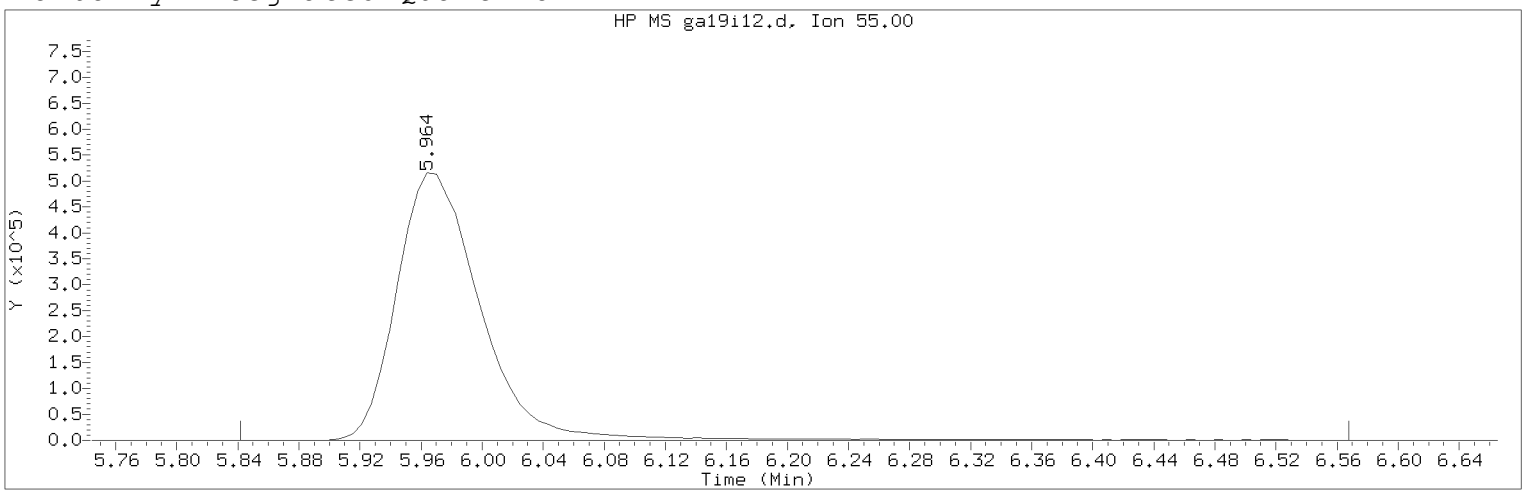
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 627
Retention Time (minutes): 5.409
Quant Ion : 43.00
Area : 2653
On-column Amount (ng) : 25.0000
Integration start scan : 624 Integration stop scan: 635
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7000

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

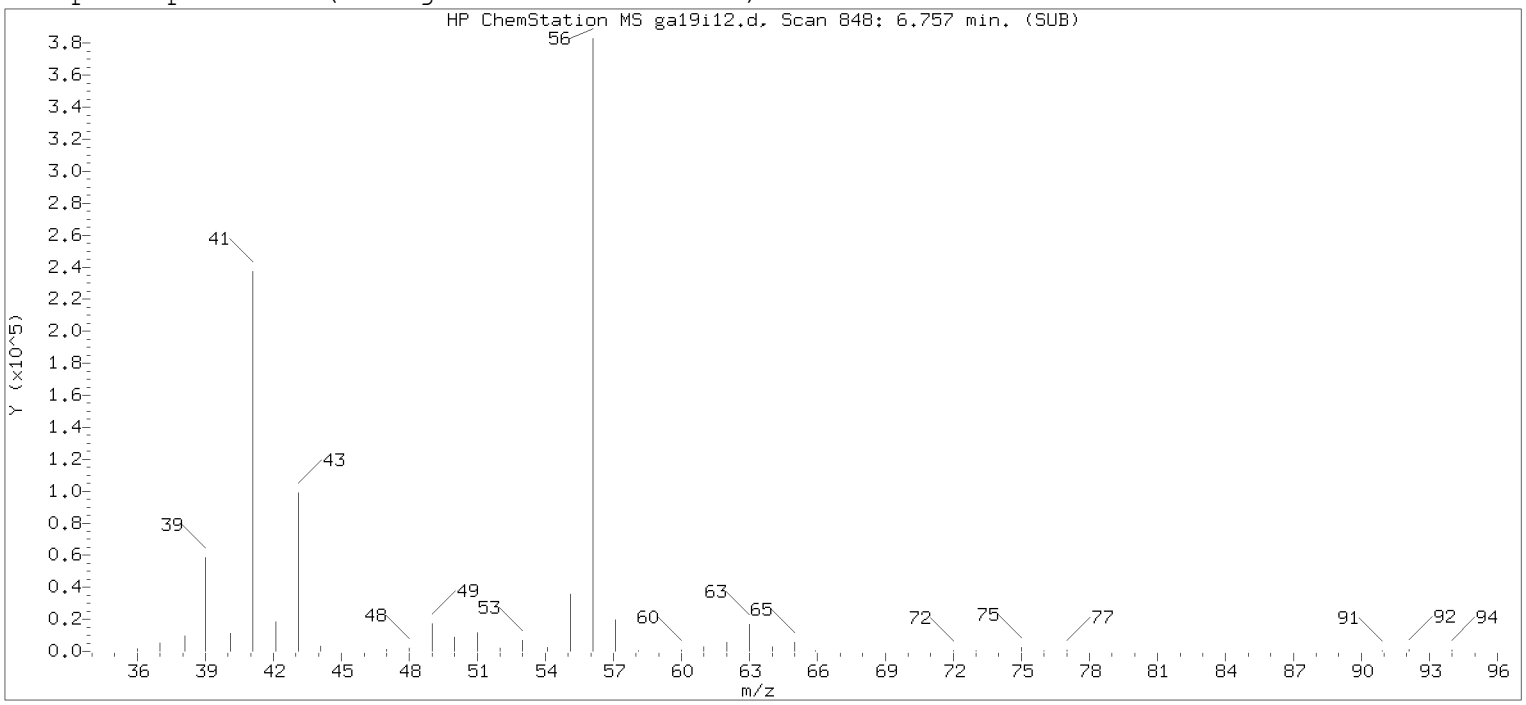
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 718
Retention Time (minutes): 5.964
Quant Ion : 55.00
Area (flag) : 1971594M
On-Column Amount (ng) : 50.0265
Integration start scan : 697 Integration stop scan: 816
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

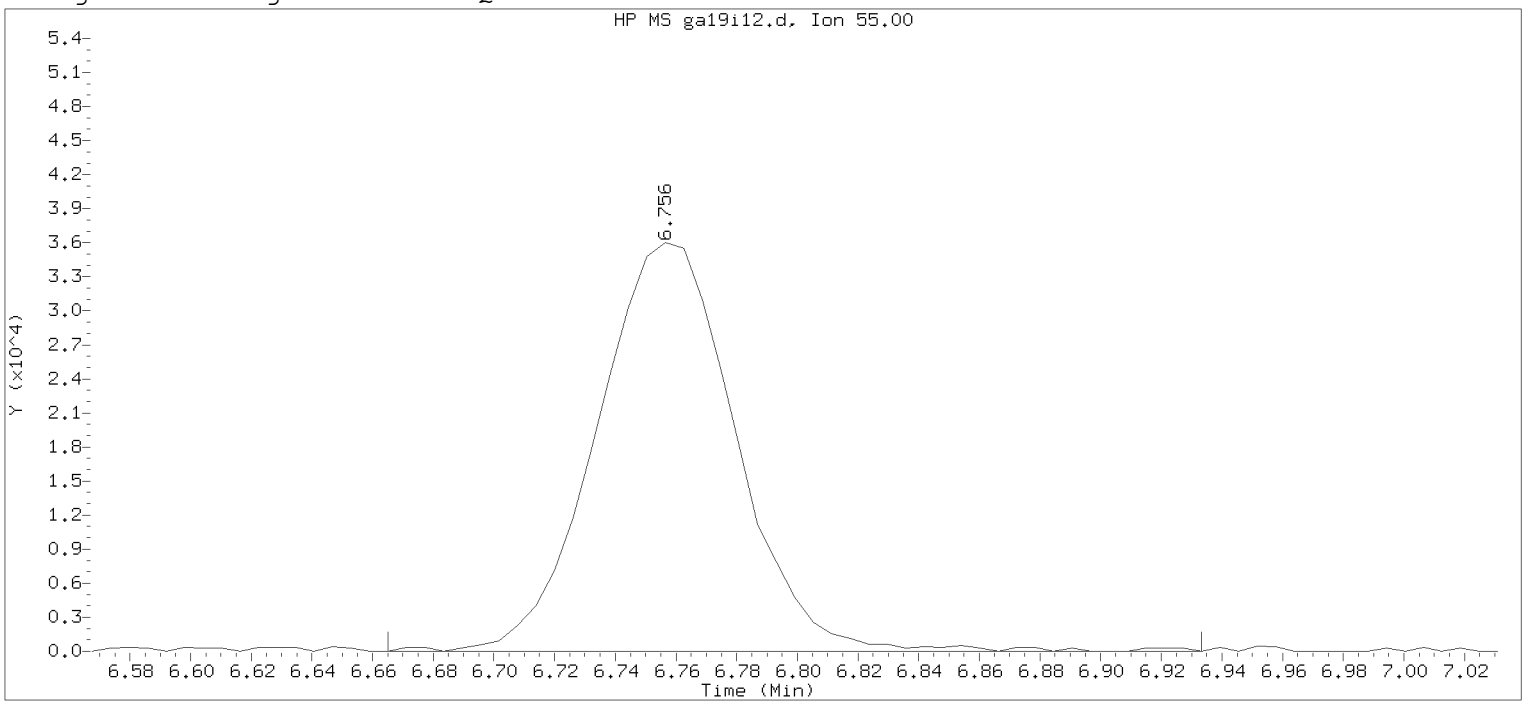
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

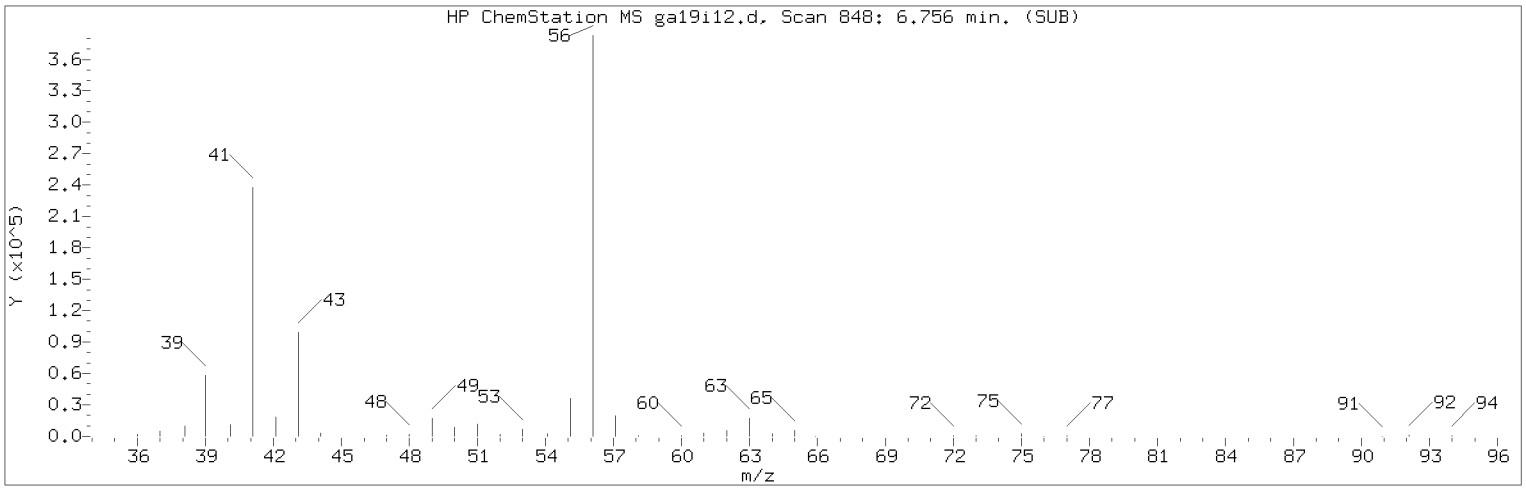
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

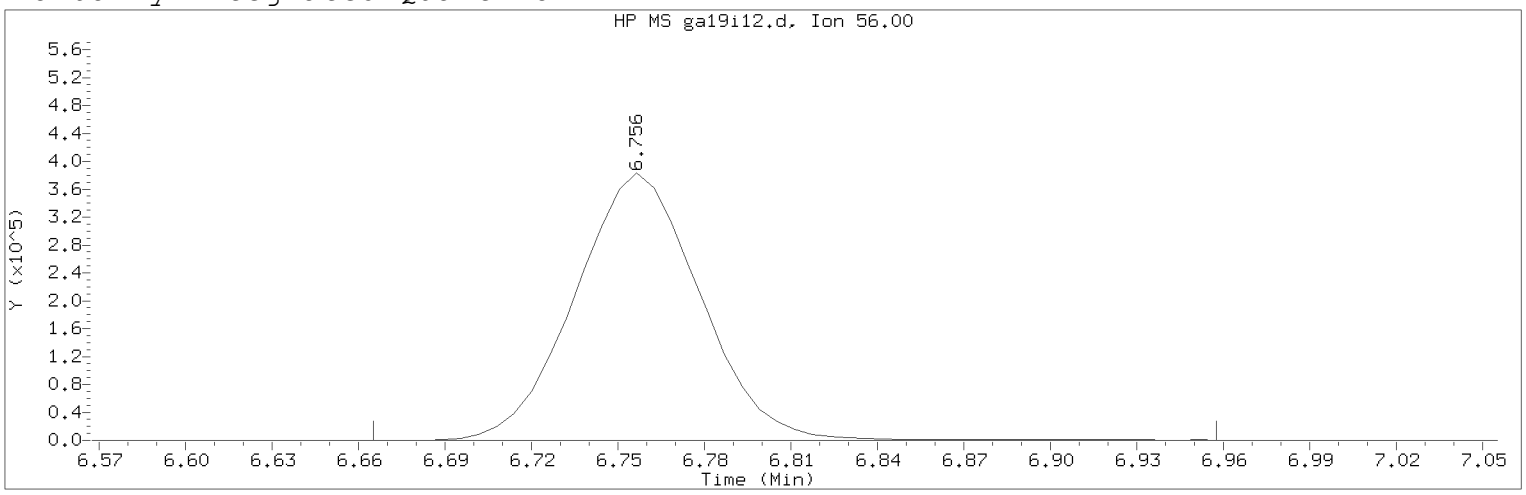
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 848
Retention Time (minutes): 6.756
Quant Ion : 55.00
Area : 114786
On-column Amount (ng) : 125.0000
Integration start scan : 832 Integration stop scan: 876
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used for method 7632

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

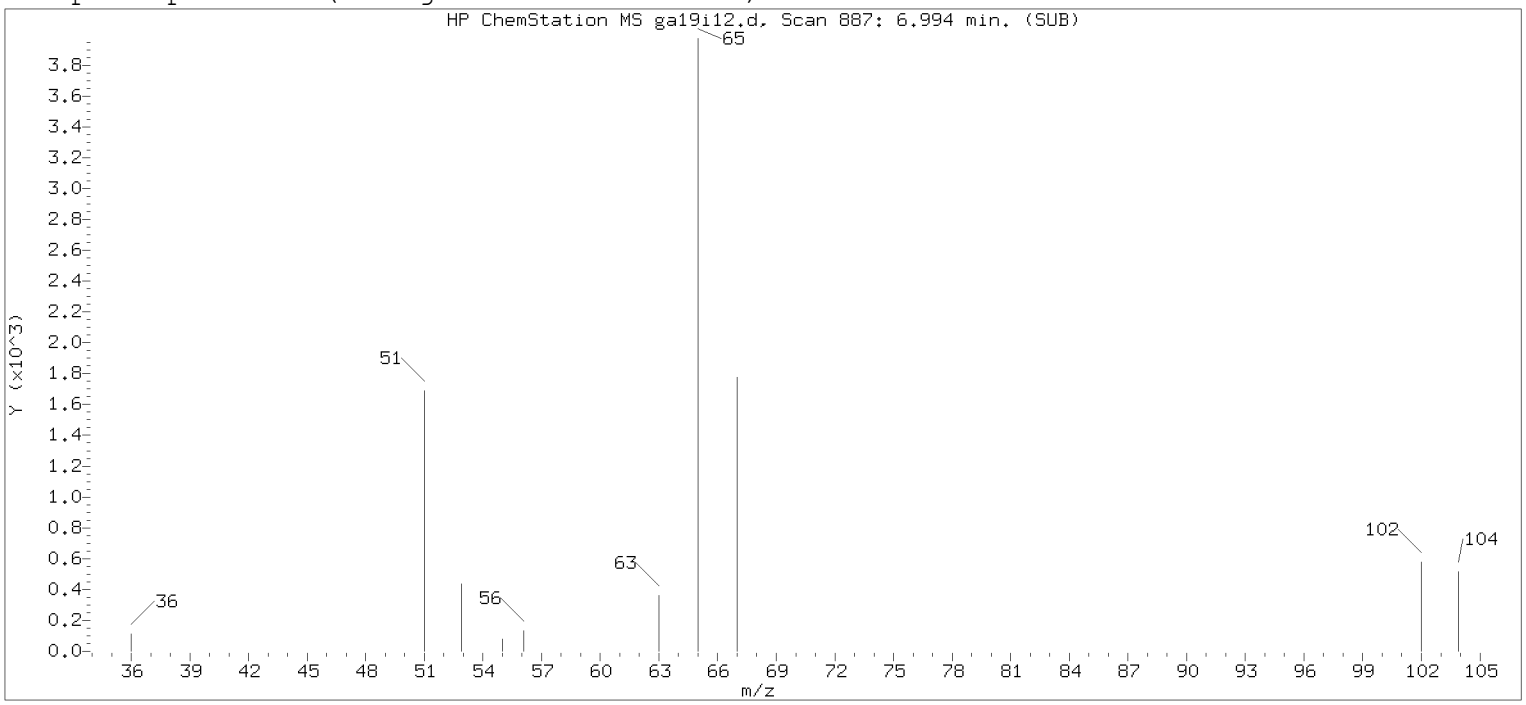
Compound Number : 53
Compound Name : 1-Chlorobutane
Scan Number : 848
Retention Time (minutes): 6.756
Quant Ion : 56.00
Area (flag) : 1155073M
On-Column Amount (ng) : 10.1102
Integration start scan : 832 Integration stop scan: 880
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

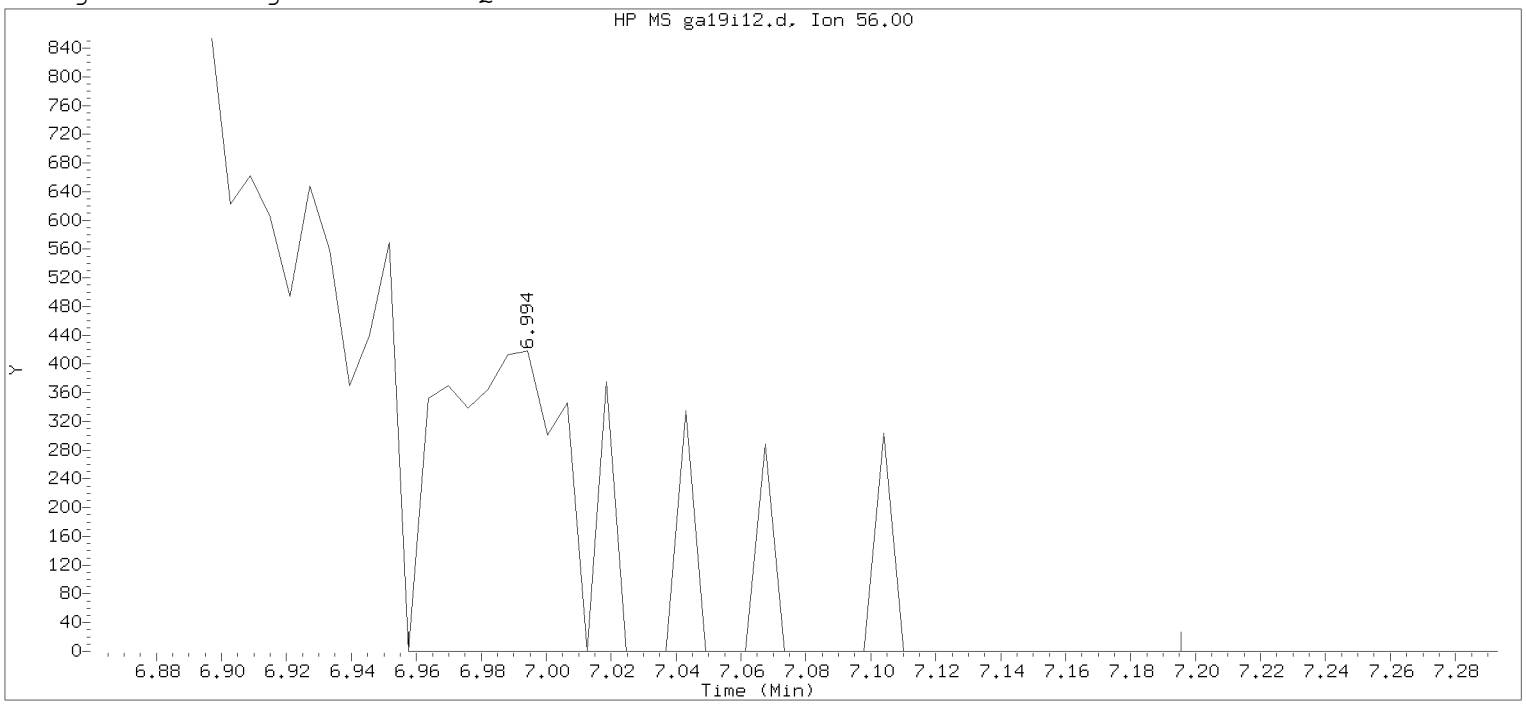
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

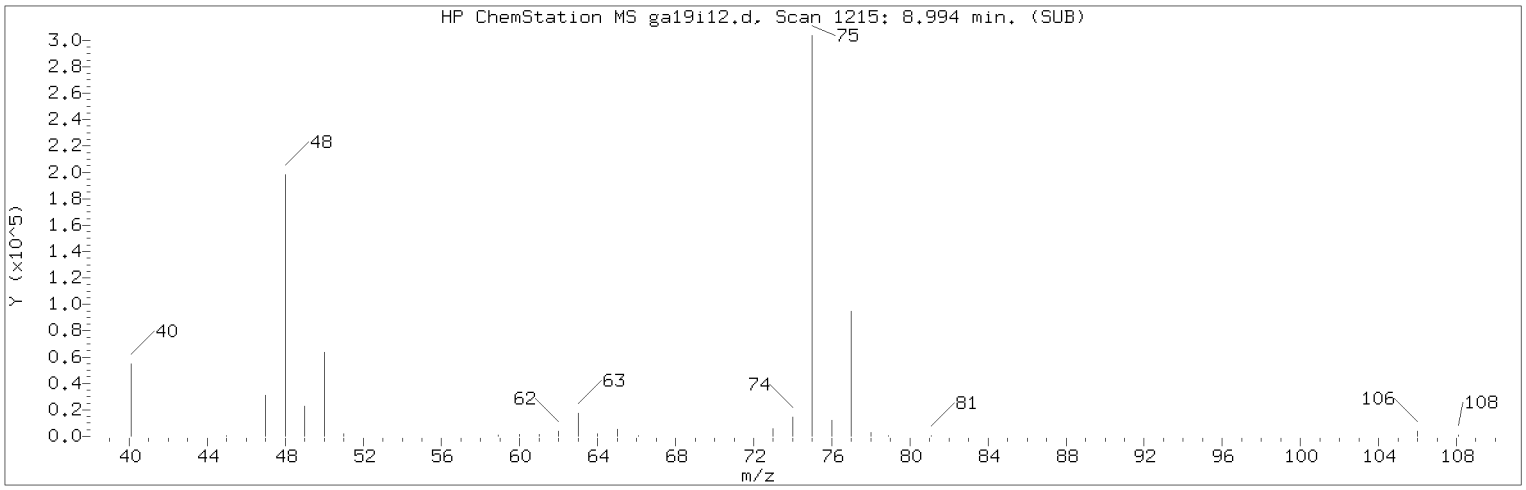
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

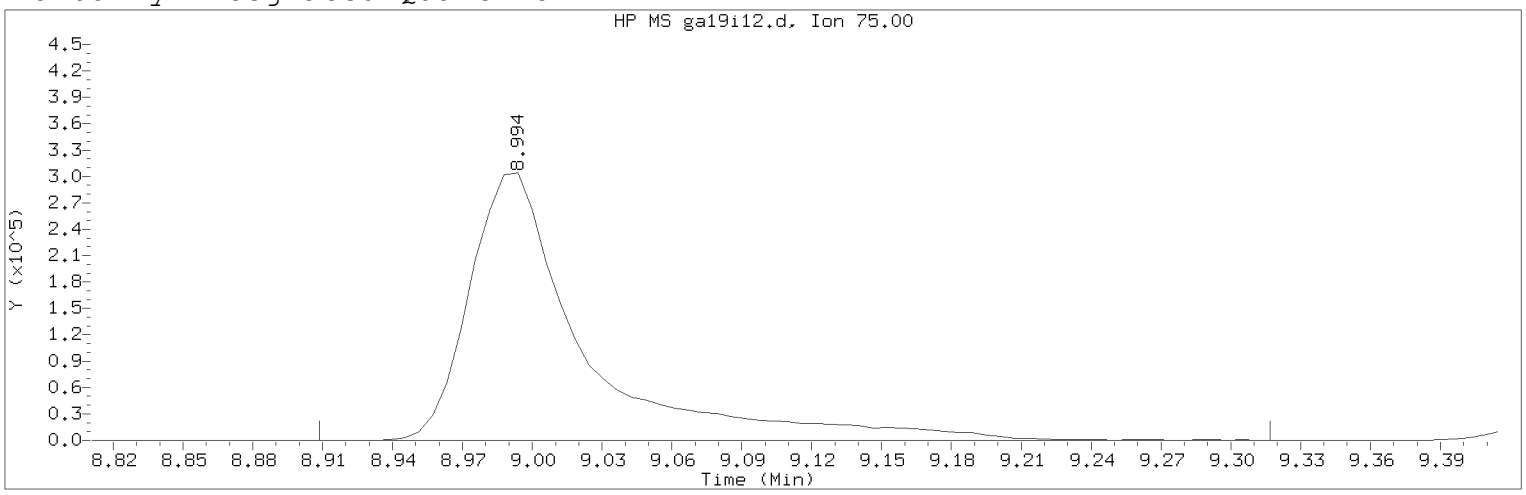
Compound Number : 53
Compound Name : 1-Chlorobutane
Scan Number : 887
Retention Time (minutes): 6.994
Quant Ion : 56.00
Area : 1538
On-column Amount (ng) : 25.0000
Integration start scan : 880 Integration stop scan: 919
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7634

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

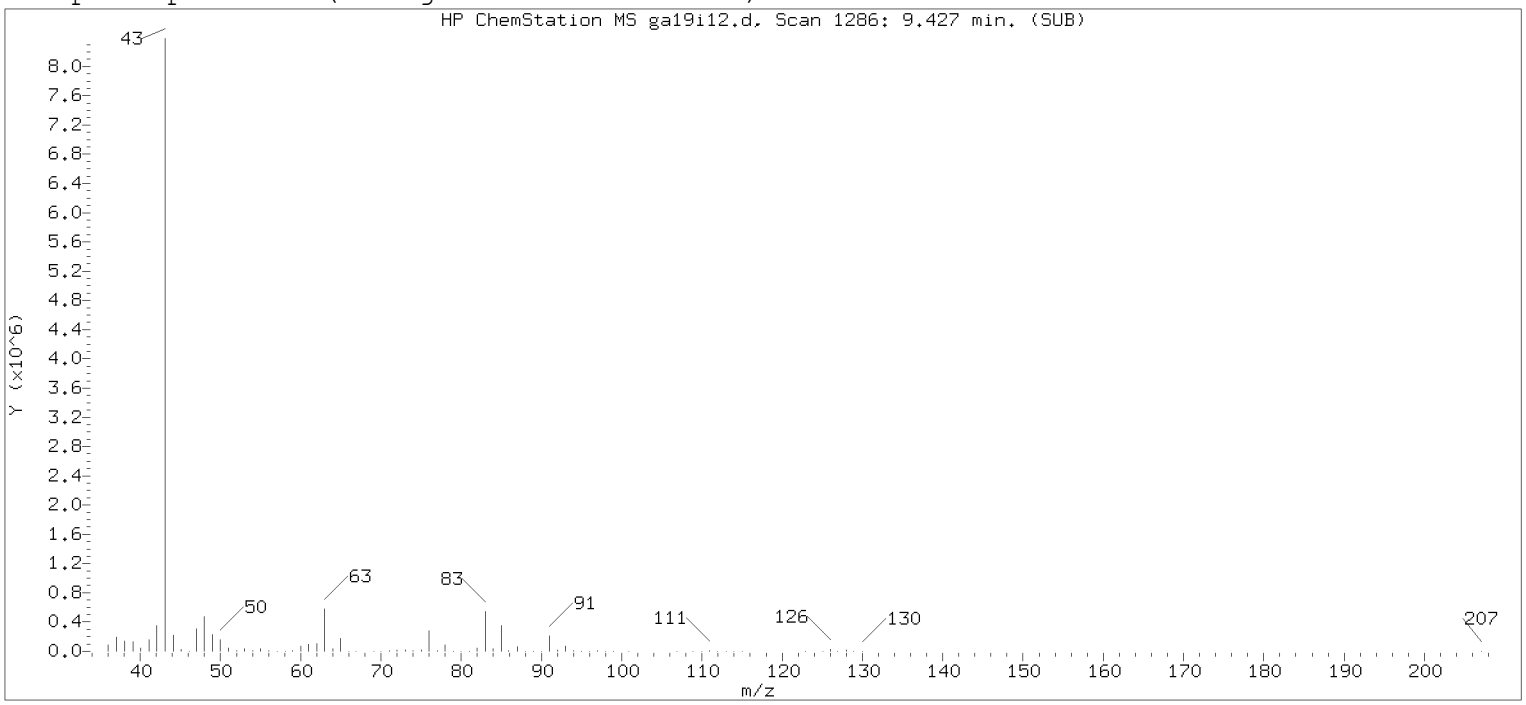
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1215
Retention Time (minutes): 8.994
Quant Ion : 75.00
Area (flag) : 1042499M
On-Column Amount (ng) : 492.4333
Integration start scan : 1200 Integration stop scan: 1267
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

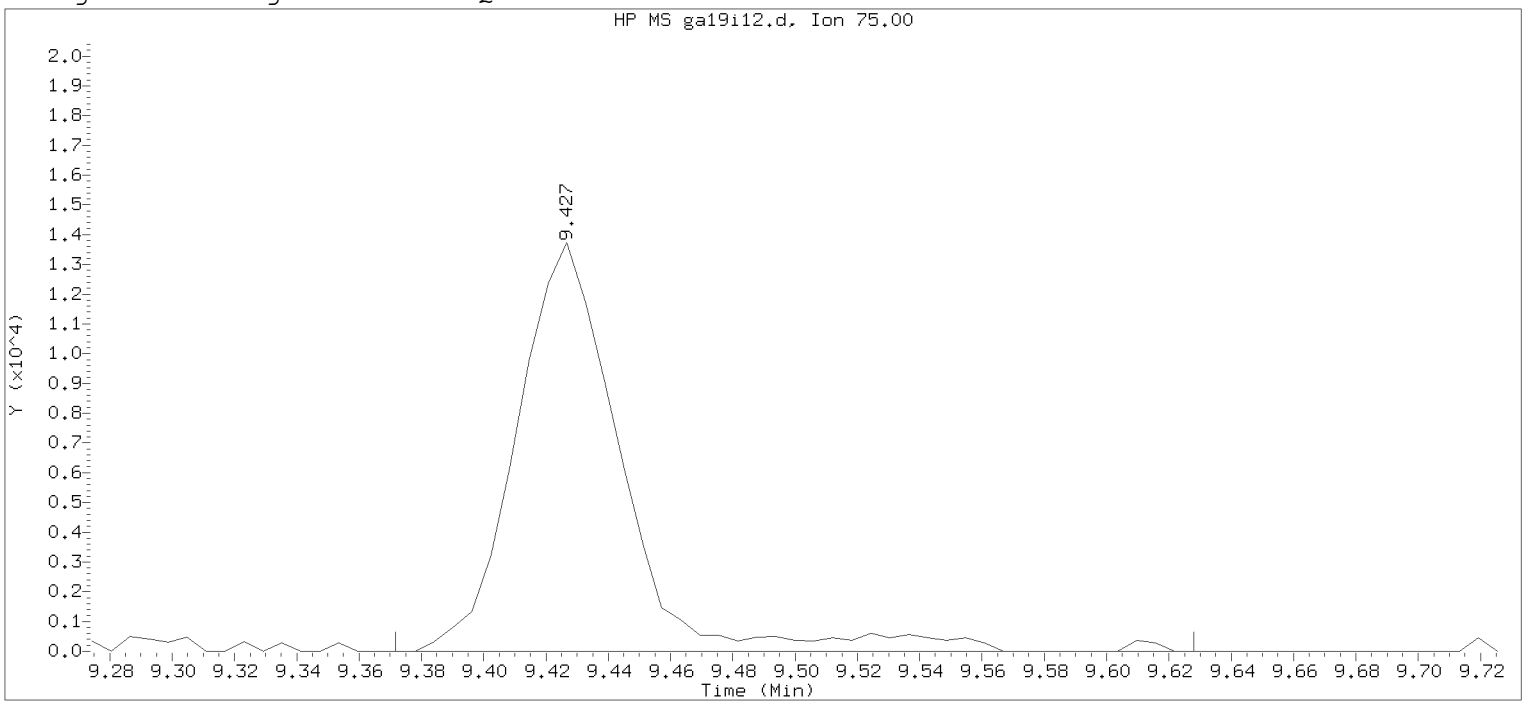
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

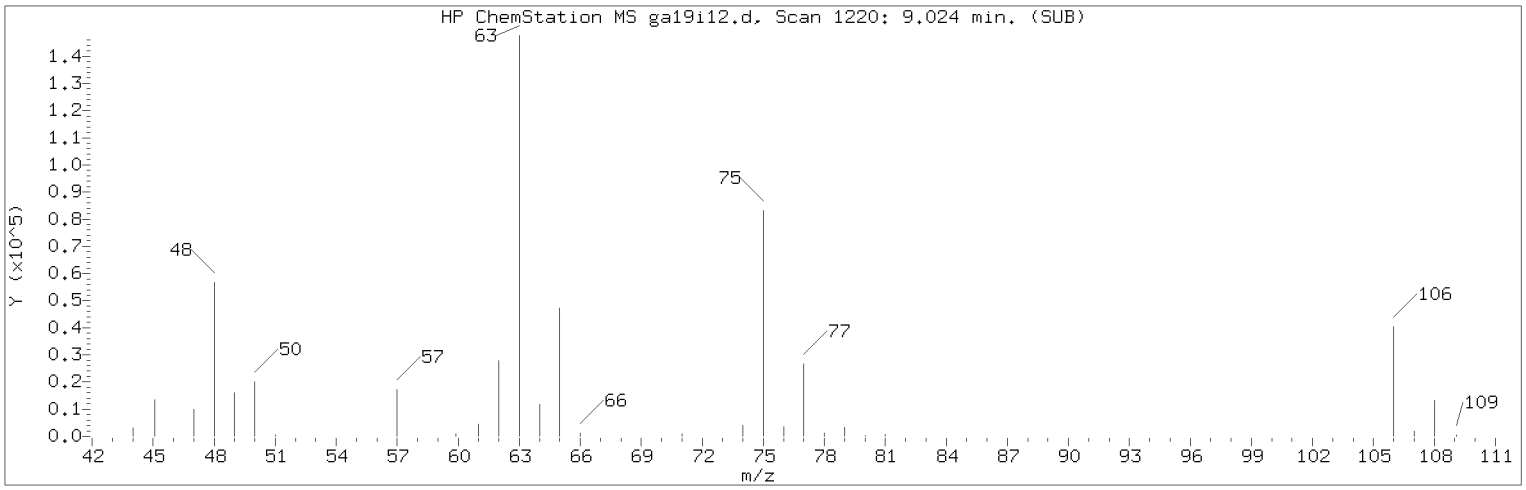
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

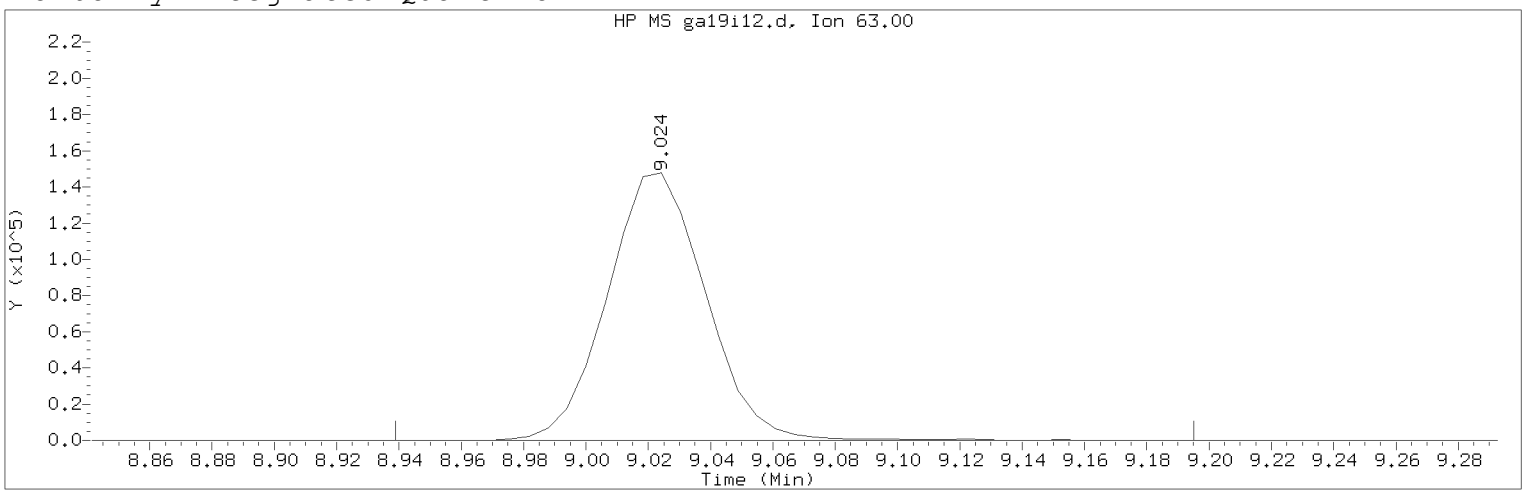
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 75.00
Area : 32370
On-column Amount (ng) : 1250.0000
Integration start scan : 1276 Integration stop scan: 1318
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7636

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

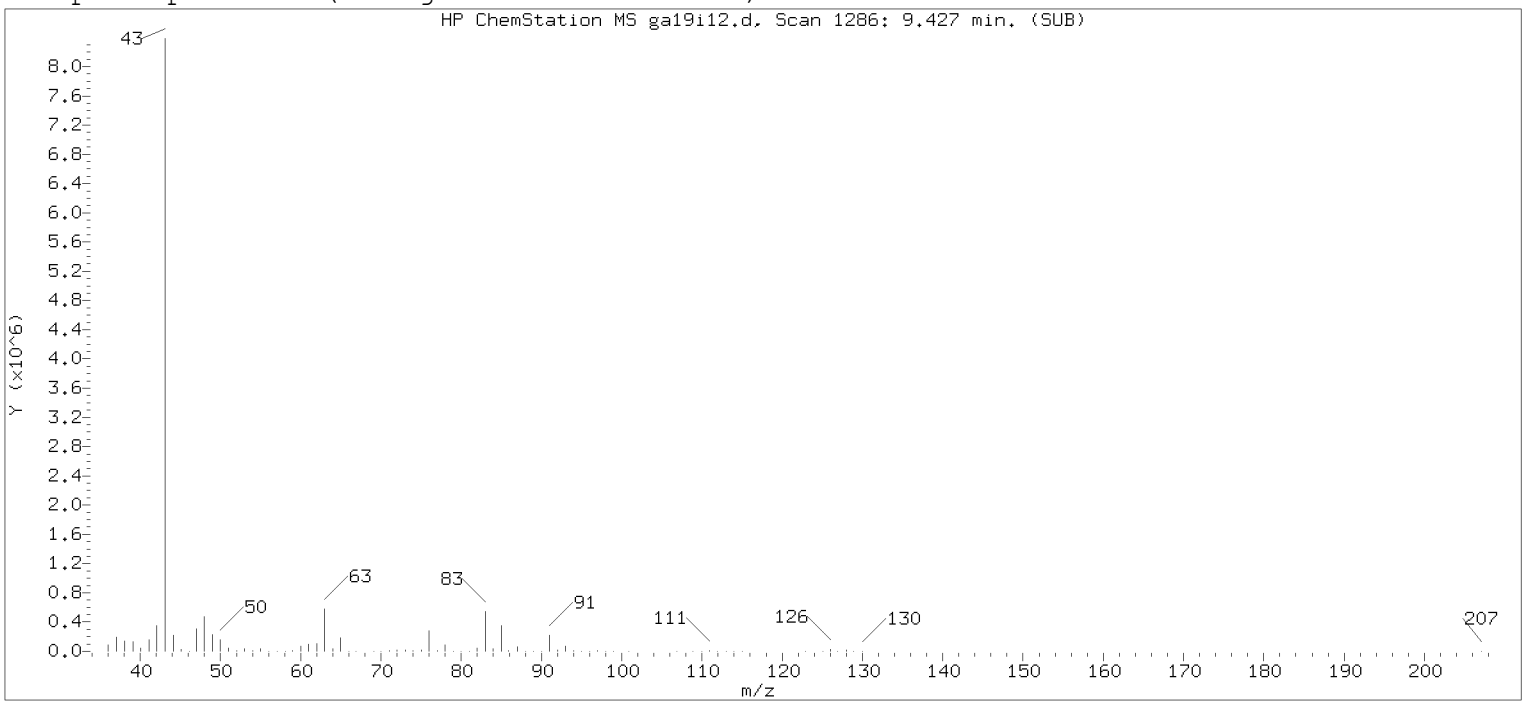
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1220
Retention Time (minutes): 9.024
Quant Ion : 63.00
Area (flag) : 323884M
On-Column Amount (ng) : 9.9577
Integration start scan : 1205 Integration stop scan: 1247
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

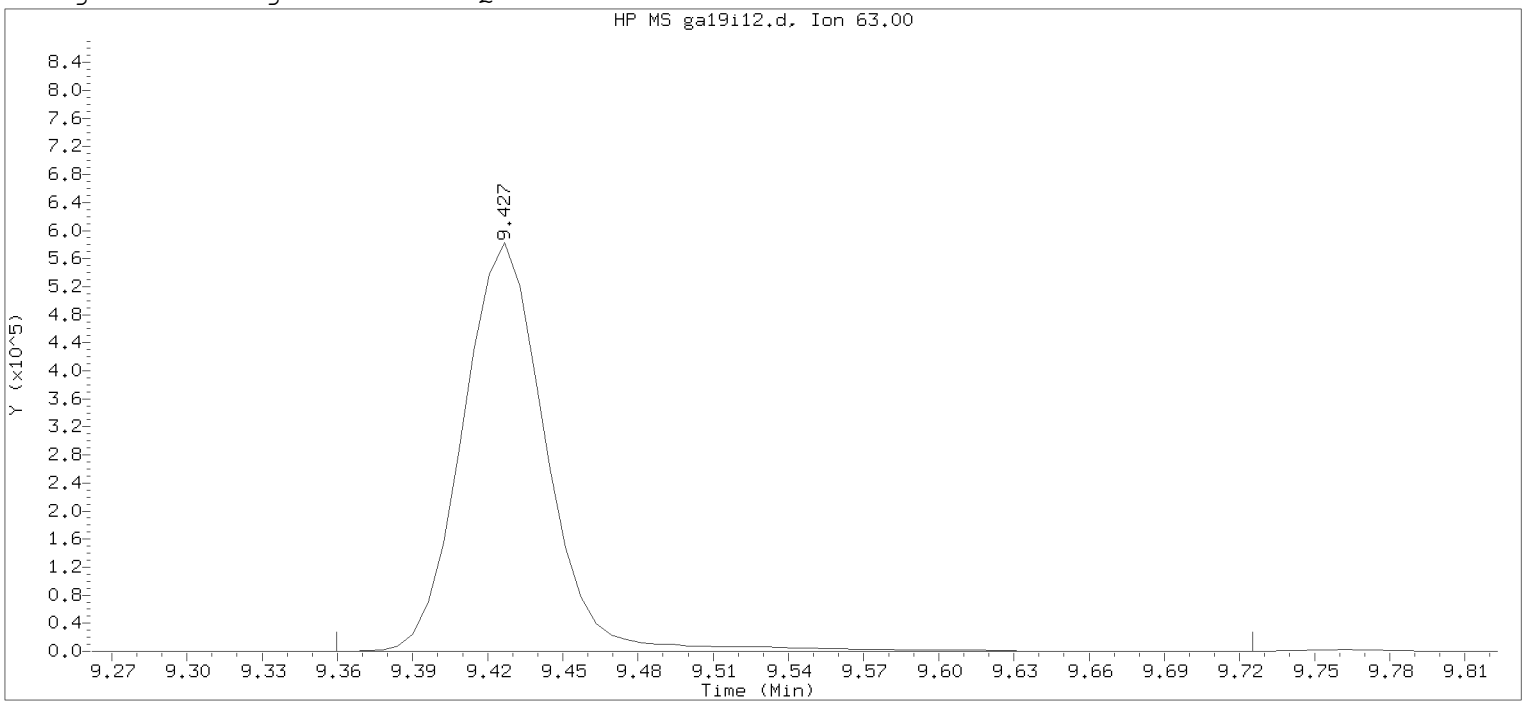
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

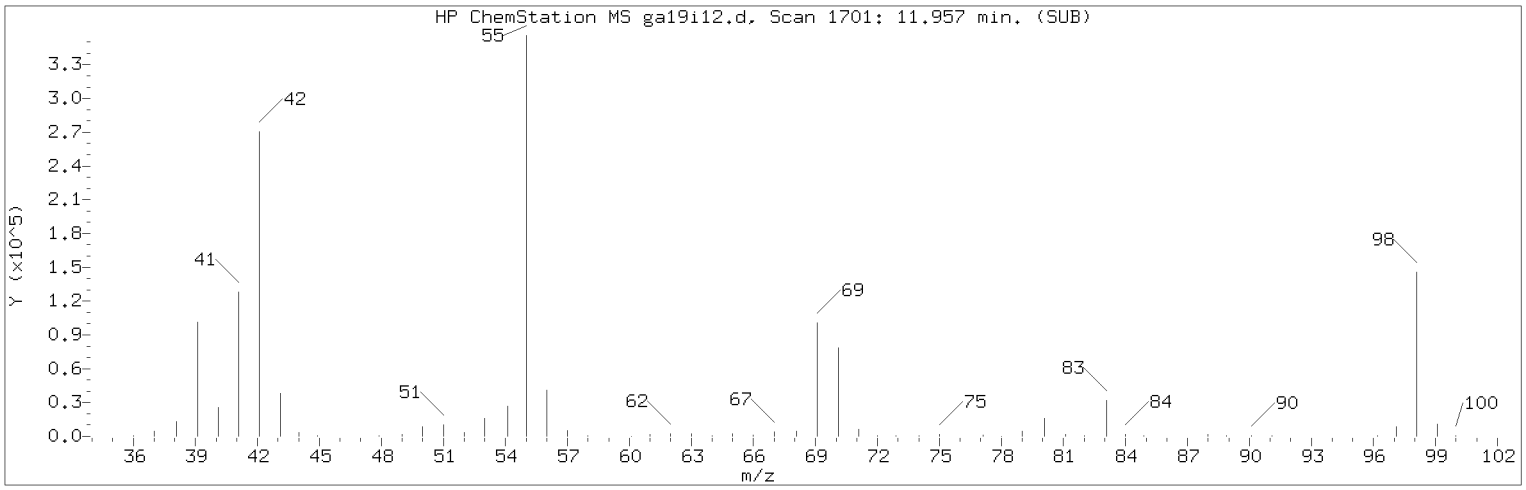
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

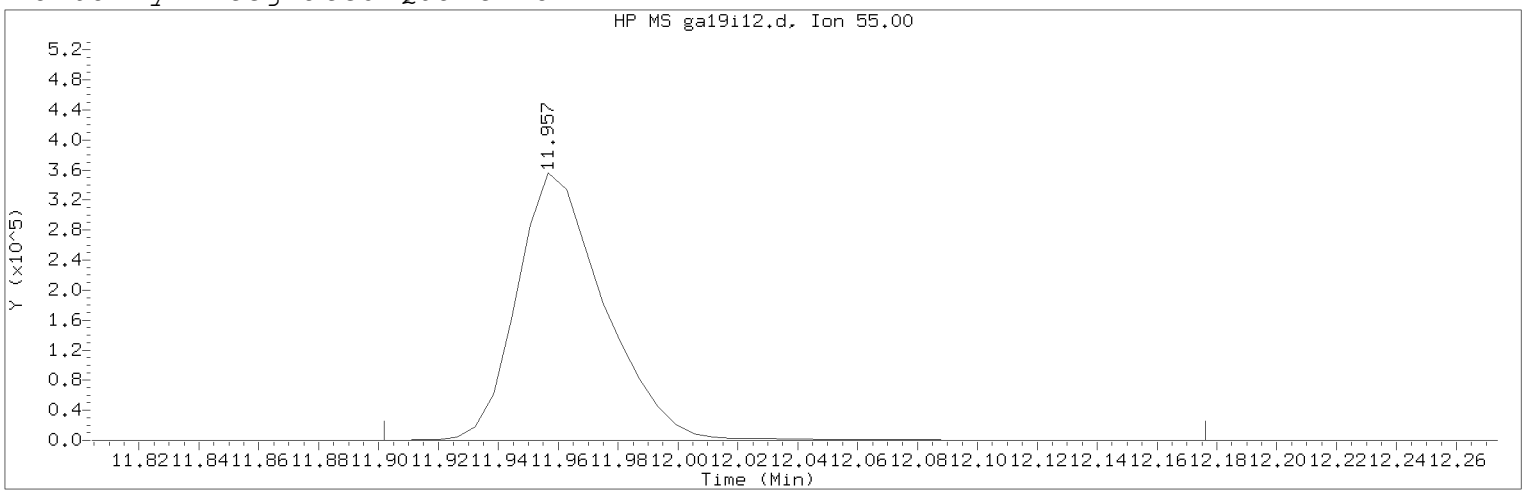
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 1346515
On-column Amount (ng) : 25.0000
Integration start scan : 1274 Integration stop scan: 1334
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. AE06 mod 7630

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

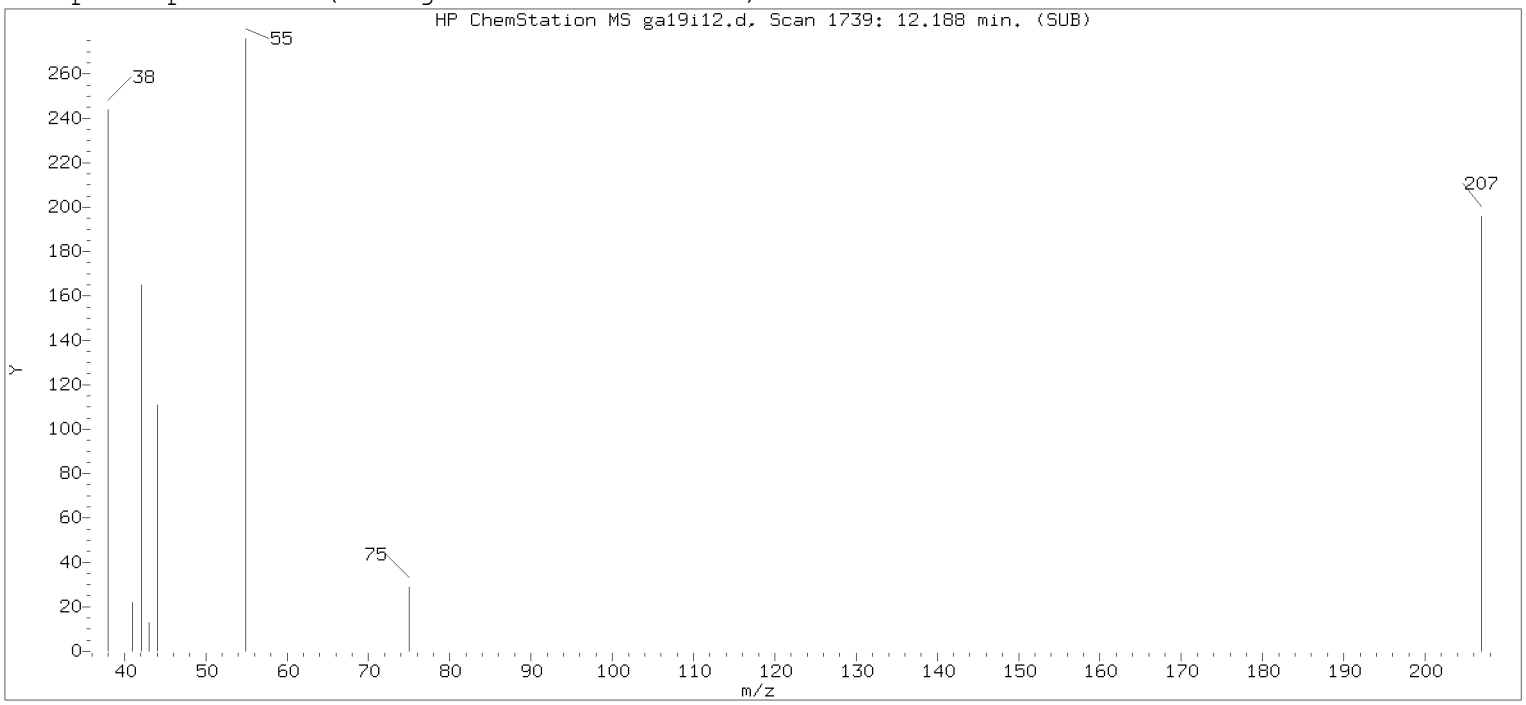
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 721708M
On-Column Amount (ng) : 500.3836
Integration start scan : 1691 Integration stop scan: 1736
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

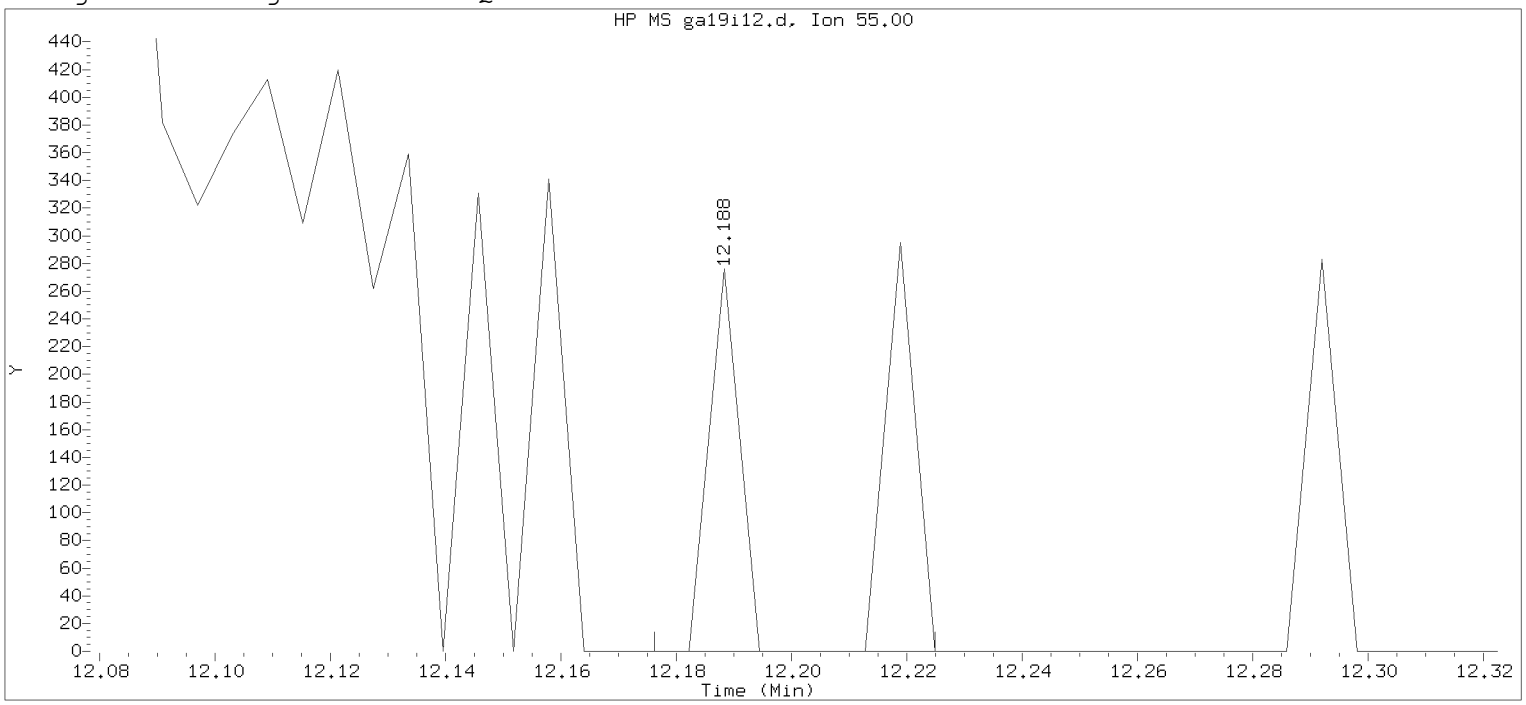
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



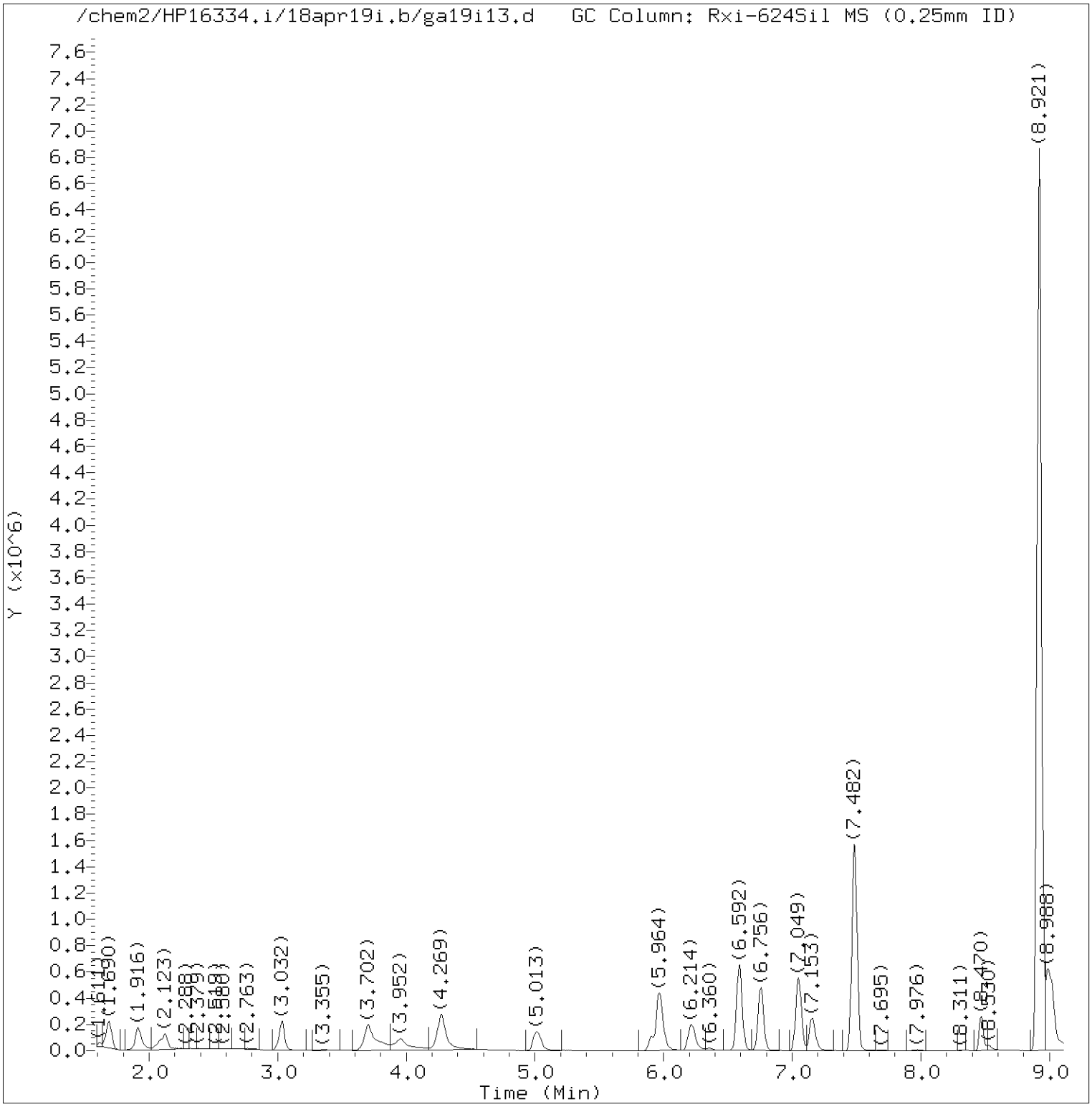
Data File: /chem2/HP16334.i/18apr19i.b/ga19i12.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:28 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 16:45
Date, time and analyst ID of latest file update: 19-Apr-2018 16:45 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1739
Retention Time (minutes): 12.188
Quant Ion : 55.00
Area : 208
On-column Amount (ng) : 1250.0000
Integration start scan : 1736 Integration stop scan: 1744
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document



Total Ion Chromatogram (TIC)

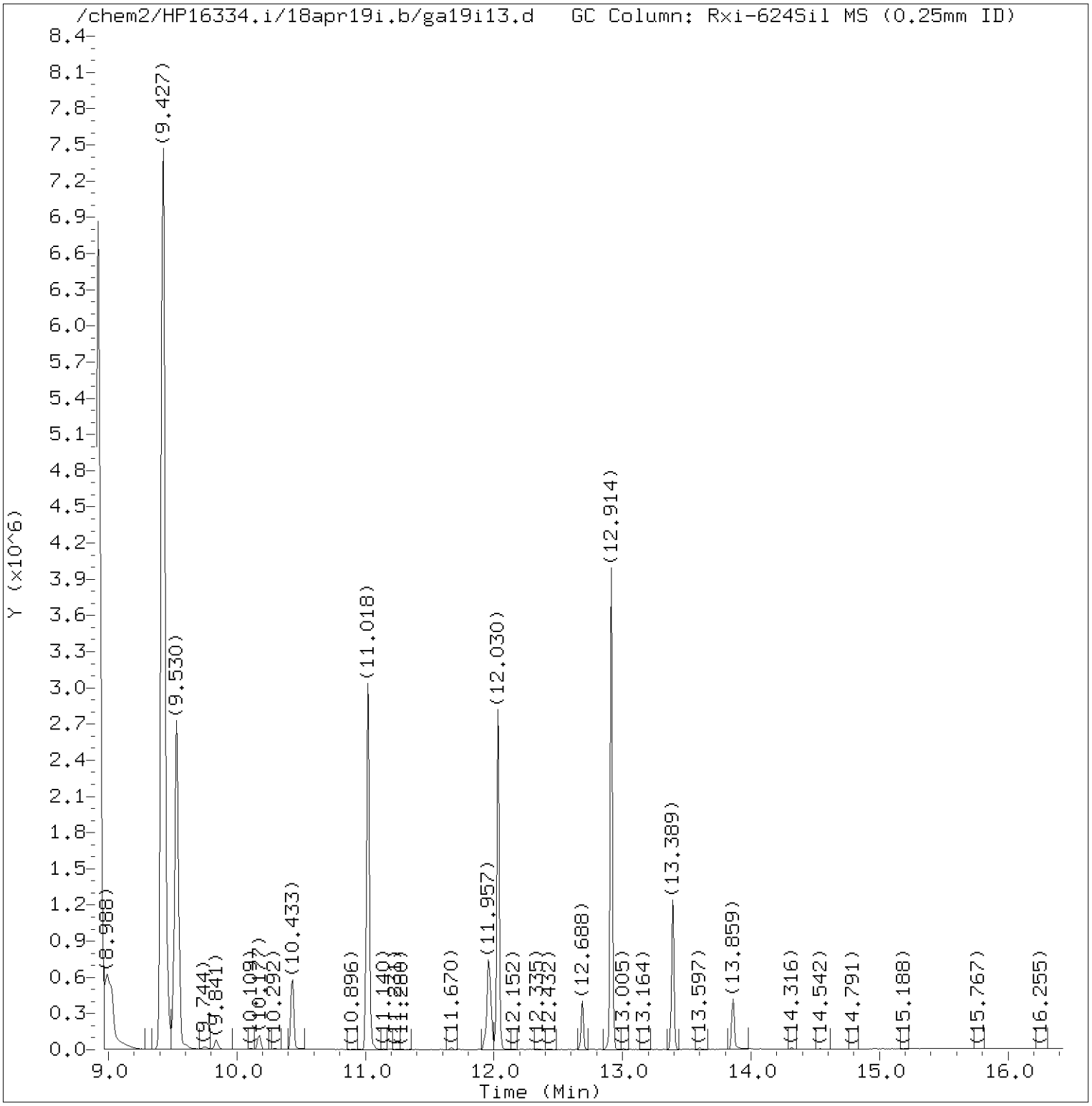
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

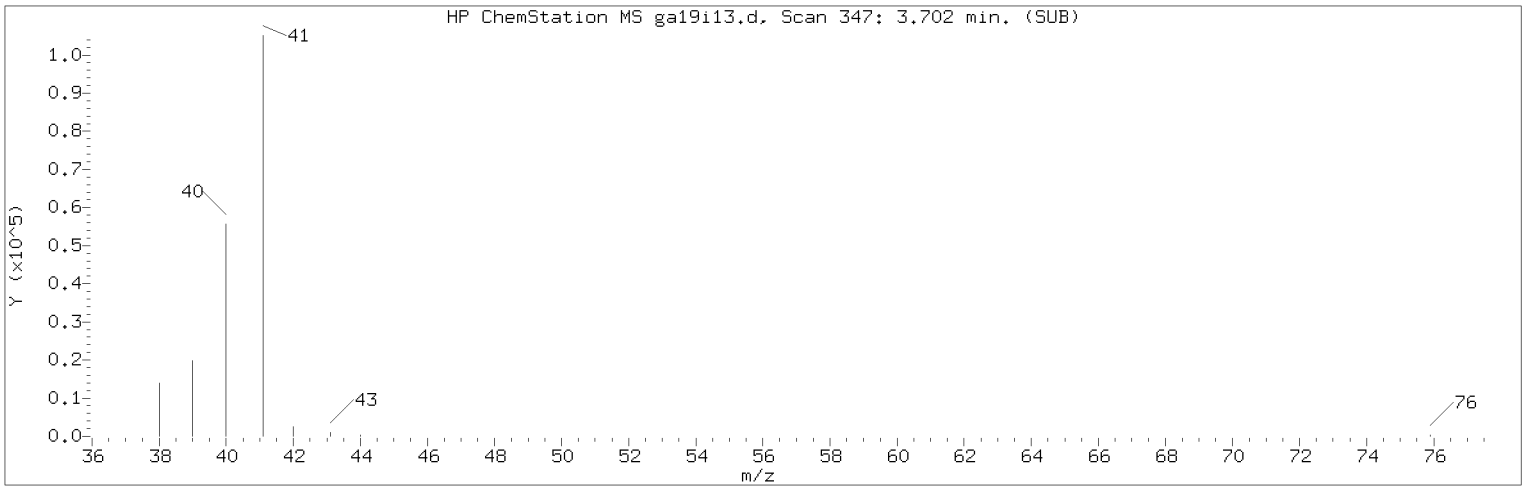
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.916	45	383036	5.150
25) Acetonitrile	(1)	3.702	41	983023M	199.296
26)*t-Butyl Alcohol-d10	(1)	3.952	65	219492	50.000
36) Vinyl Acetate	(2)	5.013	43	524456M	4.968
43) Methyl Acrylate	(2)	5.970	55	955472M	24.647
53) 1-Chlorobutane	(2)	6.756	56	569819	5.023
63)*Fluorobenzene	(2)	7.482	96	2054246	10.000
77) Chloroacetonitrile	(2)	8.988	75	512572M	246.250
78) 2-Chloroethyl vinyl ether	(2)	9.018	63	155742M	4.888
97)*Chlorobenzene-d5	(3)	11.018	117	1566159	10.000
112) Cyclohexanone	(1)	11.957	55	372554M	248.063
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	874033	10.000
142) Hexachloroethane	(4)	13.389	117	169642	4.586

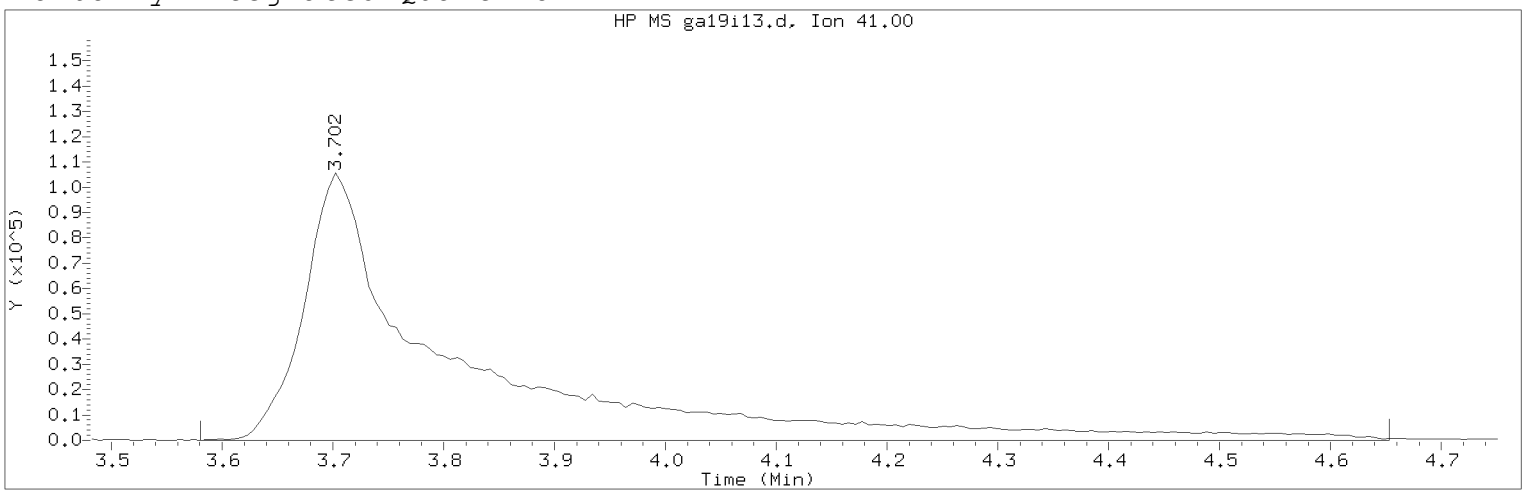
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

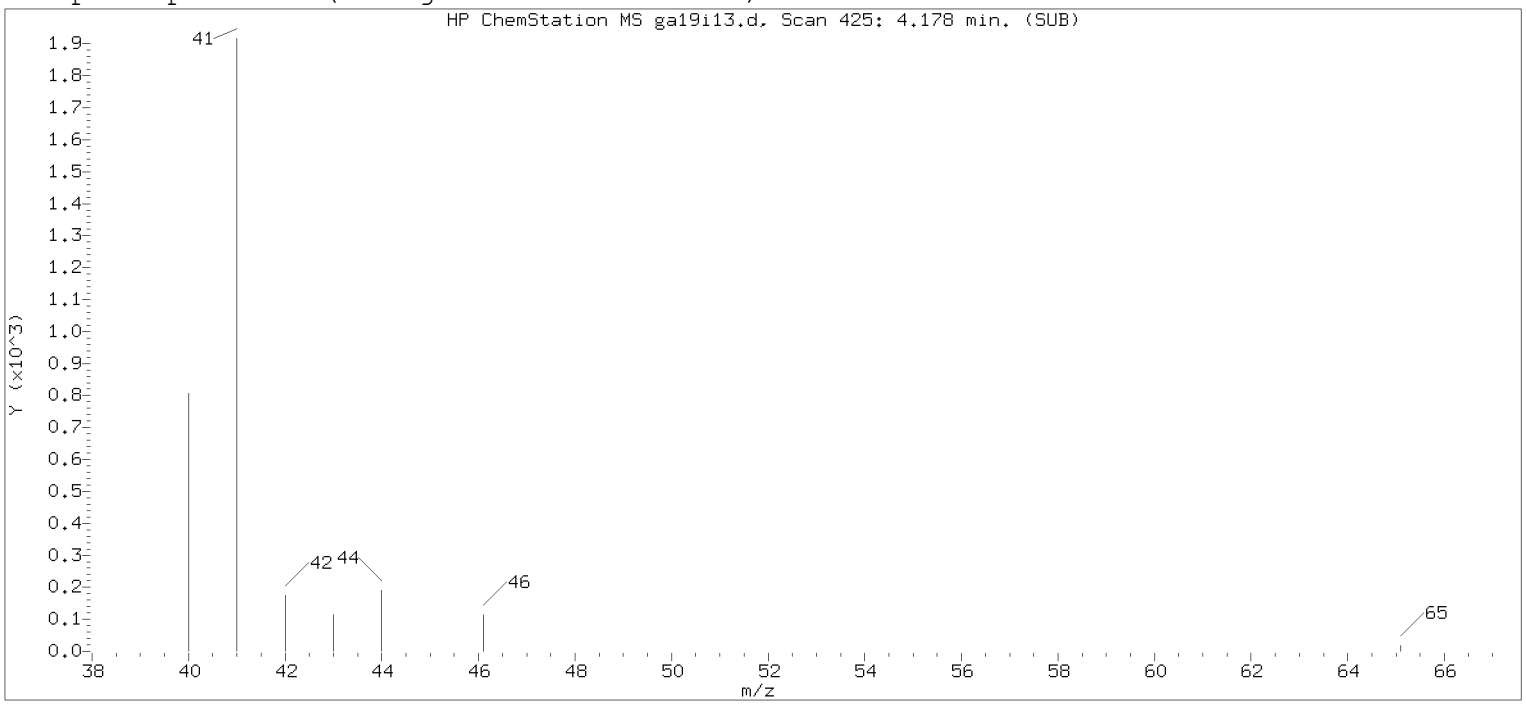
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 983023M
On-Column Amount (ng) : 199.2965
Integration start scan : 326 Integration stop scan: 502
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

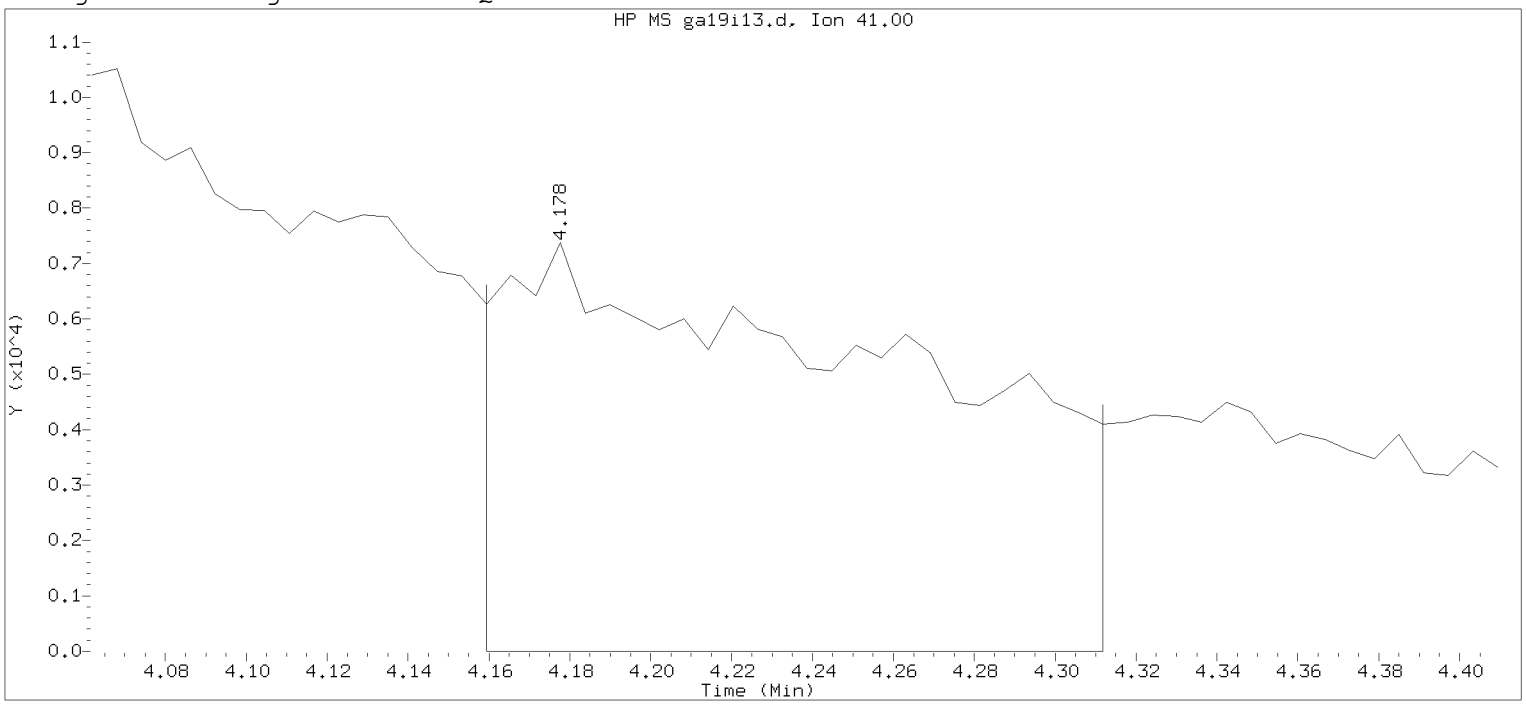
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

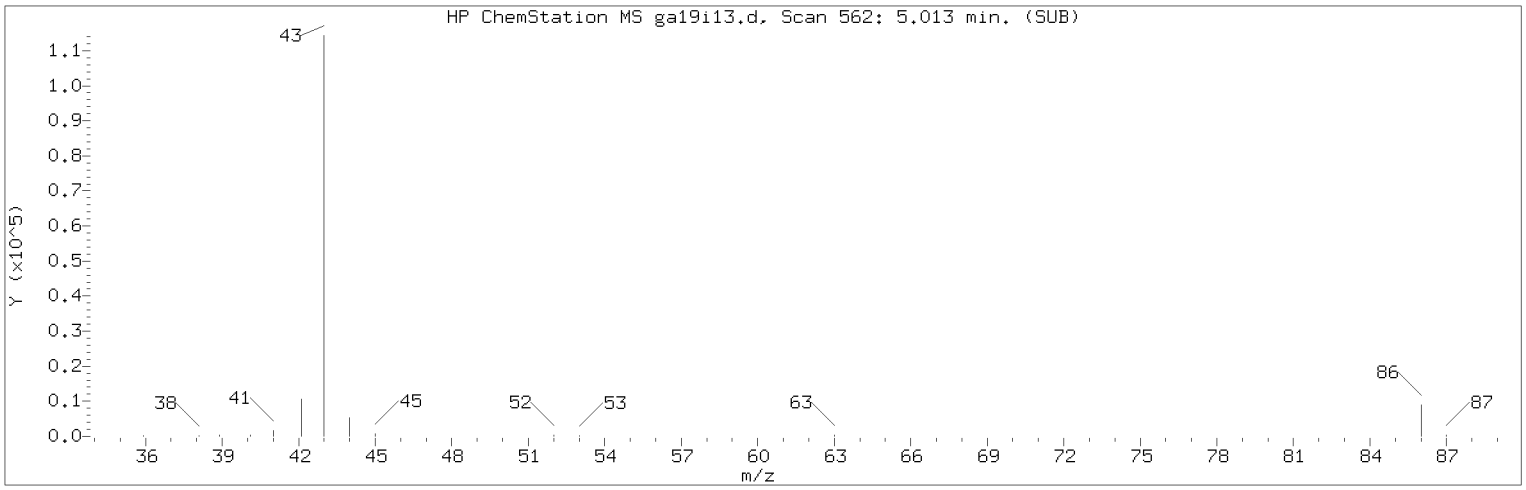
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

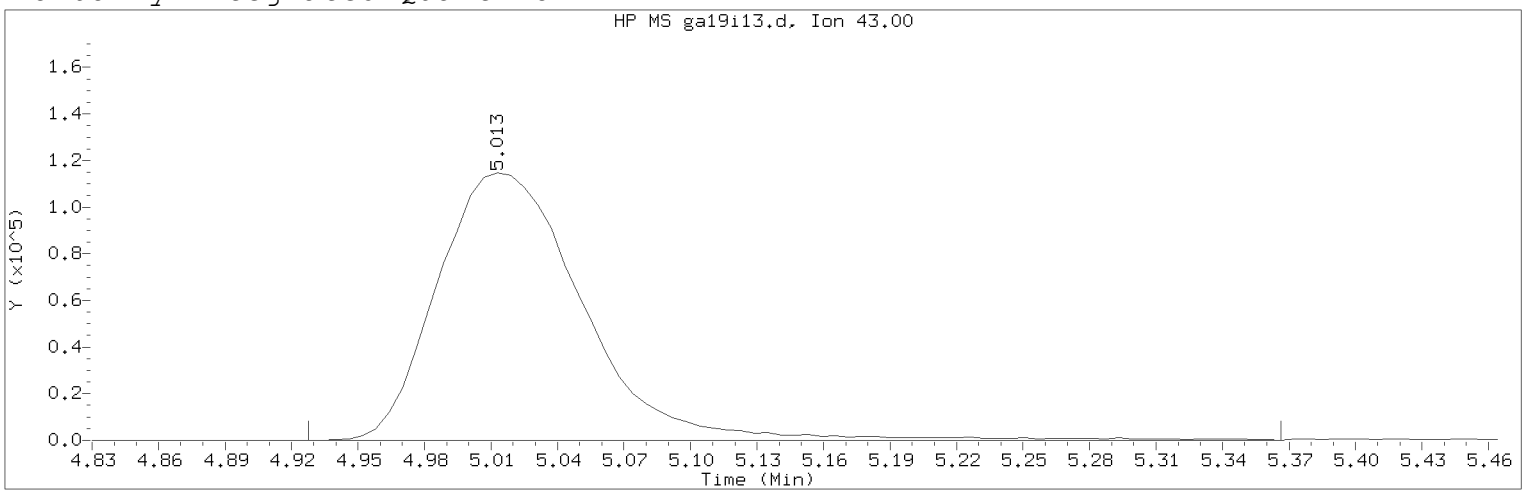
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 425
Retention Time (minutes): 4.178
Quant Ion : 41.00
Area : 50737
On-column Amount (ng) : 266.8339
Integration start scan : 421 Integration stop scan: 446
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used for method 7645

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

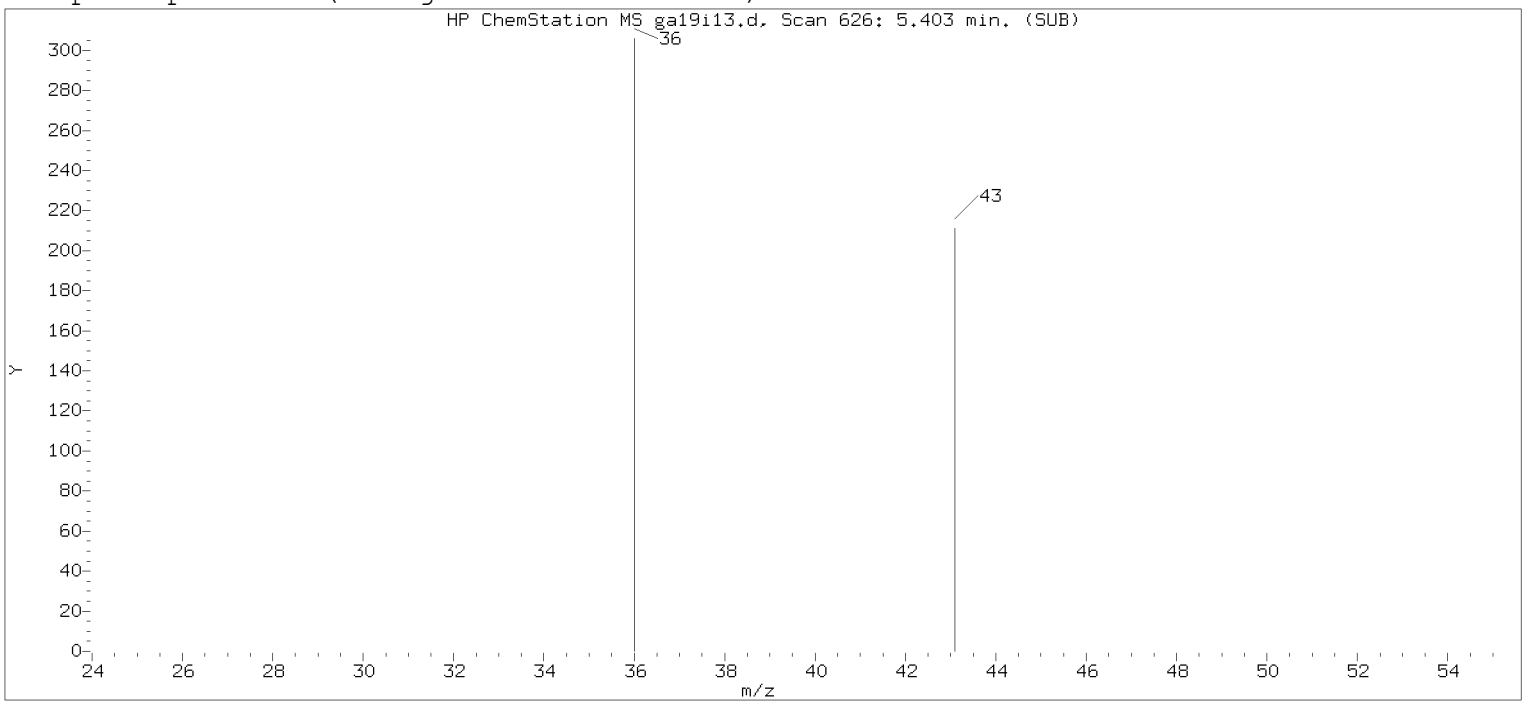
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 562
Retention Time (minutes): 5.013
Quant Ion : 43.00
Area (flag) : 524456M
On-Column Amount (ng) : 4.9681
Integration start scan : 547 Integration stop scan: 619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

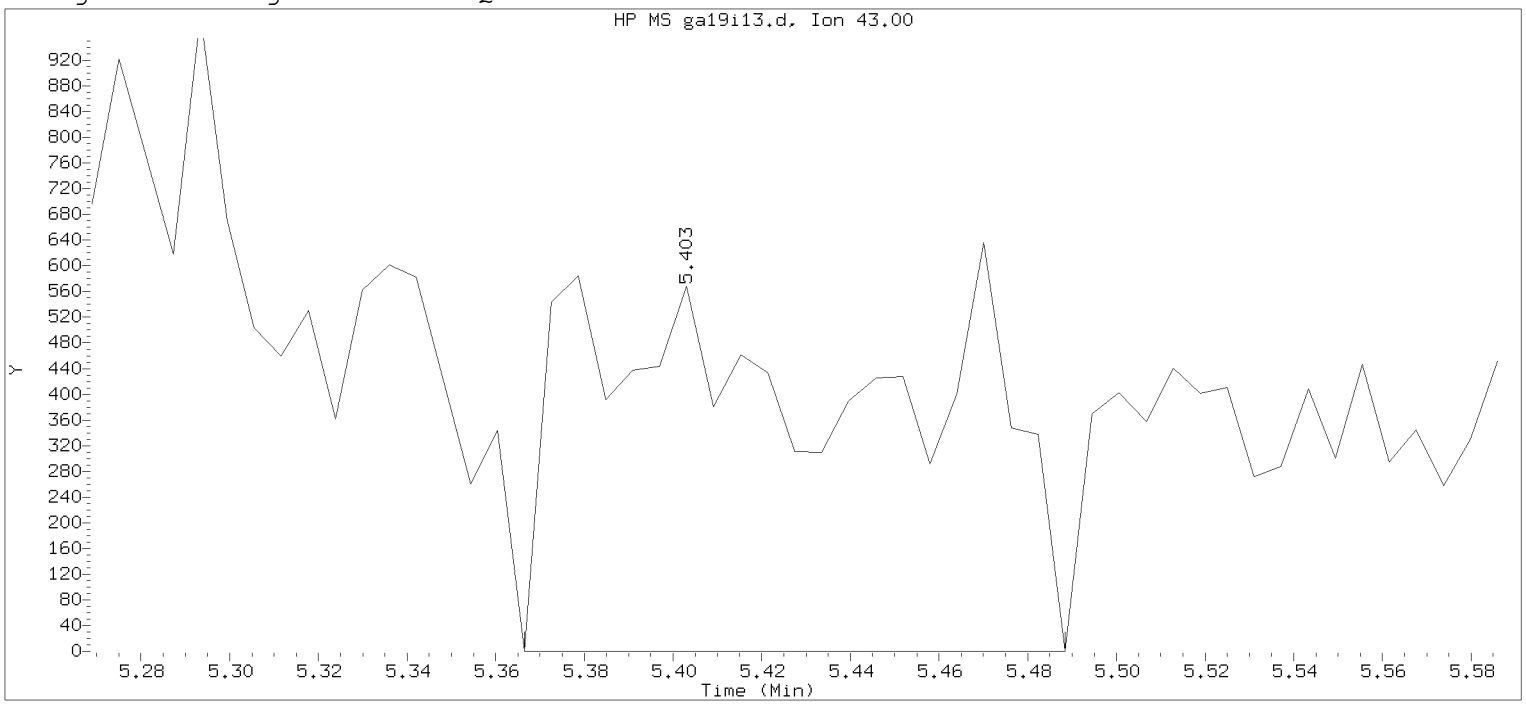
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

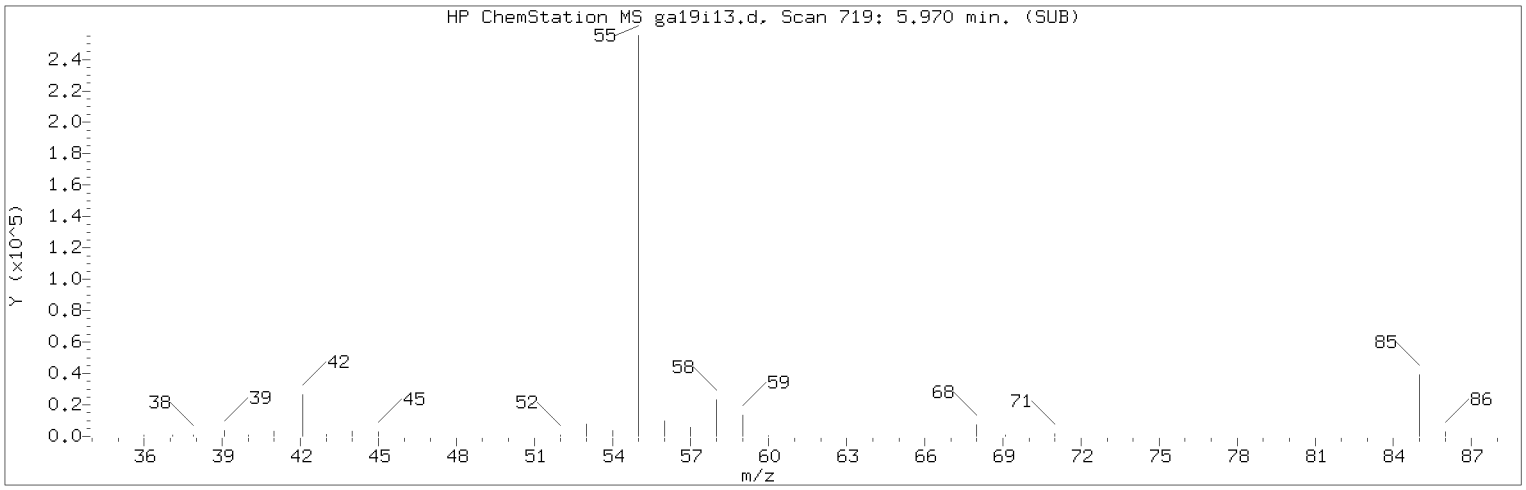
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

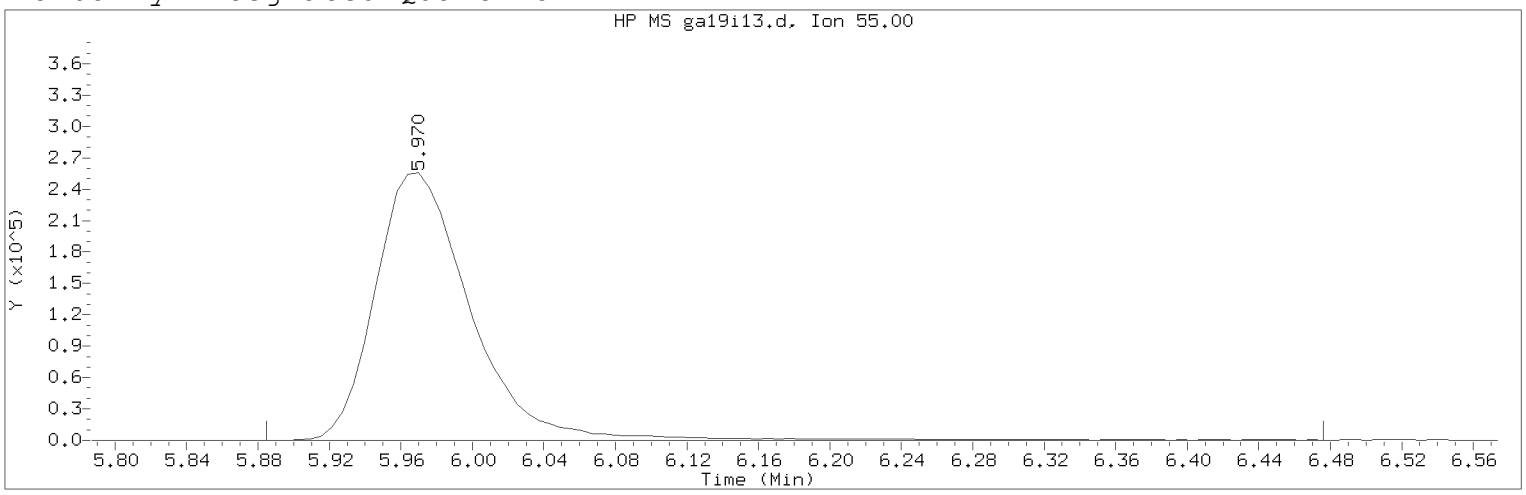
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 626
Retention Time (minutes): 5.403
Quant Ion : 43.00
Area : 2972
On-column Amount (ng) : 8.4974
Integration start scan : 619 Integration stop scan: 639
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

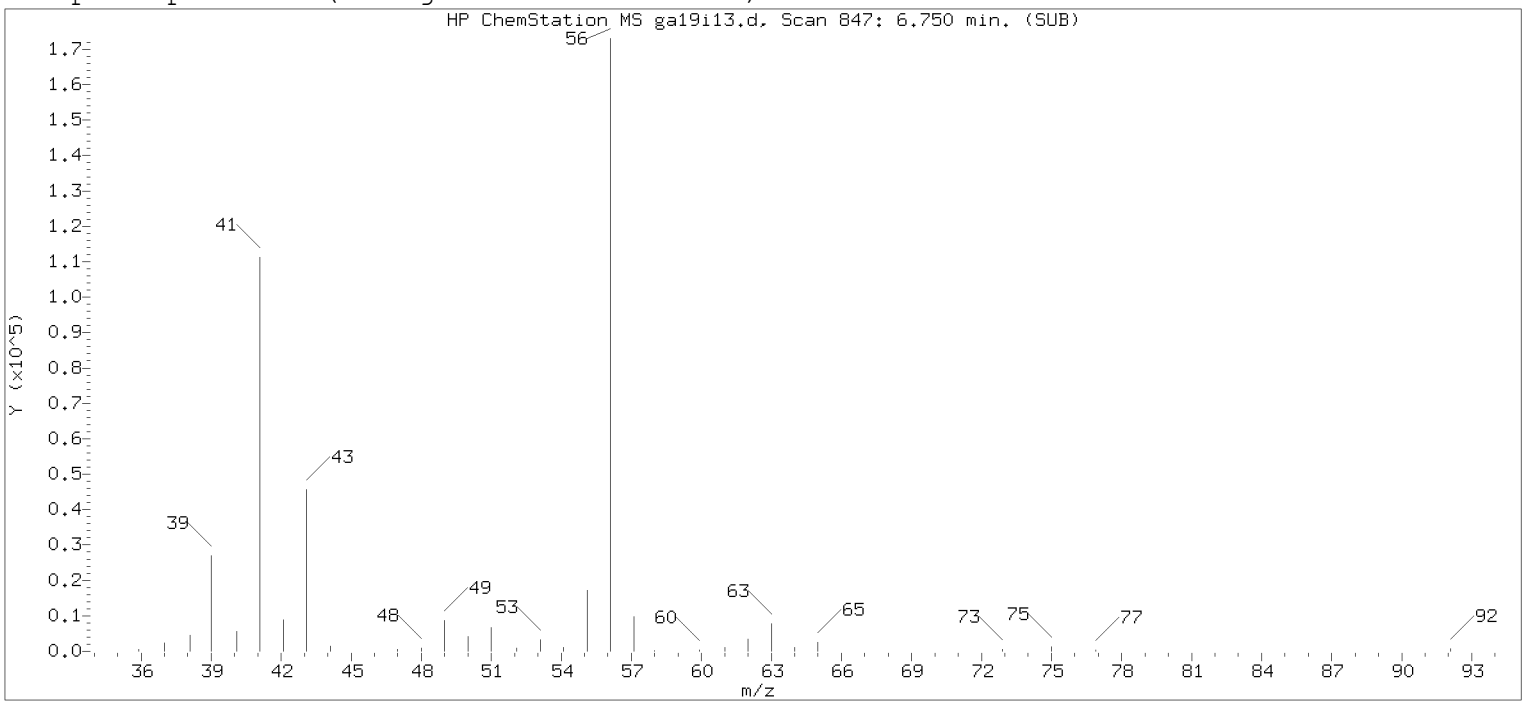
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 719
Retention Time (minutes): 5.970
Quant Ion : 55.00
Area (flag) : 955472M
On-Column Amount (ng) : 24.6469
Integration start scan : 704 Integration stop scan: 801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

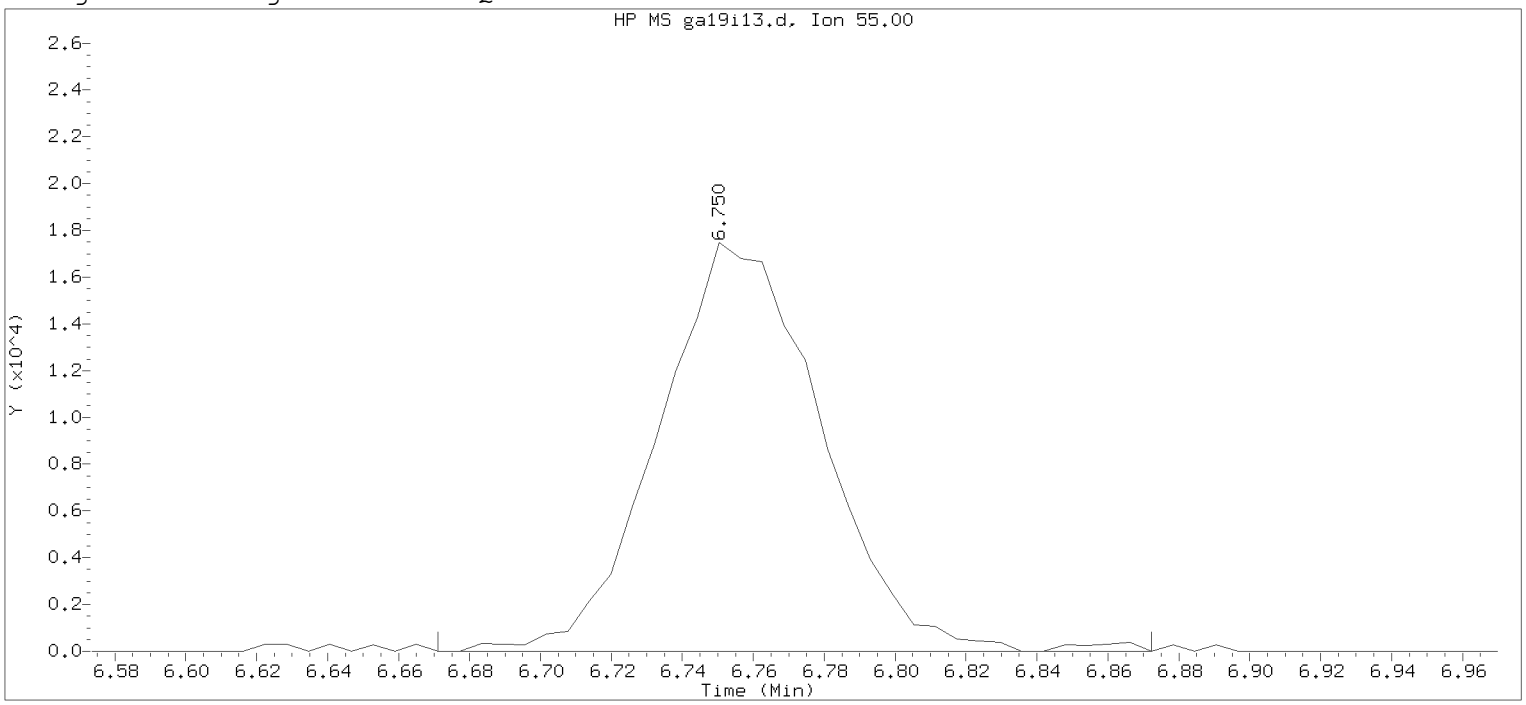
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

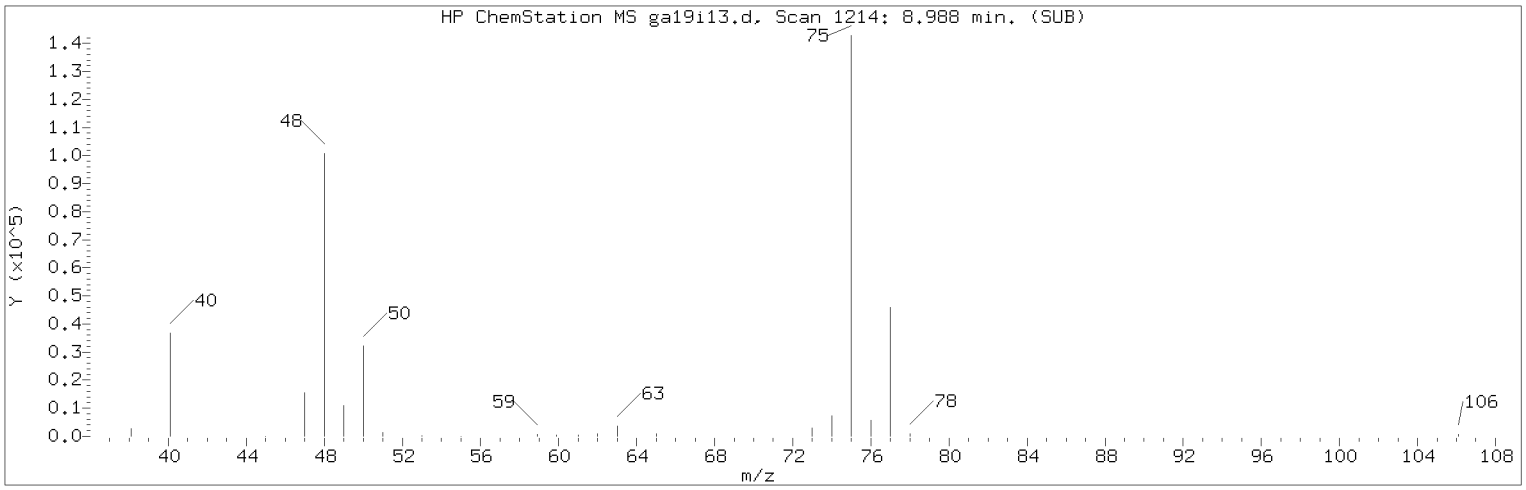
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

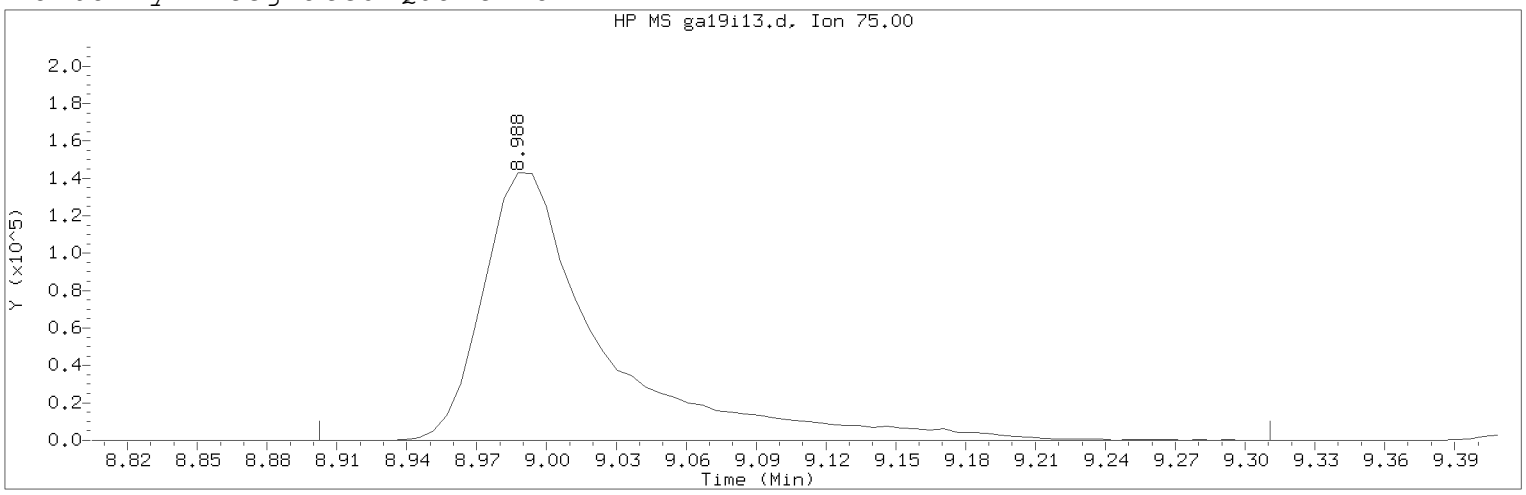
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 847
Retention Time (minutes): 6.750
Quant Ion : 55.00
Area : 55802
On-column Amount (ng) : 35.5233
Integration start scan : 833 Integration stop scan: 866
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

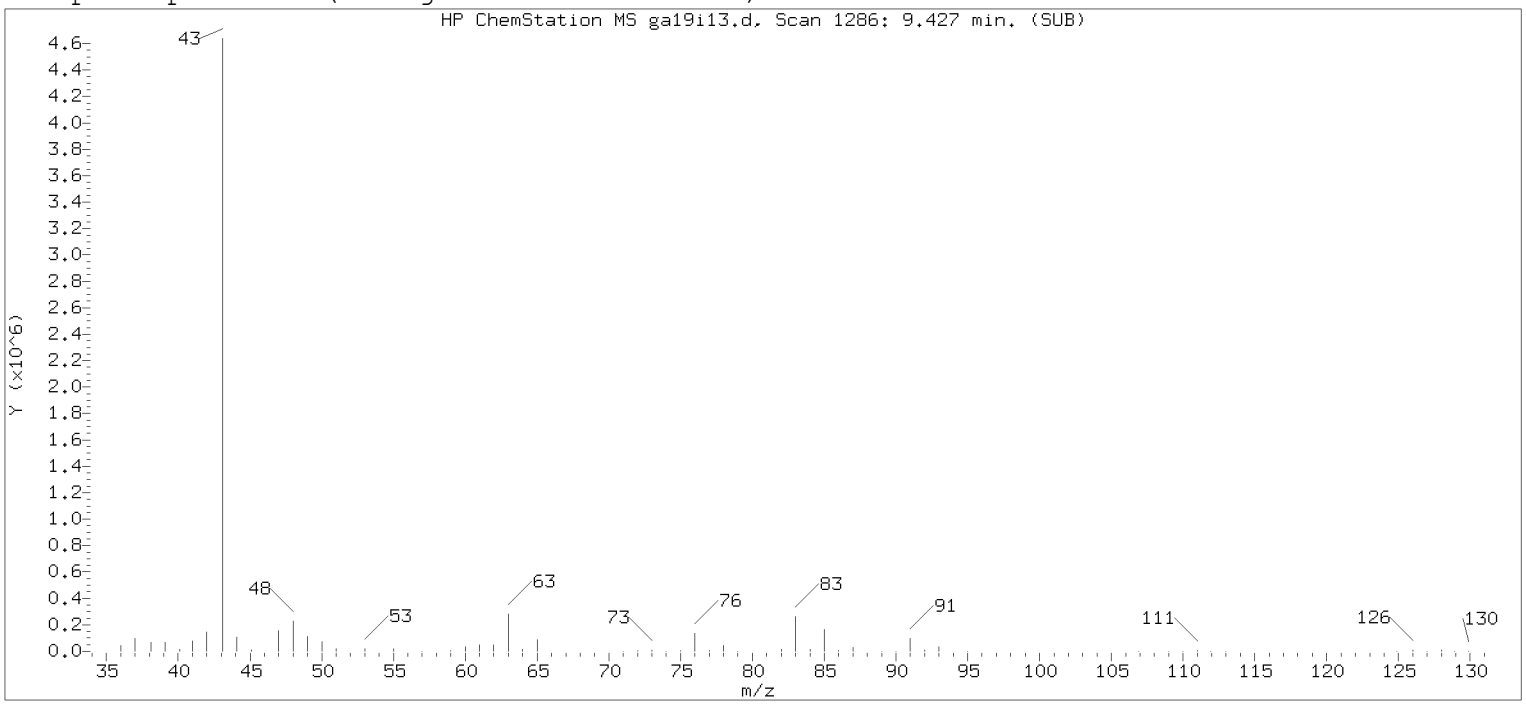
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1214
Retention Time (minutes): 8.988
Quant Ion : 75.00
Area (flag) : 512572M
On-Column Amount (ng) : 246.2500
Integration start scan : 1199 Integration stop scan: 1266
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

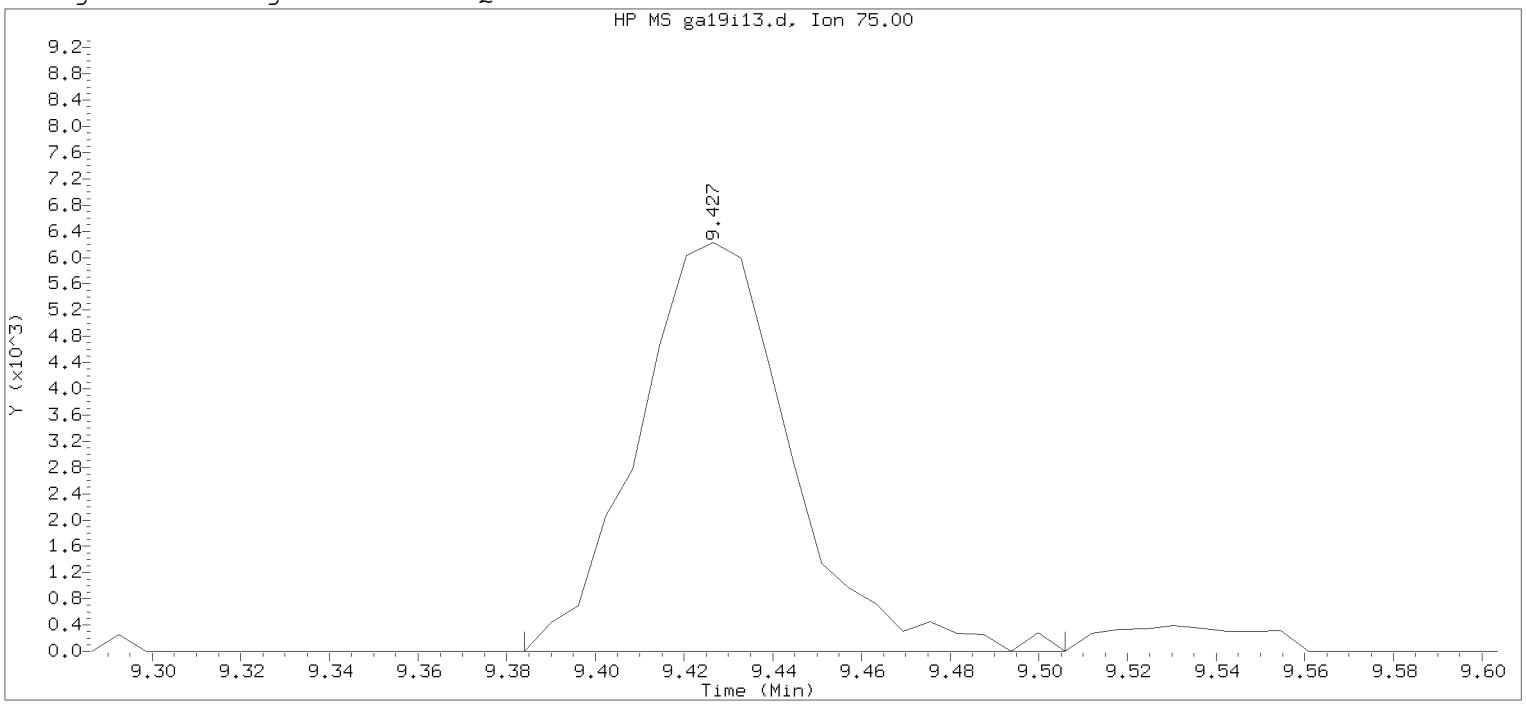
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 75.00
Area : 14902
On-column Amount (ng) : 349.5662
Integration start scan : 1278 Integration stop scan: 1298
Y at integration start : 0 Y at integration end: 0

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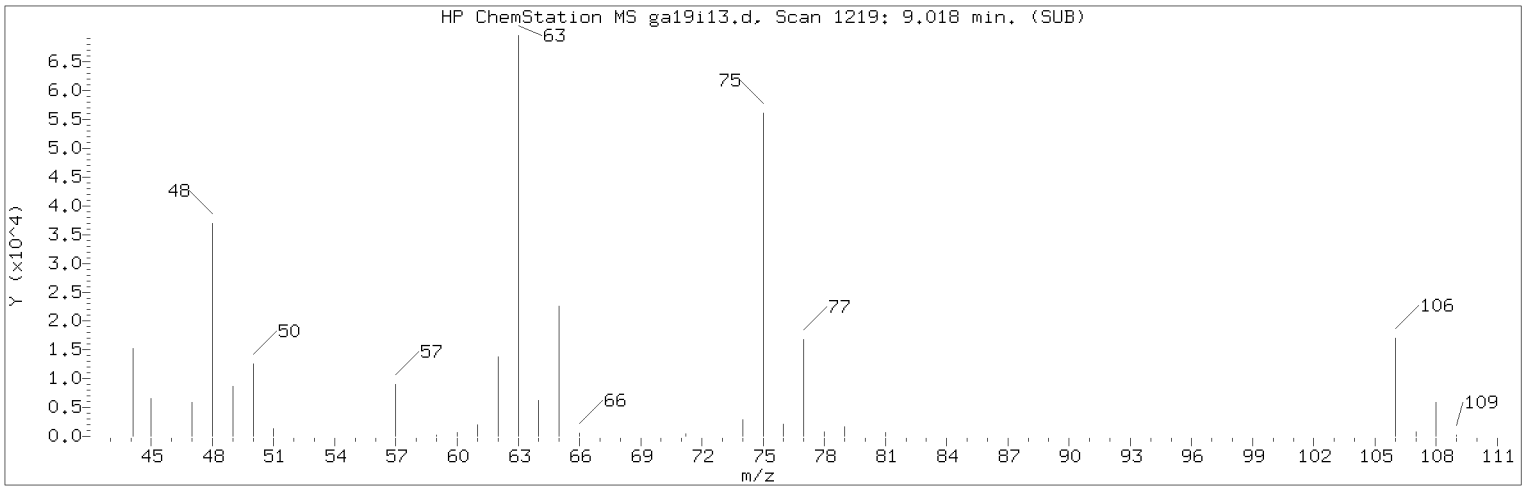
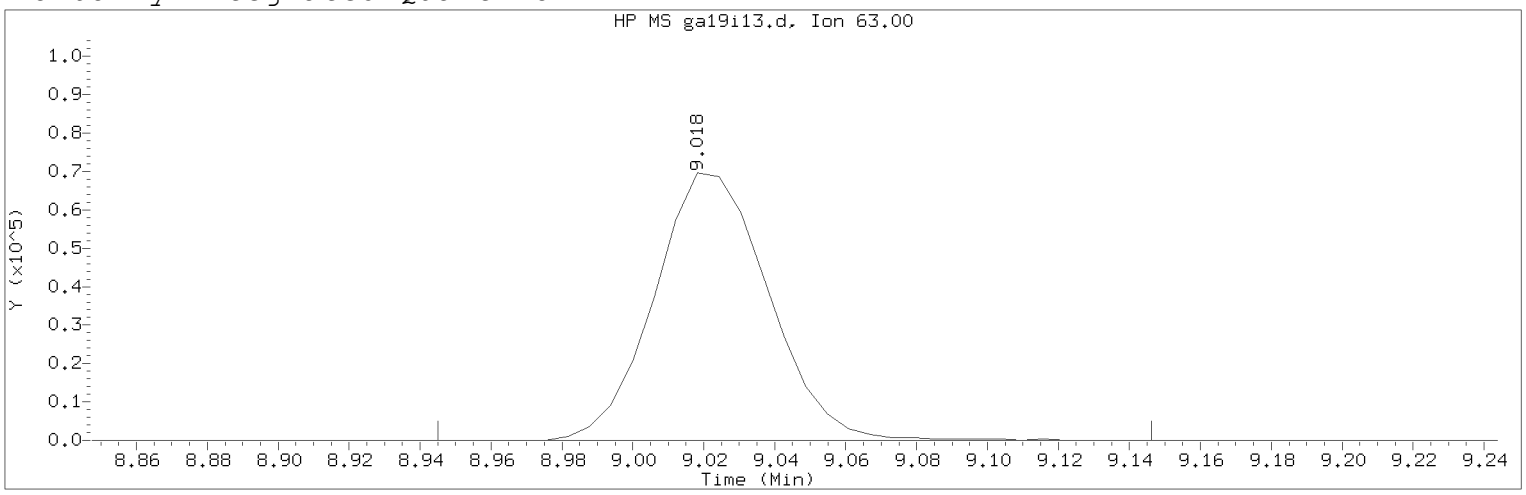
Target 3.5 esignature used. Page 7651

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

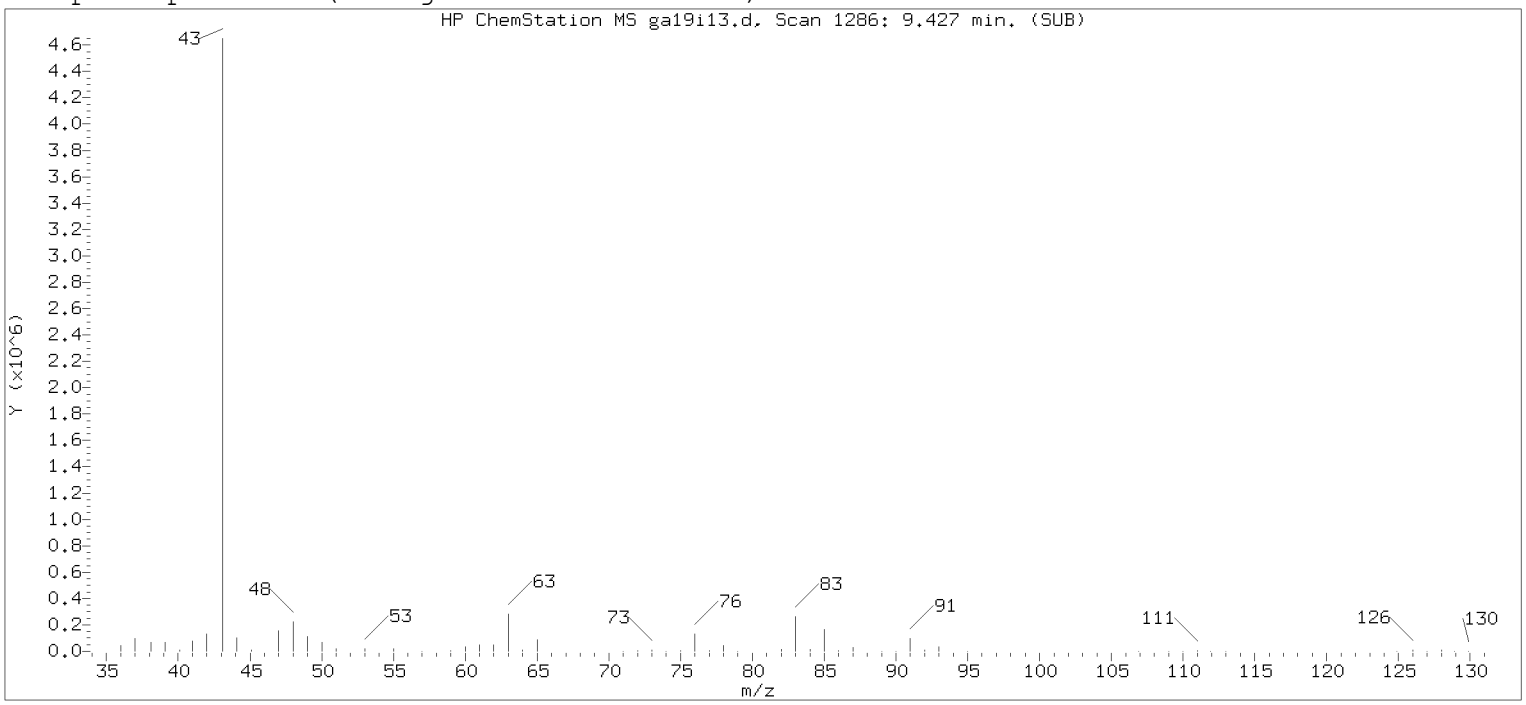
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1219
Retention Time (minutes): 9.018
Quant Ion : 63.00
Area (flag) : 155742M
On-Column Amount (ng) : 4.8879
Integration start scan : 1206 Integration stop scan: 1239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

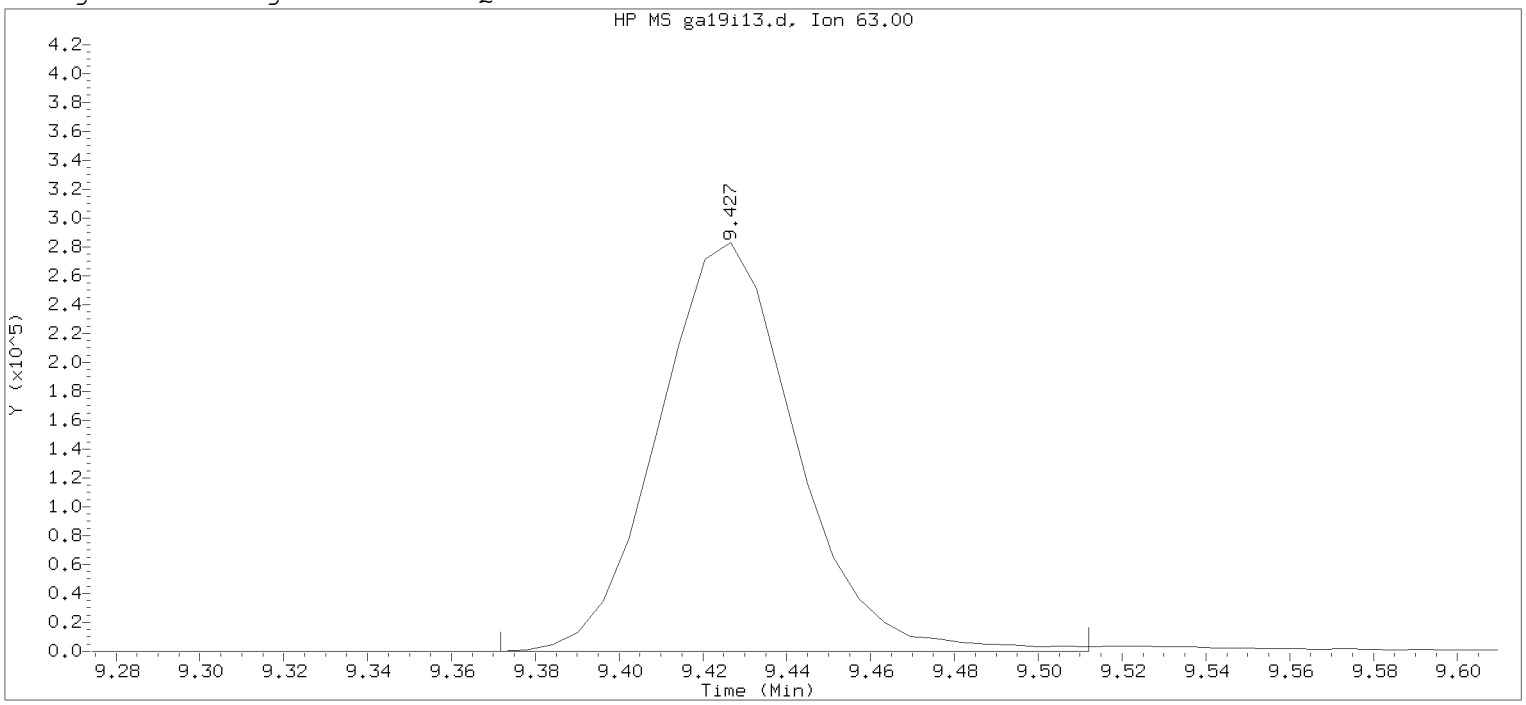
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

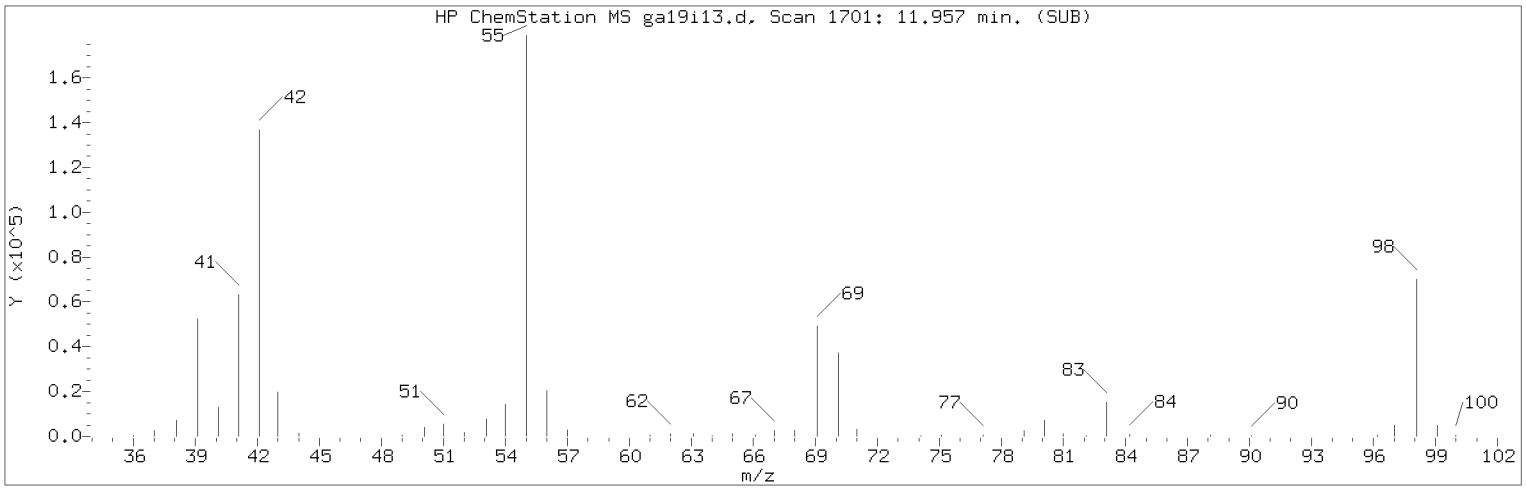
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

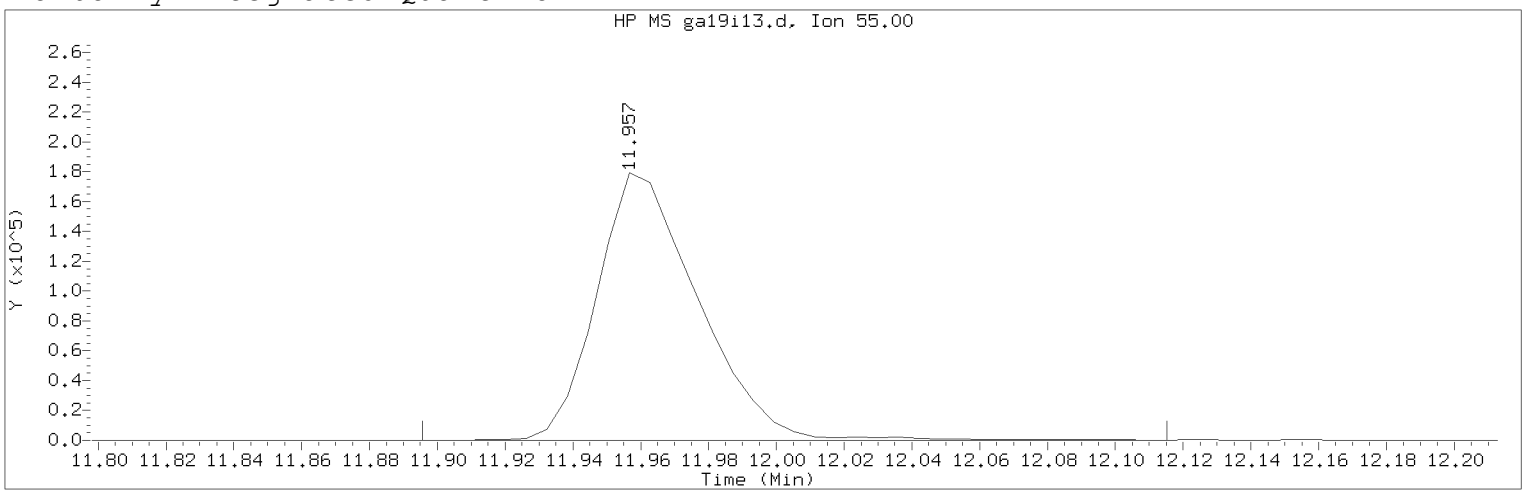
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 643660
On-column Amount (ng) : 7.0698
Integration start scan : 1276 Integration stop scan: 1299
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature user name: mskrause

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:46 msk07970

Sample Name: VSTD005 Lab Sample ID: VSTD005

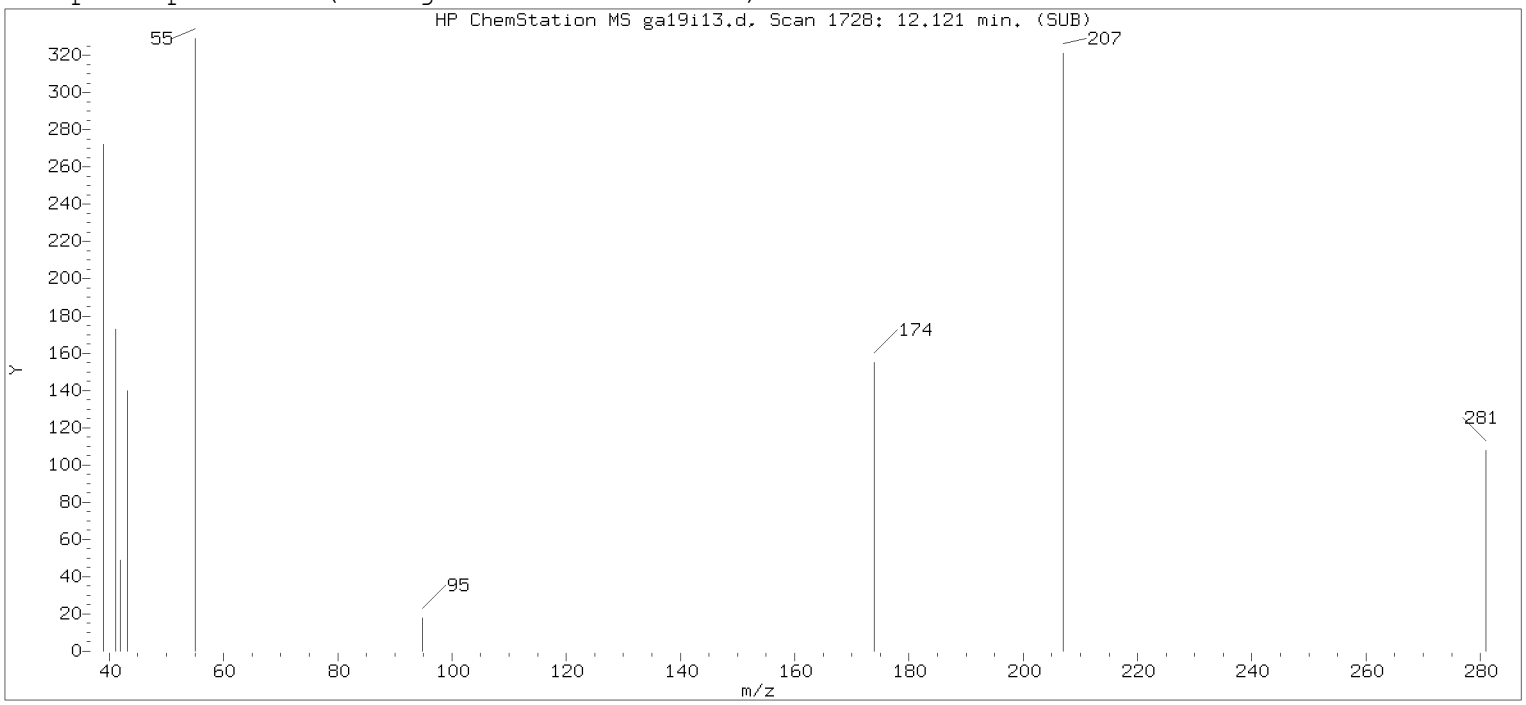
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 372554M
On-Column Amount (ng) : 248.0626
Integration start scan : 1690 Integration stop scan: 1726
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

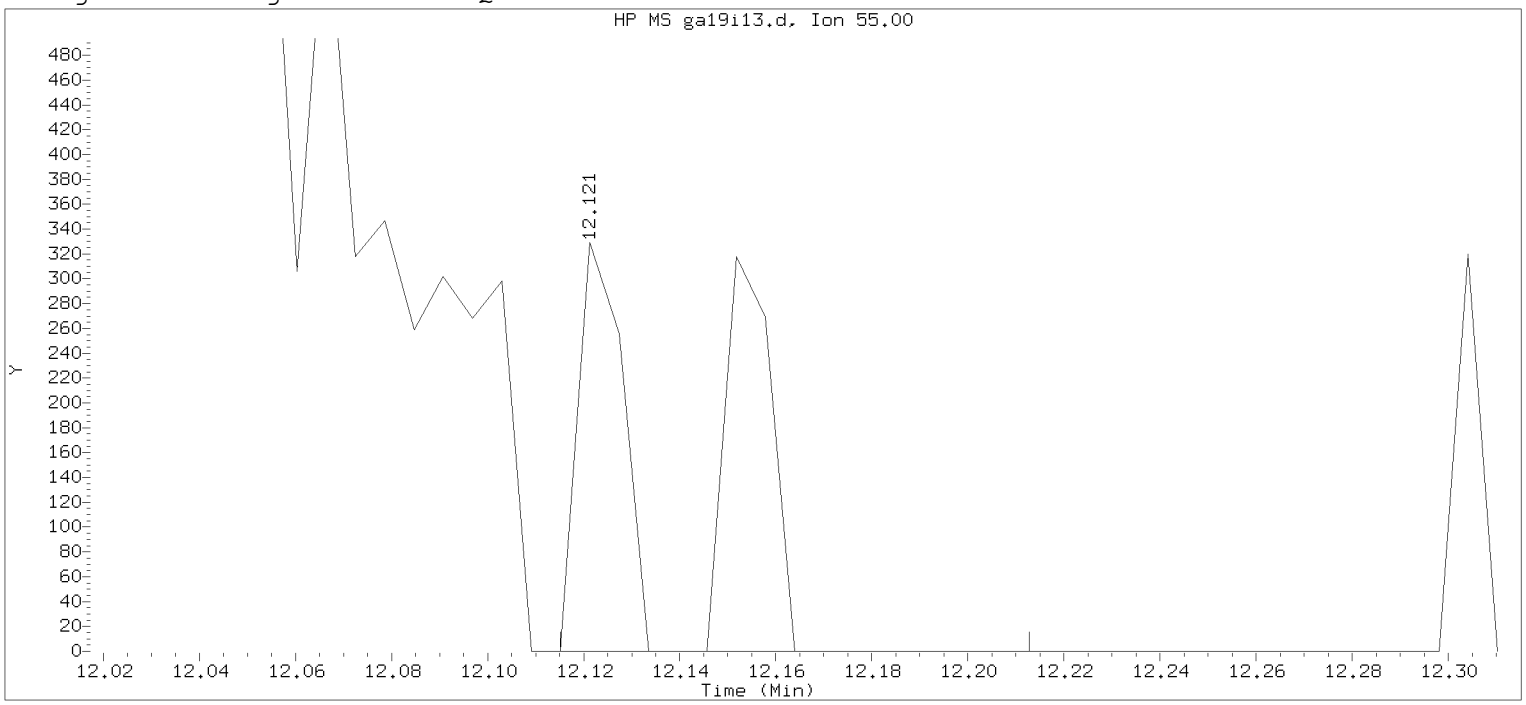
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



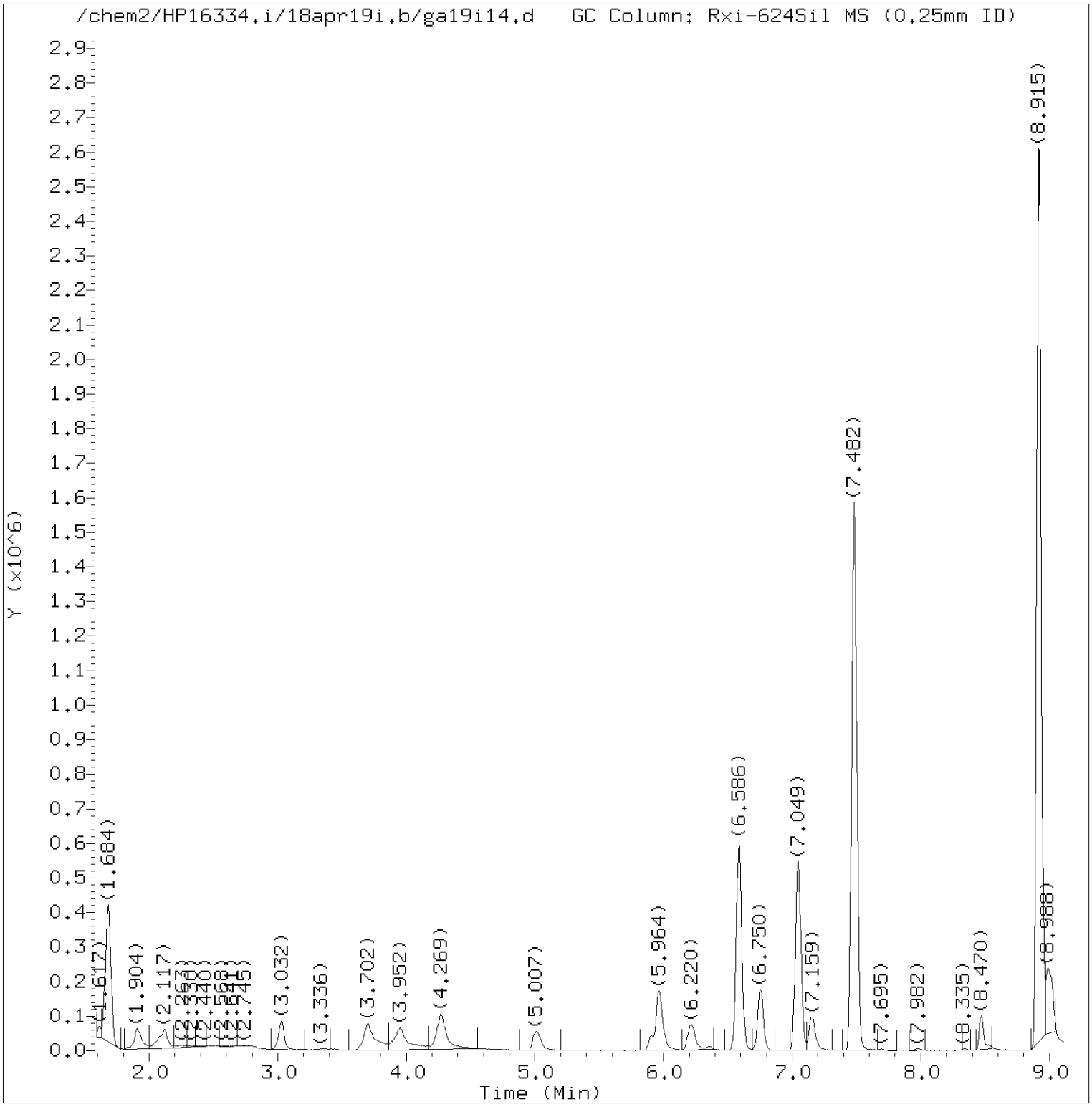
Data File: /chem2/HP16334.i/18apr19i.b/ga19i13.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 16:51 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:07
Date, time and analyst ID of latest file update: 19-Apr-2018 17:07 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1728
Retention Time (minutes): 12.121
Quant Ion : 55.00
Area : 428
On-column Amount (ng) : 453.9525
Integration start scan : 1726 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

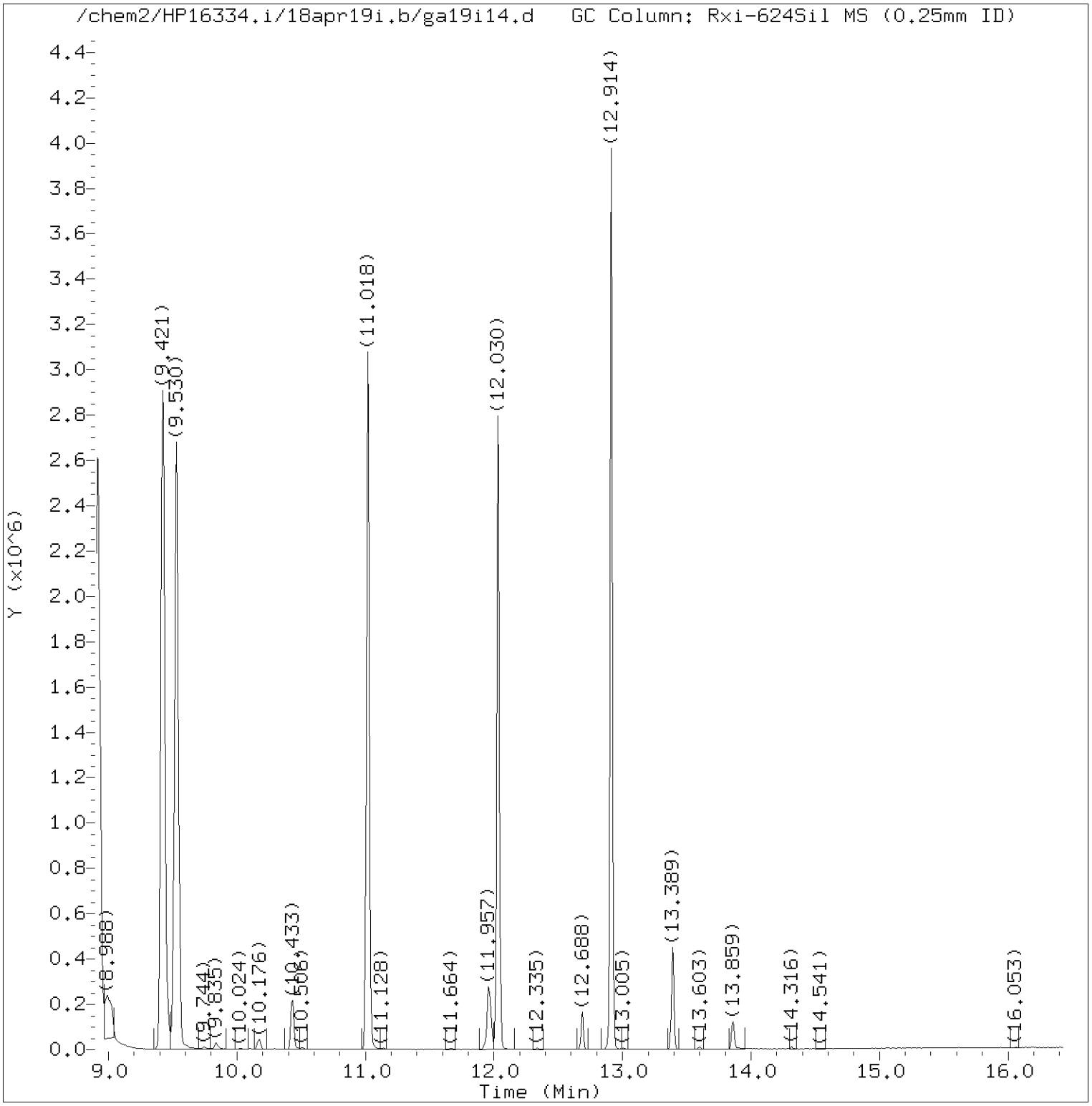
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

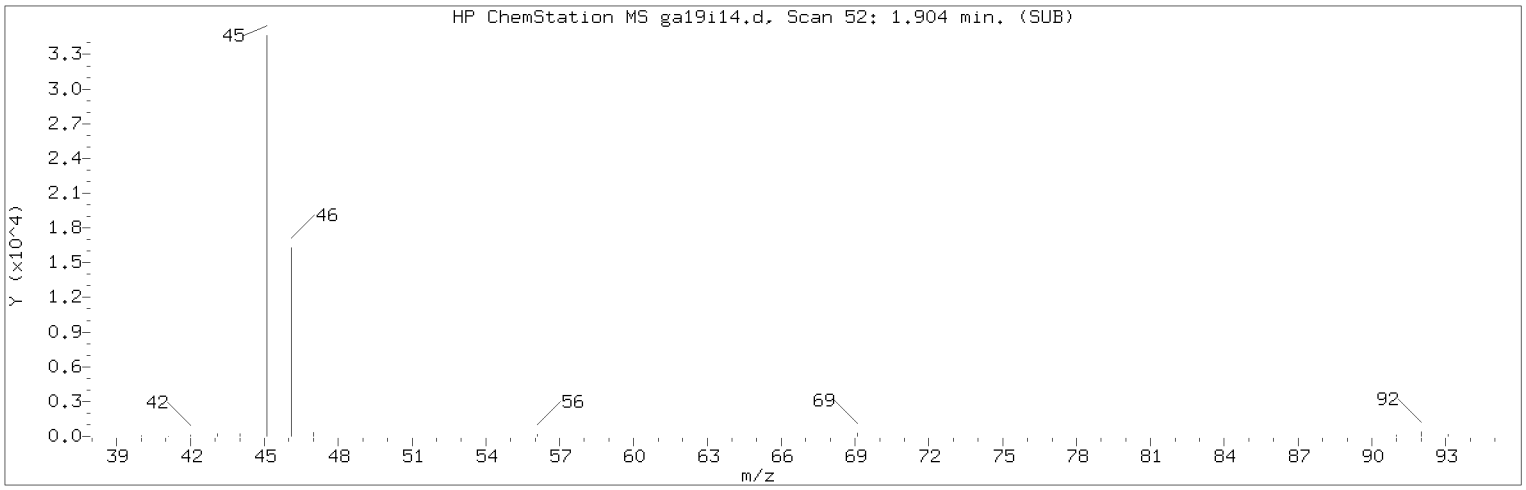
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.904	45	126861M	1.772
25) Acetonitrile	(1)	3.702	41	389206M	78.459
26)*t-Butyl Alcohol-d10	(1)	3.952	65	222162	50.000
36) Vinyl Acetate	(2)	5.007	43	203082M	1.944
43) Methyl Acrylate	(2)	5.964	55	368609M	9.635
53) 1-Chlorobutane	(2)	6.756	56	210746	1.893
63)*Fluorobenzene	(2)	7.482	96	2051797	10.000
77) Chloroacetonitrile	(2)	8.988	75	189227M	93.108
78) 2-Chloroethyl vinyl ether	(2)	9.018	63	58932M	1.887
97)*Chlorobenzene-d5	(3)	11.018	117	1555216	10.000
112) Cyclohexanone	(1)	11.957	55	143983M	95.985
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	873380	10.000
142) Hexachloroethane	(4)	13.389	117	57923	1.657

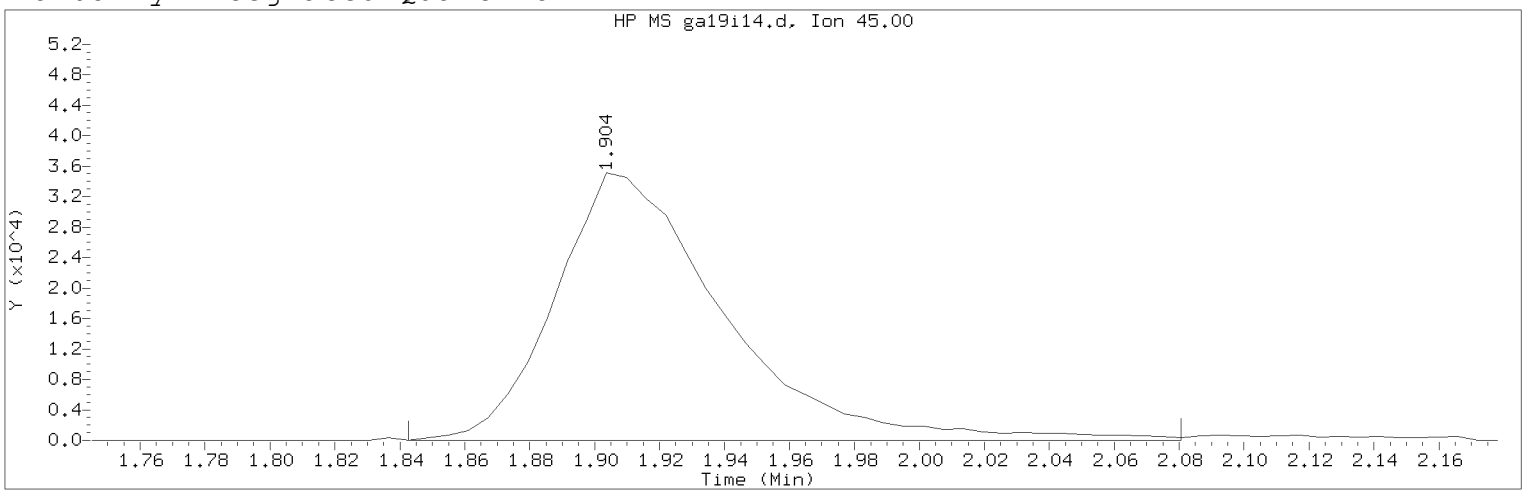
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

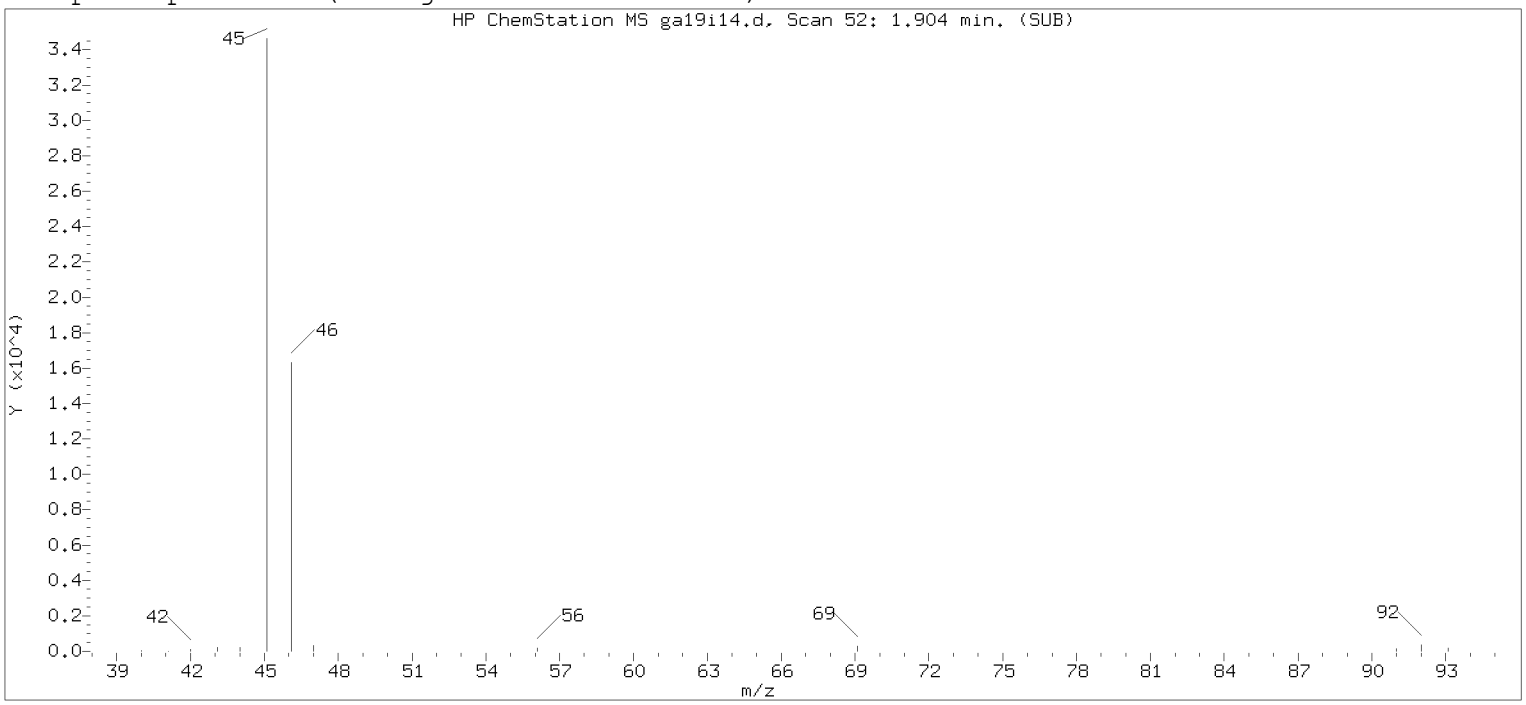
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 52
Retention Time (minutes): 1.904
Quant Ion : 45.00
Area (flag) : 126861M
On-Column Amount (ng) : 1.7723
Integration start scan : 41 Integration stop scan: 80
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

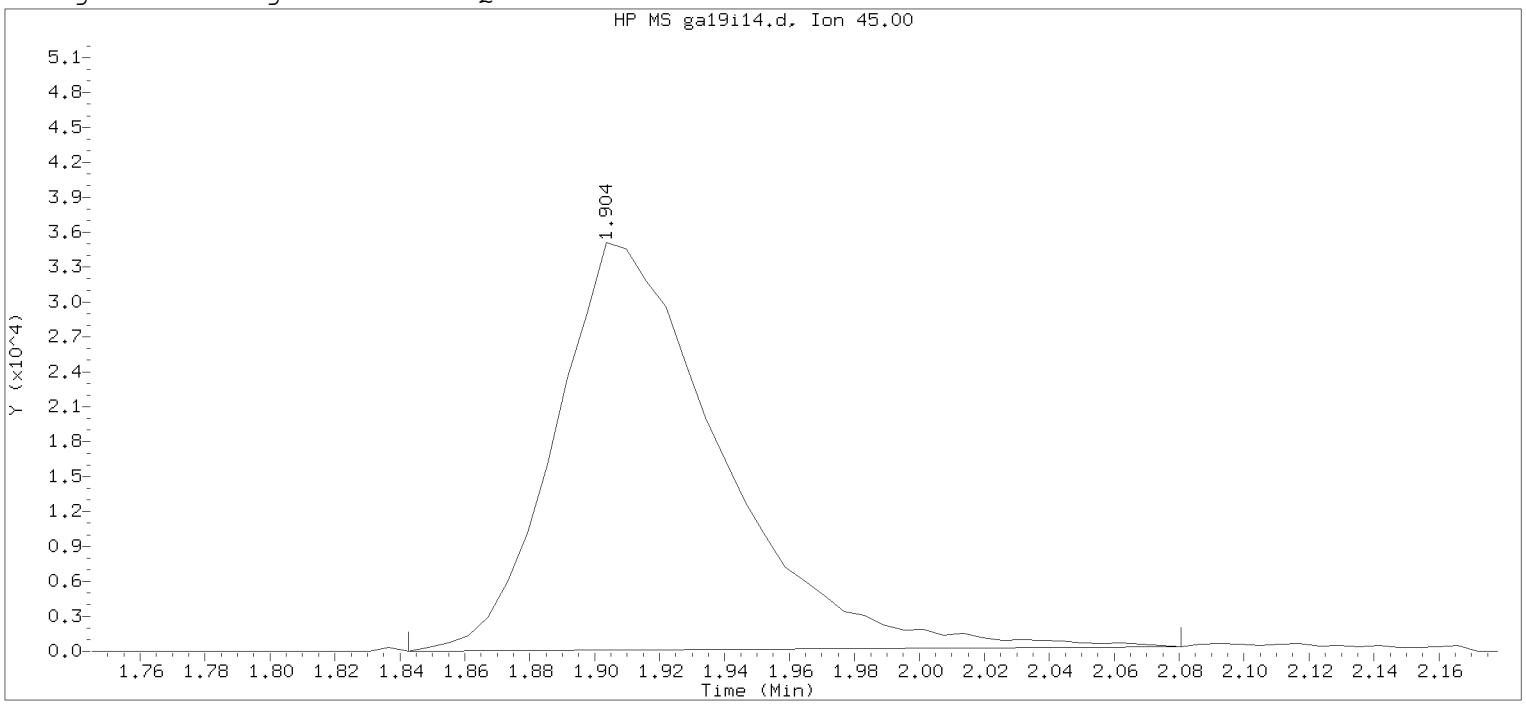
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 52
Retention Time (minutes): 1.904
Quant Ion : 45.00
Area : 124212
On-column Amount (ng) : 2.2243
Integration start scan : 41 Integration stop scan: 80
Y at integration start : 0 Y at integration end: 362

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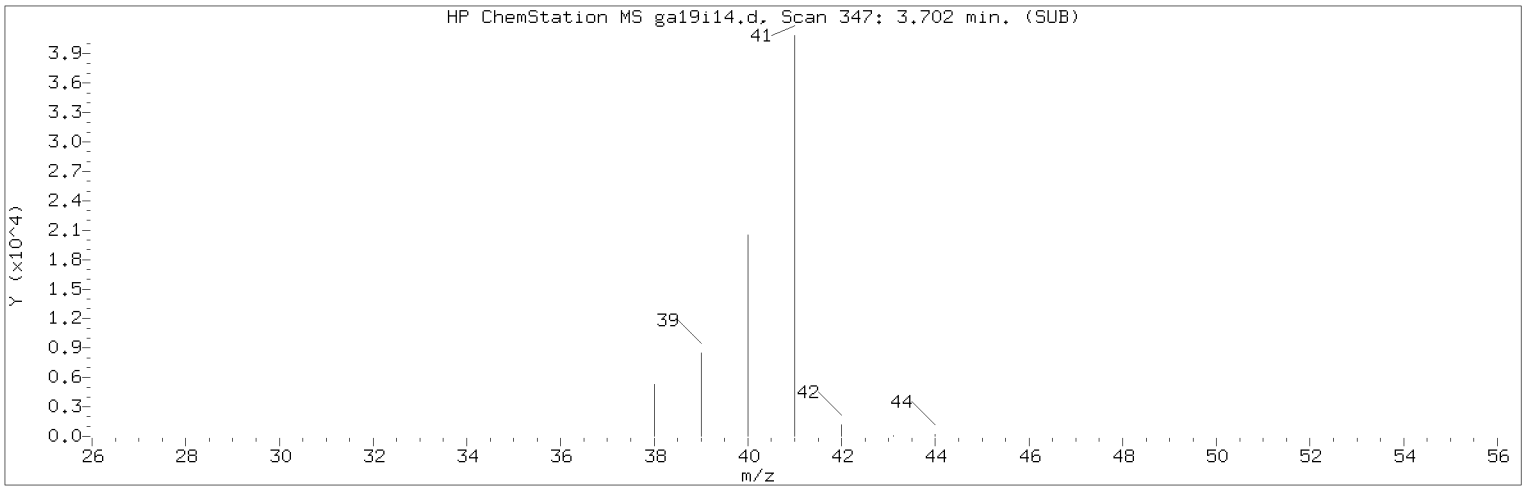
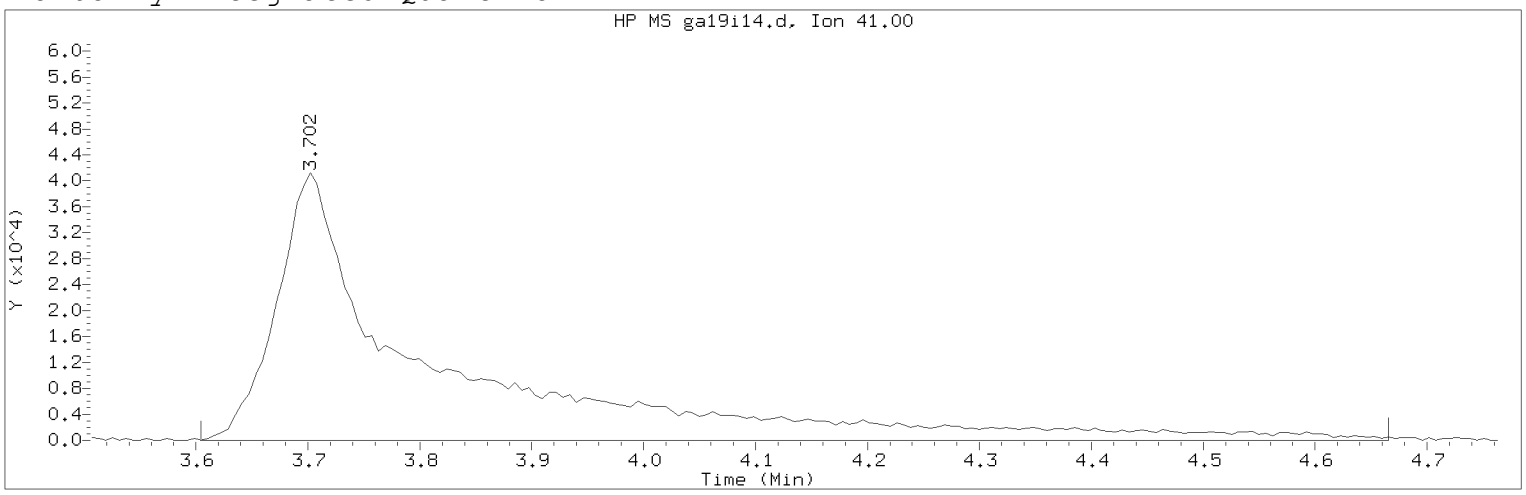
Target 3.5 esignature used. Page 7660

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

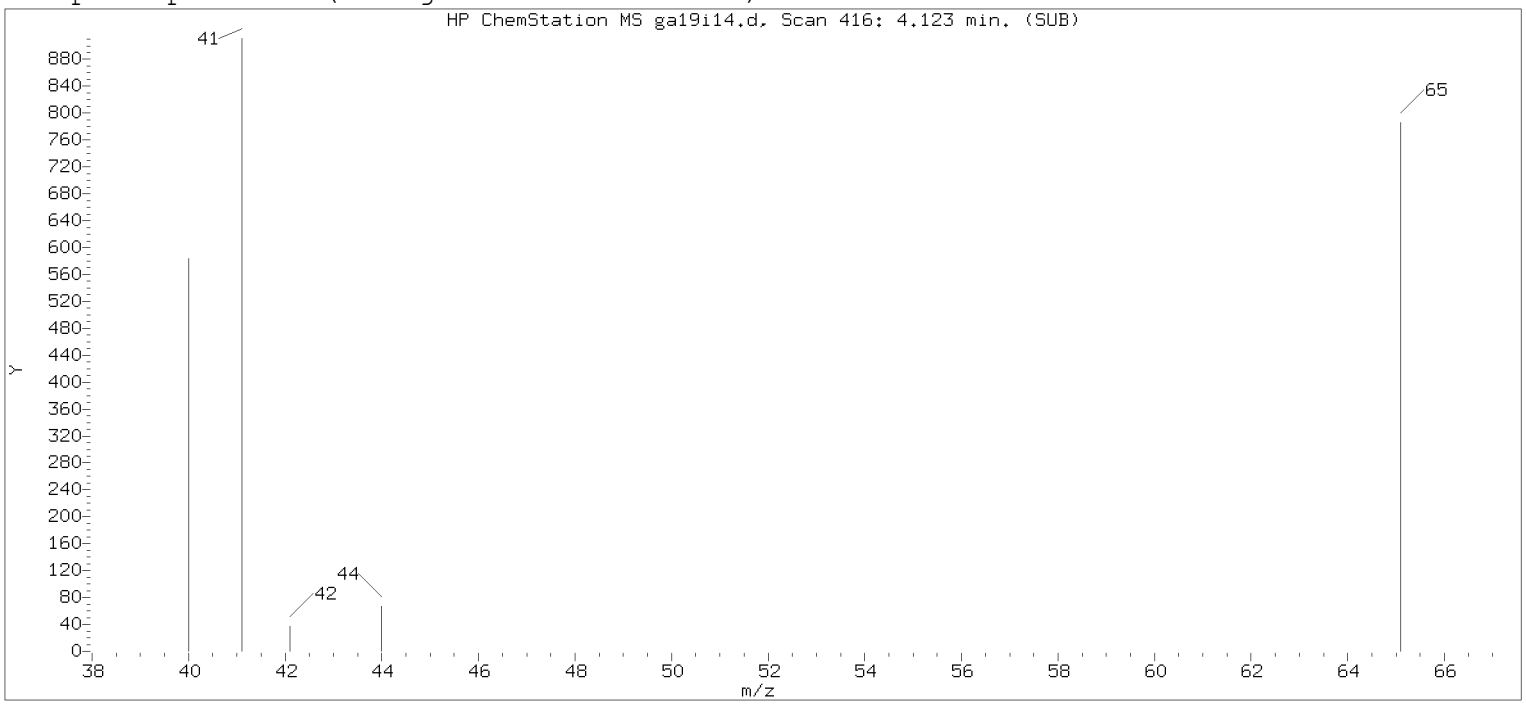
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 389206M
On-Column Amount (ng) : 78.4592
Integration start scan : 330 Integration stop scan: 504
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

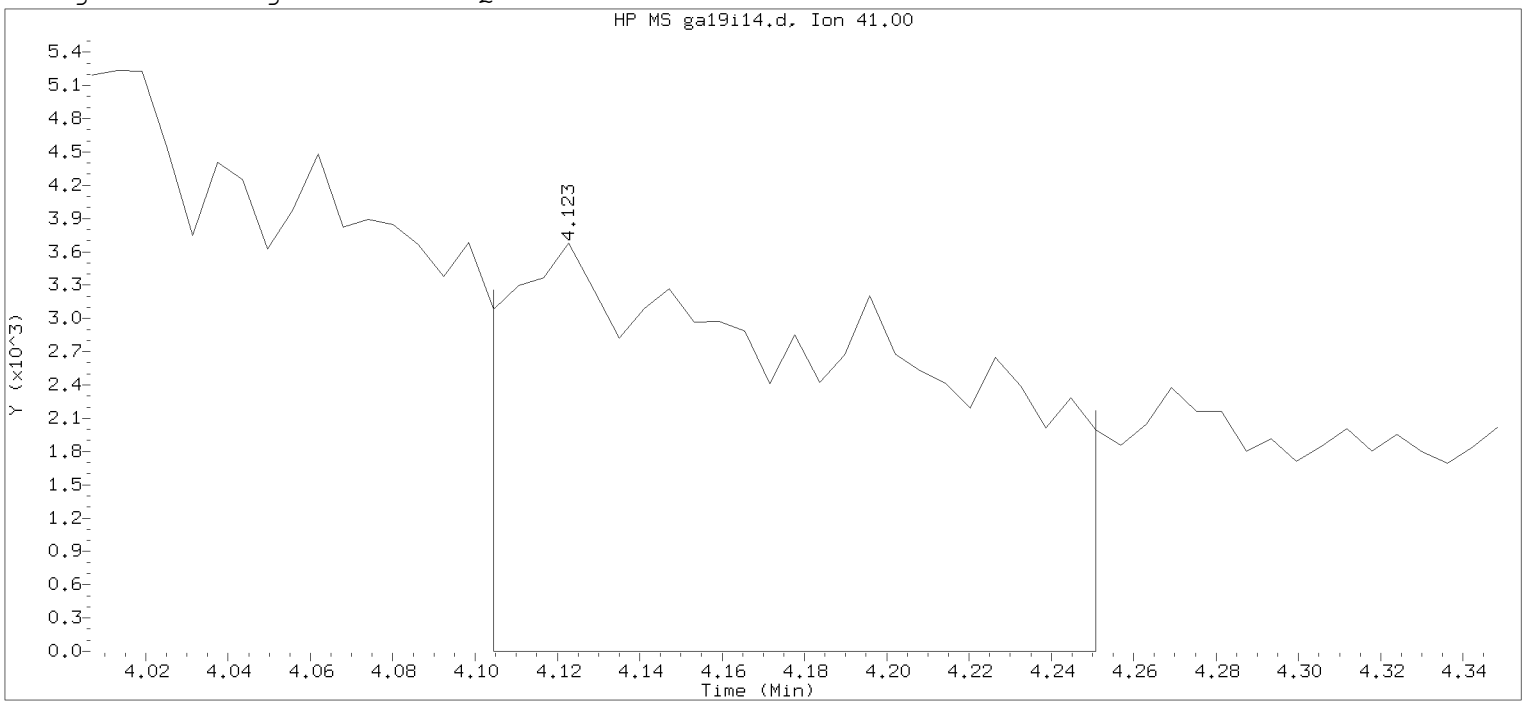
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 41.00
Area : 24446
On-column Amount (ng) : 106.2123
Integration start scan : 412 Integration stop scan: 436
Y at integration start : 0 Y at integration end: 0

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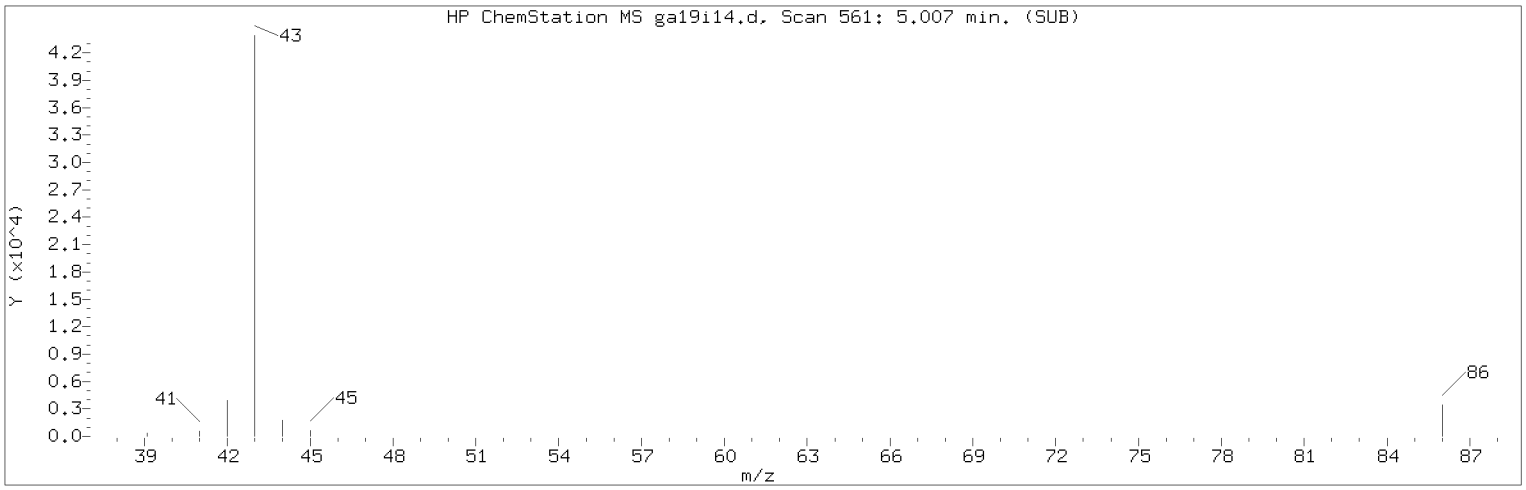
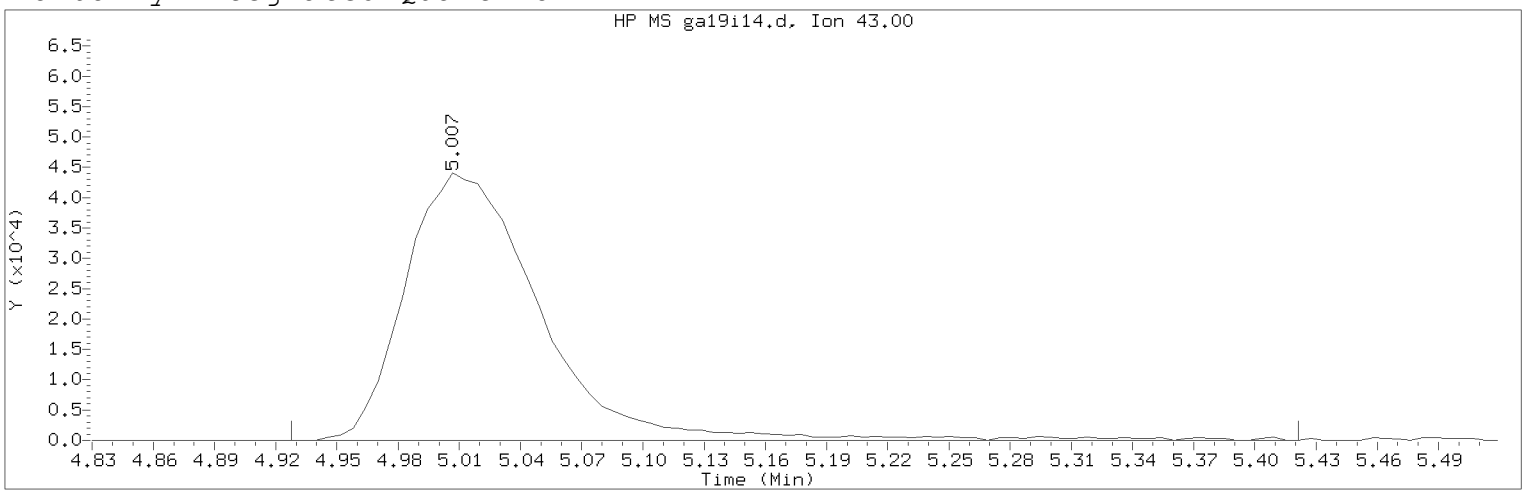
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

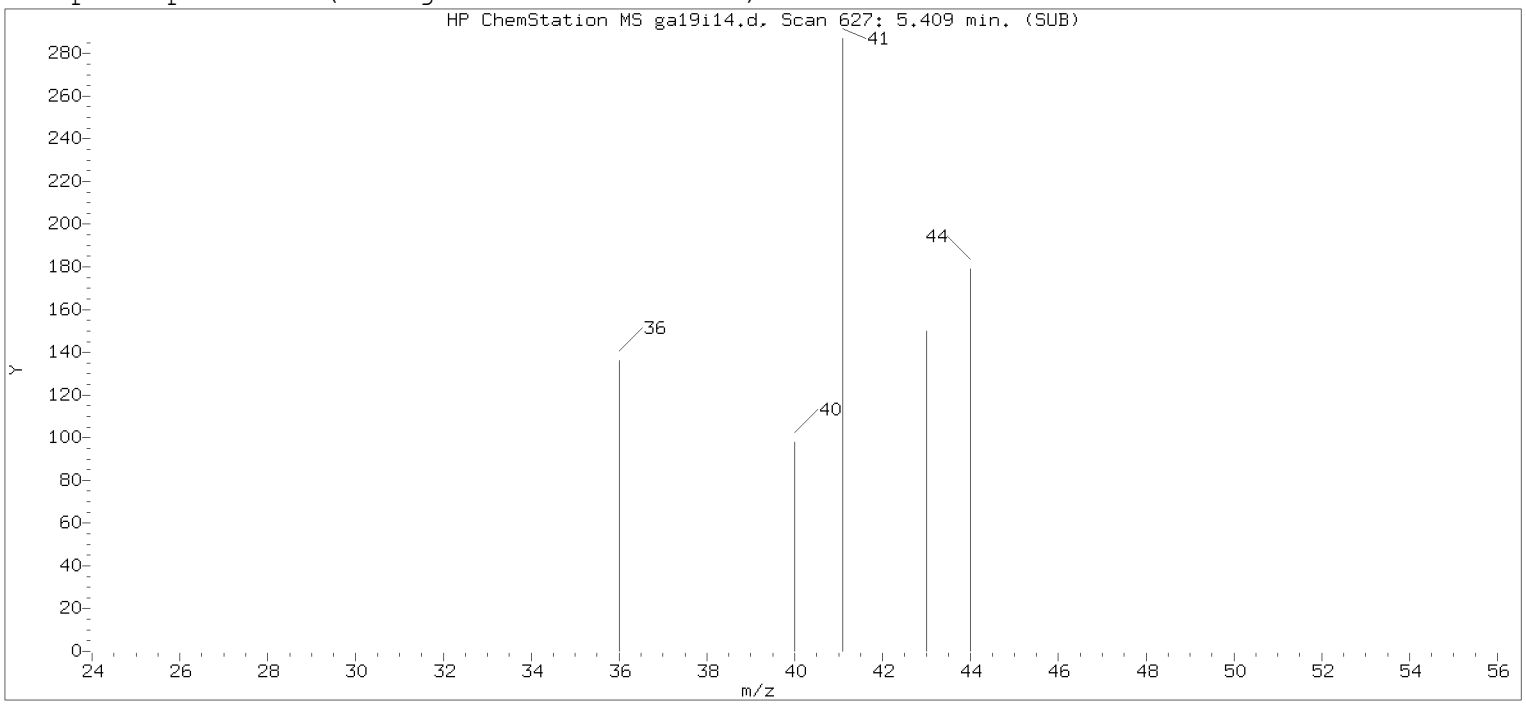
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 561
Retention Time (minutes): 5.007
Quant Ion : 43.00
Area (flag) : 203082M
On-Column Amount (ng) : 1.9440
Integration start scan : 547 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

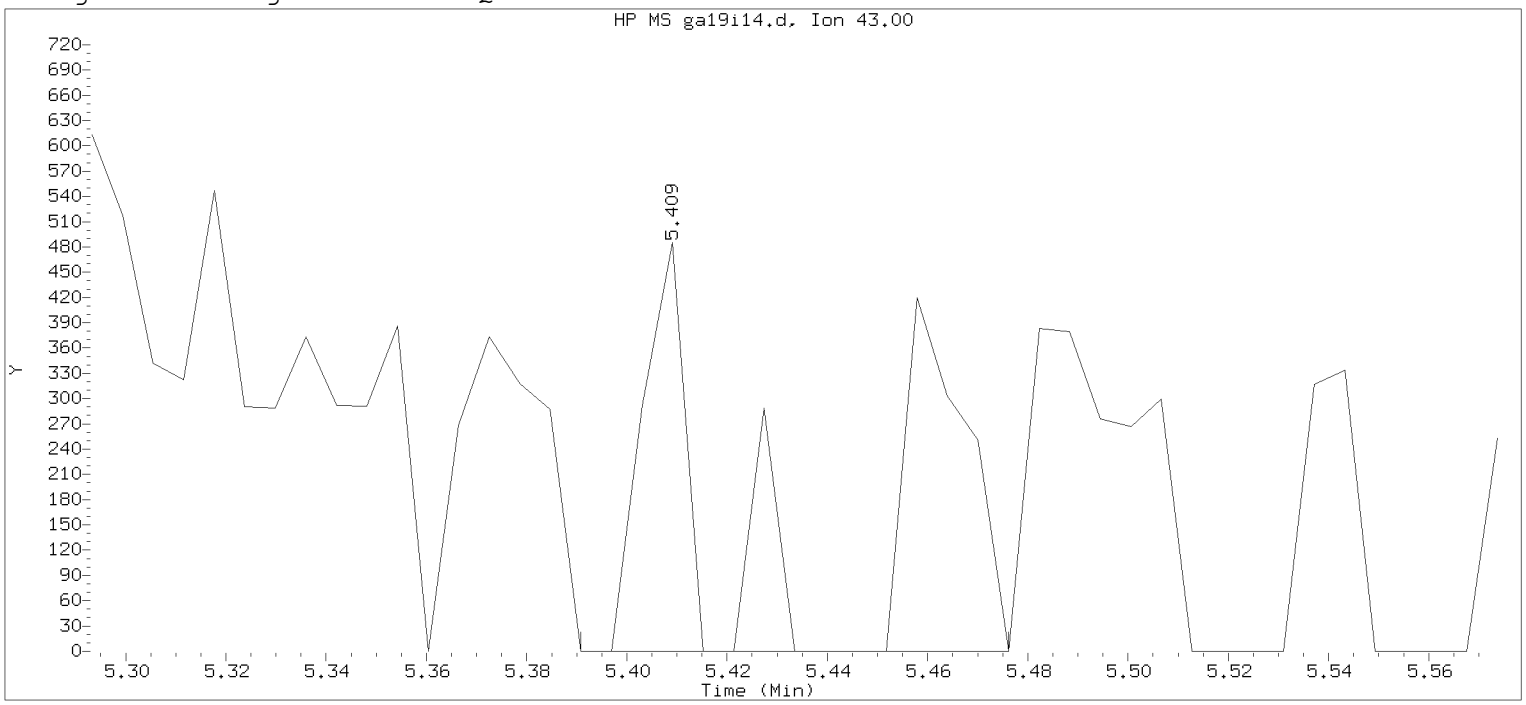
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 627
Retention Time (minutes): 5.409
Quant Ion : 43.00
Area : 746
On-column Amount (ng) : 2.0887
Integration start scan : 623 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

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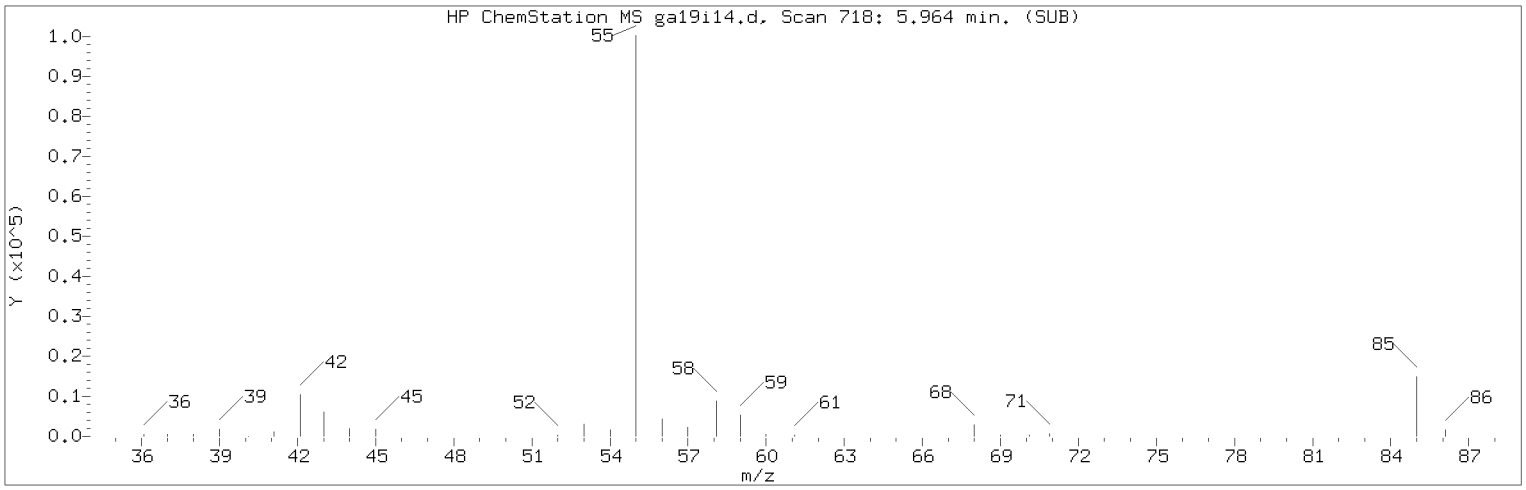
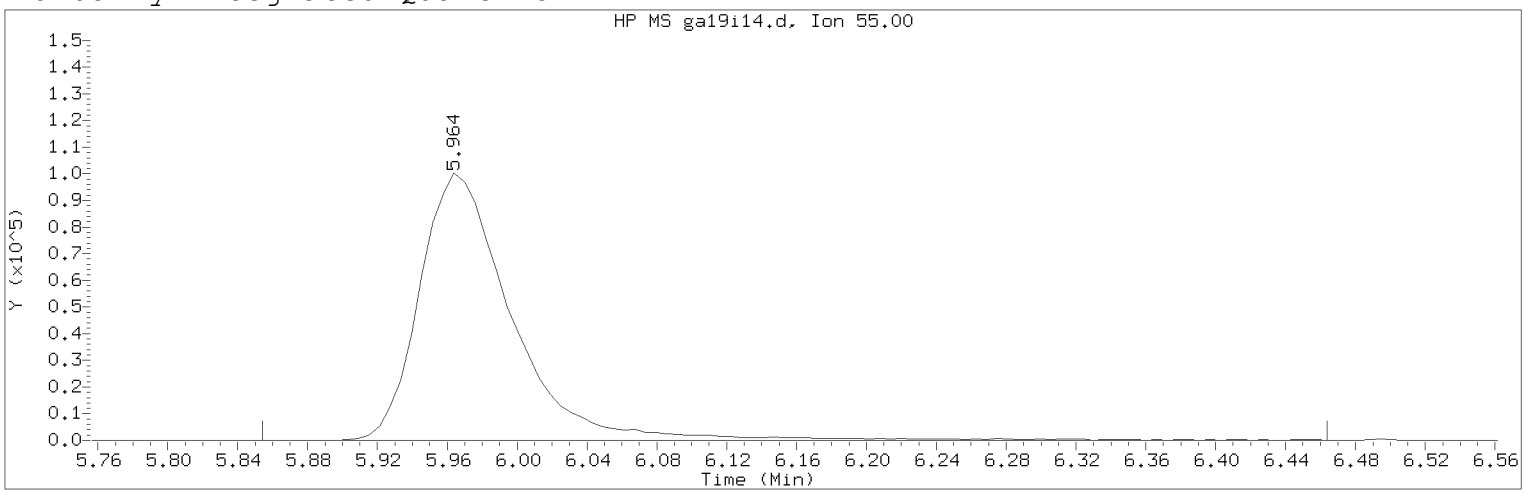
Target 3.5 esignature used. Page 7664

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

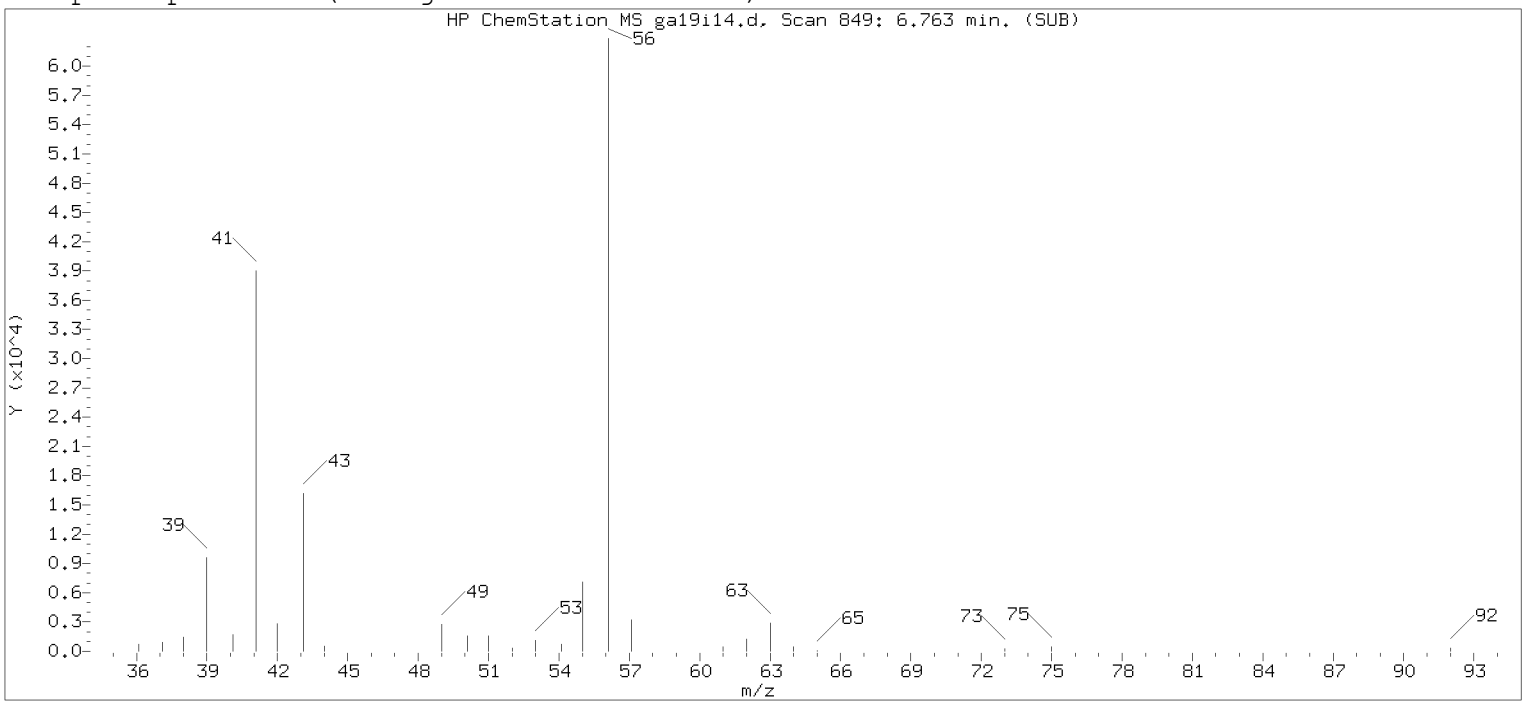
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 718
Retention Time (minutes): 5.964
Quant Ion : 55.00
Area (flag) : 368609M
On-Column Amount (ng) : 9.6355
Integration start scan : 699 Integration stop scan: 799
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

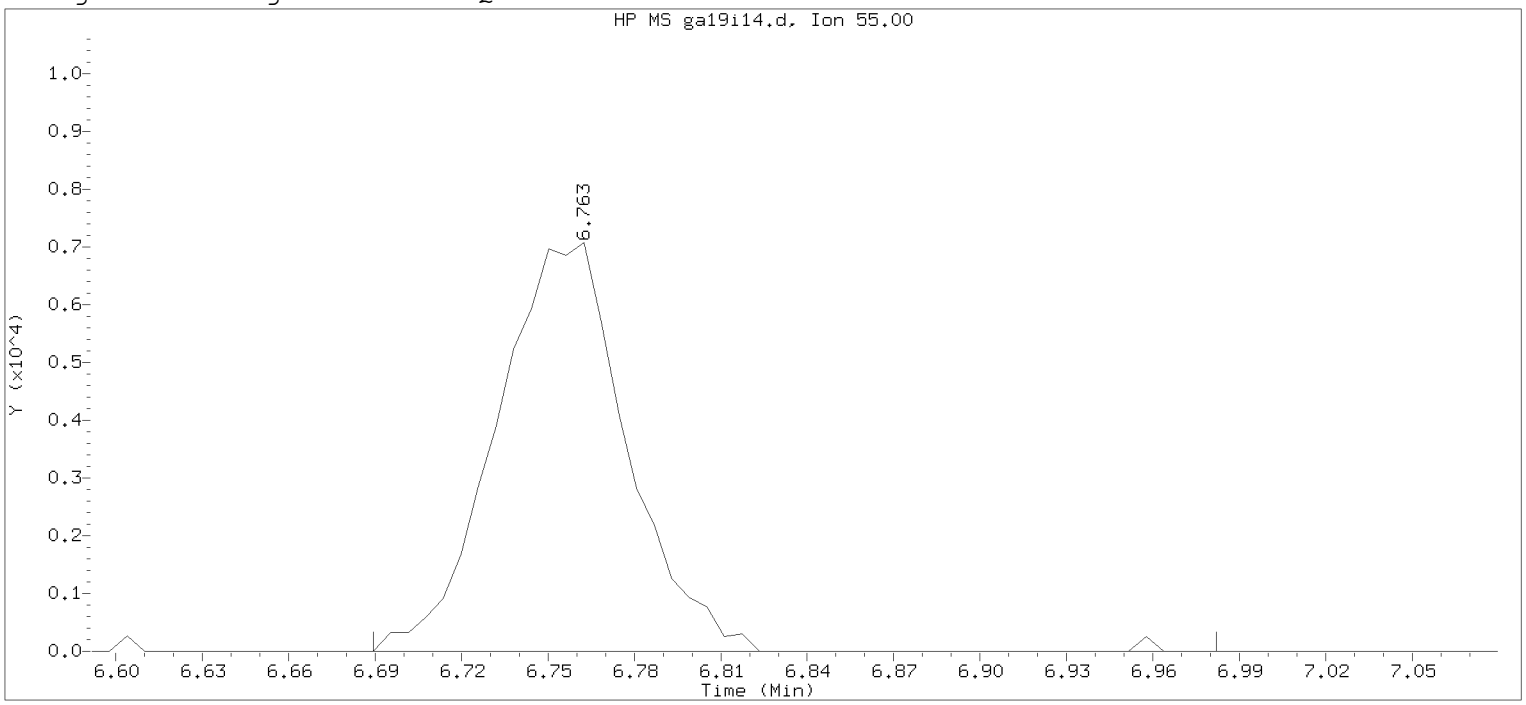
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 849
Retention Time (minutes): 6.763
Quant Ion : 55.00
Area : 22386
On-column Amount (ng) : 12.4911
Integration start scan : 836 Integration stop scan: 884
Y at integration start : 0 Y at integration end: 0

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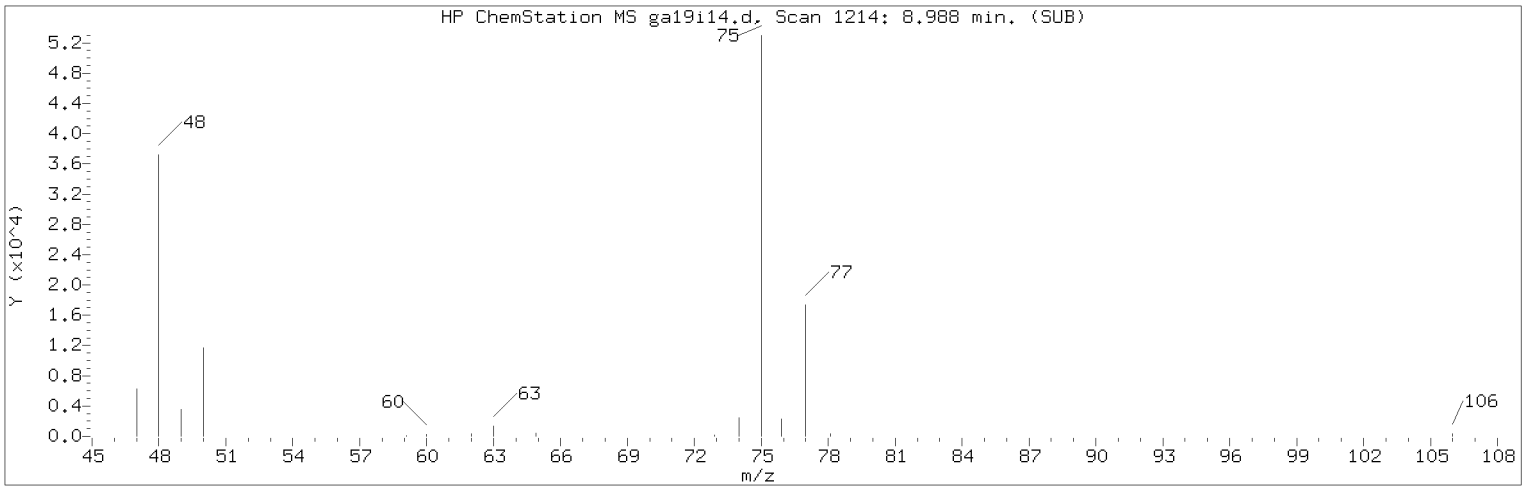
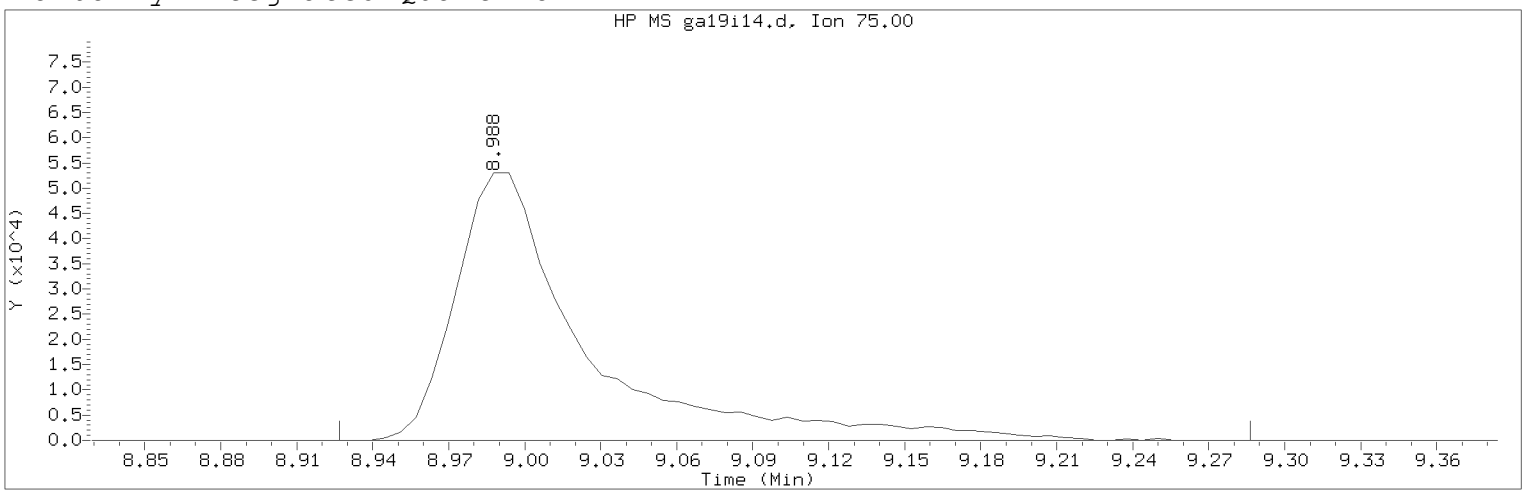
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

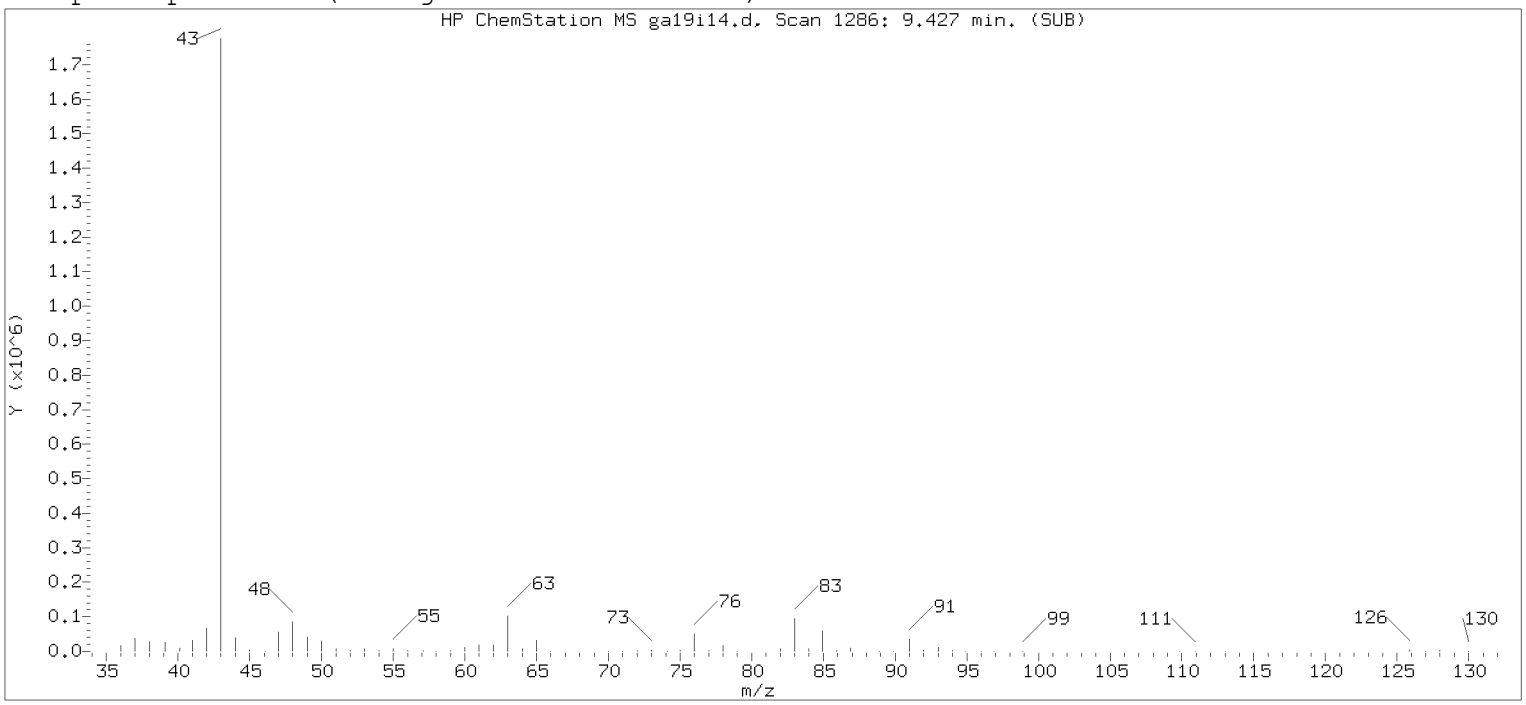
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1214
Retention Time (minutes): 8.988
Quant Ion : 75.00
Area (flag) : 189227M
On-Column Amount (ng) : 93.1080
Integration start scan : 1203 Integration stop scan: 1262
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

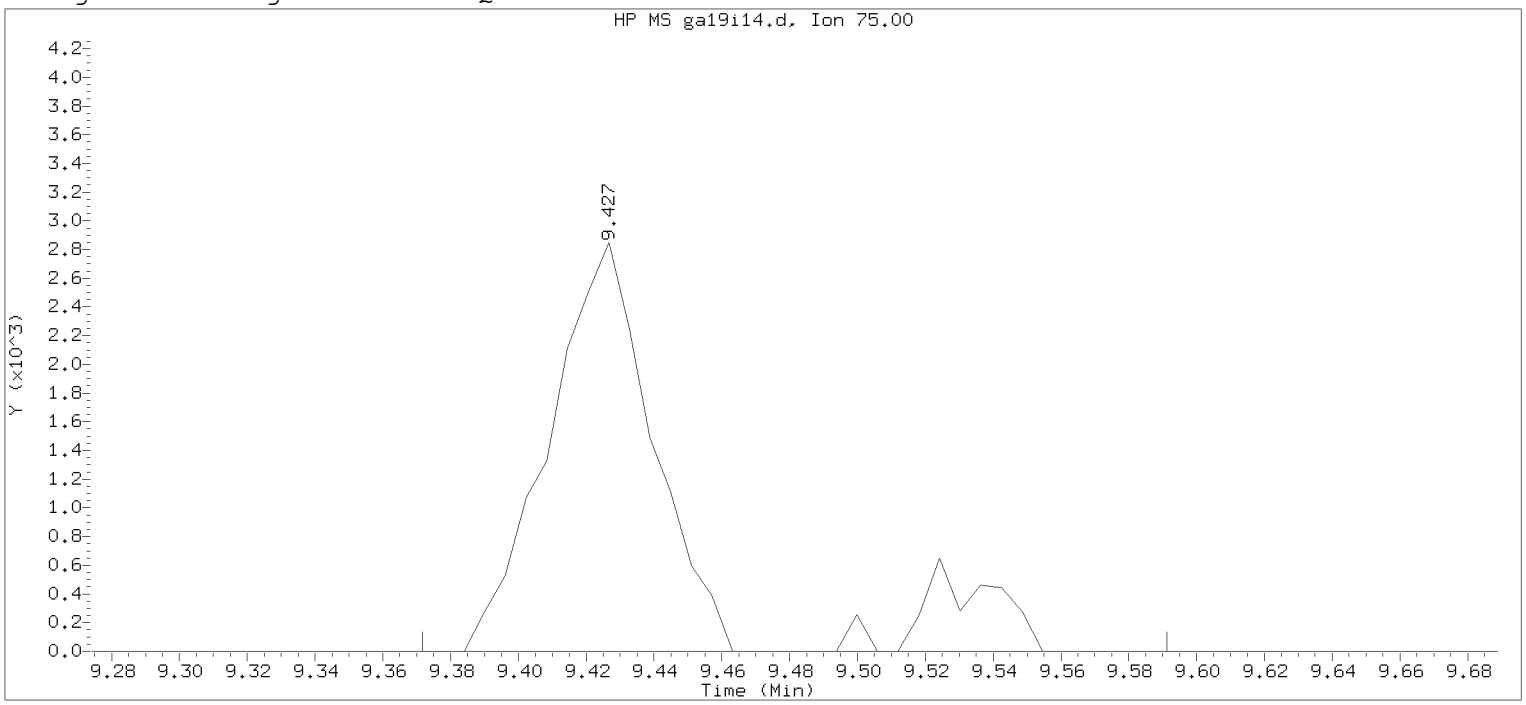
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 77		
Compound Name	: Chloroacetonitrile		
Scan Number	: 1286		
Retention Time (minutes)	: 9.427		
Quant Ion	: 75.00		
Area	: 6987		
On-column Amount (ng)	: 135.2137		
Integration start scan	: 1276	Integration stop scan:	1312
Y at integration start	: 0	Y at integration end:	0

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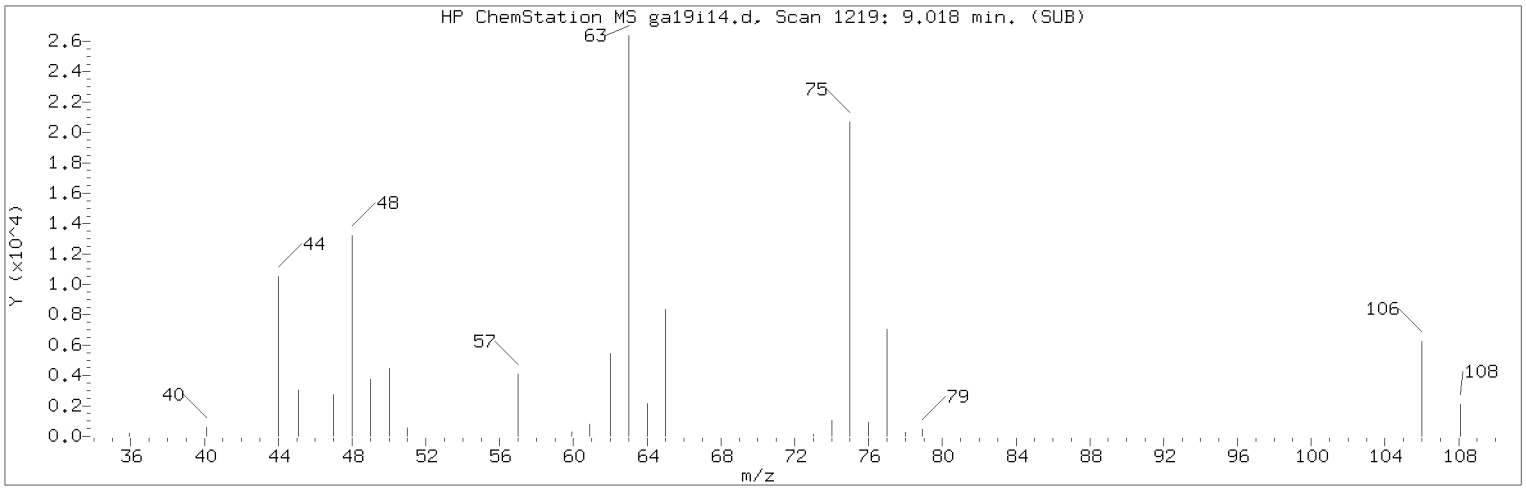
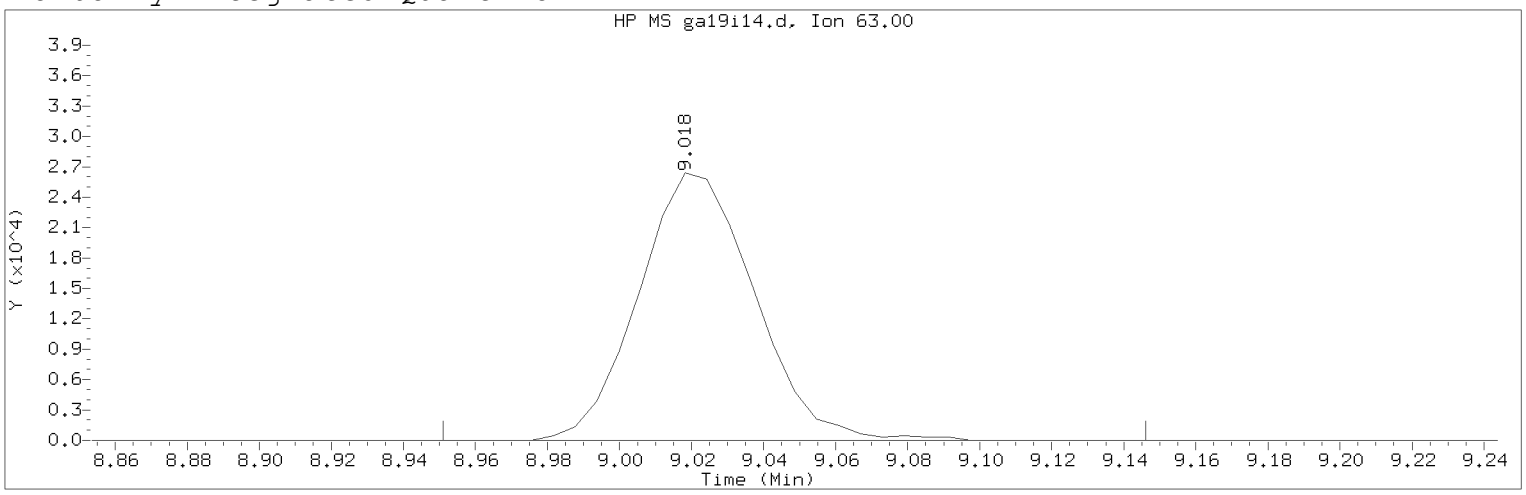
Target 3.5 esignature used. Method: 7668

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

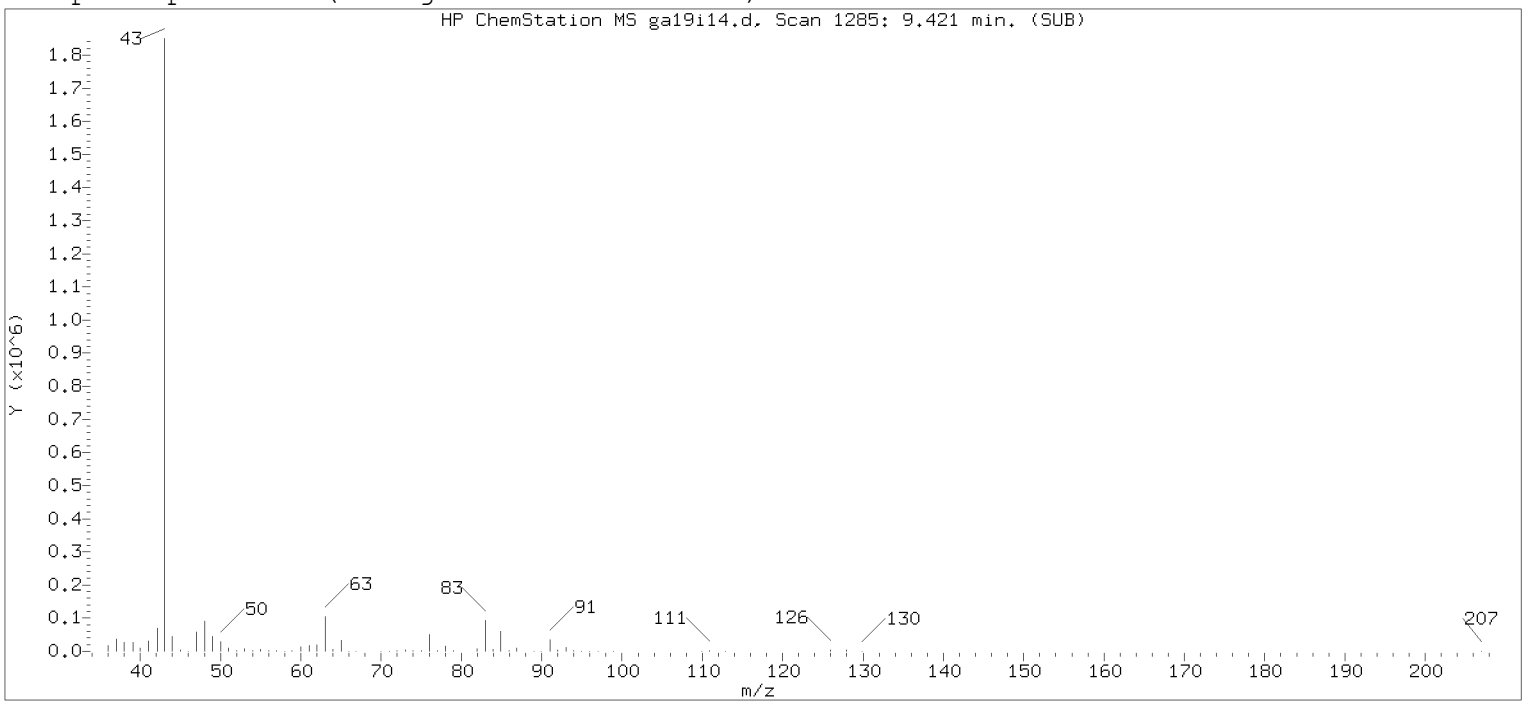
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1219
Retention Time (minutes): 9.018
Quant Ion : 63.00
Area (flag) : 58932M
On-Column Amount (ng) : 1.8867
Integration start scan : 1207 Integration stop scan: 1239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

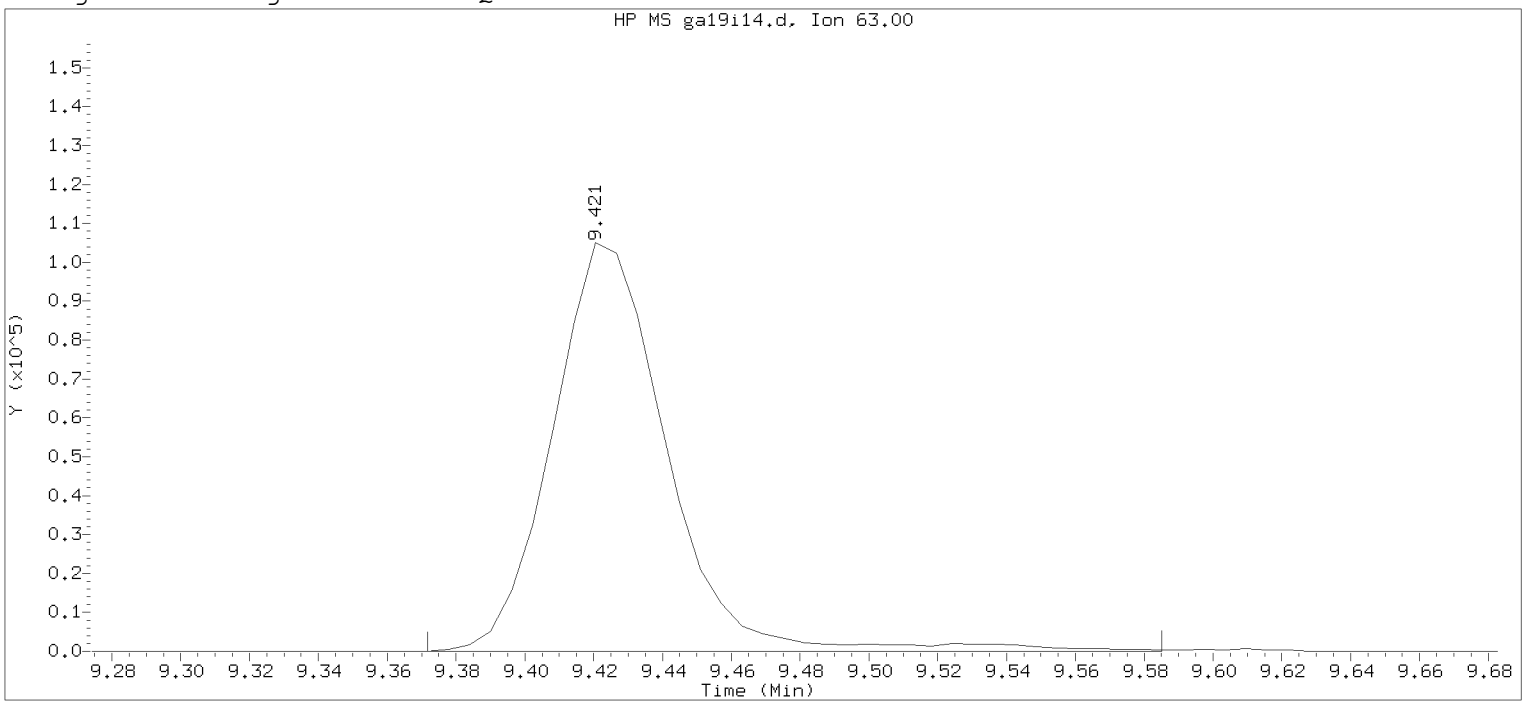
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

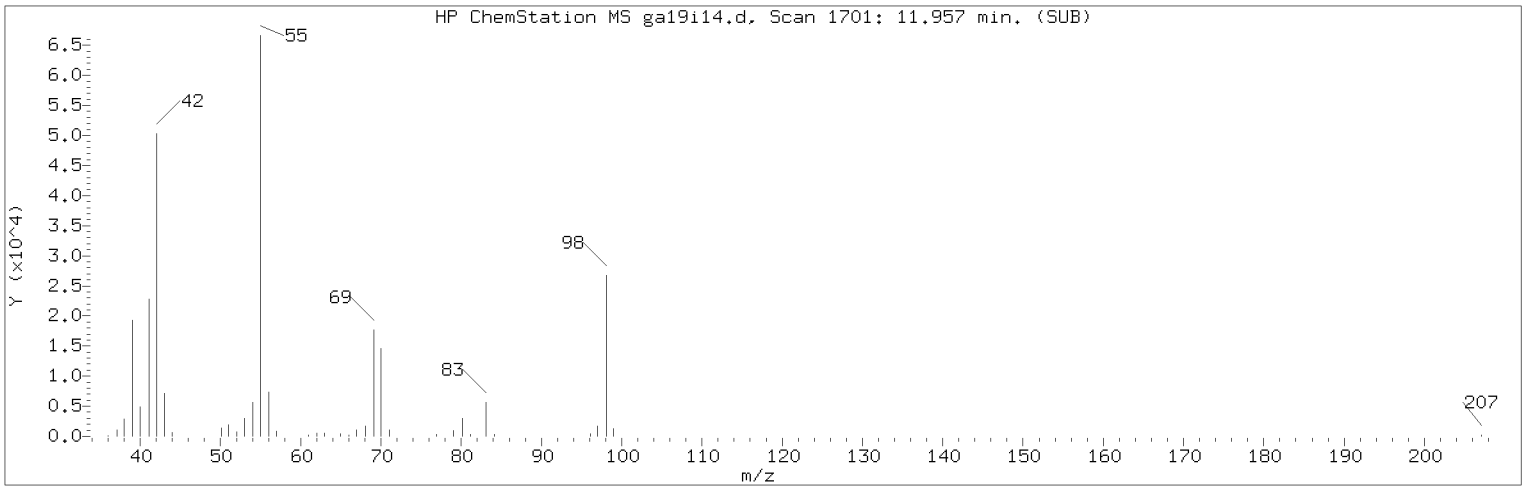
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

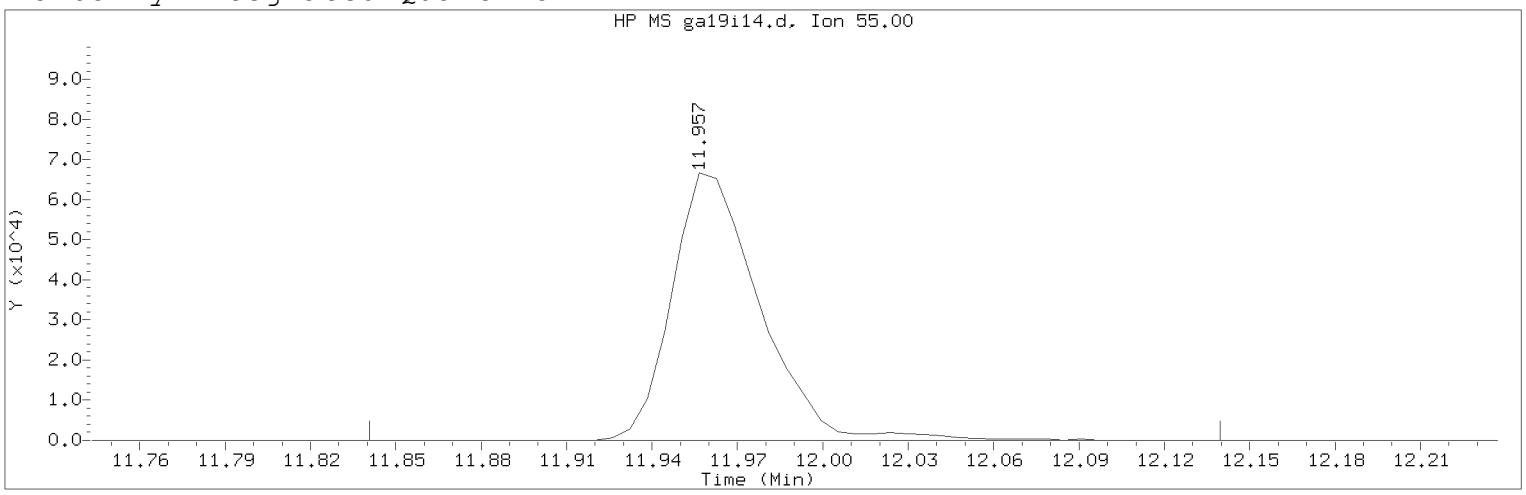
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1285
Retention Time (minutes): 9.421
Quant Ion : 63.00
Area : 242506
On-column Amount (ng) : 2.4001
Integration start scan : 1276 Integration stop scan: 1311
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Adobe 7.0

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD002 Lab Sample ID: VSTD002

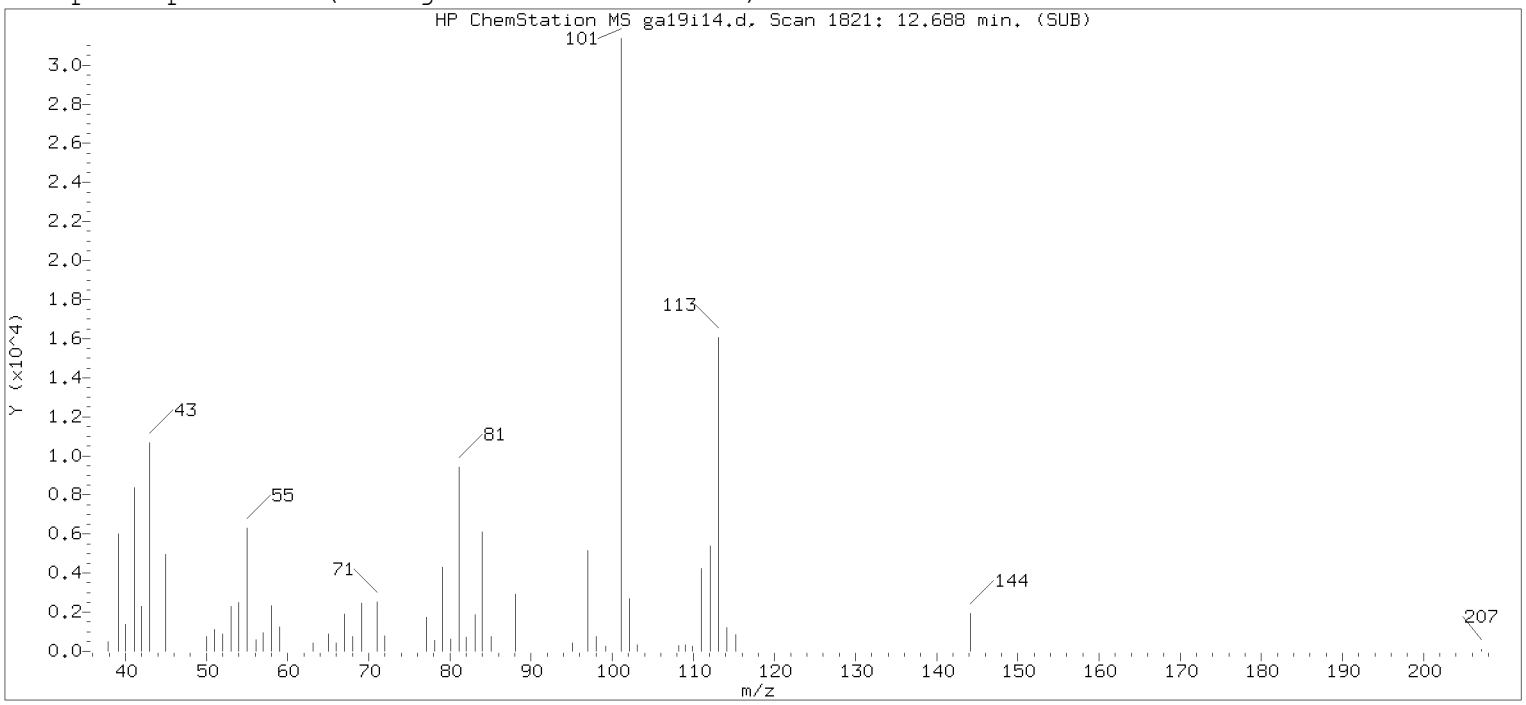
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 143983M
On-Column Amount (ng) : 95.9854
Integration start scan : 1681 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

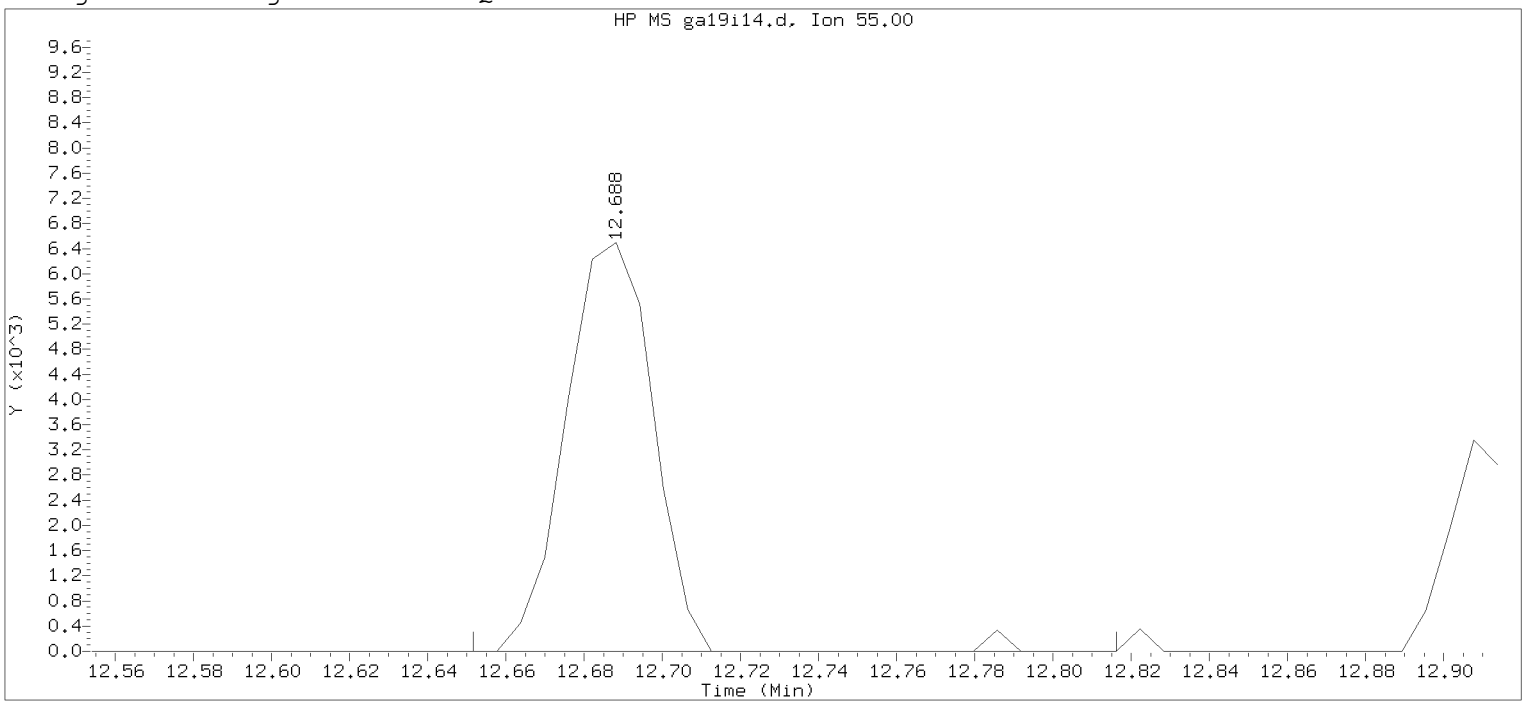
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



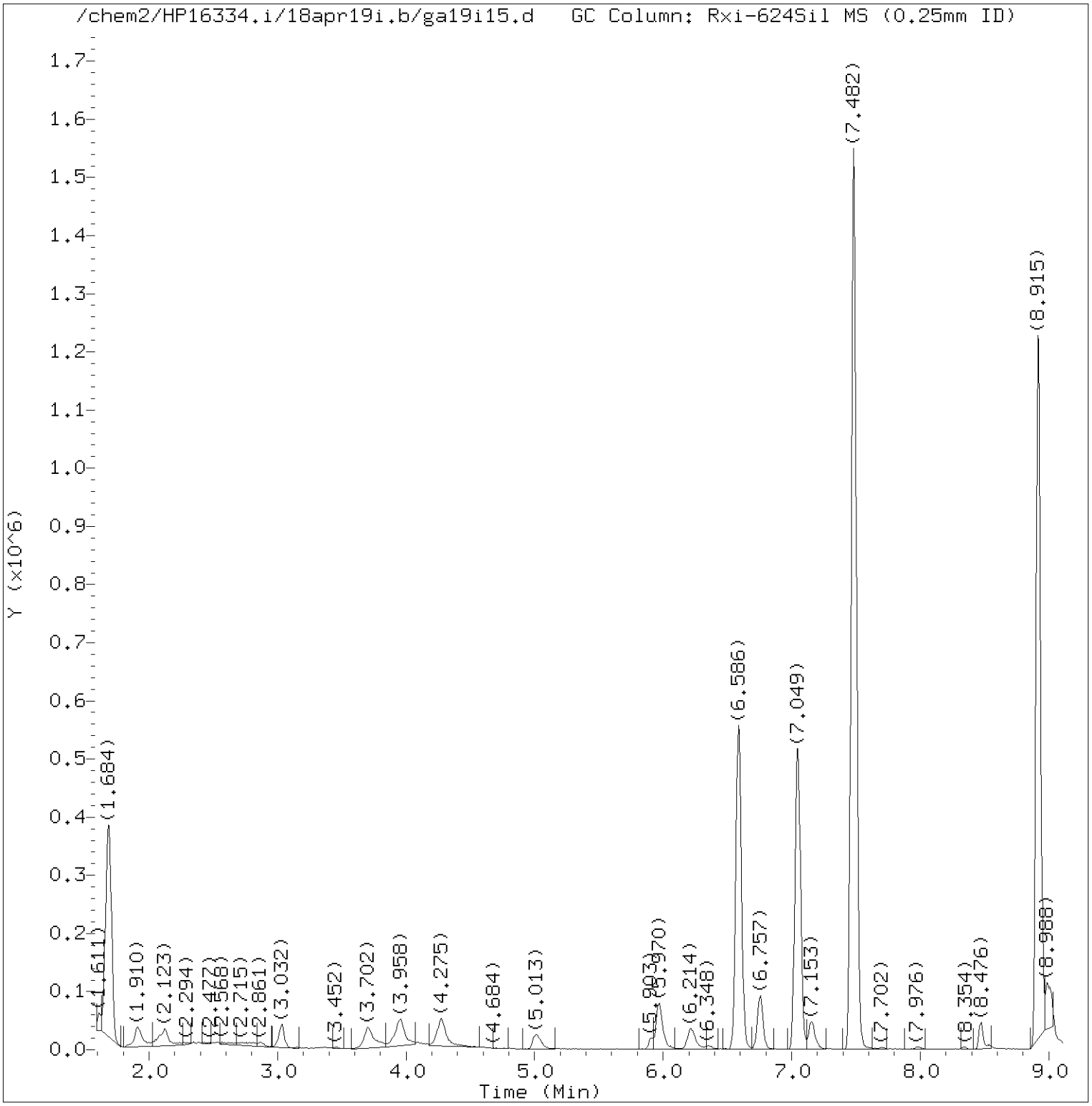
Data File: /chem2/HP16334.i/18apr19i.b/ga19i14.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:13 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:29
Date, time and analyst ID of latest file update: 19-Apr-2018 17:29 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1821
Retention Time (minutes): 12.688
Quant Ion : 55.00
Area : 10174
On-column Amount (ng) : 294.4754
Integration start scan : 1814 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

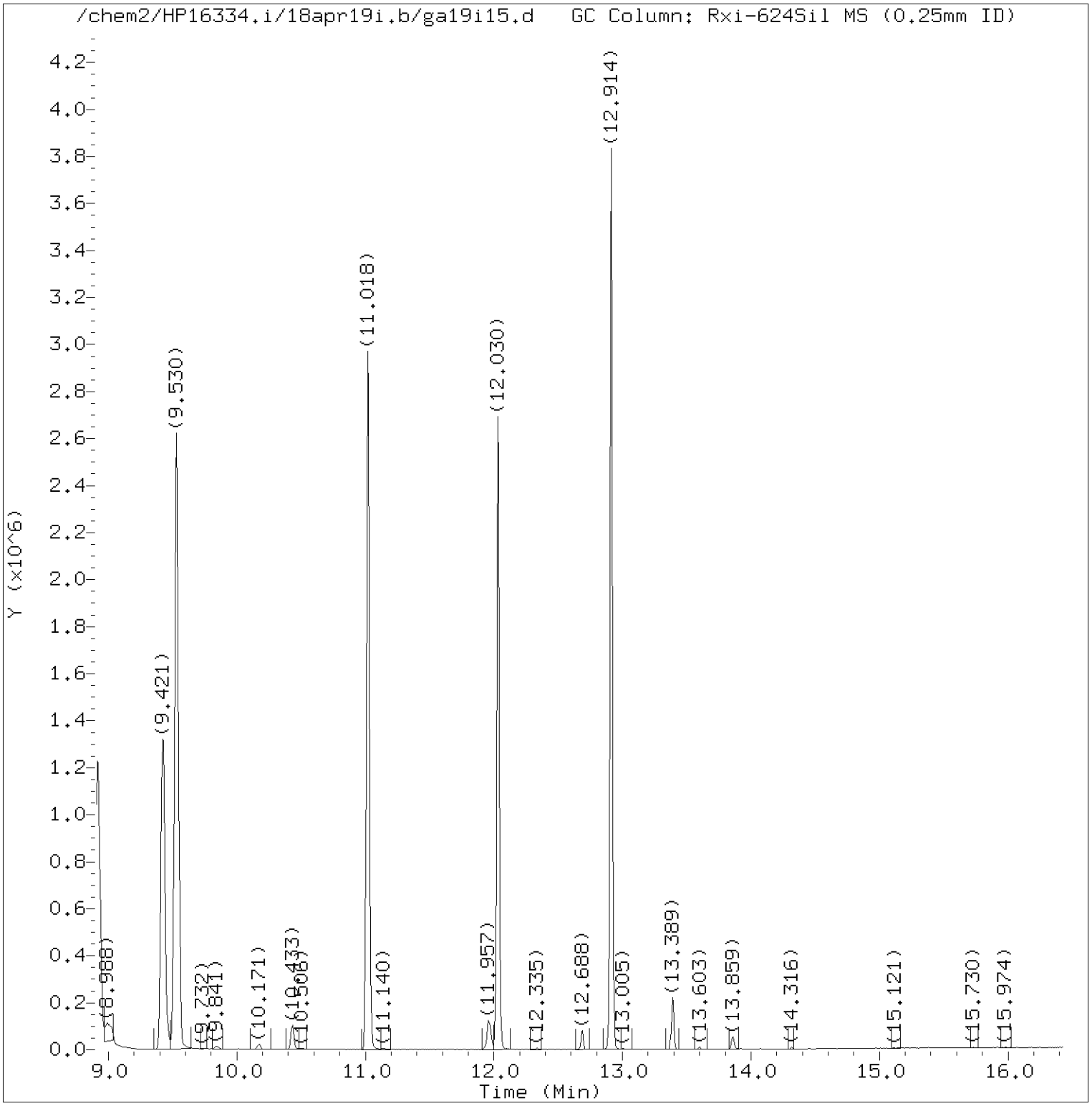
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.916	45	74043M	1.050
25) Acetonitrile	(1)	3.702	41	191708M	40.892
26)*t-Butyl Alcohol-d10	(1)	3.952	65	208792	50.000
36) Vinyl Acetate	(2)	5.013	43	95785M	0.954
43) Methyl Acrylate	(2)	5.970	55	170701M	4.665
53) 1-Chlorobutane	(2)	6.757	56	108354	1.001
63)*Fluorobenzene	(2)	7.482	96	1995606	10.000
77) Chloroacetonitrile	(2)	8.988	75	87730M	45.403
78) 2-Chloroethyl vinyl ether	(2)	9.024	63	27629M	0.926
97)*Chlorobenzene-d5	(3)	11.018	117	1510225	10.000
112) Cyclohexanone	(1)	11.957	55	64560M	46.578
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	846603	10.000
142) Hexachloroethane	(4)	13.389	117	26523	0.818

M = Compound was manually integrated.
* = Compound is an internal standard.

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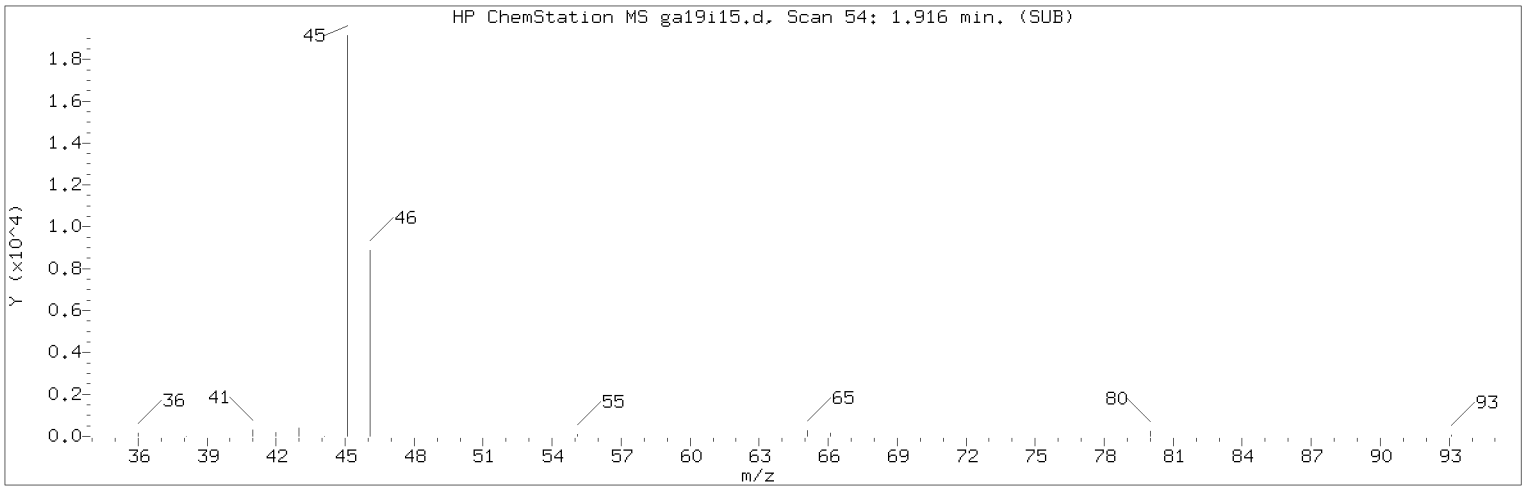
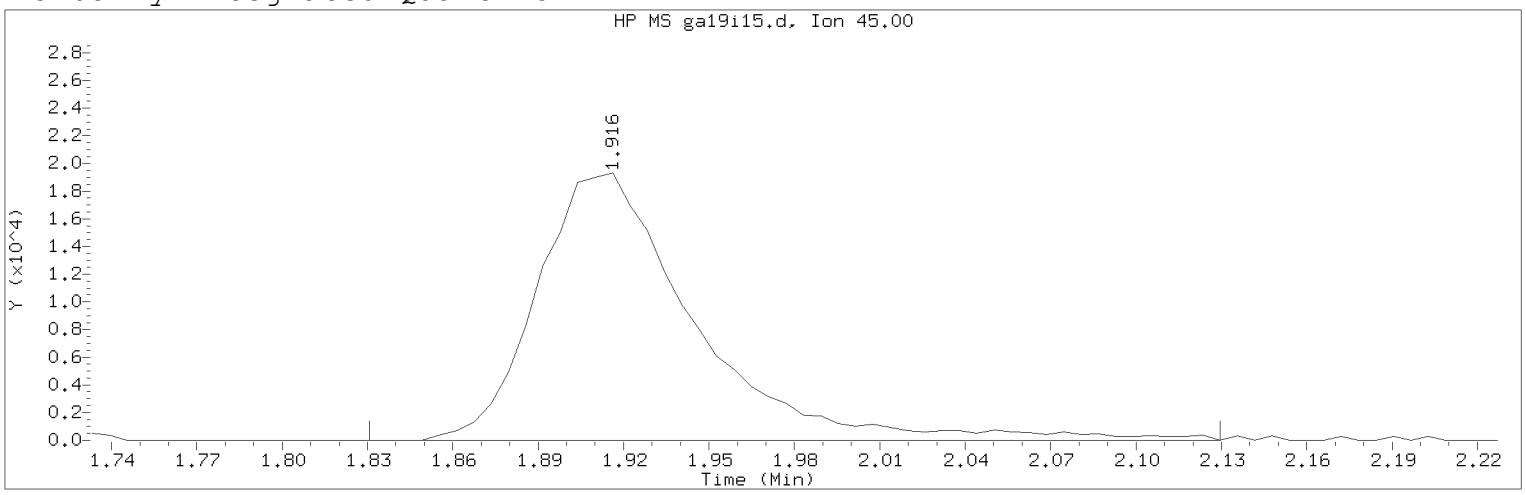
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

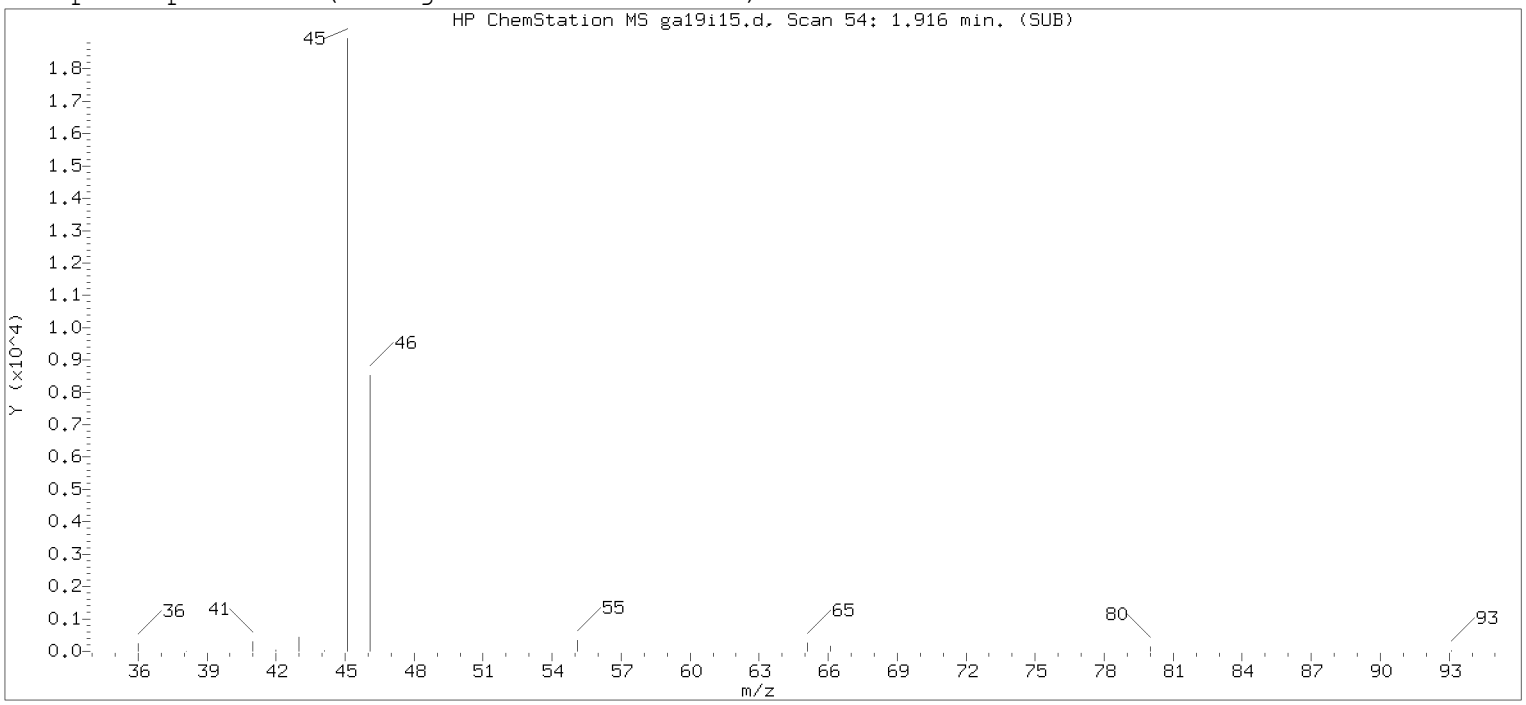
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 54
Retention Time (minutes): 1.916
Quant Ion : 45.00
Area (flag) : 74043M
On-Column Amount (ng) : 1.0502
Integration start scan : 39 Integration stop scan: 88
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

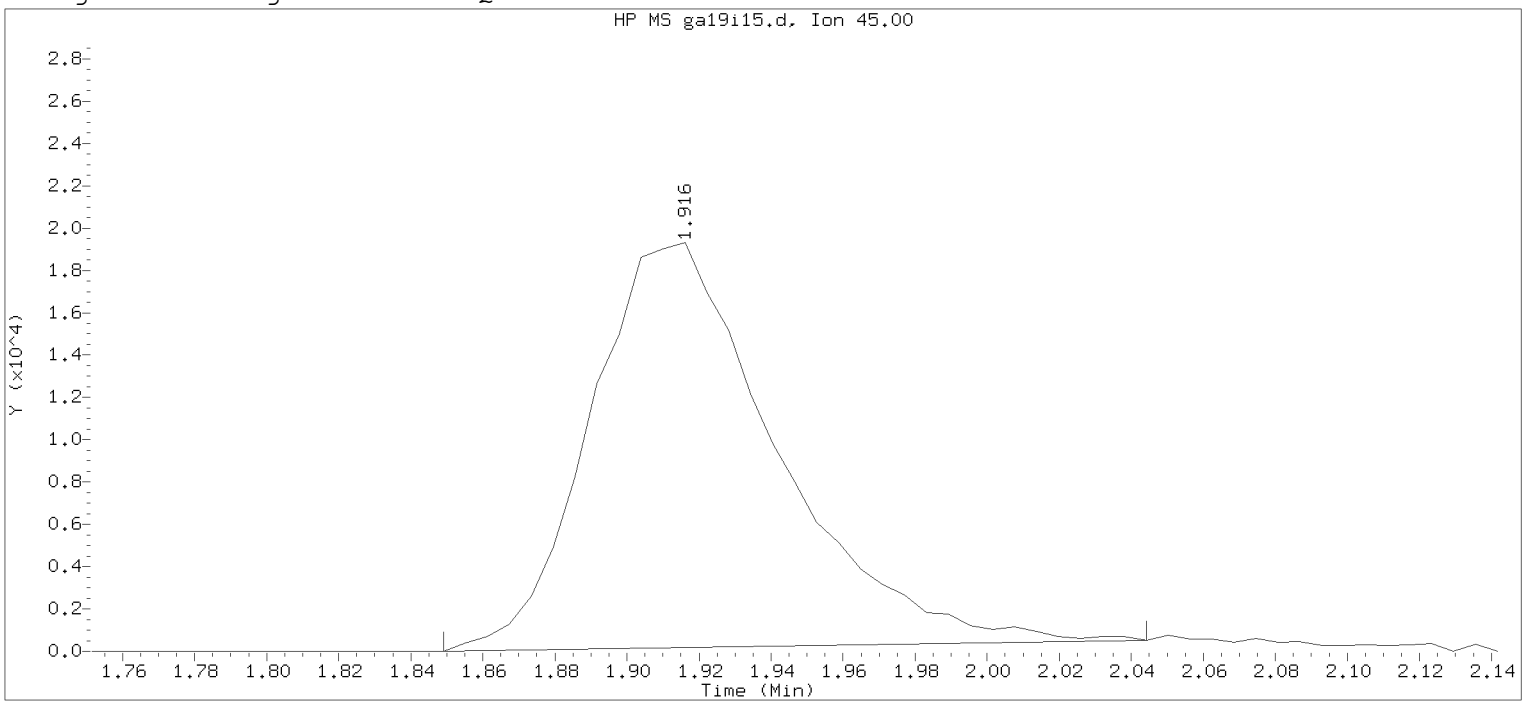
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 54		
Retention Time (minutes)	: 1.916		
Quant Ion	: 45.00		
Area	: 68945		
On-column Amount (ng)	: 1.2062		
Integration start scan	: 42	Integration stop scan:	74
Y at integration start	: 0	Y at integration end:	506

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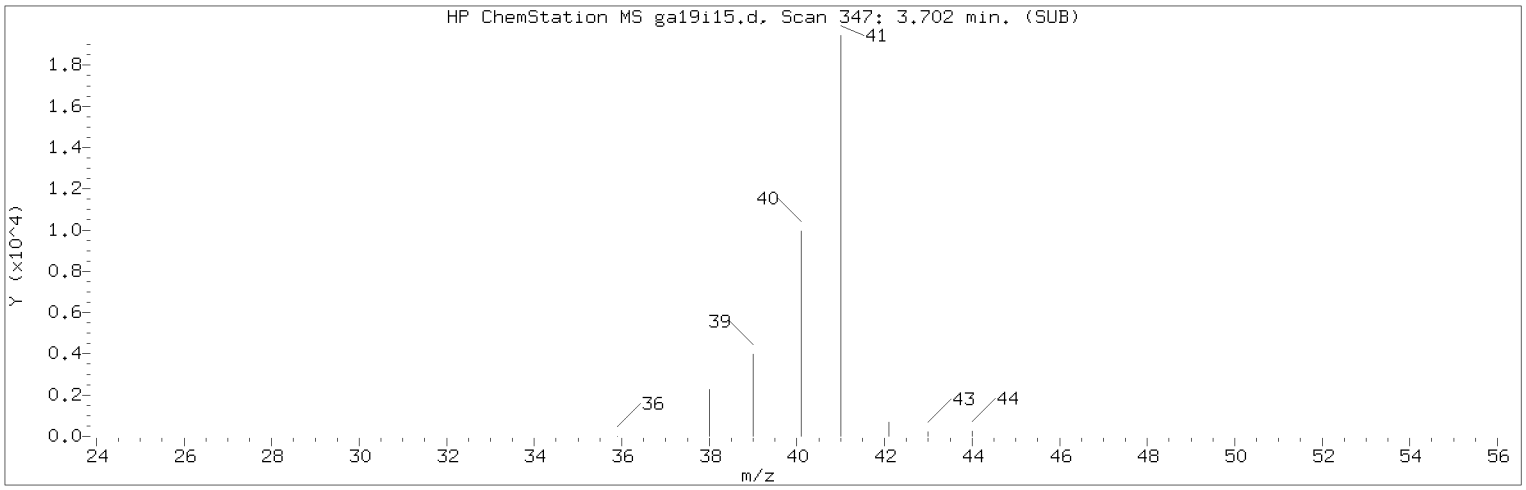
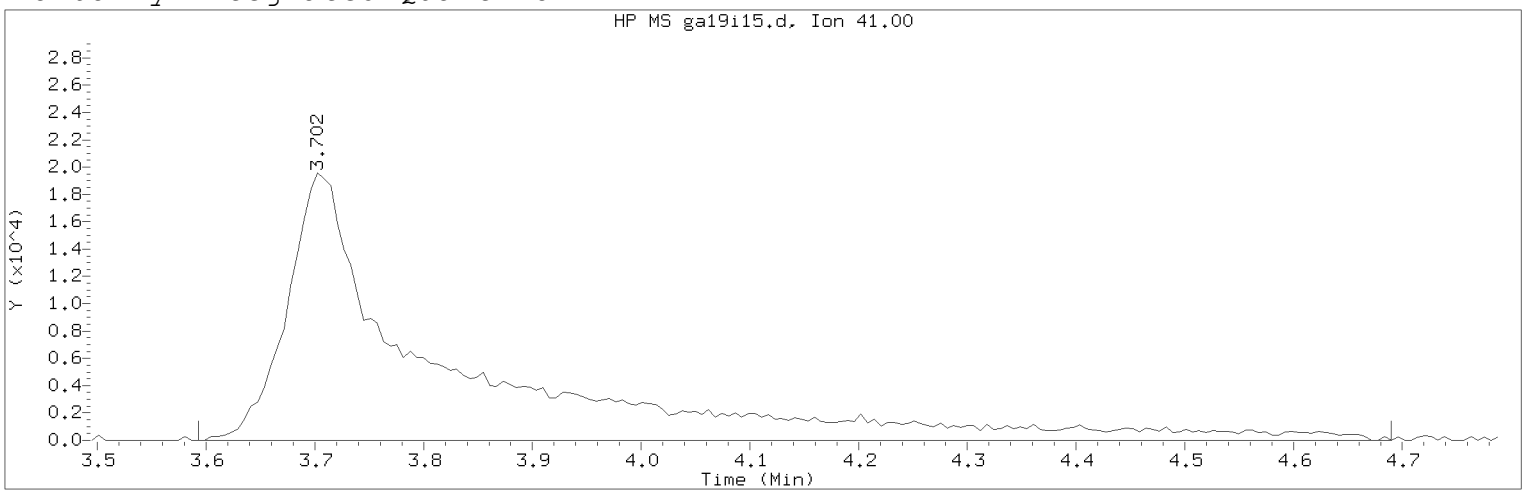
Target 3.5 esignature used. Page 677

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

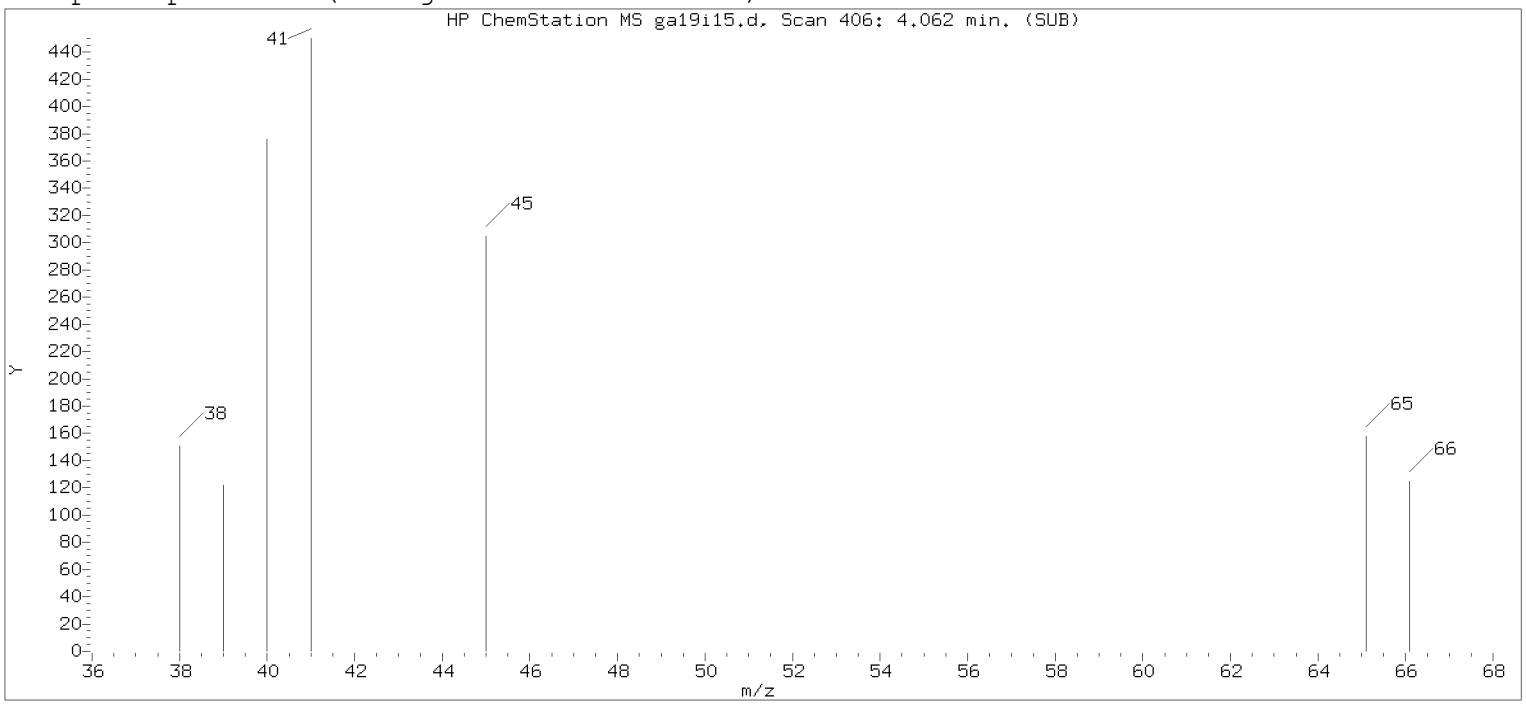
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 191708M
On-Column Amount (ng) : 40.8916
Integration start scan : 328 Integration stop scan: 508
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

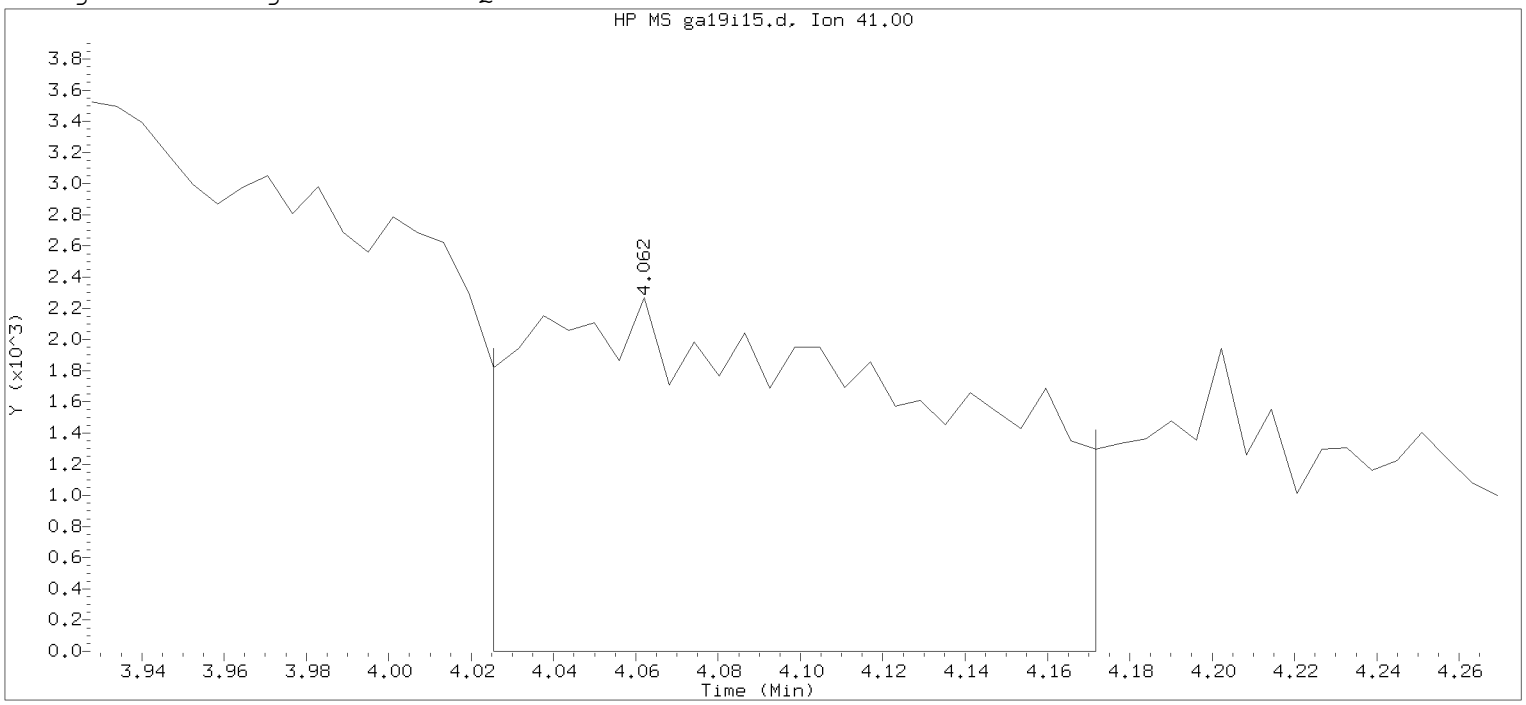
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 41.00
Area : 15691
On-column Amount (ng) : 62.4292
Integration start scan : 399 Integration stop scan: 423
Y at integration start : 0 Y at integration end: 0

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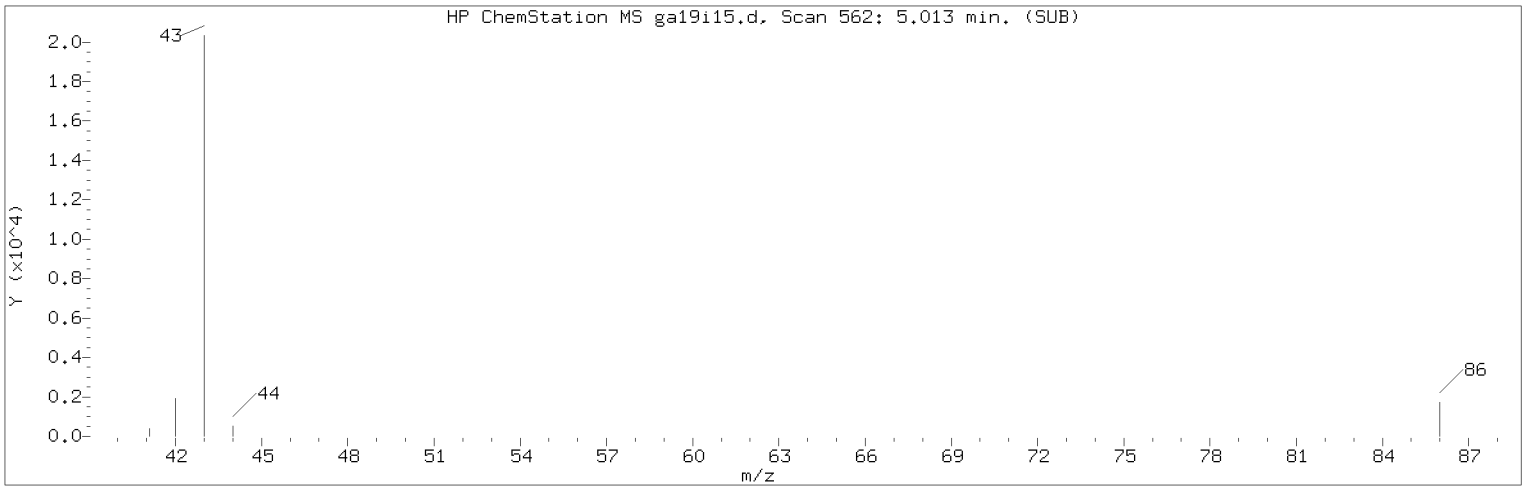
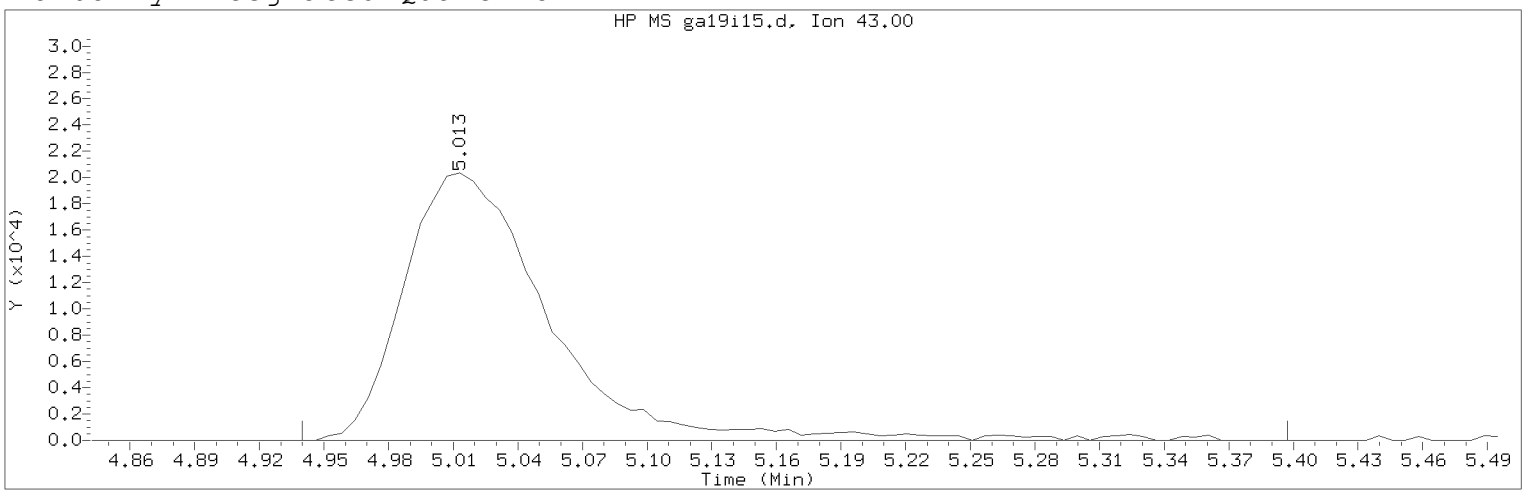
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

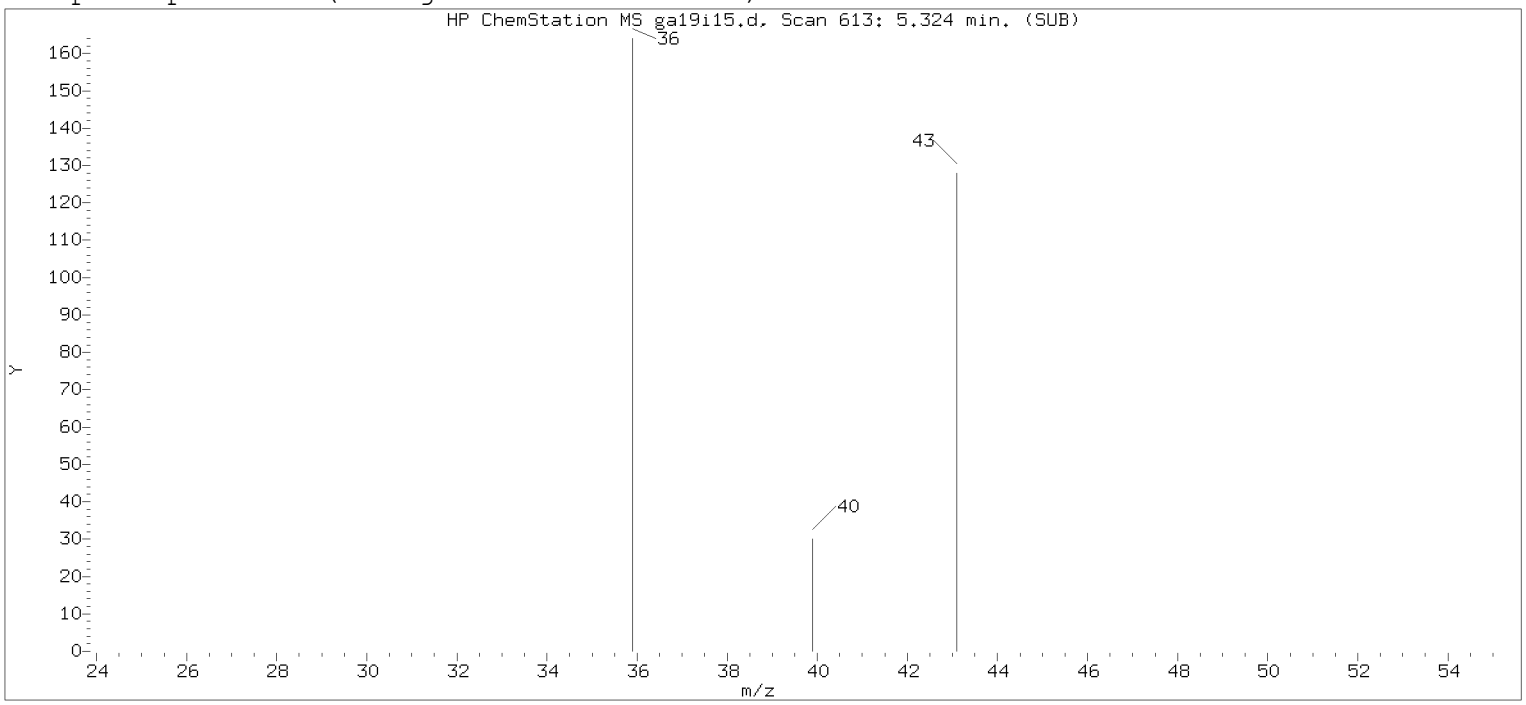
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 562
Retention Time (minutes): 5.013
Quant Ion : 43.00
Area (flag) : 95785M
On-Column Amount (ng) : 0.9537
Integration start scan : 549 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

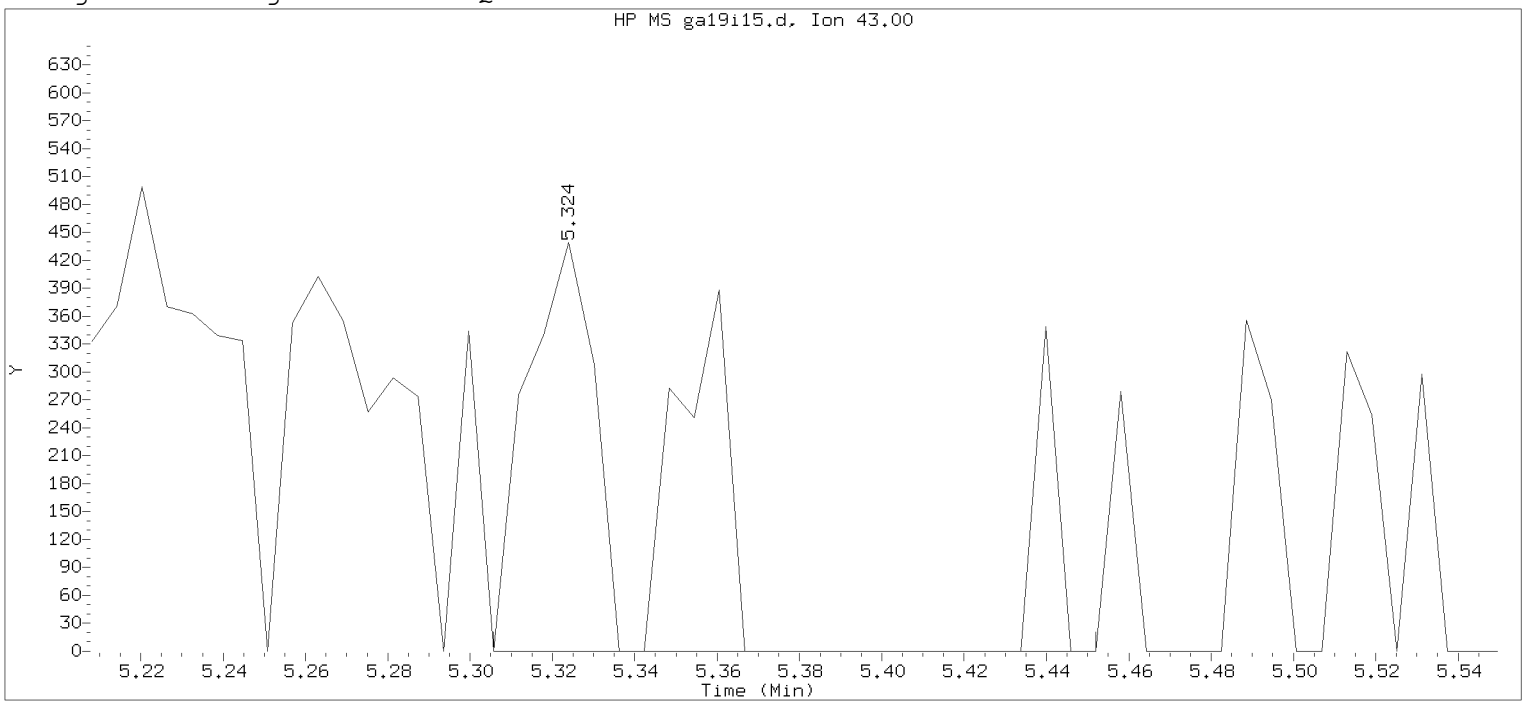
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 613
Retention Time (minutes): 5.324
Quant Ion : 43.00
Area : 963
On-column Amount (ng) : 1.7592
Integration start scan : 609 Integration stop scan: 633
Y at integration start : 0 Y at integration end: 0

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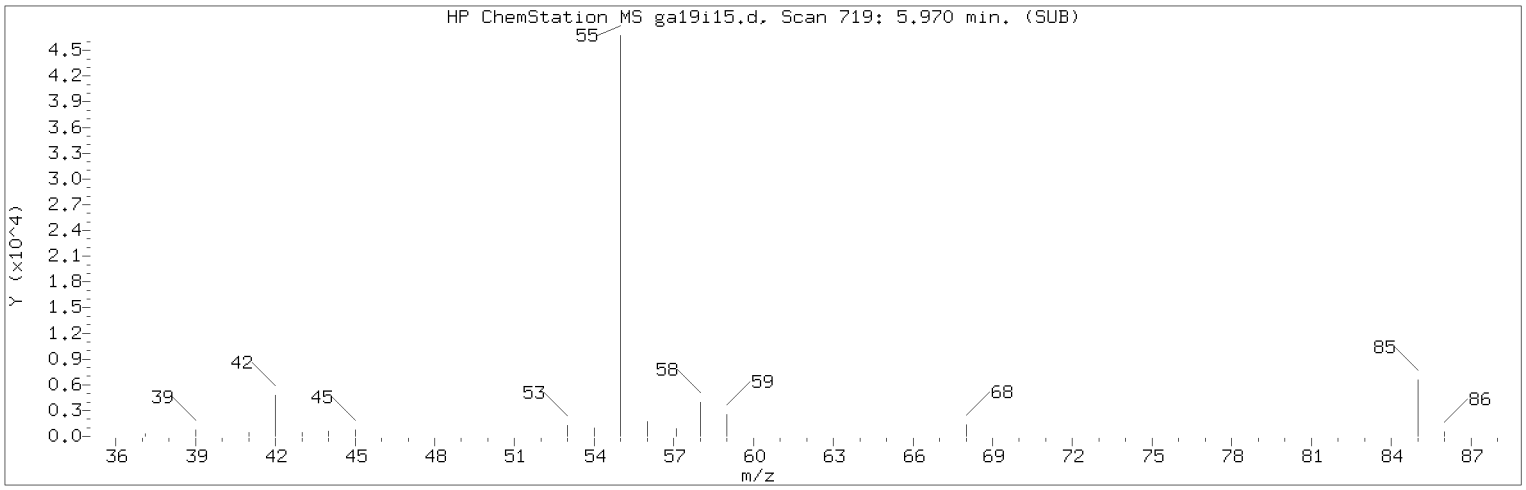
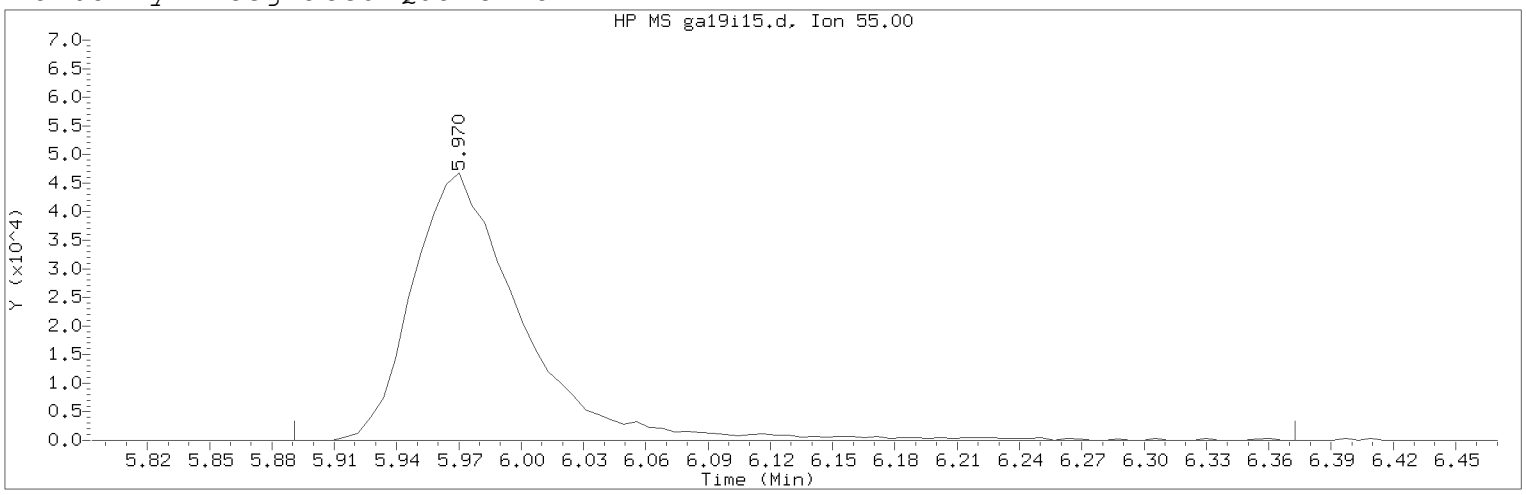
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

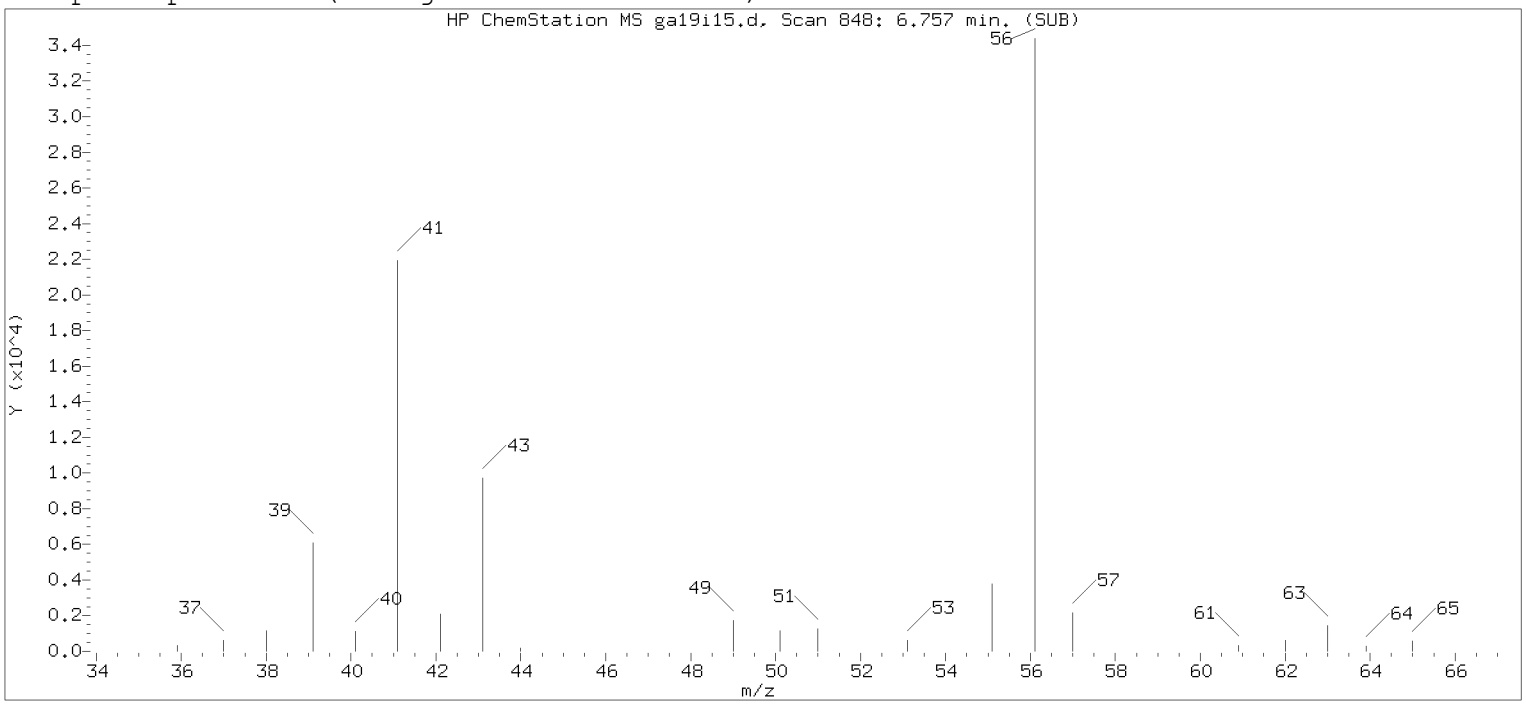
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 719
Retention Time (minutes): 5.970
Quant Ion : 55.00
Area (flag) : 170701M
On-Column Amount (ng) : 4.6647
Integration start scan : 705 Integration stop scan: 784
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

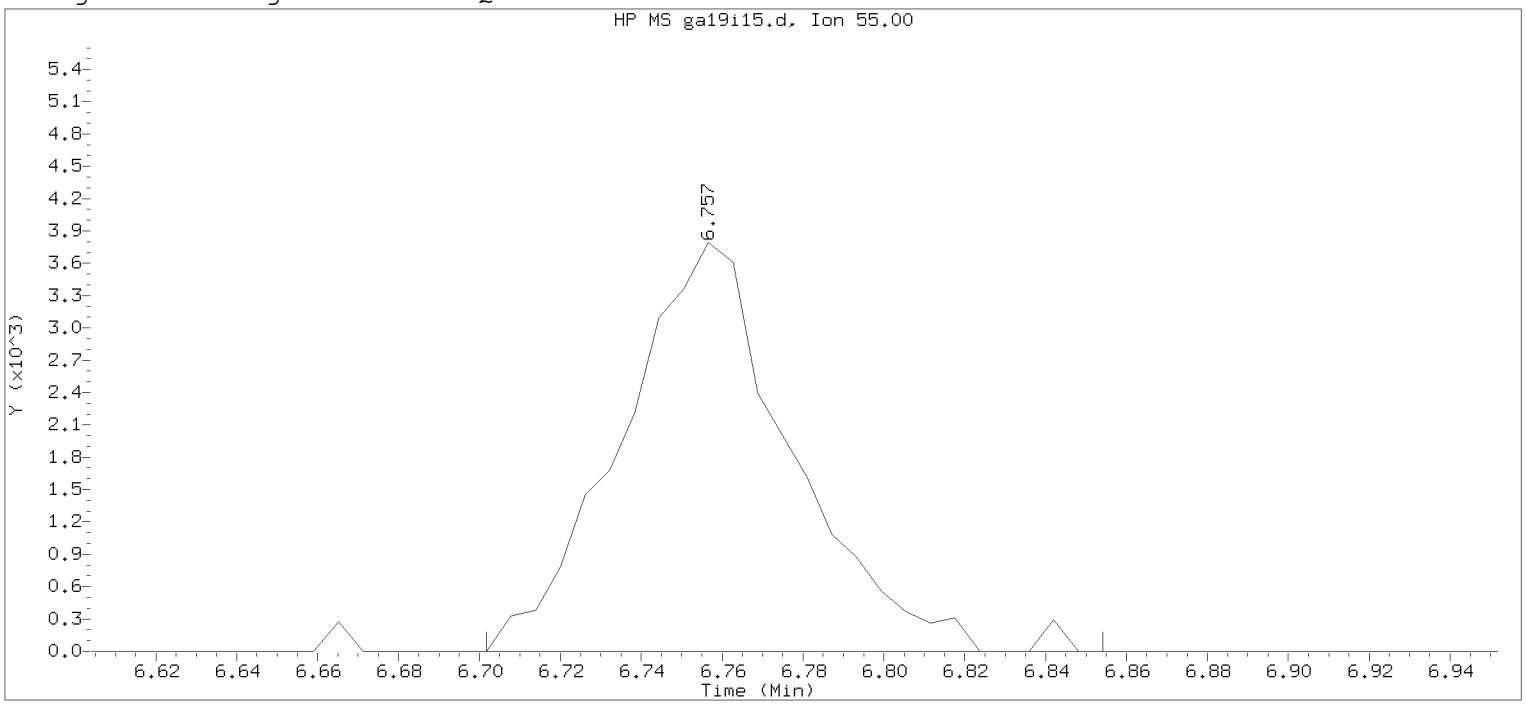
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 43		
Compound Name	: Methyl Acrylate		
Scan Number	: 848		
Retention Time (minutes)	: 6.757		
Quant Ion	: 55.00		
Area	: 11140		
On-column Amount (ng)	: 6.3295		
Integration start scan	: 838	Integration stop scan:	863
Y at integration start	: 0	Y at integration end:	0

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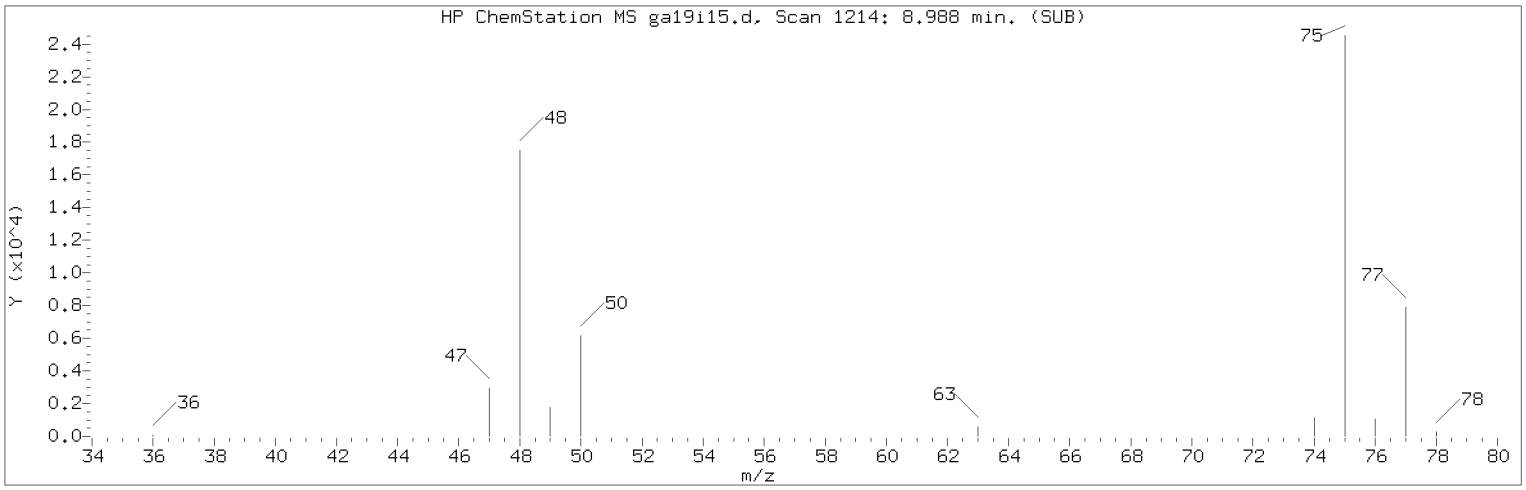
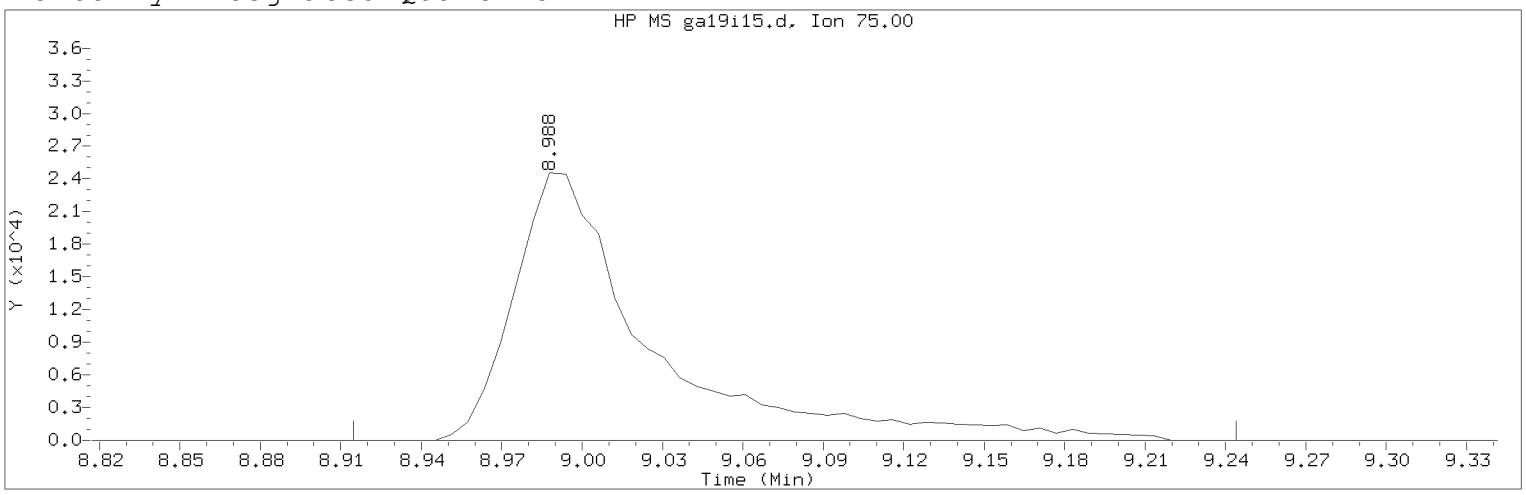
Target 3.5 esignature used. AE06 m.d 07/30/2015

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

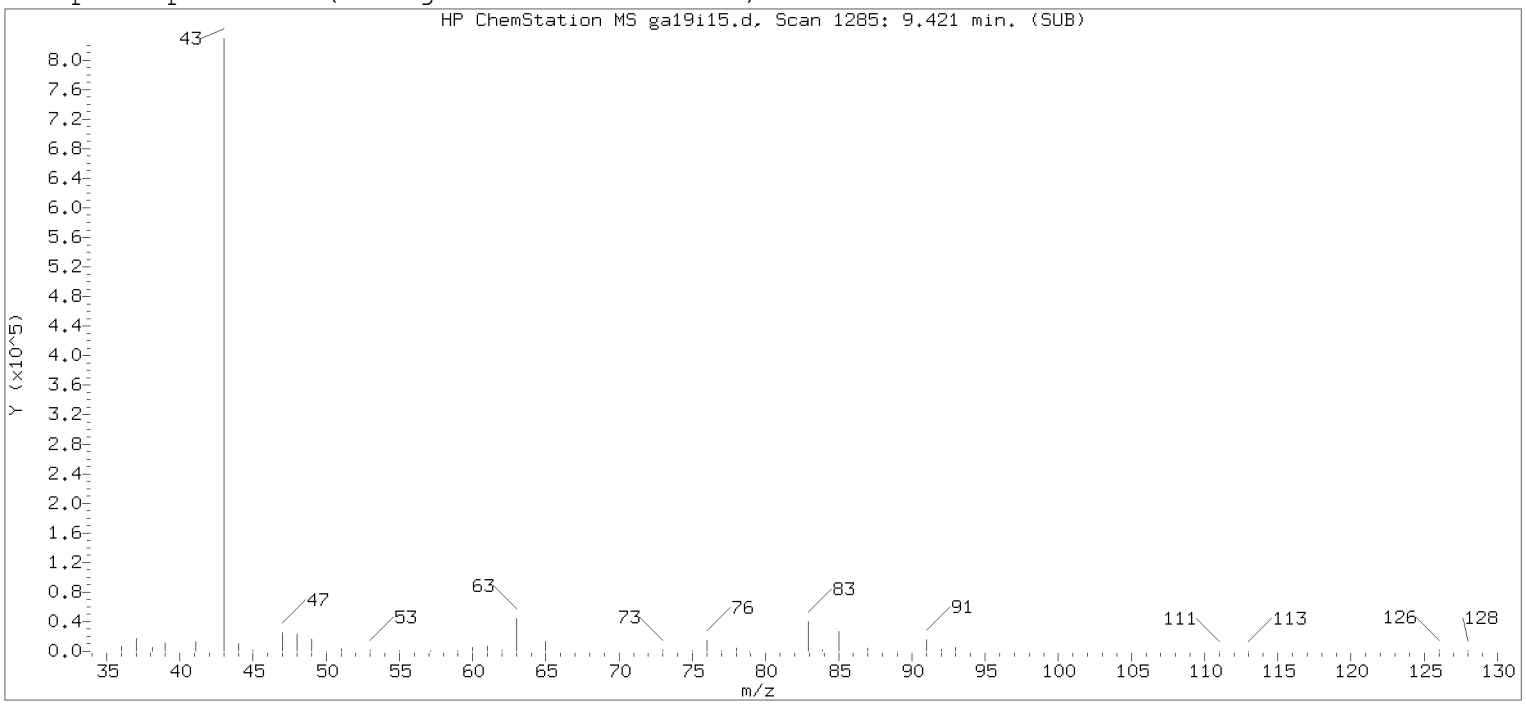
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1214
Retention Time (minutes): 8.988
Quant Ion : 75.00
Area (flag) : 87730M
On-Column Amount (ng) : 45.4027
Integration start scan : 1201 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

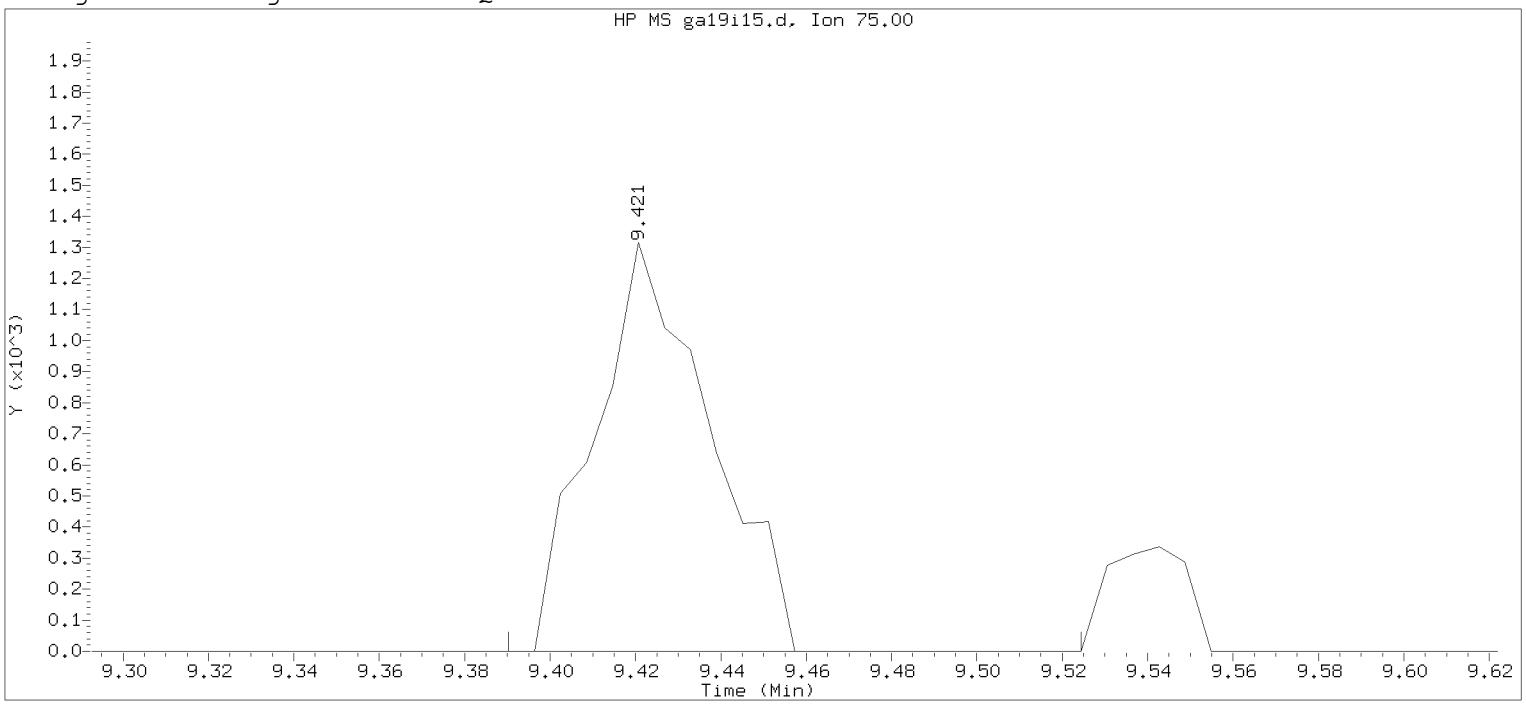
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

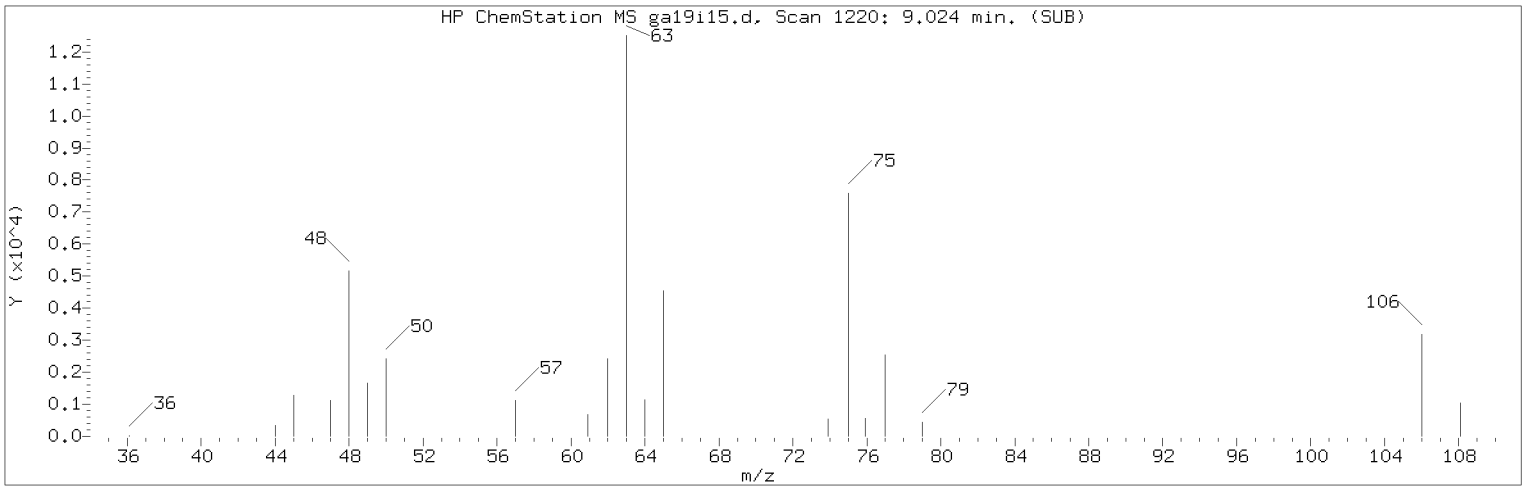
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

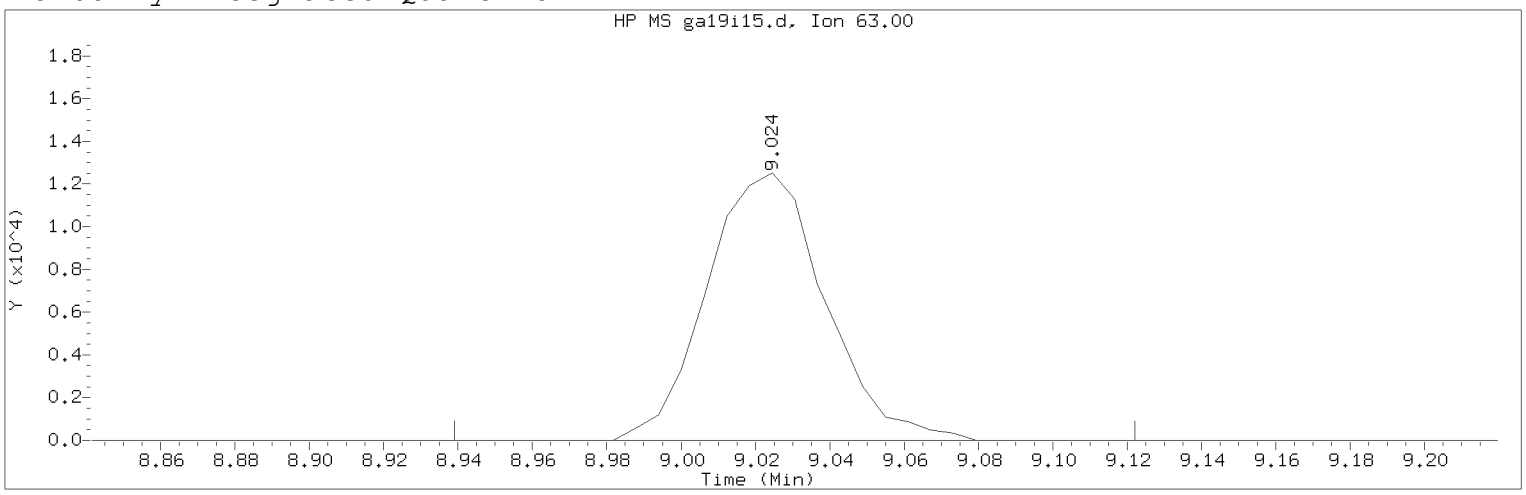
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1285
Retention Time (minutes): 9.421
Quant Ion : 75.00
Area : 2474
On-column Amount (ng) : 56.1047
Integration start scan : 1279 Integration stop scan: 1301
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

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Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

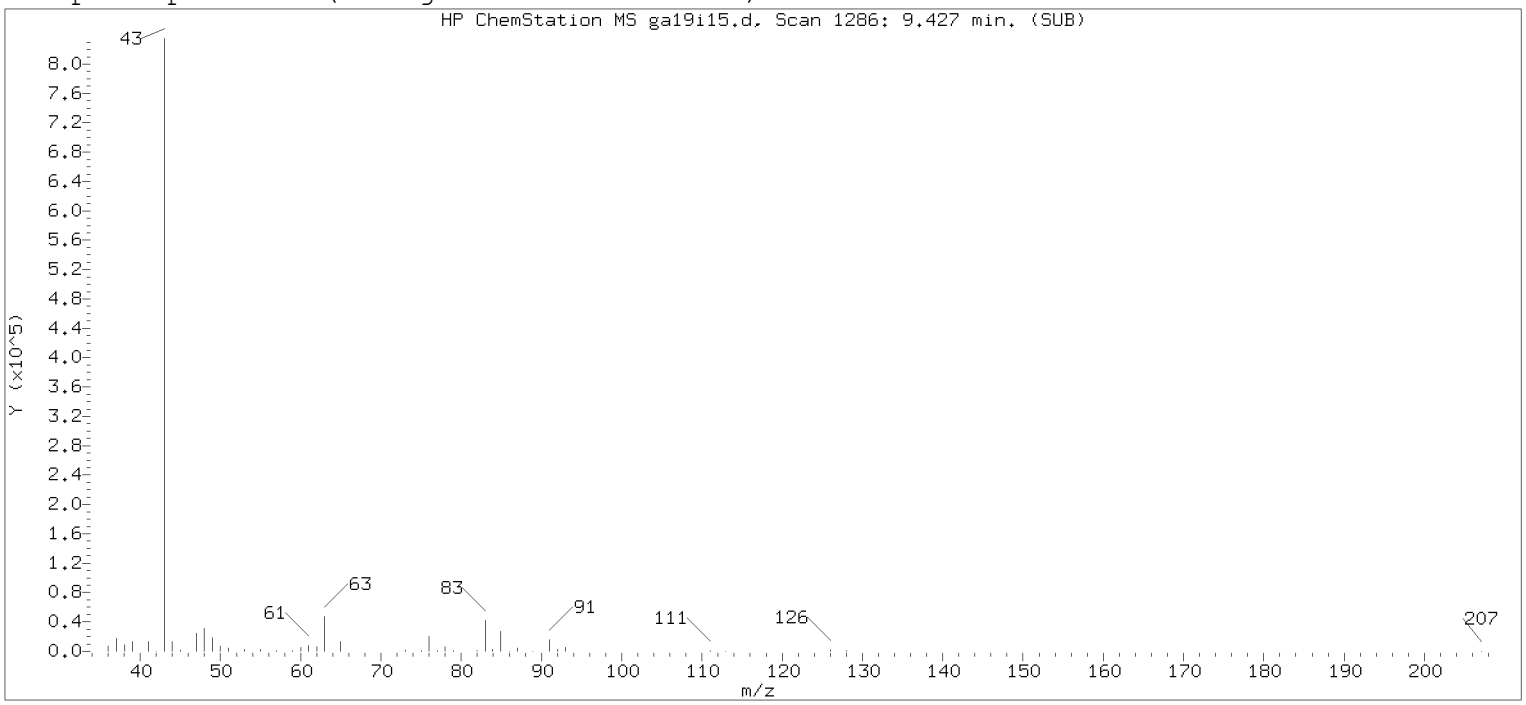
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1220
Retention Time (minutes): 9.024
Quant Ion : 63.00
Area (flag) : 27629M
On-Column Amount (ng) : 0.9262
Integration start scan : 1205 Integration stop scan: 1235
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

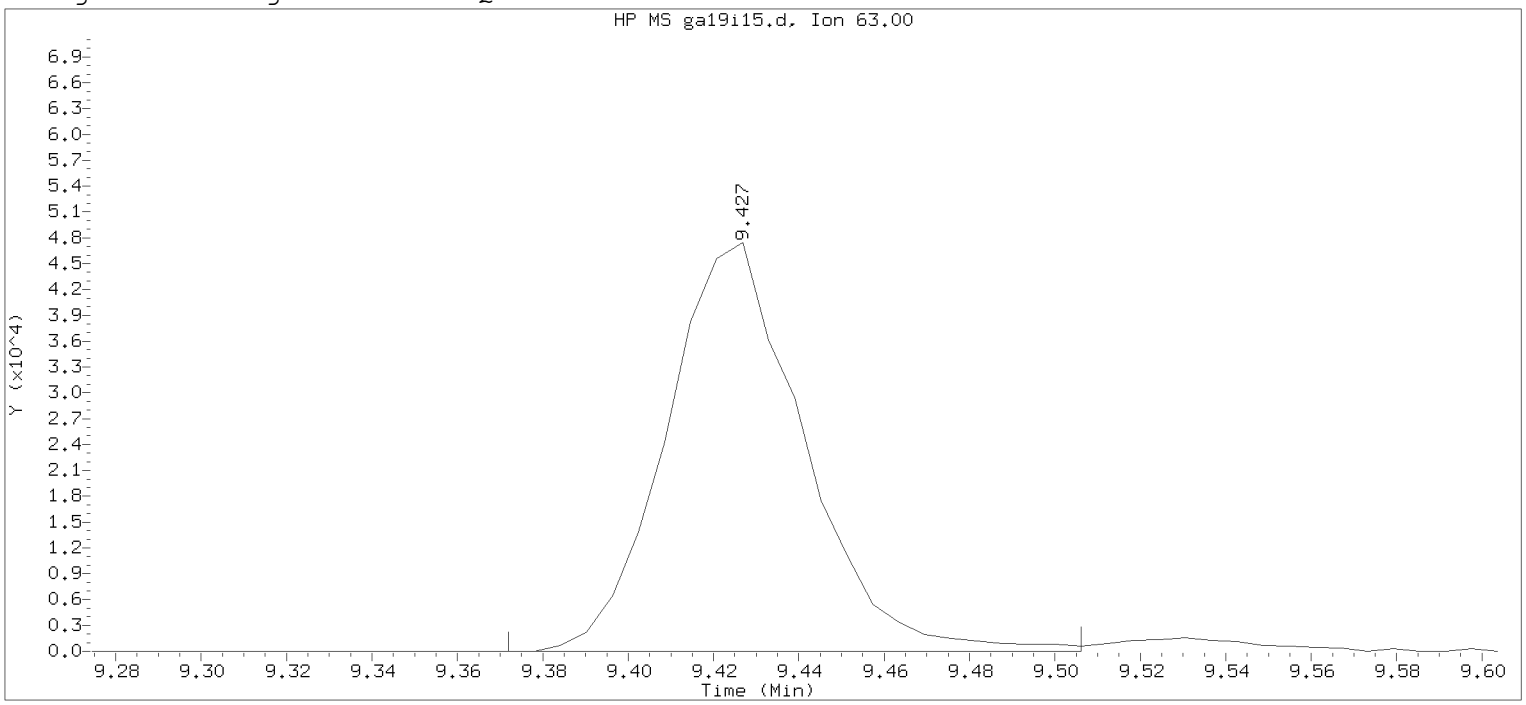
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

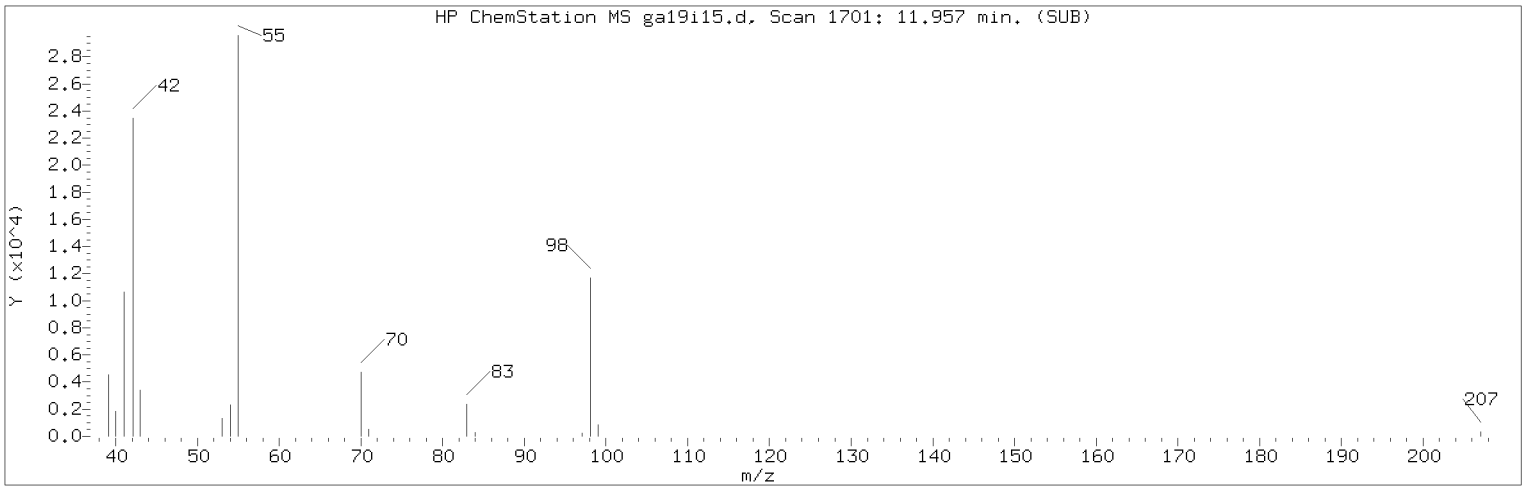
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

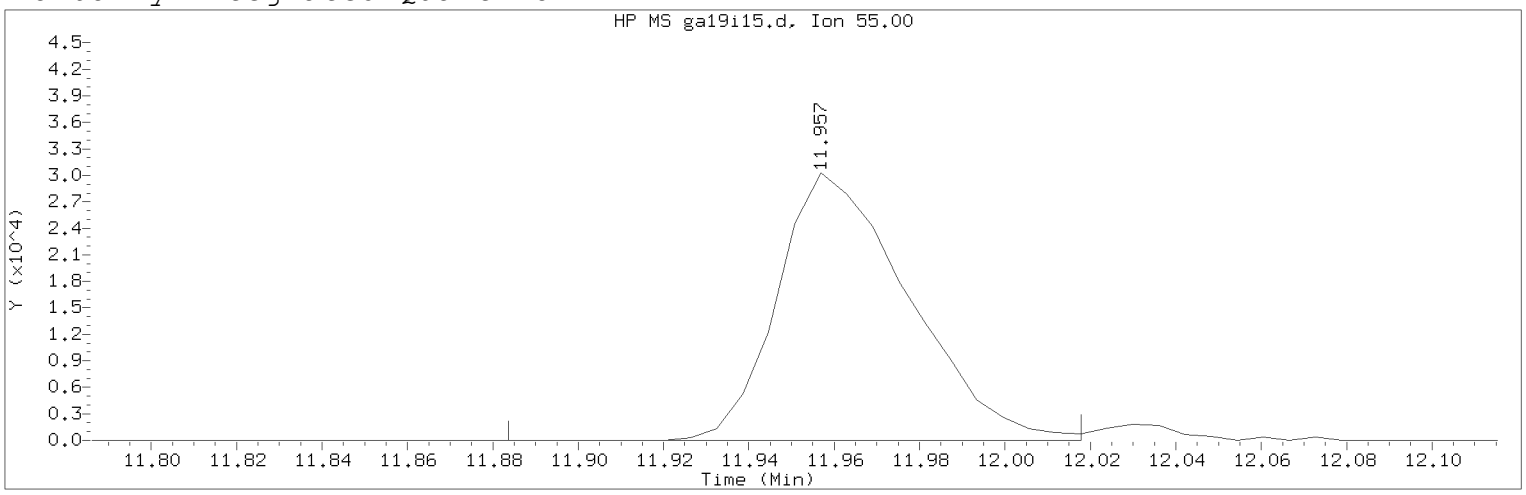
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 105861
On-column Amount (ng) : 1.1232
Integration start scan : 1276 Integration stop scan: 1298
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7670

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD001 Lab Sample ID: VSTD001

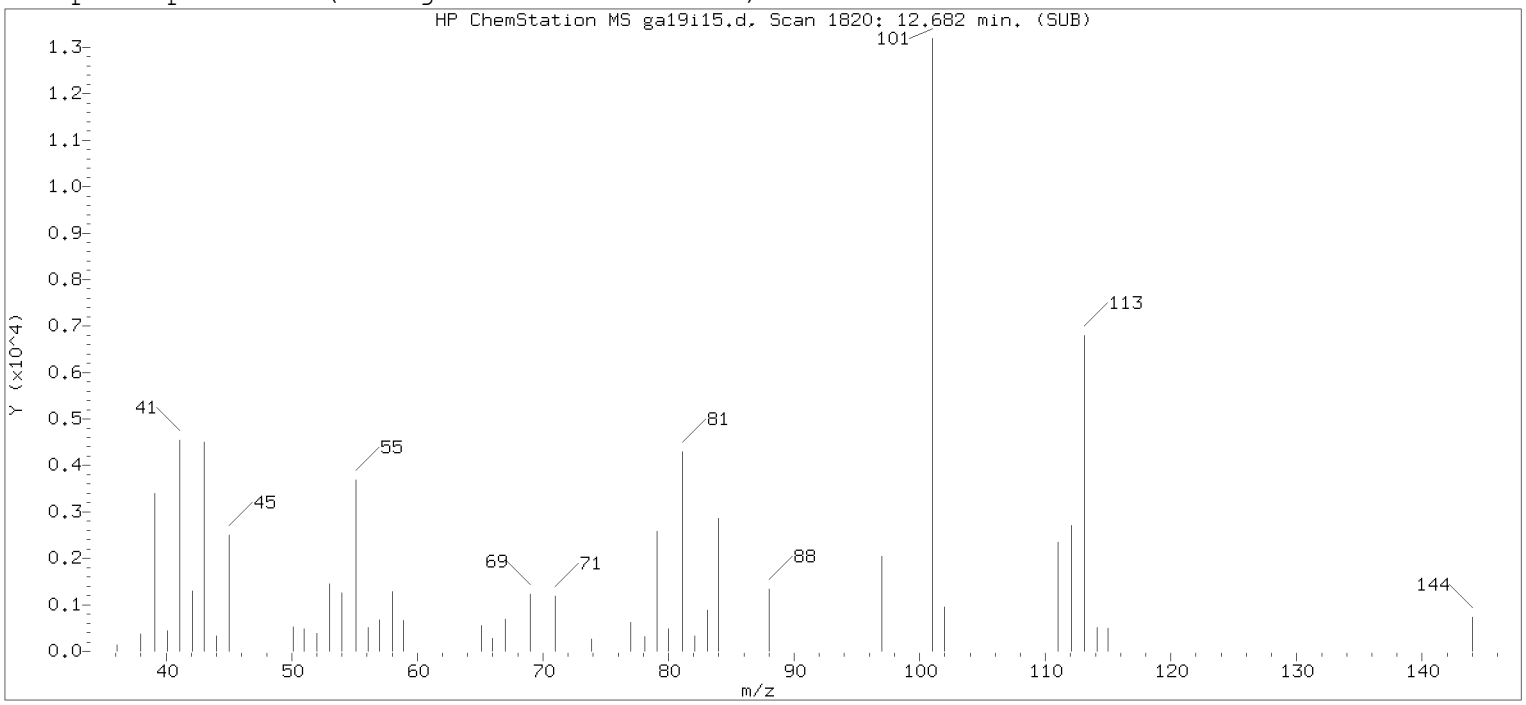
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 64560M
On-Column Amount (ng) : 46.5781
Integration start scan : 1688 Integration stop scan: 1710
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

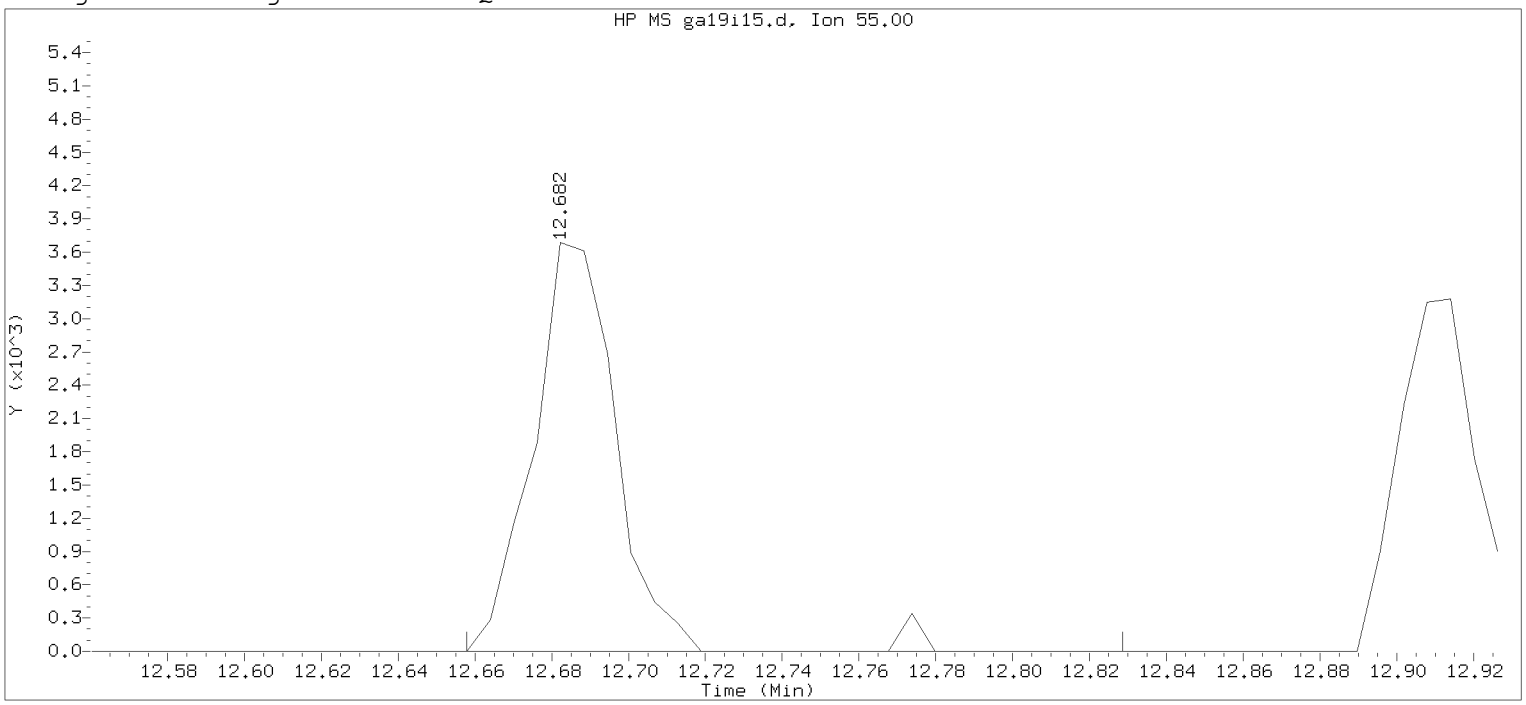
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



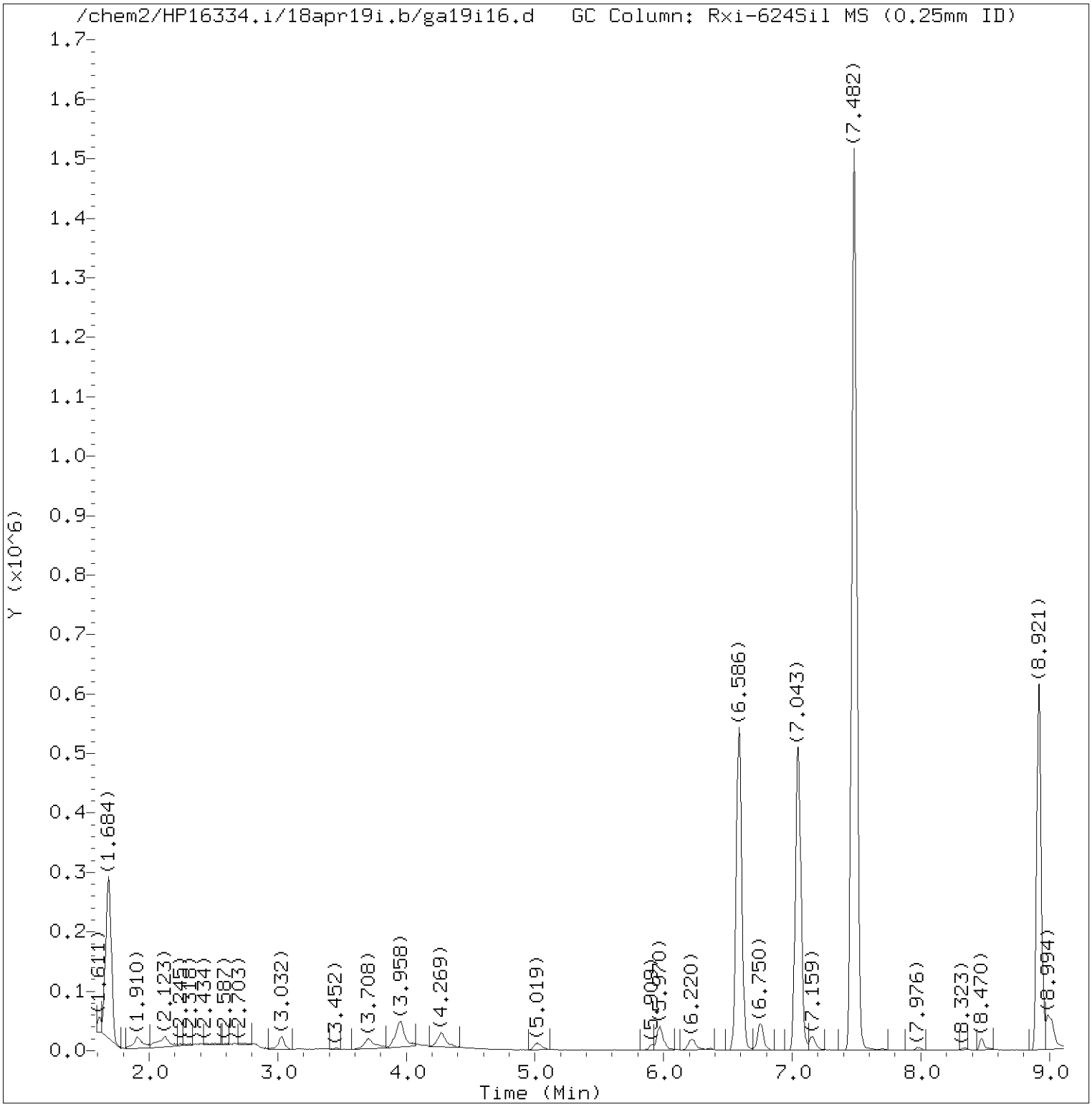
Data File: /chem2/HP16334.i/18apr19i.b/ga19i15.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:35 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 17:51
Date, time and analyst ID of latest file update: 19-Apr-2018 17:51 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1820
Retention Time (minutes): 12.682
Quant Ion : 55.00
Area : 5567
On-column Amount (ng) : 147.6218
Integration start scan : 1815 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. AE06 mdc 7689



Total Ion Chromatogram (TIC)

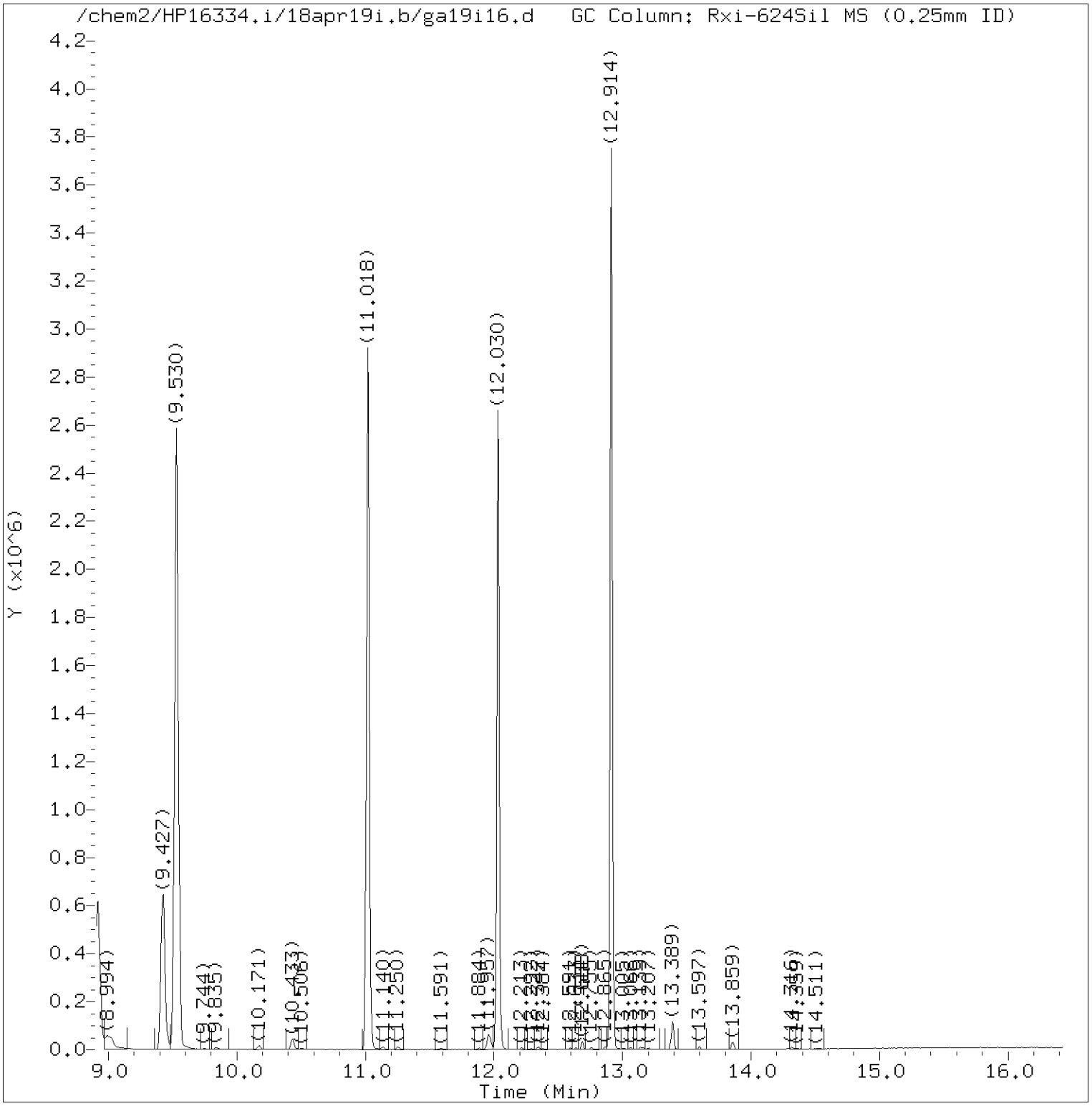
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

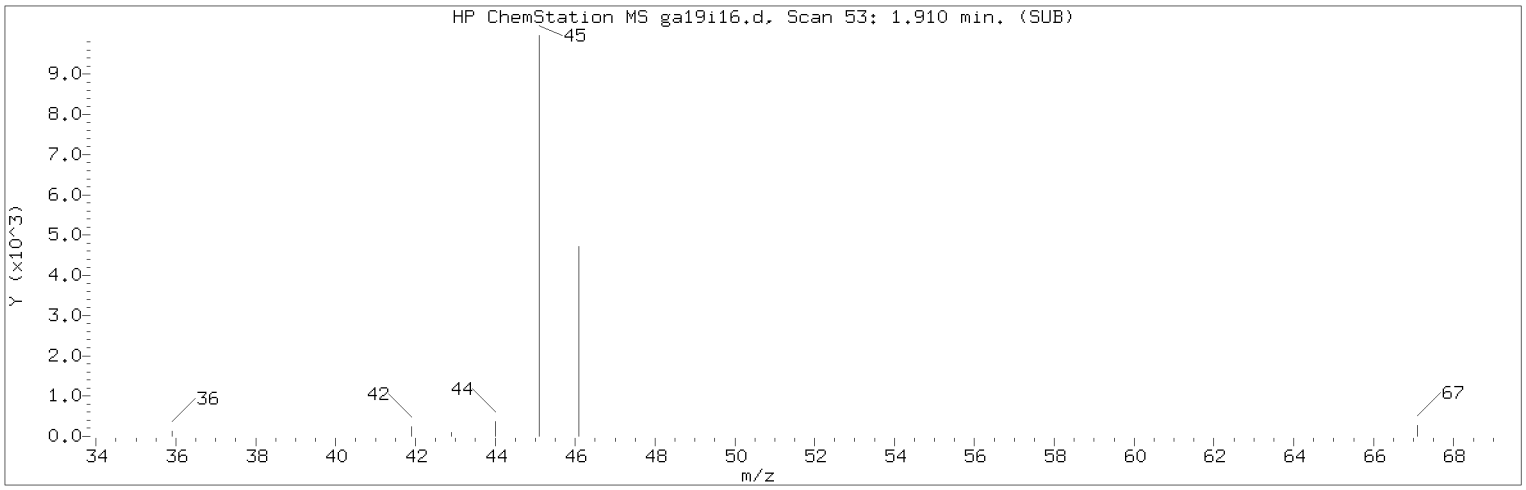
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	35889M	0.517
25) Acetonitrile	(1)	3.702	41	104877M	22.499
26)*t-Butyl Alcohol-d10	(1)	3.958	65	202412	50.000
36) Vinyl Acetate	(2)	5.019	43	41652M	0.435
43) Methyl Acrylate	(2)	5.970	55	86023M	2.419
53) 1-Chlorobutane	(2)	6.750	56	53551	0.505
63)*Fluorobenzene	(2)	7.482	96	1951602	10.000
77) Chloroacetonitrile	(2)	8.994	75	44949M	23.981
78) 2-Chloroethyl vinyl ether	(2)	9.018	63	13434M	0.467
97)*Chlorobenzene-d5	(3)	11.018	117	1475874	10.000
112) Cyclohexanone	(1)	11.957	55	31110M	23.441
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	823717	10.000
142) Hexachloroethane	(4)	13.389	117	12879	0.421

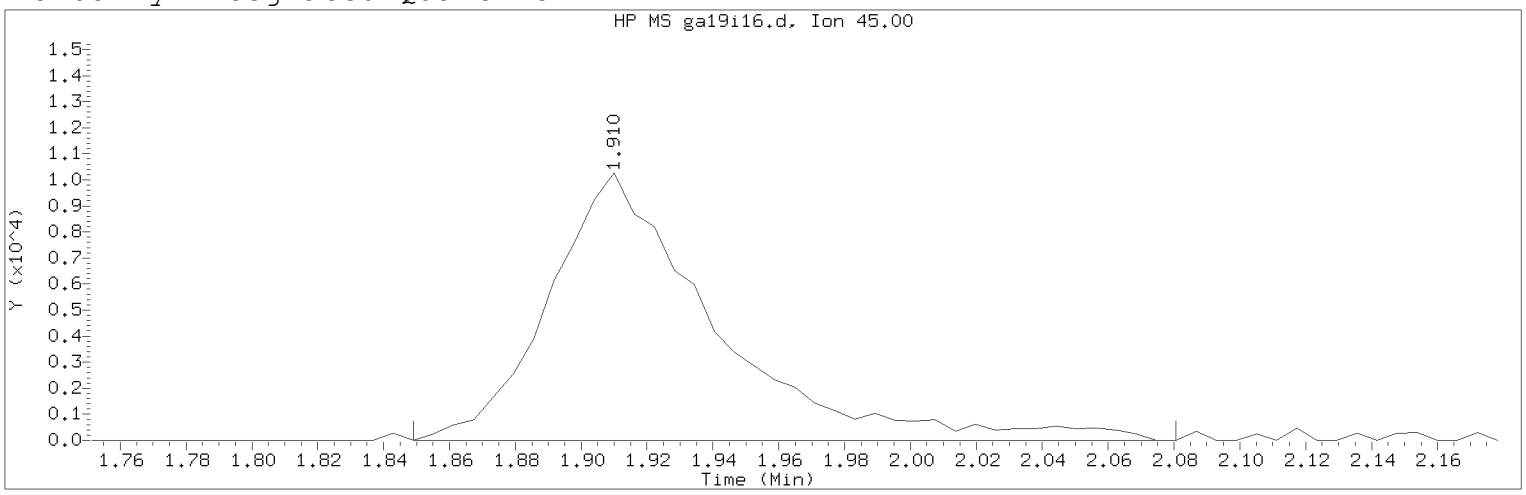
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

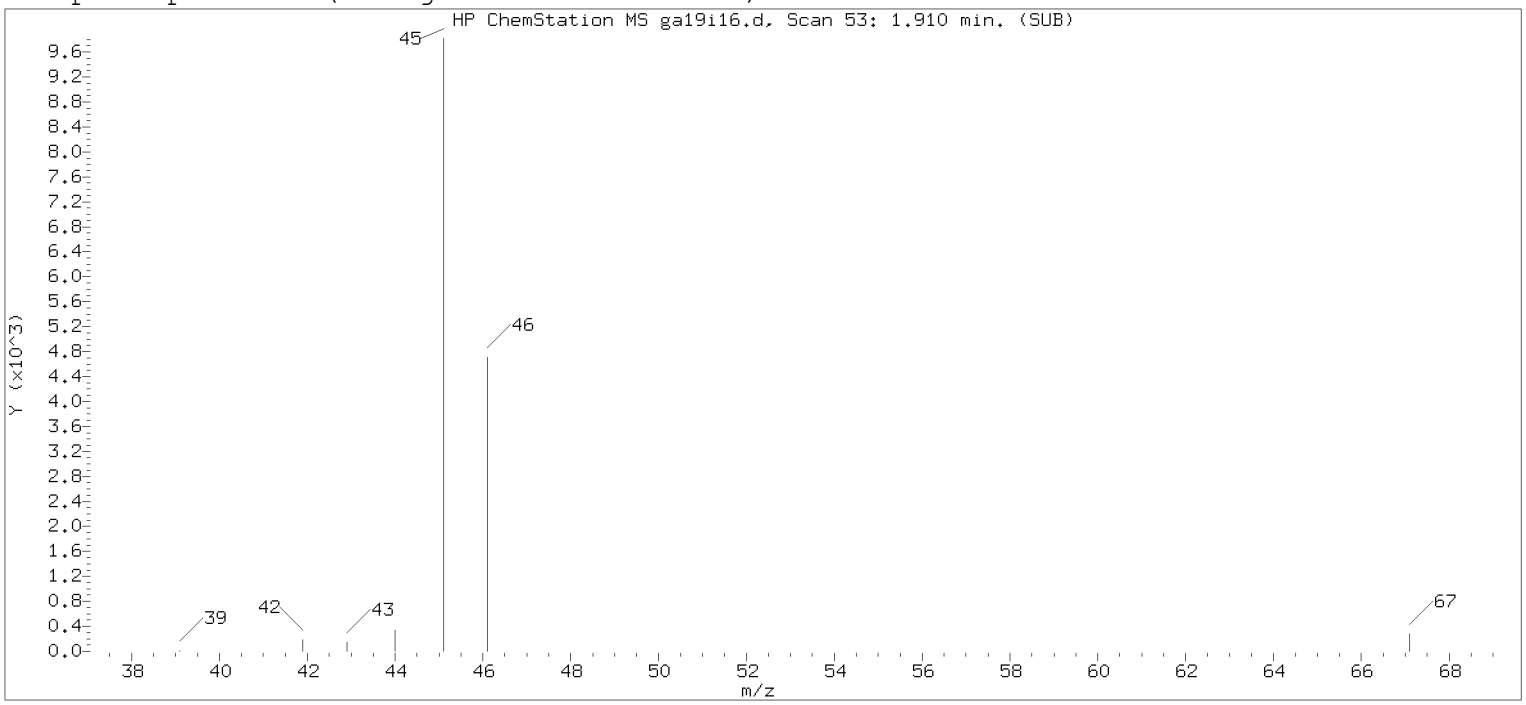
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 53		
Retention Time (minutes)	: 1.910		
Quant Ion	: 45.00		
Area (flag)	: 35889M		
On-Column Amount (ng)	: 0.5170		
Integration start scan	: 42	Integration stop scan:	80
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

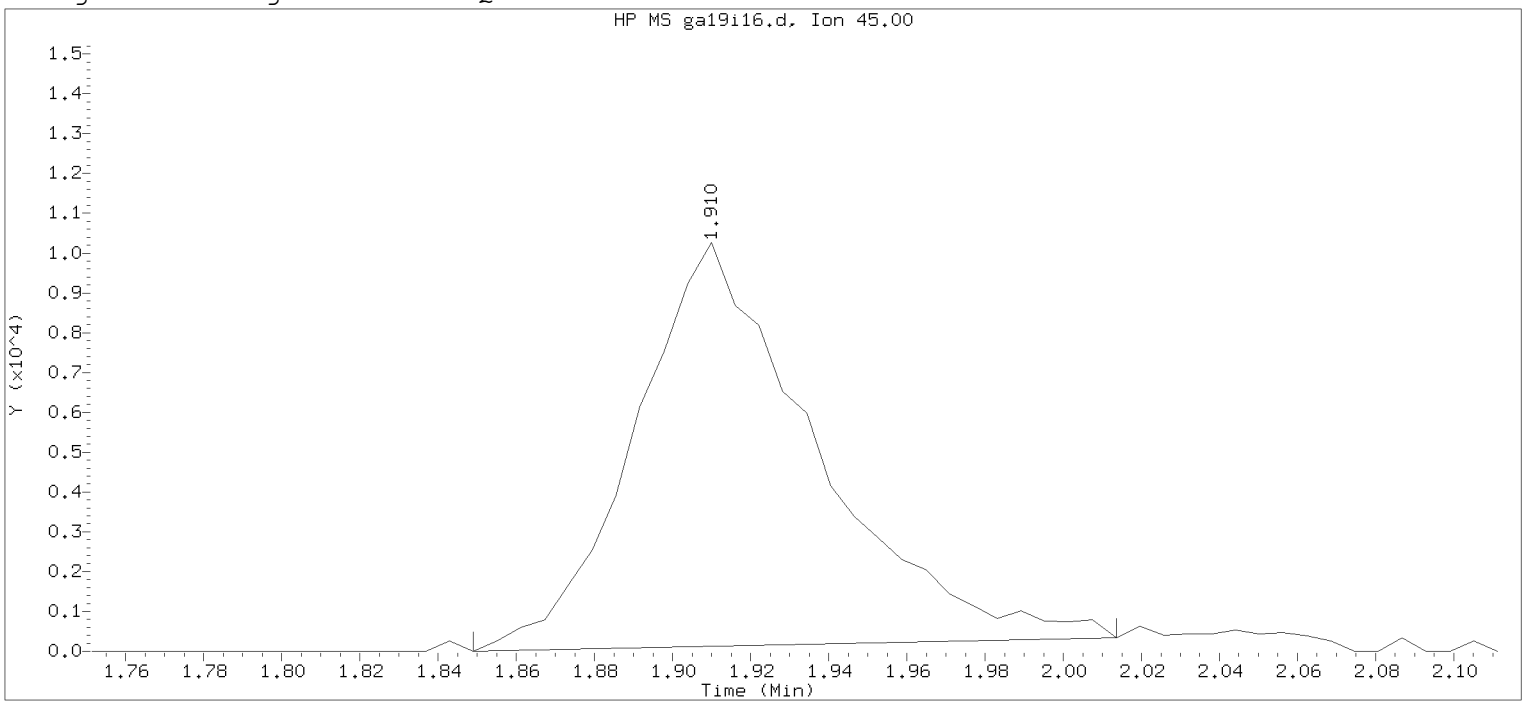
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area : 32721
On-column Amount (ng) : 0.5614
Integration start scan : 42 Integration stop scan: 69
Y at integration start : 0 Y at integration end: 335

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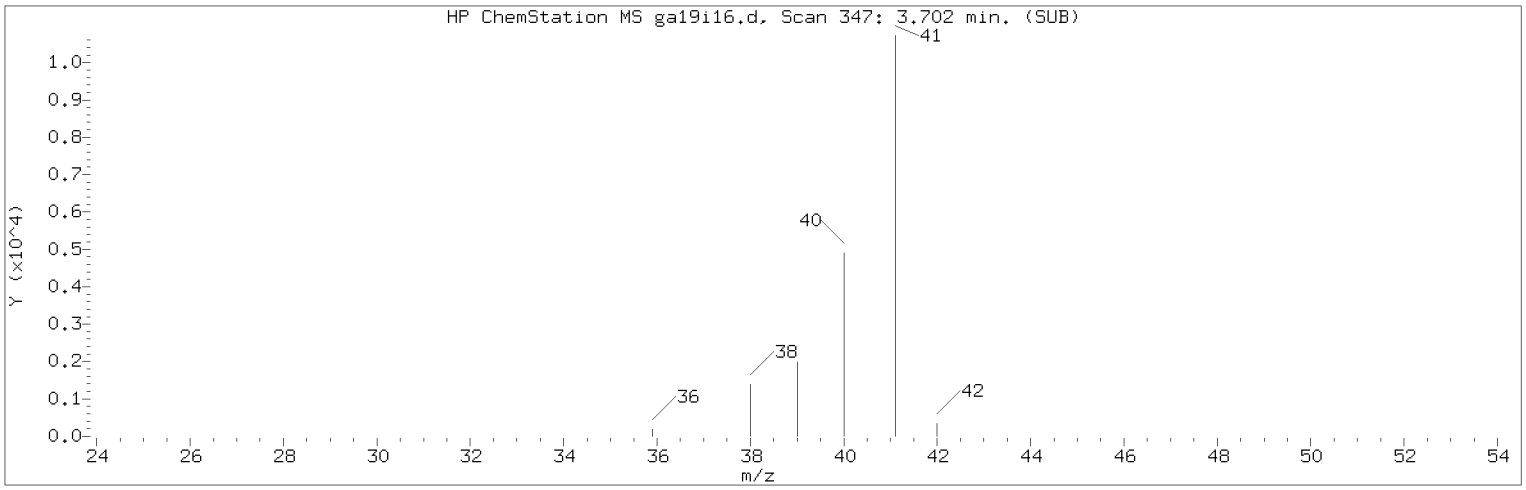
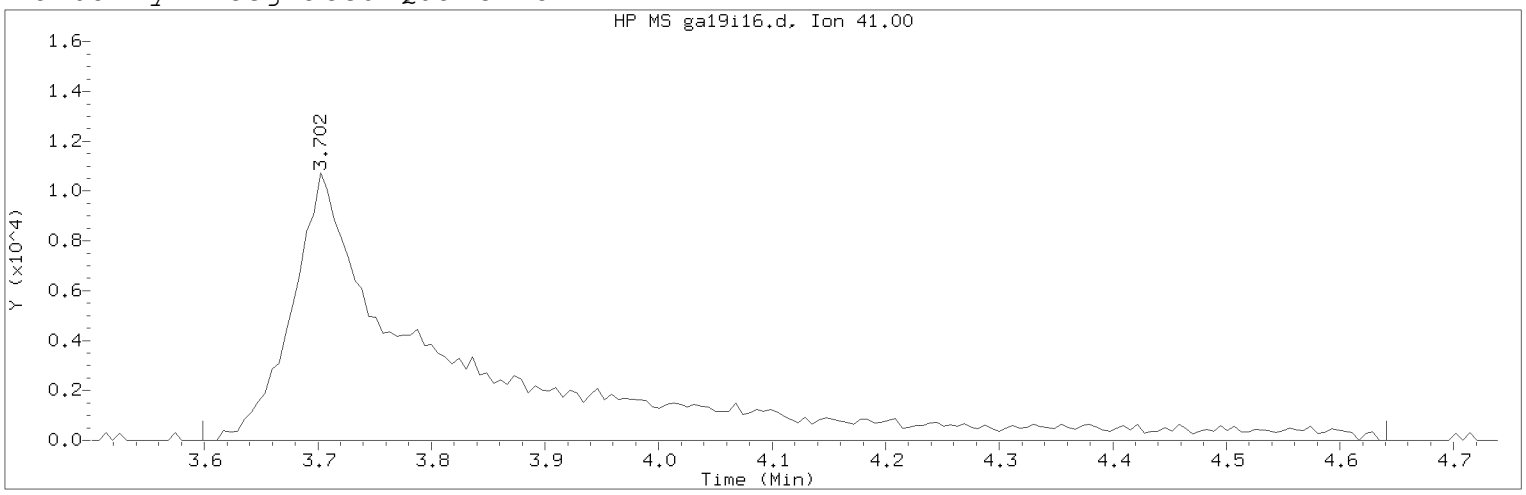
Target 3.5 esignature used. Page 7694

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

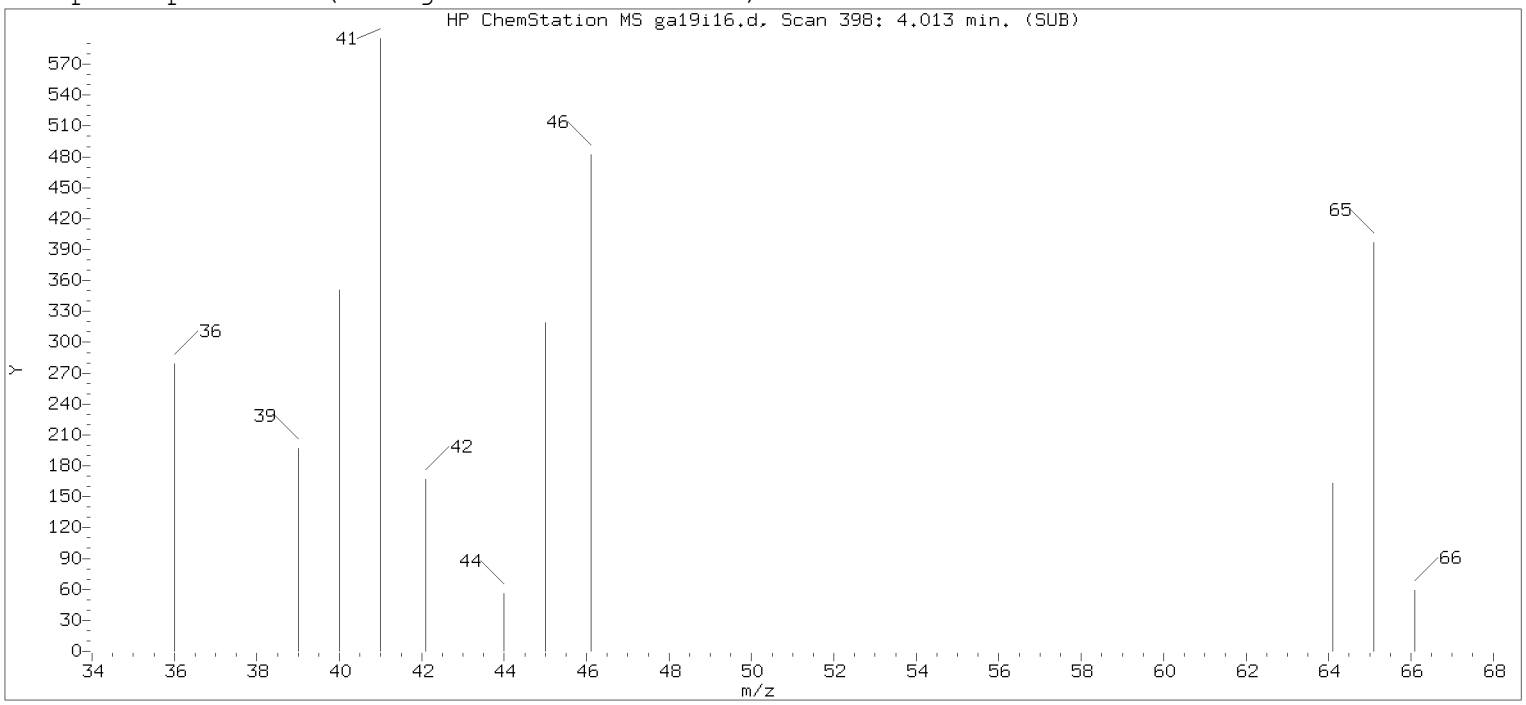
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 104877M
On-Column Amount (ng) : 22.4989
Integration start scan : 329 Integration stop scan: 500
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

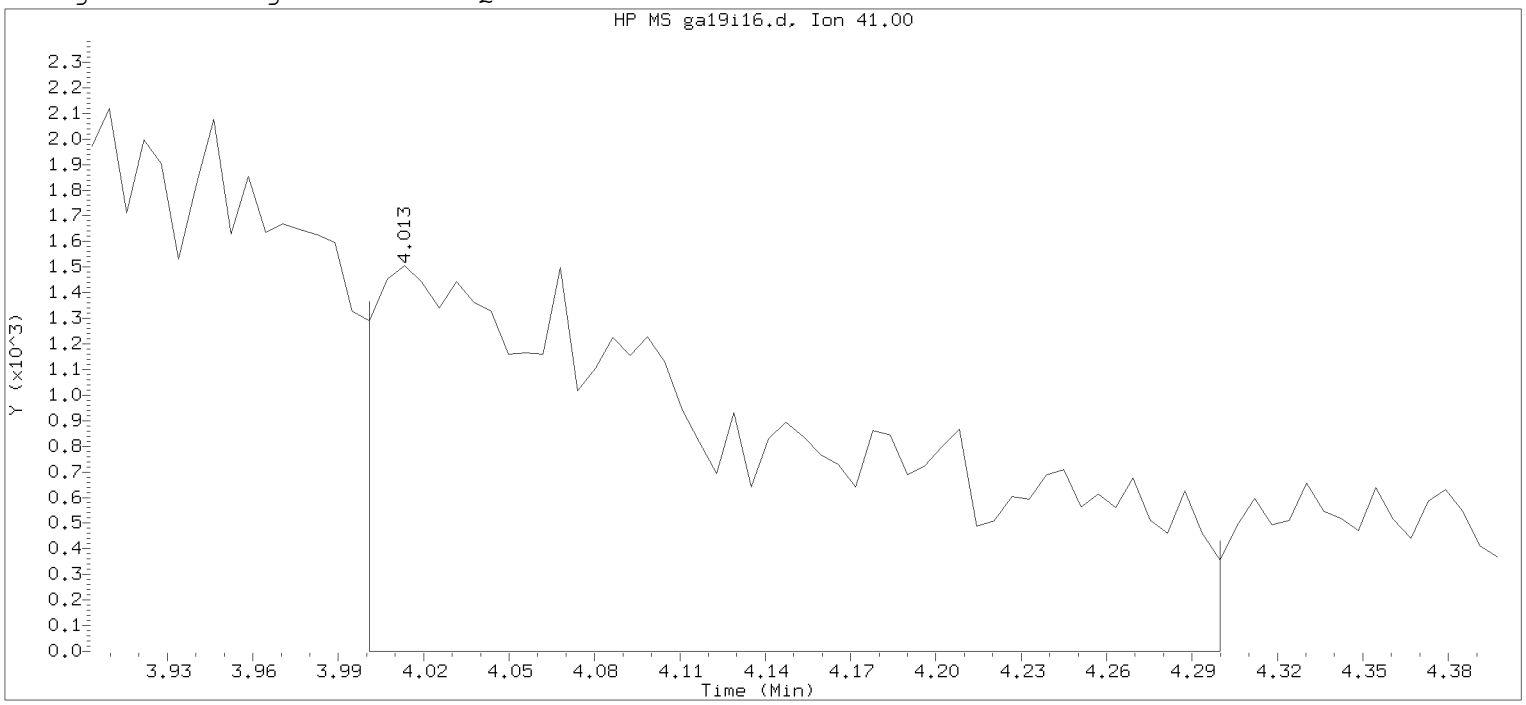
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 398		
Retention Time (minutes)	: 4.013		
Quant Ion	: 41.00		
Area	: 16137		
On-column Amount (ng)	: 41.9733		
Integration start scan	: 395	Integration stop scan:	444
Y at integration start	: 0	Y at integration end:	0

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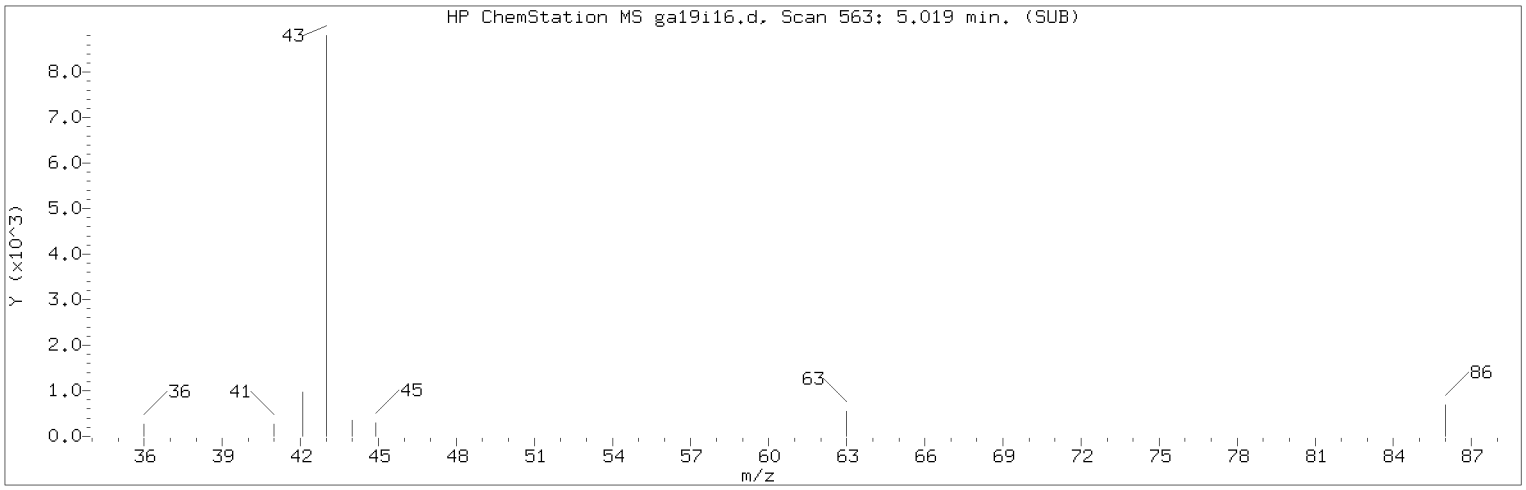
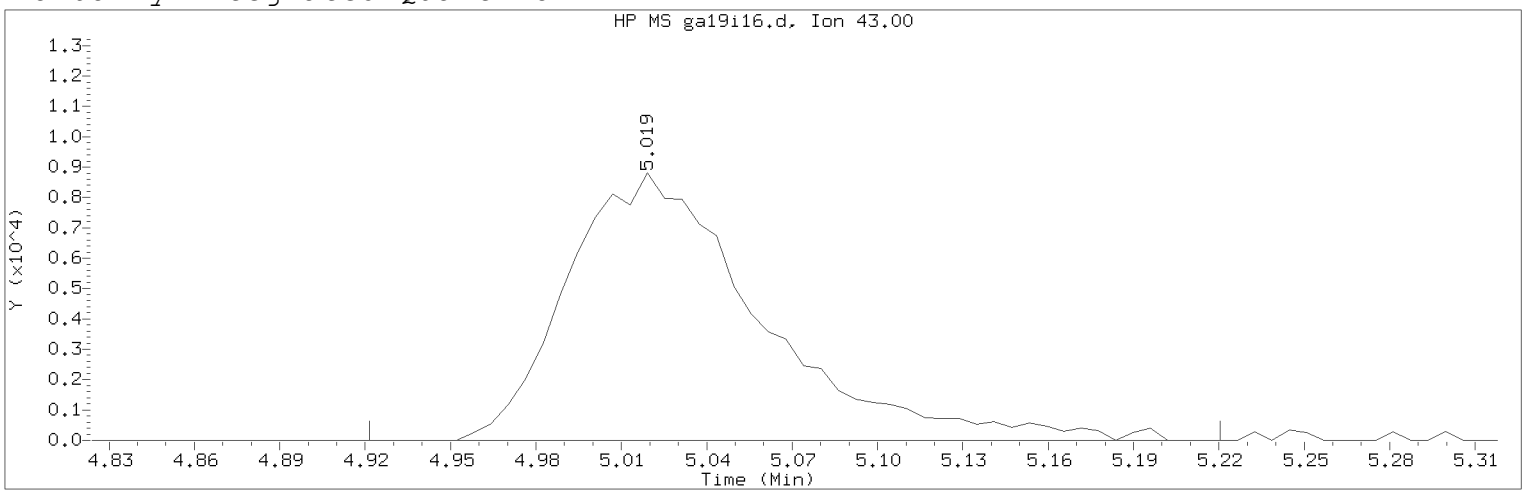
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

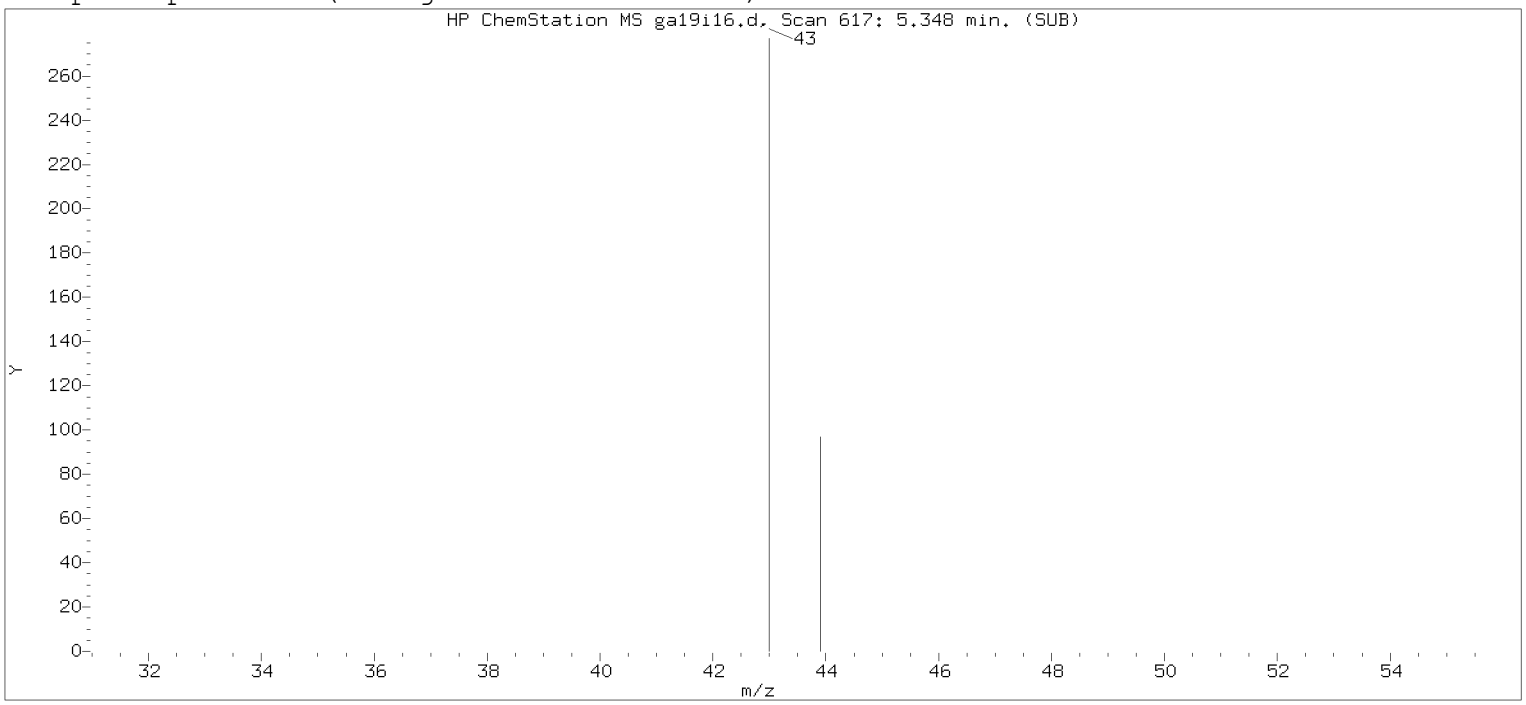
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 563
Retention Time (minutes): 5.019
Quant Ion : 43.00
Area (flag) : 41652M
On-Column Amount (ng) : 0.4351
Integration start scan : 546 Integration stop scan: 595
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

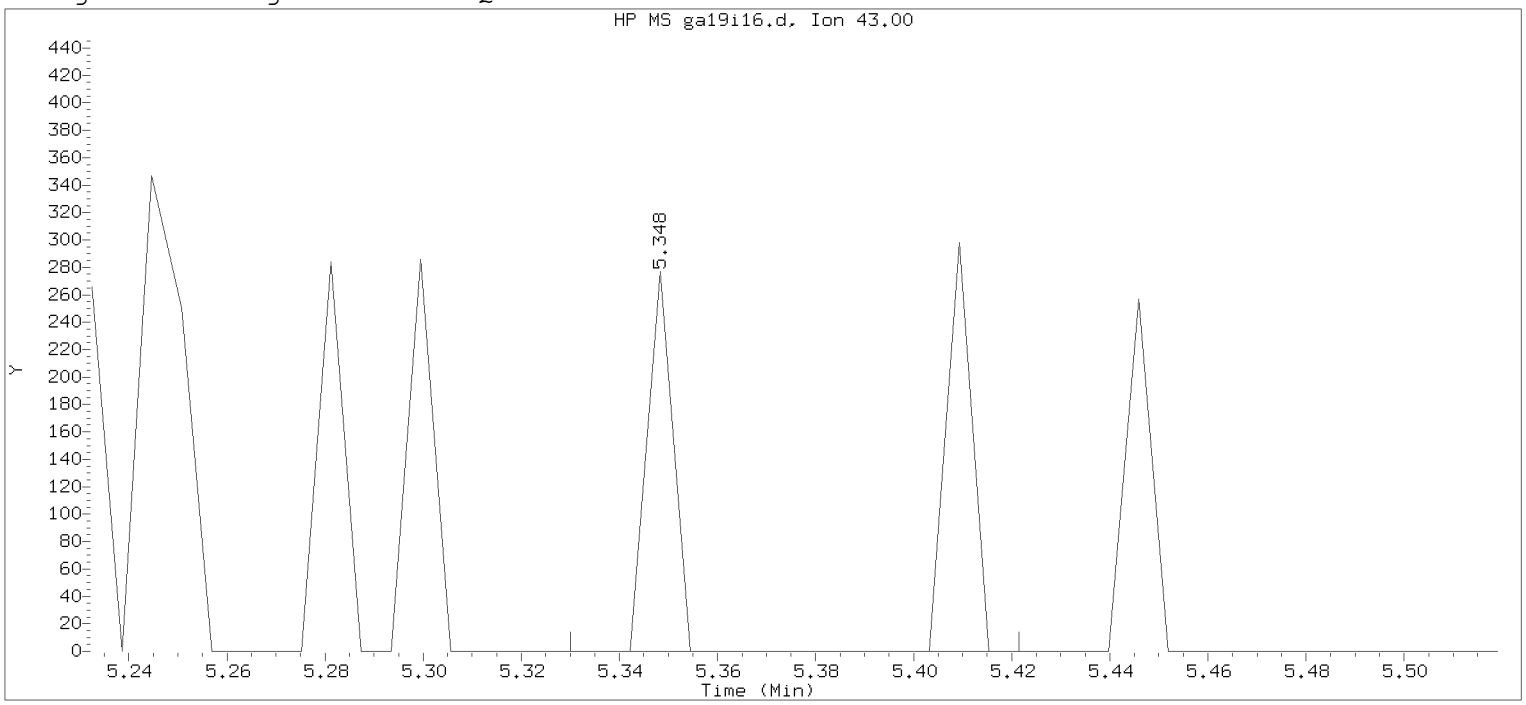
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

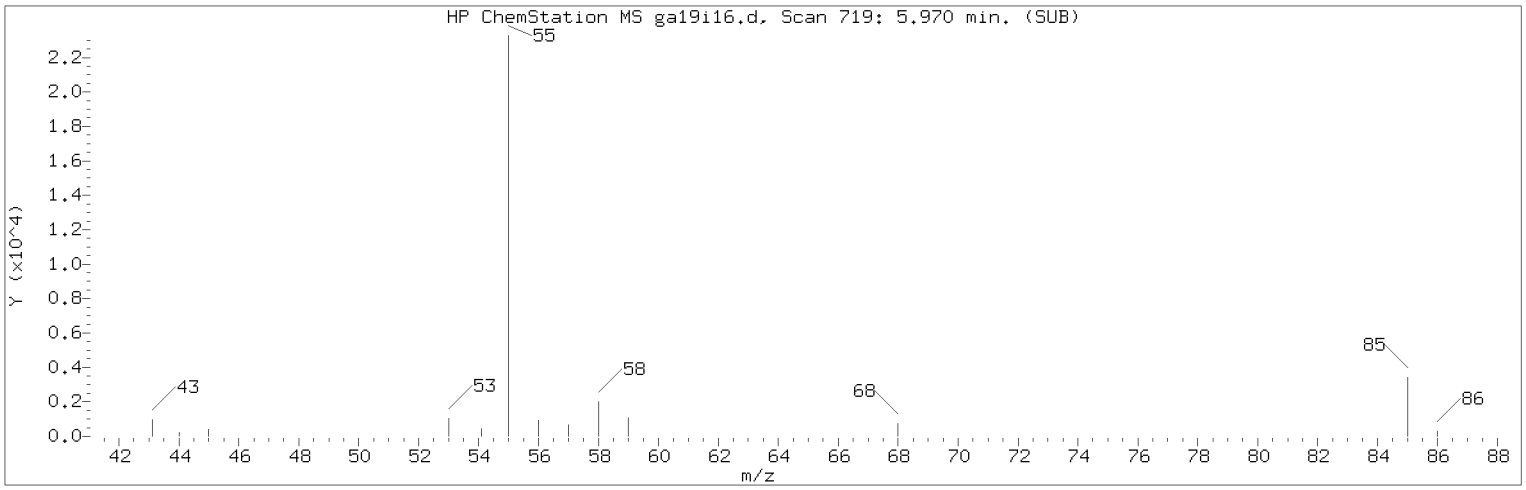
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

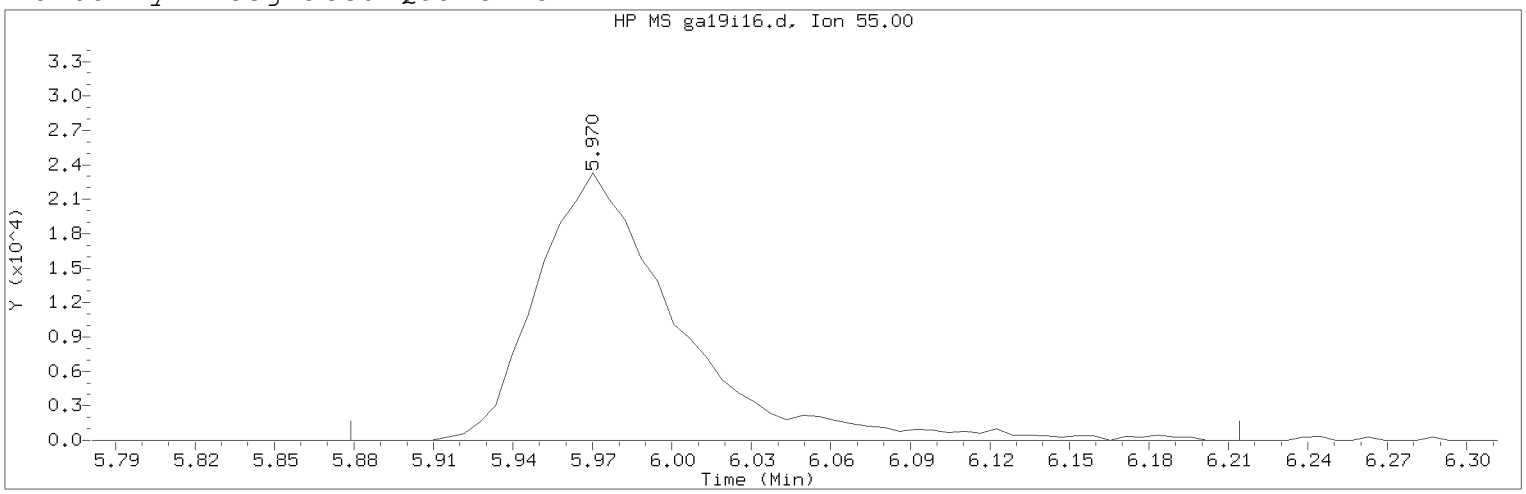
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 617		
Retention Time (minutes)	: 5.348		
Quant Ion	: 43.00		
Area	: 210		
On-column Amount (ng)	: 0.4150		
Integration start scan	: 613	Integration stop scan:	628
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

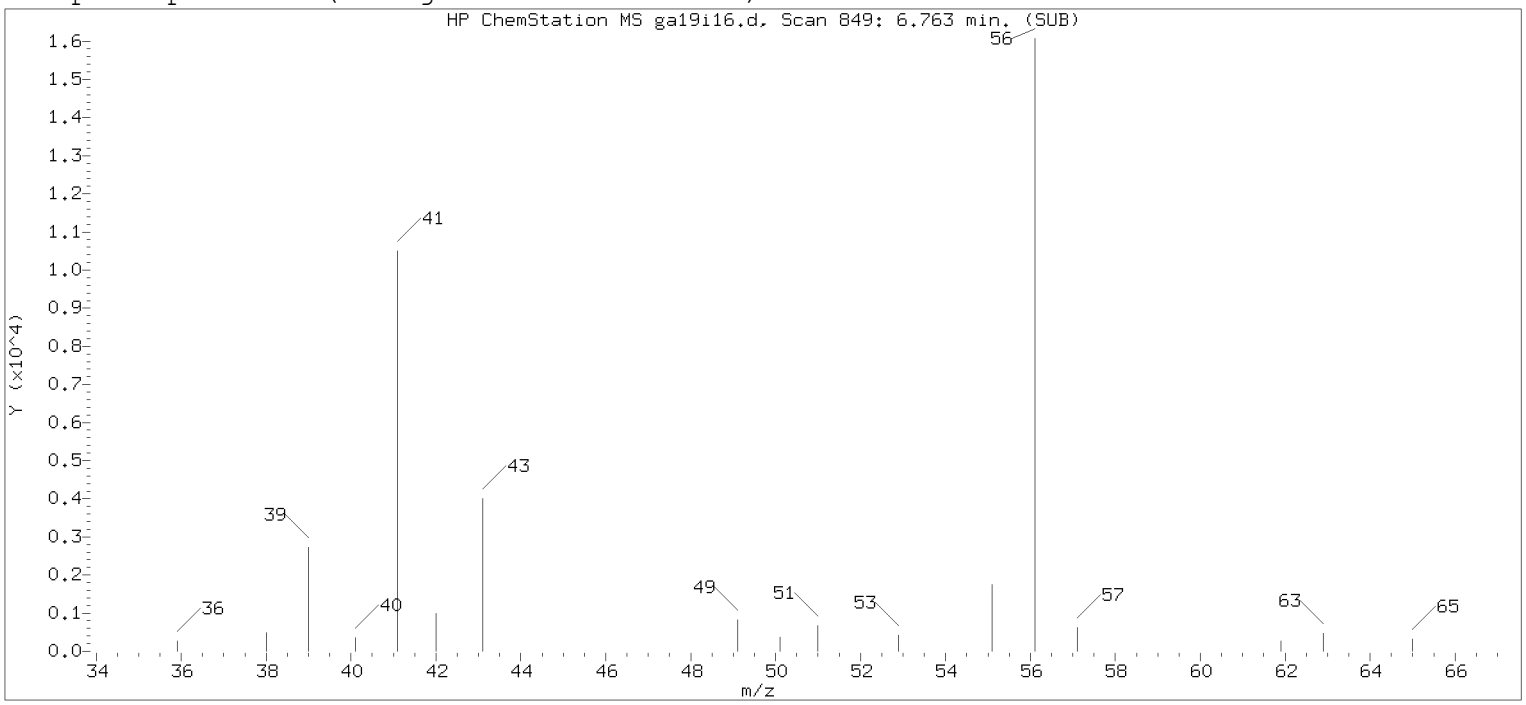
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 719
Retention Time (minutes): 5.970
Quant Ion : 55.00
Area (flag) : 86023M
On-Column Amount (ng) : 2.4193
Integration start scan : 703 Integration stop scan: 758
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

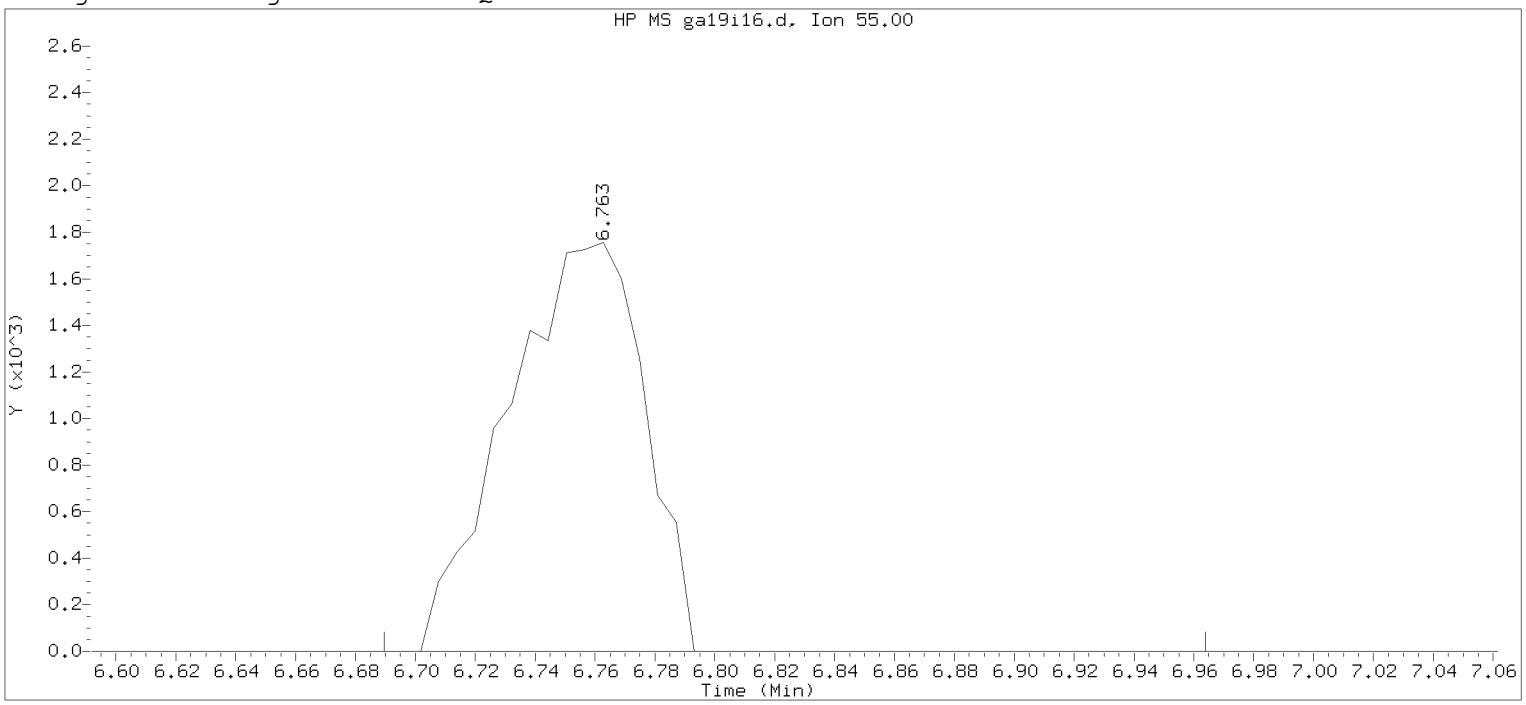
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

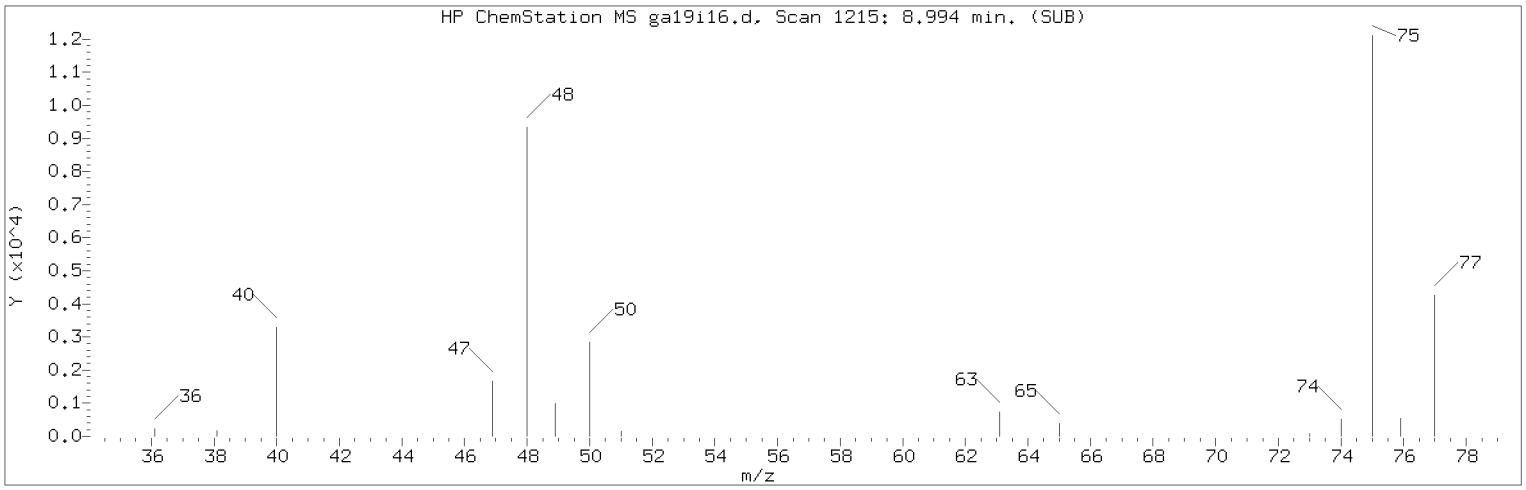
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

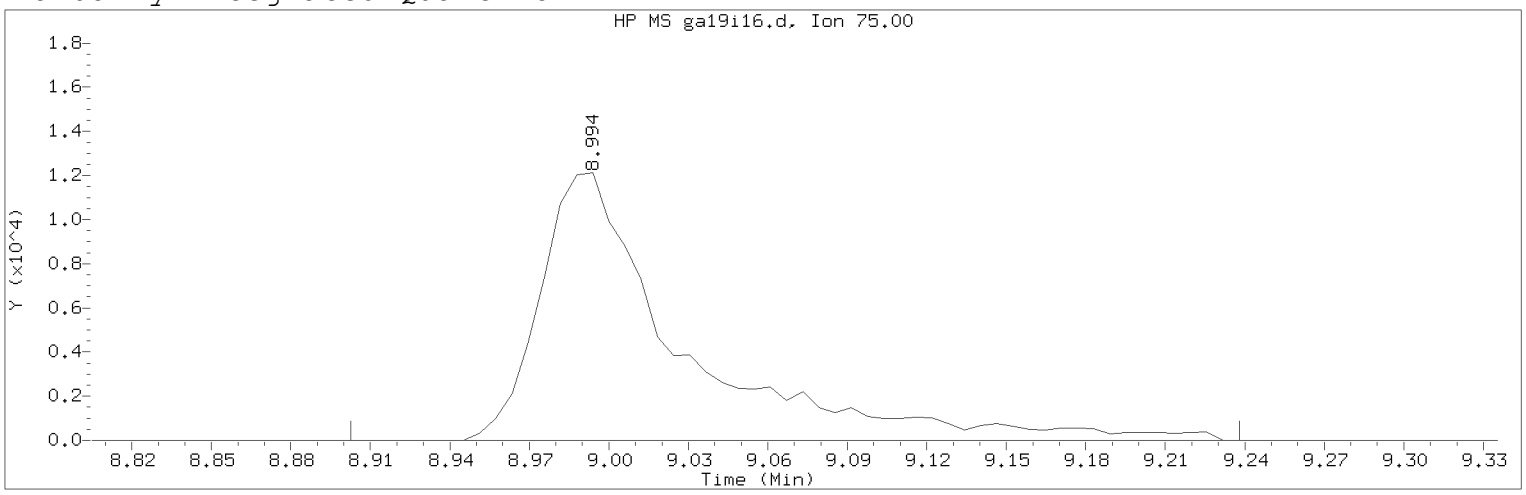
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 849
Retention Time (minutes): 6.763
Quant Ion : 55.00
Area : 5576
On-column Amount (ng) : 3.0168
Integration start scan : 836 Integration stop scan: 881
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used for method 7700

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

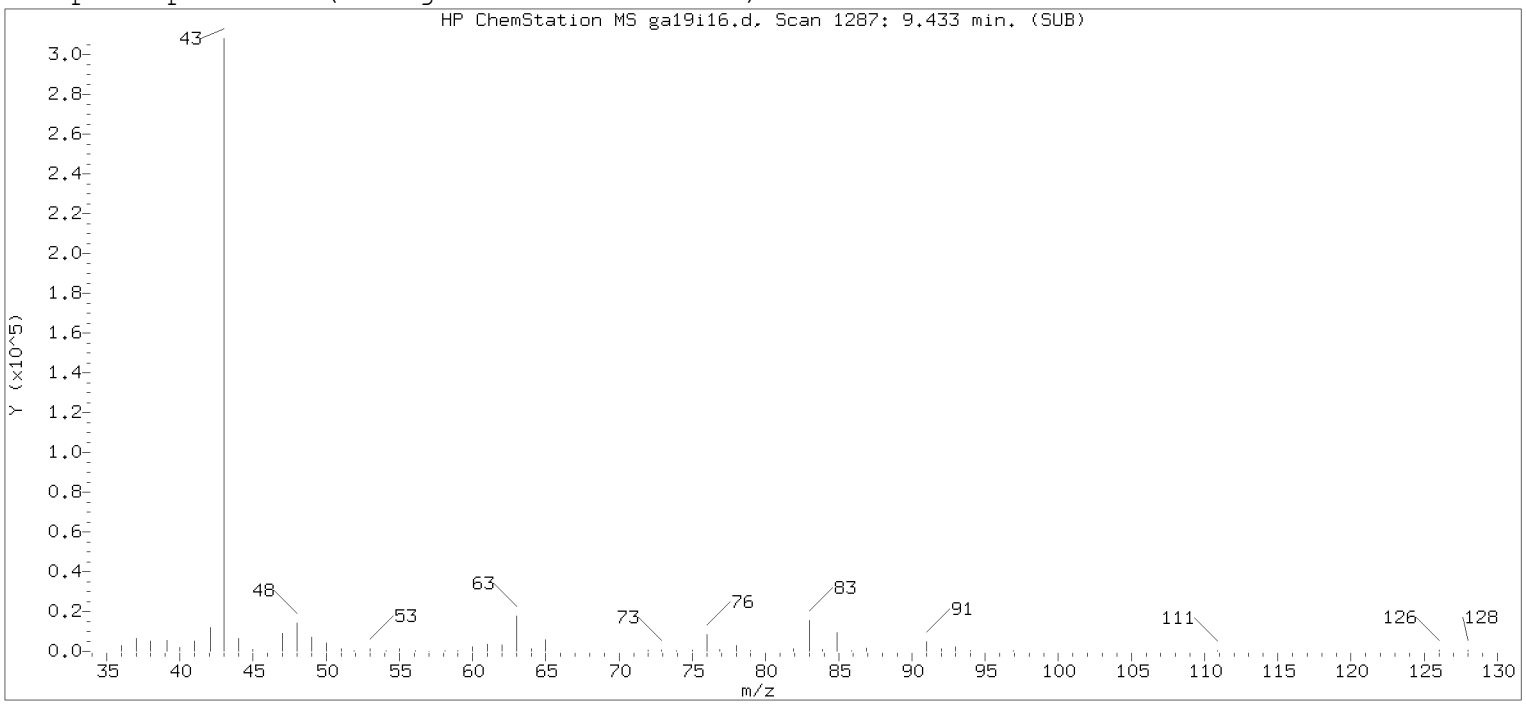
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1215
Retention Time (minutes): 8.994
Quant Ion : 75.00
Area (flag) : 44949M
On-Column Amount (ng) : 23.9808
Integration start scan : 1199 Integration stop scan: 1254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

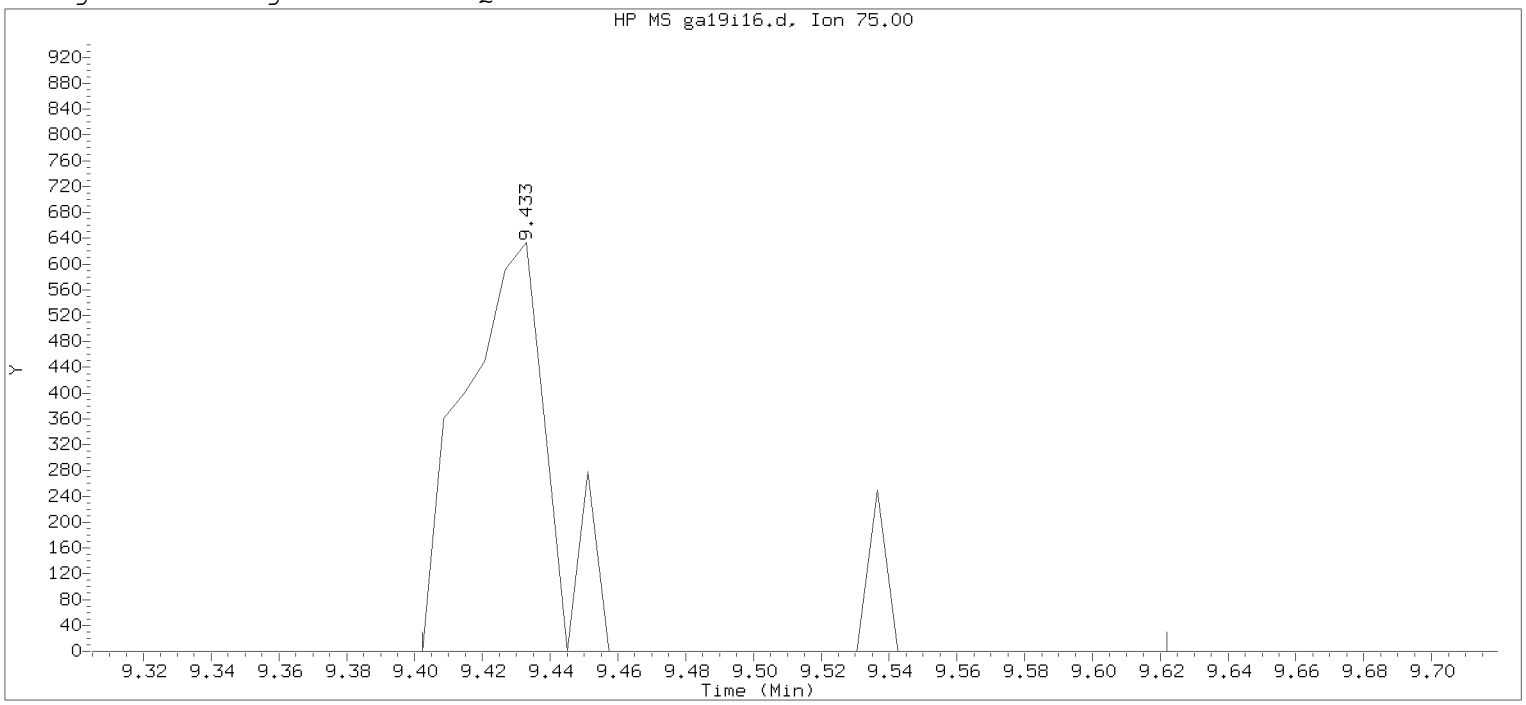
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

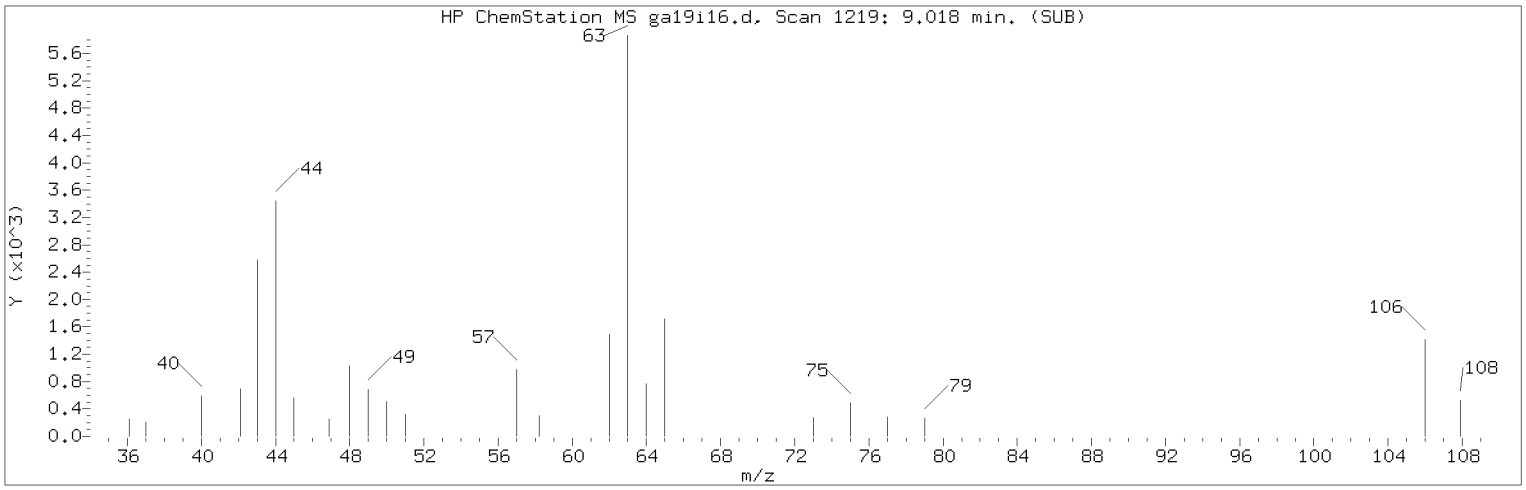
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

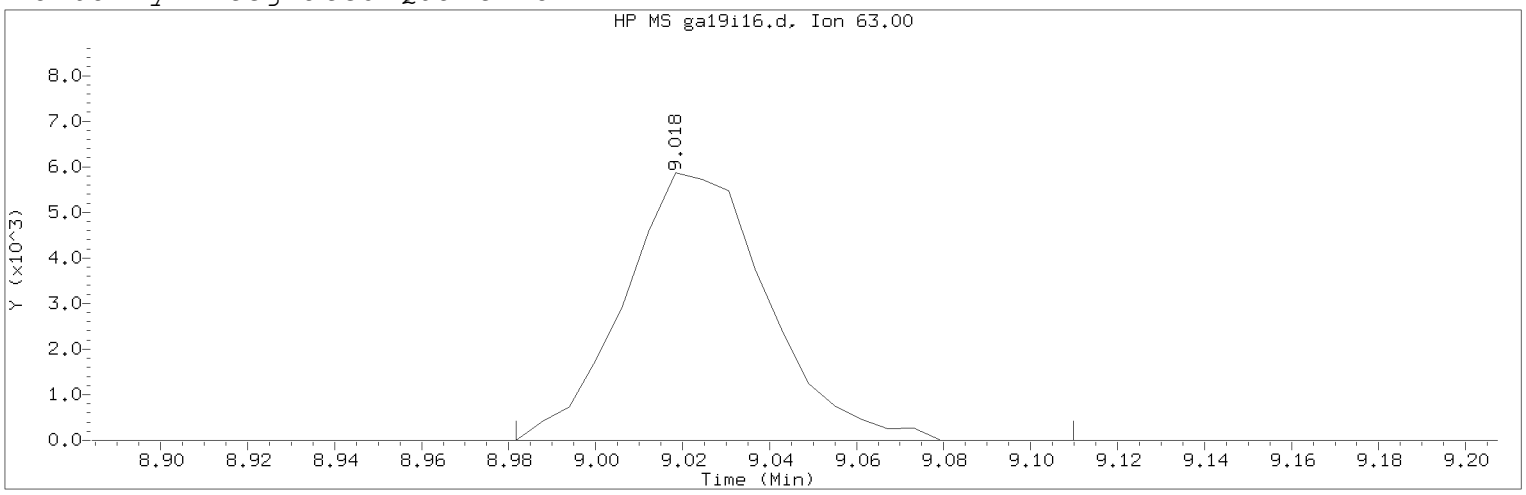
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1287
Retention Time (minutes): 9.433
Quant Ion : 75.00
Area : 1201
On-column Amount (ng) : 27.0853
Integration start scan : 1281 Integration stop scan: 1317
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7702

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

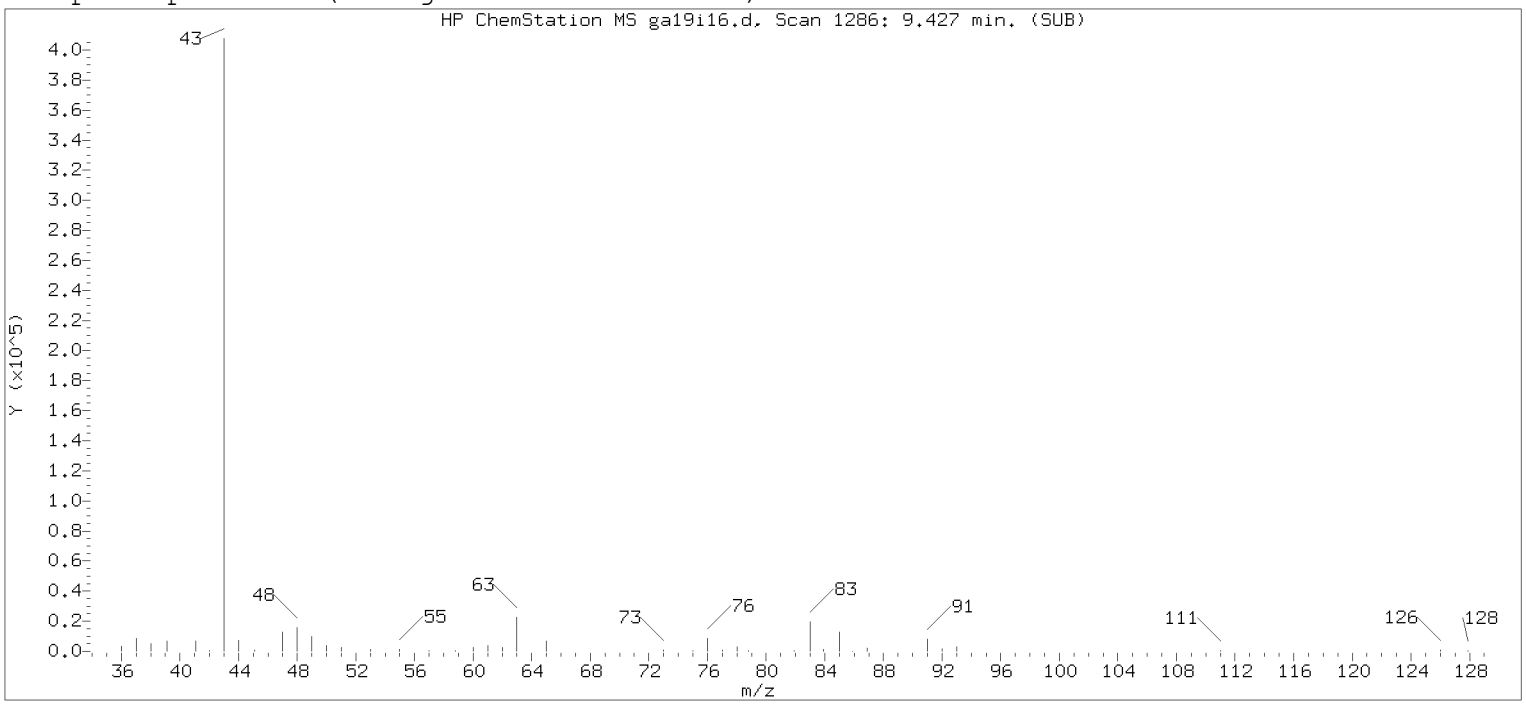
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1219
Retention Time (minutes): 9.018
Quant Ion : 63.00
Area (flag) : 13434M
On-Column Amount (ng) : 0.4667
Integration start scan : 1212 Integration stop scan: 1233
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

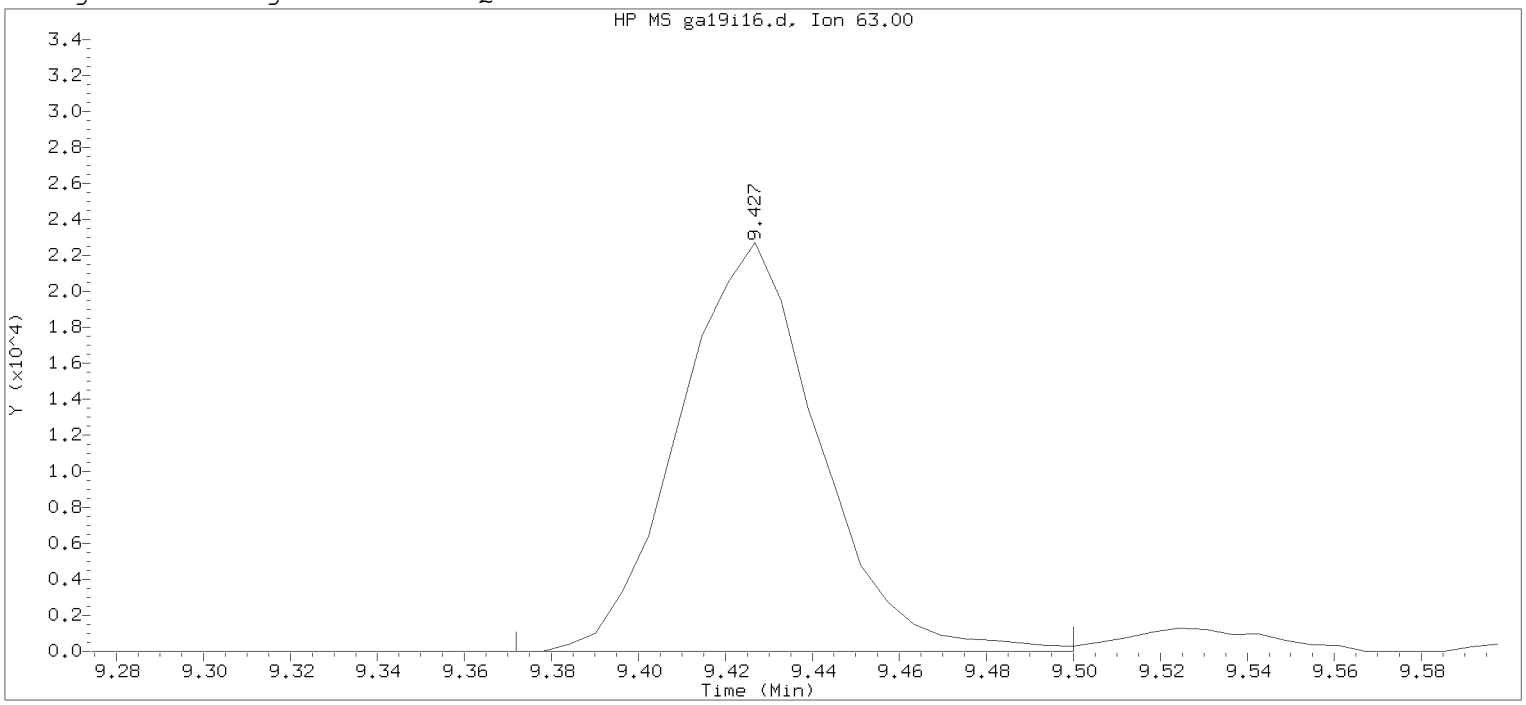
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

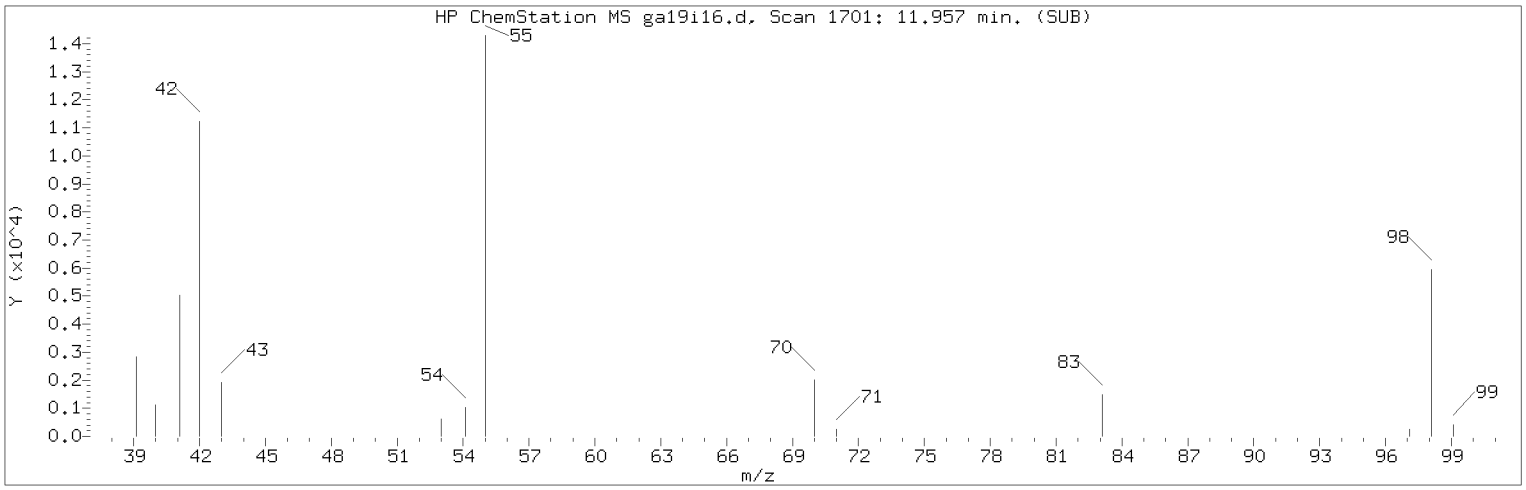
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

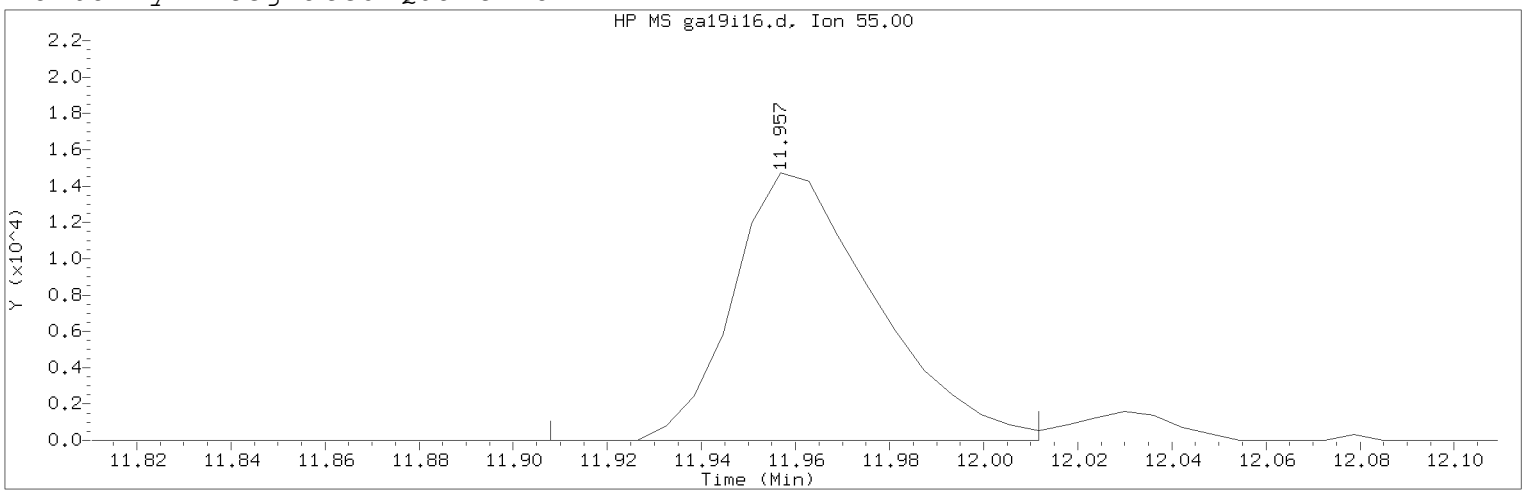
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 50607
On-column Amount (ng) : 0.5359
Integration start scan : 1276 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7704

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:43
Date, time and analyst ID of latest file update: 19-Apr-2018 20:43 msk07970

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

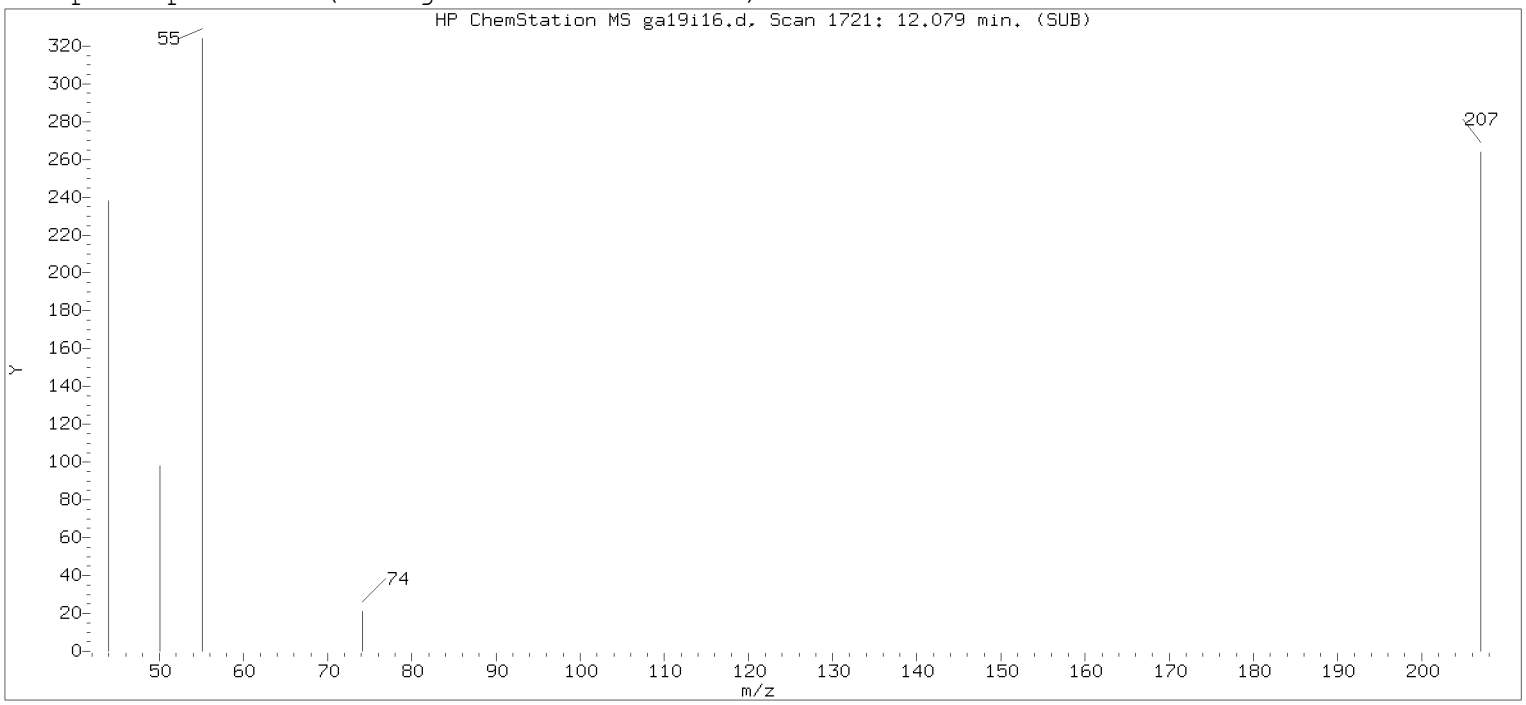
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 31110M
On-Column Amount (ng) : 23.4411
Integration start scan : 1692 Integration stop scan: 1709
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

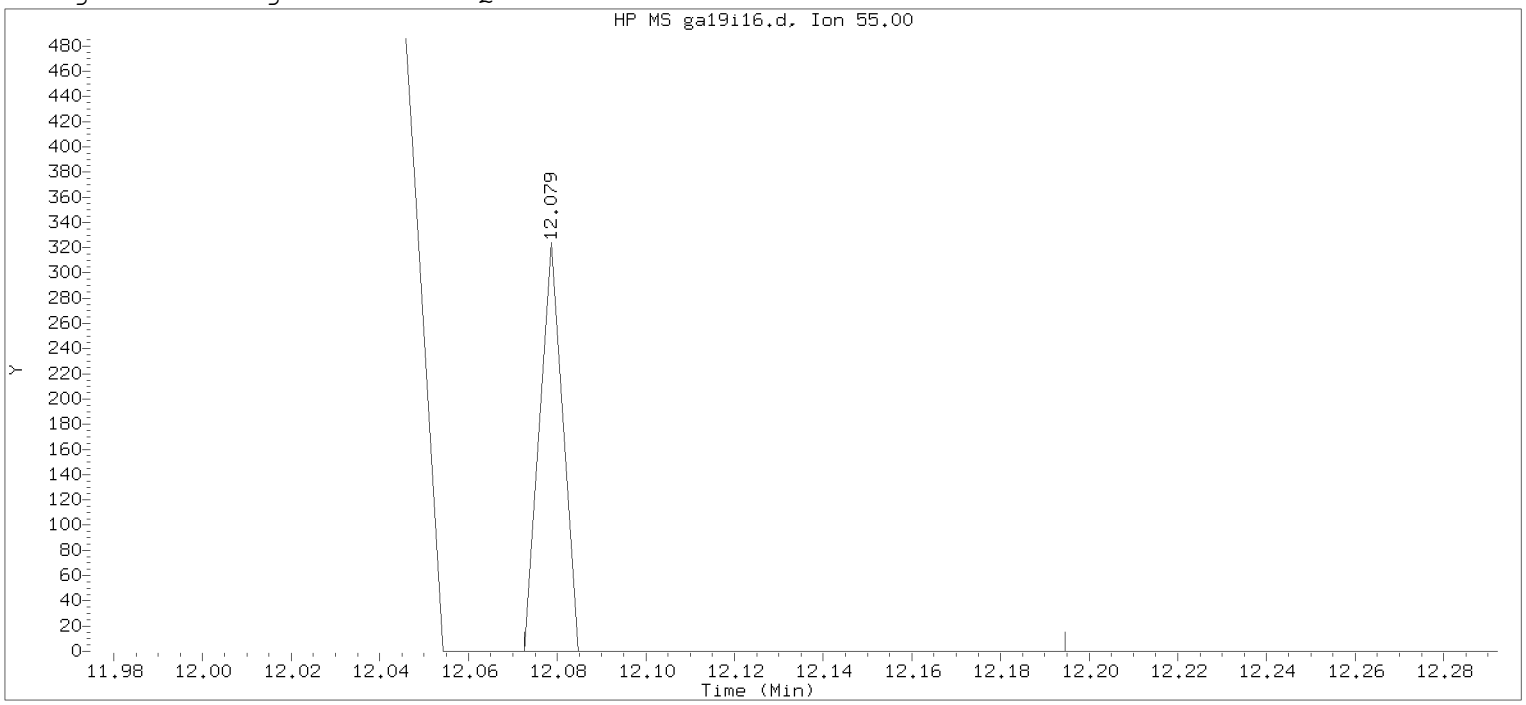
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



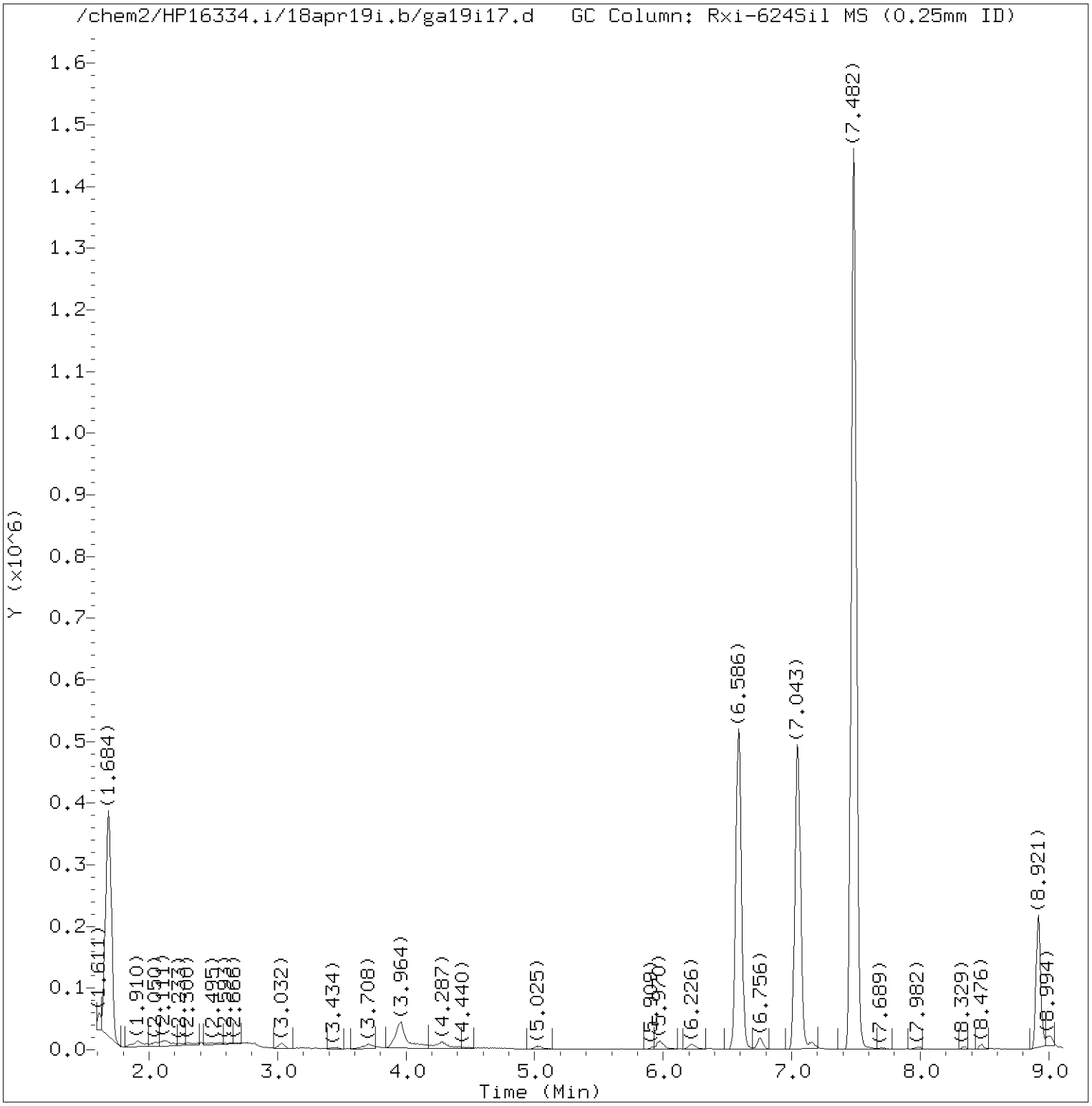
Data File: /chem2/HP16334.i/18apr19i.b/ga19i16.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 17:57 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:13
Date, time and analyst ID of latest file update: 19-Apr-2018 18:14 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1721
Retention Time (minutes): 12.079
Quant Ion : 55.00
Area : 118
On-column Amount (ng) : 4.1432
Integration start scan : 1719 Integration stop scan: 1739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:52.
Target 3.5 esignature used. Method: 7706



Total Ion Chromatogram (TIC)

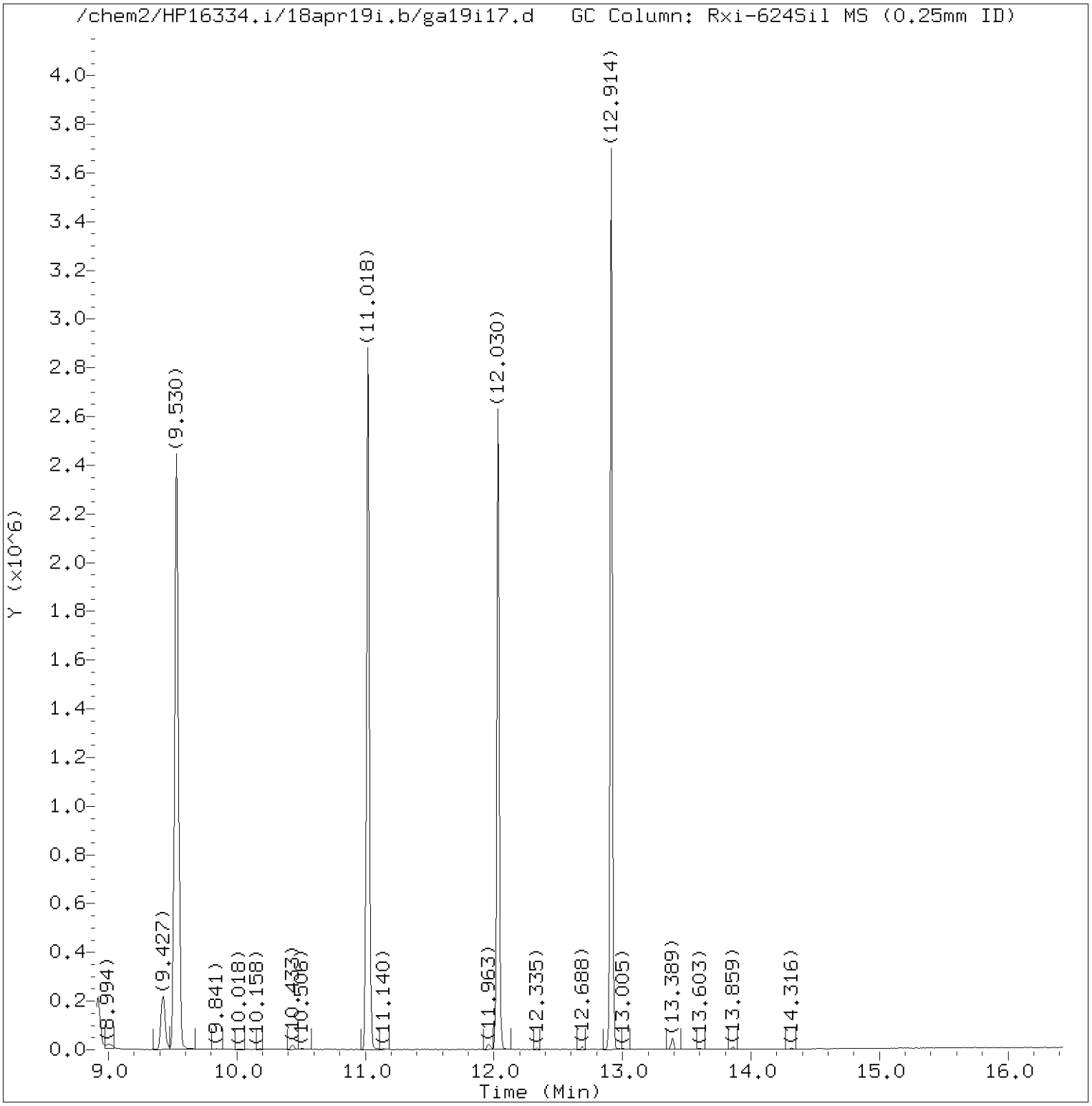
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

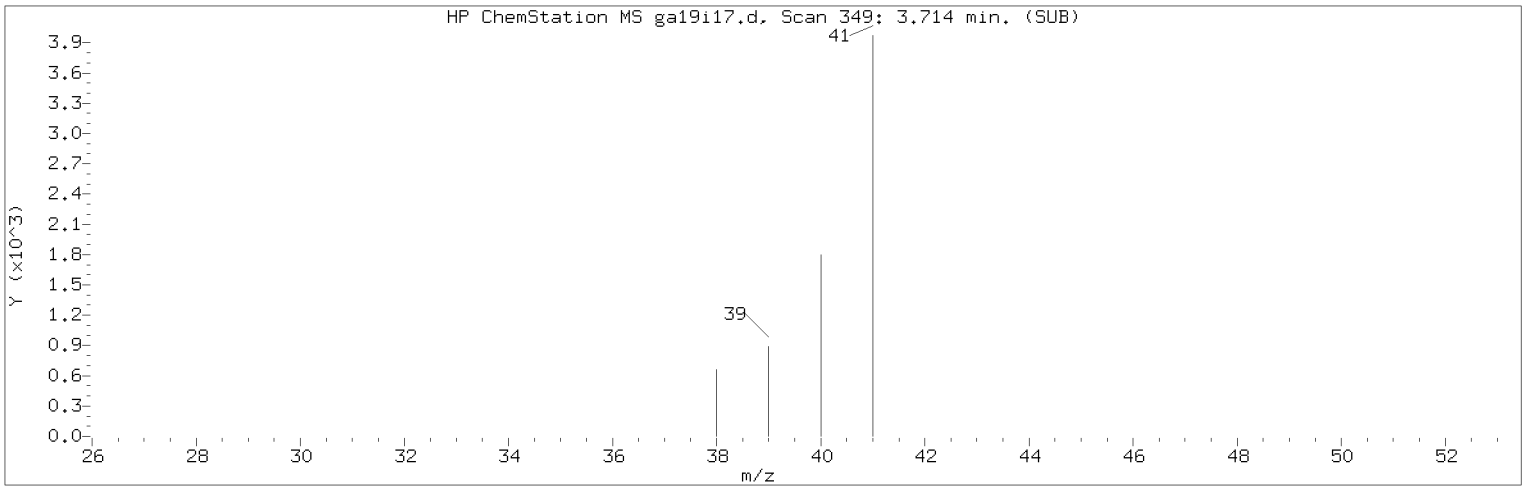
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	14948	0.217
25) Acetonitrile	(1)	3.714	41	44591M	9.642
26)*t-Butyl Alcohol-d10	(1)	3.964	65	193957	50.000
36) Vinyl Acetate	(2)	5.025	43	16967M	0.184
43) Methyl Acrylate	(2)	5.976	55	32121M	0.935
53) 1-Chlorobutane	(2)	6.756	56	20293	0.197
63)*Fluorobenzene	(2)	7.482	96	1904931	10.000
77) Chloroacetonitrile	(2)	8.994	75	14927	8.379
78) 2-Chloroethyl vinyl ether	(2)	9.012	63	5226MA	0.188
97)*Chlorobenzene-d5	(3)	11.018	117	1433781	10.000
112) Cyclohexanone	(1)	11.957	55	10220M	8.268
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	808966	10.000
142) Hexachloroethane	(4)	13.389	117	4709	0.162

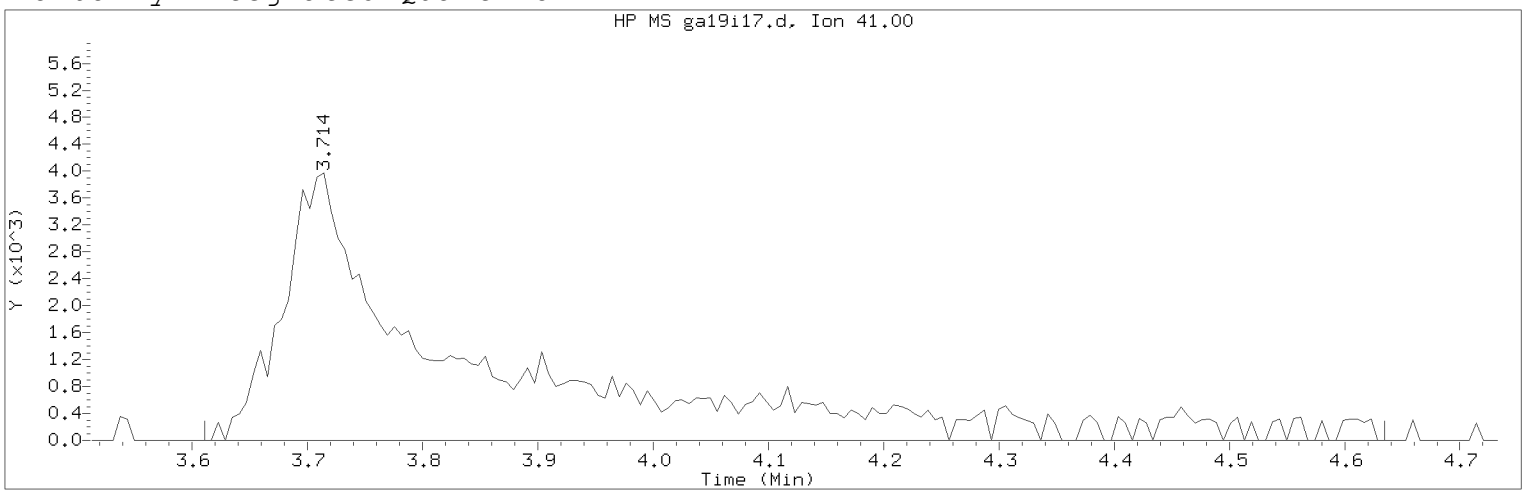
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

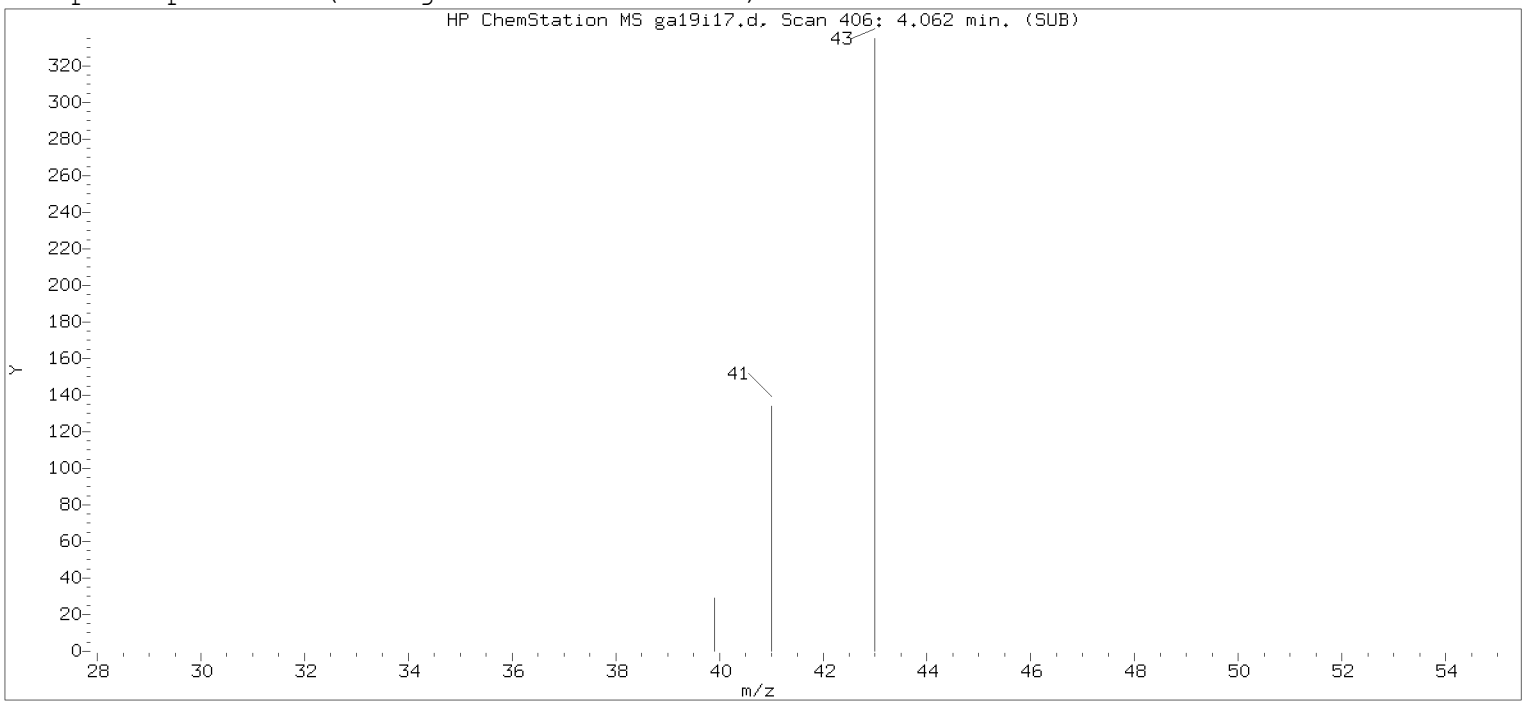
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 349
Retention Time (minutes): 3.714
Quant Ion : 41.00
Area (flag) : 44591M
On-Column Amount (ng) : 9.6415
Integration start scan : 331 Integration stop scan: 499
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

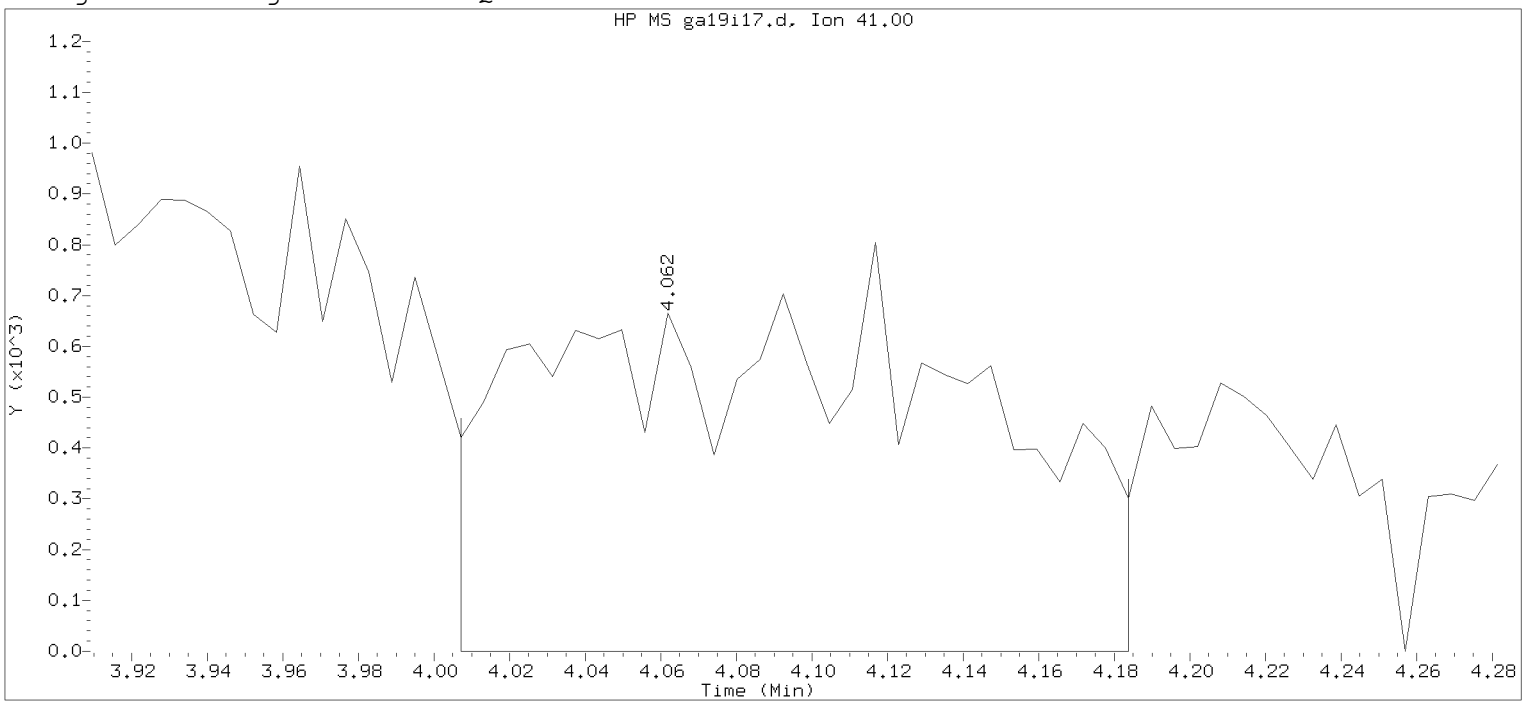
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:36 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 406
Retention Time (minutes): 4.062
Quant Ion : 41.00
Area : 5576
On-column Amount (ng) : 12.8446
Integration start scan : 396 Integration stop scan: 425
Y at integration start : 0 Y at integration end: 0

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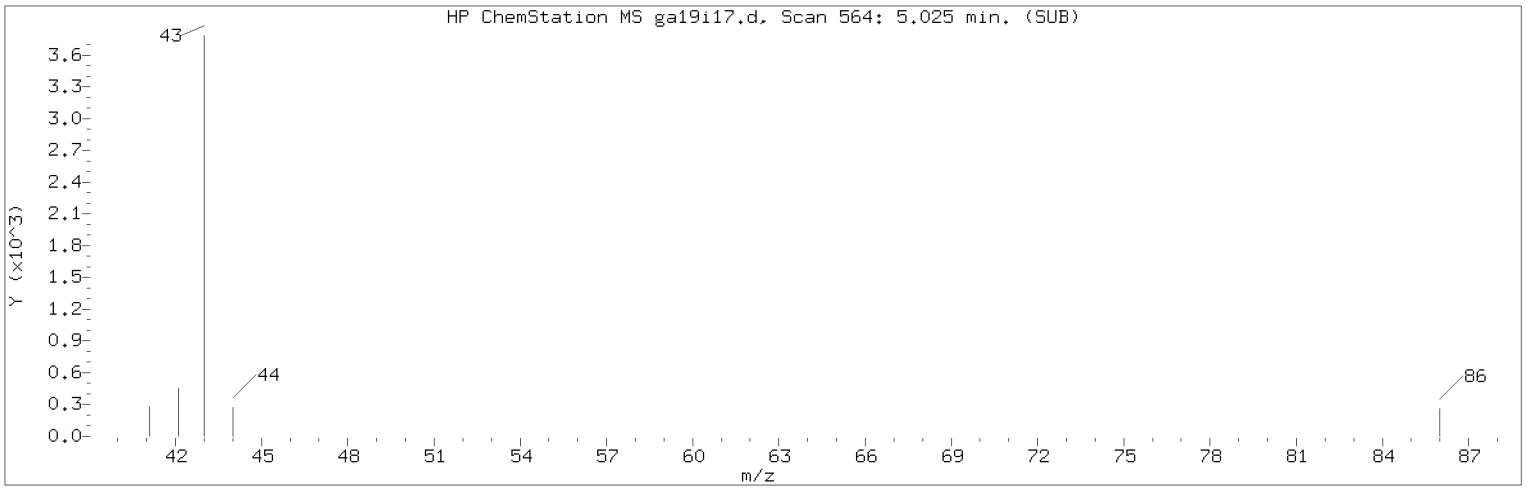
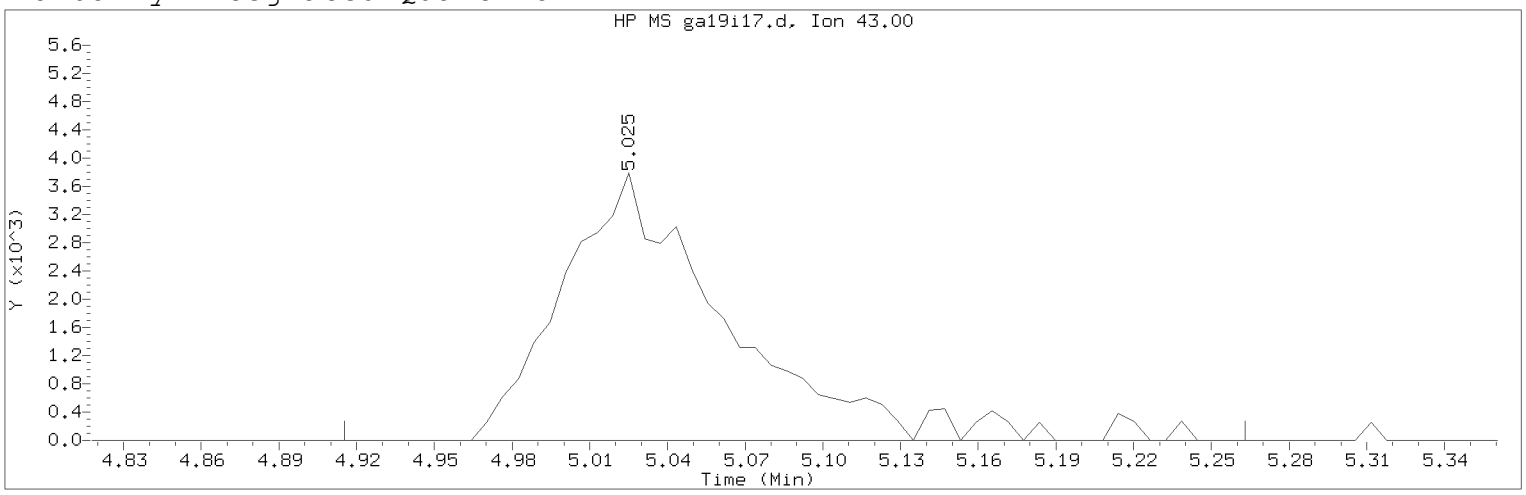
Target 3.5 esignature used. Page 771

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

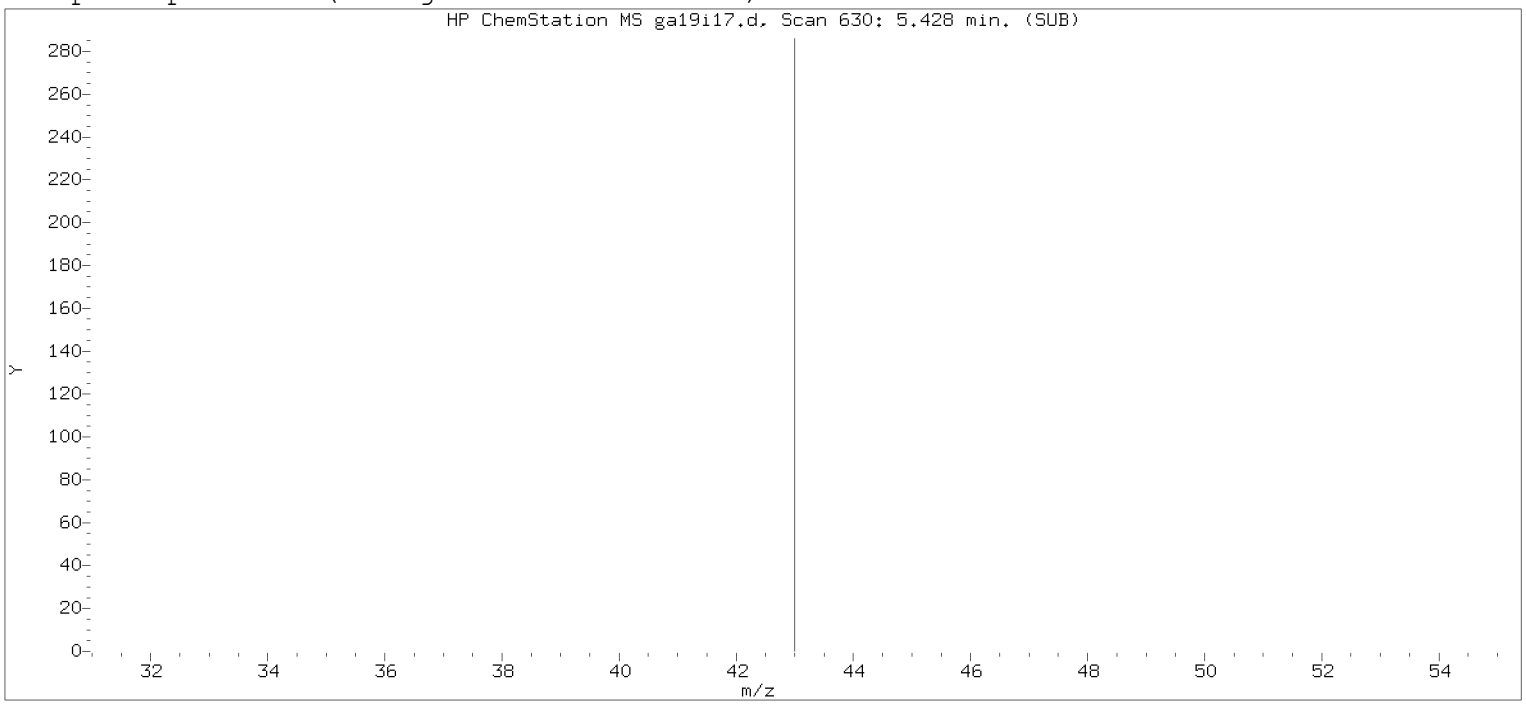
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 564
Retention Time (minutes): 5.025
Quant Ion : 43.00
Area (flag) : 16967M
On-Column Amount (ng) : 0.1840
Integration start scan : 545 Integration stop scan: 602
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

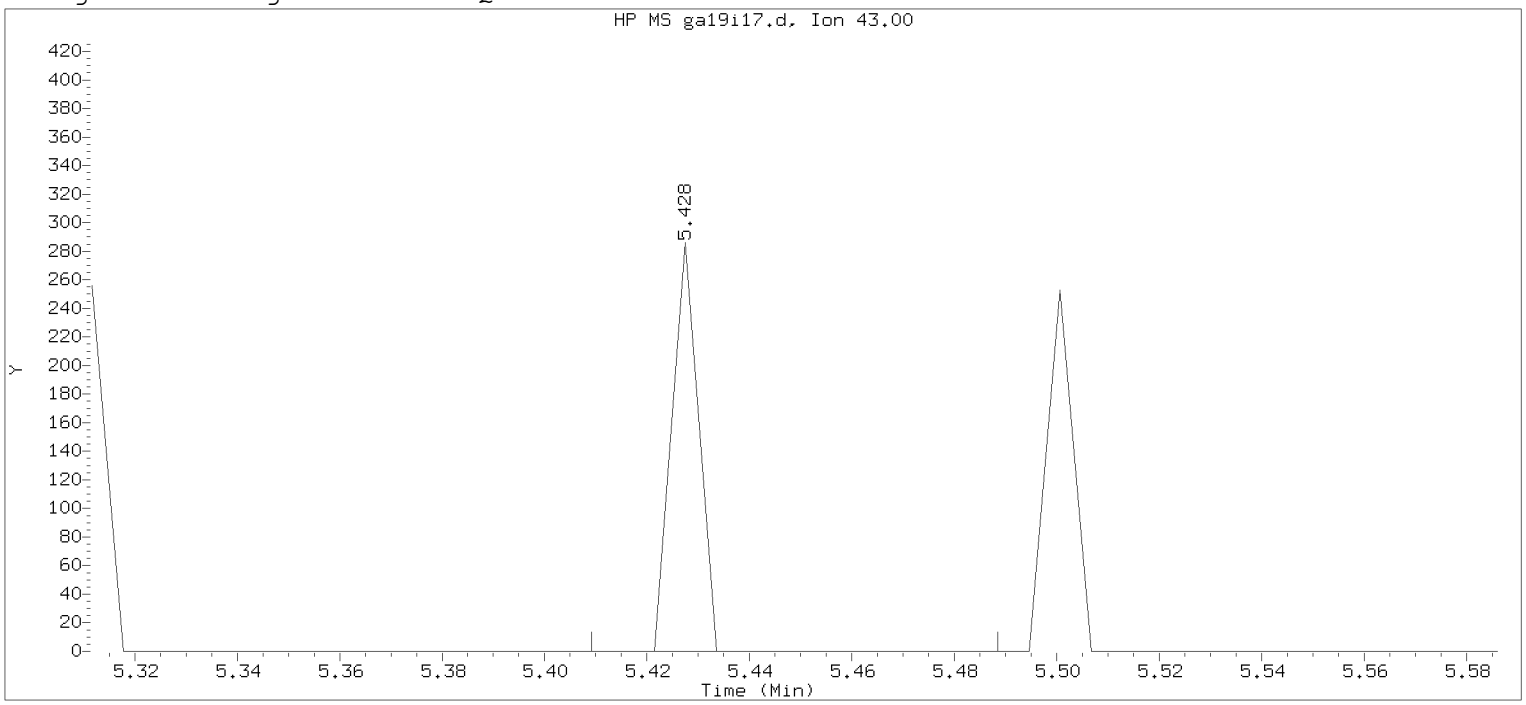
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

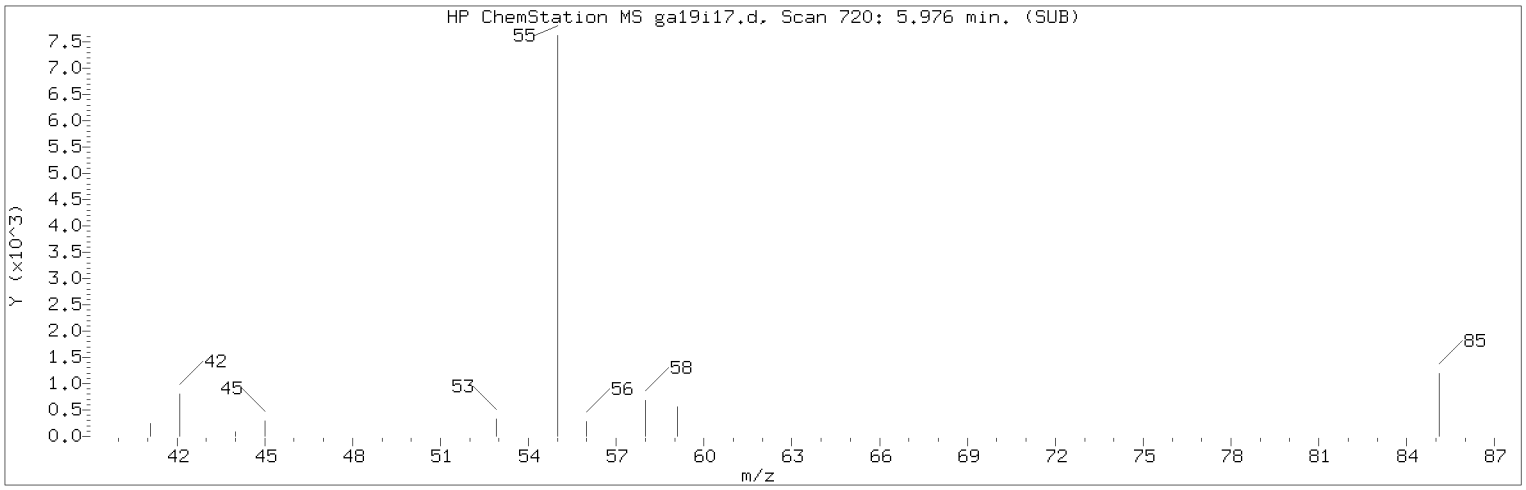
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:36 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

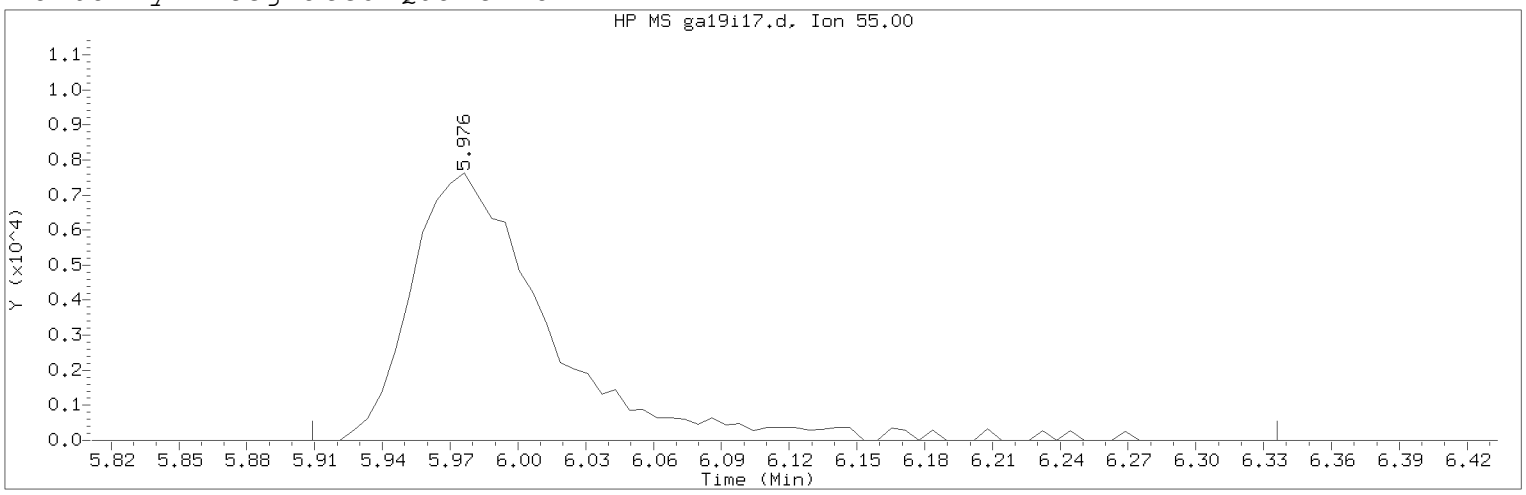
Compound Number	: 36		
Compound Name	: Vinyl Acetate		
Scan Number	: 630		
Retention Time (minutes)	: 5.428		
Quant Ion	: 43.00		
Area	: 104		
On-column Amount (ng)	: 0.2091		
Integration start scan	: 626	Integration stop scan:	639
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:53.
Target 3.5 esignature used. AE06 mdc 7/13

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

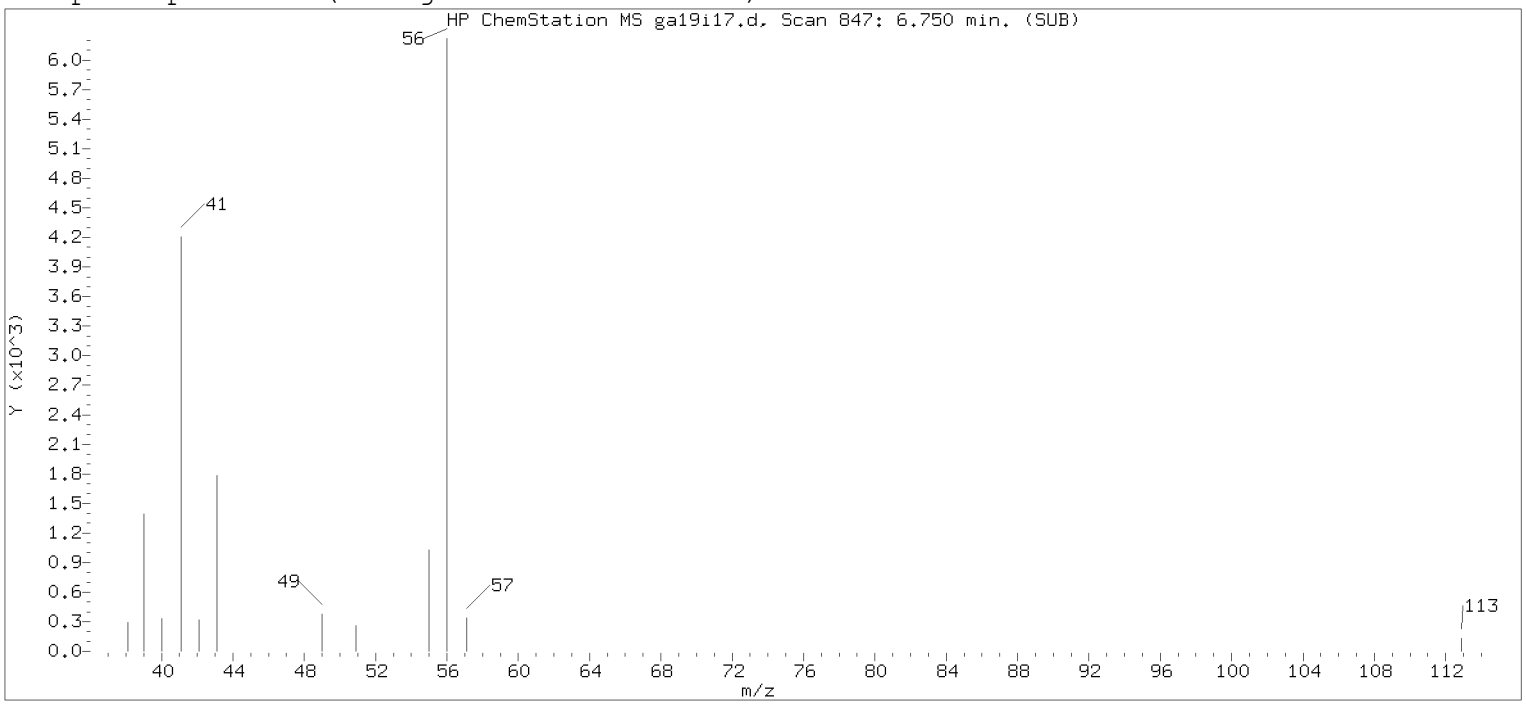
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 720
Retention Time (minutes): 5.976
Quant Ion : 55.00
Area (flag) : 32121M
On-Column Amount (ng) : 0.9354
Integration start scan : 708 Integration stop scan: 778
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

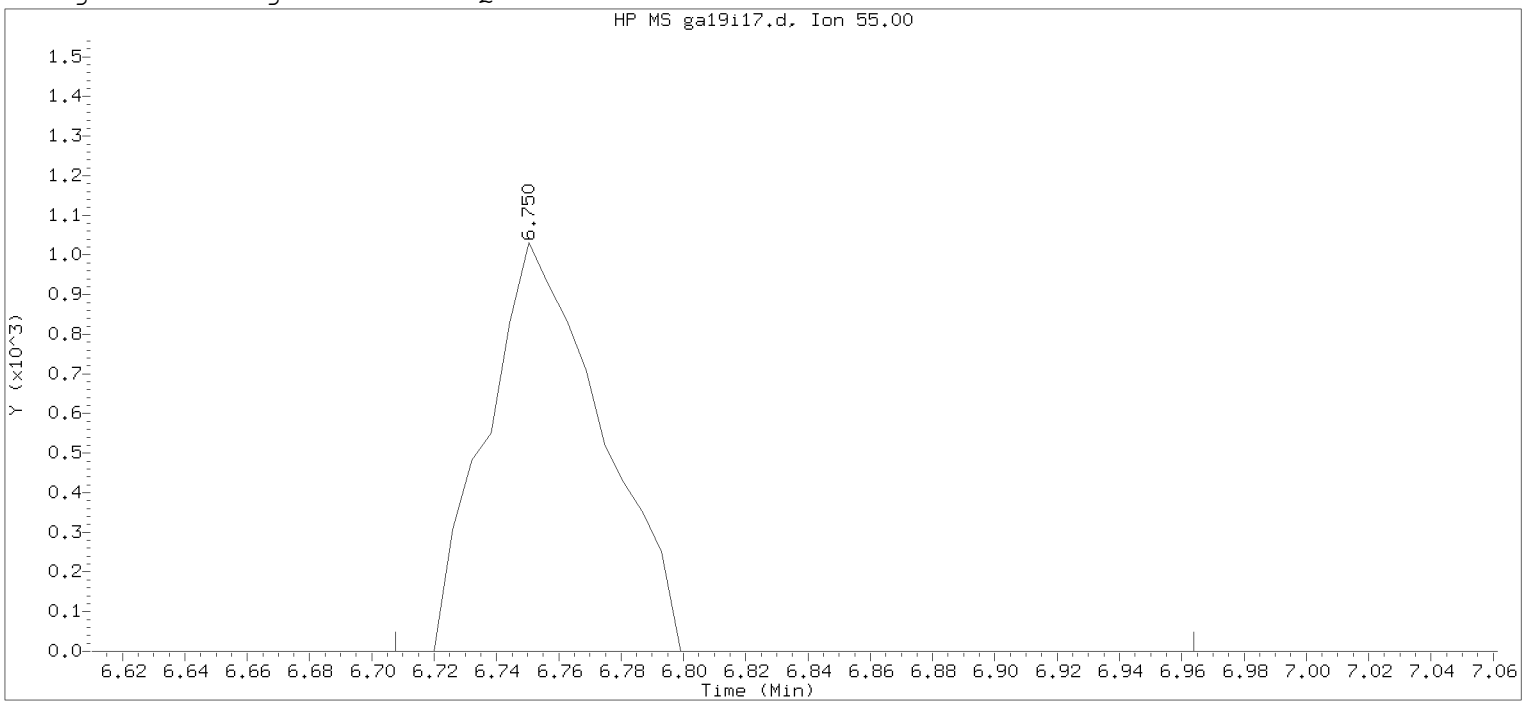
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

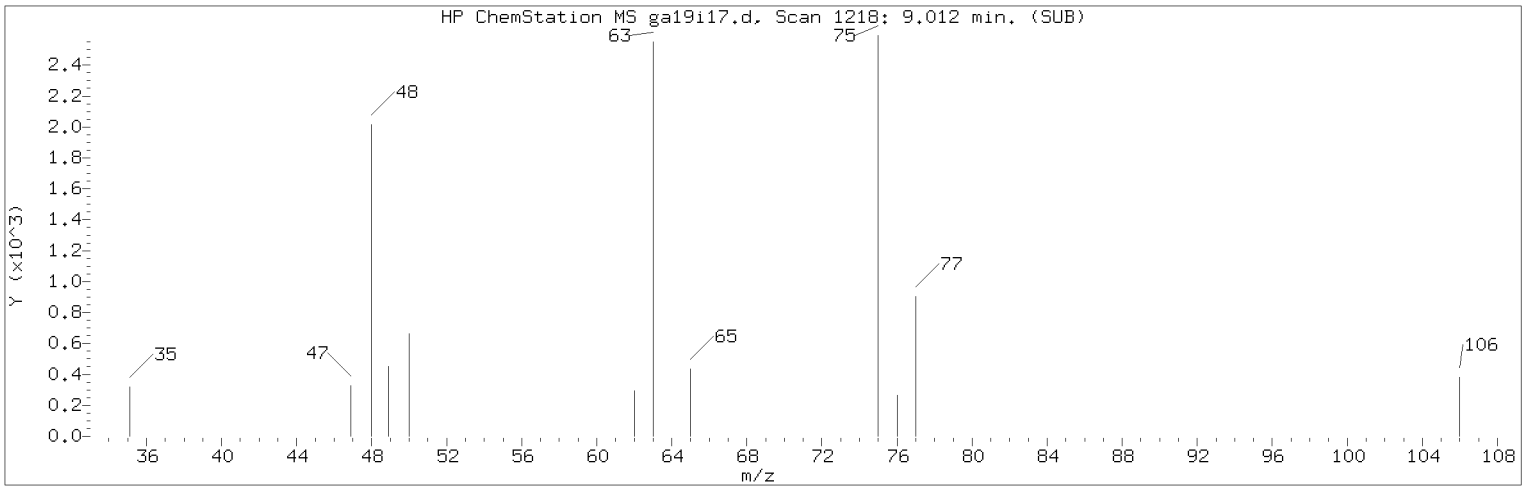
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:36 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

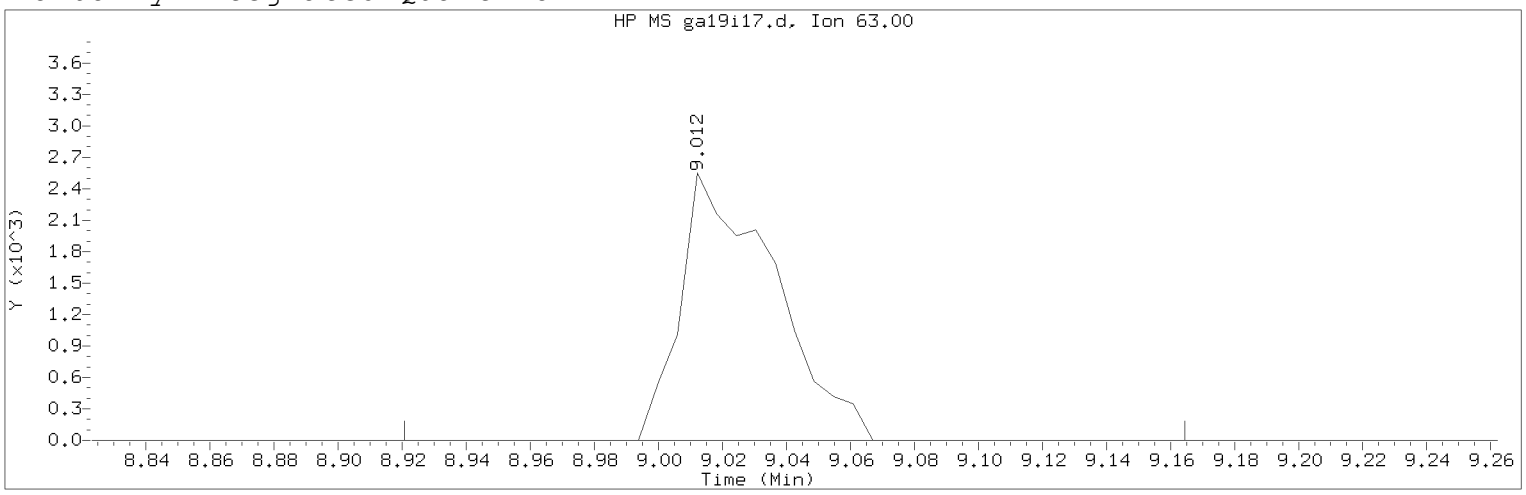
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 847
Retention Time (minutes): 6.750
Quant Ion : 55.00
Area : 2640
On-column Amount (ng) : 1.3392
Integration start scan : 839 Integration stop scan: 881
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:53.
Target 3.5 esignature used. Reason: 7715

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

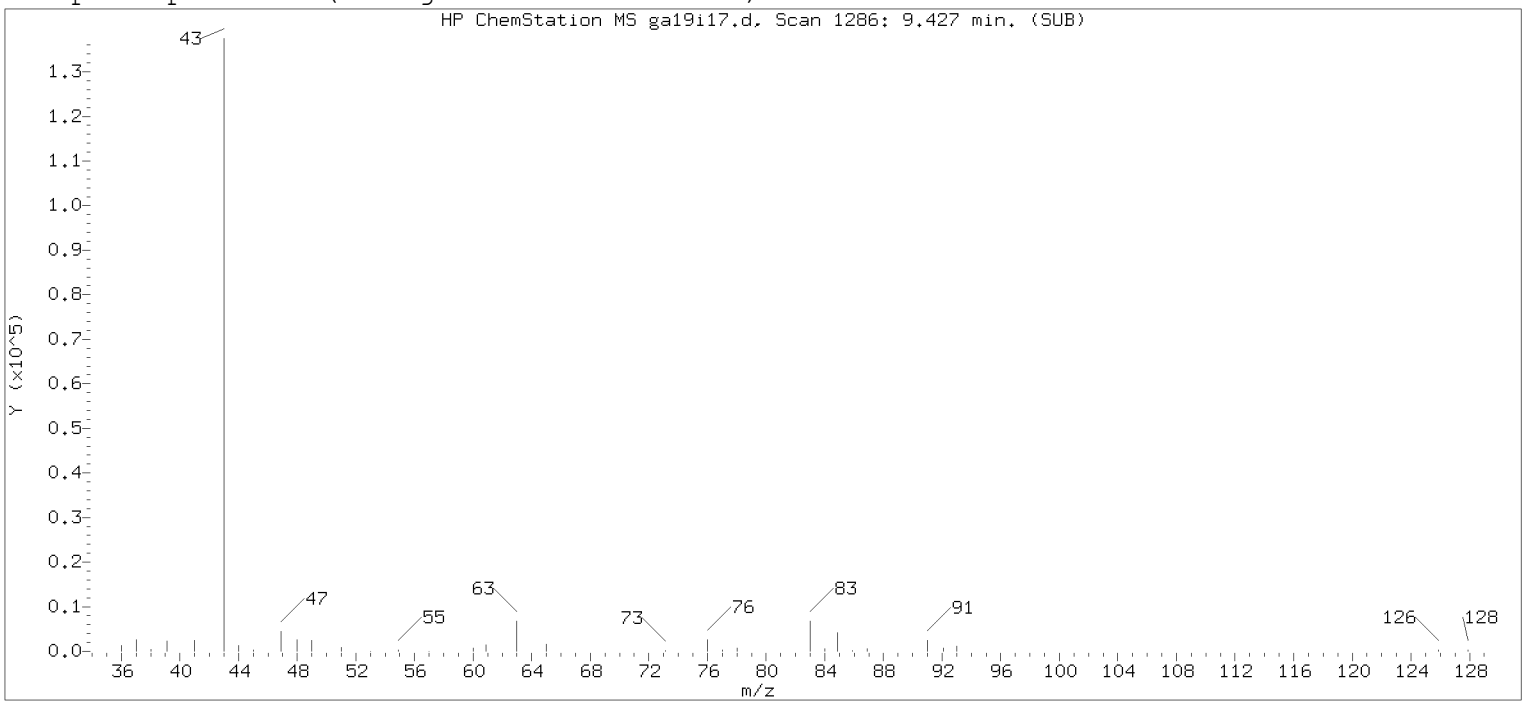
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1218
Retention Time (minutes): 9.012
Quant Ion : 63.00
Area (flag) : 5226MA
On-Column Amount (ng) : 0.1879
Integration start scan : 1202 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

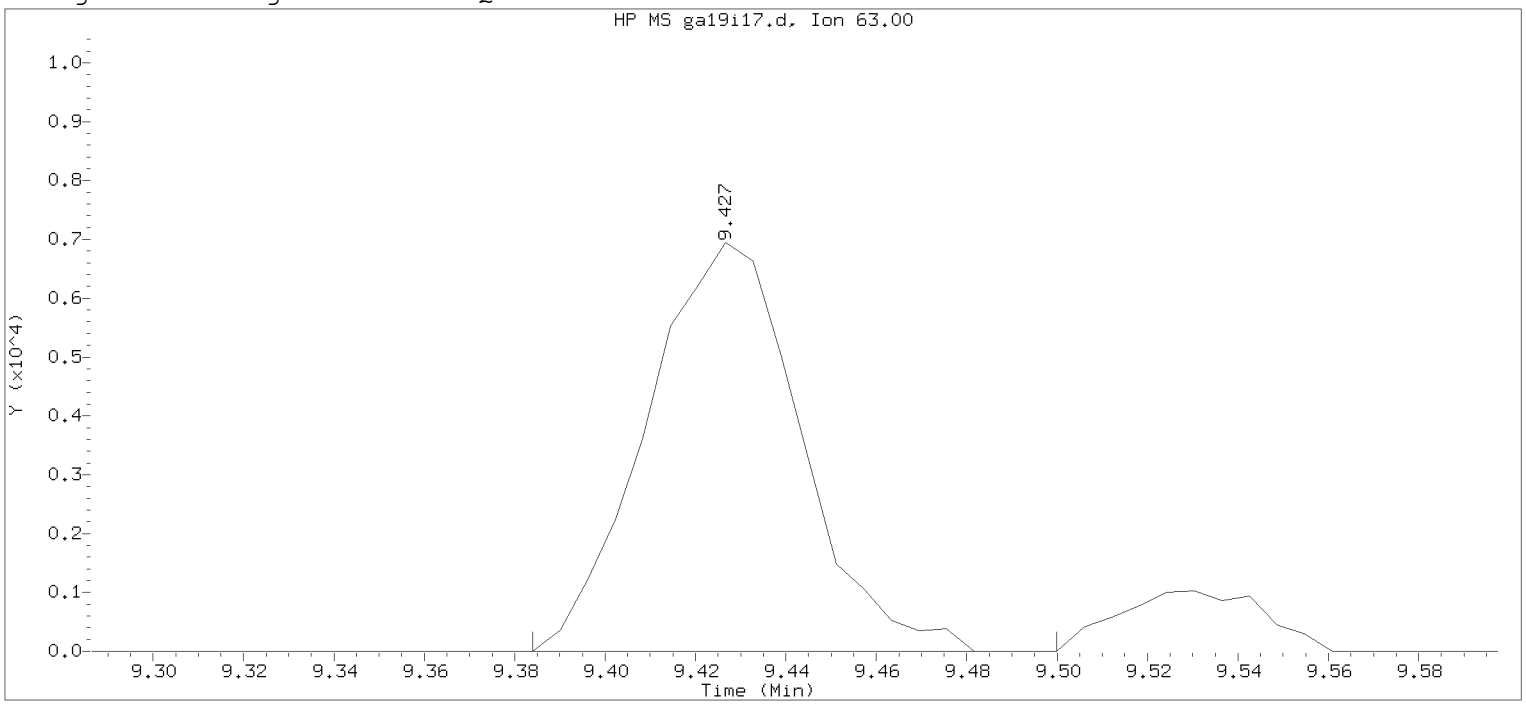
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

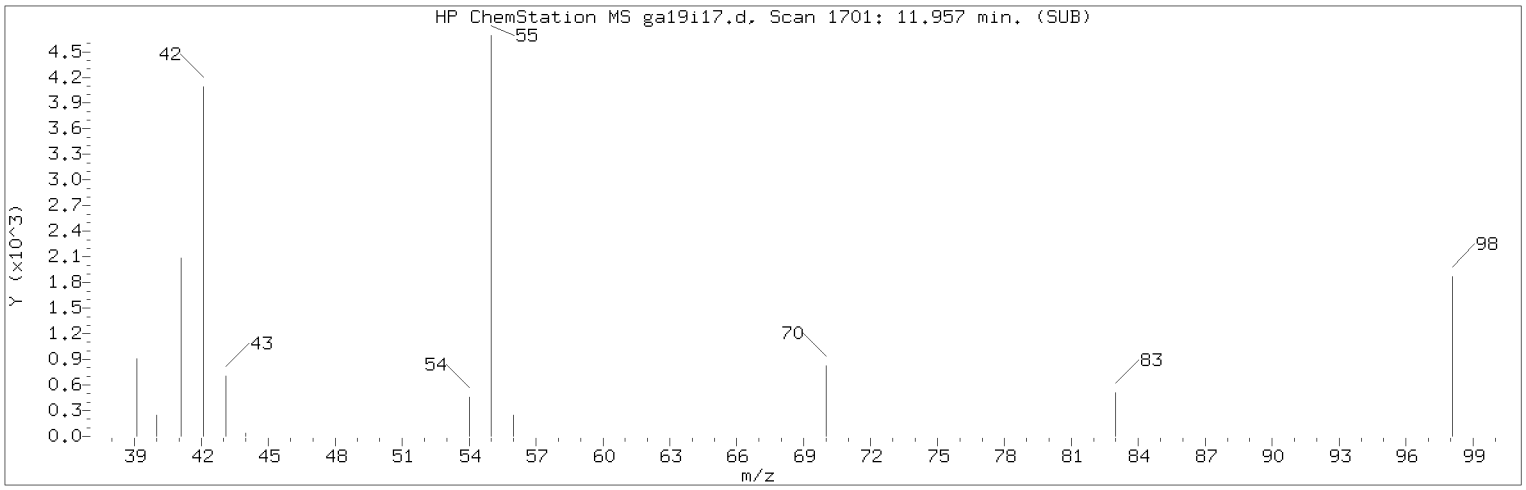
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:36 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

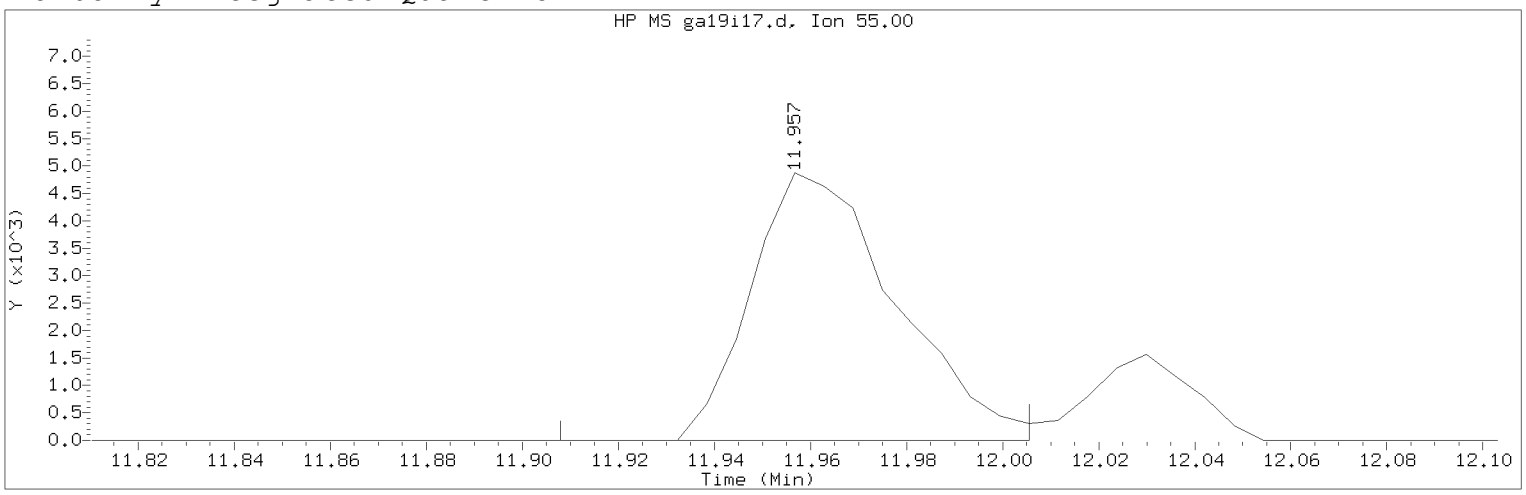
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 16405
On-column Amount (ng) : 0.1820
Integration start scan : 1278 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:53.
Target 3.5 esignature used. Page 777

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 19-APR-2018 20:44
Date, time and analyst ID of latest file update: 19-Apr-2018 20:44 msk07970

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

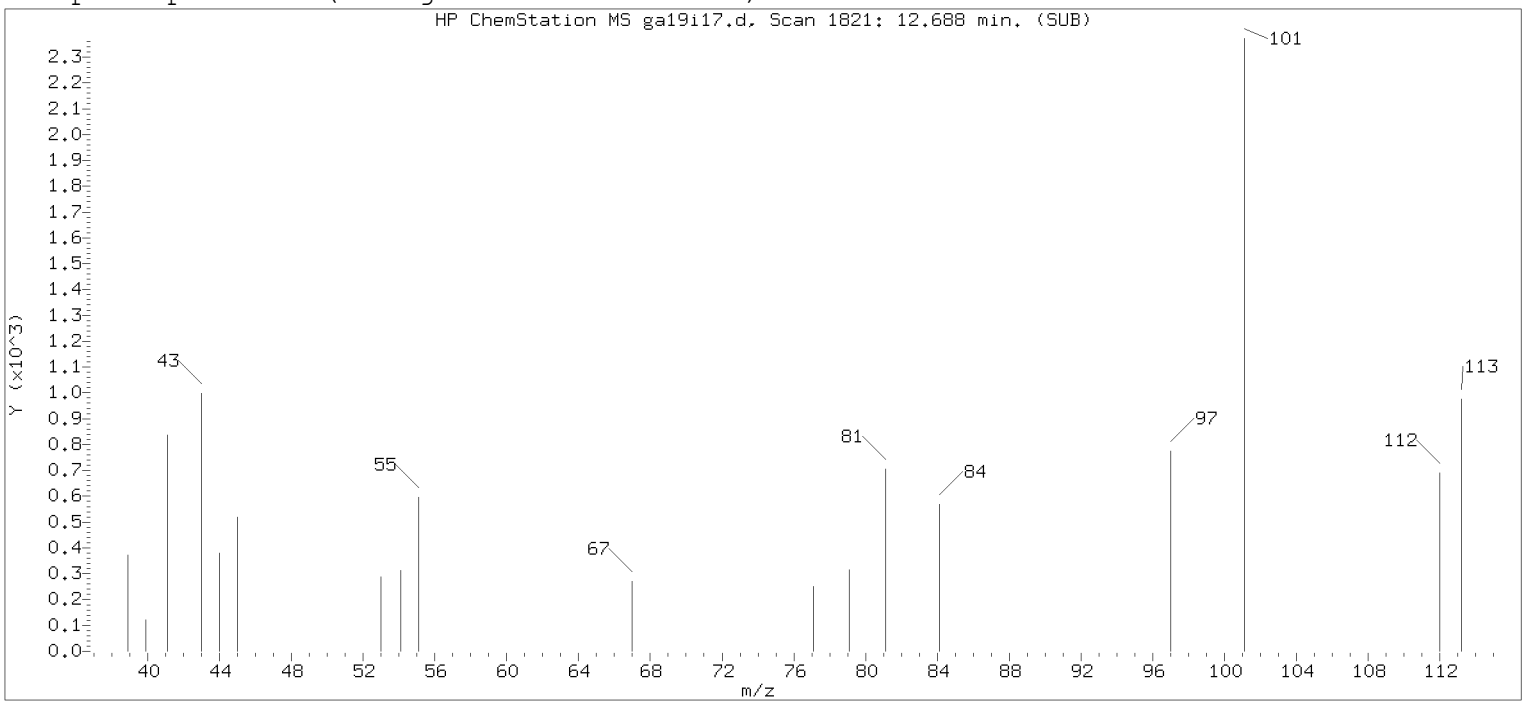
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 10220M
On-Column Amount (ng) : 8.2683
Integration start scan : 1692 Integration stop scan: 1708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

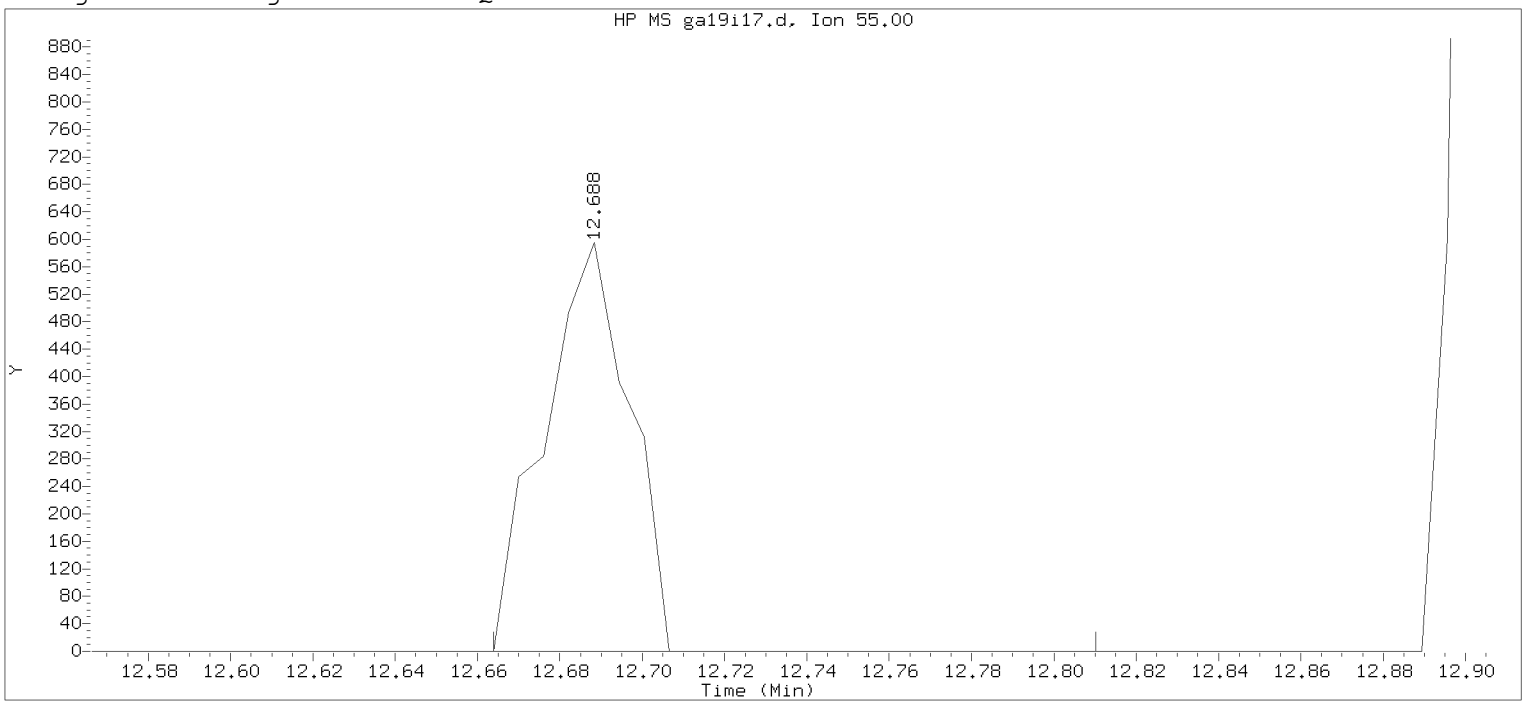
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/20/2018 at 18:53.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Marla S. Brewer on 04/20/2018 at 20:34.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



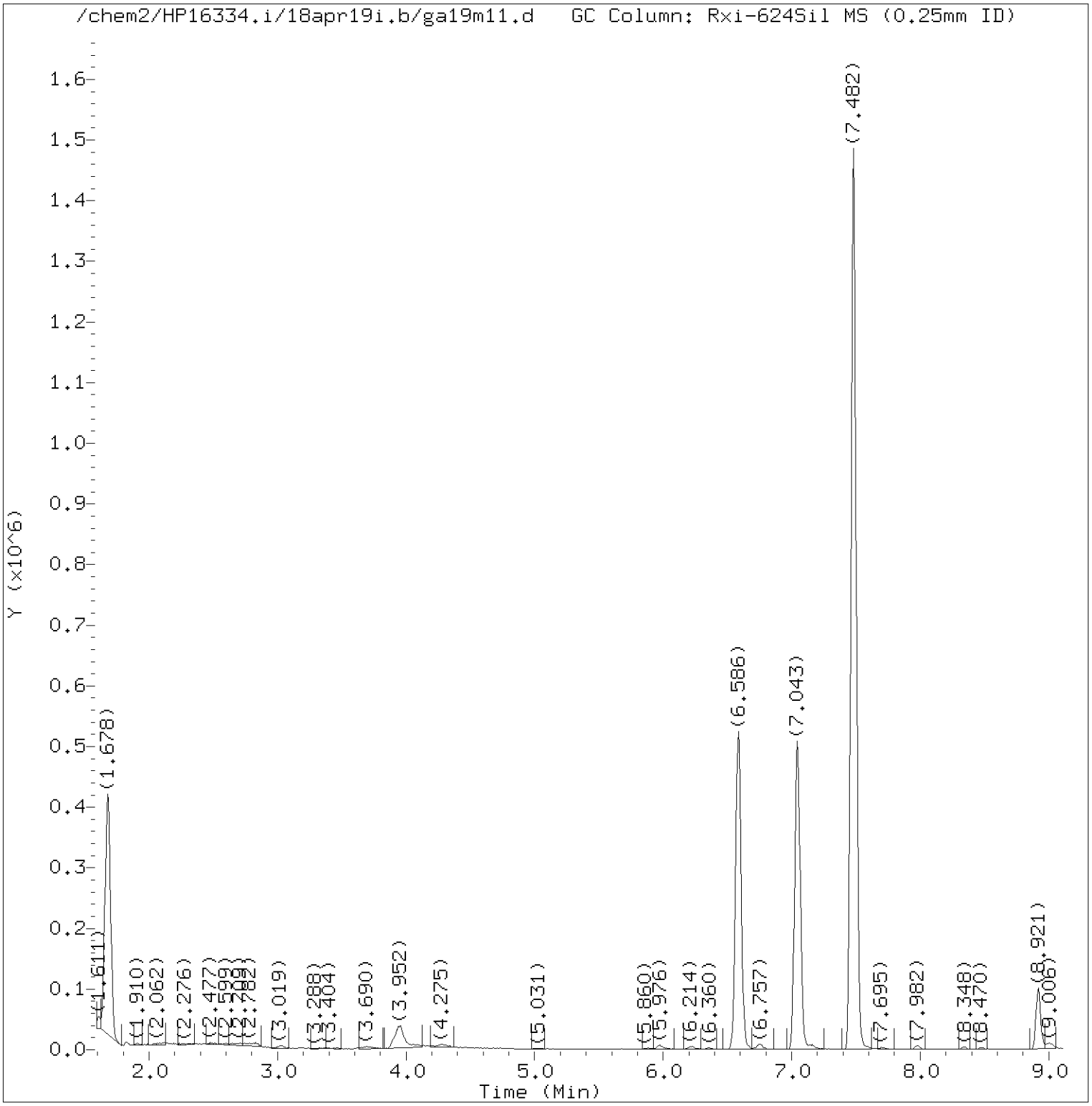
Data File: /chem2/HP16334.i/18apr19i.b/ga19i17.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:19 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:36 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1821
Retention Time (minutes): 12.688
Quant Ion : 55.00
Area : 852
On-column Amount (ng) : 21.8703
Integration start scan : 1816 Integration stop scan: 1840
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/20/2018 at 18:53.
Target 3.5 esignature used. Method: 7719



Total Ion Chromatogram (TIC)

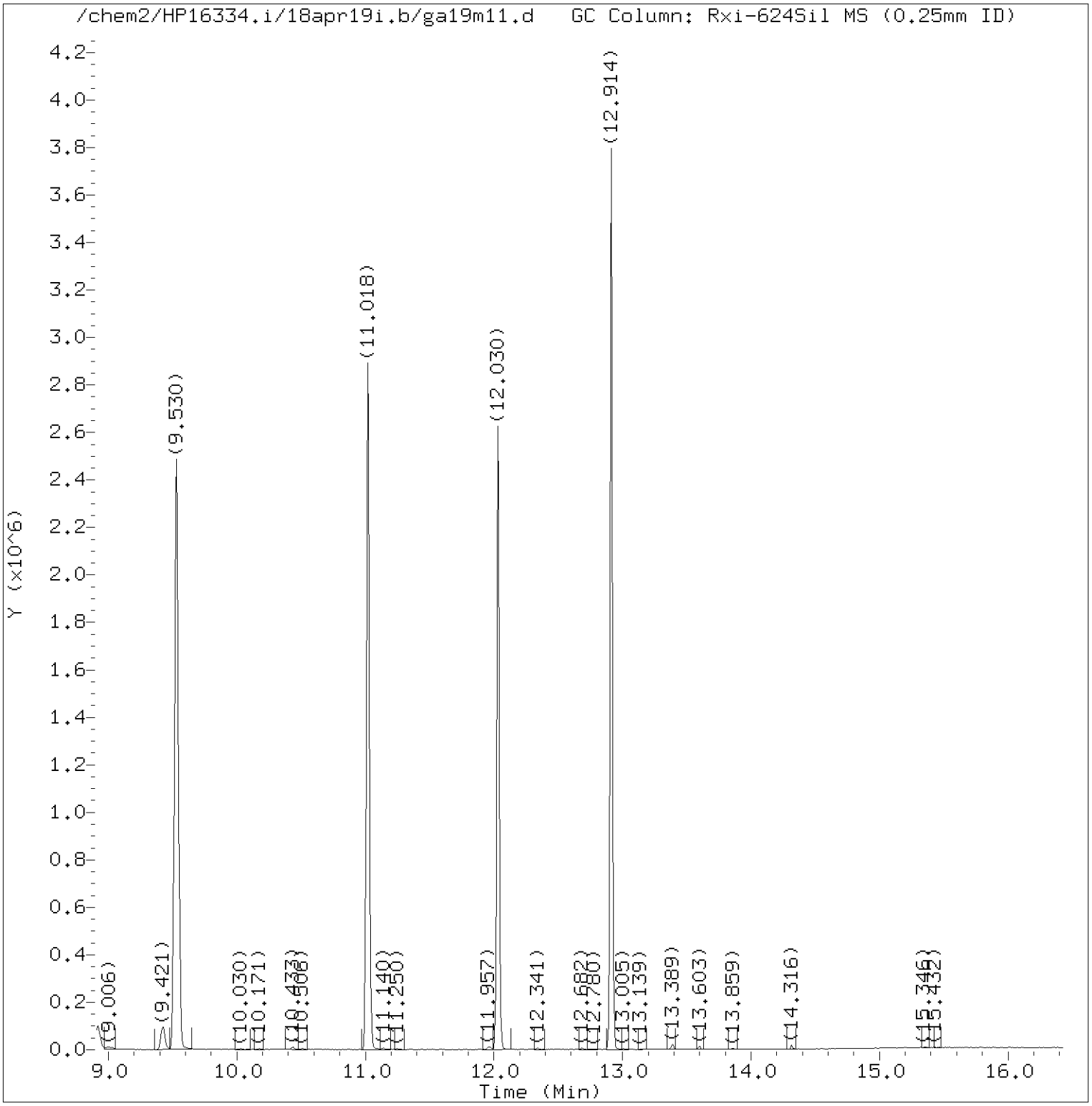
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:50.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

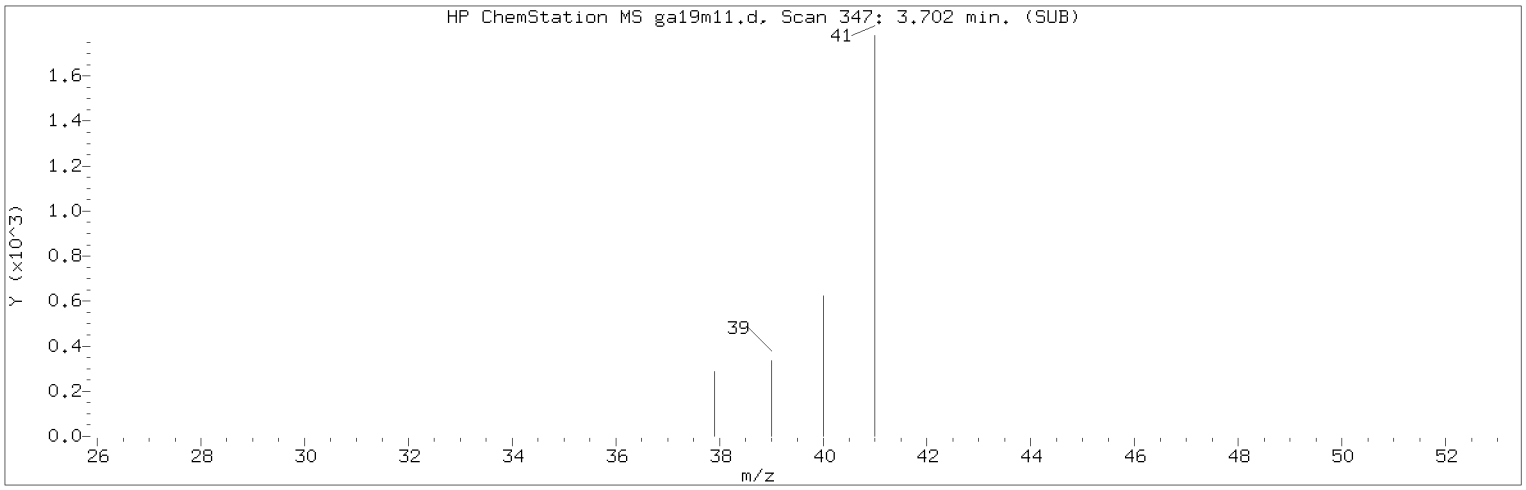
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.916	45	8244	0.119
25) Acetonitrile	(1)	3.702	41	21338M	4.842
26)*t-Butyl Alcohol-d10	(1)	3.952	65	184814	50.000
36) Vinyl Acetate	(2)	5.031	43	6395	0.069
43) Methyl Acrylate	(2)	5.976	55	15753M	0.456
50)$Dibromofluoromethane	(2)	6.586	113	476078	9.883
53) 1-Chlorobutane	(2)	6.757	56	9180	0.088
57)$1,2-Dichloroethane-d4	(2)	7.049	102	102849	10.075
63)*Fluorobenzene	(2)	7.482	96	1915603	10.000
77) Chloroacetonitrile	(2)	9.000	75	6552	3.657
78) 2-Chloroethyl vinyl ether	(2)	9.024	63	2095M	0.075
82)$Toluene-d8	(3)	9.530	98	1956844	10.085
97)*Chlorobenzene-d5	(3)	11.018	117	1446874	10.000
112) Cyclohexanone	(1)	11.957	55	5771M	4.900
111)$4-Bromofluorobenzene	(3)	12.030	95	738055	9.937
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	810910	10.000
142) Hexachloroethane	(4)	13.389	117	2100	0.072

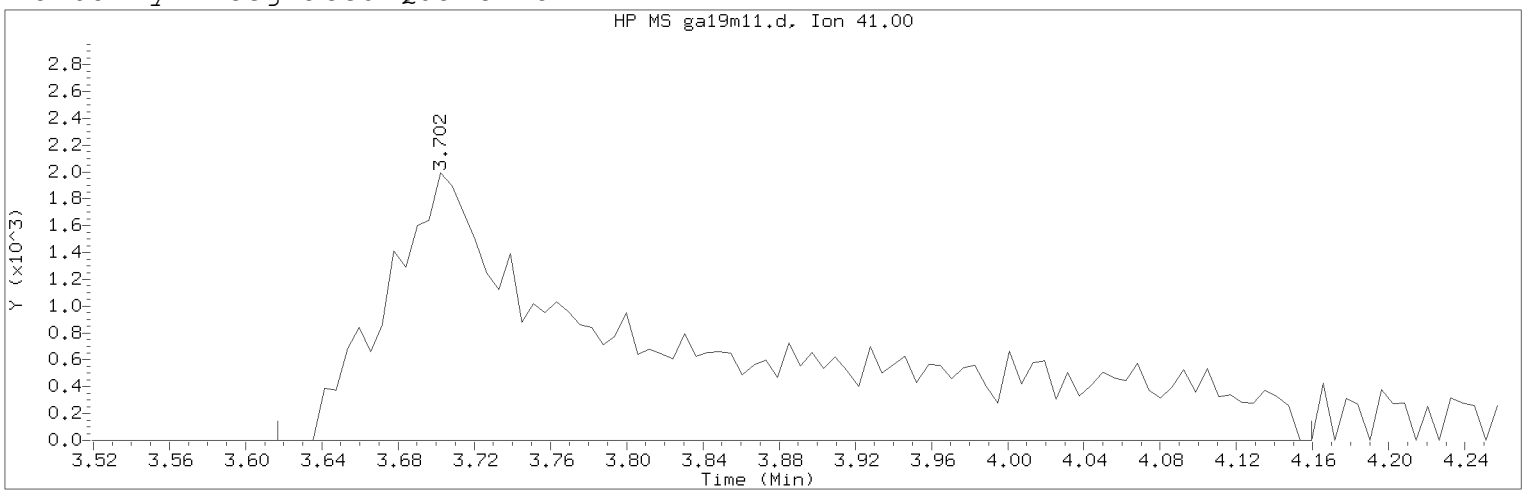
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

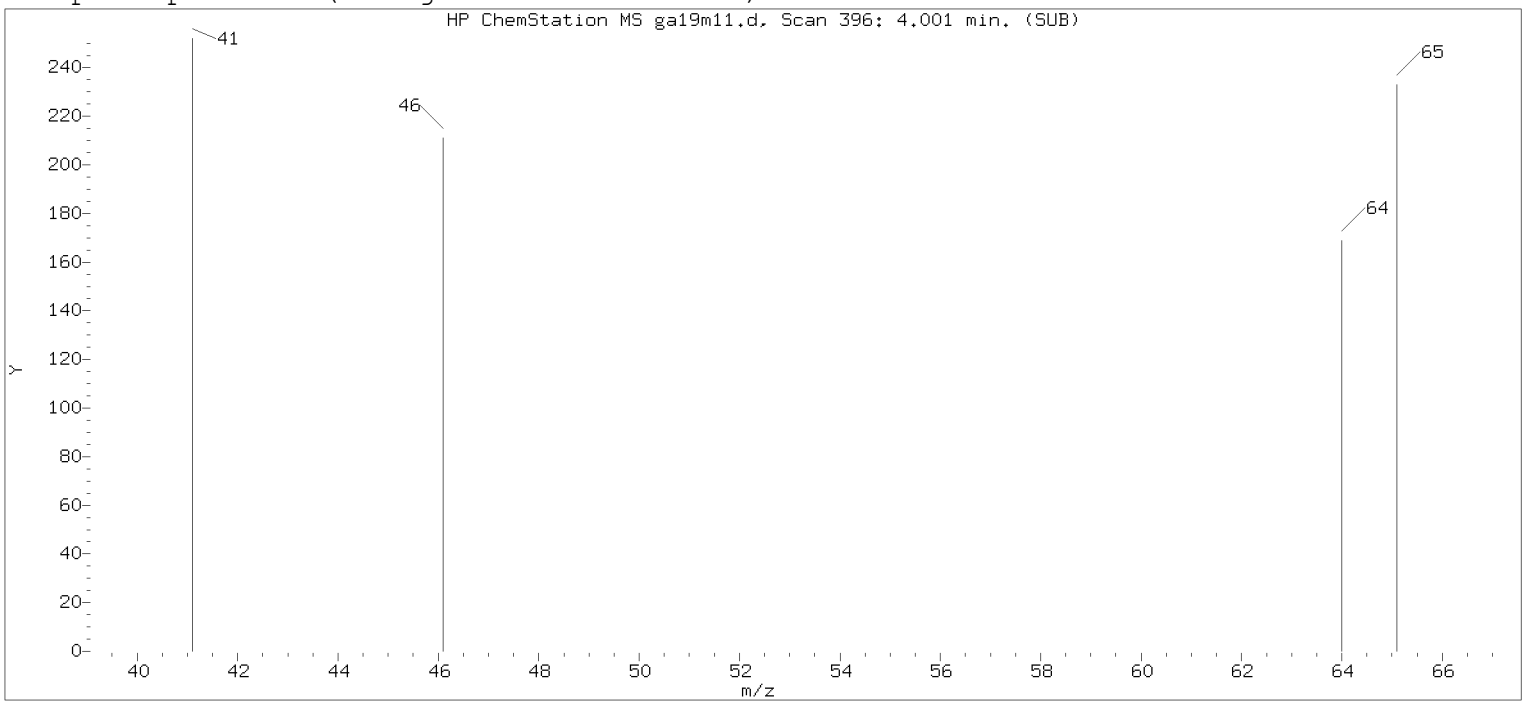
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 347
Retention Time (minutes): 3.702
Quant Ion : 41.00
Area (flag) : 21338M
On-Column Amount (ng) : 4.8420
Integration start scan : 332 Integration stop scan: 421
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

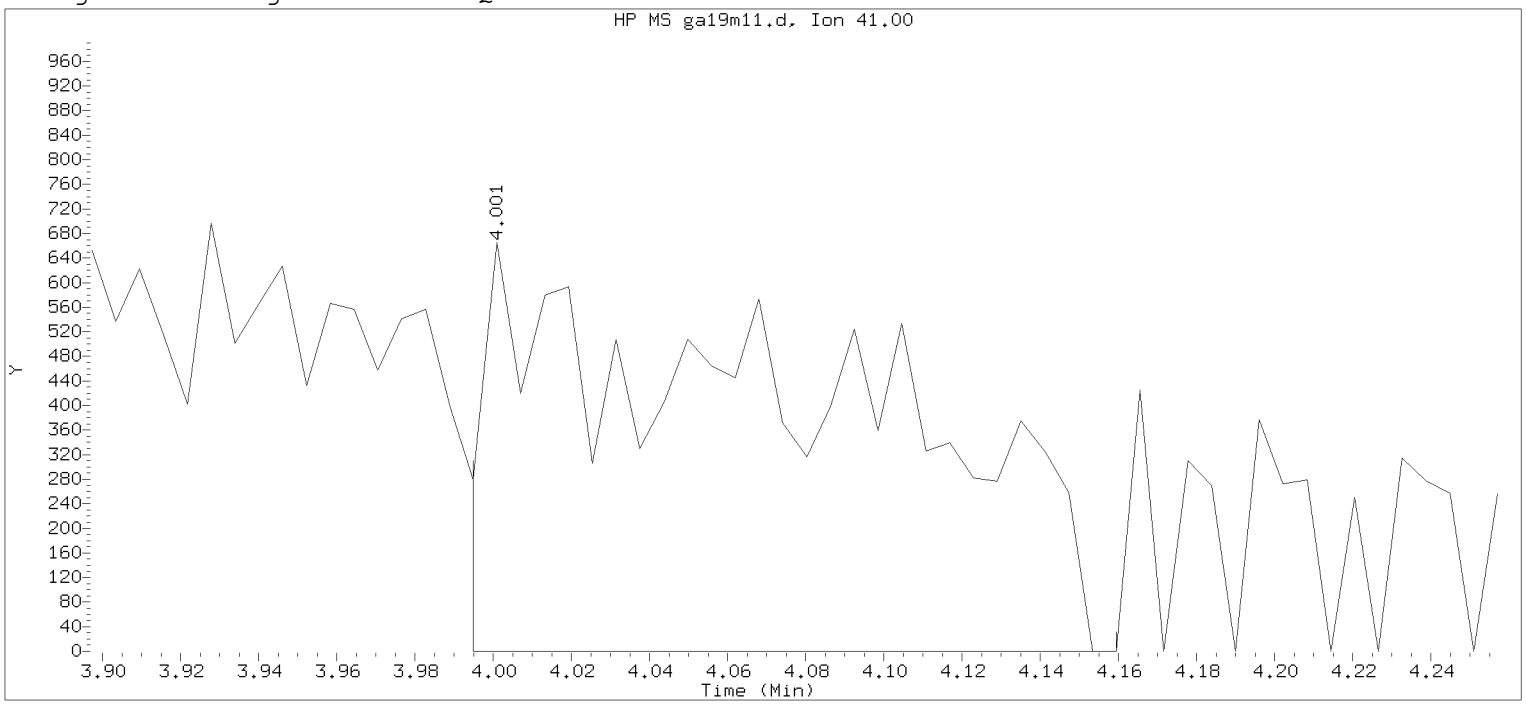
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:51.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

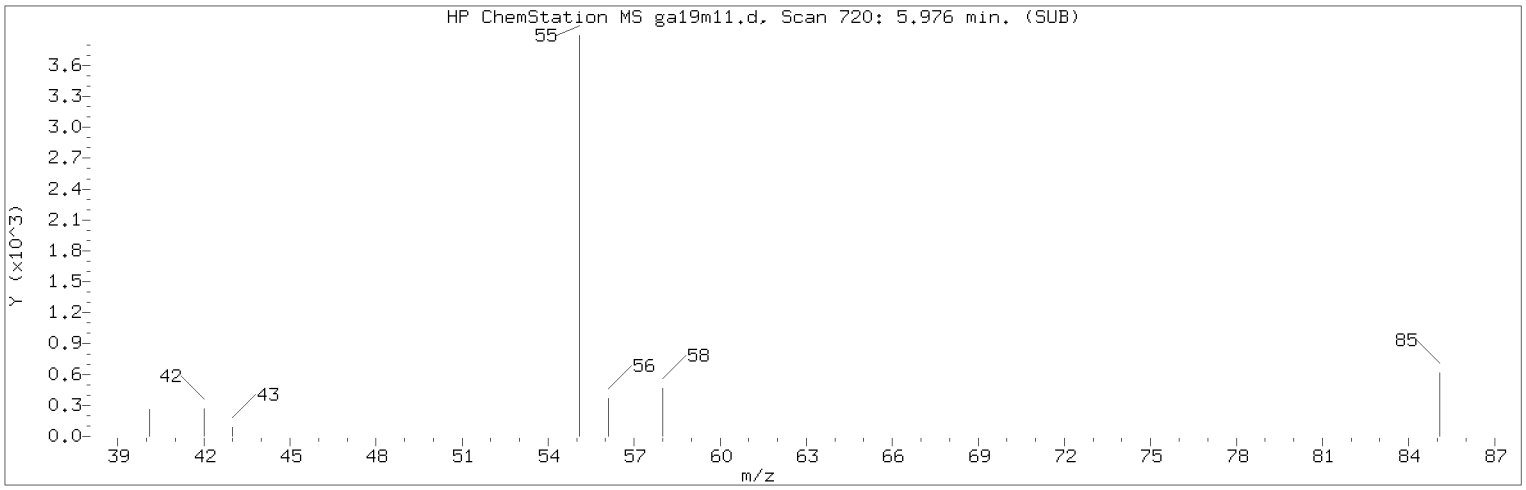
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:58 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

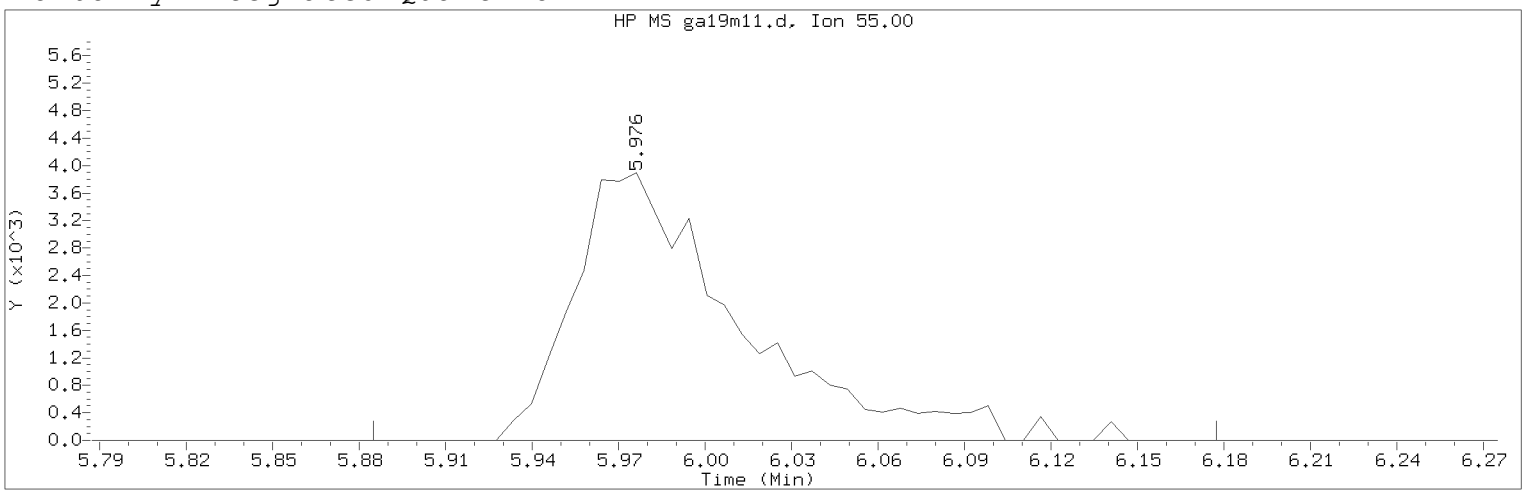
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 396		
Retention Time (minutes)	: 4.001		
Quant Ion	: 41.00		
Area	: 3886		
On-column Amount (ng)	: 9.3948		
Integration start scan	: 394	Integration stop scan:	421
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

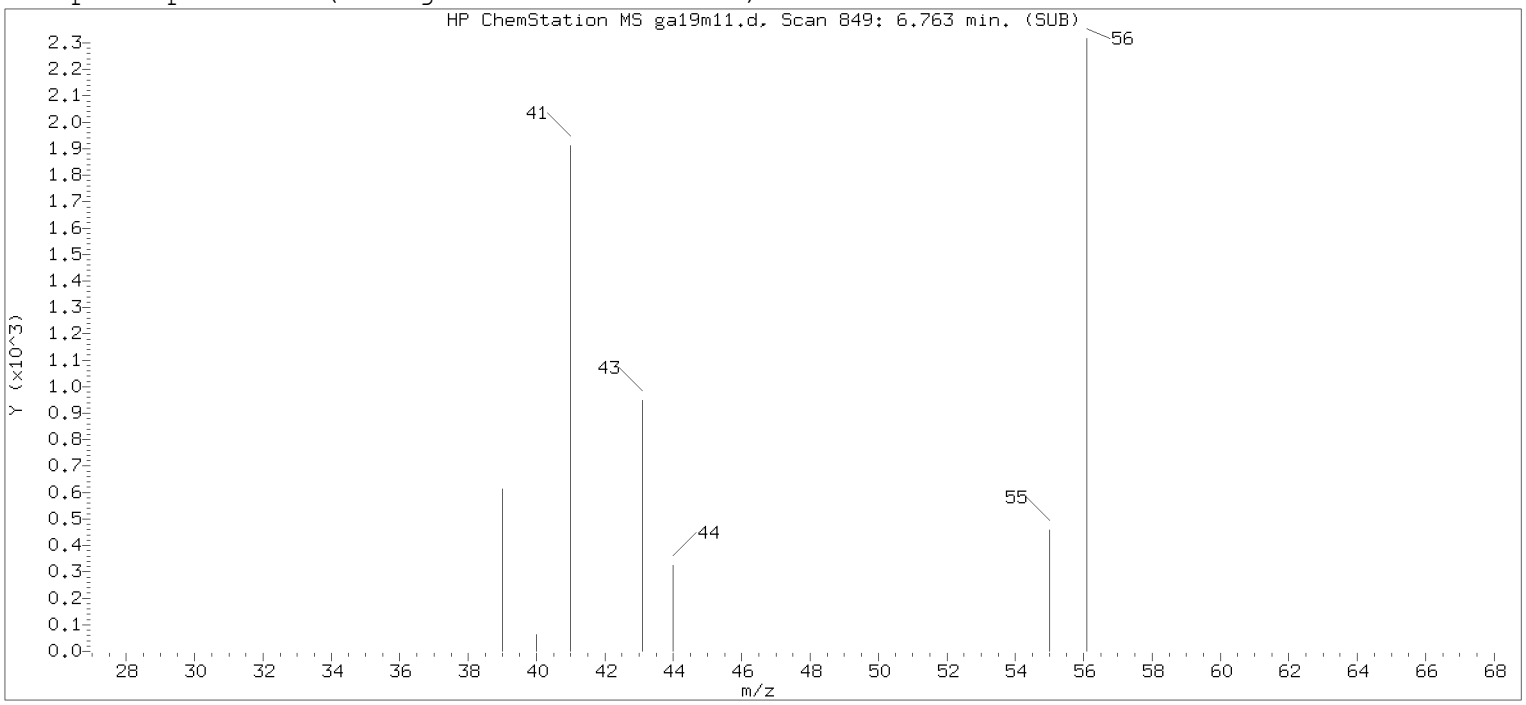
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 720
Retention Time (minutes): 5.976
Quant Ion : 55.00
Area (flag) : 15753M
On-Column Amount (ng) : 0.4562
Integration start scan : 704 Integration stop scan: 752
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

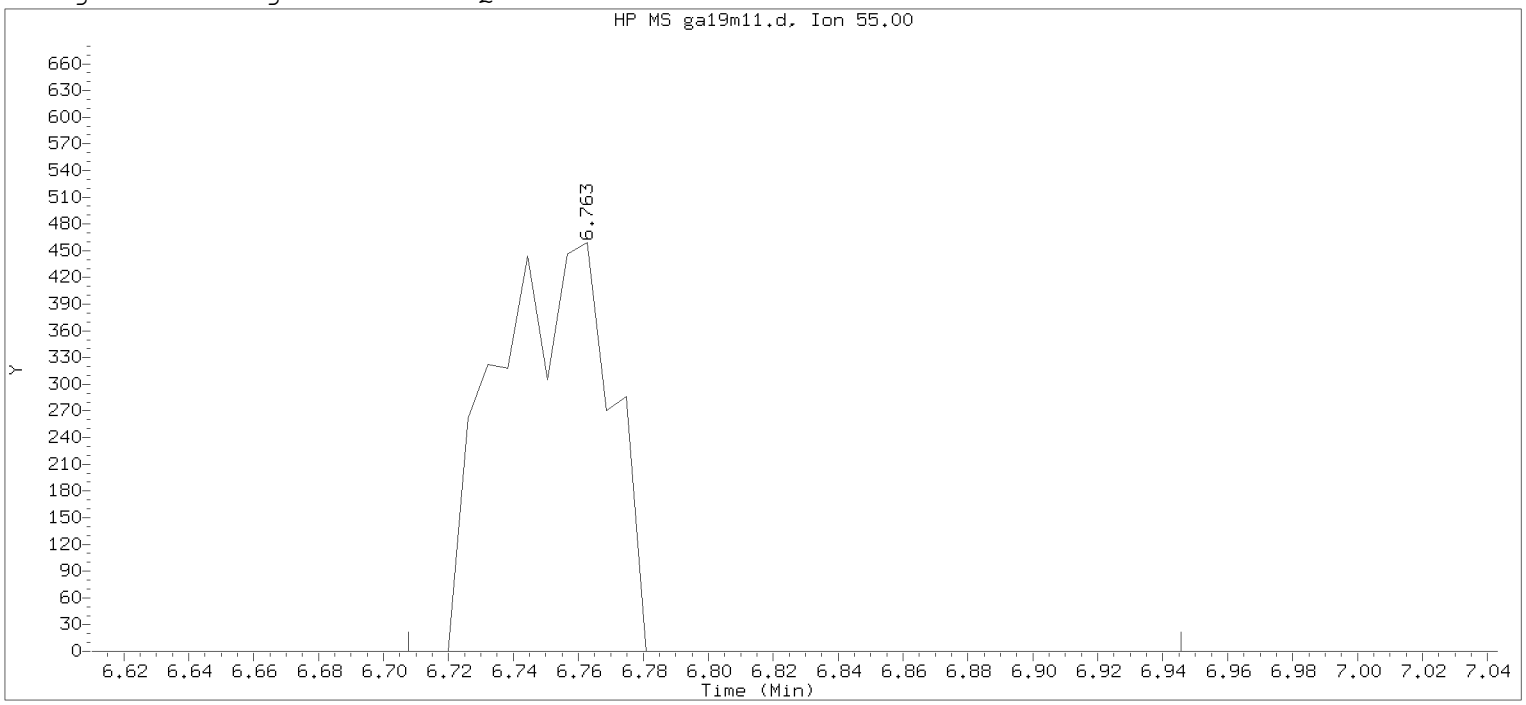
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:51.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

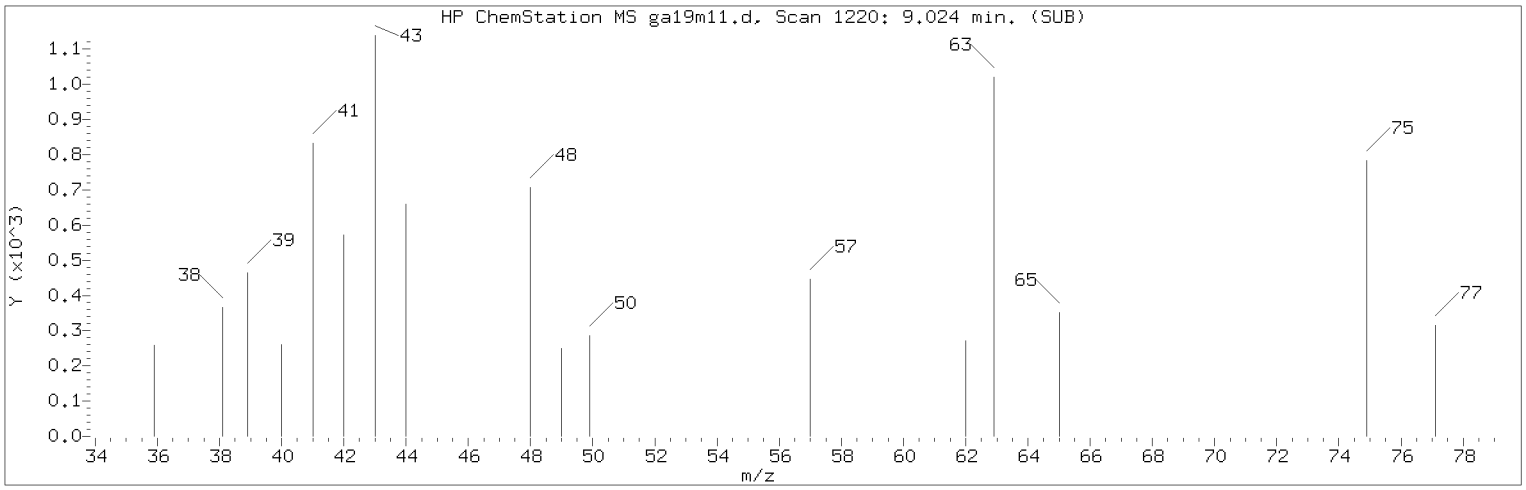
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:58 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

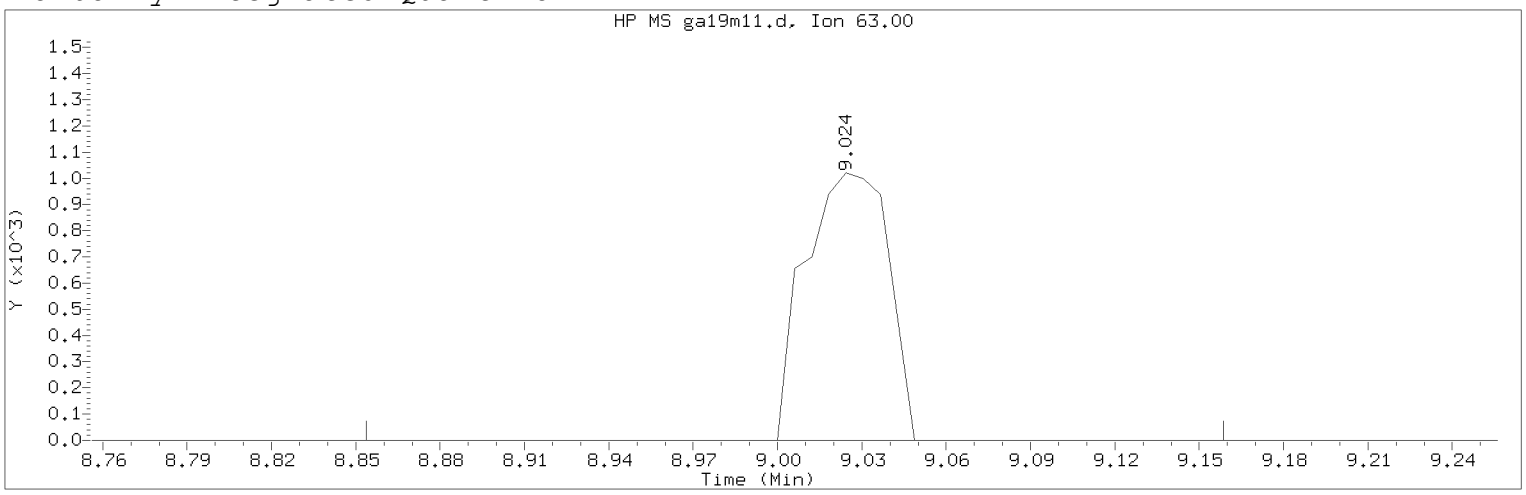
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 849
Retention Time (minutes): 6.763
Quant Ion : 55.00
Area : 1138
On-column Amount (ng) : 0.5742
Integration start scan : 839 Integration stop scan: 878
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. AE06 m.dl 7726

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

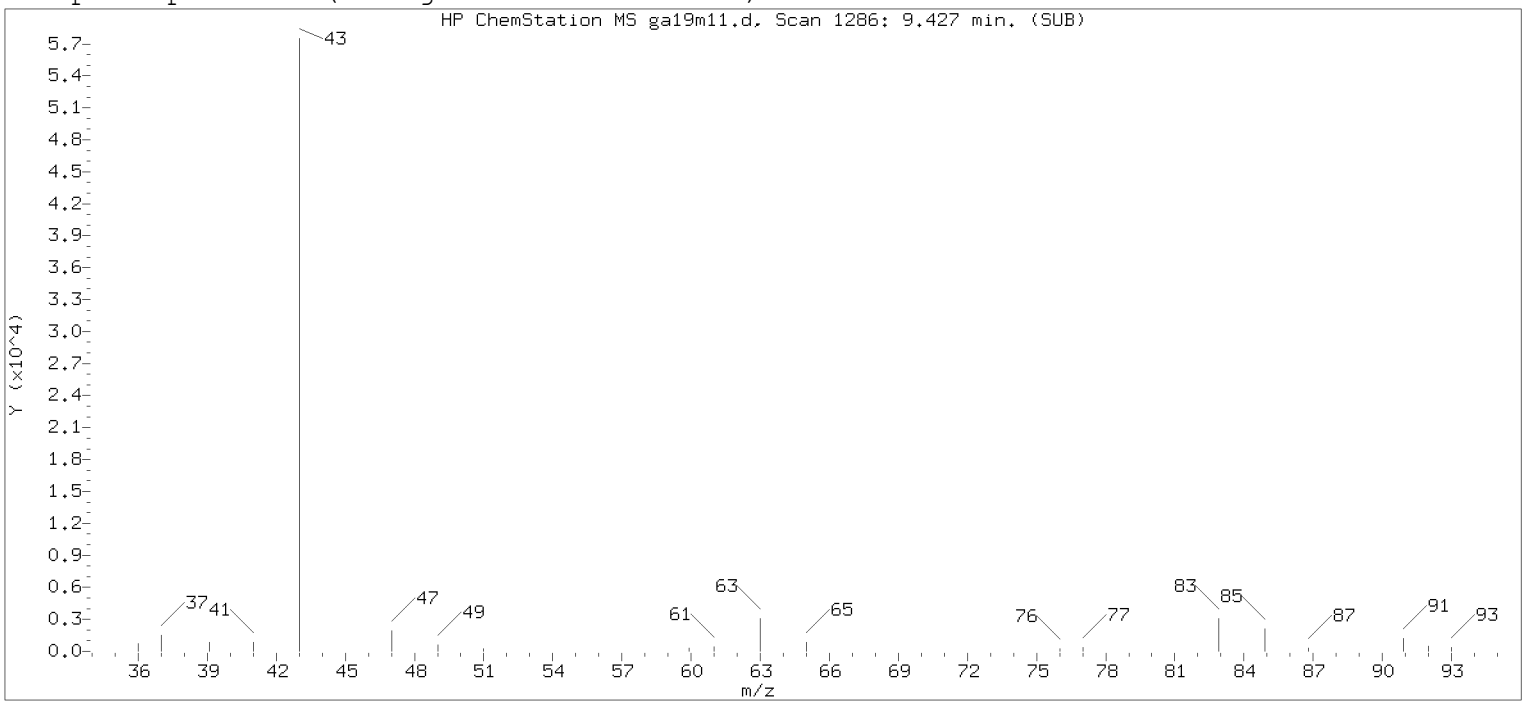
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1220
Retention Time (minutes): 9.024
Quant Ion : 63.00
Area (flag) : 2095M
On-Column Amount (ng) : 0.0749
Integration start scan : 1191 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

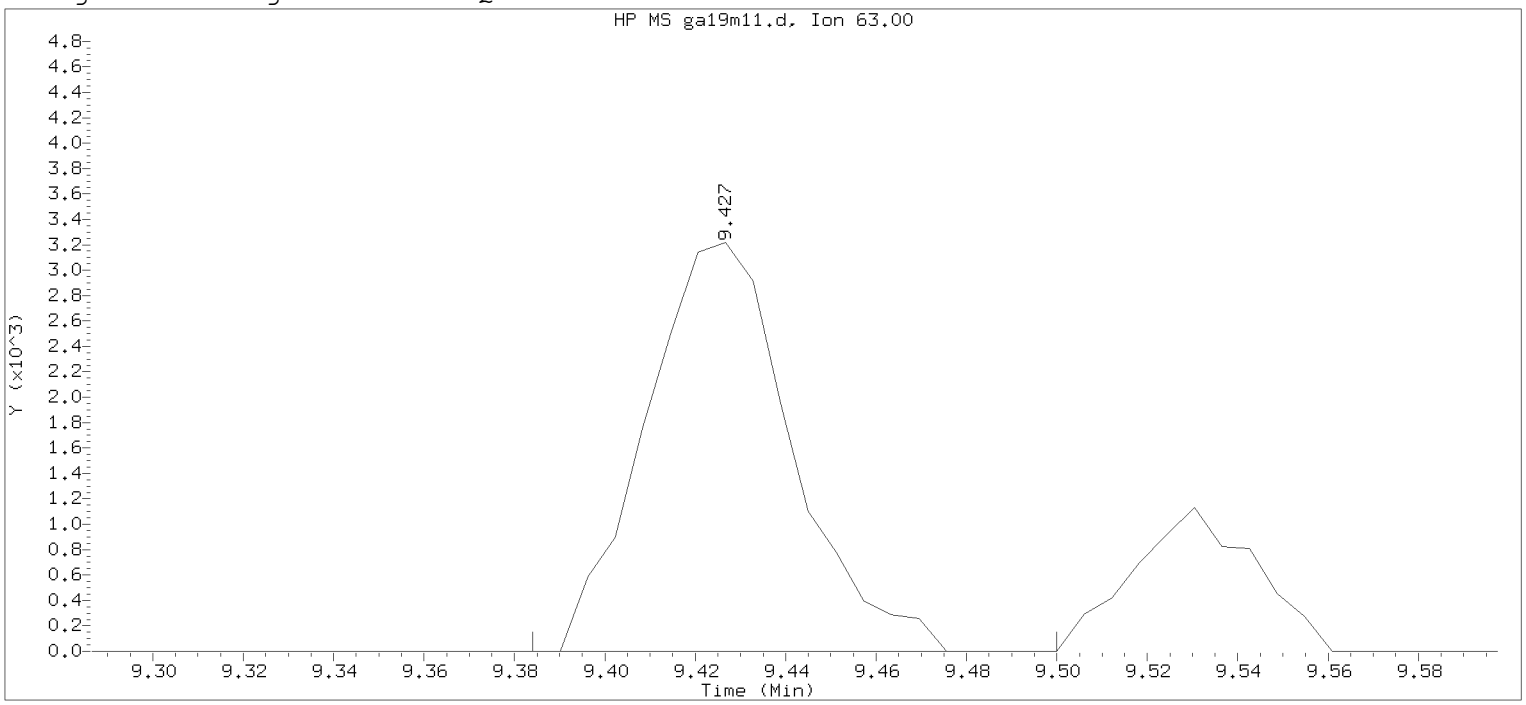
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:51.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

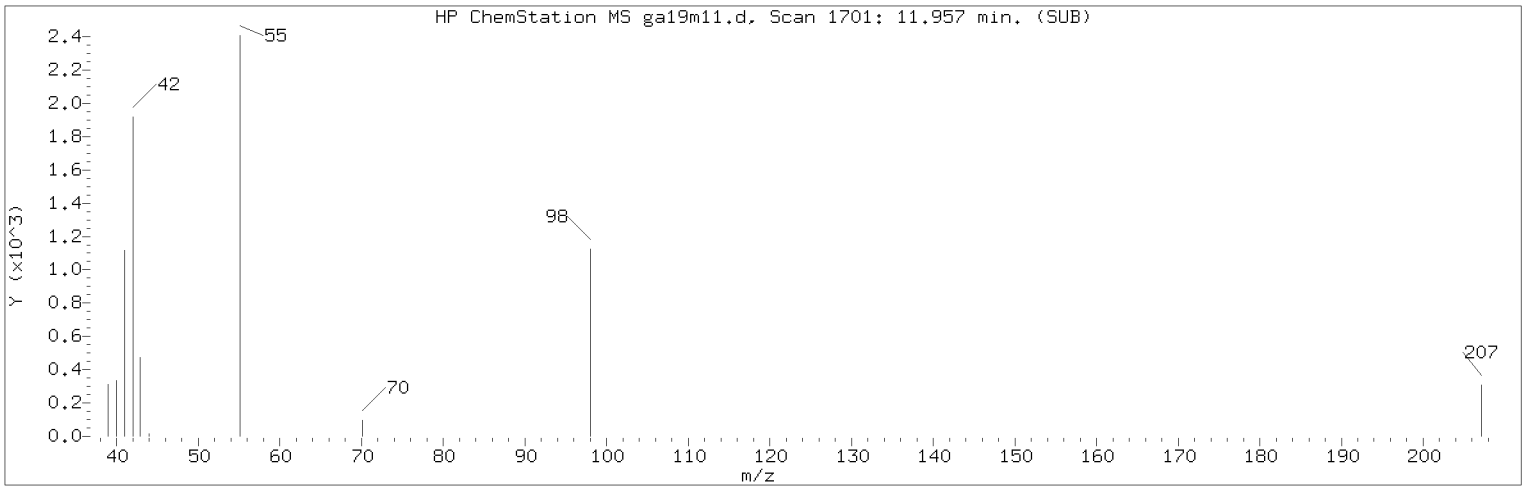
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:58 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

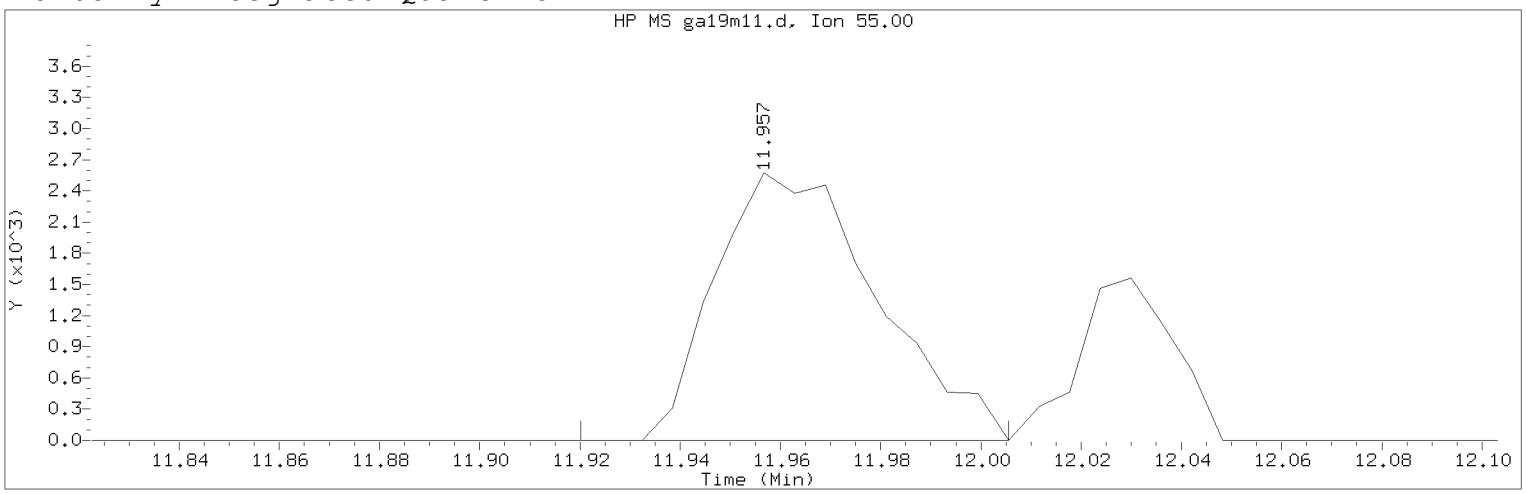
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 7240
On-column Amount (ng) : 0.0799
Integration start scan : 1278 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. AE06 mdl 0.0799

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

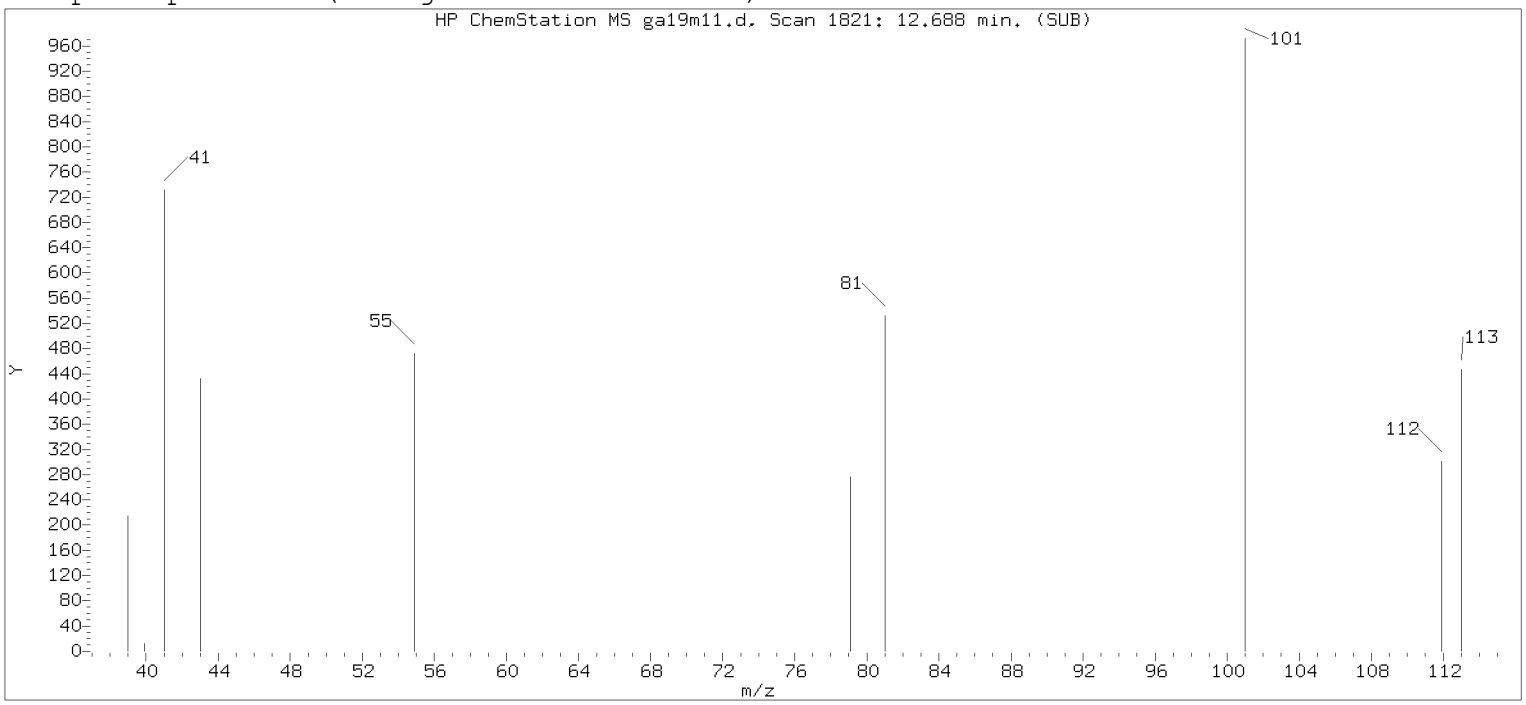
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 5771M
On-Column Amount (ng) : 4.8999
Integration start scan : 1694 Integration stop scan: 1708
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

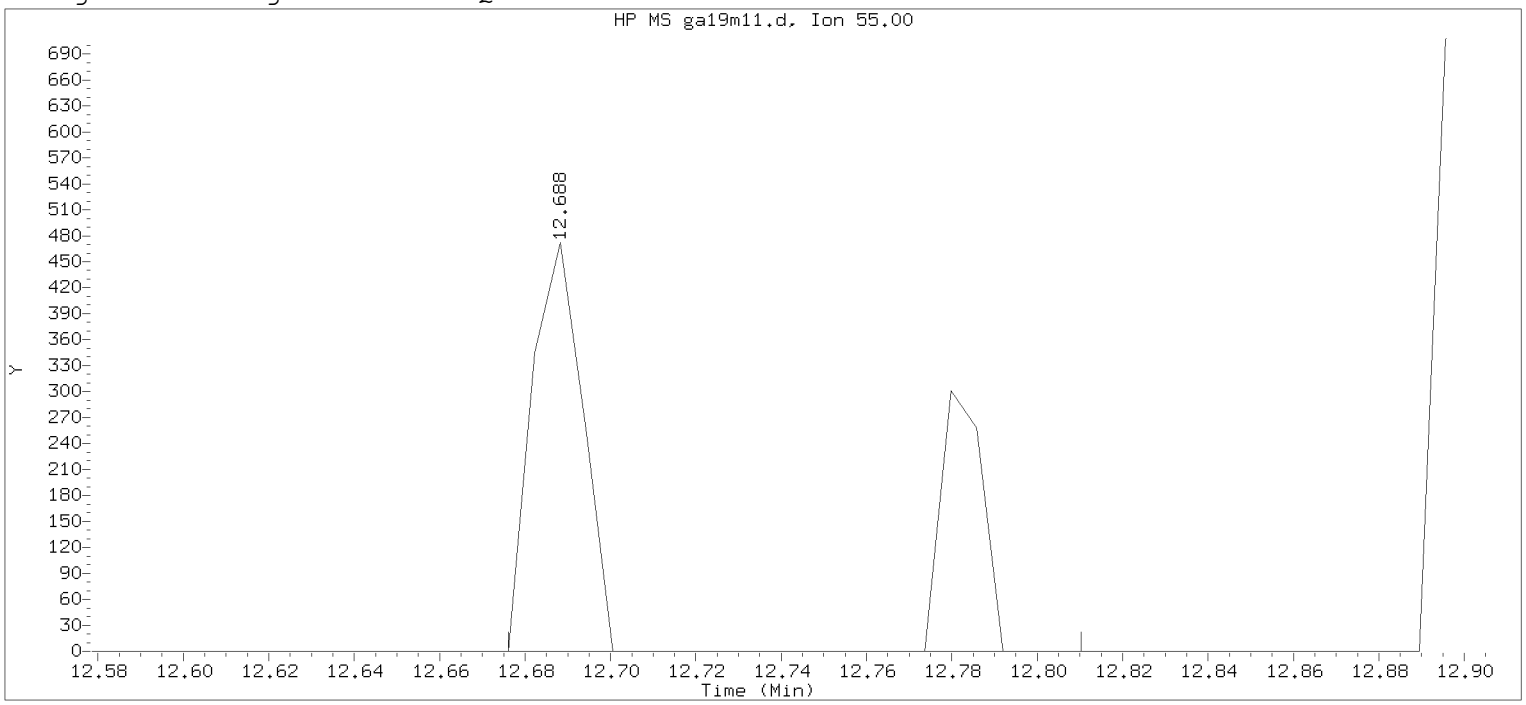
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:51.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 13:51.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



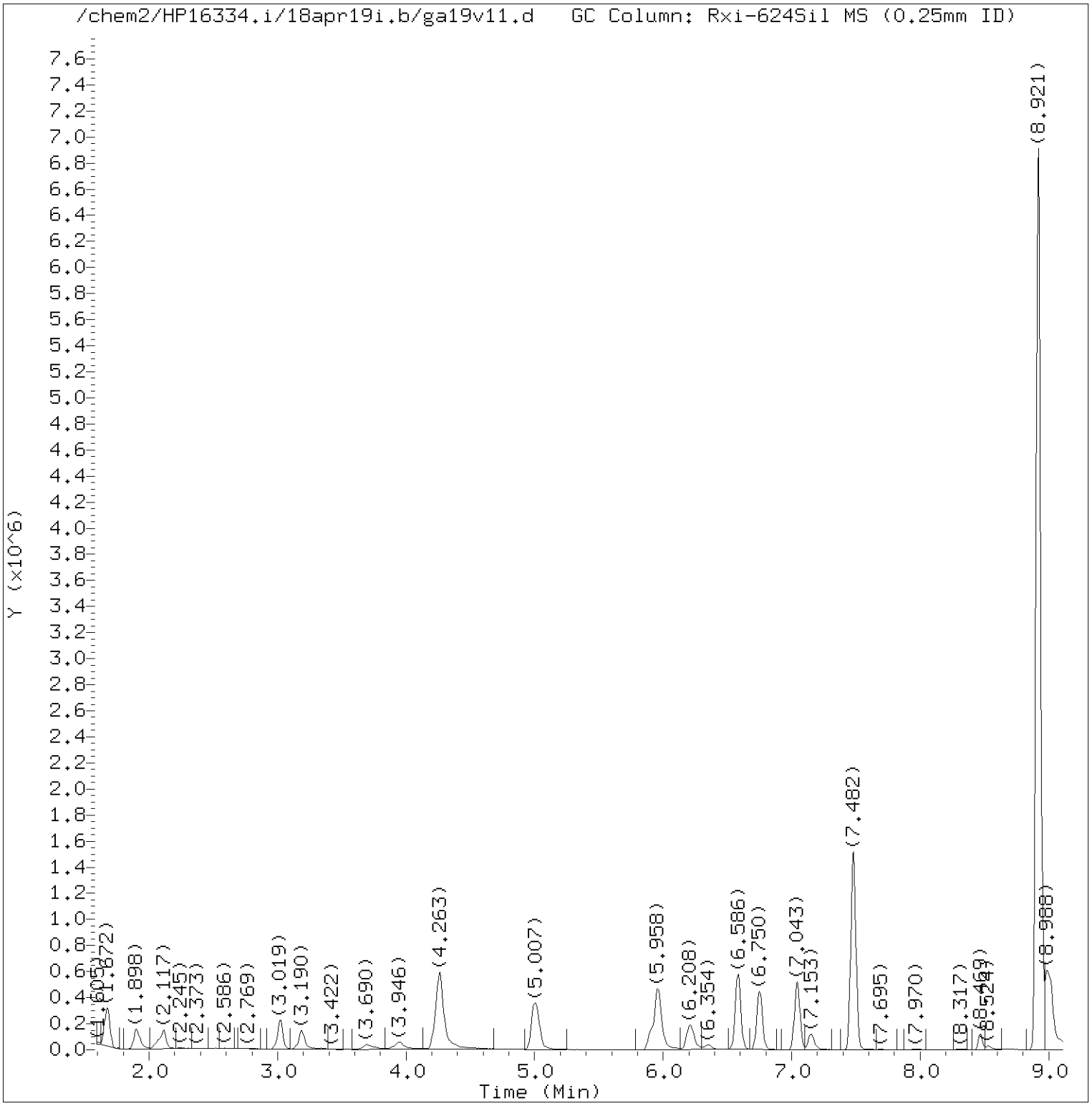
Data File: /chem2/HP16334.i/18apr19i.b/ga19m11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 18:42 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 18:36
Date, time and analyst ID of latest file update: 19-Apr-2018 18:58 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1821
Retention Time (minutes): 12.688
Quant Ion : 55.00
Area : 595
On-column Amount (ng) : 16.0294
Integration start scan : 1818 Integration stop scan: 1840
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:51.
Target 3.5 esignature used. AE06 mdl 0.1 730



Total Ion Chromatogram (TIC)

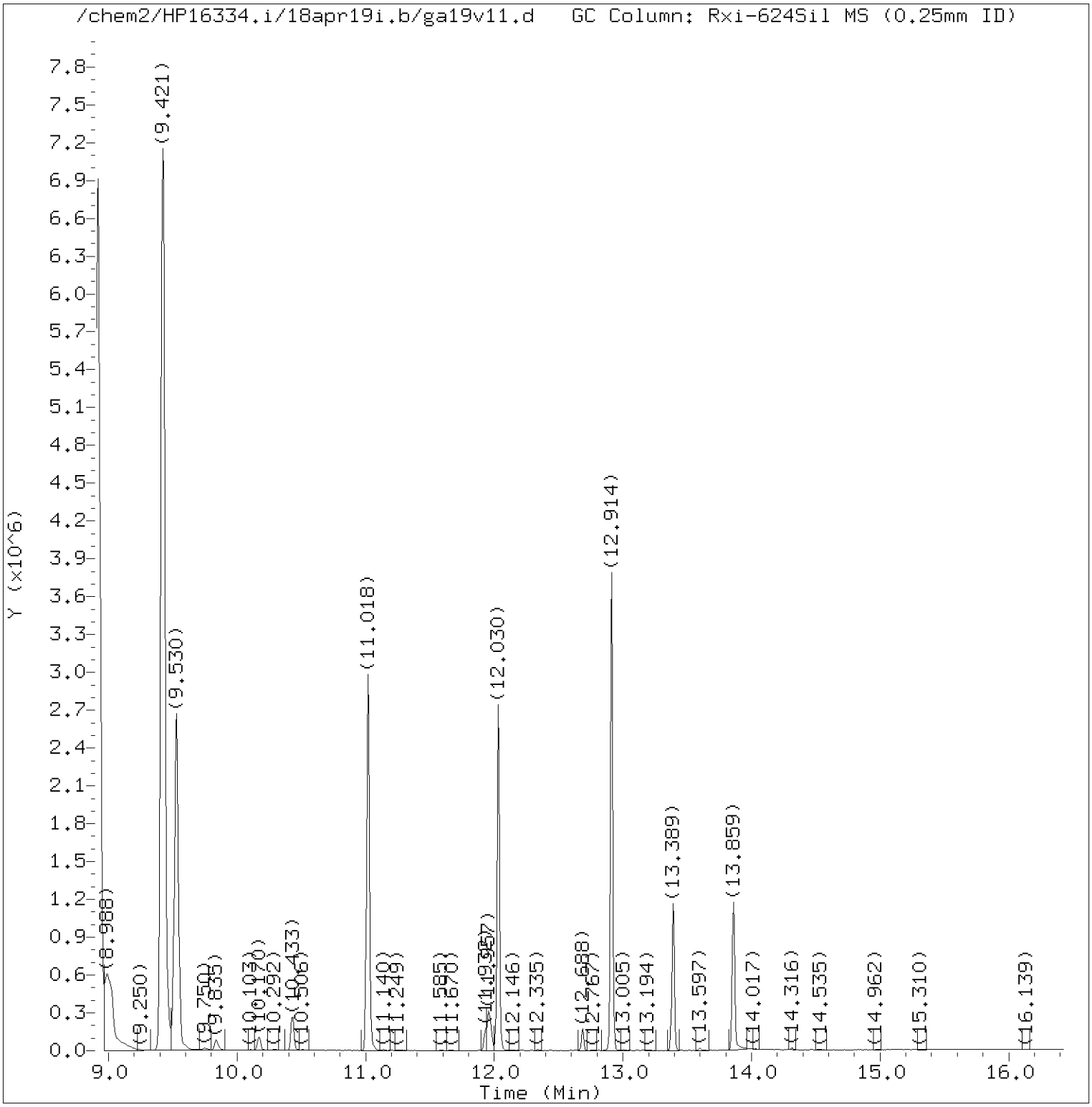
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

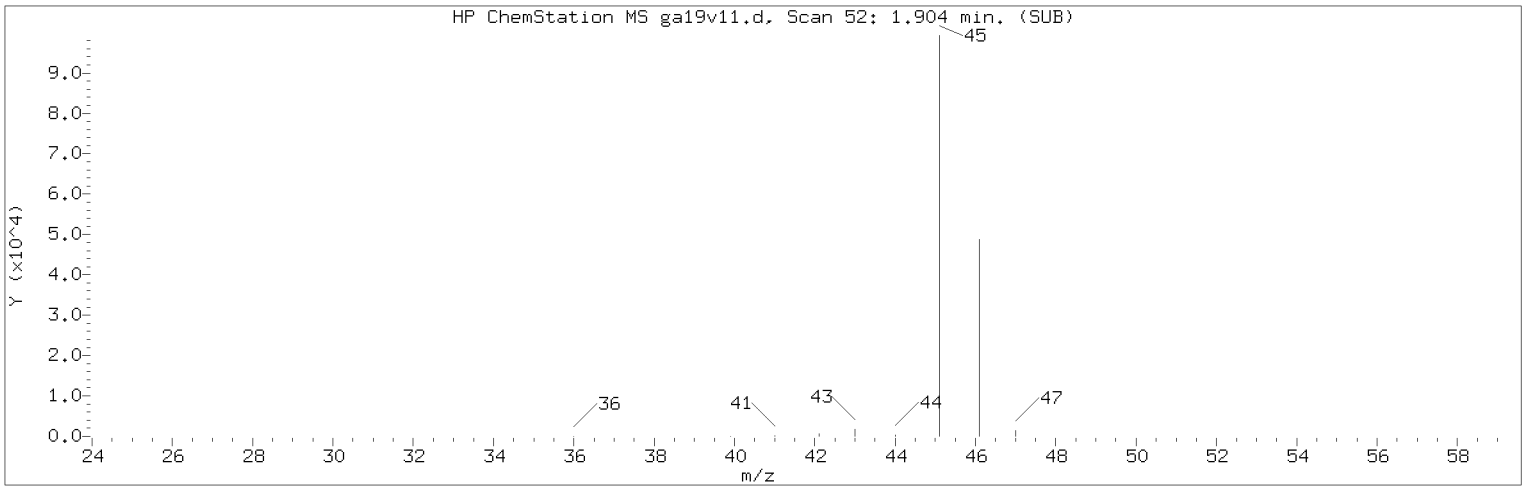
Sample Name: LCSSMG Lab Sample ID: LCSSMG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.904	45	364267M	5.134
25) Acetonitrile	(1)	3.696	41	191510M	41.641
26)*t-Butyl Alcohol-d10	(1)	3.946	65	192874	50.000
36) Vinyl Acetate	(2)	5.007	43	1282643	13.478
43) Methyl Acrylate	(2)	5.958	55	973123M	27.463
50)$Dibromofluoromethane	(2)	6.586	113	493124	9.976
53) 1-Chlorobutane	(2)	6.750	56	537132	5.041
57)$1,2-Dichloroethane-d4	(2)	7.043	102	105654	10.086
63)*Fluorobenzene	(2)	7.482	96	1965747	10.000
77) Chloroacetonitrile	(2)	8.988	75	474868	258.319
78) 2-Chloroethyl vinyl ether	(2)	9.018	63	153569M	5.350
82)$Toluene-d8	(3)	9.530	98	2046427	10.096
97)*Chlorobenzene-d5	(3)	11.018	117	1511477	10.000
112) Cyclohexanone	(1)	11.957	55	159209M	129.528
111)$4-Bromofluorobenzene	(3)	12.030	95	772845	9.961
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	832457	10.000
142) Hexachloroethane	(4)	13.389	117	153248	5.117

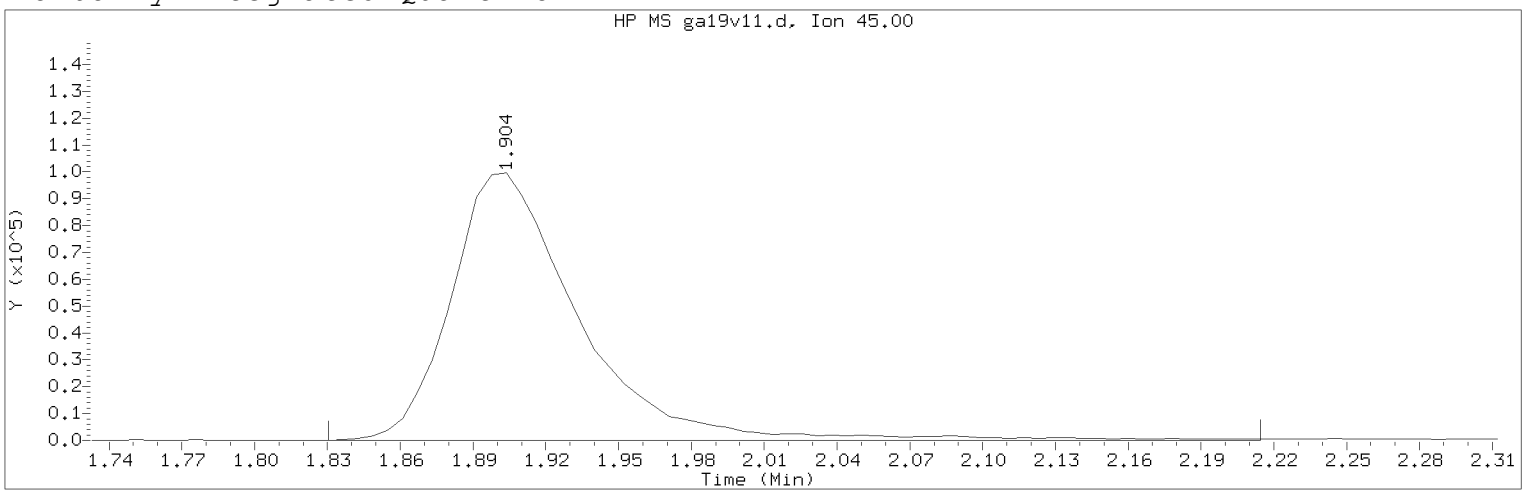
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

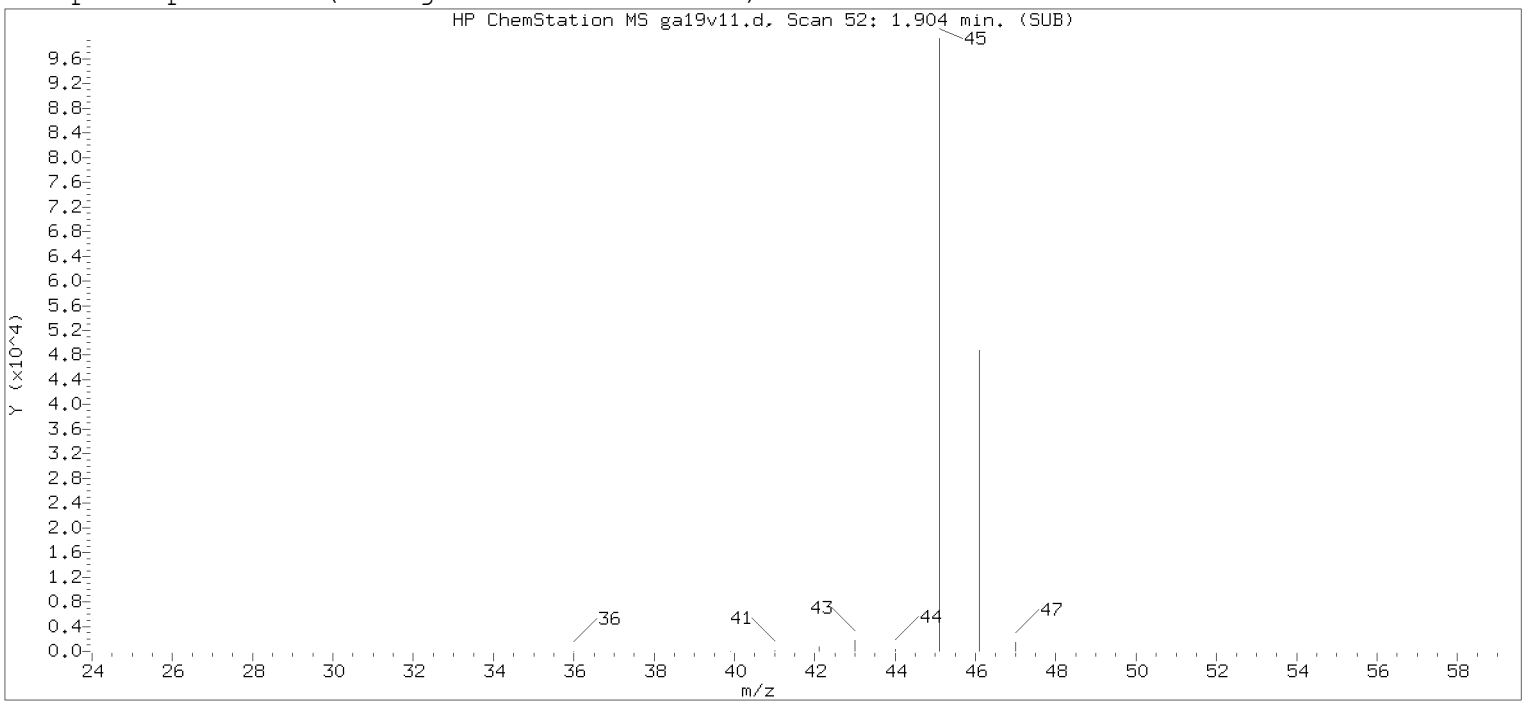
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 52
Retention Time (minutes): 1.904
Quant Ion : 45.00
Area (flag) : 364267M
On-Column Amount (ng) : 5.1340
Integration start scan : 39 Integration stop scan: 102
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

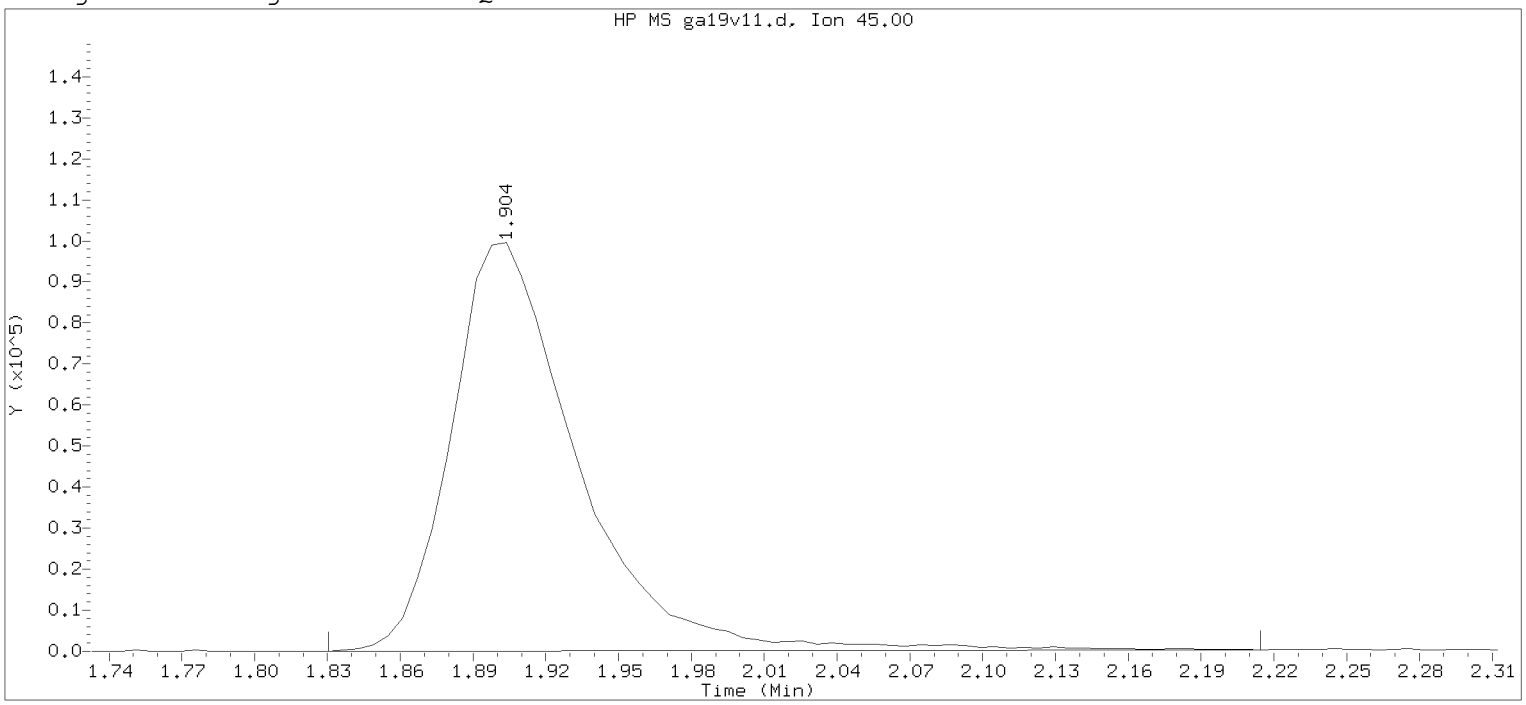
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:01.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

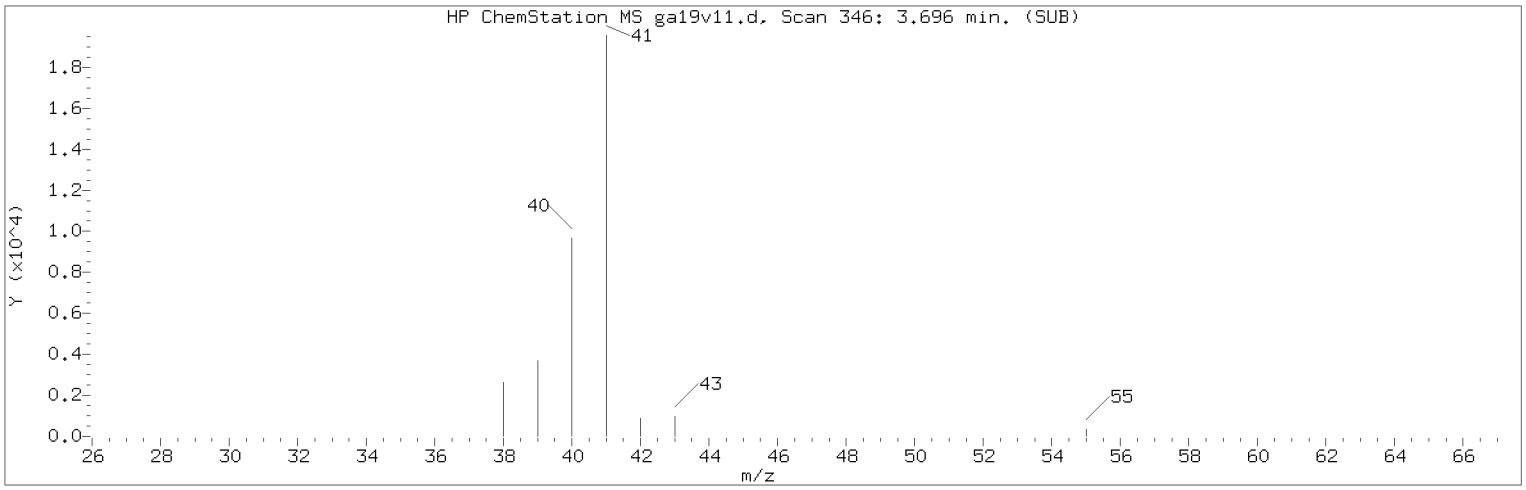
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 19:12
Date, time and analyst ID of latest file update: 19-Apr-2018 19:20 Automation

Sample Name: LCSSMG Lab Sample ID: LCSSMG

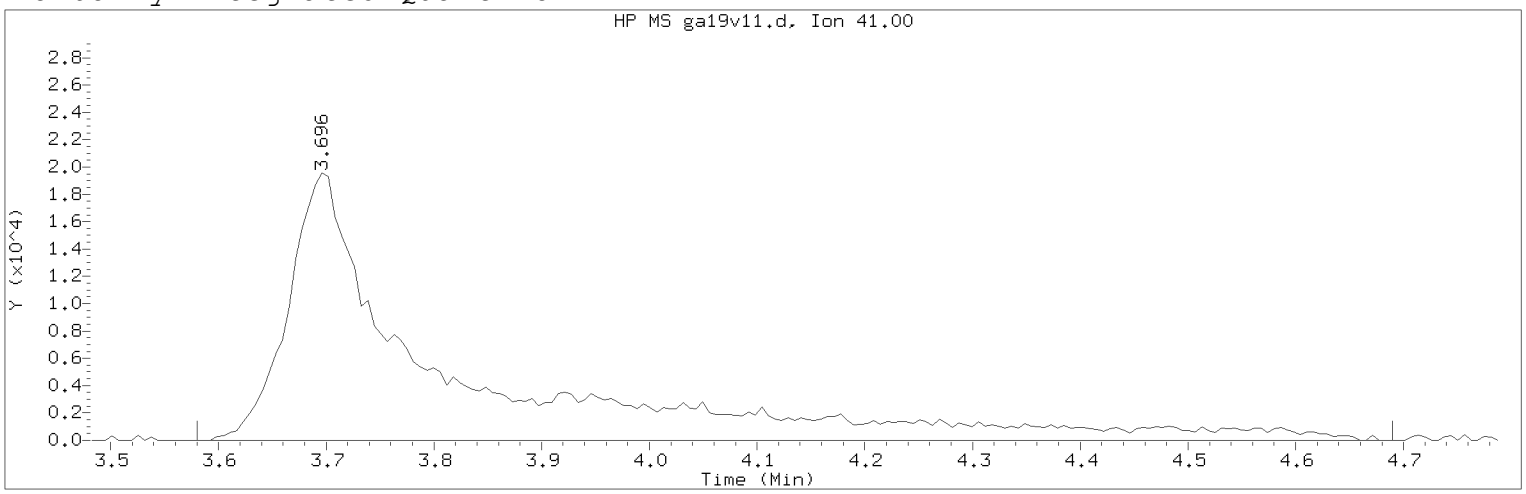
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 52
Retention Time (minutes): 1.904
Quant Ion : 45.00
Area : 359897
On-column Amount (ng) : 5.1587
Integration start scan : 39 Integration stop scan: 102
Y at integration start : 0 Y at integration end: 373

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:52.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

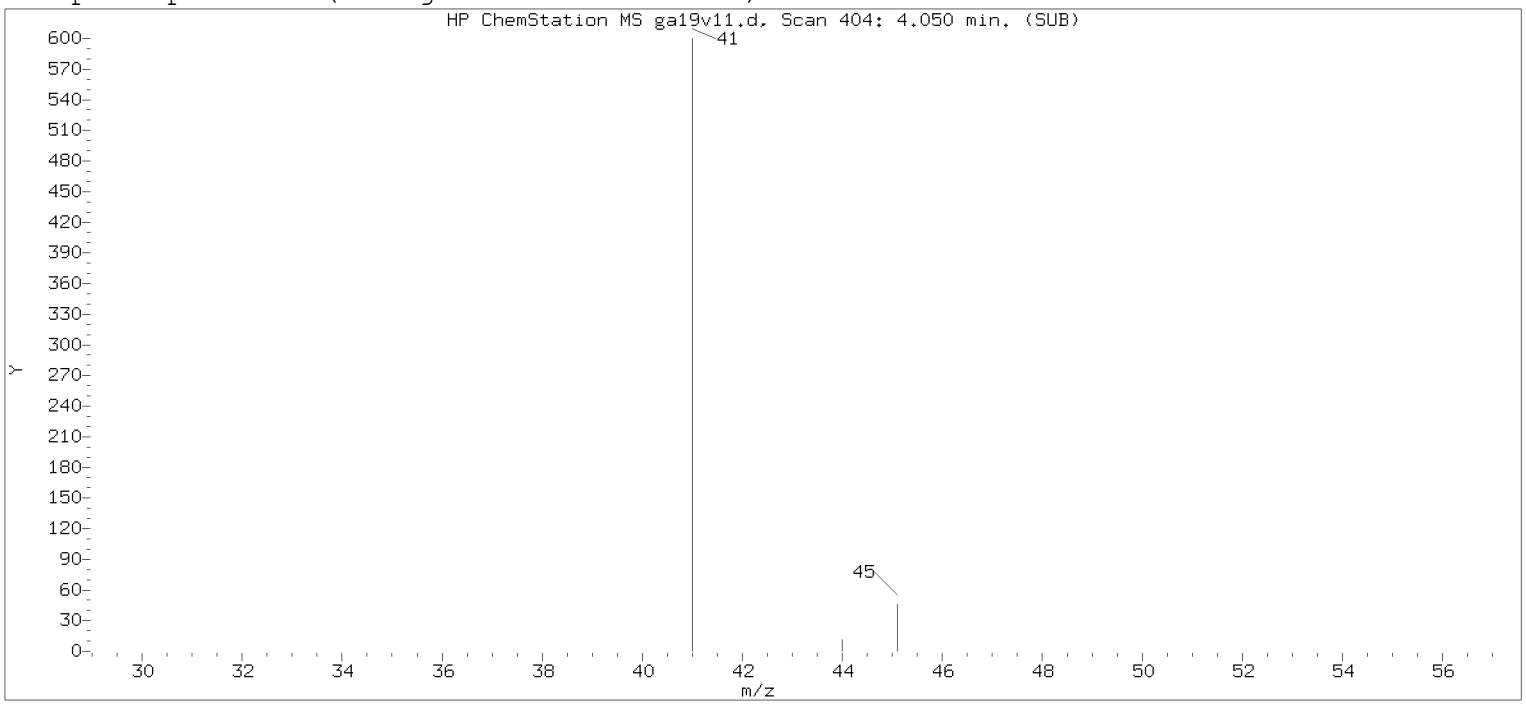
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 346
Retention Time (minutes): 3.696
Quant Ion : 41.00
Area (flag) : 191510M
On-Column Amount (ng) : 41.6411
Integration start scan : 326 Integration stop scan: 508
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

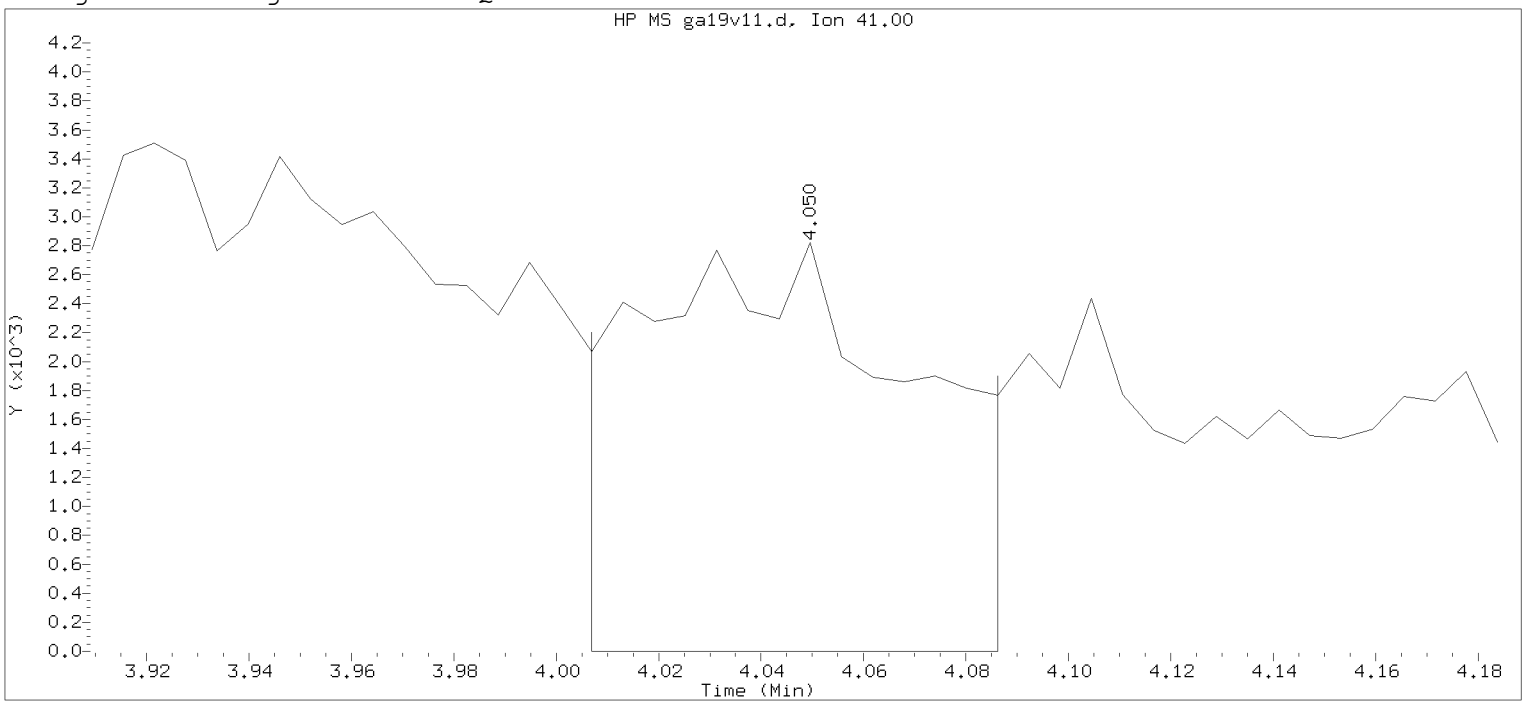
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:01.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

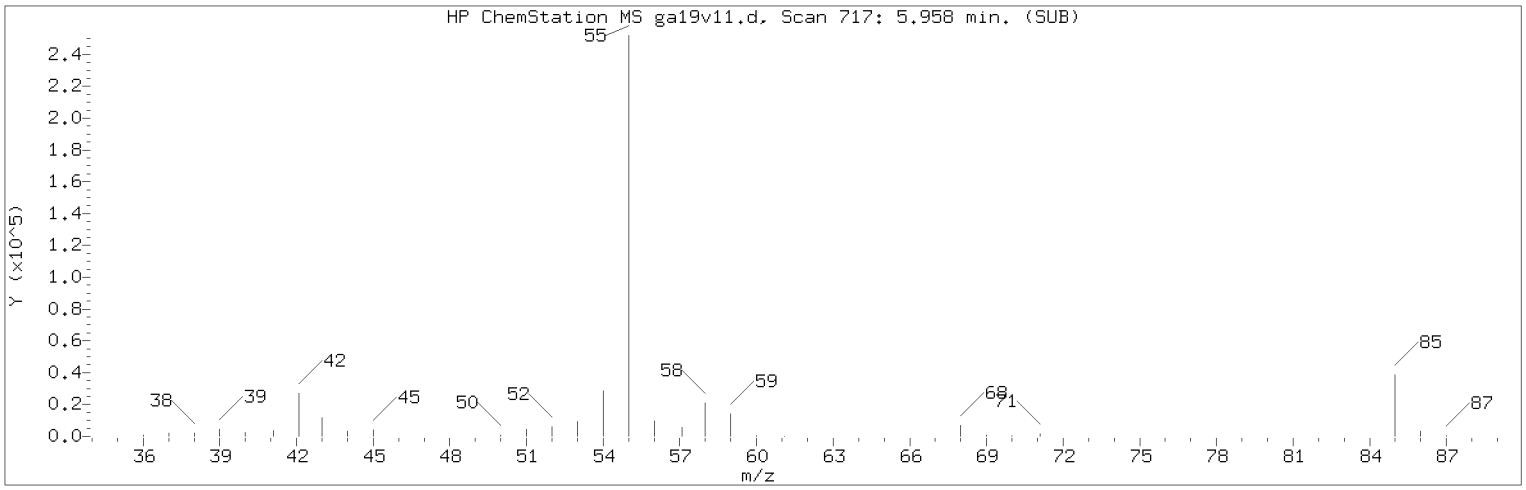
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 19:12
Date, time and analyst ID of latest file update: 19-Apr-2018 19:20 Automation

Sample Name: LCSSMG Lab Sample ID: LCSSMG

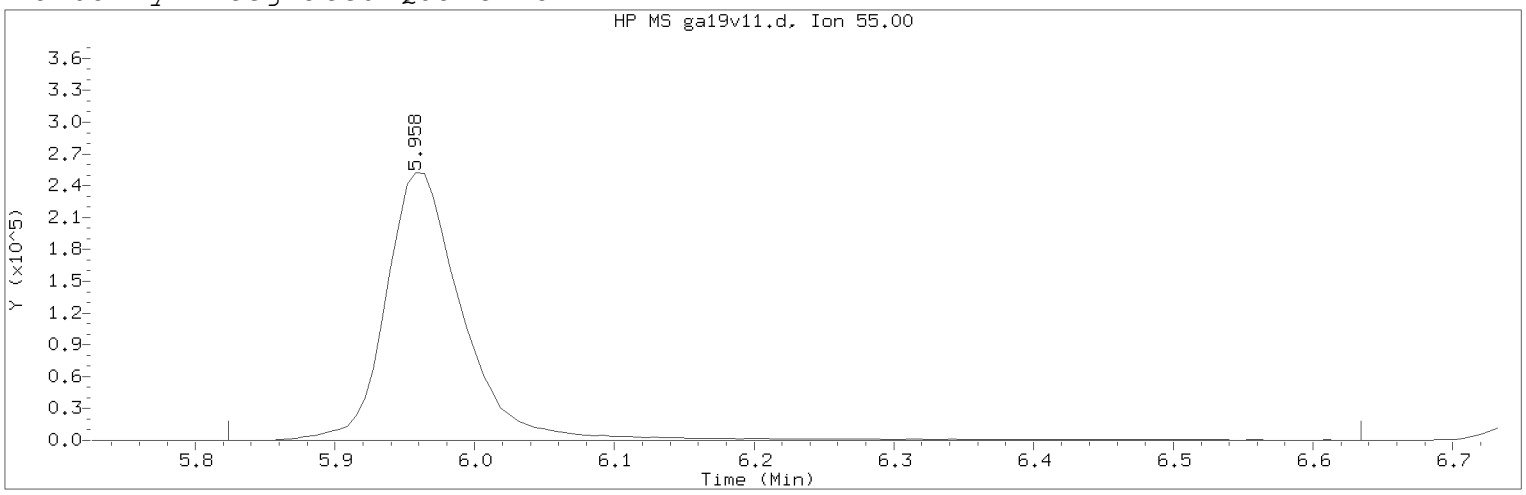
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 404
Retention Time (minutes): 4.050
Quant Ion : 41.00
Area : 10486
On-column Amount (ng) : 2.2593
Integration start scan : 396 Integration stop scan: 409
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:52.
Target 3.5 esignature used. Method: 7737

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

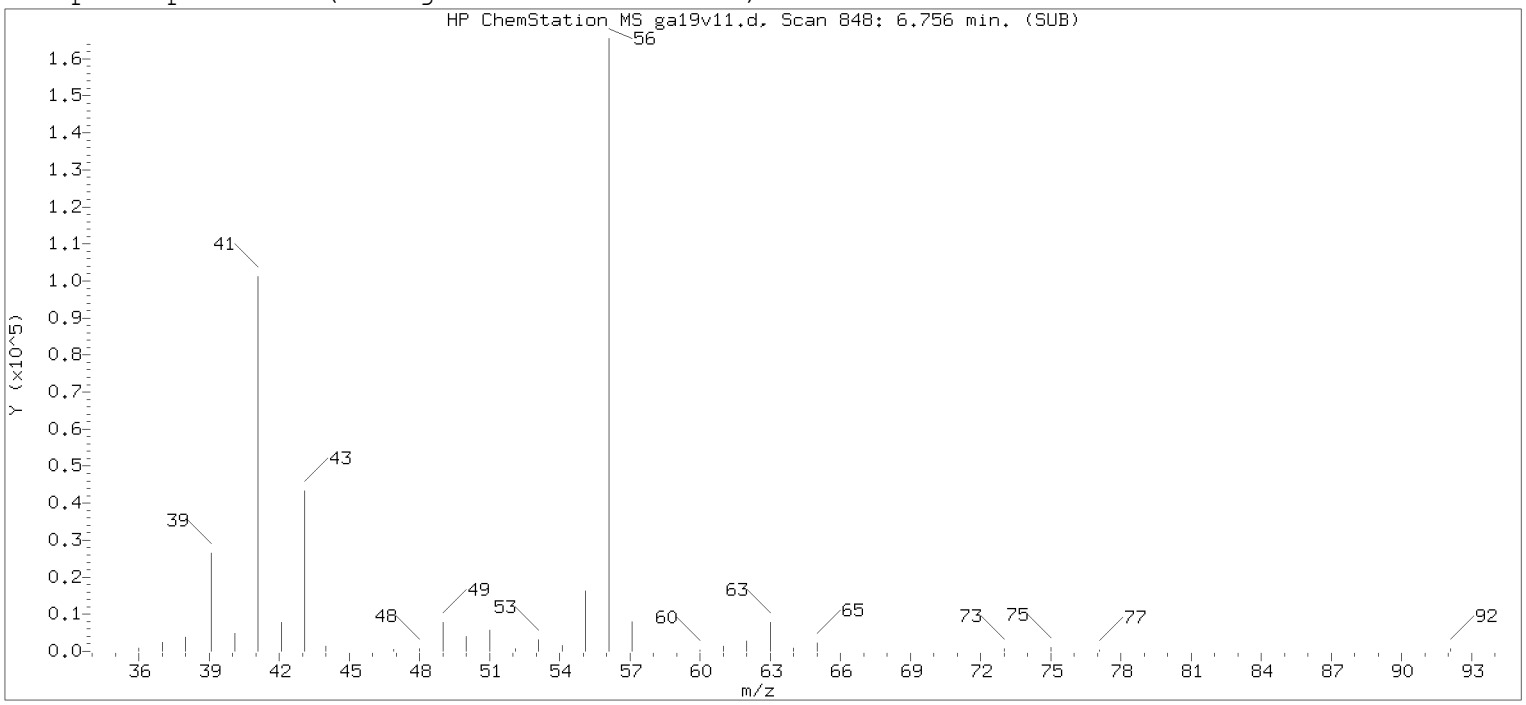
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 717
Retention Time (minutes): 5.958
Quant Ion : 55.00
Area (flag) : 973123M
On-Column Amount (ng) : 27.4629
Integration start scan : 694 Integration stop scan: 827
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

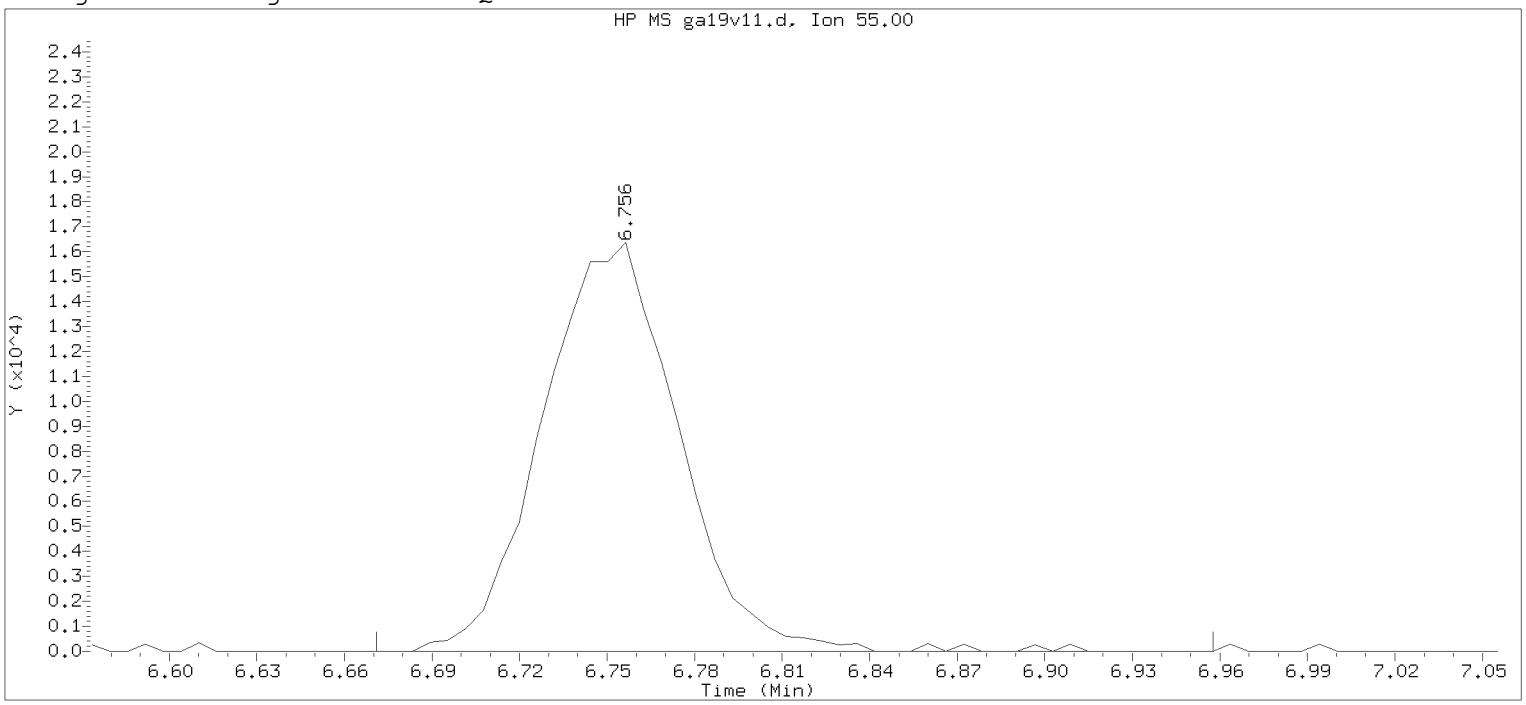
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:01.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

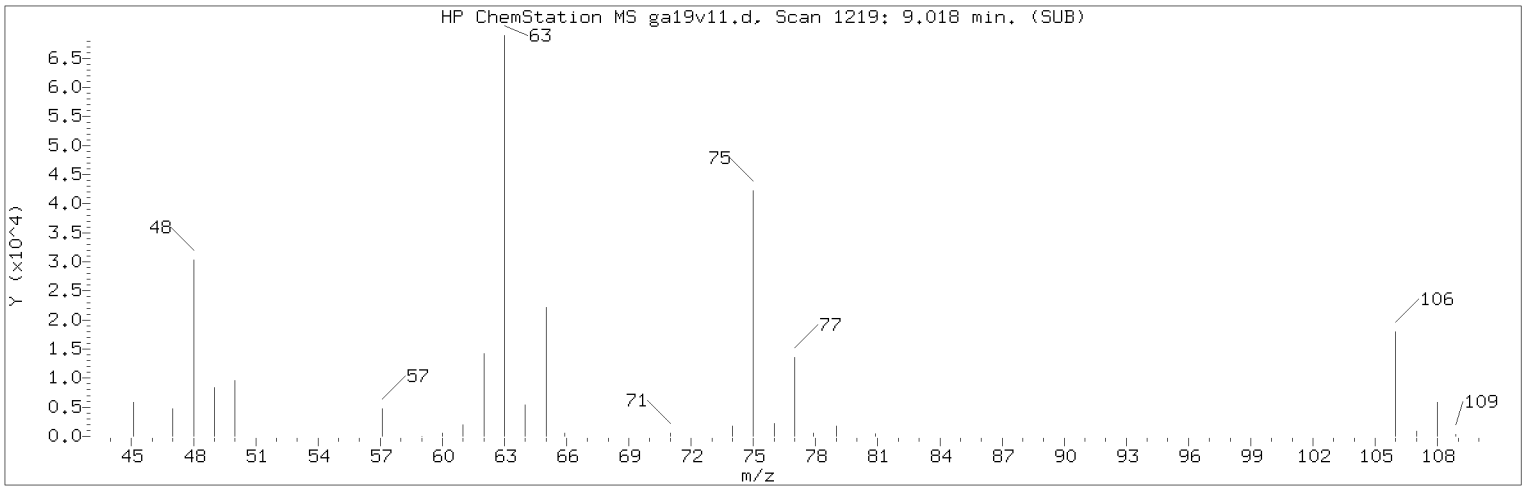
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 19:12
Date, time and analyst ID of latest file update: 19-Apr-2018 19:20 Automation

Sample Name: LCSSMG Lab Sample ID: LCSSMG

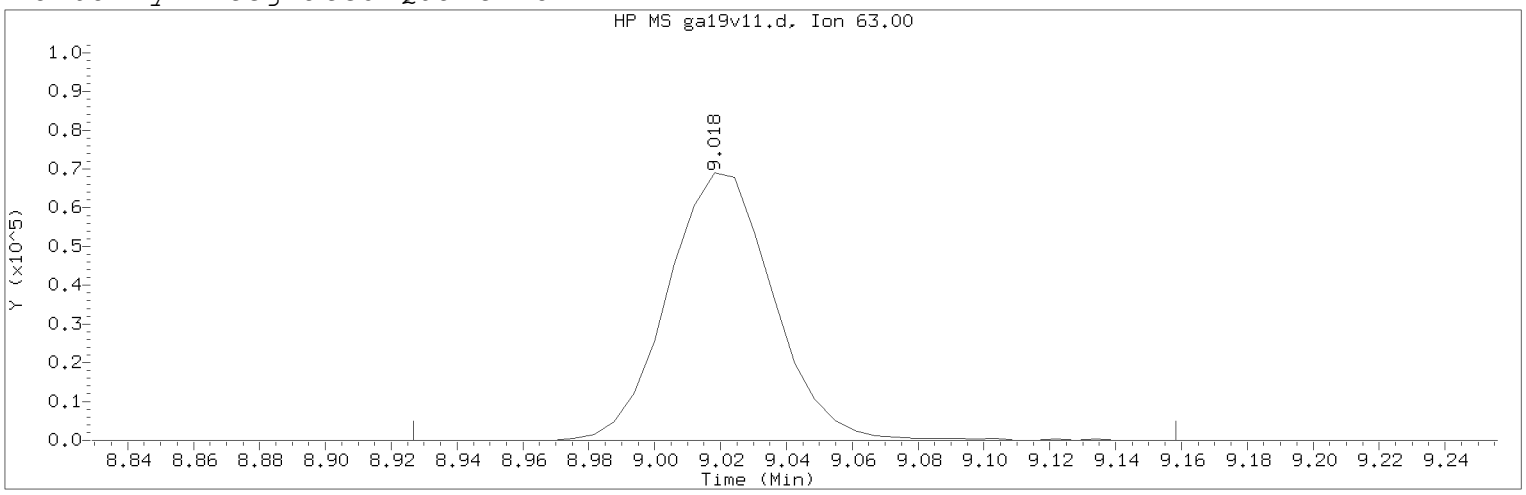
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 848
Retention Time (minutes): 6.756
Quant Ion : 55.00
Area : 53027
On-column Amount (ng) : 1.5103
Integration start scan : 833 Integration stop scan: 880
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:52.
Target 3.5 esignature used. AE06 m.dot 7/30/

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

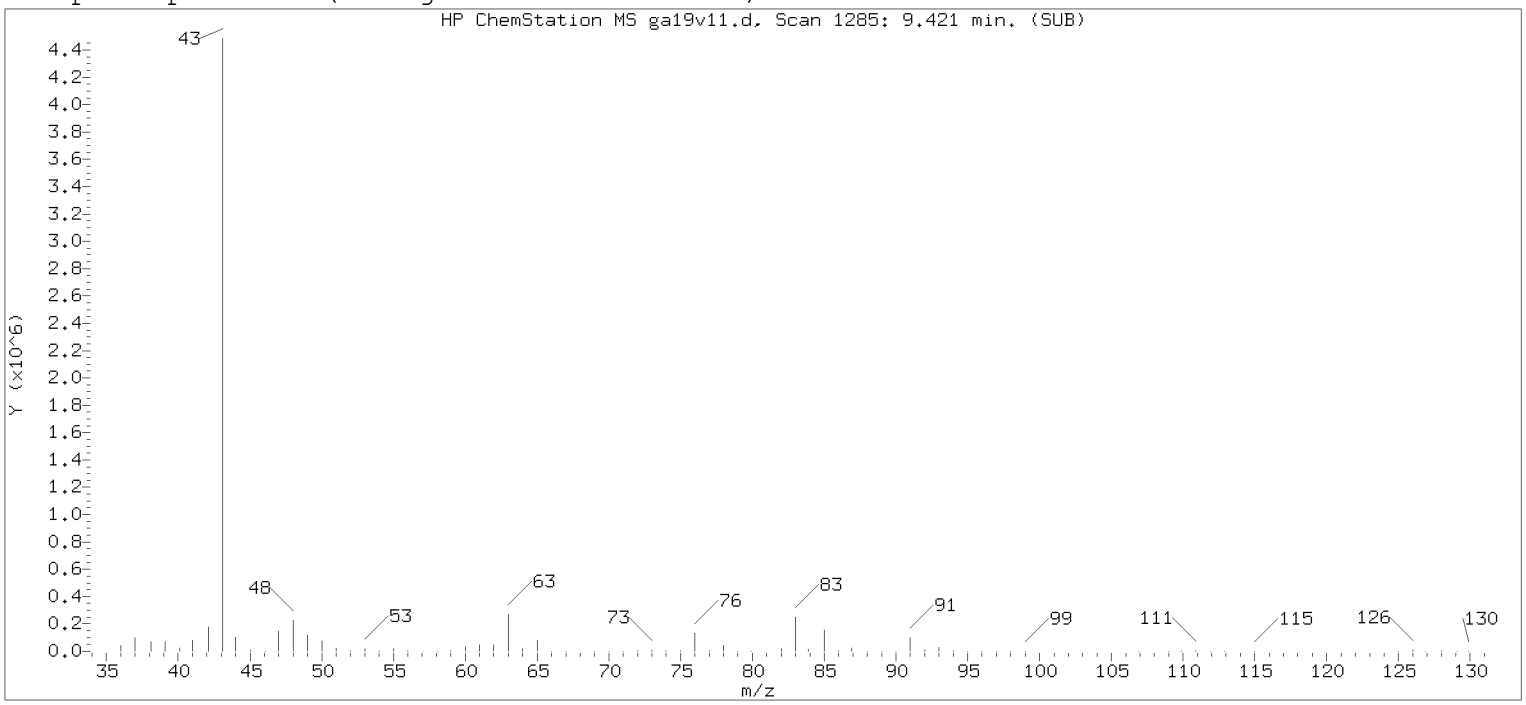
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1219
Retention Time (minutes): 9.018
Quant Ion : 63.00
Area (flag) : 153569M
On-Column Amount (ng) : 5.3497
Integration start scan : 1203 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

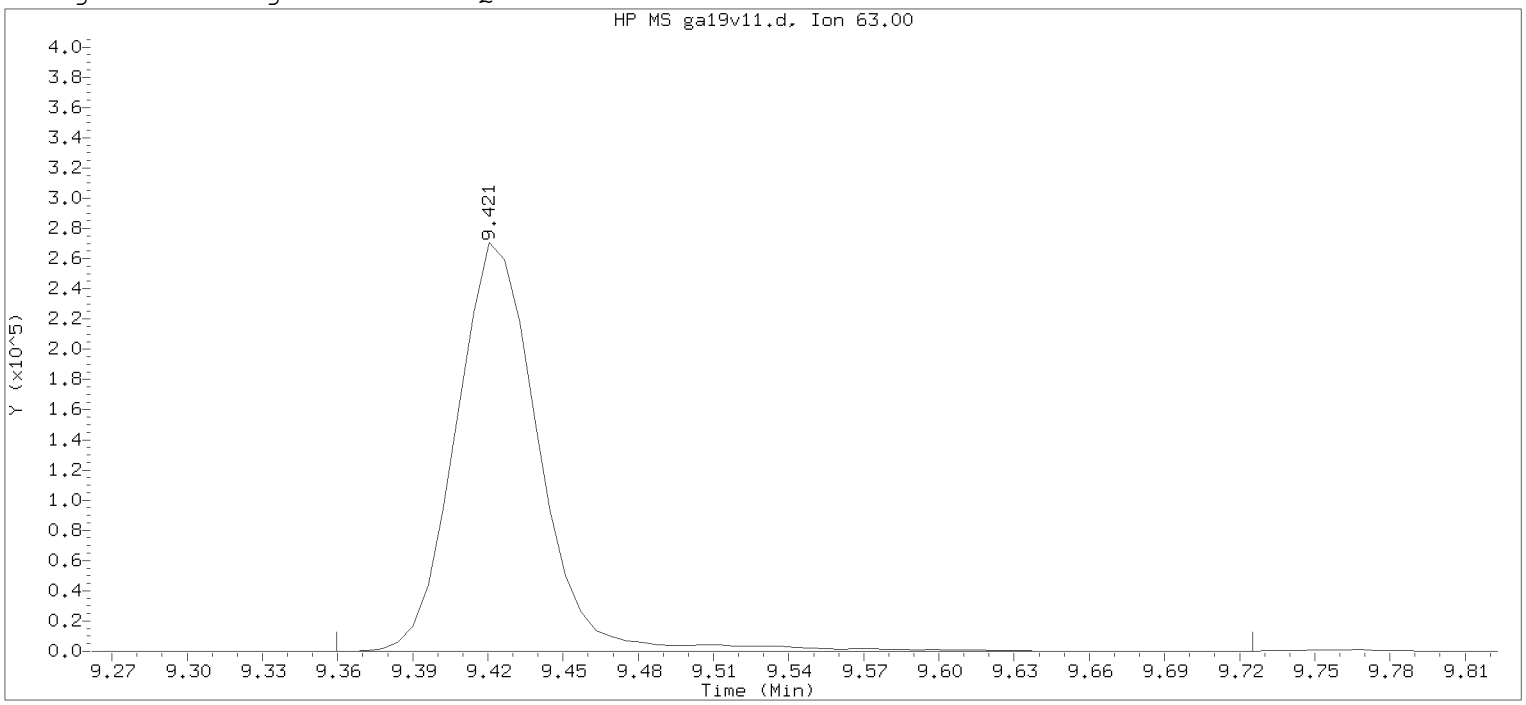
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:01.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

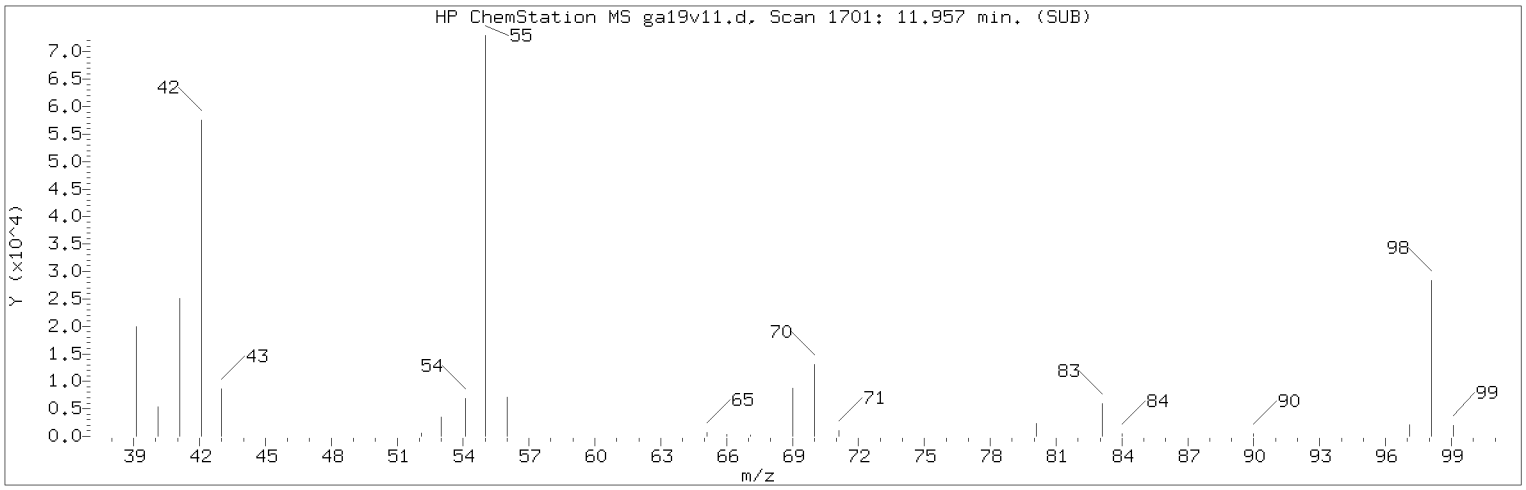
Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 19:12
Date, time and analyst ID of latest file update: 19-Apr-2018 19:20 Automation

Sample Name: LCSSMG Lab Sample ID: LCSSMG

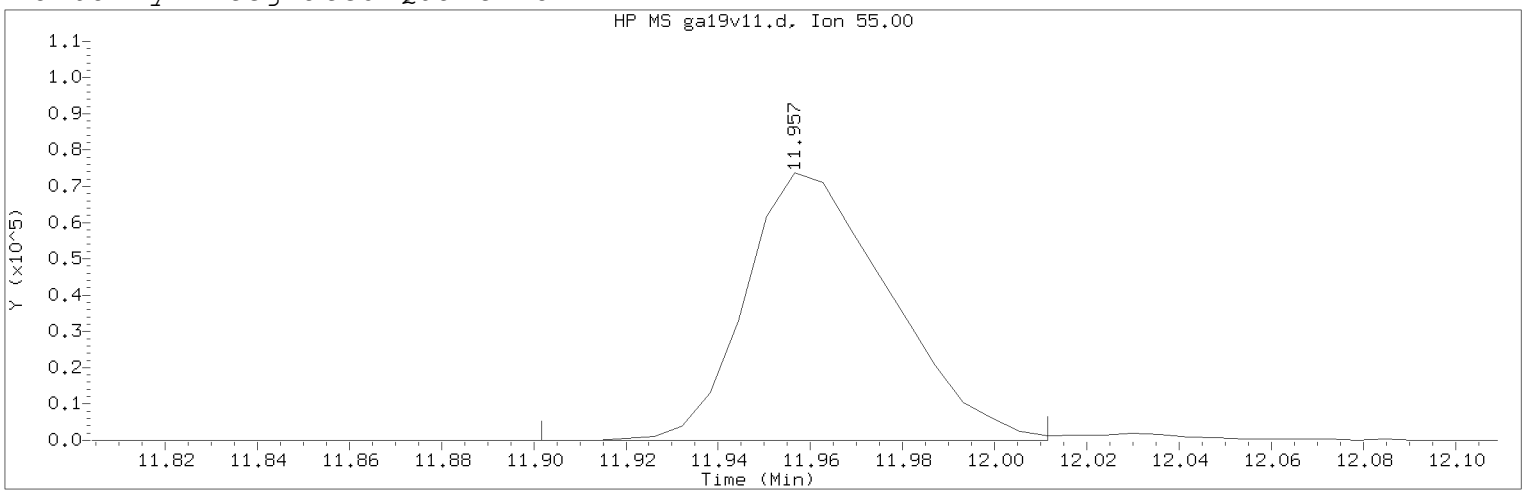
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1285
Retention Time (minutes): 9.421
Quant Ion : 63.00
Area : 624033
On-column Amount (ng) : 21.9930
Integration start scan : 1274 Integration stop scan: 1334
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:52.
Target 3.5 esignature used. Method: 7741

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 19-APR-2018 20:15
Date, time and analyst ID of latest file update: 19-Apr-2018 20:27 msk07970

Sample Name: LCSSMG Lab Sample ID: LCSSMG

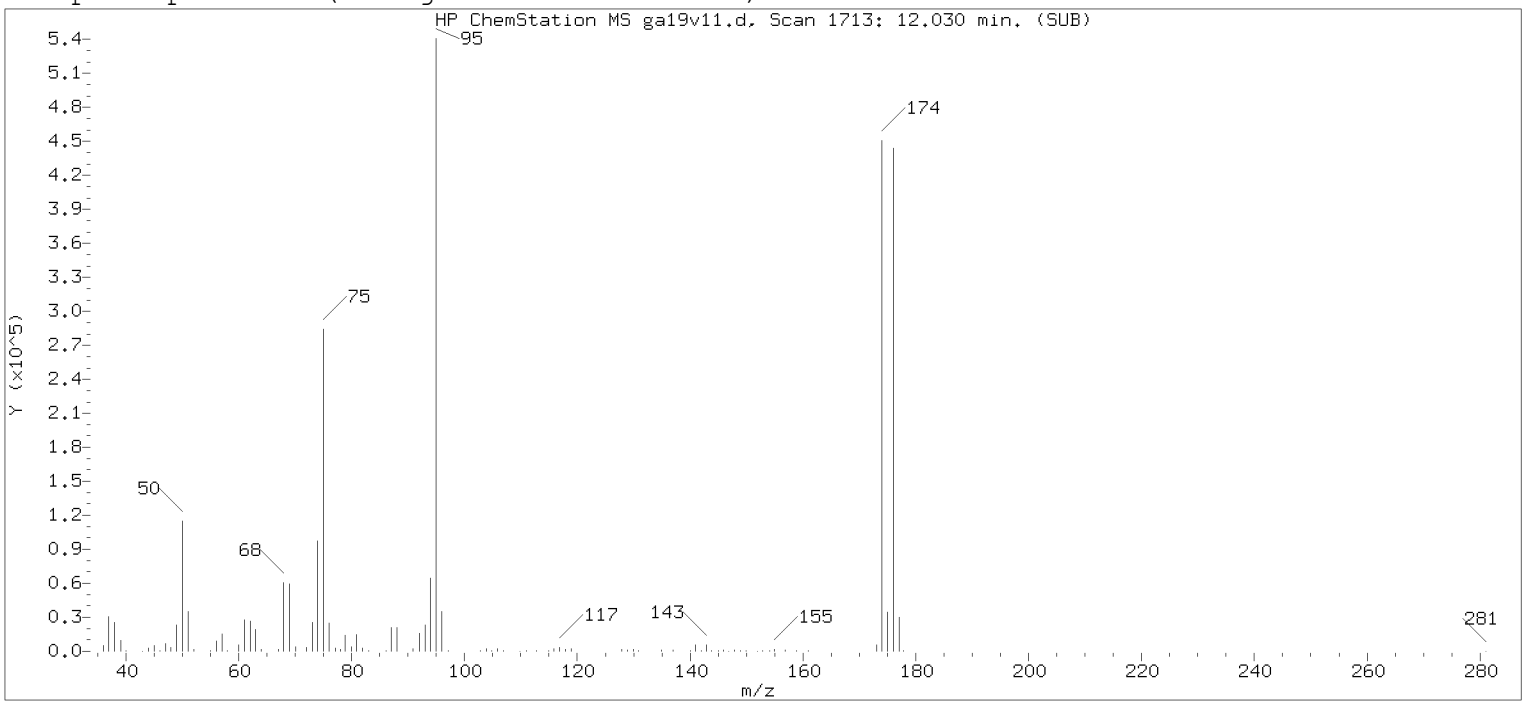
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 159209M
On-Column Amount (ng) : 129.5285
Integration start scan : 1691 Integration stop scan: 1709
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

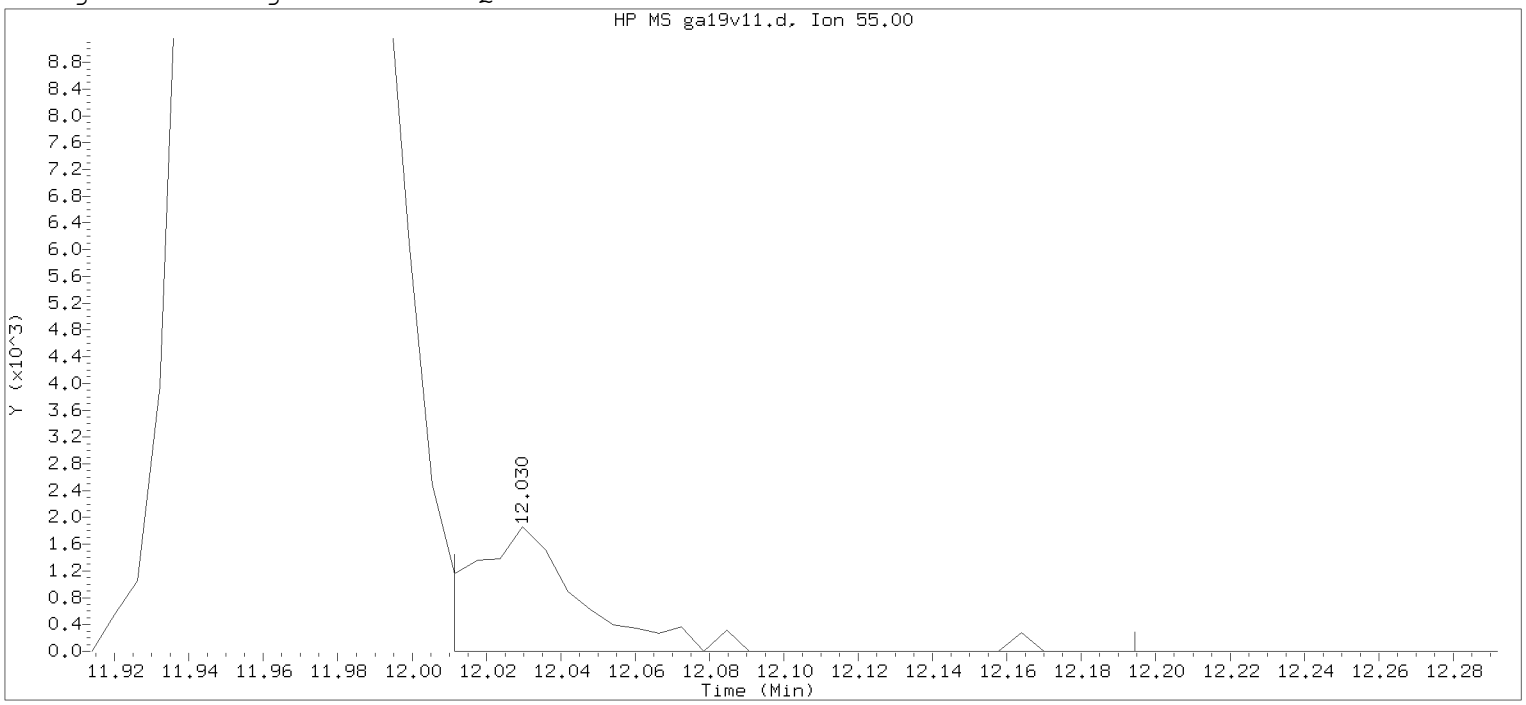
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/19/2018 at 20:52.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Paul R. Cormier on 04/20/2018 at 14:01.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



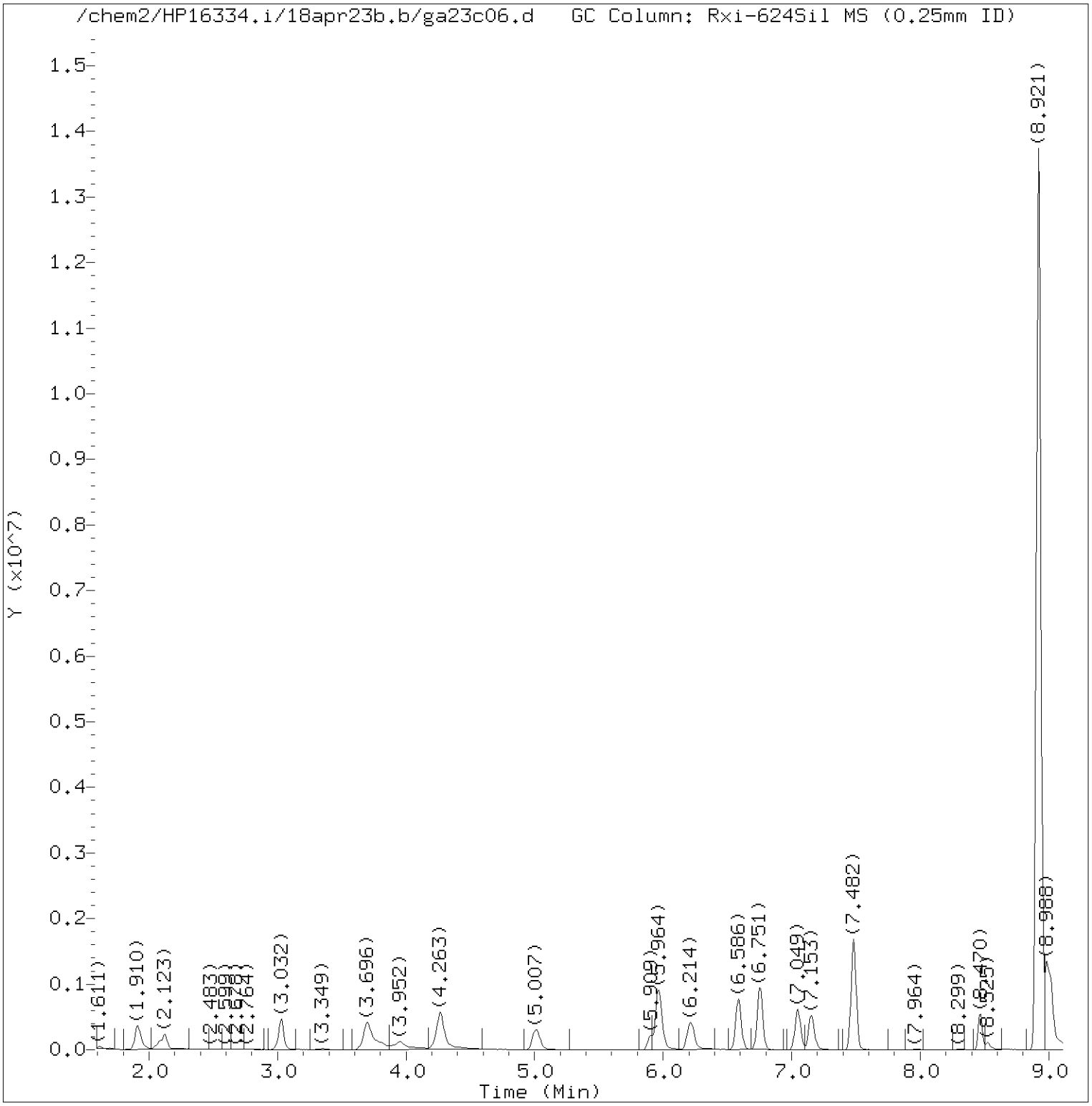
Data File: /chem2/HP16334.i/18apr19i.b/ga19v11.d Instrument ID: HP16334.i
Injection date and time: 19-APR-2018 19:04 Analyst ID: JKH09052

Method used: /chem2/HP16334.i/18apr19i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 19-APR-2018 19:12
Date, time and analyst ID of latest file update: 19-Apr-2018 19:20 Automation

Sample Name: LCSSMG Lab Sample ID: LCSSMG

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1713
Retention Time (minutes): 12.030
Quant Ion : 55.00
Area : 3718
On-column Amount (ng) : 3.0656
Integration start scan : 1709 Integration stop scan: 1739
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/19/2018 at 20:52.
Target 3.5 esignature used. Method: 7743



Total Ion Chromatogram (TIC)

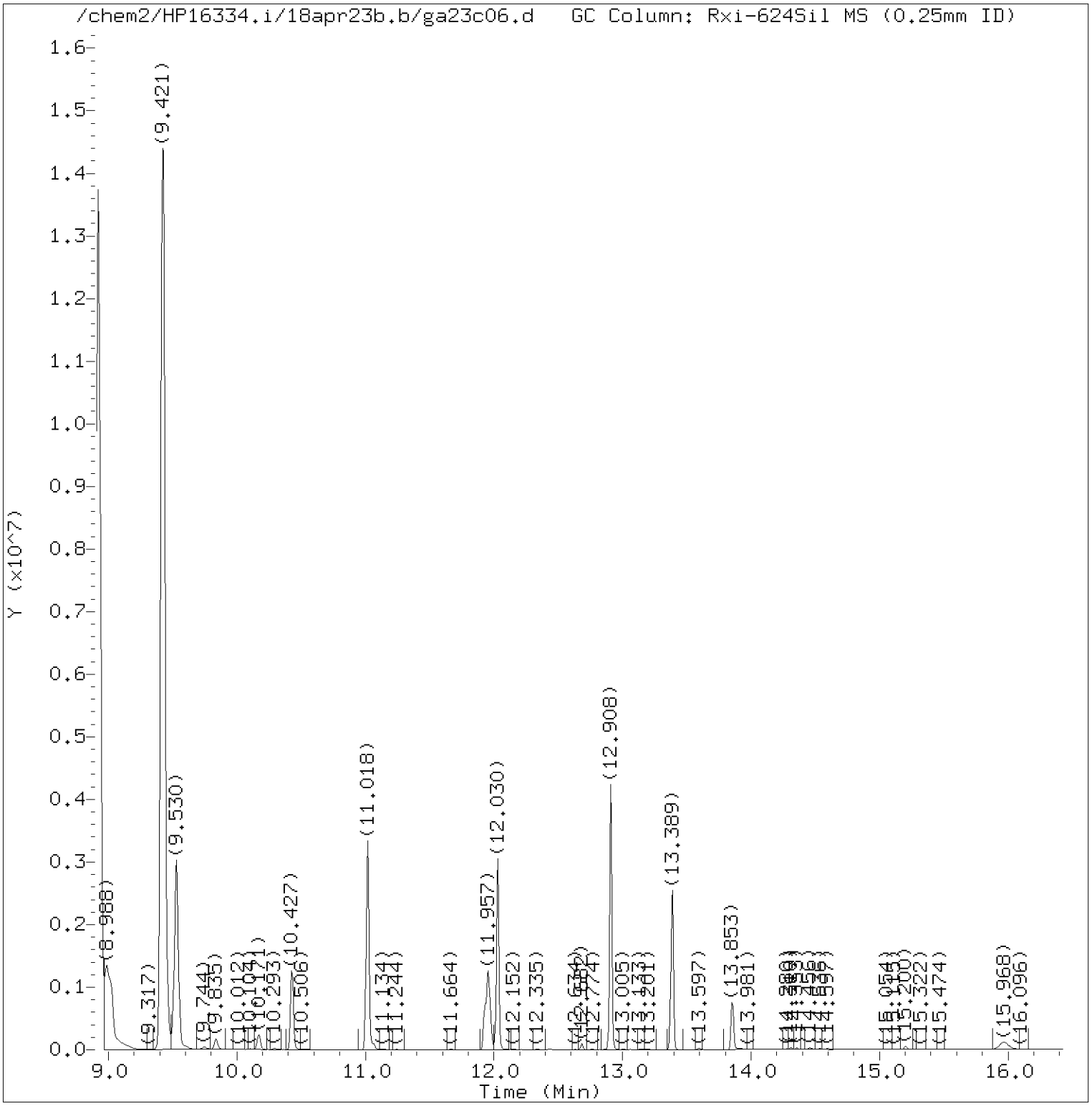
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

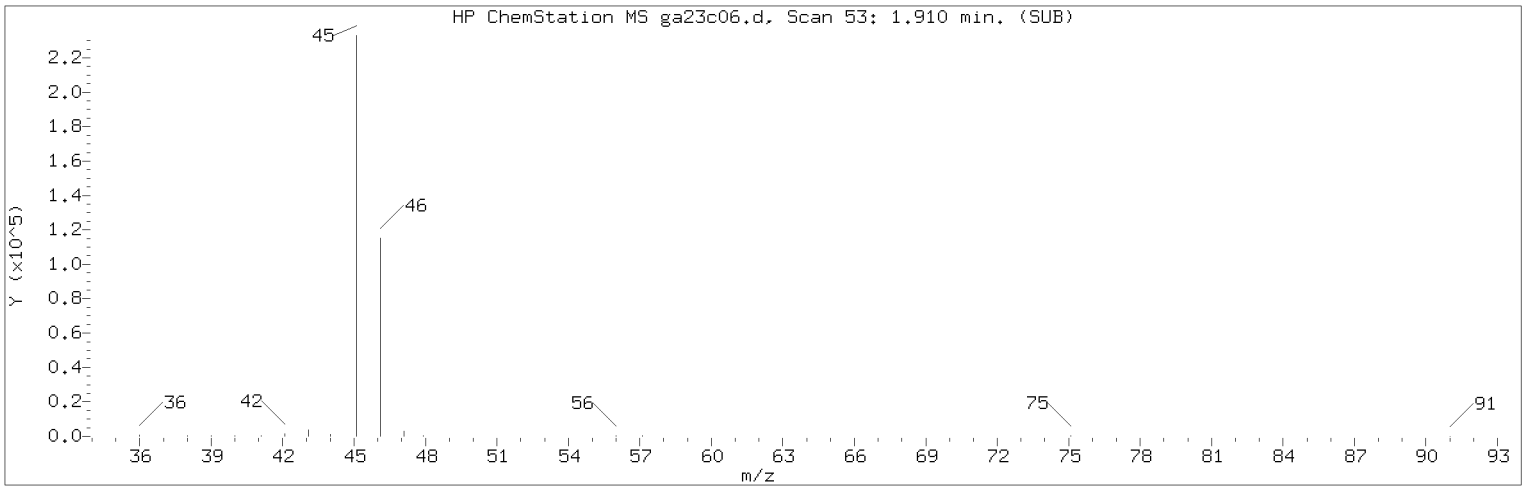
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	845549M	10.667
25) Acetonitrile	(1)	3.696	41	1843459M	362.786
26)*t-Butyl Alcohol-d10	(1)	3.952	65	213102	50.000
36) Vinyl Acetate	(2)	5.007	43	1059473	9.965
43) Methyl Acrylate	(2)	5.964	55	1978255M	49.973
53) 1-Chlorobutane	(2)	6.751	56	1115097	9.367
63)*Fluorobenzene	(2)	7.482	96	2196117	10.000
77) Chloroacetonitrile	(2)	8.988	75	1068268	520.158
78) 2-Chloroethyl vinyl ether	(2)	9.018	63	342624M	10.684
97)*Chlorobenzene-d5	(3)	11.018	117	1720689	10.000
112) Cyclohexanone	(1)	11.957	55	597175M	439.730
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	934536	10.000
142) Hexachloroethane	(4)	13.389	117	370549	11.021

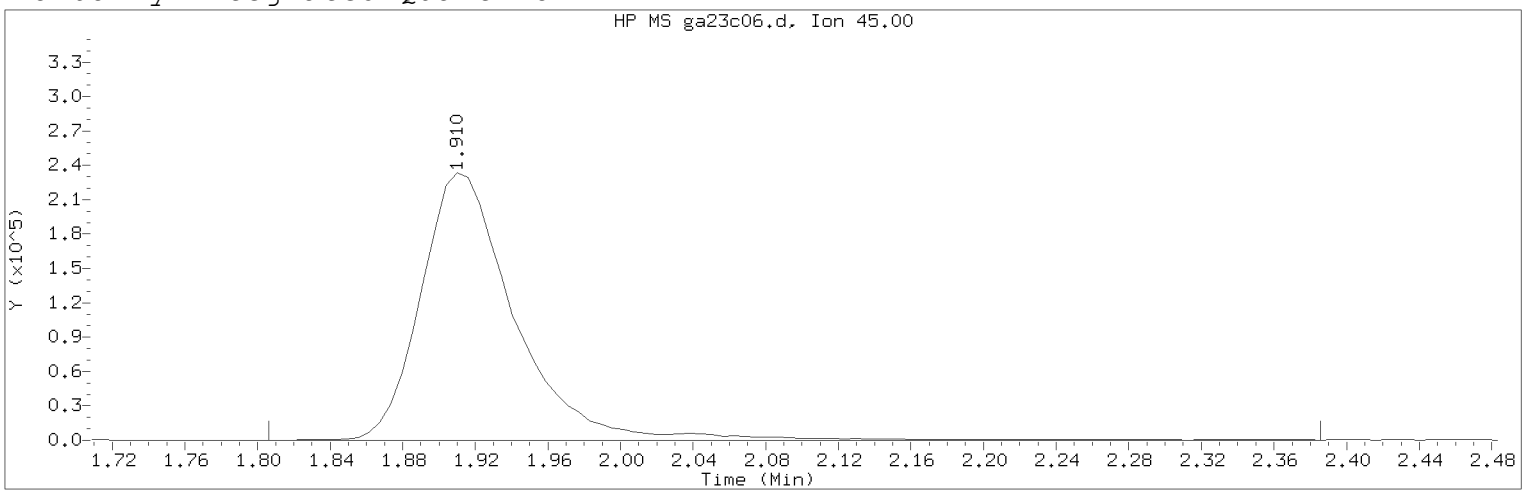
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

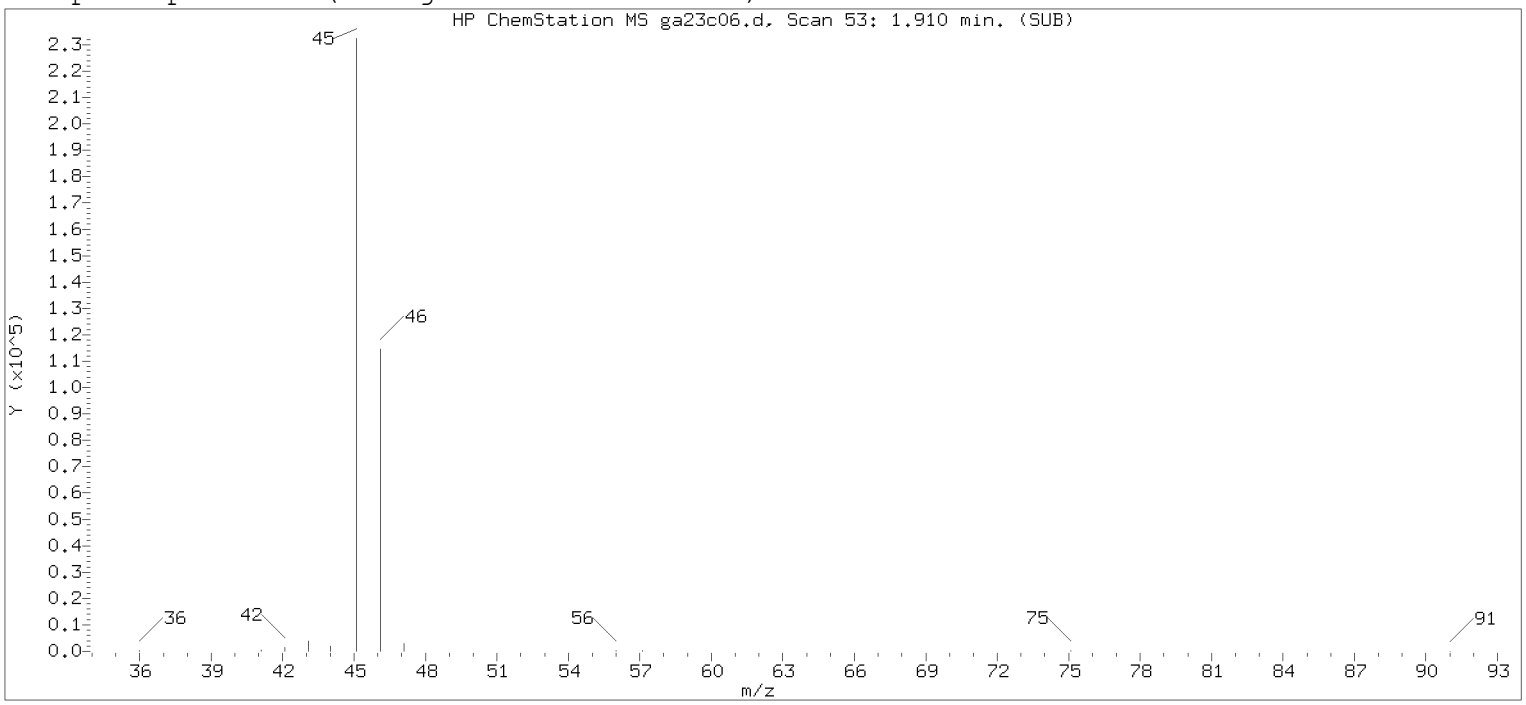
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area (flag) : 845549M
On-Column Amount (ng) : 10.6671
Integration start scan : 35 Integration stop scan: 130
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

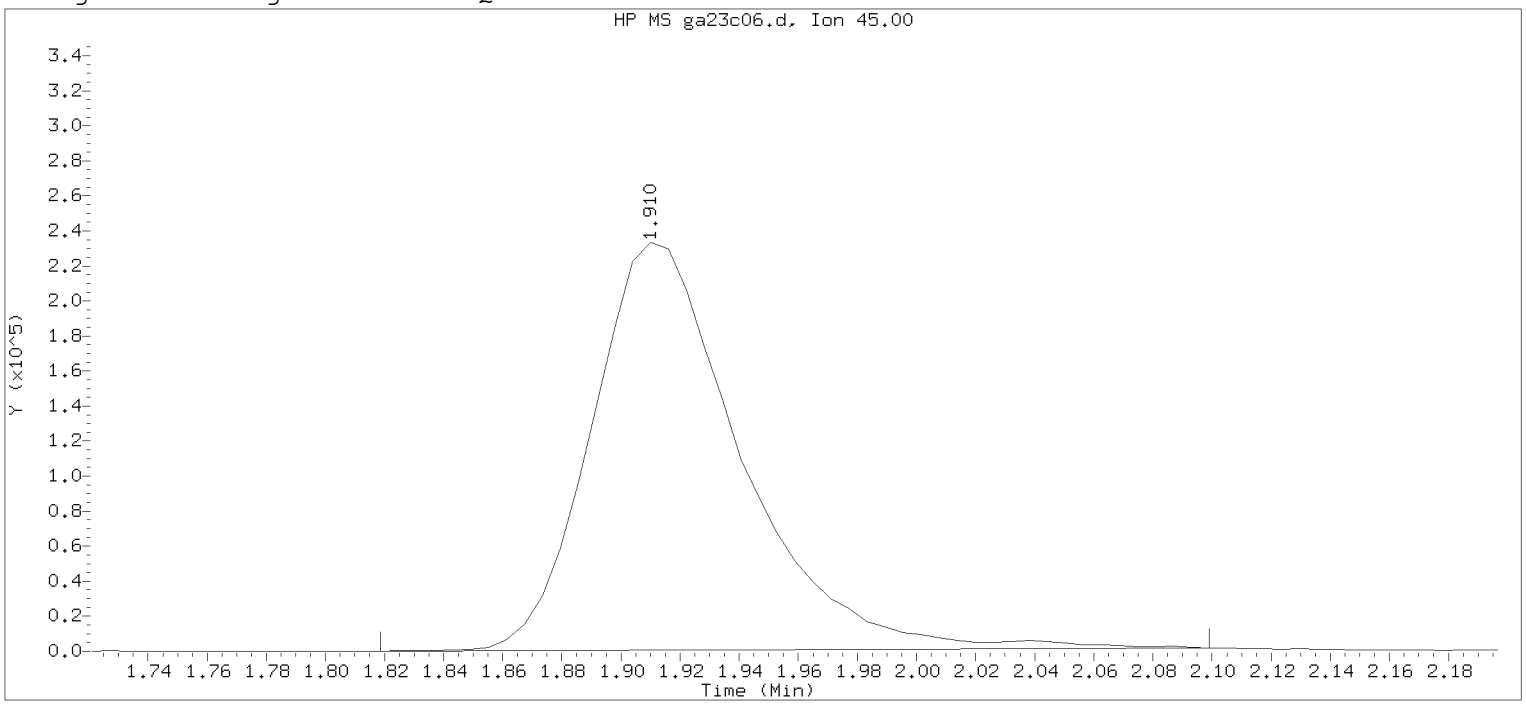
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

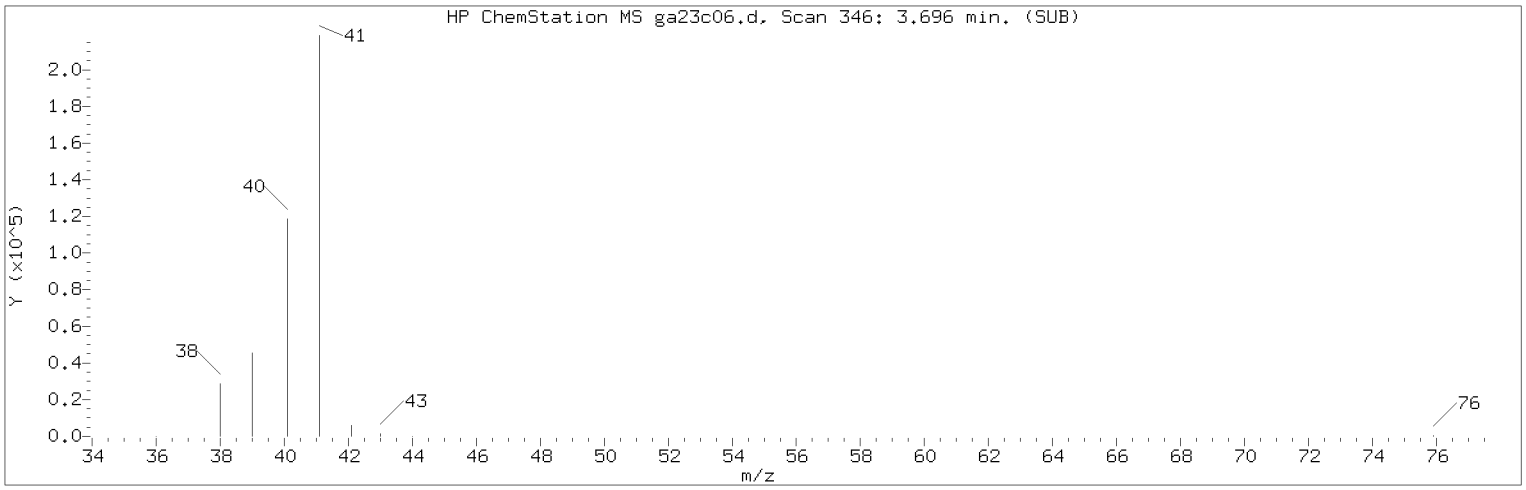
Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

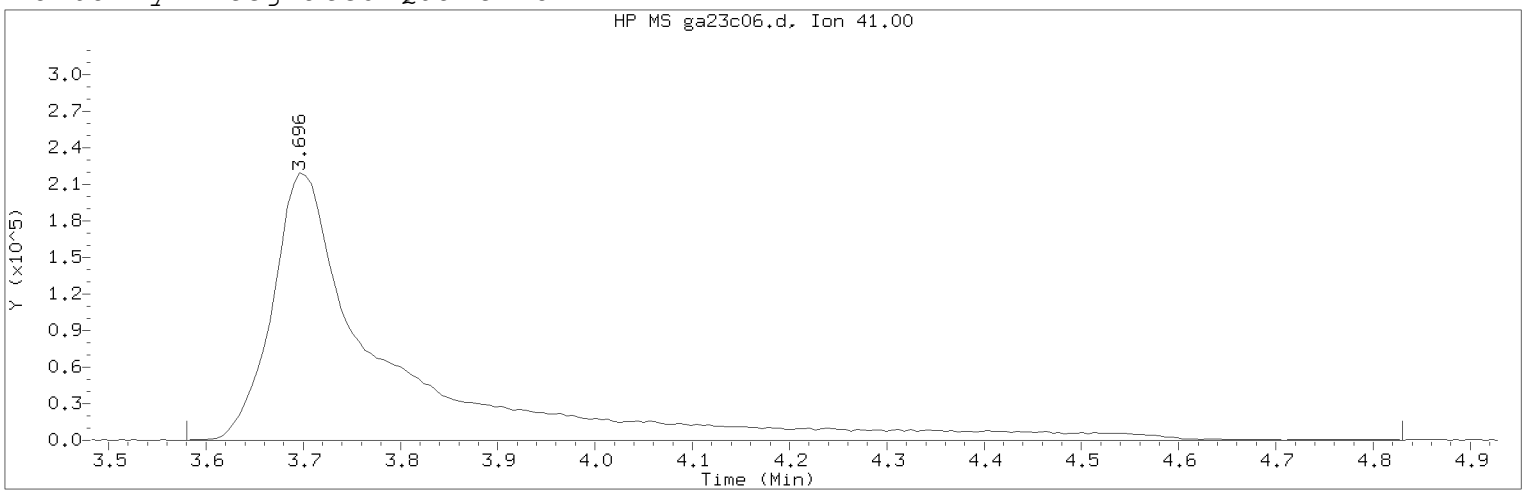
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 53		
Retention Time (minutes)	: 1.910		
Quant Ion	: 45.00		
Area	: 819063		
On-column Amount (ng)	: 10.3330		
Integration start scan	: 37	Integration stop scan:	83
Y at integration start	: 0	Y at integration end:	1718

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

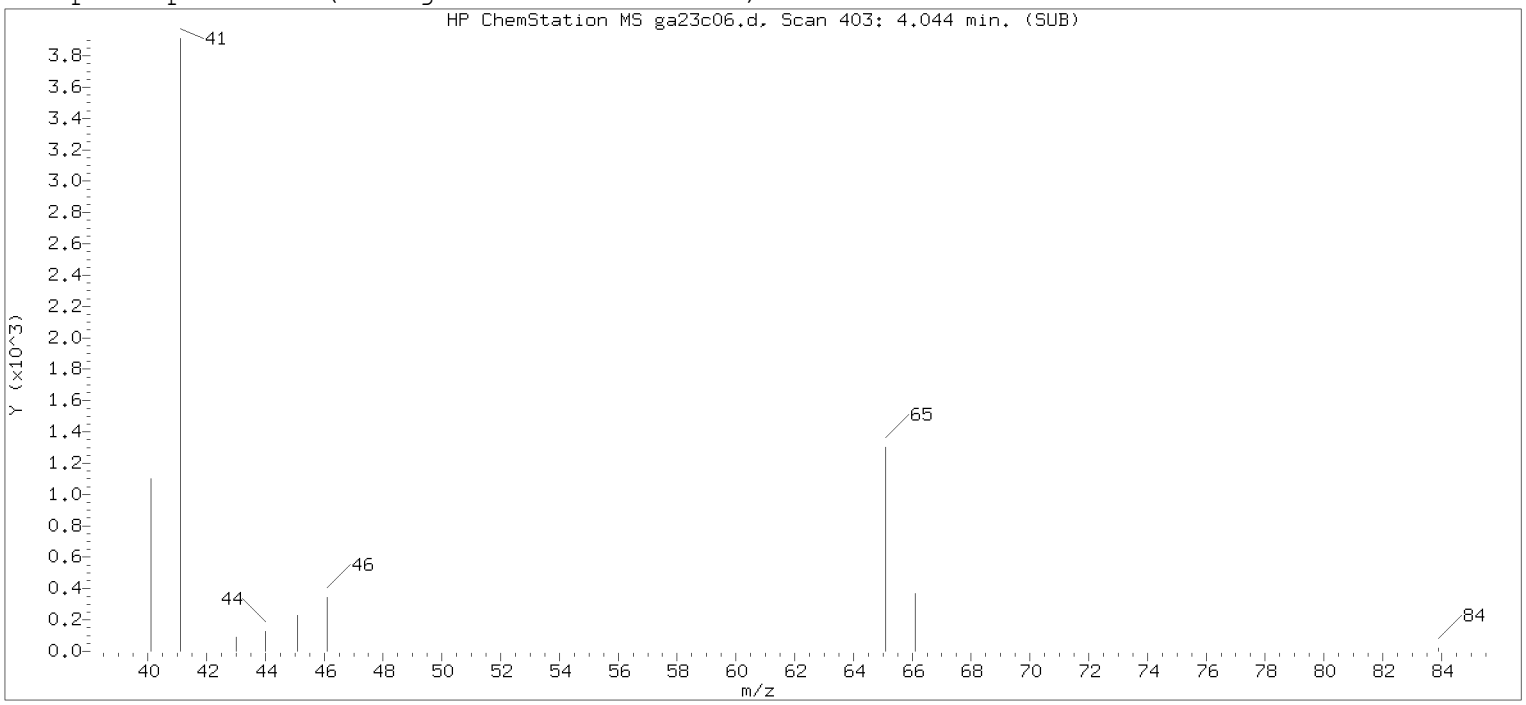
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 346
Retention Time (minutes): 3.696
Quant Ion : 41.00
Area (flag) : 1843459M
On-Column Amount (ng) : 362.7862
Integration start scan : 326 Integration stop scan: 531
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

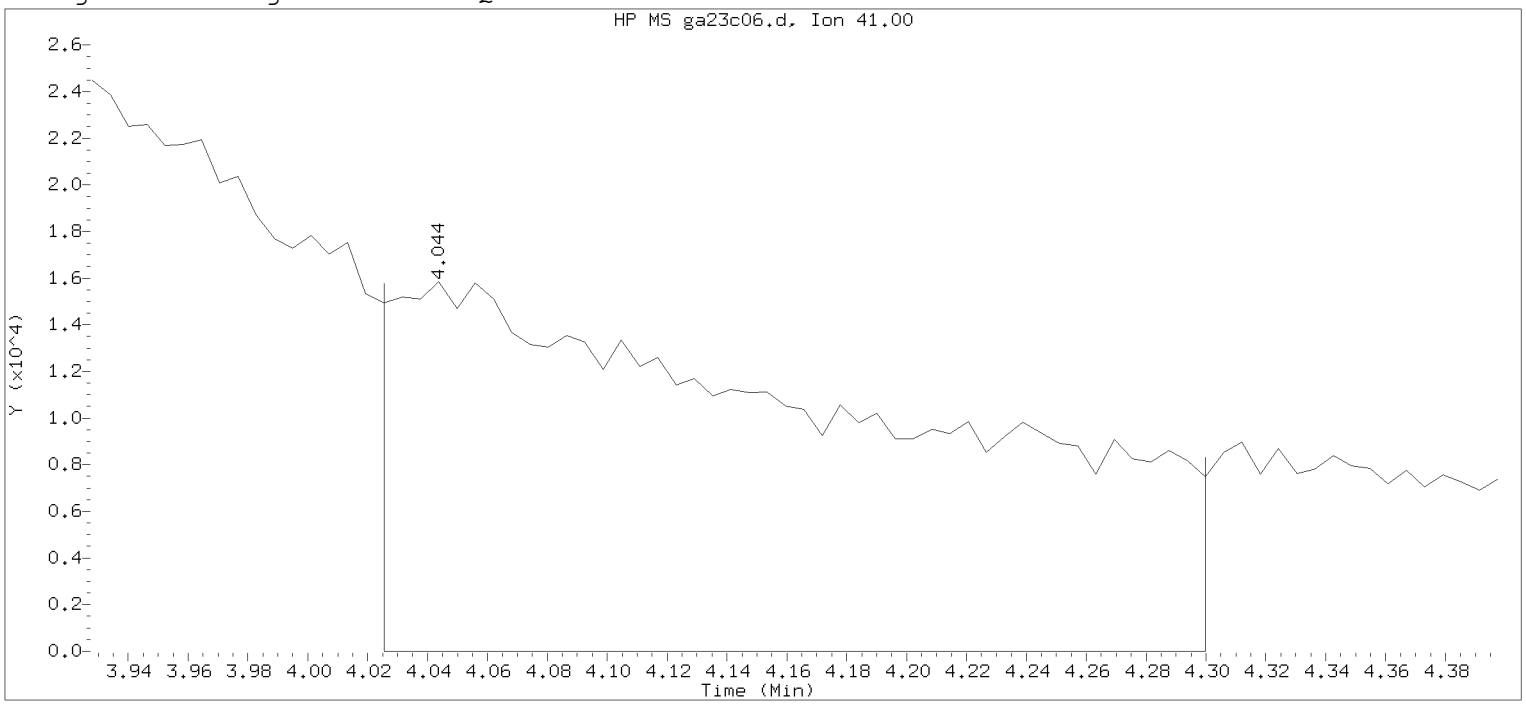
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

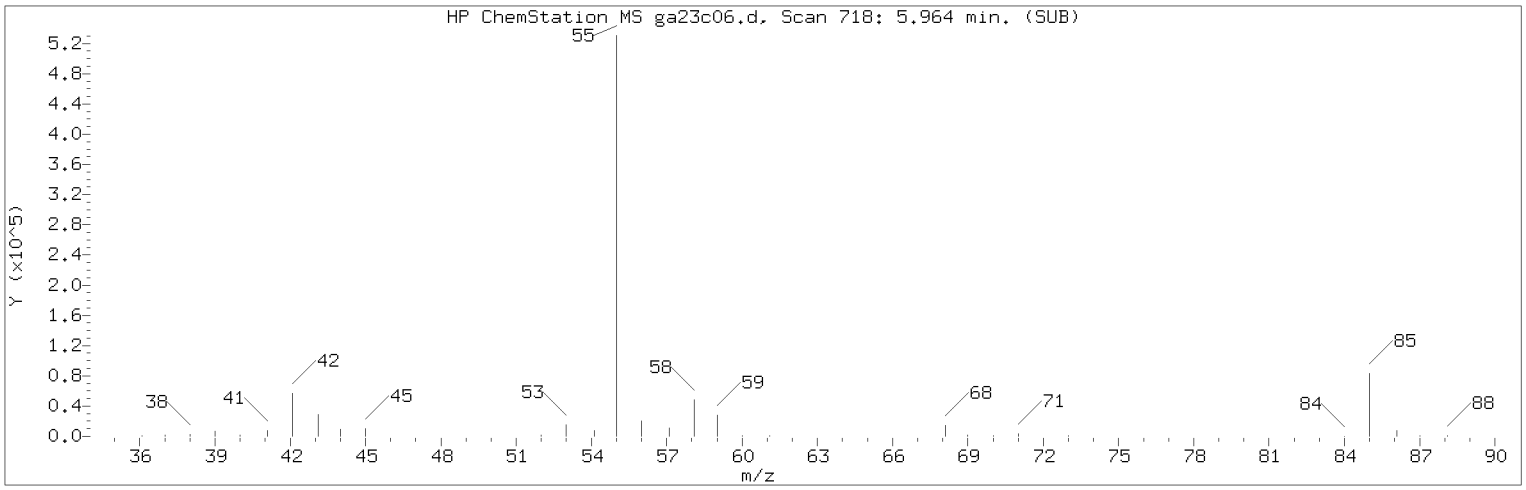
Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

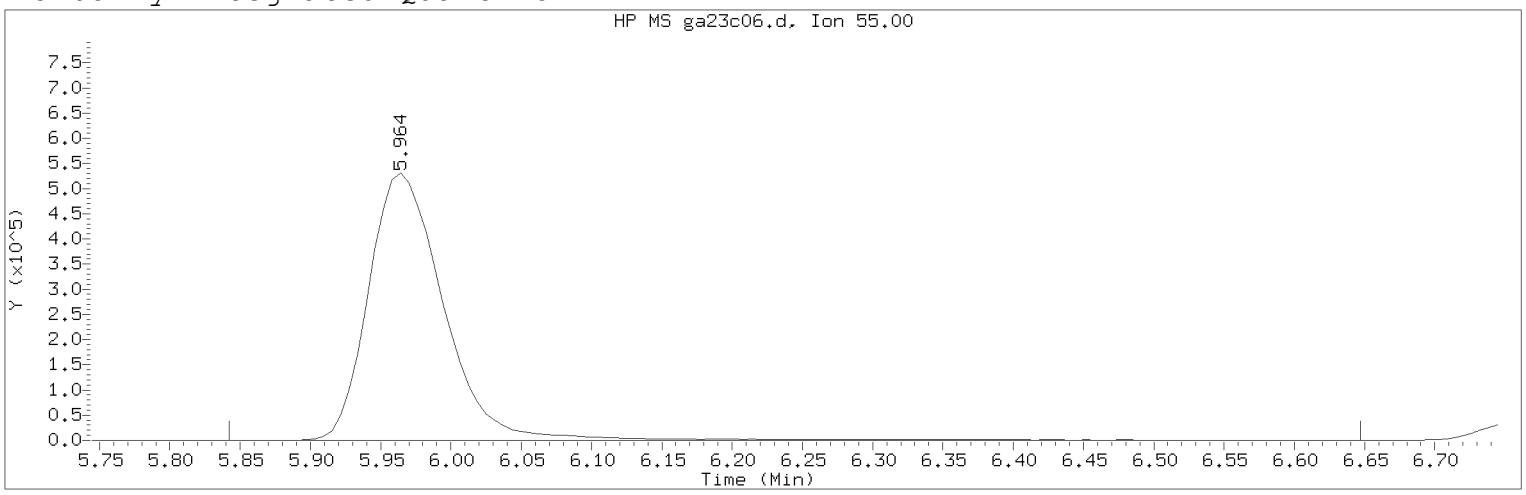
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 403
Retention Time (minutes): 4.044
Quant Ion : 41.00
Area : 182698
On-column Amount (ng) : 35.9543
Integration start scan : 399 Integration stop scan: 444
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature user name: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

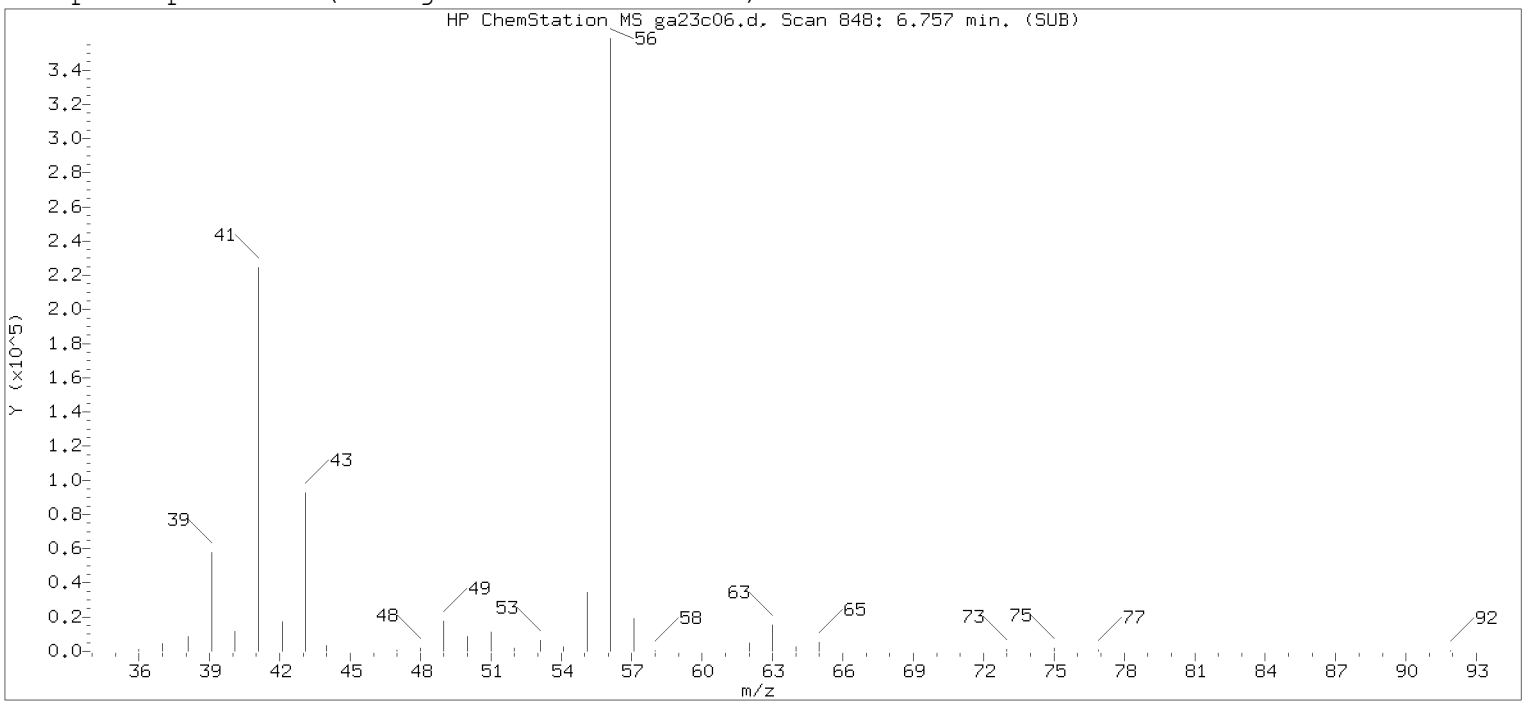
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 718
Retention Time (minutes): 5.964
Quant Ion : 55.00
Area (flag) : 1978255M
On-Column Amount (ng) : 49.9728
Integration start scan : 697 Integration stop scan: 829
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

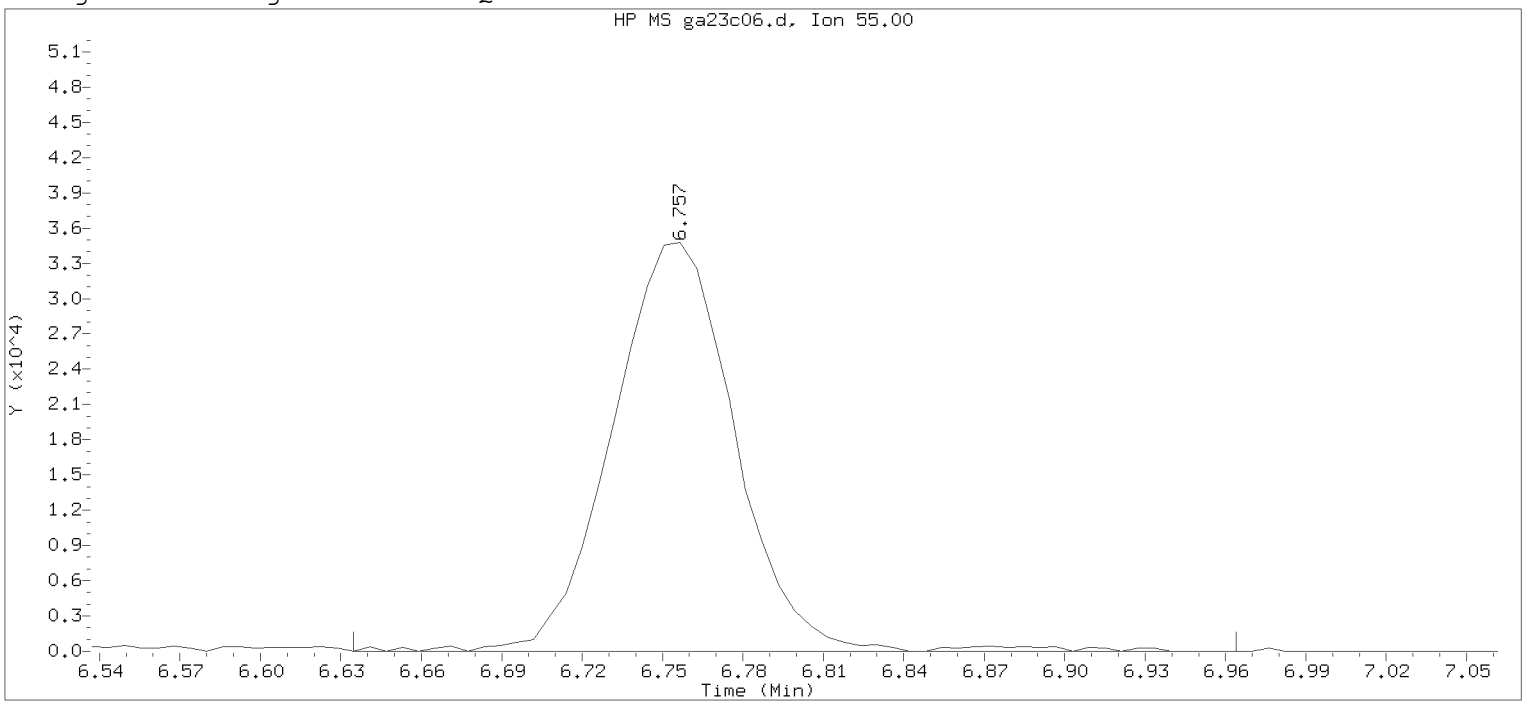
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

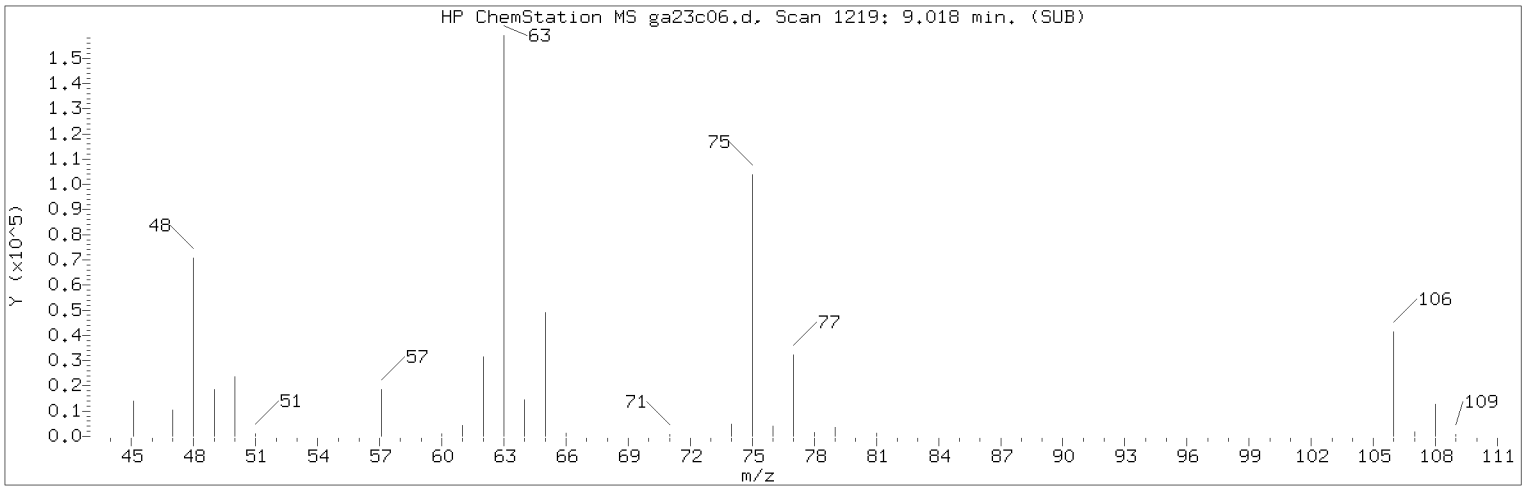
Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

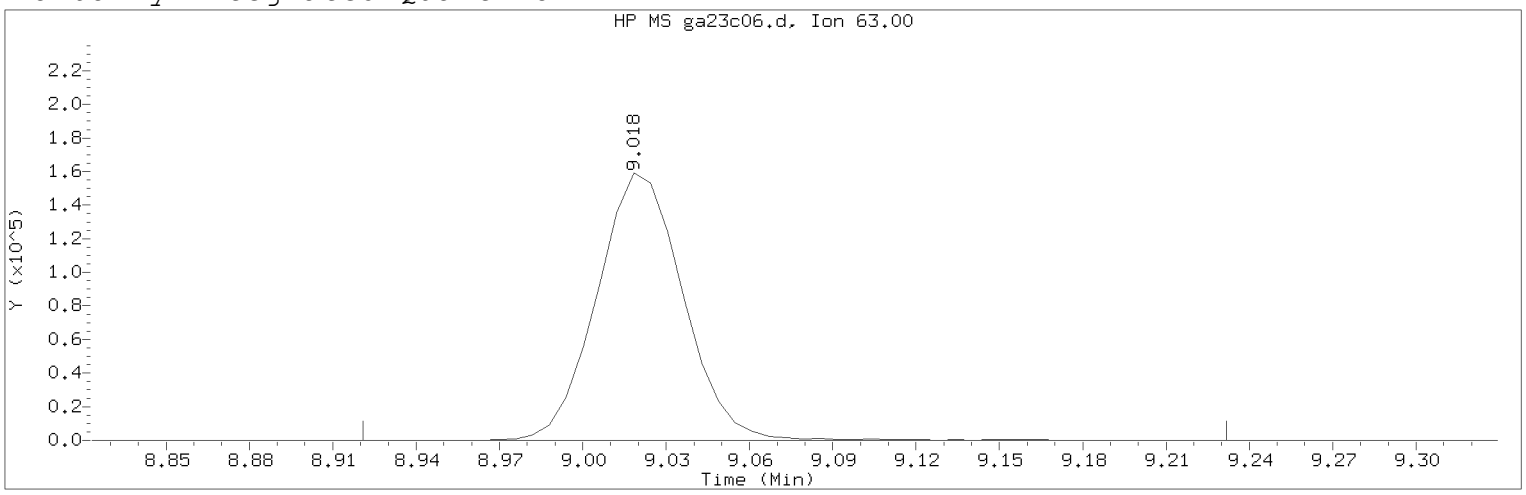
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 848
Retention Time (minutes): 6.757
Quant Ion : 55.00
Area : 111167
On-column Amount (ng) : 2.8082
Integration start scan : 827 Integration stop scan: 881
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used for m8260c25.m

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

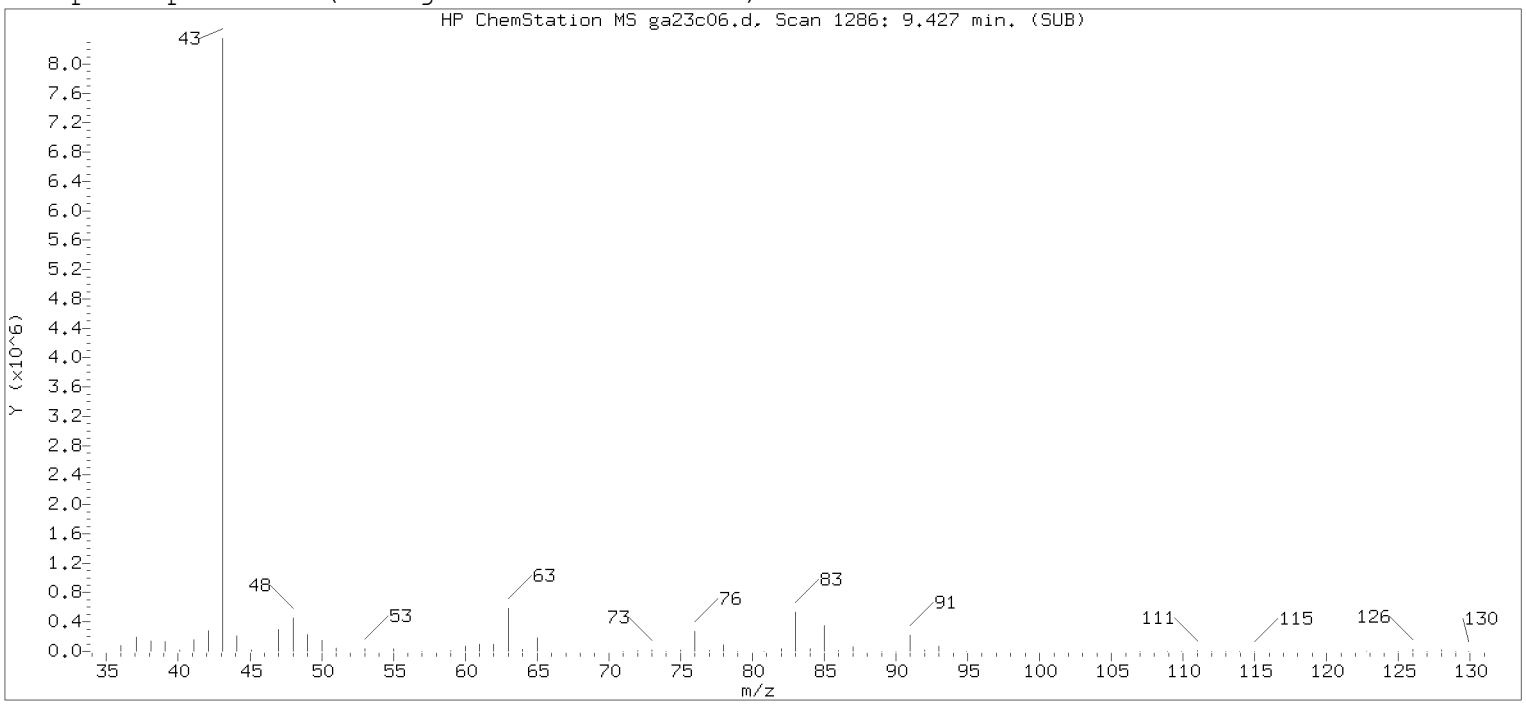
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1219
Retention Time (minutes): 9.018
Quant Ion : 63.00
Area (flag) : 342624M
On-Column Amount (ng) : 10.6835
Integration start scan : 1202 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

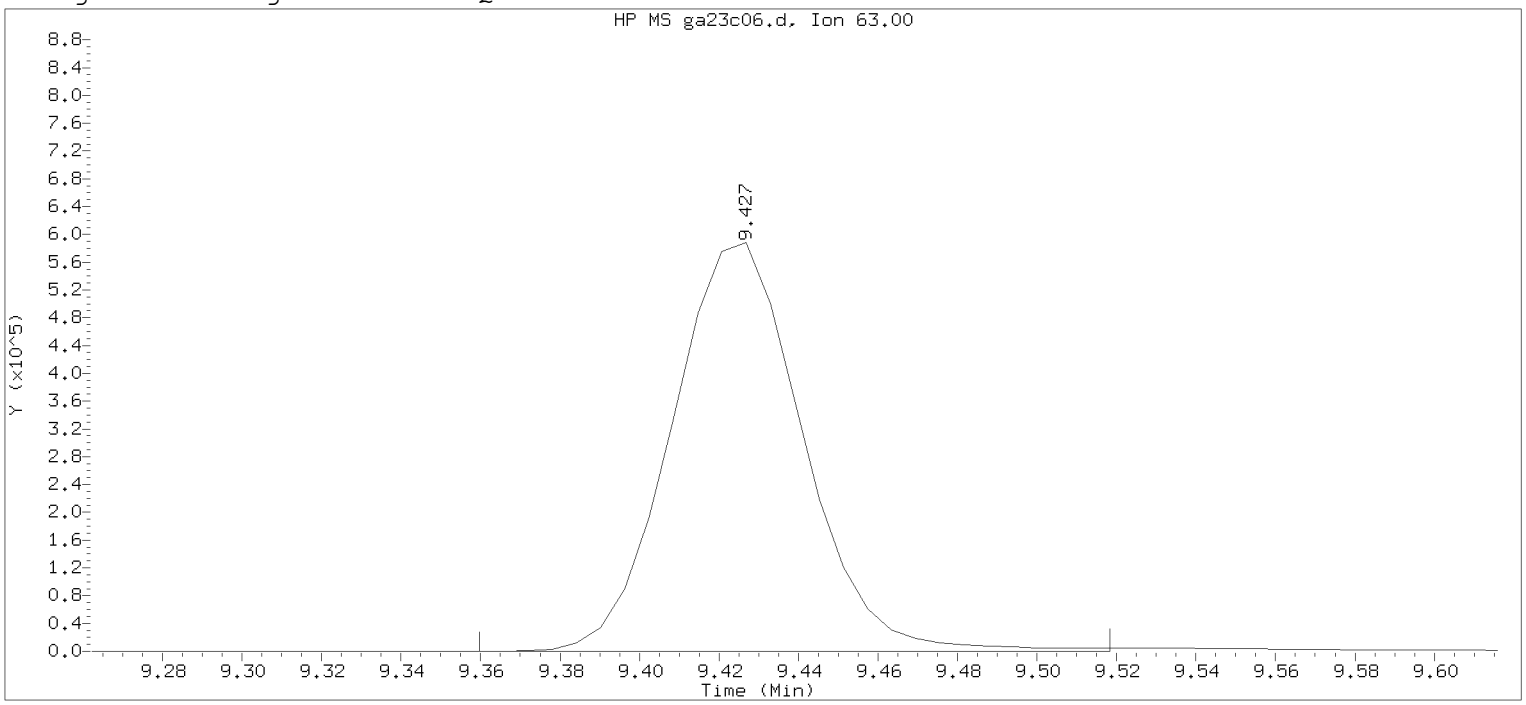
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

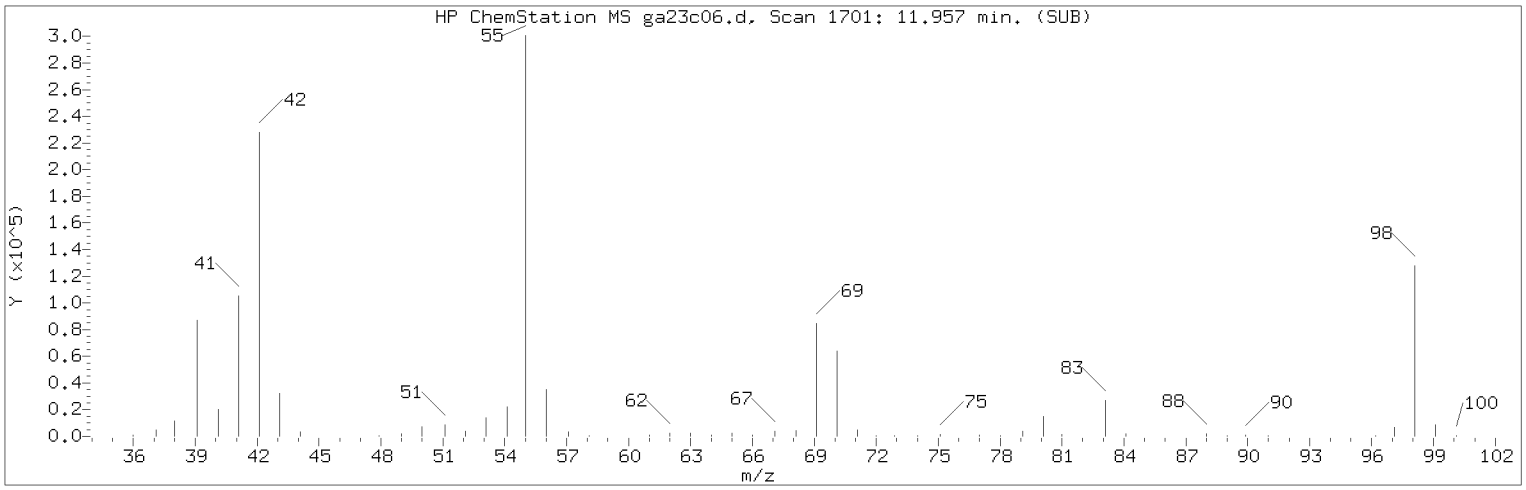
Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

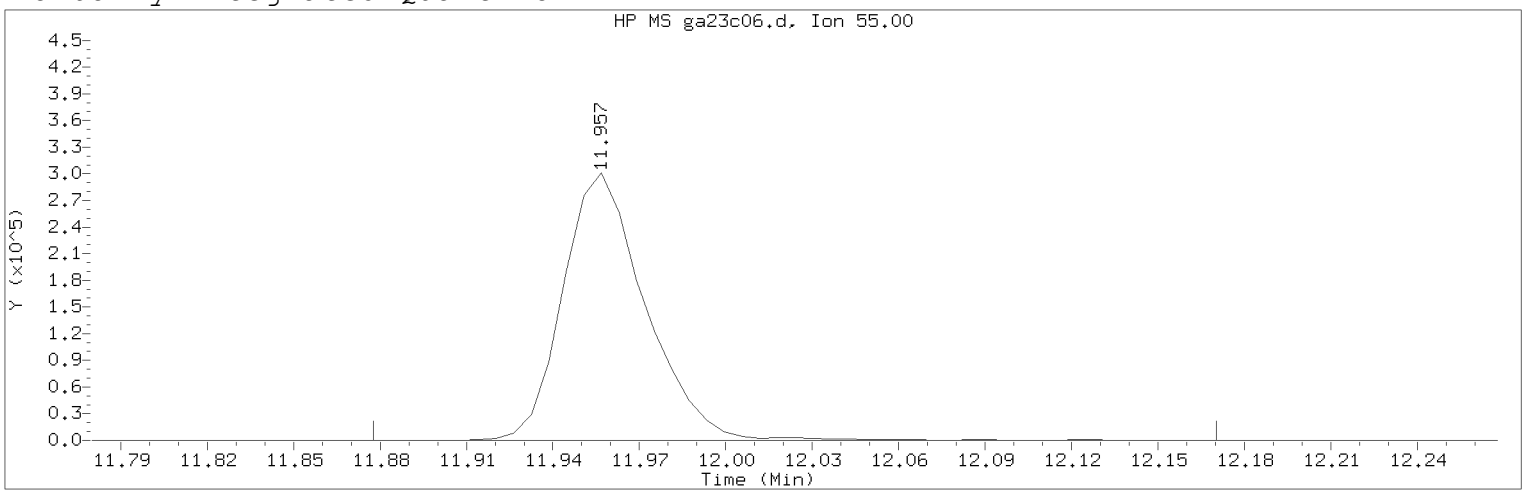
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1286
Retention Time (minutes): 9.427
Quant Ion : 63.00
Area : 1347376
On-column Amount (ng) : 42.0132
Integration start scan : 1274 Integration stop scan: 1300
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used. AE06 mdl 07754

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:57 msk07970

Sample Name: VSTD010 Lab Sample ID: VSTD010

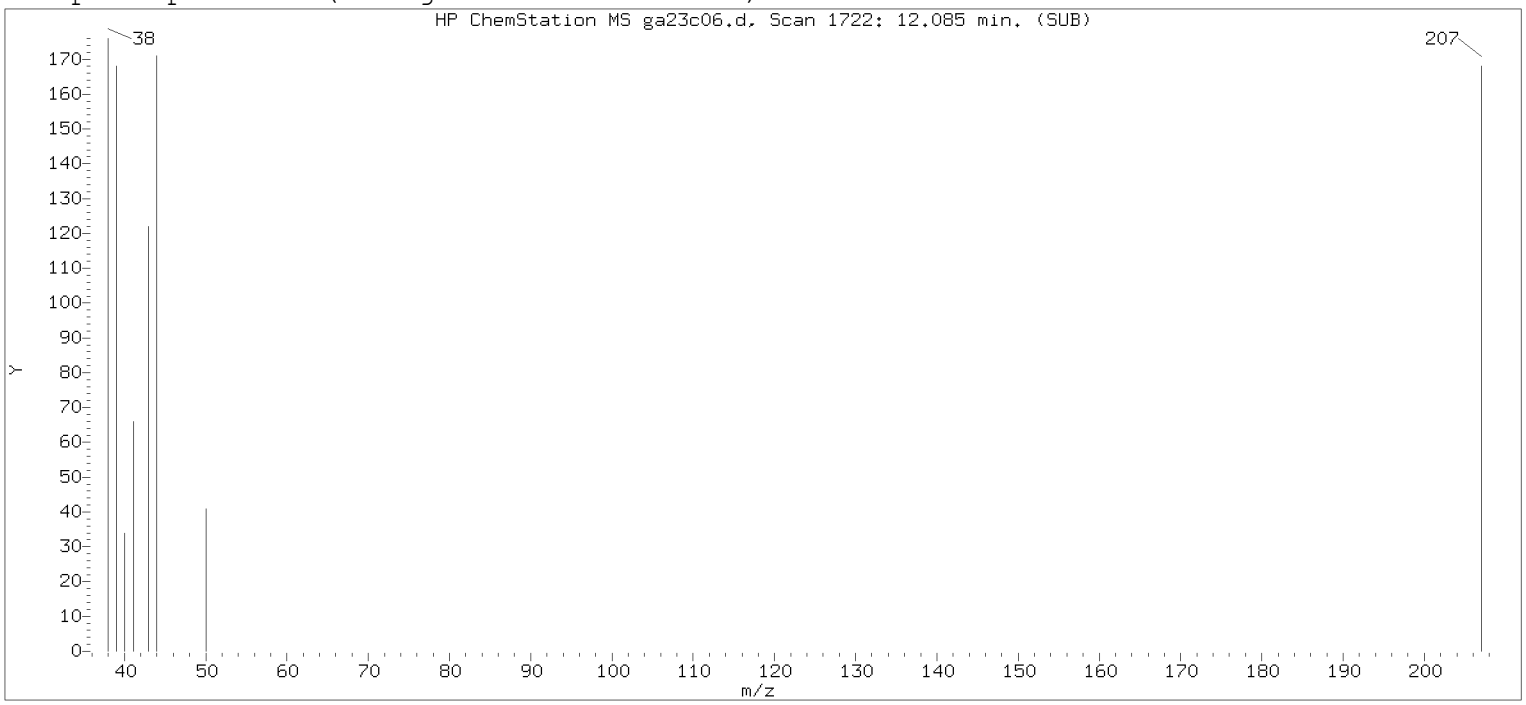
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1701
Retention Time (minutes): 11.957
Quant Ion : 55.00
Area (flag) : 597175M
On-Column Amount (ng) : 439.7297
Integration start scan : 1687 Integration stop scan: 1735
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

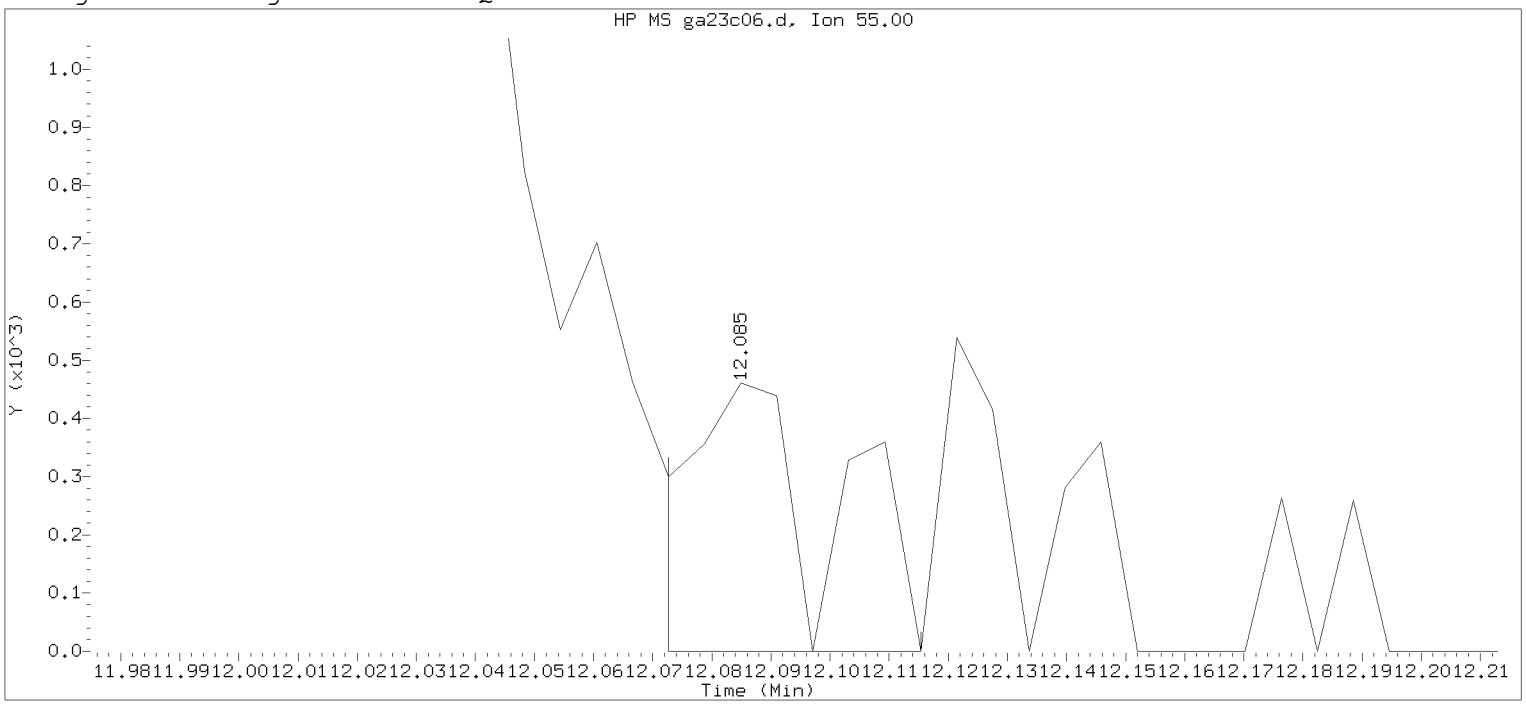
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:46.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23c06.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:32 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 23-APR-2018 19:49
Date, time and analyst ID of latest file update: 23-Apr-2018 19:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1722
Retention Time (minutes): 12.085
Quant Ion : 55.00
Area : 766
On-column Amount (ng) : 0.5643
Integration start scan : 1719 Integration stop scan: 1726
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used [illegible]

Data File: /chem2/HP19930.i/18apr17i.b/ia17t11.d

Date : 17-APR-2018 17:38

Client ID: BFB Feb 13 2018

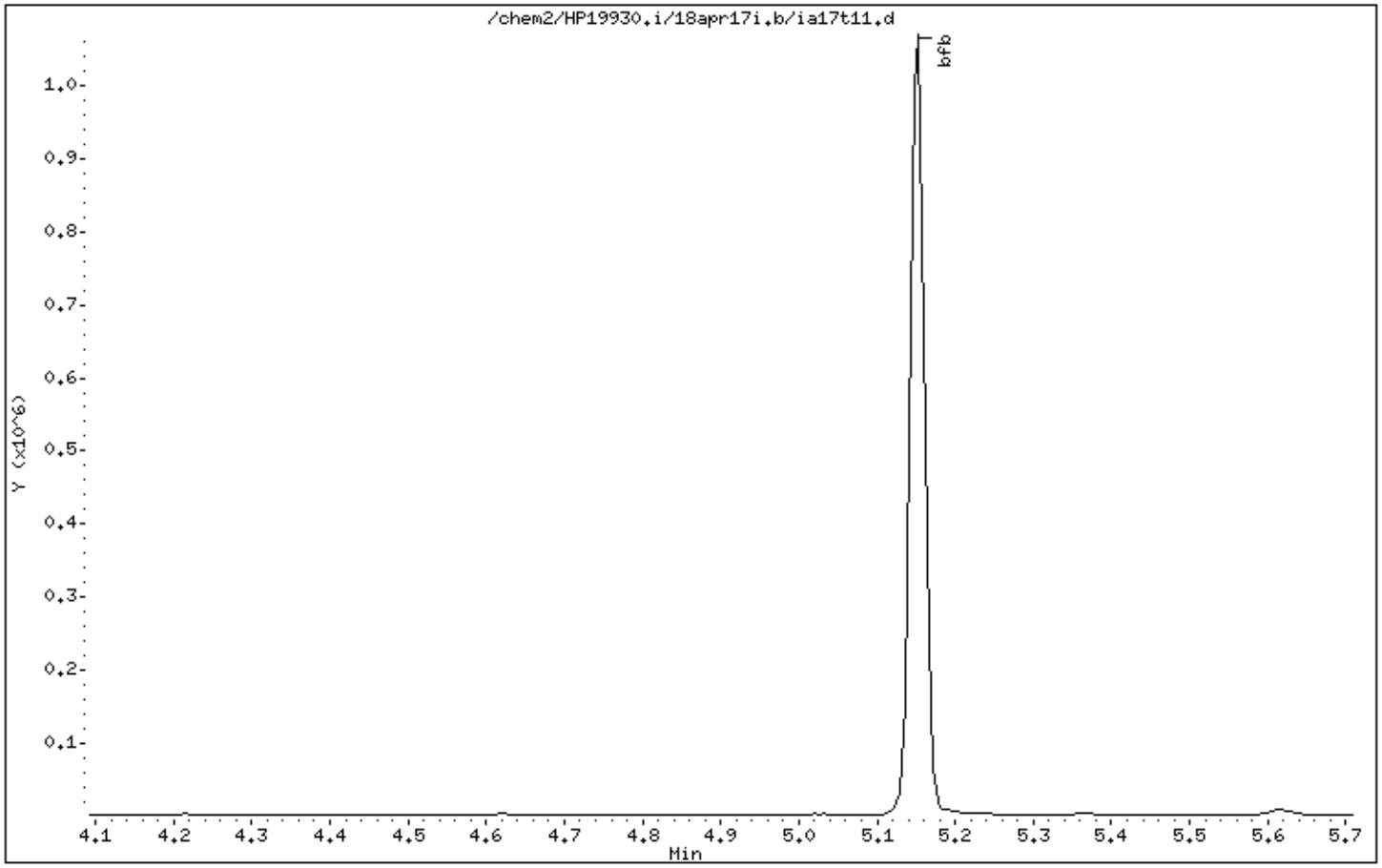
Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 04/17/2018 at 17:44.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr17i.b/ia17t11.d

Date : 17-APR-2018 17:38

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

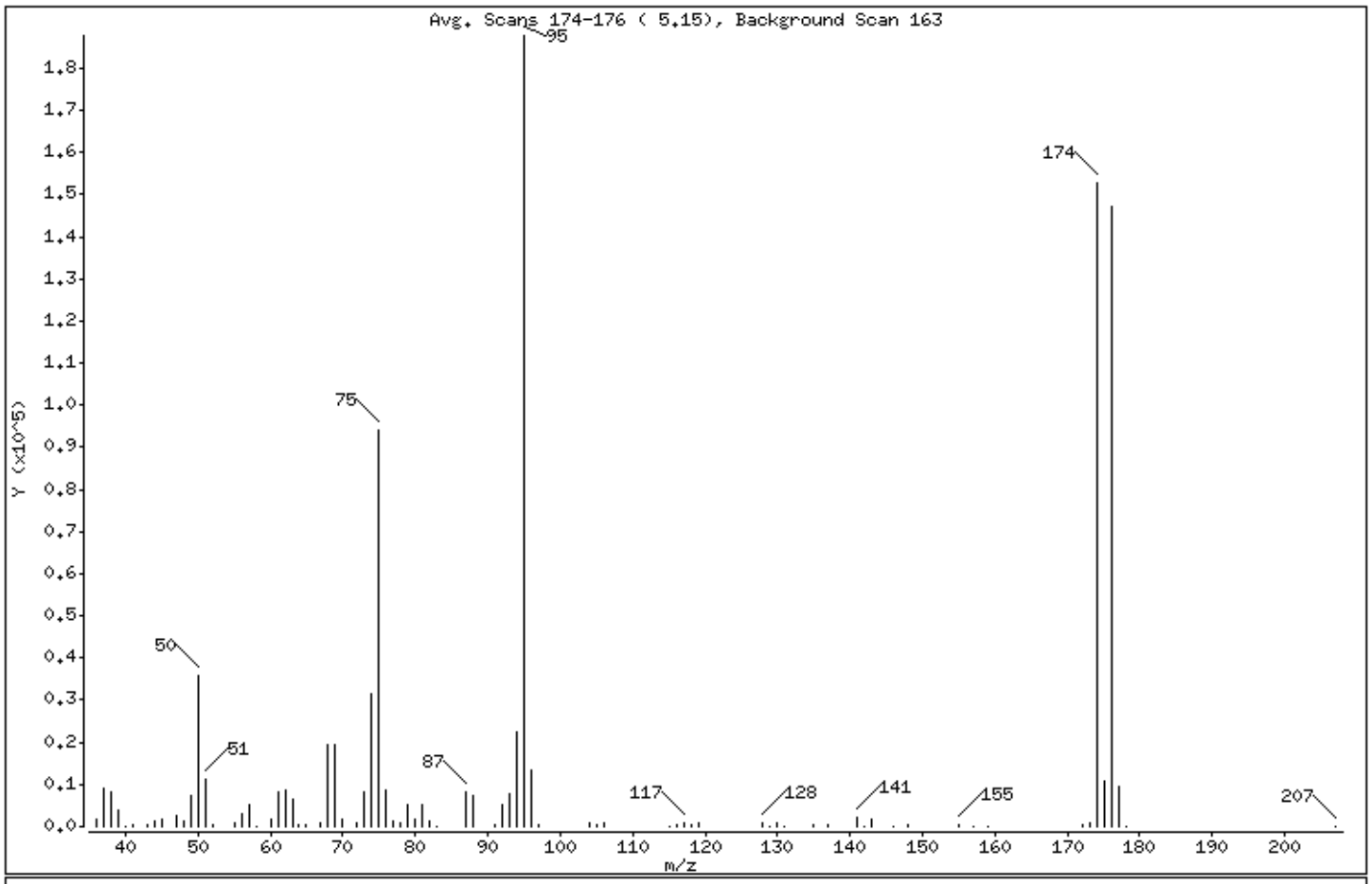
Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.03
75	30.00 - 60.00% of mass 95	50.15
96	5.00 - 9.00% of mass 95	7.04
173	Less than 2.00% of mass 174	0.57 (0.70)
174	50.00 - 100.00% of mass 95	81.35
175	5.00 - 9.00% of mass 174	5.76 (7.08)
176	95.00 - 101.00% of mass 174	78.48 (96.48)
177	5.00 - 9.00% of mass 176	4.96 (6.32)

Digitally signed by Don V. Viray on 04/17/2018 at 17:44.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr17i.b/ia17t11.d

Date : 17-APR-2018 17:38

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

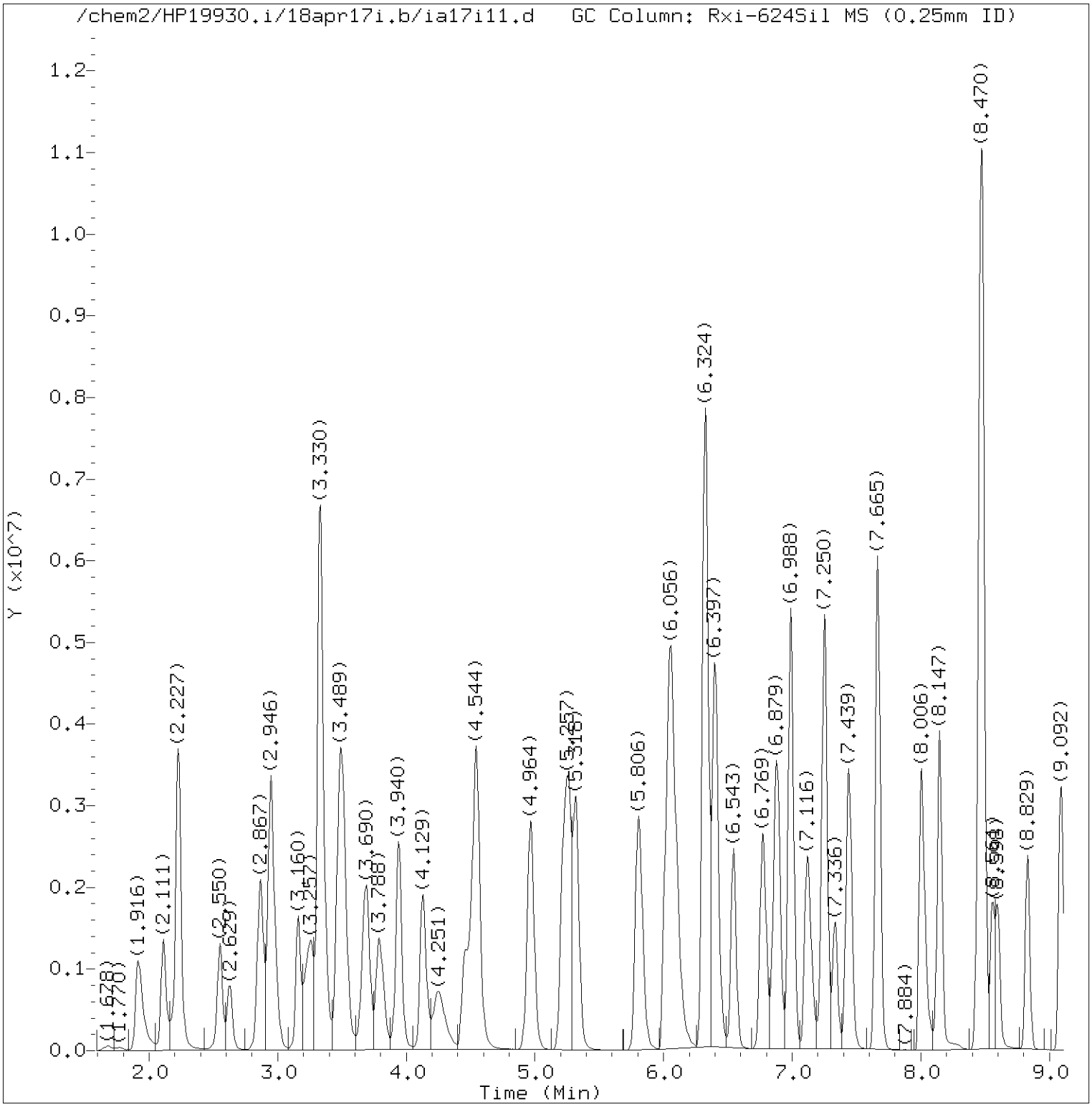
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ia17t11.d
Spectrum: Avg. Scans 174-176 (5.15), Background Scan 163
Location of Maximum: 95.00
Number of points: 80

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1717	62.00	8545	88.00	7427	137.00	263
37.00	9239	63.00	6480	91.00	600	141.00	2029
38.00	8168	64.00	645	92.00	5134	142.00	109
39.00	3676	65.00	224	93.00	7834	143.00	1794
40.00	95	67.00	648	94.00	22248	146.00	107
41.00	349	68.00	19248	95.00	187712	148.00	421
43.00	365	69.00	19504	96.00	13214	155.00	447
44.00	1323	70.00	1785	97.00	415	157.00	211
45.00	1683	72.00	1066	104.00	757	159.00	145
47.00	2667	73.00	8387	105.00	365	172.00	413
48.00	1083	74.00	31456	106.00	672	173.00	1071
49.00	7485	75.00	94152	115.00	85	174.00	152704
50.00	35720	76.00	8548	116.00	575	175.00	10819
51.00	11431	77.00	1091	117.00	1035	176.00	147328
52.00	497	78.00	799	118.00	593	177.00	9305
55.00	699	79.00	5372	119.00	924	178.00	178
56.00	2814	80.00	1691	128.00	771	207.00	47
57.00	5331	81.00	5185	129.00	110		
58.00	200	82.00	1250	130.00	713		
60.00	1744	83.00	116	131.00	142		
61.00	8351	87.00	8212	135.00	274		

Digitally signed by Don V. Viray on 04/17/2018 at 17:44.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

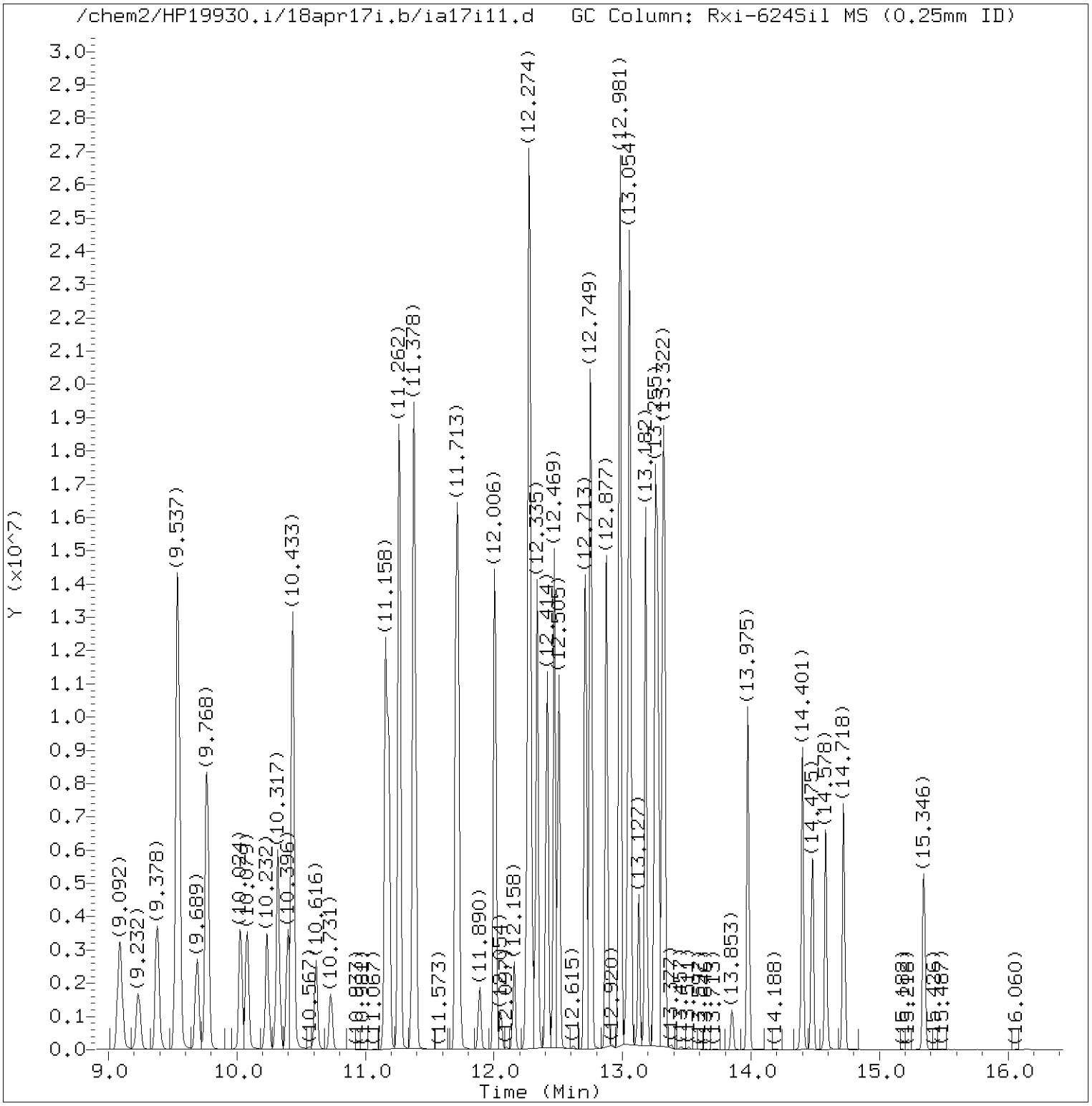
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.916	85	2888680	28.235
2) Chloromethane	(2)	2.111	50	2439650	25.761
5) Vinyl Chloride	(2)	2.227	62	2237903	26.252
6) 1,3-Butadiene	(2)	2.227	39	1877233M	21.583
7) Bromomethane	(2)	2.550	94	1471581	24.560
8) Chloroethane	(2)	2.629	64	1162322	23.931
9) Dichlorofluoromethane	(2)	2.867	67	2840379	24.898
10) Trichlorofluoromethane	(2)	2.928	101	2896973M	27.043
11) Ethyl ether	(2)	3.160	59	1367103	25.865
12) Freon 123a	(2)	3.251	67	2003691	26.488
13) Acrolein	(1)	3.330	56	10718369	1267.626
15) 1,1-Dichloroethene	(2)	3.477	96	1374673	27.217
14) Acetone	(1)	3.495	43	3028126	243.948
16) Freon 113	(2)	3.513	101	1556678	26.884
17) Methyl Iodide	(2)	3.678	142	2471679	26.469
18) Carbon Disulfide	(2)	3.788	76	4073820	28.523
21) Methyl Acetate	(1)	3.910	43	785069	26.828
22) Allyl Chloride	(2)	3.940	41	2643853	28.415
23) Methylene Chloride	(2)	4.129	84	1559693	25.290
26)*t-Butyl Alcohol-d10	(1)	4.135	65	176652	50.000
28) t-Butyl Alcohol	(1)	4.251	59	2325772	542.266
29) Acrylonitrile	(1)	4.452	53	1901328	136.687
30) Methyl Tertiary Butyl Ether	(2)	4.525	73	4011757	26.681
31) trans-1,2-Dichloroethene	(2)	4.550	96	1556612	26.989
32) n-Hexane	(2)	4.964	57	2705069	28.080
33) 1,1-Dichloroethane	(2)	5.214	63	3095568	26.867
34) di-Isopropyl Ether	(2)	5.263	45	5698903	27.189
35) 2-Chloro-1,3-Butadiene	(2)	5.318	53	2722555	27.696
37) Ethyl t-butyl ether	(2)	5.806	59	4822730	27.972
38) 2-Butanone	(1)	6.019	43	5355771	276.205
39) cis-1,2-Dichloroethene	(2)	6.056	96	1765704	27.022
41) 2,2-Dichloropropane	(2)	6.074	77	2333606	28.914
40) 1,2-Dichloroethene (Total)	(2)		96	3322316	54.011
42) Propionitrile	(1)	6.110	54	2850688	516.178
45) Methacrylonitrile	(1)	6.324	67	4762019	264.252
47) Bromochloromethane	(2)	6.397	128	710448	25.965
48) Tetrahydrofuran	(1)	6.403	71	1397603	265.240
49) Chloroform	(2)	6.543	83	2842857	26.226

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	519666	10.018
50)$Dibromofluoromethane	(2)	6.763	111	537067	10.071
51) 1,1,1-Trichloroethane	(2)	6.775	97	2525112	27.967
52) Cyclohexane	(2)	6.879	56	3208185	27.386
52) Cyclohexane	(2)	6.879	84	2567655	27.298
52) Cyclohexane	(2)	6.879	69	947924	27.617
54) Carbon Tetrachloride	(2)	6.988	117	2213384	29.025
55) 1,1-Dichloropropene	(2)	6.988	75	2394515	27.832
56) Isobutyl Alcohol	(1)	7.116	41	2209678	1289.863
57)$1,2-Dichloroethane-d4	(2)	7.226	102	111272	9.860
57)$1,2-Dichloroethane-d4	(2)	7.226	65	545582	9.773
57)$1,2-Dichloroethane-d4	(2)	7.226	104	70942	9.967
58) Benzene	(2)	7.257	78	6778159	26.195
59) 1,2-Dichloroethane	(2)	7.336	62	1848255	24.457
59) 1,2-Dichloroethane	(2)	7.336	98	167991	26.848
60) t-Amyl methyl ether	(2)	7.439	73	4067620	28.014
62) n-Heptane	(2)	7.665	43	2938617	28.721
63)*Fluorobenzene	(2)	7.665	96	2222731	10.000
65) n-Butanol	(1)	8.006	56	3707774	2842.557
67) Trichloroethene	(2)	8.147	95	1778336	27.143
69) Methylcyclohexane	(2)	8.458	83	3157463	27.987
70) 1,2-Dichloropropane	(2)	8.482	63	1772962	26.415
71) Methyl Methacrylate	(1)	8.555	69	905570	29.931
72) 1,4-Dioxane	(1)	8.579	88	357506	1194.793
72) 1,4-Dioxane	(1)	8.567	58	261753M	1219.176
73) Dibromomethane	(2)	8.598	93	786180	26.164
74) Bromodichloromethane	(2)	8.829	83	2105493	29.267
76) 2-Nitropropane	(1)	9.092	41	2892597	295.307
80) cis-1,3-Dichloropropene	(2)	9.378	75	2655342	29.279
81) 4-Methyl-2-Pentanone	(1)	9.537	43	12471632	258.821
82)$Toluene-d8	(3)	9.689	98	2182376	9.552
82)$Toluene-d8	(3)	9.689	100	1402904	9.562
83) Toluene	(3)	9.768	92	4307303	25.825
84) trans-1,3-Dichloropropene	(3)	10.024	75	2161487	30.643
86) Ethyl Methacrylate	(3)	10.079	69	1980221	28.668
85) 1,3-Dichloropropene (total)	(3)		75	4816829	59.922
88) 1,1,2-Trichloroethane	(3)	10.238	97	1207760	25.673
89) Tetrachloroethene	(3)	10.317	166	1895524	26.752

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.396	76	2131727	25.461
91) 2-Hexanone	(1)	10.433	43	8888087	261.289
93) Dibromochloromethane	(3)	10.616	129	1414251	30.527
95) 1,2-Dibromoethane	(3)	10.731	107	1140052	26.635
97)*Chlorobenzene-d5	(3)	11.152	117	1692122	10.000
98) Chlorobenzene	(3)	11.183	112	4620632	25.492
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	1636400	28.388
100) Ethylbenzene	(3)	11.262	91	8365689	26.466
101) m+p-Xylene	(3)	11.378	106	6584612	54.216
104) o-Xylene	(3)	11.707	106	3330110	28.179
106) Styrene	(3)	11.725	104	5222080	28.628
105) Xylene (Total)	(3)		106	9914722	82.396
107) Bromoform	(3)	11.890	173	791510	24.991
108) Isopropylbenzene	(3)	12.006	105	8442617	27.832
111)$4-Bromofluorobenzene	(3)	12.158	95	784486	9.724
111)$4-Bromofluorobenzene	(3)	12.158	174	631211	9.615
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	1632834	27.194
114) Bromobenzene	(4)	12.274	156	2026711	28.465
115) trans-1,4-Dichloro-2-butene	(1)	12.274	53	3492025A	289.061
116) 1,2,3-Trichloropropane	(4)	12.298	110	401056	25.502
117) n-Propylbenzene	(4)	12.335	91	9695863	26.919
119) 2-Chlorotoluene	(4)	12.414	126	1912648	27.576
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	6991204	28.112
122) 4-Chlorotoluene	(4)	12.505	126	1924547	27.274
125) tert-Butylbenzene	(4)	12.713	134	1526172	29.671
126) Pentachloroethane	(4)	12.749	167	1235907	31.147
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	7077940	28.342
128) sec-Butylbenzene	(4)	12.877	105	9148229	28.415
131) 1,3-Dichlorobenzene	(4)	12.981	146	3947739	28.385
132) p-Isopropyltoluene	(4)	12.981	119	7921799	28.090
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	853465	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	3864846	27.278
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	3100362	27.318
136) Benzyl Chloride	(4)	13.127	126	562128	24.990
138) n-Butylbenzene	(4)	13.274	92	3922223	29.372
139) 1,2-Dichlorobenzene	(4)	13.310	146	3481638	26.991
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	205527	31.468
144) 1,3,5-Trichlorobenzene	(4)	13.975	180	2767737	29.457

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

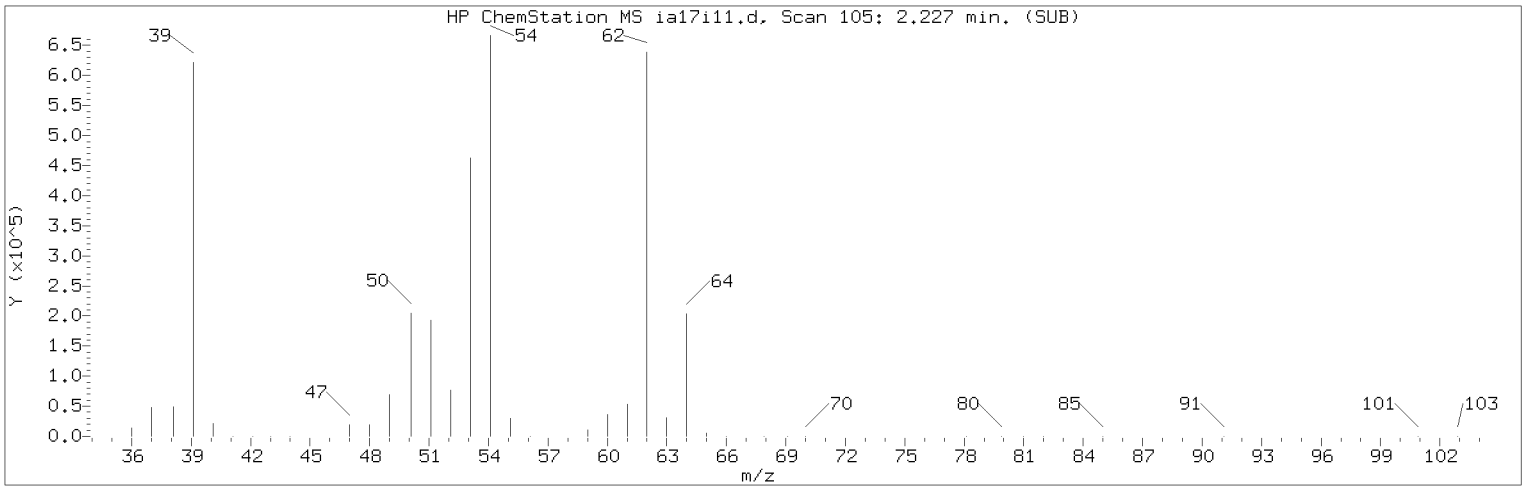
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

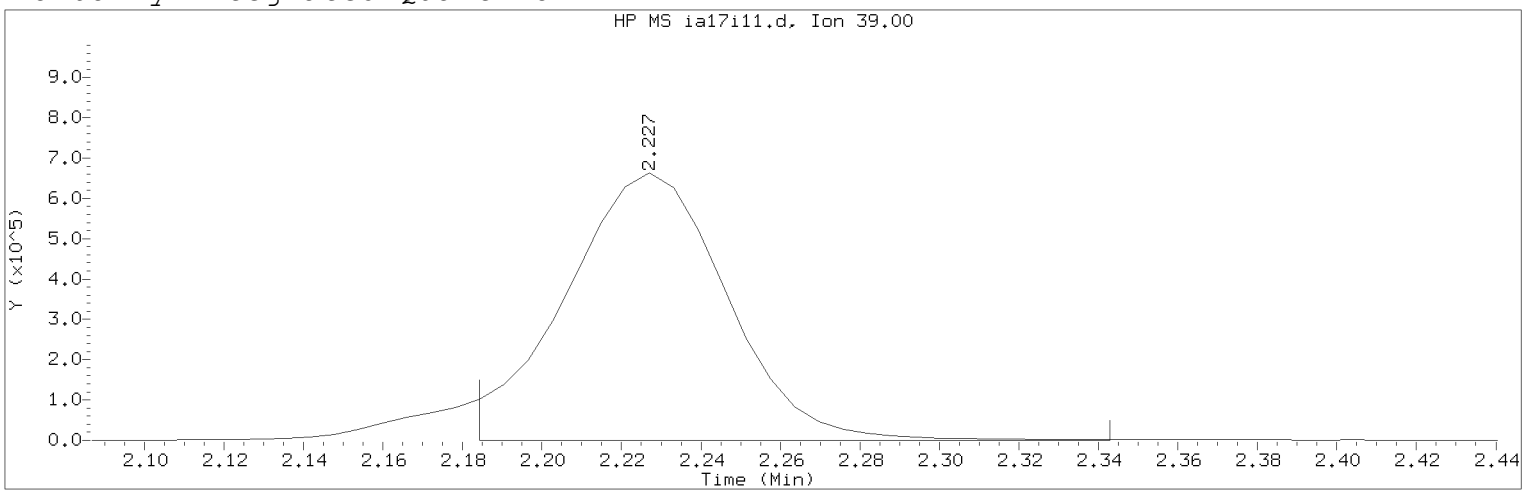
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	2396328	29.108
146) Hexachlorobutadiene	(4)	14.481	225	928886	31.181
147) Naphthalene	(4)	14.584	128	4509117	27.958
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	1953875	26.667

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

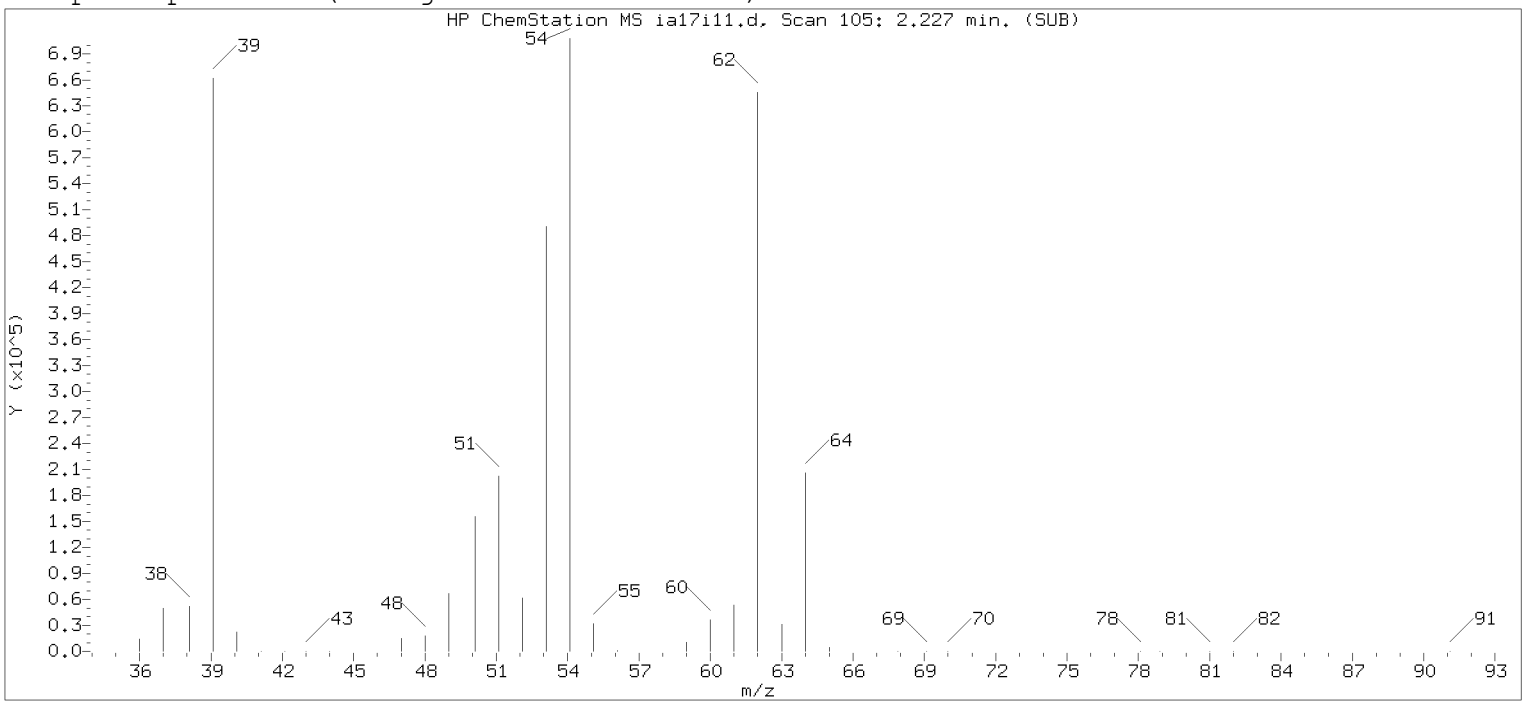
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 105
Retention Time (minutes): 2.227
Quant Ion : 39.00
Area (flag) : 1877233M
On-Column Amount (ng) : 21.5832
Integration start scan : 97 Integration stop scan: 123
Y at integration start : 276 Y at integration end: 276

Reason for manual integration: improper integration

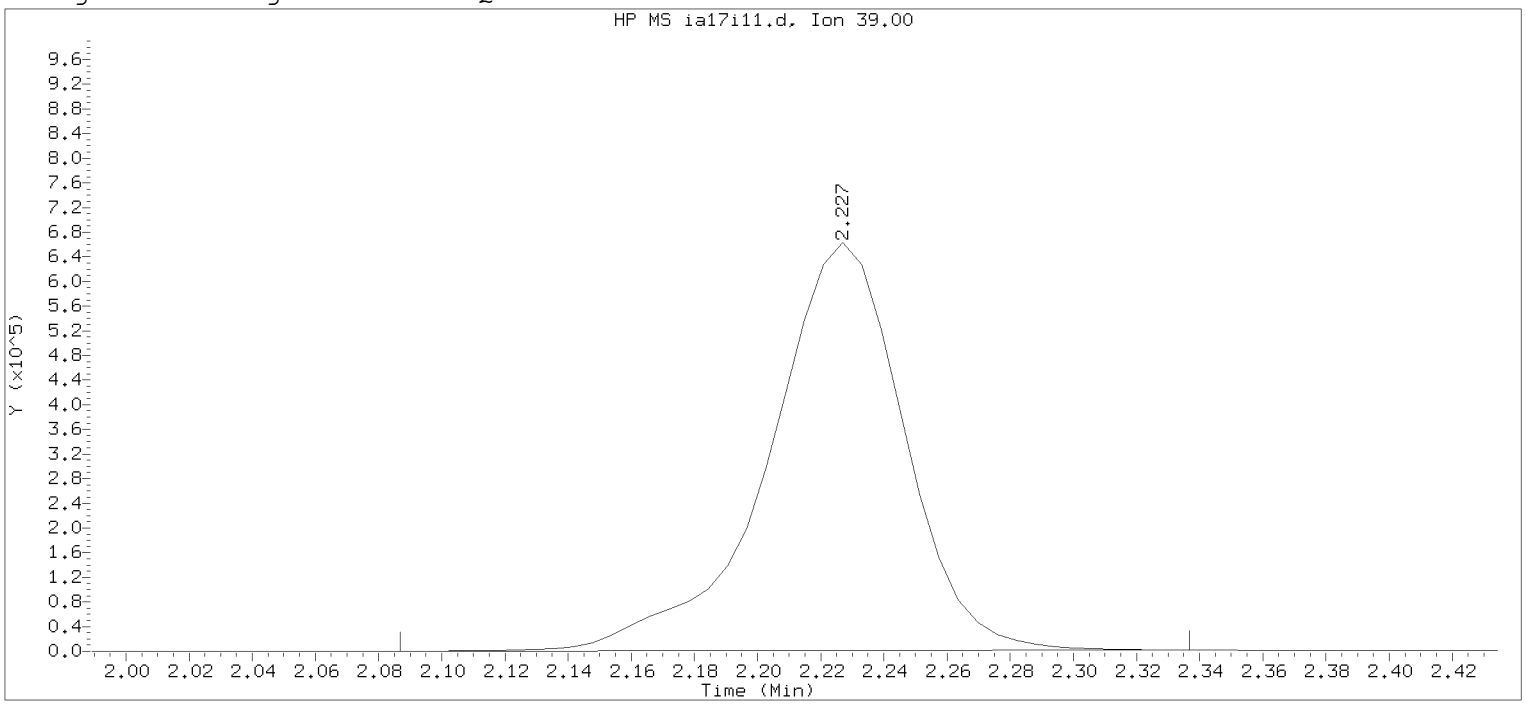
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

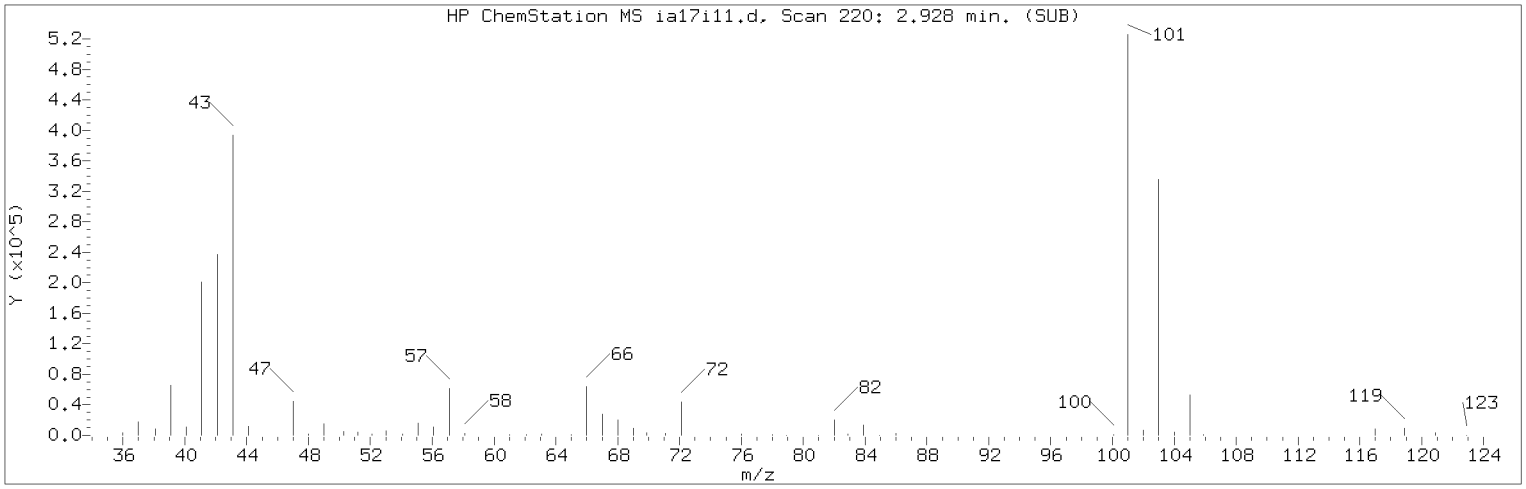
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 18:40
Date, time and analyst ID of latest file update: 17-Apr-2018 18:40 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

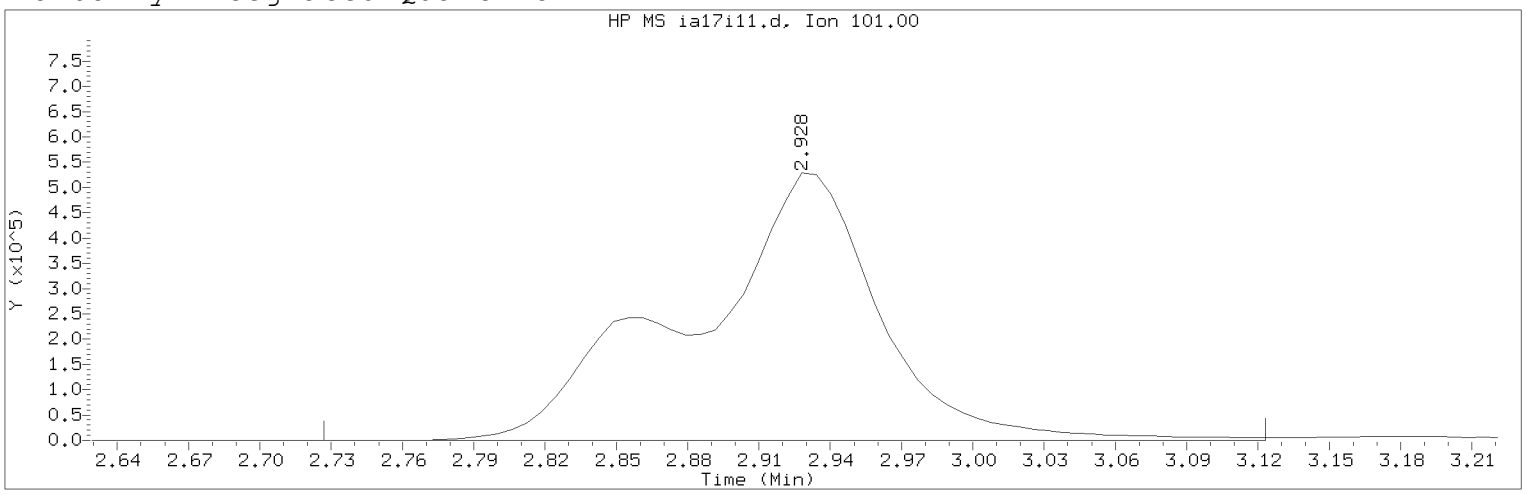
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 105
Retention Time (minutes): 2.227
Quant Ion : 39.00
Area : 1974401
On-column Amount (ng) : 25.0000
Integration start scan : 81 Integration stop scan: 122
Y at integration start : 267 Y at integration end: 2197

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used. Reason: 0763

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

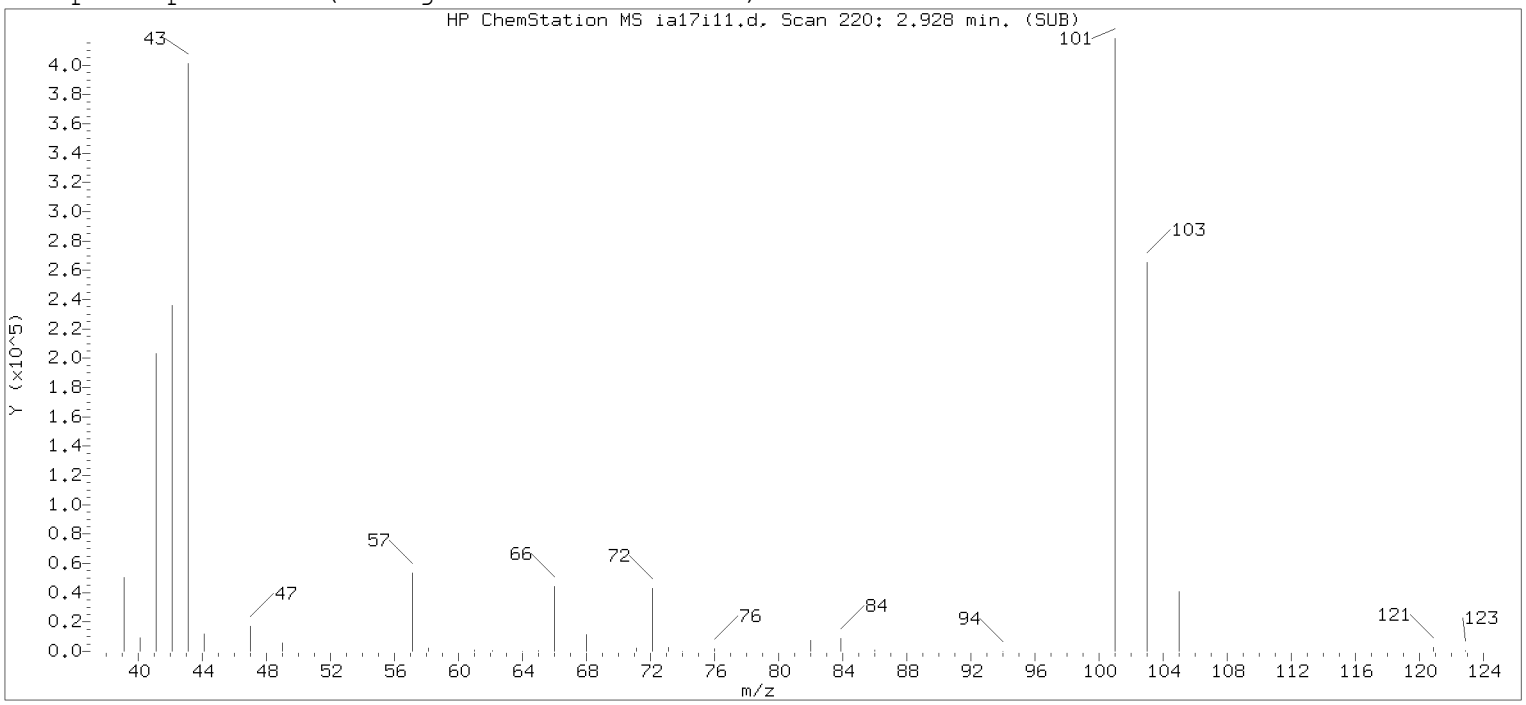
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area (flag) : 2896973M
On-Column Amount (ng) : 27.0429
Integration start scan : 186 Integration stop scan: 251
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

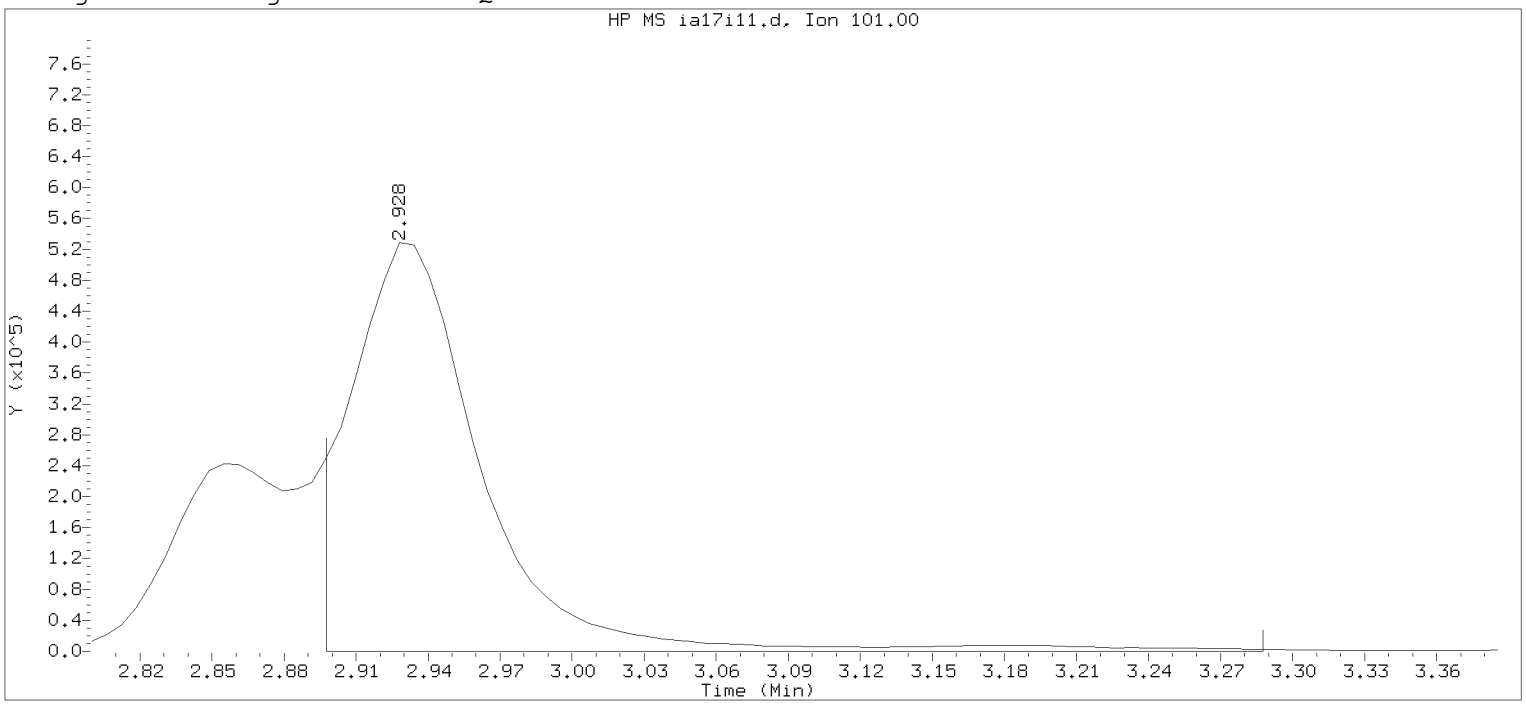
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

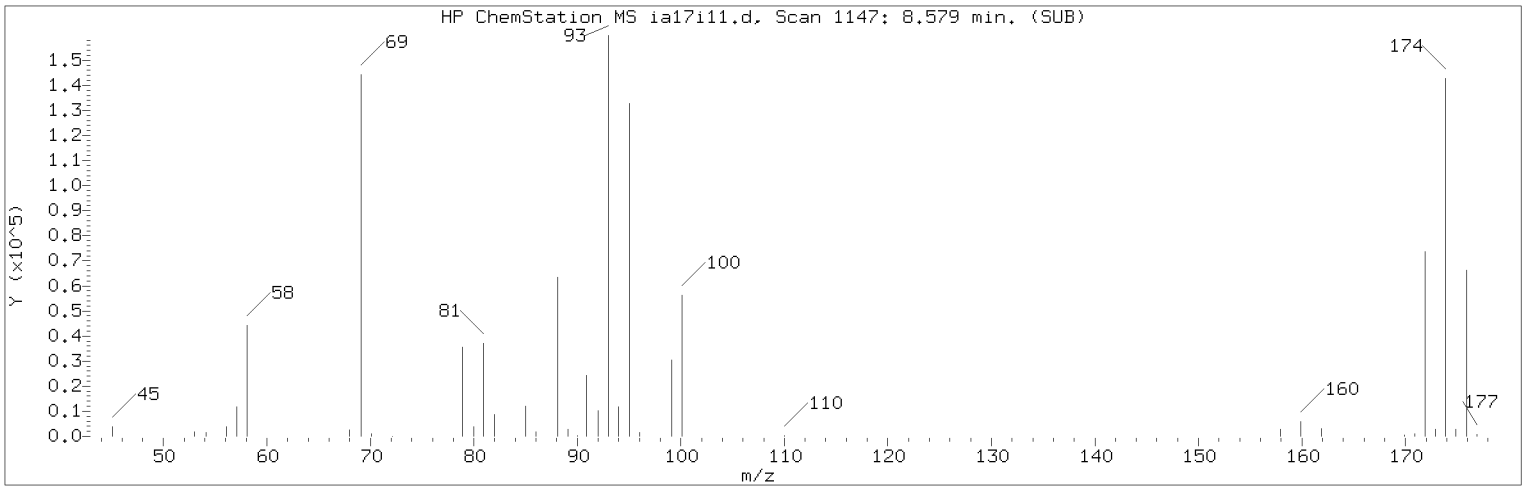
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 18:40
Date, time and analyst ID of latest file update: 17-Apr-2018 18:40 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

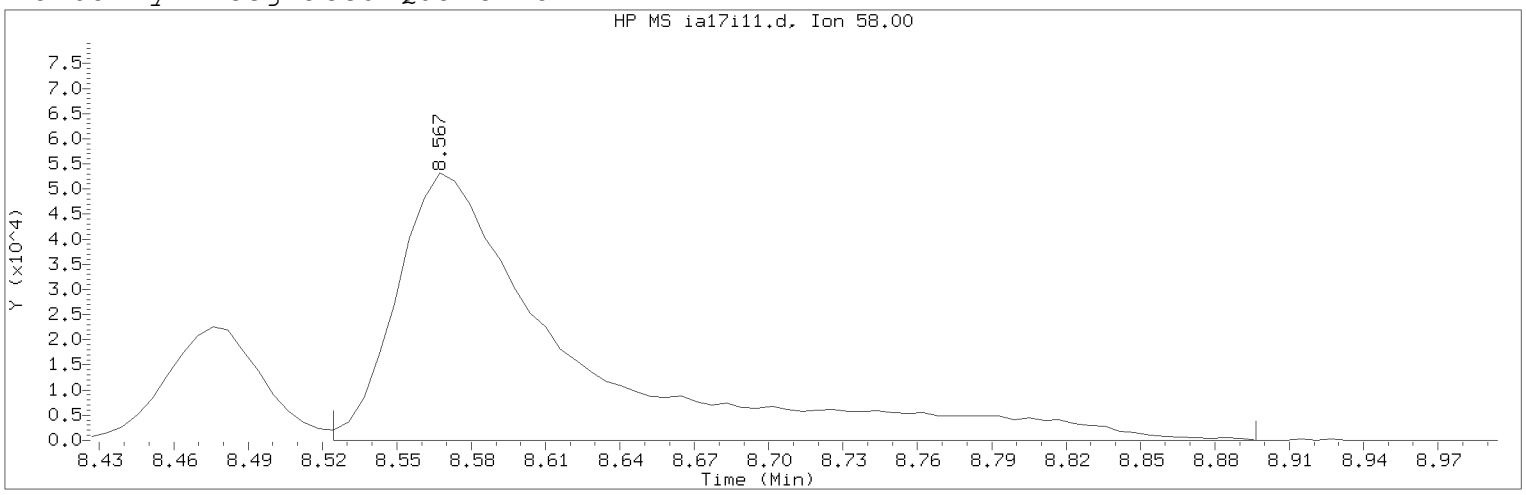
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area : 1980187
On-column Amount (ng) : 25.0000
Integration start scan : 214 Integration stop scan: 278
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

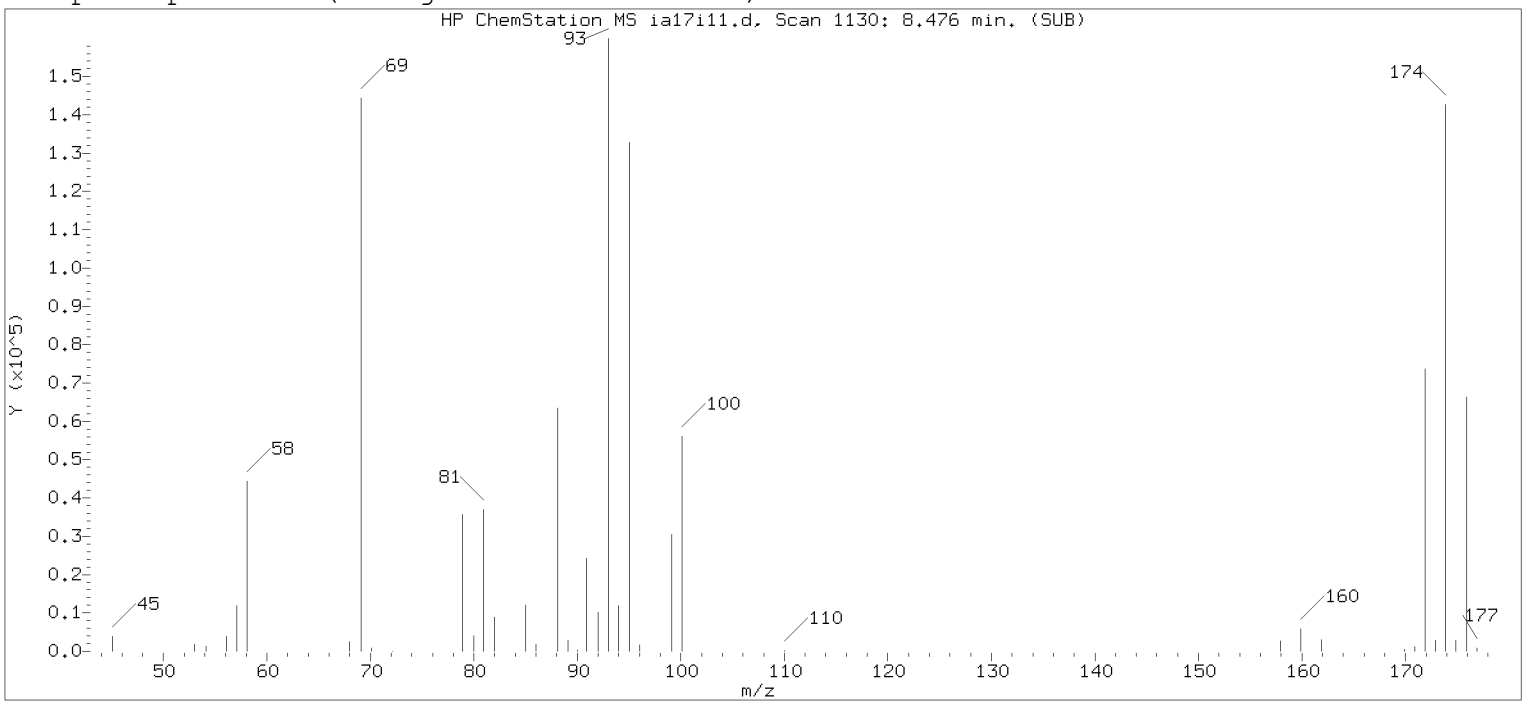
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1145
Retention Time (minutes): 8.567
Quant Ion : 58.00
Area (flag) : 261753M
On-Column Amount (ng) : 1219.1763
Integration start scan : 1137 Integration stop scan: 1198
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

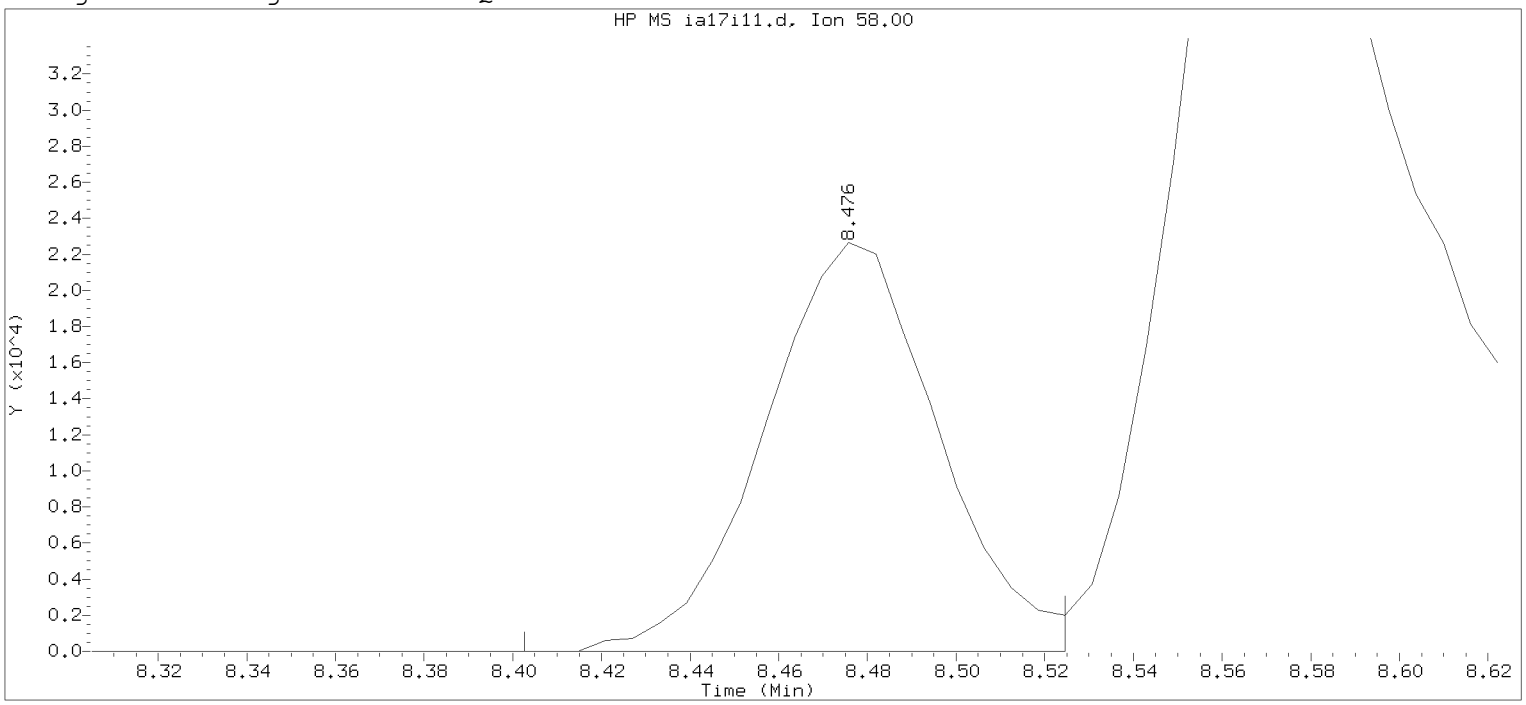
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

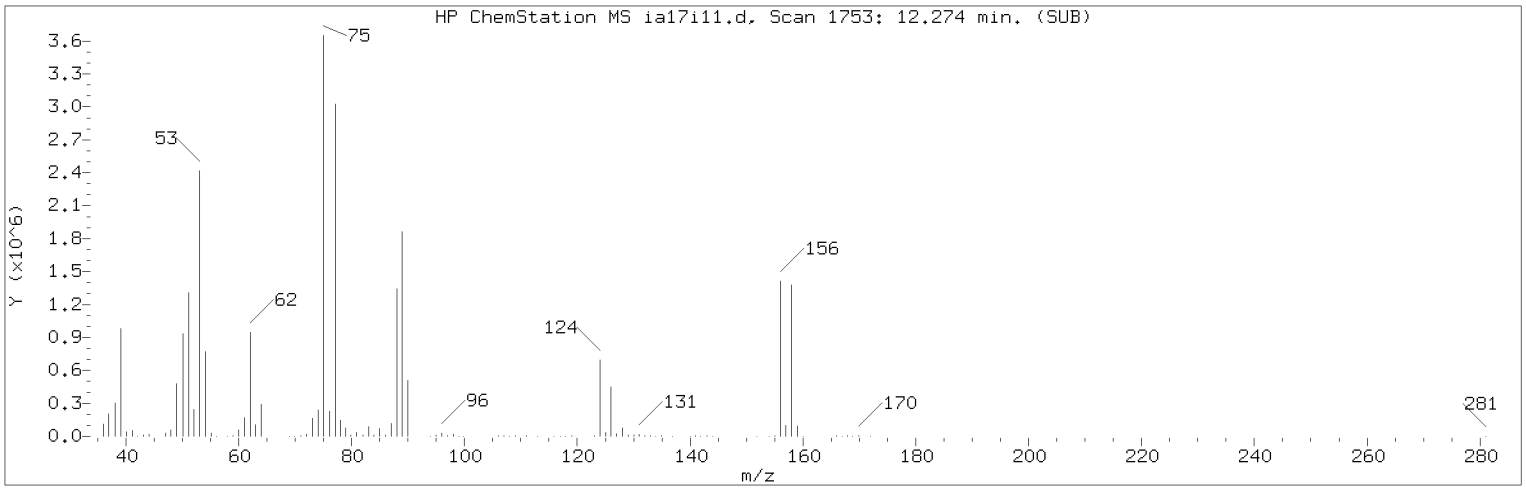
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 18:40
Date, time and analyst ID of latest file update: 17-Apr-2018 18:40 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

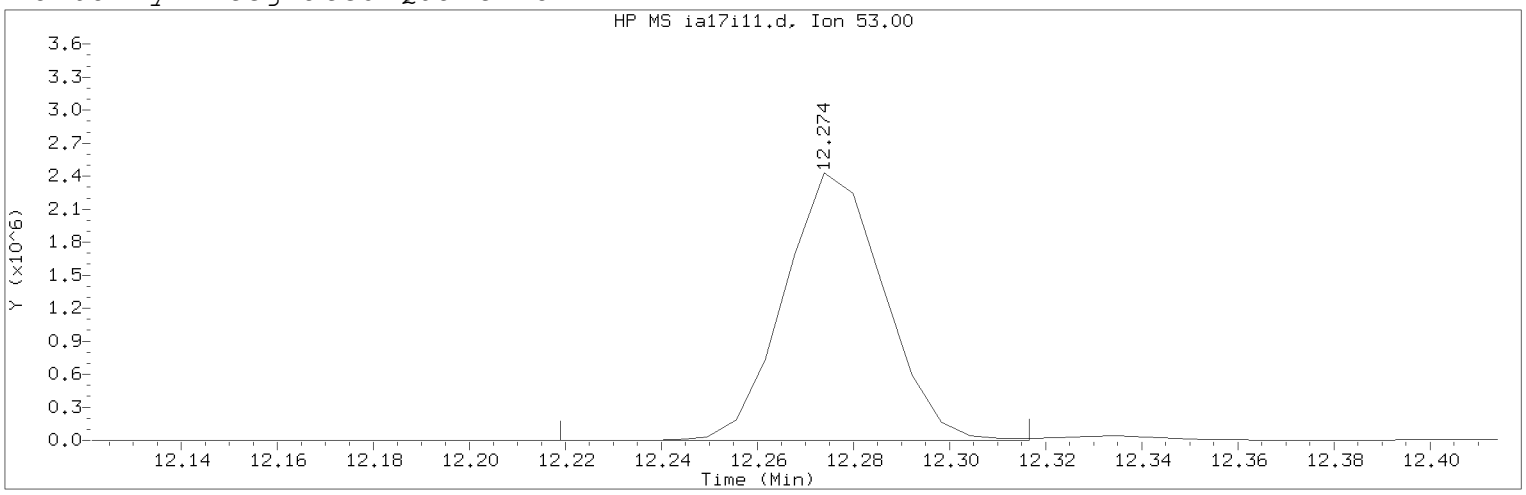
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 58.00
Area : 61409
On-column Amount (ng) : 1250.0000
Integration start scan : 1117 Integration stop scan: 1137
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/27/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

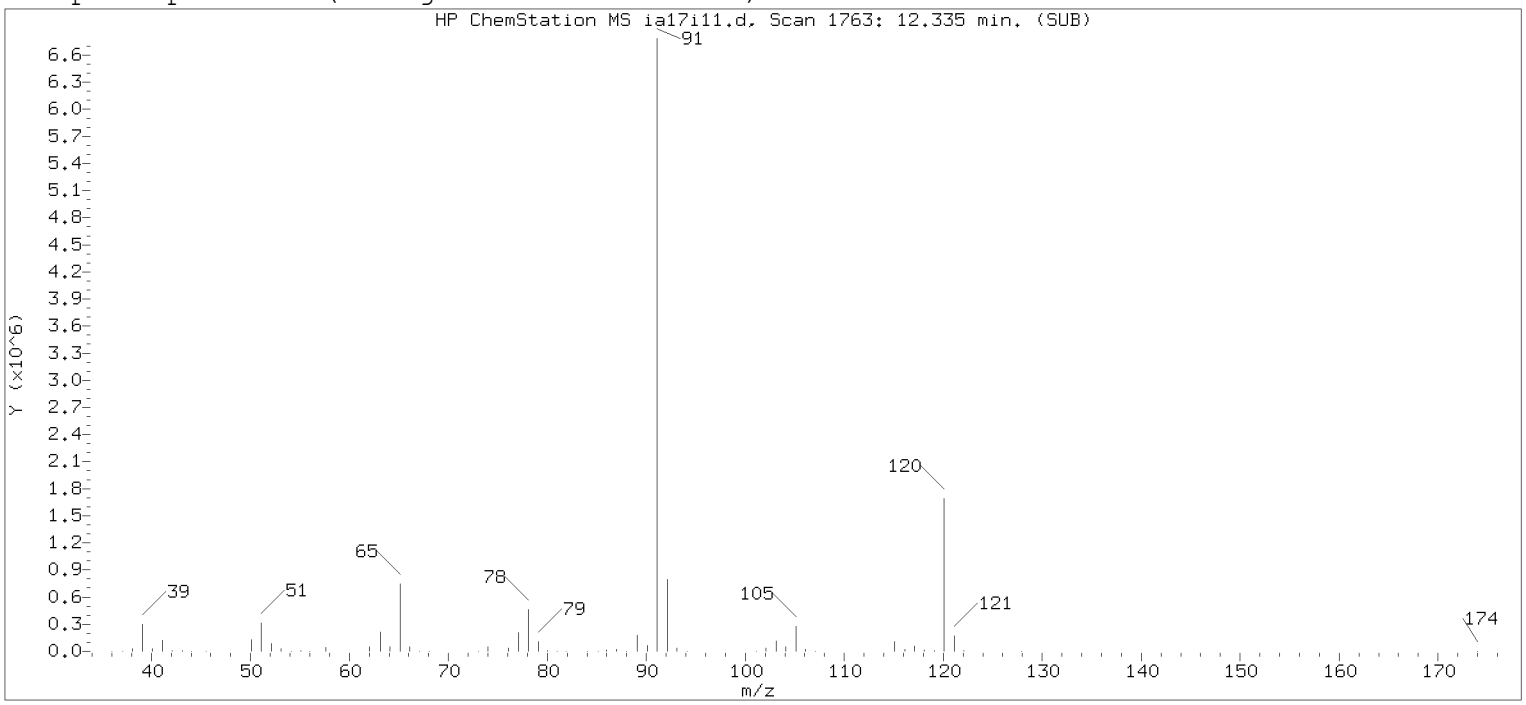
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1753
Retention Time (minutes): 12.274
Quant Ion : 53.00
Area (flag) : 3492025A
On-Column Amount (ng) : 289.0609
Integration start scan : 1743 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

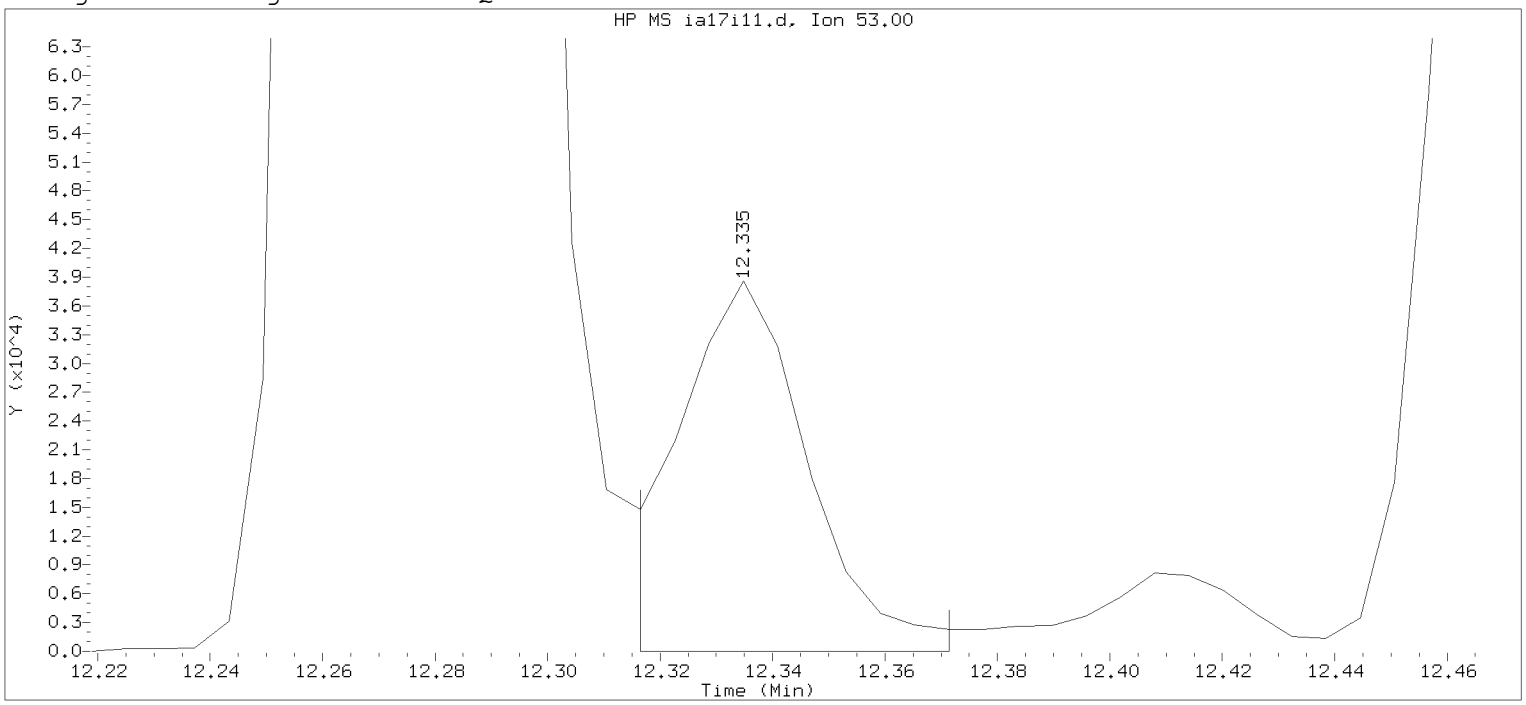
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



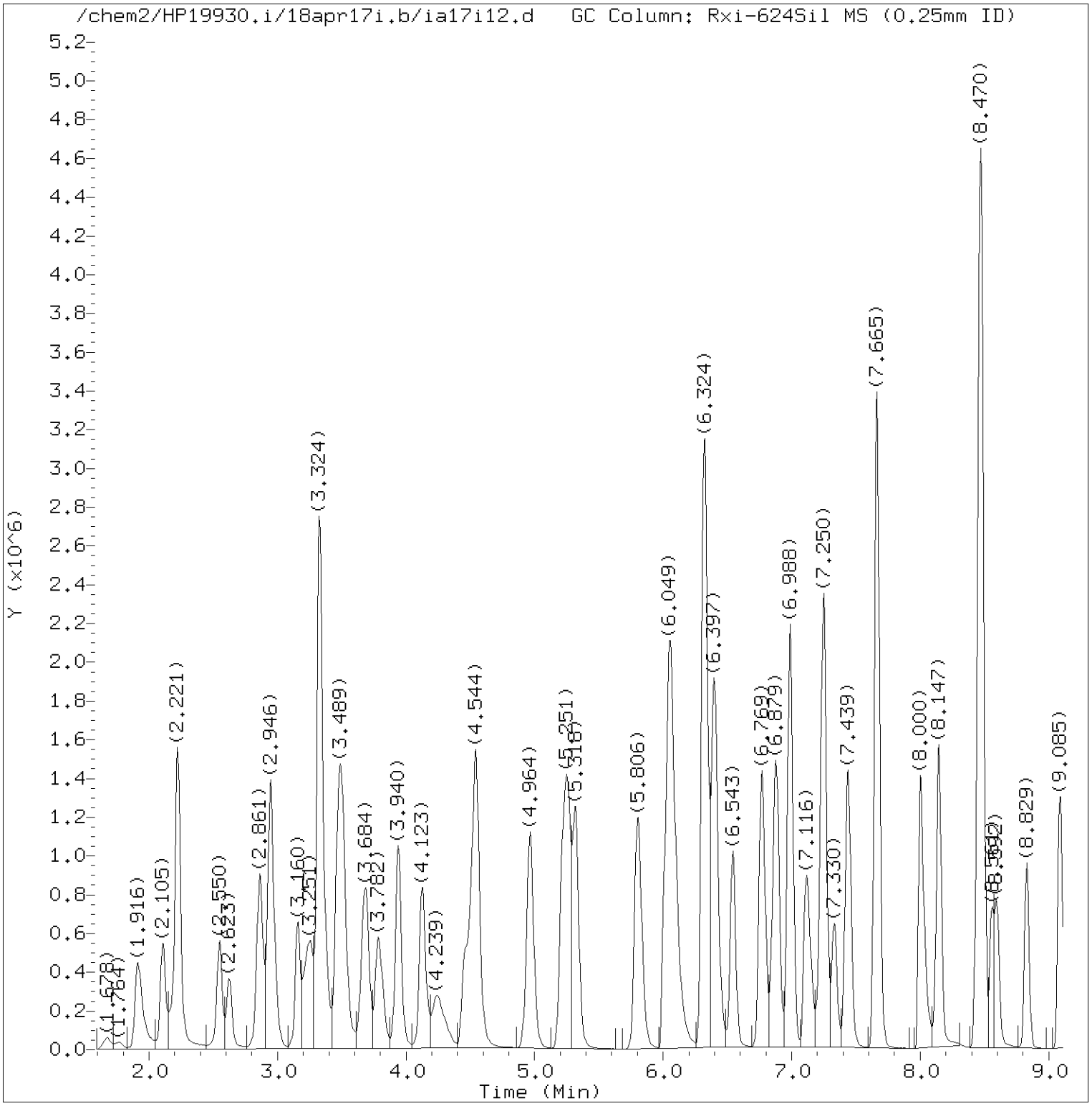
Data File: /chem2/HP19930.i/18apr17i.b/ia17i11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:22 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 18:40
Date, time and analyst ID of latest file update: 17-Apr-2018 18:40 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 53.00
Area : 60683
On-column Amount (ng) : 250.0000
Integration start scan : 1759 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.



Total Ion Chromatogram (TIC)

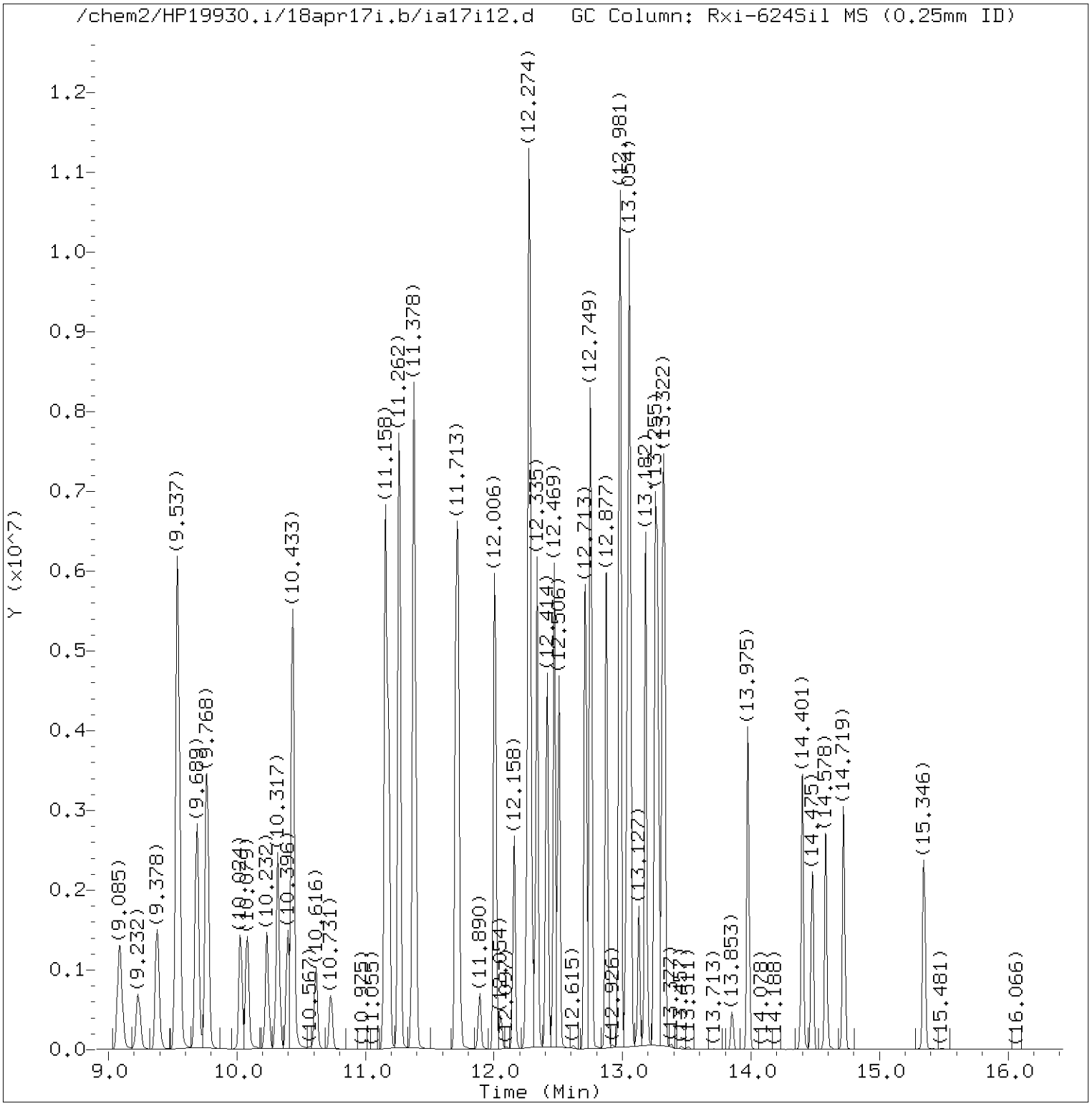
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.910	85	1169019	10.988
2) Chloromethane	(2)	2.105	50	1013734	10.294
5) Vinyl Chloride	(2)	2.221	62	931576	10.509
6) 1,3-Butadiene	(2)	2.221	39	840832M	9.297
7) Bromomethane	(2)	2.550	94	629727	10.107
8) Chloroethane	(2)	2.623	64	511590	10.129
9) Dichlorofluoromethane	(2)	2.861	67	1213123	10.226
10) Trichlorofluoromethane	(2)	2.934	101	1178108	10.576
11) Ethyl ether	(2)	3.154	59	571867	10.405
12) Freon 123a	(2)	3.251	67	846122	10.756
13) Acrolein	(1)	3.324	56	4535216	536.016
15) 1,1-Dichloroethene	(2)	3.471	96	572086	10.892
14) Acetone	(1)	3.495	43	1238701	99.726
16) Freon 113	(2)	3.507	101	646229	10.732
17) Methyl Iodide	(2)	3.672	142	1041843	10.729
18) Carbon Disulfide	(2)	3.788	76	1668782	11.236
21) Methyl Acetate	(1)	3.916	43	317038	10.827
22) Allyl Chloride	(2)	3.940	41	1081540M	11.178
23) Methylene Chloride	(2)	4.123	84	661053	10.308
26)*t-Butyl Alcohol-d10	(1)	4.123	65	176767	50.000
28) t-Butyl Alcohol	(1)	4.245	59	906727	211.271
29) Acrylonitrile	(1)	4.458	53	790058	56.761
30) Methyl Tertiary Butyl Ether	(2)	4.519	73	1681893	10.757
31) trans-1,2-Dichloroethene	(2)	4.544	96	654608	10.915
32) n-Hexane	(2)	4.964	57	1105259	11.033
33) 1,1-Dichloroethane	(2)	5.214	63	1298548	10.838
34) di-Isopropyl Ether	(2)	5.257	45	2403719	11.028
35) 2-Chloro-1,3-Butadiene	(2)	5.324	53	1126767	11.023
37) Ethyl t-butyl ether	(2)	5.800	59	2007982	11.200
38) 2-Butanone	(1)	6.019	43	2222278	114.531
39) cis-1,2-Dichloroethene	(2)	6.056	96	744276	10.953
41) 2,2-Dichloropropane	(2)	6.068	77	957457	11.408
42) Propionitrile	(1)	6.104	54	1173584	212.364
40) 1,2-Dichloroethene (Total)	(2)		96	1398884	21.868
45) Methacrylonitrile	(1)	6.324	67	2000349	110.930
47) Bromochloromethane	(2)	6.397	128	294195	10.340
48) Tetrahydrofuran	(1)	6.409	71	581908	110.364
49) Chloroform	(2)	6.543	83	1200252	10.648

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	540582	10.021
50)$Dibromofluoromethane	(2)	6.763	111	555974	10.025
51) 1,1,1-Trichloroethane	(2)	6.775	97	1041757	11.096
52) Cyclohexane	(2)	6.879	56	1314654	10.792
52) Cyclohexane	(2)	6.879	84	1048682	10.722
52) Cyclohexane	(2)	6.879	69	385287	10.795
54) Carbon Tetrachloride	(2)	6.988	117	900720	11.359
55) 1,1-Dichloropropene	(2)	6.988	75	1003465	11.216
56) Isobutyl Alcohol	(1)	7.116	41	879552	513.090
57)$1,2-Dichloroethane-d4	(2)	7.226	102	116731	9.948
57)$1,2-Dichloroethane-d4	(2)	7.226	65	568467	9.793
57)$1,2-Dichloroethane-d4	(2)	7.232	104	73717	9.960
58) Benzene	(2)	7.250	78	2871336	10.671
59) 1,2-Dichloroethane	(2)	7.336	62	784127	9.978
59) 1,2-Dichloroethane	(2)	7.330	98	70442	10.826
60) t-Amyl methyl ether	(2)	7.439	73	1686908	11.173
63)*Fluorobenzene	(2)	7.659	96	2311353	10.000
62) n-Heptane	(2)	7.665	43	1186741	11.154
65) n-Butanol	(1)	8.000	56	1491919	1143.032
67) Trichloroethene	(2)	8.147	95	739586	10.855
69) Methylcyclohexane	(2)	8.458	83	1274762	10.866
70) 1,2-Dichloropropane	(2)	8.482	63	748031	10.718
71) Methyl Methacrylate	(1)	8.555	69	367061	12.124
72) 1,4-Dioxane	(1)	8.567	88	151960M	507.523
72) 1,4-Dioxane	(1)	8.573	58	110686M	515.211
73) Dibromomethane	(2)	8.598	93	329386	10.542
74) Bromodichloromethane	(2)	8.829	83	844542	11.289
76) 2-Nitropropane	(1)	9.092	41	1173959	119.772
80) cis-1,3-Dichloropropene	(2)	9.378	75	1072034	11.367
81) 4-Methyl-2-Pentanone	(1)	9.537	43	5460543	113.248
82)$Toluene-d8	(3)	9.689	98	2264553	9.774
82)$Toluene-d8	(3)	9.689	100	1453223	9.767
83) Toluene	(3)	9.768	92	1795413	10.615
84) trans-1,3-Dichloropropene	(3)	10.024	75	855876	11.965
86) Ethyl Methacrylate	(3)	10.079	69	804921	11.490
85) 1,3-Dichloropropene (total)	(3)		75	1927910	23.332
88) 1,1,2-Trichloroethane	(3)	10.232	97	499833	10.477
89) Tetrachloroethene	(3)	10.317	166	780560	10.863

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.396	76	894135	10.530
91) 2-Hexanone	(1)	10.433	43	3865312	113.557
93) Dibromochloromethane	(3)	10.616	129	554164	11.795
95) 1,2-Dibromoethane	(3)	10.731	107	472023	10.874
97)*Chlorobenzene-d5	(3)	11.152	117	1716032	10.000
98) Chlorobenzene	(3)	11.183	112	1932998	10.516
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	652116	11.155
100) Ethylbenzene	(3)	11.262	91	3526458	11.001
101) m+p-Xylene	(3)	11.378	106	2727435	22.144
104) o-Xylene	(3)	11.707	106	1348533	11.252
106) Styrene	(3)	11.725	104	2141920	11.578
105) Xylene (Total)	(3)		106	4075968	33.397
107) Bromoform	(3)	11.890	173	294258	10.094
108) Isopropylbenzene	(3)	12.006	105	3525771	11.461
111)$4-Bromofluorobenzene	(3)	12.158	95	809135	9.890
111)$4-Bromofluorobenzene	(3)	12.158	174	656205	9.857
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	654501	10.652
114) Bromobenzene	(4)	12.274	156	796018	10.926
115) trans-1,4-Dichloro-2-butene	(1)	12.274	53	1470423	121.639
116) 1,2,3-Trichloropropane	(4)	12.298	110	168068	10.444
117) n-Propylbenzene	(4)	12.335	91	4155381	11.274
119) 2-Chlorotoluene	(4)	12.414	126	783185	11.035
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	2894531	11.374
122) 4-Chlorotoluene	(4)	12.506	126	795793	11.021
125) tert-Butylbenzene	(4)	12.713	134	614371	11.672
126) Pentachloroethane	(4)	12.749	167	474564	11.688
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	2936647	11.492
128) sec-Butylbenzene	(4)	12.877	105	3794680	11.518
131) 1,3-Dichlorobenzene	(4)	12.981	146	1559540	10.958
132) p-Isopropyltoluene	(4)	12.981	119	3232441	11.201
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	873331	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	1552370	10.707
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	1239572	10.674
136) Benzyl Chloride	(4)	13.127	126	210288	10.097
138) n-Butylbenzene	(4)	13.274	92	1590524	11.640
139) 1,2-Dichlorobenzene	(4)	13.310	146	1405636	10.649
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	78029	11.939
144) 1,3,5-Trichlorobenzene	(4)	13.975	180	1086640	11.302

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	955427	11.341
146) Hexachlorobutadiene	(4)	14.481	225	357445	11.726
147) Naphthalene	(4)	14.584	128	1893907	11.476
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	821860	10.962

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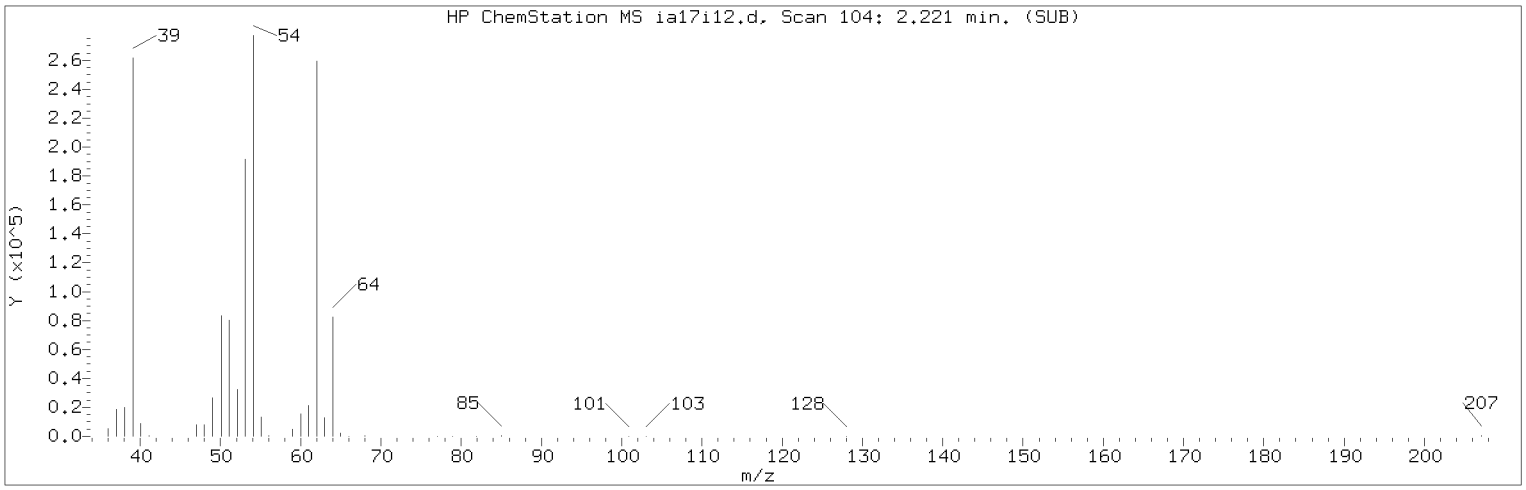
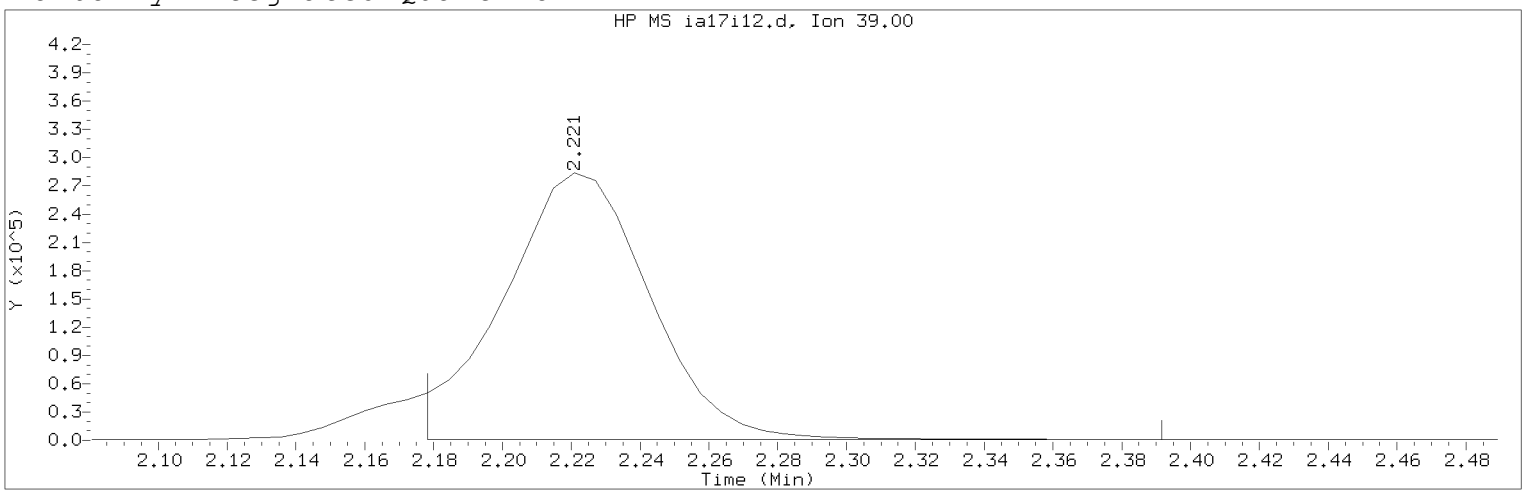
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

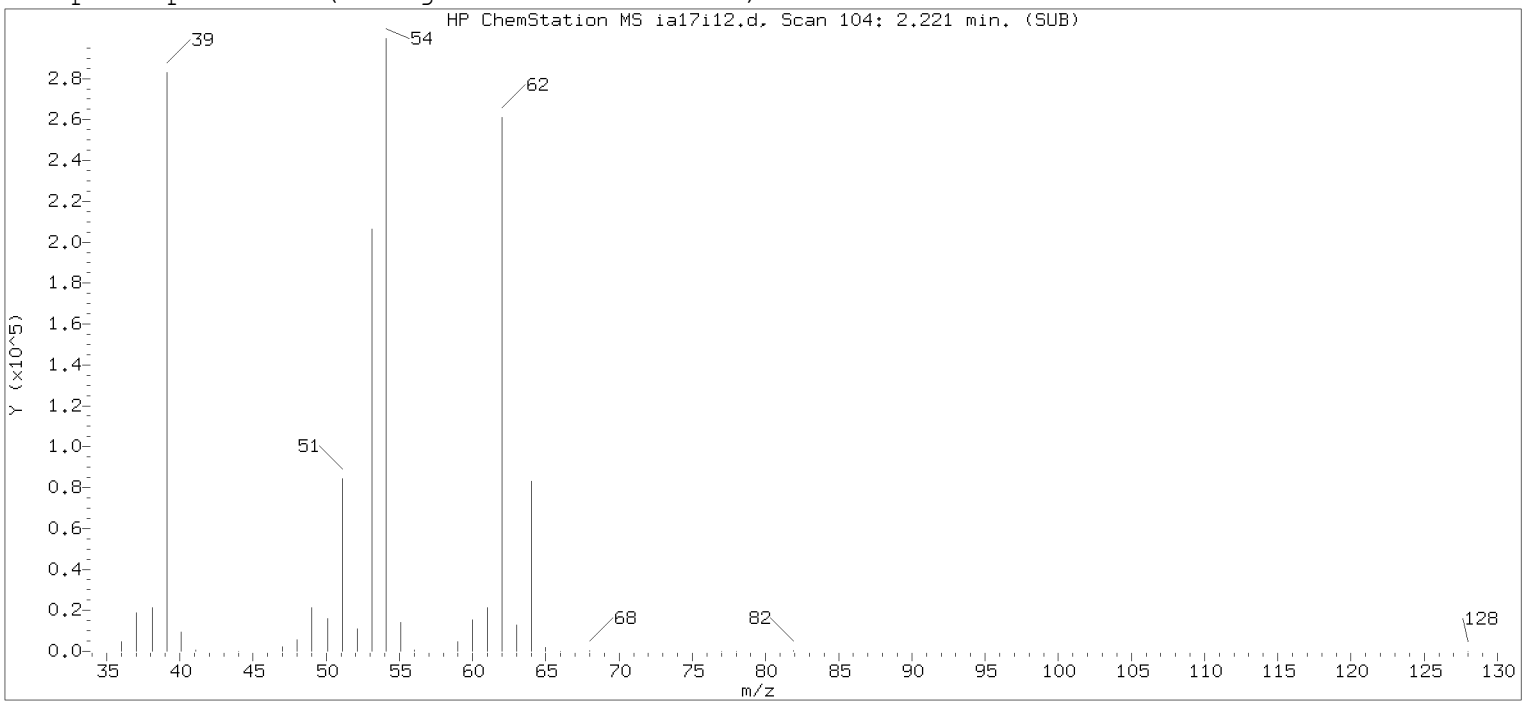
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 104
Retention Time (minutes): 2.221
Quant Ion : 39.00
Area (flag) : 840832M
On-Column Amount (ng) : 9.2967
Integration start scan : 96 Integration stop scan: 131
Y at integration start : 658 Y at integration end: 658

Reason for manual integration: improper integration

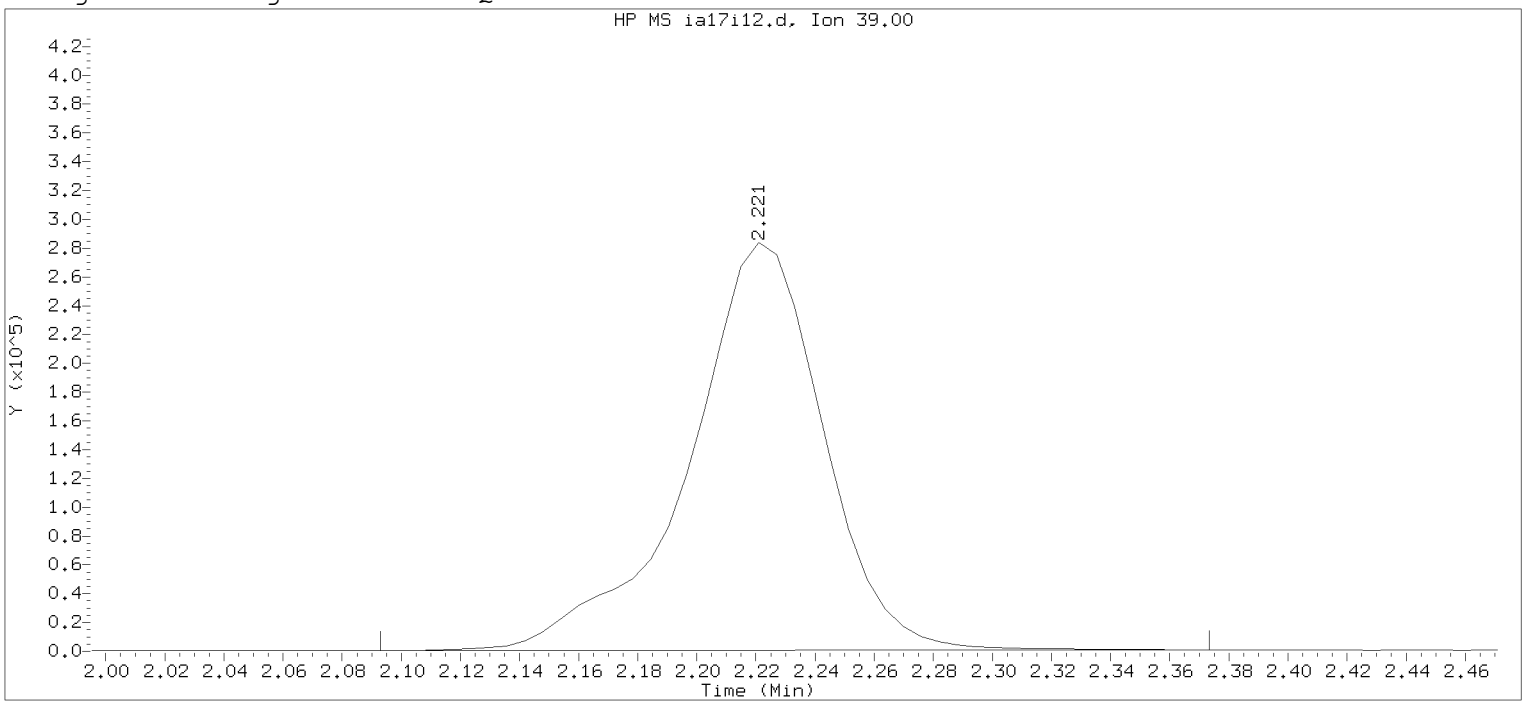
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

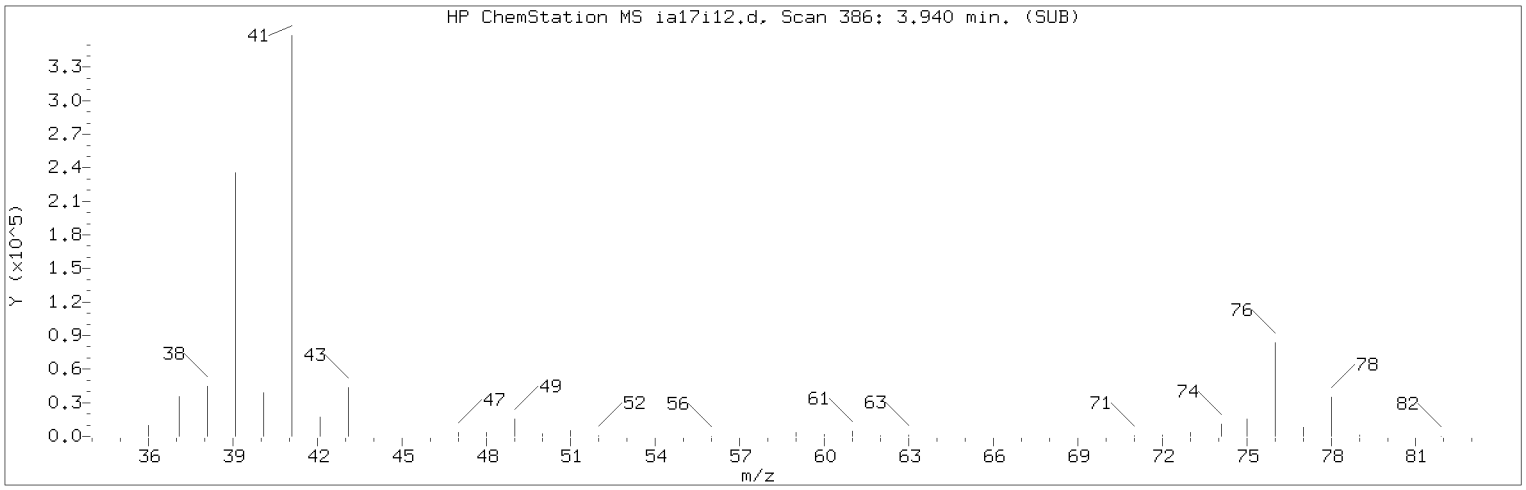
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:01
Date, time and analyst ID of latest file update: 17-Apr-2018 19:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

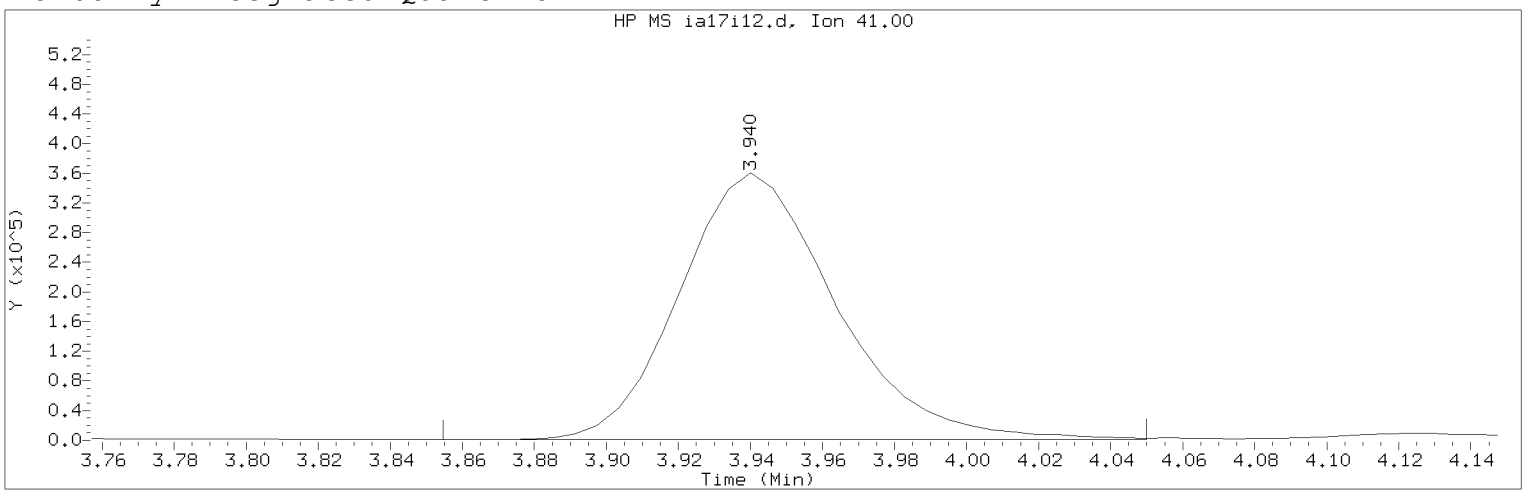
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 104
Retention Time (minutes): 2.221
Quant Ion : 39.00
Area : 898253
On-column Amount (ng) : 10.4478
Integration start scan : 82 Integration stop scan: 128
Y at integration start : 527 Y at integration end: 868

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

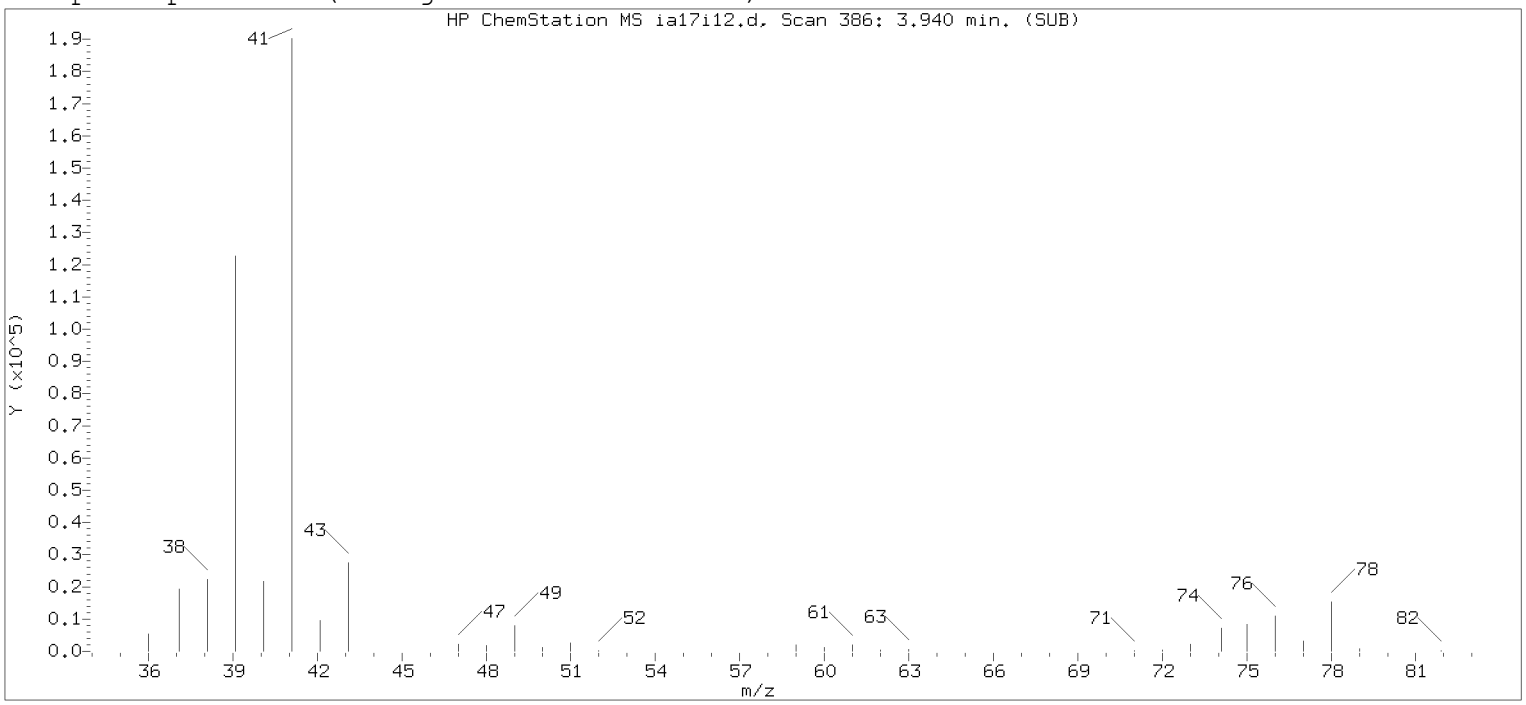
Compound Number : 22
Compound Name : Allyl Chloride
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 41.00
Area (flag) : 1081540M
On-Column Amount (ng) : 11.1782
Integration start scan : 371 Integration stop scan: 403
Y at integration start : 710 Y at integration end: 710

Reason for manual integration: improper integration

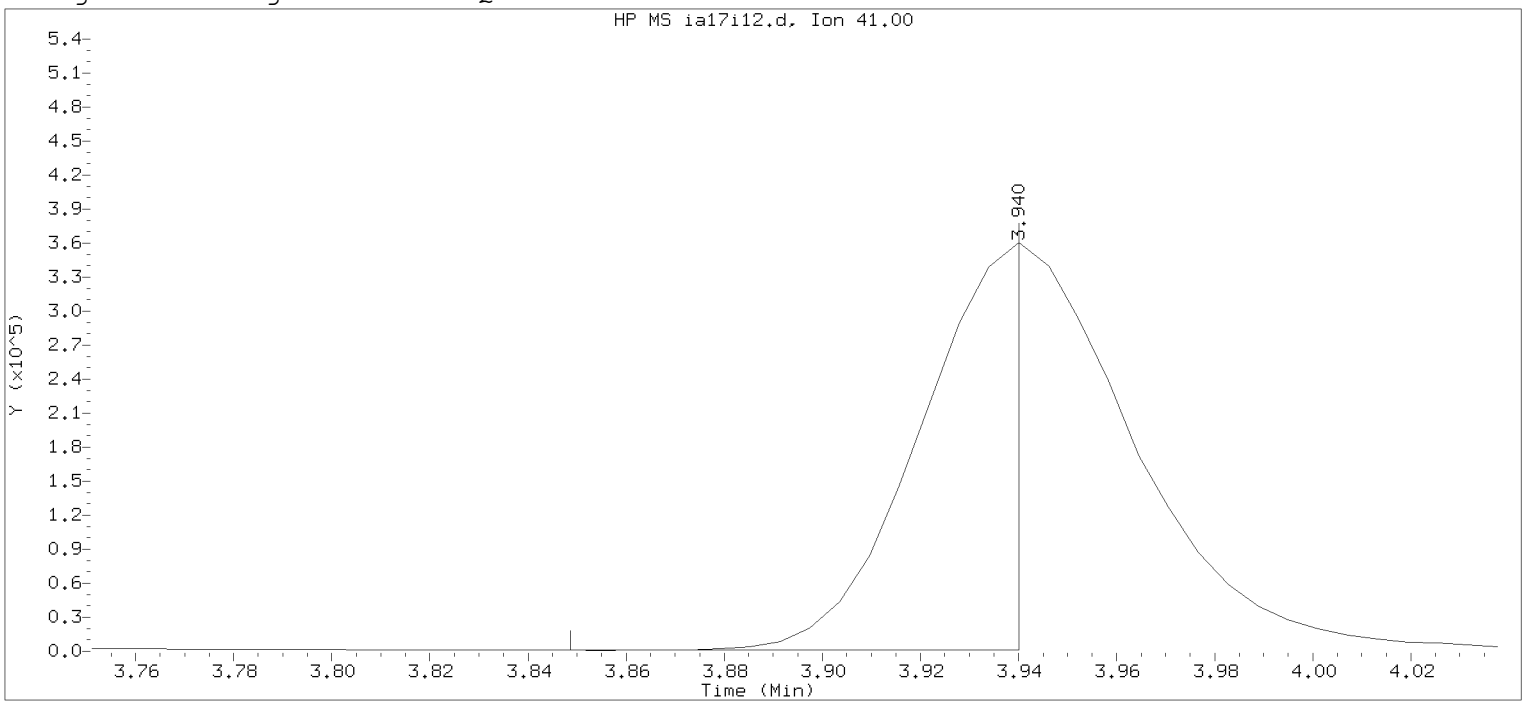
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

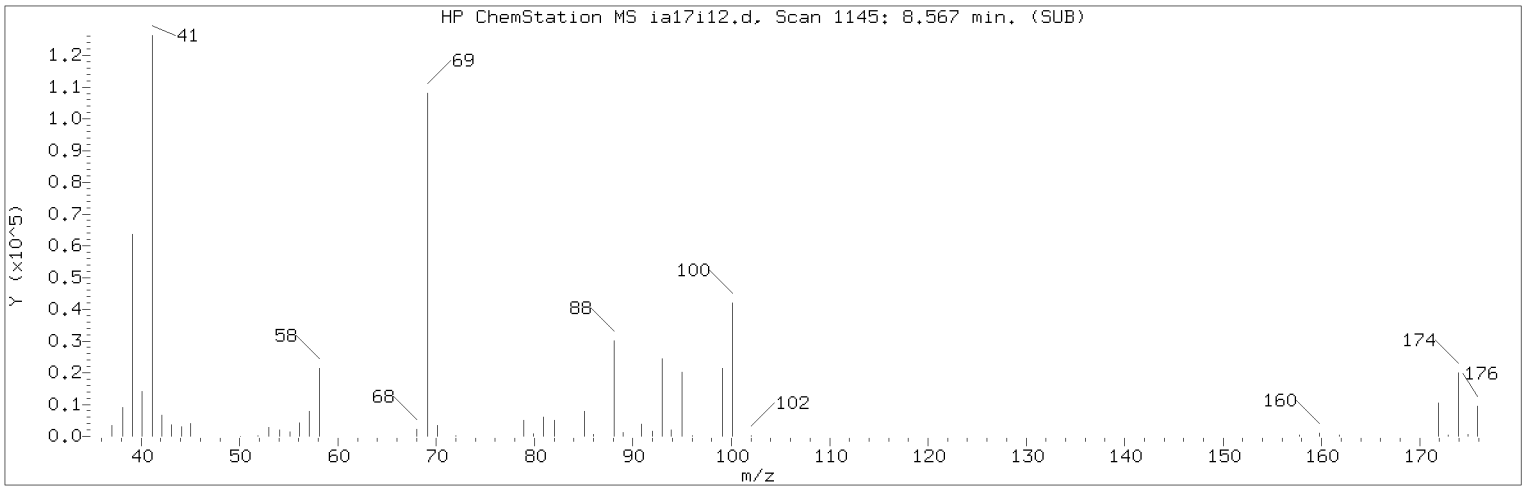
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:01
Date, time and analyst ID of latest file update: 17-Apr-2018 19:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

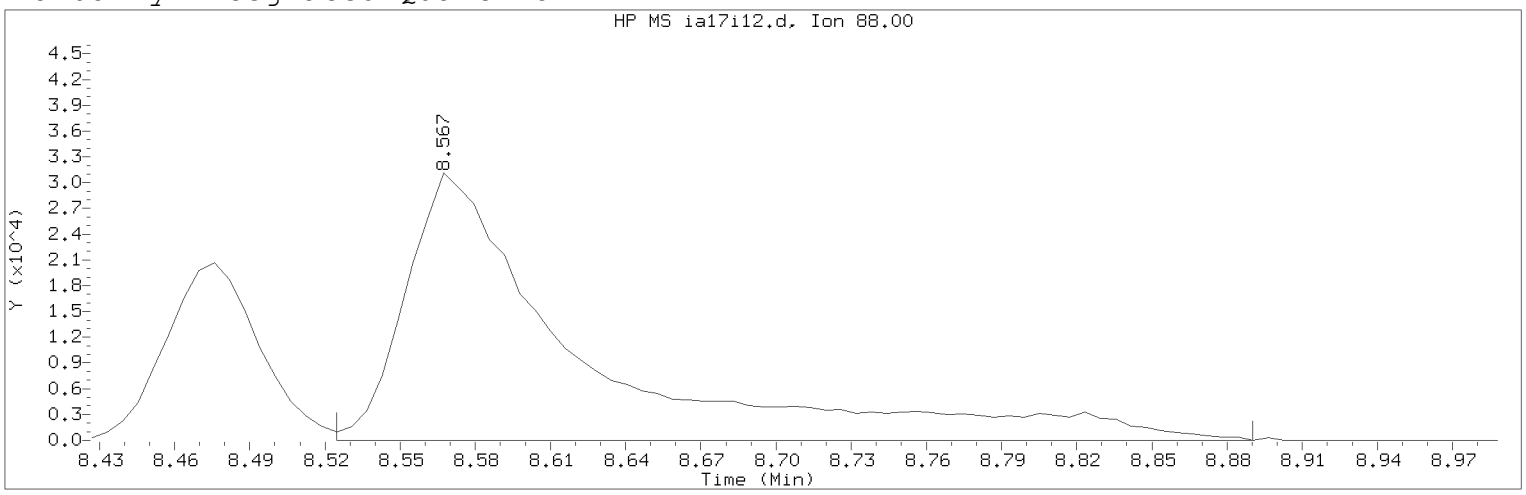
Compound Number : 22
Compound Name : Allyl Chloride
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 41.00
Area : 485333
On-column Amount (ng) : 6.1239
Integration start scan : 370 Integration stop scan: 385
Y at integration start : 862 Y at integration end: 862

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

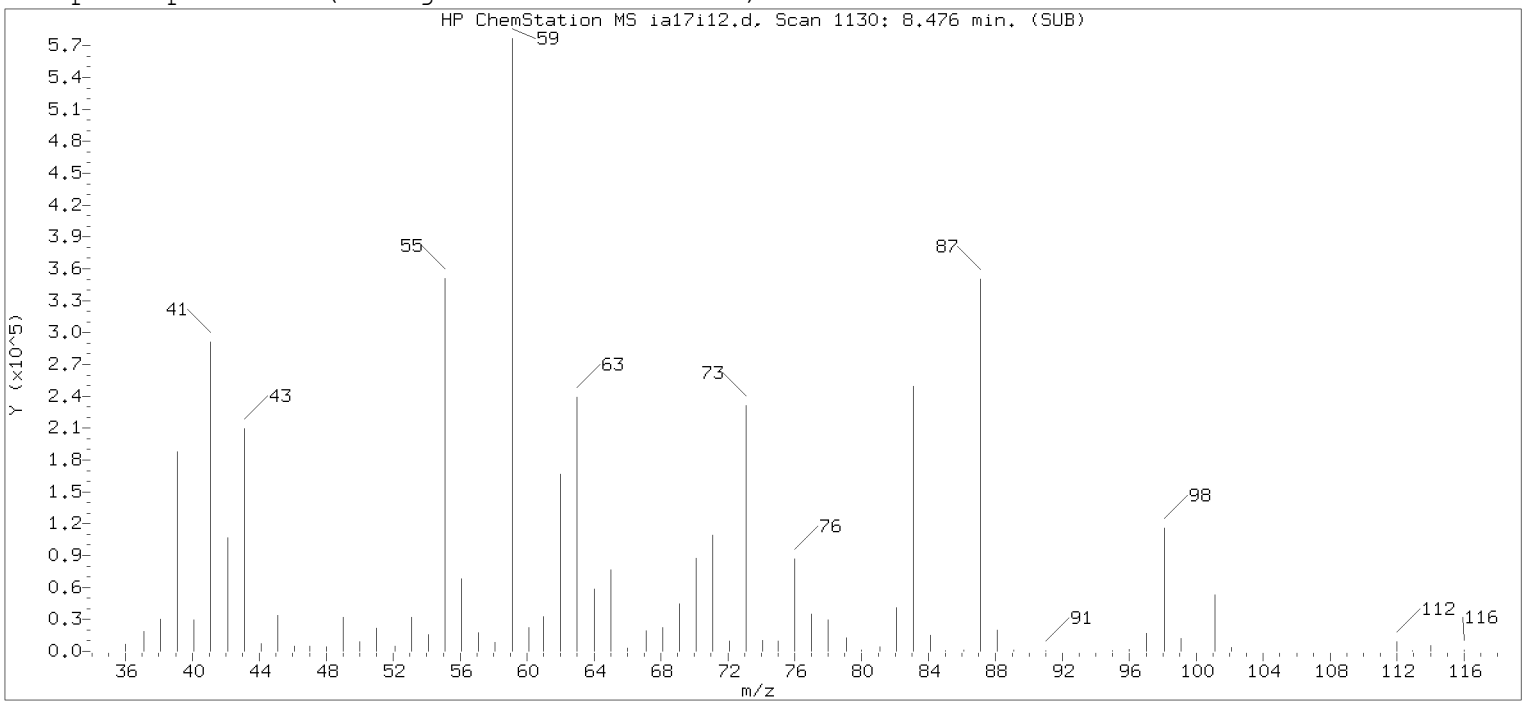
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1145
Retention Time (minutes): 8.567
Quant Ion : 88.00
Area (flag) : 151960M
On-Column Amount (ng) : 507.5234
Integration start scan : 1137 Integration stop scan: 1197
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

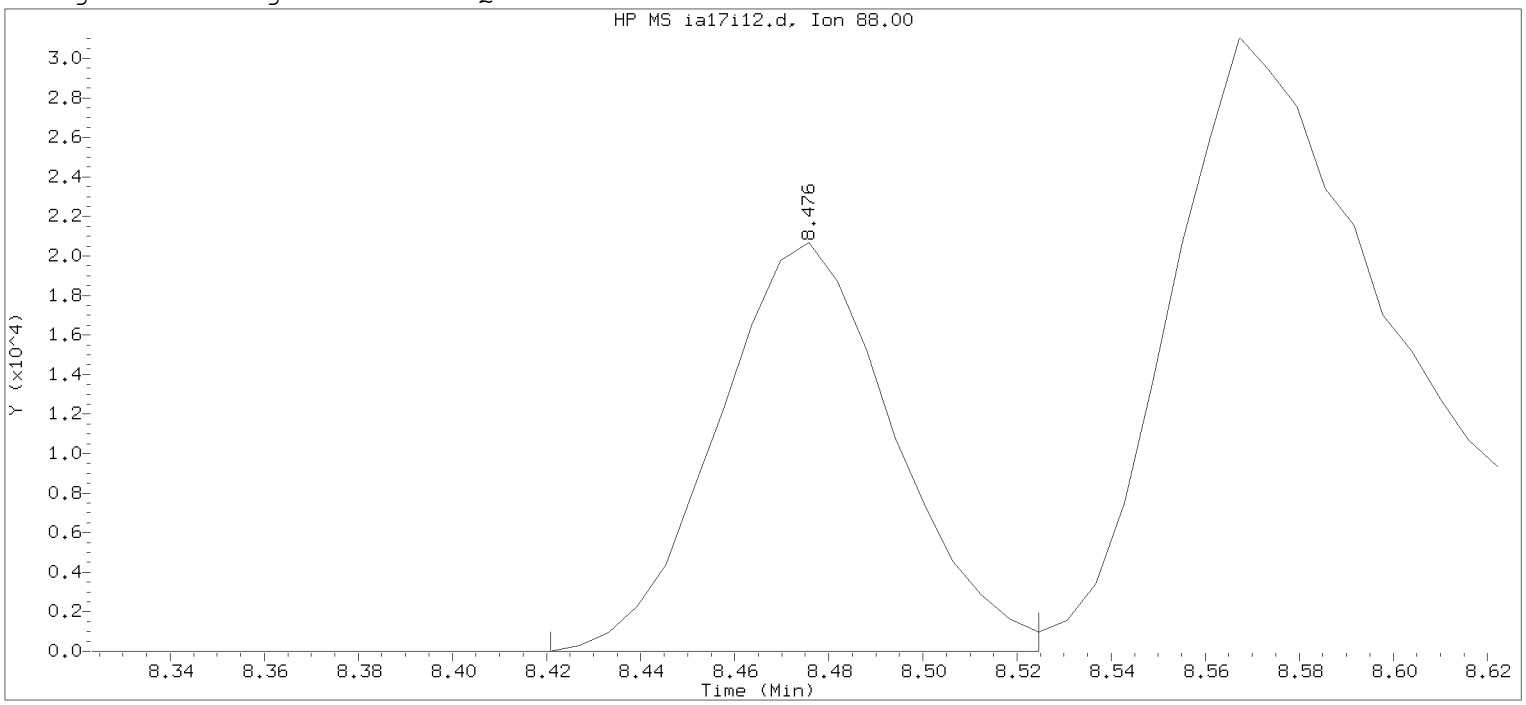
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

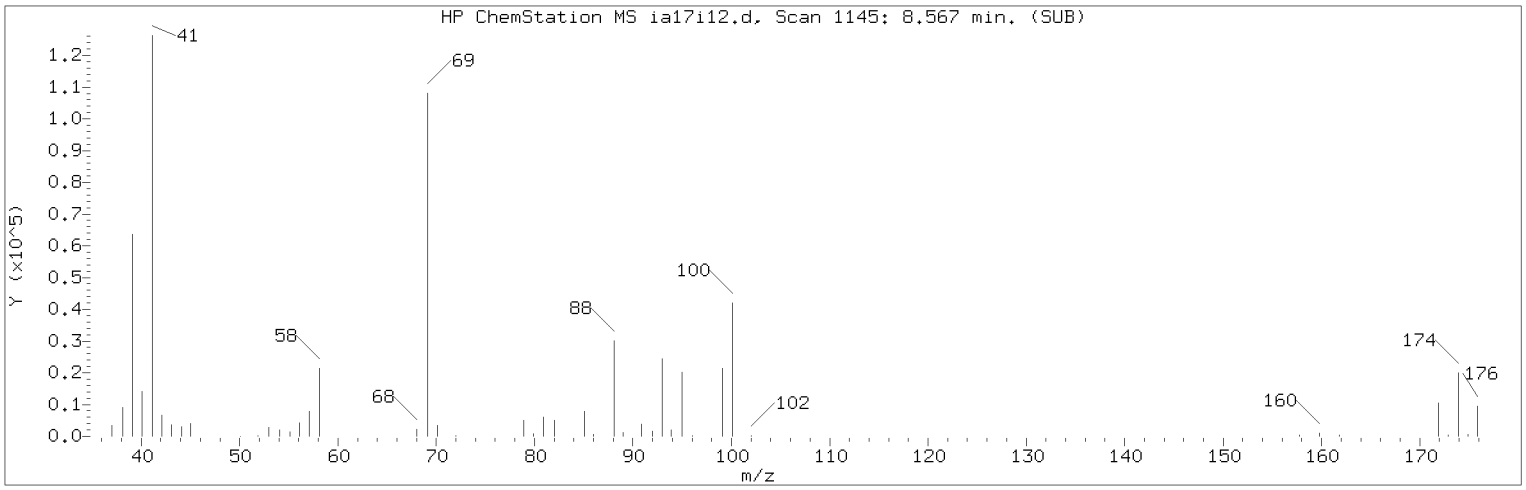
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:01
Date, time and analyst ID of latest file update: 17-Apr-2018 19:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

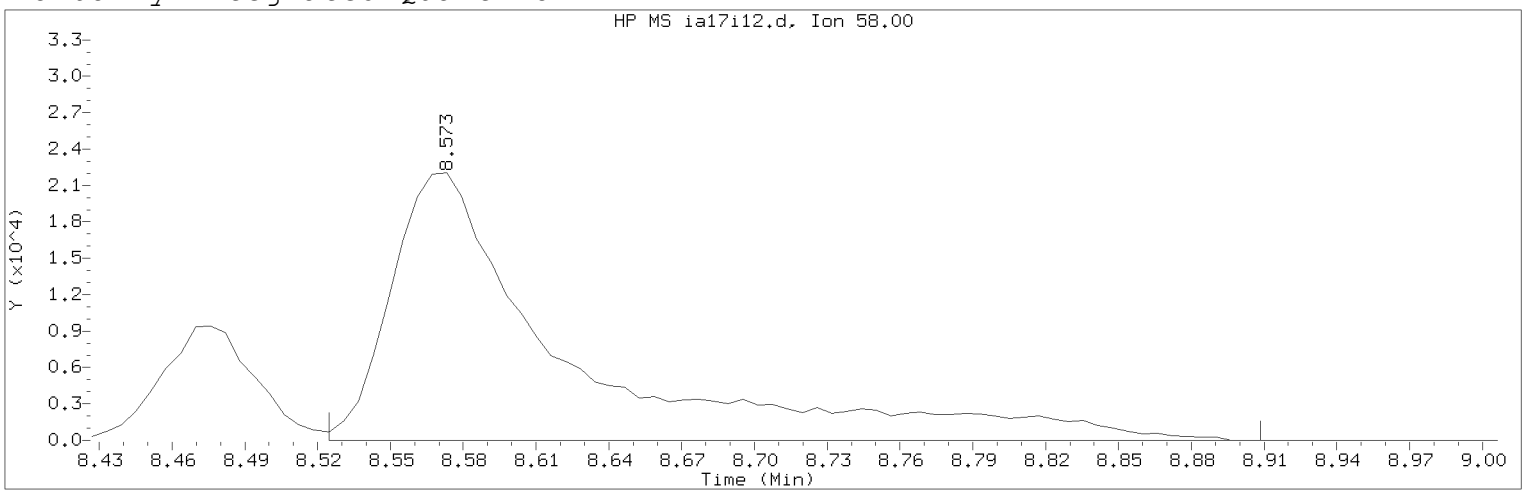
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 88.00
Area : 53804
On-column Amount (ng) : 273.2578
Integration start scan : 1120 Integration stop scan: 1137
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

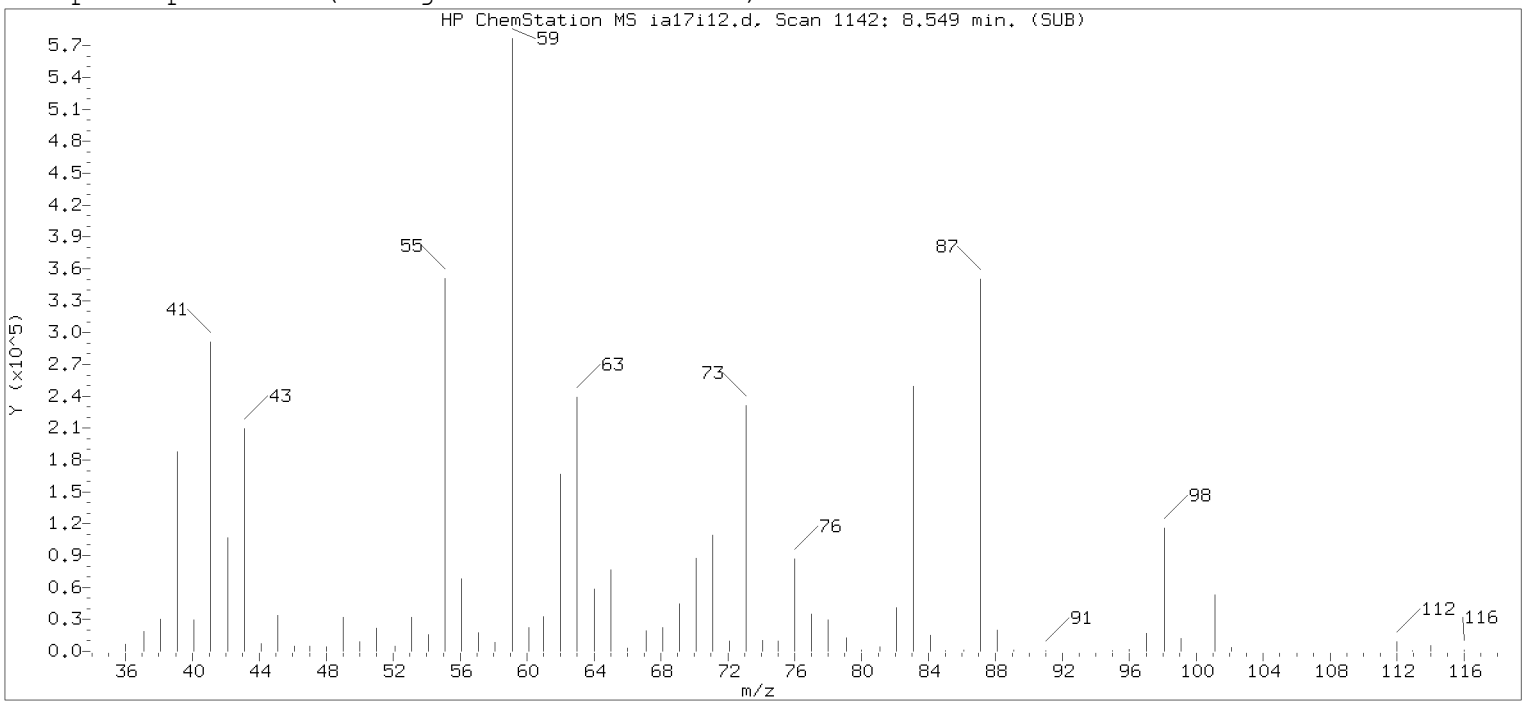
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 58.00
Area (flag) : 110686M
On-Column Amount (ng) : 515.2107
Integration start scan : 1137 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

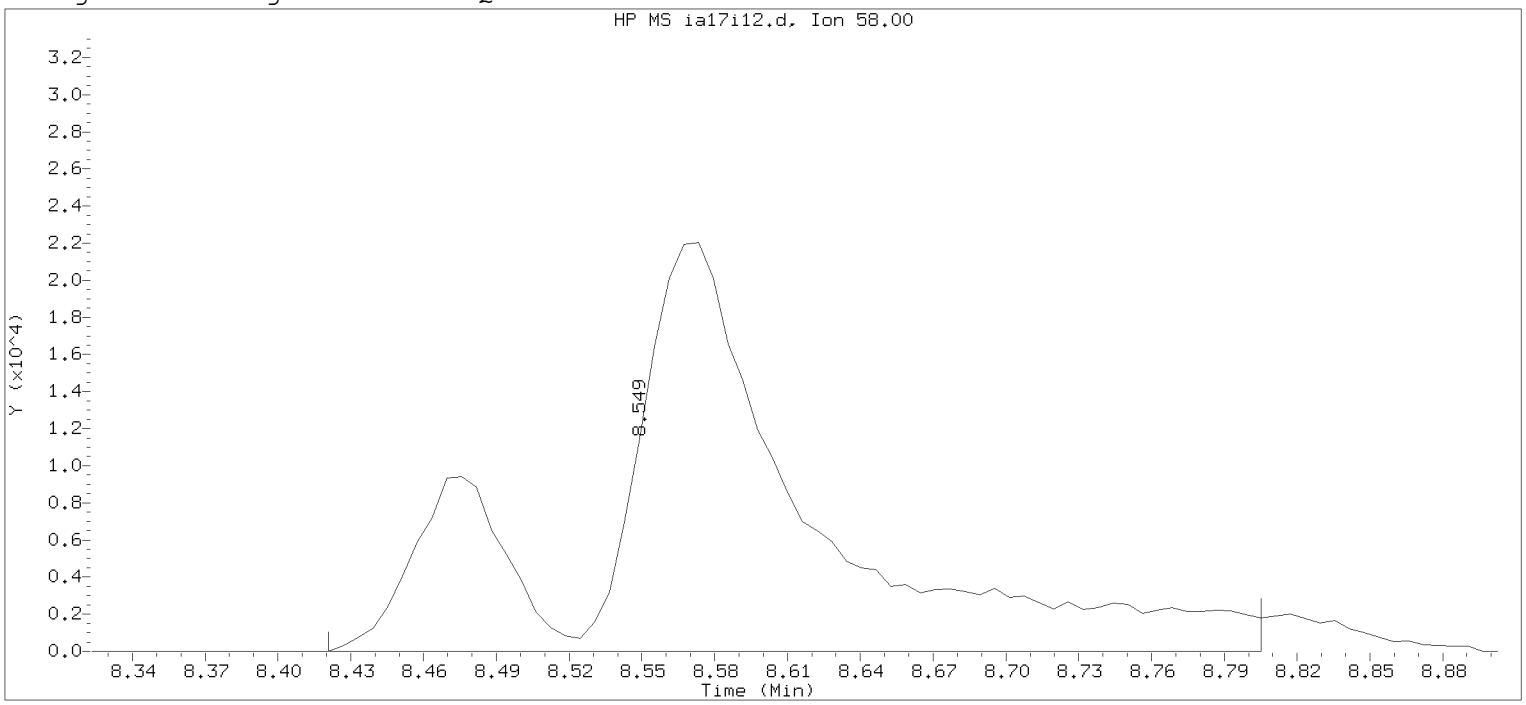
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



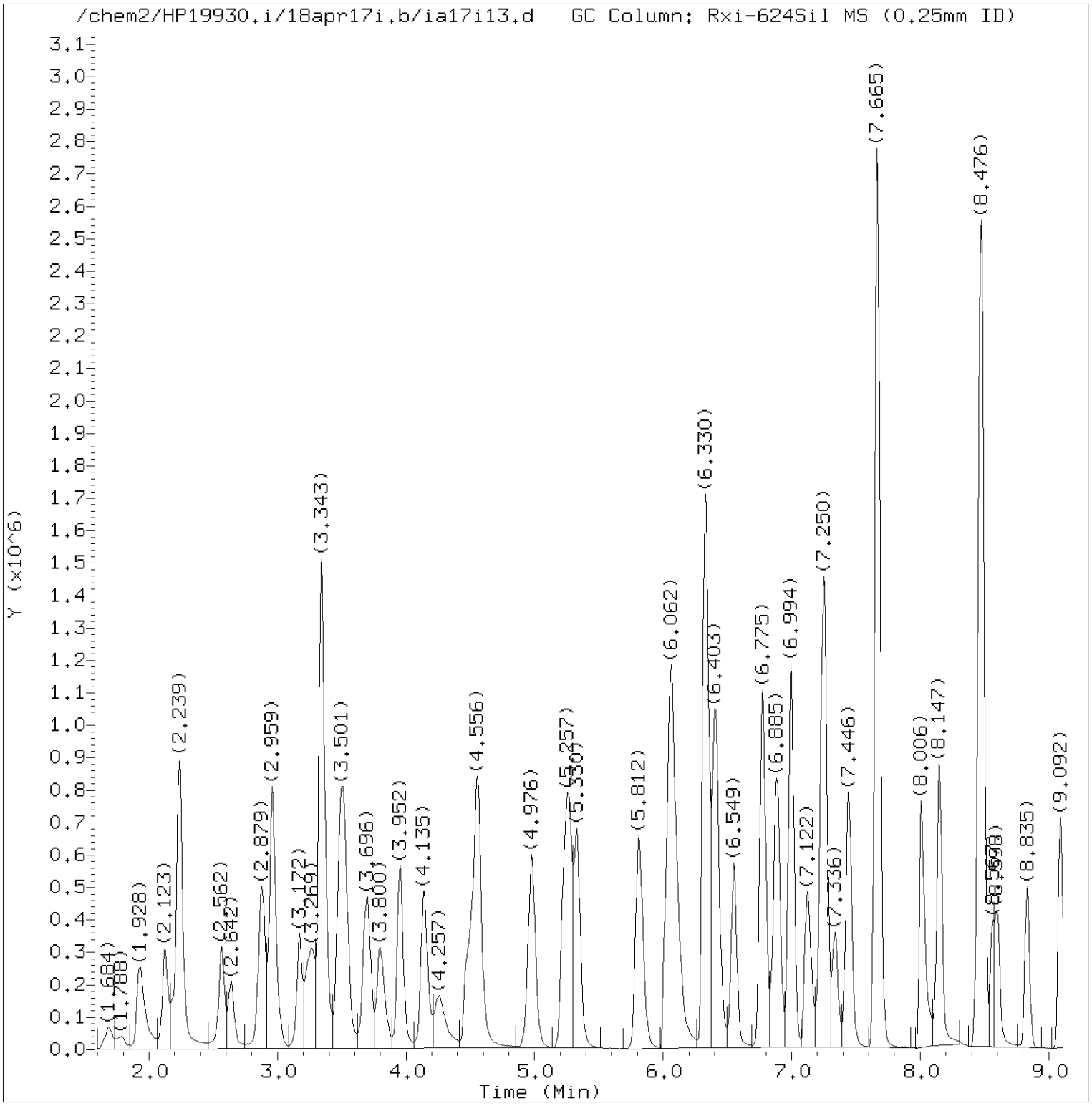
Data File: /chem2/HP19930.i/18apr17i.b/ia17i12.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 18:43 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:01
Date, time and analyst ID of latest file update: 17-Apr-2018 19:01 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1142
Retention Time (minutes): 8.549
Quant Ion : 58.00
Area : 130585
On-column Amount (ng) : 841.5902
Integration start scan : 1120 Integration stop scan: 1183
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.



Total Ion Chromatogram (TIC)

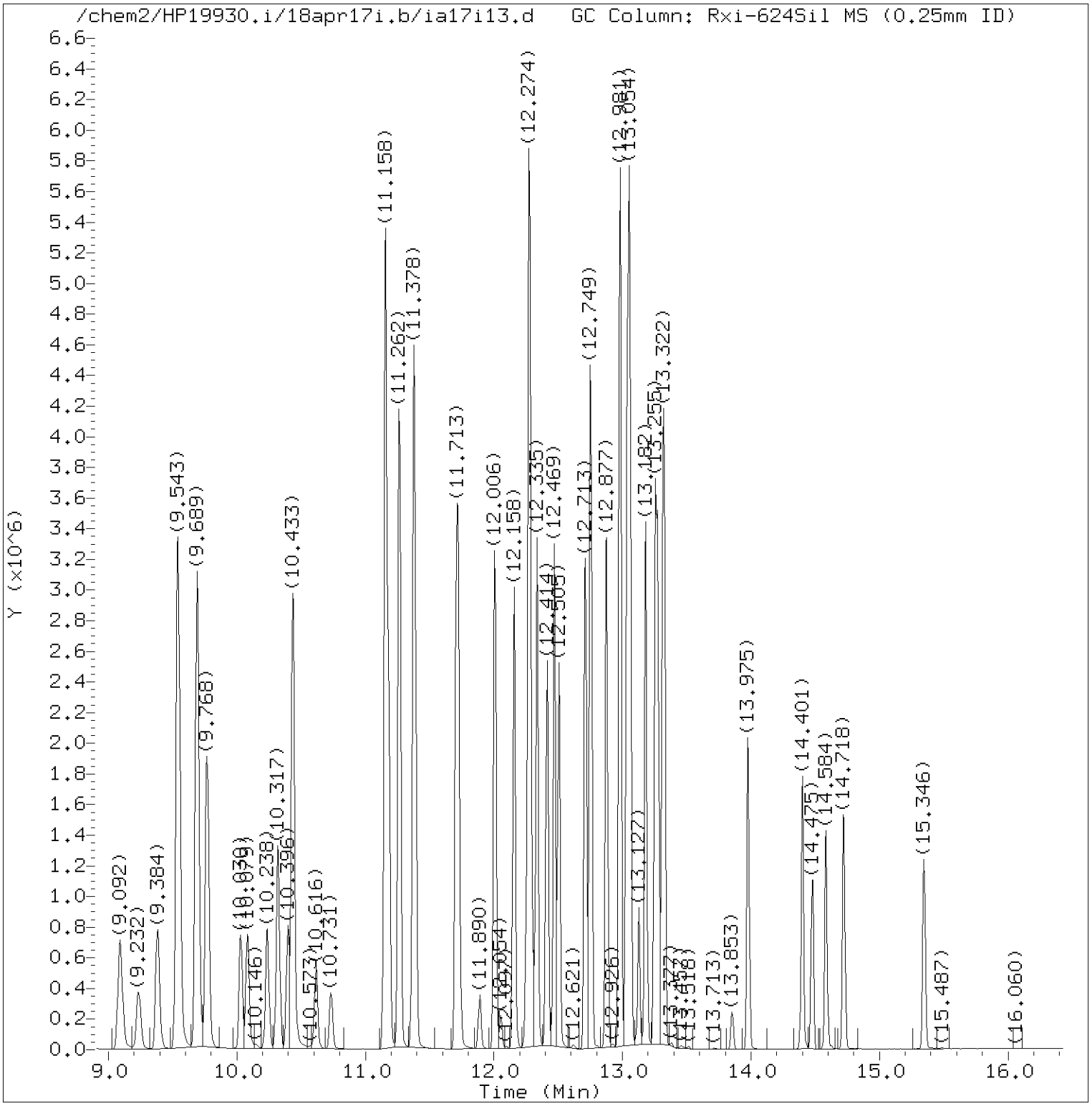
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.928	85	656781	5.558
2) Chloromethane	(2)	2.123	50	579842	5.301
5) Vinyl Chloride	(2)	2.239	62	534999	5.433
6) 1,3-Butadiene	(2)	2.239	39	532268M	5.298
7) Bromomethane	(2)	2.568	94	361886	5.229
8) Chloroethane	(2)	2.642	64	296332	5.282
9) Dichlorofluoromethane	(2)	2.879	67	699657	5.310
10) Trichlorofluoromethane	(2)	2.946	101	672743	5.437
11) Ethyl ether	(2)	3.166	59	319973	5.241
12) Freon 123a	(2)	3.257	67	476669	5.455
13) Acrolein	(1)	3.343	56	2514367	256.072
15) 1,1-Dichloroethene	(2)	3.483	96	319985	5.485
14) Acetone	(1)	3.507	43	691269	47.956
16) Freon 113	(2)	3.519	101	365641	5.467
17) Methyl Iodide	(2)	3.684	142	580160	5.379
18) Carbon Disulfide	(2)	3.800	76	916029	5.552
21) Methyl Acetate	(1)	3.928	43	170714	5.024
22) Allyl Chloride	(2)	3.952	41	594234	5.529
23) Methylene Chloride	(2)	4.135	84	365713	5.134
26)*t-Butyl Alcohol-d10	(1)	4.135	65	205139M	50.000
28) t-Butyl Alcohol	(1)	4.263	59	481831	96.741
29) Acrylonitrile	(1)	4.470	53	428133	26.504
30) Methyl Tertiary Butyl Ether	(2)	4.538	73	929029	5.349
31) trans-1,2-Dichloroethene	(2)	4.562	96	363587	5.458
32) n-Hexane	(2)	4.976	57	611541	5.496
33) 1,1-Dichloroethane	(2)	5.226	63	714518	5.369
34) di-Isopropyl Ether	(2)	5.269	45	1323393	5.466
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	624732	5.502
37) Ethyl t-butyl ether	(2)	5.812	59	1095504	5.501
38) 2-Butanone	(1)	6.025	43	1220363	54.196
39) cis-1,2-Dichloroethene	(2)	6.062	96	413252	5.475
41) 2,2-Dichloropropane	(2)	6.080	77	526088	5.643
40) 1,2-Dichloroethene (Total)	(2)		96	776839	10.933
42) Propionitrile	(1)	6.123	54	661353	103.123
45) Methacrylonitrile	(1)	6.330	67	1094847	52.318
47) Bromochloromethane	(2)	6.403	128	167315	5.294
48) Tetrahydrofuran	(1)	6.415	71	323979	52.947
49) Chloroform	(2)	6.549	83	669373	5.346

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.769	113	601000	10.030
50)$Dibromofluoromethane	(2)	6.769	111	614871	9.982
51) 1,1,1-Trichloroethane	(2)	6.781	97	578092	5.543
52) Cyclohexane	(2)	6.885	56	735598	5.436
52) Cyclohexane	(2)	6.891	84	583056	5.367
52) Cyclohexane	(2)	6.885	69	216212	5.453
54) Carbon Tetrachloride	(2)	6.994	117	497244	5.645
55) 1,1-Dichloropropene	(2)	6.994	75	555640	5.591
56) Isobutyl Alcohol	(1)	7.128	41	495172	248.909
57)$1,2-Dichloroethane-d4	(2)	7.232	102	129750	9.954
57)$1,2-Dichloroethane-d4	(2)	7.232	65	637235	9.883
57)$1,2-Dichloroethane-d4	(2)	7.232	104	81675	9.935
58) Benzene	(2)	7.257	78	1602885	5.363
59) 1,2-Dichloroethane	(2)	7.336	62	438752	5.026
59) 1,2-Dichloroethane	(2)	7.336	98	39154	5.417
60) t-Amyl methyl ether	(2)	7.446	73	919394	5.482
63)*Fluorobenzene	(2)	7.665	96	2567461	10.000
62) n-Heptane	(2)	7.671	43	660924	5.592
65) n-Butanol	(1)	8.006	56	837205	552.711
67) Trichloroethene	(2)	8.147	95	408116	5.393
69) Methylcyclohexane	(2)	8.458	83	712212	5.465
70) 1,2-Dichloropropane	(2)	8.488	63	417747	5.388
71) Methyl Methacrylate	(1)	8.561	69	199298	5.672
72) 1,4-Dioxane	(1)	8.573	88	95901M	275.996
72) 1,4-Dioxane	(1)	8.579	58	70008M	280.797
73) Dibromomethane	(2)	8.604	93	182275	5.252
74) Bromodichloromethane	(2)	8.835	83	454657	5.471
76) 2-Nitropropane	(1)	9.092	41	629376	55.331
80) cis-1,3-Dichloropropene	(2)	9.384	75	572794	5.468
81) 4-Methyl-2-Pentanone	(1)	9.543	43	3036836	54.271
82)$Toluene-d8	(3)	9.689	98	2544275	9.985
82)$Toluene-d8	(3)	9.689	100	1631674	9.972
83) Toluene	(3)	9.768	92	1000441	5.378
84) trans-1,3-Dichloropropene	(3)	10.030	75	449225	5.710
86) Ethyl Methacrylate	(3)	10.079	69	428901	5.567
85) 1,3-Dichloropropene (total)	(3)		75	1022019	11.178
88) 1,1,2-Trichloroethane	(3)	10.238	97	275381	5.249
89) Tetrachloroethene	(3)	10.317	166	431679	5.463

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.396	76	494156	5.292
91) 2-Hexanone	(1)	10.433	43	2160420	54.692
93) Dibromochloromethane	(3)	10.616	129	293748	5.685
95) 1,2-Dibromoethane	(3)	10.731	107	255251	5.347
97)*Chlorobenzene-d5	(3)	11.152	117	1887166	10.000
98) Chlorobenzene	(3)	11.183	112	1070013	5.293
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	351485	5.467
100) Ethylbenzene	(3)	11.262	91	1948514	5.527
101) m+p-Xylene	(3)	11.378	106	1501513	11.085
104) o-Xylene	(3)	11.707	106	743239	5.639
106) Styrene	(3)	11.725	104	1170192	5.752
105) Xylene (Total)	(3)		106	2244752	16.725
107) Bromoform	(3)	11.890	173	149293	4.898
108) Isopropylbenzene	(3)	12.006	105	1935855	5.722
111)$4-Bromofluorobenzene	(3)	12.158	95	901530	10.020
111)$4-Bromofluorobenzene	(3)	12.158	174	734859	10.037
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	365146	5.324
114) Bromobenzene	(4)	12.274	156	429575	5.282
115) trans-1,4-Dichloro-2-butene	(1)	12.274	53	774660A	55.220
116) 1,2,3-Trichloropropane	(4)	12.298	110	93593	5.210
117) n-Propylbenzene	(4)	12.335	91	2292021	5.571
119) 2-Chlorotoluene	(4)	12.414	126	429938	5.427
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	1598626	5.628
122) 4-Chlorotoluene	(4)	12.505	126	431898	5.359
125) tert-Butylbenzene	(4)	12.713	134	330209	5.620
126) Pentachloroethane	(4)	12.749	167	254348	5.612
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	1591266	5.579
128) sec-Butylbenzene	(4)	12.877	105	2087247	5.676
131) 1,3-Dichlorobenzene	(4)	12.981	146	843978	5.313
132) p-Isopropyltoluene	(4)	12.981	119	1737036	5.393
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	974826	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	836079	5.166
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	677389	5.226
136) Benzyl Chloride	(4)	13.127	126	107646	4.909
138) n-Butylbenzene	(4)	13.274	92	848943	5.566
139) 1,2-Dichlorobenzene	(4)	13.310	146	769940	5.226
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	40021	5.277
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	558267	5.202

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

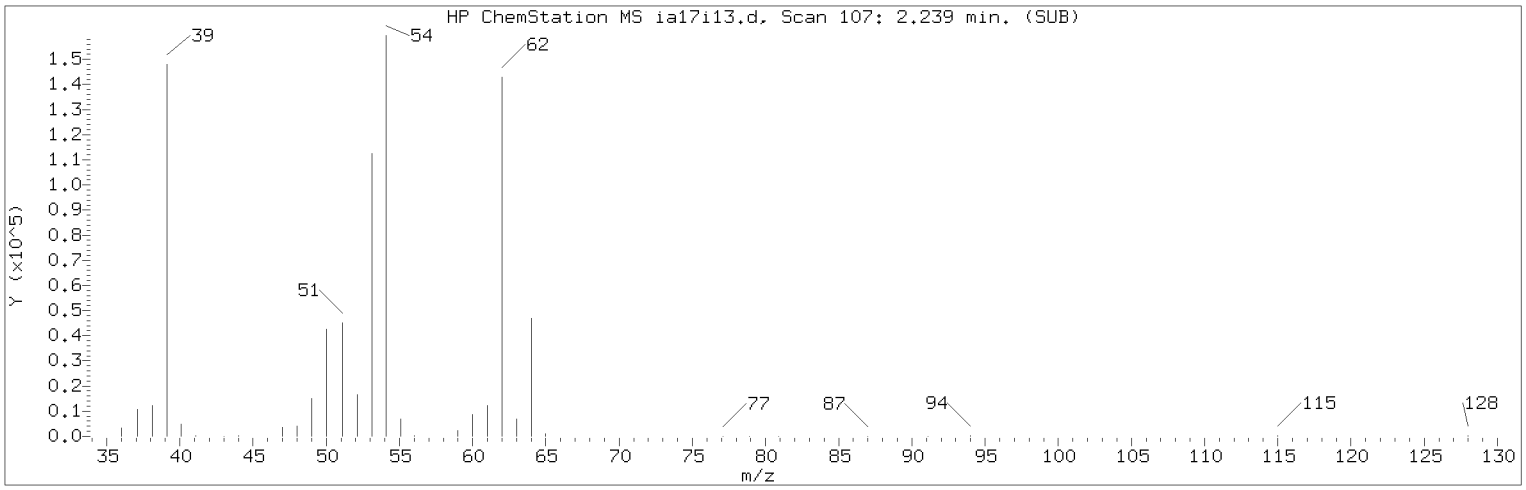
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

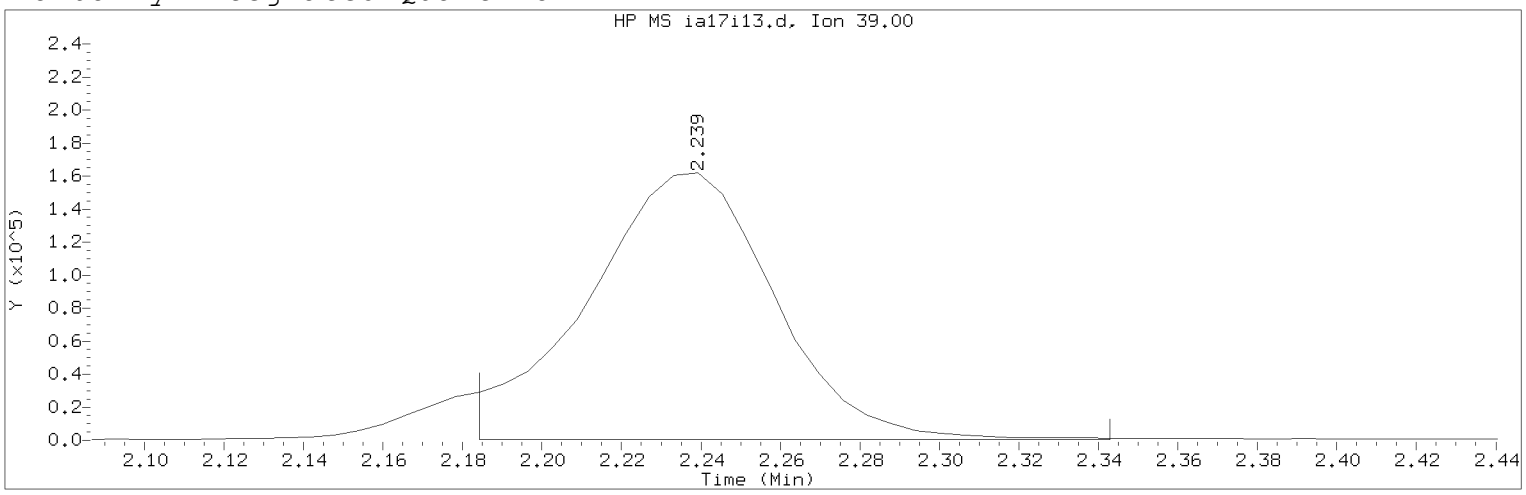
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	485526	5.163
146) Hexachlorobutadiene	(4)	14.481	225	180750	5.312
147) Naphthalene	(4)	14.584	128	990335	5.376
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	424724	5.075

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

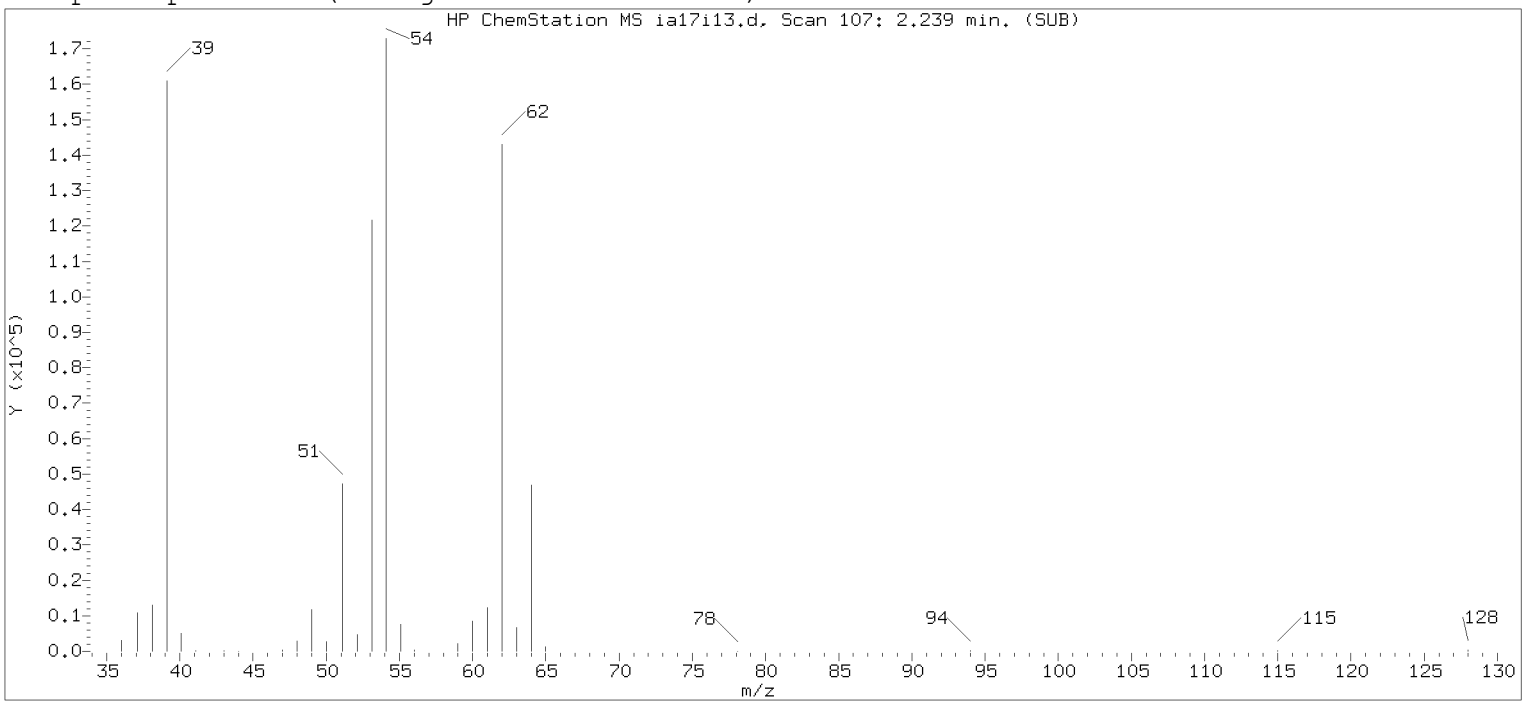
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 107
Retention Time (minutes): 2.239
Quant Ion : 39.00
Area (flag) : 532268M
On-Column Amount (ng) : 5.2980
Integration start scan : 97 Integration stop scan: 123
Y at integration start : 357 Y at integration end: 357

Reason for manual integration: improper integration

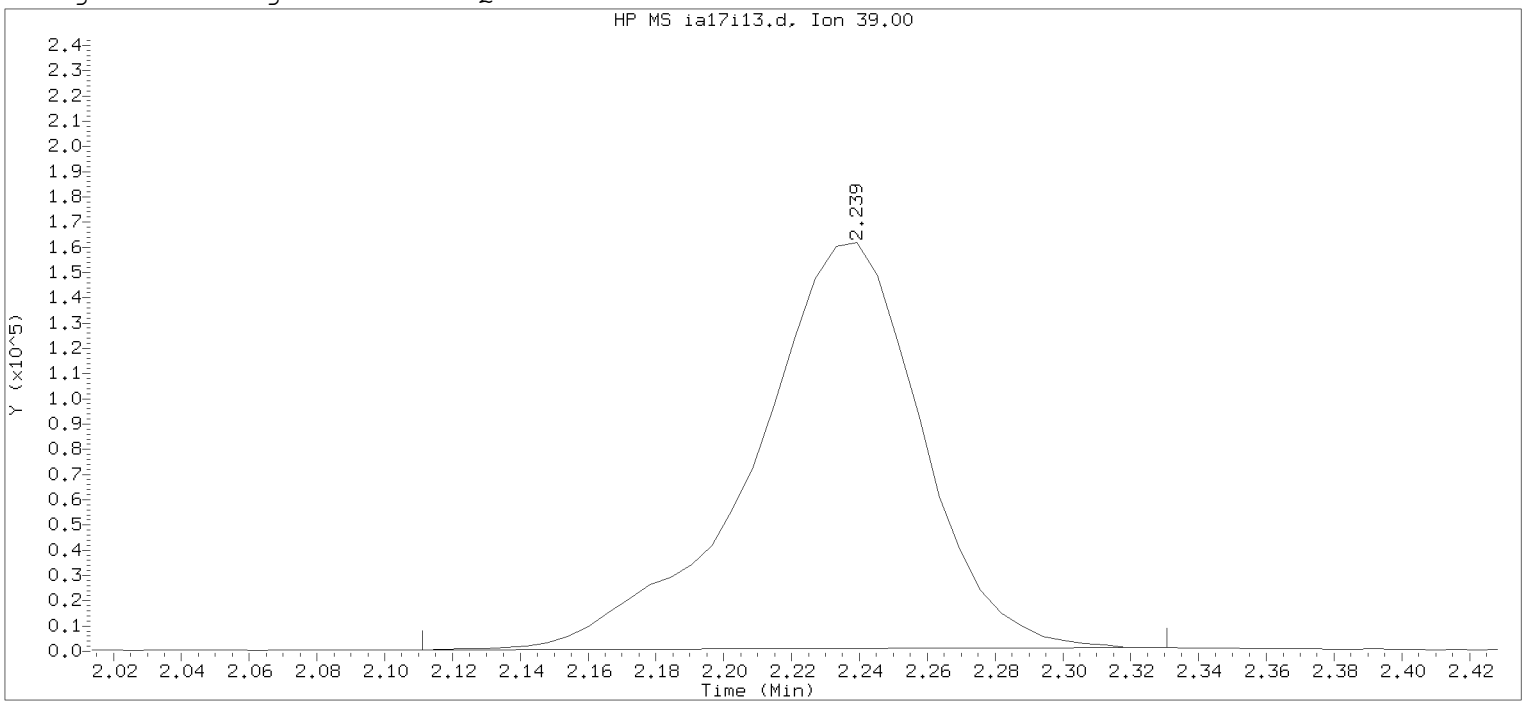
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

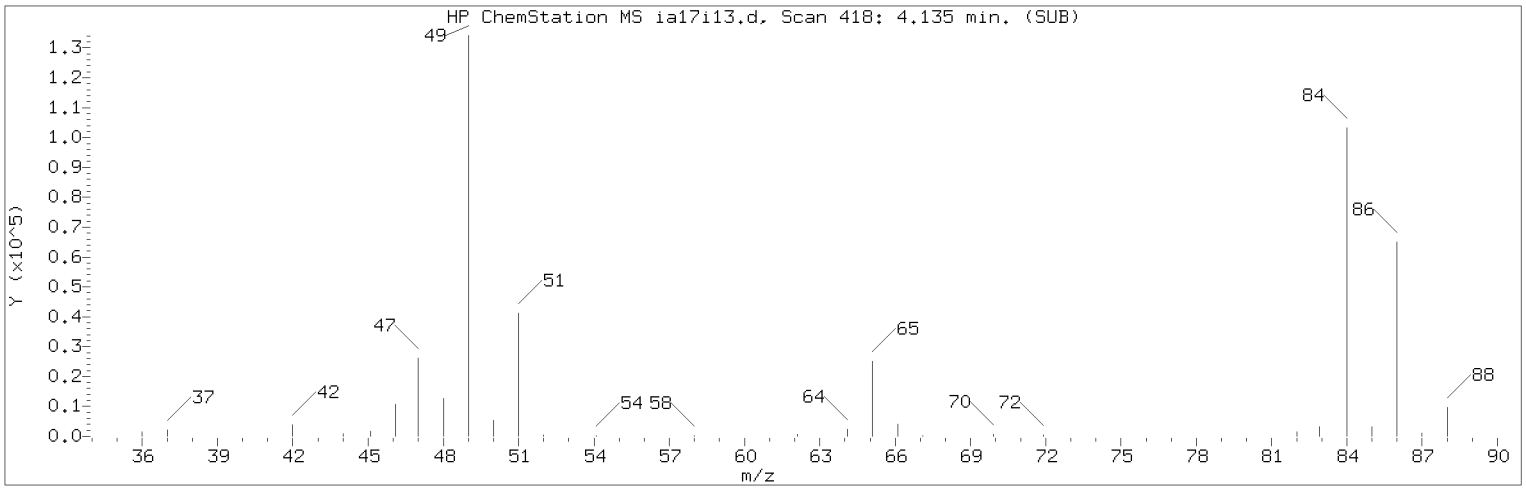
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:23
Date, time and analyst ID of latest file update: 17-Apr-2018 19:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

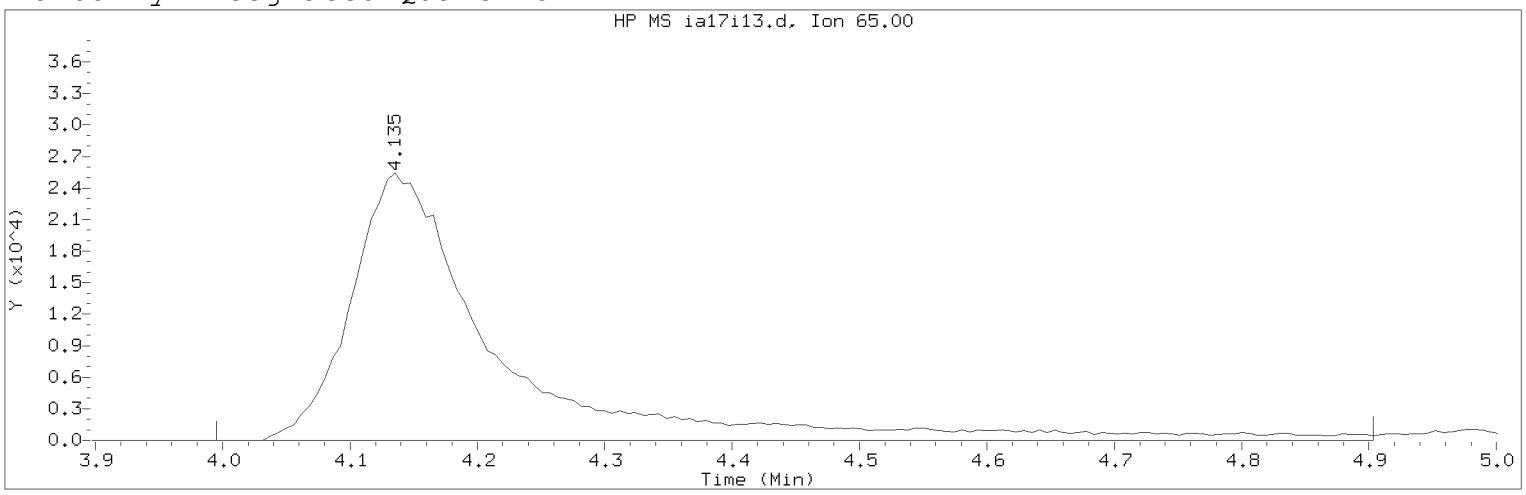
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 107
Retention Time (minutes): 2.239
Quant Ion : 39.00
Area : 554279
On-column Amount (ng) : 5.5087
Integration start scan : 85 Integration stop scan: 121
Y at integration start : 497 Y at integration end: 1432

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

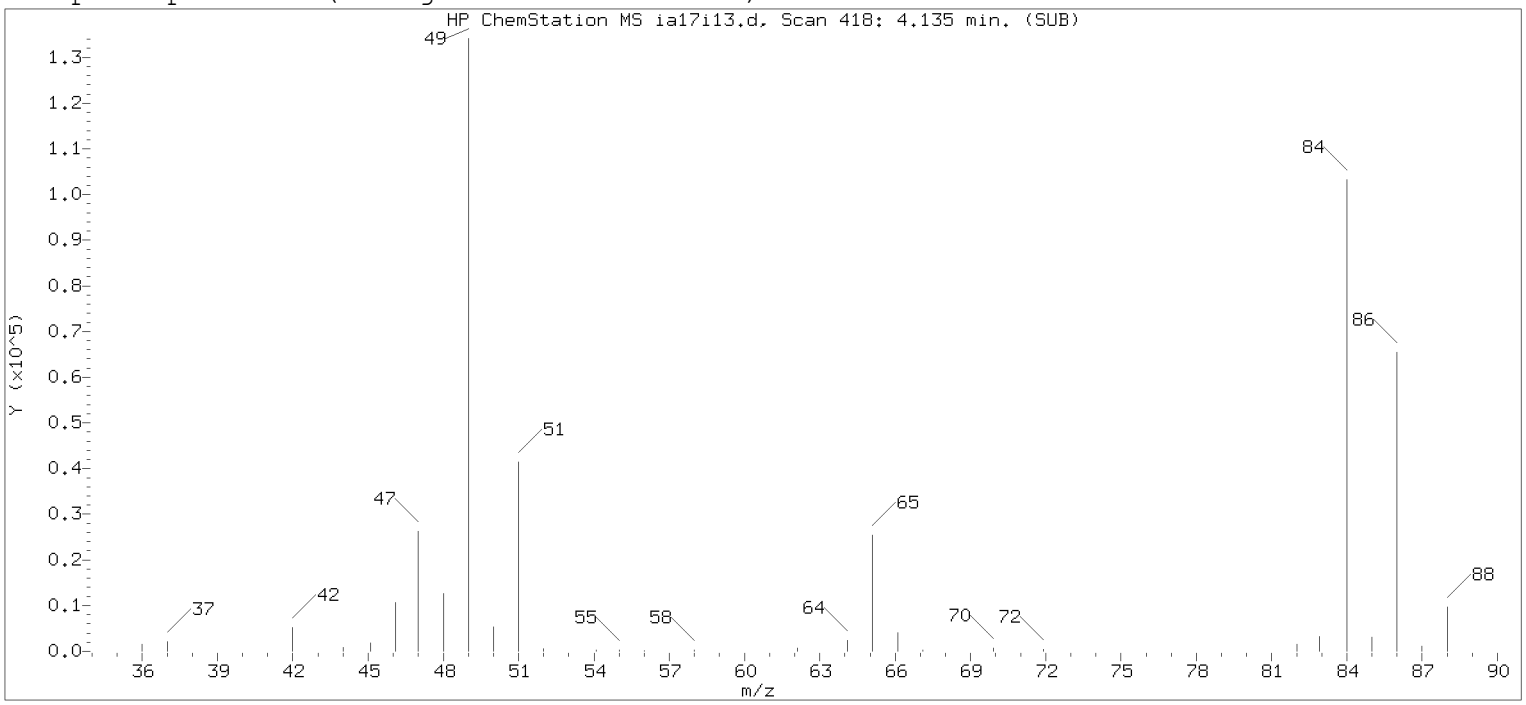
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area (flag) : 205139M
On-Column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 543
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

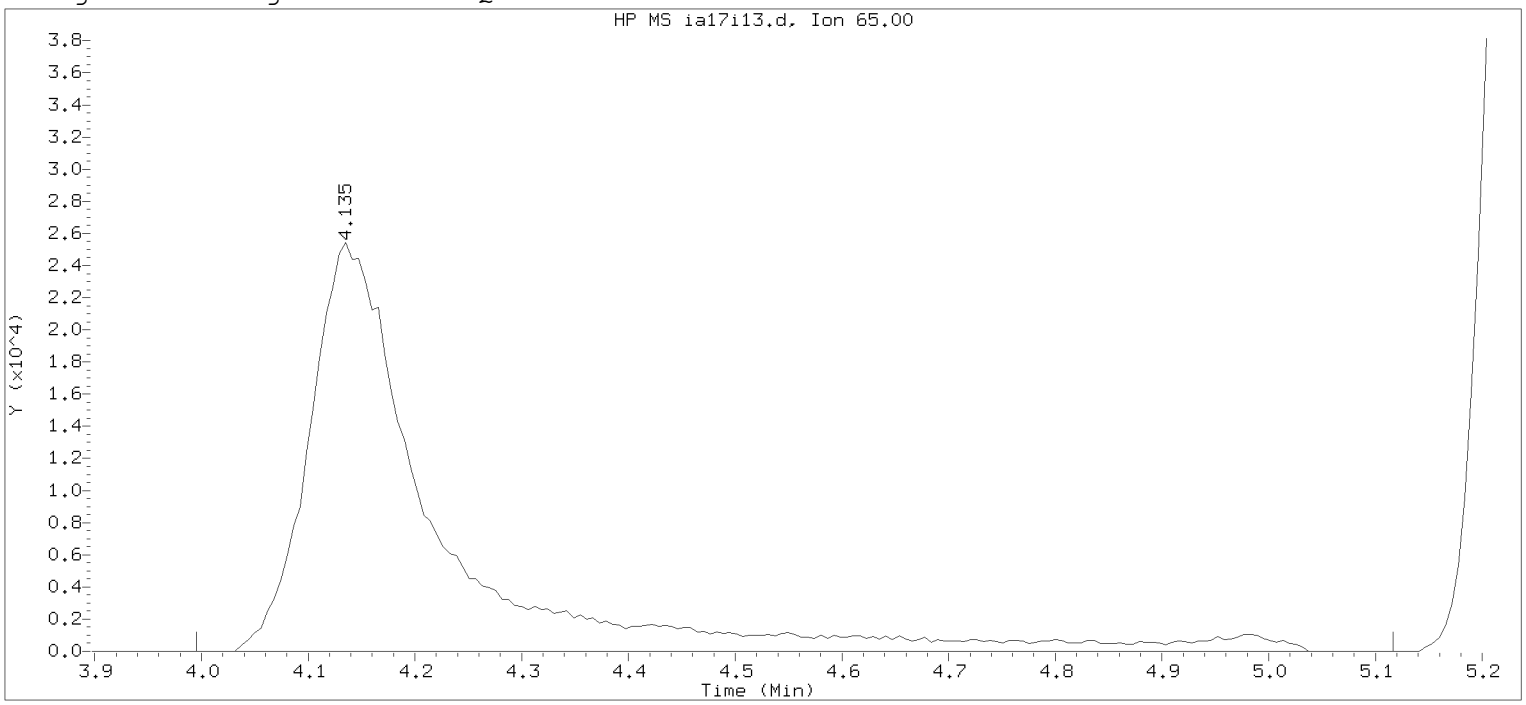
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

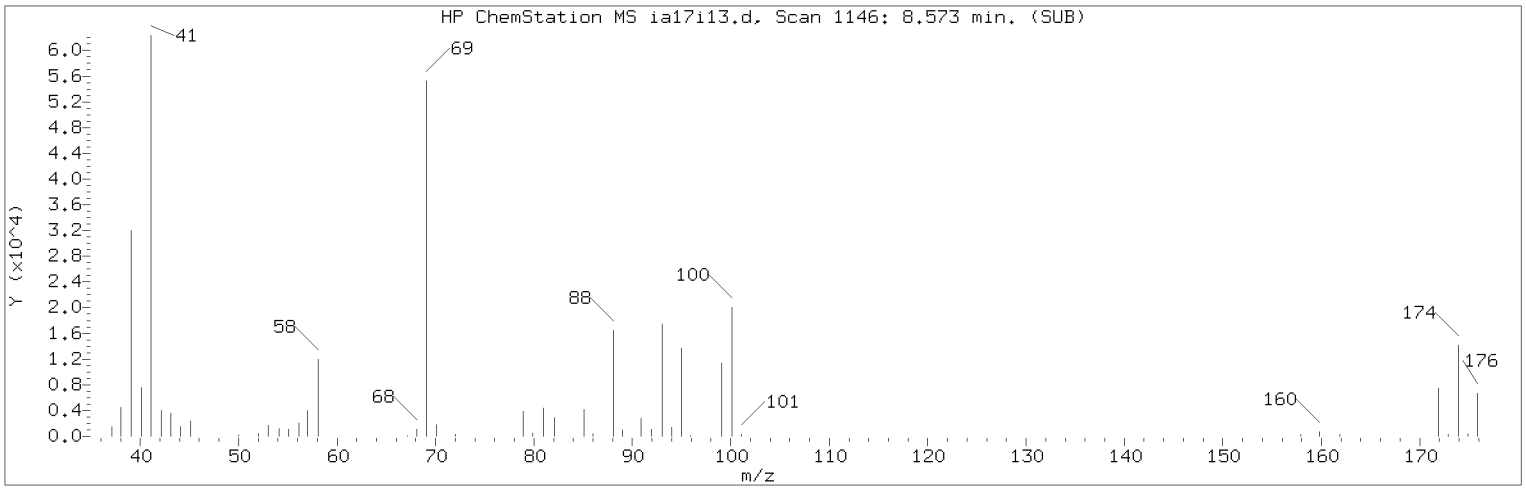
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:23
Date, time and analyst ID of latest file update: 17-Apr-2018 19:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

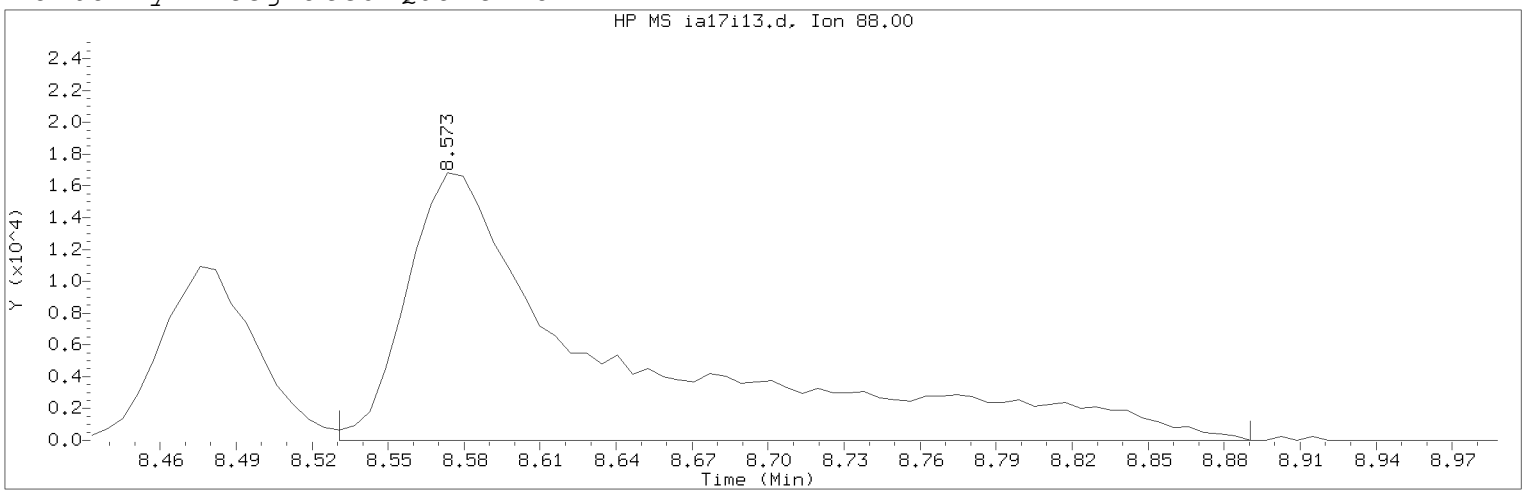
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area : 210400
On-column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

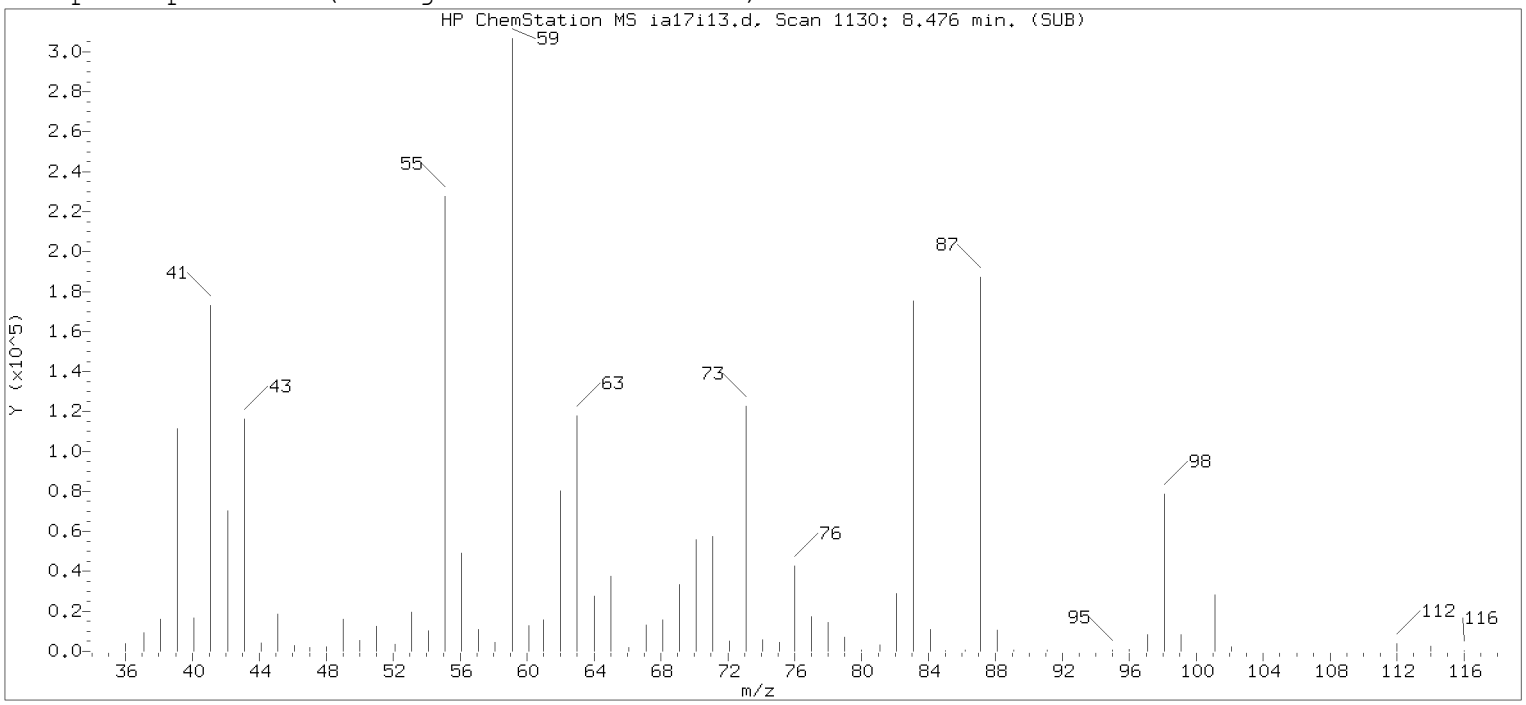
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 95901M
On-Column Amount (ng) : 275.9961
Integration start scan : 1138 Integration stop scan: 1197
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

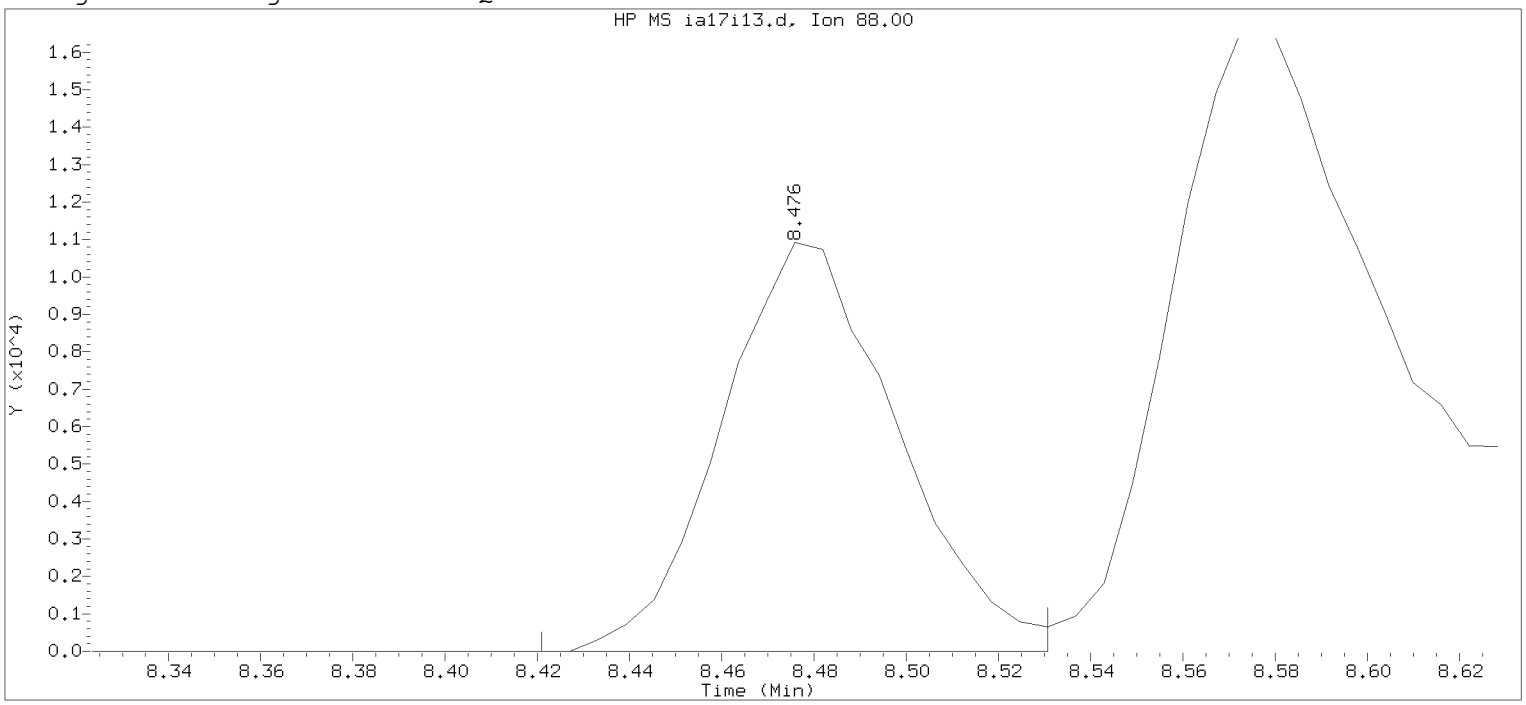
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

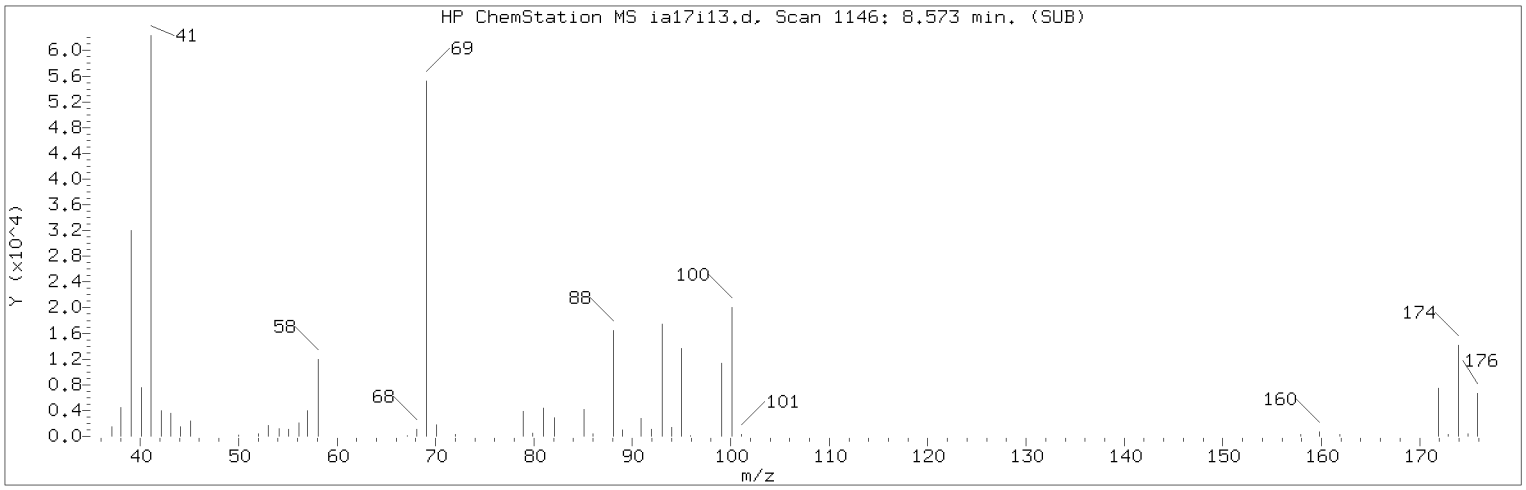
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:23
Date, time and analyst ID of latest file update: 17-Apr-2018 19:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

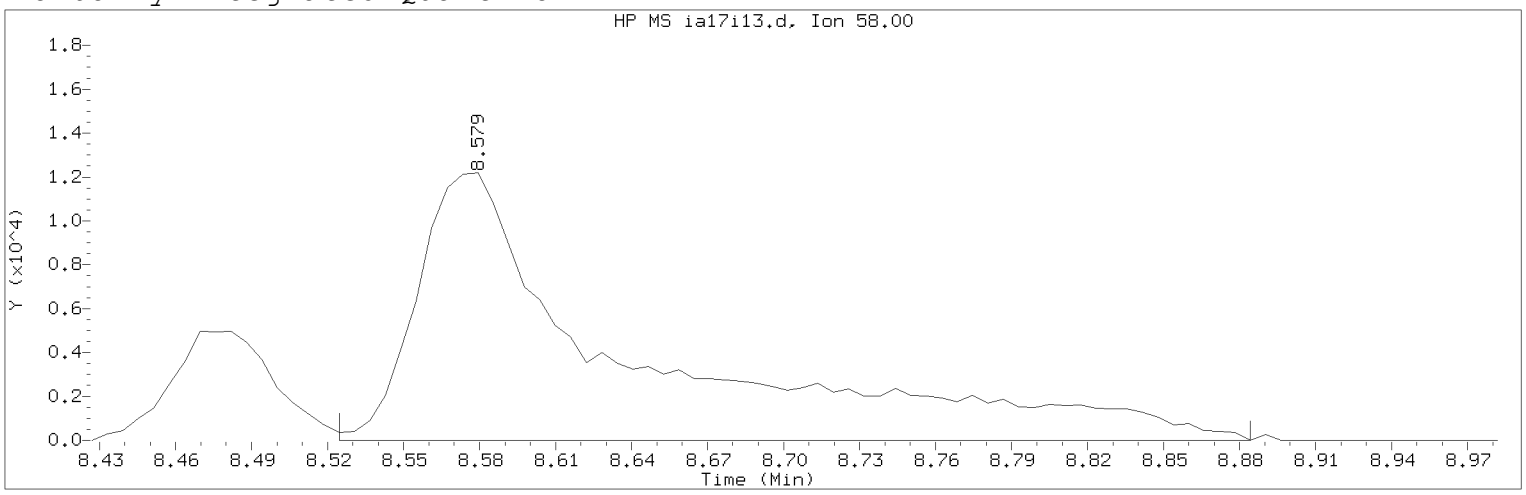
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 88.00
Area : 28736
On-column Amount (ng) : 147.7001
Integration start scan : 1120 Integration stop scan: 1138
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

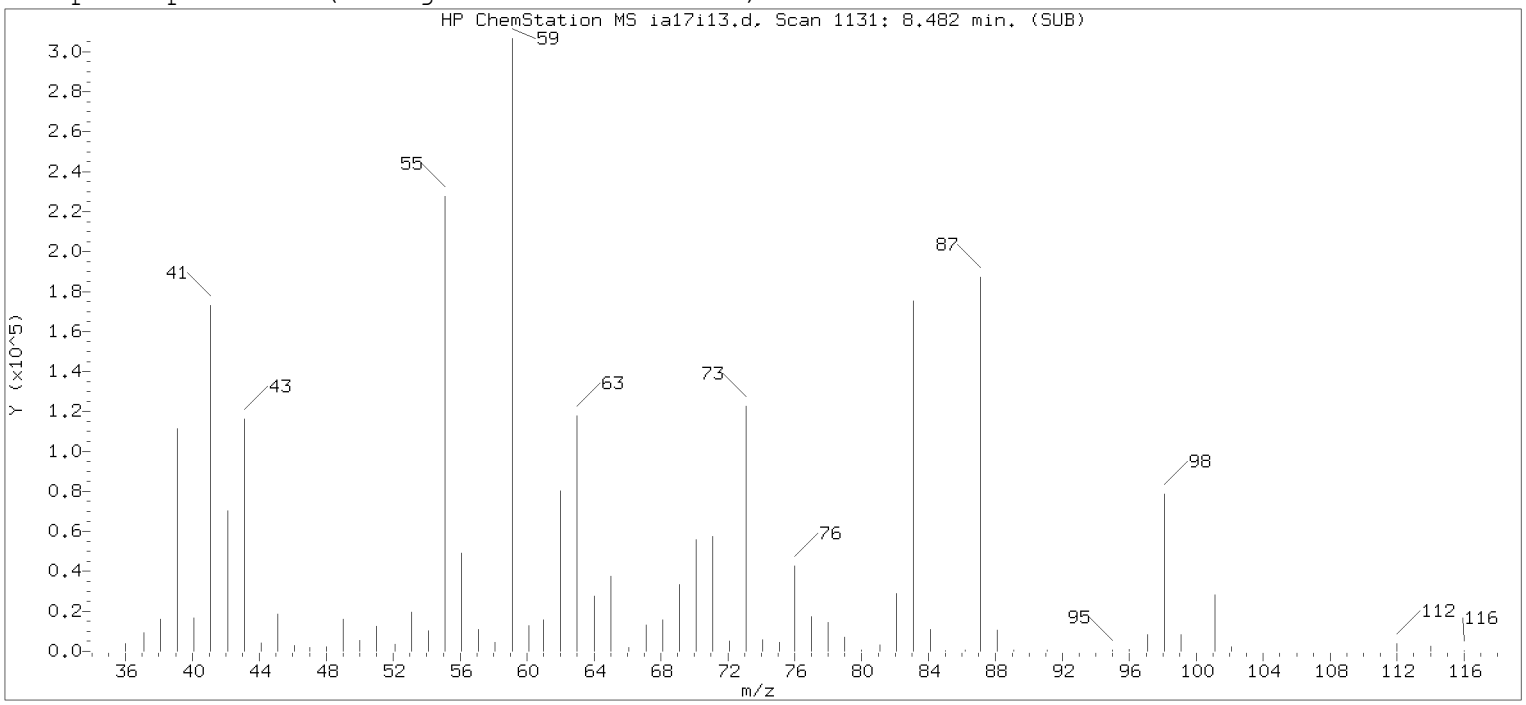
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1147
Retention Time (minutes): 8.579
Quant Ion : 58.00
Area (flag) : 70008M
On-Column Amount (ng) : 280.7972
Integration start scan : 1137 Integration stop scan: 1196
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

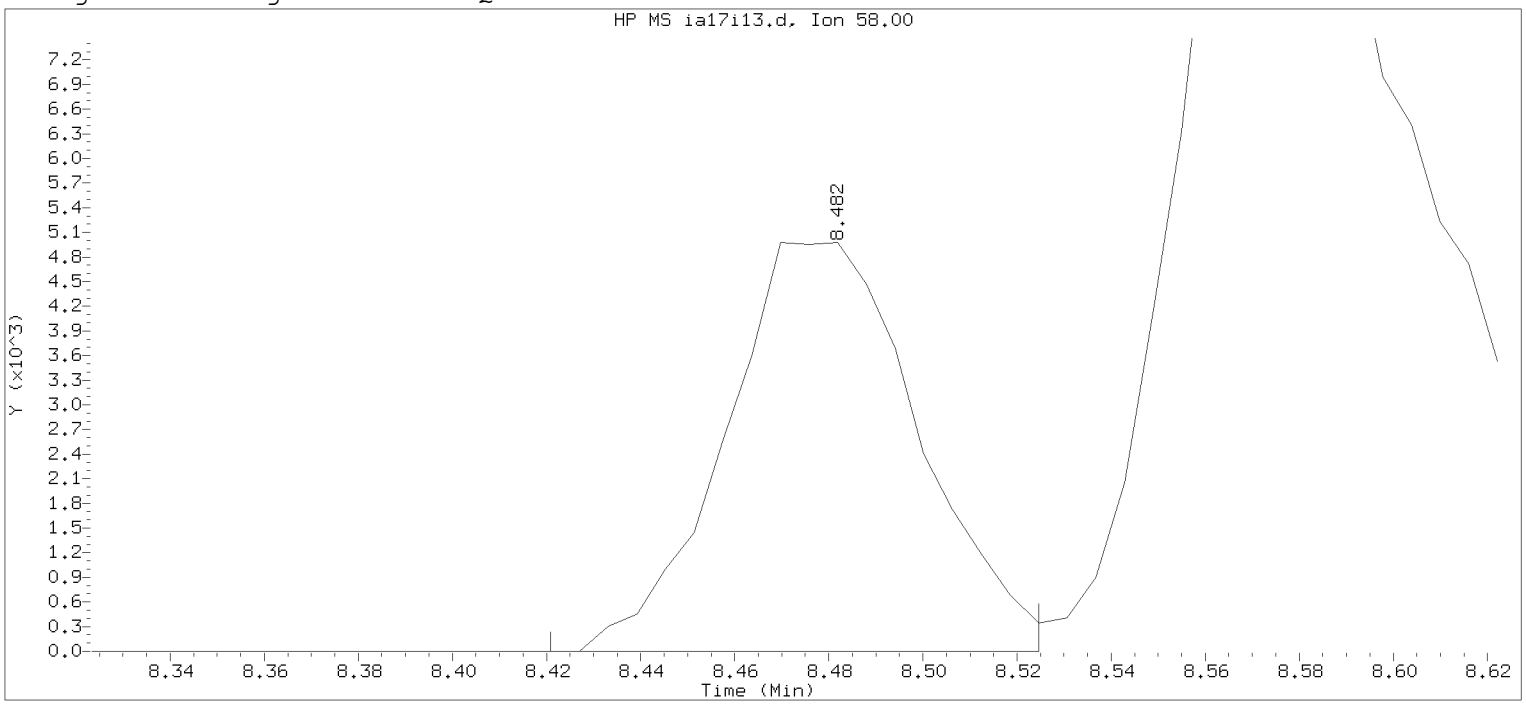
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

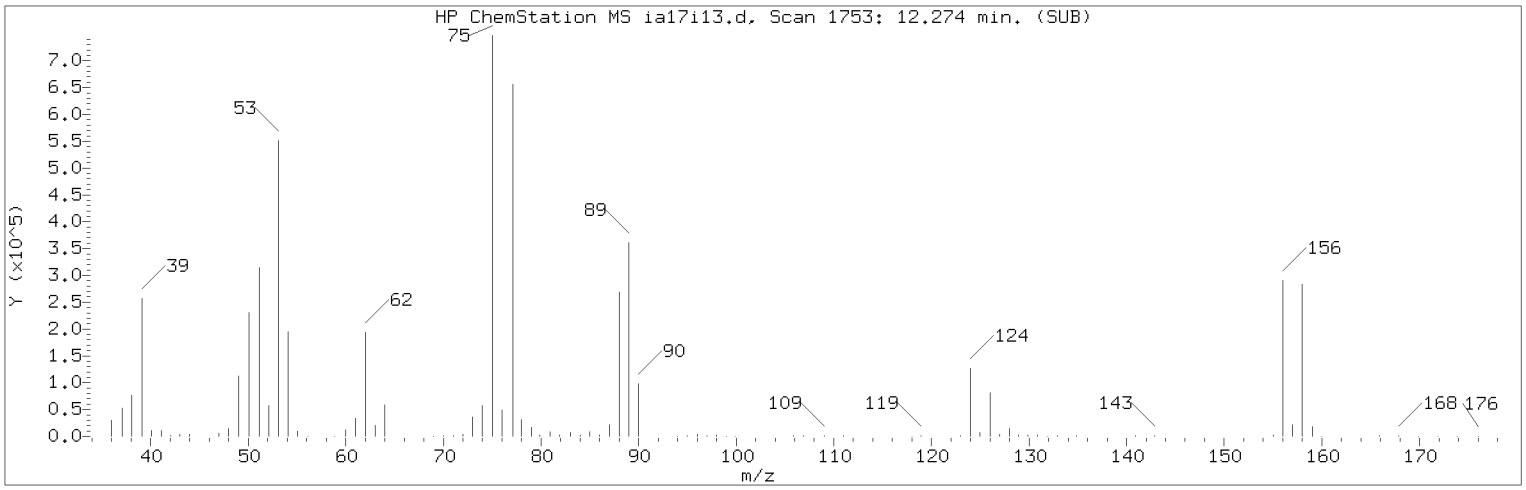
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:23
Date, time and analyst ID of latest file update: 17-Apr-2018 19:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

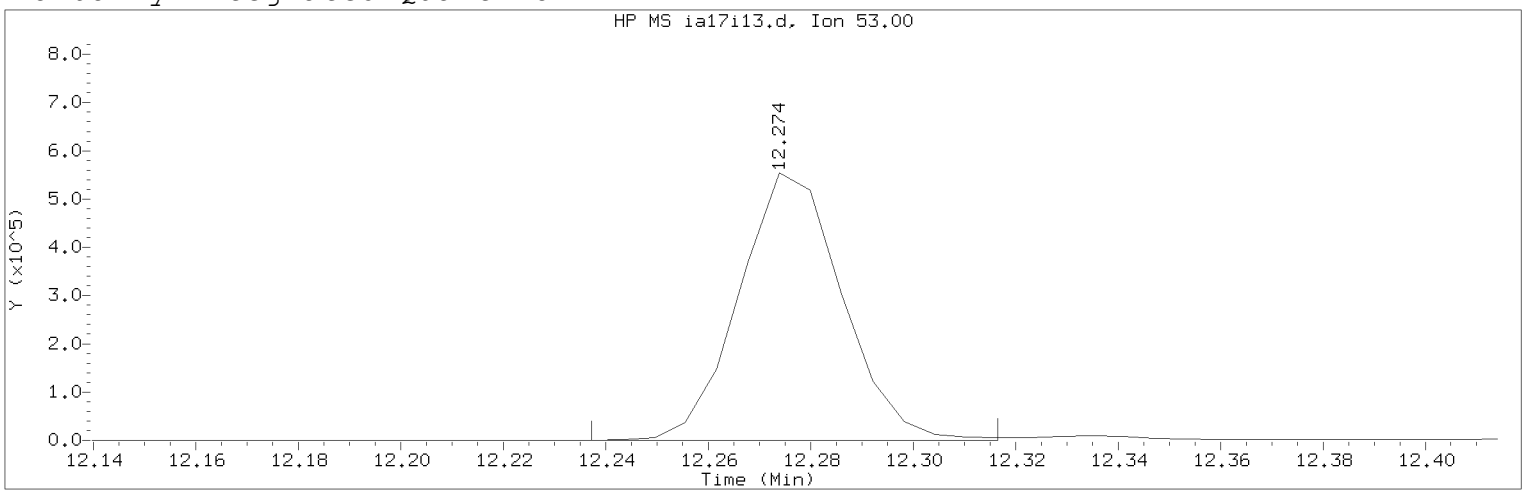
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1131		
Retention Time (minutes)	: 8.482		
Quant Ion	: 58.00		
Area	: 14124		
On-column Amount (ng)	: 99.4964		
Integration start scan	: 1120	Integration stop scan:	1137
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

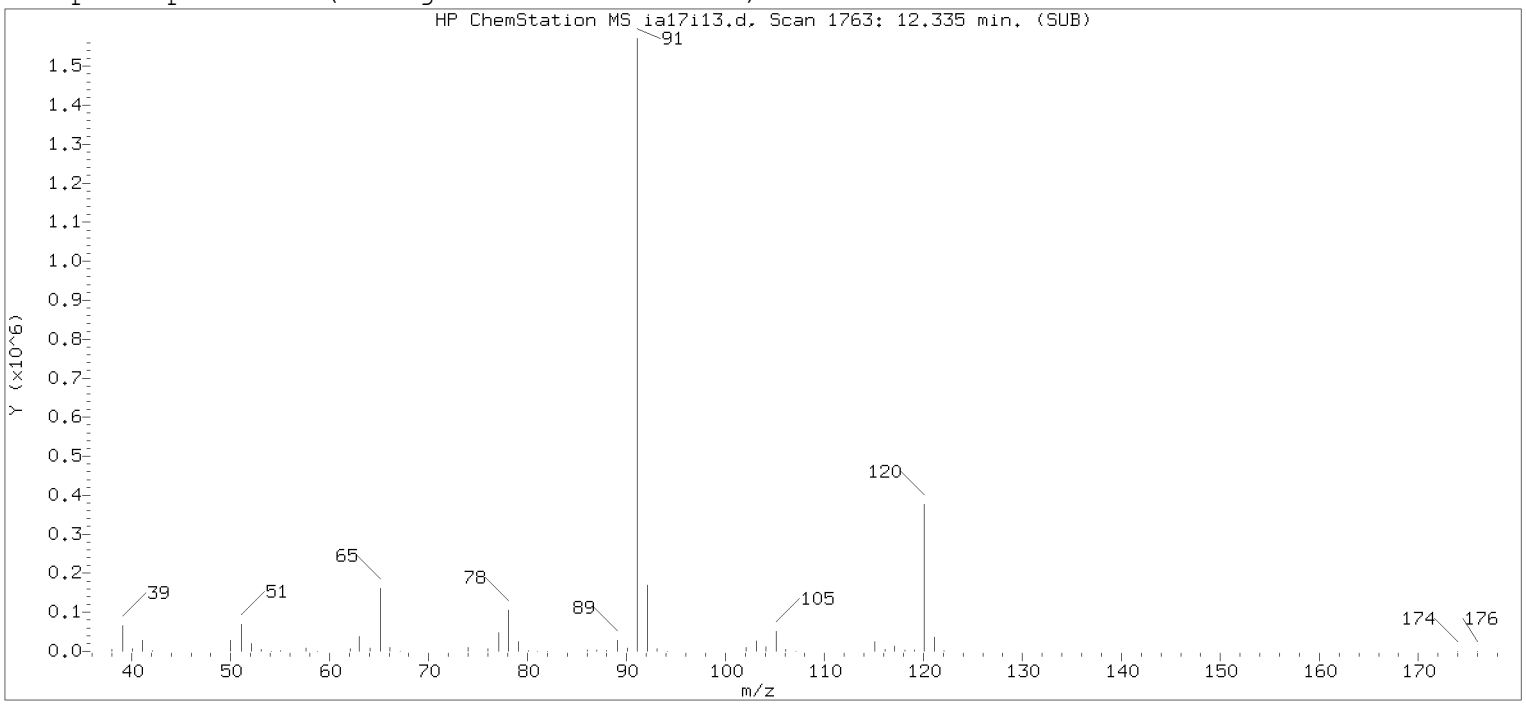
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1753
Retention Time (minutes): 12.274
Quant Ion : 53.00
Area (flag) : 774660A
On-Column Amount (ng) : 55.2196
Integration start scan : 1746 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

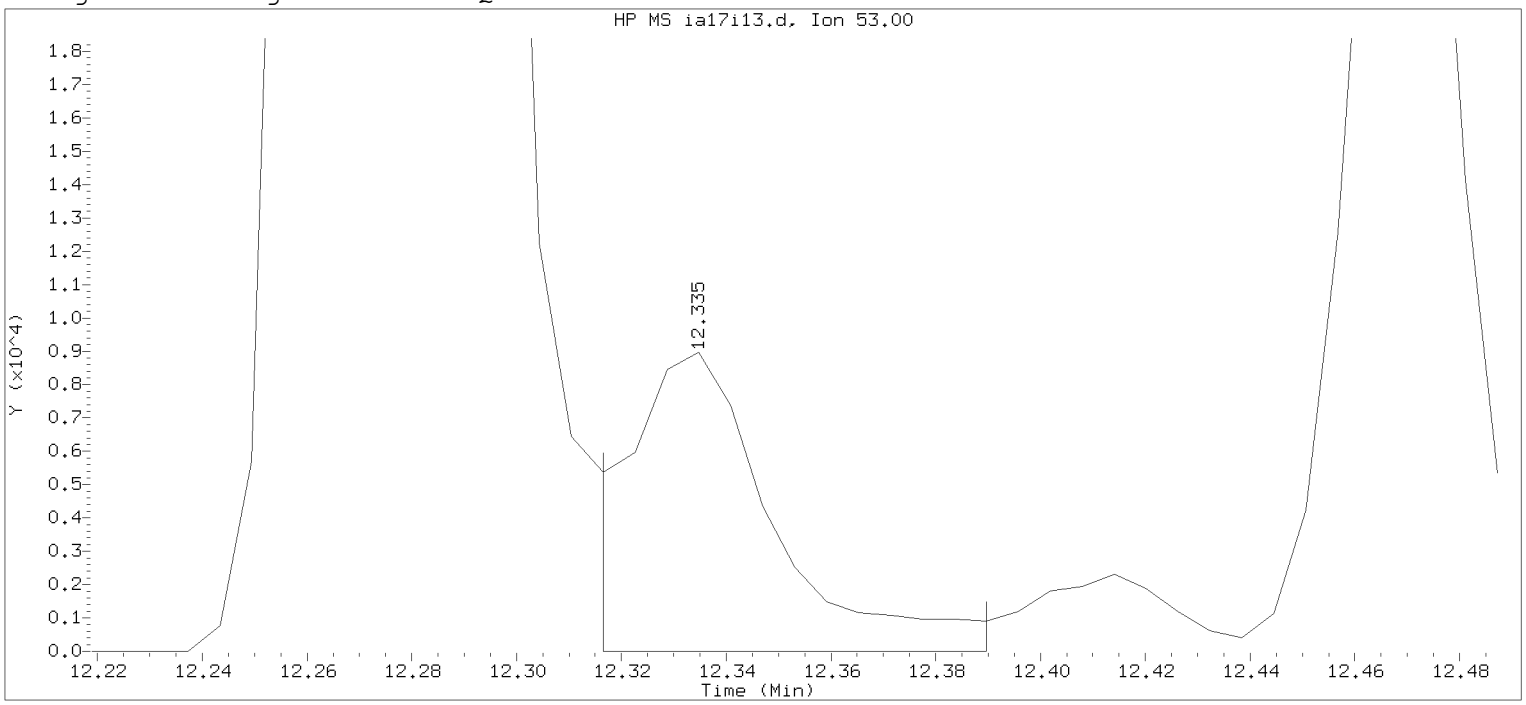
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



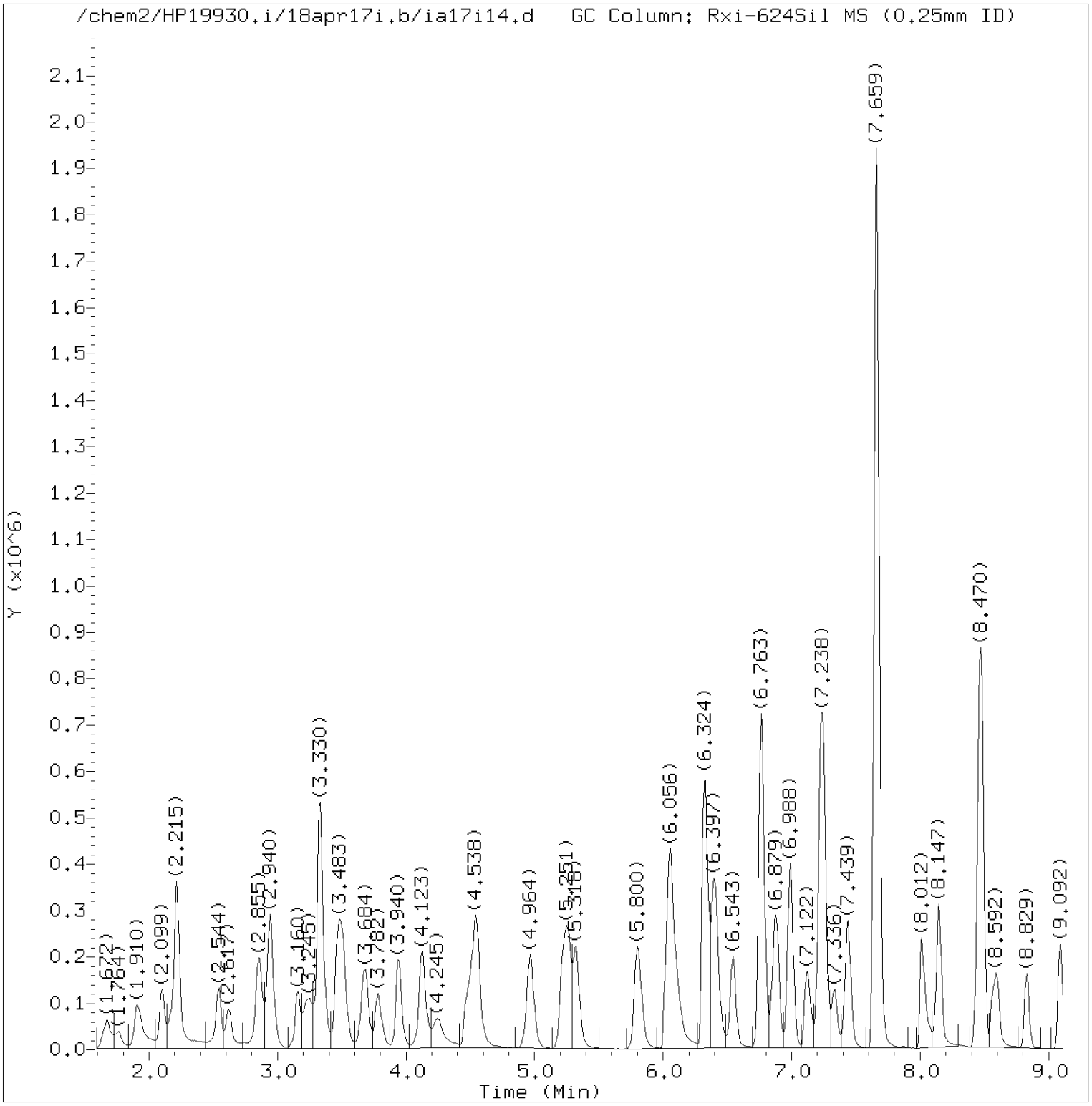
Data File: /chem2/HP19930.i/18apr17i.b/ia17i13.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:23
Date, time and analyst ID of latest file update: 17-Apr-2018 19:23 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 53.00
Area : 16979
On-column Amount (ng) : 2.8096
Integration start scan : 1759 Integration stop scan: 1771
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018



Total Ion Chromatogram (TIC)

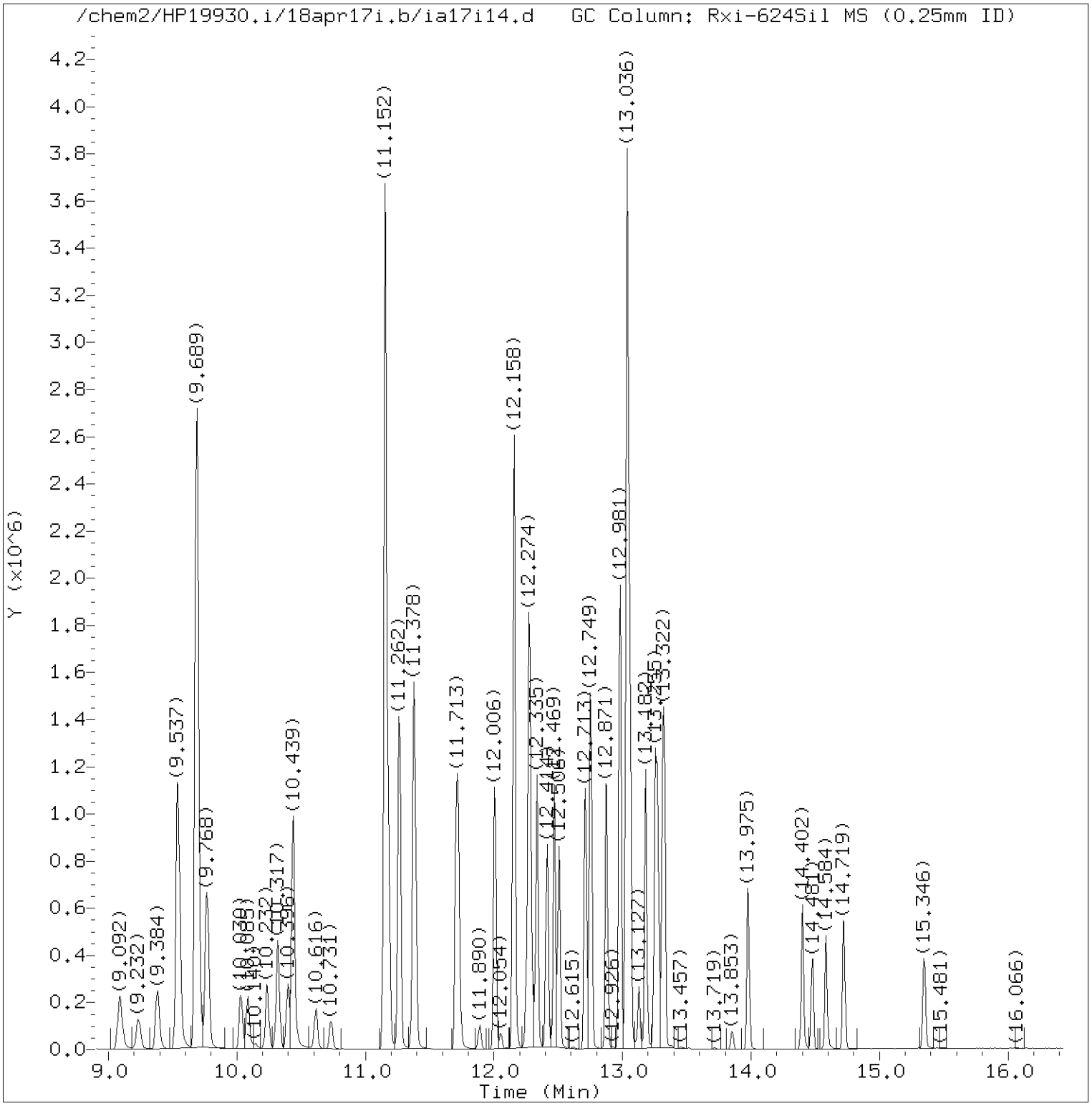
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.910	85	229472	2.225
2) Chloromethane	(2)	2.099	50	205433	2.152
5) Vinyl Chloride	(2)	2.215	62	188161	2.189
6) 1,3-Butadiene	(2)	2.215	39	186146M	2.123
7) Bromomethane	(2)	2.544	94	131878	2.183
8) Chloroethane	(2)	2.617	64	106996	2.185
9) Dichlorofluoromethane	(2)	2.861	67	253113	2.201
10) Trichlorofluoromethane	(2)	2.922	101	236556M	2.190
11) Ethyl ether	(2)	3.154	59	109955	2.063
12) Freon 123a	(2)	3.239	67	166407	2.182
13) Acrolein	(1)	3.330	56	859621	99.836
15) 1,1-Dichloroethene	(2)	3.465	96	110607	2.172
16) Freon 113	(2)	3.501	101	126798	2.172
14) Acetone	(1)	3.501	43	249140	19.710
17) Methyl Iodide	(2)	3.672	142	200747	2.132
18) Carbon Disulfide	(2)	3.782	76	301961	2.097
21) Methyl Acetate	(1)	3.934	43	62186	2.087
22) Allyl Chloride	(2)	3.940	41	199946	2.131
26)*t-Butyl Alcohol-d10	(1)	4.123	65	179887M	50.000
23) Methylene Chloride	(2)	4.129	84	128574	2.068
28) t-Butyl Alcohol	(1)	4.245	59	172780	39.560
29) Acrylonitrile	(1)	4.471	53	144950	10.233
30) Methyl Tertiary Butyl Ether	(2)	4.525	73	315656	2.082
31) trans-1,2-Dichloroethene	(2)	4.550	96	126752	2.180
32) n-Hexane	(2)	4.970	57	202293	2.083
33) 1,1-Dichloroethane	(2)	5.220	63	248251	2.137
34) di-Isopropyl Ether	(2)	5.263	45	451516	2.137
35) 2-Chloro-1,3-Butadiene	(2)	5.324	53	208270	2.102
37) Ethyl t-butyl ether	(2)	5.806	59	361168	2.078
38) 2-Butanone	(1)	6.031	43	411273	20.829
39) cis-1,2-Dichloroethene	(2)	6.056	96	141726	2.151
41) 2,2-Dichloropropane	(2)	6.068	77	177413	2.180
40) 1,2-Dichloroethene (Total)	(2)		96	268478	4.331
42) Propionitrile	(1)	6.117	54	232050	41.262
45) Methacrylonitrile	(1)	6.324	67	379928	20.704
47) Bromochloromethane	(2)	6.391	128	58487	2.120
48) Tetrahydrofuran	(1)	6.403	71	110187	20.535
49) Chloroform	(2)	6.543	83	234521	2.146

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	522686	9.994
50)$Dibromofluoromethane	(2)	6.763	111	536234	9.973
51) 1,1,1-Trichloroethane	(2)	6.769	97	196662	2.160
52) Cyclohexane	(2)	6.885	56	248497	2.104
52) Cyclohexane	(2)	6.872	84	199852	2.108
52) Cyclohexane	(2)	6.872	69	72524	2.096
54) Carbon Tetrachloride	(2)	6.988	117	164590	2.141
55) 1,1-Dichloropropene	(2)	6.988	75	187739	2.164
56) Isobutyl Alcohol	(1)	7.122	41	173878	99.673
57)$1,2-Dichloroethane-d4	(2)	7.226	102	113785	10.001
57)$1,2-Dichloroethane-d4	(2)	7.226	65	569990	10.128
57)$1,2-Dichloroethane-d4	(2)	7.226	104	72090	10.046
58) Benzene	(2)	7.250	78	561183	2.151
59) 1,2-Dichloroethane	(2)	7.336	62	154070	2.022
59) 1,2-Dichloroethane	(2)	7.336	98	13913	2.206
60) t-Amyl methyl ether	(2)	7.439	73	304114	2.077
63)*Fluorobenzene	(2)	7.659	96	2240910	10.000
62) n-Heptane	(2)	7.665	43	223674	2.168
65) n-Butanol	(1)	8.012	56	266004	200.264
67) Trichloroethene	(2)	8.141	95	141989	2.150
69) Methylcyclohexane	(2)	8.458	83	238619	2.098
70) 1,2-Dichloropropane	(2)	8.482	63	144670	2.138
71) Methyl Methacrylate	(1)	8.567	69	63286	2.054
72) 1,4-Dioxane	(1)	8.573	88	33917M	111.313
72) 1,4-Dioxane	(1)	8.573	58	24584M	112.447
73) Dibromomethane	(2)	8.598	93	62530	2.064
74) Bromodichloromethane	(2)	8.829	83	148417	2.046
76) 2-Nitropropane	(1)	9.092	41	200746	20.126
80) cis-1,3-Dichloropropene	(2)	9.384	75	183440	2.006
81) 4-Methyl-2-Pentanone	(1)	9.537	43	1026064	20.911
82)$Toluene-d8	(3)	9.689	98	2229329	10.099
82)$Toluene-d8	(3)	9.689	100	1426794	10.065
83) Toluene	(3)	9.768	92	344799	2.139
84) trans-1,3-Dichloropropene	(3)	10.030	75	139714	2.050
86) Ethyl Methacrylate	(3)	10.085	69	131918	1.976
85) 1,3-Dichloropropene (total)	(3)		75	323154	4.056
88) 1,1,2-Trichloroethane	(3)	10.232	97	95681	2.105
89) Tetrachloroethene	(3)	10.317	166	146266	2.136

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.396	76	169826	2.099
91) 2-Hexanone	(1)	10.439	43	734165	21.195
93) Dibromochloromethane	(3)	10.616	129	91712	2.049
95) 1,2-Dibromoethane	(3)	10.731	107	85079	2.057
97)*Chlorobenzene-d5	(3)	11.152	117	1635026	10.000
98) Chlorobenzene	(3)	11.183	112	371098	2.119
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	117046	2.101
100) Ethylbenzene	(3)	11.262	91	660373	2.162
101) m+p-Xylene	(3)	11.378	106	508762	4.335
104) o-Xylene	(3)	11.707	106	248443	2.176
106) Styrene	(3)	11.725	104	383906	2.178
105) Xylene (Total)	(3)		106	757205	6.511
107) Bromoform	(3)	11.890	173	44437	1.861
108) Isopropylbenzene	(3)	12.006	105	651737	2.224
111)$4-Bromofluorobenzene	(3)	12.158	95	784586	10.065
111)$4-Bromofluorobenzene	(3)	12.158	174	639470	10.081
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	122828	2.056
114) Bromobenzene	(4)	12.274	156	148152	2.092
115) trans-1,4-Dichloro-2-butene	(1)	12.274	53	250204	20.339
116) 1,2,3-Trichloropropane	(4)	12.298	110	32517	2.079
117) n-Propylbenzene	(4)	12.335	91	795790	2.221
119) 2-Chlorotoluene	(4)	12.414	126	148296	2.149
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	544126	2.200
122) 4-Chlorotoluene	(4)	12.506	126	151020	2.151
125) tert-Butylbenzene	(4)	12.713	134	110619	2.162
126) Pentachloroethane	(4)	12.749	167	82448	2.089
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	545146	2.194
128) sec-Butylbenzene	(4)	12.877	105	702729	2.194
131) 1,3-Dichlorobenzene	(4)	12.981	146	289428	2.092
132) p-Isopropyltoluene	(4)	12.981	119	582925	2.078
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	848987	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	293234	2.081
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	236107	2.091
136) Benzyl Chloride	(4)	13.127	126	30264	1.817
138) n-Butylbenzene	(4)	13.274	92	287589	2.165
139) 1,2-Dichlorobenzene	(4)	13.310	146	269434	2.100
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	12578	1.891
144) 1,3,5-Trichlorobenzene	(4)	13.975	180	191765	2.052

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

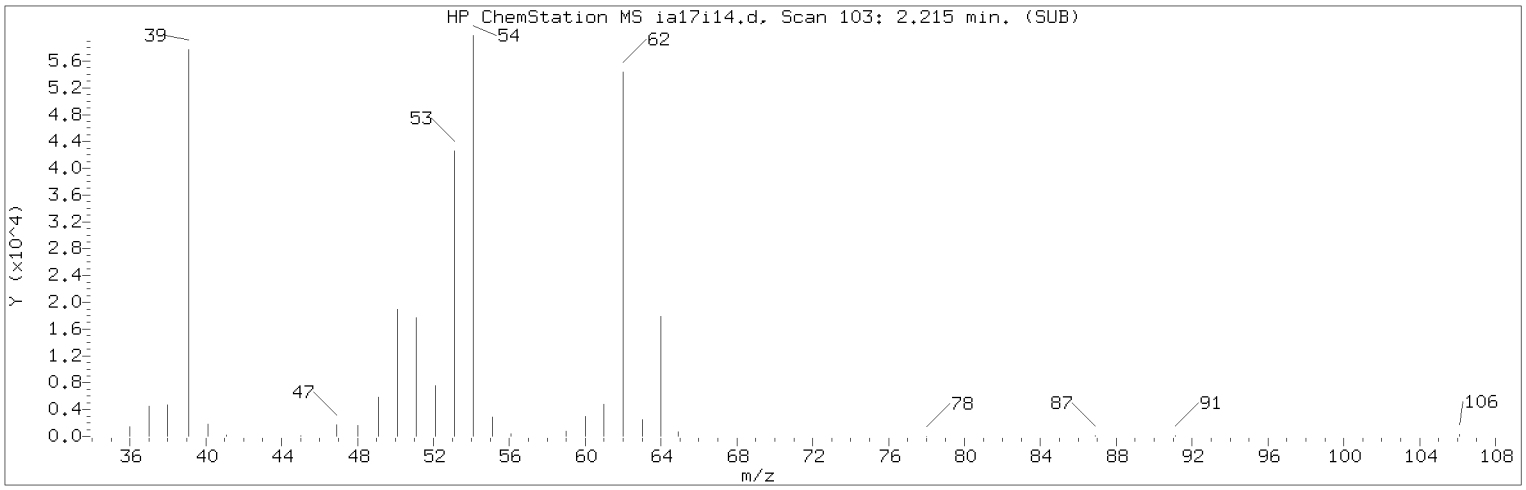
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

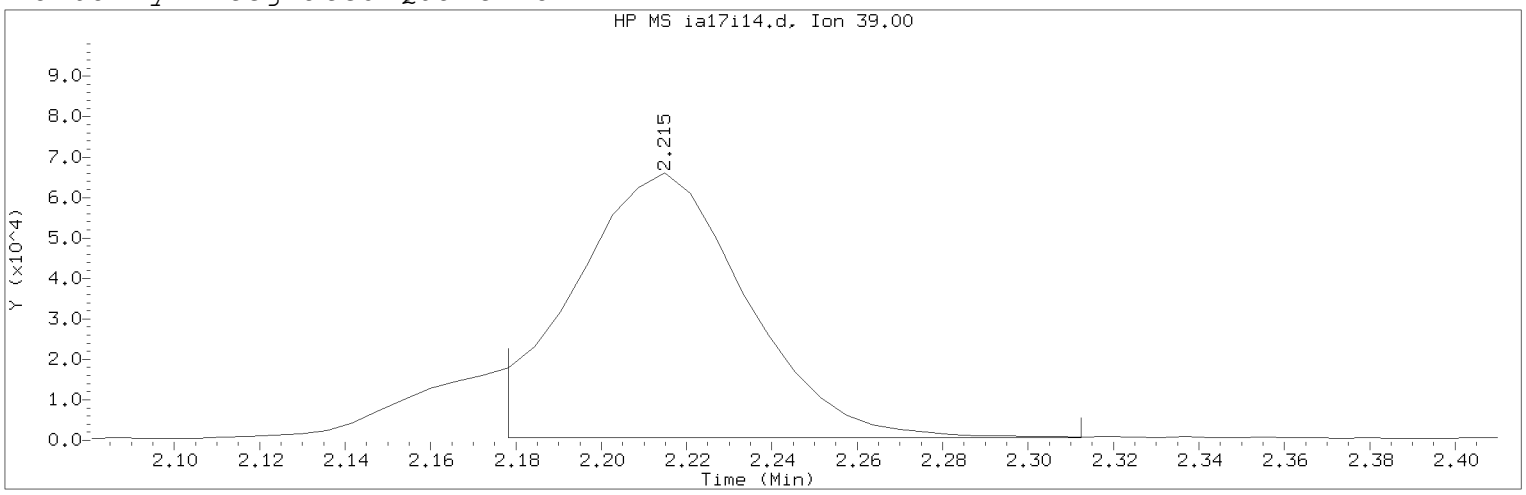
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.402	180	169020	2.064
146) Hexachlorobutadiene	(4)	14.481	225	62121	2.096
147) Naphthalene	(4)	14.584	128	337217	2.102
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	152627	2.094

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

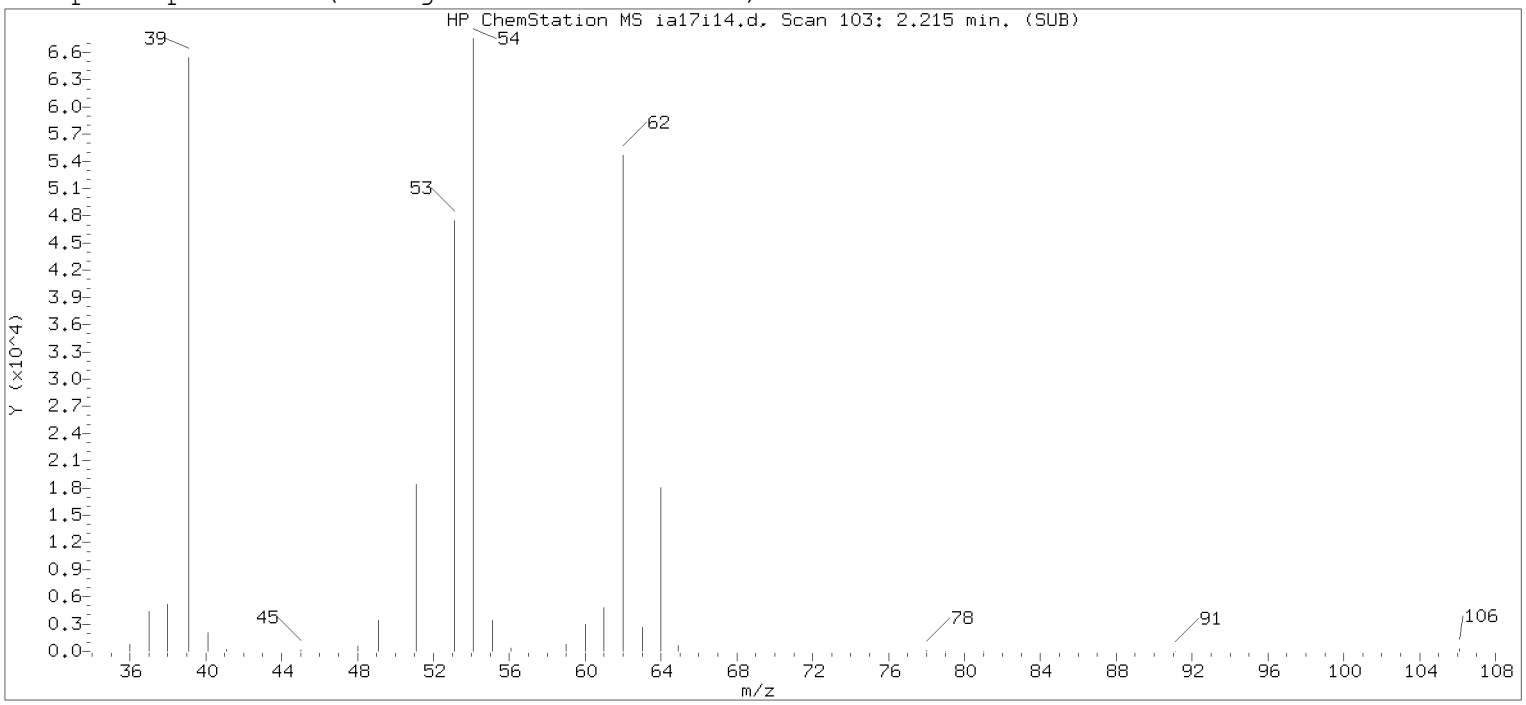
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area (flag) : 186146M
On-Column Amount (ng) : 2.1228
Integration start scan : 96 Integration stop scan: 118
Y at integration start : 580 Y at integration end: 580

Reason for manual integration: improper integration

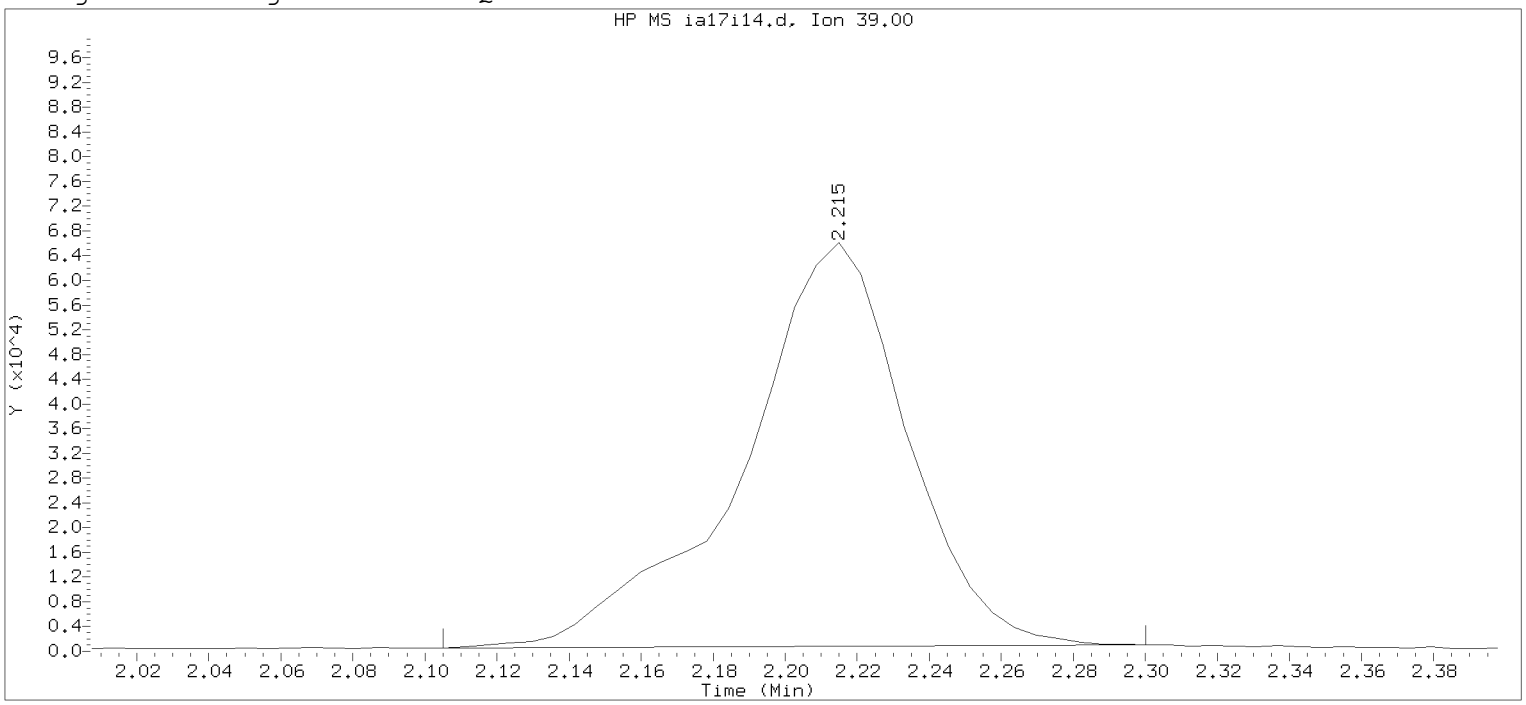
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

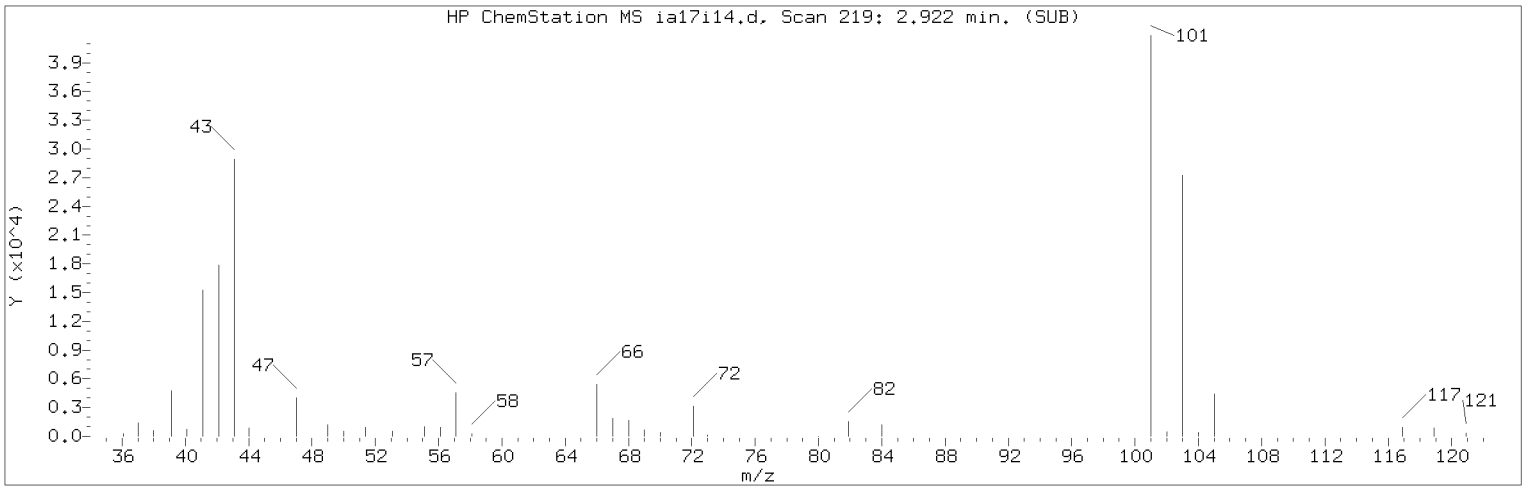
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:44
Date, time and analyst ID of latest file update: 17-Apr-2018 19:44 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

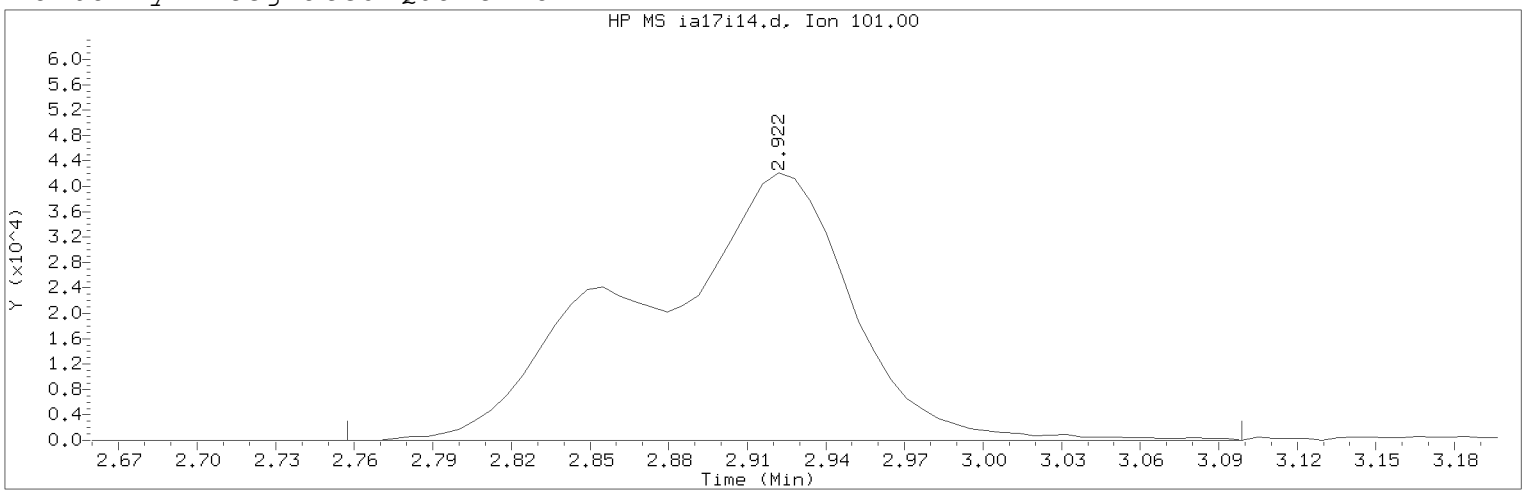
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area : 207809
On-column Amount (ng) : 2.2627
Integration start scan : 84 Integration stop scan: 116
Y at integration start : 516 Y at integration end: 1000

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

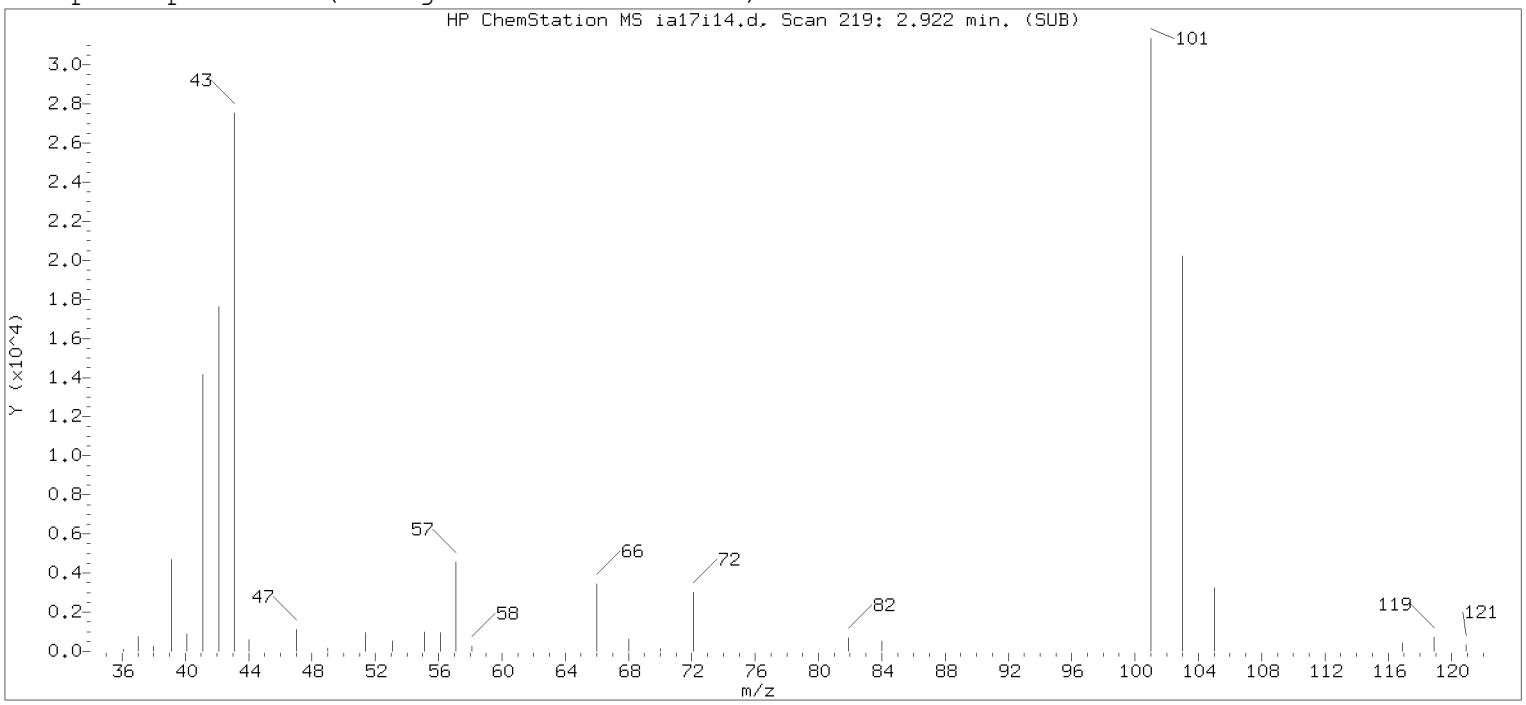
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 236556M
On-Column Amount (ng) : 2.1903
Integration start scan : 191 Integration stop scan: 247
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

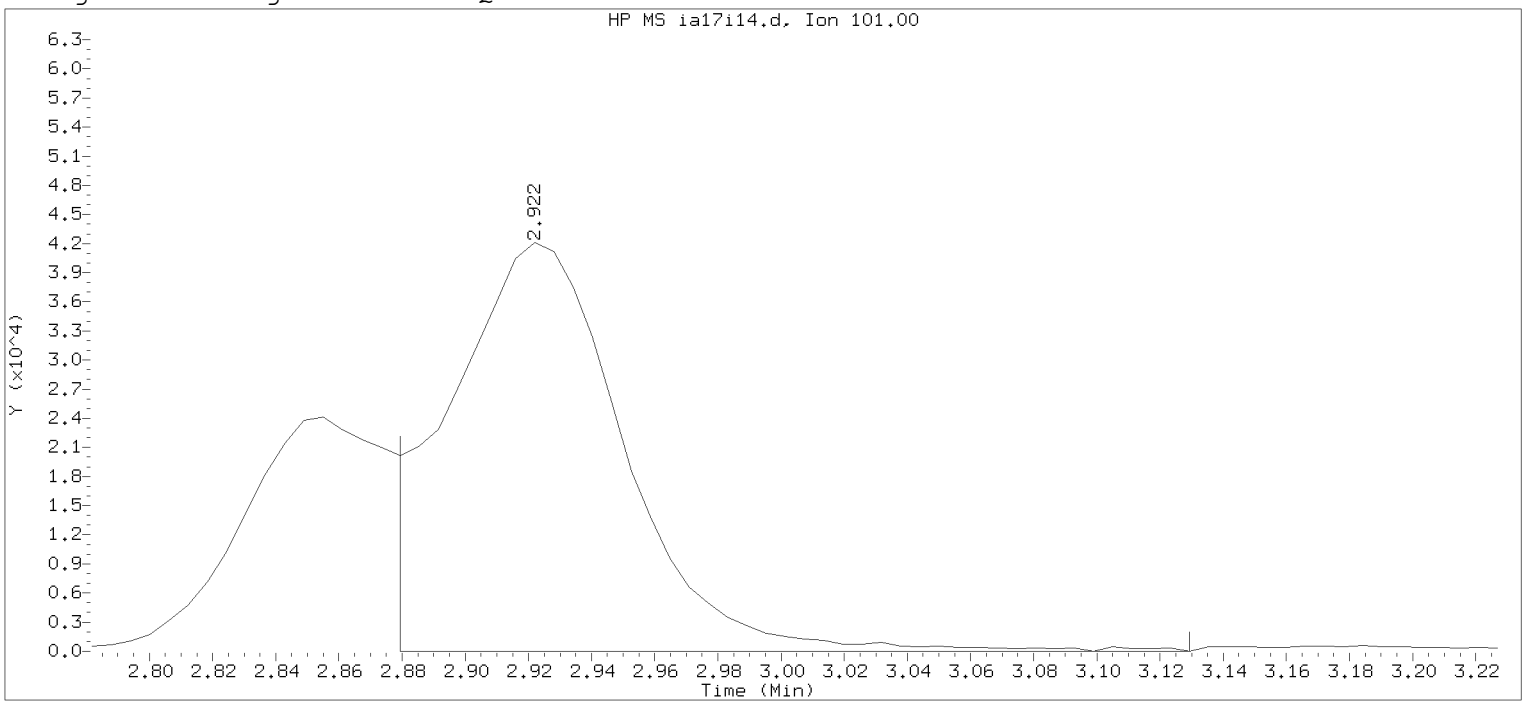
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

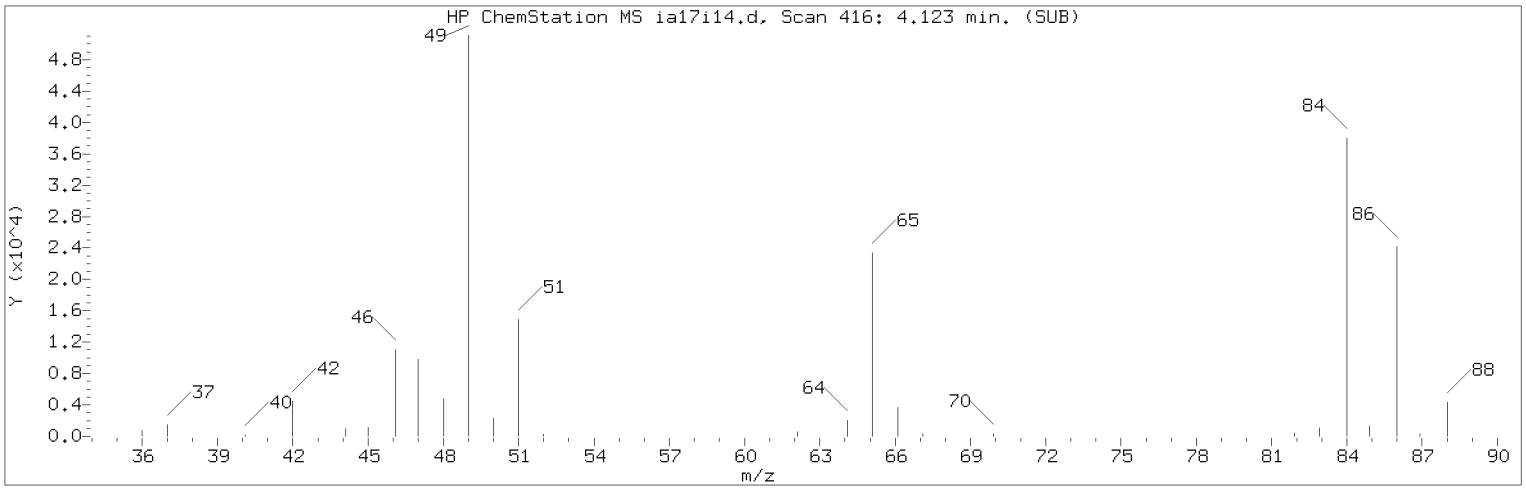
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:44
Date, time and analyst ID of latest file update: 17-Apr-2018 19:44 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

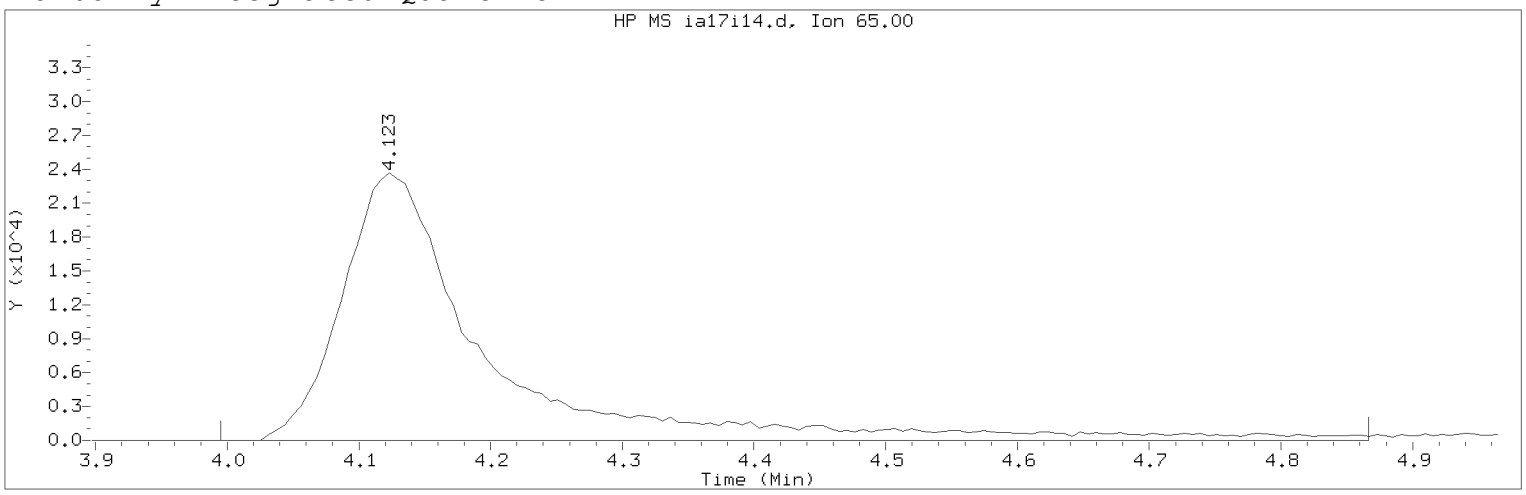
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 161307
On-column Amount (ng) : 1.6453
Integration start scan : 211 Integration stop scan: 252
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature user name: dviray0203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

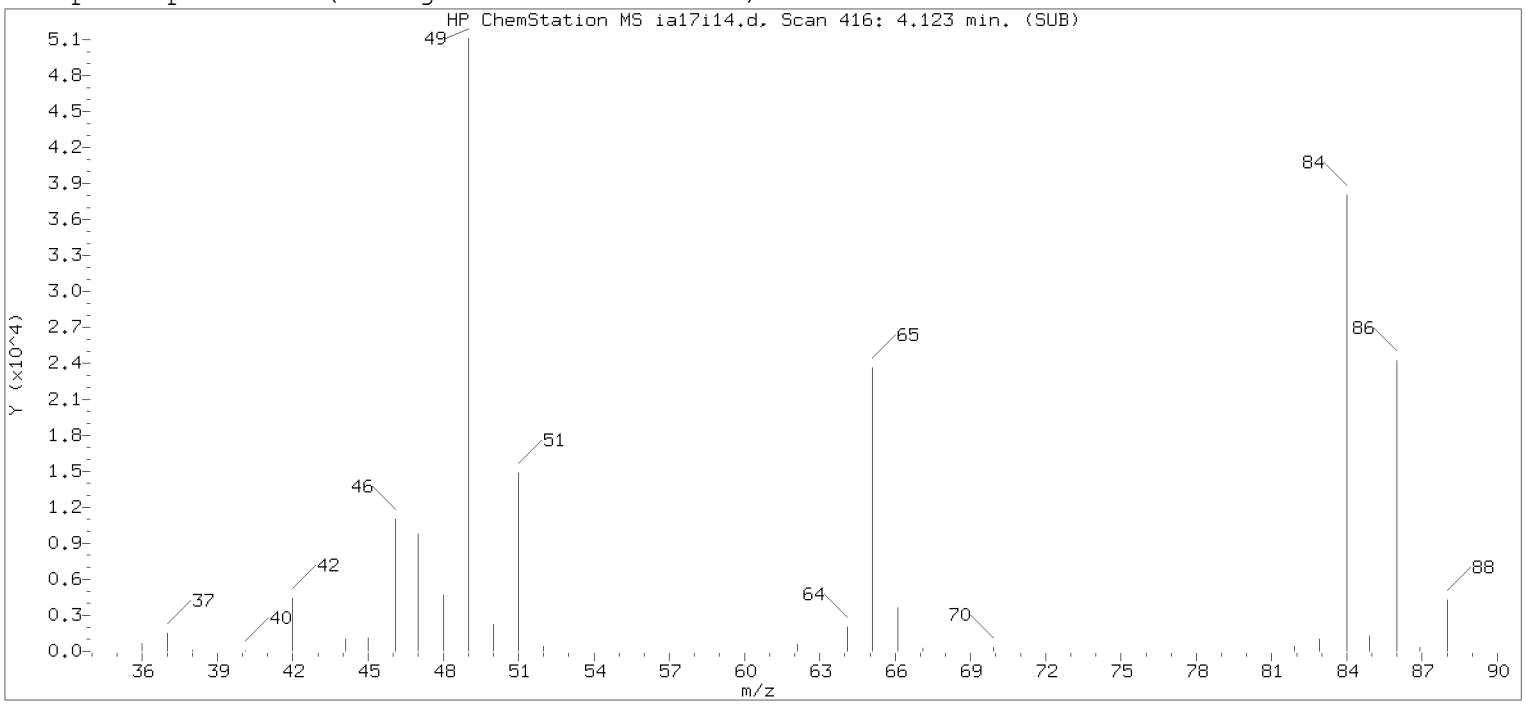
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 65.00
Area (flag) : 179887M
On-Column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

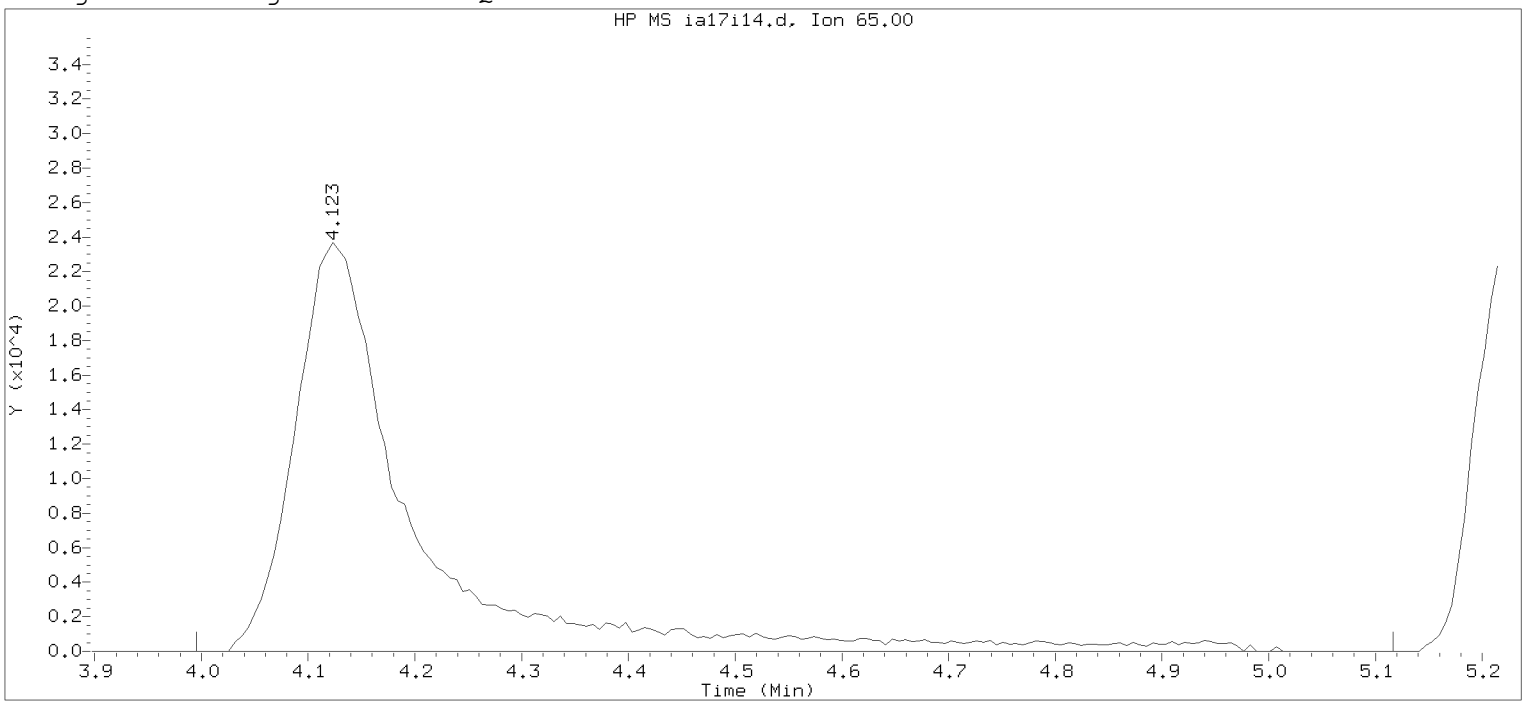
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

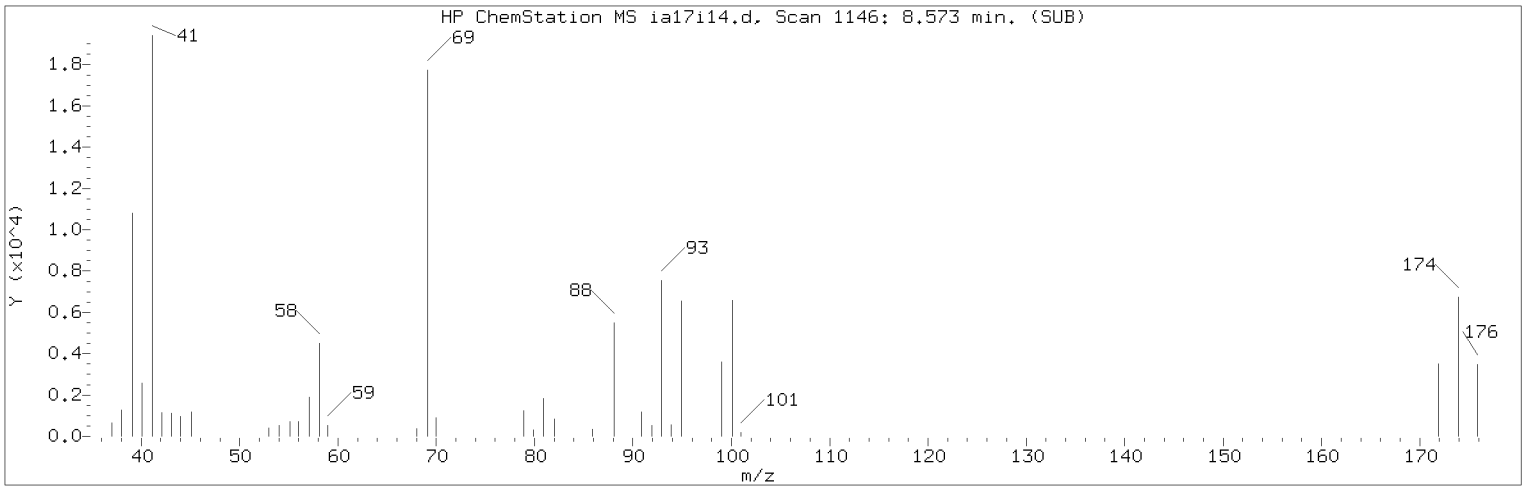
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:44
Date, time and analyst ID of latest file update: 17-Apr-2018 19:44 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

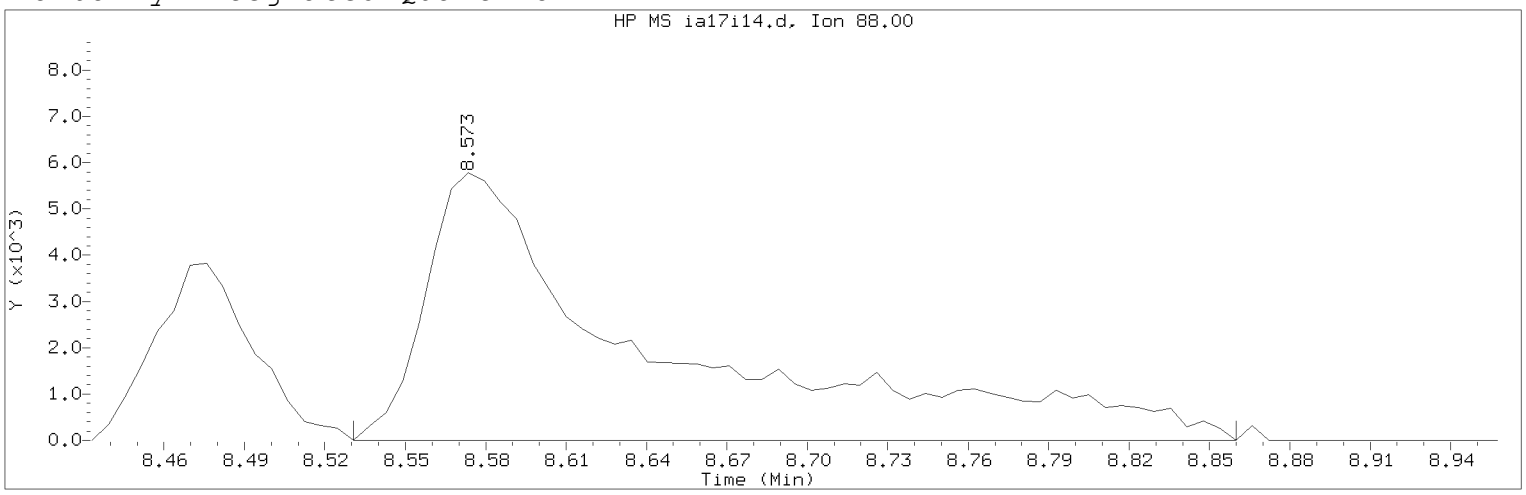
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 416		
Retention Time (minutes)	: 4.123		
Quant Ion	: 65.00		
Area	: 182957		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 394	Integration stop scan:	578
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

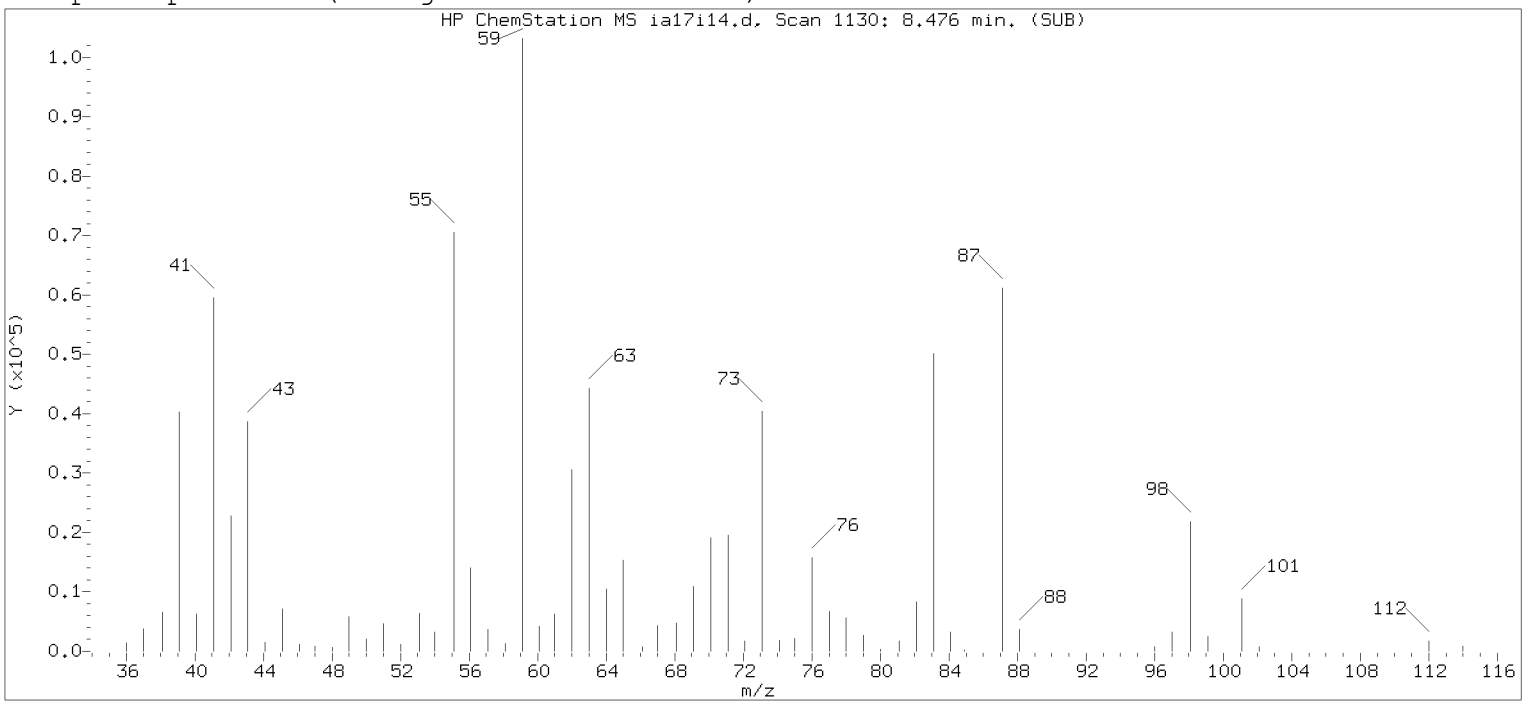
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 33917M
On-Column Amount (ng) : 111.3129
Integration start scan : 1138 Integration stop scan: 1192
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

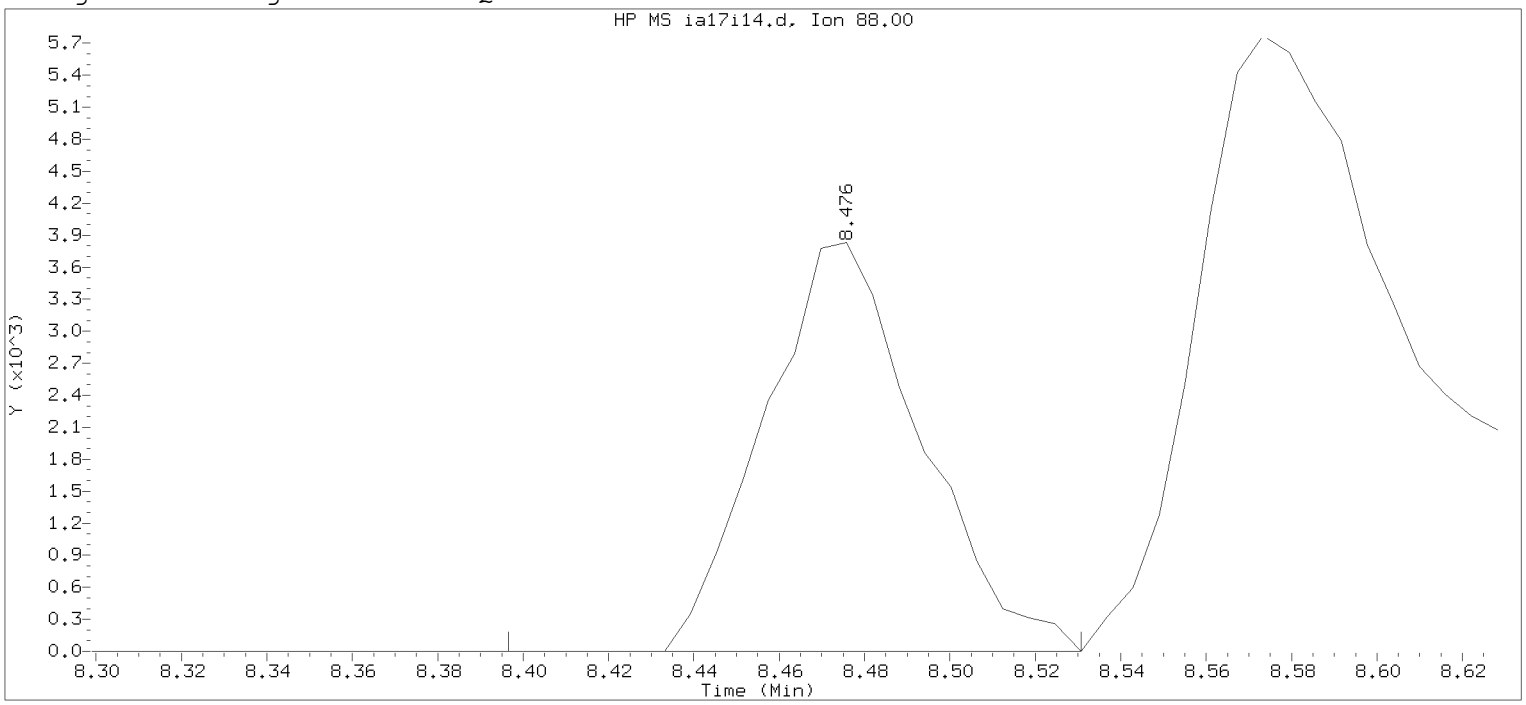
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

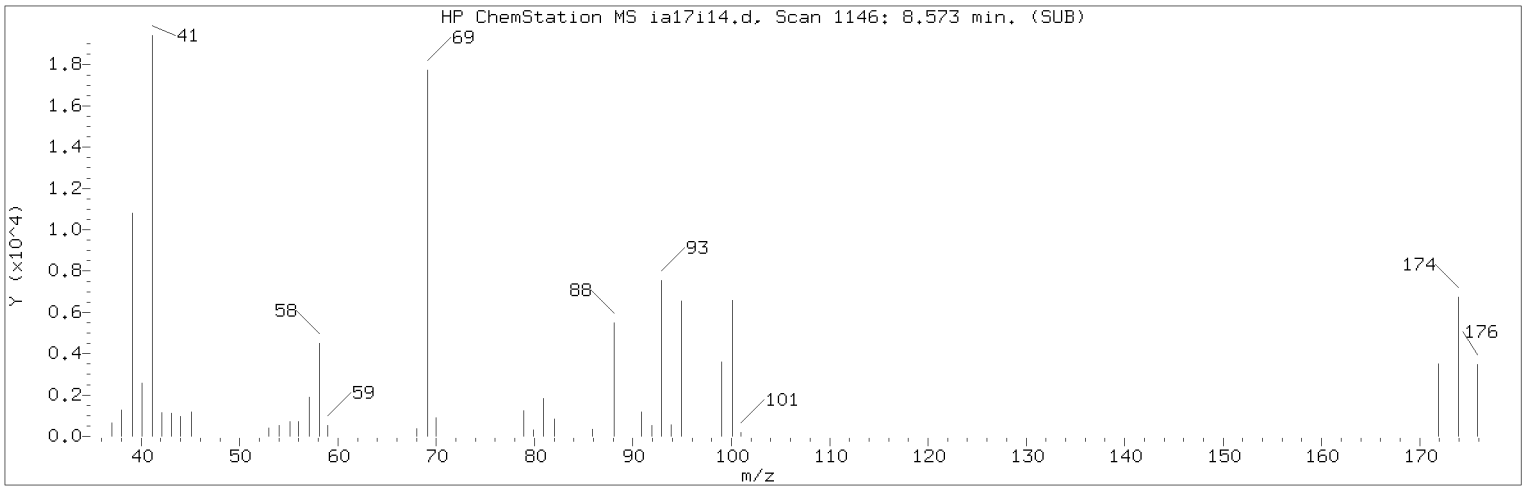
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:44
Date, time and analyst ID of latest file update: 17-Apr-2018 19:44 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

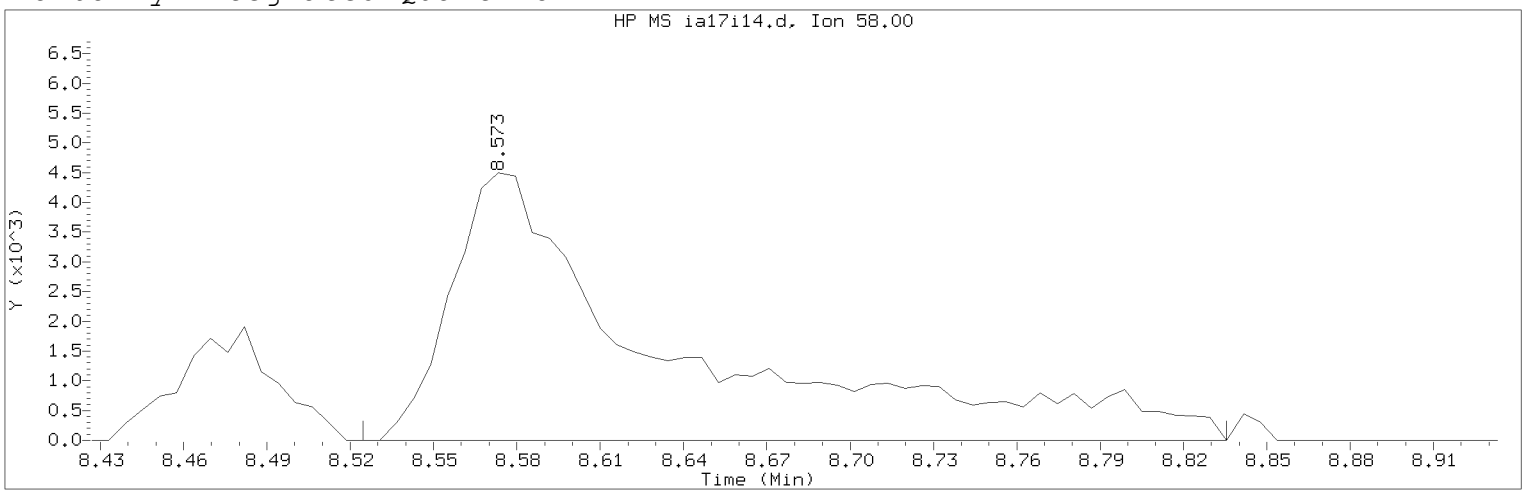
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1130		
Retention Time (minutes)	: 8.476		
Quant Ion	: 88.00		
Area	: 9758		
On-column Amount (ng)	: 64.5053		
Integration start scan	: 1116	Integration stop scan:	1138
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

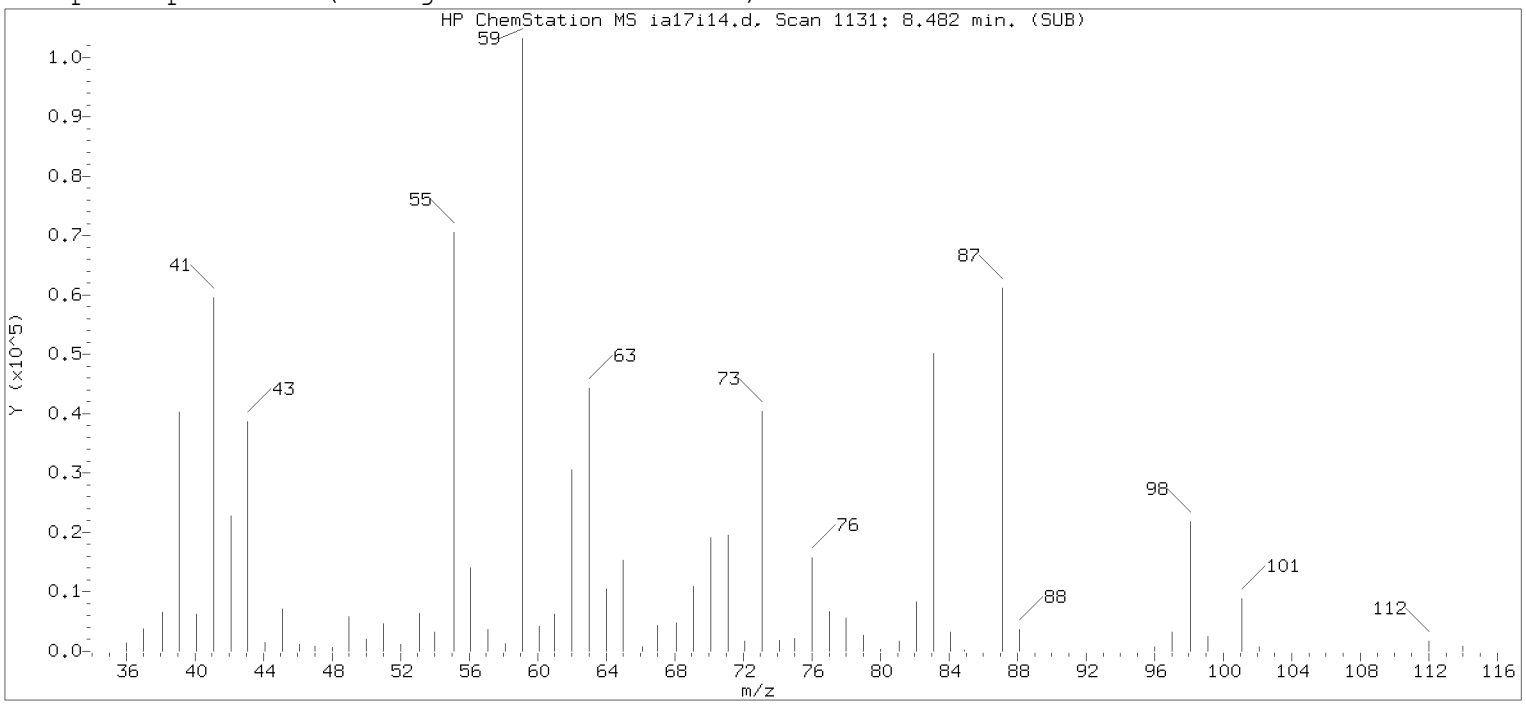
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 58.00
Area (flag) : 24584M
On-Column Amount (ng) : 112.4466
Integration start scan : 1137 Integration stop scan: 1188
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

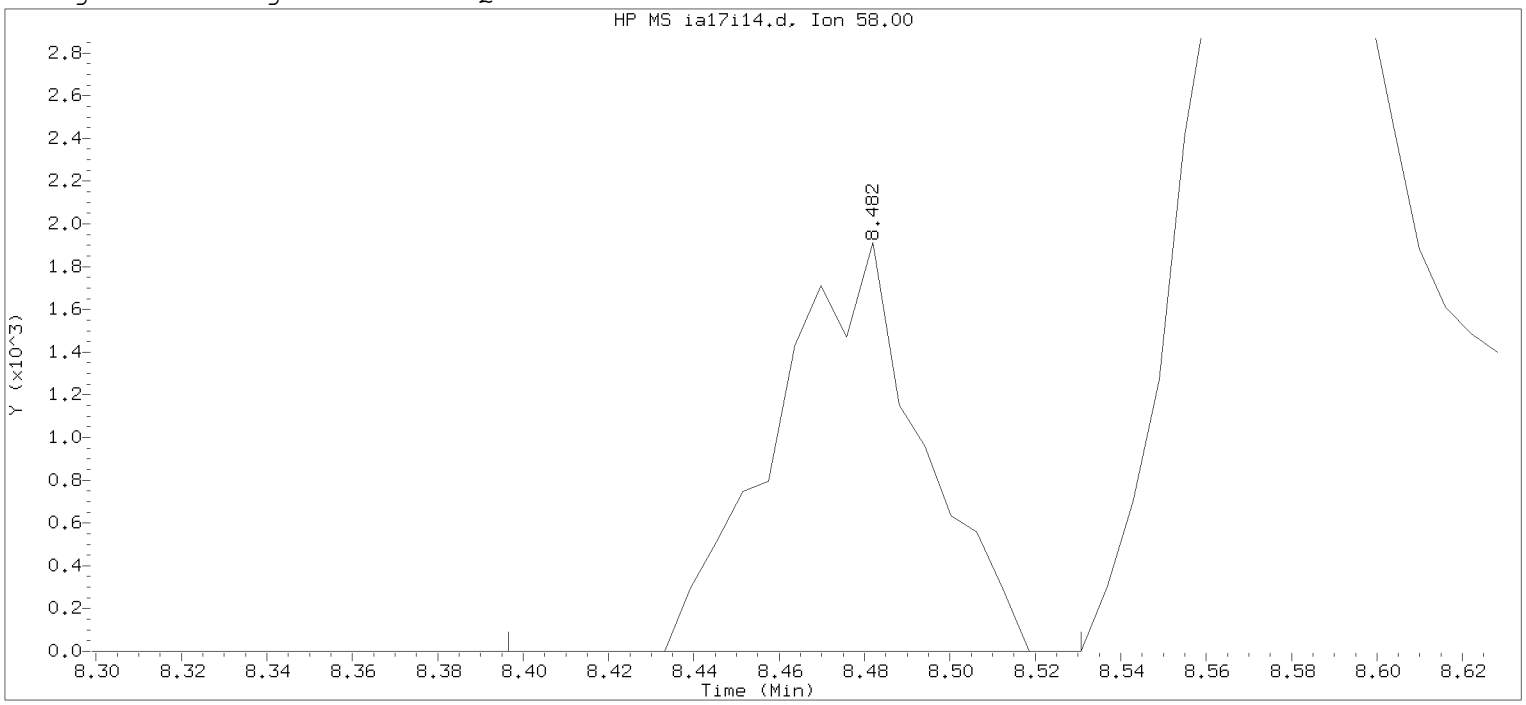
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



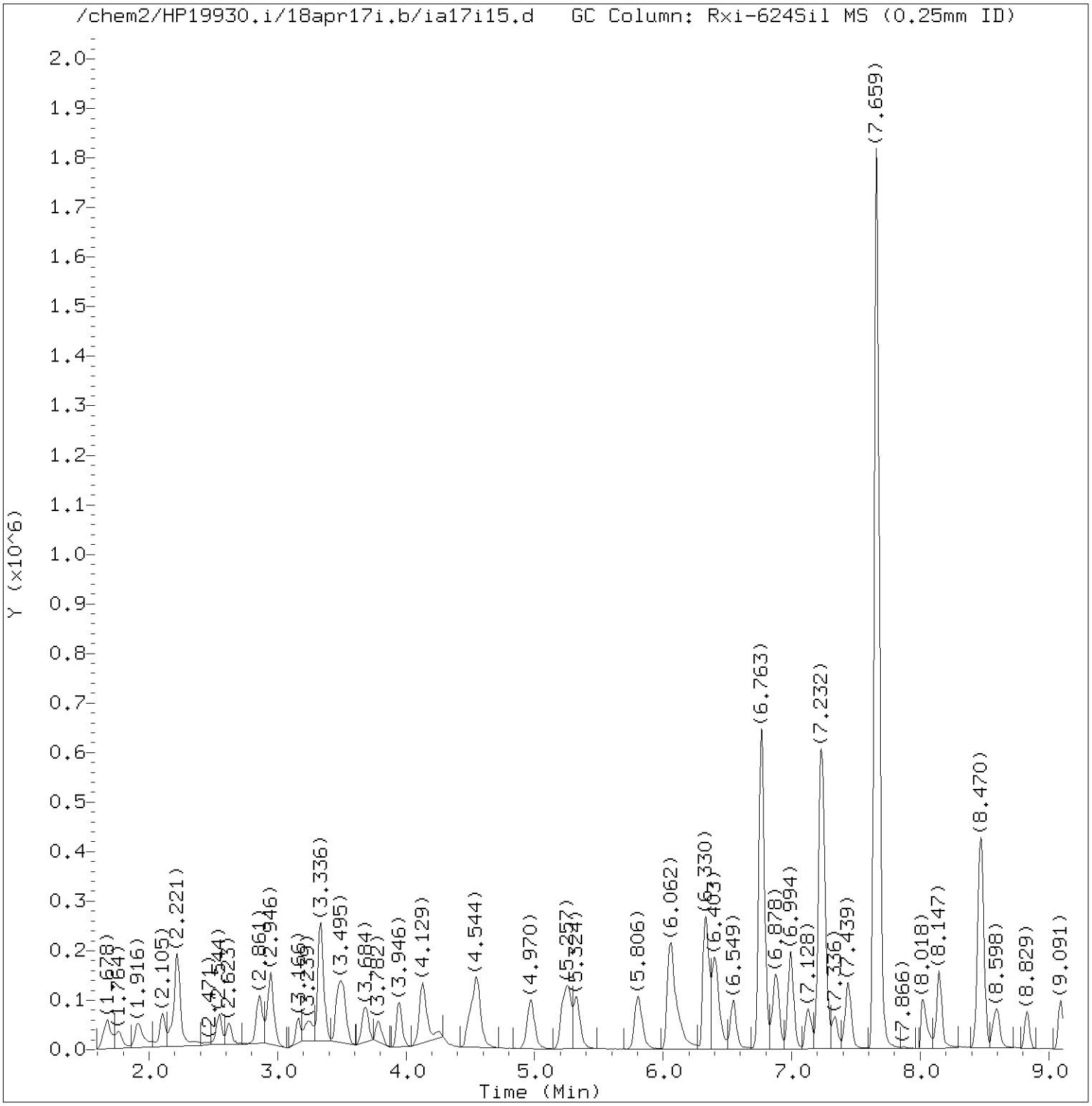
Data File: /chem2/HP19930.i/18apr17i.b/ia17i14.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:26 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 19:44
Date, time and analyst ID of latest file update: 17-Apr-2018 19:44 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1131		
Retention Time (minutes)	: 8.482		
Quant Ion	: 58.00		
Area	: 4561		
On-column Amount (ng)	: 43.8690		
Integration start scan	: 1116	Integration stop scan:	1138
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018



Total Ion Chromatogram (TIC)

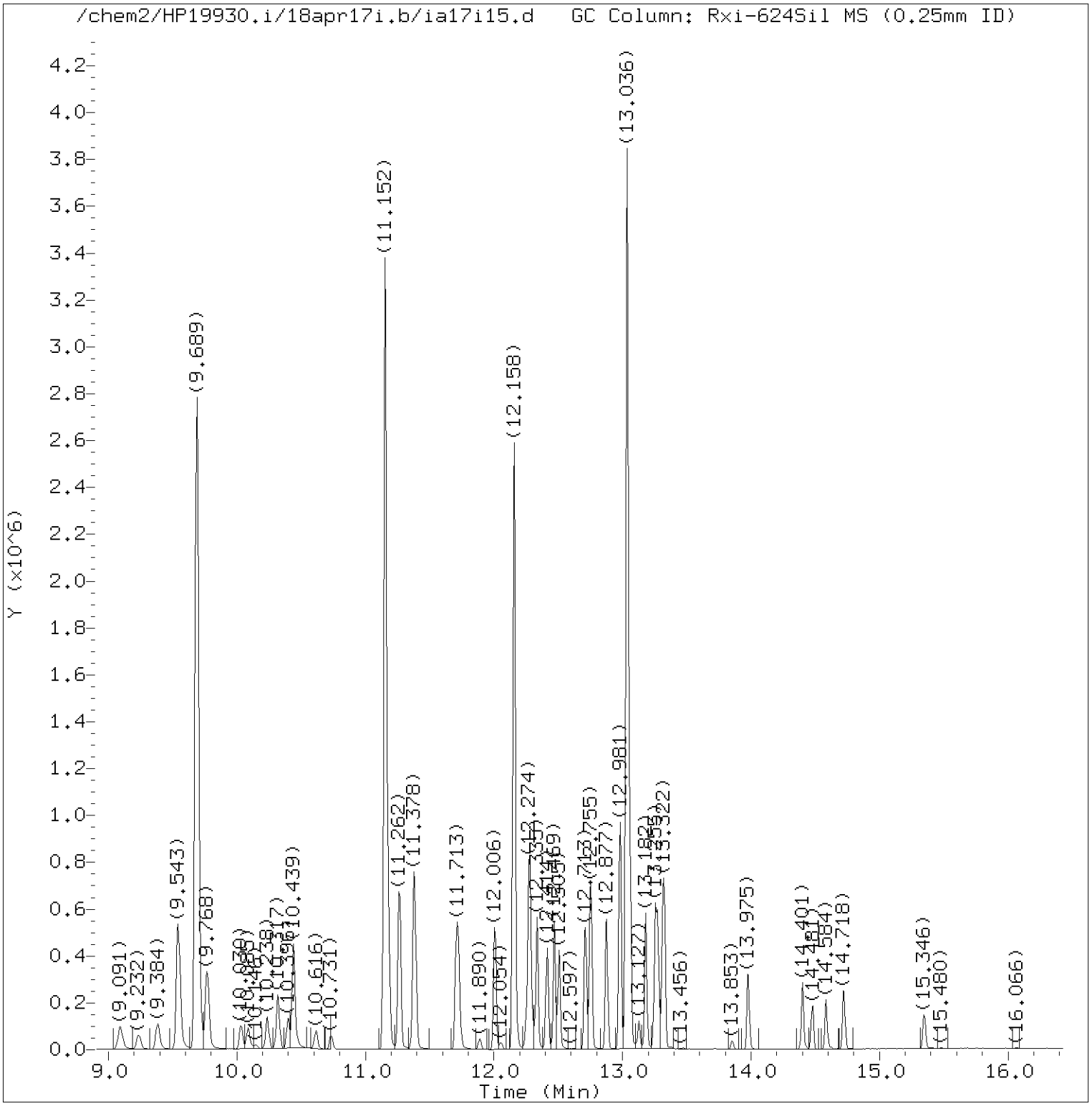
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.910	85	119712	1.135
2) Chloromethane	(2)	2.105	50	105690	1.083
6) 1,3-Butadiene	(2)	2.215	39	101036M	1.127
5) Vinyl Chloride	(2)	2.221	62	97555	1.111
7) Bromomethane	(2)	2.544	94	67585	1.095
8) Chloroethane	(2)	2.623	64	55566	1.110
9) Dichlorofluoromethane	(2)	2.861	67	129859	1.105
10) Trichlorofluoromethane	(2)	2.928	101	122740M	1.112
11) Ethyl ether	(2)	3.154	59	54840	1.007
12) Freon 123a	(2)	3.239	67	84879	1.089
13) Acrolein	(1)	3.336	56	420257	48.415
15) 1,1-Dichloroethene	(2)	3.471	96	56501	1.086
14) Acetone	(1)	3.507	43	126407M	9.920
16) Freon 113	(2)	3.513	101	65798	1.103
17) Methyl Iodide	(2)	3.672	142	100413	1.044
18) Carbon Disulfide	(2)	3.782	76	149320	1.015
21) Methyl Acetate	(1)	3.934	43	27593	0.919
22) Allyl Chloride	(2)	3.946	41	98062	1.023
23) Methylene Chloride	(2)	4.129	84	64436	1.014
26)*t-Butyl Alcohol-d10	(1)	4.129	65	181349M	50.000
28) t-Butyl Alcohol	(1)	4.251	59	85294M	19.372
29) Acrylonitrile	(1)	4.489	53	69645	4.877
30) Methyl Tertiary Butyl Ether	(2)	4.519	73	150885	0.974
31) trans-1,2-Dichloroethene	(2)	4.562	96	62793	1.057
32) n-Hexane	(2)	4.976	57	99196	0.999
33) 1,1-Dichloroethane	(2)	5.220	63	122639	1.033
34) di-Isopropyl Ether	(2)	5.263	45	216883	1.004
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	99086	0.978
37) Ethyl t-butyl ether	(2)	5.799	59	172907M	0.973
38) 2-Butanone	(1)	6.037	43	196395	9.866
39) cis-1,2-Dichloroethene	(2)	6.062	96	68801	1.022
41) 2,2-Dichloropropane	(2)	6.074	77	84793	1.020
40) 1,2-Dichloroethene (Total)	(2)		96	131594	2.078
42) Propionitrile	(1)	6.129	54	113856	20.082
45) Methacrylonitrile	(1)	6.330	67	178868	9.669
47) Bromochloromethane	(2)	6.403	128	29531	1.047
48) Tetrahydrofuran	(1)	6.409	71	52652	9.734
49) Chloroform	(2)	6.549	83	116162	1.040

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	535563	10.019
50)$Dibromofluoromethane	(2)	6.763	111	546235	9.940
51) 1,1,1-Trichloroethane	(2)	6.775	97	96275	1.035
52) Cyclohexane	(2)	6.878	56	123361	1.022
52) Cyclohexane	(2)	6.885	84	100054	1.032
52) Cyclohexane	(2)	6.872	69	36037	1.019
54) Carbon Tetrachloride	(2)	6.988	117	80569	1.025
55) 1,1-Dichloropropene	(2)	6.994	75	94910	1.071
56) Isobutyl Alcohol	(1)	7.128	41	87275	49.626
57)$1,2-Dichloroethane-d4	(2)	7.226	102	115815	9.960
57)$1,2-Dichloroethane-d4	(2)	7.226	65	579015	10.066
57)$1,2-Dichloroethane-d4	(2)	7.226	104	73479	10.018
58) Benzene	(2)	7.250	78	278655	1.045
59) 1,2-Dichloroethane	(2)	7.342	62	79912	1.026
59) 1,2-Dichloroethane	(2)	7.342	98	6837	1.060
60) t-Amyl methyl ether	(2)	7.439	73	146163	0.977
63)*Fluorobenzene	(2)	7.659	96	2290474	10.000
62) n-Heptane	(2)	7.665	43	115078	1.091
65) n-Butanol	(1)	8.018	56	114962	85.853
67) Trichloroethene	(2)	8.147	95	70921	1.050
69) Methylcyclohexane	(2)	8.457	83	117913	1.014
70) 1,2-Dichloropropane	(2)	8.482	63	70718	1.022
71) Methyl Methacrylate	(1)	8.573	69	29732	0.957
72) 1,4-Dioxane	(1)	8.585	88	16154	52.589
72) 1,4-Dioxane	(1)	8.585	58	11260	51.088
73) Dibromomethane	(2)	8.598	93	30872	0.997
74) Bromodichloromethane	(2)	8.829	83	70342	0.949
76) 2-Nitropropane	(1)	9.091	41	90379M	8.988
80) cis-1,3-Dichloropropene	(2)	9.384	75	83097	0.889
81) 4-Methyl-2-Pentanone	(1)	9.543	43	482354M	9.751
82)$Toluene-d8	(3)	9.689	98	2279721	10.196
82)$Toluene-d8	(3)	9.689	100	1472250	10.254
83) Toluene	(3)	9.768	92	170776	1.046
84) trans-1,3-Dichloropropene	(3)	10.030	75	63564	0.921
86) Ethyl Methacrylate	(3)	10.085	69	58085	0.859
85) 1,3-Dichloropropene (total)	(3)		75	146661	1.810
88) 1,1,2-Trichloroethane	(3)	10.238	97	46211	1.004
89) Tetrachloroethene	(3)	10.317	166	74212	1.070

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.396	76	81911	1.000
91) 2-Hexanone	(1)	10.439	43	342203	9.799
93) Dibromochloromethane	(3)	10.616	129	42221	0.931
95) 1,2-Dibromoethane	(3)	10.731	107	41389	0.988
97)*Chlorobenzene-d5	(3)	11.152	117	1656015	10.000
98) Chlorobenzene	(3)	11.183	112	186471	1.051
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	55165	0.978
100) Ethylbenzene	(3)	11.268	91	322152	1.041
101) m+p-Xylene	(3)	11.378	106	252581	2.125
104) o-Xylene	(3)	11.707	106	118776	1.027
106) Styrene	(3)	11.725	104	180802	1.013
105) Xylene (Total)	(3)		106	371357	3.152
107) Bromoform	(3)	11.890	173	19819	0.956
108) Isopropylbenzene	(3)	12.006	105	310810	1.047
111)$4-Bromofluorobenzene	(3)	12.158	95	804320	10.188
111)$4-Bromofluorobenzene	(3)	12.158	174	654264	10.184
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	57570	0.935
114) Bromobenzene	(4)	12.274	156	71683	0.981
115) trans-1,4-Dichloro-2-butene	(1)	12.280	53	111863	9.020
116) 1,2,3-Trichloropropane	(4)	12.298	110	16016	0.993
117) n-Propylbenzene	(4)	12.335	91	387652	1.049
119) 2-Chlorotoluene	(4)	12.414	126	73077	1.027
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	261500	1.025
122) 4-Chlorotoluene	(4)	12.505	126	74967	1.036
125) tert-Butylbenzene	(4)	12.713	134	53207	1.008
126) Pentachloroethane	(4)	12.749	167	38324	0.941
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	263380	1.028
128) sec-Butylbenzene	(4)	12.877	105	345485	1.046
131) 1,3-Dichlorobenzene	(4)	12.981	146	143845	1.008
132) p-Isopropyltoluene	(4)	12.981	119	280254	0.969
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	875534	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	145728	1.003
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	117583	1.010
136) Benzyl Chloride	(4)	13.127	126	12480	0.917
138) n-Butylbenzene	(4)	13.274	92	141602	1.034
139) 1,2-Dichlorobenzene	(4)	13.310	146	133927	1.012
143) 1,2-Dibromo-3-chloropropane	(1)	13.859	155	6191	0.923
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	92974	0.965

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

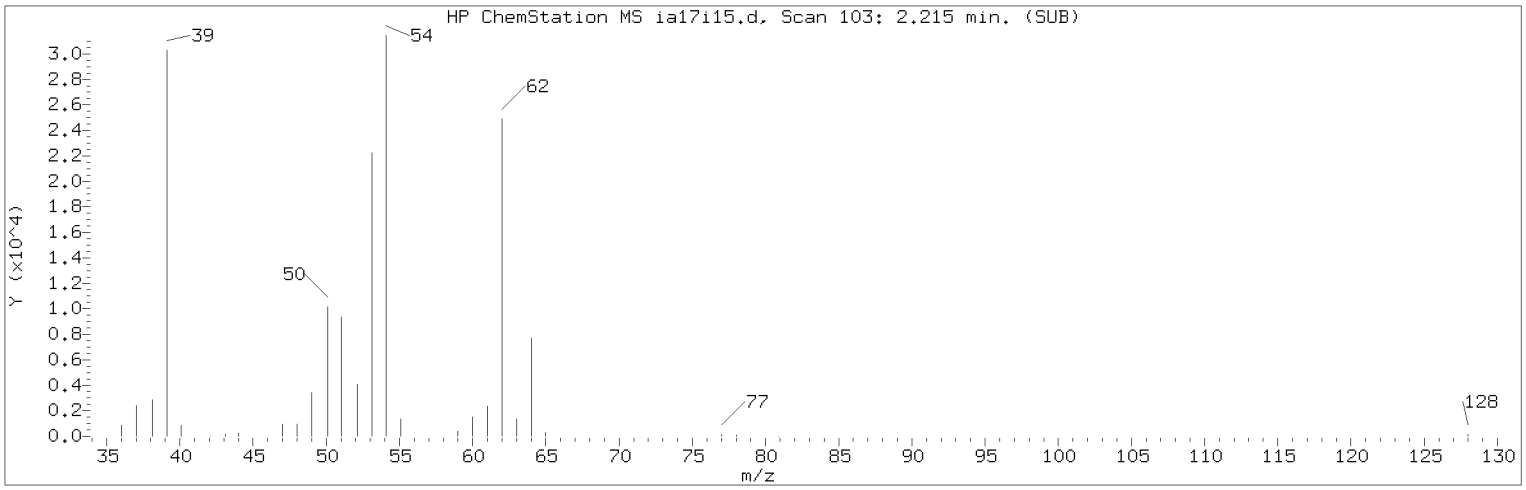
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

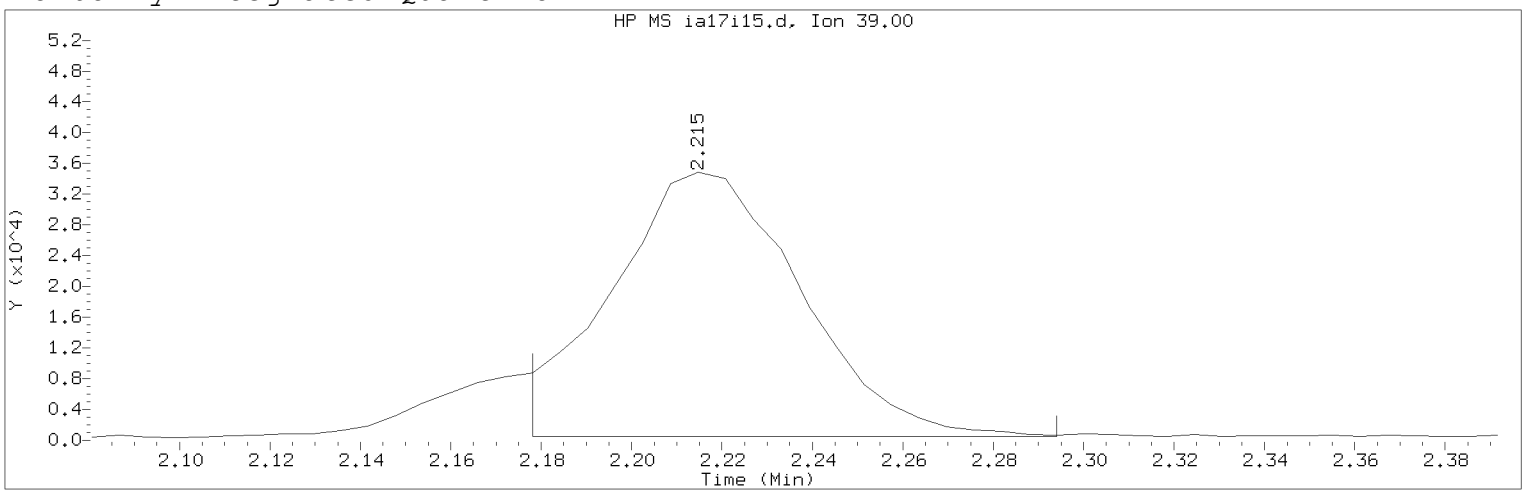
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	79497	0.941
146) Hexachlorobutadiene	(4)	14.481	225	30636	1.002
147) Naphthalene	(4)	14.584	128	152256	0.920
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	71223	0.948

Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

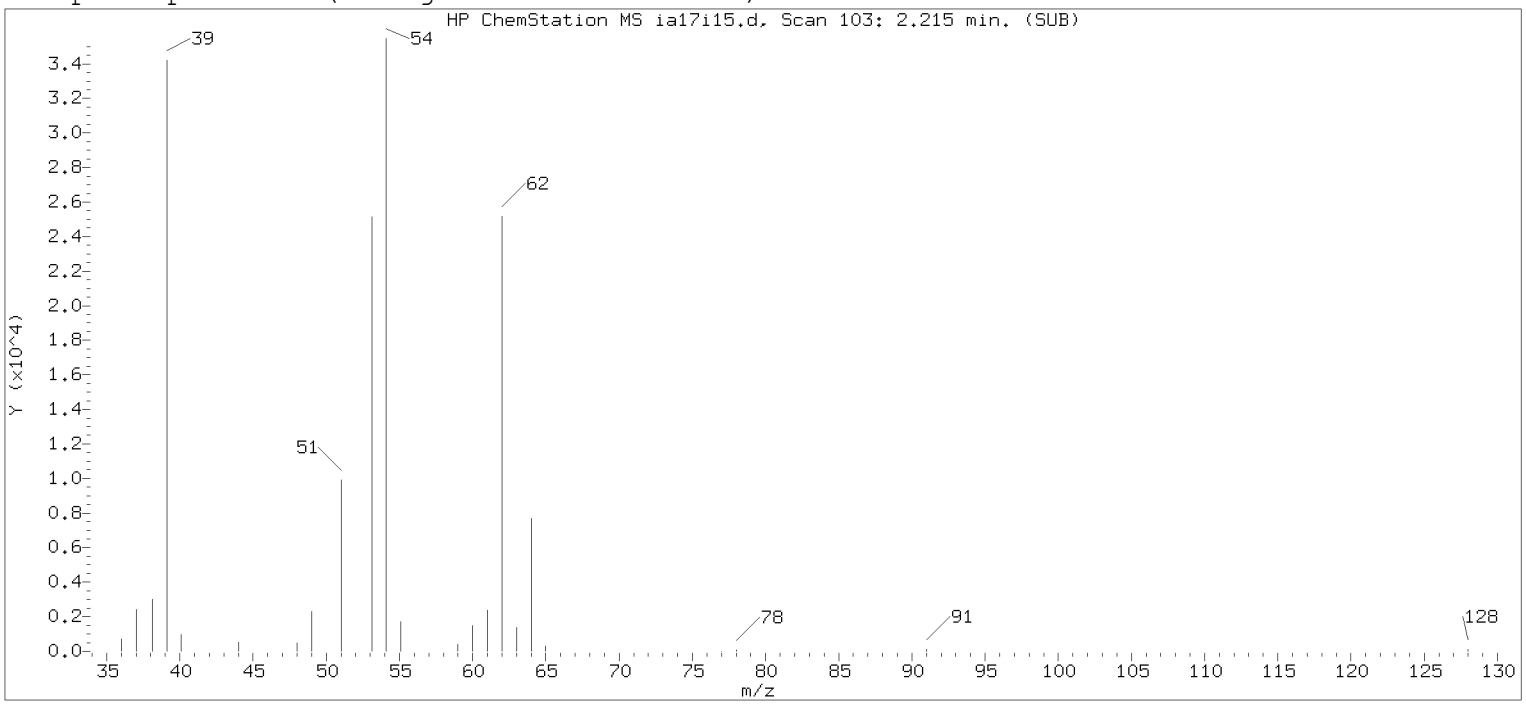
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area (flag) : 101036M
On-Column Amount (ng) : 1.1273
Integration start scan : 96 Integration stop scan: 115
Y at integration start : 521 Y at integration end: 521

Reason for manual integration: improper integration

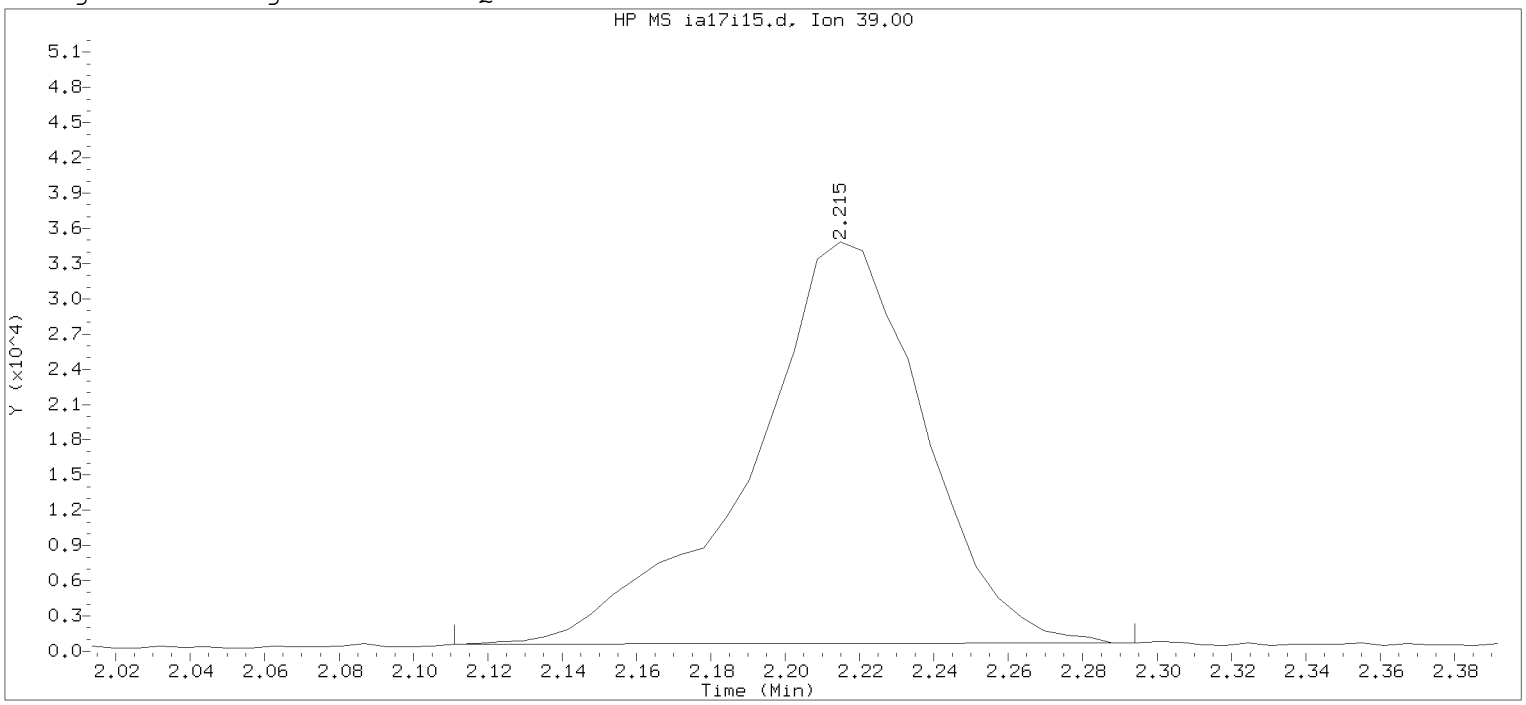
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

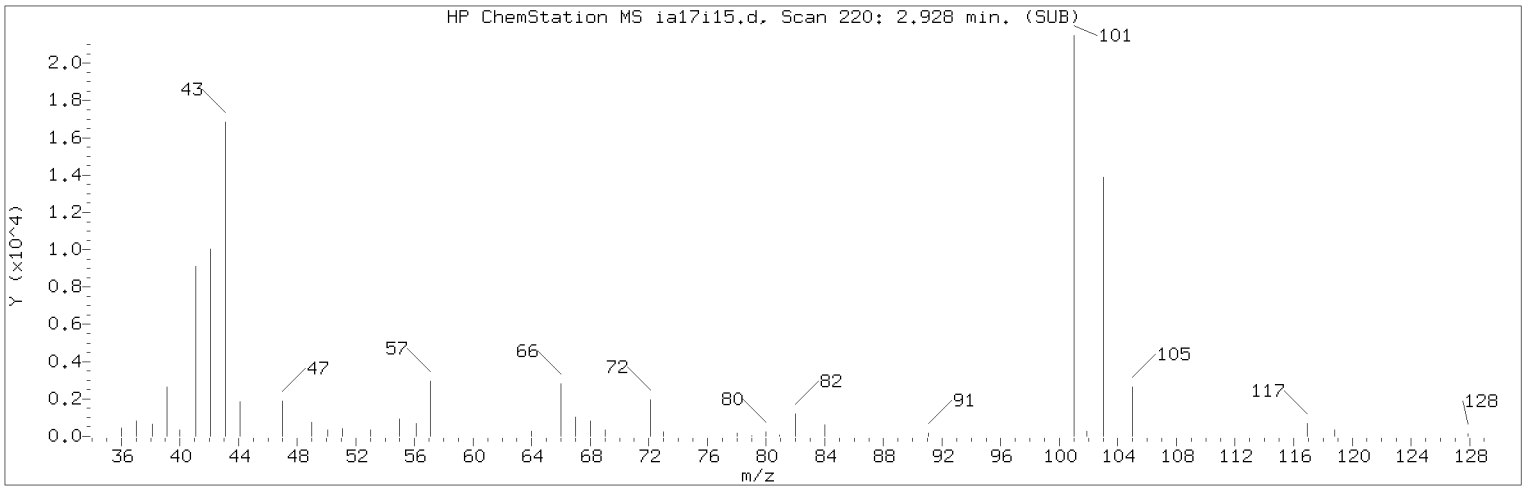
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

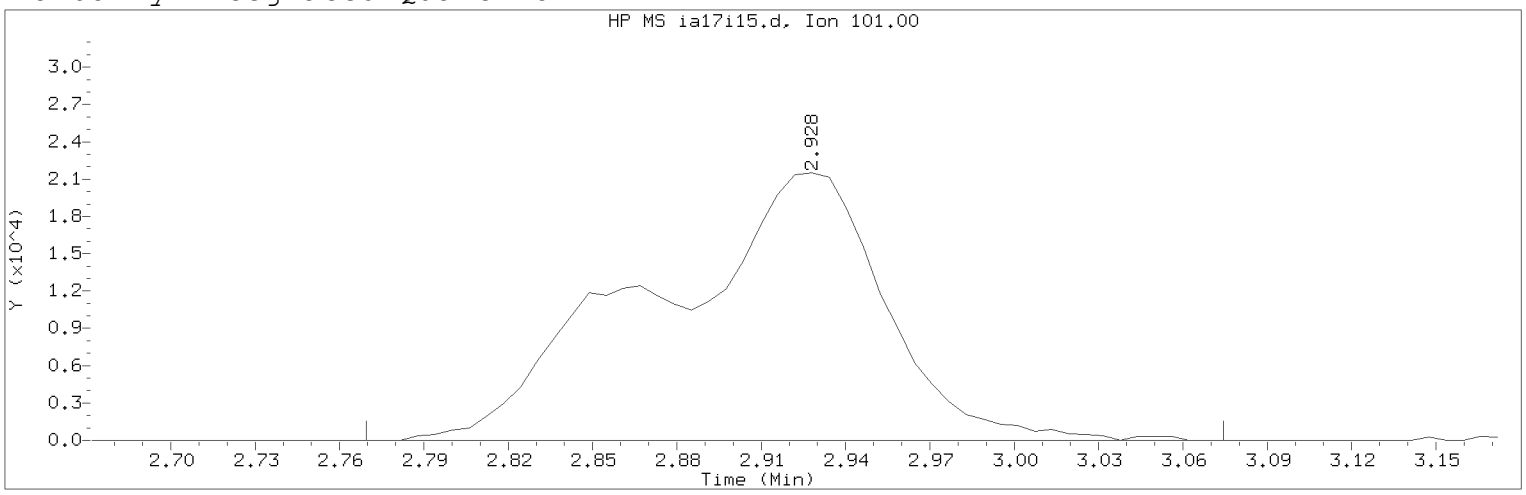
Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 103		
Retention Time (minutes)	: 2.215		
Quant Ion	: 39.00		
Area	: 110630		
On-column Amount (ng)	: 1.1988		
Integration start scan	: 85	Integration stop scan:	115
Y at integration start	: 592	Y at integration end:	708

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

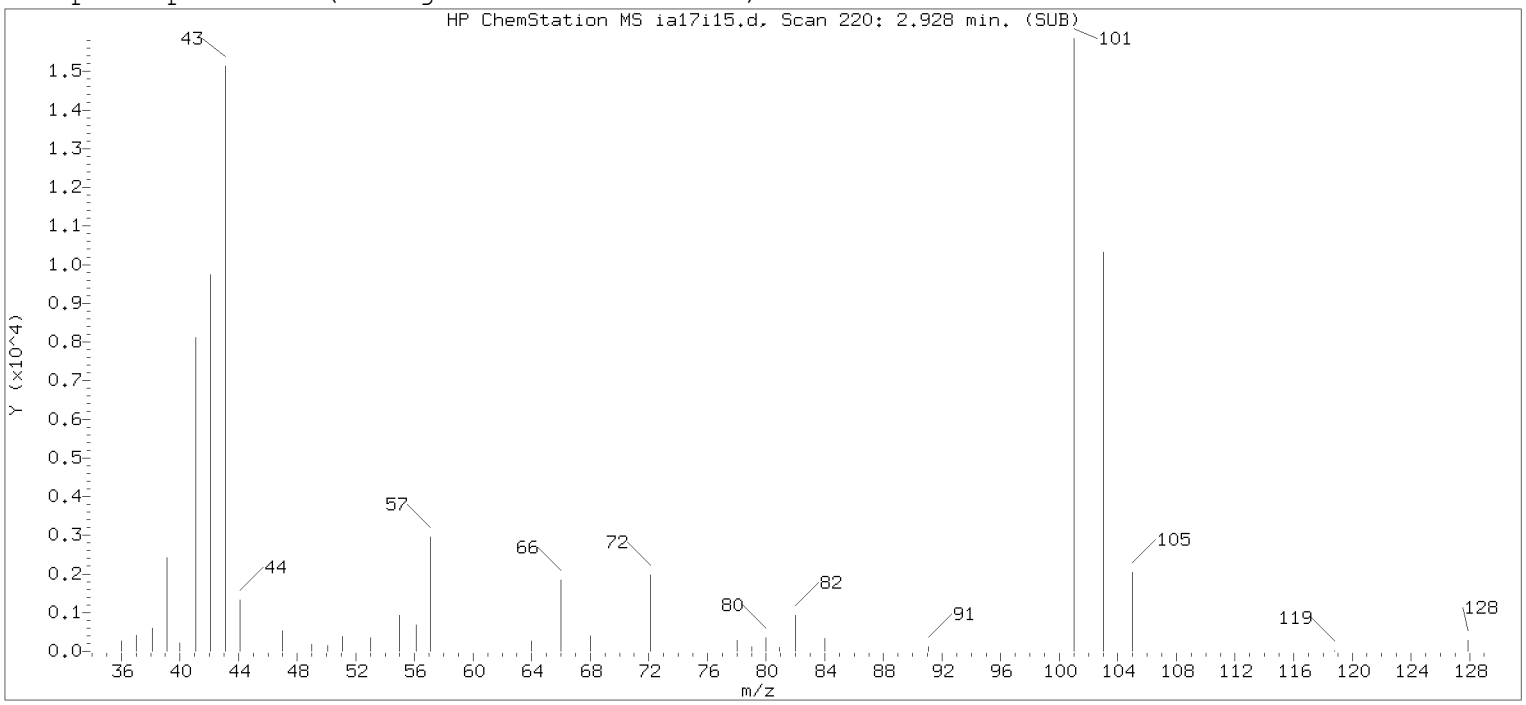
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area (flag) : 122740M
On-Column Amount (ng) : 1.1119
Integration start scan : 193 Integration stop scan: 243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

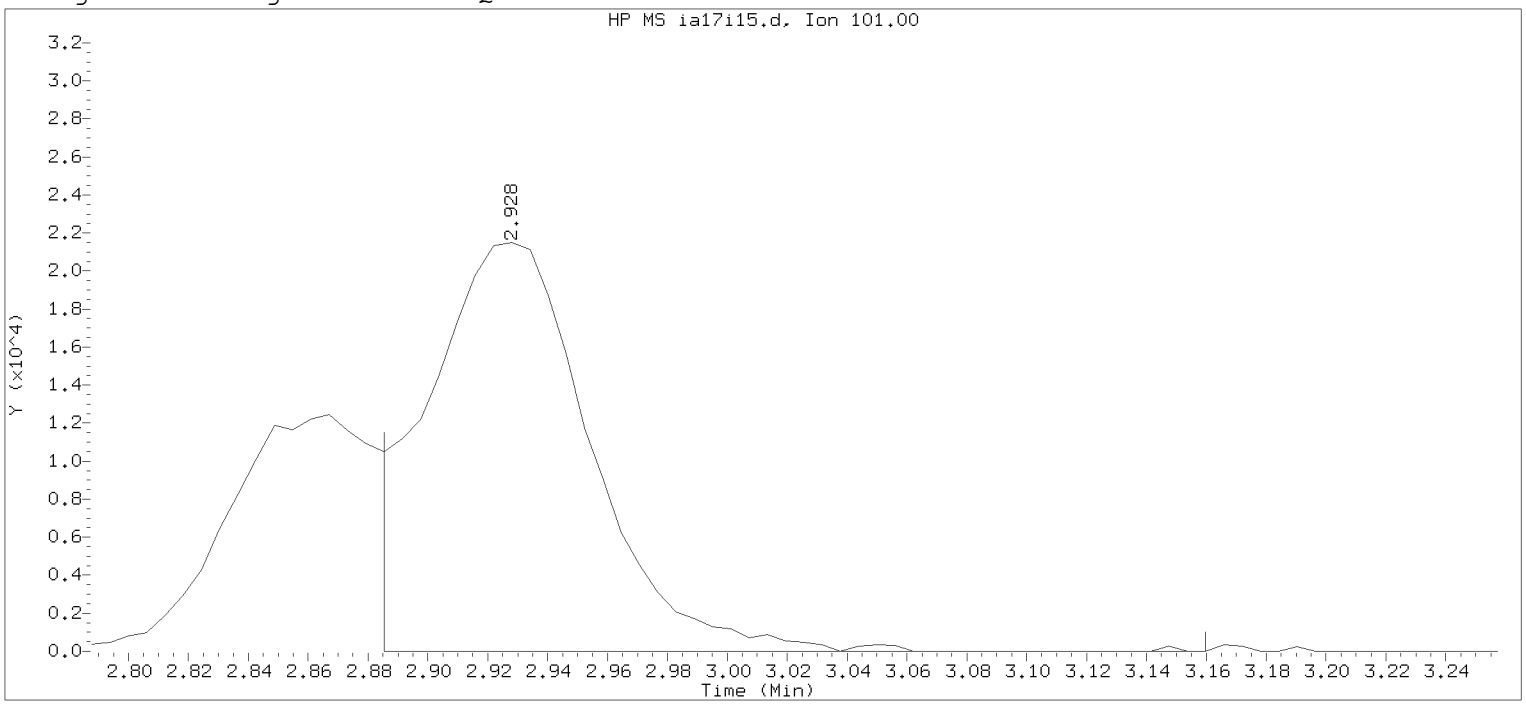
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area : 81677
On-column Amount (ng) : 0.7309
Integration start scan : 212 Integration stop scan: 257
Y at integration start : 0 Y at integration end: 0

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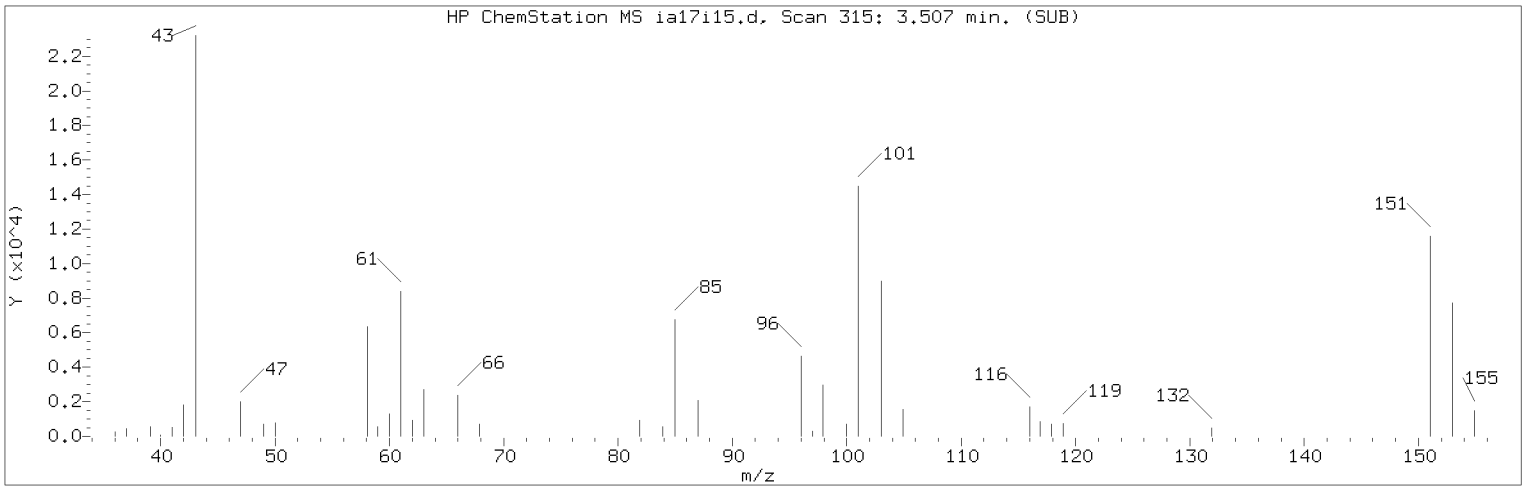
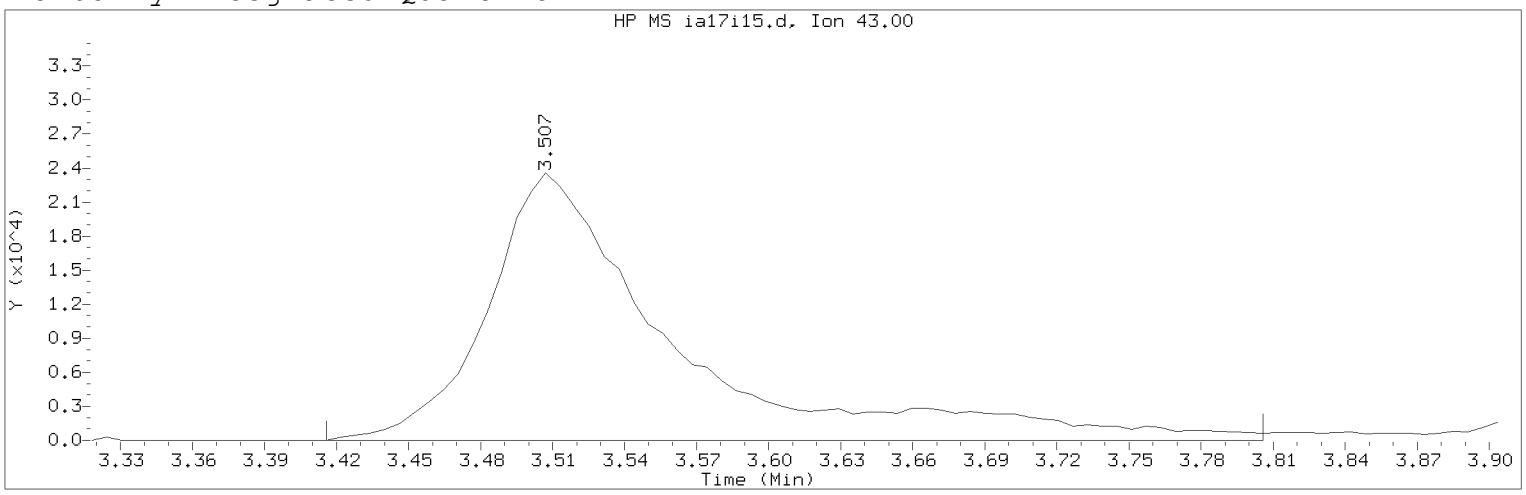
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

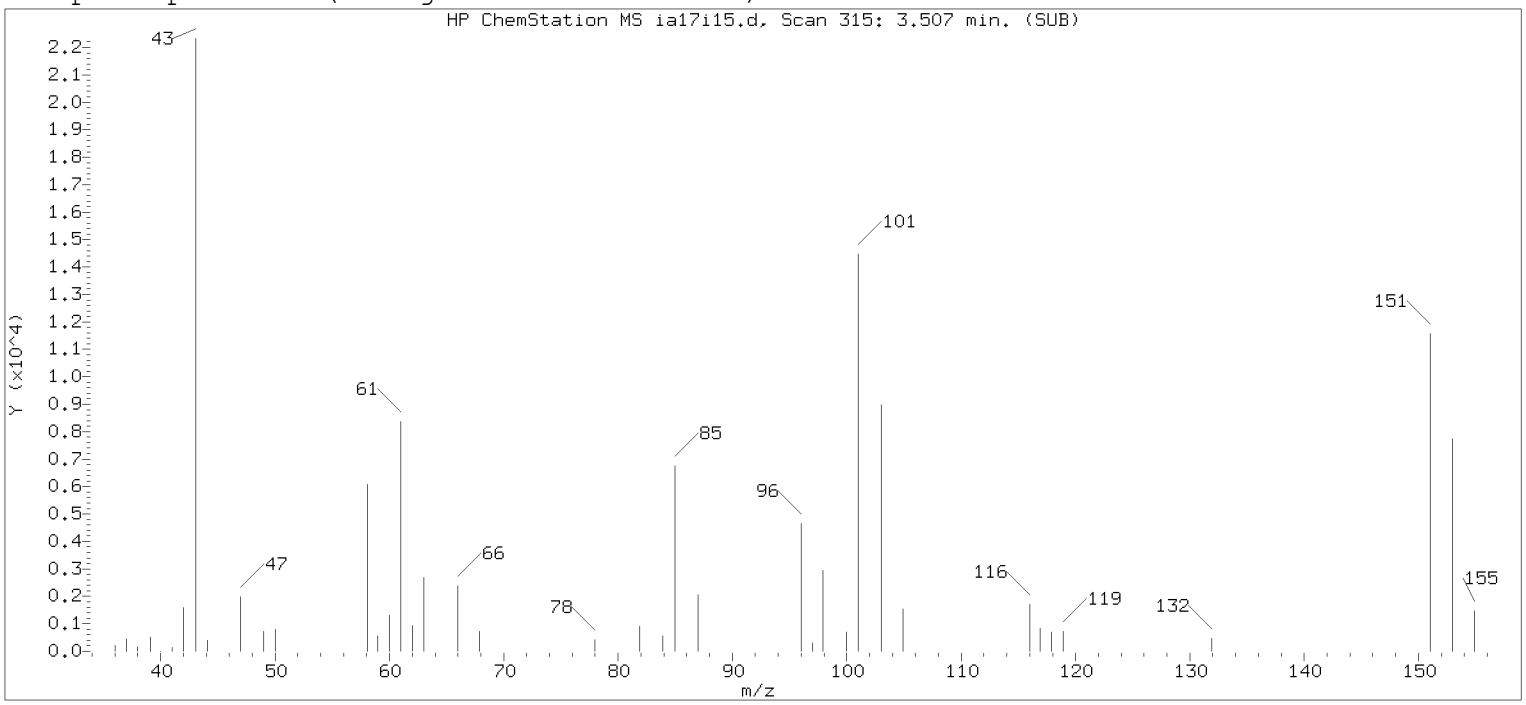
Compound Number : 14
Compound Name : Acetone
Scan Number : 315
Retention Time (minutes): 3.507
Quant Ion : 43.00
Area (flag) : 126407M
On-Column Amount (ng) : 9.9197
Integration start scan : 299 Integration stop scan: 363
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

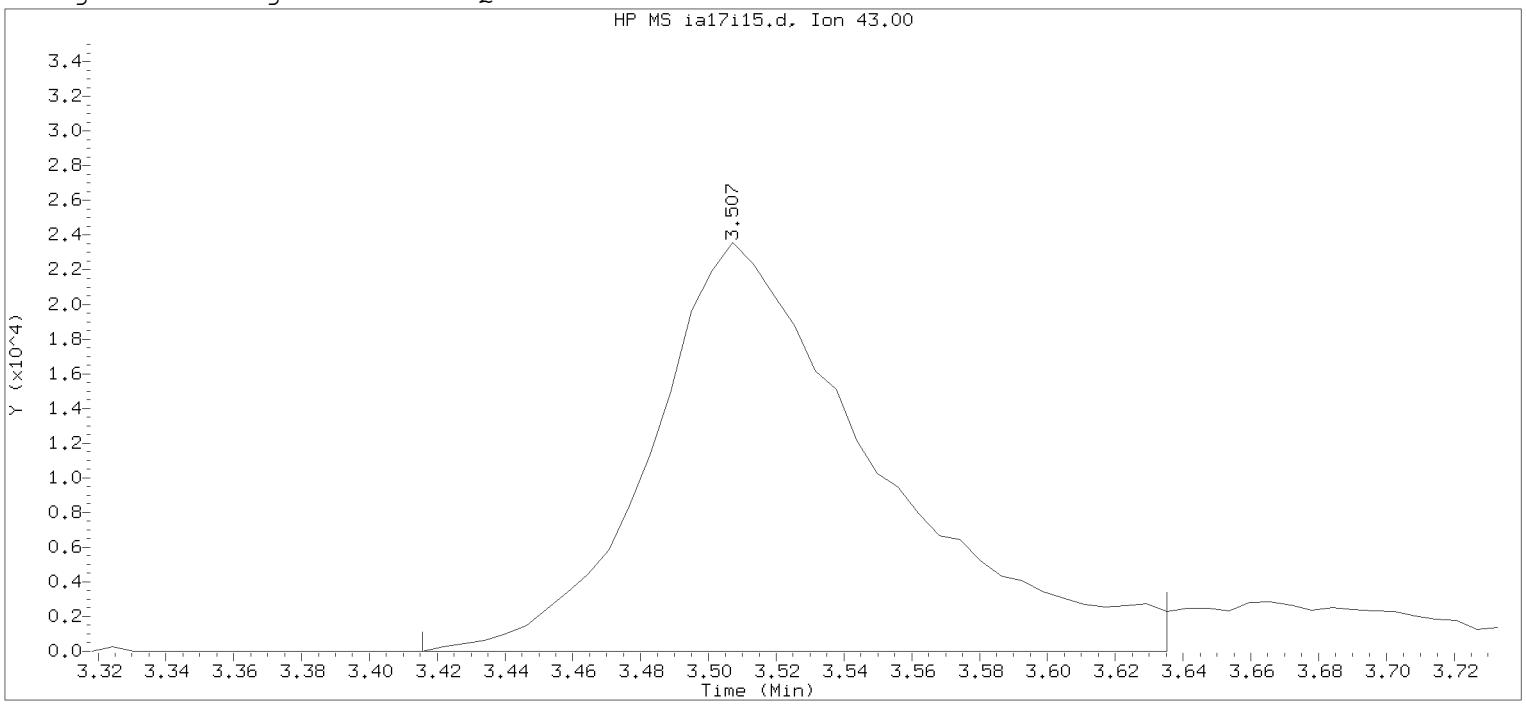
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

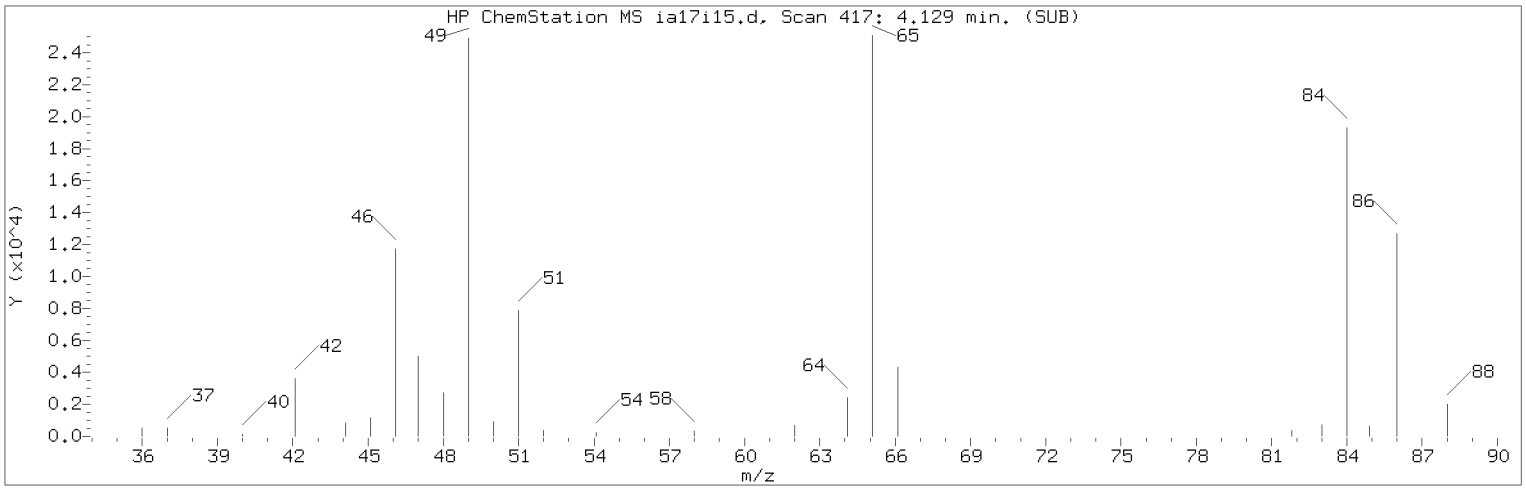
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

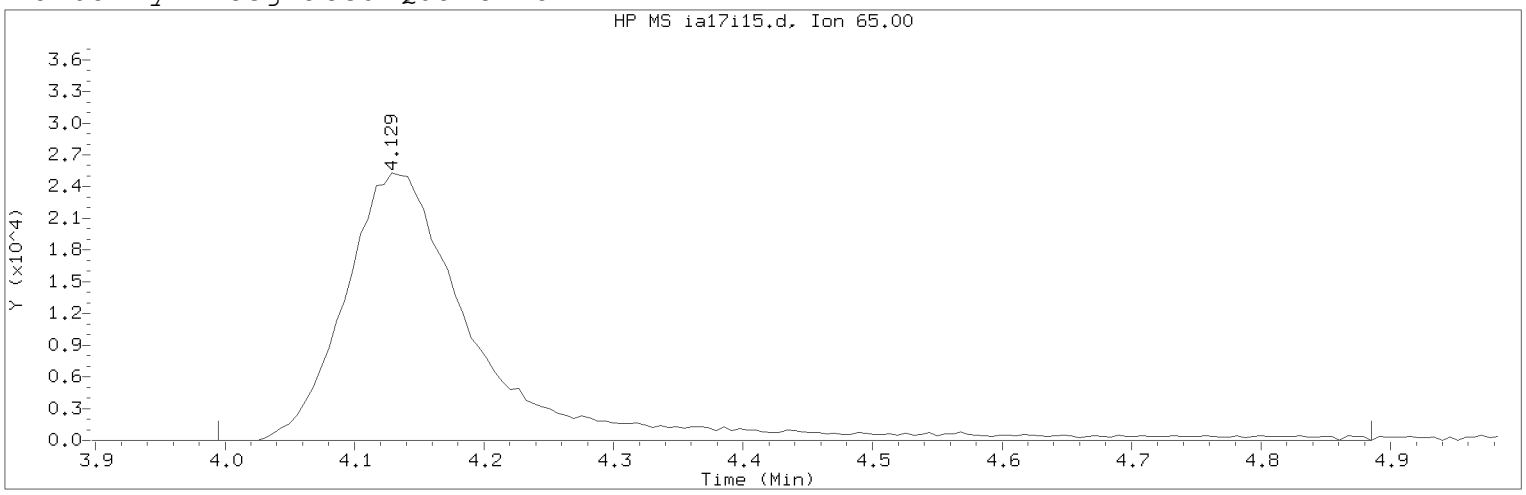
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 315		
Retention Time (minutes)	: 3.507		
Quant Ion	: 43.00		
Area	: 108805		
On-column Amount (ng)	: 8.8627		
Integration start scan	: 299	Integration stop scan:	335
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

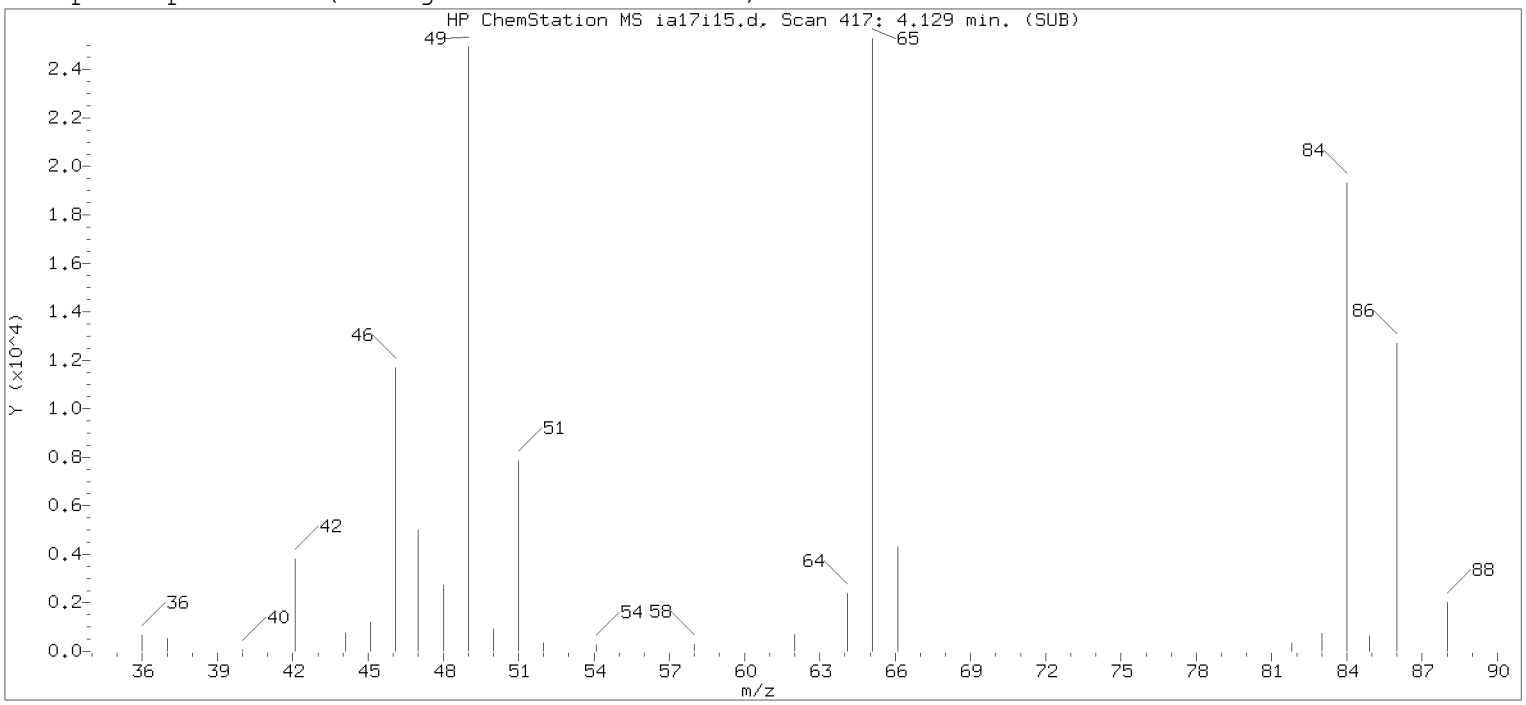
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 417
Retention Time (minutes): 4.129
Quant Ion : 65.00
Area (flag) : 181349M
On-Column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

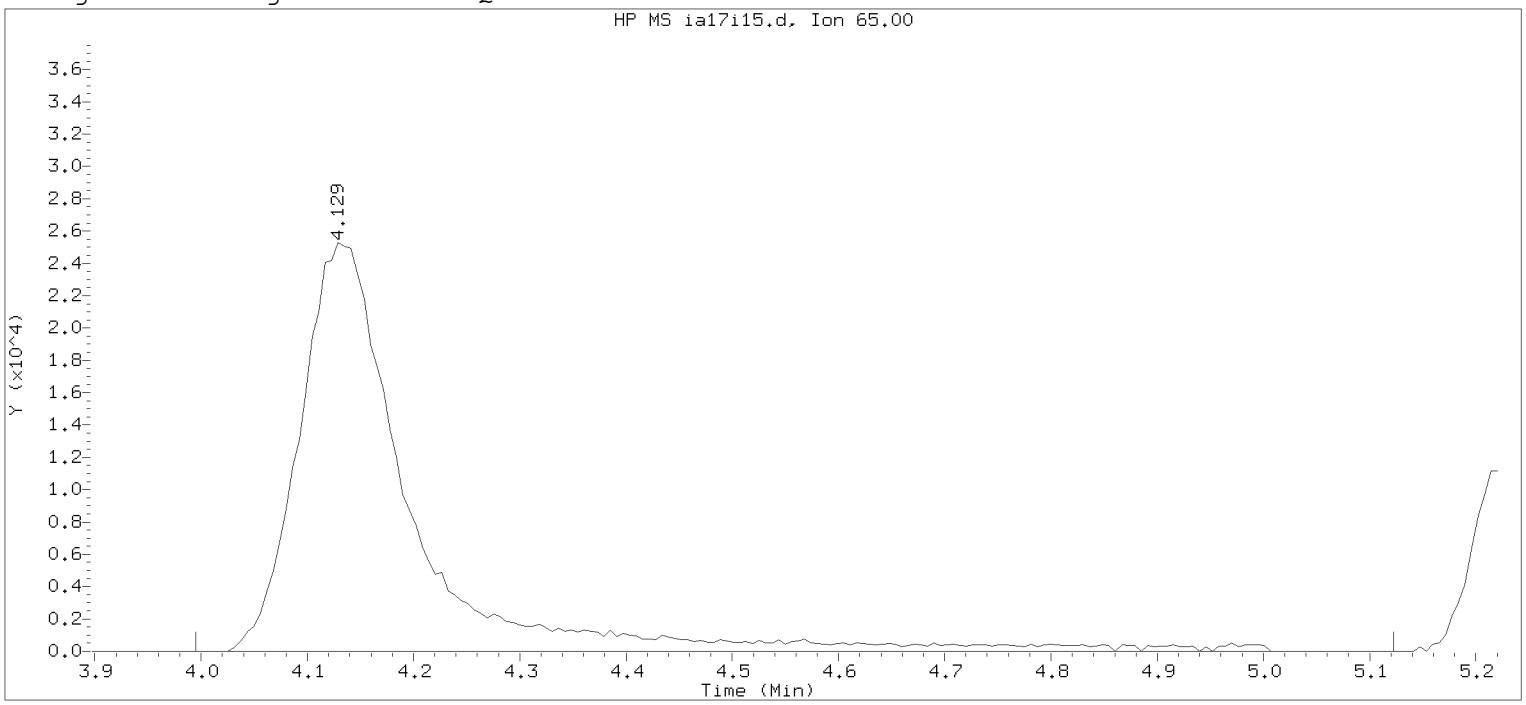
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

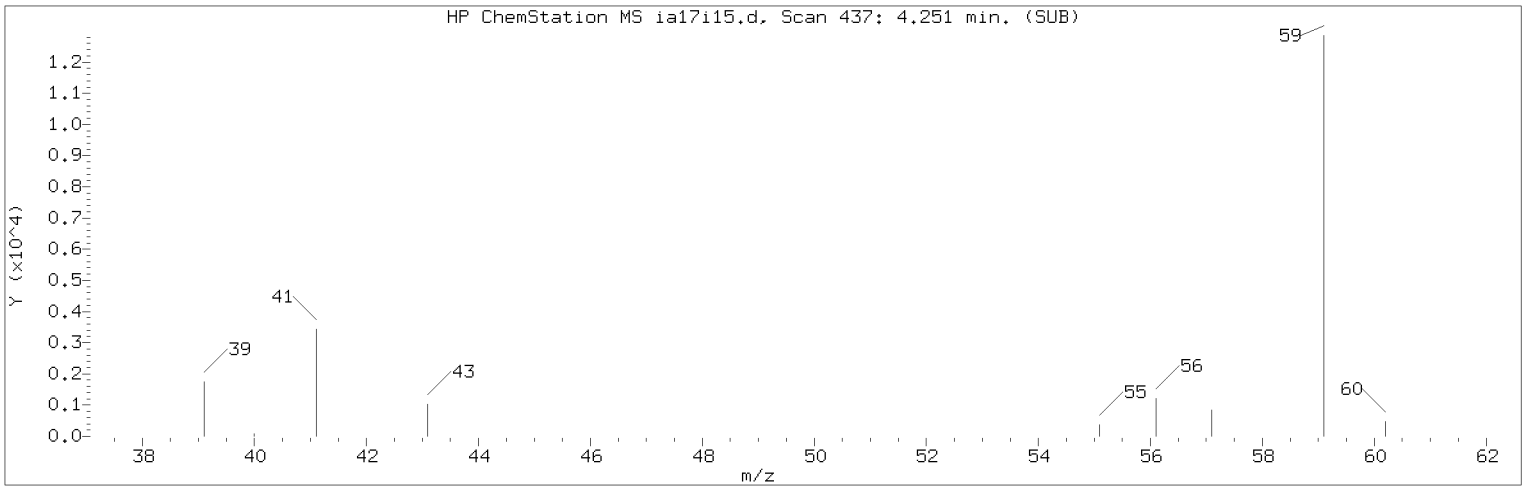
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

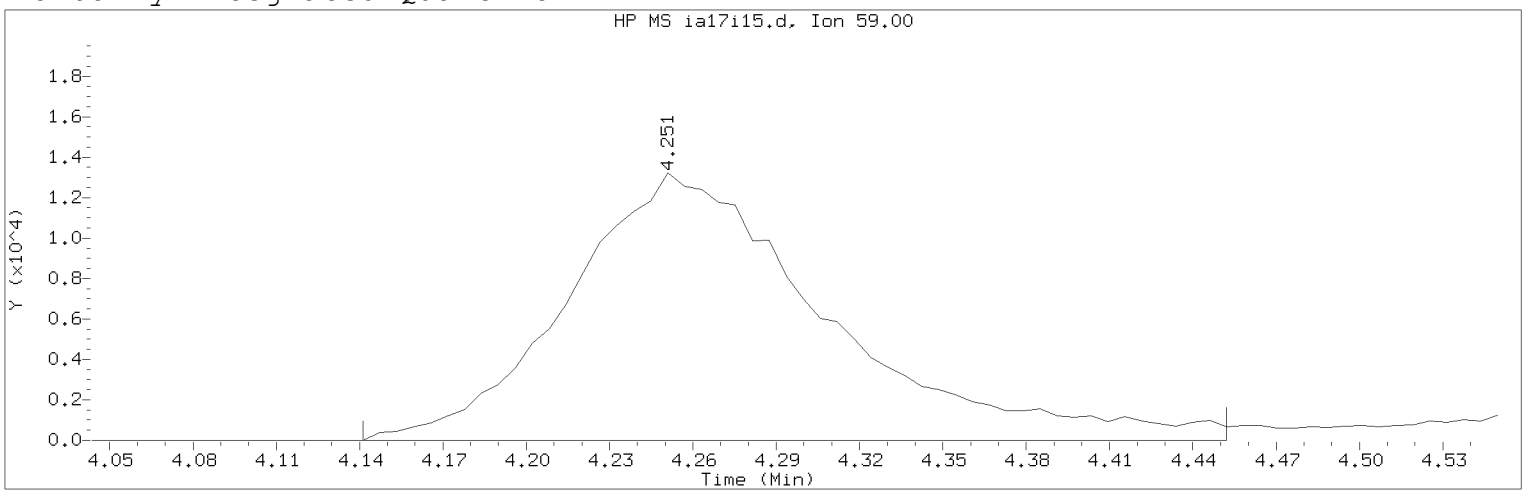
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 417		
Retention Time (minutes)	: 4.129		
Quant Ion	: 65.00		
Area	: 183458		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 394	Integration stop scan:	579
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

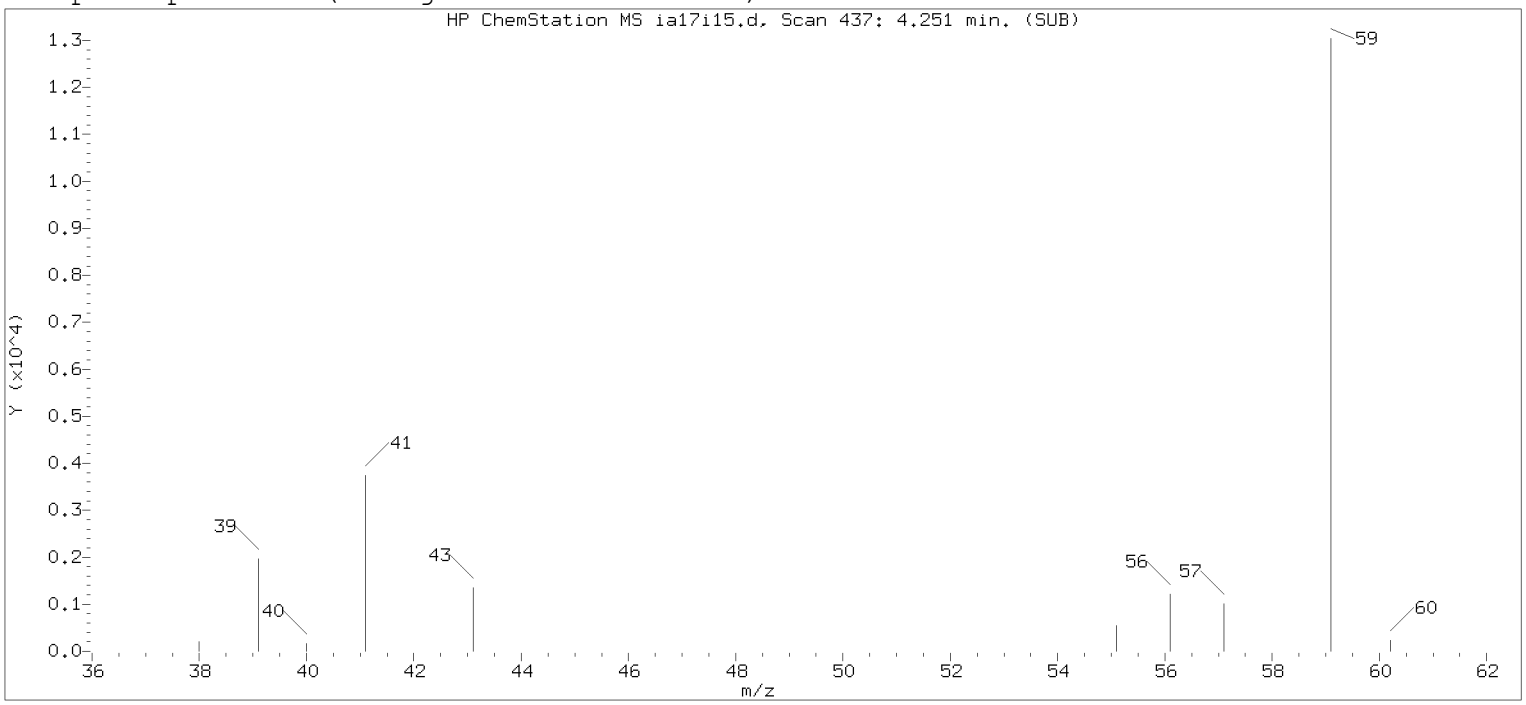
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 59.00
Area (flag) : 85294M
On-Column Amount (ng) : 19.3717
Integration start scan : 418 Integration stop scan: 469
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

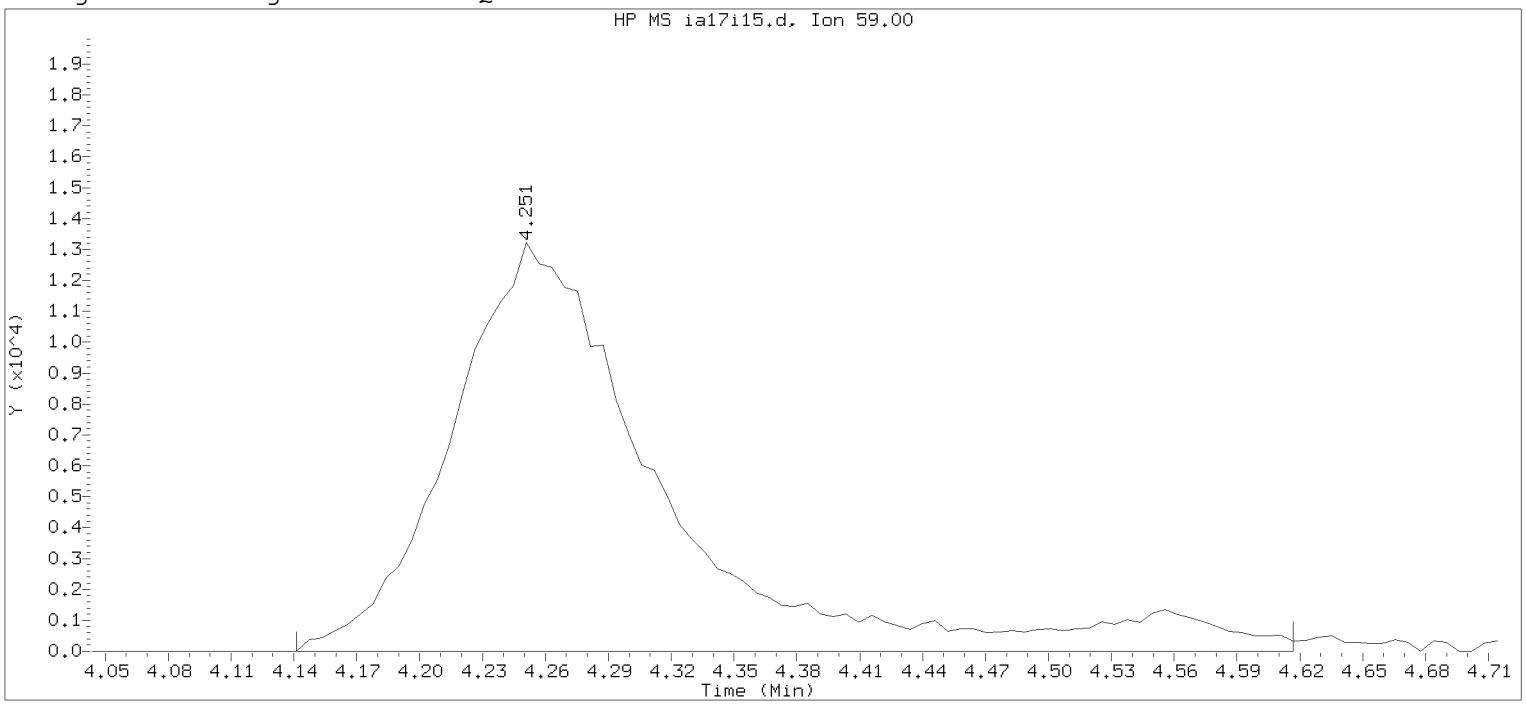
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

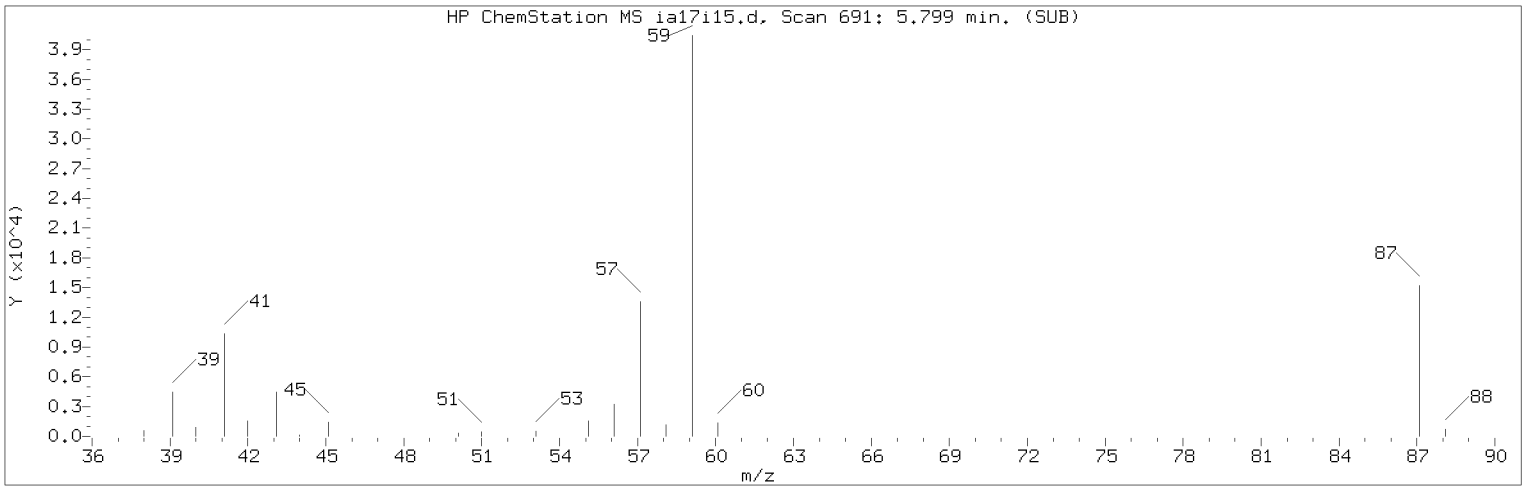
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

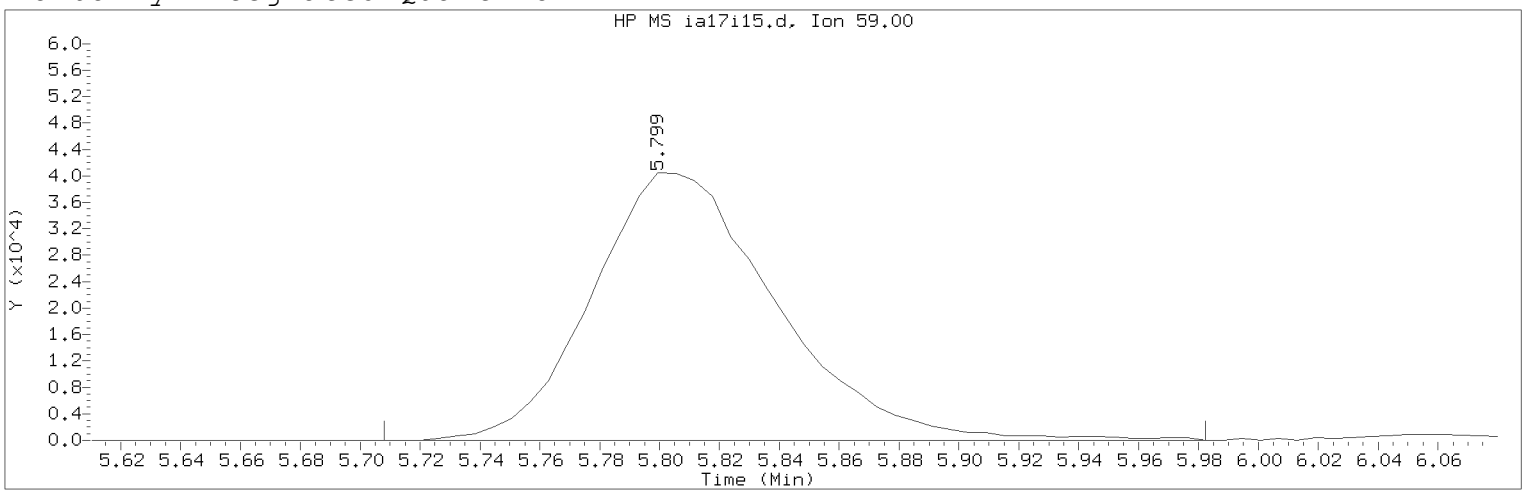
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 437
Retention Time (minutes): 4.251
Quant Ion : 59.00
Area : 92925
On-column Amount (ng) : 20.2924
Integration start scan : 418 Integration stop scan: 496
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

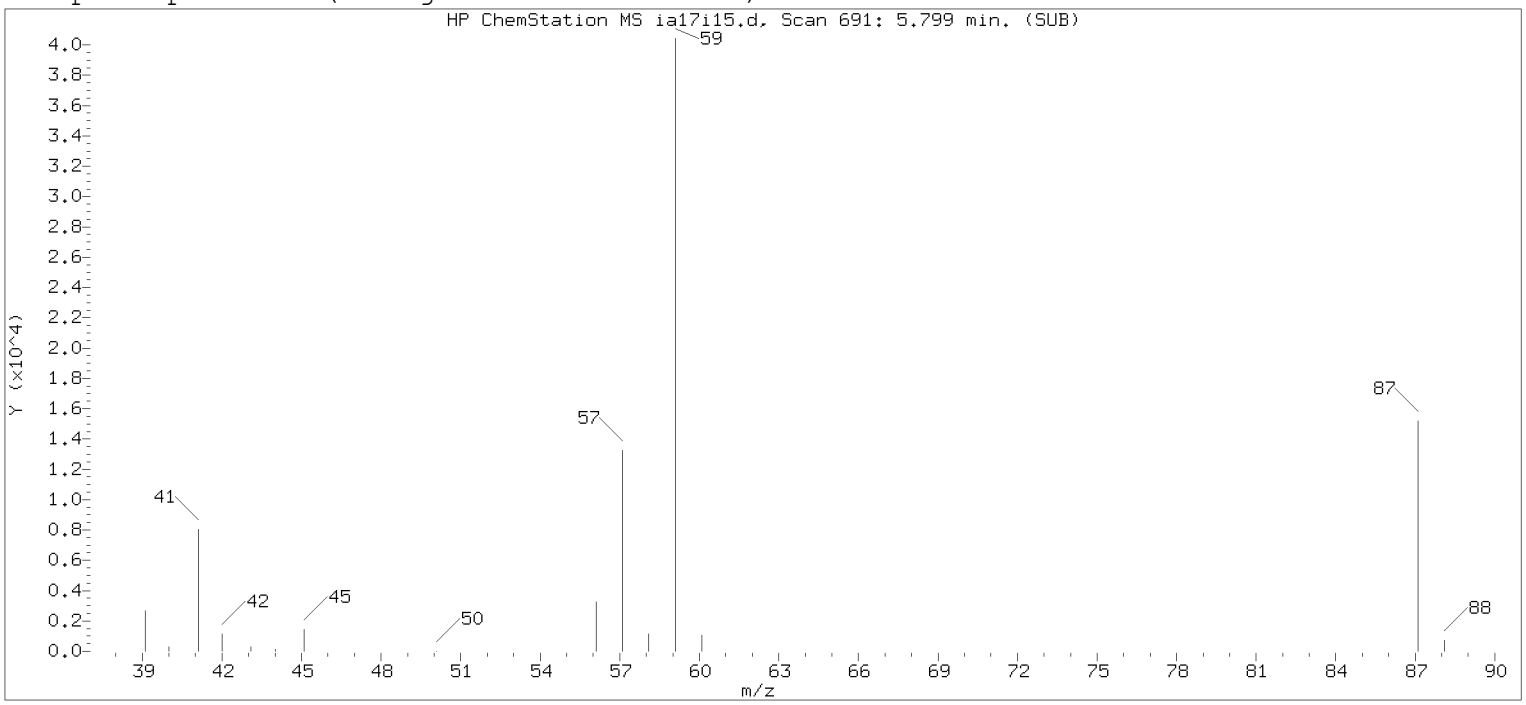
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 691
Retention Time (minutes): 5.799
Quant Ion : 59.00
Area (flag) : 172907M
On-Column Amount (ng) : 0.9732
Integration start scan : 675 Integration stop scan: 720
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

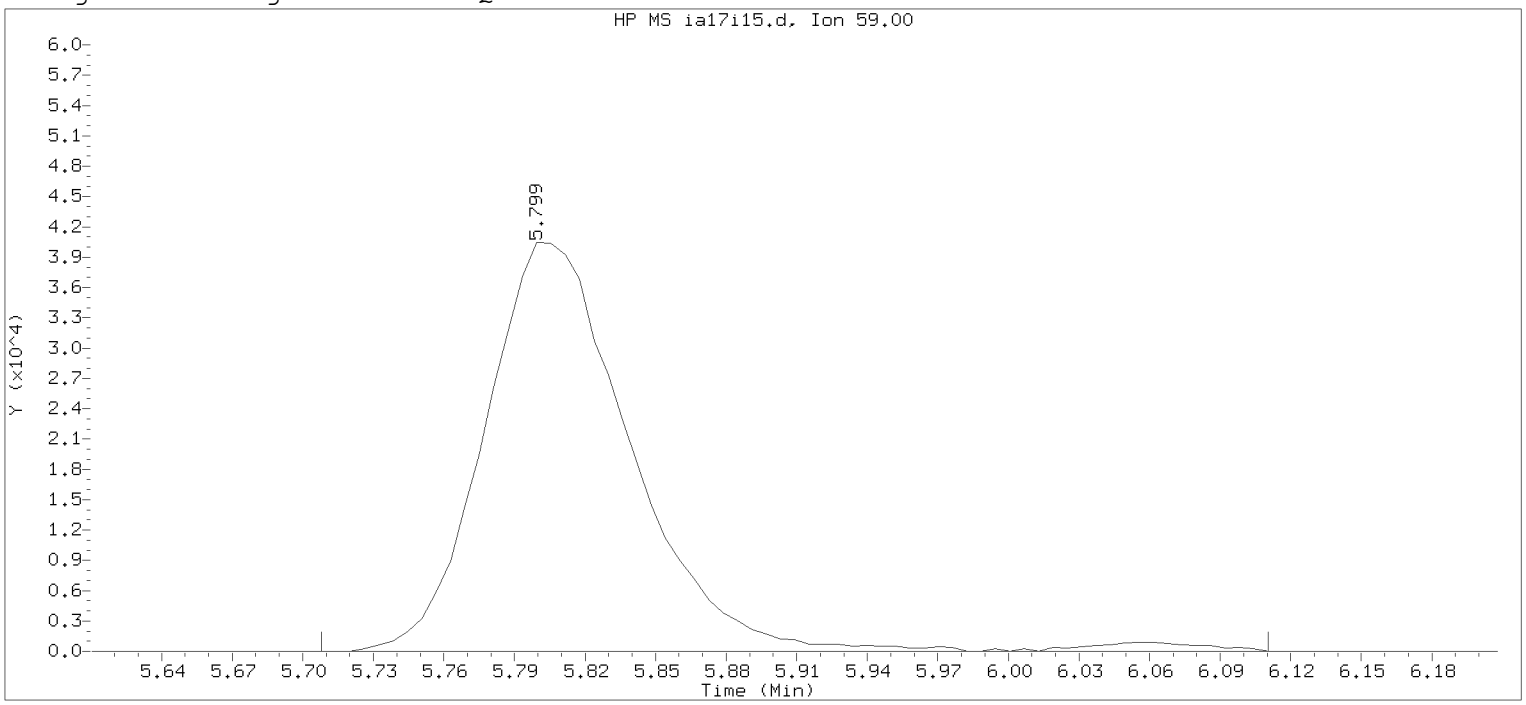
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

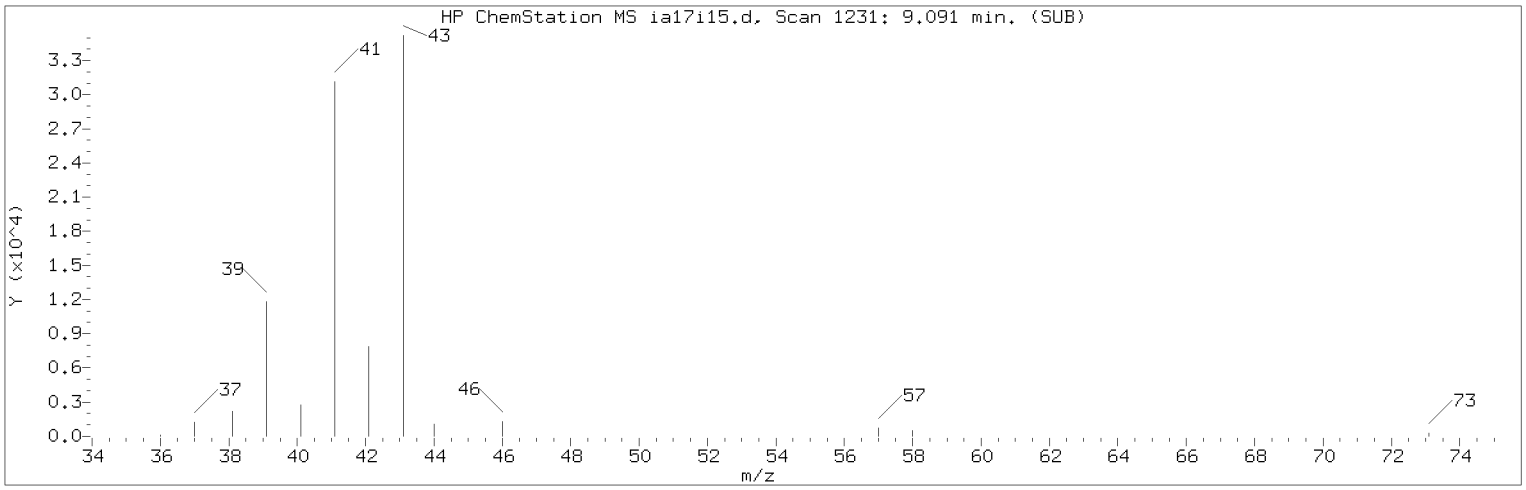
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

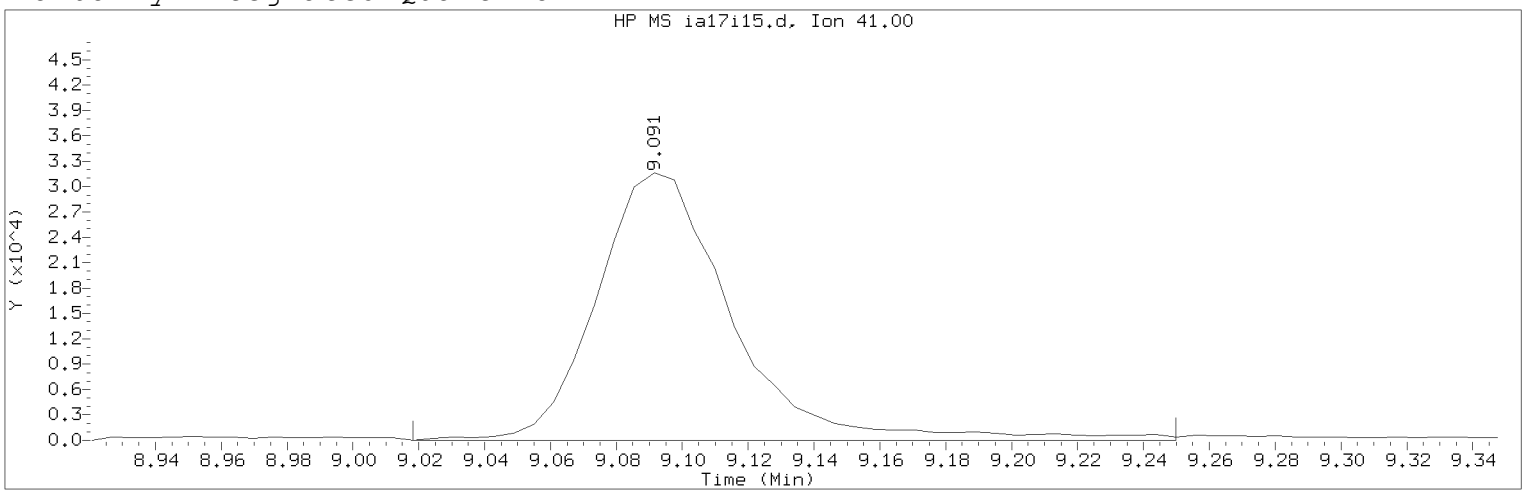
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 691
Retention Time (minutes): 5.799
Quant Ion : 59.00
Area : 176191
On-column Amount (ng) : 0.9234
Integration start scan : 675 Integration stop scan: 741
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

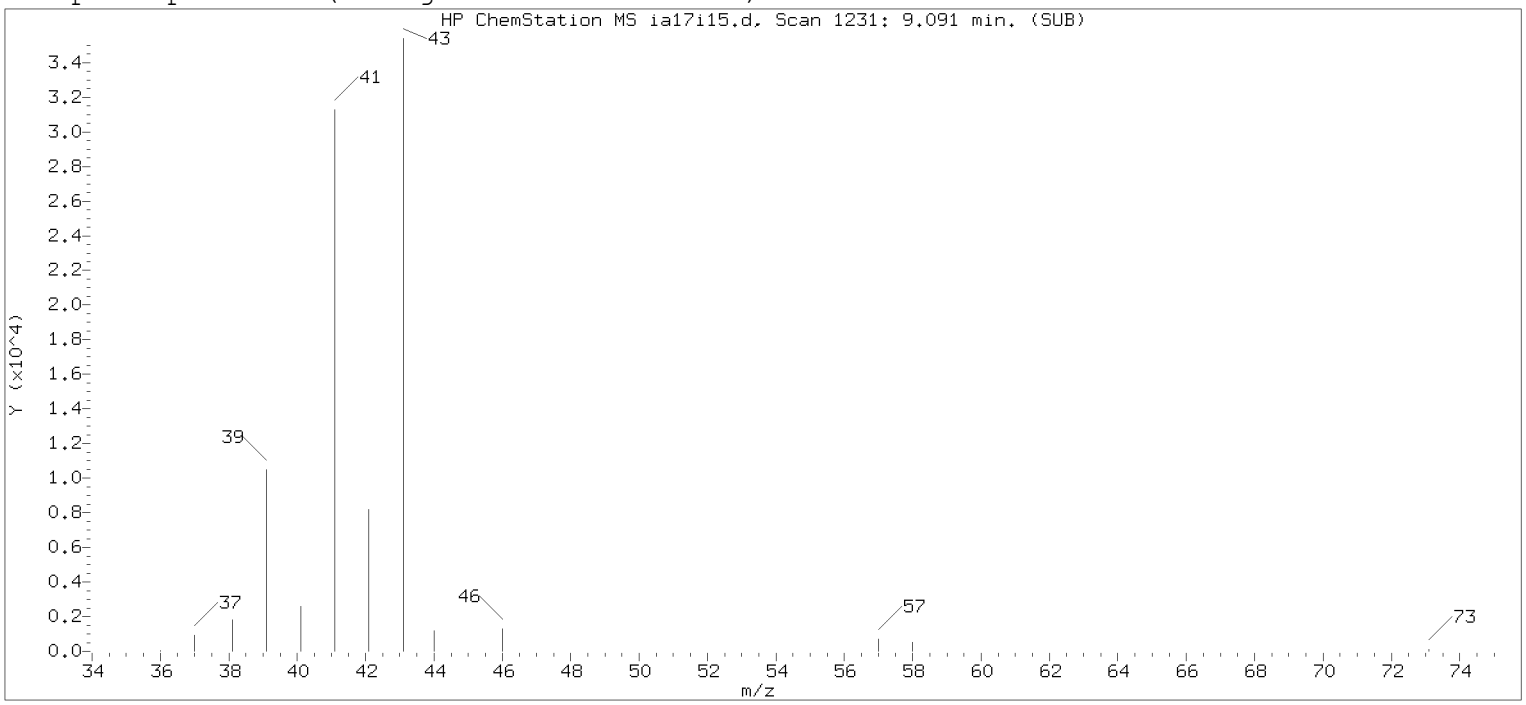
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1231
Retention Time (minutes): 9.091
Quant Ion : 41.00
Area (flag) : 90379M
On-Column Amount (ng) : 8.9879
Integration start scan : 1218 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

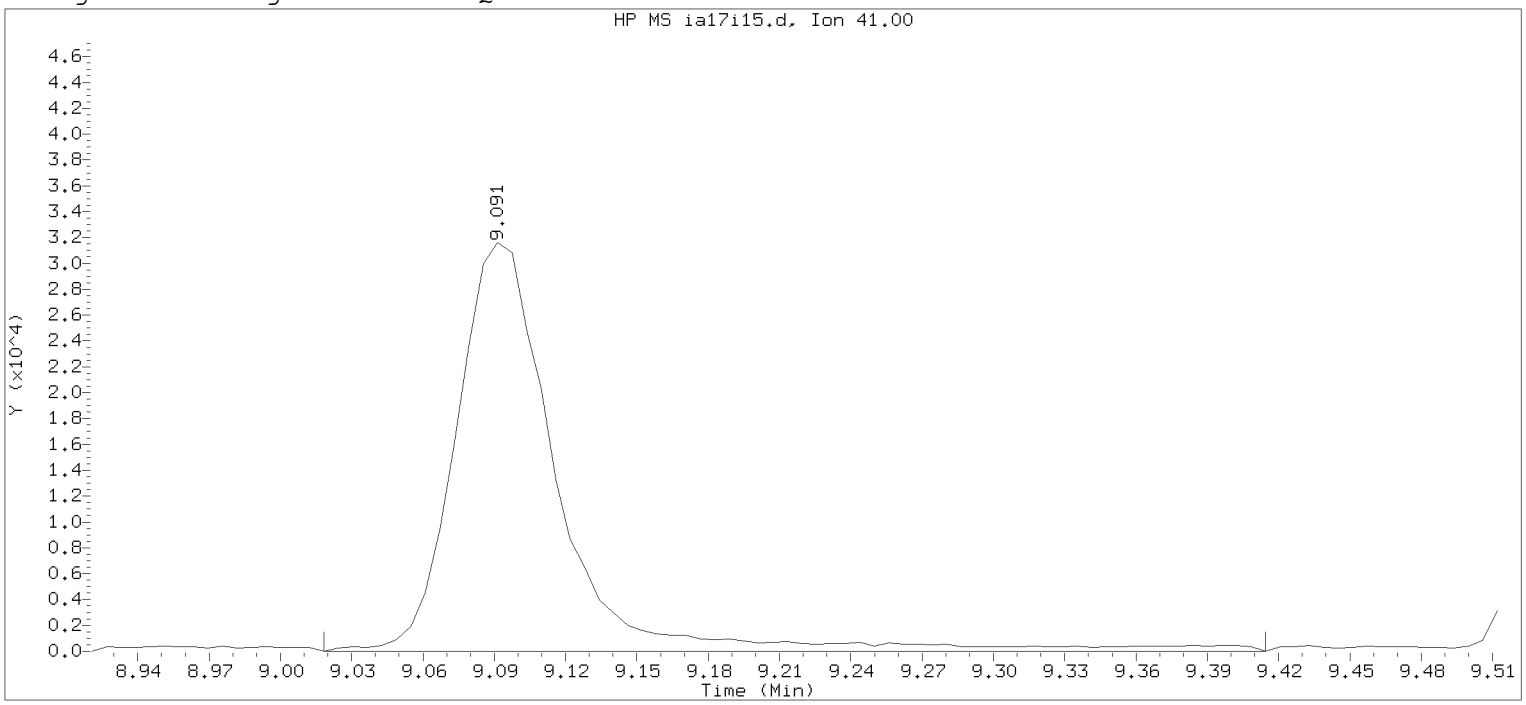
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

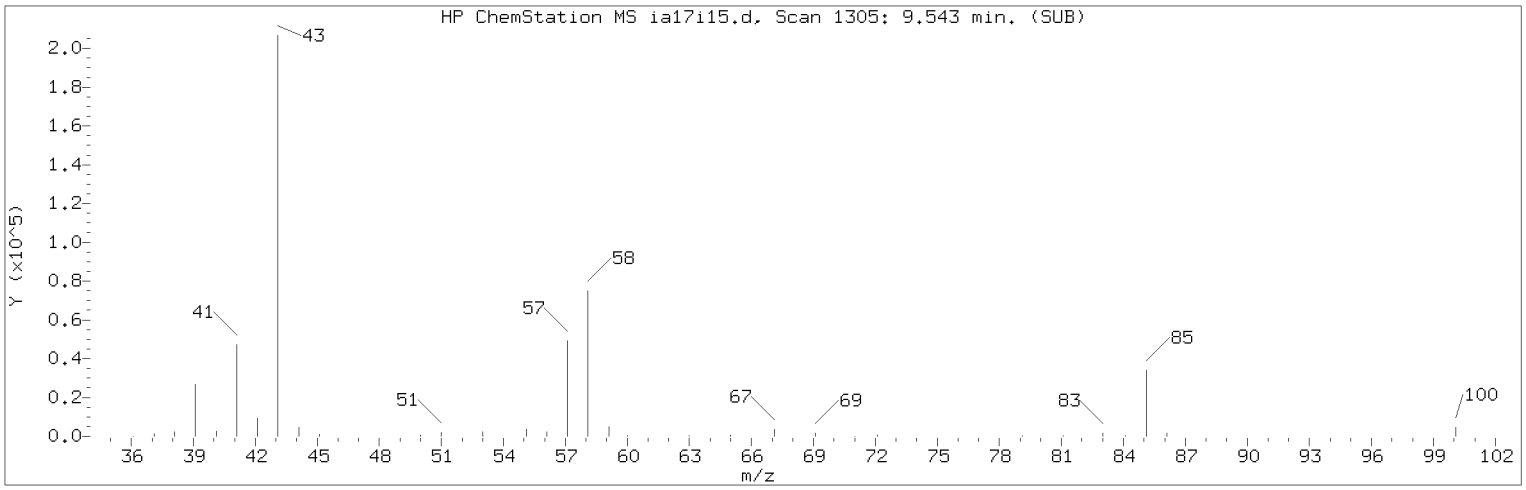
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

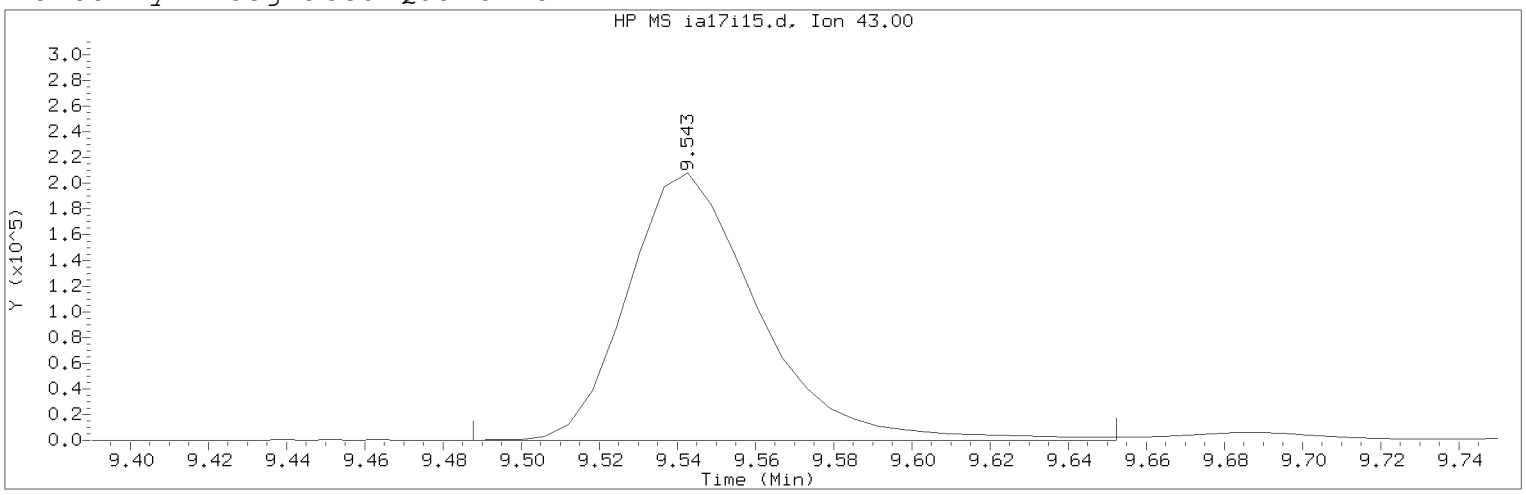
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1231
Retention Time (minutes): 9.091
Quant Ion : 41.00
Area : 94233
On-column Amount (ng) : 8.5485
Integration start scan : 1218 Integration stop scan: 1283
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

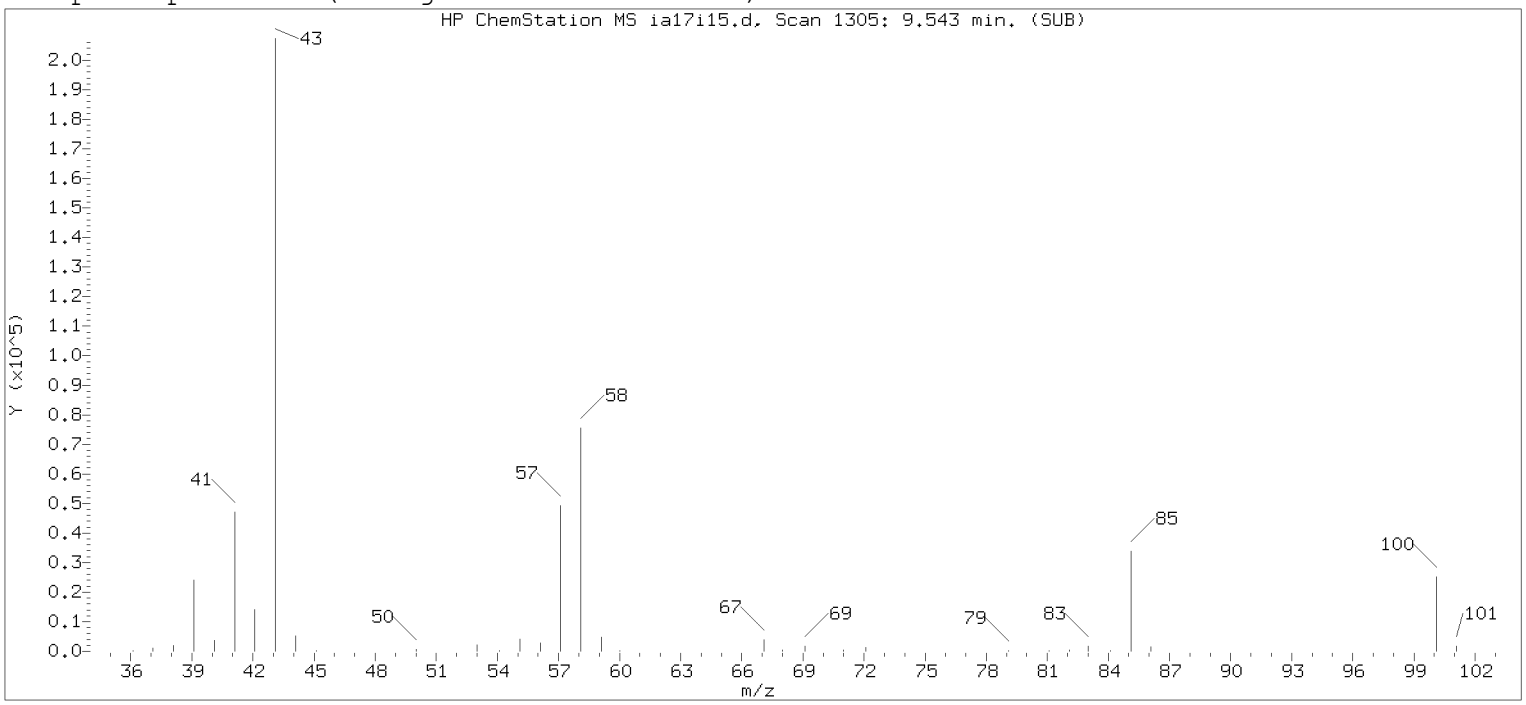
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1305
Retention Time (minutes): 9.543
Quant Ion : 43.00
Area (flag) : 482354M
On-Column Amount (ng) : 9.7509
Integration start scan : 1295 Integration stop scan: 1322
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

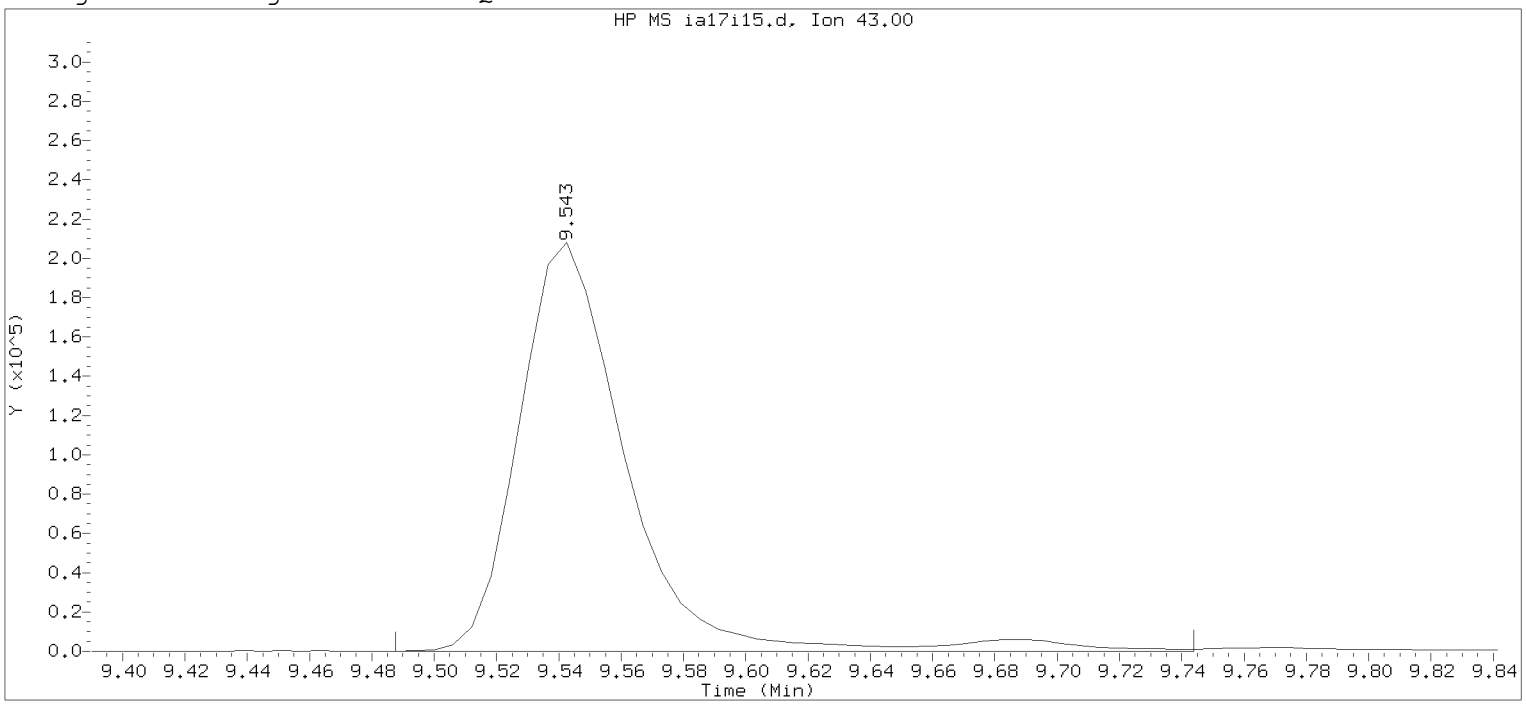
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:37.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



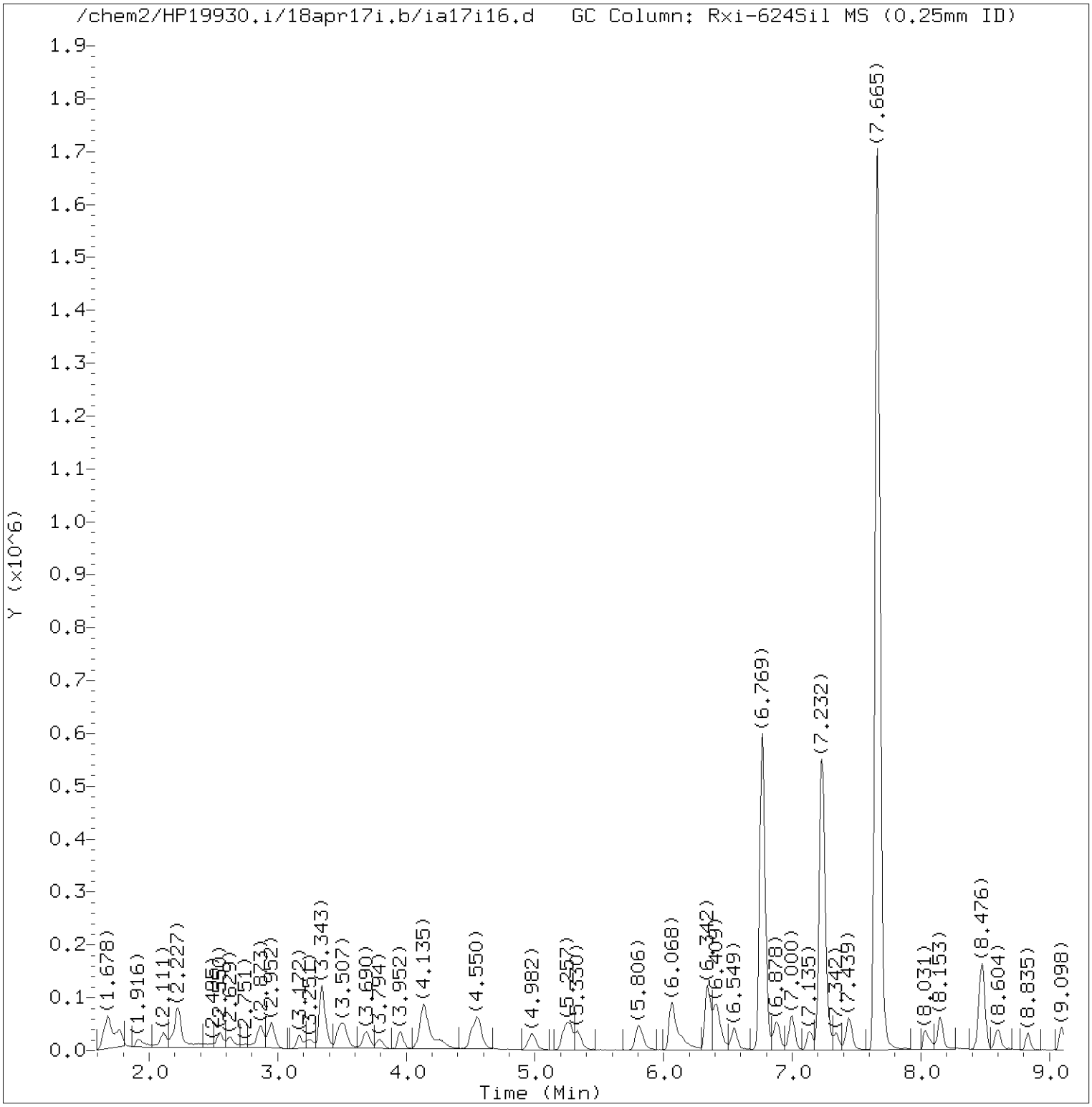
Data File: /chem2/HP19930.i/18apr17i.b/ia17i15.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 19:47 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:05
Date, time and analyst ID of latest file update: 17-Apr-2018 20:05 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1305
Retention Time (minutes): 9.543
Quant Ion : 43.00
Area : 498484
On-column Amount (ng) : 9.4065
Integration start scan : 1295 Integration stop scan: 1337
Y at integration start : 0 Y at integration end: 92

Digitally signed by Don V. Viray on 04/26/2018 at 16:37.
Target 3.5 esignature used on 04/26/2018



Total Ion Chromatogram (TIC)

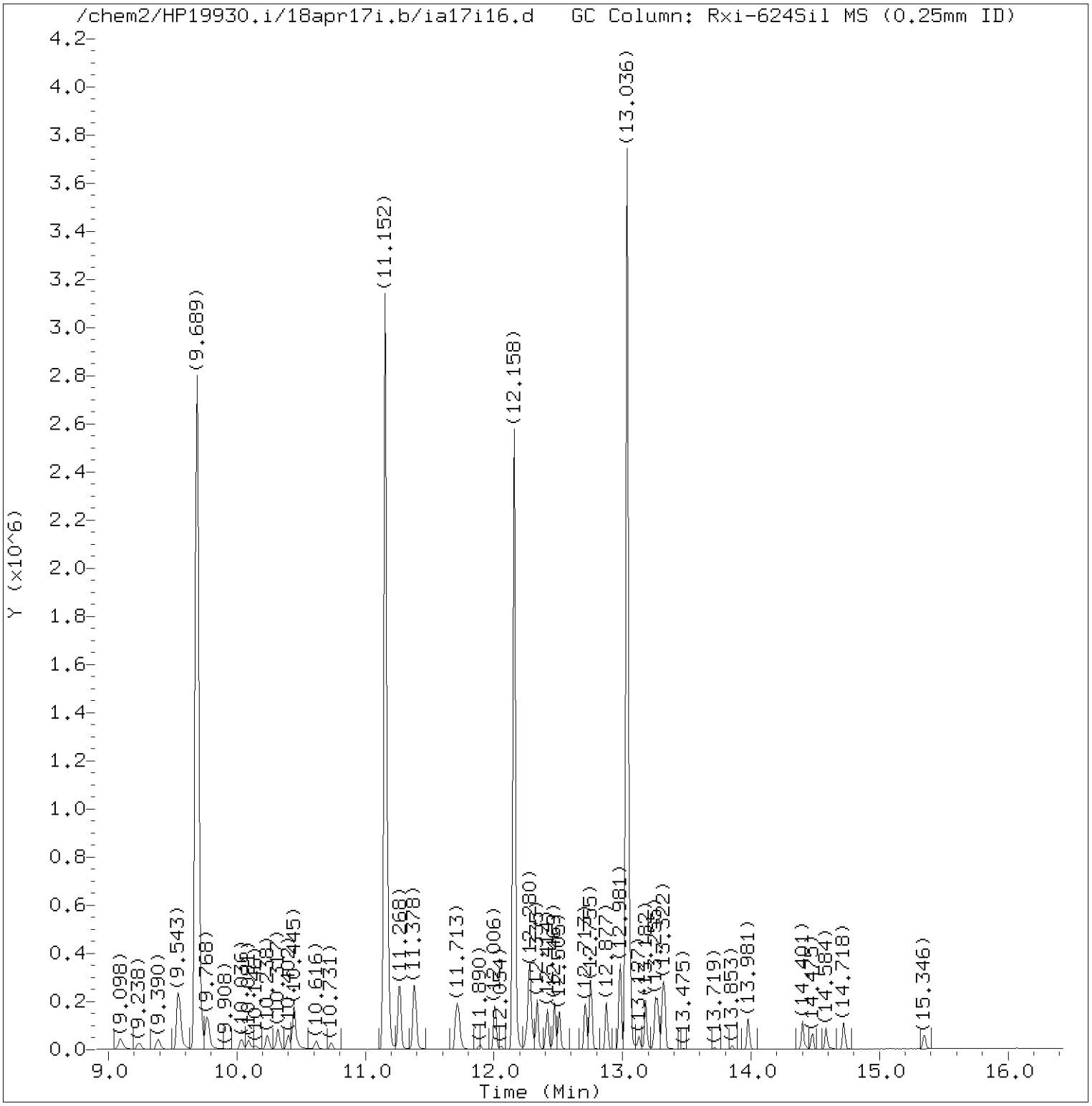
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.916	85	36865	0.352
2) Chloromethane	(2)	2.111	50	40104	0.413
6) 1,3-Butadiene	(2)	2.215	39	41462	0.465
5) Vinyl Chloride	(2)	2.227	62	34290	0.393
7) Bromomethane	(2)	2.550	94	26060M	0.424
8) Chloroethane	(2)	2.623	64	20691	0.416
9) Dichlorofluoromethane	(2)	2.867	67	47536	0.407
10) Trichlorofluoromethane	(2)	2.934	101	41423M	0.377
11) Ethyl ether	(2)	3.160	59	24913	0.460
12) Freon 123a	(2)	3.245	67	30310	0.391
13) Acrolein	(1)	3.343	56	203931	24.327
15) 1,1-Dichloroethene	(2)	3.477	96	19374	0.374
16) Freon 113	(2)	3.513	101	21946	0.370
14) Acetone	(1)	3.519	43	61042M	4.960
17) Methyl Iodide	(2)	3.672	142	39665	0.415
18) Carbon Disulfide	(2)	3.794	76	53870	0.368
22) Allyl Chloride	(2)	3.952	41	36938	0.387
21) Methyl Acetate	(1)	3.970	43	15572	0.537
23) Methylene Chloride	(2)	4.135	84	28772	0.455
26)*t-Butyl Alcohol-d10	(1)	4.135	65	175133M	50.000
28) t-Butyl Alcohol	(1)	4.257	59	40104M	9.432
29) Acrylonitrile	(1)	4.513	53	32981	2.392
30) Methyl Tertiary Butyl Ether	(2)	4.525	73	68195	0.443
31) trans-1,2-Dichloroethene	(2)	4.562	96	23381	0.396
32) n-Hexane	(2)	4.989	57	31275	0.317
33) 1,1-Dichloroethane	(2)	5.226	63	49096	0.416
34) di-Isopropyl Ether	(2)	5.269	45	89733	0.418
35) 2-Chloro-1,3-Butadiene	(2)	5.336	53	33261	0.330
37) Ethyl t-butyl ether	(2)	5.806	59	74741	0.423
38) 2-Butanone	(1)	6.055	43	84556	4.398
39) cis-1,2-Dichloroethene	(2)	6.062	96	27532	0.411
41) 2,2-Dichloropropane	(2)	6.068	77	29795	0.360
40) 1,2-Dichloroethene (Total)	(2)		96	50913	0.807
42) Propionitrile	(1)	6.147	54	50426	9.210
45) Methacrylonitrile	(1)	6.342	67	83197	4.657
47) Bromochloromethane	(2)	6.409	128	12650	0.451
48) Tetrahydrofuran	(1)	6.415	71	23582	4.514
49) Chloroform	(2)	6.543	83	46484	0.419

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) 1,1,1-Trichloroethane	(2)	6.769	97	34850	0.377
50)$Dibromofluoromethane	(2)	6.769	113	533744	10.042
50)$Dibromofluoromethane	(2)	6.769	111	548939	10.046
52) Cyclohexane	(2)	6.878	56	39863	0.332
52) Cyclohexane	(2)	6.885	84	32601	0.338
52) Cyclohexane	(2)	6.878	69	11578	0.329
54) Carbon Tetrachloride	(2)	6.988	117	28501	0.365
55) 1,1-Dichloropropene	(2)	7.000	75	32636	0.370
56) Isobutyl Alcohol	(1)	7.135	41	39915	23.502
57)$1,2-Dichloroethane-d4	(2)	7.232	102	117273	10.143
57)$1,2-Dichloroethane-d4	(2)	7.226	65	580439	10.148
57)$1,2-Dichloroethane-d4	(2)	7.226	104	73062	10.019
58) Benzene	(2)	7.256	78	110569	0.417
59) 1,2-Dichloroethane	(2)	7.342	62	36462	0.471
59) 1,2-Dichloroethane	(2)	7.348	98	2977	0.464
60) t-Amyl methyl ether	(2)	7.439	73	63743	0.428
63)*Fluorobenzene	(2)	7.665	96	2277458	10.000
62) n-Heptane	(2)	7.665	43	36791	0.351
65) n-Butanol	(1)	8.037	56	48796	37.734
67) Trichloroethene	(2)	8.147	95	26598	0.396
69) Methylcyclohexane	(2)	8.457	83	36857	0.319
70) 1,2-Dichloropropane	(2)	8.488	63	29360	0.427
71) Methyl Methacrylate	(1)	8.579	69	11918	0.397
72) 1,4-Dioxane	(1)	8.598	88	5638M	19.006
72) 1,4-Dioxane	(1)	8.585	58	3857M	18.121
73) Dibromomethane	(2)	8.604	93	13914	0.452
74) Bromodichloromethane	(2)	8.835	83	29538	0.401
76) 2-Nitropropane	(1)	9.091	41	39919M	4.111
80) cis-1,3-Dichloropropene	(2)	9.390	75	32813	0.353
81) 4-Methyl-2-Pentanone	(1)	9.543	43	217469	4.552
82)$Toluene-d8	(3)	9.689	98	2276351	10.268
82)$Toluene-d8	(3)	9.689	100	1457664	10.239
83) Toluene	(3)	9.768	92	67228	0.415
84) trans-1,3-Dichloropropene	(3)	10.036	75	26427	0.386
86) Ethyl Methacrylate	(3)	10.091	69	24910	0.372
85) 1,3-Dichloropropene (total)	(3)		75	59240	0.739
88) 1,1,2-Trichloroethane	(3)	10.238	97	20936	0.459
89) Tetrachloroethene	(3)	10.323	166	27444	0.399

M = Compound was manually integrated.
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Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.402	76	37246	0.458
91) 2-Hexanone	(1)	10.445	43	154394	4.578
93) Dibromochloromethane	(3)	10.616	129	17797	0.396
95) 1,2-Dibromoethane	(3)	10.731	107	18561	0.447
97)*Chlorobenzene-d5	(3)	11.152	117	1641937	10.000
98) Chlorobenzene	(3)	11.182	112	75886	0.431
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	22932	0.410
100) Ethylbenzene	(3)	11.268	91	123371	0.402
101) m+p-Xylene	(3)	11.384	106	94037	0.798
104) o-Xylene	(3)	11.707	106	44105	0.385
106) Styrene	(3)	11.731	104	67376	0.381
105) Xylene (Total)	(3)		106	138142	1.183
107) Bromoform	(3)	11.890	173	8552	0.551
108) Isopropylbenzene	(3)	12.006	105	110141	0.374
111)$4-Bromofluorobenzene	(3)	12.158	95	788246	10.070
111)$4-Bromofluorobenzene	(3)	12.158	174	646287	10.146
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	28155	0.462
114) Bromobenzene	(4)	12.274	156	30130	0.417
115) trans-1,4-Dichloro-2-butene	(1)	12.280	53	49194	4.107
116) 1,2,3-Trichloropropane	(4)	12.304	110	7621	0.477
117) n-Propylbenzene	(4)	12.335	91	139190	0.381
119) 2-Chlorotoluene	(4)	12.414	126	28133	0.399
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	96242	0.381
122) 4-Chlorotoluene	(4)	12.505	126	29581	0.413
125) tert-Butylbenzene	(4)	12.713	134	19100M	0.366
126) Pentachloroethane	(4)	12.749	167	15840	0.393
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	96500	0.381
128) sec-Butylbenzene	(4)	12.877	105	119408	0.365
131) 1,3-Dichlorobenzene	(4)	12.981	146	58315	0.413
132) p-Isopropyltoluene	(4)	12.981	119	95956	0.335
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	866656	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	62023	0.431
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	48097	0.417
136) Benzyl Chloride	(4)	13.127	126	5267	0.571
138) n-Butylbenzene	(4)	13.274	92	49414	0.364
139) 1,2-Dichlorobenzene	(4)	13.310	146	56967	0.435
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	2550	0.394
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	37628	0.394

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Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

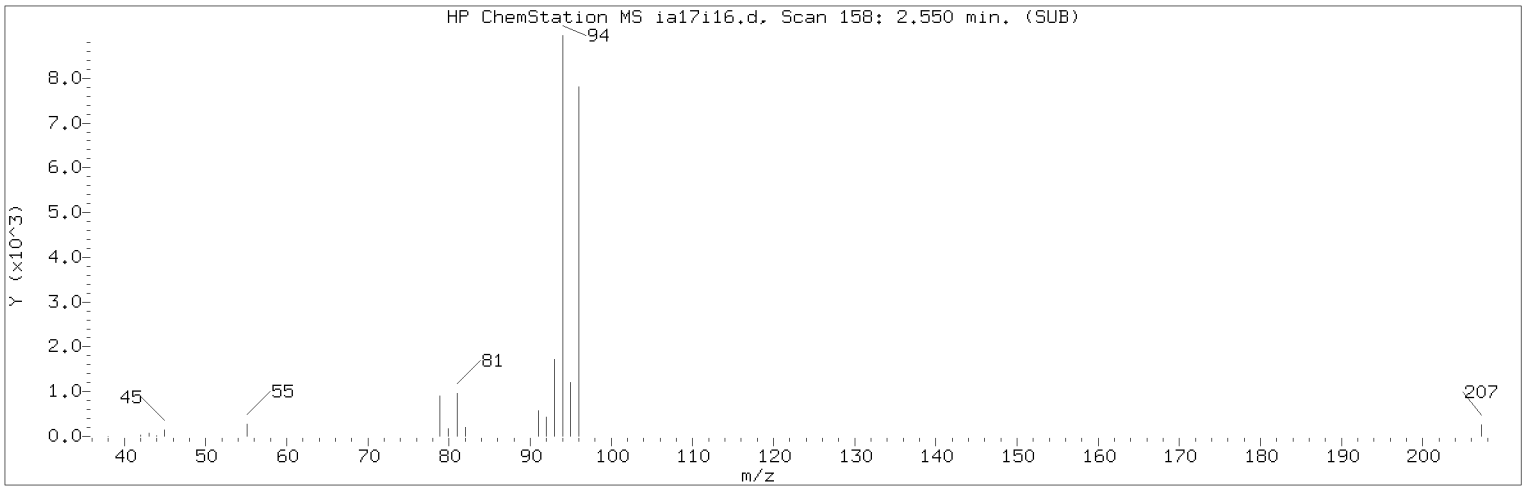
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

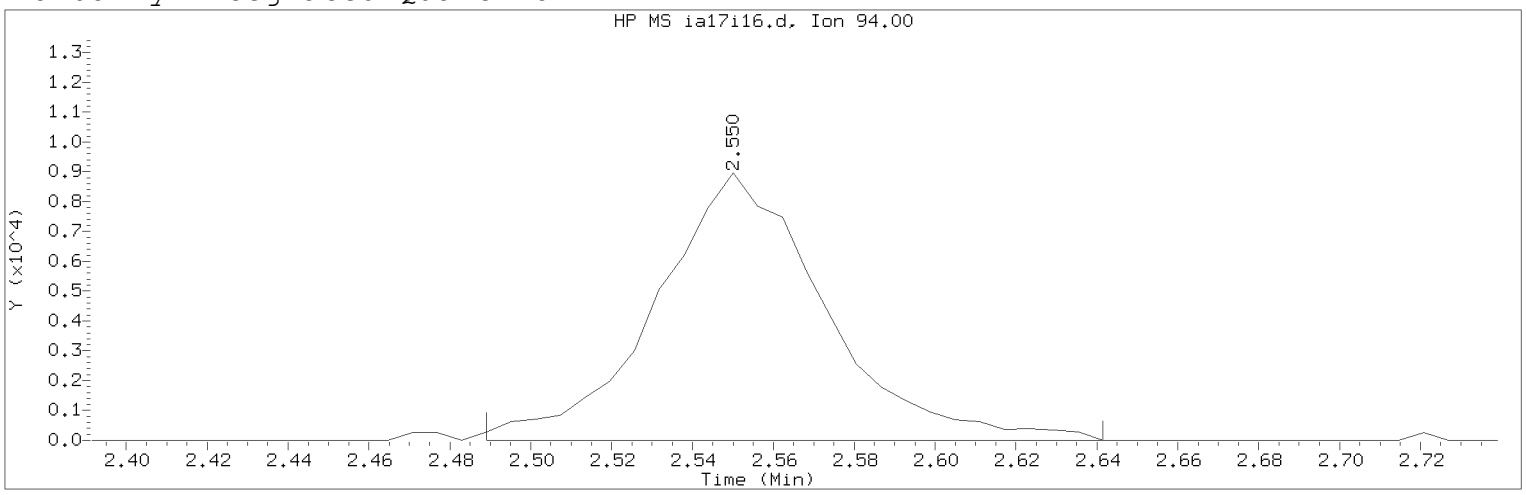
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	34502	0.413
146) Hexachlorobutadiene	(4)	14.481	225	10767	0.356
147) Naphthalene	(4)	14.584	128	67132	0.410
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	32160	0.432

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

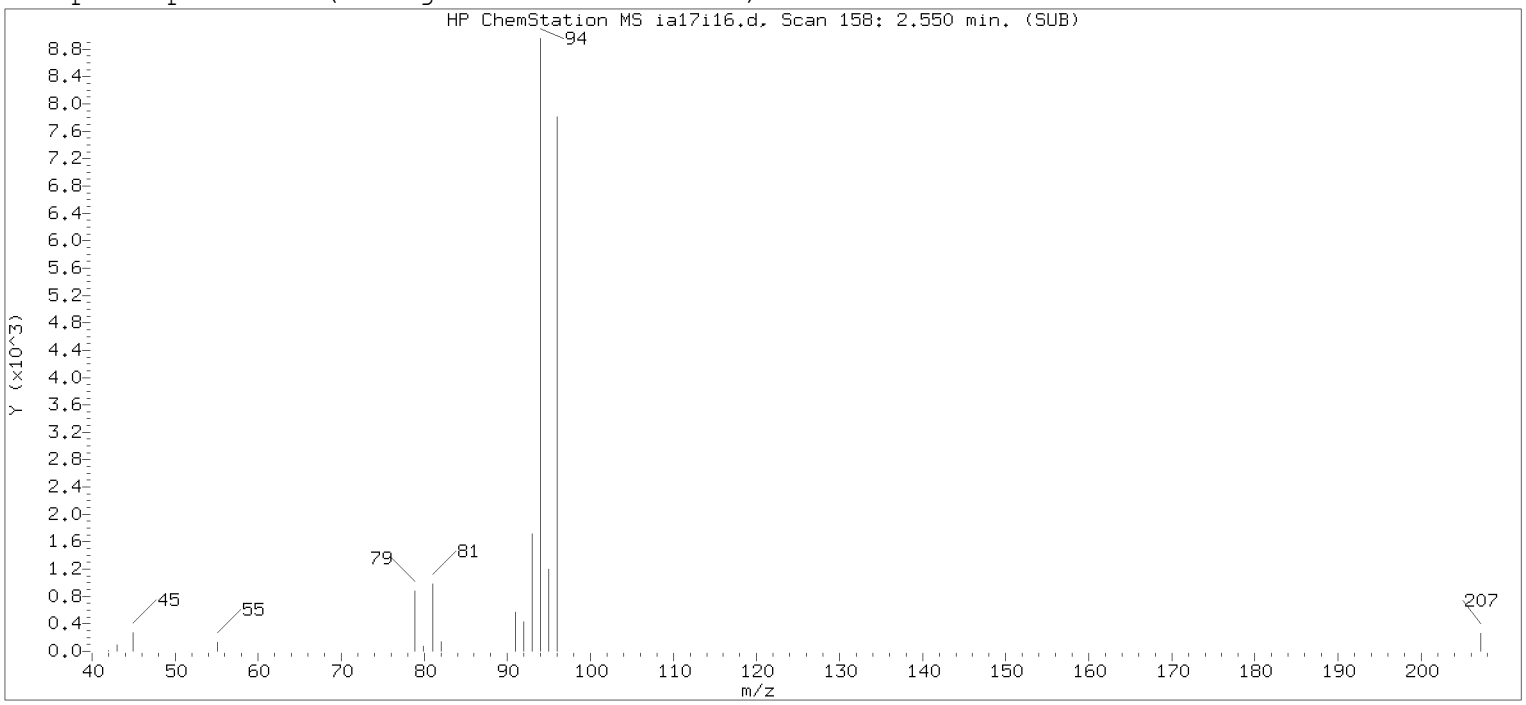
Compound Number : 7
Compound Name : Bromomethane
Scan Number : 158
Retention Time (minutes): 2.550
Quant Ion : 94.00
Area (flag) : 26060M
On-Column Amount (ng) : 0.4245
Integration start scan : 147 Integration stop scan: 172
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

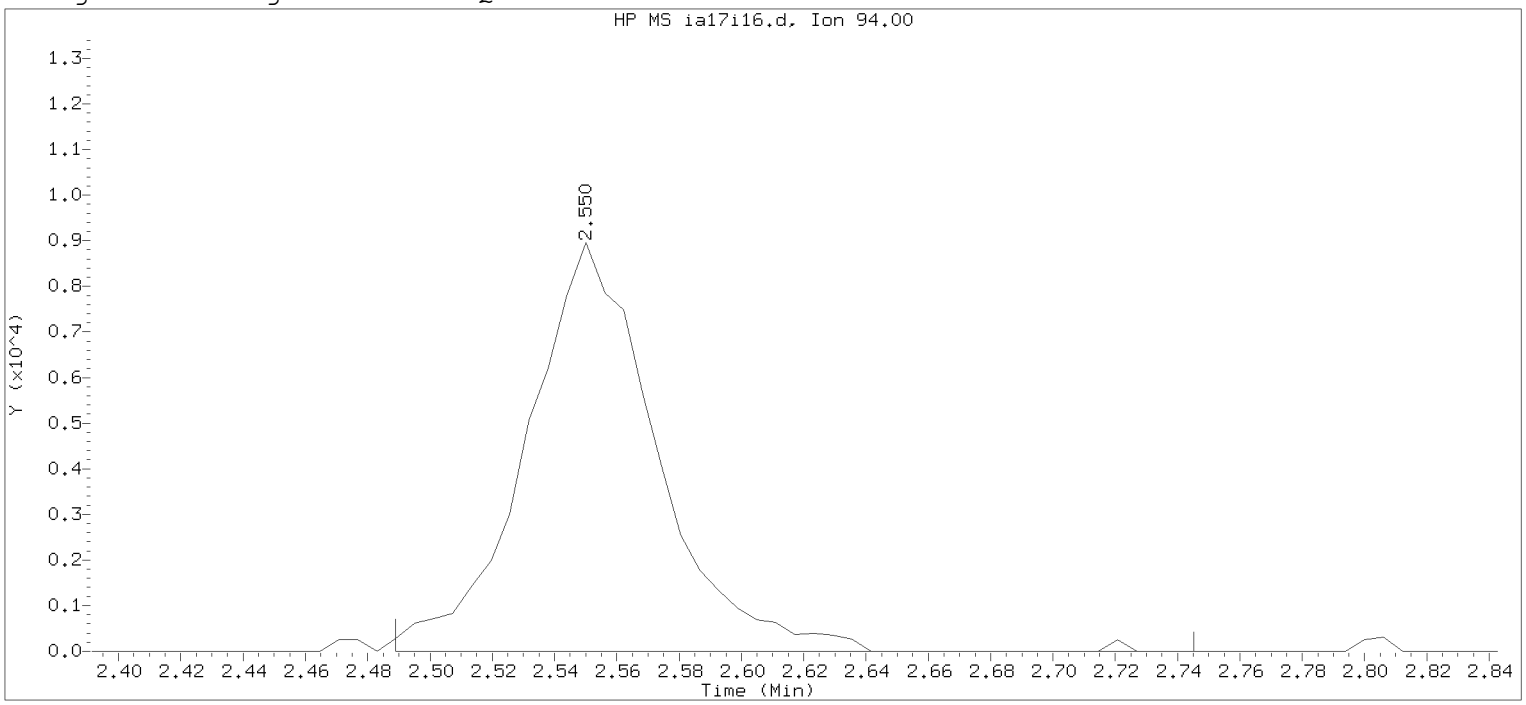
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

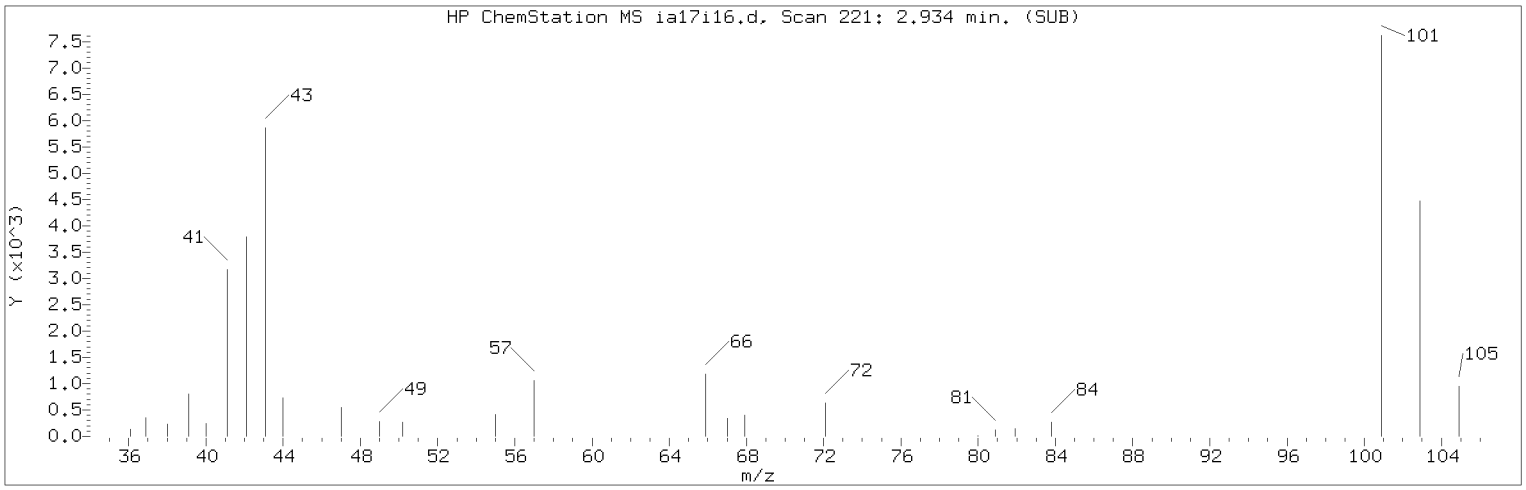
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

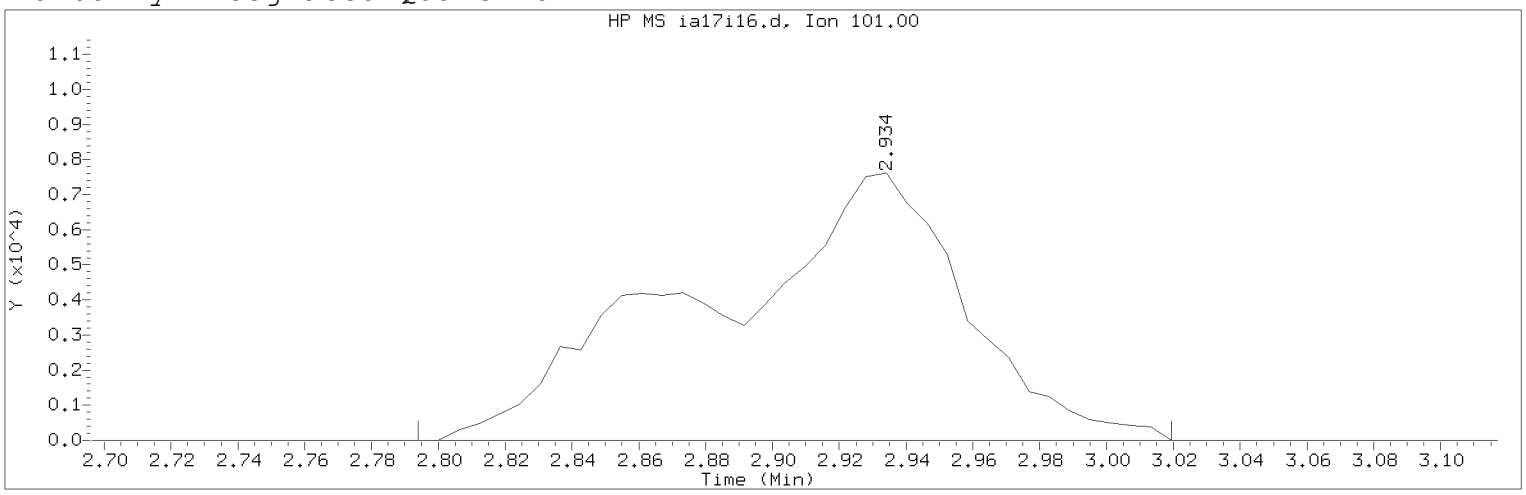
Compound Number : 7
Compound Name : Bromomethane
Scan Number : 158
Retention Time (minutes): 2.550
Quant Ion : 94.00
Area : 26102
On-column Amount (ng) : 0.4199
Integration start scan : 147 Integration stop scan: 189
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

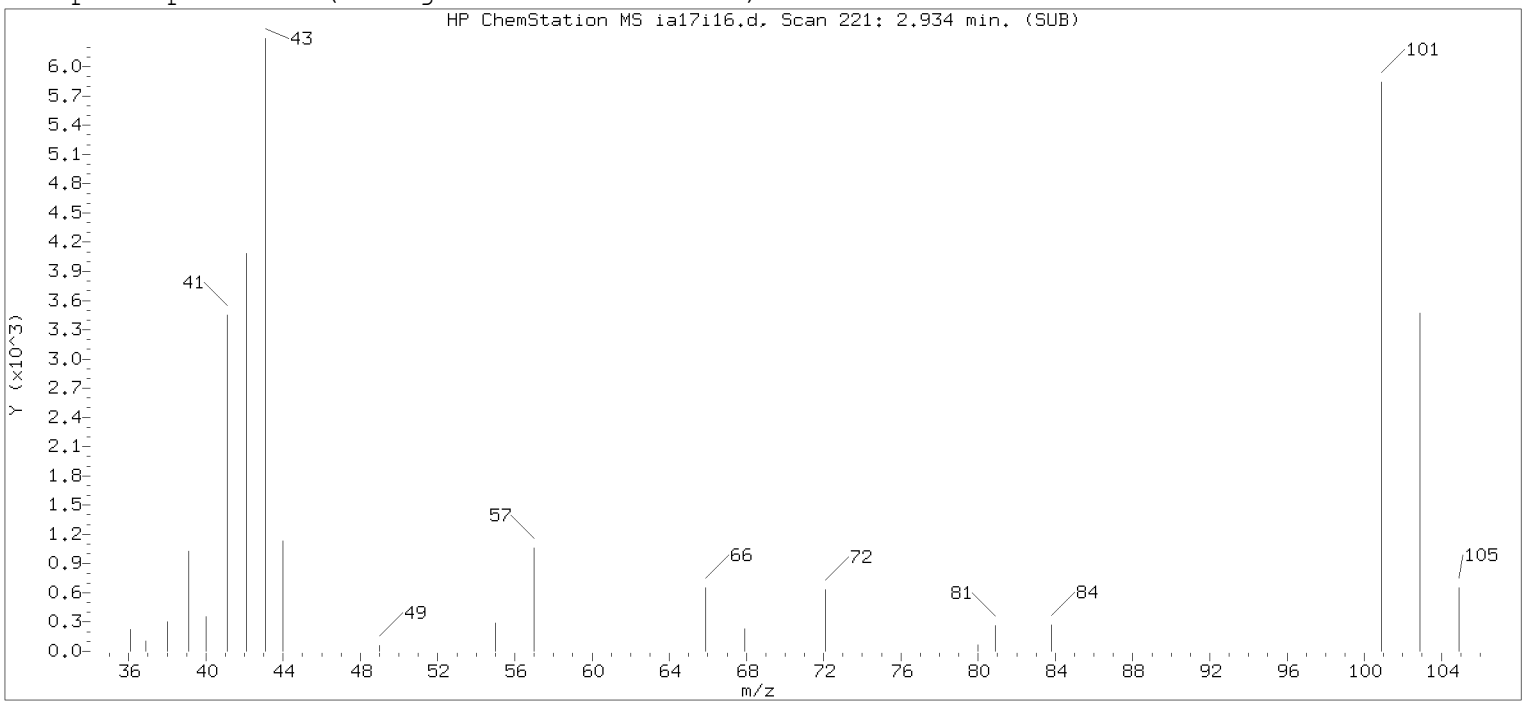
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 221
Retention Time (minutes): 2.934
Quant Ion : 101.00
Area (flag) : 41423M
On-Column Amount (ng) : 0.3774
Integration start scan : 197 Integration stop scan: 234
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

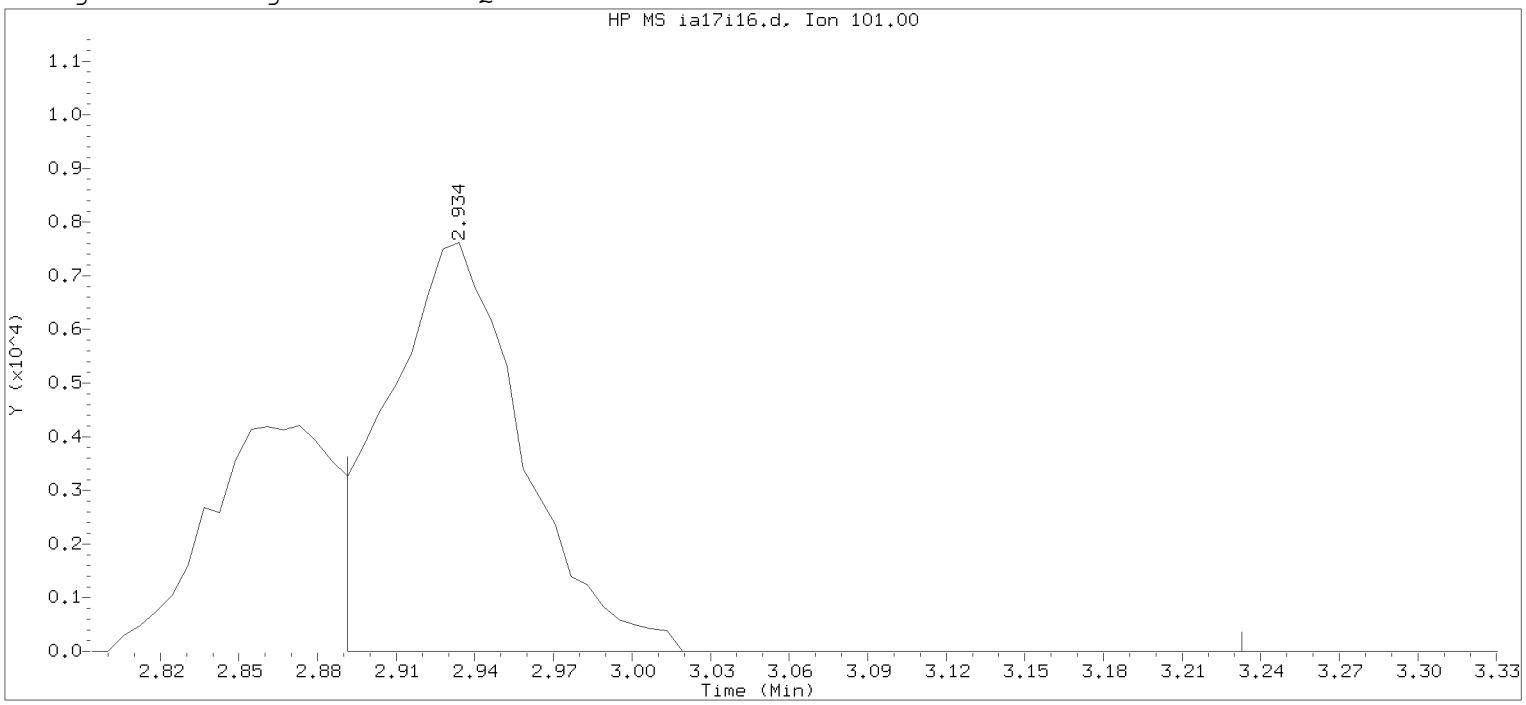
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

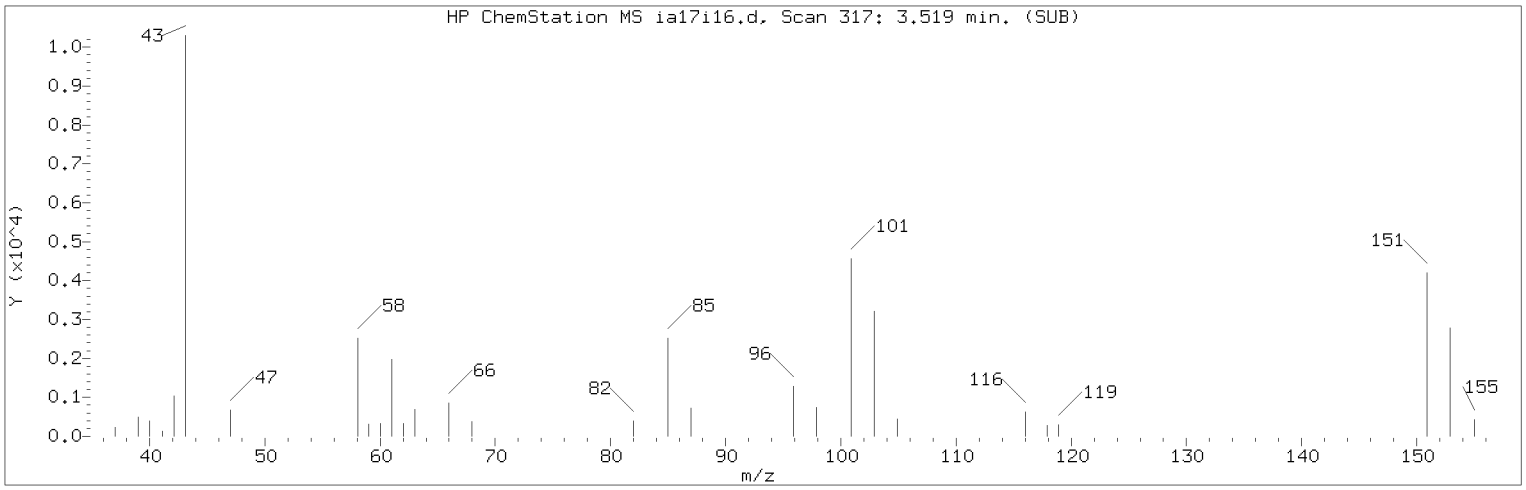
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

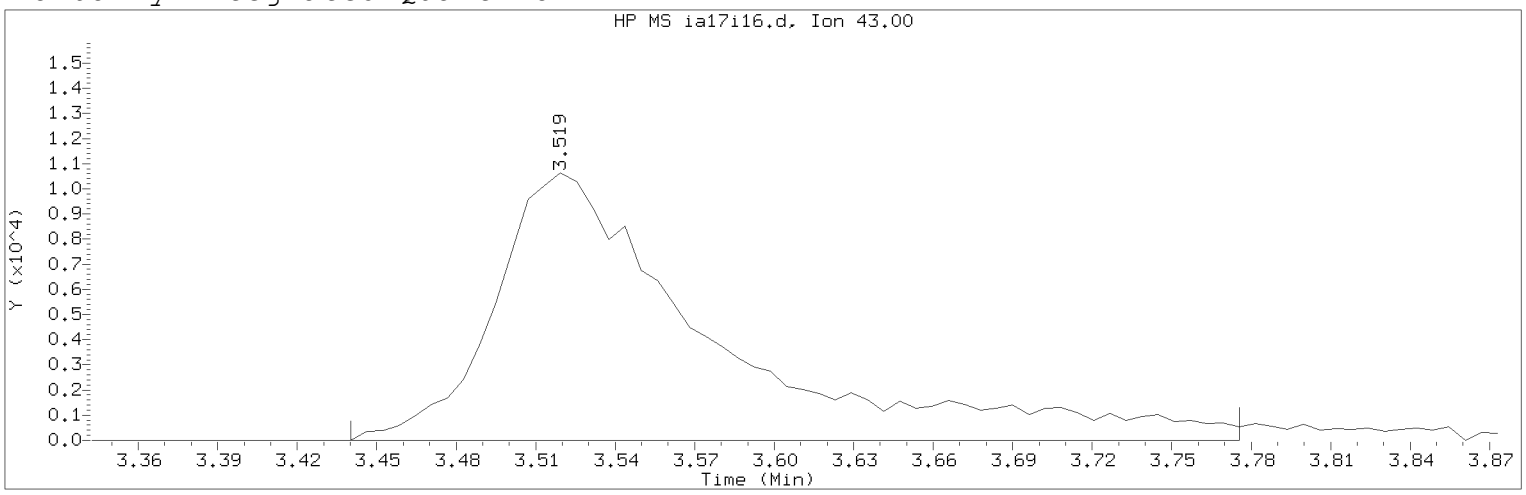
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 221
Retention Time (minutes): 2.934
Quant Ion : 101.00
Area : 27241
On-column Amount (ng) : 0.2511
Integration start scan : 213 Integration stop scan: 269
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

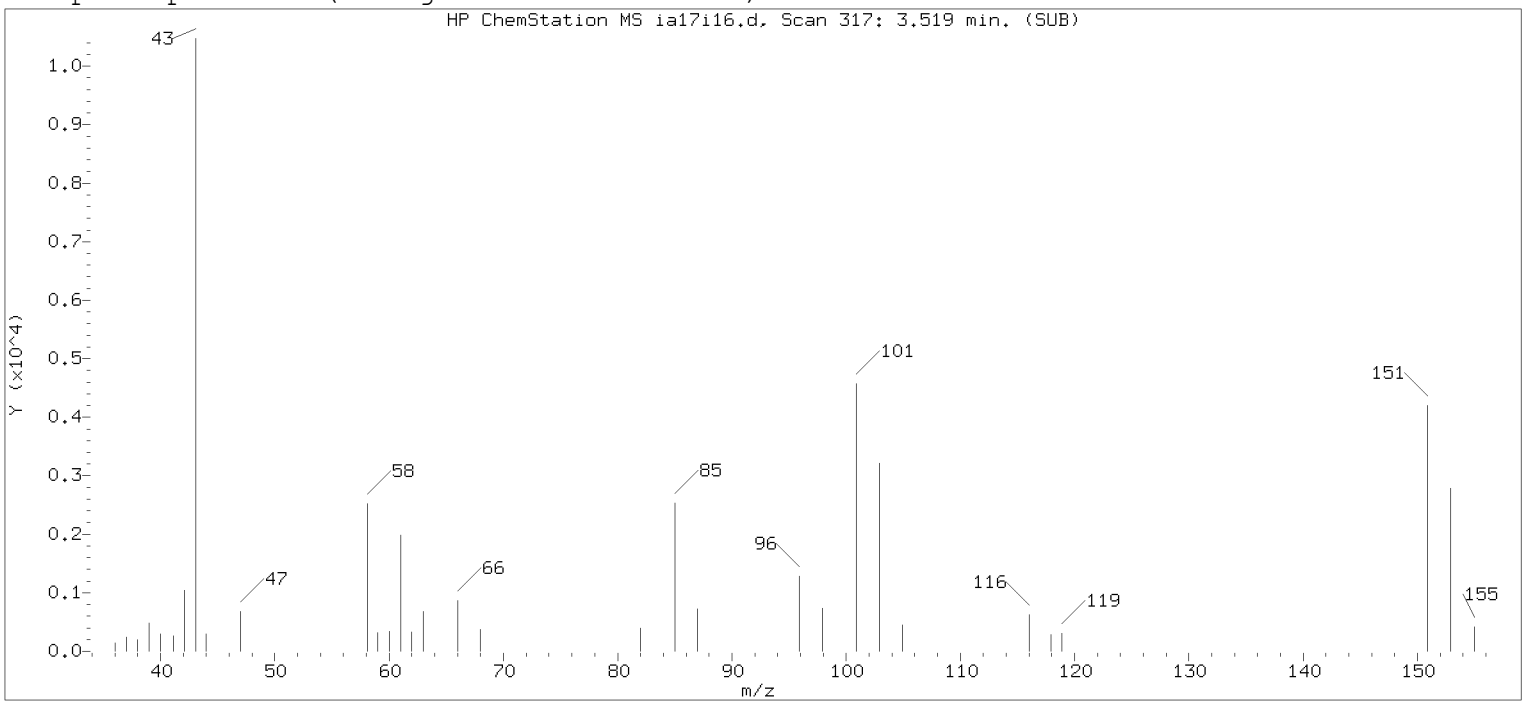
Compound Number : 14
Compound Name : Acetone
Scan Number : 317
Retention Time (minutes): 3.519
Quant Ion : 43.00
Area (flag) : 61042M
On-Column Amount (ng) : 4.9602
Integration start scan : 303 Integration stop scan: 358
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

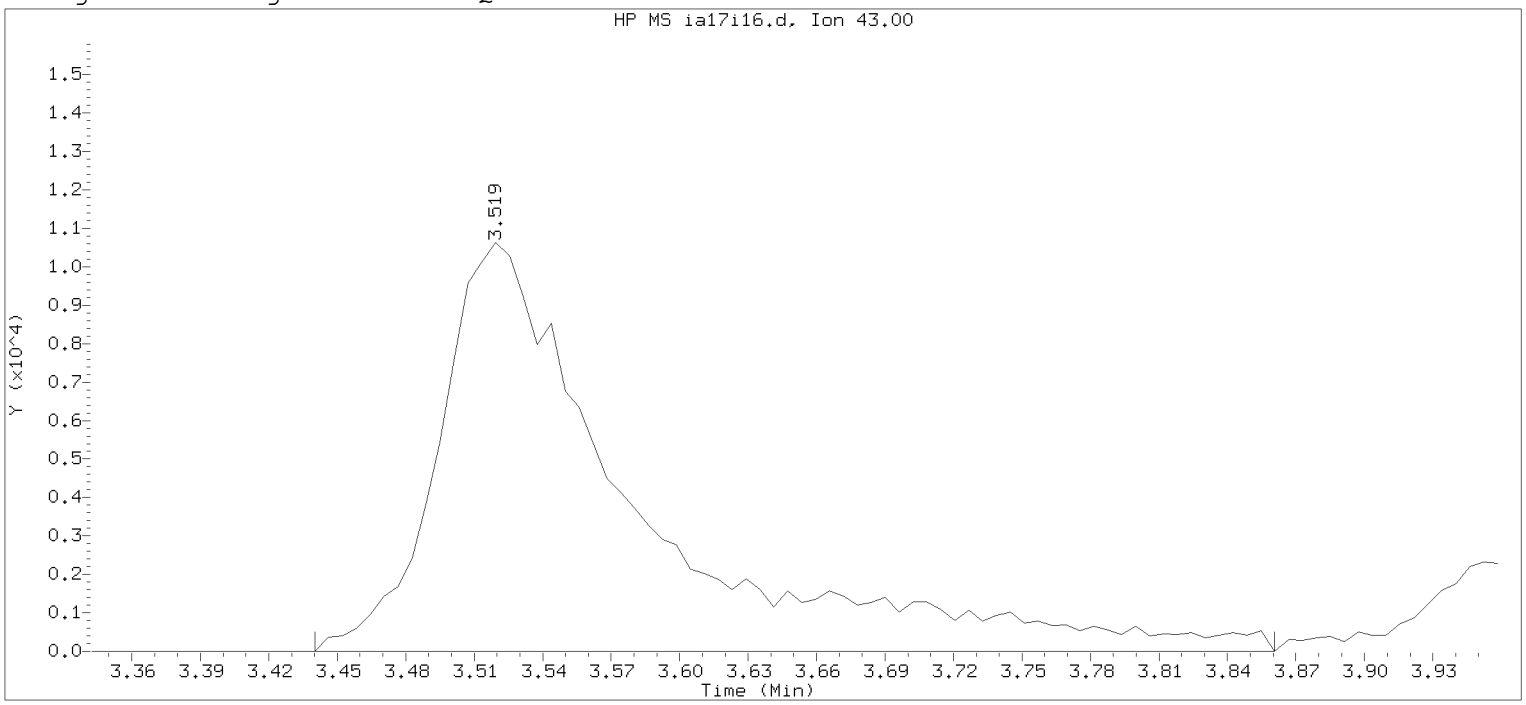
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

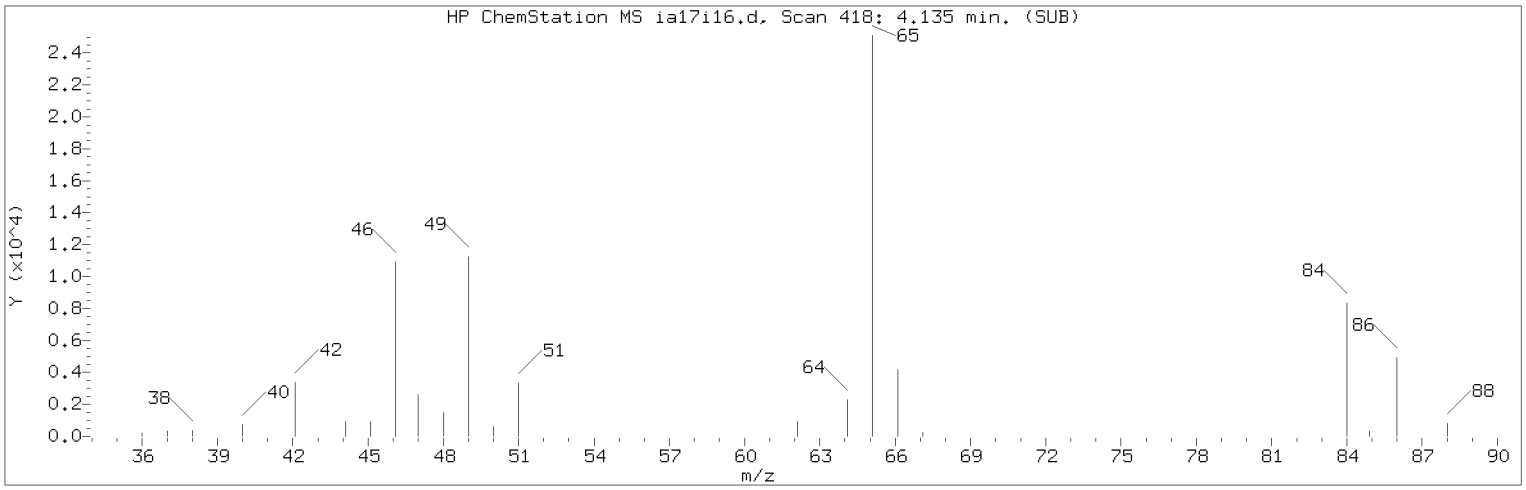
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

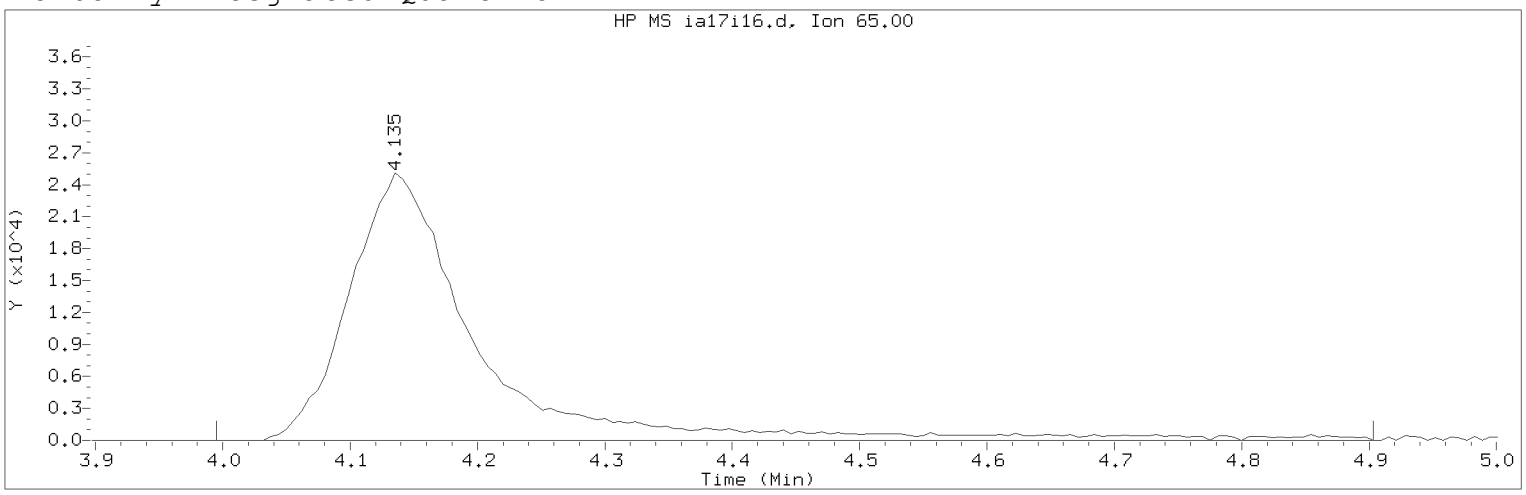
Compound Number : 14
Compound Name : Acetone
Scan Number : 317
Retention Time (minutes): 3.519
Quant Ion : 43.00
Area : 63331
On-column Amount (ng) : 5.1709
Integration start scan : 303 Integration stop scan: 372
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

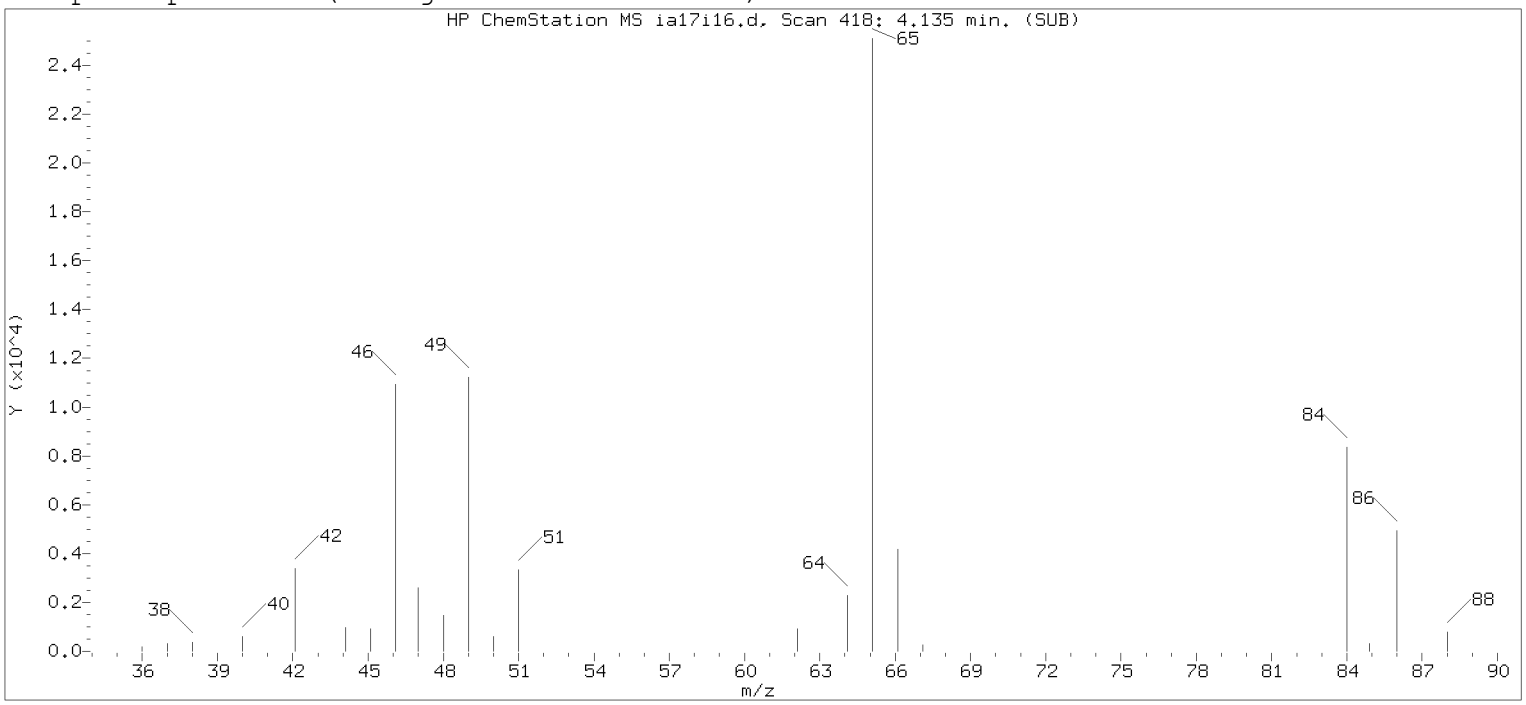
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area (flag) : 175133M
On-Column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 543
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

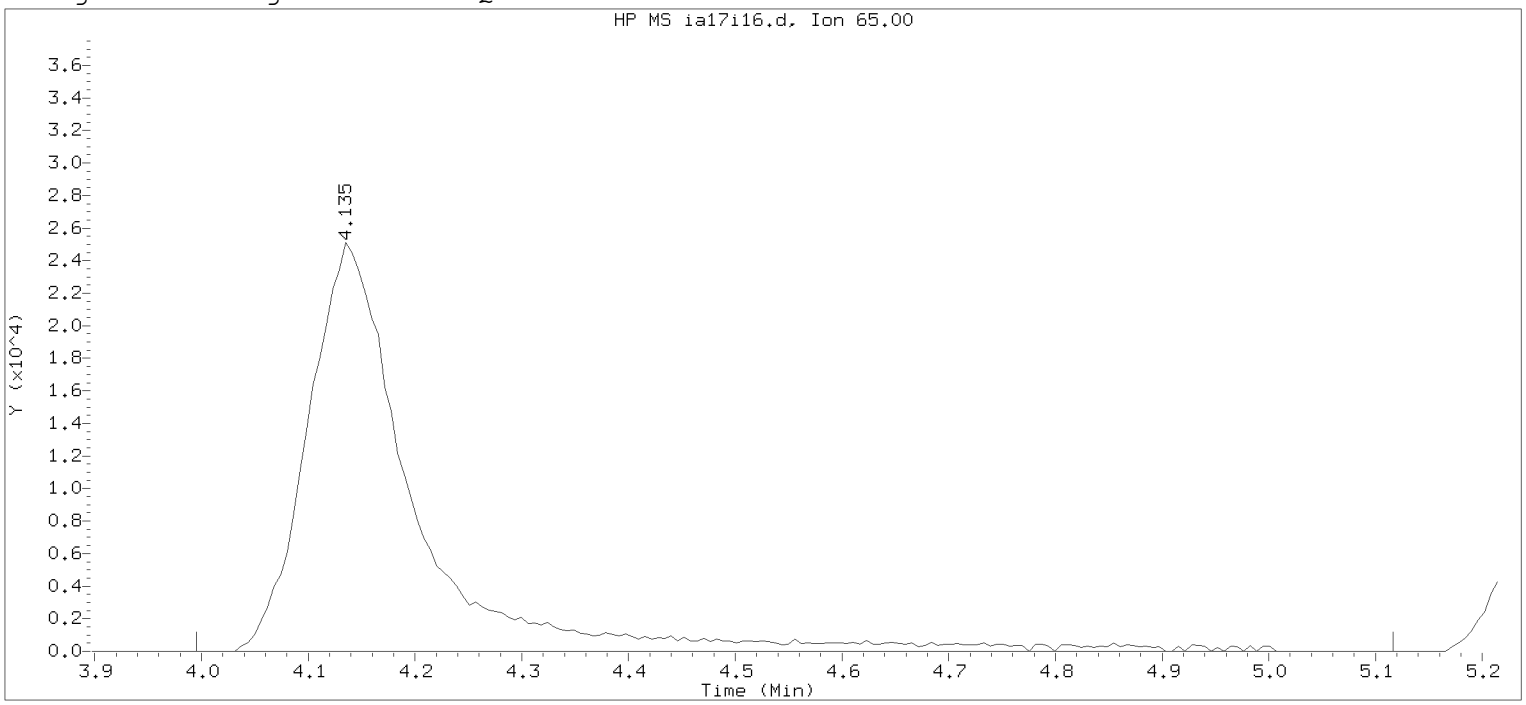
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

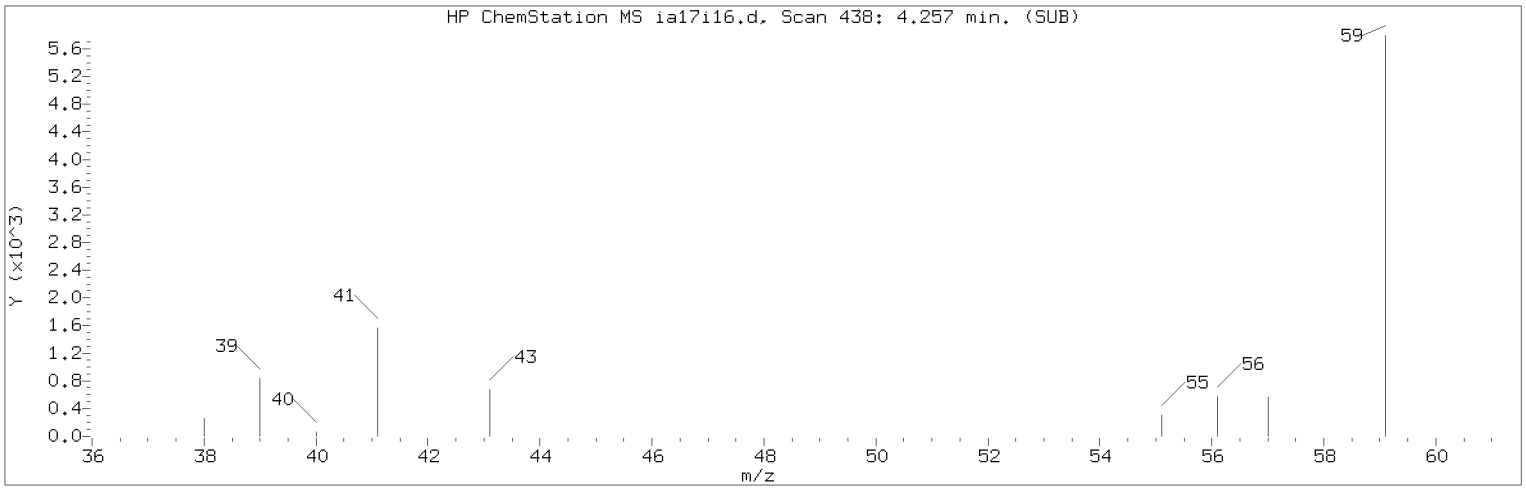
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

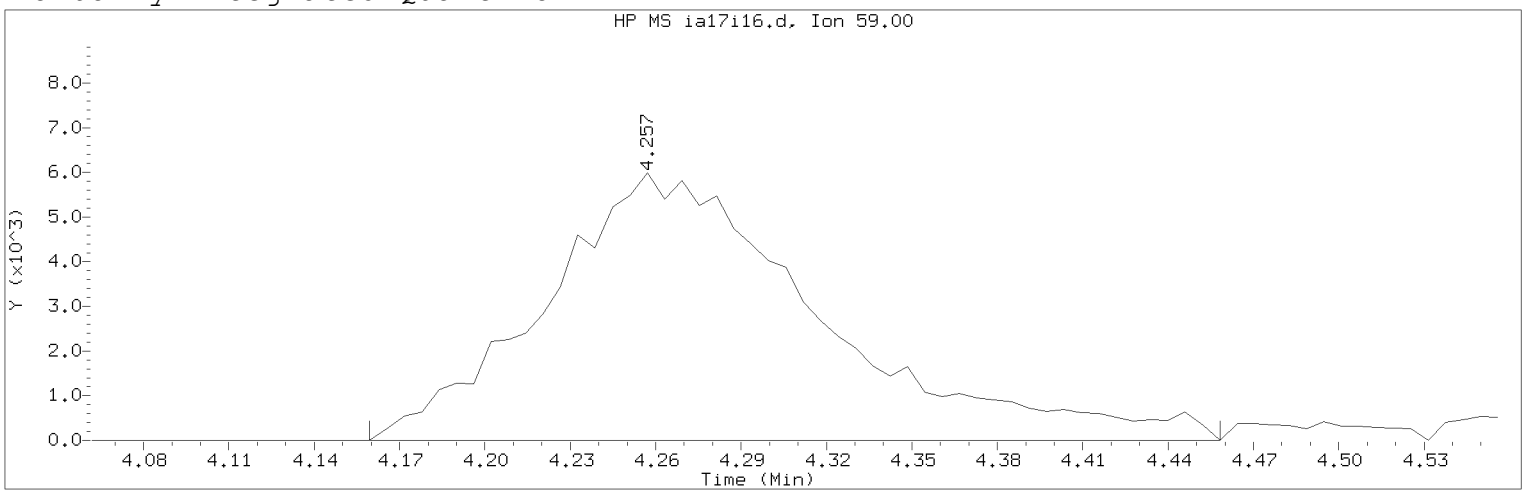
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area : 176294
On-column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

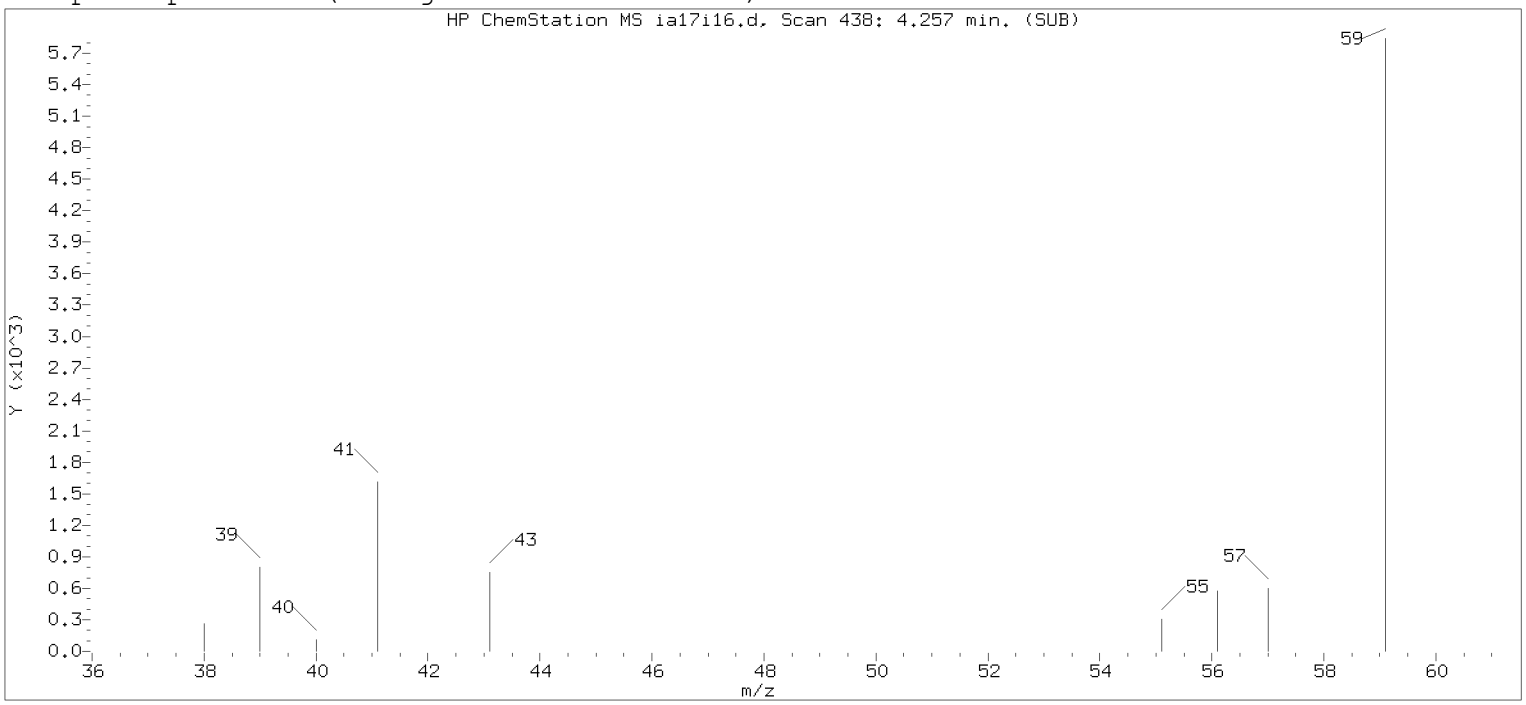
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 438
Retention Time (minutes): 4.257
Quant Ion : 59.00
Area (flag) : 40104M
On-Column Amount (ng) : 9.4316
Integration start scan : 421 Integration stop scan: 470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

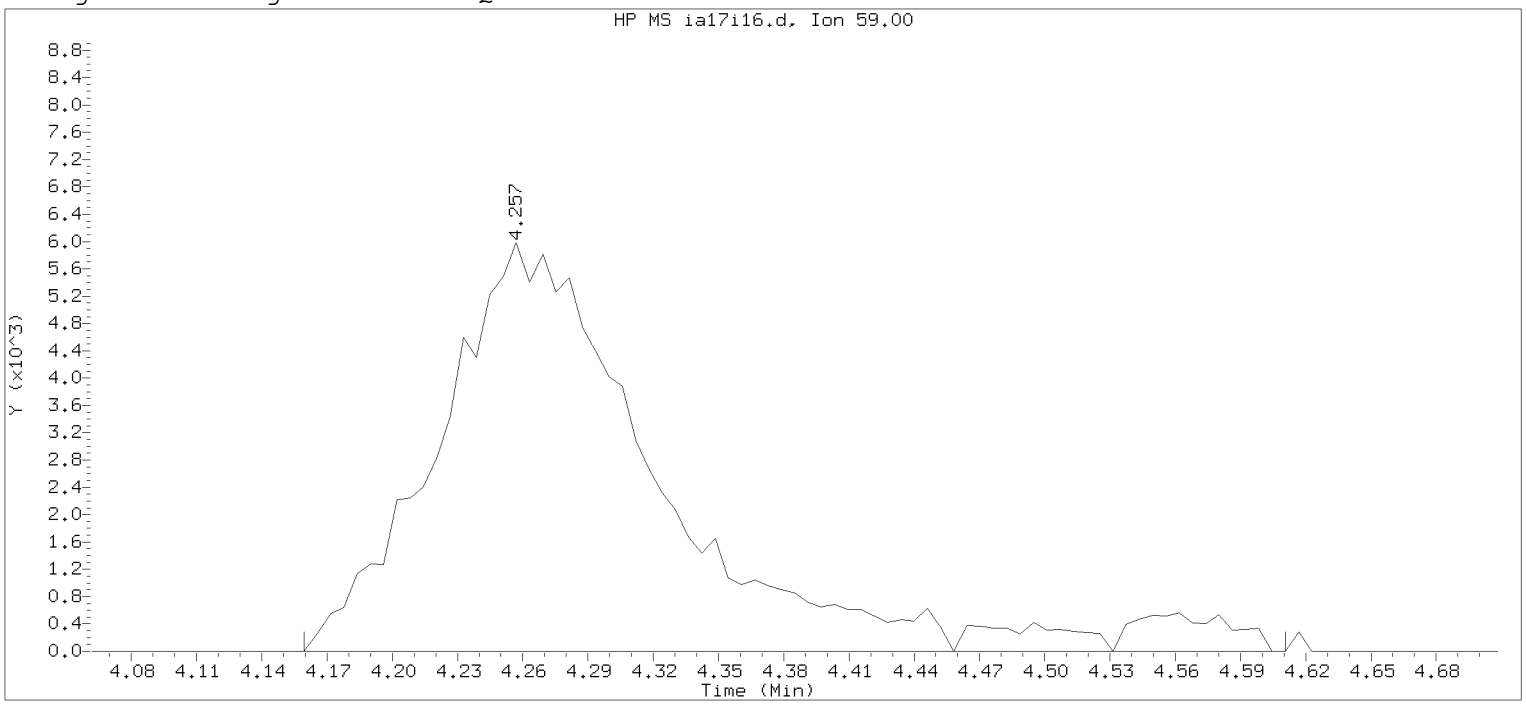
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

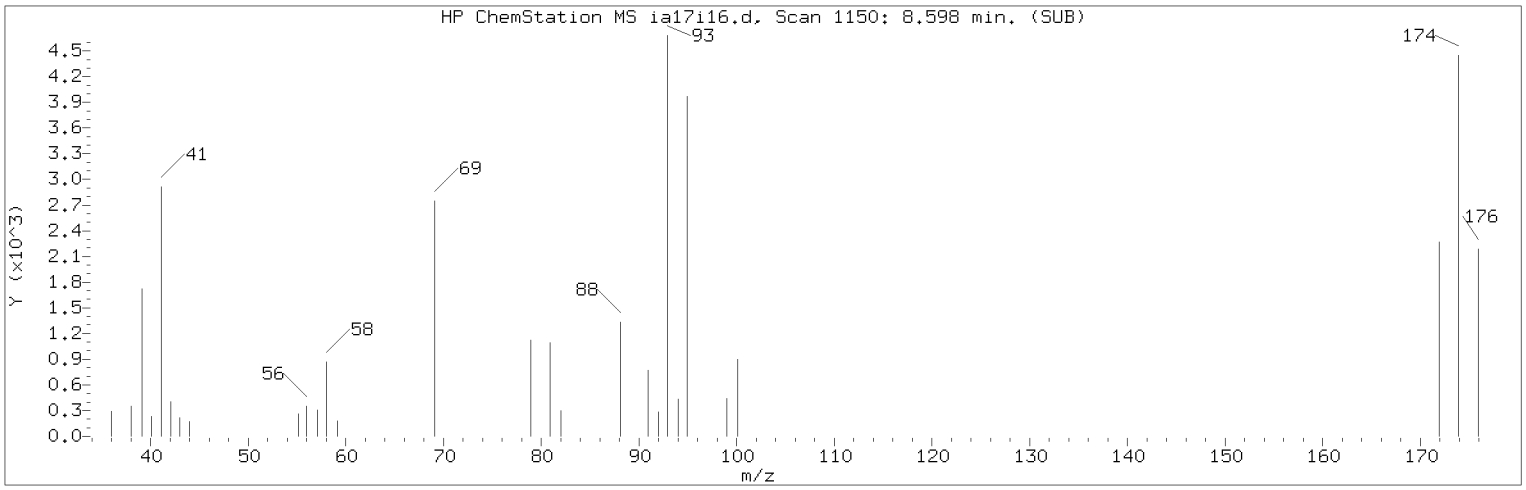
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

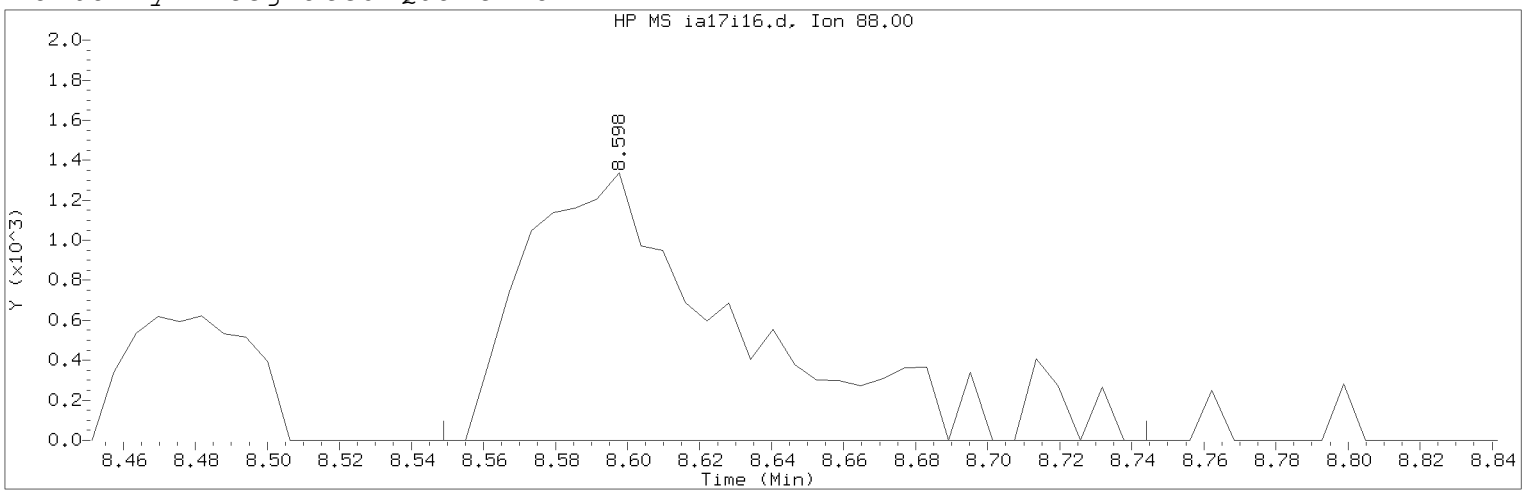
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 438
Retention Time (minutes): 4.257
Quant Ion : 59.00
Area : 43163
On-column Amount (ng) : 9.9608
Integration start scan : 421 Integration stop scan: 495
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

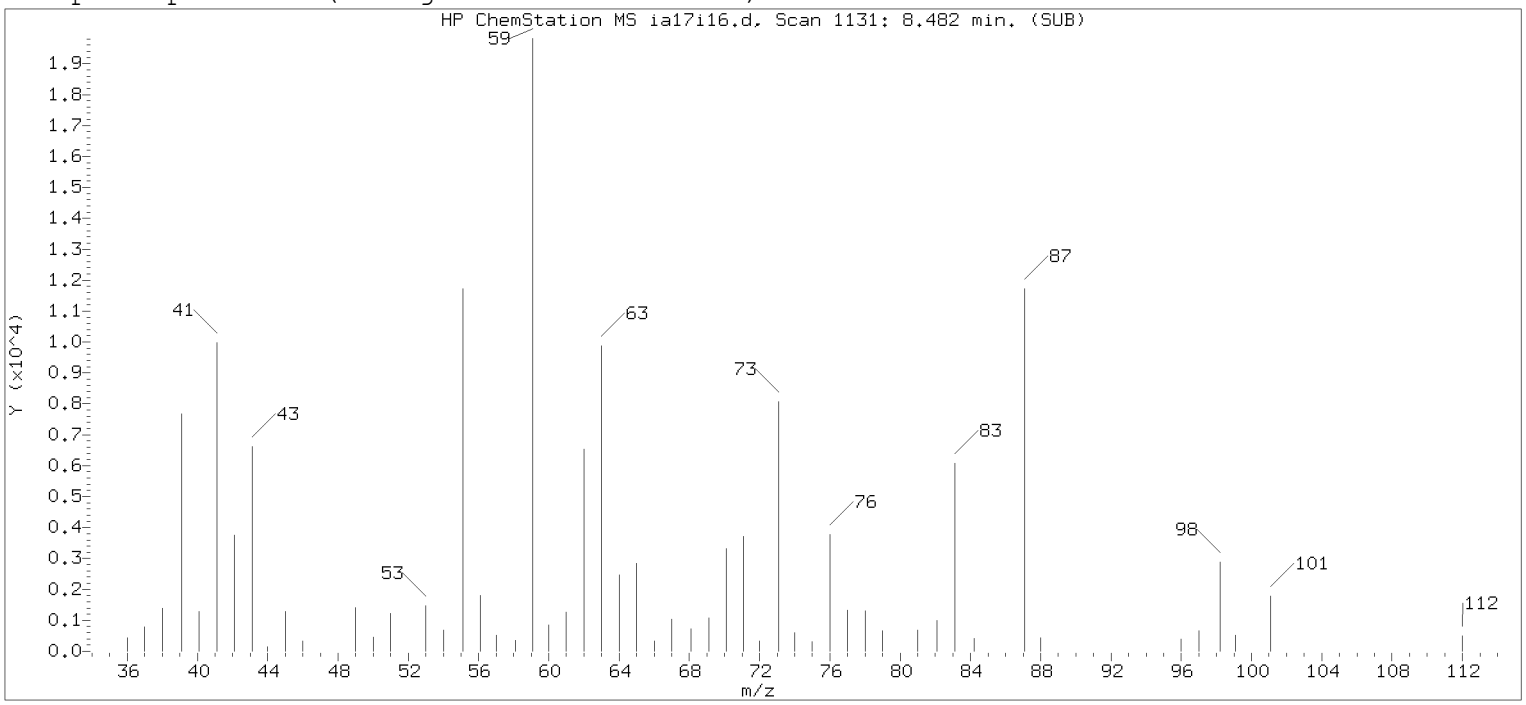
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1150
Retention Time (minutes): 8.598
Quant Ion : 88.00
Area (flag) : 5638M
On-Column Amount (ng) : 19.0058
Integration start scan : 1141 Integration stop scan: 1173
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

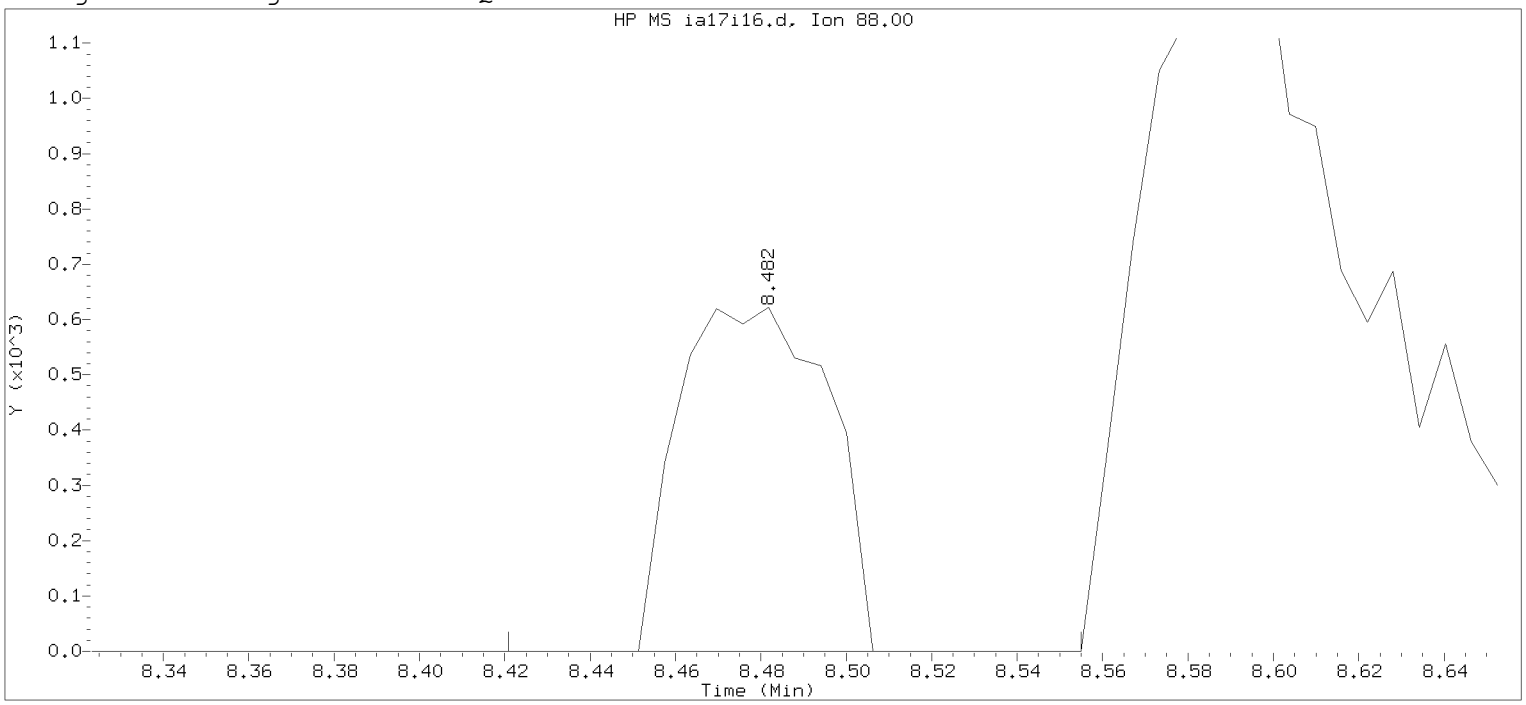
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

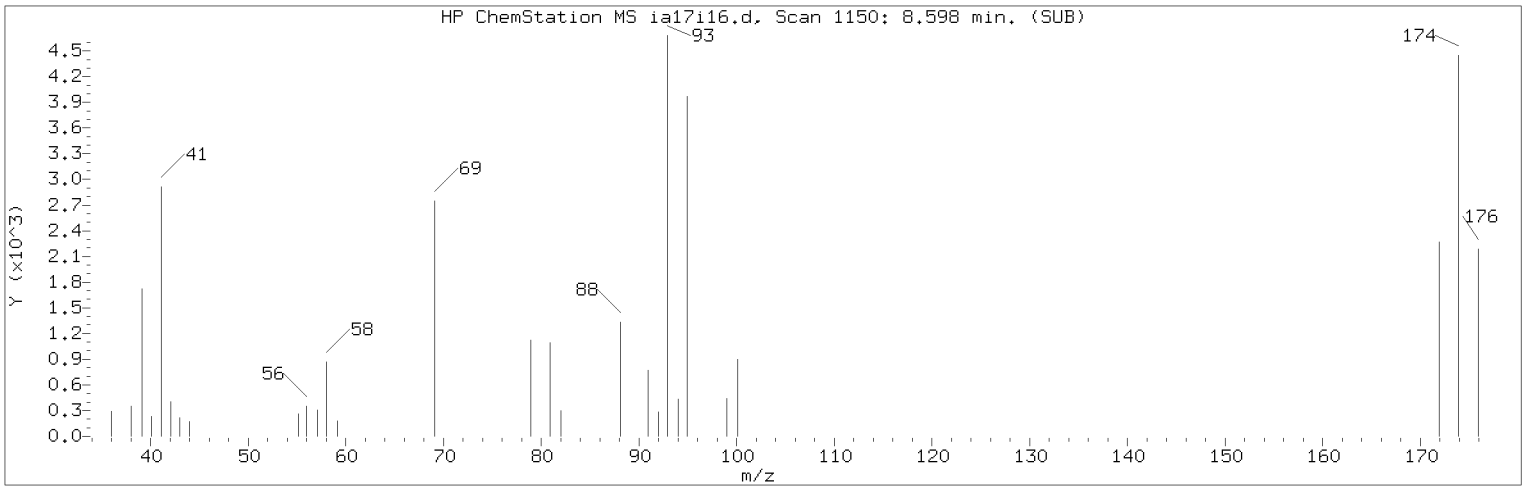
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

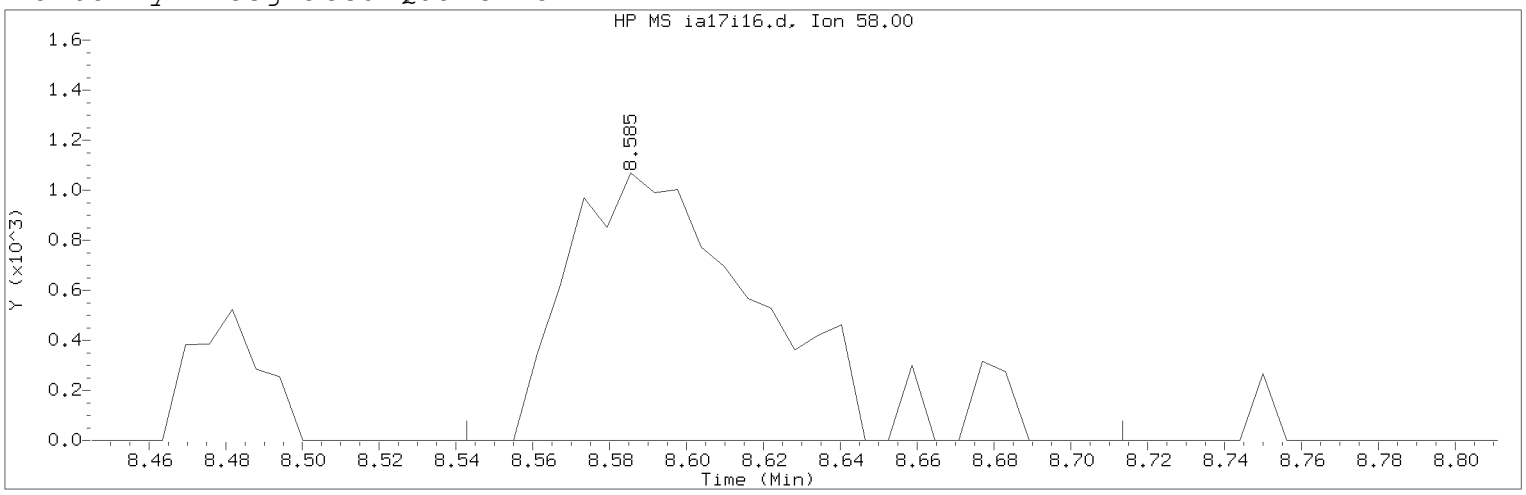
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1131
Retention Time (minutes): 8.482
Quant Ion : 88.00
Area : 1519
On-column Amount (ng) : 5.6074
Integration start scan : 1120 Integration stop scan: 1142
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature user id: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

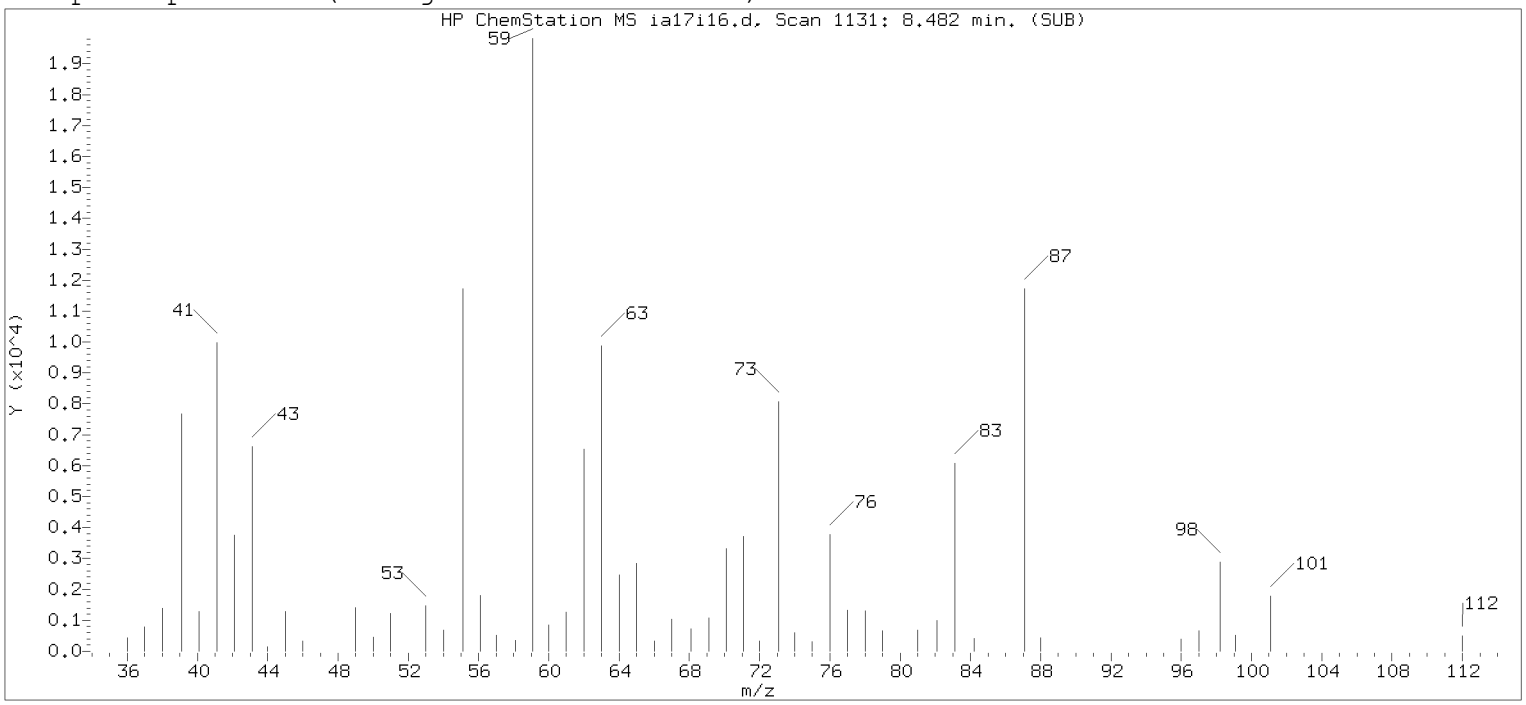
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1148
Retention Time (minutes): 8.585
Quant Ion : 58.00
Area (flag) : 3857M
On-Column Amount (ng) : 18.1207
Integration start scan : 1140 Integration stop scan: 1168
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

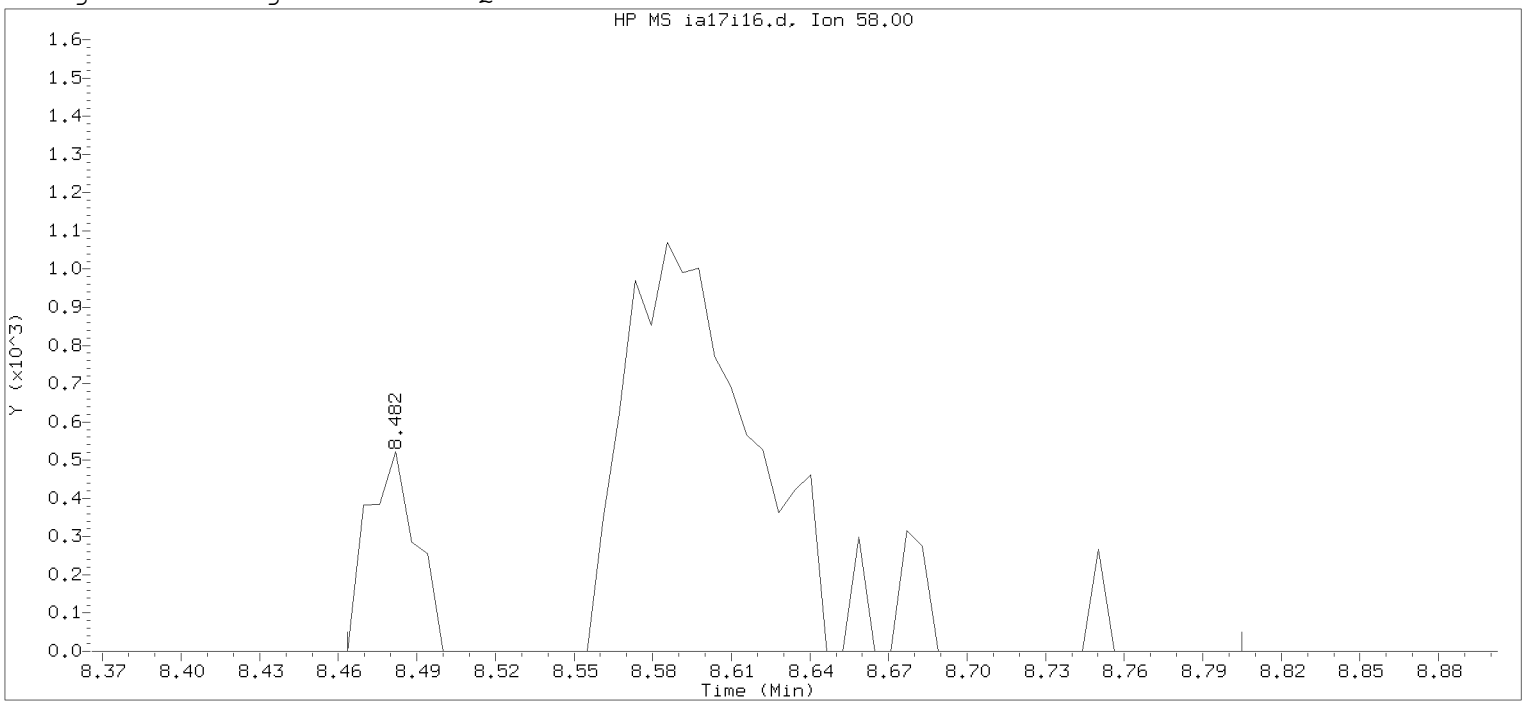
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

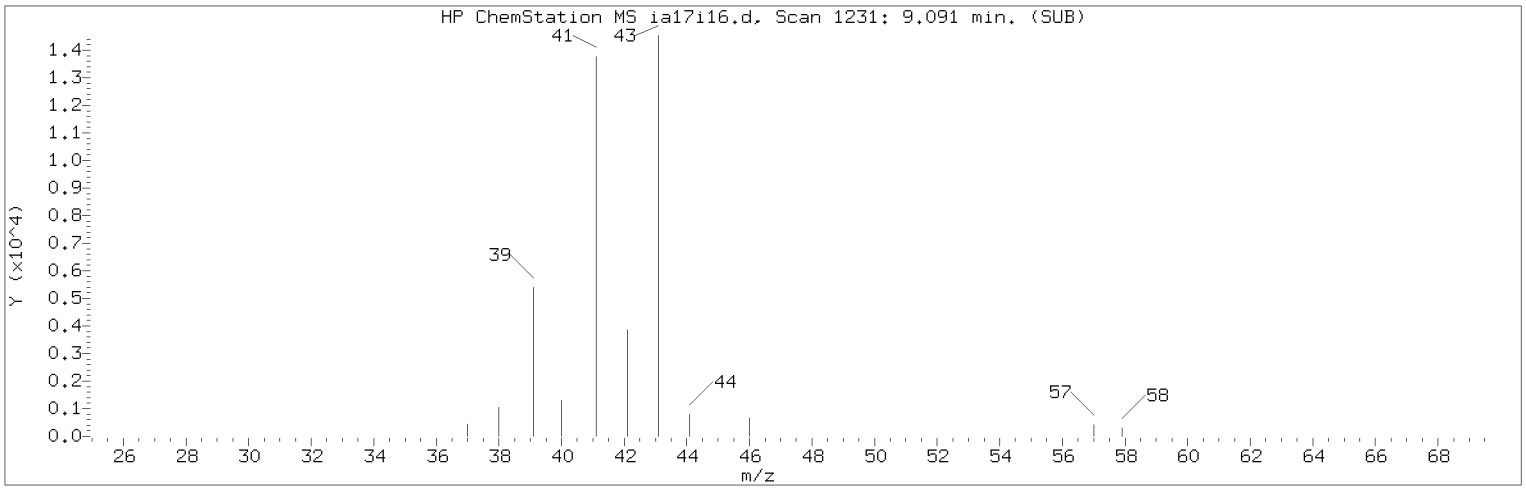
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

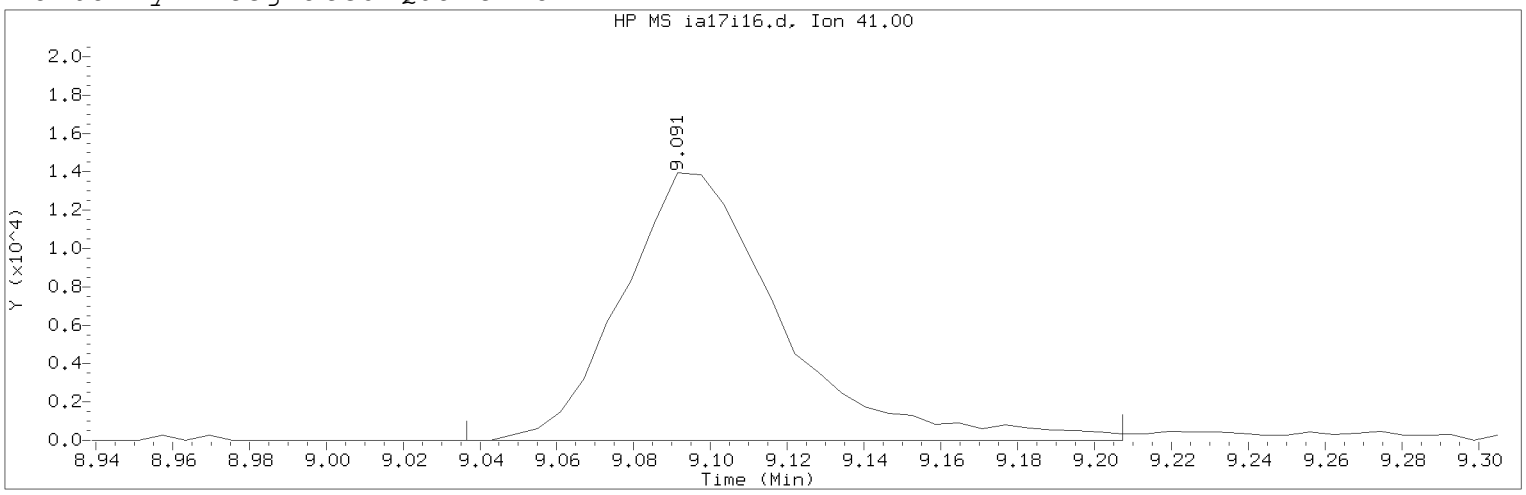
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1131
Retention Time (minutes): 8.482
Quant Ion : 58.00
Area : 4625
On-column Amount (ng) : 21.0995
Integration start scan : 1127 Integration stop scan: 1183
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

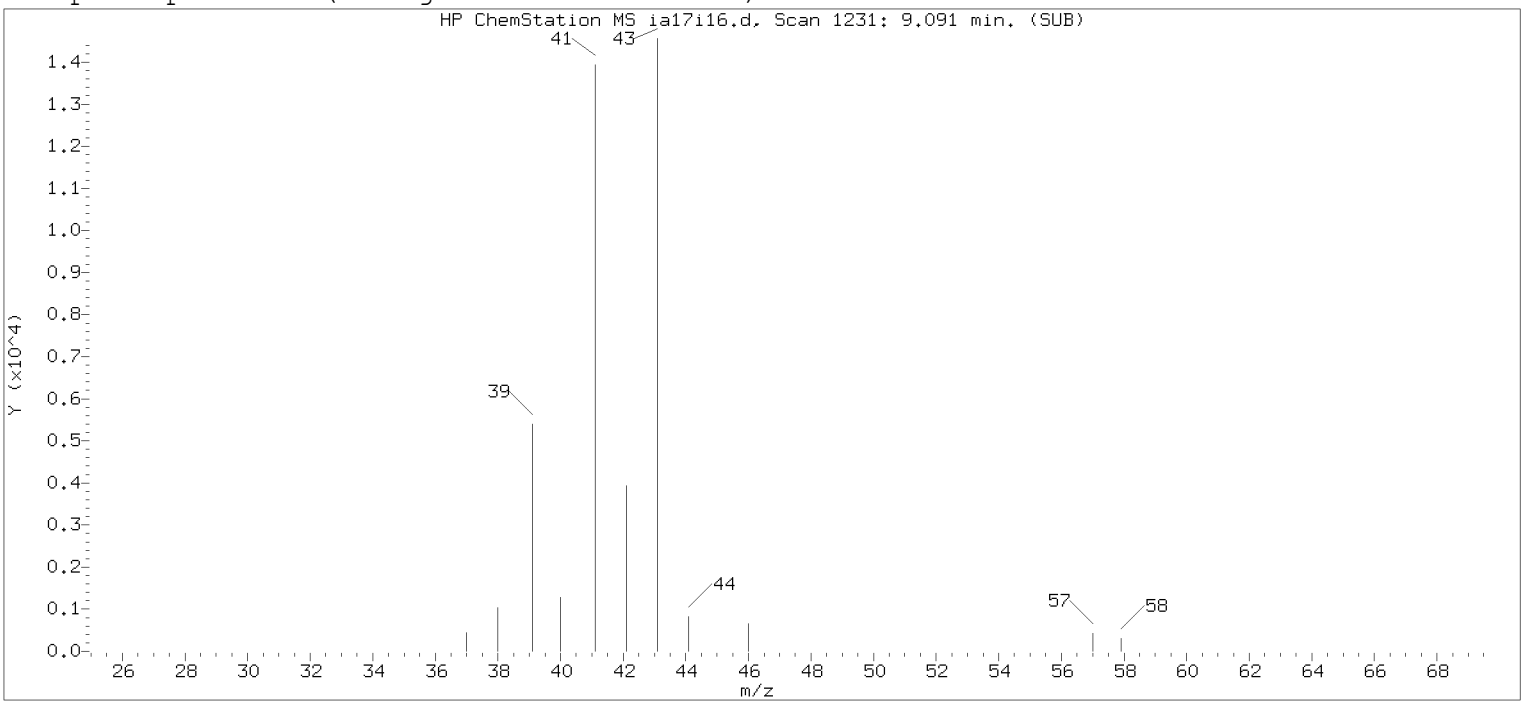
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1231
Retention Time (minutes): 9.091
Quant Ion : 41.00
Area (flag) : 39919M
On-Column Amount (ng) : 4.1107
Integration start scan : 1221 Integration stop scan: 1249
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

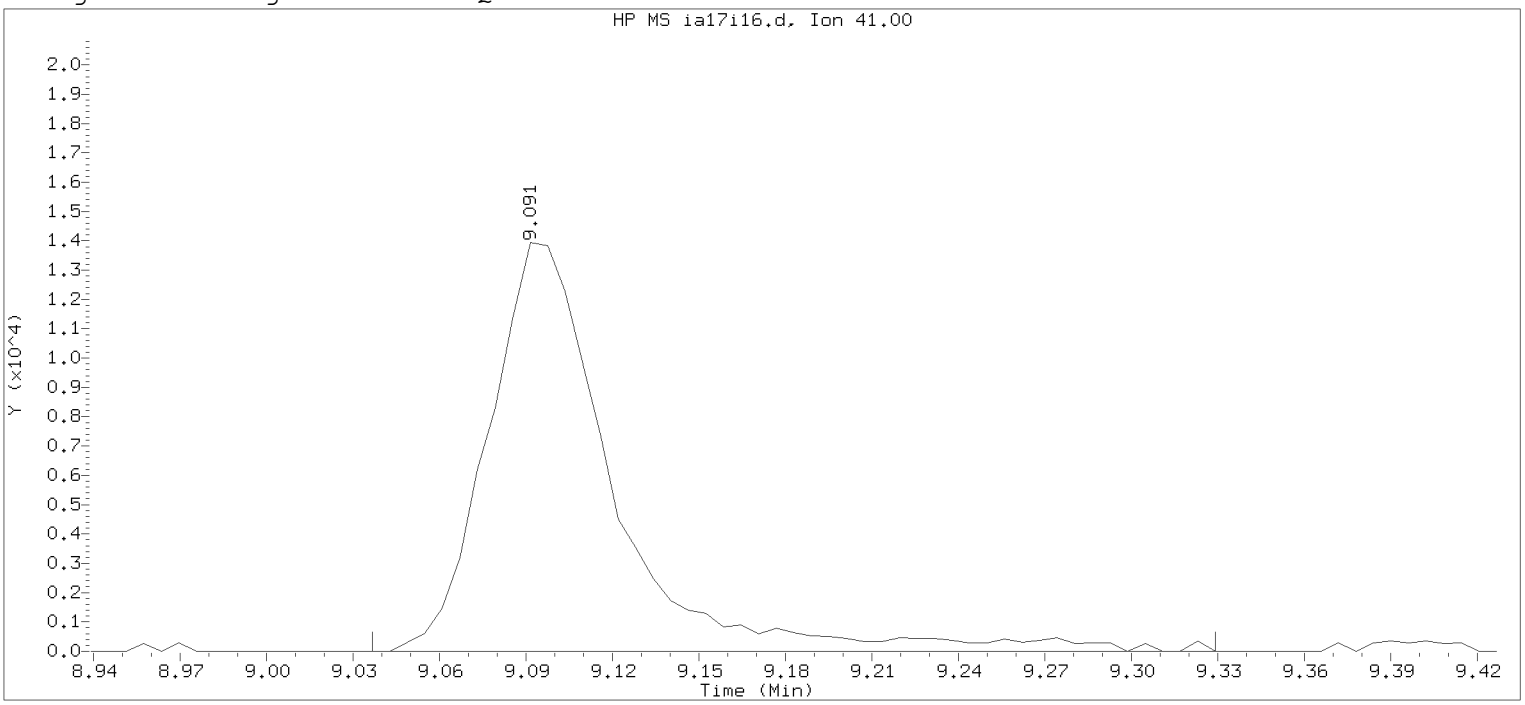
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

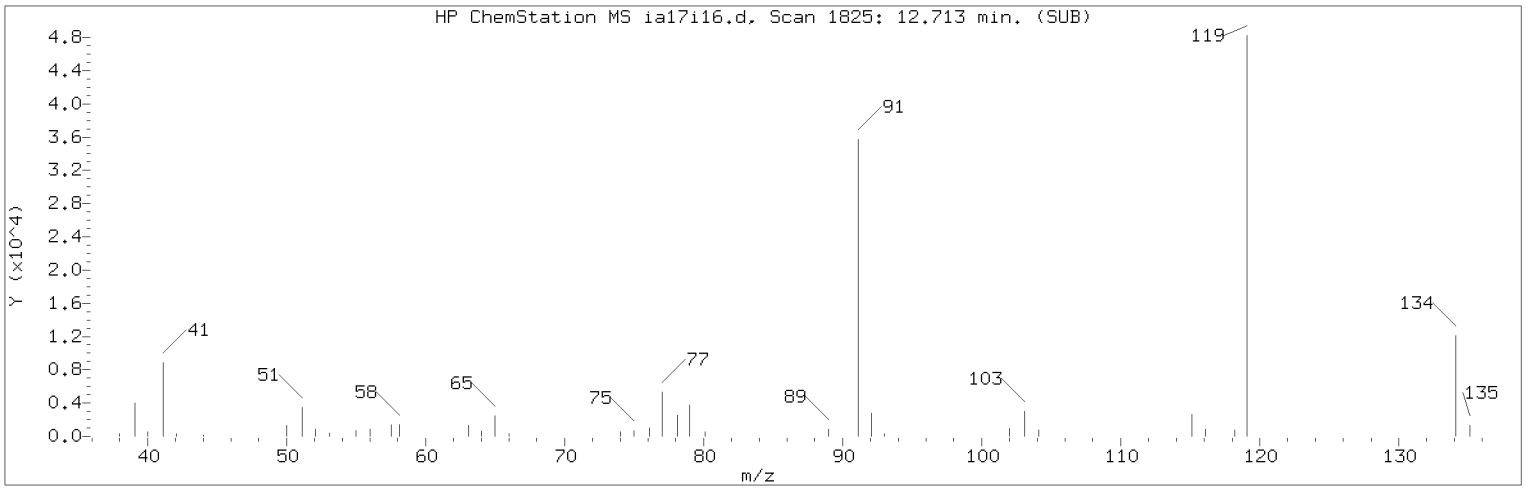
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

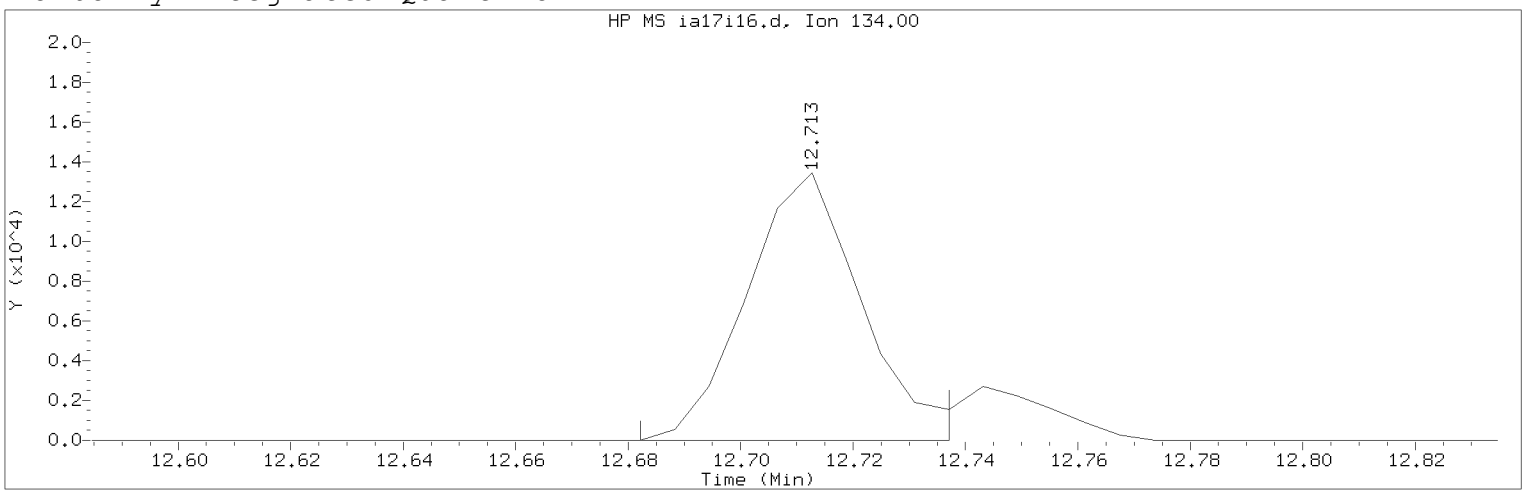
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1231
Retention Time (minutes): 9.091
Quant Ion : 41.00
Area : 41955
On-column Amount (ng) : 4.1209
Integration start scan : 1221 Integration stop scan: 1269
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

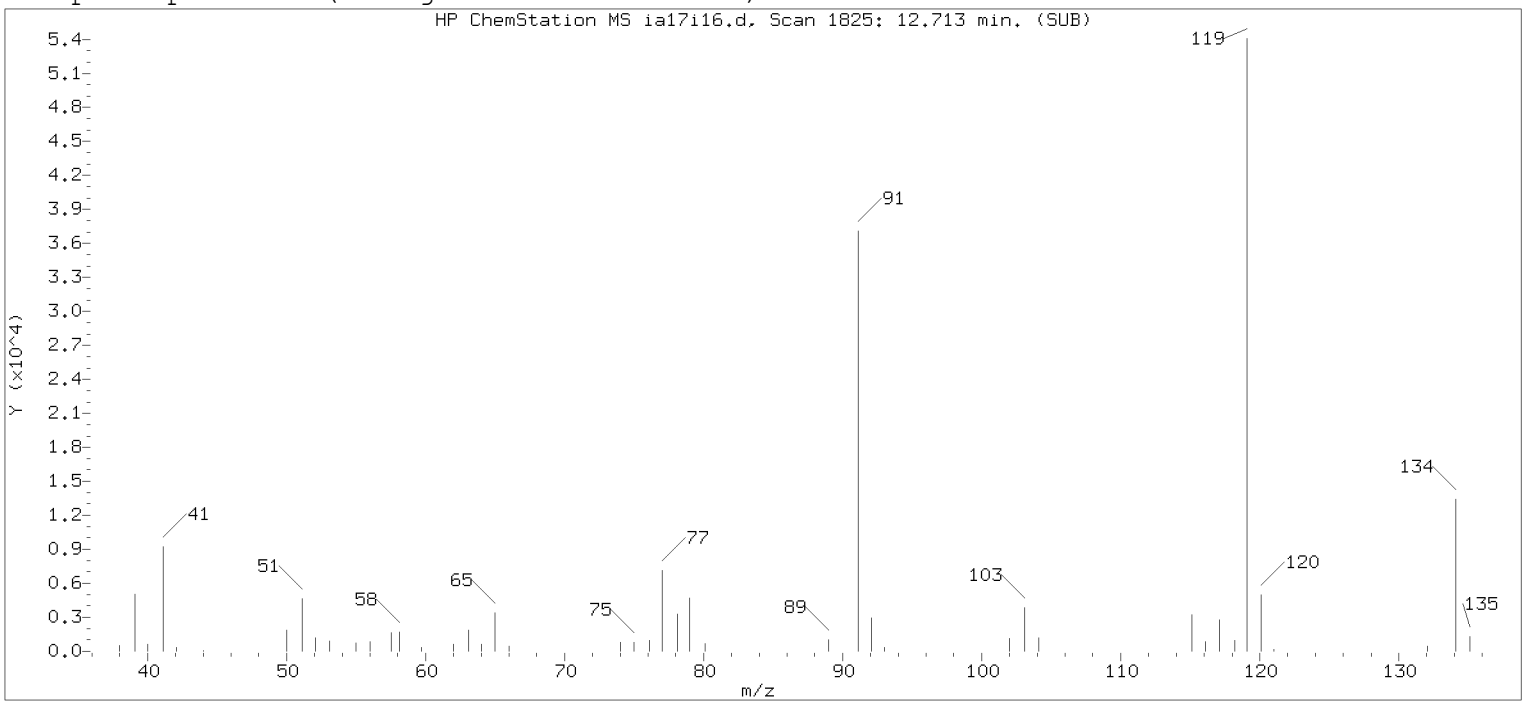
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1825
Retention Time (minutes): 12.713
Quant Ion : 134.00
Area (flag) : 19100M
On-Column Amount (ng) : 0.3657
Integration start scan : 1819 Integration stop scan: 1828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

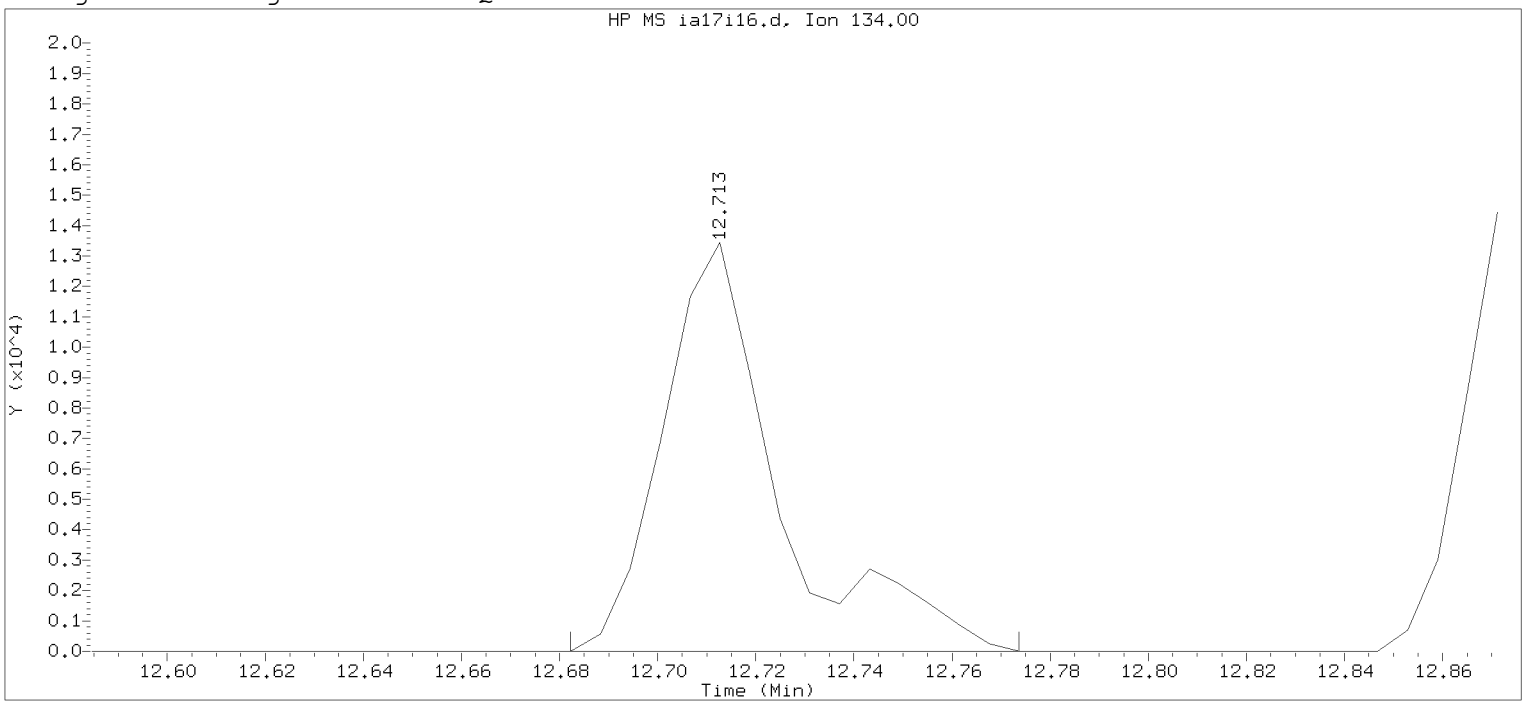
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



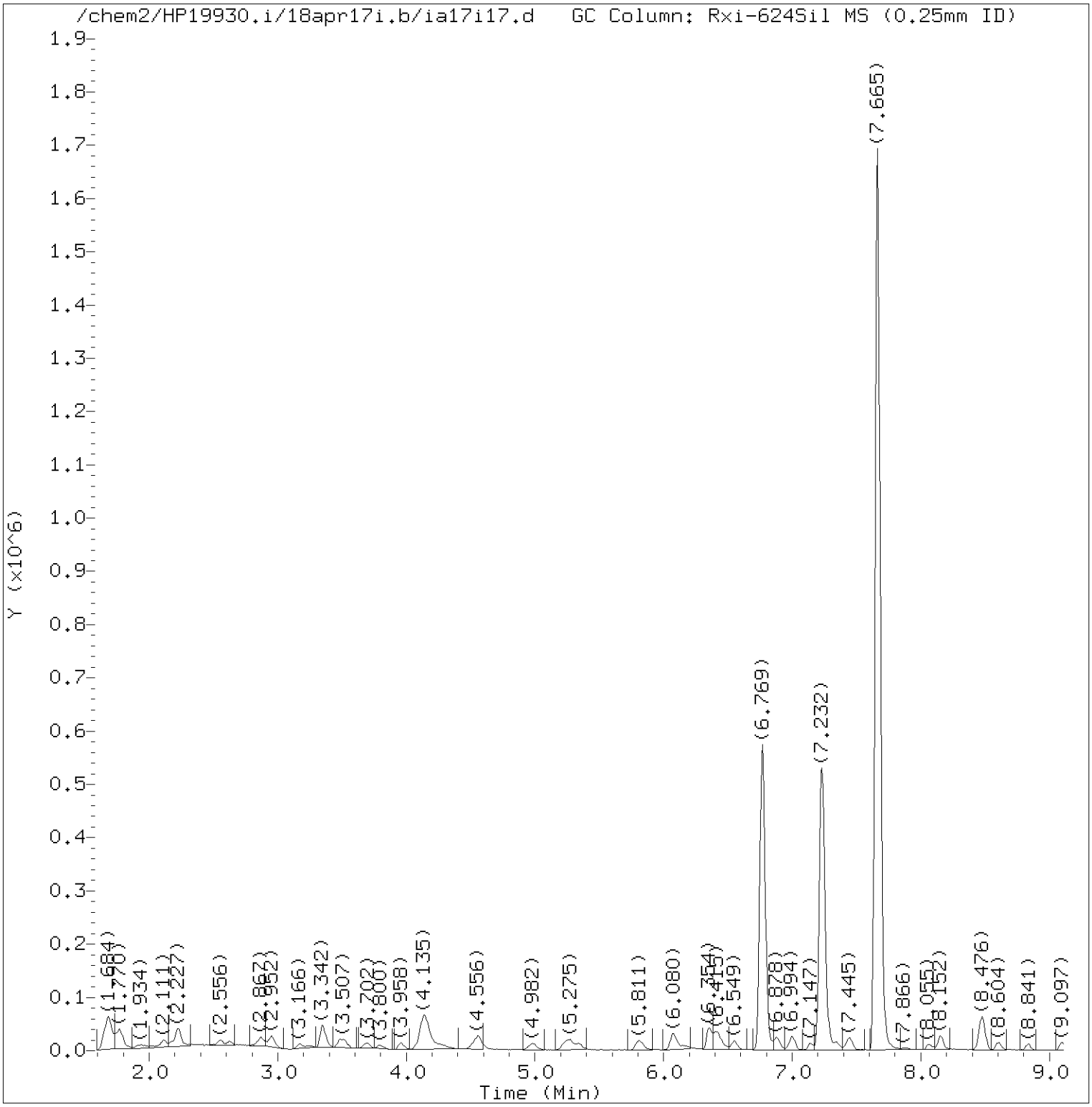
Data File: /chem2/HP19930.i/18apr17i.b/ia17i16.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:09 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:27
Date, time and analyst ID of latest file update: 17-Apr-2018 20:27 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1825
Retention Time (minutes): 12.713
Quant Ion : 134.00
Area : 21885
On-column Amount (ng) : 0.3925
Integration start scan : 1819 Integration stop scan: 1834
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.



Total Ion Chromatogram (TIC)

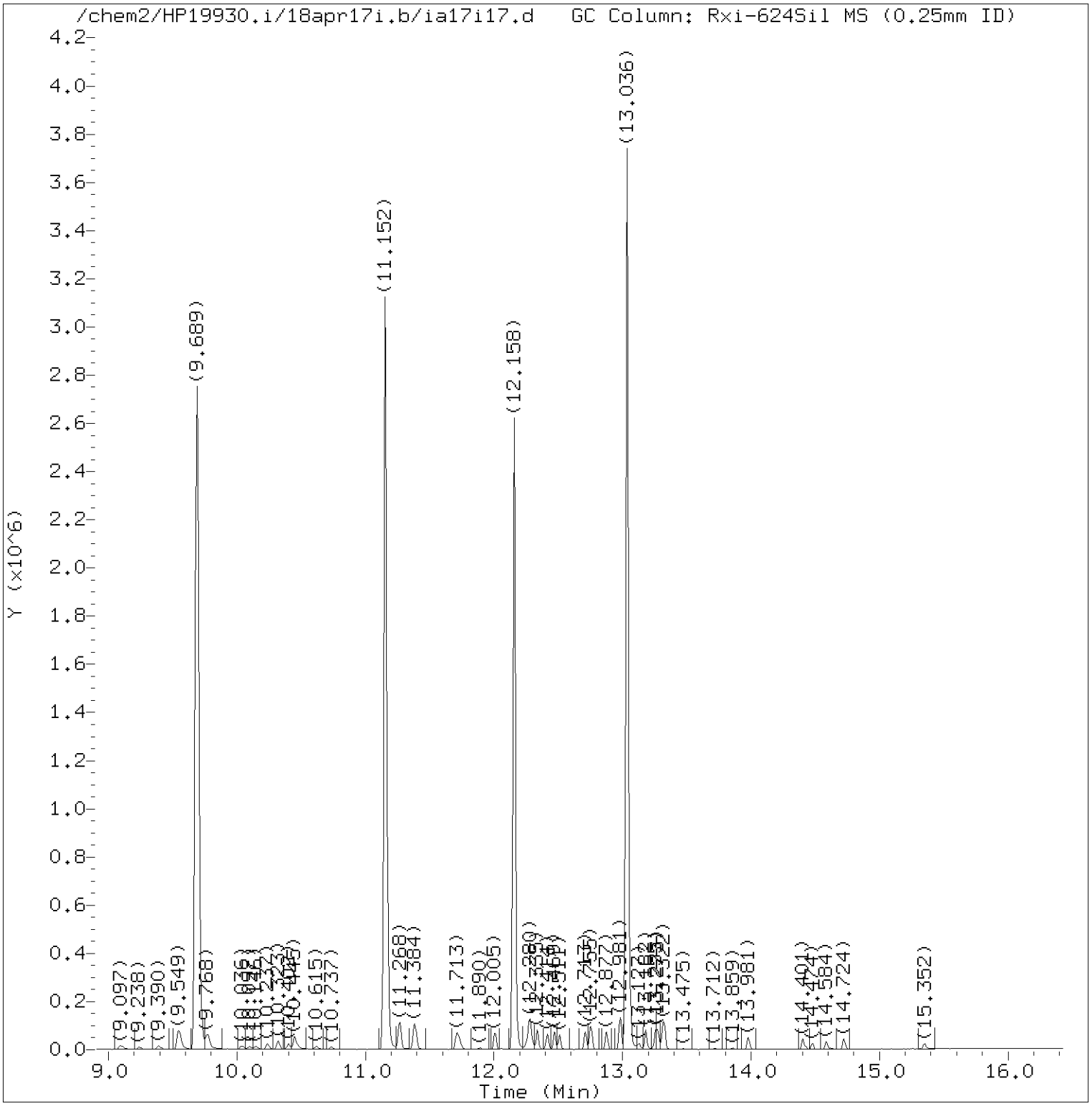
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.922	85	14801	0.142
2) Chloromethane	(2)	2.111	50	17288	0.179
6) 1,3-Butadiene	(2)	2.227	39	18247M	0.206
5) Vinyl Chloride	(2)	2.233	62	14297	0.164
7) Bromomethane	(2)	2.556	94	11320	0.185
8) Chloroethane	(2)	2.623	64	9306	0.188
9) Dichlorofluoromethane	(2)	2.867	67	20974	0.180
10) Trichlorofluoromethane	(2)	2.934	101	17738M	0.162
11) Ethyl ether	(2)	3.166	59	9901	0.184
12) Freon 123a	(2)	3.233	67	12530	0.162
13) Acrolein	(1)	3.349	56	77634	9.498
15) 1,1-Dichloroethene	(2)	3.483	96	8293	0.161
16) Freon 113	(2)	3.507	101	9801	0.166
14) Acetone	(1)	3.525	43	26358	2.197
17) Methyl Iodide	(2)	3.678	142	16265	0.171
18) Carbon Disulfide	(2)	3.800	76	24065	0.165
22) Allyl Chloride	(2)	3.958	41	14739M	0.155
21) Methyl Acetate	(1)	3.989	43	4548	0.161
23) Methylene Chloride	(2)	4.135	84	12236	0.194
26)*t-Butyl Alcohol-d10	(1)	4.141	65	170762M	50.000
28) t-Butyl Alcohol	(1)	4.269	59	16434M	3.964
30) Methyl Tertiary Butyl Ether	(2)	4.537	73	27214	0.177
29) Acrylonitrile	(1)	4.556	53	10162	0.756
31) trans-1,2-Dichloroethene	(2)	4.568	96	9411	0.160
32) n-Hexane	(2)	4.970	57	11999	0.122
33) 1,1-Dichloroethane	(2)	5.226	63	19616	0.167
34) di-Isopropyl Ether	(2)	5.275	45	34564	0.162
35) 2-Chloro-1,3-Butadiene	(2)	5.348	53	13034	0.130
37) Ethyl t-butyl ether	(2)	5.811	59	28241	0.161
39) cis-1,2-Dichloroethene	(2)	6.068	96	10785	0.162
41) 2,2-Dichloropropane	(2)	6.080	77	12248	0.149
38) 2-Butanone	(1)	6.086	43	28424	1.516
40) 1,2-Dichloroethene (Total)	(2)		96	20196	0.322
42) Propionitrile	(1)	6.165	54	19602	3.672
45) Methacrylonitrile	(1)	6.354	67	29751	1.708
47) Bromochloromethane	(2)	6.409	128	4795	0.172
48) Tetrahydrofuran	(1)	6.427	71	8898	1.747
49) Chloroform	(2)	6.549	83	19174	0.173

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.769	113	522612	9.875
50)$Dibromofluoromethane	(2)	6.769	111	542067	9.963
51) 1,1,1-Trichloroethane	(2)	6.775	97	14640	0.159
52) Cyclohexane	(2)	6.884	56	16035	0.134
52) Cyclohexane	(2)	6.878	84	13228	0.138
52) Cyclohexane	(2)	6.878	69	4385	0.125
54) Carbon Tetrachloride	(2)	6.988	117	11651	0.150
55) 1,1-Dichloropropene	(2)	7.000	75	13229	0.151
56) Isobutyl Alcohol	(1)	7.134	41	16841	10.170
57)$1,2-Dichloroethane-d4	(2)	7.232	102	116672	10.134
57)$1,2-Dichloroethane-d4	(2)	7.232	65	581430	10.210
57)$1,2-Dichloroethane-d4	(2)	7.232	104	73007	10.055
58) Benzene	(2)	7.262	78	45289	0.172
59) 1,2-Dichloroethane	(2)	7.342	62	16031	0.208
59) 1,2-Dichloroethane	(2)	7.336	98	853	0.134
60) t-Amyl methyl ether	(2)	7.439	73	23502	0.159
63)*Fluorobenzene	(2)	7.665	96	2267597	10.000
62) n-Heptane	(2)	7.665	43	15443	0.148
65) n-Butanol	(1)	8.055	56	15545M	12.329
67) Trichloroethene	(2)	8.152	95	11130	0.167
69) Methylcyclohexane	(2)	8.457	83	14223	0.124
70) 1,2-Dichloropropane	(2)	8.494	63	11623	0.170
71) Methyl Methacrylate	(1)	8.591	69	3959	0.135
72) 1,4-Dioxane	(1)	8.598	88	1413M	4.885
72) 1,4-Dioxane	(1)	8.591	58	673	3.243
73) Dibromomethane	(2)	8.604	93	5616	0.183
74) Bromodichloromethane	(2)	8.841	83	12224	0.167
76) 2-Nitropropane	(1)	9.104	41	14908	1.574
80) cis-1,3-Dichloropropene	(2)	9.390	75	12226	0.132
81) 4-Methyl-2-Pentanone	(1)	9.549	43	75995M	1.632
82)$Toluene-d8	(3)	9.689	98	2238738	10.126
82)$Toluene-d8	(3)	9.689	100	1439759	10.141
83) Toluene	(3)	9.774	92	28508	0.177
84) trans-1,3-Dichloropropene	(3)	10.042	75	9800	0.144
86) Ethyl Methacrylate	(3)	10.097	69	8687	0.130
85) 1,3-Dichloropropene (total)	(3)		75	22026	0.276
88) 1,1,2-Trichloroethane	(3)	10.237	97	8215	0.180
89) Tetrachloroethene	(3)	10.323	166	11167	0.163

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.402	76	14649	0.181
91) 2-Hexanone	(1)	10.445	43	50647M	1.540
93) Dibromochloromethane	(3)	10.622	129	6411	0.143
95) 1,2-Dibromoethane	(3)	10.737	107	7185	0.173
97)*Chlorobenzene-d5	(3)	11.152	117	1637484	10.000
98) Chlorobenzene	(3)	11.182	112	31457	0.179
99) 1,1,1,2-Tetrachloroethane	(3)	11.268	131	9004	0.161
100) Ethylbenzene	(3)	11.268	91	49493	0.162
101) m+p-Xylene	(3)	11.384	106	35523	0.302
104) o-Xylene	(3)	11.713	106	16825	0.147
106) Styrene	(3)	11.731	104	24132	0.137
105) Xylene (Total)	(3)		106	52348	0.449
107) Bromoform	(3)	11.896	173	3036	0.350
108) Isopropylbenzene	(3)	12.005	105	40454M	0.138
111)$4-Bromofluorobenzene	(3)	12.158	95	784054	10.043
111)$4-Bromofluorobenzene	(3)	12.158	174	640396	10.081
113) 1,1,2,2-Tetrachloroethane	(4)	12.255	83	10830	0.179
114) Bromobenzene	(4)	12.274	156	12207	0.170
115) trans-1,4-Dichloro-2-butene	(1)	12.280	53	18277	1.565
116) 1,2,3-Trichloropropane	(4)	12.304	110	2872	0.181
117) n-Propylbenzene	(4)	12.335	91	55170	0.152
119) 2-Chlorotoluene	(4)	12.420	126	11276	0.161
121) 1,3,5-Trimethylbenzene	(4)	12.475	105	36324	0.145
122) 4-Chlorotoluene	(4)	12.511	126	11339	0.160
125) tert-Butylbenzene	(4)	12.713	134	7262	0.140
126) Pentachloroethane	(4)	12.749	167	5519	0.138
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	35954	0.143
128) sec-Butylbenzene	(4)	12.877	105	45547	0.141
131) 1,3-Dichlorobenzene	(4)	12.981	146	23132	0.165
132) p-Isopropyltoluene	(4)	12.981	119	34968	0.123
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	859157	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	25667	0.180
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	20665M	0.181
136) Benzyl Chloride	(4)	13.133	126	1687	0.397
138) n-Butylbenzene	(4)	13.273	92	18897	0.141
139) 1,2-Dichlorobenzene	(4)	13.310	146	22814	0.176
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	1055	0.167
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	16493	0.174

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

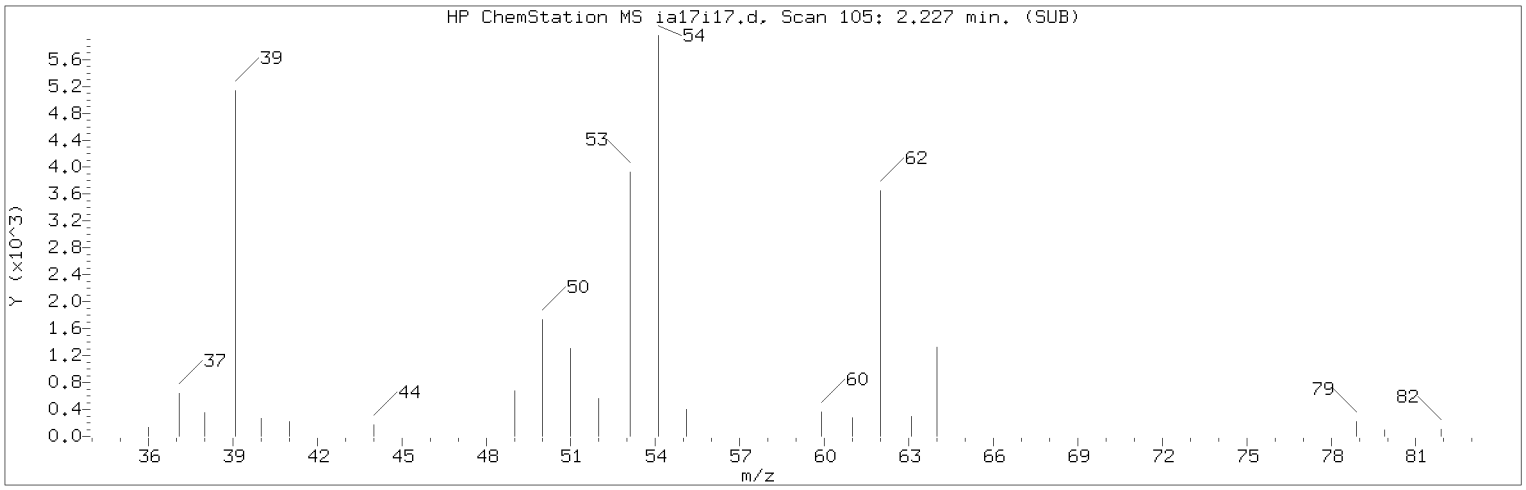
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

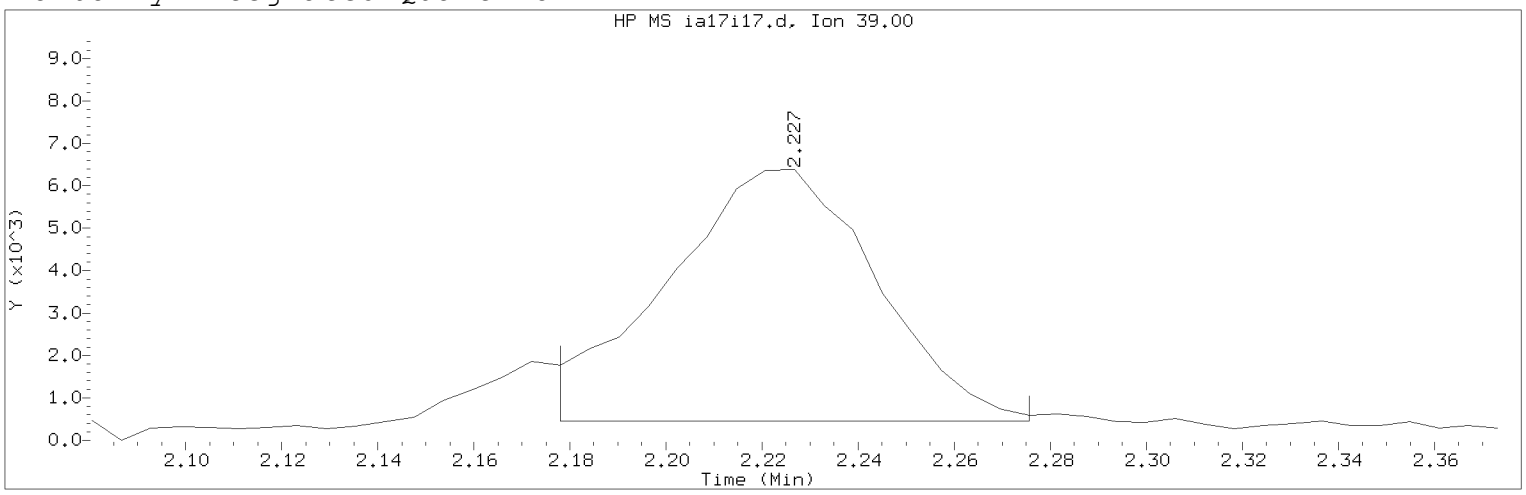
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.401	180	14424	0.174
146) Hexachlorobutadiene	(4)	14.474	225	4530	0.151
147) Naphthalene	(4)	14.584	128	28182	0.174
148) 1,2,3-Trichlorobenzene	(4)	14.724	180	14208	0.193

Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

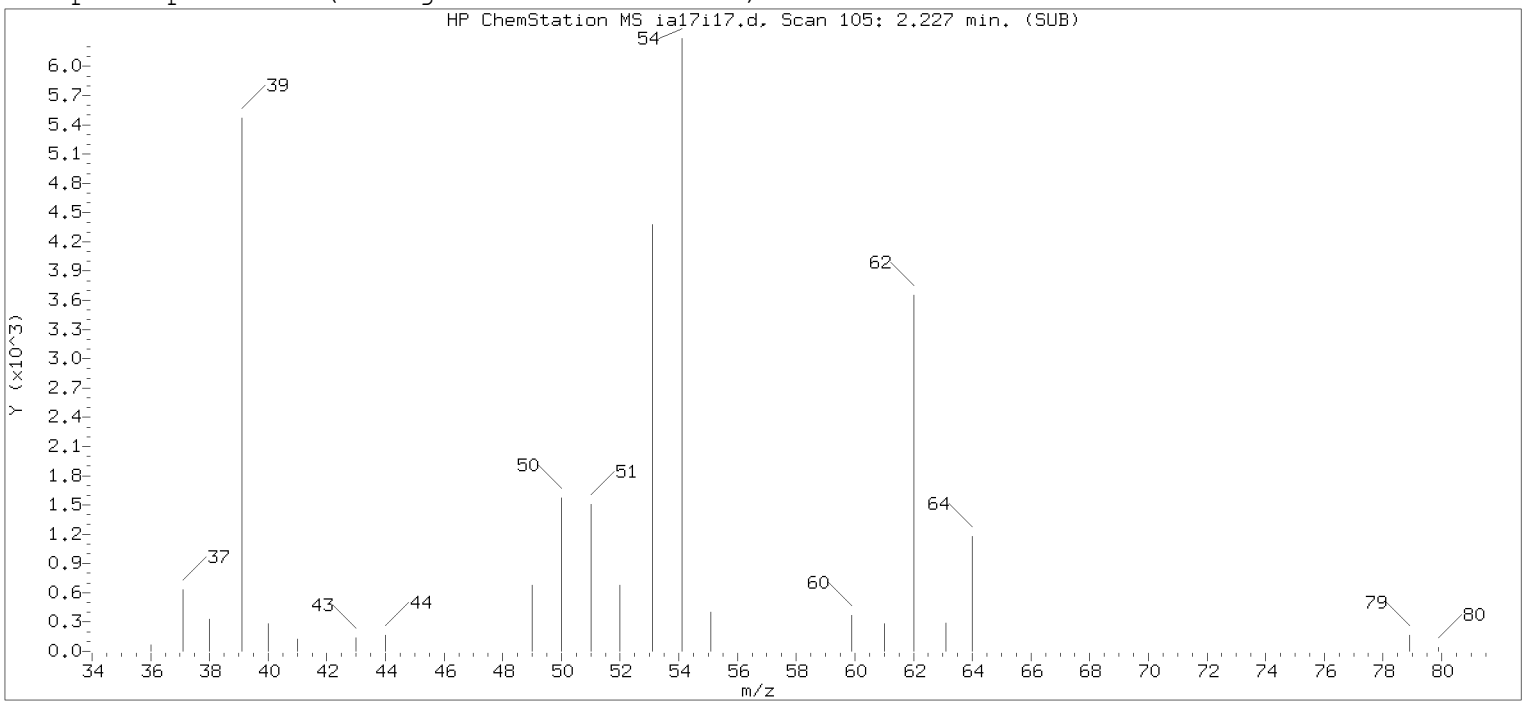
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 105
Retention Time (minutes): 2.227
Quant Ion : 39.00
Area (flag) : 18247M
On-Column Amount (ng) : 0.2056
Integration start scan : 96 Integration stop scan: 112
Y at integration start : 454 Y at integration end: 454

Reason for manual integration: improper integration

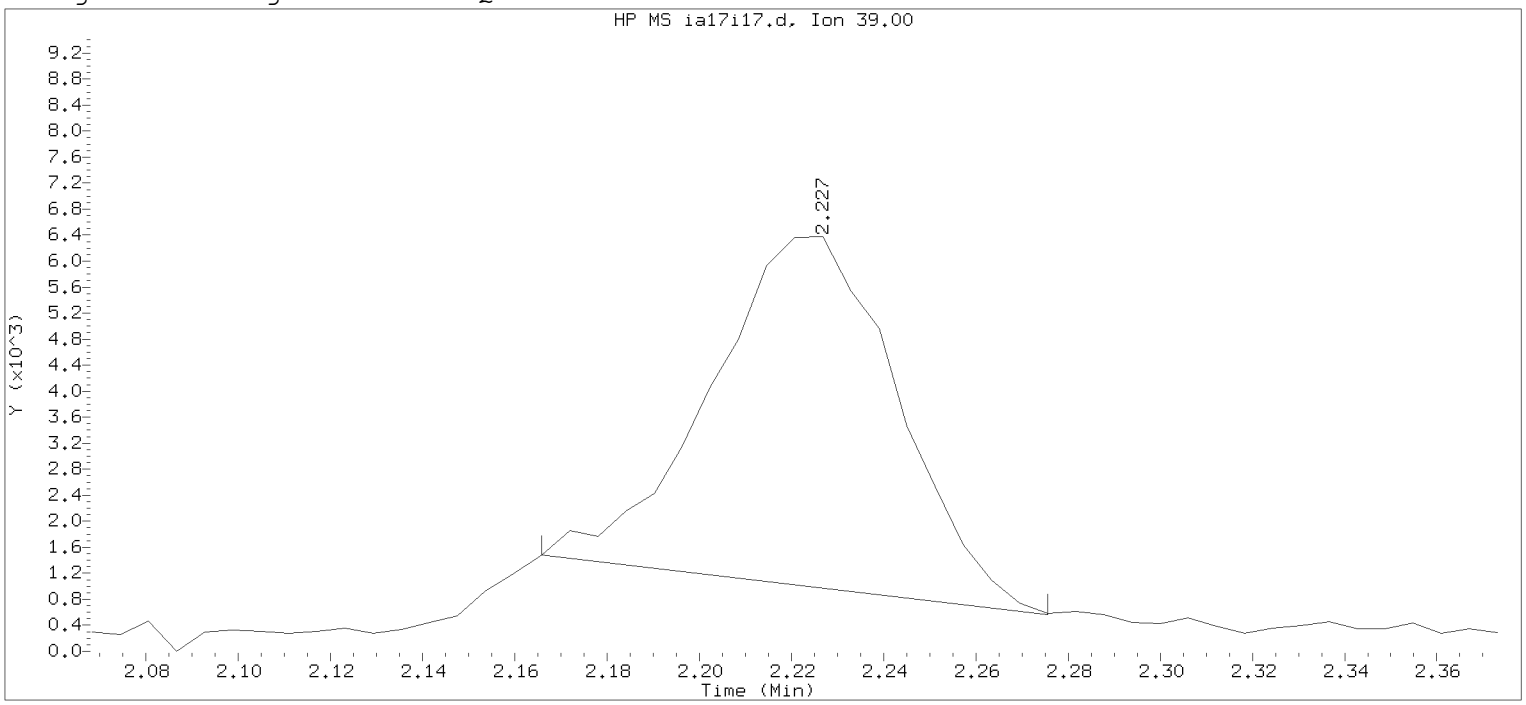
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

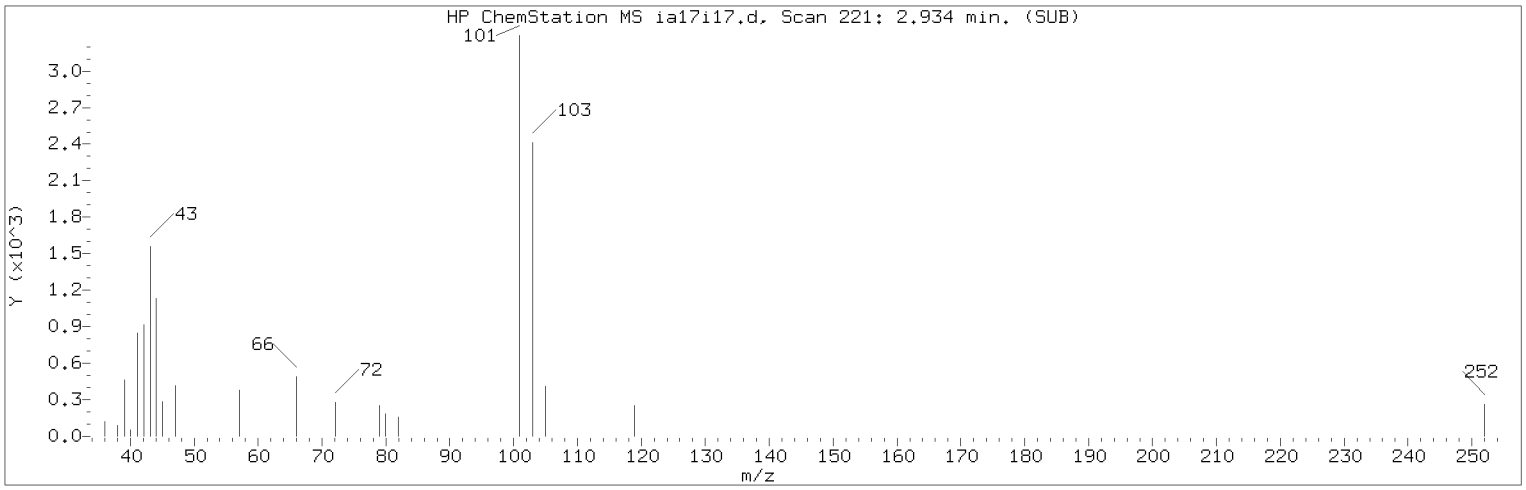
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

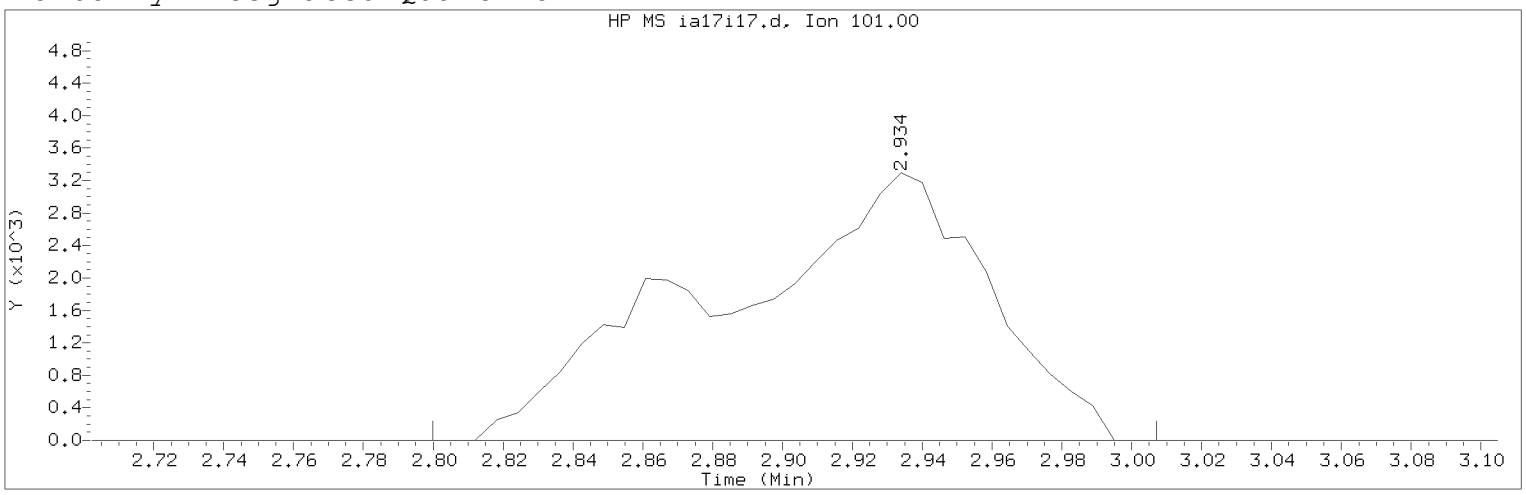
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 105
Retention Time (minutes): 2.227
Quant Ion : 39.00
Area : 15204
On-column Amount (ng) : 0.1757
Integration start scan : 94 Integration stop scan: 112
Y at integration start : 1480 Y at integration end: 558

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

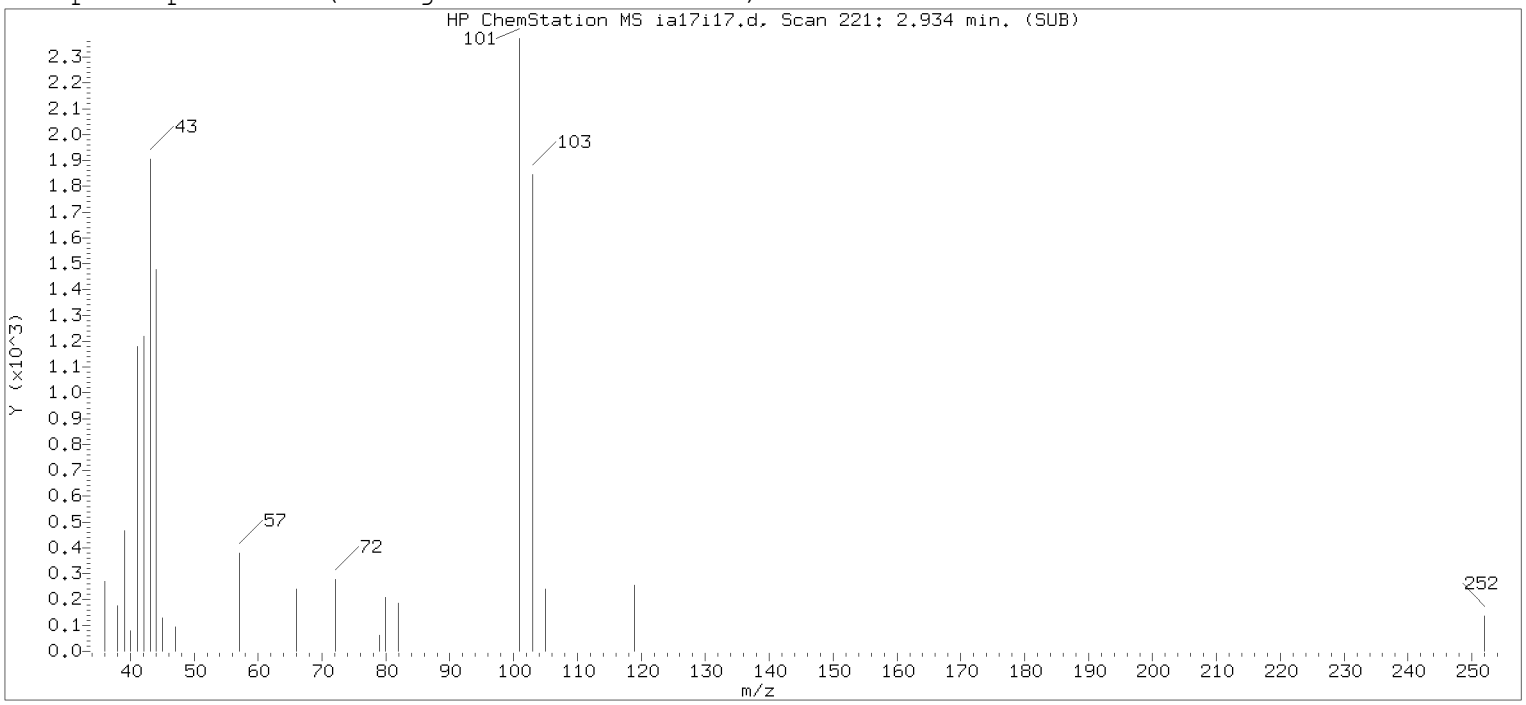
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 221
Retention Time (minutes): 2.934
Quant Ion : 101.00
Area (flag) : 17738M
On-Column Amount (ng) : 0.1623
Integration start scan : 198 Integration stop scan: 232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

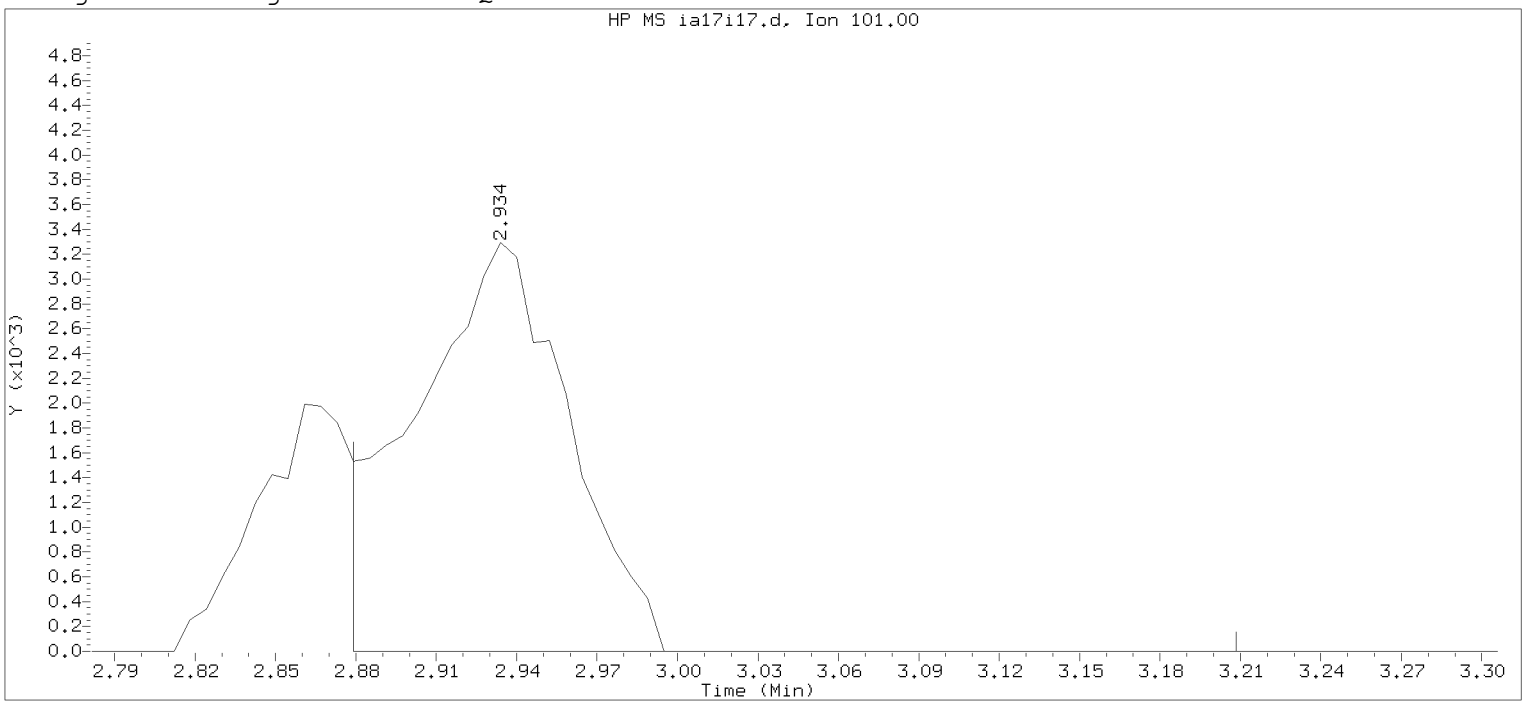
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

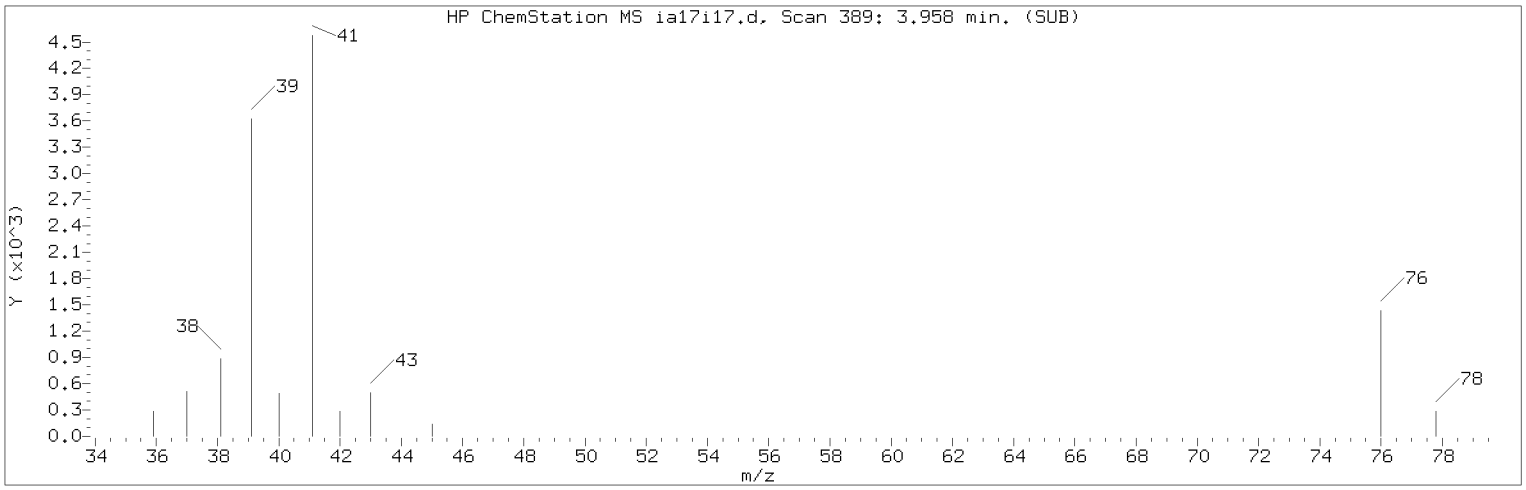
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

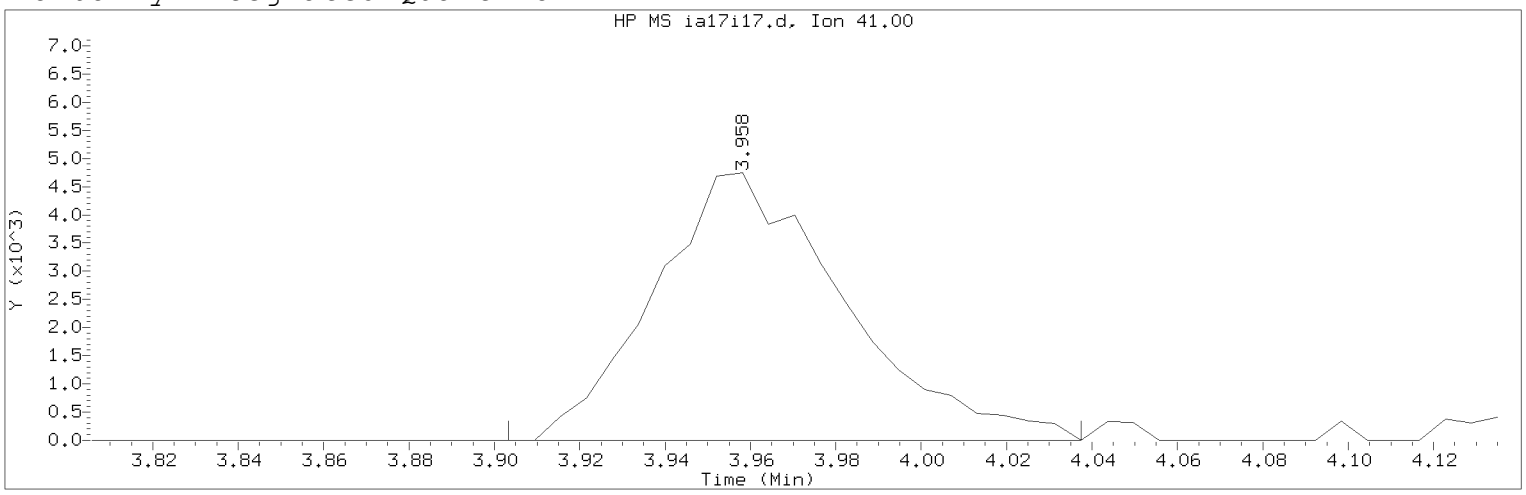
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 221
Retention Time (minutes): 2.934
Quant Ion : 101.00
Area : 13120
On-column Amount (ng) : 0.1287
Integration start scan : 211 Integration stop scan: 265
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

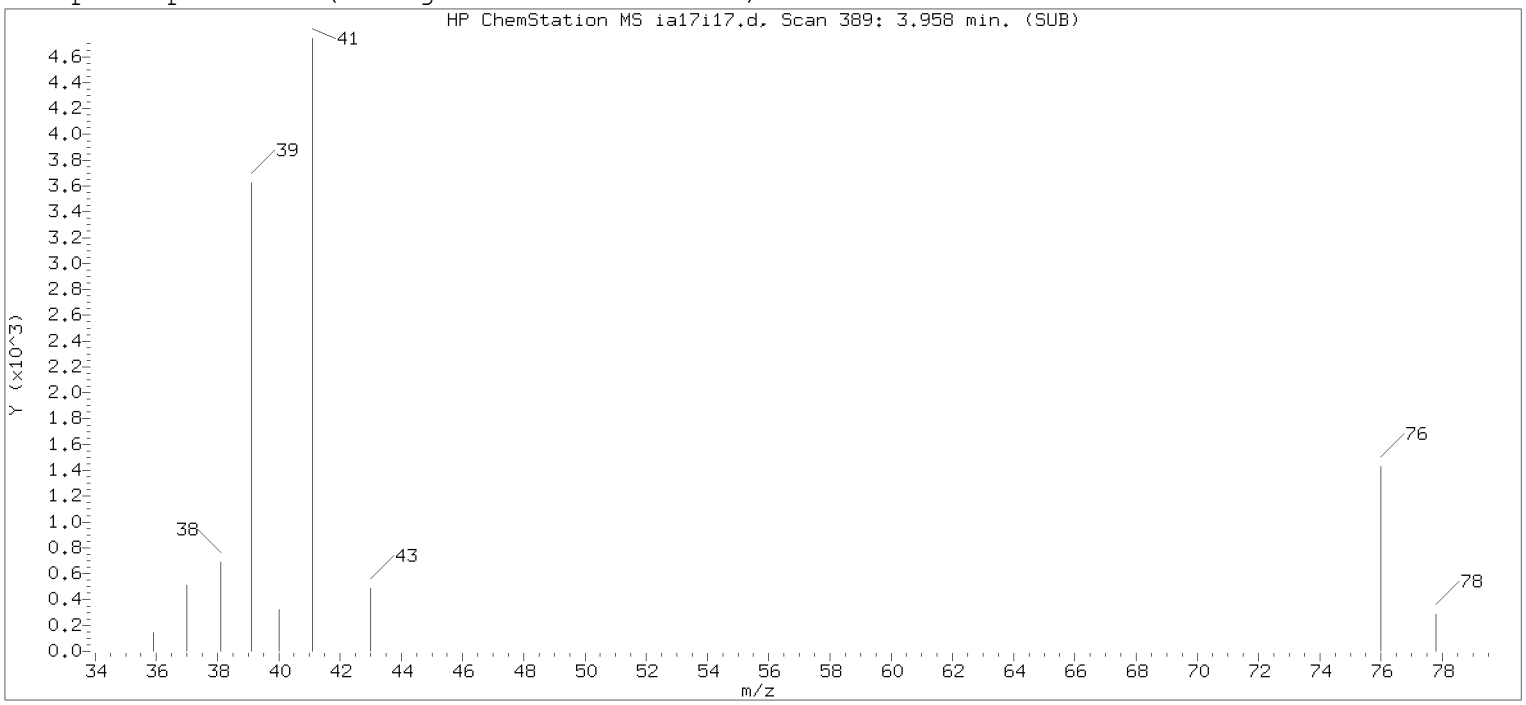
Compound Number : 22
Compound Name : Allyl Chloride
Scan Number : 389
Retention Time (minutes): 3.958
Quant Ion : 41.00
Area (flag) : 14739M
On-Column Amount (ng) : 0.1553
Integration start scan : 379 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

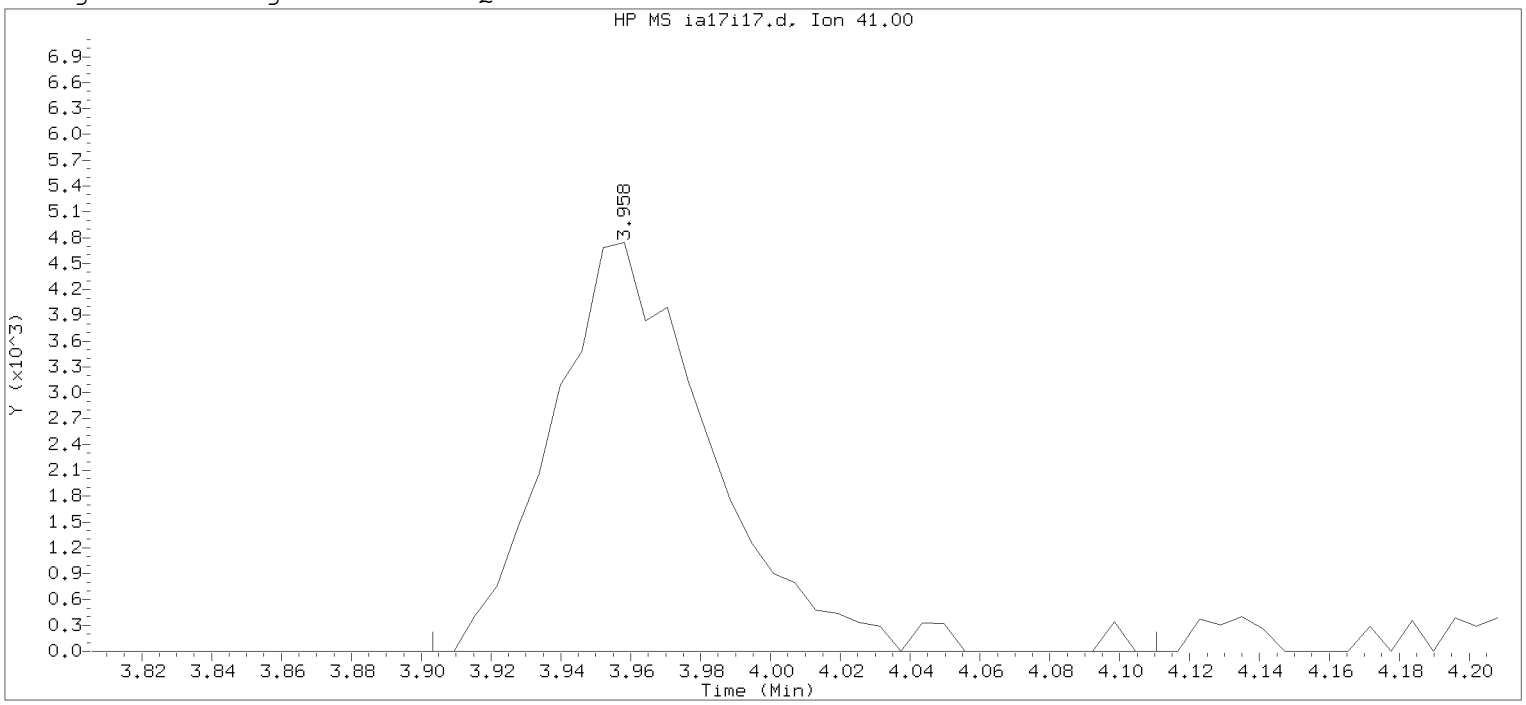
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

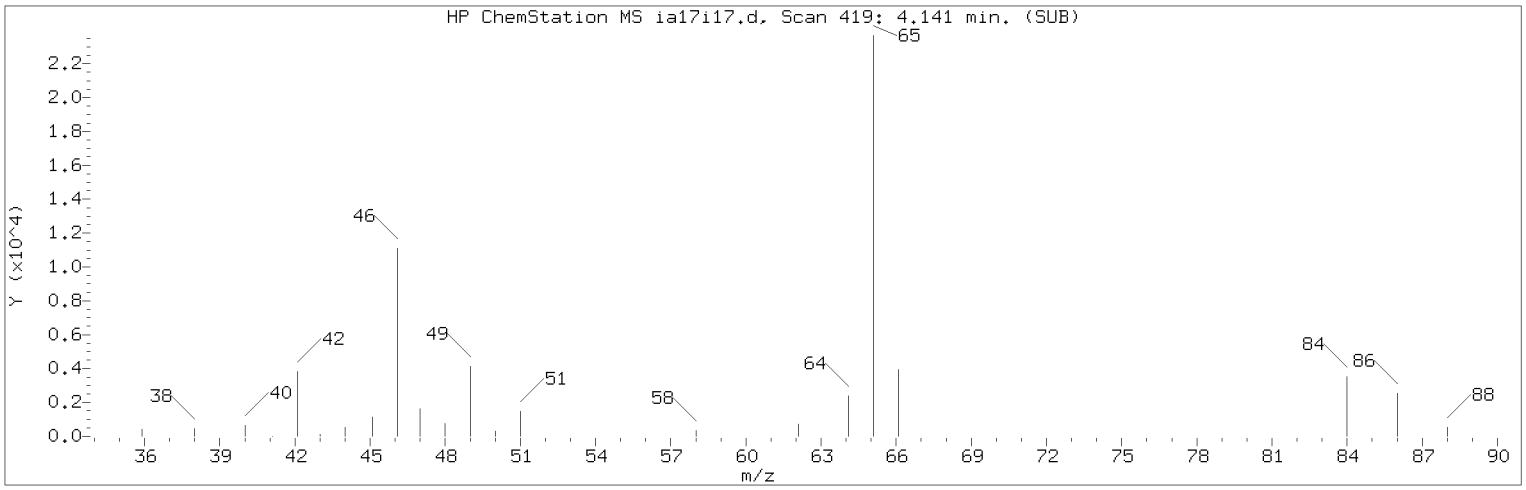
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

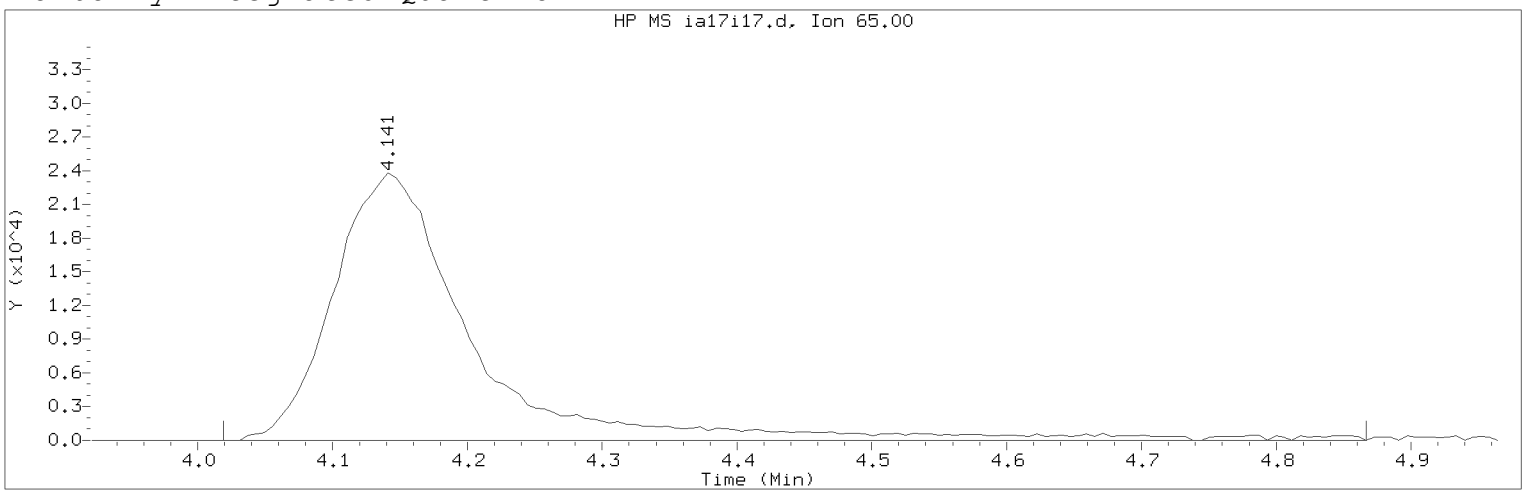
Compound Number : 22
Compound Name : Allyl Chloride
Scan Number : 389
Retention Time (minutes): 3.958
Quant Ion : 41.00
Area : 15101
On-column Amount (ng) : 0.1587
Integration start scan : 379 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

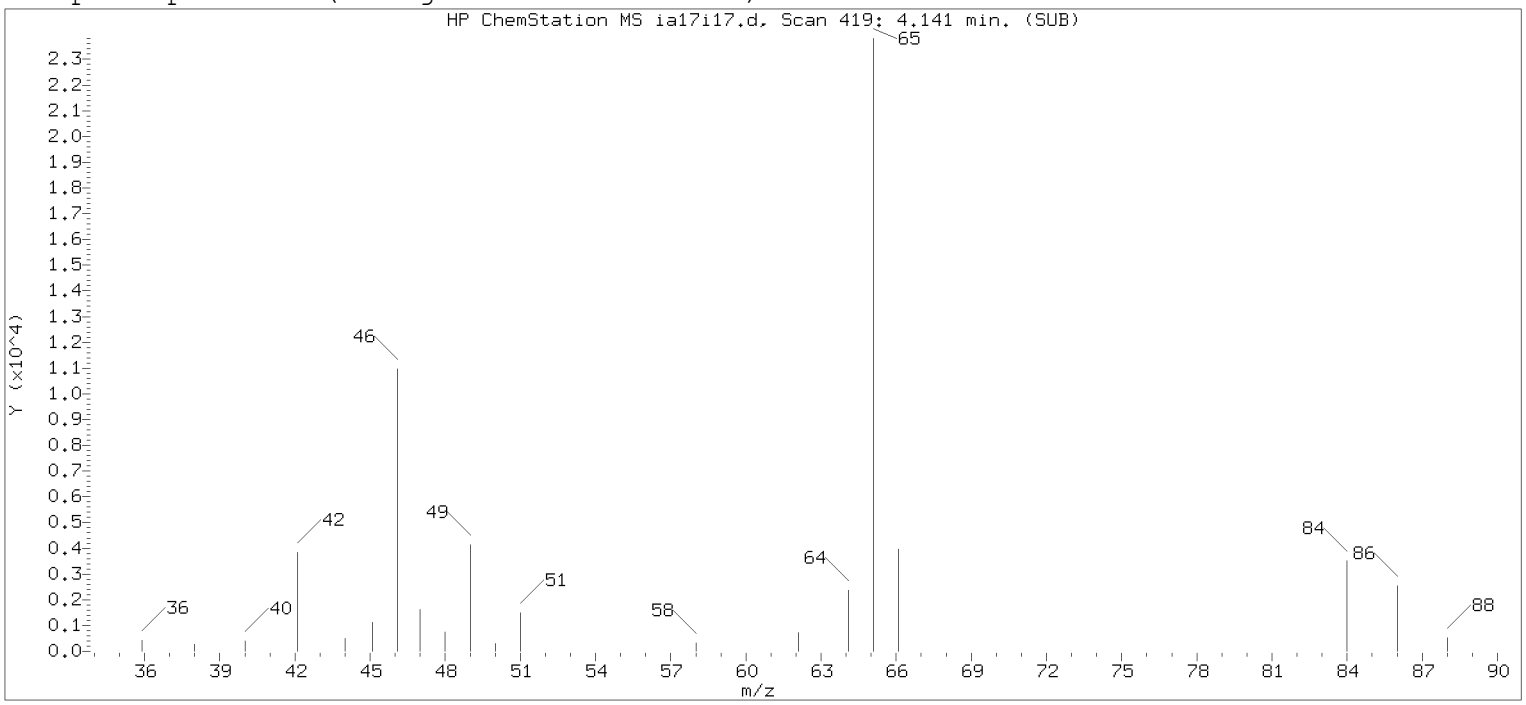
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area (flag) : 170762M
On-Column Amount (ng) : 50.0000
Integration start scan : 398 Integration stop scan: 537
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

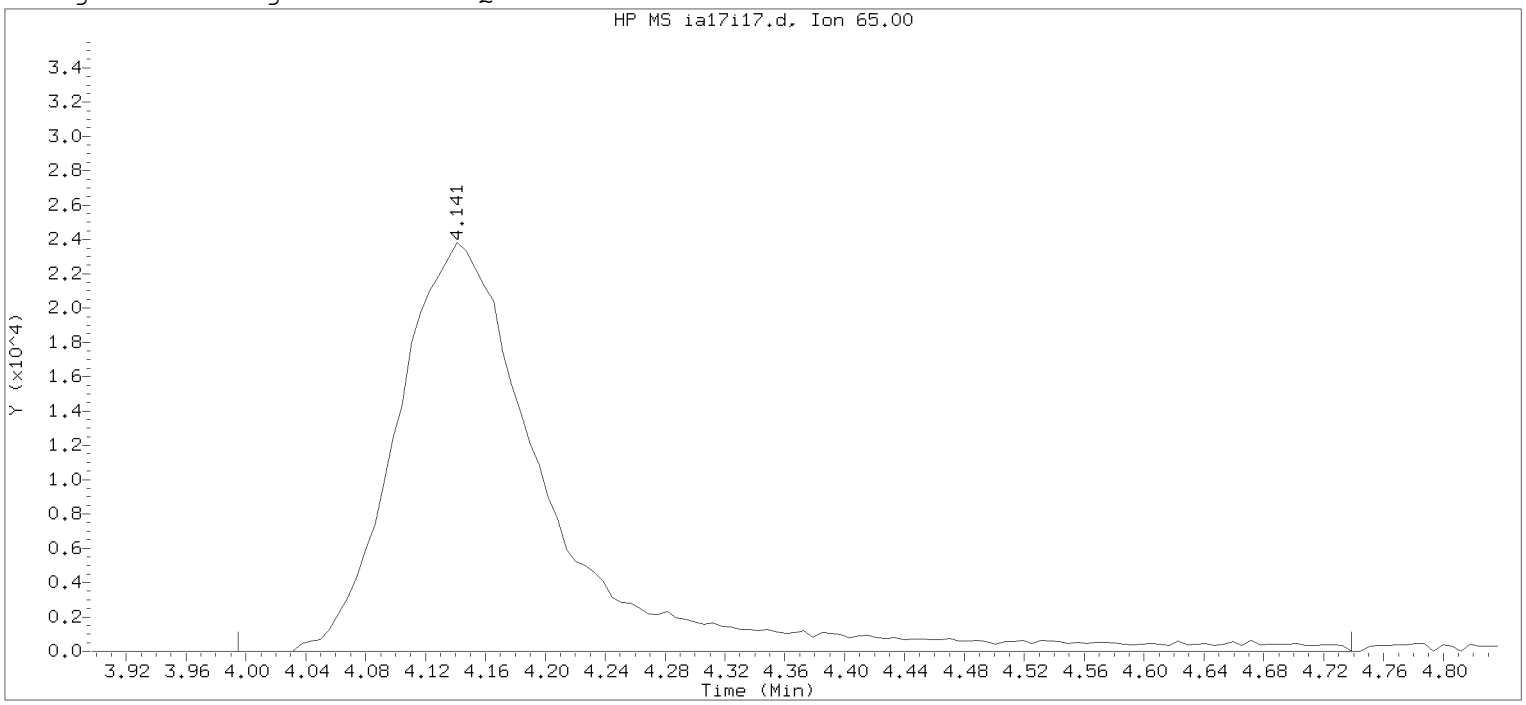
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

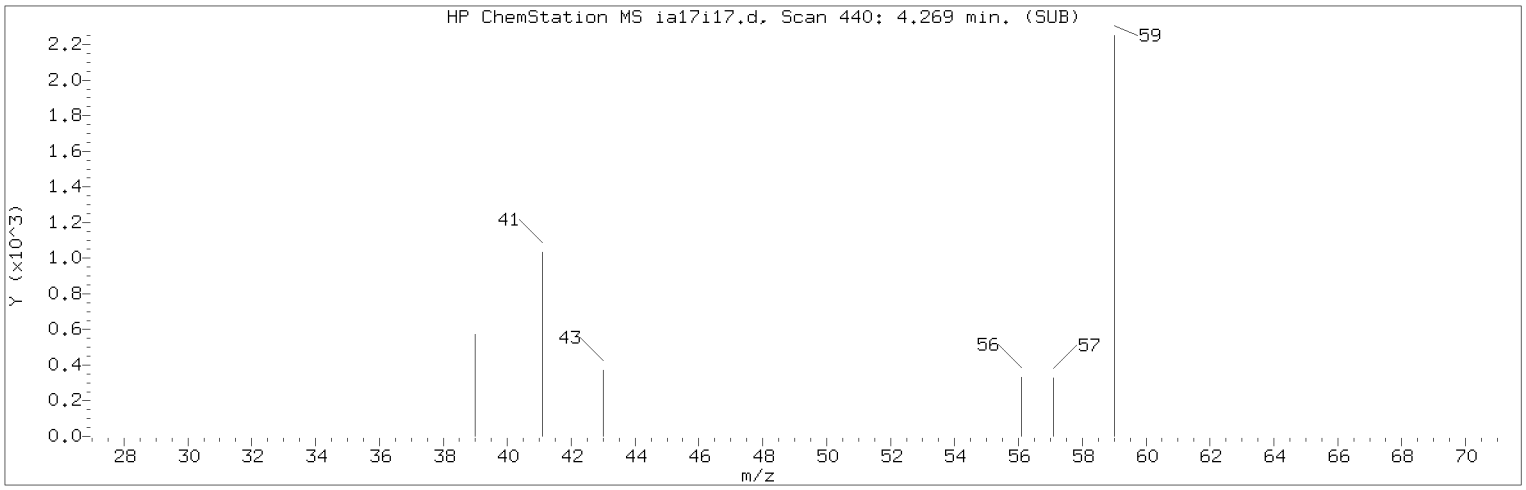
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

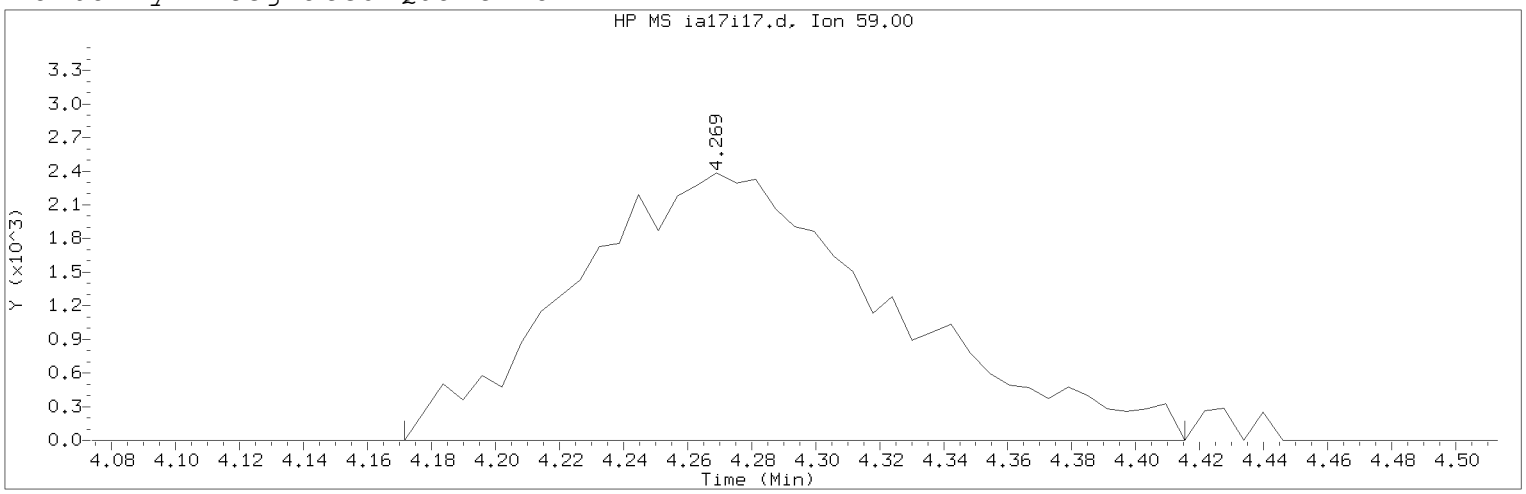
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area : 168511
On-column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 516
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

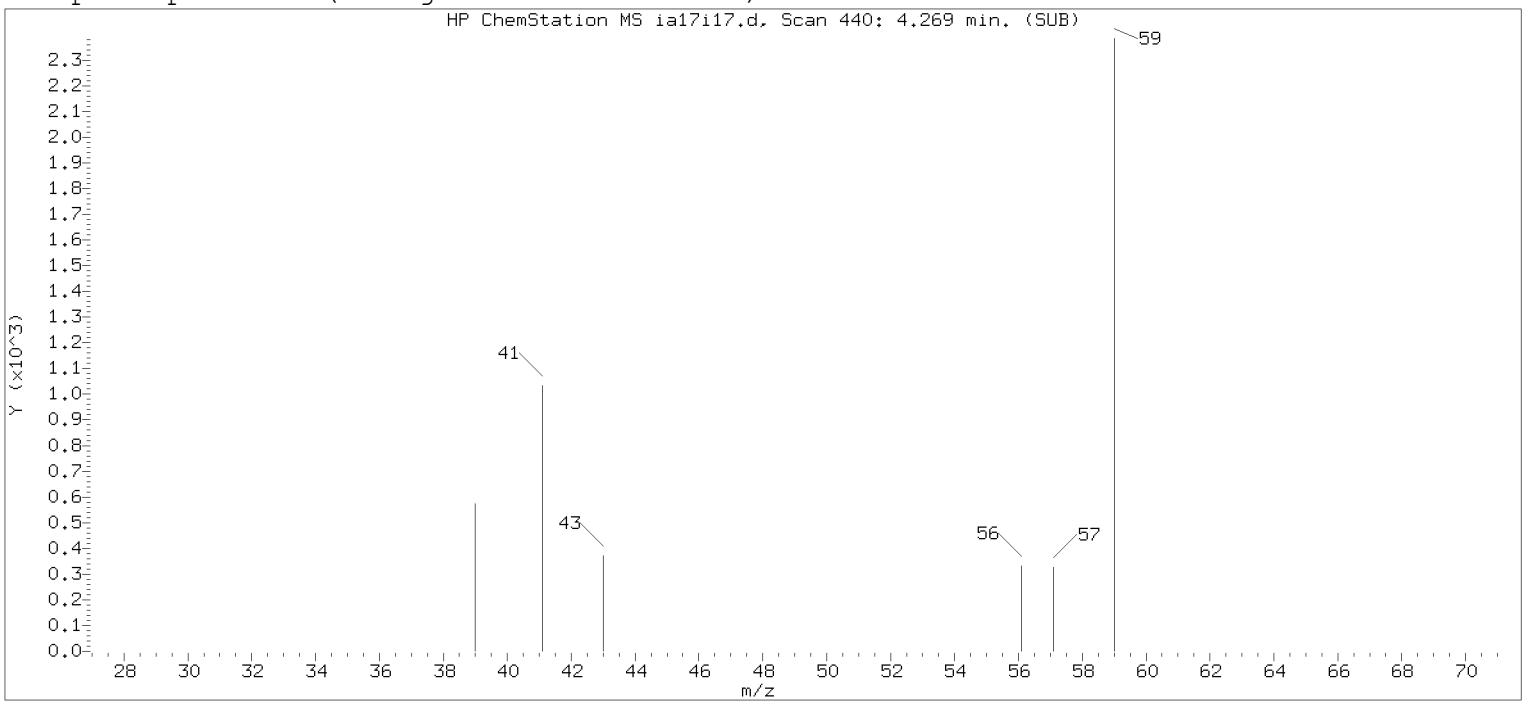
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 59.00
Area (flag) : 16434M
On-Column Amount (ng) : 3.9638
Integration start scan : 423 Integration stop scan: 463
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

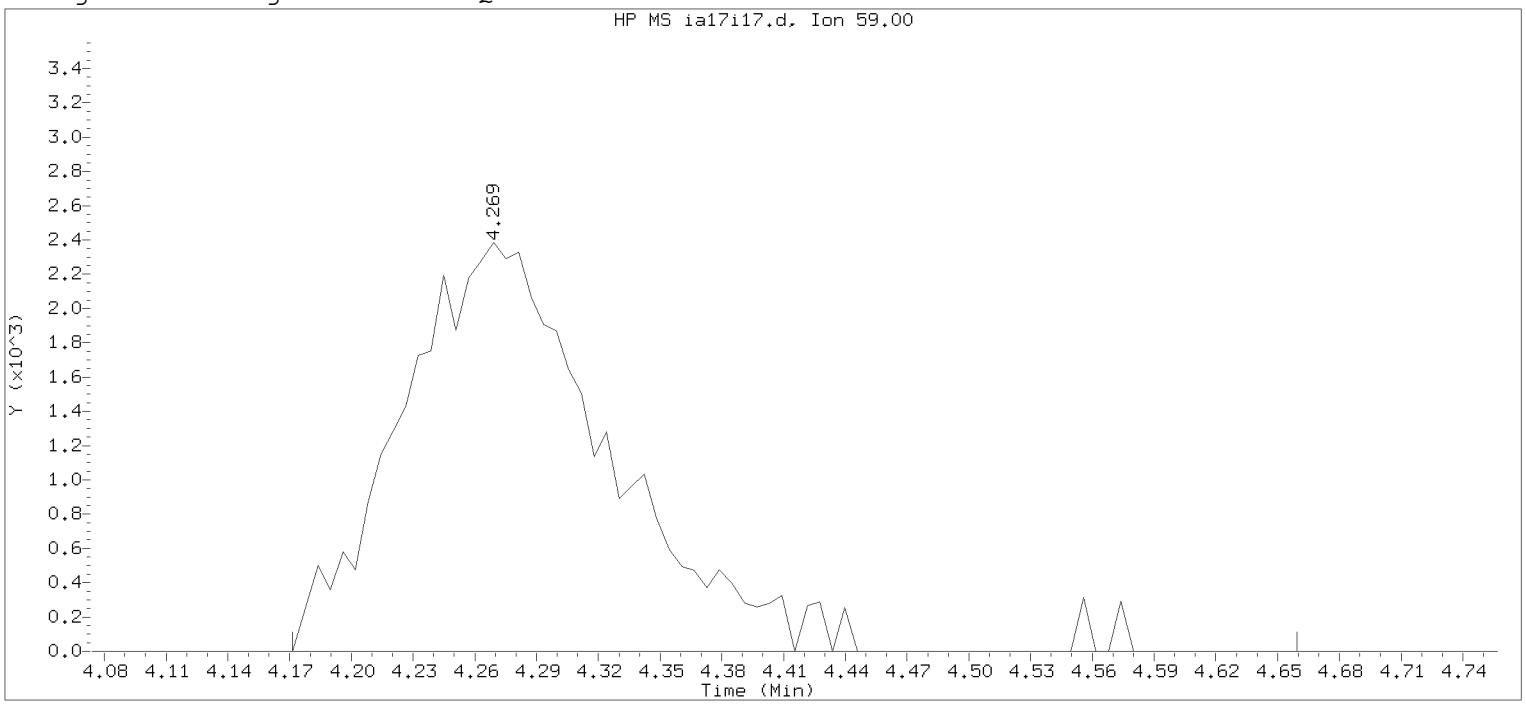
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

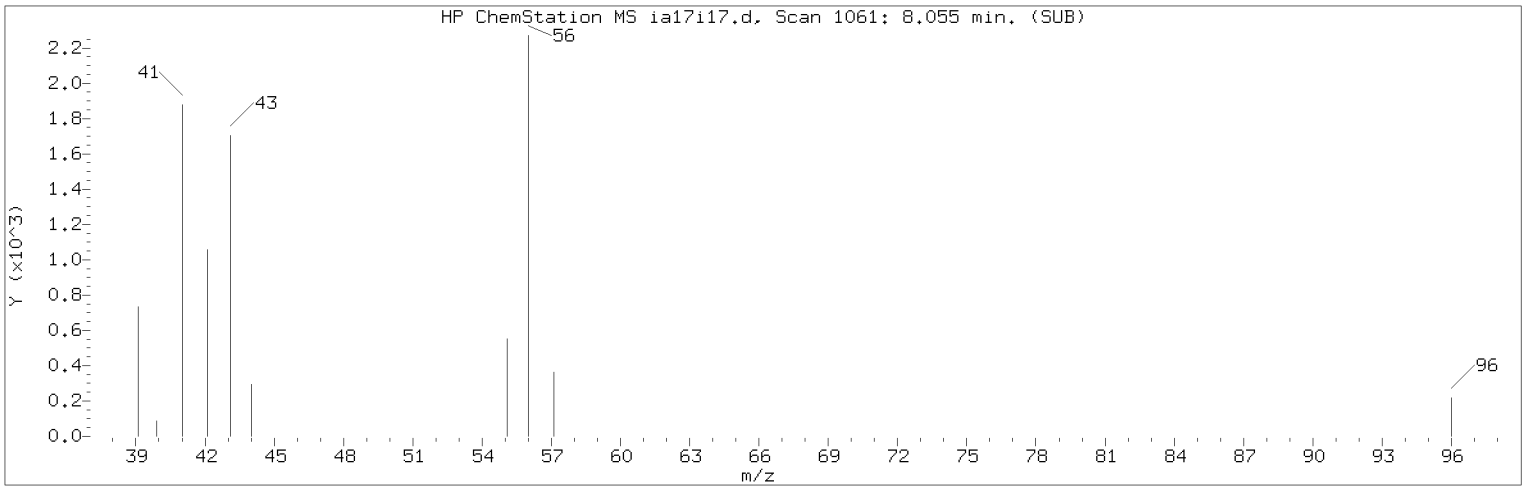
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

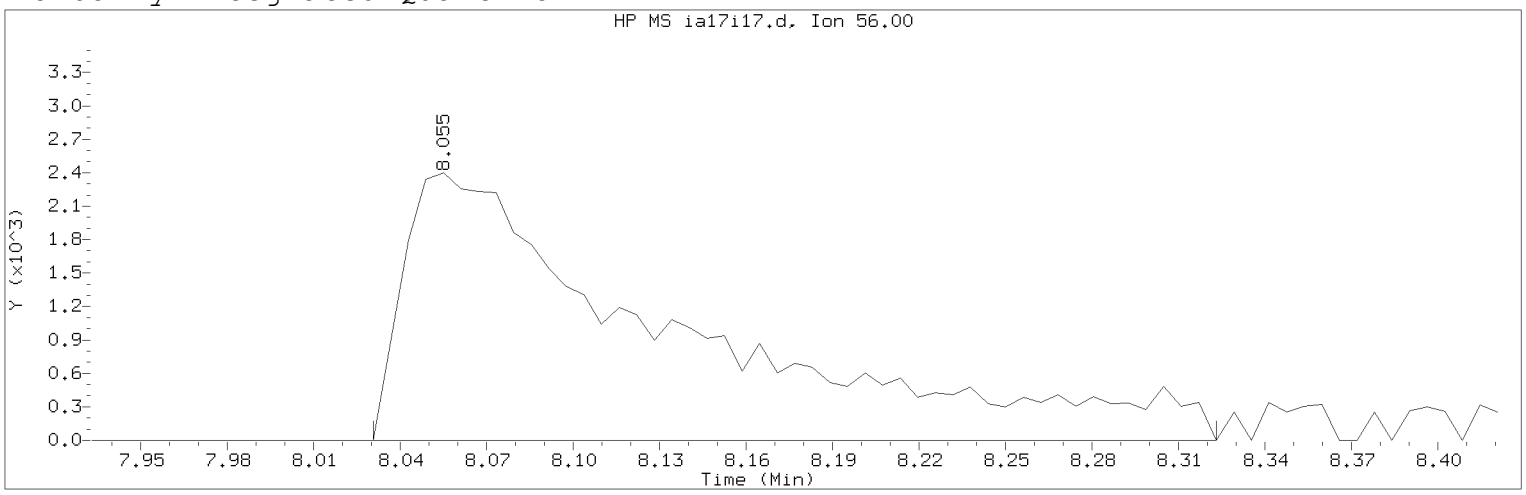
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 440
Retention Time (minutes): 4.269
Quant Ion : 59.00
Area : 16950
On-column Amount (ng) : 4.0789
Integration start scan : 423 Integration stop scan: 503
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

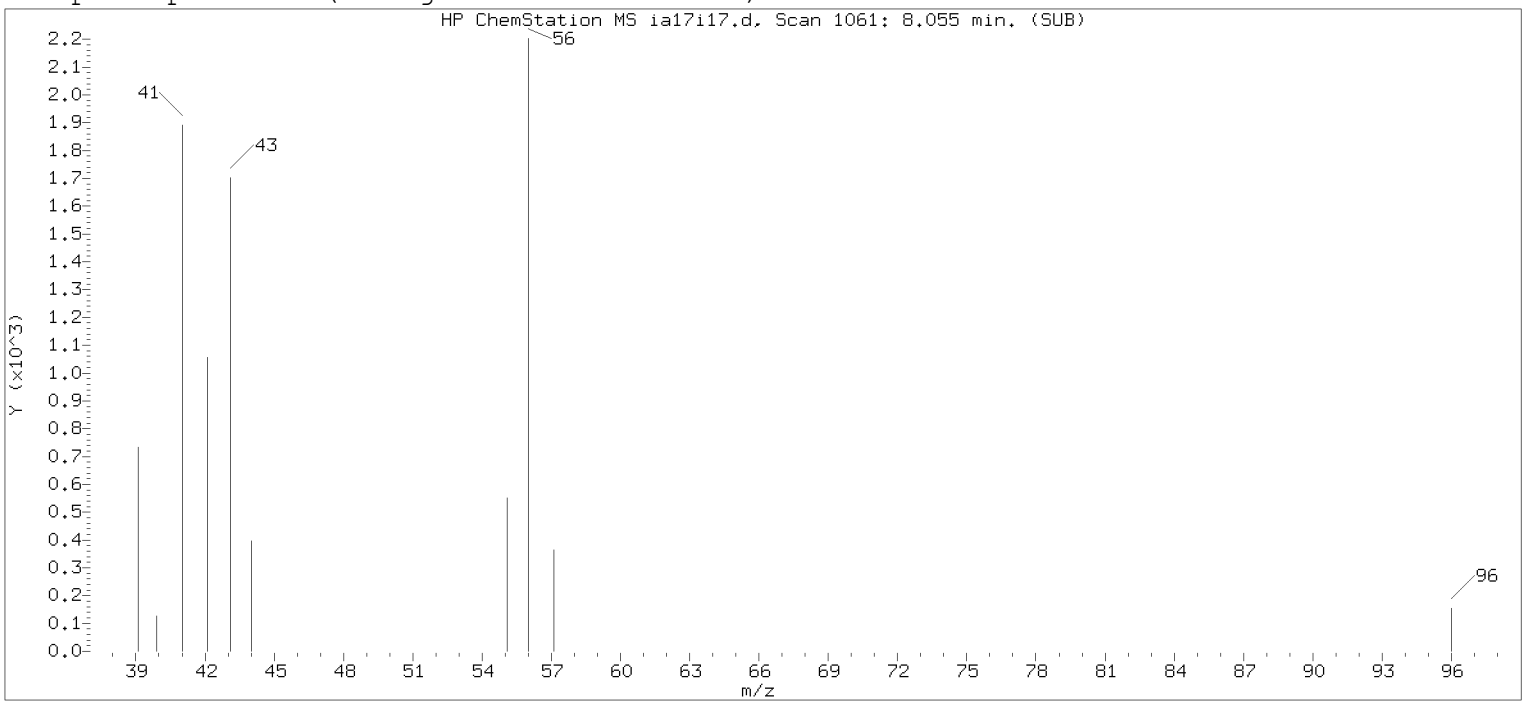
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1061
Retention Time (minutes): 8.055
Quant Ion : 56.00
Area (flag) : 15545M
On-Column Amount (ng) : 12.3286
Integration start scan : 1056 Integration stop scan: 1104
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

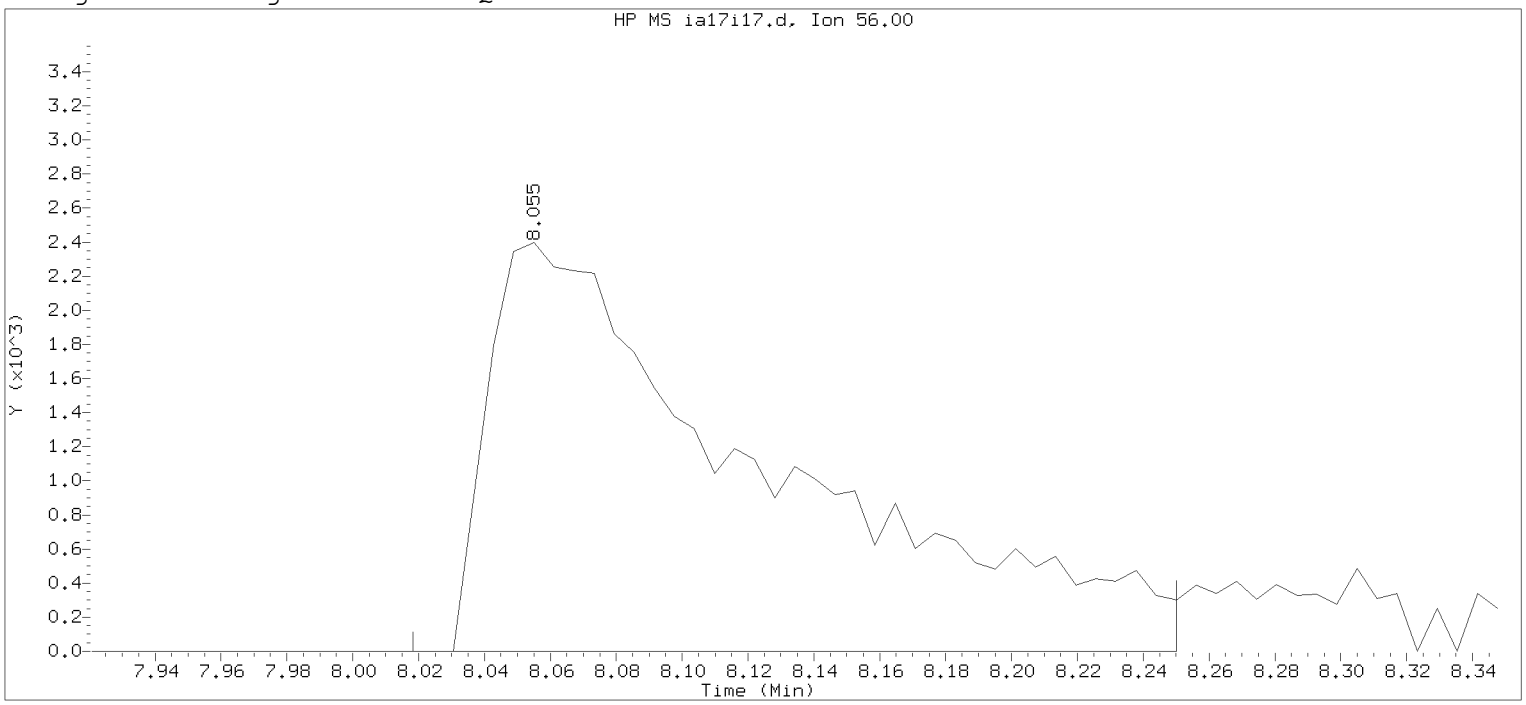
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

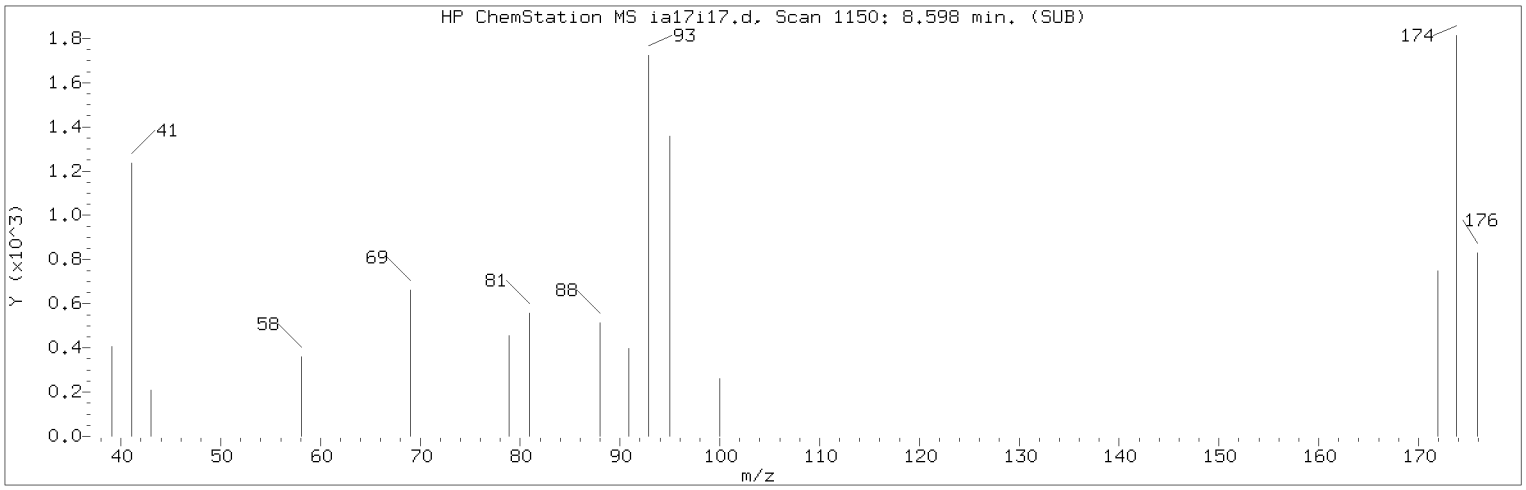
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

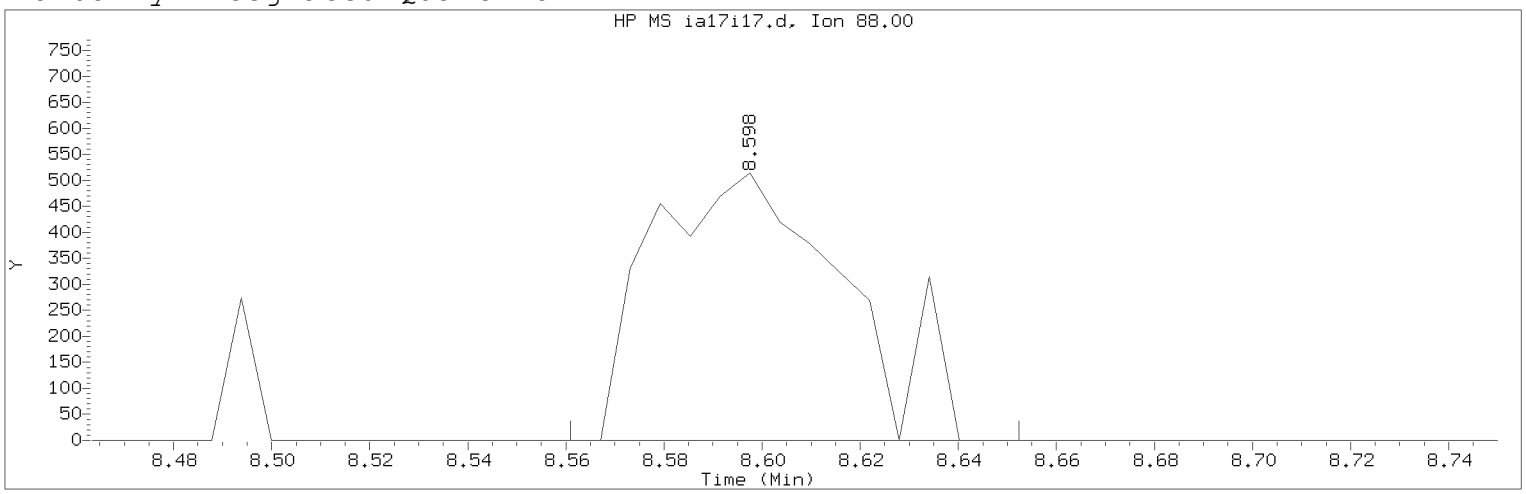
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1061		
Retention Time (minutes)	: 8.055		
Quant Ion	: 56.00		
Area	: 14063		
On-column Amount (ng)	: 12.0604		
Integration start scan	: 1054	Integration stop scan:	1092
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used. AE06 Page 283 of 2168

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

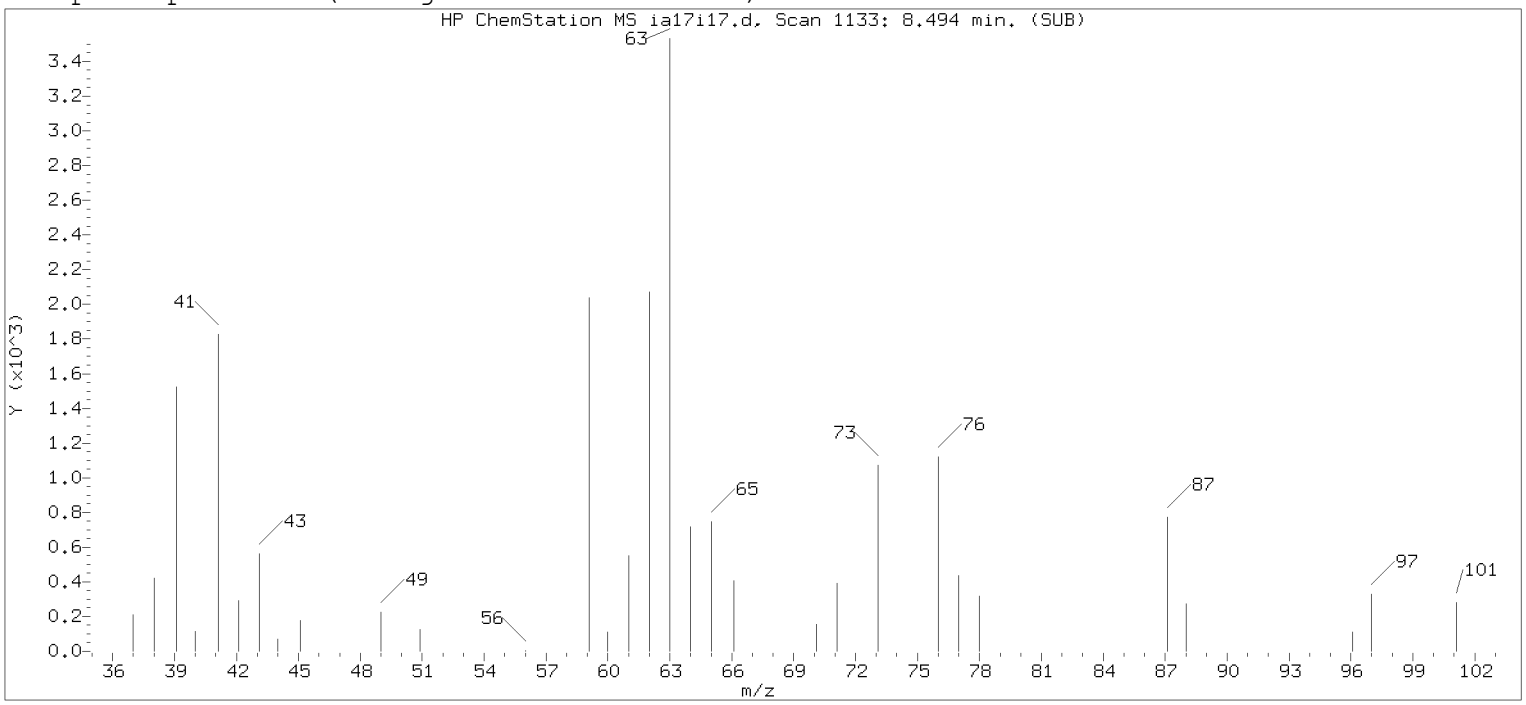
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1150
Retention Time (minutes): 8.598
Quant Ion : 88.00
Area (flag) : 1413M
On-Column Amount (ng) : 4.8852
Integration start scan : 1143 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

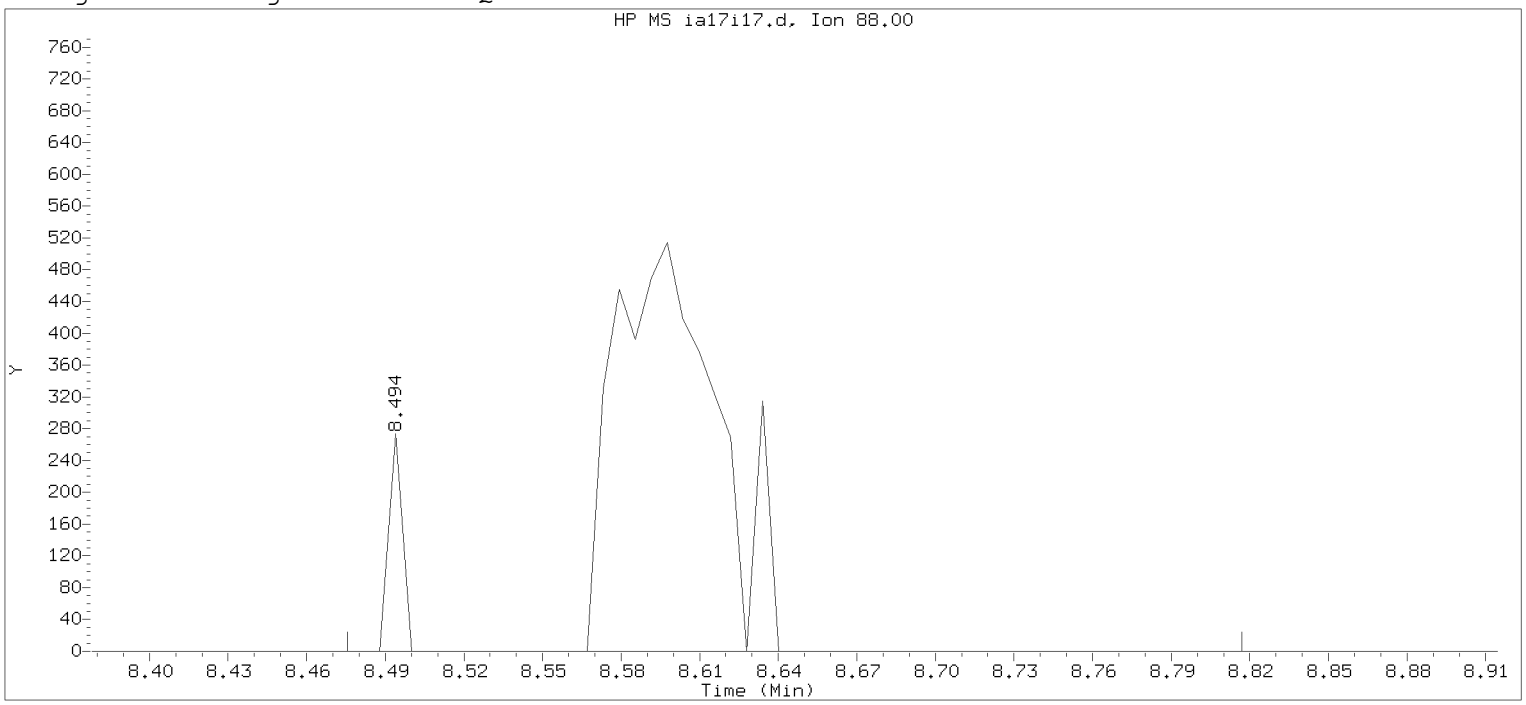
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

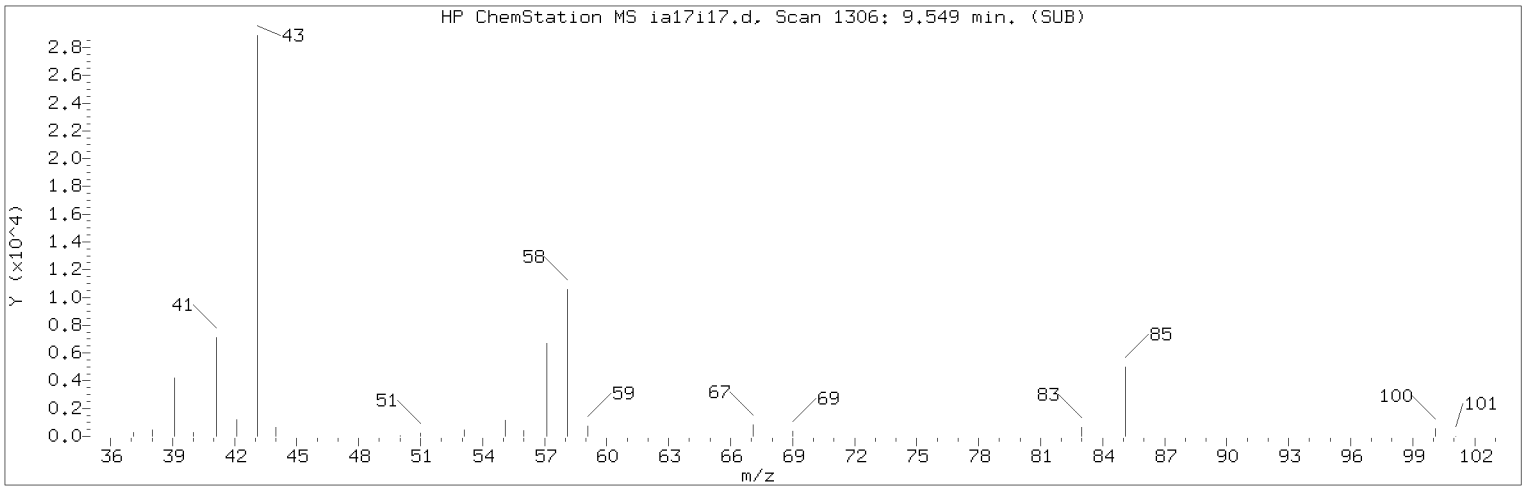
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

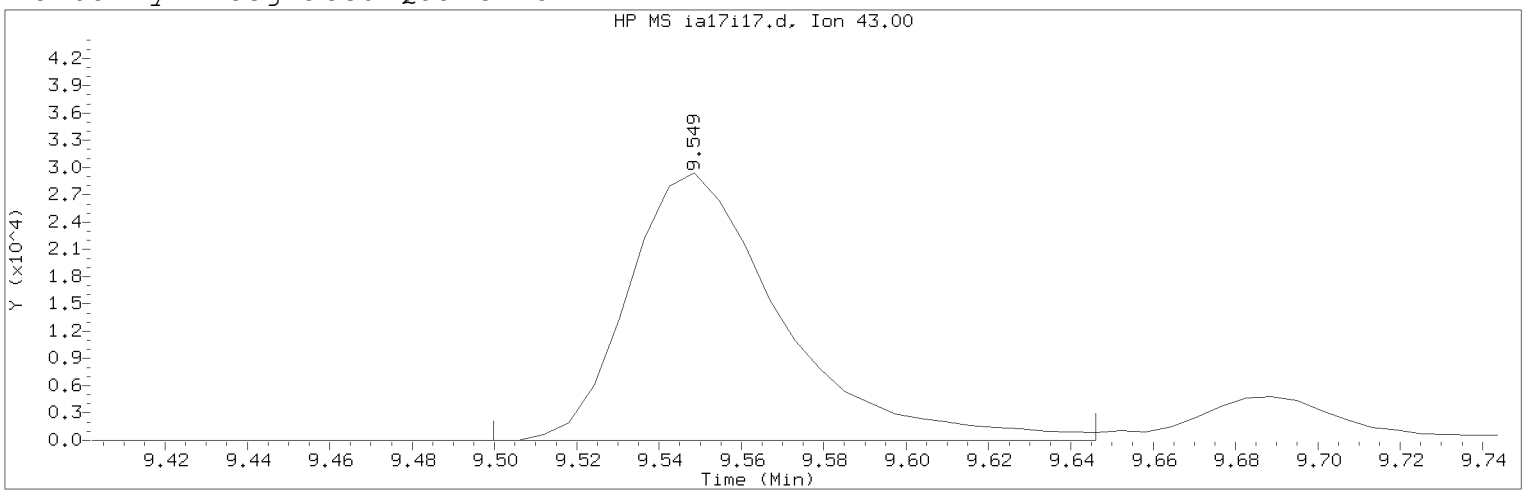
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1133
Retention Time (minutes): 8.494
Quant Ion : 88.00
Area : 1513
On-column Amount (ng) : 6.2156
Integration start scan : 1129 Integration stop scan: 1185
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used. AE06 Page 285 of 2168

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

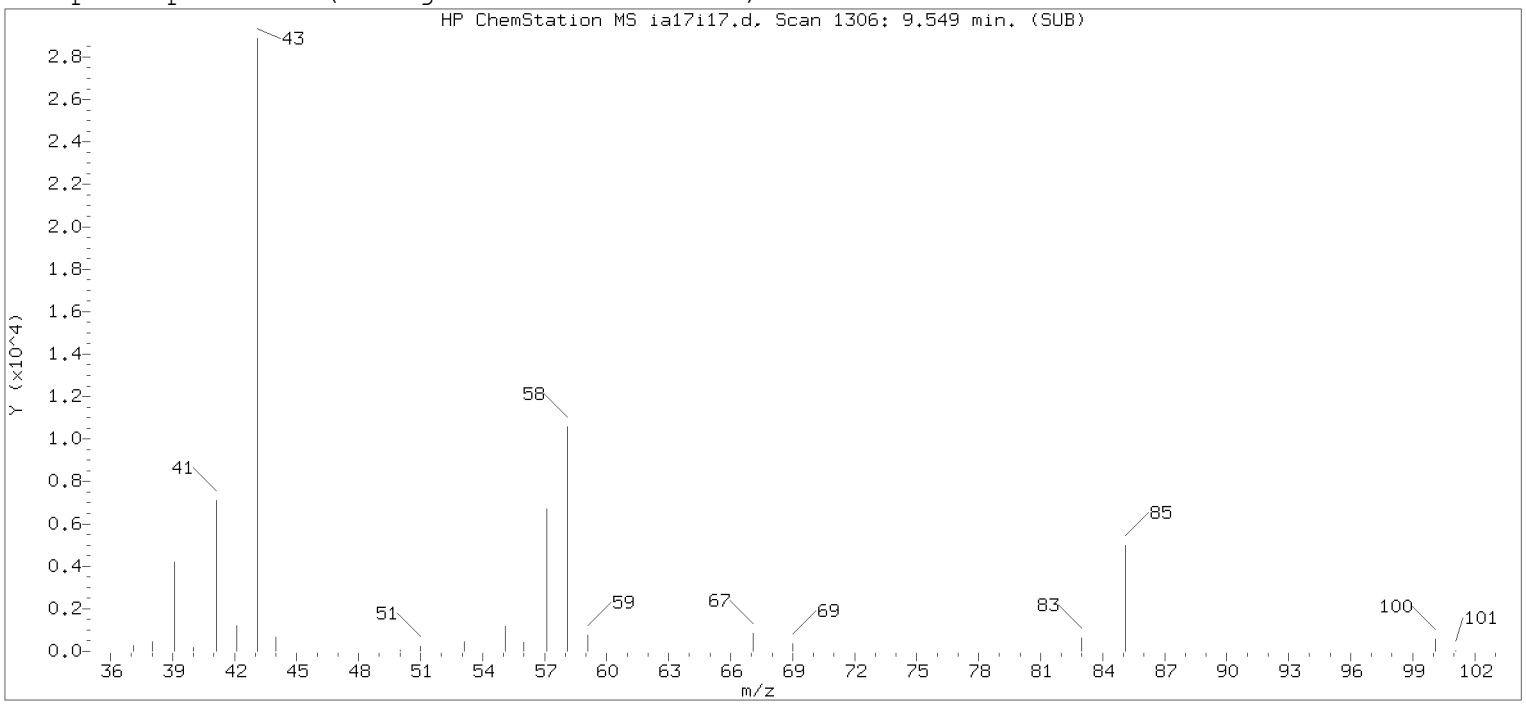
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1306
Retention Time (minutes): 9.549
Quant Ion : 43.00
Area (flag) : 75995M
On-Column Amount (ng) : 1.6315
Integration start scan : 1297 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

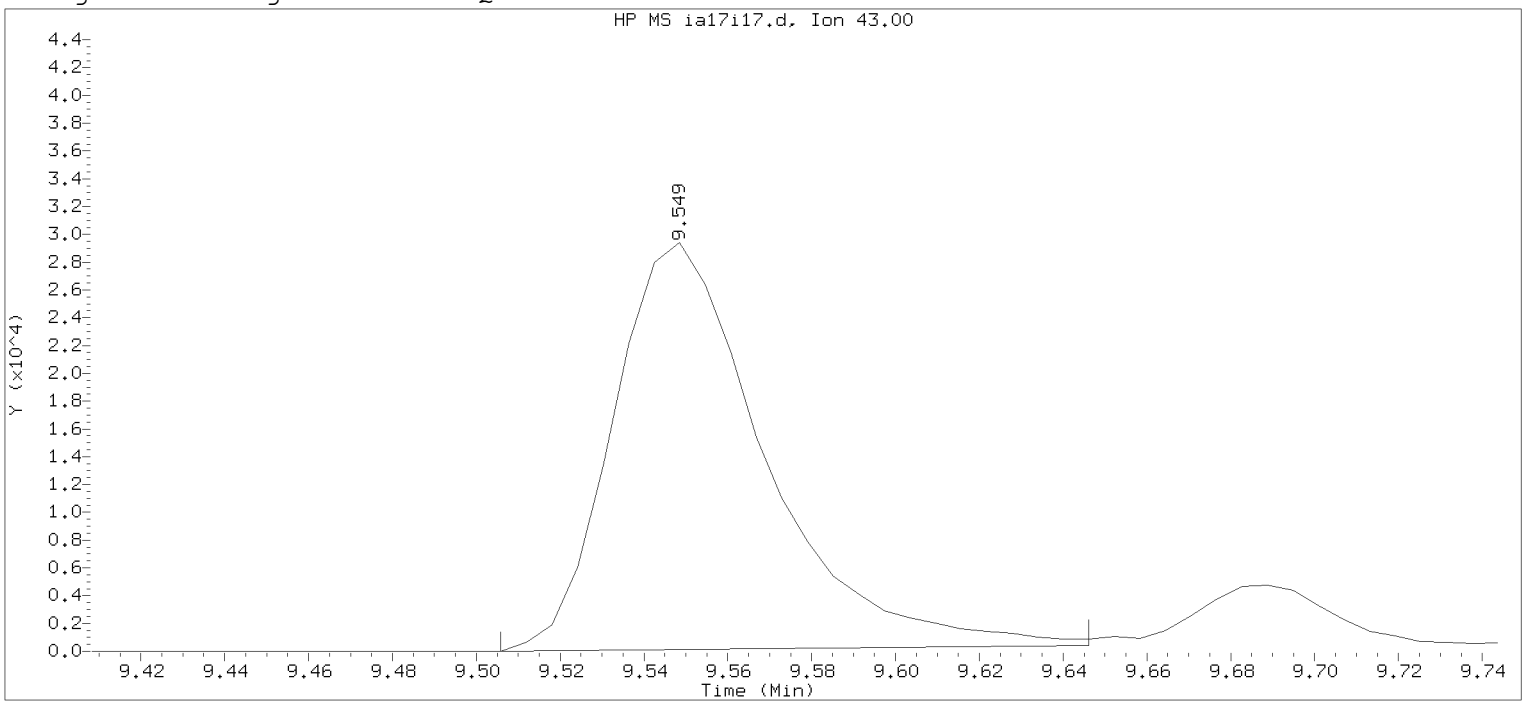
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

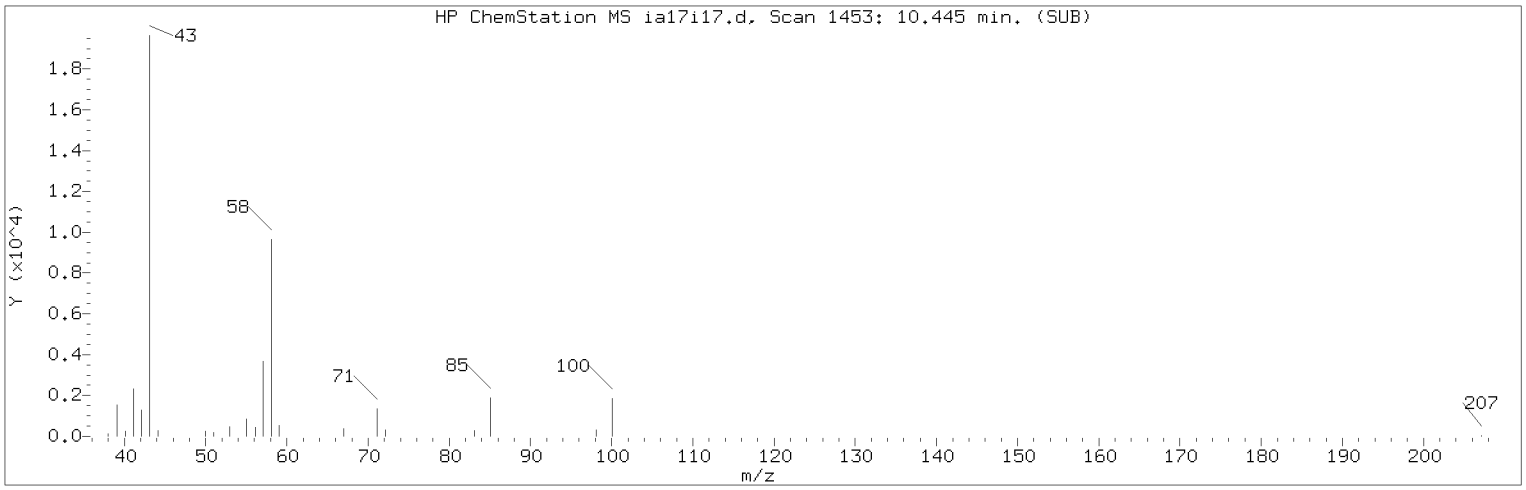
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

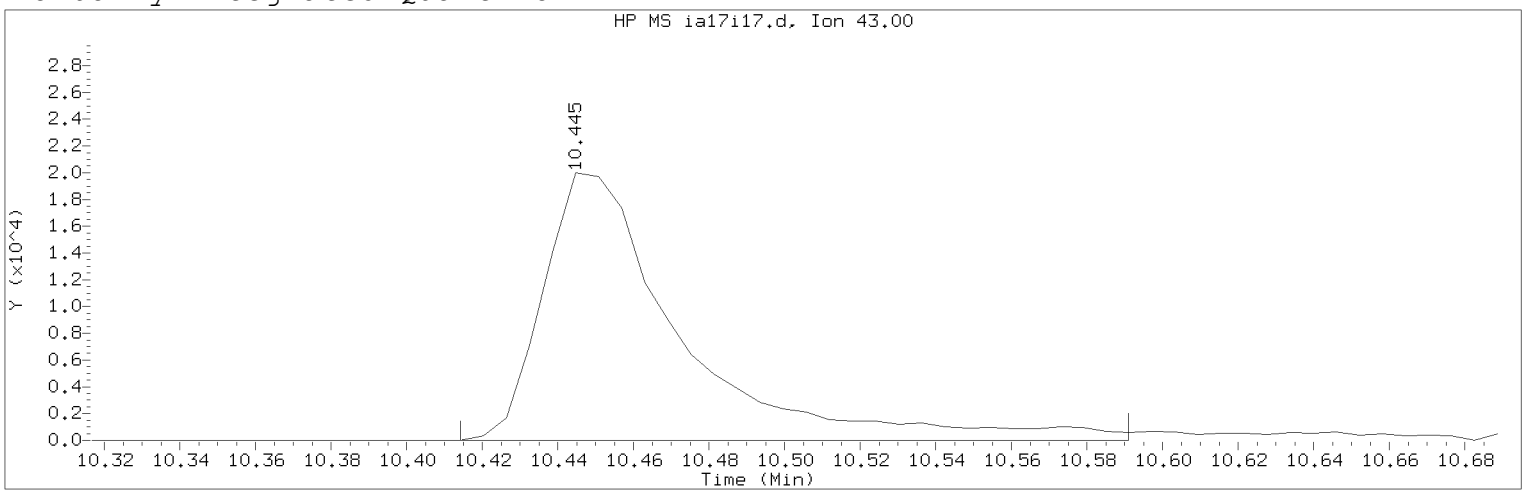
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1306
Retention Time (minutes): 9.549
Quant Ion : 43.00
Area : 73995
On-column Amount (ng) : 1.6137
Integration start scan : 1298 Integration stop scan: 1321
Y at integration start : 0 Y at integration end: 437

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

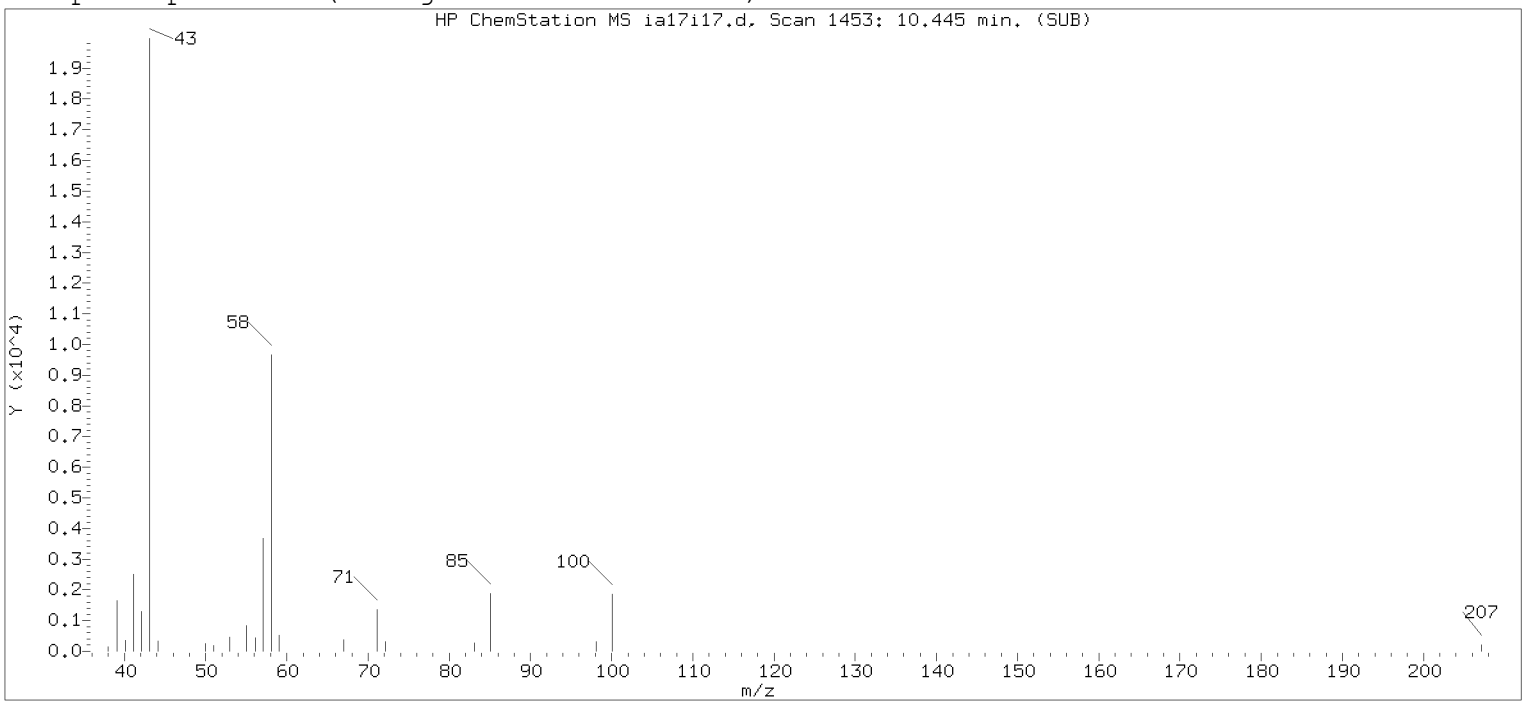
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1453
Retention Time (minutes): 10.445
Quant Ion : 43.00
Area (flag) : 50647M
On-Column Amount (ng) : 1.5403
Integration start scan : 1447 Integration stop scan: 1476
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

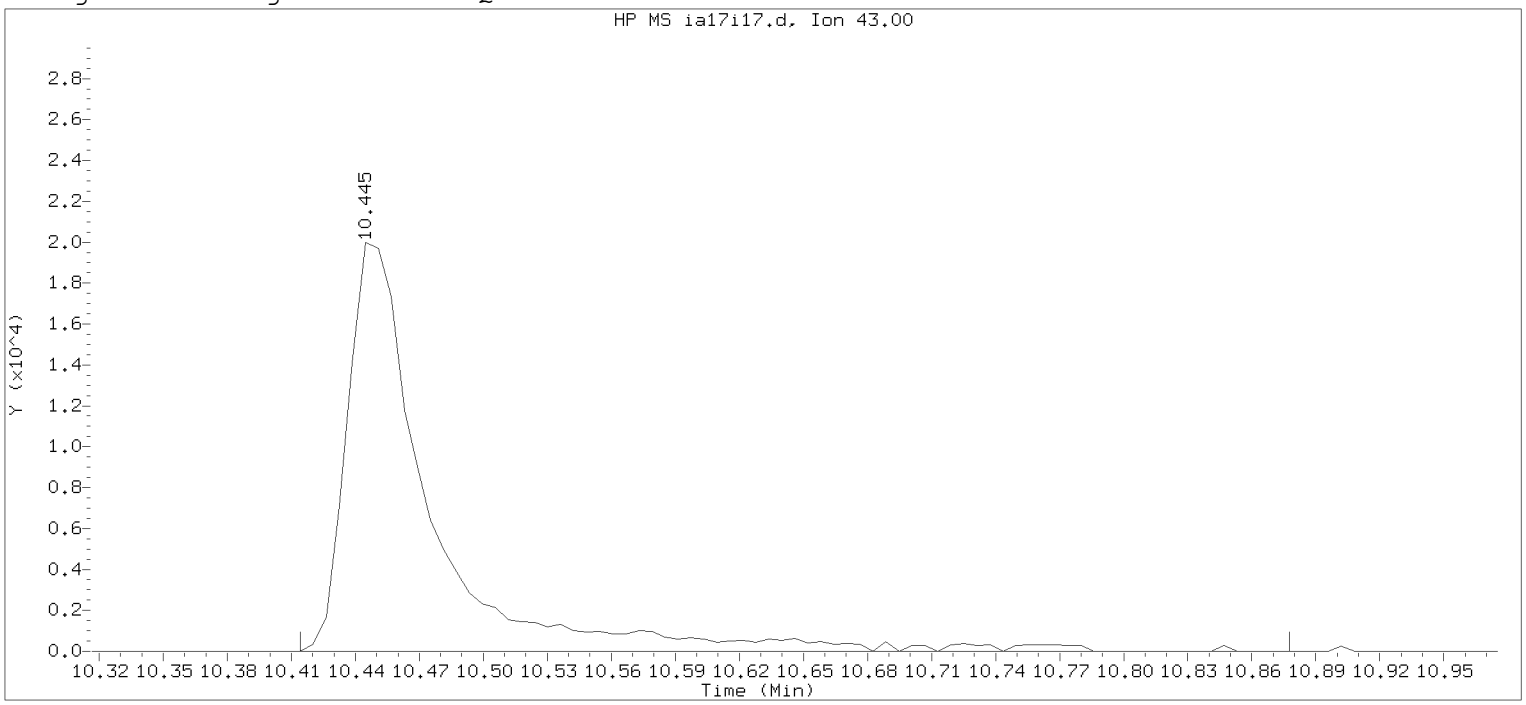
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

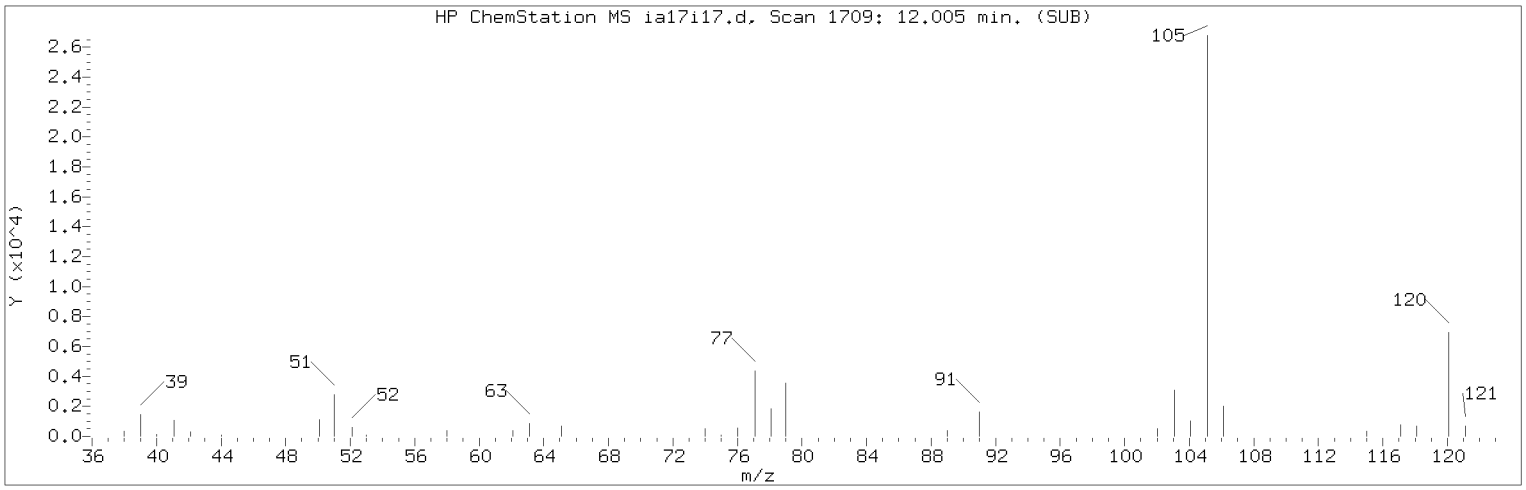
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

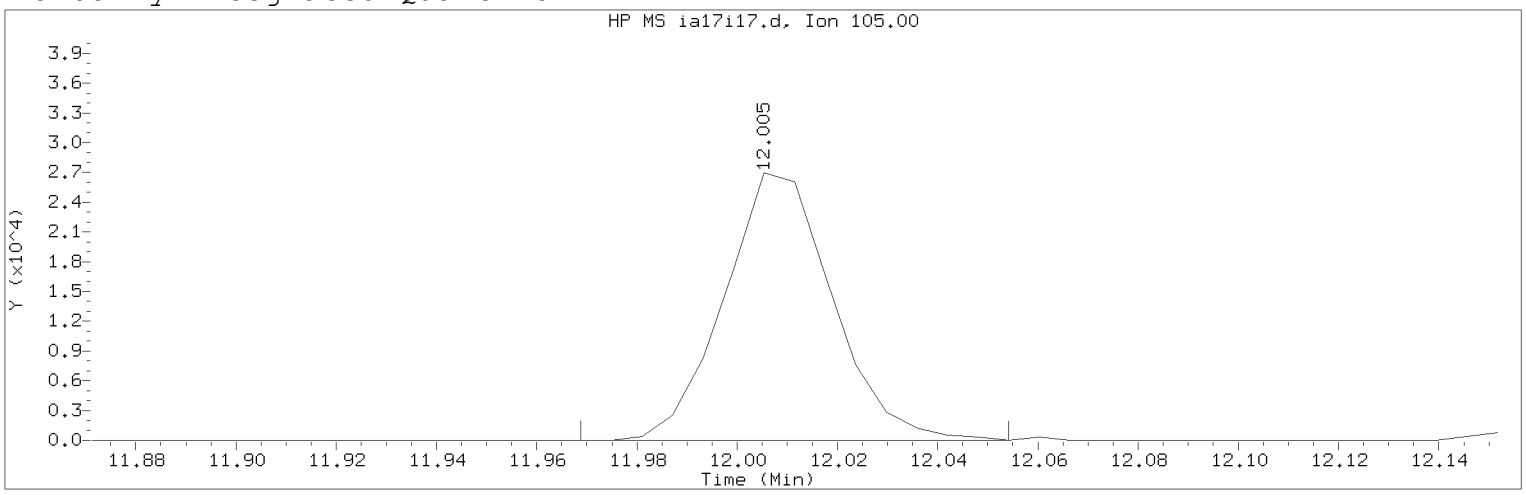
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 1453		
Retention Time (minutes)	: 10.445		
Quant Ion	: 43.00		
Area	: 54770		
On-column Amount (ng)	: 1.6717		
Integration start scan	: 1447	Integration stop scan	: 1523
Y at integration start	: 0	Y at integration end	: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used for this document.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

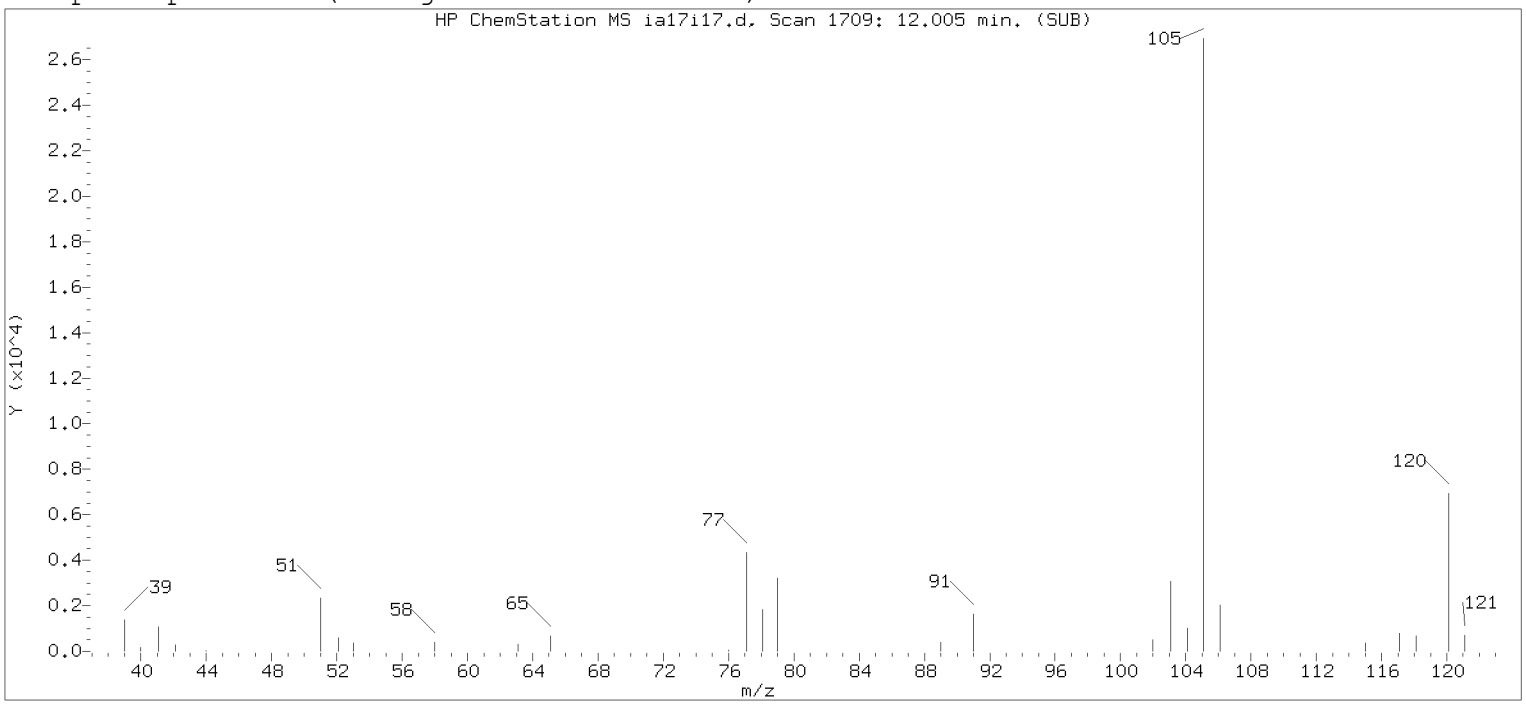
Compound Number : 108
Compound Name : Isopropylbenzene
Scan Number : 1709
Retention Time (minutes): 12.005
Quant Ion : 105.00
Area (flag) : 40454M
On-Column Amount (ng) : 0.1378
Integration start scan : 1702 Integration stop scan: 1716
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

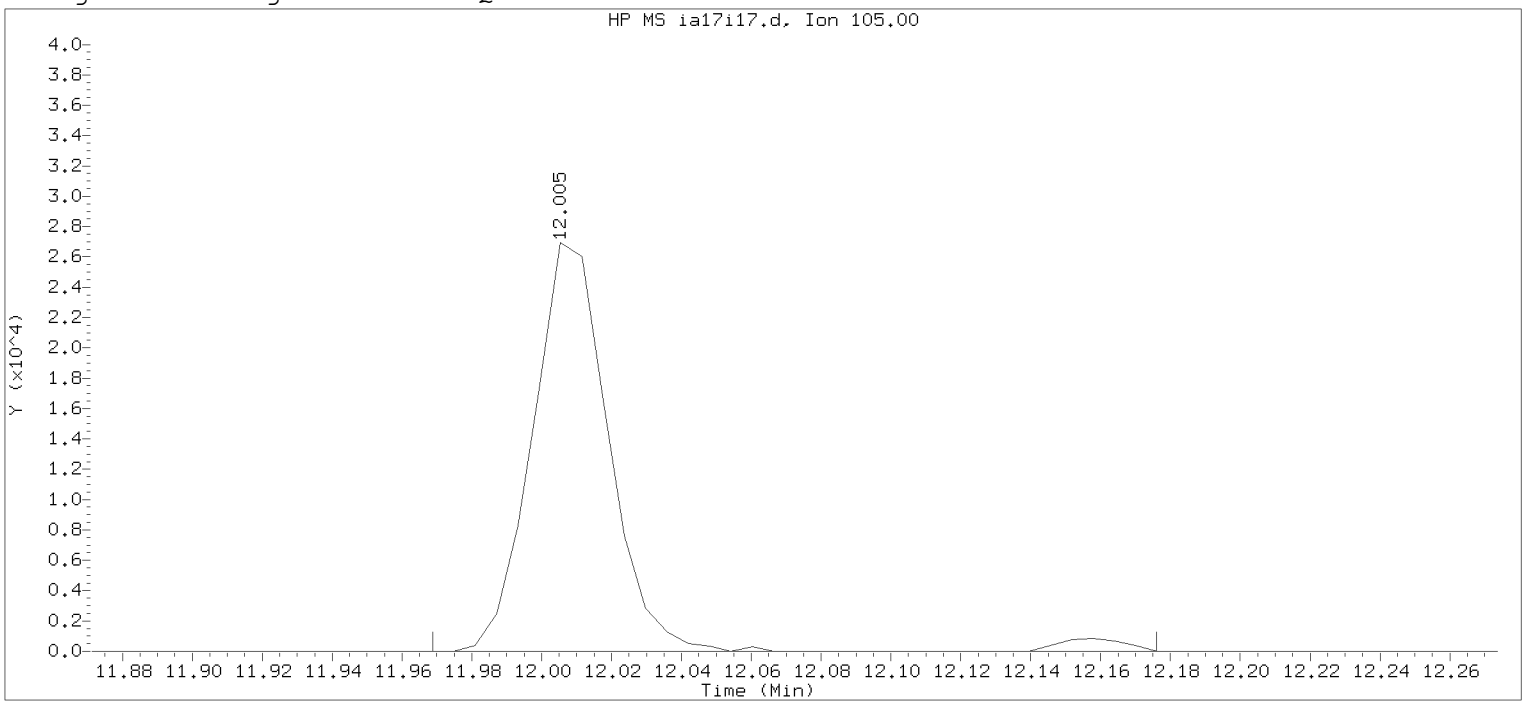
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

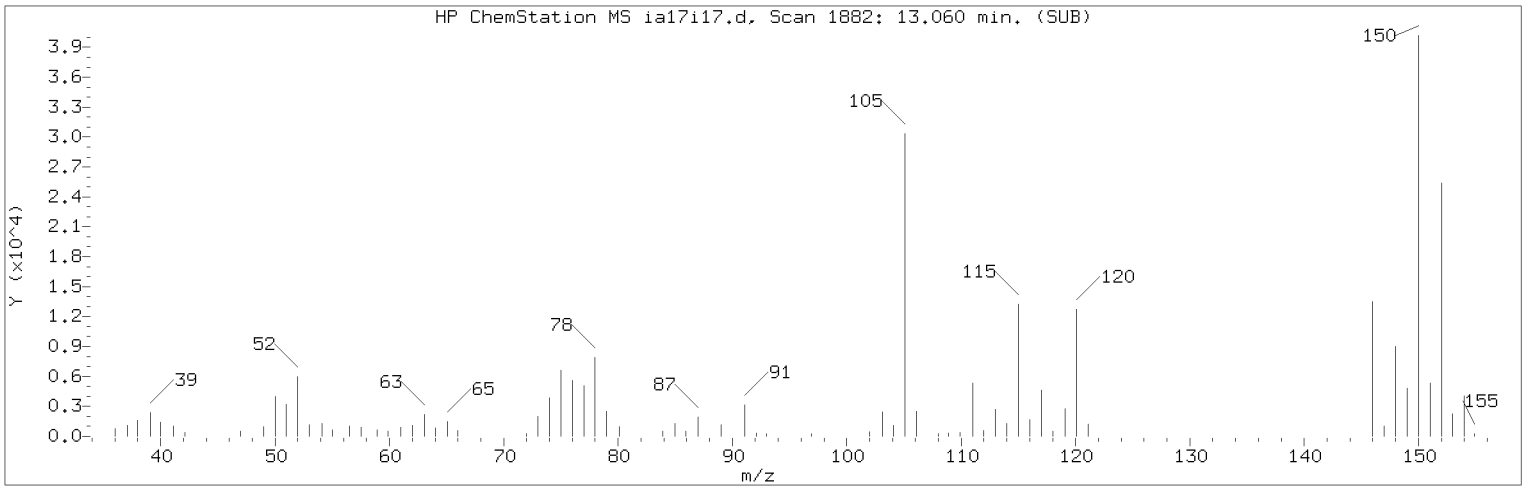
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

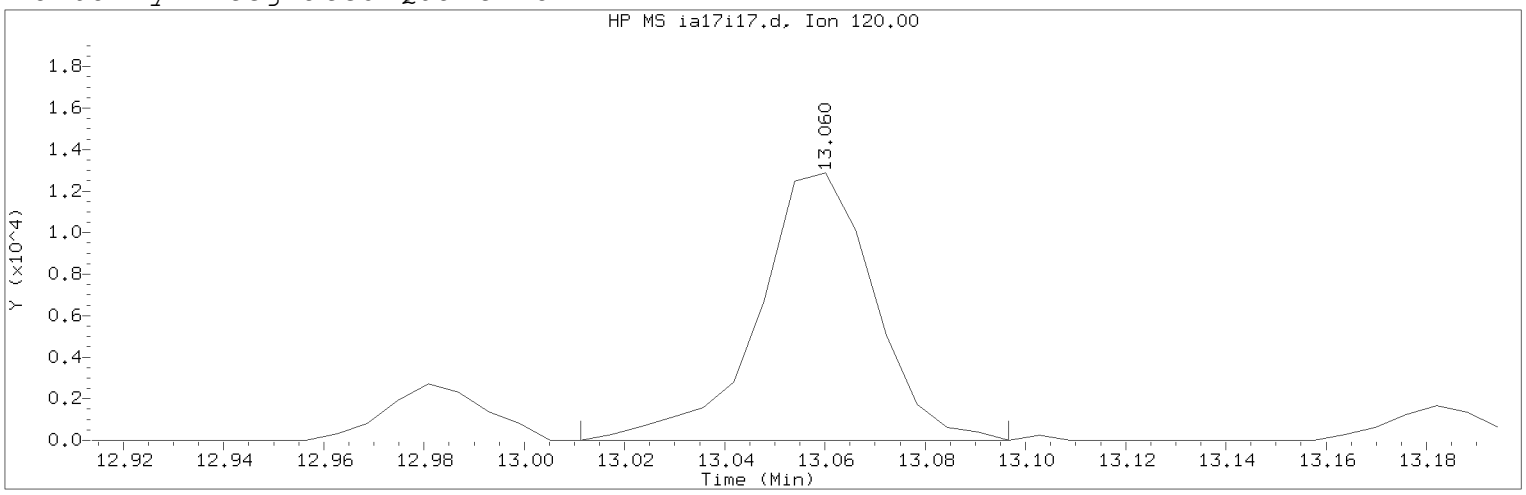
Compound Number : 108
Compound Name : Isopropylbenzene
Scan Number : 1709
Retention Time (minutes): 12.005
Quant Ion : 105.00
Area : 41662
On-column Amount (ng) : 0.1415
Integration start scan : 1702 Integration stop scan: 1736
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 26-APR-2018 16:36
Date, time and analyst ID of latest file update: 26-Apr-2018 16:36 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

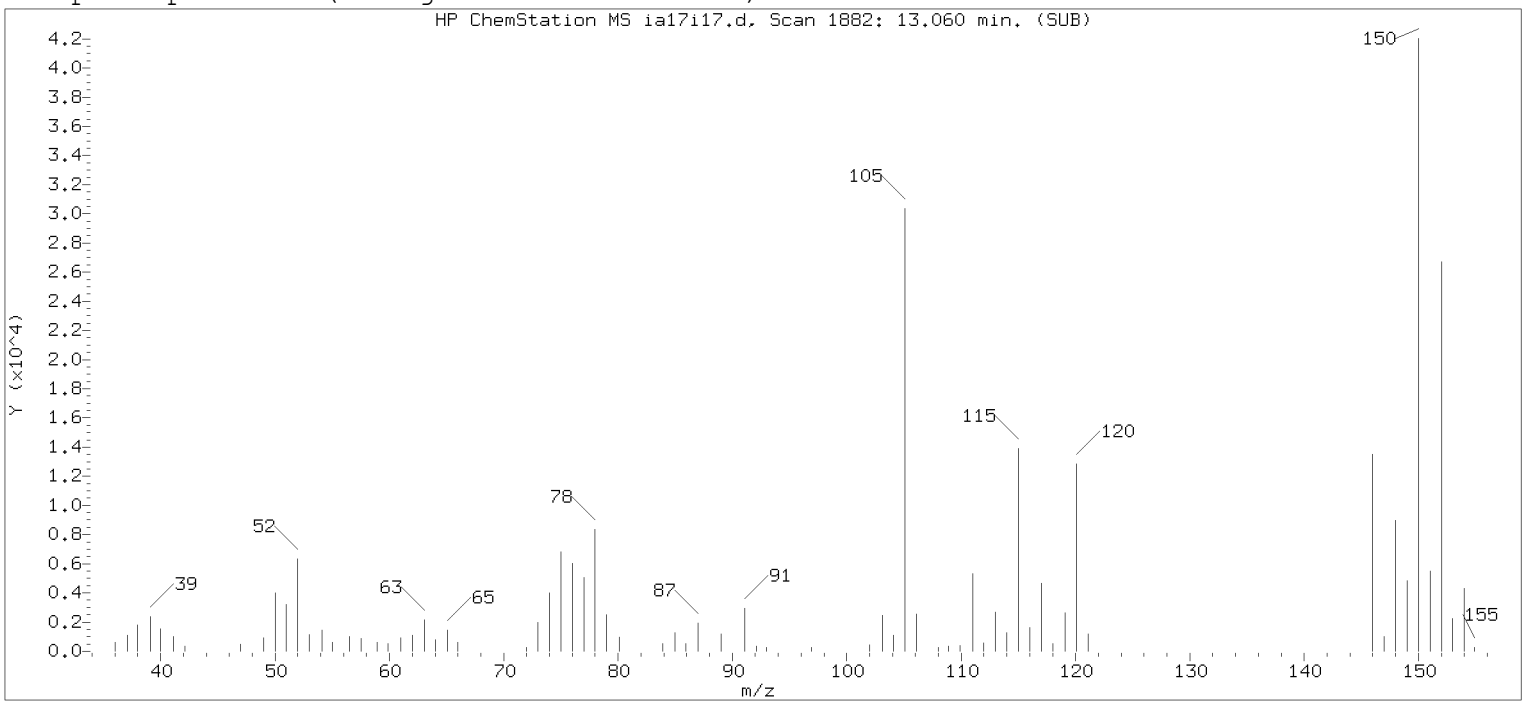
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1882
Retention Time (minutes): 13.060
Quant Ion : 120.00
Area (flag) : 20665M
On-Column Amount (ng) : 0.1809
Integration start scan : 1873 Integration stop scan: 1887
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

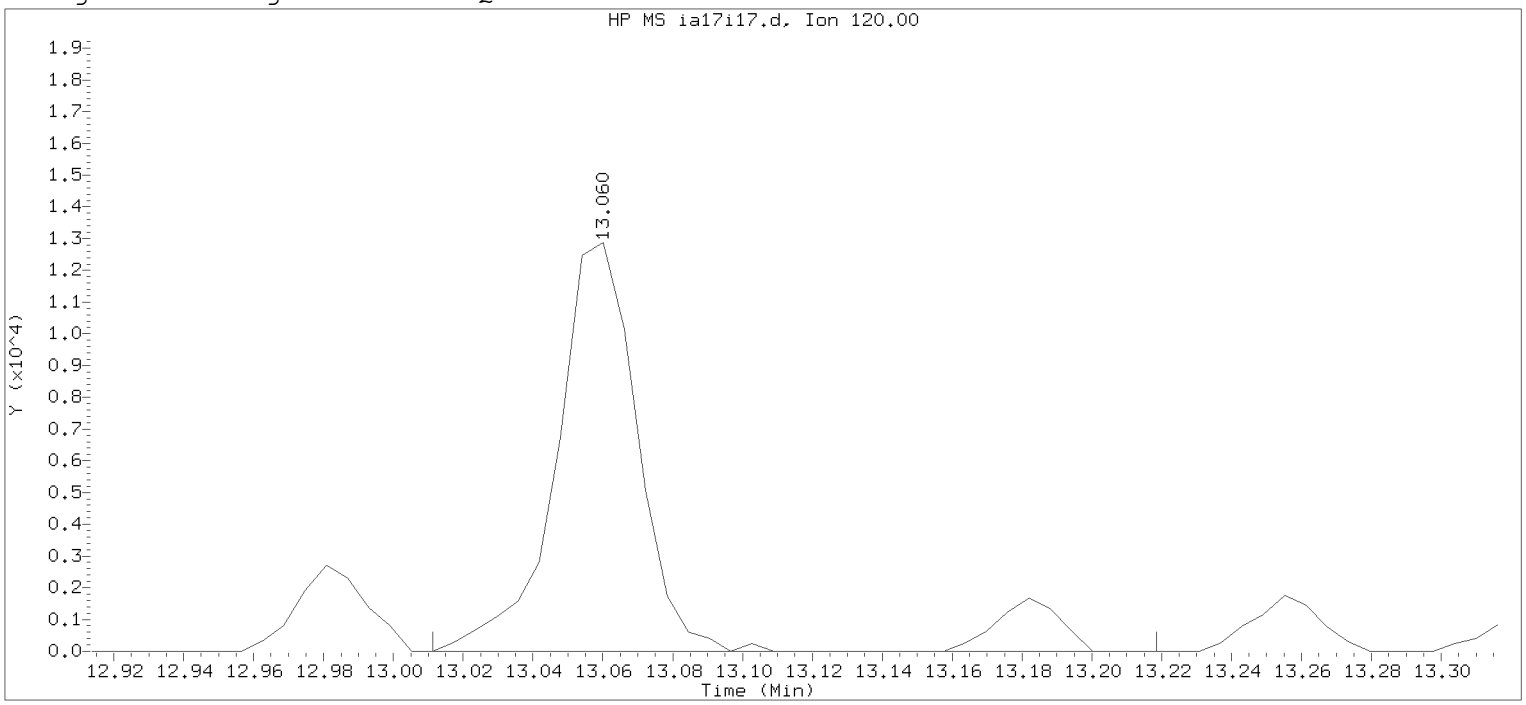
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/26/2018 at 16:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/26/2018 at 16:46.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



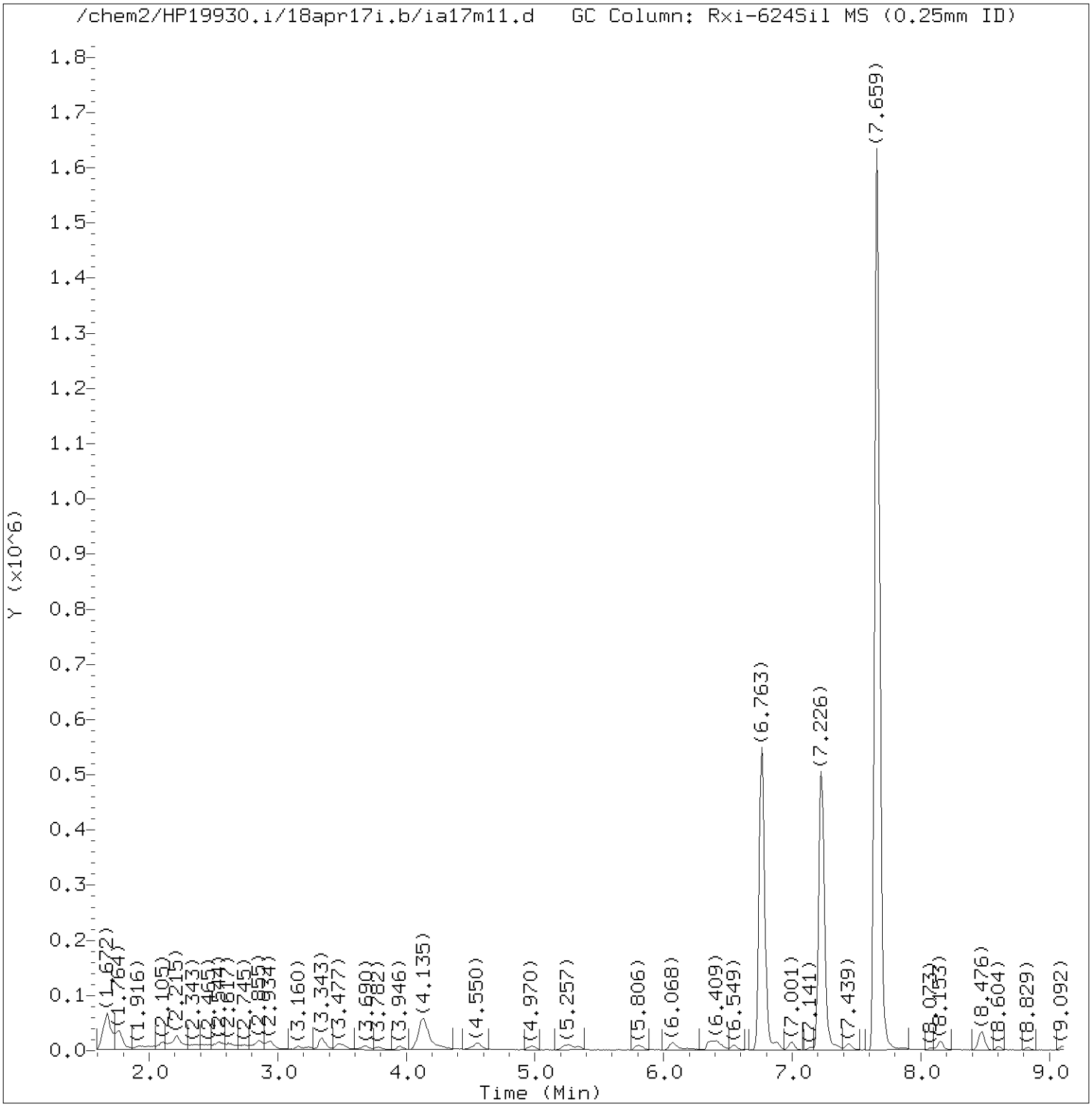
Data File: /chem2/HP19930.i/18apr17i.b/ia17i17.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 20:49
Date, time and analyst ID of latest file update: 17-Apr-2018 20:49 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1882
Retention Time (minutes): 13.060
Quant Ion : 120.00
Area : 22872
On-column Amount (ng) : 0.1975
Integration start scan : 1873 Integration stop scan: 1907
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/26/2018 at 16:38.
Target 3.5 esignature used on 04/26/2018.



Total Ion Chromatogram (TIC)

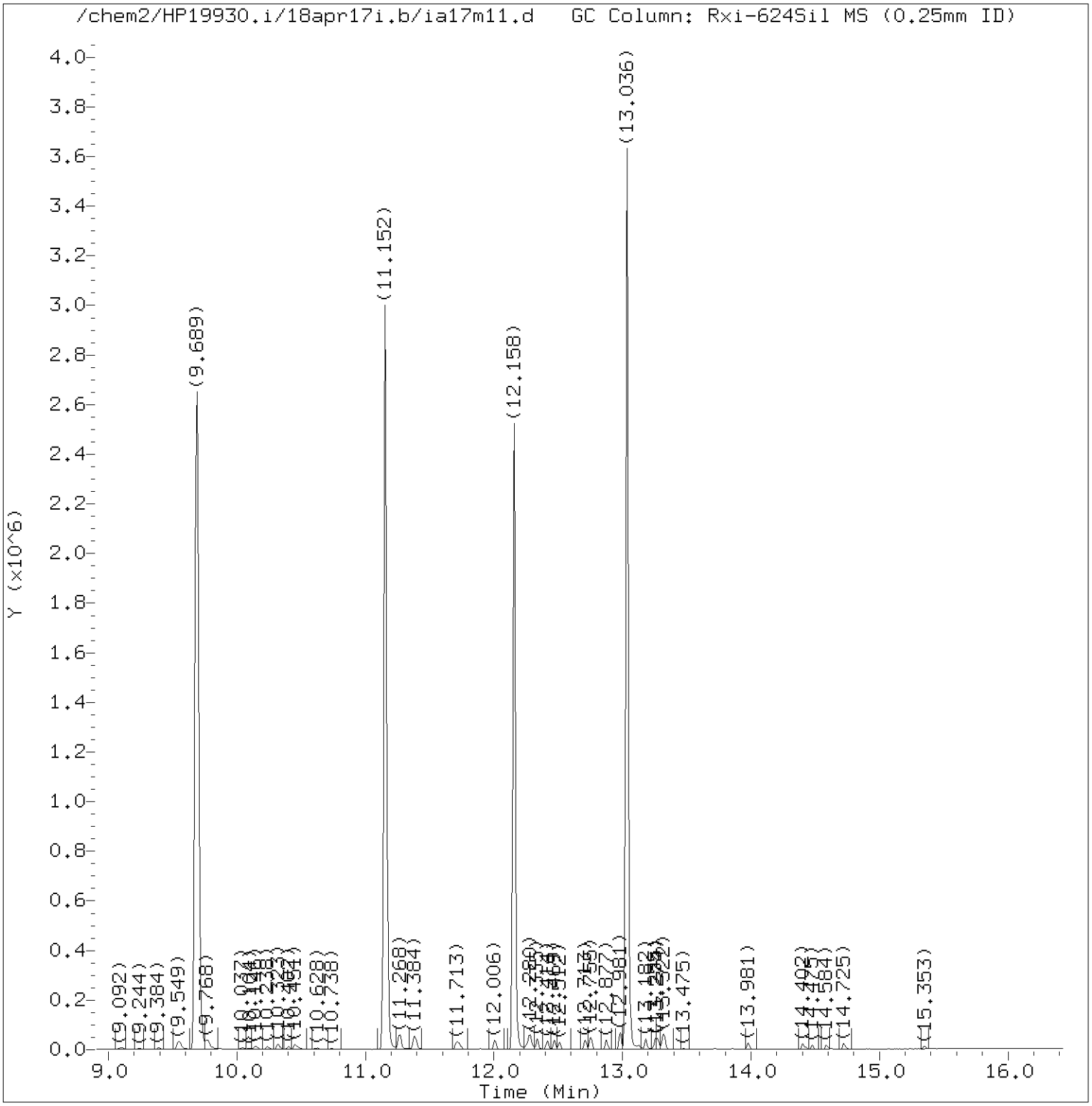
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.916	85	9104	0.090
2) Chloromethane	(2)	2.099	50	10630	0.113
6) 1,3-Butadiene	(2)	2.215	39	9937M	0.115
5) Vinyl Chloride	(2)	2.221	62	8505	0.100
7) Bromomethane	(2)	2.544	94	7177	0.121
8) Chloroethane	(2)	2.617	64	5665	0.117
9) Dichlorofluoromethane	(2)	2.855	67	12165	0.107
10) Trichlorofluoromethane	(2)	2.922	101	11120M	0.105
11) Ethyl ether	(2)	3.154	59	4760	0.091
12) Freon 123a	(2)	3.239	67	7551	0.101
13) Acrolein	(1)	3.343	56	37920	4.845
15) 1,1-Dichloroethene	(2)	3.465	96	4790	0.096
16) Freon 113	(2)	3.507	101	6145	0.107
14) Acetone	(1)	3.532	43	14244	1.240
17) Methyl Iodide	(2)	3.672	142	8892	0.096
18) Carbon Disulfide	(2)	3.782	76	14175	0.100
22) Allyl Chloride	(2)	3.946	41	8410M	0.091
21) Methyl Acetate	(1)	3.977	43	869	0.032
23) Methylene Chloride	(2)	4.135	84	6355	0.104
26)*t-Butyl Alcohol-d10	(1)	4.135	65	163529	50.000
28) t-Butyl Alcohol	(1)	4.269	59	8099	2.040
30) Methyl Tertiary Butyl Ether	(2)	4.519	73	13013	0.087
31) trans-1,2-Dichloroethene	(2)	4.562	96	5504	0.096
29) Acrylonitrile	(1)	4.580	53	4021	0.312
32) n-Hexane	(2)	4.977	57	6979	0.073
33) 1,1-Dichloroethane	(2)	5.214	63	10114	0.088
34) di-Isopropyl Ether	(2)	5.269	45	17601	0.085
35) 2-Chloro-1,3-Butadiene	(2)	5.336	53	7237	0.074
37) Ethyl t-butyl ether	(2)	5.806	59	14380	0.084
41) 2,2-Dichloropropane	(2)	6.049	77	6601	0.082
39) cis-1,2-Dichloroethene	(2)	6.062	96	5822	0.090
40) 1,2-Dichloroethene (Total)	(2)		96	11326	0.186
38) 2-Butanone	(1)	6.123	43	14711	0.820
42) Propionitrile	(1)	6.190	54	8091M	1.583
45) Methacrylonitrile	(1)	6.366	67	13226	0.793
47) Bromochloromethane	(2)	6.409	128	2419	0.089
48) Tetrahydrofuran	(1)	6.421	71	3740	0.767
49) Chloroform	(2)	6.549	83	10635	0.099

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	513152	9.962
51) 1,1,1-Trichloroethane	(2)	6.775	97	8273	0.092
52) Cyclohexane	(2)	6.879	56	9189	0.079
54) Carbon Tetrachloride	(2)	6.982	117	6641	0.088
55) 1,1-Dichloropropene	(2)	7.007	75	7079	0.083
56) Isobutyl Alcohol	(1)	7.153	41	7614M	4.801
57)$1,2-Dichloroethane-d4	(2)	7.226	102	112617	10.050
58) Benzene	(2)	7.257	78	24586	0.096
59) 1,2-Dichloroethane	(2)	7.336	62	8848	0.118
60) t-Amyl methyl ether	(2)	7.439	73	11437	0.079
63)*Fluorobenzene	(2)	7.659	96	2207175	10.000
62) n-Heptane	(2)	7.671	43	9505	0.094
65) n-Butanol	(1)	8.073	56	5610	4.646
67) Trichloroethene	(2)	8.153	95	6356	0.098
69) Methylcyclohexane	(2)	8.458	83	8132	0.073
70) 1,2-Dichloropropane	(2)	8.488	63	5846	0.088
73) Dibromomethane	(2)	8.598	93	2668	0.089
71) Methyl Methacrylate	(1)	8.604	69	1160	0.041
74) Bromodichloromethane	(2)	8.829	83	5971	0.084
76) 2-Nitropropane	(1)	9.104	41	7448	0.821
80) cis-1,3-Dichloropropene	(2)	9.390	75	5964	0.066
81) 4-Methyl-2-Pentanone	(1)	9.549	43	33602	0.753
82)$Toluene-d8	(3)	9.689	98	2186686	10.100
83) Toluene	(3)	9.774	92	15015	0.095
84) trans-1,3-Dichloropropene	(3)	10.037	75	4548	0.068
86) Ethyl Methacrylate	(3)	10.104	69	3469	0.053
85) 1,3-Dichloropropene (total)	(3)		75	10512	0.134
88) 1,1,2-Trichloroethane	(3)	10.238	97	4052	0.091
89) Tetrachloroethene	(3)	10.323	166	6584	0.098
90) 1,3-Dichloropropane	(3)	10.402	76	7080	0.089
91) 2-Hexanone	(1)	10.451	43	20735M	0.659
93) Dibromochloromethane	(3)	10.616	129	3283	0.075
95) 1,2-Dibromoethane	(3)	10.738	107	3141	0.077
97)*Chlorobenzene-d5	(3)	11.152	117	1603529	10.000
98) Chlorobenzene	(3)	11.183	112	16829	0.098
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	4705	0.086
100) Ethylbenzene	(3)	11.268	91	26734	0.089
101) m+p-Xylene	(3)	11.384	106	19121	0.166

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

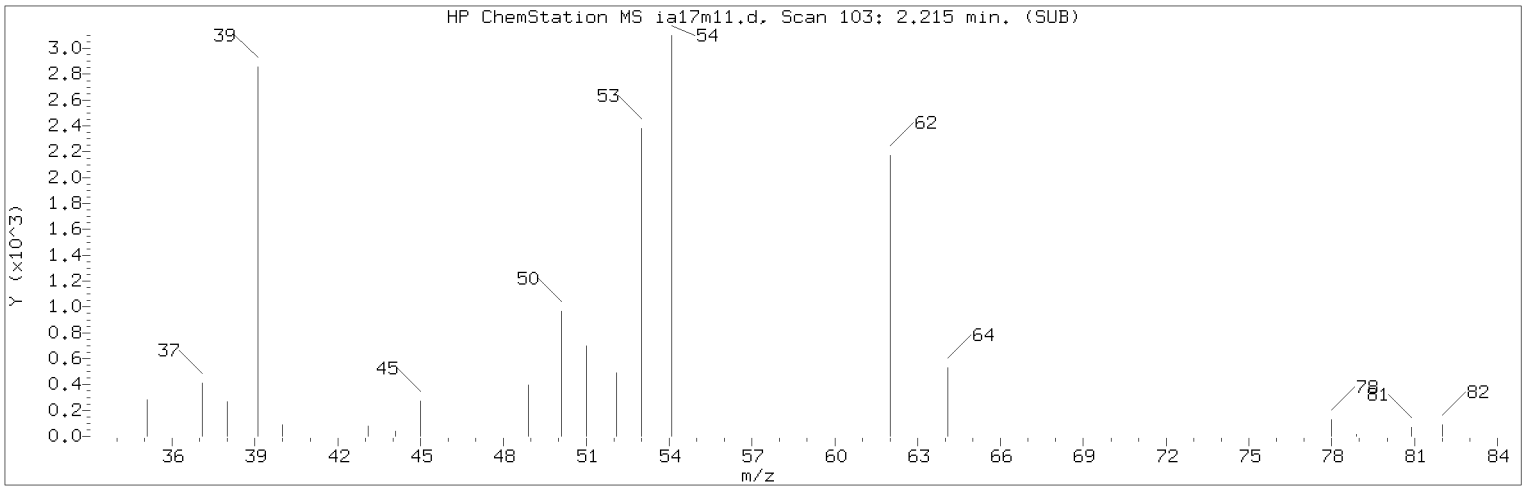
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.707	106	8862	0.079
106) Styrene	(3)	11.731	104	11339	0.066
105) Xylene (Total)	(3)		106	27983	0.245
107) Bromoform	(3)	11.896	173	1392	0.290
108) Isopropylbenzene	(3)	12.006	105	21714	0.076
111)$4-Bromofluorobenzene	(3)	12.158	95	764630	10.002
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	5355	0.091
114) Bromobenzene	(4)	12.274	156	6145	0.088
115) trans-1,4-Dichloro-2-butene	(1)	12.286	53	8284	0.741
116) 1,2,3-Trichloropropane	(4)	12.304	110	1405	0.091
117) n-Propylbenzene	(4)	12.341	91	30078	0.085
119) 2-Chlorotoluene	(4)	12.414	126	5902	0.087
121) 1,3,5-Trimethylbenzene	(4)	12.475	105	18408	0.076
122) 4-Chlorotoluene	(4)	12.512	126	5391	0.078
125) tert-Butylbenzene	(4)	12.713	134	3474	0.069
126) Pentachloroethane	(4)	12.749	167	2812	0.072
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	18177	0.074
128) sec-Butylbenzene	(4)	12.877	105	24064	0.076
132) p-Isopropyltoluene	(4)	12.981	119	17857	0.065
131) 1,3-Dichlorobenzene	(4)	12.987	146	12202	0.090
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	834693	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	14007	0.101
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	11078	0.100
136) Benzyl Chloride	(4)	13.127	126	730	0.351
138) n-Butylbenzene	(4)	13.274	92	10253	0.079
139) 1,2-Dichlorobenzene	(4)	13.310	146	12417	0.098
143) 1,2-Dibromo-3-chloropropane	(1)	13.859	155	207	0.034
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	8758	0.095
145) 1,2,4-Trichlorobenzene	(4)	14.402	180	7842	0.097
146) Hexachlorobutadiene	(4)	14.481	225	3071	0.105
147) Naphthalene	(4)	14.584	128	14850	0.094
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	7582	0.106

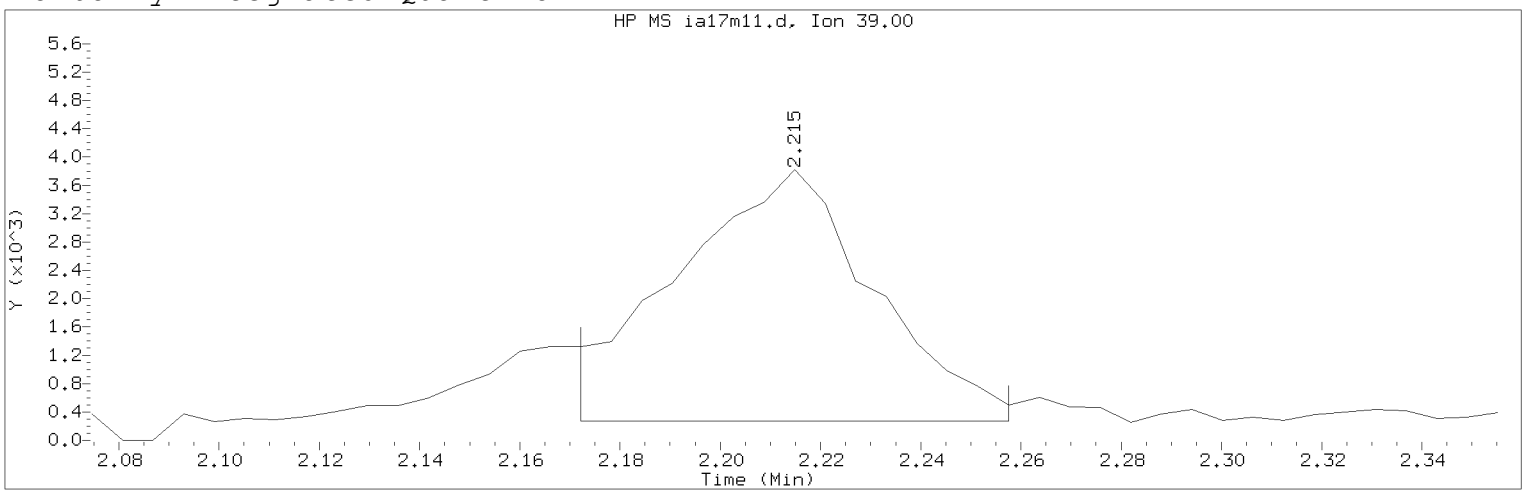
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

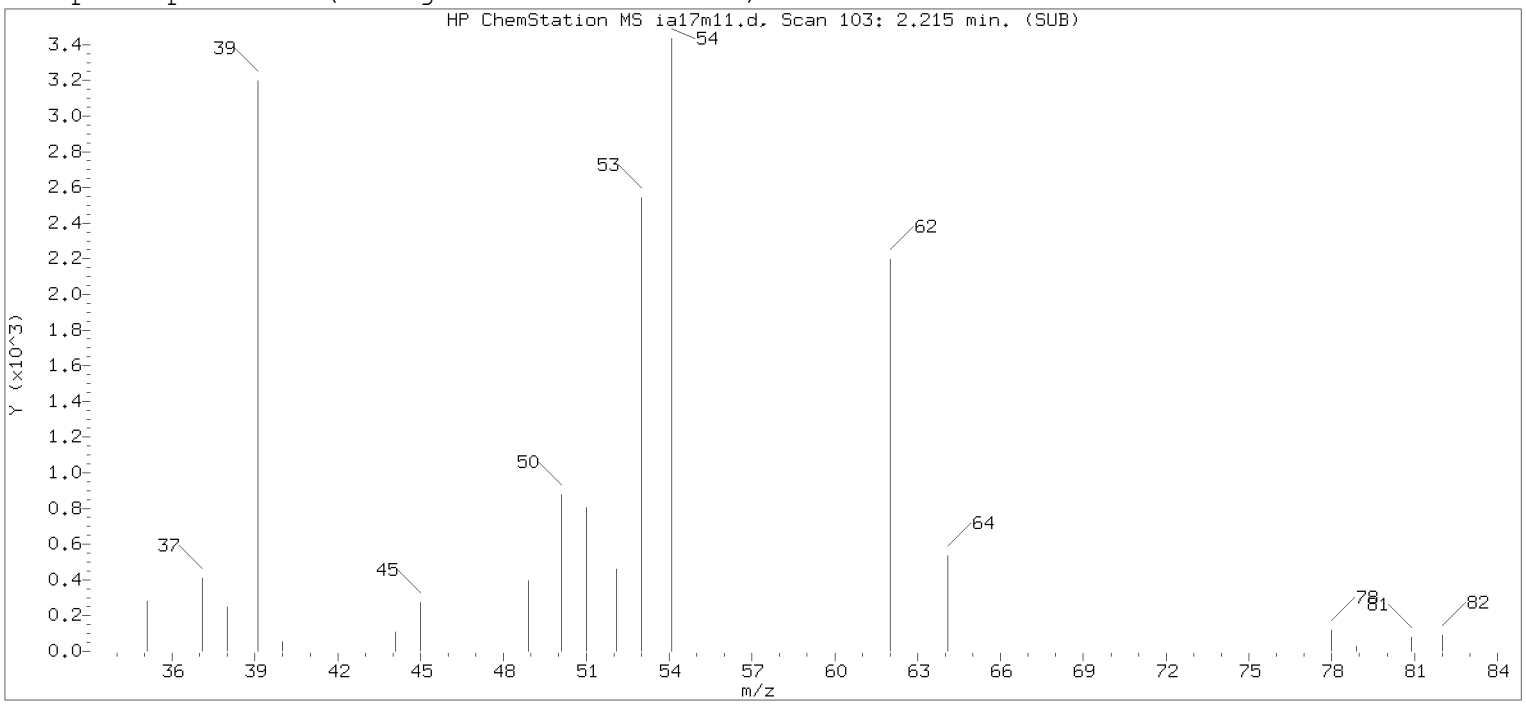
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area (flag) : 9937M
On-Column Amount (ng) : 0.1151
Integration start scan : 95 Integration stop scan: 109
Y at integration start : 272 Y at integration end: 272

Reason for manual integration: improper integration

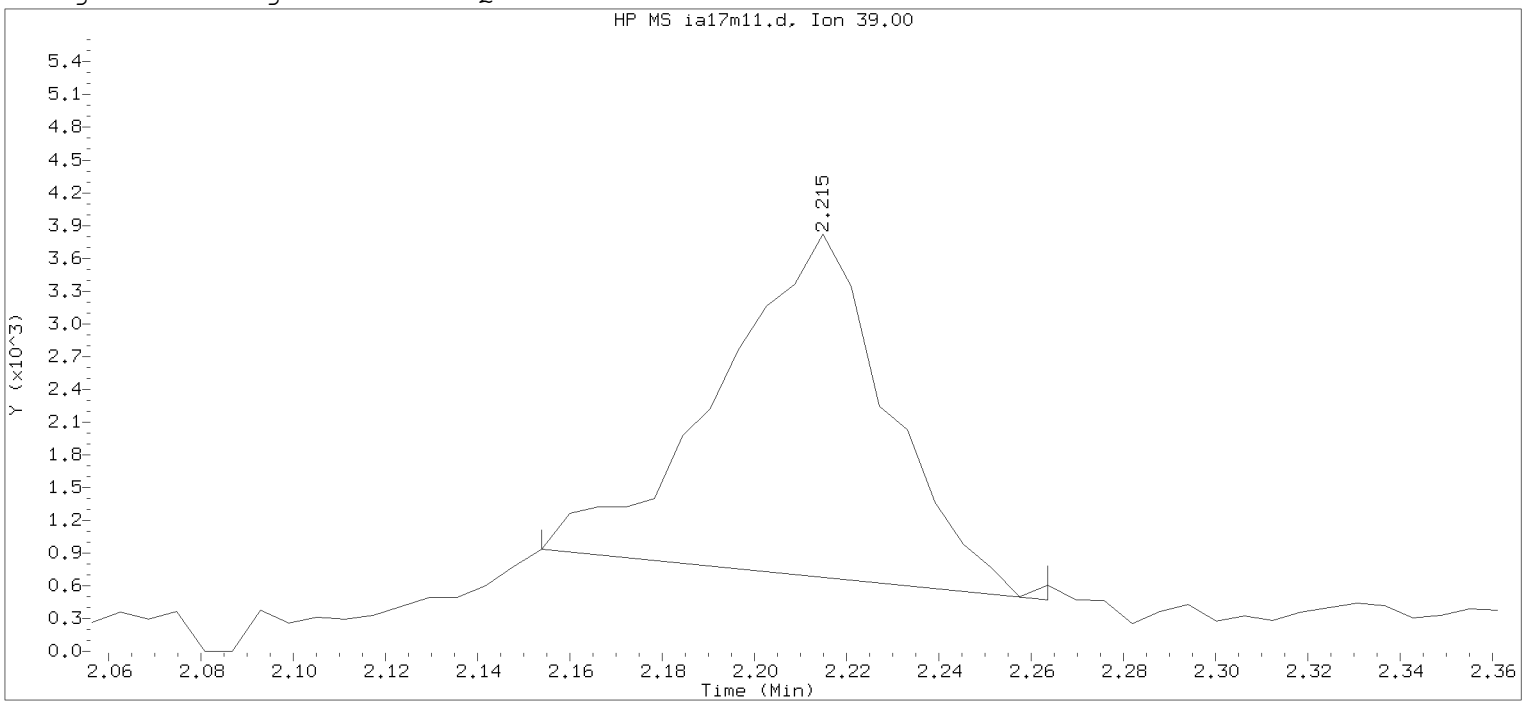
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 103		
Retention Time (minutes)	: 2.215		
Quant Ion	: 39.00		
Area	: 8040		
On-column Amount (ng)	: 0.0931		
Integration start scan	: 92	Integration stop scan:	110
Y at integration start	: 933	Y at integration end:	469

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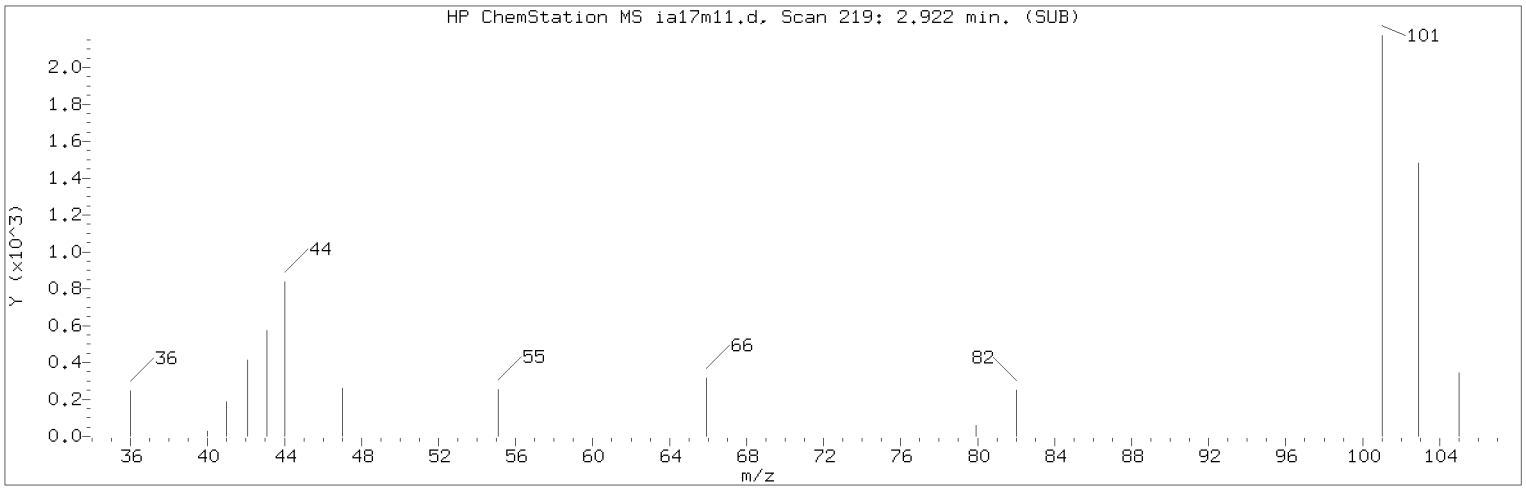
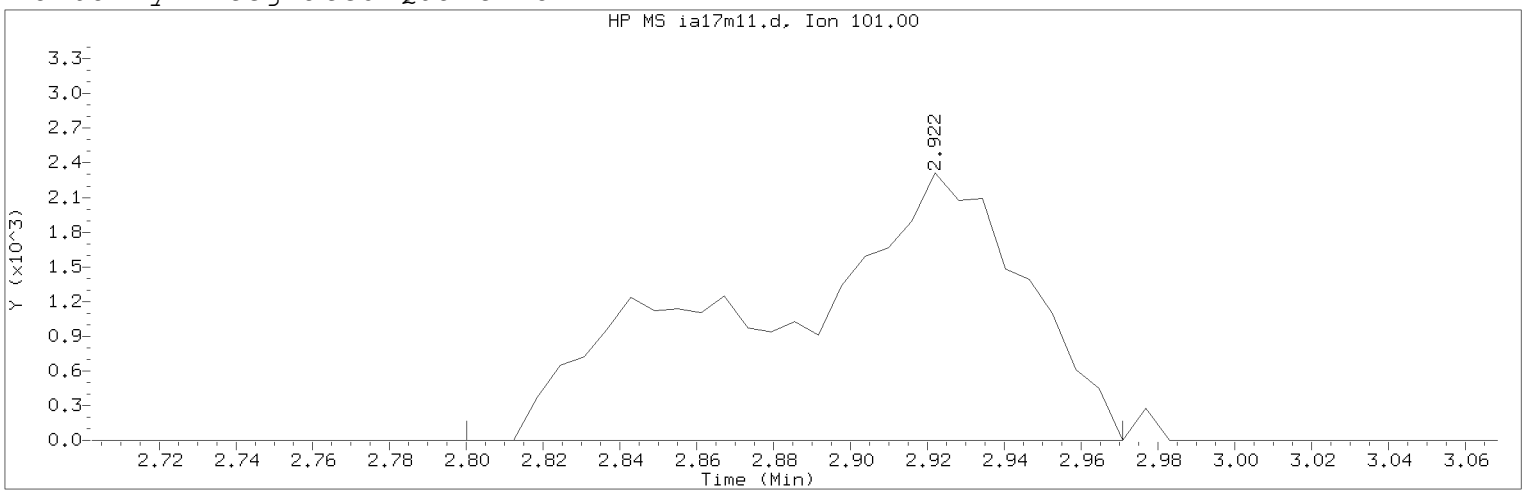
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

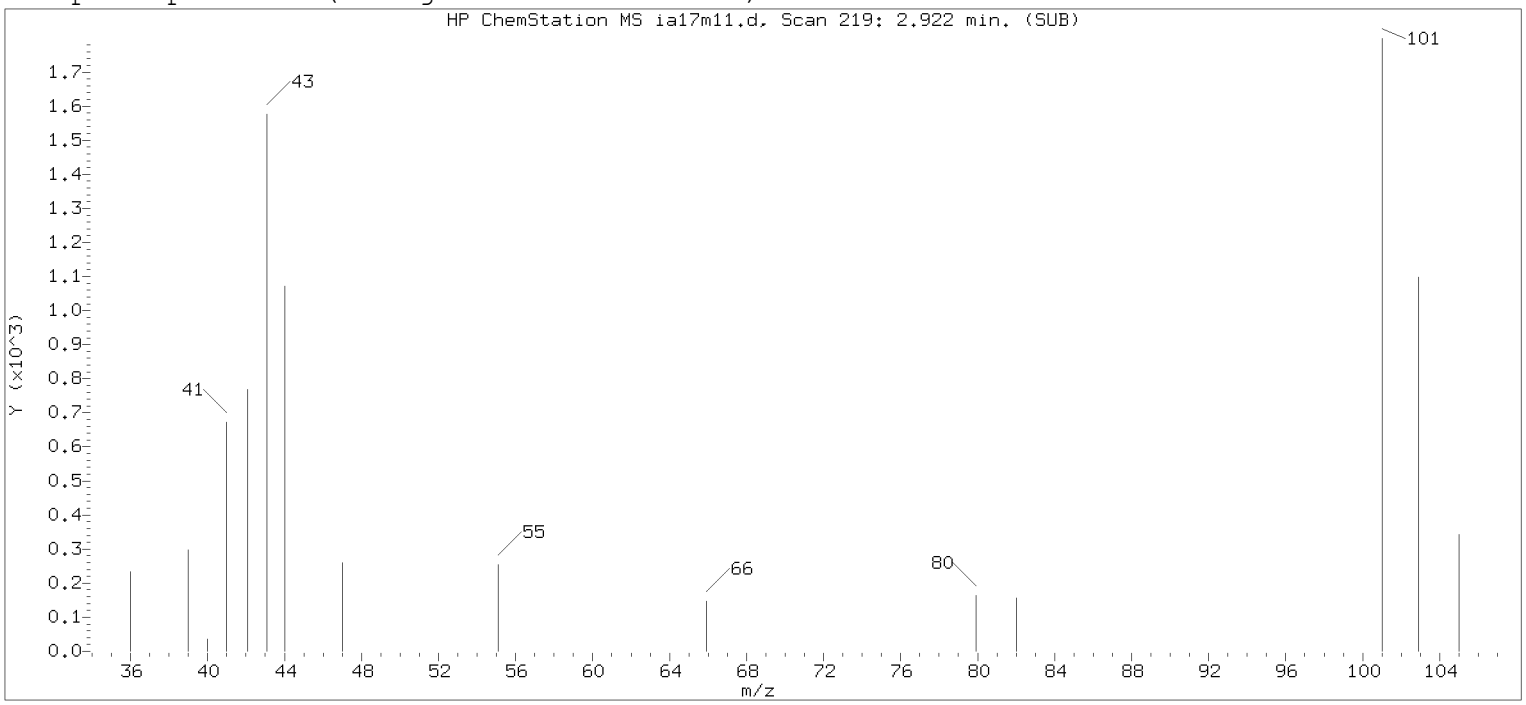
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 11120M
On-Column Amount (ng) : 0.1045
Integration start scan : 198 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

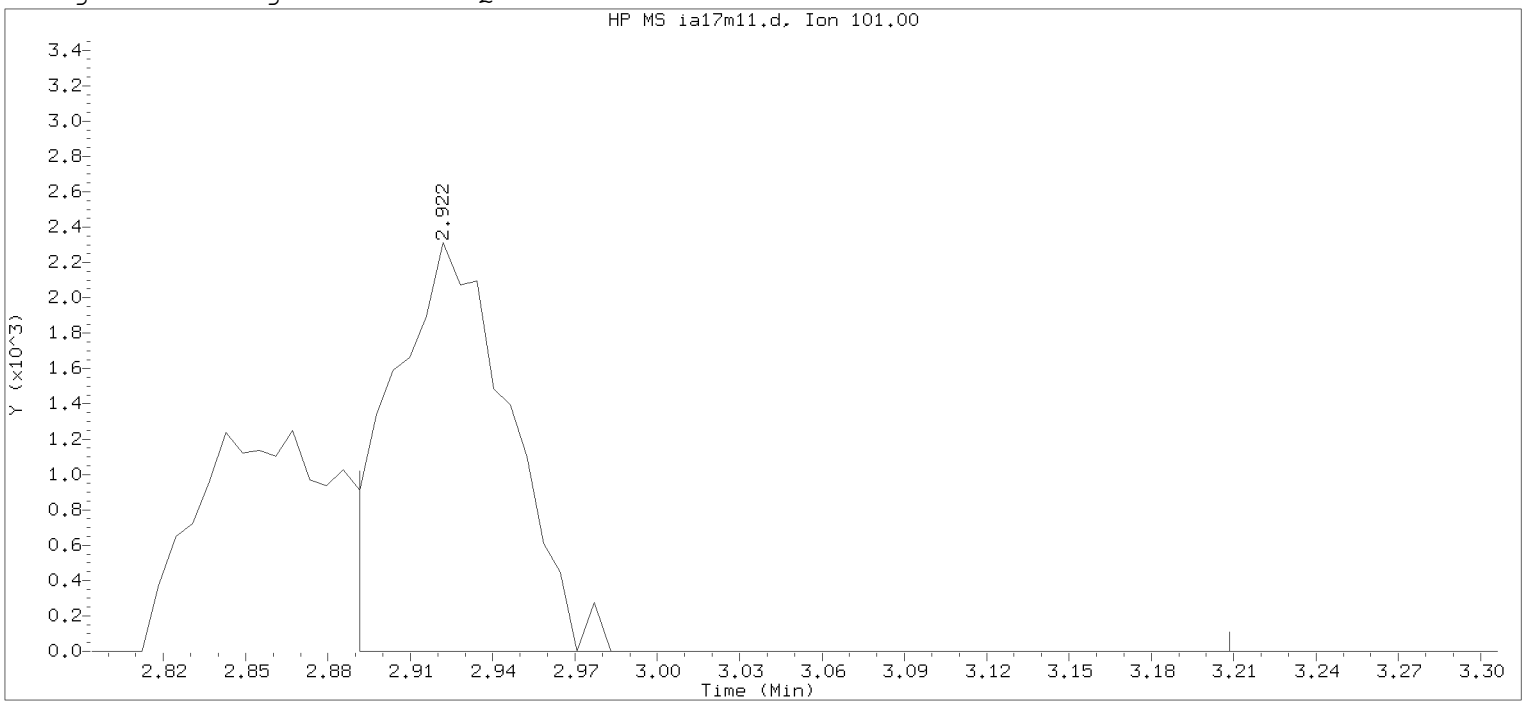
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 6851
On-column Amount (ng) : 0.0644
Integration start scan : 213 Integration stop scan: 265
Y at integration start : 0 Y at integration end: 0

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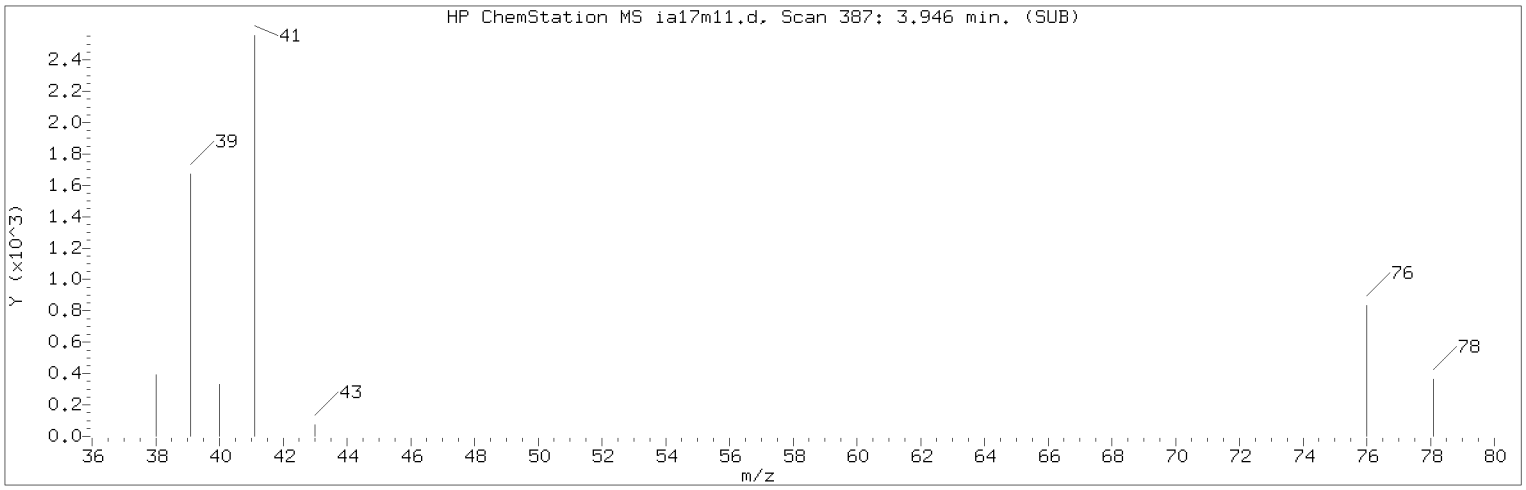
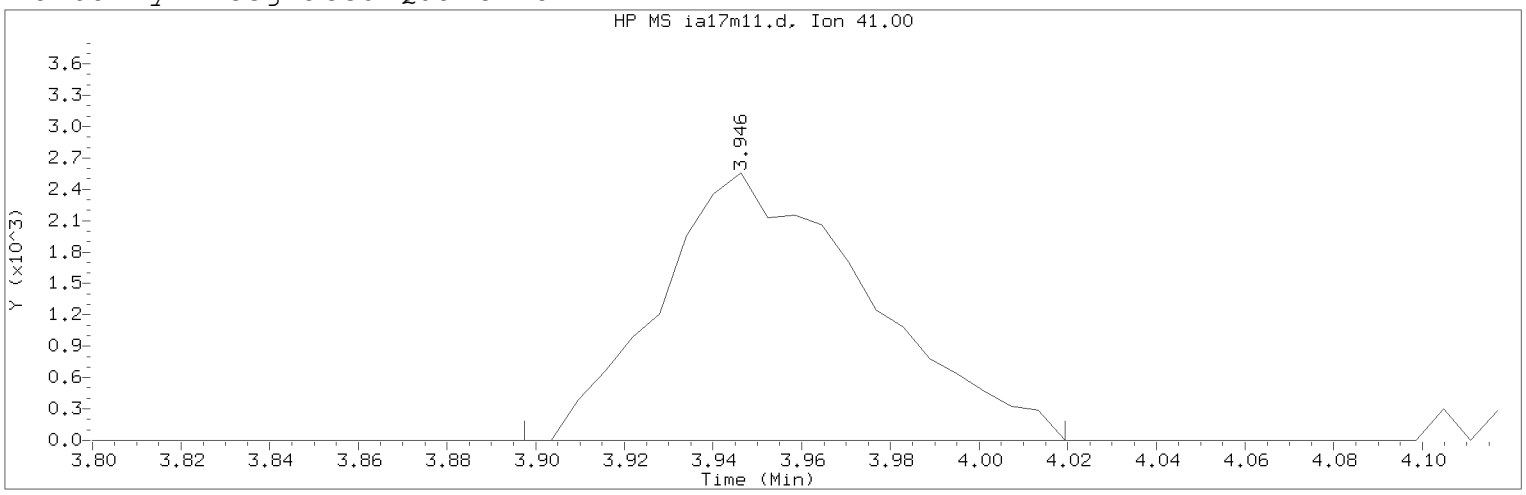
Target 3.5 esignature used. AE06 Page 902 of 2168

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

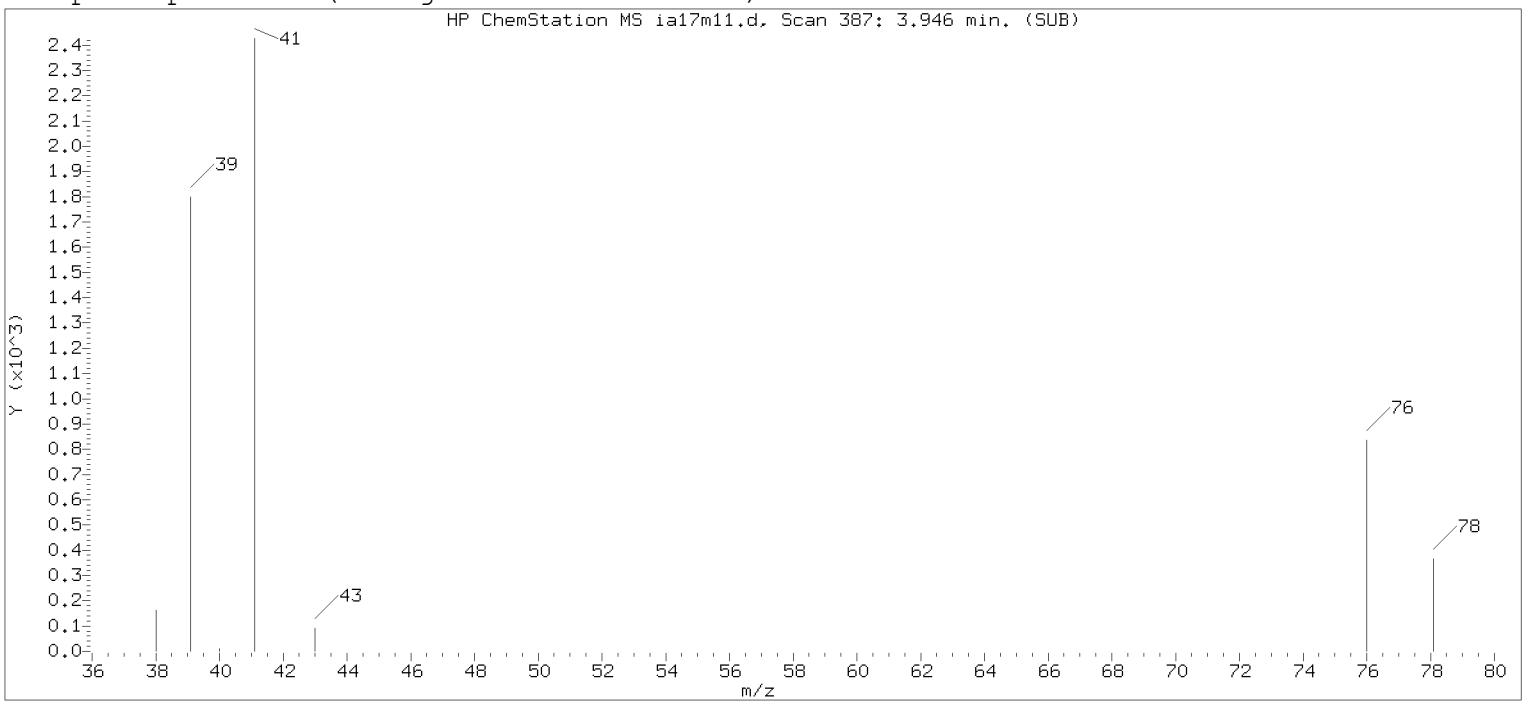
Compound Number : 22
Compound Name : Allyl Chloride
Scan Number : 387
Retention Time (minutes): 3.946
Quant Ion : 41.00
Area (flag) : 8410M
On-Column Amount (ng) : 0.0910
Integration start scan : 378 Integration stop scan: 398
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

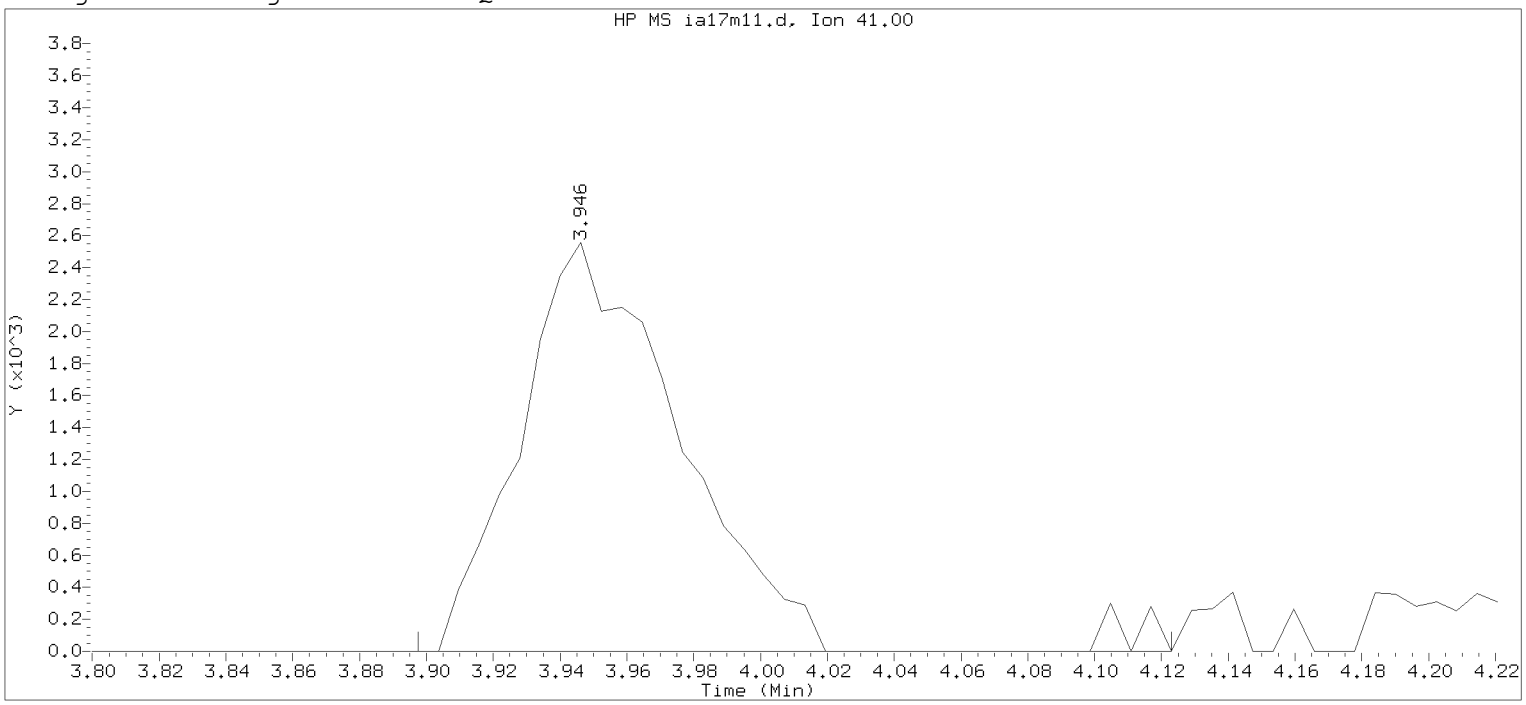
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

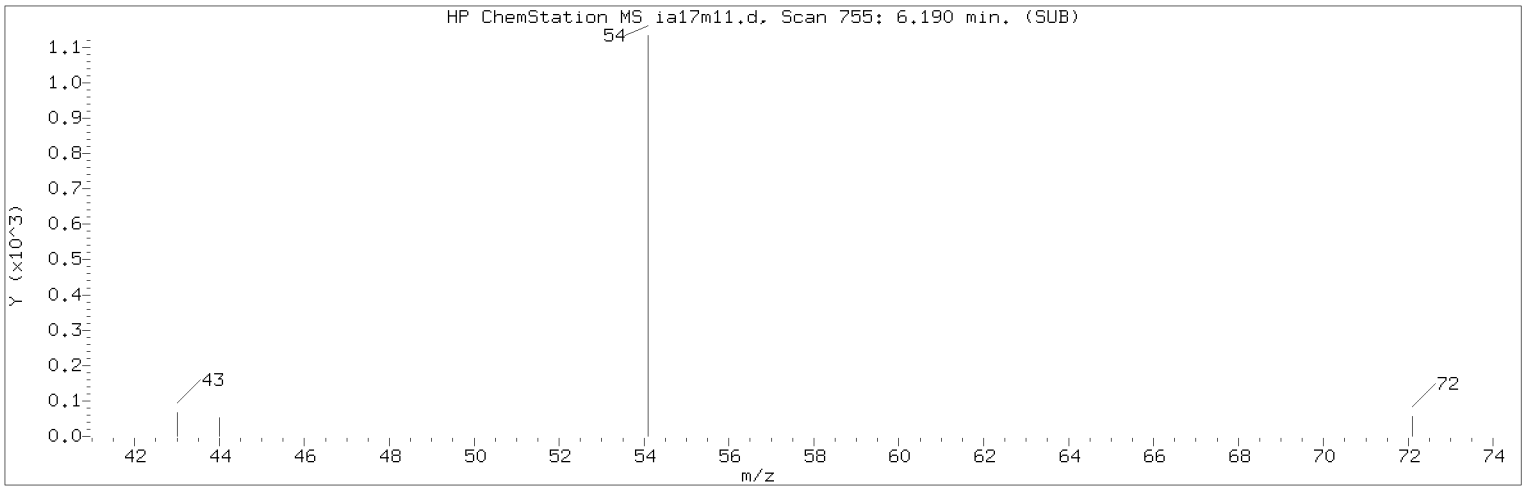
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

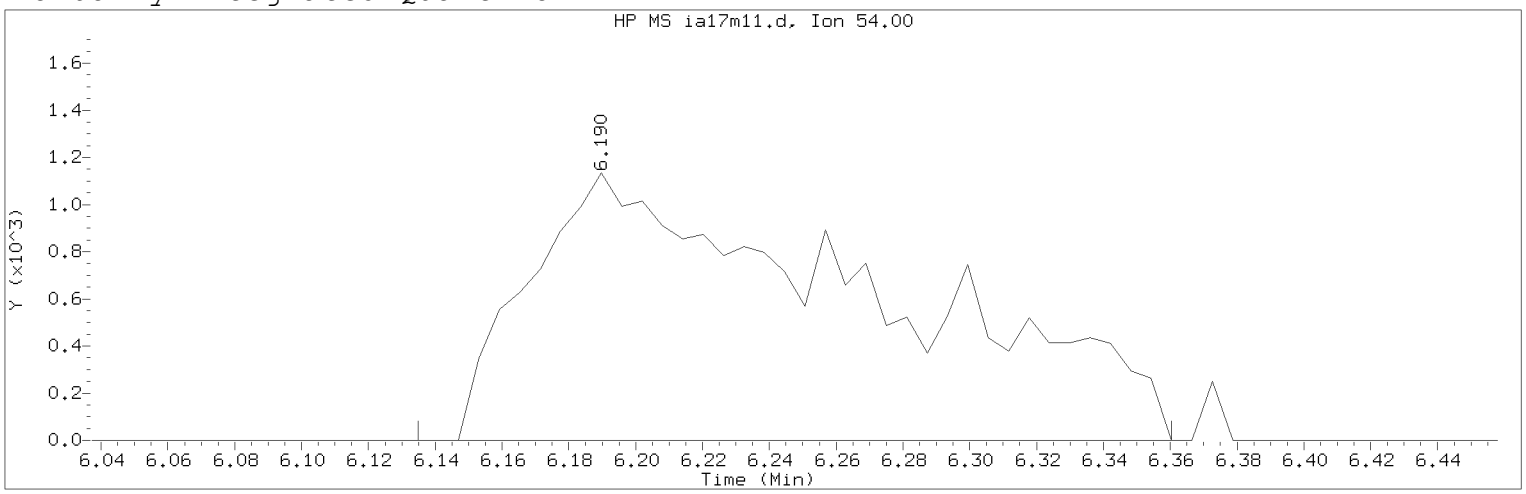
Compound Number	: 22		
Compound Name	: Allyl Chloride		
Scan Number	: 387		
Retention Time (minutes)	: 3.946		
Quant Ion	: 41.00		
Area	: 8624		
On-column Amount (ng)	: 0.0933		
Integration start scan	: 378	Integration stop scan:	415
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

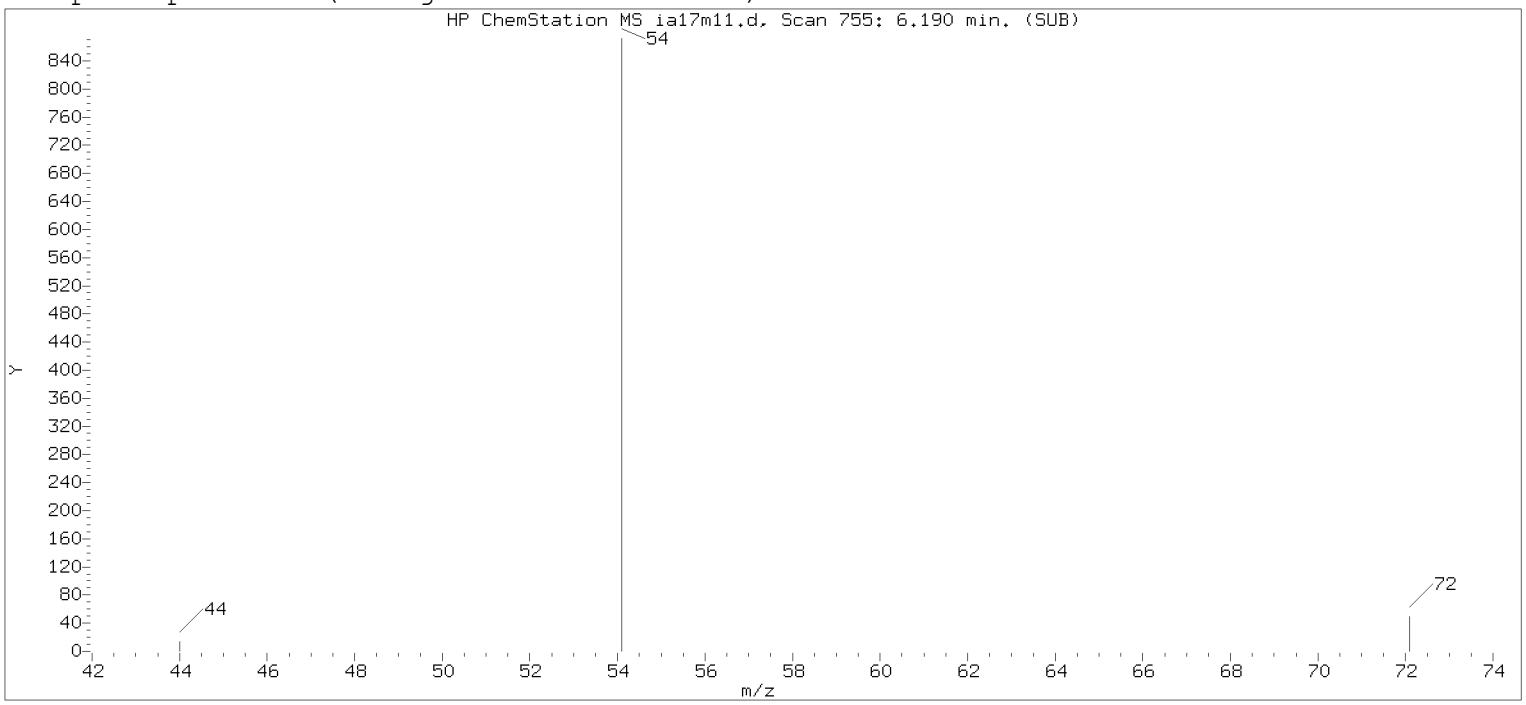
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 755
Retention Time (minutes): 6.190
Quant Ion : 54.00
Area (flag) : 8091M
On-Column Amount (ng) : 1.5827
Integration start scan : 745 Integration stop scan: 782
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

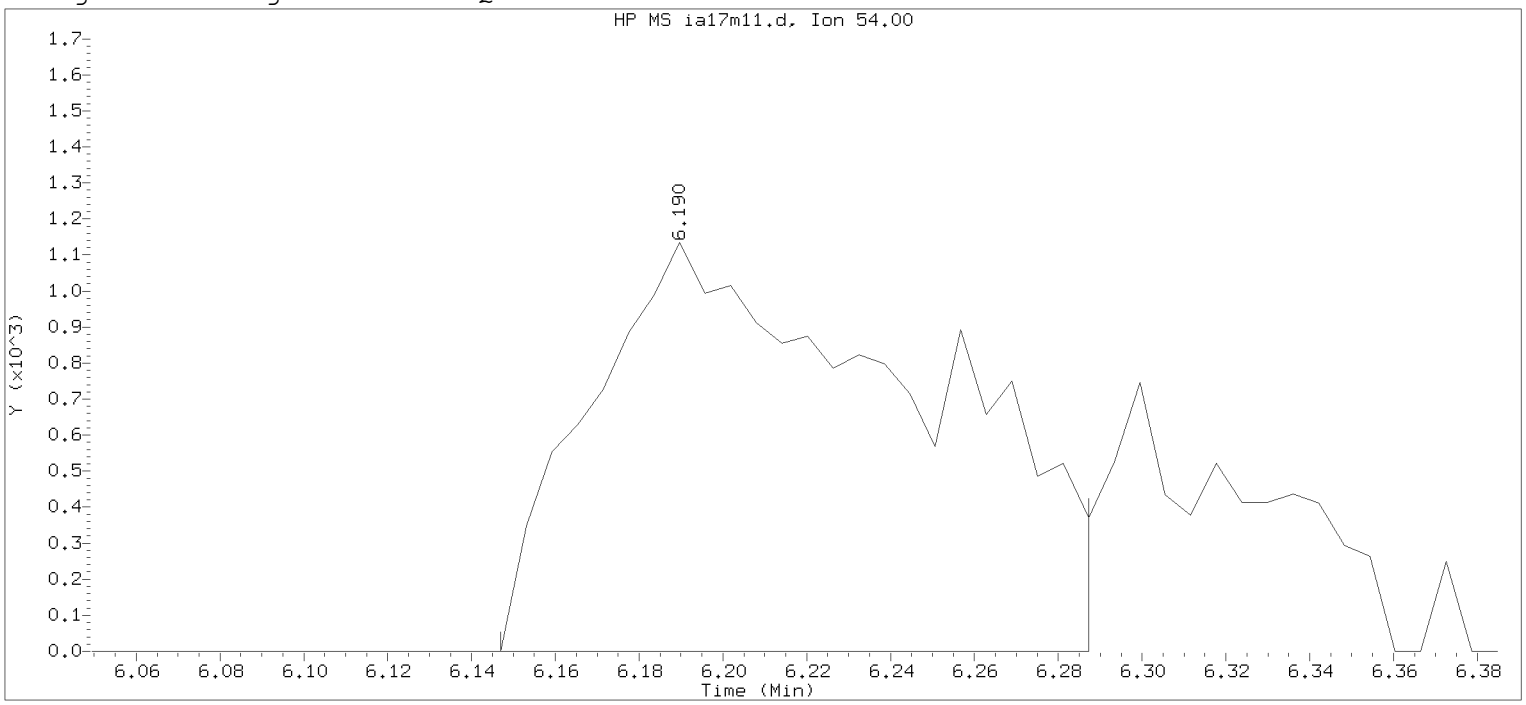
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

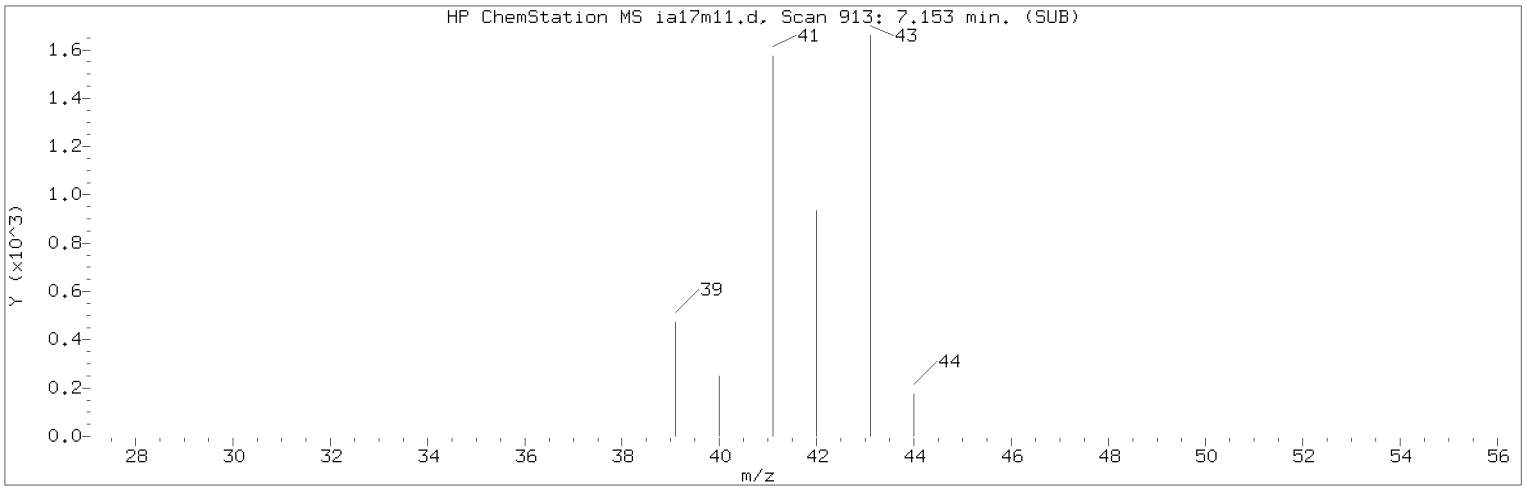
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

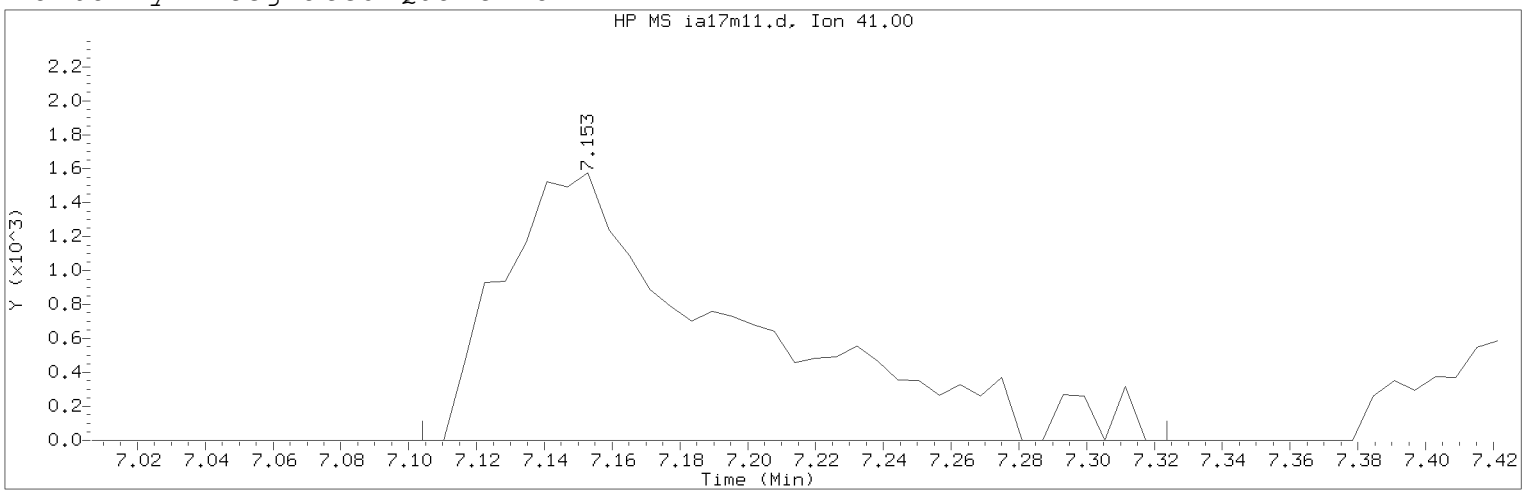
Compound Number : 42
Compound Name : Propionitrile
Scan Number : 755
Retention Time (minutes): 6.190
Quant Ion : 54.00
Area : 6254
On-column Amount (ng) : 1.2234
Integration start scan : 747 Integration stop scan: 770
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

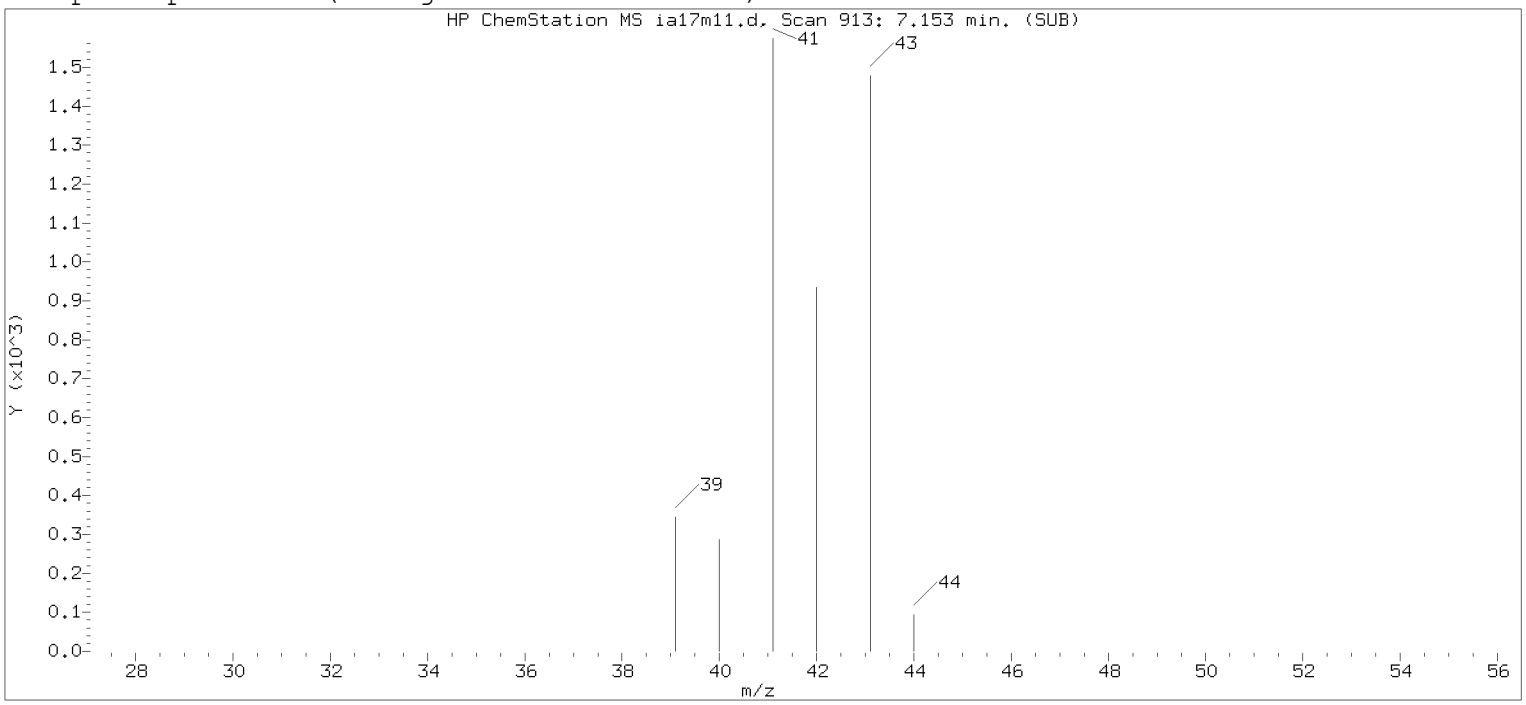
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 913
Retention Time (minutes): 7.153
Quant Ion : 41.00
Area (flag) : 7614M
On-Column Amount (ng) : 4.8012
Integration start scan : 904 Integration stop scan: 940
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

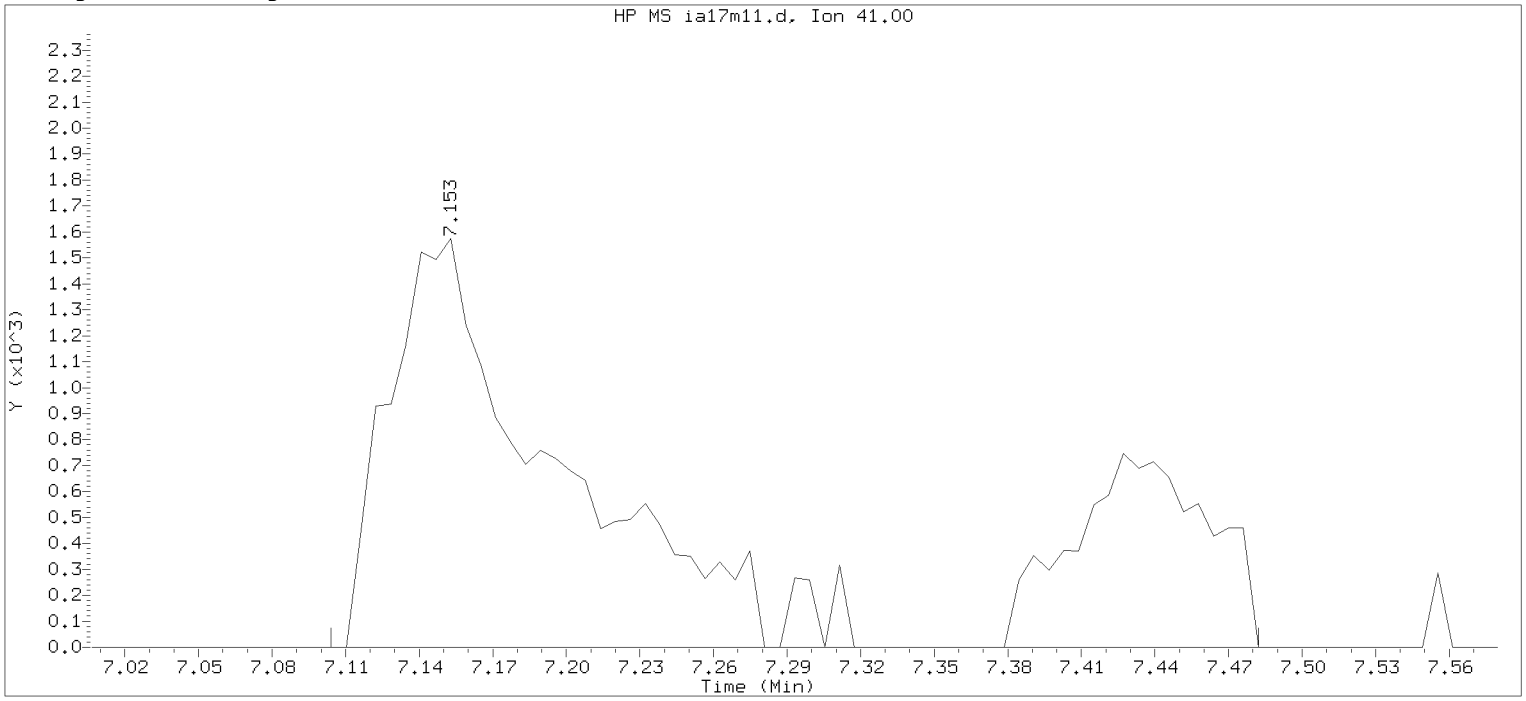
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

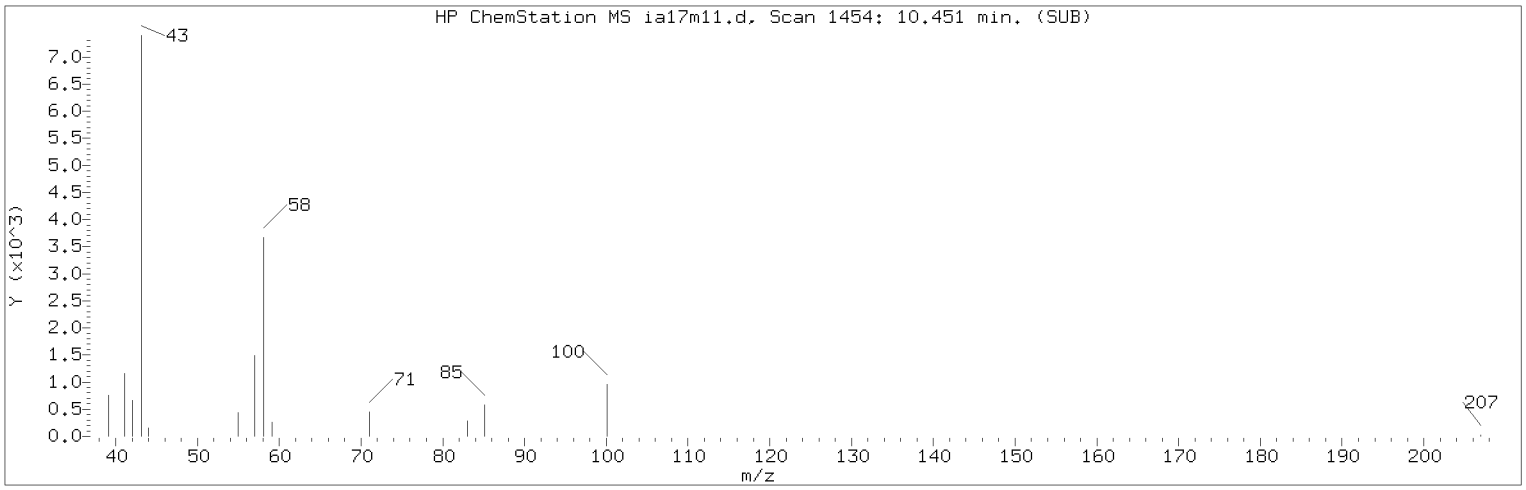
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

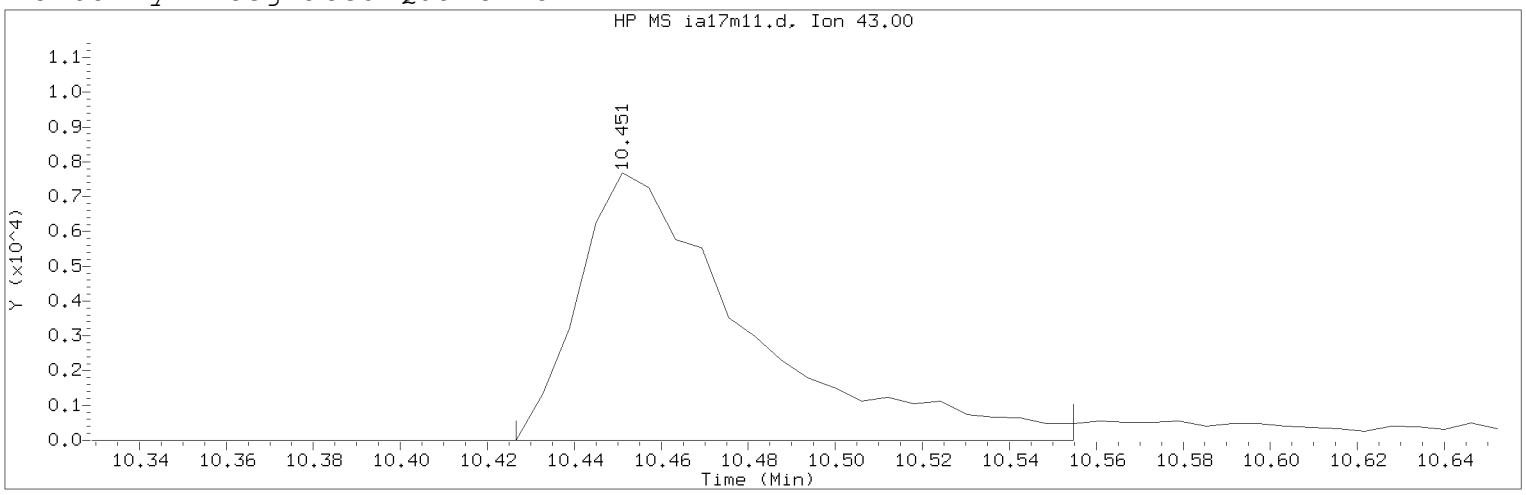
Compound Number : 56
Compound Name : Isobutyl Alcohol
Scan Number : 913
Retention Time (minutes): 7.153
Quant Ion : 41.00
Area : 10544
On-column Amount (ng) : 6.6493
Integration start scan : 904 Integration stop scan: 966
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/10/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:24 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

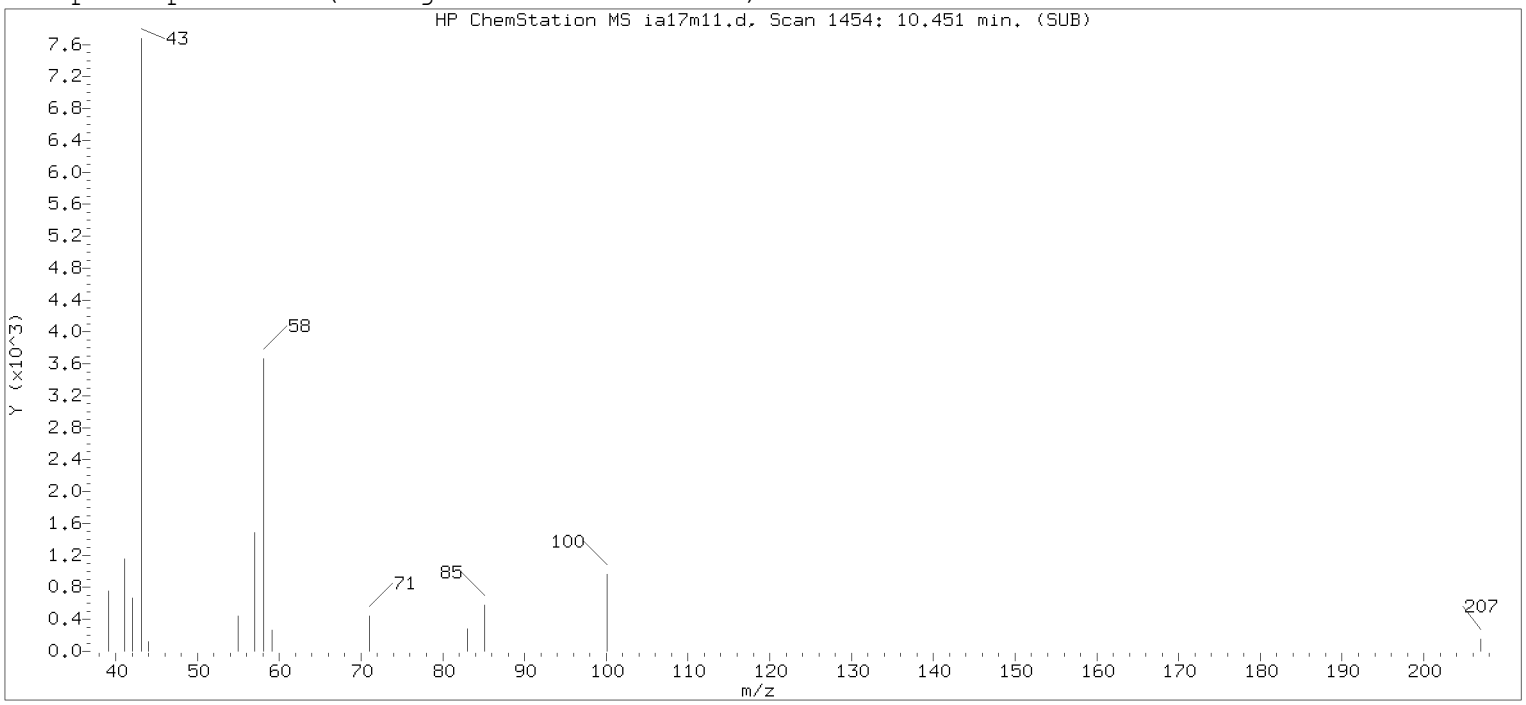
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1454
Retention Time (minutes): 10.451
Quant Ion : 43.00
Area (flag) : 20735M
On-Column Amount (ng) : 0.6585
Integration start scan : 1449 Integration stop scan: 1470
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

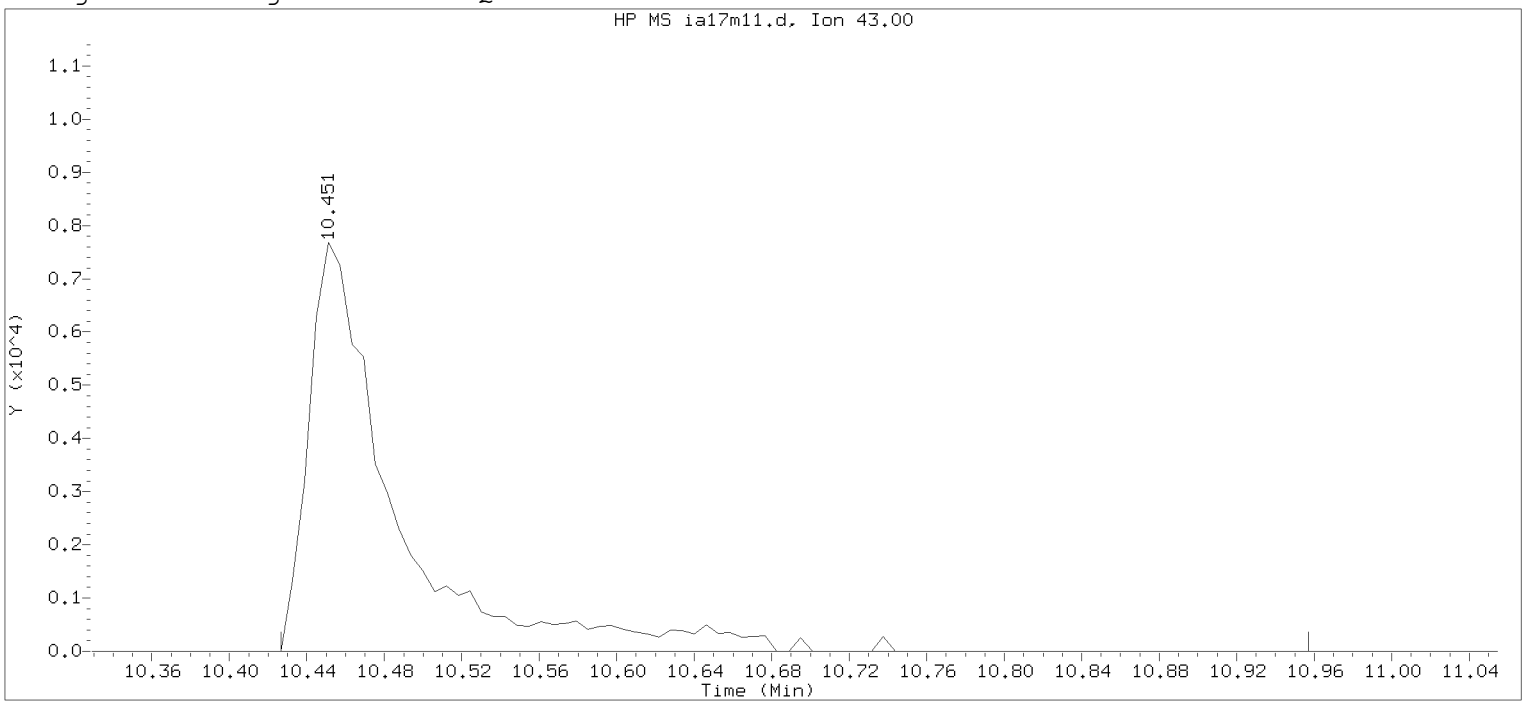
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



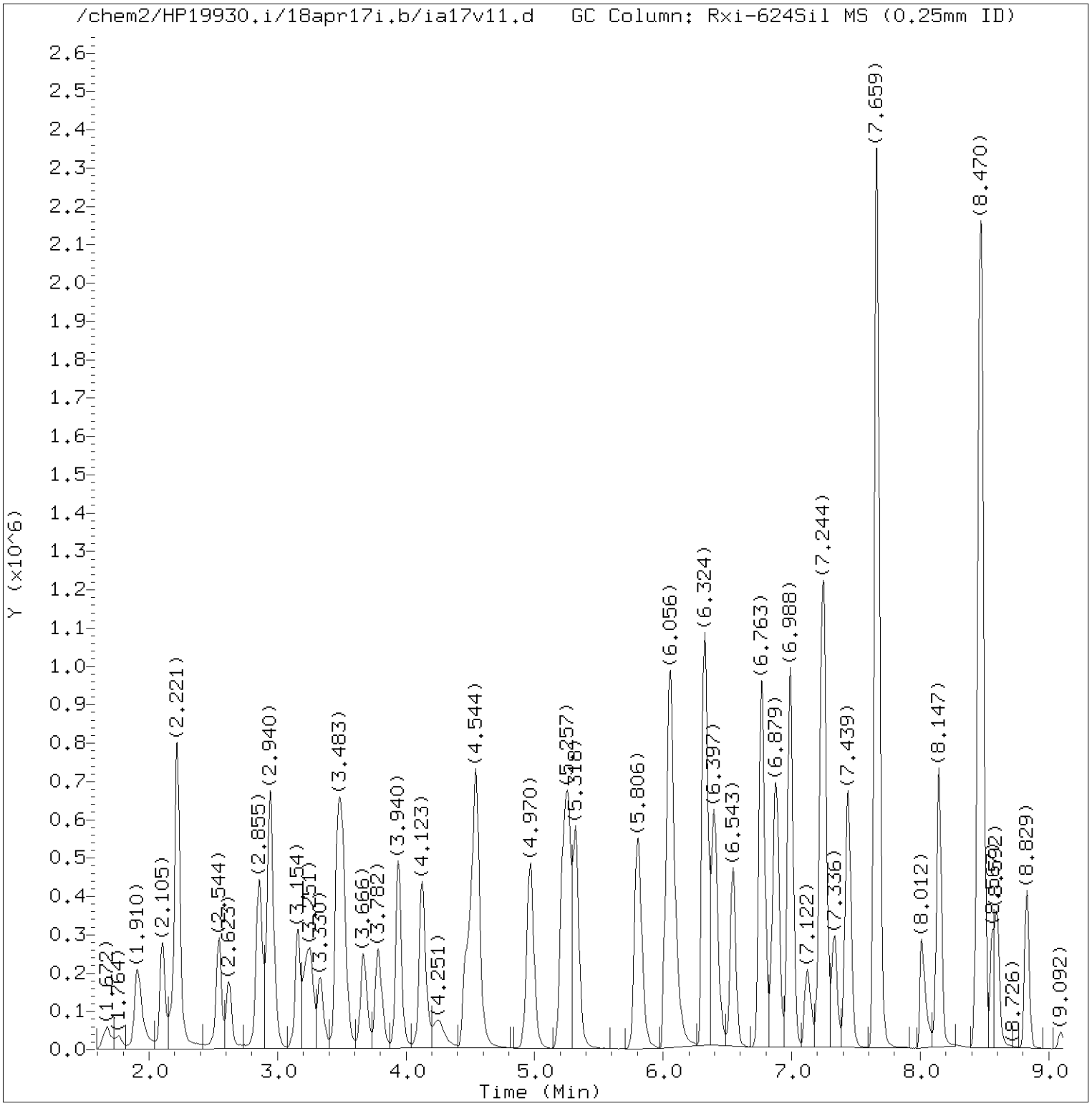
Data File: /chem2/HP19930.i/18apr17i.b/ia17m11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 20:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:02
Date, time and analyst ID of latest file update: 17-Apr-2018 21:10 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1454
Retention Time (minutes): 10.451
Quant Ion : 43.00
Area : 23855
On-column Amount (ng) : 0.7576
Integration start scan : 1449 Integration stop scan: 1536
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/09/2018



Total Ion Chromatogram (TIC)

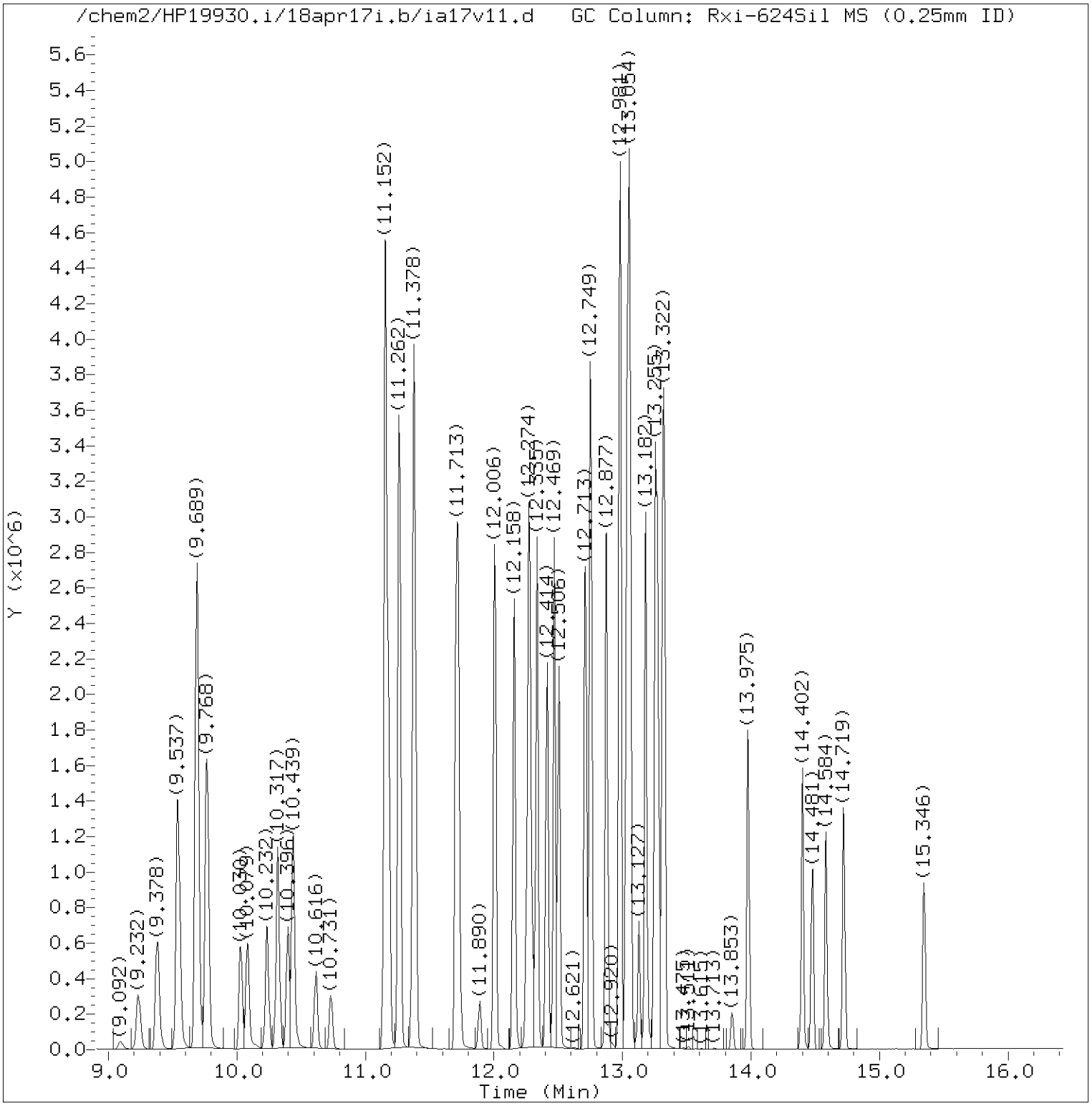
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.910	85	531968	5.181
2) Chloromethane	(2)	2.099	50	487397	5.128
5) Vinyl Chloride	(2)	2.221	62	456548	5.336
6) 1,3-Butadiene	(2)	2.221	39	409459M	4.691
7) Bromomethane	(2)	2.544	94	316193	5.258
8) Chloroethane	(2)	2.623	64	245717	5.041
9) Dichlorofluoromethane	(2)	2.855	67	588681	5.142
10) Trichlorofluoromethane	(2)	2.922	101	569678M	5.299
11) Ethyl ether	(2)	3.154	59	277217	5.226
12) Freon 123a	(2)	3.245	67	404313	5.326
13) Acrolein	(1)	3.337	56	290706	36.212
15) 1,1-Dichloroethene	(2)	3.465	96	291580	5.752
14) Acetone	(1)	3.495	43	427015	36.233
16) Freon 113	(2)	3.507	101	300514	5.171
17) Methyl Iodide	(2)	3.666	142	474588	5.064
18) Carbon Disulfide	(2)	3.782	76	707103	4.933
21) Methyl Acetate	(1)	3.922	43	142528	5.130
22) Allyl Chloride	(2)	3.940	41	502700	5.383
23) Methylene Chloride	(2)	4.123	84	316316	5.111
26)*t-Butyl Alcohol-d10	(1)	4.129	65	167717	50.000
28) t-Butyl Alcohol	(1)	4.251	59	204713	50.273
29) Acrylonitrile	(1)	4.458	53	355922	26.950
30) Methyl Tertiary Butyl Ether	(2)	4.525	73	773393	5.125
31) trans-1,2-Dichloroethene	(2)	4.550	96	317275	5.481
32) n-Hexane	(2)	4.970	57	487032	5.038
33) 1,1-Dichloroethane	(2)	5.214	63	610714	5.282
34) di-Isopropyl Ether	(2)	5.257	45	1130627	5.375
35) 2-Chloro-1,3-Butadiene	(2)	5.318	53	519335	5.264
37) Ethyl t-butyl ether	(2)	5.806	59	910127	5.260
38) 2-Butanone	(1)	6.019	43	762146	41.399
39) cis-1,2-Dichloroethene	(2)	6.056	96	360408	5.496
41) 2,2-Dichloropropane	(2)	6.068	77	441563	5.451
40) 1,2-Dichloroethene (Total)	(2)		96	677683	10.977
42) Propionitrile	(1)	6.110	54	203378	38.788
45) Methacrylonitrile	(1)	6.324	67	684780	40.024
47) Bromochloromethane	(2)	6.397	128	142907	5.204
48) Tetrahydrofuran	(1)	6.403	71	134062	26.798
49) Chloroform	(2)	6.543	83	568030	5.222

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.763	113	519597	9.981
51) 1,1,1-Trichloroethane	(2)	6.775	97	487049	5.375
52) Cyclohexane	(2)	6.879	56	601458	5.116
54) Carbon Tetrachloride	(2)	6.988	117	415766	5.433
55) 1,1-Dichloropropene	(2)	6.988	75	460999	5.339
56) Isobutyl Alcohol	(1)	7.122	41	199249	122.505
57)$1,2-Dichloroethane-d4	(2)	7.226	102	112859	9.965
58) Benzene	(2)	7.250	78	1364821	5.256
59) 1,2-Dichloroethane	(2)	7.336	62	368590	4.860
60) t-Amyl methyl ether	(2)	7.439	73	770216	5.286
63)*Fluorobenzene	(2)	7.659	96	2230708	10.000
62) n-Heptane	(2)	7.665	43	534645	5.207
65) n-Butanol	(1)	8.012	56	306306	247.339
67) Trichloroethene	(2)	8.147	95	345776	5.259
69) Methylcyclohexane	(2)	8.458	83	589167	5.204
70) 1,2-Dichloropropane	(2)	8.482	63	352820	5.238
71) Methyl Methacrylate	(1)	8.561	69	160451	5.586
72) 1,4-Dioxane	(1)	8.573	88	39434M	138.810
73) Dibromomethane	(2)	8.598	93	153051	5.075
74) Bromodichloromethane	(2)	8.829	83	371315	5.143
76) 2-Nitropropane	(1)	9.098	41	39677M	4.266
80) cis-1,3-Dichloropropene	(2)	9.384	75	448215	4.925
81) 4-Methyl-2-Pentanone	(1)	9.537	43	1237278M	27.045
82)$Toluene-d8	(3)	9.689	98	2205006	9.929
83) Toluene	(3)	9.768	92	849179	5.238
84) trans-1,3-Dichloropropene	(3)	10.030	75	350561	5.113
86) Ethyl Methacrylate	(3)	10.085	69	345001	5.138
85) 1,3-Dichloropropene (total)	(3)		75	798776	10.037
88) 1,1,2-Trichloroethane	(3)	10.232	97	238944	5.225
89) Tetrachloroethene	(3)	10.317	166	365571	5.308
90) 1,3-Dichloropropane	(3)	10.396	76	413060	5.075
91) 2-Hexanone	(1)	10.439	43	887728	27.487
93) Dibromochloromethane	(3)	10.616	129	233862	5.193
95) 1,2-Dibromoethane	(3)	10.731	107	213630	5.134
97)*Chlorobenzene-d5	(3)	11.152	117	1644881	10.000
98) Chlorobenzene	(3)	11.183	112	914222	5.189
99) 1,1,1,2-Tetrachloroethane	(3)	11.262	131	299087	5.337
100) Ethylbenzene	(3)	11.262	91	1647484	5.362

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

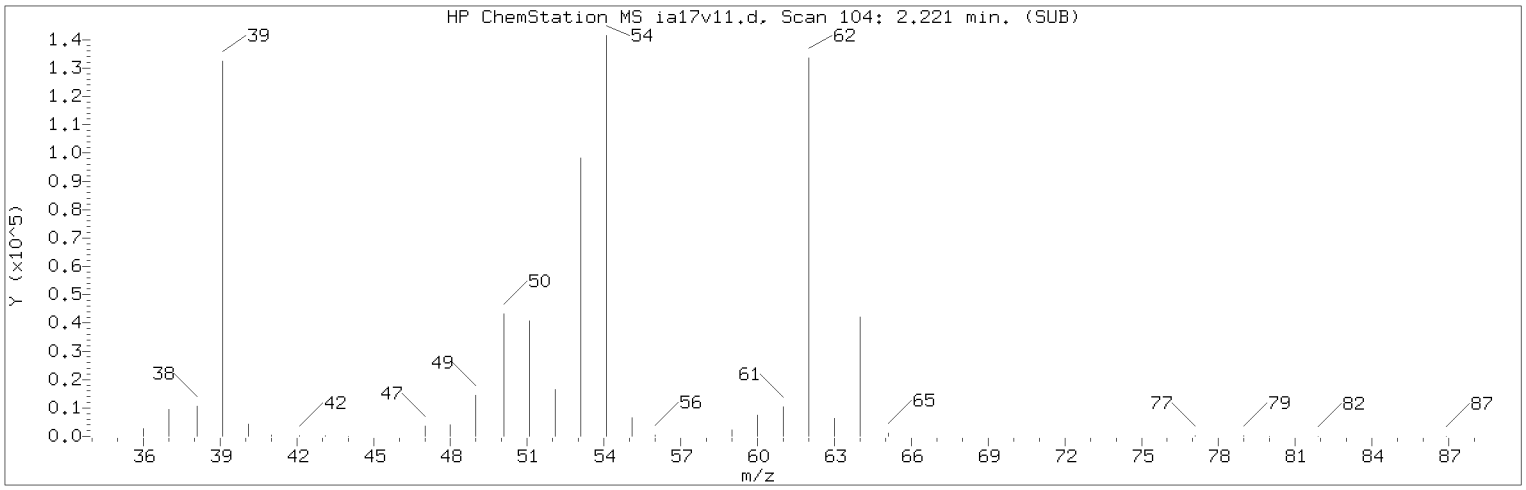
Sample Name: LCSI01 Lab Sample ID: LCSI01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101) m+p-Xylene	(3)	11.378	106	1275552	10.804
104) o-Xylene	(3)	11.707	106	619019	5.389
106) Styrene	(3)	11.725	104	993931	5.605
105) Xylene (Total)	(3)		106	1894571	16.193
107) Bromoform	(3)	11.890	173	115264	4.375
108) Isopropylbenzene	(3)	12.006	105	1661469	5.635
111)$4-Bromofluorobenzene	(3)	12.158	95	781608	9.967
113) 1,1,2,2-Tetrachloroethane	(4)	12.249	83	294950	4.928
114) Bromobenzene	(4)	12.274	156	363933	5.128
115) trans-1,4-Dichloro-2-butene	(1)	12.274	53	313170	27.304
116) 1,2,3-Trichloropropane	(4)	12.298	110	81666	5.210
117) n-Propylbenzene	(4)	12.335	91	1981607	5.519
119) 2-Chlorotoluene	(4)	12.414	126	369044	5.338
121) 1,3,5-Trimethylbenzene	(4)	12.469	105	1366824	5.514
122) 4-Chlorotoluene	(4)	12.506	126	368644	5.241
125) tert-Butylbenzene	(4)	12.713	134	286608	5.590
126) Pentachloroethane	(4)	12.749	167	216080	5.463
127) 1,2,4-Trimethylbenzene	(4)	12.755	105	1381203	5.549
128) sec-Butylbenzene	(4)	12.877	105	1813623	5.652
131) 1,3-Dichlorobenzene	(4)	12.981	146	710591	5.126
132) p-Isopropyltoluene	(4)	12.981	119	1522342	5.416
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	850706	10.000
134) 1,4-Dichlorobenzene	(4)	13.054	146	720541	5.102
135) 1,2,3-Trimethylbenzene	(4)	13.060	120	612257	5.412
136) Benzyl Chloride	(4)	13.127	126	81763	4.324
138) n-Butylbenzene	(4)	13.274	92	740889	5.566
139) 1,2-Dichlorobenzene	(4)	13.310	146	671126	5.220
143) 1,2-Dibromo-3-chloropropane	(1)	13.853	155	34871	5.623
144) 1,3,5-Trichlorobenzene	(4)	13.981	180	493673	5.271
145) 1,2,4-Trichlorobenzene	(4)	14.402	180	416959	5.081
146) Hexachlorobutadiene	(4)	14.481	225	165939	5.588
147) Naphthalene	(4)	14.584	128	839769	5.224
148) 1,2,3-Trichlorobenzene	(4)	14.725	180	366820	5.023

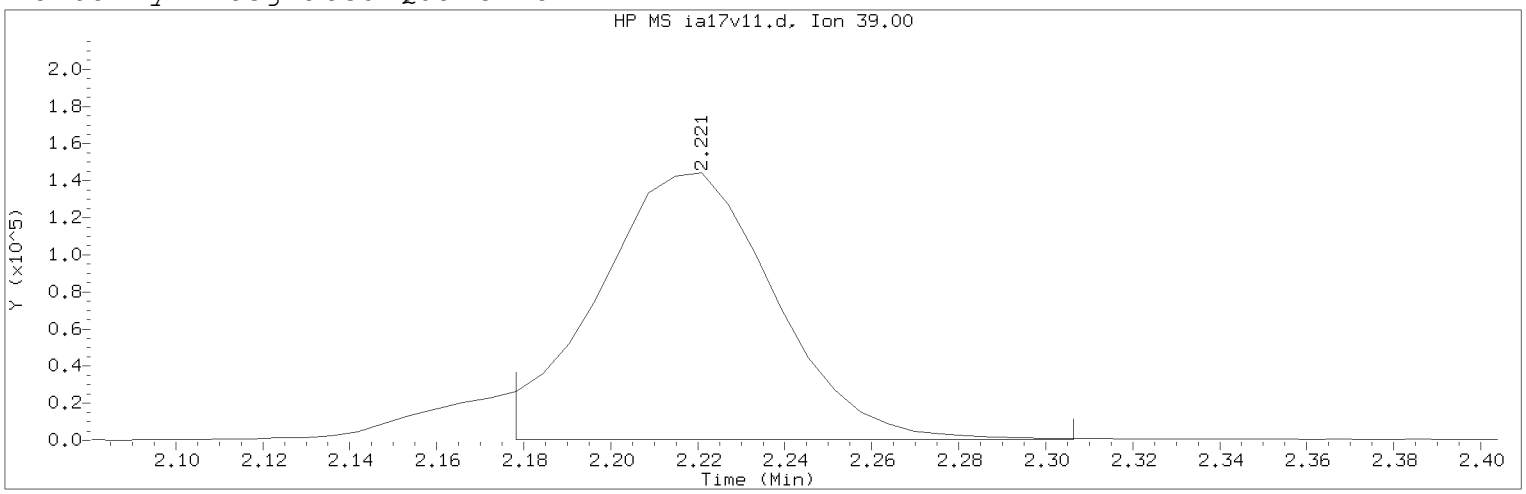
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

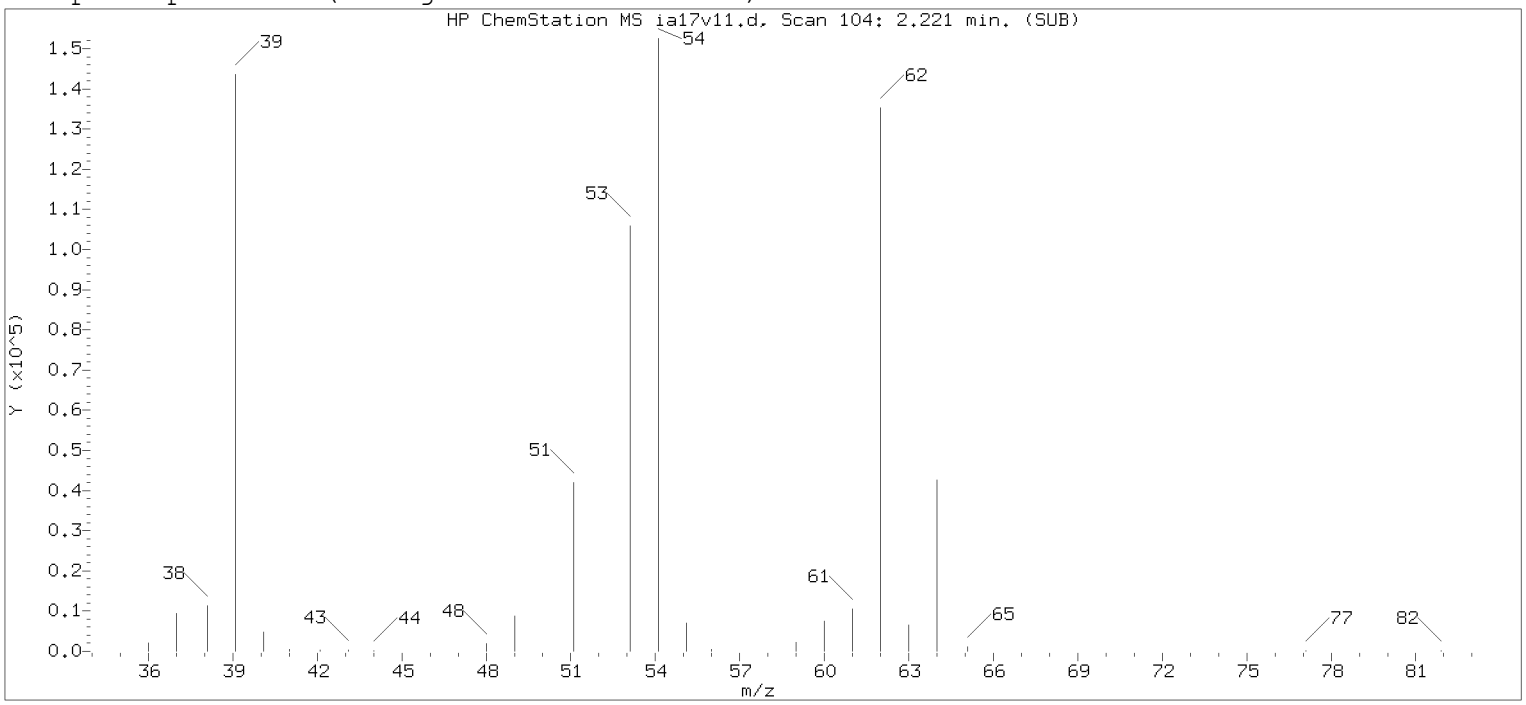
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 104
Retention Time (minutes): 2.221
Quant Ion : 39.00
Area (flag) : 409459M
On-Column Amount (ng) : 4.6909
Integration start scan : 96 Integration stop scan: 117
Y at integration start : 395 Y at integration end: 395

Reason for manual integration: improper integration

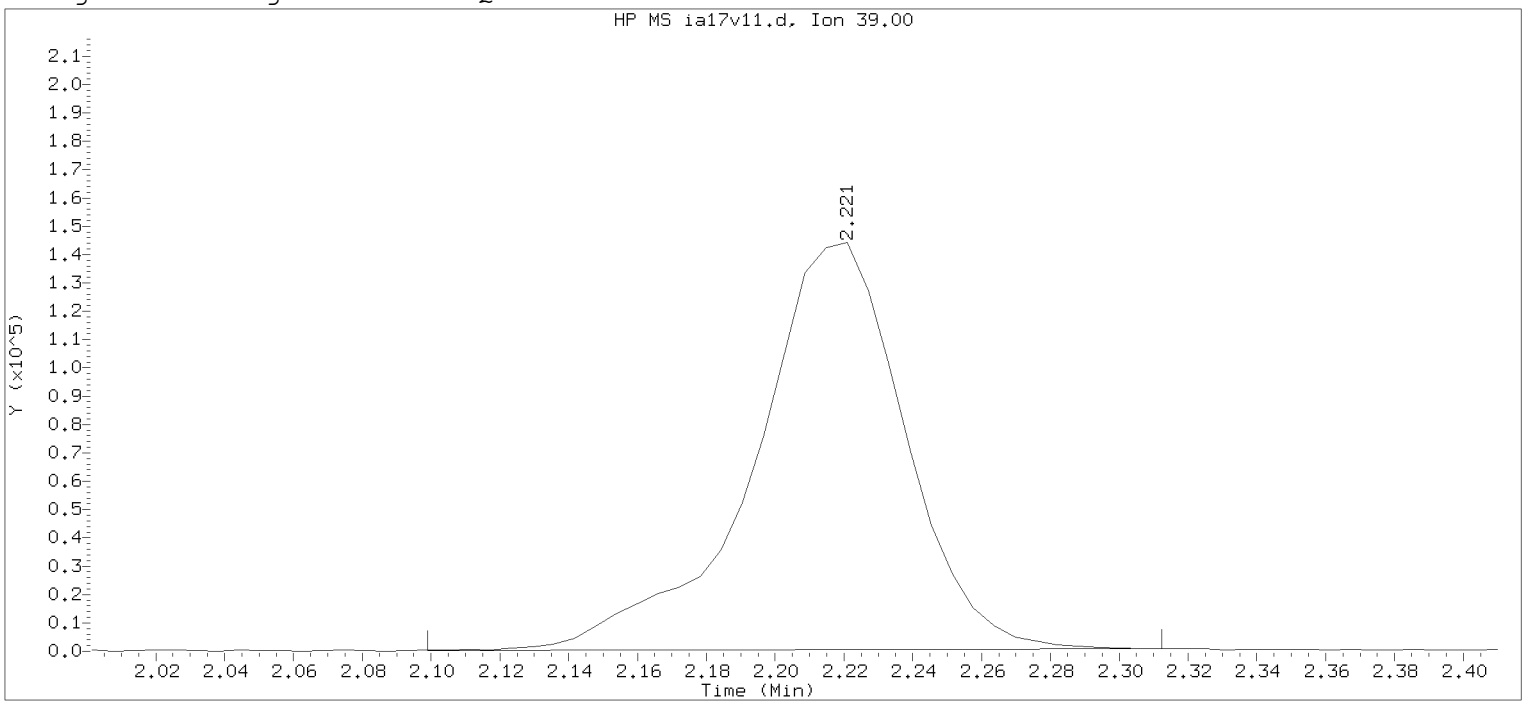
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

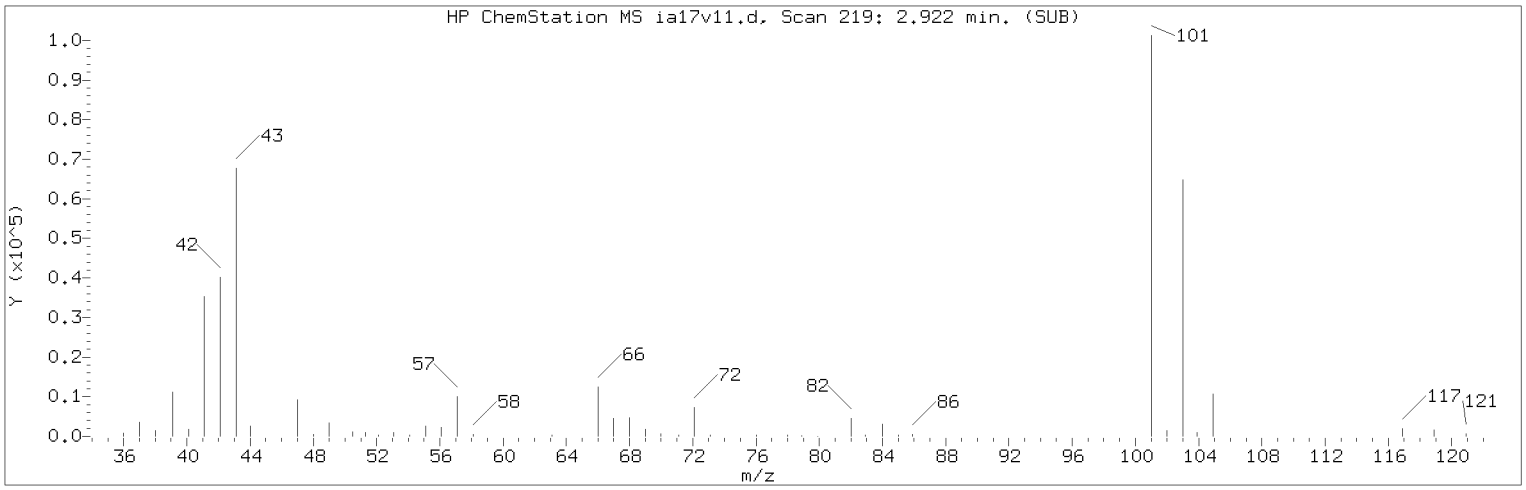
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:32 Automation

Sample Name: LCSI01 Lab Sample ID: LCSI01

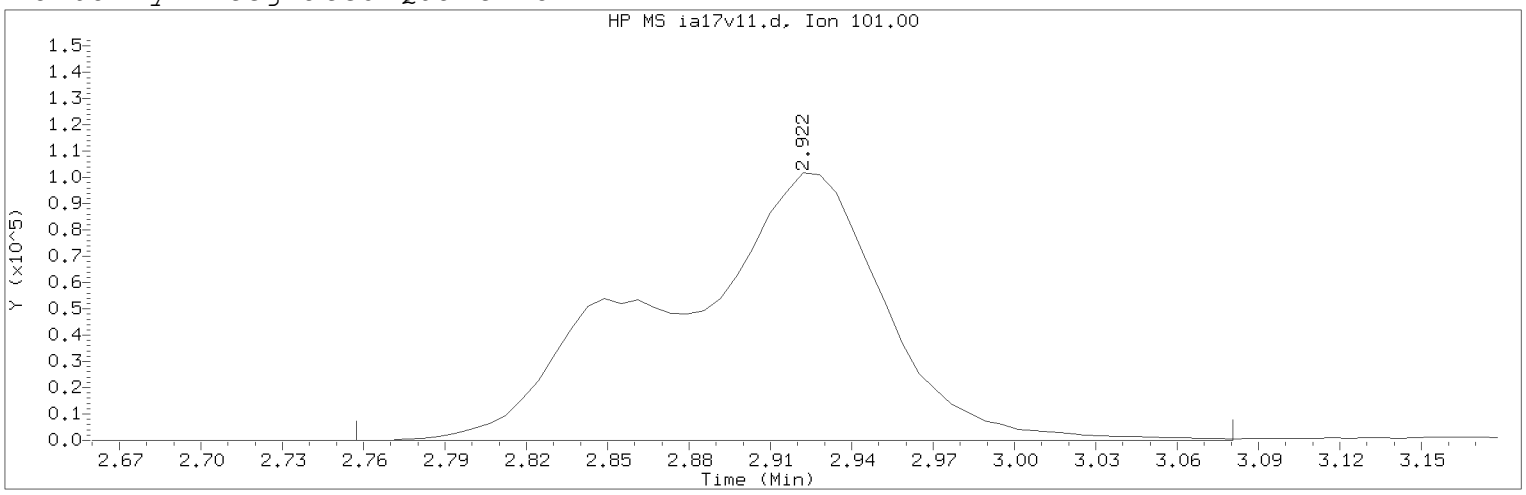
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 104
Retention Time (minutes): 2.221
Quant Ion : 39.00
Area : 439247
On-column Amount (ng) : 5.0321
Integration start scan : 83 Integration stop scan: 118
Y at integration start : 321 Y at integration end: 904

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

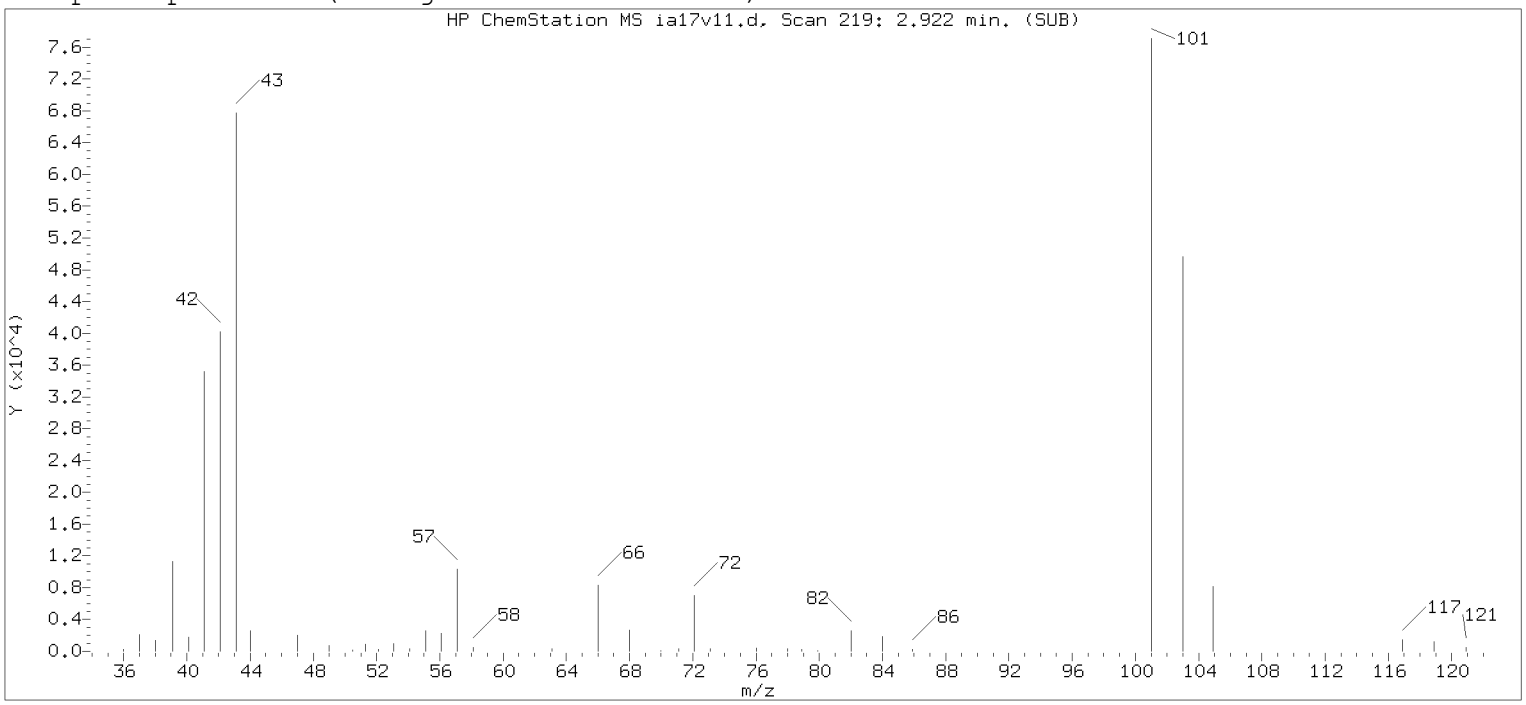
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 569678M
On-Column Amount (ng) : 5.2989
Integration start scan : 191 Integration stop scan: 244
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

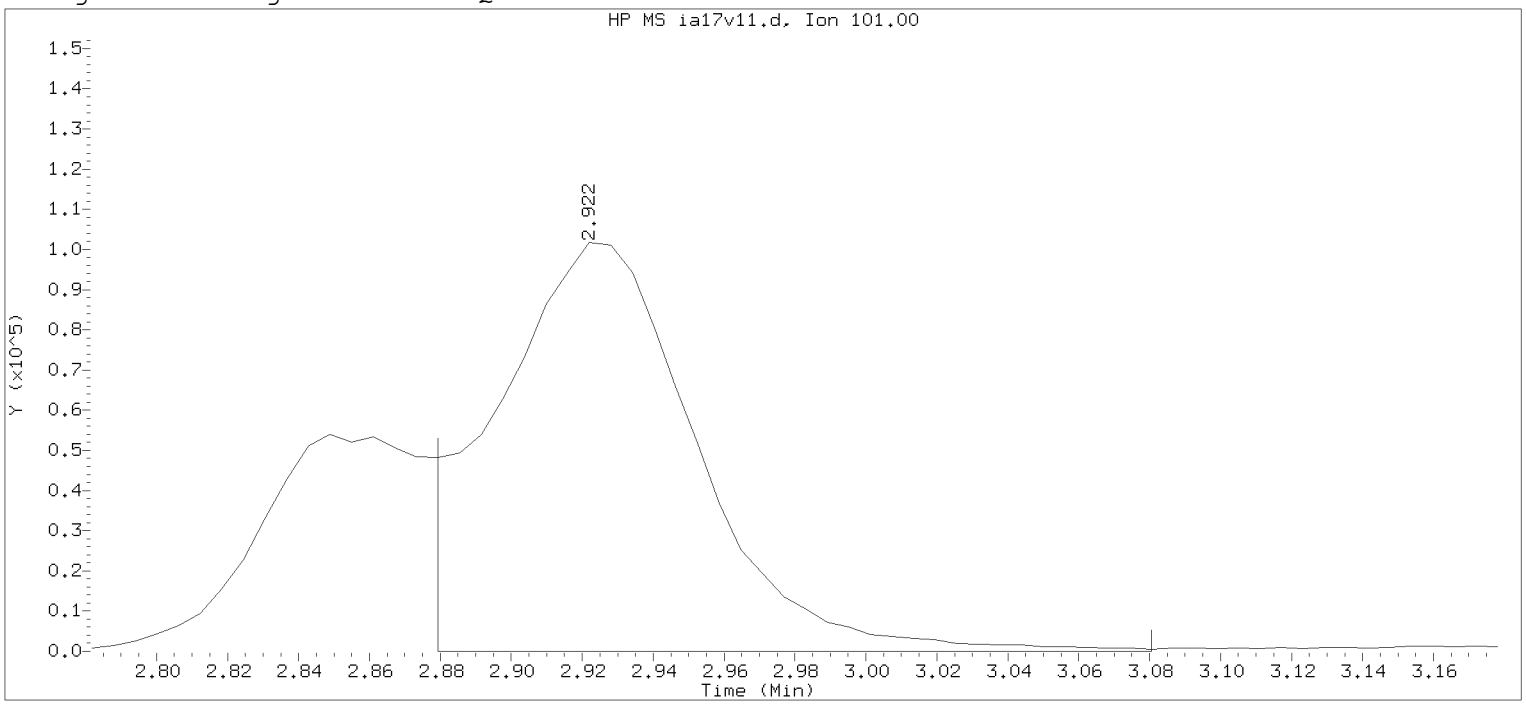
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

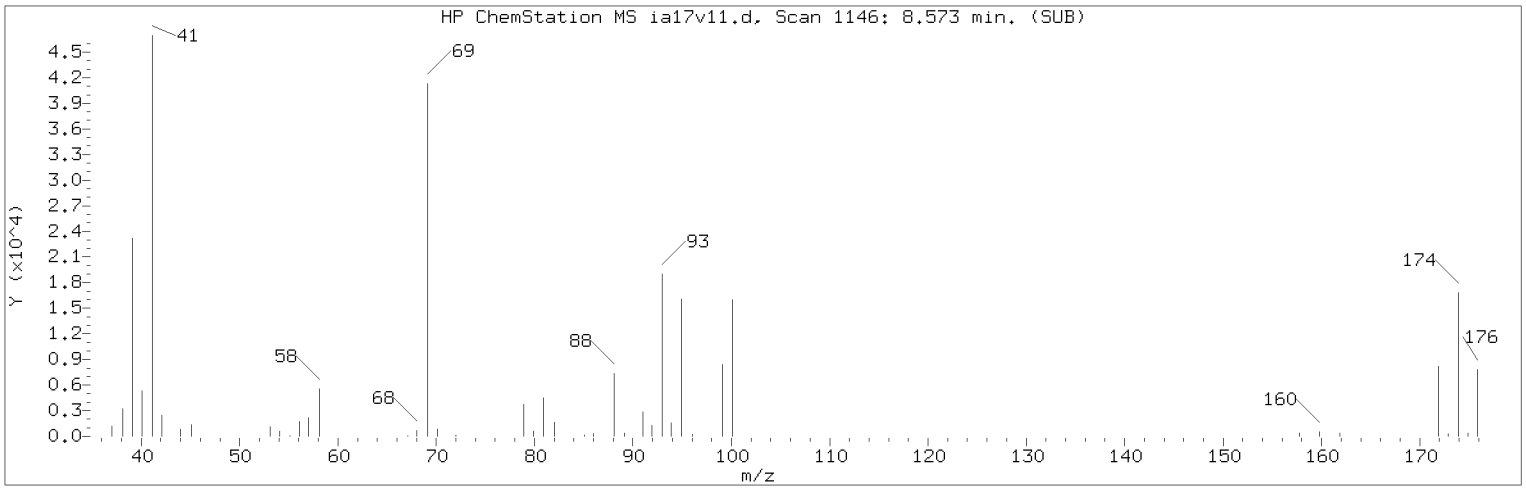
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:32 Automation

Sample Name: LCSI01 Lab Sample ID: LCSI01

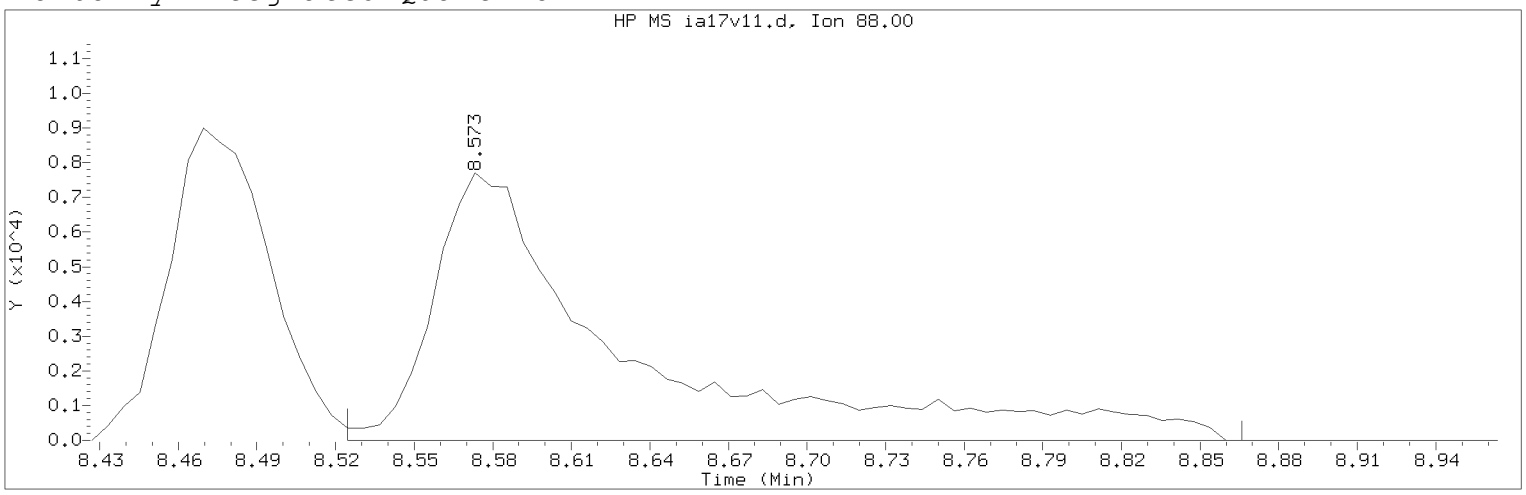
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 396535
On-column Amount (ng) : 3.6884
Integration start scan : 211 Integration stop scan: 244
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

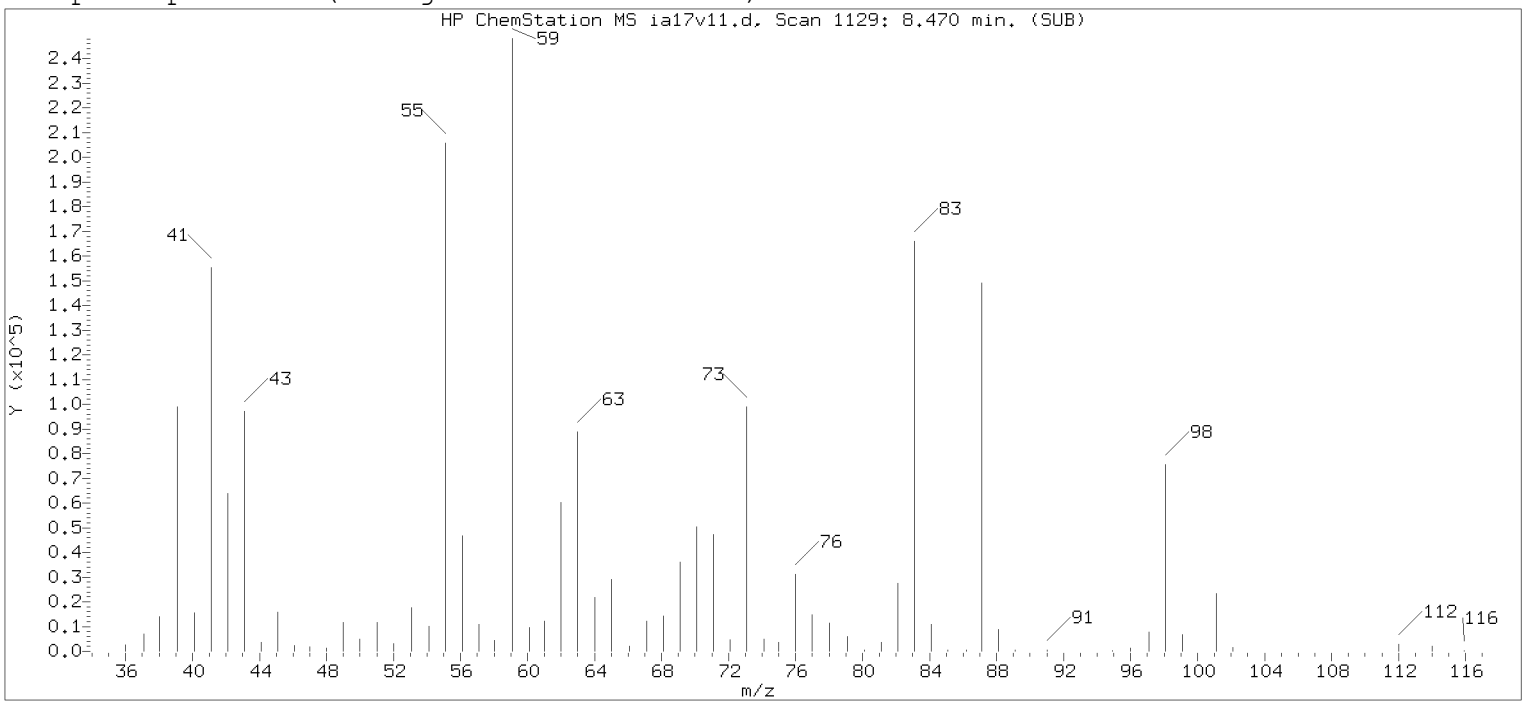
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 39434M
On-Column Amount (ng) : 138.8103
Integration start scan : 1137 Integration stop scan: 1193
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

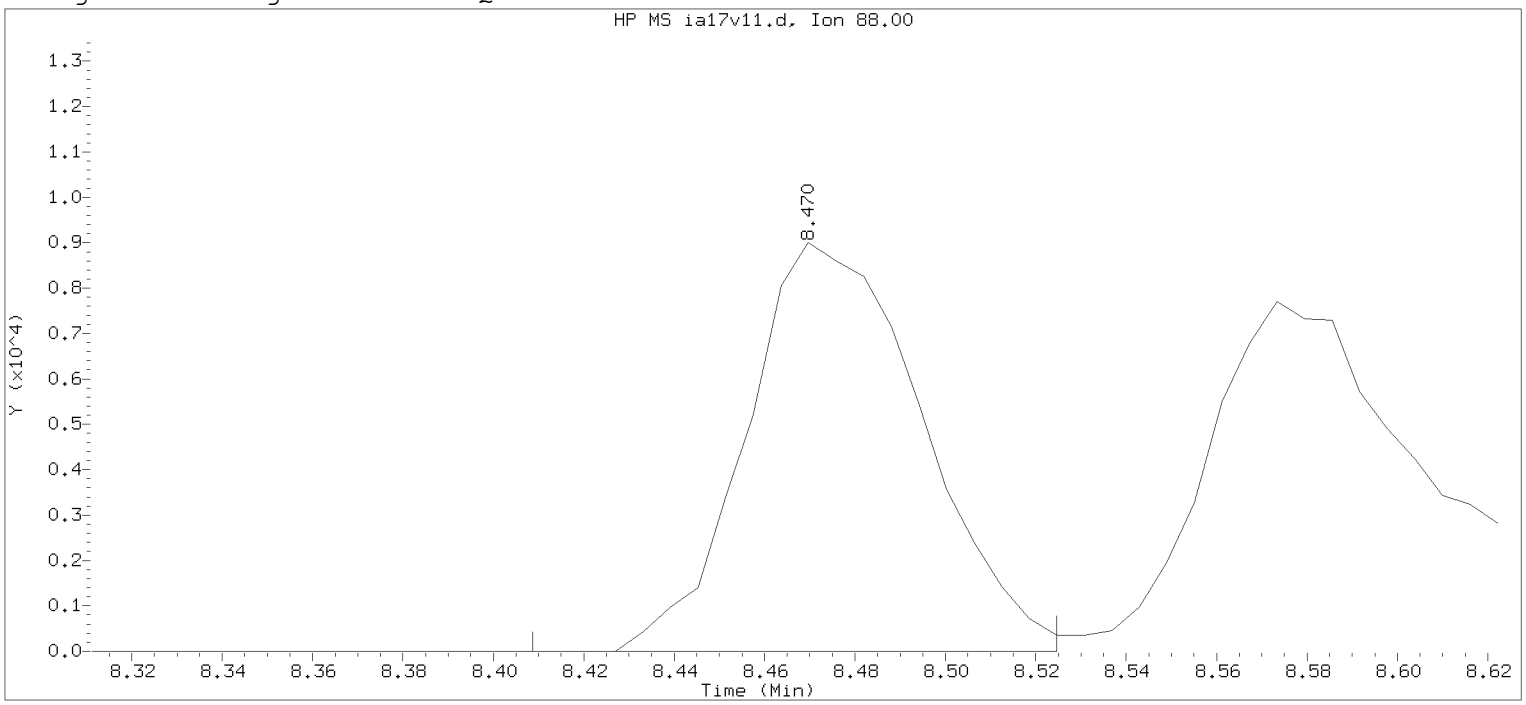
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

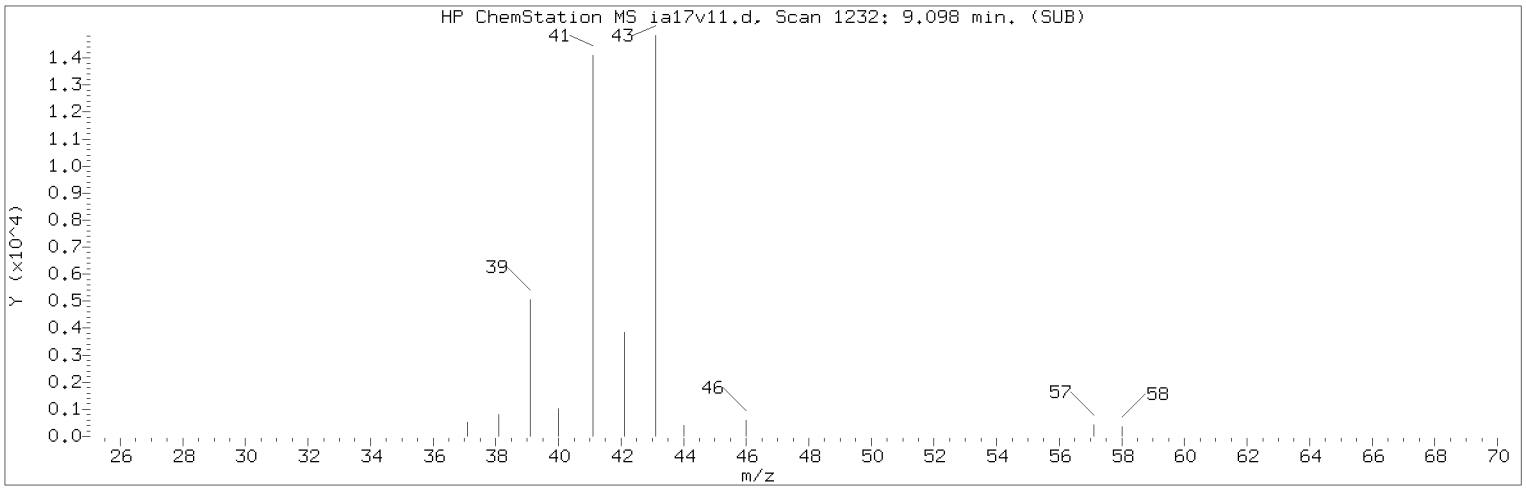
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:32 Automation

Sample Name: LCSI01 Lab Sample ID: LCSI01

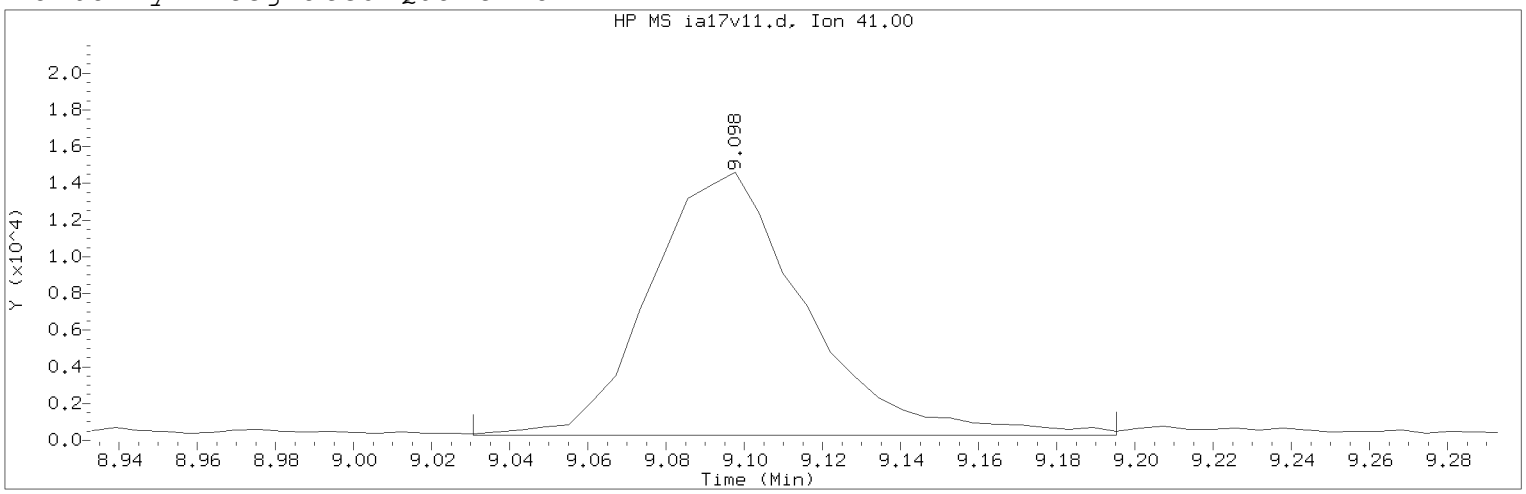
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1129
Retention Time (minutes): 8.470
Quant Ion : 88.00
Area : 24209
On-column Amount (ng) : 85.2204
Integration start scan : 1118 Integration stop scan: 1137
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

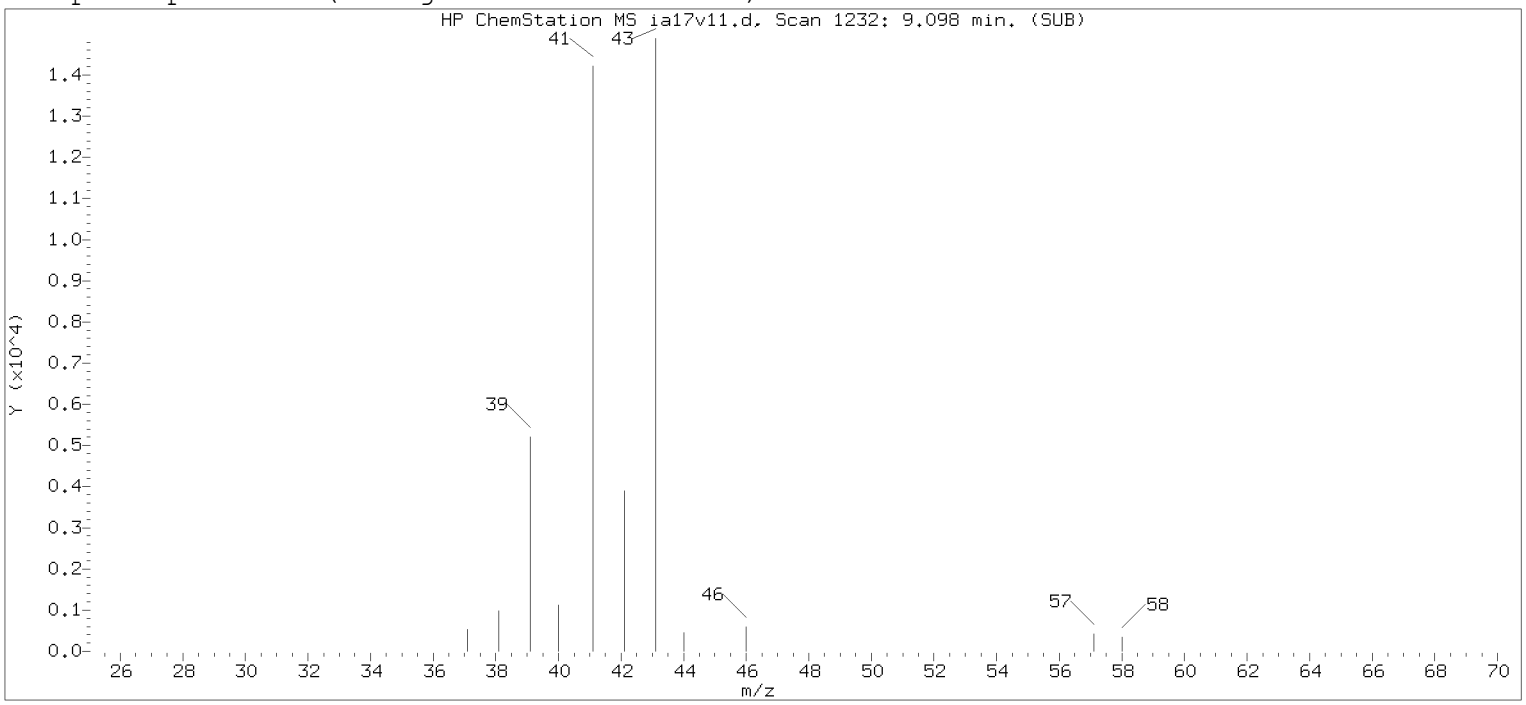
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1232
Retention Time (minutes): 9.098
Quant Ion : 41.00
Area (flag) : 39677M
On-Column Amount (ng) : 4.2664
Integration start scan : 1220 Integration stop scan: 1247
Y at integration start : 280 Y at integration end: 280

Reason for manual integration: improper integration

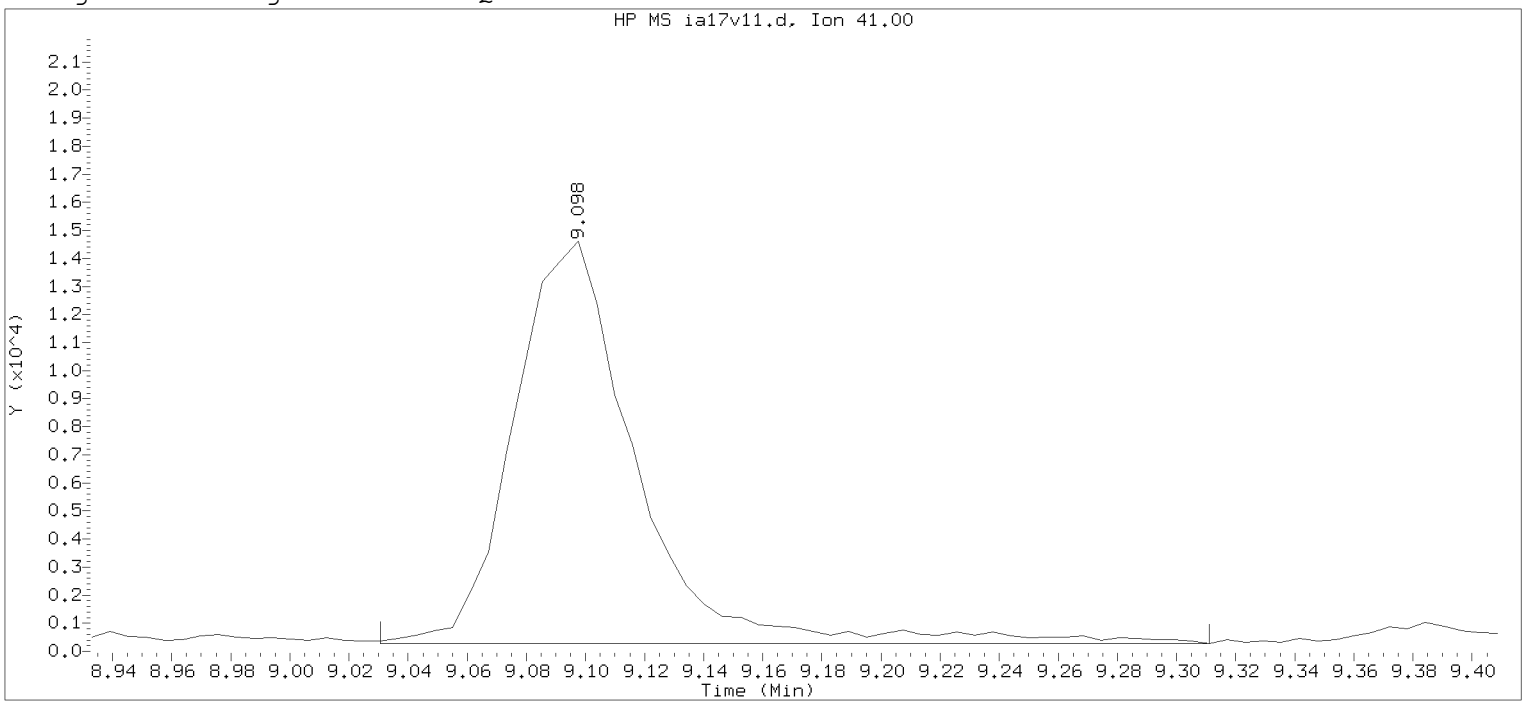
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

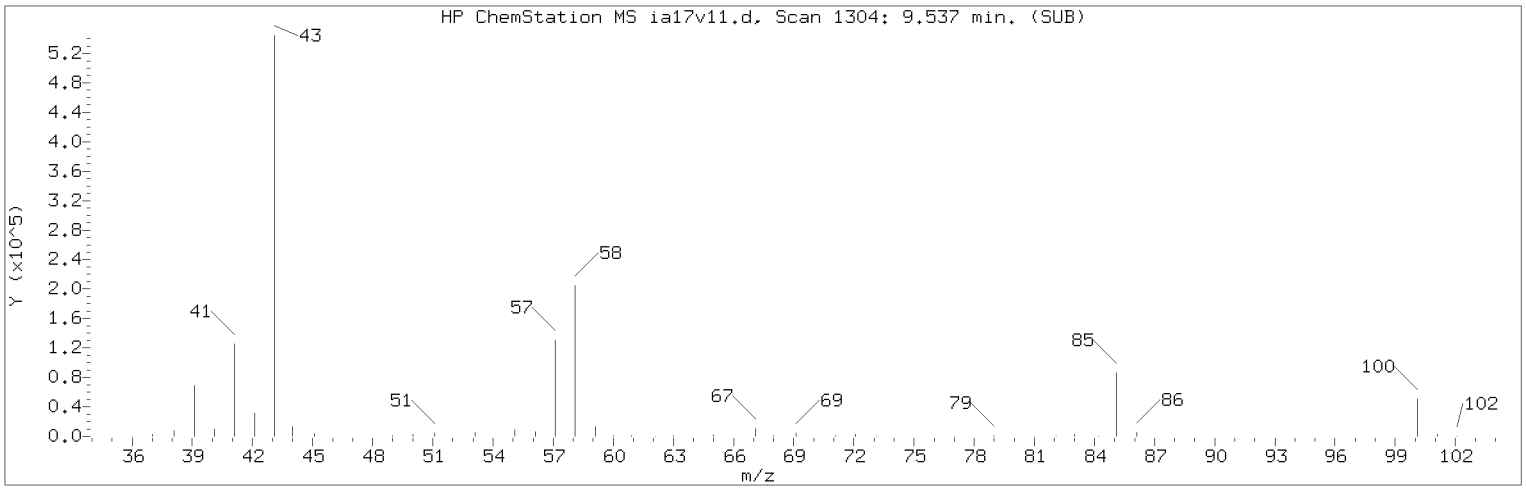
Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:32 Automation

Sample Name: LCSI01 Lab Sample ID: LCSI01

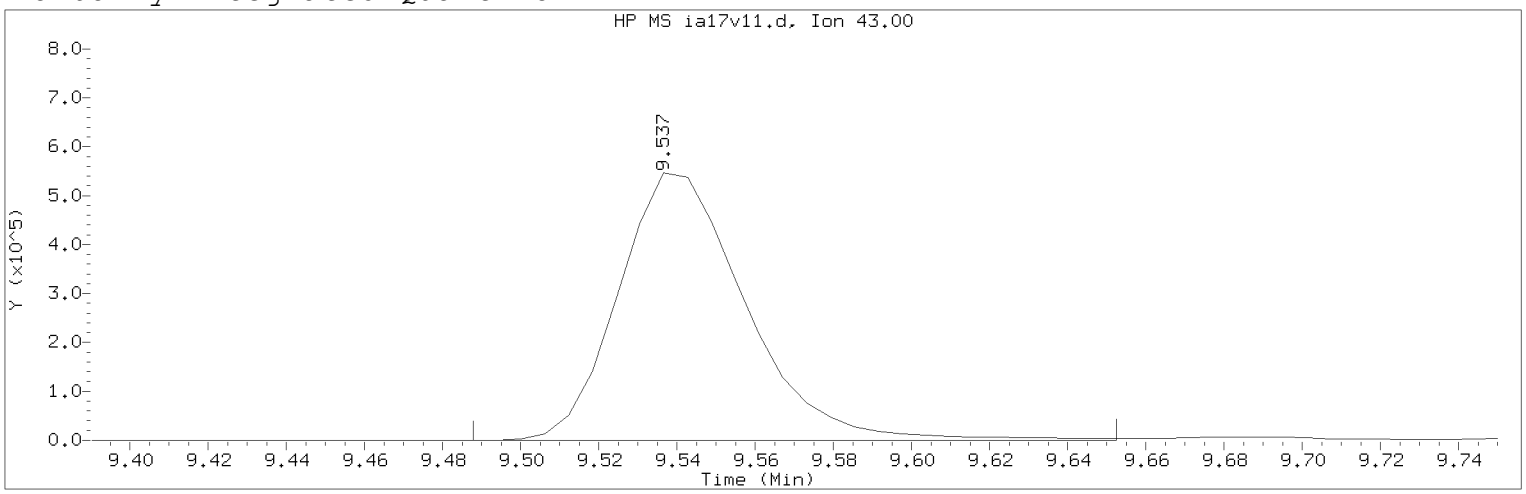
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1232
Retention Time (minutes): 9.098
Quant Ion : 41.00
Area : 41331
On-column Amount (ng) : 4.4444
Integration start scan : 1220 Integration stop scan: 1266
Y at integration start : 280 Y at integration end: 280

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used on 04/17/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:39 dvv10203

Sample Name: LCSI01 Lab Sample ID: LCSI01

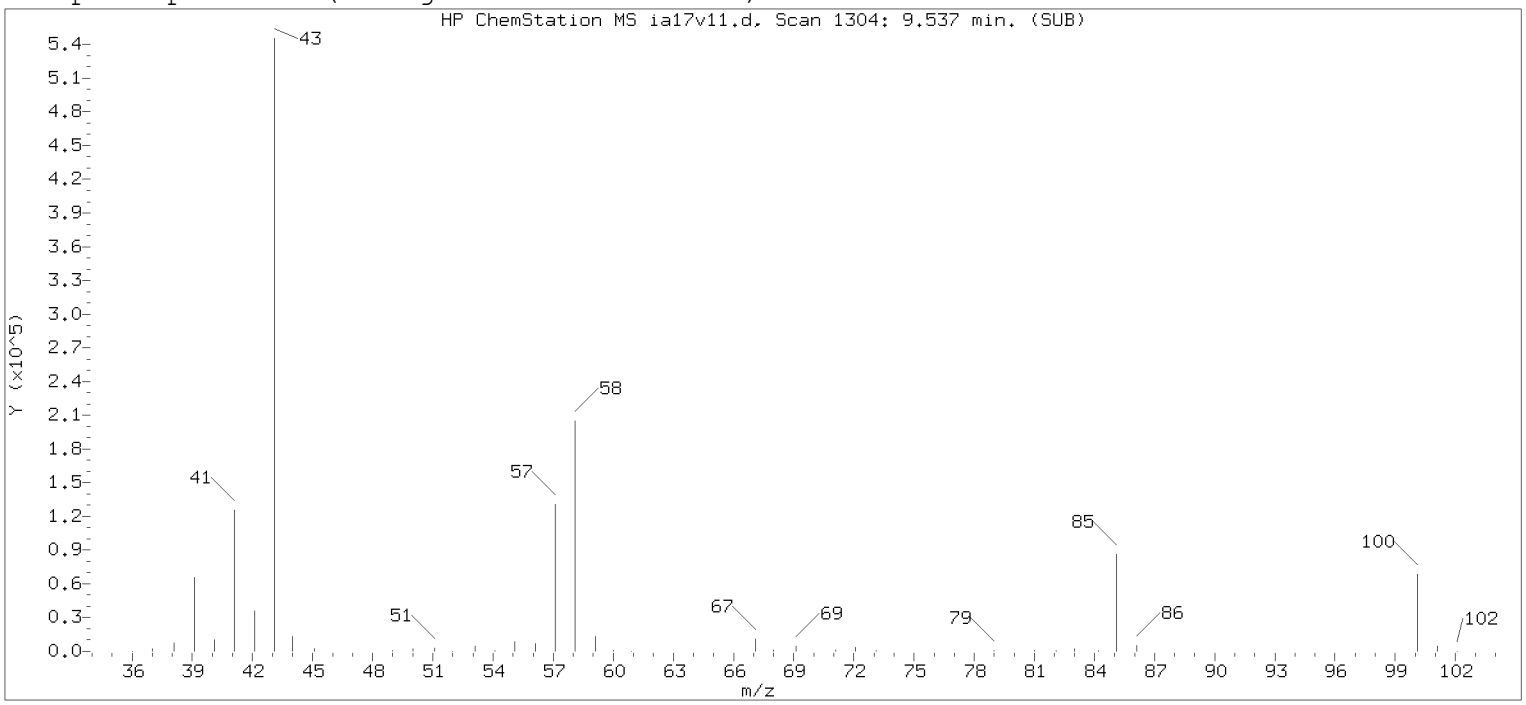
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.537
Quant Ion : 43.00
Area (flag) : 1237278M
On-Column Amount (ng) : 27.0448
Integration start scan : 1295 Integration stop scan: 1322
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

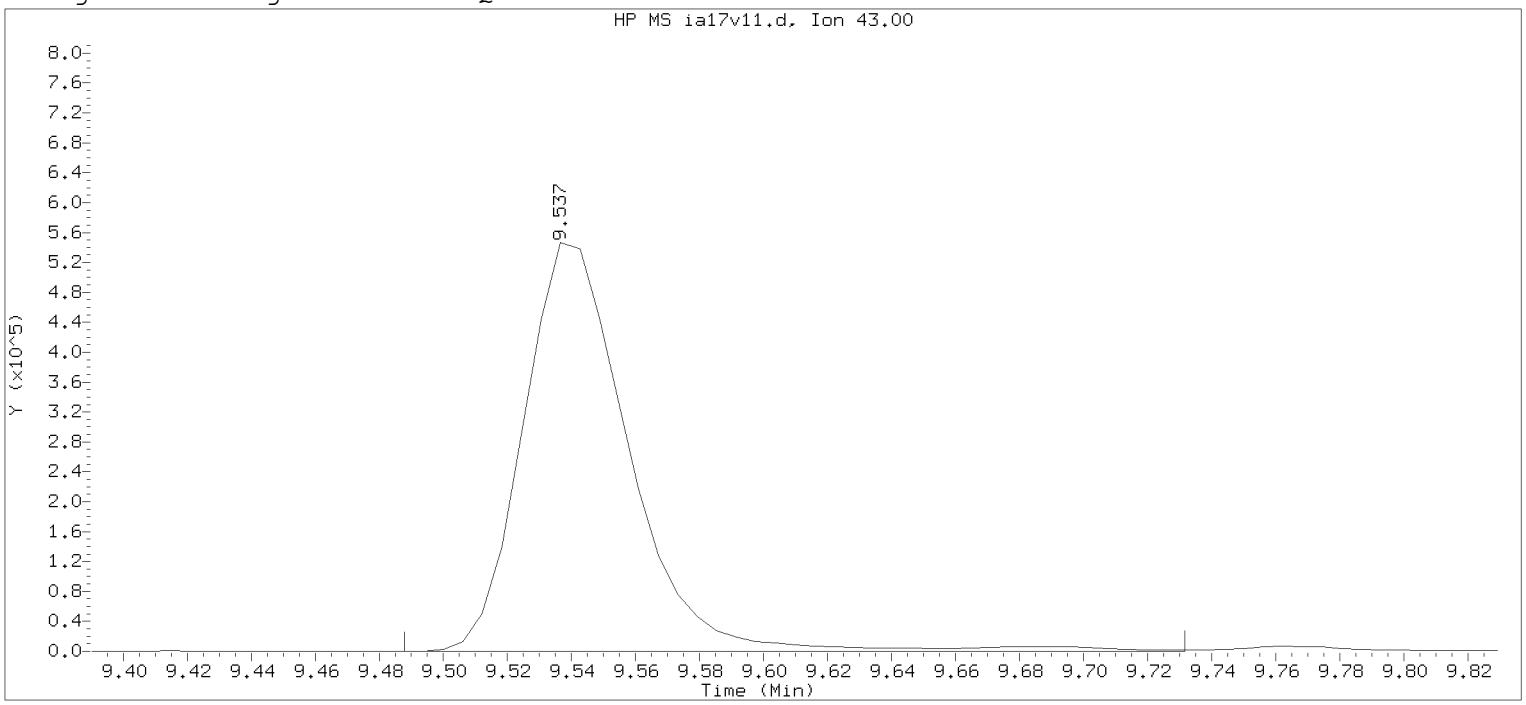
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/17/2018 at 21:41.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 04/18/2018 at 13:55.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr17i.b/ia17v11.d Instrument ID: HP19930.i
Injection date and time: 17-APR-2018 21:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr17i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 17-APR-2018 21:13
Date, time and analyst ID of latest file update: 17-Apr-2018 21:32 Automation

Sample Name: LCSI01 Lab Sample ID: LCSI01

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.537
Quant Ion : 43.00
Area : 1256285
On-column Amount (ng) : 27.4603
Integration start scan : 1295 Integration stop scan: 1335
Y at integration start : 0 Y at integration end: 67

Digitally signed by Don V. Viray on 04/17/2018 at 21:41.
Target 3.5 esignature used during 8260 run.

Data File: /chem2/HP19930.i/18apr23c.b/ia23t05.d

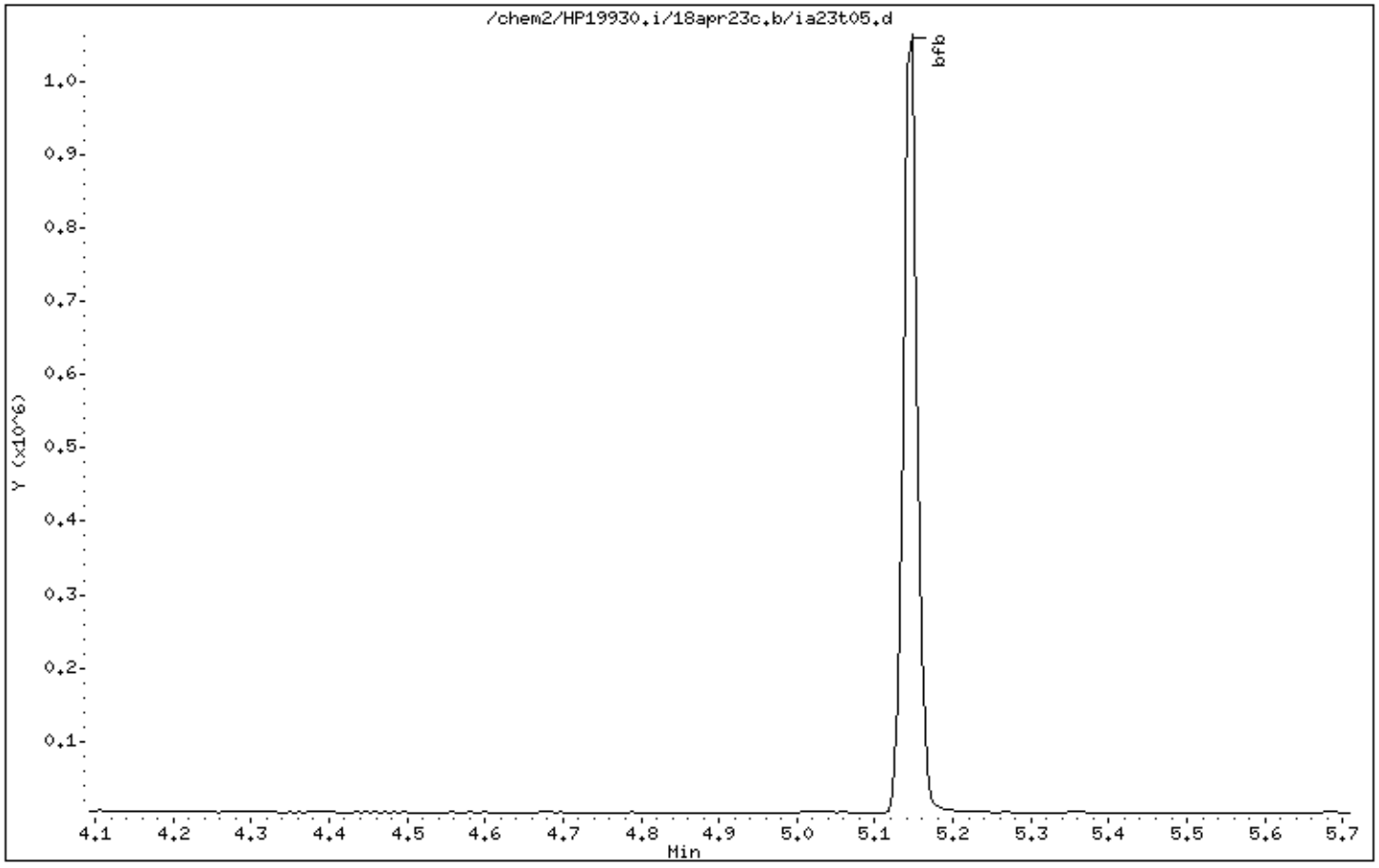
Date : 23-APR-2018 20:52

Client ID: BFB Feb 13 2018 Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS Column diameter: 0.25



Digitally signed by Don V. Viray on 04/23/2018 at 20:57.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr23c.b/ia23t05.d

Date : 23-APR-2018 20:52

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

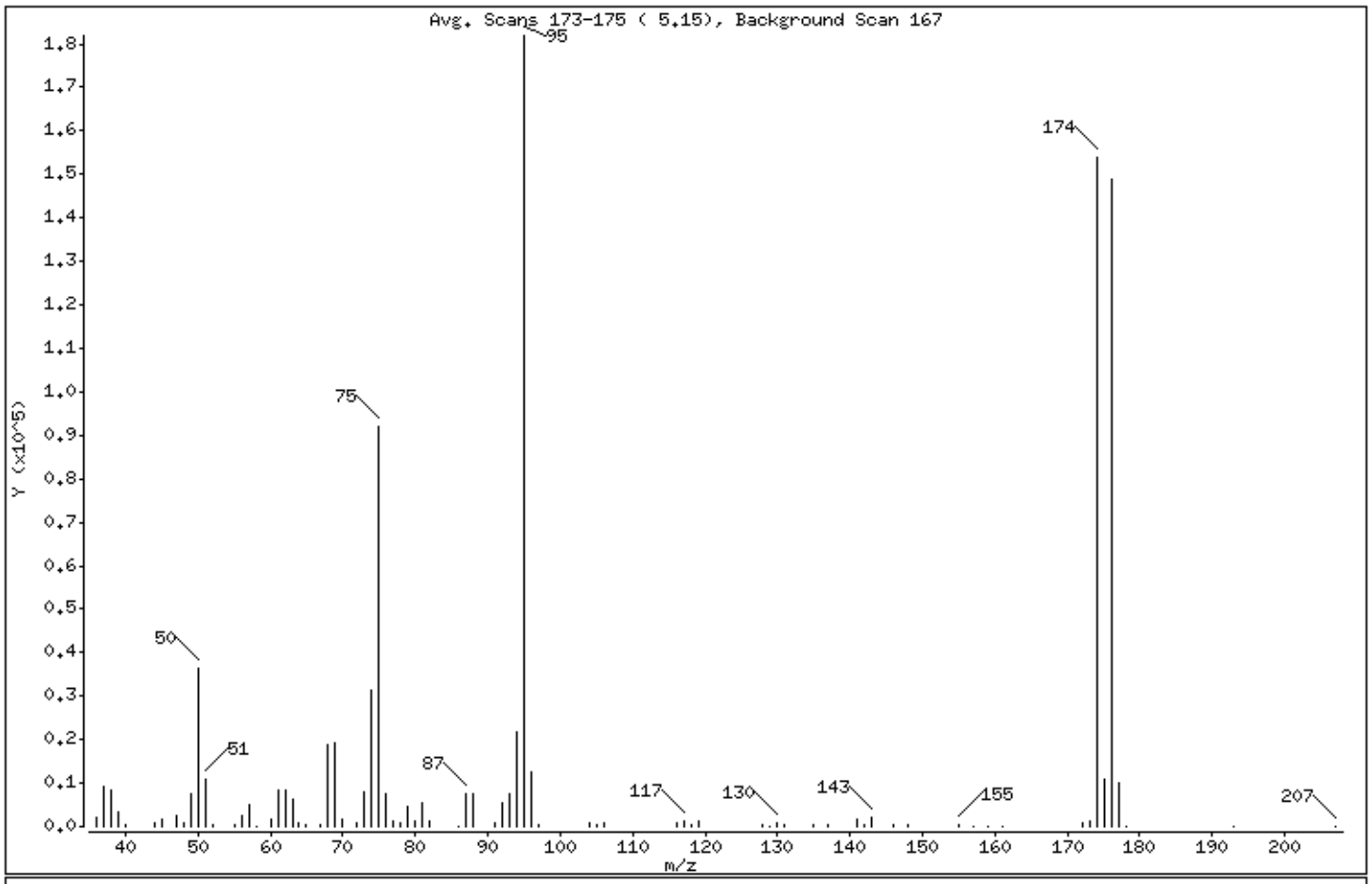
Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.00
75	30.00 - 60.00% of mass 95	50.64
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.62 (0.73)
174	50.00 - 100.00% of mass 95	84.67
175	5.00 - 9.00% of mass 174	6.00 (7.09)
176	95.00 - 101.00% of mass 174	81.77 (96.57)
177	5.00 - 9.00% of mass 176	5.44 (6.66)

Digitally signed by Don V. Viray on 04/23/2018 at 20:57.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr23c.b/ia23t05.d

Date : 23-APR-2018 20:52

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

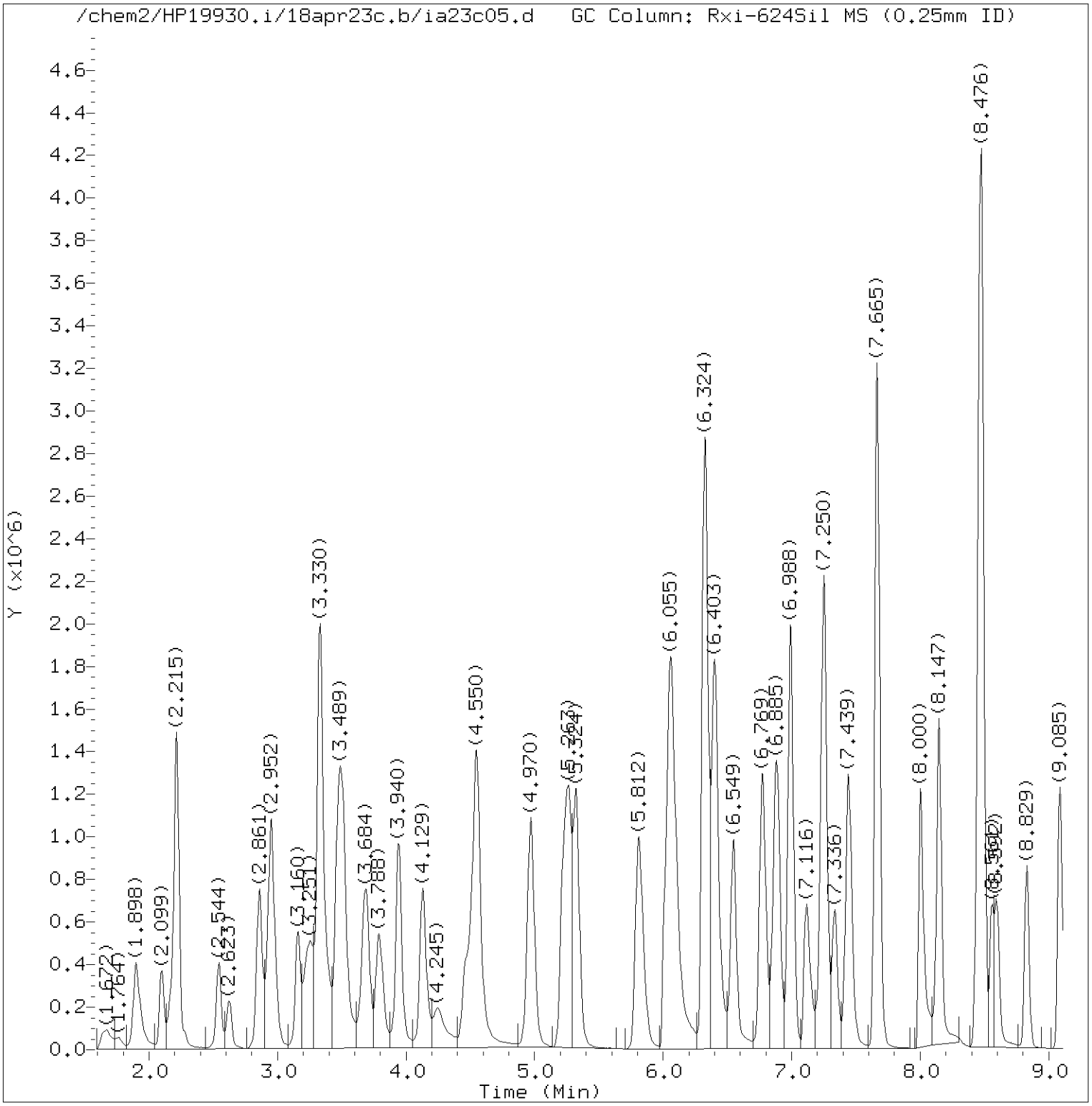
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ia23t05.d
Spectrum: Avg. Scans 173-175 (5.15), Background Scan 167
Location of Maximum: 95.00
Number of points: 79

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1883	63.00	6161	88.00	7320	137.00	254
37.00	9216	64.00	723	91.00	682	141.00	1821
38.00	8270	65.00	583	92.00	5460	142.00	234
39.00	3465	67.00	487	93.00	7641	143.00	2053
40.00	253	68.00	18808	94.00	21760	146.00	217
44.00	784	69.00	19272	95.00	181888	148.00	467
45.00	1627	70.00	1560	96.00	12354	155.00	408
47.00	2545	72.00	943	97.00	279	157.00	107
48.00	1042	73.00	8068	104.00	818	159.00	132
49.00	7669	74.00	31432	105.00	258	161.00	126
50.00	36376	75.00	92104	106.00	849	172.00	687
51.00	10933	76.00	7665	116.00	640	173.00	1129
52.00	521	77.00	1107	117.00	1157	174.00	153984
55.00	388	78.00	702	118.00	625	175.00	10919
56.00	2563	79.00	4762	119.00	1157	176.00	148672
57.00	4931	80.00	1344	128.00	611	177.00	9900
58.00	101	81.00	5270	129.00	200	178.00	116
60.00	1549	82.00	1116	130.00	639	193.00	89
61.00	8318	86.00	137	131.00	344	207.00	131
62.00	8299	87.00	7686	135.00	454		

Digitally signed by Don V. Viray on 04/23/2018 at 20:57.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

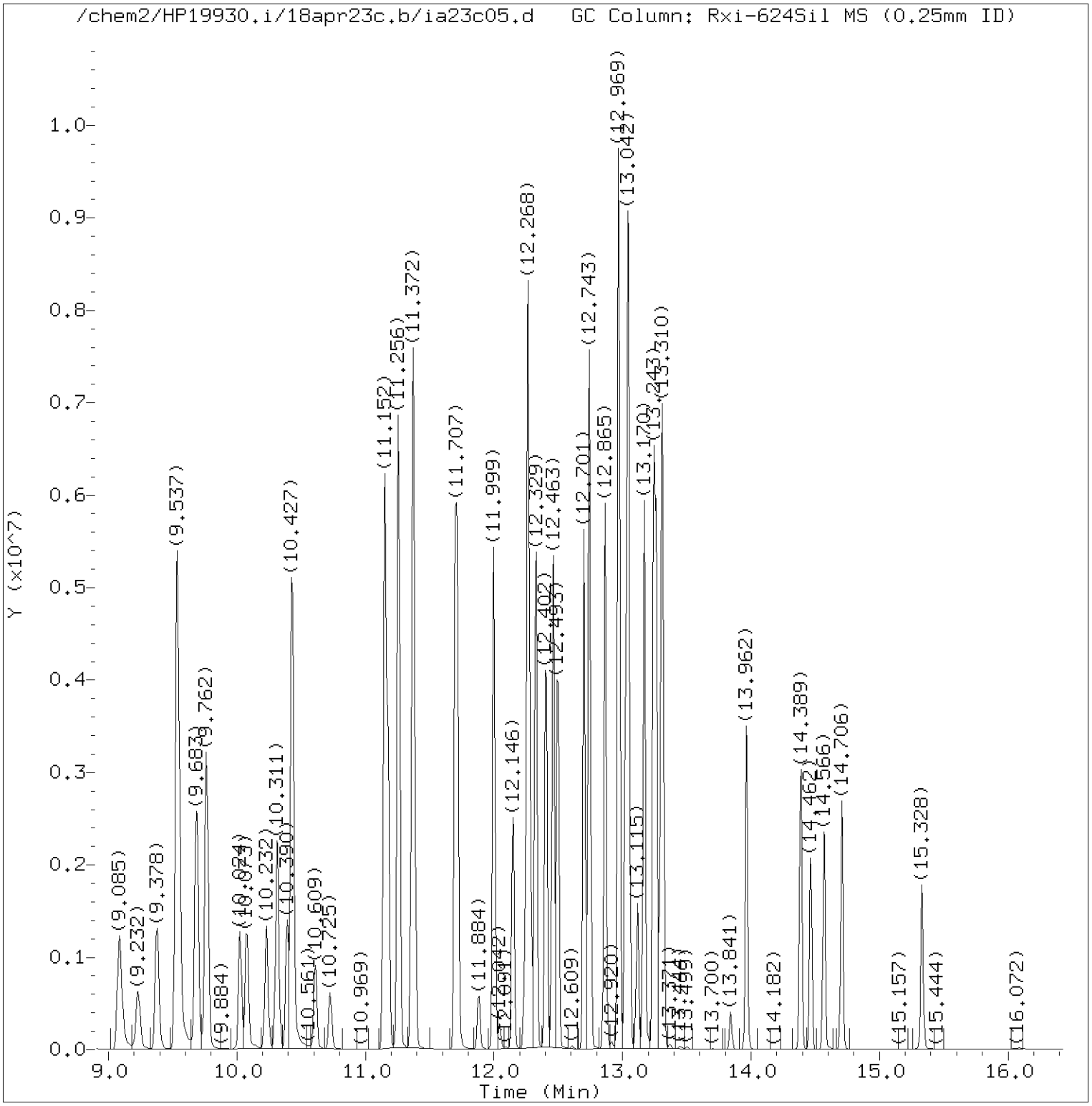
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.898	85	915358	9.665
2) Chloromethane	(2)	2.099	50	591687	6.749
5) Vinyl Chloride	(2)	2.209	62	586066	7.427
6) 1,3-Butadiene	(2)	2.215	39	844913M	10.494
7) Bromomethane	(2)	2.544	94	425966	7.680
8) Chloroethane	(2)	2.623	64	320406	7.126
9) Dichlorofluoromethane	(2)	2.861	67	971268	9.197
10) Trichlorofluoromethane	(2)	2.928	101	974137M	9.823
11) Ethyl ether	(2)	3.154	59	486489	9.943
12) Freon 123a	(2)	3.257	67	774283	11.057
13) Acrolein	(1)	3.330	56	3912213	554.852
15) 1,1-Dichloroethene	(2)	3.471	96	514055	10.995
14) Acetone	(1)	3.495	43	1100101	106.279
16) Freon 113	(2)	3.507	101	607418	11.332
17) Methyl Iodide	(2)	3.672	142	942380	10.902
18) Carbon Disulfide	(2)	3.788	76	1449081	10.960
21) Methyl Acetate	(1)	3.922	43	320951	13.153
22) Allyl Chloride	(2)	3.946	41	1004295	11.660
23) Methylene Chloride	(2)	4.135	84	588853	10.314
26)*t-Butyl Alcohol-d10	(1)	4.135	65	147308	50.000
28) t-Butyl Alcohol	(1)	4.245	59	603388	168.707
29) Acrylonitrile	(1)	4.458	53	718461	61.939
30) Methyl Tertiary Butyl Ether	(2)	4.525	73	1476243	10.606
31) trans-1,2-Dichloroethene	(2)	4.550	96	576516	10.798
32) n-Hexane	(2)	4.970	57	1028556	11.534
33) 1,1-Dichloroethane	(2)	5.220	63	1167076	10.942
34) di-Isopropyl Ether	(2)	5.269	45	2185704	11.265
35) 2-Chloro-1,3-Butadiene	(2)	5.324	53	1048466	11.522
37) Ethyl t-butyl ether	(2)	5.812	59	1746227	10.941
38) 2-Butanone	(1)	6.025	43	2096472	129.655
39) cis-1,2-Dichloroethene	(2)	6.055	96	653654	10.806
41) 2,2-Dichloropropane	(2)	6.074	77	846164	11.326
42) Propionitrile	(1)	6.104	54	1109745	240.971
40) 1,2-Dichloroethene (Total)	(2)		96	1230170	21.604
45) Methacrylonitrile	(1)	6.324	67	1807600	120.288
47) Bromochloromethane	(2)	6.397	128	270257	10.670
48) Tetrahydrofuran	(1)	6.409	71	544543	123.931
49) Chloroform	(2)	6.549	83	1087533	10.838

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.769	113	490946	10.224
50)$Dibromofluoromethane	(2)	6.769	111	501507	10.159
51) 1,1,1-Trichloroethane	(2)	6.775	97	947400	11.335
52) Cyclohexane	(2)	6.885	56	1223395	11.281
52) Cyclohexane	(2)	6.885	84	944372	11.350
52) Cyclohexane	(2)	6.885	69	354832	11.167
55) 1,1-Dichloropropene	(2)	6.988	75	900850	11.311
54) Carbon Tetrachloride	(2)	6.994	117	828493	11.736
56) Isobutyl Alcohol	(1)	7.116	41	794439	556.118
57)$1,2-Dichloroethane-d4	(2)	7.226	102	102325	9.795
57)$1,2-Dichloroethane-d4	(2)	7.226	65	543589	10.519
57)$1,2-Dichloroethane-d4	(2)	7.232	104	67377	10.226
58) Benzene	(2)	7.256	78	2561931	10.696
59) 1,2-Dichloroethane	(2)	7.336	62	742555	10.614
59) 1,2-Dichloroethane	(2)	7.336	98	62676	10.821
60) t-Amyl methyl ether	(2)	7.439	73	1492472	11.104
62) n-Heptane	(2)	7.665	43	1150182	12.144
63)*Fluorobenzene	(2)	7.665	96	2057588	10.000
65) n-Butanol	(1)	8.000	56	1314585	1208.584
67) Trichloroethene	(2)	8.147	95	668791	11.027
69) Methylcyclohexane	(2)	8.457	83	1181322	11.311
70) 1,2-Dichloropropane	(2)	8.482	63	666441	10.726
71) Methyl Methacrylate	(1)	8.555	69	328574	13.023
72) 1,4-Dioxane	(1)	8.573	88	139419M	558.760
72) 1,4-Dioxane	(1)	8.482	58	23077	128.898
73) Dibromomethane	(2)	8.598	93	301012	10.822
74) Bromodichloromethane	(2)	8.829	83	744828	11.184
76) 2-Nitropropane	(1)	9.085	41	1166928	142.864
80) cis-1,3-Dichloropropene	(2)	9.378	75	913508	10.881
81) 4-Methyl-2-Pentanone	(1)	9.537	43	5327698	132.589
82)$Toluene-d8	(3)	9.683	98	2036395	9.741
82)$Toluene-d8	(3)	9.683	100	1318440	9.821
83) Toluene	(3)	9.762	92	1582490	10.369
84) trans-1,3-Dichloropropene	(3)	10.024	75	723501	11.209
86) Ethyl Methacrylate	(3)	10.079	69	716615	11.337
85) 1,3-Dichloropropene (total)	(3)		75	1637009	22.090
88) 1,1,2-Trichloroethane	(3)	10.232	97	447832	10.403
89) Tetrachloroethene	(3)	10.317	166	715738	11.039

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.390	76	811203	10.588
91) 2-Hexanone	(1)	10.427	43	3794413	133.767
93) Dibromochloromethane	(3)	10.609	129	482468	11.381
95) 1,2-Dibromoethane	(3)	10.725	107	419666	10.715
97)*Chlorobenzene-d5	(3)	11.146	117	1548416	10.000
98) Chlorobenzene	(3)	11.176	112	1720775	10.374
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	589114	11.168
100) Ethylbenzene	(3)	11.256	91	3122264	10.794
101) m+p-Xylene	(3)	11.372	106	2393852	21.540
104) o-Xylene	(3)	11.701	106	1198369	11.082
106) Styrene	(3)	11.713	104	1882129	11.275
105) Xylene (Total)	(3)		106	3592221	32.622
107) Bromoform	(3)	11.884	173	249203	9.515
108) Isopropylbenzene	(3)	11.999	105	3159399	11.382
111)$4-Bromofluorobenzene	(3)	12.146	95	741837	10.049
111)$4-Bromofluorobenzene	(3)	12.152	174	619679	10.316
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	600609	10.305
114) Bromobenzene	(4)	12.262	156	716773	10.371
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	1071266	106.341
116) 1,2,3-Trichloropropane	(4)	12.292	110	156698	10.265
117) n-Propylbenzene	(4)	12.329	91	3753915	10.737
119) 2-Chlorotoluene	(4)	12.408	126	701196	10.415
121) 1,3,5-Trimethylbenzene	(4)	12.463	105	2627704	10.886
122) 4-Chlorotoluene	(4)	12.499	126	708065	10.338
125) tert-Butylbenzene	(4)	12.701	134	547679	10.969
126) Pentachloroethane	(4)	12.737	167	425434	11.046
127) 1,2,4-Trimethylbenzene	(4)	12.743	105	2635516	10.872
128) sec-Butylbenzene	(4)	12.865	105	3442805	11.017
131) 1,3-Dichlorobenzene	(4)	12.969	146	1416216	10.491
132) p-Isopropyltoluene	(4)	12.975	119	2914221	10.646
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	828420	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	1394547	10.140
135) 1,2,3-Trimethylbenzene	(4)	13.048	120	1122474	10.190
136) Benzyl Chloride	(4)	13.115	126	184293	9.383
138) n-Butylbenzene	(4)	13.261	92	1425405	10.997
139) 1,2-Dichlorobenzene	(4)	13.298	146	1288486	10.291
143) 1,2-Dibromo-3-chloropropane	(1)	13.841	155	68407	12.560
144) 1,3,5-Trichlorobenzene	(4)	13.969	180	962335	10.552

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

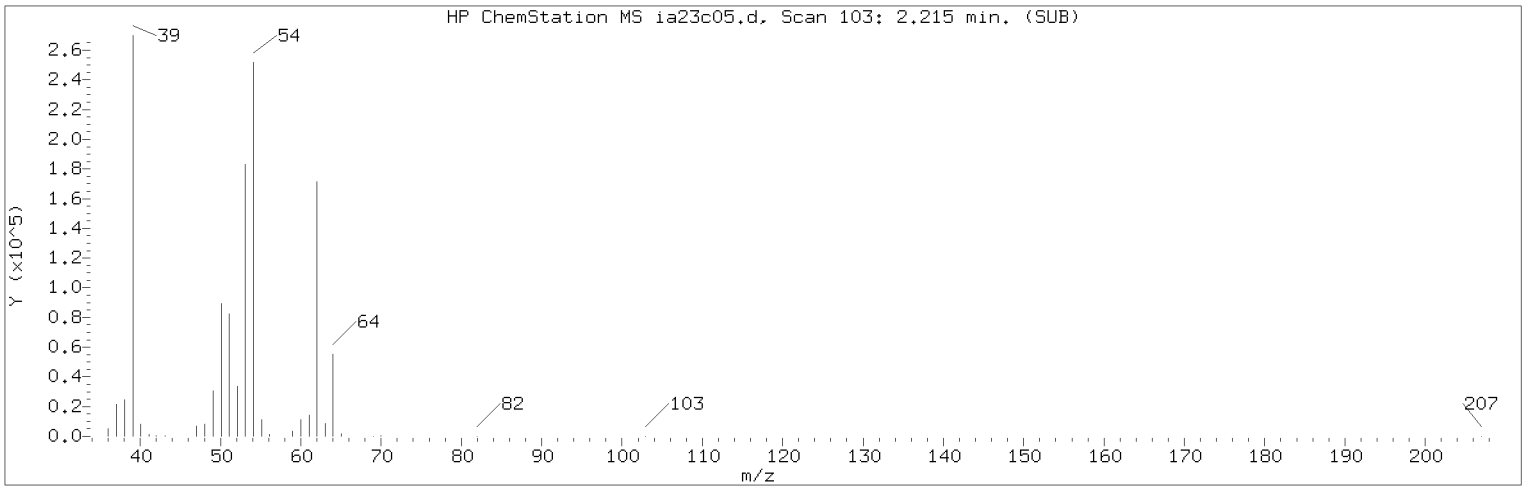
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

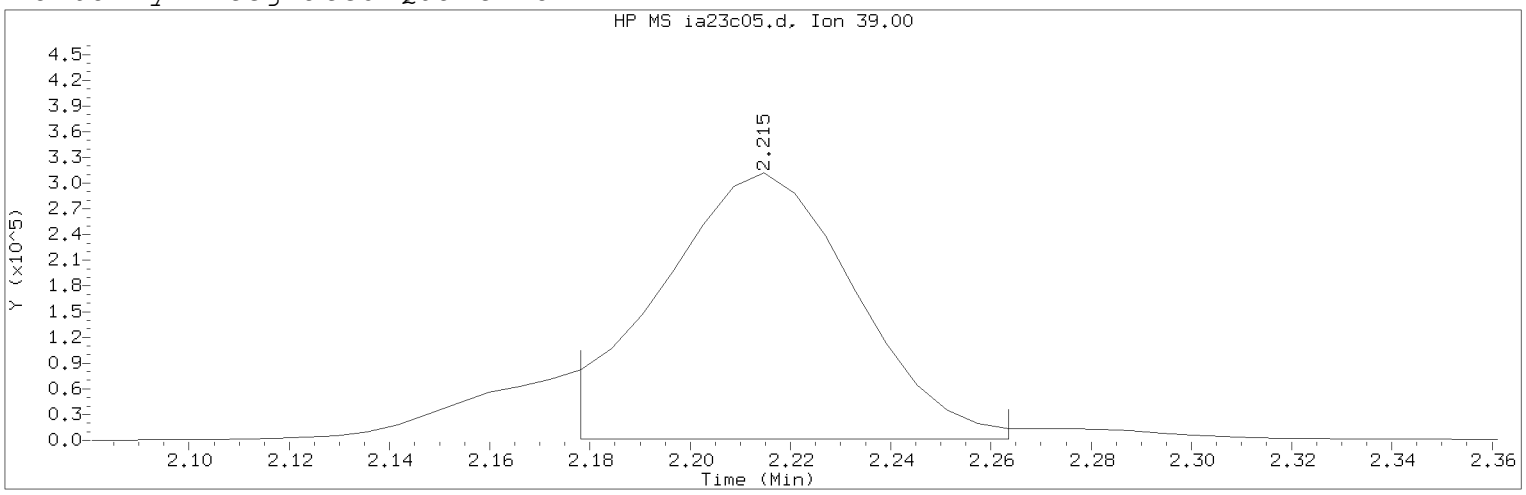
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.389	180	823697	10.308
146) Hexachlorobutadiene	(4)	14.468	225	339737	11.749
147) Naphthalene	(4)	14.572	128	1611499	10.294
148) 1,2,3-Trichlorobenzene	(4)	14.706	180	699339	9.833

Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

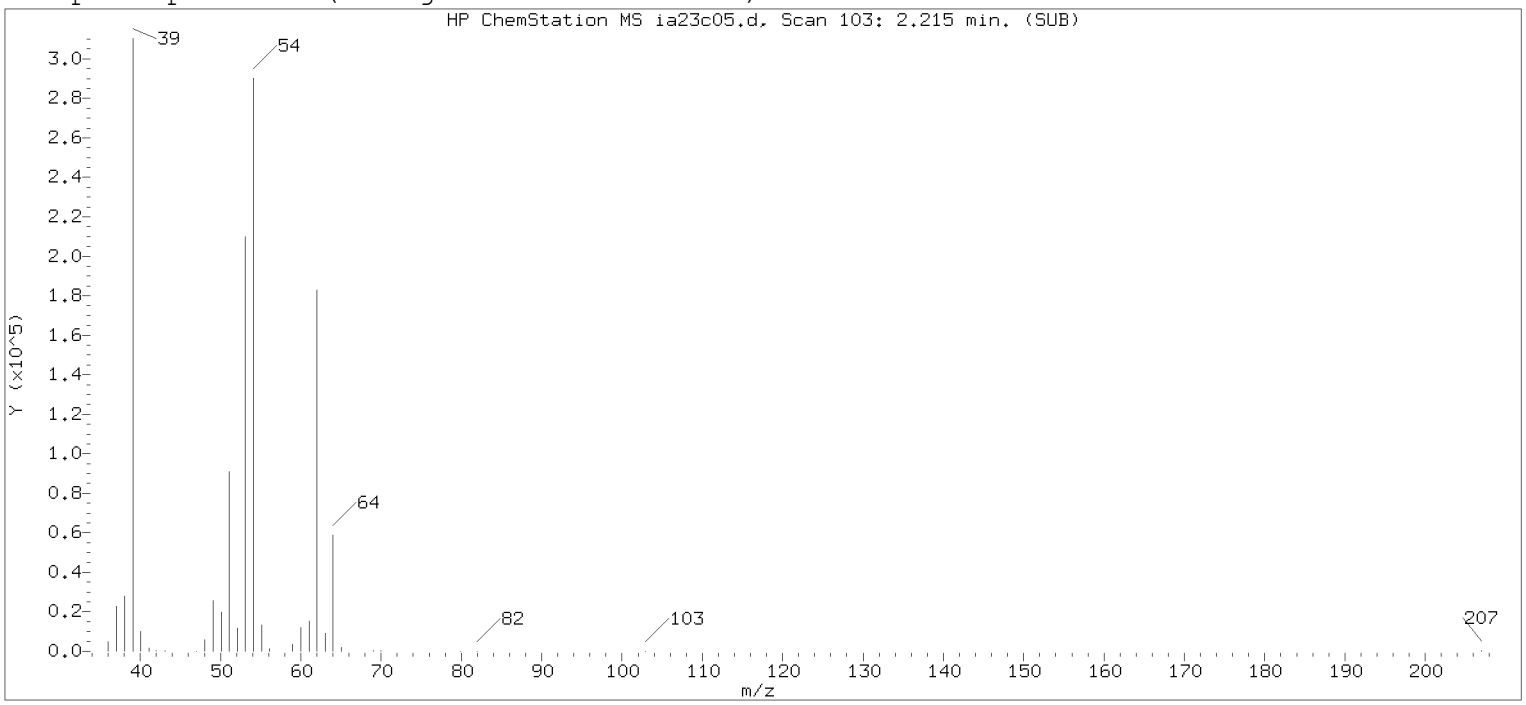
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area (flag) : 844913M
On-Column Amount (ng) : 10.4939
Integration start scan : 96 Integration stop scan: 110
Y at integration start : 1833 Y at integration end: 1833

Reason for manual integration: improper integration

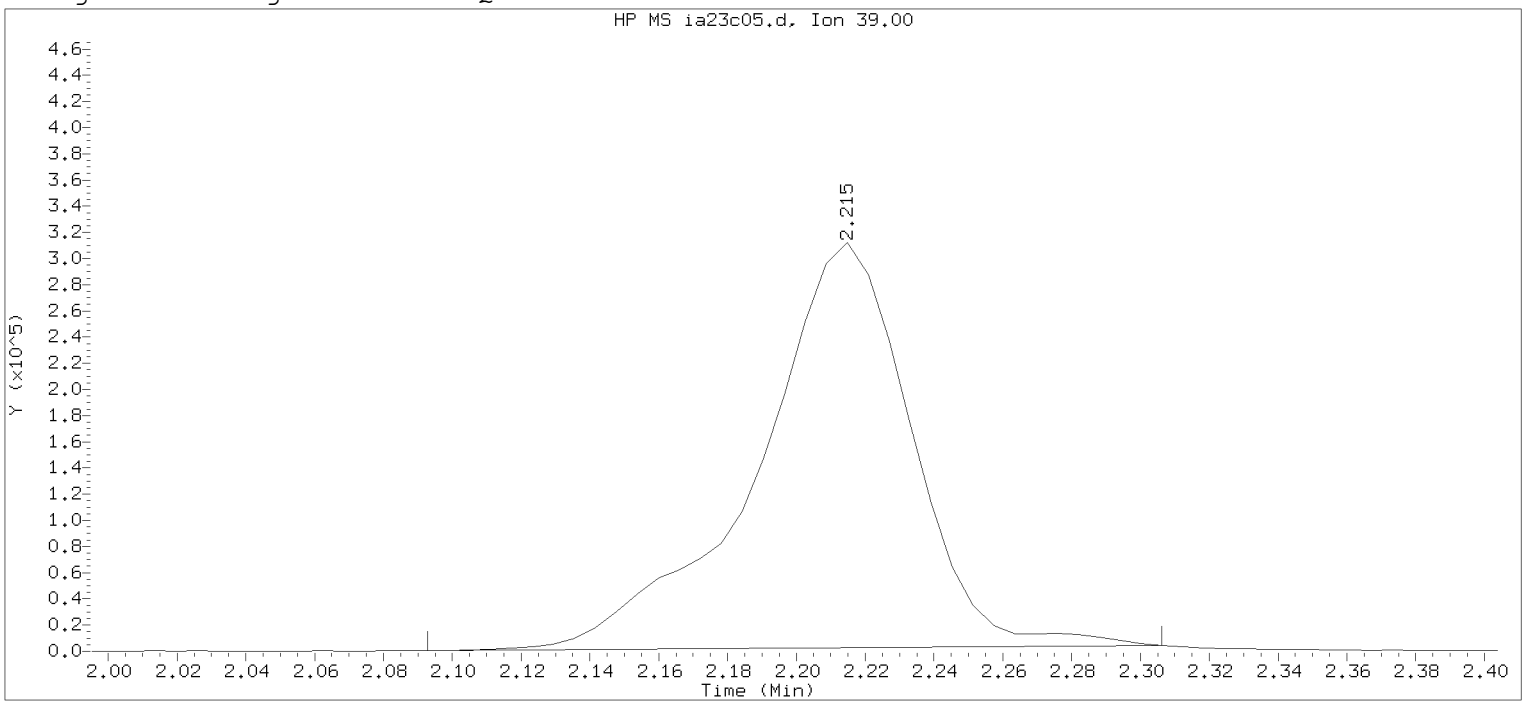
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

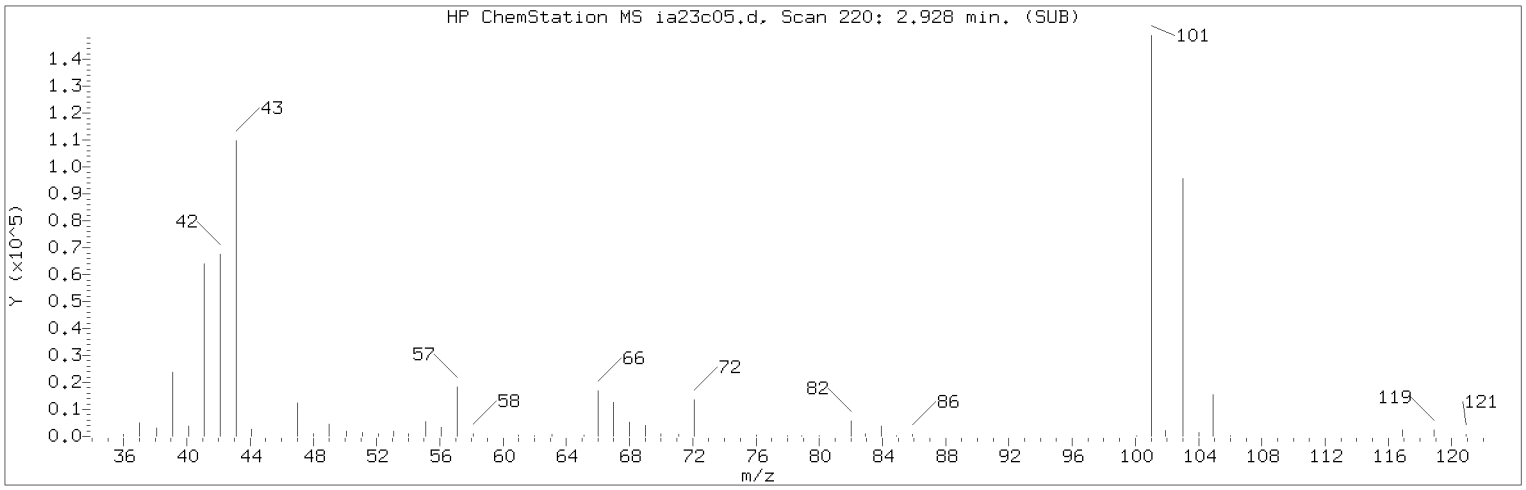
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:57 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

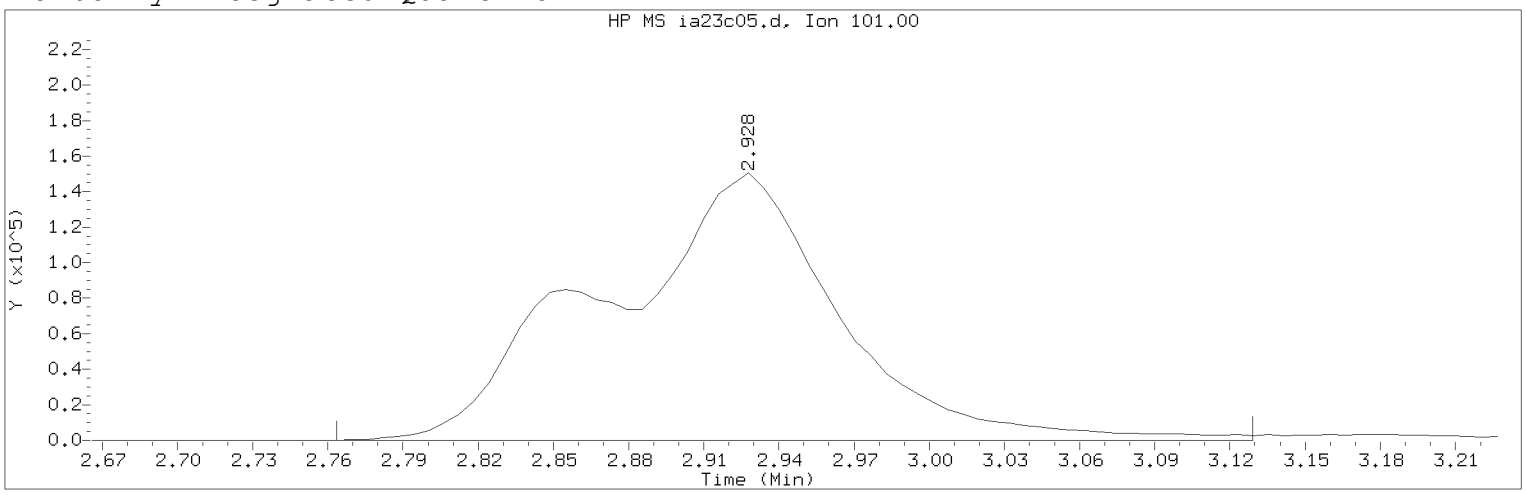
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area : 962676
On-column Amount (ng) : 11.9566
Integration start scan : 82 Integration stop scan: 117
Y at integration start : 281 Y at integration end: 4174

Digitally signed by Don V. Viray on 04/23/2018 at 21:59.
Target 3.5 esignature used on 04/23/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

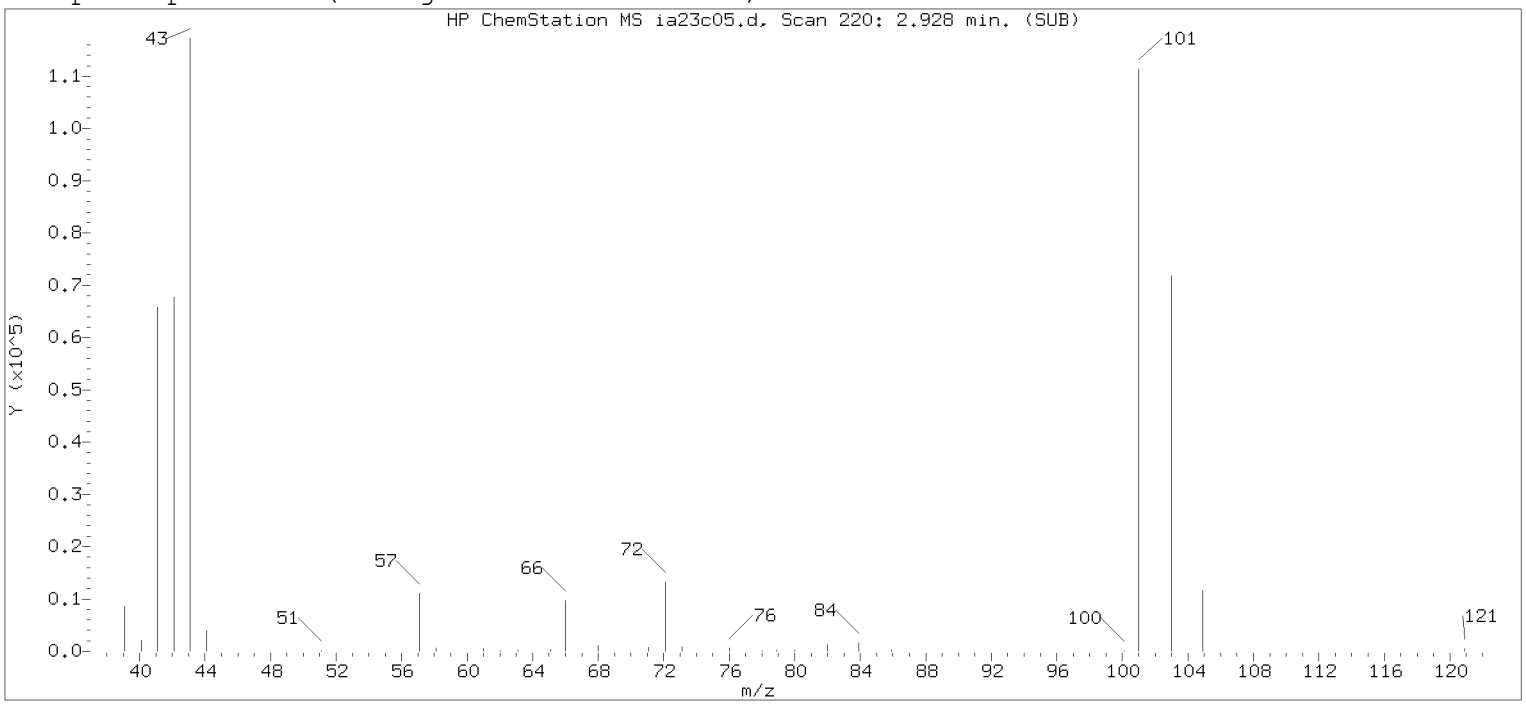
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area (flag) : 974137M
On-Column Amount (ng) : 9.8233
Integration start scan : 192 Integration stop scan: 252
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

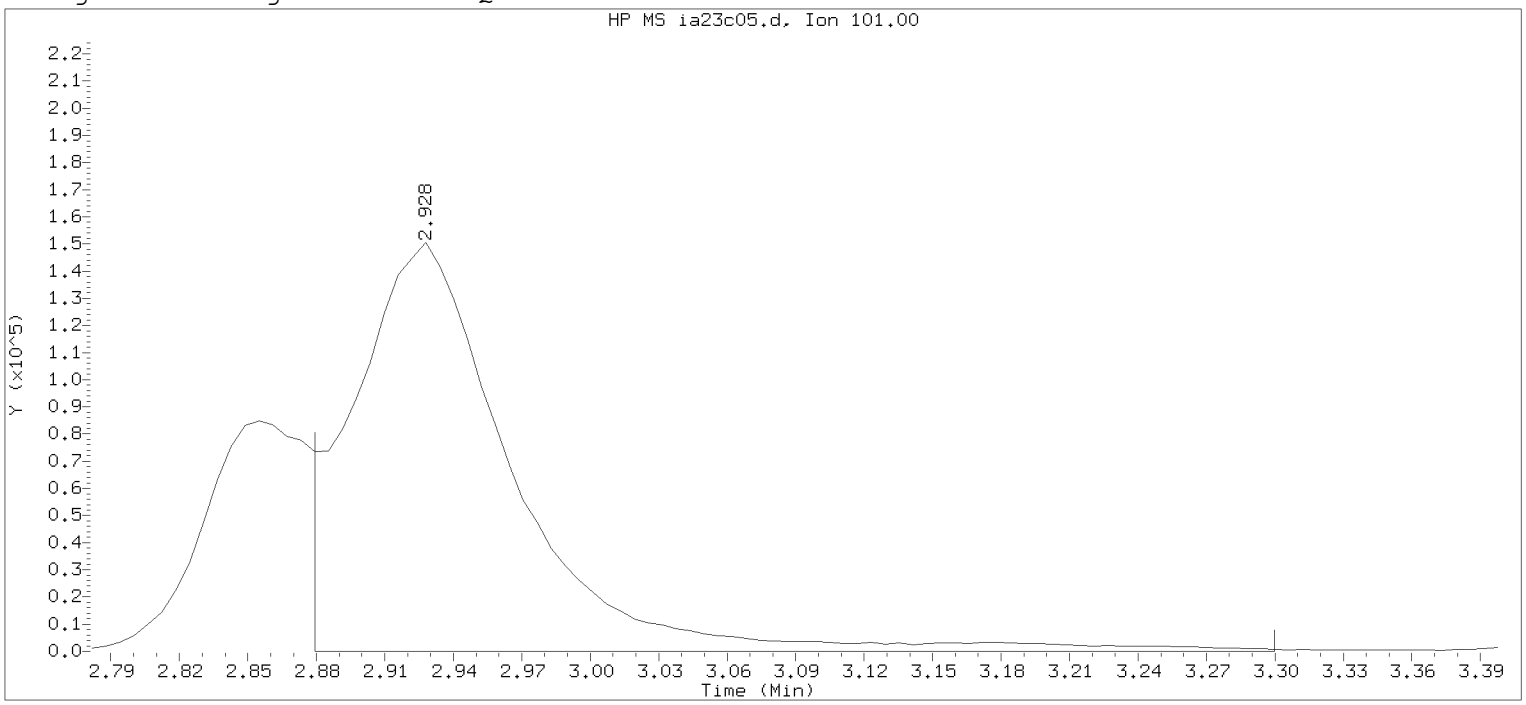
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

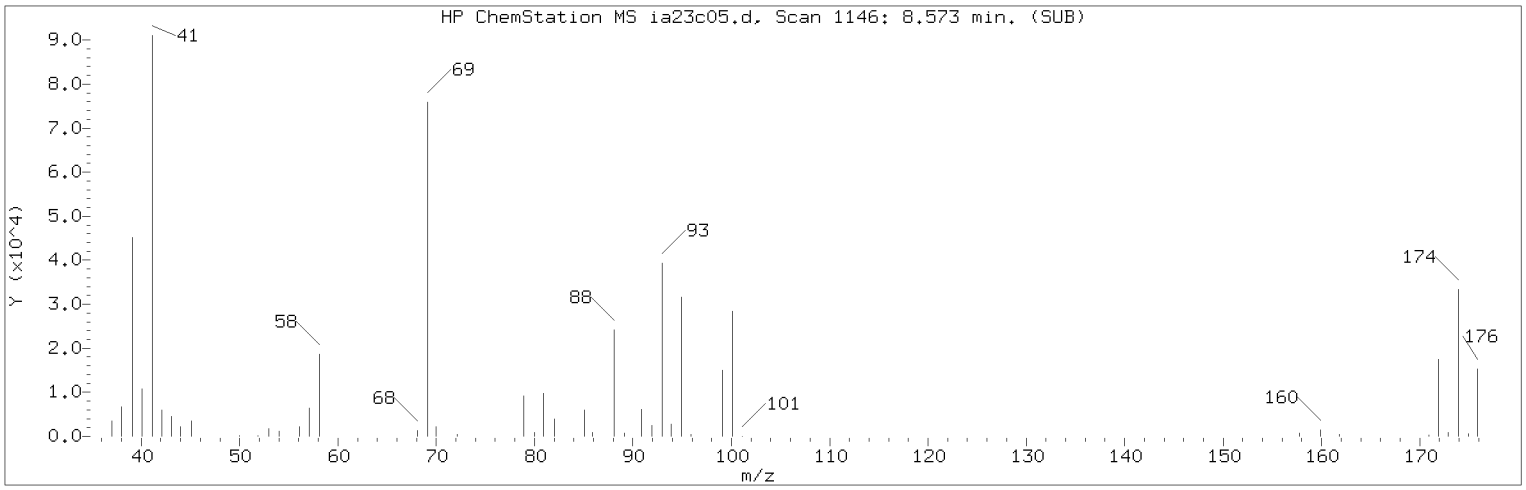
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:57 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

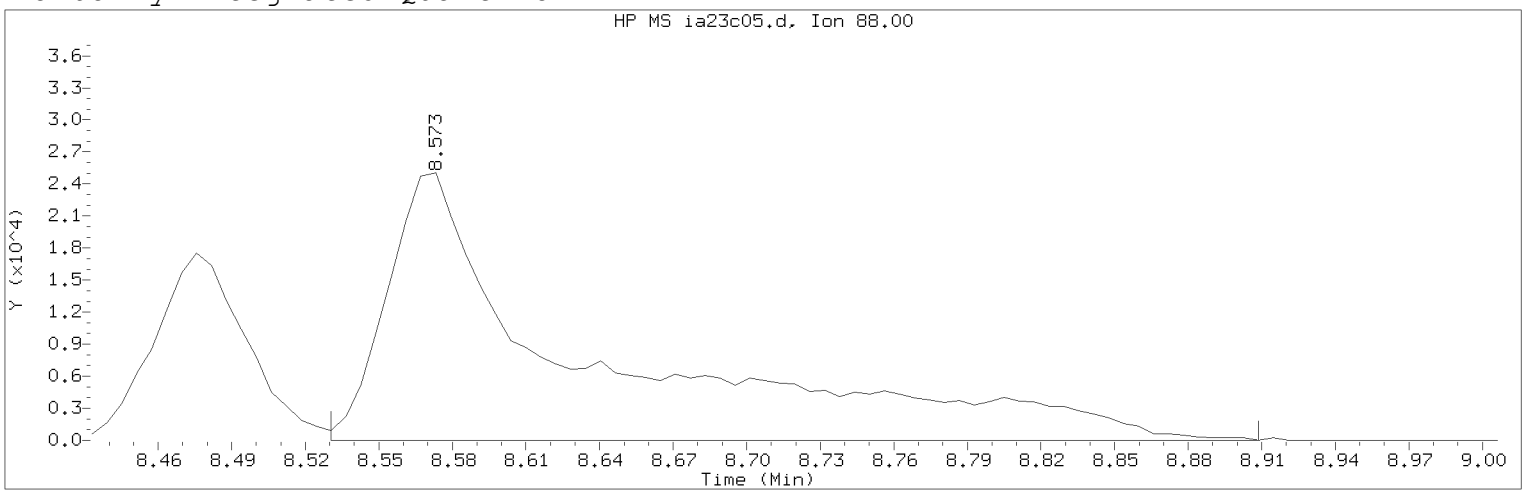
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area : 732215
On-column Amount (ng) : 7.3837
Integration start scan : 211 Integration stop scan: 280
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/23/2018 at 21:59.
Target 3.5 esignature used on 04/23/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:58 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

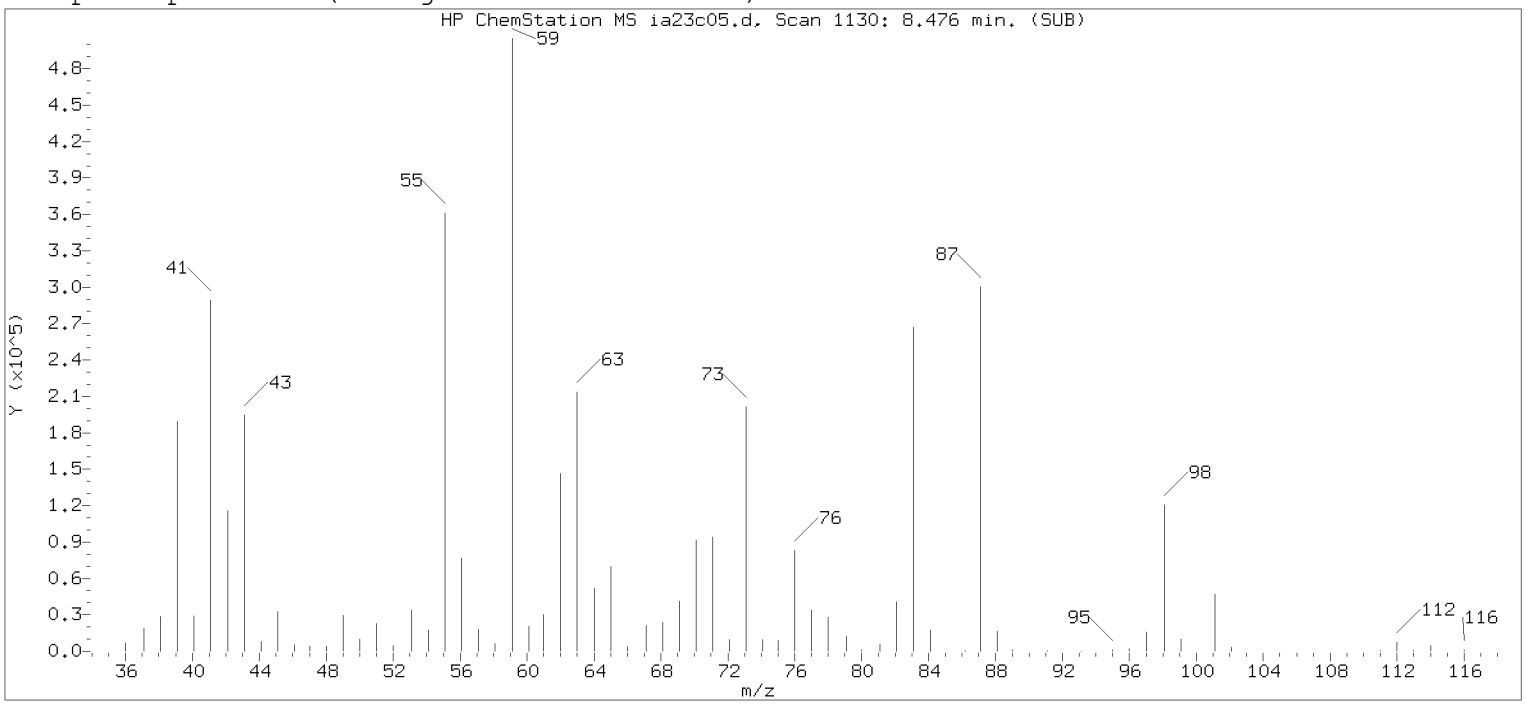
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 139419M
On-Column Amount (ng) : 558.7595
Integration start scan : 1138 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

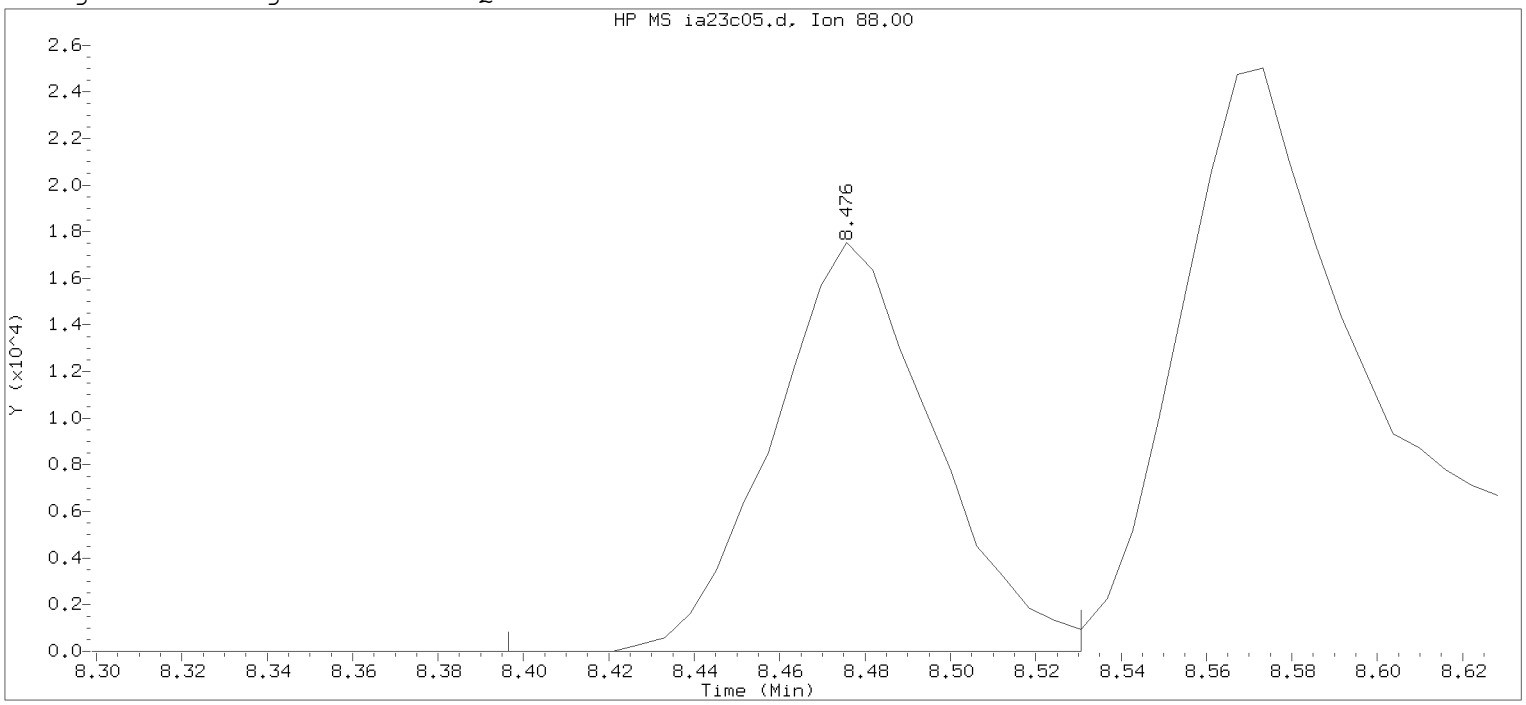
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 21:59.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c05.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 23-APR-2018 21:56
Date, time and analyst ID of latest file update: 23-Apr-2018 21:57 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 88.00
Area : 45774
On-column Amount (ng) : 183.4535
Integration start scan : 1116 Integration stop scan: 1138
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/23/2018 at 21:59.
Target 3.5 esignature used during data review.

Data File: /chem2/HP19930.i/18apr24b.b/ia24t05.d

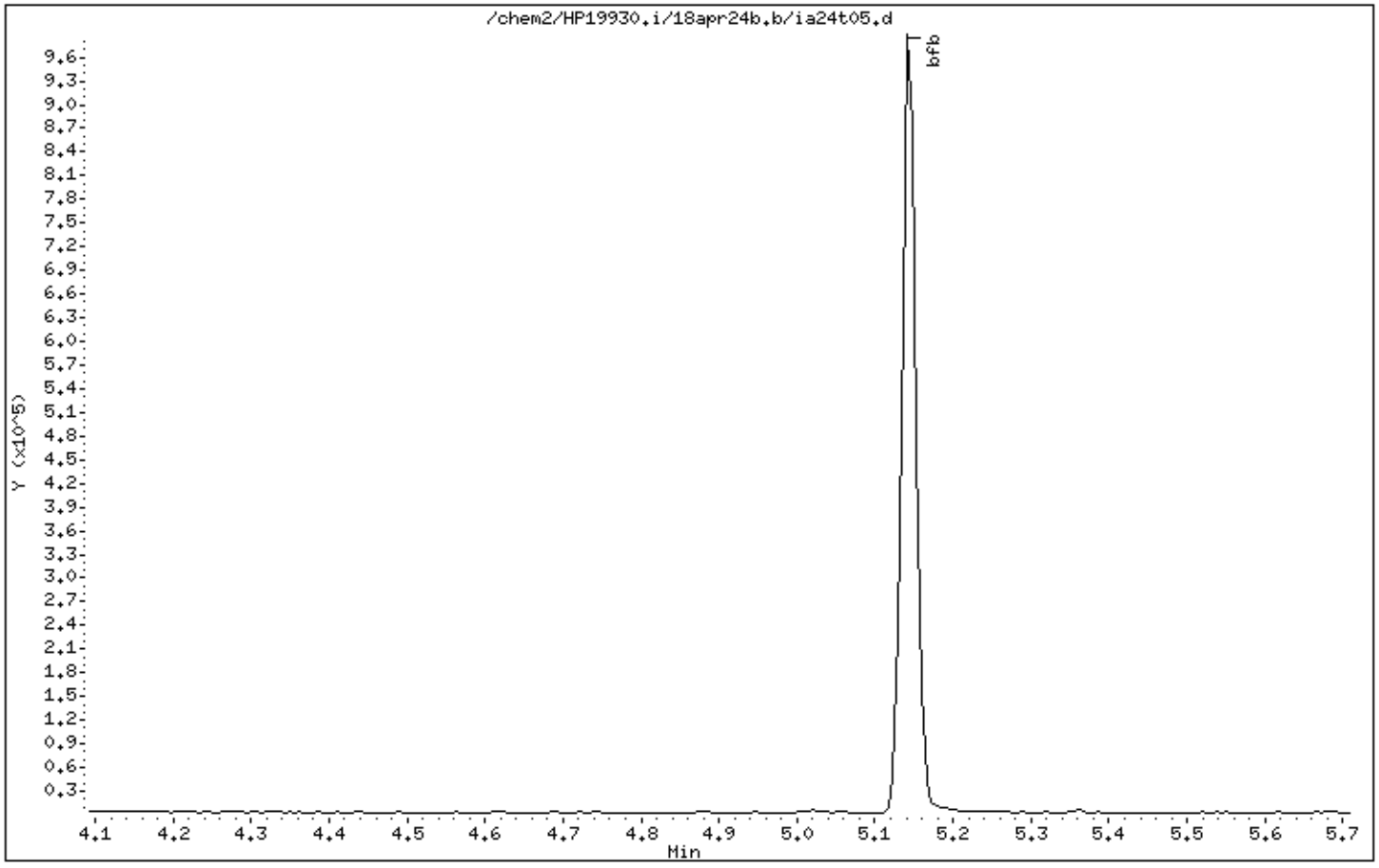
Date : 24-APR-2018 20:06

Client ID: BFB Feb 13 2018 Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS Column diameter: 0.25



Digitally signed by Don V. Viray on 04/24/2018 at 20:12.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr24b.b/ia24t05.d

Date : 24-APR-2018 20:06

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

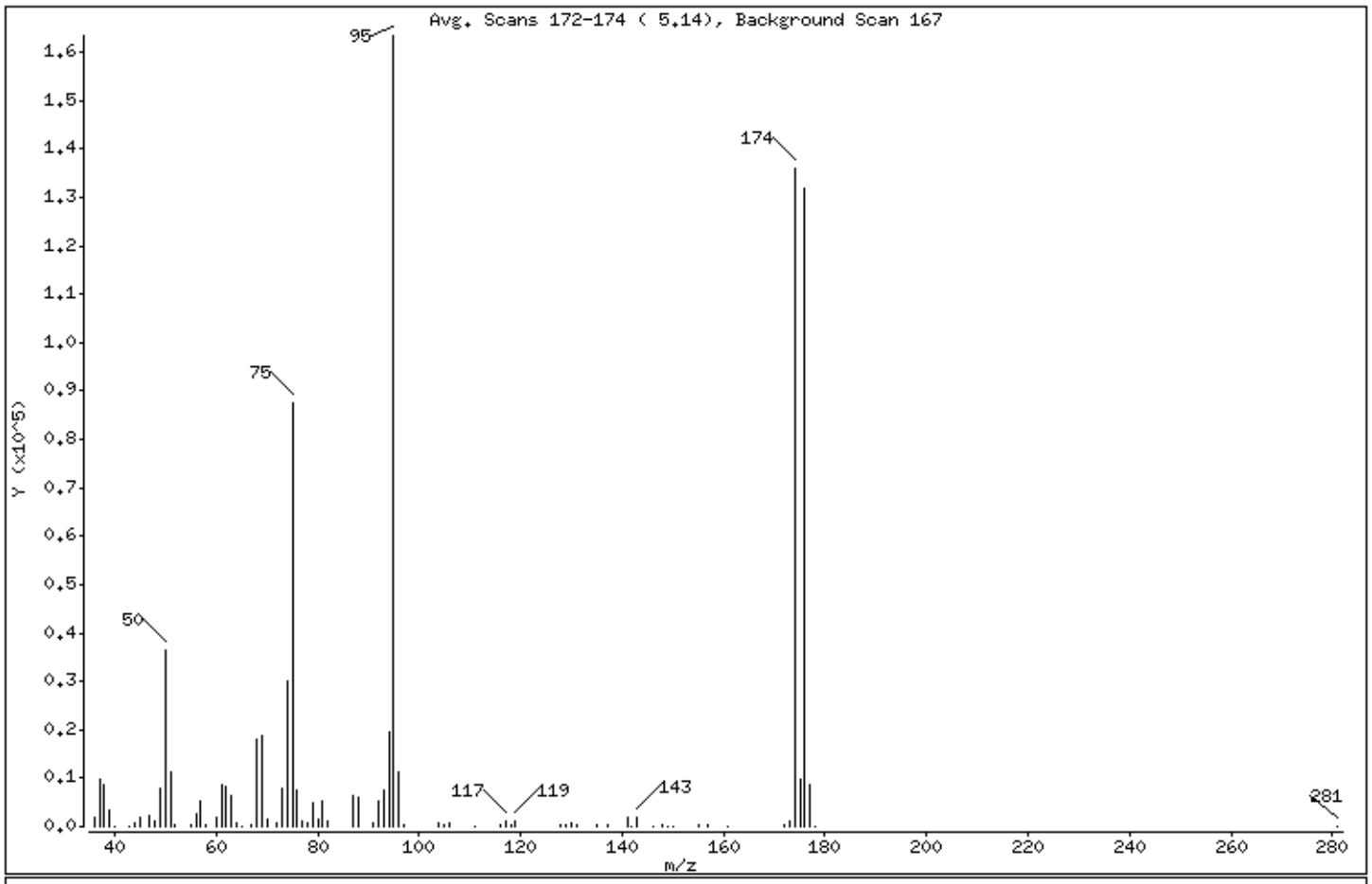
Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.35
75	30.00 - 60.00% of mass 95	53.61
96	5.00 - 9.00% of mass 95	6.85
173	Less than 2.00% of mass 174	0.71 (0.85)
174	50.00 - 100.00% of mass 95	83.21
175	5.00 - 9.00% of mass 174	5.98 (7.19)
176	95.00 - 101.00% of mass 174	80.79 (97.10)
177	5.00 - 9.00% of mass 176	5.27 (6.52)

Digitally signed by Don V. Viray on 04/24/2018 at 20:12.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19930.i/18apr24b.b/ia24t05.d

Date : 24-APR-2018 20:06

Client ID: BFB Feb 13 2018

Instrument: HP19930.i

Sample Info: BFB Feb 13 2018;50NGBFB;1;3;;;;;;

Operator: DVV10203

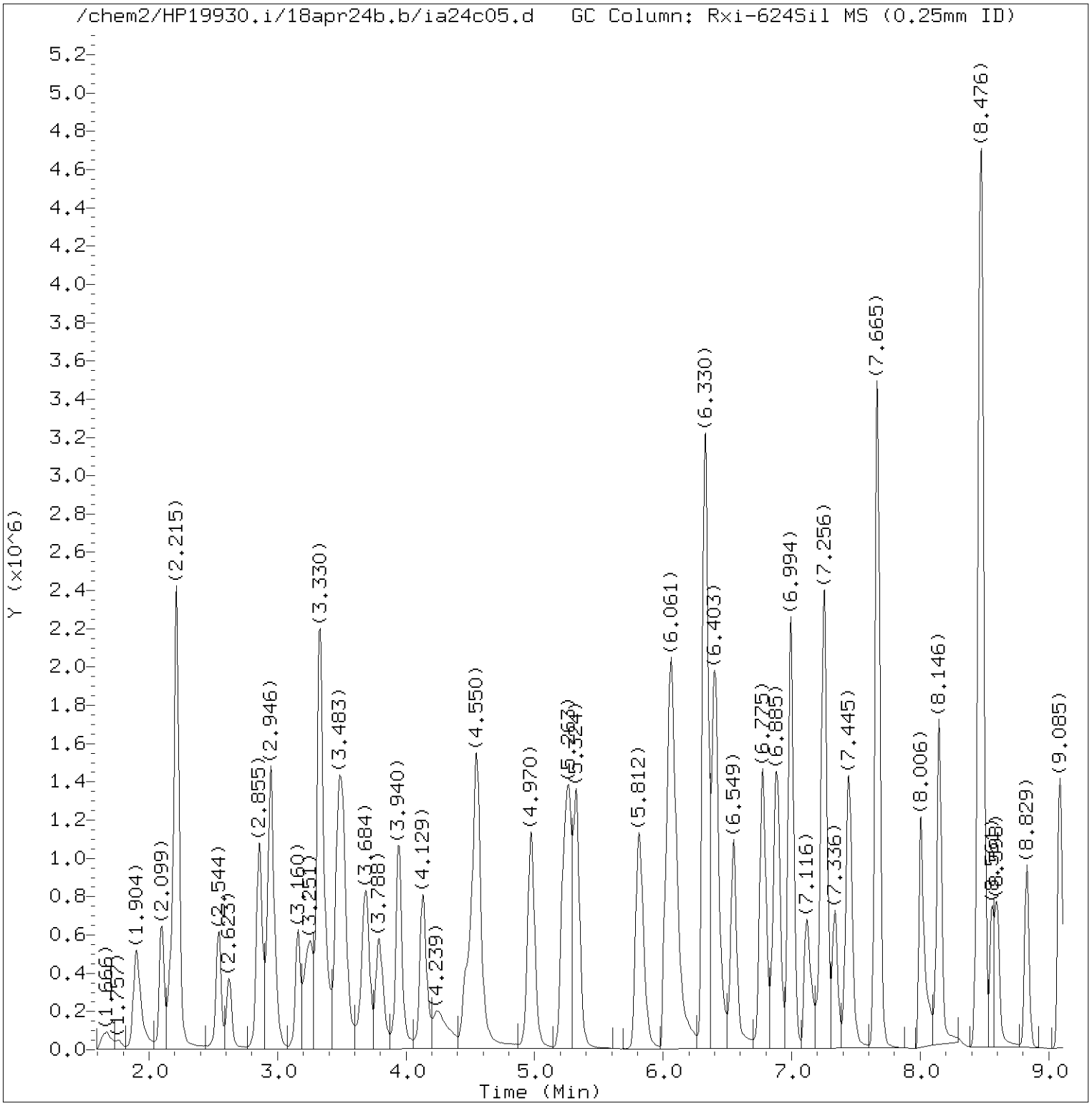
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ia24t05.d
Spectrum: Avg. Scans 172-174 (5.14), Background Scan 167
Location of Maximum: 95.00
Number of points: 80

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1942	63.00	6313	92.00	5082	142.00	102
37.00	9953	64.00	661	93.00	7429	143.00	1851
38.00	8805	65.00	91	94.00	19400	146.00	110
39.00	3362	67.00	424	95.00	163456	148.00	384
40.00	56	68.00	17904	96.00	11193	149.00	98
43.00	87	69.00	18744	97.00	249	150.00	109
44.00	856	70.00	1400	104.00	823	155.00	274
45.00	1749	72.00	858	105.00	240	157.00	216
47.00	2107	73.00	7849	106.00	774	161.00	90
48.00	1020	74.00	30096	111.00	105	172.00	323
49.00	7740	75.00	87640	116.00	520	173.00	1155
50.00	36544	76.00	7497	117.00	1035	174.00	136000
51.00	11290	77.00	1057	118.00	552	175.00	9775
52.00	499	78.00	584	119.00	963	176.00	132032
55.00	442	79.00	4961	128.00	392	177.00	8618
56.00	2575	80.00	1443	129.00	298	178.00	122
57.00	5111	81.00	5260	130.00	635	281.00	86
58.00	220	82.00	1242	131.00	228		
60.00	1720	87.00	6380	135.00	267		
61.00	8710	88.00	5999	137.00	221		
62.00	8438	91.00	696	141.00	1692		

Digitally signed by Don V. Viray on 04/24/2018 at 20:12.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

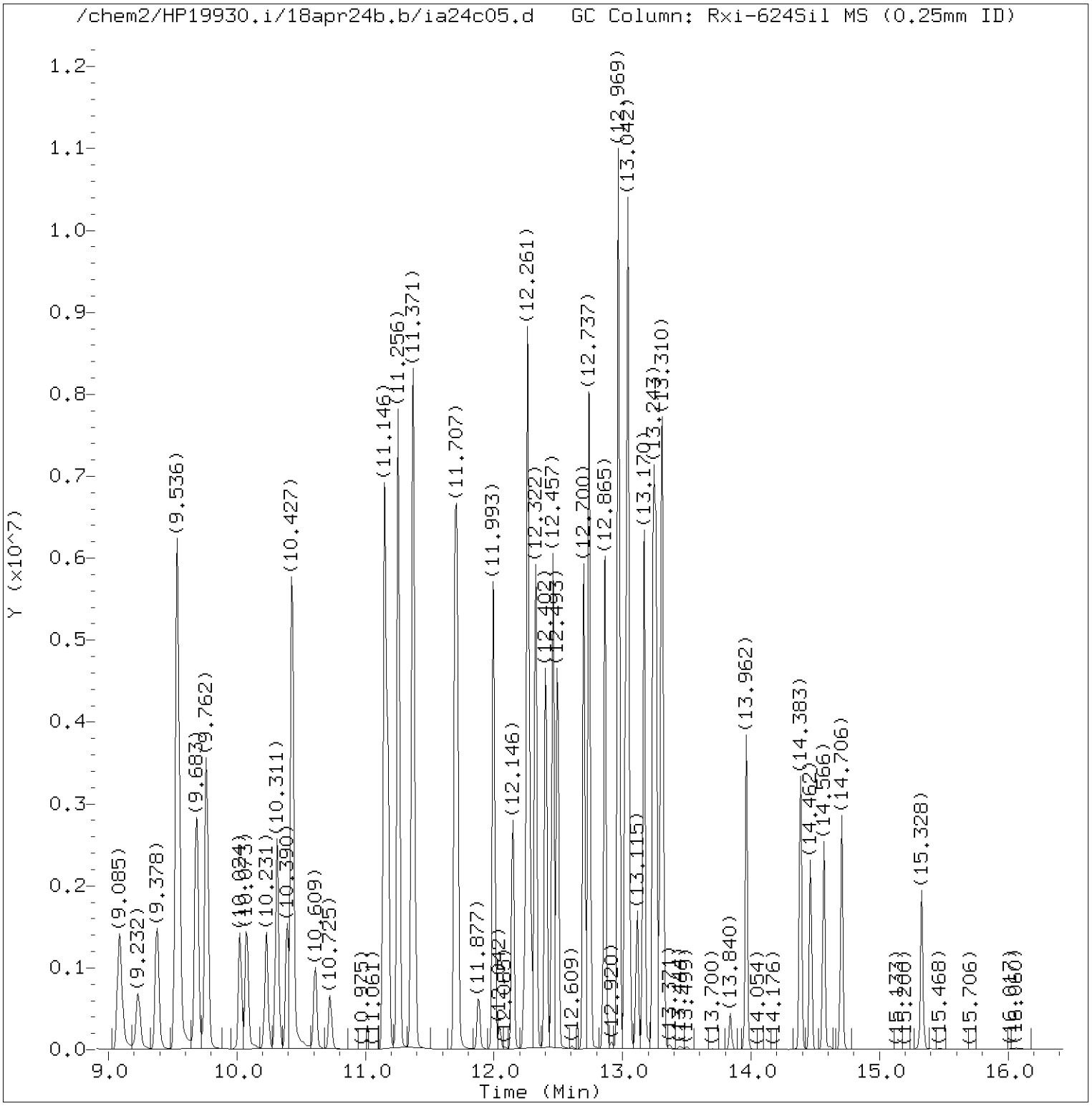
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.904	85	1233152	12.215
2) Chloromethane	(2)	2.099	50	1075890	11.513
5) Vinyl Chloride	(2)	2.209	62	986485	11.727
6) 1,3-Butadiene	(2)	2.215	39	1453061M	16.930
7) Bromomethane	(2)	2.544	94	657606	11.122
8) Chloroethane	(2)	2.623	64	513716	10.719
9) Dichlorofluoromethane	(2)	2.861	67	1407536	12.504
10) Trichlorofluoromethane	(2)	2.928	101	1282049	12.128
11) Ethyl ether	(2)	3.160	59	530211	10.166
12) Freon 123a	(2)	3.257	67	814831	10.916
13) Acrolein	(1)	3.330	56	4083387	518.797
15) 1,1-Dichloroethene	(2)	3.471	96	560273	11.242
14) Acetone	(1)	3.495	43	1152684	99.758
16) Freon 113	(2)	3.507	101	640316	11.206
17) Methyl Iodide	(2)	3.672	142	1059246	11.496
18) Carbon Disulfide	(2)	3.794	76	1492165	10.587
21) Methyl Acetate	(1)	3.922	43	297059	10.905
22) Allyl Chloride	(2)	3.946	41	1076267	11.722
23) Methylene Chloride	(2)	4.129	84	624035	10.254
26)*t-Butyl Alcohol-d10	(1)	4.135	65	164438M	50.000
28) t-Butyl Alcohol	(1)	4.251	59	712516	178.466
29) Acrylonitrile	(1)	4.464	53	705284	54.469
30) Methyl Tertiary Butyl Ether	(2)	4.531	73	1698087	11.445
31) trans-1,2-Dichloroethene	(2)	4.550	96	621176	10.915
32) n-Hexane	(2)	4.970	57	1044952M	10.992
33) 1,1-Dichloroethane	(2)	5.220	63	1260506	11.087
34) di-Isopropyl Ether	(2)	5.269	45	2392712	11.569
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	1171389	12.076
37) Ethyl t-butyl ether	(2)	5.812	59	1993848	11.719
38) 2-Butanone	(1)	6.025	43	2190906	121.380
39) cis-1,2-Dichloroethene	(2)	6.061	96	710843	11.024
41) 2,2-Dichloropropane	(2)	6.074	77	937372	11.770
40) 1,2-Dichloroethene (Total)	(2)		96	1332019	21.939
42) Propionitrile	(1)	6.110	54	1070077	208.151
45) Methacrylonitrile	(1)	6.330	67	1931830	115.162
47) Bromochloromethane	(2)	6.403	128	301657	11.172
48) Tetrahydrofuran	(1)	6.409	71	557972	113.758
49) Chloroform	(2)	6.549	83	1183668	11.066

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	6.769	113	533574	10.424
50)$Dibromofluoromethane	(2)	6.769	111	547485	10.404
51) 1,1,1-Trichloroethane	(2)	6.781	97	1029113	11.551
52) Cyclohexane	(2)	6.885	56	1258725	10.889
52) Cyclohexane	(2)	6.885	84	988895	11.149
52) Cyclohexane	(2)	6.878	69	367856	10.861
54) Carbon Tetrachloride	(2)	6.994	117	902804	11.998
55) 1,1-Dichloropropene	(2)	6.994	75	973627	11.468
56) Isobutyl Alcohol	(1)	7.116	41	814452	510.733
57)$1,2-Dichloroethane-d4	(2)	7.232	102	111888	10.048
57)$1,2-Dichloroethane-d4	(2)	7.232	65	608477	11.046
57)$1,2-Dichloroethane-d4	(2)	7.232	104	71053	10.117
58) Benzene	(2)	7.256	78	2710967	10.617
59) 1,2-Dichloroethane	(2)	7.336	62	836670	11.220
59) 1,2-Dichloroethane	(2)	7.336	98	65691	10.639
60) t-Amyl methyl ether	(2)	7.445	73	1683489	11.750
63)*Fluorobenzene	(2)	7.665	96	2193337	10.000
62) n-Heptane	(2)	7.671	43	1210439	11.989
65) n-Butanol	(1)	8.006	56	1355364	1116.262
67) Trichloroethene	(2)	8.146	95	719730	11.132
69) Methylcyclohexane	(2)	8.457	83	1249761	11.226
70) 1,2-Dichloropropane	(2)	8.482	63	719851	10.869
71) Methyl Methacrylate	(1)	8.561	69	353937	12.567
72) 1,4-Dioxane	(1)	8.573	88	142100M	510.174
72) 1,4-Dioxane	(1)	8.476	58	26515	132.672
73) Dibromomethane	(2)	8.598	93	323329	10.905
74) Bromodichloromethane	(2)	8.829	83	807039	11.368
76) 2-Nitropropane	(1)	9.085	41	1351218	148.192
80) cis-1,3-Dichloropropene	(2)	9.378	75	990712	11.070
81) 4-Methyl-2-Pentanone	(1)	9.536	43	5804241M	129.400
82)$Toluene-d8	(3)	9.683	98	2216547	9.811
82)$Toluene-d8	(3)	9.689	100	1426220	9.831
83) Toluene	(3)	9.762	92	1728325	10.479
84) trans-1,3-Dichloropropene	(3)	10.024	75	796974	11.426
86) Ethyl Methacrylate	(3)	10.073	69	772194	11.305
85) 1,3-Dichloropropene (total)	(3)		75	1787686	22.496
88) 1,1,2-Trichloroethane	(3)	10.231	97	474316	10.196
89) Tetrachloroethene	(3)	10.311	166	805248	11.493

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropane	(3)	10.390	76	861687	10.407
91) 2-Hexanone	(1)	10.427	43	4156221M	131.258
93) Dibromochloromethane	(3)	10.609	129	522420	11.403
95) 1,2-Dibromoethane	(3)	10.725	107	453367	10.711
97)*Chlorobenzene-d5	(3)	11.146	117	1673291	10.000
98) Chlorobenzene	(3)	11.170	112	1884181	10.512
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	646773	11.346
100) Ethylbenzene	(3)	11.256	91	3396134	10.865
101) m+p-Xylene	(3)	11.371	106	2668905	22.223
104) o-Xylene	(3)	11.701	106	1315249	11.255
106) Styrene	(3)	11.713	104	2100157	11.643
105) Xylene (Total)	(3)		106	3984154	33.477
107) Bromoform	(3)	11.877	173	267125	9.443
108) Isopropylbenzene	(3)	11.993	105	3414033	11.381
111)$4-Bromofluorobenzene	(3)	12.146	95	782661	9.811
111)$4-Bromofluorobenzene	(3)	12.146	174	680183	10.478
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	620149	10.038
114) Bromobenzene	(4)	12.261	156	801097	10.935
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	1094896A	97.364
116) 1,2,3-Trichloropropane	(4)	12.292	110	161942	10.008
117) n-Propylbenzene	(4)	12.322	91	3977231	10.732
119) 2-Chlorotoluene	(4)	12.402	126	759547	10.643
121) 1,3,5-Trimethylbenzene	(4)	12.457	105	2821635	11.027
122) 4-Chlorotoluene	(4)	12.493	126	775551	10.682
125) tert-Butylbenzene	(4)	12.700	134	604837	11.428
126) Pentachloroethane	(4)	12.737	167	468395	11.473
127) 1,2,4-Trimethylbenzene	(4)	12.743	105	2830228	11.015
128) sec-Butylbenzene	(4)	12.865	105	3677210	11.101
131) 1,3-Dichlorobenzene	(4)	12.969	146	1566701	10.948
132) p-Isopropyltoluene	(4)	12.969	119	3170912	10.928
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	878134	10.000
135) 1,2,3-Trimethylbenzene	(4)	13.042	120	1235219	10.578
134) 1,4-Dichlorobenzene	(4)	13.042	146	1540982	10.571
136) Benzyl Chloride	(4)	13.115	126	201707	9.666
138) n-Butylbenzene	(4)	13.261	92	1538258	11.196
139) 1,2-Dichlorobenzene	(4)	13.298	146	1409730	10.622
143) 1,2-Dibromo-3-chloropropane	(1)	13.840	155	71752	11.802
144) 1,3,5-Trichlorobenzene	(4)	13.962	180	1028144	10.635

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

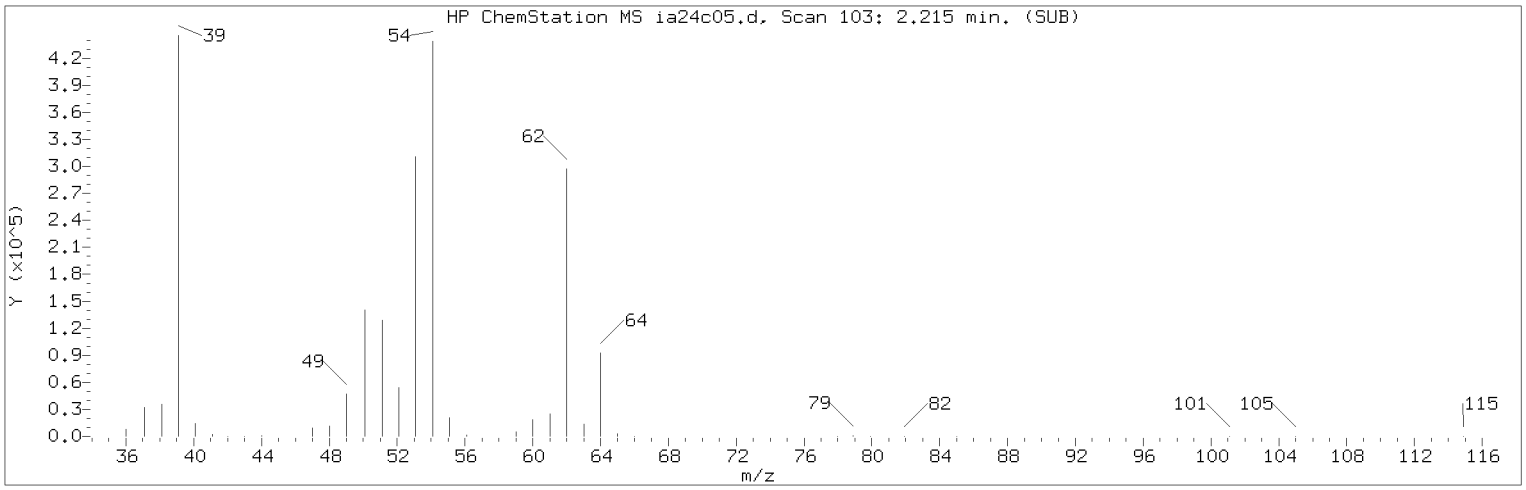
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

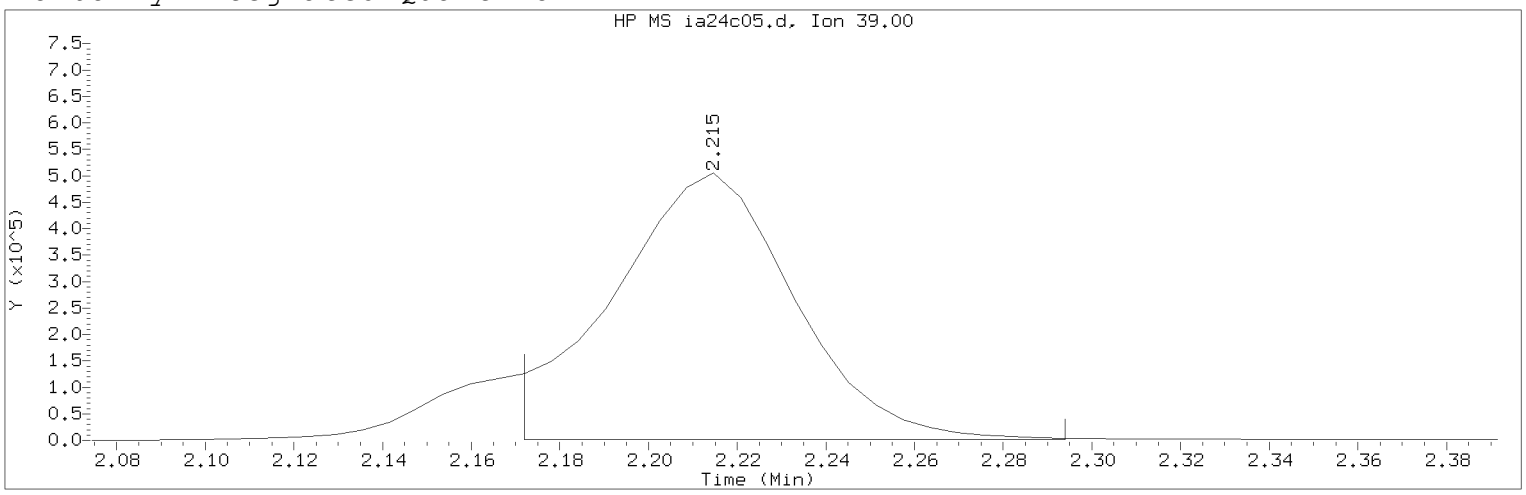
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,2,4-Trichlorobenzene	(4)	14.383	180	872136	10.296
146) Hexachlorobutadiene	(4)	14.462	225	365508	11.925
147) Naphthalene	(4)	14.566	128	1651643	9.953
148) 1,2,3-Trichlorobenzene	(4)	14.706	180	736691	9.772

Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

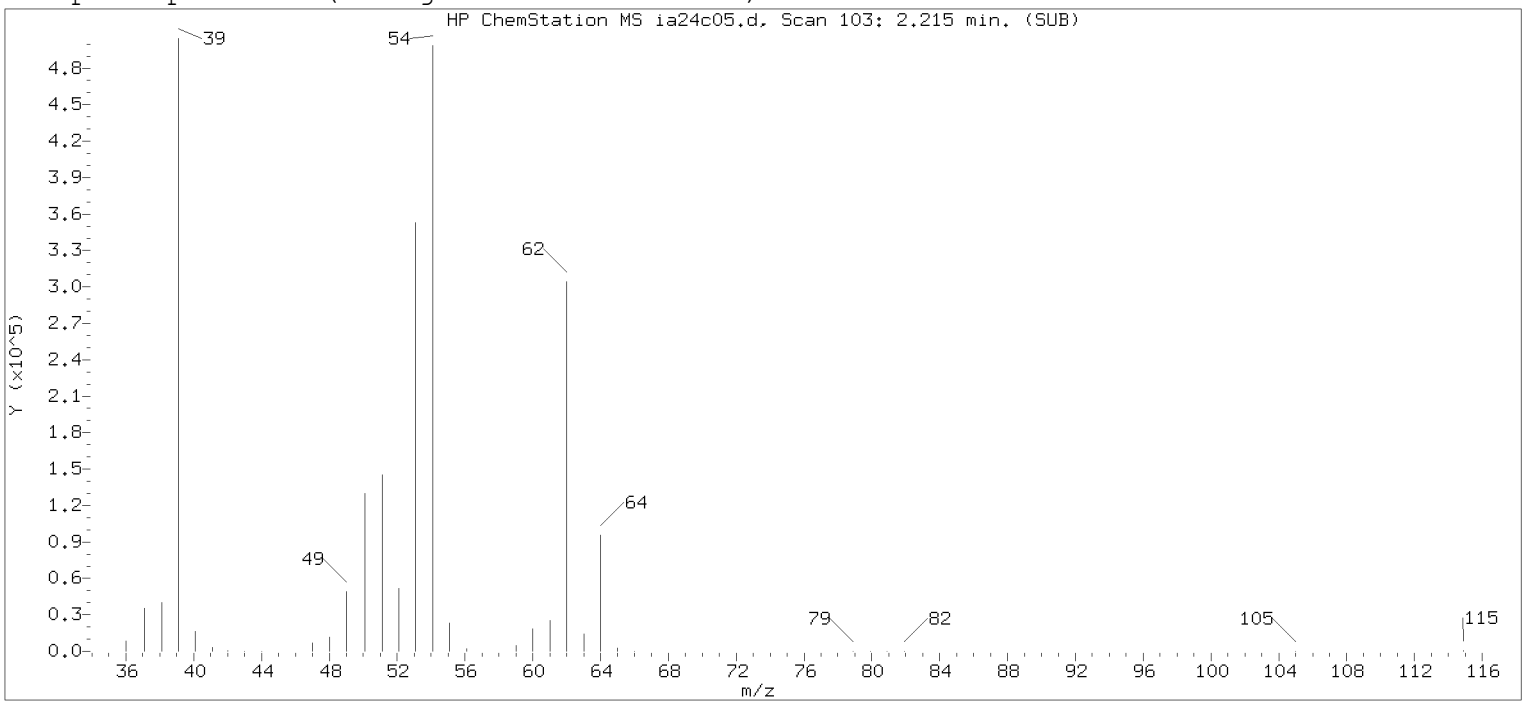
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area (flag) : 1453061M
On-Column Amount (ng) : 16.9303
Integration start scan : 95 Integration stop scan: 115
Y at integration start : 875 Y at integration end: 875

Reason for manual integration: improper integration

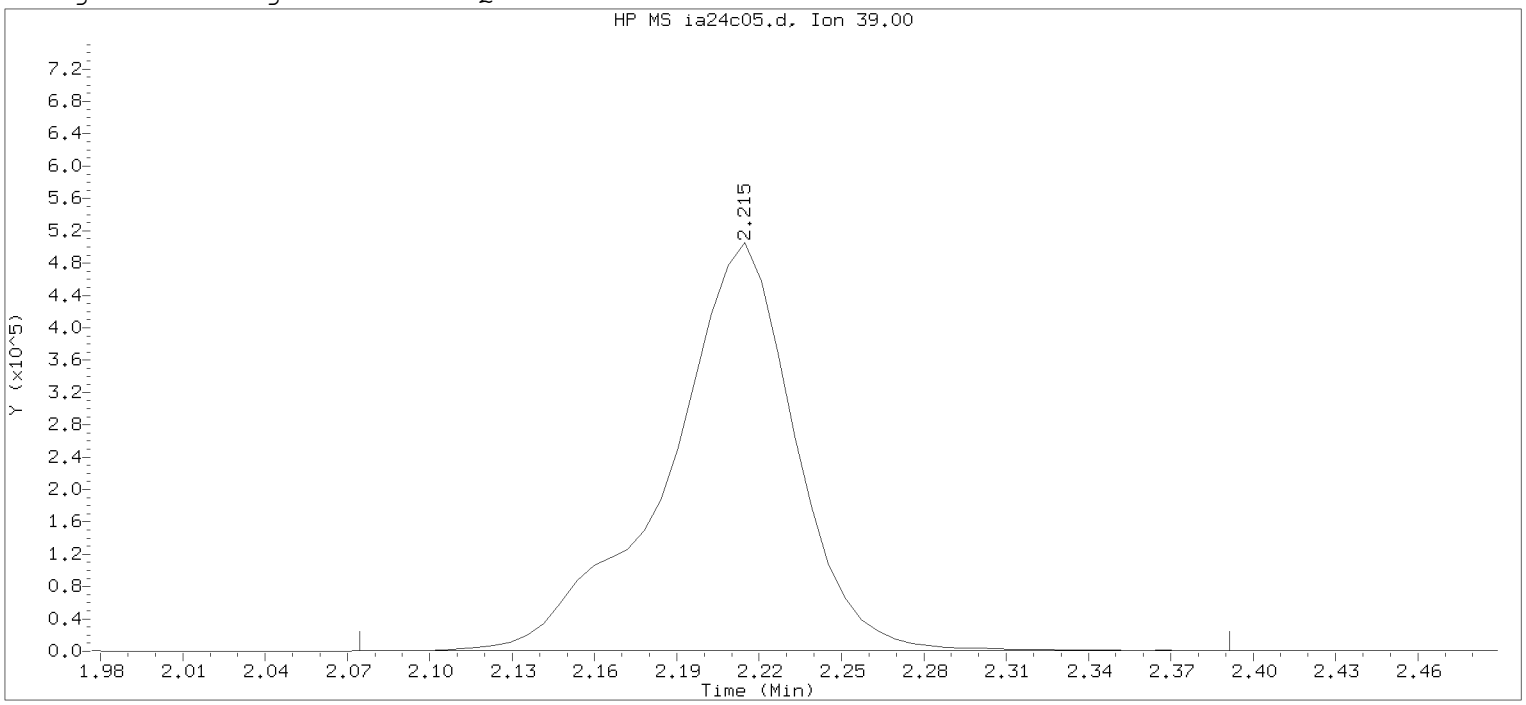
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

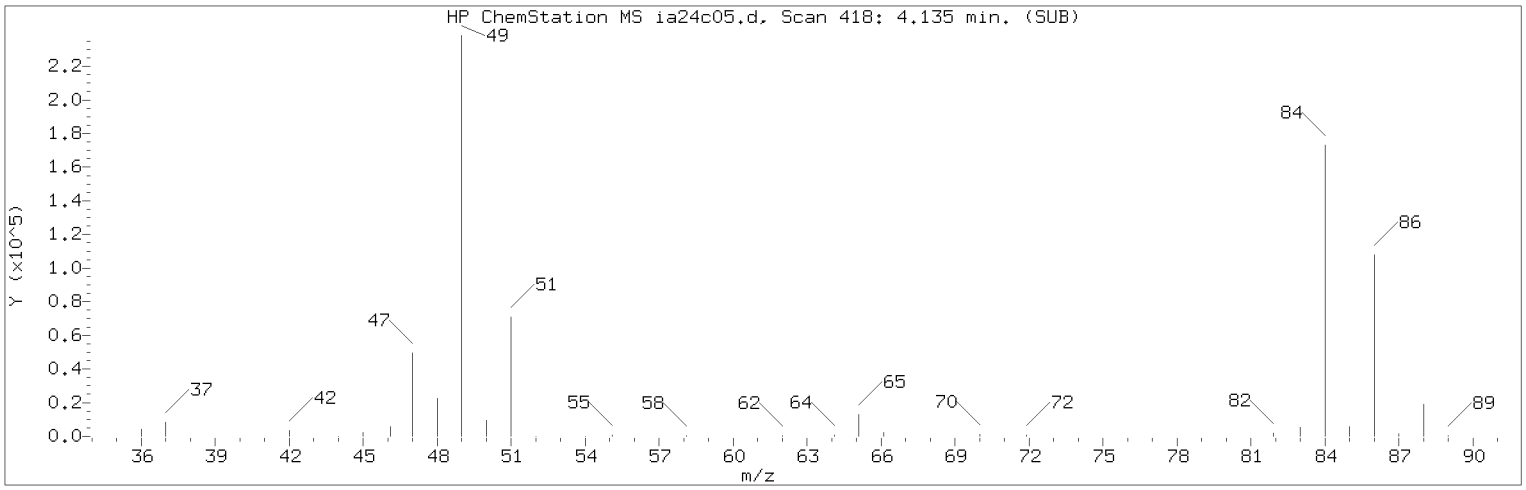
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

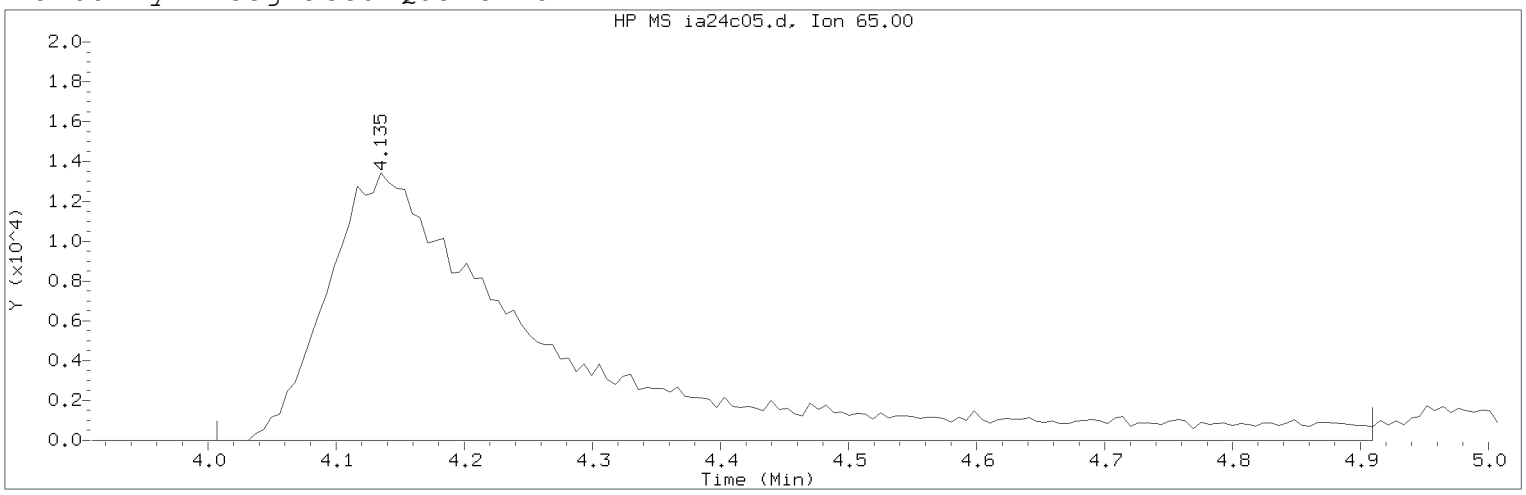
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 103
Retention Time (minutes): 2.215
Quant Ion : 39.00
Area : 1623824
On-column Amount (ng) : 18.9199
Integration start scan : 79 Integration stop scan: 131
Y at integration start : 461 Y at integration end: 814

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used to create PDF 10.0.1.3

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

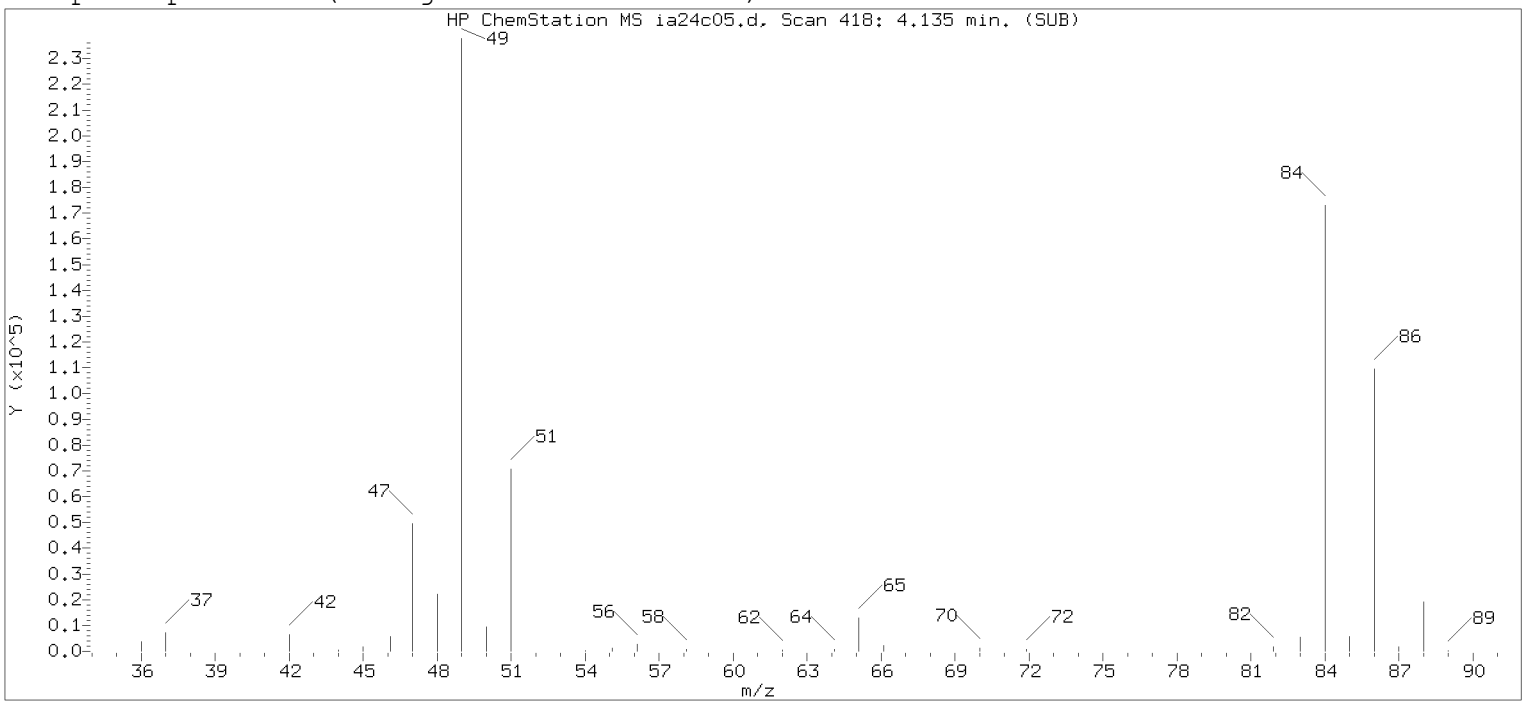
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area (flag) : 164438M
On-Column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

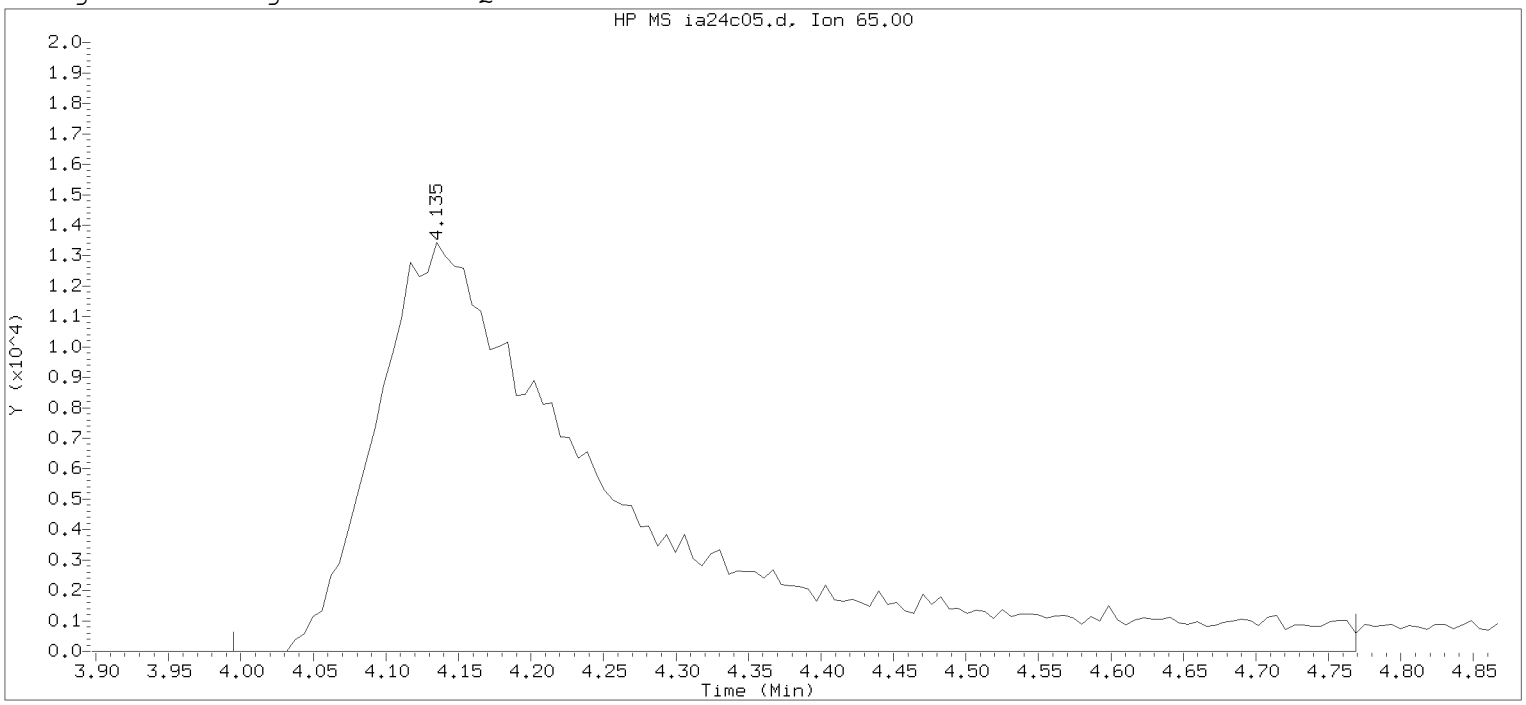
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

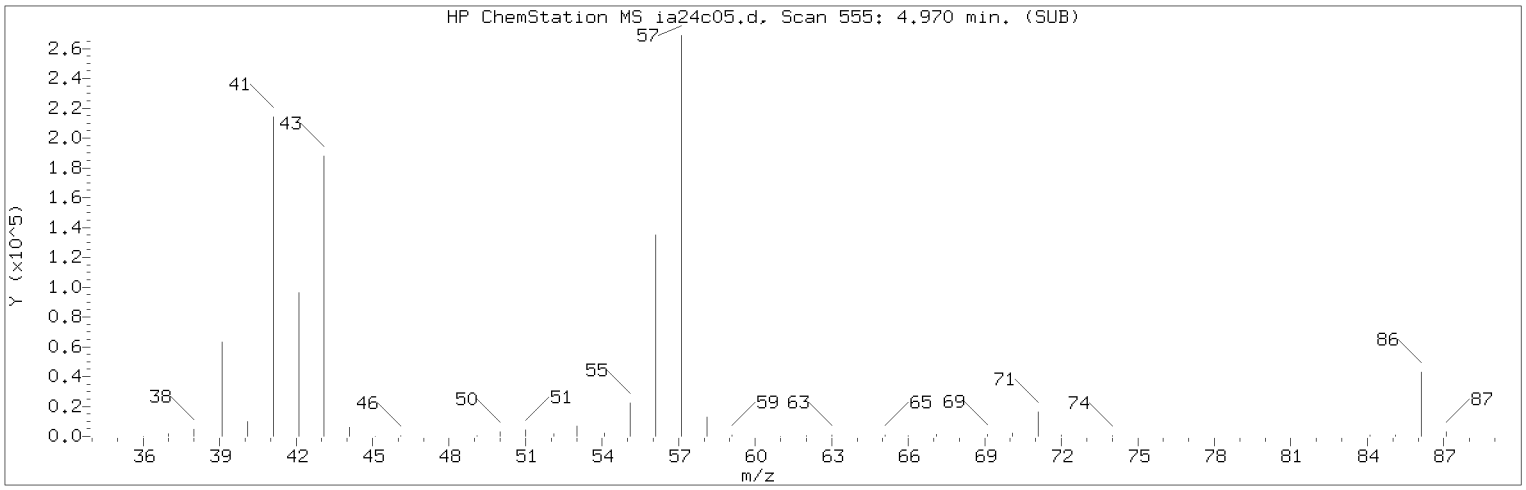
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

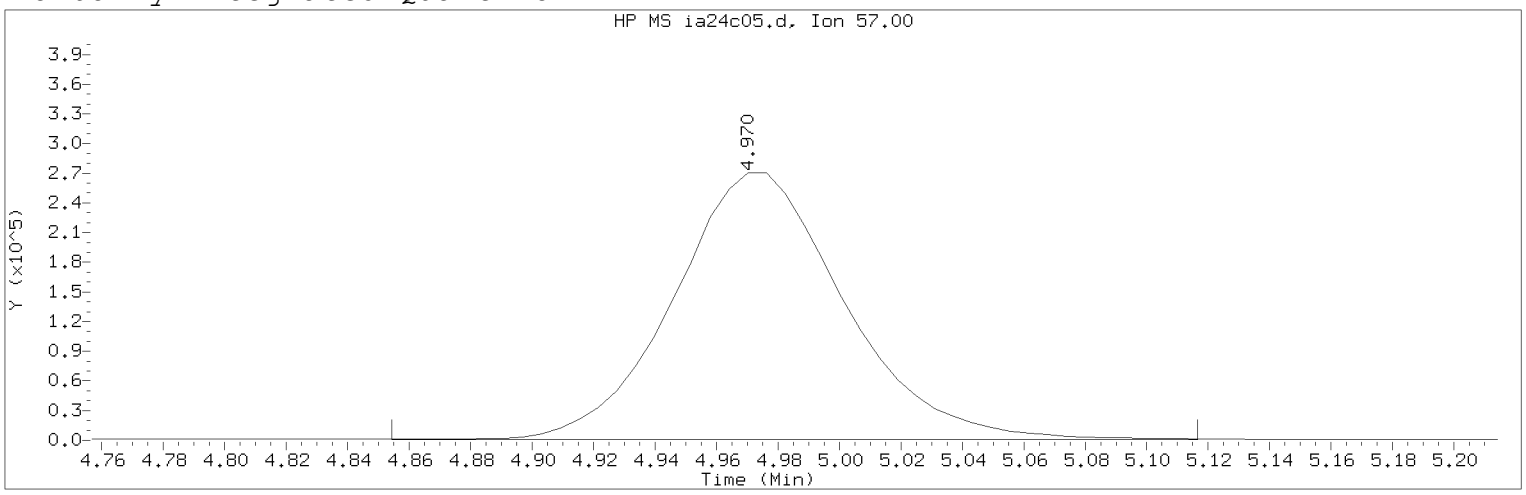
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area : 157437
On-column Amount (ng) : 50.0000
Integration start scan : 394 Integration stop scan: 521
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

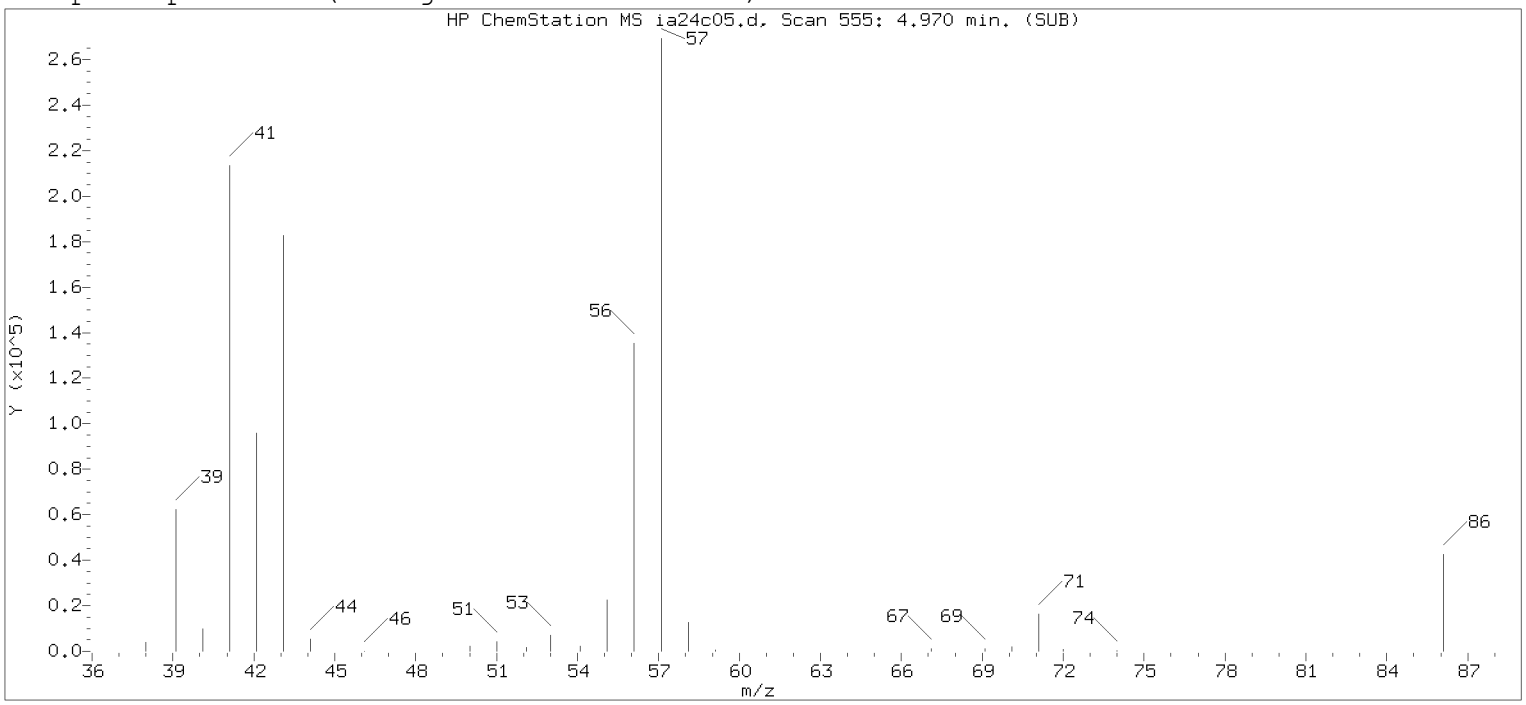
Compound Number : 32
Compound Name : n-Hexane
Scan Number : 555
Retention Time (minutes): 4.970
Quant Ion : 57.00
Area (flag) : 1044952M
On-Column Amount (ng) : 10.9924
Integration start scan : 535 Integration stop scan: 578
Y at integration start : 646 Y at integration end: 646

Reason for manual integration: improper integration

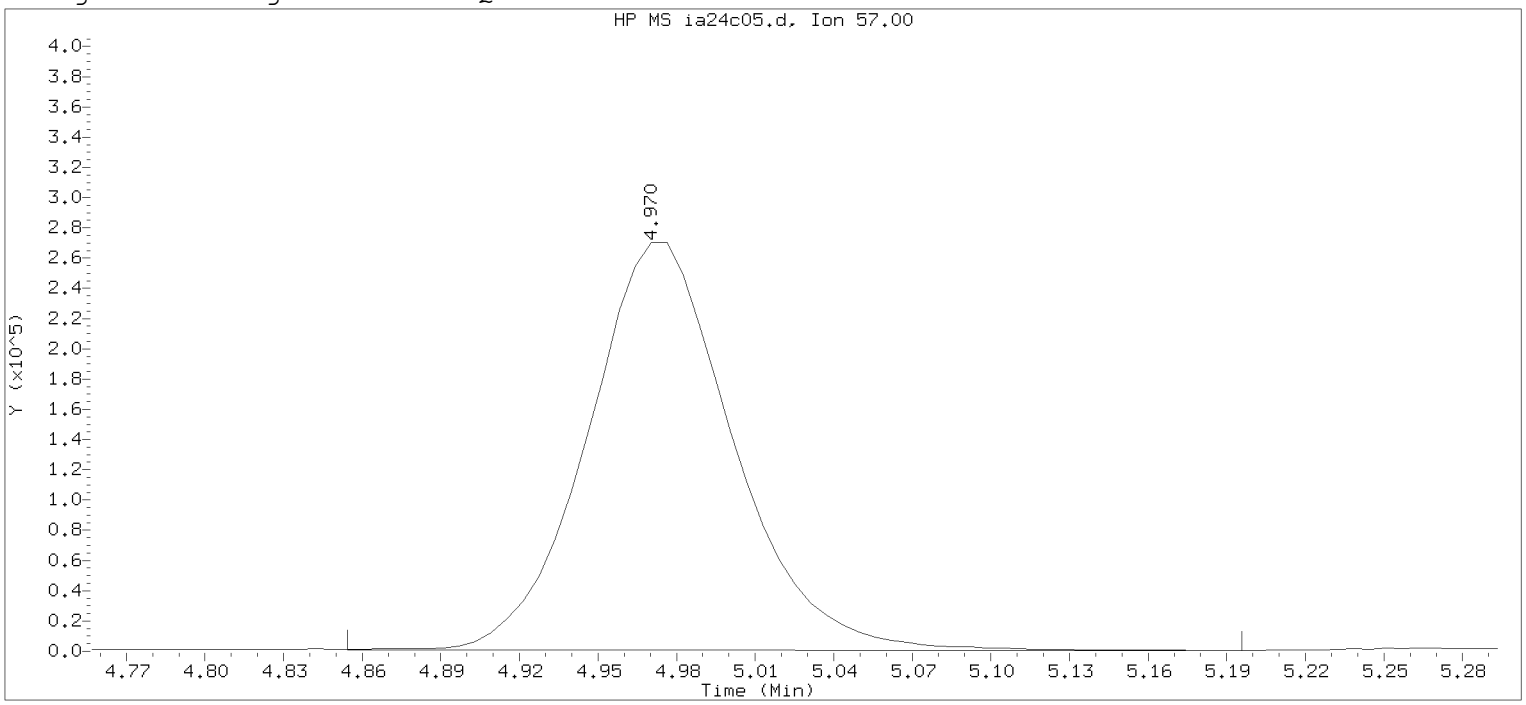
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

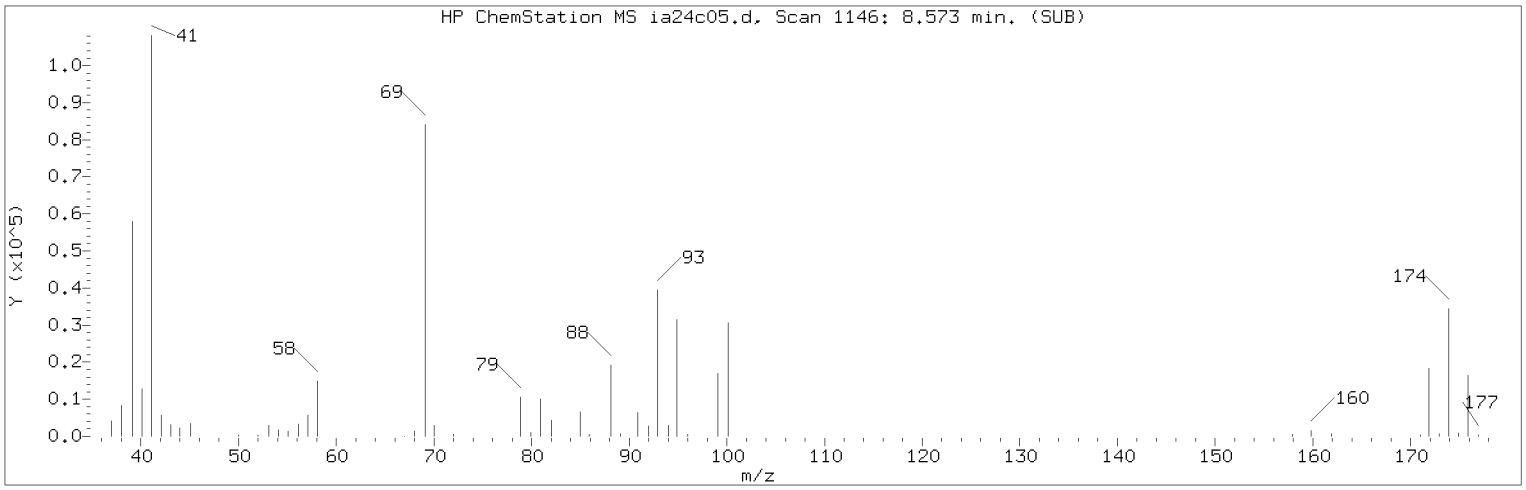
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

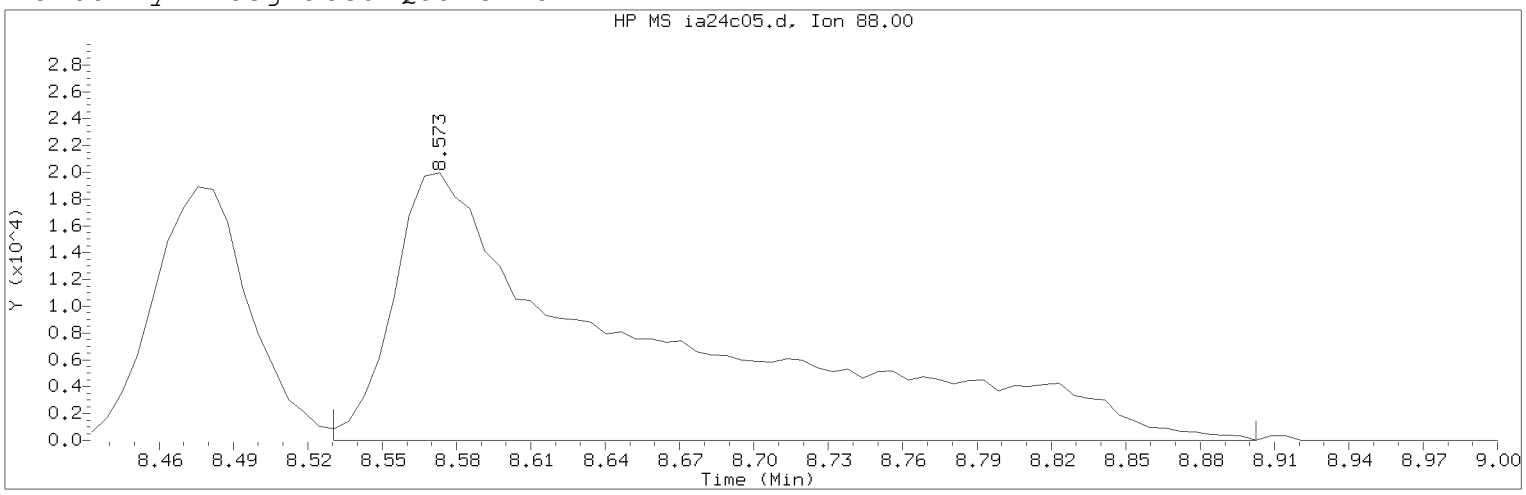
Compound Number	: 32		
Compound Name	: n-Hexane		
Scan Number	: 555		
Retention Time (minutes)	: 4.970		
Quant Ion	: 57.00		
Area	: 1043448		
On-column Amount (ng)	: 10.9766		
Integration start scan	: 535	Integration stop scan:	591
Y at integration start	: 1060	Y at integration end:	453

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

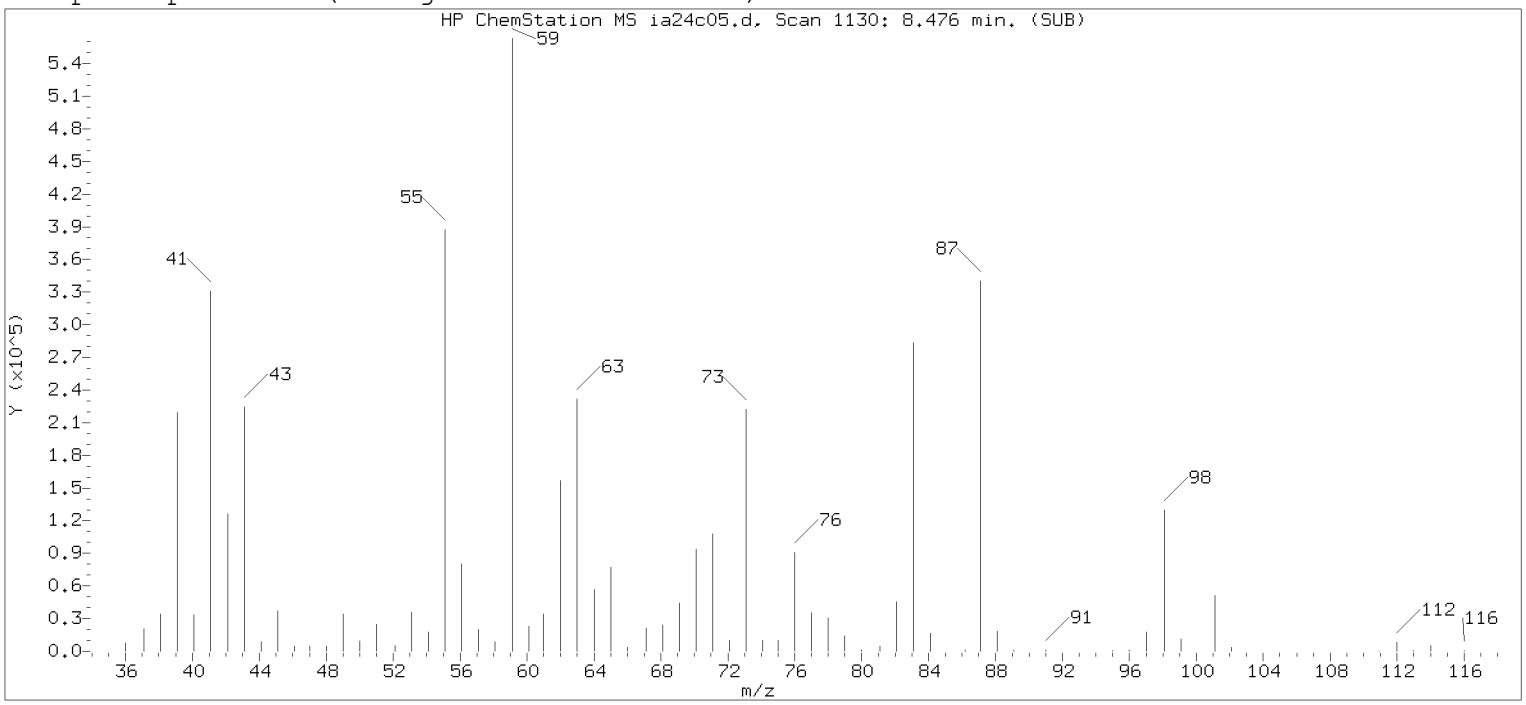
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 142100M
On-Column Amount (ng) : 510.1743
Integration start scan : 1138 Integration stop scan: 1199
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

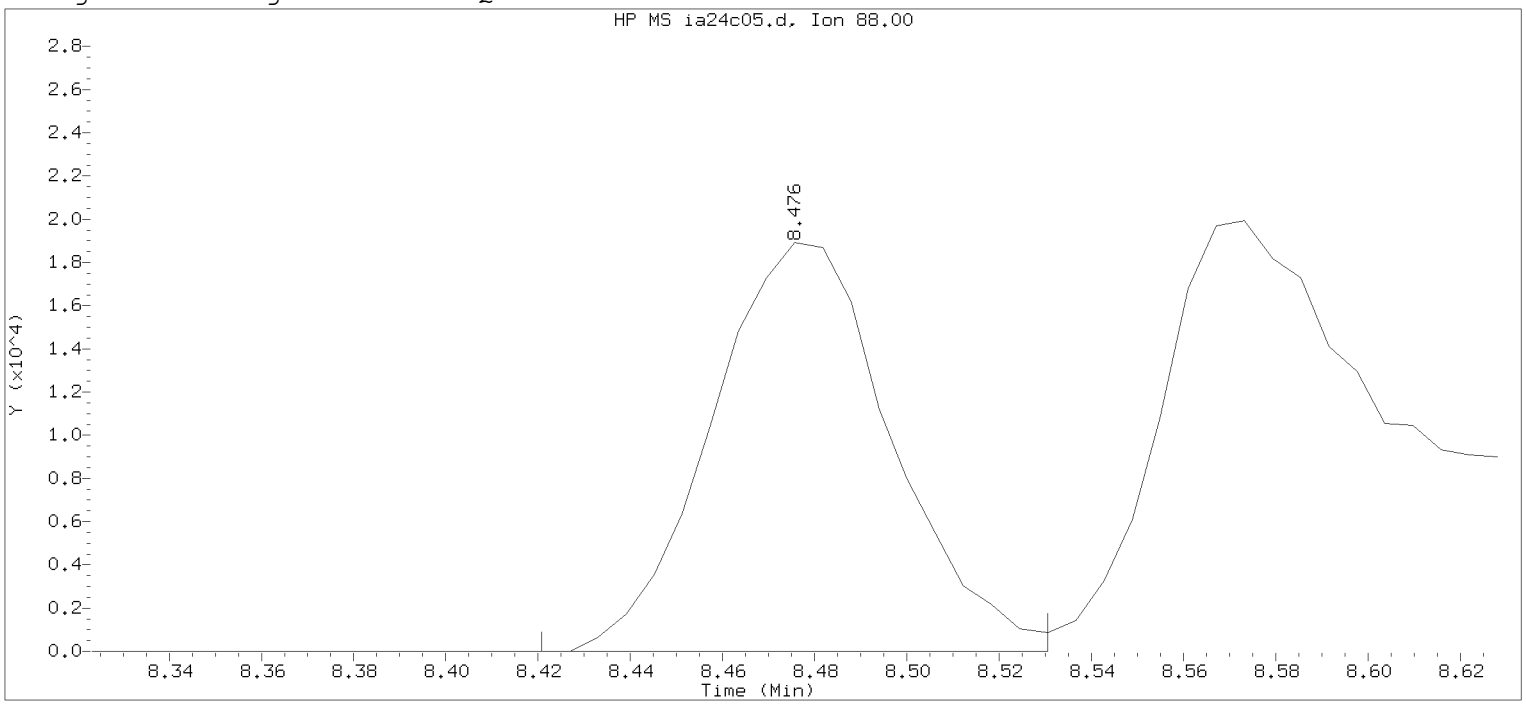
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

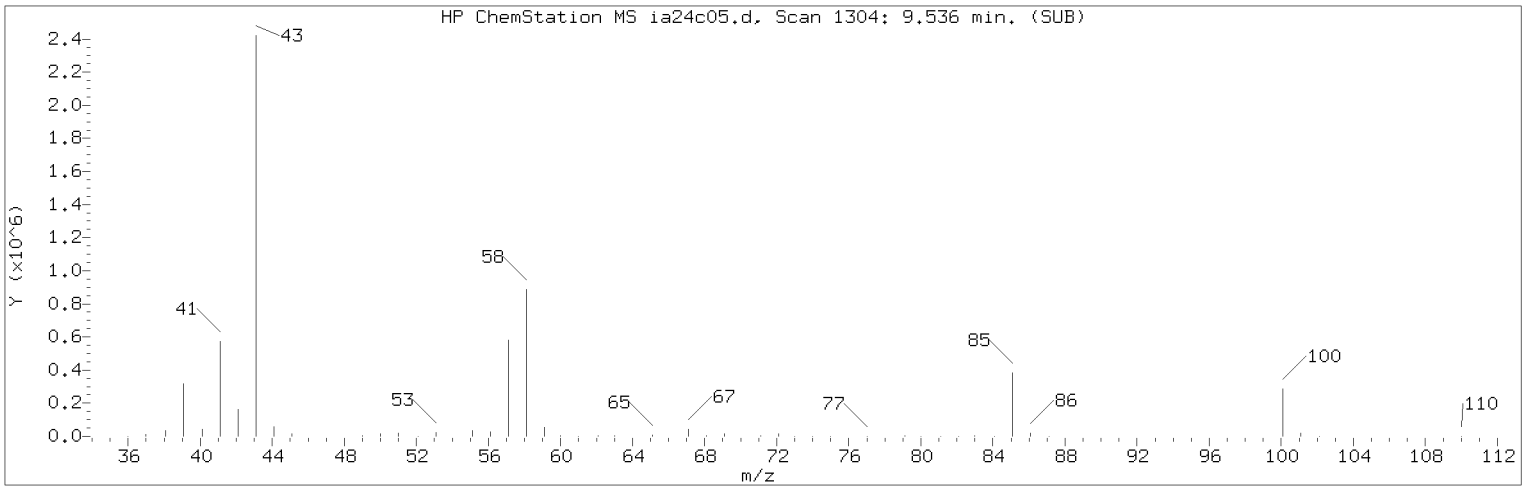
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

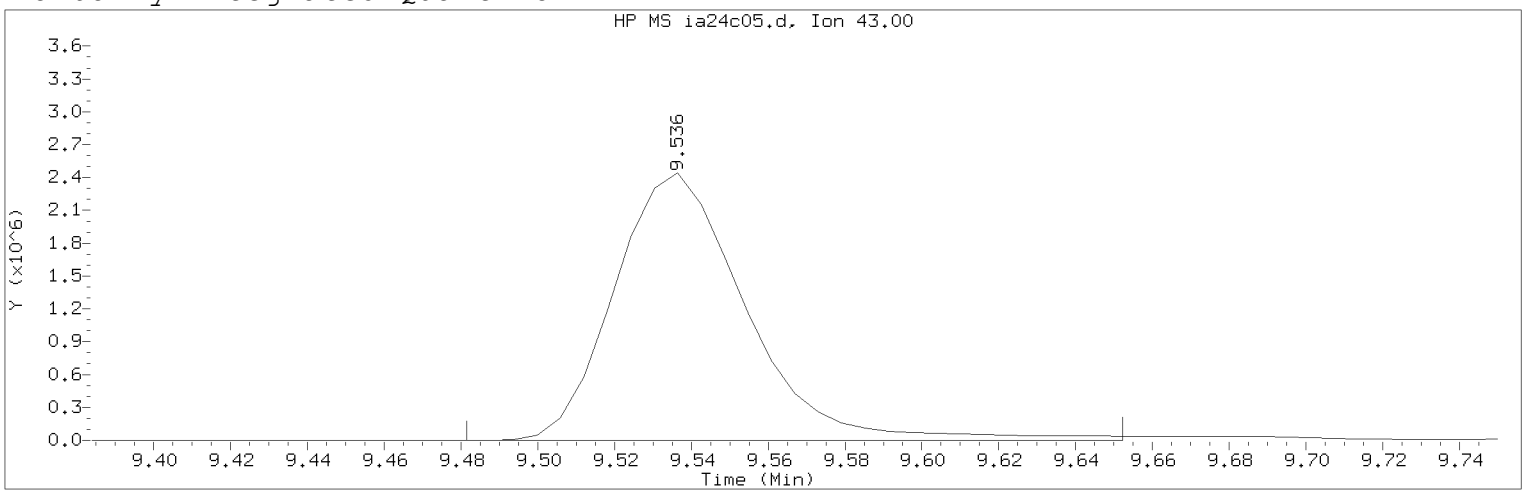
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 88.00
Area : 51200
On-column Amount (ng) : 191.9984
Integration start scan : 1120 Integration stop scan: 1138
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

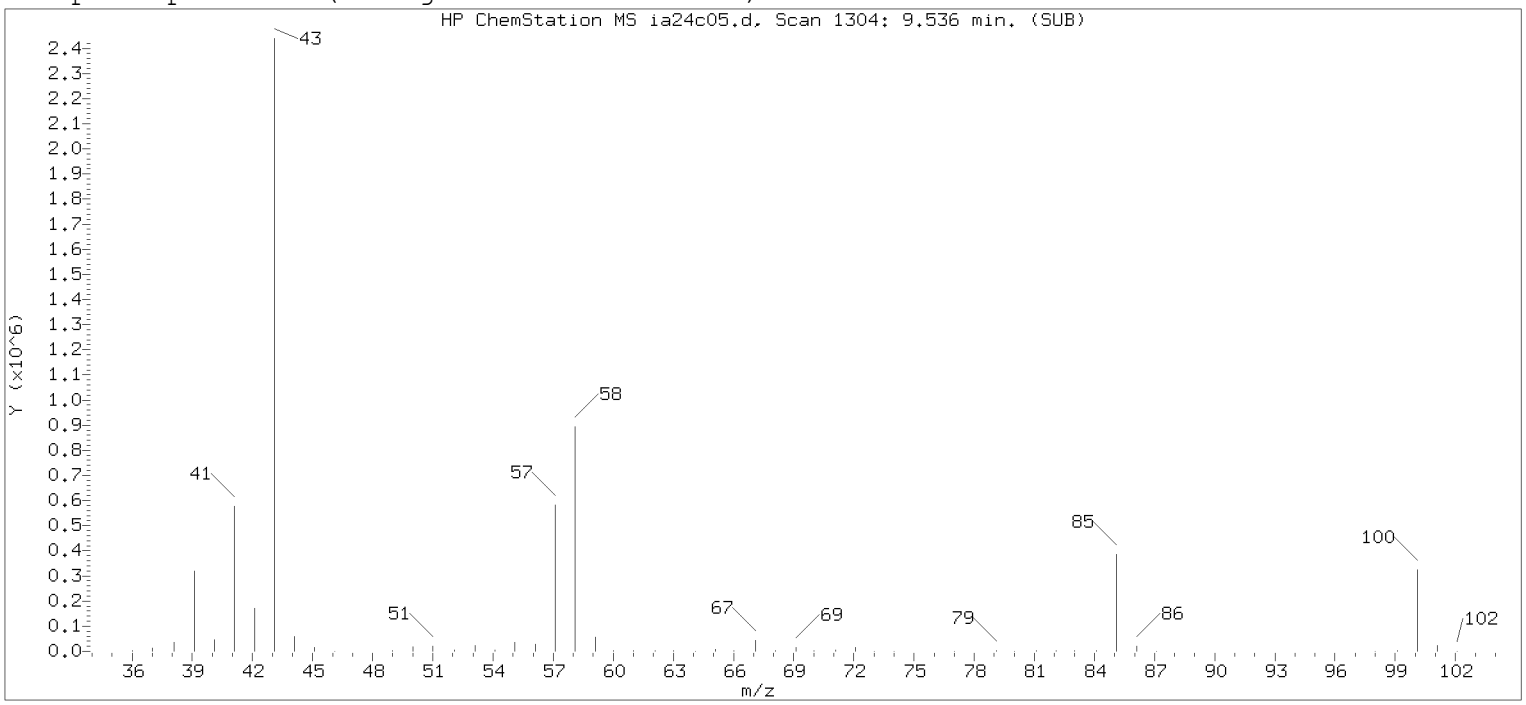
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.536
Quant Ion : 43.00
Area (flag) : 5804241M
On-Column Amount (ng) : 129.4003
Integration start scan : 1294 Integration stop scan: 1322
Y at integration start : 627 Y at integration end: 627

Reason for manual integration: improper integration

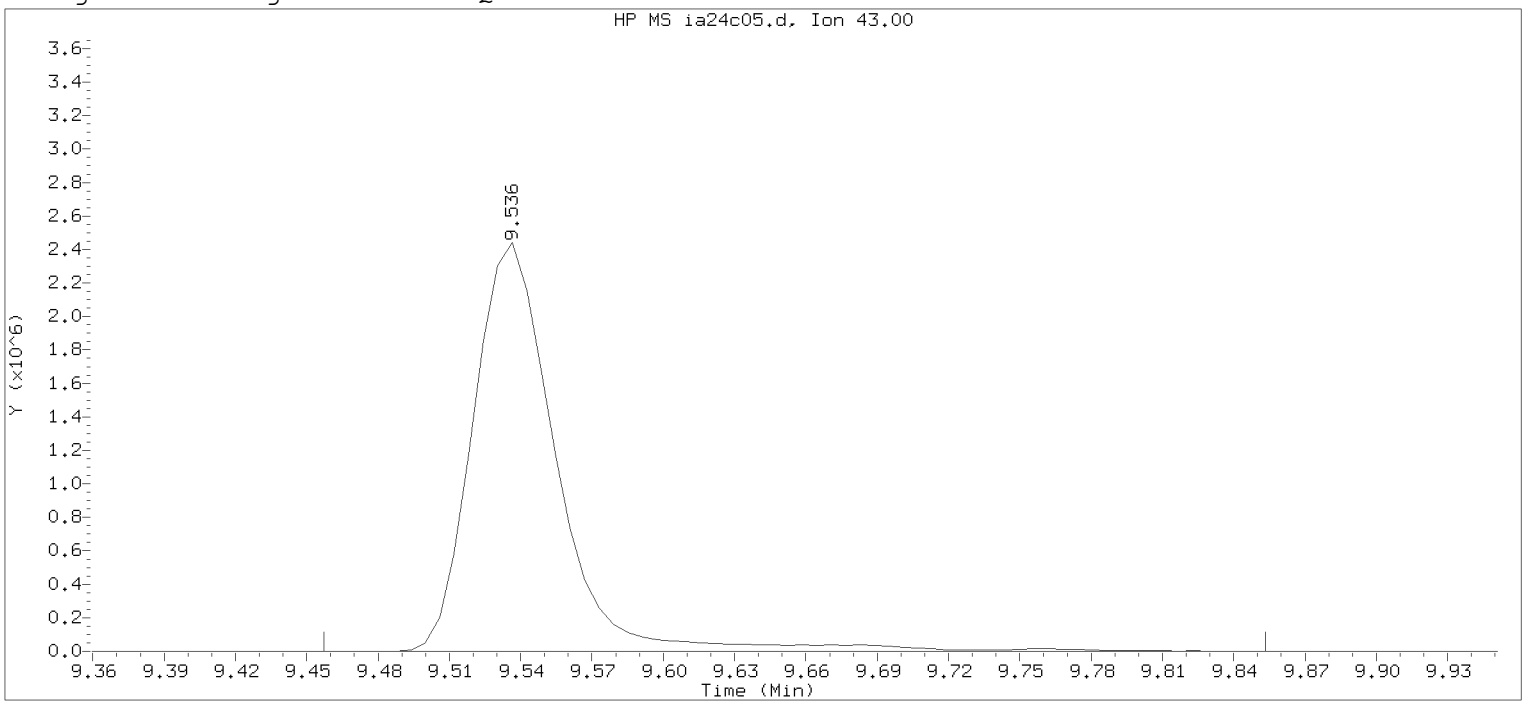
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

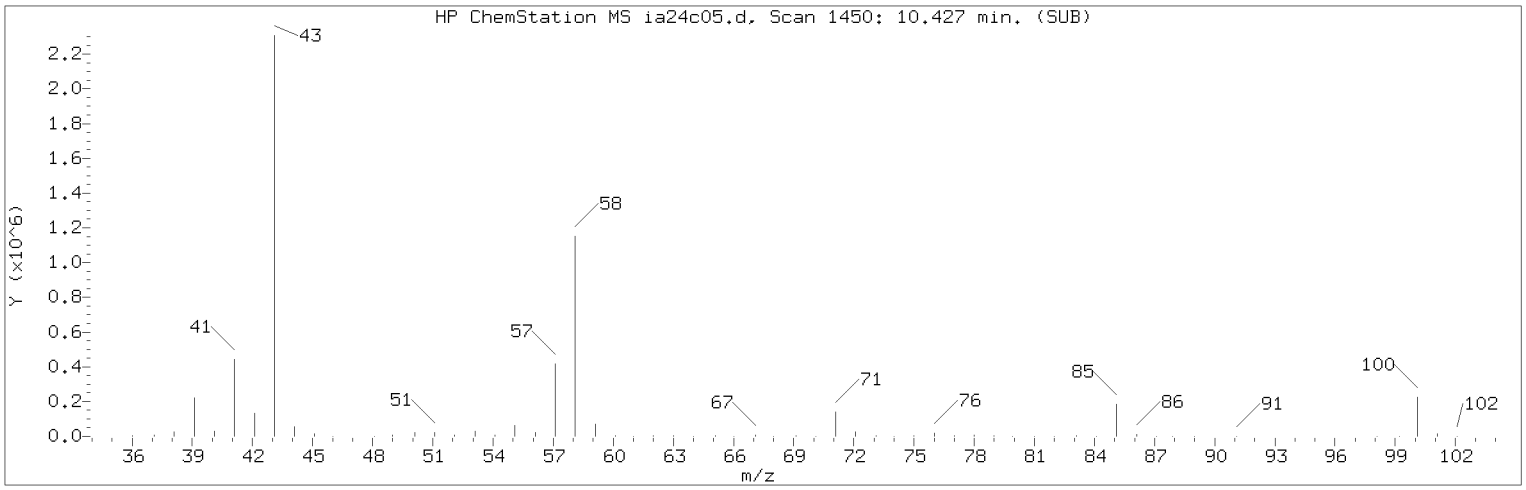
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

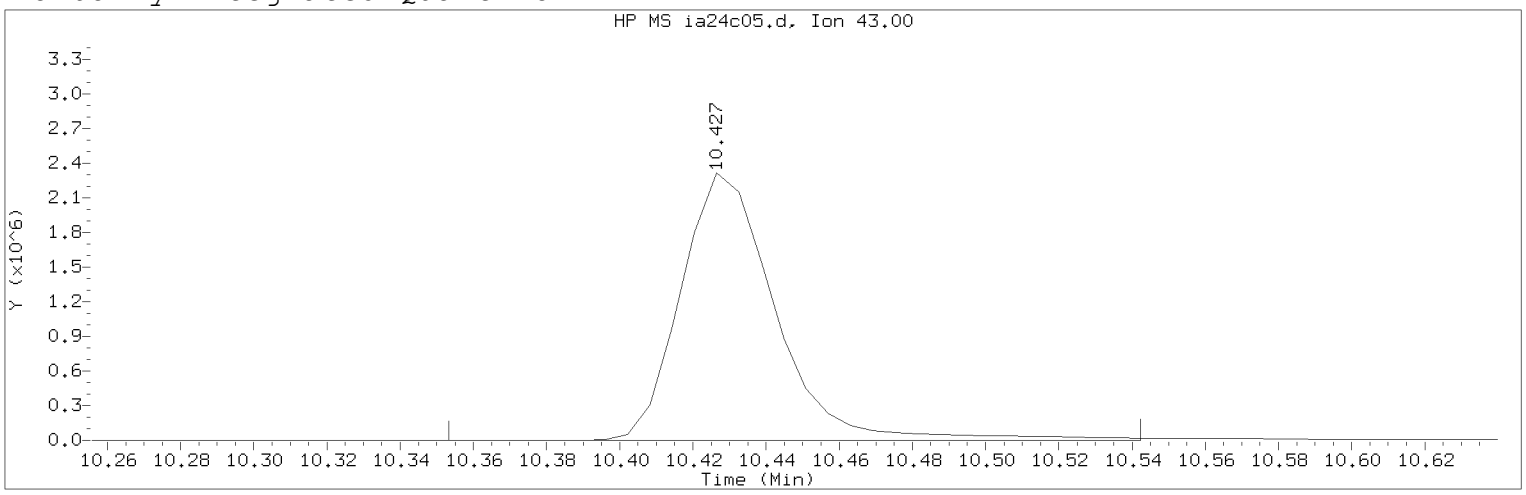
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.536
Quant Ion : 43.00
Area : 5953860
On-column Amount (ng) : 138.6392
Integration start scan : 1290 Integration stop scan: 1355
Y at integration start : 622 Y at integration end: 887

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

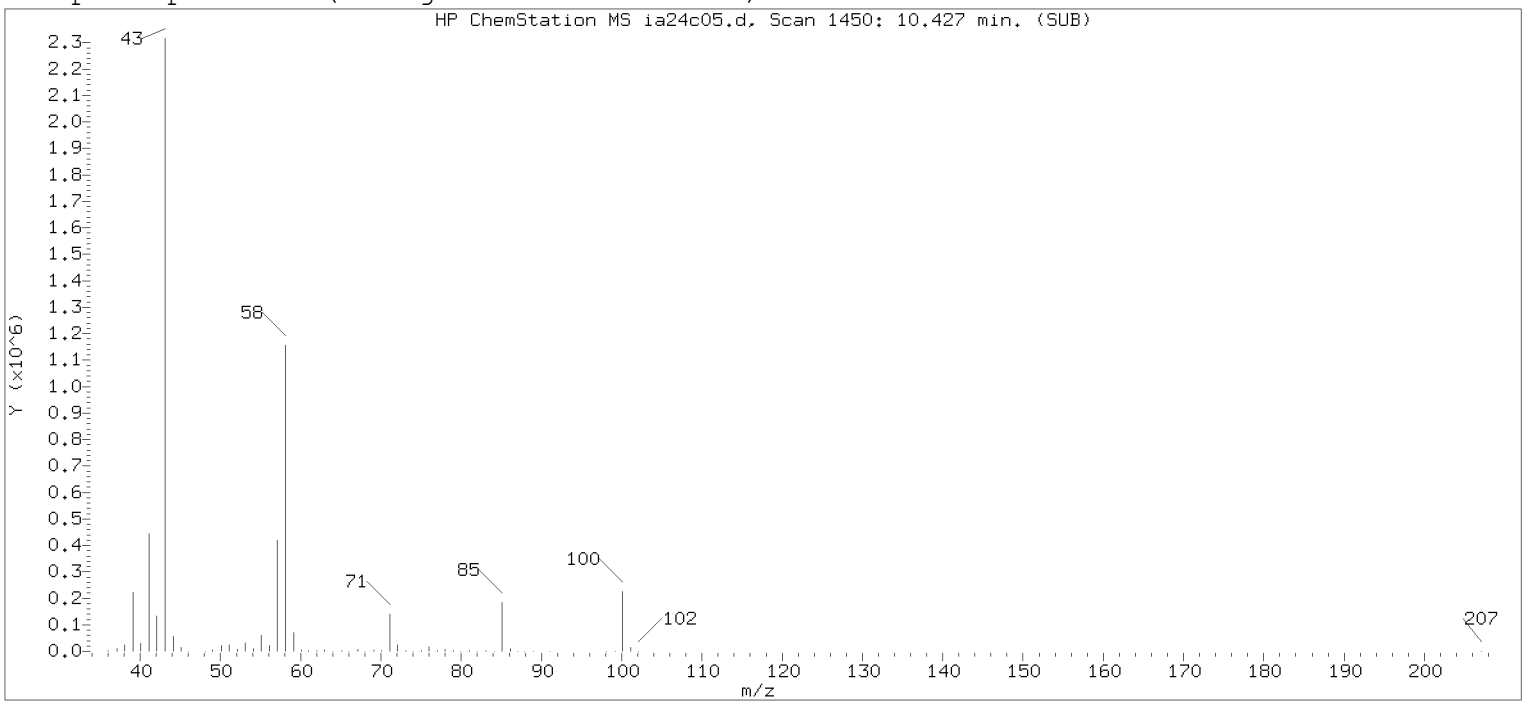
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1450
Retention Time (minutes): 10.427
Quant Ion : 43.00
Area (flag) : 4156221M
On-Column Amount (ng) : 131.2580
Integration start scan : 1437 Integration stop scan: 1468
Y at integration start : 412 Y at integration end: 412

Reason for manual integration: improper integration

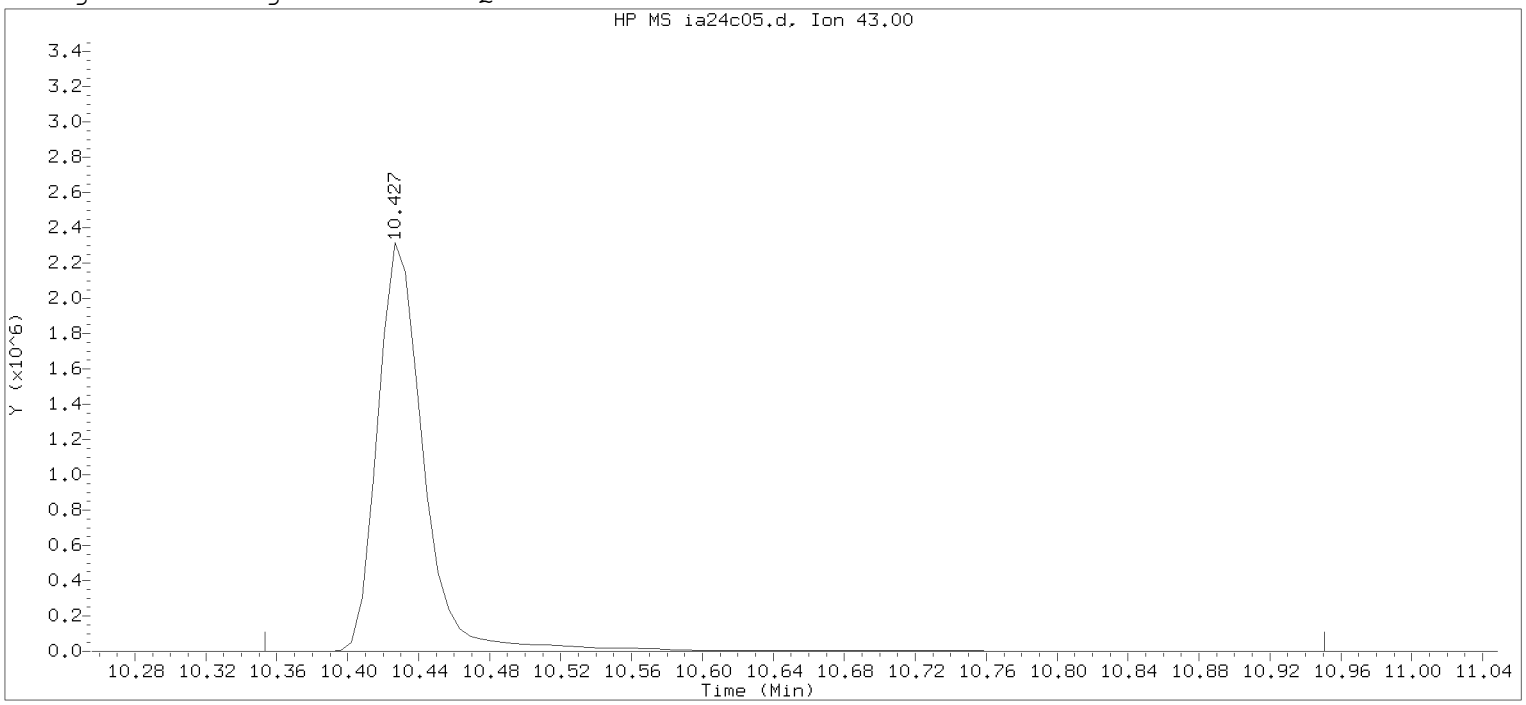
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

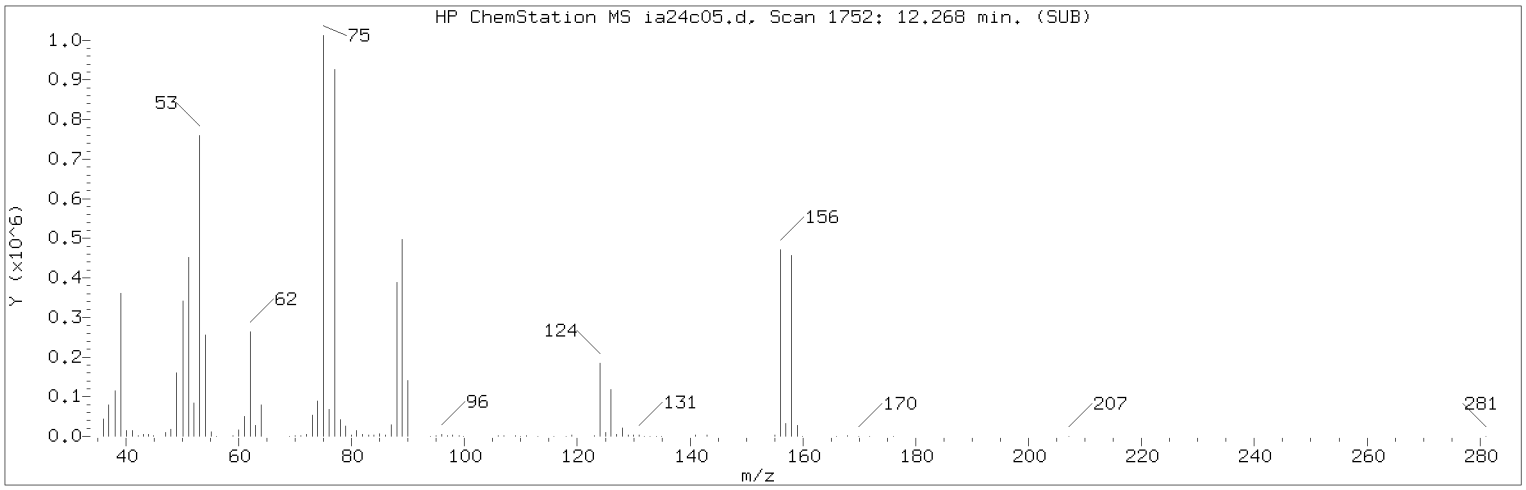
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

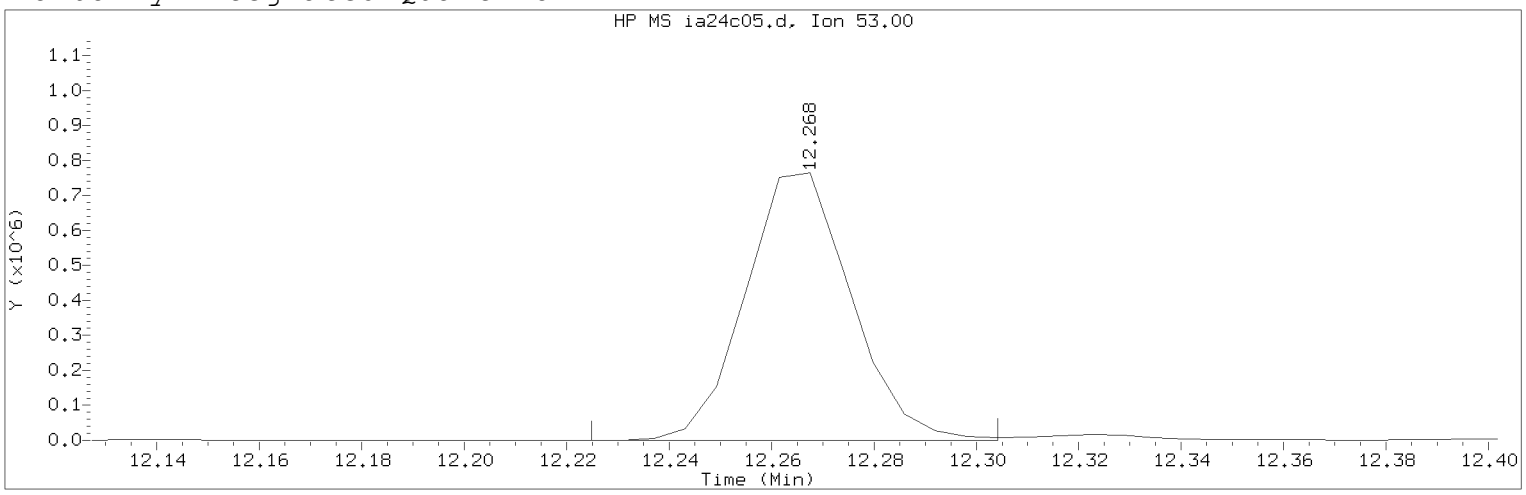
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1450
Retention Time (minutes): 10.427
Quant Ion : 43.00
Area : 4230869
On-column Amount (ng) : 139.5578
Integration start scan : 1437 Integration stop scan: 1535
Y at integration start : 412 Y at integration end: 412

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:11 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

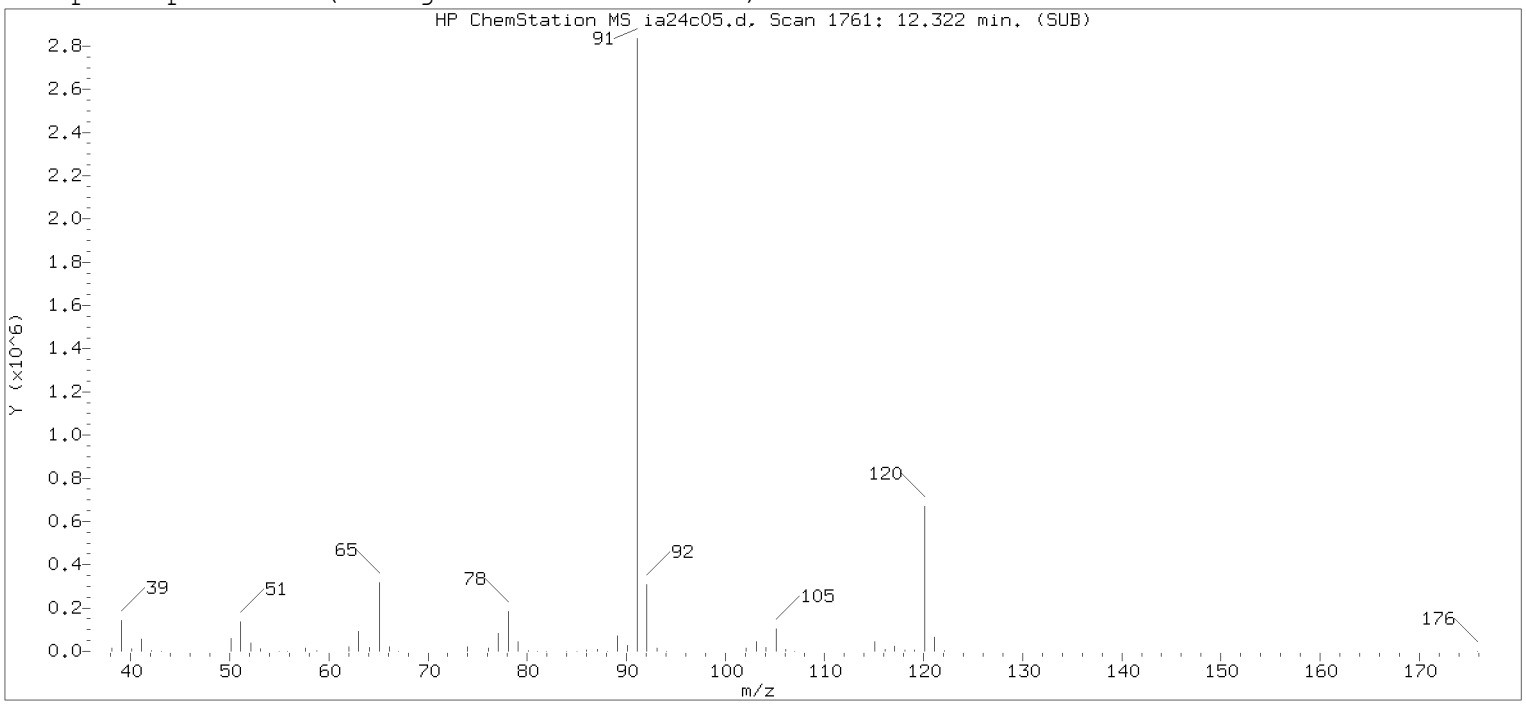
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1752
Retention Time (minutes): 12.268
Quant Ion : 53.00
Area (flag) : 1094896A
On-Column Amount (ng) : 97.3641
Integration start scan : 1744 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

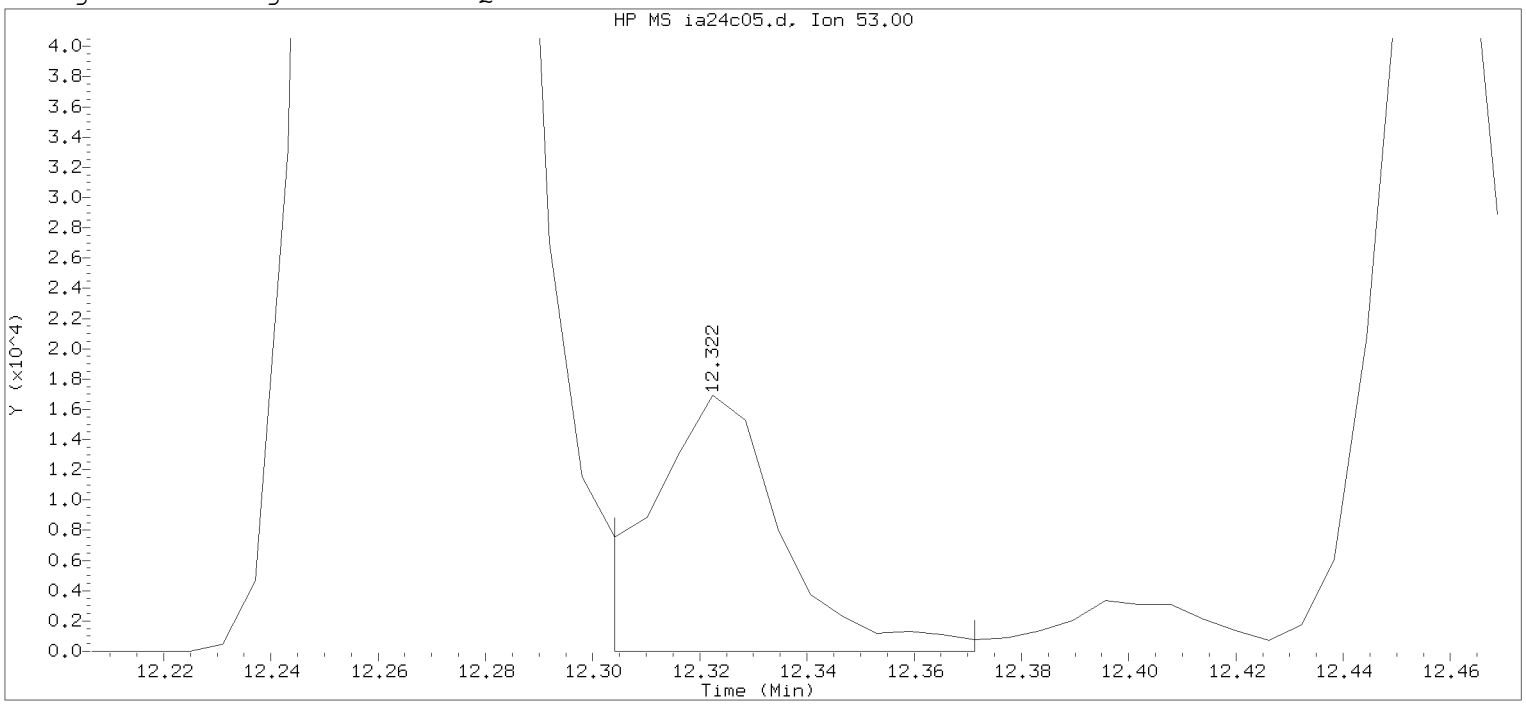
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:12.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c05.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 20:49 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-APR-2018 21:06
Date, time and analyst ID of latest file update: 24-Apr-2018 21:07 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1761
Retention Time (minutes): 12.322
Quant Ion : 53.00
Area : 27795
On-column Amount (ng) : 2.5816
Integration start scan : 1757 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 21:12.
Target 3.5 esignature used on 04/24/2018

Data File: /chem2/HP19930.i/18apr12i.b/ia12t02.d

Date : 12-APR-2018 09:49

Client ID: BFB 50ng

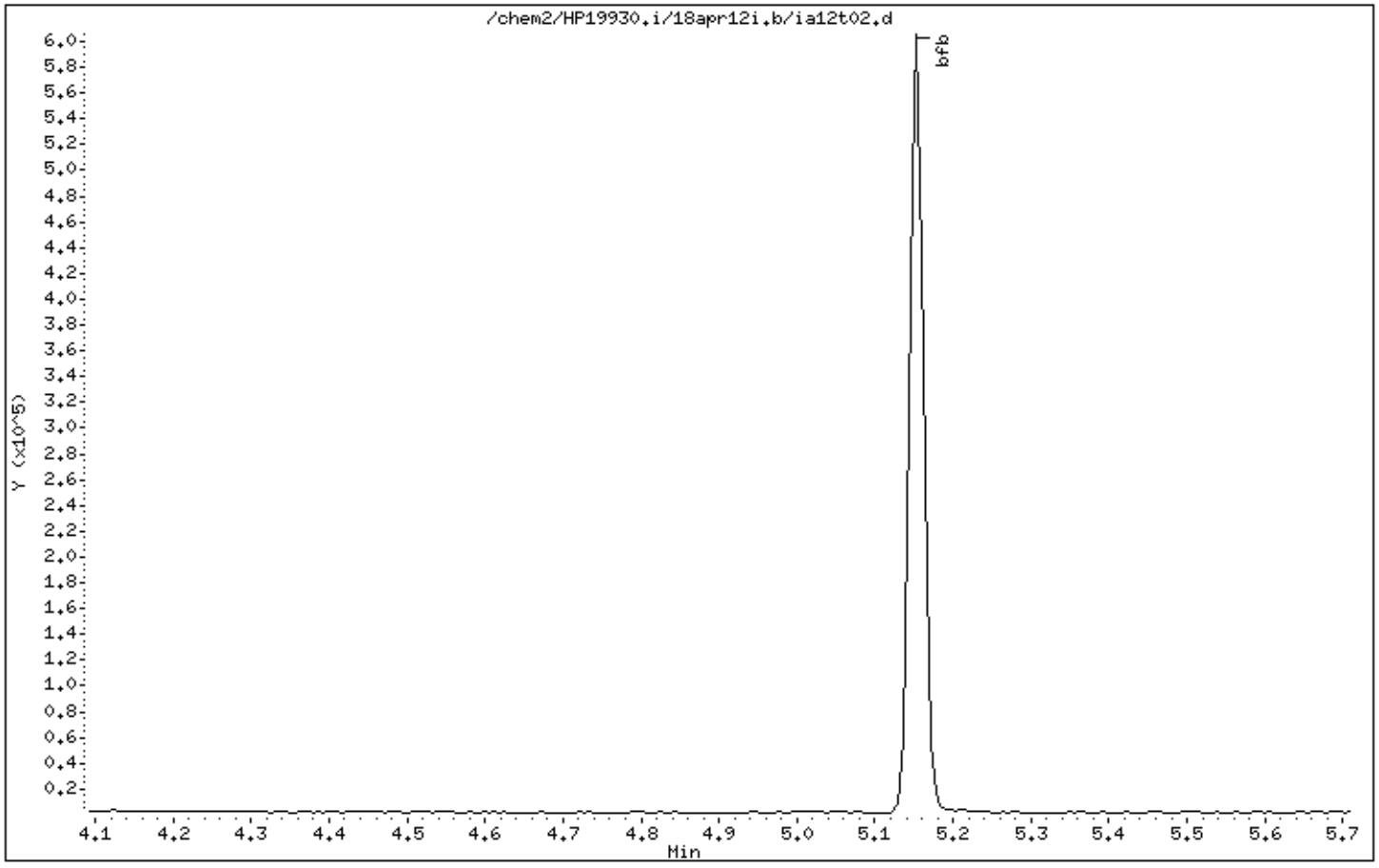
Instrument: HP19930.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jennifer K. Howe on 04/12/2018 at 14:16.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19930.i/18apr12i.b/ia12t02.d

Date : 12-APR-2018 09:49

Client ID: BFB 50ng

Instrument: HP19930.i

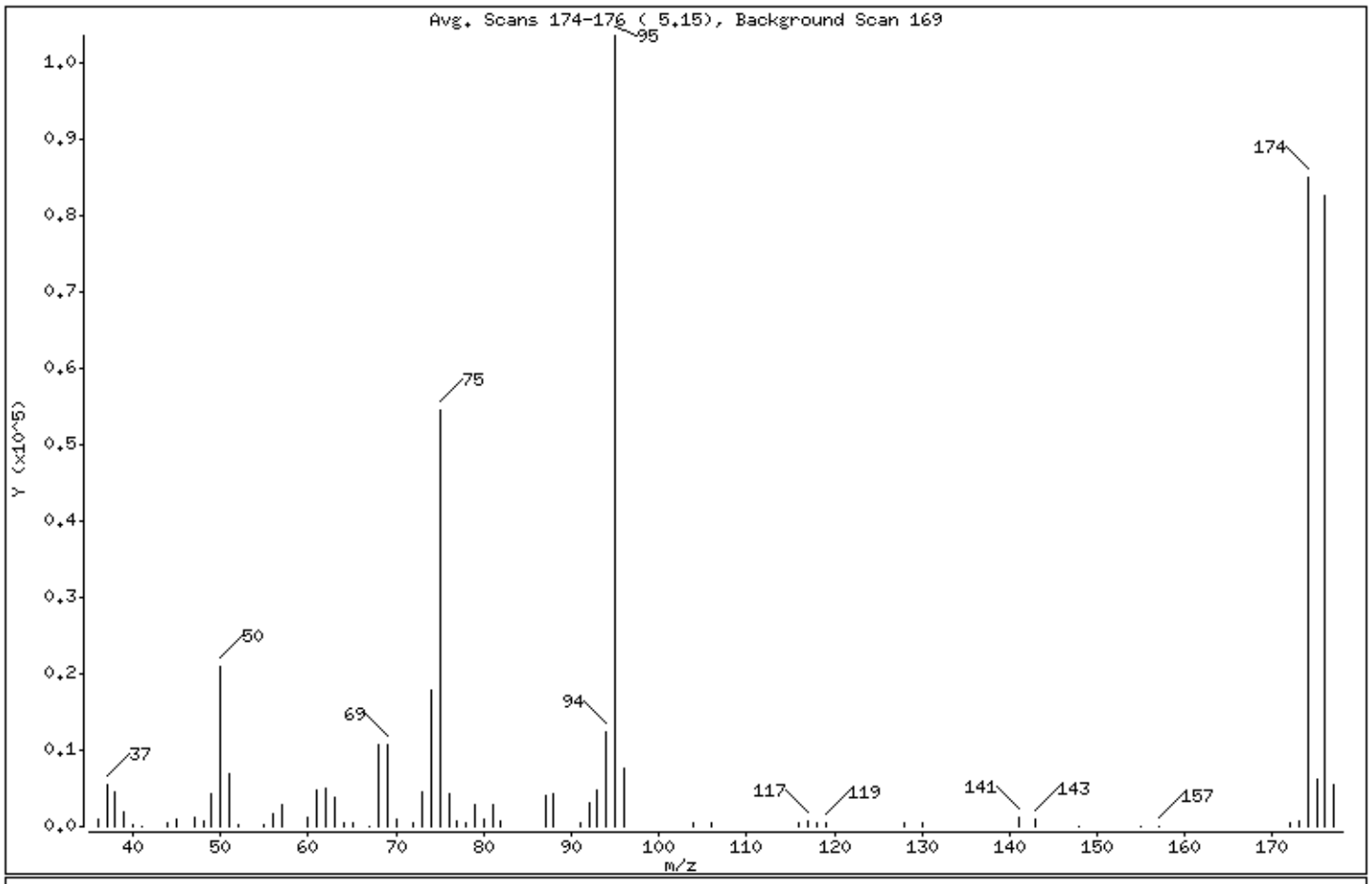
Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.14
75	30.00 - 60.00% of mass 95	52.73
96	5.00 - 9.00% of mass 95	7.36
173	Less than 2.00% of mass 174	0.67 (0.82)
174	50.00 - 100.00% of mass 95	81.96
175	5.00 - 9.00% of mass 174	5.90 (7.20)
176	95.00 - 101.00% of mass 174	79.68 (97.22)
177	5.00 - 9.00% of mass 176	5.29 (6.64)

Digitally signed by Jennifer K. Howe on 04/12/2018 at 14:16.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19930.i/18apr12i.b/ia12t02.d

Date : 12-APR-2018 09:49

Client ID: BFB 50ng

Instrument: HP19930.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;;

Operator: JKH09052

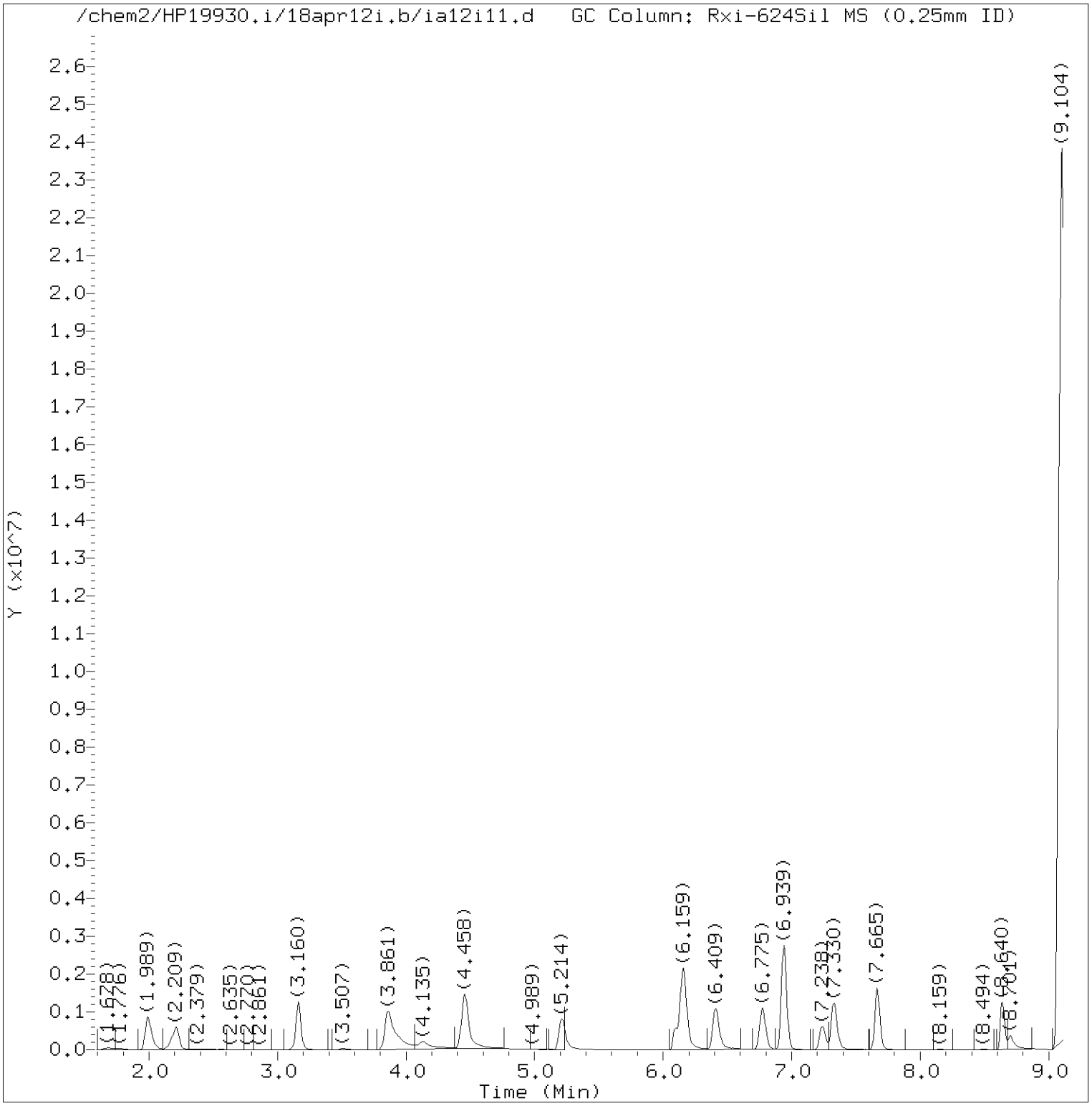
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: ia12t02.d
Spectrum: Avg. Scans 174-176 (5.15), Background Scan 169
Location of Maximum: 95.00
Number of points: 65

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	923	60.00	1078	79.00	2843	119.00	552
37.00	5494	61.00	4878	80.00	921	128.00	385
38.00	4462	62.00	4985	81.00	2810	130.00	411
39.00	1954	63.00	3890	82.00	624	141.00	1132
40.00	203	64.00	448	87.00	3983	143.00	1037
41.00	83	65.00	421	88.00	4305	148.00	84
44.00	422	67.00	110	91.00	403	155.00	83
45.00	1061	68.00	10693	92.00	3203	157.00	91
47.00	1168	69.00	10766	93.00	4783	172.00	578
48.00	596	70.00	904	94.00	12469	173.00	695
49.00	4249	72.00	594	95.00	103544	174.00	84872
50.00	20856	73.00	4566	96.00	7617	175.00	6107
51.00	6791	74.00	17752	104.00	447	176.00	82512
52.00	286	75.00	54600	106.00	399	177.00	5478
55.00	352	76.00	4402	116.00	411		
56.00	1663	77.00	656	117.00	696		
57.00	2818	78.00	402	118.00	406		

Digitally signed by Jennifer K. Howe on 04/12/2018 at 14:16.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

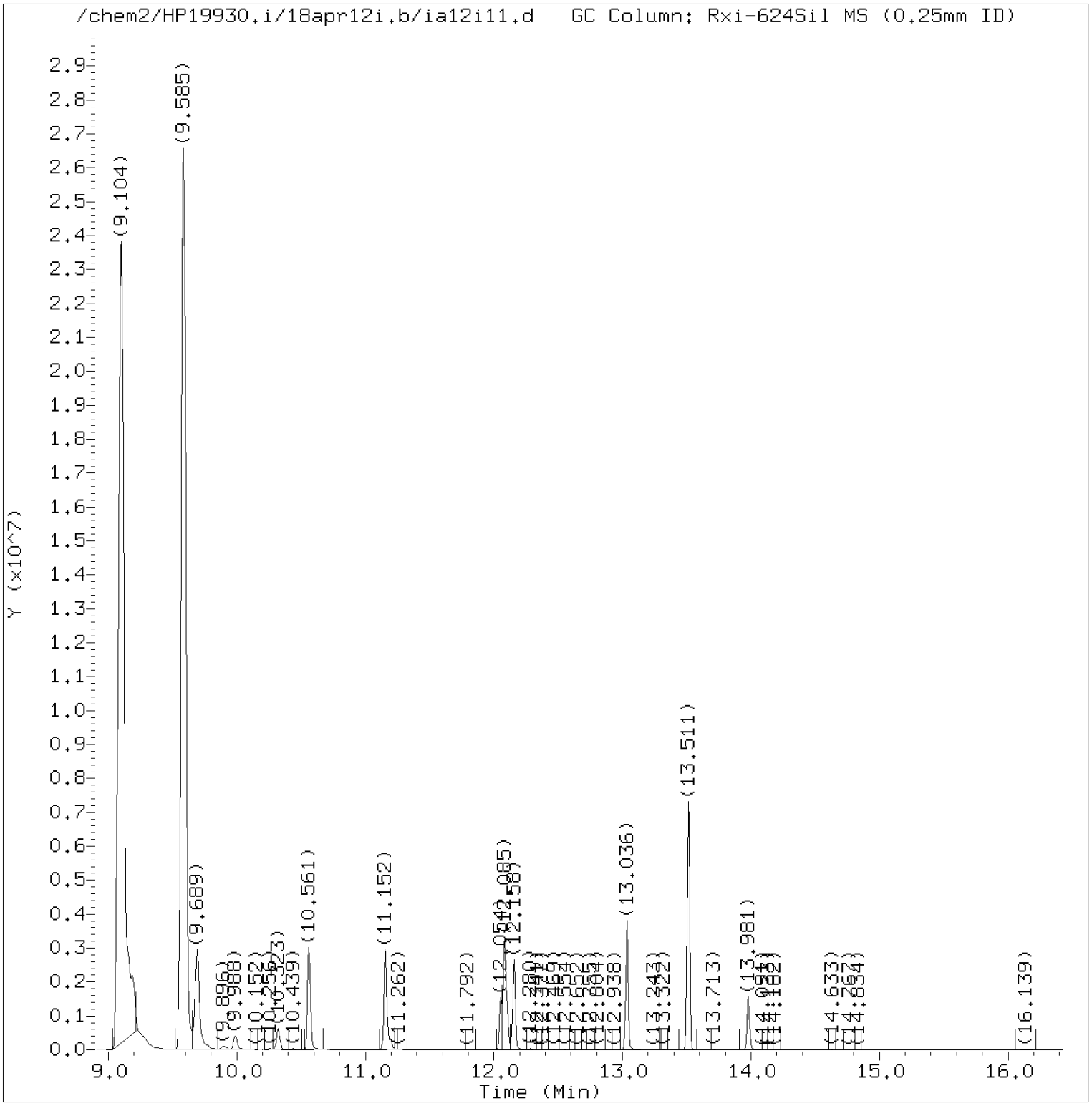
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

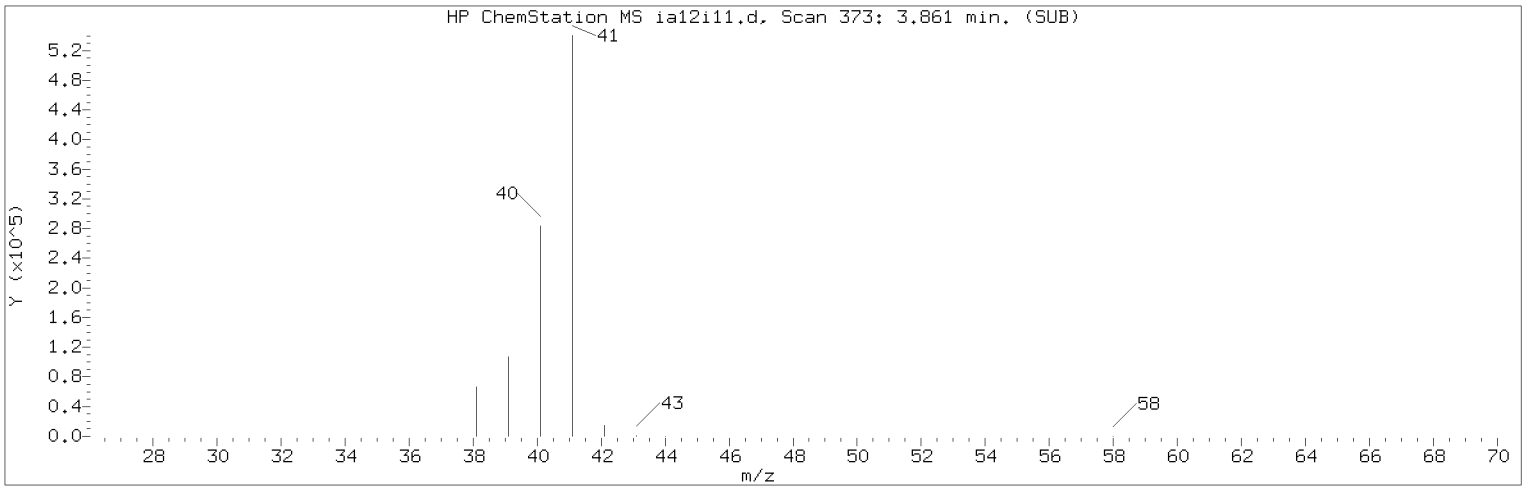
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.989	45	2015345	24.902
25) Acetonitrile	(1)	3.861	41	4502270M	1000.493
26)*t-Butyl Alcohol-d10	(1)	4.135	65	165803M	50.000
36) Vinyl Acetate	(2)	5.214	43	2519352	24.989
43) Methyl Acrylate	(2)	6.159	55	4775565	149.902
53) 1-Chlorobutane	(2)	6.939	56	3248683	26.950
63)*Fluorobenzene	(2)	7.665	96	2103815	10.000
77) Chloroacetonitrile	(2)	9.152	75	2198260	1297.682
78) 2-Chloroethyl vinyl ether	(2)	9.195	63	711715	28.862
97)*Chlorobenzene-d5	(3)	11.158	117	1626512	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.054	88	310464A	26.630
112) Cyclohexanone	(1)	12.085	55	1536870	1383.549
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	855294	10.000
142) Hexachloroethane	(4)	13.511	117	1223612	33.130

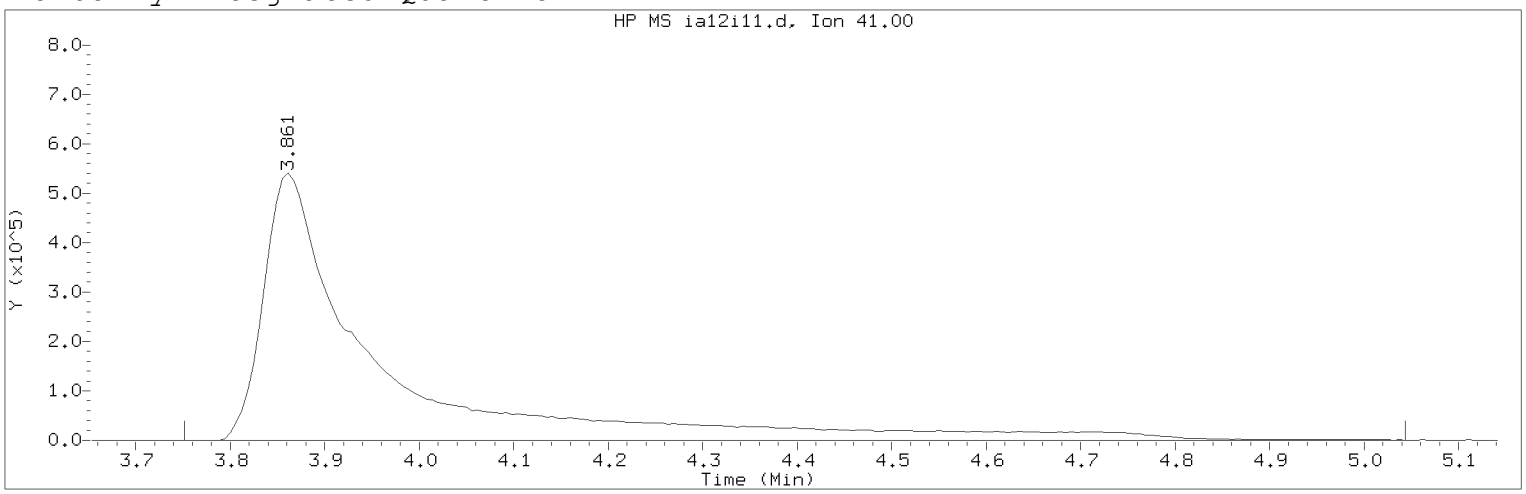
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

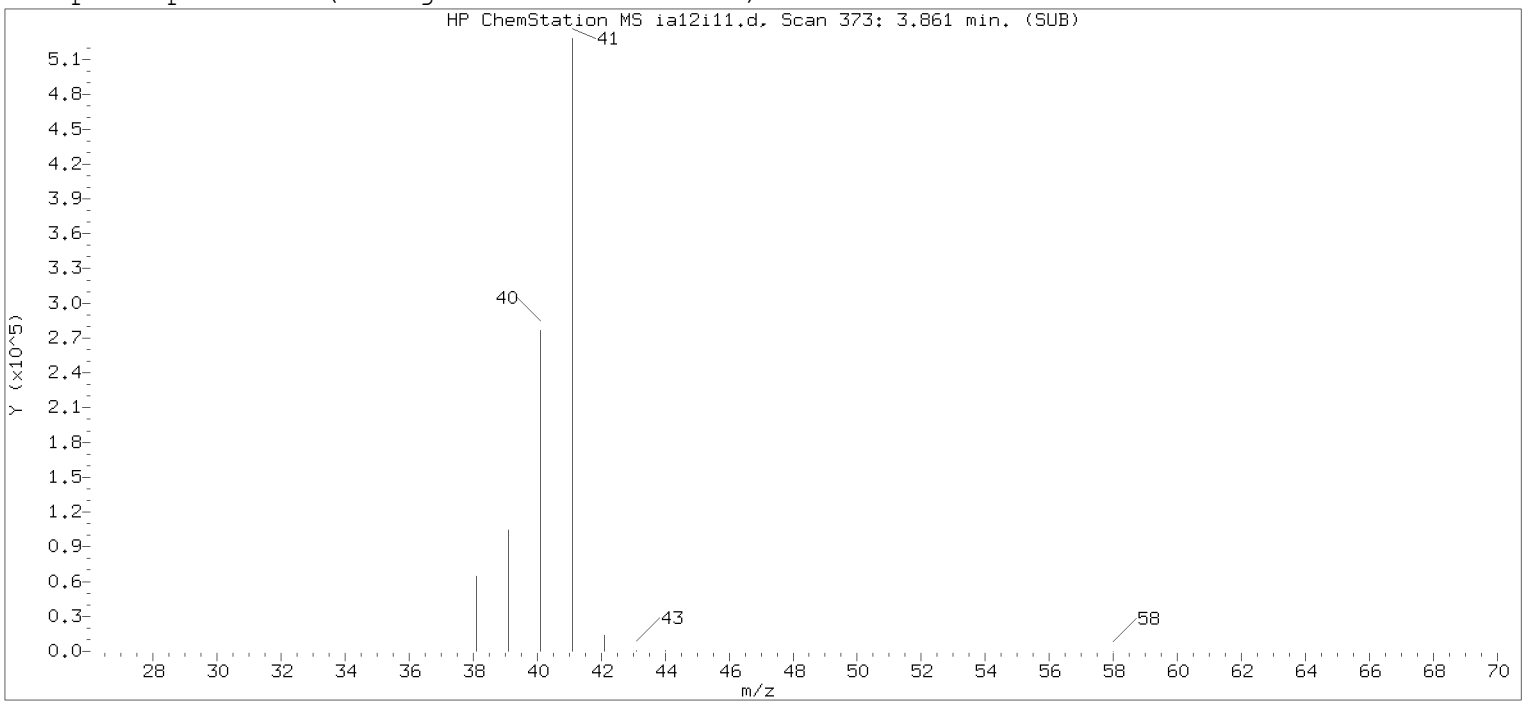
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area (flag) : 4502270M
On-Column Amount (ng) : 1000.4925
Integration start scan : 354 Integration stop scan: 566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

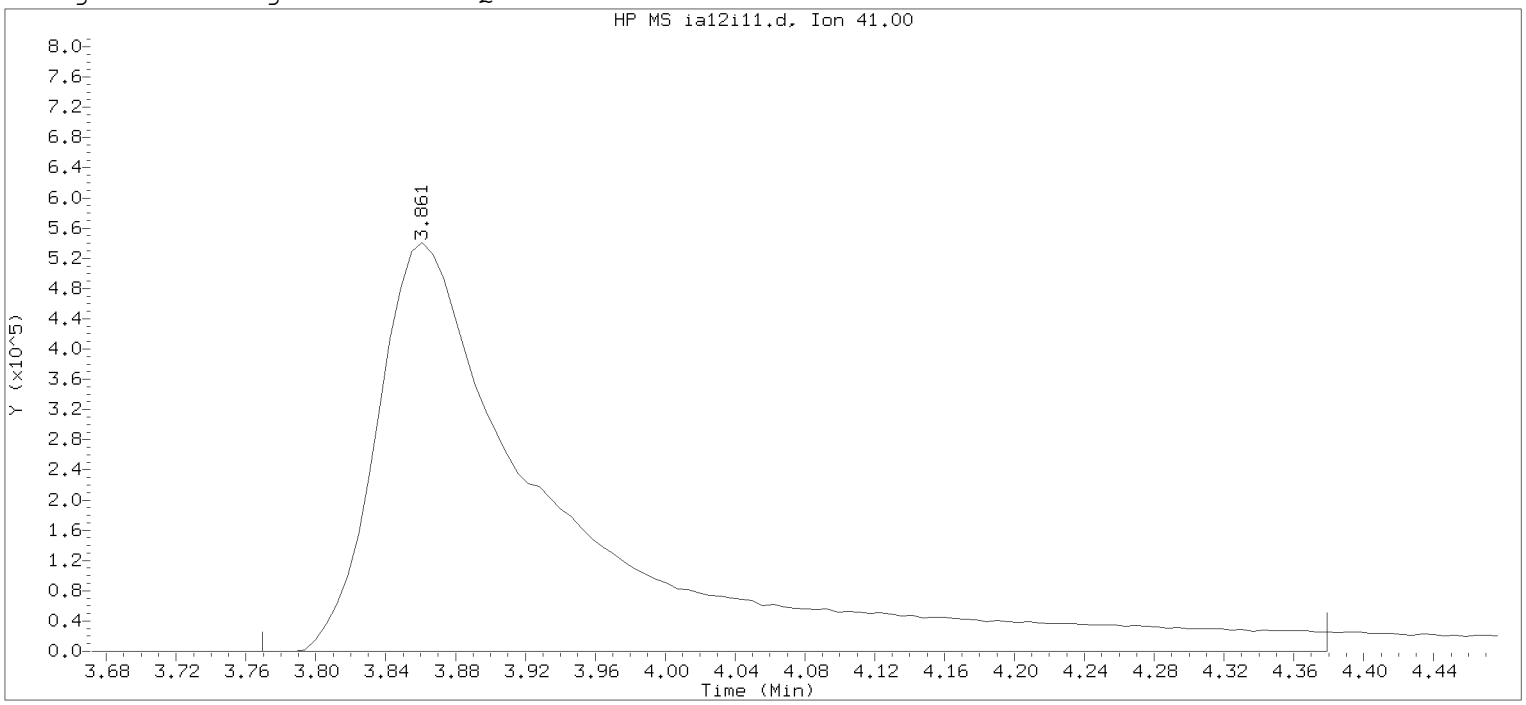
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

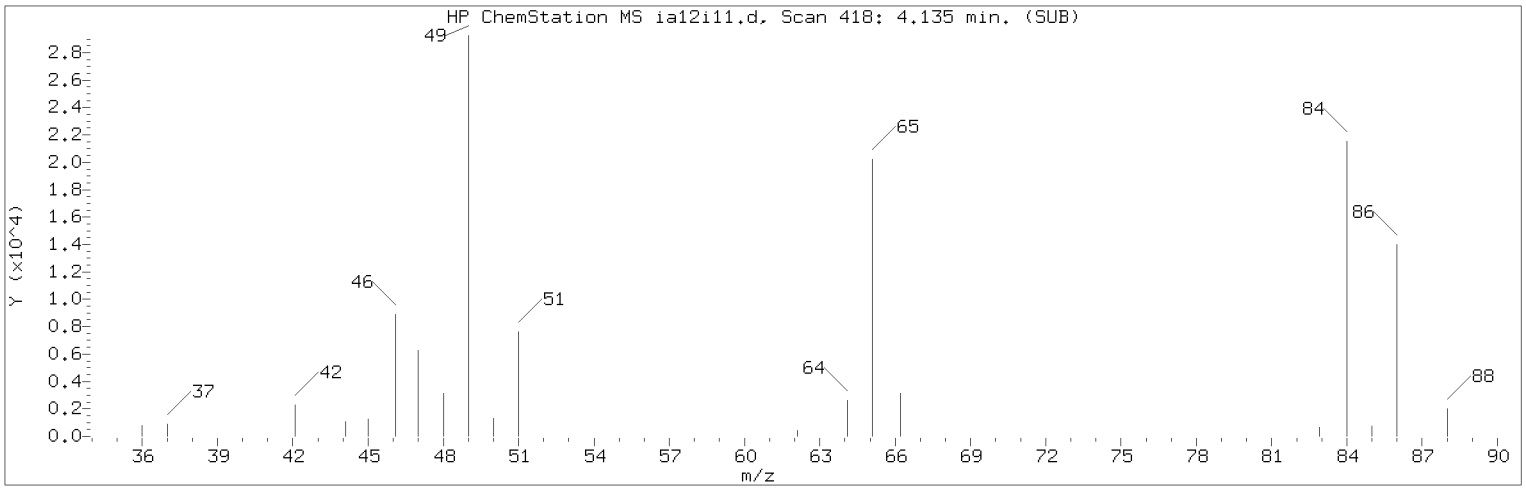
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

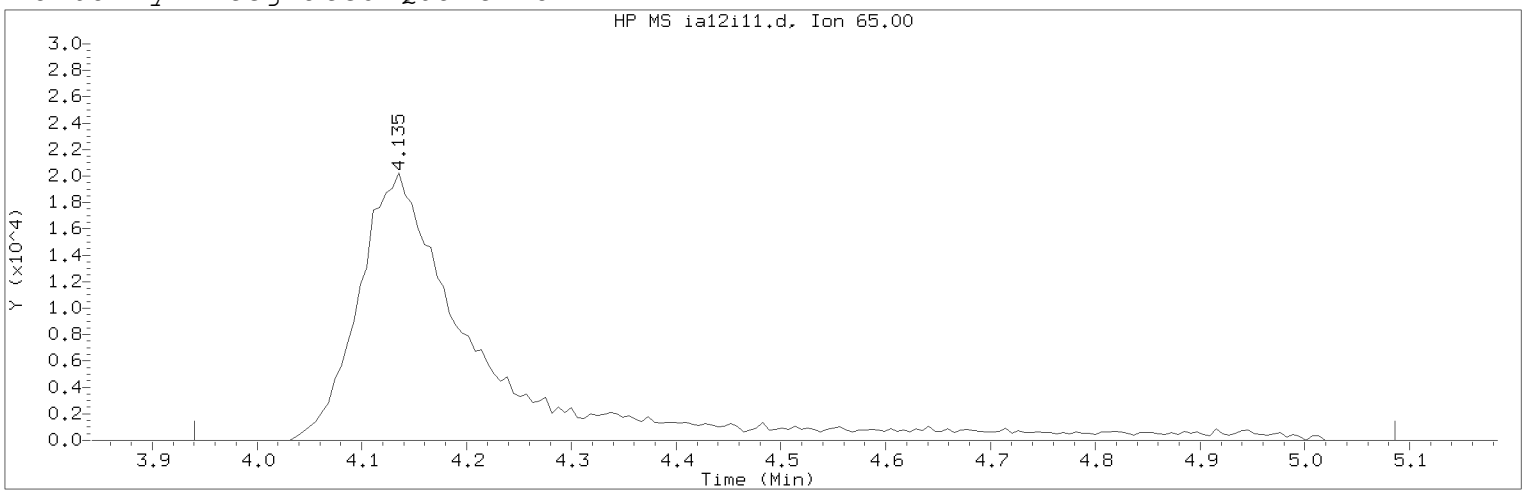
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area : 4030880
On-column Amount (ng) : 958.9700
Integration start scan : 357 Integration stop scan: 457
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

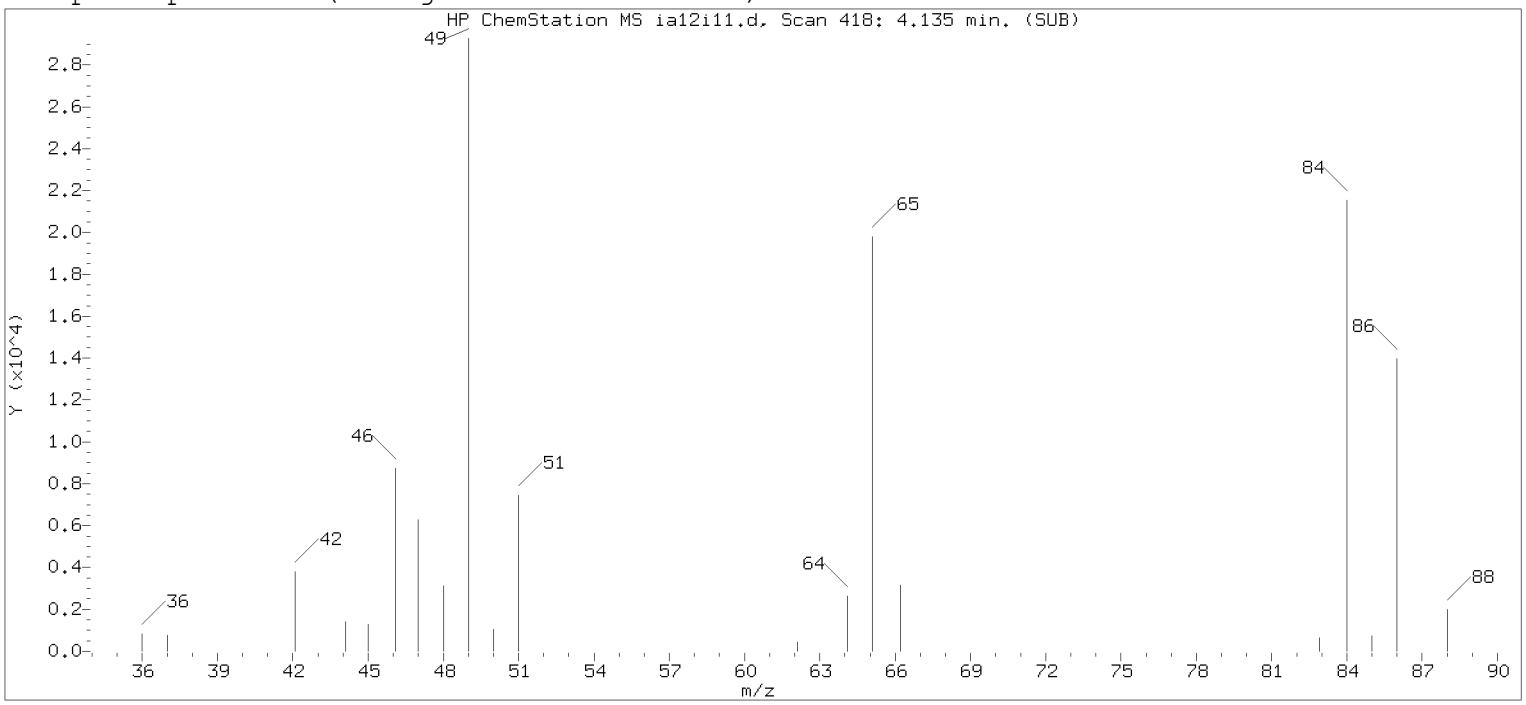
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area (flag) : 165803M
On-Column Amount (ng) : 50.0000
Integration start scan : 385 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

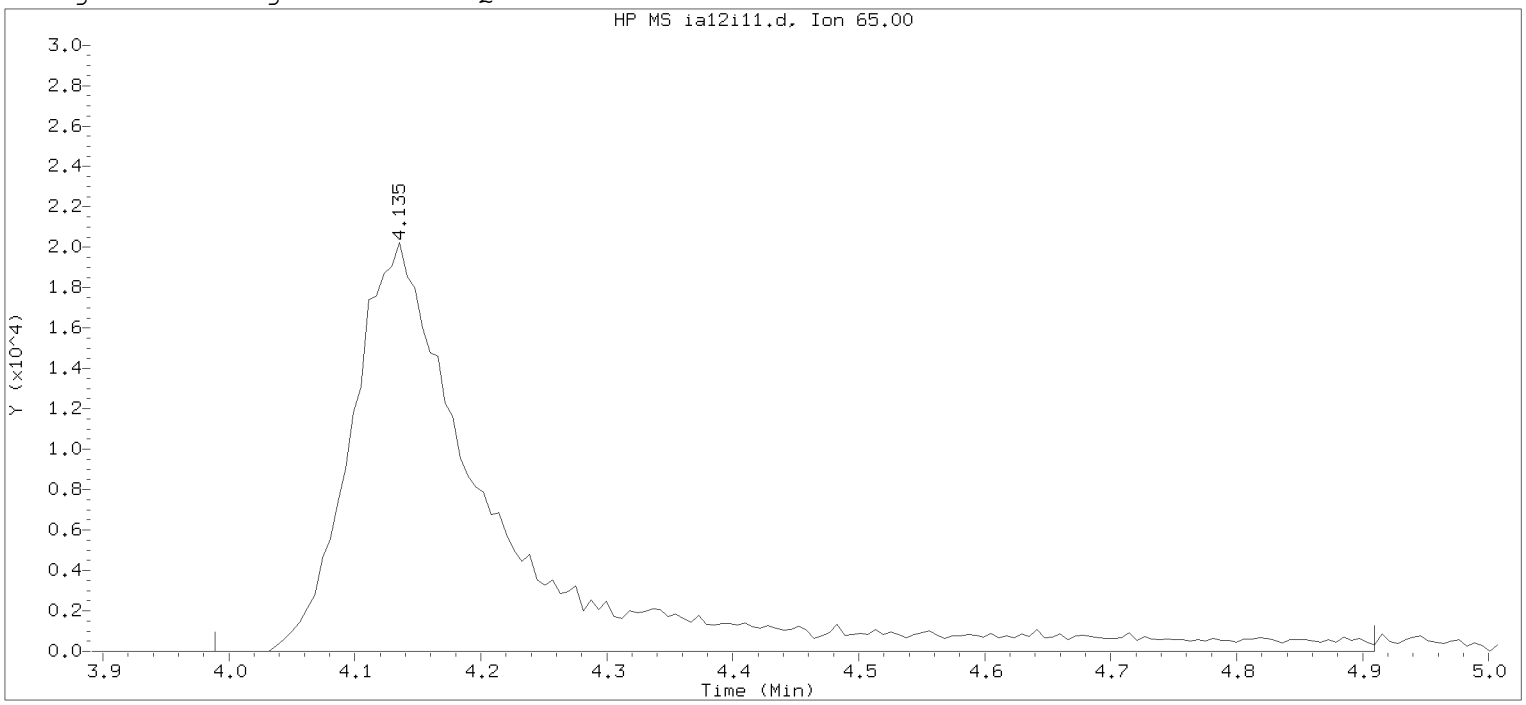
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

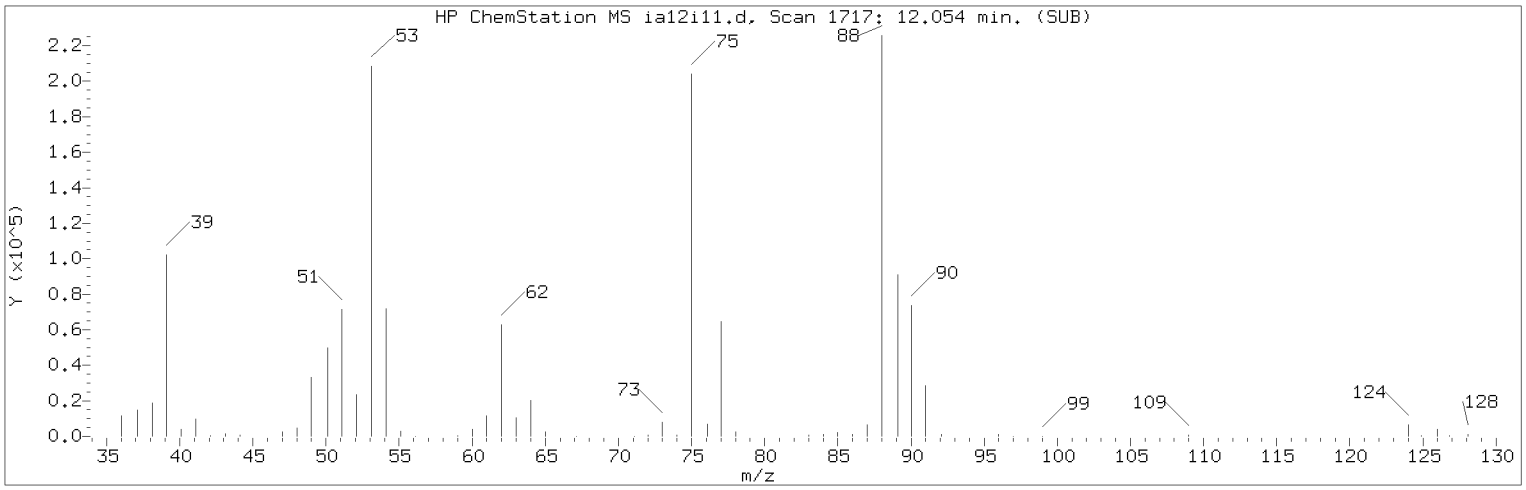
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

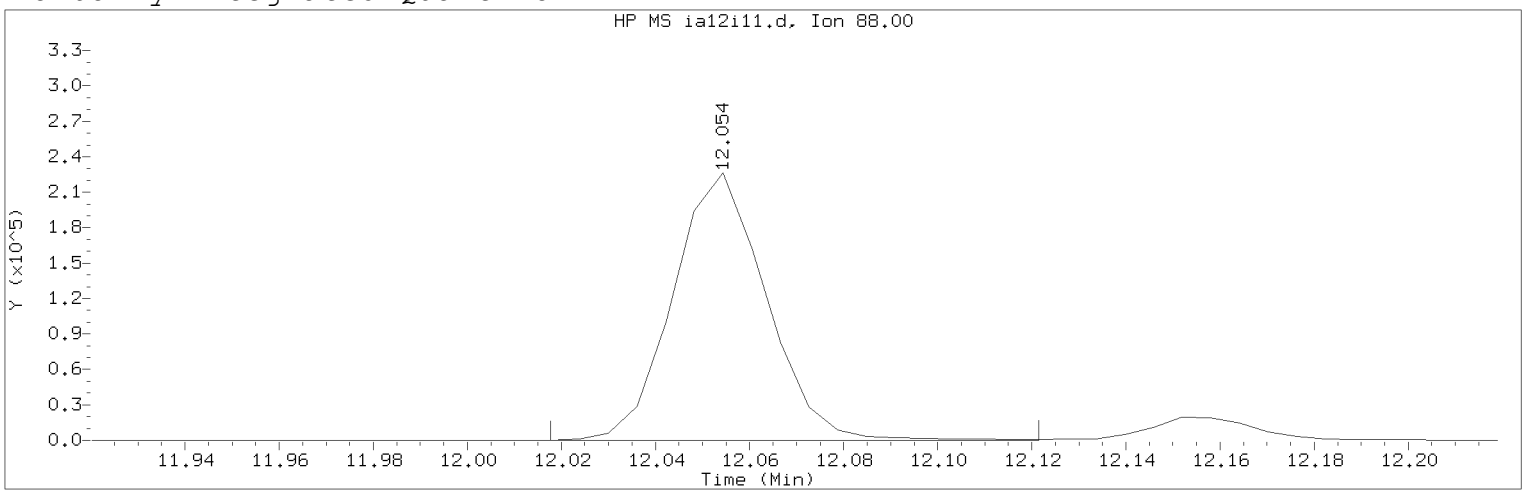
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 418
Retention Time (minutes): 4.135
Quant Ion : 65.00
Area : 162887
On-column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 544
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used. Reason: I approve this document.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

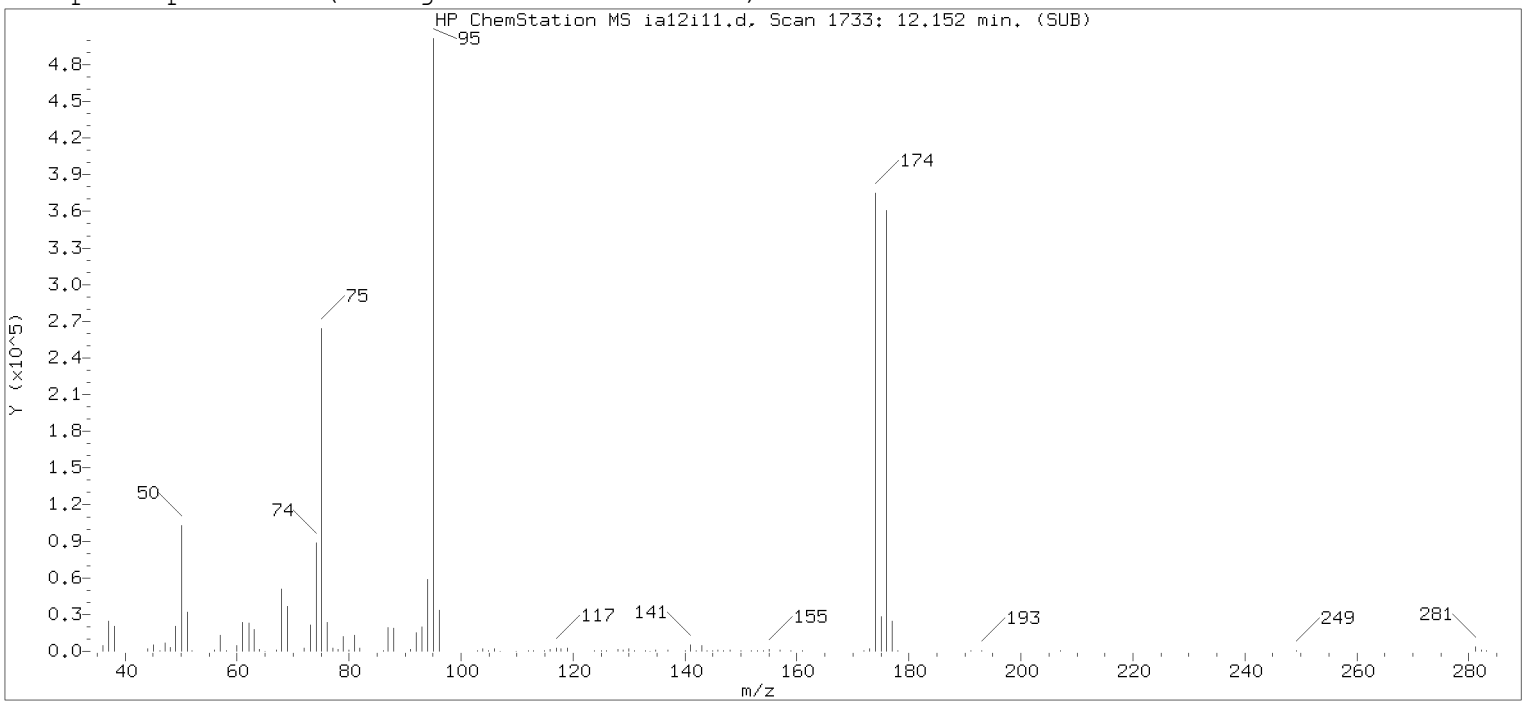
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1717
Retention Time (minutes): 12.054
Quant Ion : 88.00
Area (flag) : 310464A
On-Column Amount (ng) : 26.6297
Integration start scan : 1710 Integration stop scan: 1727
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

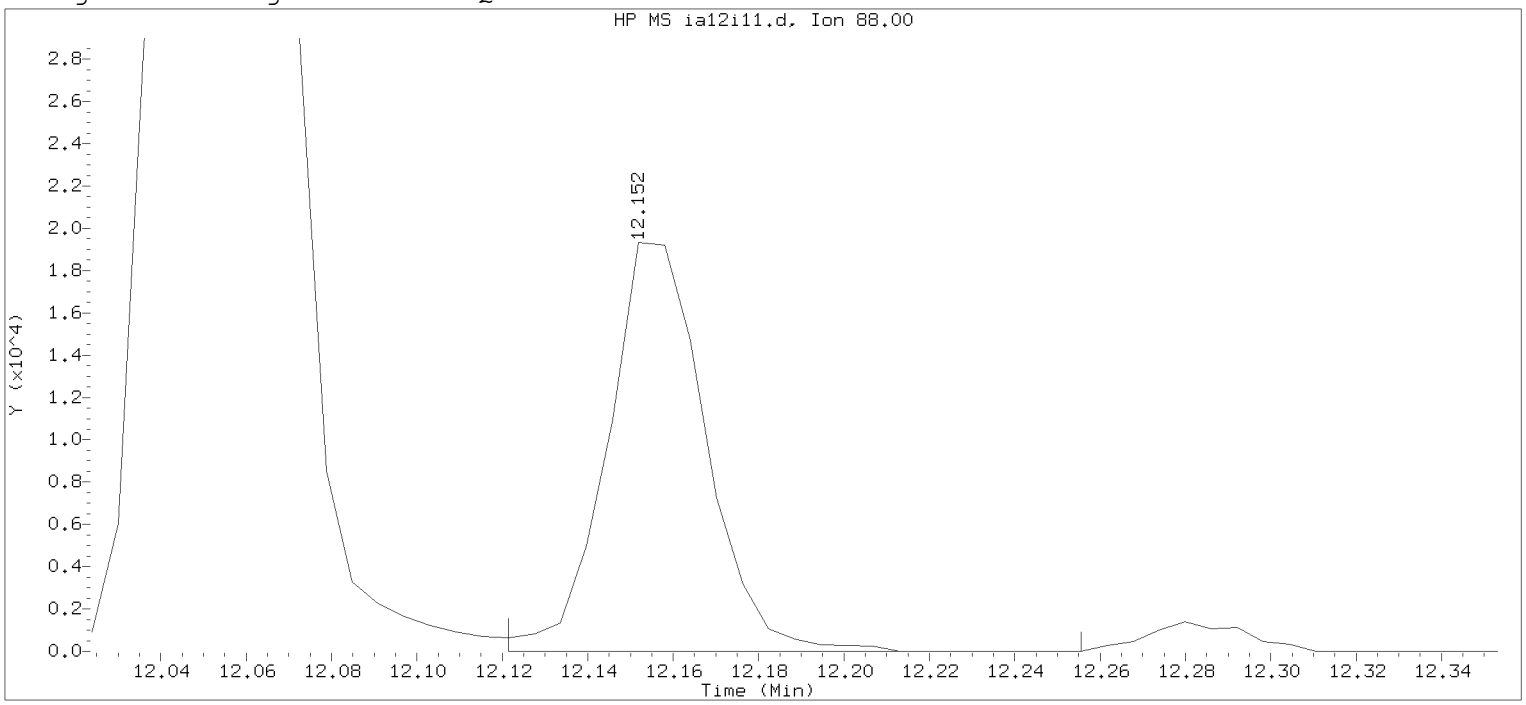
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:25 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1733
Retention Time (minutes): 12.152
Quant Ion : 88.00
Area : 30975
On-column Amount (ng) : 7.7065
Integration start scan : 1727 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

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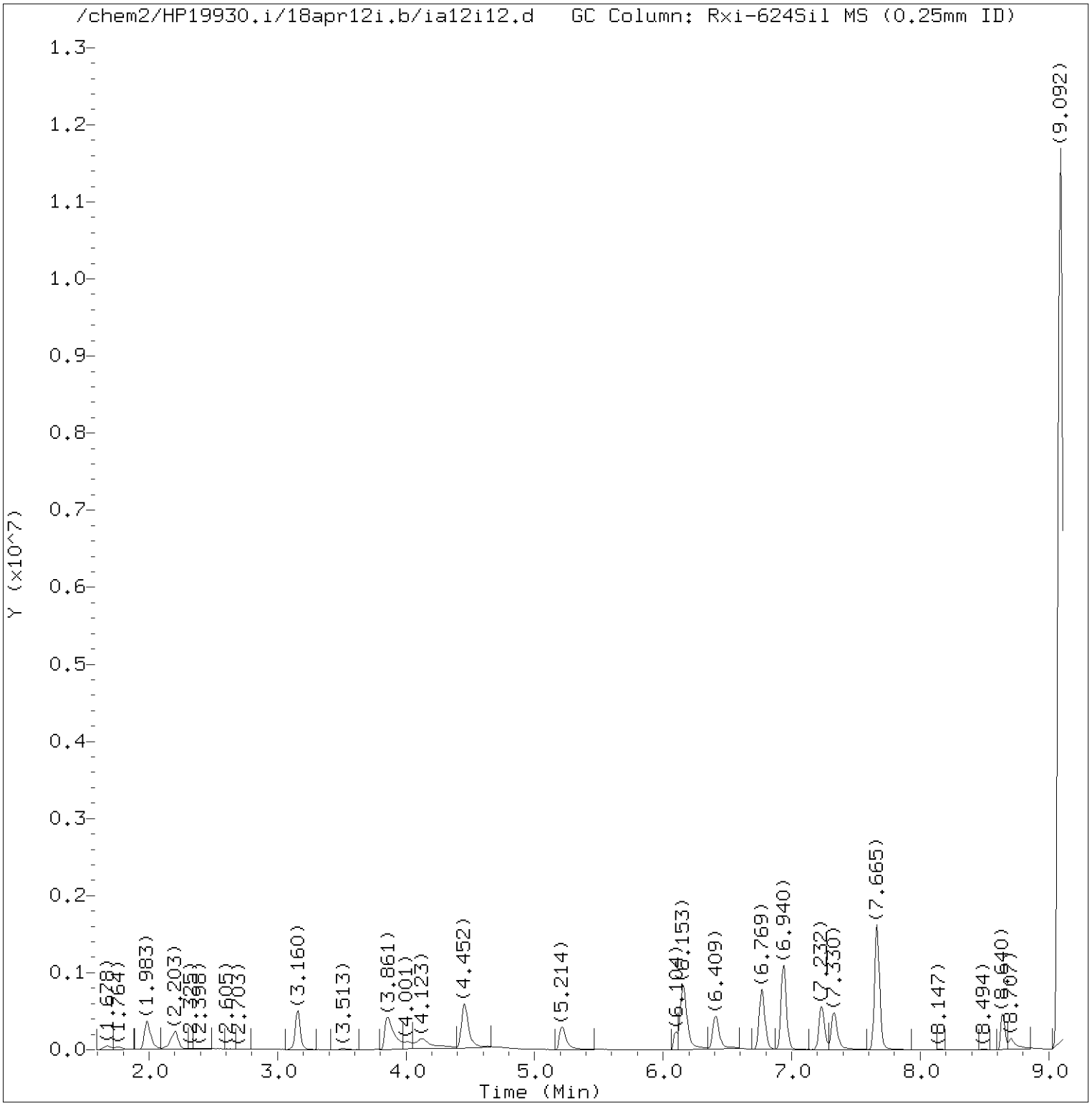
Target 3.5 esignature used. Page 975



Total Ion Chromatogram (TIC)

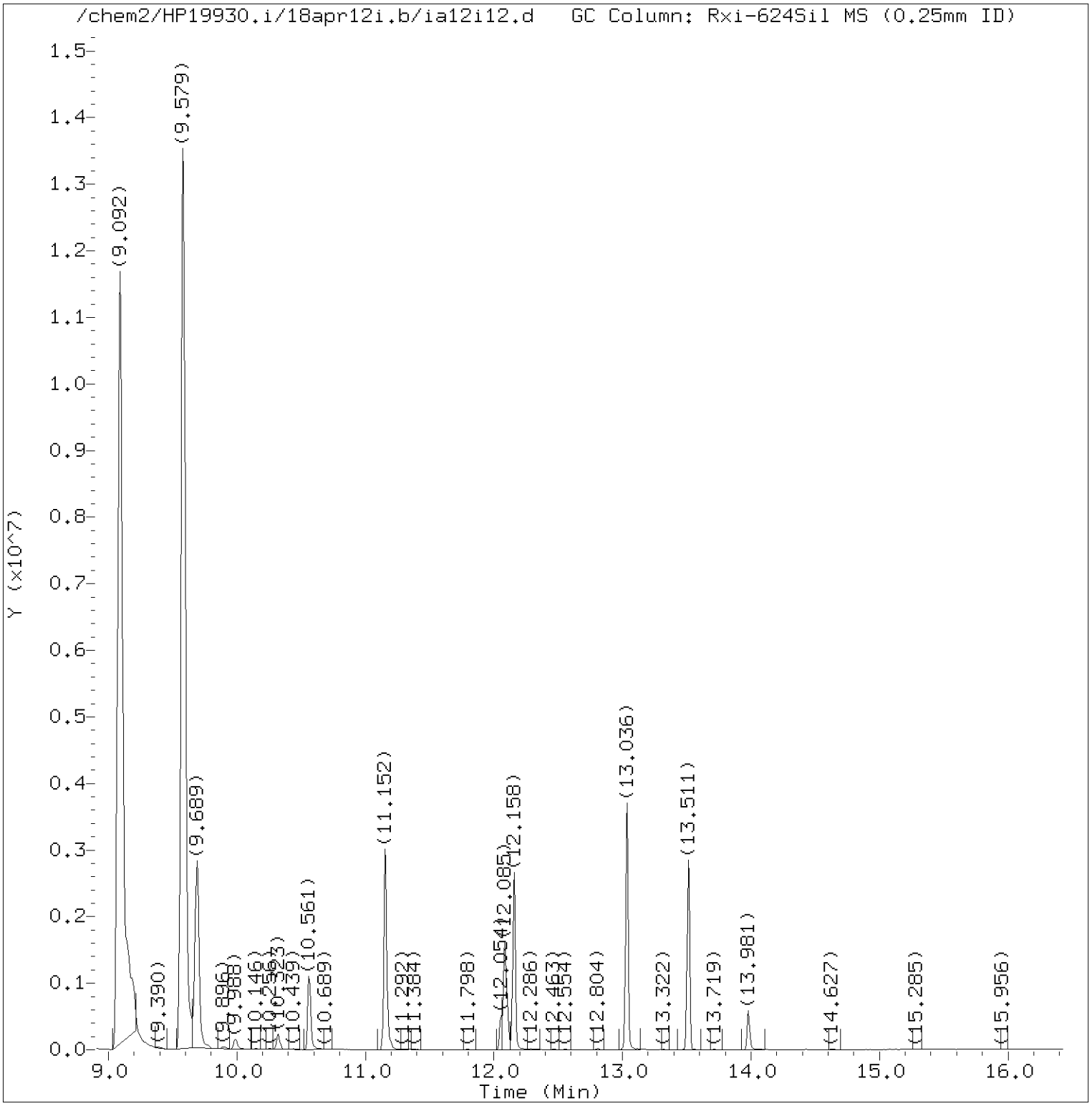
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

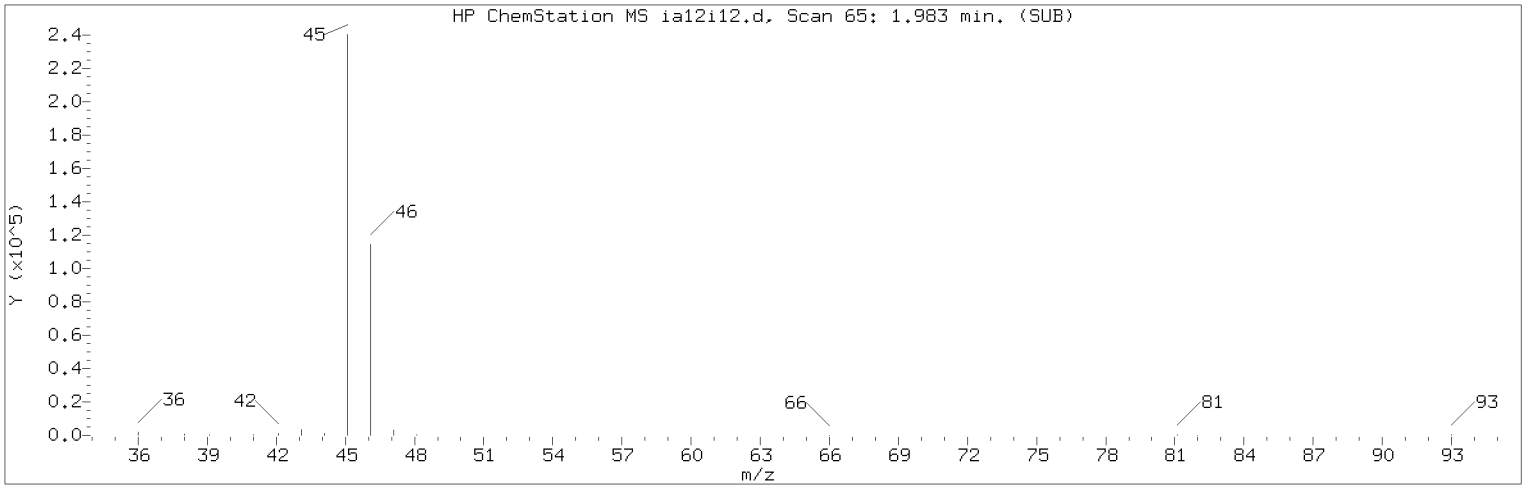
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	849526M	10.410
25) Acetonitrile	(1)	3.861	41	2151258M	395.408
26)*t-Butyl Alcohol-d10	(1)	4.117	65	200457M	50.000
36) Vinyl Acetate	(2)	5.214	43	950904	10.103
43) Methyl Acrylate	(2)	6.159	55	1924763M	59.915
53) 1-Chlorobutane	(2)	6.940	56	1293240	10.639
63)*Fluorobenzene	(2)	7.665	96	2121433	10.000
77) Chloroacetonitrile	(2)	9.152	75	1021564	598.044
78) 2-Chloroethyl vinyl ether	(2)	9.189	63	293447	11.801
97)*Chlorobenzene-d5	(3)	11.152	117	1632292	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.054	88	98930	19.966
112) Cyclohexanone	(1)	12.085	55	794304	591.446
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	865686	10.000
142) Hexachloroethane	(4)	13.511	117	451900	12.089

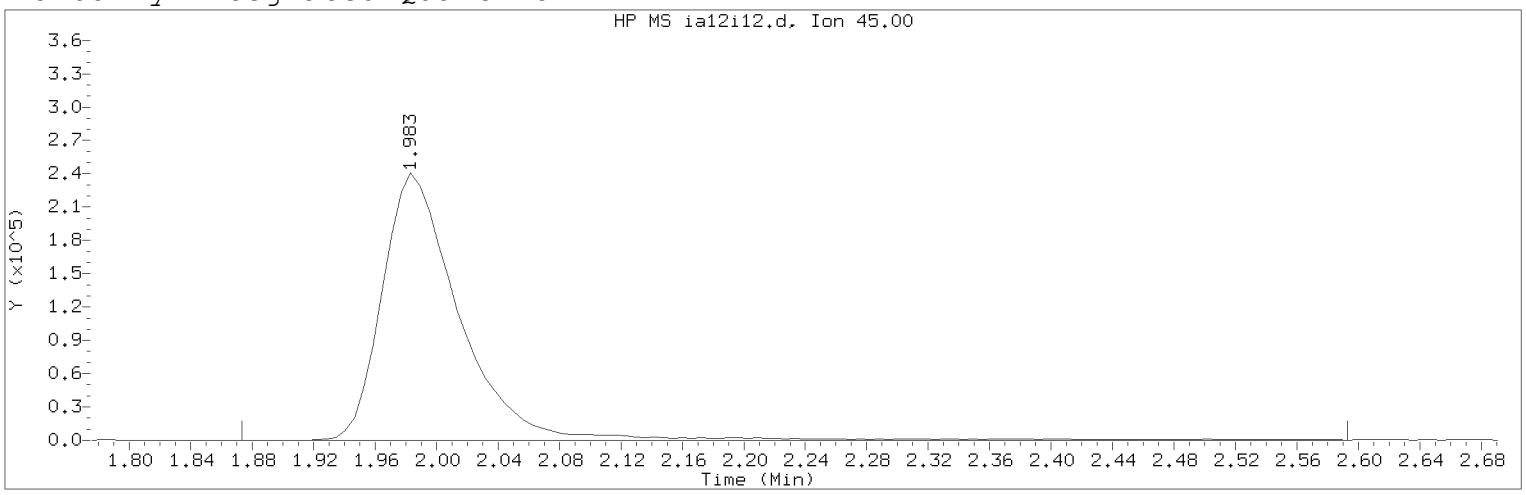
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

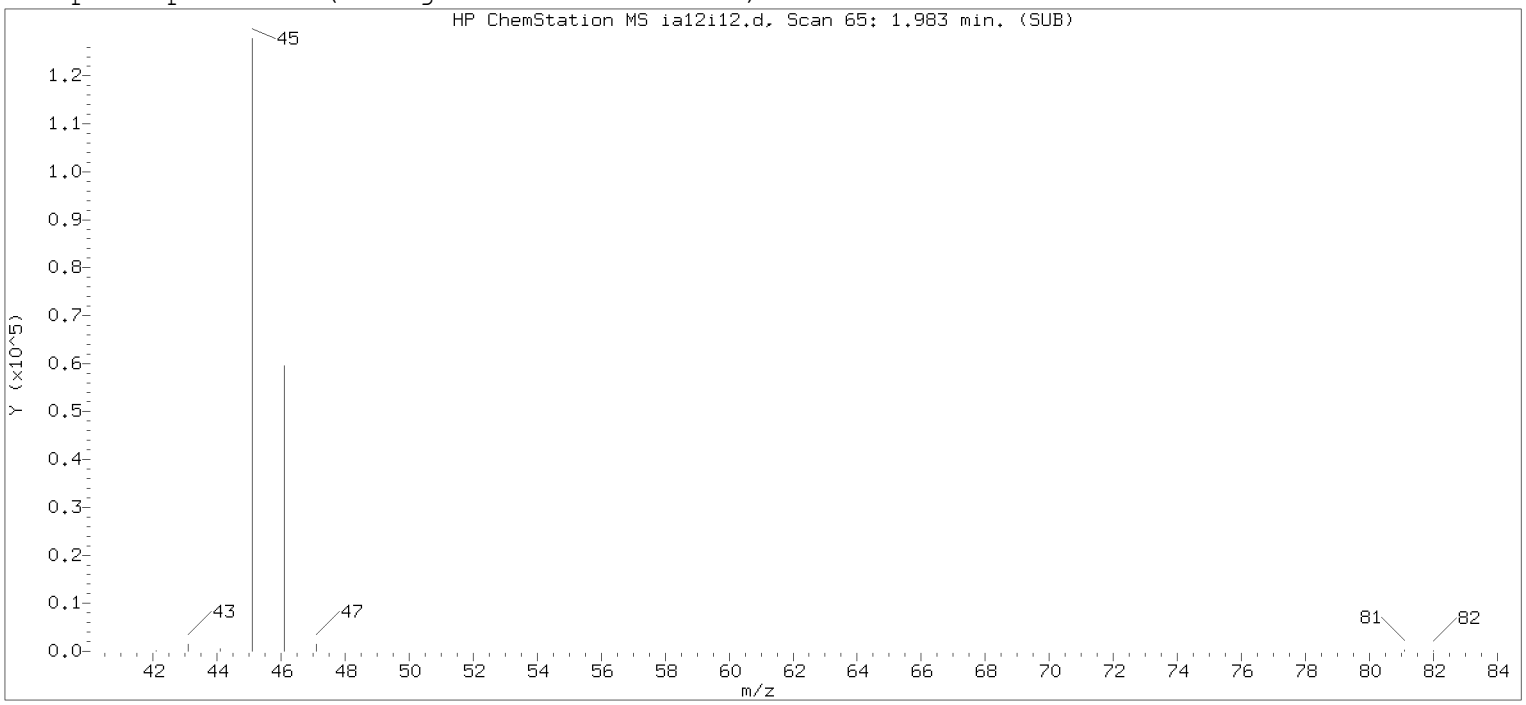
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 65
Retention Time (minutes): 1.983
Quant Ion : 45.00
Area (flag) : 849526M
On-Column Amount (ng) : 10.4097
Integration start scan : 46 Integration stop scan: 164
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

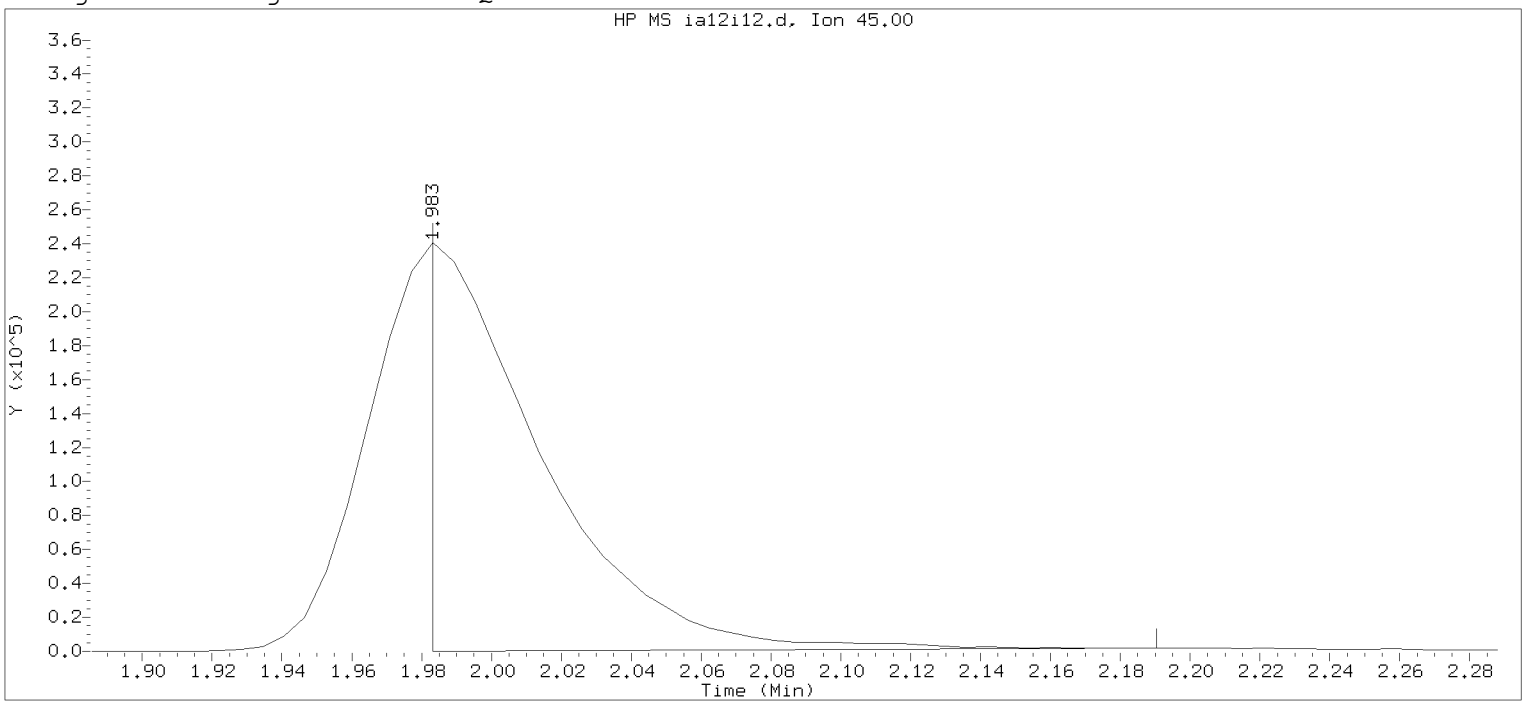
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

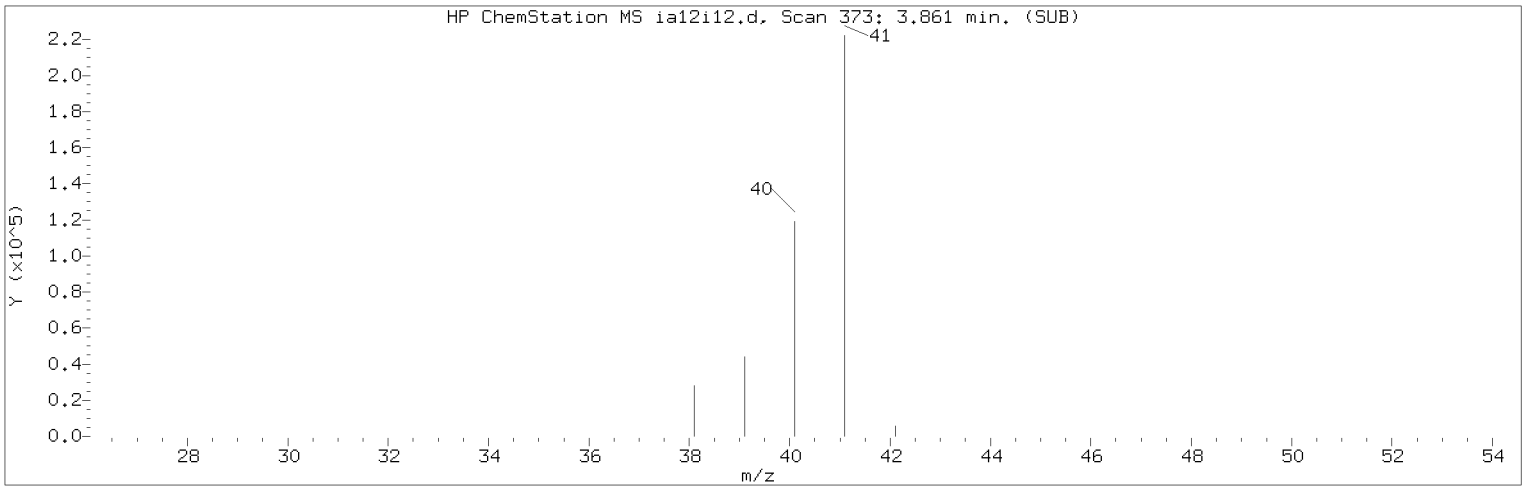
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 11:04
Date, time and analyst ID of latest file update: 12-Apr-2018 11:04 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

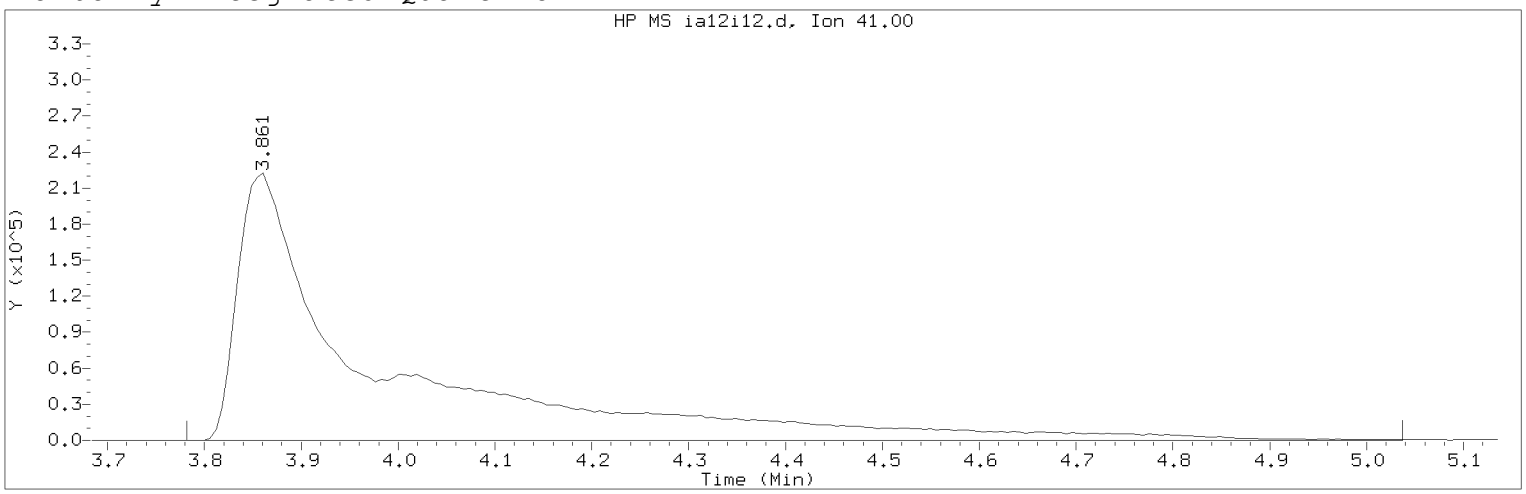
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 65
Retention Time (minutes): 1.983
Quant Ion : 45.00
Area : 511669
On-column Amount (ng) : 7.7867
Integration start scan : 64 Integration stop scan: 98
Y at integration start : 0 Y at integration end: 2050

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

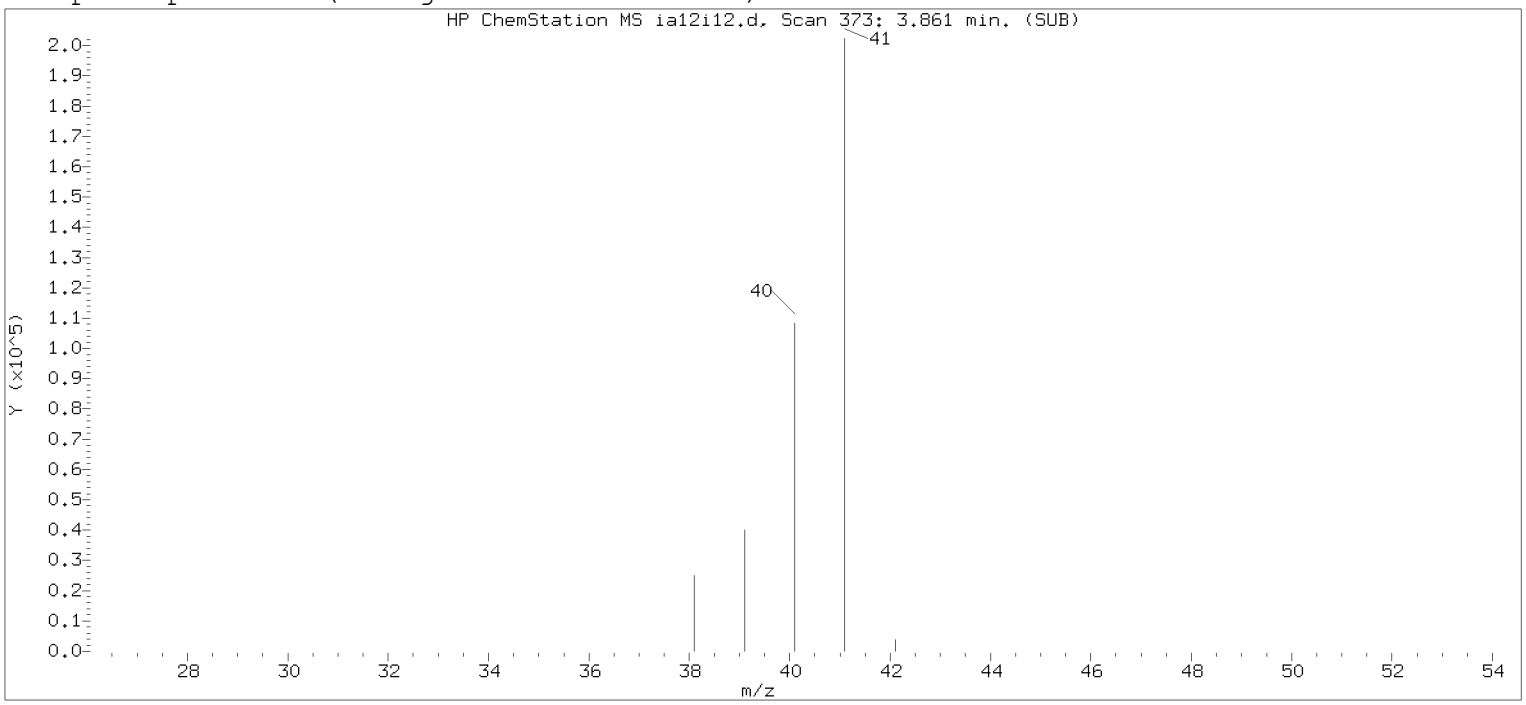
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area (flag) : 2151258M
On-Column Amount (ng) : 395.4085
Integration start scan : 359 Integration stop scan: 565
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

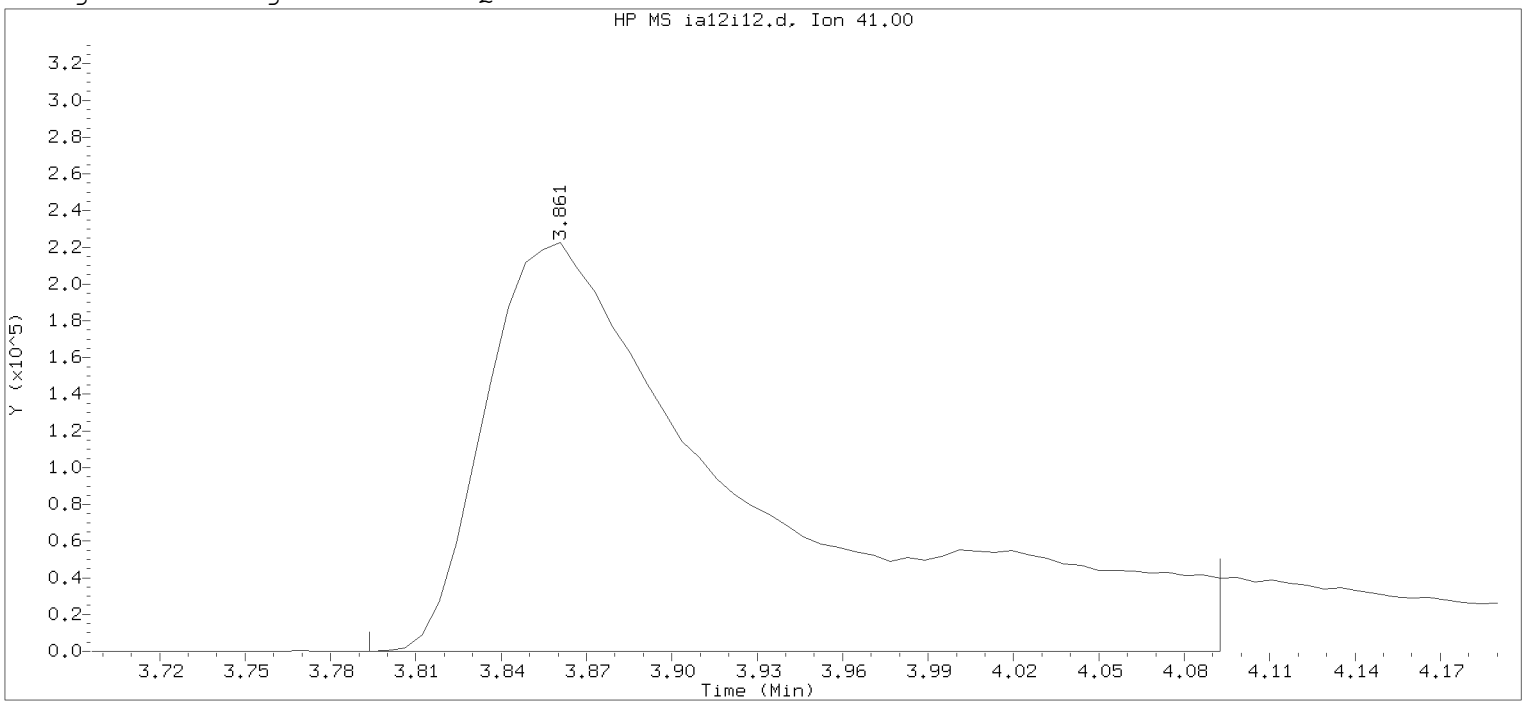
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

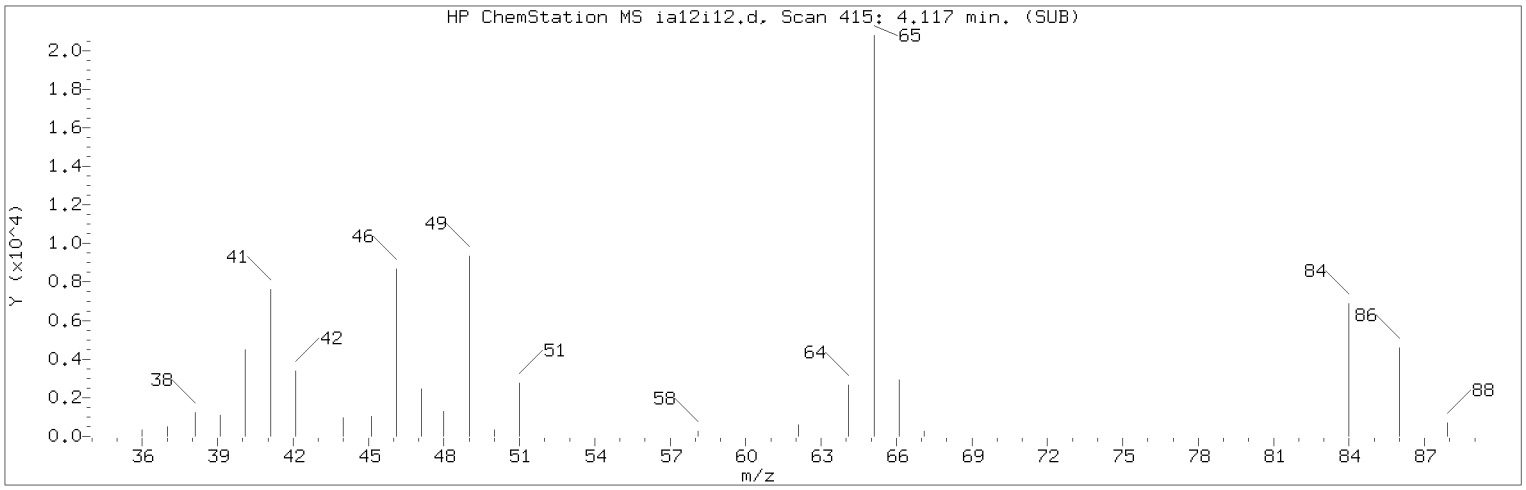
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 11:04
Date, time and analyst ID of latest file update: 12-Apr-2018 11:04 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

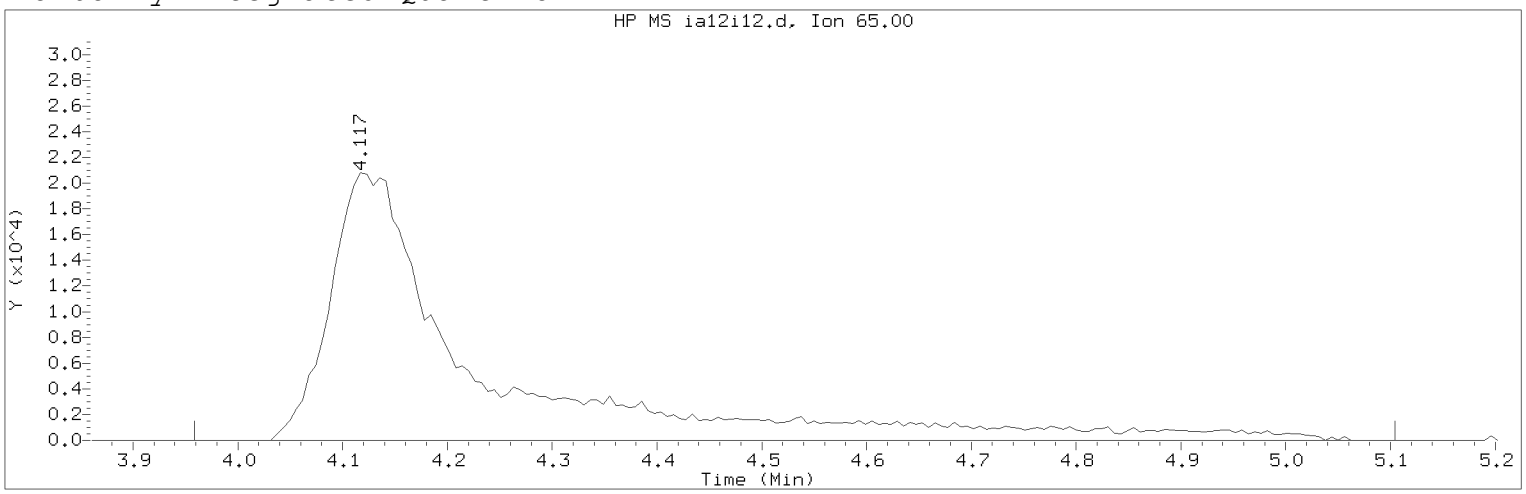
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area : 1481477
On-column Amount (ng) : 344.7452
Integration start scan : 361 Integration stop scan: 410
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

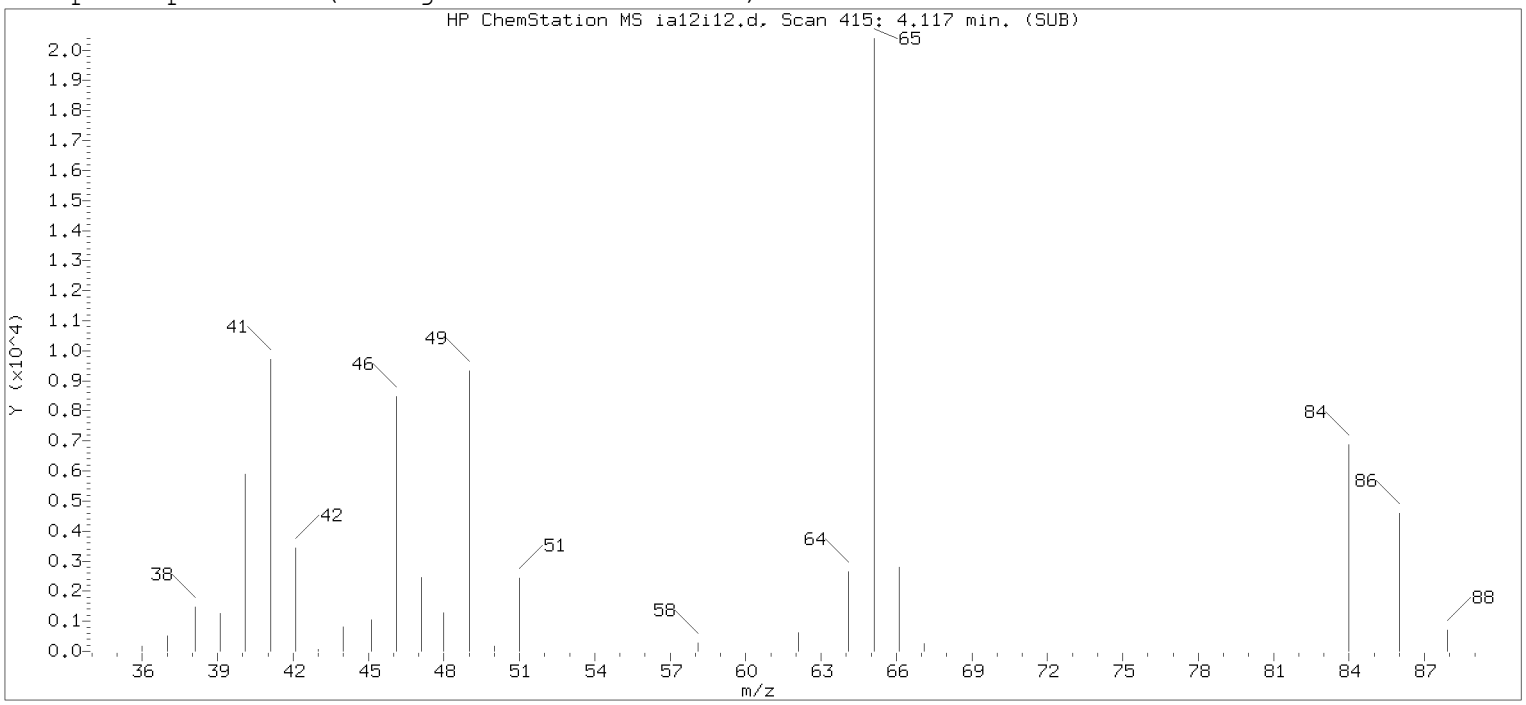
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 415
Retention Time (minutes): 4.117
Quant Ion : 65.00
Area (flag) : 200457M
On-Column Amount (ng) : 50.0000
Integration start scan : 388 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

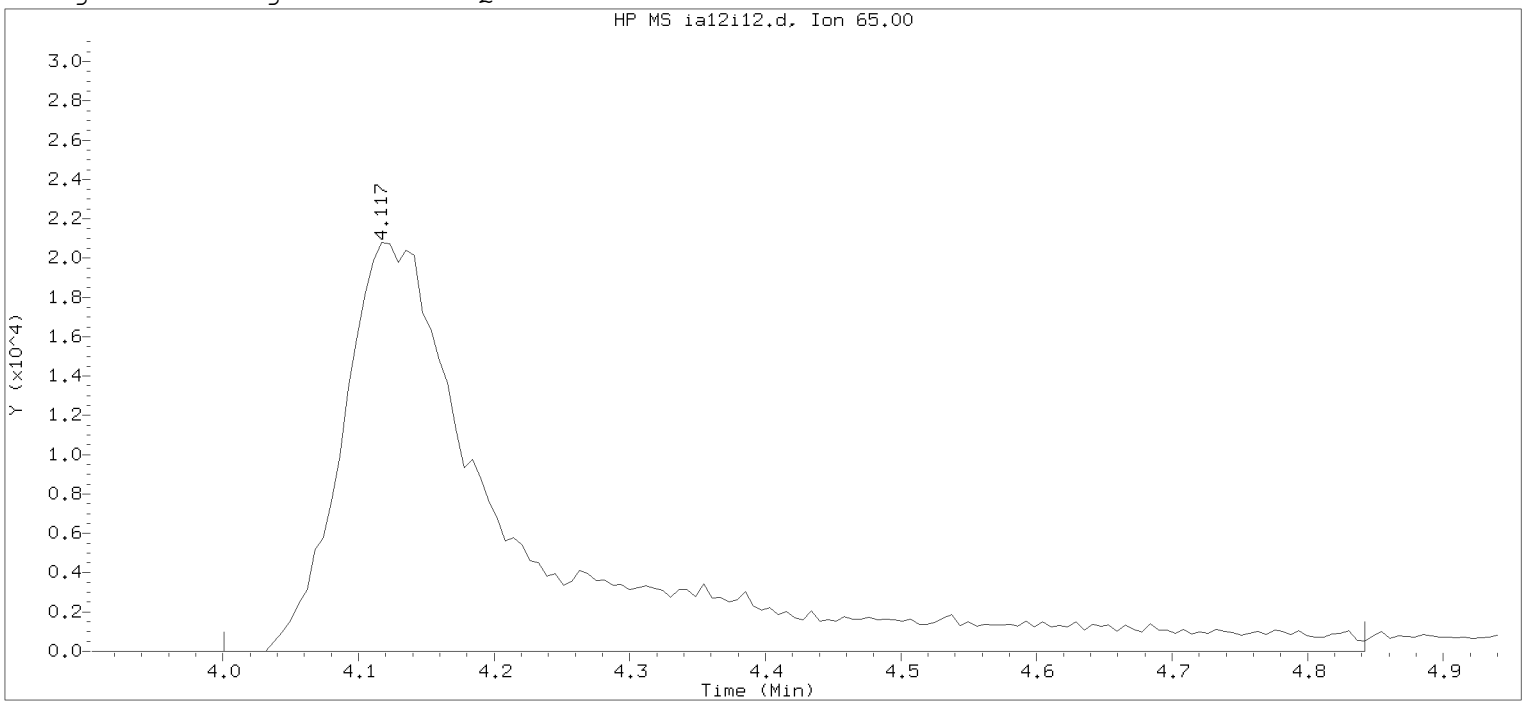
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

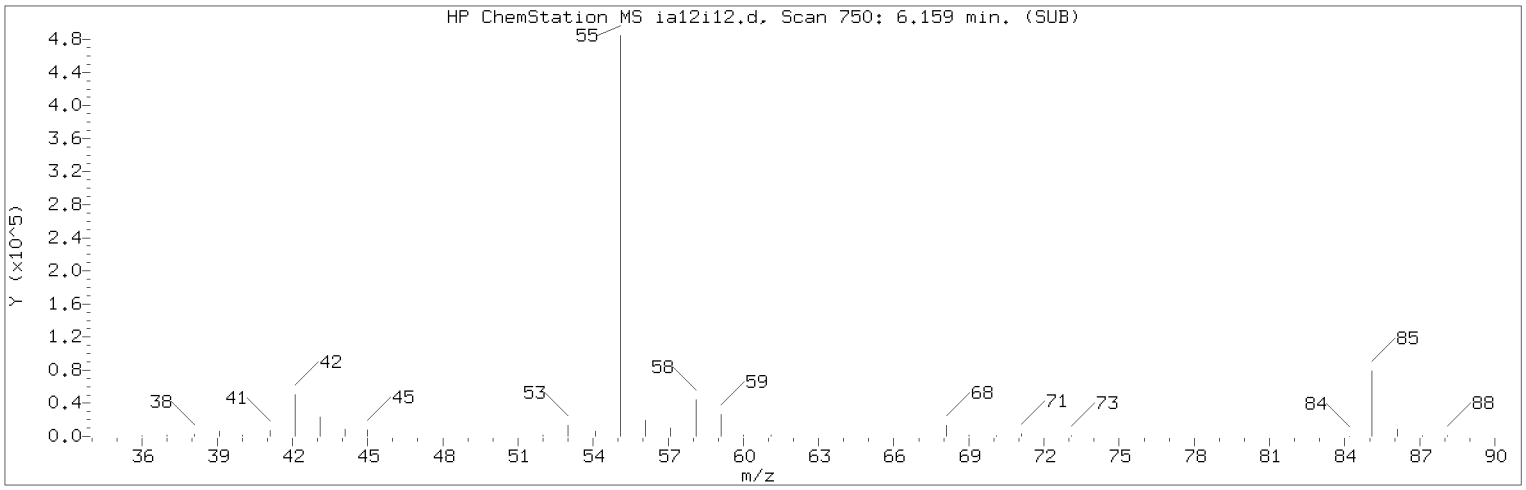
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 11:04
Date, time and analyst ID of latest file update: 12-Apr-2018 11:04 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

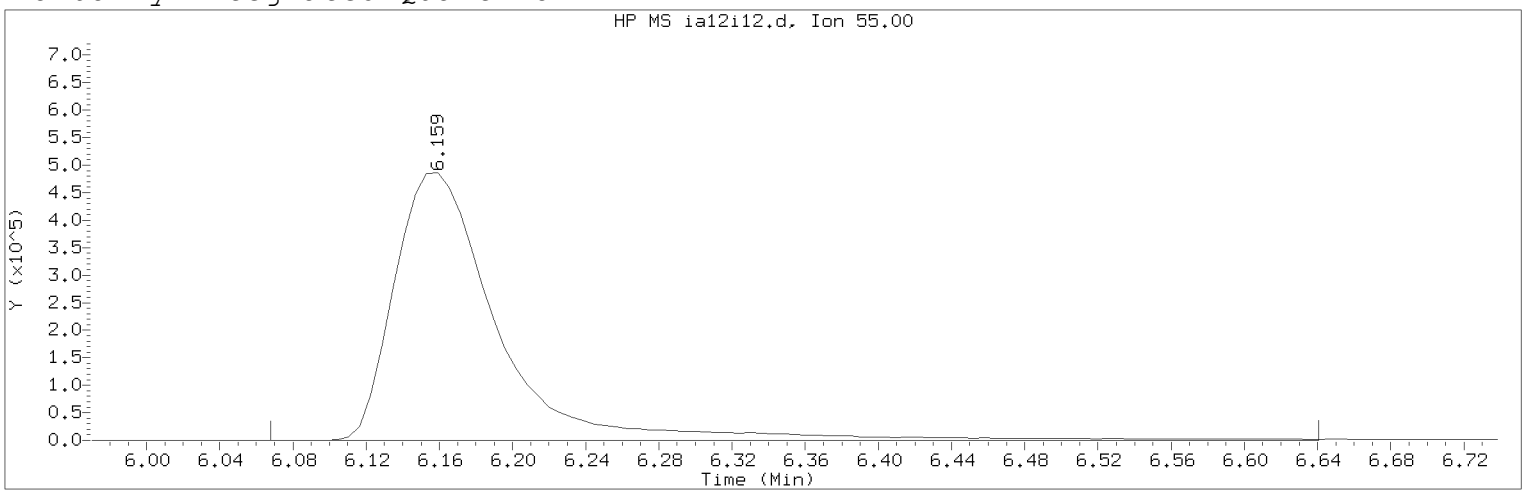
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 415
Retention Time (minutes): 4.117
Quant Ion : 65.00
Area : 192790
On-column Amount (ng) : 50.0000
Integration start scan : 395 Integration stop scan: 533
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

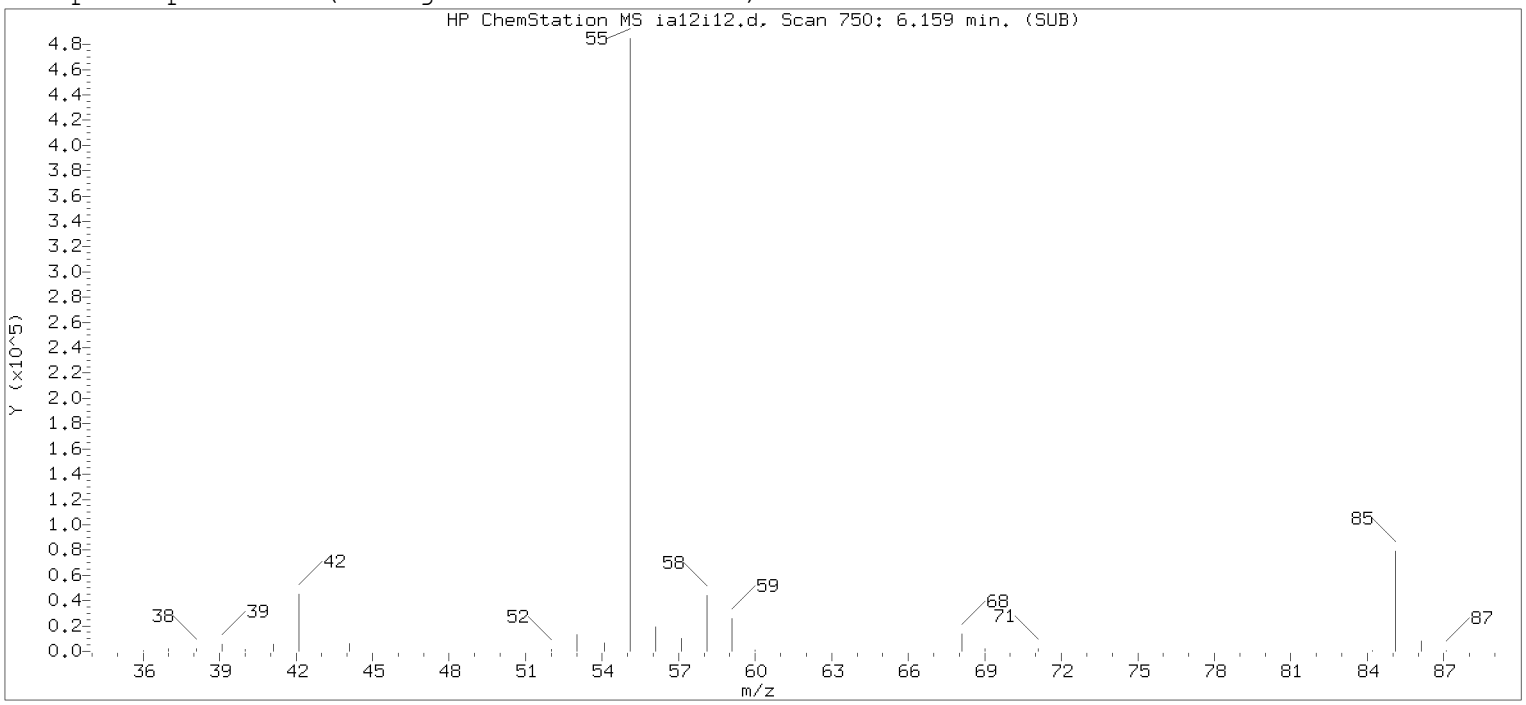
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 750
Retention Time (minutes): 6.159
Quant Ion : 55.00
Area (flag) : 1924763M
On-Column Amount (ng) : 59.9152
Integration start scan : 734 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

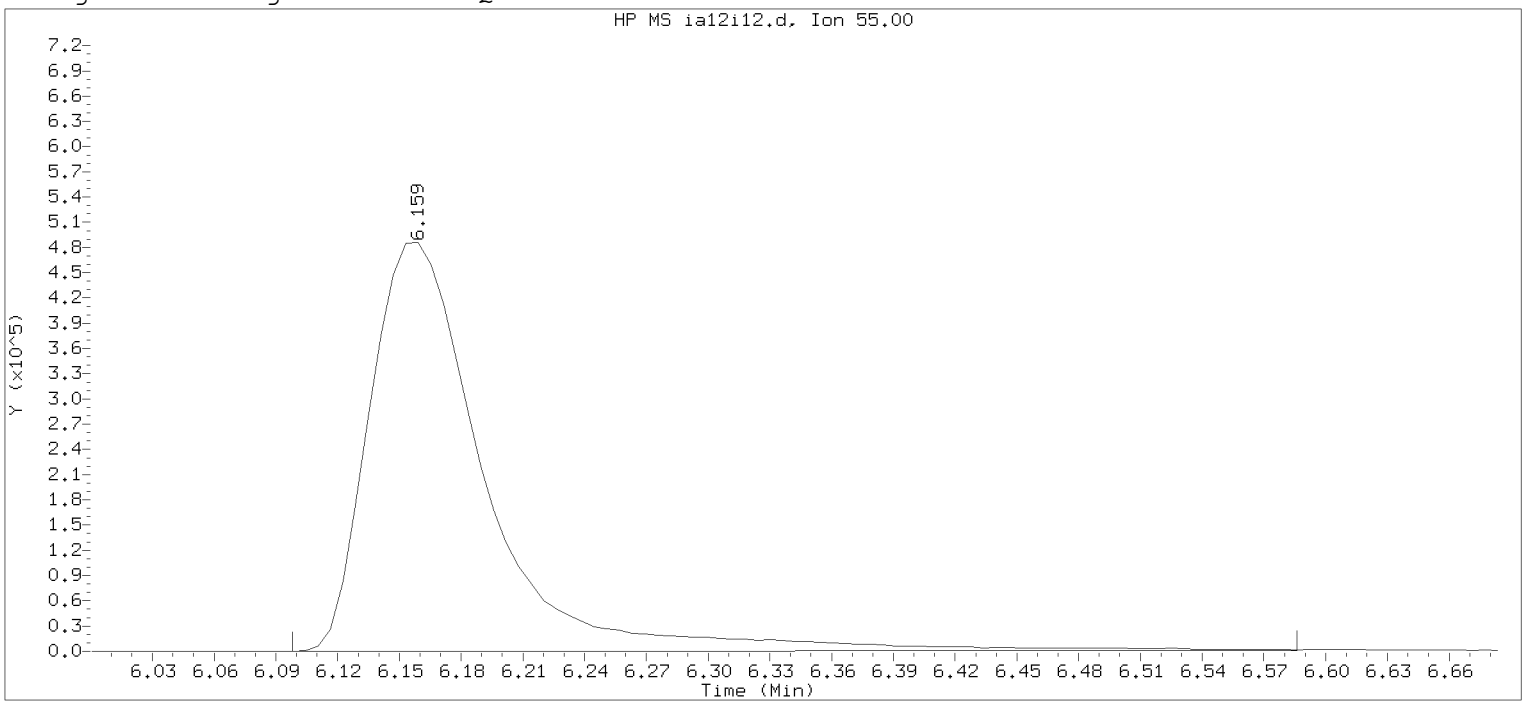
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 10:46 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 11:04
Date, time and analyst ID of latest file update: 12-Apr-2018 11:04 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 750
Retention Time (minutes): 6.159
Quant Ion : 55.00
Area : 1903359
On-column Amount (ng) : 49.8939
Integration start scan : 739 Integration stop scan: 819
Y at integration start : 0 Y at integration end: 1015

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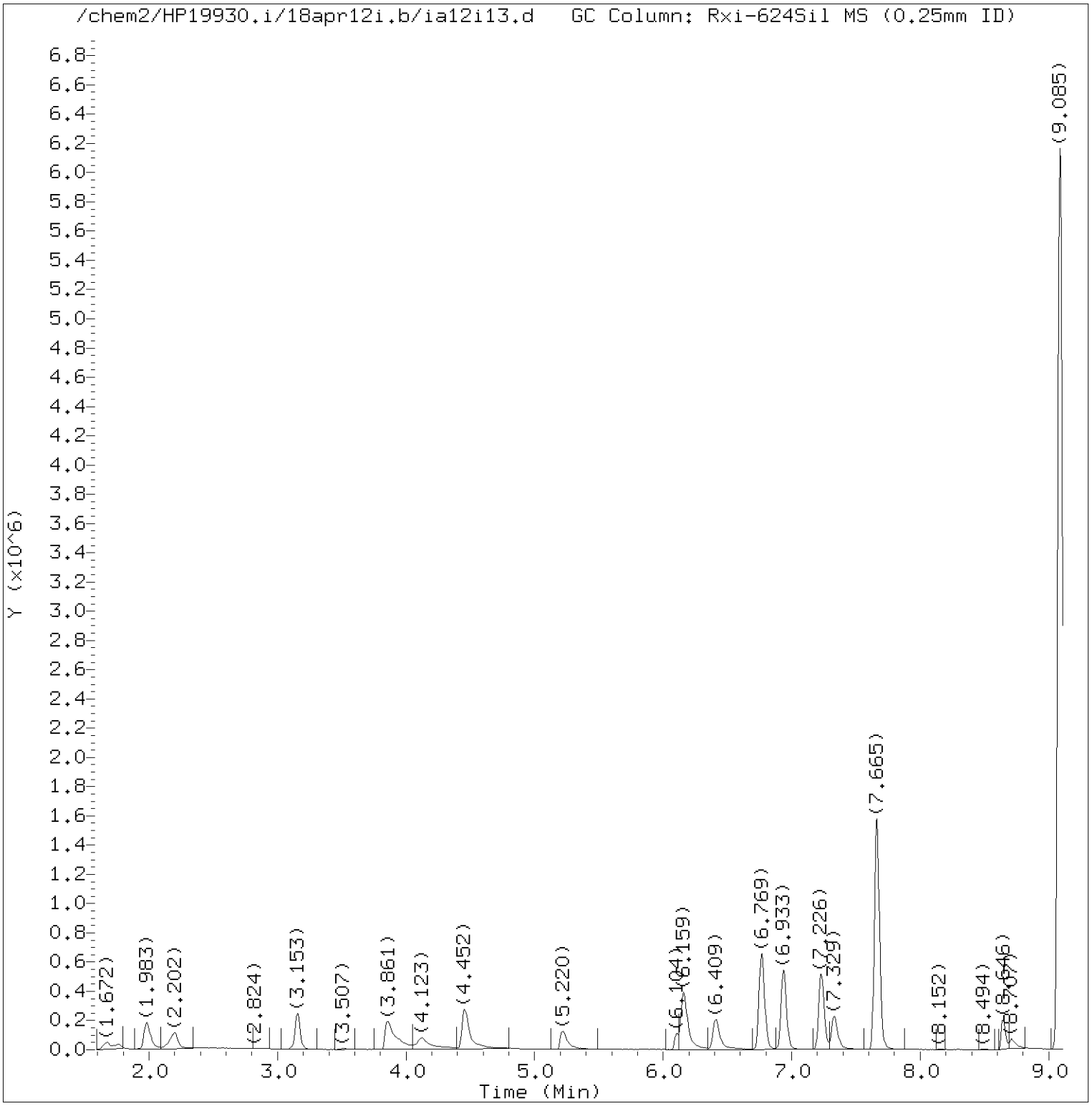
Target 3.5 esignature used. AE06 Page 986 of 2168



Total Ion Chromatogram (TIC)

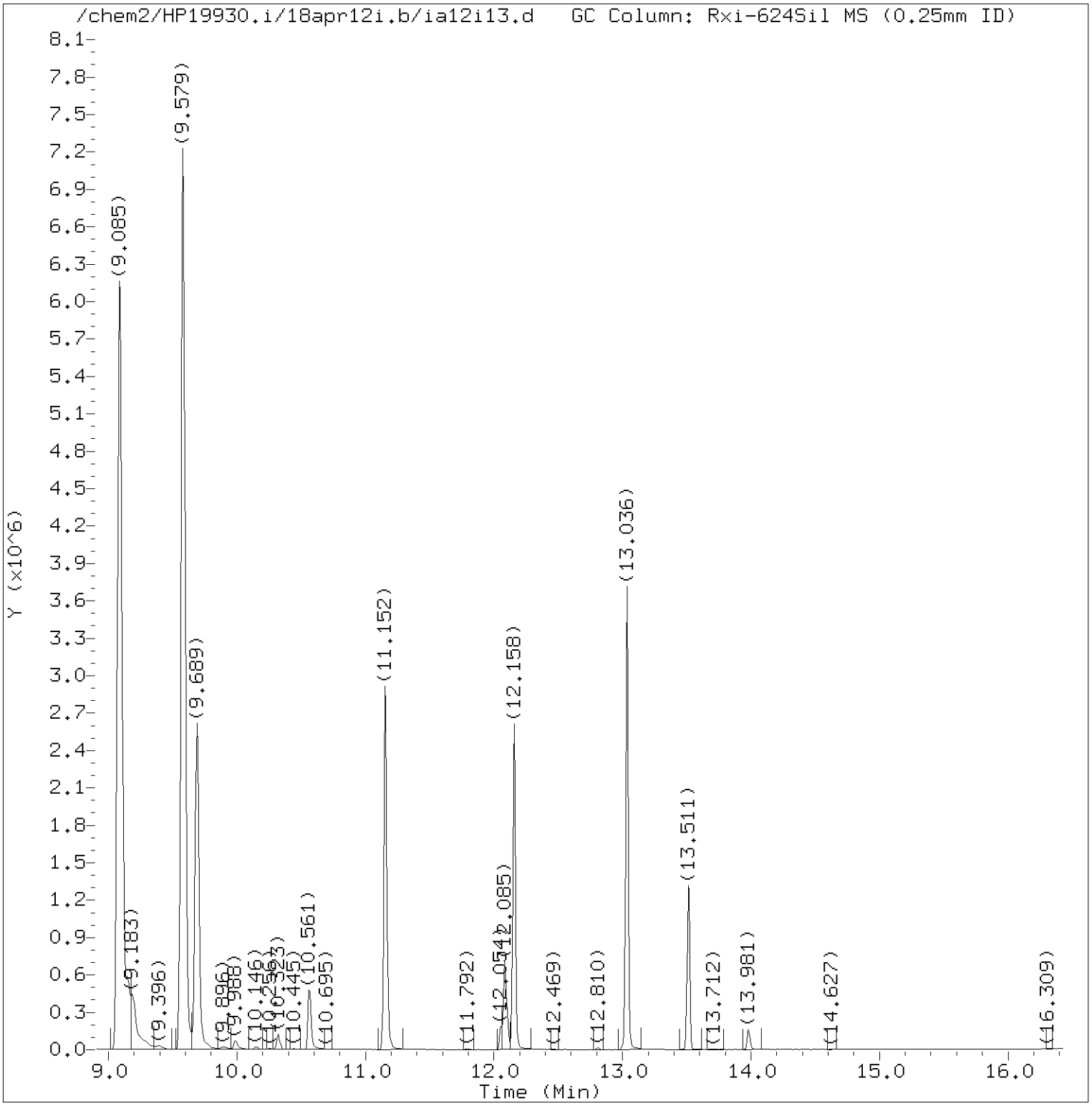
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	411176	5.092
25) Acetonitrile	(1)	3.861	41	898661M	203.074
26)*t-Butyl Alcohol-d10	(1)	4.123	65	163048	50.000
36) Vinyl Acetate	(2)	5.220	43	435387	4.900
43) Methyl Acrylate	(2)	6.159	55	917323M	28.861
53) 1-Chlorobutane	(2)	6.933	56	644250	5.357
63)*Fluorobenzene	(2)	7.665	96	2098955	10.000
77) Chloroacetonitrile	(2)	9.152	75	436698	258.390
78) 2-Chloroethyl vinyl ether	(2)	9.195	63	144402	5.869
97)*Chlorobenzene-d5	(3)	11.152	117	1578633	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.054	88	35508	10.213
112) Cyclohexanone	(1)	12.085	55	327728	300.018
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	838215	10.000
142) Hexachloroethane	(4)	13.511	117	205073	5.666

M = Compound was manually integrated.
* = Compound is an internal standard.

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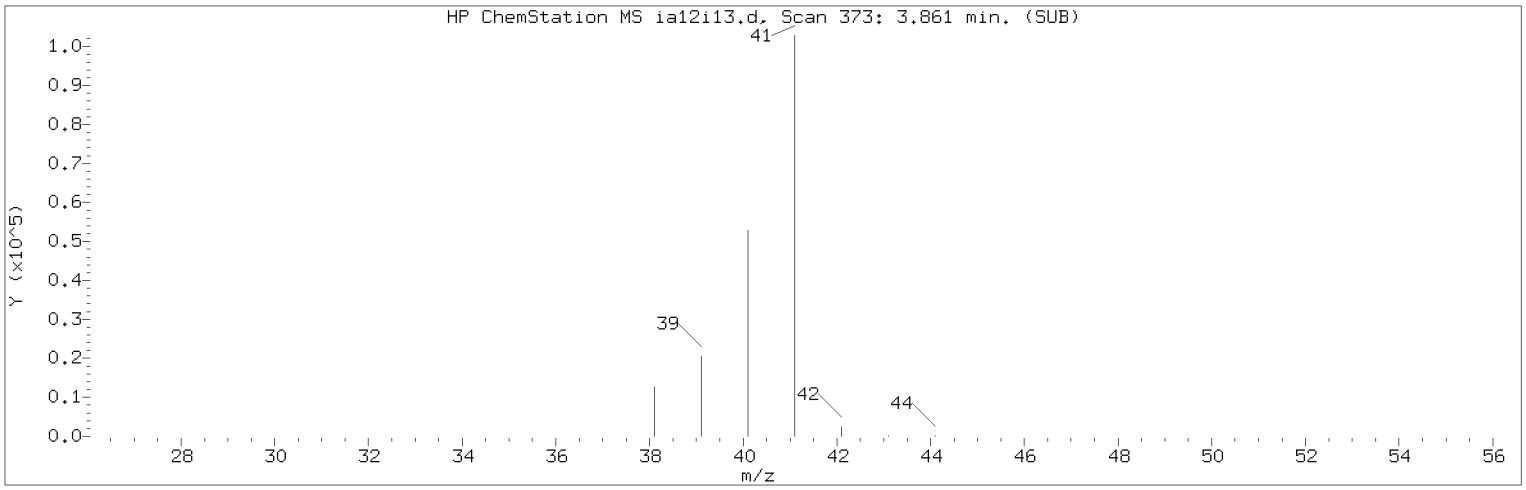
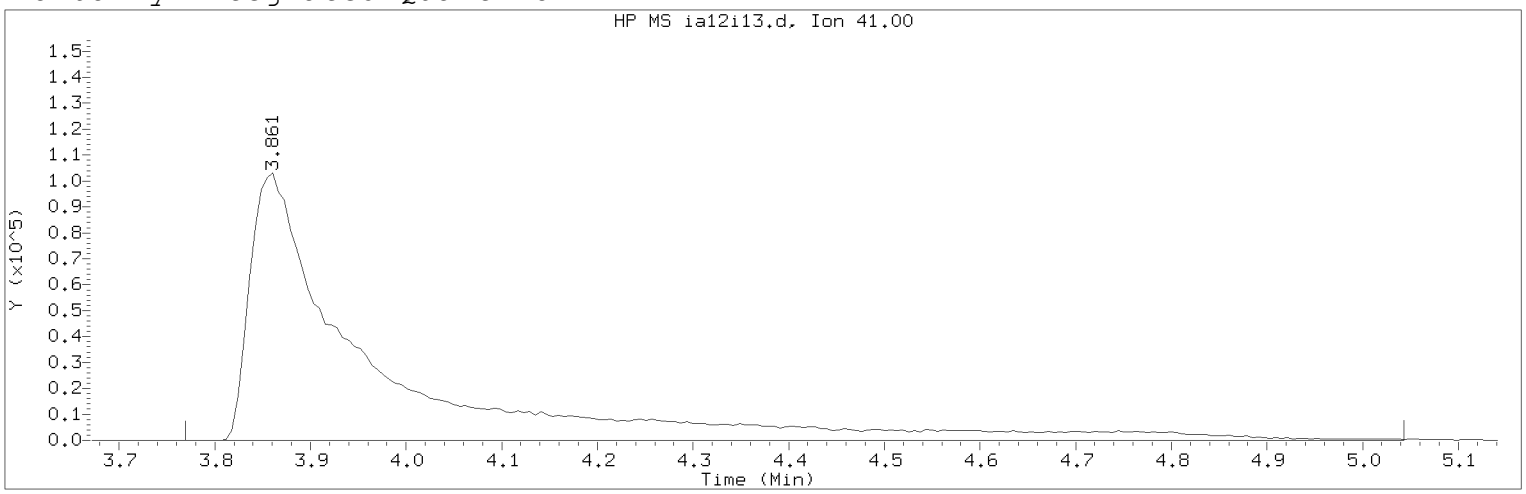
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

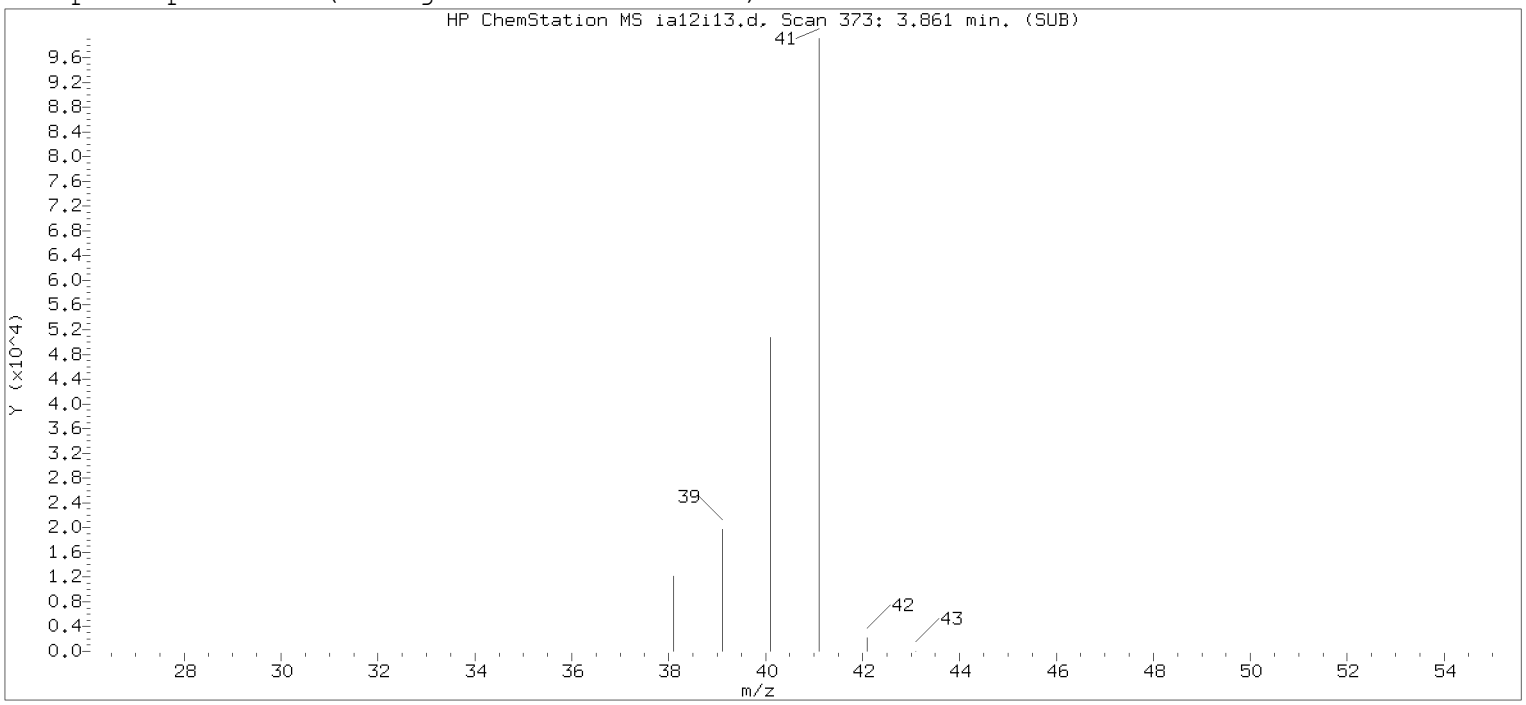
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area (flag) : 898661M
On-Column Amount (ng) : 203.0744
Integration start scan : 357 Integration stop scan: 566
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

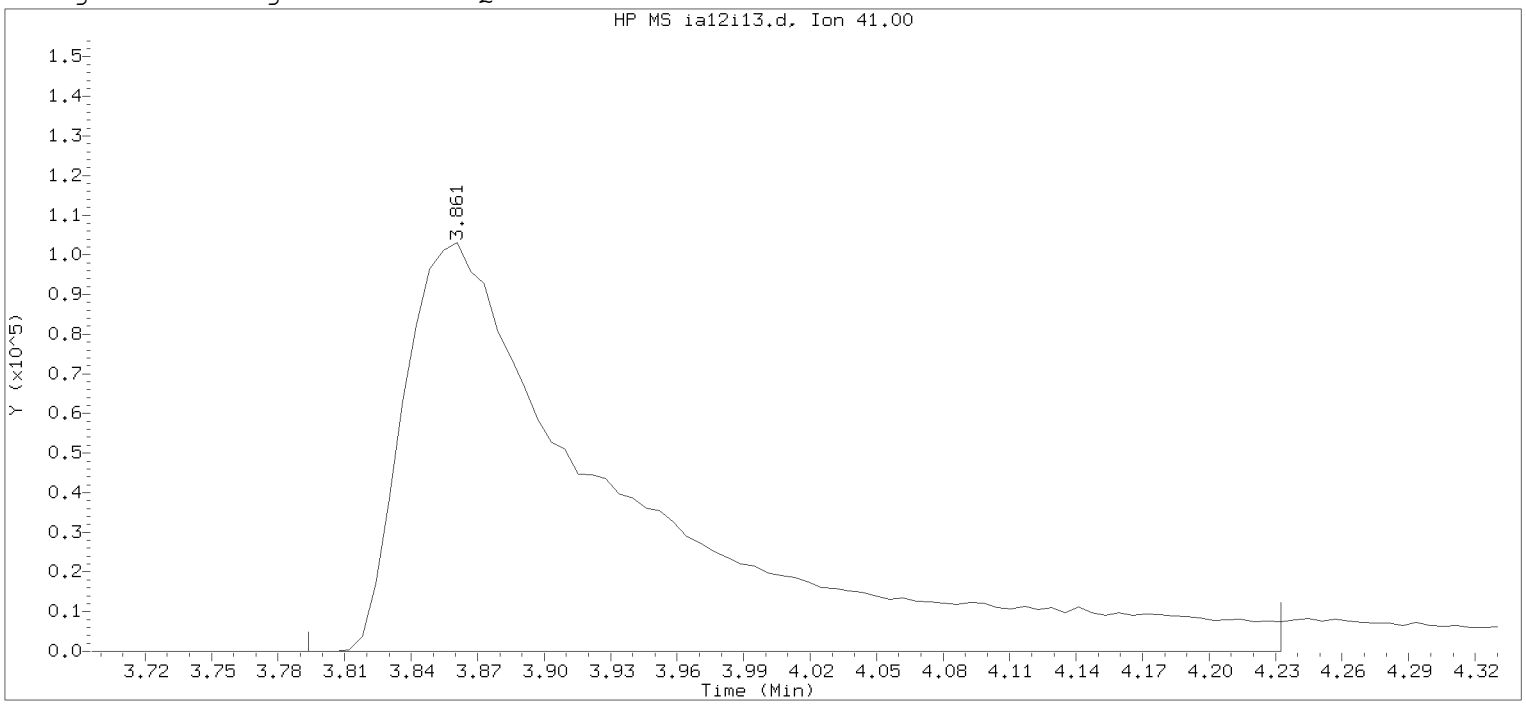
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area : 729250
On-column Amount (ng) : 181.3866
Integration start scan : 361 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

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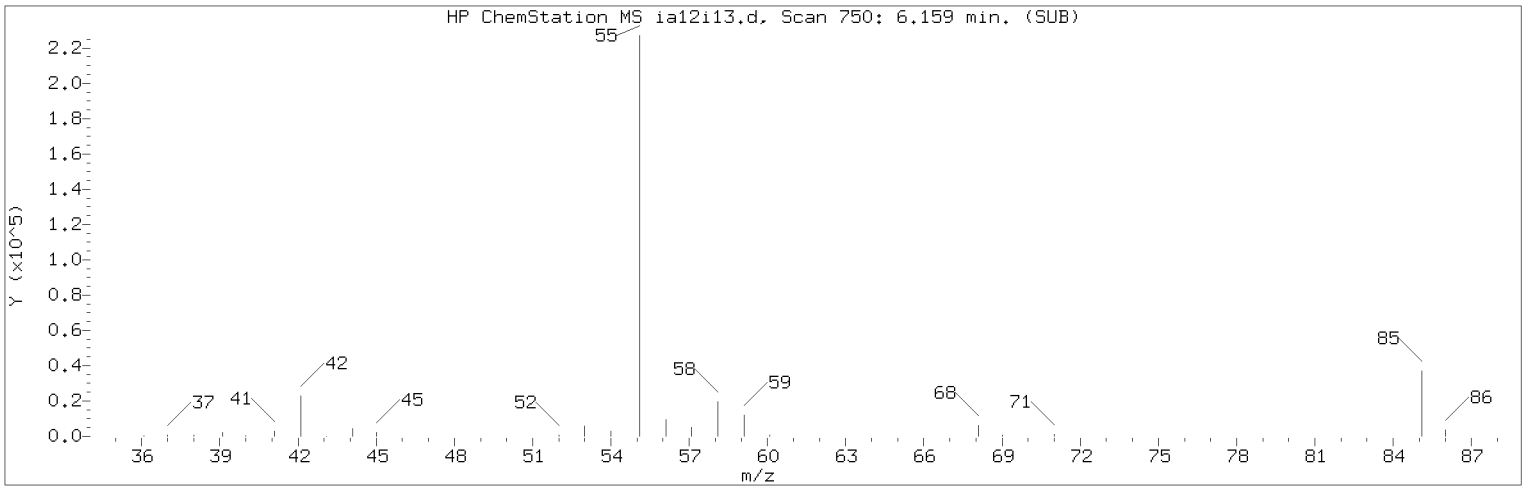
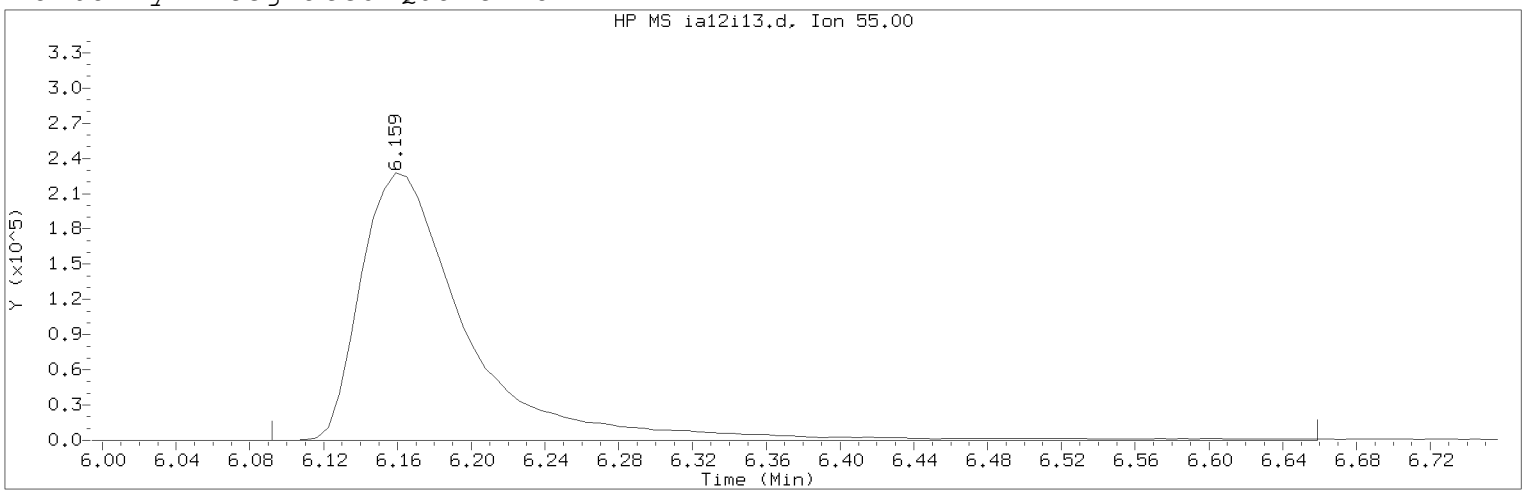
Target 3.5 esignature used. Page 991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:21
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

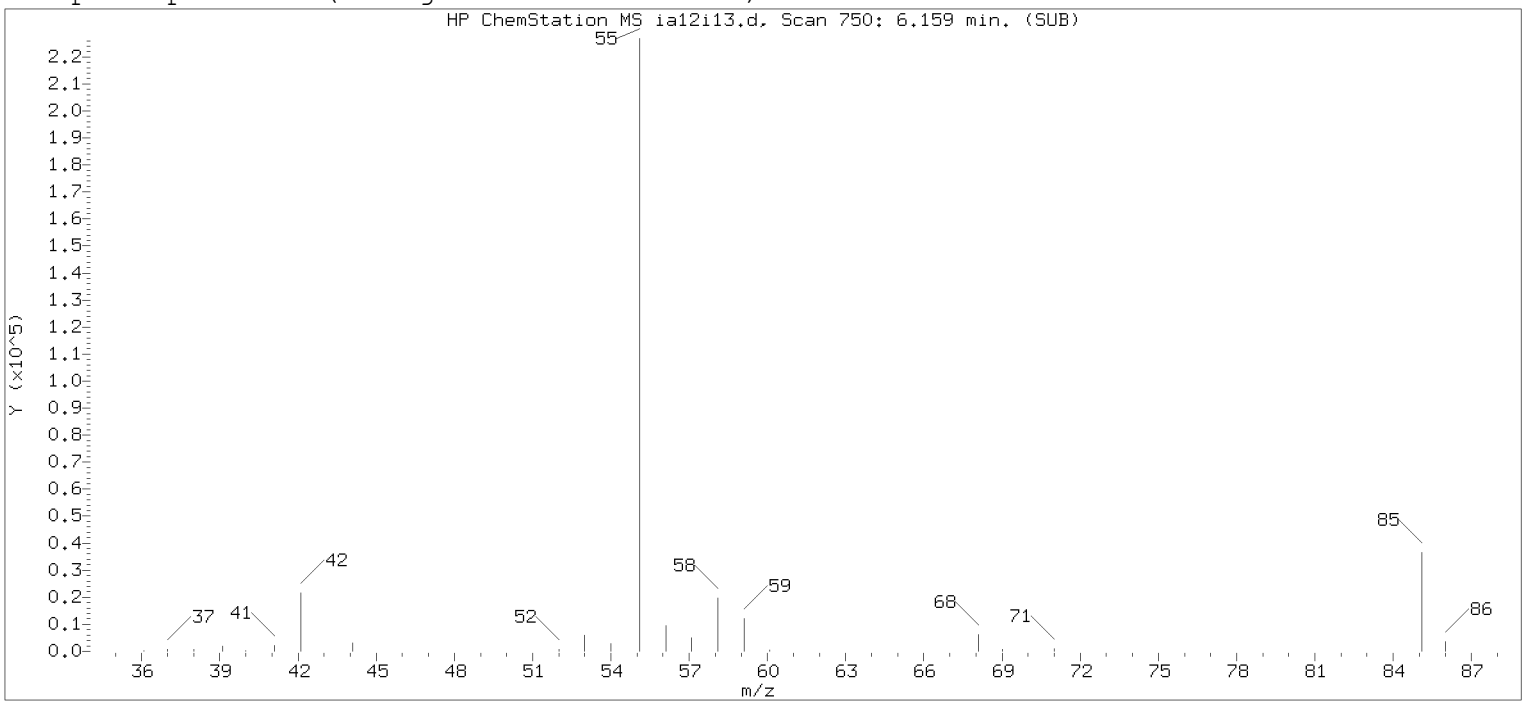
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 750
Retention Time (minutes): 6.159
Quant Ion : 55.00
Area (flag) : 917323M
On-Column Amount (ng) : 28.8608
Integration start scan : 738 Integration stop scan: 831
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

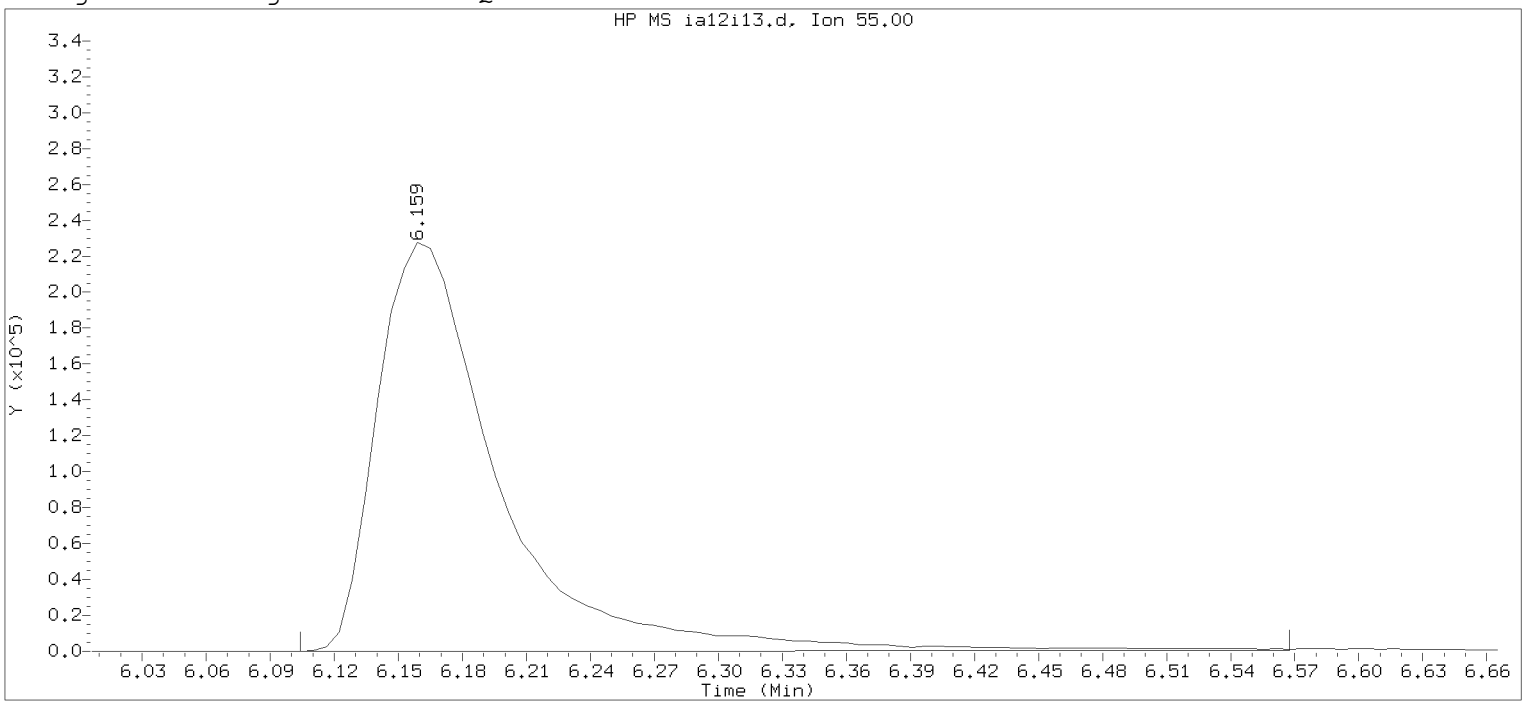
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i13.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:08 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 750
Retention Time (minutes): 6.159
Quant Ion : 55.00
Area : 905411
On-column Amount (ng) : 24.2528
Integration start scan : 740 Integration stop scan: 816
Y at integration start : 0 Y at integration end: 377

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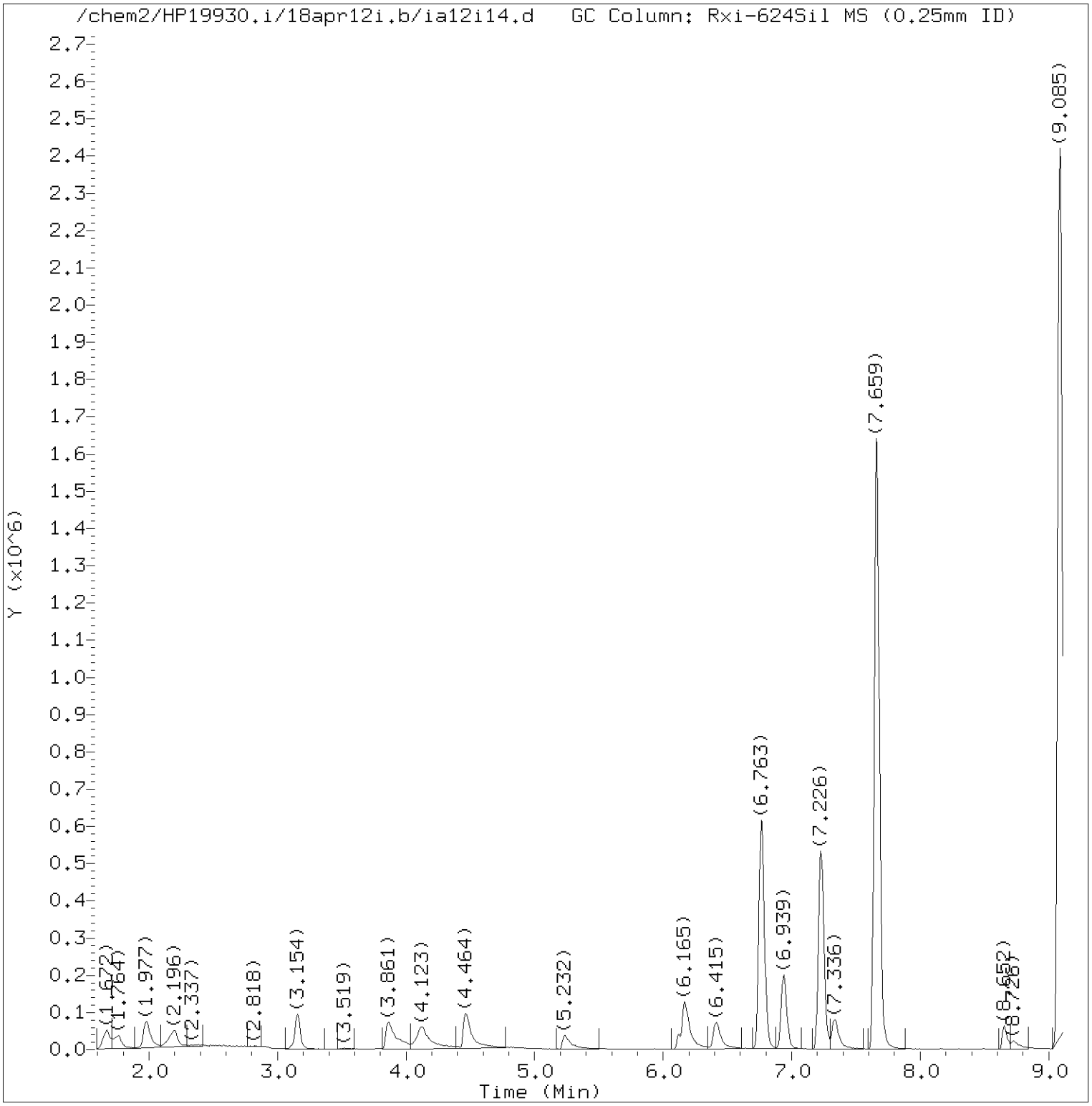
Target 3.5 esignature used. Page 993 of 2168



Total Ion Chromatogram (TIC)

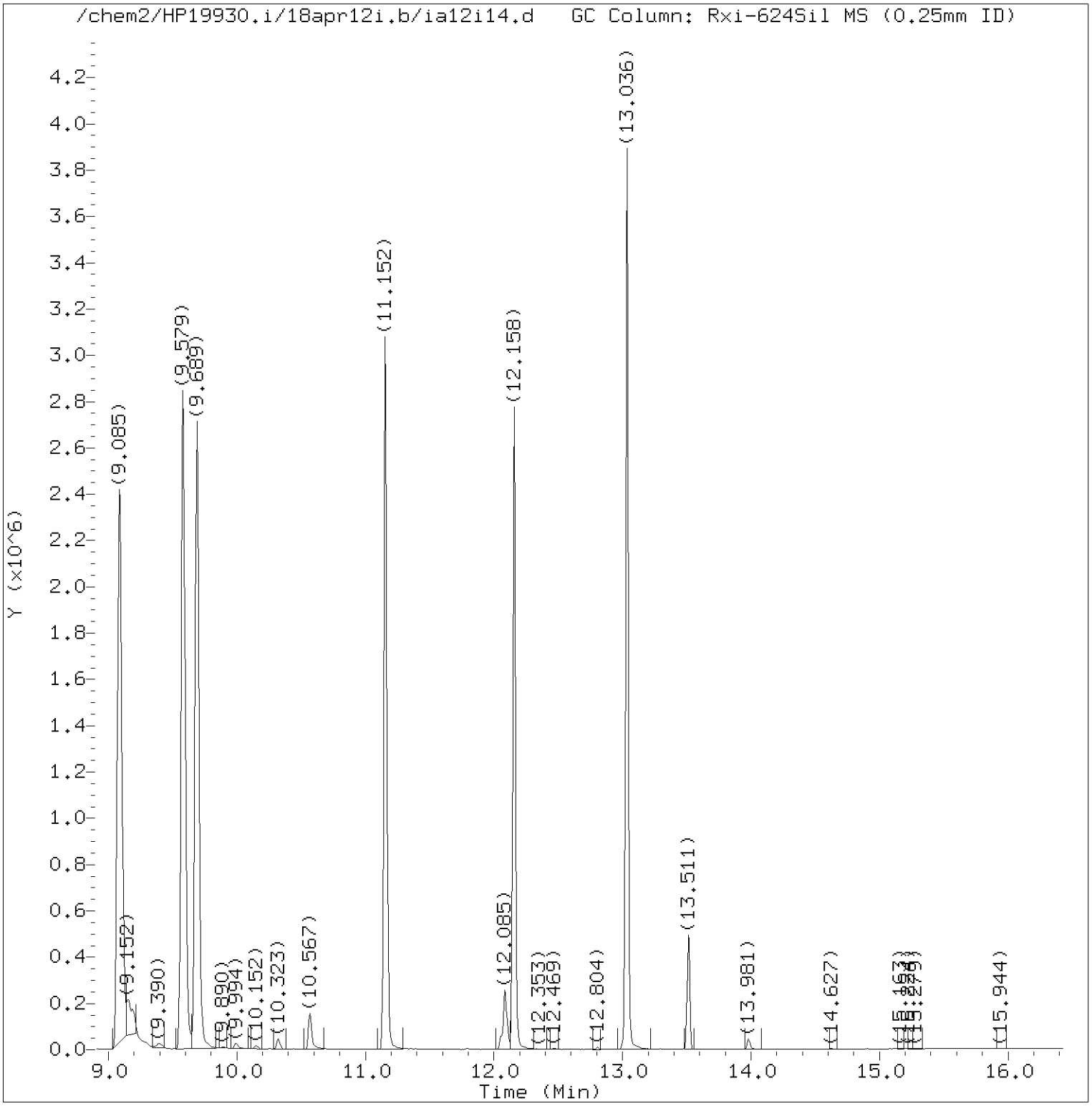
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

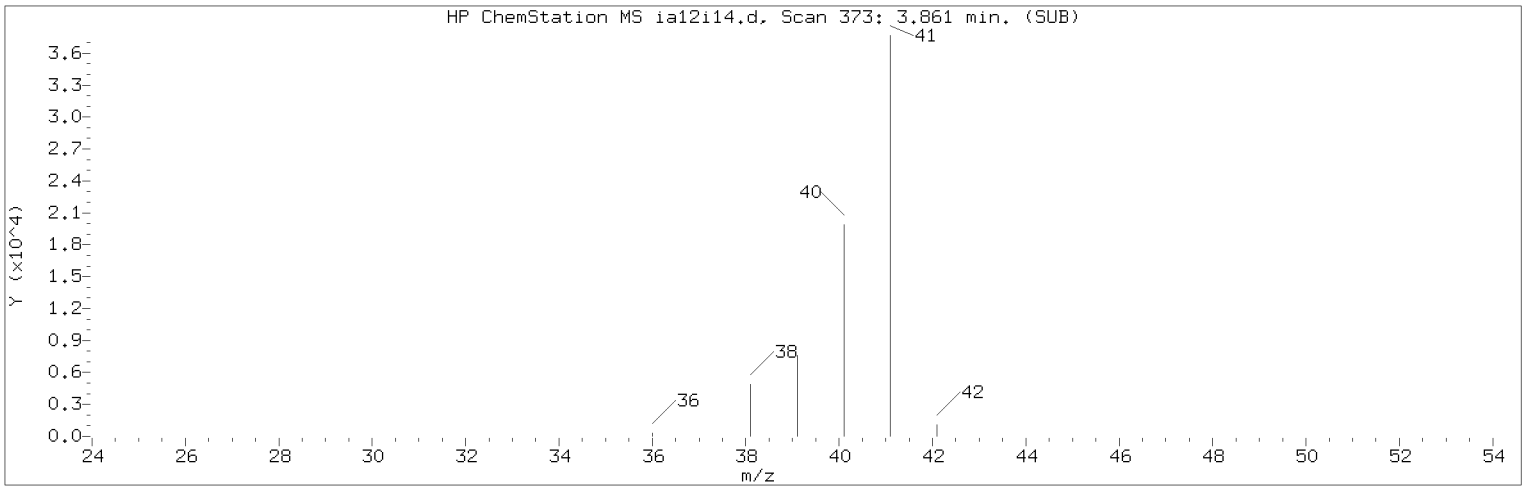
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	163312	1.936
25) Acetonitrile	(1)	3.861	41	347343M	74.405
26)*t-Butyl Alcohol-d10	(1)	4.123	65	172002M	50.000
36) Vinyl Acetate	(2)	5.239	43	150137M	1.805
43) Methyl Acrylate	(2)	6.171	55	324675M	9.776
53) 1-Chlorobutane	(2)	6.939	56	241381	1.921
63)*Fluorobenzene	(2)	7.659	96	2193233	10.000
77) Chloroacetonitrile	(2)	9.158	75	169019	95.708
78) 2-Chloroethyl vinyl ether	(2)	9.195	63	52938	2.059
97)*Chlorobenzene-d5	(3)	11.152	117	1678754	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.054	88	11165	3.597
112) Cyclohexanone	(1)	12.085	55	118807M	103.100
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	889787	10.000
142) Hexachloroethane	(4)	13.517	117	72513	1.887

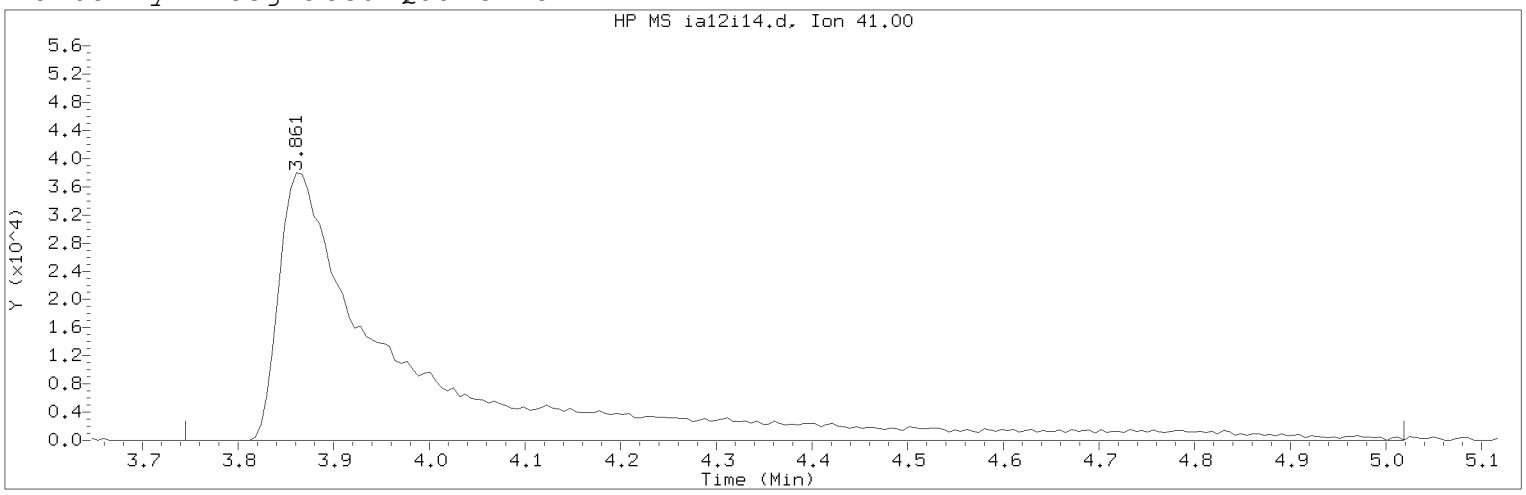
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

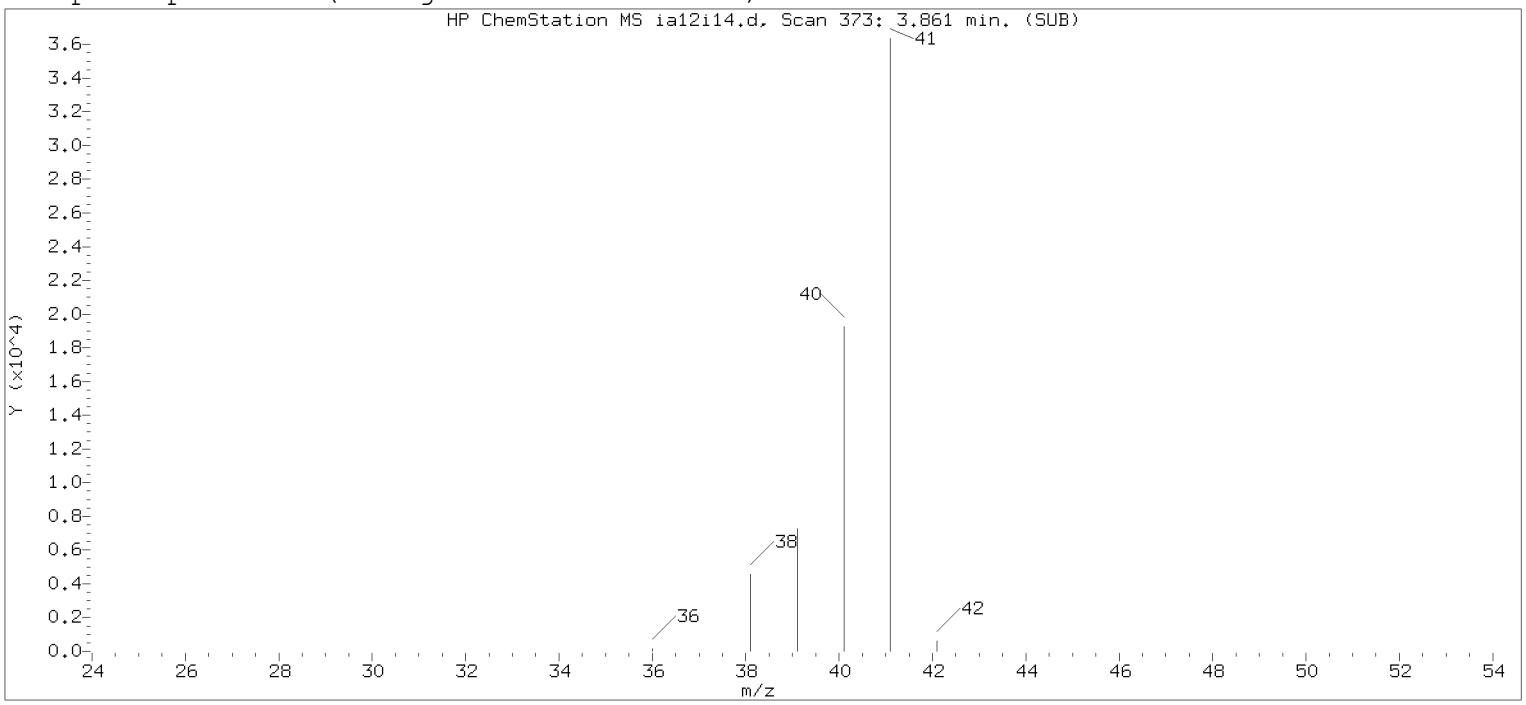
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 373
Retention Time (minutes): 3.861
Quant Ion : 41.00
Area (flag) : 347343M
On-Column Amount (ng) : 74.4046
Integration start scan : 353 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

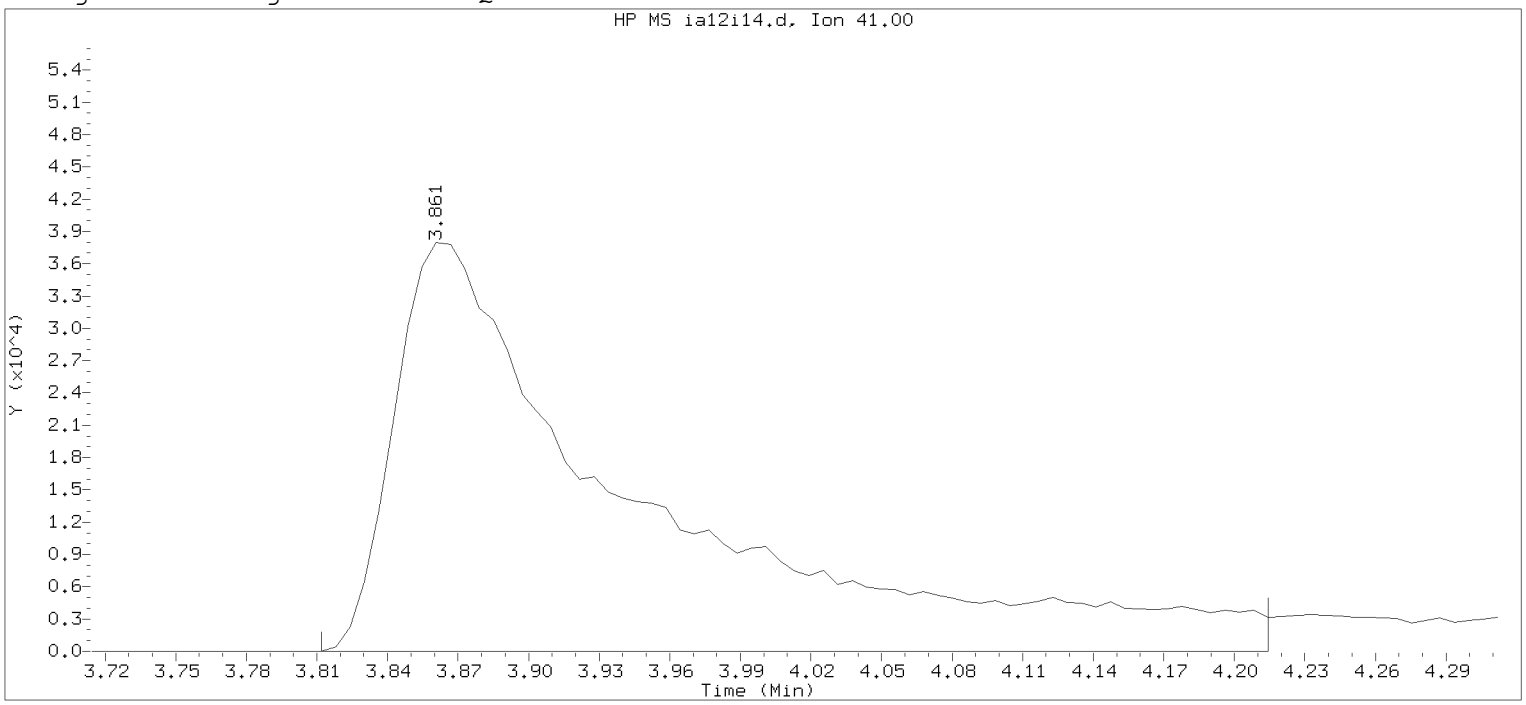
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

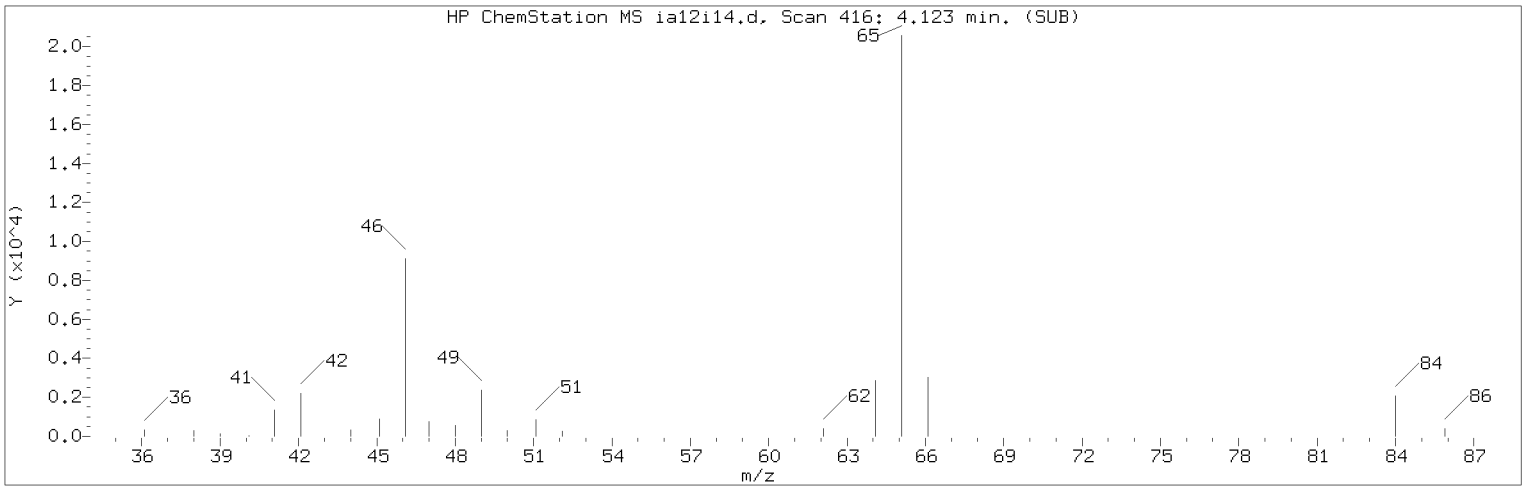
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

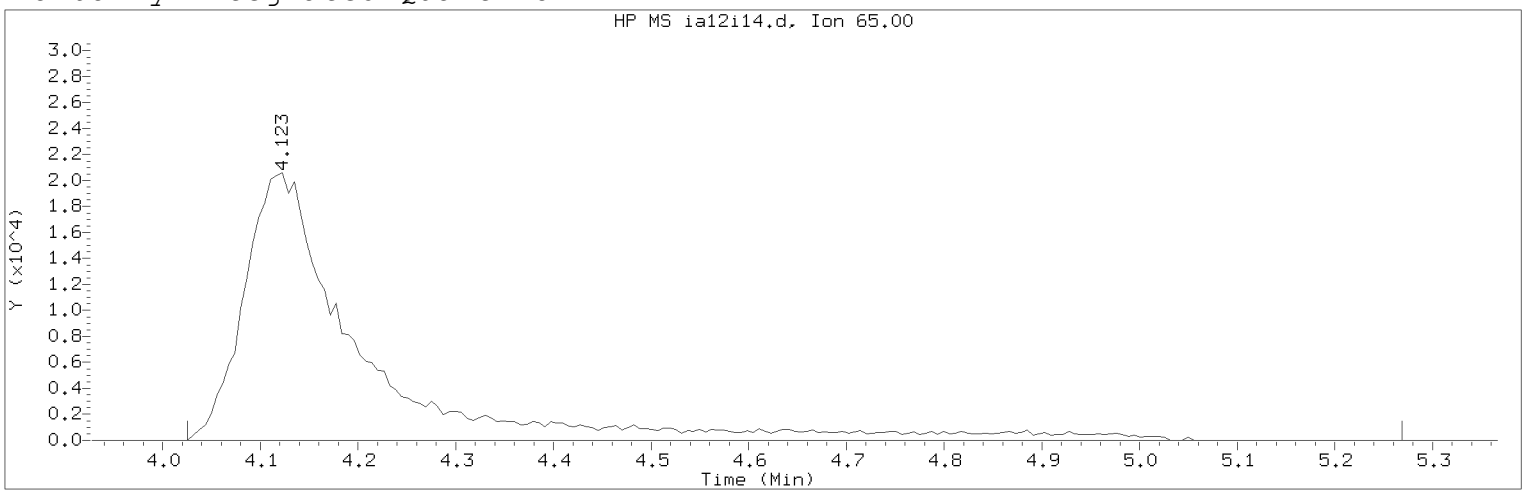
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 373		
Retention Time (minutes)	: 3.861		
Quant Ion	: 41.00		
Area	: 271270		
On-column Amount (ng)	: 68.4684		
Integration start scan	: 364	Integration stop scan:	430
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used. AE06 Page 998 of 2168

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

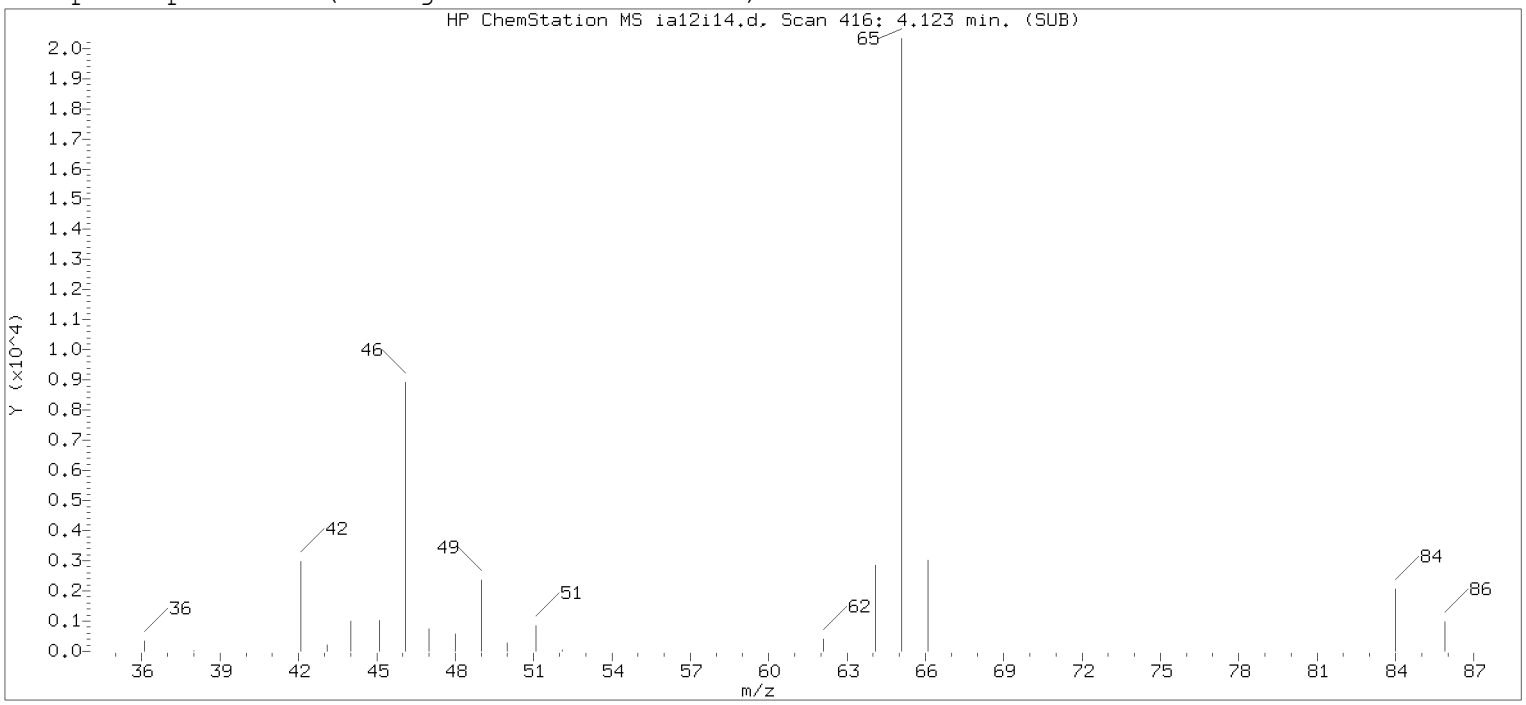
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 65.00
Area (flag) : 172002M
On-Column Amount (ng) : 50.0000
Integration start scan : 399 Integration stop scan: 603
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

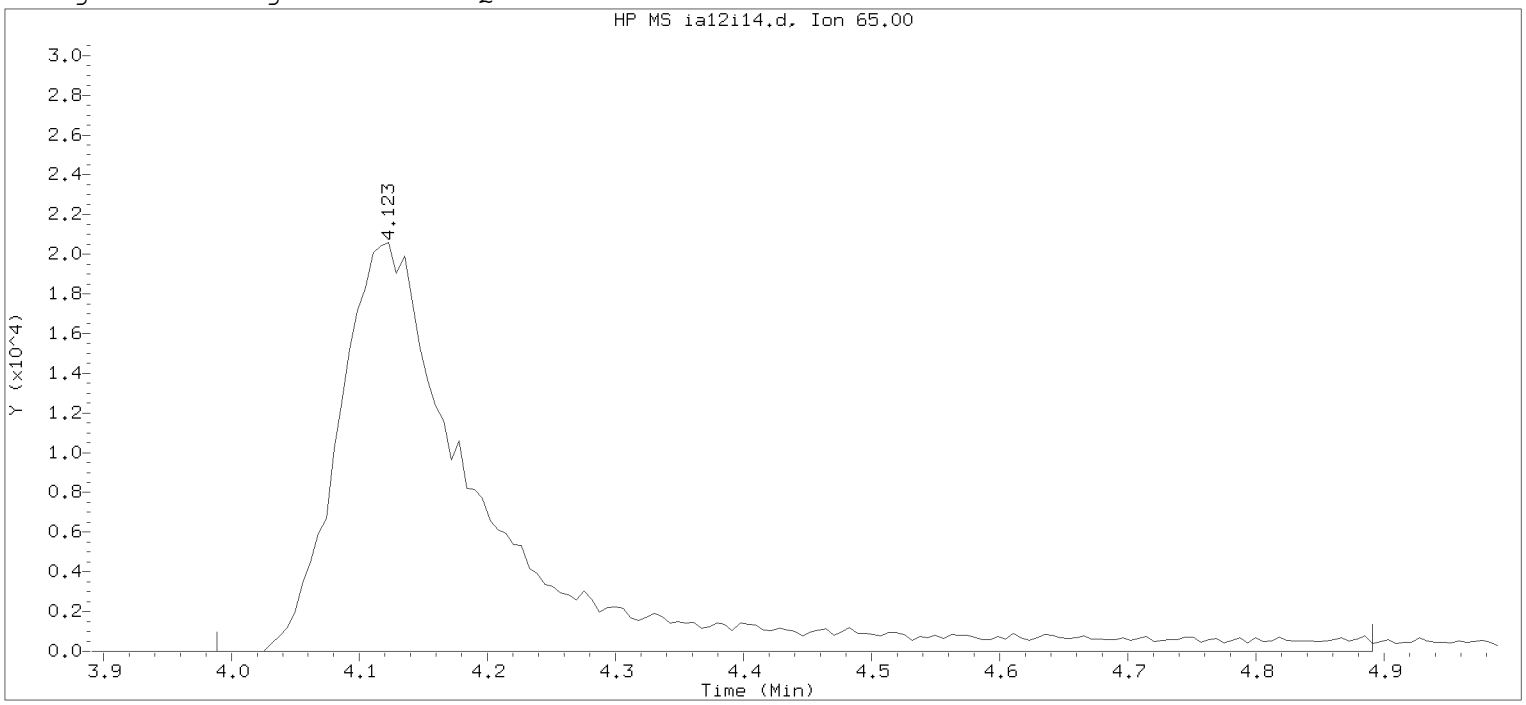
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

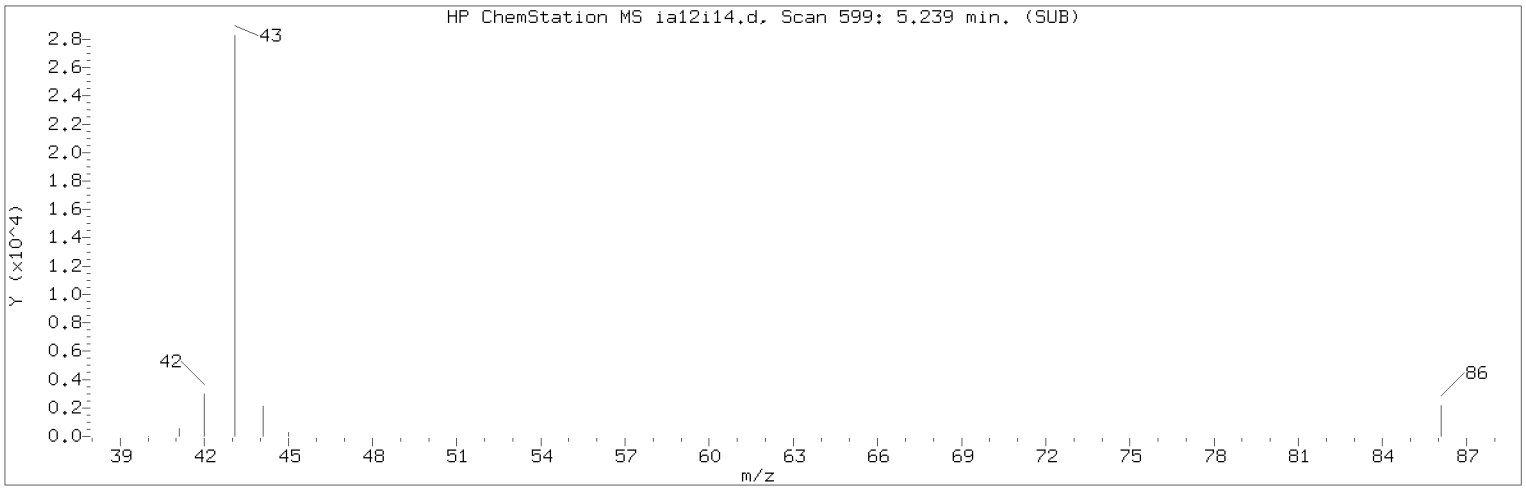
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

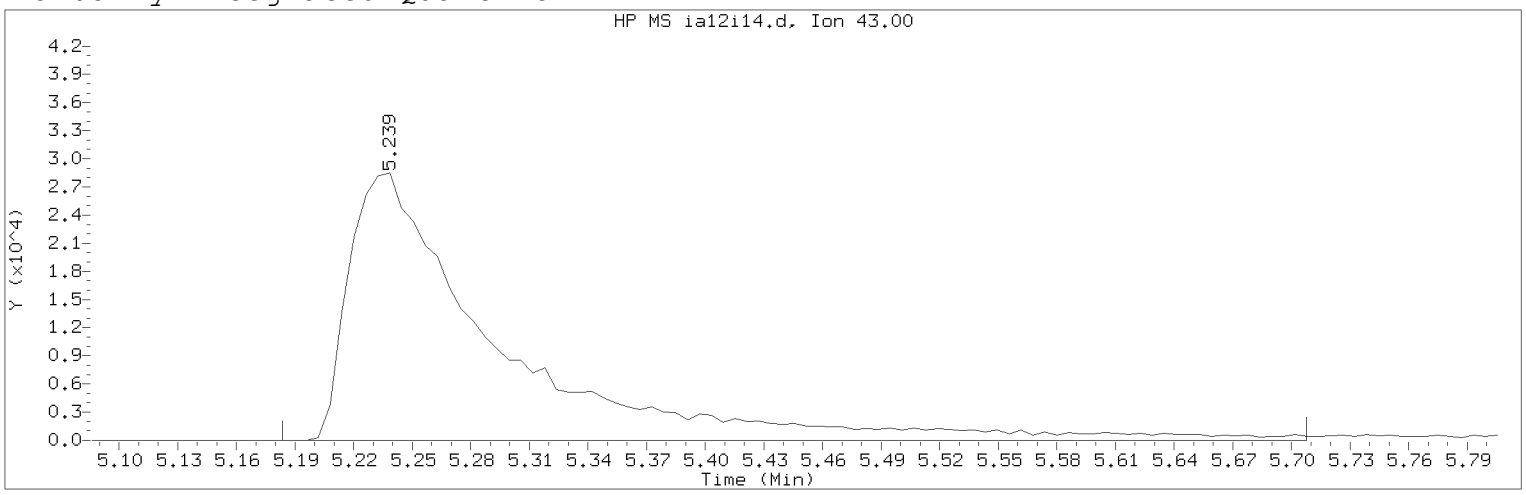
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 65.00
Area : 168398
On-column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 541
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

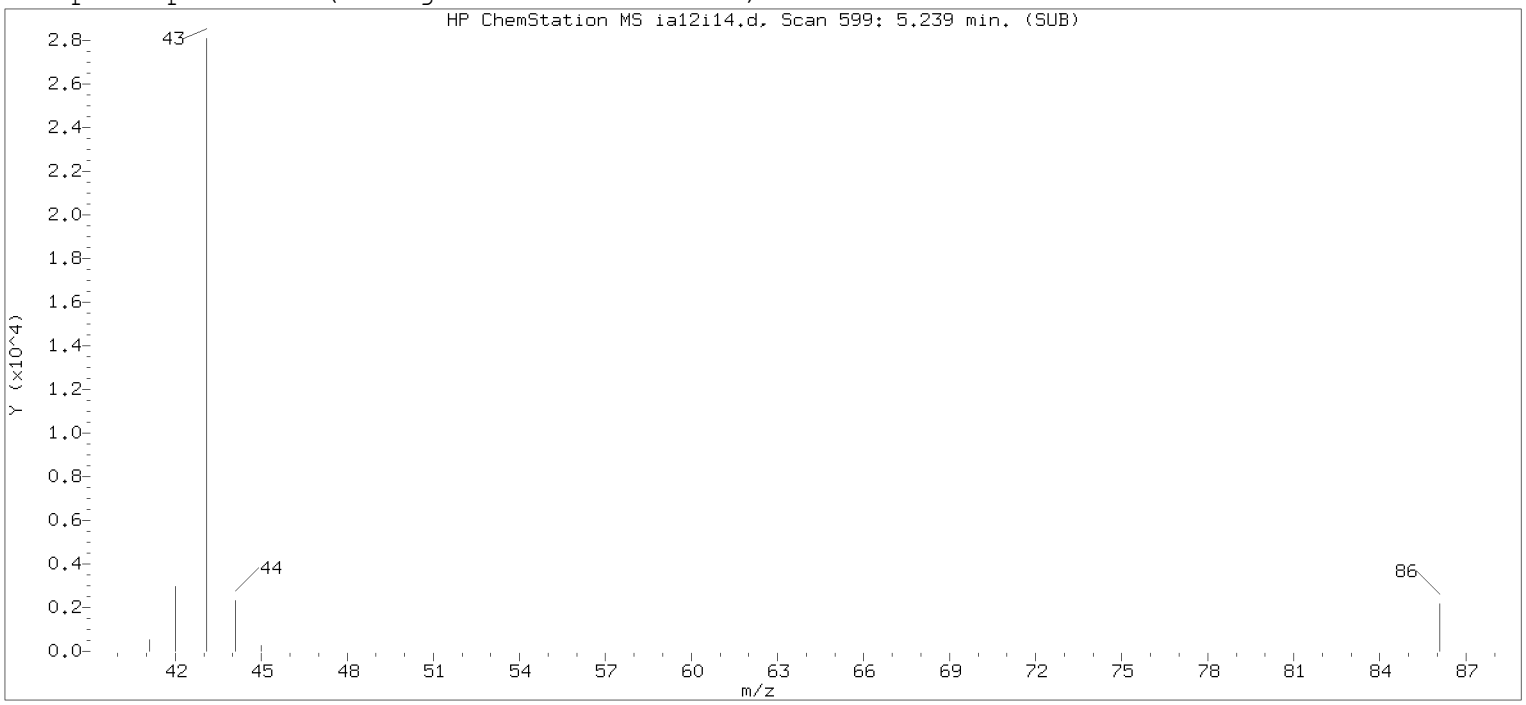
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 599
Retention Time (minutes): 5.239
Quant Ion : 43.00
Area (flag) : 150137M
On-Column Amount (ng) : 1.8047
Integration start scan : 589 Integration stop scan: 675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

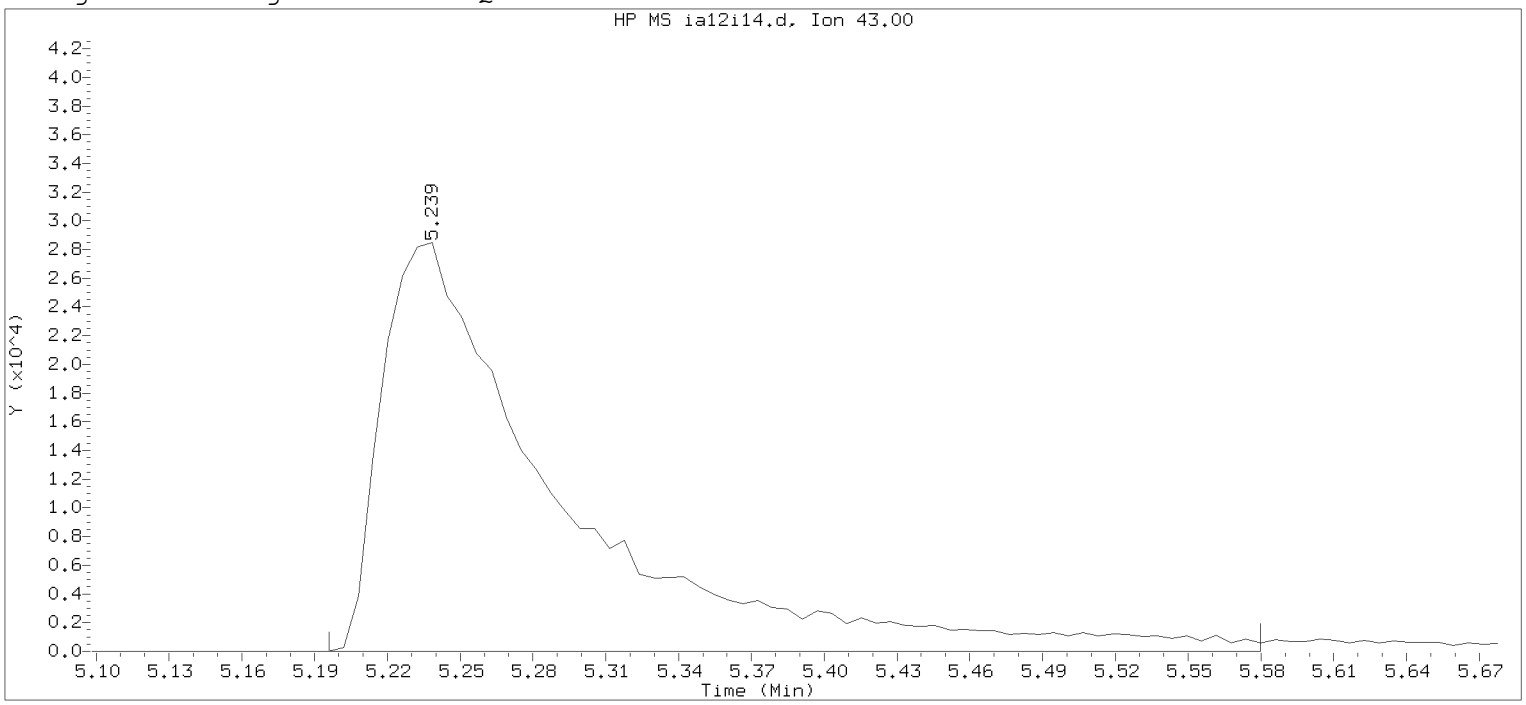
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

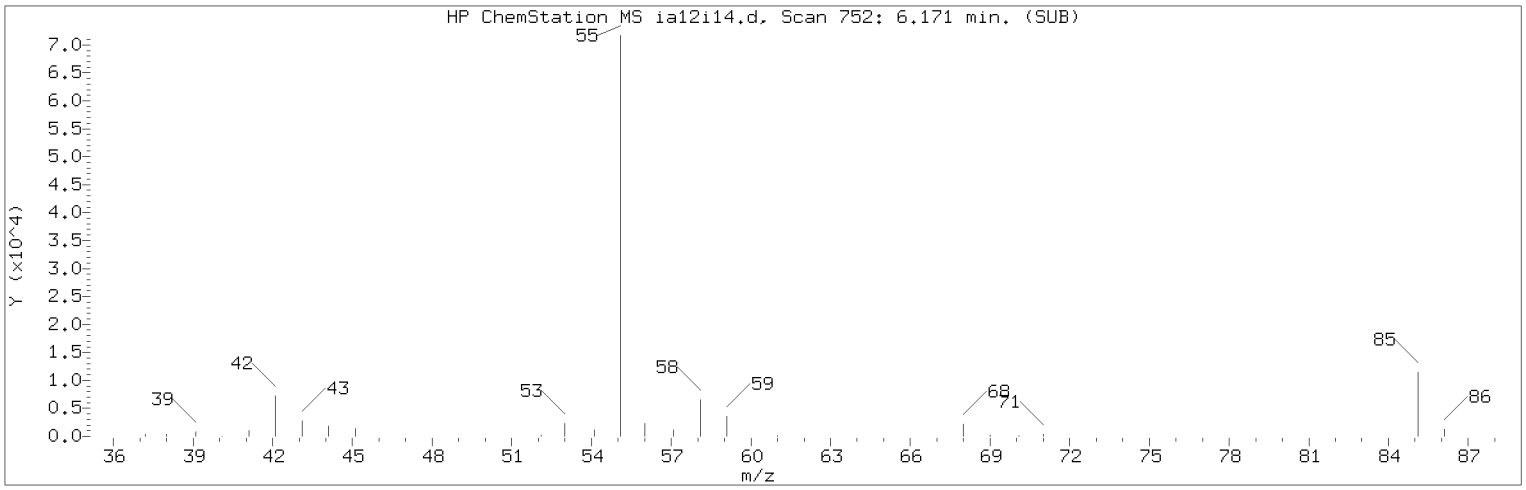
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

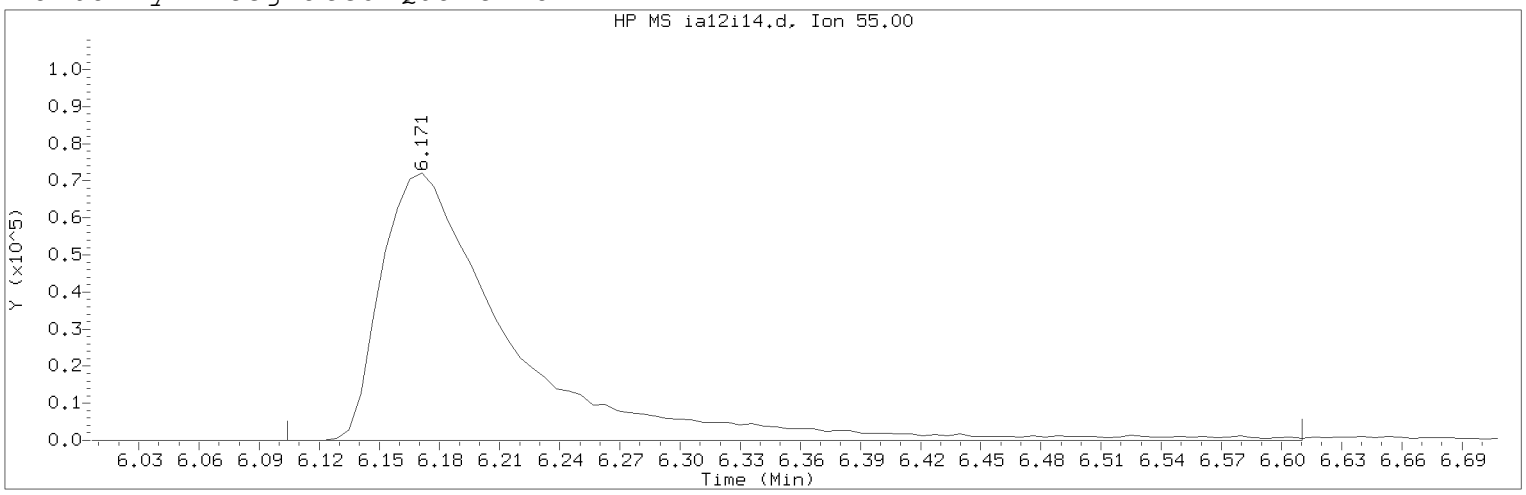
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 599
Retention Time (minutes): 5.239
Quant Ion : 43.00
Area : 145424
On-column Amount (ng) : 1.5847
Integration start scan : 591 Integration stop scan: 654
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

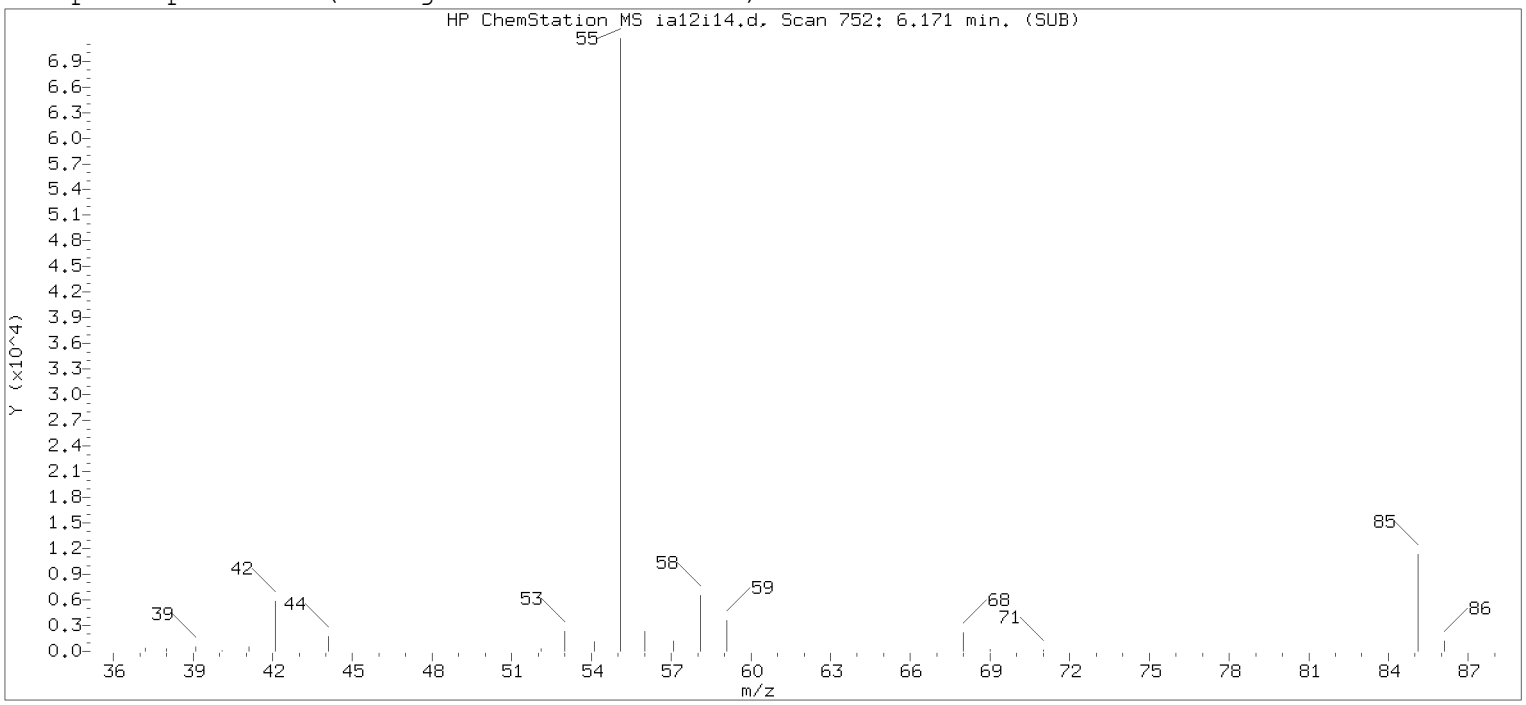
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 752
Retention Time (minutes): 6.171
Quant Ion : 55.00
Area (flag) : 324675M
On-Column Amount (ng) : 9.7758
Integration start scan : 740 Integration stop scan: 823
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

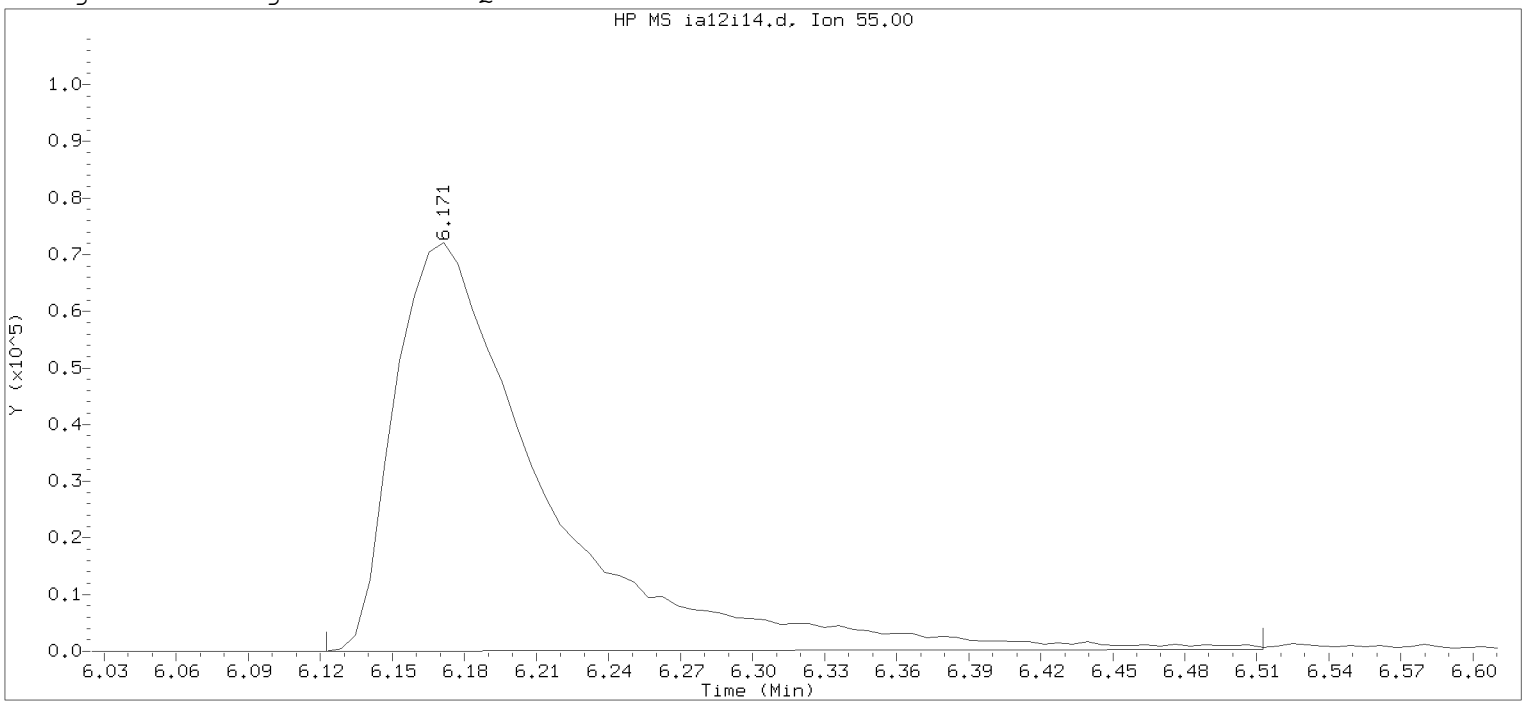
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

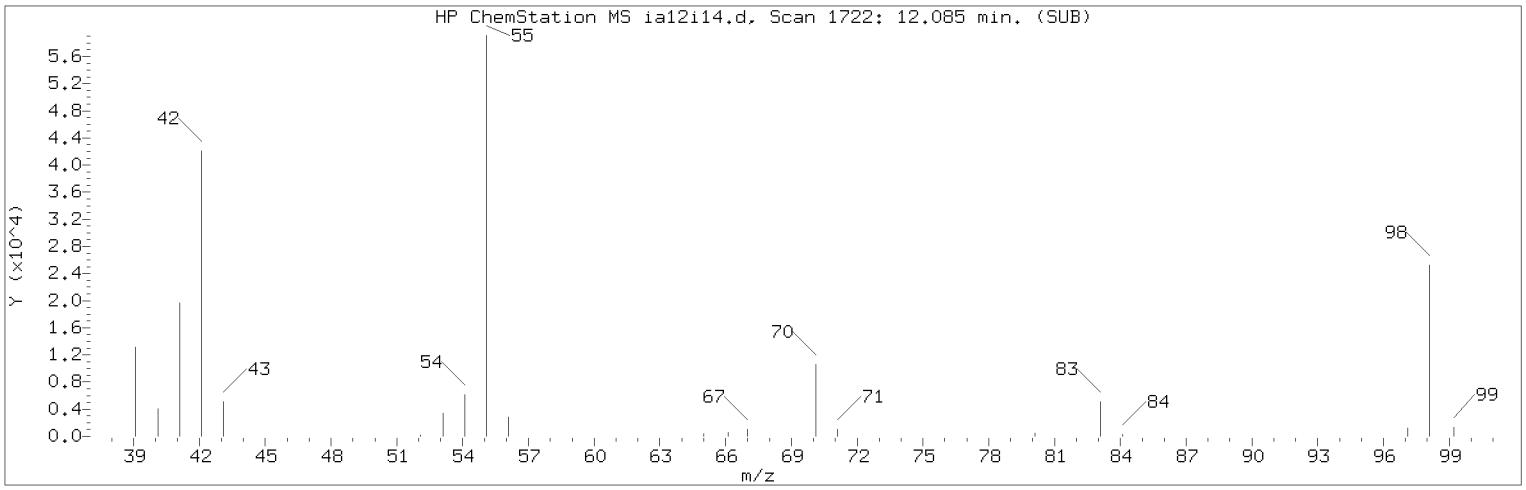
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

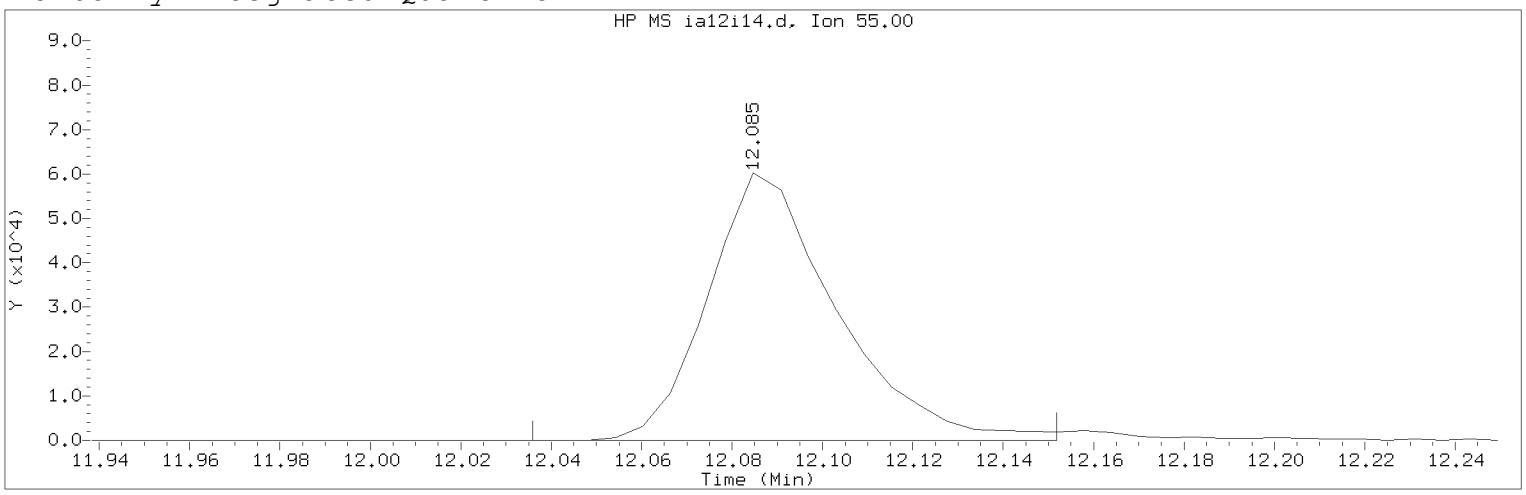
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 752
Retention Time (minutes): 6.171
Quant Ion : 55.00
Area : 315258
On-column Amount (ng) : 8.4888
Integration start scan : 743 Integration stop scan: 807
Y at integration start : 0 Y at integration end: 353

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

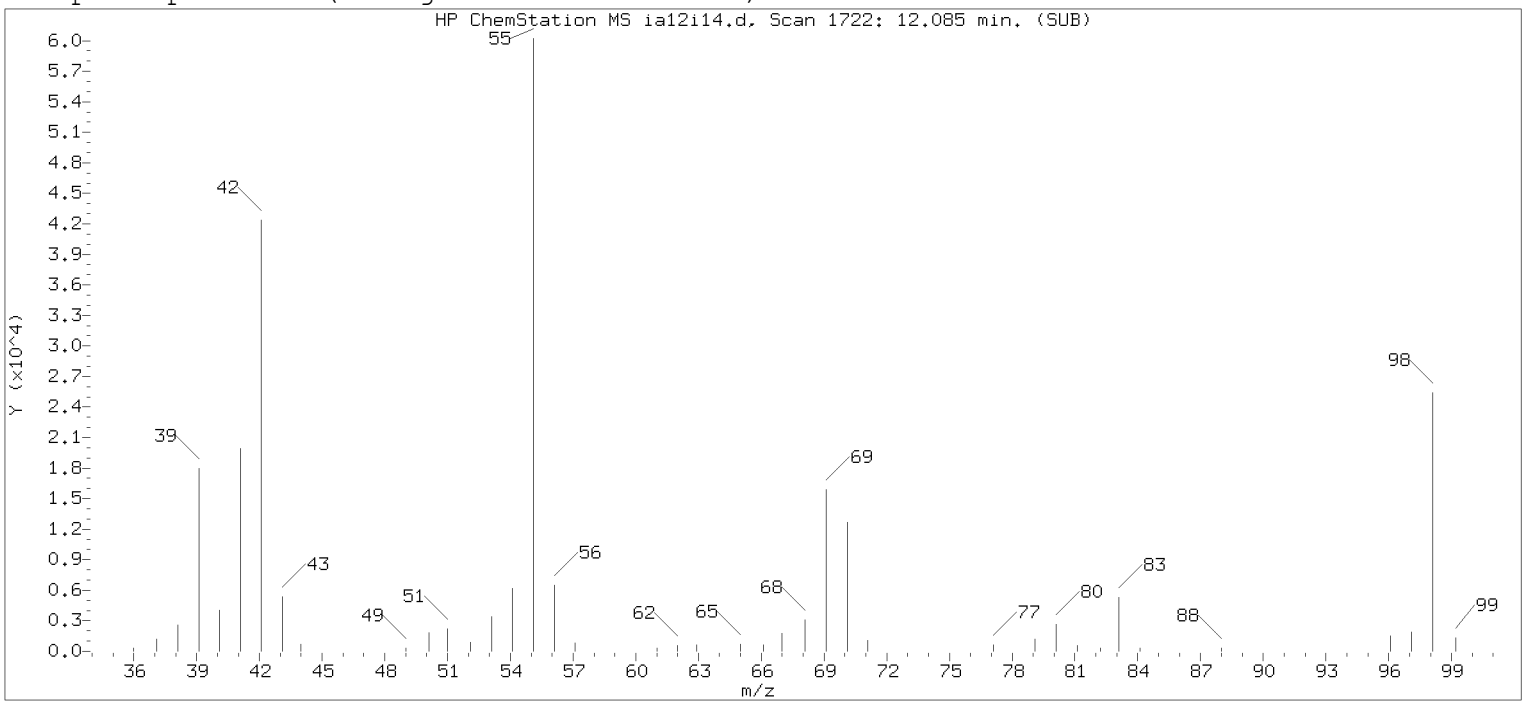
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1722
Retention Time (minutes): 12.085
Quant Ion : 55.00
Area (flag) : 118807M
On-Column Amount (ng) : 103.0999
Integration start scan : 1713 Integration stop scan: 1732
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

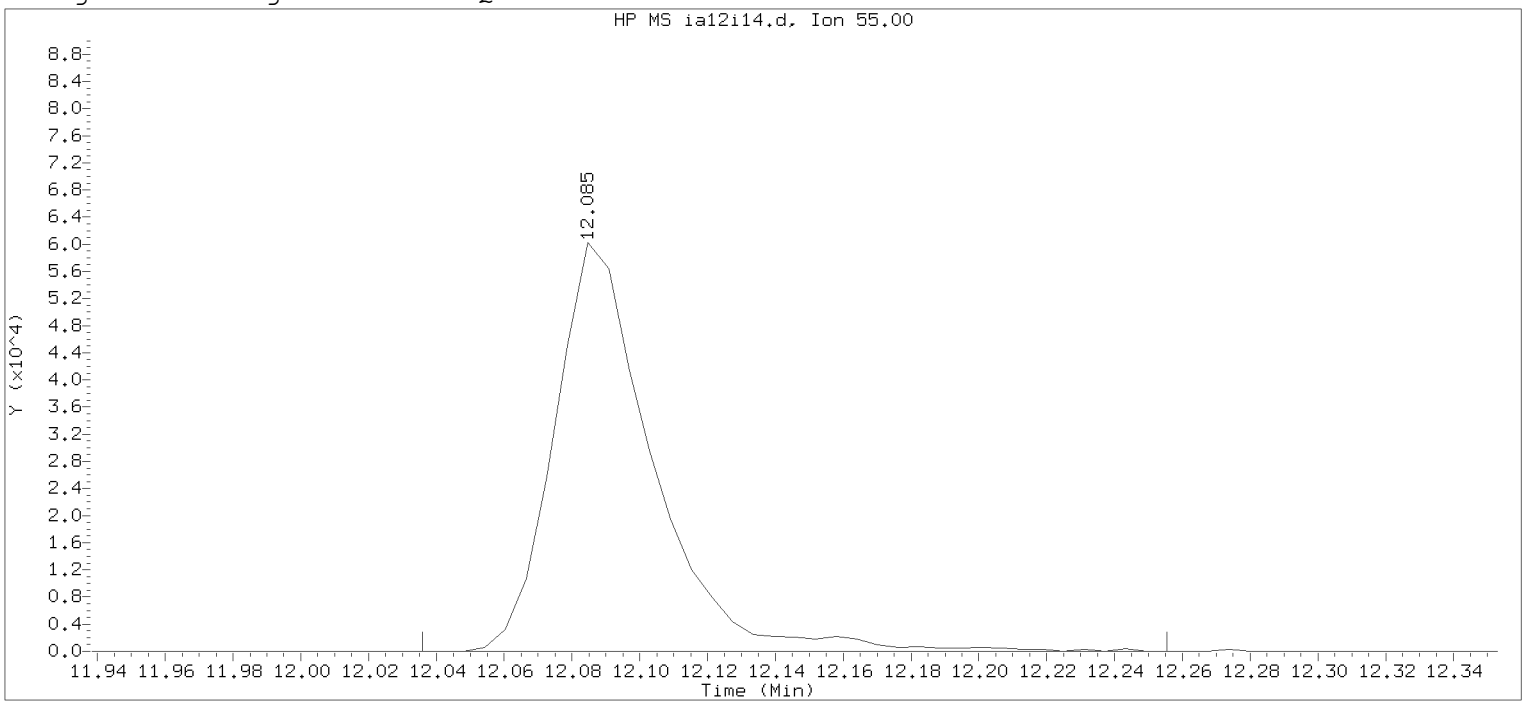
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



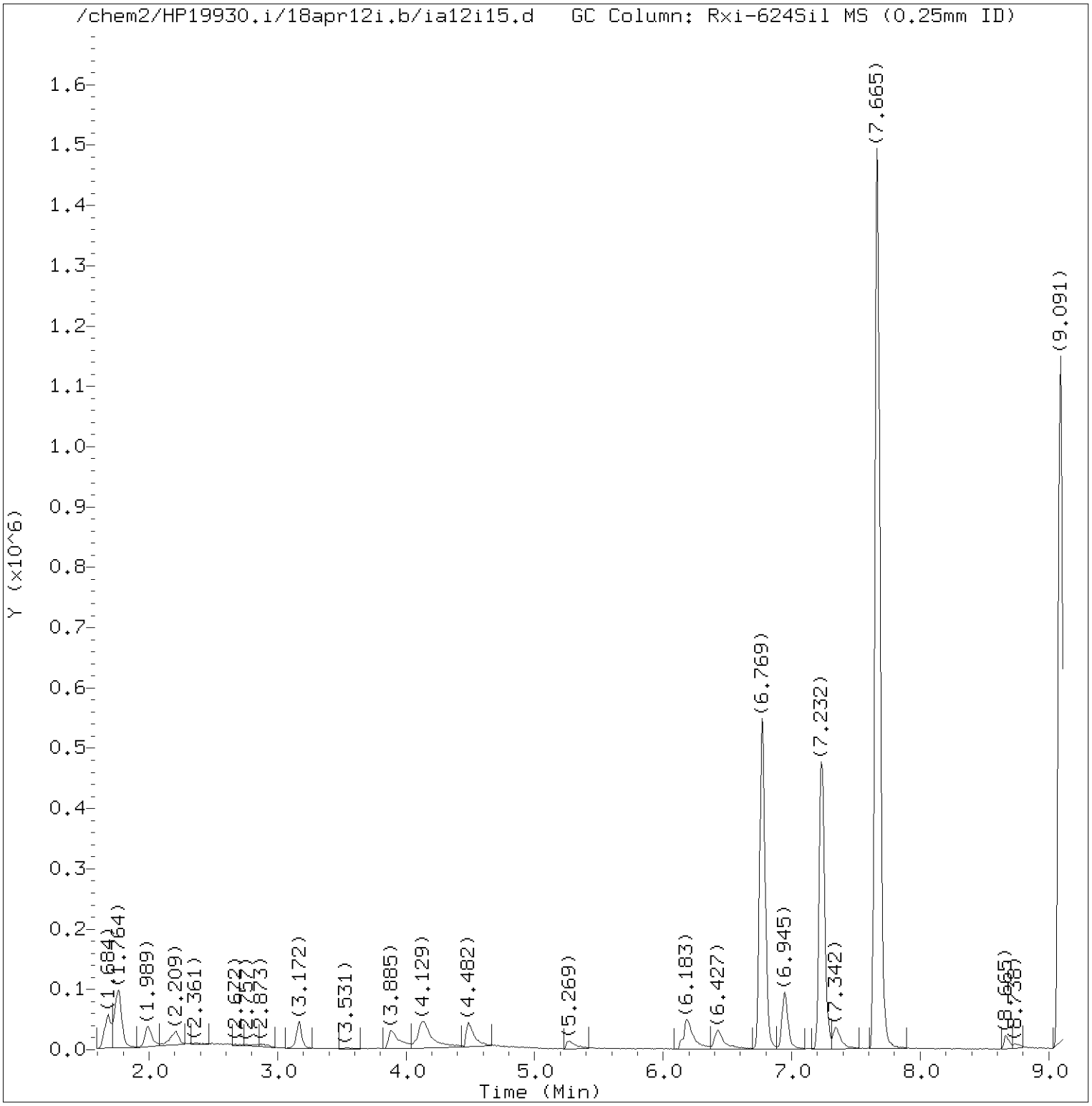
Data File: /chem2/HP19930.i/18apr12i.b/ia12i14.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:29 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1722
Retention Time (minutes): 12.085
Quant Ion : 55.00
Area : 122220
On-column Amount (ng) : 94.3465
Integration start scan : 1713 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used. Page 1006



Total Ion Chromatogram (TIC)

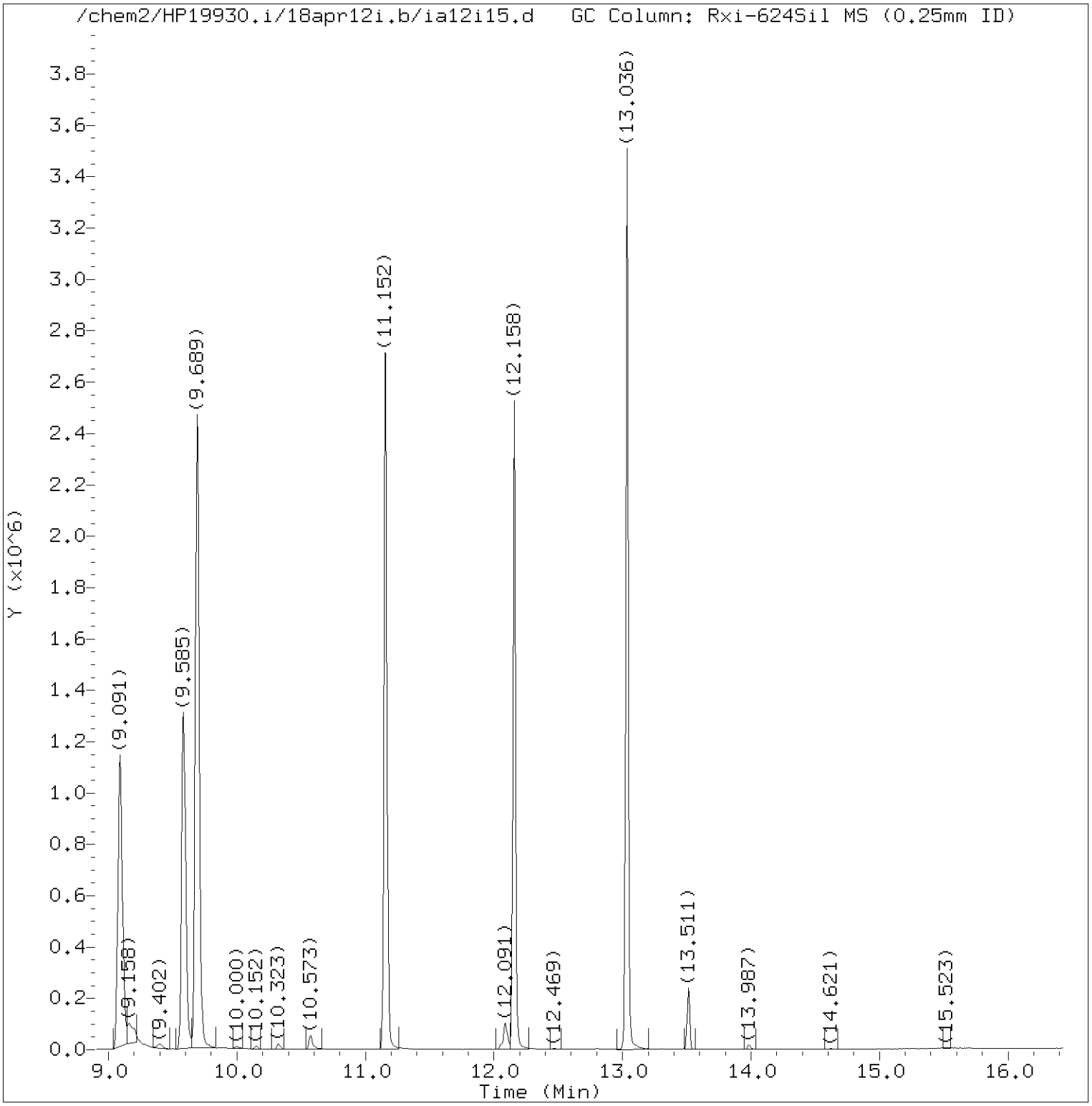
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

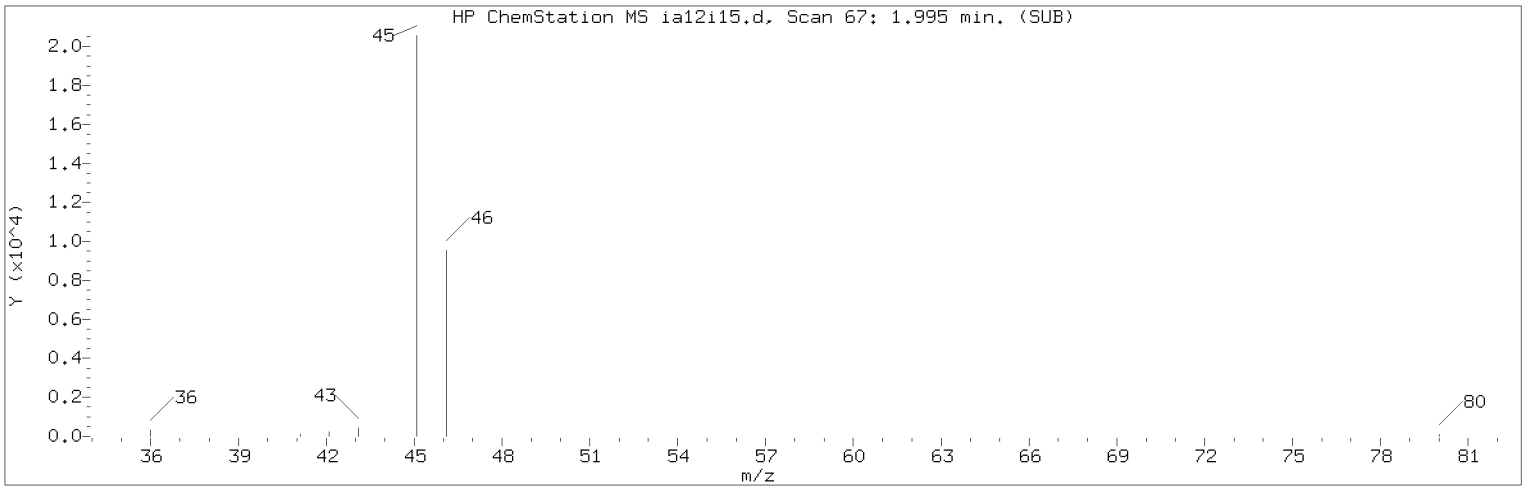
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.995	45	76511M	0.986
25) Acetonitrile	(1)	3.879	41	175338M	41.144
26)*t-Butyl Alcohol-d10	(1)	4.129	65	157015	50.000
36) Vinyl Acetate	(2)	5.269	43	64039M	0.976
43) Methyl Acrylate	(2)	6.189	55	142592M	4.667
53) 1-Chlorobutane	(2)	6.945	56	115162	0.996
63)*Fluorobenzene	(2)	7.665	96	2017792	10.000
77) Chloroacetonitrile	(2)	9.164	75	82832M	50.982
78) 2-Chloroethyl vinyl ether	(2)	9.201	63	22323	0.944
97)*Chlorobenzene-d5	(3)	11.158	117	1509154	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.060	88	3809	1.693
112) Cyclohexanone	(1)	12.091	55	50415M	47.926
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	793592	10.000
142) Hexachloroethane	(4)	13.511	117	33223	0.969

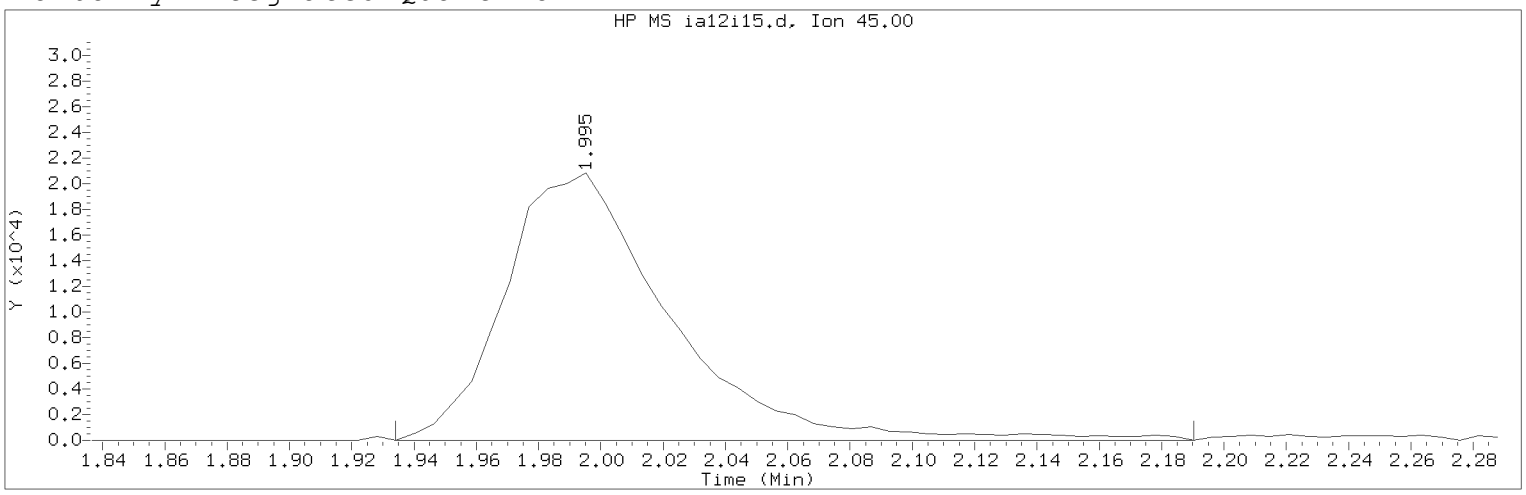
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

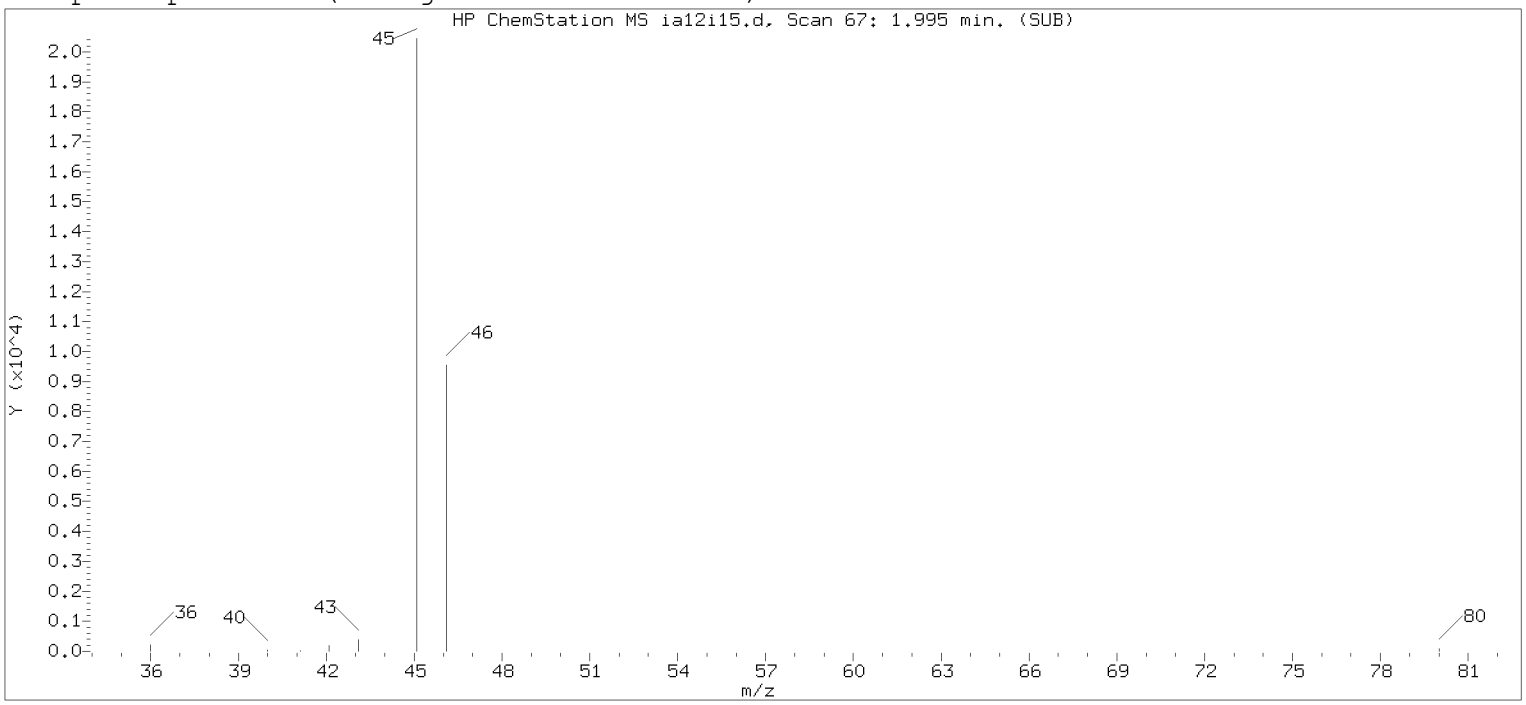
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 67
Retention Time (minutes): 1.995
Quant Ion : 45.00
Area (flag) : 76511M
On-Column Amount (ng) : 0.9857
Integration start scan : 56 Integration stop scan: 98
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

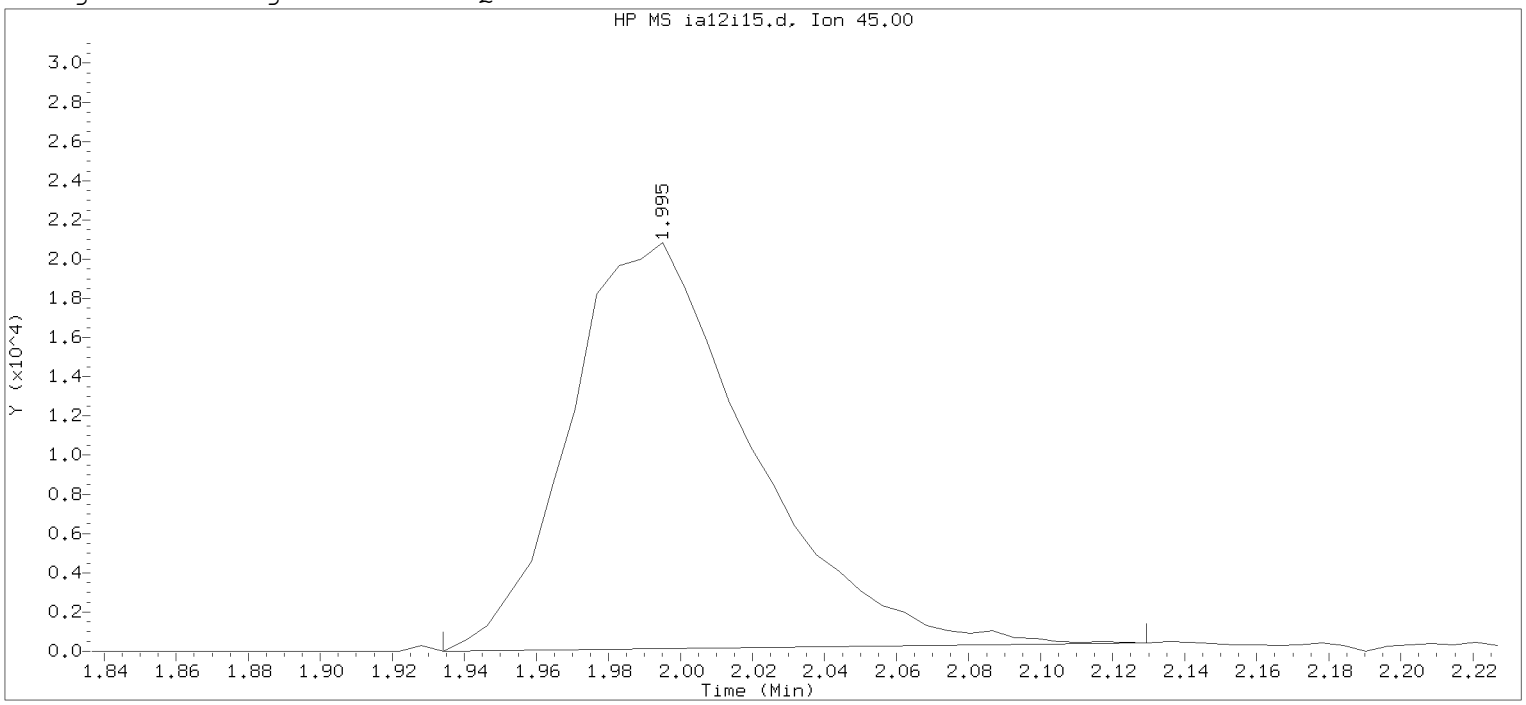
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

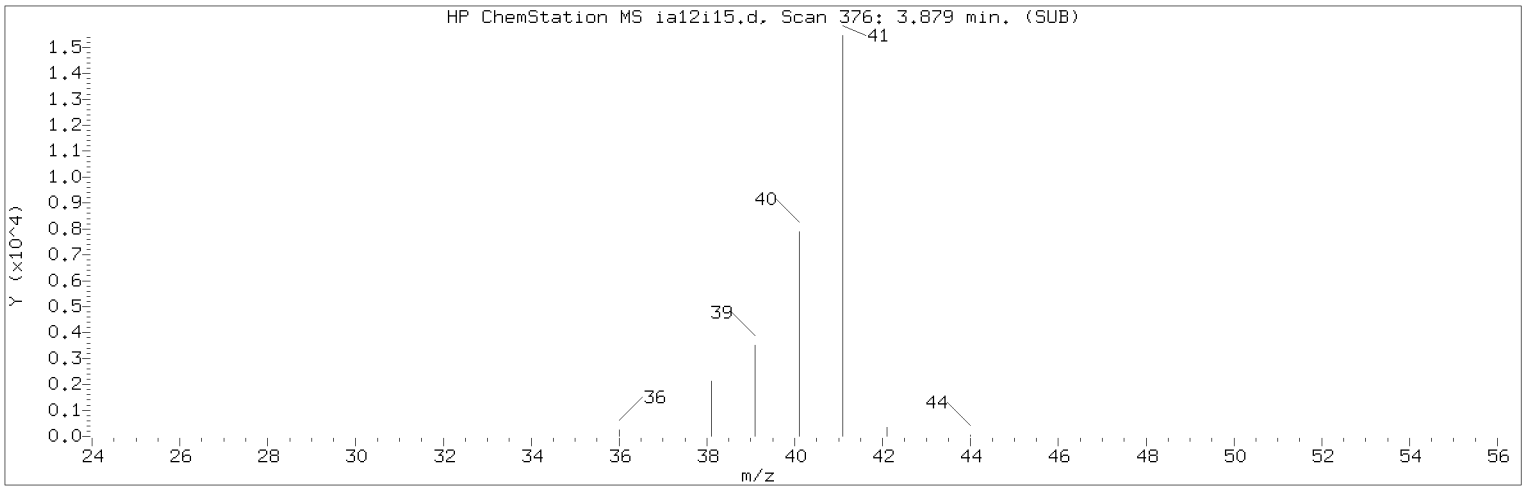
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

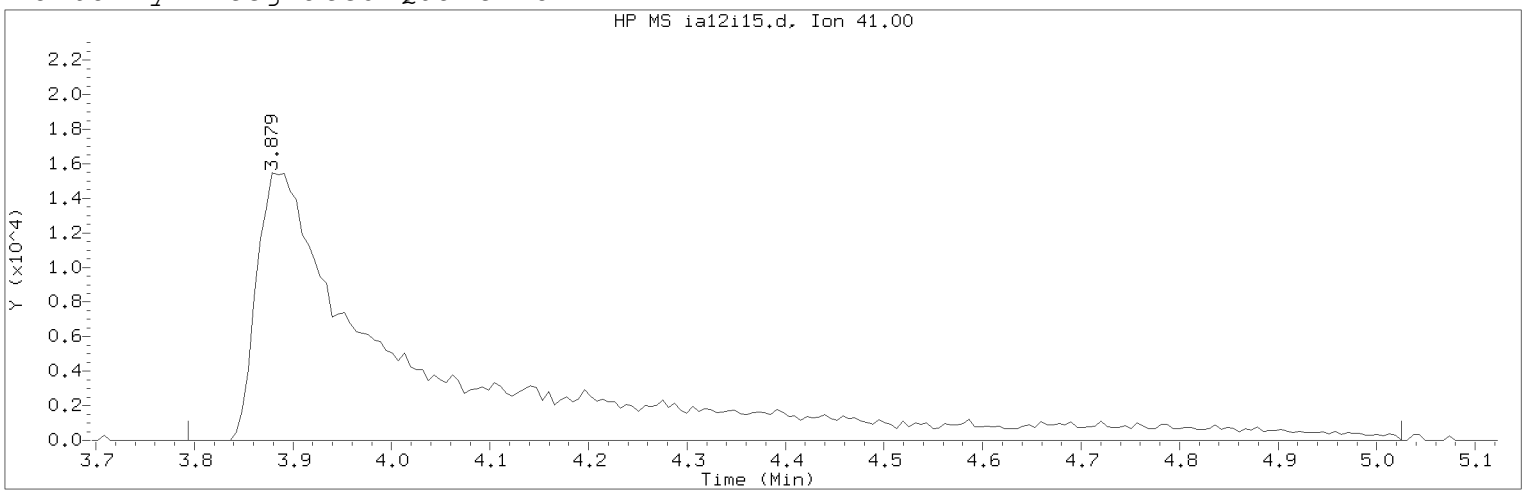
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 67
Retention Time (minutes): 1.995
Quant Ion : 45.00
Area : 72763
On-column Amount (ng) : 0.9448
Integration start scan : 56 Integration stop scan: 88
Y at integration start : 0 Y at integration end: 419

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

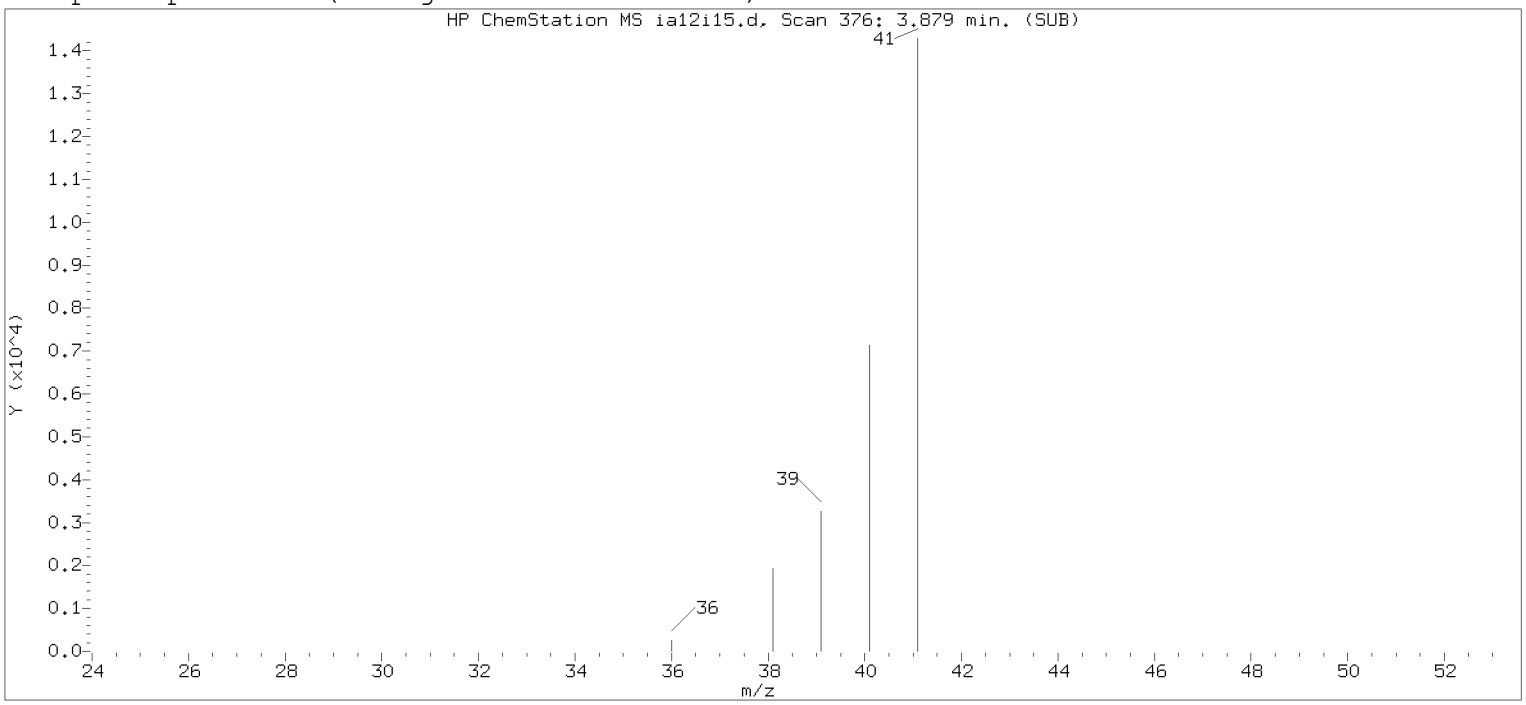
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 376
Retention Time (minutes): 3.879
Quant Ion : 41.00
Area (flag) : 175338M
On-Column Amount (ng) : 41.1443
Integration start scan : 361 Integration stop scan: 563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

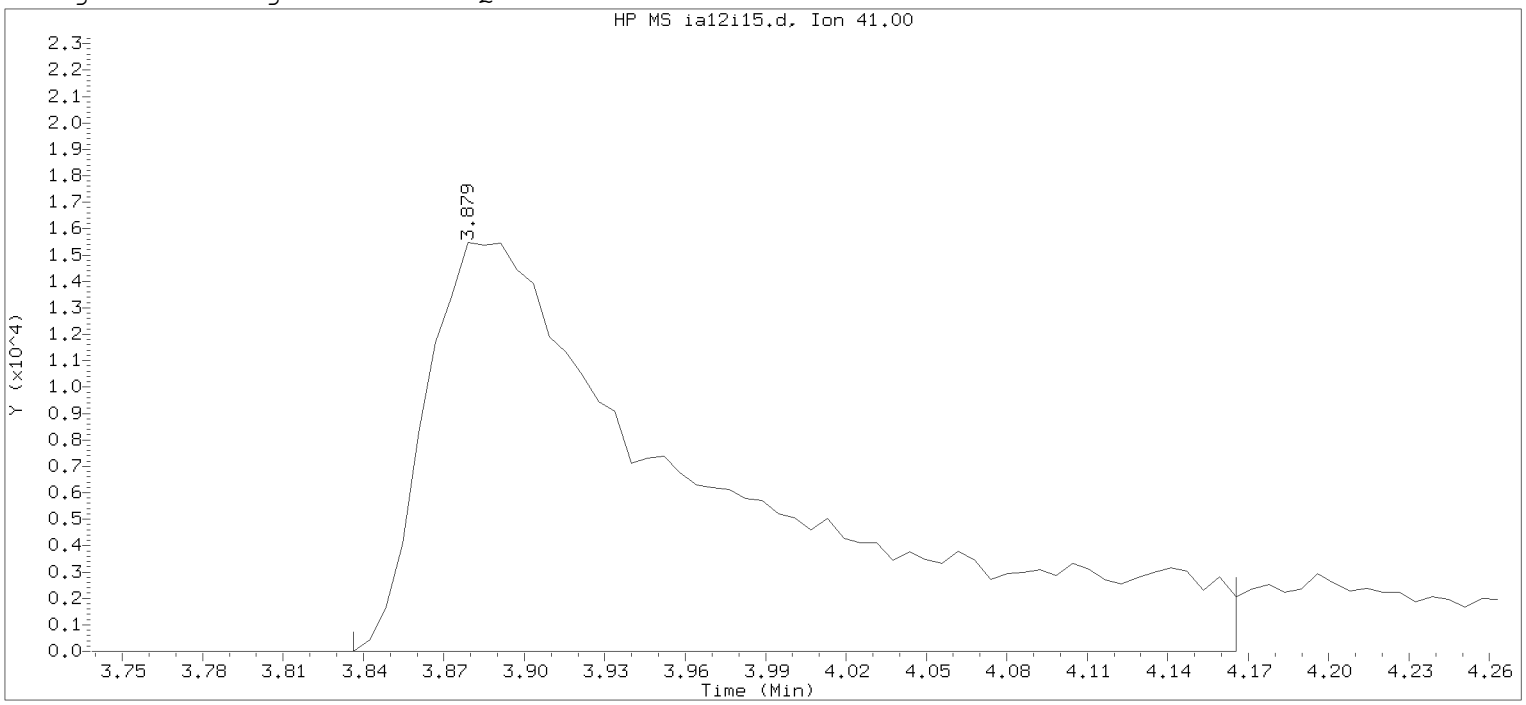
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

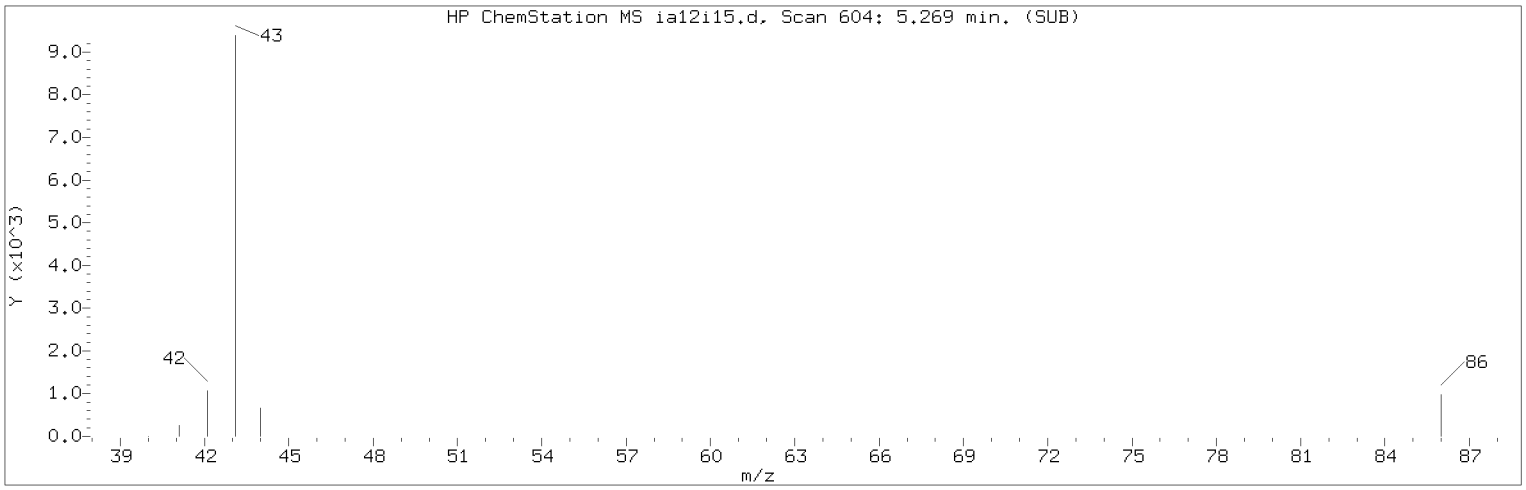
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

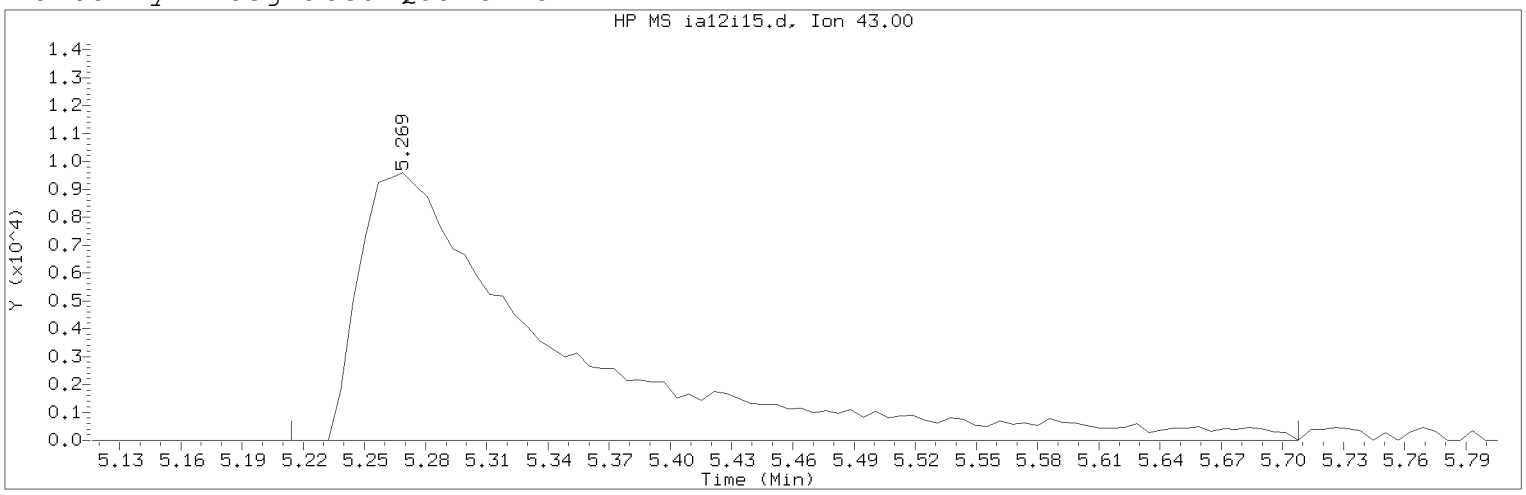
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 376
Retention Time (minutes): 3.879
Quant Ion : 41.00
Area : 118210
On-column Amount (ng) : 33.3327
Integration start scan : 368 Integration stop scan: 422
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used. Page 1013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

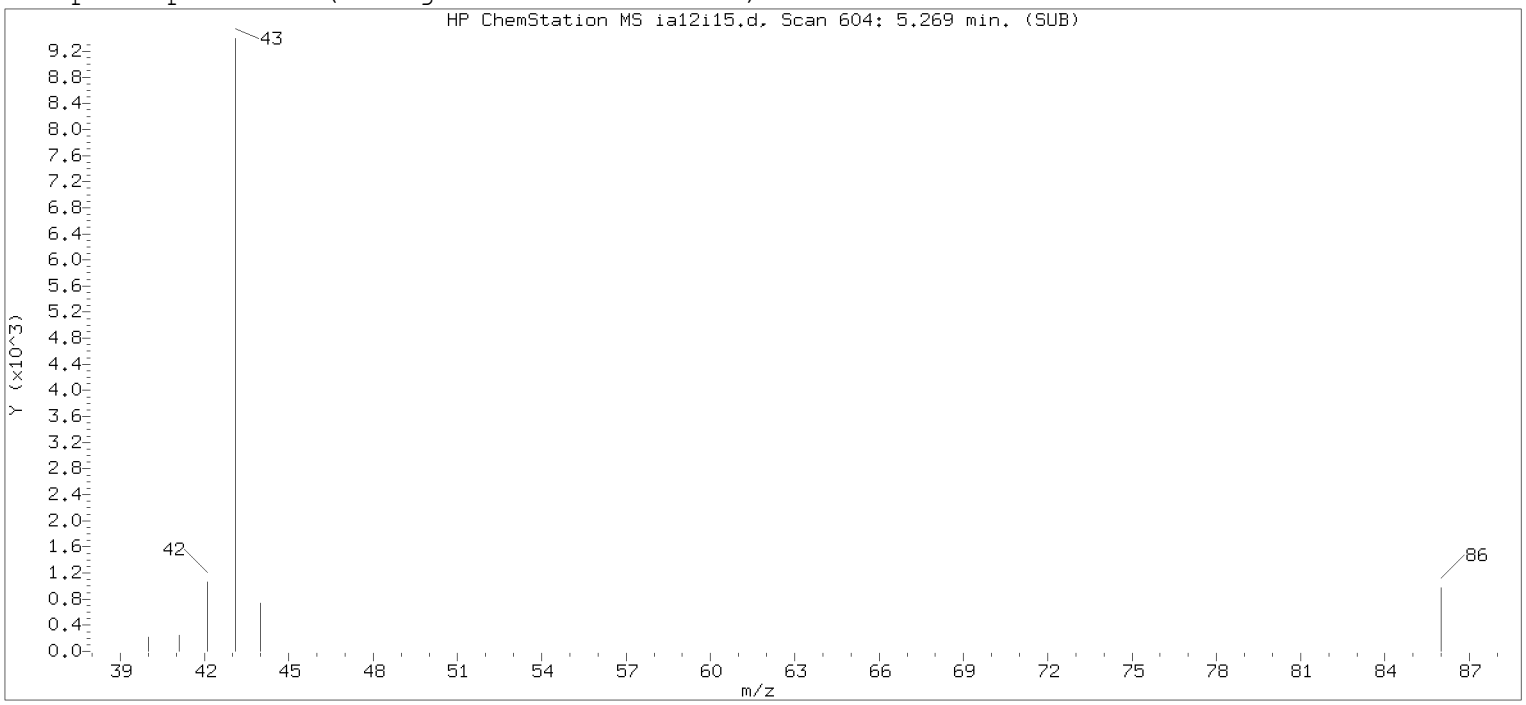
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 604
Retention Time (minutes): 5.269
Quant Ion : 43.00
Area (flag) : 64039M
On-Column Amount (ng) : 0.9756
Integration start scan : 594 Integration stop scan: 675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

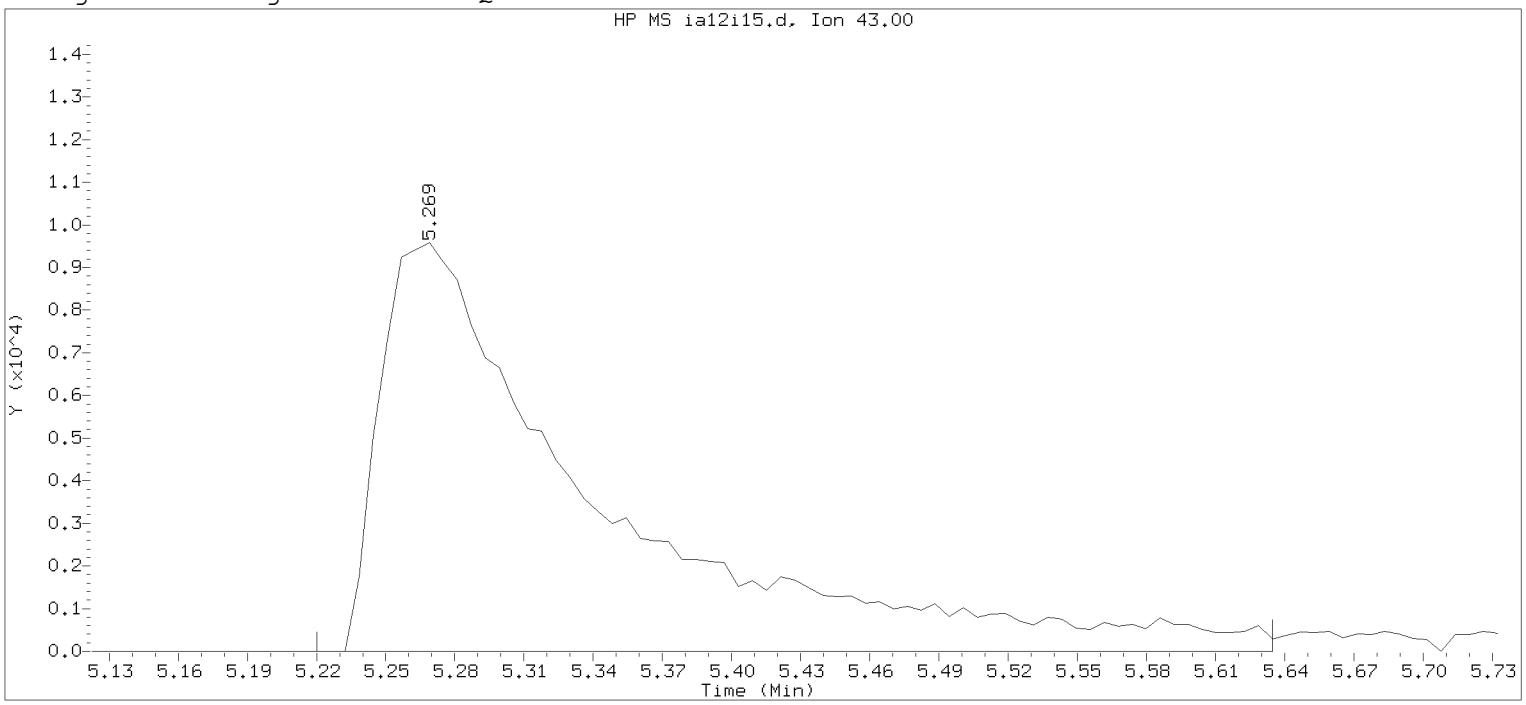
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

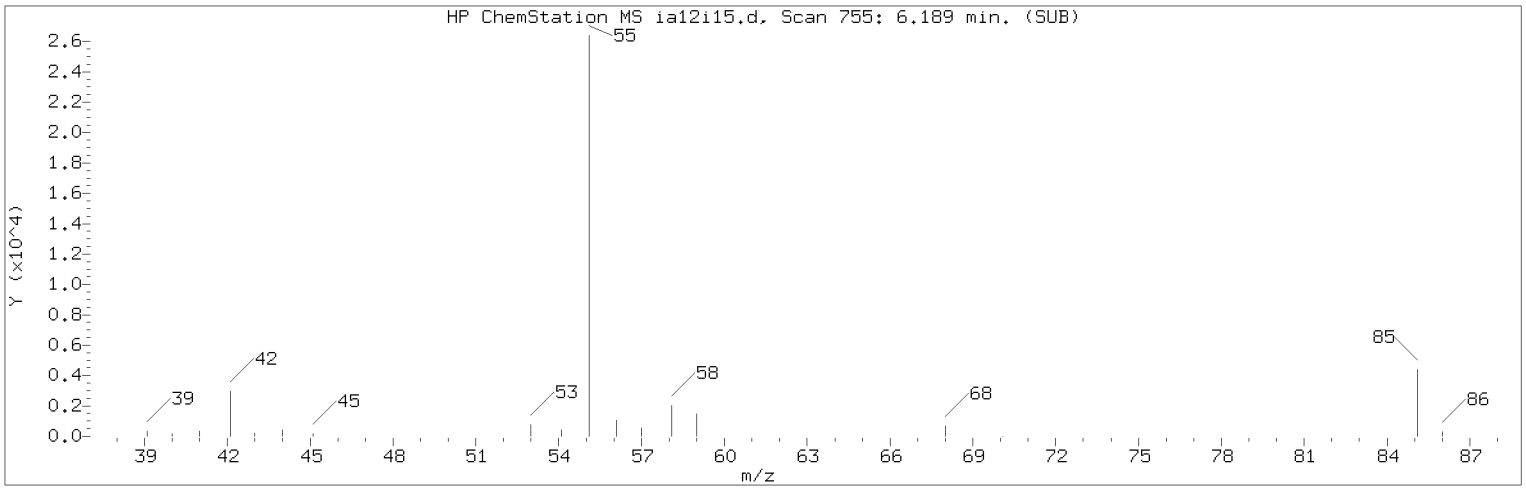
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

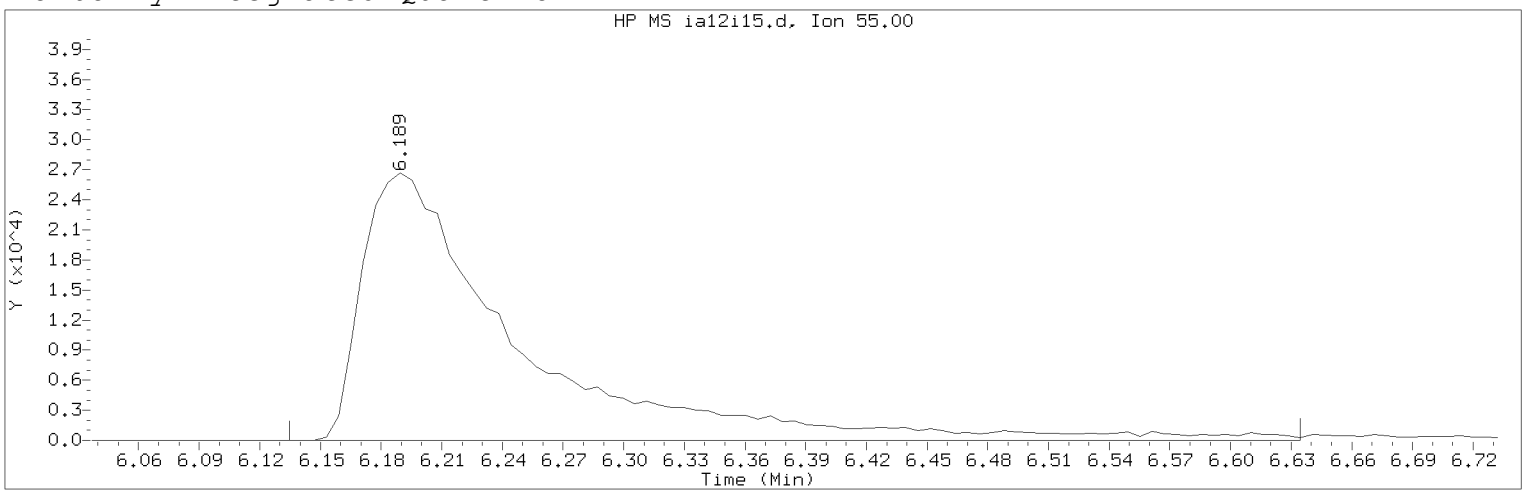
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 604
Retention Time (minutes): 5.269
Quant Ion : 43.00
Area : 62418
On-column Amount (ng) : 0.7800
Integration start scan : 595 Integration stop scan: 663
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

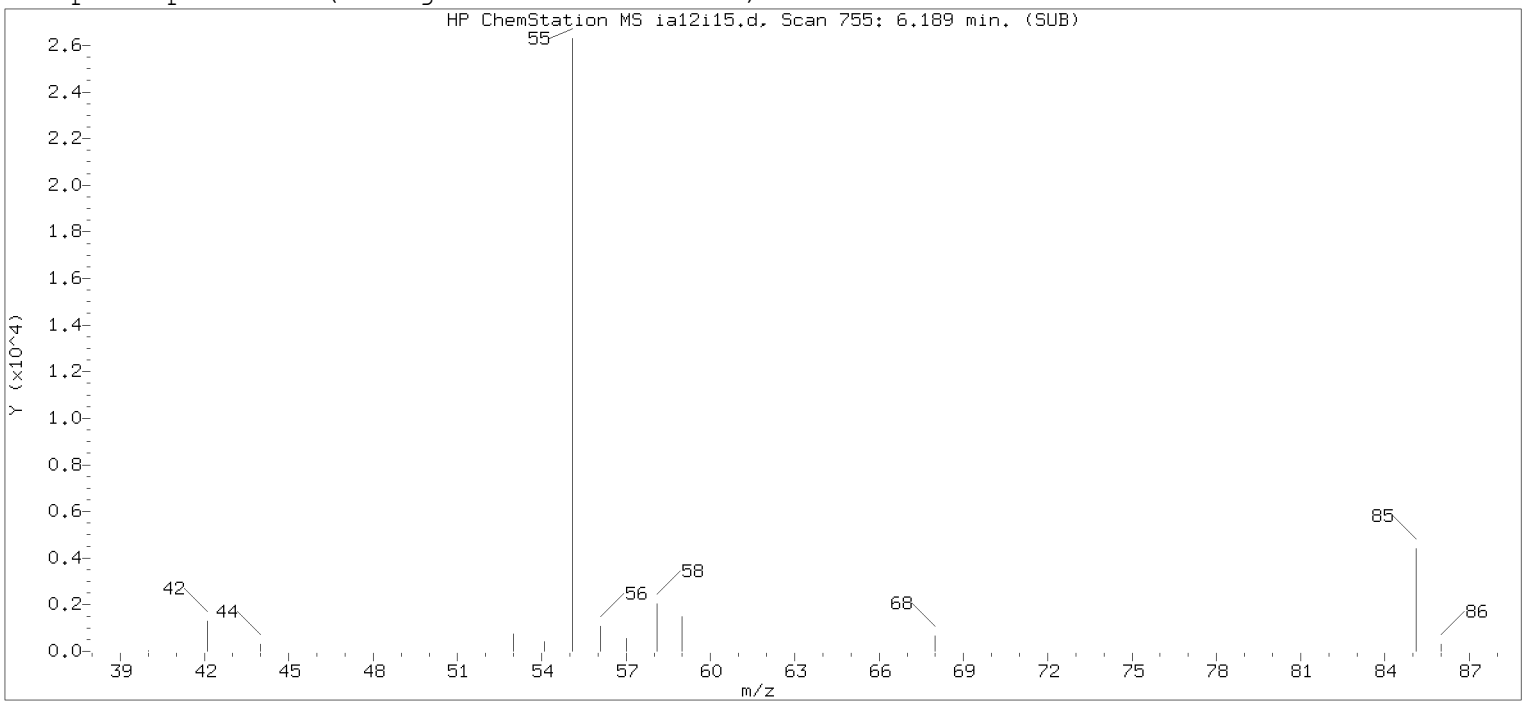
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 755
Retention Time (minutes): 6.189
Quant Ion : 55.00
Area (flag) : 142592M
On-Column Amount (ng) : 4.6667
Integration start scan : 745 Integration stop scan: 827
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

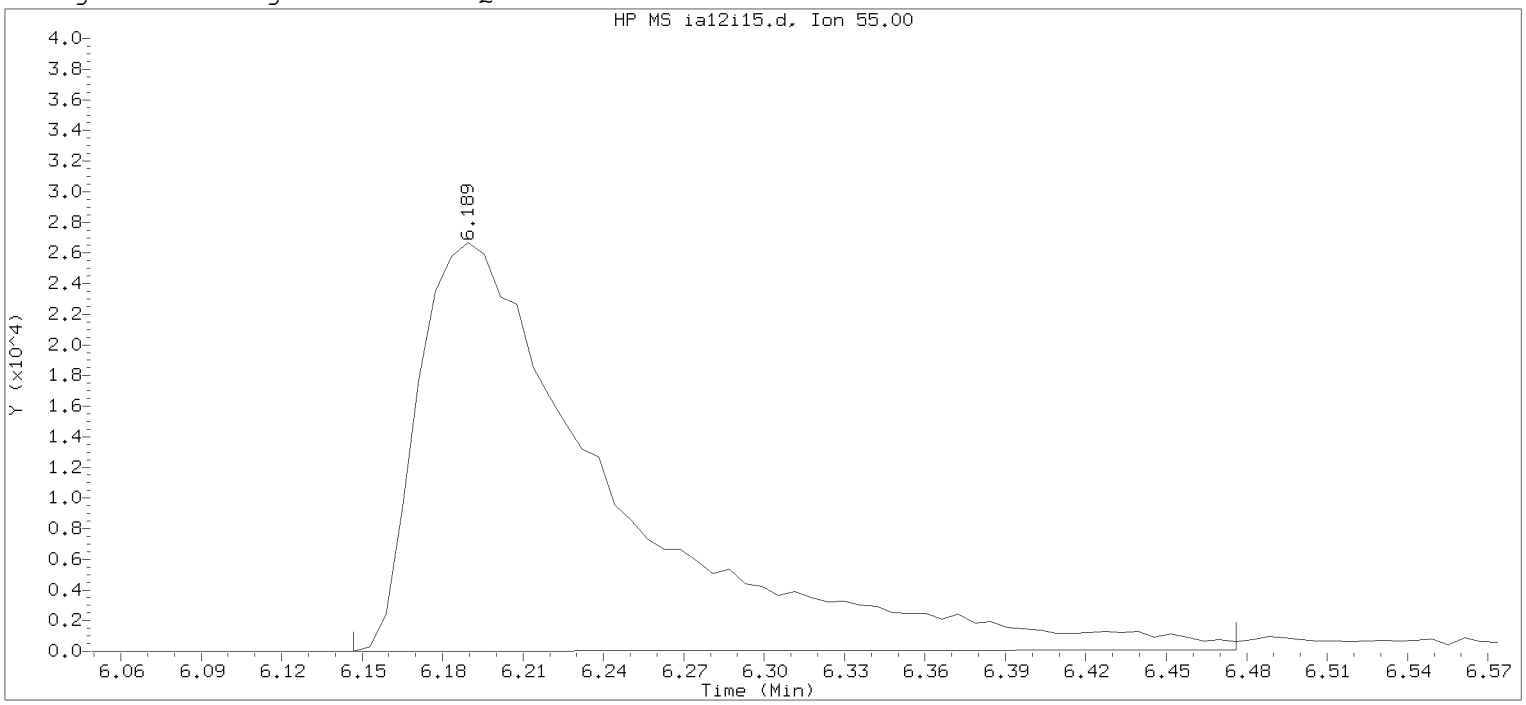
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

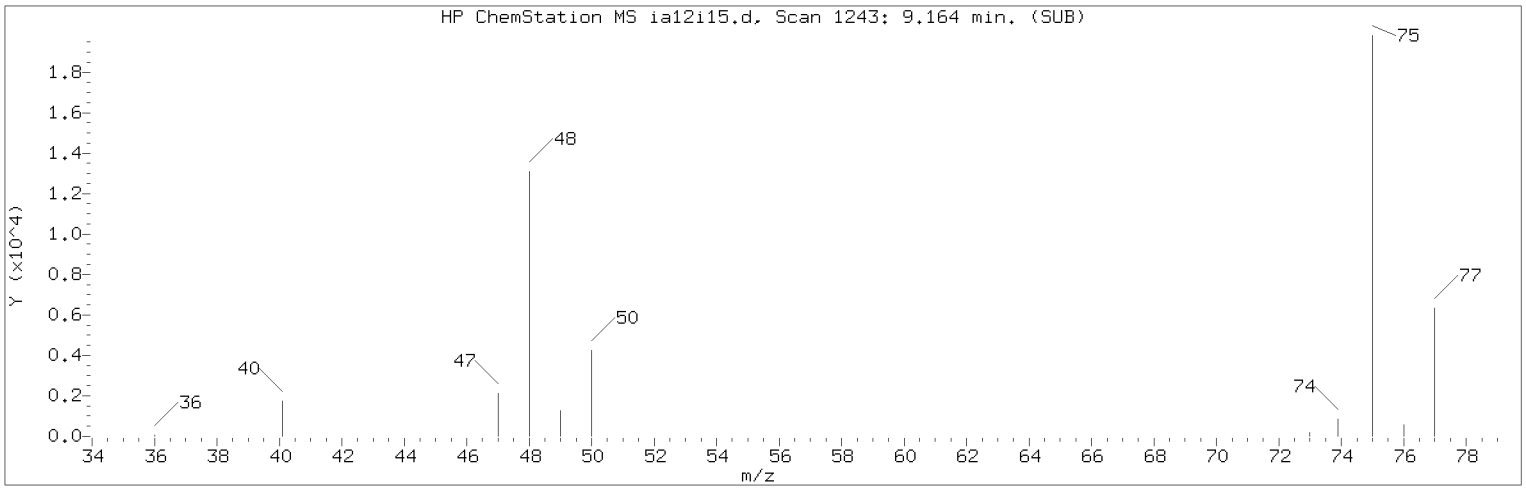
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

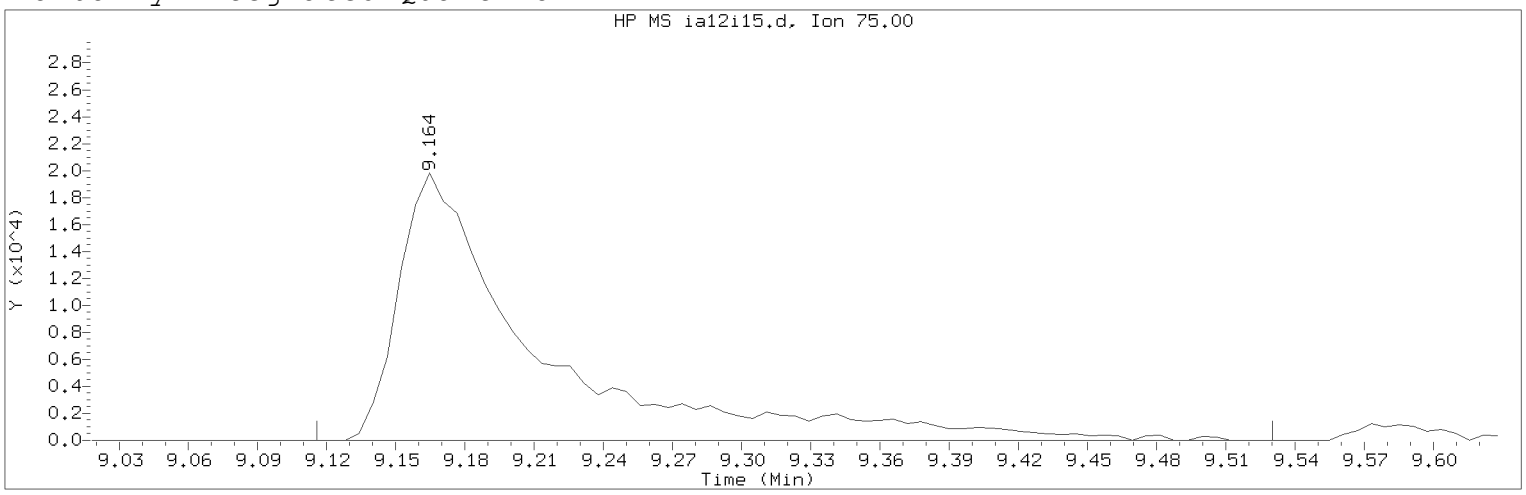
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 755
Retention Time (minutes): 6.189
Quant Ion : 55.00
Area : 135492
On-column Amount (ng) : 4.1367
Integration start scan : 747 Integration stop scan: 801
Y at integration start : 0 Y at integration end: 94

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

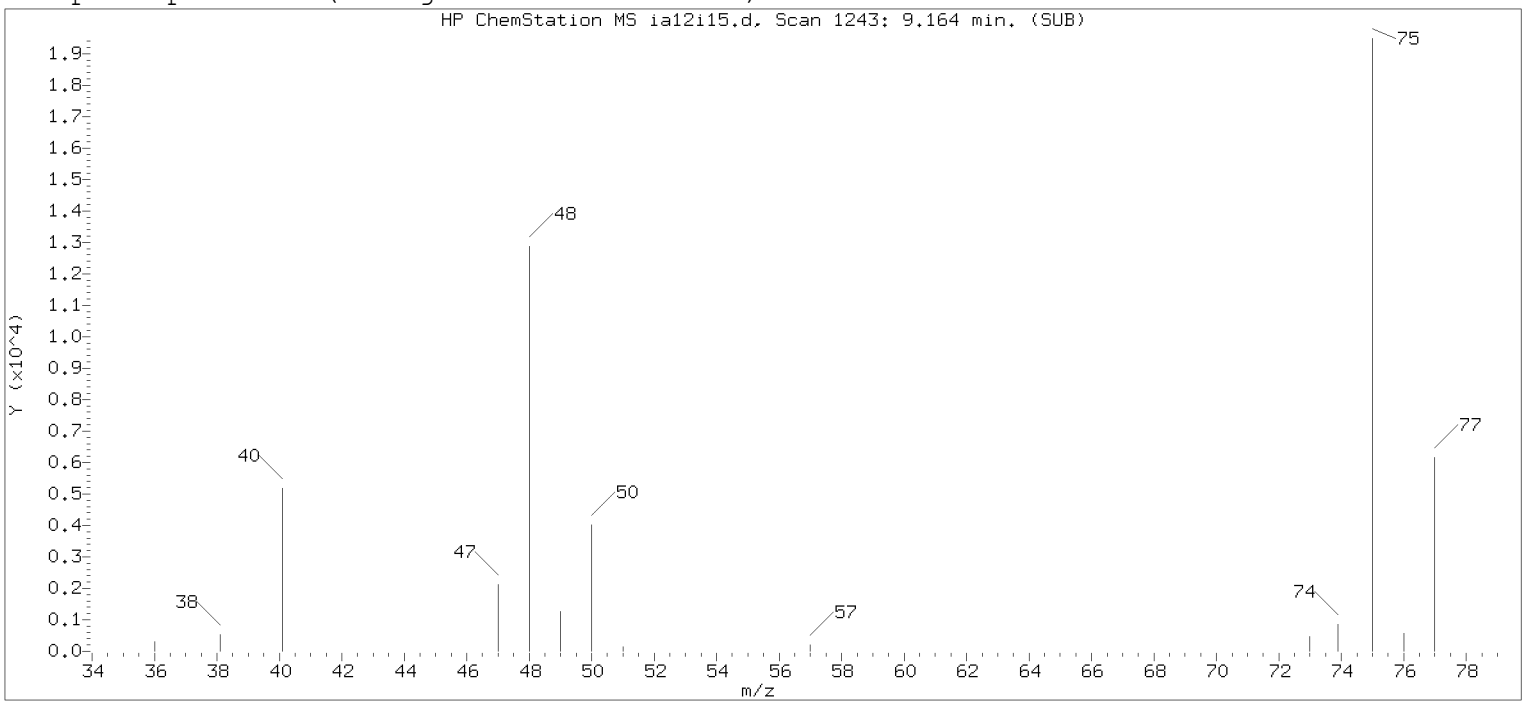
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1243
Retention Time (minutes): 9.164
Quant Ion : 75.00
Area (flag) : 82832M
On-Column Amount (ng) : 50.9822
Integration start scan : 1234 Integration stop scan: 1302
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

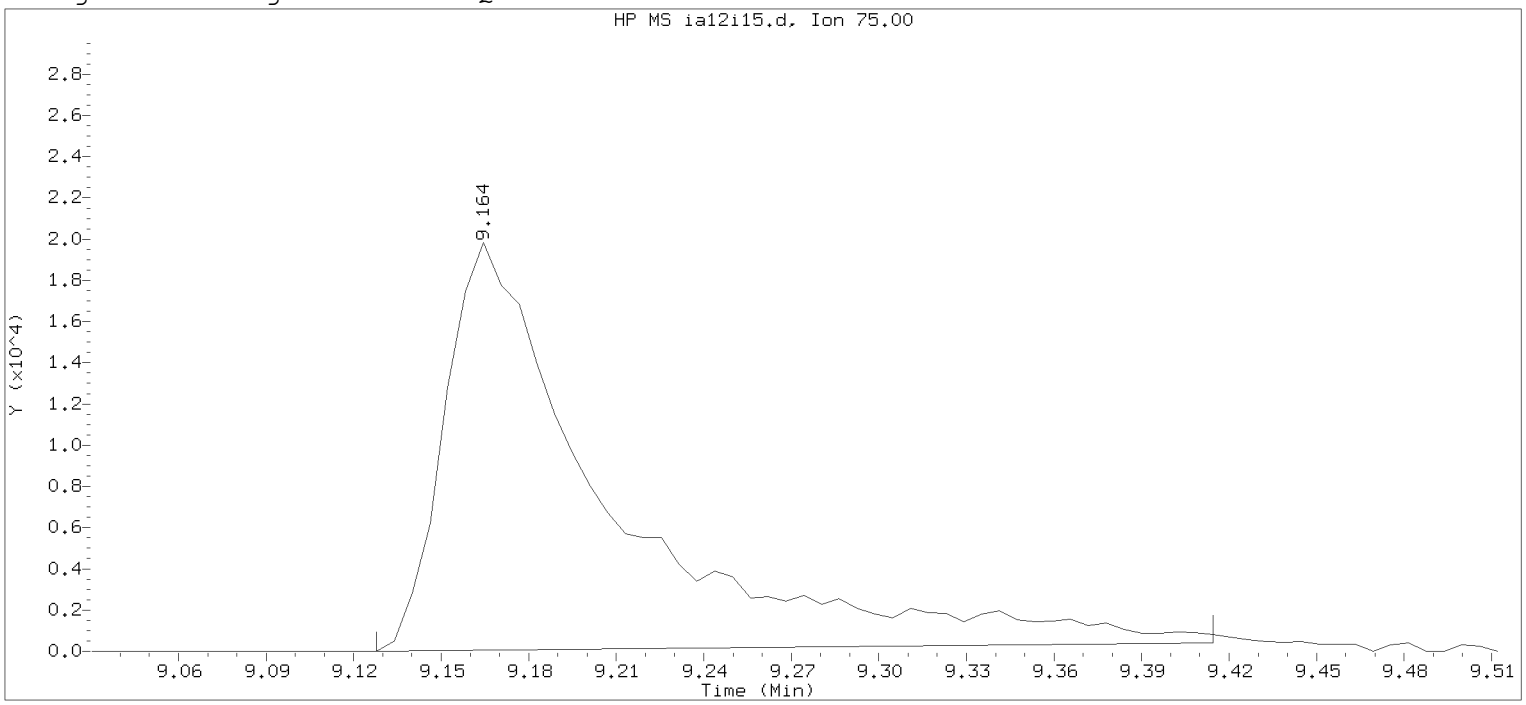
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

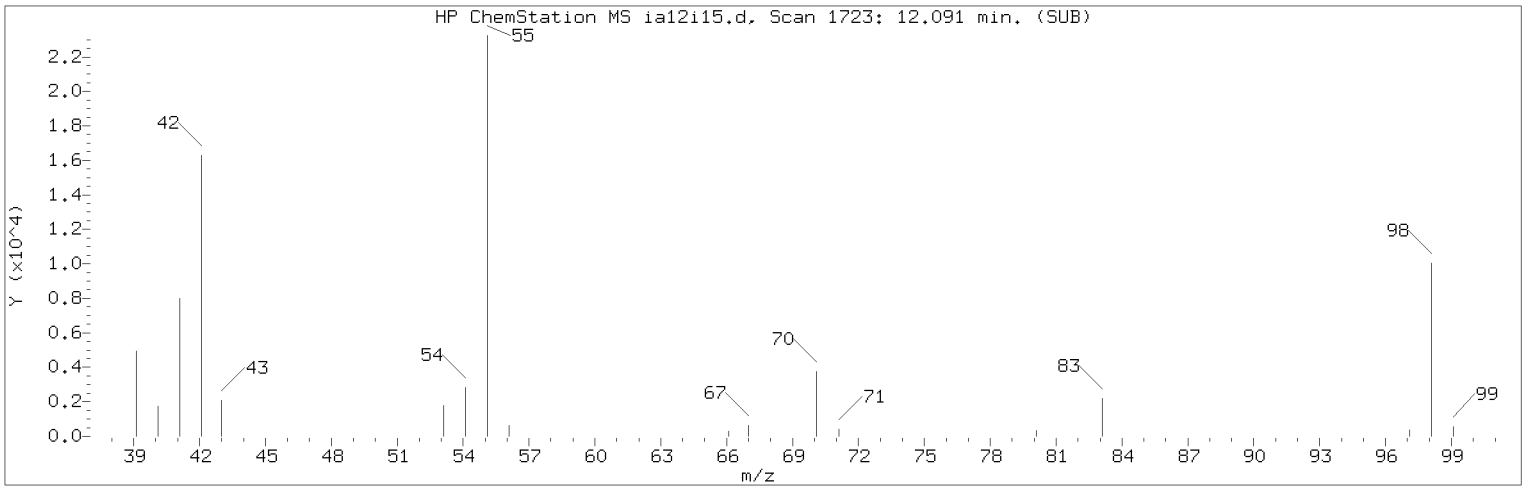
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

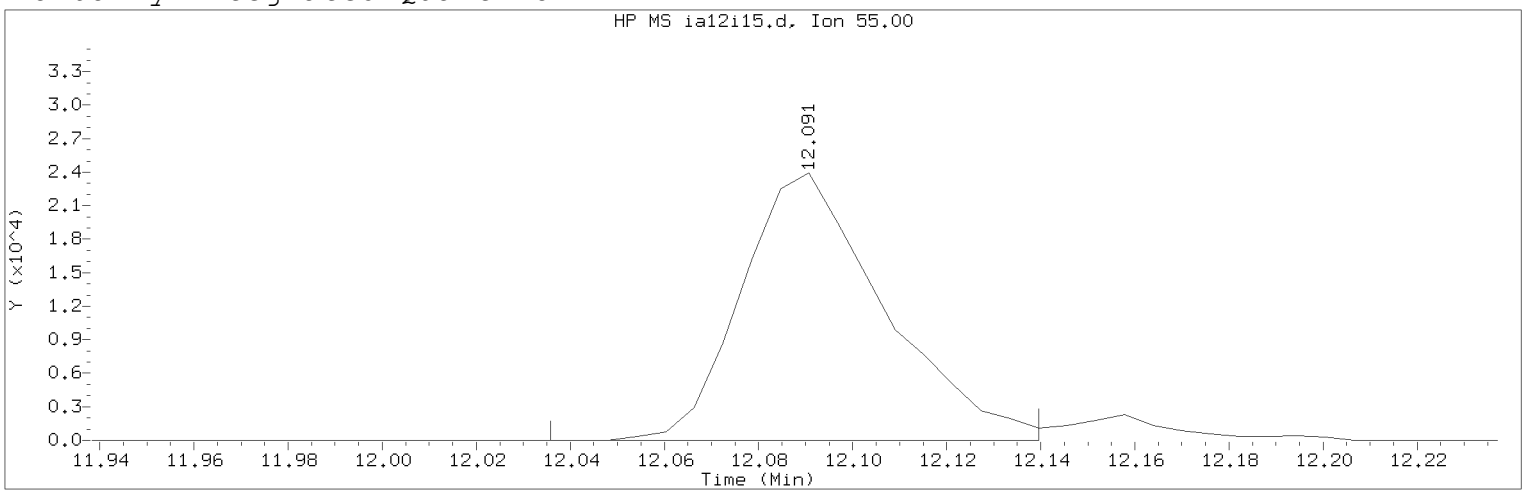
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1243
Retention Time (minutes): 9.164
Quant Ion : 75.00
Area : 77400
On-column Amount (ng) : 46.0046
Integration start scan : 1236 Integration stop scan: 1283
Y at integration start : 0 Y at integration end: 404

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

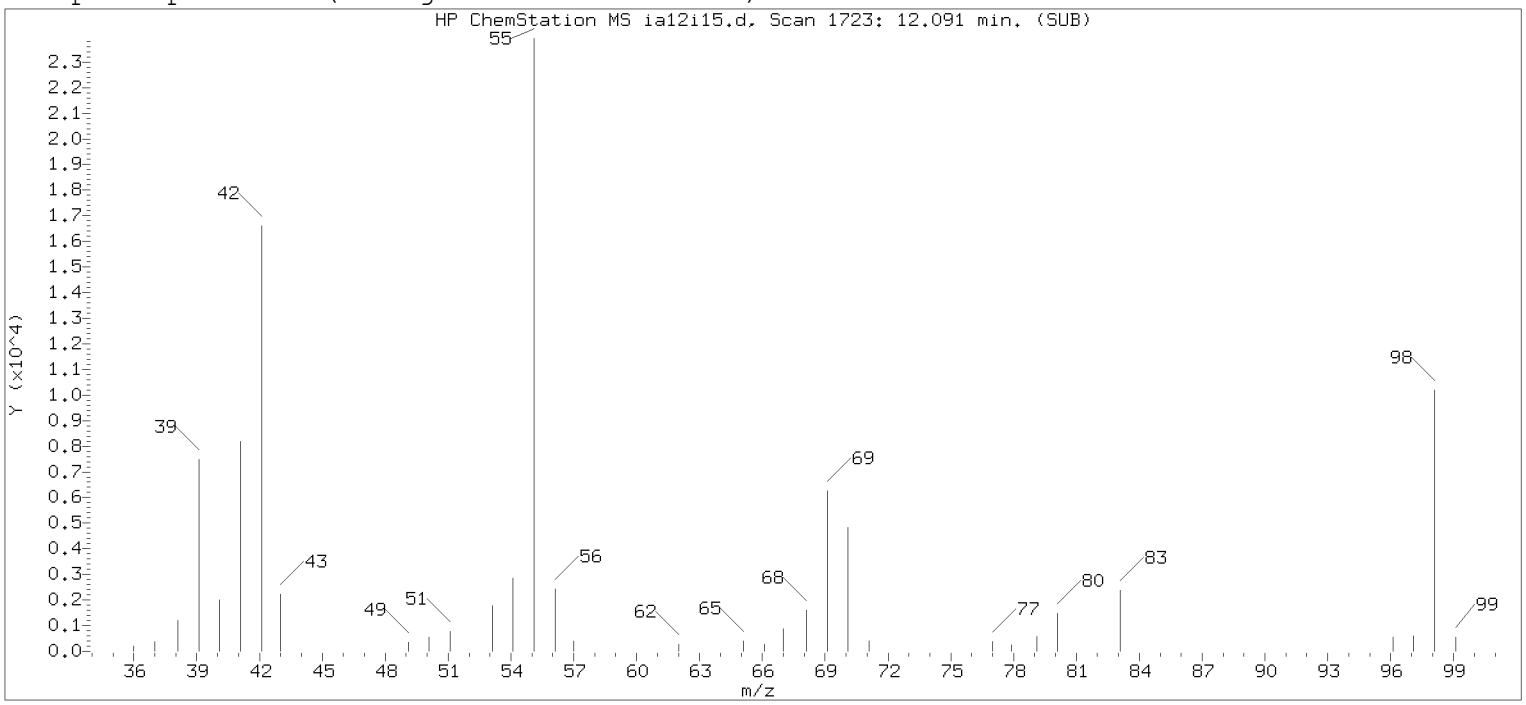
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area (flag) : 50415M
On-Column Amount (ng) : 47.9257
Integration start scan : 1713 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

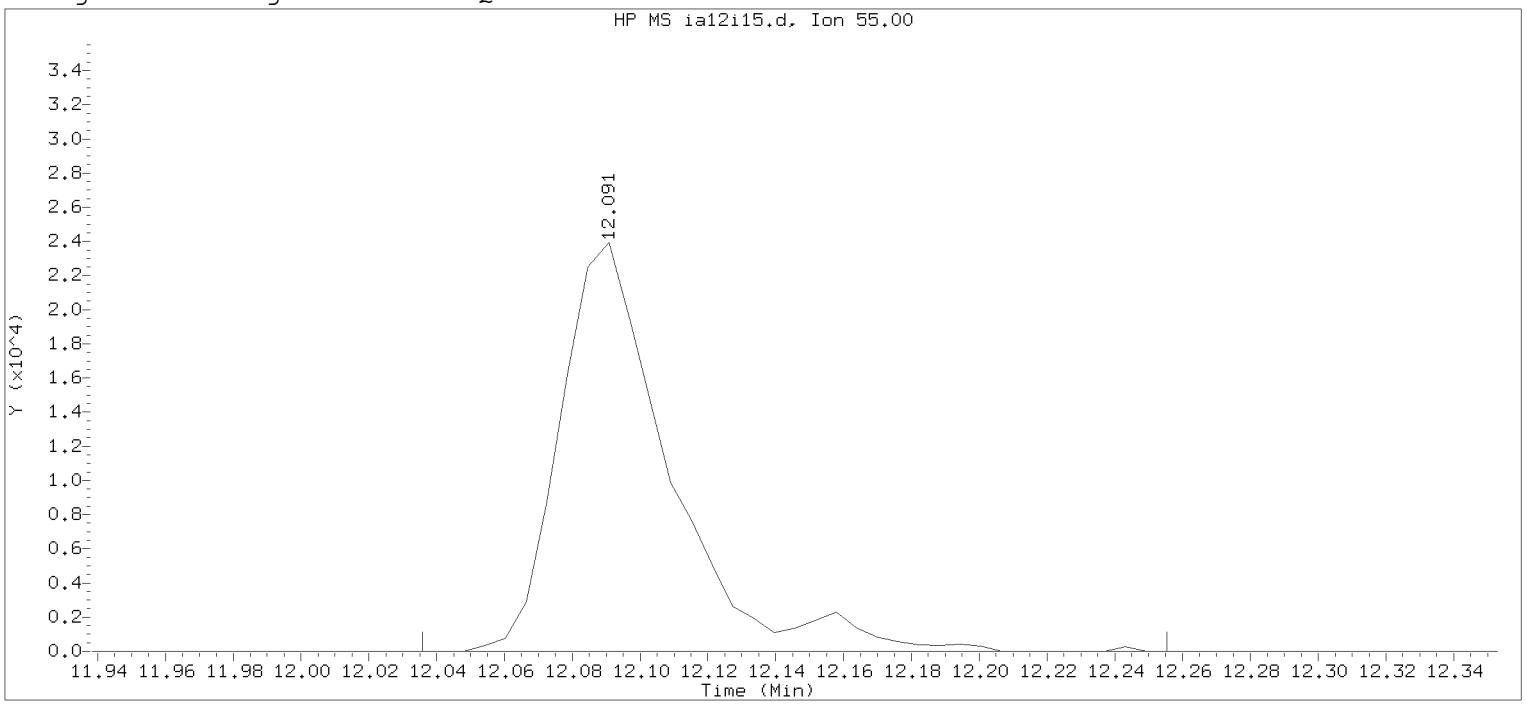
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



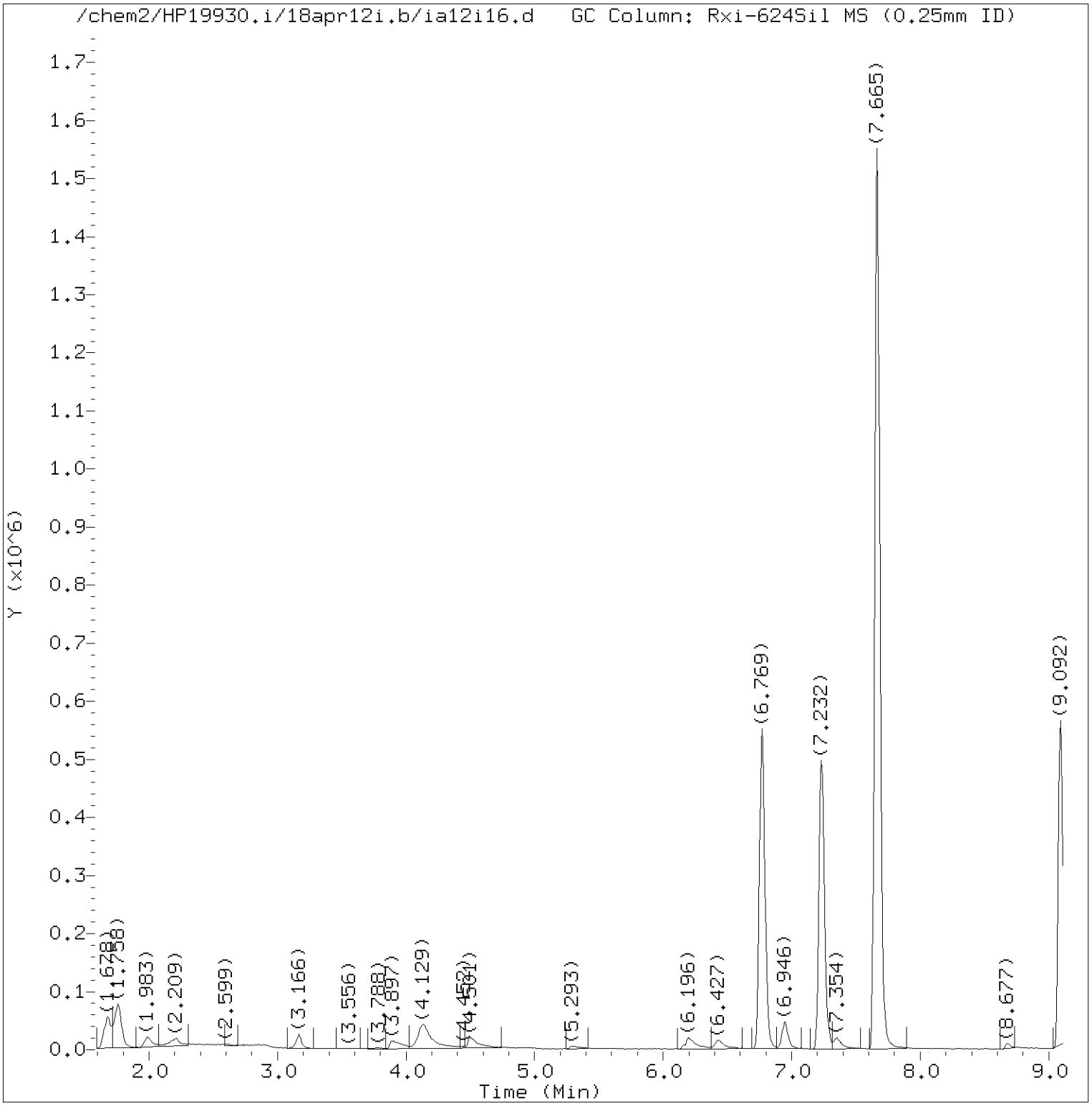
Data File: /chem2/HP19930.i/18apr12i.b/ia12i15.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 11:50 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area : 54008
On-column Amount (ng) : 45.6795
Integration start scan : 1713 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

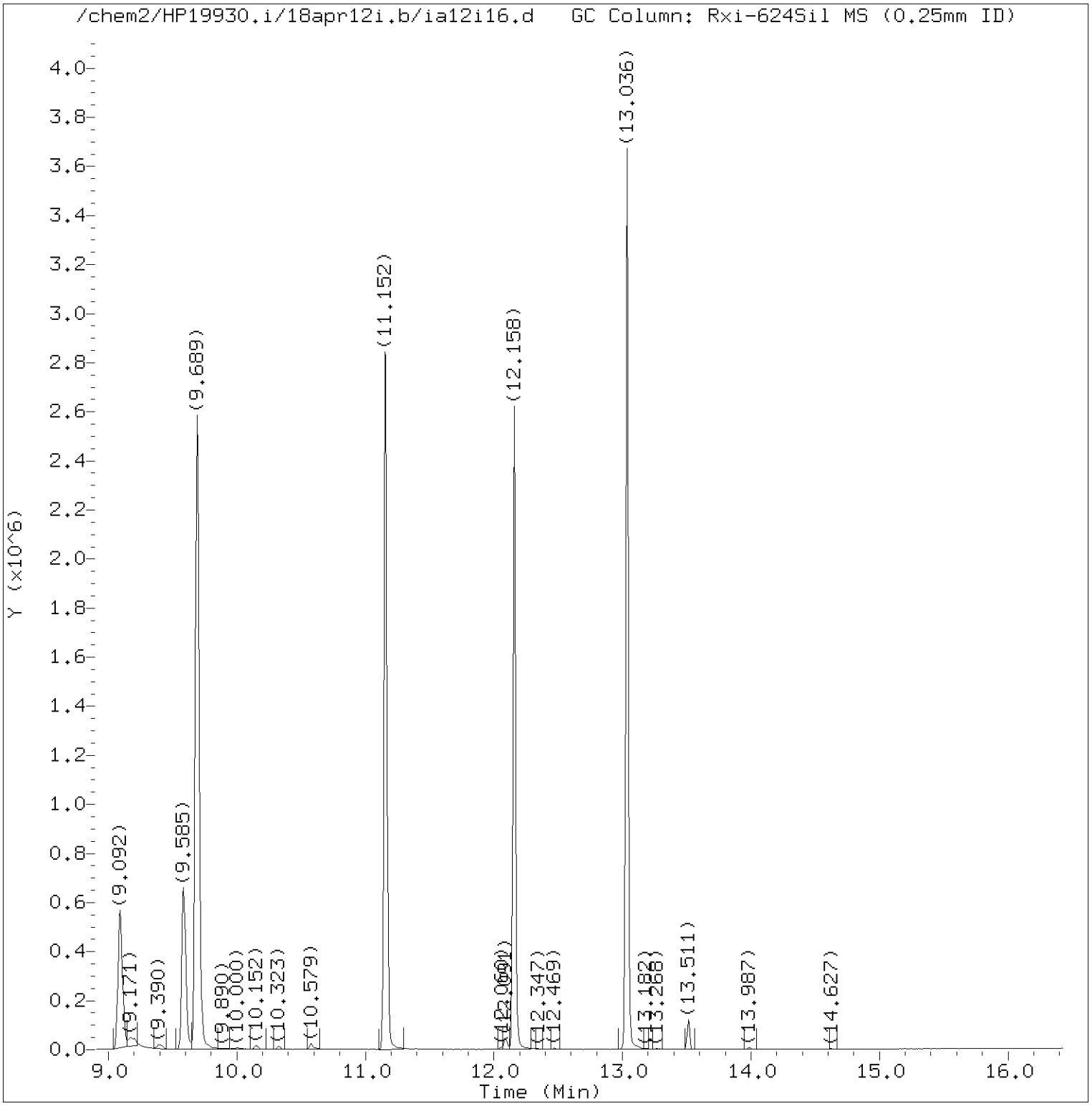
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

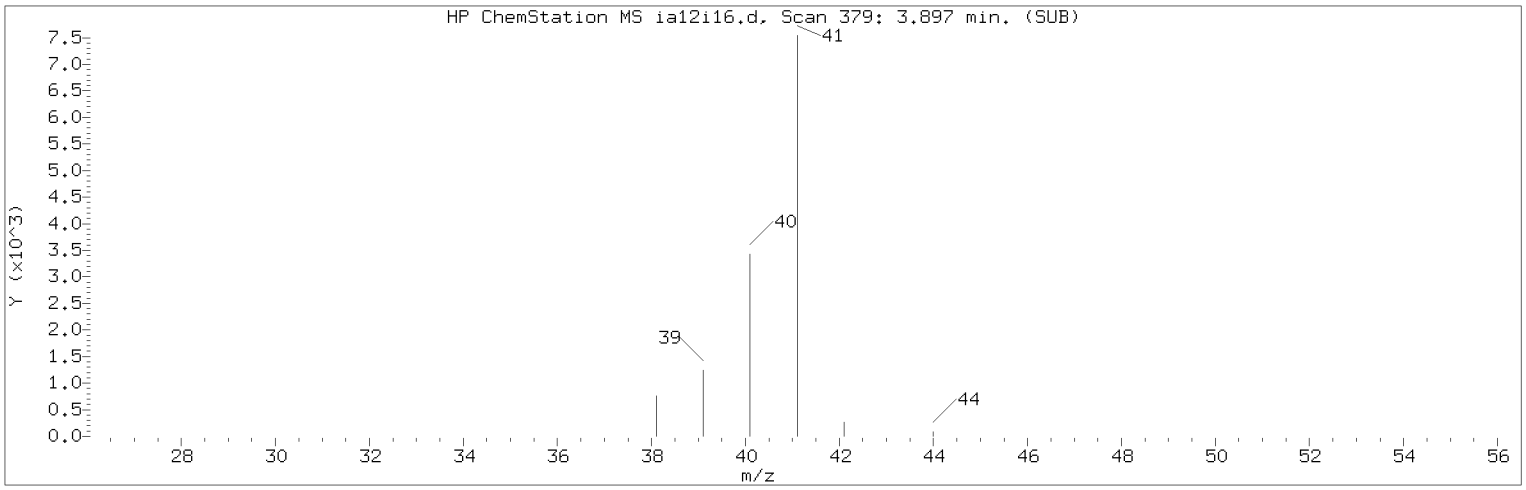
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	37821	0.473
25) Acetonitrile	(1)	3.897	41	89459M	20.692
26)*t-Butyl Alcohol-d10	(1)	4.129	65	159290M	50.000
36) Vinyl Acetate	(2)	5.287	43	29171M	0.574
43) Methyl Acrylate	(2)	6.196	55	66174M	2.104
53) 1-Chlorobutane	(2)	6.946	56	56450	0.474
63)*Fluorobenzene	(2)	7.665	96	2076704	10.000
77) Chloroacetonitrile	(2)	9.171	75	40142	24.006
78) 2-Chloroethyl vinyl ether	(2)	9.201	63	10541M	0.433
97)*Chlorobenzene-d5	(3)	11.158	117	1572136	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.060	88	2068	1.153
112) Cyclohexanone	(1)	12.091	55	21277M	19.938
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	827651	10.000
142) Hexachloroethane	(4)	13.511	117	15744	0.441

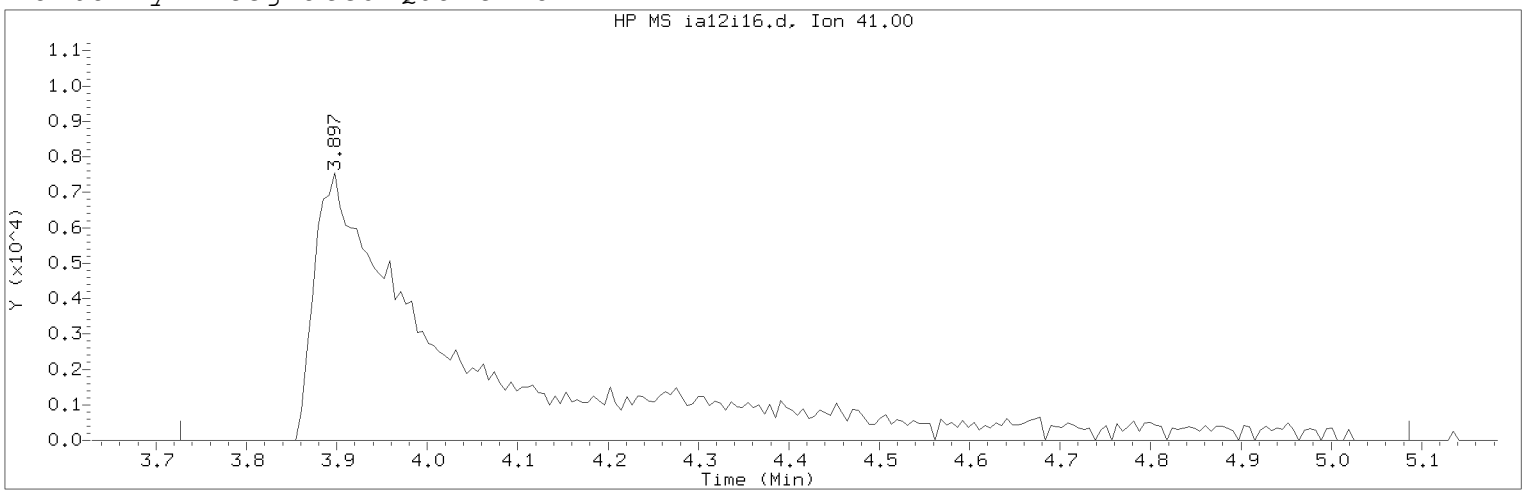
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

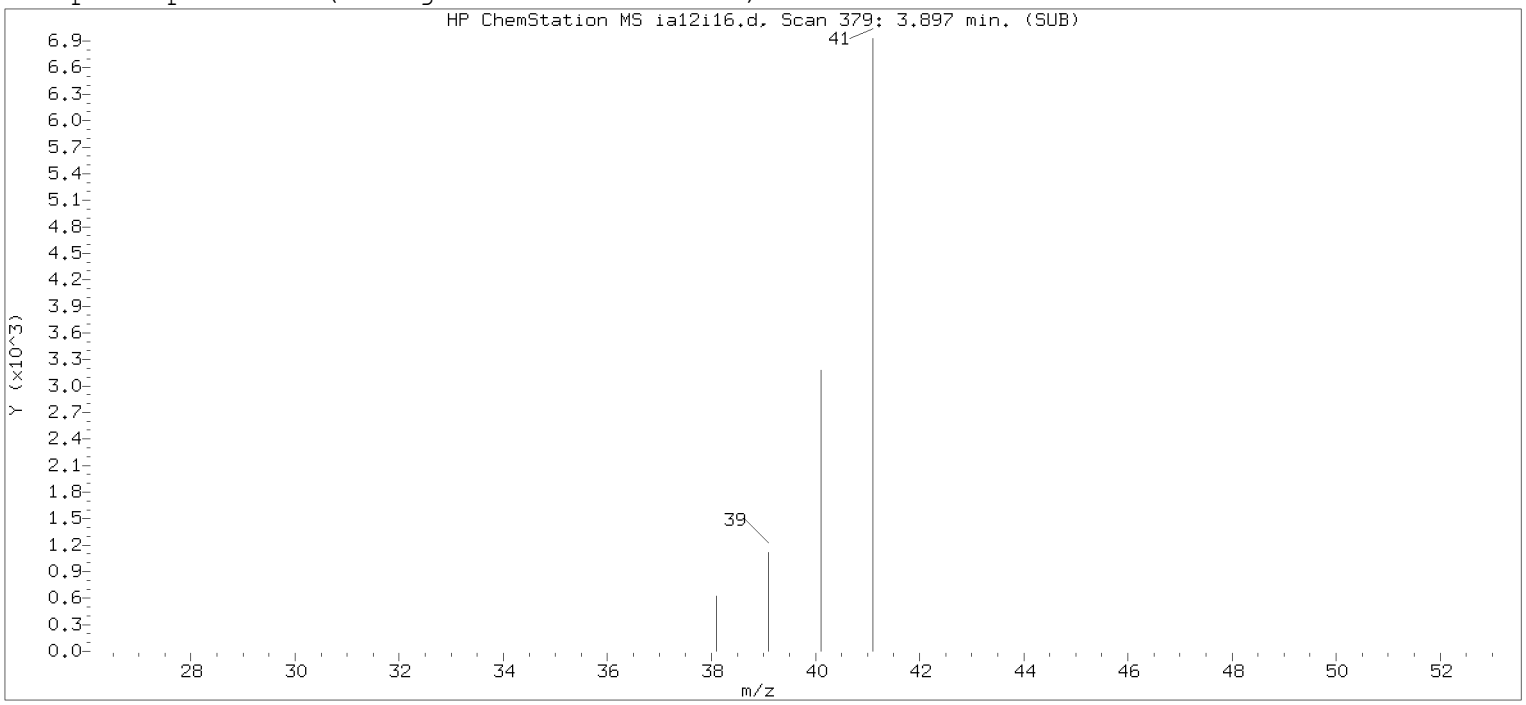
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 379
Retention Time (minutes): 3.897
Quant Ion : 41.00
Area (flag) : 89459M
On-Column Amount (ng) : 20.6924
Integration start scan : 350 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

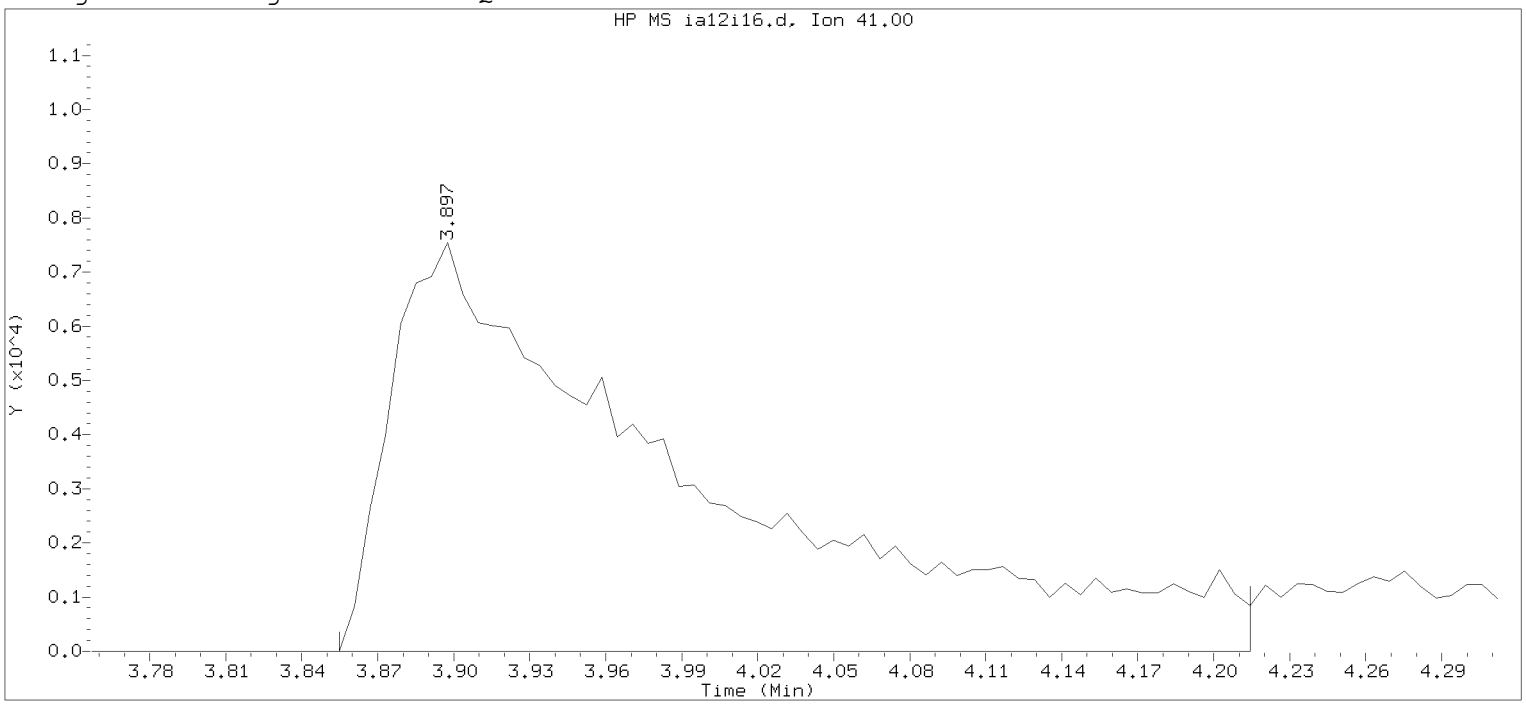
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

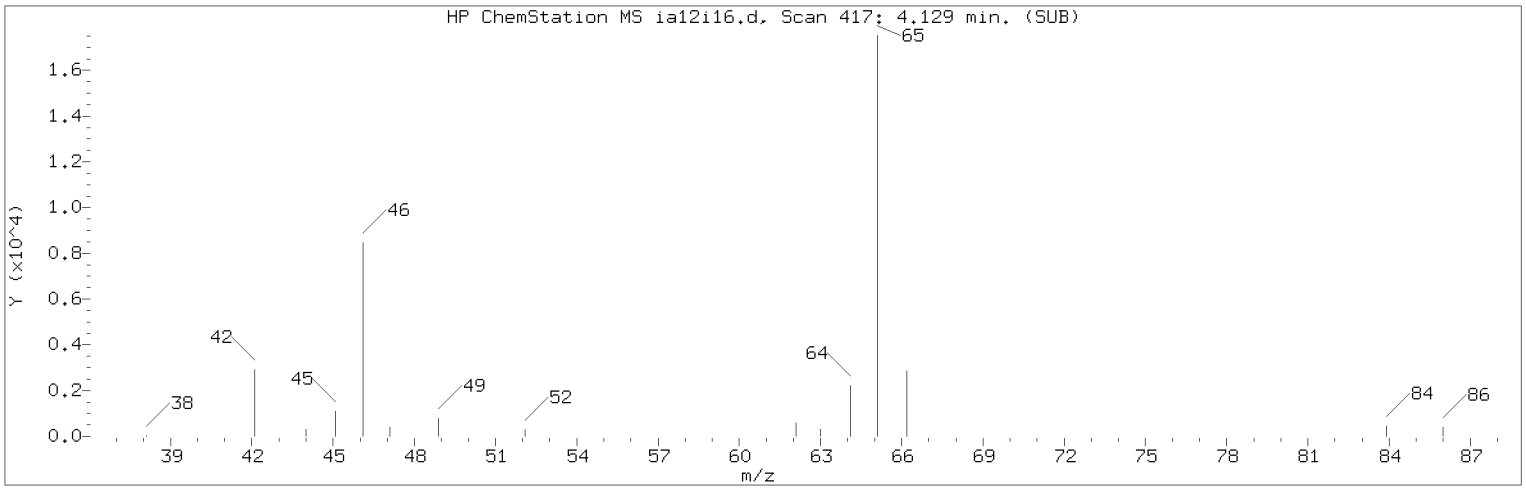
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

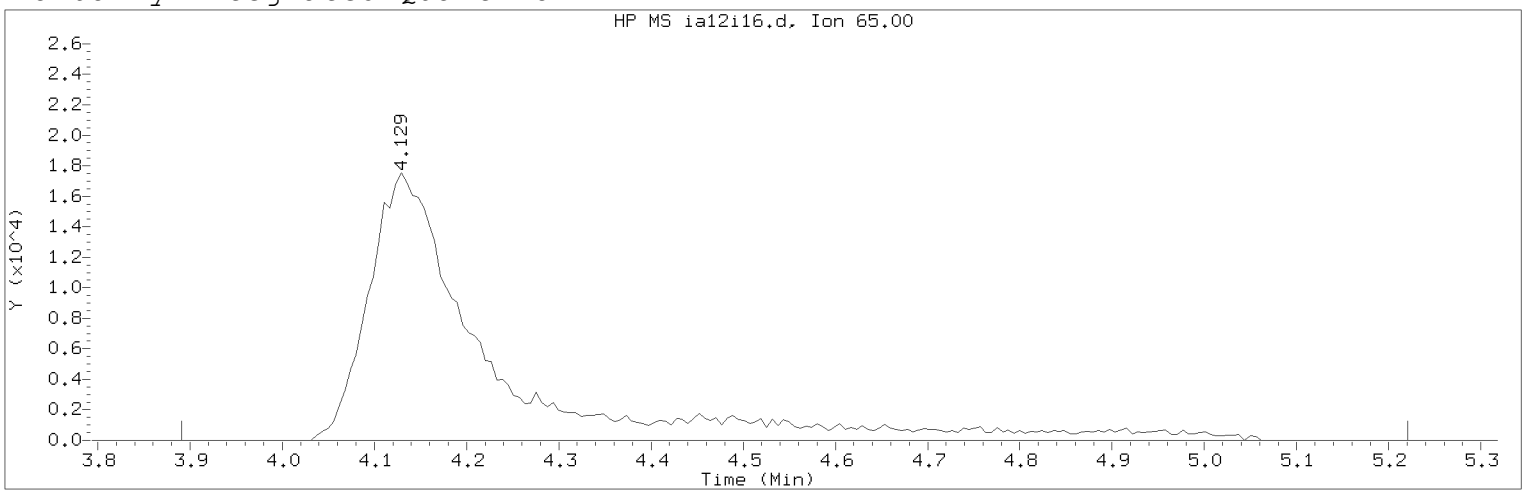
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 379
Retention Time (minutes): 3.897
Quant Ion : 41.00
Area : 61816
On-column Amount (ng) : 21.0657
Integration start scan : 371 Integration stop scan: 430
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

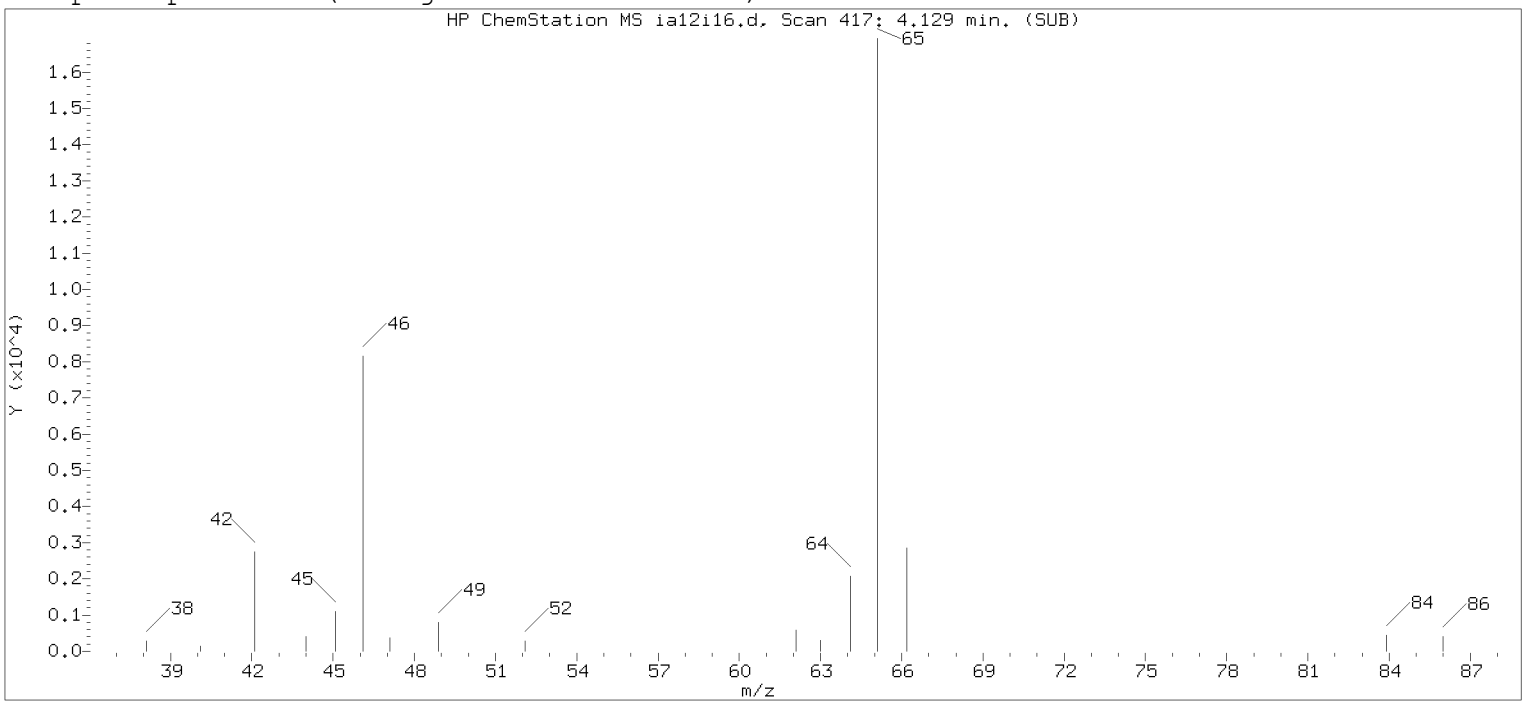
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 417
Retention Time (minutes): 4.129
Quant Ion : 65.00
Area (flag) : 159290M
On-Column Amount (ng) : 50.0000
Integration start scan : 377 Integration stop scan: 595
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

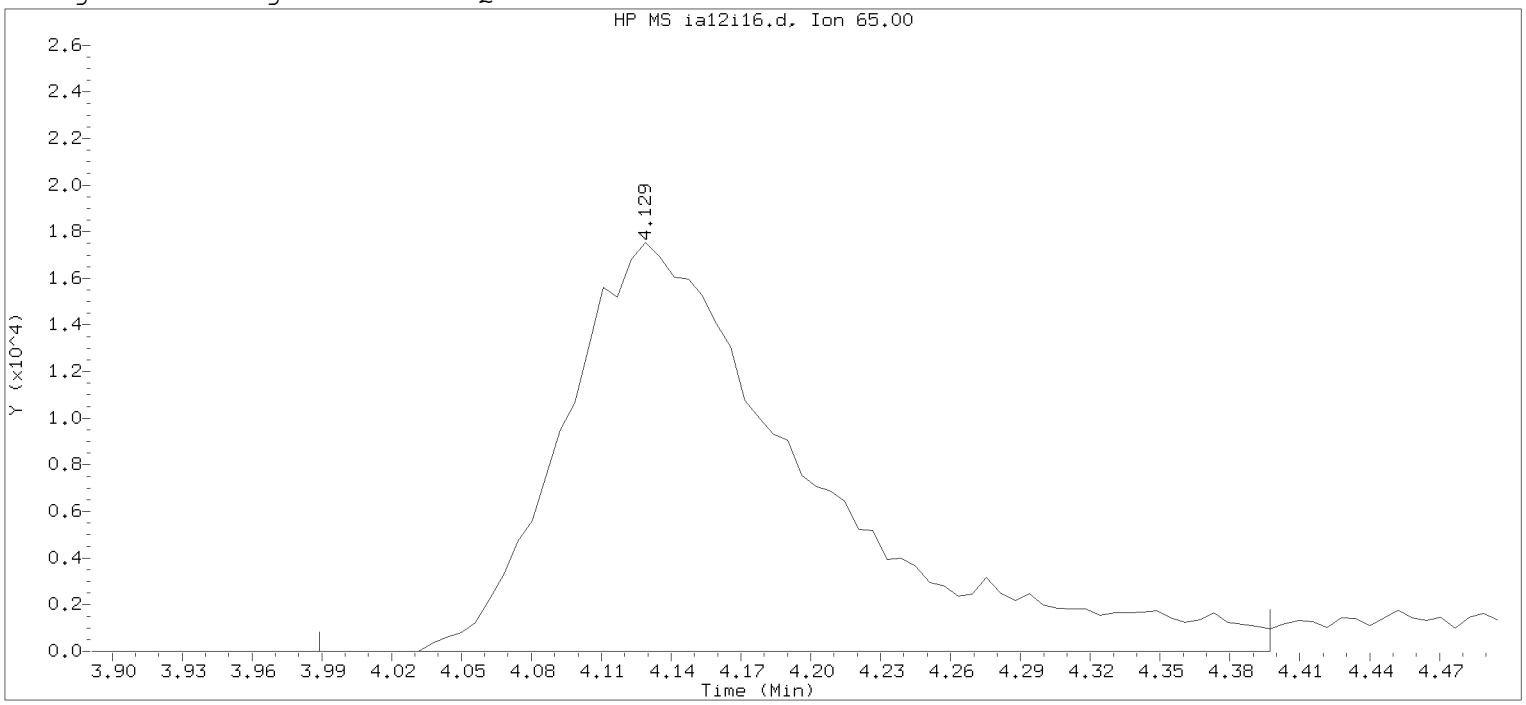
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

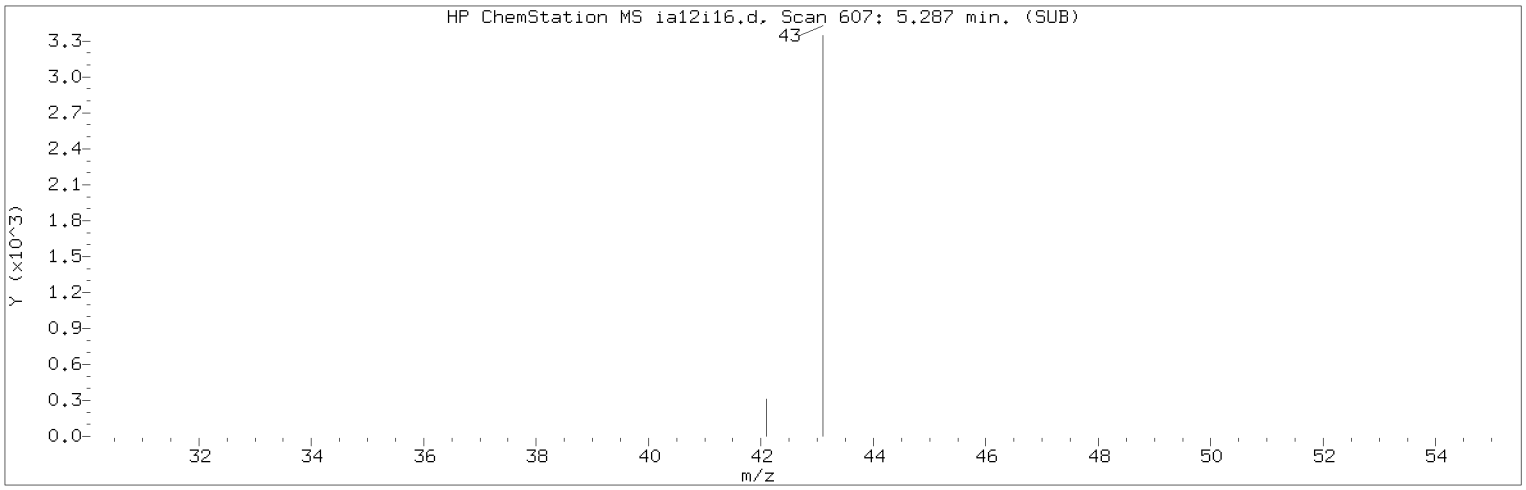
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

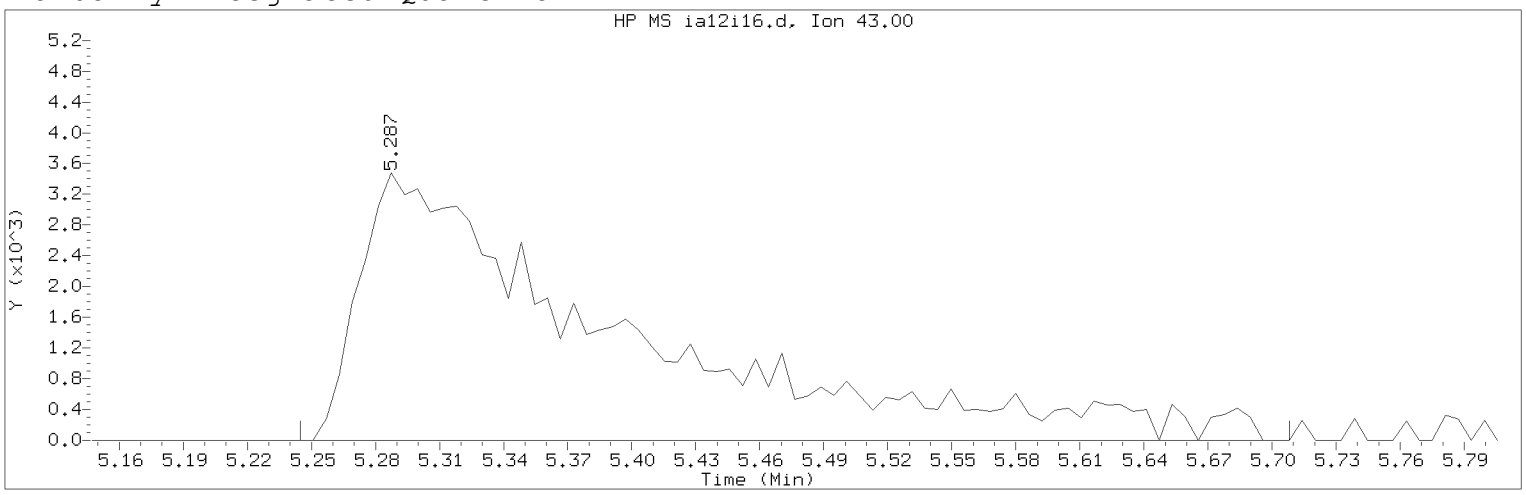
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 417
Retention Time (minutes): 4.129
Quant Ion : 65.00
Area : 128538
On-column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 460
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

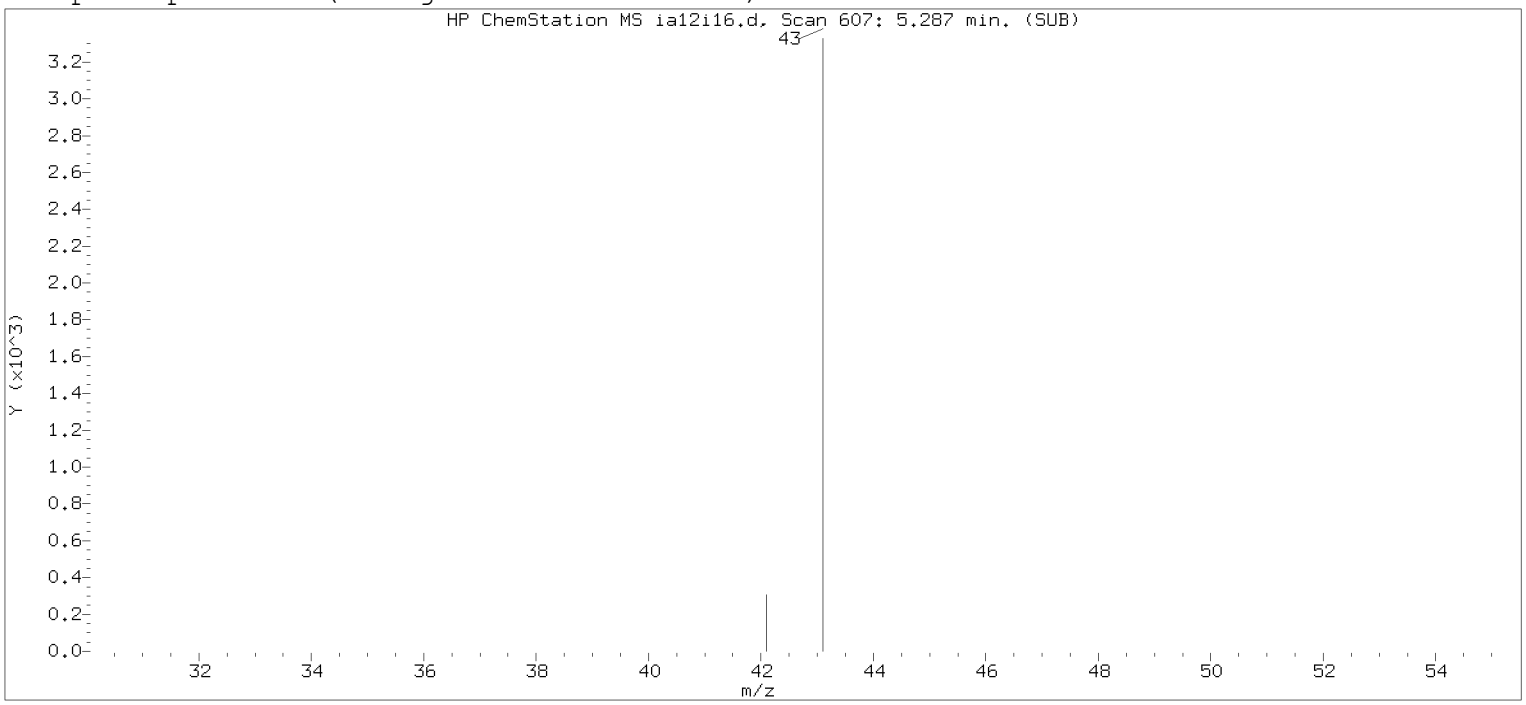
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 607
Retention Time (minutes): 5.287
Quant Ion : 43.00
Area (flag) : 29171M
On-Column Amount (ng) : 0.5745
Integration start scan : 599 Integration stop scan: 675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

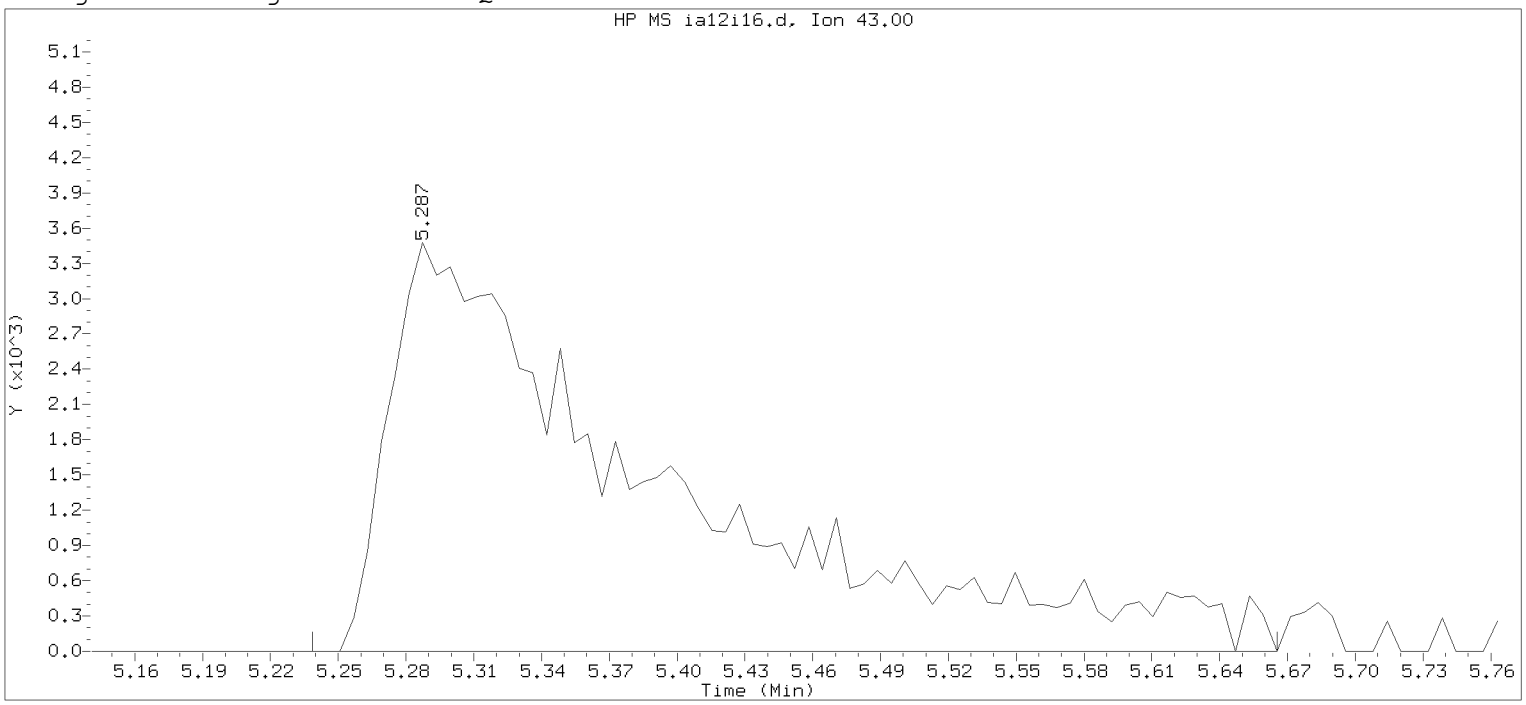
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

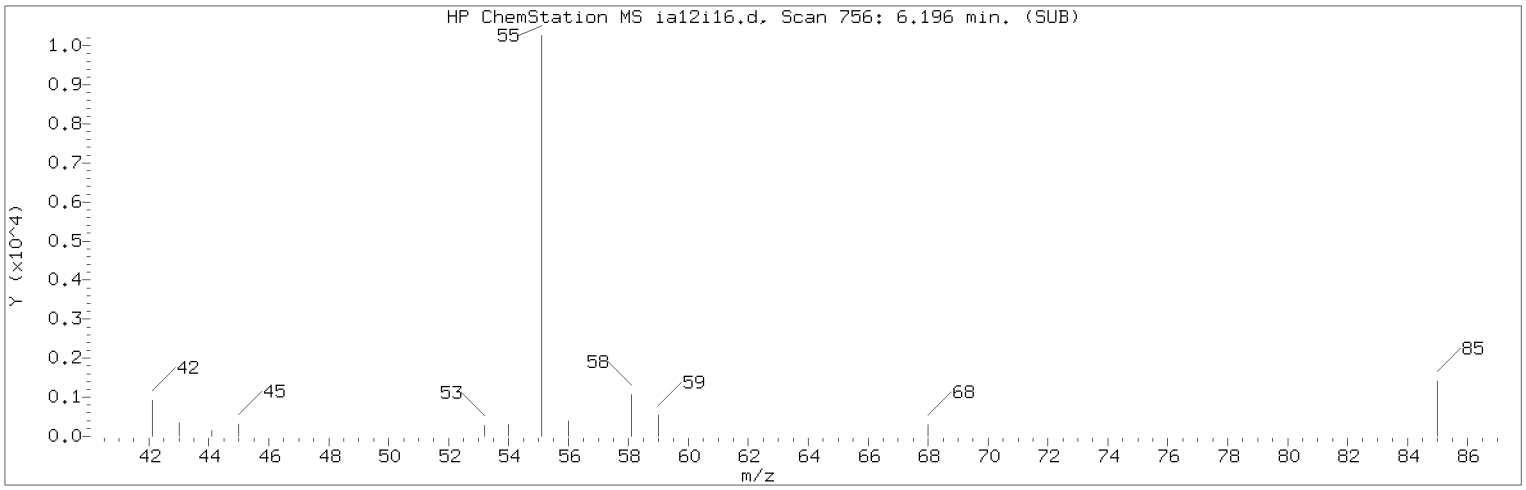
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

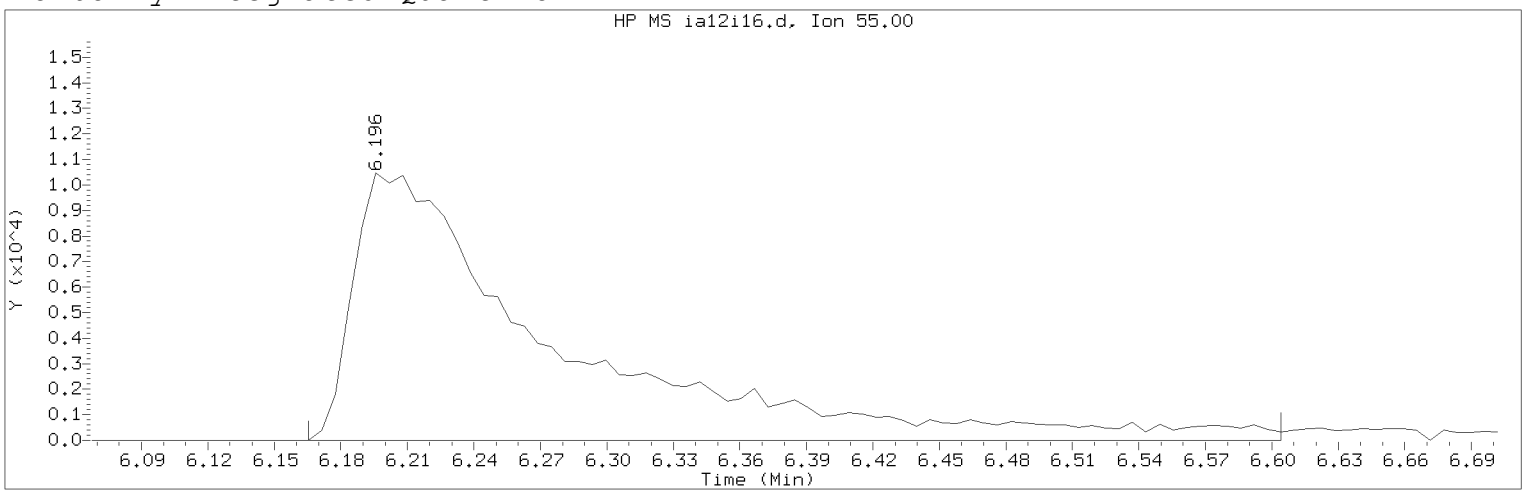
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 607
Retention Time (minutes): 5.287
Quant Ion : 43.00
Area : 28677
On-column Amount (ng) : 0.3667
Integration start scan : 598 Integration stop scan: 668
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

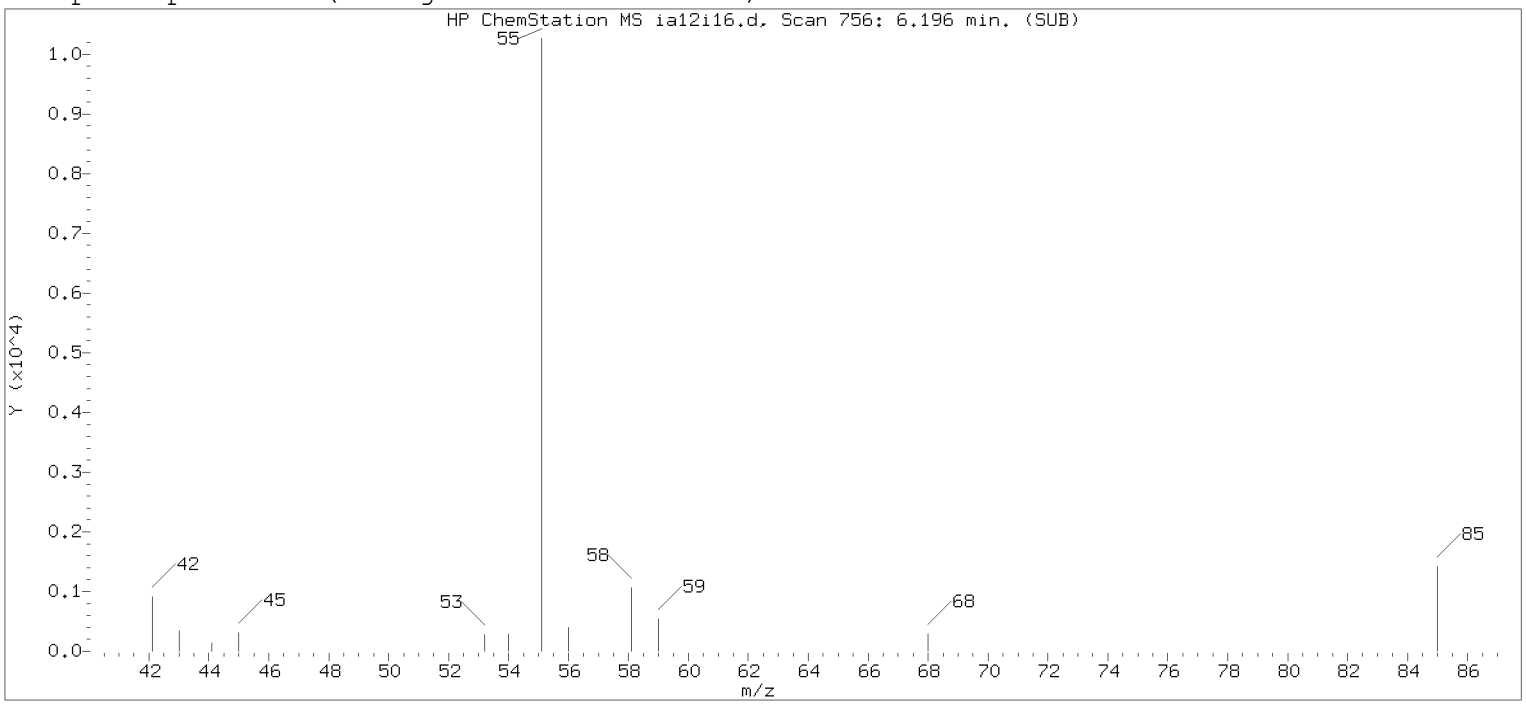
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 756
Retention Time (minutes): 6.196
Quant Ion : 55.00
Area (flag) : 66174M
On-Column Amount (ng) : 2.1043
Integration start scan : 750 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

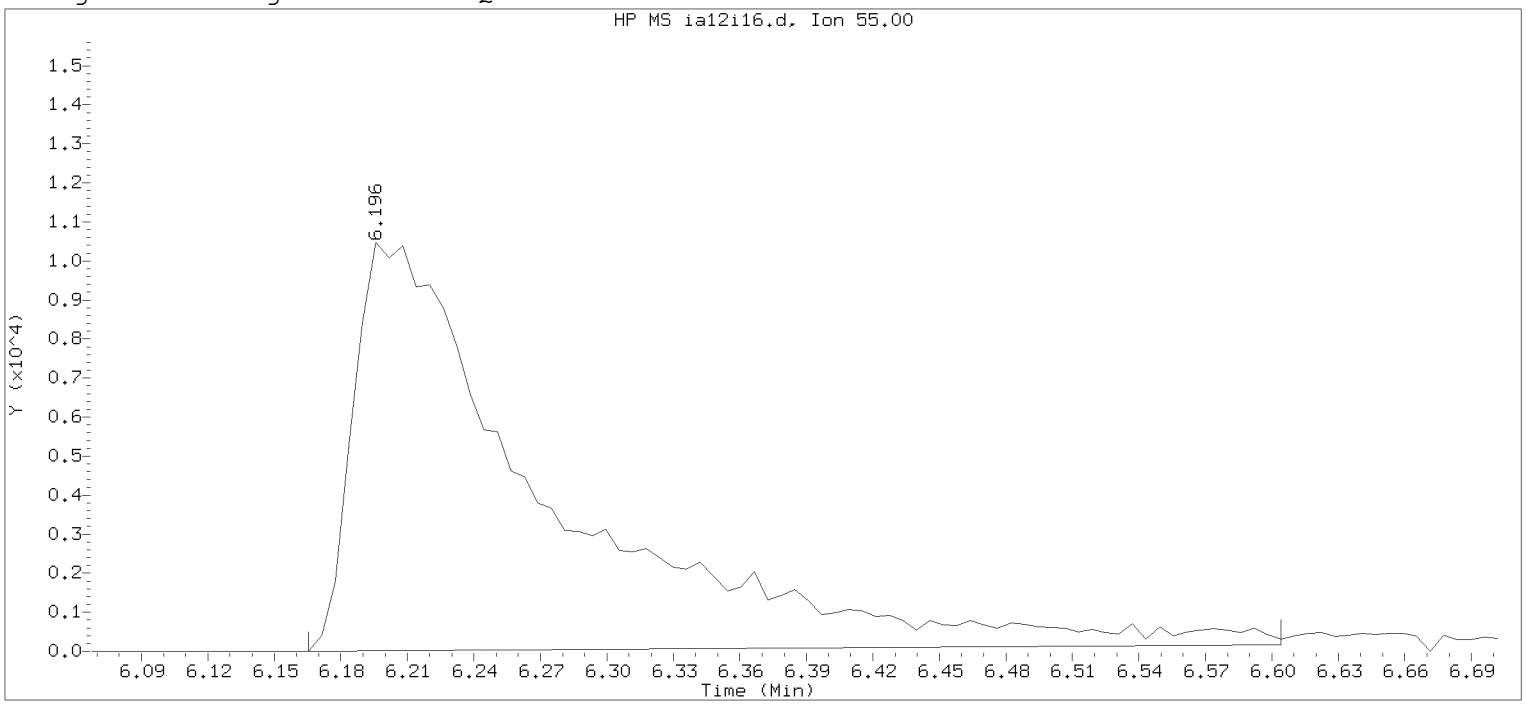
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

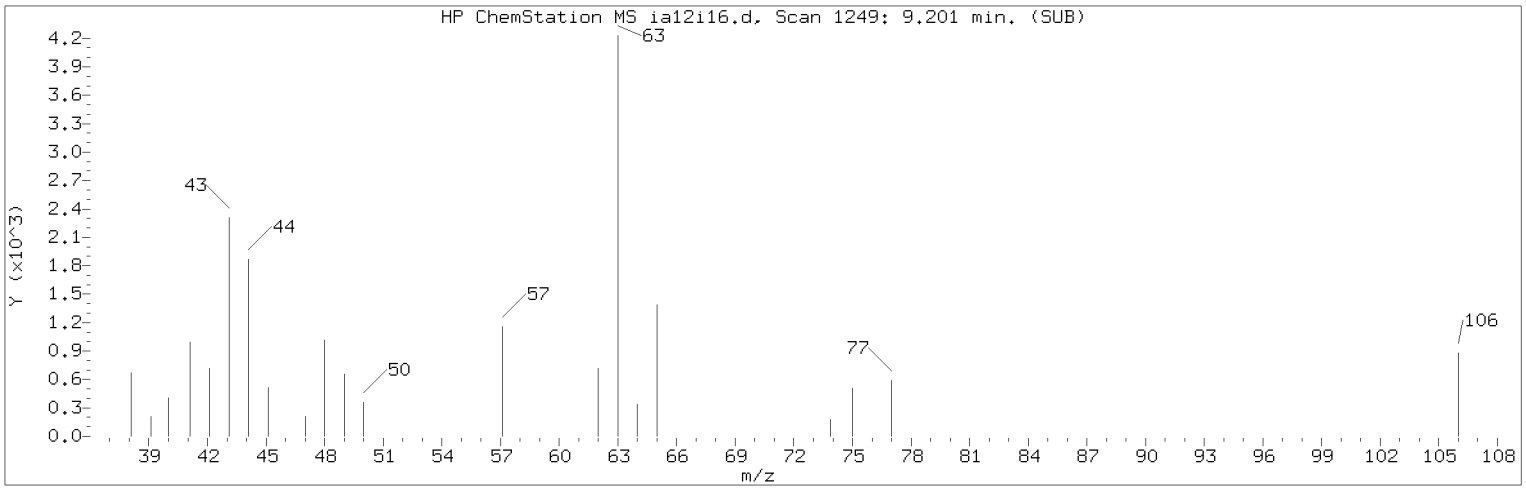
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

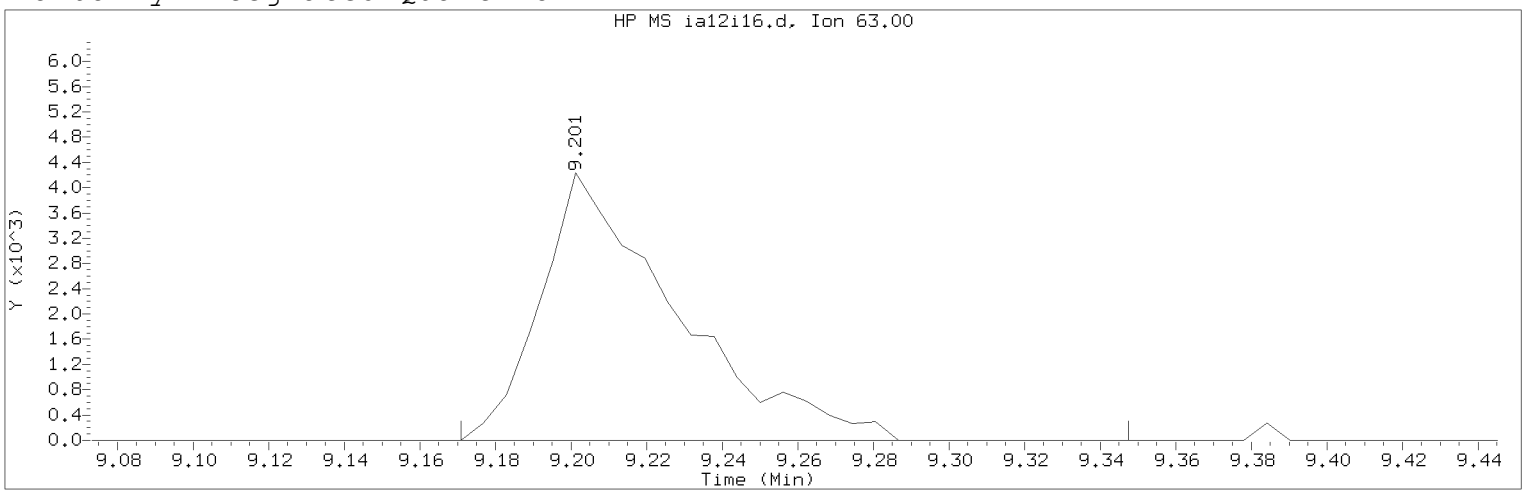
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 756
Retention Time (minutes): 6.196
Quant Ion : 55.00
Area : 64050
On-column Amount (ng) : 1.9792
Integration start scan : 750 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 157

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

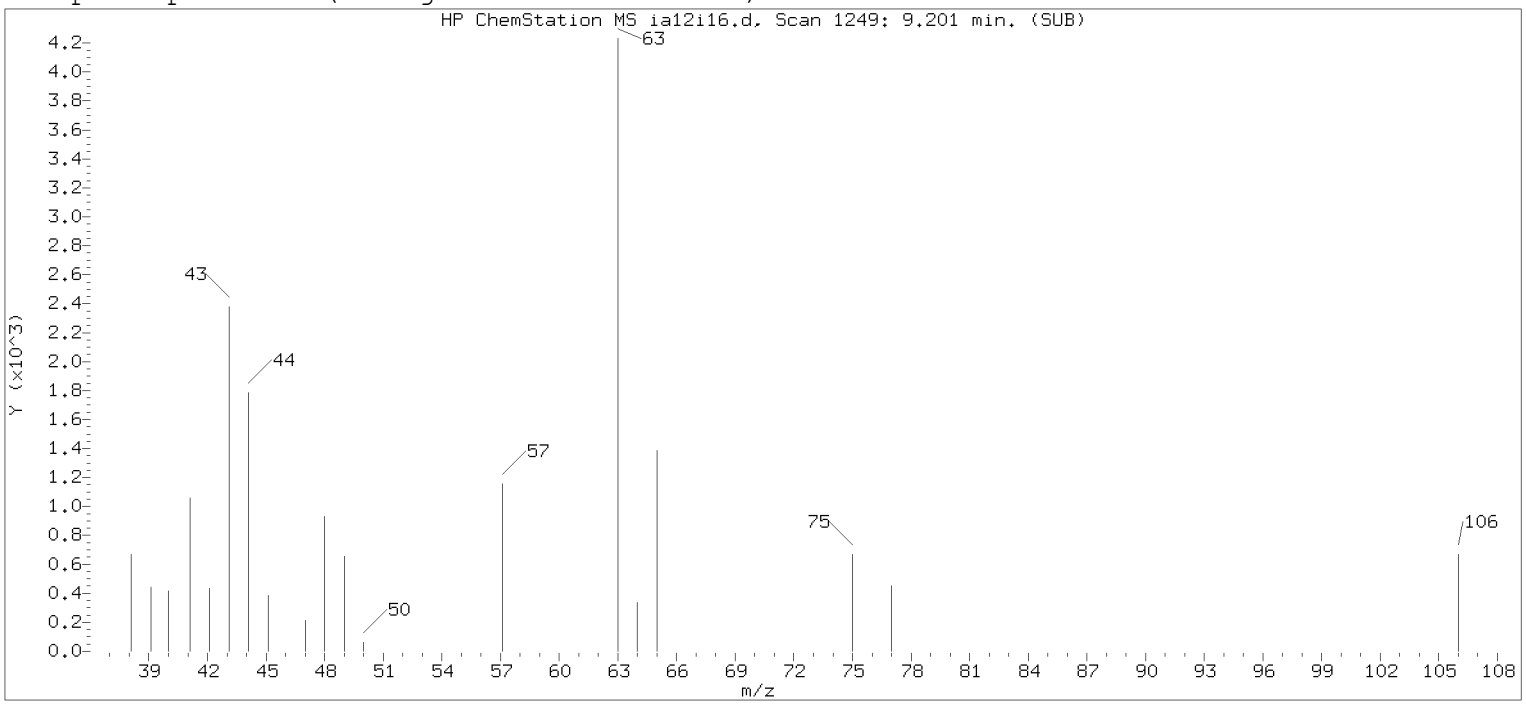
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 63.00
Area (flag) : 10541M
On-Column Amount (ng) : 0.4330
Integration start scan : 1243 Integration stop scan: 1272
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

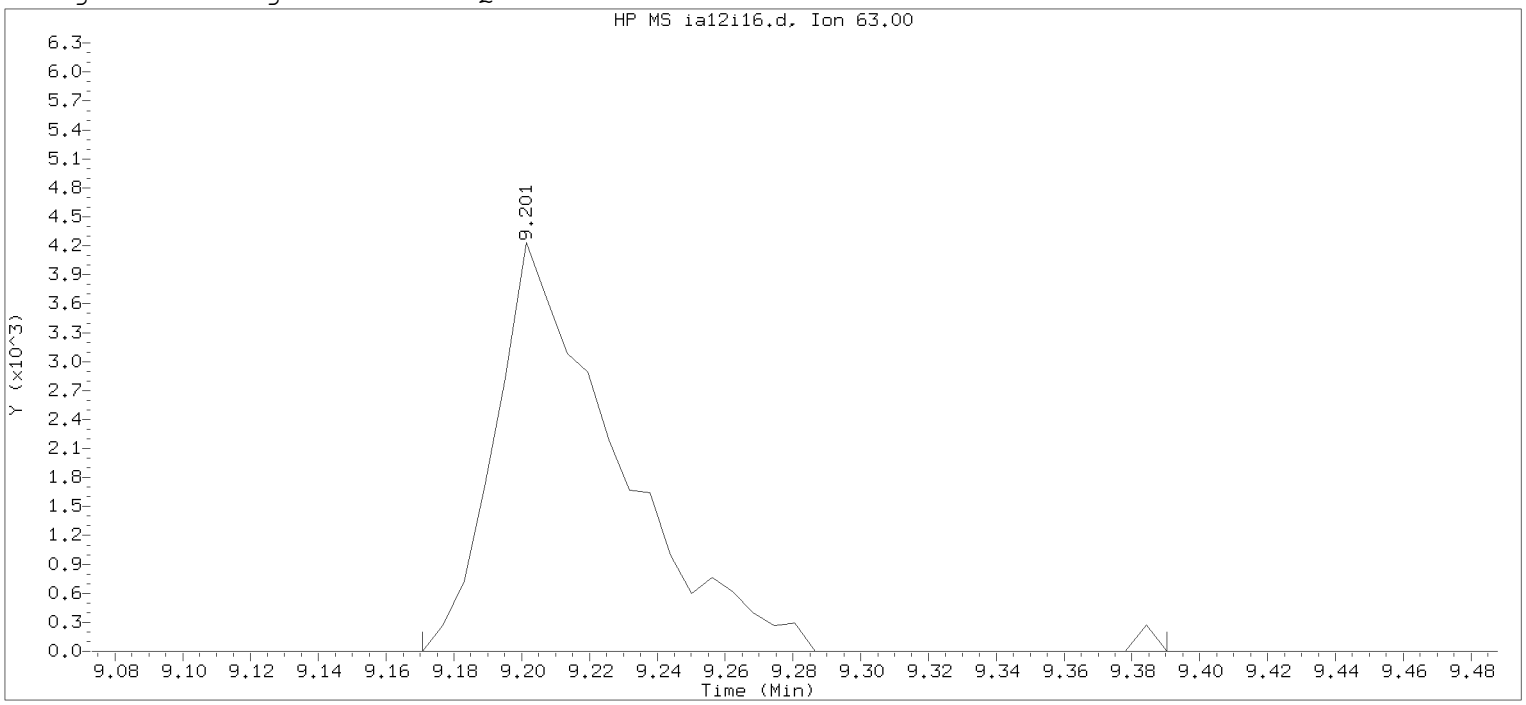
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

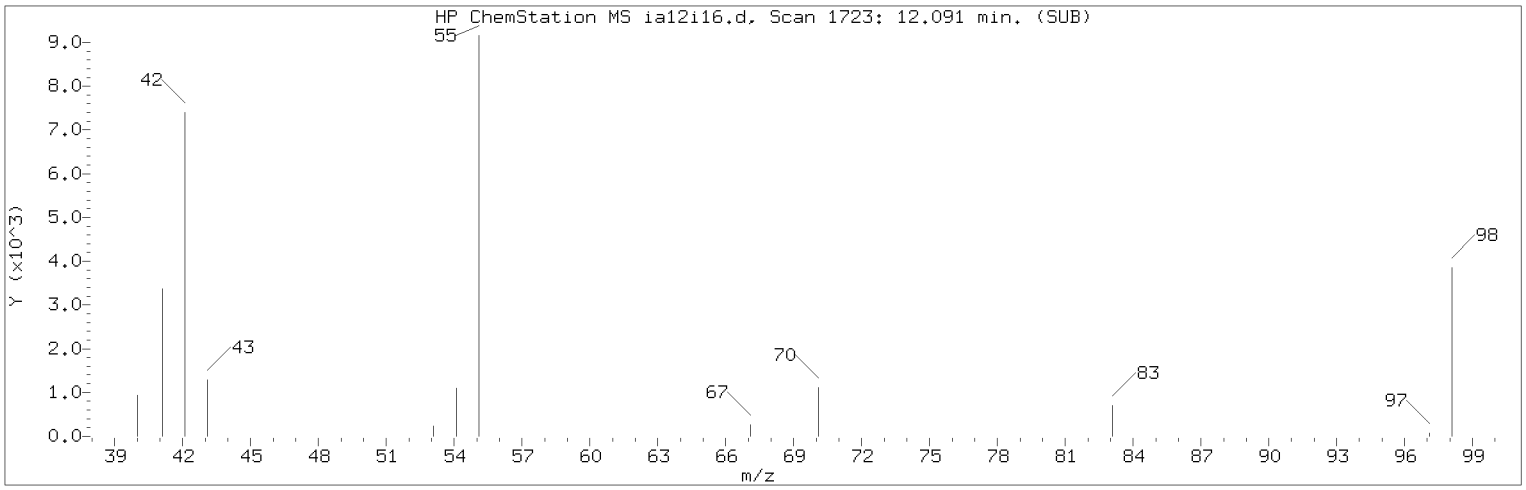
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

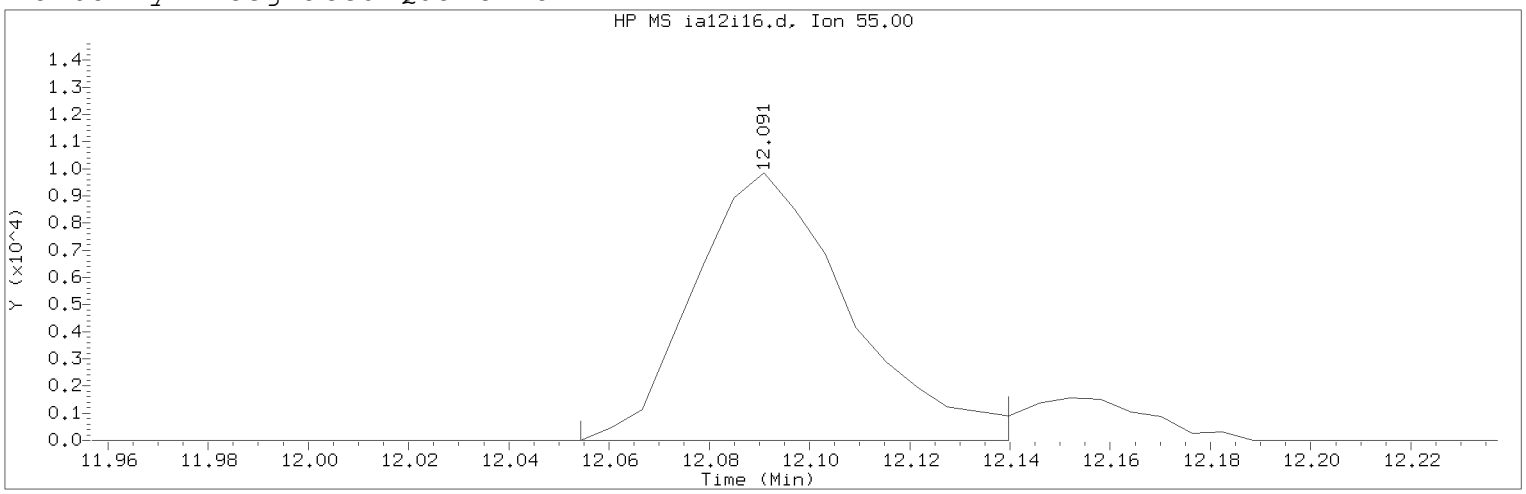
Compound Number : 78
Compound Name : 2-Chloroethyl vinyl ether
Scan Number : 1249
Retention Time (minutes): 9.201
Quant Ion : 63.00
Area : 10640
On-column Amount (ng) : 0.4126
Integration start scan : 1243 Integration stop scan: 1279
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

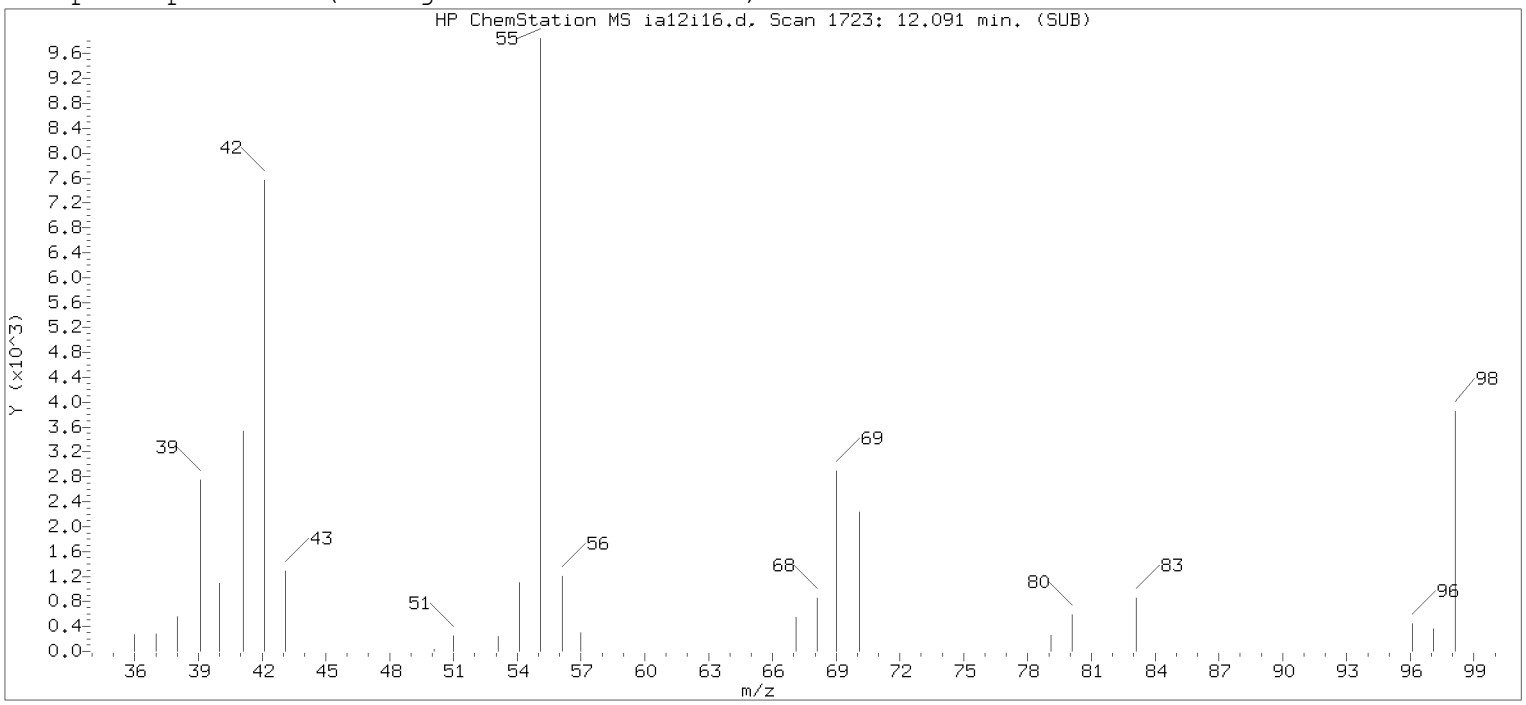
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area (flag) : 21277M
On-Column Amount (ng) : 19.9375
Integration start scan : 1716 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

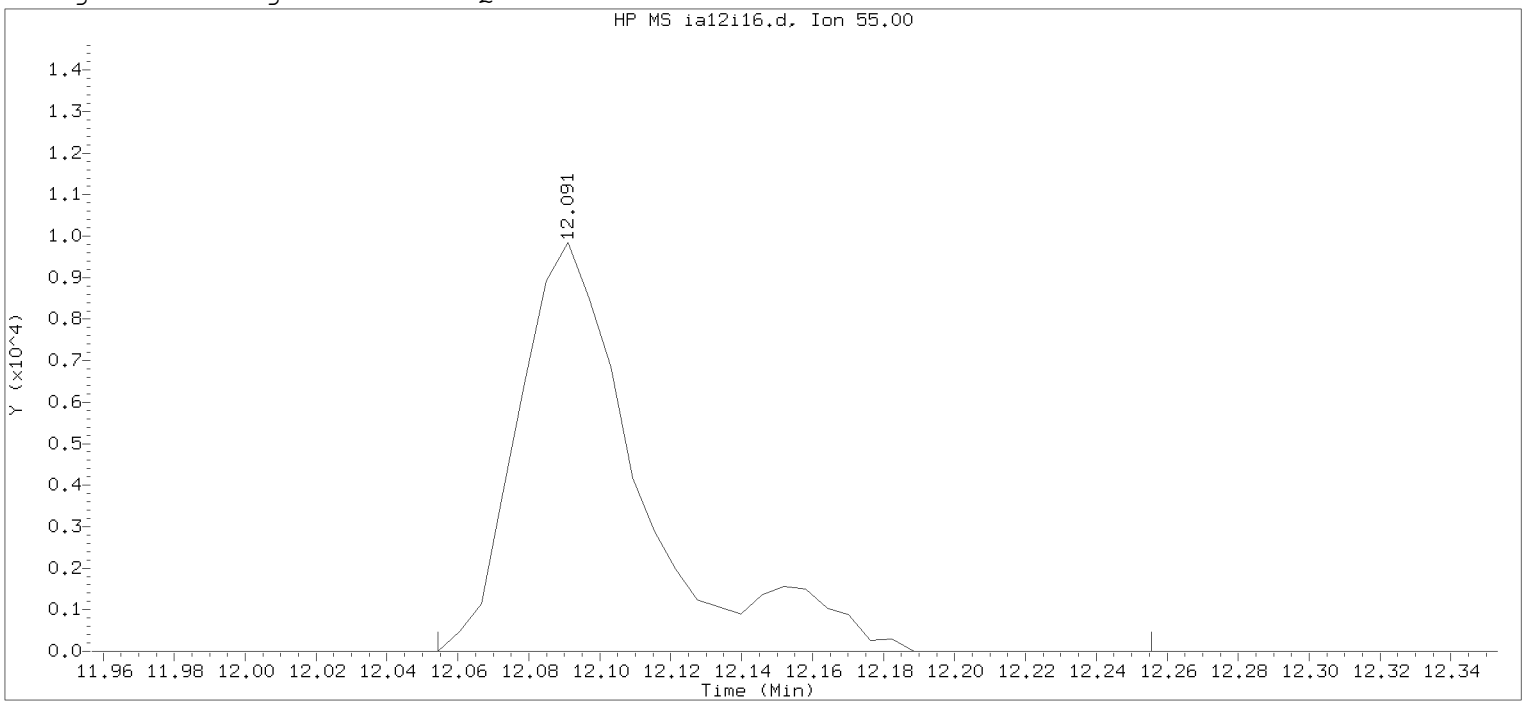
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



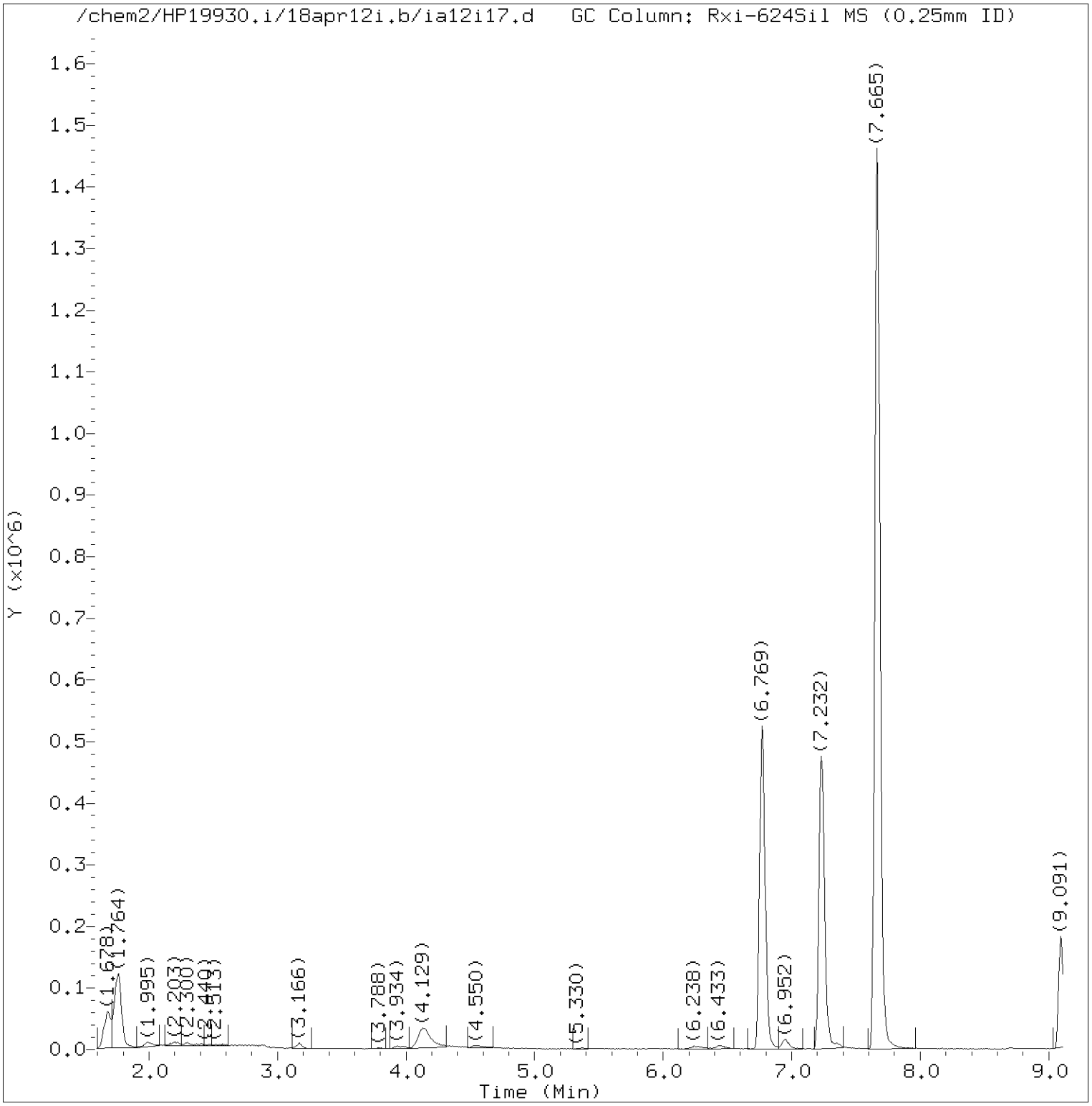
Data File: /chem2/HP19930.i/18apr12i.b/ia12i16.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:11 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area : 23801
On-column Amount (ng) : 24.6583
Integration start scan : 1716 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used for this report



Total Ion Chromatogram (TIC)

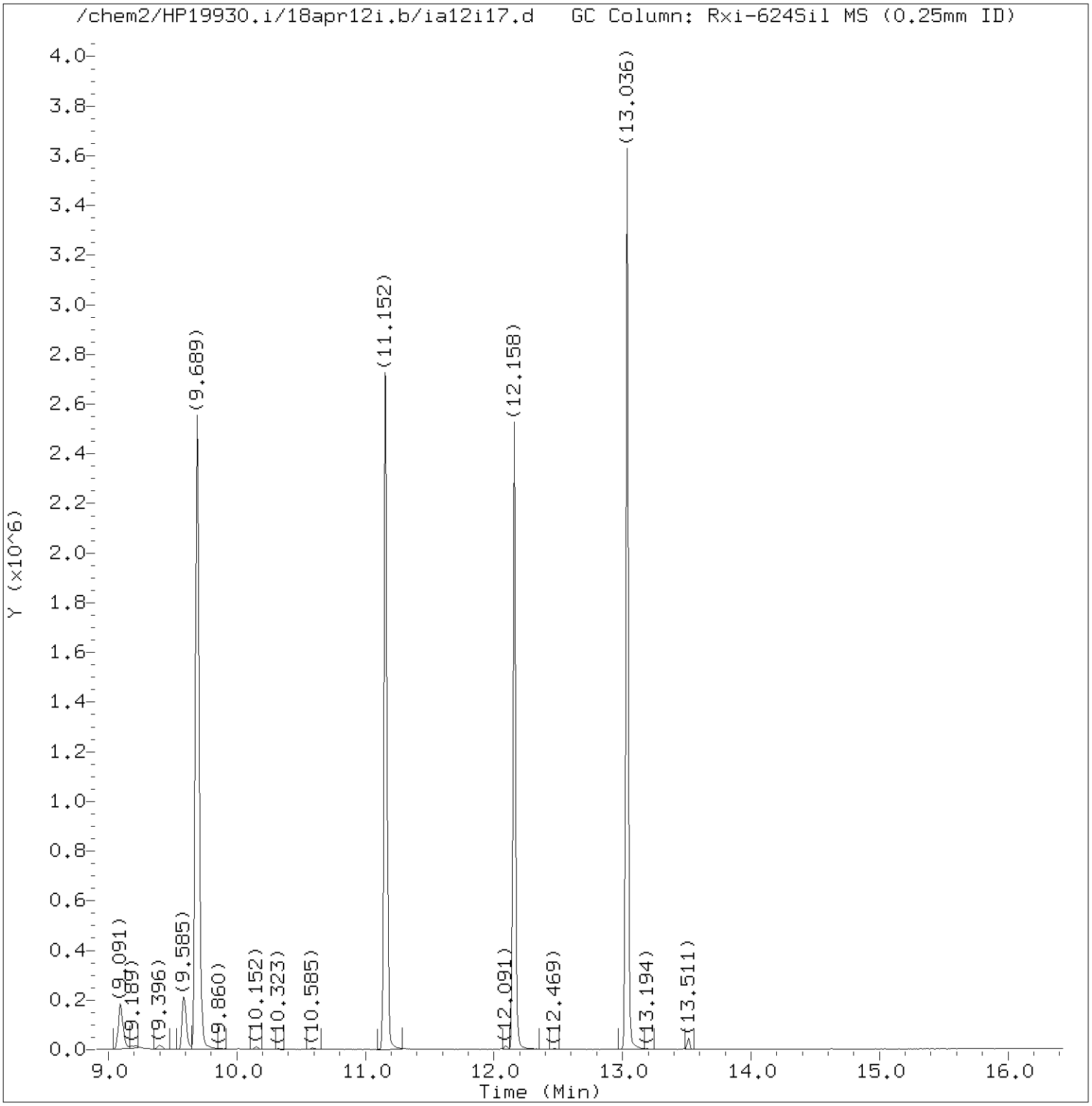
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

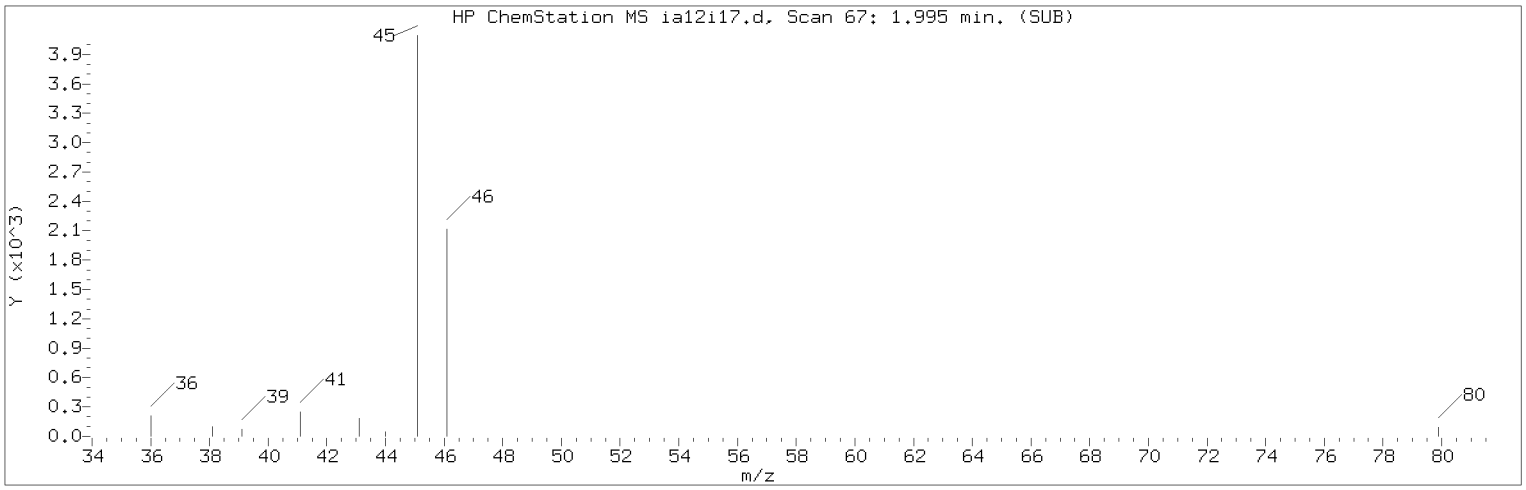
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.995	45	16065M	0.209
25) Acetonitrile	(1)	3.934	41	31084M	8.019
26)*t-Butyl Alcohol-d10	(1)	4.129	65	142827	50.000
36) Vinyl Acetate	(2)	5.360	43	8615M	0.353
43) Methyl Acrylate	(2)	6.269	55	21059M	0.695
53) 1-Chlorobutane	(2)	6.946	56	20197	0.176
63)*Fluorobenzene	(2)	7.665	96	1999757	10.000
77) Chloroacetonitrile	(2)	9.195	75	12805M	7.952
78) 2-Chloroethyl vinyl ether	(2)	9.219	63	3056	0.130
97)*Chlorobenzene-d5	(3)	11.158	117	1519463	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.060	88	740	0.778
112) Cyclohexanone	(1)	12.091	55	6920M	7.232
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	797500	10.000
142) Hexachloroethane	(4)	13.517	117	5950	0.173

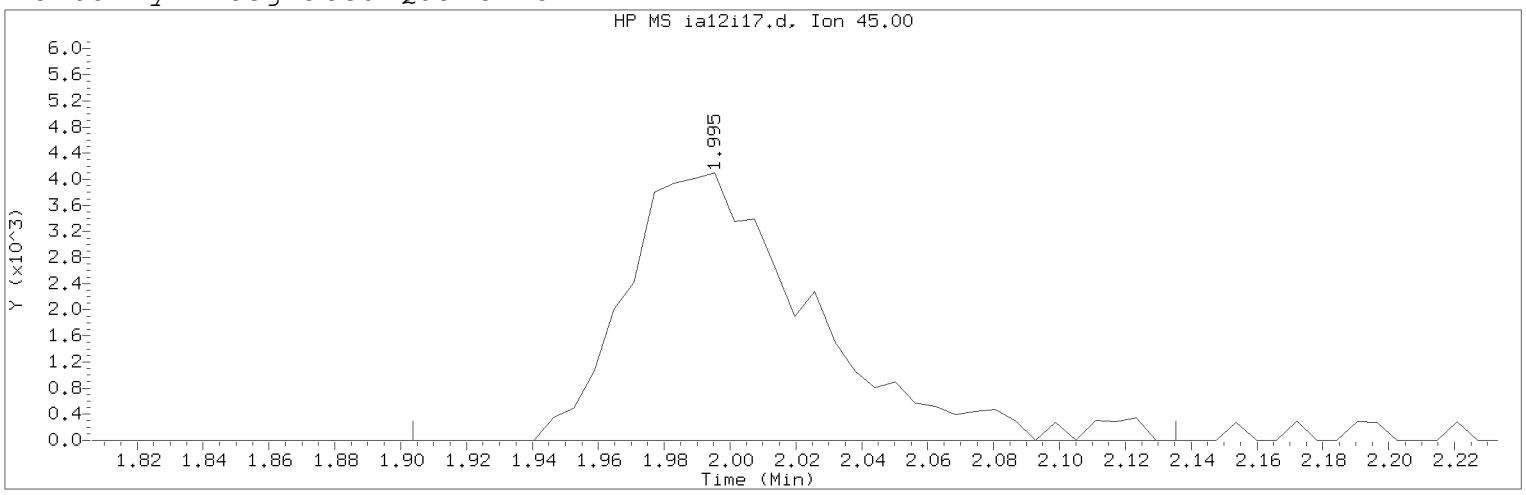
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

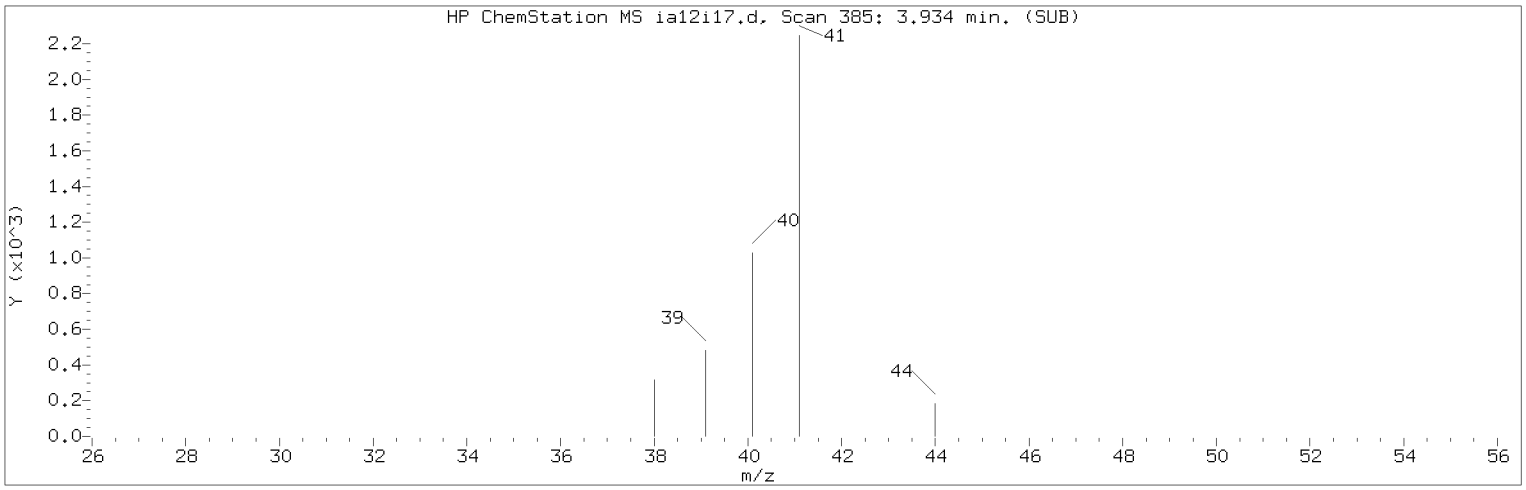
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 67
Retention Time (minutes): 1.995
Quant Ion : 45.00
Area (flag) : 16065M
On-Column Amount (ng) : 0.2088
Integration start scan : 51 Integration stop scan: 89
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

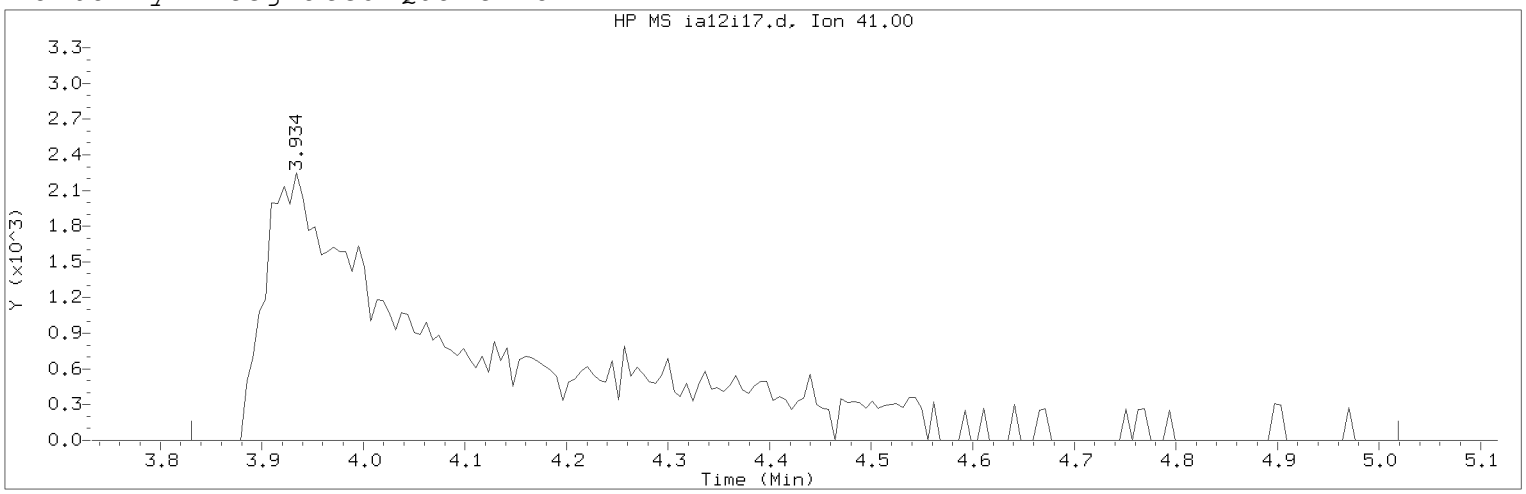
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

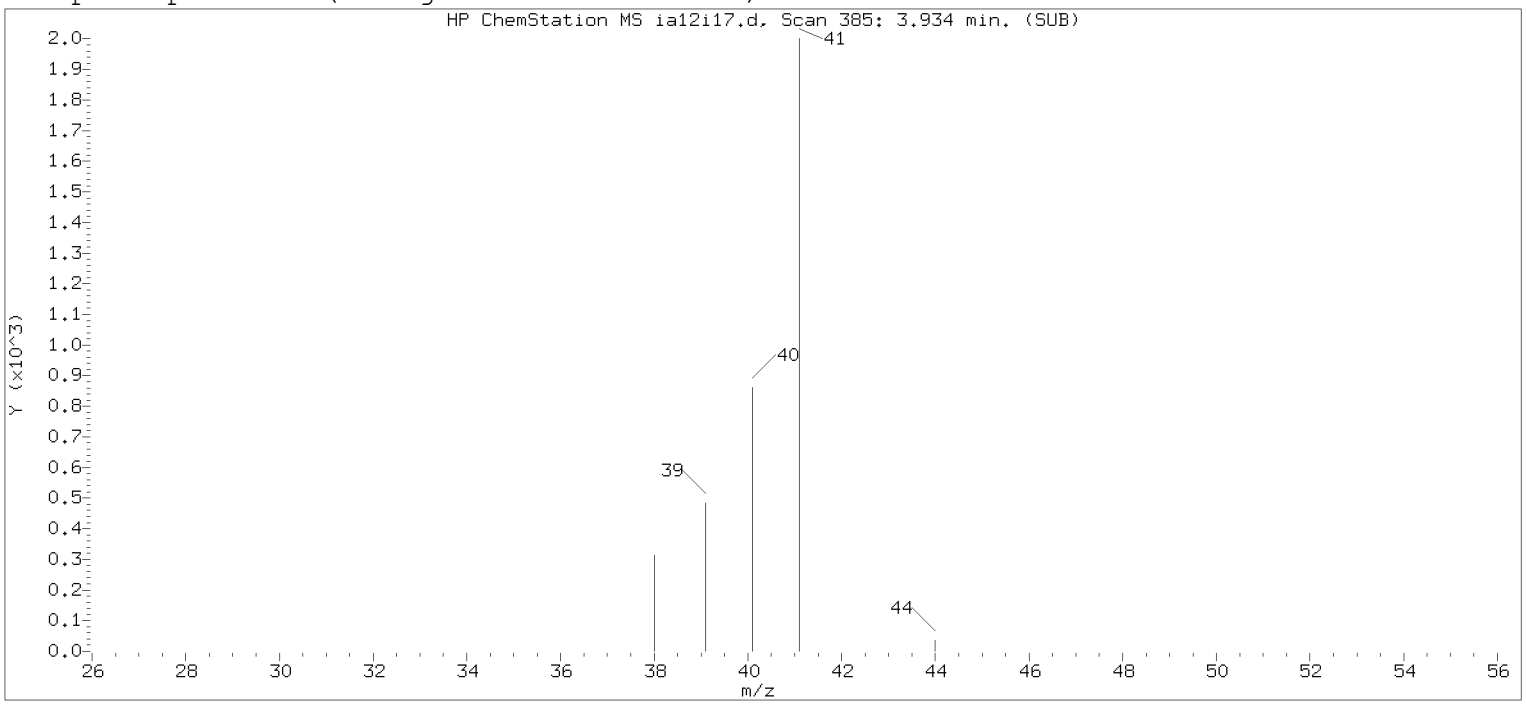
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 385
Retention Time (minutes): 3.934
Quant Ion : 41.00
Area (flag) : 31084M
On-Column Amount (ng) : 8.0187
Integration start scan : 367 Integration stop scan: 562
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

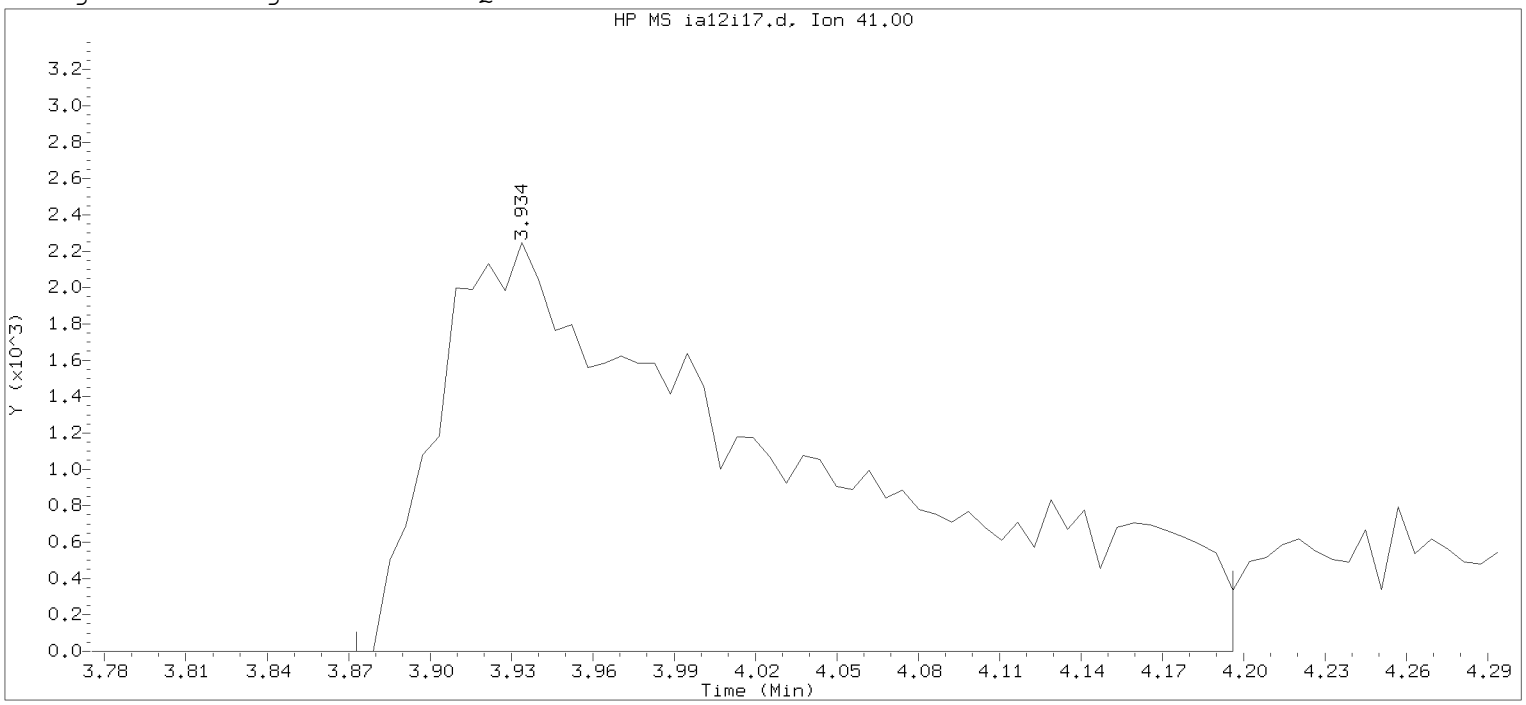
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

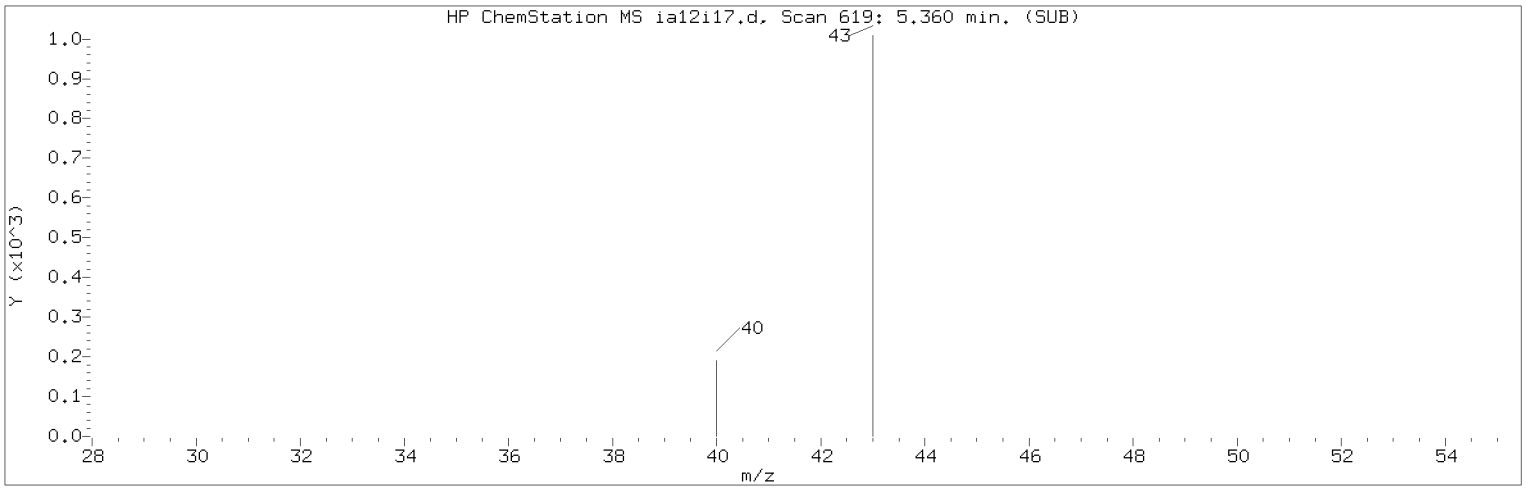
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

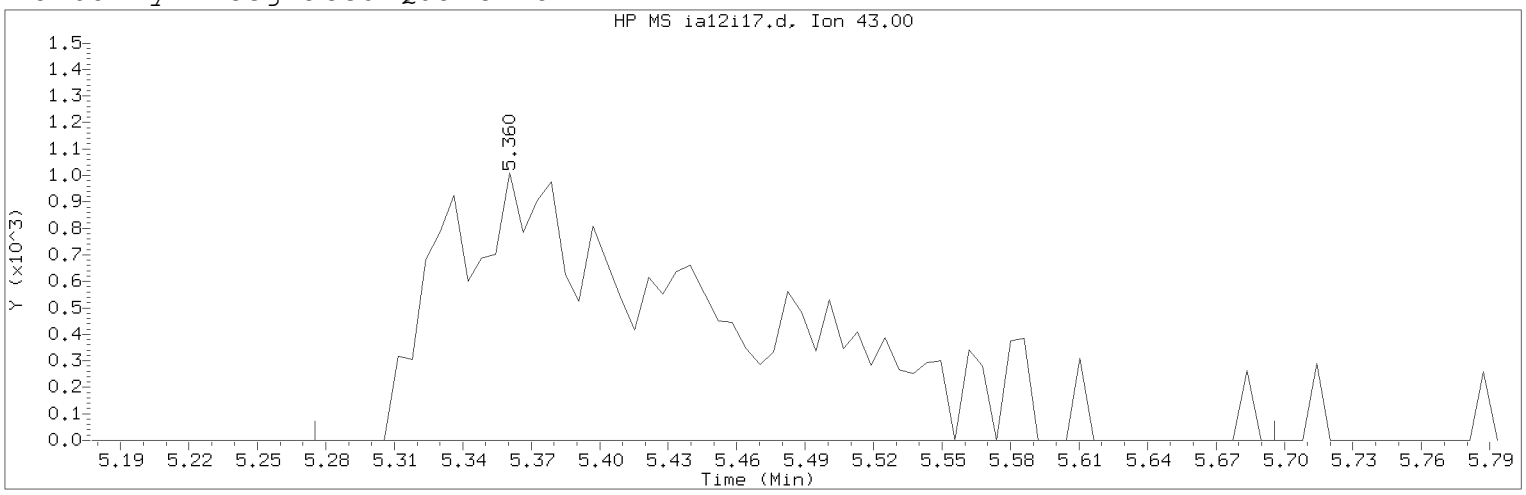
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 385
Retention Time (minutes): 3.934
Quant Ion : 41.00
Area : 20793
On-column Amount (ng) : 6.5673
Integration start scan : 374 Integration stop scan: 427
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

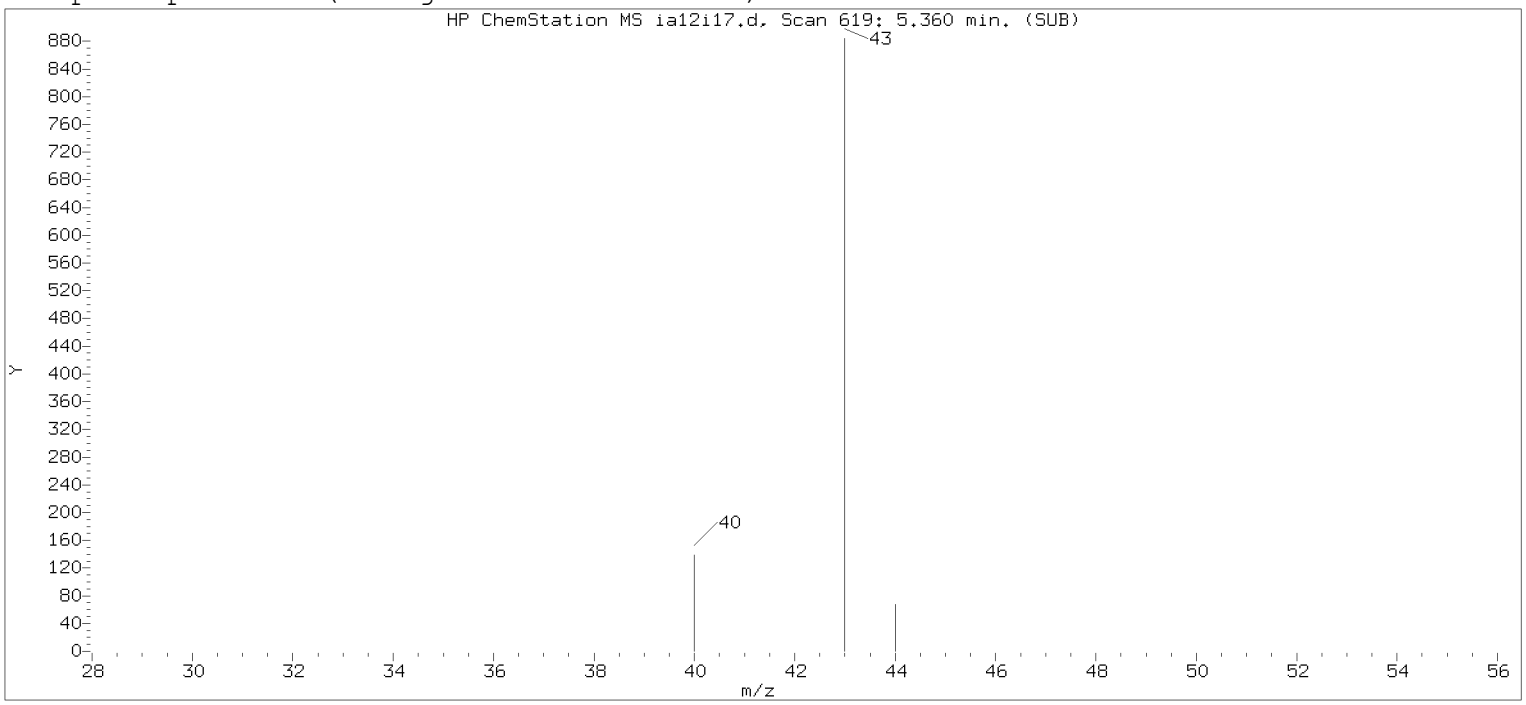
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 619
Retention Time (minutes): 5.360
Quant Ion : 43.00
Area (flag) : 8615M
On-Column Amount (ng) : 0.3532
Integration start scan : 604 Integration stop scan: 673
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

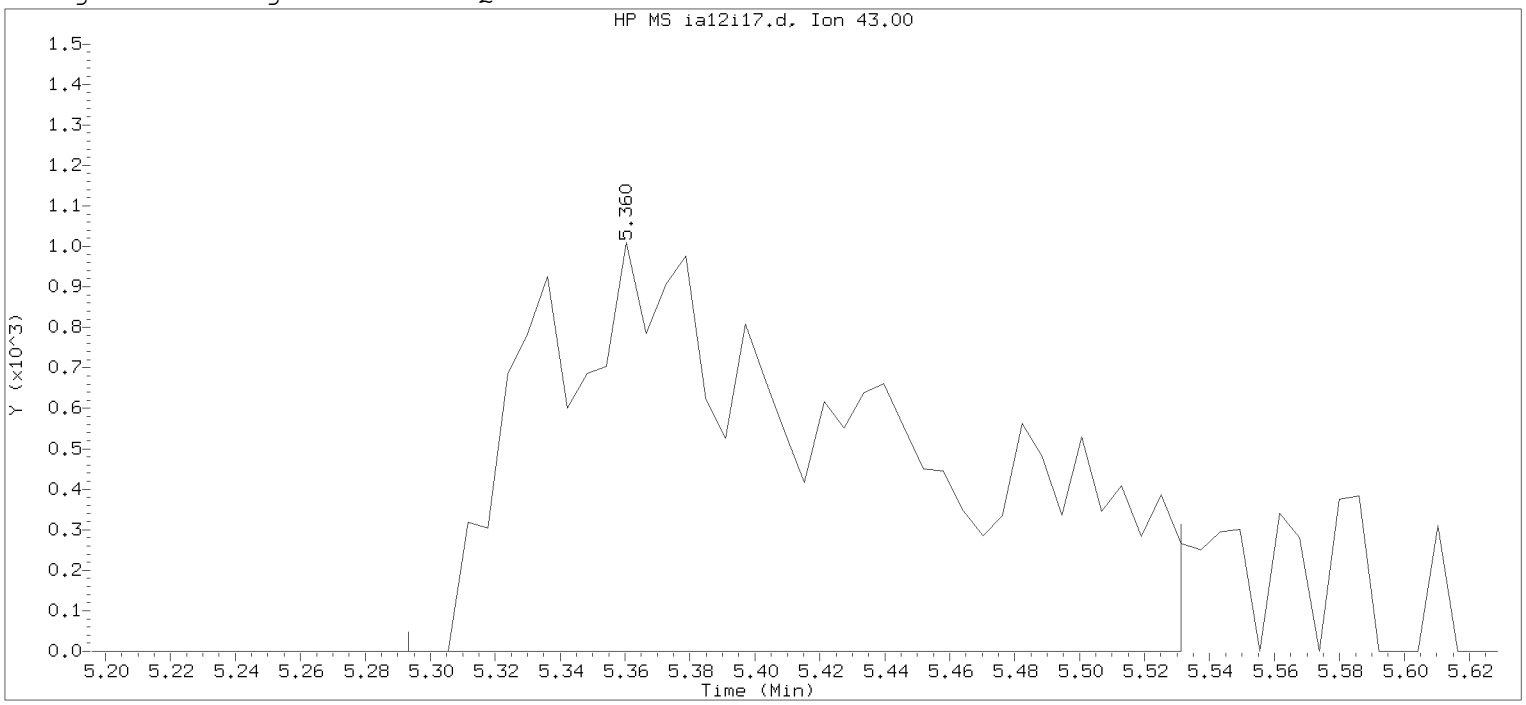
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

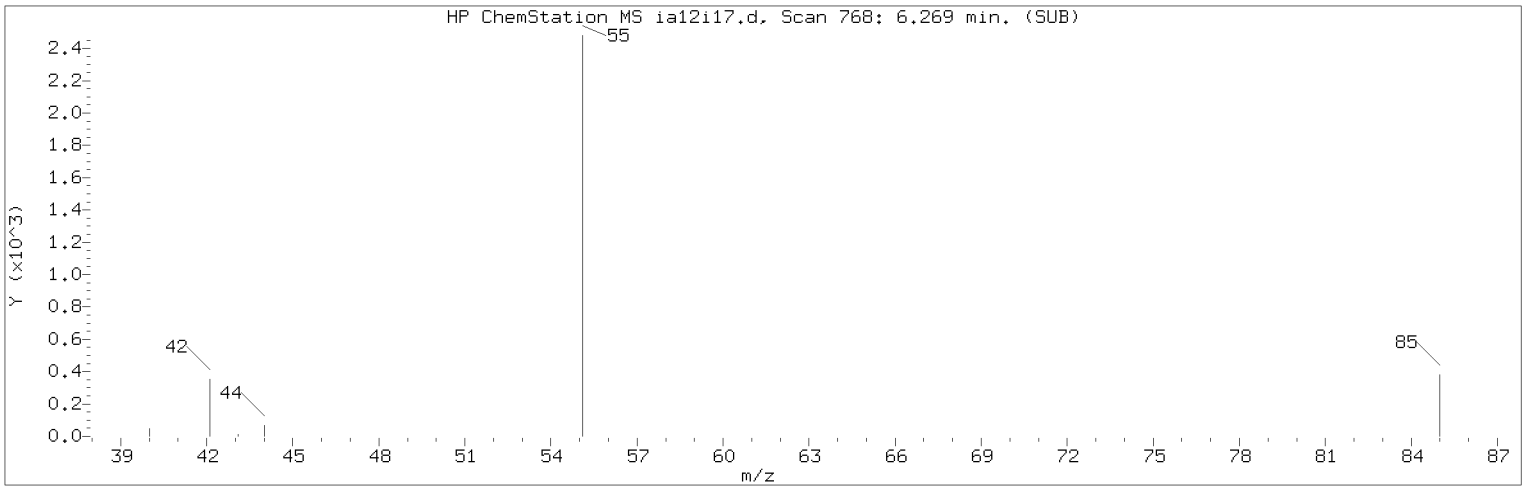
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

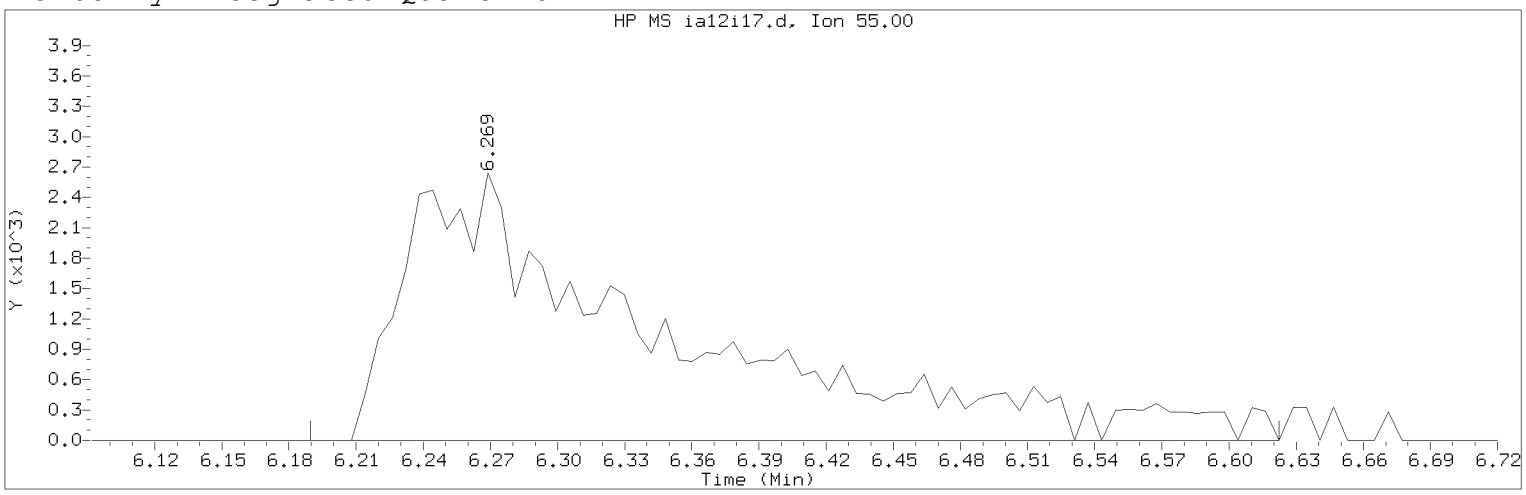
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 619
Retention Time (minutes): 5.360
Quant Ion : 43.00
Area : 7542
On-column Amount (ng) : 0.1079
Integration start scan : 607 Integration stop scan: 646
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

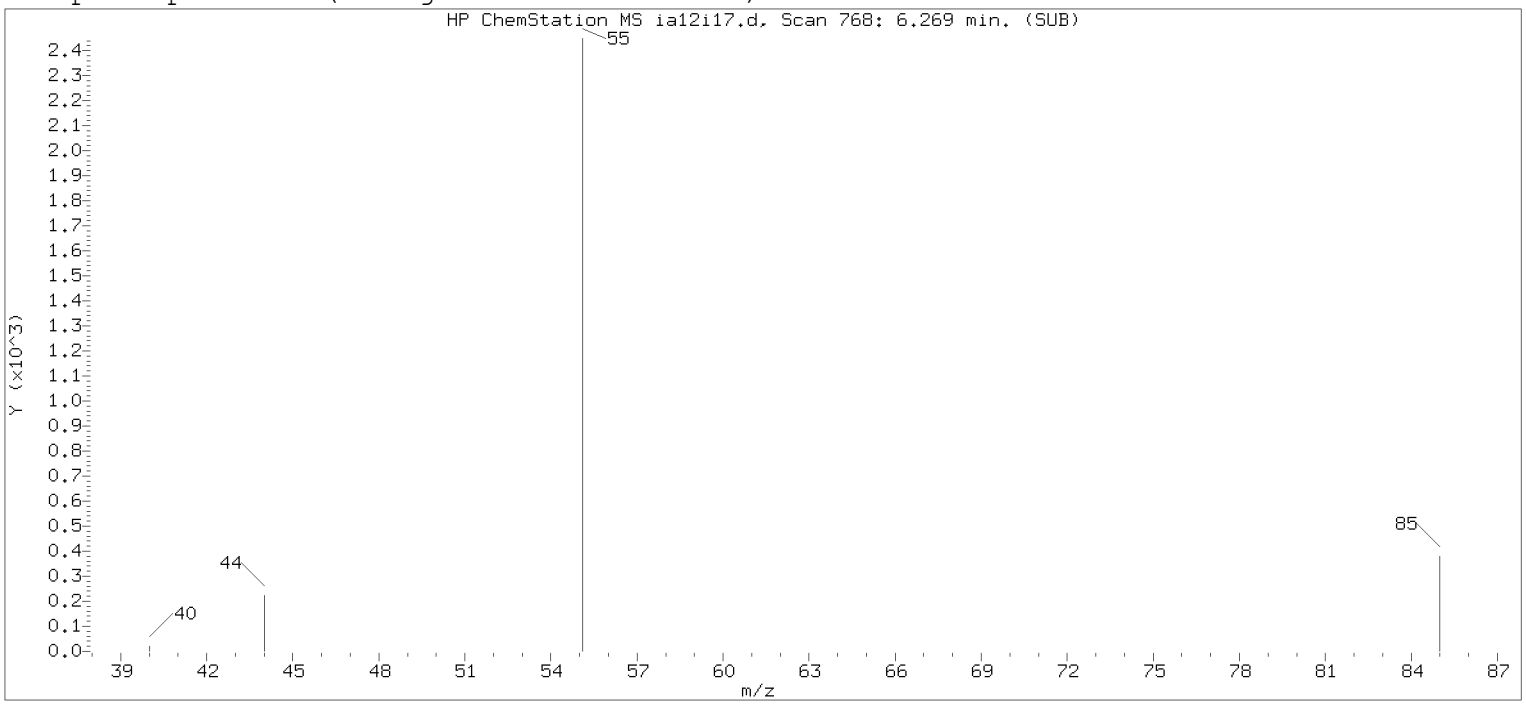
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 768
Retention Time (minutes): 6.269
Quant Ion : 55.00
Area (flag) : 21059M
On-Column Amount (ng) : 0.6954
Integration start scan : 754 Integration stop scan: 825
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

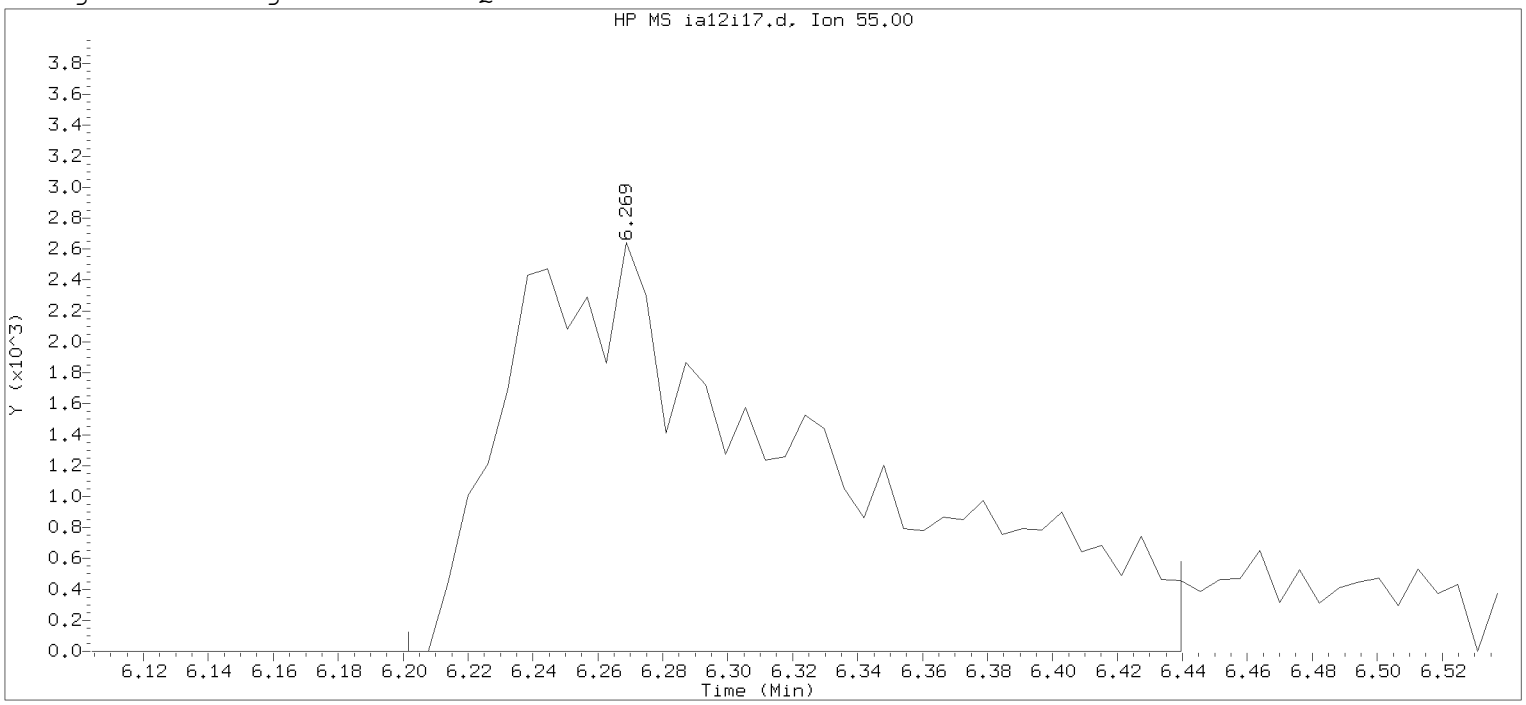
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

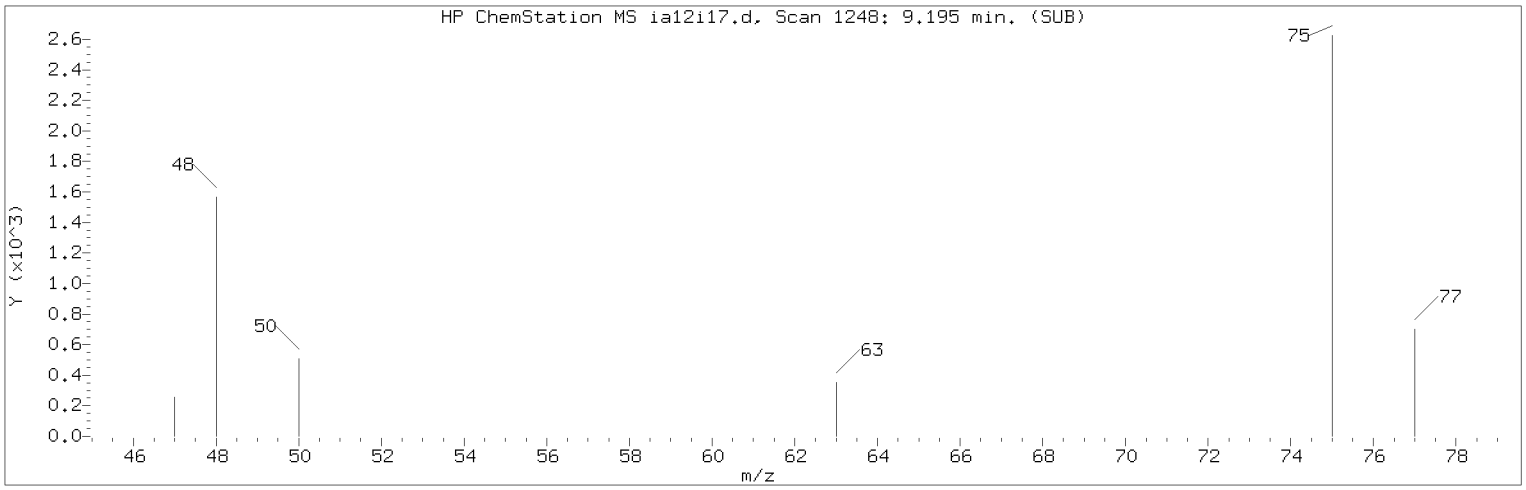
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

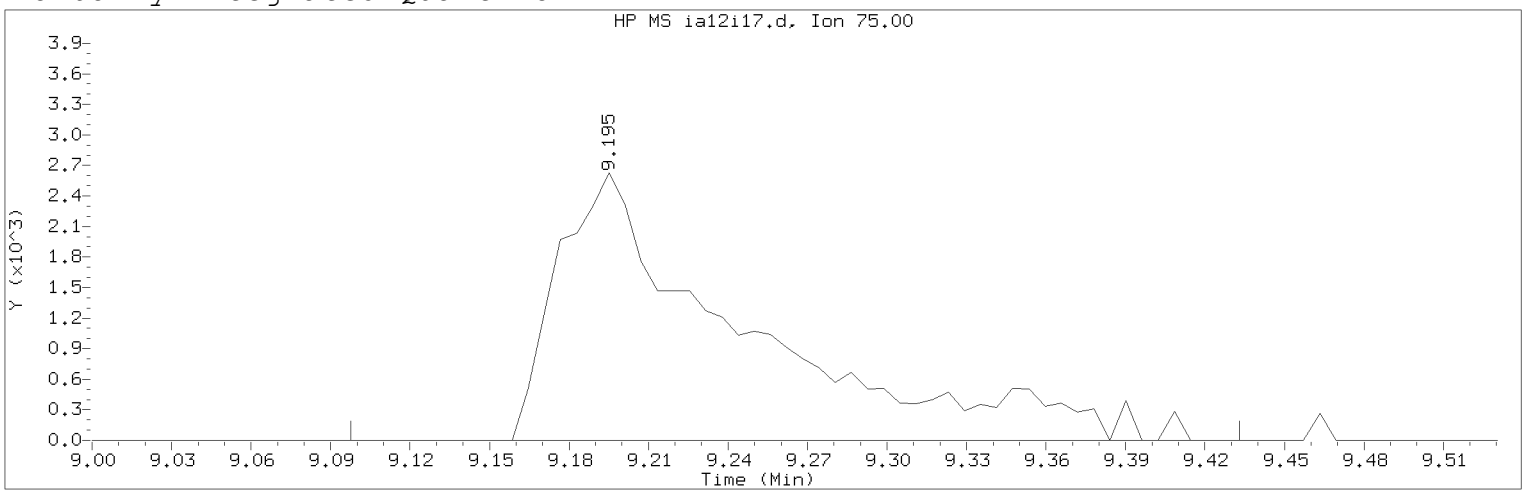
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 768
Retention Time (minutes): 6.269
Quant Ion : 55.00
Area : 17419
On-column Amount (ng) : 0.5966
Integration start scan : 756 Integration stop scan: 795
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

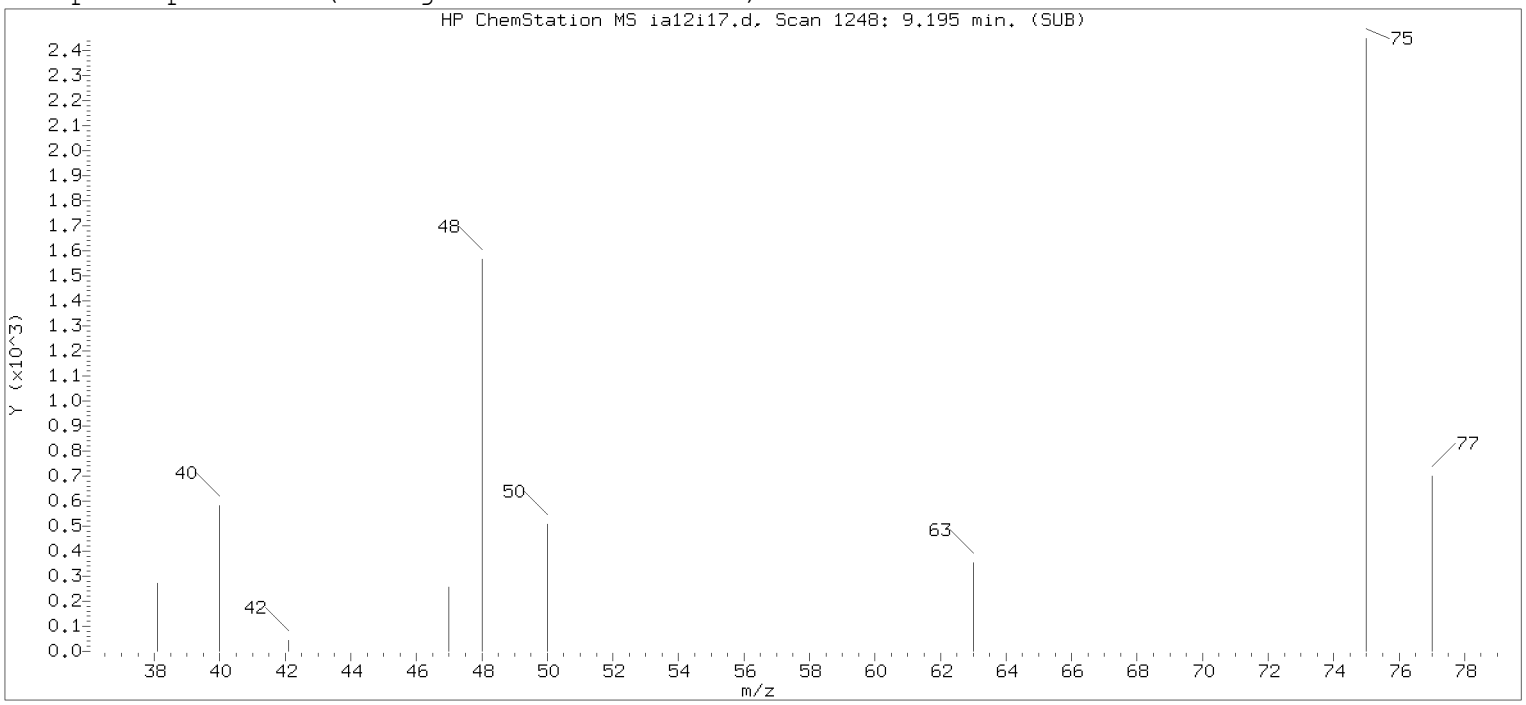
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 75.00
Area (flag) : 12805M
On-Column Amount (ng) : 7.9524
Integration start scan : 1231 Integration stop scan: 1286
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

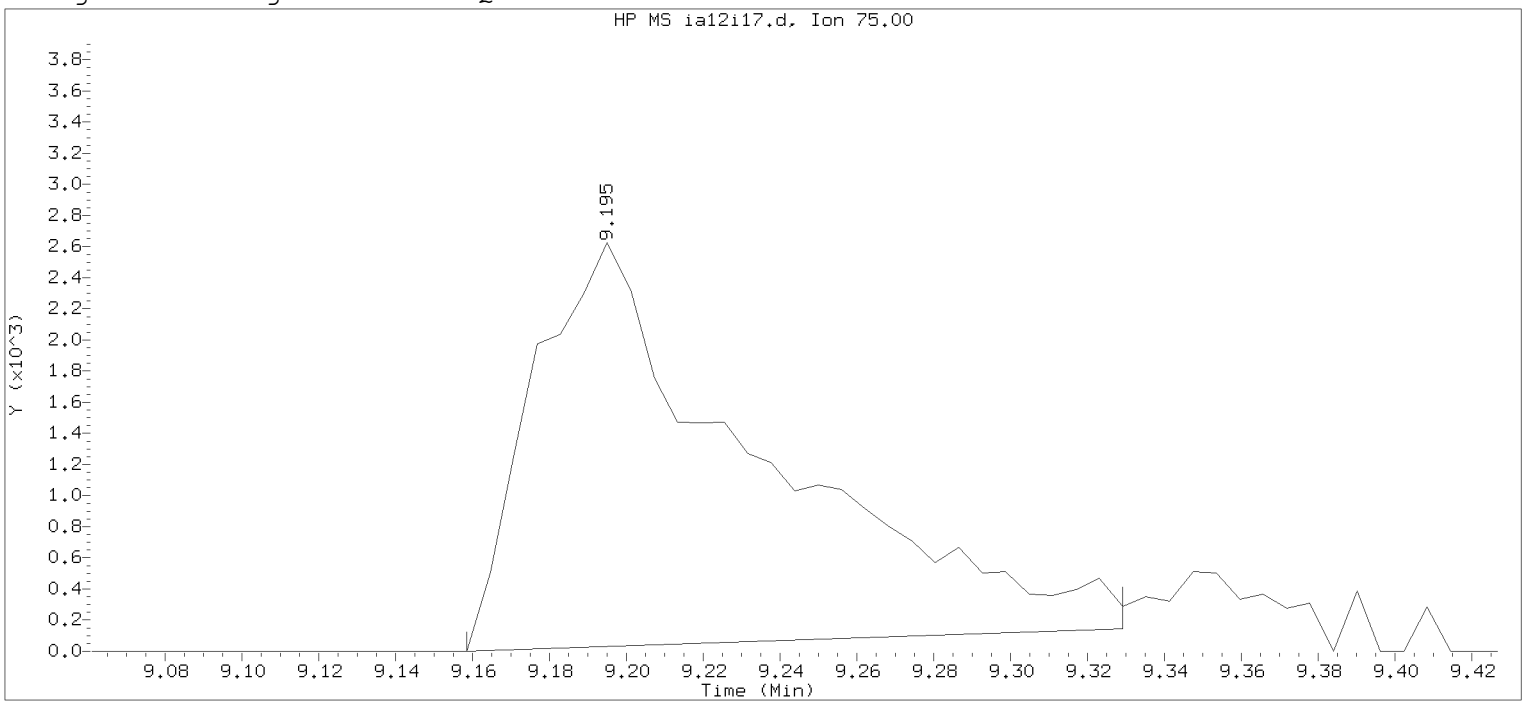
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

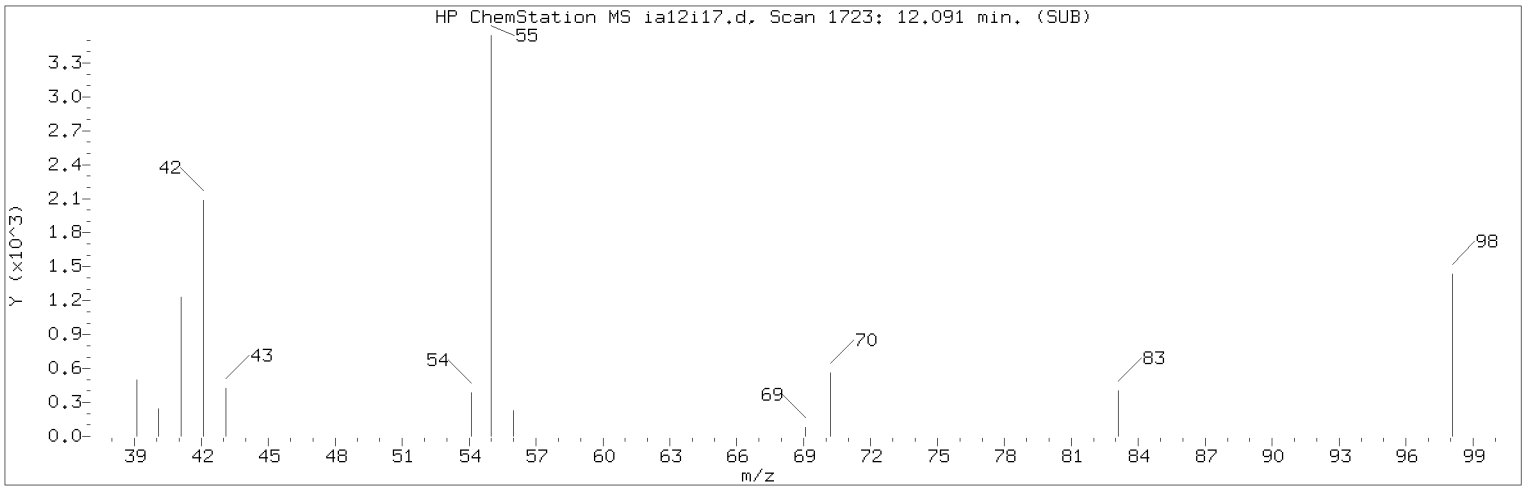
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

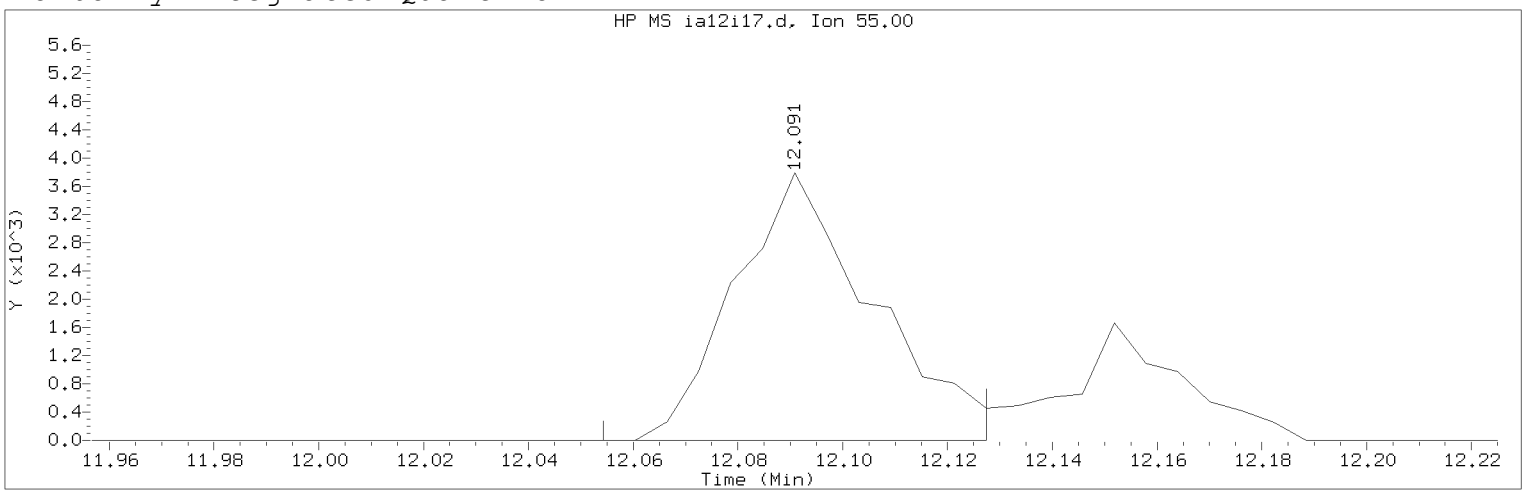
Compound Number : 77
Compound Name : Chloroacetonitrile
Scan Number : 1248
Retention Time (minutes): 9.195
Quant Ion : 75.00
Area : 10681
On-column Amount (ng) : 6.8273
Integration start scan : 1241 Integration stop scan: 1269
Y at integration start : 0 Y at integration end: 144

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:48
Date, time and analyst ID of latest file update: 12-Apr-2018 14:48 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

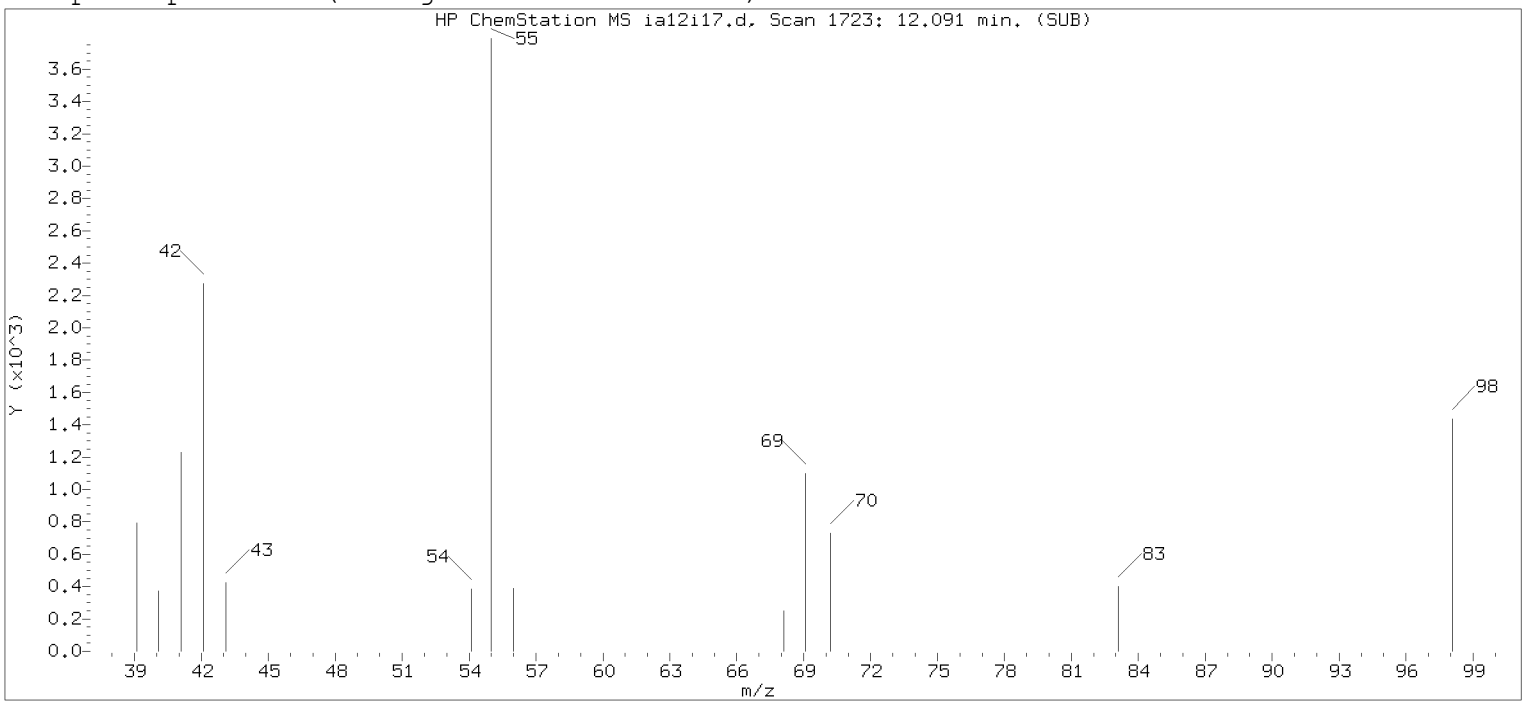
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area (flag) : 6920M
On-Column Amount (ng) : 7.2318
Integration start scan : 1716 Integration stop scan: 1728
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

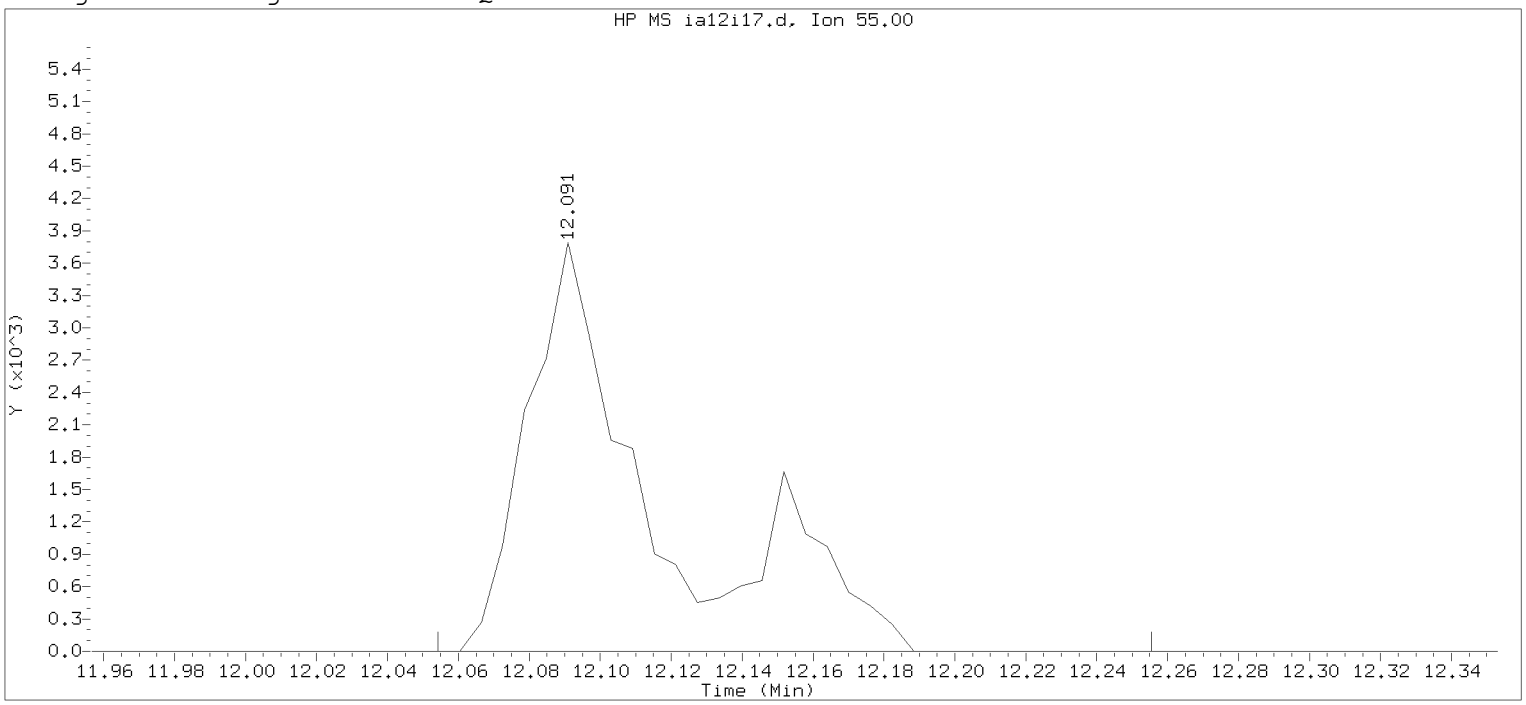
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 11:54.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



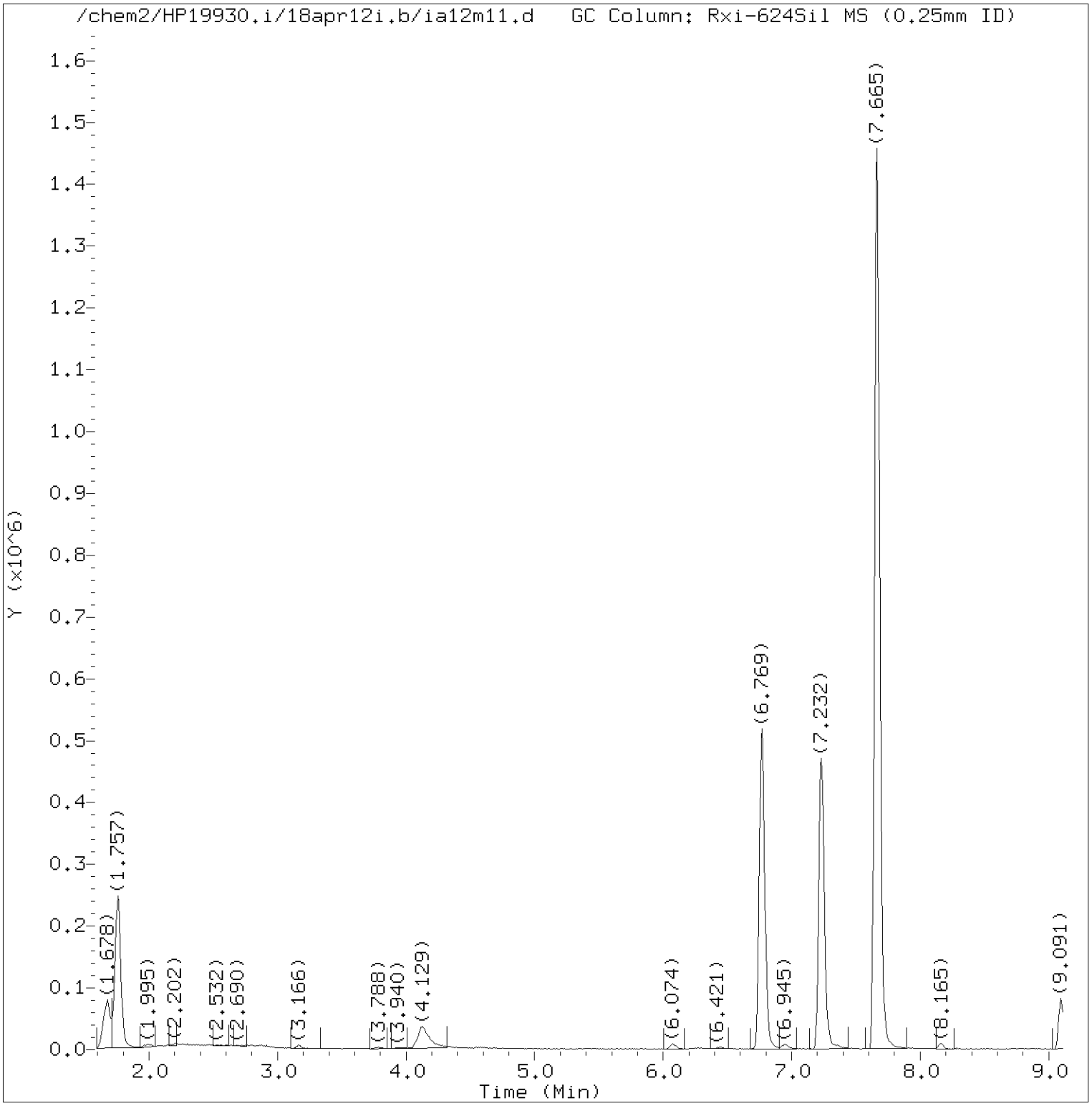
Data File: /chem2/HP19930.i/18apr12i.b/ia12i17.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:33 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL-1
Calibration date and time: 12-APR-2018 13:54
Date, time and analyst ID of latest file update: 12-Apr-2018 13:54 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1723
Retention Time (minutes): 12.091
Quant Ion : 55.00
Area : 9372
On-column Amount (ng) : 8.8989
Integration start scan : 1716 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

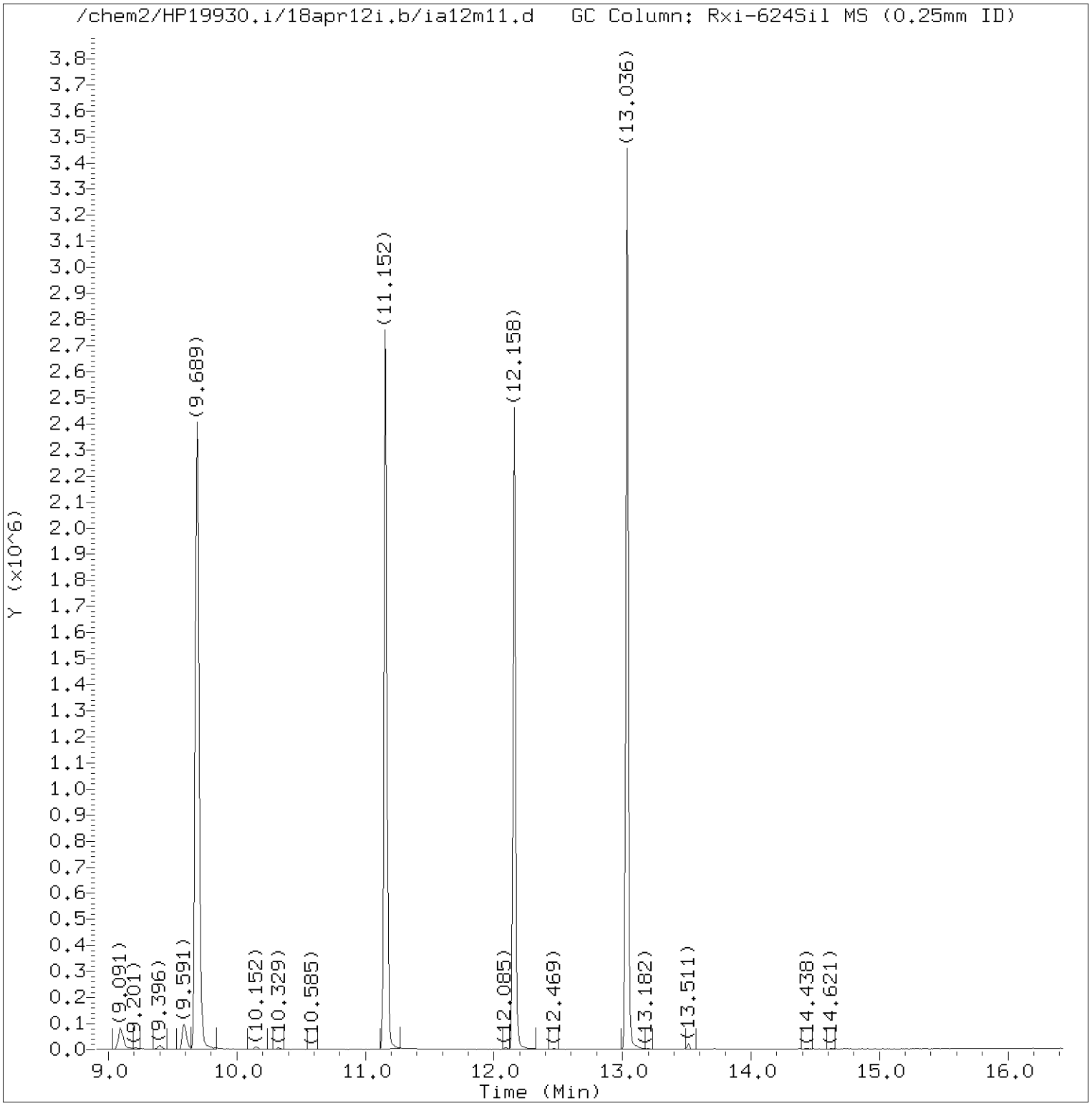
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

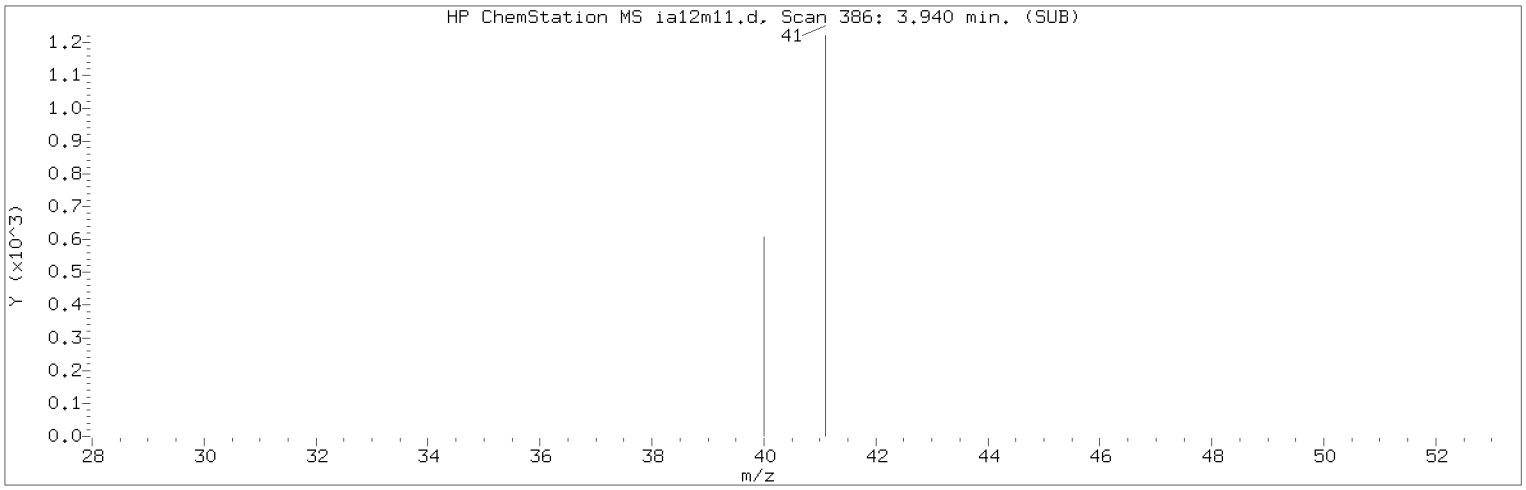
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.995	45	8198	0.109
25) Acetonitrile	(1)	3.940	41	12974M	3.575
26)*t-Butyl Alcohol-d10	(1)	4.129	65	133711	50.000
36) Vinyl Acetate	(2)	5.421	43	2378	0.283
43) Methyl Acrylate	(2)	6.293	55	9221M	0.311
53) 1-Chlorobutane	(2)	6.952	56	8449	0.075
63)*Fluorobenzene	(2)	7.665	96	1957347	10.000
77) Chloroacetonitrile	(2)	9.207	75	5519	3.502
78) 2-Chloroethyl vinyl ether	(2)	9.232	63	957	0.042
97)*Chlorobenzene-d5	(3)	11.152	117	1482914	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.060	88	238	0.613
112) Cyclohexanone	(1)	12.085	55	3113	3.475
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	781685	10.000
142) Hexachloroethane	(4)	13.511	117	2839	0.084

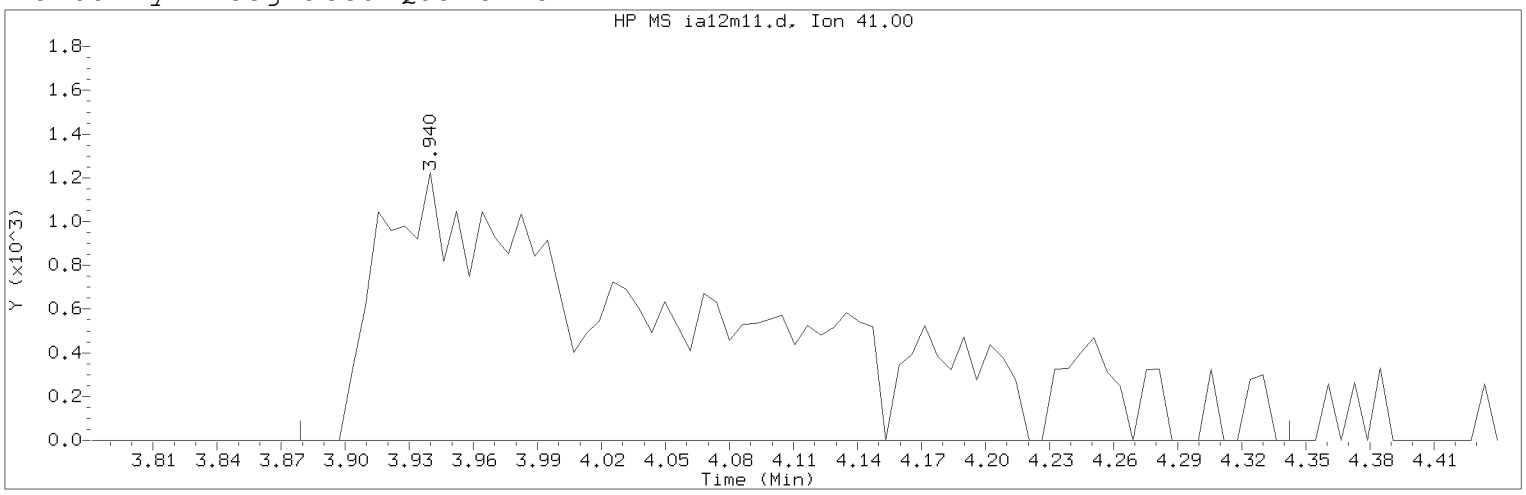
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

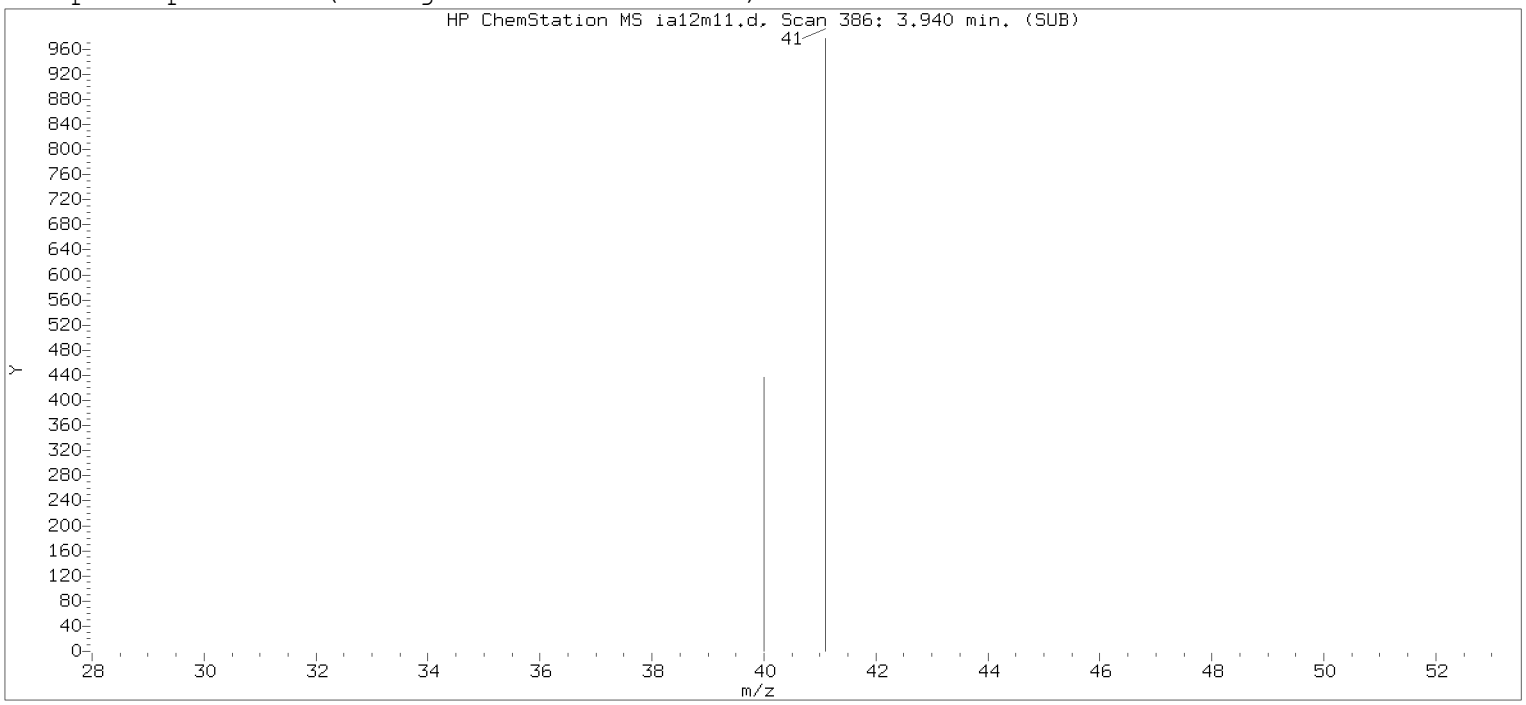
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 41.00
Area (flag) : 12974M
On-Column Amount (ng) : 3.5750
Integration start scan : 375 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

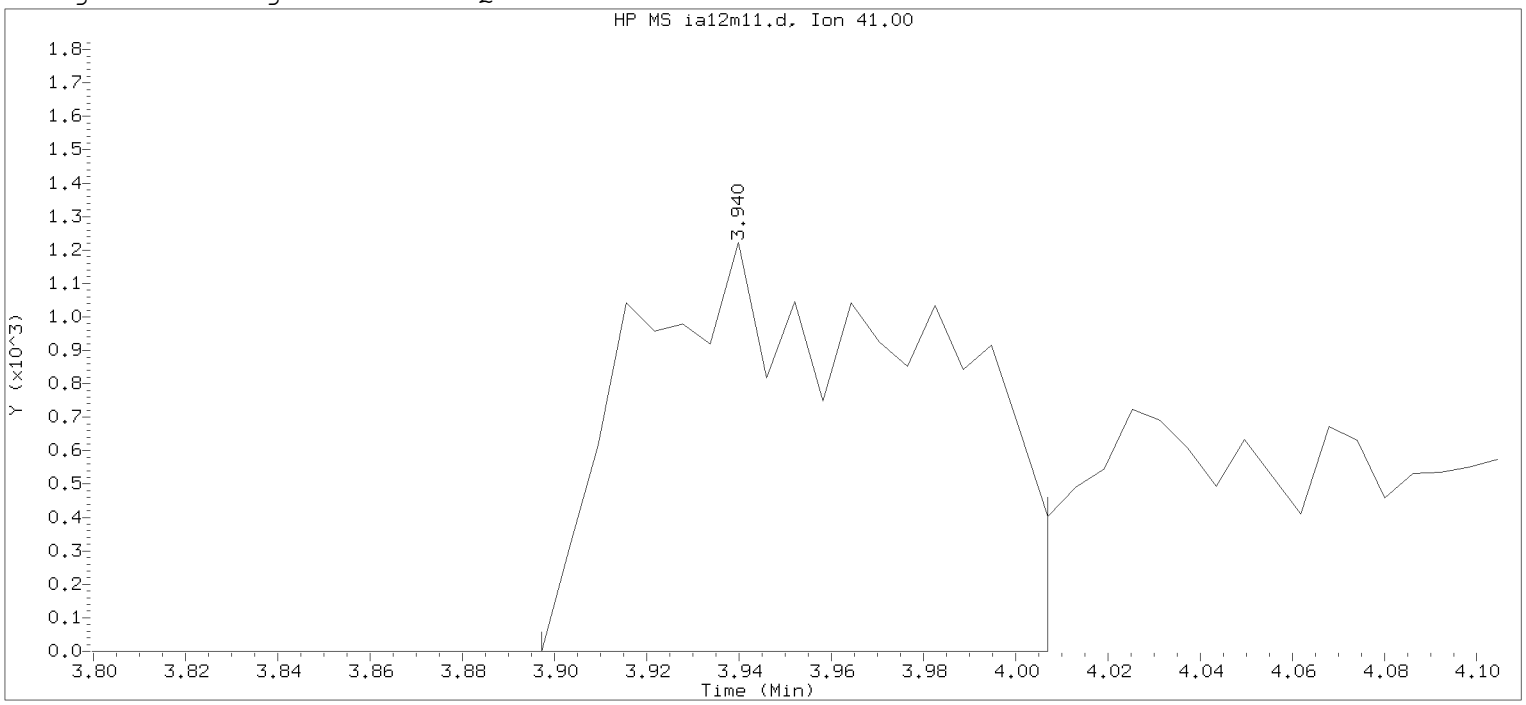
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

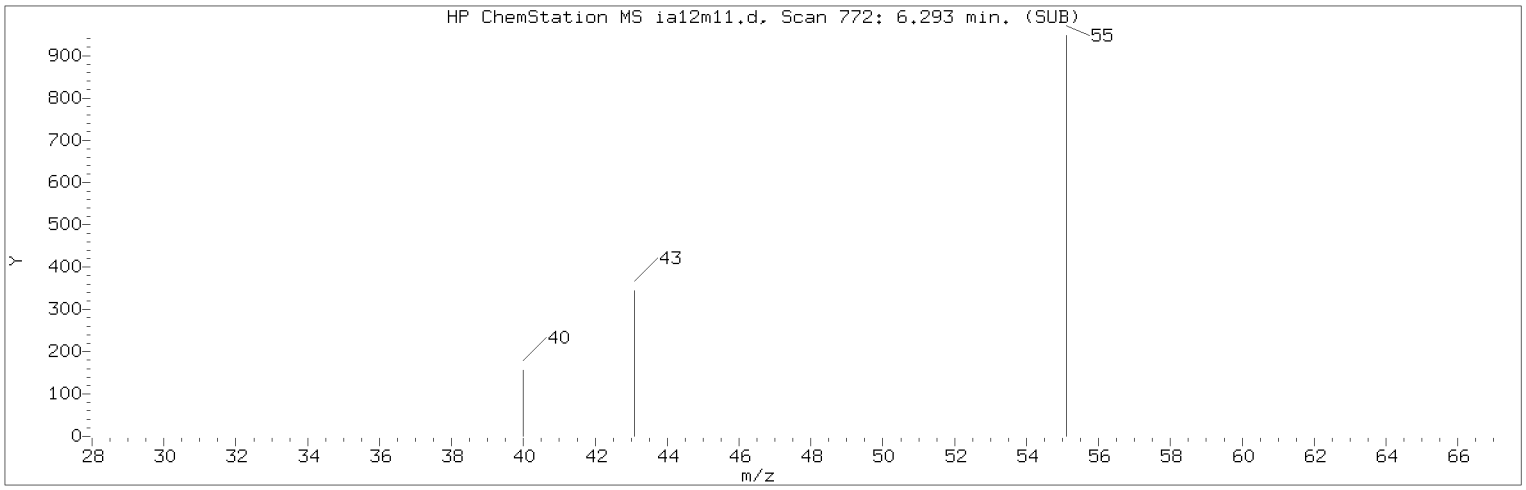
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

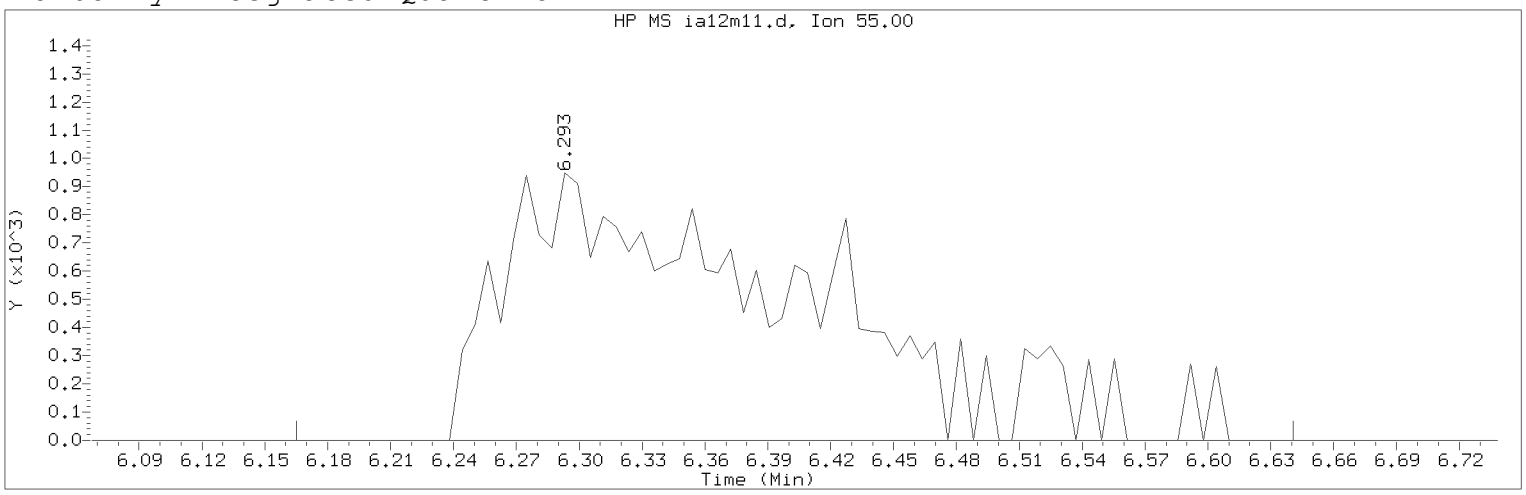
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 386
Retention Time (minutes): 3.940
Quant Ion : 41.00
Area : 5538
On-column Amount (ng) : 1.5291
Integration start scan : 378 Integration stop scan: 396
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:24.
Target 3.5 esignature used for this page.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 13-APR-2018 11:22
Date, time and analyst ID of latest file update: 13-Apr-2018 11:22 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

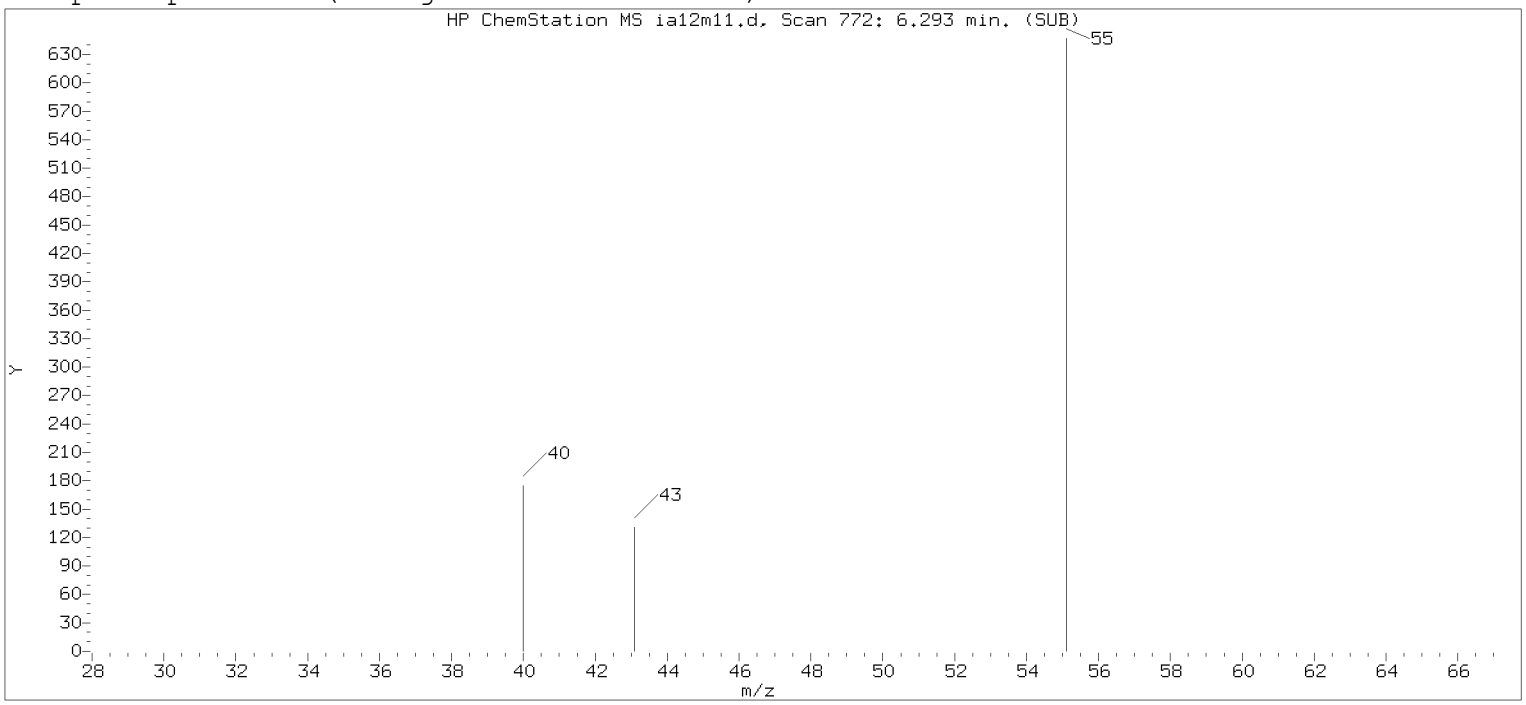
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 772
Retention Time (minutes): 6.293
Quant Ion : 55.00
Area (flag) : 9221M
On-Column Amount (ng) : 0.3111
Integration start scan : 750 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

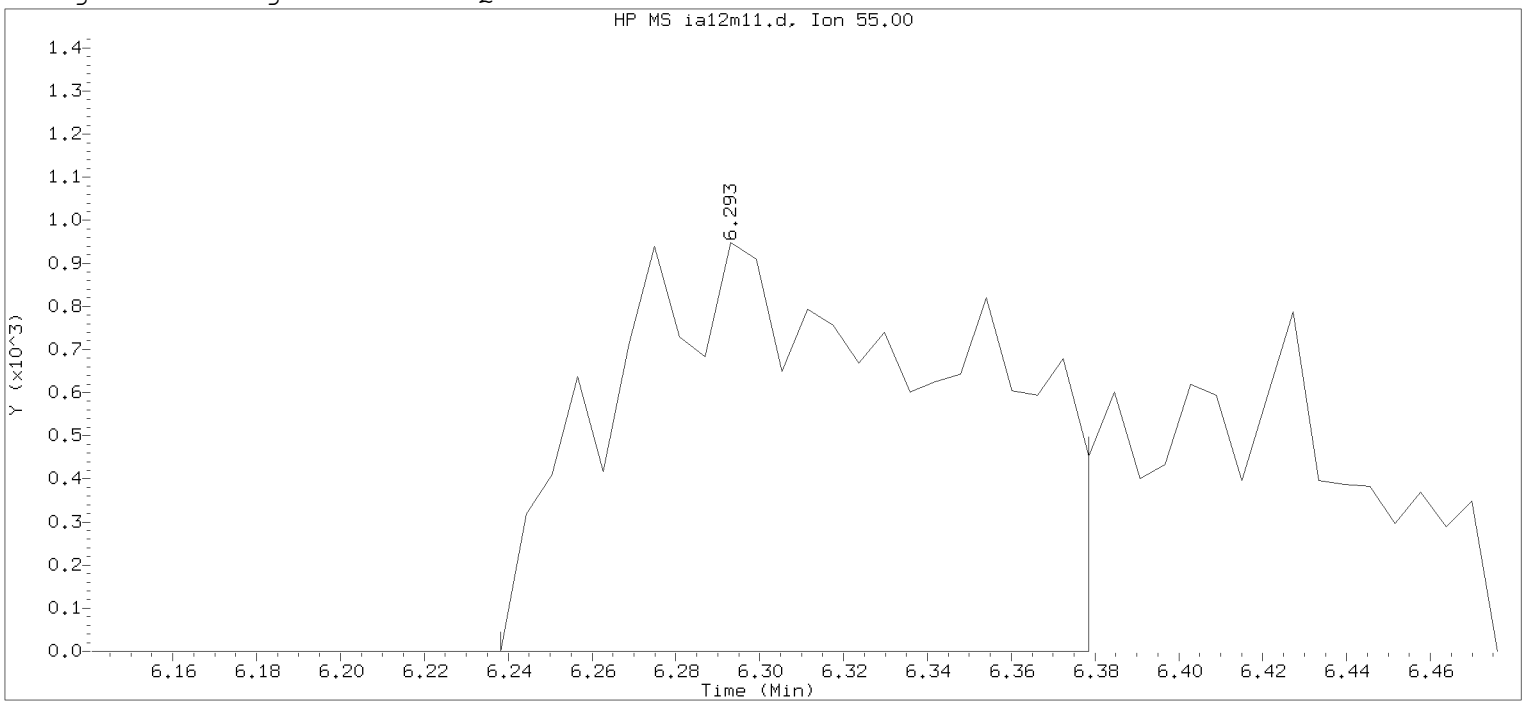
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



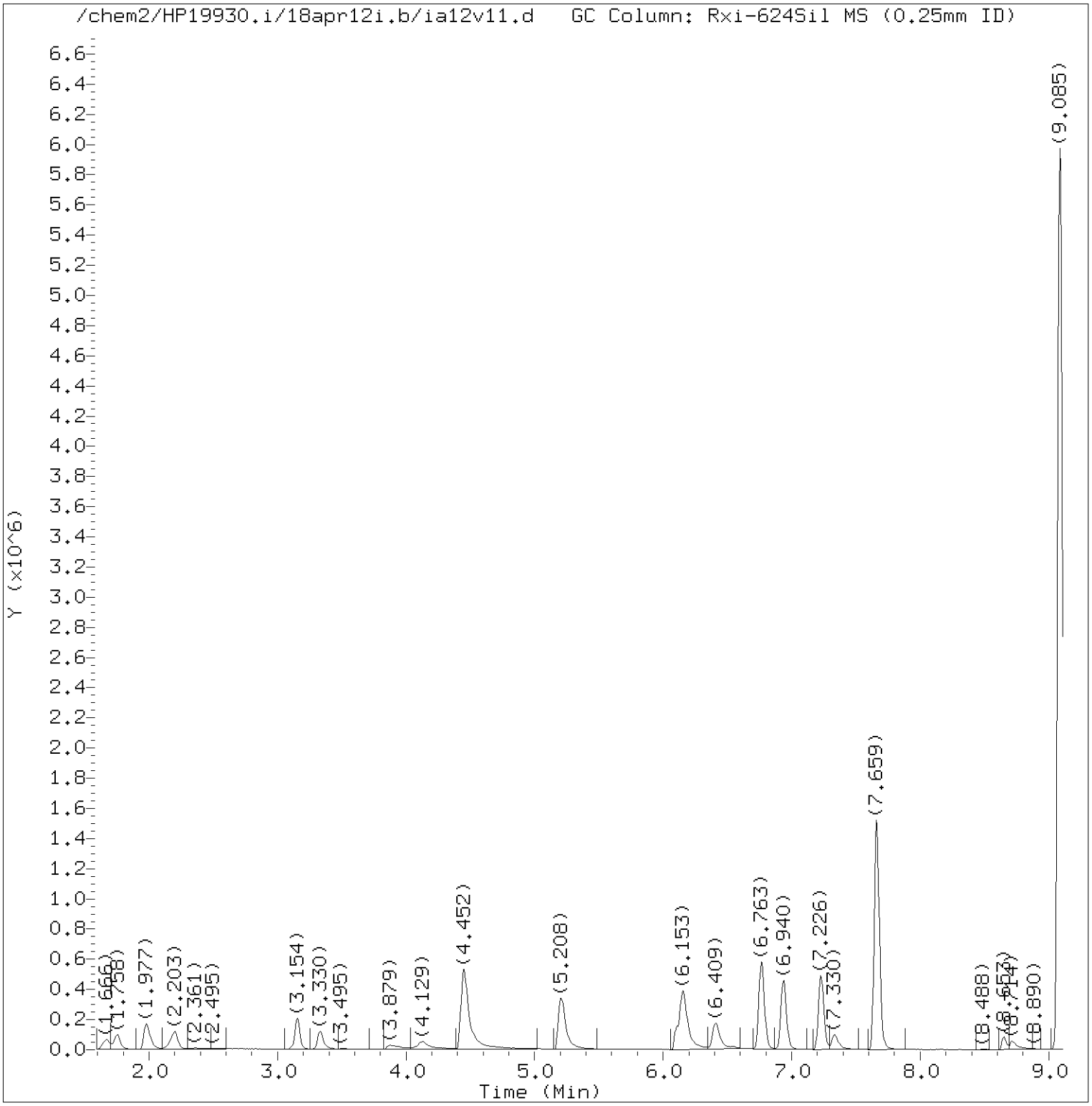
Data File: /chem2/HP19930.i/18apr12i.b/ia12m11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 12:55 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 772
Retention Time (minutes): 6.293
Quant Ion : 55.00
Area : 5526
On-column Amount (ng) : 0.1864
Integration start scan : 762 Integration stop scan: 785
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:24.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

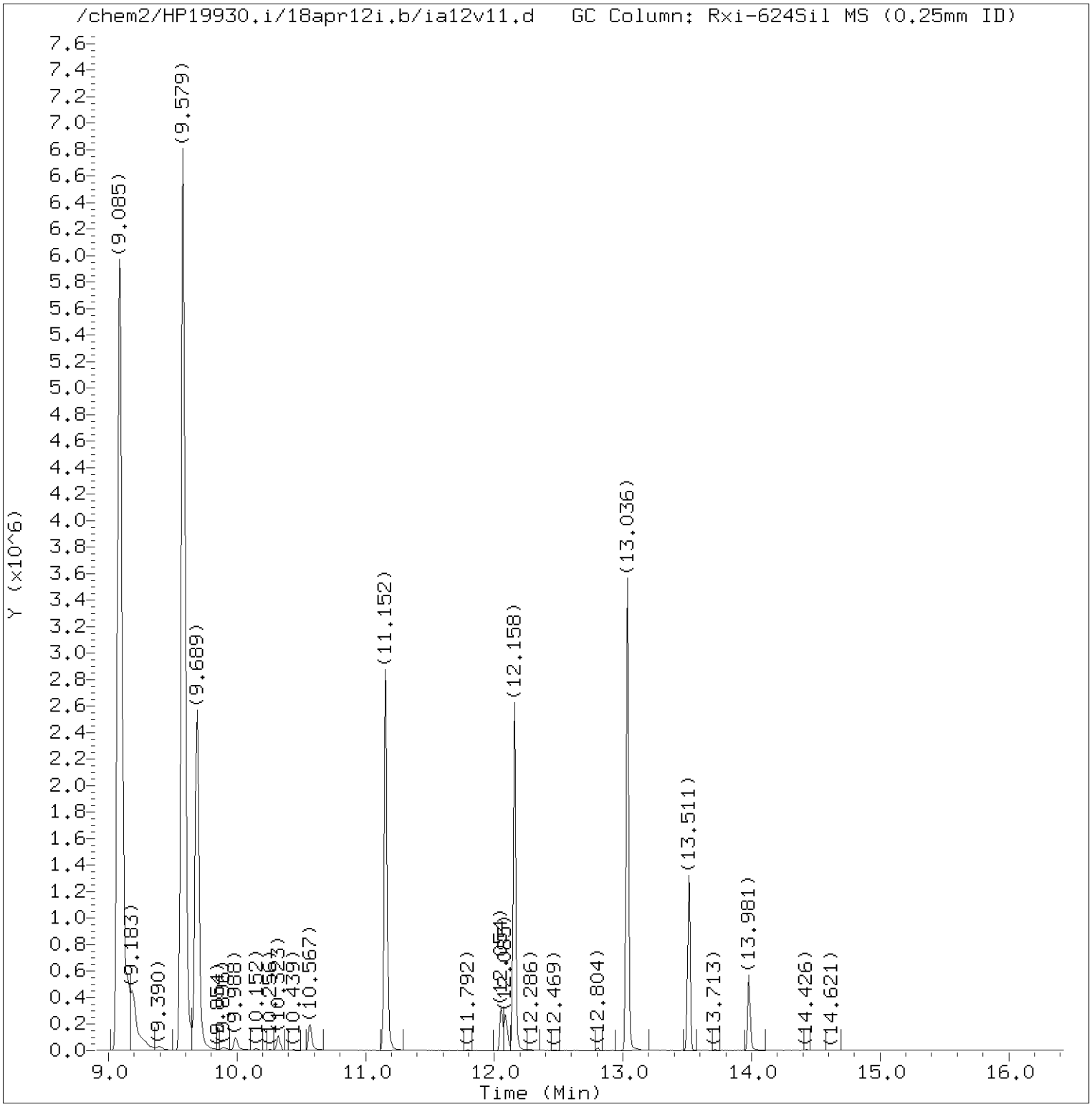
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

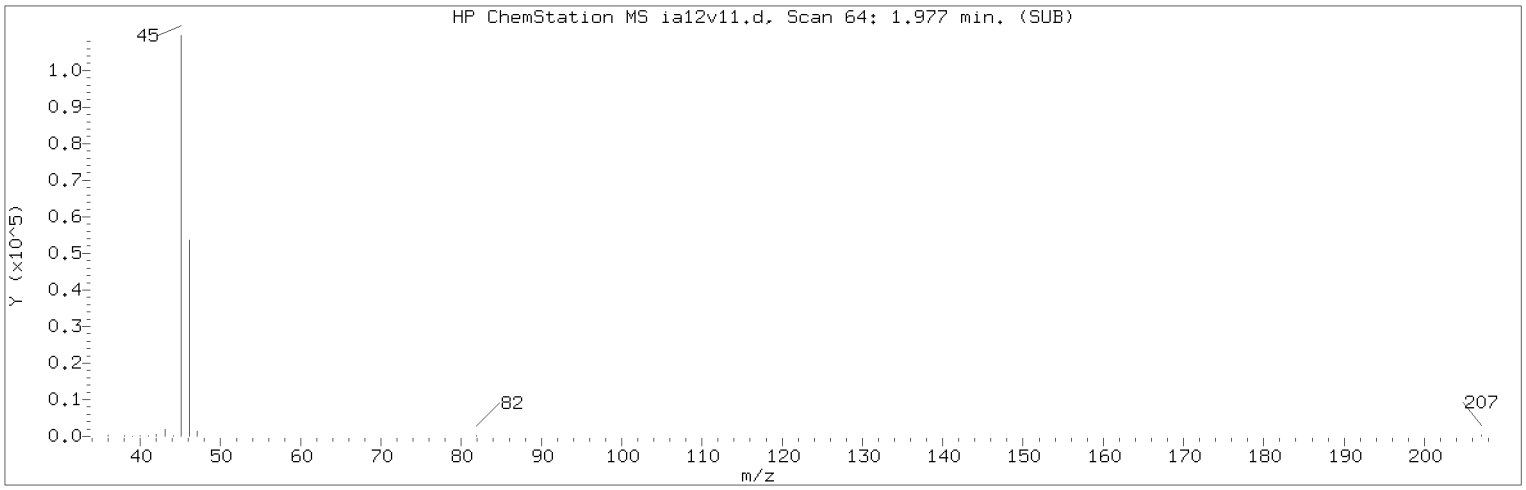
Sample Name: LCSISM Lab Sample ID: LCSISM

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.977	45	393366M	5.015
26)*t-Butyl Alcohol-d10	(1)	4.123	65	141126M	50.000
36) Vinyl Acetate	(2)	5.208	43	1167254M	12.708
43) Methyl Acrylate	(2)	6.159	55	892802	28.918
50)$Dibromofluoromethane	(2)	6.763	113	497592	10.230
53) 1-Chlorobutane	(2)	6.940	56	554132	4.744
57)$1,2-Dichloroethane-d4	(2)	7.226	102	102468	9.760
63)*Fluorobenzene	(2)	7.659	96	2038813	10.000
77) Chloroacetonitrile	(2)	9.152	75	382284	232.866
78) 2-Chloroethyl vinyl ether	(2)	9.195	63	136809	5.725
82)$Toluene-d8	(3)	9.689	98	2013439	9.907
97)*Chlorobenzene-d5	(3)	11.152	117	1555721	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.054	88	63084	18.518
112) Cyclohexanone	(1)	12.085	55	129766M	137.247
111)$4-Bromofluorobenzene	(3)	12.158	95	796039	10.248
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	815539	10.000
142) Hexachloroethane	(4)	13.511	117	197826	5.617

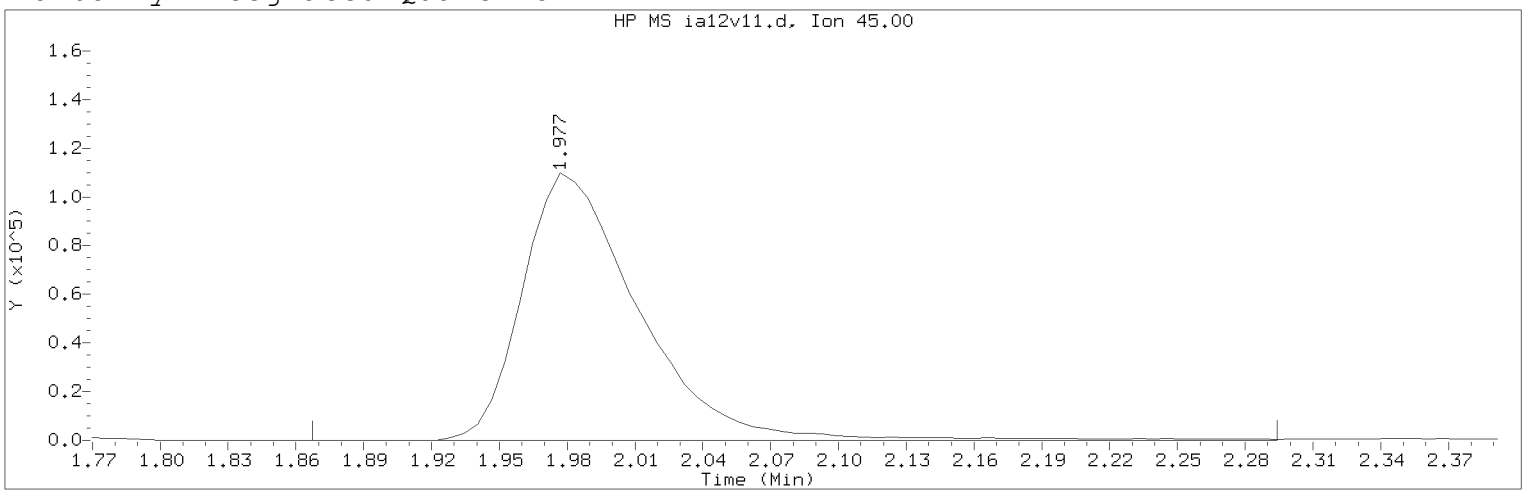
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

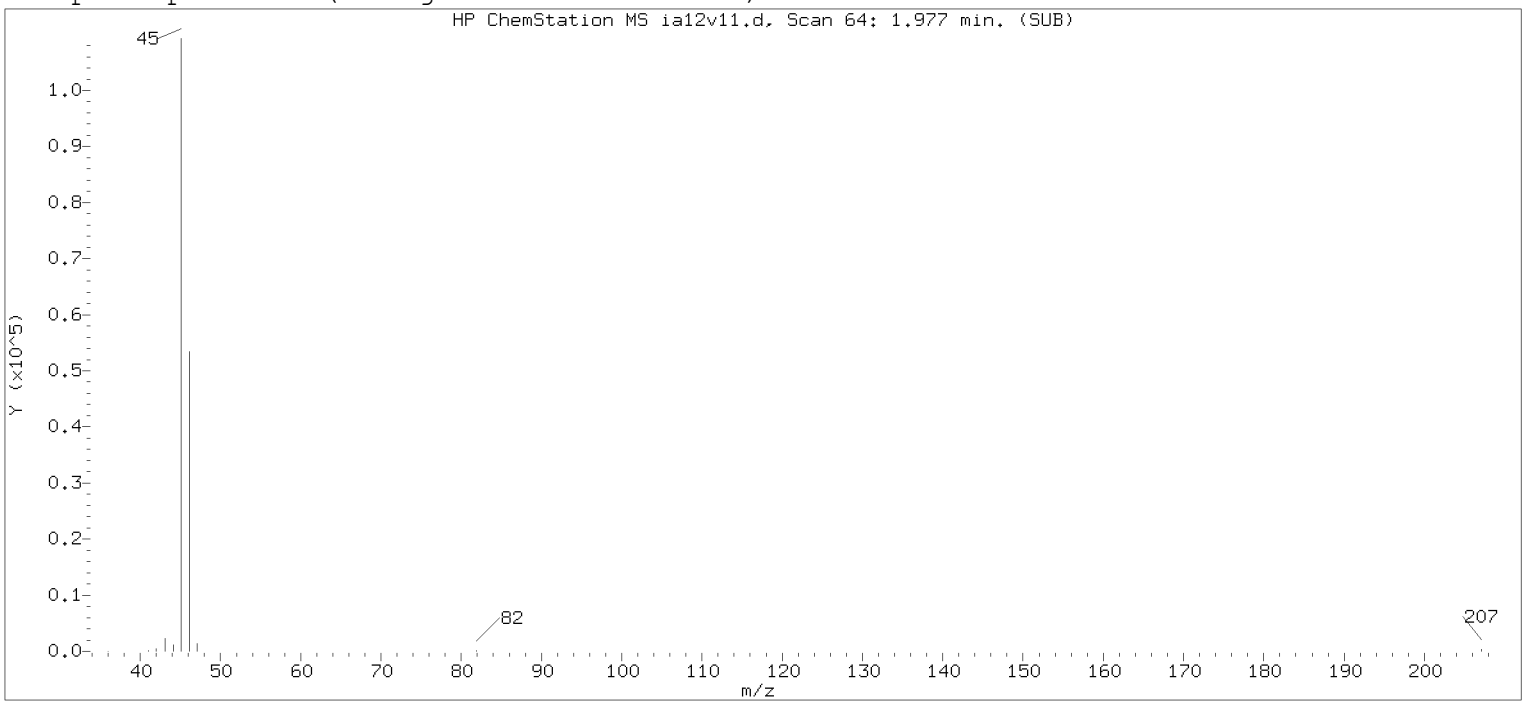
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 64
Retention Time (minutes): 1.977
Quant Ion : 45.00
Area (flag) : 393366M
On-Column Amount (ng) : 5.0154
Integration start scan : 45 Integration stop scan: 115
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

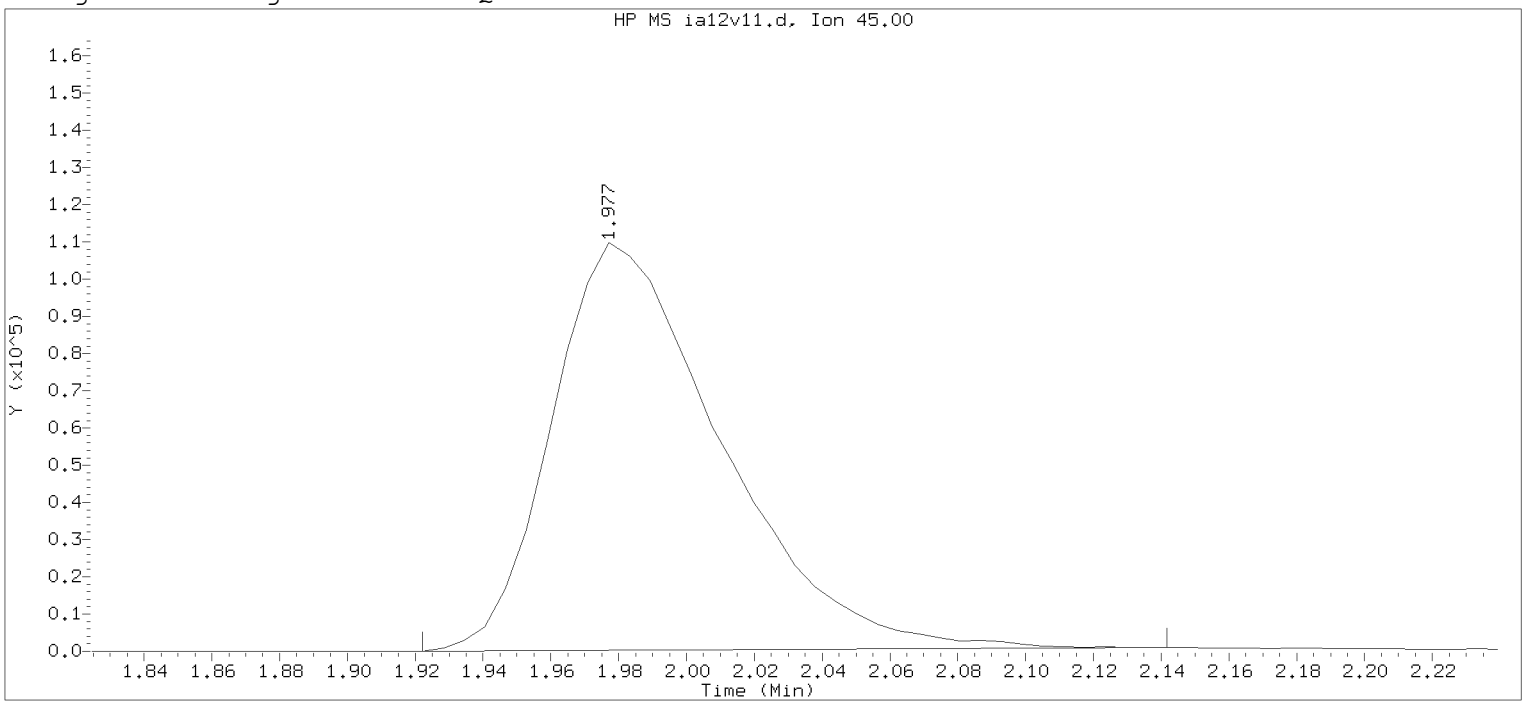
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

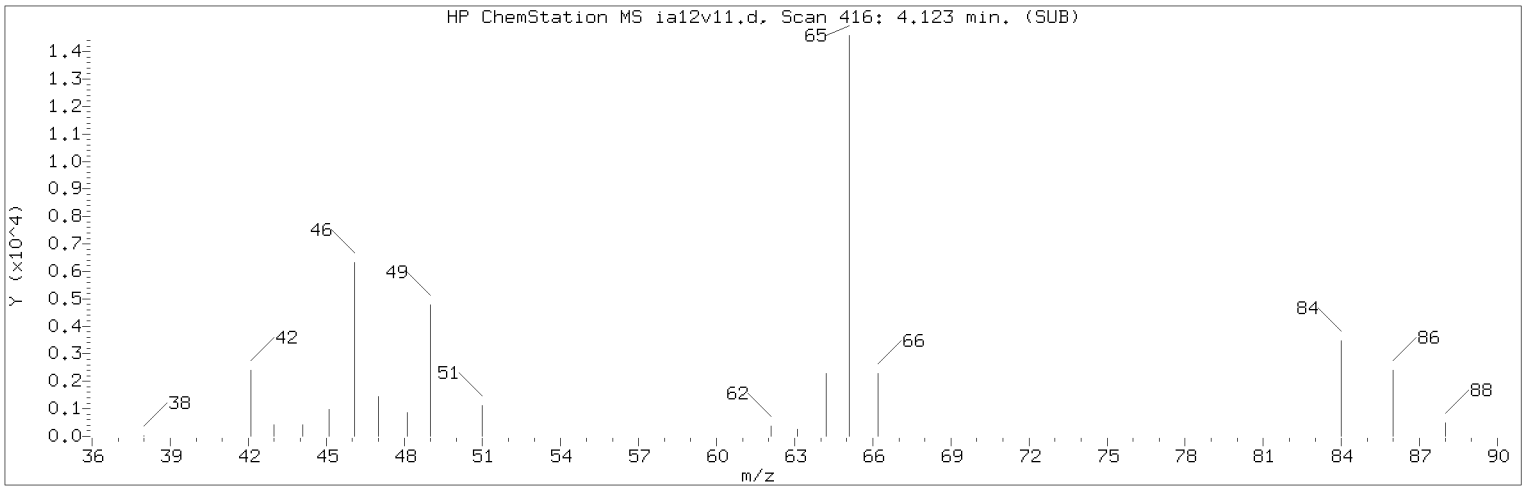
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

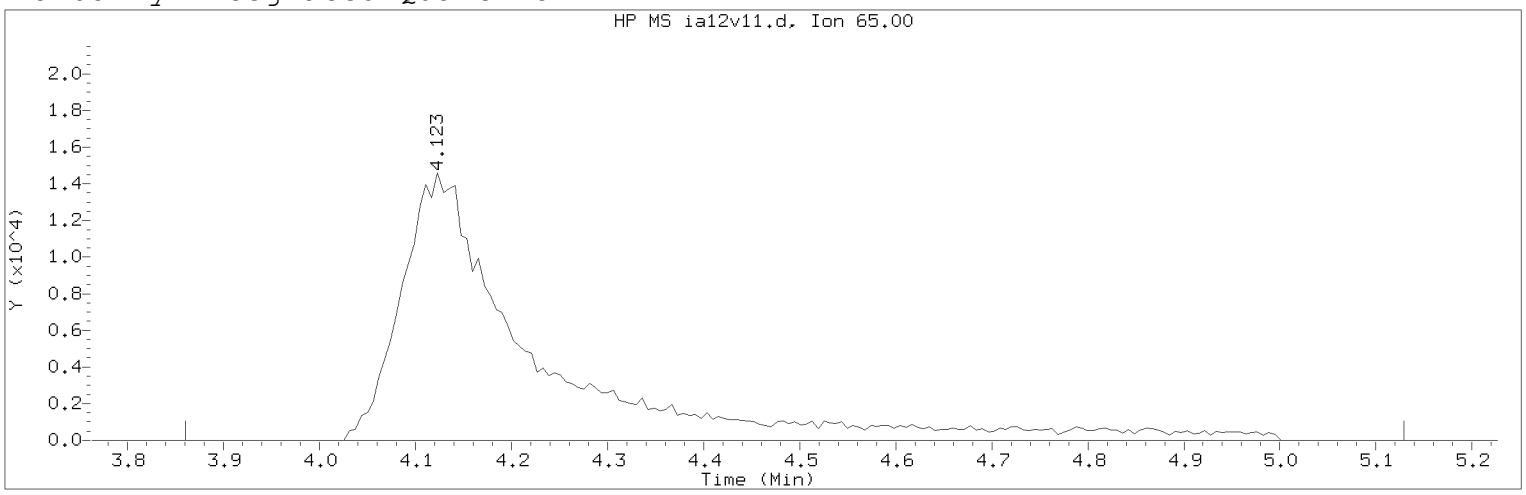
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 64
Retention Time (minutes): 1.977
Quant Ion : 45.00
Area : 380533
On-column Amount (ng) : 4.8518
Integration start scan : 54 Integration stop scan: 90
Y at integration start : 0 Y at integration end: 1019

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:25.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

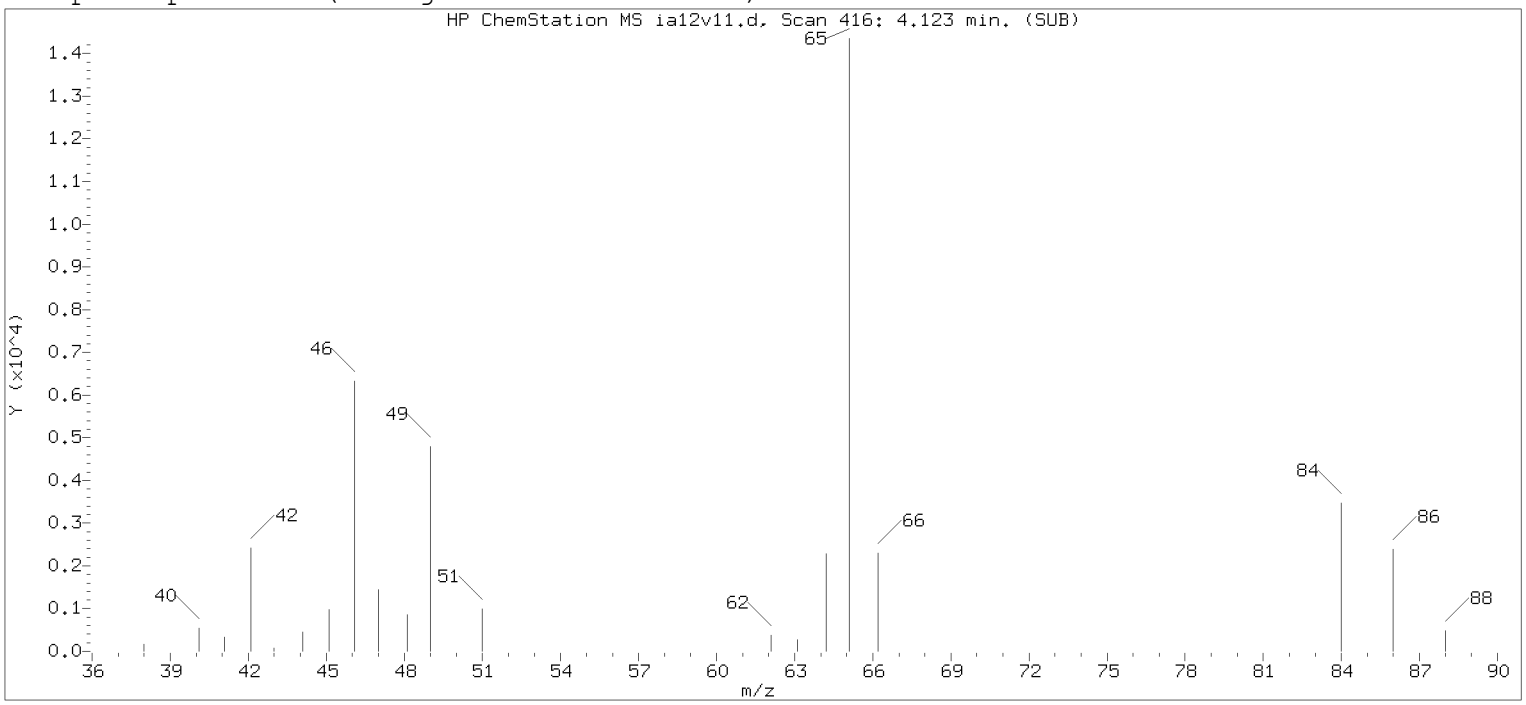
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 65.00
Area (flag) : 141126M
On-Column Amount (ng) : 50.0000
Integration start scan : 372 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

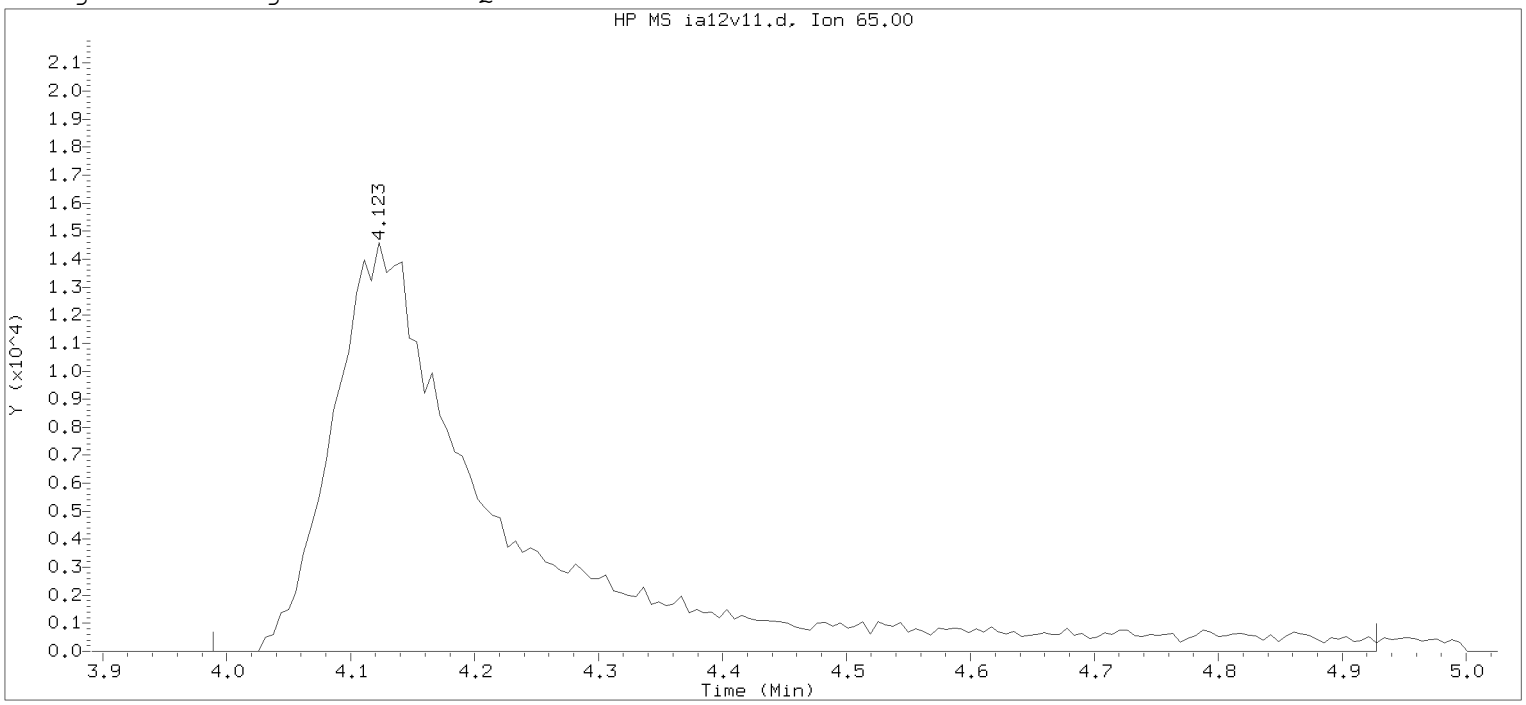
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

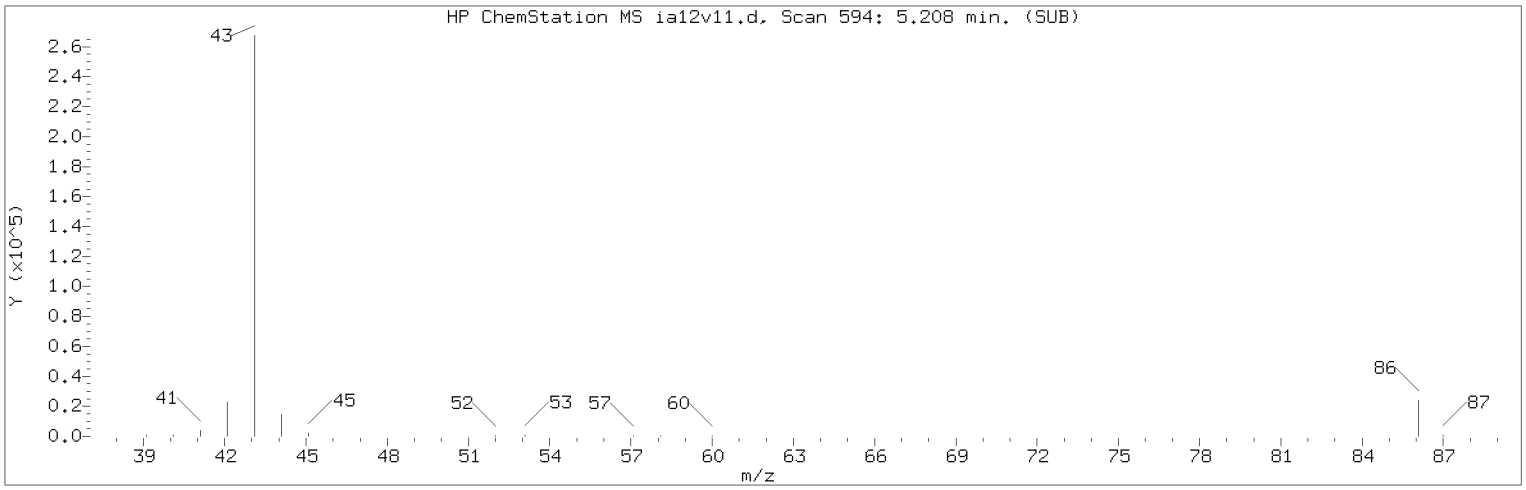
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

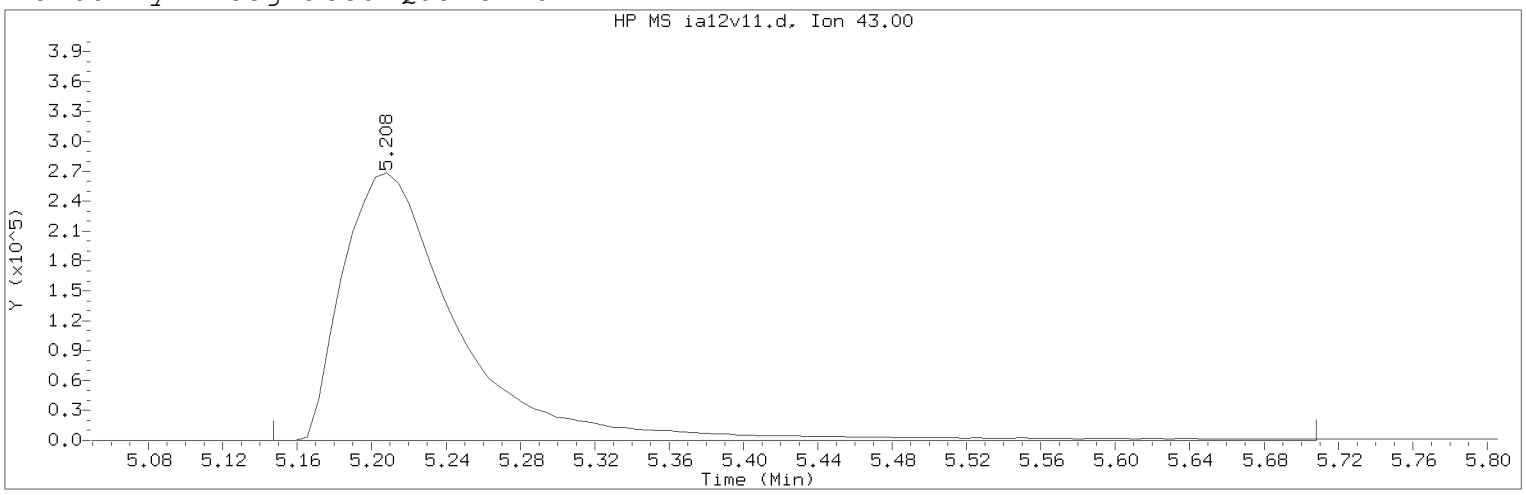
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 416
Retention Time (minutes): 4.123
Quant Ion : 65.00
Area : 139422
On-column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 547
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:25.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

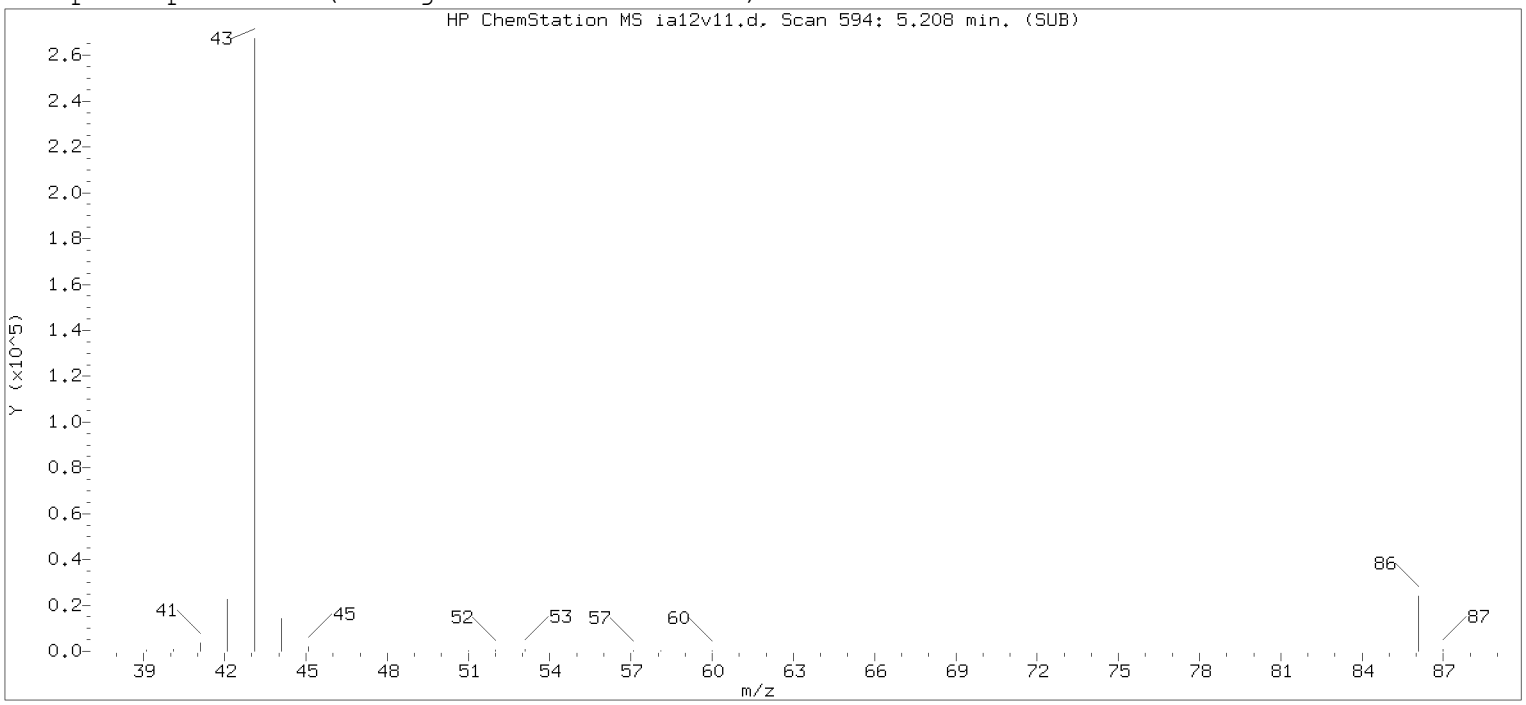
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 594
Retention Time (minutes): 5.208
Quant Ion : 43.00
Area (flag) : 1167254M
On-Column Amount (ng) : 12.7082
Integration start scan : 583 Integration stop scan: 675
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

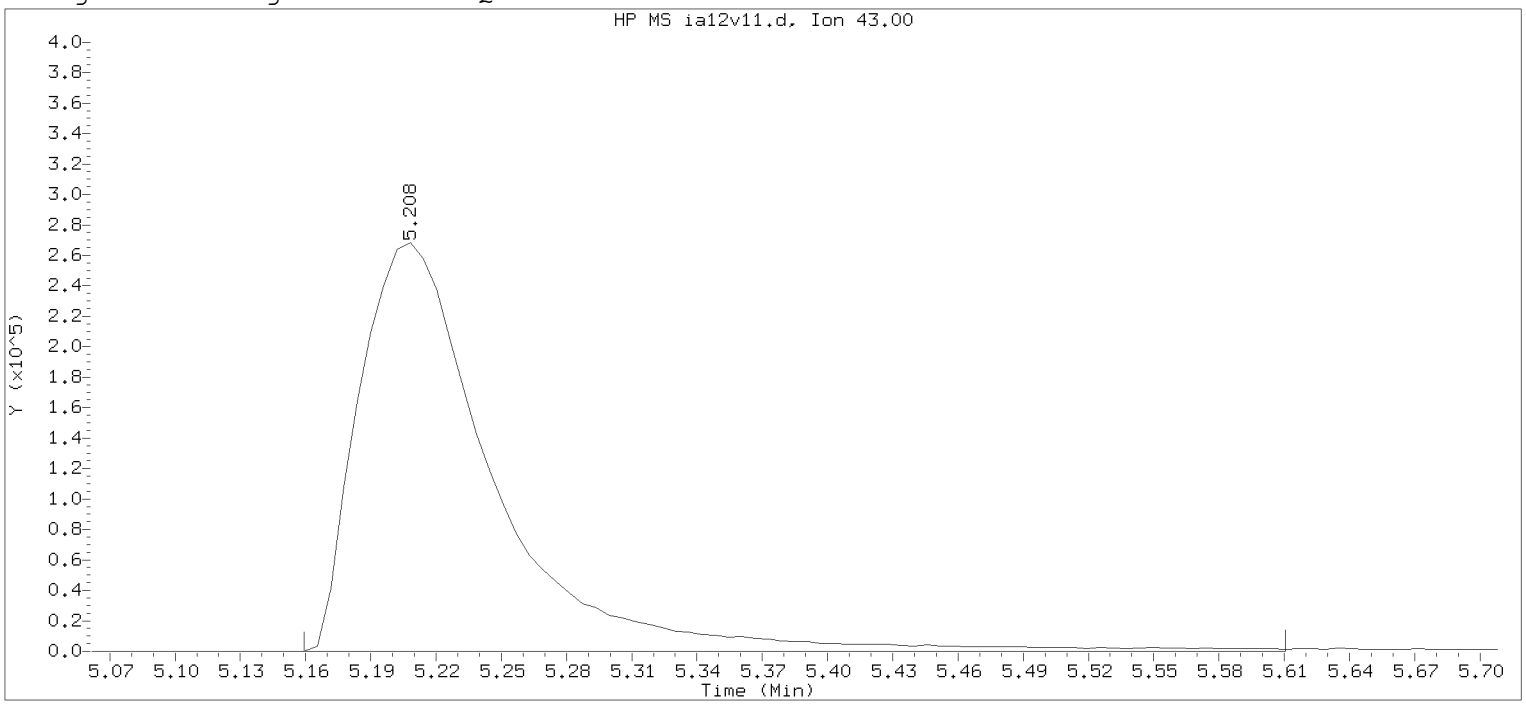
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

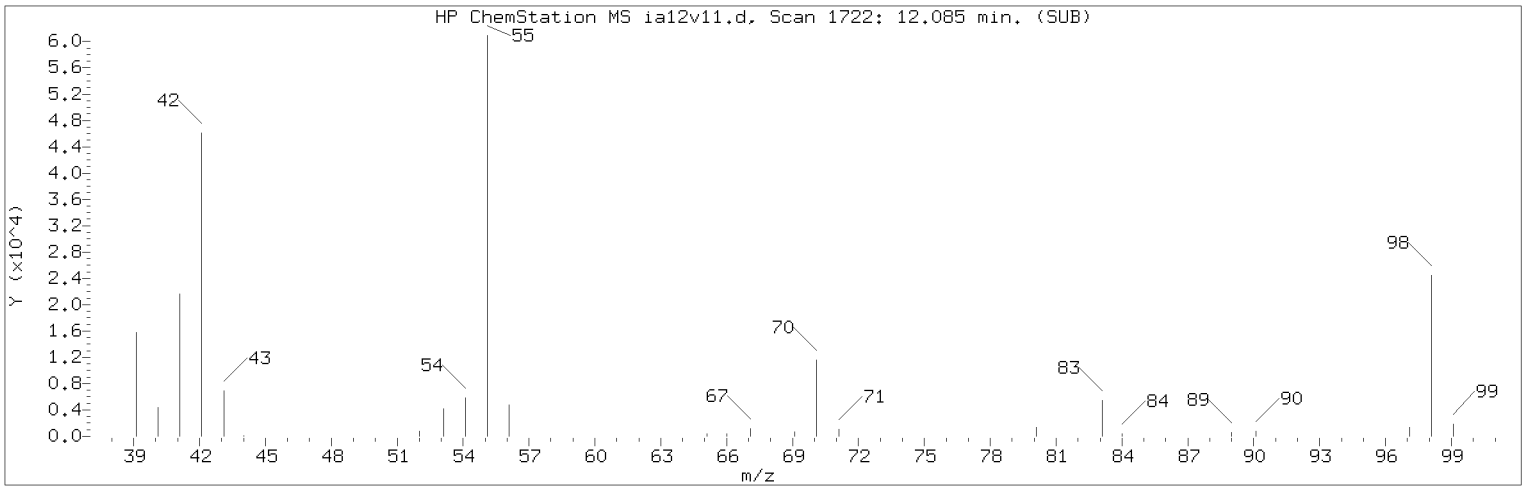
Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

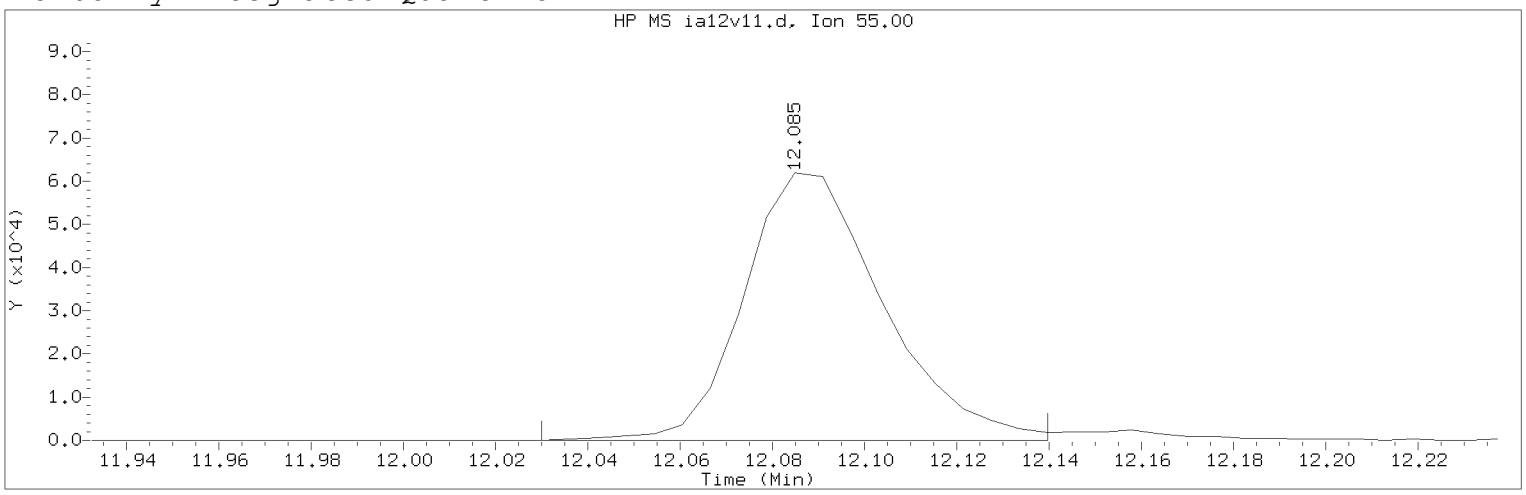
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 594
Retention Time (minutes): 5.208
Quant Ion : 43.00
Area : 1158618
On-column Amount (ng) : 12.6203
Integration start scan : 585 Integration stop scan: 659
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

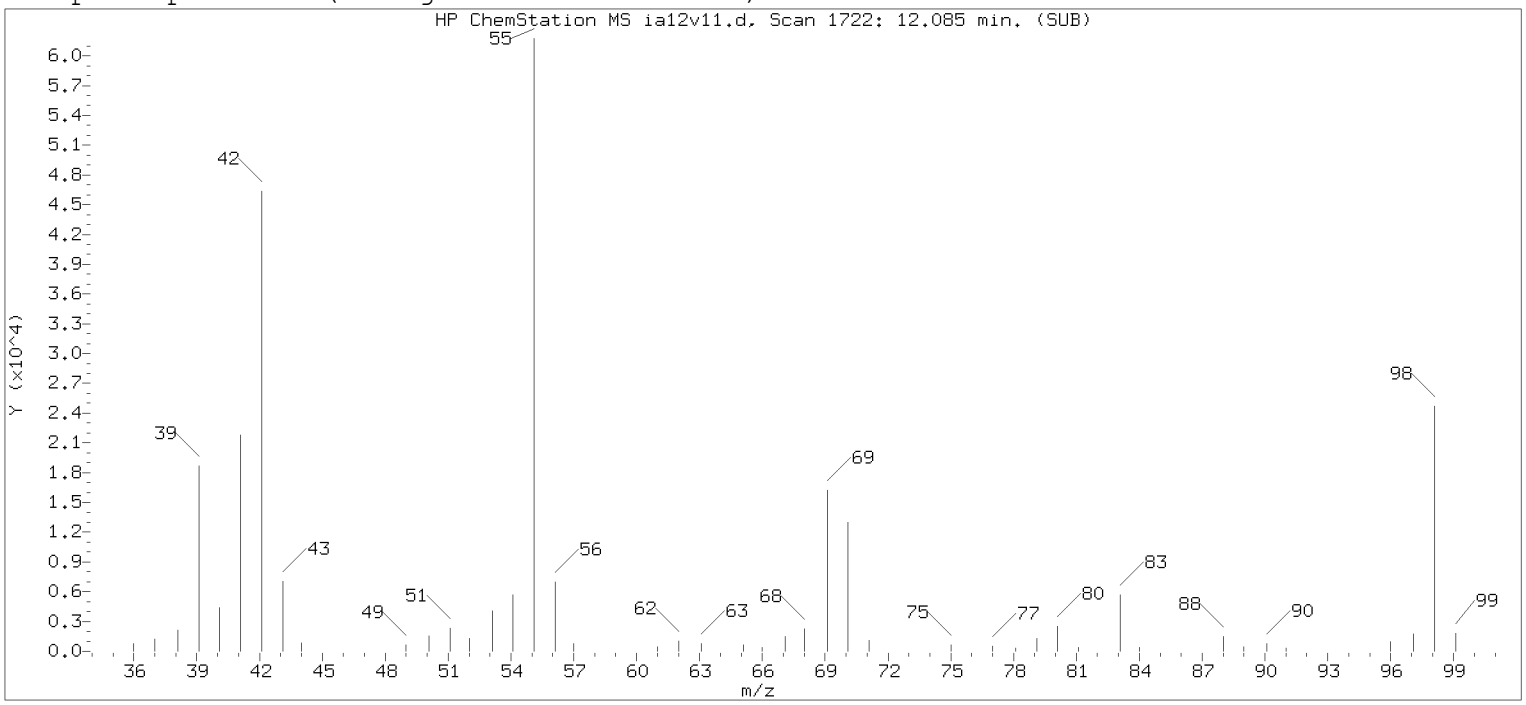
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1722
Retention Time (minutes): 12.085
Quant Ion : 55.00
Area (flag) : 129766M
On-Column Amount (ng) : 137.2473
Integration start scan : 1712 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

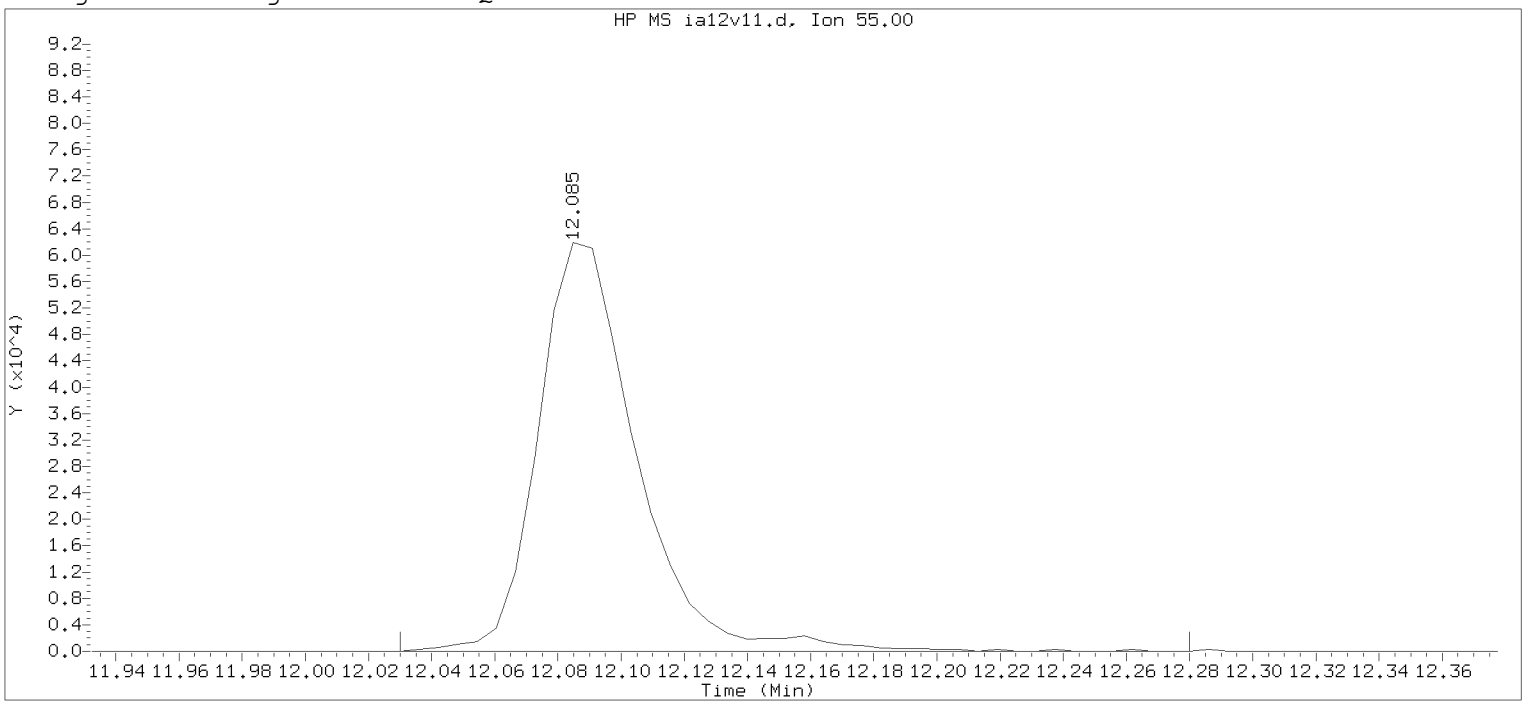
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:56.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



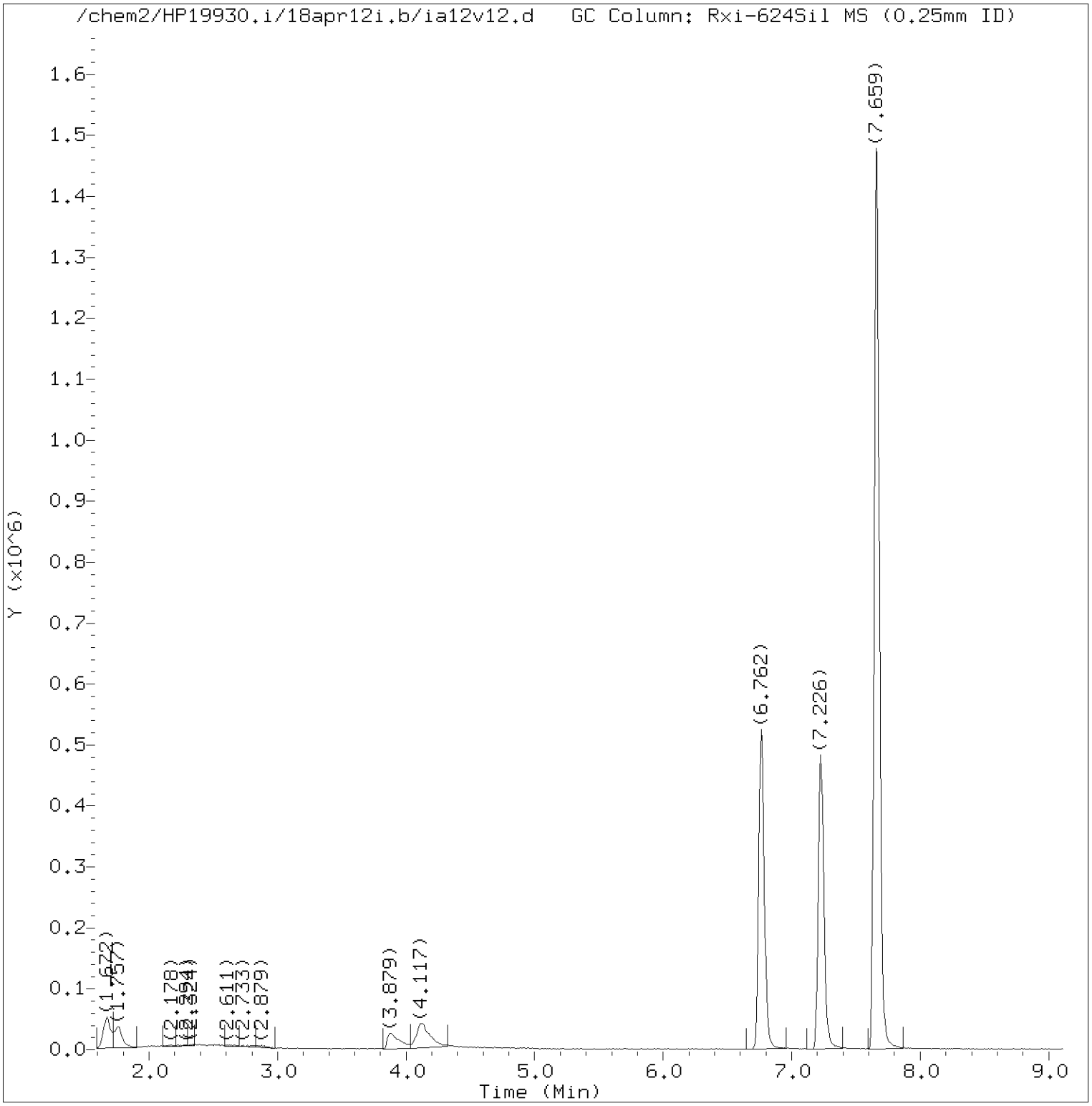
Data File: /chem2/HP19930.i/18apr12i.b/ia12v11.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 13:16 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 12-APR-2018 14:12
Date, time and analyst ID of latest file update: 12-Apr-2018 14:12 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1722
Retention Time (minutes): 12.085
Quant Ion : 55.00
Area : 134240
On-column Amount (ng) : 143.7145
Integration start scan : 1712 Integration stop scan: 1753
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:25.
Target 3.5 esignature used for this report.



Total Ion Chromatogram (TIC)

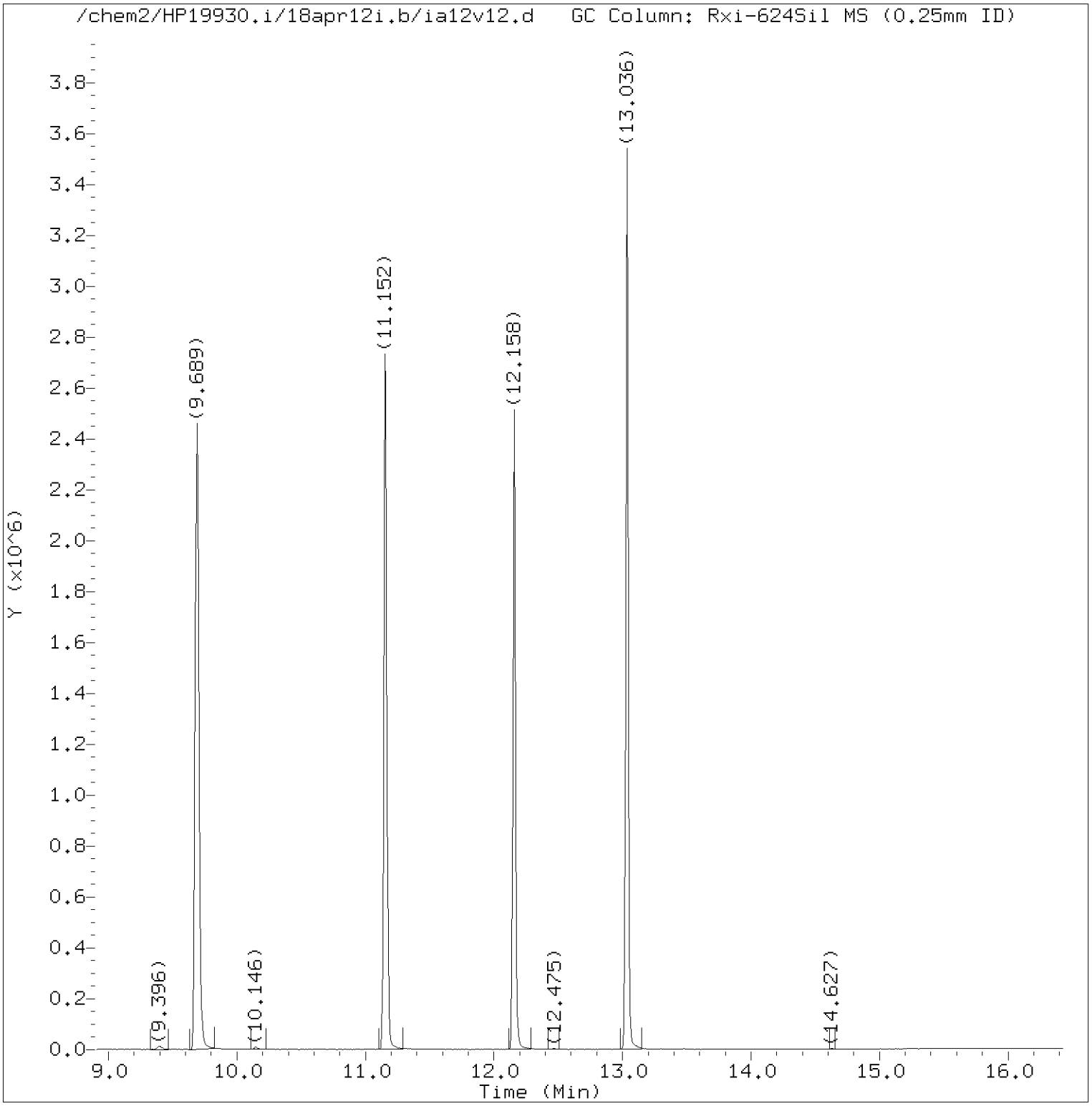
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: Acet
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: Acet
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: Acet
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

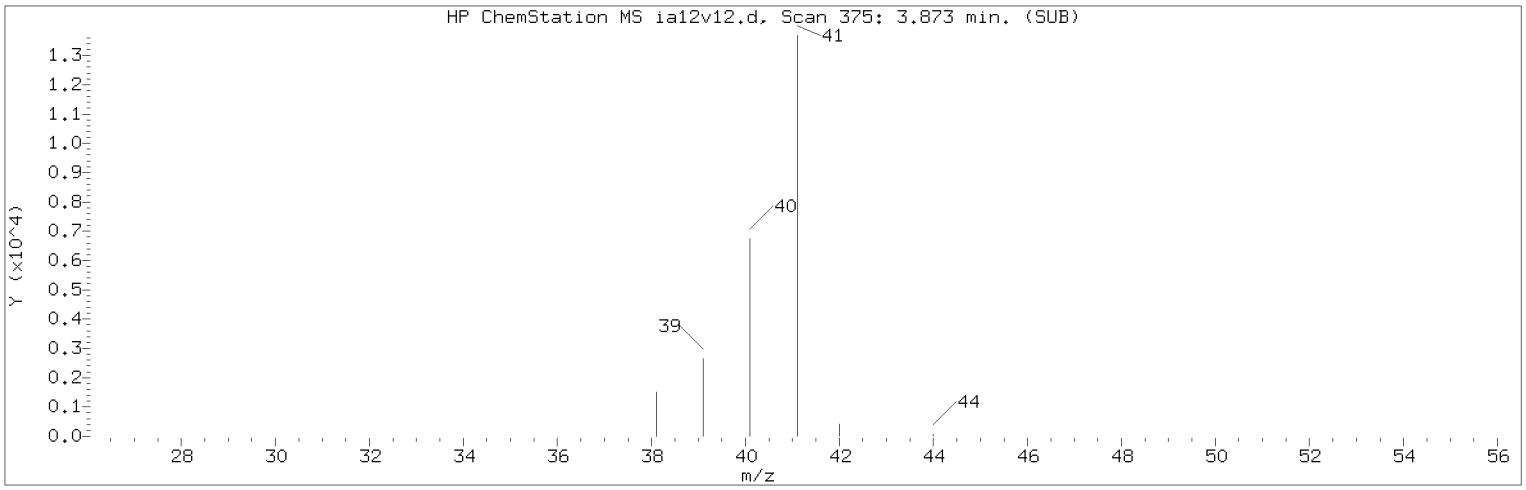
Sample Name: LCSISM Lab Sample ID: LCSISM

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
25) Acetonitrile	(1)	3.873	41	148177M	34.660
26)*t-Butyl Alcohol-d10	(1)	4.117	65	157518M	50.000
50)$Dibromofluoromethane	(2)	6.762	113	489493	10.321
57)$1,2-Dichloroethane-d4	(2)	7.226	102	100744	9.842
63)*Fluorobenzene	(2)	7.665	96	1987834	10.000
82)$Toluene-d8	(3)	9.689	98	1951802	10.028
97)*Chlorobenzene-d5	(3)	11.152	117	1489804	10.000
111)$4-Bromofluorobenzene	(3)	12.158	95	733223	9.857
133)*1,4-Dichlorobenzene-d4	(4)	13.036	152	787565	10.000

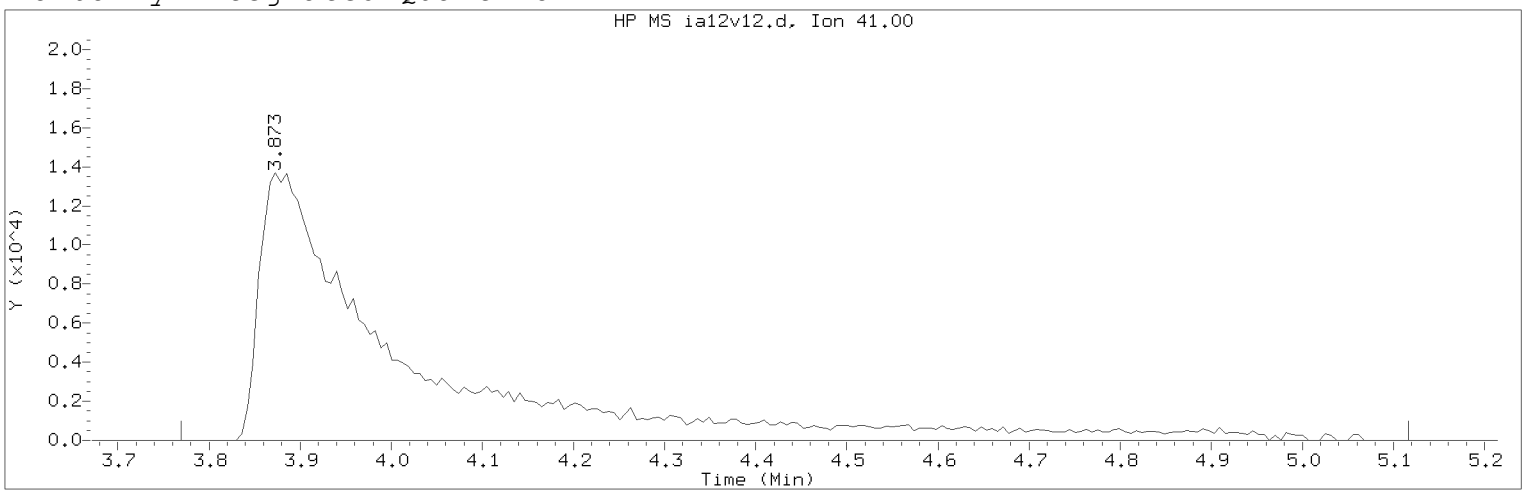
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: Acet
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

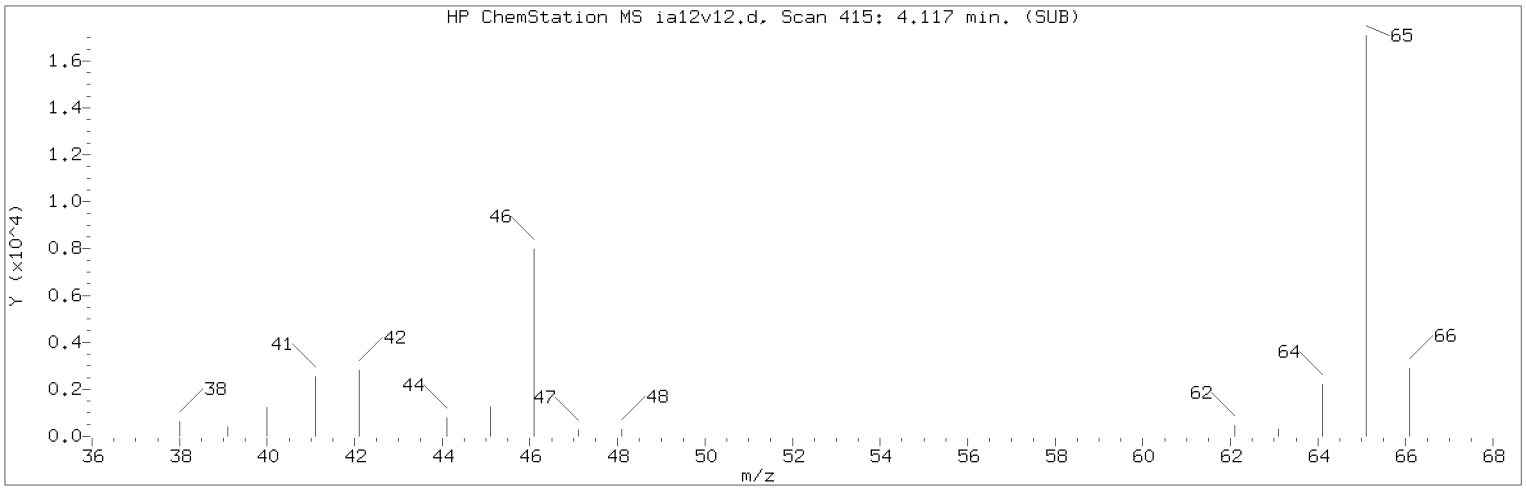
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 375
Retention Time (minutes): 3.873
Quant Ion : 41.00
Area (flag) : 148177M
On-Column Amount (ng) : 34.6597
Integration start scan : 357 Integration stop scan: 578
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

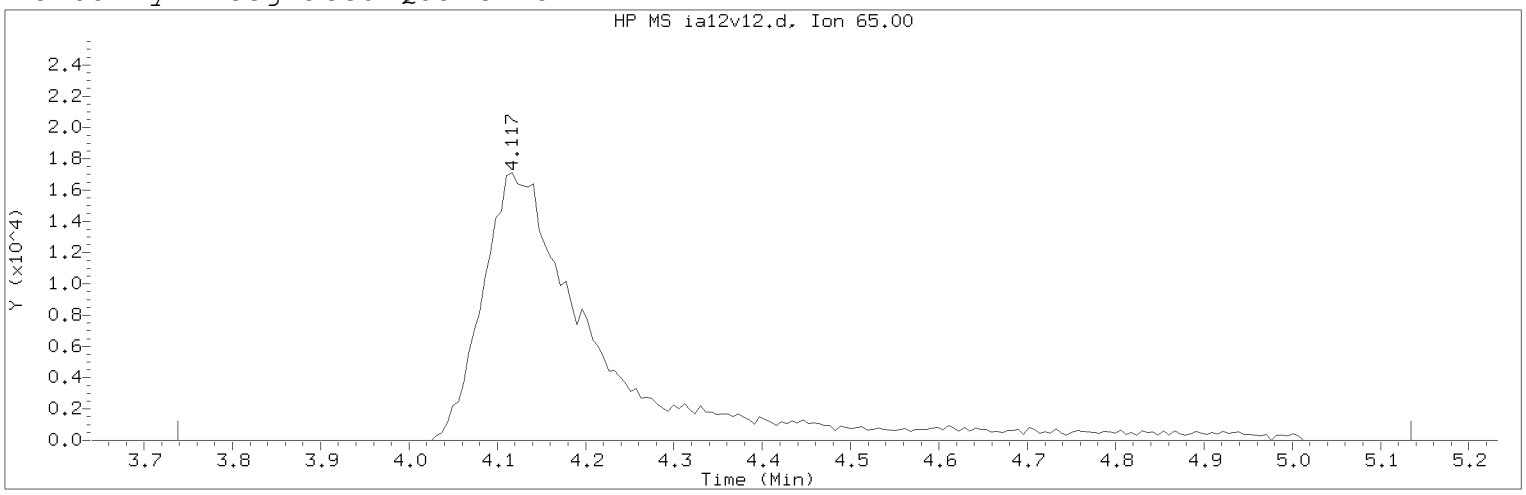
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:57.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: Acet
Calibration date and time: 13-APR-2018 11:24
Date, time and analyst ID of latest file update: 13-Apr-2018 11:24 jkh09052

Sample Name: LCSISM Lab Sample ID: LCSISM

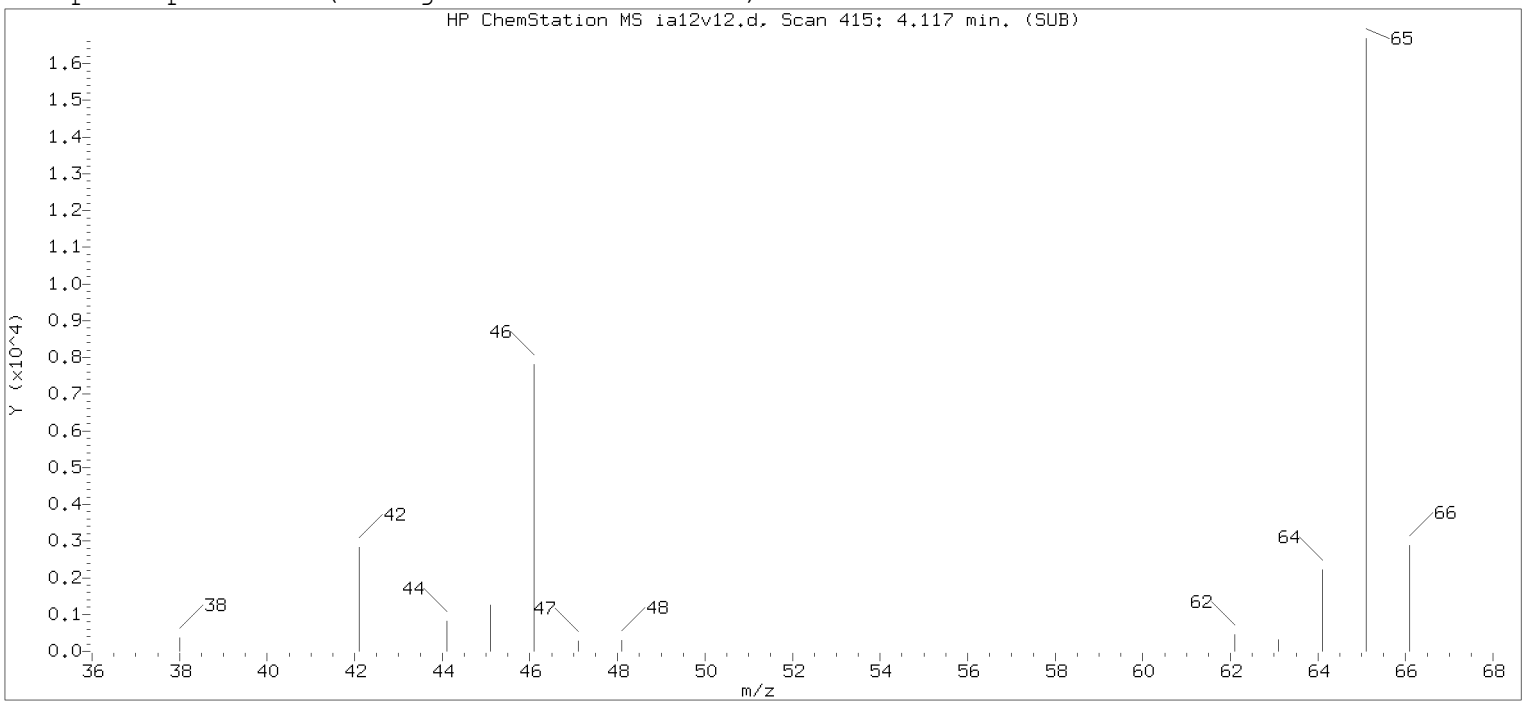
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 415
Retention Time (minutes): 4.117
Quant Ion : 65.00
Area (flag) : 157518M
On-Column Amount (ng) : 50.0000
Integration start scan : 352 Integration stop scan: 581
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

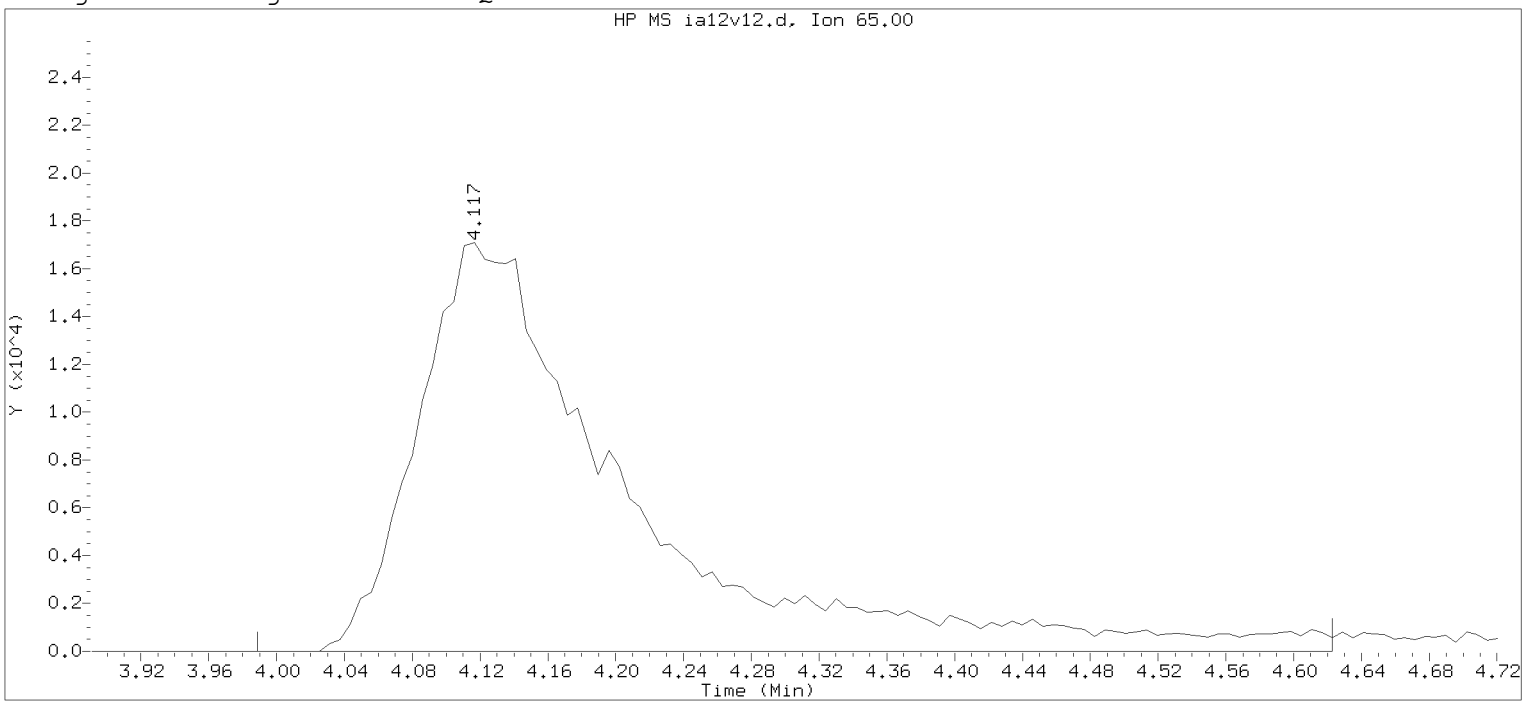
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Paul R. Cormier on 04/13/2018 at 12:57.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



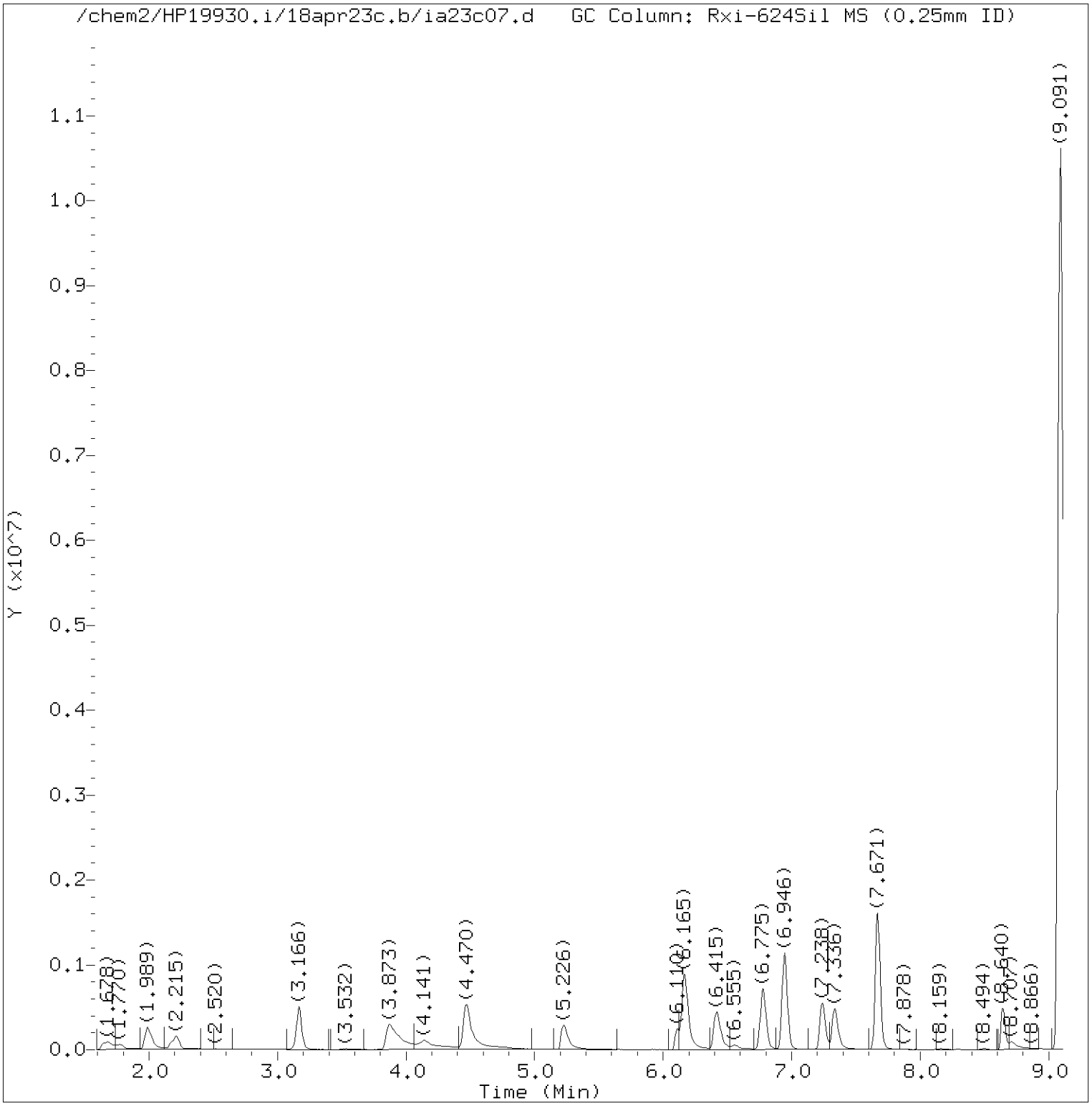
Data File: /chem2/HP19930.i/18apr12i.b/ia12v12.d Instrument ID: HP19930.i
Injection date and time: 12-APR-2018 15:35 Analyst ID: jkh09052

Method used: /chem2/HP19930.i/18apr12i.b/m8260c25.m Sublist used: SMQC-1
Calibration date and time: 12-APR-2018 15:06
Date, time and analyst ID of latest file update: 12-Apr-2018 15:53 Automation

Sample Name: LCSISM Lab Sample ID: LCSISM

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 415
Retention Time (minutes): 4.117
Quant Ion : 65.00
Area : 146141
On-column Amount (ng) : 50.0000
Integration start scan : 393 Integration stop scan: 497
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/13/2018 at 11:25.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

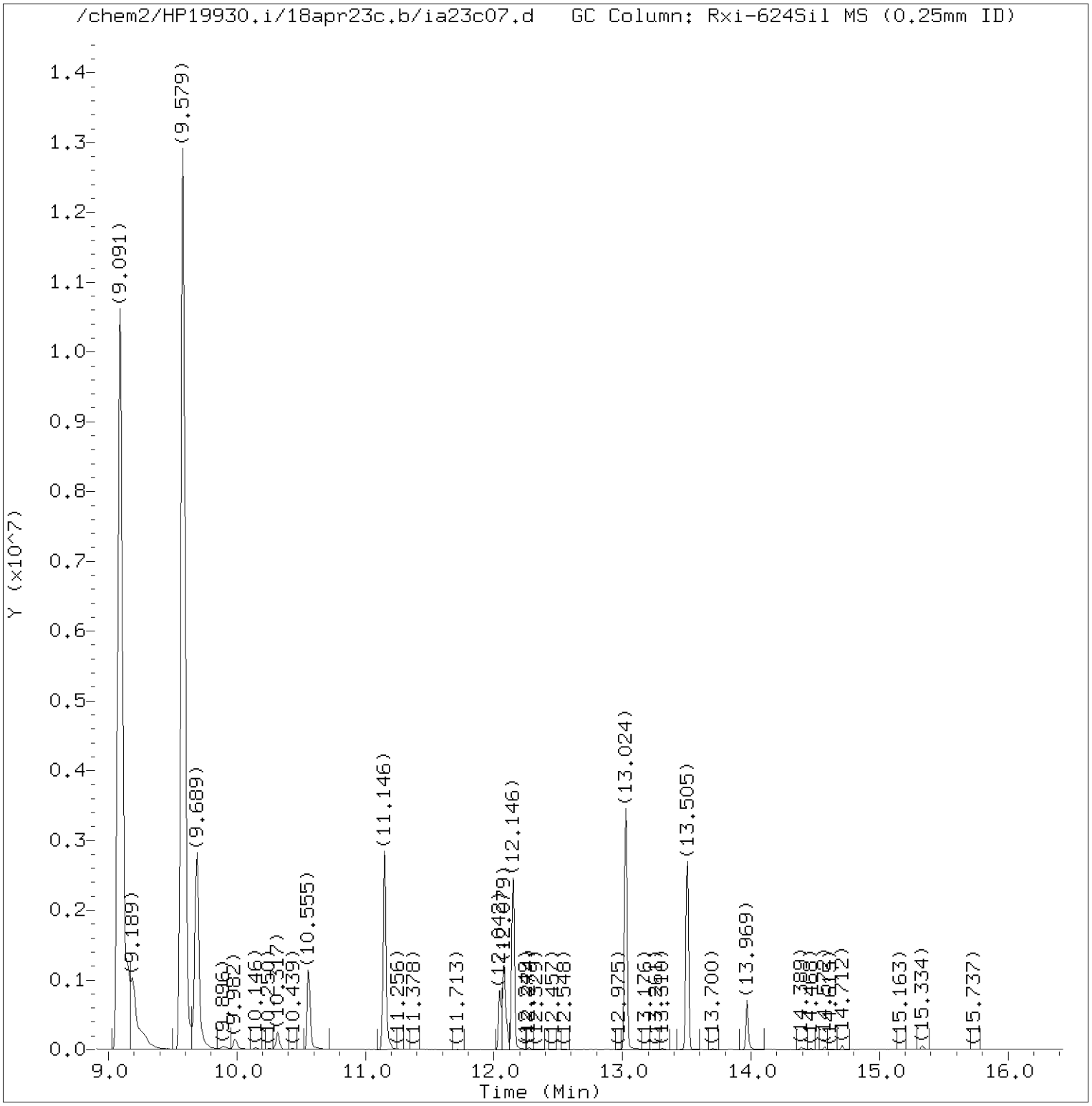
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

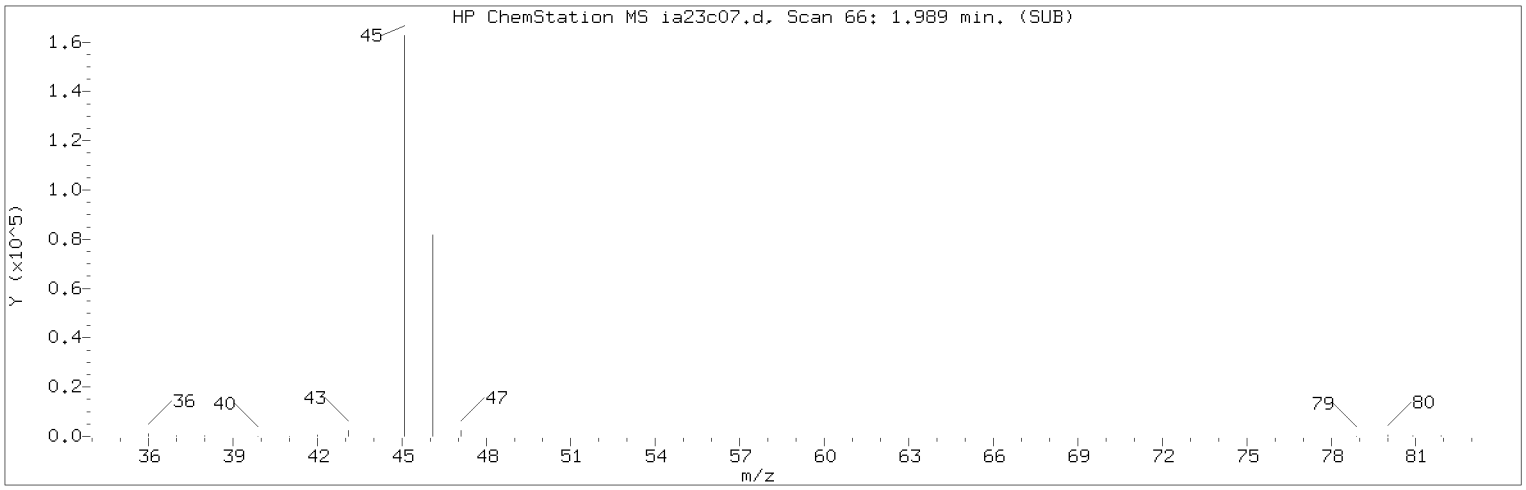
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.989	45	660921A	8.165
25) Acetonitrile	(1)	3.873	41	1863533M	519.739
26)*t-Butyl Alcohol-d10	(1)	4.153	65	132107M	50.000
36) Vinyl Acetate	(2)	5.226	43	941260	10.083
43) Methyl Acrylate	(2)	6.165	55	1982270	62.210
53) 1-Chlorobutane	(2)	6.946	56	1314609	10.904
63)*Fluorobenzene	(2)	7.671	96	2104219	10.000
77) Chloroacetonitrile	(2)	9.152	75	937515	553.330
78) 2-Chloroethyl vinyl ether	(2)	9.189	63	312713	12.679
97)*Chlorobenzene-d5	(3)	11.146	117	1558080	10.000
112) Cyclohexanone	(1)	12.079	55	592349	669.269
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	808730	10.000
142) Hexachloroethane	(4)	13.505	117	414647	11.873

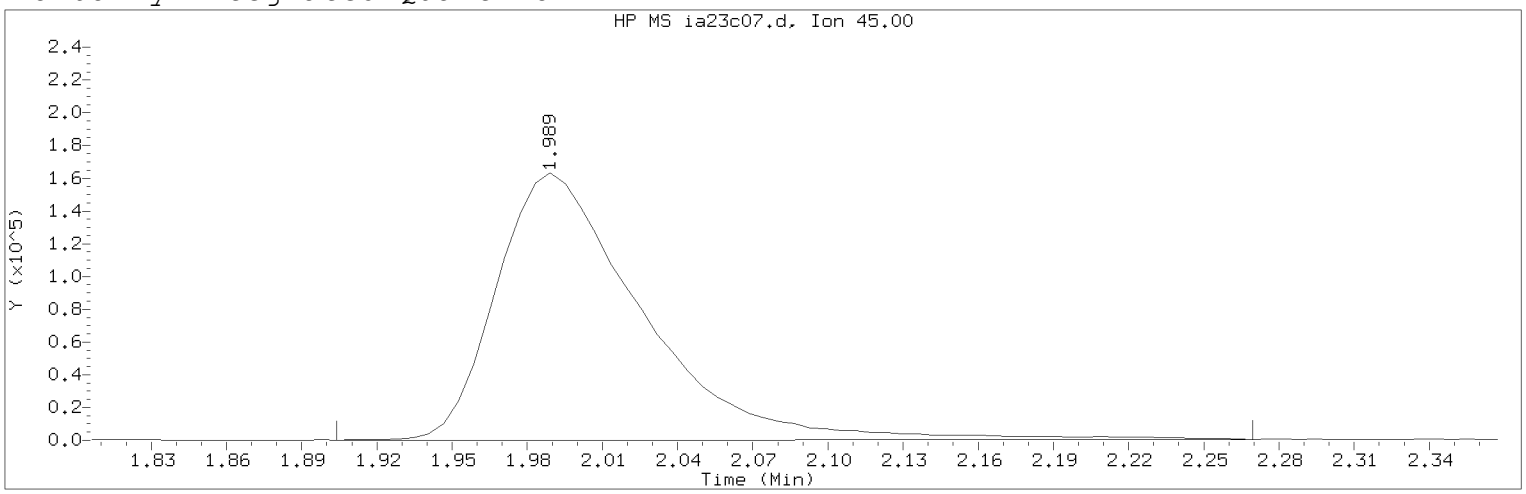
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

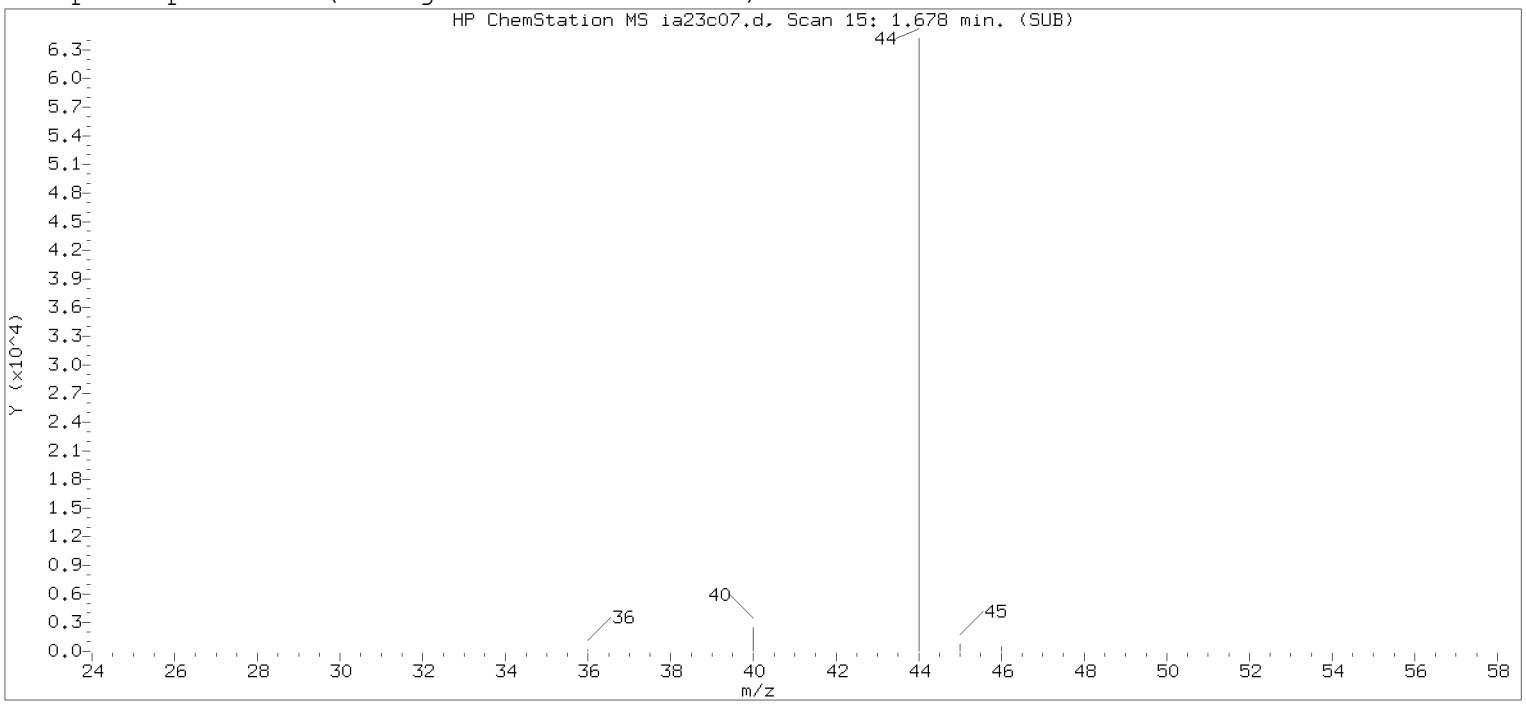
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 66
Retention Time (minutes): 1.989
Quant Ion : 45.00
Area (flag) : 660921A
On-Column Amount (ng) : 8.1649
Integration start scan : 51 Integration stop scan: 111
Y at integration start : 0 Y at integration end: 458

Reason for manual integration: improper integration

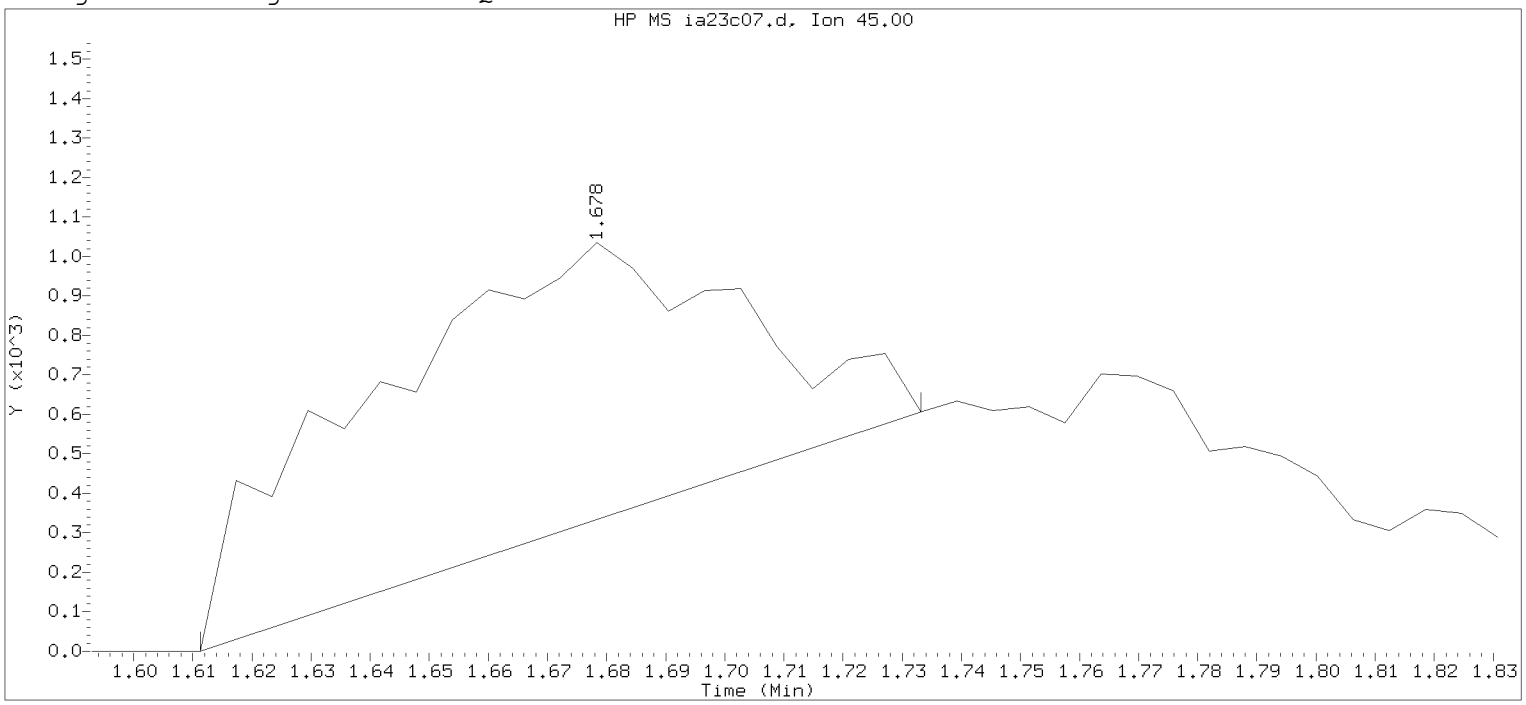
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

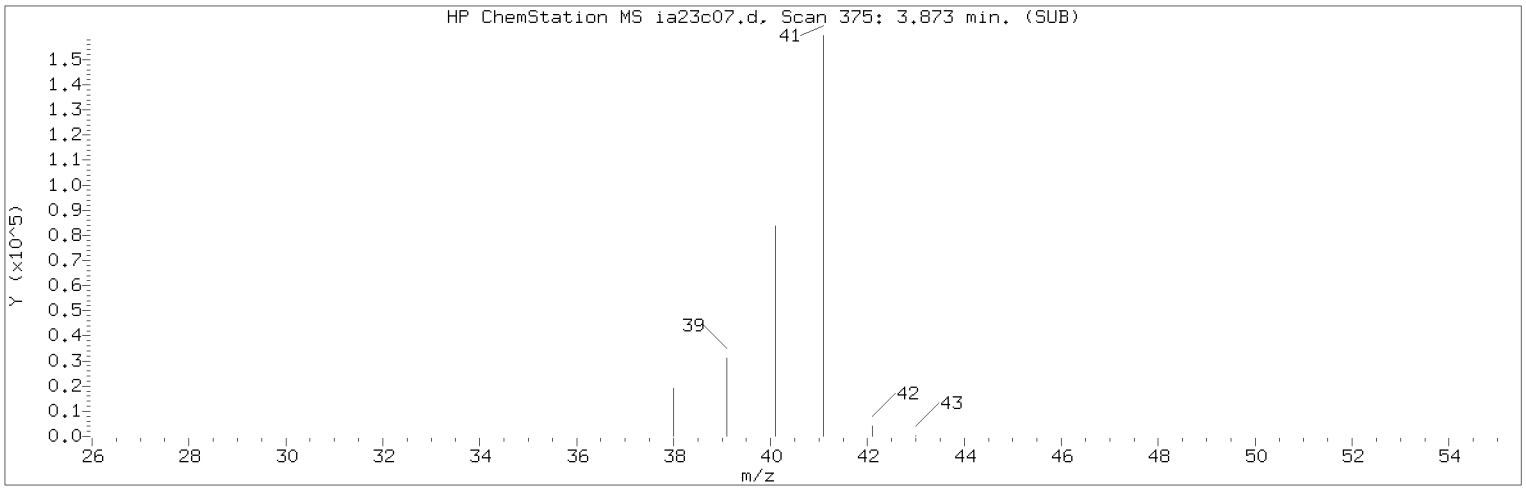
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:13 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

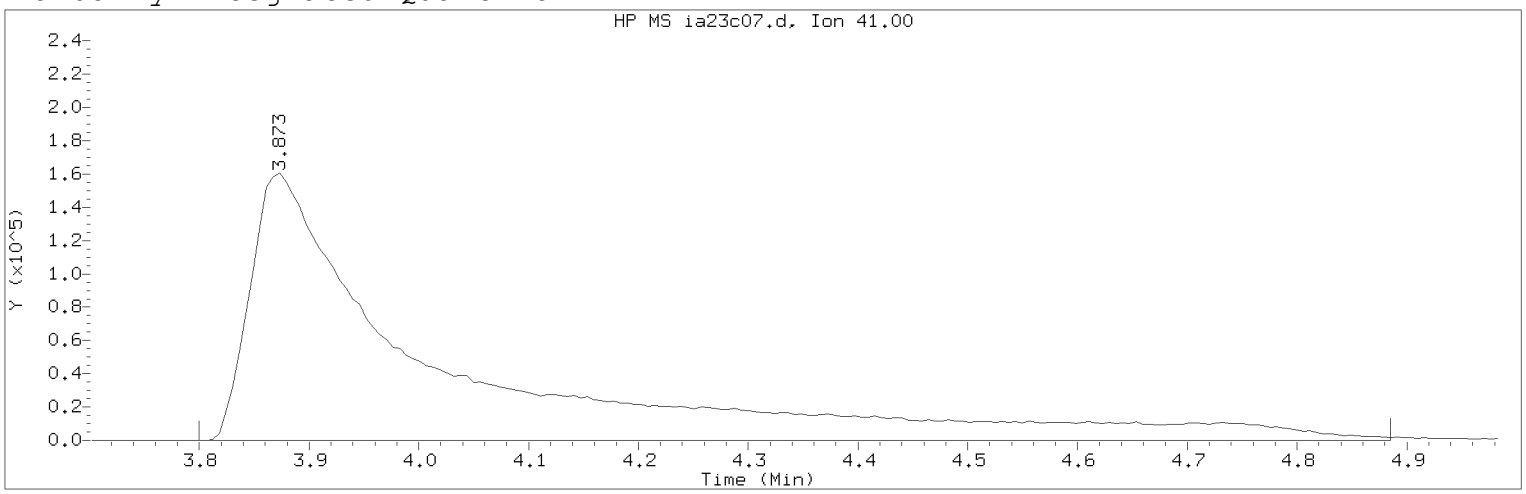
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 15
Retention Time (minutes): 1.678
Quant Ion : 45.00
Area : 3216
On-column Amount (ng) : 0.0397
Integration start scan : 3 Integration stop scan: 23
Y at integration start : 0 Y at integration end: 607

Digitally signed by Don V. Viray on 04/23/2018 at 22:18.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

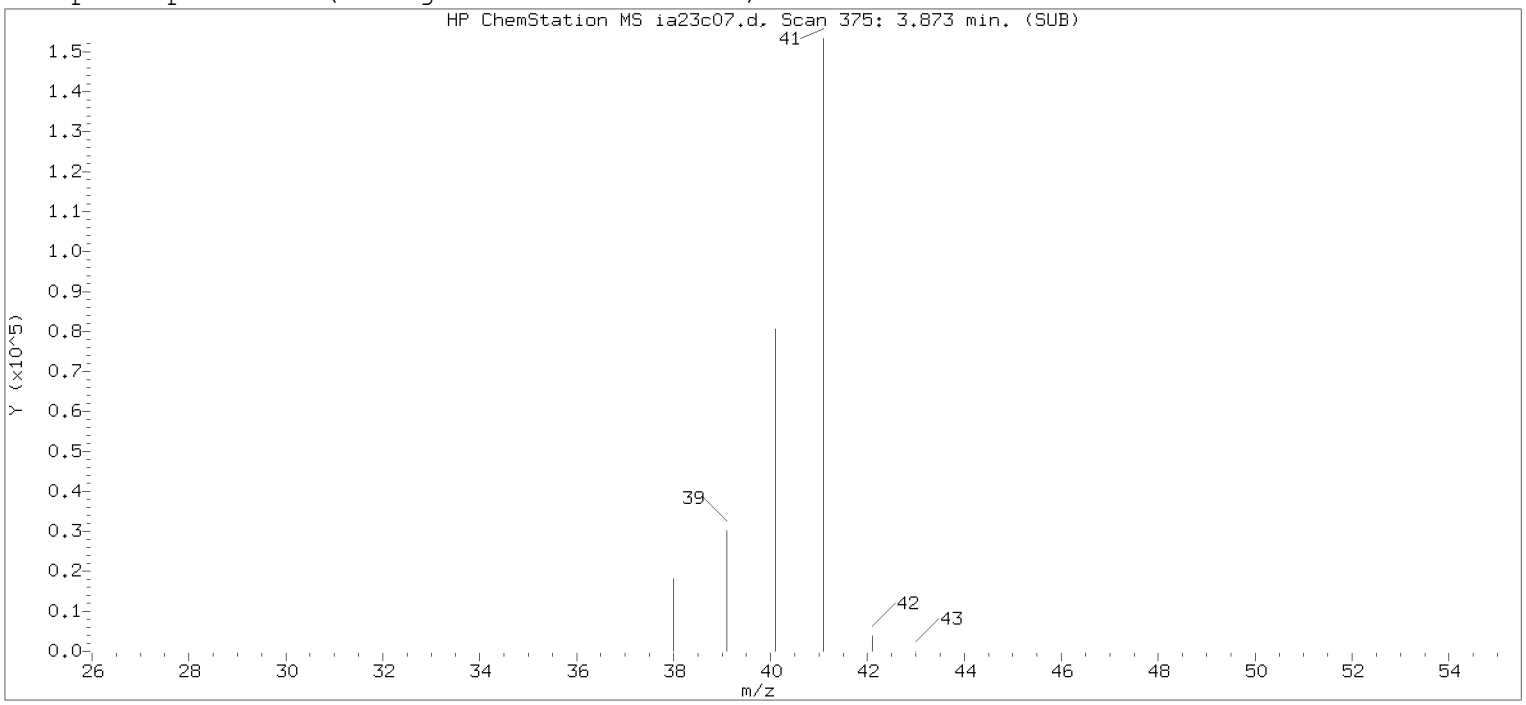
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 375
Retention Time (minutes): 3.873
Quant Ion : 41.00
Area (flag) : 1863533M
On-Column Amount (ng) : 519.7386
Integration start scan : 362 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

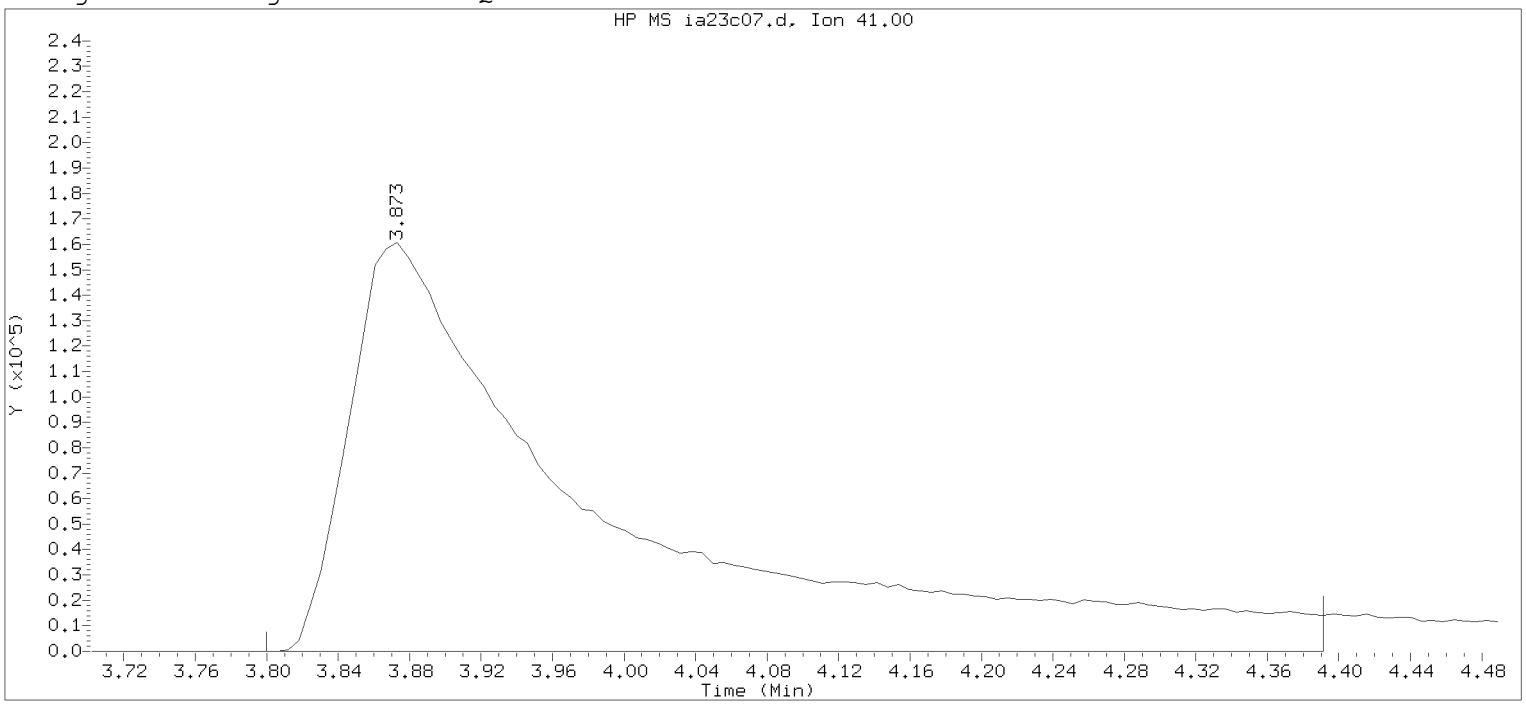
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

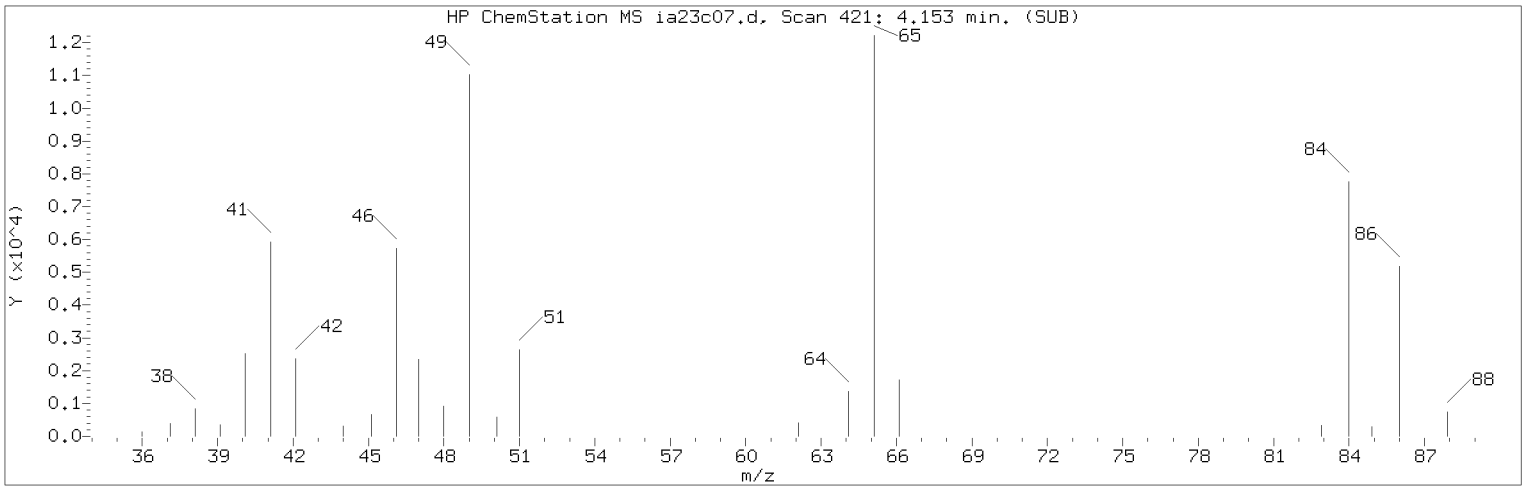
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:13 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

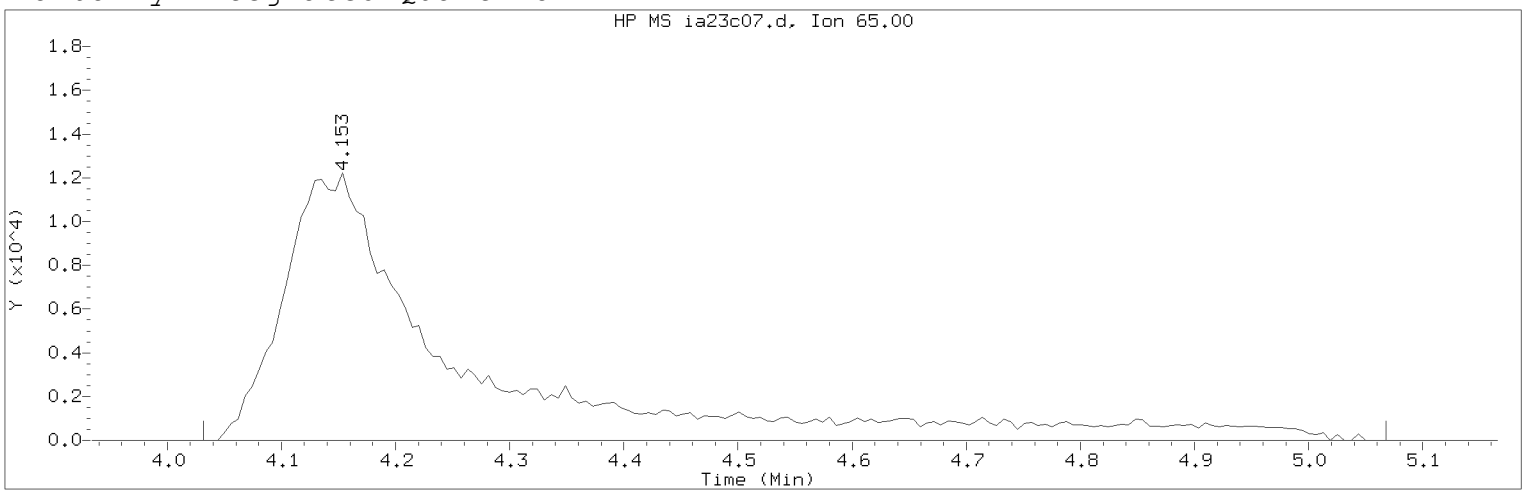
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 375
Retention Time (minutes): 3.873
Quant Ion : 41.00
Area : 1581559
On-column Amount (ng) : 480.0386
Integration start scan : 362 Integration stop scan: 459
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/23/2018 at 22:18.
Target 3.5 esignature user FID Page 1081

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:18 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

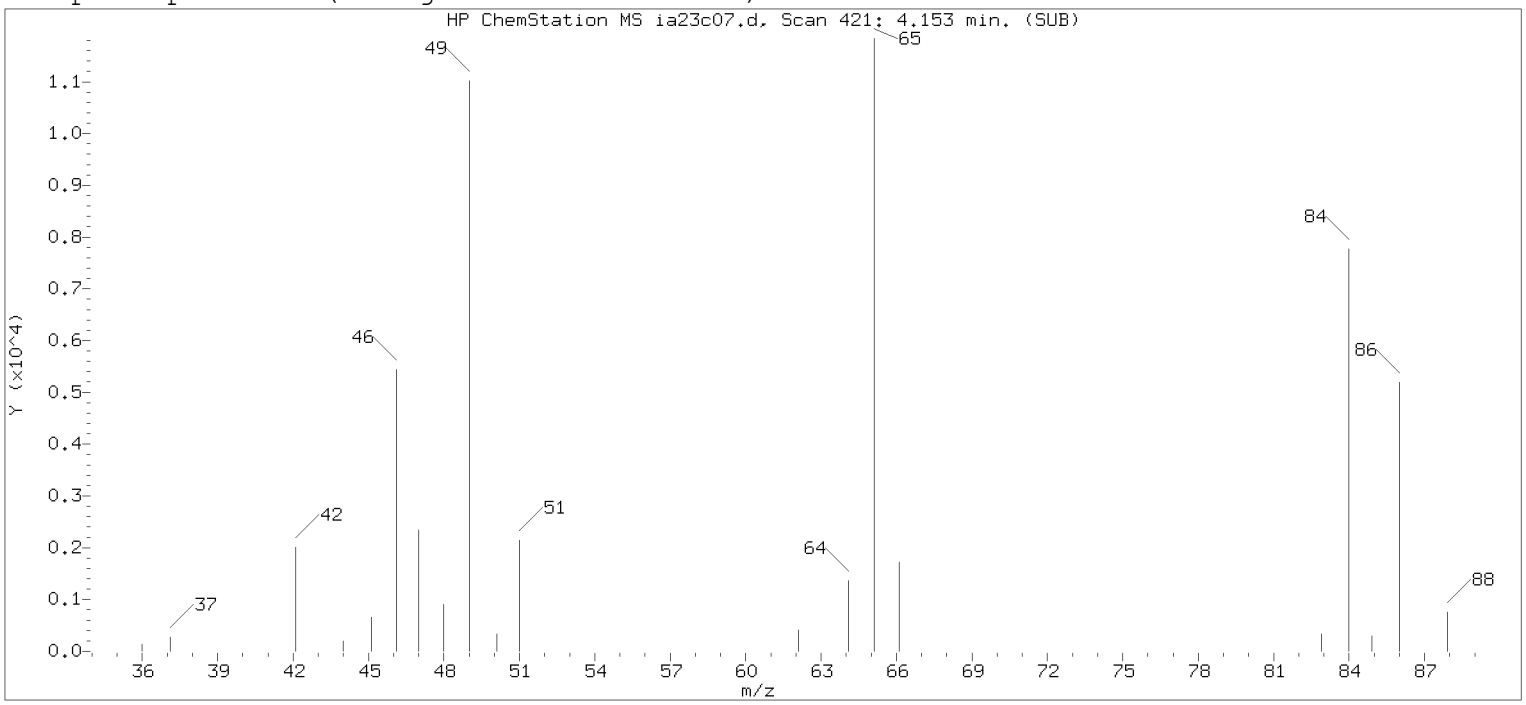
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 421
Retention Time (minutes): 4.153
Quant Ion : 65.00
Area (flag) : 132107M
On-Column Amount (ng) : 50.0000
Integration start scan : 400 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

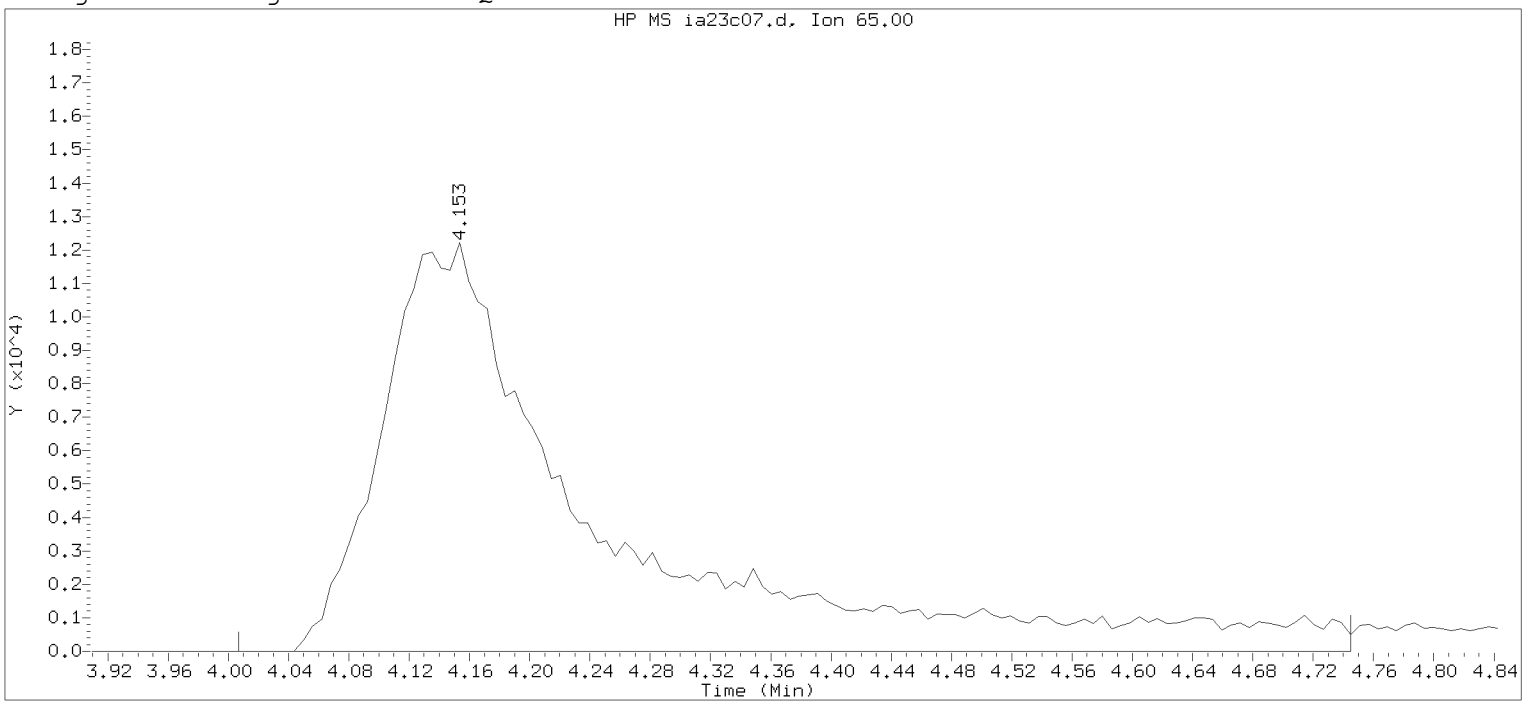
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:05.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



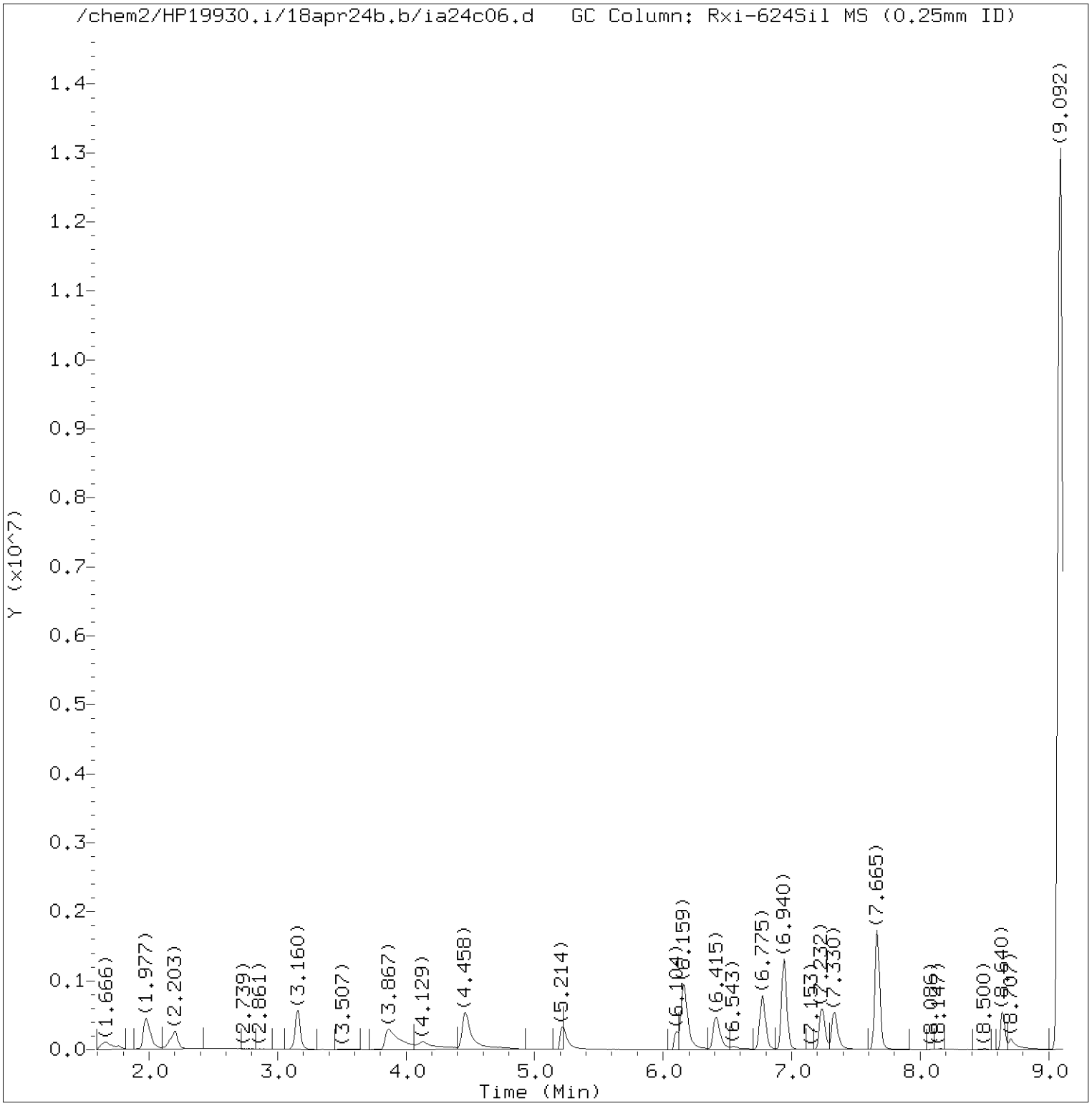
Data File: /chem2/HP19930.i/18apr23c.b/ia23c07.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 21:55 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 23-APR-2018 22:13
Date, time and analyst ID of latest file update: 23-Apr-2018 22:13 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 421		
Retention Time (minutes)	: 4.153		
Quant Ion	: 65.00		
Area	: 121390		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 396	Integration stop scan:	517
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/23/2018 at 22:18.
Target 3.5 esignature user ID: DVV10203



Total Ion Chromatogram (TIC)

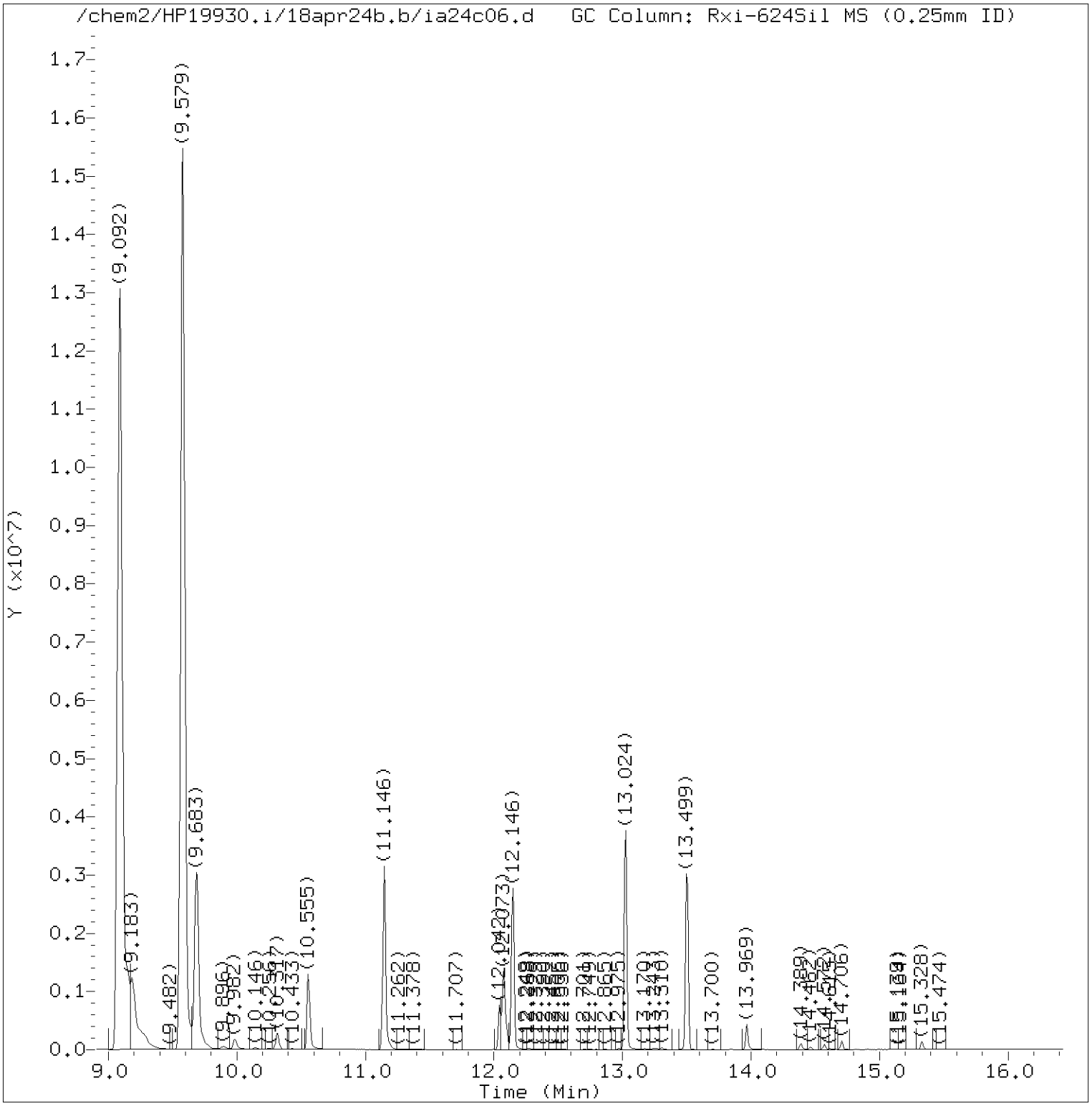
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:42 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:42 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:42 dvv10203

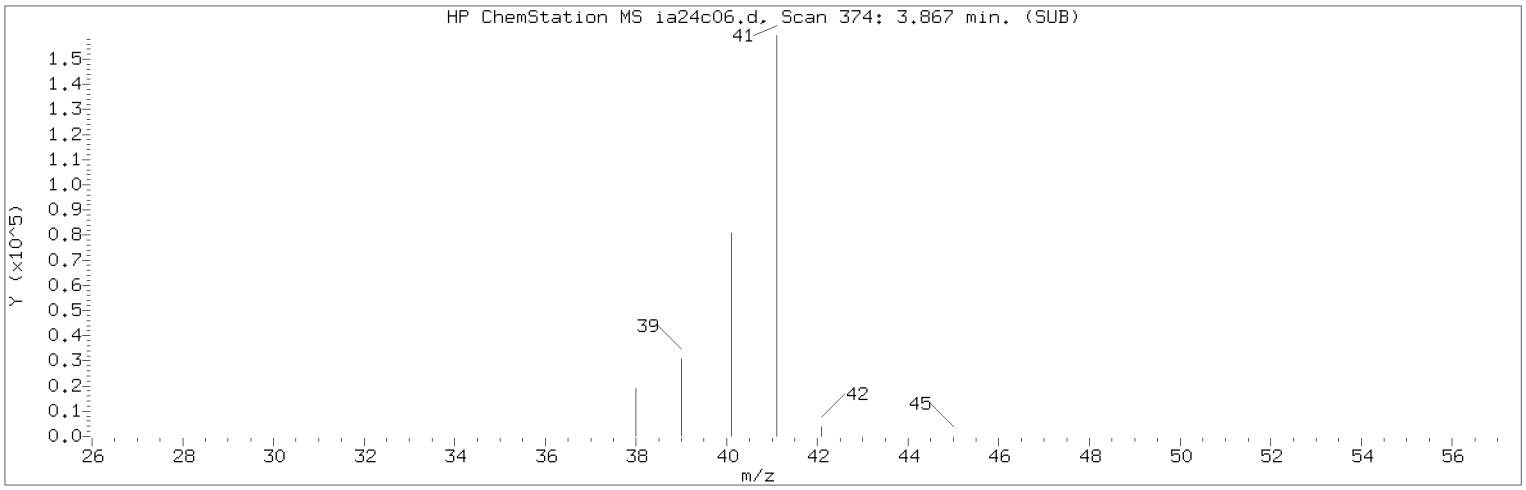
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.977	45	1116504	13.331
25) Acetonitrile	(1)	3.867	41	1900264M	452.503
26)*t-Butyl Alcohol-d10	(1)	4.141	65	154727M	50.000
36) Vinyl Acetate	(2)	5.220	43	1080158	11.113
43) Methyl Acrylate	(2)	6.159	55	2111482	64.044
53) 1-Chlorobutane	(2)	6.940	56	1455302	11.666
63)*Fluorobenzene	(2)	7.665	96	2177194	10.000
77) Chloroacetonitrile	(2)	9.152	75	1020927	582.364
78) 2-Chloroethyl vinyl ether	(2)	9.189	63	357405	14.005
97)*Chlorobenzene-d5	(3)	11.146	117	1637051	10.000
112) Cyclohexanone	(1)	12.073	55	645549	622.748
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	856655	10.000
142) Hexachloroethane	(4)	13.499	117	455613	12.316

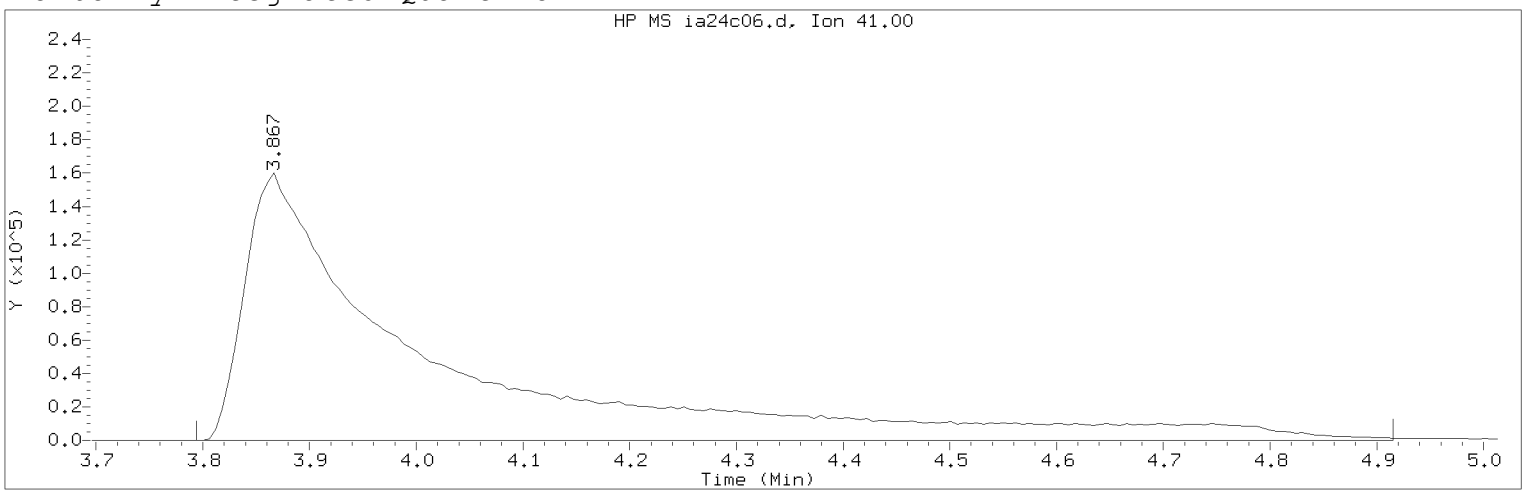
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:42 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

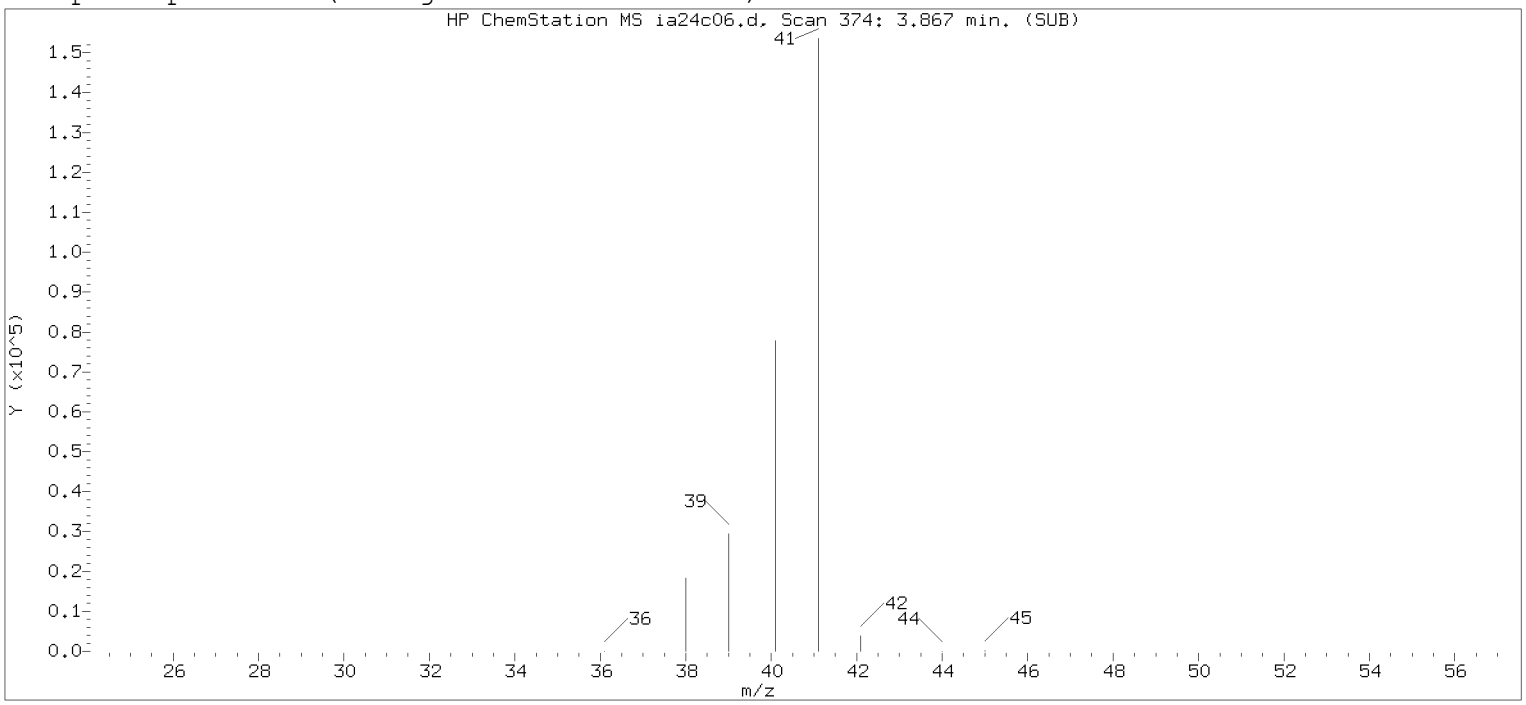
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 374
Retention Time (minutes): 3.867
Quant Ion : 41.00
Area (flag) : 1900264M
On-Column Amount (ng) : 452.5033
Integration start scan : 361 Integration stop scan: 545
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

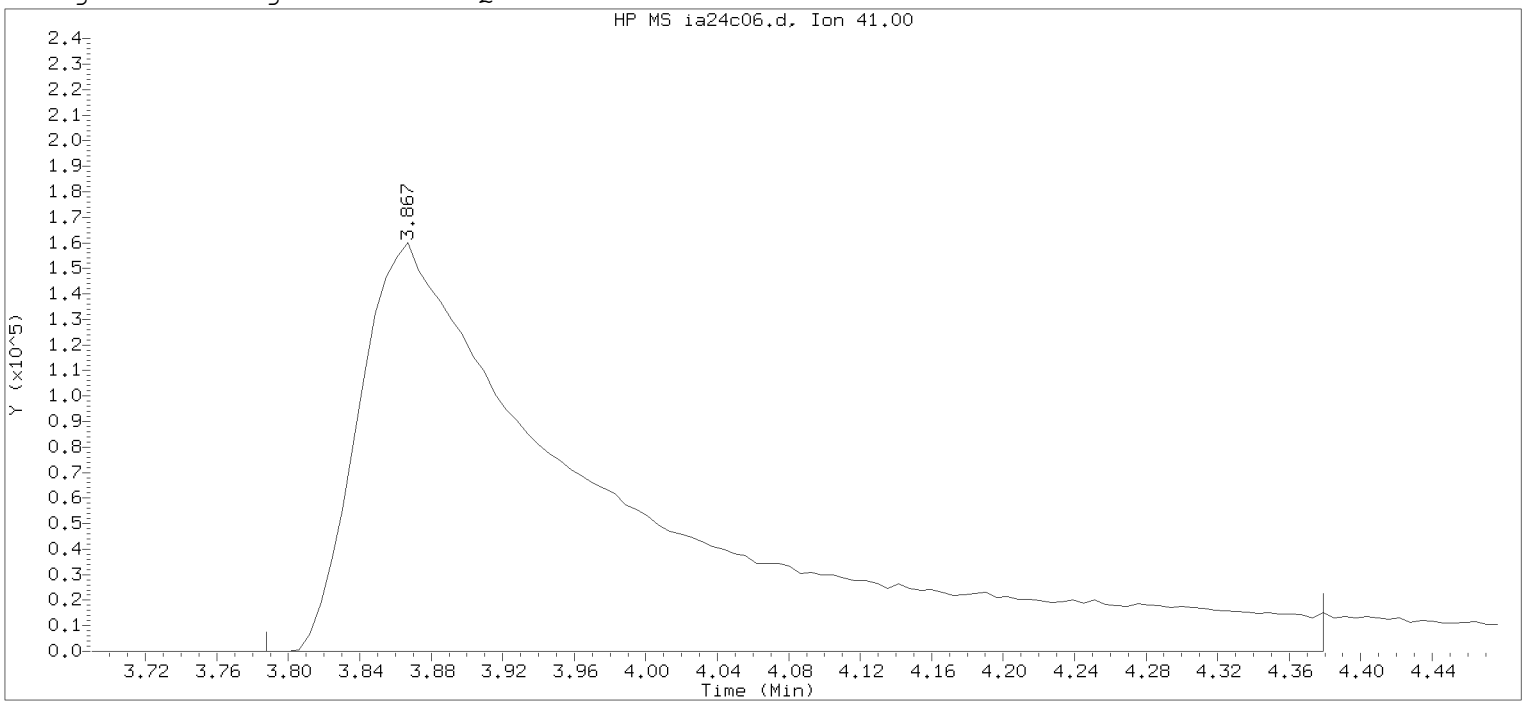
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

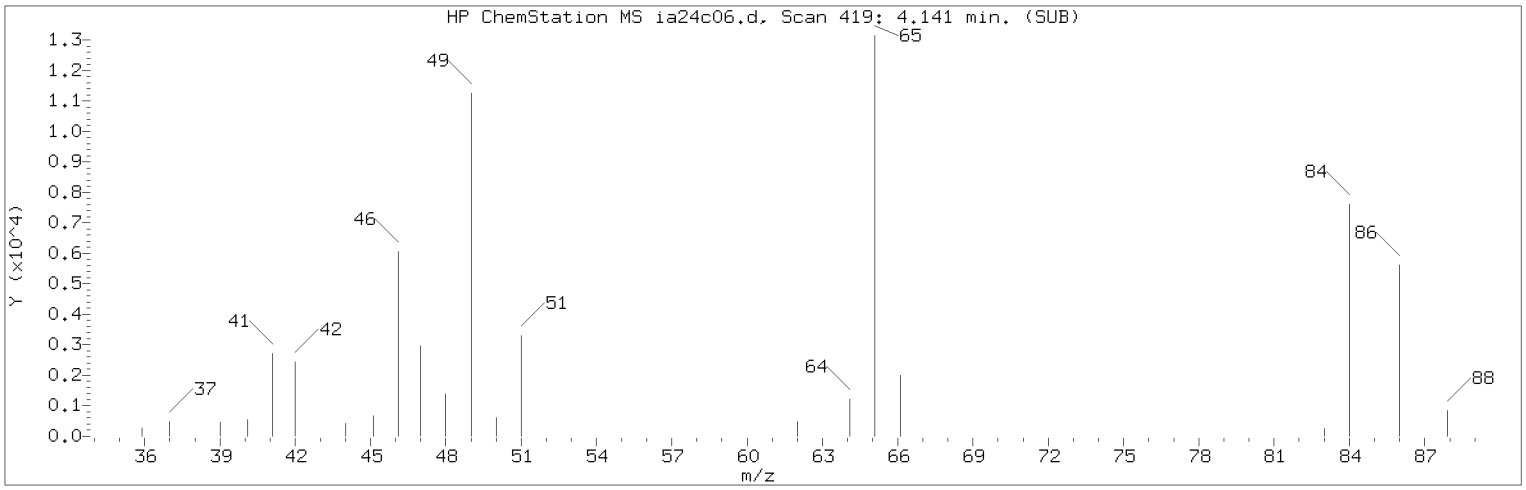
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:28 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

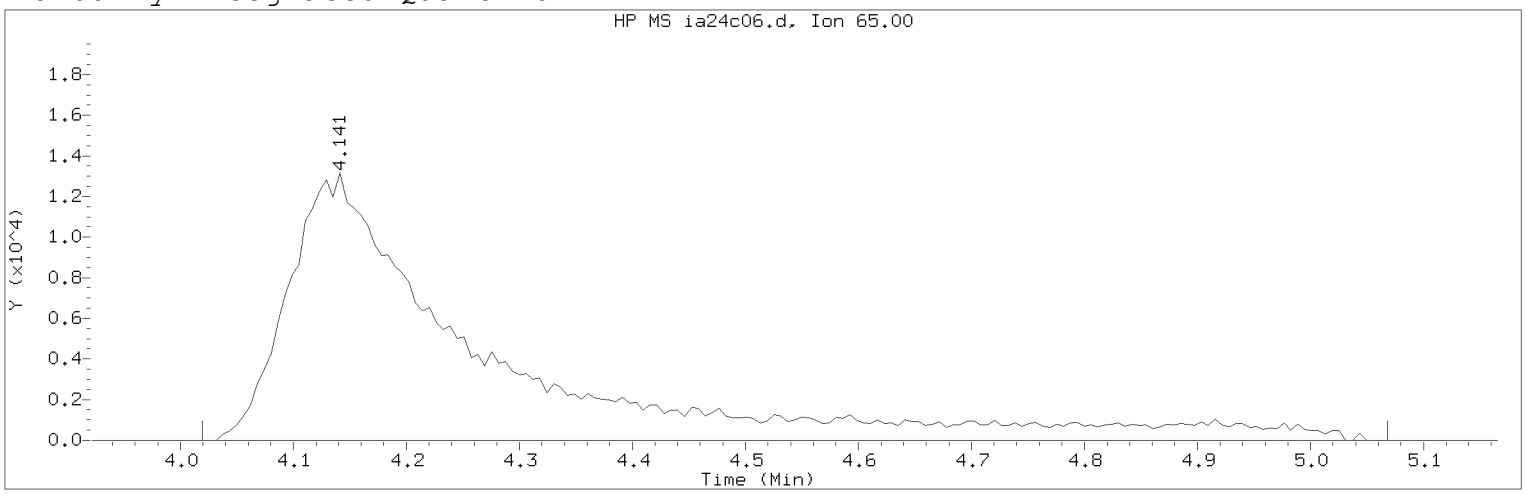
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 374
Retention Time (minutes): 3.867
Quant Ion : 41.00
Area : 1622530
On-column Amount (ng) : 390.1853
Integration start scan : 360 Integration stop scan: 457
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:42 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

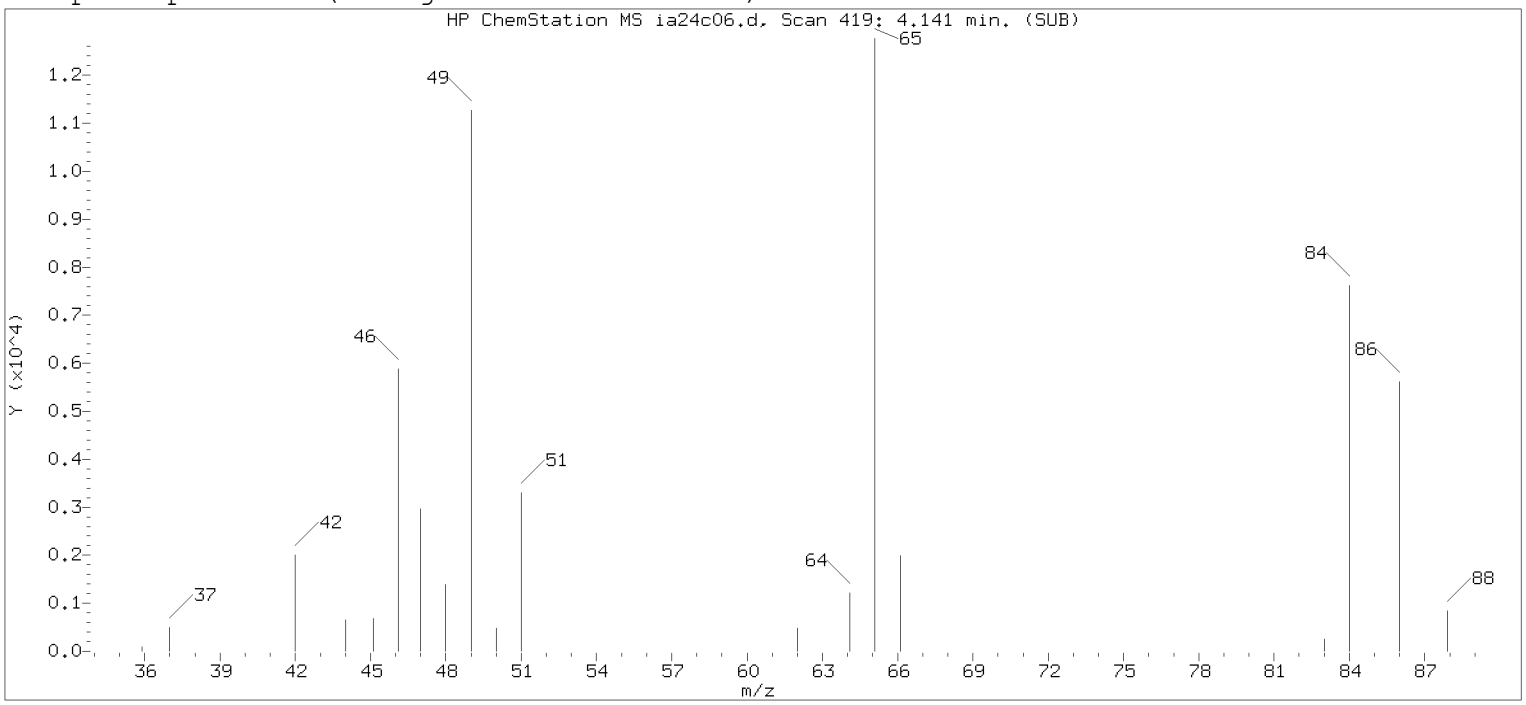
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area (flag) : 154727M
On-Column Amount (ng) : 50.0000
Integration start scan : 398 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

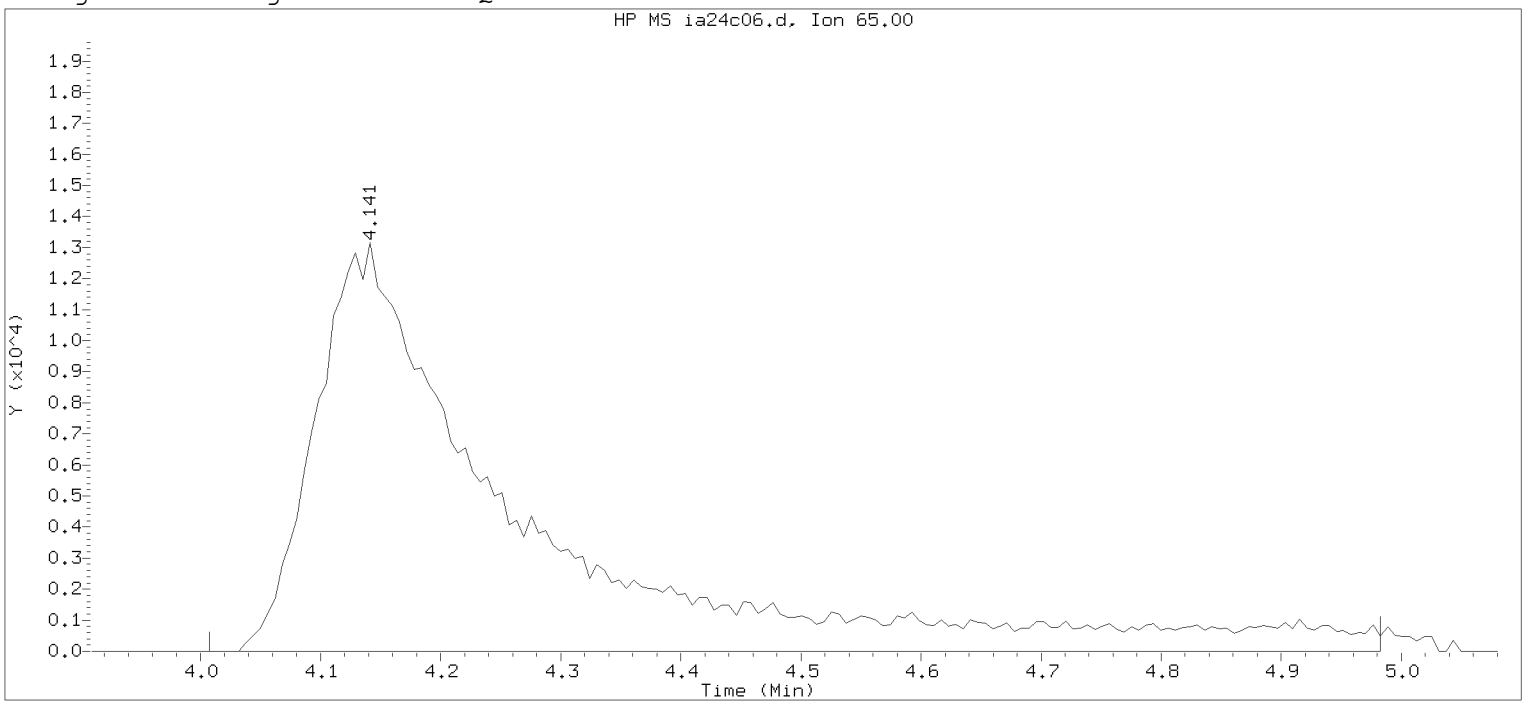
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 21:42.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:31.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24c06.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:10 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:28 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area : 153213
On-column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 556
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 21:42.
Target 3.5 esignature used. FID Page 1093

Data File: /chem2/HP26285.i/18apr16i.b/5a16t01.d

Date : 16-APR-2018 09:50

Client ID: BFBFEB13-18

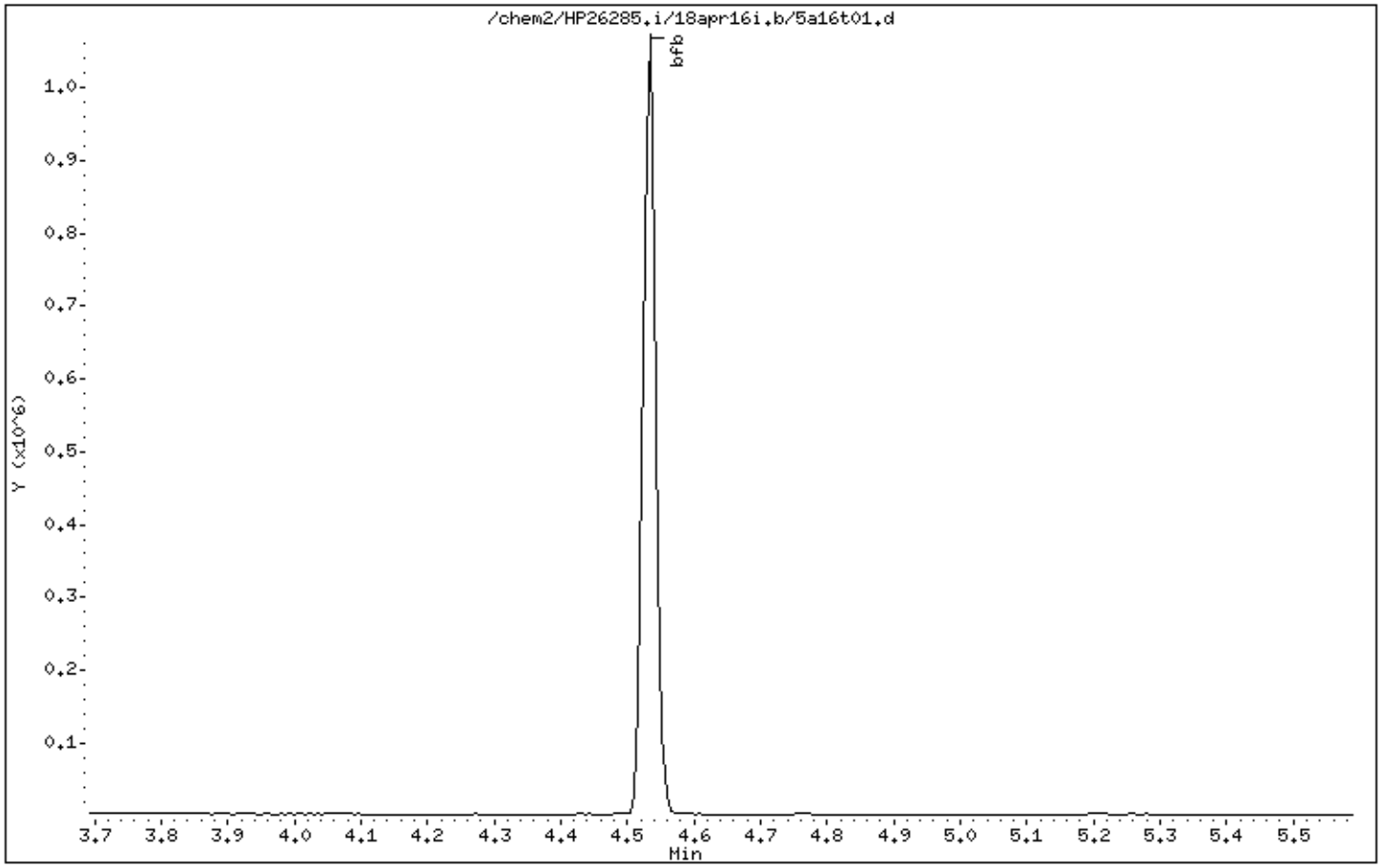
Instrument: HP26285.i

Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/18apr16i.b/5a16t01.d

Date : 16-APR-2018 09:50

Client ID: BFBFEB13-18

Instrument: HP26285.i

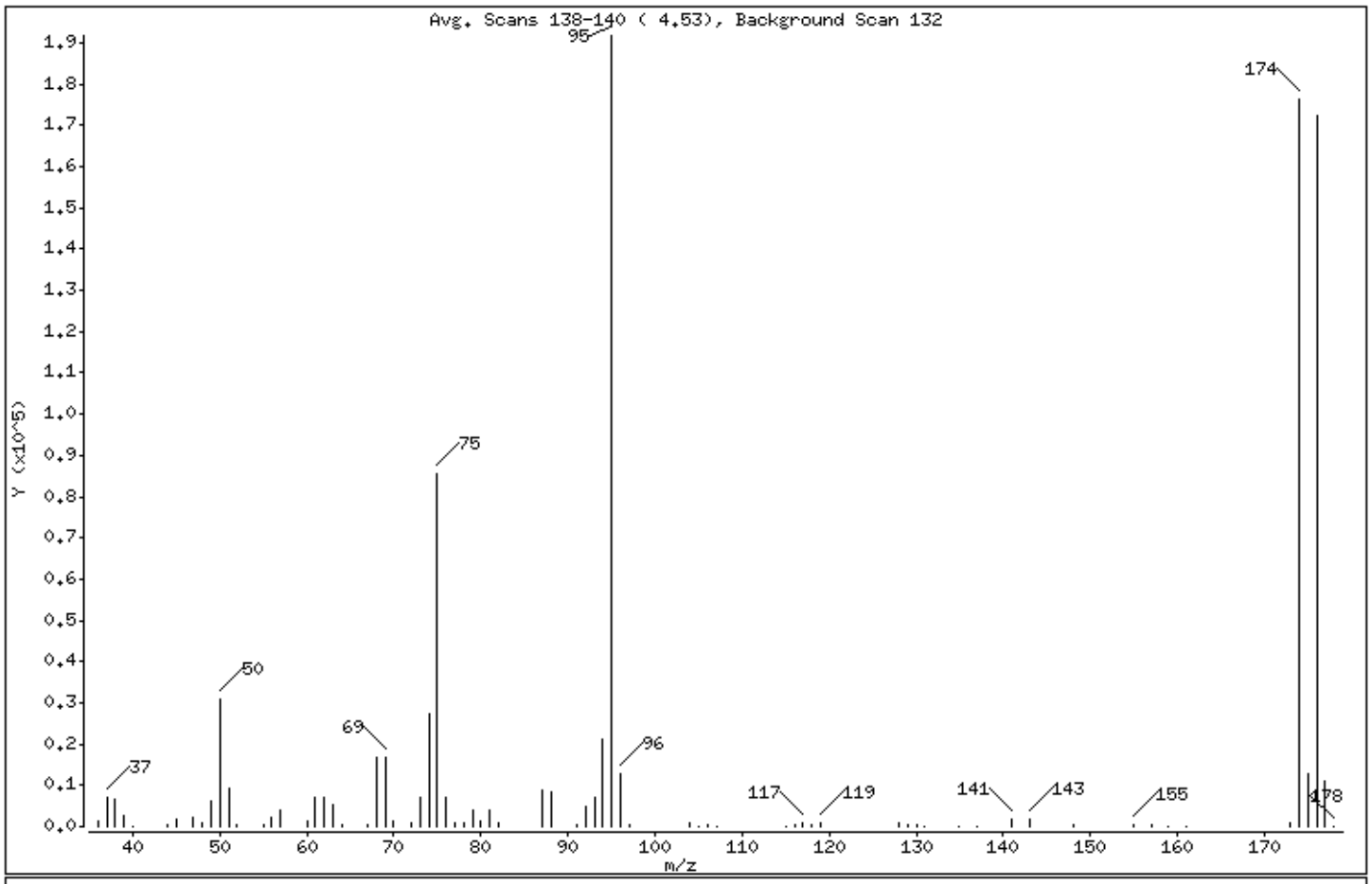
Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.01
75	30.00 - 60.00% of mass 95	44.55
96	5.00 - 9.00% of mass 95	6.64
173	Less than 2.00% of mass 174	0.54 (0.58)
174	50.00 - 100.00% of mass 95	91.86
175	5.00 - 9.00% of mass 174	6.73 (7.33)
176	95.00 - 101.00% of mass 174	89.93 (97.90)
177	5.00 - 9.00% of mass 176	5.75 (6.40)

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP26285.i/18apr16i.b/5a16t01.d

Date : 16-APR-2018 09:50

Client ID: BFBFEB13-18

Instrument: HP26285.i

Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

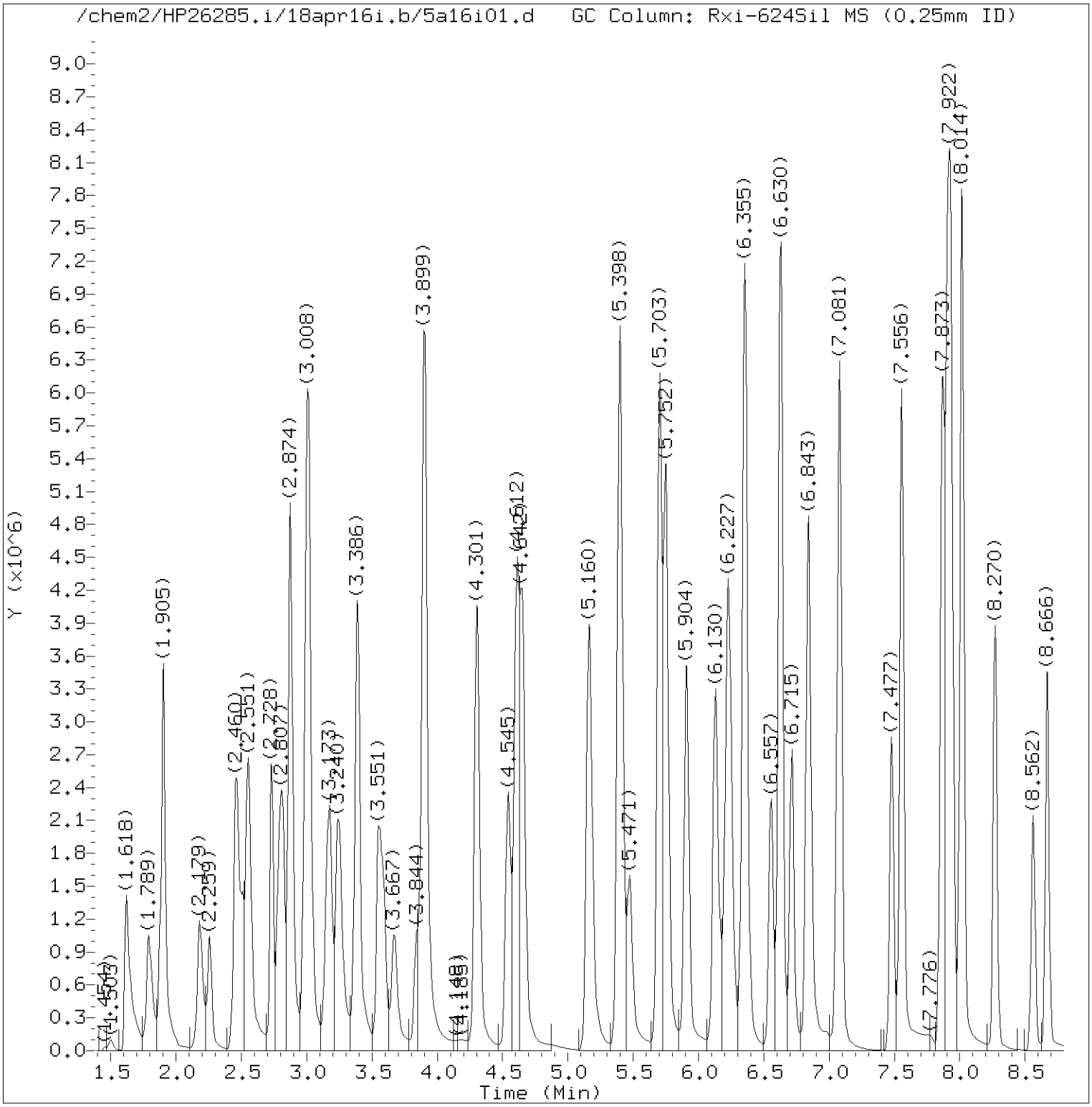
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 5a16t01.d
Spectrum: Avg. Scans 138-140 (4.53), Background Scan 132
Location of Maximum: 95.00
Number of points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1437	63.00	5376	91.00	653	131.00	162
37.00	7272	64.00	500	92.00	4890	135.00	213
38.00	6472	67.00	416	93.00	7230	137.00	192
39.00	2648	68.00	16664	94.00	21288	141.00	1686
40.00	54	69.00	16728	95.00	191744	143.00	1795
44.00	561	70.00	1368	96.00	12742	148.00	449
45.00	1551	72.00	818	97.00	341	155.00	540
47.00	2387	73.00	7103	104.00	722	157.00	253
48.00	856	74.00	27272	105.00	211	159.00	201
49.00	6112	75.00	85432	106.00	632	161.00	197
50.00	30696	76.00	7246	107.00	115	173.00	1027
51.00	9283	77.00	1006	115.00	97	174.00	176128
52.00	427	78.00	728	116.00	491	175.00	12910
55.00	399	79.00	3785	117.00	1091	176.00	172416
56.00	2392	80.00	1129	118.00	627	177.00	11036
57.00	4124	81.00	4164	119.00	920	178.00	214
60.00	1348	82.00	937	128.00	700		
61.00	7142	87.00	8764	129.00	299		
62.00	7132	88.00	8376	130.00	618		

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

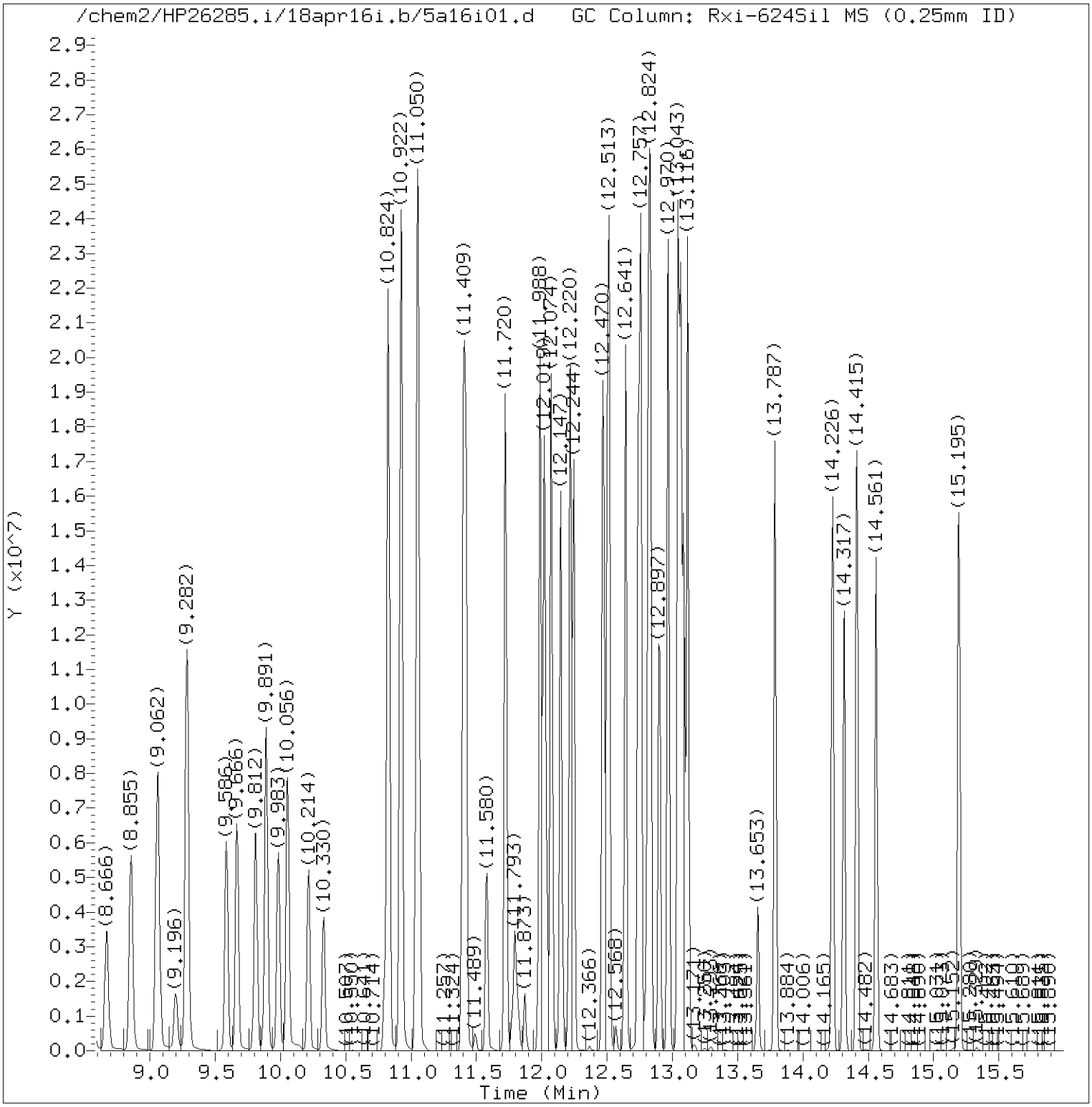
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	2866904	348.799
4) Chloromethane	(2)	1.789	50	2008826	311.078
6) Vinyl Chloride	(2)	1.881	62	2005125	311.597
5) 1,3-Butadiene	(2)	1.905	39	1395876	263.441
8) Bromomethane	(2)	2.179	94	1572224	302.012
9) Chloroethane	(2)	2.259	64	984919M	292.277
10) Dichlorofluoromethane	(2)	2.454	67	2949139	292.051
12) Trichlorofluoromethane	(2)	2.472	101	2916637	334.071
11) n-Pentane	(2)	2.551	43	2036138	315.457
14) Ethyl ether	(2)	2.728	59	1639403	293.875
15) Freon 123a	(2)	2.807	67	2224613	316.258
16) Acrolein	(1)	2.874	56	6085290	2763.270
17) 1,1-Dichloroethene	(2)	2.996	96	1833067	335.199
17) 1,1-Dichloroethene	(2)	2.996	63	851805	324.602
18) Acetone	(1)	3.015	58	536768	595.192
19) Freon 113	(2)	3.015	101	2062167	347.295
21) 2-Propanol	(1)	3.161	45	881595M	1501.116
22) Methyl Iodide	(2)	3.179	142	3928538	323.949
23) Carbon Disulfide	(2)	3.240	76	5652746	346.650
27) Methyl Acetate	(2)	3.374	43	2316587	282.968
25) Allyl Chloride	(2)	3.393	41	2939393	311.798
28) Methylene Chloride	(2)	3.551	84	2127960	312.739
29)*t-Butyl alcohol-d10	(1)	3.563	65	275770	250.000
30) t-Butyl alcohol	(1)	3.673	59	1941404	1543.756
31) Acrylonitrile	(2)	3.844	53	1214019	300.898
33) Methyl Tertiary Butyl Ether	(2)	3.899	73	5906117	307.267
32) trans-1,2-Dichloroethene	(2)	3.905	96	2149178	328.091
34) n-Hexane	(2)	4.301	57	3163563	356.082
36) 1,1-Dichloroethane	(2)	4.545	63	3677235	319.323
38) di-Isopropyl ether	(2)	4.612	45	6358586	302.700
39) 2-Chloro-1,3-butadiene	(2)	4.654	53	2995077	336.271
40) Ethyl t-butyl ether	(2)	5.160	59	6016308	312.319
44) 2-Butanone	(2)	5.386	43	3232616	579.242
42) cis-1,2-Dichloroethene	(2)	5.398	96	2458214	323.467
45) 2,2-Dichloropropane	(2)	5.404	77	2090675	311.904
47) Propionitrile	(1)	5.471	54	2182858	1510.830
48) Methacrylonitrile	(2)	5.703	67	3336343	748.881
49) Bromochloromethane	(2)	5.746	128	1271576	320.506

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.758	71	982333	625.517
51) Chloroform	(2)	5.904	83	3840082	320.780
52)$Dibromofluoromethane	(2)	6.130	113	338851	51.124
52)$Dibromofluoromethane	(2)	6.130	111	342086	50.945
53) 1,1,1-Trichloroethane	(2)	6.130	97	3528533	321.118
43) 1,2-Dichloroethene (Total)	(2)		96	4607392	651.558
54) Cyclohexane	(2)	6.227	56	3573482	344.574
54) Cyclohexane	(2)	6.227	84	3059024	349.109
54) Cyclohexane	(2)	6.227	69	1132266	355.230
56) Carbon Tetrachloride	(2)	6.349	117	3078665	366.909
55) 1,1-Dichloropropene	(2)	6.355	75	2953170	329.683
58) Isobutyl Alcohol	(1)	6.557	41	1473624	3708.145
57)$1,2-Dichloroethane-d4	(2)	6.611	102	72053	48.595
57)$1,2-Dichloroethane-d4	(2)	6.605	65	324095	49.020
57)$1,2-Dichloroethane-d4	(2)	6.605	104	46997	49.895
60) Benzene	(2)	6.630	78	8914041	313.098
61) 1,2-Dichloroethane	(2)	6.715	62	2633142	297.634
61) 1,2-Dichloroethane	(2)	6.715	98	264342	333.040
65) t-Amyl methyl ether	(2)	6.843	73	6109297	316.787
66)*Fluorobenzene	(2)	7.056	96	1286695	50.000
67) n-Heptane	(2)	7.081	43	3291206	358.829
69) n-Butanol	(1)	7.477	56	2465662	7925.151
71) Trichloroethene	(2)	7.556	95	2432021	326.067
73) Methylcyclohexane	(2)	7.867	83	4019584	346.095
73) Methylcyclohexane	(2)	7.867	98	1784174	350.067
74) 1,2-Dichloropropane	(2)	7.904	63	2239139	311.907
72) t-Amyl ethyl ether	(2)	7.934	87	3340742	330.571
76) 1,4-Dioxane	(1)	8.008	88	337214M	3939.932
77) Methyl Methacrylate	(2)	8.014	69	2148614	327.542
75) Dibromomethane	(2)	8.020	93	1493091	318.185
79) Bromodichloromethane	(2)	8.270	83	3043062	359.594
80) 2-Nitropropane	(2)	8.562	41	1664963	673.333
81) 2-Chloroethyl Vinyl Ether	(2)	8.666	63	1822506	331.833
82) cis-1,3-Dichloropropene	(2)	8.855	75	3849182	345.398
83) 4-Methyl-2-pentanone	(2)	9.062	43	6947535	605.818
84)$Toluene-d8	(3)	9.196	98	1240660	48.967
84)$Toluene-d8	(3)	9.196	100	838736	50.593
89) Toluene	(3)	9.282	92	5989823	318.407

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	3503194	354.378
92) Ethyl Methacrylate	(3)	9.666	69	3727416	338.866
93) 1,1,2-Trichloroethane	(3)	9.812	97	2252631	319.664
94) Tetrachloroethene	(3)	9.891	166	3029215	341.499
95) 1,3-Dichloropropane	(3)	9.983	76	3487273	310.427
97) 2-Hexanone	(3)	10.056	43	5536210	585.828
91) 1,3-Dichloropropene (total)	(3)		100	7352376	699.776
98) Dibromochloromethane	(3)	10.214	129	2776582	112.918
100) 1,2-Dibromoethane	(3)	10.330	107	2526424	329.434
101)*Chlorobenzene-d5	(3)	10.800	117	1010797	50.000
103) Chlorobenzene	(3)	10.824	112	7138568	322.507
102) 1-Chlorohexane	(3)	10.824	91	3428072	337.272
104) 1,1,1,2-Tetrachloroethane	(3)	10.922	131	2637175	361.910
105) Ethylbenzene	(3)	10.928	91	11357892	317.471
107) m+p-Xylene	(3)	11.050	106	9432149	657.638
108) o-Xylene	(3)	11.397	106	4752426	335.254
110) Styrene	(3)	11.415	104	7762045	340.760
111) Bromoform	(3)	11.580	173	2222942	8.918
112) Isopropylbenzene	(3)	11.720	105	11399926	327.042
109) Xylene (Total)	(3)		106	14184575	992.892
113) Cyclohexanone	(1)	11.793	55	1696307MA	3925.785
115)$4-Bromofluorobenzene	(3)	11.873	95	475051	48.976
115)$4-Bromofluorobenzene	(3)	11.873	174	429984	48.697
117) 1,1,2,2-Tetrachloroethane	(4)	11.988	83	3625023	318.681
116) Bromobenzene	(4)	11.988	156	3522665	358.683
119) trans-1,4-Dichloro-2-butene	(4)	12.019	53	2266405	775.224
118) 1,2,3-Trichloropropane	(4)	12.031	110	1066685	314.877
120) n-Propylbenzene	(4)	12.074	91	12364599	307.790
121) 2-Chlorotoluene	(4)	12.147	126	2987554	340.308
123) 1,3,5-Trimethylbenzene	(4)	12.220	105	9718856	334.512
122) 4-Chlorotoluene	(4)	12.244	126	3127552	339.470
125) tert-Butylbenzene	(4)	12.470	134	2349326	355.256
126) Pentachloroethane	(4)	12.501	167	2148202	377.432
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	10042959	336.780
128) sec-Butylbenzene	(4)	12.641	105	11903019	330.475
130) 1,3-Dichlorobenzene	(4)	12.738	146	6381561	344.066
131) p-Isopropyltoluene	(4)	12.757	119	10920043	344.636
132)*1,4-Dichlorobenzene-d4	(4)	12.799	152	548553	50.000

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

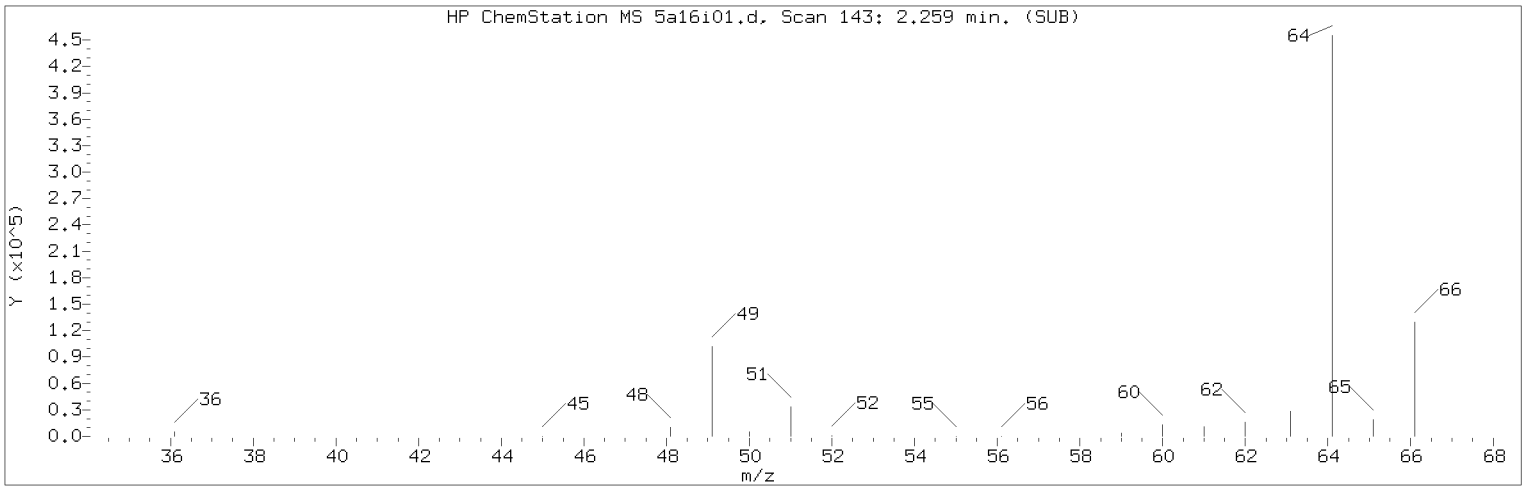
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

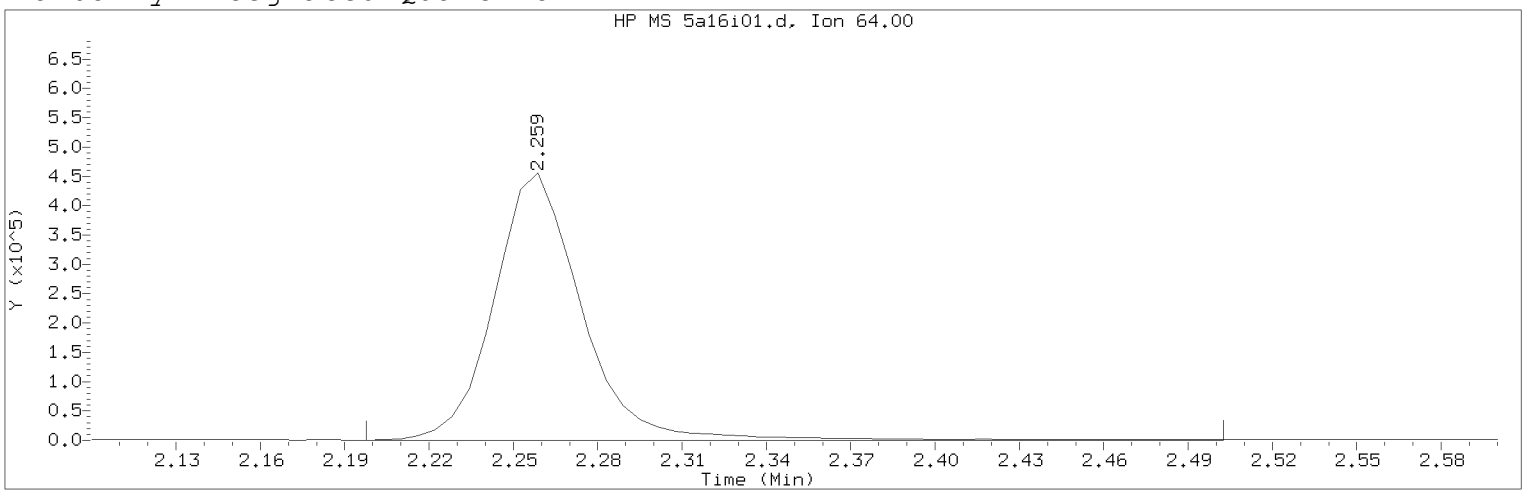
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.818	146	6366342	343.078
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	9927169	319.248
136) Benzyl Chloride	(4)	12.897	91	7330914	299.621
137) 1,3-Diethylbenzene	(4)	12.970	119	6798648	344.079
138) 1,4-Diethylbenzene	(4)	13.043	119	7182980	349.691
140) n-Butylbenzene	(4)	13.061	92	5479533	343.850
139) 1,2-Dichlorobenzene	(4)	13.086	146	5784901	336.888
141) 1,2-Diethylbenzene	(4)	13.116	119	5592812	338.808
142) Diethylbenzene (total)	(4)		100	19574440	1032.578
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	793899	342.179
145) 1,3,5-Trichlorobenzene	(4)	13.787	180	4779283	372.142
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	4311552	373.110
148) Hexachlorobutadiene	(4)	14.317	225	2213067	435.034
149) Naphthalene	(4)	14.415	128	11345517	323.203
150) 1,2,3-Trichlorobenzene	(4)	14.561	180	3749271	361.517
151) 2-Methylnaphthalene	(4)	15.195	142	7113674	359.795

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

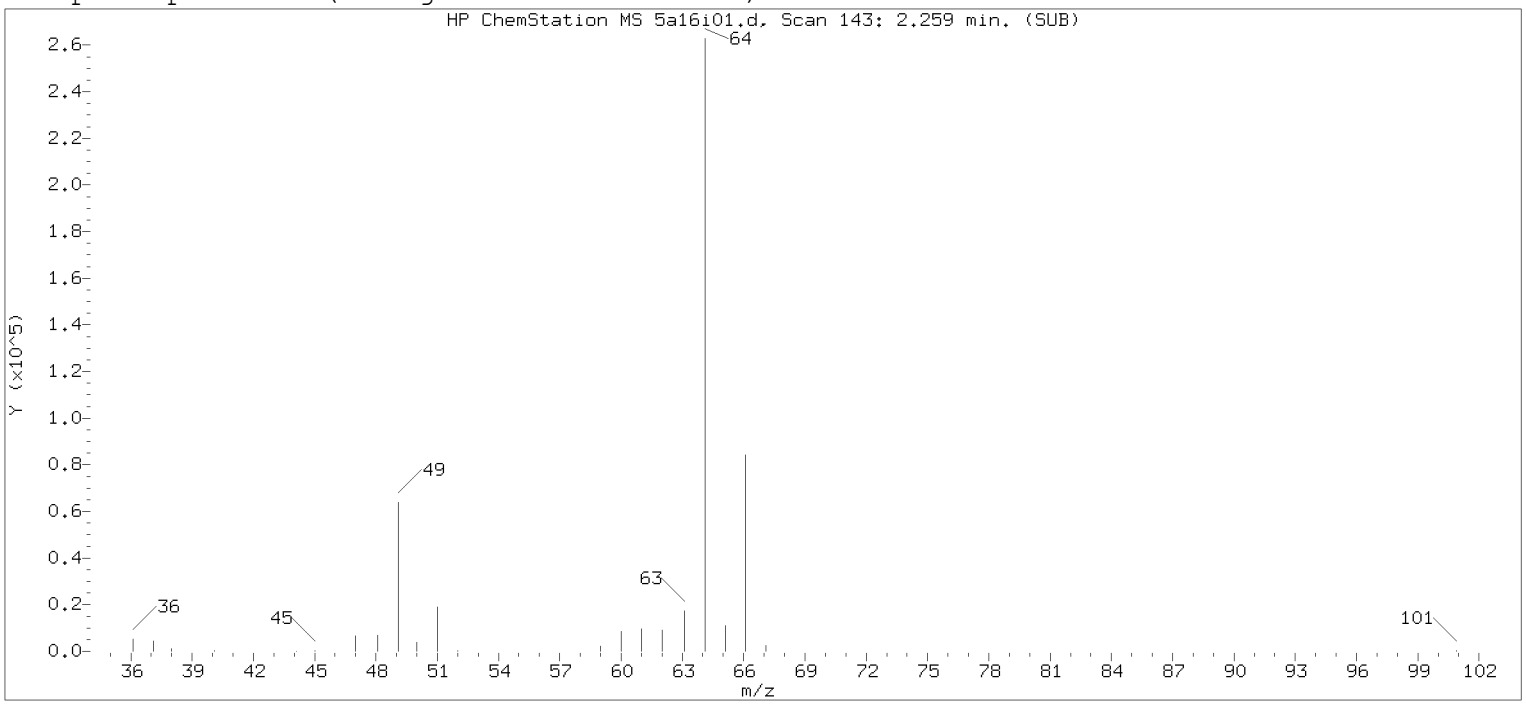
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 143
Retention Time (minutes): 2.259
Quant Ion : 64.00
Area (flag) : 984919M
On-Column Amount (ng) : 292.2770
Integration start scan : 132 Integration stop scan: 182
Y at integration start : 329 Y at integration end: 329

Reason for manual integration: improper integration

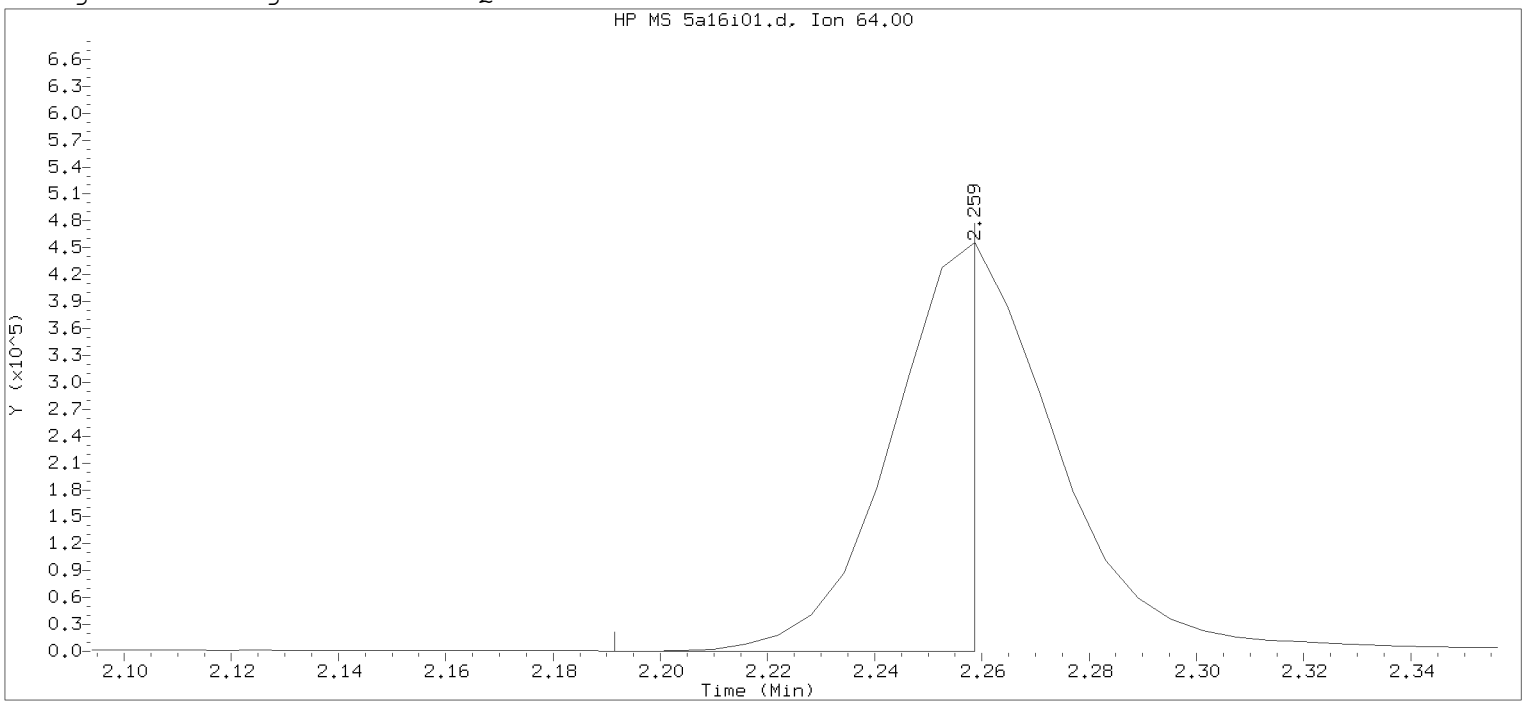
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

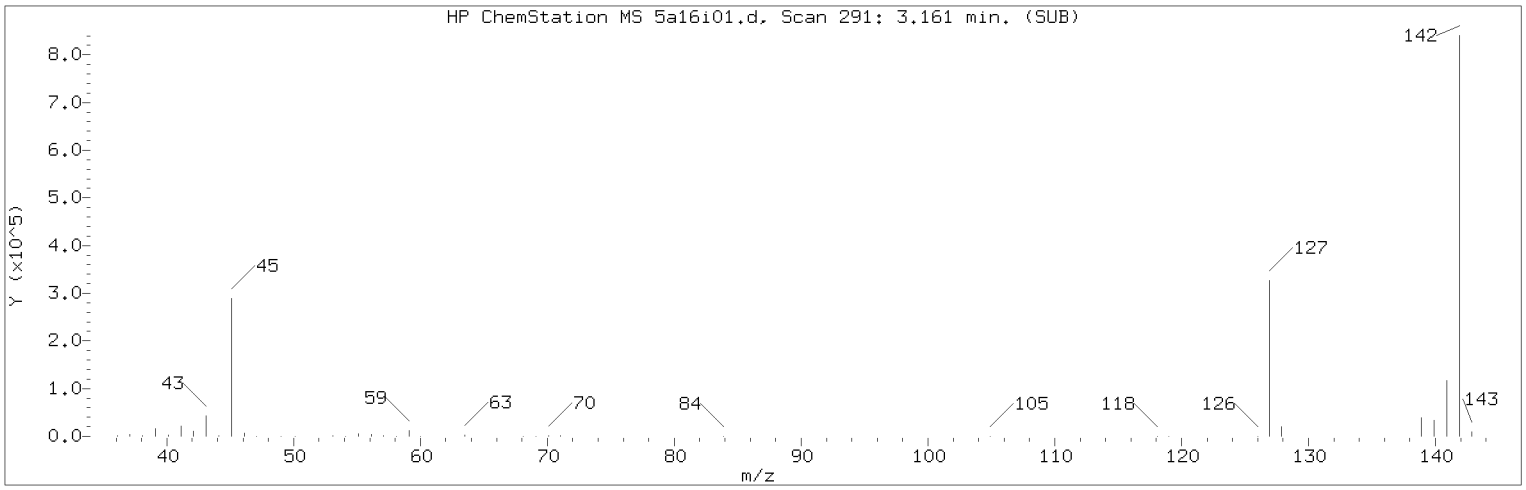
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:07
Date, time and analyst ID of latest file update: 16-Apr-2018 12:07 lcp00895

Sample Name: VSTD300 Lab Sample ID: VSTD300

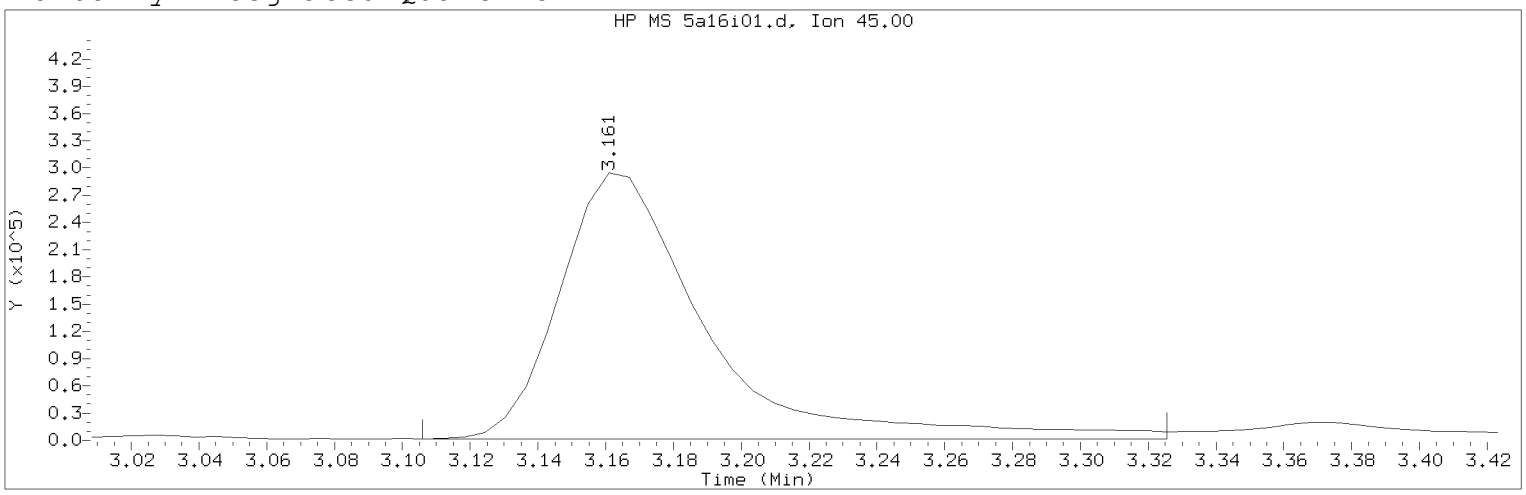
Compound Number : 9
Compound Name : Chloroethane
Scan Number : 143
Retention Time (minutes): 2.259
Quant Ion : 64.00
Area : 475445
On-column Amount (ng) : 300.0000
Integration start scan : 131 Integration stop scan: 142
Y at integration start : 356 Y at integration end: 356

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: KELLY

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

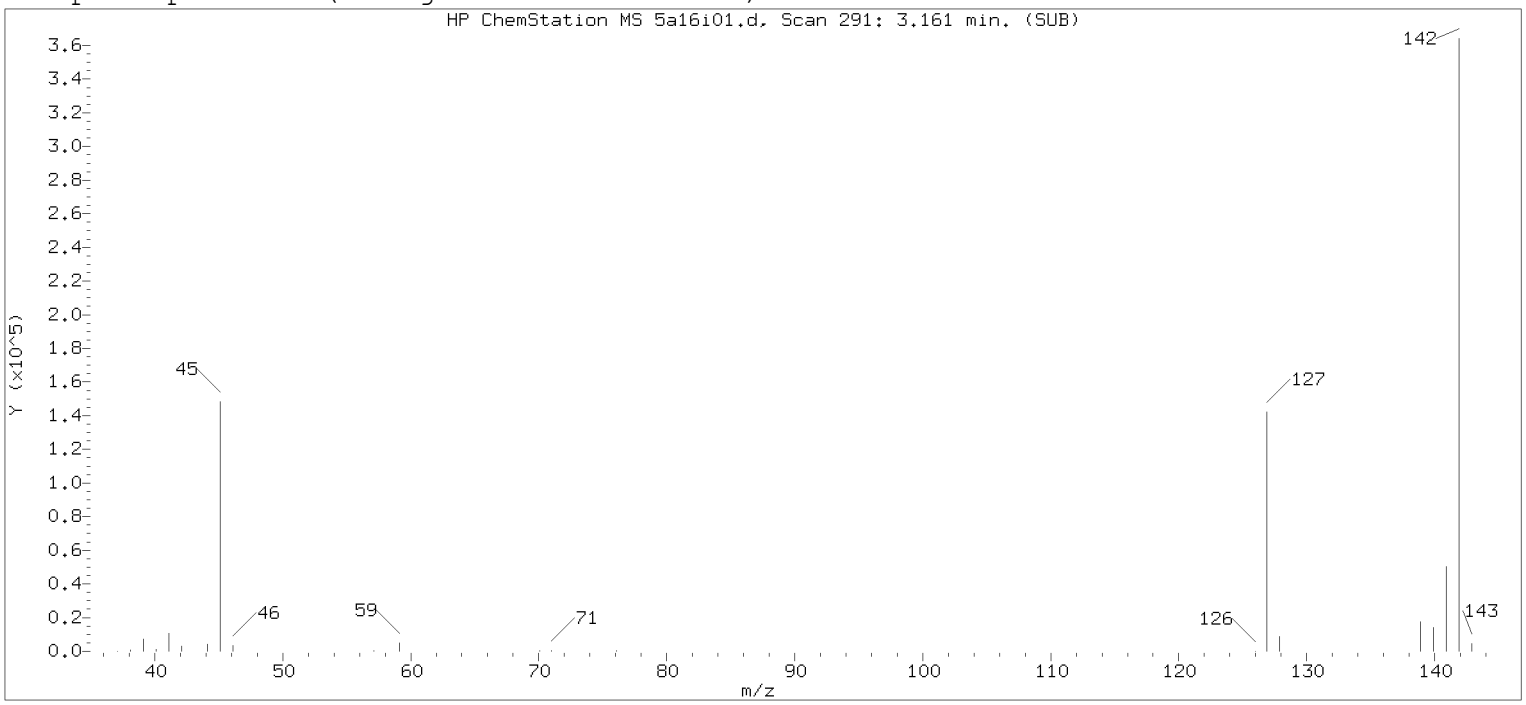
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 291
Retention Time (minutes): 3.161
Quant Ion : 45.00
Area (flag) : 881595M
On-Column Amount (ng) : 1501.1157
Integration start scan : 281 Integration stop scan: 317
Y at integration start : 1361 Y at integration end: 1361

Reason for manual integration: improper integration

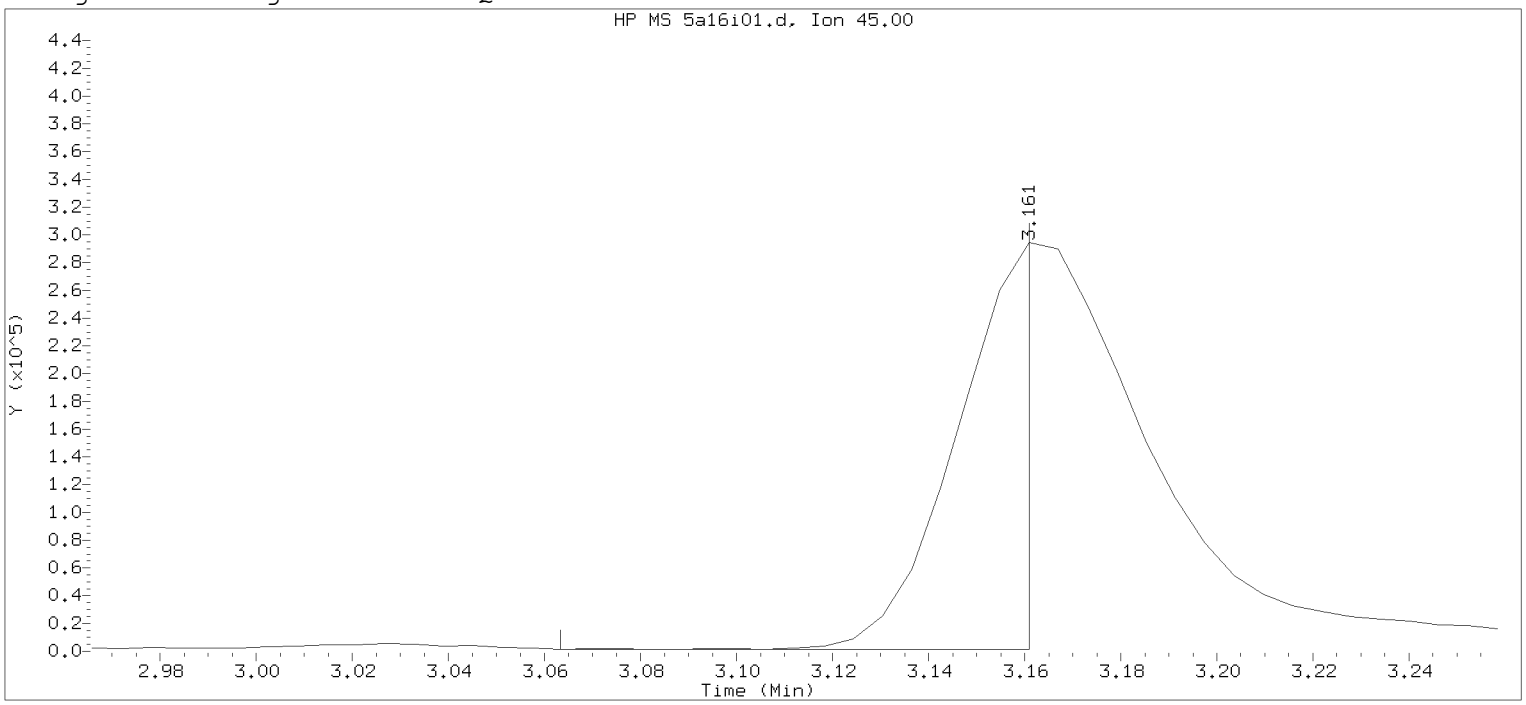
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:07
Date, time and analyst ID of latest file update: 16-Apr-2018 12:07 lcp00895

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 291
Retention Time (minutes): 3.161
Quant Ion : 45.00
Area : 293659
On-column Amount (ng) : 1500.0000
Integration start scan : 274 Integration stop scan: 290
Y at integration start : 1589 Y at integration end: 1589

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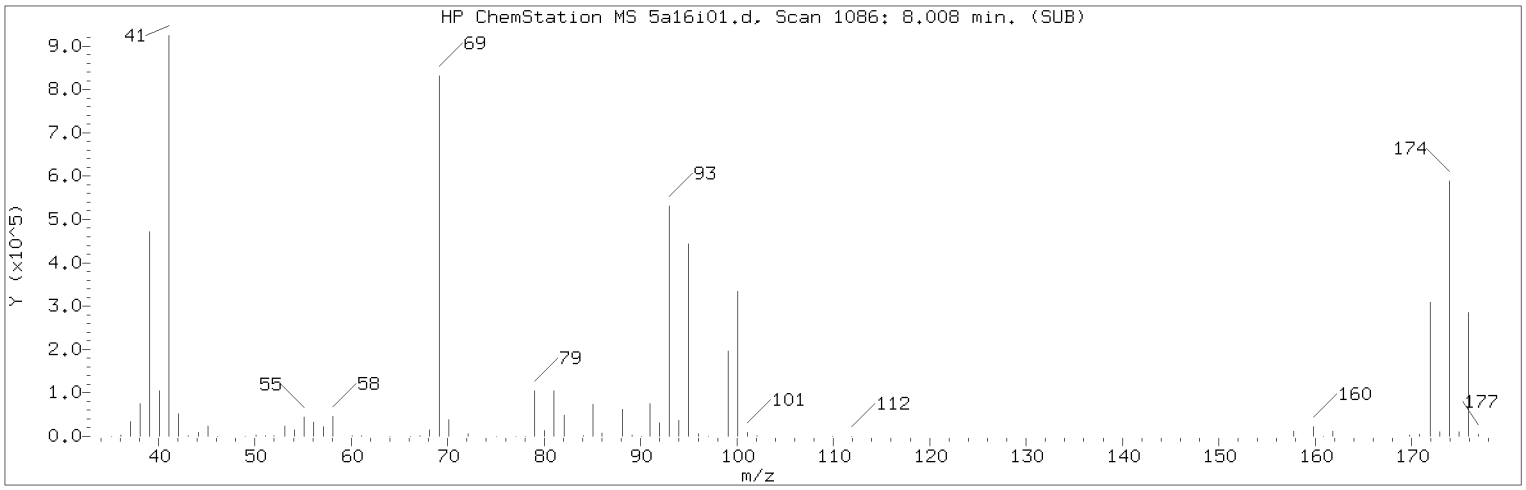
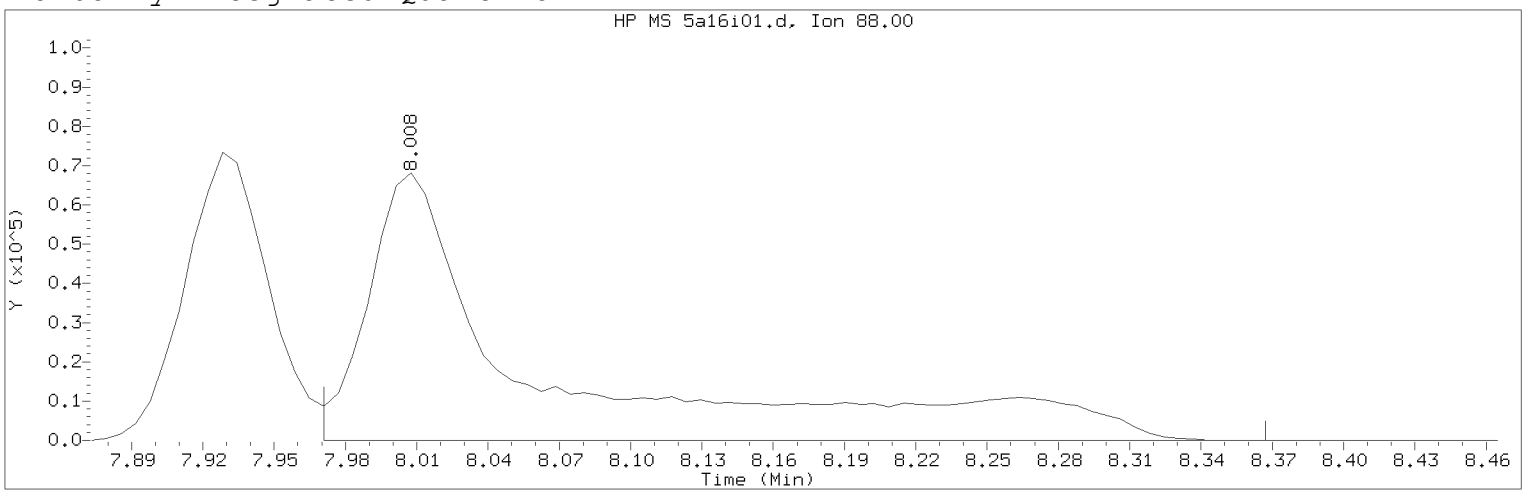
Target 3.5 esignature used. FID Page 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

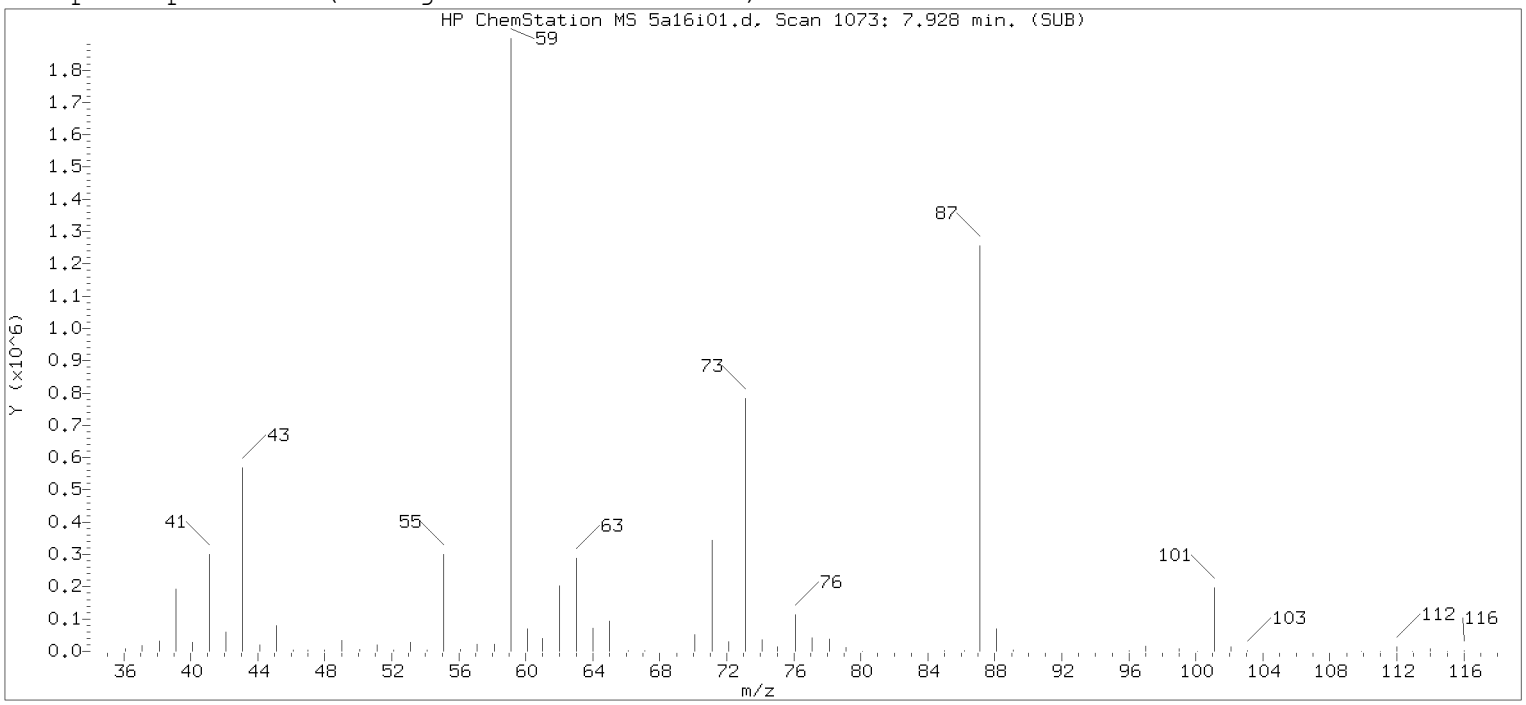
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1086
Retention Time (minutes): 8.008
Quant Ion : 88.00
Area (flag) : 337214M
On-Column Amount (ng) : 3939.9316
Integration start scan : 1079 Integration stop scan: 1144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

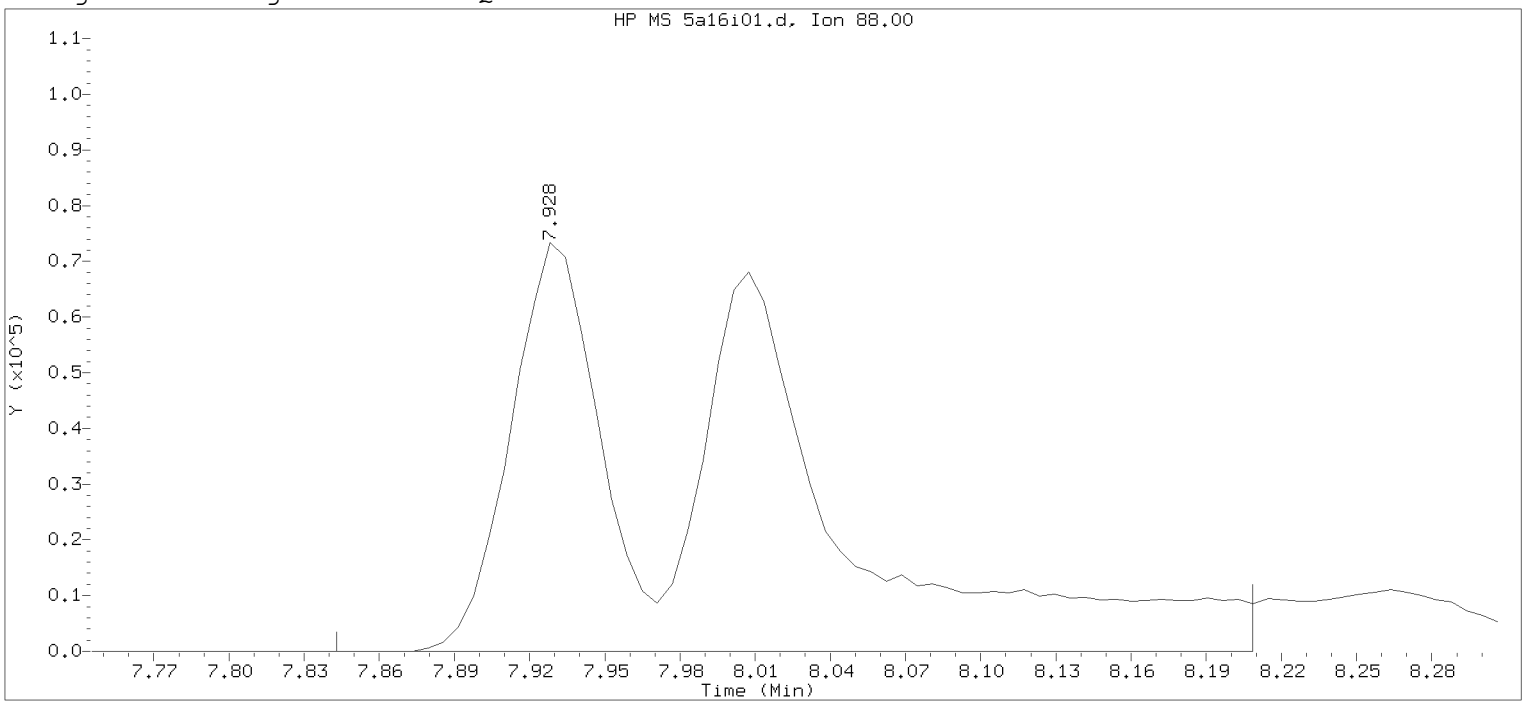
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:07
Date, time and analyst ID of latest file update: 16-Apr-2018 12:07 lcp00895

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1073
Retention Time (minutes): 7.928
Quant Ion : 88.00
Area : 457038
On-column Amount (ng) : 3750.0000
Integration start scan : 1058 Integration stop scan: 1118
Y at integration start : 0 Y at integration end: 0

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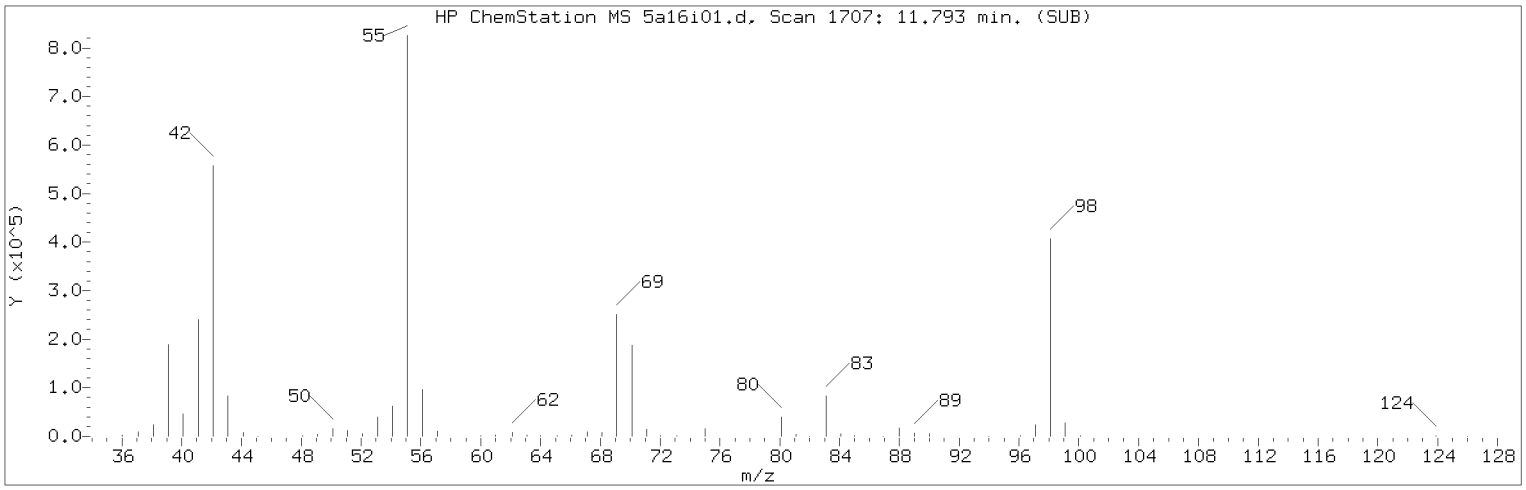
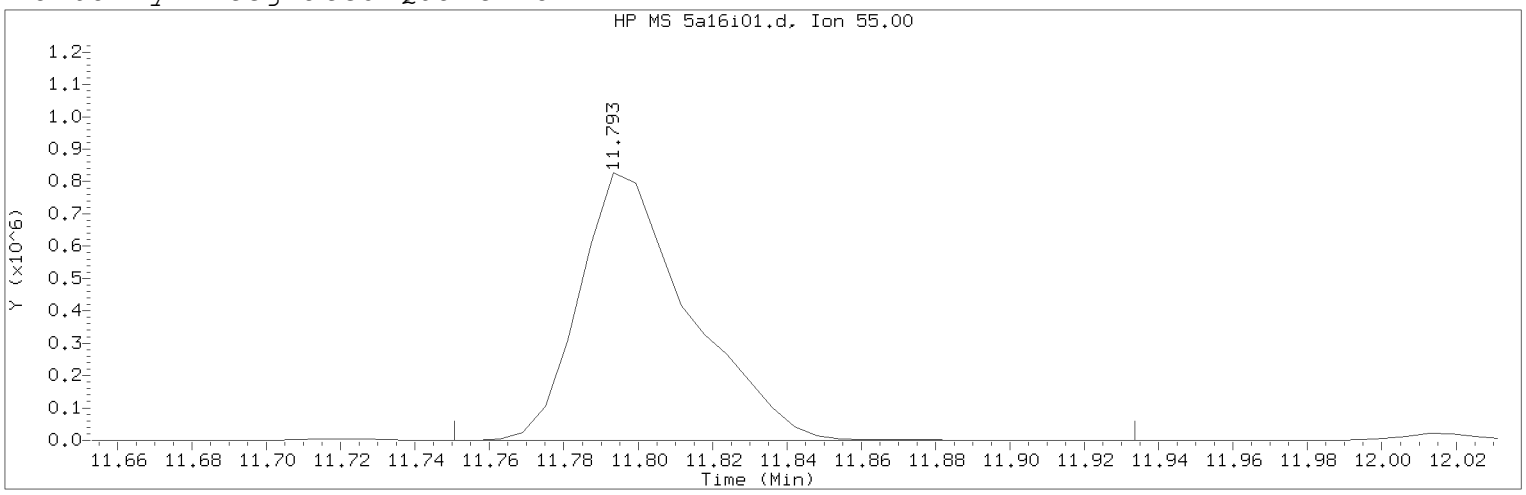
Target 3.5 esignature used. FID Page 1105

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD300 Lab Sample ID: VSTD300

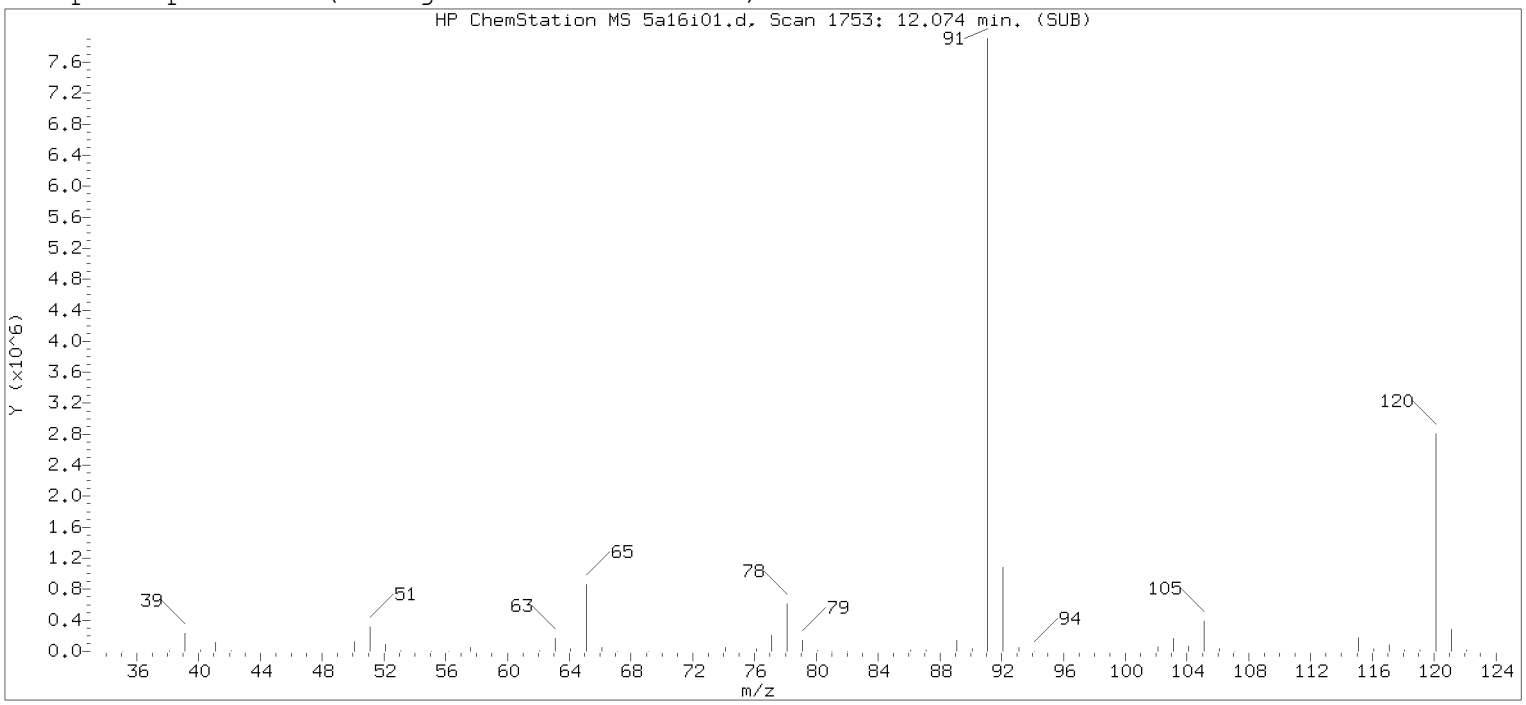
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1707
Retention Time (minutes): 11.793
Quant Ion : 55.00
Area (flag) : 1696307MA
On-Column Amount (ng) : 3925.7848
Integration start scan : 1699 Integration stop scan: 1729
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

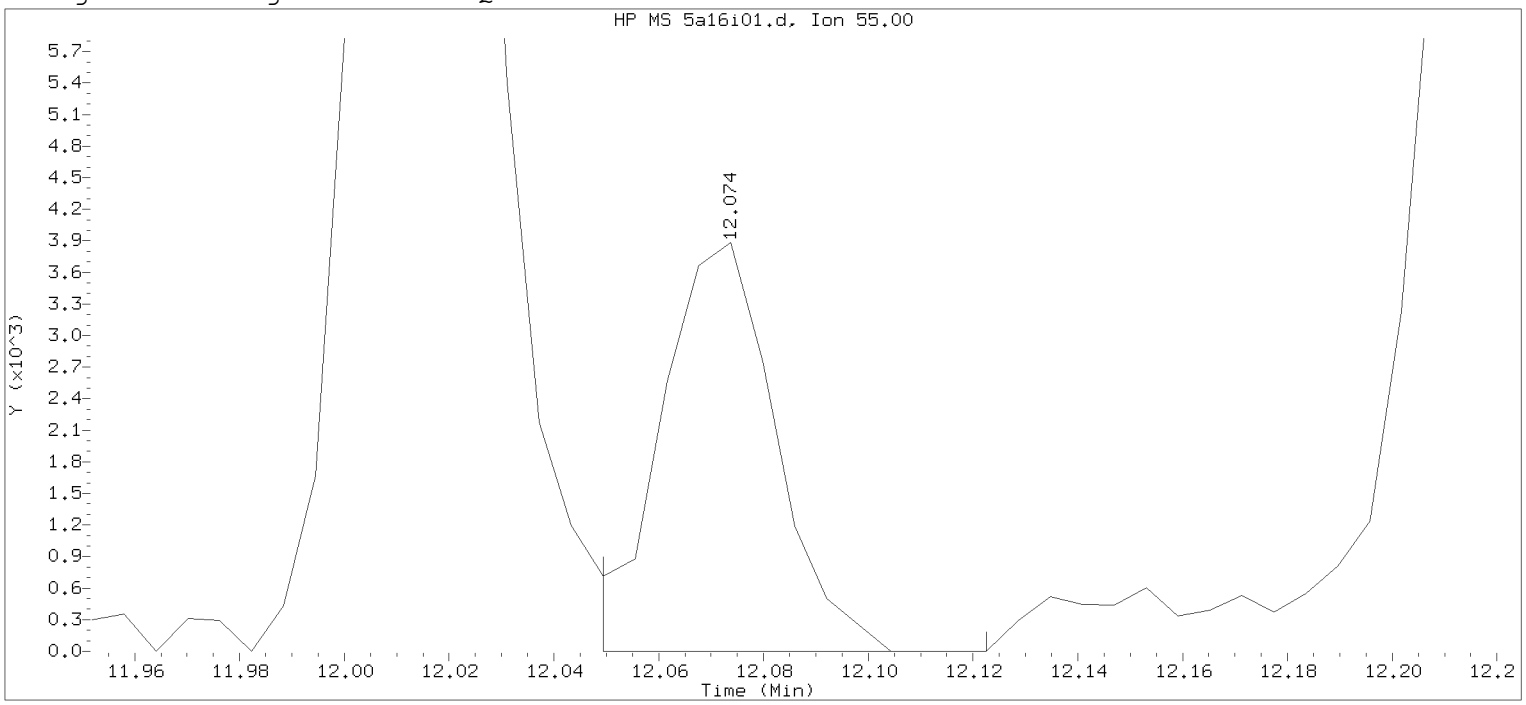
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



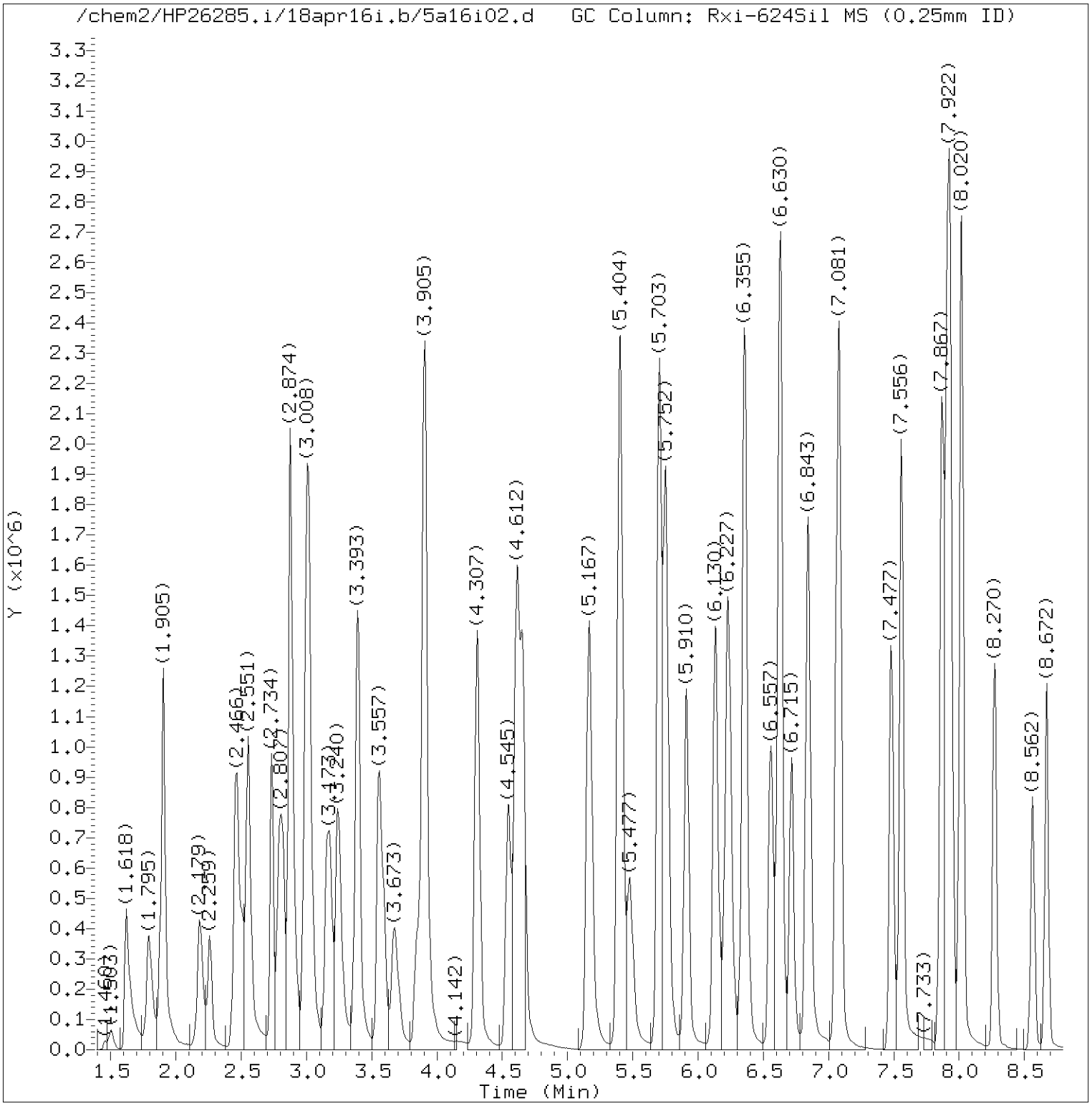
Data File: /chem2/HP26285.i/18apr16i.b/5a16i01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 10:41 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:07
Date, time and analyst ID of latest file update: 16-Apr-2018 12:07 lcp00895

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1753
Retention Time (minutes): 12.074
Quant Ion : 55.00
Area : 5869
On-column Amount (ng) : 3750.0000
Integration start scan : 1748 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for this report



Total Ion Chromatogram (TIC)

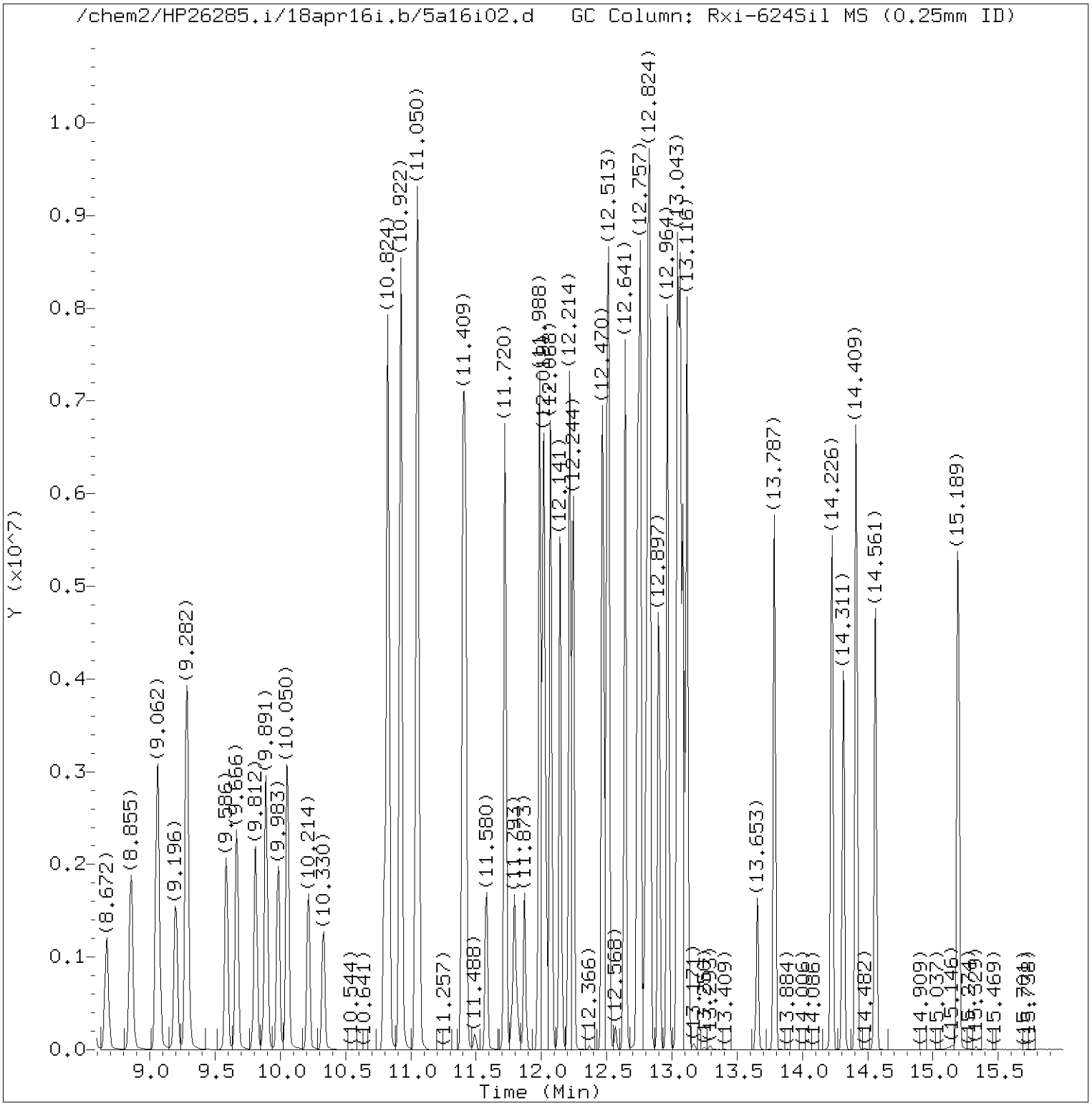
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	920066	112.550
4) Chloromethane	(2)	1.789	50	705438	109.837
6) Vinyl Chloride	(2)	1.881	62	683374	106.776
5) 1,3-Butadiene	(2)	1.905	39	498335	94.563
8) Bromomethane	(2)	2.179	94	559555	108.073
9) Chloroethane	(2)	2.259	64	359775	107.347
10) Dichlorofluoromethane	(2)	2.454	67	1062140	105.757
12) Trichlorofluoromethane	(2)	2.472	101	952529	109.698
11) n-Pentane	(2)	2.551	43	718524	111.928
14) Ethyl ether	(2)	2.734	59	593274	106.929
15) Freon 123a	(2)	2.807	67	761117	108.793
16) Acrolein	(1)	2.874	56	2509506	921.810
17) 1,1-Dichloroethene	(2)	2.996	96	608267	111.836
17) 1,1-Dichloroethene	(2)	2.990	63	290831	111.433
19) Freon 113	(2)	3.015	101	682404	115.553
18) Acetone	(1)	3.021	58	232582	208.621
21) 2-Propanol	(1)	3.167	45	413826	569.999
22) Methyl Iodide	(2)	3.173	142	1338152	110.947
23) Carbon Disulfide	(2)	3.240	76	1905868	117.514
27) Methyl Acetate	(2)	3.374	43	879490	108.015
25) Allyl Chloride	(2)	3.393	41	990706	105.664
28) Methylene Chloride	(2)	3.551	84	735990	108.756
29)*t-Butyl alcohol-d10	(1)	3.563	65	340907	250.000
30) t-Butyl alcohol	(1)	3.673	59	883632	568.388
31) Acrylonitrile	(2)	3.844	53	469811	117.080
33) Methyl Tertiary Butyl Ether	(2)	3.898	73	2087791	109.211
32) trans-1,2-Dichloroethene	(2)	3.911	96	707244	108.556
34) n-Hexane	(2)	4.307	57	1057506	119.680
36) 1,1-Dichloroethane	(2)	4.545	63	1237387	108.038
38) di-Isopropyl ether	(2)	4.612	45	2258055	108.081
39) 2-Chloro-1,3-butadiene	(2)	4.654	53	1004290	113.372
40) Ethyl t-butyl ether	(2)	5.167	59	2110077	110.136
44) 2-Butanone	(2)	5.392	43	1299910	234.198
42) cis-1,2-Dichloroethene	(2)	5.404	96	826501	109.350
45) 2,2-Dichloropropane	(2)	5.410	77	751500	112.727
47) Propionitrile	(1)	5.477	54	902953	505.553
48) Methacrylonitrile	(2)	5.703	67	1227216	276.967
49) Bromochloromethane	(2)	5.746	128	427129	108.247

* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.764	71	372207	191.724
51) Chloroform	(2)	5.910	83	1300694	109.246
53) 1,1,1-Trichloroethane	(2)	6.130	97	1152516	105.459
52)$Dibromofluoromethane	(2)	6.136	113	332179	50.391
52)$Dibromofluoromethane	(2)	6.136	111	338460	50.680
43) 1,2-Dichloroethene (Total)	(2)		96	1533745	217.906
54) Cyclohexane	(2)	6.227	56	1204966	116.824
54) Cyclohexane	(2)	6.233	84	1022207	117.295
54) Cyclohexane	(2)	6.227	69	381436	120.322
56) Carbon Tetrachloride	(2)	6.349	117	975976	116.950
55) 1,1-Dichloropropene	(2)	6.361	75	981205	110.137
58) Isobutyl Alcohol	(1)	6.557	41	684344M	1393.014
57)$1,2-Dichloroethane-d4	(2)	6.611	102	74713	50.664
57)$1,2-Dichloroethane-d4	(2)	6.605	65	332239	50.526
57)$1,2-Dichloroethane-d4	(2)	6.605	104	47397	50.595
60) Benzene	(2)	6.630	78	3031837	107.072
61) 1,2-Dichloroethane	(2)	6.715	62	929075	105.590
61) 1,2-Dichloroethane	(2)	6.715	98	91542	115.962
65) t-Amyl methyl ether	(2)	6.843	73	2118189	110.434
66)*Fluorobenzene	(2)	7.056	96	1279710	50.000
67) n-Heptane	(2)	7.081	43	1138925	124.851
69) n-Butanol	(1)	7.477	56	1172706	3049.118
71) Trichloroethene	(2)	7.556	95	810458	109.253
73) Methylcyclohexane	(2)	7.867	83	1266901	109.678
73) Methylcyclohexane	(2)	7.867	98	566737	111.805
74) 1,2-Dichloropropane	(2)	7.904	63	779210	109.135
72) t-Amyl ethyl ether	(2)	7.928	87	1126746	112.102
76) 1,4-Dioxane	(1)	8.007	88	136383M	1289.004
77) Methyl Methacrylate	(2)	8.014	69	764658	117.203
75) Dibromomethane	(2)	8.020	93	508816	109.023
79) Bromodichloromethane	(2)	8.270	83	1008904	119.871
80) 2-Nitropropane	(2)	8.562	41	636005	258.613
81) 2-Chloroethyl Vinyl Ether	(2)	8.672	63	627058	114.795
82) cis-1,3-Dichloropropene	(2)	8.855	75	1306708	117.894
83) 4-Methyl-2-pentanone	(2)	9.062	43	2614489	229.225
84)$Toluene-d8	(3)	9.196	98	1231429	49.216
84)$Toluene-d8	(3)	9.196	100	809145	49.423
89) Toluene	(3)	9.282	92	2001659	107.746

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	1183393	121.220
92) Ethyl Methacrylate	(3)	9.666	69	1295768	119.286
93) 1,1,2-Trichloroethane	(3)	9.812	97	759676	109.162
94) Tetrachloroethene	(3)	9.891	166	959990	109.589
95) 1,3-Dichloropropane	(3)	9.983	76	1203523	108.485
97) 2-Hexanone	(3)	10.050	43	2113059	226.418
91) 1,3-Dichloropropene (total)	(3)		100	2490101	239.114
98) Dibromochloromethane	(3)	10.214	129	897163	100.083
100) 1,2-Dibromoethane	(3)	10.330	107	858118	113.305
101)*Chlorobenzene-d5	(3)	10.800	117	998212	50.000
103) Chlorobenzene	(3)	10.824	112	2411922	110.340
102) 1-Chlorohexane	(3)	10.824	91	1158722	115.438
104) 1,1,1,2-Tetrachloroethane	(3)	10.922	131	853580	118.617
105) Ethylbenzene	(3)	10.928	91	3940099	111.521
107) m+p-Xylene	(3)	11.050	106	3186187	224.951
108) o-Xylene	(3)	11.397	106	1592341	113.746
110) Styrene	(3)	11.415	104	2667447	118.580
111) Bromoform	(3)	11.580	173	707908	100.047
112) Isopropylbenzene	(3)	11.720	105	3991179	115.943
109) Xylene (Total)	(3)		106	4778528	338.697
113) Cyclohexanone	(1)	11.793	55	724118	1355.634
115)$4-Bromofluorobenzene	(3)	11.873	95	487559	50.899
115)$4-Bromofluorobenzene	(3)	11.873	174	437823	50.210
117) 1,1,2,2-Tetrachloroethane	(4)	11.988	83	1356594	113.320
116) Bromobenzene	(4)	11.988	156	1130122	109.339
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	910329	295.868
118) 1,2,3-Trichloropropane	(4)	12.031	110	388859	109.071
120) n-Propylbenzene	(4)	12.068	91	4711026	111.429
121) 2-Chlorotoluene	(4)	12.147	126	996690	107.876
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	3479121	113.783
122) 4-Chlorotoluene	(4)	12.244	126	1051591	108.456
125) tert-Butylbenzene	(4)	12.470	134	792077	113.809
126) Pentachloroethane	(4)	12.500	167	677433	113.094
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	3647186	116.212
128) sec-Butylbenzene	(4)	12.641	105	4497556	118.650
130) 1,3-Dichlorobenzene	(4)	12.738	146	2200619	112.738
131) p-Isopropyltoluene	(4)	12.757	119	4008732	120.214
132)*1,4-Dichlorobenzene-d4	(4)	12.799	152	577309	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.818	146	2242037	114.804
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	3594812	109.847
136) Benzyl Chloride	(4)	12.897	91	2760613	104.163
137) 1,3-Diethylbenzene	(4)	12.964	119	2331389	112.114
138) 1,4-Diethylbenzene	(4)	13.043	119	2473940	114.440
140) n-Butylbenzene	(4)	13.061	92	2023975	120.682
139) 1,2-Dichlorobenzene	(4)	13.086	146	2060345	114.009
141) 1,2-Diethylbenzene	(4)	13.116	119	1902618	109.518
142) Diethylbenzene (total)	(4)		100	6707947	336.073
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	321447	131.646
145) 1,3,5-Trichlorobenzene	(4)	13.787	180	1609474	119.080
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	1455196	119.656
148) Hexachlorobutadiene	(4)	14.317	225	696776	130.146
149) Naphthalene	(4)	14.409	128	4487549	121.471
150) 1,2,3-Trichlorobenzene	(4)	14.561	180	1303635	119.440
151) 2-Methylnaphthalene	(4)	15.189	142	2468119	118.614

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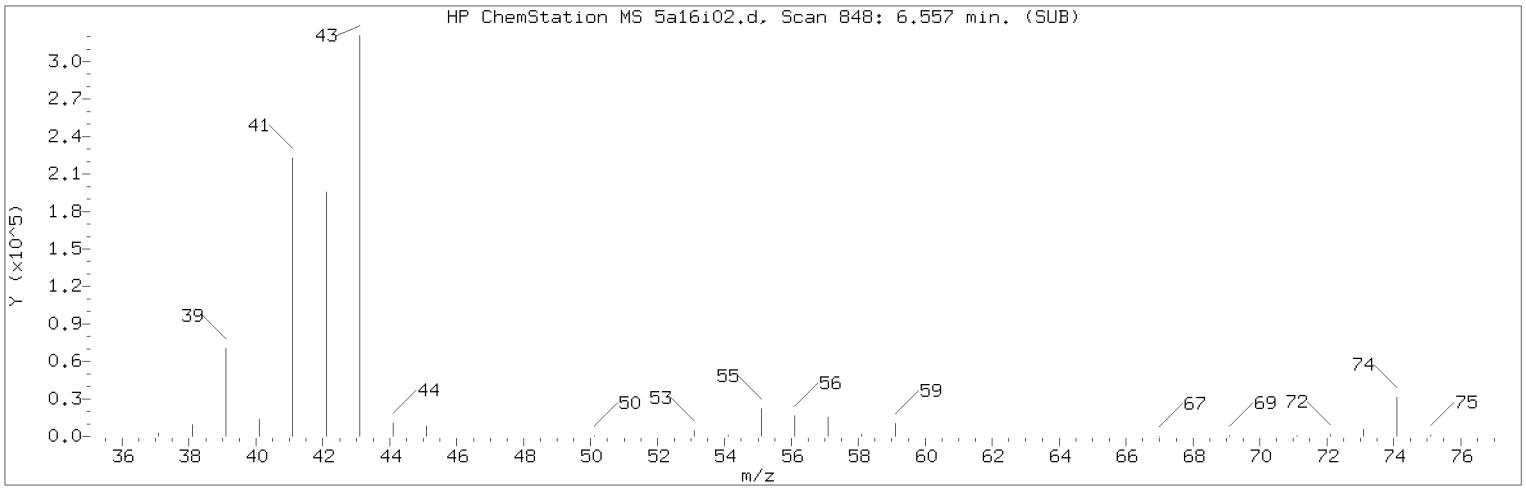
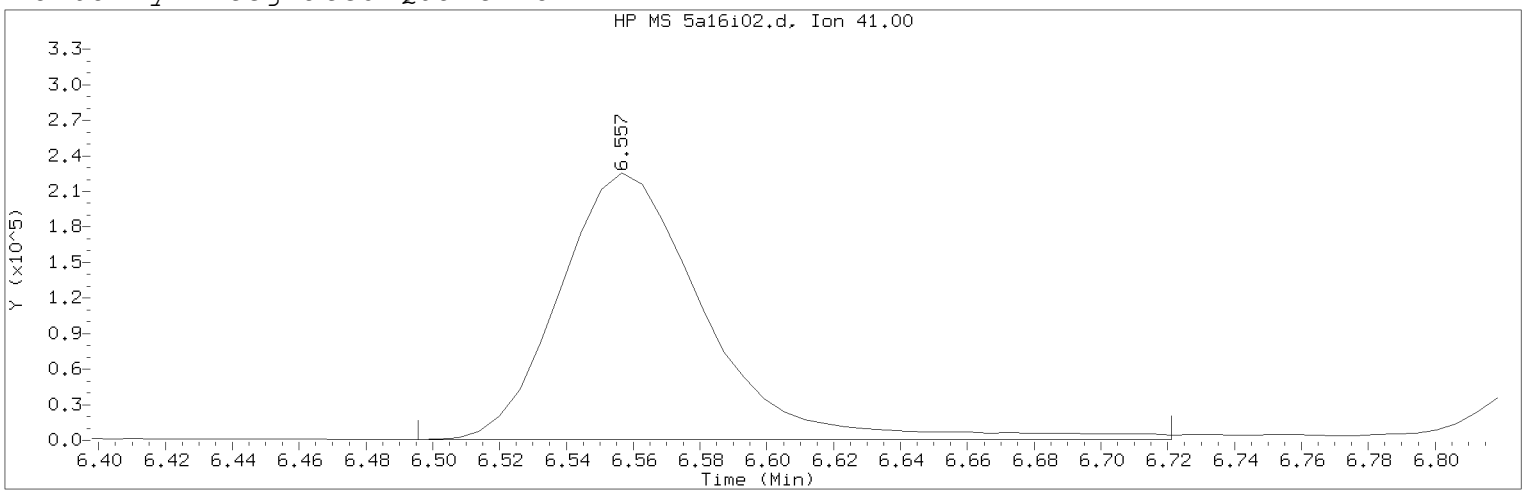
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

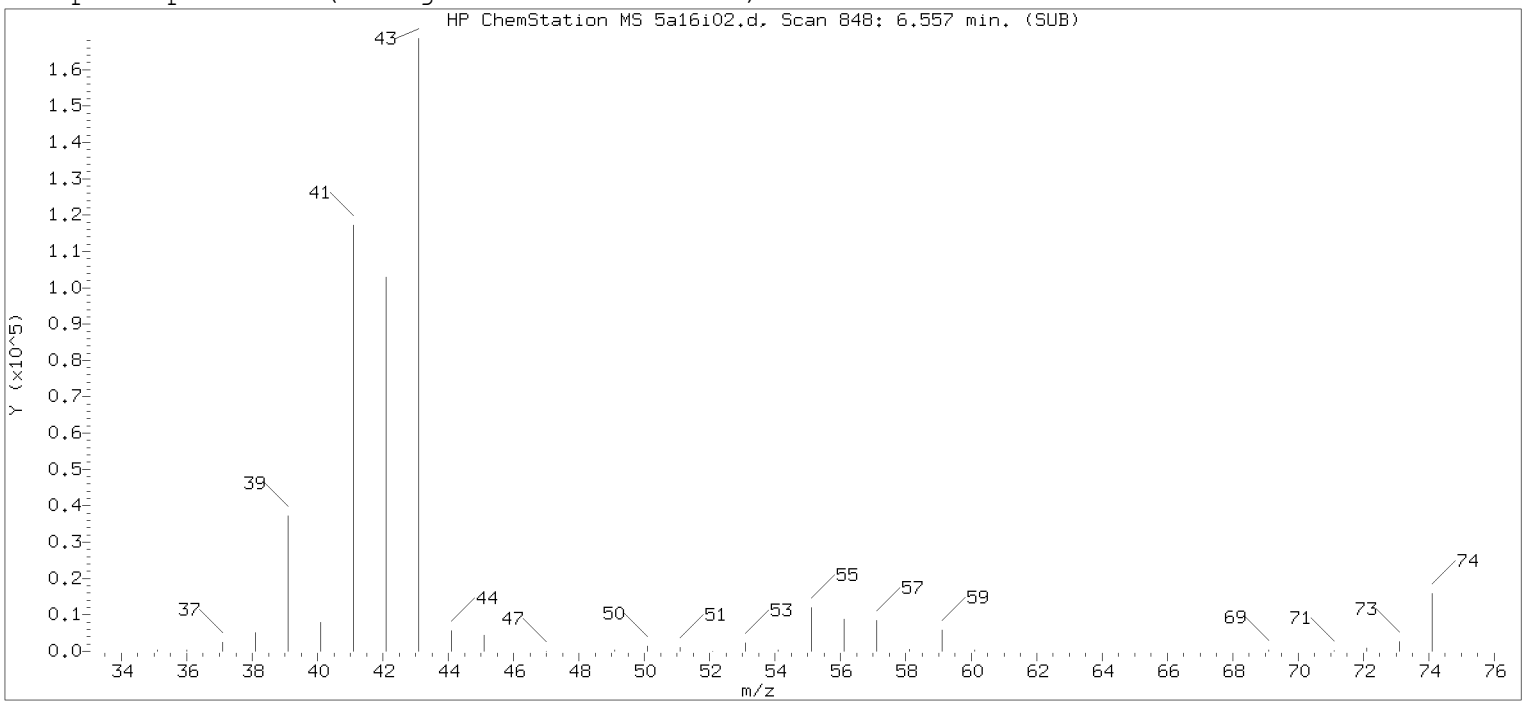
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 848
Retention Time (minutes): 6.557
Quant Ion : 41.00
Area (flag) : 684344M
On-Column Amount (ng) : 1393.0145
Integration start scan : 837 Integration stop scan: 874
Y at integration start : 542 Y at integration end: 542

Reason for manual integration: improper integration

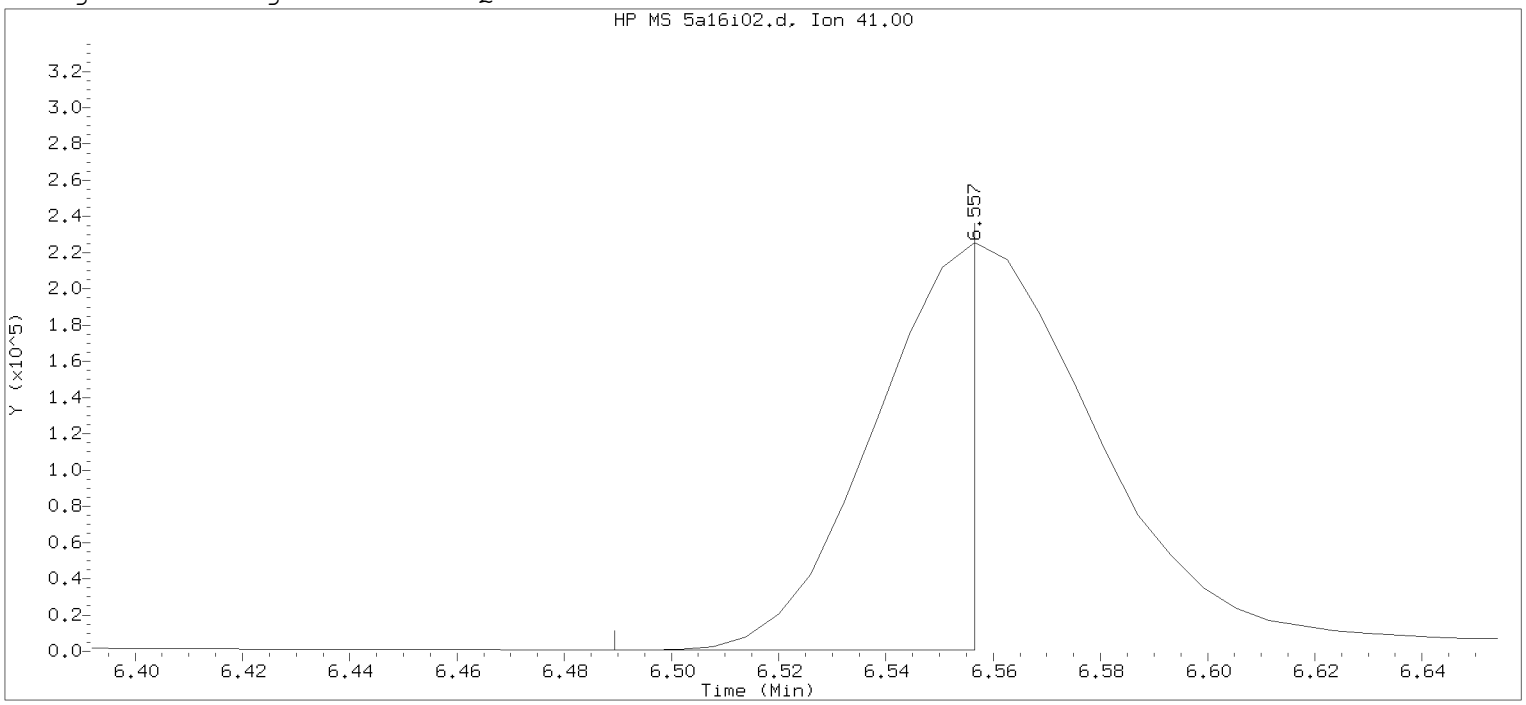
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

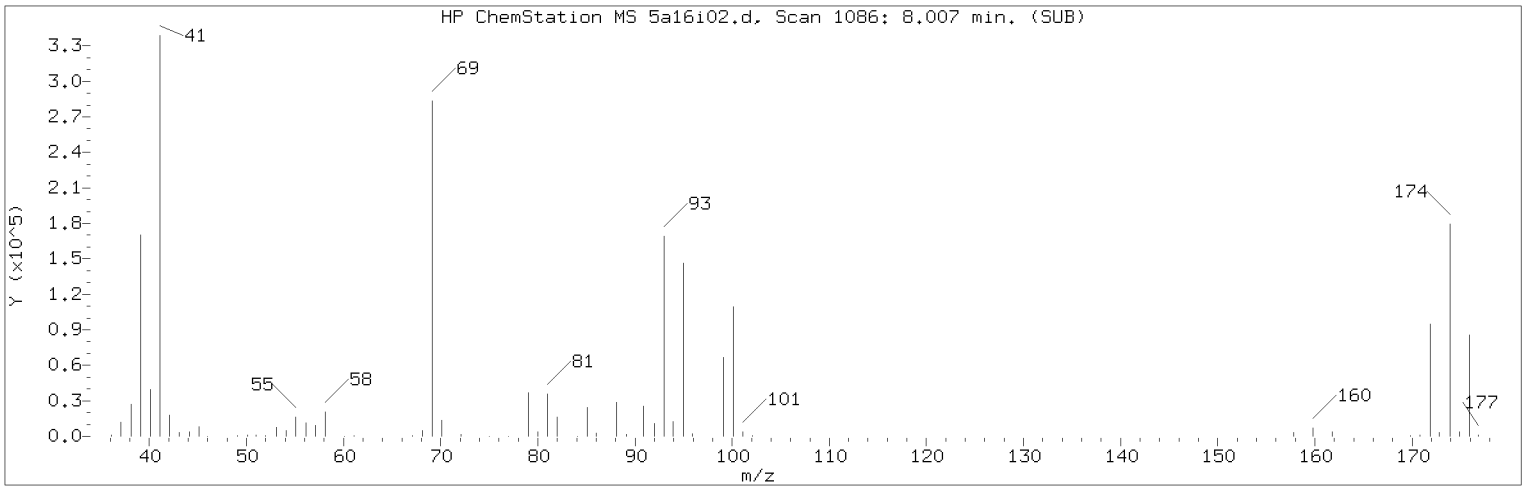
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:14
Date, time and analyst ID of latest file update: 16-Apr-2018 12:14 lcp00895

Sample Name: VSTD100 Lab Sample ID: VSTD100

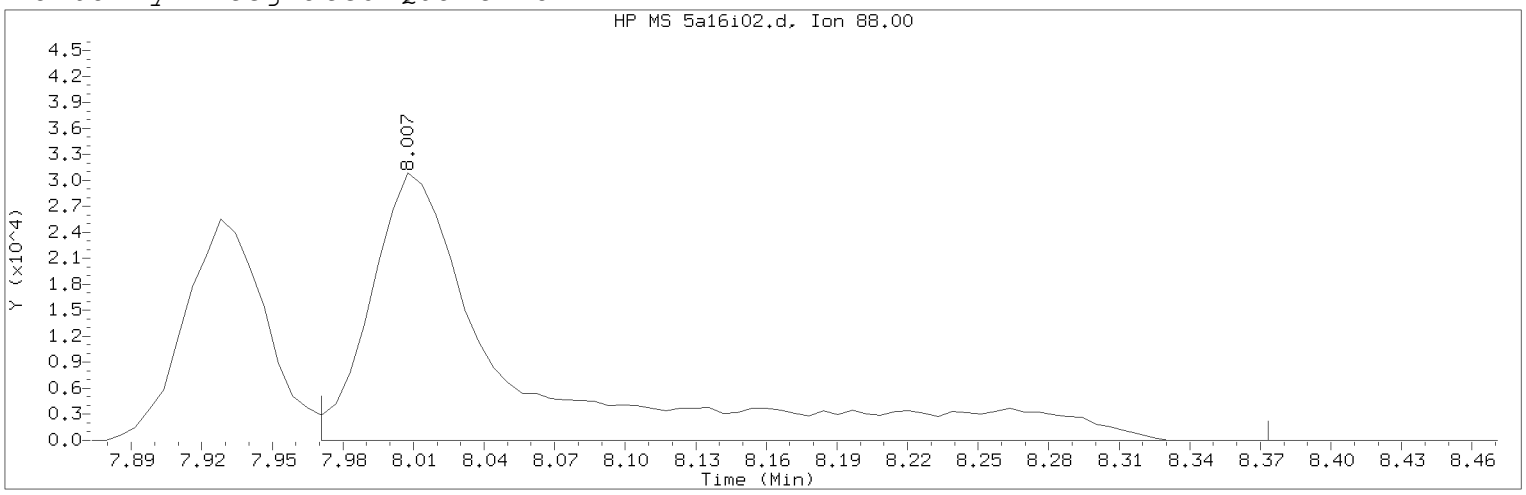
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 848
Retention Time (minutes): 6.557
Quant Ion : 41.00
Area : 284142
On-column Amount (ng) : 734.5072
Integration start scan : 836 Integration stop scan: 847
Y at integration start : 655 Y at integration end: 655

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:41
Date, time and analyst ID of latest file update: 16-Apr-2018 15:41 kk10002

Sample Name: VSTD100 Lab Sample ID: VSTD100

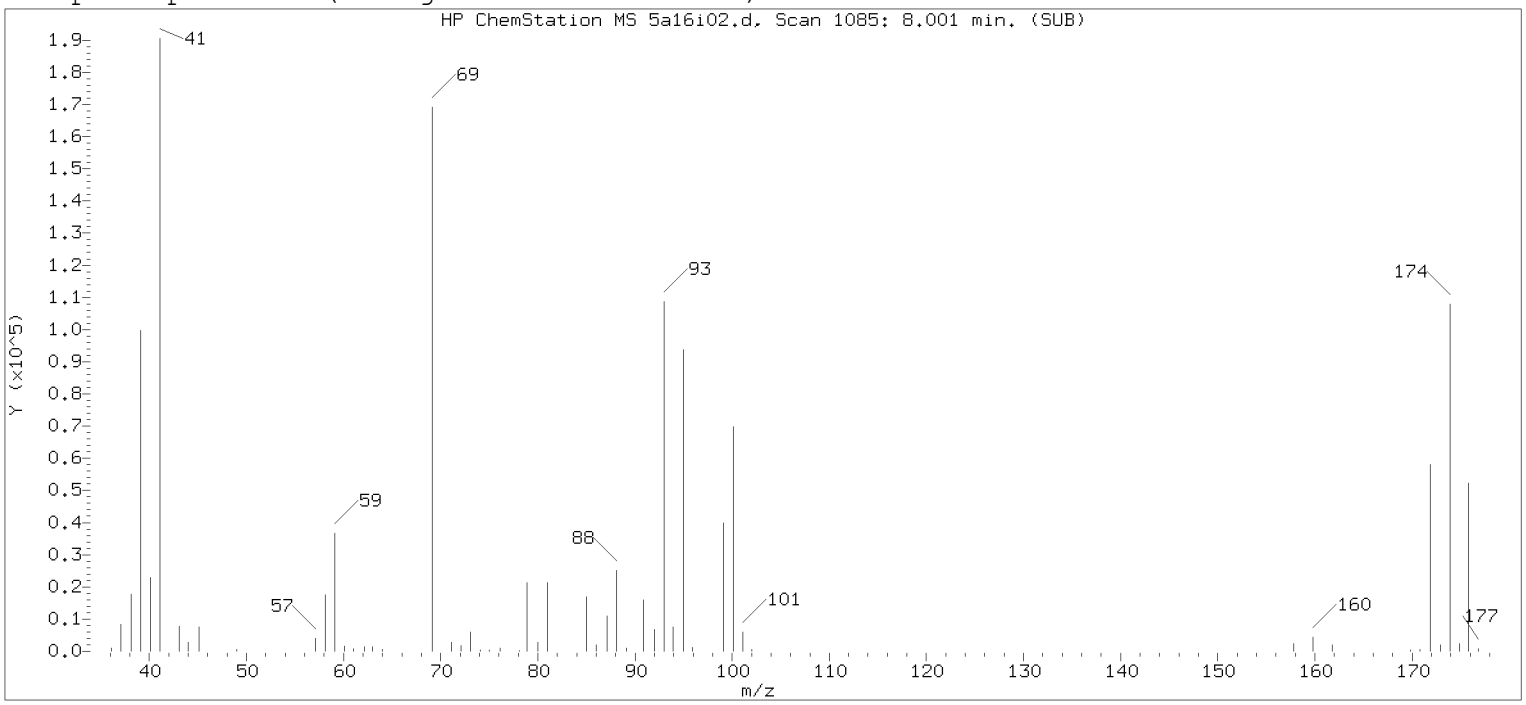
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1086
Retention Time (minutes): 8.007
Quant Ion : 88.00
Area (flag) : 136383M
On-Column Amount (ng) : 1289.0045
Integration start scan : 1079 Integration stop scan: 1145
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

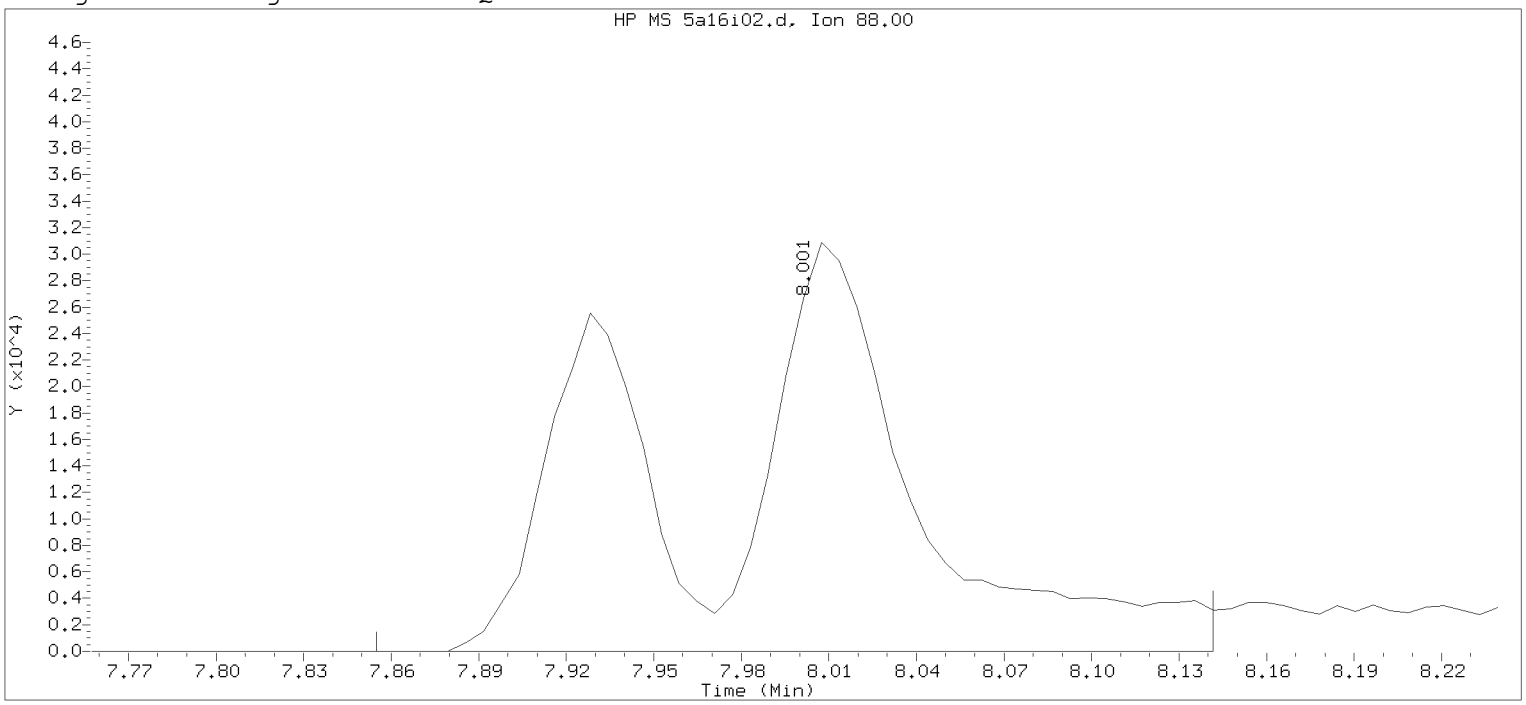
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



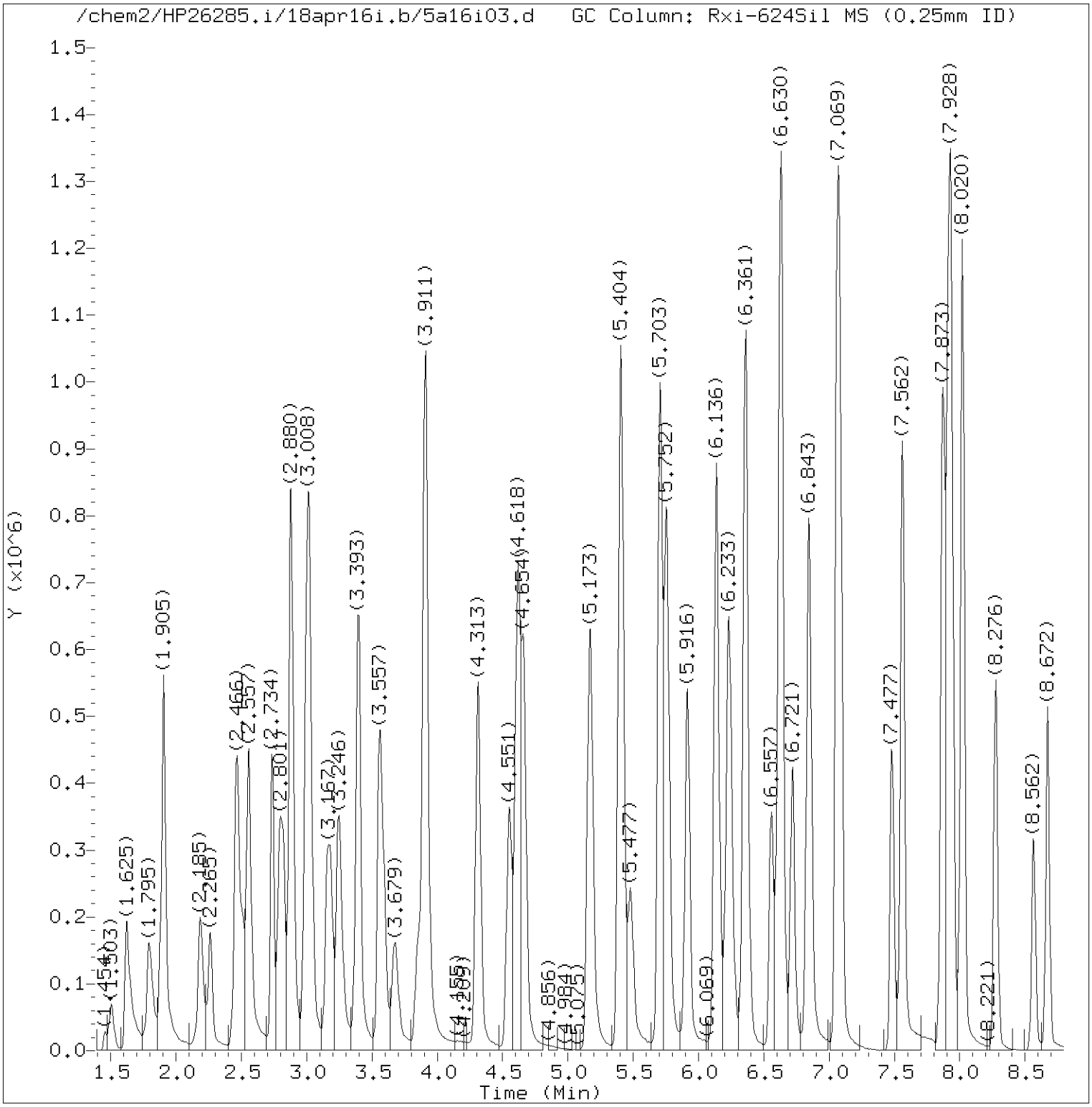
Data File: /chem2/HP26285.i/18apr16i.b/5a16i02.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:02 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:14
Date, time and analyst ID of latest file update: 16-Apr-2018 12:14 lcp00895

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1085
Retention Time (minutes): 8.001
Quant Ion : 88.00
Area : 164951
On-column Amount (ng) : 1304.0864
Integration start scan : 1060 Integration stop scan: 1107
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used. FID Page 1



Total Ion Chromatogram (TIC)

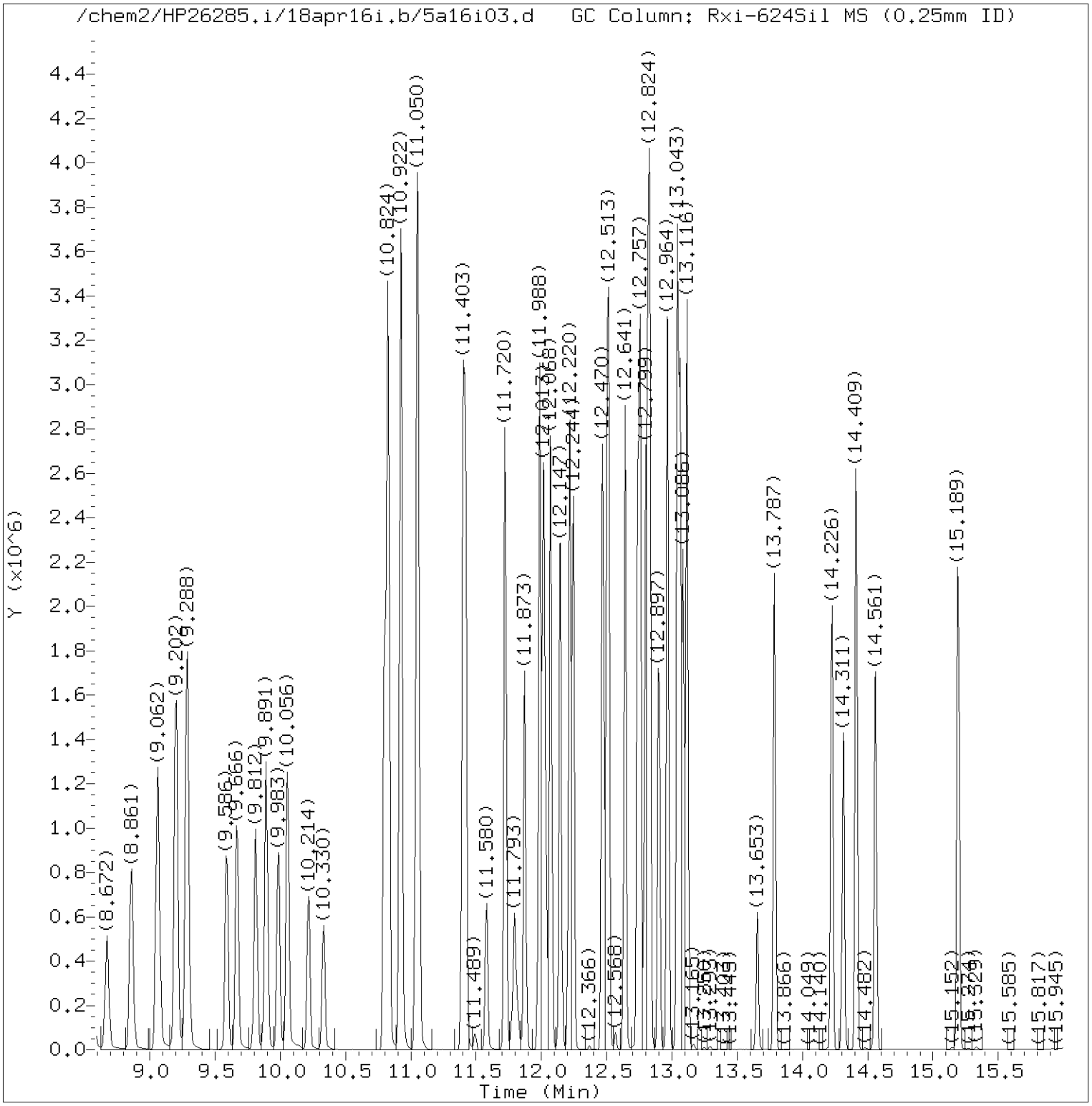
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	404638	48.696
4) Chloromethane	(2)	1.795	50	299112	45.817
6) Vinyl Chloride	(2)	1.887	62	302162	46.447
5) 1,3-Butadiene	(2)	1.905	39	226588	42.300
8) Bromomethane	(2)	2.185	94	243268	46.223
9) Chloroethane	(2)	2.265	64	161252	47.333
10) Dichlorofluoromethane	(2)	2.460	67	492824	48.275
12) Trichlorofluoromethane	(2)	2.478	101	421168	47.718
11) n-Pentane	(2)	2.557	43	315016	48.276
14) Ethyl ether	(2)	2.734	59	269379	47.765
15) Freon 123a	(2)	2.801	67	349875	49.200
16) Acrolein	(1)	2.880	56	1029568	446.699
17) 1,1-Dichloroethene	(2)	2.990	96	272479	49.286
17) 1,1-Dichloroethene	(2)	2.990	63	127730	48.147
18) Acetone	(1)	3.021	58	85095	90.155
19) Freon 113	(2)	3.021	101	293666	48.921
21) 2-Propanol	(1)	3.167	45	140766	229.013
22) Methyl Iodide	(2)	3.179	142	592142	48.299
23) Carbon Disulfide	(2)	3.246	76	838068	50.837
27) Methyl Acetate	(2)	3.380	43	374100	45.201
25) Allyl Chloride	(2)	3.399	41	459952	48.261
28) Methylene Chloride	(2)	3.557	84	329895	47.958
29)*t-Butyl alcohol-d10	(1)	3.569	65	288622	250.000
30) t-Butyl alcohol	(1)	3.679	59	308131	234.108
31) Acrylonitrile	(2)	3.850	53	185426	45.460
33) Methyl Tertiary Butyl Ether	(2)	3.905	73	928496	47.782
32) trans-1,2-Dichloroethene	(2)	3.911	96	323348	48.827
34) n-Hexane	(2)	4.313	57	416062	46.323
36) 1,1-Dichloroethane	(2)	4.551	63	563832	48.431
38) di-Isopropyl ether	(2)	4.618	45	1027706	48.394
39) 2-Chloro-1,3-butadiene	(2)	4.661	53	461225	51.223
40) Ethyl t-butyl ether	(2)	5.173	59	938259	48.179
44) 2-Butanone	(2)	5.392	43	503644	89.268
42) cis-1,2-Dichloroethene	(2)	5.404	96	372648	48.504
45) 2,2-Dichloropropane	(2)	5.410	77	350663	51.748
47) Propionitrile	(1)	5.477	54	347724	229.955
48) Methacrylonitrile	(2)	5.703	67	531139	117.928
49) Bromochloromethane	(2)	5.752	128	190986	47.617

* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.764	71	146585	89.184
51) Chloroform	(2)	5.916	83	580647	47.979
52)$Dibromofluoromethane	(2)	6.136	113	336852	50.272
52)$Dibromofluoromethane	(2)	6.136	111	343892	50.659
53) 1,1,1-Trichloroethane	(2)	6.136	97	521376	46.934
43) 1,2-Dichloroethene (Total)	(2)		96	695996	97.331
54) Cyclohexane	(2)	6.233	56	506888	48.347
54) Cyclohexane	(2)	6.233	84	425654	48.051
54) Cyclohexane	(2)	6.227	69	158748	49.265
56) Carbon Tetrachloride	(2)	6.349	117	430334	50.730
55) 1,1-Dichloropropene	(2)	6.361	75	449095	49.592
58) Isobutyl Alcohol	(1)	6.557	41	236761	569.243
57)$1,2-Dichloroethane-d4	(2)	6.611	102	75046	50.065
57)$1,2-Dichloroethane-d4	(2)	6.611	65	333489	49.894
57)$1,2-Dichloroethane-d4	(2)	6.611	104	47659	50.050
60) Benzene	(2)	6.636	78	1385680	48.143
61) 1,2-Dichloroethane	(2)	6.721	62	416146	46.529
61) 1,2-Dichloroethane	(2)	6.721	98	40065	49.930
65) t-Amyl methyl ether	(2)	6.843	73	941255	48.278
66)*Fluorobenzene	(2)	7.063	96	1300793	50.000
67) n-Heptane	(2)	7.087	43	423789	45.704
69) n-Butanol	(1)	7.483	56	380844	1169.604
71) Trichloroethene	(2)	7.562	95	366399	48.592
73) Methylcyclohexane	(2)	7.873	83	583162	49.667
73) Methylcyclohexane	(2)	7.867	98	256152	49.714
74) 1,2-Dichloropropane	(2)	7.910	63	353888	48.762
72) t-Amyl ethyl ether	(2)	7.934	87	504623	49.392
76) 1,4-Dioxane	(1)	8.014	88	51673M	576.852
77) Methyl Methacrylate	(2)	8.020	69	326315	49.205
75) Dibromomethane	(2)	8.020	93	224614	47.348
79) Bromodichloromethane	(2)	8.276	83	439070	51.322
80) 2-Nitropropane	(2)	8.568	41	240292	96.124
81) 2-Chloroethyl Vinyl Ether	(2)	8.672	63	267303	48.142
82) cis-1,3-Dichloropropene	(2)	8.861	75	576781	51.195
83) 4-Methyl-2-pentanone	(2)	9.062	43	1064472	91.815
84)$Toluene-d8	(3)	9.202	98	1269448	50.020
84)$Toluene-d8	(3)	9.202	100	832071	50.107
89) Toluene	(3)	9.288	92	900608	47.795

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	511960	51.703
92) Ethyl Methacrylate	(3)	9.666	69	556206	50.482
93) 1,1,2-Trichloroethane	(3)	9.812	97	340486	48.237
94) Tetrachloroethene	(3)	9.891	166	412510	46.427
95) 1,3-Dichloropropane	(3)	9.983	76	534267	47.480
97) 2-Hexanone	(3)	10.056	43	869395	91.844
91) 1,3-Dichloropropene (total)	(3)		100	1088741	102.898
98) Dibromochloromethane	(3)	10.214	129	378421	49.269
100) 1,2-Dibromoethane	(3)	10.330	107	374810	48.792
101)*Chlorobenzene-d5	(3)	10.800	117	1012481	50.000
102) 1-Chlorohexane	(3)	10.824	91	462964	45.473
103) Chlorobenzene	(3)	10.830	112	1058266	47.731
104) 1,1,1,2-Tetrachloroethane	(3)	10.922	131	365032	50.011
105) Ethylbenzene	(3)	10.928	91	1717220	47.919
107) m+p-Xylene	(3)	11.050	106	1377593	95.890
108) o-Xylene	(3)	11.397	106	684512	48.208
110) Styrene	(3)	11.415	104	1144426	50.158
111) Bromoform	(3)	11.580	173	273129	49.472
112) Isopropylbenzene	(3)	11.720	105	1634633	46.816
109) Xylene (Total)	(3)		106	2062105	144.098
113) Cyclohexanone	(1)	11.793	55	285522	631.363
115)$4-Bromofluorobenzene	(3)	11.873	95	493335	50.776
115)$4-Bromofluorobenzene	(3)	11.873	174	444579	50.266
117) 1,1,2,2-Tetrachloroethane	(4)	11.988	83	558517	47.606
116) Bromobenzene	(4)	11.988	156	472943	46.690
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	371893	123.335
118) 1,2,3-Trichloropropane	(4)	12.031	110	160913	46.055
120) n-Propylbenzene	(4)	12.068	91	1914255	46.201
121) 2-Chlorotoluene	(4)	12.147	126	418708	46.243
123) 1,3,5-Trimethylbenzene	(4)	12.220	105	1377509	45.969
122) 4-Chlorotoluene	(4)	12.244	126	442710	46.590
125) tert-Butylbenzene	(4)	12.470	134	306496	44.937
126) Pentachloroethane	(4)	12.501	167	280421	47.770
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	1433153	46.597
128) sec-Butylbenzene	(4)	12.641	105	1683482	45.318
130) 1,3-Dichlorobenzene	(4)	12.738	146	870326	45.496
131) p-Isopropyltoluene	(4)	12.757	119	1497147	45.812
132)*1,4-Dichlorobenzene-d4	(4)	12.799	152	565770	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

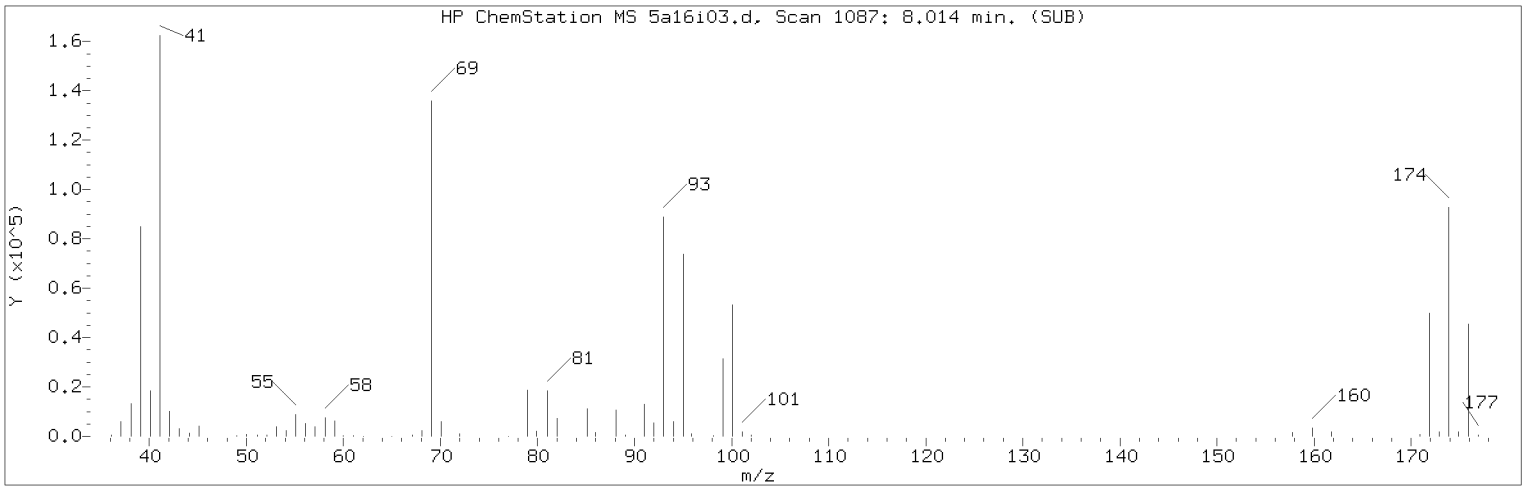
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

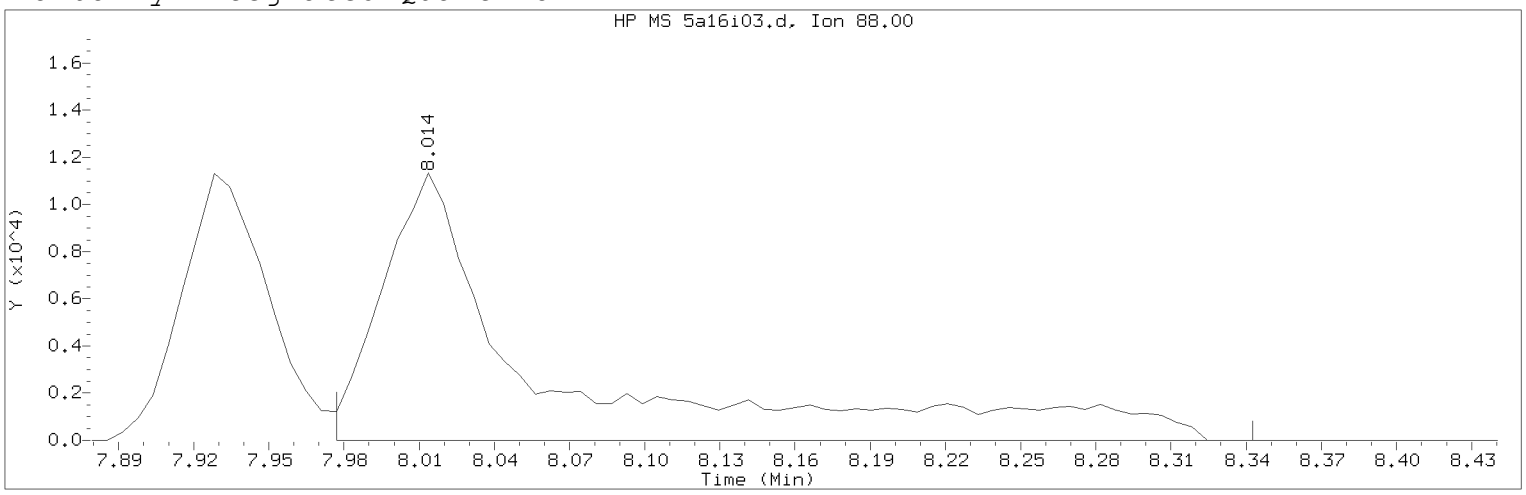
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.818	146	895329	46.780
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	1522762	47.480
136) Benzyl Chloride	(4)	12.897	91	1058972	42.253
137) 1,3-Diethylbenzene	(4)	12.970	119	985304	48.349
138) 1,4-Diethylbenzene	(4)	13.043	119	1012949	47.813
140) n-Butylbenzene	(4)	13.061	92	732503	44.567
139) 1,2-Dichlorobenzene	(4)	13.086	146	813507	45.934
141) 1,2-Diethylbenzene	(4)	13.116	119	803282	47.181
142) Diethylbenzene (total)	(4)		100	2801535	143.343
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	120108	50.192
145) 1,3,5-Trichlorobenzene	(4)	13.787	180	584433	44.122
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	530520	44.513
148) Hexachlorobutadiene	(4)	14.317	225	237890	45.340
149) Naphthalene	(4)	14.409	128	1744479	48.183
150) 1,2,3-Trichlorobenzene	(4)	14.561	180	475723	44.475
151) 2-Methylnaphthalene	(4)	15.195	142	983702	48.240

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

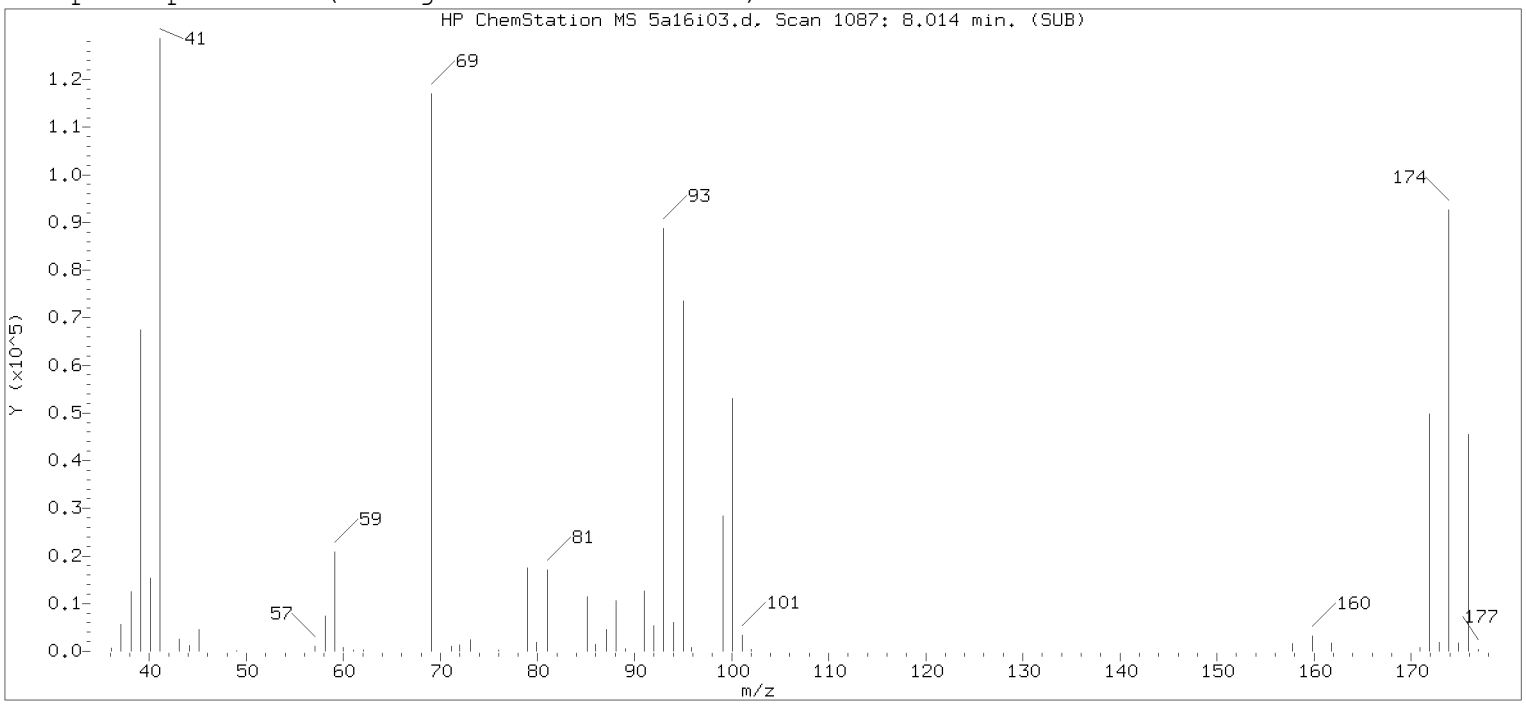
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1087
Retention Time (minutes): 8.014
Quant Ion : 88.00
Area (flag) : 51673M
On-Column Amount (ng) : 576.8519
Integration start scan : 1080 Integration stop scan: 1140
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

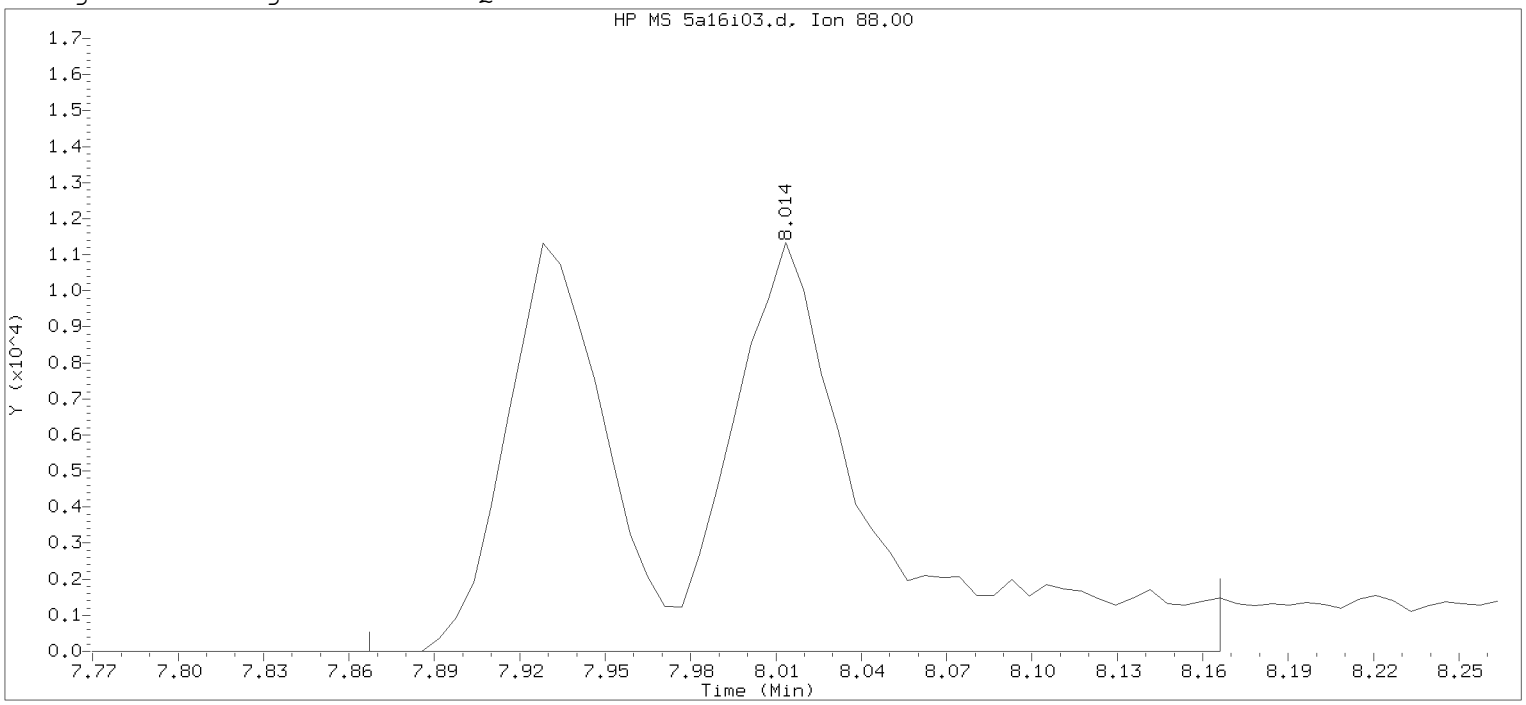
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



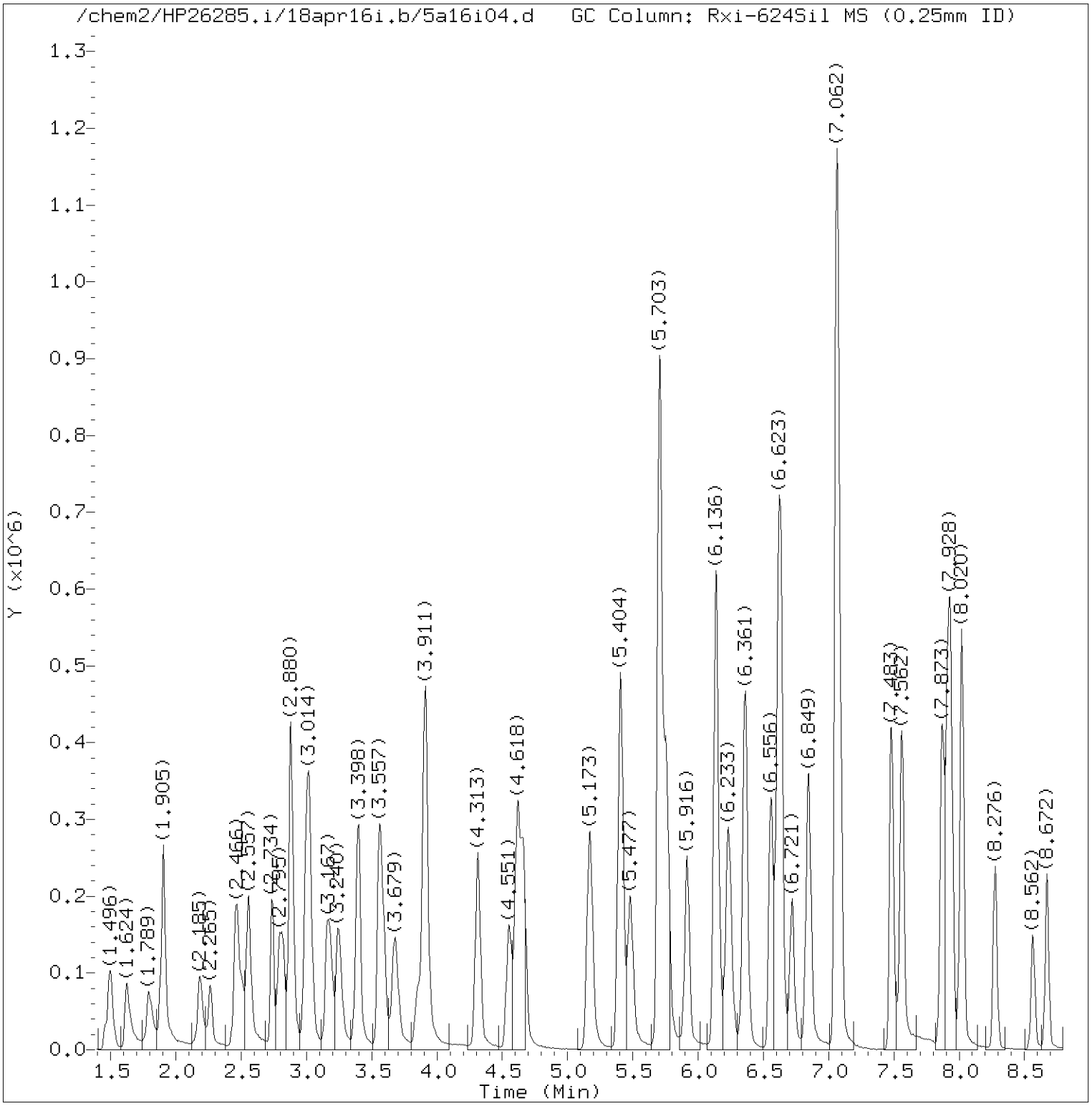
Data File: /chem2/HP26285.i/18apr16i.b/5a16i03.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:24 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:14
Date, time and analyst ID of latest file update: 16-Apr-2018 12:15 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1087
Retention Time (minutes): 8.014
Quant Ion : 88.00
Area : 66761
On-column Amount (ng) : 640.5893
Integration start scan : 1062 Integration stop scan: 1111
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for this report.



Total Ion Chromatogram (TIC)

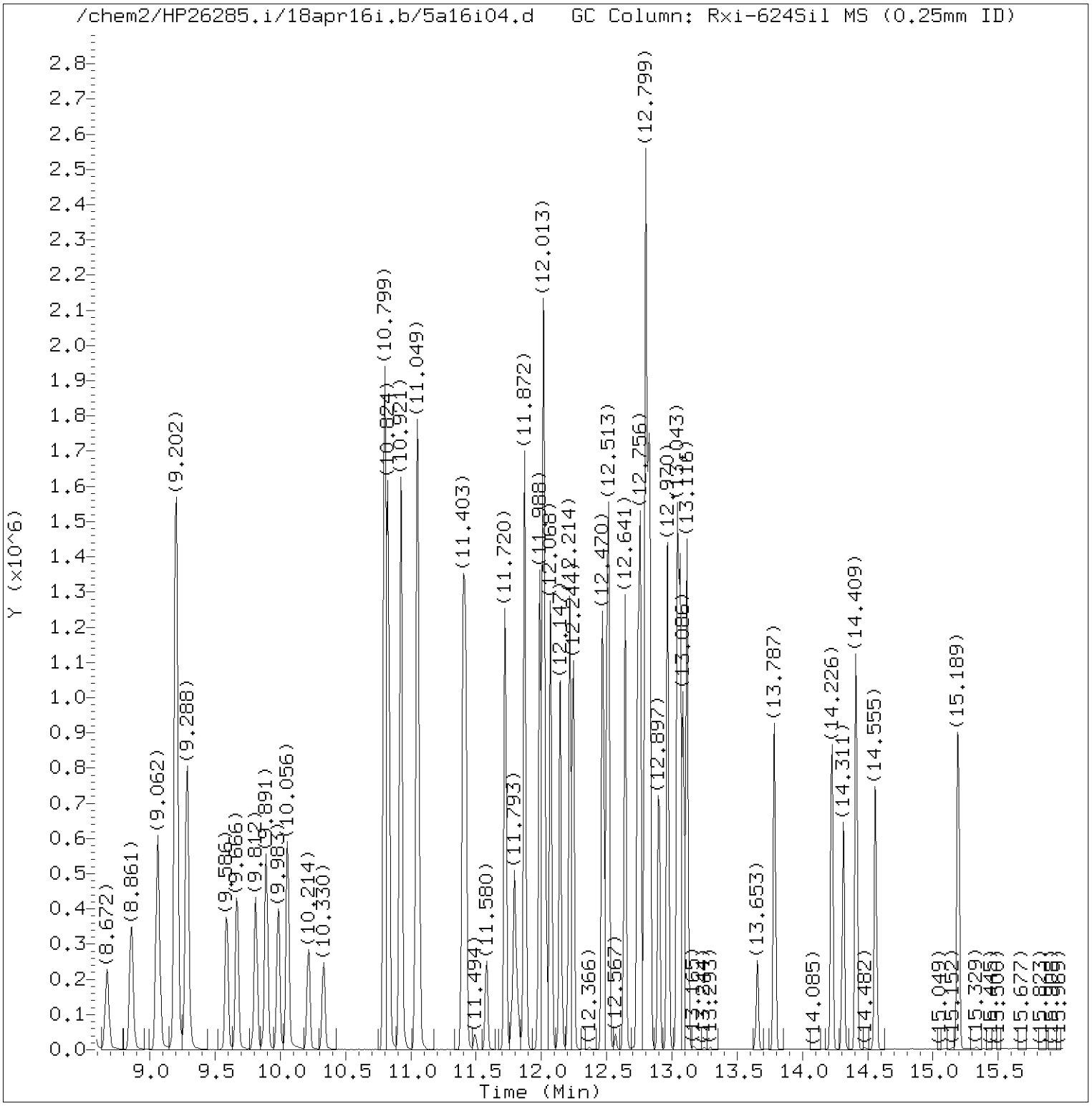
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	179726	21.588
4) Chloromethane	(2)	1.795	50	131804	20.151
6) Vinyl Chloride	(2)	1.887	62	137845	21.148
5) 1,3-Butadiene	(2)	1.905	39	109132	20.334
8) Bromomethane	(2)	2.185	94	112480	21.331
9) Chloroethane	(2)	2.265	64	72812	21.332
10) Dichlorofluoromethane	(2)	2.454	67	207227	20.260
12) Trichlorofluoromethane	(2)	2.478	101	190219	21.510
11) n-Pentane	(2)	2.557	43	137997	21.107
14) Ethyl ether	(2)	2.734	59	119483	21.145
15) Freon 123a	(2)	2.813	67	153099	21.488
16) Acrolein	(1)	2.880	56	498176	208.063
17) 1,1-Dichloroethene	(2)	2.990	96	122428	22.102
17) 1,1-Dichloroethene	(2)	2.996	63	58377	21.963
19) Freon 113	(2)	3.014	101	127055	21.125
18) Acetone	(1)	3.021	58	43358	44.219
22) Methyl Iodide	(2)	3.161	142	264032	21.495
21) 2-Propanol	(1)	3.167	45	135493	212.193
23) Carbon Disulfide	(2)	3.246	76	364384	22.061
27) Methyl Acetate	(2)	3.380	43	172360	20.785
25) Allyl Chloride	(2)	3.398	41	200913	21.040
28) Methylene Chloride	(2)	3.557	84	147887	21.458
29)*t-Butyl alcohol-d10	(1)	3.569	65	299832	250.000
30) t-Butyl alcohol	(1)	3.679	59	285578	208.861
31) Acrylonitrile	(2)	3.850	53	89877	21.992
33) Methyl Tertiary Butyl Ether	(2)	3.904	73	416970	21.417
32) trans-1,2-Dichloroethene	(2)	3.911	96	143068	21.562
34) n-Hexane	(2)	4.313	57	194464	21.609
36) 1,1-Dichloroethane	(2)	4.551	63	251357	21.549
38) di-Isopropyl ether	(2)	4.618	45	456319	21.446
39) 2-Chloro-1,3-butadiene	(2)	4.660	53	199448	22.108
40) Ethyl t-butyl ether	(2)	5.173	59	417583	21.401
44) 2-Butanone	(2)	5.392	43	248416	43.946
42) cis-1,2-Dichloroethene	(2)	5.404	96	162459	21.105
45) 2,2-Dichloropropane	(2)	5.416	77	152843	22.512
47) Propionitrile	(1)	5.483	54	325833	207.422
48) Methacrylonitrile	(2)	5.703	67	479953	106.358
49) Bromochloromethane	(2)	5.752	128	83595	20.802

* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.764	71	70181	41.103
51) Chloroform	(2)	5.916	83	259941	21.437
52)$Dibromofluoromethane	(2)	6.136	113	337762	50.311
52)$Dibromofluoromethane	(2)	6.142	111	341450	50.202
53) 1,1,1-Trichloroethane	(2)	6.136	97	240719	21.628
43) 1,2-Dichloroethene (Total)	(2)		96	305527	42.667
54) Cyclohexane	(2)	6.233	56	224633	21.384
54) Cyclohexane	(2)	6.233	84	188062	21.189
54) Cyclohexane	(2)	6.233	69	69264	21.454
56) Carbon Tetrachloride	(2)	6.355	117	183792	21.625
55) 1,1-Dichloropropene	(2)	6.361	75	196833	21.694
58) Isobutyl Alcohol	(1)	6.556	41	229259	530.598
57)$1,2-Dichloroethane-d4	(2)	6.611	102	76958	51.241
57)$1,2-Dichloroethane-d4	(2)	6.611	65	337091	50.336
57)$1,2-Dichloroethane-d4	(2)	6.611	104	48321	50.647
60) Benzene	(2)	6.636	78	617919	21.427
61) 1,2-Dichloroethane	(2)	6.721	62	186657	20.830
61) 1,2-Dichloroethane	(2)	6.721	98	17833	22.181
65) t-Amyl methyl ether	(2)	6.843	73	418677	21.433
66)*Fluorobenzene	(2)	7.062	96	1303303	50.000
67) n-Heptane	(2)	7.087	43	198719	21.390
69) n-Butanol	(1)	7.483	56	365059	1079.210
71) Trichloroethene	(2)	7.562	95	162762	21.544
73) Methylcyclohexane	(2)	7.867	83	246593	20.962
73) Methylcyclohexane	(2)	7.873	98	106984	20.723
74) 1,2-Dichloropropane	(2)	7.910	63	157009	21.592
72) t-Amyl ethyl ether	(2)	7.934	87	221186	21.608
76) 1,4-Dioxane	(1)	8.013	88	45824M	492.431
77) Methyl Methacrylate	(2)	8.020	69	142204	21.402
75) Dibromomethane	(2)	8.020	93	98120	20.643
79) Bromodichloromethane	(2)	8.276	83	186197	21.722
80) 2-Nitropropane	(2)	8.562	41	111439	44.493
81) 2-Chloroethyl Vinyl Ether	(2)	8.672	63	118372	21.278
82) cis-1,3-Dichloropropene	(2)	8.861	75	246701	21.855
83) 4-Methyl-2-pentanone	(2)	9.062	43	501081	43.137
84)$Toluene-d8	(3)	9.202	98	1277192	50.414
84)$Toluene-d8	(3)	9.202	100	829896	50.064
89) Toluene	(3)	9.288	92	403088	21.429

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	216856	21.939
92) Ethyl Methacrylate	(3)	9.666	69	241717	21.977
93) 1,1,2-Trichloroethane	(3)	9.812	97	148896	21.131
94) Tetrachloroethene	(3)	9.891	166	183389	20.676
95) 1,3-Dichloropropane	(3)	9.983	76	239192	21.294
97) 2-Hexanone	(3)	10.056	43	410704	43.464
91) 1,3-Dichloropropene (total)	(3)		100	463557	43.794
98) Dibromochloromethane	(3)	10.214	129	154091	21.599
100) 1,2-Dibromoethane	(3)	10.330	107	164639	21.470
101)*Chlorobenzene-d5	(3)	10.799	117	1010699	50.000
102) 1-Chlorohexane	(3)	10.824	91	209375	20.601
103) Chlorobenzene	(3)	10.830	112	467215	21.110
104) 1,1,1,2-Tetrachloroethane	(3)	10.921	131	155352	21.322
105) Ethylbenzene	(3)	10.928	91	760715	21.265
107) m+p-Xylene	(3)	11.049	106	612355	42.699
108) o-Xylene	(3)	11.397	106	300041	21.168
110) Styrene	(3)	11.415	104	498292	21.878
111) Bromoform	(3)	11.580	173	106521	21.487
112) Isopropylbenzene	(3)	11.720	105	739563	21.219
109) Xylene (Total)	(3)		106	912396	63.867
113) Cyclohexanone	(1)	11.793	55	229071	487.597
115)$4-Bromofluorobenzene	(3)	11.872	95	488548	50.372
115)$4-Bromofluorobenzene	(3)	11.872	174	449507	50.913
117) 1,1,2,2-Tetrachloroethane	(4)	11.988	83	245993	20.983
116) Bromobenzene	(4)	11.988	156	205985	20.351
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	326606	108.397
118) 1,2,3-Trichloropropane	(4)	12.031	110	71407	20.453
120) n-Propylbenzene	(4)	12.068	91	877629	21.198
121) 2-Chlorotoluene	(4)	12.147	126	185678	20.522
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	619862	20.701
122) 4-Chlorotoluene	(4)	12.244	126	196035	20.646
125) tert-Butylbenzene	(4)	12.470	134	137708	20.205
126) Pentachloroethane	(4)	12.500	167	114347	19.494
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	640290	20.834
128) sec-Butylbenzene	(4)	12.641	105	768959	20.715
130) 1,3-Dichlorobenzene	(4)	12.738	146	383464	20.061
131) p-Isopropyltoluene	(4)	12.756	119	680370	20.835
132)*1,4-Dichlorobenzene-d4	(4)	12.799	152	565345	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.817	146	388079	20.292
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	652924	20.374
136) Benzyl Chloride	(4)	12.897	91	431891	19.266
137) 1,3-Diethylbenzene	(4)	12.970	119	419017	20.577
138) 1,4-Diethylbenzene	(4)	13.043	119	430652	20.343
140) n-Butylbenzene	(4)	13.061	92	333522	20.307
139) 1,2-Dichlorobenzene	(4)	13.086	146	356757	20.159
141) 1,2-Diethylbenzene	(4)	13.116	119	339597	19.961
142) Diethylbenzene (total)	(4)		100	1189266	60.881
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	50300	21.036
145) 1,3,5-Trichlorobenzene	(4)	13.787	180	260478	19.680
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	229777	19.294
148) Hexachlorobutadiene	(4)	14.317	225	106056	20.229
149) Naphthalene	(4)	14.409	128	746410	20.632
150) 1,2,3-Trichlorobenzene	(4)	14.561	180	209312	19.583
151) 2-Methylnaphthalene	(4)	15.195	142	409131	20.078

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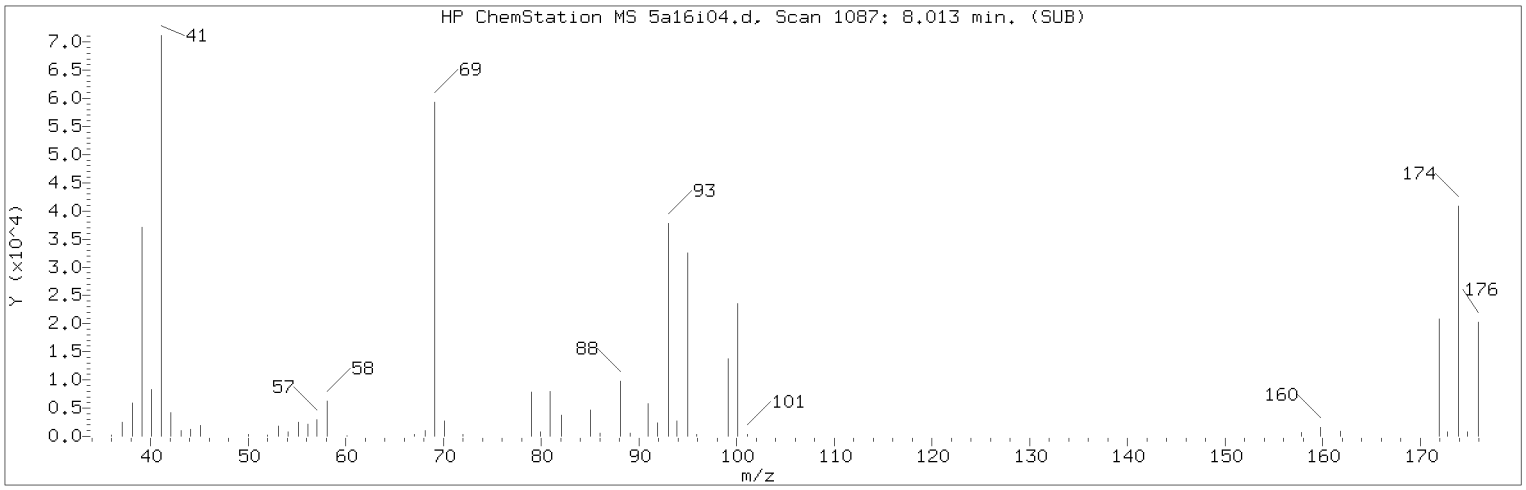
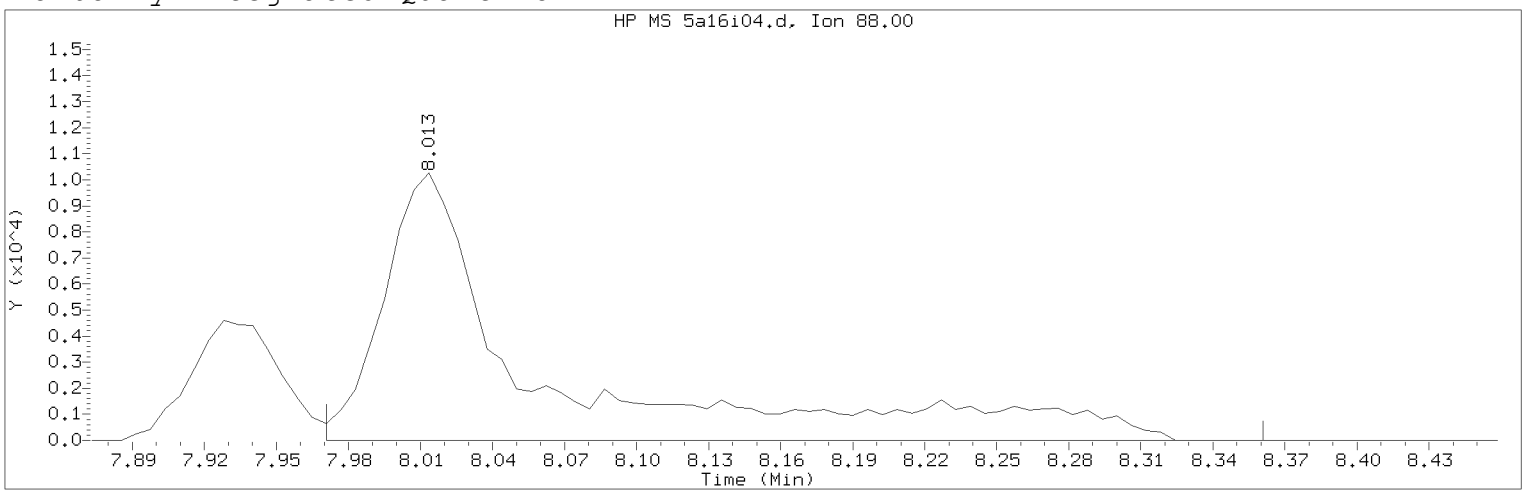
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD020 Lab Sample ID: VSTD020

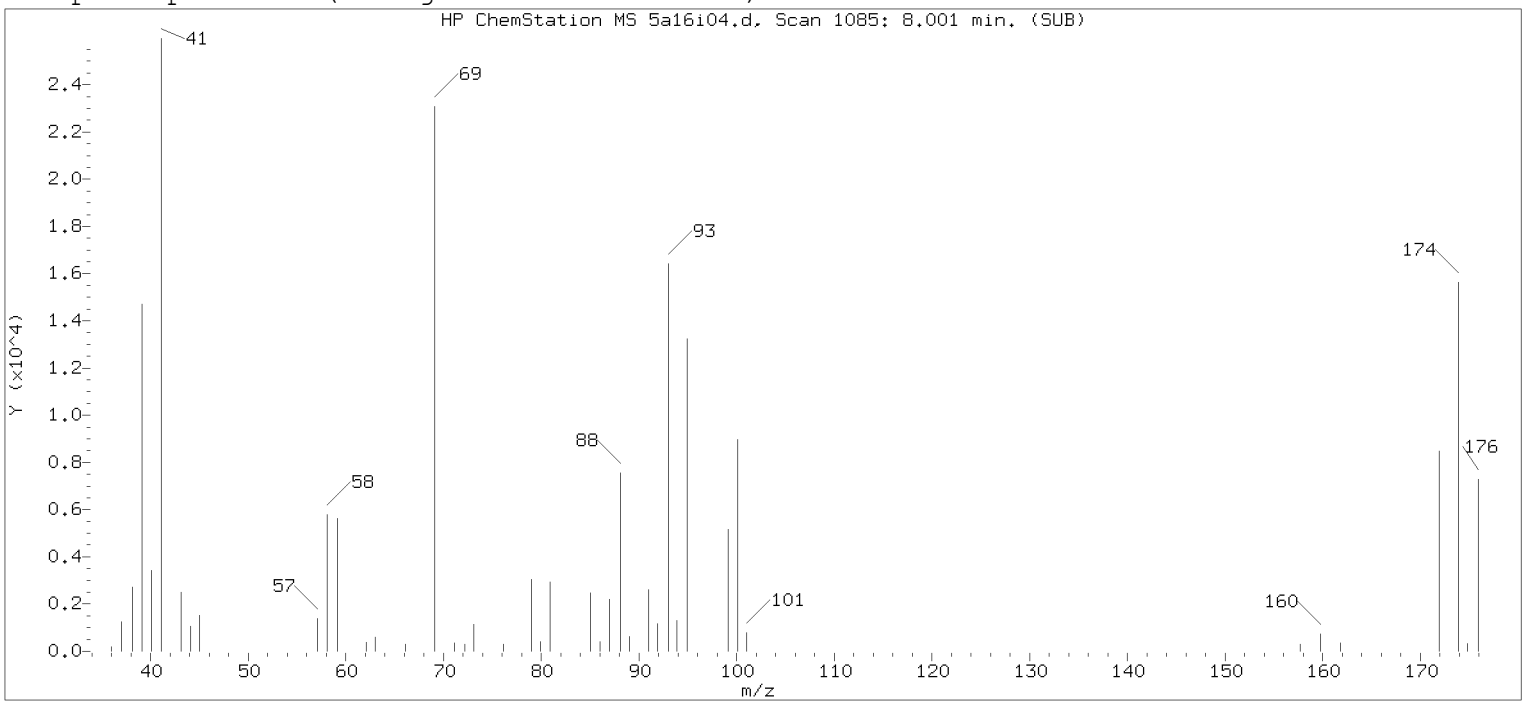
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1087
Retention Time (minutes): 8.013
Quant Ion : 88.00
Area (flag) : 45824M
On-Column Amount (ng) : 492.4307
Integration start scan : 1079 Integration stop scan: 1143
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

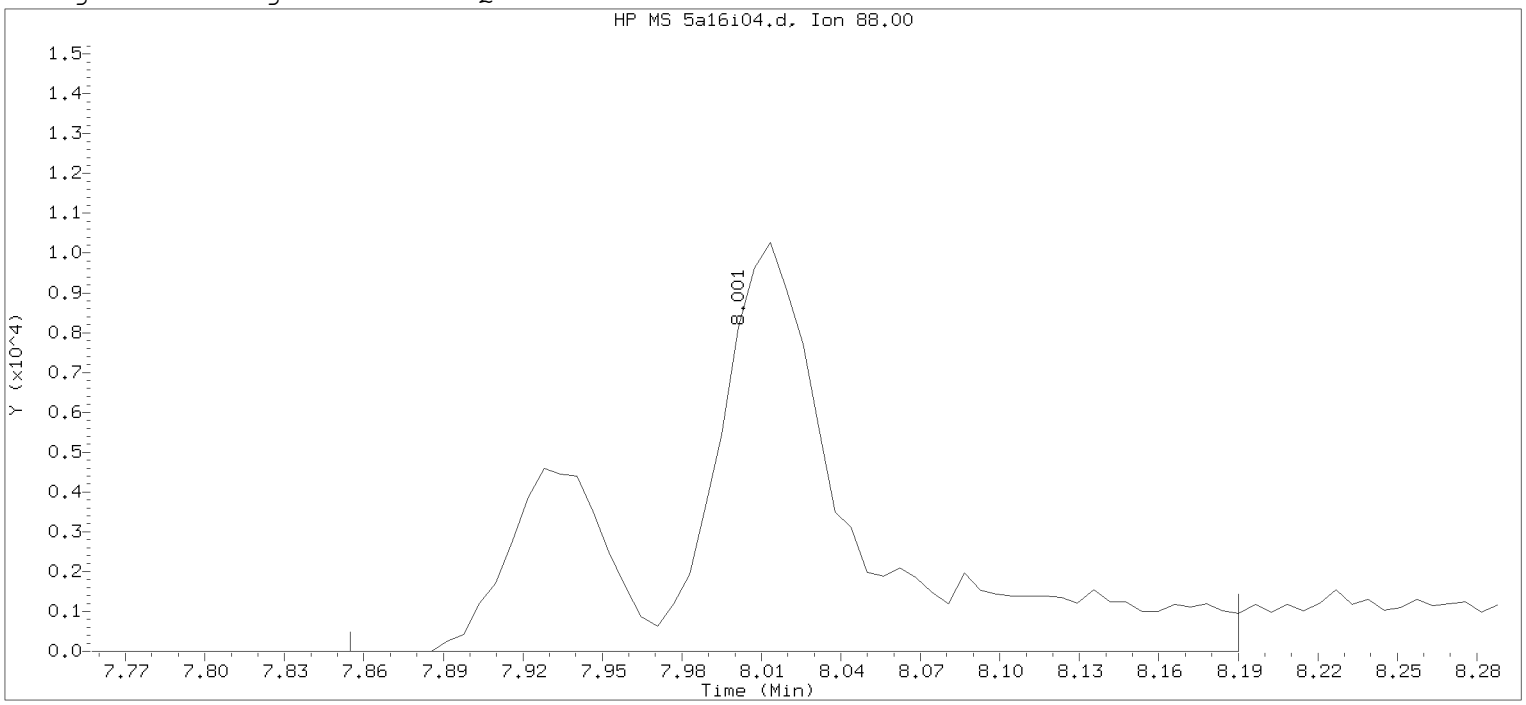
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



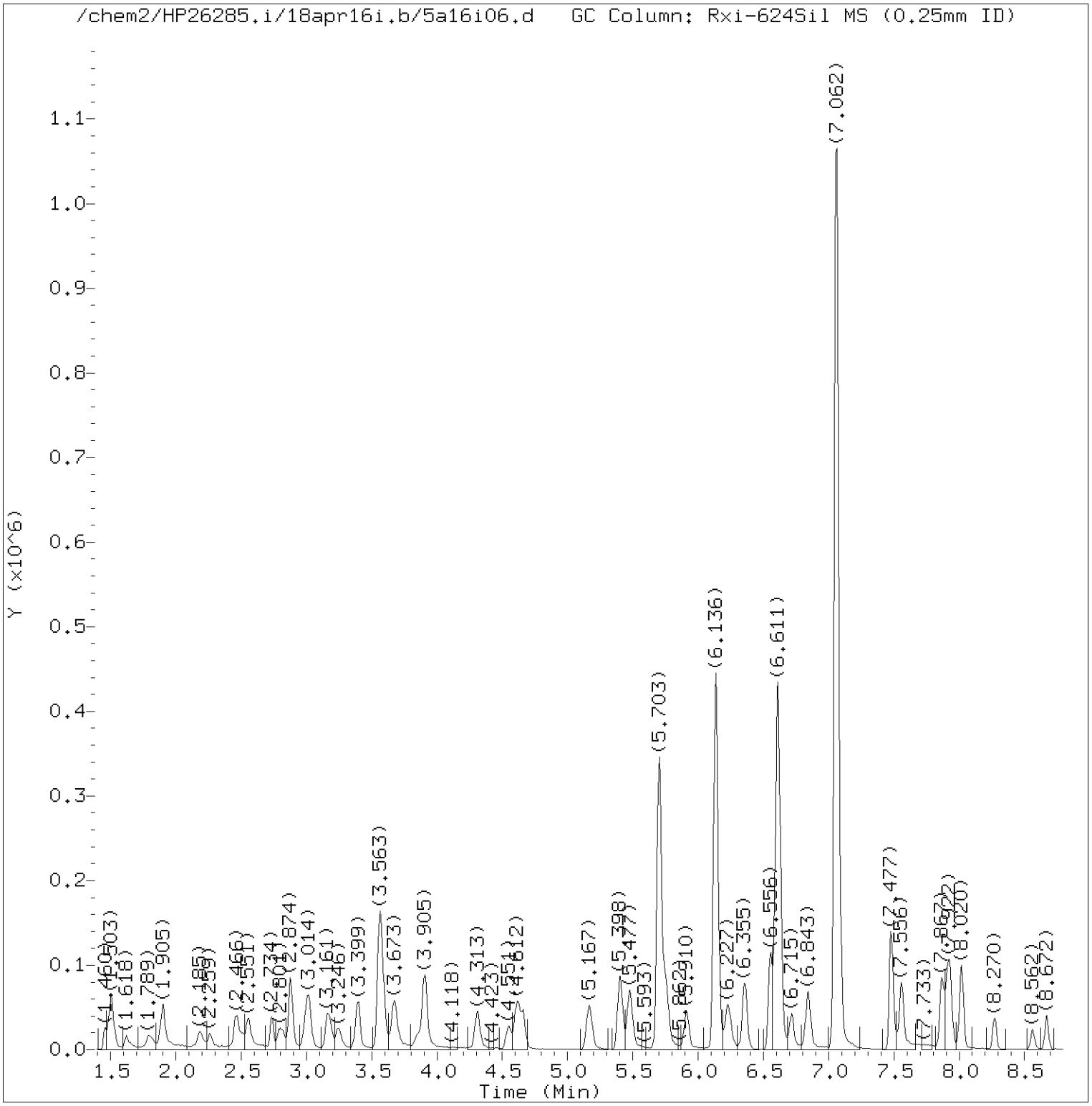
Data File: /chem2/HP26285.i/18apr16i.b/5a16i04.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 11:45 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:15
Date, time and analyst ID of latest file update: 16-Apr-2018 12:15 lcp00895

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 76		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1085		
Retention Time (minutes)	: 8.001		
Quant Ion	: 88.00		
Area	: 49450		
On-column Amount (ng)	: 466.8421		
Integration start scan	: 1060	Integration stop scan:	1115
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for this report.



Total Ion Chromatogram (TIC)

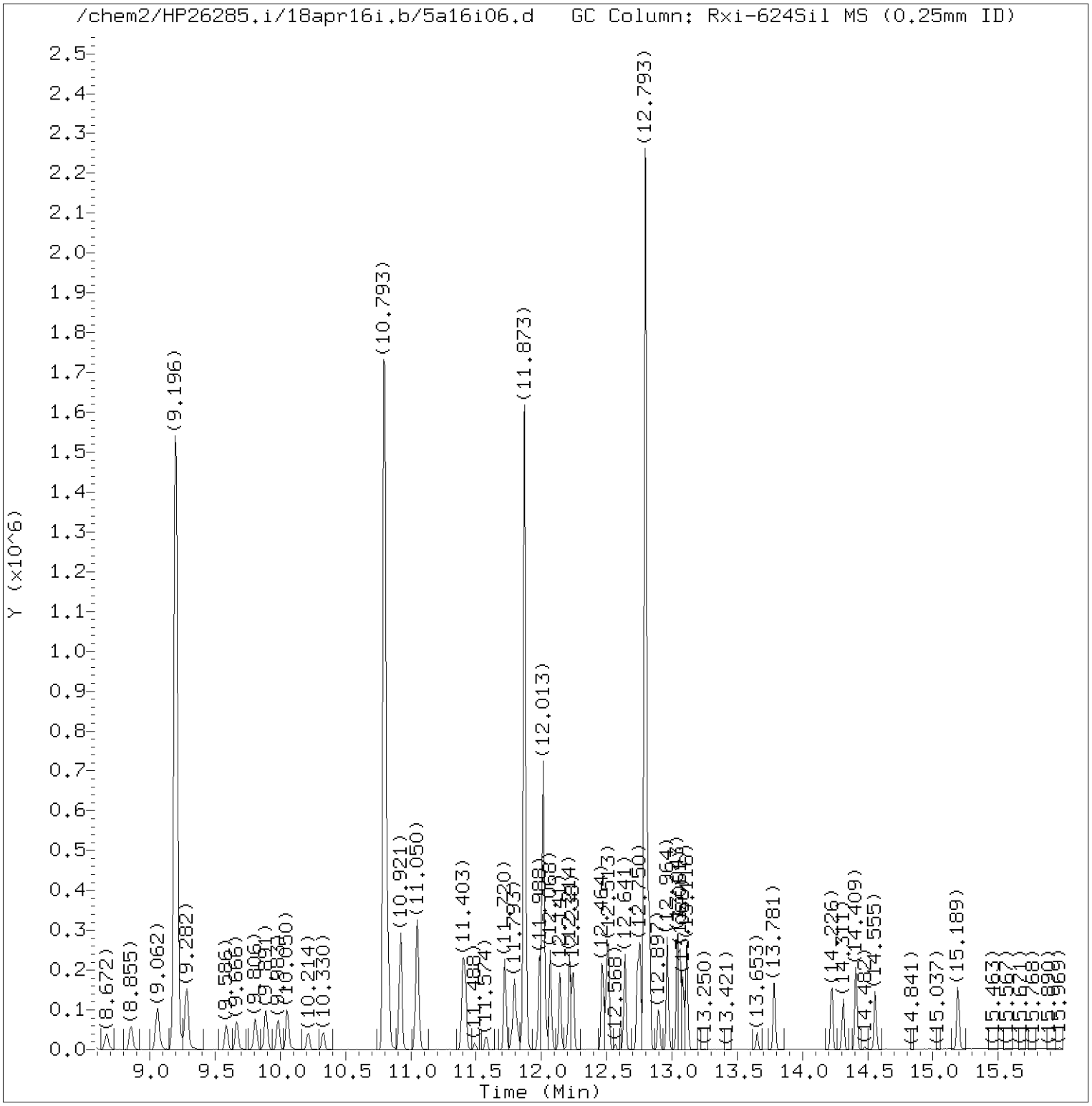
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	31440	3.825
4) Chloromethane	(2)	1.789	50	26639	4.125
6) Vinyl Chloride	(2)	1.881	62	26711	4.151
5) 1,3-Butadiene	(2)	1.905	39	24335	4.592
8) Bromomethane	(2)	2.179	94	22218M	4.268
9) Chloroethane	(2)	2.259	64	14522	4.309
10) Dichlorofluoromethane	(2)	2.454	67	43828	4.340
12) Trichlorofluoromethane	(2)	2.478	101	37390M	4.282
11) n-Pentane	(2)	2.551	43	25963	4.022
14) Ethyl ether	(2)	2.734	59	22201	3.979
15) Freon 123a	(2)	2.789	67	27135	3.857
16) Acrolein	(1)	2.874	56	94651	41.342
17) 1,1-Dichloroethene	(2)	2.990	96	20136	3.682
17) 1,1-Dichloroethene	(2)	2.990	63	9827	3.745
18) Acetone	(1)	3.021	58	7416	7.910
19) Freon 113	(2)	3.021	101	22183	3.736
21) 2-Propanol	(1)	3.167	45	49923	81.765
22) Methyl Iodide	(2)	3.179	142	46724	3.853
23) Carbon Disulfide	(2)	3.246	76	58001	3.557
27) Methyl Acetate	(2)	3.380	43	34739	4.243
25) Allyl Chloride	(2)	3.399	41	38685	4.103
28) Methylene Chloride	(2)	3.557	84	26105	3.836
29)*t-Butyl alcohol-d10	(1)	3.563	65	286697	250.000
30) t-Butyl alcohol	(1)	3.673	59	100033	76.512
31) Acrylonitrile	(2)	3.850	53	16250	4.027
33) Methyl Tertiary Butyl Ether	(2)	3.905	73	75336	3.919
32) trans-1,2-Dichloroethene	(2)	3.911	96	24436	3.730
34) n-Hexane	(2)	4.313	57	33583	3.780
36) 1,1-Dichloroethane	(2)	4.551	63	43938	3.815
38) di-Isopropyl ether	(2)	4.618	45	81652	3.887
39) 2-Chloro-1,3-butadiene	(2)	4.661	53	32731	3.675
40) Ethyl t-butyl ether	(2)	5.167	59	75210	3.904
44) 2-Butanone	(2)	5.392	43	45808	8.207
42) cis-1,2-Dichloroethene	(2)	5.404	96	29139	3.834
45) 2,2-Dichloropropane	(2)	5.410	77	24791	3.698
47) Propionitrile	(1)	5.477	54	119175	79.341
48) Methacrylonitrile	(2)	5.703	67	176278	39.564
49) Bromochloromethane	(2)	5.752	128	16386	4.130

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.764	71	12748	7.808
51) Chloroform	(2)	5.910	83	46217	3.860
52)$Dibromofluoromethane	(2)	6.136	113	328895	49.618
52)$Dibromofluoromethane	(2)	6.136	111	333176	49.614
53) 1,1,1-Trichloroethane	(2)	6.136	97	45061	4.100
43) 1,2-Dichloroethene (Total)	(2)		96	53575	7.564
54) Cyclohexane	(2)	6.227	56	39642	3.822
54) Cyclohexane	(2)	6.233	84	33287	3.799
54) Cyclohexane	(2)	6.233	69	11816	3.707
56) Carbon Tetrachloride	(2)	6.349	117	29781	3.549
55) 1,1-Dichloropropene	(2)	6.361	75	33759	3.768
58) Isobutyl Alcohol	(1)	6.556	41	79364	192.096
57)$1,2-Dichloroethane-d4	(2)	6.605	102	76244	51.417
57)$1,2-Dichloroethane-d4	(2)	6.605	65	336600	50.907
57)$1,2-Dichloroethane-d4	(2)	6.605	104	46991	49.885
60) Benzene	(2)	6.630	78	111152	3.904
61) 1,2-Dichloroethane	(2)	6.715	62	35335	3.994
61) 1,2-Dichloroethane	(2)	6.715	98	3213	4.048
65) t-Amyl methyl ether	(2)	6.843	73	74140	3.844
66)*Fluorobenzene	(2)	7.062	96	1286804	50.000
67) n-Heptane	(2)	7.087	43	35167	3.834
69) n-Butanol	(1)	7.477	56	119307	368.862
71) Trichloroethene	(2)	7.556	95	27909	3.742
73) Methylcyclohexane	(2)	7.867	83	47653	4.103
73) Methylcyclohexane	(2)	7.867	98	20320	3.987
74) 1,2-Dichloropropane	(2)	7.904	63	27804	3.873
72) t-Amyl ethyl ether	(2)	7.928	87	39197	3.878
76) 1,4-Dioxane	(1)	8.007	88	16855M	189.424
77) Methyl Methacrylate	(2)	8.020	69	24351	3.712
75) Dibromomethane	(2)	8.020	93	17892	3.813
79) Bromodichloromethane	(2)	8.276	83	28815	3.405
80) 2-Nitropropane	(2)	8.562	41	17401	7.037
81) 2-Chloroethyl Vinyl Ether	(2)	8.672	63	20555	3.742
82) cis-1,3-Dichloropropene	(2)	8.855	75	39378	3.533
83) 4-Methyl-2-pentanone	(2)	9.062	43	88584	7.724
84)$Toluene-d8	(3)	9.196	98	1257914	49.620
84)$Toluene-d8	(3)	9.196	100	815833	49.183
89) Toluene	(3)	9.282	92	70306	3.735

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	33792	3.416
92) Ethyl Methacrylate	(3)	9.666	69	38983	3.542
93) 1,1,2-Trichloroethane	(3)	9.812	97	26539	3.764
94) Tetrachloroethene	(3)	9.891	166	33372	3.760
95) 1,3-Dichloropropane	(3)	9.983	76	43473	3.868
97) 2-Hexanone	(3)	10.050	43	74077	7.834
91) 1,3-Dichloropropene (total)	(3)		100	73170	6.950
98) Dibromochloromethane	(3)	10.214	129	22561	3.593
100) 1,2-Dibromoethane	(3)	10.330	107	28024	3.652
101)*Chlorobenzene-d5	(3)	10.800	117	1011375	50.000
102) 1-Chlorohexane	(3)	10.818	91	39172	3.852
103) Chlorobenzene	(3)	10.824	112	82857	3.741
104) 1,1,1,2-Tetrachloroethane	(3)	10.915	131	25238	3.462
105) Ethylbenzene	(3)	10.921	91	138470	3.868
107) m+p-Xylene	(3)	11.050	106	111115	7.743
108) o-Xylene	(3)	11.397	106	52836	3.725
110) Styrene	(3)	11.415	104	79592	3.492
111) Bromoform	(3)	11.580	173	13638	3.687
112) Isopropylbenzene	(3)	11.720	105	134545	3.858
109) Xylene (Total)	(3)		106	163951	11.468
113) Cyclohexanone	(1)	11.793	55	83251	185.326
115)$4-Bromofluorobenzene	(3)	11.866	95	479925	49.450
115)$4-Bromofluorobenzene	(3)	11.873	174	435761	49.323
117) 1,1,2,2-Tetrachloroethane	(4)	11.988	83	43631	3.879
116) Bromobenzene	(4)	11.988	156	35958	3.703
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	112160	38.802
118) 1,2,3-Trichloropropane	(4)	12.031	110	12927	3.860
120) n-Propylbenzene	(4)	12.068	91	161923	4.077
121) 2-Chlorotoluene	(4)	12.141	126	34915	4.023
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	112093	3.902
122) 4-Chlorotoluene	(4)	12.244	126	35905	3.942
125) tert-Butylbenzene	(4)	12.470	134	25561	3.909
126) Pentachloroethane	(4)	12.500	167	18554	3.297
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	114537	3.885
128) sec-Butylbenzene	(4)	12.641	105	140998	3.959
130) 1,3-Dichlorobenzene	(4)	12.738	146	71549	3.902
131) p-Isopropyltoluene	(4)	12.757	119	119883	3.827
132)*1,4-Dichlorobenzene-d4	(4)	12.799	152	542360	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.817	146	70437	3.839
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	123863	4.029
136) Benzyl Chloride	(4)	12.897	91	59830	5.854
137) 1,3-Diethylbenzene	(4)	12.964	119	77045	3.944
138) 1,4-Diethylbenzene	(4)	13.043	119	79767	3.928
140) n-Butylbenzene	(4)	13.061	92	62981	3.997
139) 1,2-Dichlorobenzene	(4)	13.086	146	65748	3.873
141) 1,2-Diethylbenzene	(4)	13.116	119	66314	4.063
142) Diethylbenzene (total)	(4)		100	223126	11.935
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	7744	3.376
145) 1,3,5-Trichlorobenzene	(4)	13.787	180	47877	3.771
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	43159	3.778
148) Hexachlorobutadiene	(4)	14.311	225	20613	4.098
149) Naphthalene	(4)	14.409	128	134896	3.887
150) 1,2,3-Trichlorobenzene	(4)	14.555	180	39511	3.853
151) 2-Methylnaphthalene	(4)	15.189	142	67635	3.460

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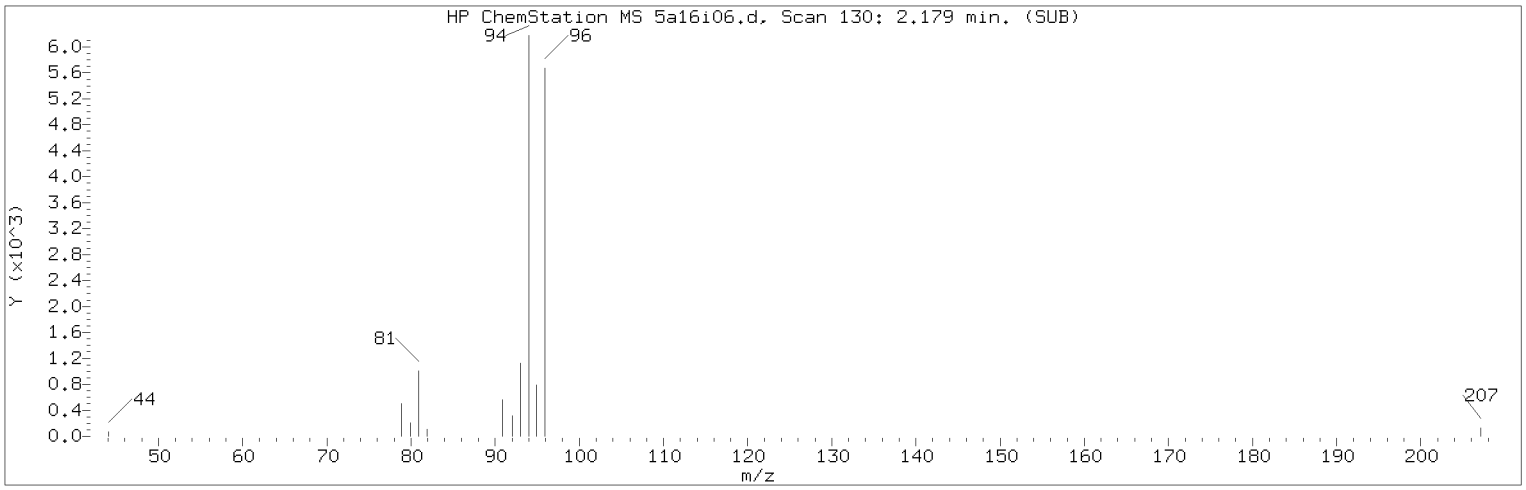
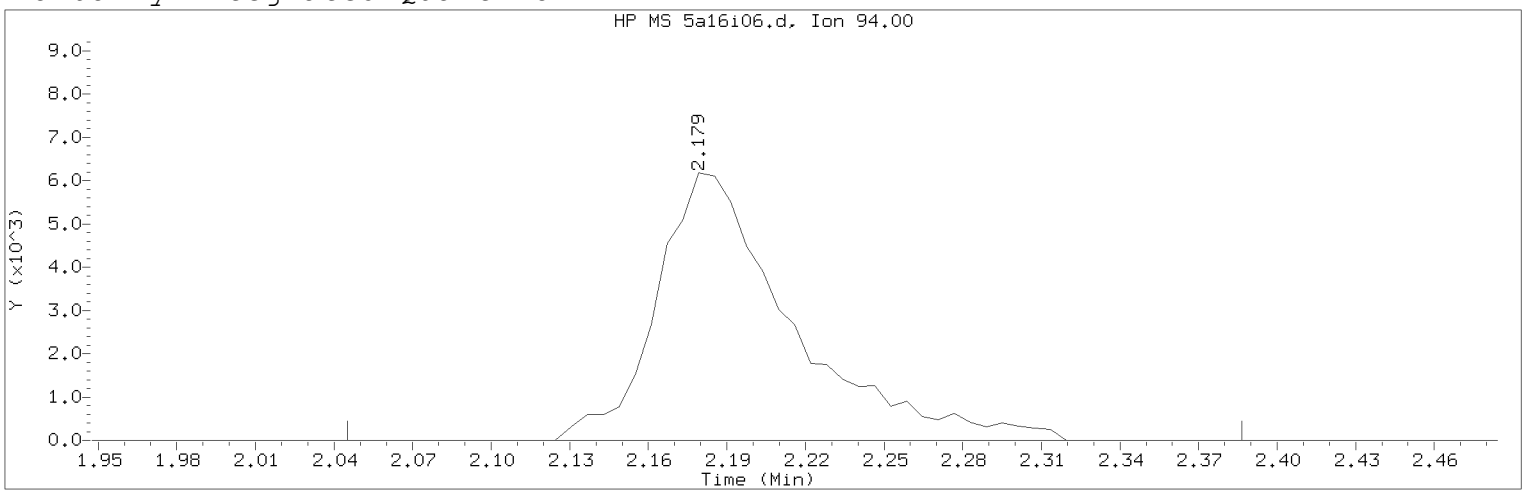
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

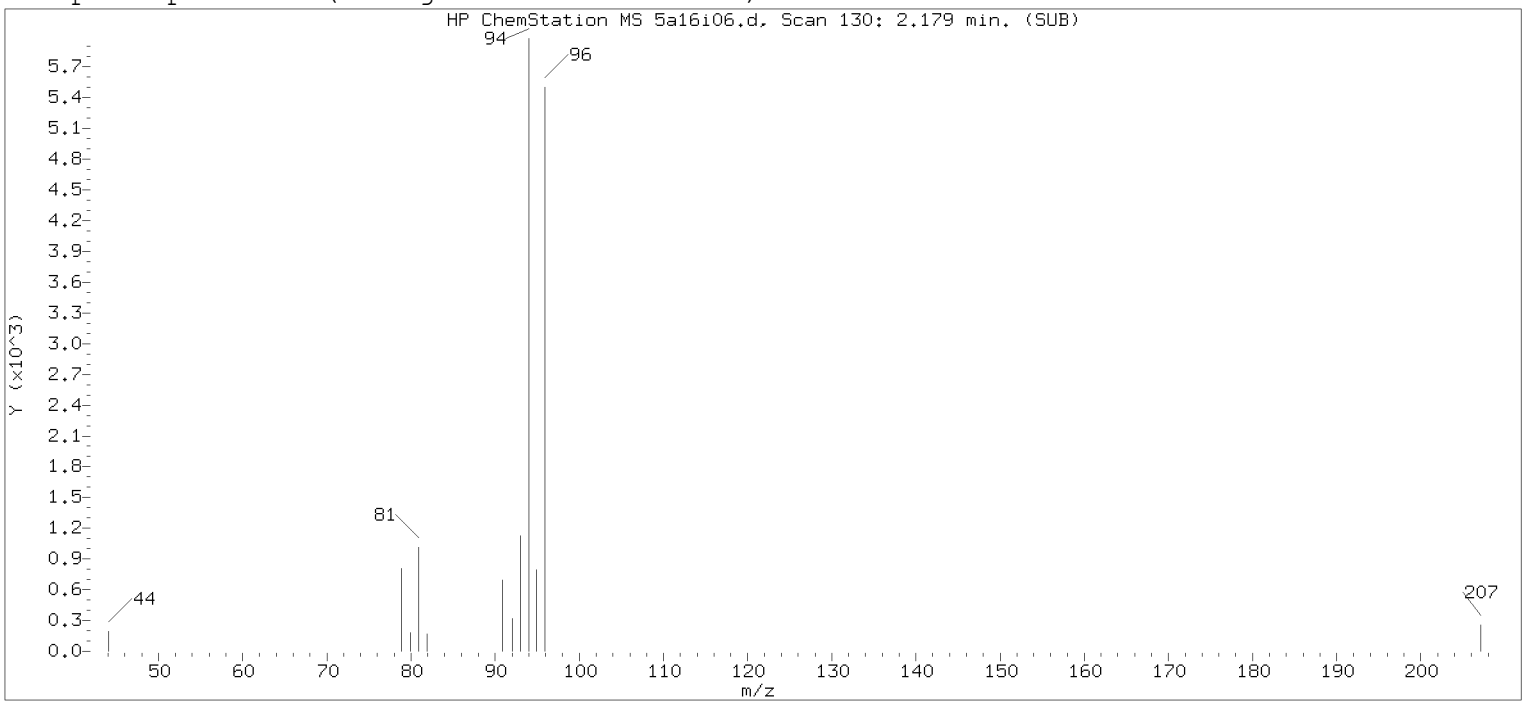
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 130
Retention Time (minutes): 2.179
Quant Ion : 94.00
Area (flag) : 22218M
On-Column Amount (ng) : 4.2675
Integration start scan : 107 Integration stop scan: 163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

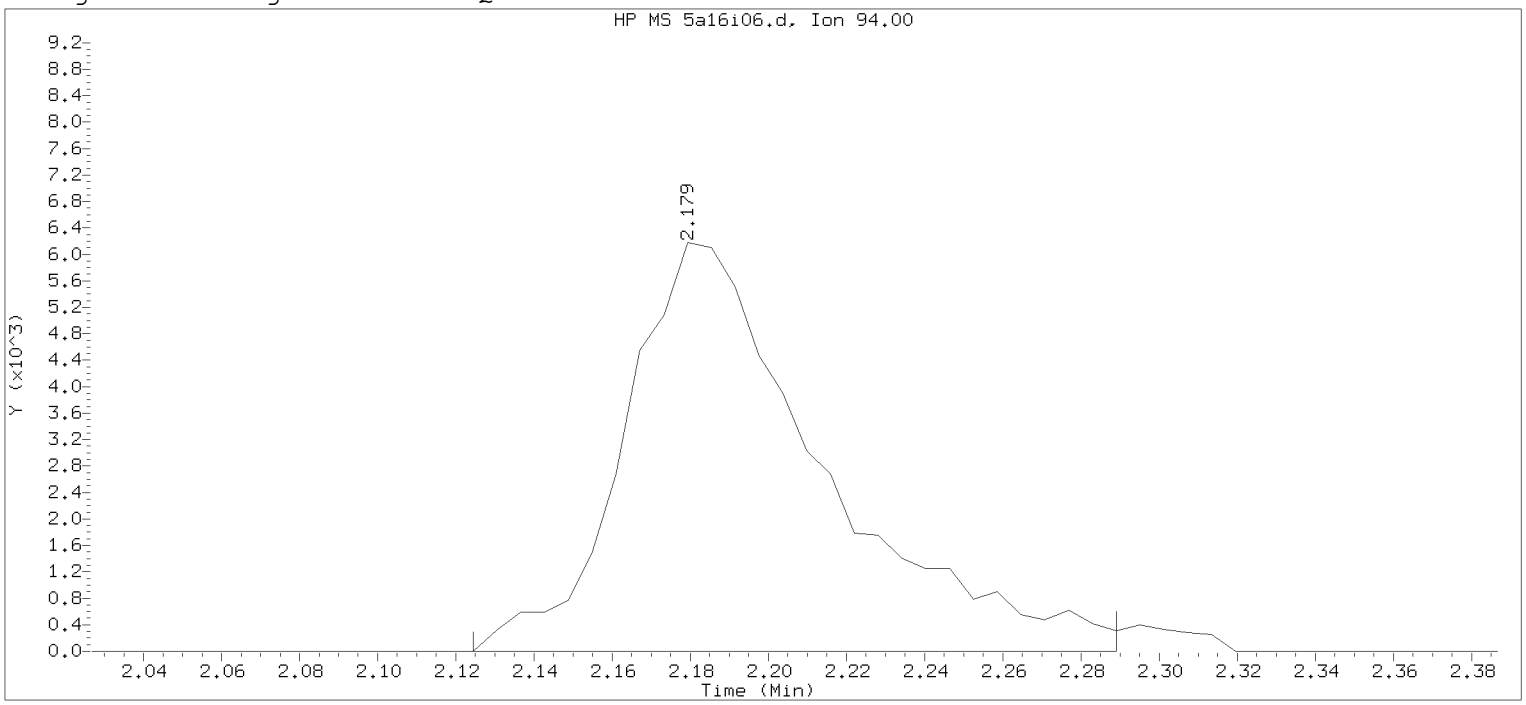
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

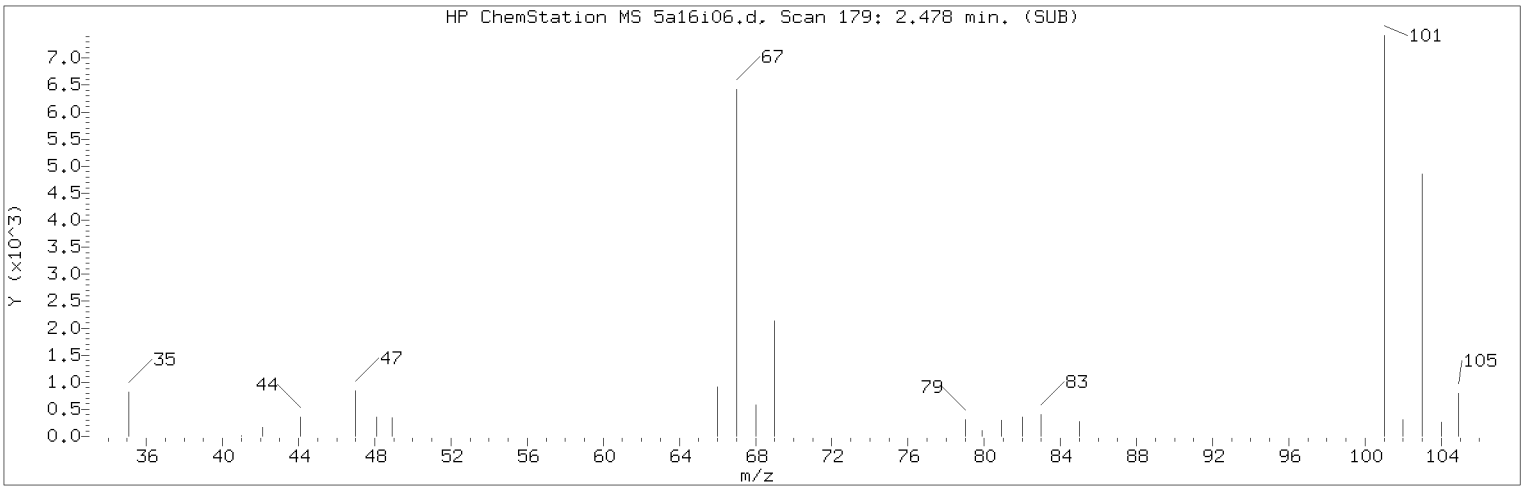
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:47
Date, time and analyst ID of latest file update: 16-Apr-2018 12:47 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

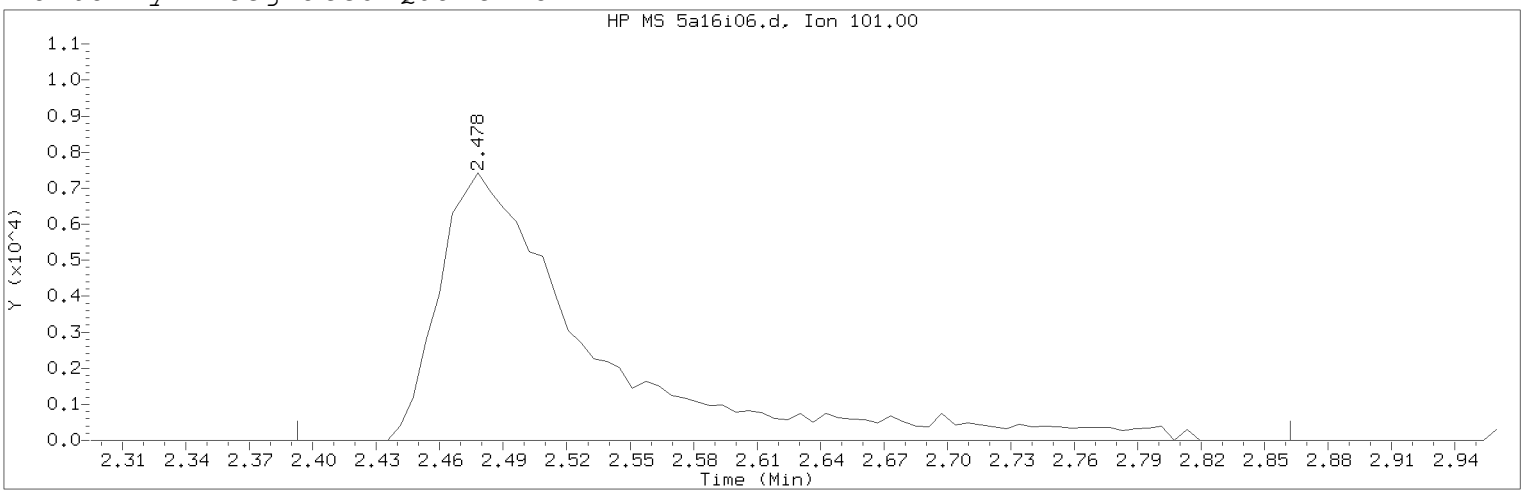
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 130
Retention Time (minutes): 2.179
Quant Ion : 94.00
Area : 21699
On-column Amount (ng) : 3.5184
Integration start scan : 120 Integration stop scan: 147
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for this run.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

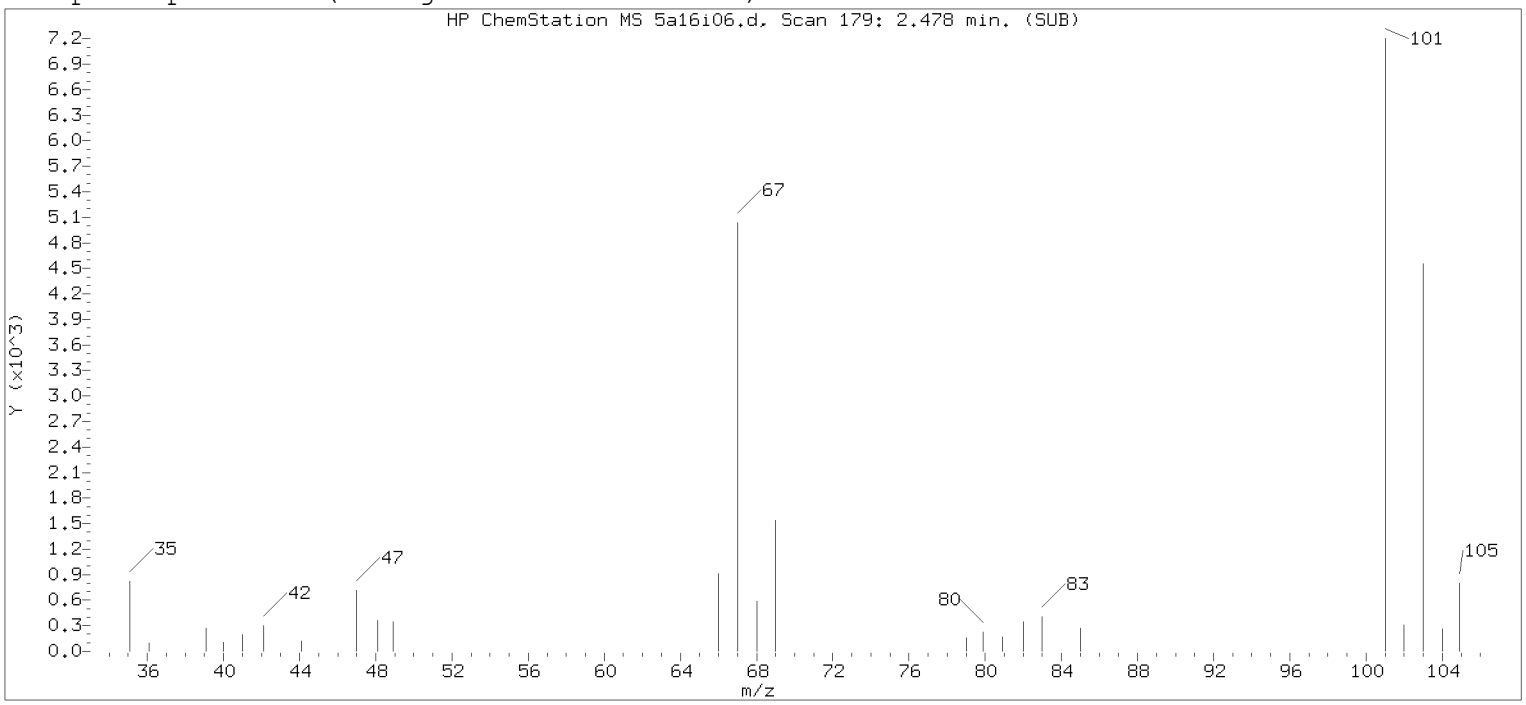
Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 179
Retention Time (minutes): 2.478
Quant Ion : 101.00
Area (flag) : 37390M
On-Column Amount (ng) : 4.2823
Integration start scan : 164 Integration stop scan: 241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

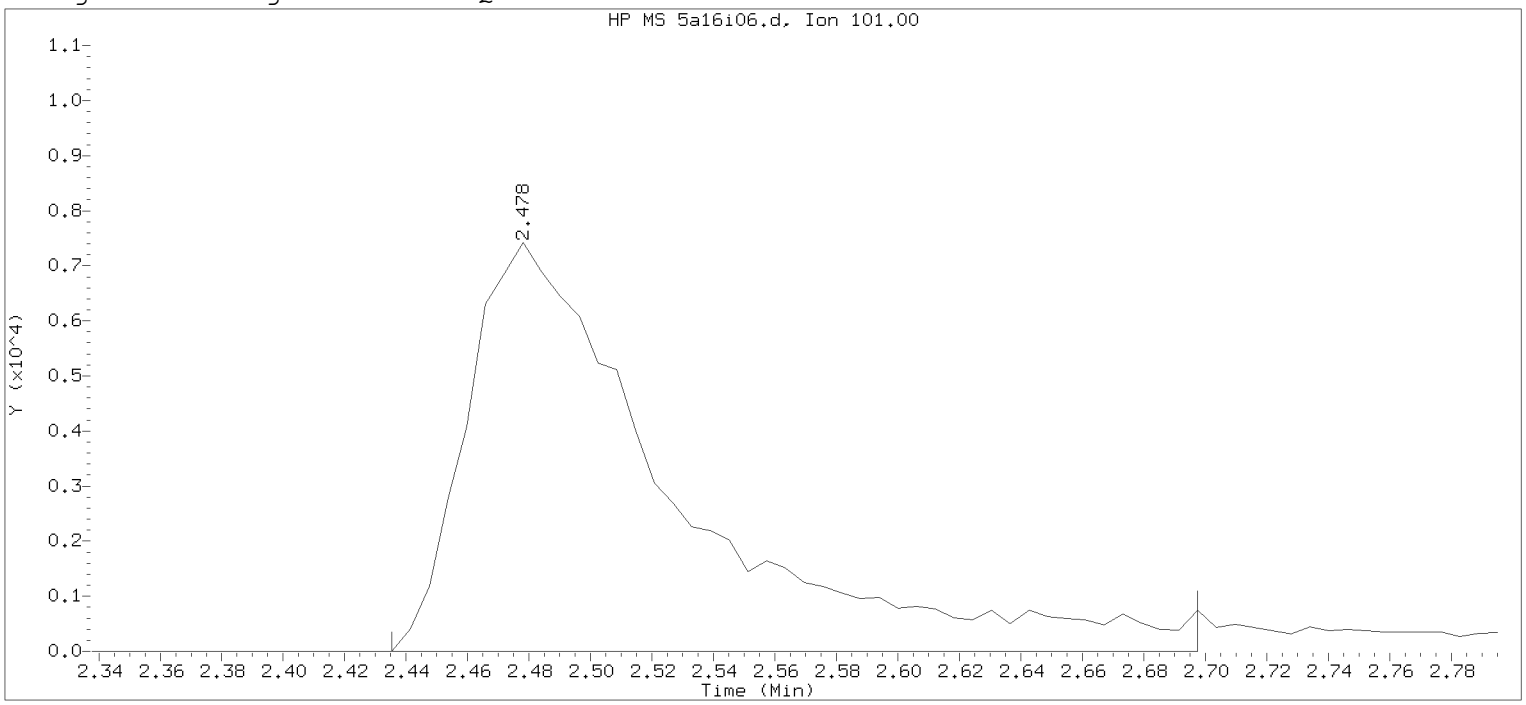
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:47
Date, time and analyst ID of latest file update: 16-Apr-2018 12:47 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 12
Compound Name : Trichlorofluoromethane
Scan Number : 179
Retention Time (minutes): 2.478
Quant Ion : 101.00
Area : 34826
On-column Amount (ng) : 3.3071
Integration start scan : 171 Integration stop scan: 214
Y at integration start : 0 Y at integration end: 0

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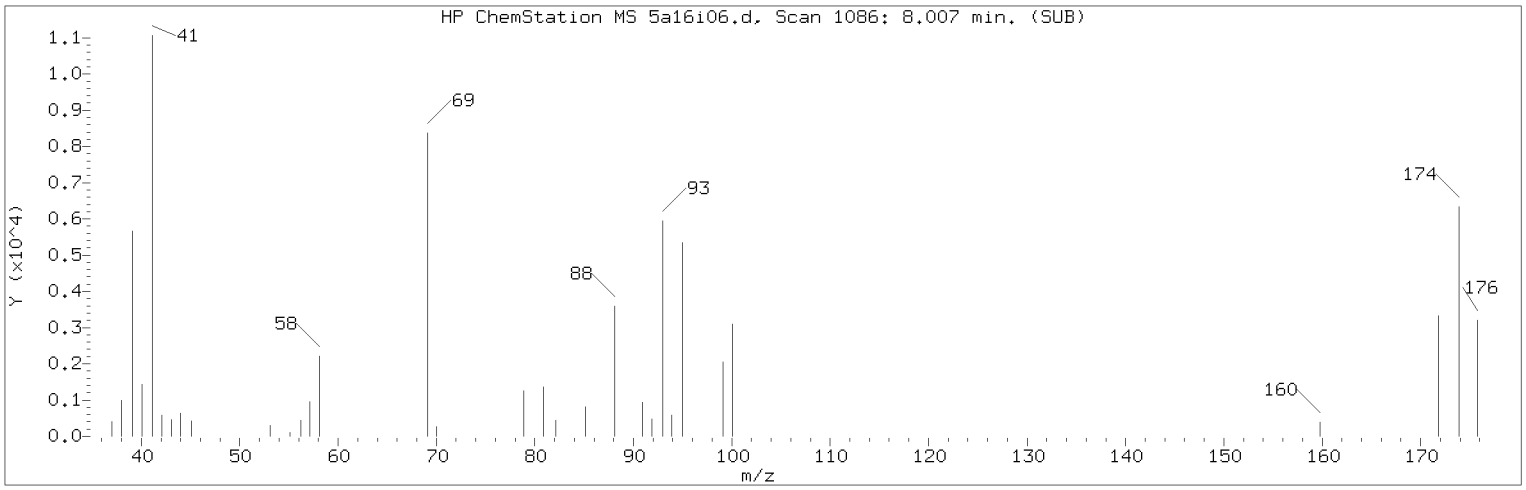
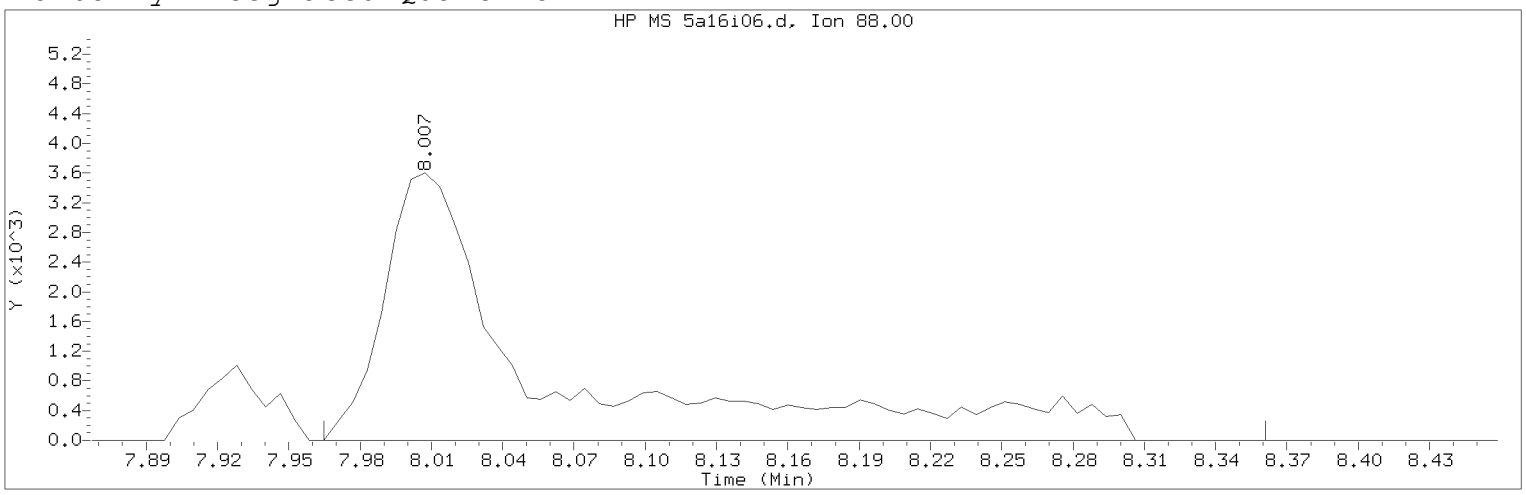
Target 3.5 esignature used. FID Page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD004 Lab Sample ID: VSTD004

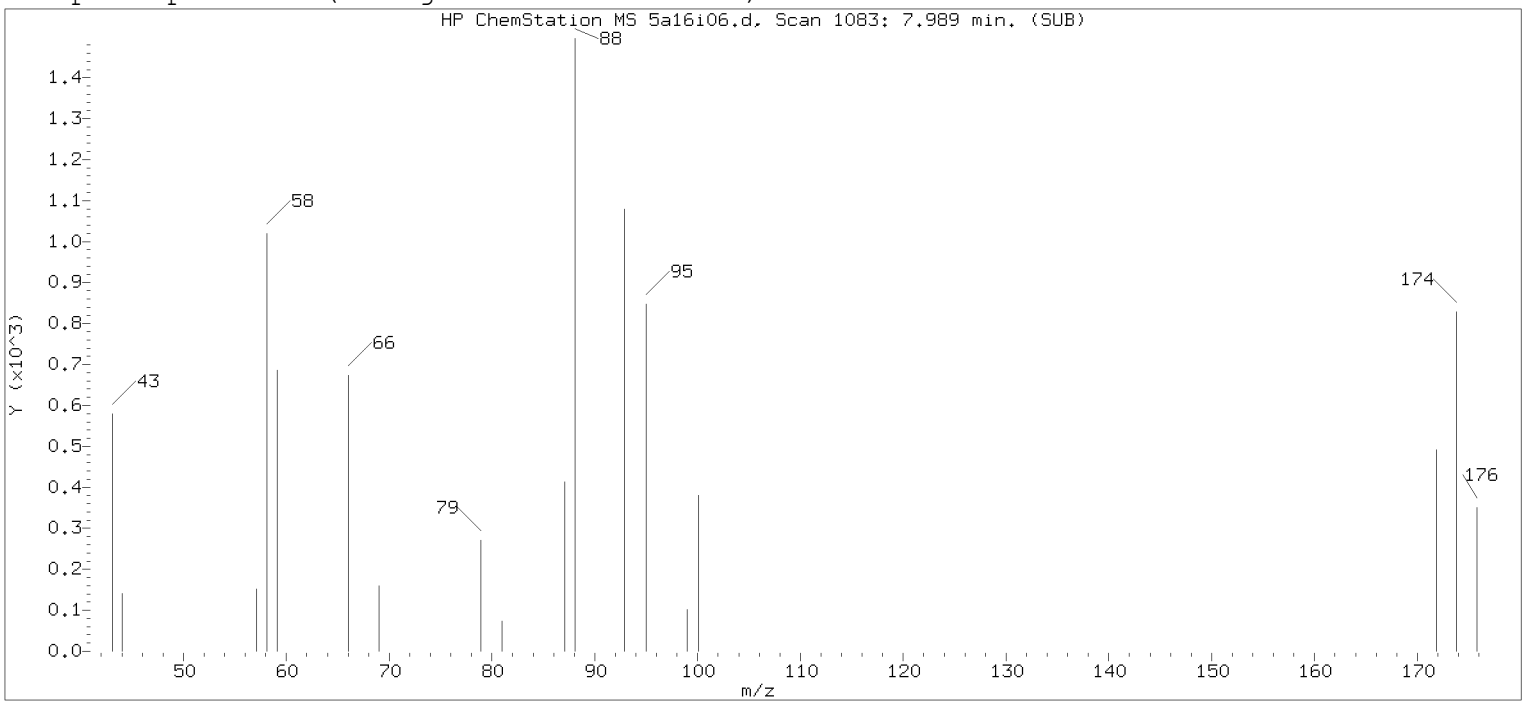
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1086
Retention Time (minutes): 8.007
Quant Ion : 88.00
Area (flag) : 16855M
On-Column Amount (ng) : 189.4243
Integration start scan : 1078 Integration stop scan: 1143
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

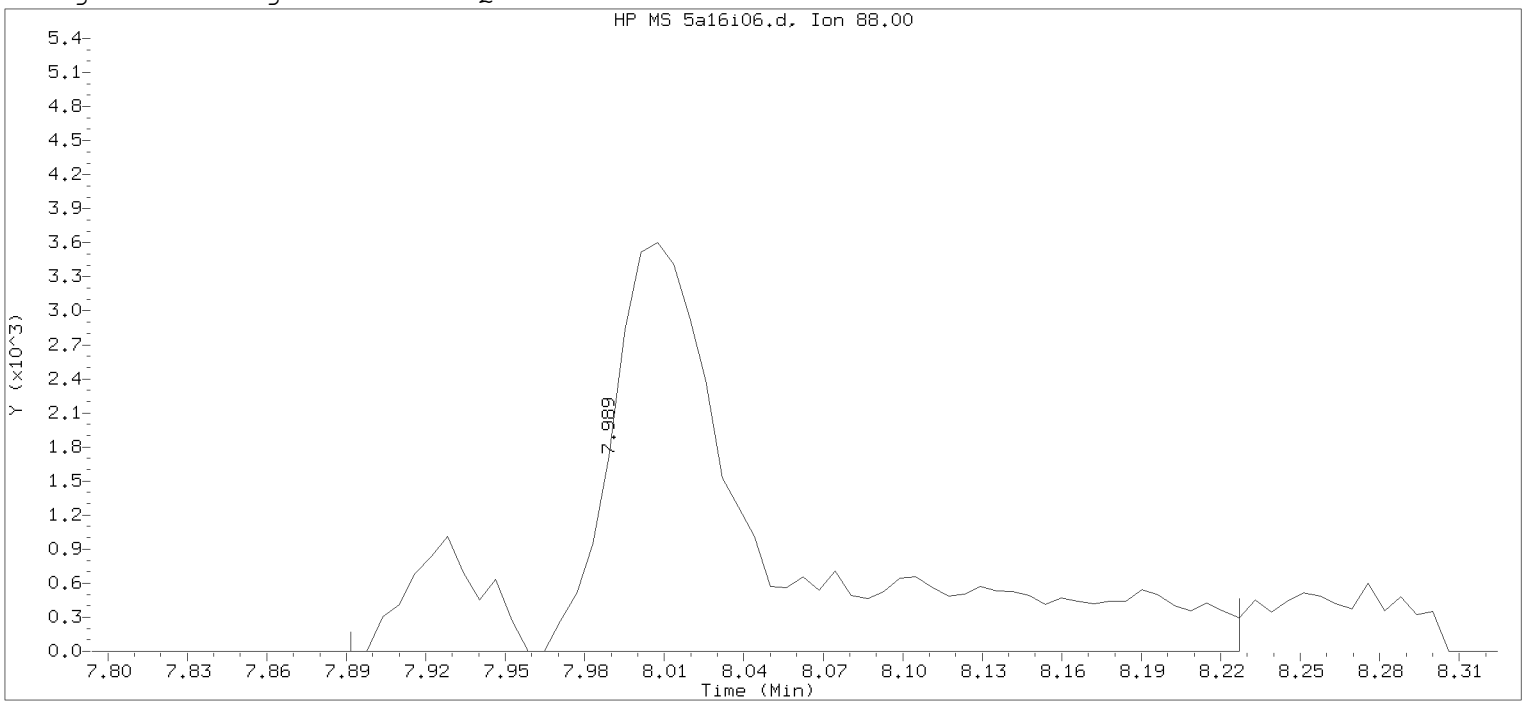
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



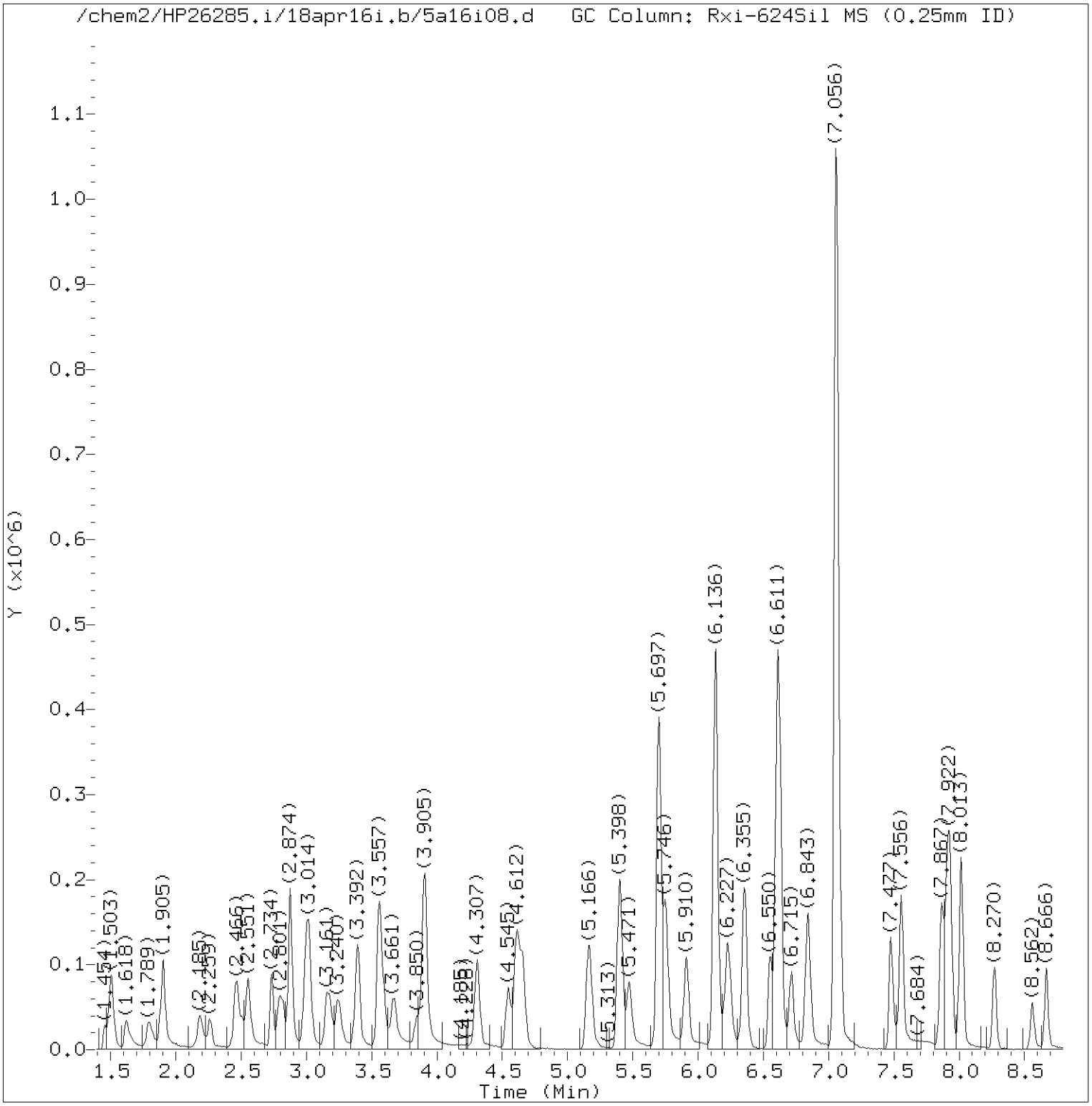
Data File: /chem2/HP26285.i/18apr16i.b/5a16i06.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 12:28 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 12:47
Date, time and analyst ID of latest file update: 16-Apr-2018 12:47 Unknown

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1083
Retention Time (minutes): 7.989
Quant Ion : 88.00
Area : 16856
On-column Amount (ng) : 218.2601
Integration start scan : 1066 Integration stop scan: 1121
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used for FID Page 1124



Total Ion Chromatogram (TIC)

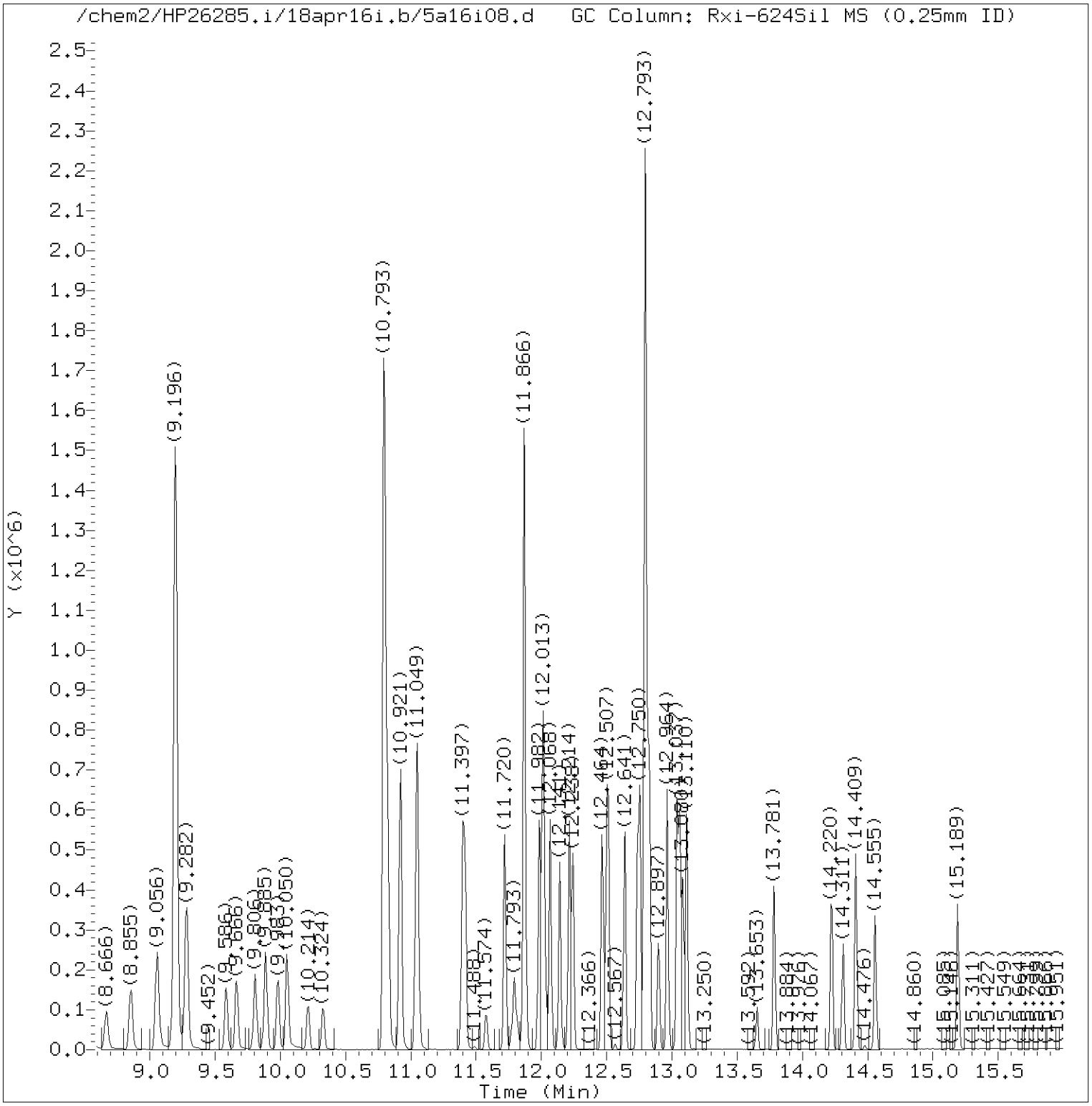
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.618	85	74556	9.364
4) Chloromethane	(2)	1.789	50	56574	9.044
6) Vinyl Chloride	(2)	1.881	62	57293	9.191
5) 1,3-Butadiene	(2)	1.905	39	46461	9.052
8) Bromomethane	(2)	2.185	94	47355	9.391
9) Chloroethane	(2)	2.259	64	31443	9.633
10) Dichlorofluoromethane	(2)	2.454	67	89643	9.164
12) Trichlorofluoromethane	(2)	2.472	101	79335	9.381
11) n-Pentane	(2)	2.551	43	57284	9.162
14) Ethyl ether	(2)	2.734	59	52606	9.735
15) Freon 123a	(2)	2.801	67	66955	9.826
16) Acrolein	(1)	2.874	56	203149	109.932
17) 1,1-Dichloroethene	(2)	2.990	96	49838	9.408
17) 1,1-Dichloroethene	(2)	2.990	63	23377	9.197
19) Freon 113	(2)	3.014	101	55471	9.644
18) Acetone	(1)	3.021	58	15571	20.576
21) 2-Propanol	(1)	3.167	45	44505	90.307
22) Methyl Iodide	(2)	3.179	142	113966	9.702
23) Carbon Disulfide	(2)	3.240	76	138351	8.759
27) Methyl Acetate	(2)	3.374	43	73031	9.209
25) Allyl Chloride	(2)	3.392	41	84229	9.224
28) Methylene Chloride	(2)	3.557	84	64703	9.817
29)*t-Butyl alcohol-d10	(1)	3.563	65	231409	250.000
30) t-Butyl alcohol	(1)	3.667	59	100572	95.303
31) Acrylonitrile	(2)	3.844	53	36857	9.431
33) Methyl Tertiary Butyl Ether	(2)	3.898	73	179194	9.624
32) trans-1,2-Dichloroethene	(2)	3.911	96	60005	9.457
34) n-Hexane	(2)	4.307	57	79640	9.254
36) 1,1-Dichloroethane	(2)	4.545	63	107481	9.635
38) di-Isopropyl ether	(2)	4.612	45	204728	10.061
39) 2-Chloro-1,3-butadiene	(2)	4.654	53	82400	9.551
40) Ethyl t-butyl ether	(2)	5.160	59	184806	9.904
44) 2-Butanone	(2)	5.386	43	101989	18.866
42) cis-1,2-Dichloroethene	(2)	5.398	96	70679	9.601
45) 2,2-Dichloropropane	(2)	5.410	77	61470	9.467
47) Propionitrile	(1)	5.471	54	123012	101.462
48) Methacrylonitrile	(2)	5.697	67	204322	47.346
49) Bromochloromethane	(2)	5.746	128	36509	9.500

* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.758	71	29467	22.361
51) Chloroform	(2)	5.910	83	112016	9.660
52)$Dibromofluoromethane	(2)	6.130	113	310129	48.304
52)$Dibromofluoromethane	(2)	6.136	111	317686	48.841
53) 1,1,1-Trichloroethane	(2)	6.130	97	100094	9.404
43) 1,2-Dichloroethene (Total)	(2)		96	130684	19.058
54) Cyclohexane	(2)	6.227	56	93988	9.356
54) Cyclohexane	(2)	6.227	84	80031	9.429
54) Cyclohexane	(2)	6.227	69	28708	9.298
56) Carbon Tetrachloride	(2)	6.349	117	73584	9.053
55) 1,1-Dichloropropene	(2)	6.361	75	81447	9.387
58) Isobutyl Alcohol	(1)	6.550	41	80254	240.660
57)$1,2-Dichloroethane-d4	(2)	6.605	102	70316	48.957
57)$1,2-Dichloroethane-d4	(2)	6.605	65	307696	48.045
57)$1,2-Dichloroethane-d4	(2)	6.605	104	44161	48.401
60) Benzene	(2)	6.630	78	265358	9.622
61) 1,2-Dichloroethane	(2)	6.715	62	80330	9.374
61) 1,2-Dichloroethane	(2)	6.715	98	7362	9.575
65) t-Amyl methyl ether	(2)	6.843	73	181512	9.716
66)*Fluorobenzene	(2)	7.056	96	1246382	50.000
67) n-Heptane	(2)	7.081	43	80162	9.022
69) n-Butanol	(1)	7.477	56	122729	470.098
71) Trichloroethene	(2)	7.556	95	68699	9.509
73) Methylcyclohexane	(2)	7.867	83	98556	8.760
73) Methylcyclohexane	(2)	7.867	98	42633	8.635
74) 1,2-Dichloropropane	(2)	7.904	63	66918	9.623
72) t-Amyl ethyl ether	(2)	7.928	87	95984	9.805
76) 1,4-Dioxane	(1)	8.001	88	19090M	265.800
77) Methyl Methacrylate	(2)	8.013	69	60699	9.552
75) Dibromomethane	(2)	8.020	93	43570	9.585
79) Bromodichloromethane	(2)	8.270	83	74979	9.147
80) 2-Nitropropane	(2)	8.562	41	42146	17.596
81) 2-Chloroethyl Vinyl Ether	(2)	8.666	63	50012	9.400
82) cis-1,3-Dichloropropene	(2)	8.855	75	102695	9.513
83) 4-Methyl-2-pentanone	(2)	9.056	43	221126	19.906
84)$Toluene-d8	(3)	9.196	98	1220911	51.205
84)$Toluene-d8	(3)	9.196	100	789009	50.574
89) Toluene	(3)	9.282	92	174025	9.830

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.586	75	87641	9.421
92) Ethyl Methacrylate	(3)	9.666	69	99804	9.642
93) 1,1,2-Trichloroethane	(3)	9.806	97	66208	9.984
94) Tetrachloroethene	(3)	9.891	166	77770	9.316
95) 1,3-Dichloropropane	(3)	9.983	76	105543	9.984
97) 2-Hexanone	(3)	10.050	43	179285	20.160
91) 1,3-Dichloropropene (total)	(3)		100	190336	18.934
98) Dibromochloromethane	(3)	10.214	129	60329	9.420
100) 1,2-Dibromoethane	(3)	10.324	107	70998	9.838
101)*Chlorobenzene-d5	(3)	10.793	117	951225	50.000
102) 1-Chlorohexane	(3)	10.818	91	88431	9.245
103) Chlorobenzene	(3)	10.824	112	201223	9.660
104) 1,1,1,2-Tetrachloroethane	(3)	10.915	131	65375	9.534
105) Ethylbenzene	(3)	10.921	91	330055	9.803
107) m+p-Xylene	(3)	11.049	106	259502	19.226
108) o-Xylene	(3)	11.397	106	129034	9.673
110) Styrene	(3)	11.415	104	206442	9.631
111) Bromoform	(3)	11.580	173	37526	8.872
112) Isopropylbenzene	(3)	11.720	105	318038	9.695
109) Xylene (Total)	(3)		106	388536	28.899
113) Cyclohexanone	(1)	11.793	55	89626	247.185
115)$4-Bromofluorobenzene	(3)	11.866	95	458817	50.264
115)$4-Bromofluorobenzene	(3)	11.872	174	420143	50.562
117) 1,1,2,2-Tetrachloroethane	(4)	11.982	83	106067	9.741
116) Bromobenzene	(4)	11.988	156	90491	9.626
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	136822	48.891
118) 1,2,3-Trichloropropane	(4)	12.031	110	31651	9.761
120) n-Propylbenzene	(4)	12.068	91	380229	9.888
121) 2-Chlorotoluene	(4)	12.141	126	81060	9.646
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	270586	9.729
122) 4-Chlorotoluene	(4)	12.238	126	86252	9.780
125) tert-Butylbenzene	(4)	12.464	134	60833	9.610
126) Pentachloroethane	(4)	12.494	167	46669	8.566
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	278998	9.774
128) sec-Butylbenzene	(4)	12.641	105	333616	9.676
130) 1,3-Dichlorobenzene	(4)	12.738	146	169288	9.535
131) p-Isopropyltoluene	(4)	12.756	119	294398	9.706
132)*1,4-Dichlorobenzene-d4	(4)	12.793	152	525093	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.811	146	170898	9.621
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	280259	9.416
136) Benzyl Chloride	(4)	12.897	91	160402	9.847
137) 1,3-Diethylbenzene	(4)	12.964	119	174300	9.215
138) 1,4-Diethylbenzene	(4)	13.037	119	178116	9.059
140) n-Butylbenzene	(4)	13.061	92	143502	9.407
139) 1,2-Dichlorobenzene	(4)	13.086	146	157480	9.581
141) 1,2-Diethylbenzene	(4)	13.116	119	145175	9.188
142) Diethylbenzene (total)	(4)		100	497591	27.462
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	20734	9.336
145) 1,3,5-Trichlorobenzene	(4)	13.781	180	115738	9.415
147) 1,2,4-Trichlorobenzene	(4)	14.226	180	101318	9.160
148) Hexachlorobutadiene	(4)	14.311	225	43373	8.907
149) Naphthalene	(4)	14.409	128	318311	9.473
150) 1,2,3-Trichlorobenzene	(4)	14.555	180	89353	9.001
151) 2-Methylnaphthalene	(4)	15.189	142	147784	7.809

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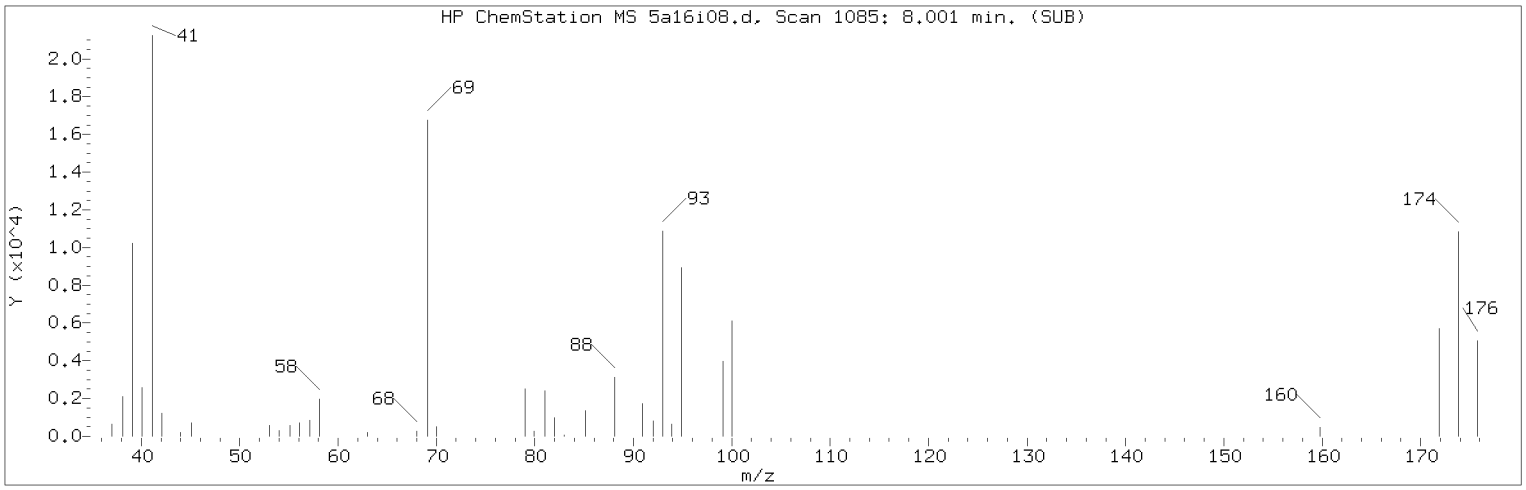
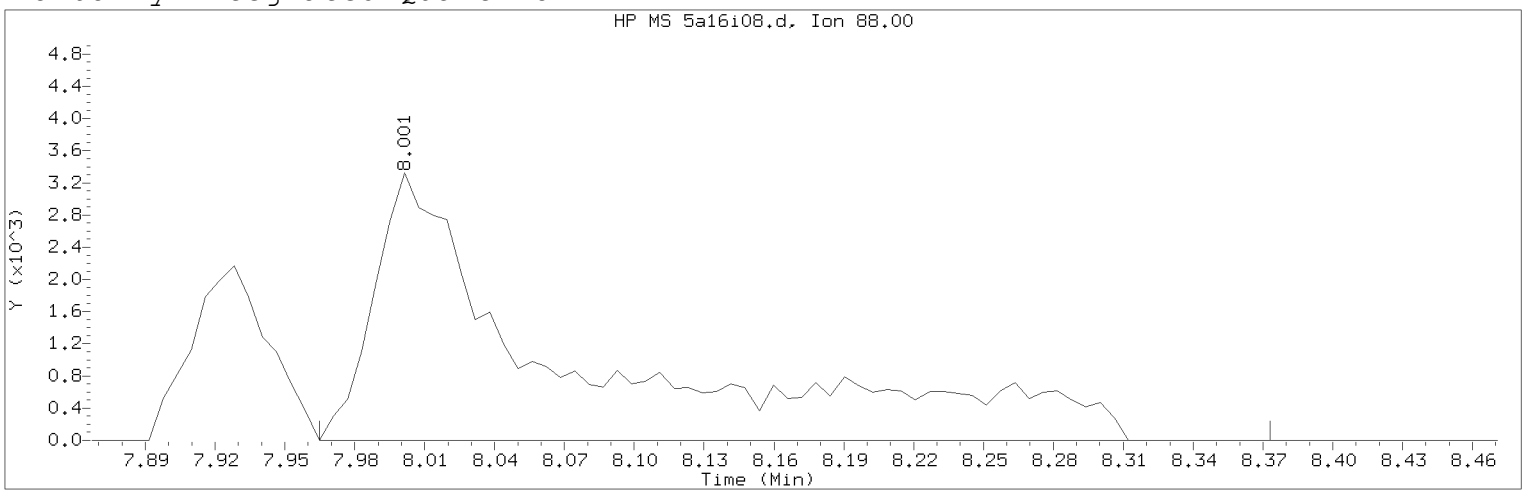
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD010 Lab Sample ID: VSTD010

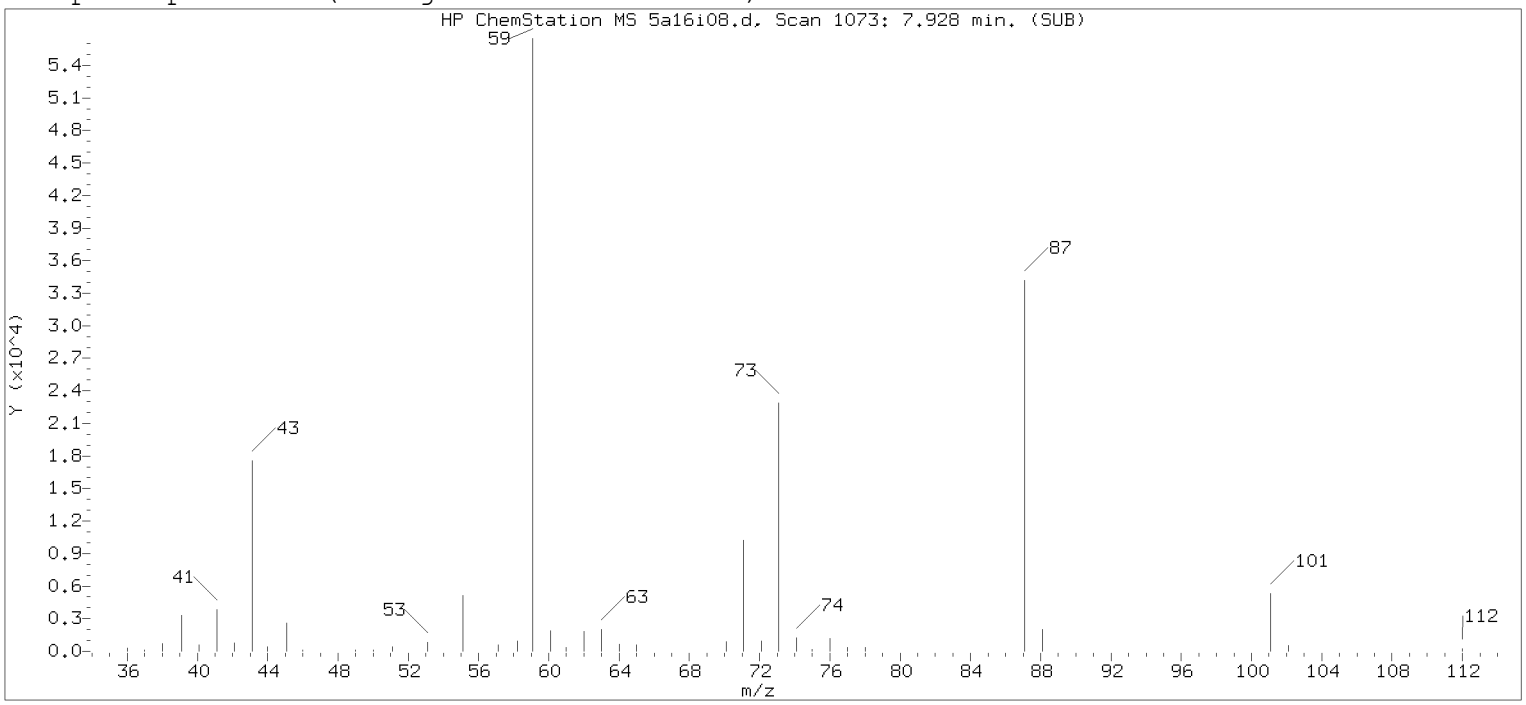
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1085
Retention Time (minutes): 8.001
Quant Ion : 88.00
Area (flag) : 19090M
On-Column Amount (ng) : 265.8005
Integration start scan : 1078 Integration stop scan: 1145
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

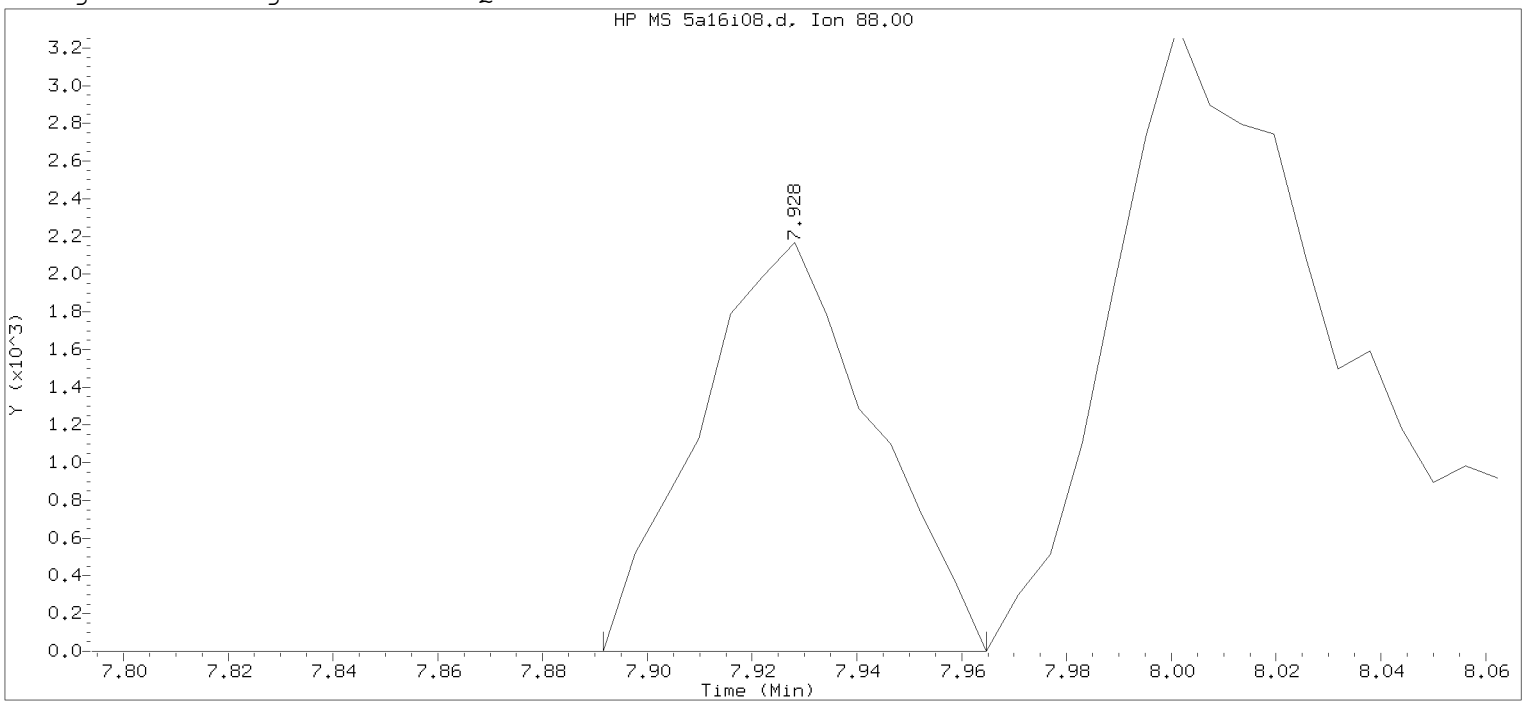
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:17.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i08.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:11 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 13:30
Date, time and analyst ID of latest file update: 16-Apr-2018 13:30 Unknown

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1073
Retention Time (minutes): 7.928
Quant Ion : 88.00
Area : 5004
On-column Amount (ng) : 86.1973
Integration start scan : 1066 Integration stop scan: 1078
Y at integration start : 0 Y at integration end: 0

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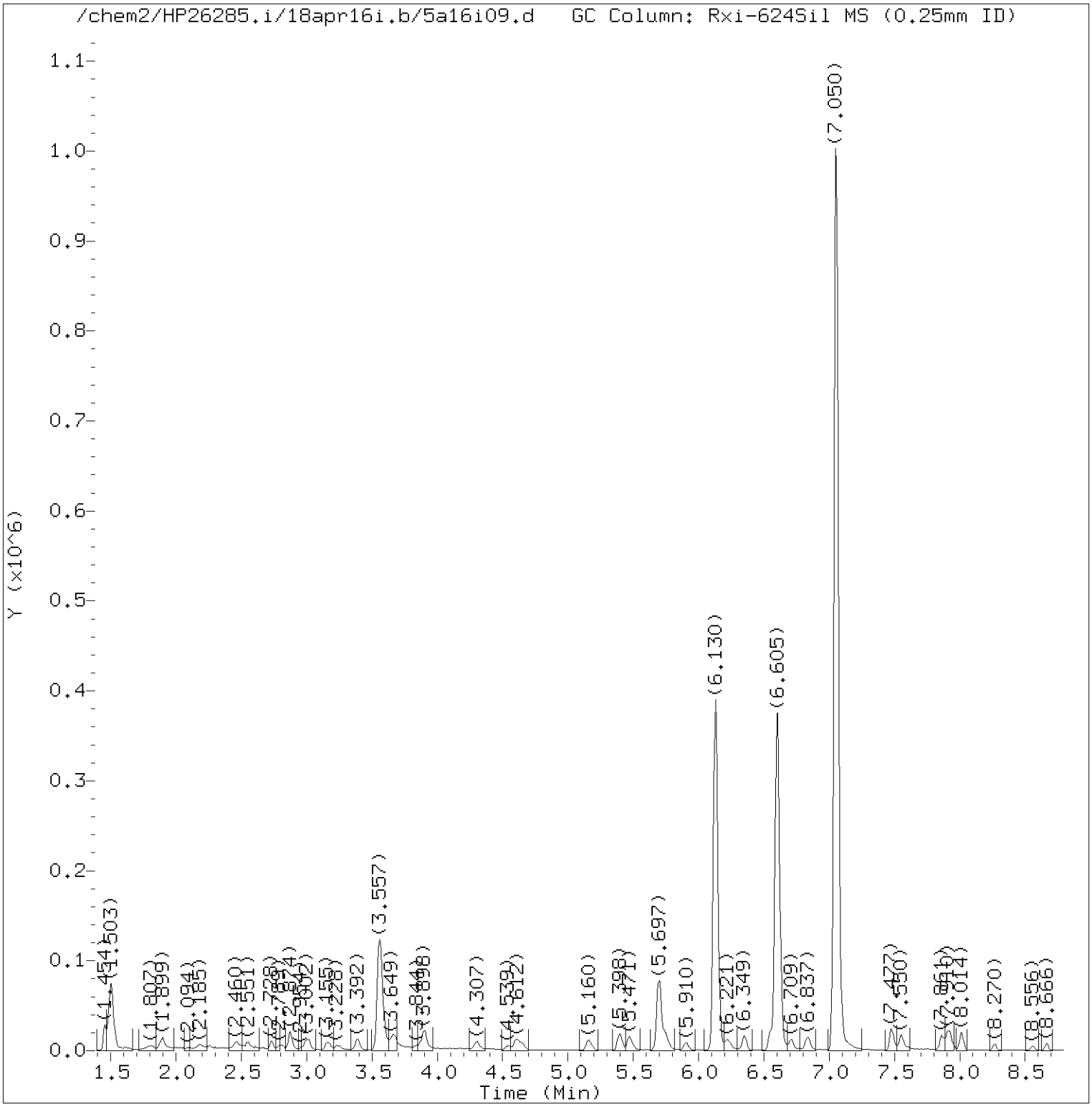
Target 3.5 esignature used for FID Page 115



Total Ion Chromatogram (TIC)

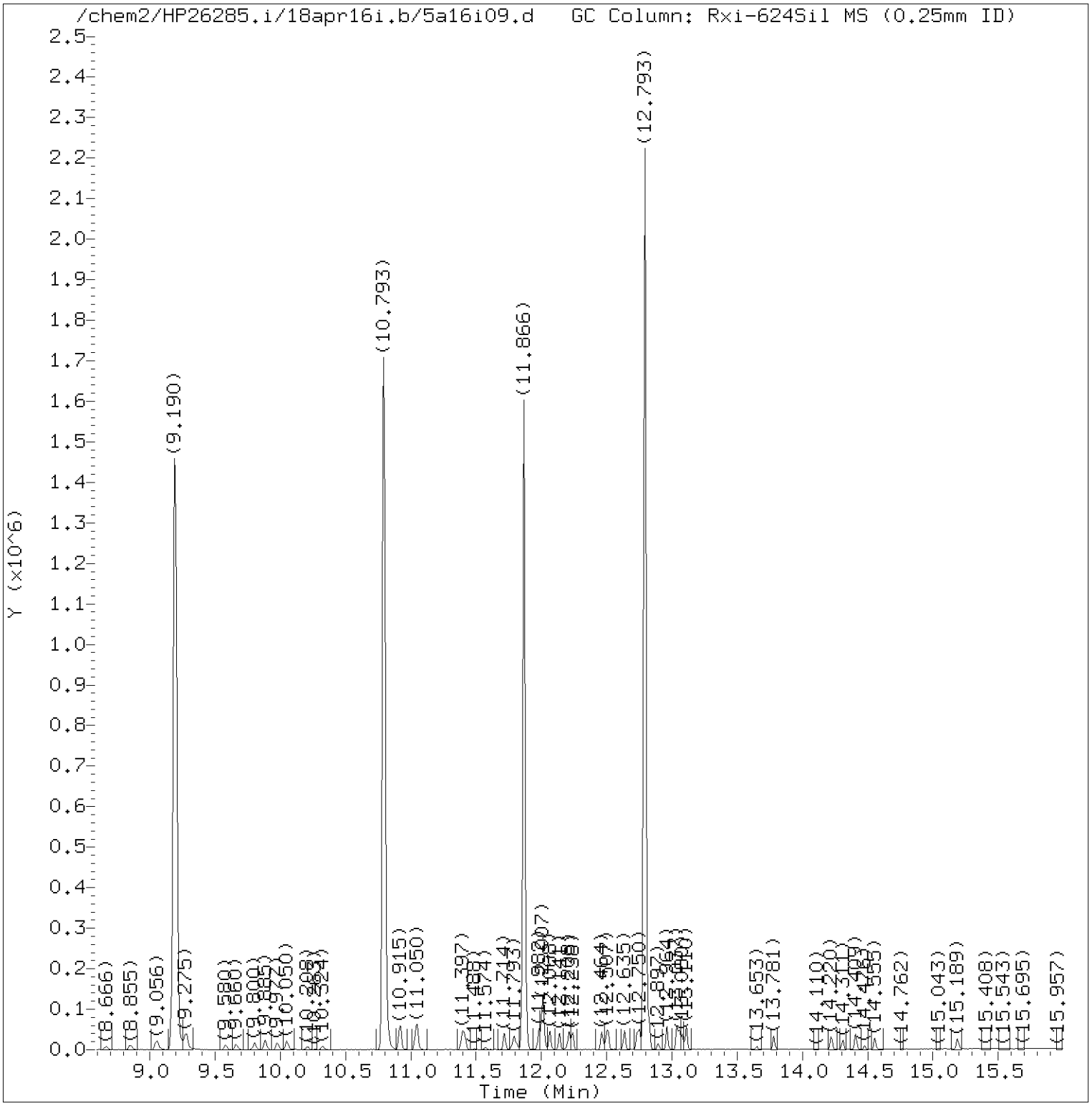
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.612	85	6011	0.766
4) Chloromethane	(2)	1.789	50	6198	1.005
6) Vinyl Chloride	(2)	1.881	62	5840	0.950
5) 1,3-Butadiene	(2)	1.905	39	6376M	1.260
8) Bromomethane	(2)	2.185	94	4551M	0.916
9) Chloroethane	(2)	2.252	64	2891	0.898
10) Dichlorofluoromethane	(2)	2.454	67	9536	0.989
12) Trichlorofluoromethane	(2)	2.472	101	6260	0.751
11) n-Pentane	(2)	2.551	43	5464	0.887
14) Ethyl ether	(2)	2.734	59	5168	0.970
15) Freon 123a	(2)	2.807	67	5726	0.853
16) Acrolein	(1)	2.874	56	21734	10.905
17) 1,1-Dichloroethene	(2)	2.990	96	4241	0.812
17) 1,1-Dichloroethene	(2)	2.990	63	2222	0.887
18) Acetone	(1)	3.014	58	1535	1.881
19) Freon 113	(2)	3.014	101	4274	0.754
21) 2-Propanol	(1)	3.161	45	10174	19.142
22) Methyl Iodide	(2)	3.161	142	9688	0.837
23) Carbon Disulfide	(2)	3.234	76	12216	0.785
27) Methyl Acetate	(2)	3.374	43	8221M	1.052
25) Allyl Chloride	(2)	3.392	41	8449	0.939
28) Methylene Chloride	(2)	3.551	84	5829	0.897
29)*t-Butyl alcohol-d10	(1)	3.563	65	249571	250.000
30) t-Butyl alcohol	(1)	3.667	59	21485	18.878
31) Acrylonitrile	(2)	3.838	53	3342	0.868
32) trans-1,2-Dichloroethene	(2)	3.898	96	5554	0.888
33) Methyl Tertiary Butyl Ether	(2)	3.898	73	16794	0.915
34) n-Hexane	(2)	4.295	57	6269	0.739
36) 1,1-Dichloroethane	(2)	4.539	63	9806	0.892
38) di-Isopropyl ether	(2)	4.612	45	17895	0.892
39) 2-Chloro-1,3-butadiene	(2)	4.654	53	6309	0.742
40) Ethyl t-butyl ether	(2)	5.160	59	15773	0.858
44) 2-Butanone	(2)	5.380	43	9624	1.806
45) 2,2-Dichloropropane	(2)	5.398	77	5128	0.801
42) cis-1,2-Dichloroethene	(2)	5.404	96	6417	0.884
47) Propionitrile	(1)	5.471	54	26631	20.367
48) Methacrylonitrile	(2)	5.697	67	40437	9.506
49) Bromochloromethane	(2)	5.740	128	3312	0.874

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	5.752	71	2801	1.971
51) Chloroform	(2)	5.904	83	10010	0.876
53) 1,1,1-Trichloroethane	(2)	6.124	97	9332	0.889
52)$Dibromofluoromethane	(2)	6.130	113	316304	49.980
52)$Dibromofluoromethane	(2)	6.130	111	314547	49.060
43) 1,2-Dichloroethene (Total)	(2)		96	11971	1.772
54) Cyclohexane	(2)	6.227	56	7485	0.756
54) Cyclohexane	(2)	6.221	84	6278	0.750
54) Cyclohexane	(2)	6.233	69	2125	0.698
56) Carbon Tetrachloride	(2)	6.349	117	5761	0.719
55) 1,1-Dichloropropene	(2)	6.355	75	7205	0.842
58) Isobutyl Alcohol	(1)	6.550	41	18012	50.082
57)$1,2-Dichloroethane-d4	(2)	6.599	102	69460	49.062
57)$1,2-Dichloroethane-d4	(2)	6.605	65	323671	51.272
57)$1,2-Dichloroethane-d4	(2)	6.605	104	45443	50.528
60) Benzene	(2)	6.624	78	24826	0.913
61) 1,2-Dichloroethane	(2)	6.709	62	8820	1.044
61) 1,2-Dichloroethane	(2)	6.721	98	495	0.653
65) t-Amyl methyl ether	(2)	6.837	73	16017	0.870
66)*Fluorobenzene	(2)	7.050	96	1228576	50.000
67) n-Heptane	(2)	7.075	43	6228	0.711
69) n-Butanol	(1)	7.477	56	23832	84.642
71) Trichloroethene	(2)	7.550	95	6305	0.885
73) Methylcyclohexane	(2)	7.861	83	8943	0.806
73) Methylcyclohexane	(2)	7.867	98	4012	0.824
74) 1,2-Dichloropropane	(2)	7.904	63	6057	0.884
72) t-Amyl ethyl ether	(2)	7.922	87	7322	0.759
76) 1,4-Dioxane	(1)	8.001	88	1873M	24.181
75) Dibromomethane	(2)	8.014	93	4294	0.958
77) Methyl Methacrylate	(2)	8.020	69	5003	0.799
79) Bromodichloromethane	(2)	8.270	83	5852	0.724
80) 2-Nitropropane	(2)	8.556	41	3550	1.504
81) 2-Chloroethyl Vinyl Ether	(2)	8.672	63	4424	0.844
82) cis-1,3-Dichloropropene	(2)	8.855	75	7645	0.718
83) 4-Methyl-2-pentanone	(2)	9.050	43	19422	1.774
84)$Toluene-d8	(3)	9.190	98	1203800	50.558
84)$Toluene-d8	(3)	9.190	100	779841	50.056
89) Toluene	(3)	9.282	92	16211	0.917

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Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) trans-1,3-Dichloropropene	(3)	9.580	75	6311	0.679
92) Ethyl Methacrylate	(3)	9.660	69	7437	0.719
93) 1,1,2-Trichloroethane	(3)	9.800	97	5842	0.882
94) Tetrachloroethene	(3)	9.885	166	7767	0.932
95) 1,3-Dichloropropane	(3)	9.977	76	9510	0.901
97) 2-Hexanone	(3)	10.050	43	15972	1.798
91) 1,3-Dichloropropene (total)	(3)		100	13956	1.398
98) Dibromochloromethane	(3)	10.208	129	4315	1.036
100) 1,2-Dibromoethane	(3)	10.318	107	5929	0.823
101)*Chlorobenzene-d5	(3)	10.793	117	949896	50.000
102) 1-Chlorohexane	(3)	10.818	91	8543	0.894
103) Chlorobenzene	(3)	10.824	112	18932	0.910
104) 1,1,1,2-Tetrachloroethane	(3)	10.909	131	4947	0.722
105) Ethylbenzene	(3)	10.922	91	28830	0.858
107) m+p-Xylene	(3)	11.043	106	22202	1.647
108) o-Xylene	(3)	11.397	106	10976	0.824
110) Styrene	(3)	11.415	104	15952	0.745
111) Bromoform	(3)	11.574	173	2270	1.434
112) Isopropylbenzene	(3)	11.714	105	26836	0.819
109) Xylene (Total)	(3)		106	33178	2.471
113) Cyclohexanone	(1)	11.787	55	18924	48.394
115)$4-Bromofluorobenzene	(3)	11.866	95	449042	49.262
115)$4-Bromofluorobenzene	(3)	11.866	174	415127	50.029
117) 1,1,2,2-Tetrachloroethane	(4)	11.982	83	9147	0.859
116) Bromobenzene	(4)	11.982	156	8008	0.871
119) trans-1,4-Dichloro-2-butene	(4)	12.007	53	20912	7.644
118) 1,2,3-Trichloropropane	(4)	12.025	110	3091	0.975
120) n-Propylbenzene	(4)	12.068	91	32626	0.868
121) 2-Chlorotoluene	(4)	12.141	126	7112	0.866
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	22953	0.844
122) 4-Chlorotoluene	(4)	12.238	126	7383	0.856
125) tert-Butylbenzene	(4)	12.464	134	5139	0.830
126) Pentachloroethane	(4)	12.488	167	3056	0.574
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	22132	0.793
128) sec-Butylbenzene	(4)	12.635	105	27380	0.812
130) 1,3-Dichlorobenzene	(4)	12.732	146	15341	0.884
131) p-Isopropyltoluene	(4)	12.750	119	22648	0.764
132)*1,4-Dichlorobenzene-d4	(4)	12.793	152	513340	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

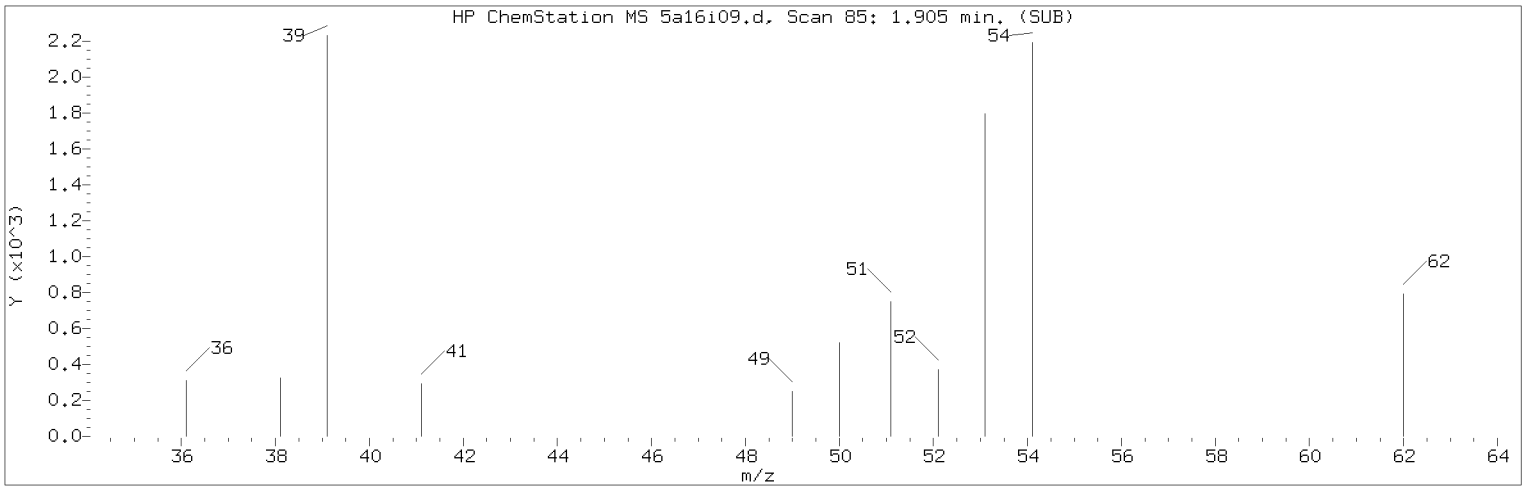
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

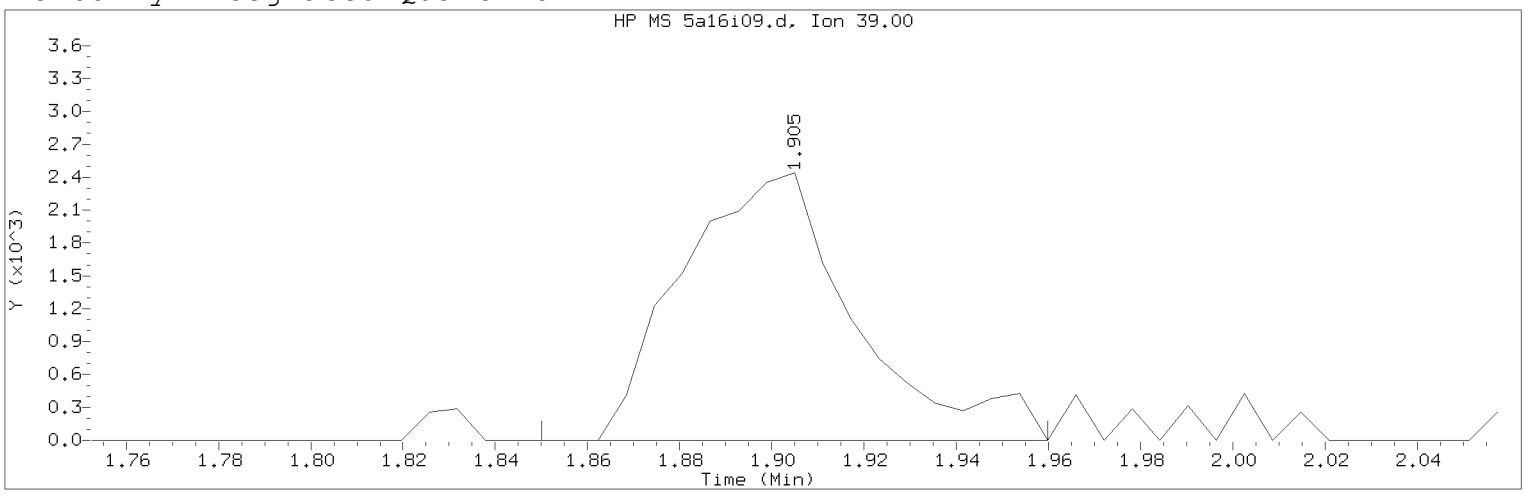
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
134) 1,4-Dichlorobenzene	(4)	12.811	146	14522	0.836
135) 1,2,3-Trimethylbenzene	(4)	12.824	105	26781	0.920
136) Benzyl Chloride	(4)	12.897	91	9895	3.995
137) 1,3-Diethylbenzene	(4)	12.964	119	15322	0.829
138) 1,4-Diethylbenzene	(4)	13.037	119	15931	0.829
140) n-Butylbenzene	(4)	13.055	92	11934	0.800
139) 1,2-Dichlorobenzene	(4)	13.080	146	14207	0.884
141) 1,2-Diethylbenzene	(4)	13.110	119	13891	0.899
142) Diethylbenzene (total)	(4)		100	45144	2.557
143) 1,2-Dibromo-3-chloropropane	(4)	13.647	75	1541	0.710
145) 1,3,5-Trichlorobenzene	(4)	13.781	180	9833	0.818
147) 1,2,4-Trichlorobenzene	(4)	14.220	180	9132	0.844
148) Hexachlorobutadiene	(4)	14.311	225	4118	0.865
149) Naphthalene	(4)	14.409	128	26074	0.794
150) 1,2,3-Trichlorobenzene	(4)	14.555	180	8429	0.869
151) 2-Methylnaphthalene	(4)	15.189	142	12026	0.650

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

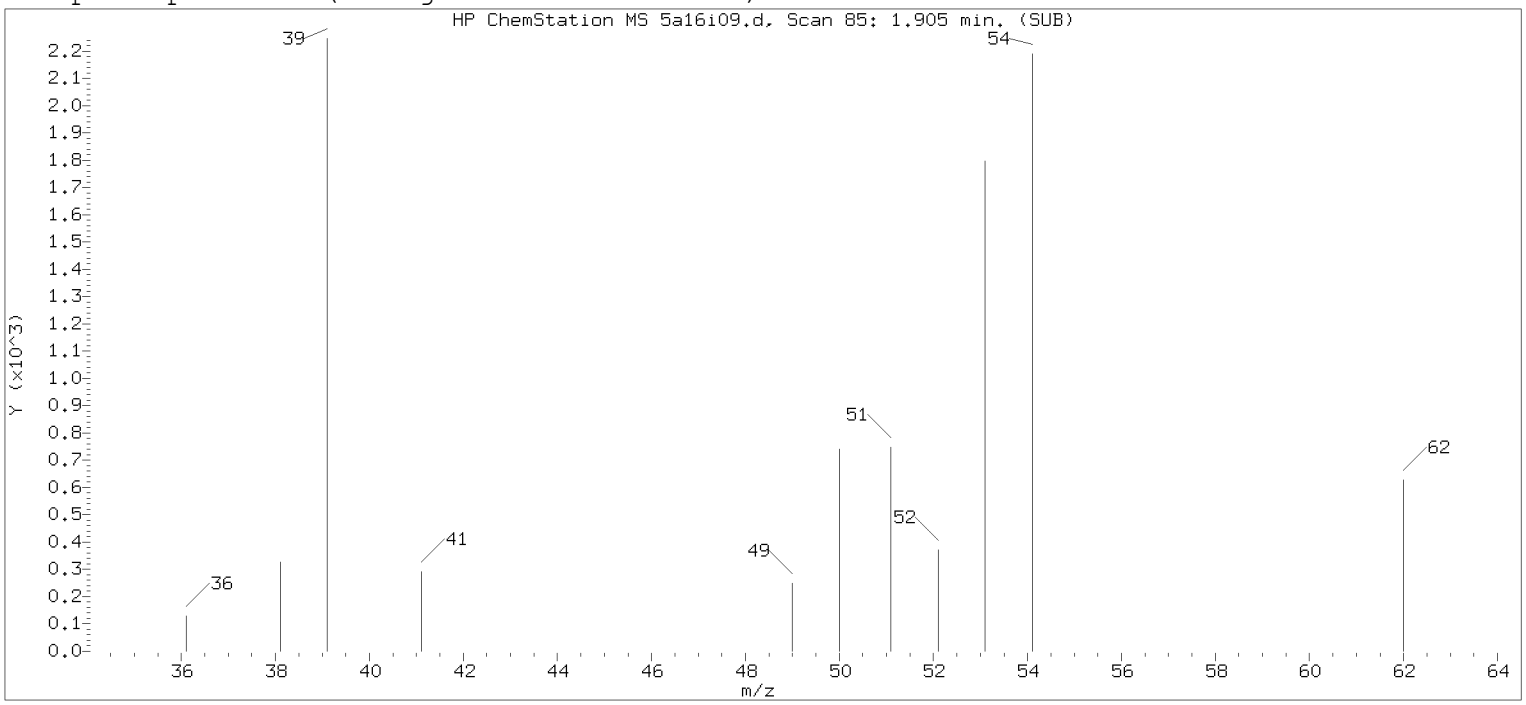
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 85
Retention Time (minutes): 1.905
Quant Ion : 39.00
Area (flag) : 6376M
On-Column Amount (ng) : 1.2603
Integration start scan : 75 Integration stop scan: 93
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

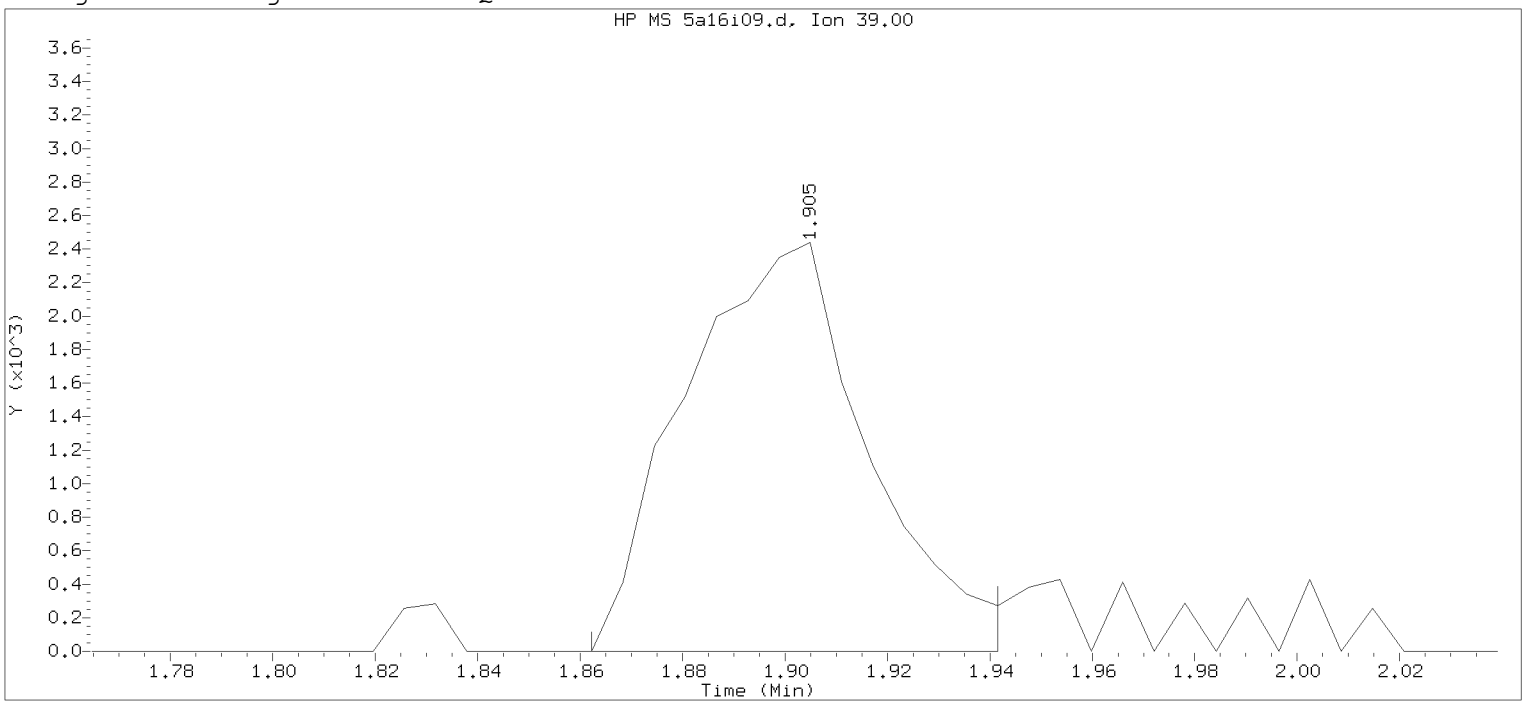
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:03
Date, time and analyst ID of latest file update: 16-Apr-2018 15:03 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 85
Retention Time (minutes): 1.905
Quant Ion : 39.00
Area : 6029
On-column Amount (ng) : 1.4276
Integration start scan : 77 Integration stop scan: 90
Y at integration start : 0 Y at integration end: 0

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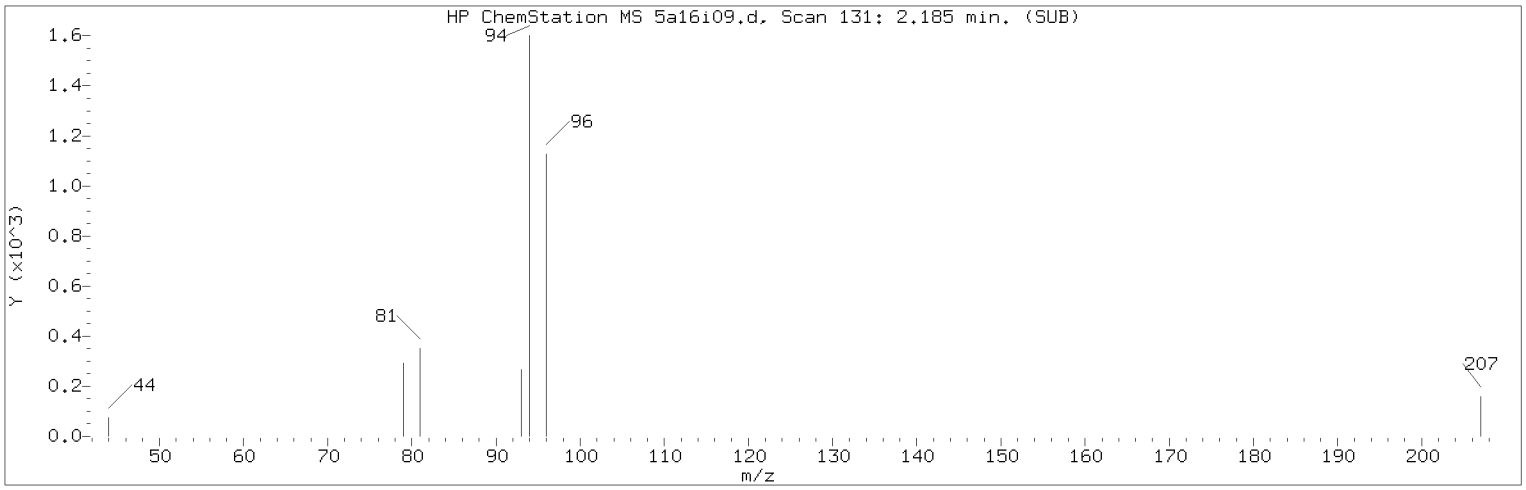
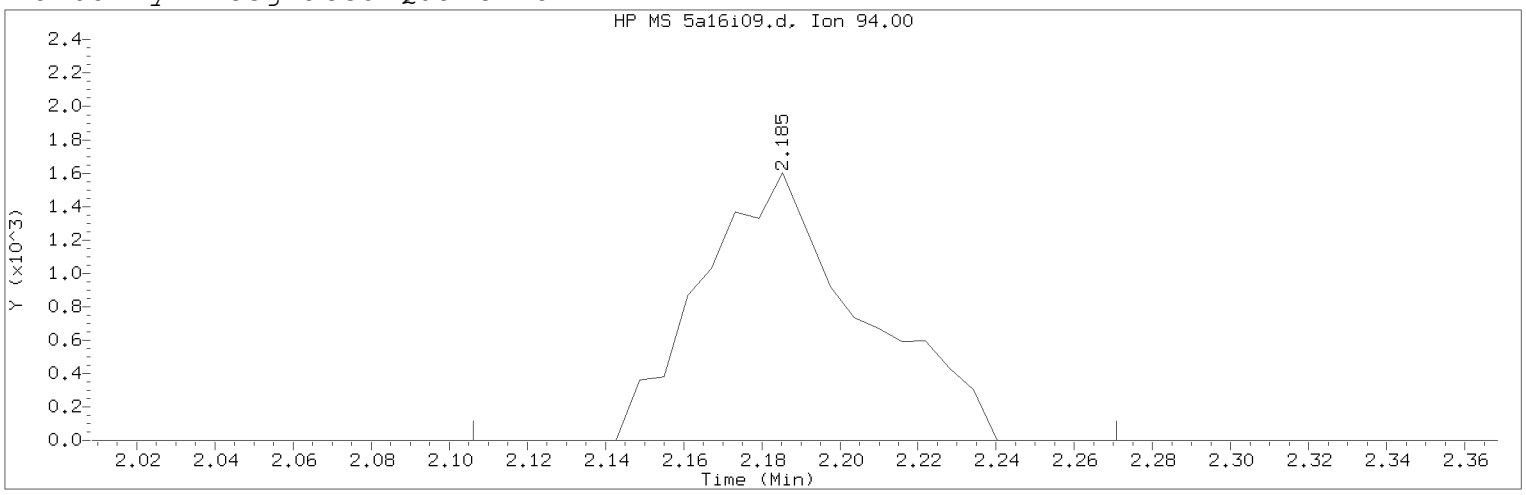
Target 3.5 esignature used. FID Page 116

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

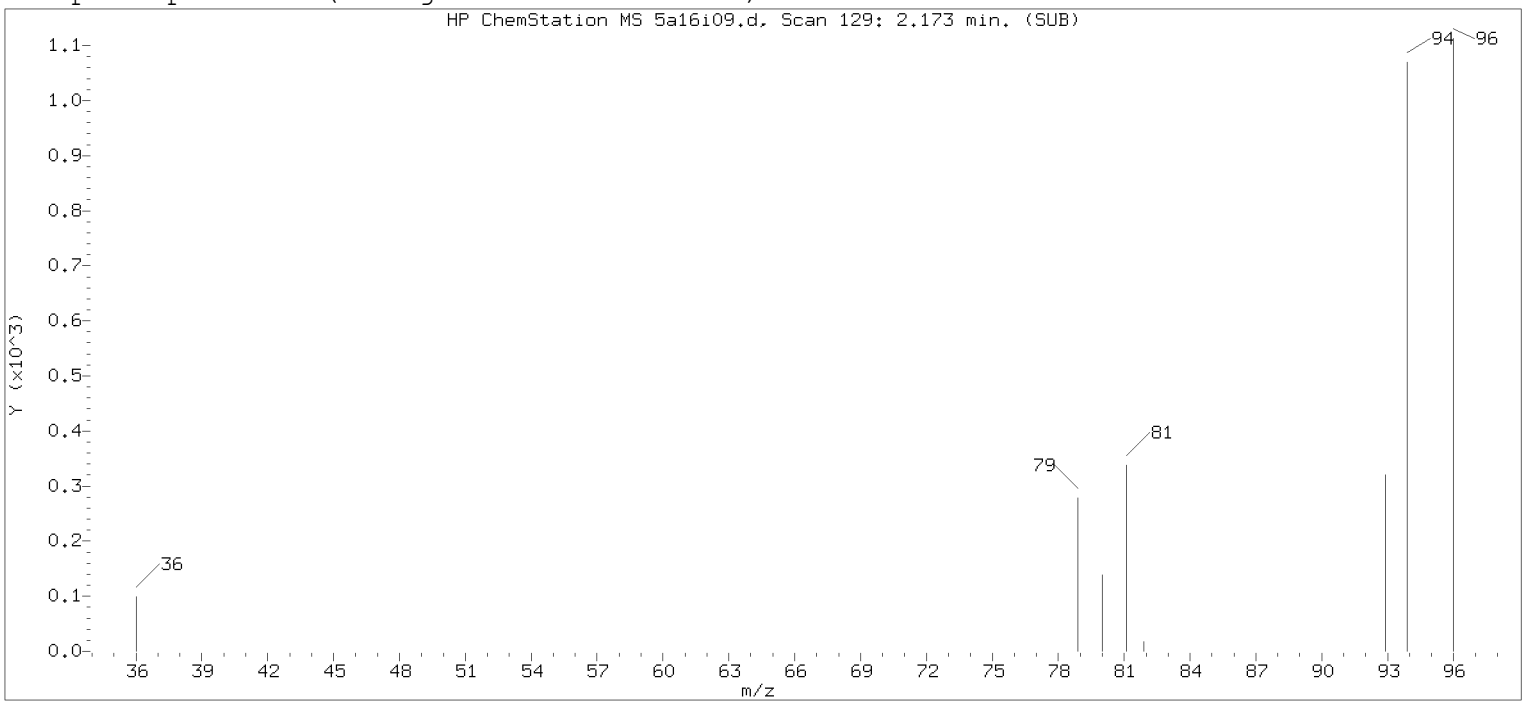
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 131
Retention Time (minutes): 2.185
Quant Ion : 94.00
Area (flag) : 4551M
On-Column Amount (ng) : 0.9156
Integration start scan : 117 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

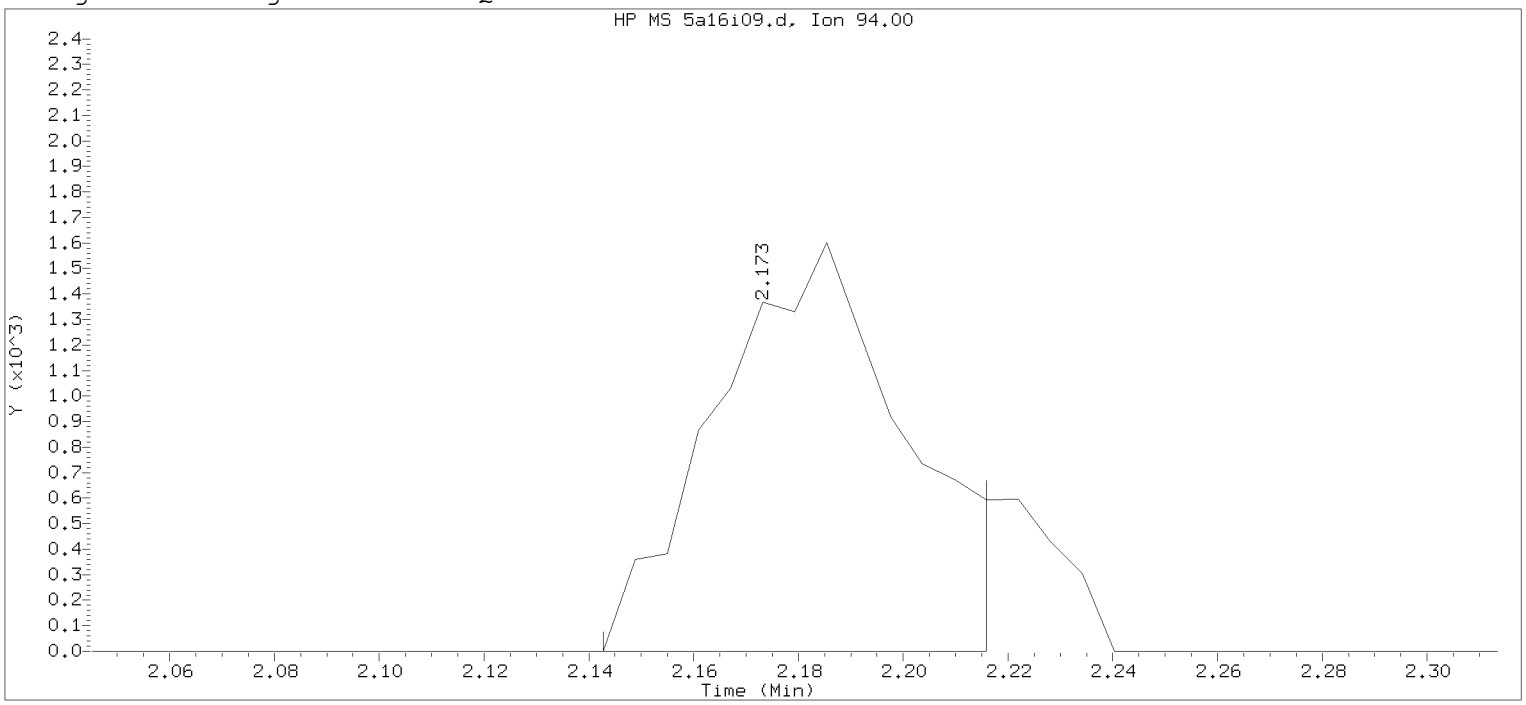
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:03
Date, time and analyst ID of latest file update: 16-Apr-2018 15:03 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 8
Compound Name : Bromomethane
Scan Number : 129
Retention Time (minutes): 2.173
Quant Ion : 94.00
Area : 3956
On-column Amount (ng) : 0.8098
Integration start scan : 123 Integration stop scan: 135
Y at integration start : 0 Y at integration end: 0

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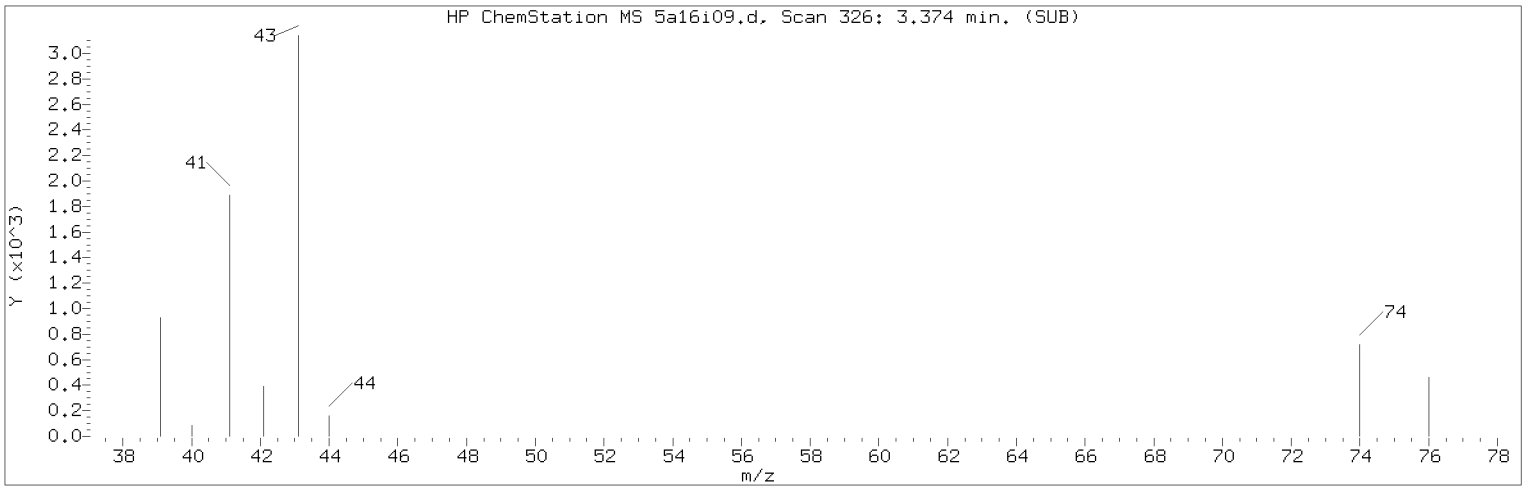
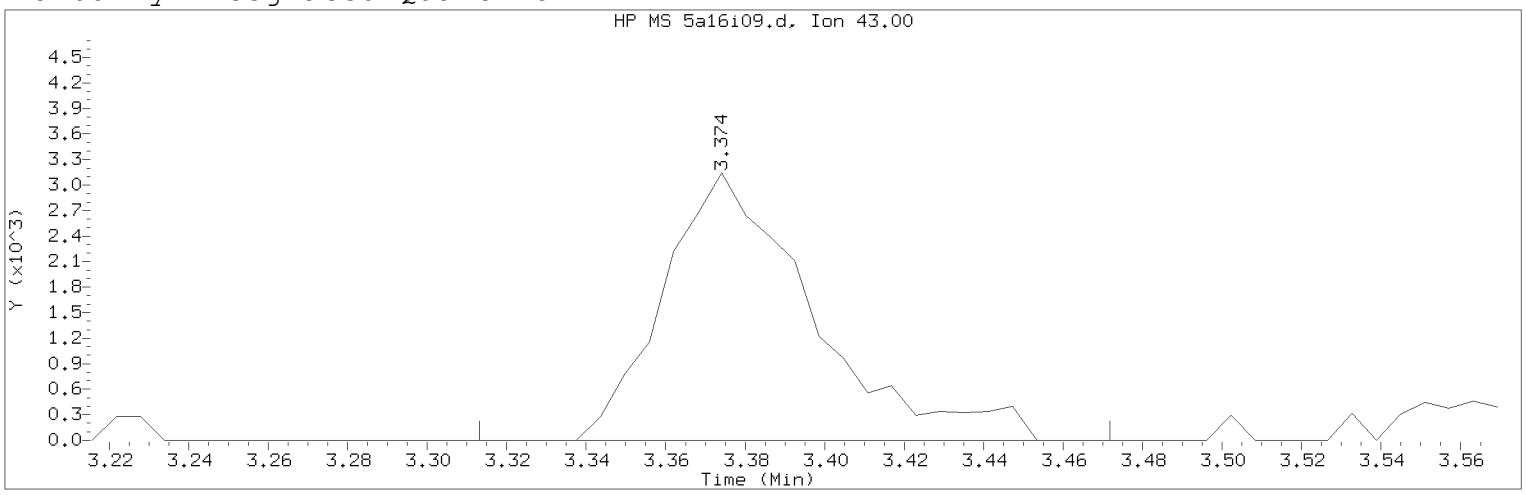
Target 3.5 esignature used. FD6 Page 116

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

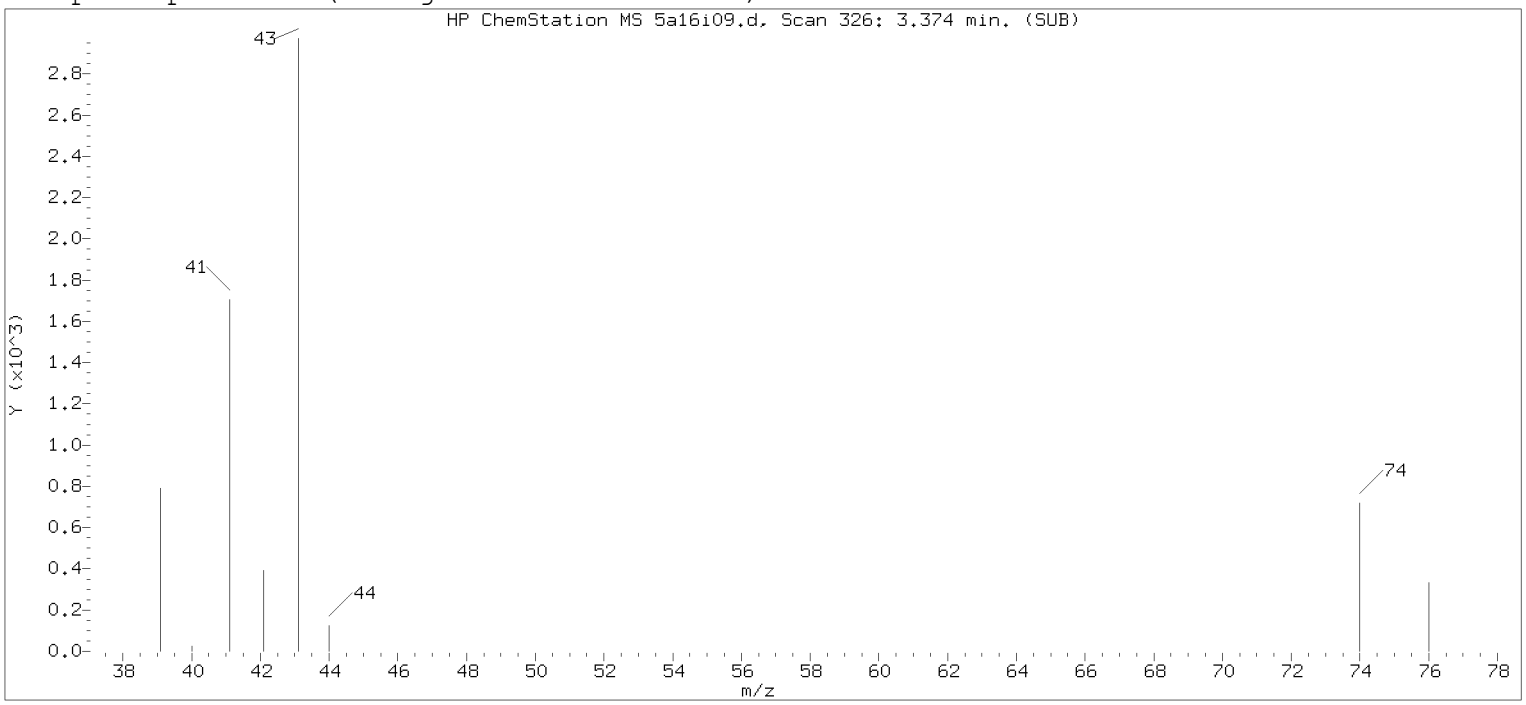
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 326
Retention Time (minutes): 3.374
Quant Ion : 43.00
Area (flag) : 8221M
On-Column Amount (ng) : 1.0517
Integration start scan : 315 Integration stop scan: 341
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

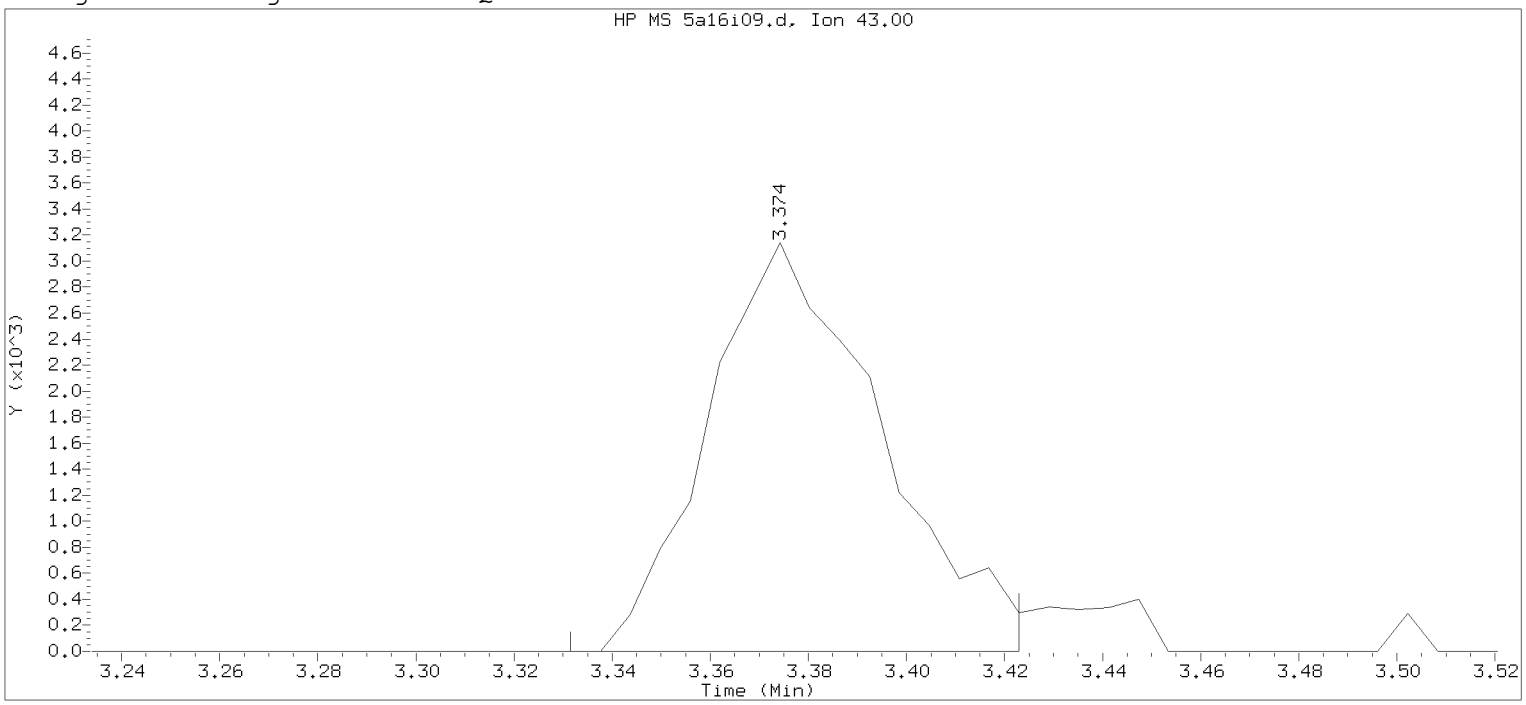
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

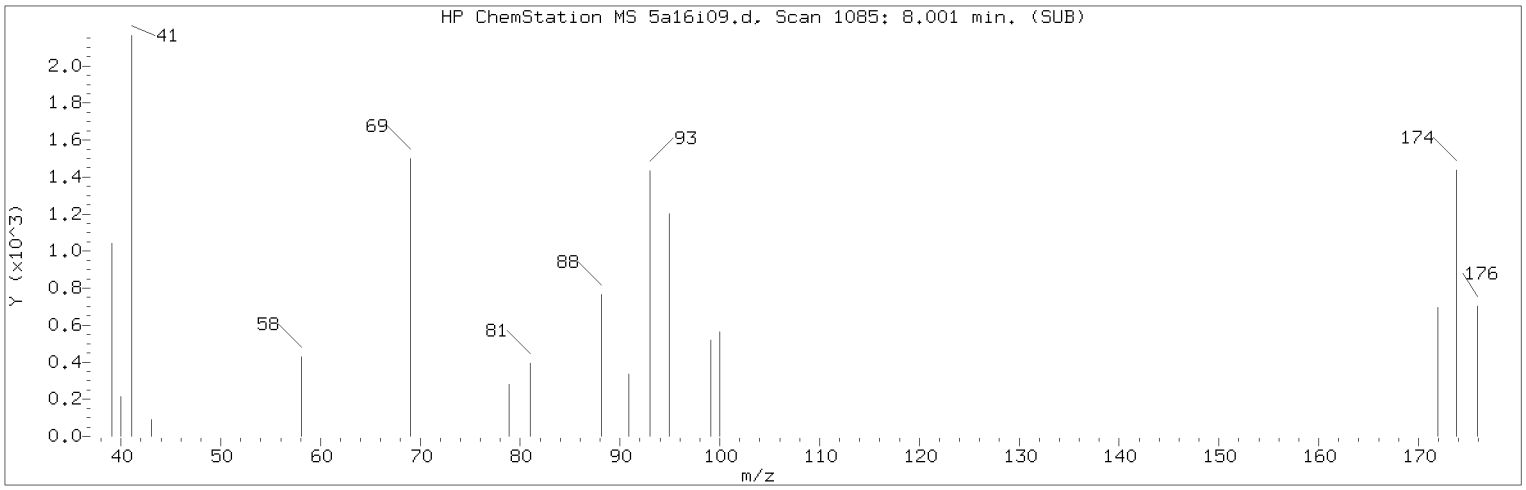
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:03
Date, time and analyst ID of latest file update: 16-Apr-2018 15:03 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

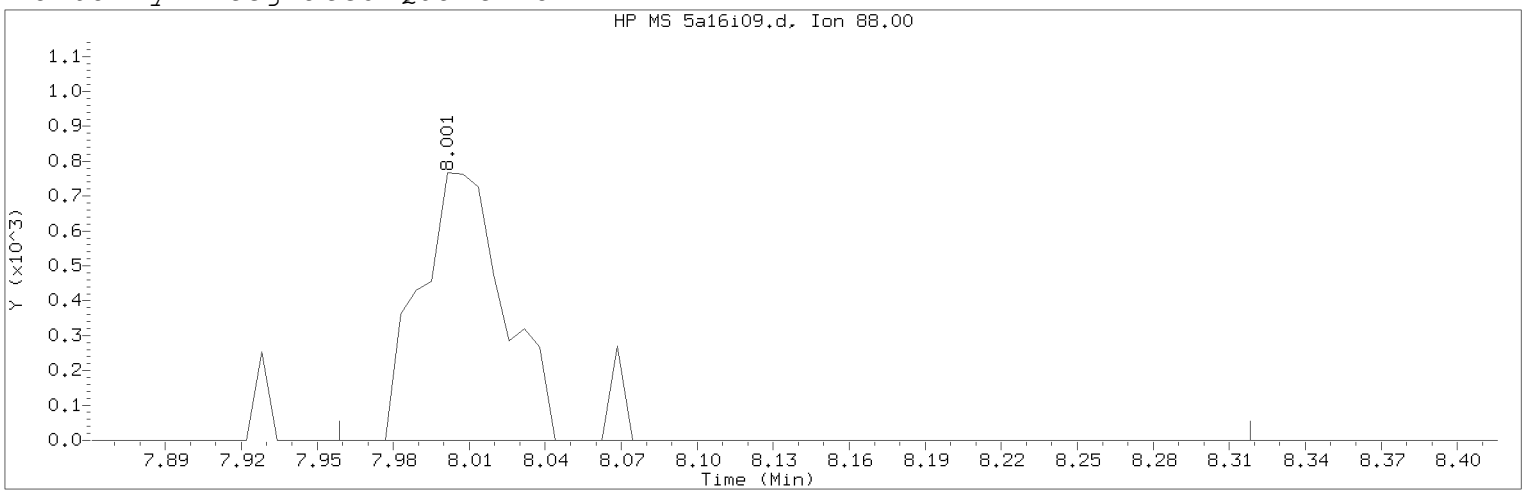
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 326
Retention Time (minutes): 3.374
Quant Ion : 43.00
Area : 7657
On-column Amount (ng) : 0.9898
Integration start scan : 318 Integration stop scan: 333
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:42 kk10002

Sample Name: VSTD001 Lab Sample ID: VSTD001

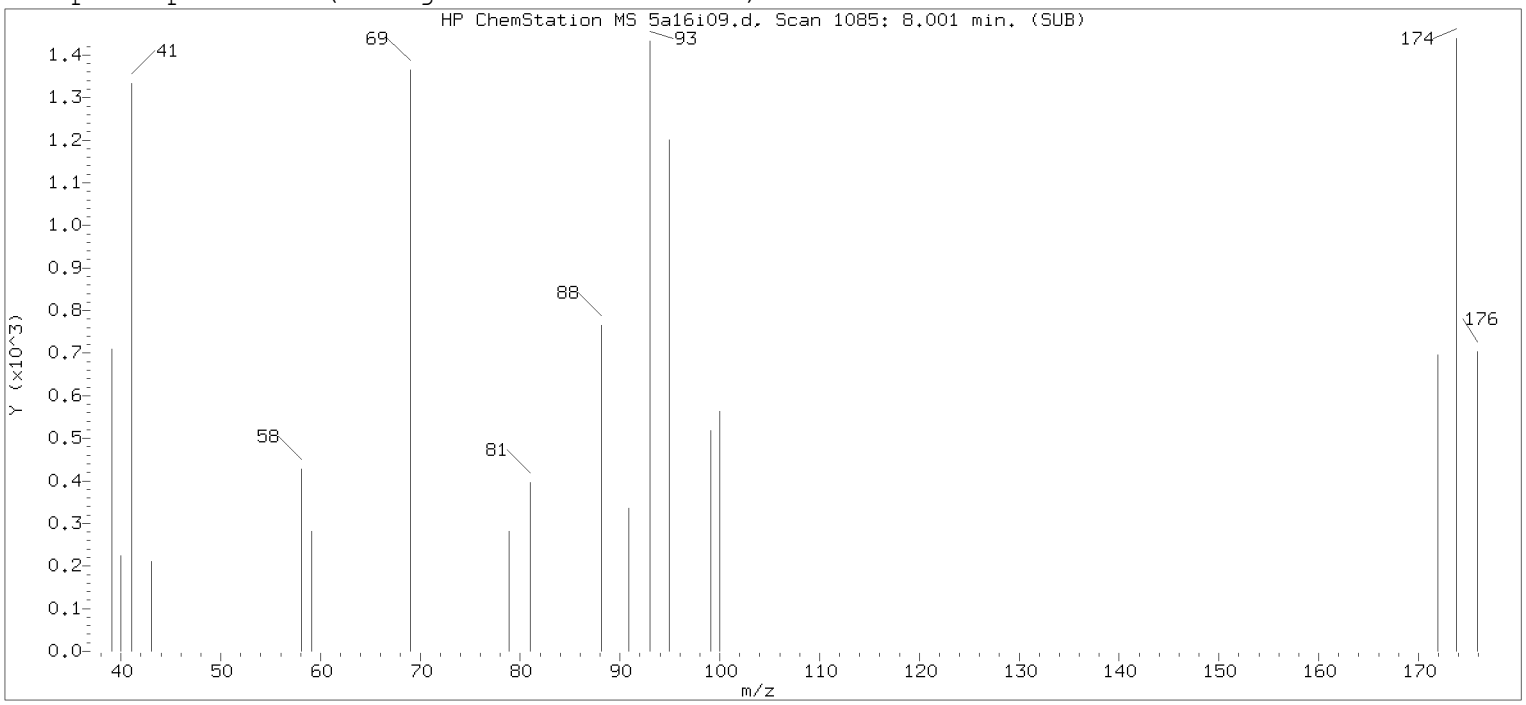
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1085
Retention Time (minutes): 8.001
Quant Ion : 88.00
Area (flag) : 1873M
On-Column Amount (ng) : 24.1810
Integration start scan : 1077 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

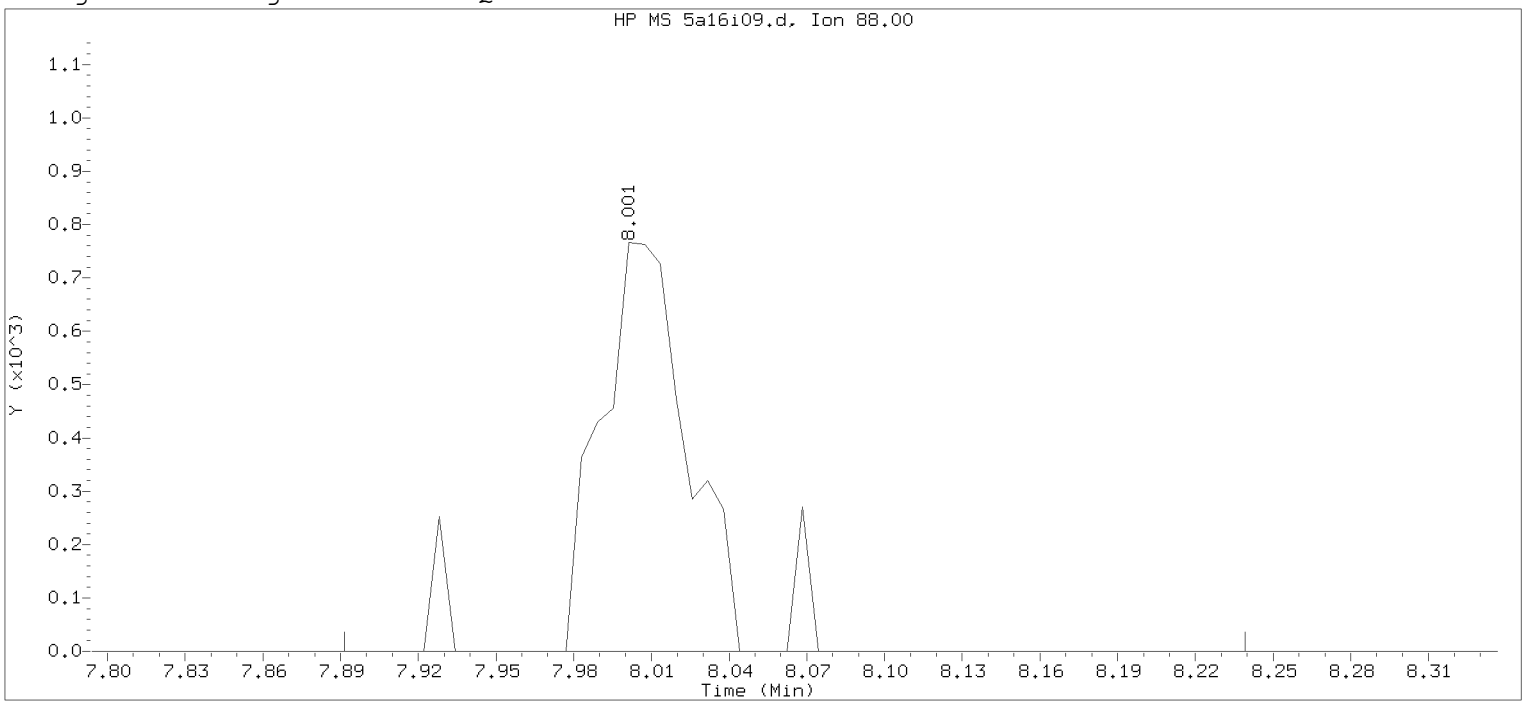
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:53.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



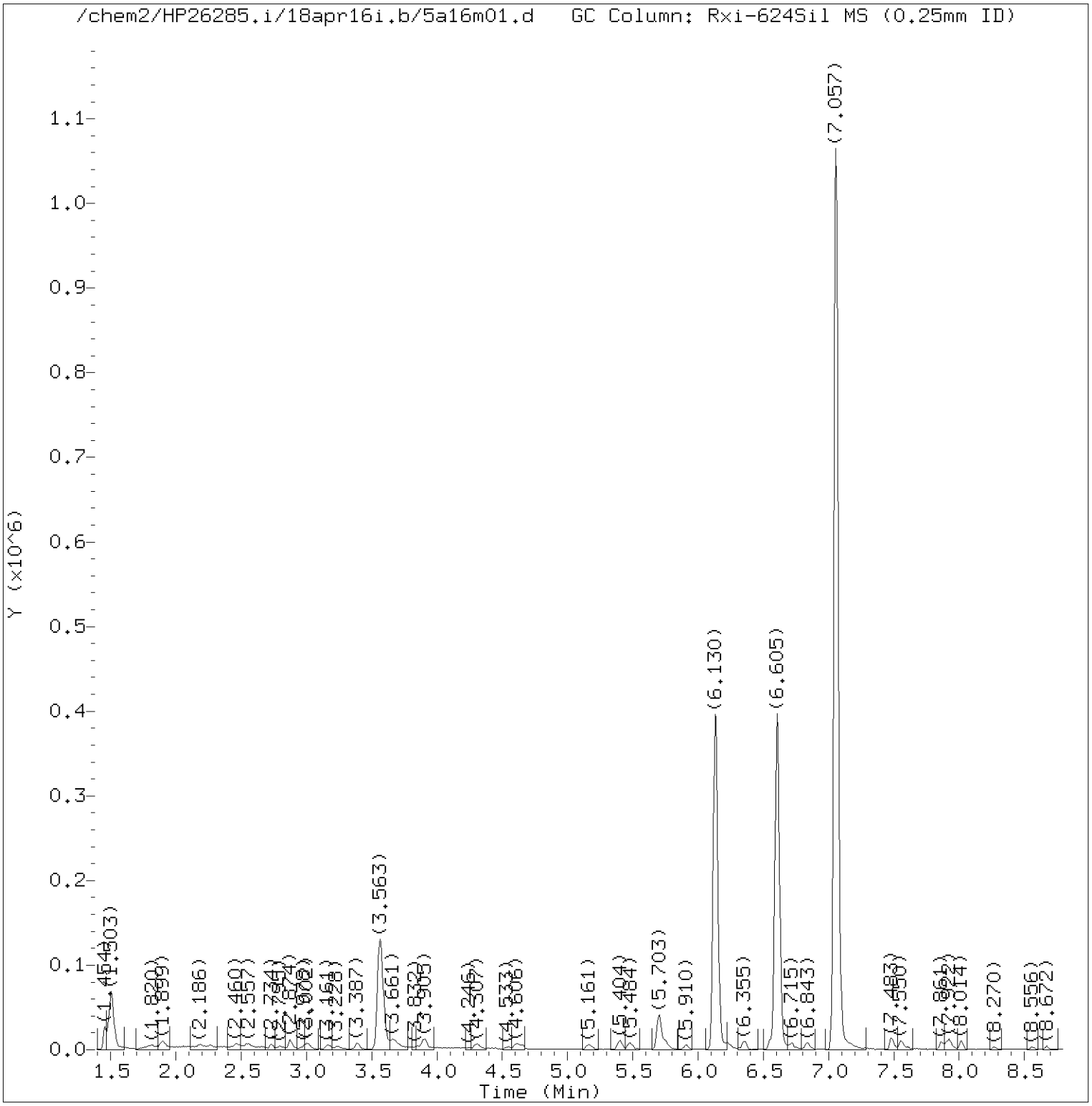
Data File: /chem2/HP26285.i/18apr16i.b/5a16i09.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 14:44 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:03
Date, time and analyst ID of latest file update: 16-Apr-2018 15:03 Unknown

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1085
Retention Time (minutes): 8.001
Quant Ion : 88.00
Area : 1965
On-column Amount (ng) : 27.2982
Integration start scan : 1066 Integration stop scan: 1123
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:53.
Target 3.5 esignature used. FID Page 116



Total Ion Chromatogram (TIC)

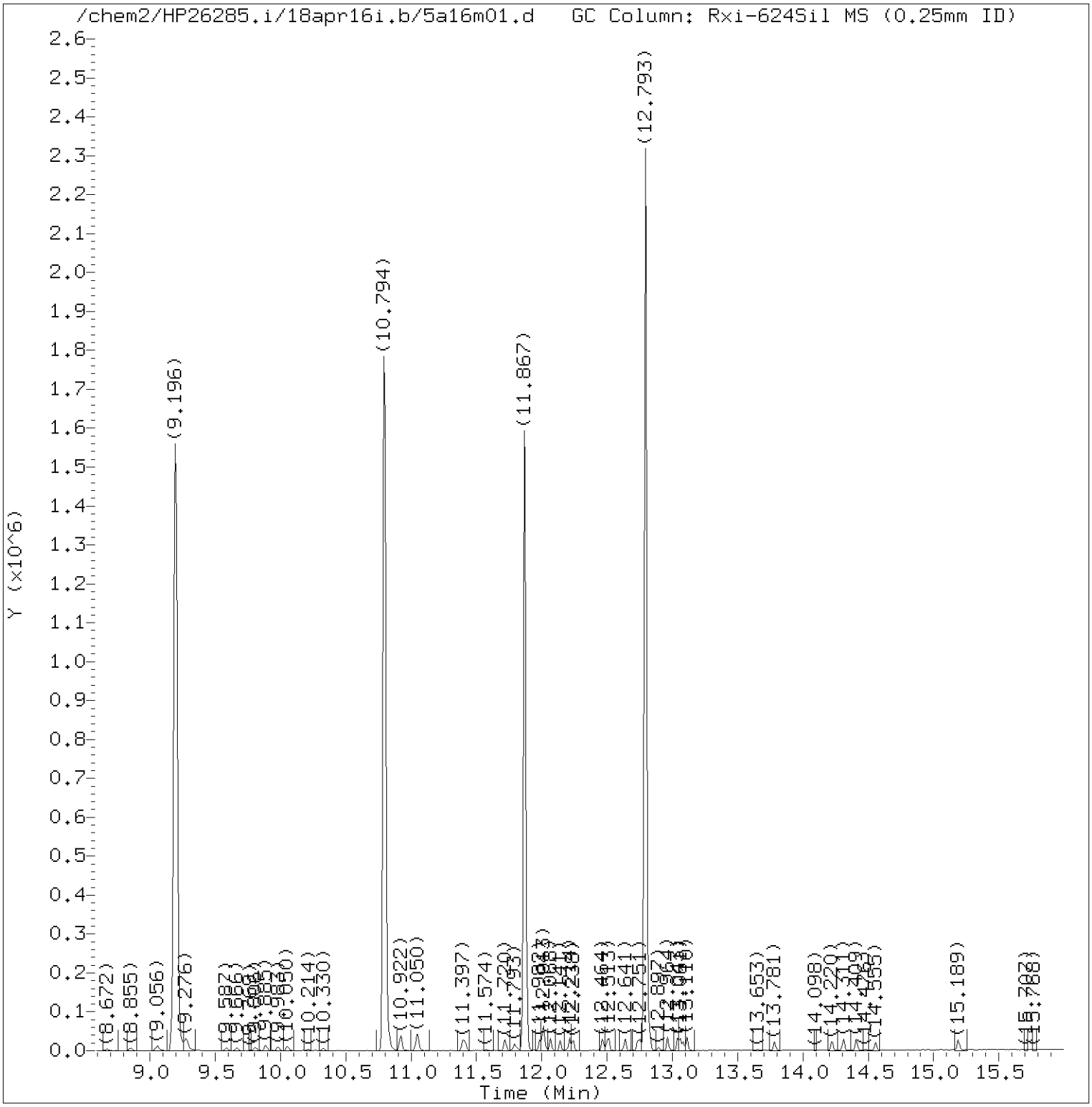
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.619	85	2798	0.340
4) Chloromethane	(2)	1.795	50	3951	0.612
6) Vinyl Chloride	(2)	1.887	62	3986	0.619
5) 1,3-Butadiene	(2)	1.899	39	4243M	0.801
8) Bromomethane	(2)	2.186	94	2488	0.478
9) Chloroethane	(2)	2.259	64	2028	0.602
10) Dichlorofluoromethane	(2)	2.460	67	4722	0.468
12) Trichlorofluoromethane	(2)	2.478	101	3387	0.388
11) n-Pentane	(2)	2.551	43	3656	0.566
14) Ethyl ether	(2)	2.728	59	2669	0.478
15) Freon 123a	(2)	2.801	67	3437	0.489
16) Acrolein	(1)	2.874	56	11804	5.366
17) 1,1-Dichloroethene	(2)	2.978	96	2545	0.465
18) Acetone	(1)	3.021	58	932	1.035
19) Freon 113	(2)	3.033	101	2077	0.350
22) Methyl Iodide	(2)	3.155	142	5647	0.466
21) 2-Propanol	(1)	3.161	45	5219	8.897
23) Carbon Disulfide	(2)	3.234	76	7906M	0.485
25) Allyl Chloride	(2)	3.387	41	5196	0.551
27) Methyl Acetate	(2)	3.387	43	3966	0.484
28) Methylene Chloride	(2)	3.551	84	3213	0.472
29)*t-Butyl alcohol-d10	(1)	3.563	65	275453	250.000
30) t-Butyl alcohol	(1)	3.673	59	11598	9.233
31) Acrylonitrile	(2)	3.844	53	1944	0.482
33) Methyl Tertiary Butyl Ether	(2)	3.893	73	9210	0.479
32) trans-1,2-Dichloroethene	(2)	3.905	96	3362	0.513
34) n-Hexane	(2)	4.295	57	3620	0.407
36) 1,1-Dichloroethane	(2)	4.545	63	5861	0.509
38) di-Isopropyl ether	(2)	4.624	45	10181	0.485
39) 2-Chloro-1,3-butadiene	(2)	4.661	53	4121	0.463
40) Ethyl t-butyl ether	(2)	5.173	59	8635	0.448
44) 2-Butanone	(2)	5.392	43	5549	0.994
42) cis-1,2-Dichloroethene	(2)	5.398	96	3903	0.513
45) 2,2-Dichloropropane	(2)	5.417	77	2885	0.430
47) Propionitrile	(1)	5.478	54	14010	9.708
48) Methacrylonitrile	(2)	5.703	67	20699	4.645
49) Bromochloromethane	(2)	5.746	128	1932	0.487
50) Tetrahydrofuran	(1)	5.758	71	1592	1.015

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.910	83	6276	0.524
52)$Dibromofluoromethane	(2)	6.130	113	327892	49.461
53) 1,1,1-Trichloroethane	(2)	6.130	97	5698	0.518
43) 1,2-Dichloroethene (Total)	(2)		96	7265	1.027
54) Cyclohexane	(2)	6.227	56	4313	0.416
56) Carbon Tetrachloride	(2)	6.343	117	3638	0.433
55) 1,1-Dichloropropene	(2)	6.349	75	4700	0.525
58) Isobutyl Alcohol	(1)	6.551	41	9633	24.268
57)$1,2-Dichloroethane-d4	(2)	6.605	102	75141	50.668
60) Benzene	(2)	6.636	78	15569	0.547
61) 1,2-Dichloroethane	(2)	6.715	62	5396	0.610
65) t-Amyl methyl ether	(2)	6.843	73	8436	0.437
66)*Fluorobenzene	(2)	7.057	96	1286940	50.000
67) n-Heptane	(2)	7.081	43	5770	0.629
69) n-Butanol	(1)	7.477	56	12097	38.927
71) Trichloroethene	(2)	7.563	95	3991	0.535
73) Methylcyclohexane	(2)	7.861	83	5248	0.452
74) 1,2-Dichloropropane	(2)	7.904	63	3151	0.439
72) t-Amyl ethyl ether	(2)	7.934	87	4476	0.443
76) 1,4-Dioxane	(1)	8.008	88	697	8.153
77) Methyl Methacrylate	(2)	8.014	69	2740M	0.418
75) Dibromomethane	(2)	8.014	93	2133	0.454
79) Bromodichloromethane	(2)	8.270	83	3124	0.369
80) 2-Nitropropane	(2)	8.556	41	1819	0.735
81) 2-Chloroethyl Vinyl Ether	(2)	8.666	63	2256	0.411
82) cis-1,3-Dichloropropene	(2)	8.855	75	4472	0.401
83) 4-Methyl-2-pentanone	(2)	9.056	43	10171	0.887
84)$Toluene-d8	(3)	9.196	98	1252444	51.007
89) Toluene	(3)	9.282	92	9857	0.541
90) trans-1,3-Dichloropropene	(3)	9.580	75	3839	0.401
92) Ethyl Methacrylate	(3)	9.660	69	4090	0.384
93) 1,1,2-Trichloroethane	(3)	9.806	97	3168	0.464
94) Tetrachloroethene	(3)	9.885	166	4545	0.529
95) 1,3-Dichloropropane	(3)	9.983	76	5479	0.503
97) 2-Hexanone	(3)	10.050	43	7513	0.820
91) 1,3-Dichloropropene (total)	(3)		100	8311	0.802
98) Dibromochloromethane	(3)	10.214	129	2007	0.675
100) 1,2-Dibromoethane	(3)	10.324	107	3530	0.475

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101)*Chlorobenzene-d5	(3)	10.794	117	979582	50.000
102) 1-Chlorohexane	(3)	10.818	91	6663	0.676
103) Chlorobenzene	(3)	10.824	112	12112	0.565
104) 1,1,1,2-Tetrachloroethane	(3)	10.909	131	3085	0.437
105) Ethylbenzene	(3)	10.922	91	19483	0.562
107) m+p-Xylene	(3)	11.050	106	15237	1.096
108) o-Xylene	(3)	11.397	106	7133	0.519
110) Styrene	(3)	11.415	104	9034	0.409
111) Bromoform	(3)	11.574	173	1073	1.170
112) Isopropylbenzene	(3)	11.720	105	17964	0.532
109) Xylene (Total)	(3)		106	22370	1.615
113) Cyclohexanone	(1)	11.793	55	9268	21.474
115)$4-Bromofluorobenzene	(3)	11.867	95	469061	49.899
117) 1,1,2,2-Tetrachloroethane	(4)	11.982	83	4683	0.420
116) Bromobenzene	(4)	11.982	156	4680	0.486
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	10542	3.680
118) 1,2,3-Trichloropropane	(4)	12.025	110	1481	0.446
120) n-Propylbenzene	(4)	12.068	91	22661	0.576
121) 2-Chlorotoluene	(4)	12.141	126	4641	0.540
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	14750	0.518
122) 4-Chlorotoluene	(4)	12.245	126	4897	0.542
125) tert-Butylbenzene	(4)	12.470	134	3413	0.527
126) Pentachloroethane	(4)	12.495	167	2056	0.369
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	14164	0.485
128) sec-Butylbenzene	(4)	12.641	105	18358	0.520
130) 1,3-Dichlorobenzene	(4)	12.732	146	9913	0.545
131) p-Isopropyltoluene	(4)	12.757	119	14362	0.463
132)*1,4-Dichlorobenzene-d4	(4)	12.793	152	537512	50.000
134) 1,4-Dichlorobenzene	(4)	12.818	146	10131	0.557
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	16725	0.549
136) Benzyl Chloride	(4)	12.897	91	5252	3.801
137) 1,3-Diethylbenzene	(4)	12.964	119	10173	0.525
138) 1,4-Diethylbenzene	(4)	13.037	119	9259	0.460
140) n-Butylbenzene	(4)	13.061	92	7375	0.472
139) 1,2-Dichlorobenzene	(4)	13.086	146	8536	0.507
141) 1,2-Diethylbenzene	(4)	13.110	119	8236M	0.509
142) Diethylbenzene (total)	(4)		100	27668	1.495
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	738	0.325

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145)	1,3,5-Trichlorobenzene	(4)	13.787	180	7380	0.586
147)	1,2,4-Trichlorobenzene	(4)	14.220	180	6425	0.567
148)	Hexachlorobutadiene	(4)	14.311	225	5275	1.058
149)	Naphthalene	(4)	14.409	128	18465	0.537
150)	1,2,3-Trichlorobenzene	(4)	14.555	180	6608	0.650
151)	2-Methylnaphthalene	(4)	15.189	142	12102	0.625

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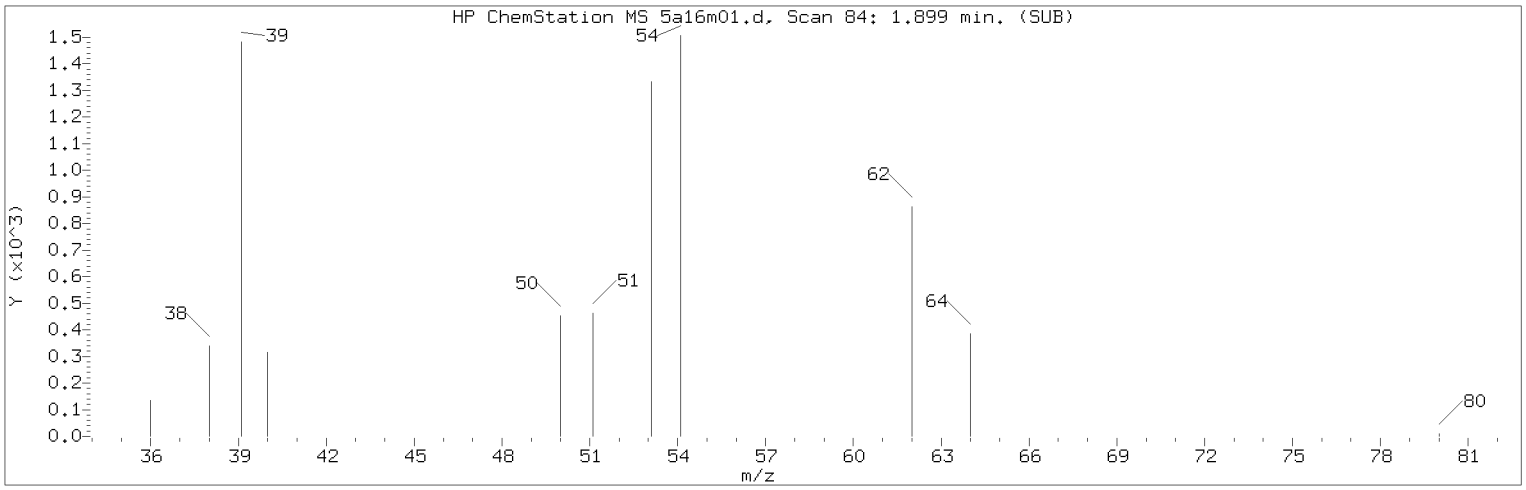
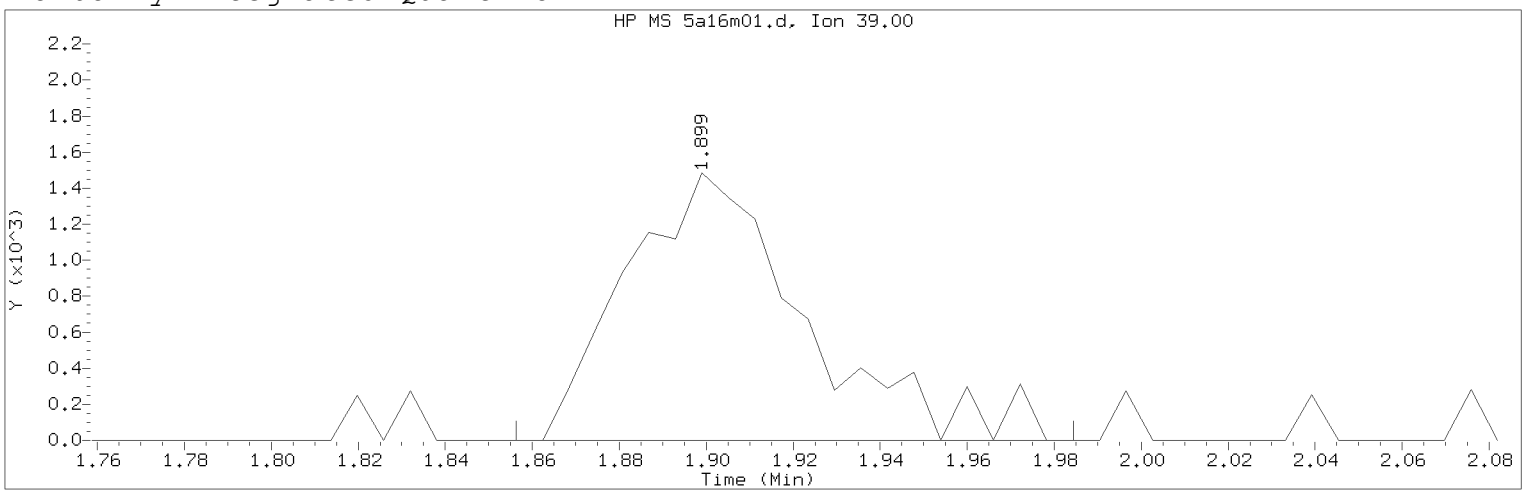
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

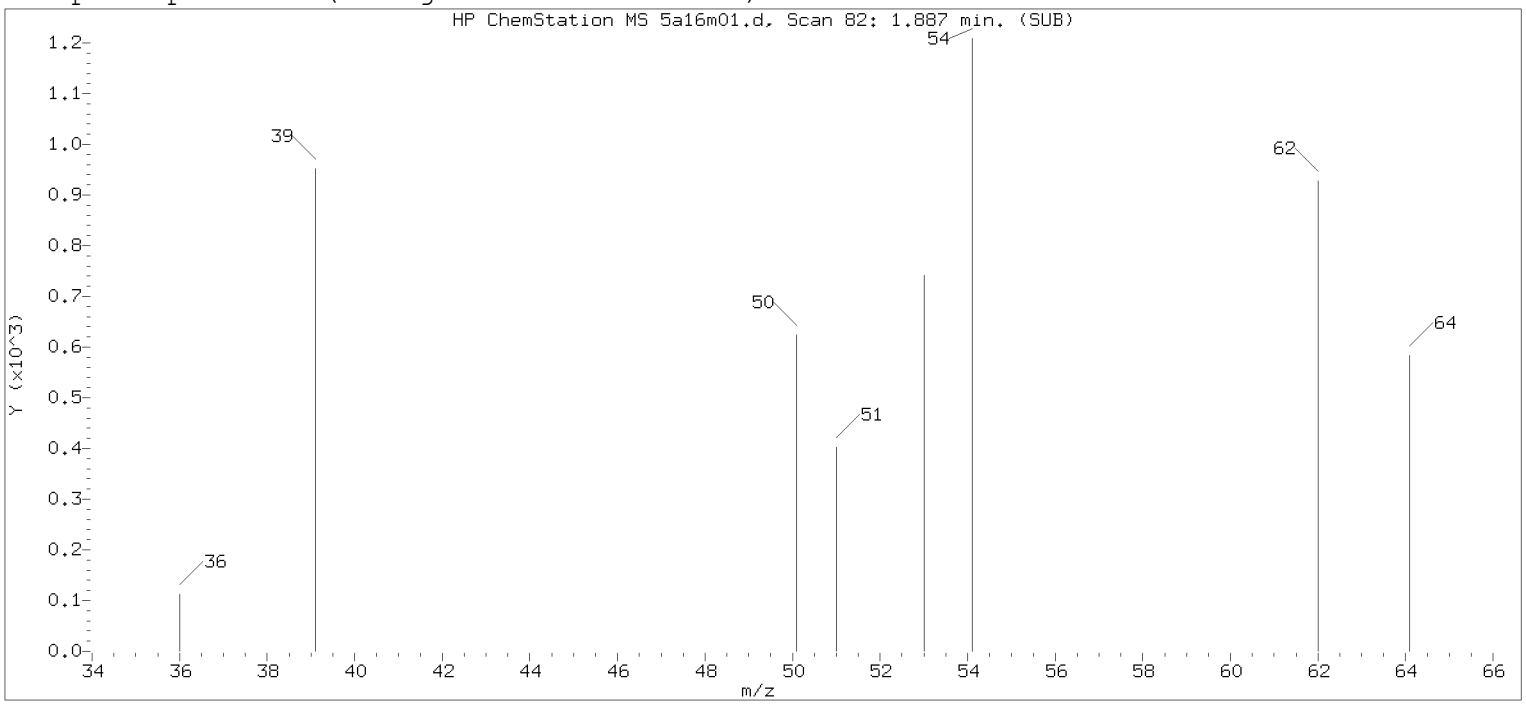
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 84
Retention Time (minutes): 1.899
Quant Ion : 39.00
Area (flag) : 4243M
On-Column Amount (ng) : 0.8008
Integration start scan : 76 Integration stop scan: 97
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

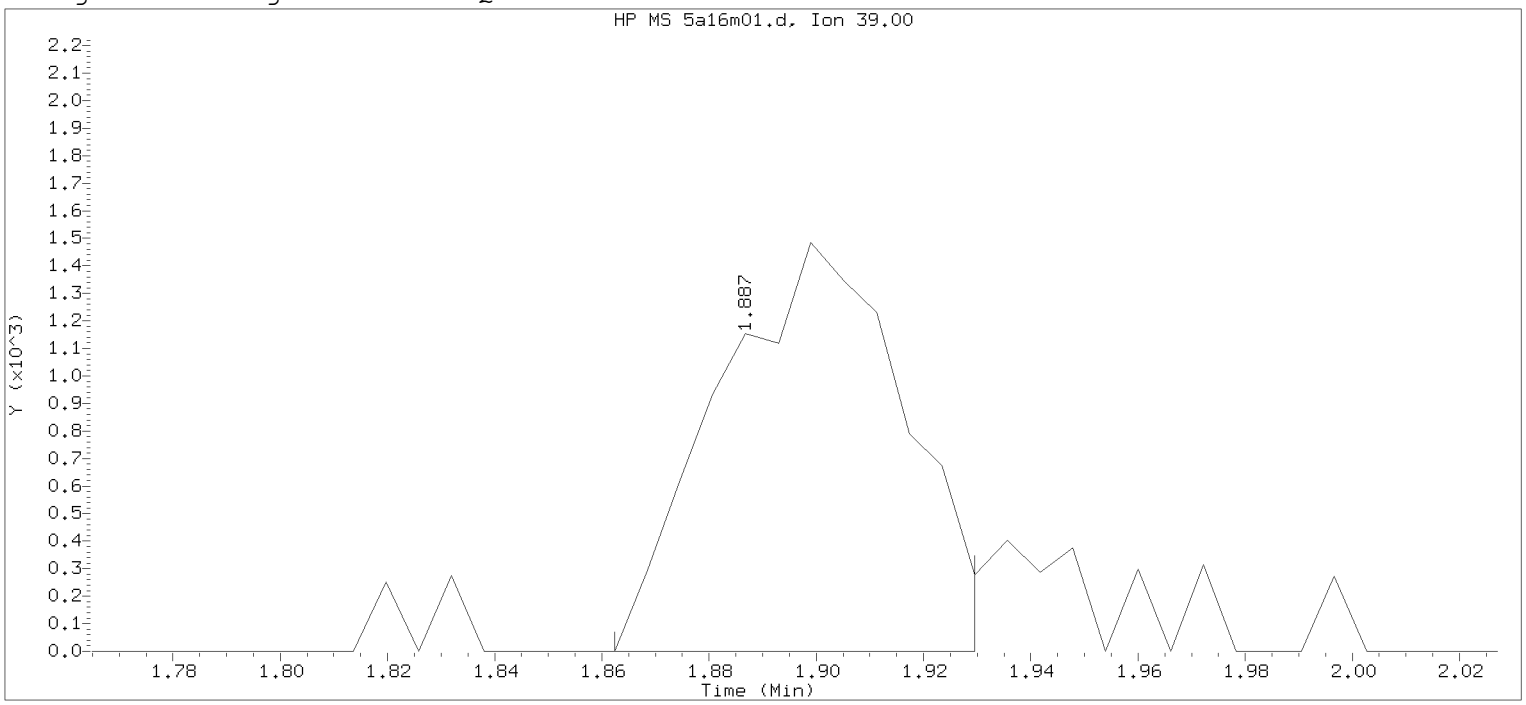
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

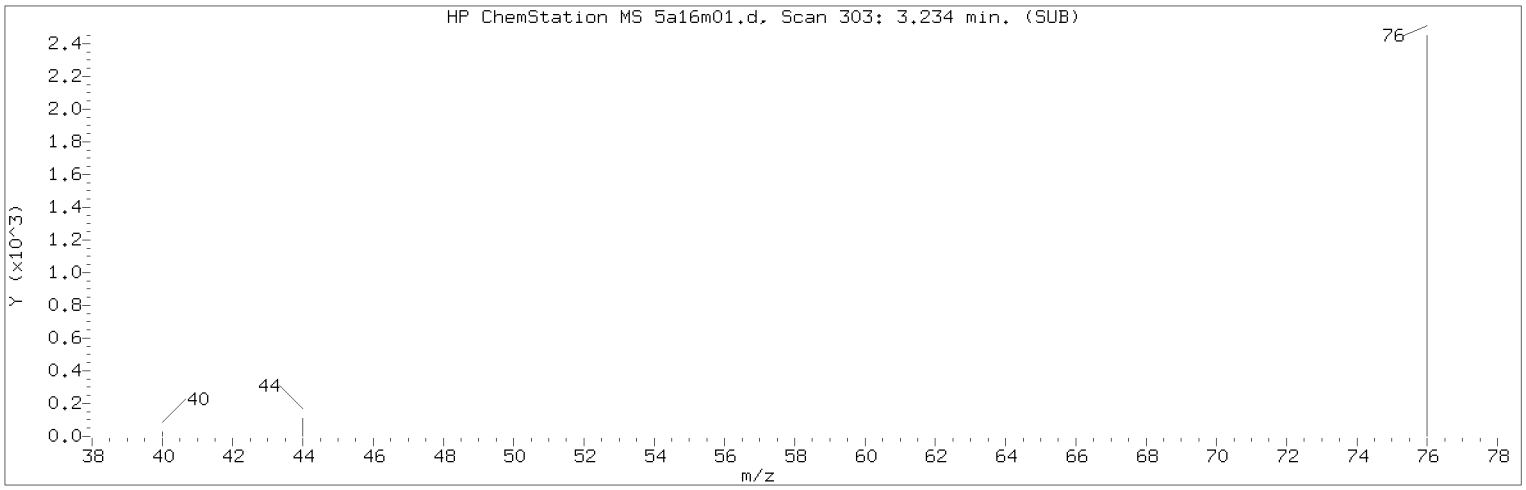
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 13:47
Date, time and analyst ID of latest file update: 16-Apr-2018 13:51 Unknown

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

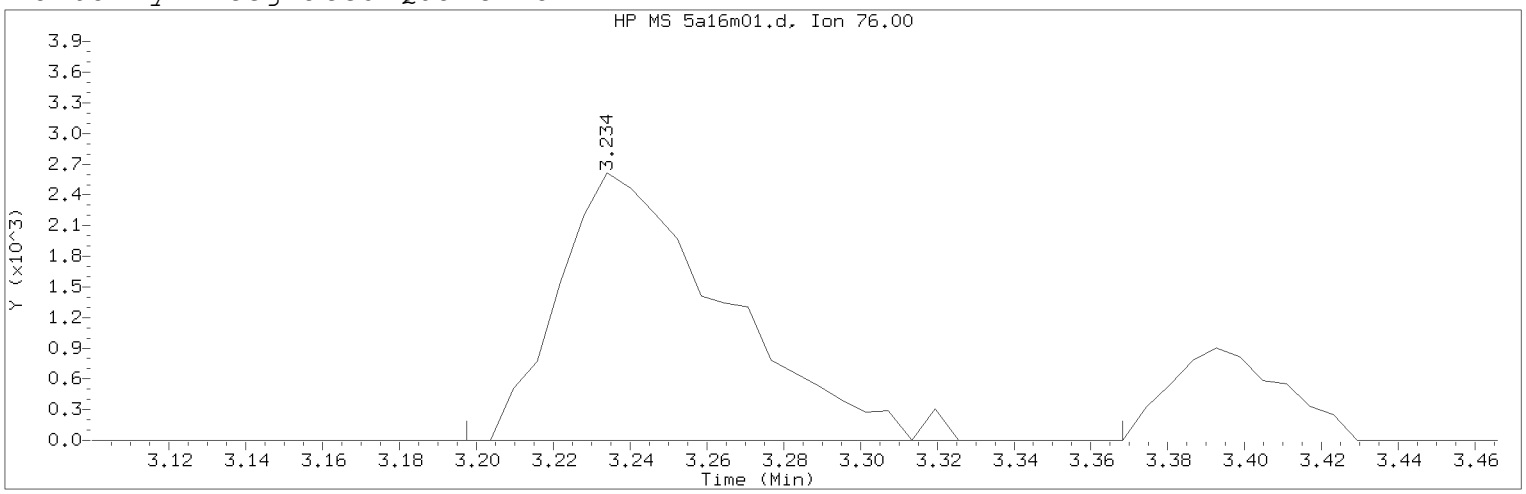
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 82
Retention Time (minutes): 1.887
Quant Ion : 39.00
Area : 3578
On-column Amount (ng) : 0.6611
Integration start scan : 77 Integration stop scan: 88
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:54.
Target 3.5 esignature used. FID Page 117

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

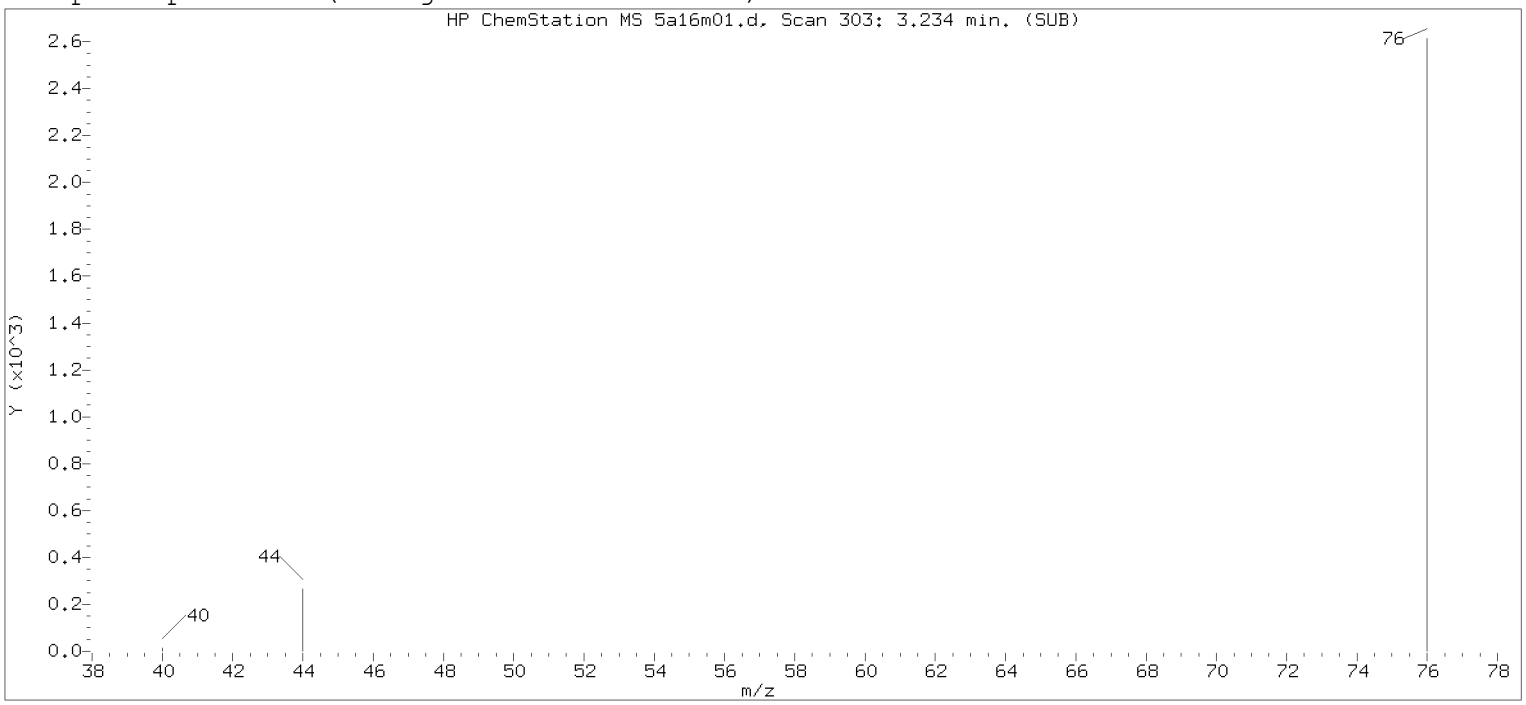
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 303
Retention Time (minutes): 3.234
Quant Ion : 76.00
Area (flag) : 7906M
On-Column Amount (ng) : 0.4848
Integration start scan : 296 Integration stop scan: 324
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

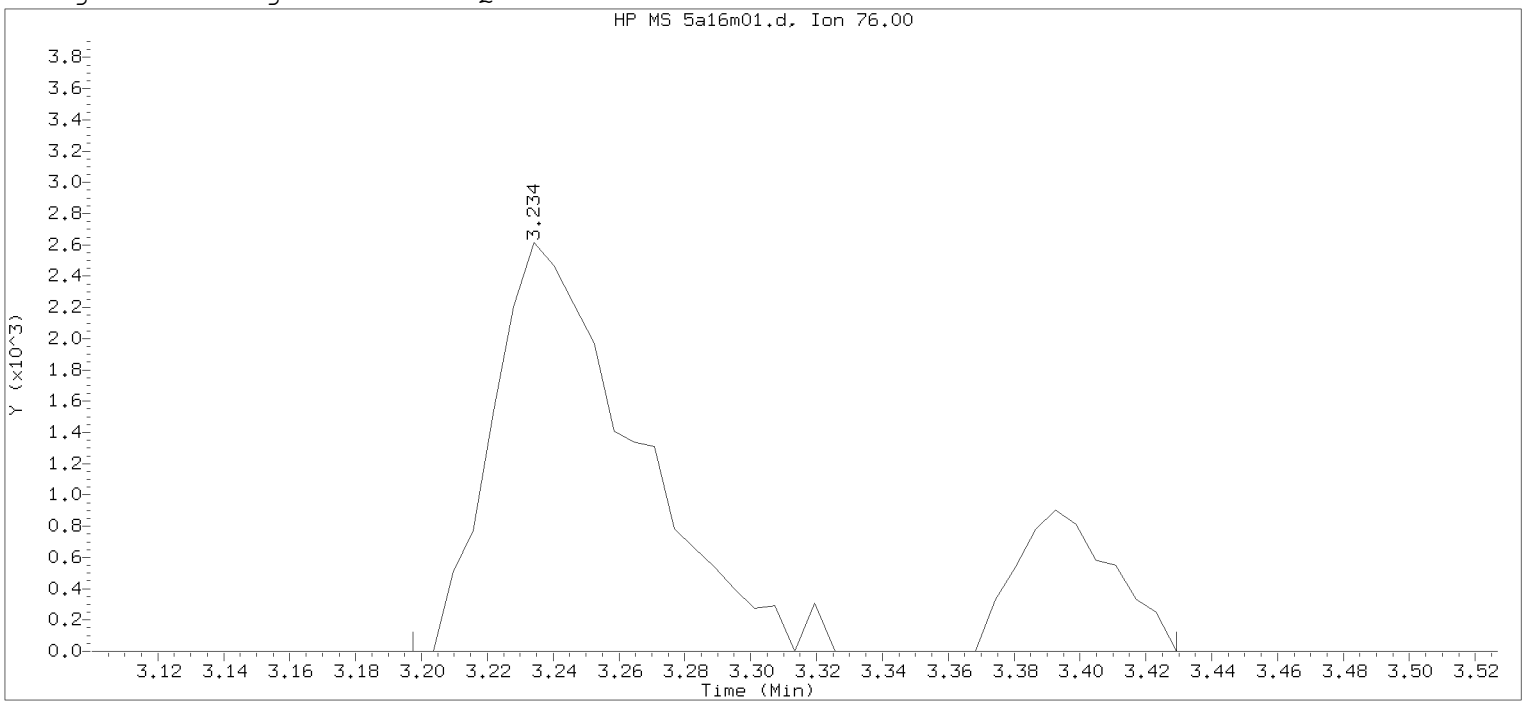
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 13:47
Date, time and analyst ID of latest file update: 16-Apr-2018 13:51 Unknown

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 303
Retention Time (minutes): 3.234
Quant Ion : 76.00
Area : 9767
On-column Amount (ng) : 0.6007
Integration start scan : 296 Integration stop scan: 334
Y at integration start : 0 Y at integration end: 0

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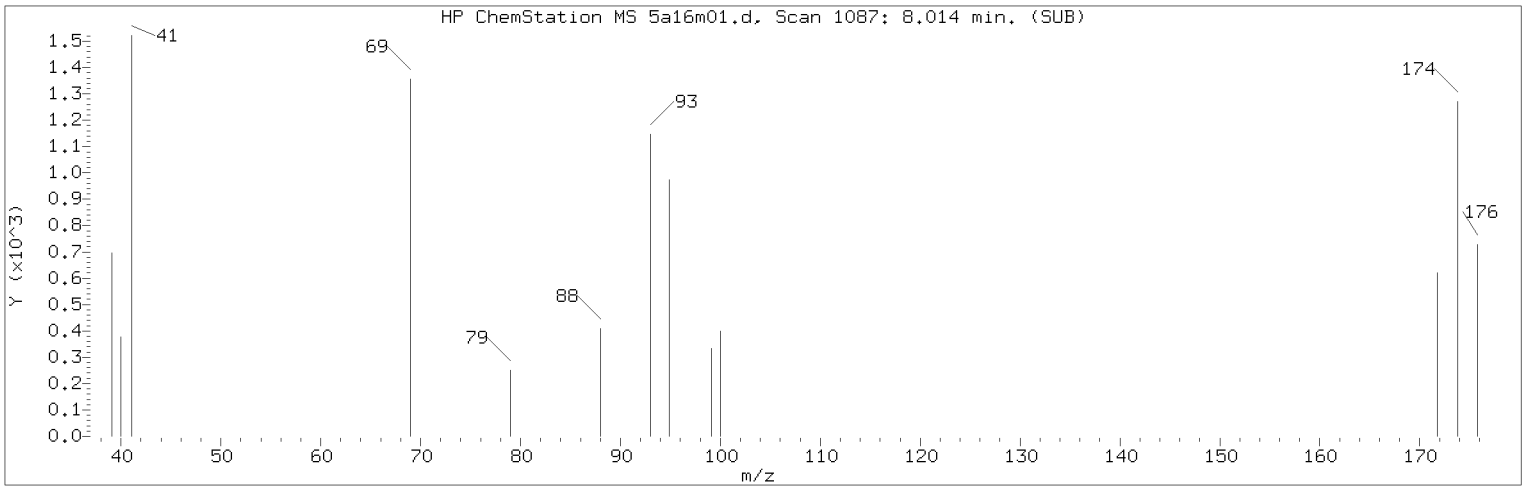
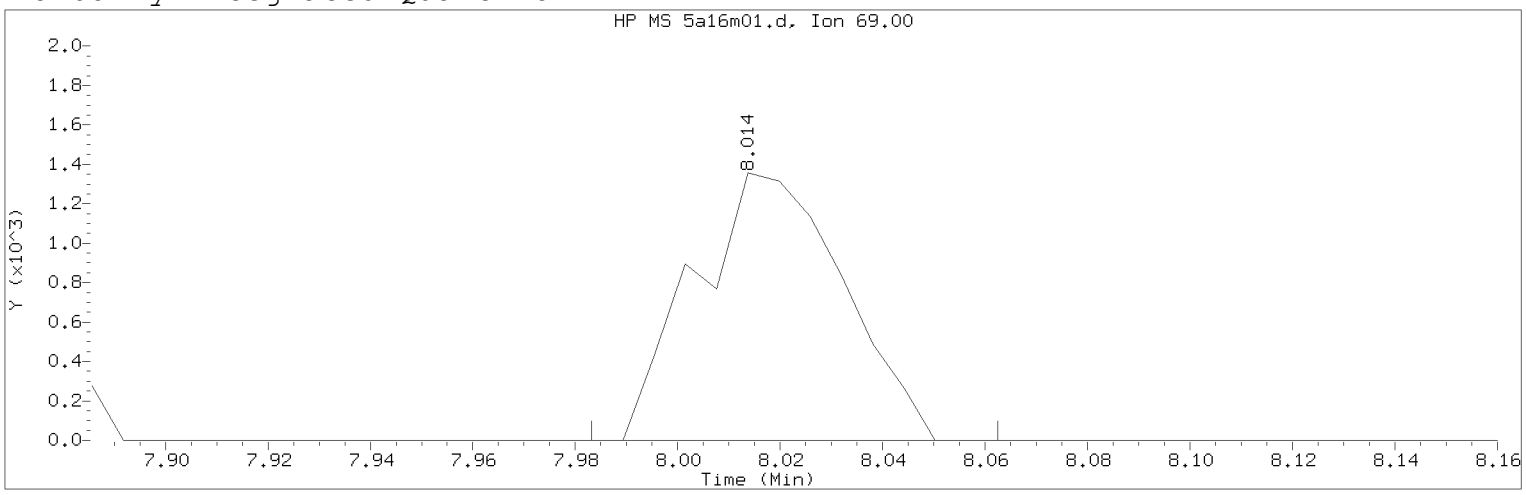
Target 3.5 esignature used. FID Page 117

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

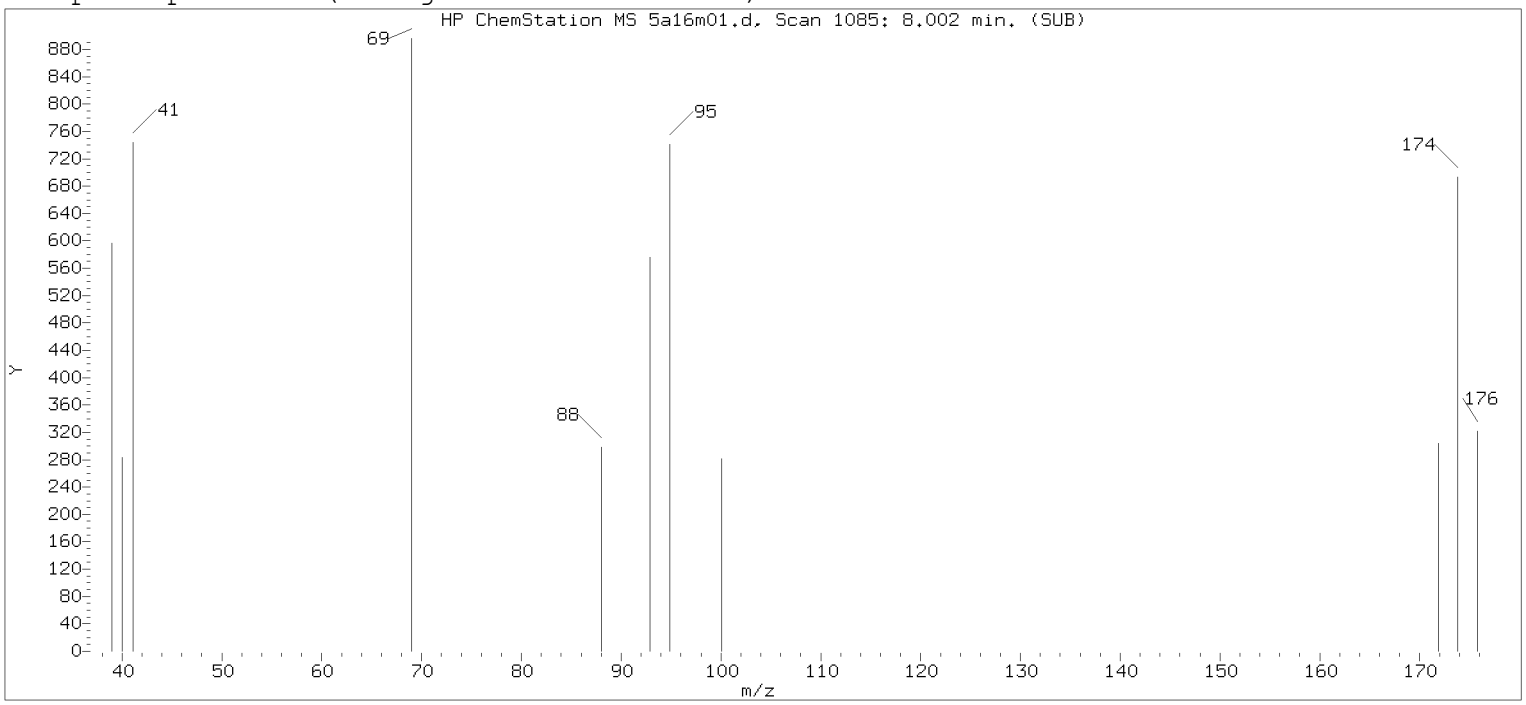
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1087
Retention Time (minutes): 8.014
Quant Ion : 69.00
Area (flag) : 2740M
On-Column Amount (ng) : 0.4176
Integration start scan : 1081 Integration stop scan: 1094
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

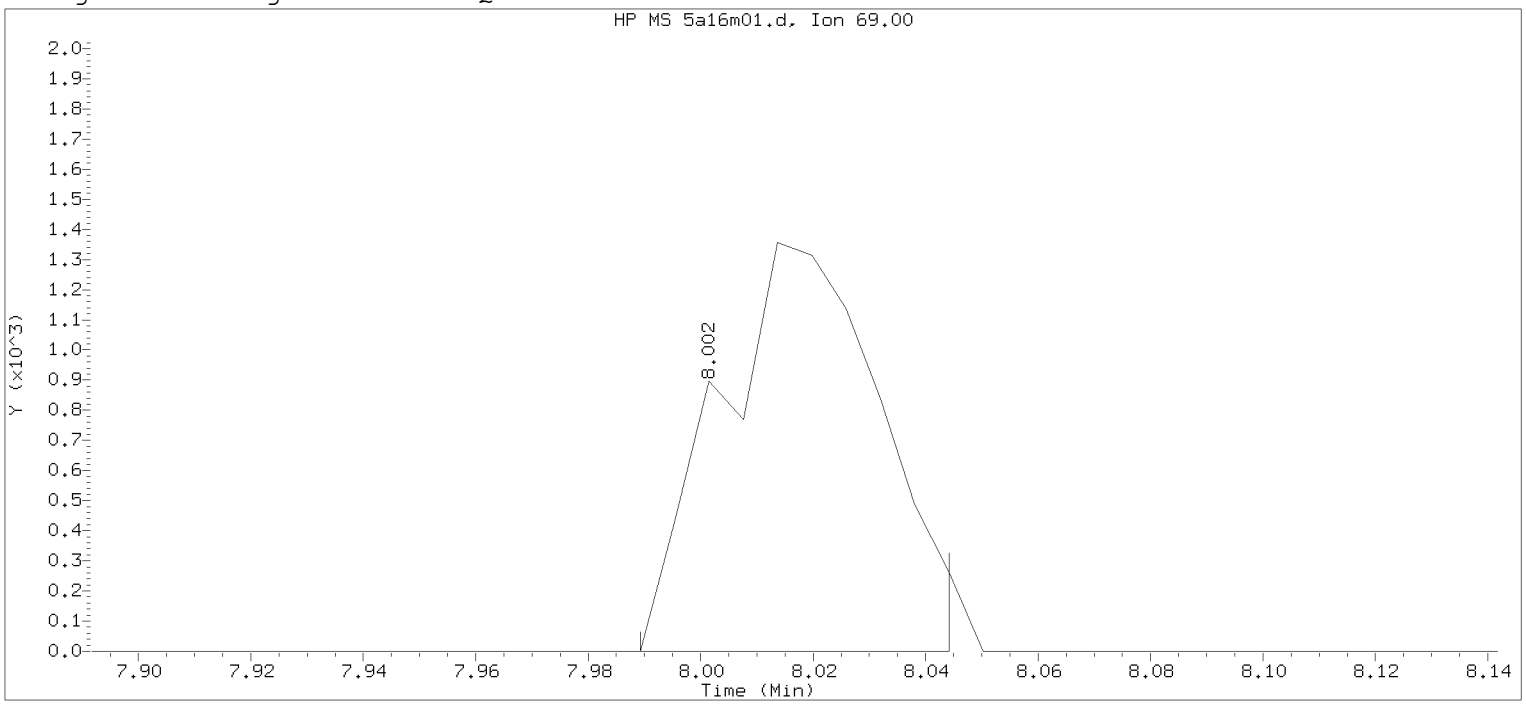
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

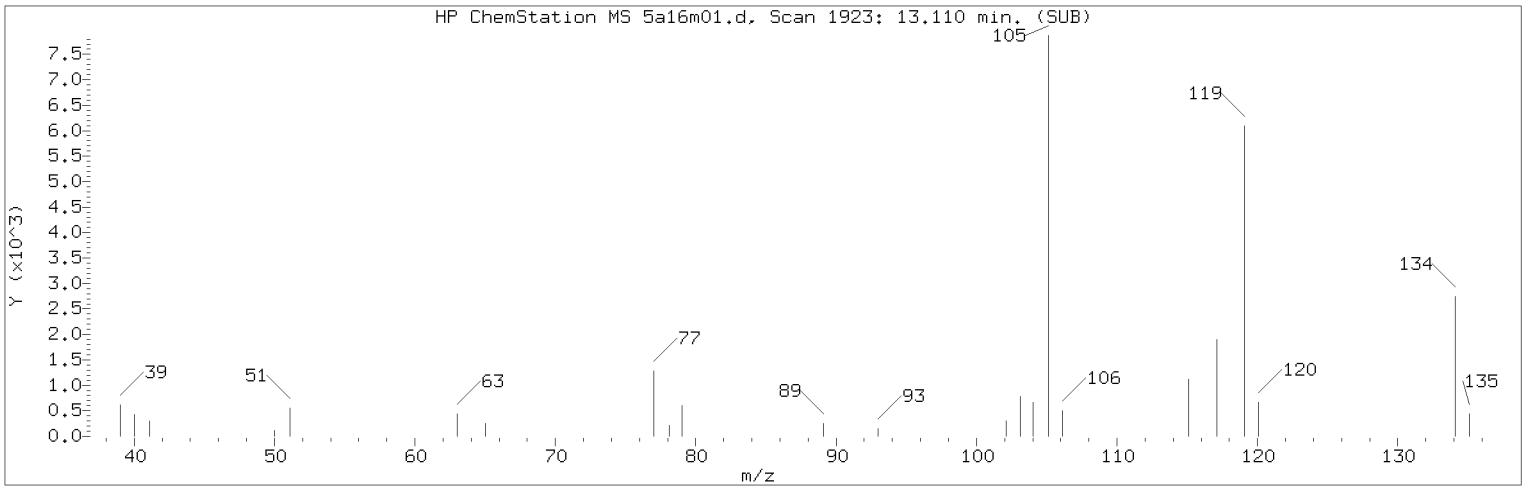
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 13:47
Date, time and analyst ID of latest file update: 16-Apr-2018 13:51 Unknown

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

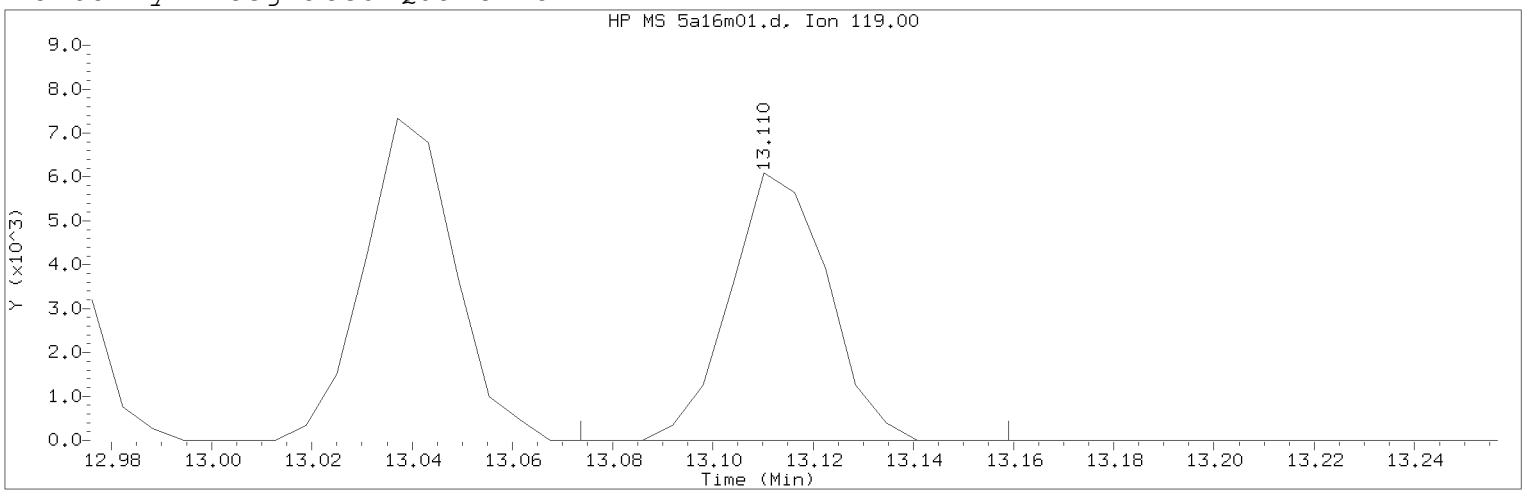
Compound Number : 77
Compound Name : Methyl Methacrylate
Scan Number : 1085
Retention Time (minutes): 8.002
Quant Ion : 69.00
Area : 2692
On-column Amount (ng) : 0.4094
Integration start scan : 1082 Integration stop scan: 1091
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:54.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:43 kk10002

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

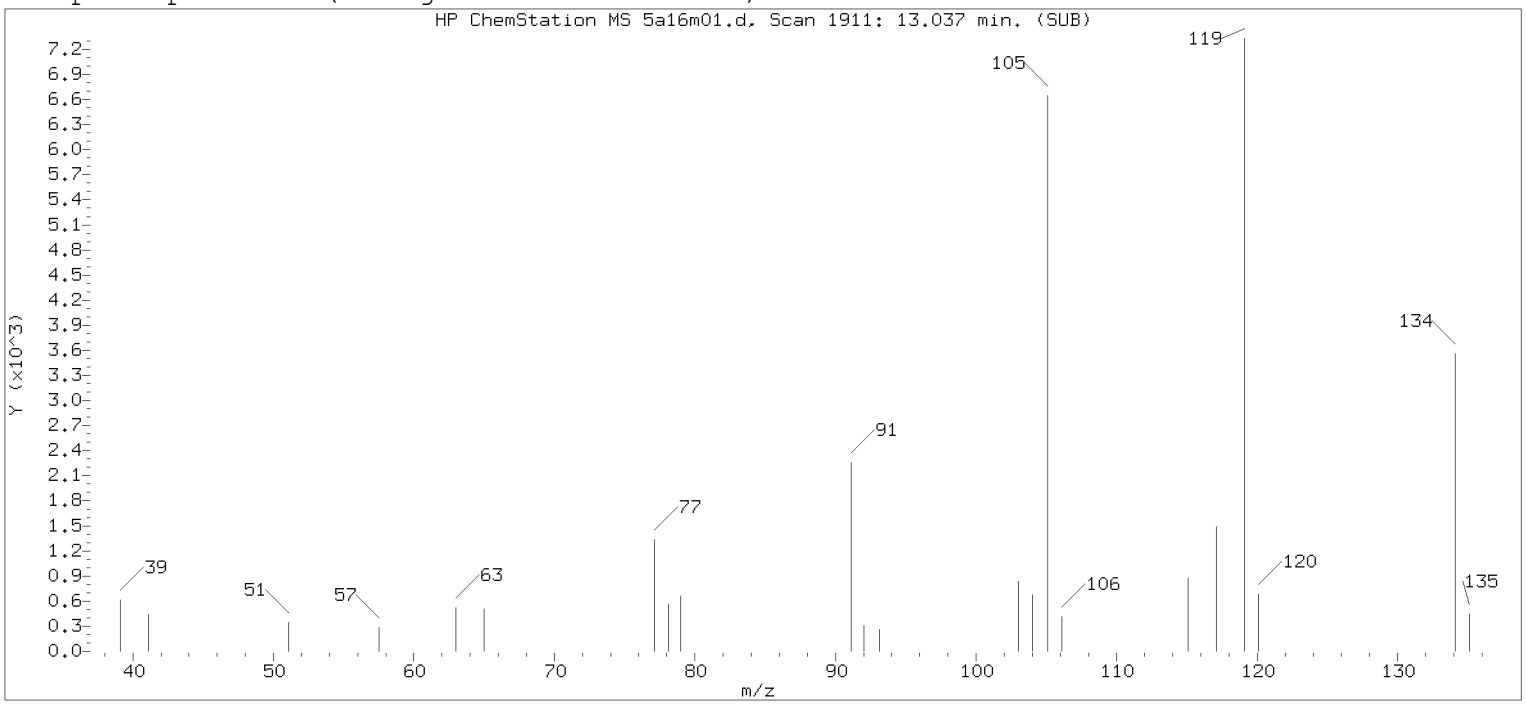
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1923
Retention Time (minutes): 13.110
Quant Ion : 119.00
Area (flag) : 8236M
On-Column Amount (ng) : 0.5092
Integration start scan : 1916 Integration stop scan: 1930
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

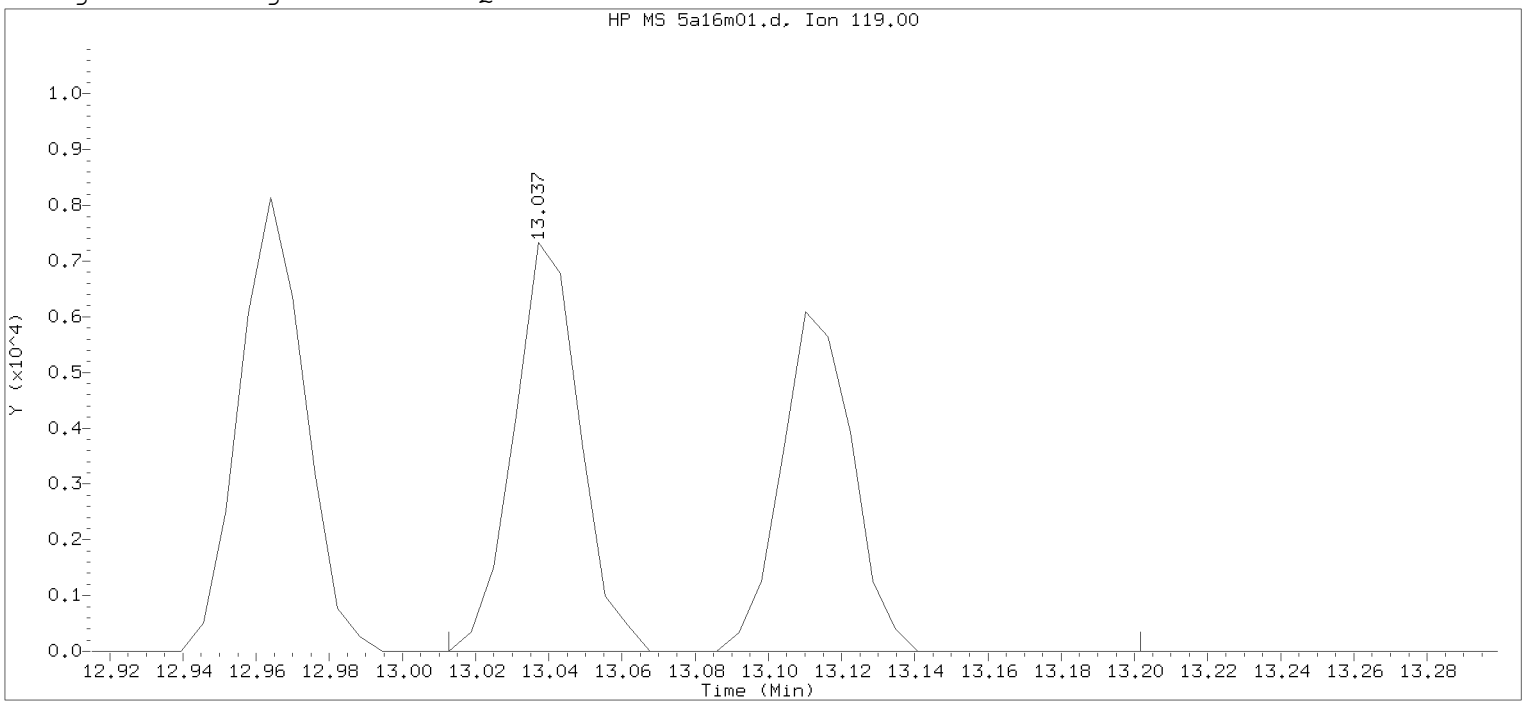
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



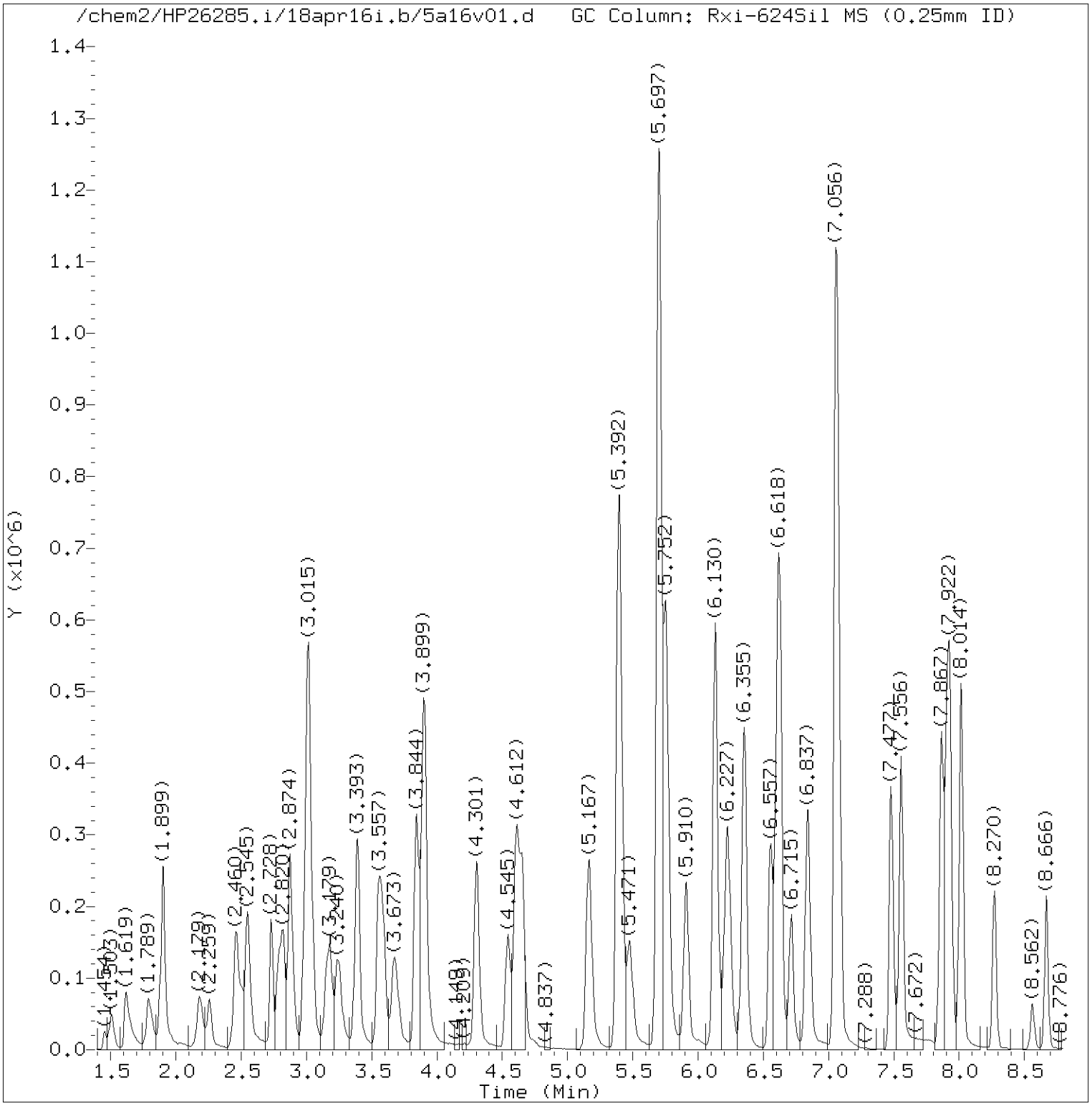
Data File: /chem2/HP26285.i/18apr16i.b/5a16m01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:33 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 13:47
Date, time and analyst ID of latest file update: 16-Apr-2018 13:51 Unknown

Sample Name: 0.5PPB Lab Sample ID: 0.5PPB

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1911
Retention Time (minutes): 13.037
Quant Ion : 119.00
Area : 17496
On-column Amount (ng) : 1.0875
Integration start scan : 1906 Integration stop scan: 1937
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:54.
Target 3.5 esignature used. FID Page 1



Total Ion Chromatogram (TIC)

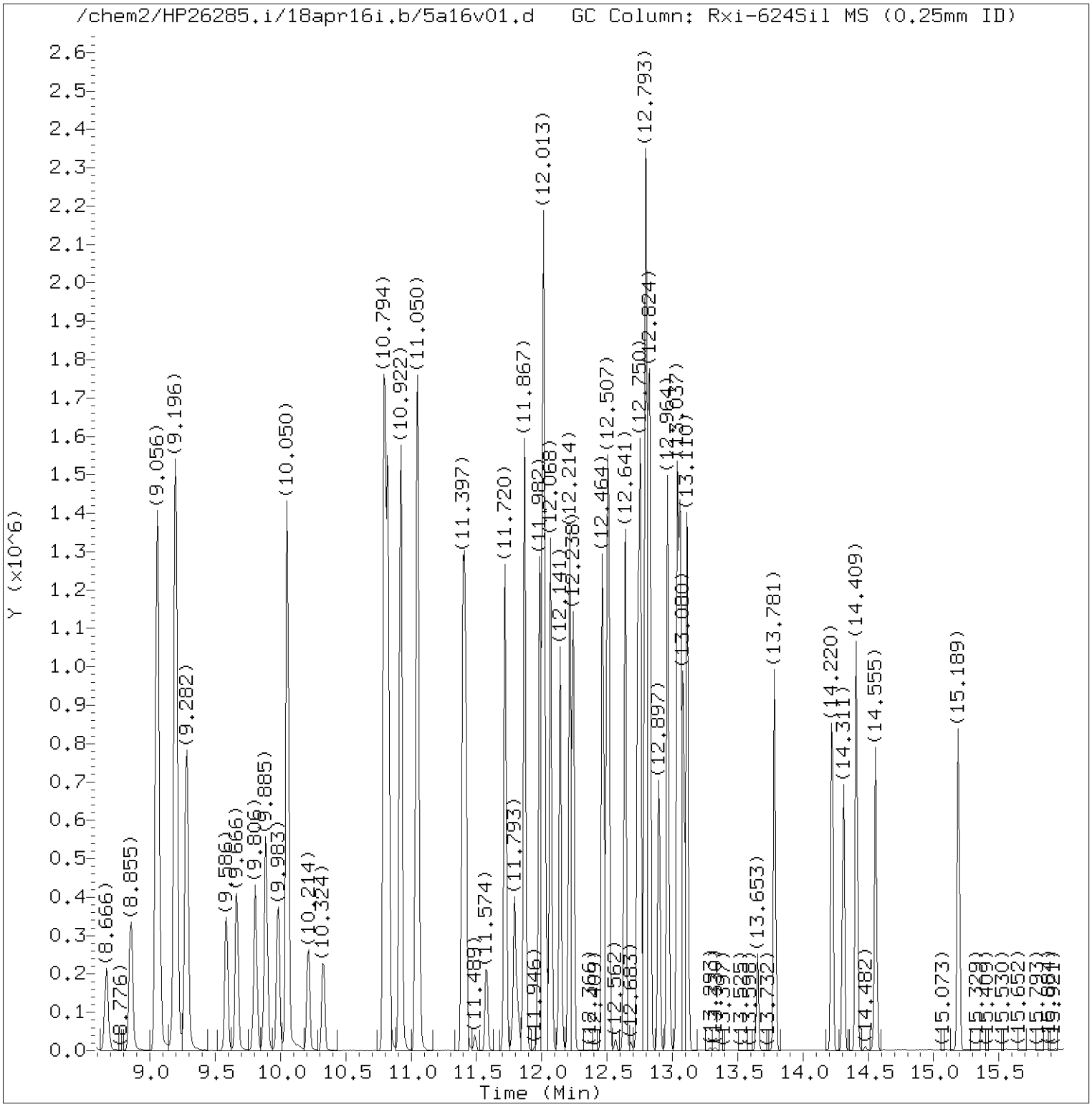
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.619	85	172222	21.619
4) Chloromethane	(2)	1.789	50	130446	20.842
6) Vinyl Chloride	(2)	1.881	62	131885	21.146
5) 1,3-Butadiene	(2)	1.905	39	108120	21.054
8) Bromomethane	(2)	2.185	94	100901	19.998
9) Chloroethane	(2)	2.259	64	64430	19.727
10) Dichlorofluoromethane	(2)	2.454	67	178163	18.204
12) Trichlorofluoromethane	(2)	2.472	101	181029	21.394
11) n-Pentane	(2)	2.545	43	135150	21.604
14) Ethyl ether	(2)	2.728	59	110219	20.385
15) Freon 123a	(2)	2.813	67	151203	22.179
16) Acrolein	(1)	2.874	56	335919	146.596
17) 1,1-Dichloroethene	(2)	2.996	96	127940	24.139
18) Acetone	(1)	3.015	58	178255	189.958
19) Freon 113	(2)	3.015	101	131500	22.850
21) 2-Propanol	(1)	3.167	45	95188	155.766
22) Methyl Iodide	(2)	3.179	142	249783	21.252
23) Carbon Disulfide	(2)	3.246	76	322169	20.385
27) Methyl Acetate	(2)	3.374	43	167104	21.060
25) Allyl Chloride	(2)	3.393	41	203483	22.271
28) Methylene Chloride	(2)	3.551	84	144949	21.980
29)*t-Butyl alcohol-d10	(1)	3.569	65	286947	250.000
30) t-Butyl alcohol	(1)	3.673	59	263503	201.369
31) Acrylonitrile	(2)	3.844	53	414577	106.019
33) Methyl Tertiary Butyl Ether	(2)	3.899	73	385022	20.667
32) trans-1,2-Dichloroethene	(2)	3.905	96	143621	22.622
34) n-Hexane	(2)	4.301	57	197666	22.956
36) 1,1-Dichloroethane	(2)	4.545	63	242580	21.734
38) di-Isopropyl ether	(2)	4.606	45	443217	21.770
39) 2-Chloro-1,3-butadiene	(2)	4.654	53	197105	22.833
40) Ethyl t-butyl ether	(2)	5.167	59	390341	20.907
44) 2-Butanone	(2)	5.386	43	933288	172.547
42) cis-1,2-Dichloroethene	(2)	5.398	96	164019	22.269
45) 2,2-Dichloropropane	(2)	5.410	77	144316	22.214
47) Propionitrile	(1)	5.478	54	235534	156.671
48) Methacrylonitrile	(2)	5.697	67	685428	158.741
49) Bromochloromethane	(2)	5.746	128	80557	20.950
50) Tetrahydrofuran	(1)	5.764	71	164178	100.471

* = Compound is an internal standard.

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on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.910	83	248323	21.403
53) 1,1,1-Trichloroethane	(2)	6.124	97	230823	21.674
52)$Dibromofluoromethane	(2)	6.130	113	319884	49.796
43) 1,2-Dichloroethene (Total)	(2)		96	307640	44.890
54) Cyclohexane	(2)	6.227	56	234912	23.371
56) Carbon Tetrachloride	(2)	6.343	117	180047	22.140
55) 1,1-Dichloropropene	(2)	6.355	75	188622	21.726
58) Isobutyl Alcohol	(1)	6.557	41	203682	492.570
57)$1,2-Dichloroethane-d4	(2)	6.605	102	74153	51.600
60) Benzene	(2)	6.630	78	592066	21.457
61) 1,2-Dichloroethane	(2)	6.715	62	175726	20.494
65) t-Amyl methyl ether	(2)	6.843	73	391497	20.945
66)*Fluorobenzene	(2)	7.056	96	1247066	50.000
67) n-Heptane	(2)	7.081	43	213814	24.052
69) n-Butanol	(1)	7.477	56	313402	968.102
71) Trichloroethene	(2)	7.556	95	156739	21.682
73) Methylcyclohexane	(2)	7.867	83	255887	22.733
74) 1,2-Dichloropropane	(2)	7.904	63	152970	21.986
72) t-Amyl ethyl ether	(2)	7.928	87	210741	21.516
76) 1,4-Dioxane	(1)	8.008	88	39237M	440.584
77) Methyl Methacrylate	(2)	8.014	69	135765	21.354
75) Dibromomethane	(2)	8.014	93	95940	21.095
79) Bromodichloromethane	(2)	8.270	83	170361	20.771
80) 2-Nitropropane	(2)	8.562	41	47656	19.885
81) 2-Chloroethyl Vinyl Ether	(2)	8.666	63	108054	20.299
82) cis-1,3-Dichloropropene	(2)	8.855	75	228476	21.153
83) 4-Methyl-2-pentanone	(2)	9.056	43	1167581	105.047
84)$Toluene-d8	(3)	9.196	98	1226610	50.762
89) Toluene	(3)	9.282	92	388815	21.672
90) trans-1,3-Dichloropropene	(3)	9.586	75	195379	20.723
92) Ethyl Methacrylate	(3)	9.666	69	226517	21.592
93) 1,1,2-Trichloroethane	(3)	9.806	97	147204	21.903
94) Tetrachloroethene	(3)	9.885	166	183743	21.720
95) 1,3-Dichloropropane	(3)	9.983	76	225255	21.025
97) 2-Hexanone	(3)	10.050	43	959797	106.492
91) 1,3-Dichloropropene (total)	(3)		100	423855	41.877
98) Dibromochloromethane	(3)	10.214	129	142844	21.027
100) 1,2-Dibromoethane	(3)	10.324	107	155903	21.316

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
101)*Chlorobenzene-d5	(3)	10.794	117	964015	50.000
102) 1-Chlorohexane	(3)	10.818	91	219135	22.606
103) Chlorobenzene	(3)	10.824	112	447675	21.207
104) 1,1,1,2-Tetrachloroethane	(3)	10.915	131	149388	21.496
105) Ethylbenzene	(3)	10.922	91	752057	22.041
107) m+p-Xylene	(3)	11.050	106	602984	44.082
108) o-Xylene	(3)	11.397	106	289590	21.420
110) Styrene	(3)	11.415	104	480230	22.106
111) Bromoform	(3)	11.580	173	93010	19.829
112) Isopropylbenzene	(3)	11.720	105	751804	22.614
109) Xylene (Total)	(3)		106	892574	65.502
113) Cyclohexanone	(1)	11.793	55	187743M	417.573
115)$4-Bromofluorobenzene	(3)	11.867	95	471819	51.003
117) 1,1,2,2-Tetrachloroethane	(4)	11.982	83	231983	20.690
116) Bromobenzene	(4)	11.988	156	199083	20.565
119) trans-1,4-Dichloro-2-butene	(4)	12.013	53	332544	115.399
118) 1,2,3-Trichloropropane	(4)	12.025	110	70111	20.997
120) n-Propylbenzene	(4)	12.068	91	892863	22.549
121) 2-Chlorotoluene	(4)	12.141	126	184192	21.286
123) 1,3,5-Trimethylbenzene	(4)	12.214	105	625599	21.845
122) 4-Chlorotoluene	(4)	12.238	126	192283	21.174
125) tert-Butylbenzene	(4)	12.464	134	142424	21.850
126) Pentachloroethane	(4)	12.494	167	111371	19.852
127) 1,2,4-Trimethylbenzene	(4)	12.513	105	644418	21.924
128) sec-Butylbenzene	(4)	12.641	105	812635	22.890
130) 1,3-Dichlorobenzene	(4)	12.738	146	375569	20.543
131) p-Isopropyltoluene	(4)	12.757	119	712042	22.798
132)*1,4-Dichlorobenzene-d4	(4)	12.793	152	540698	50.000
134) 1,4-Dichlorobenzene	(4)	12.811	146	381453	20.855
135) 1,2,3-Trimethylbenzene	(4)	12.830	105	659496	21.517
136) Benzyl Chloride	(4)	12.897	91	402497	18.864
137) 1,3-Diethylbenzene	(4)	12.964	119	416306	21.375
138) 1,4-Diethylbenzene	(4)	13.037	119	434722	21.471
140) n-Butylbenzene	(4)	13.061	92	348134	22.163
139) 1,2-Dichlorobenzene	(4)	13.086	146	350023	20.680
141) 1,2-Diethylbenzene	(4)	13.116	119	346138M	21.273
142) Diethylbenzene (total)	(4)		100	1197166	64.120
143) 1,2-Dibromo-3-chloropropane	(4)	13.653	75	46697	20.419

M = Compound was manually integrated.
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on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
145) 1,3,5-Trichlorobenzene	(4)	13.781	180	266939	21.087
147) 1,2,4-Trichlorobenzene	(4)	14.220	180	230069	20.199
148) Hexachlorobutadiene	(4)	14.311	225	113179	22.571
149) Naphthalene	(4)	14.409	128	704723	20.367
150) 1,2,3-Trichlorobenzene	(4)	14.555	180	207452	20.294
151) 2-Methylnaphthalene	(4)	15.189	142	354396	18.185

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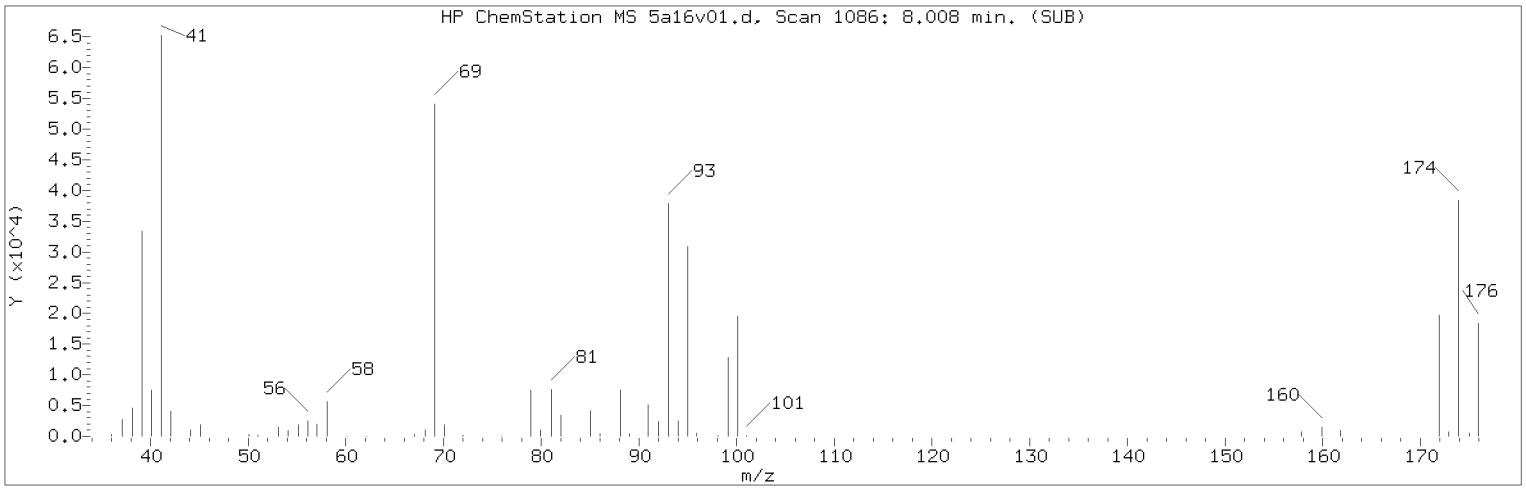
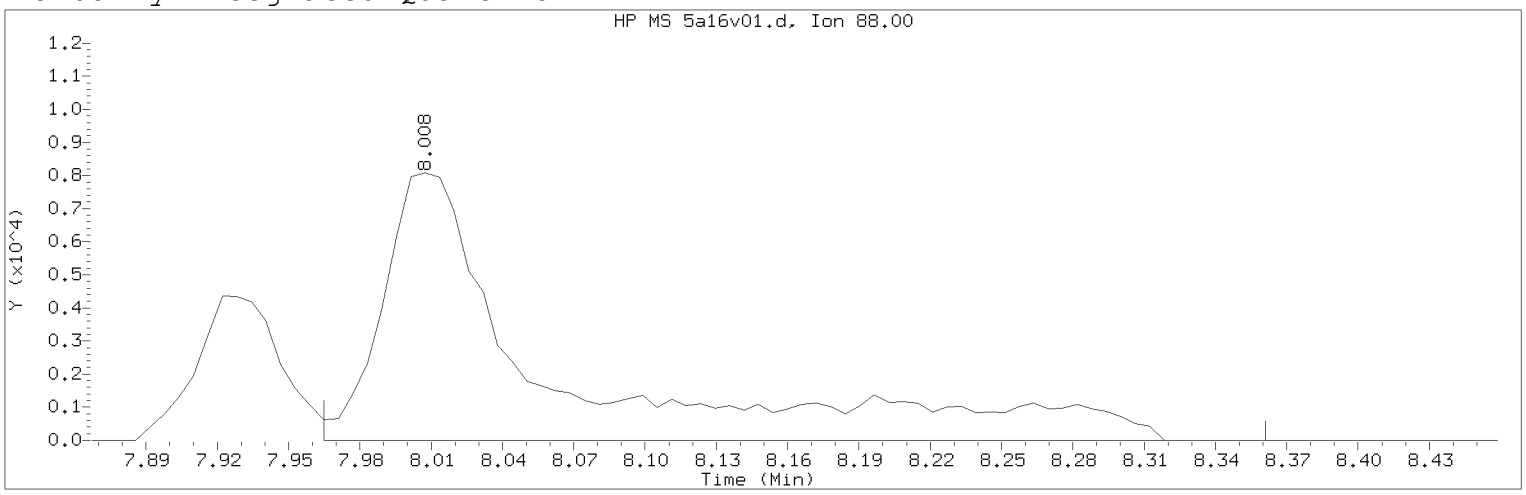
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

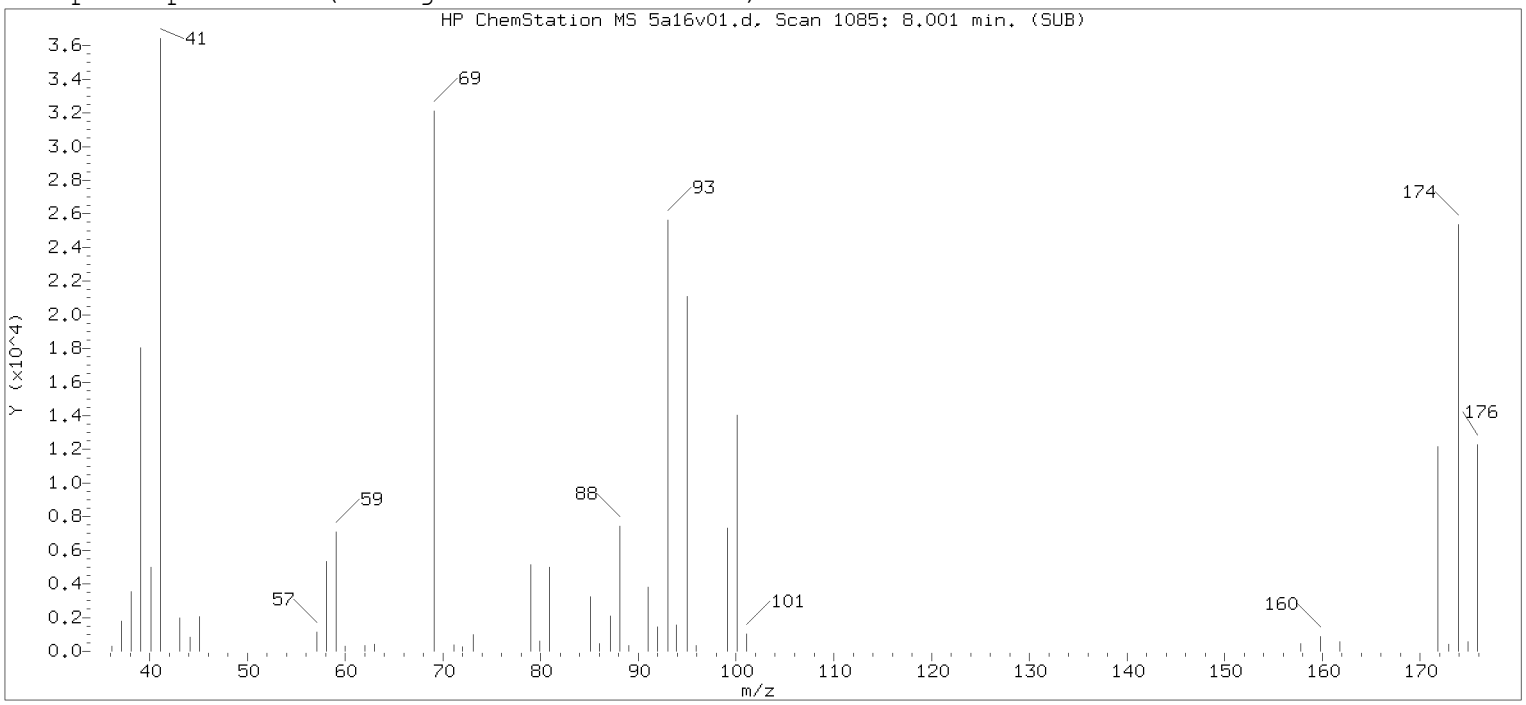
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1086
Retention Time (minutes): 8.008
Quant Ion : 88.00
Area (flag) : 39237M
On-Column Amount (ng) : 440.5841
Integration start scan : 1078 Integration stop scan: 1143
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

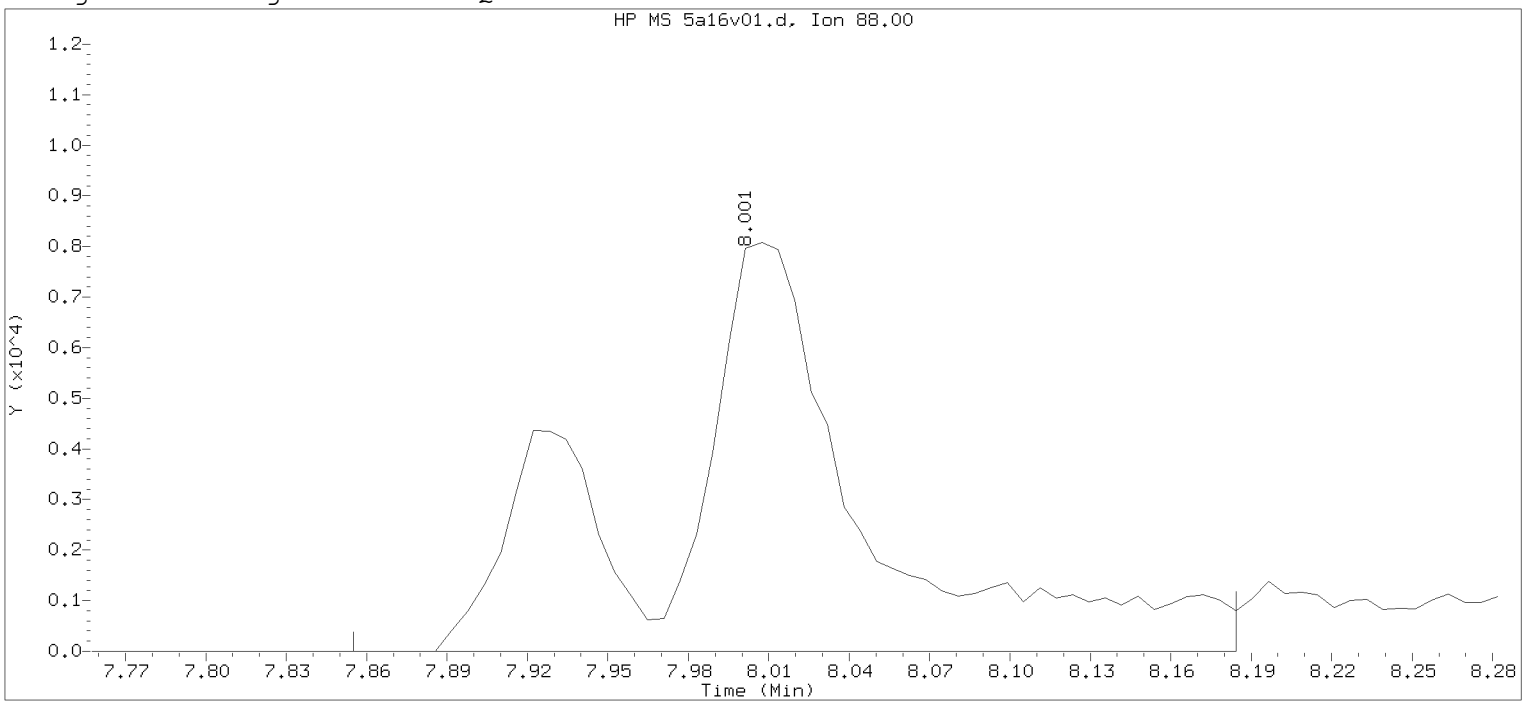
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 14:09
Date, time and analyst ID of latest file update: 16-Apr-2018 14:13 Unknown

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1085
Retention Time (minutes): 8.001
Quant Ion : 88.00
Area : 42469
On-column Amount (ng) : 518.0845
Integration start scan : 1060 Integration stop scan: 1114
Y at integration start : 0 Y at integration end: 0

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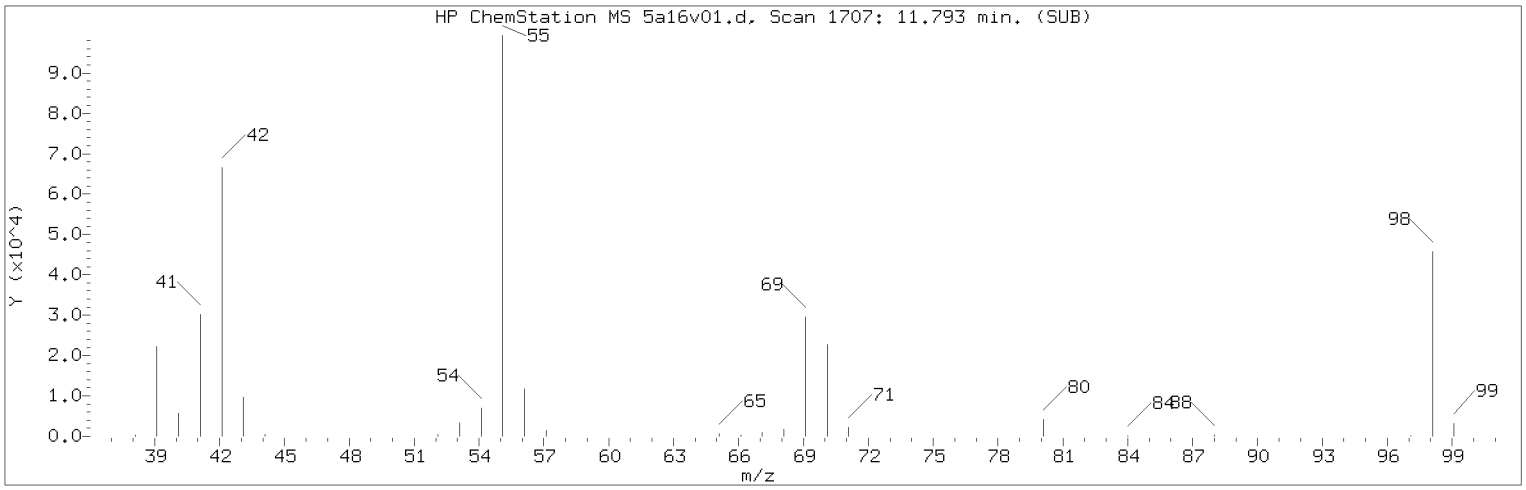
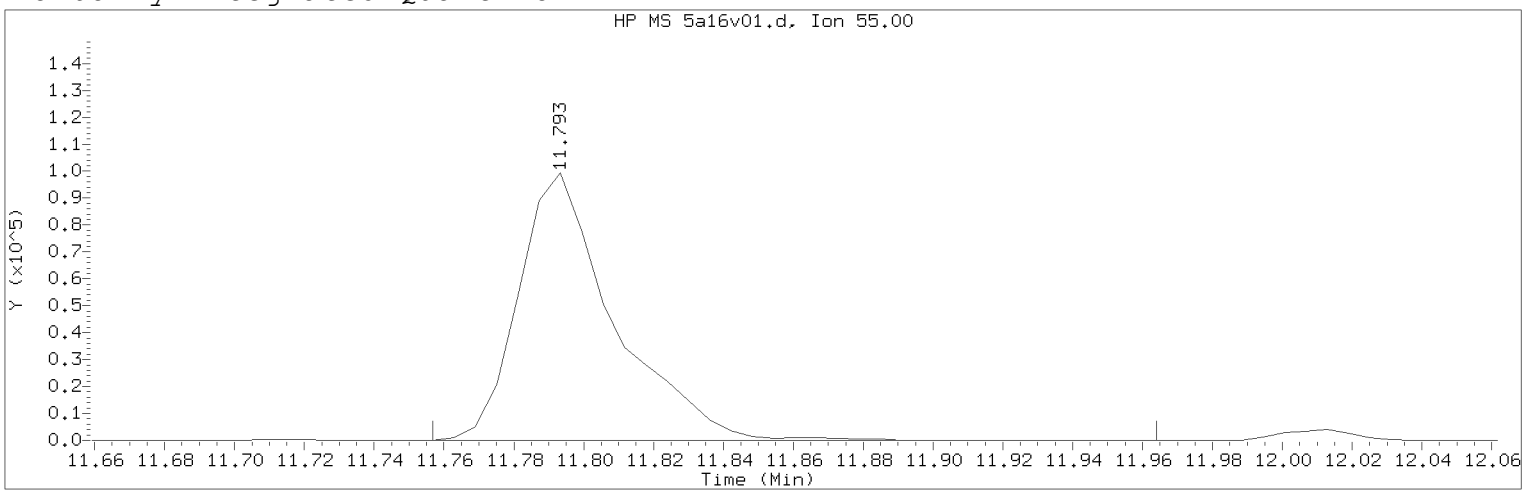
Target 3.5 esignature used. FID Page 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

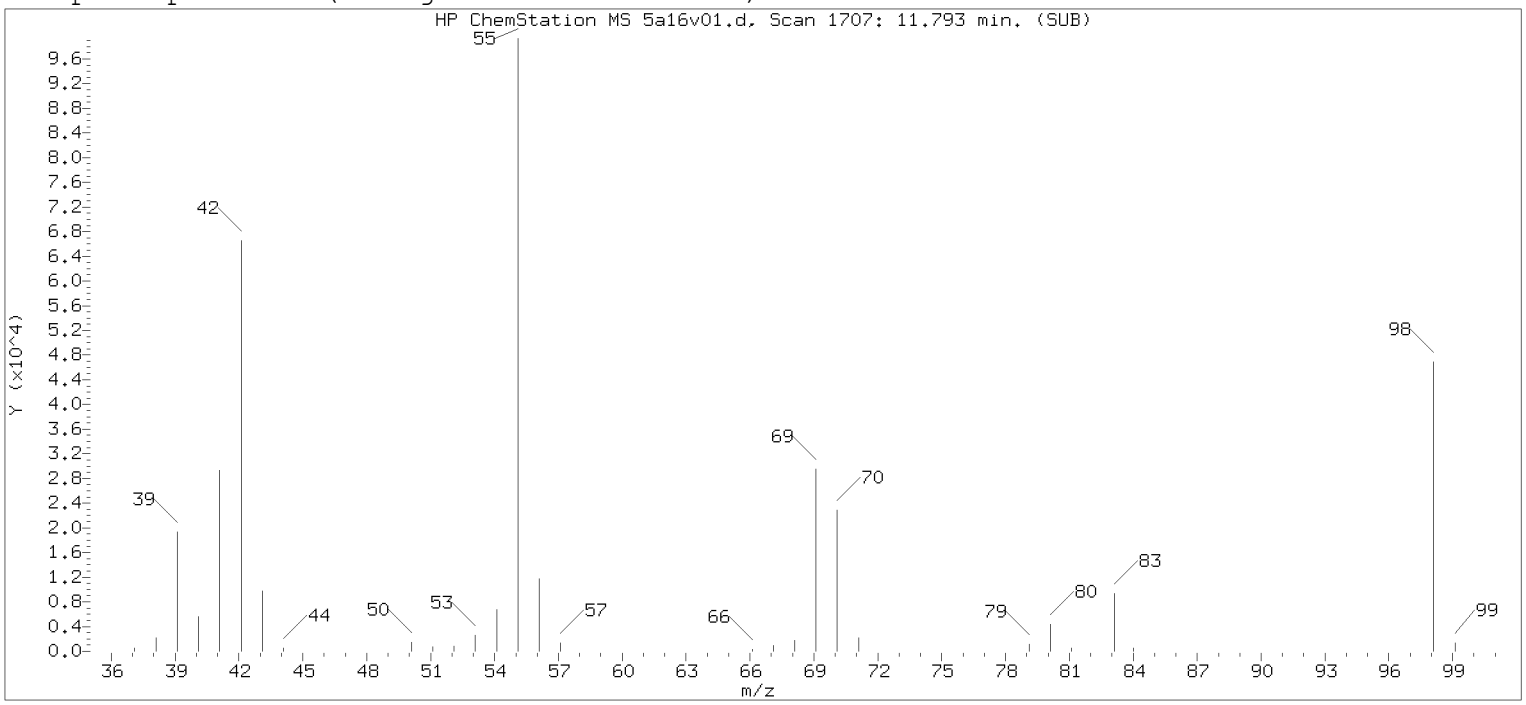
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1707
Retention Time (minutes): 11.793
Quant Ion : 55.00
Area (flag) : 187743M
On-Column Amount (ng) : 417.5733
Integration start scan : 1700 Integration stop scan: 1734
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

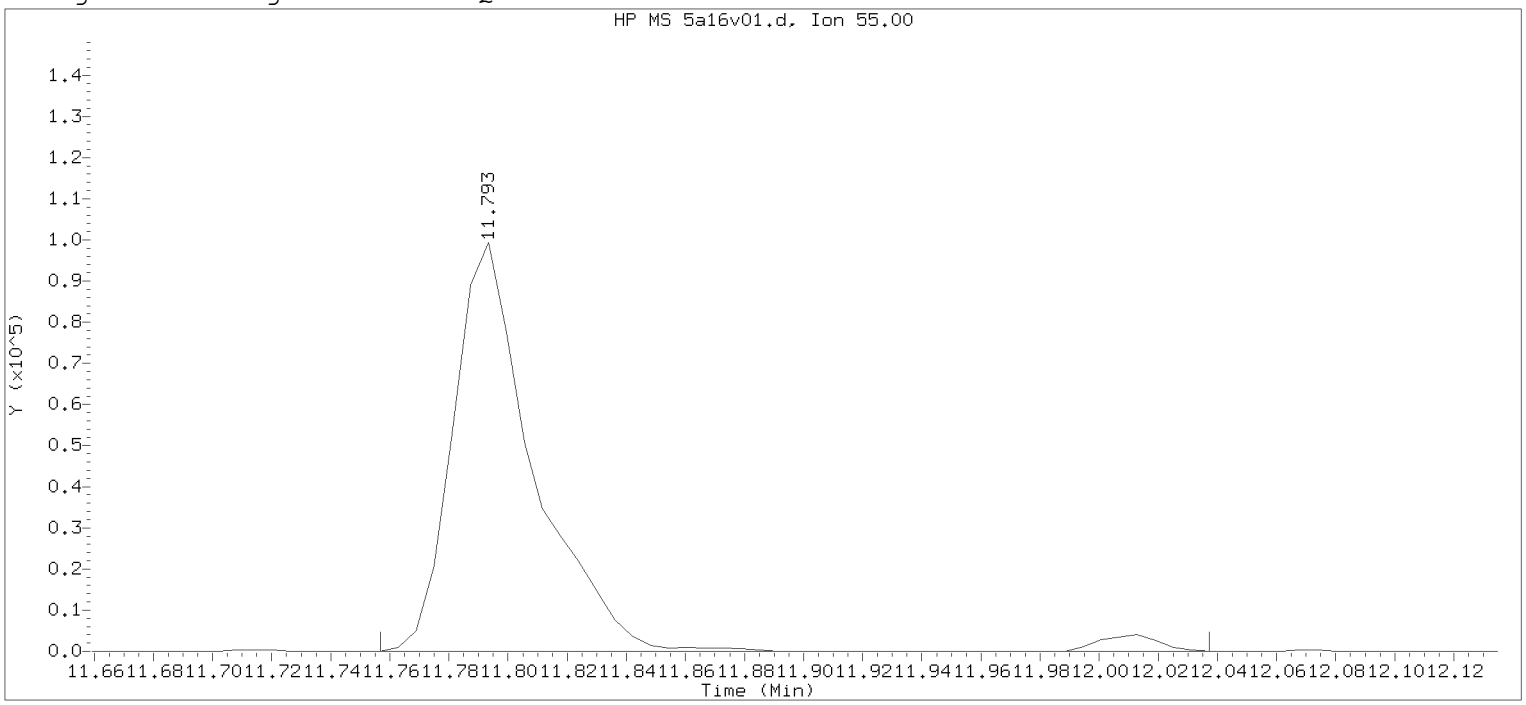
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

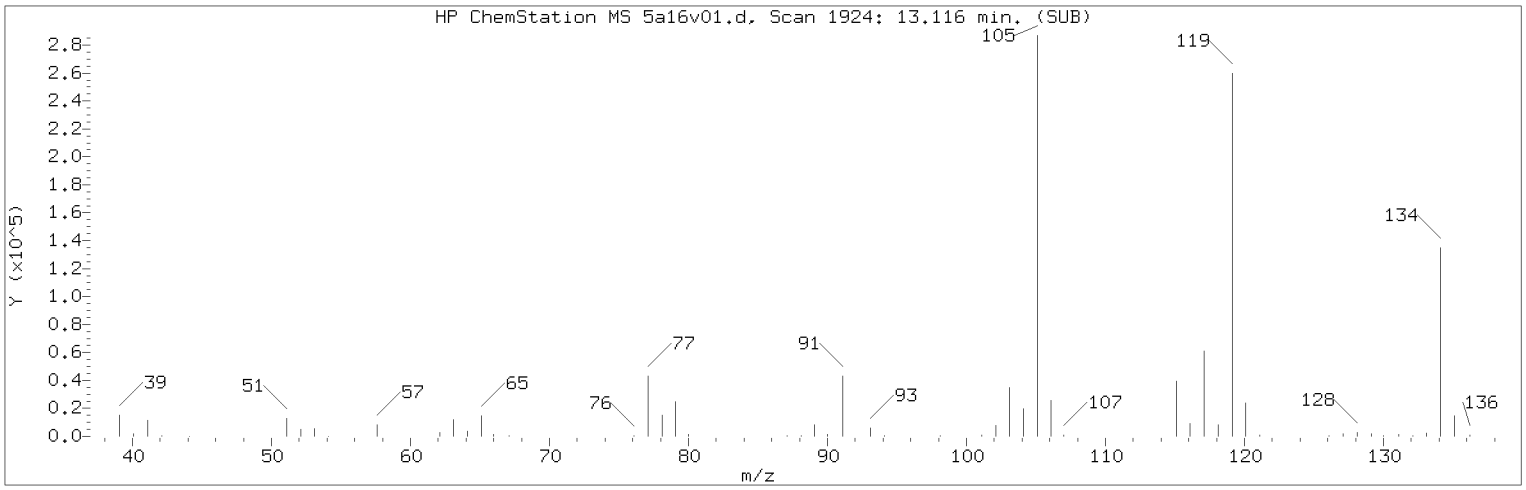
Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 14:09
Date, time and analyst ID of latest file update: 16-Apr-2018 14:13 Unknown

Sample Name: LG5ICV Lab Sample ID: LG5ICV

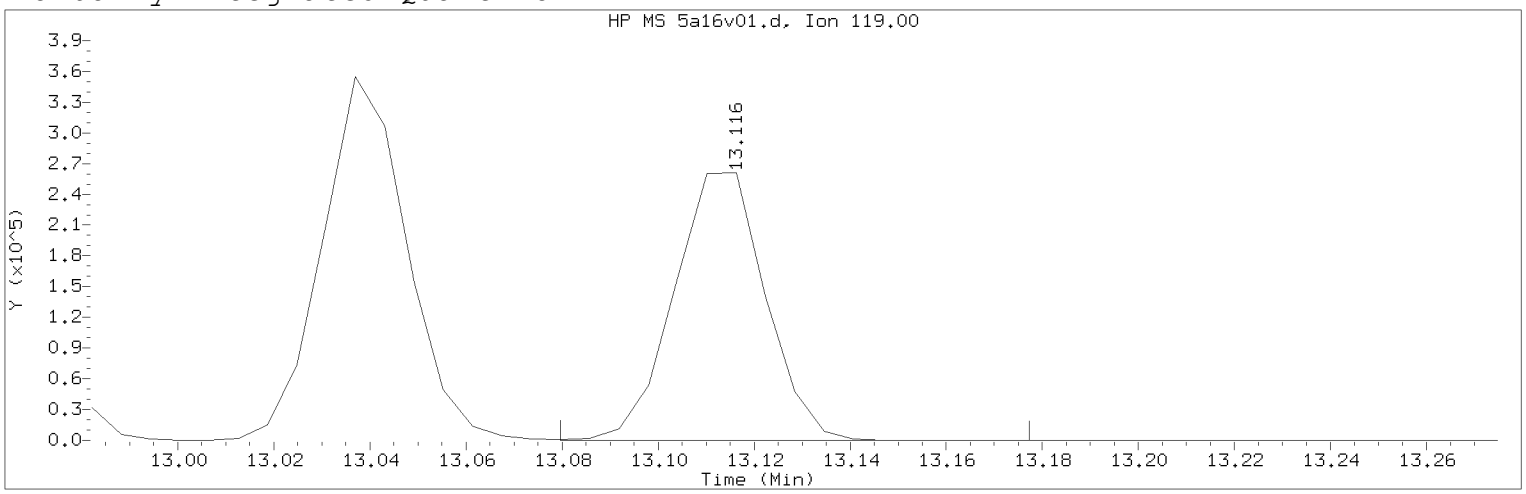
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1707
Retention Time (minutes): 11.793
Quant Ion : 55.00
Area : 193283
On-column Amount (ng) : 443.1073
Integration start scan : 1700 Integration stop scan: 1746
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: LCP00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 15:42
Date, time and analyst ID of latest file update: 16-Apr-2018 15:45 kk10002

Sample Name: LG5ICV Lab Sample ID: LG5ICV

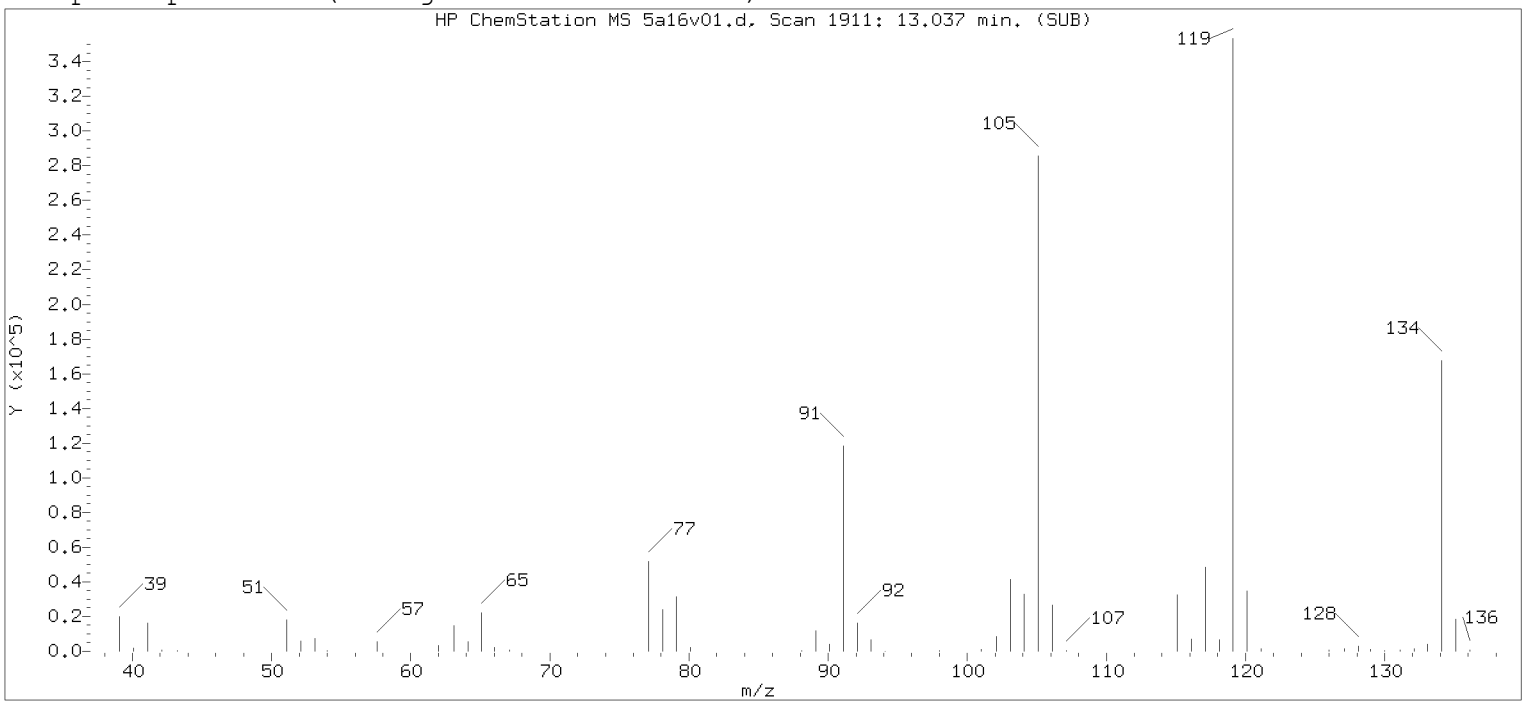
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1924
Retention Time (minutes): 13.116
Quant Ion : 119.00
Area (flag) : 346138M
On-Column Amount (ng) : 21.2734
Integration start scan : 1917 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

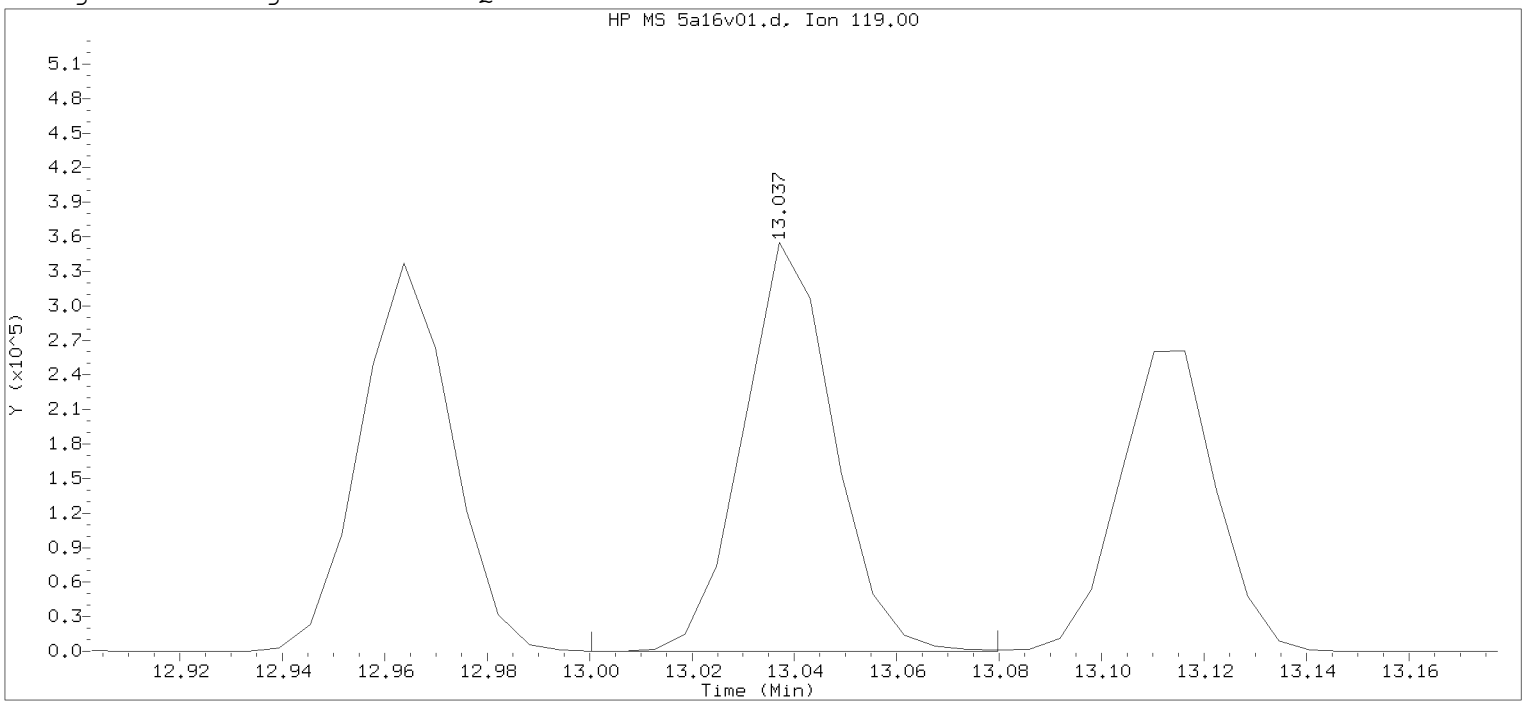
Analyst responsible for change: Digitally signed by Kevin Kelly
on 04/16/2018 at 15:54.
Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Marla S. Brewer on 04/17/2018 at 17:20.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr16i.b/5a16v01.d Instrument ID: HP26285.i
Injection date and time: 16-APR-2018 13:55 Analyst ID: lcp00895

Method used: /chem2/HP26285.i/18apr16i.b/m8260c5.m Sublist used: 8260W-H
Calibration date and time: 16-APR-2018 14:09
Date, time and analyst ID of latest file update: 16-Apr-2018 14:13 Unknown

Sample Name: LG5ICV Lab Sample ID: LG5ICV

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1911
Retention Time (minutes): 13.037
Quant Ion : 119.00
Area : 434722
On-column Amount (ng) : 26.8608
Integration start scan : 1904 Integration stop scan: 1917
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/16/2018 at 15:54.
Target 3.5 esignature used. FID Page 1193

Data File: /chem2/HP26285.i/18apr23a.b/5a23t01.d

Date : 23-APR-2018 08:39

Client ID: BFBFEB13-18

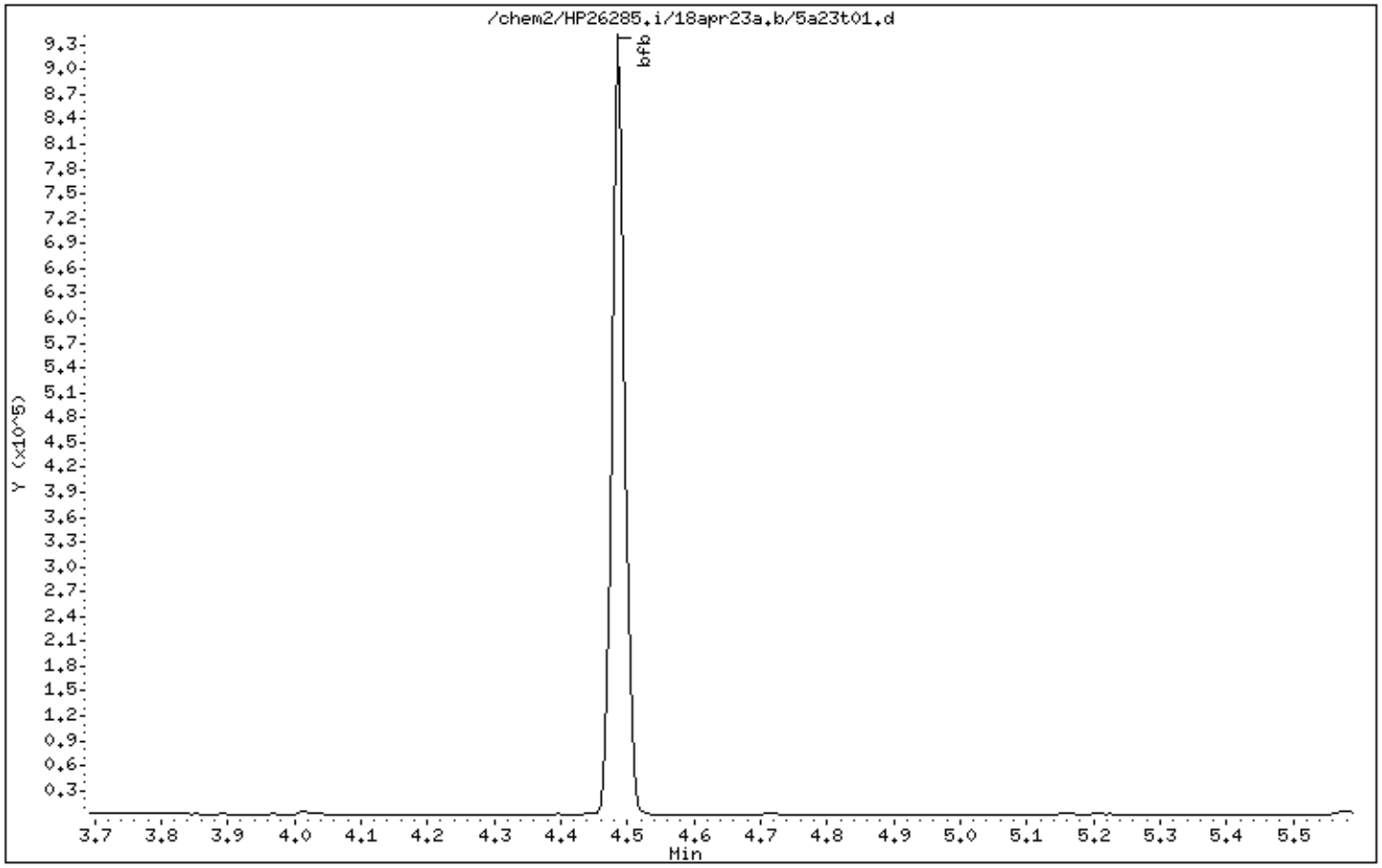
Instrument: HP26285.i

Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Linda C. Pape on 04/23/2018 at 09:55.
Target 3.5 esignature user ID: lcp00895

Data File: /chem2/HP26285.i/18apr23a.b/5a23t01.d

Date : 23-APR-2018 08:39

Client ID: BFBFEB13-18

Instrument: HP26285.i

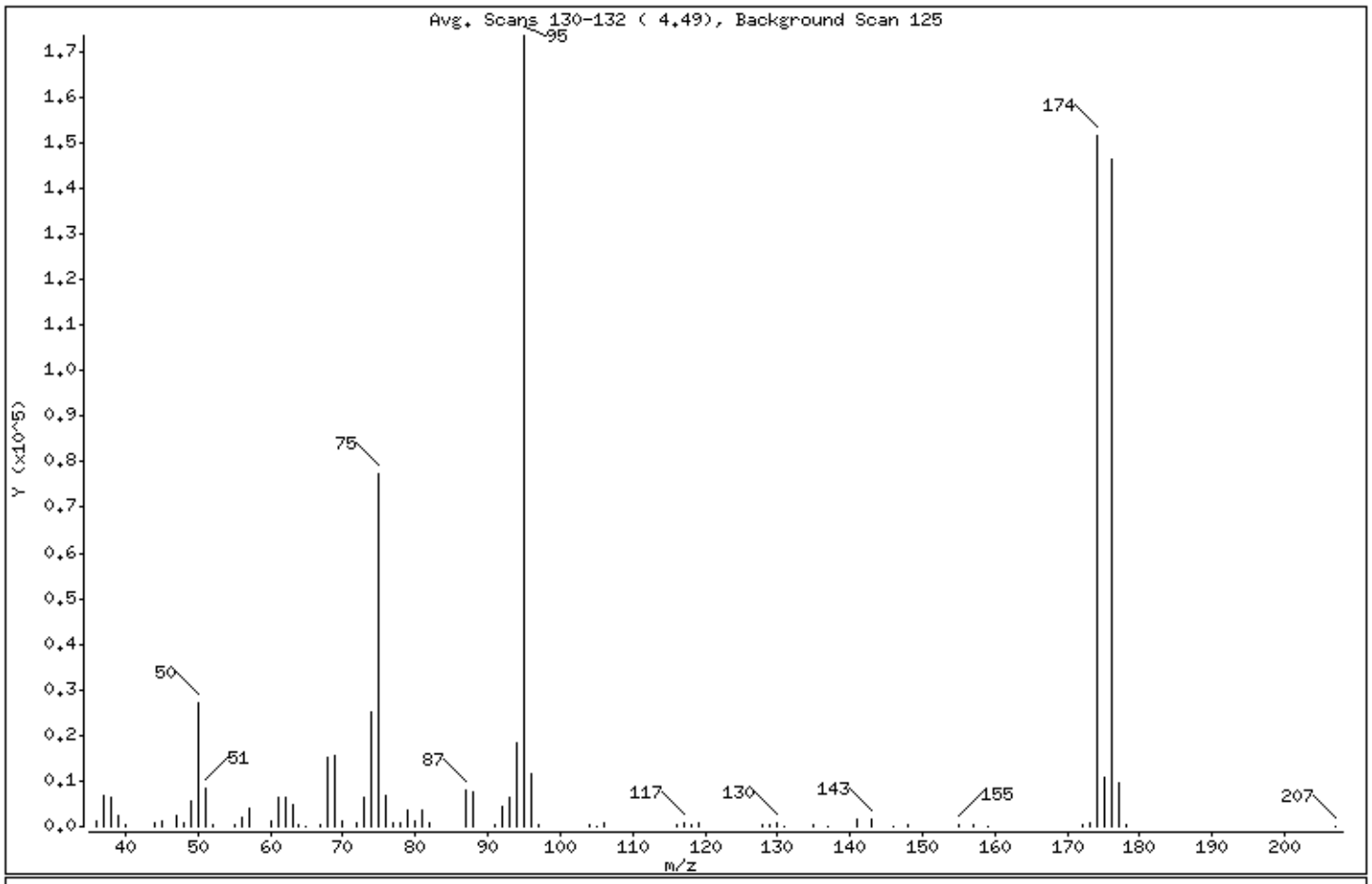
Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.69
75	30.00 - 60.00% of mass 95	44.60
96	5.00 - 9.00% of mass 95	6.67
173	Less than 2.00% of mass 174	0.47 (0.53)
174	50.00 - 100.00% of mass 95	87.30
175	5.00 - 9.00% of mass 174	6.30 (7.21)
176	95.00 - 101.00% of mass 174	84.35 (96.63)
177	5.00 - 9.00% of mass 176	5.53 (6.55)

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Target 3.5 esignature user ID: lcp00895

Data File: /chem2/HP26285.i/18apr23a.b/5a23t01.d

Date : 23-APR-2018 08:39

Client ID: BFBFEB13-18

Instrument: HP26285.i

Sample Info: BFBFEB13-18;50NGBFB;1;3;;;;;;

Operator: lcp00895

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: 5a23t01.d
Spectrum: Avg. Scans 130-132 (4.49), Background Scan 125
Location of Maximum: 95.00
Number of points: 74

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1164	63.00	4880	88.00	7640	135.00	209
37.00	6816	64.00	446	91.00	517	137.00	91
38.00	6331	65.00	97	92.00	4313	141.00	1523
39.00	2553	67.00	433	93.00	6529	143.00	1542
40.00	240	68.00	15317	94.00	18336	146.00	91
44.00	887	69.00	15492	95.00	173440	148.00	413
45.00	1354	70.00	1153	96.00	11575	155.00	450
47.00	2343	72.00	805	97.00	406	157.00	269
48.00	813	73.00	6473	104.00	578	159.00	93
49.00	5563	74.00	24936	105.00	89	172.00	314
50.00	27216	75.00	77344	106.00	674	173.00	810
51.00	8361	76.00	6710	116.00	560	174.00	151360
52.00	425	77.00	910	117.00	993	175.00	10921
55.00	322	78.00	689	118.00	446	176.00	146304
56.00	2123	79.00	3586	119.00	862	177.00	9583
57.00	3788	80.00	1000	128.00	507	178.00	216
60.00	1266	81.00	3634	129.00	202	207.00	93
61.00	6479	82.00	831	130.00	608		
62.00	6549	87.00	8030	131.00	112		

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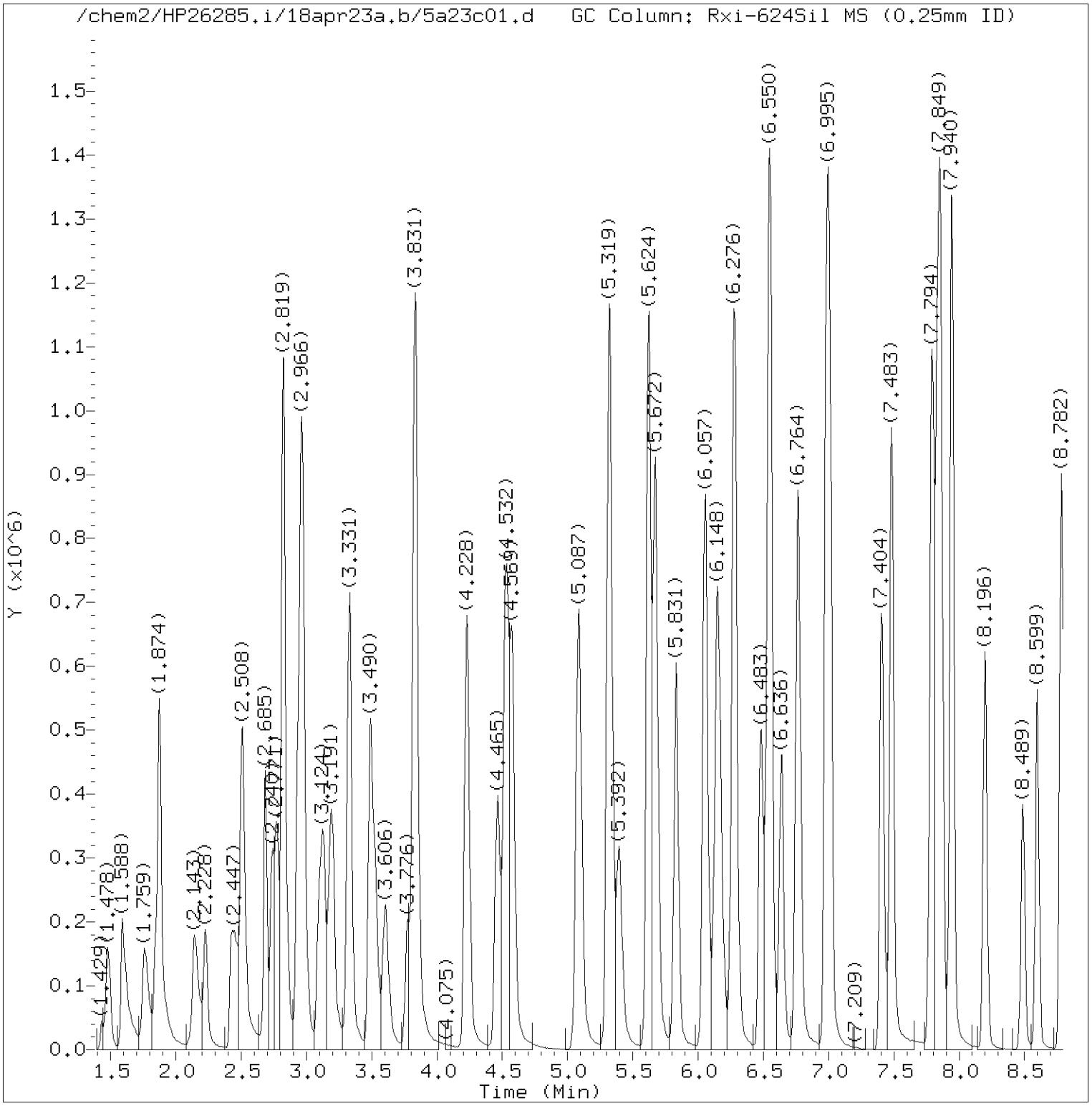
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

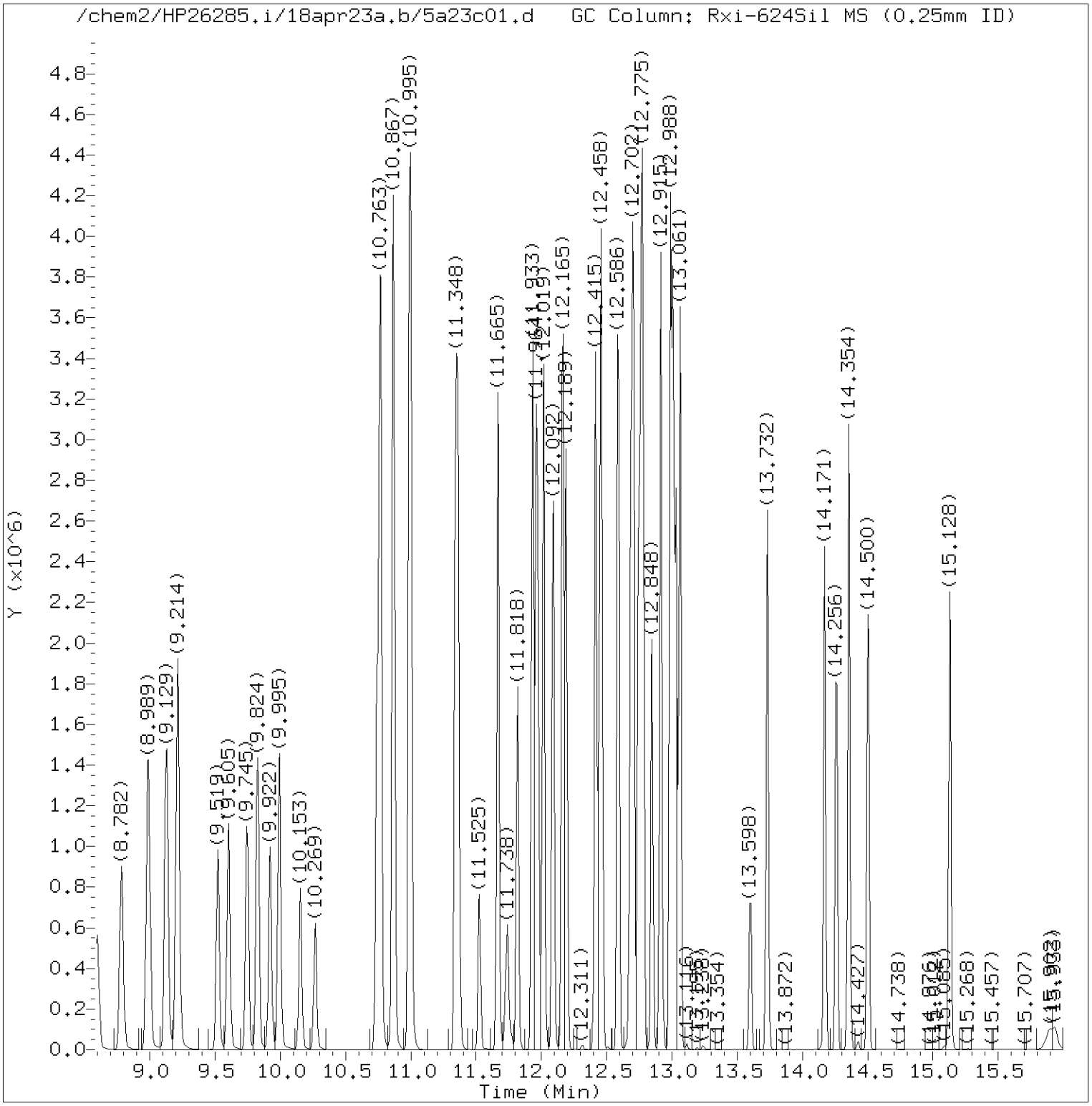
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.588	85	462015	57.745
4) Chloromethane	(2)	1.759	50	310536	49.401
6) Vinyl Chloride	(2)	1.844	62	314022	50.131
5) 1,3-Butadiene	(2)	1.874	39	246238	47.741
8) Bromomethane	(2)	2.143	94	258987	51.108
9) Chloroethane	(2)	2.228	64	169846	51.778
12) Trichlorofluoromethane	(2)	2.429	101	459826	54.106
11) n-Pentane	(2)	2.508	43	375347	59.740
14) Ethyl ether	(2)	2.685	59	255767	47.100
15) Freon 123a	(2)	2.771	67	395874	57.815
16) Acrolein	(1)	2.825	56	1148358	431.329
17) 1,1-Dichloroethene	(2)	2.947	96	299365	56.237
17) 1,1-Dichloroethene	(2)	2.935	63	143751	56.276
18) Acetone	(1)	2.966	58	104747	96.073
19) Freon 113	(2)	2.972	101	353911	61.230
21) 2-Propanol	(1)	3.106	45	201723	284.112
22) Methyl Iodide	(2)	3.130	142	644322	54.582
23) Carbon Disulfide	(2)	3.191	76	922490	58.115
27) Methyl Acetate	(2)	3.313	43	399045	50.074
25) Allyl Chloride	(2)	3.331	41	473326	51.579
28) Methylene Chloride	(2)	3.490	84	357359	53.954
29)*t-Butyl alcohol-d10	(1)	3.502	65	333394	250.000
30) t-Butyl alcohol	(1)	3.606	59	408020	268.370
31) Acrylonitrile	(2)	3.770	53	216119	55.028
33) Methyl Tertiary Butyl Ether	(2)	3.825	73	1019519	54.489
32) trans-1,2-Dichloroethene	(2)	3.837	96	345509	54.185
34) n-Hexane	(2)	4.228	57	510206	58.995
36) 1,1-Dichloroethane	(2)	4.465	63	603655	53.851
38) di-Isopropyl ether	(2)	4.532	45	1086333	53.127
39) 2-Chloro-1,3-butadiene	(2)	4.575	53	494122	56.992
40) Ethyl t-butyl ether	(2)	5.087	59	997818	53.213
44) 2-Butanone	(2)	5.307	43	596741	109.847
42) cis-1,2-Dichloroethene	(2)	5.319	96	397547	53.740
45) 2,2-Dichloropropane	(2)	5.331	77	400906	61.443
47) Propionitrile	(1)	5.398	54	436770	250.053
48) Methacrylonitrile	(2)	5.624	67	576405	132.913
49) Bromochloromethane	(2)	5.666	128	201677	52.221
50) Tetrahydrofuran	(1)	5.679	71	167446	88.195

* = Compound is an internal standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	5.831	83	628366	53.924
53) 1,1,1-Trichloroethane	(2)	6.050	97	538971	50.389
52)$Dibromofluoromethane	(2)	6.057	113	327751	50.800
52)$Dibromofluoromethane	(2)	6.057	111	331908	50.779
54) Cyclohexane	(2)	6.148	56	599047	59.340
54) Cyclohexane	(2)	6.148	84	502358	58.896
54) Cyclohexane	(2)	6.154	69	185499	59.786
43) 1,2-Dichloroethene (Total)	(2)		96	743056	107.925
56) Carbon Tetrachloride	(2)	6.270	117	487138	59.641
55) 1,1-Dichloropropene	(2)	6.282	75	480579	55.115
58) Isobutyl Alcohol	(1)	6.483	41	326551	679.689
57)$1,2-Dichloroethane-d4	(2)	6.532	102	71468	49.516
57)$1,2-Dichloroethane-d4	(2)	6.532	65	337673	52.468
57)$1,2-Dichloroethane-d4	(2)	6.532	104	45589	49.722
60) Benzene	(2)	6.550	78	1472873	53.146
61) 1,2-Dichloroethane	(2)	6.636	62	458979	53.297
61) 1,2-Dichloroethane	(2)	6.642	98	42471	54.969
65) t-Amyl methyl ether	(2)	6.764	73	996071	53.060
66)*Fluorobenzene	(2)	6.983	96	1252499	50.000
67) n-Heptane	(2)	7.008	43	539143	60.386
69) n-Butanol	(1)	7.404	56	542752	1442.994
71) Trichloroethene	(2)	7.483	95	386285	53.204
73) Methylcyclohexane	(2)	7.794	83	631937	55.897
73) Methylcyclohexane	(2)	7.794	98	276160	55.664
74) 1,2-Dichloropropane	(2)	7.831	63	381558	54.601
72) t-Amyl ethyl ether	(2)	7.861	87	524287	53.295
76) 1,4-Dioxane	(1)	7.922	88	89282	862.852
75) Dibromomethane	(2)	7.940	93	245548	53.756
77) Methyl Methacrylate	(2)	7.946	69	354745	55.555
79) Bromodichloromethane	(2)	8.196	83	480951	58.385
80) 2-Nitropropane	(2)	8.489	41	286305	118.947
81) 2-Chloroethyl Vinyl Ether	(2)	8.599	63	282722	52.882
82) cis-1,3-Dichloropropene	(2)	8.782	75	615148	56.706
83) 4-Methyl-2-pentanone	(2)	8.983	43	1202636	107.732
84)$Toluene-d8	(3)	9.129	98	1225311	48.971
84)$Toluene-d8	(3)	9.129	100	792326	48.395
89) Toluene	(3)	9.214	92	960331	51.692
90) trans-1,3-Dichloropropene	(3)	9.519	75	547189	56.050

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) Ethyl Methacrylate	(3)	9.605	69	600727	55.301
93) 1,1,2-Trichloroethane	(3)	9.745	97	370161	53.190
94) Tetrachloroethene	(3)	9.824	166	455232	51.967
95) 1,3-Dichloropropane	(3)	9.922	76	592082	53.369
97) 2-Hexanone	(3)	9.995	43	980474	105.058
91) 1,3-Dichloropropene (total)	(3)		100	1162337	112.756
98) Dibromochloromethane	(3)	10.153	129	414740	54.071
100) 1,2-Dibromoethane	(3)	10.269	107	410669	54.224
101)*Chlorobenzene-d5	(3)	10.739	117	998222	50.000
102) 1-Chlorohexane	(3)	10.763	91	544264	54.222
103) Chlorobenzene	(3)	10.769	112	1144556	52.360
104) 1,1,1,2-Tetrachloroethane	(3)	10.860	131	398360	55.357
105) Ethylbenzene	(3)	10.867	91	1926161A	54.518
107) m+p-Xylene	(3)	10.995	106	1522758	107.509
108) o-Xylene	(3)	11.342	106	762295	54.453
110) Styrene	(3)	11.360	104	1259150	55.974
111) Bromoform	(3)	11.525	173	316141	56.558
112) Isopropylbenzene	(3)	11.665	105	1896057	55.079
113) Cyclohexanone	(1)	11.738	55	246653	472.169
109) Xylene (Total)	(3)		106	2285053	161.961
115)$4-Bromofluorobenzene	(3)	11.818	95	495145	51.690
115)$4-Bromofluorobenzene	(3)	11.818	174	445162	51.051
117) 1,1,2,2-Tetrachloroethane	(4)	11.933	83	646195	55.135
116) Bromobenzene	(4)	11.933	156	522976	51.682
119) trans-1,4-Dichloro-2-butene	(4)	11.958	53	433639	143.959
118) 1,2,3-Trichloropropane	(4)	11.976	110	185262	53.078
120) n-Propylbenzene	(4)	12.019	91	2292420	55.385
121) 2-Chlorotoluene	(4)	12.092	126	470979	52.069
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	1635856	54.646
122) 4-Chlorotoluene	(4)	12.189	126	496988	52.356
125) tert-Butylbenzene	(4)	12.415	134	359083	52.700
126) Pentachloroethane	(4)	12.446	167	300114	51.177
127) 1,2,4-Trimethylbenzene	(4)	12.458	105	1655211	53.871
128) sec-Butylbenzene	(4)	12.586	105	2108409	56.814
130) 1,3-Dichlorobenzene	(4)	12.683	146	998096	52.229
131) p-Isopropyltoluene	(4)	12.702	119	1819238	55.725
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	565194	50.000
134) 1,4-Dichlorobenzene	(4)	12.763	146	1011619	52.910

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

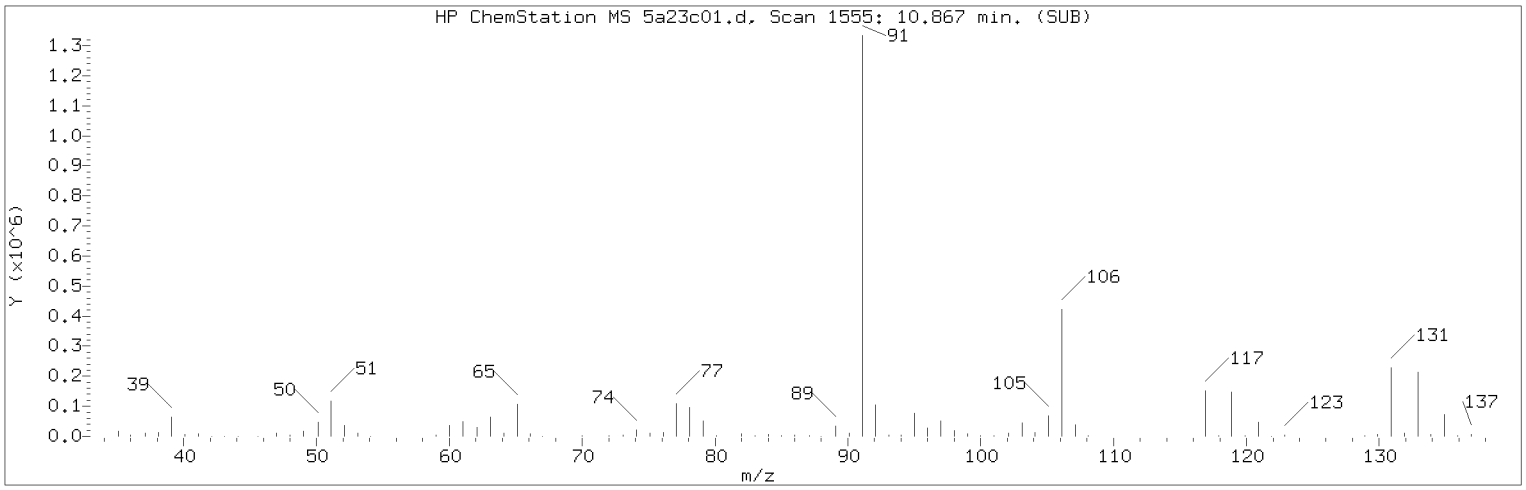
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

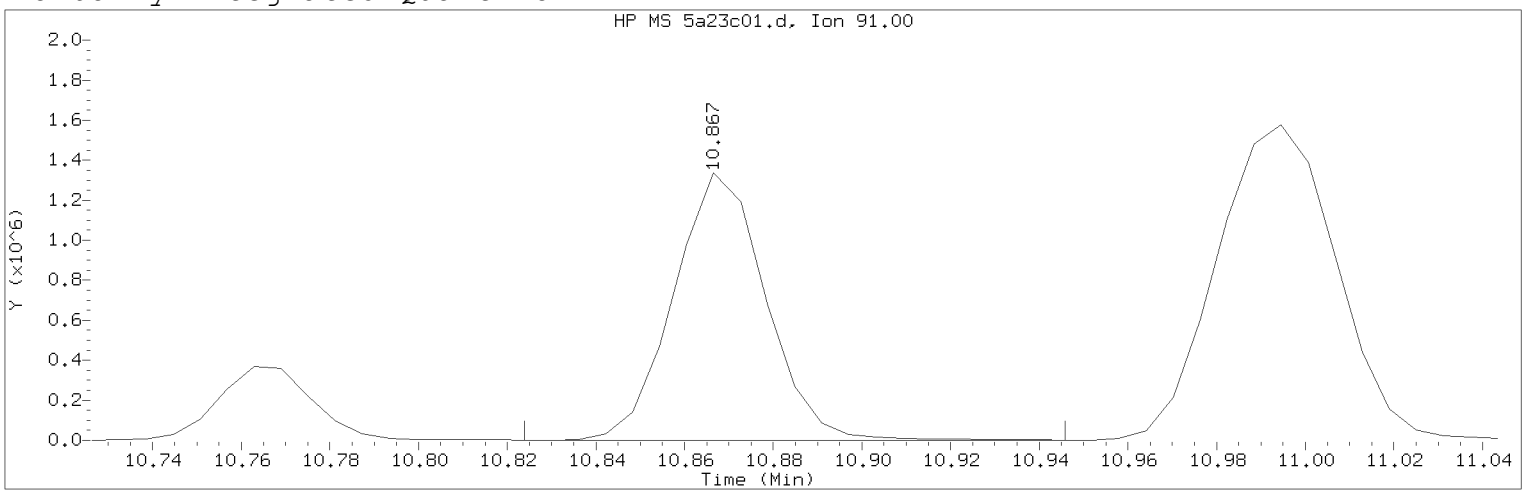
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) 1,2,3-Trimethylbenzene	(4)	12.775	105	1675668	52.301
136) Benzyl Chloride	(4)	12.848	91	1186237	47.004
137) 1,3-Diethylbenzene	(4)	12.915	119	1053635	51.754
138) 1,4-Diethylbenzene	(4)	12.988	119	1129869	53.386
140) n-Butylbenzene	(4)	13.006	92	921463	56.121
139) 1,2-Dichlorobenzene	(4)	13.031	146	920143	52.008
141) 1,2-Diethylbenzene	(4)	13.061	119	856508	50.359
142) Diethylbenzene (total)	(4)		100	3040012	155.499
143) 1,2-Dibromo-3-chloropropane	(4)	13.598	75	146374	61.231
145) 1,3,5-Trichlorobenzene	(4)	13.732	180	700307	52.924
147) 1,2,4-Trichlorobenzene	(4)	14.171	180	628947	52.825
148) Hexachlorobutadiene	(4)	14.262	225	303153	57.838
149) Naphthalene	(4)	14.354	128	1987861	54.962
150) 1,2,3-Trichlorobenzene	(4)	14.506	180	567510	53.110
151) 2-Methylnaphthalene	(4)	15.128	142	948860	46.578

Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:55
Date, time and analyst ID of latest file update: 23-Apr-2018 09:55 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

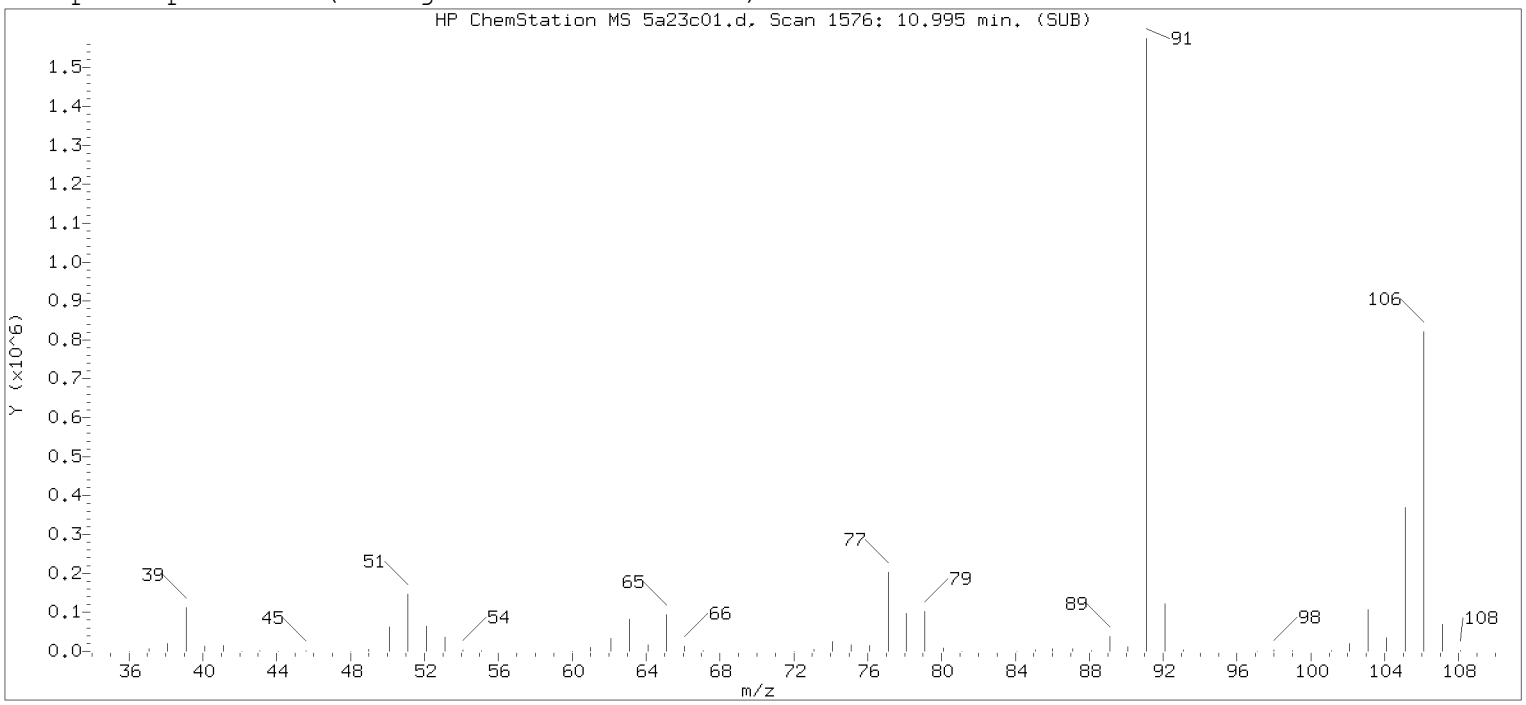
Compound Number : 105
Compound Name : Ethylbenzene
Scan Number : 1555
Retention Time (minutes): 10.867
Quant Ion : 91.00
Area (flag) : 1926161A
On-Column Amount (ng) : 54.5176
Integration start scan : 1547 Integration stop scan: 1567
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

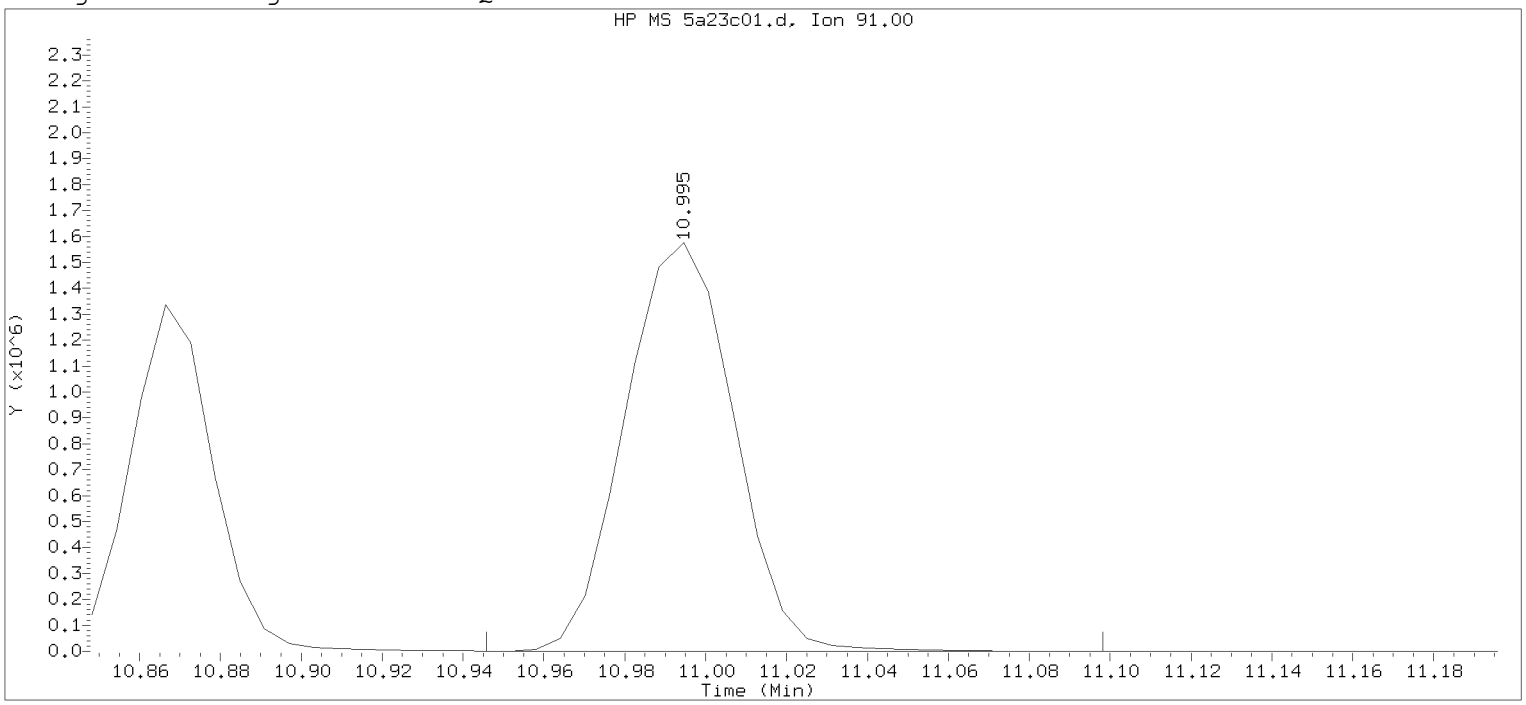
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 09:56.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23c01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:25 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:54
Date, time and analyst ID of latest file update: 23-Apr-2018 09:54 lcp00895

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 105
Compound Name : Ethylbenzene
Scan Number : 1576
Retention Time (minutes): 10.995
Quant Ion : 91.00
Area : 2950191
On-column Amount (ng) : 83.5014
Integration start scan : 1567 Integration stop scan: 1592
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 09:56.
Target 3.5 esignature used.

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23b01.d
Injection date and time: **23-APR-2018 09:46**
Data file Sample Info. Line: VBLK564;VBLK564;1;3;;;;;;
Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502	(0.000)	347	65	345384	(4)	250.00	
66) Fluorobenzene	6.983	(0.000)	918	96	1209467	(-3)	50.00	
101) Chlorobenzene-d5	10.739	(0.000)	1534	117	934574	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	508070	(-10)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(-0.001)	113	302187	48.504	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.532	(0.000)	102	70334	50.464	101%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1170201	49.953	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.000)	95	452678	50.476	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)				Not Detected					0.5	1
4) Chloromethane	(2)				Not Detected					0.5	1
5) 1,3-Butadiene	(2)				Not Detected					0.5	1
6) Vinyl Chloride	(2)				Not Detected					0.5	1
8) Bromomethane	(2)				Not Detected					0.5	1
9) Chloroethane	(2)				Not Detected					0.5	1
11) n-Pentane	(2)				Not Detected					2	10
12) Trichlorofluoromethane	(2)				Not Detected					0.5	1
14) Ethyl ether	(2)				Not Detected					2	5
15) Freon 123a	(2)				Not Detected					2	5
16) Acrolein	(1)				Not Detected					40	100
17) 1,1-Dichloroethene	(2)				Not Detected					0.5	1
18) Acetone	(1)				Not Detected					6	20
19) Freon 113	(2)				Not Detected					2	10
21) 2-Propanol	(1)				Not Detected					50	100
22) Methyl Iodide	(2)				Not Detected					0.5	1
23) Carbon Disulfide	(2)				Not Detected					1	5
25) Allyl Chloride	(2)				Not Detected					1	5
27) Methyl Acetate	(2)				Not Detected					1	5
28) Methylene Chloride	(2)				Not Detected					0.5	1
30) t-Butyl alcohol	(1)				Not Detected					5	20
31) Acrylonitrile	(2)				Not Detected					4	20
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	1
33) Methyl Tertiary Butyl Ether	(2)				Not Detected					0.5	1
34) n-Hexane	(2)				Not Detected					2	5
36) 1,1-Dichloroethane	(2)				Not Detected					0.5	1
38) di-Isopropyl ether	(2)				Not Detected					0.5	1
39) 2-Chloro-1,3-butadiene	(2)				Not Detected					1	5
40) Ethyl t-butyl ether	(2)				Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	1
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.5	1

Digitally signed by Linda C. Pape on 04/23/2018 at 10:46. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23b01.d Injection date and time: **23-APR-2018 09:46**
Data file Sample Info. Line: VBLK564;VBLK564;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)				Not Detected					3	10
45) 2,2-Dichloropropane	(2)				Not Detected					0.5	1
47) Propionitrile	(1)				Not Detected					30	100
48) Methacrylonitrile	(2)				Not Detected					10	50
49) Bromochloromethane	(2)				Not Detected					1	5
50) Tetrahydrofuran	(1)				Not Detected					4	10
51) Chloroform	(2)				Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.5	1
54) Cyclohexane	(2)				Not Detected					2	5
55) 1,1-Dichloropropene	(2)				Not Detected					1	5
56) Carbon Tetrachloride	(2)				Not Detected					0.5	1
58) Isobutyl Alcohol	(1)				Not Detected					100	250
60) Benzene	(2)				Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.5	1
72) t-Amyl ethyl ether	(2)				Not Detected					0.5	1
65) t-Amyl methyl ether	(2)				Not Detected					0.5	1
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					100	250
71) Trichloroethene	(2)				Not Detected					0.5	1
73) Methylcyclohexane	(2)				Not Detected					1	5
74) 1,2-Dichloropropane	(2)				Not Detected					0.5	1
75) Dibromomethane	(2)				Not Detected					0.5	1
76) 1,4-Dioxane	(1)				Not Detected					70	250
77) Methyl Methacrylate	(2)				Not Detected					1	5
79) Bromodichloromethane	(2)				Not Detected					0.5	1
80) 2-Nitropropane	(2)				Not Detected					2	10
81) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					2	10
82) cis-1,3-Dichloropropene	(2)				Not Detected					0.5	1
83) 4-Methyl-2-pentanone	(2)				Not Detected					3	10
89) Toluene	(3)				Not Detected					0.5	1
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.5	1
91) 1,3-Dichloropropene (total)	(3)				Not Detected					1	5
92) Ethyl Methacrylate	(3)				Not Detected					1	5
93) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	1
94) Tetrachloroethene	(3)				Not Detected					0.5	1
95) 1,3-Dichloropropane	(3)				Not Detected					0.5	1
97) 2-Hexanone	(3)				Not Detected					3	10
98) Dibromochloromethane	(3)				Not Detected					0.5	1
100) 1,2-Dibromoethane	(3)				Not Detected					0.5	1
102) 1-Chlorohexane	(3)				Not Detected					1	5
103) Chlorobenzene	(3)				Not Detected					0.5	1
104) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.5	1
105) Ethylbenzene	(3)				Not Detected					0.5	1
107) m+p-Xylene	(3)				Not Detected					0.5	1
108) o-Xylene	(3)				Not Detected					0.5	1
109) Xylene (Total)	(3)				Not Detected					0.5	1
110) Styrene	(3)				Not Detected					1	5
111) Bromoform	(3)				Not Detected					0.5	4
112) Isopropylbenzene	(3)				Not Detected					1	5
113) Cyclohexanone	(1)				Not Detected					25	100
116) Bromobenzene	(4)				Not Detected					1	5
117) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1
118) 1,2,3-Trichloropropane	(4)				Not Detected					1	5
119) trans-1,4-Dichloro-2-butene	(4)				Not Detected					15	50

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23b01.d Injection date and time: **23-APR-2018 09:46**
Data file Sample Info. Line: VBLK564;VBLK564;1;3;;;;;; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

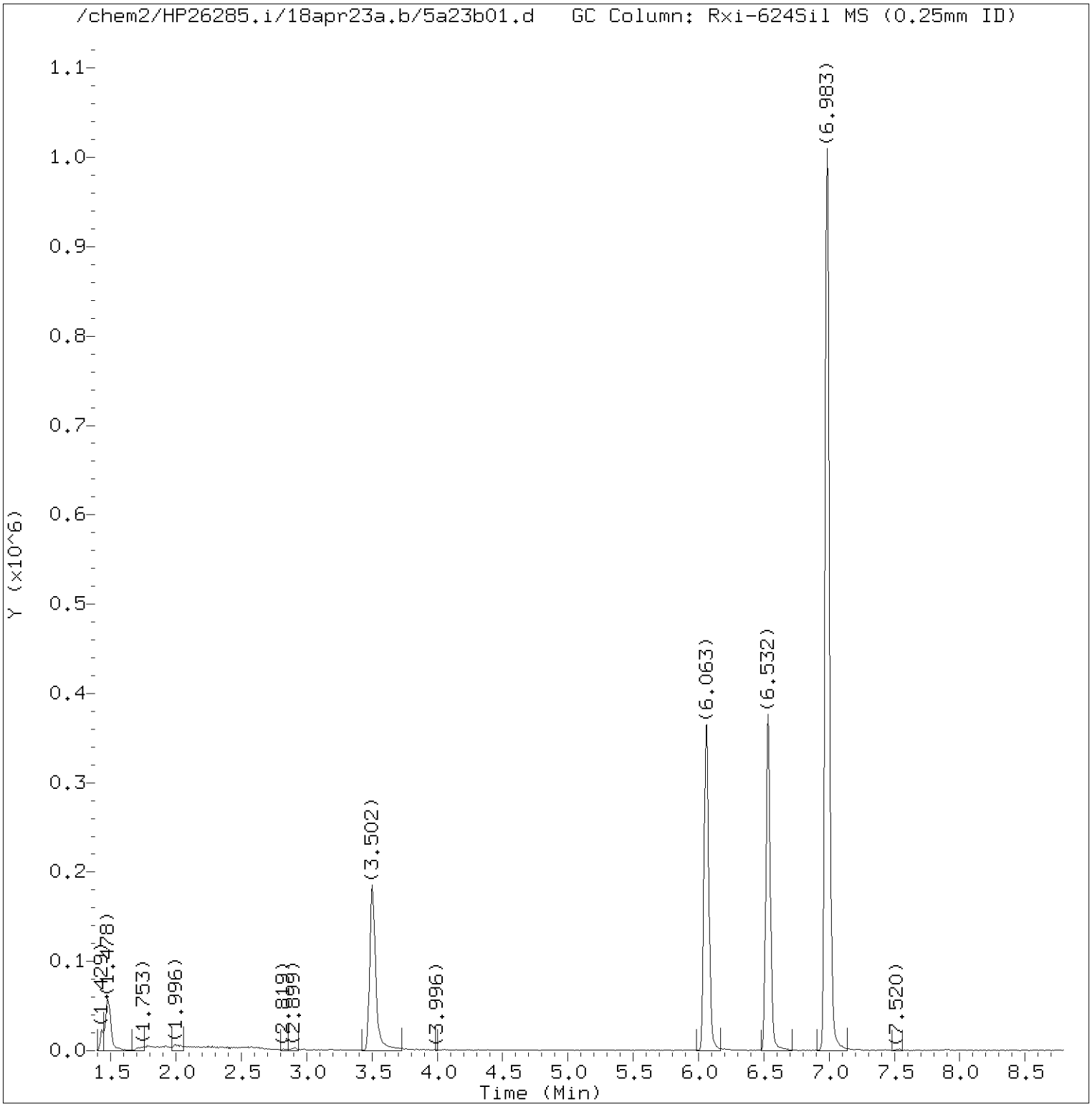
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)				Not Detected					1	5
121) 2-Chlorotoluene	(4)				Not Detected					1	5
122) 4-Chlorotoluene	(4)				Not Detected					1	5
123) 1,3,5-Trimethylbenzene	(4)				Not Detected					1	5
125) tert-Butylbenzene	(4)				Not Detected					1	5
126) Pentachloroethane	(4)				Not Detected					1	5
127) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
128) sec-Butylbenzene	(4)				Not Detected					1	5
130) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
131) p-Isopropyltoluene	(4)				Not Detected					1	5
134) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
135) 1,2,3-Trimethylbenzene	(4)				Not Detected					1	5
136) Benzyl Chloride	(4)				Not Detected					1	5
137) 1,3-Diethylbenzene	(4)				Not Detected					1	5
138) 1,4-Diethylbenzene	(4)				Not Detected					1	5
139) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
140) n-Butylbenzene	(4)				Not Detected					1	5
141) 1,2-Diethylbenzene	(4)				Not Detected					1	5
142) Diethylbenzene (total)	(4)				Not Detected					1	5
143) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
145) 1,3,5-Trichlorobenzene	(4)				Not Detected					1	5
147) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5
148) Hexachlorobutadiene	(4)				Not Detected					2	5
149) Naphthalene	(4)				Not Detected					1	5
150) 1,2,3-Trichlorobenzene	(4)				Not Detected					1	5
151) 2-Methylnaphthalene	(4)				Not Detected					2	5

Total number of targets = 111

Digitally signed by Linda C. Pape on 04/23/2018 at 10:46. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

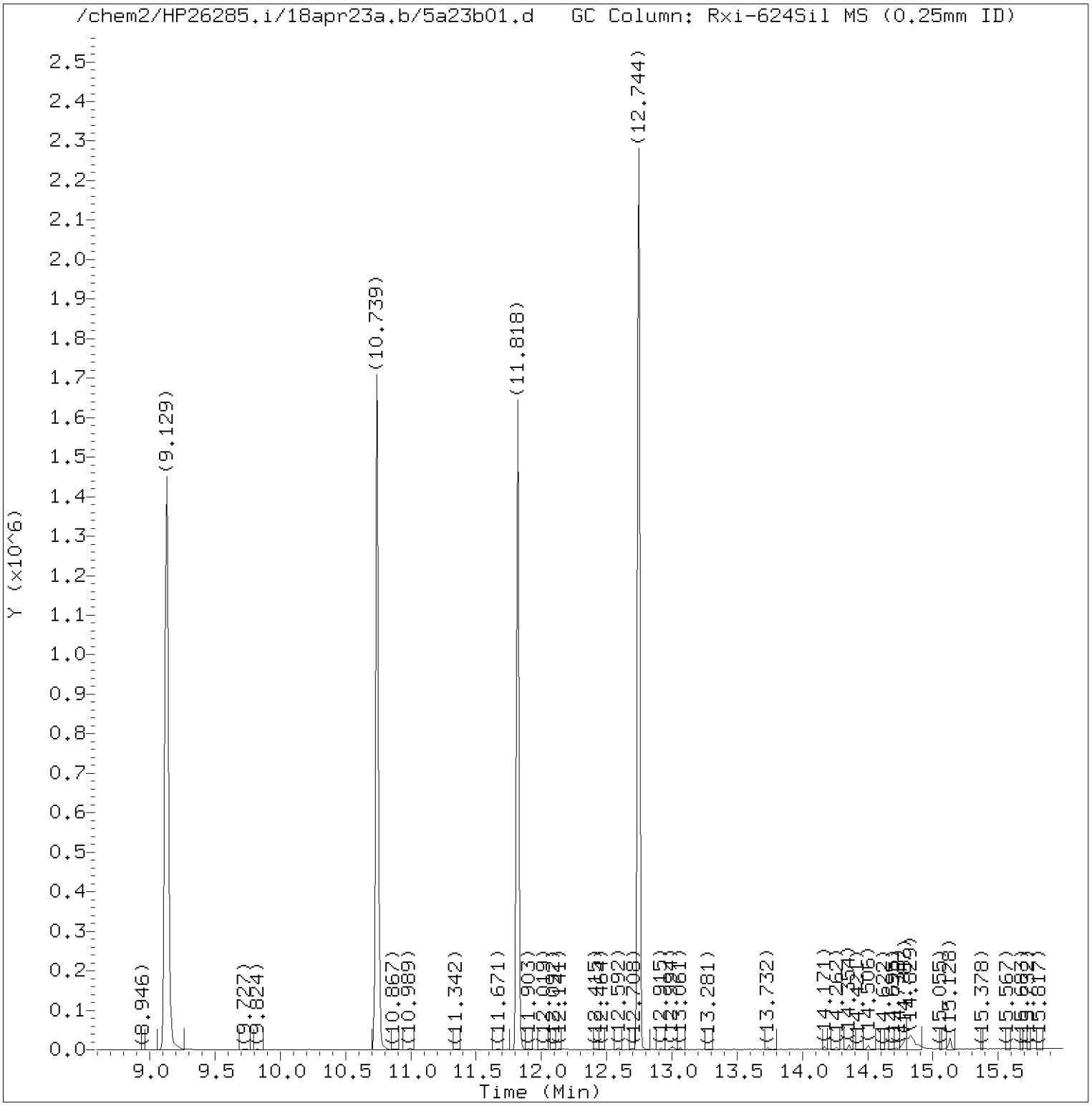
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23b01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: VBLK564 Lab Sample ID: VBLK564

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:46.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23b01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: VBLK564 Lab Sample ID: VBLK564

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:46.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23b01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 09:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: VBLK564 Lab Sample ID: VBLK564

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	3.502	65	345384	250.000
52)$Dibromofluoromethane	(2)	6.063	113	302187	48.504
57)$1,2-Dichloroethane-d4	(2)	6.532	102	70334	50.464
66)*Fluorobenzene	(2)	6.983	96	1209467	50.000
84)$Toluene-d8	(3)	9.129	98	1170201	49.953
101)*Chlorobenzene-d5	(3)	10.739	117	934574	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	452678	50.476
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	508070	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:46.
Target 3.5 esignature user ID: lcp00895

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKG84

Data file: /chem2/HP16334.i/18apr23b.b/ga23b05.d
Injection date and time: **23-APR-2018 21:23**
Data file Sample Info. Line: VBLKG84;VBLKG84;1;3;;;DRAPERLOQ;;;
Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:40 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958 (-0.006)	389	65	208009 (-2)	50.00	
63) Fluorobenzene	7.488 (-0.012)	968	96	2141411 (-1)	10.00	
97) Chlorobenzene-d5	11.018 (0.000)	1547	117	1613141 (-6)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914 (-0.006)	1858	152	900518 (-8)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.592 (0.000)	113	535176	9.939	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049 (0.001)	102	113319	9.930	99%		80 - 120
82) Toluene-d8	(3)	9.530 (-0.001)	98	2169095	10.026	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030 (-0.001)	95	813525	9.824	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	1
8) Chloroethane	(2)			Not Detected					0.1	1
10) Trichlorofluoromethane	(2)			Not Detected					0.1	1
11) Ethyl ether	(2)			Not Detected					0.1	13
15) 1,1-Dichloroethene	(2)			Not Detected					0.1	1
16) Freon 113	(2)			Not Detected					0.2	1
23) Methylene Chloride	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
38) 2-Butanone	(1)			Not Detected					1	10
48) Tetrahydrofuran	(1)			Not Detected					2	25
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.1	1
58) Benzene	(2)			Not Detected					0.1	1
67) Trichloroethene	(2)			Not Detected					0.1	1
83) Toluene	(3)			Not Detected					0.1	1
89) Tetrachloroethene	(3)			Not Detected					0.1	1
100) Ethylbenzene	(3)			Not Detected					0.1	1
101) m+p-Xylene	(3)			Not Detected					0.1	0.5
104) o-Xylene	(3)			Not Detected					0.1	0.5
105) Xylene (Total)	(3)			Not Detected					0.1	3

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:03. Target 3.5 esignature user ID: msk07970

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23b05.d Injection date and time: **23-APR-2018 21:23**
Data file Sample Info. Line: VBLKG84;VBLKG84;1;3;;;DRAPERLOQ;;; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:40 Automation

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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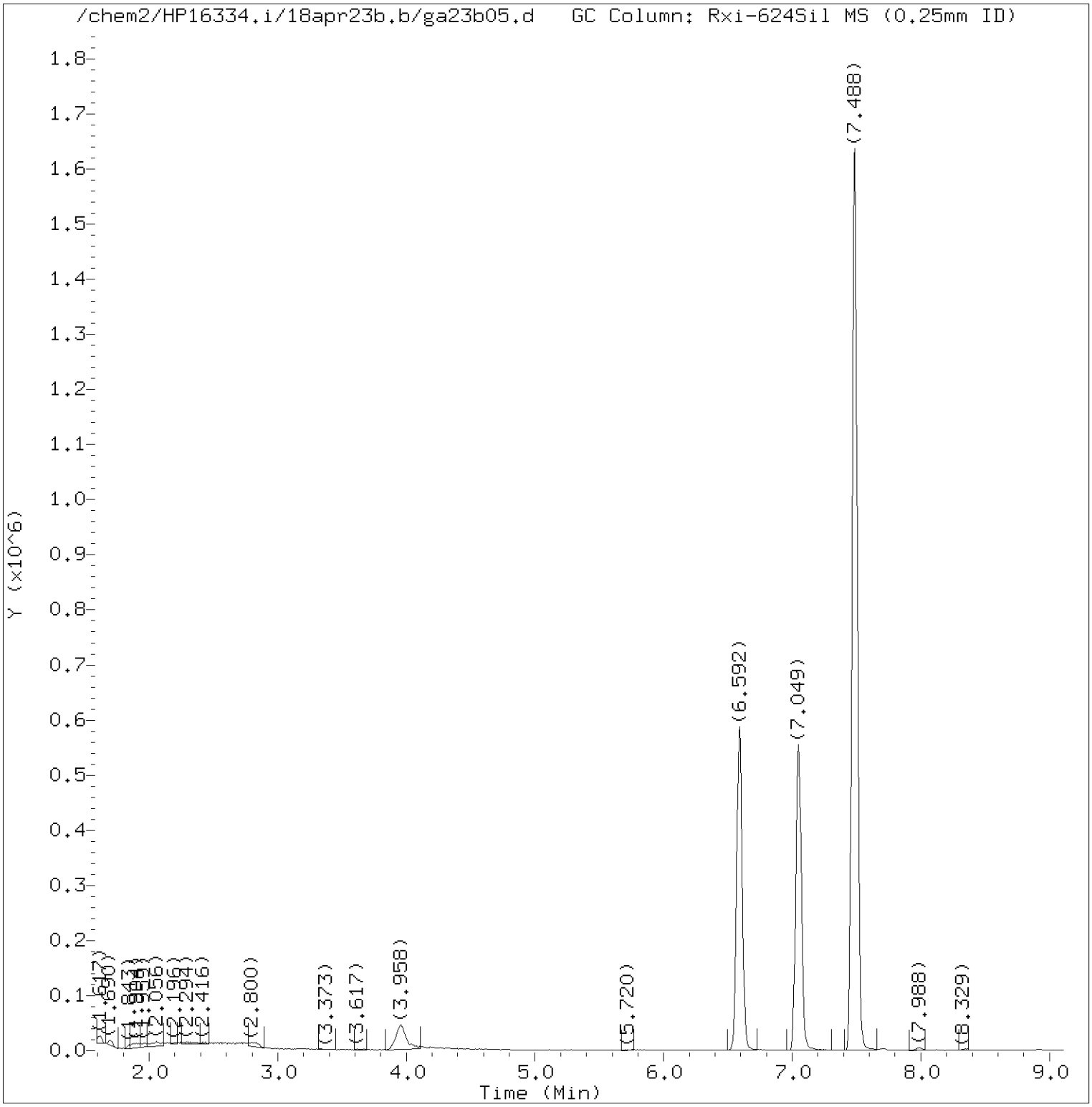
Total number of targets = 22

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:03. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

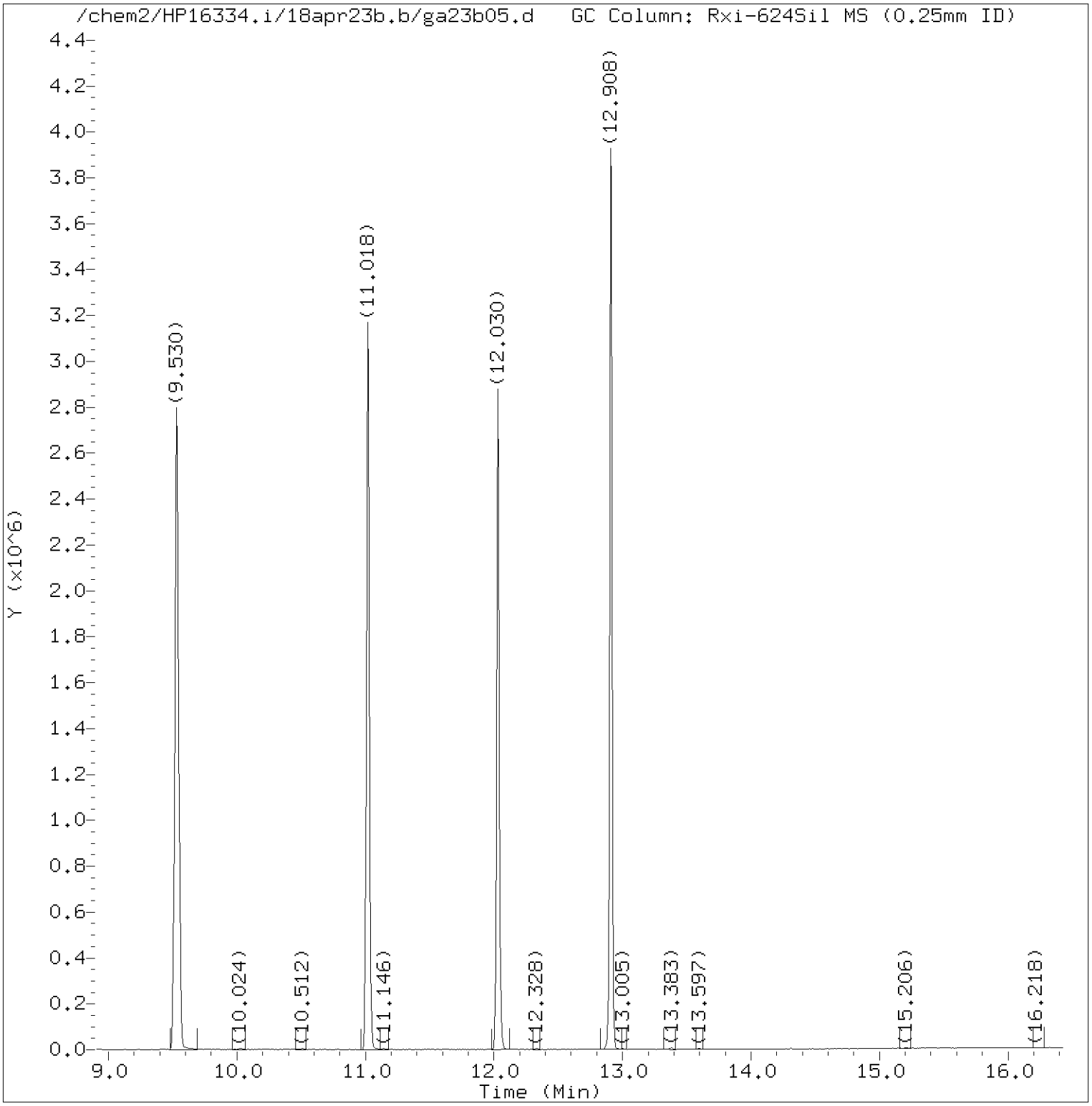
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23b05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:23 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:40 Automation

Sample Name: VBLKG84 Lab Sample ID: VBLKG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23b05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:23 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:40 Automation

Sample Name: VBLKG84 Lab Sample ID: VBLKG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23b05.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:23 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:40 Automation

Sample Name: VBLKG84 Lab Sample ID: VBLKG84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	3.958	65	208009	50.000
50)$Dibromofluoromethane	(2)	6.592	113	535176	9.939
57)$1,2-Dichloroethane-d4	(2)	7.049	102	113319	9.930
63)*Fluorobenzene	(2)	7.488	96	2141411	10.000
82)$Toluene-d8	(3)	9.530	98	2169095	10.026
97)*Chlorobenzene-d5	(3)	11.018	117	1613141	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	813525	9.824
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	900518	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:03.
Target 3.5 esignature user ID: msk07970

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23b71.d Injection date and time: **24-APR-2018 00:03**
Data file Sample Info. Line: VBLKI92;VBLKI92;1;3;;;DAA3568;;; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9159-ND

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.147 (-0.012)	420	65	138581 (-6)	50.00	
63) Fluorobenzene	7.671 (-0.006)	998	96	2140562 (4)	10.00	
97) Chlorobenzene-d5	11.152 (-0.006)	1569	117	1559512 (1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024 (0.000)	1876	152	817042 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775 (0.000)	113	511597	10.241	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232 (0.000)	102	111775	10.285	103%		80 - 120
82) Toluene-d8	(3)	9.689 (0.000)	98	2101775	9.982	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.152 (0.000)	95	727606	9.786	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)			Not Detected					0.1	1
4) Dimethyl ether	(2)			Not Detected					0.1	13
2) Chloromethane	(2)			Not Detected					0.2	0.5
5) Vinyl Chloride	(2)			Not Detected					0.2	1
7) Bromomethane	(2)			Not Detected					0.5	1
8) Chloroethane	(2)			Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)			Not Detected					0.2	1
11) Ethyl ether	(2)			Not Detected					1	13
13) Acrolein	(1)			Not Detected					5	25
15) 1,1-Dichloroethene	(2)			Not Detected					0.2	1
16) Freon 113	(2)			Not Detected					0.2	1
14) Acetone	(1)			Not Detected					3	10
17) Methyl Iodide	(2)			Not Detected					0.6	10
18) Carbon Disulfide	(2)			Not Detected					0.4	10
25) Acetonitrile	(1)			Not Detected					32	100
22) Allyl Chloride	(2)			Not Detected					0.8	10
23) Methylene Chloride	(2)			Not Detected					0.2	1
29) Acrylonitrile	(1)			Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)			Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)			Not Detected					0.1	1
36) Vinyl Acetate	(2)			Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)			Not Detected					0.5	10
38) 2-Butanone	(1)			Not Detected					1	10
42) Propionitrile	(1)			Not Detected					10	100
45) Methacrylonitrile	(1)			Not Detected					10	100
48) Tetrahydrofuran	(1)			Not Detected					2	25
49) Chloroform	(2)			Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.1	1
54) Carbon Tetrachloride	(2)			Not Detected					0.2	1
56) Isobutyl Alcohol	(1)			Not Detected					10	200

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23b71.d Injection date and time: **24-APR-2018 00:03**
Data file Sample Info. Line: VBLKI92;VBLKI92;1;3;;;DAA3568;;; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

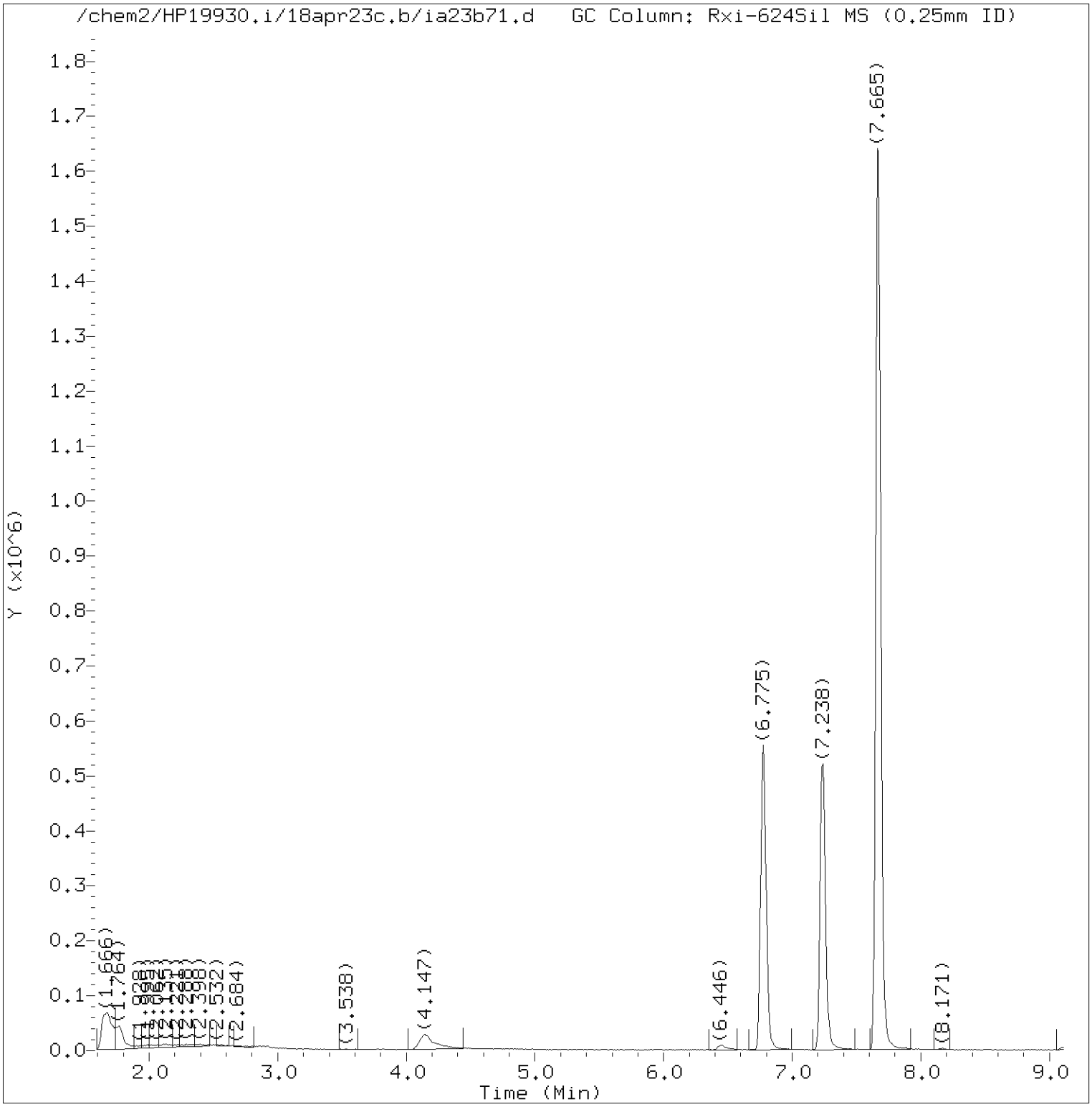
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
58) Benzene	(2)				Not Detected					0.1	1
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Jennifer K. Howe on 04/25/2018 at 13:40. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 16:19. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

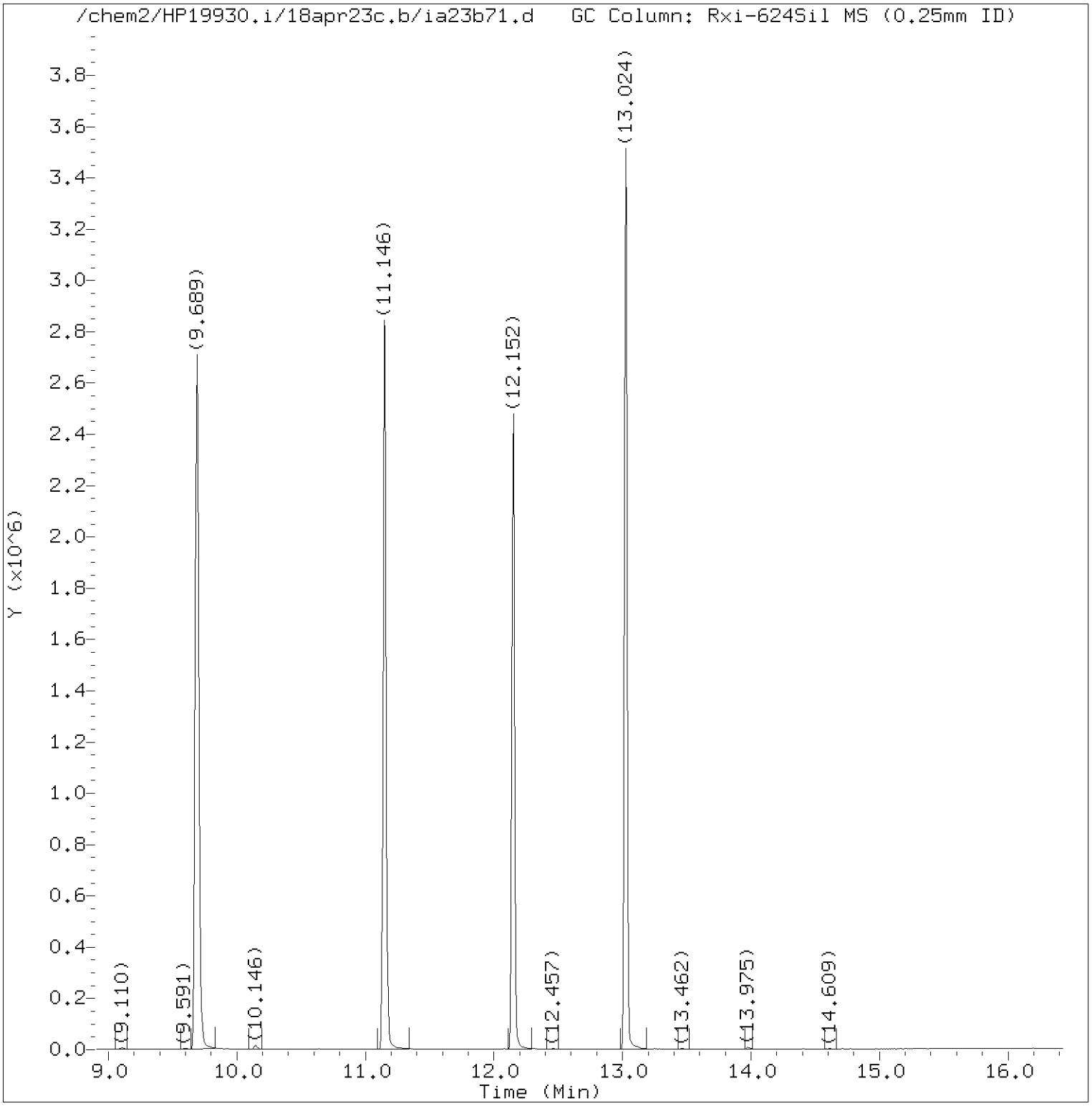
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23b71.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 00:03 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:28 dvv10203

Sample Name: VBLKI92 Lab Sample ID: VBLKI92

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23b71.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 00:03 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:28 dvv10203

Sample Name: VBLKI92 Lab Sample ID: VBLKI92

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23b71.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 00:03 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:28 dvv10203

Sample Name: VBLKI92 Lab Sample ID: VBLKI92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.147	65	138581	50.000
50)$Dibromofluoromethane	(2)	6.775	113	511597	10.241
57)$1,2-Dichloroethane-d4	(2)	7.232	102	111775	10.285
63)*Fluorobenzene	(2)	7.671	96	2140562	10.000
82)$Toluene-d8	(3)	9.689	98	2101775	9.982
97)*Chlorobenzene-d5	(3)	11.152	117	1559512	10.000
111)$4-Bromofluorobenzene	(3)	12.152	95	727606	9.786
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	817042	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/25/2018 at 13:40.
Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24b41.d Injection date and time: **24-APR-2018 22:56**
Data file Sample Info. Line: VBLKI95;VBLKI95;1;3;;;DAA3568;;; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:25 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	157754	(-4)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	2114543	(-4)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1558450	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	830303	(-5)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	506280	10.259	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(0.000)	102	109607	10.210	102%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	2115341	10.053	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	736736	9.916	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.1	1
4) Dimethyl ether	(2)				Not Detected					0.1	13
2) Chloromethane	(2)				Not Detected					0.2	0.5
5) Vinyl Chloride	(2)				Not Detected					0.2	1
7) Bromomethane	(2)				Not Detected					0.5	1
8) Chloroethane	(2)				Not Detected					0.1	0.5
10) Trichlorofluoromethane	(2)				Not Detected					0.2	1
11) Ethyl ether	(2)				Not Detected					1	13
13) Acrolein	(1)				Not Detected					5	25
15) 1,1-Dichloroethene	(2)				Not Detected					0.2	1
16) Freon 113	(2)				Not Detected					0.2	1
14) Acetone	(1)				Not Detected					3	10
17) Methyl Iodide	(2)				Not Detected					0.6	10
18) Carbon Disulfide	(2)				Not Detected					0.4	10
25) Acetonitrile	(1)				Not Detected					32	100
22) Allyl Chloride	(2)				Not Detected					0.8	10
23) Methylene Chloride	(2)				Not Detected					0.2	1
29) Acrylonitrile	(1)				Not Detected					1	10
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.2	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.1	1
36) Vinyl Acetate	(2)				Not Detected					3	10
35) 2-Chloro-1,3-Butadiene	(2)				Not Detected					0.5	10
38) 2-Butanone	(1)				Not Detected					1	10
42) Propionitrile	(1)				Not Detected					10	100
45) Methacrylonitrile	(1)				Not Detected					10	100
48) Tetrahydrofuran	(1)				Not Detected					2	25
49) Chloroform	(2)				Not Detected					0.1	1
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.1	1
54) Carbon Tetrachloride	(2)				Not Detected					0.2	1
56) Isobutyl Alcohol	(1)				Not Detected					10	200
58) Benzene	(2)				Not Detected					0.1	1

Digitally signed by Don V. Viray on 04/24/2018 at 23:38. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24b41.d Injection date and time: **24-APR-2018 22:56**
Data file Sample Info. Line: VBLKI95;VBLKI95;1;3;;;DAA3568;;; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:25 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

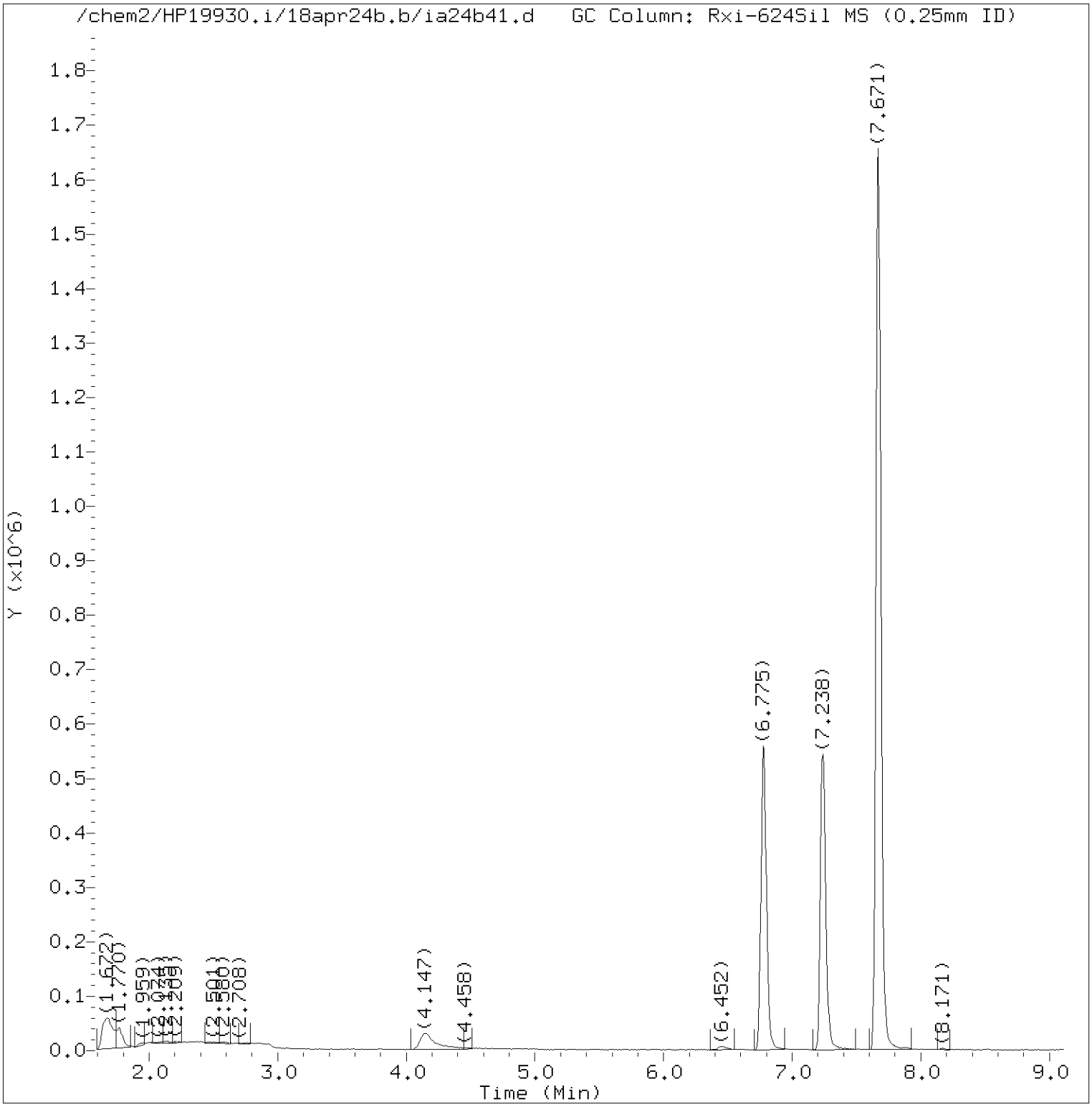
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
59) 1,2-Dichloroethane	(2)				Not Detected					0.1	1
67) Trichloroethene	(2)				Not Detected					0.2	1
70) 1,2-Dichloropropane	(2)				Not Detected					0.1	1
71) Methyl Methacrylate	(1)				Not Detected					4	10
73) Dibromomethane	(2)				Not Detected					0.1	1
72) 1,4-Dioxane	(1)				Not Detected					45	200
74) Bromodichloromethane	(2)				Not Detected					0.1	1
81) 4-Methyl-2-Pentanone	(1)				Not Detected					1	10
83) Toluene	(3)				Not Detected					0.1	1
84) trans-1,3-Dichloropropene	(3)				Not Detected					0.1	1
86) Ethyl Methacrylate	(3)				Not Detected					0.8	10
88) 1,1,2-Trichloroethane	(3)				Not Detected					0.1	1
89) Tetrachloroethene	(3)				Not Detected					0.1	1
90) 1,3-Dichloropropane	(3)				Not Detected					0.1	1
91) 2-Hexanone	(1)				Not Detected					1	10
93) Dibromochloromethane	(3)				Not Detected					0.1	1
95) 1,2-Dibromoethane	(3)				Not Detected					0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					0.1	1
100) Ethylbenzene	(3)				Not Detected					0.1	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.1	0.5
105) Xylene (Total)	(3)				Not Detected					0.2	3
106) Styrene	(3)				Not Detected					0.1	1
107) Bromoform	(3)				Not Detected					0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.2	1
115) trans-1,4-Dichloro-2-butene	(1)				Not Detected					1	10
116) 1,2,3-Trichloropropane	(4)				Not Detected					0.3	1
126) Pentachloroethane	(4)				Not Detected					0.8	10
131) 1,3-Dichlorobenzene	(4)				Not Detected					0.1	1
134) 1,4-Dichlorobenzene	(4)				Not Detected					0.1	1
139) 1,2-Dichlorobenzene	(4)				Not Detected					0.1	1
142) Hexachloroethane	(4)				Not Detected					0.1	10
143) 1,2-Dibromo-3-chloropropane	(1)				Not Detected					0.2	1
145) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.1	1
146) Hexachlorobutadiene	(4)				Not Detected					0.1	1
147) Naphthalene	(4)				Not Detected					0.1	1

Total number of targets = 67

Digitally signed by Don V. Viray on 04/24/2018 at 23:38. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

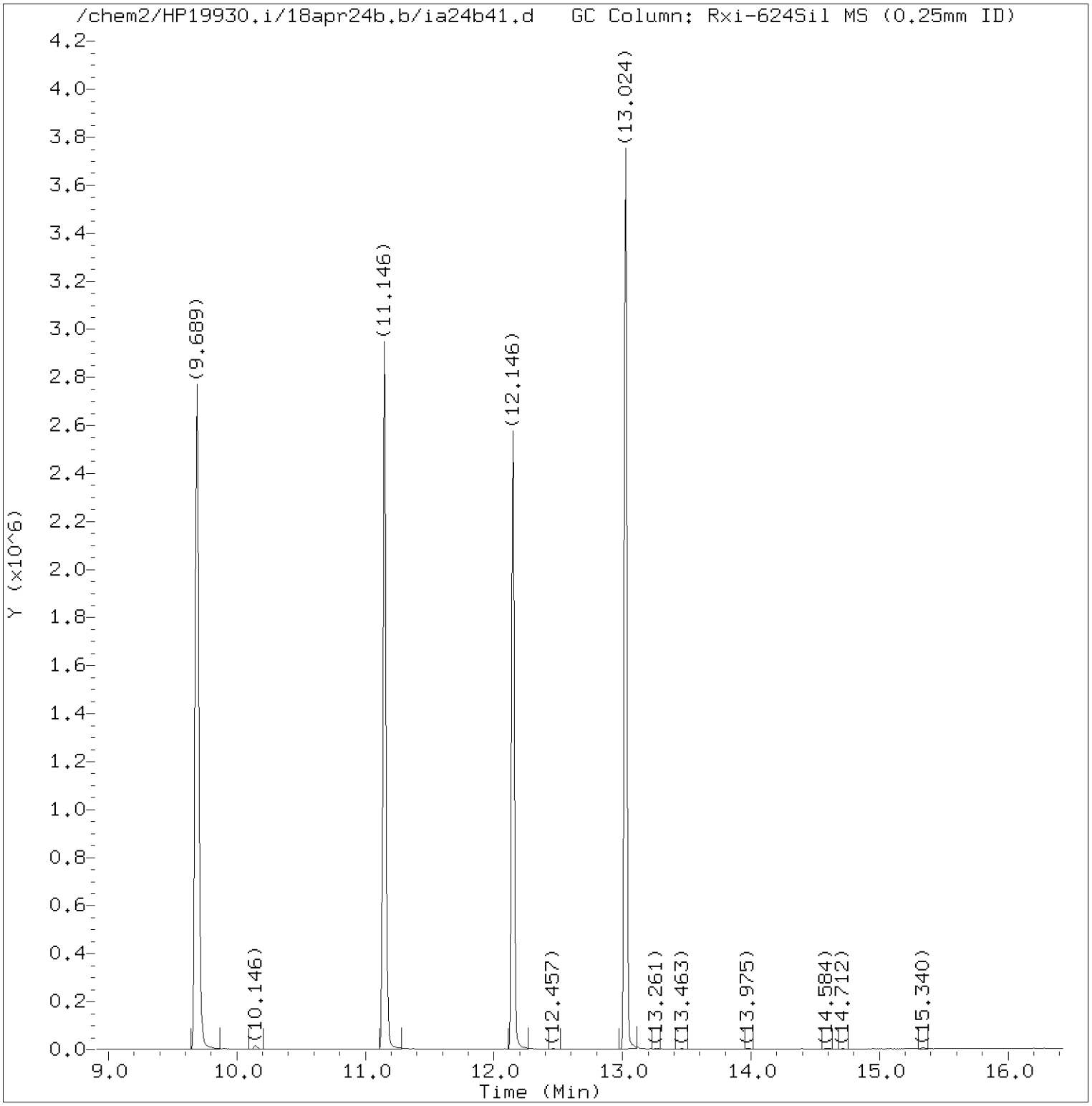
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24b41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:56 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:25 dvv10203

Sample Name: VBLKI95 Lab Sample ID: VBLKI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24b41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:56 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:25 dvv10203

Sample Name: VBLKI95 Lab Sample ID: VBLKI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24b41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:56 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:25 dvv10203

Sample Name: VBLKI95 Lab Sample ID: VBLKI95

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.135	65	157754	50.000
50)$Dibromofluoromethane	(2)	6.775	113	506280	10.259
57)$1,2-Dichloroethane-d4	(2)	7.238	102	109607	10.210
63)*Fluorobenzene	(2)	7.671	96	2114543	10.000
82)$Toluene-d8	(3)	9.689	98	2115341	10.053
97)*Chlorobenzene-d5	(3)	11.146	117	1558450	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	736736	9.916
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	830303	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:38.
Target 3.5 esignature user ID: dvv10203

R0604MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9558699MS

Data file: /chem2/HP26285.i/18apr23a.b/5a23s06.d Injection date and time: **23-APR-2018 12:46**
Data file Sample Info. Line: R0604MS;9558699MS;1;3;MS;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:05 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.502	(0.000)	347	65	281798	(-15)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1196835	(-4)	50.00	
101) Chlorobenzene-d5	10.745	(-0.006)	1535	117	948184	(-5)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	526767	(-7)	50.00	

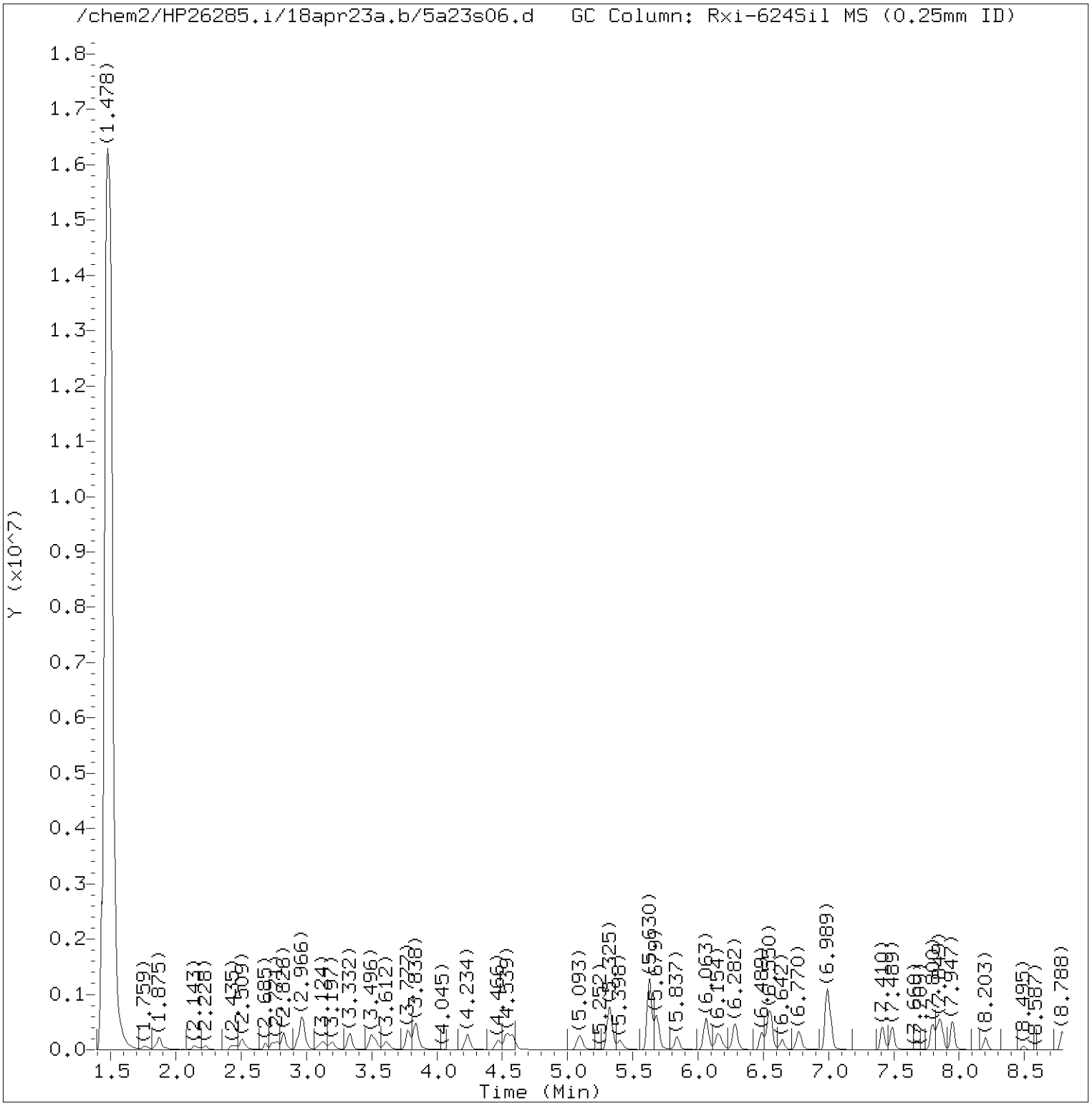
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	310876	50.425	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538	(0.000)	102	71258	51.667	103%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1186260	49.912	100%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.001)	95	464078	51.004	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
21) 2-Propanol	(1)	3.112	(-0.001)	45	100573	167.585	167.59			50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

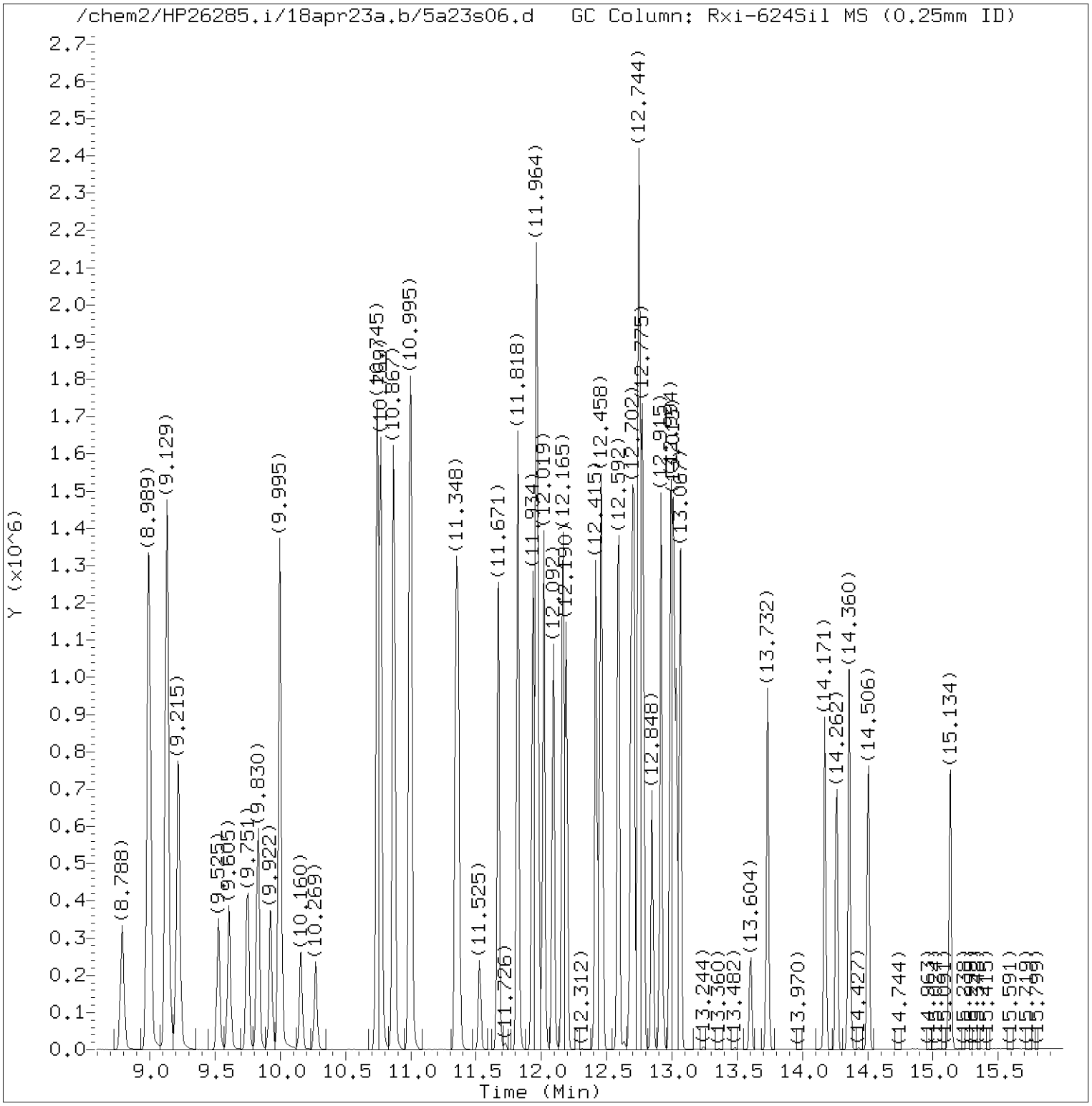
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s06.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:05 Unknown

Sample Name: R0604MS Lab Sample ID: 9558699MS

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s06.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:05 Unknown

Sample Name: R0604MS Lab Sample ID: 9558699MS

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s06.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 12:46 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:05 Unknown

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.112	45	100573	167.585
29)*t-Butyl alcohol-d10	(1)	3.502	65	281798	250.000
52)$Dibromofluoromethane	(2)	6.063	113	310876	50.425
57)$1,2-Dichloroethane-d4	(2)	6.538	102	71258	51.667
66)*Fluorobenzene	(2)	6.989	96	1196835	50.000
84)$Toluene-d8	(3)	9.129	98	1186260	49.912
101)*Chlorobenzene-d5	(3)	10.745	117	948184	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	464078	51.004
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	526767	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

R0604MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9558700MSD

Data file: /chem2/HP26285.i/18apr23a.b/5a23s07.d Injection date and time: **23-APR-2018 13:07**
Data file Sample Info. Line: R0604MSD;9558700MSD;1;3;MSD;RAF06;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:27 Unknown

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **16342**
Calibration date and time (Last Method Edit): 23-APR-2018 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.508	(-0.006)	348	65	315757	(-5)	250.00	
66) Fluorobenzene	6.989	(-0.006)	919	96	1173265	(-6)	50.00	
101) Chlorobenzene-d5	10.745	(-0.006)	1535	117	933776	(-6)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744	(0.000)	1863	152	525324	(-7)	50.00	

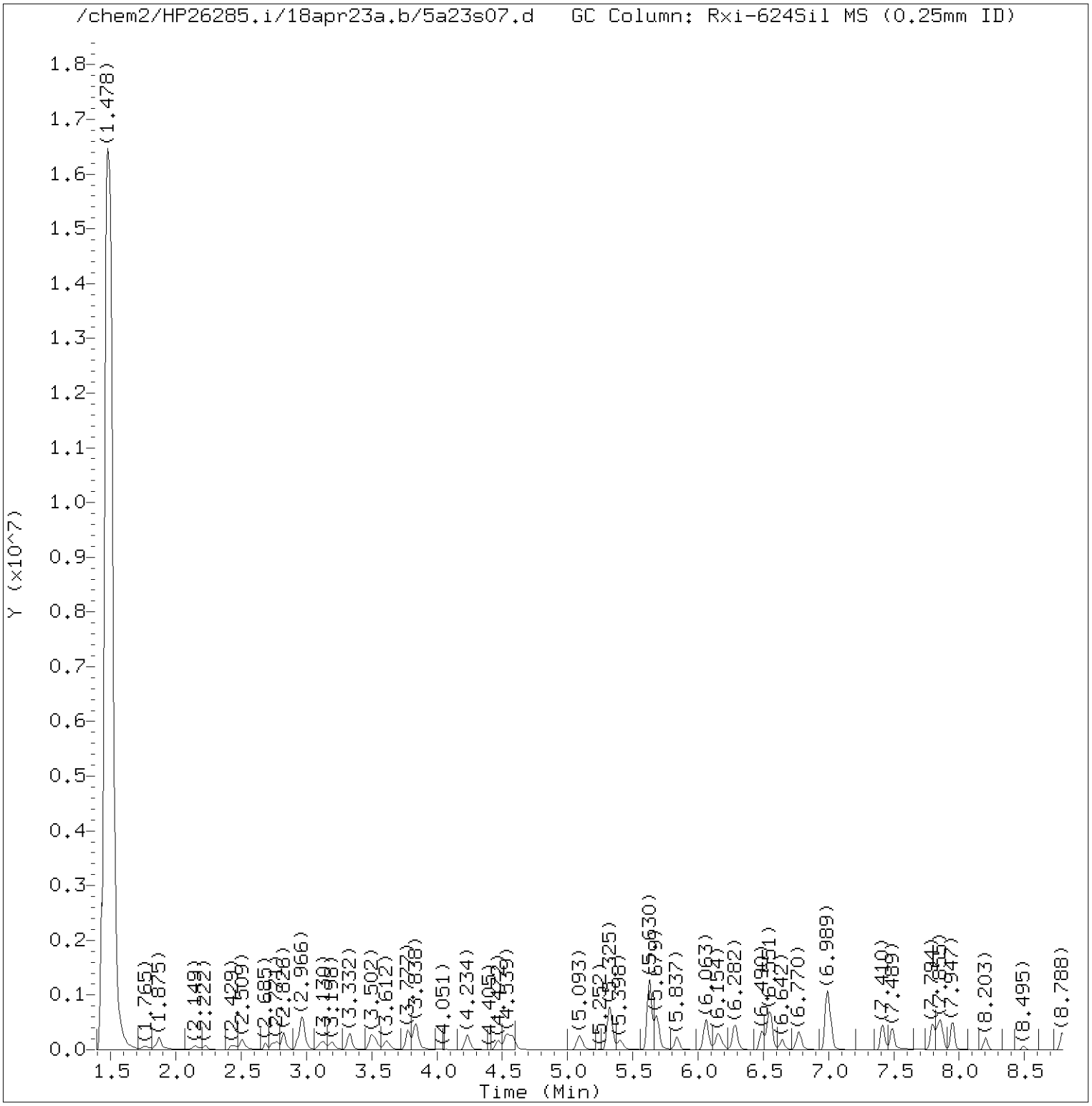
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063	(0.000)	113	304392	50.365	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.538	(0.000)	102	70769	52.344	105%		80 - 120
84) Toluene-d8	(3)	9.129	(0.000)	98	1159763	49.550	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818	(0.001)	95	454008	50.667	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
21) 2-Propanol	(1)	3.112	(-0.000)	45	115190	171.299	171.30			50	100

Total number of targets = 1

Digitally signed by Linda C. Pape on 04/23/2018 at 14:30. Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

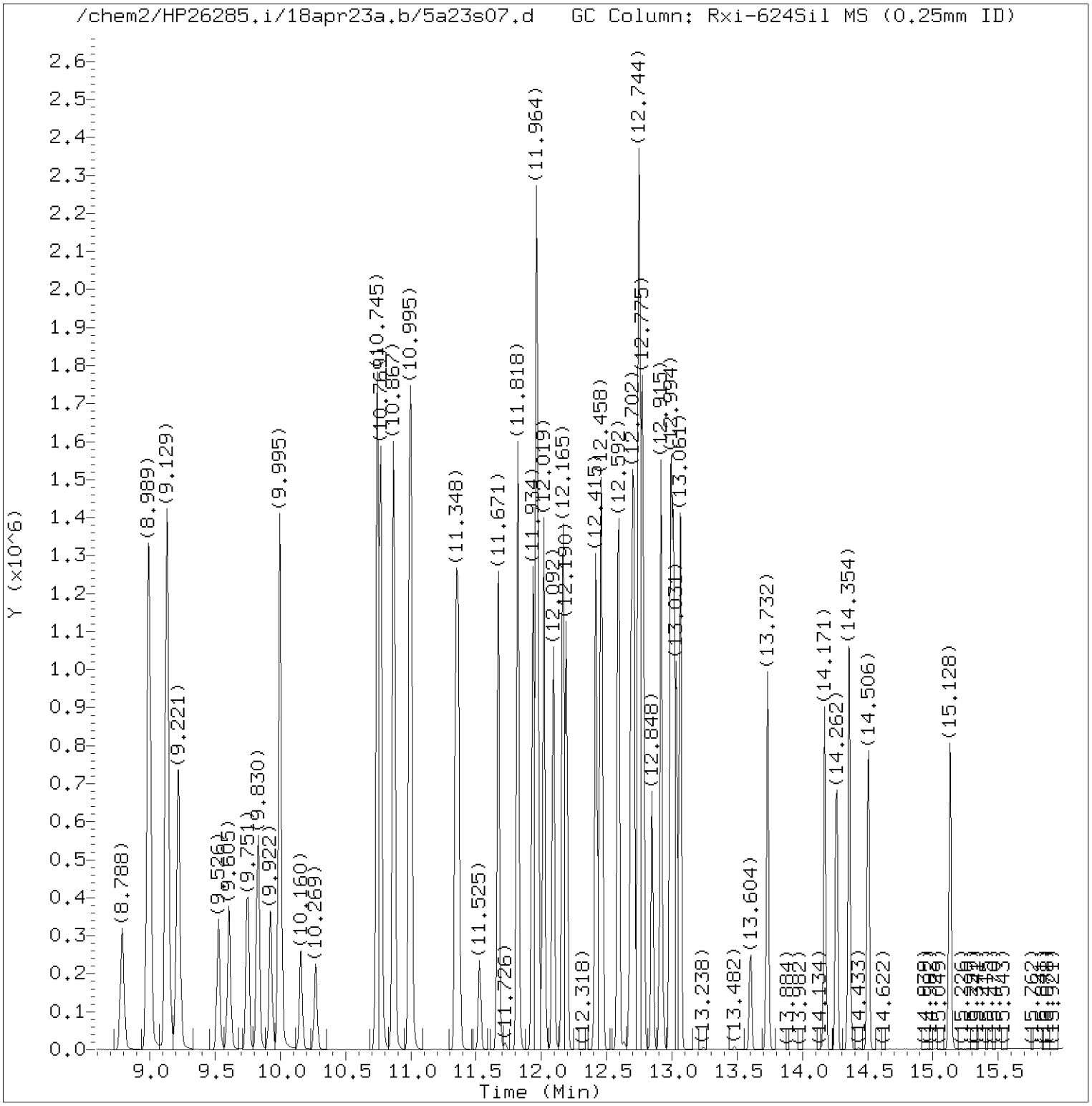
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s07.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:07 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:27 Unknown

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s07.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:07 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:27 Unknown

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s07.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 13:07 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 16342
Calibration date and time: 23-APR-2018 12:24
Date, time and analyst ID of latest file update: 23-Apr-2018 13:27 Unknown

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
21) 2-Propanol	(1)	3.112	45	115190	171.299
29)*t-Butyl alcohol-d10	(1)	3.508	65	315757	250.000
52)$Dibromofluoromethane	(2)	6.063	113	304392	50.365
57)$1,2-Dichloroethane-d4	(2)	6.538	102	70769	52.344
66)*Fluorobenzene	(2)	6.989	96	1173265	50.000
84)$Toluene-d8	(3)	9.129	98	1159763	49.550
101)*Chlorobenzene-d5	(3)	10.745	117	933776	50.000
115)$4-Bromofluorobenzene	(3)	11.818	95	454008	50.667
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	525324	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 14:30.
Target 3.5 esignature user ID: lcp00895

R0604MS1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558699MS

Data file: /chem2/HP19930.i/18apr23c.b/ia23s79.d Injection date and time: **24-APR-2018 05:44**
Data file Sample Info. Line: R0604MS1;9558699MS;1;3;MS;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133A**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:02 Automation

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.147	(-0.012)	420	65	131837	(-11)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	2019520	(-2)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1484095	(-4)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	768176	(-7)	10.00	

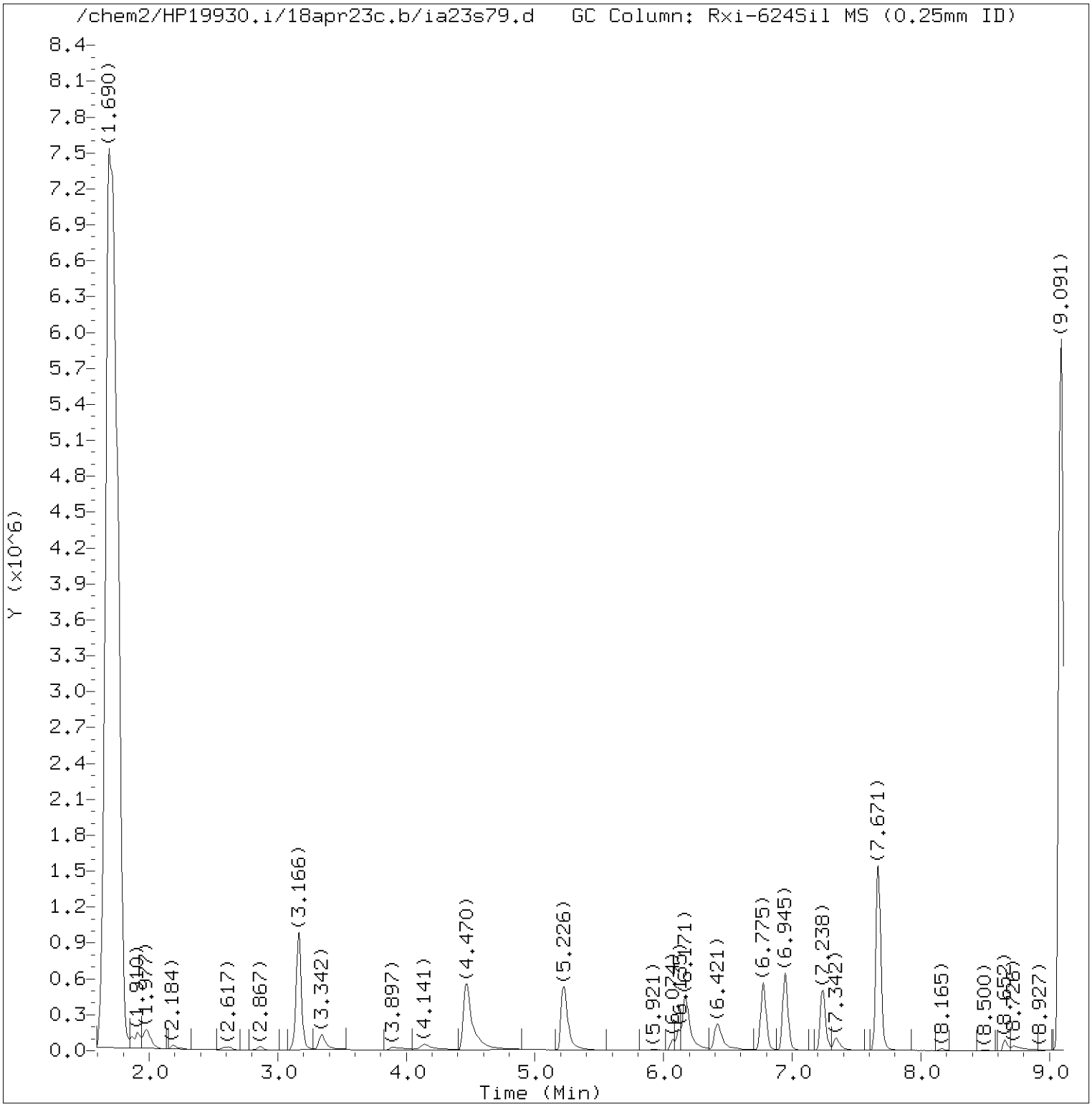
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	475716	10.093	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.001)	102	103190	10.064	101%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	2002260	9.992	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	726683	10.270	103%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	1.983	(0.001)	45	370324	4.767	4.77		J	0.1	13
25) Acetonitrile	(1)	3.897	(-0.003)	41	152499	42.619	42.62		J	32	100
36) Vinyl Acetate	(2)	5.220	(0.001)	43	1269705	13.869	13.87			3	10
142) Hexachloroethane	(4)	13.505	(0.000)	117	201674	6.080	6.08		J	0.1	10

Total number of targets = 4

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:24. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

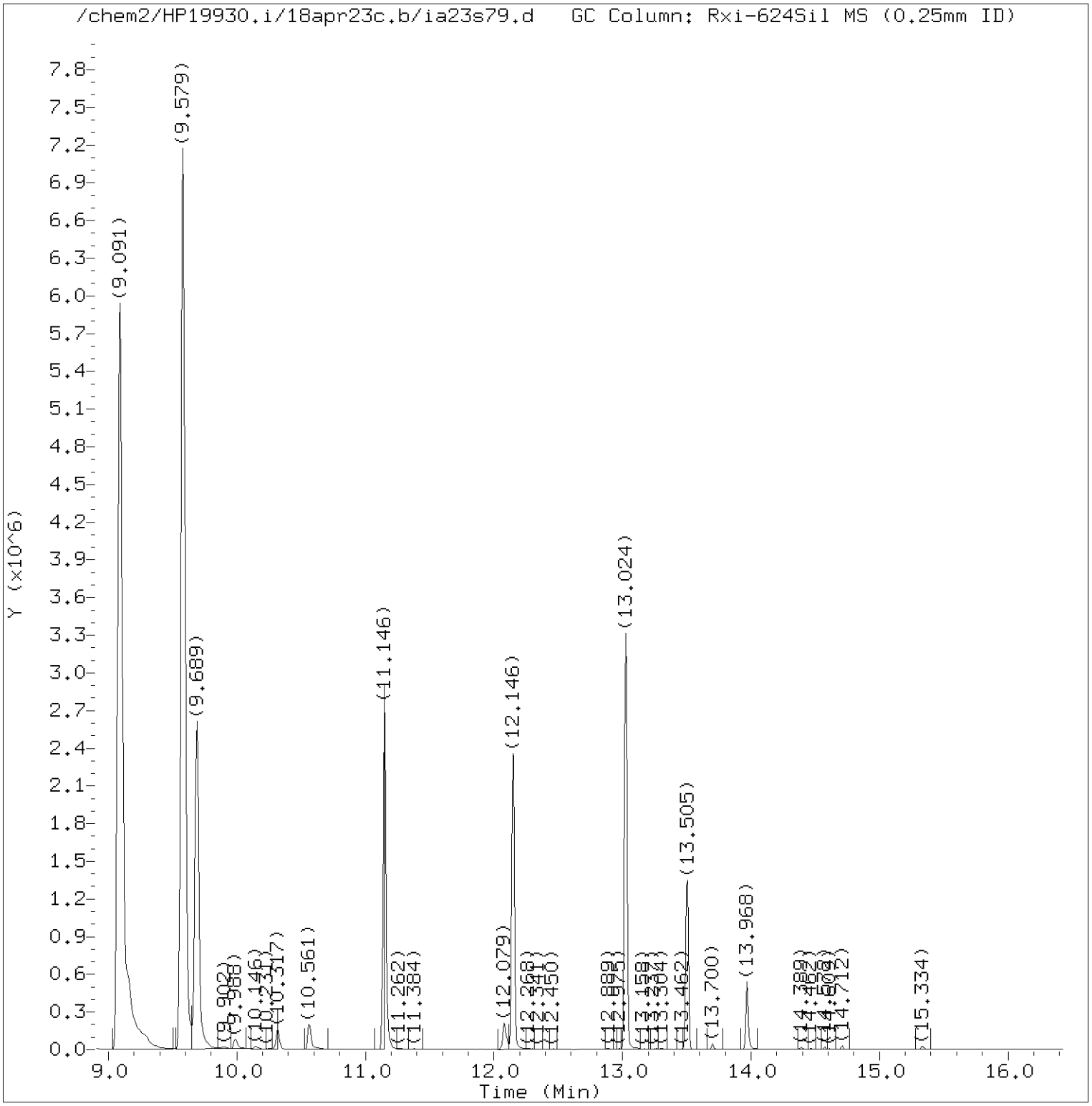
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s79.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:02 Automation

Sample Name: R0604MS1 Lab Sample ID: 9558699MS

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s79.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:02 Automation

Sample Name: R0604MS1 Lab Sample ID: 9558699MS

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s79.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:44 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:02 Automation

Sample Name: R0604MS1 Lab Sample ID: 9558699MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.983	45	370324	4.767
25) Acetonitrile	(1)	3.897	41	152499	42.619
26)*t-Butyl Alcohol-d10	(1)	4.147	65	131837	50.000
36) Vinyl Acetate	(2)	5.220	43	1269705	13.869
50)$Dibromofluoromethane	(2)	6.775	113	475716	10.093
57)$1,2-Dichloroethane-d4	(2)	7.238	102	103190	10.064
63)*Fluorobenzene	(2)	7.671	96	2019520	10.000
82)$Toluene-d8	(3)	9.689	98	2002260	9.992
97)*Chlorobenzene-d5	(3)	11.146	117	1484095	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	726683	10.270
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	768176	10.000
142) Hexachloroethane	(4)	13.505	117	201674	6.080

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

R0604MSD1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9558700MSD

Data file: /chem2/HP19930.i/18apr23c.b/ia23s80.d Injection date and time: **24-APR-2018 06:05**
Data file Sample Info. Line: R0604MSD1;9558700MSD;1;3;MSD;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I1811**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:23 Automation

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038C** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135	(0.000)	418	65	116244	(-21)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	2100007	(2)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1539872	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	789940	(-5)	10.00	

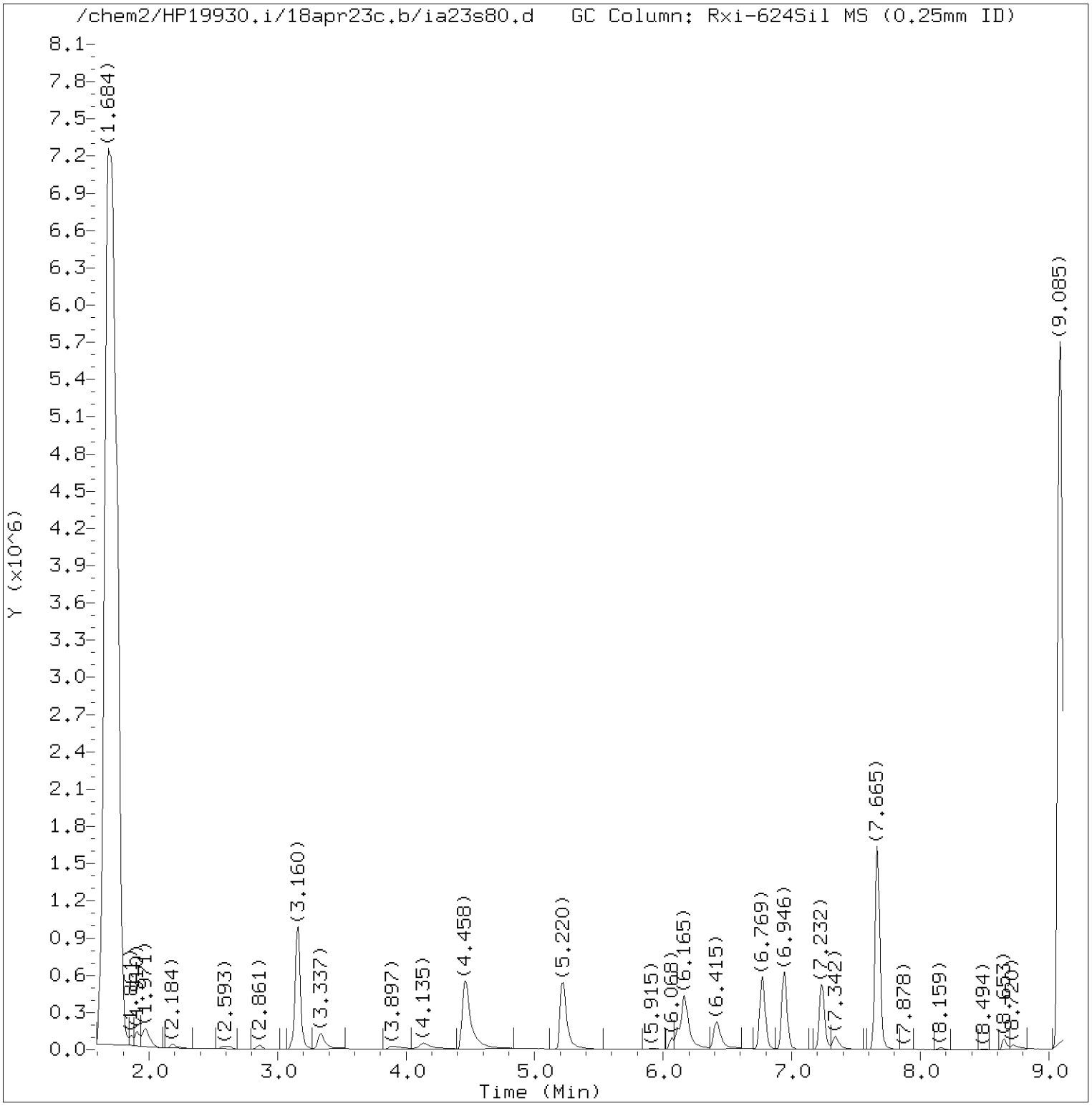
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769	(0.000)	113	494568	10.091	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232	(-0.001)	102	108004	10.130	101%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	2084780	10.027	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	753849	10.268	103%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	1.977	(0.001)	45	355581	4.402	4.40		J	0.1	13
25) Acetonitrile	(1)	3.904	(-0.007)	41	130299	41.300	41.30		J	32	100
36) Vinyl Acetate	(2)	5.214	(0.001)	43	1263588	13.312	13.31			3	10
142) Hexachloroethane	(4)	13.499	(0.000)	117	198345	5.815	5.81		J	0.1	10

Total number of targets = 4

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:24. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

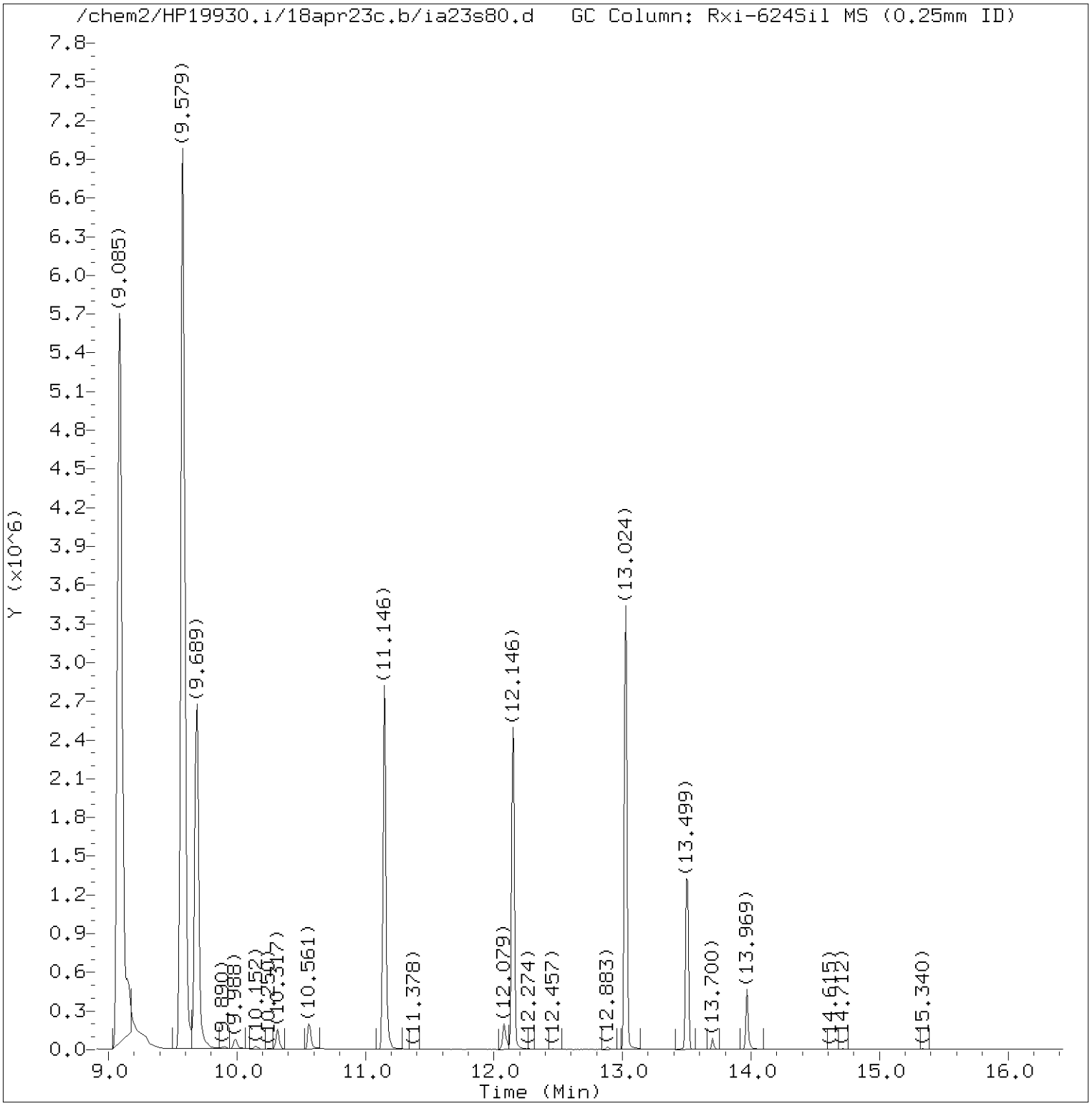
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s80.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:23 Automation

Sample Name: R0604MSD1 Lab Sample ID: 9558700MSD

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s80.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:23 Automation

Sample Name: R0604MSD1 Lab Sample ID: 9558700MSD

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s80.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 06:05 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 06:23 Automation

Sample Name: R0604MSD1 Lab Sample ID: 9558700MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.977	45	355581	4.402
25) Acetonitrile	(1)	3.904	41	130299	41.300
26)*t-Butyl Alcohol-d10	(1)	4.135	65	116244	50.000
36) Vinyl Acetate	(2)	5.214	43	1263588	13.312
50)$Dibromofluoromethane	(2)	6.769	113	494568	10.091
57)$1,2-Dichloroethane-d4	(2)	7.232	102	108004	10.130
63)*Fluorobenzene	(2)	7.665	96	2100007	10.000
82)$Toluene-d8	(3)	9.689	98	2084780	10.027
97)*Chlorobenzene-d5	(3)	11.146	117	1539872	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	753849	10.268
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	789940	10.000
142) Hexachloroethane	(4)	13.499	117	198345	5.815

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/24/2018 at 07:24.
Target 3.5 esignature user ID: jkh09052

R0604MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9558699MS

Data file: /chem2/HP19930.i/18apr23c.b/ia23s77.d Injection date and time: **24-APR-2018 05:01**
Data file Sample Info. Line: R0604MS;9558699MS;1;3;MS;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.153	(-0.018)	421	65	114409	(-22)	50.00	
63) Fluorobenzene	7.665	(0.000)	997	96	1965579	(-4)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1454953	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.023	(0.000)	1876	152	778781	(-6)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(-0.001)	113	470858	10.264	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.002)	102	100167	10.038	100%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1960495	9.980	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	703114	10.136	101%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.904	(-0.000)	85	420110	4.644	4.64			0.1	1
2) Chloromethane	(2)	2.105	(-0.000)	50	299552	3.577	3.58			0.2	0.5
5) Vinyl Chloride	(2)	2.215	(-0.000)	62	314784	4.176	4.18			0.2	1
7) Bromomethane	(2)	2.550	(-0.000)	94	226995	4.284	4.28			0.5	1
8) Chloroethane	(2)	2.629	(-0.000)	64	197072	4.588	4.59			0.1	0.5
10) Trichlorofluoromethane	(2)	2.928	(0.000)	101	577280M	6.094	6.09			0.2	1
11) Ethyl ether	(2)	3.166	(-0.001)	59	872615	18.670	18.67			1	13
13) Acrolein	(1)	3.342	(0.000)	56	237398	43.351	43.35			5	25
15) 1,1-Dichloroethene	(2)	3.483	(-0.001)	96	300814	6.735	6.74			0.2	1
16) Freon 113	(2)	3.513	(-0.000)	101	340575	6.651	6.65			0.2	1
14) Acetone	(1)	3.507	(0.000)	43	336229	41.823	41.82			3	10
17) Methyl Iodide	(2)	3.684	(-0.001)	142	455778	5.520	5.52		J	0.6	10
18) Carbon Disulfide	(2)	3.800	(-0.001)	76	715500	5.665	5.66		J	0.4	10
22) Allyl Chloride	(2)	3.952	(-0.000)	41	516971	6.283	6.28		J	0.8	10
23) Methylene Chloride	(2)	4.141	(-0.000)	84	312968	5.739	5.74			0.2	1
29) Acrylonitrile	(1)	4.476	(0.000)	53	298363	33.119	33.12			1	10
31) trans-1,2-Dichloroethene	(2)	4.562	(-0.001)	96	312555	6.128	6.13			0.2	1
33) 1,1-Dichloroethane	(2)	5.226	(-0.000)	63	836164	8.207	8.21			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.336	(-0.001)	53	558765	6.428	6.43		J	0.5	10
38) 2-Butanone	(1)	6.037	(0.003)	43	677211	53.925	53.93			1	10
42) Propionitrile	(1)	6.122	(0.002)	54	169373	47.354	47.35		J	10	100
45) Methacrylonitrile	(1)	6.336	(0.003)	67	617492	52.907	52.91		J	10	100
48) Tetrahydrofuran	(1)	6.415	(0.005)	71	124869	36.591	36.59			2	25
49) Chloroform	(2)	6.555	(-0.000)	83	569842	5.945	5.94			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.781	(-0.000)	97	503819	6.310	6.31			0.1	1
54) Carbon Tetrachloride	(2)	7.000	(-0.000)	117	452164	6.705	6.71			0.2	1
56) Isobutyl Alcohol	(1)	7.128	(0.004)	41	153365	138.229	138.23		J	10	200
58) Benzene	(2)	7.262	(-0.000)	78	1355778	5.925	5.93			0.1	1
59) 1,2-Dichloroethane	(2)	7.342	(-0.000)	62	377683M	5.651	5.65			0.1	1
67) Trichloroethene	(2)	8.152	(-0.000)	95	350702	6.053	6.05			0.2	1

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19930.i/18apr23c.b/ia23s77.d Injection date and time: **24-APR-2018 05:01**
Data file Sample Info. Line: R0604MS;9558699MS;1;3;MS;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

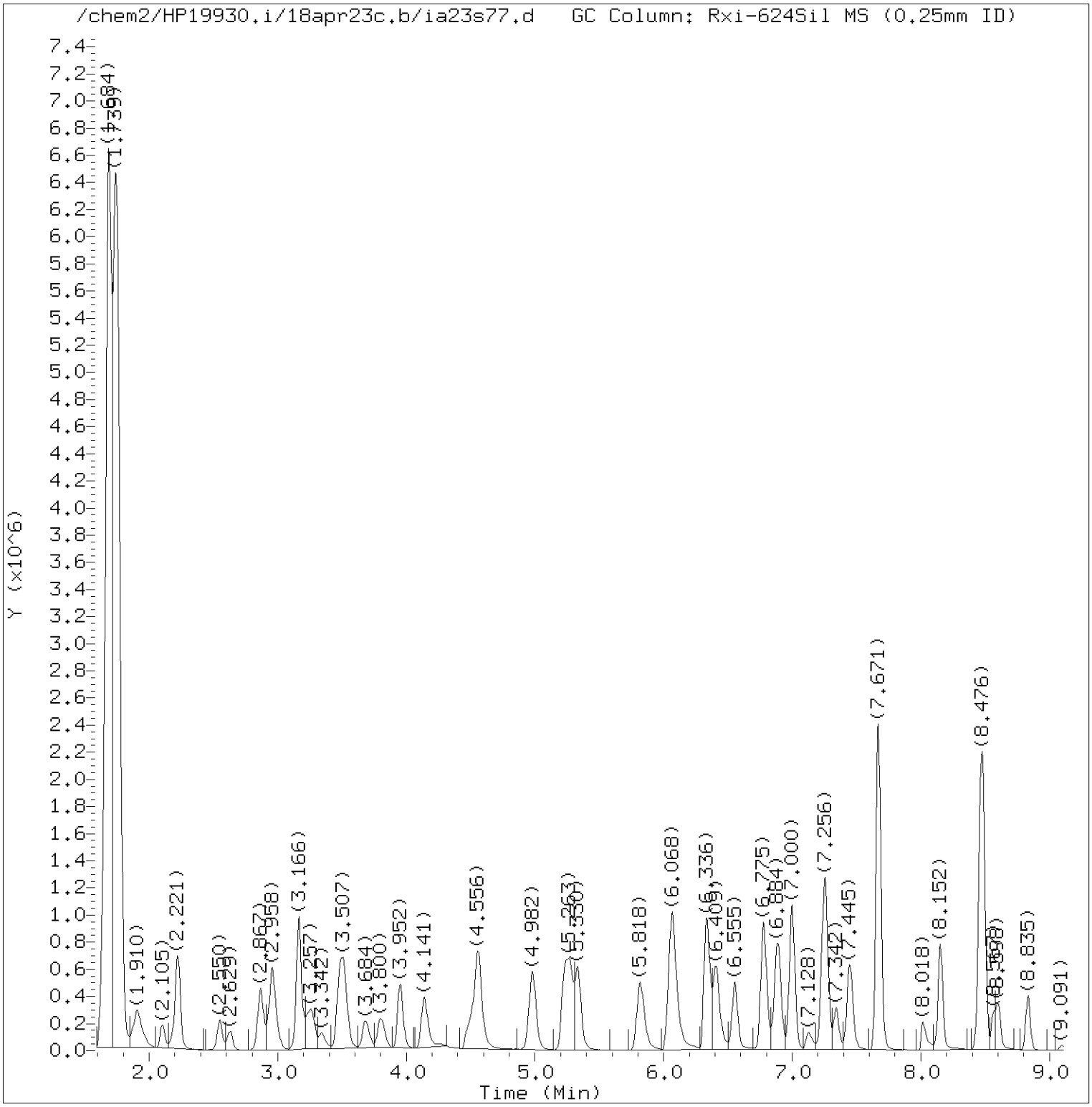
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
70) 1,2-Dichloropropane	(2)	8.488(-0.000)	63	350014	5.897	5.90			0.1	1
71) Methyl Methacrylate	(1)	8.561(0.007)	69	147279	7.516	7.52		J	4	10
73) Dibromomethane	(2)	8.604(-0.000)	93	150046	5.647	5.65			0.1	1
72) 1,4-Dioxane	(1)	8.579(0.007)	88	30202M	155.854	155.85		J	45	200
74) Bromodichloromethane	(2)	8.835(-0.000)	83	355937	5.595	5.59			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.542(0.008)	43	1194921	38.289	38.29			1	10
83) Toluene	(3)	9.768(-0.000)	92	826228	5.761	5.76			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.024(0.000)	75	328275	5.413	5.41			0.1	1
86) Ethyl Methacrylate	(3)	10.079(0.000)	69	316258	5.325	5.32		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.231(0.000)	97	228584	5.651	5.65			0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	381631	6.264	6.26			0.1	1
90) 1,3-Dichloropropane	(3)	10.396(-0.000)	76	397845	5.526	5.53			0.1	1
91) 2-Hexanone	(1)	10.432(0.009)	43	856852M	38.893	38.89			1	10
93) Dibromochloromethane	(3)	10.609(0.000)	129	210244	5.278	5.28			0.1	1
95) 1,2-Dibromoethane	(3)	10.725(0.000)	107	203386	5.526	5.53			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.256(-0.000)	131	288179	5.814	5.81			0.1	1
100) Ethylbenzene	(3)	11.256(-0.000)	91	1619991	5.960	5.96			0.1	1
101) m+p-Xylene	(3)	11.371(-0.000)	106	1233938	11.816	11.82			0.1	0.5
104) o-Xylene	(3)	11.700(-0.000)	106	585887	5.766	5.77			0.1	0.5
105) Xylene (Total)	(3)		106	1819825	17.582	17.58			0.2	3
106) Styrene	(3)	11.719(-0.000)	104	937962	5.980	5.98			0.1	1
107) Bromoform	(3)	11.883(-0.000)	173	93900	4.054	4.05			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.243(0.000)	83	277697	5.068	5.07			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.268(0.013)	53	240683A	30.762	30.76			1	10
116) 1,2,3-Trichloropropane	(4)	12.292(0.000)	110	77575	5.406	5.41			0.3	1
126) Pentachloroethane	(4)	12.737(0.000)	167	205560	5.677	5.68		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	12.969(0.000)	146	692752	5.459	5.46			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.042(-0.000)	146	693481	5.364	5.36			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.298(-0.000)	146	632695	5.375	5.38			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.840(0.014)	155	28556	6.751	6.75			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.389(-0.000)	180	360363	4.797	4.80			0.1	1
146) Hexachlorobutadiene	(4)	14.468(-0.000)	225	163145	6.002	6.00			0.1	1
147) Naphthalene	(4)	14.572(-0.000)	128	705487	4.794	4.79			0.1	1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 63

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

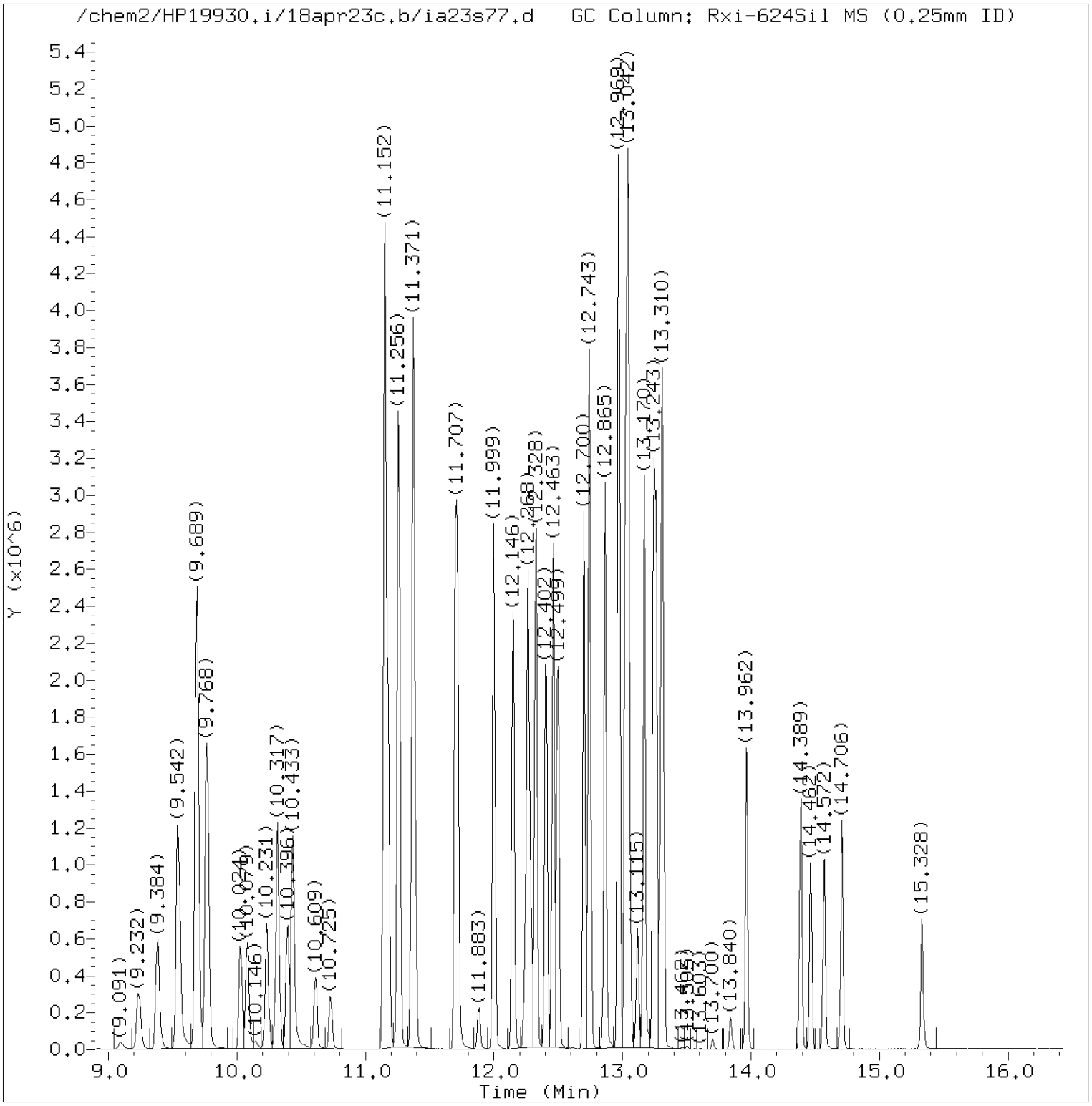
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.904	85	420110	4.644
2) Chloromethane	(2)	2.105	50	299552	3.577
5) Vinyl Chloride	(2)	2.215	62	314784	4.176
7) Bromomethane	(2)	2.550	94	226995	4.284
8) Chloroethane	(2)	2.629	64	197072	4.588
10) Trichlorofluoromethane	(2)	2.928	101	577280M	6.094
11) Ethyl ether	(2)	3.166	59	872615	18.670
13) Acrolein	(1)	3.342	56	237398	43.351
15) 1,1-Dichloroethene	(2)	3.483	96	300814	6.735
14) Acetone	(1)	3.507	43	336229	41.823
16) Freon 113	(2)	3.513	101	340575	6.651
17) Methyl Iodide	(2)	3.684	142	455778	5.520
18) Carbon Disulfide	(2)	3.800	76	715500	5.665
22) Allyl Chloride	(2)	3.952	41	516971	6.283
23) Methylene Chloride	(2)	4.141	84	312968	5.739
26)*t-Butyl Alcohol-d10	(1)	4.153	65	114409	50.000
29) Acrylonitrile	(1)	4.476	53	298363	33.119
31) trans-1,2-Dichloroethene	(2)	4.562	96	312555	6.128
33) 1,1-Dichloroethane	(2)	5.226	63	836164	8.207
35) 2-Chloro-1,3-Butadiene	(2)	5.336	53	558765	6.428
38) 2-Butanone	(1)	6.037	43	677211	53.925
42) Propionitrile	(1)	6.122	54	169373	47.354
45) Methacrylonitrile	(1)	6.336	67	617492	52.907
48) Tetrahydrofuran	(1)	6.415	71	124869	36.591
49) Chloroform	(2)	6.555	83	569842	5.945
50)$Dibromofluoromethane	(2)	6.775	113	470858	10.264
51) 1,1,1-Trichloroethane	(2)	6.781	97	503819	6.310
54) Carbon Tetrachloride	(2)	7.000	117	452164	6.705
56) Isobutyl Alcohol	(1)	7.128	41	153365	138.229
57)$1,2-Dichloroethane-d4	(2)	7.238	102	100167	10.038
58) Benzene	(2)	7.262	78	1355778	5.925
59) 1,2-Dichloroethane	(2)	7.342	62	377683M	5.651
63)*Fluorobenzene	(2)	7.665	96	1965579	10.000
67) Trichloroethene	(2)	8.152	95	350702	6.053
70) 1,2-Dichloropropane	(2)	8.488	63	350014	5.897
71) Methyl Methacrylate	(1)	8.561	69	147279	7.516
72) 1,4-Dioxane	(1)	8.579	88	30202M	155.854
73) Dibromomethane	(2)	8.604	93	150046	5.647

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.835	83	355937	5.595
81) 4-Methyl-2-Pentanone	(1)	9.542	43	1194921	38.289
82)$Toluene-d8	(3)	9.689	98	1960495	9.980
83) Toluene	(3)	9.768	92	826228	5.761
84) trans-1,3-Dichloropropene	(3)	10.024	75	328275	5.413
86) Ethyl Methacrylate	(3)	10.079	69	316258	5.325
88) 1,1,2-Trichloroethane	(3)	10.231	97	228584	5.651
89) Tetrachloroethene	(3)	10.317	166	381631	6.264
90) 1,3-Dichloropropane	(3)	10.396	76	397845	5.526
91) 2-Hexanone	(1)	10.433	43	856852M	38.893
93) Dibromochloromethane	(3)	10.609	129	210244	5.278
95) 1,2-Dibromoethane	(3)	10.725	107	203386	5.526
97)*Chlorobenzene-d5	(3)	11.146	117	1454953	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	288179	5.814
100) Ethylbenzene	(3)	11.256	91	1619991	5.960
101) m+p-Xylene	(3)	11.371	106	1233938	11.816
104) o-Xylene	(3)	11.701	106	585887	5.766
106) Styrene	(3)	11.719	104	937962	5.980
105) Xylene (Total)	(3)		106	1819825	17.582
107) Bromoform	(3)	11.883	173	93900	4.054
111)$4-Bromofluorobenzene	(3)	12.146	95	703114	10.136
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	277697	5.068
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	240683A	30.762
116) 1,2,3-Trichloropropane	(4)	12.292	110	77575	5.406
126) Pentachloroethane	(4)	12.737	167	205560	5.677
131) 1,3-Dichlorobenzene	(4)	12.969	146	692752	5.459
133)*1,4-Dichlorobenzene-d4	(4)	13.023	152	778781	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	693481	5.364
139) 1,2-Dichlorobenzene	(4)	13.298	146	632695	5.375
143) 1,2-Dibromo-3-chloropropane	(1)	13.840	155	28556	6.751
145) 1,2,4-Trichlorobenzene	(4)	14.389	180	360363	4.797
146) Hexachlorobutadiene	(4)	14.468	225	163145	6.002
147) Naphthalene	(4)	14.572	128	705487	4.794

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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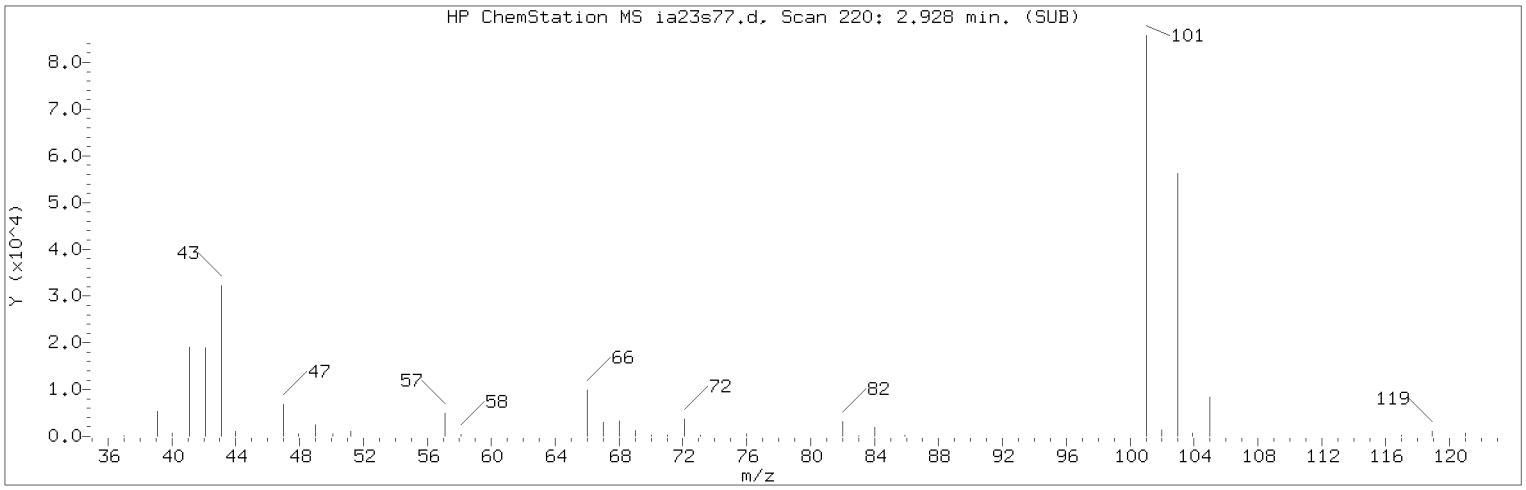
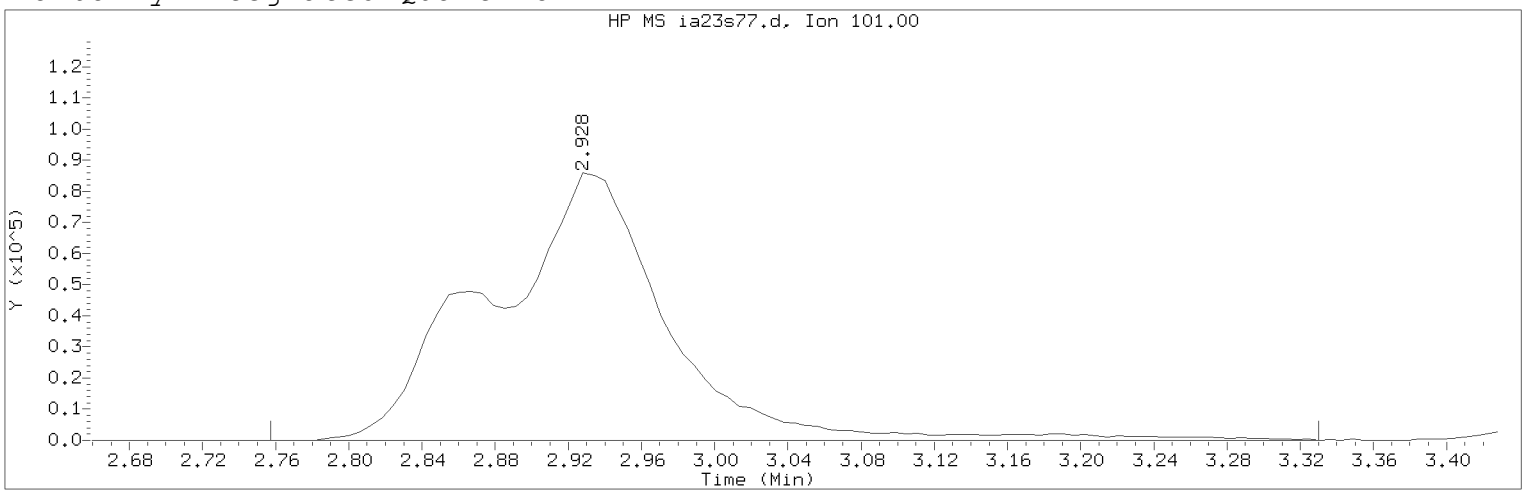
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

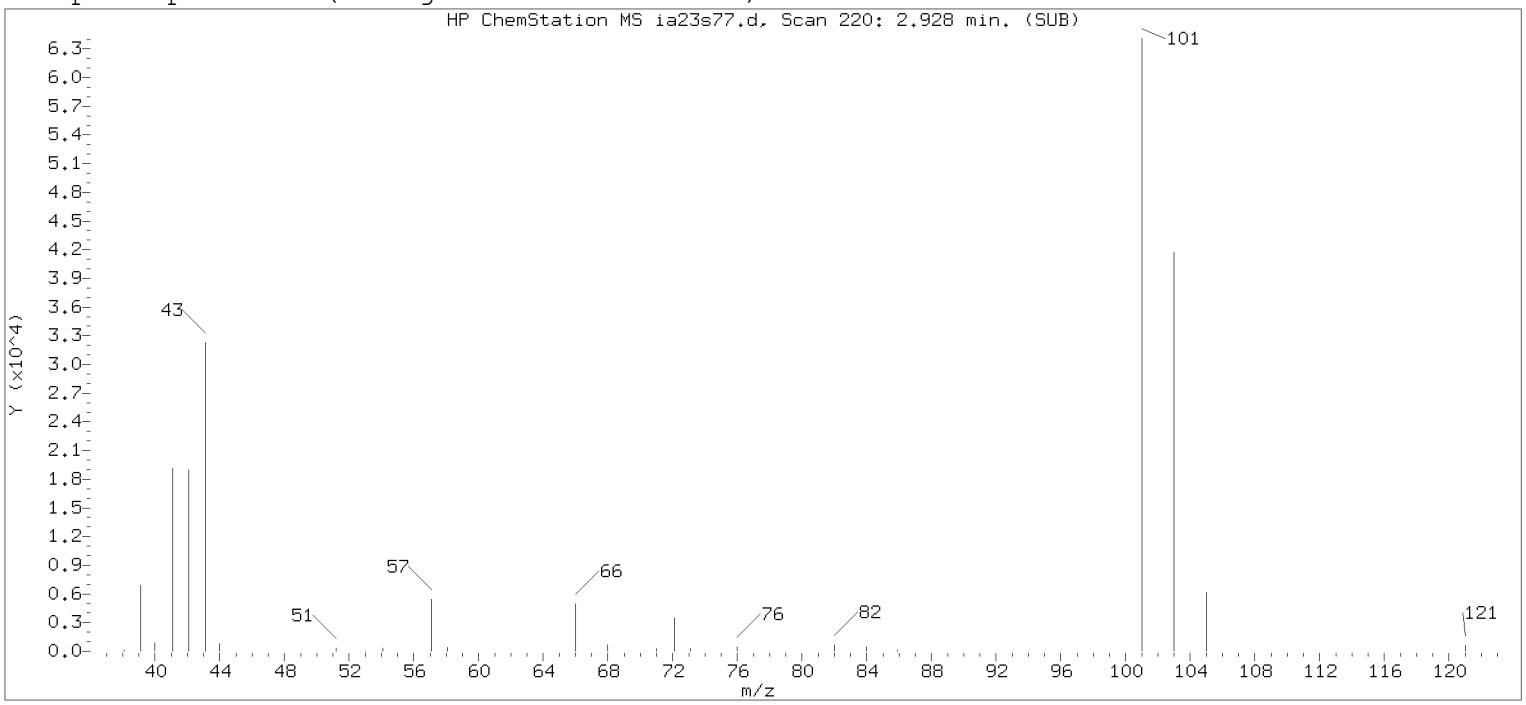
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area (flag) : 577280M
On-Column Amount (ng) : 6.0939
Integration start scan : 191 Integration stop scan: 285
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

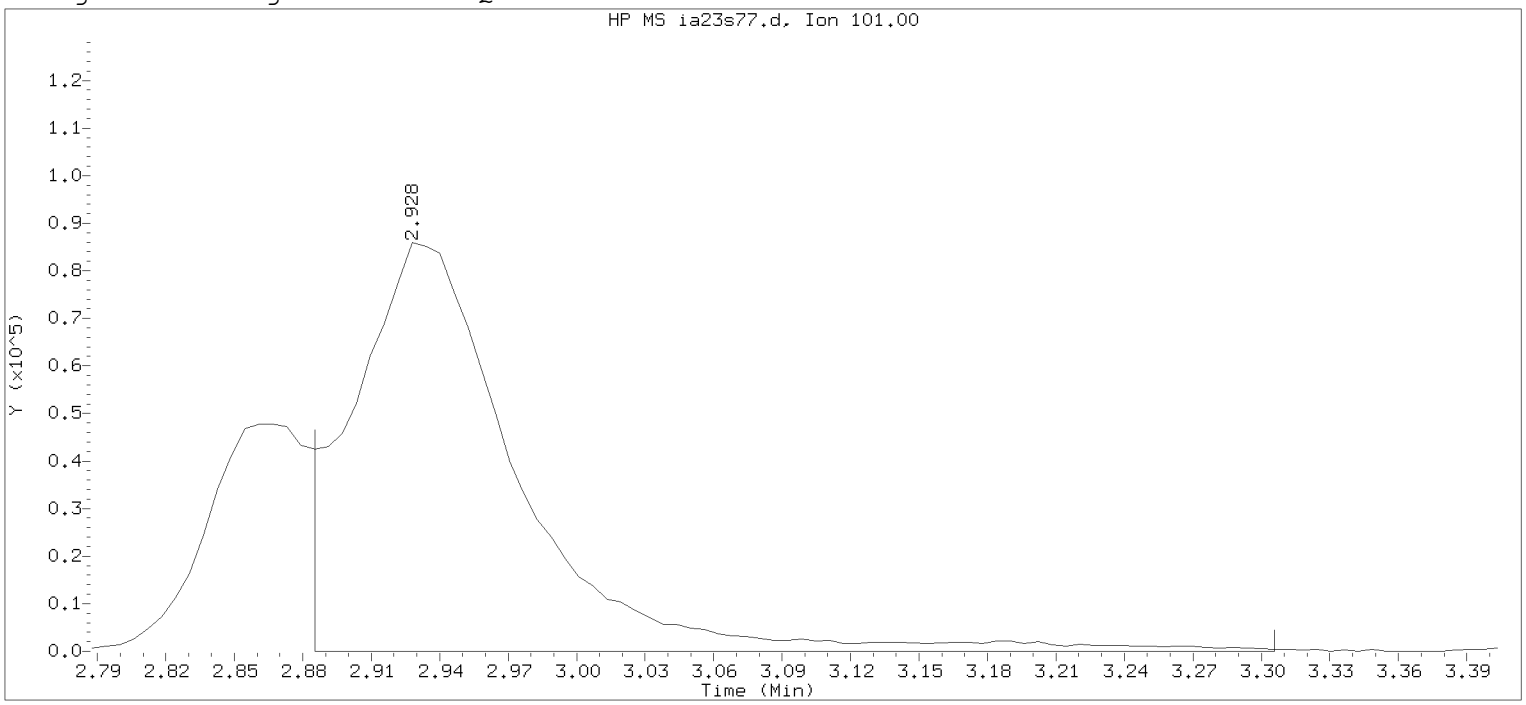
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

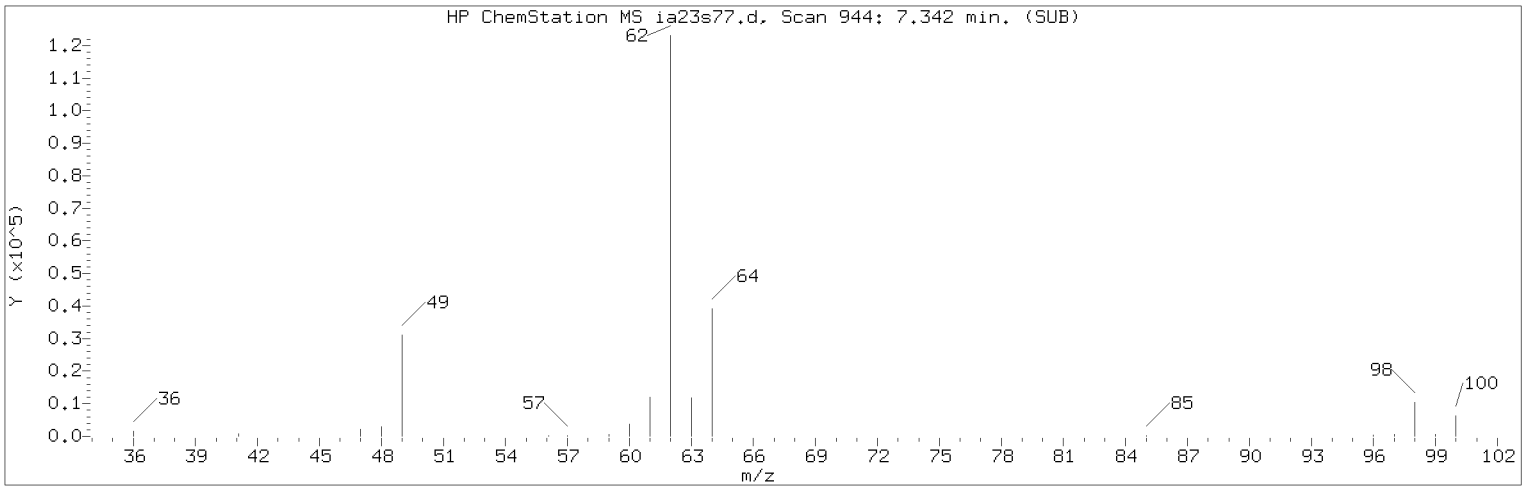
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:19 Automation

Sample Name: R0604MS Lab Sample ID: 9558699MS

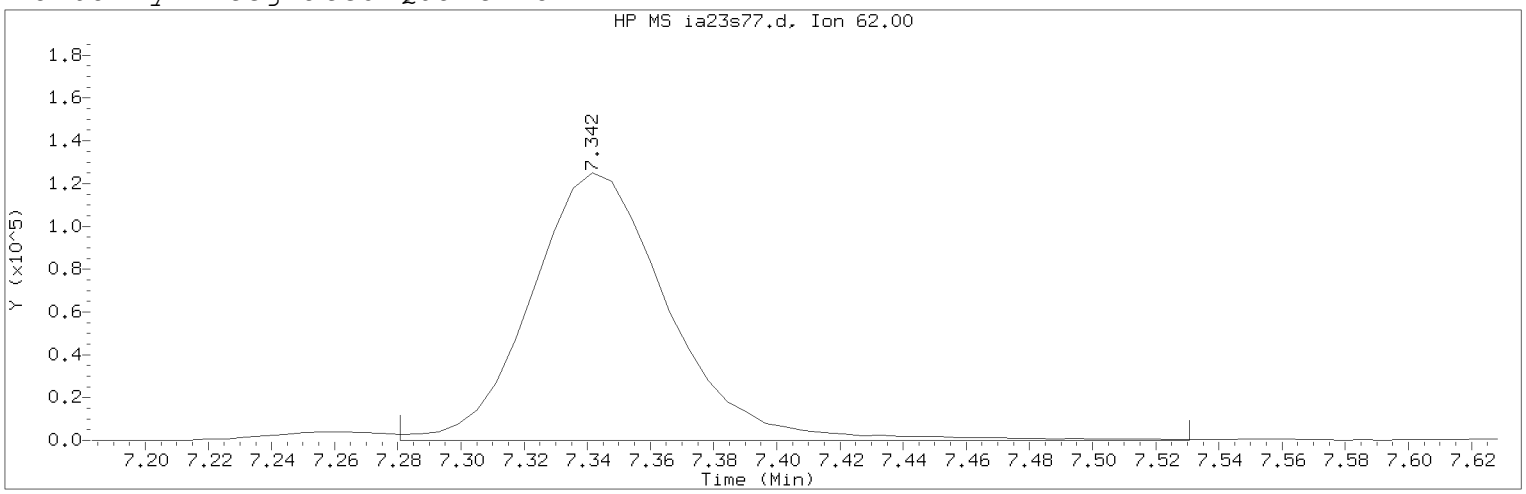
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 220
Retention Time (minutes): 2.928
Quant Ion : 101.00
Area : 430962
On-column Amount (ng) : 4.5493
Integration start scan : 212 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

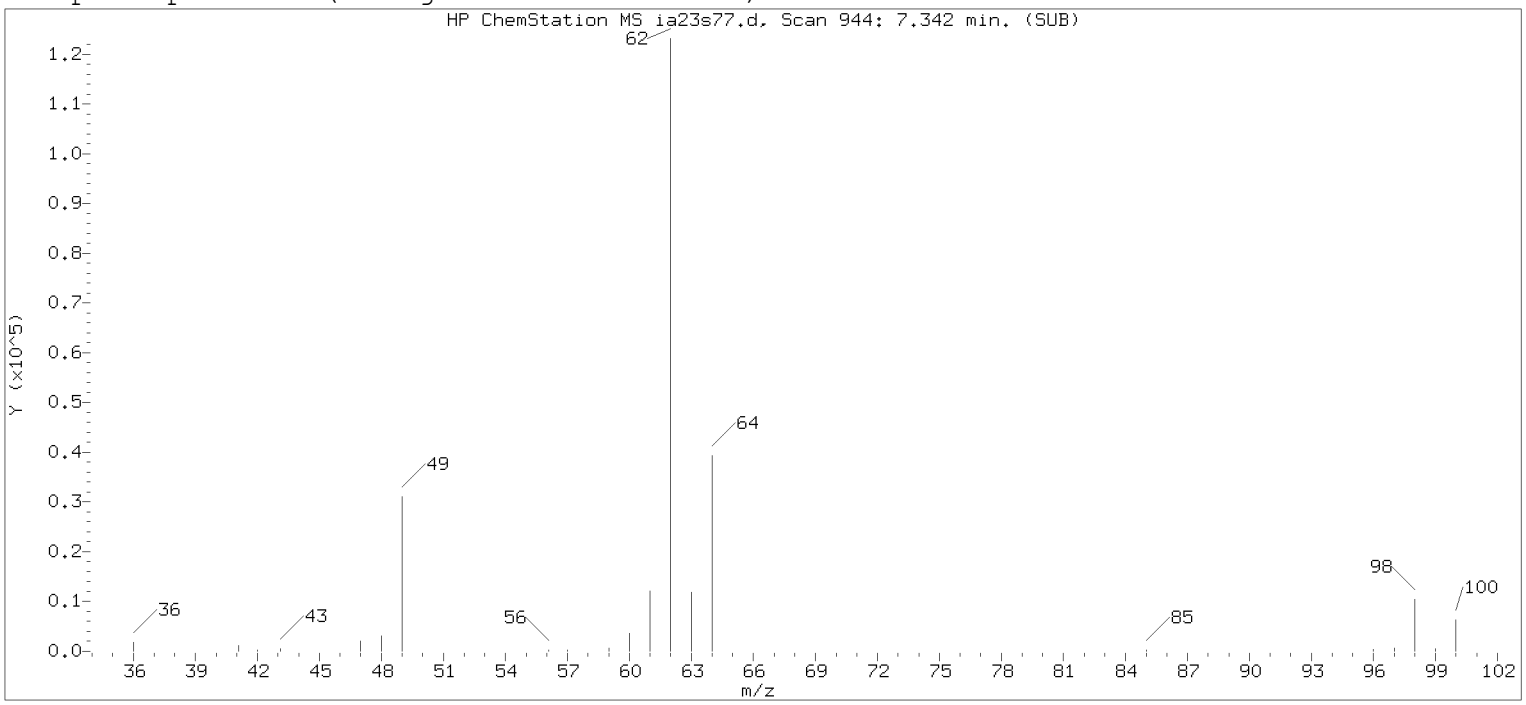
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 62.00
Area (flag) : 377683M
On-Column Amount (ng) : 5.6515
Integration start scan : 933 Integration stop scan: 974
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

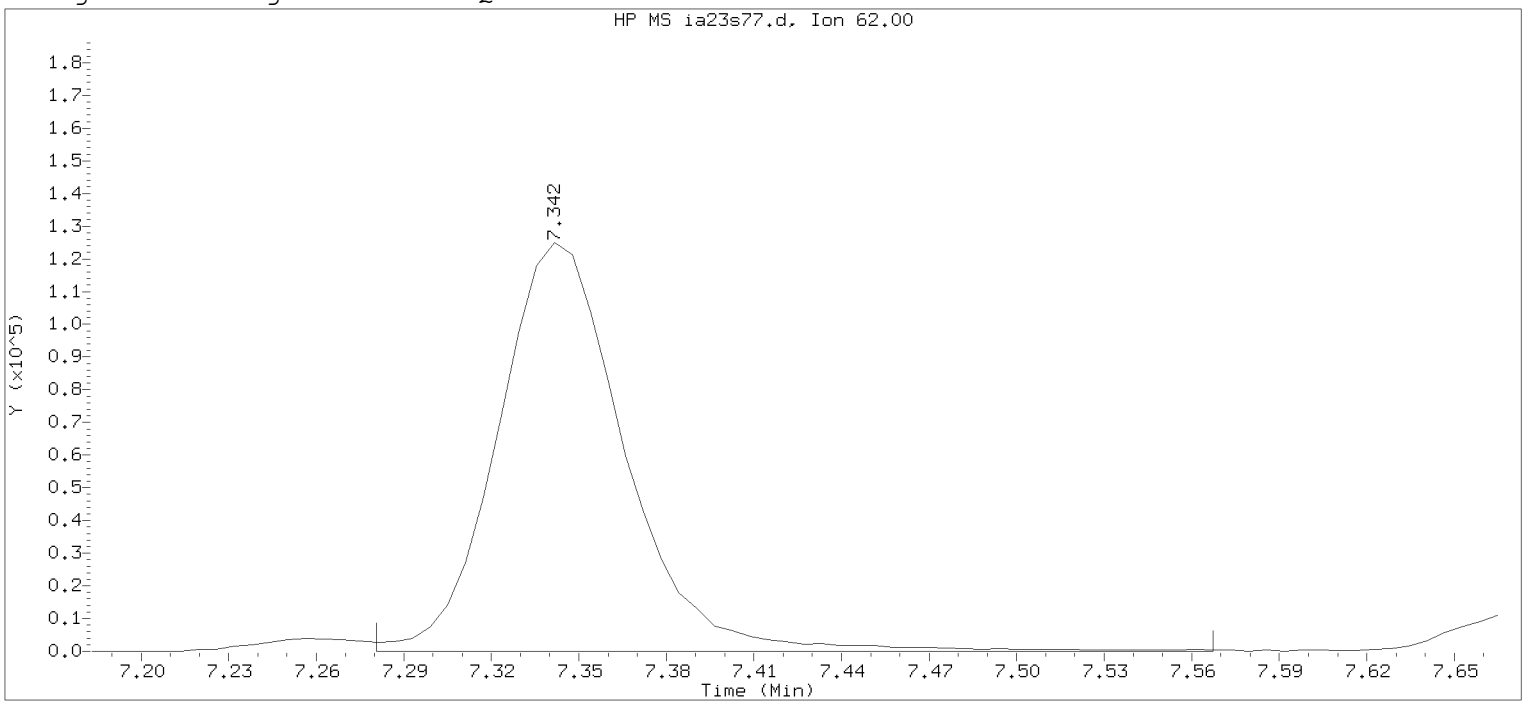
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:19 Automation

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 944
Retention Time (minutes): 7.342
Quant Ion : 62.00
Area : 378069
On-column Amount (ng) : 5.6573
Integration start scan : 933 Integration stop scan: 980
Y at integration start : 0 Y at integration end: 0

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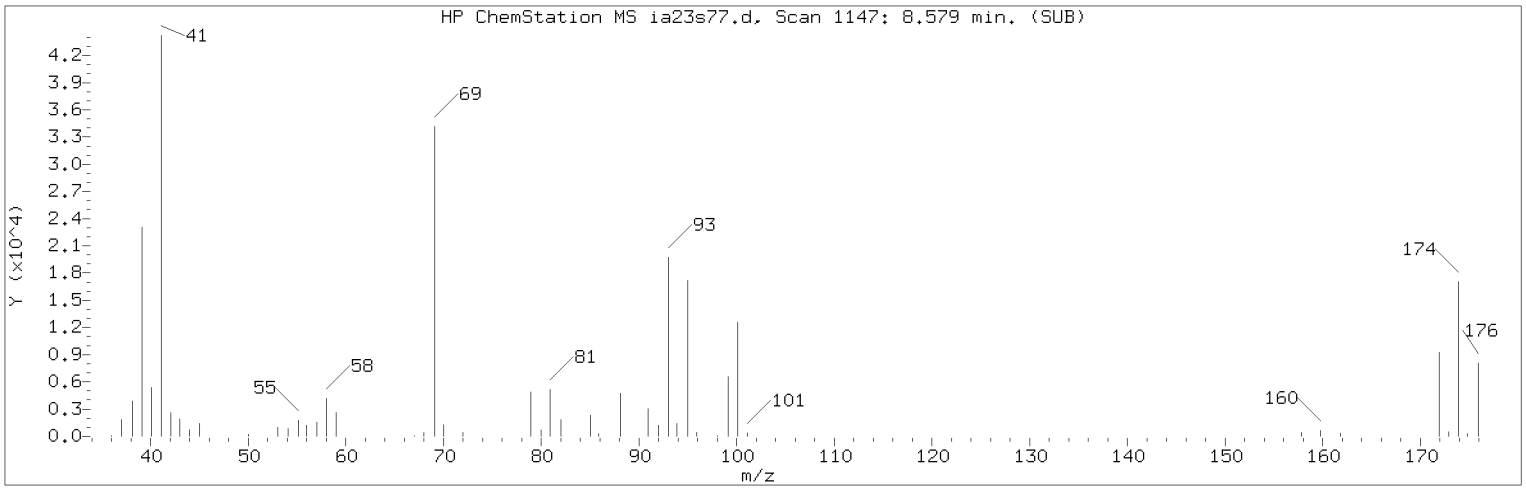
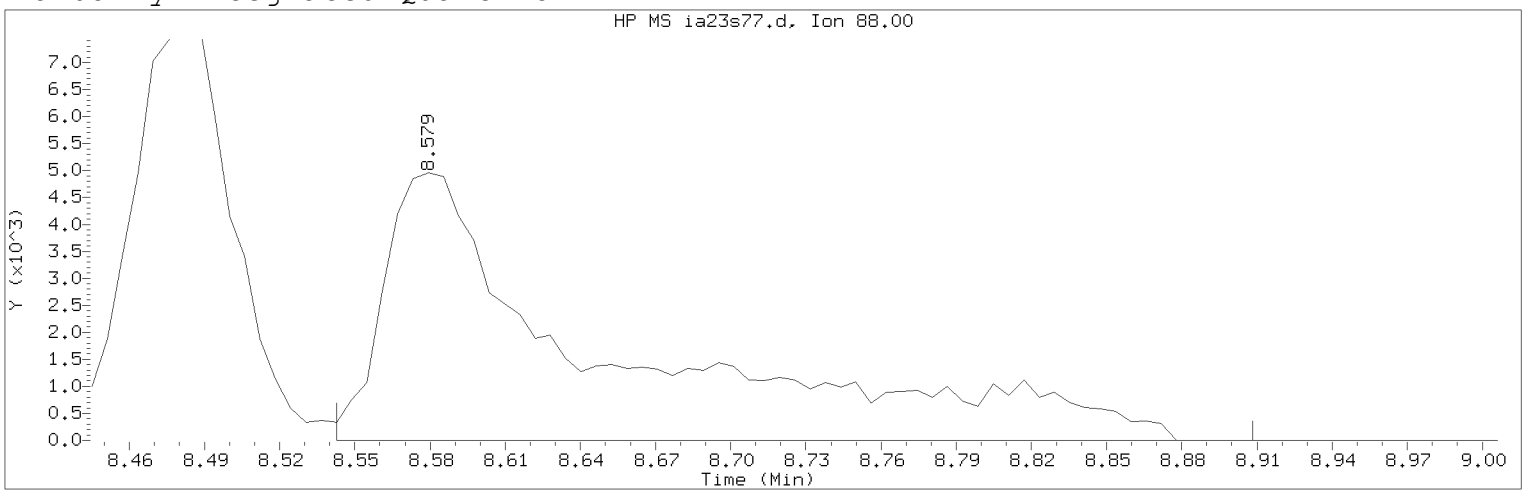
Target 3.5 esignature user ID: JKHOWE

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

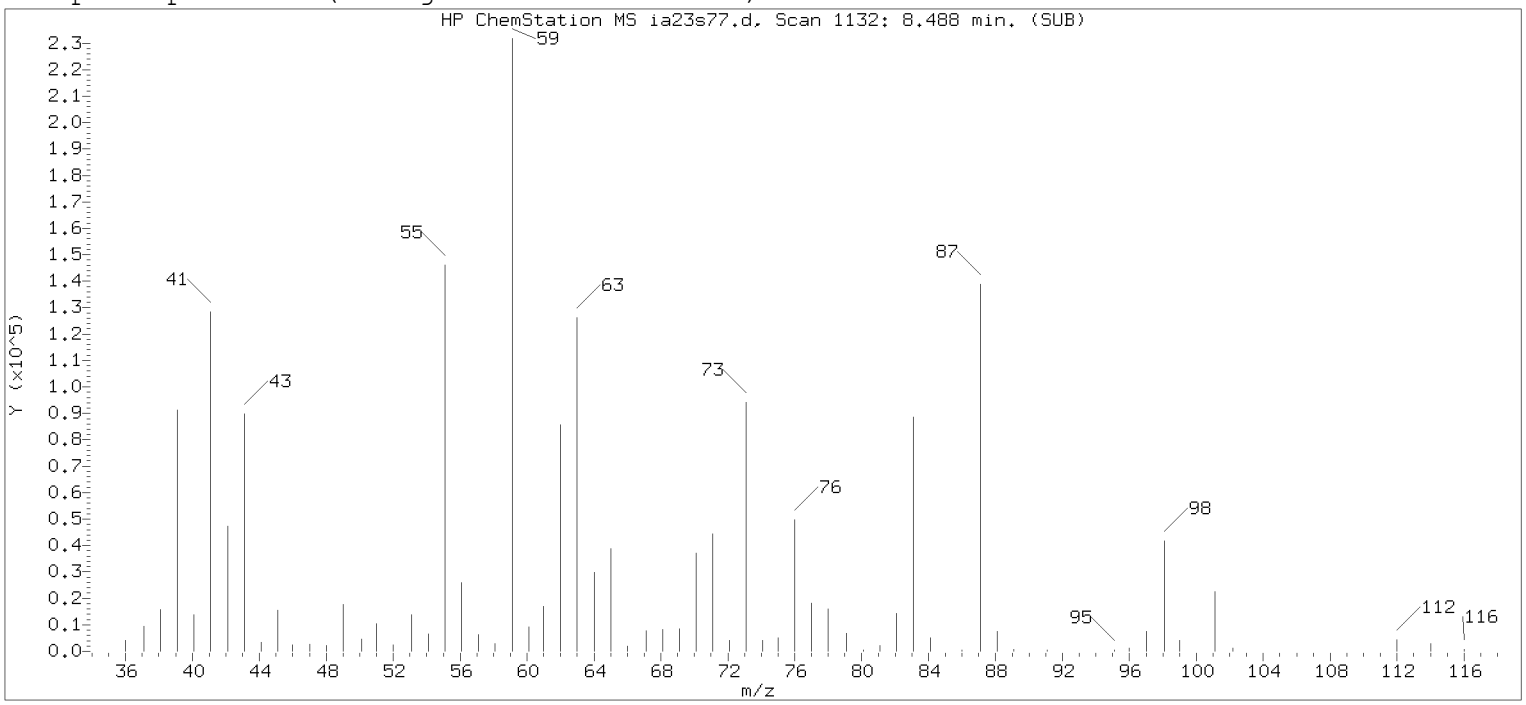
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1147
Retention Time (minutes): 8.579
Quant Ion : 88.00
Area (flag) : 30202M
On-Column Amount (ng) : 155.8538
Integration start scan : 1140 Integration stop scan: 1200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

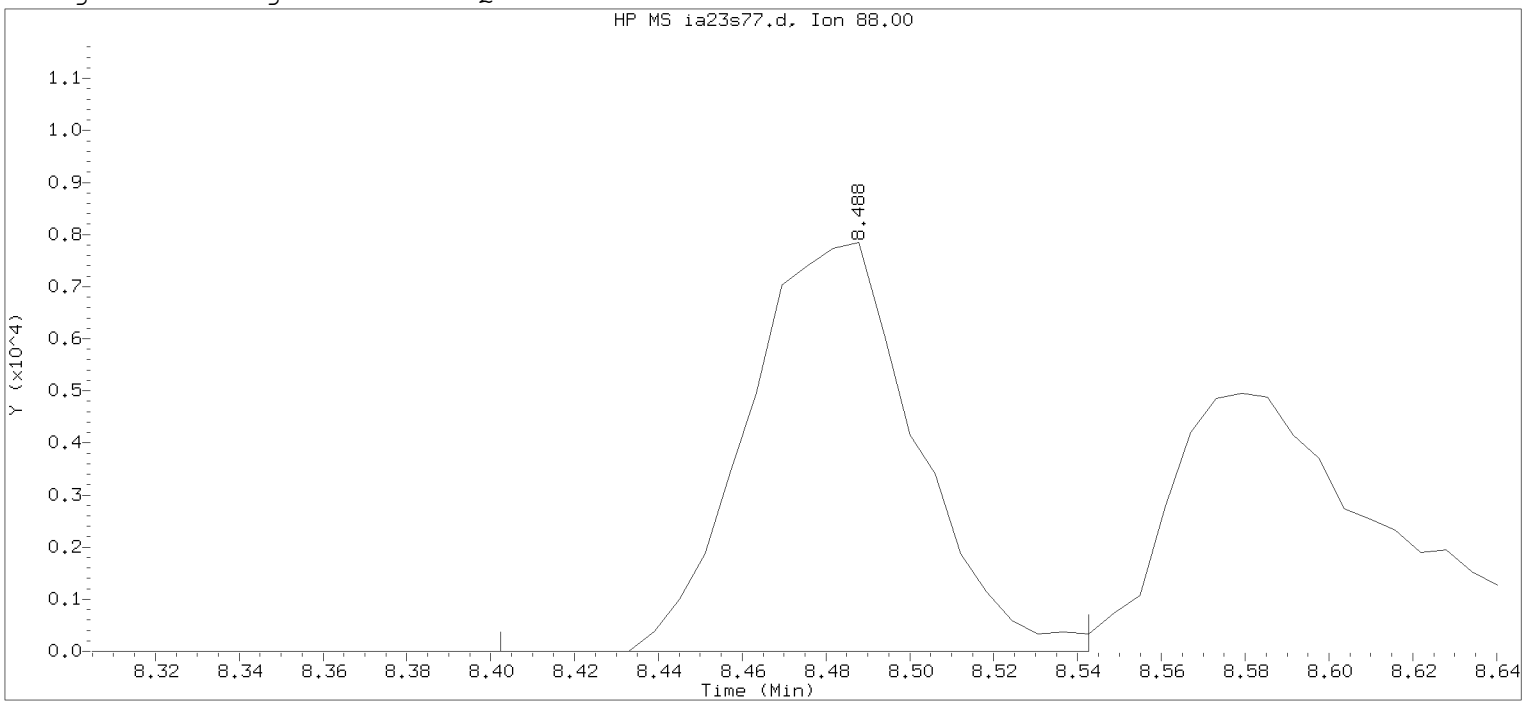
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:19 Automation

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1132		
Retention Time (minutes)	: 8.488		
Quant Ion	: 88.00		
Area	: 21875		
On-column Amount (ng)	: 112.8825		
Integration start scan	: 1117	Integration stop scan:	1140
Y at integration start	: 0	Y at integration end:	0

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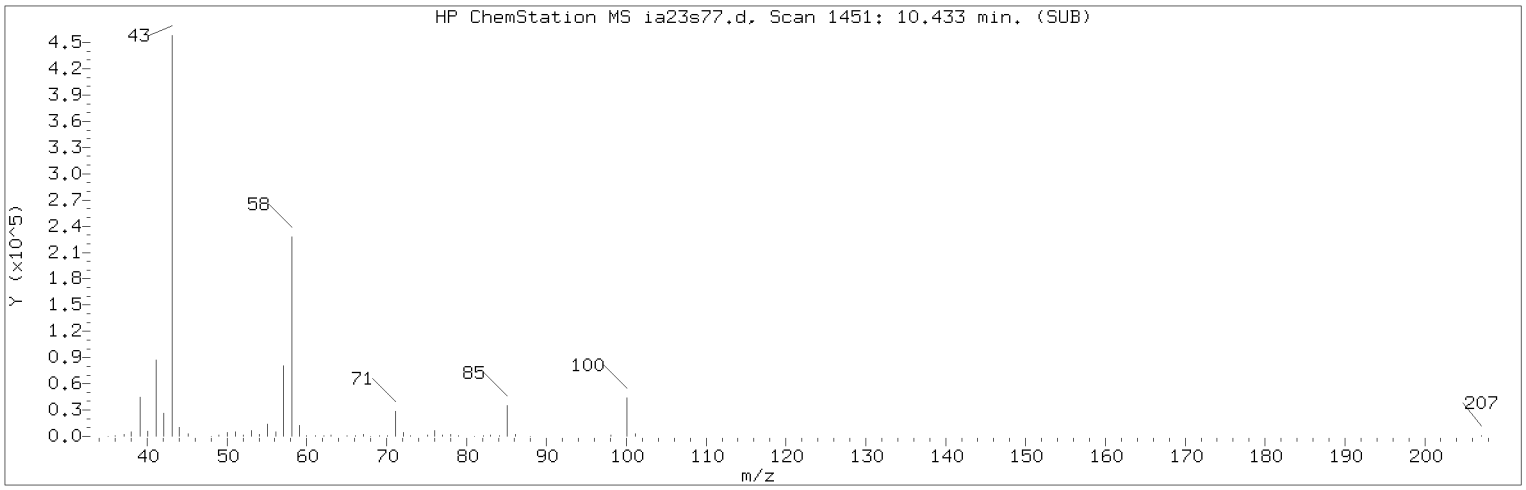
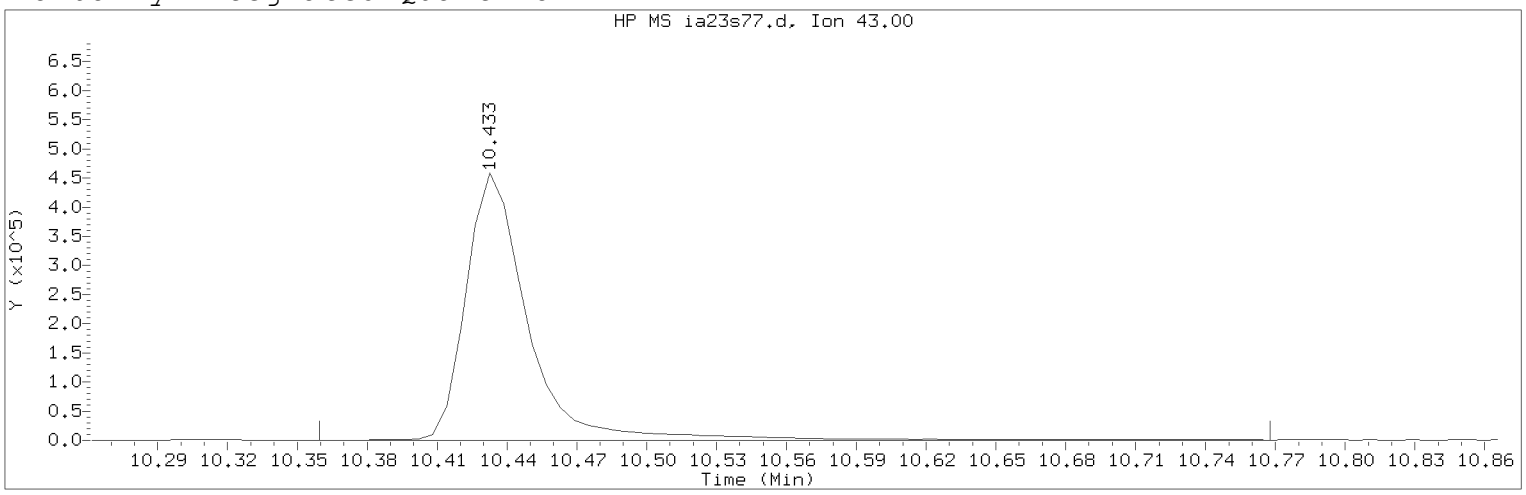
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

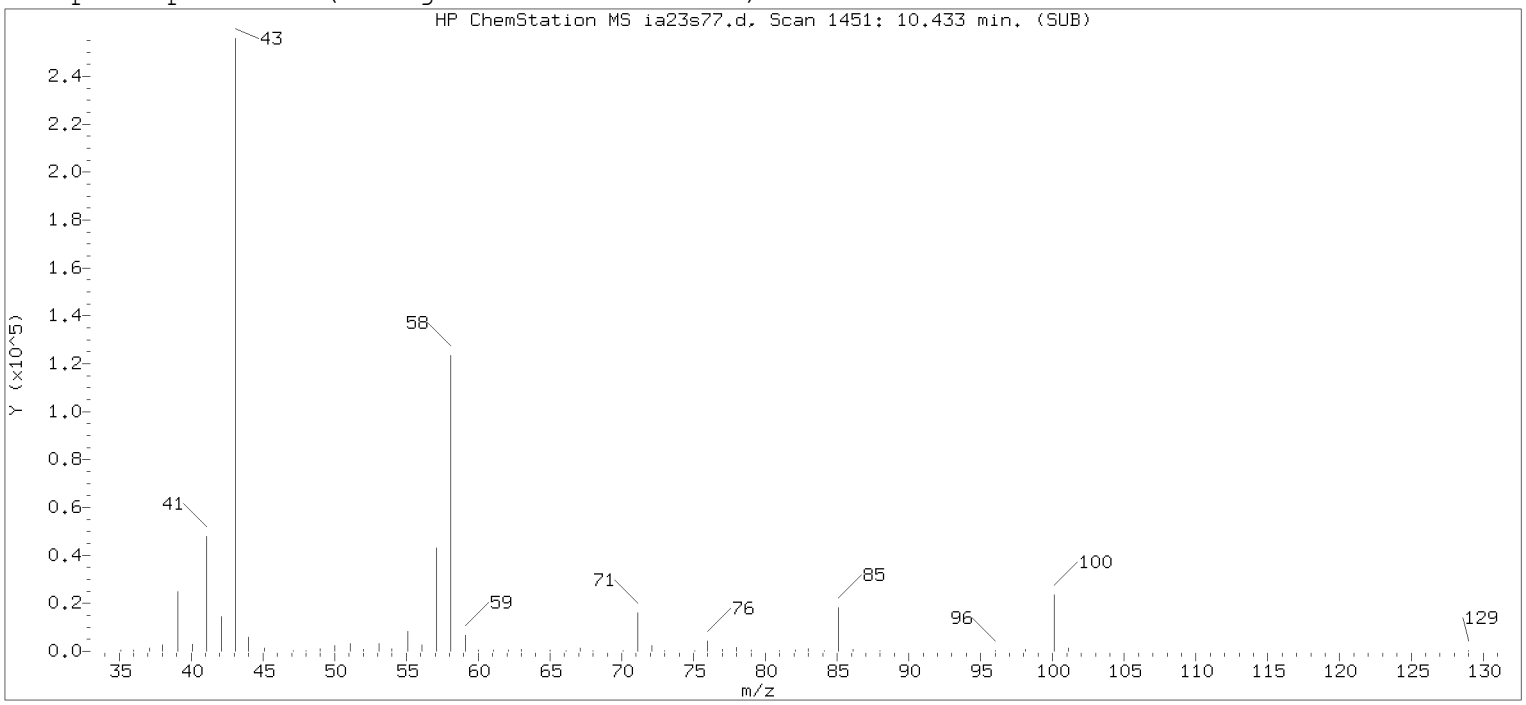
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1451
Retention Time (minutes): 10.433
Quant Ion : 43.00
Area (flag) : 856852M
On-Column Amount (ng) : 38.8935
Integration start scan : 1438 Integration stop scan: 1505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

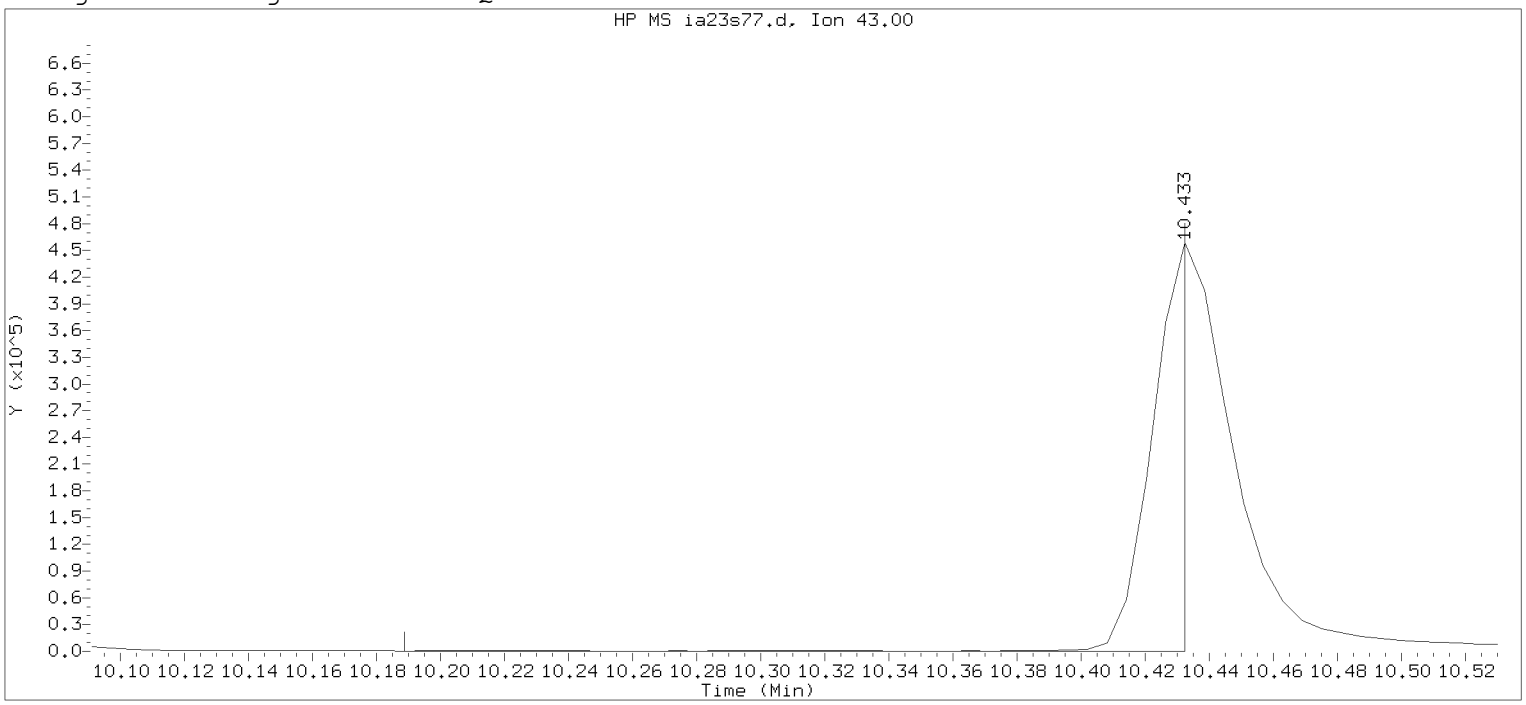
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:19 Automation

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1451
Retention Time (minutes): 10.433
Quant Ion : 43.00
Area : 317146
On-column Amount (ng) : 14.3955
Integration start scan : 1410 Integration stop scan: 1450
Y at integration start : 291 Y at integration end: 291

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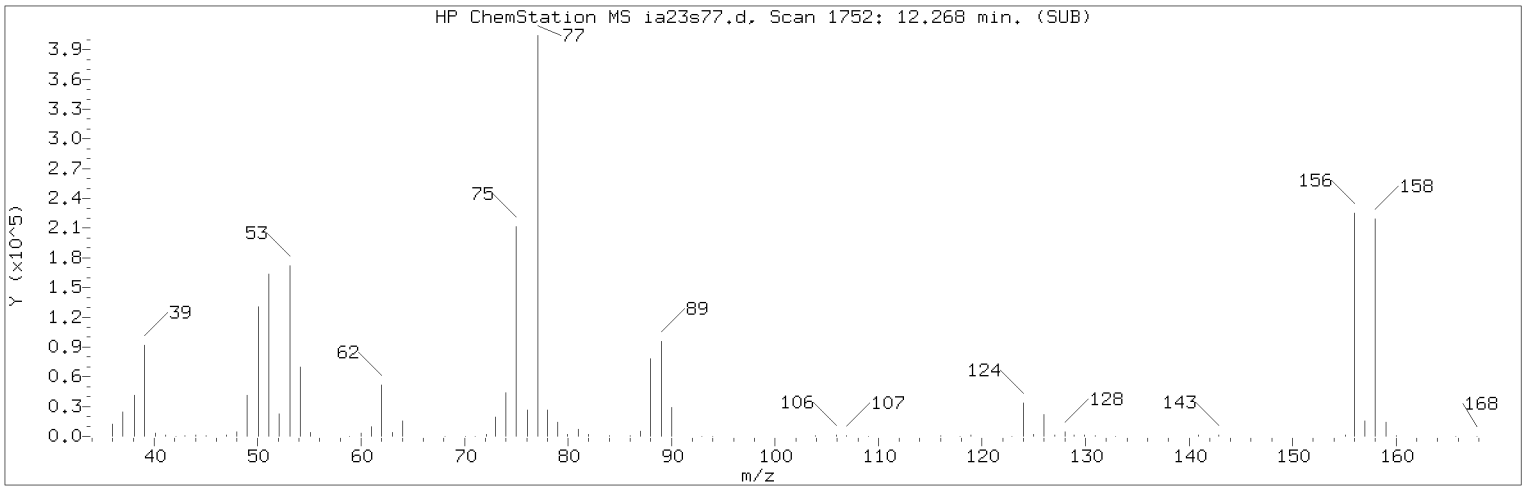
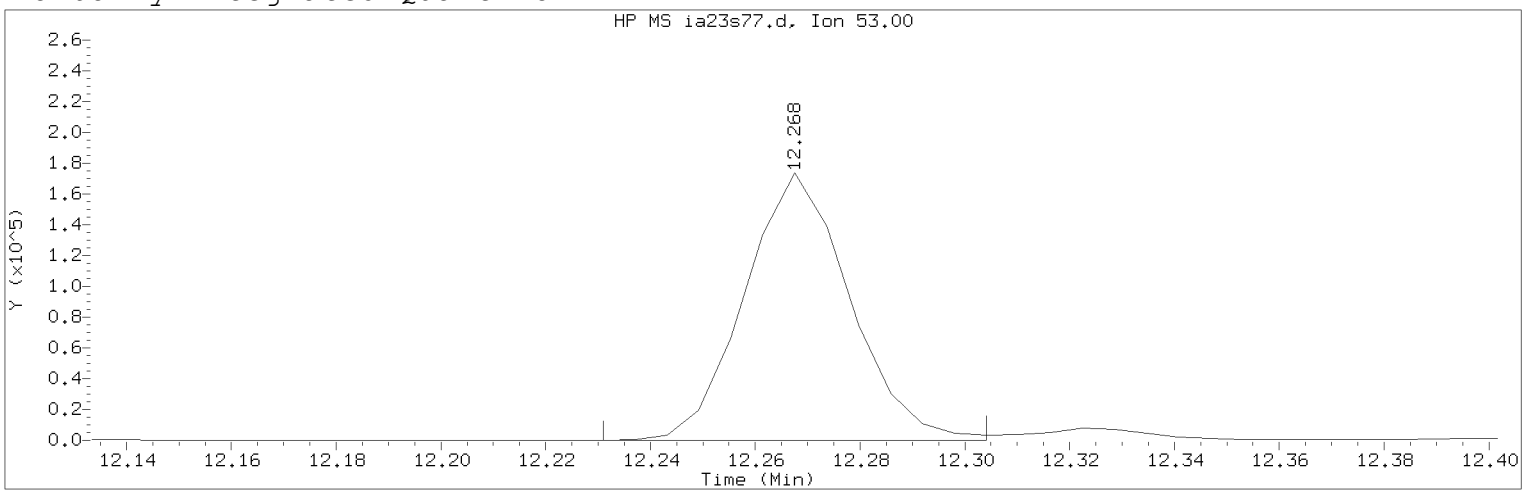
Target 3.5 esignature used. Page 1256

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:17 jkh09052

Sample Name: R0604MS Lab Sample ID: 9558699MS

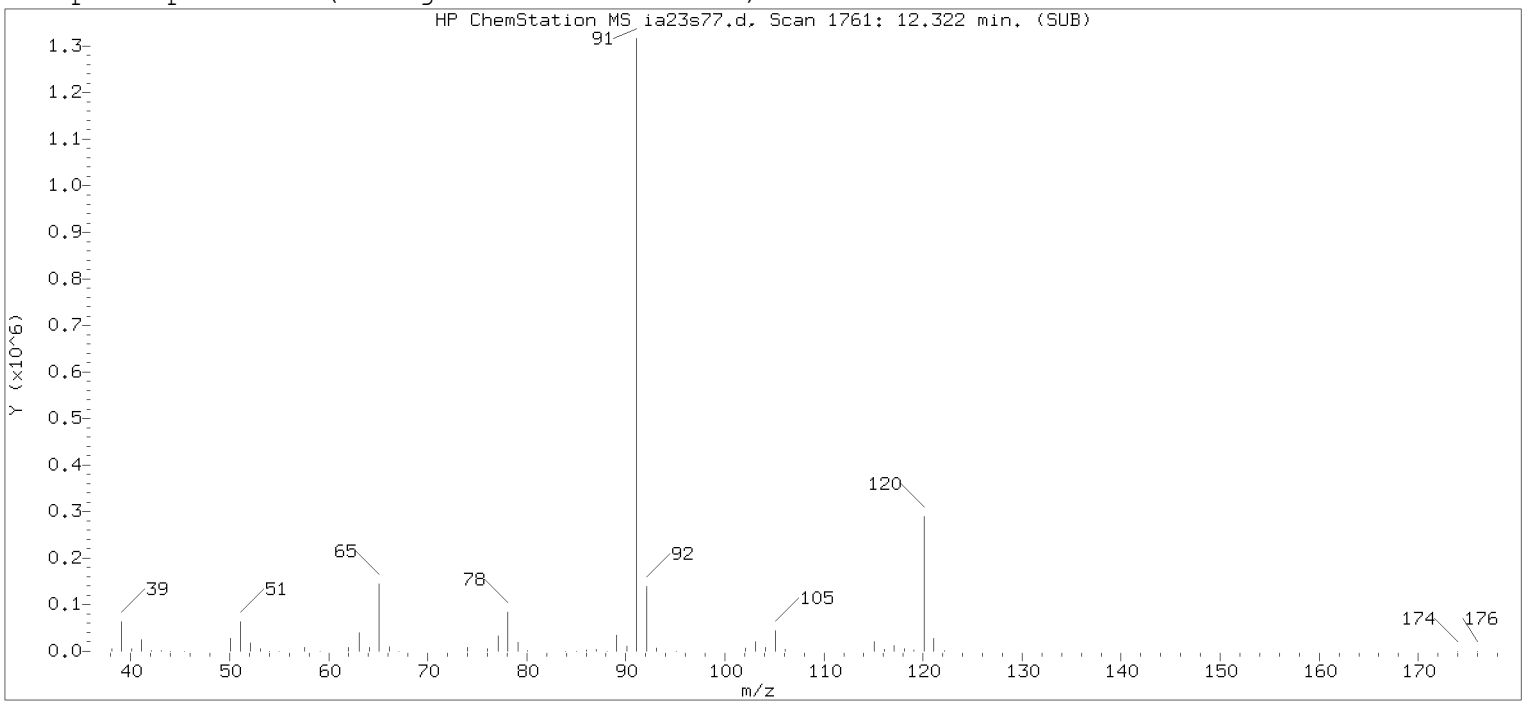
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1752
Retention Time (minutes): 12.268
Quant Ion : 53.00
Area (flag) : 240683A
On-Column Amount (ng) : 30.7621
Integration start scan : 1745 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

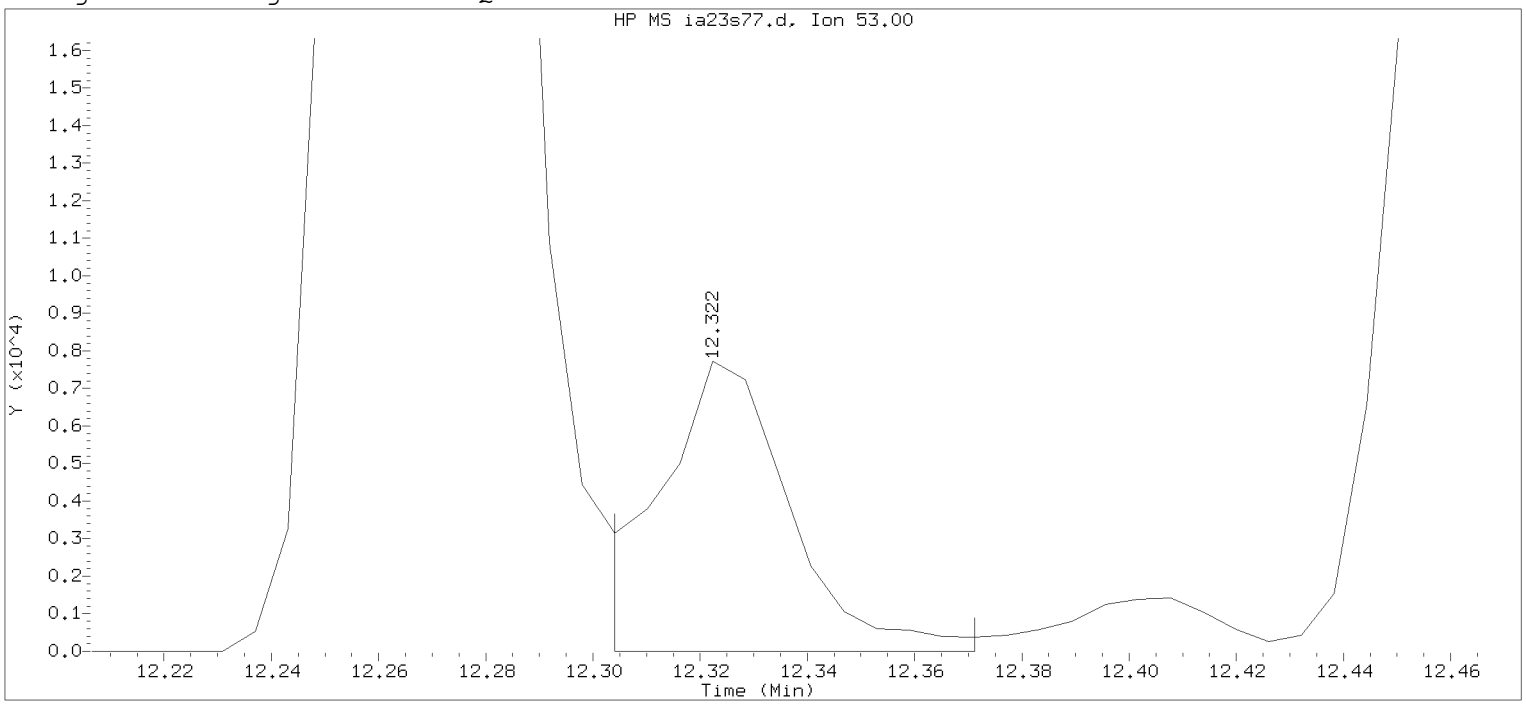
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s77.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:01 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:19 Automation

Sample Name: R0604MS Lab Sample ID: 9558699MS

Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1761
Retention Time (minutes): 12.322
Quant Ion : 53.00
Area : 12854
On-column Amount (ng) : 1.6430
Integration start scan : 1757 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: JKHOWE

Data file: /chem2/HP19930.i/18apr23c.b/ia23s78.d Injection date and time: **24-APR-2018 05:23**
Data file Sample Info. Line: R0604MSD;9558700MSD;1;3;MSD;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I18113**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.129	(0.006)	417	65	117471	(-20)	50.00	
63) Fluorobenzene	7.671	(-0.006)	998	96	1973864	(-4)	10.00	
97) Chlorobenzene-d5	11.146	(0.000)	1568	117	1462670	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024	(0.000)	1876	152	785233	(-5)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775	(0.000)	113	466903	10.136	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238	(-0.001)	102	100185	9.997	100%		80 - 120
82) Toluene-d8	(3)	9.689	(-0.001)	98	1968116	9.966	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146	(0.000)	95	709493	10.174	102%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.910	(-0.001)	85	386146	4.250	4.25			0.1	1
2) Chloromethane	(2)	2.105	(-0.000)	50	286533	3.407	3.41			0.2	0.5
5) Vinyl Chloride	(2)	2.215	(-0.000)	62	298927	3.949	3.95			0.2	1
7) Bromomethane	(2)	2.550	(-0.000)	94	207264	3.895	3.90			0.5	1
8) Chloroethane	(2)	2.629	(-0.000)	64	184726	4.283	4.28			0.1	0.5
10) Trichlorofluoromethane	(2)	2.934	(-0.000)	101	524159	5.510	5.51			0.2	1
11) Ethyl ether	(2)	3.166	(-0.001)	59	887097	18.900	18.90			1	13
13) Acrolein	(1)	3.343	(-0.004)	56	244596	43.501	43.50			5	25
15) 1,1-Dichloroethene	(2)	3.483	(-0.001)	96	308909	6.887	6.89			0.2	1
16) Freon 113	(2)	3.513	(-0.000)	101	344749	6.704	6.70			0.2	1
14) Acetone	(1)	3.507	(-0.004)	43	351036	42.527	42.53			3	10
17) Methyl Iodide	(2)	3.684	(-0.001)	142	470918	5.679	5.68		J	0.6	10
18) Carbon Disulfide	(2)	3.800	(-0.001)	76	727019	5.732	5.73		J	0.4	10
22) Allyl Chloride	(2)	3.952	(-0.000)	41	537823	6.509	6.51		J	0.8	10
23) Methylene Chloride	(2)	4.141	(-0.000)	84	318410	5.814	5.81			0.2	1
29) Acrylonitrile	(1)	4.476	(-0.006)	53	317289	34.302	34.30			1	10
31) trans-1,2-Dichloroethene	(2)	4.568	(-0.001)	96	321549	6.278	6.28			0.2	1
33) 1,1-Dichloroethane	(2)	5.226	(-0.000)	63	857282	8.379	8.38			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.336	(-0.001)	53	561902	6.437	6.44		J	0.5	10
38) 2-Butanone	(1)	6.031	(-0.003)	43	710749	55.121	55.12			1	10
42) Propionitrile	(1)	6.135	(-0.009)	54	171402	46.672	46.67		J	10	100
45) Methacrylonitrile	(1)	6.336	(-0.005)	67	640812	53.474	53.47		J	10	100
48) Tetrahydrofuran	(1)	6.421	(-0.005)	71	134960	38.517	38.52			2	25
49) Chloroform	(2)	6.555	(-0.000)	83	578534	6.010	6.01			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.781	(-0.000)	97	515783	6.433	6.43			0.1	1
54) Carbon Tetrachloride	(2)	7.000	(-0.000)	117	458157	6.766	6.77			0.2	1
56) Isobutyl Alcohol	(1)	7.128	(-0.005)	41	165722	145.473	145.47		J	10	200
58) Benzene	(2)	7.256	(0.000)	78	1393664	6.065	6.07			0.1	1
59) 1,2-Dichloroethane	(2)	7.342	(-0.000)	62	379336	5.652	5.65			0.1	1
67) Trichloroethene	(2)	8.153	(0.000)	95	362476	6.230	6.23			0.2	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s78.d Injection date and time: **24-APR-2018 05:23**
Data file Sample Info. Line: R0604MSD;9558700MSD;1;3;MSD;RAF06;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I18113**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

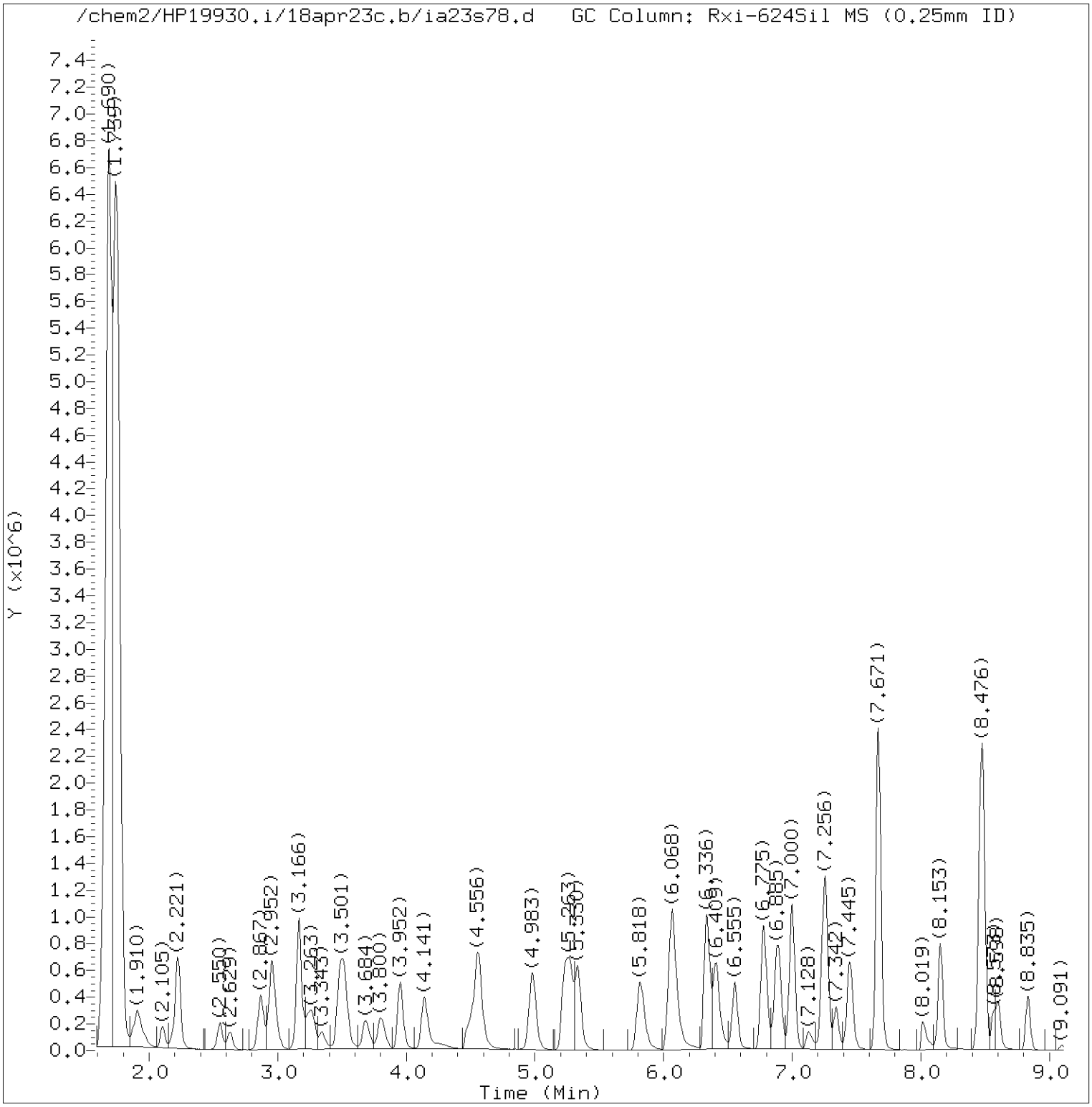
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
70) 1,2-Dichloropropane	(2)	8.488(0.000)	63	354868	5.954	5.95			0.1	1
71) Methyl Methacrylate	(1)	8.567(-0.006)	69	147845	7.348	7.35		J	4	10
73) Dibromomethane	(2)	8.604(0.000)	93	152782	5.726	5.73			0.1	1
72) 1,4-Dioxane	(1)	8.573(-0.003)	88	31524M	158.433	158.43		J	45	200
74) Bromodichloromethane	(2)	8.829(0.000)	83	360961	5.650	5.65			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.543(-0.004)	43	1212090M	37.827	37.83			1	10
83) Toluene	(3)	9.768(-0.000)	92	844579	5.858	5.86			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.024(0.000)	75	340761	5.589	5.59			0.1	1
86) Ethyl Methacrylate	(3)	10.079(0.000)	69	330559	5.536	5.54		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.232(0.000)	97	232514	5.718	5.72			0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	391217	6.388	6.39			0.1	1
90) 1,3-Dichloropropane	(3)	10.396(-0.000)	76	410027	5.665	5.67			0.1	1
91) 2-Hexanone	(1)	10.433(-0.005)	43	885381	39.141	39.14			1	10
93) Dibromochloromethane	(3)	10.609(0.000)	129	215976	5.393	5.39			0.1	1
95) 1,2-Dibromoethane	(3)	10.725(0.000)	107	207742	5.615	5.61			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.256(0.000)	131	293321	5.887	5.89			0.1	1
100) Ethylbenzene	(3)	11.256(0.000)	91	1661737	6.082	6.08			0.1	1
101) m+p-Xylene	(3)	11.372(0.000)	106	1273271	12.128	12.13			0.1	0.5
104) o-Xylene	(3)	11.701(0.000)	106	607655	5.949	5.95			0.1	0.5
105) Xylene (Total)	(3)		106	1880926	18.077	18.08			0.2	3
106) Styrene	(3)	11.719(-0.000)	104	969044	6.146	6.15			0.1	1
107) Bromoform	(3)	11.884(0.000)	173	98135	4.202	4.20			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.243(0.000)	83	286530M	5.187	5.19			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.268(-0.004)	53	245544	30.565	30.57			1	10
116) 1,2,3-Trichloropropane	(4)	12.292(0.000)	110	80123M	5.537	5.54			0.3	1
126) Pentachloroethane	(4)	12.737(0.000)	167	213266	5.842	5.84		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	12.969(0.000)	146	719958	5.626	5.63			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.042(0.000)	146	721173	5.532	5.53			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.298(0.000)	146	660931	5.569	5.57			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.847(-0.006)	155	29937	6.893	6.89			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.389(0.000)	180	393094	5.190	5.19			0.1	1
146) Hexachlorobutadiene	(4)	14.468(0.000)	225	168752	6.157	6.16			0.1	1
147) Naphthalene	(4)	14.572(0.000)	128	768240	5.177	5.18			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

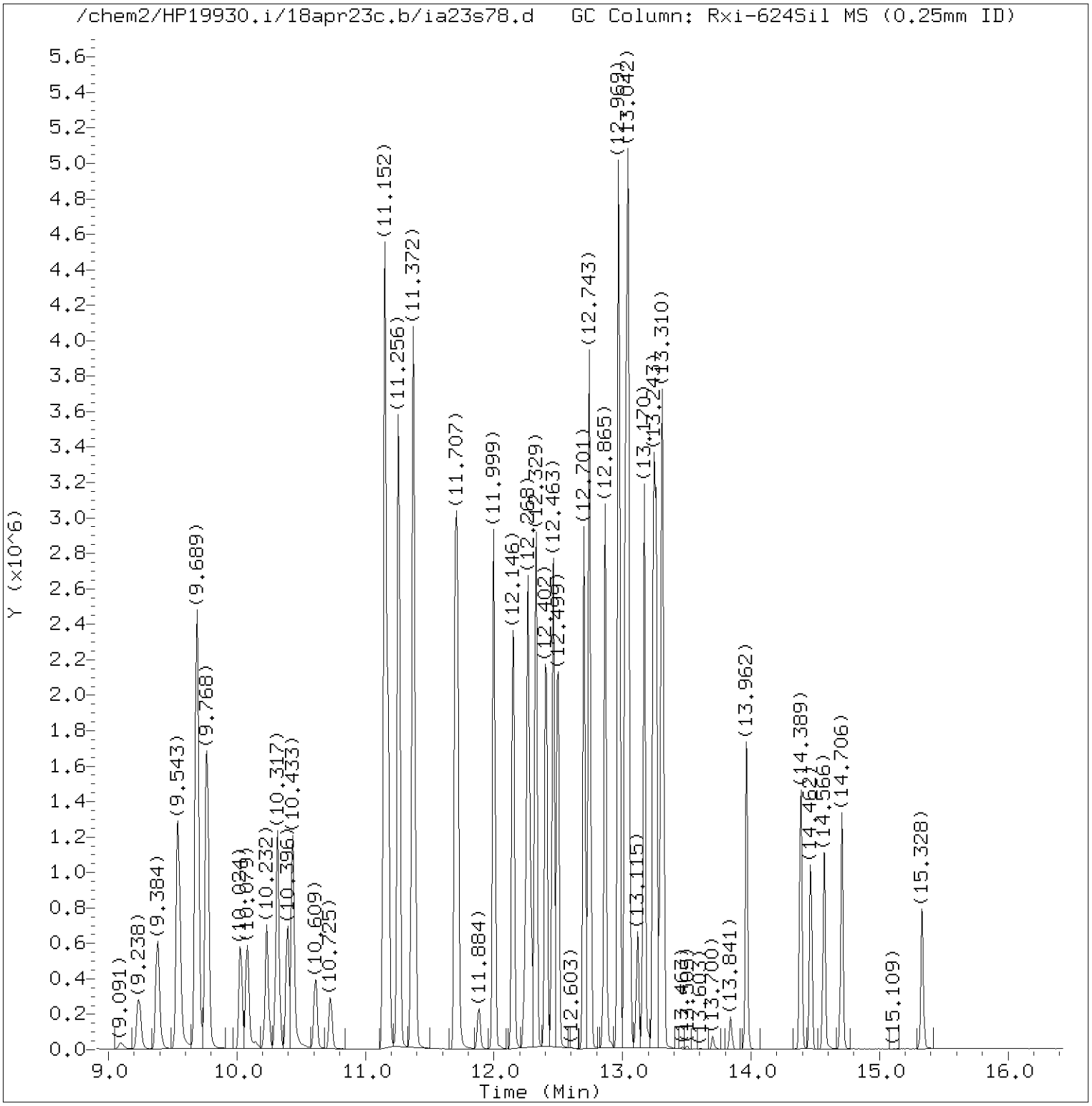
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.910	85	386146	4.250
2) Chloromethane	(2)	2.105	50	286533	3.407
5) Vinyl Chloride	(2)	2.215	62	298927	3.949
7) Bromomethane	(2)	2.550	94	207264	3.895
8) Chloroethane	(2)	2.629	64	184726	4.283
10) Trichlorofluoromethane	(2)	2.934	101	524159	5.510
11) Ethyl ether	(2)	3.166	59	887097	18.900
13) Acrolein	(1)	3.343	56	244596	43.501
15) 1,1-Dichloroethene	(2)	3.483	96	308909	6.887
14) Acetone	(1)	3.507	43	351036	42.527
16) Freon 113	(2)	3.513	101	344749	6.704
17) Methyl Iodide	(2)	3.684	142	470918	5.679
18) Carbon Disulfide	(2)	3.800	76	727019	5.732
22) Allyl Chloride	(2)	3.952	41	537823	6.509
26)*t-Butyl Alcohol-d10	(1)	4.129	65	117471	50.000
23) Methylene Chloride	(2)	4.141	84	318410	5.814
29) Acrylonitrile	(1)	4.477	53	317289	34.302
31) trans-1,2-Dichloroethene	(2)	4.568	96	321549	6.278
33) 1,1-Dichloroethane	(2)	5.226	63	857282	8.379
35) 2-Chloro-1,3-Butadiene	(2)	5.336	53	561902	6.437
38) 2-Butanone	(1)	6.031	43	710749	55.121
42) Propionitrile	(1)	6.135	54	171402	46.672
45) Methacrylonitrile	(1)	6.336	67	640812	53.474
48) Tetrahydrofuran	(1)	6.421	71	134960	38.517
49) Chloroform	(2)	6.555	83	578534	6.010
50)$Dibromofluoromethane	(2)	6.775	113	466903	10.136
51) 1,1,1-Trichloroethane	(2)	6.781	97	515783	6.433
54) Carbon Tetrachloride	(2)	7.000	117	458157	6.766
56) Isobutyl Alcohol	(1)	7.128	41	165722	145.473
57)$1,2-Dichloroethane-d4	(2)	7.238	102	100185	9.997
58) Benzene	(2)	7.256	78	1393664	6.065
59) 1,2-Dichloroethane	(2)	7.342	62	379336	5.652
63)*Fluorobenzene	(2)	7.671	96	1973864	10.000
67) Trichloroethene	(2)	8.153	95	362476	6.230
70) 1,2-Dichloropropane	(2)	8.488	63	354868	5.954
71) Methyl Methacrylate	(1)	8.567	69	147845	7.348
72) 1,4-Dioxane	(1)	8.573	88	31524M	158.433
73) Dibromomethane	(2)	8.604	93	152782	5.726

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

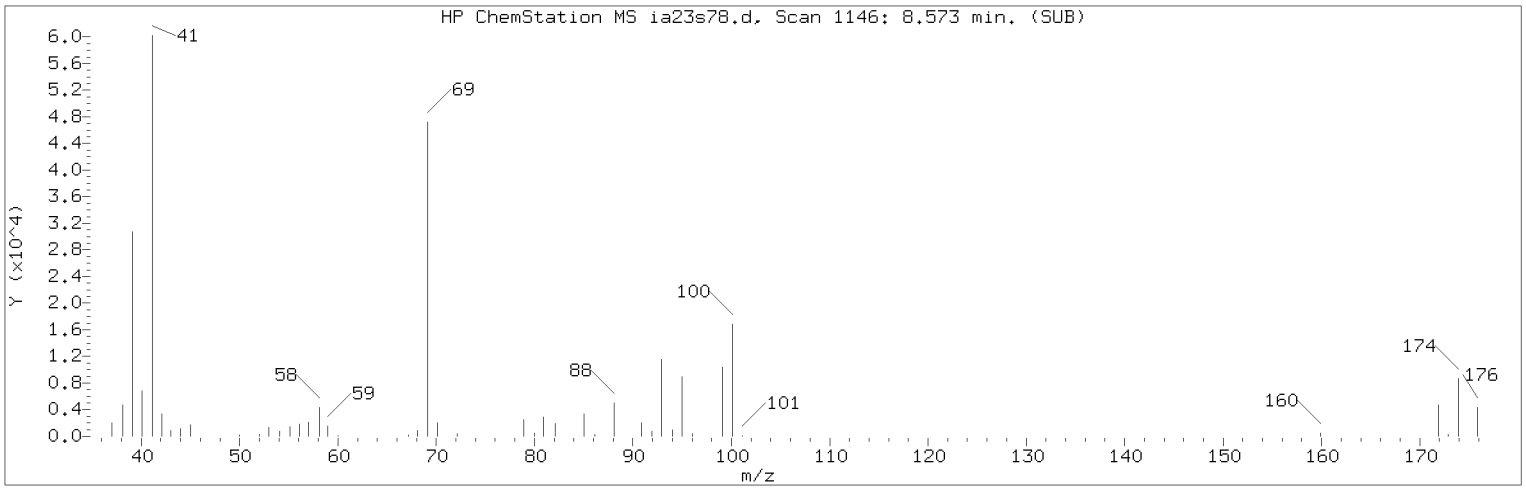
Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.829	83	360961	5.650
81) 4-Methyl-2-Pentanone	(1)	9.543	43	1212090M	37.827
82)$Toluene-d8	(3)	9.689	98	1968116	9.966
83) Toluene	(3)	9.768	92	844579	5.858
84) trans-1,3-Dichloropropene	(3)	10.024	75	340761	5.589
86) Ethyl Methacrylate	(3)	10.079	69	330559	5.536
88) 1,1,2-Trichloroethane	(3)	10.232	97	232514	5.718
89) Tetrachloroethene	(3)	10.317	166	391217	6.388
90) 1,3-Dichloropropane	(3)	10.396	76	410027	5.665
91) 2-Hexanone	(1)	10.433	43	885381	39.141
93) Dibromochloromethane	(3)	10.609	129	215976	5.393
95) 1,2-Dibromoethane	(3)	10.725	107	207742	5.615
97)*Chlorobenzene-d5	(3)	11.146	117	1462670	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	293321	5.887
100) Ethylbenzene	(3)	11.256	91	1661737	6.082
101) m+p-Xylene	(3)	11.372	106	1273271	12.128
104) o-Xylene	(3)	11.701	106	607655	5.949
106) Styrene	(3)	11.719	104	969044	6.146
105) Xylene (Total)	(3)		106	1880926	18.077
107) Bromoform	(3)	11.884	173	98135	4.202
111)$4-Bromofluorobenzene	(3)	12.146	95	709493	10.174
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	286530M	5.187
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	245544	30.565
116) 1,2,3-Trichloropropane	(4)	12.292	110	80123M	5.537
126) Pentachloroethane	(4)	12.737	167	213266	5.842
131) 1,3-Dichlorobenzene	(4)	12.969	146	719958	5.626
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	785233	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	721173	5.532
139) 1,2-Dichlorobenzene	(4)	13.298	146	660931	5.569
143) 1,2-Dibromo-3-chloropropane	(1)	13.847	155	29937	6.893
145) 1,2,4-Trichlorobenzene	(4)	14.389	180	393094	5.190
146) Hexachlorobutadiene	(4)	14.468	225	168752	6.157
147) Naphthalene	(4)	14.572	128	768240	5.177

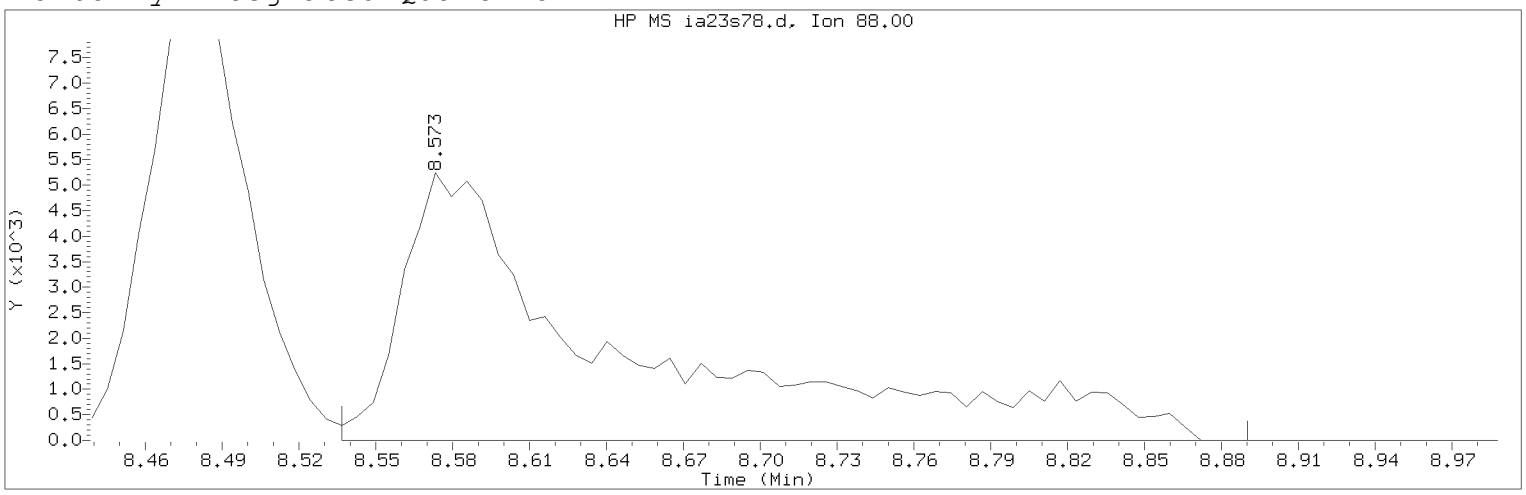
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

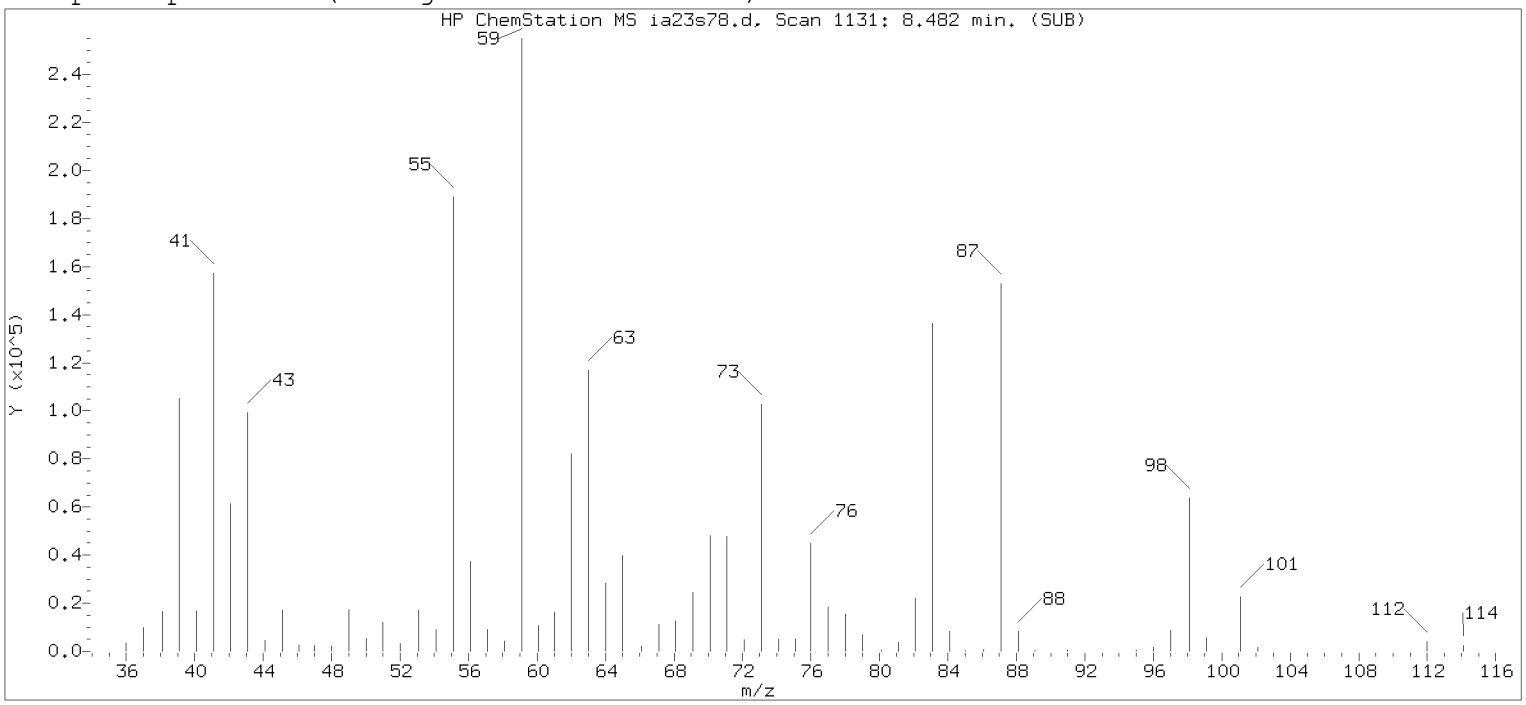
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 31524M
On-Column Amount (ng) : 158.4332
Integration start scan : 1139 Integration stop scan: 1197
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

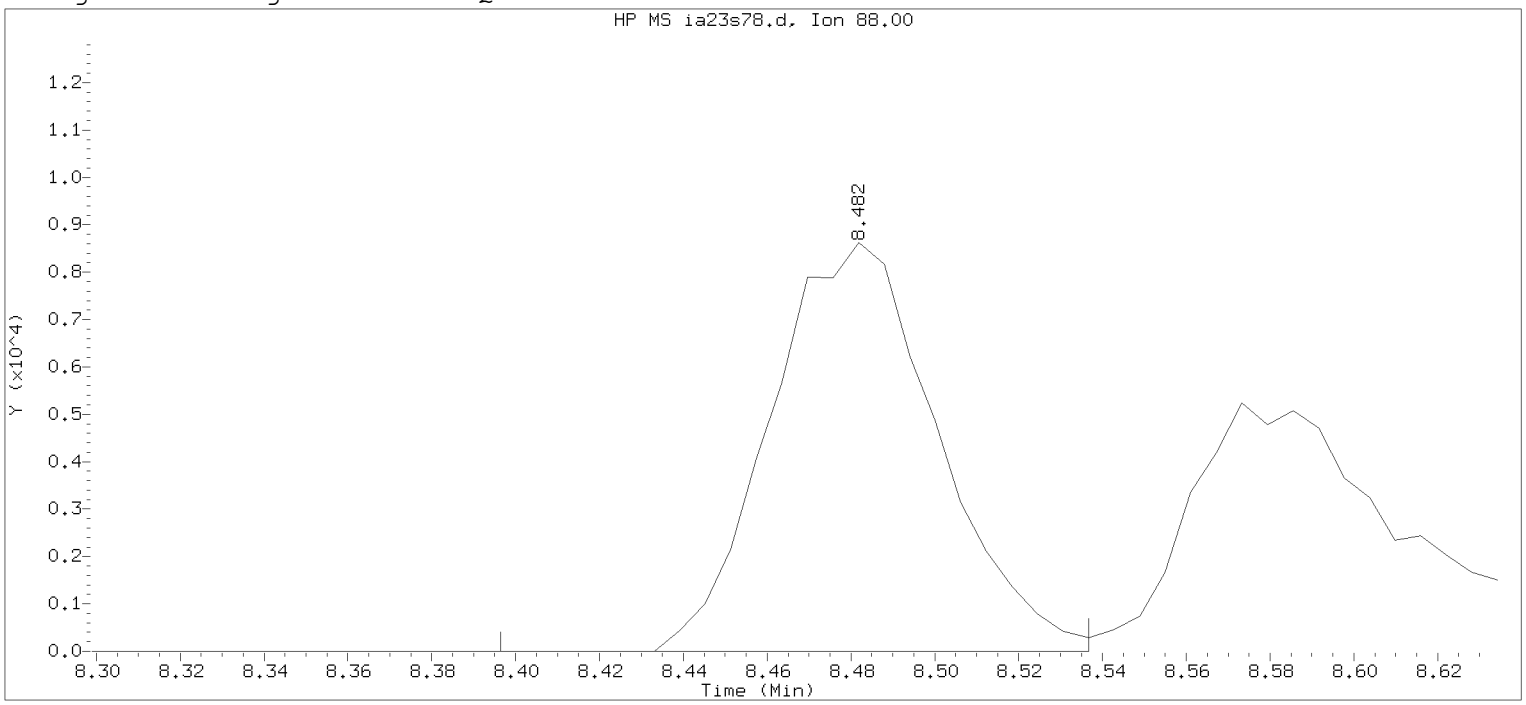
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

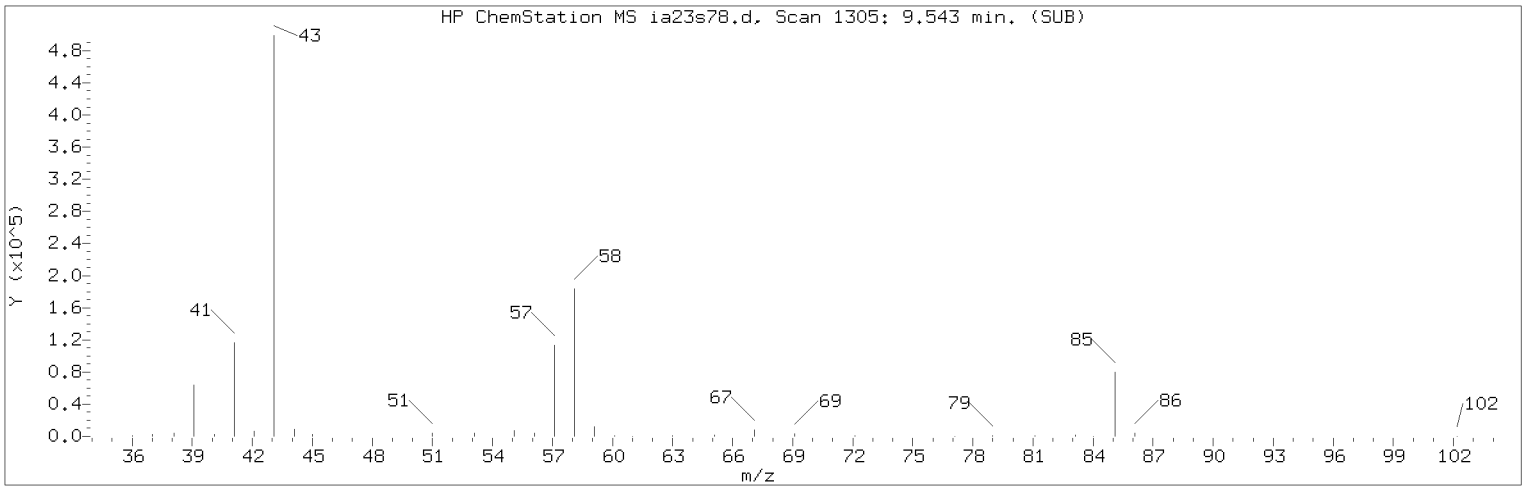
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:41 Automation

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

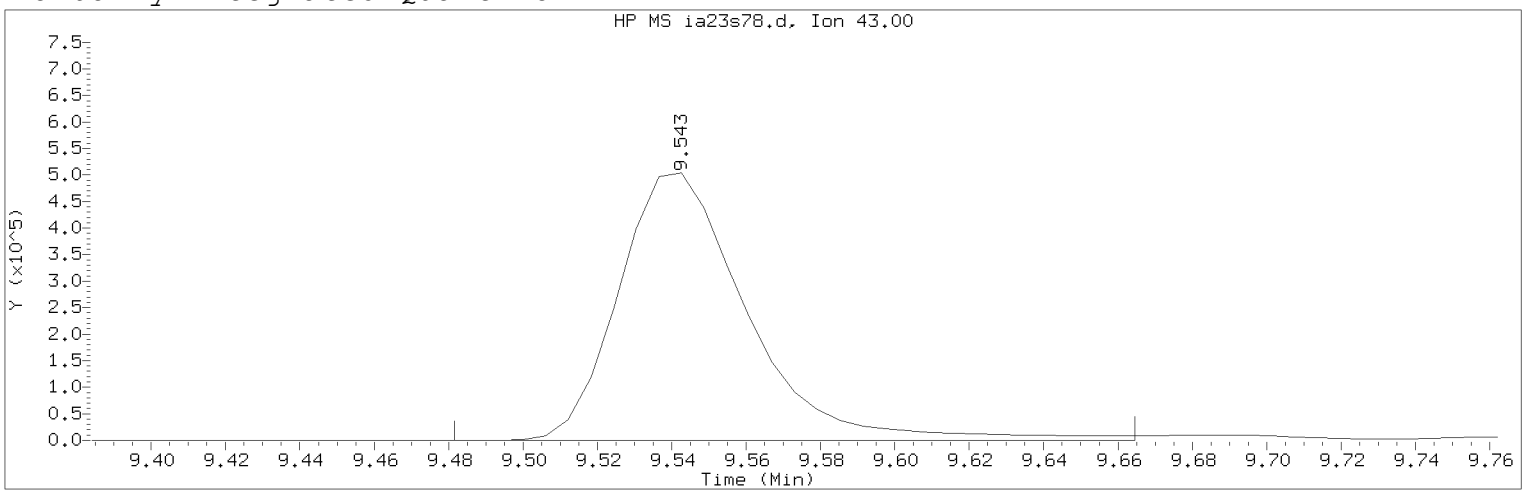
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1131		
Retention Time (minutes)	: 8.482		
Quant Ion	: 88.00		
Area	: 23758		
On-column Amount (ng)	: 119.4045		
Integration start scan	: 1116	Integration stop scan:	1139
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

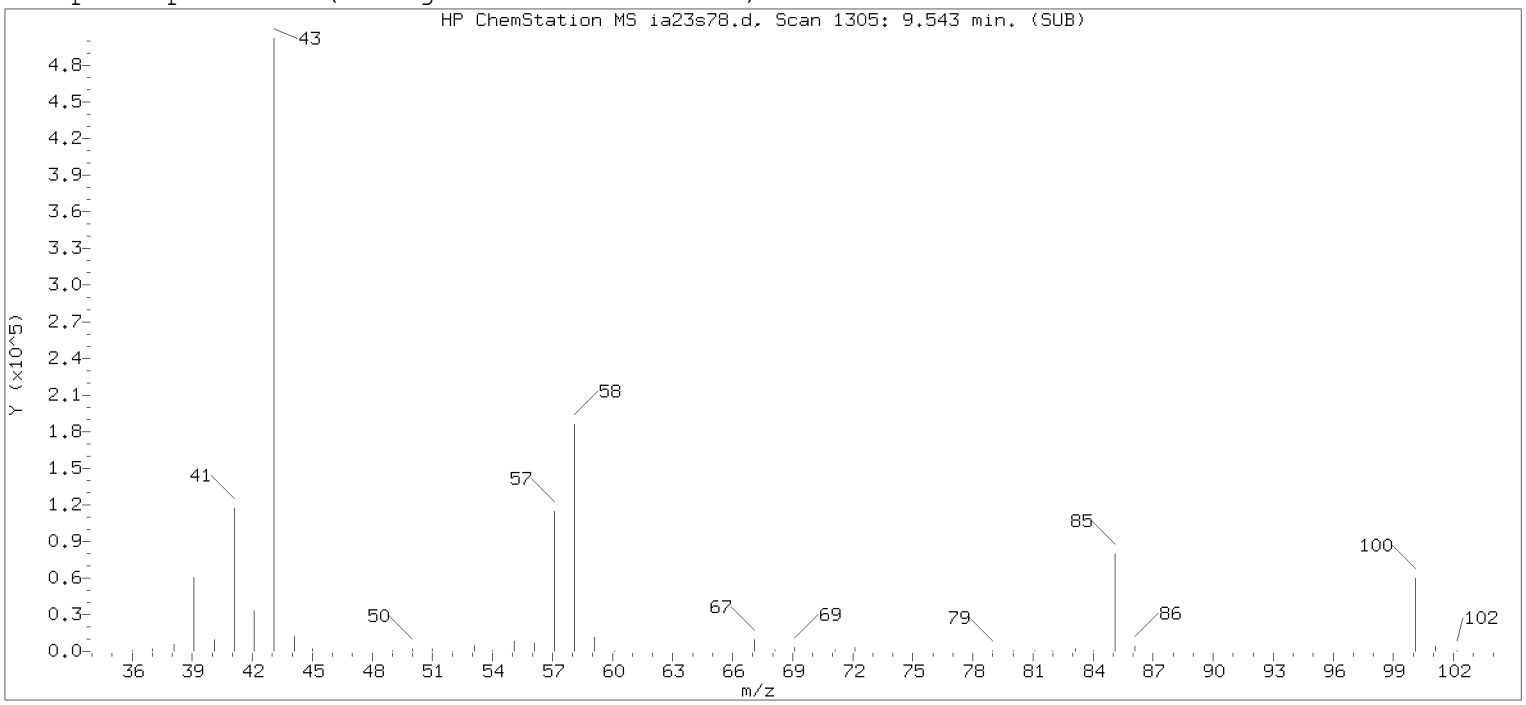
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1305
Retention Time (minutes): 9.543
Quant Ion : 43.00
Area (flag) : 1212090M
On-Column Amount (ng) : 37.8267
Integration start scan : 1294 Integration stop scan: 1324
Y at integration start : 93 Y at integration end: 151

Reason for manual integration: improper integration

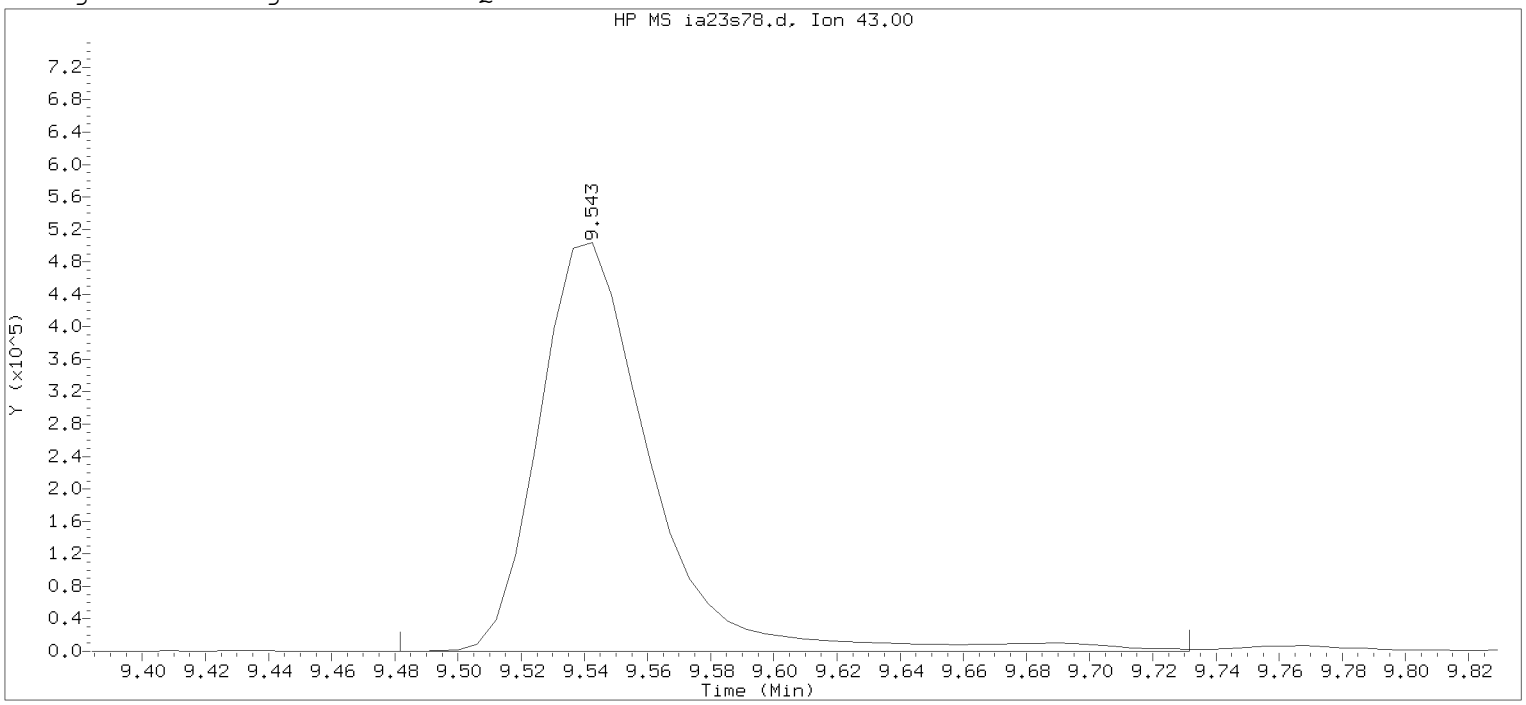
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:41 Automation

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compound Number	: 81		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1305		
Retention Time (minutes)	: 9.543		
Quant Ion	: 43.00		
Area	: 1238487		
On-column Amount (ng)	: 38.6502		
Integration start scan	: 1294	Integration stop scan:	1335
Y at integration start	: 93	Y at integration end:	173

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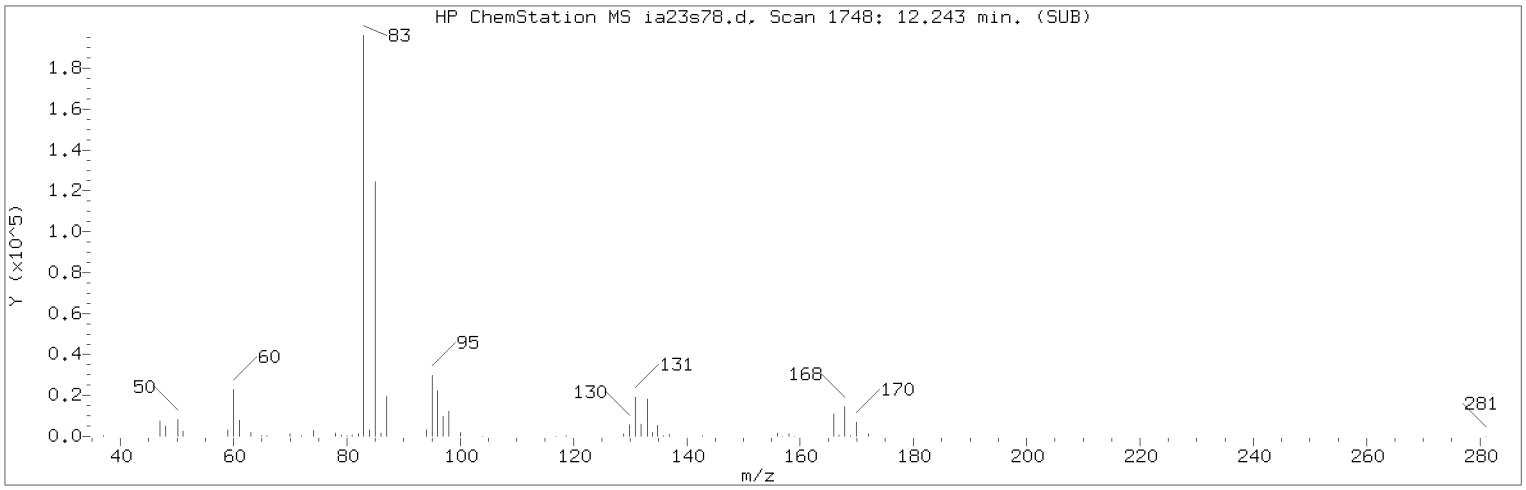
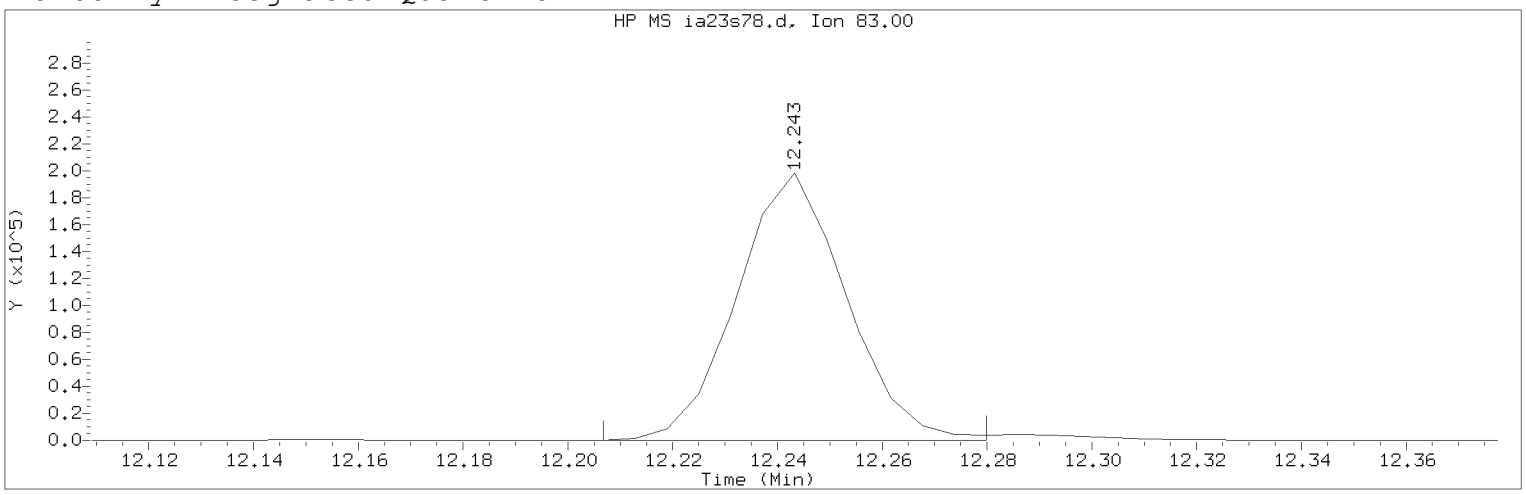
Target 3.5 esignature used. Page 1268

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

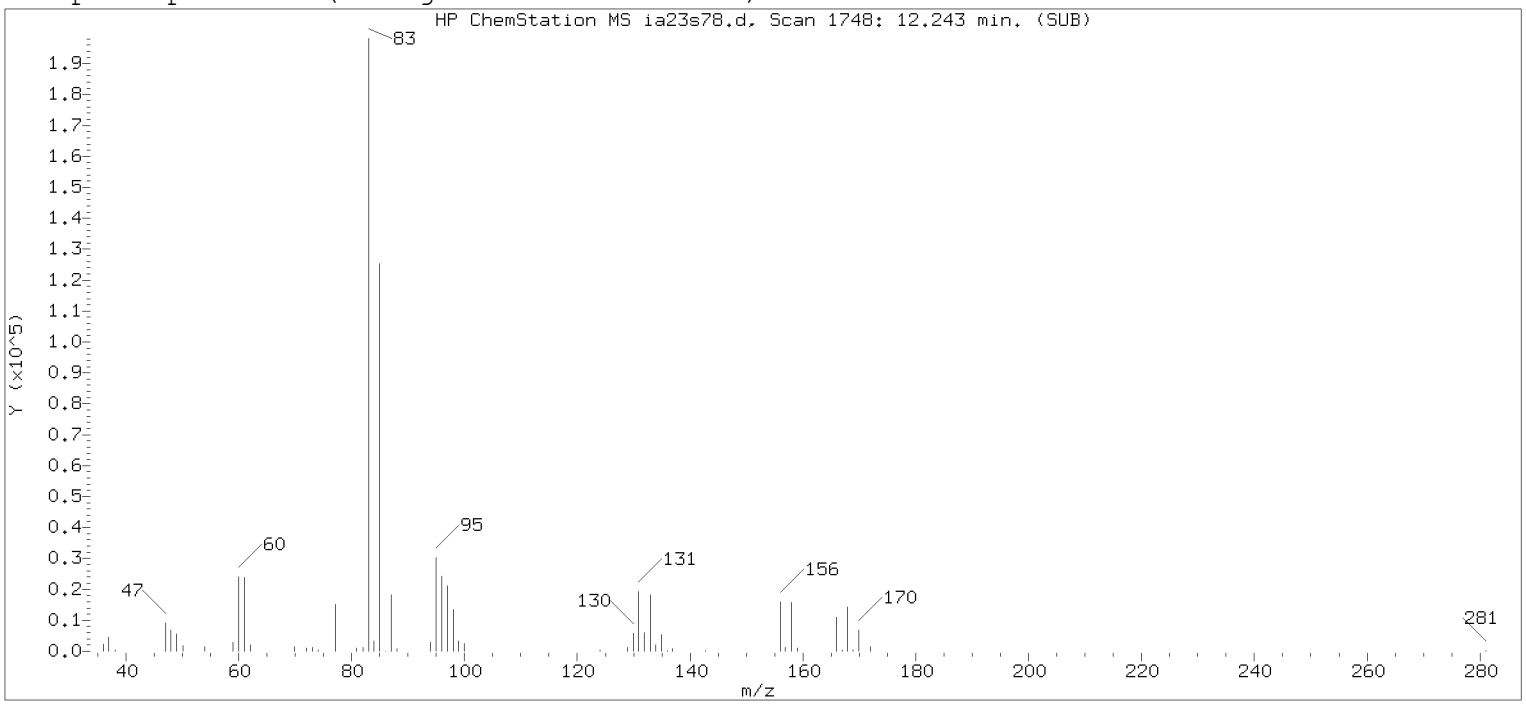
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1748
Retention Time (minutes): 12.243
Quant Ion : 83.00
Area (flag) : 286530M
On-Column Amount (ng) : 5.1866
Integration start scan : 1741 Integration stop scan: 1753
Y at integration start : 0 Y at integration end: 84

Reason for manual integration: improper integration

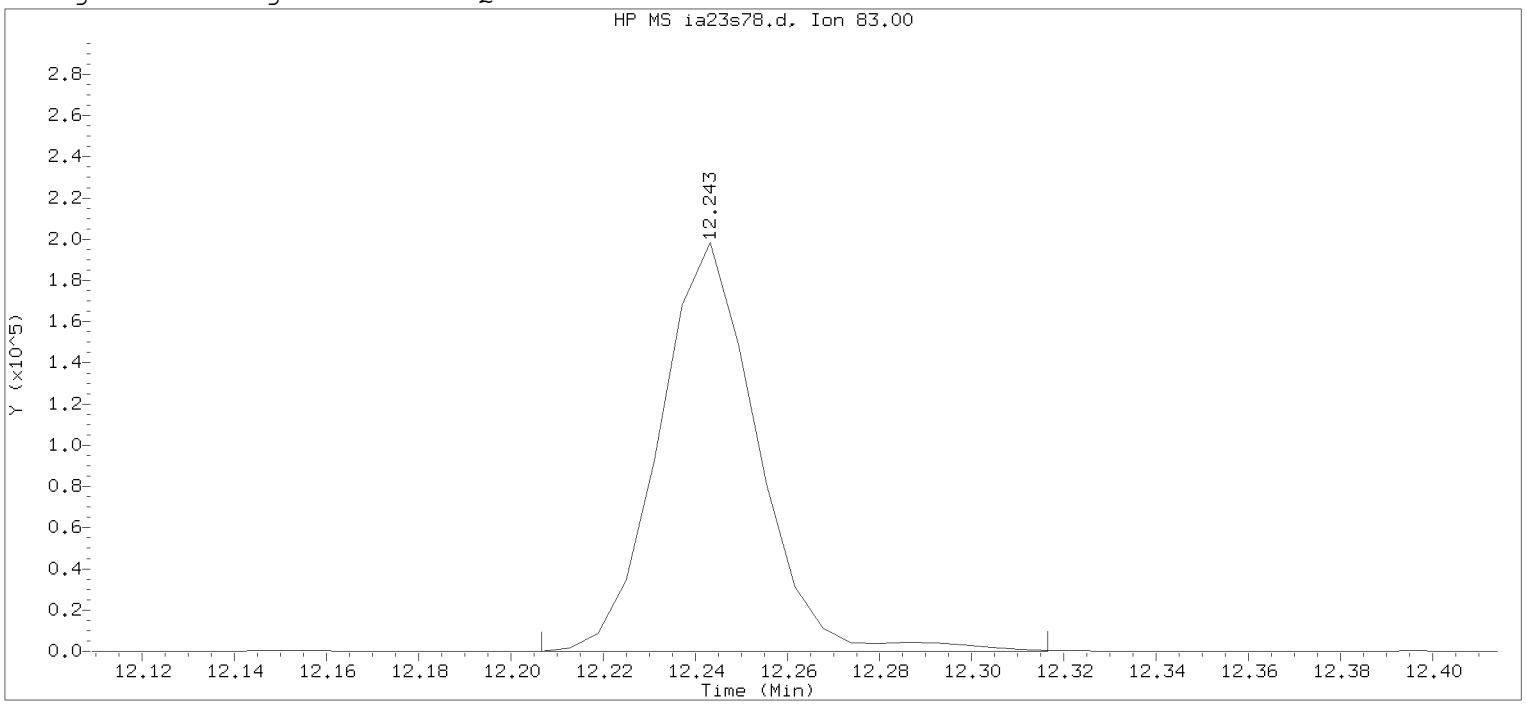
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:41 Automation

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1748
Retention Time (minutes): 12.243
Quant Ion : 83.00
Area : 291700
On-column Amount (ng) : 5.2802
Integration start scan : 1741 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 127

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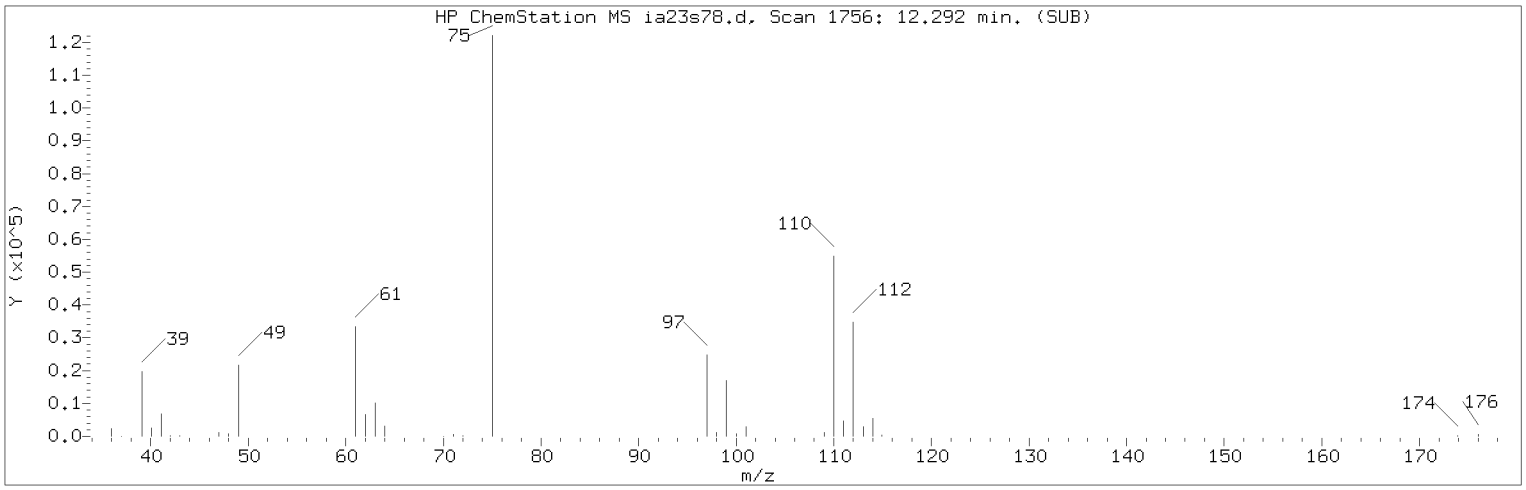
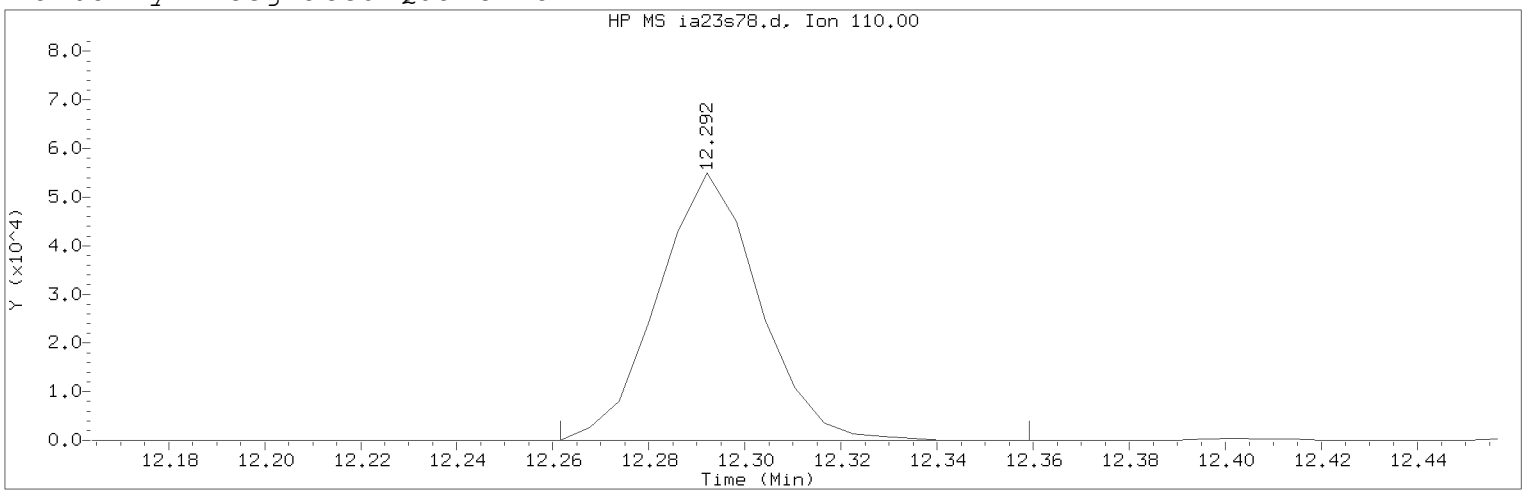
Target 3.5 esignature used. Page 1270

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 07:18 jkh09052

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

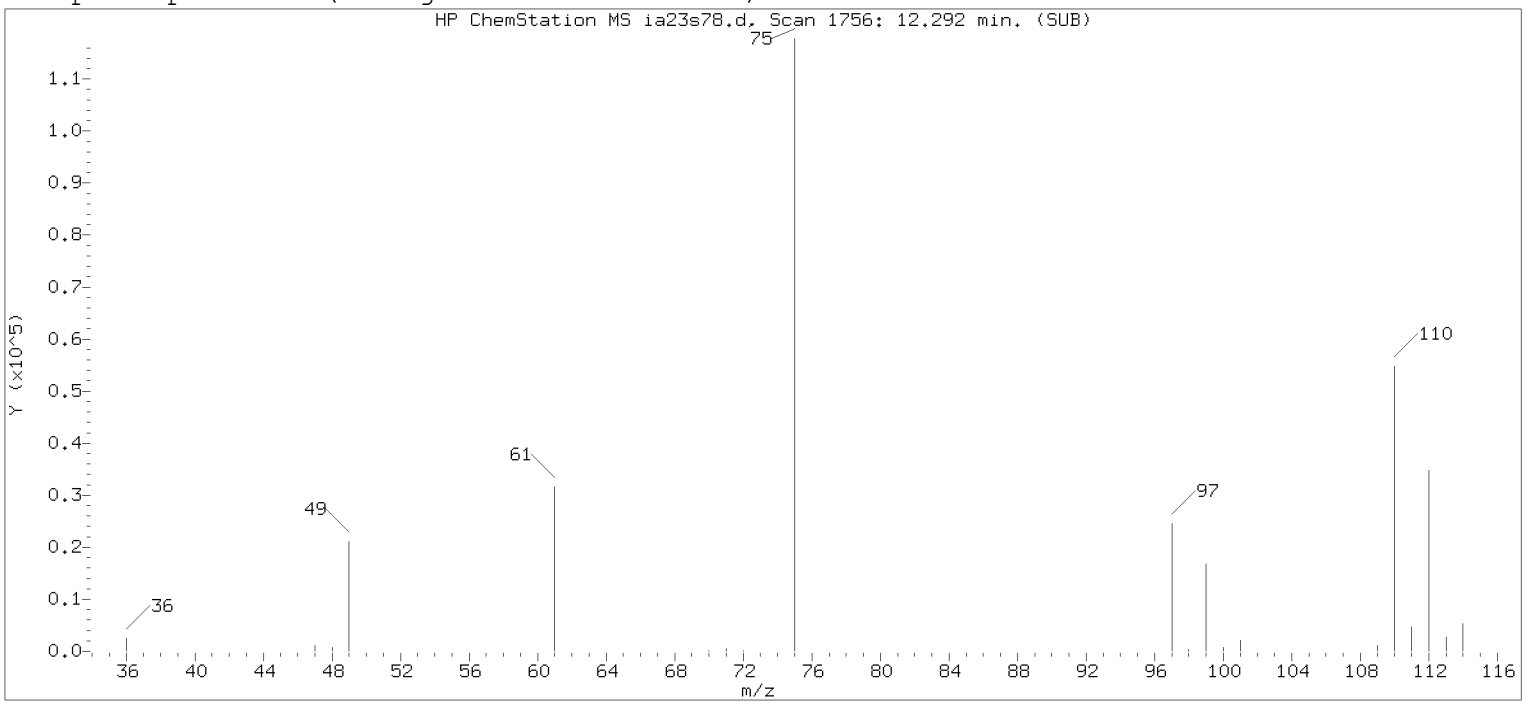
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 110.00
Area (flag) : 80123M
On-Column Amount (ng) : 5.5375
Integration start scan : 1750 Integration stop scan: 1766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

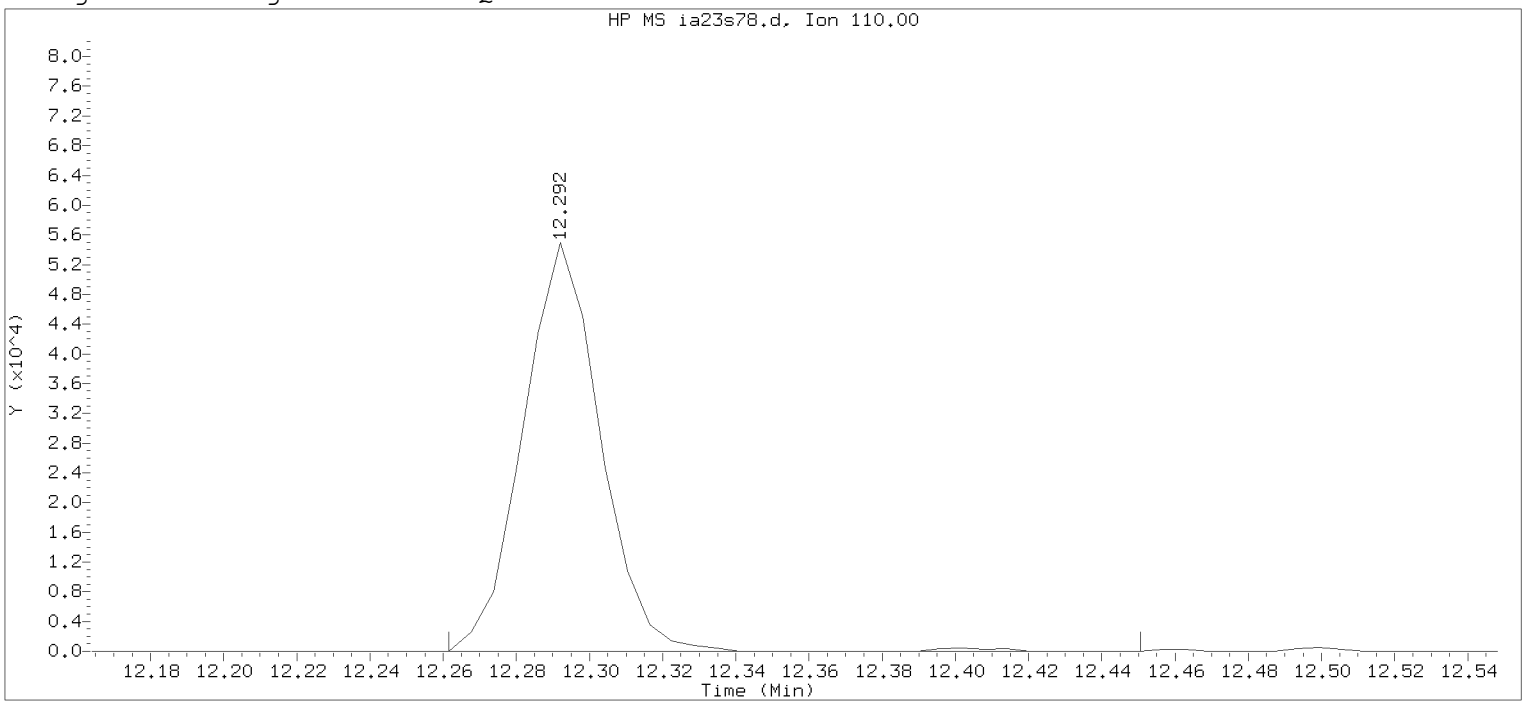
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 04/24/2018 at 07:23.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s78.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 05:23 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 05:41 Automation

Sample Name: R0604MSD Lab Sample ID: 9558700MSD

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 110.00
Area : 80618
On-column Amount (ng) : 5.5717
Integration start scan : 1750 Integration stop scan: 1781
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 04/24/2018 at 07:23.
Target 3.5 esignature used. Page 1272

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCS564

Data file: /chem2/HP26285.i/18apr23a.b/5a23s01.d Injection date and time: **23-APR-2018 10:08**
Data file Sample Info. Line: LCS564;LCS564;1;3;LCS;;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	3.508 (-0.006)	348	65	342941 (3)	250.00	
66) Fluorobenzene	6.983 (0.000)	918	96	1229965 (-2)	50.00	
101) Chlorobenzene-d5	10.739 (0.000)	1534	117	971440 (-3)	50.00	
132) 1,4-Dichlorobenzene-d4	12.744 (0.000)	1863	152	549729 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	6.063 (-0.001)	113	314880	49.699	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	6.532 (0.000)	102	71311	50.312	101%		80 - 120
84) Toluene-d8	(3)	9.129 (0.000)	98	1209508	49.672	99%		80 - 120
115) 4-Bromofluorobenzene	(3)	11.818 (0.000)	95	481103	51.609	103%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.588 (0.000)	85	163084	20.757	20.76			0.5	1
4) Chloromethane	(2)	1.765 (-0.000)	50	117718	19.070	19.07			0.5	1
5) 1,3-Butadiene	(2)	1.868 (0.000)	39	98313	19.410	19.41			0.5	1
6) Vinyl Chloride	(2)	1.844 (0.000)	62	119376	19.407	19.41			0.5	1
8) Bromomethane	(2)	2.136 (0.000)	94	97289M	19.551	19.55			0.5	1
9) Chloroethane	(2)	2.228 (0.000)	64	59892	18.593	18.59			0.5	1
11) n-Pentane	(2)	2.502 (0.000)	43	121464	19.686	19.69			2	10
12) Trichlorofluoromethane	(2)	2.441 (-0.001)	101	169659	20.329	20.33			0.5	1
14) Ethyl ether	(2)	2.685 (0.000)	59	101280	18.993	18.99			2	5
15) Freon 123a	(2)	2.770 (0.000)	67	153297	22.798	22.80			2	5
16) Acrolein	(1)	2.825 (0.001)	56	329968	120.487	120.49			40	100
17) 1,1-Dichloroethene	(2)	2.960 (-0.001)	96	121059	23.158	23.16			0.5	1
18) Acetone	(1)	2.966 (0.001)	58	160441	143.058	143.06			6	20
19) Freon 113	(2)	2.972 (0.000)	101	128712	22.677	22.68			2	10
21) 2-Propanol	(1)	3.112 (-0.000)	45	116666	159.741	159.74			50	100
22) Methyl Iodide	(2)	3.130 (0.000)	142	238576	20.580	20.58			0.5	1
23) Carbon Disulfide	(2)	3.197 (-0.000)	76	309050	19.826	19.83			1	5
25) Allyl Chloride	(2)	3.331 (0.000)	41	186323	20.676	20.68			1	5
27) Methyl Acetate	(2)	3.313 (0.000)	43	164351	21.001	21.00			1	5
28) Methylene Chloride	(2)	3.490 (0.000)	84	141695M	21.785	21.79			0.5	1
30) t-Butyl alcohol	(1)	3.612 (0.000)	59	312956	200.112	200.11			5	20
31) Acrylonitrile	(2)	3.776 (-0.000)	53	418152	108.420	108.42			4	20
32) trans-1,2-Dichloroethene	(2)	3.837 (0.000)	96	135217	21.594	21.59			0.5	1
33) Methyl Tertiary Butyl Ether	(2)	3.831 (-0.000)	73	388325	21.134	21.13			0.5	1
34) n-Hexane	(2)	4.228 (0.000)	57	181540	21.376	21.38			2	5
36) 1,1-Dichloroethane	(2)	4.465 (0.000)	63	229339	20.834	20.83			0.5	1
38) di-Isopropyl ether	(2)	4.532 (0.000)	45	419367	20.885	20.88			0.5	1
39) 2-Chloro-1,3-butadiene	(2)	4.581 (-0.000)	53	179156	21.042	21.04			1	5
40) Ethyl t-butyl ether	(2)	5.093 (-0.000)	59	374283	20.326	20.33			0.5	1
42) cis-1,2-Dichloroethene	(2)	5.325 (-0.000)	96	156480	21.540	21.54			0.5	1
43) 1,2-Dichloroethene (Total)	(2)		96	291697	43.134	43.13			0.5	1

M = Compound was manually integrated.

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49. Target 3.5 esignature user ID: lcp00895

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23s01.d Injection date and time: **23-APR-2018 10:08**
Data file Sample Info. Line: LCS564;LCS564;1;3;LCS;;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	5.313(-0.000)	43	885410	165.971	165.97			3	10
45) 2,2-Dichloropropane	(2)	5.331(0.000)	77	148618	23.195	23.19			0.5	1
47) Propionitrile	(1)	5.398(0.002)	54	255214	142.044	142.04			30	100
48) Methacrylonitrile	(2)	5.624(0.000)	67	669359	157.175	157.18			10	50
49) Bromochloromethane	(2)	5.672(-0.000)	128	76309	20.121	20.12			1	5
50) Tetrahydrofuran	(1)	5.685(0.001)	71	167301	85.666	85.67			4	10
51) Chloroform	(2)	5.837(-0.000)	83	240224	20.993	20.99			0.5	1
53) 1,1,1-Trichloroethane	(2)	6.056(-0.000)	97	207545	19.759	19.76			0.5	1
54) Cyclohexane	(2)	6.154(-0.000)	56	218292	22.020	22.02			2	5
55) 1,1-Dichloropropene	(2)	6.282(0.000)	75	175273	20.469	20.47			1	5
56) Carbon Tetrachloride	(2)	6.270(0.000)	117	174854	21.800	21.80			0.5	1
58) Isobutyl Alcohol	(1)	6.483(0.003)	41	251937	509.788	509.79			100	250
60) Benzene	(2)	6.556(-0.000)	78	568506	20.889	20.89			0.5	1
61) 1,2-Dichloroethane	(2)	6.642(-0.000)	62	174726	20.661	20.66			0.5	1
72) t-Amyl ethyl ether	(2)	7.861(-0.000)	87	198358	20.533	20.53			0.5	1
65) t-Amyl methyl ether	(2)	6.770(-0.000)	73	375136	20.349	20.35			0.5	1
67) n-Heptane	(2)	7.014(-0.000)	43	193967	22.123	22.12			2	5
69) n-Butanol	(1)	7.410(0.001)	56	403677	1043.363	1043.36			100	250
71) Trichloroethene	(2)	7.489(-0.000)	95	146502	20.548	20.55			0.5	1
73) Methylcyclohexane	(2)	7.794(-0.000)	83	234519	21.124	21.12			1	5
74) 1,2-Dichloropropane	(2)	7.837(-0.000)	63	146631	21.367	21.37			0.5	1
75) Dibromomethane	(2)	7.946(-0.000)	93	91731	20.450	20.45			0.5	1
76) 1,4-Dioxane	(1)	7.940(-0.001)	88	56619M	531.954	531.95			70	250
77) Methyl Methacrylate	(2)	7.946(-0.000)	69	130676	20.840	20.84			1	5
79) Bromodichloromethane	(2)	8.202(-0.000)	83	168679	20.852	20.85			0.5	1
80) 2-Nitropropane	(2)	8.489(-0.000)	41	47053	19.907	19.91			2	10
81) 2-Chloroethyl Vinyl Ether	(2)	8.599(-0.000)	63	106064	20.202	20.20			2	10
82) cis-1,3-Dichloropropene	(2)	8.788(-0.000)	75	222227	20.861	20.86			0.5	1
83) 4-Methyl-2-pentanone	(2)	8.989(-0.000)	43	1177627	107.424	107.42			3	10
89) Toluene	(3)	9.214(0.000)	92	372119	20.583	20.58			0.5	1
90) trans-1,3-Dichloropropene	(3)	9.525(-0.000)	75	192620	20.275	20.27			0.5	1
91) 1,3-Dichloropropene (total)	(3)		100	414847	41.135	41.14			1	5
92) Ethyl Methacrylate	(3)	9.604(0.000)	69	215332	20.369	20.37			1	5
93) 1,1,2-Trichloroethane	(3)	9.745(0.000)	97	144775	21.377	21.38			0.5	1
94) Tetrachloroethene	(3)	9.830(-0.000)	166	169785	19.916	19.92			0.5	1
95) 1,3-Dichloropropane	(3)	9.922(0.000)	76	224537	20.797	20.80			0.5	1
97) 2-Hexanone	(3)	9.995(0.000)	43	944975	104.046	104.05			3	10
98) Dibromochloromethane	(3)	10.153(0.000)	129	143992	21.033	21.03			0.5	1
100) 1,2-Dibromoethane	(3)	10.269(0.000)	107	153350	20.806	20.81			0.5	1
102) 1-Chlorohexane	(3)	10.769(-0.000)	91	202884	20.769	20.77			1	5
103) Chlorobenzene	(3)	10.769(-0.000)	112	432584	20.335	20.34			0.5	1
104) 1,1,1,2-Tetrachloroethane	(3)	10.860(0.000)	131	143320	20.465	20.47			0.5	1
105) Ethylbenzene	(3)	10.866(-0.000)	91	723335	21.038	21.04			0.5	1
107) m+p-Xylene	(3)	10.994(-0.000)	106	573809	41.629	41.63			0.5	1
108) o-Xylene	(3)	11.342(0.000)	106	276030	20.261	20.26			0.5	1
109) Xylene (Total)	(3)		106	849839	61.890	61.89			0.5	1
110) Styrene	(3)	11.360(-0.000)	104	457057	20.878	20.88			1	5
111) Bromoform	(3)	11.525(-0.000)	173	99762	20.986	20.99			0.5	4
112) Isopropylbenzene	(3)	11.665(-0.000)	105	710963	21.222	21.22			1	5
113) Cyclohexanone	(1)	11.738(0.005)	55	201284M	374.593	374.59			25	100
116) Bromobenzene	(4)	11.933(0.000)	156	193143	19.624	19.62			1	5
117) 1,1,2,2-Tetrachloroethane	(4)	11.933(0.000)	83	237190	20.807	20.81			0.5	1
118) 1,2,3-Trichloropropane	(4)	11.976(0.000)	110	70525	20.774	20.77			1	5
119) trans-1,4-Dichloro-2-butene	(4)	11.964(-0.000)	53	331016	112.982	112.98			15	50

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP26285.i/18apr23a.b/5a23s01.d Injection date and time: **23-APR-2018 10:08**
Data file Sample Info. Line: LCS564;LCS564;1;3;LCS;;;;5a23b01; Instrument ID: **HP26285.i** Batch: **5181131AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Blank Data file reference: **/chem2/HP26285.i/18apr23a.b/5a23b01.d**

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: **8260W-DH**
Calibration date and time (Last Method Edit): 23-APR-2018 09:56
Mid Level Daily Calibration Standard Reference: **/chem2/HP26285.i/18apr23a.b/5a23c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
120) n-Propylbenzene	(4)	12.019(0.000)	91	864904	21.484	21.48			1	5
121) 2-Chlorotoluene	(4)	12.092(0.000)	126	178277	20.264	20.26			1	5
122) 4-Chlorotoluene	(4)	12.189(0.000)	126	183629	19.889	19.89			1	5
123) 1,3,5-Trimethylbenzene	(4)	12.165(0.000)	105	602003	20.676	20.68			1	5
125) tert-Butylbenzene	(4)	12.415(0.000)	134	135865	20.501	20.50			1	5
126) Pentachloroethane	(4)	12.446(0.000)	167	110261	19.331	19.33			1	5
127) 1,2,4-Trimethylbenzene	(4)	12.464(-0.000)	105	626882	20.977	20.98			1	5
128) sec-Butylbenzene	(4)	12.592(-0.000)	105	774211	21.449	21.45			1	5
130) 1,3-Dichlorobenzene	(4)	12.683(0.000)	146	365393	19.658	19.66			1	5
131) p-Isopropyltoluene	(4)	12.702(0.000)	119	674920	21.255	21.25			1	5
134) 1,4-Dichlorobenzene	(4)	12.762(-0.000)	146	378193	20.337	20.34			1	5
135) 1,2,3-Trimethylbenzene	(4)	12.781(-0.000)	105	649588	20.845	20.85			1	5
136) Benzyl Chloride	(4)	12.848(-0.000)	91	409212	18.864	18.86			1	5
137) 1,3-Diethylbenzene	(4)	12.915(-0.000)	119	393952	19.895	19.90			1	5
138) 1,4-Diethylbenzene	(4)	12.988(0.000)	119	414520	20.137	20.14			1	5
139) 1,2-Dichlorobenzene	(4)	13.031(-0.000)	146	343031	19.934	19.93			1	5
140) n-Butylbenzene	(4)	13.006(-0.000)	92	335677	21.019	21.02			1	5
141) 1,2-Diethylbenzene	(4)	13.061(-0.000)	119	333552M	20.163	20.16			1	5
142) Diethylbenzene (total)	(4)		100	1142024	60.195	60.20			1	5
143) 1,2-Dibromo-3-chloropropane	(4)	13.598(-0.000)	75	49756	21.399	21.40			2	5
145) 1,3,5-Trichlorobenzene	(4)	13.732(-0.000)	180	255746	19.871	19.87			1	5
147) 1,2,4-Trichlorobenzene	(4)	14.171(0.000)	180	227336	19.631	19.63			1	5
148) Hexachlorobutadiene	(4)	14.262(-0.000)	225	108353	21.254	21.25			2	5
149) Naphthalene	(4)	14.360(-0.000)	128	714588	20.313	20.31			1	5
150) 1,2,3-Trichlorobenzene	(4)	14.506(0.000)	180	207773	19.991	19.99			1	5
151) 2-Methylnaphthalene	(4)	15.128(-0.000)	142	350436	17.686	17.69			2	5

M = Compound was manually integrated.

Total number of targets = 111

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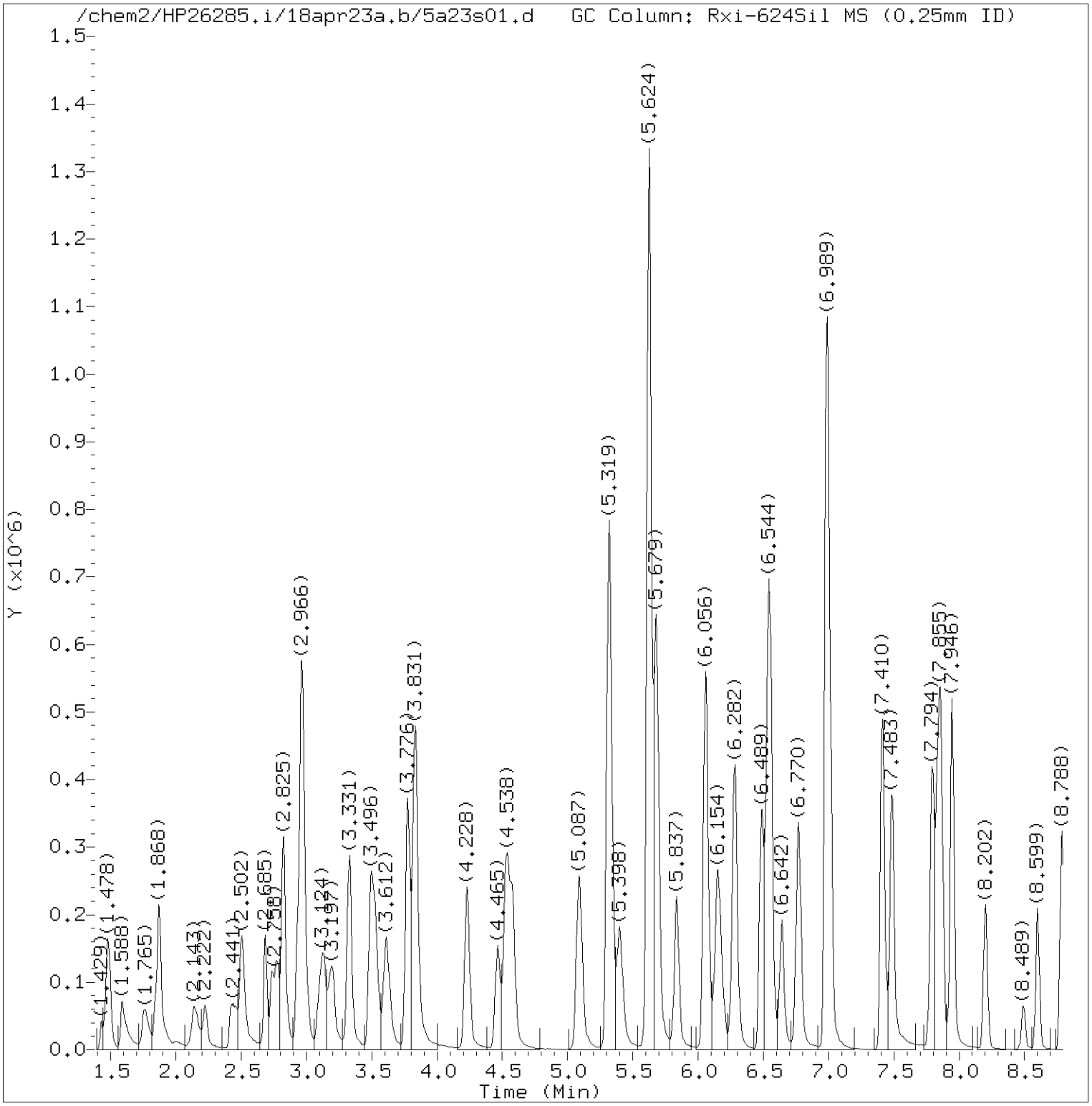
Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

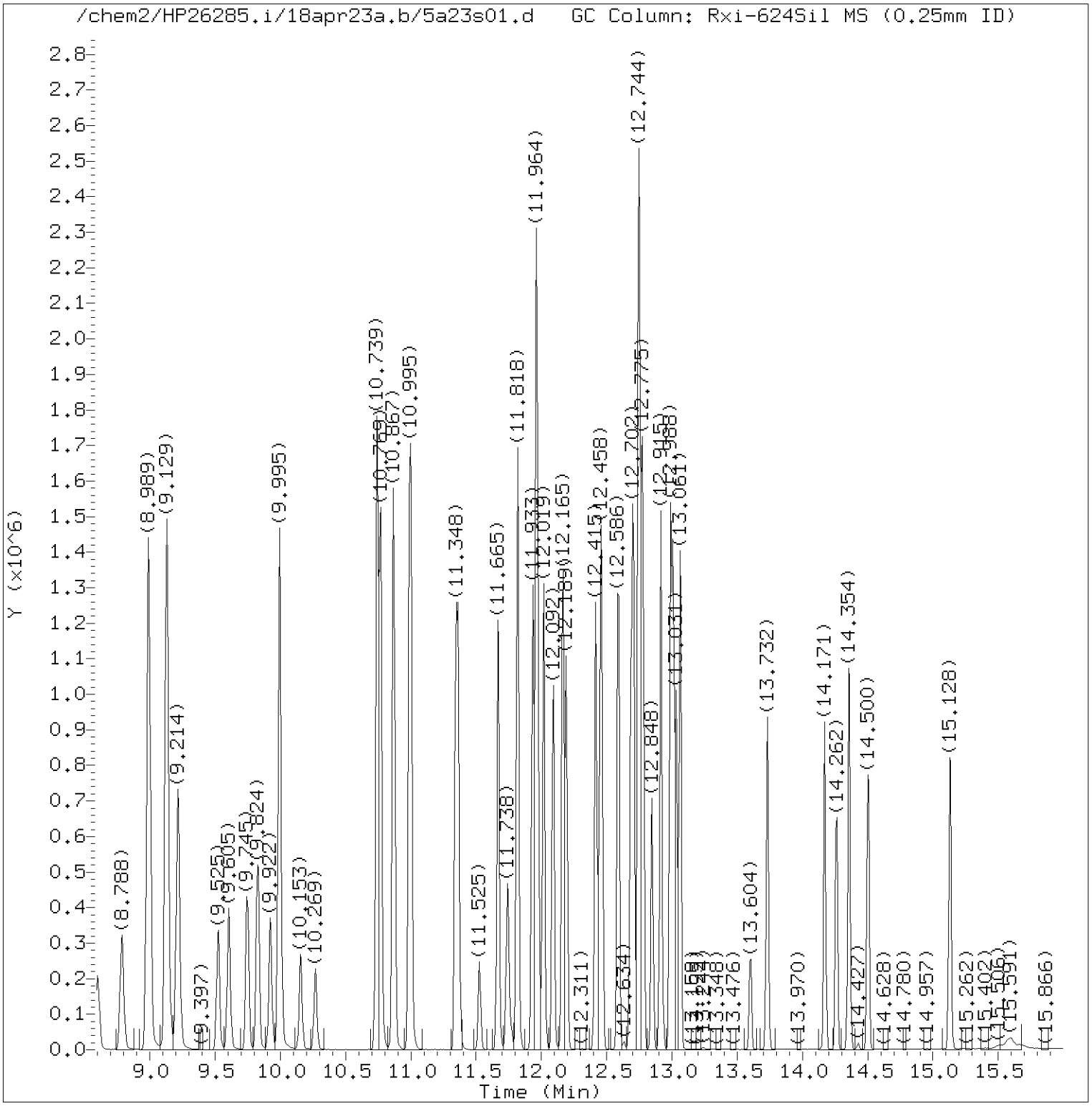
Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.588	85	163084	20.757
4) Chloromethane	(2)	1.765	50	117718	19.070
6) Vinyl Chloride	(2)	1.844	62	119376	19.407
5) 1,3-Butadiene	(2)	1.868	39	98313	19.410
8) Bromomethane	(2)	2.137	94	97289M	19.551
9) Chloroethane	(2)	2.228	64	59892	18.593
12) Trichlorofluoromethane	(2)	2.441	101	169659	20.329
11) n-Pentane	(2)	2.502	43	121464	19.686
14) Ethyl ether	(2)	2.685	59	101280	18.993
15) Freon 123a	(2)	2.771	67	153297	22.798
16) Acrolein	(1)	2.825	56	329968	120.487
17) 1,1-Dichloroethene	(2)	2.960	96	121059	23.158
18) Acetone	(1)	2.966	58	160441	143.058
19) Freon 113	(2)	2.972	101	128712	22.677
21) 2-Propanol	(1)	3.112	45	116666	159.741
22) Methyl Iodide	(2)	3.130	142	238576	20.580
23) Carbon Disulfide	(2)	3.197	76	309050	19.826
27) Methyl Acetate	(2)	3.313	43	164351	21.001
25) Allyl Chloride	(2)	3.331	41	186323	20.676
28) Methylene Chloride	(2)	3.490	84	141695M	21.785
29)*t-Butyl alcohol-d10	(1)	3.508	65	342941	250.000
30) t-Butyl alcohol	(1)	3.612	59	312956	200.112
31) Acrylonitrile	(2)	3.776	53	418152	108.420
33) Methyl Tertiary Butyl Ether	(2)	3.831	73	388325	21.134
32) trans-1,2-Dichloroethene	(2)	3.837	96	135217	21.594
34) n-Hexane	(2)	4.228	57	181540	21.376
36) 1,1-Dichloroethane	(2)	4.465	63	229339	20.834
38) di-Isopropyl ether	(2)	4.532	45	419367	20.885
39) 2-Chloro-1,3-butadiene	(2)	4.581	53	179156	21.042
40) Ethyl t-butyl ether	(2)	5.093	59	374283	20.326
44) 2-Butanone	(2)	5.313	43	885410	165.971
42) cis-1,2-Dichloroethene	(2)	5.325	96	156480	21.540
45) 2,2-Dichloropropane	(2)	5.331	77	148618	23.195
47) Propionitrile	(1)	5.398	54	255214	142.044
48) Methacrylonitrile	(2)	5.624	67	669359	157.175
49) Bromochloromethane	(2)	5.672	128	76309	20.121
50) Tetrahydrofuran	(1)	5.685	71	167301	85.666
51) Chloroform	(2)	5.837	83	240224	20.993

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
53) 1,1,1-Trichloroethane	(2)	6.056	97	207545	19.759
52)$Dibromofluoromethane	(2)	6.063	113	314880	49.699
54) Cyclohexane	(2)	6.154	56	218292	22.020
43) 1,2-Dichloroethene (Total)	(2)		96	291697	43.134
56) Carbon Tetrachloride	(2)	6.270	117	174854	21.800
55) 1,1-Dichloropropene	(2)	6.282	75	175273	20.469
58) Isobutyl Alcohol	(1)	6.483	41	251937	509.788
57)$1,2-Dichloroethane-d4	(2)	6.532	102	71311	50.312
60) Benzene	(2)	6.556	78	568506	20.889
61) 1,2-Dichloroethane	(2)	6.642	62	174726	20.661
65) t-Amyl methyl ether	(2)	6.770	73	375136	20.349
66)*Fluorobenzene	(2)	6.983	96	1229965	50.000
67) n-Heptane	(2)	7.014	43	193967	22.123
69) n-Butanol	(1)	7.410	56	403677	1043.363
71) Trichloroethene	(2)	7.489	95	146502	20.548
73) Methylcyclohexane	(2)	7.794	83	234519	21.124
74) 1,2-Dichloropropane	(2)	7.837	63	146631	21.367
72) t-Amyl ethyl ether	(2)	7.861	87	198358	20.533
76) 1,4-Dioxane	(1)	7.940	88	56619M	531.954
77) Methyl Methacrylate	(2)	7.946	69	130676	20.840
75) Dibromomethane	(2)	7.946	93	91731	20.450
79) Bromodichloromethane	(2)	8.202	83	168679	20.852
80) 2-Nitropropane	(2)	8.489	41	47053	19.907
81) 2-Chloroethyl Vinyl Ether	(2)	8.599	63	106064	20.202
82) cis-1,3-Dichloropropene	(2)	8.788	75	222227	20.861
83) 4-Methyl-2-pentanone	(2)	8.989	43	1177627	107.424
84)$Toluene-d8	(3)	9.129	98	1209508	49.672
89) Toluene	(3)	9.214	92	372119	20.583
90) trans-1,3-Dichloropropene	(3)	9.525	75	192620	20.275
92) Ethyl Methacrylate	(3)	9.605	69	215332	20.369
93) 1,1,2-Trichloroethane	(3)	9.745	97	144775	21.377
94) Tetrachloroethene	(3)	9.830	166	169785	19.916
95) 1,3-Dichloropropane	(3)	9.922	76	224537	20.797
97) 2-Hexanone	(3)	9.995	43	944975	104.046
91) 1,3-Dichloropropene (total)	(3)		100	414847	41.135
98) Dibromochloromethane	(3)	10.153	129	143992	21.033
100) 1,2-Dibromoethane	(3)	10.269	107	153350	20.806
101)*Chlorobenzene-d5	(3)	10.739	117	971440	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
103) Chlorobenzene	(3)	10.769	112	432584	20.335
102) 1-Chlorohexane	(3)	10.769	91	202884	20.769
104) 1,1,1,2-Tetrachloroethane	(3)	10.860	131	143320	20.465
105) Ethylbenzene	(3)	10.867	91	723335	21.038
107) m+p-Xylene	(3)	10.995	106	573809	41.629
108) o-Xylene	(3)	11.342	106	276030	20.261
110) Styrene	(3)	11.360	104	457057	20.878
111) Bromoform	(3)	11.525	173	99762	20.986
112) Isopropylbenzene	(3)	11.665	105	710963	21.222
113) Cyclohexanone	(1)	11.738	55	201284M	374.593
109) Xylene (Total)	(3)		106	849839	61.890
115)$4-Bromofluorobenzene	(3)	11.818	95	481103	51.609
117) 1,1,2,2-Tetrachloroethane	(4)	11.933	83	237190	20.807
116) Bromobenzene	(4)	11.933	156	193143	19.624
119) trans-1,4-Dichloro-2-butene	(4)	11.964	53	331016	112.982
118) 1,2,3-Trichloropropane	(4)	11.976	110	70525	20.774
120) n-Propylbenzene	(4)	12.019	91	864904	21.484
121) 2-Chlorotoluene	(4)	12.092	126	178277	20.264
123) 1,3,5-Trimethylbenzene	(4)	12.165	105	602003	20.676
122) 4-Chlorotoluene	(4)	12.189	126	183629	19.889
125) tert-Butylbenzene	(4)	12.415	134	135865	20.501
126) Pentachloroethane	(4)	12.445	167	110261	19.331
127) 1,2,4-Trimethylbenzene	(4)	12.464	105	626882	20.977
128) sec-Butylbenzene	(4)	12.592	105	774211	21.449
130) 1,3-Dichlorobenzene	(4)	12.683	146	365393	19.658
131) p-Isopropyltoluene	(4)	12.702	119	674920	21.255
132)*1,4-Dichlorobenzene-d4	(4)	12.744	152	549729	50.000
134) 1,4-Dichlorobenzene	(4)	12.763	146	378193	20.337
135) 1,2,3-Trimethylbenzene	(4)	12.781	105	649588	20.845
136) Benzyl Chloride	(4)	12.848	91	409212	18.864
137) 1,3-Diethylbenzene	(4)	12.915	119	393952	19.895
138) 1,4-Diethylbenzene	(4)	12.988	119	414520	20.137
140) n-Butylbenzene	(4)	13.006	92	335677	21.019
139) 1,2-Dichlorobenzene	(4)	13.031	146	343031	19.934
141) 1,2-Diethylbenzene	(4)	13.061	119	333552M	20.163
142) Diethylbenzene (total)	(4)		100	1142024	60.195
143) 1,2-Dibromo-3-chloropropane	(4)	13.598	75	49756	21.399
145) 1,3,5-Trichlorobenzene	(4)	13.732	180	255746	19.871

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Quant Report

Target Revision 3.5

Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

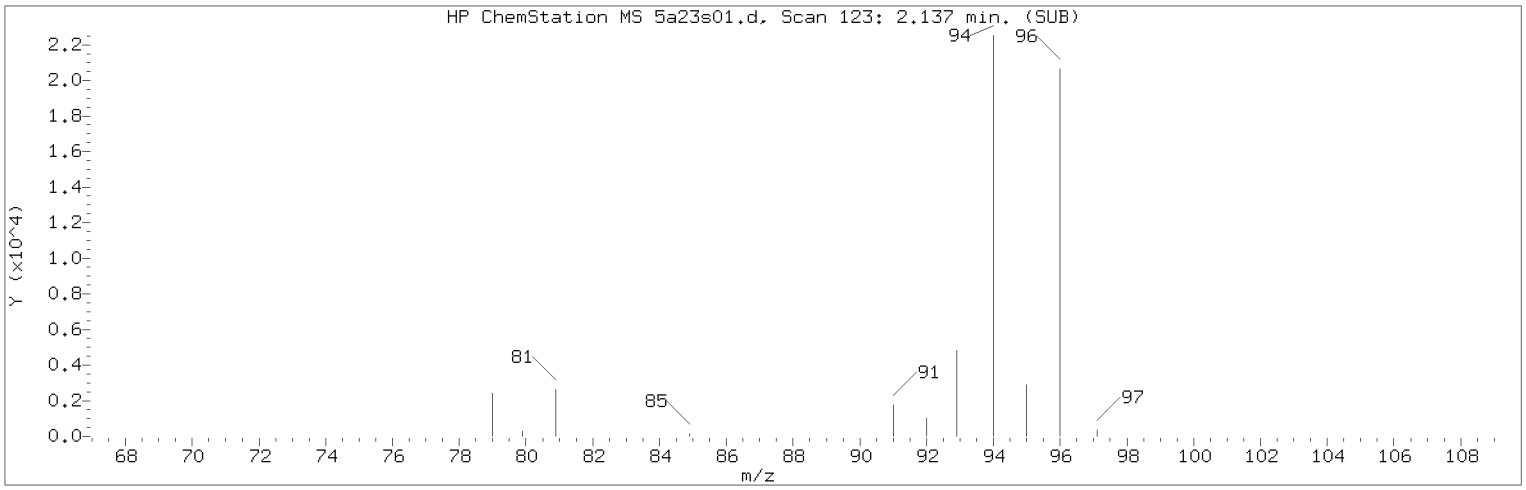
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

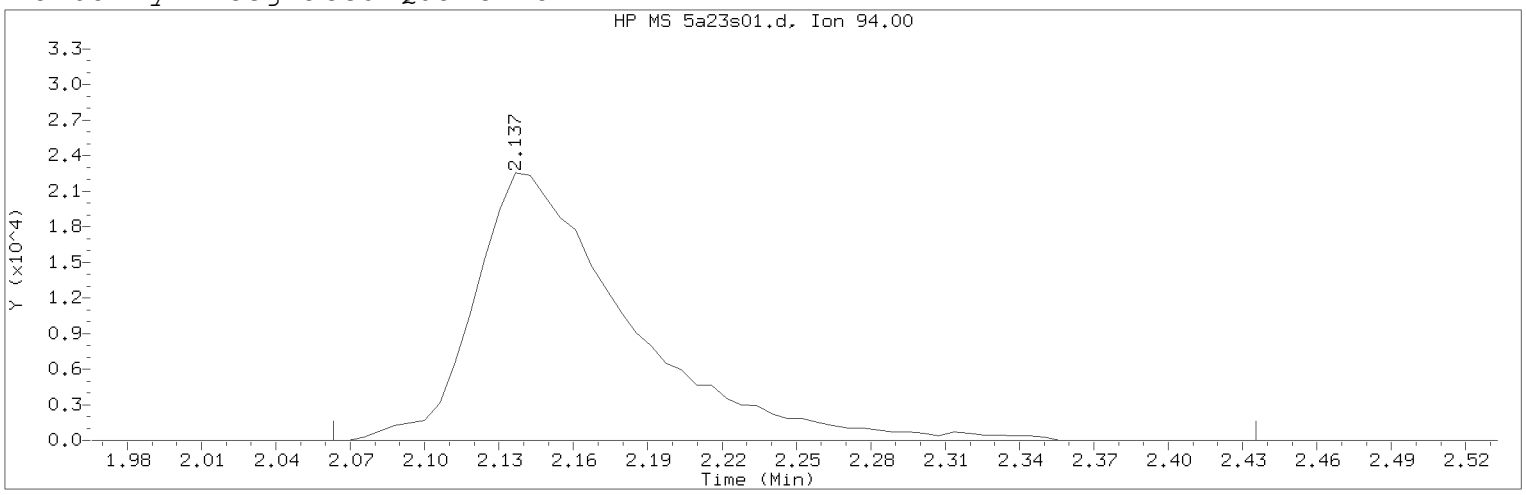
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) 1,2,4-Trichlorobenzene	(4)	14.171	180	227336	19.631
148) Hexachlorobutadiene	(4)	14.262	225	108353	21.254
149) Naphthalene	(4)	14.360	128	714588	20.313
150) 1,2,3-Trichlorobenzene	(4)	14.506	180	207773	19.991
151) 2-Methylnaphthalene	(4)	15.128	142	350436	17.686

Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

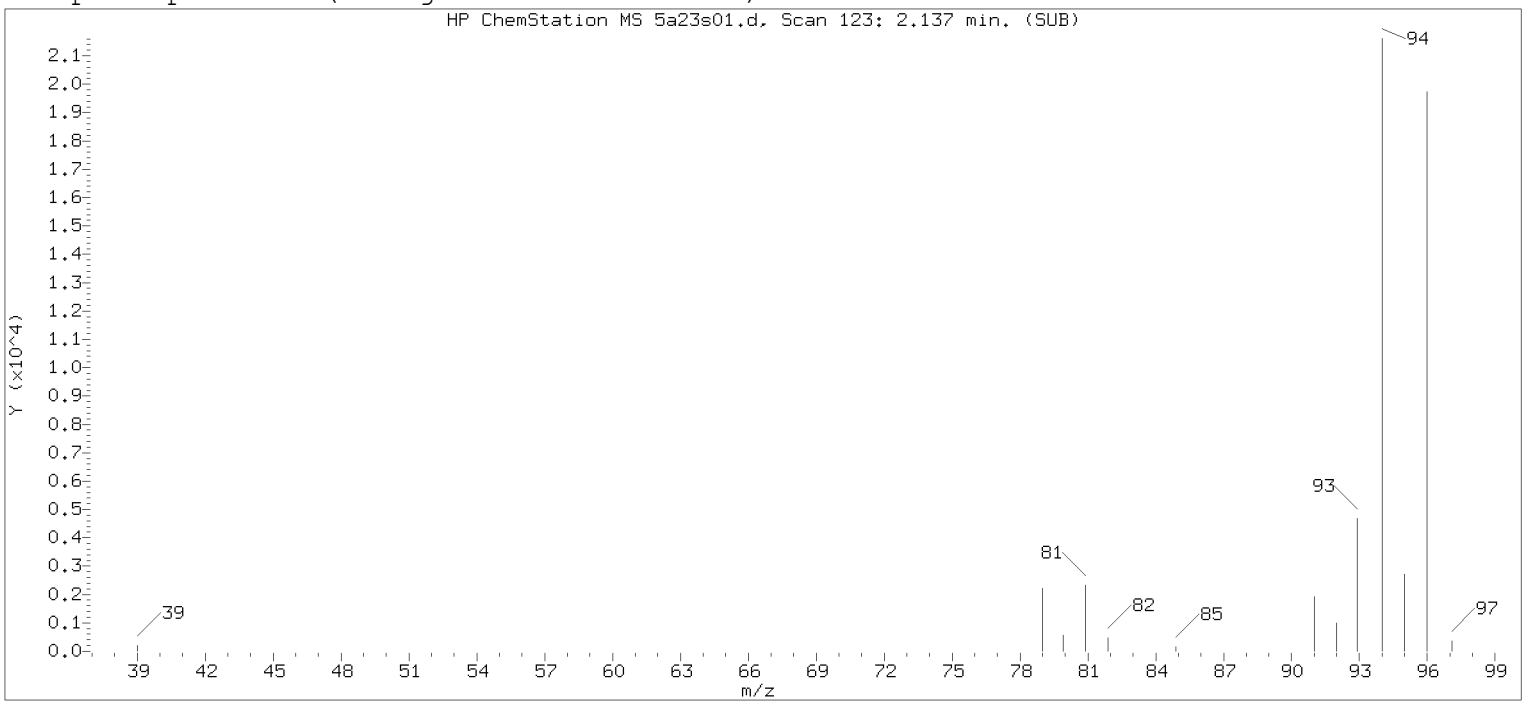
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 123
Retention Time (minutes): 2.137
Quant Ion : 94.00
Area (flag) : 97289M
On-Column Amount (ng) : 19.5506
Integration start scan : 110 Integration stop scan: 171
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

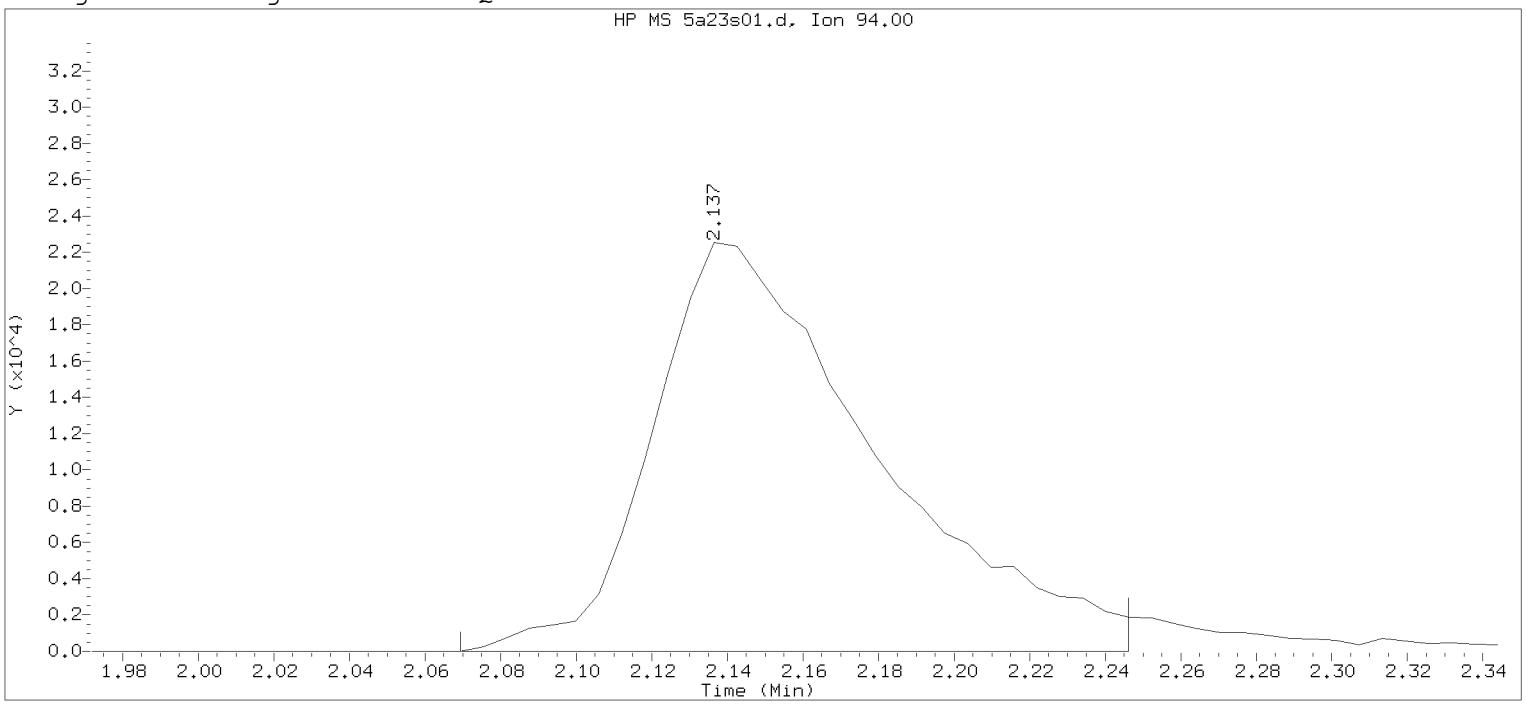
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

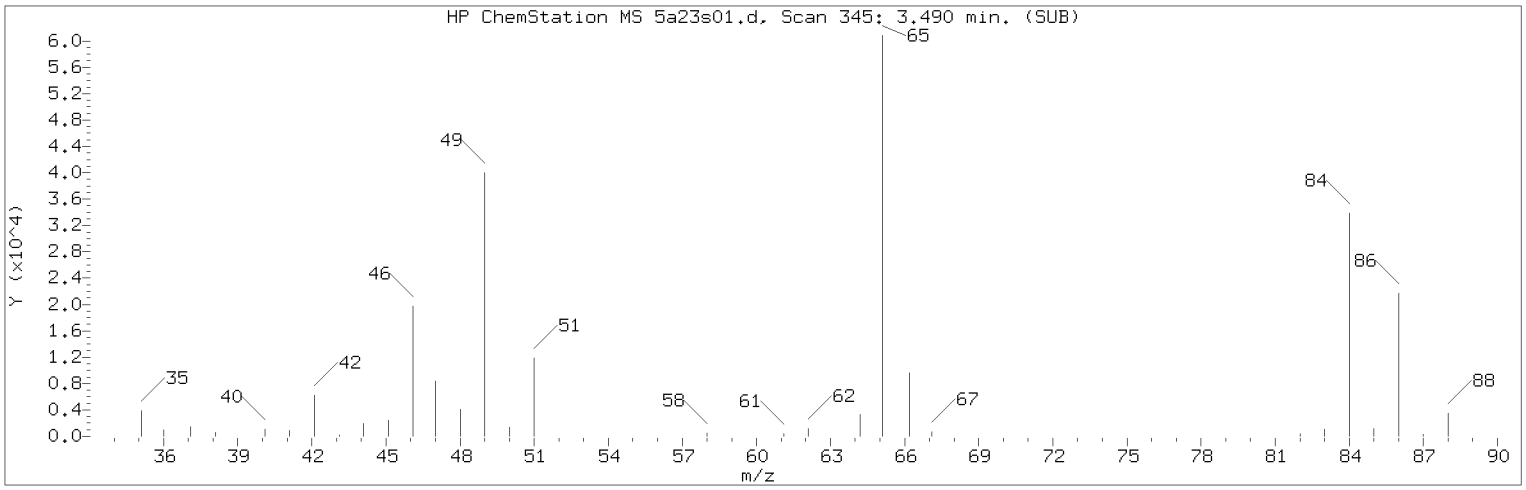
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

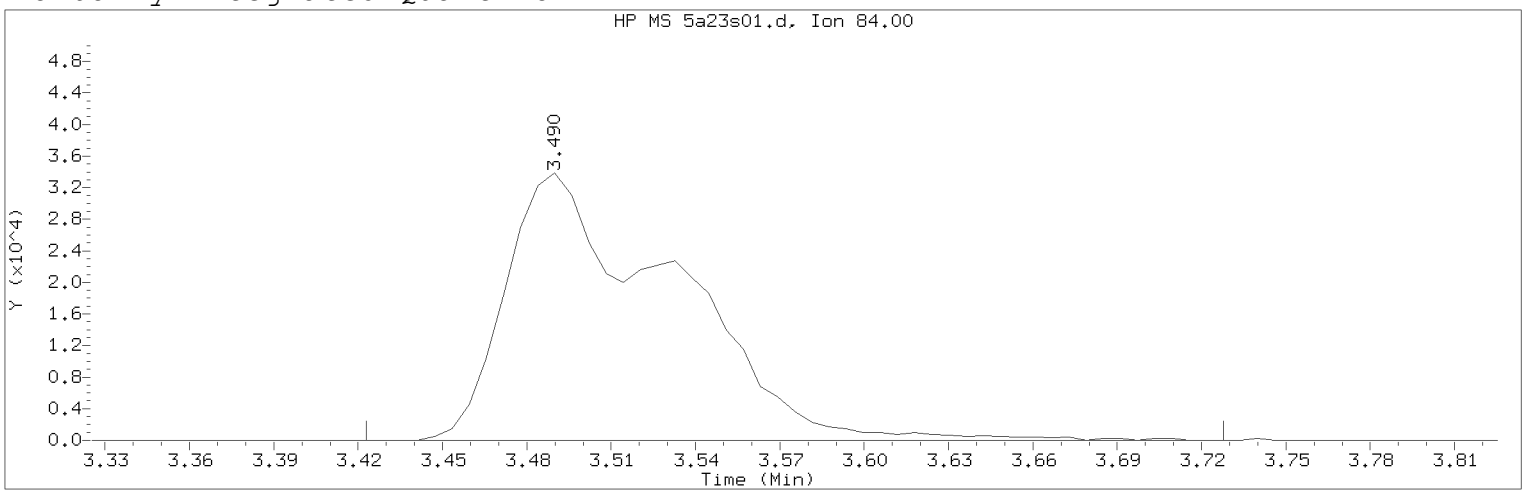
Compound Number : 8
Compound Name : Bromomethane
Scan Number : 123
Retention Time (minutes): 2.137
Quant Ion : 94.00
Area : 92184
On-column Amount (ng) : 18.5247
Integration start scan : 111 Integration stop scan: 140
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49.
Target 3.5 esignature used for this file.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

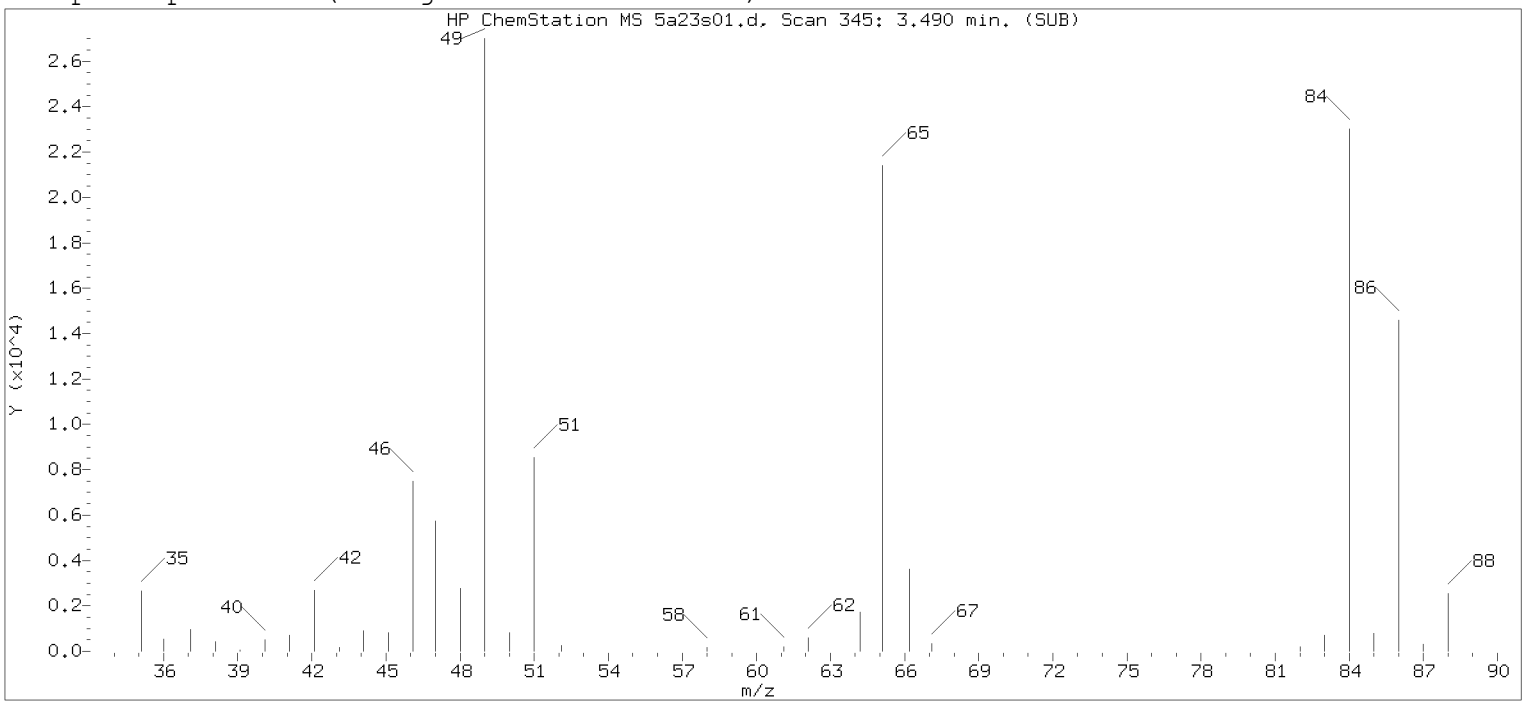
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 345
Retention Time (minutes): 3.490
Quant Ion : 84.00
Area (flag) : 141695M
On-Column Amount (ng) : 21.7850
Integration start scan : 333 Integration stop scan: 383
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

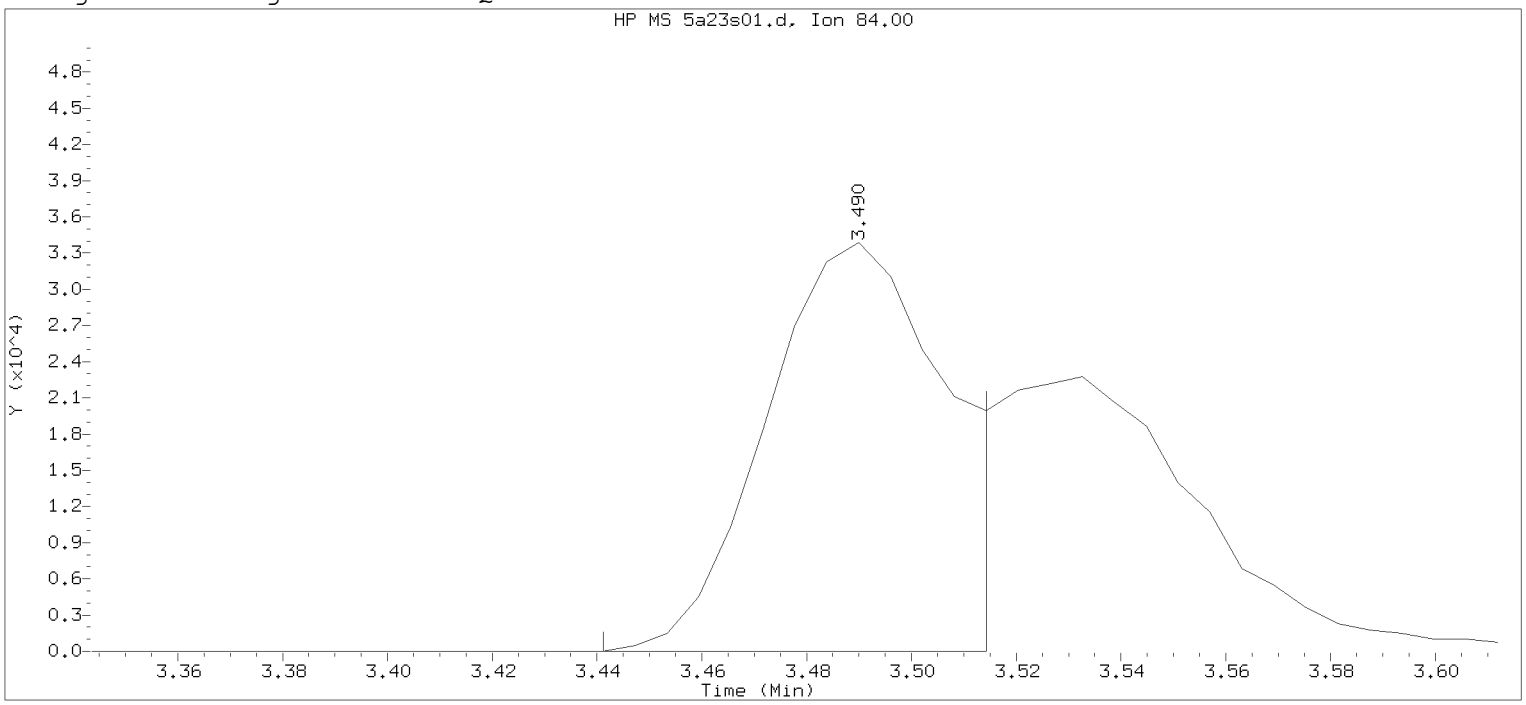
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

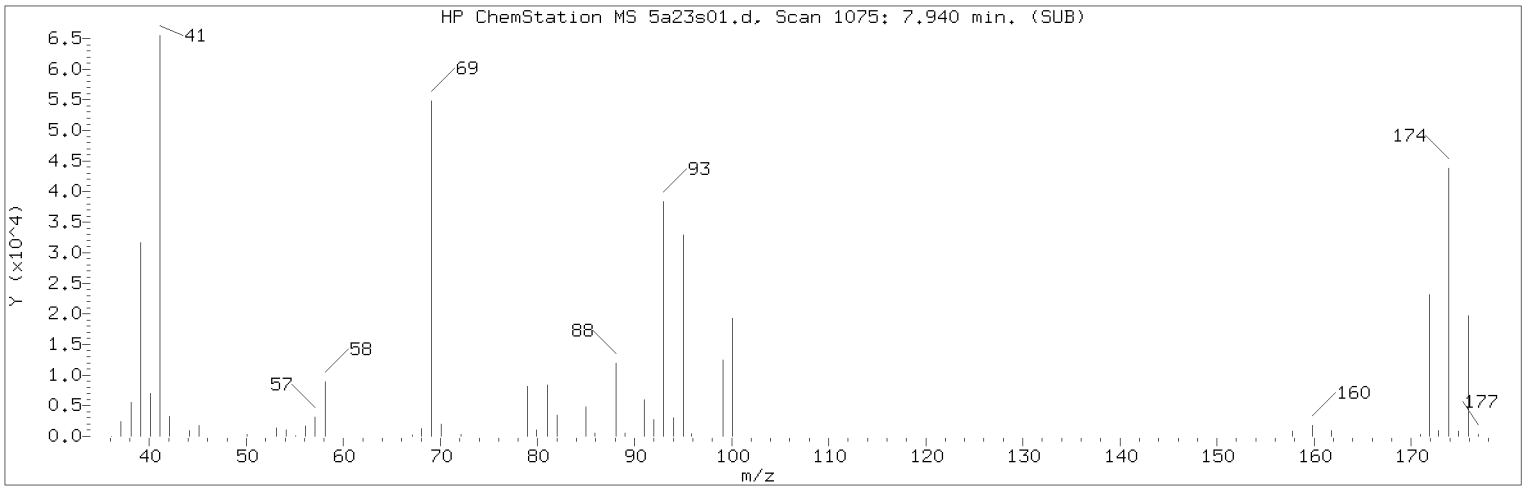
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

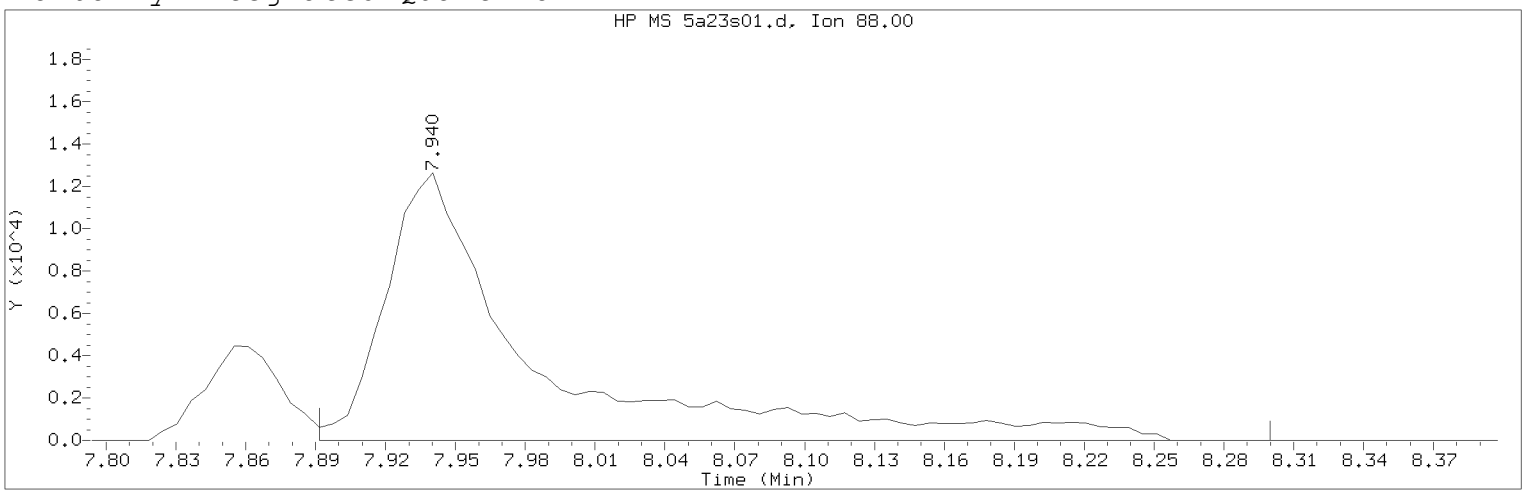
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 345
Retention Time (minutes): 3.490
Quant Ion : 84.00
Area : 78773
On-column Amount (ng) : 12.1111
Integration start scan : 336 Integration stop scan: 348
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

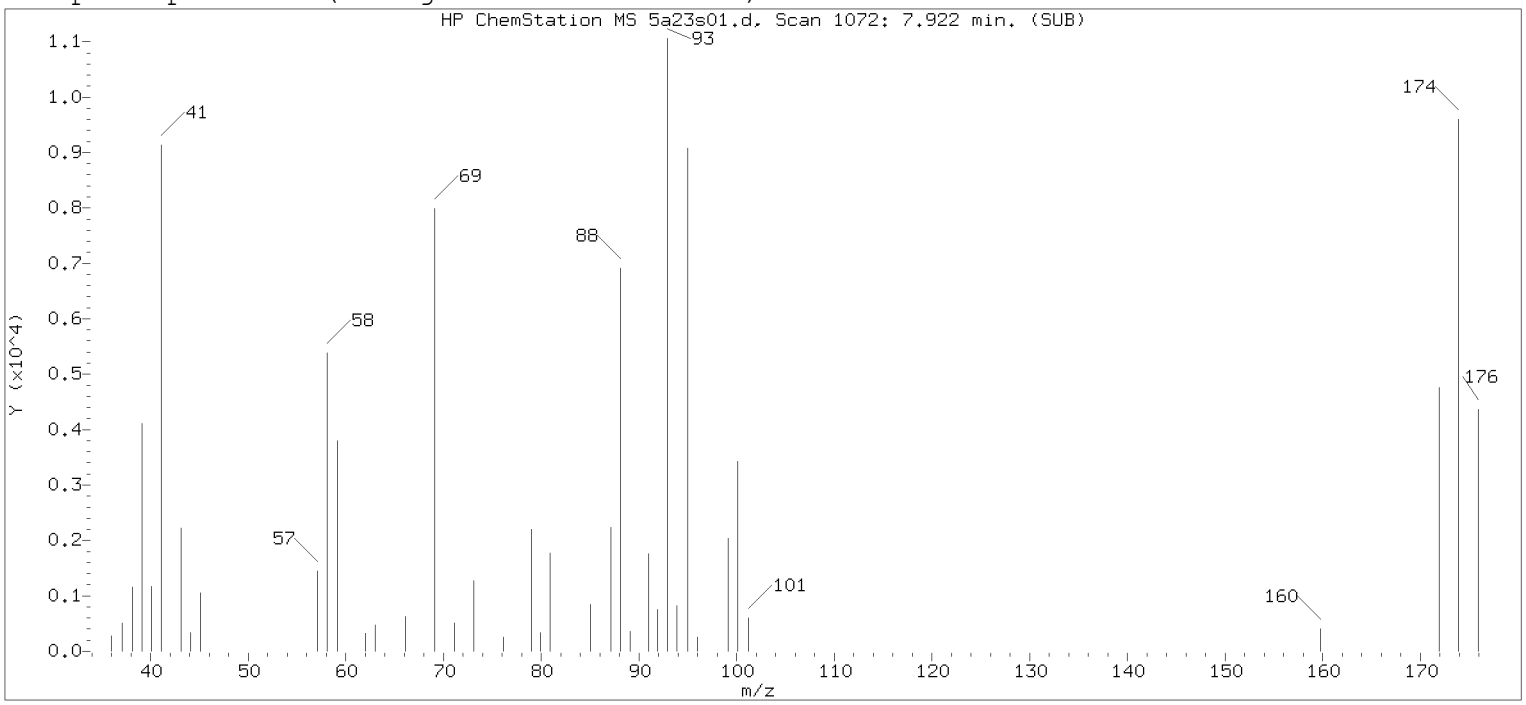
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1075
Retention Time (minutes): 7.940
Quant Ion : 88.00
Area (flag) : 56619M
On-Column Amount (ng) : 531.9542
Integration start scan : 1066 Integration stop scan: 1133
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

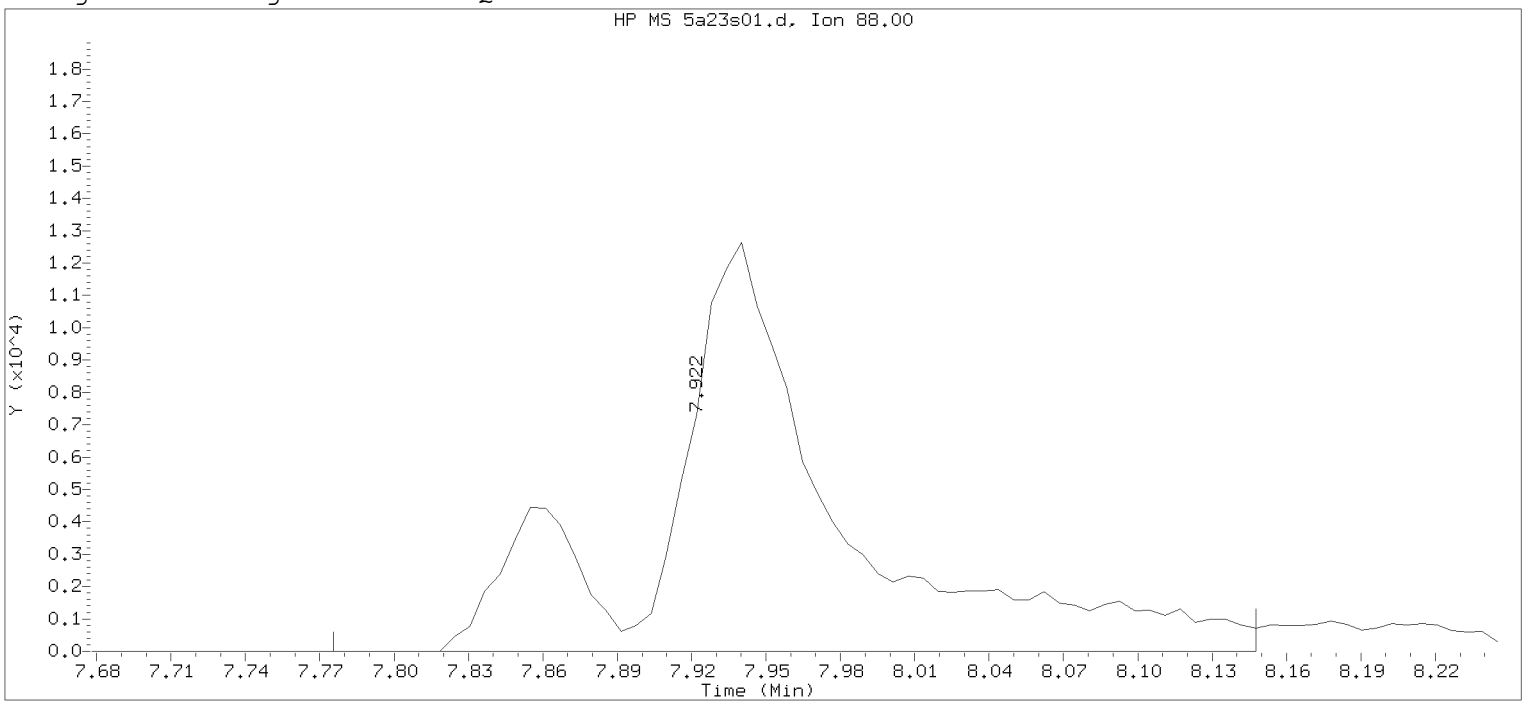
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

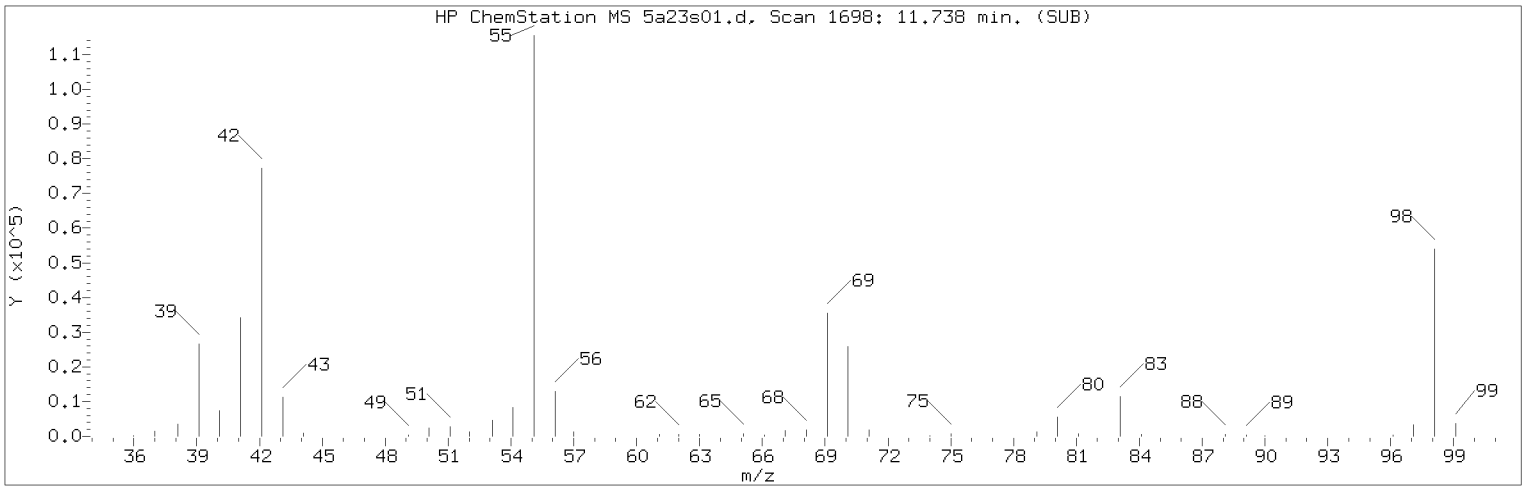
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

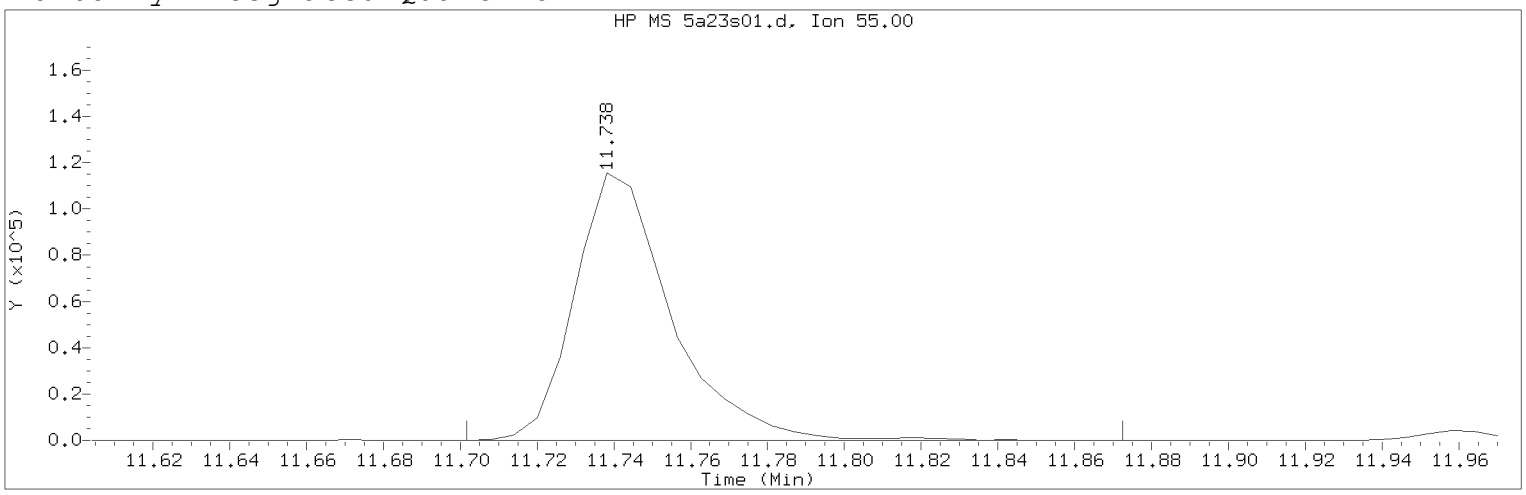
Compound Number : 76
Compound Name : 1,4-Dioxane
Scan Number : 1072
Retention Time (minutes): 7.922
Quant Ion : 88.00
Area : 62149
On-column Amount (ng) : 583.9148
Integration start scan : 1047 Integration stop scan: 1108
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

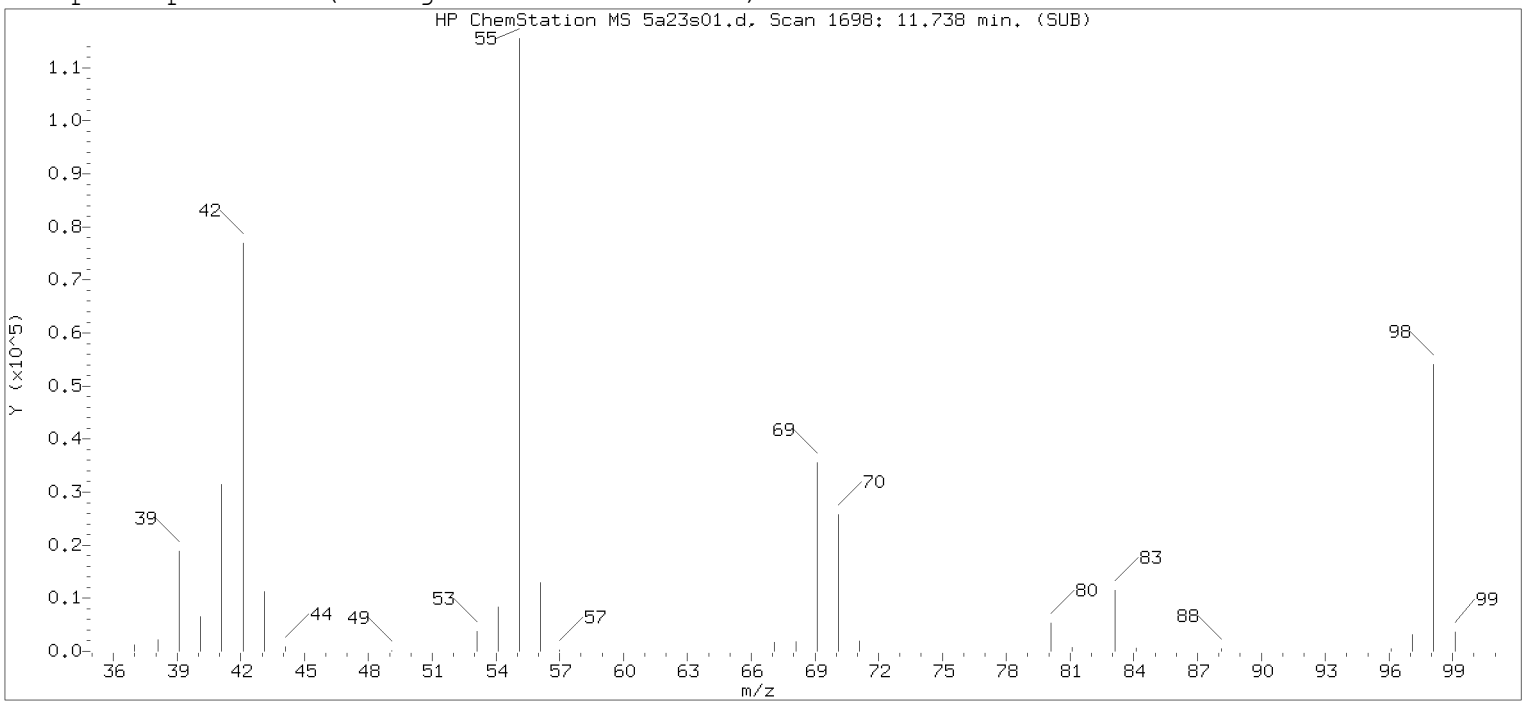
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1698
Retention Time (minutes): 11.738
Quant Ion : 55.00
Area (flag) : 201284M
On-Column Amount (ng) : 374.5935
Integration start scan : 1691 Integration stop scan: 1719
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

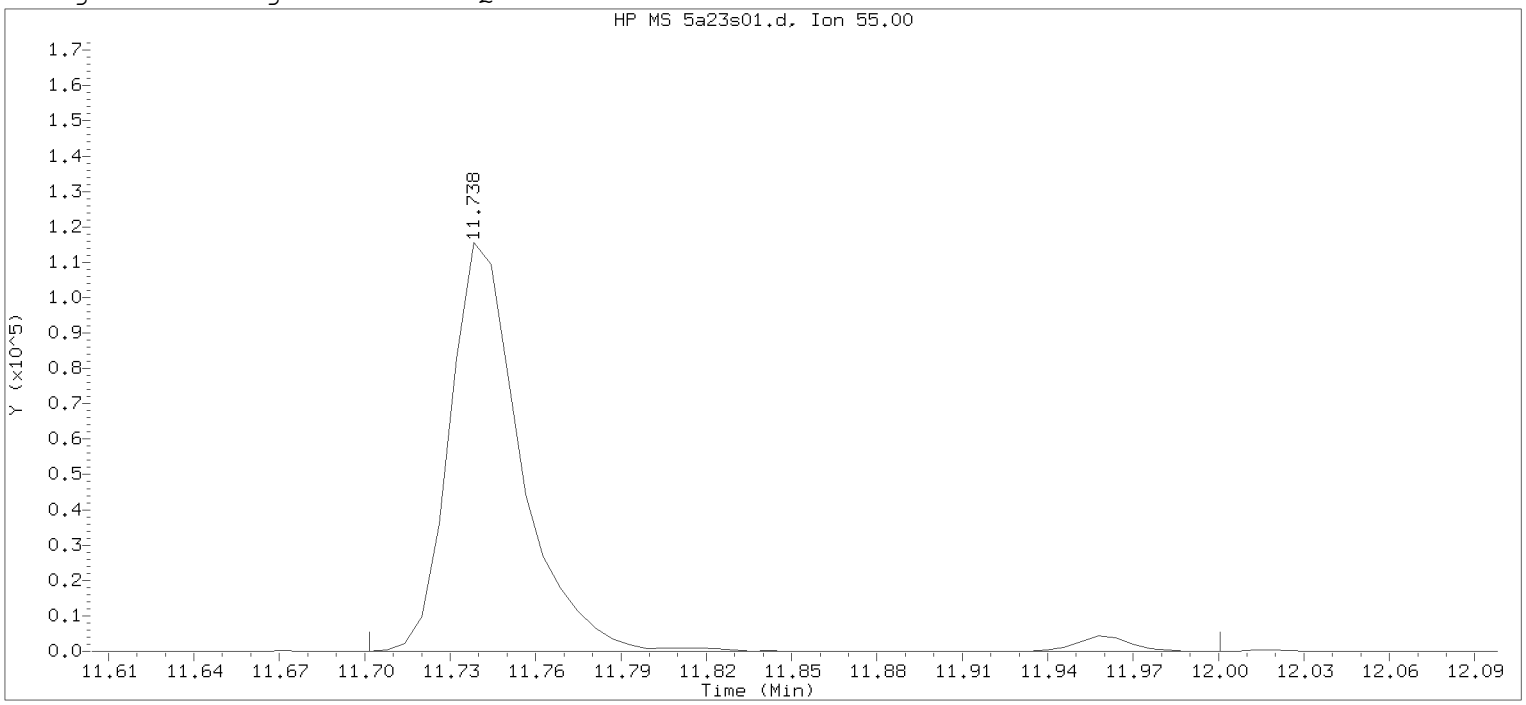
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

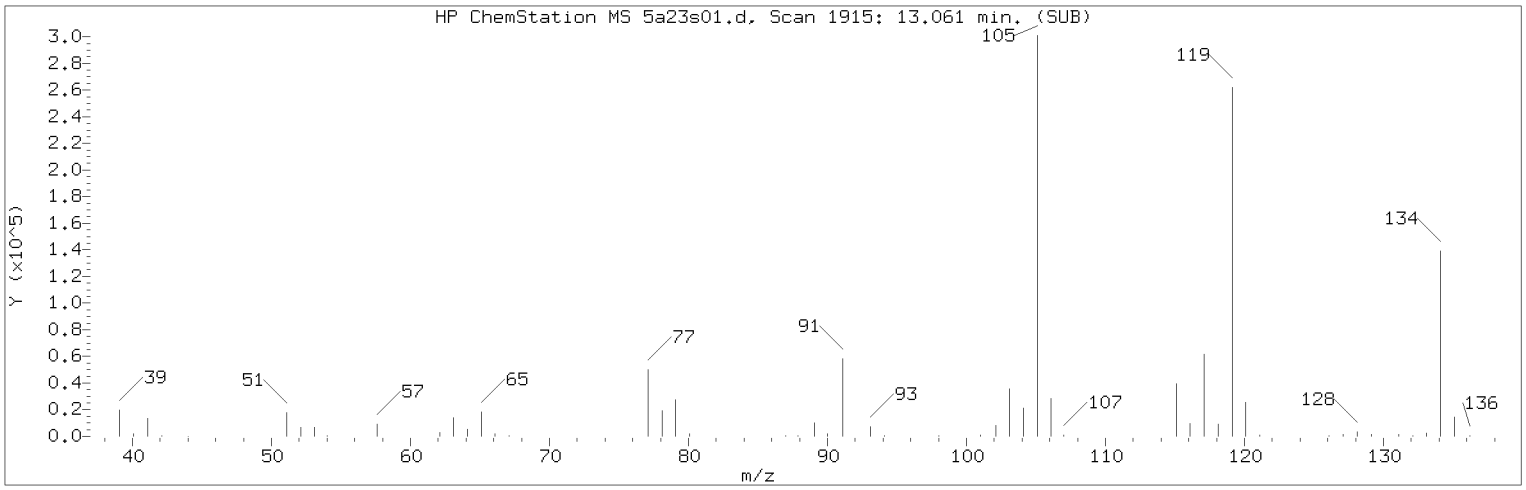
Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

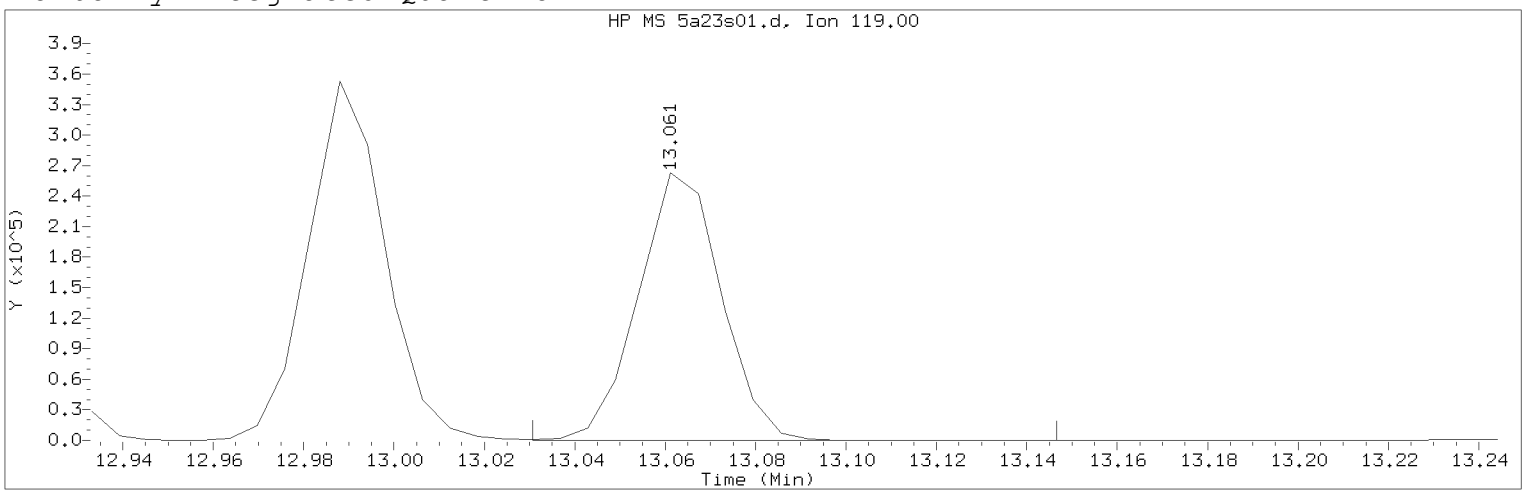
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1698
Retention Time (minutes): 11.738
Quant Ion : 55.00
Area : 206944
On-column Amount (ng) : 385.1256
Integration start scan : 1691 Integration stop scan: 1740
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:48 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

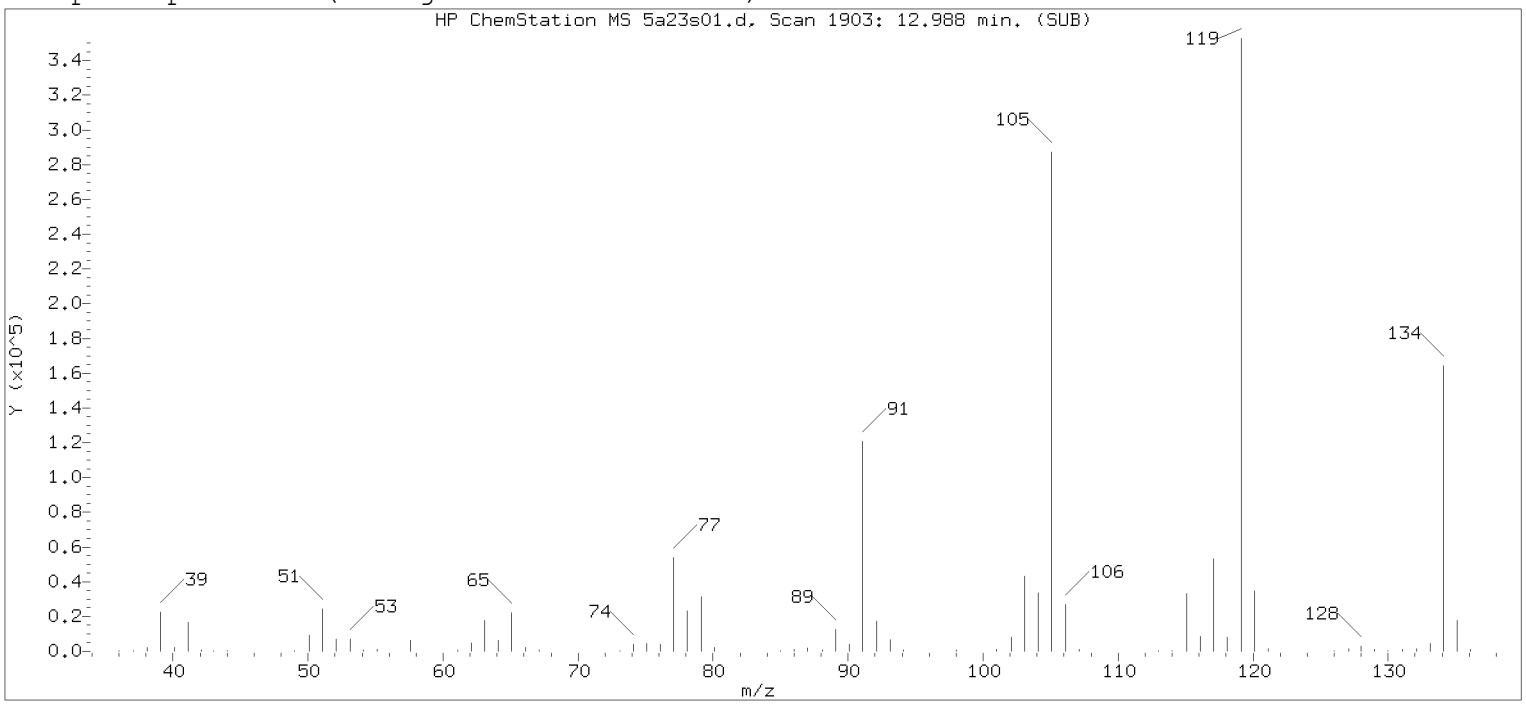
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1915
Retention Time (minutes): 13.061
Quant Ion : 119.00
Area (flag) : 333552M
On-Column Amount (ng) : 20.1631
Integration start scan : 1909 Integration stop scan: 1928
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

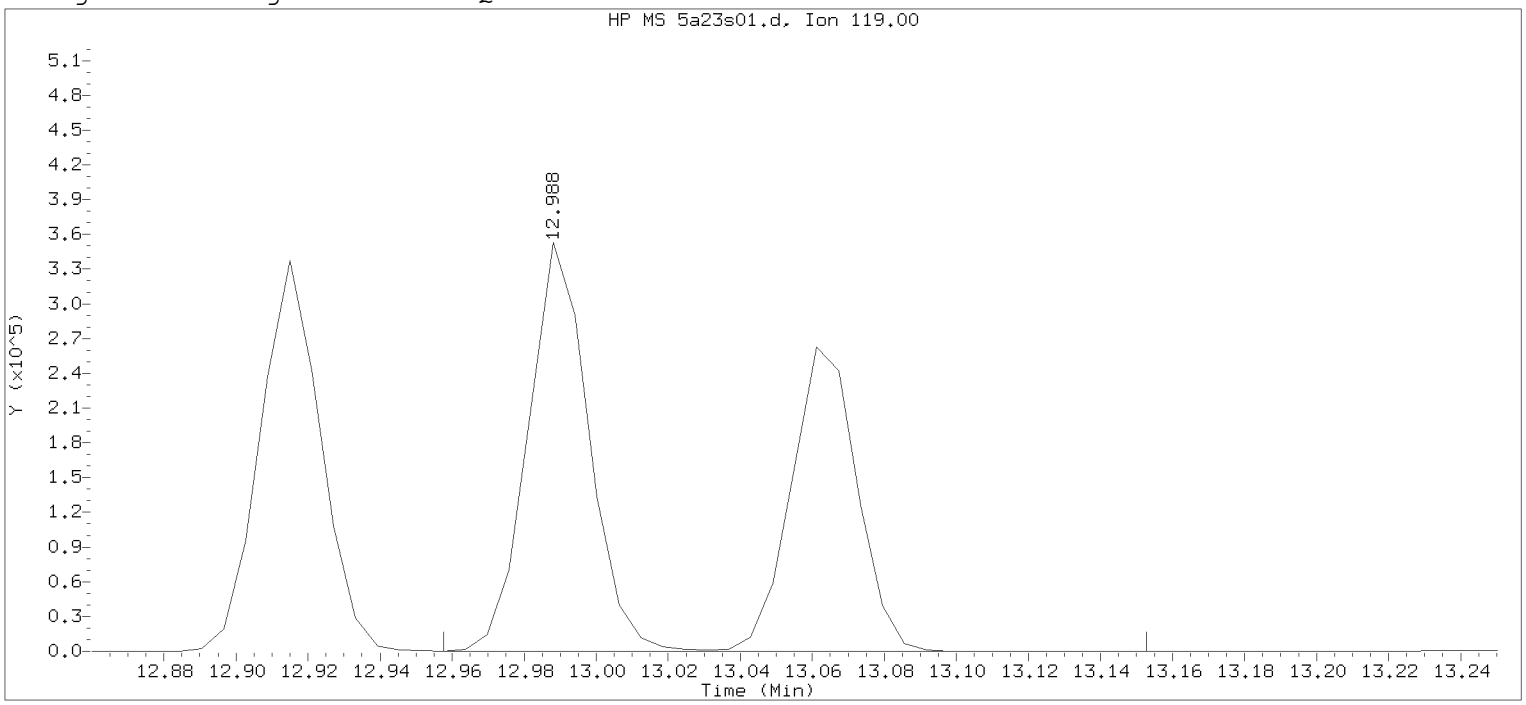
Analyst responsible for change: Digitally signed by Linda C. Pape
on 04/23/2018 at 10:49.
Target 3.5 esignature user ID: lcp00895

Secondary review performed and digitally signed by Joshua E. Berrios on 04/23/2018 at 21:08.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP26285.i/18apr23a.b/5a23s01.d Instrument ID: HP26285.i
Injection date and time: 23-APR-2018 10:08 Analyst ID: LCP00895

Method used: /chem2/HP26285.i/18apr23a.b/m8260c5.m Sublist used: 8260W-DH
Calibration date and time: 23-APR-2018 09:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:46 lcp00895

Sample Name: LCS564 Lab Sample ID: LCS564

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1903
Retention Time (minutes): 12.988
Quant Ion : 119.00
Area : 747903
On-column Amount (ng) : 45.2105
Integration start scan : 1897 Integration stop scan: 1929
Y at integration start : 0 Y at integration end: 0

Digitally signed by Linda C. Pape on 04/23/2018 at 10:49.
Target 3.5 esignature used for this report.

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSG85

Data file: /chem2/HP16334.i/18apr23b.b/ga23s43.d Injection date and time: **23-APR-2018 20:39**
Data file Sample Info. Line: LCSG85;LCSG85;1;3;LCS;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.958	(-0.006)	389	65	225642	(7)	50.00	
63) Fluorobenzene	7.488	(-0.012)	968	96	2246839	(4)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1734013	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	12.914	(-0.006)	1858	152	960019	(-2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.001)	113	562731	9.960	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.001)	102	119713	9.998	100%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2326426	10.004	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	871886	9.795	98%		80 - 120

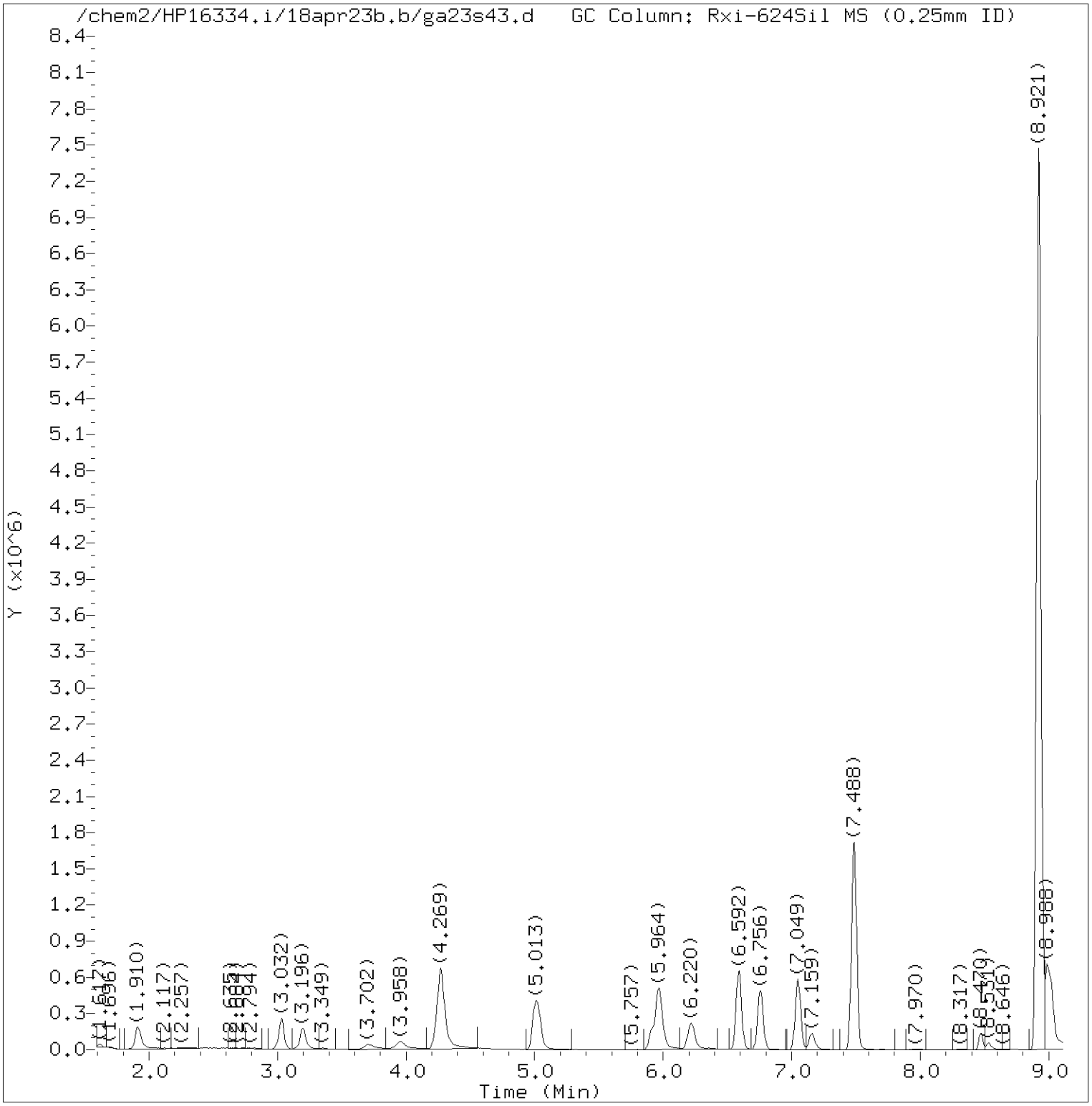
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
4) Dimethyl ether	(2)	1.910	(0.000)	45	421898M	5.202	5.20		J	0.1	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

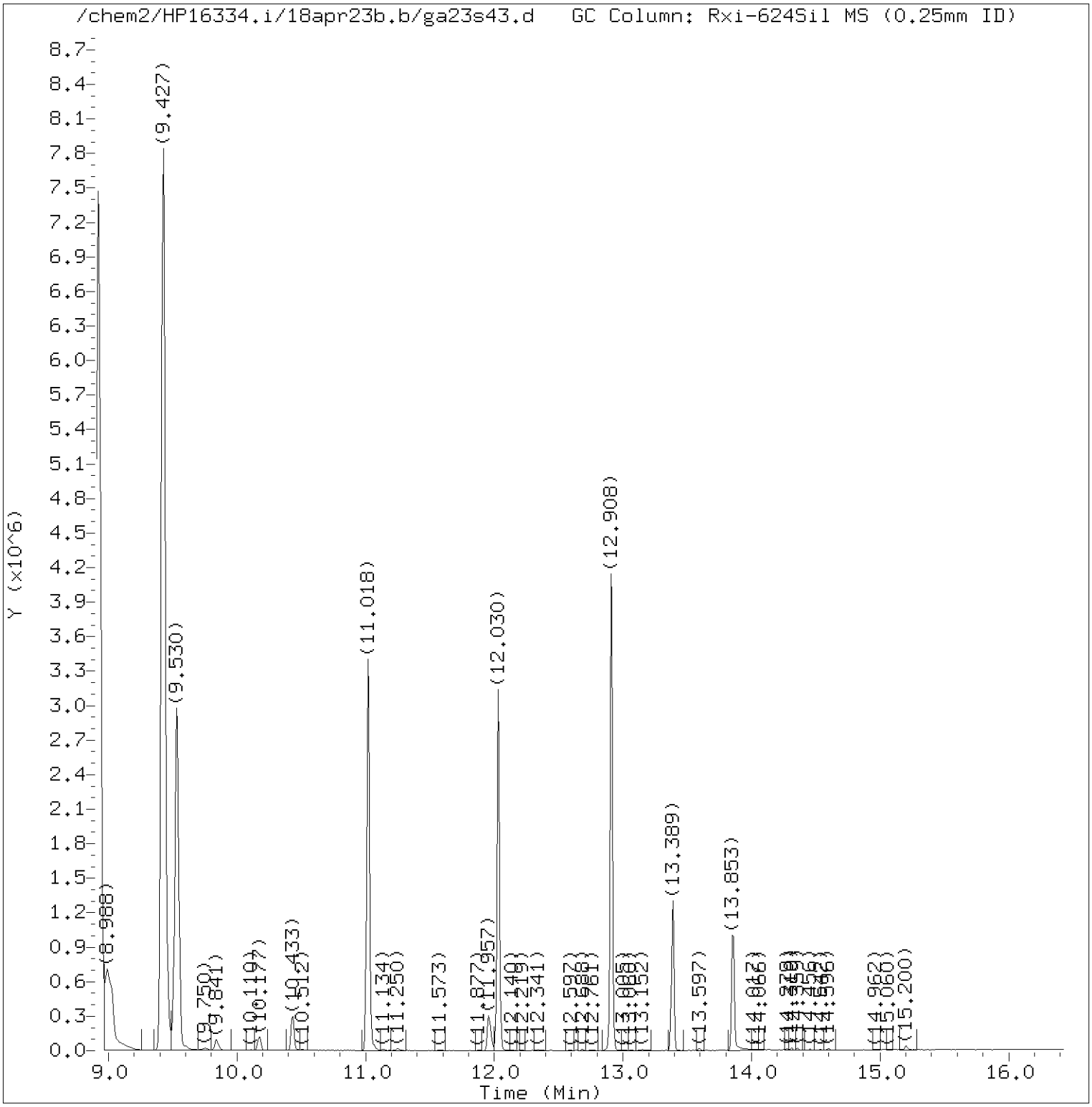
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s43.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:39 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCSG85 Lab Sample ID: LCSG85

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s43.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:39 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCSG85 Lab Sample ID: LCSG85

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s43.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:39 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

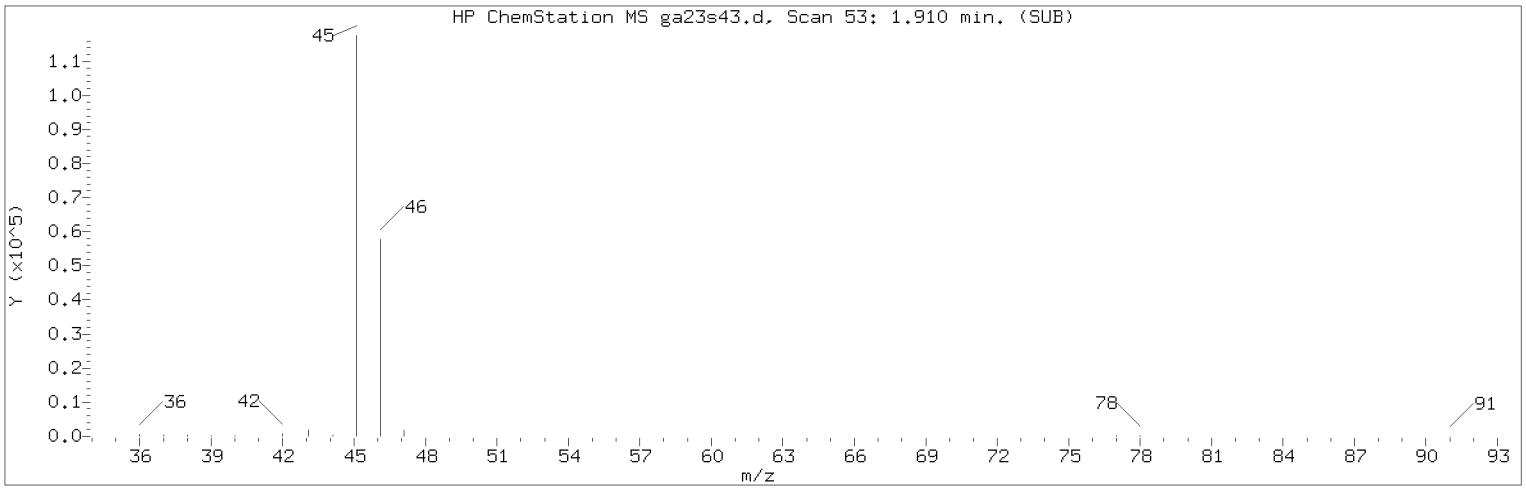
Sample Name: LCSG85 Lab Sample ID: LCSG85

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	421898M	5.202
26)*t-Butyl Alcohol-d10	(1)	3.958	65	225642	50.000
50)$Dibromofluoromethane	(2)	6.586	113	562731	9.960
57)$1,2-Dichloroethane-d4	(2)	7.049	102	119713	9.998
63)*Fluorobenzene	(2)	7.488	96	2246839	10.000
82)$Toluene-d8	(3)	9.530	98	2326426	10.004
97)*Chlorobenzene-d5	(3)	11.018	117	1734013	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	871886	9.795
133)*1,4-Dichlorobenzene-d4	(4)	12.914	152	960019	10.000

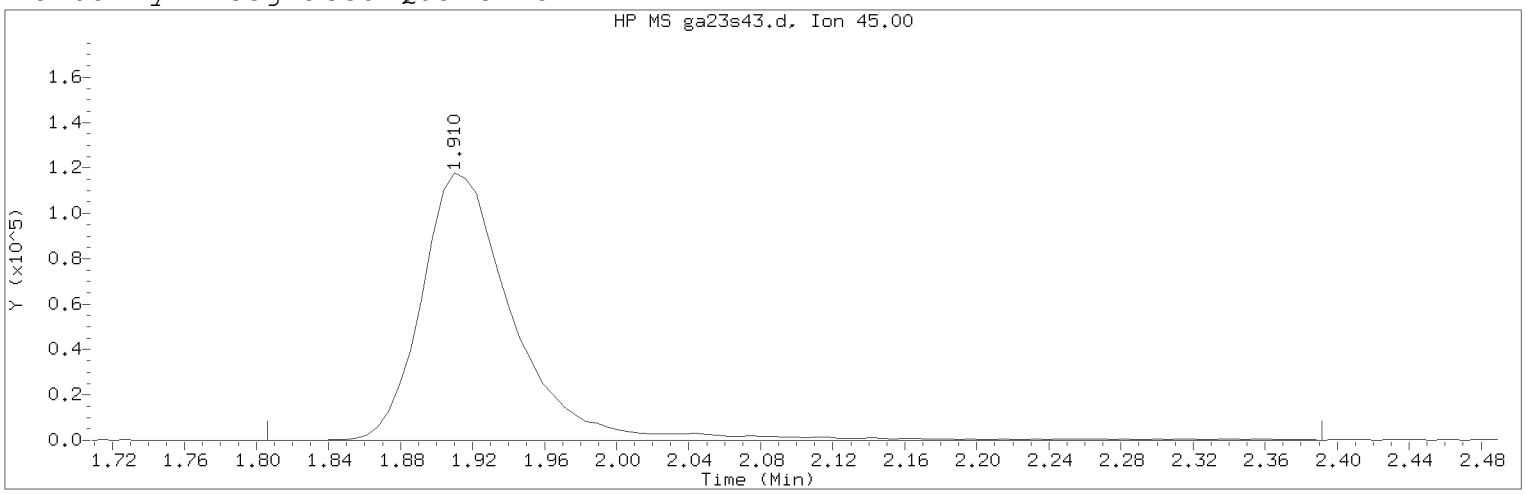
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s43.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:39 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCSG85 Lab Sample ID: LCSG85

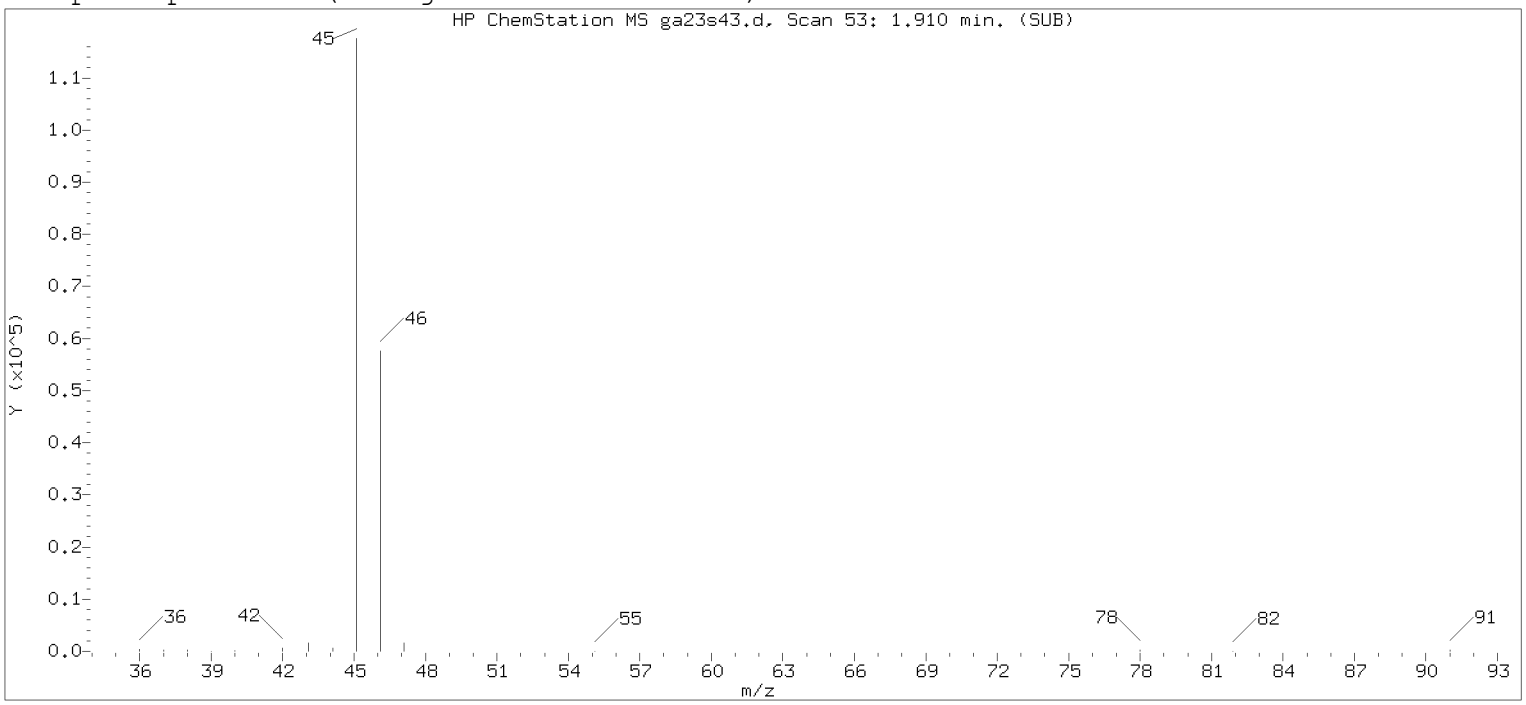
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area (flag) : 421898M
On-Column Amount (ng) : 5.2023
Integration start scan : 35 Integration stop scan: 131
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

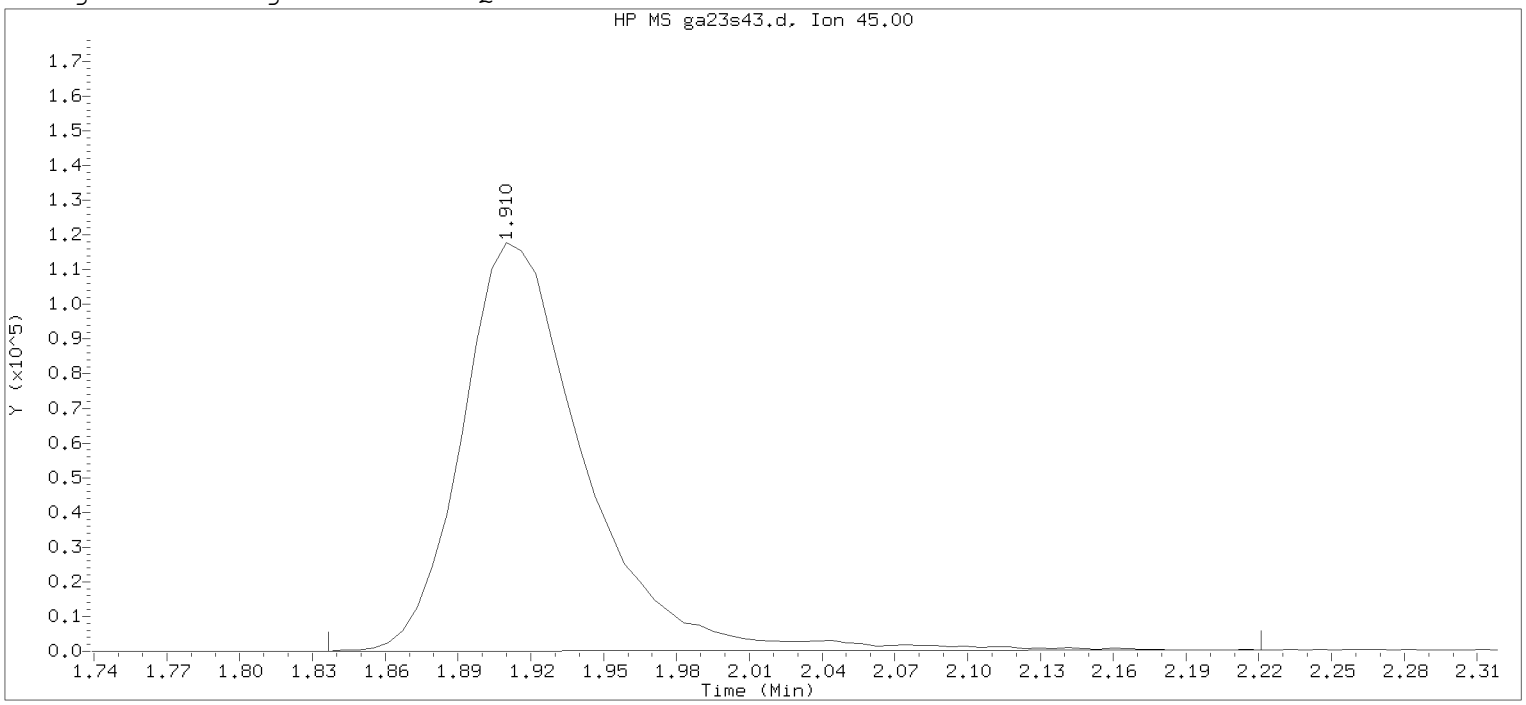
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s43.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:39 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:55 Automation

Sample Name: LCSG85 Lab Sample ID: LCSG85

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area : 414433
On-column Amount (ng) : 5.1103
Integration start scan : 40 Integration stop scan: 103
Y at integration start : 0 Y at integration end: 283

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: mskrause

Data file: /chem2/HP16334.i/18apr23b.b/ga23s44.d Injection date and time: **23-APR-2018 21:01**
Data file Sample Info. Line: LCDG85;LCDG85;1;3;LCSD;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.000)	388	65	233968	(11)	50.00	
63) Fluorobenzene	7.488	(-0.012)	968	96	2239519	(4)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1736616	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	961866	(-2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.001)	113	559947	9.943	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.049	(0.001)	102	119286	9.995	100%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2319563	9.960	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	868215	9.739	97%		80 - 120

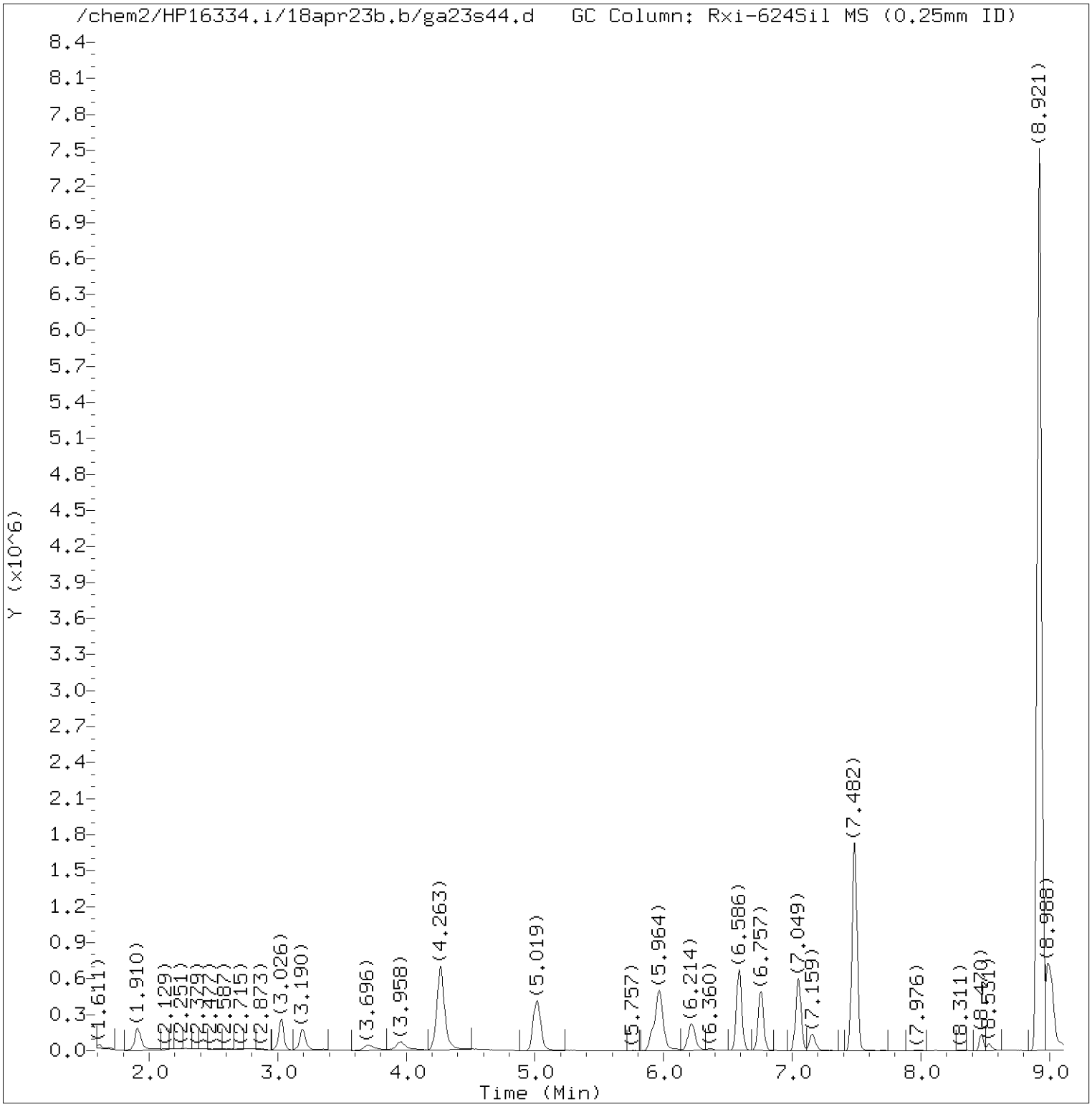
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
4) Dimethyl ether	(2)	1.910	(0.000)	45	414821M	5.132	5.13		J	0.1	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

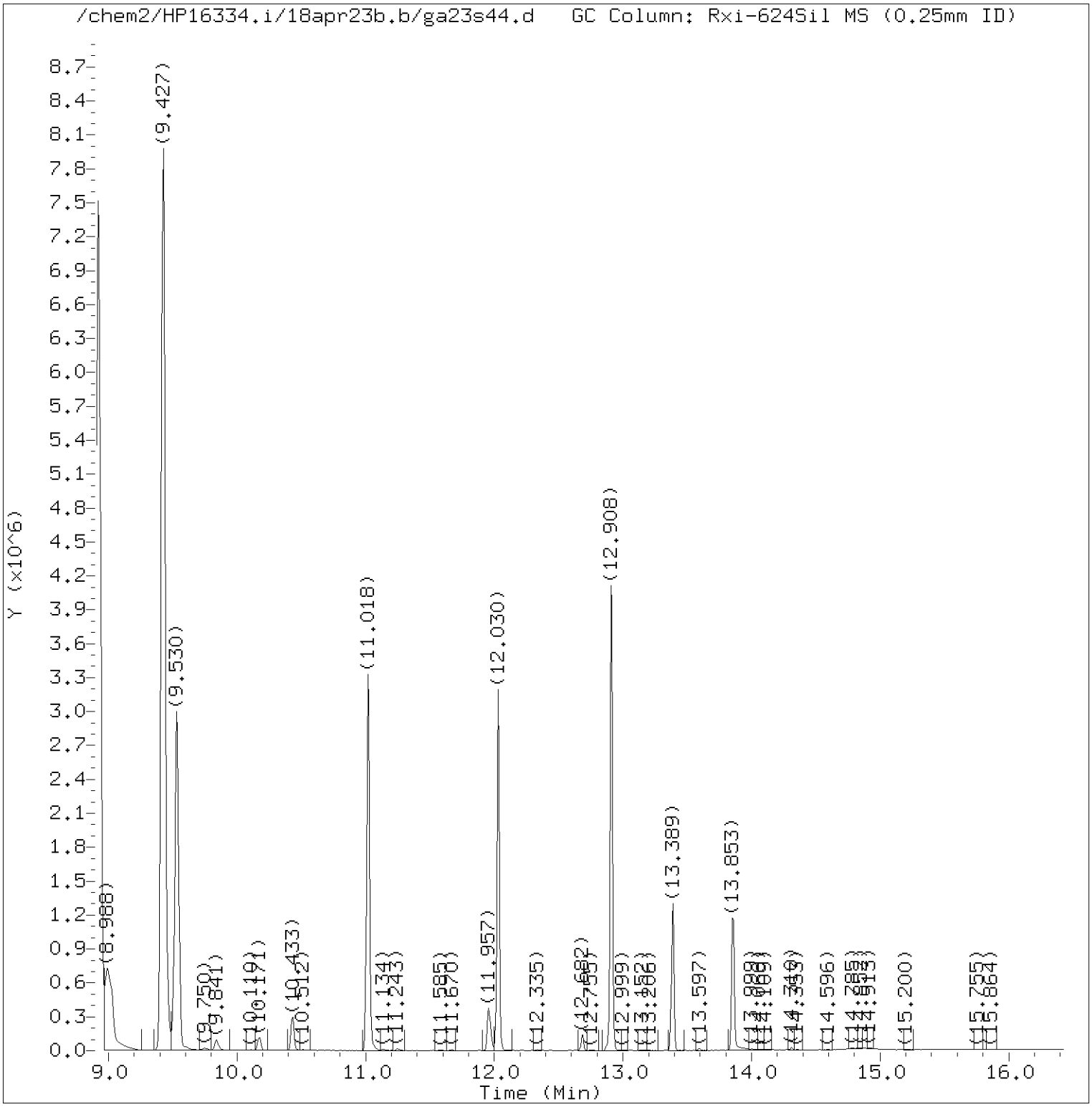
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s44.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:01 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG85 Lab Sample ID: LCDG85

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s44.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:01 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG85 Lab Sample ID: LCDG85

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s44.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:01 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

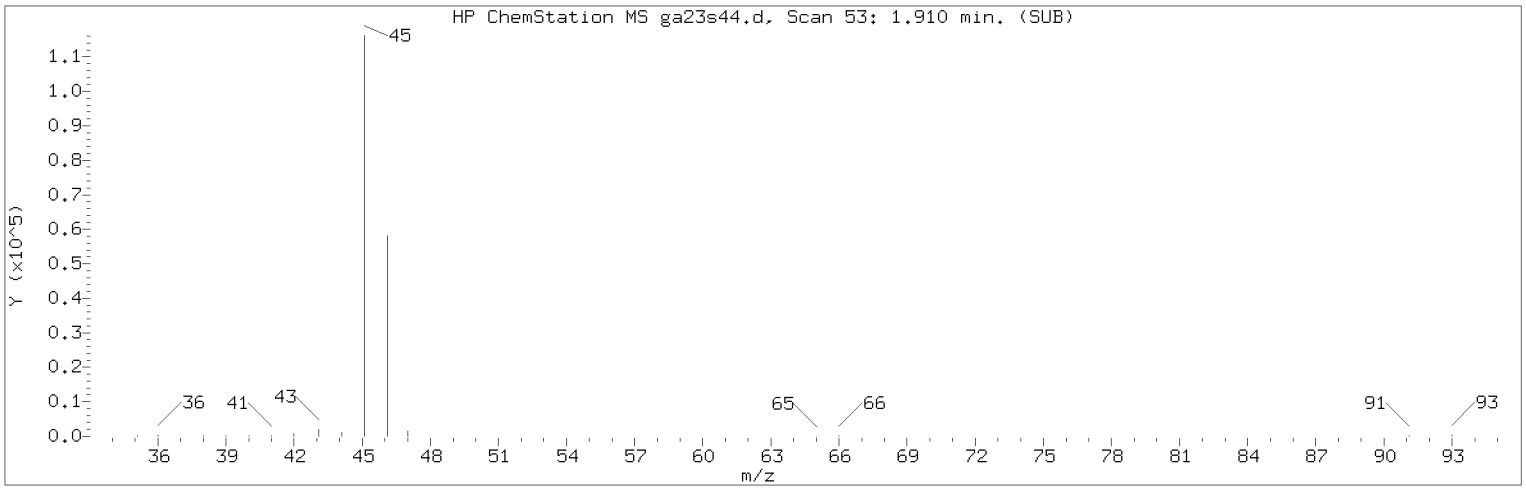
Sample Name: LCDG85 Lab Sample ID: LCDG85

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.910	45	414821M	5.132
26)*t-Butyl Alcohol-d10	(1)	3.952	65	233968	50.000
50)$Dibromofluoromethane	(2)	6.586	113	559947	9.943
57)$1,2-Dichloroethane-d4	(2)	7.049	102	119286	9.995
63)*Fluorobenzene	(2)	7.488	96	2239519	10.000
82)$Toluene-d8	(3)	9.530	98	2319563	9.960
97)*Chlorobenzene-d5	(3)	11.018	117	1736616	10.000
111)$4-Bromofluorobenzene	(3)	12.030	95	868215	9.739
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	961866	10.000

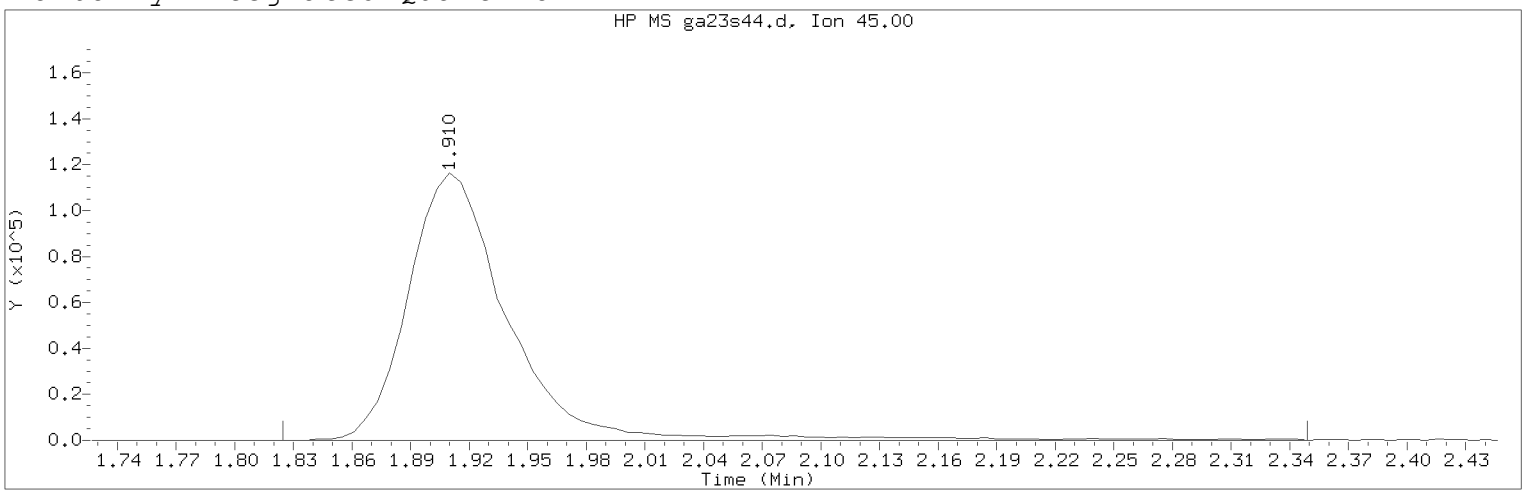
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s44.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:01 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG85 Lab Sample ID: LCDG85

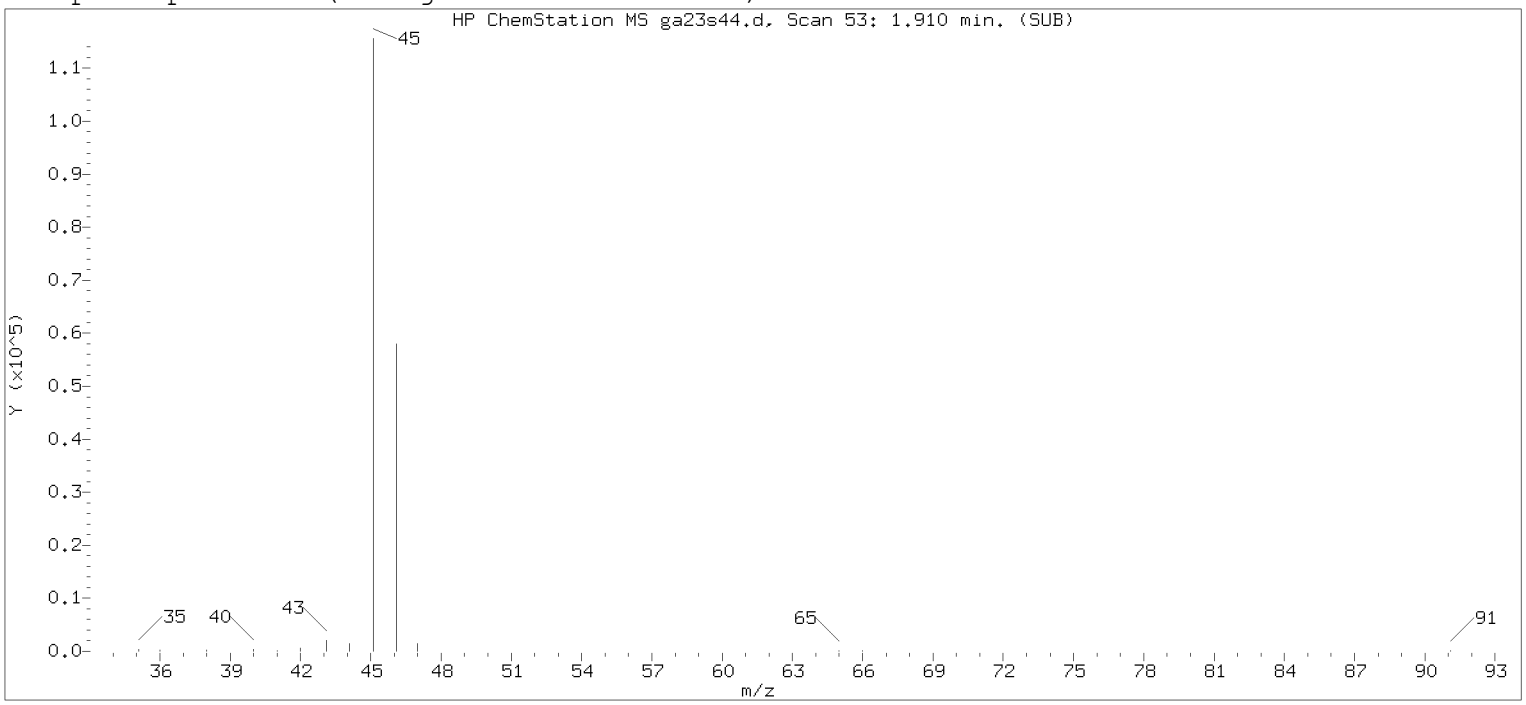
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area (flag) : 414821M
On-Column Amount (ng) : 5.1318
Integration start scan : 38 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

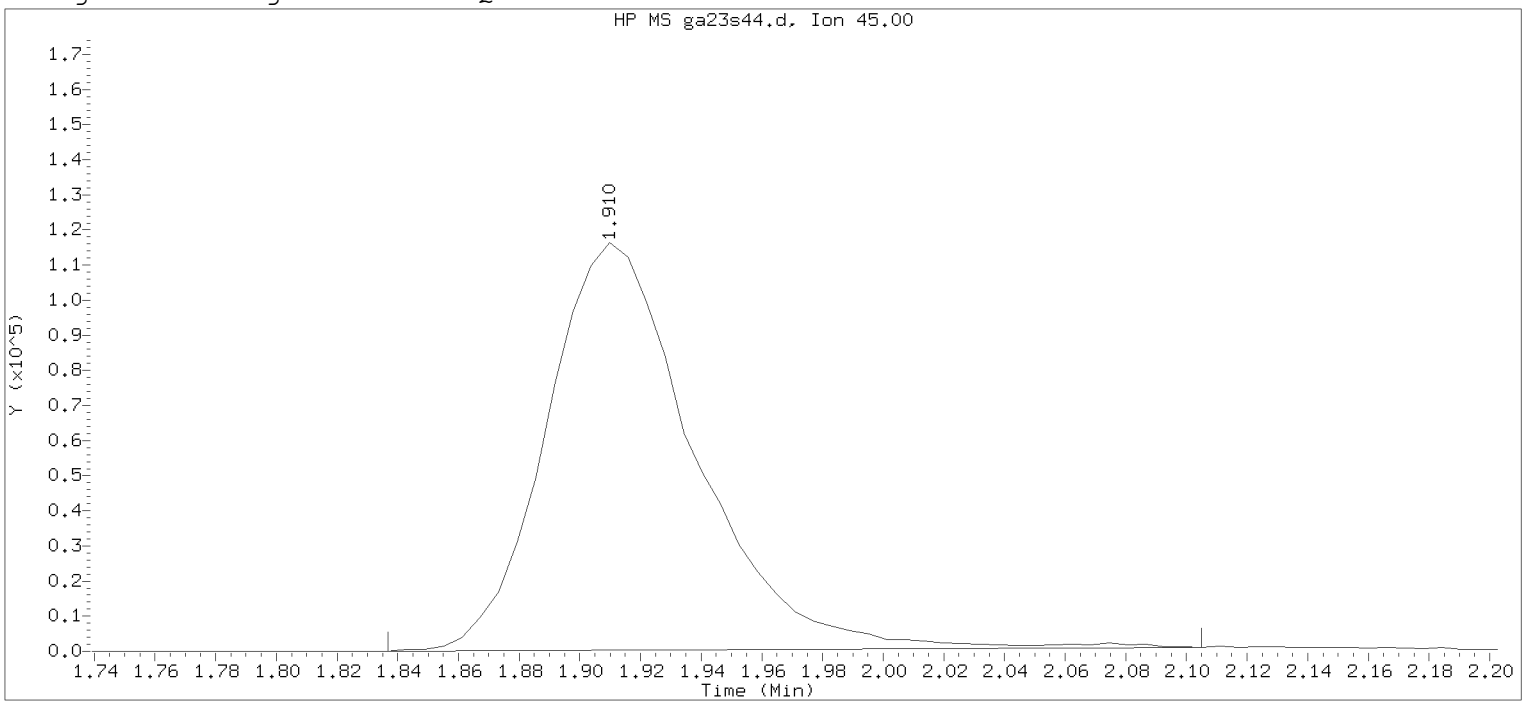
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s44.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 21:01 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:18 Automation

Sample Name: LCDG85 Lab Sample ID: LCDG85

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 53
Retention Time (minutes): 1.910
Quant Ion : 45.00
Area : 395942
On-column Amount (ng) : 4.8982
Integration start scan : 40 Integration stop scan: 84
Y at integration start : 0 Y at integration end: 1079

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used. Page 1303

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSG84

Data file: /chem2/HP16334.i/18apr23b.b/ga23s41.d Injection date and time: **23-APR-2018 19:54**
Data file Sample Info. Line: LCSG84;LCSG84;1;3;LCS;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.952	(0.000)	388	65	233958	(11)	50.00	
63) Fluorobenzene	7.482	(-0.006)	967	96	2215931	(2)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1713873	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	984768	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	558257	10.019	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	120571	10.210	102%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2270421	9.878	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	863191	9.811	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.830	(0.001)	85	291194	3.503	3.50			0.1	1
2) Chloromethane	(2)	2.020	(0.001)	50	328688	3.927	3.93			0.2	1
8) Chloroethane	(2)	2.519	(0.001)	64	175972	4.301	4.30			0.1	1
10) Trichlorofluoromethane	(2)	2.806	(0.001)	101	405779M	4.332	4.33			0.1	1
11) Ethyl ether	(2)	3.025	(0.001)	59	223258	4.782	4.78		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.318	(0.001)	96	211488	4.611	4.61			0.1	1
16) Freon 113	(2)	3.367	(0.000)	101	219196	4.239	4.24			0.2	1
23) Methylene Chloride	(2)	3.946	(0.001)	84	265422	4.280	4.28			0.2	1
33) 1,1-Dichloroethane	(2)	5.019	(0.000)	63	498154	4.582	4.58			0.1	1
38) 2-Butanone	(1)	5.824	(-0.000)	43	791699	35.233	35.23			1	10
48) Tetrahydrofuran	(1)	6.214	(-0.001)	71	128868	24.093	24.09		J	2	25
51) 1,1,1-Trichloroethane	(2)	6.592	(-0.000)	97	403515	4.596	4.60			0.1	1
54) Carbon Tetrachloride	(2)	6.805	(-0.000)	117	327682	4.595	4.59			0.1	1
58) Benzene	(2)	7.067	(0.000)	78	1049652	4.644	4.64			0.1	1
67) Trichloroethene	(2)	7.964	(0.000)	95	275608	4.619	4.62			0.1	1
83) Toluene	(3)	9.610	(-0.000)	92	672536	4.618	4.62			0.1	1
89) Tetrachloroethene	(3)	10.170	(0.000)	166	299782	4.439	4.44			0.1	1
100) Ethylbenzene	(3)	11.134	(-0.000)	91	1327012	4.586	4.59			0.1	1
101) m+p-Xylene	(3)	11.249	(-0.000)	106	1023369	9.290	9.29			0.1	0.5
104) o-Xylene	(3)	11.579	(-0.000)	106	512213	4.638	4.64			0.1	0.5
105) Xylene (Total)	(3)			106	1535582	13.928	13.93			0.1	3

M = Compound was manually integrated.

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s41.d Injection date and time: **23-APR-2018 19:54**
Data file Sample Info. Line: LCSG84;LCSG84;1;3;LCS;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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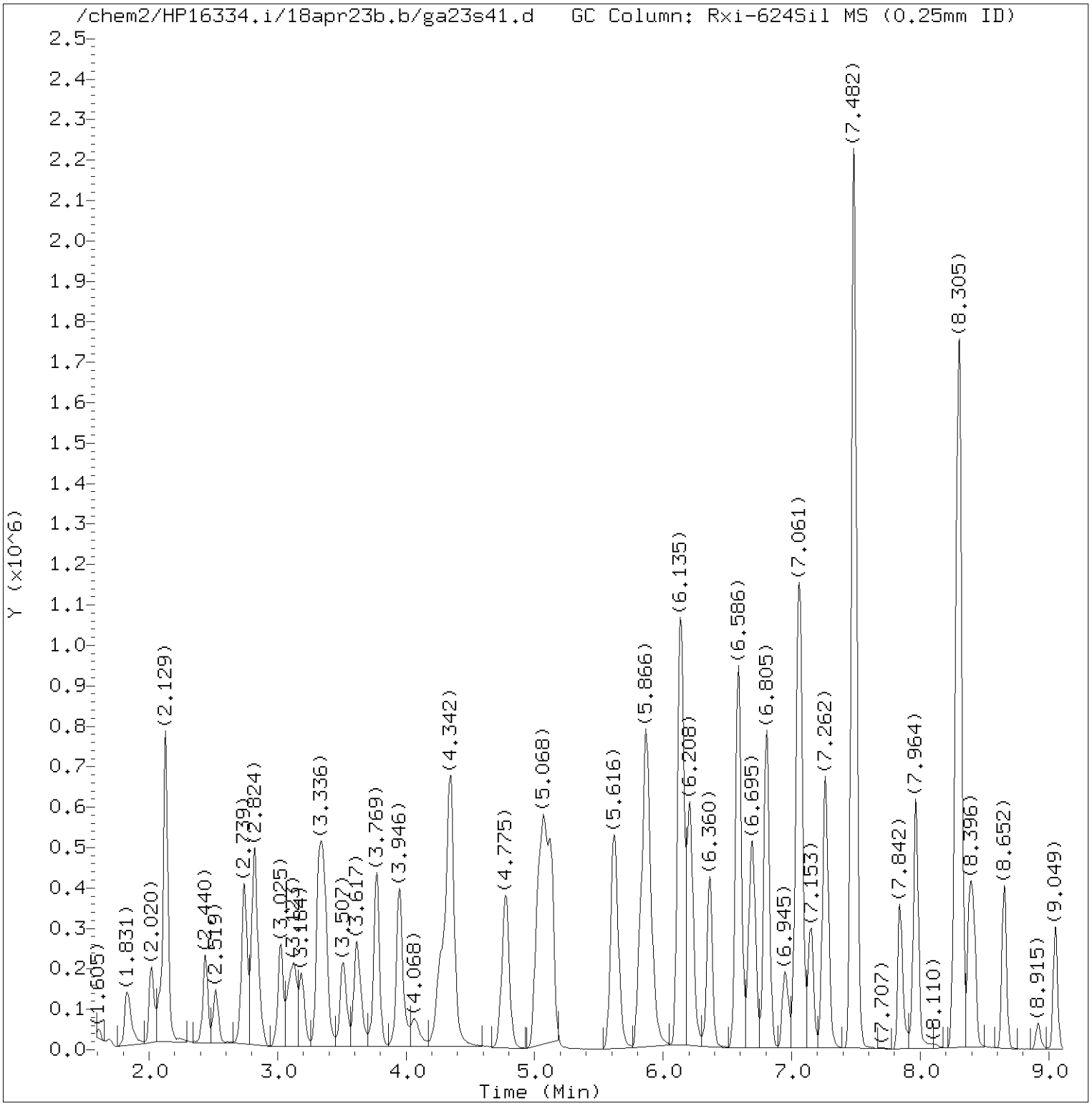
Total number of targets = 21

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

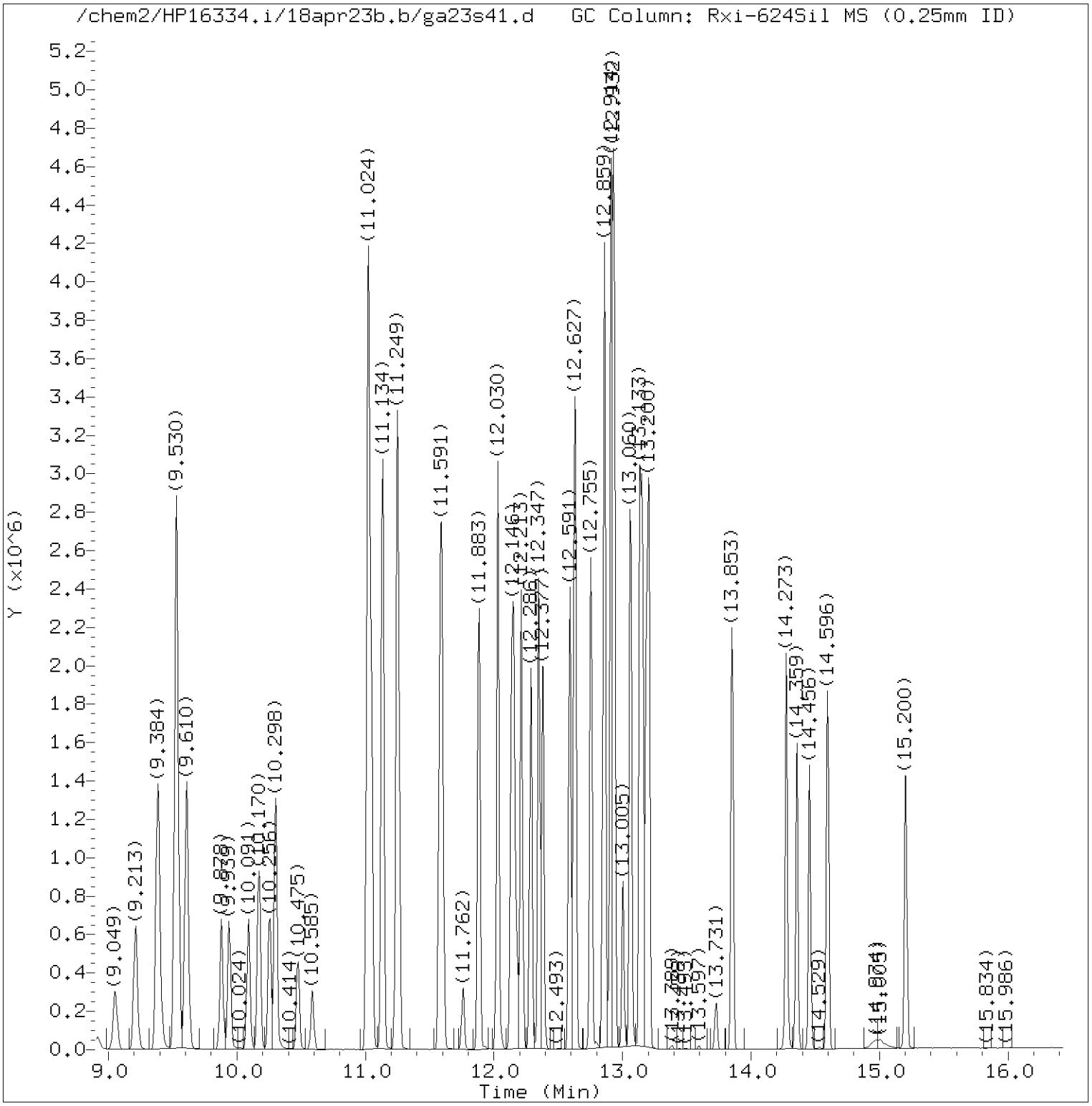
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s41.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:54 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

Sample Name: LCSG84 Lab Sample ID: LCSG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s41.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:54 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

Sample Name: LCSG84 Lab Sample ID: LCSG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s41.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:54 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

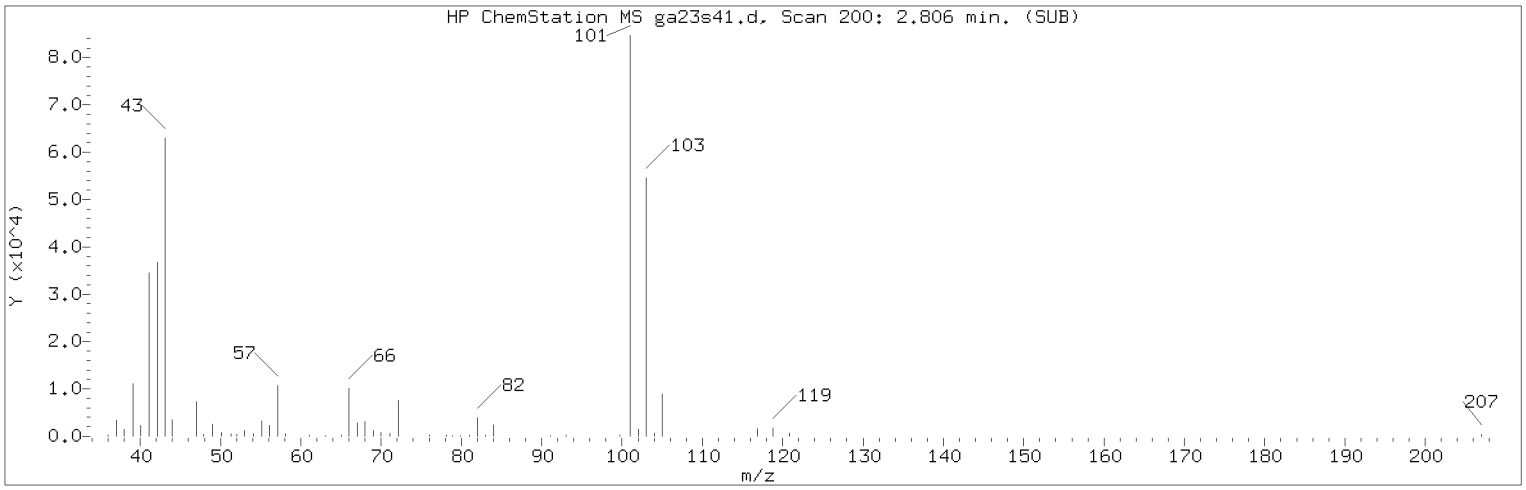
Sample Name: LCSG84 Lab Sample ID: LCSG84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.831	85	291194	3.503
2) Chloromethane	(2)	2.020	50	328688	3.927
8) Chloroethane	(2)	2.519	64	175972	4.301
10) Trichlorofluoromethane	(2)	2.806	101	405779M	4.332
11) Ethyl ether	(2)	3.025	59	223258	4.782
15) 1,1-Dichloroethene	(2)	3.318	96	211488	4.611
16) Freon 113	(2)	3.367	101	219196	4.239
23) Methylene Chloride	(2)	3.946	84	265422	4.280
26)*t-Butyl Alcohol-d10	(1)	3.952	65	233958	50.000
33) 1,1-Dichloroethane	(2)	5.019	63	498154	4.582
38) 2-Butanone	(1)	5.824	43	791699	35.233
48) Tetrahydrofuran	(1)	6.214	71	128868	24.093
50)$Dibromofluoromethane	(2)	6.586	113	558257	10.019
51) 1,1,1-Trichloroethane	(2)	6.592	97	403515	4.596
54) Carbon Tetrachloride	(2)	6.805	117	327682	4.595
57)$1,2-Dichloroethane-d4	(2)	7.043	102	120571	10.210
58) Benzene	(2)	7.067	78	1049652	4.644
63)*Fluorobenzene	(2)	7.482	96	2215931	10.000
67) Trichloroethene	(2)	7.964	95	275608	4.619
82)$Toluene-d8	(3)	9.530	98	2270421	9.878
83) Toluene	(3)	9.610	92	672536	4.618
89) Tetrachloroethene	(3)	10.170	166	299782	4.439
97)*Chlorobenzene-d5	(3)	11.018	117	1713873	10.000
100) Ethylbenzene	(3)	11.134	91	1327012	4.586
101) m+p-Xylene	(3)	11.249	106	1023369	9.290
104) o-Xylene	(3)	11.579	106	512213	4.638
105) Xylene (Total)	(3)		106	1535582	13.928
111)$4-Bromofluorobenzene	(3)	12.030	95	863191	9.811
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	984768	10.000

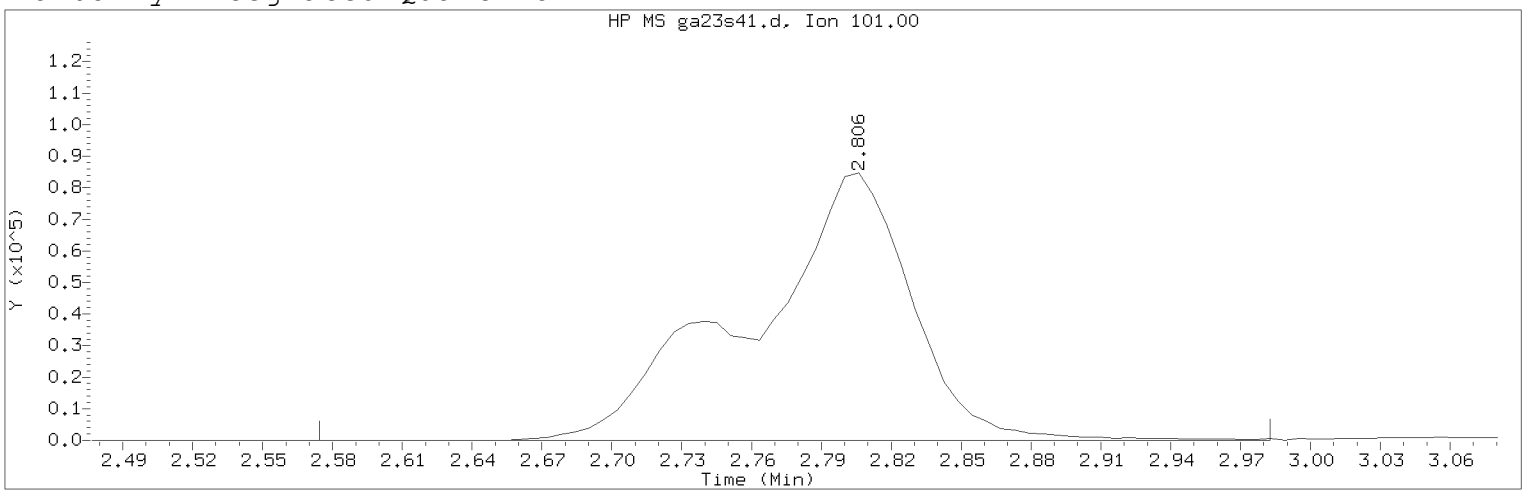
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s41.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:54 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:46 msk07970

Sample Name: LCSG84 Lab Sample ID: LCSG84

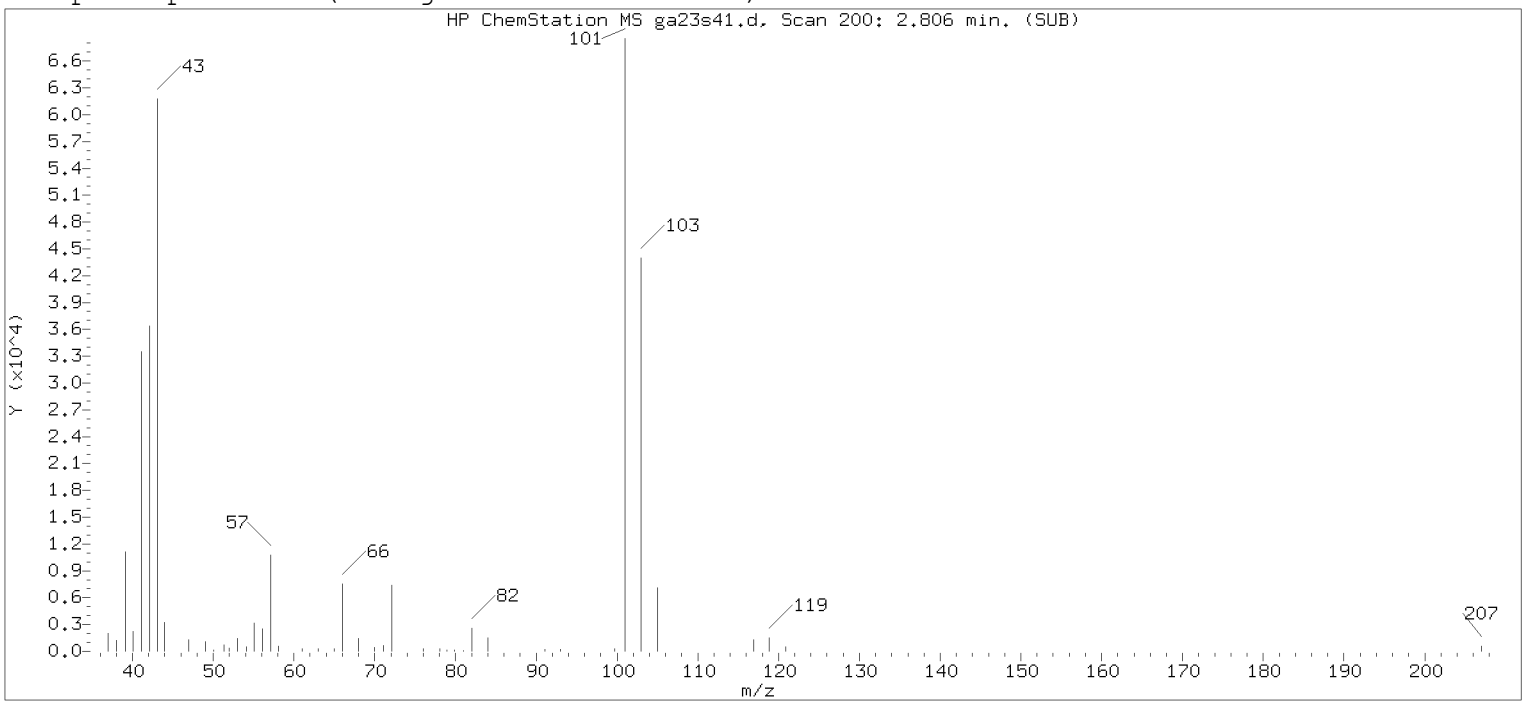
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 405779M
On-Column Amount (ng) : 4.3319
Integration start scan : 161 Integration stop scan: 228
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

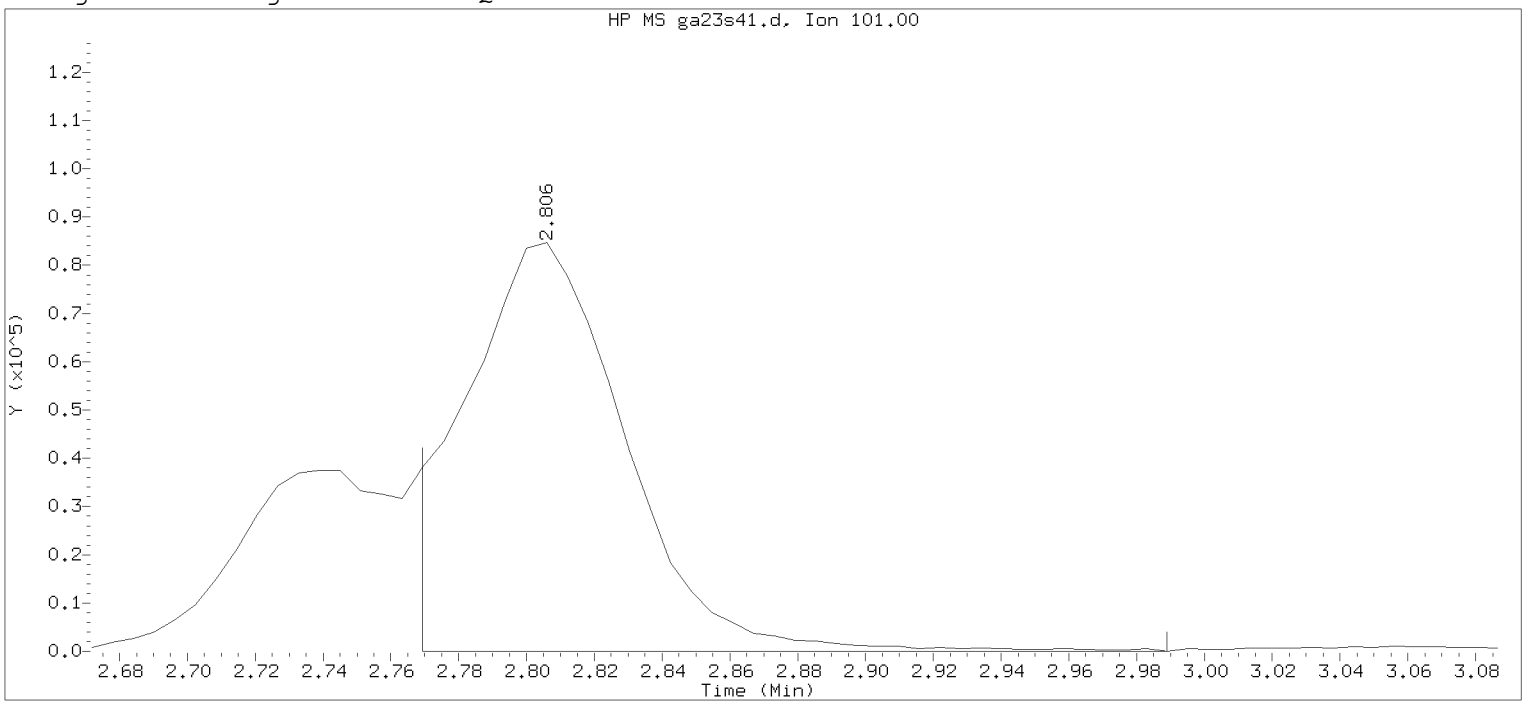
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s41.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 19:54 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:20 msk07970

Sample Name: LCSG84 Lab Sample ID: LCSG84

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area : 276509
On-column Amount (ng) : 2.9519
Integration start scan : 193 Integration stop scan: 229
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature used. Page 1310

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/18apr23b.b/ga23s42.d Injection date and time: **23-APR-2018 20:17**
Data file Sample Info. Line: LCDG84;LCDG84;1;3;LCSD;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	3.946	(0.006)	387	65	234502	(11)	50.00	
63) Fluorobenzene	7.482	(-0.006)	967	96	2269497	(5)	10.00	
97) Chlorobenzene-d5	11.018	(0.000)	1547	117	1742842	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	12.908	(0.000)	1857	152	998461	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.586	(0.000)	113	569933	9.987	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.043	(0.001)	102	118457	9.795	98%		80 - 120
82) Toluene-d8	(3)	9.530	(-0.001)	98	2305676	9.865	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.030	(-0.001)	95	882557	9.865	99%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.825	(0.002)	85	299625	3.520	3.52			0.1	1
2) Chloromethane	(2)	2.014	(0.001)	50	348046	4.061	4.06			0.2	1
8) Chloroethane	(2)	2.520	(0.001)	64	179636	4.287	4.29			0.1	1
10) Trichlorofluoromethane	(2)	2.806	(0.001)	101	417319M	4.350	4.35			0.1	1
11) Ethyl ether	(2)	3.026	(0.001)	59	232274	4.857	4.86		J	0.1	13
15) 1,1-Dichloroethene	(2)	3.318	(0.001)	96	220549	4.695	4.70			0.1	1
16) Freon 113	(2)	3.361	(0.001)	101	226707	4.281	4.28			0.2	1
23) Methylene Chloride	(2)	3.946	(0.001)	84	273367	4.304	4.30			0.2	1
33) 1,1-Dichloroethane	(2)	5.019	(0.000)	63	513252	4.609	4.61			0.1	1
38) 2-Butanone	(1)	5.824	(-0.002)	43	809277	35.932	35.93			1	10
48) Tetrahydrofuran	(1)	6.208	(-0.002)	71	134156	25.023	25.02			2	25
51) 1,1,1-Trichloroethane	(2)	6.592	(-0.000)	97	410788	4.568	4.57			0.1	1
54) Carbon Tetrachloride	(2)	6.805	(-0.000)	117	336444	4.606	4.61			0.1	1
58) Benzene	(2)	7.074	(-0.000)	78	1084259	4.684	4.68			0.1	1
67) Trichloroethene	(2)	7.970	(0.000)	95	282367	4.621	4.62			0.1	1
83) Toluene	(3)	9.610	(-0.000)	92	693434	4.683	4.68			0.1	1
89) Tetrachloroethene	(3)	10.170	(0.000)	166	317138	4.618	4.62			0.1	1
100) Ethylbenzene	(3)	11.134	(-0.000)	91	1363591	4.634	4.63			0.1	1
101) m+p-Xylene	(3)	11.250	(-0.000)	106	1058066	9.445	9.44			0.1	0.5
104) o-Xylene	(3)	11.579	(-0.000)	106	530448	4.723	4.72			0.1	0.5
105) Xylene (Total)	(3)			106	1588514	14.168	14.17			0.1	3

M = Compound was manually integrated.

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Data file: /chem2/HP16334.i/18apr23b.b/ga23s42.d Injection date and time: **23-APR-2018 20:17**
Data file Sample Info. Line: LCDG84;LCDG84;1;3;LCSD;;DRAPERLOQ;;ga23b05; Instrument ID: **HP16334.i** Batch: **G181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Blank Data file reference: **/chem2/HP16334.i/18apr23b.b/ga23b05.d**

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 20:20
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/18apr23b.b/ga23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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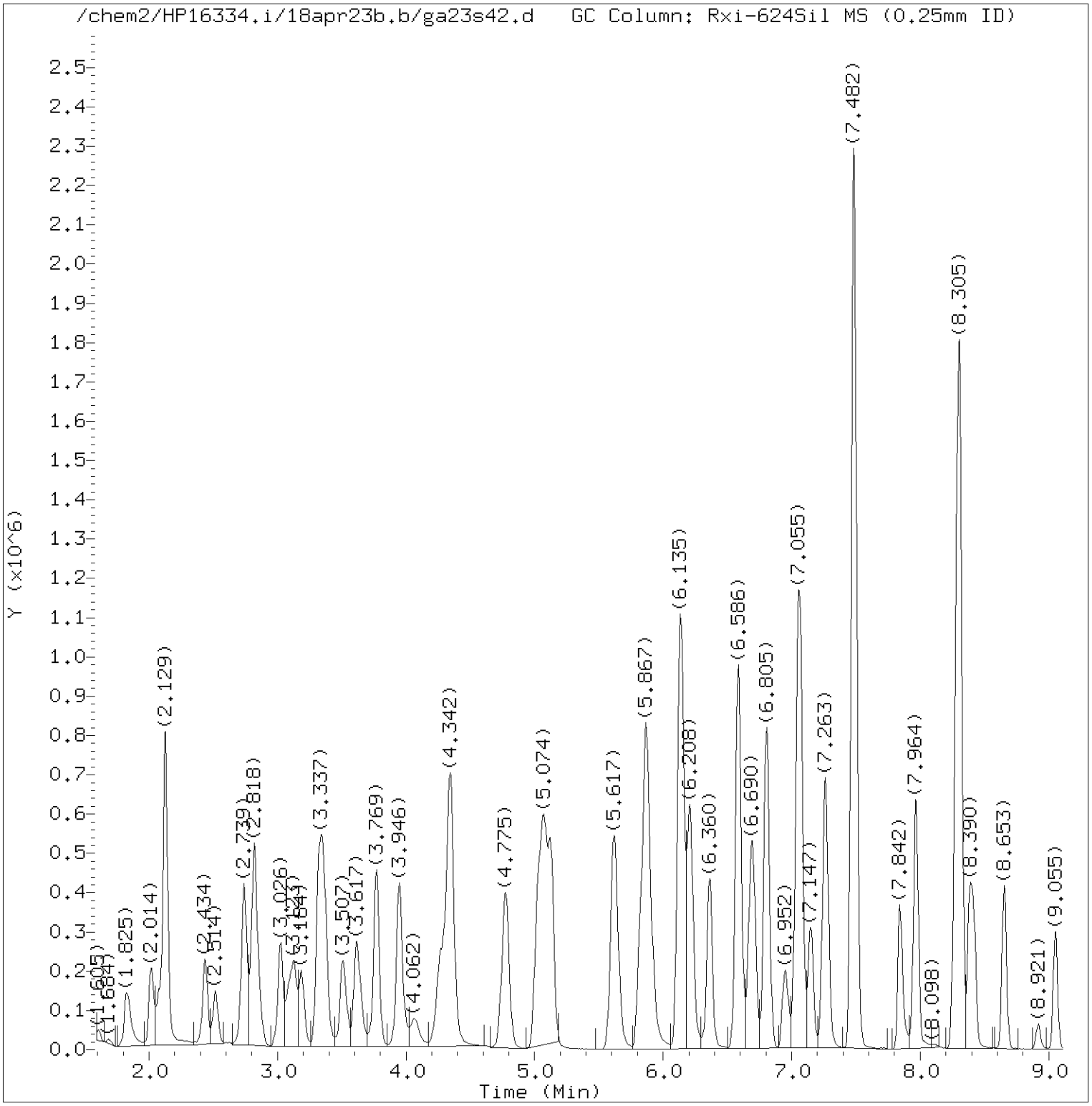
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04. Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

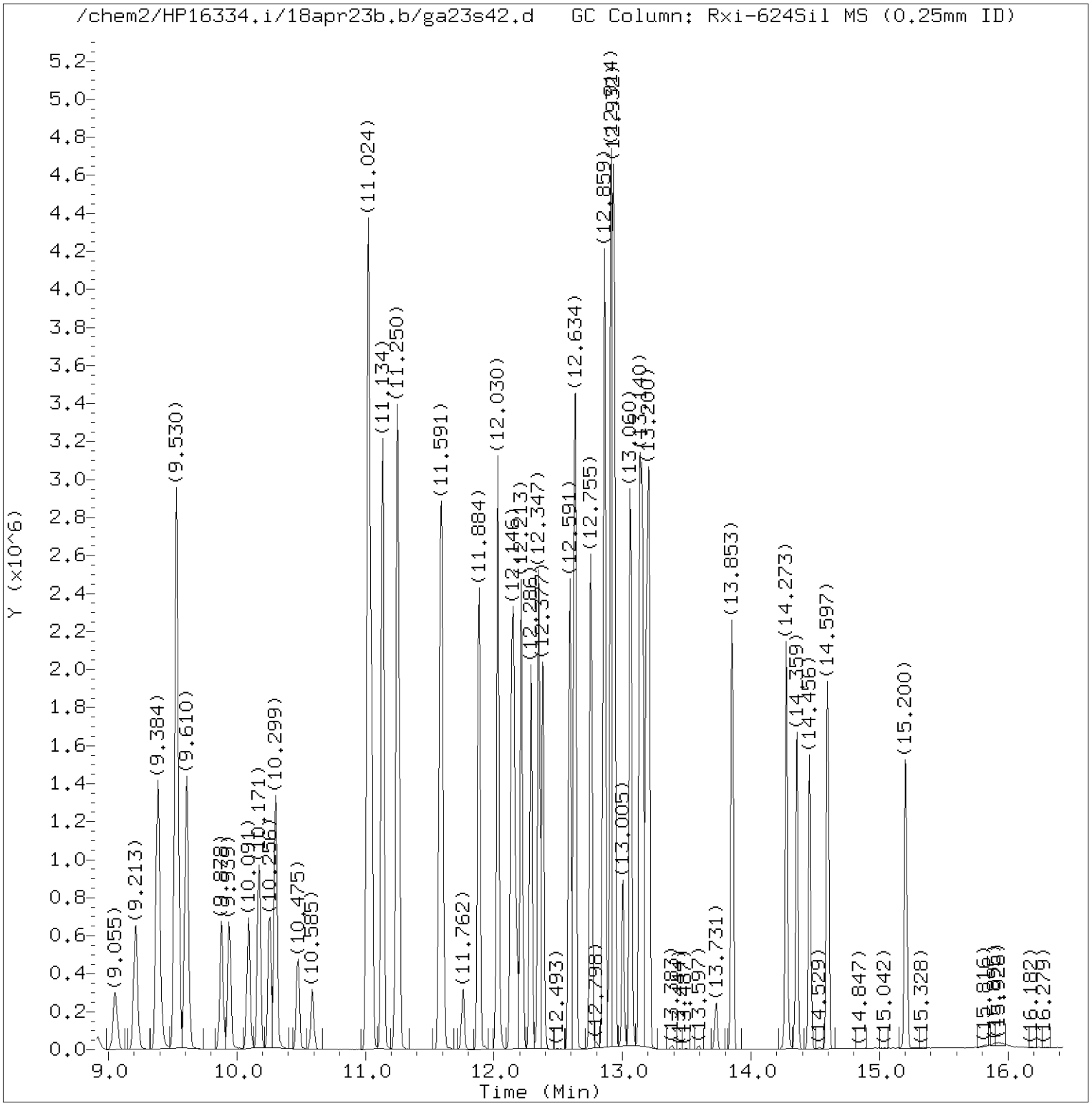
Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s42.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:17 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG84 Lab Sample ID: LCDG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s42.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:17 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG84 Lab Sample ID: LCDG84

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/18apr23b.b/ga23s42.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:17 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

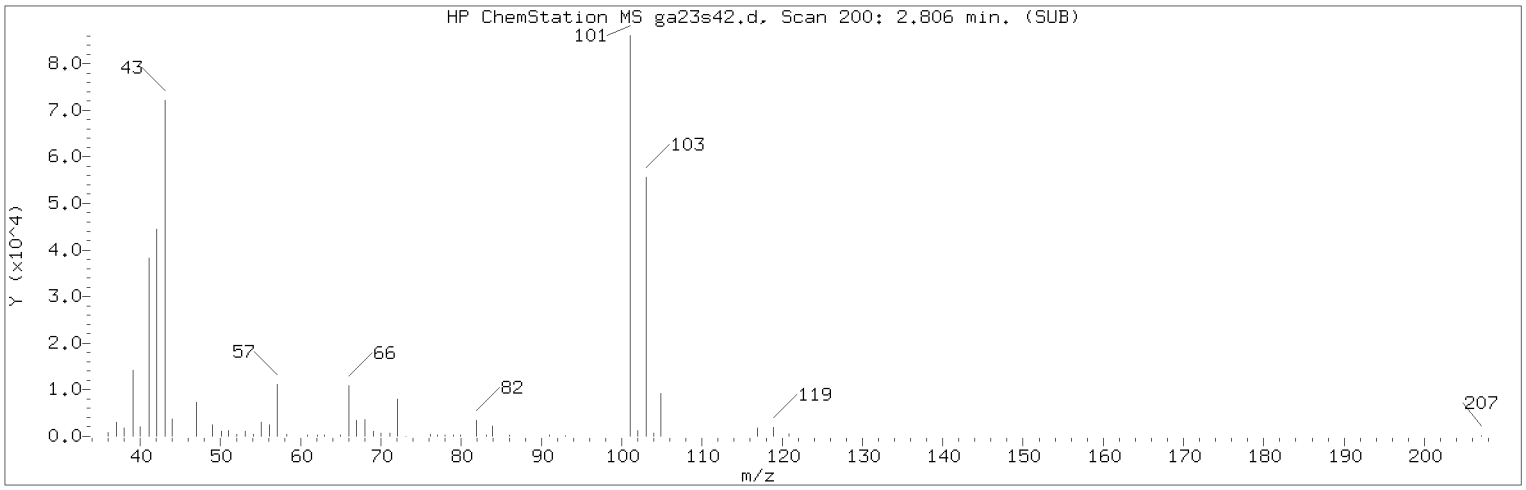
Sample Name: LCDG84 Lab Sample ID: LCDG84

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.825	85	299625	3.520
2) Chloromethane	(2)	2.014	50	348046	4.061
8) Chloroethane	(2)	2.520	64	179636	4.287
10) Trichlorofluoromethane	(2)	2.806	101	417319M	4.350
11) Ethyl ether	(2)	3.026	59	232274	4.857
15) 1,1-Dichloroethene	(2)	3.318	96	220549	4.695
16) Freon 113	(2)	3.361	101	226707	4.281
23) Methylene Chloride	(2)	3.946	84	273367	4.304
26)*t-Butyl Alcohol-d10	(1)	3.946	65	234502	50.000
33) 1,1-Dichloroethane	(2)	5.019	63	513252	4.609
38) 2-Butanone	(1)	5.824	43	809277	35.932
48) Tetrahydrofuran	(1)	6.208	71	134156	25.023
50)$Dibromofluoromethane	(2)	6.586	113	569933	9.987
51) 1,1,1-Trichloroethane	(2)	6.592	97	410788	4.568
54) Carbon Tetrachloride	(2)	6.805	117	336444	4.606
57)$1,2-Dichloroethane-d4	(2)	7.043	102	118457	9.795
58) Benzene	(2)	7.074	78	1084259	4.684
63)*Fluorobenzene	(2)	7.482	96	2269497	10.000
67) Trichloroethene	(2)	7.970	95	282367	4.621
82)$Toluene-d8	(3)	9.530	98	2305676	9.865
83) Toluene	(3)	9.610	92	693434	4.683
89) Tetrachloroethene	(3)	10.171	166	317138	4.618
97)*Chlorobenzene-d5	(3)	11.018	117	1742842	10.000
100) Ethylbenzene	(3)	11.134	91	1363591	4.634
101) m+p-Xylene	(3)	11.250	106	1058066	9.445
104) o-Xylene	(3)	11.579	106	530448	4.723
105) Xylene (Total)	(3)		106	1588514	14.168
111)$4-Bromofluorobenzene	(3)	12.030	95	882557	9.865
133)*1,4-Dichlorobenzene-d4	(4)	12.908	152	998461	10.000

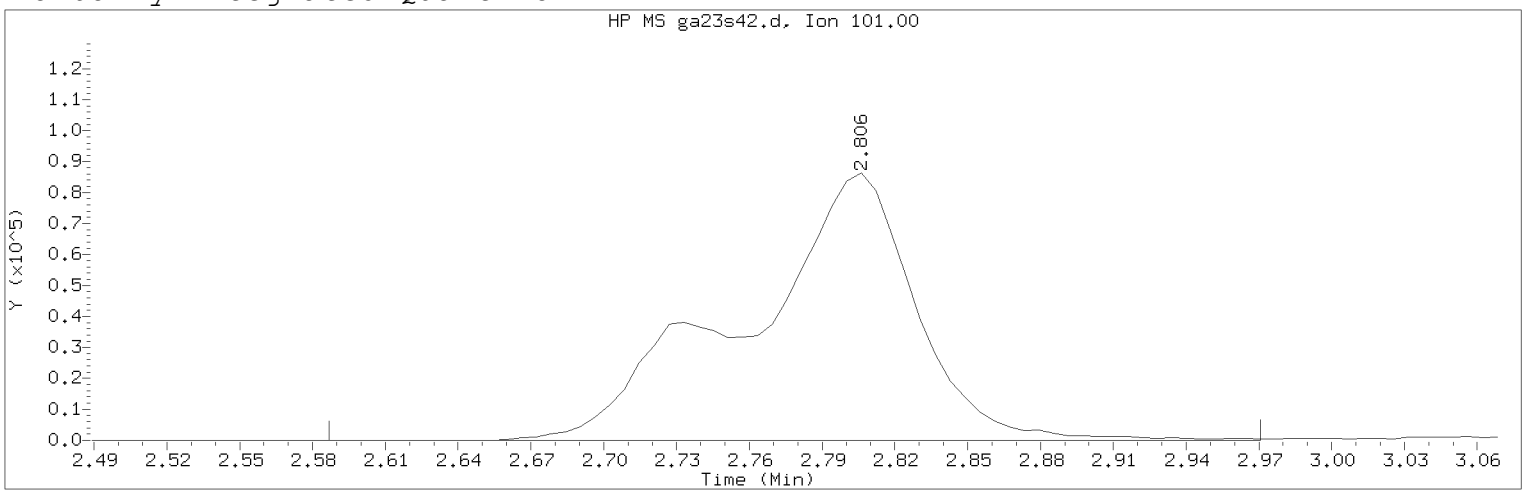
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s42.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:17 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 21:47 msk07970

Sample Name: LCDG84 Lab Sample ID: LCDG84

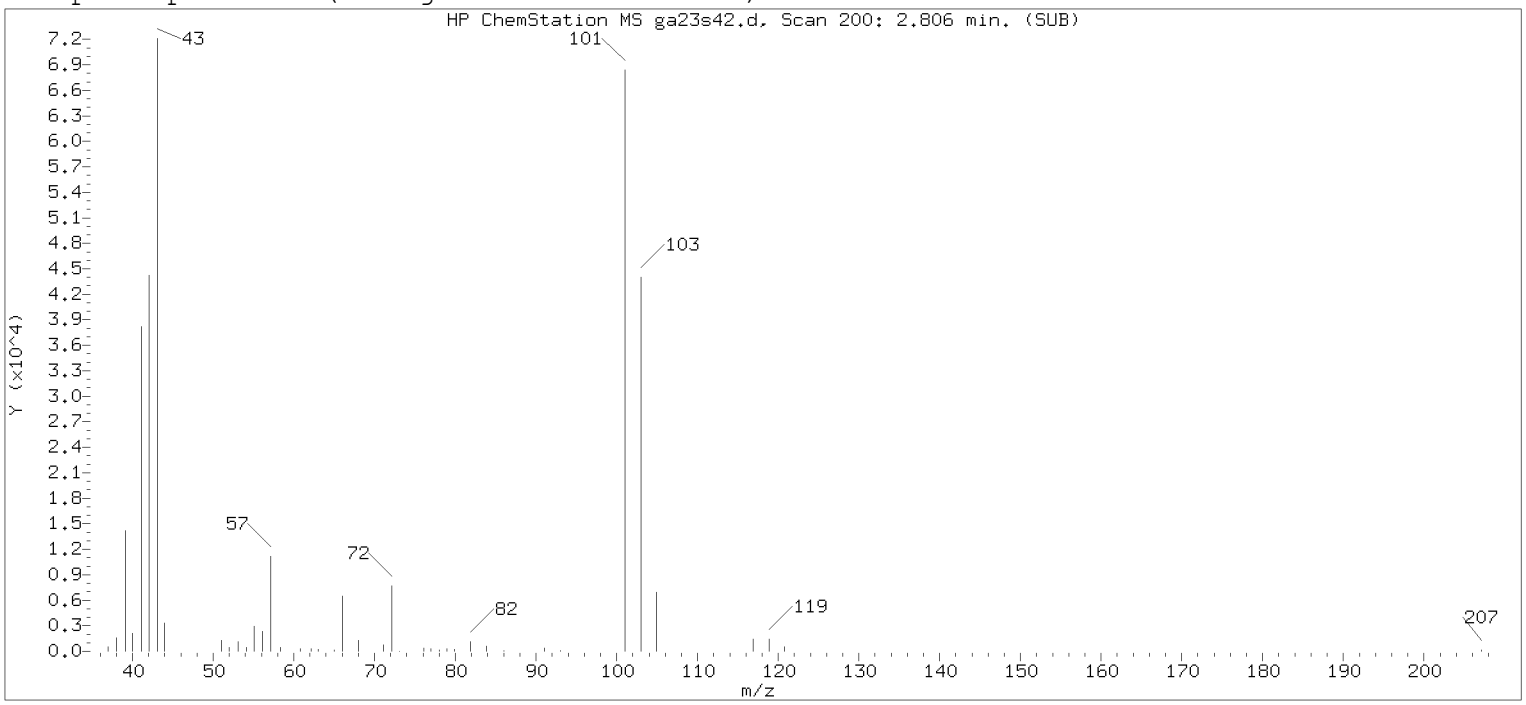
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area (flag) : 417319M
On-Column Amount (ng) : 4.3499
Integration start scan : 163 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

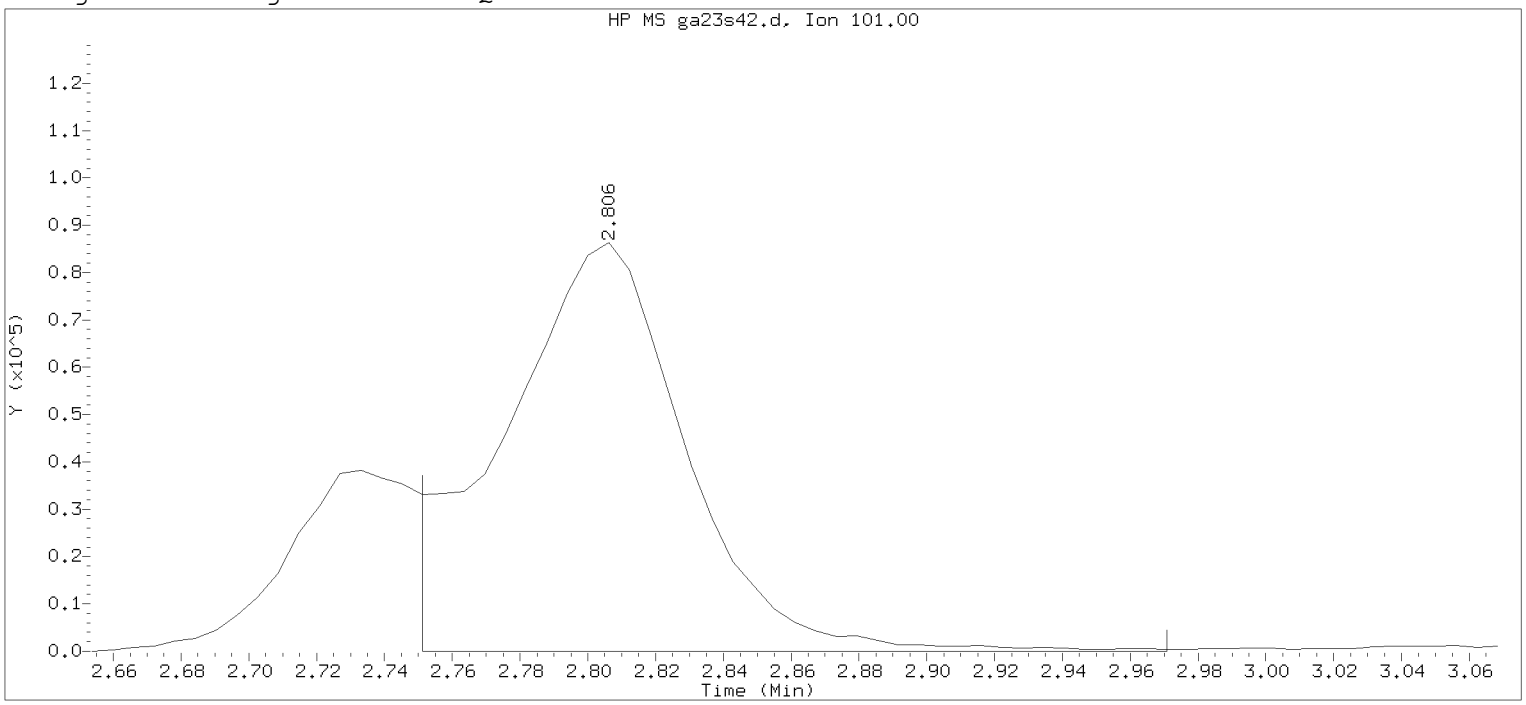
Analyst responsible for change: Digitally signed by Matthew S. Krause
on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: msk07970

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 17:56.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/18apr23b.b/ga23s42.d Instrument ID: HP16334.i
Injection date and time: 23-APR-2018 20:17 Analyst ID: msk07970

Method used: /chem2/HP16334.i/18apr23b.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 23-APR-2018 20:20
Date, time and analyst ID of latest file update: 23-Apr-2018 20:33 Automation

Sample Name: LCDG84 Lab Sample ID: LCDG84

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 200
Retention Time (minutes): 2.806
Quant Ion : 101.00
Area : 319704
On-column Amount (ng) : 3.3324
Integration start scan : 190 Integration stop scan: 226
Y at integration start : 0 Y at integration end: 0

Digitally signed by Matthew S. Krause on 04/23/2018 at 22:04.
Target 3.5 esignature user ID: mskrause

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s72.d Injection date and time: **23-APR-2018 23:41**
Data file Sample Info. Line: LCSI93;LCSI93;1;3;LCS;;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.147(-0.012)	420	65	141849M (-4)	50.00	
63) Fluorobenzene	7.665(0.000)	997	96	2181154 (6)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1594054 (3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024(0.000)	1876	152	821027 (-1)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775(-0.001)	113	512293	10.064	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.238(-0.002)	102	110432	9.973	100%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2176841	10.114	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	769808	10.129	101%		80 - 120

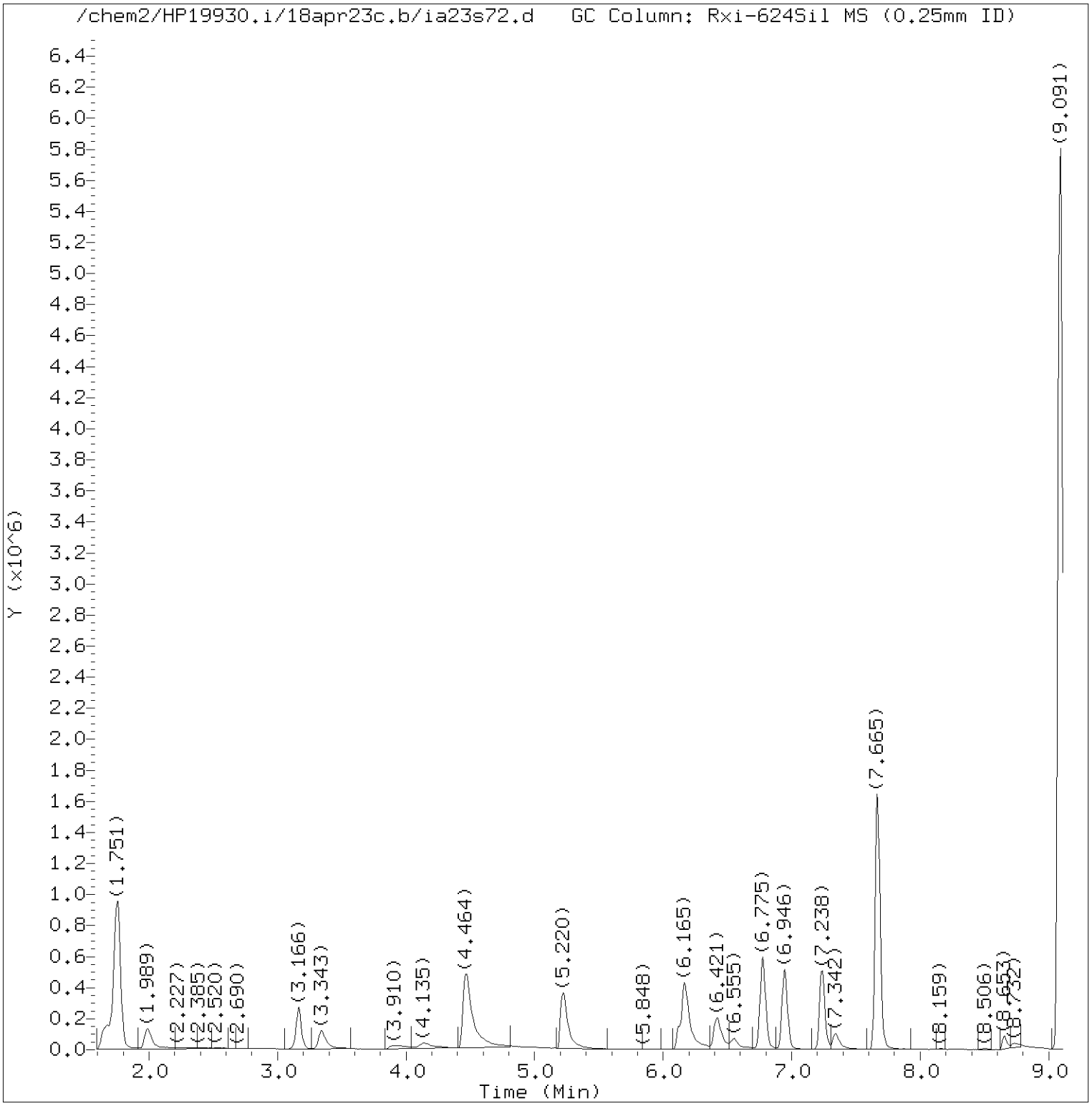
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
4) Dimethyl ether	(2)	1.989(0.000)	45	331199M	3.947	3.95		J	0.1	13
25) Acetonitrile	(1)	3.916(-0.007)	41	241833M	62.815	62.82		J	32	100
36) Vinyl Acetate	(2)	5.220(0.000)	43	1222516	12.458	12.46			3	10
142) Hexachloroethane	(4)	13.505(0.000)	117	170488	4.809	4.81		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Don V. Viray on 04/24/2018 at 00:34. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

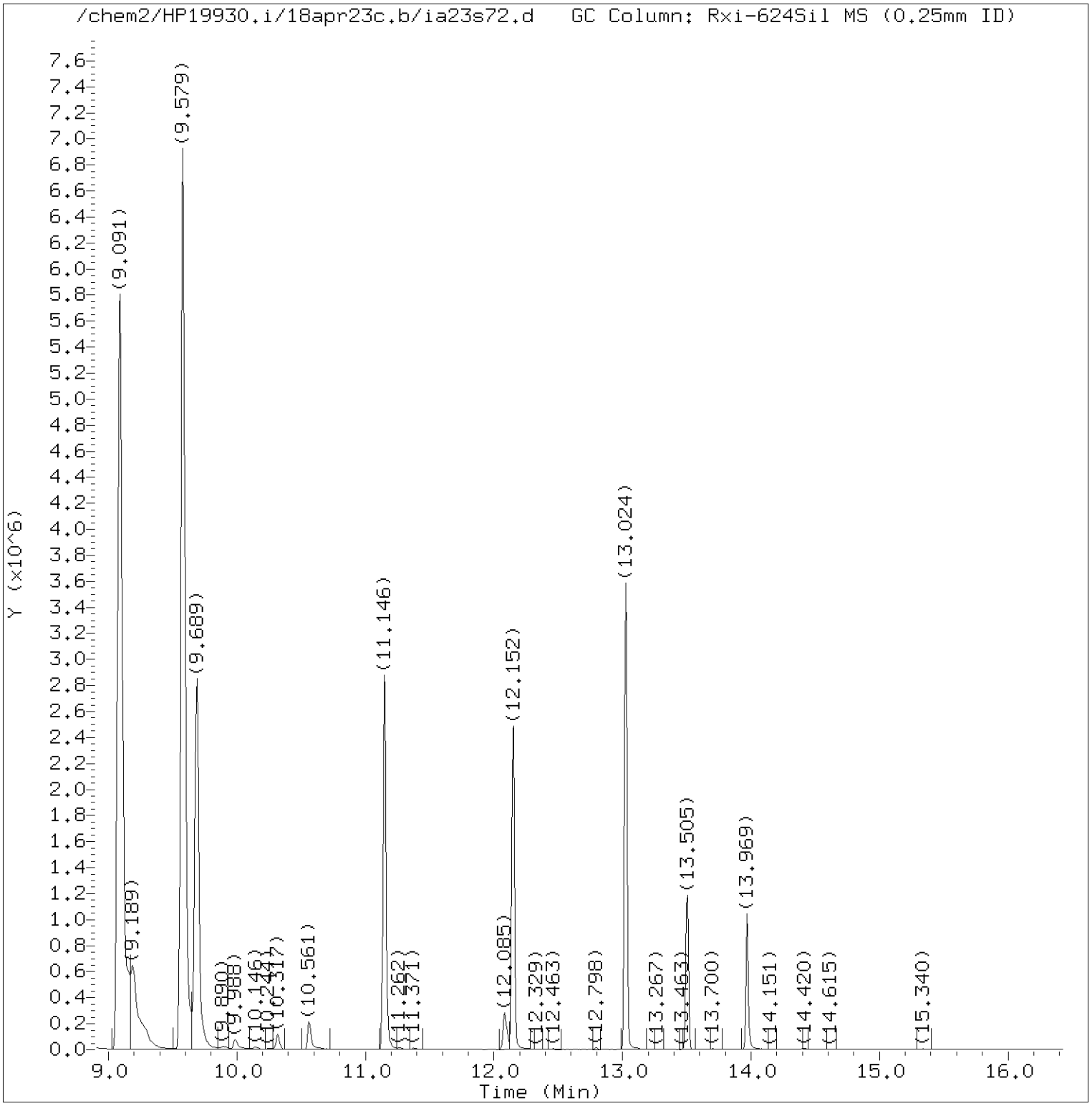
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

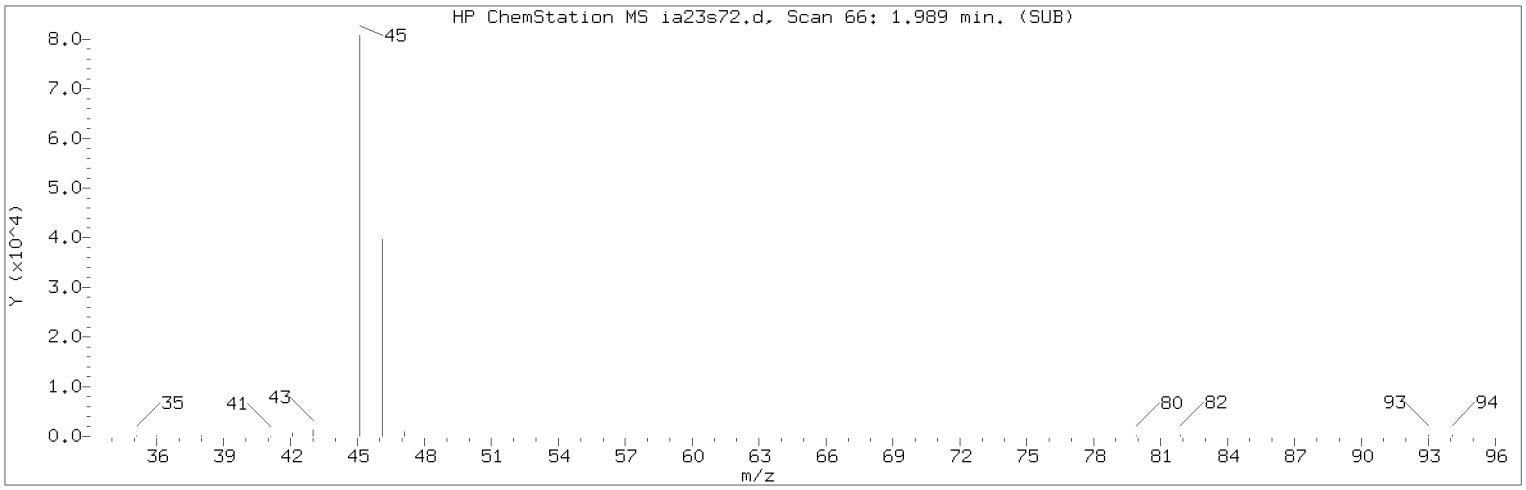
Sample Name: LCSI93 Lab Sample ID: LCSI93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.989	45	331199M	3.947
25) Acetonitrile	(1)	3.916	41	241833M	62.815
26)*t-Butyl Alcohol-d10	(1)	4.147	65	141849M	50.000
36) Vinyl Acetate	(2)	5.220	43	1222516	12.458
50)$Dibromofluoromethane	(2)	6.775	113	512293	10.064
57)$1,2-Dichloroethane-d4	(2)	7.238	102	110432	9.973
63)*Fluorobenzene	(2)	7.665	96	2181154	10.000
82)$Toluene-d8	(3)	9.689	98	2176841	10.114
97)*Chlorobenzene-d5	(3)	11.146	117	1594054	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	769808	10.129
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	821027	10.000
142) Hexachloroethane	(4)	13.505	117	170488	4.809

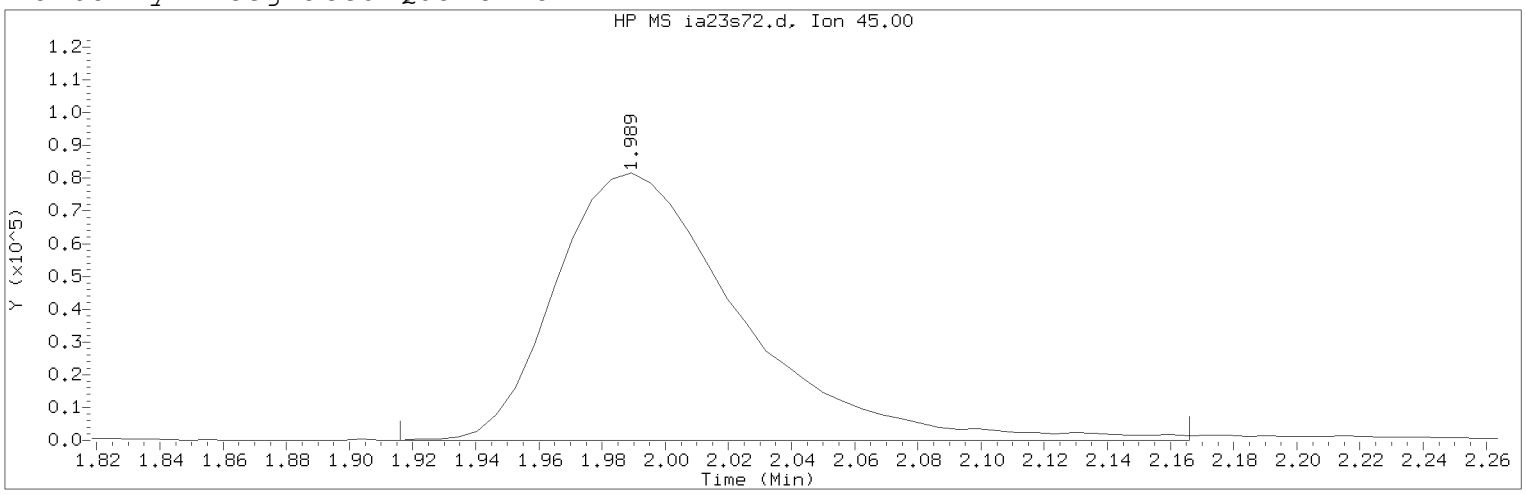
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

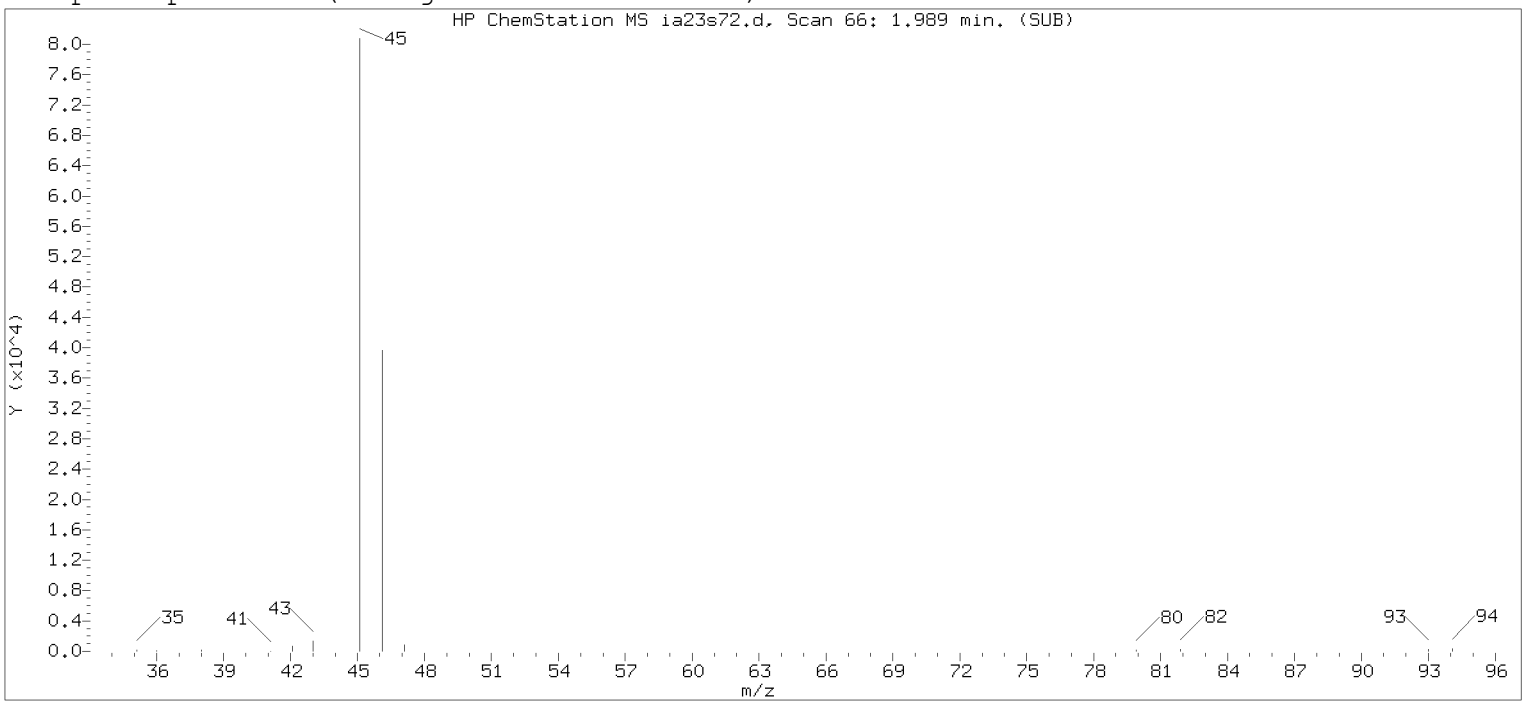
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 66
Retention Time (minutes): 1.989
Quant Ion : 45.00
Area (flag) : 331199M
On-Column Amount (ng) : 3.9472
Integration start scan : 53 Integration stop scan: 94
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

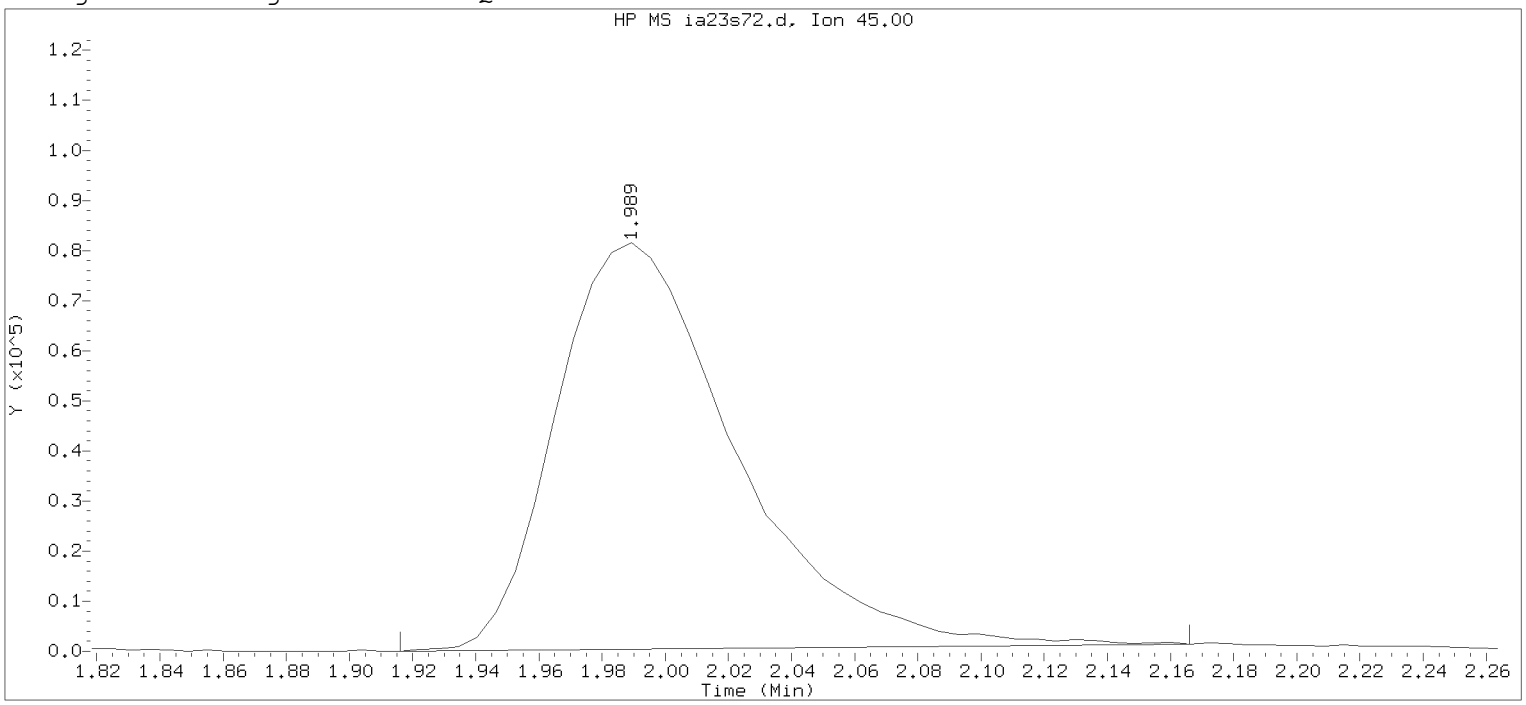
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

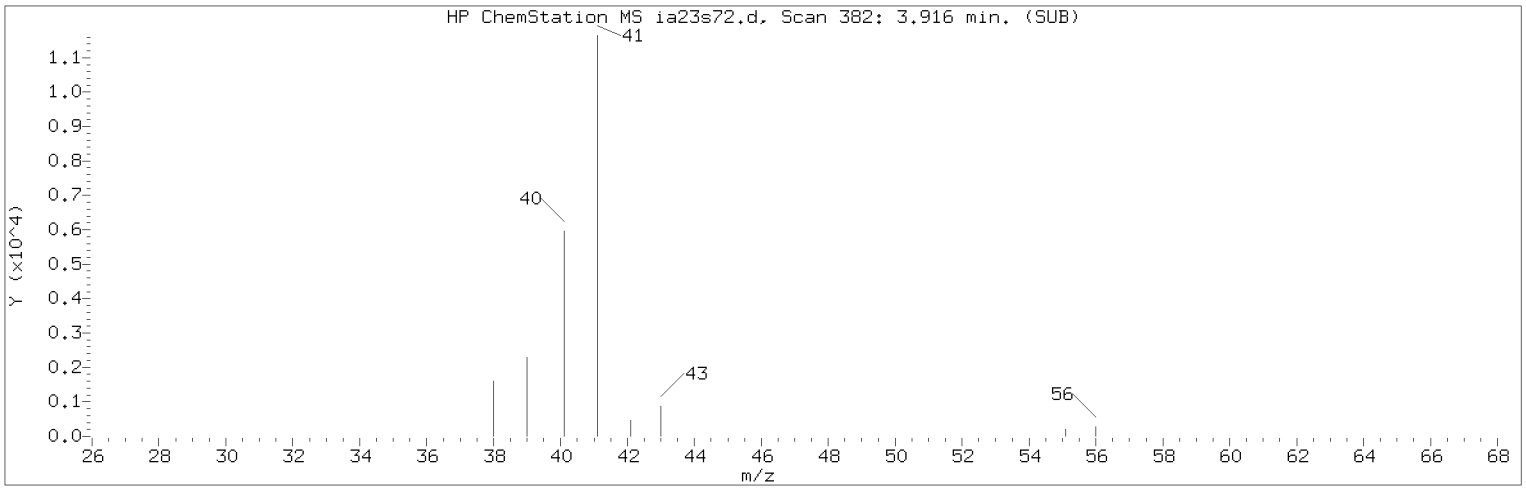
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:03 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

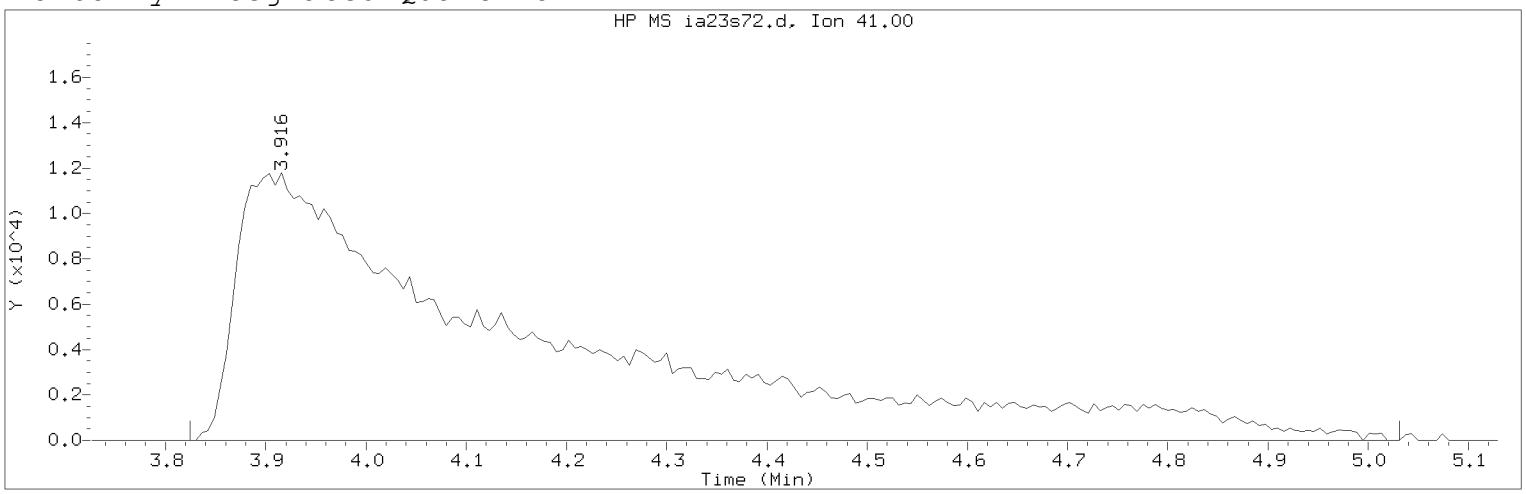
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 66
Retention Time (minutes): 1.989
Quant Ion : 45.00
Area : 319943
On-column Amount (ng) : 3.8131
Integration start scan : 53 Integration stop scan: 94
Y at integration start : 0 Y at integration end: 1465

Digitally signed by Don V. Viray on 04/24/2018 at 00:34.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

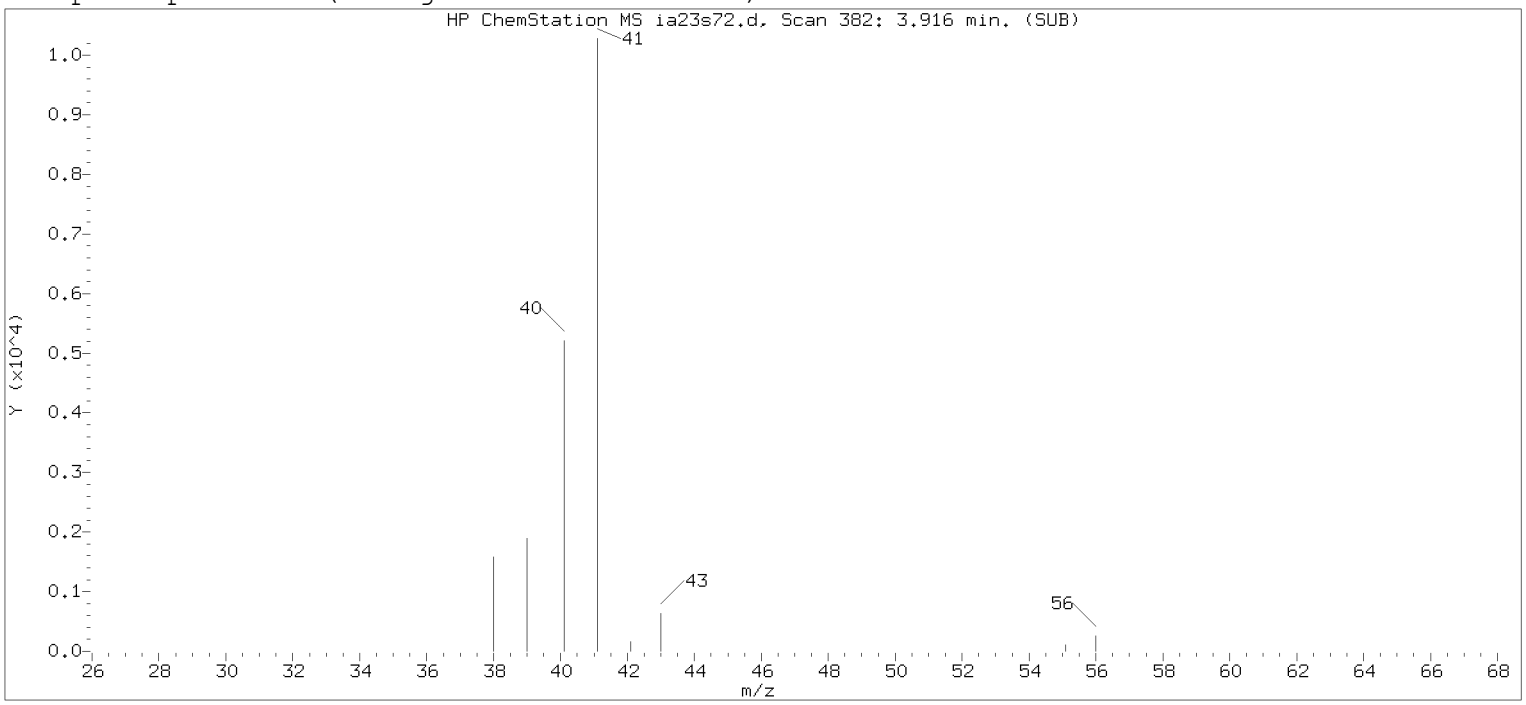
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 382
Retention Time (minutes): 3.916
Quant Ion : 41.00
Area (flag) : 241833M
On-Column Amount (ng) : 62.8151
Integration start scan : 366 Integration stop scan: 564
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

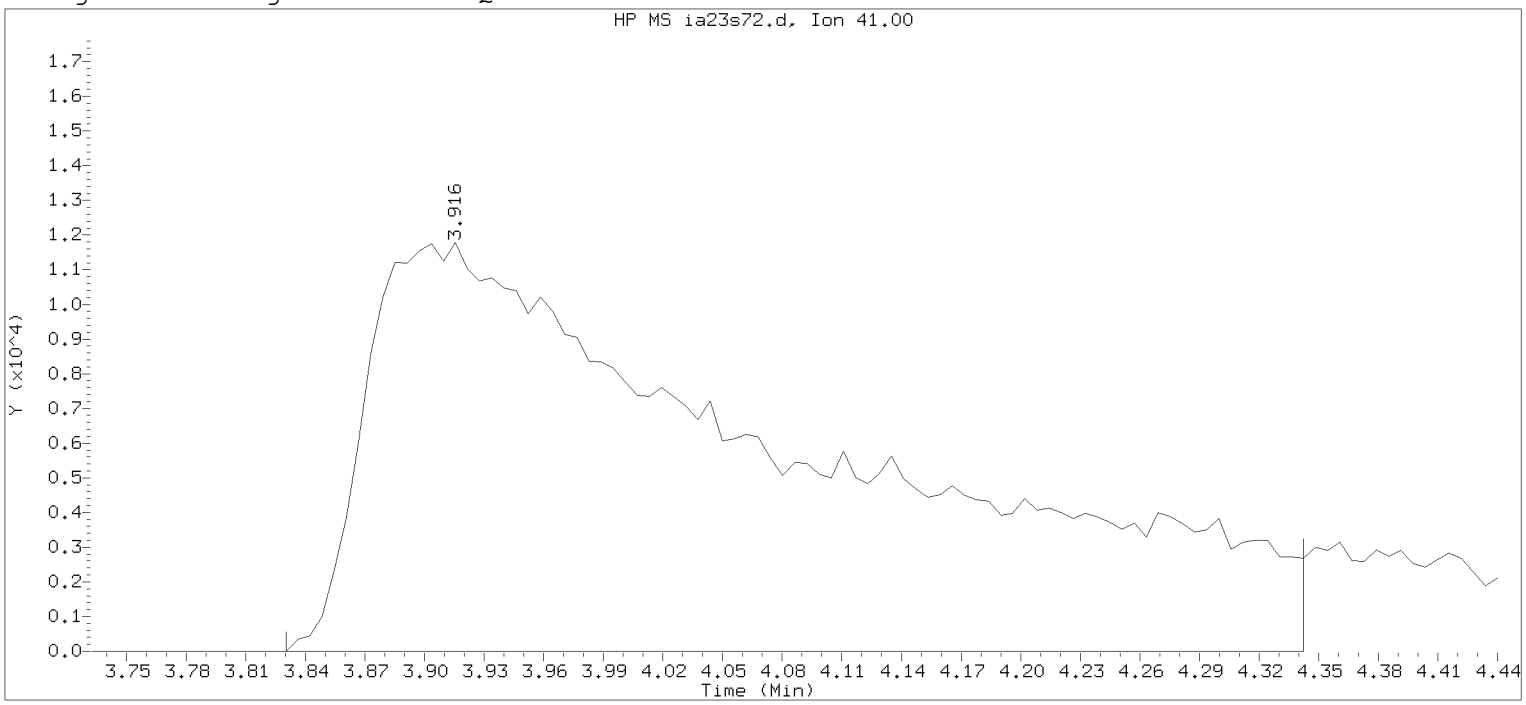
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

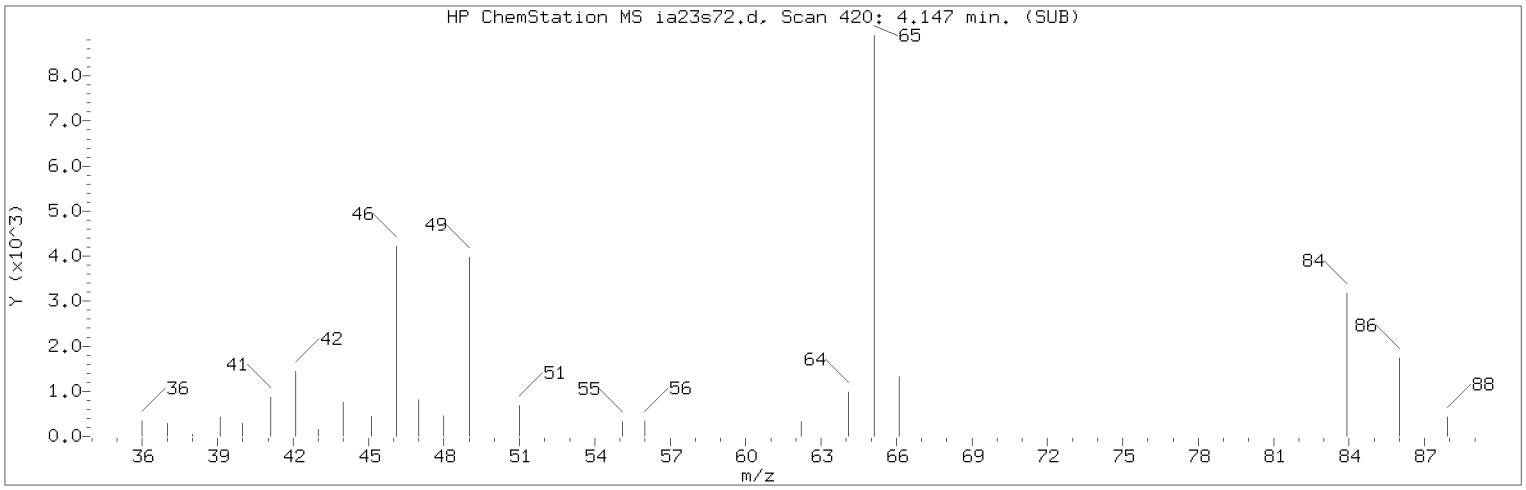
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:03 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

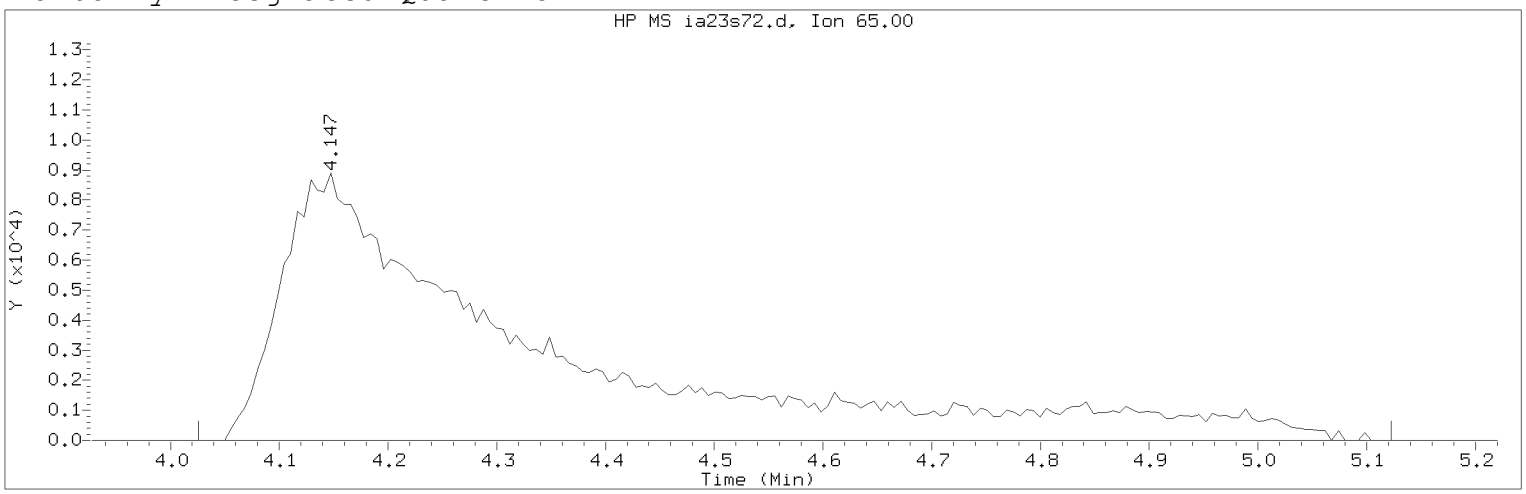
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 382
Retention Time (minutes): 3.916
Quant Ion : 41.00
Area : 181891
On-column Amount (ng) : 52.0027
Integration start scan : 367 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:31 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

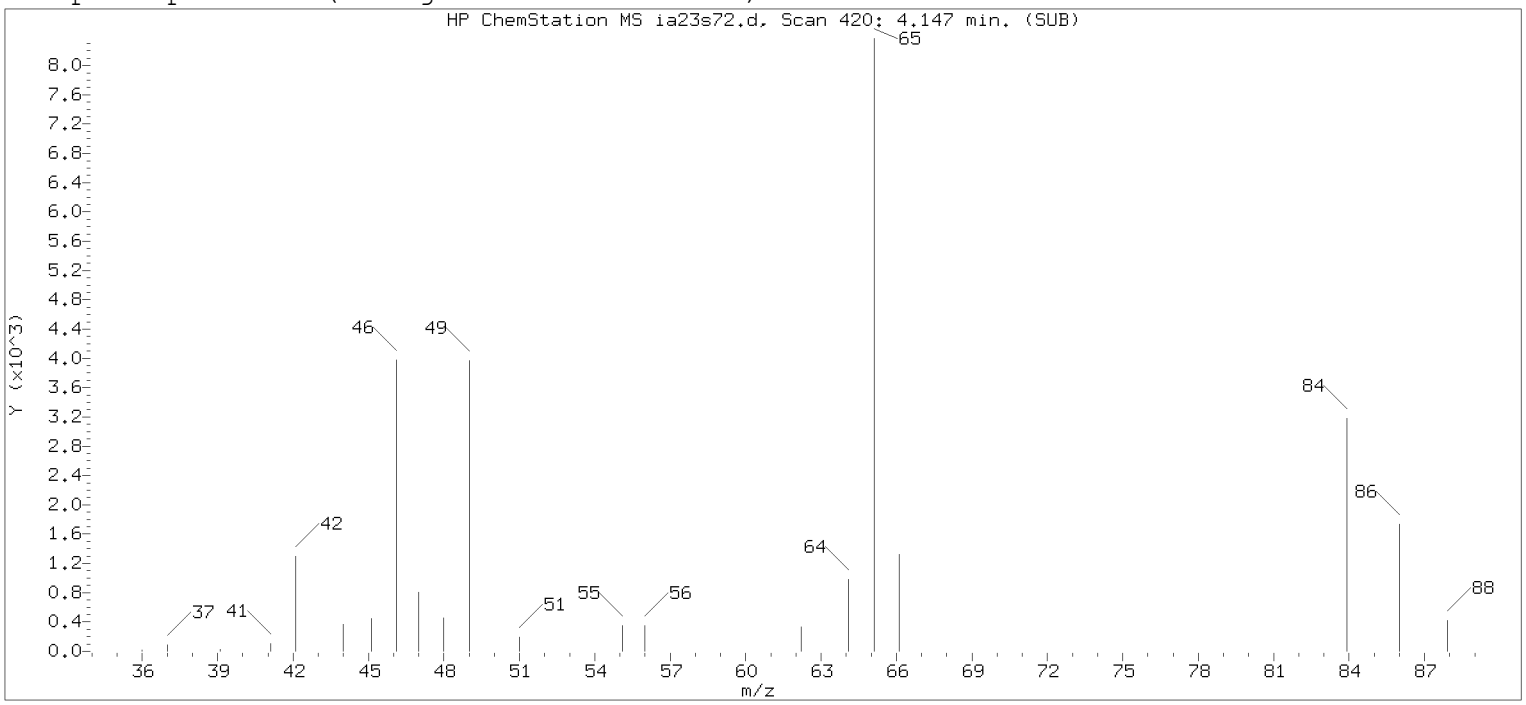
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 420
Retention Time (minutes): 4.147
Quant Ion : 65.00
Area (flag) : 141849M
On-Column Amount (ng) : 50.0000
Integration start scan : 399 Integration stop scan: 579
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

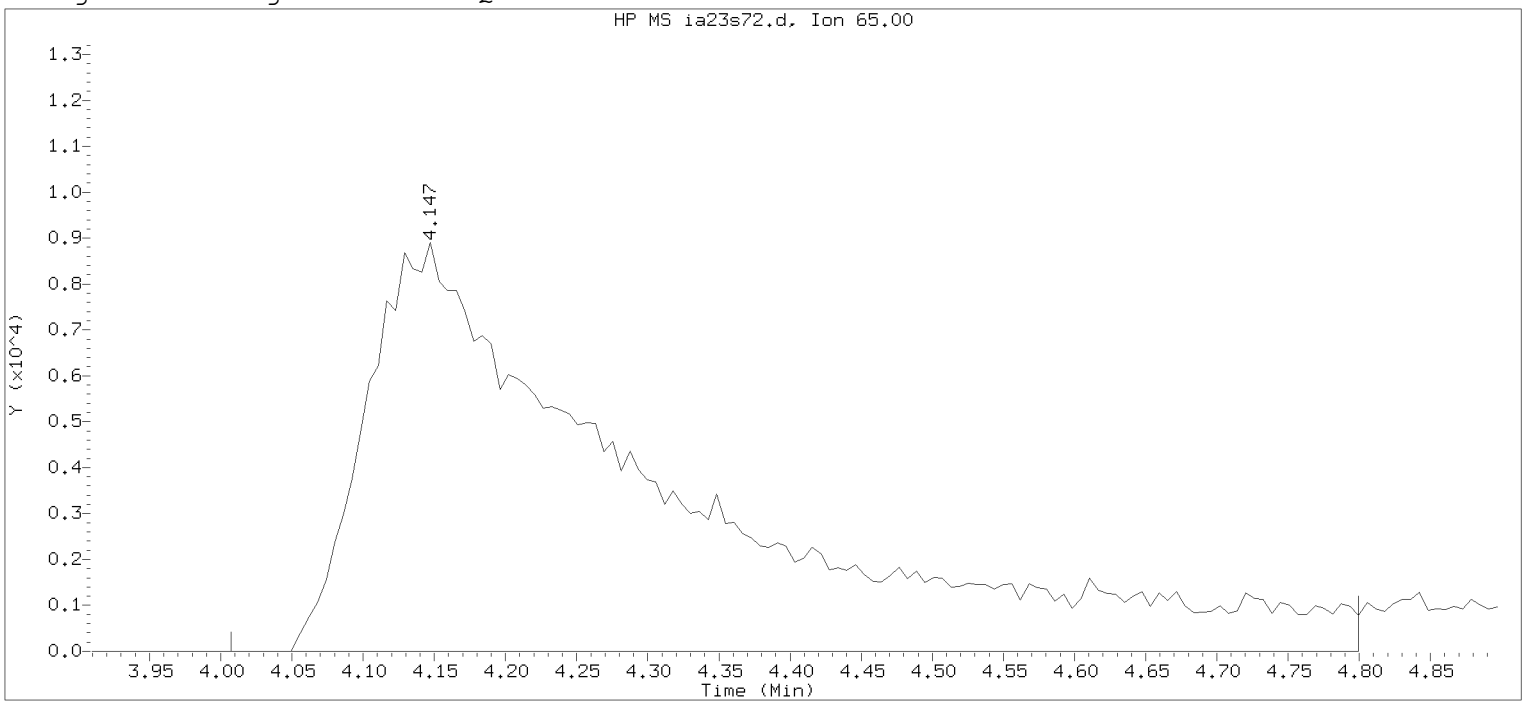
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:34.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s72.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 23:41 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:03 dvv10203

Sample Name: LCSI93 Lab Sample ID: LCSI93

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 420		
Retention Time (minutes)	: 4.147		
Quant Ion	: 65.00		
Area	: 128872		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 396	Integration stop scan:	526
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 04/24/2018 at 00:34.
Target 3.5 esignature used.

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s71.d Injection date and time: **23-APR-2018 22:38**
Data file Sample Info. Line: LCSI92;LCSI92;1;3;LCS;;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.141(-0.006)	419	65	140444M (-5)	50.00	
63) Fluorobenzene	7.665(0.000)	997	96	2191782 (7)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1617863 (4)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024(0.000)	1876	152	855355 (3)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769(0.000)	113	519470	10.155	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232(-0.001)	102	110820	9.959	100%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2176821	9.965	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	765364	9.923	99%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.892(0.000)	85	389406	3.860	3.86			0.1	1
2) Chloromethane	(2)	2.093(0.000)	50	329316	3.526	3.53			0.2	0.5
5) Vinyl Chloride	(2)	2.208(0.000)	62	311639	3.707	3.71			0.2	1
7) Bromomethane	(2)	2.538(0.000)	94	231601	3.920	3.92			0.5	1
8) Chloroethane	(2)	2.623(0.000)	64	170757	3.565	3.57			0.1	0.5
10) Trichlorofluoromethane	(2)	2.922(0.000)	101	504252M	4.774	4.77			0.2	1
11) Ethyl ether	(2)	3.160(-0.000)	59	260070	4.990	4.99		J	1	13
13) Acrolein	(1)	3.336(-0.000)	56	278672	41.454	41.45			5	25
15) 1,1-Dichloroethene	(2)	3.470(0.000)	96	289055	5.804	5.80			0.2	1
16) Freon 113	(2)	3.507(0.000)	101	312030	5.465	5.46			0.2	1
14) Acetone	(1)	3.501(-0.000)	43	380898	38.596	38.60			3	10
17) Methyl Iodide	(2)	3.672(0.000)	142	475342	5.162	5.16		J	0.6	10
18) Carbon Disulfide	(2)	3.788(0.000)	76	697443	4.952	4.95		J	0.4	10
22) Allyl Chloride	(2)	3.946(0.000)	41	526932	5.743	5.74		J	0.8	10
23) Methylene Chloride	(2)	4.135(0.000)	84	322775	5.308	5.31			0.2	1
29) Acrylonitrile	(1)	4.470(-0.001)	53	341177	30.851	30.85			1	10
31) trans-1,2-Dichloroethene	(2)	4.550(0.000)	96	318336	5.597	5.60			0.2	1
33) 1,1-Dichloroethane	(2)	5.220(0.000)	63	617518	5.435	5.44			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.330(-0.000)	53	534036	5.509	5.51		J	0.5	10
38) 2-Butanone	(1)	6.031(0.000)	43	766480	49.719	49.72			1	10
42) Propionitrile	(1)	6.122(-0.002)	54	185500	42.248	42.25		J	10	100
45) Methacrylonitrile	(1)	6.330(0.000)	67	685937	47.877	47.88		J	10	100
48) Tetrahydrofuran	(1)	6.415(0.000)	71	134541	32.116	32.12			2	25
49) Chloroform	(2)	6.549(0.000)	83	577527	5.403	5.40			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.781(-0.000)	97	493405	5.542	5.54			0.1	1
54) Carbon Tetrachloride	(2)	6.994(0.000)	117	427227	5.682	5.68			0.2	1
56) Isobutyl Alcohol	(1)	7.122(0.001)	41	175838	129.105	129.10		J	10	200
58) Benzene	(2)	7.256(0.000)	78	1369239	5.366	5.37			0.1	1
59) 1,2-Dichloroethane	(2)	7.336(0.000)	62	387026	5.194	5.19			0.1	1
67) Trichloroethene	(2)	8.152(-0.000)	95	352439	5.455	5.46			0.2	1

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 04/24/2018 at 00:33. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr23c.b/ia23s71.d Injection date and time: **23-APR-2018 22:38**
Data file Sample Info. Line: LCSI92;LCSI92;1;3;LCS;;DAA3568;;ia23b71; Instrument ID: **HP19930.i** Batch: **I181133AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr23c.b/ia23b71.d**

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 23-APR-2018 22:44
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr23c.b/ia23c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

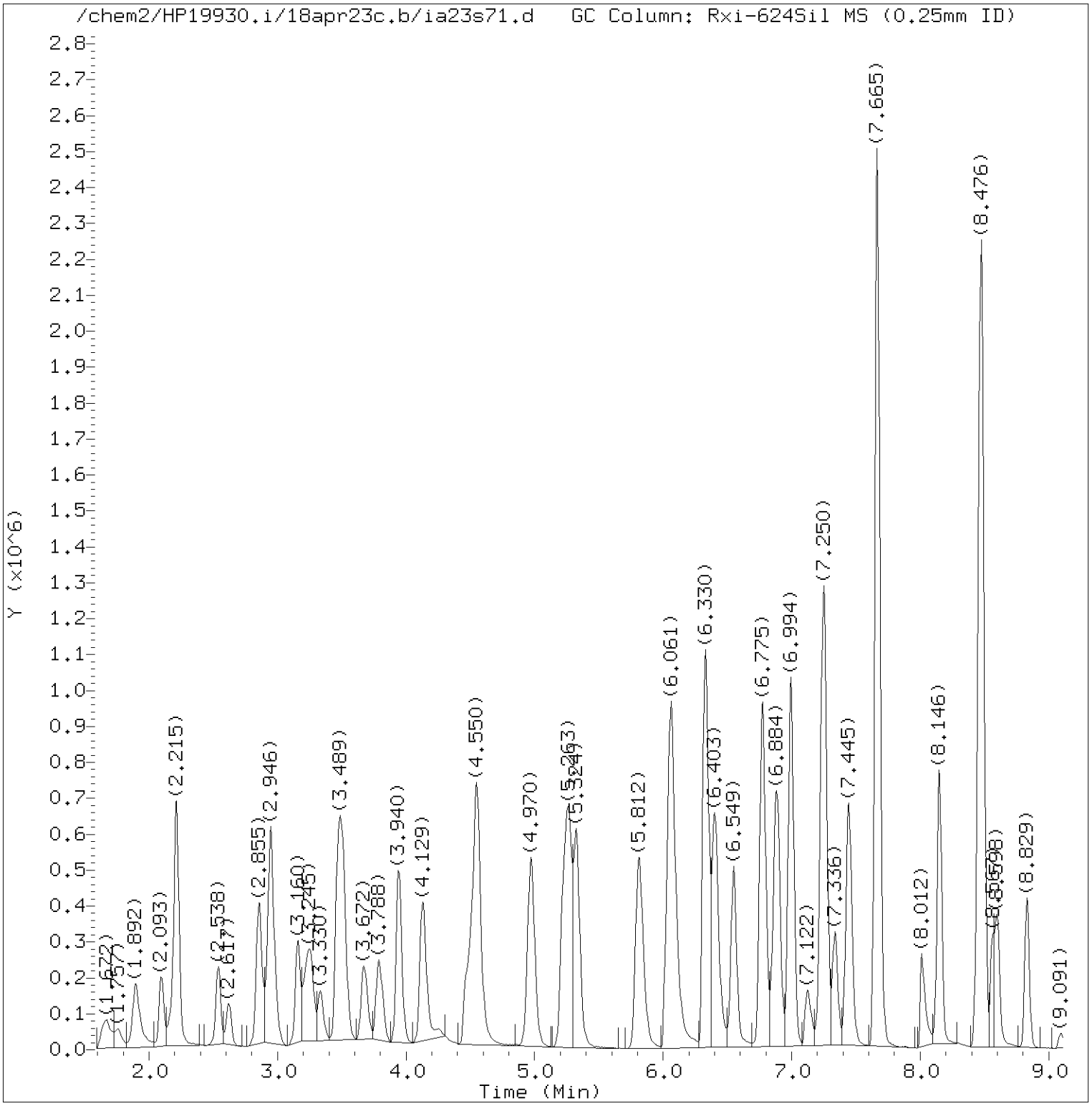
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
70) 1,2-Dichloropropane	(2)	8.488(-0.000)	63	360096	5.441	5.44			0.1	1
71) Methyl Methacrylate	(1)	8.561(0.001)	69	159837	6.645	6.64		J	4	10
73) Dibromomethane	(2)	8.598(-0.000)	93	158690	5.356	5.36			0.1	1
72) 1,4-Dioxane	(1)	8.573(0.003)	88	35506M	149.254	149.25		J	45	200
74) Bromodichloromethane	(2)	8.829(-0.000)	83	370254	5.219	5.22			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.536(0.003)	43	1299381	33.918	33.92			1	10
83) Toluene	(3)	9.768(-0.000)	92	849279	5.326	5.33			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.024(0.000)	75	353908	5.248	5.25			0.1	1
86) Ethyl Methacrylate	(3)	10.079(0.000)	69	345312	5.229	5.23		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.231(0.000)	97	239709	5.329	5.33			0.1	1
89) Tetrachloroethene	(3)	10.317(0.000)	166	381770	5.635	5.64			0.1	1
90) 1,3-Dichloropropane	(3)	10.396(-0.000)	76	419292	5.238	5.24			0.1	1
91) 2-Hexanone	(1)	10.432(0.002)	43	931470	34.443	34.44			1	10
93) Dibromochloromethane	(3)	10.609(0.000)	129	236606	5.342	5.34			0.1	1
95) 1,2-Dibromoethane	(3)	10.725(0.000)	107	216352	5.287	5.29			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.256(-0.000)	131	299252	5.430	5.43			0.1	1
100) Ethylbenzene	(3)	11.256(-0.000)	91	1634671	5.409	5.41			0.1	1
101) m+p-Xylene	(3)	11.371(-0.000)	106	1275990	10.988	10.99			0.1	0.5
104) o-Xylene	(3)	11.701(-0.000)	106	612214	5.418	5.42			0.1	0.5
105) Xylene (Total)	(3)		106	1888204	16.407	16.41			0.2	3
106) Styrene	(3)	11.719(-0.000)	104	976828	5.601	5.60			0.1	1
107) Bromoform	(3)	11.884(-0.000)	173	111773	4.318	4.32			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.243(0.000)	83	291749	4.848	4.85			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.268(0.004)	53	265160	27.608	27.61			1	10
116) 1,2,3-Trichloropropane	(4)	12.292(0.000)	110	82577	5.239	5.24			0.3	1
126) Pentachloroethane	(4)	12.737(0.000)	167	212719	5.349	5.35		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	12.969(0.000)	146	727060M	5.216	5.22			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.042(-0.000)	146	726332M	5.115	5.12			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.298(-0.000)	146	666283	5.154	5.15			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.846(0.003)	155	31502	6.067	6.07			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.389(-0.000)	180	395120	4.789	4.79			0.1	1
146) Hexachlorobutadiene	(4)	14.468(-0.000)	225	167844	5.622	5.62			0.1	1
147) Naphthalene	(4)	14.572(-0.000)	128	773317	4.784	4.78			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Don V. Viray on 04/24/2018 at 00:33. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

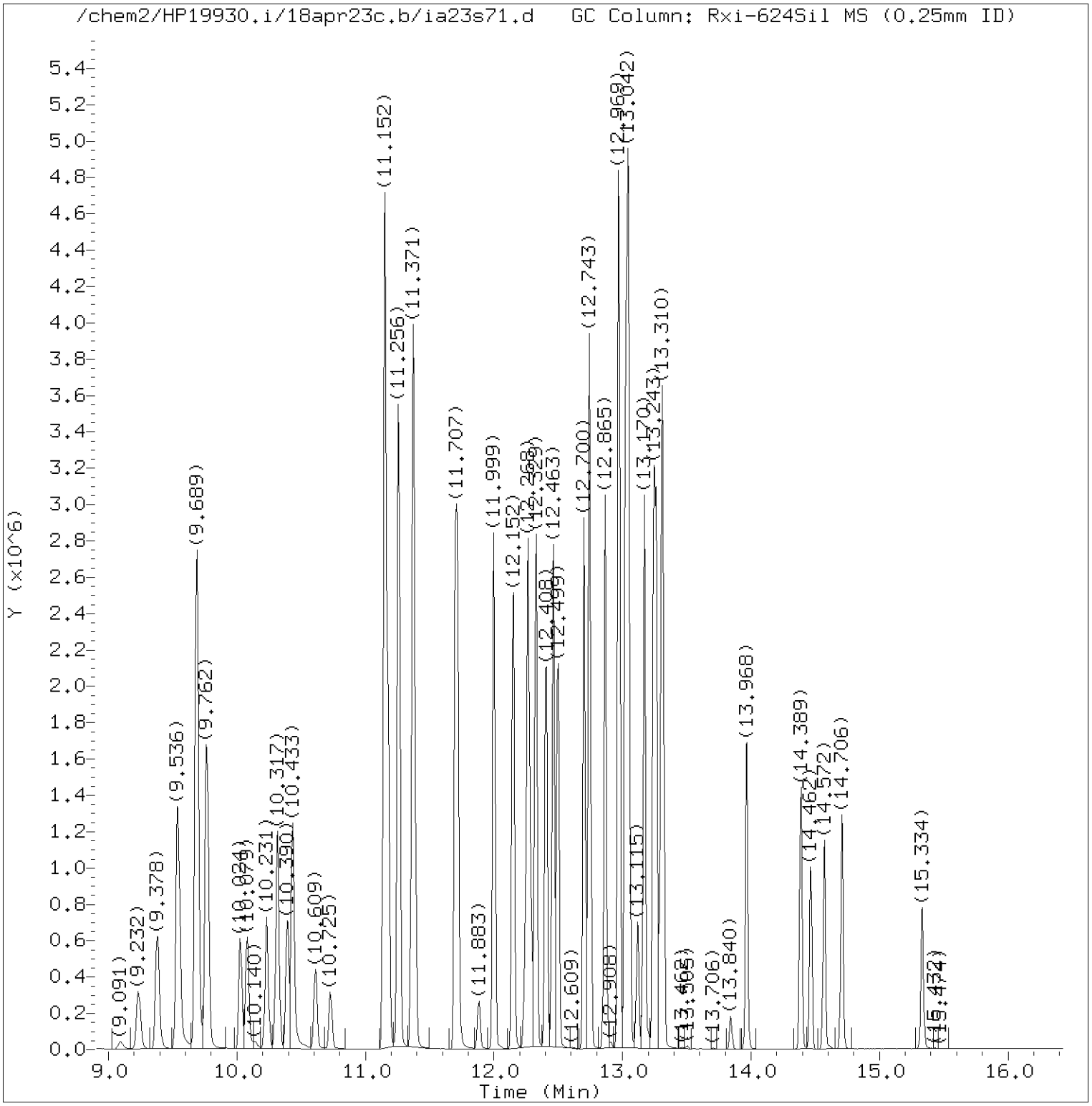
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.892	85	389406	3.860
2) Chloromethane	(2)	2.093	50	329316	3.526
5) Vinyl Chloride	(2)	2.209	62	311639	3.707
7) Bromomethane	(2)	2.538	94	231601	3.920
8) Chloroethane	(2)	2.623	64	170757	3.565
10) Trichlorofluoromethane	(2)	2.922	101	504252M	4.774
11) Ethyl ether	(2)	3.160	59	260070	4.990
13) Acrolein	(1)	3.336	56	278672	41.454
15) 1,1-Dichloroethene	(2)	3.470	96	289055	5.804
14) Acetone	(1)	3.501	43	380898	38.596
16) Freon 113	(2)	3.507	101	312030	5.465
17) Methyl Iodide	(2)	3.672	142	475342	5.162
18) Carbon Disulfide	(2)	3.788	76	697443	4.952
22) Allyl Chloride	(2)	3.946	41	526932	5.743
23) Methylene Chloride	(2)	4.135	84	322775	5.308
26)*t-Butyl Alcohol-d10	(1)	4.141	65	140444M	50.000
29) Acrylonitrile	(1)	4.470	53	341177	30.851
31) trans-1,2-Dichloroethene	(2)	4.550	96	318336	5.597
33) 1,1-Dichloroethane	(2)	5.220	63	617518	5.435
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	534036	5.509
38) 2-Butanone	(1)	6.031	43	766480	49.719
42) Propionitrile	(1)	6.122	54	185500	42.248
45) Methacrylonitrile	(1)	6.330	67	685937	47.877
48) Tetrahydrofuran	(1)	6.415	71	134541	32.116
49) Chloroform	(2)	6.549	83	577527	5.403
50)$Dibromofluoromethane	(2)	6.769	113	519470	10.155
51) 1,1,1-Trichloroethane	(2)	6.781	97	493405	5.542
54) Carbon Tetrachloride	(2)	6.994	117	427227	5.682
56) Isobutyl Alcohol	(1)	7.122	41	175838	129.105
57)$1,2-Dichloroethane-d4	(2)	7.232	102	110820	9.959
58) Benzene	(2)	7.256	78	1369239	5.366
59) 1,2-Dichloroethane	(2)	7.336	62	387026	5.194
63)*Fluorobenzene	(2)	7.665	96	2191782	10.000
67) Trichloroethene	(2)	8.153	95	352439	5.455
70) 1,2-Dichloropropane	(2)	8.488	63	360096	5.441
71) Methyl Methacrylate	(1)	8.561	69	159837	6.645
72) 1,4-Dioxane	(1)	8.573	88	35506M	149.254
73) Dibromomethane	(2)	8.598	93	158690	5.356

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

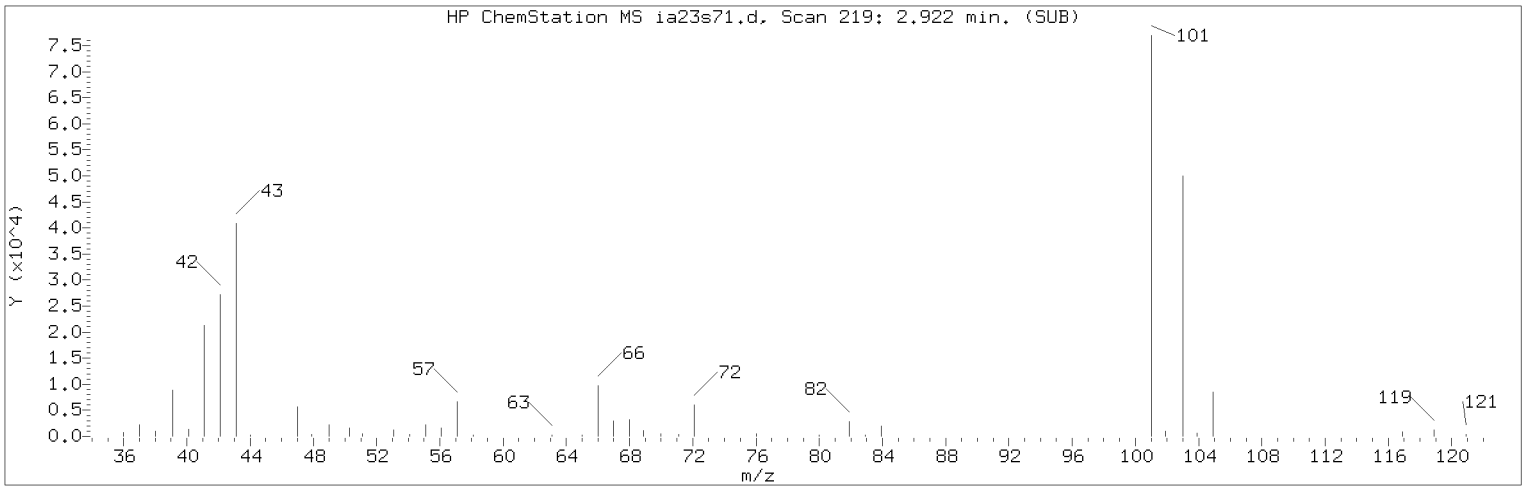
Sample Name: LCSI92 Lab Sample ID: LCSI92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.829	83	370254	5.219
81) 4-Methyl-2-Pentanone	(1)	9.536	43	1299381	33.918
82)$Toluene-d8	(3)	9.689	98	2176821	9.965
83) Toluene	(3)	9.768	92	849279	5.326
84) trans-1,3-Dichloropropene	(3)	10.024	75	353908	5.248
86) Ethyl Methacrylate	(3)	10.079	69	345312	5.229
88) 1,1,2-Trichloroethane	(3)	10.231	97	239709	5.329
89) Tetrachloroethene	(3)	10.317	166	381770	5.635
90) 1,3-Dichloropropane	(3)	10.396	76	419292	5.238
91) 2-Hexanone	(1)	10.433	43	931470	34.443
93) Dibromochloromethane	(3)	10.609	129	236606	5.342
95) 1,2-Dibromoethane	(3)	10.725	107	216352	5.287
97)*Chlorobenzene-d5	(3)	11.146	117	1617863	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	299252	5.430
100) Ethylbenzene	(3)	11.256	91	1634671	5.409
101) m+p-Xylene	(3)	11.371	106	1275990	10.988
104) o-Xylene	(3)	11.701	106	612214	5.418
106) Styrene	(3)	11.719	104	976828	5.601
105) Xylene (Total)	(3)		106	1888204	16.407
107) Bromoform	(3)	11.883	173	111773	4.318
111)$4-Bromofluorobenzene	(3)	12.146	95	765364	9.923
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	291749	4.848
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	265160	27.608
116) 1,2,3-Trichloropropane	(4)	12.292	110	82577	5.239
126) Pentachloroethane	(4)	12.737	167	212719	5.349
131) 1,3-Dichlorobenzene	(4)	12.969	146	727060M	5.216
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	855355	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	726332M	5.115
139) 1,2-Dichlorobenzene	(4)	13.298	146	666283	5.154
143) 1,2-Dibromo-3-chloropropane	(1)	13.847	155	31502	6.067
145) 1,2,4-Trichlorobenzene	(4)	14.389	180	395120	4.789
146) Hexachlorobutadiene	(4)	14.468	225	167844	5.622
147) Naphthalene	(4)	14.572	128	773317	4.784

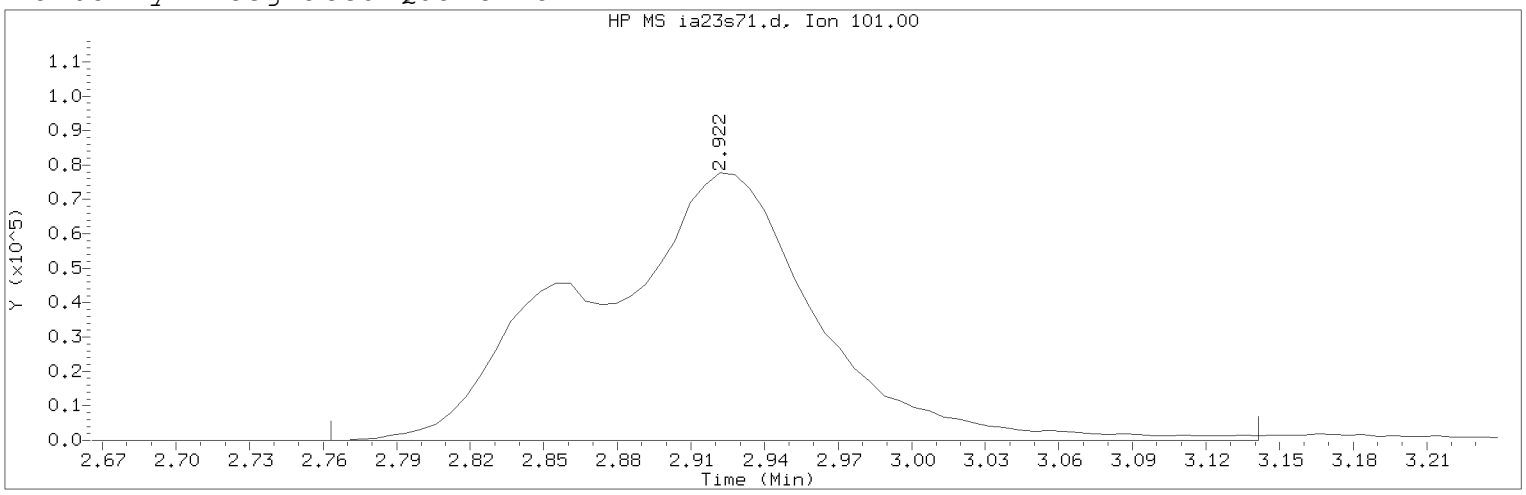
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

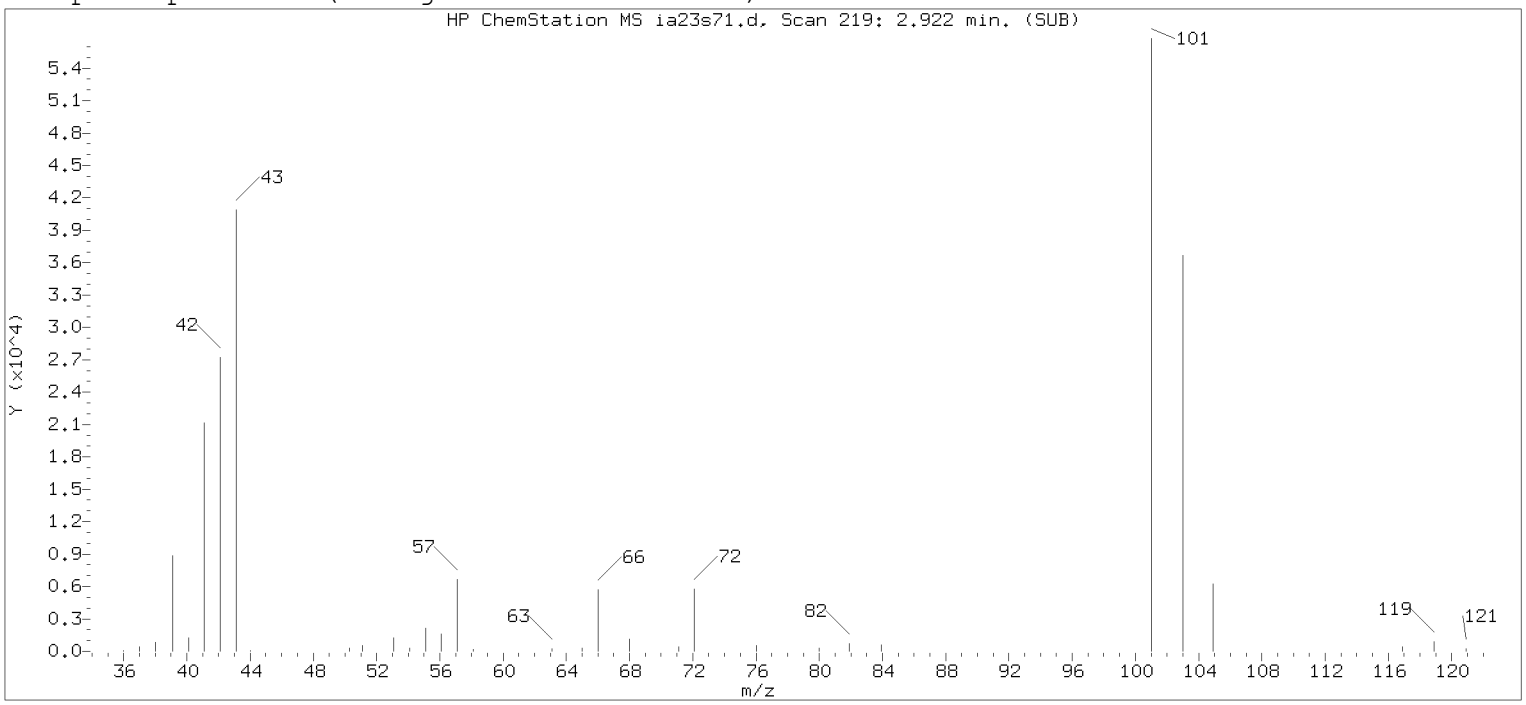
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 504252M
On-Column Amount (ng) : 4.7736
Integration start scan : 192 Integration stop scan: 254
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

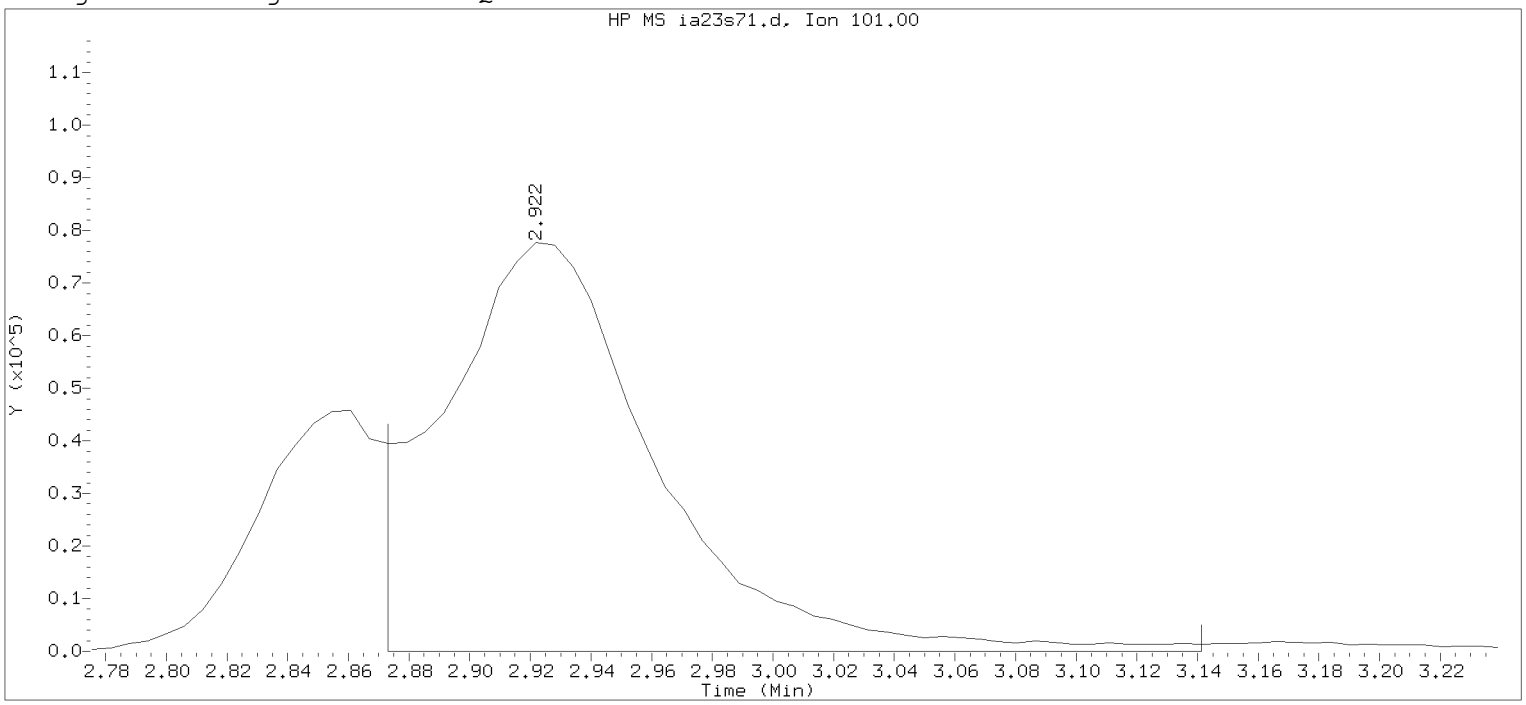
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

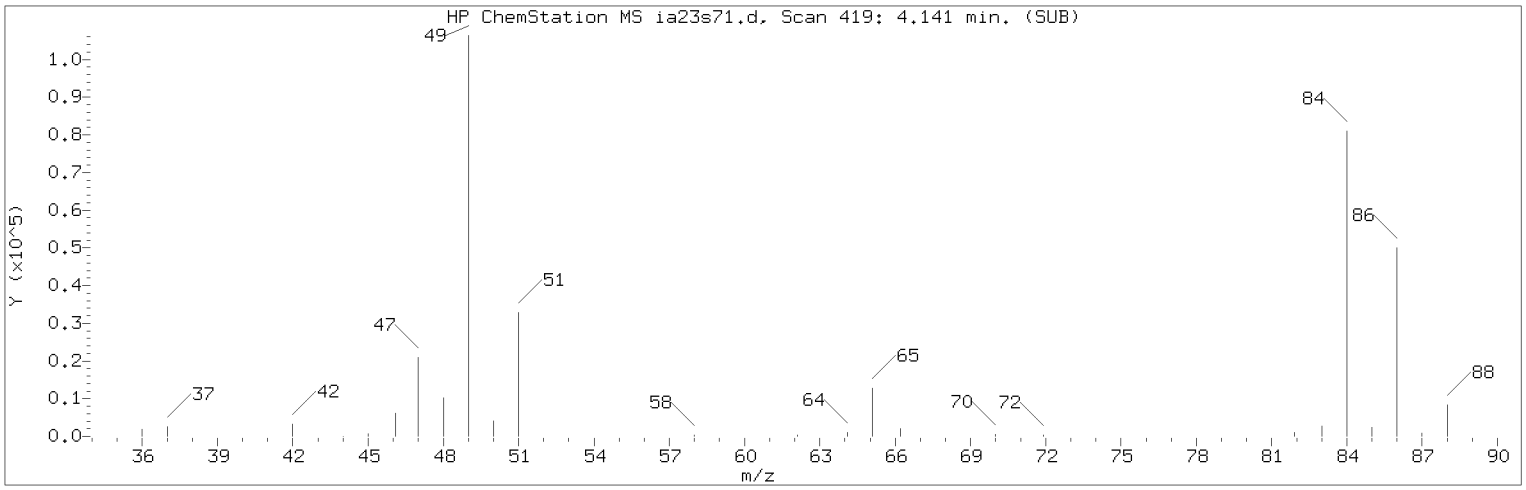
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 23-Apr-2018 23:03 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

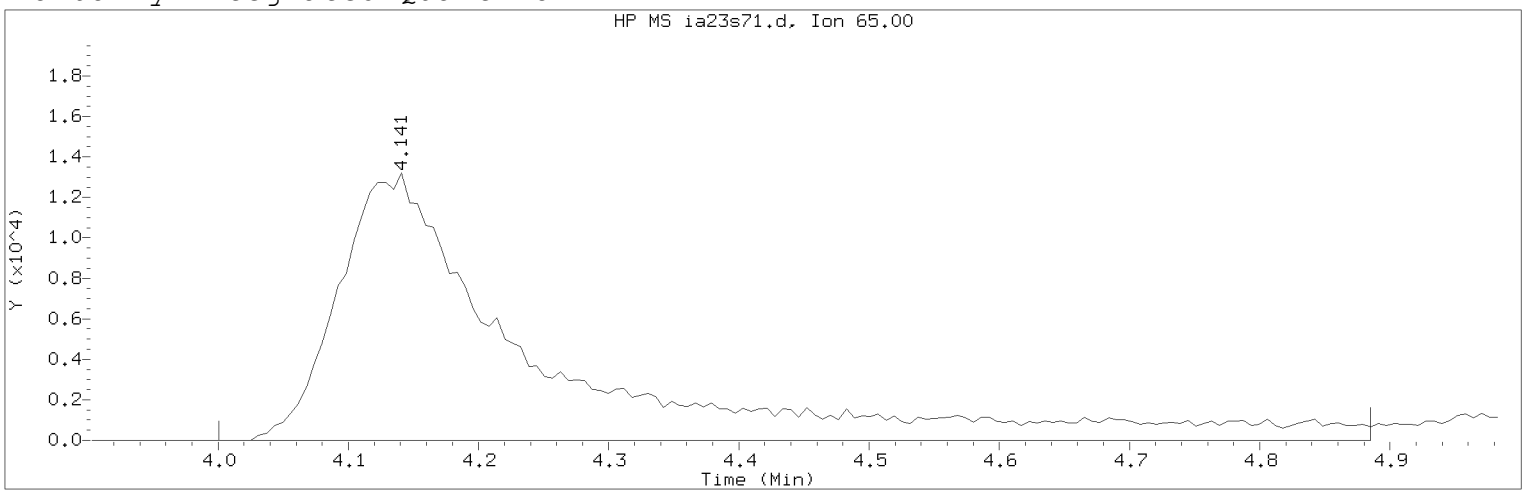
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 377053
On-column Amount (ng) : 3.5695
Integration start scan : 210 Integration stop scan: 254
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 00:33.
Target 3.5 esignature used for this run.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

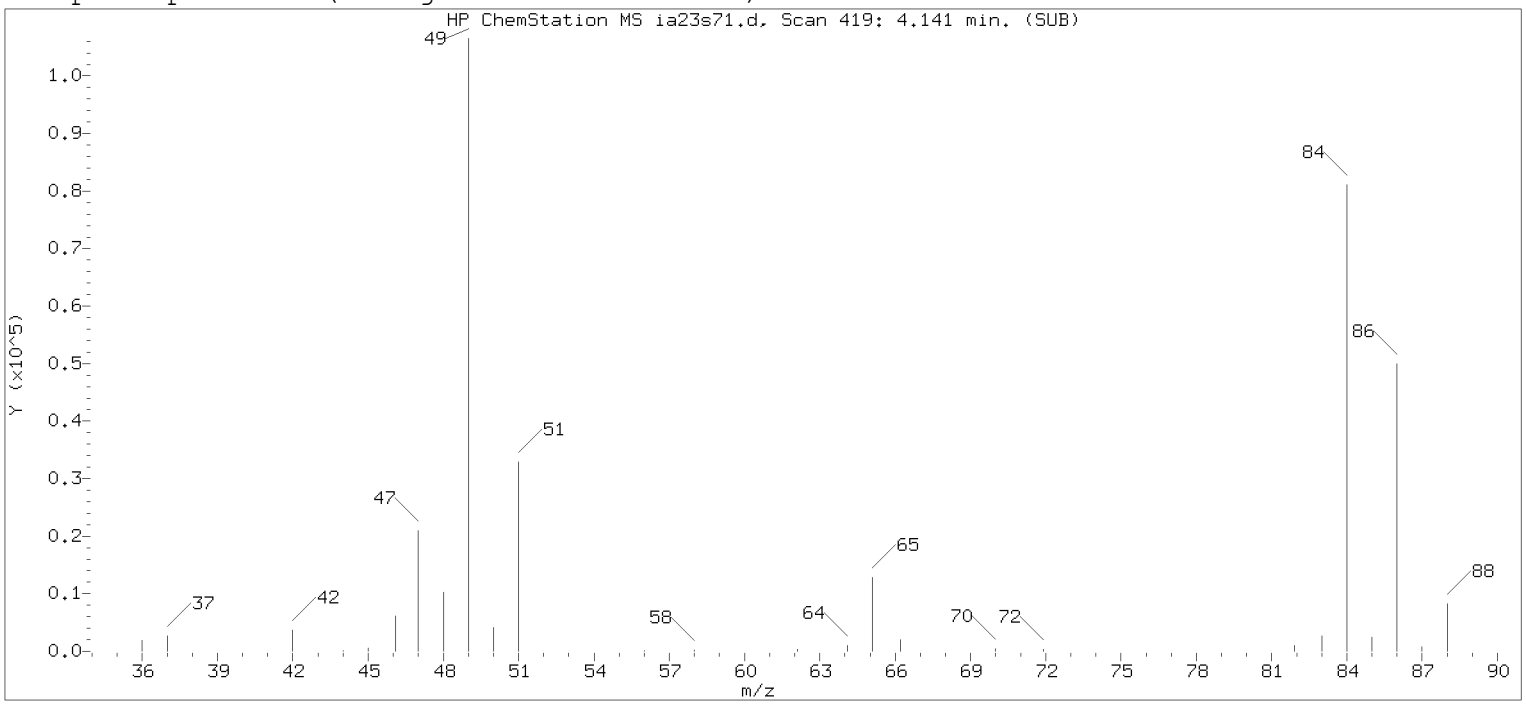
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area (flag) : 140444M
On-Column Amount (ng) : 50.0000
Integration start scan : 395 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

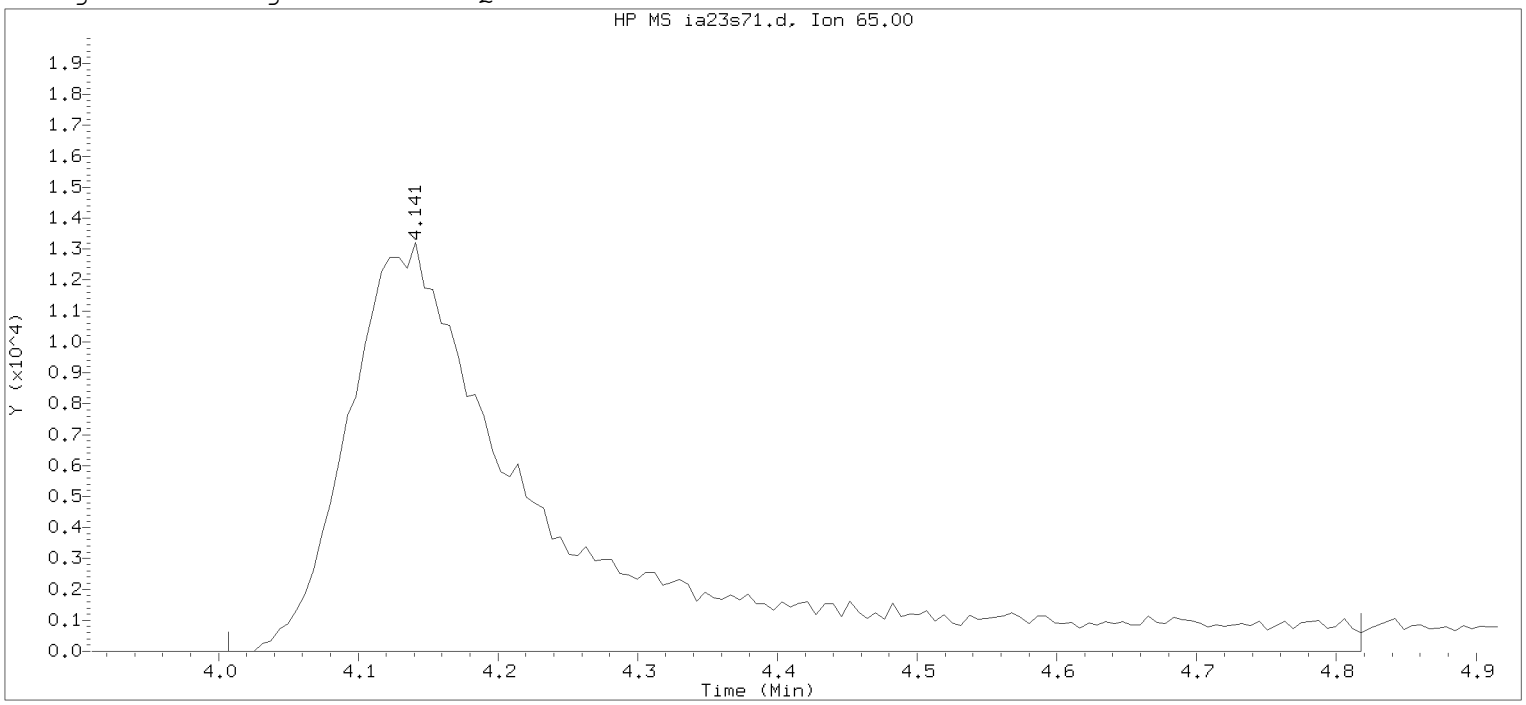
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

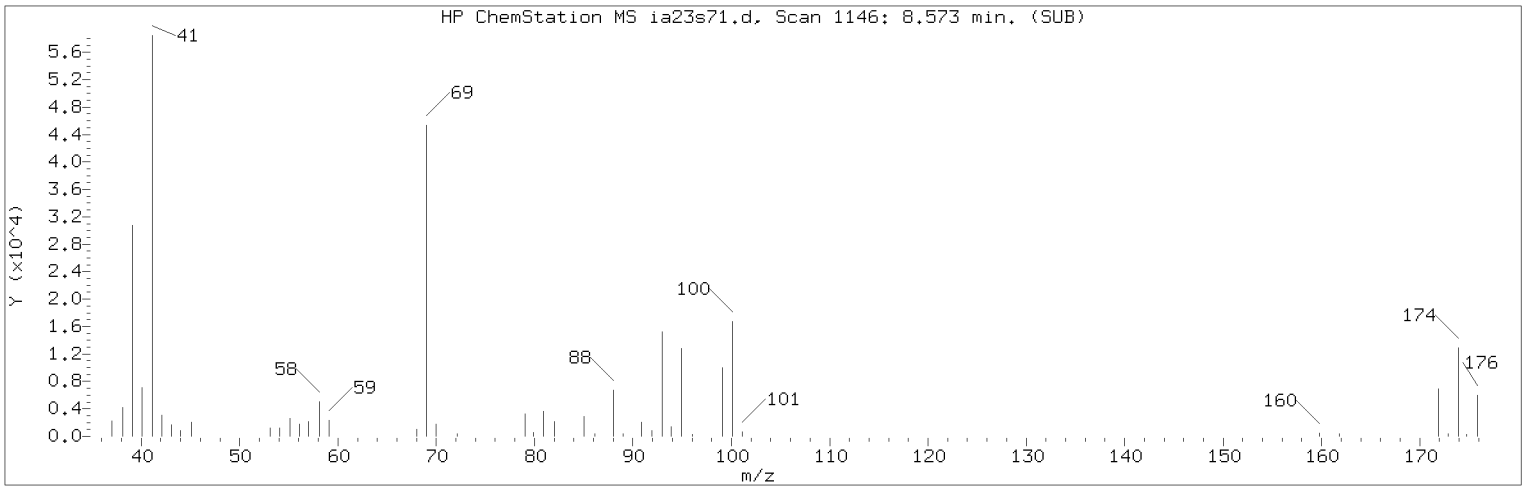
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 23-Apr-2018 23:03 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

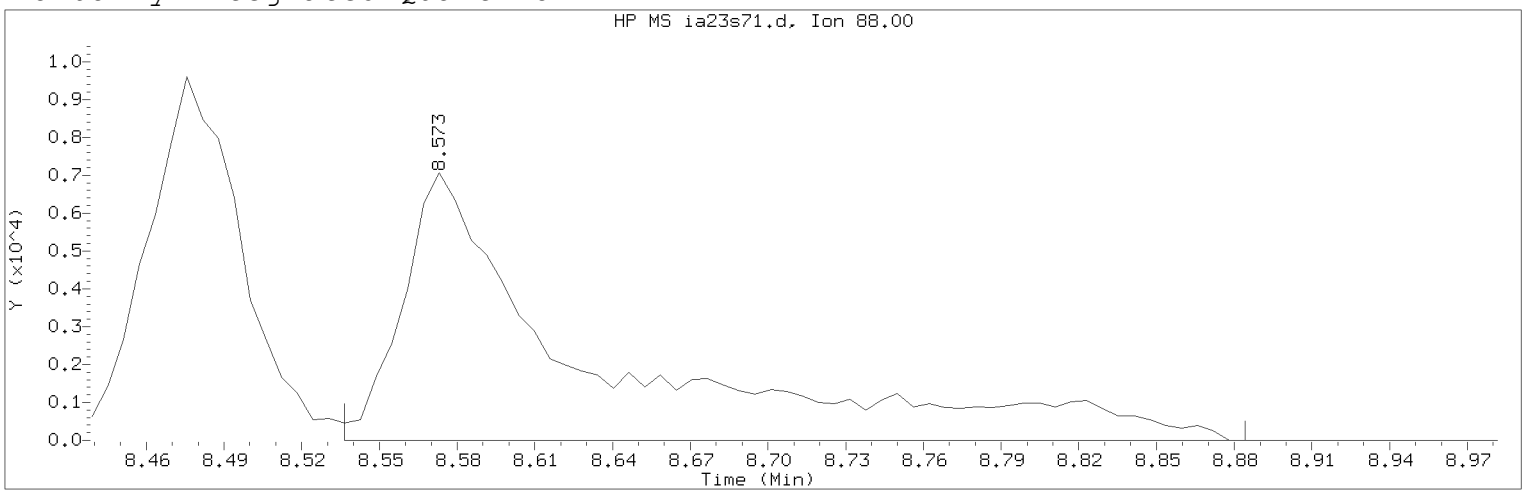
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area : 137067
On-column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 529
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

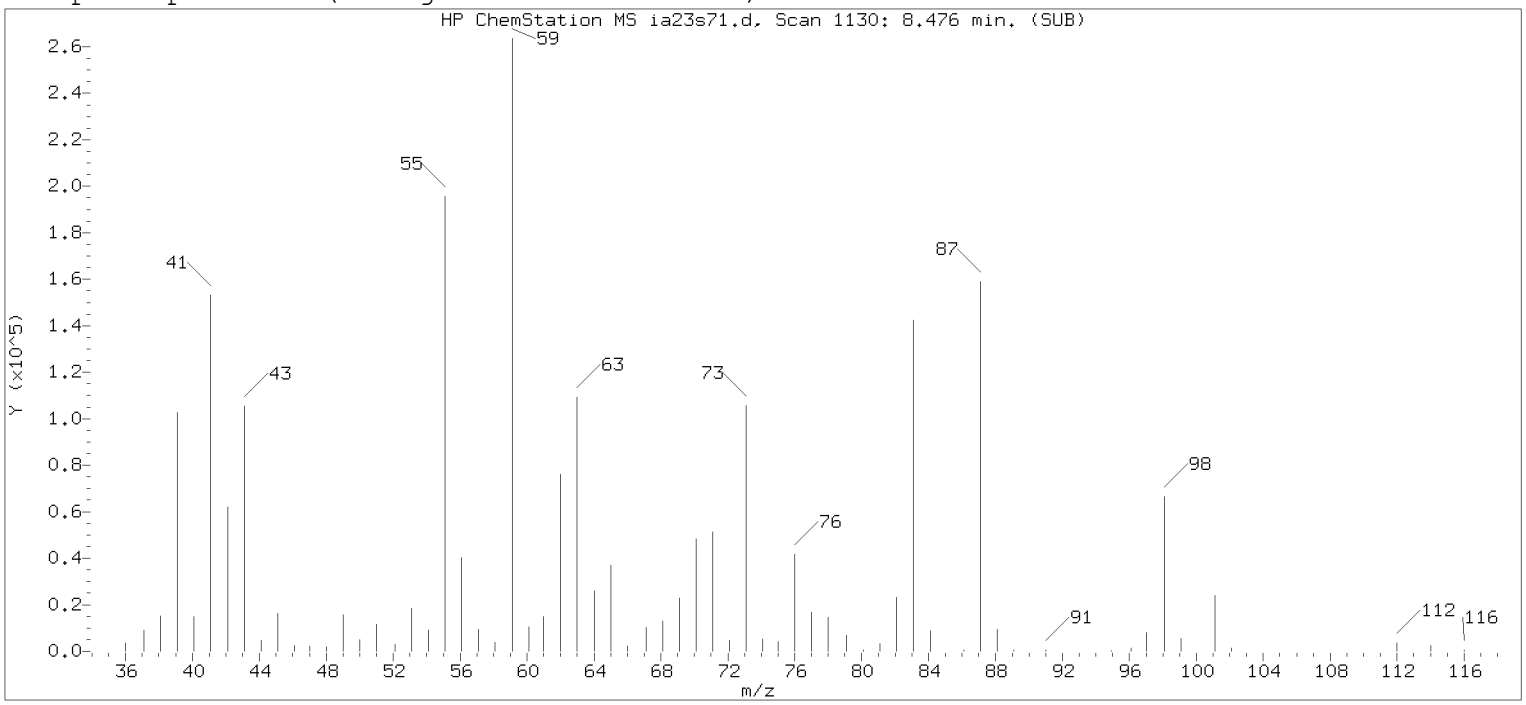
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 35506M
On-Column Amount (ng) : 149.2542
Integration start scan : 1139 Integration stop scan: 1196
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

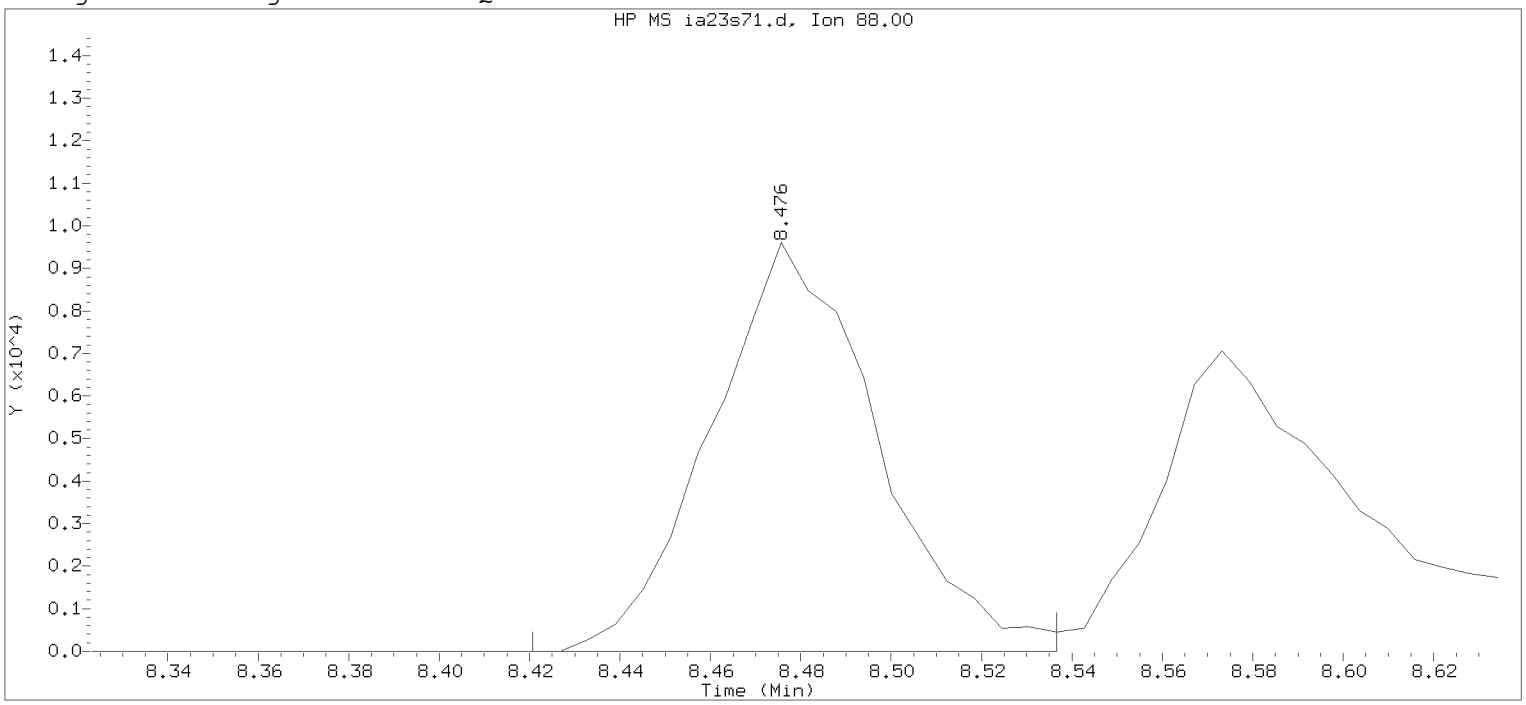
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

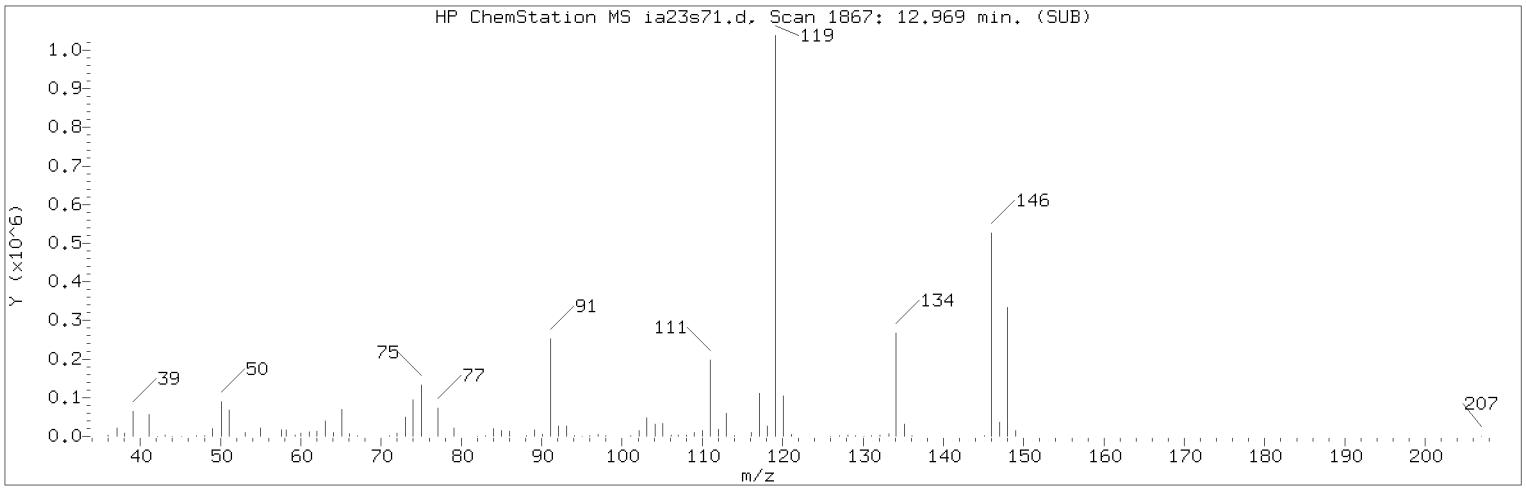
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 23-Apr-2018 23:03 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

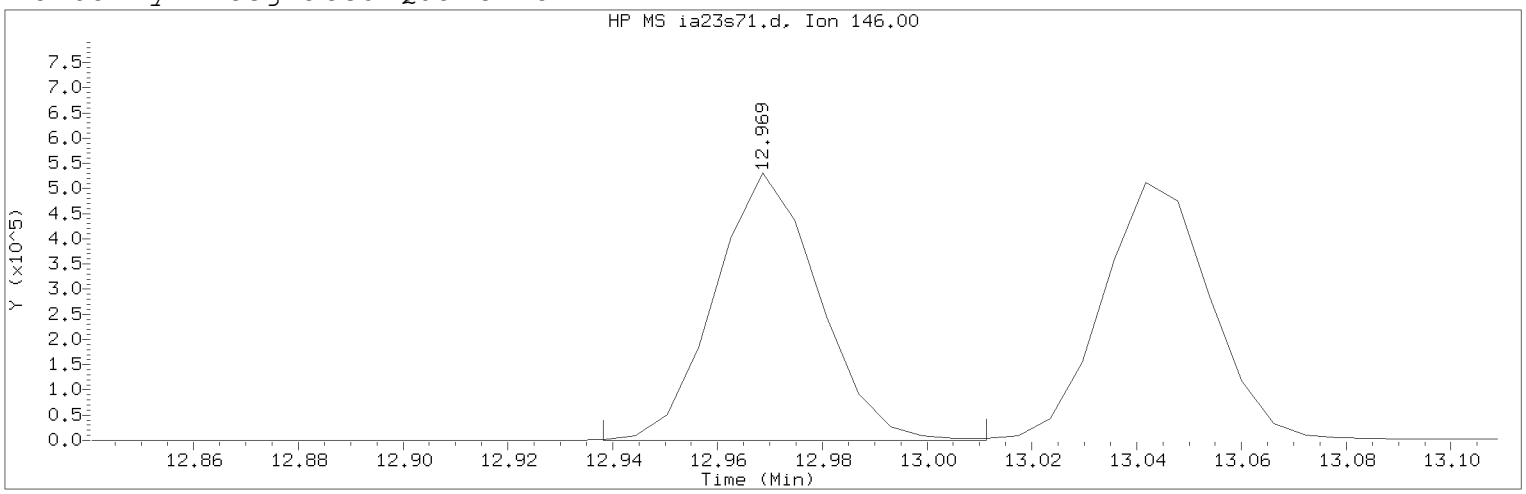
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1130
Retention Time (minutes): 8.476
Quant Ion : 88.00
Area : 24348
On-column Amount (ng) : 104.8718
Integration start scan : 1120 Integration stop scan: 1139
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 00:33.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

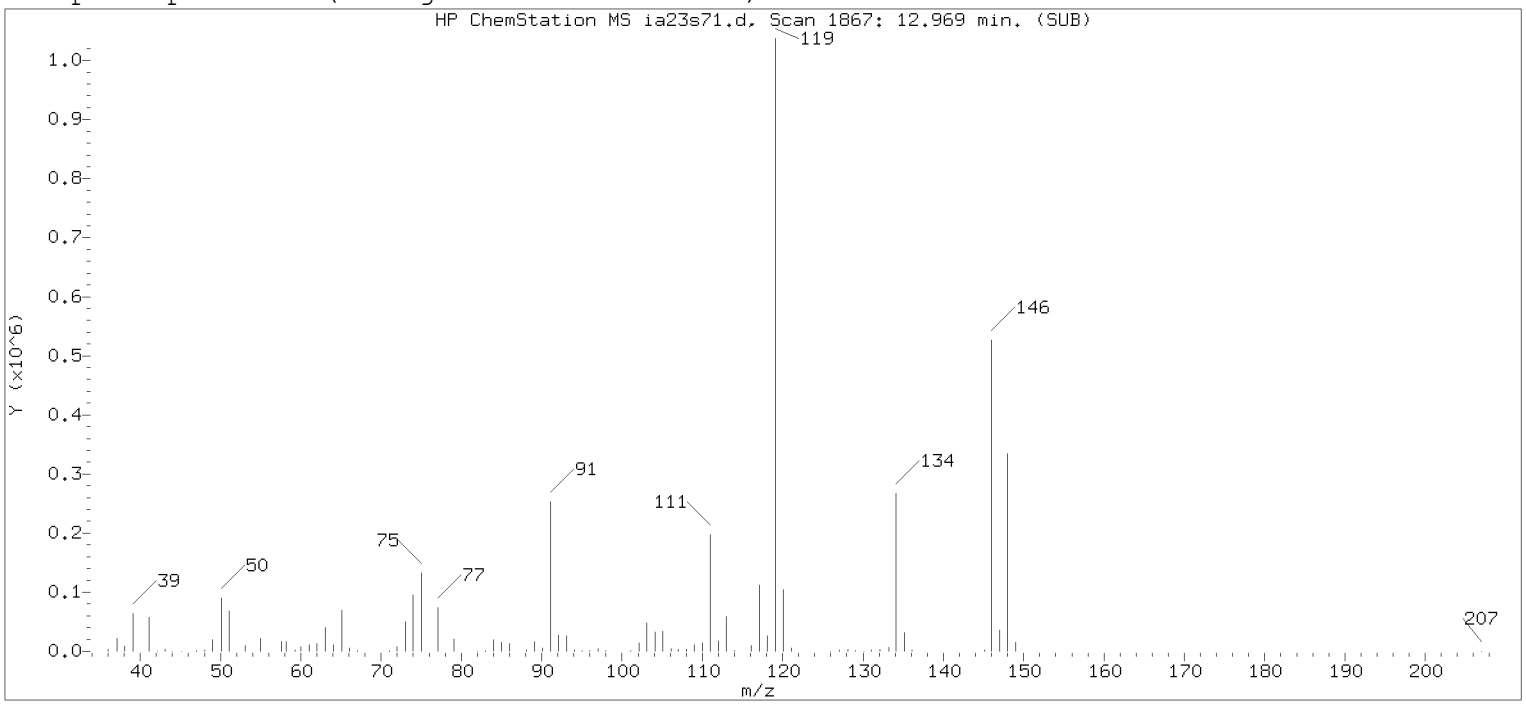
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area (flag) : 727060M
On-Column Amount (ng) : 5.2162
Integration start scan : 1861 Integration stop scan: 1873
Y at integration start : 395 Y at integration end: 395

Reason for manual integration: improper integration

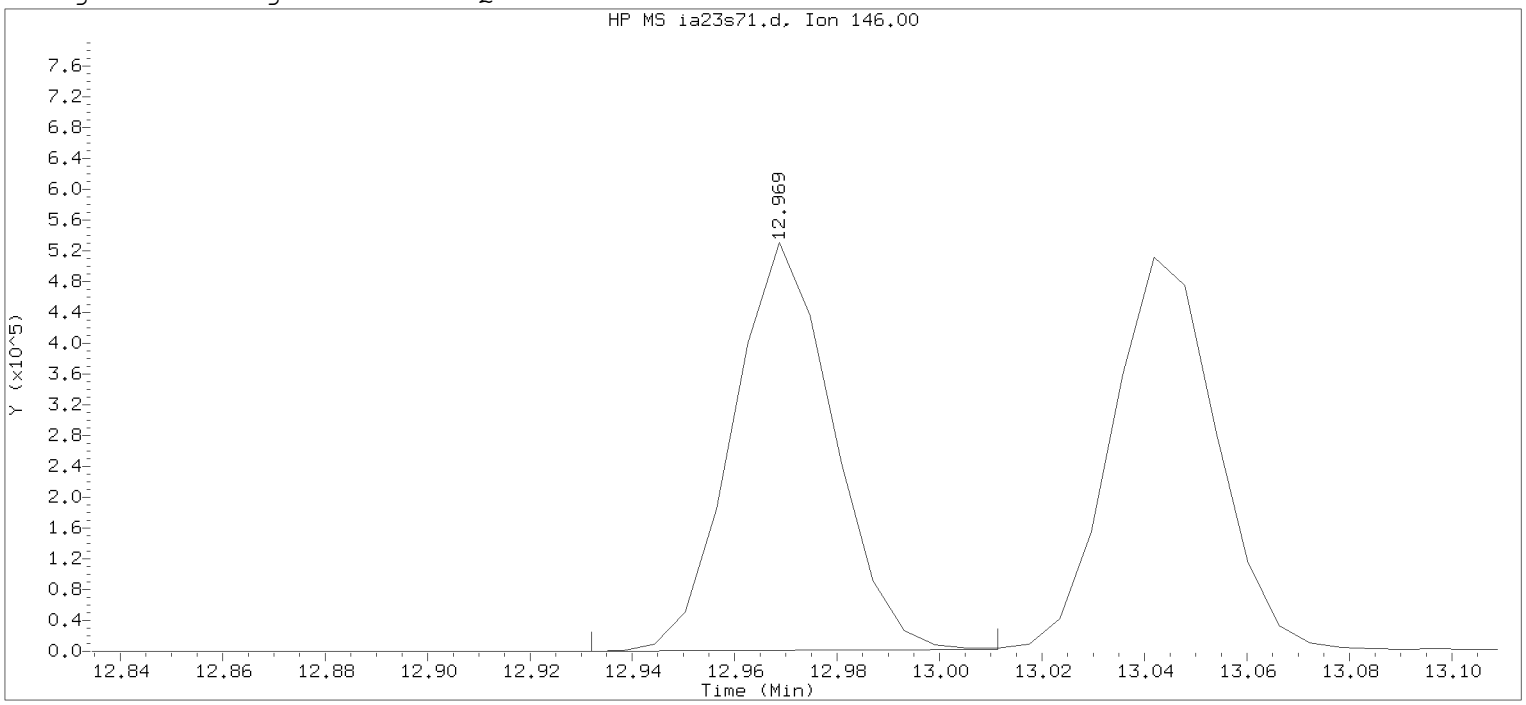
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

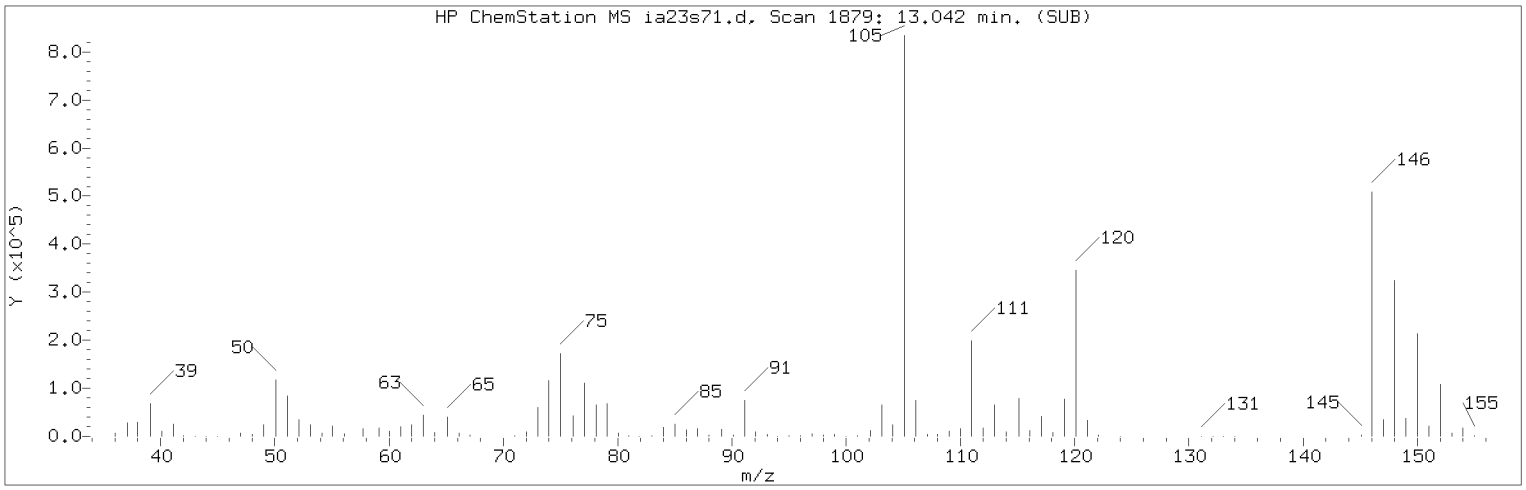
Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 23-Apr-2018 23:03 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

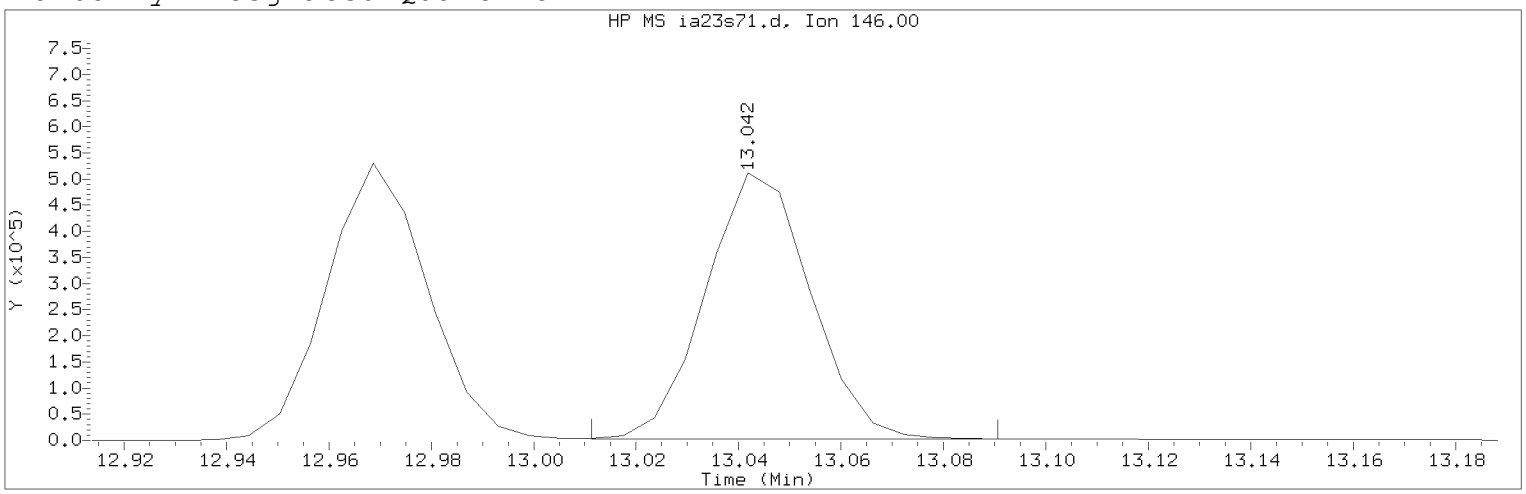
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area : 723196
On-column Amount (ng) : 5.1885
Integration start scan : 1860 Integration stop scan: 1873
Y at integration start : 0 Y at integration end: 2117

Digitally signed by Don V. Viray on 04/24/2018 at 00:33.
Target 3.5 esignature used. FD6 Page 1341

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 24-Apr-2018 00:30 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

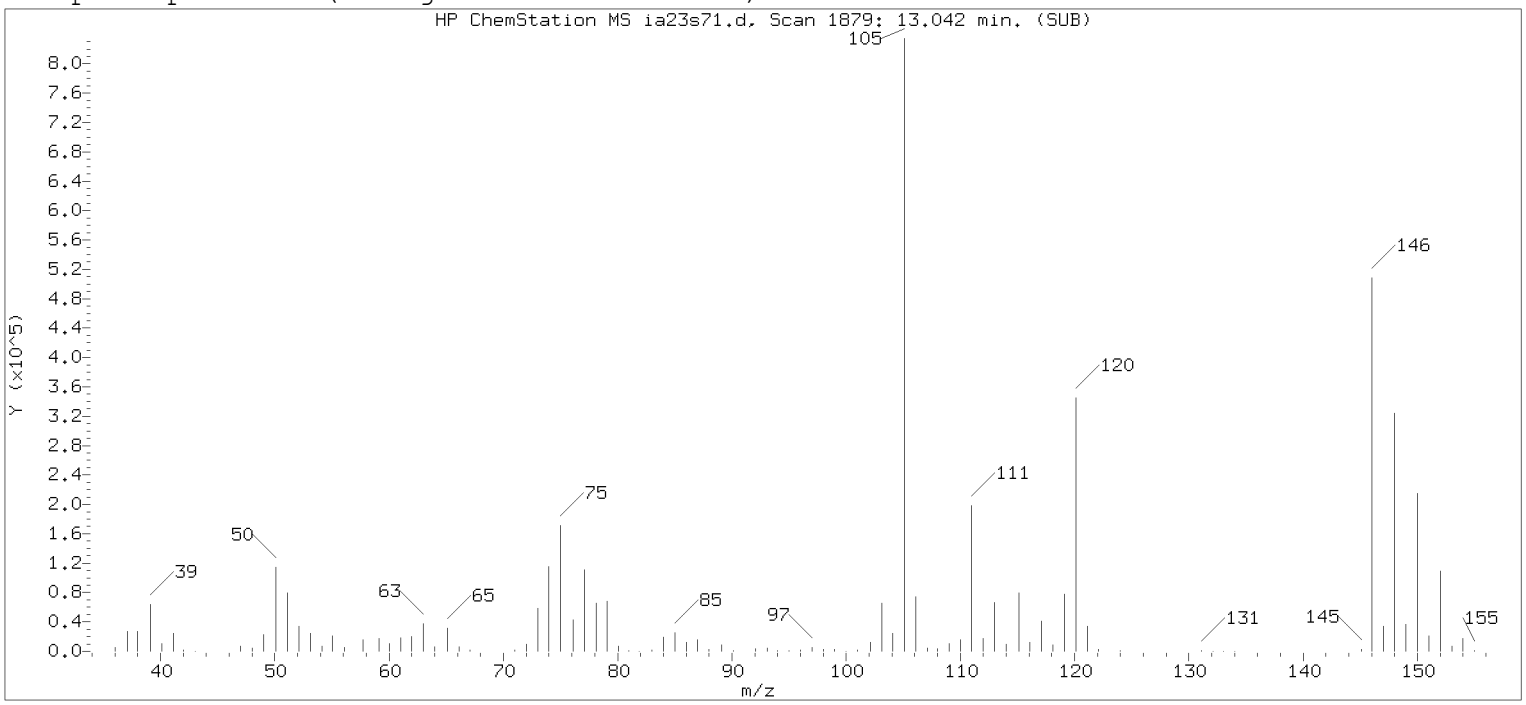
Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area (flag) : 726332M
On-Column Amount (ng) : 5.1151
Integration start scan : 1873 Integration stop scan: 1886
Y at integration start : 1871 Y at integration end: 1871

Reason for manual integration: improper integration

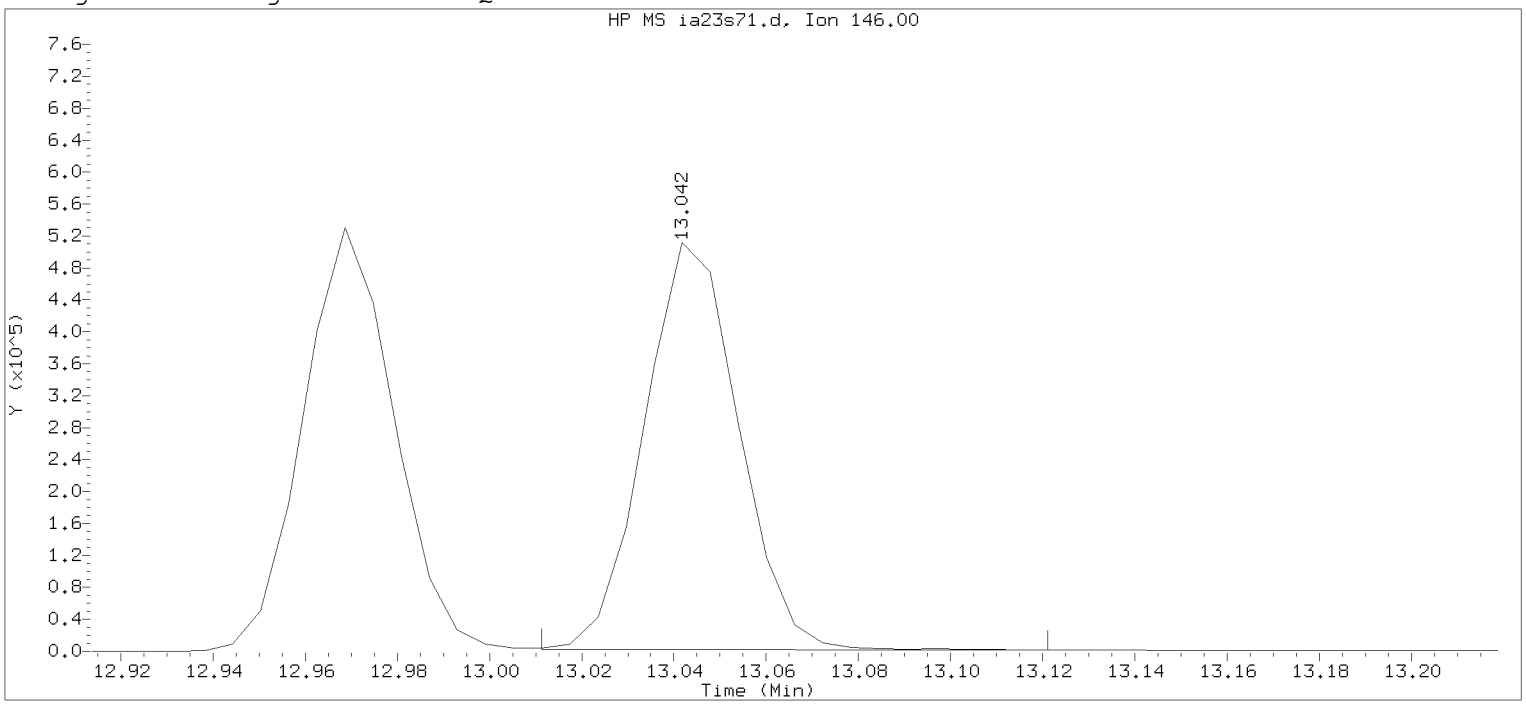
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 19:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr23c.b/ia23s71.d Instrument ID: HP19930.i
Injection date and time: 23-APR-2018 22:38 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr23c.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 23-APR-2018 22:44
Date, time and analyst ID of latest file update: 23-Apr-2018 23:03 dvv10203

Sample Name: LCSI92 Lab Sample ID: LCSI92

Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area : 726867
On-column Amount (ng) : 5.1189
Integration start scan : 1873 Integration stop scan: 1891
Y at integration start : 2117 Y at integration end: 1574

Digitally signed by Don V. Viray on 04/24/2018 at 00:33.
Target 3.5 esignature user ID: DVV10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s43.d Injection date and time: **24-APR-2018 22:13**
Data file Sample Info. Line: LCSI96;LCSI96;1;3;LCS;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.141(-0.006)	419	65	160693M (-2)	50.00	
63) Fluorobenzene	7.671(-0.006)	998	96	2191655 (0)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1623227 (-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024(0.000)	1876	152	860208 (-2)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.775(0.000)	113	522933	10.224	102%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.244(-0.001)	102	110409	9.923	99%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2235252	10.199	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	795116	10.274	103%		80 - 120

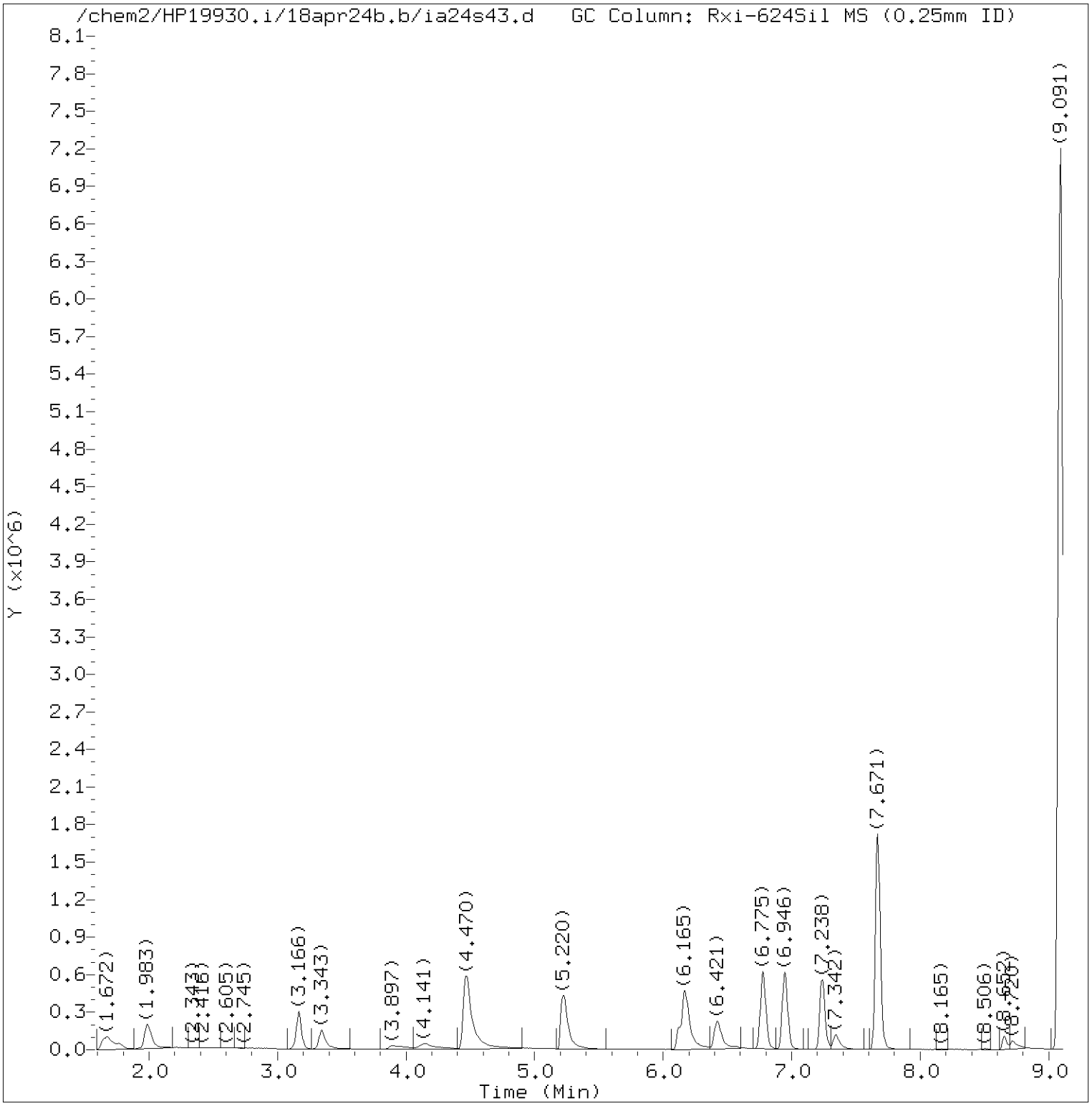
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
4) Dimethyl ether	(2)	1.989(-0.001)	45	484057	5.741	5.74		J	0.1	13
25) Acetonitrile	(1)	3.897(-0.005)	41	226946M	52.036	52.04		J	32	100
36) Vinyl Acetate	(2)	5.220(0.000)	43	1436204	14.414	14.41			3	10
142) Hexachloroethane	(4)	13.499(0.000)	117	194966	5.249	5.25		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Don V. Viray on 04/24/2018 at 23:40. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

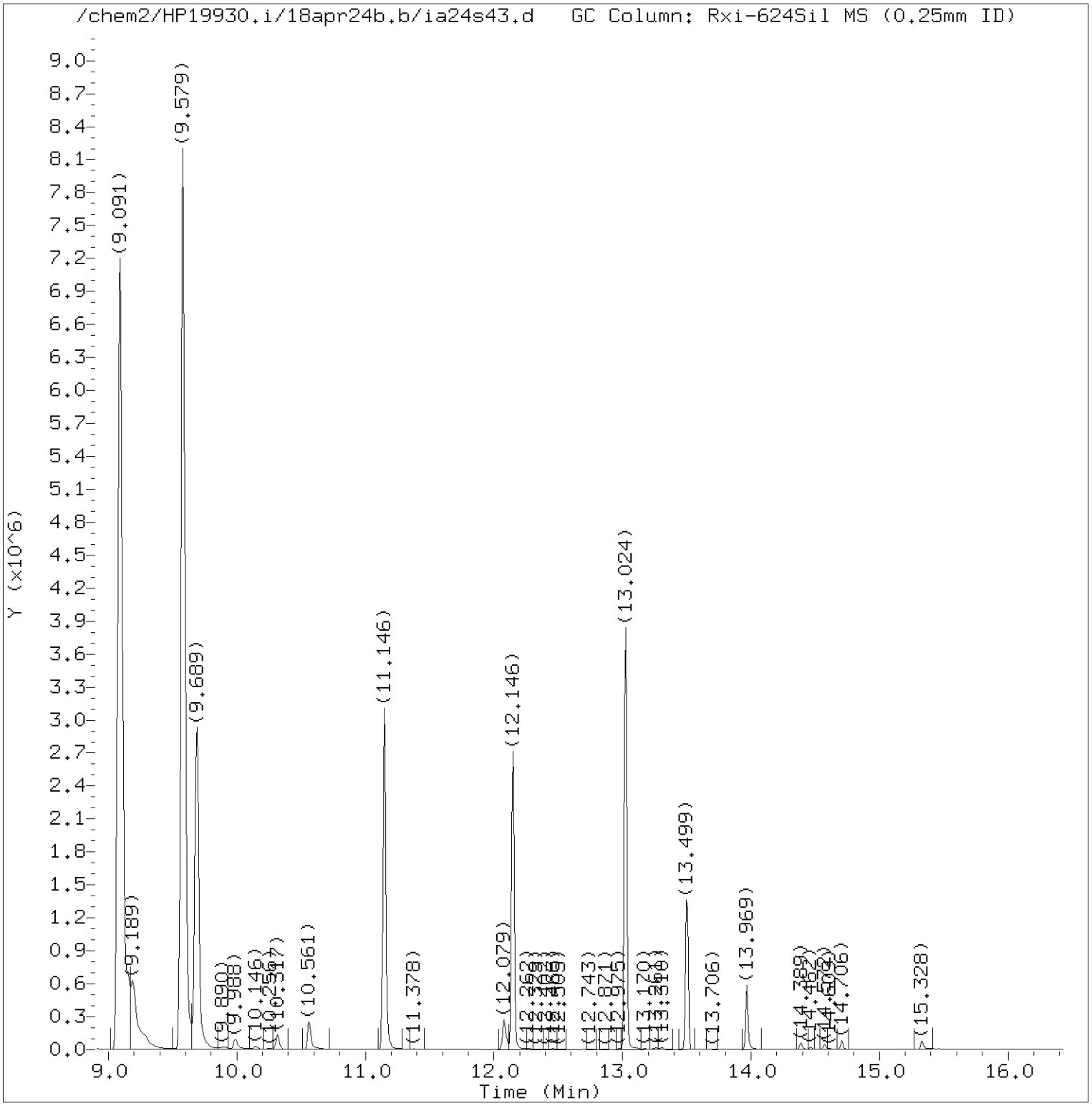
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCSI96 Lab Sample ID: LCSI96

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCSI96 Lab Sample ID: LCSI96

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

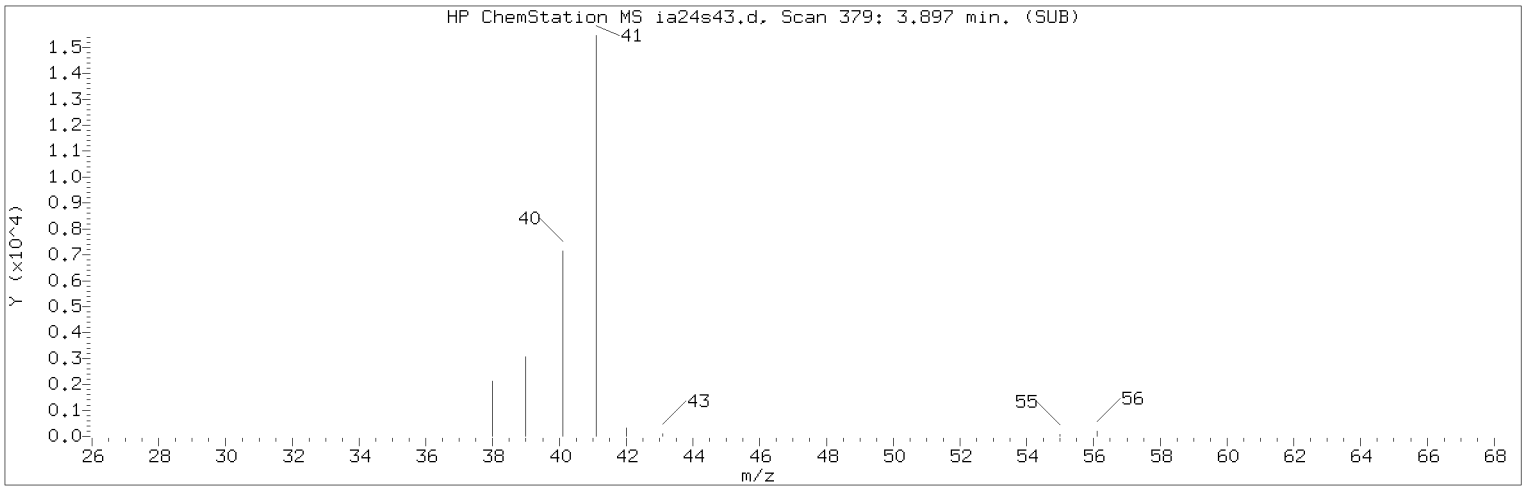
Sample Name: LCSI96 Lab Sample ID: LCSI96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.989	45	484057	5.741
25) Acetonitrile	(1)	3.897	41	226946M	52.036
26)*t-Butyl Alcohol-d10	(1)	4.141	65	160693M	50.000
36) Vinyl Acetate	(2)	5.220	43	1436204	14.414
50)$Dibromofluoromethane	(2)	6.775	113	522933	10.224
57)$1,2-Dichloroethane-d4	(2)	7.244	102	110409	9.923
63)*Fluorobenzene	(2)	7.671	96	2191655	10.000
82)$Toluene-d8	(3)	9.689	98	2235252	10.199
97)*Chlorobenzene-d5	(3)	11.146	117	1623227	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	795116	10.274
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	860208	10.000
142) Hexachloroethane	(4)	13.499	117	194966	5.249

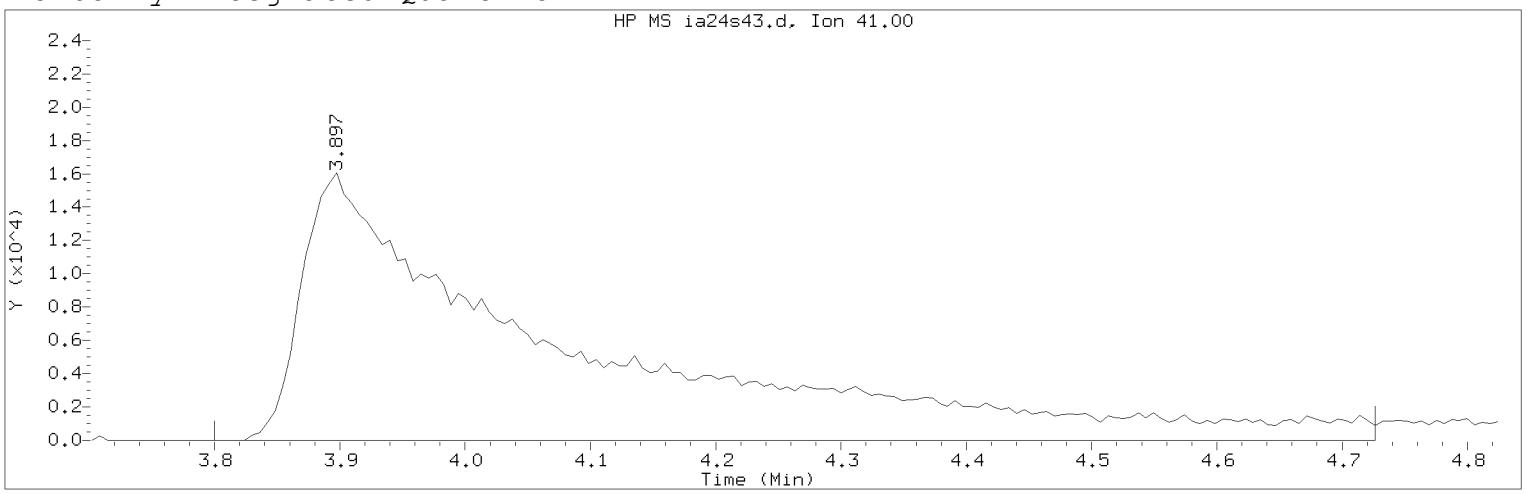
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCSI96 Lab Sample ID: LCSI96

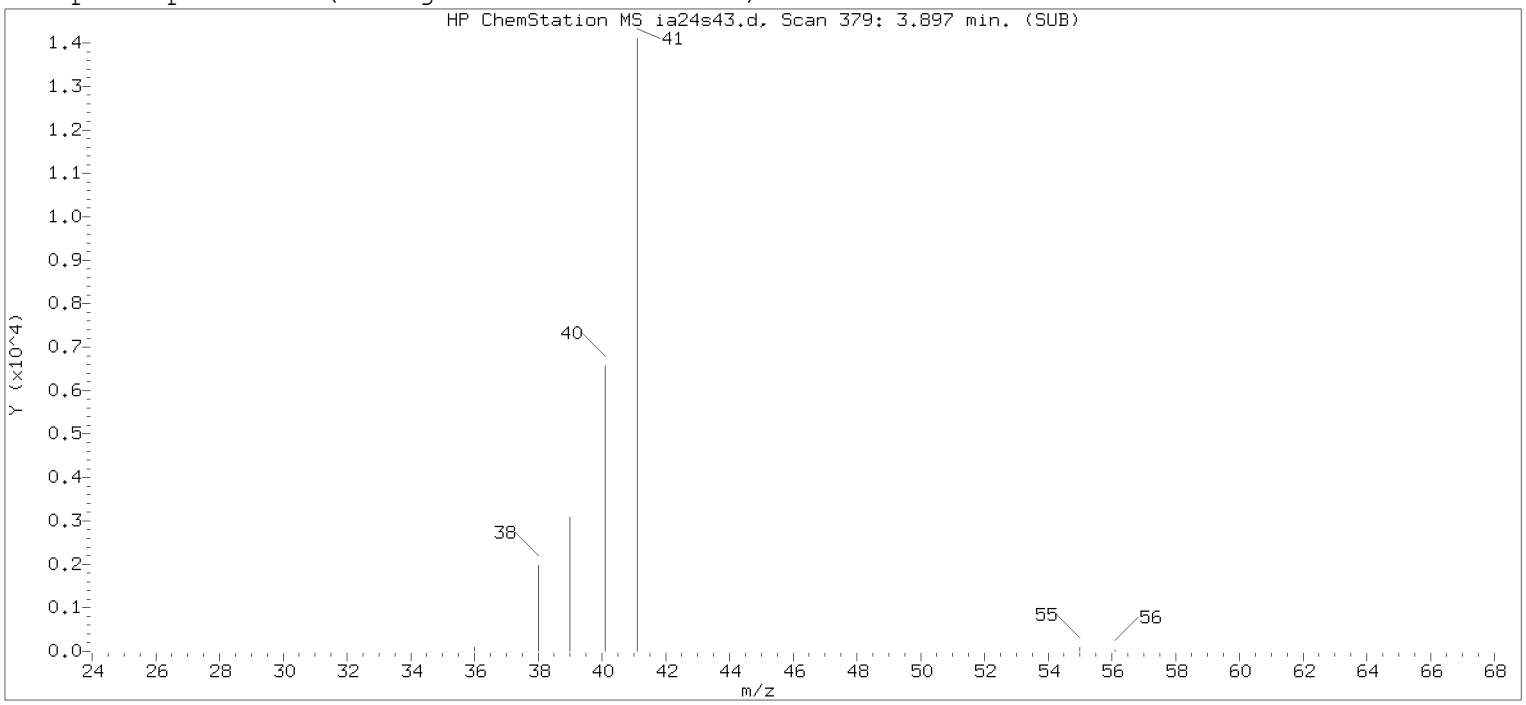
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 379
Retention Time (minutes): 3.897
Quant Ion : 41.00
Area (flag) : 226946M
On-Column Amount (ng) : 52.0356
Integration start scan : 362 Integration stop scan: 514
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

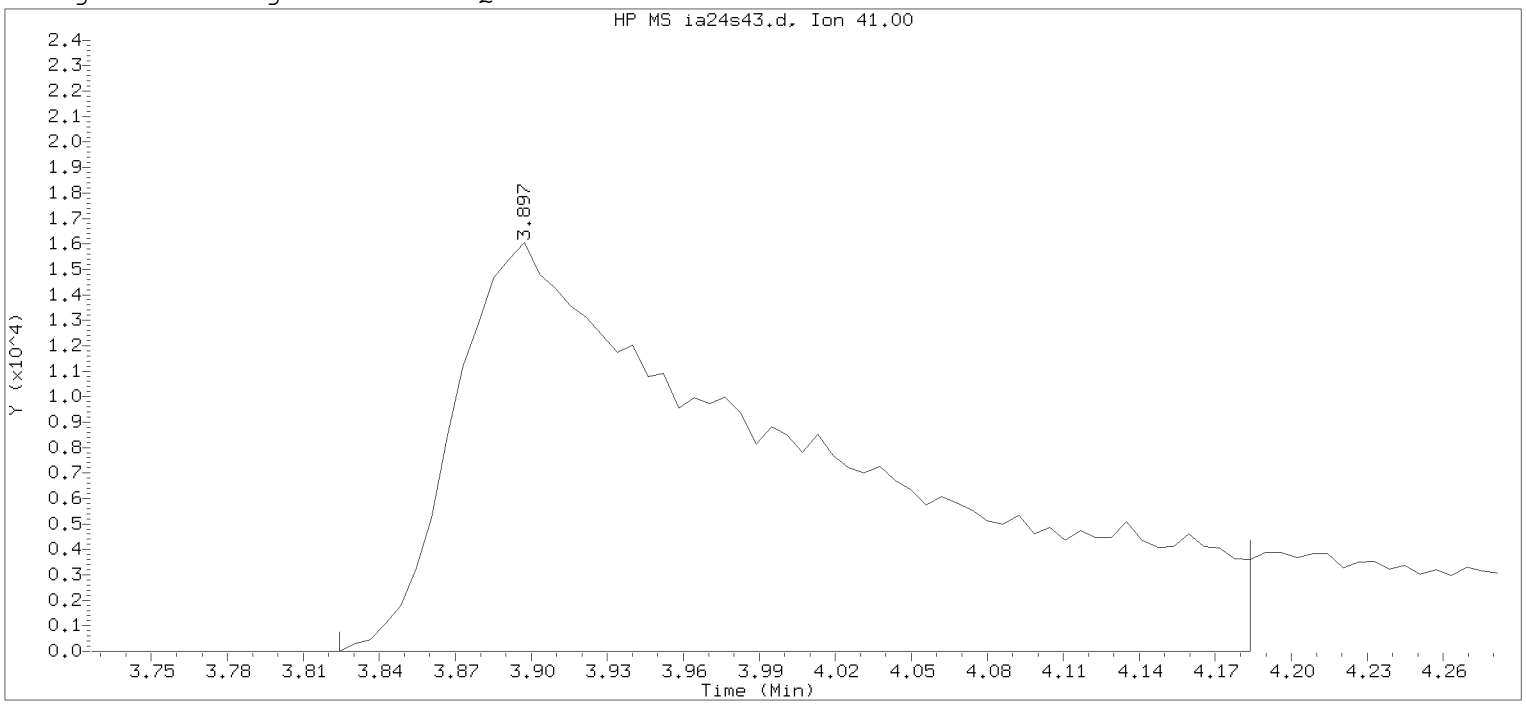
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

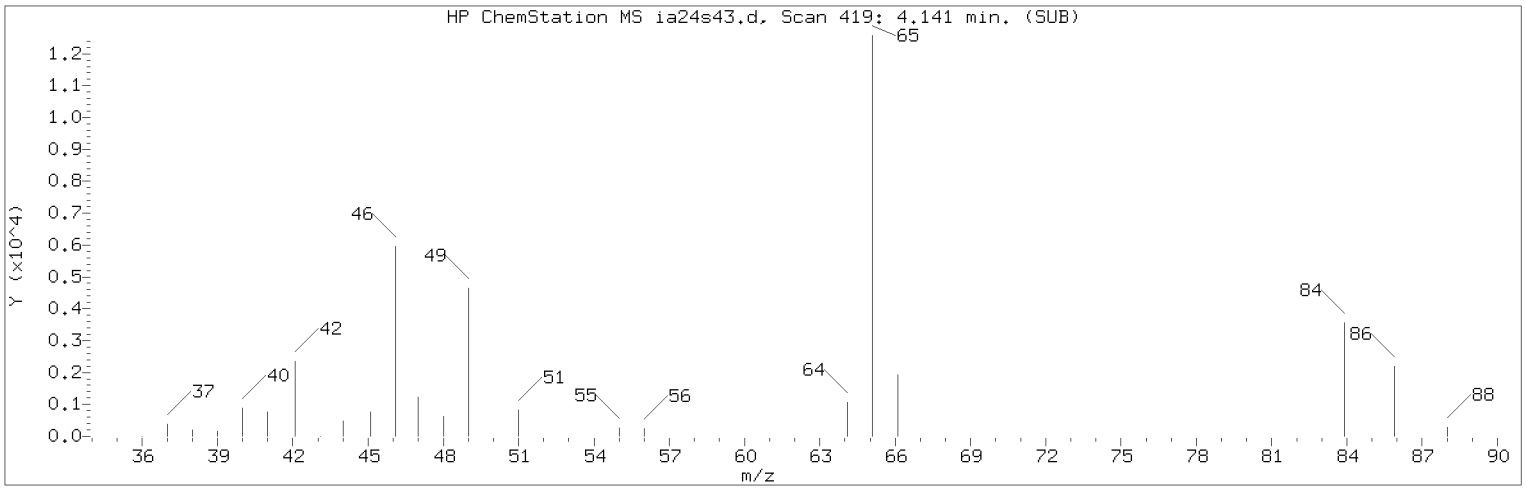
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:31 Automation

Sample Name: LCSI96 Lab Sample ID: LCSI96

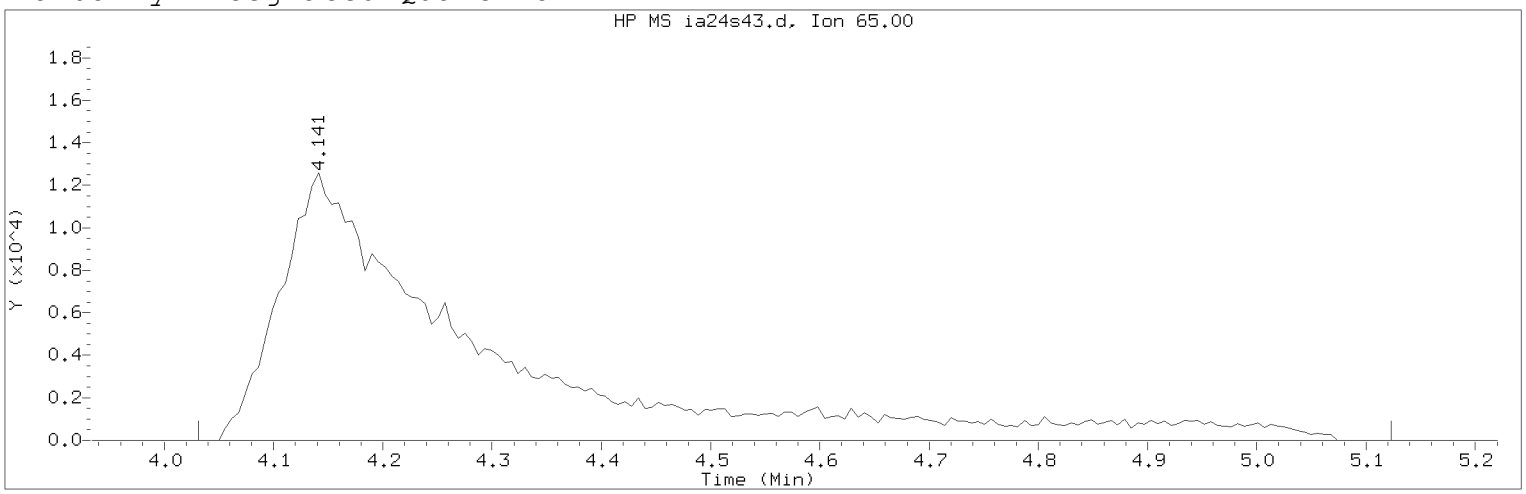
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 379
Retention Time (minutes): 3.897
Quant Ion : 41.00
Area : 160577
On-column Amount (ng) : 38.6206
Integration start scan : 366 Integration stop scan: 425
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCSI96 Lab Sample ID: LCSI96

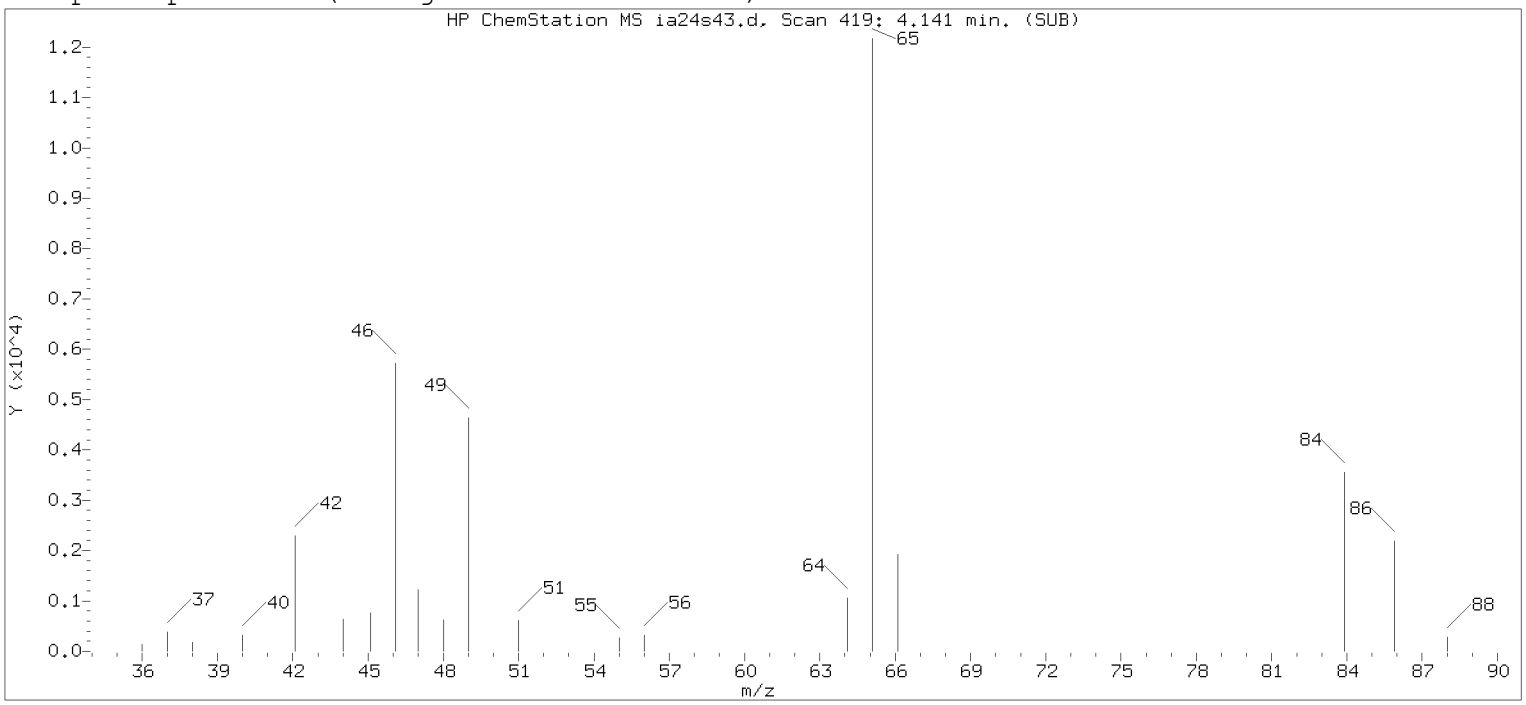
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area (flag) : 160693M
On-Column Amount (ng) : 50.0000
Integration start scan : 400 Integration stop scan: 579
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

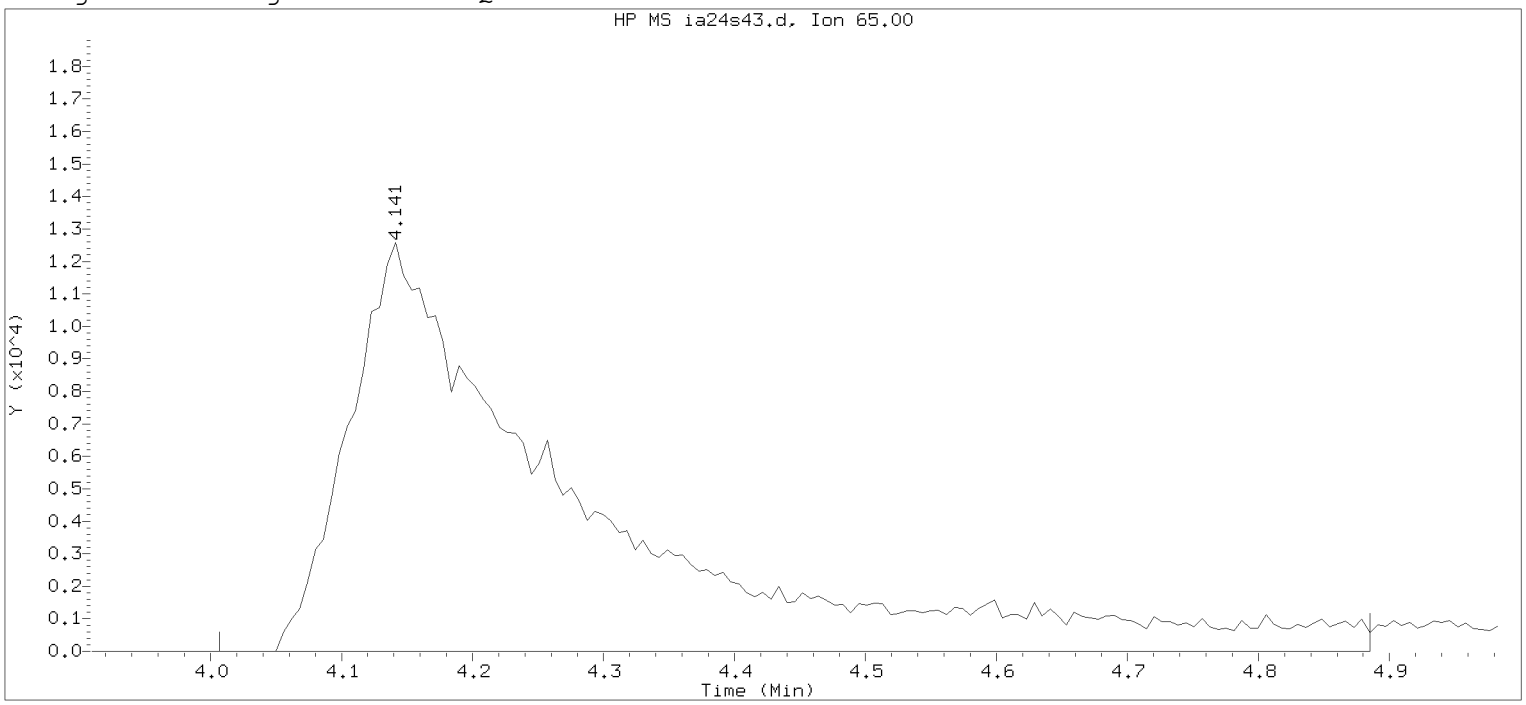
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s43.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:13 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:31 Automation

Sample Name: LCSI96 Lab Sample ID: LCSI96

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 419
Retention Time (minutes): 4.141
Quant Ion : 65.00
Area : 153193
On-column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 540
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: DVV10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s44.d Injection date and time: **24-APR-2018 22:34**
Data file Sample Info. Line: LCDI96;LCDI96;1;3;LCSD;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.135(0.000)	418	65	160692 (-2)	50.00	
63) Fluorobenzene	7.665(0.000)	997	96	2202654 (0)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1641859 (-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024(0.000)	1876	152	852423 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769(0.000)	113	527668	10.265	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232(0.000)	102	112507	10.061	101%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2247397	10.138	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	790617	10.100	101%		80 - 120

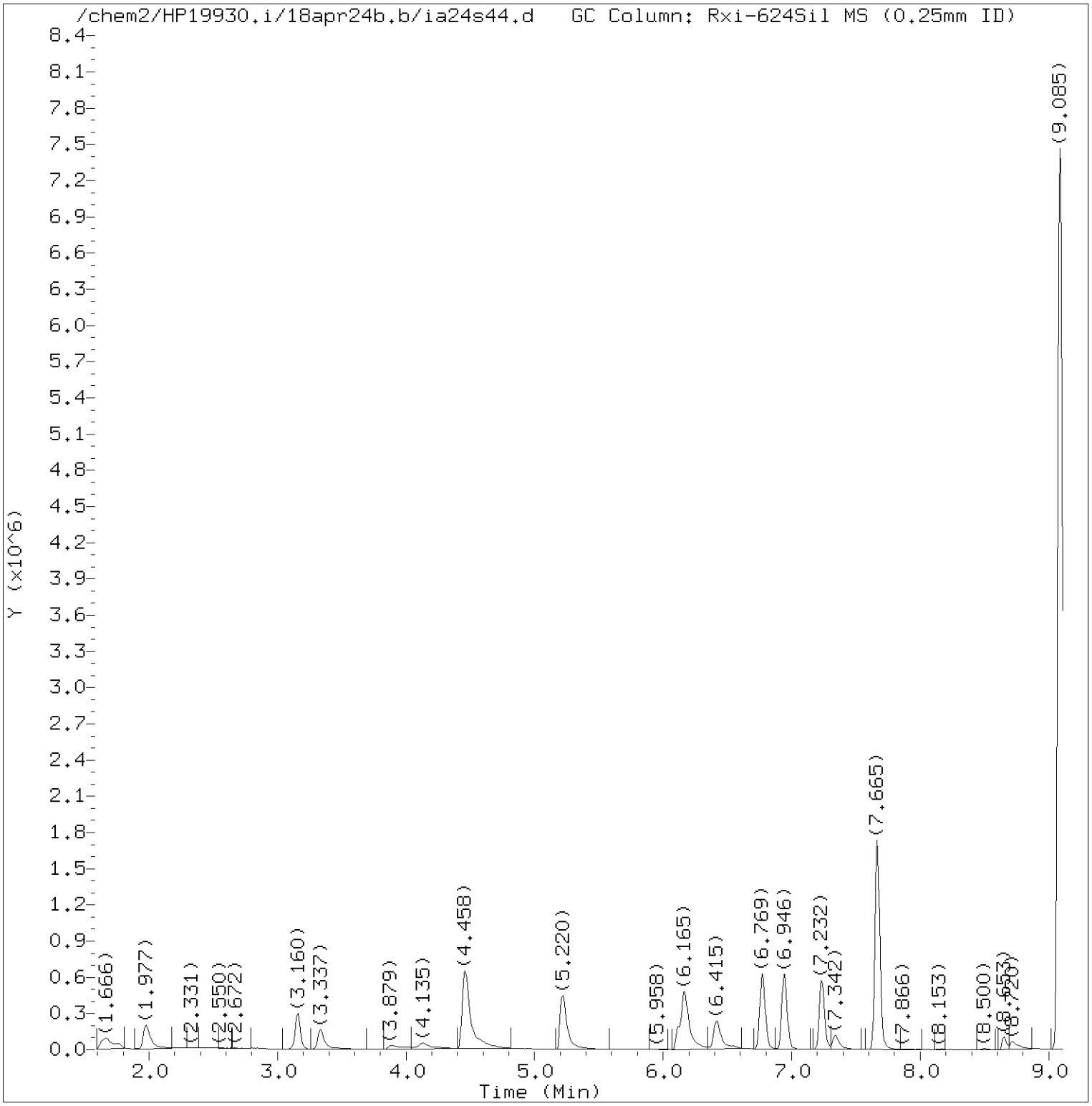
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	1.977(0.000)	45	485128M	5.725	5.73		J	0.1	13
25) Acetonitrile	(1)	3.885(-0.004)	41	230301M	52.805	52.81		J	32	100
36) Vinyl Acetate	(2)	5.220(0.000)	43	1442167	14.402	14.40			3	10
142) Hexachloroethane	(4)	13.499(0.000)	117	199645	5.424	5.42		J	0.1	10

M = Compound was manually integrated.

Total number of targets = 4

Digitally signed by Don V. Viray on 04/24/2018 at 23:40. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

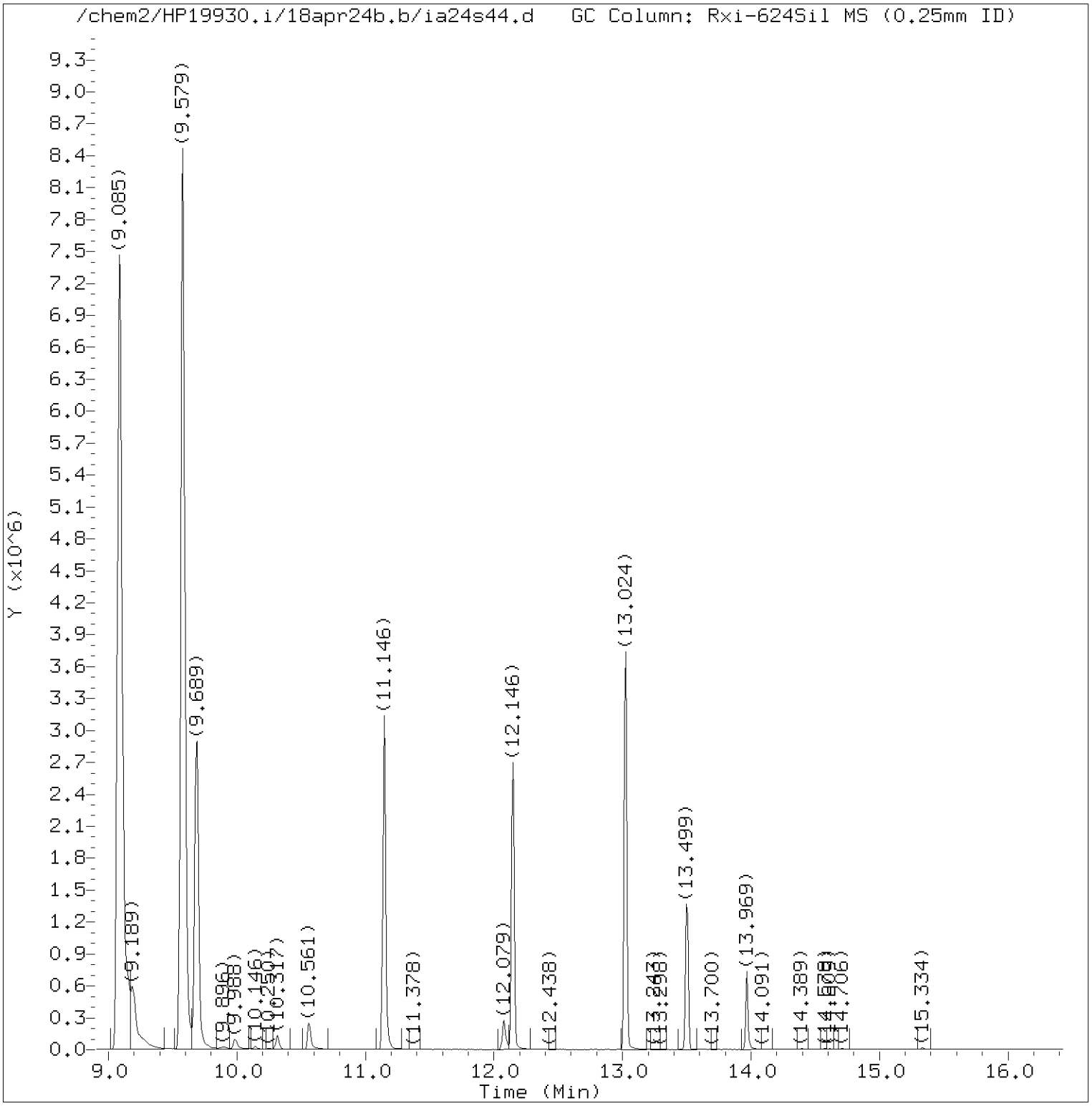
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI96 Lab Sample ID: LCDI96

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI96 Lab Sample ID: LCDI96

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

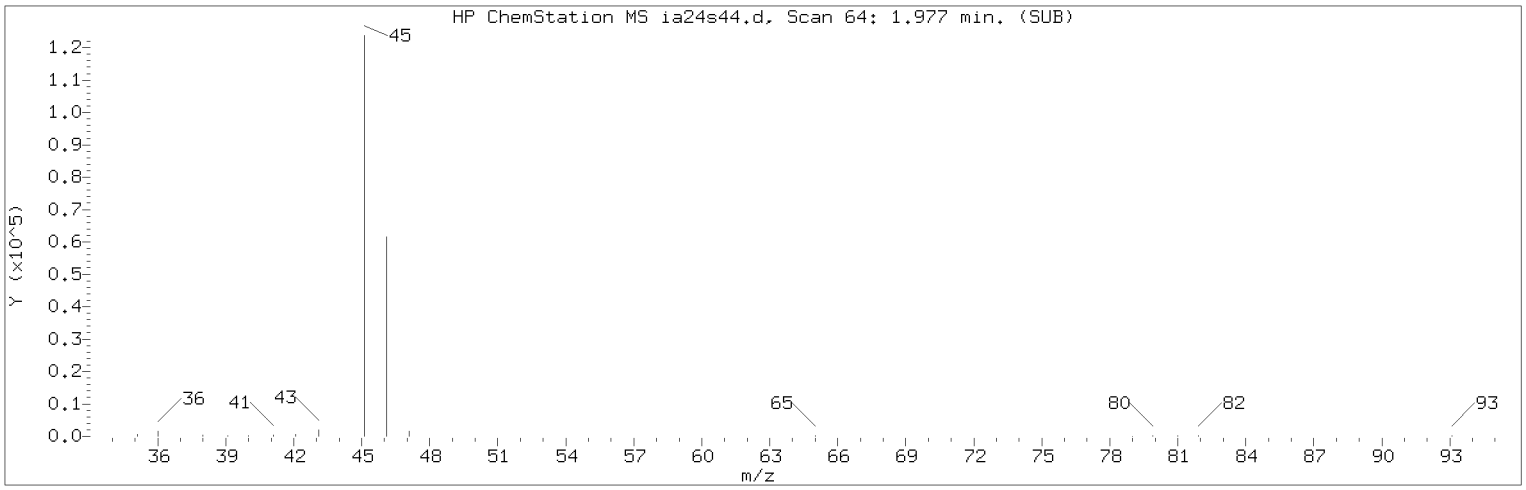
Sample Name: LCDI96 Lab Sample ID: LCDI96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	1.977	45	485128M	5.725
25) Acetonitrile	(1)	3.885	41	230301M	52.805
26)*t-Butyl Alcohol-d10	(1)	4.135	65	160692	50.000
36) Vinyl Acetate	(2)	5.220	43	1442167	14.402
50)$Dibromofluoromethane	(2)	6.769	113	527668	10.265
57)$1,2-Dichloroethane-d4	(2)	7.232	102	112507	10.061
63)*Fluorobenzene	(2)	7.665	96	2202654	10.000
82)$Toluene-d8	(3)	9.689	98	2247397	10.138
97)*Chlorobenzene-d5	(3)	11.146	117	1641859	10.000
111)$4-Bromofluorobenzene	(3)	12.146	95	790617	10.100
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	852423	10.000
142) Hexachloroethane	(4)	13.499	117	199645	5.424

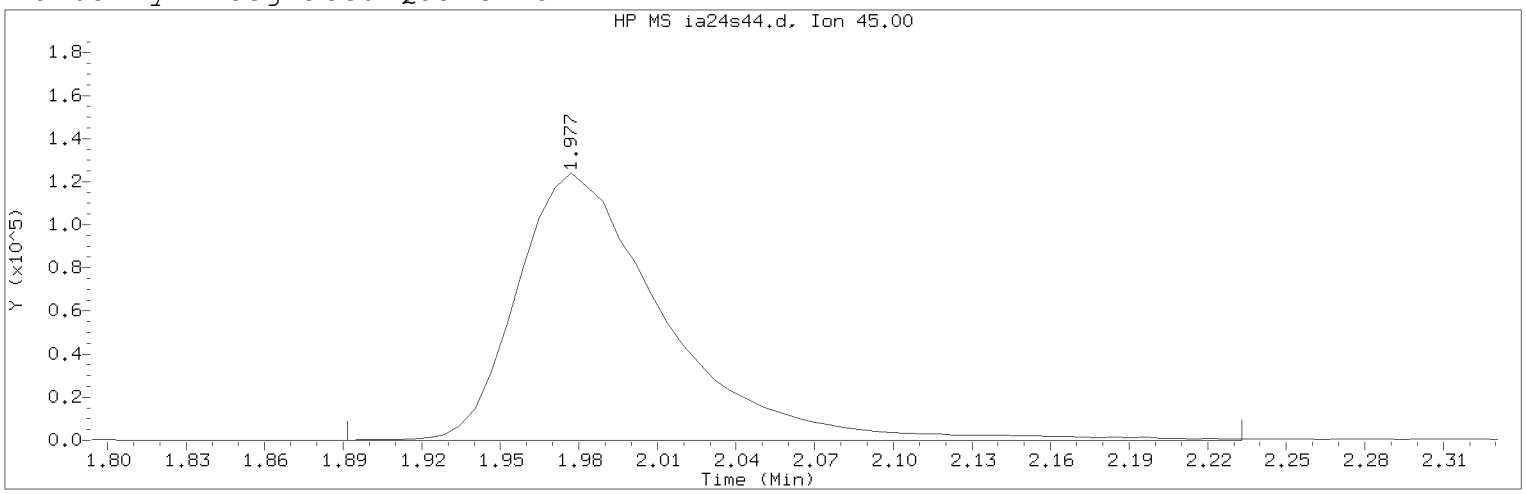
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI96 Lab Sample ID: LCDI96

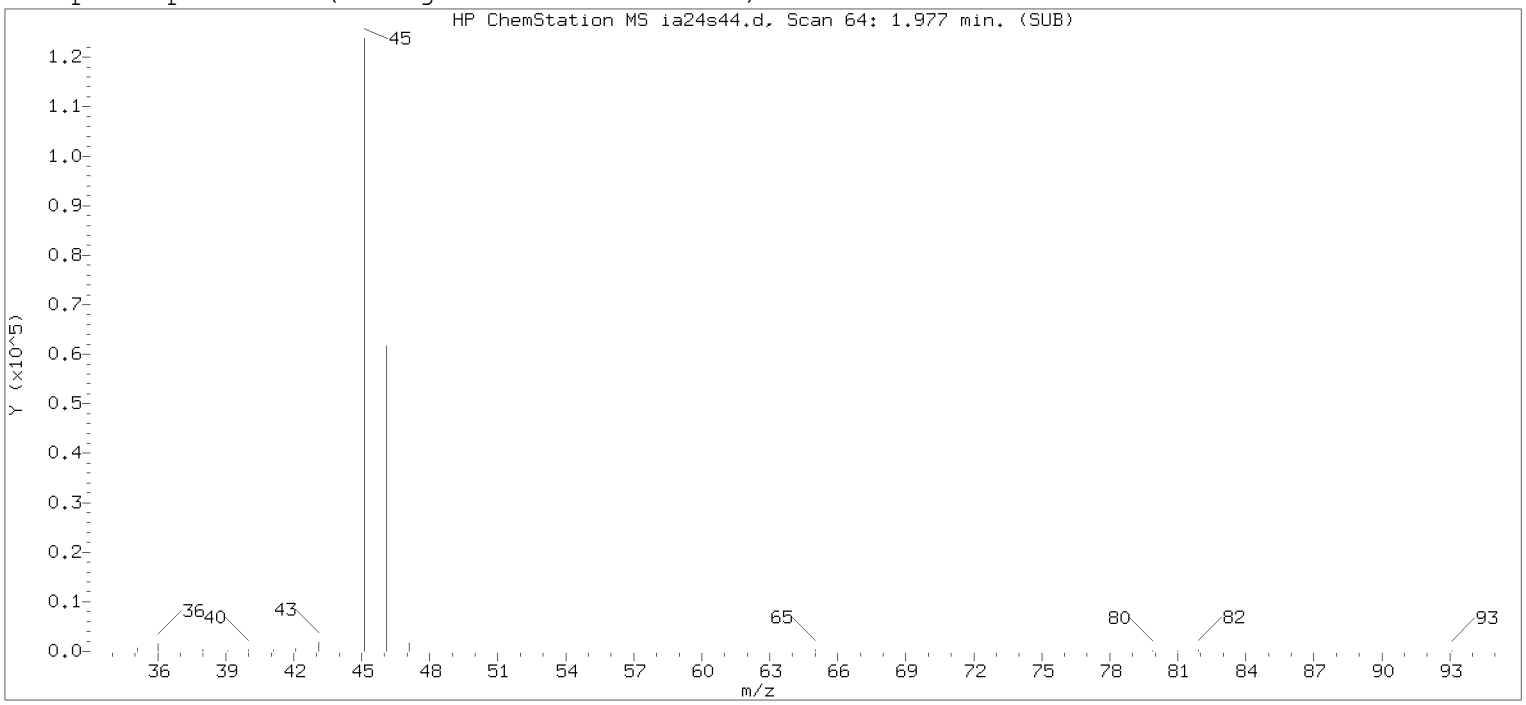
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 64
Retention Time (minutes): 1.977
Quant Ion : 45.00
Area (flag) : 485128M
On-Column Amount (ng) : 5.7253
Integration start scan : 49 Integration stop scan: 105
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

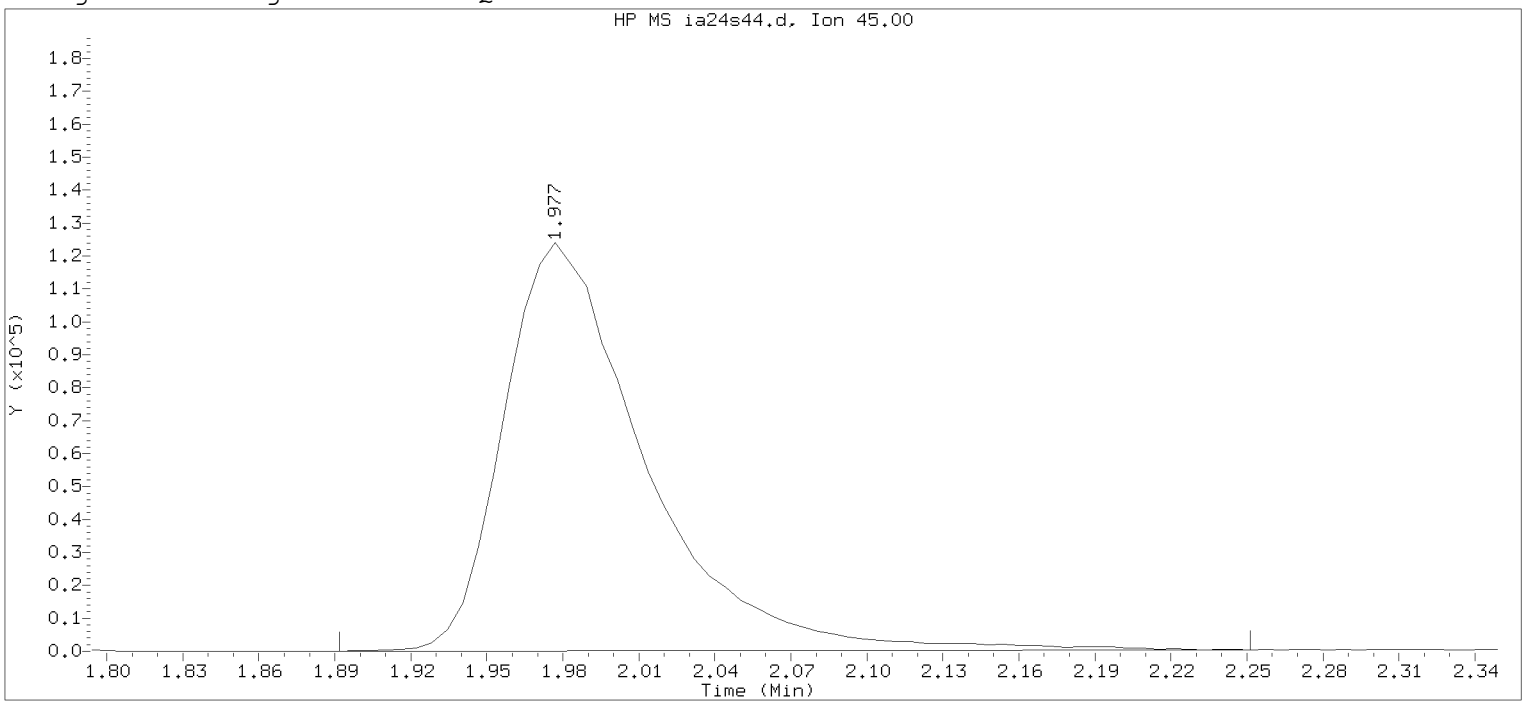
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

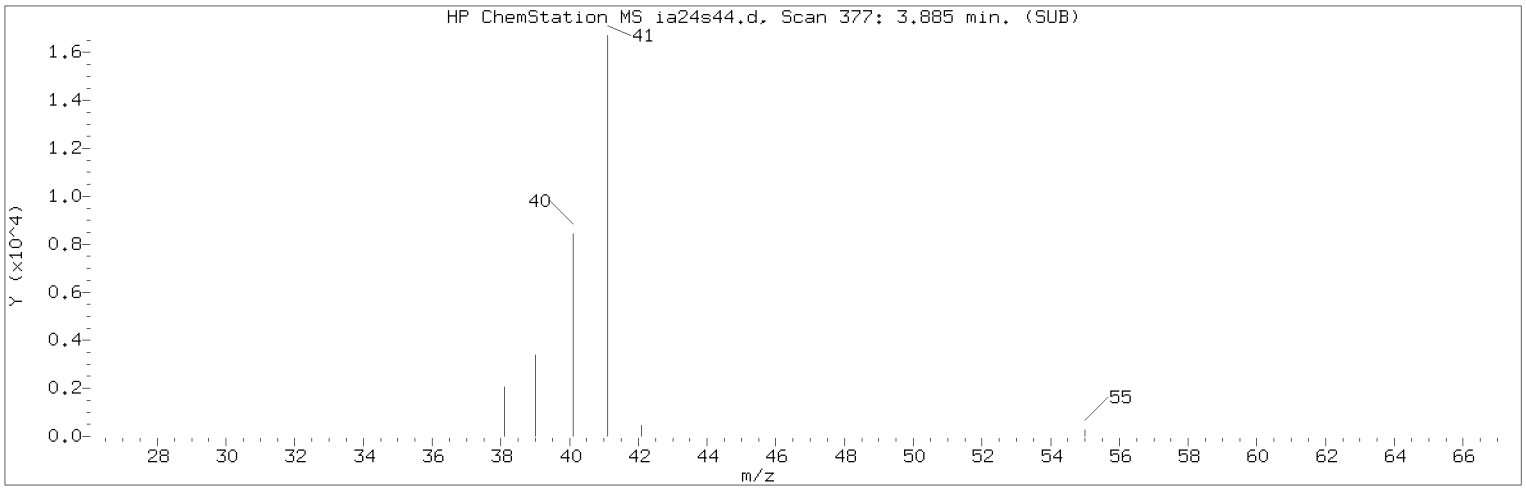
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:52 Automation

Sample Name: LCDI96 Lab Sample ID: LCDI96

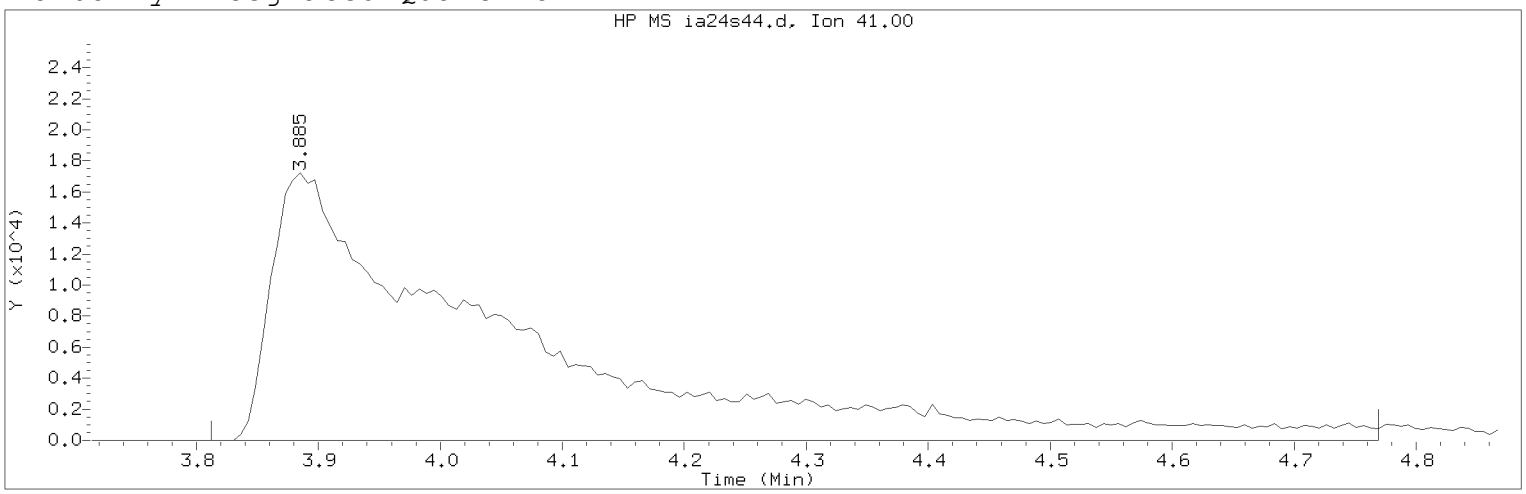
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 64
Retention Time (minutes): 1.977
Quant Ion : 45.00
Area : 480619
On-column Amount (ng) : 5.6721
Integration start scan : 49 Integration stop scan: 108
Y at integration start : 0 Y at integration end: 462

Digitally signed by Don V. Viray on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI96 Lab Sample ID: LCDI96

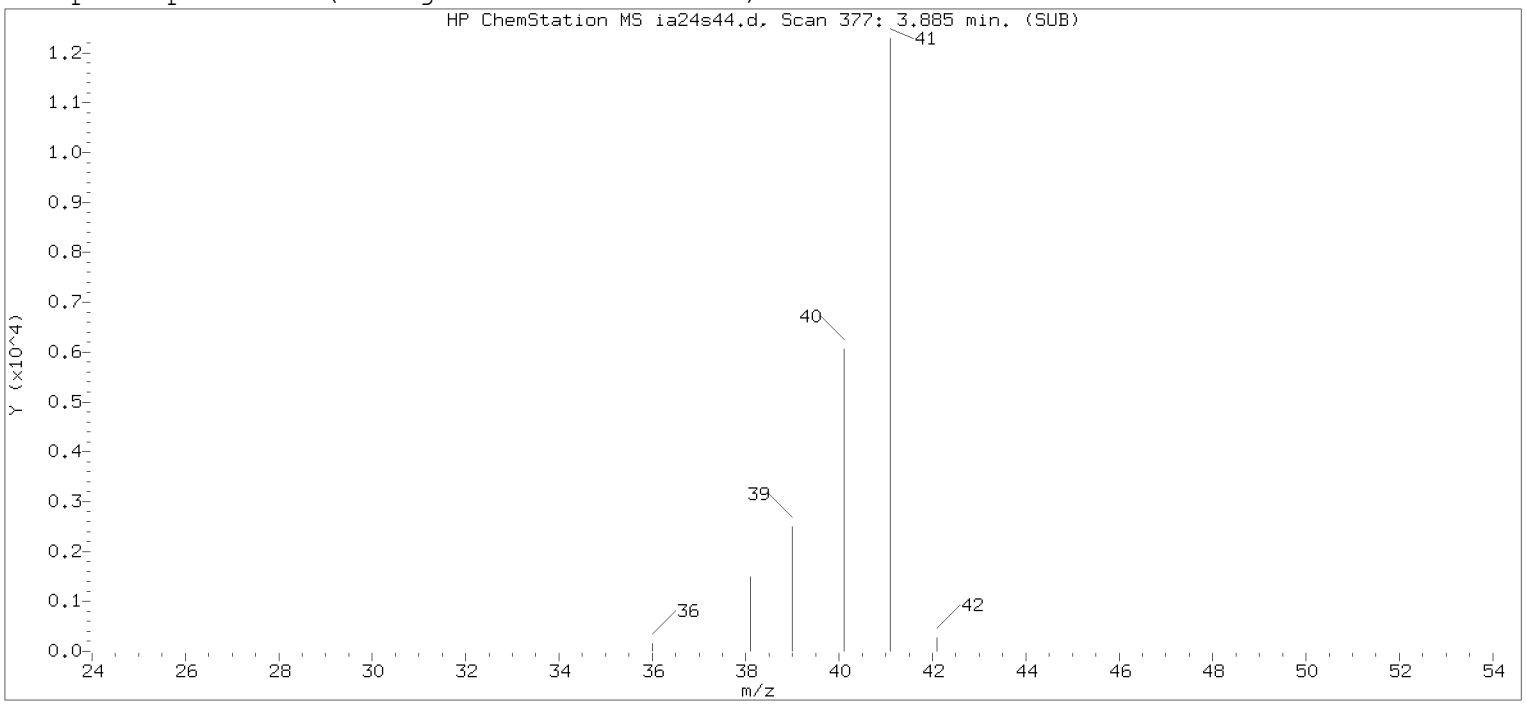
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 377
Retention Time (minutes): 3.885
Quant Ion : 41.00
Area (flag) : 230301M
On-Column Amount (ng) : 52.8051
Integration start scan : 364 Integration stop scan: 521
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

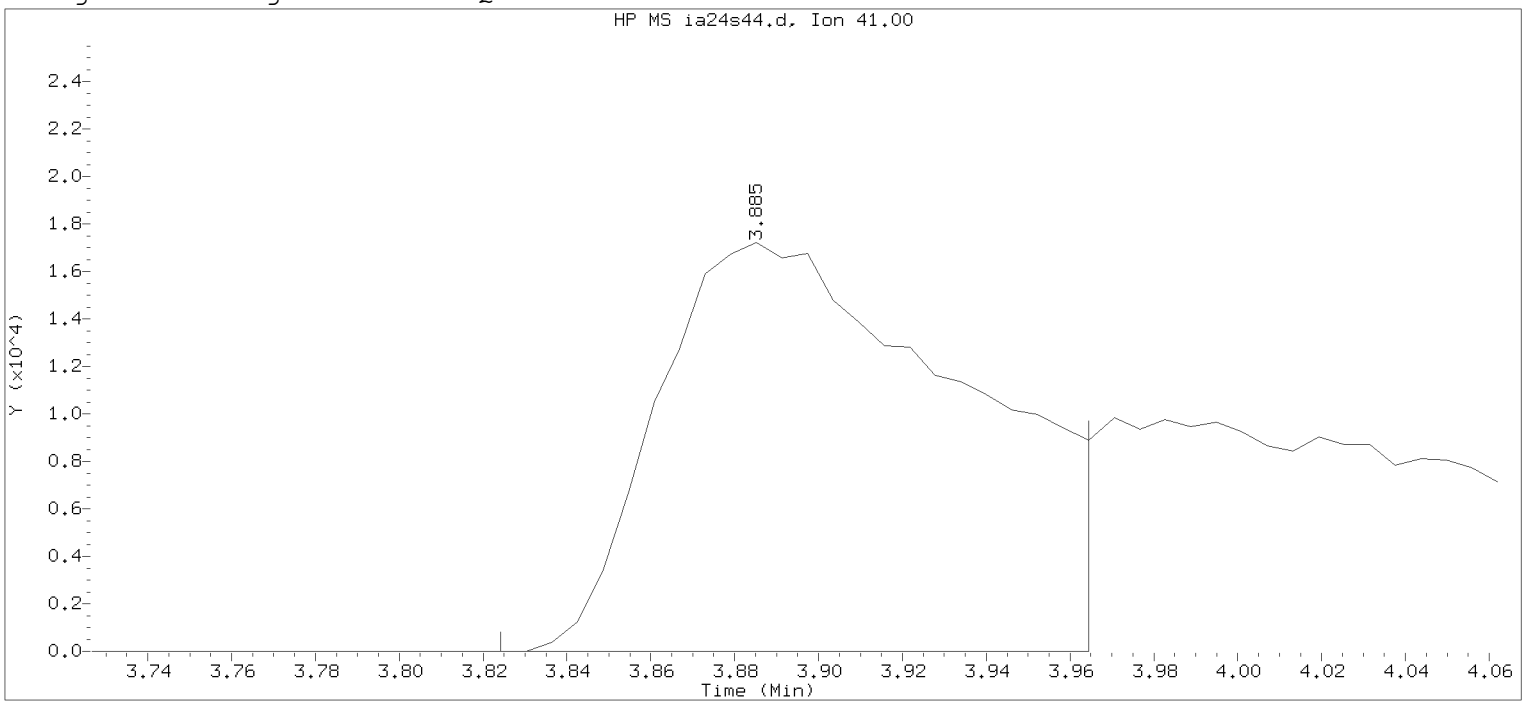
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:40.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s44.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 22:34 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:52 Automation

Sample Name: LCDI96 Lab Sample ID: LCDI96

Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 377
Retention Time (minutes): 3.885
Quant Ion : 41.00
Area : 87943
On-column Amount (ng) : 20.1642
Integration start scan : 366 Integration stop scan: 389
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:40.
Target 3.5 esignature used. FID Page 1359

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s41.d Injection date and time: **24-APR-2018 21:31**
Data file Sample Info. Line: LCSI95;LCSI95;1;3;LCS;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.129(0.006)	417	65	170657 (4)	50.00	
63) Fluorobenzene	7.665(0.000)	997	96	2225928 (1)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1666053 (0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.023(0.000)	1876	152	890359 (1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769(0.000)	113	539180	10.379	104%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232(0.000)	102	111779	9.891	99%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2241443	9.964	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	791953	9.970	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	1.898(0.000)	85	411235	4.014	4.01			0.1	1
2) Chloromethane	(2)	2.093(0.000)	50	457753	4.827	4.83			0.2	0.5
5) Vinyl Chloride	(2)	2.202(0.000)	62	422422	4.948	4.95			0.2	1
7) Bromomethane	(2)	2.538(0.000)	94	304939	5.082	5.08			0.5	1
8) Chloroethane	(2)	2.623(0.000)	64	237120	4.875	4.88			0.1	0.5
10) Trichlorofluoromethane	(2)	2.922(0.000)	101	588435M	5.485	5.49			0.2	1
11) Ethyl ether	(2)	3.160(0.000)	59	271718	5.133	5.13		J	1	13
13) Acrolein	(1)	3.330(-0.001)	56	271316	33.215	33.21			5	25
15) 1,1-Dichloroethene	(2)	3.470(0.000)	96	293133	5.795	5.80			0.2	1
16) Freon 113	(2)	3.507(0.000)	101	320297	5.524	5.52			0.2	1
14) Acetone	(1)	3.495(-0.001)	43	412036	34.360	34.36			3	10
17) Methyl Iodide	(2)	3.672(0.000)	142	501228	5.360	5.36		J	0.6	10
18) Carbon Disulfide	(2)	3.787(0.000)	76	698982	4.887	4.89		J	0.4	10
22) Allyl Chloride	(2)	3.940(0.000)	41	544300	5.841	5.84		J	0.8	10
23) Methylene Chloride	(2)	4.129(0.000)	84	321576	5.207	5.21			0.2	1
29) Acrylonitrile	(1)	4.470(-0.003)	53	345736	25.728	25.73			1	10
31) trans-1,2-Dichloroethene	(2)	4.550(0.000)	96	321718	5.570	5.57			0.2	1
33) 1,1-Dichloroethane	(2)	5.220(0.000)	63	638696	5.535	5.54			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.330(0.000)	53	581755	5.910	5.91		J	0.5	10
38) 2-Butanone	(1)	6.031(-0.003)	43	788051	42.069	42.07			1	10
42) Propionitrile	(1)	6.122(-0.005)	54	189040	35.432	35.43		J	10	100
45) Methacrylonitrile	(1)	6.330(-0.002)	67	695359	39.942	39.94		J	10	100
48) Tetrahydrofuran	(1)	6.409(-0.002)	71	141856	27.868	27.87			2	25
49) Chloroform	(2)	6.549(0.000)	83	600110	5.528	5.53			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.775(0.000)	97	524734	5.803	5.80			0.1	1
54) Carbon Tetrachloride	(2)	6.994(0.000)	117	455976	5.971	5.97			0.2	1
56) Isobutyl Alcohol	(1)	7.122(-0.004)	41	191926	115.969	115.97		J	10	200
58) Benzene	(2)	7.256(0.000)	78	1378973	5.322	5.32			0.1	1
59) 1,2-Dichloroethane	(2)	7.336(0.000)	62	425736	5.625	5.63			0.1	1
67) Trichloroethene	(2)	8.146(0.000)	95	360995	5.502	5.50			0.2	1
70) 1,2-Dichloropropane	(2)	8.482(0.000)	63	368279	5.479	5.48			0.1	1

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 04/24/2018 at 23:39. Target 3.5 esignature user ID: dvv10203

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s41.d Injection date and time: **24-APR-2018 21:31**
Data file Sample Info. Line: LCSI95;LCSI95;1;3;LCS;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

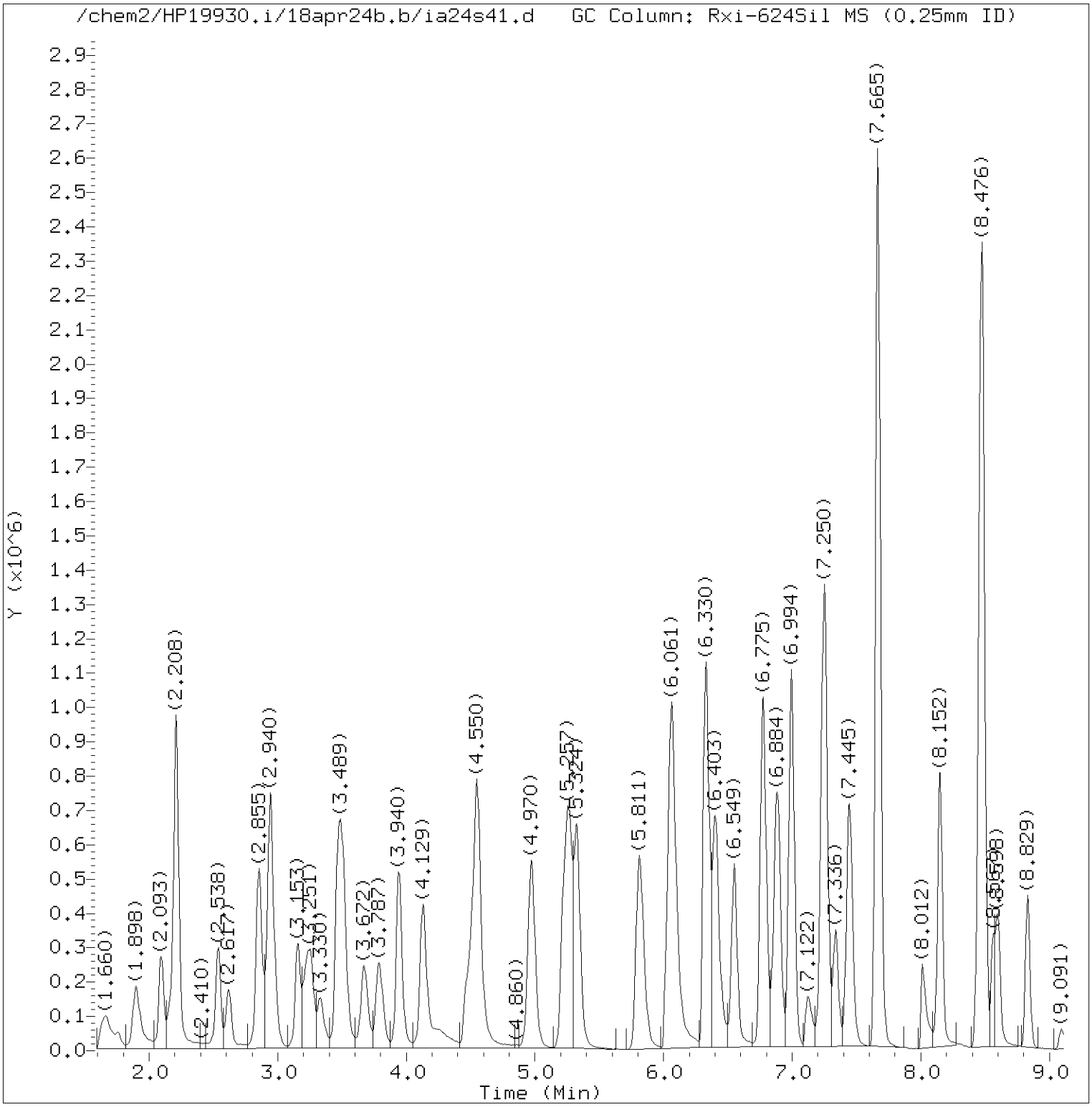
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
71) Methyl Methacrylate	(1)	8.561(-0.003)	69	170254	5.825	5.82		J	4	10
73) Dibromomethane	(2)	8.598(0.000)	93	160800	5.344	5.34			0.1	1
72) 1,4-Dioxane	(1)	8.573(-0.003)	88	35518M	122.872	122.87		J	45	200
74) Bromodichloromethane	(2)	8.829(0.000)	83	388883	5.398	5.40			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.536(-0.003)	43	1398683M	30.046	30.05			1	10
83) Toluene	(3)	9.762(-0.000)	92	867103	5.280	5.28			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.024(0.000)	75	374437	5.391	5.39			0.1	1
86) Ethyl Methacrylate	(3)	10.079(-0.000)	69	362490	5.330	5.33		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.231(0.000)	97	240929	5.201	5.20			0.1	1
89) Tetrachloroethene	(3)	10.317(-0.000)	166	404925	5.804	5.80			0.1	1
90) 1,3-Dichloropropane	(3)	10.390(0.000)	76	432400	5.245	5.25			0.1	1
91) 2-Hexanone	(1)	10.432(-0.005)	43	990024	30.127	30.13			1	10
93) Dibromochloromethane	(3)	10.609(0.000)	129	245987	5.393	5.39			0.1	1
95) 1,2-Dibromoethane	(3)	10.725(0.000)	107	221999	5.268	5.27			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.256(-0.000)	131	313982	5.532	5.53			0.1	1
100) Ethylbenzene	(3)	11.256(-0.000)	91	1691795	5.436	5.44			0.1	1
101) m+p-Xylene	(3)	11.371(-0.000)	106	1324552	11.077	11.08			0.1	0.5
104) o-Xylene	(3)	11.700(-0.000)	106	637186	5.476	5.48			0.1	0.5
105) Xylene (Total)	(3)		106	1961738	16.553	16.55			0.2	3
106) Styrene	(3)	11.719(-0.000)	104	1016879	5.662	5.66			0.1	1
107) Bromoform	(3)	11.883(-0.000)	173	116175	4.356	4.36			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.243(0.000)	83	297633	4.751	4.75			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.268(-0.004)	53	253293	21.703	21.70			1	10
116) 1,2,3-Trichloropropane	(4)	12.292(0.000)	110	85321	5.200	5.20			0.3	1
126) Pentachloroethane	(4)	12.737(-0.000)	167	229186	5.537	5.54		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	12.969(0.000)	146	748395M	5.158	5.16			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.042(-0.000)	146	770355M	5.212	5.21			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.298(-0.000)	146	697541	5.184	5.18			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.840(-0.004)	155	34139	5.411	5.41			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.383(-0.000)	180	417575	4.862	4.86			0.1	1
146) Hexachlorobutadiene	(4)	14.462(-0.000)	225	179385	5.772	5.77			0.1	1
147) Naphthalene	(4)	14.566(-0.000)	128	821532	4.883	4.88			0.1	1

M = Compound was manually integrated.

Total number of targets = 63

Digitally signed by Don V. Viray on 04/24/2018 at 23:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

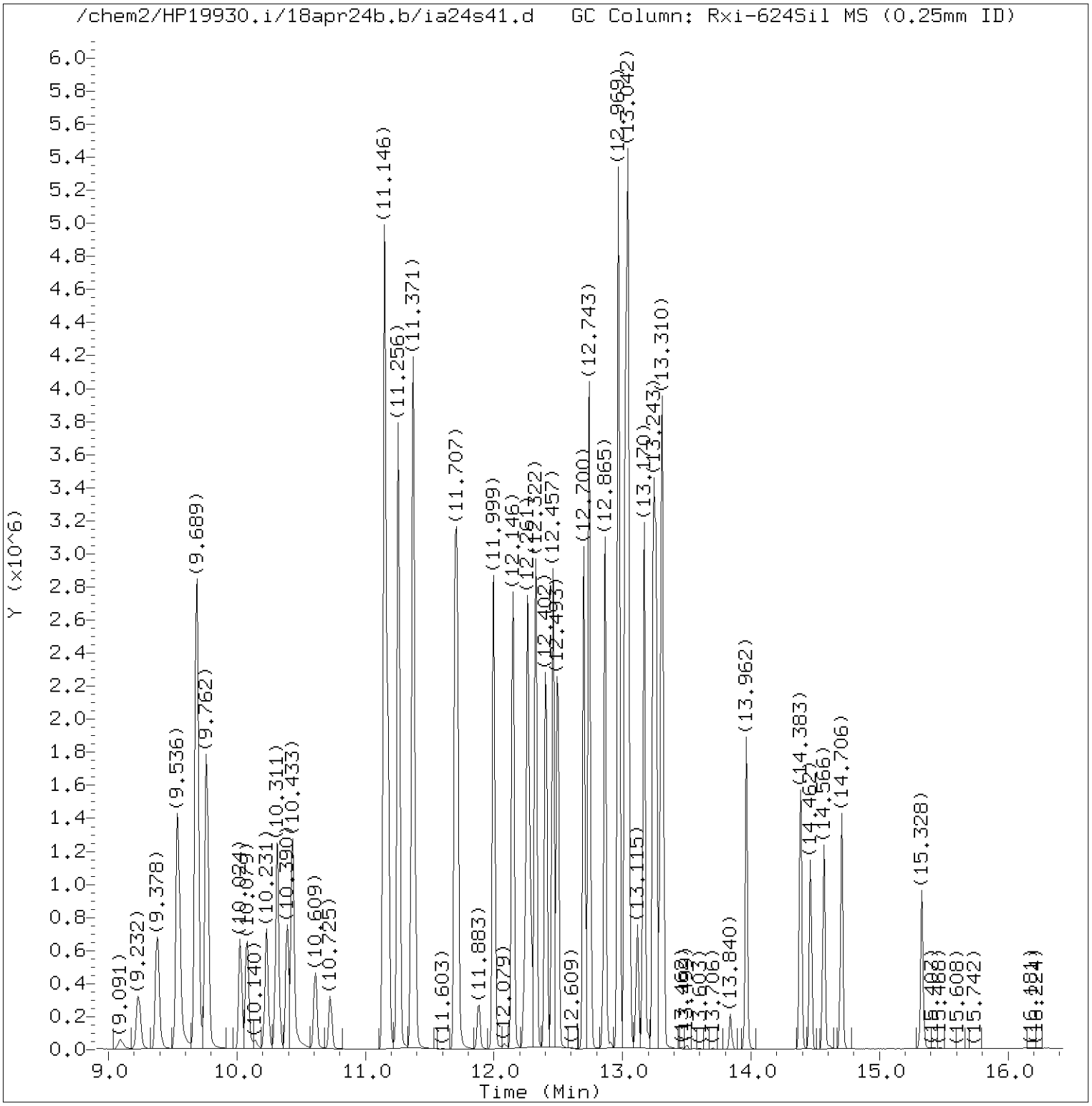
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.898	85	411235	4.014
2) Chloromethane	(2)	2.093	50	457753	4.827
5) Vinyl Chloride	(2)	2.202	62	422422	4.948
7) Bromomethane	(2)	2.538	94	304939	5.082
8) Chloroethane	(2)	2.623	64	237120	4.875
10) Trichlorofluoromethane	(2)	2.922	101	588435M	5.485
11) Ethyl ether	(2)	3.160	59	271718	5.133
13) Acrolein	(1)	3.330	56	271316	33.215
15) 1,1-Dichloroethene	(2)	3.470	96	293133	5.795
14) Acetone	(1)	3.495	43	412036	34.360
16) Freon 113	(2)	3.507	101	320297	5.524
17) Methyl Iodide	(2)	3.672	142	501228	5.360
18) Carbon Disulfide	(2)	3.787	76	698982	4.887
22) Allyl Chloride	(2)	3.940	41	544300	5.841
23) Methylene Chloride	(2)	4.129	84	321576	5.207
26)*t-Butyl Alcohol-d10	(1)	4.129	65	170657	50.000
29) Acrylonitrile	(1)	4.470	53	345736	25.728
31) trans-1,2-Dichloroethene	(2)	4.550	96	321718	5.570
33) 1,1-Dichloroethane	(2)	5.220	63	638696	5.535
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	581755	5.910
38) 2-Butanone	(1)	6.031	43	788051	42.069
42) Propionitrile	(1)	6.122	54	189040	35.432
45) Methacrylonitrile	(1)	6.330	67	695359	39.942
48) Tetrahydrofuran	(1)	6.409	71	141856	27.868
49) Chloroform	(2)	6.549	83	600110	5.528
50)$Dibromofluoromethane	(2)	6.769	113	539180	10.379
51) 1,1,1-Trichloroethane	(2)	6.775	97	524734	5.803
54) Carbon Tetrachloride	(2)	6.994	117	455976	5.971
56) Isobutyl Alcohol	(1)	7.122	41	191926	115.969
57)$1,2-Dichloroethane-d4	(2)	7.232	102	111779	9.891
58) Benzene	(2)	7.256	78	1378973	5.322
59) 1,2-Dichloroethane	(2)	7.336	62	425736	5.625
63)*Fluorobenzene	(2)	7.665	96	2225928	10.000
67) Trichloroethene	(2)	8.146	95	360995	5.502
70) 1,2-Dichloropropane	(2)	8.482	63	368279	5.479
71) Methyl Methacrylate	(1)	8.561	69	170254	5.825
72) 1,4-Dioxane	(1)	8.573	88	35518M	122.872
73) Dibromomethane	(2)	8.598	93	160800	5.344

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

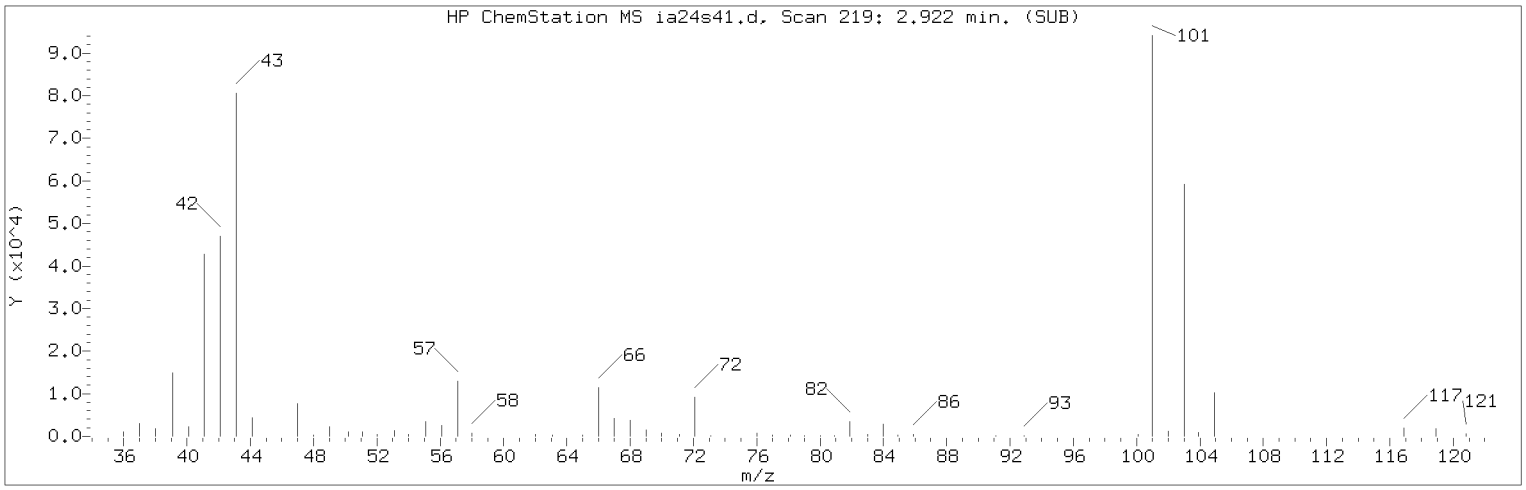
Sample Name: LCSI95 Lab Sample ID: LCSI95

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.829	83	388883	5.398
81) 4-Methyl-2-Pentanone	(1)	9.536	43	1398683M	30.046
82)$Toluene-d8	(3)	9.689	98	2241443	9.964
83) Toluene	(3)	9.762	92	867103	5.280
84) trans-1,3-Dichloropropene	(3)	10.024	75	374437	5.391
86) Ethyl Methacrylate	(3)	10.079	69	362490	5.330
88) 1,1,2-Trichloroethane	(3)	10.231	97	240929	5.201
89) Tetrachloroethene	(3)	10.317	166	404925	5.804
90) 1,3-Dichloropropane	(3)	10.390	76	432400	5.245
91) 2-Hexanone	(1)	10.433	43	990024	30.127
93) Dibromochloromethane	(3)	10.609	129	245987	5.393
95) 1,2-Dibromoethane	(3)	10.725	107	221999	5.268
97)*Chlorobenzene-d5	(3)	11.146	117	1666053	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	313982	5.532
100) Ethylbenzene	(3)	11.256	91	1691795	5.436
101) m+p-Xylene	(3)	11.371	106	1324552	11.077
104) o-Xylene	(3)	11.701	106	637186	5.476
106) Styrene	(3)	11.719	104	1016879	5.662
105) Xylene (Total)	(3)		106	1961738	16.553
107) Bromoform	(3)	11.883	173	116175	4.356
111)$4-Bromofluorobenzene	(3)	12.146	95	791953	9.970
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	297633	4.751
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	253293	21.703
116) 1,2,3-Trichloropropane	(4)	12.292	110	85321	5.200
126) Pentachloroethane	(4)	12.737	167	229186	5.537
131) 1,3-Dichlorobenzene	(4)	12.969	146	748395M	5.158
133)*1,4-Dichlorobenzene-d4	(4)	13.023	152	890359	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	770355M	5.212
139) 1,2-Dichlorobenzene	(4)	13.298	146	697541	5.184
143) 1,2-Dibromo-3-chloropropane	(1)	13.840	155	34139	5.411
145) 1,2,4-Trichlorobenzene	(4)	14.383	180	417575	4.862
146) Hexachlorobutadiene	(4)	14.462	225	179385	5.772
147) Naphthalene	(4)	14.566	128	821532	4.883

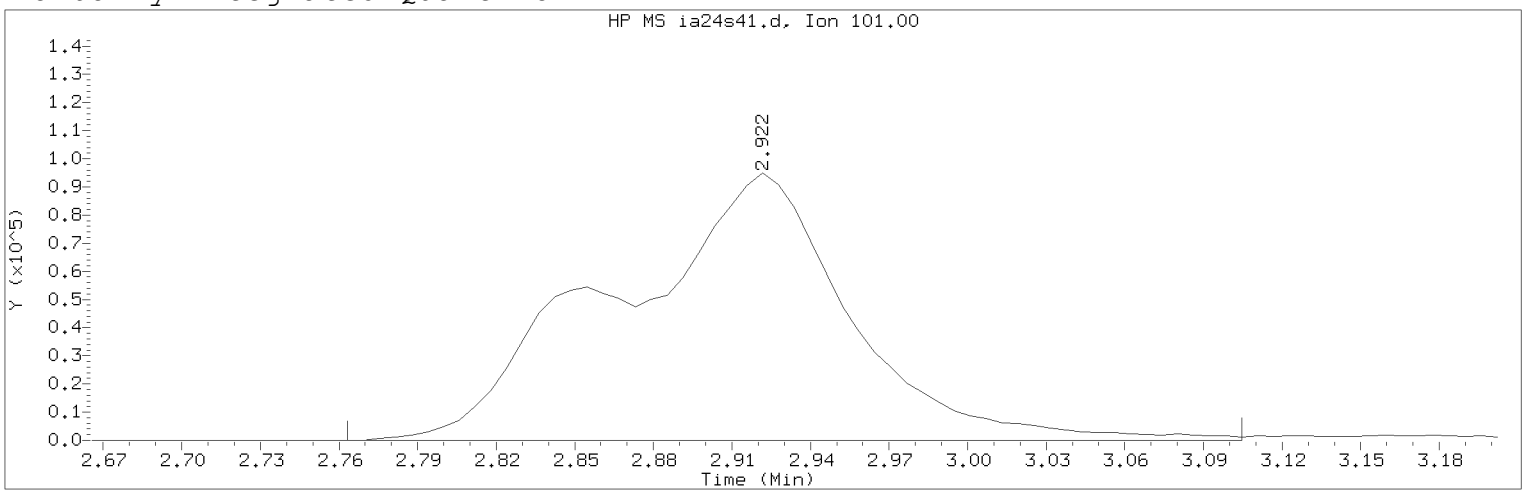
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

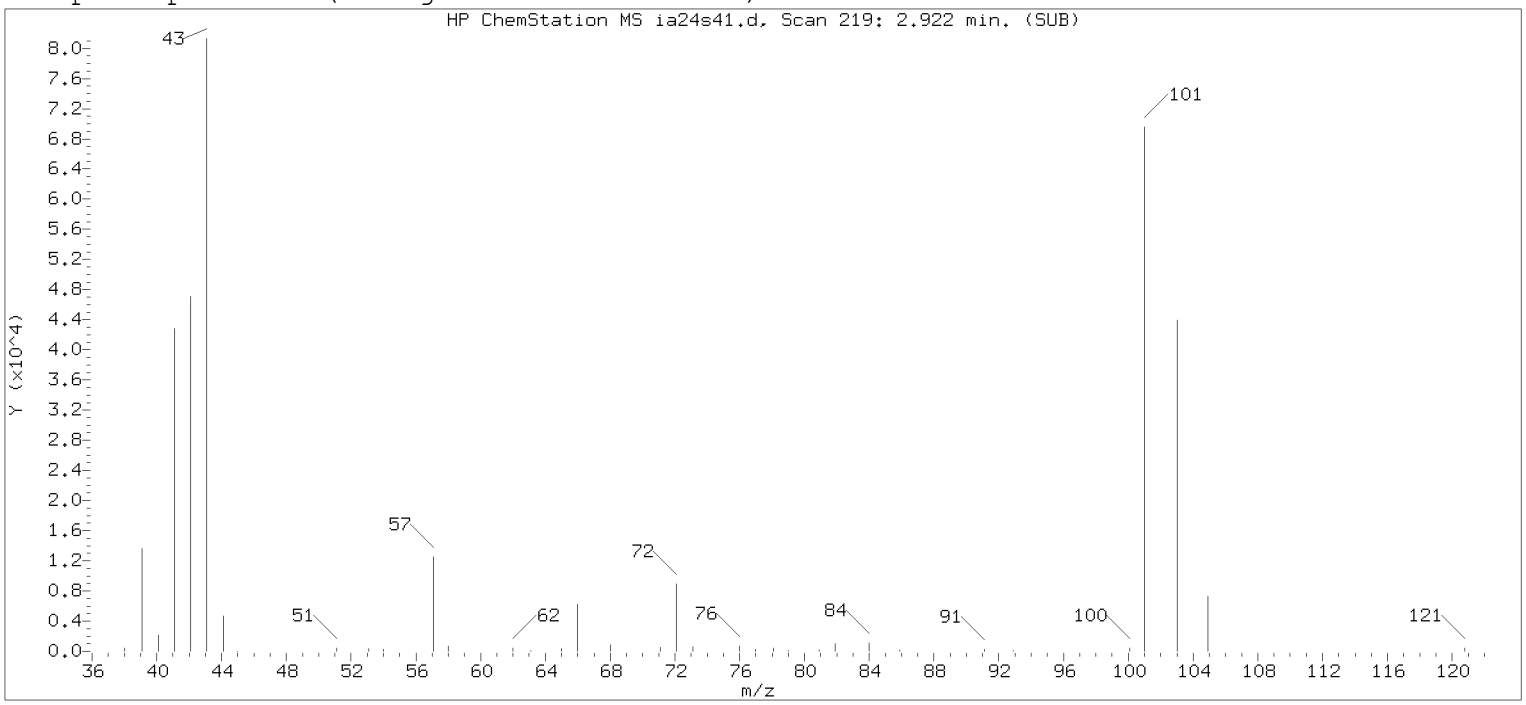
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 588435M
On-Column Amount (ng) : 5.4851
Integration start scan : 192 Integration stop scan: 248
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

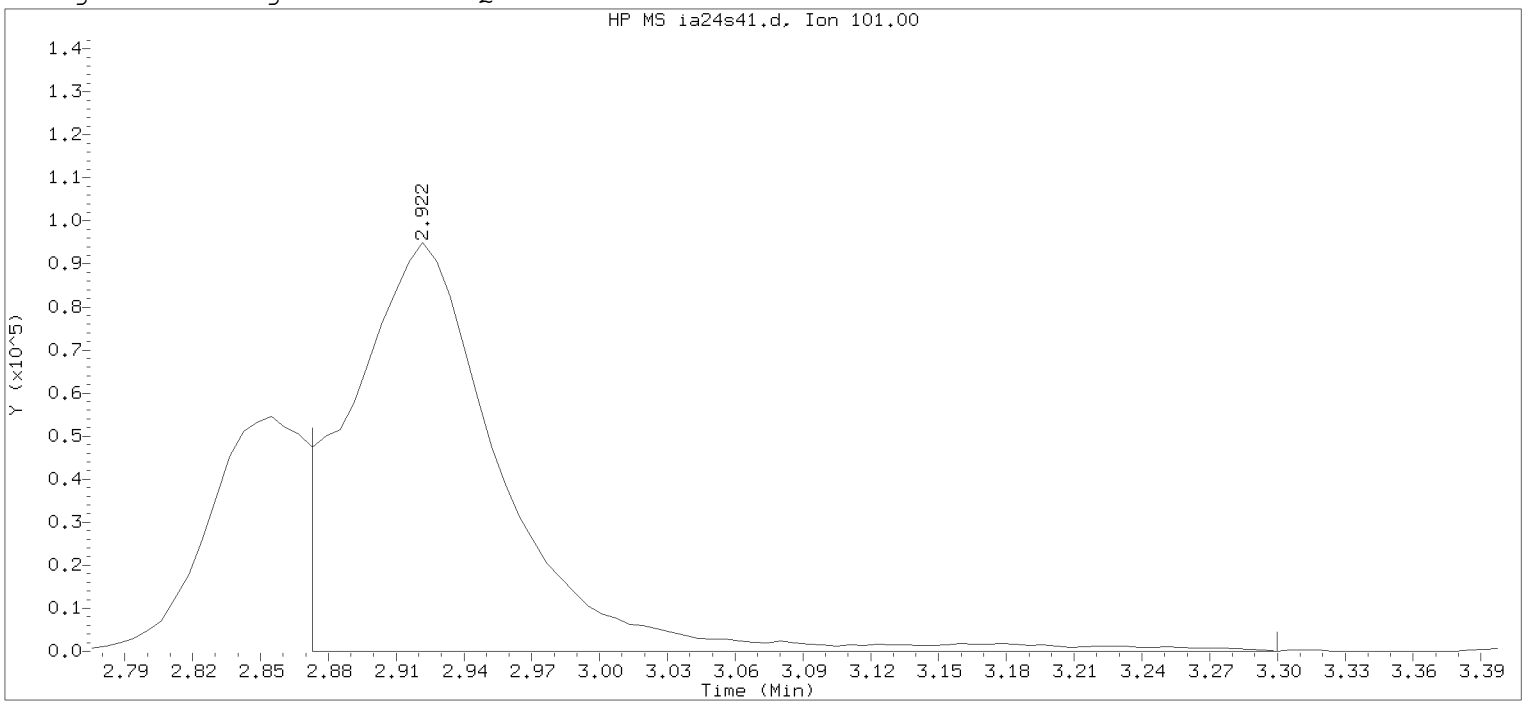
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

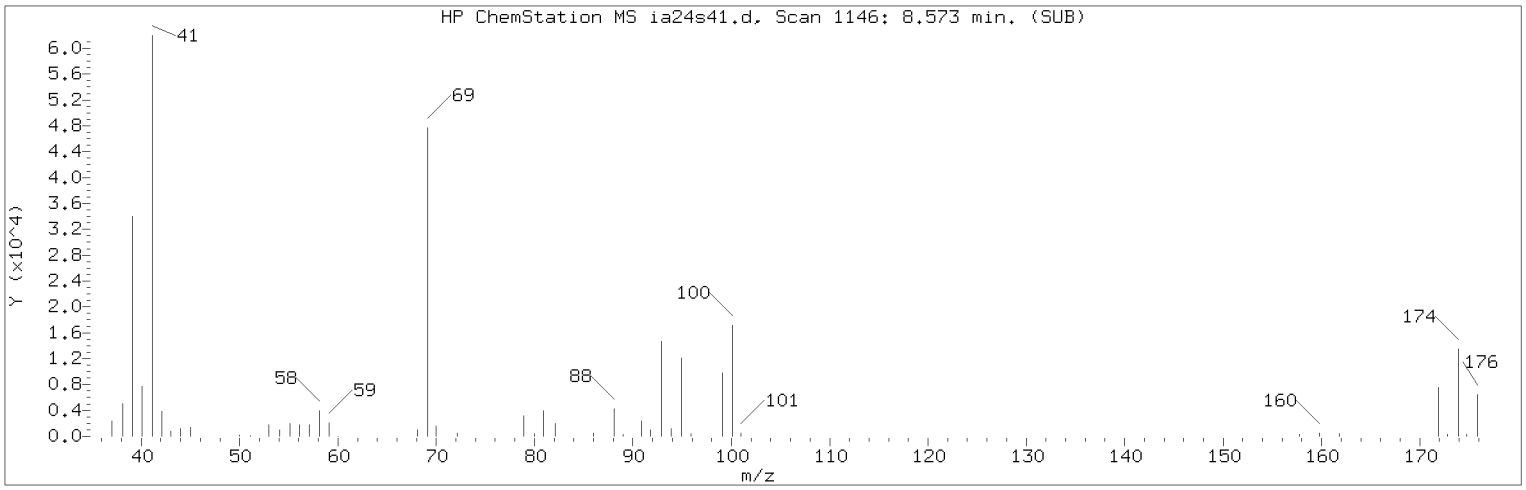
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:49 Automation

Sample Name: LCSI95 Lab Sample ID: LCSI95

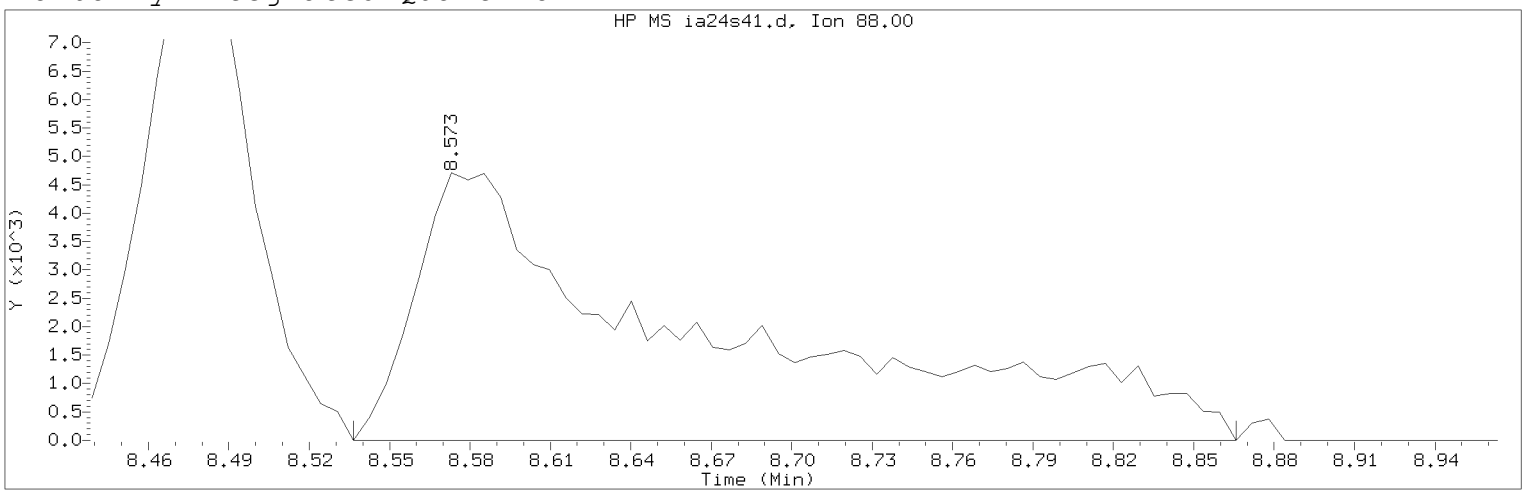
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 440743
On-column Amount (ng) : 4.1084
Integration start scan : 210 Integration stop scan: 280
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature used. FD6 Page 1367

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

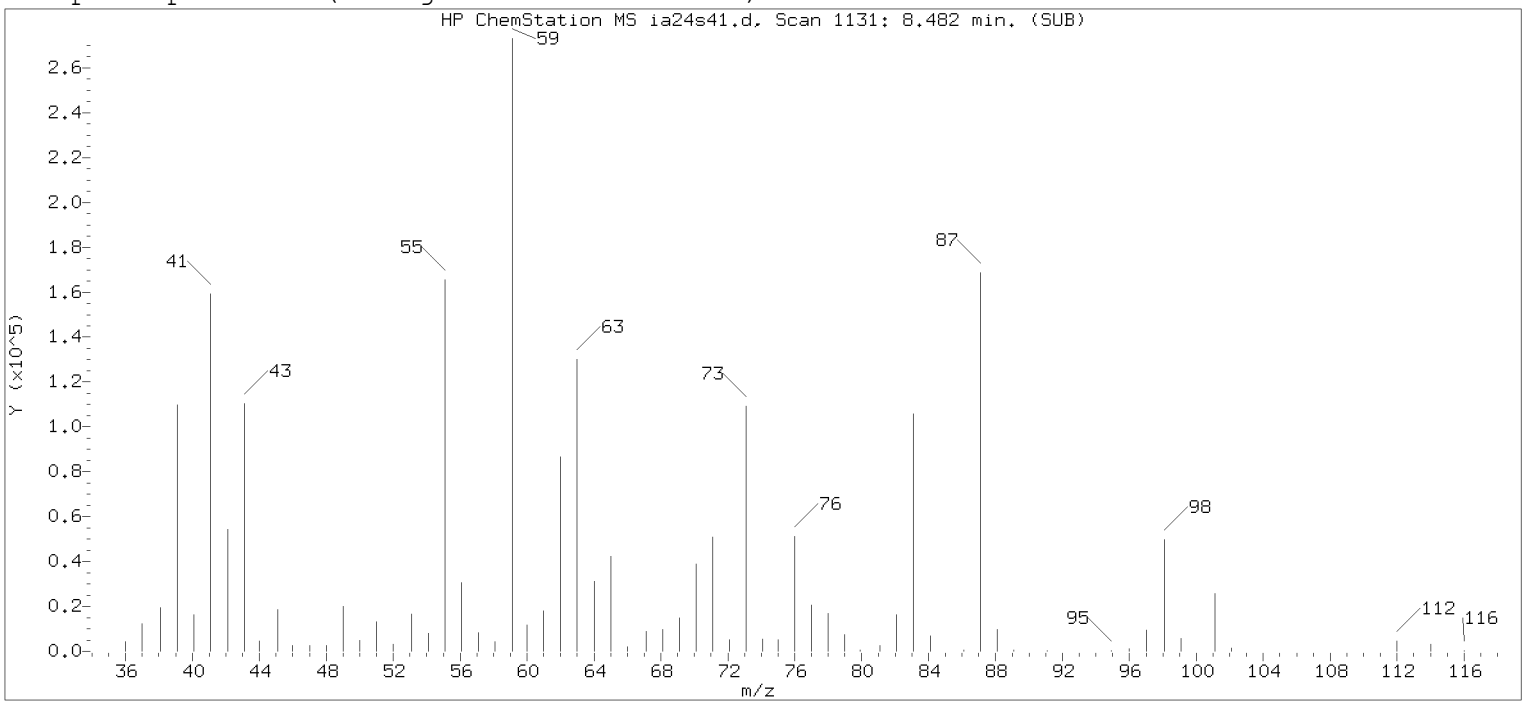
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1146
Retention Time (minutes): 8.573
Quant Ion : 88.00
Area (flag) : 35518M
On-Column Amount (ng) : 122.8718
Integration start scan : 1139 Integration stop scan: 1193
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

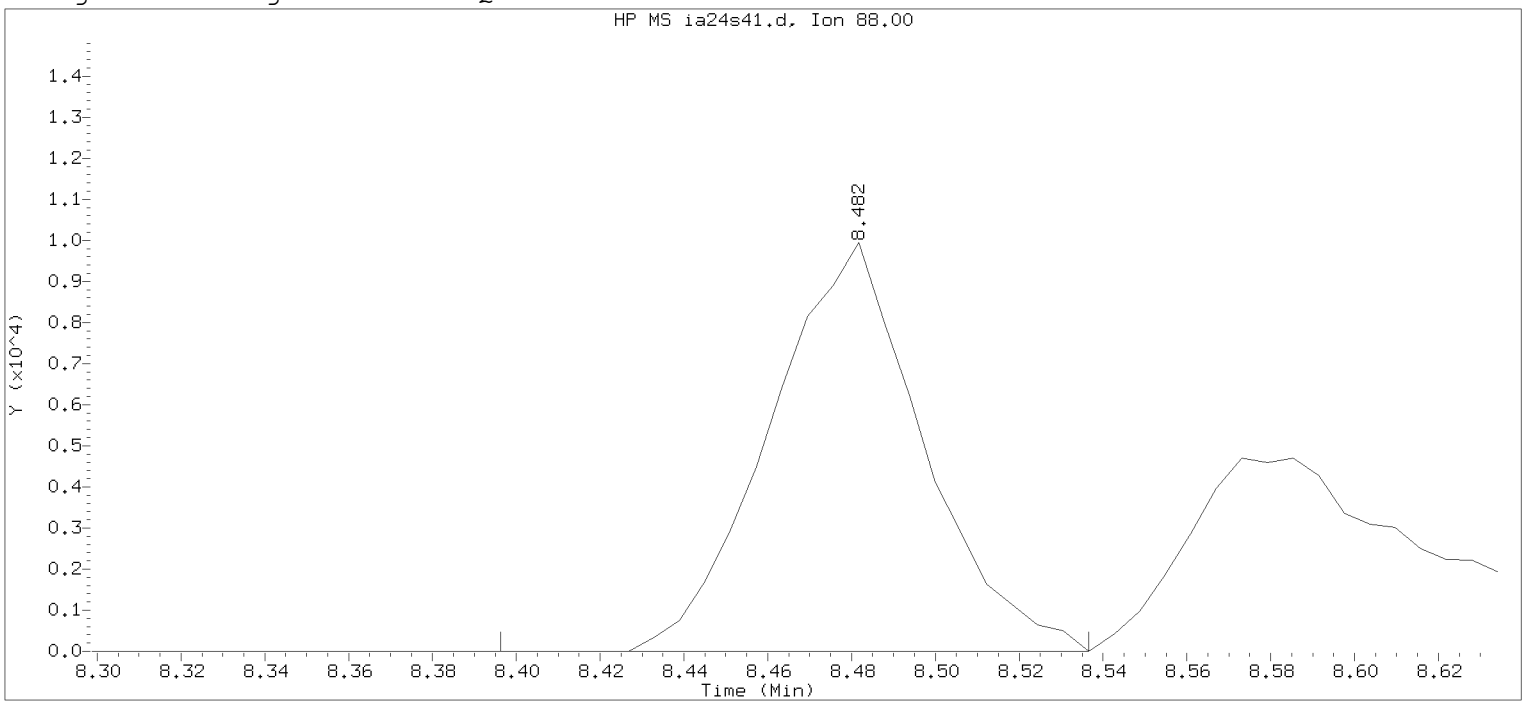
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

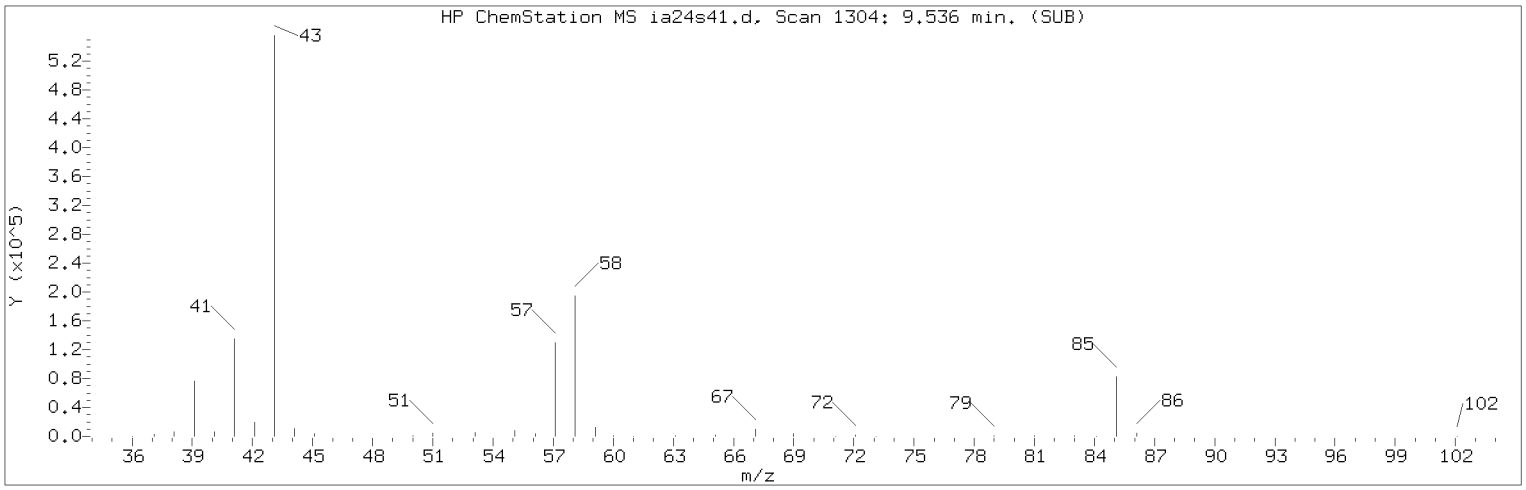
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:49 Automation

Sample Name: LCSI95 Lab Sample ID: LCSI95

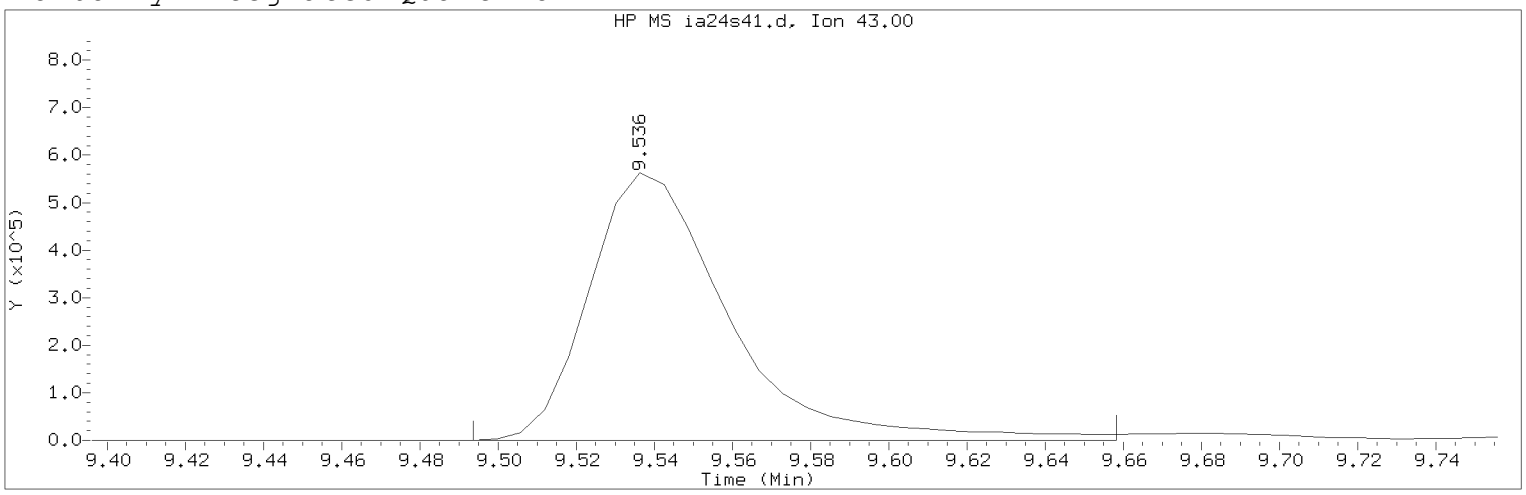
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1131
Retention Time (minutes): 8.482
Quant Ion : 88.00
Area : 25169
On-column Amount (ng) : 87.0712
Integration start scan : 1116 Integration stop scan: 1139
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature used. FID Page 1369

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

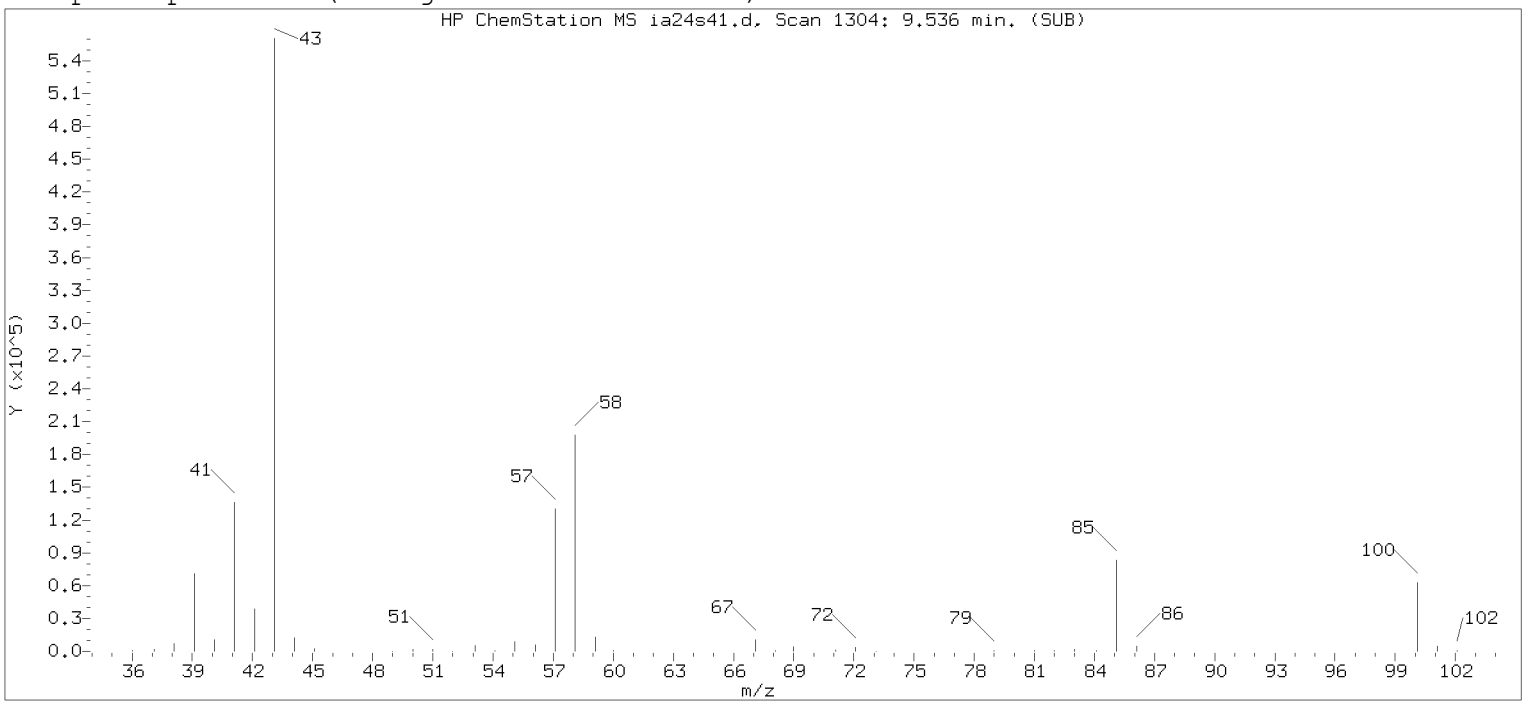
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.536
Quant Ion : 43.00
Area (flag) : 1398683M
On-Column Amount (ng) : 30.0462
Integration start scan : 1296 Integration stop scan: 1323
Y at integration start : 62 Y at integration end: 62

Reason for manual integration: improper integration

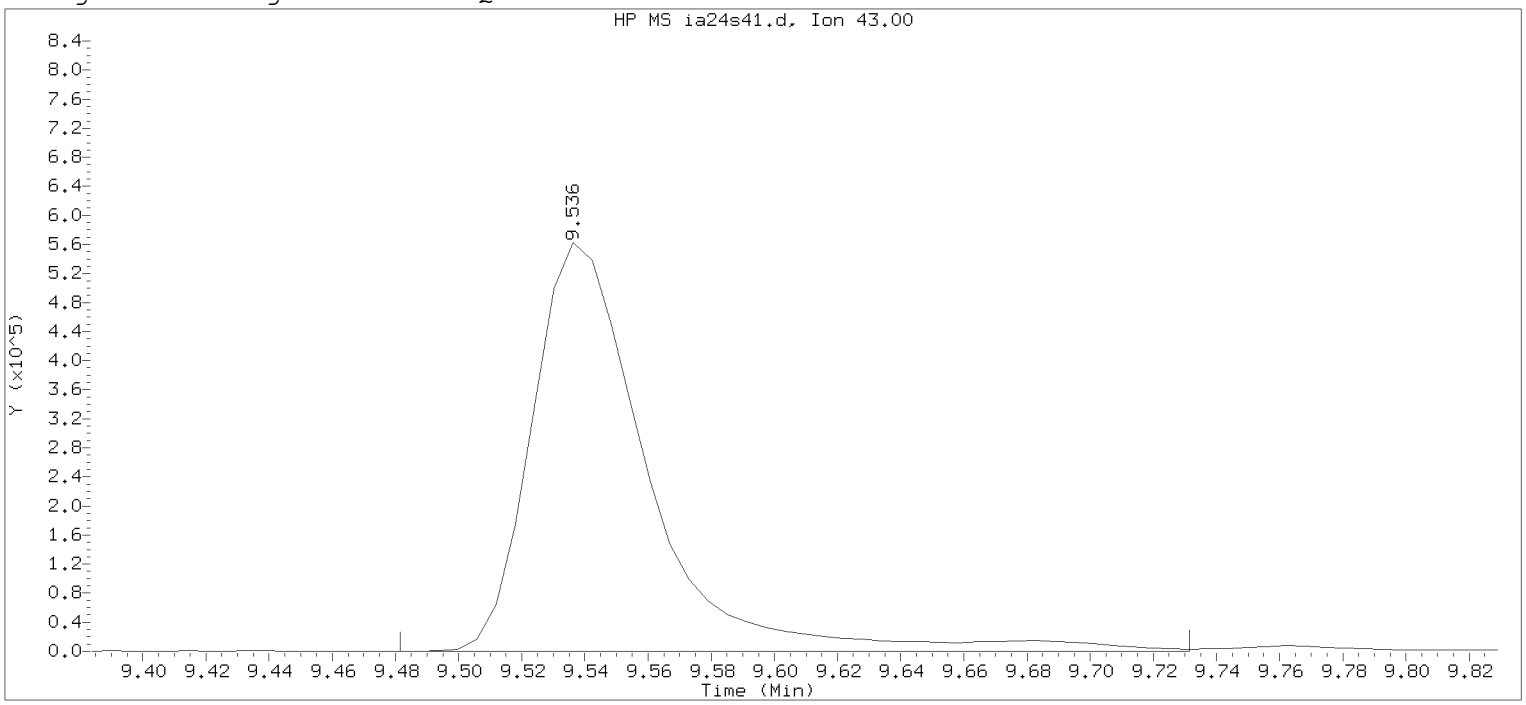
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

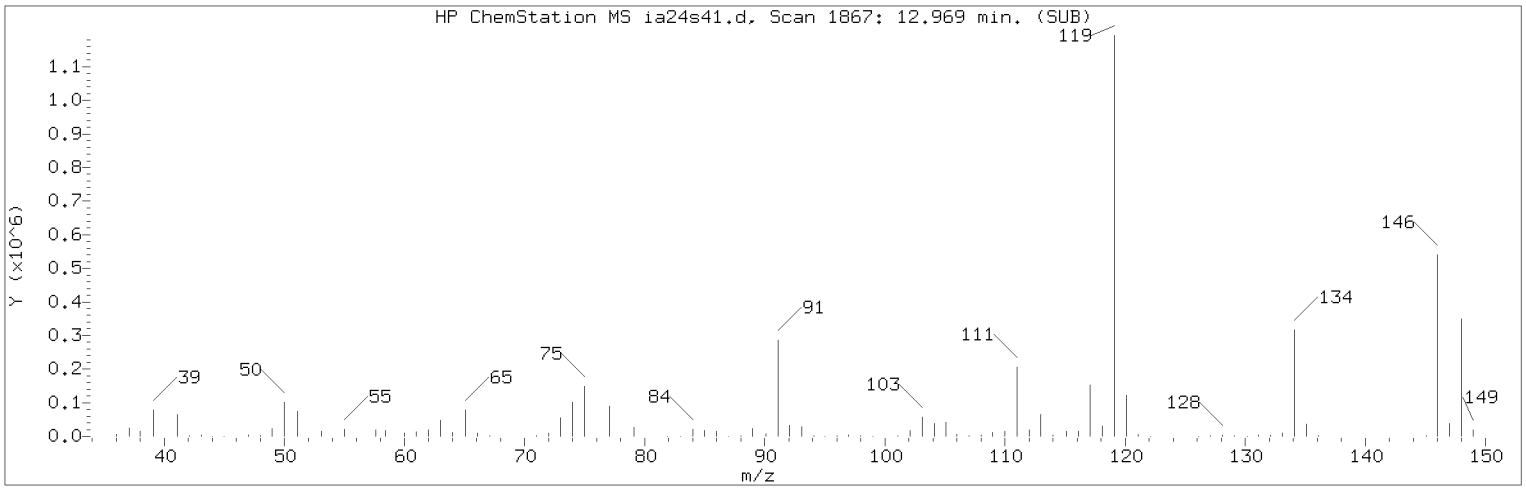
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:49 Automation

Sample Name: LCSI95 Lab Sample ID: LCSI95

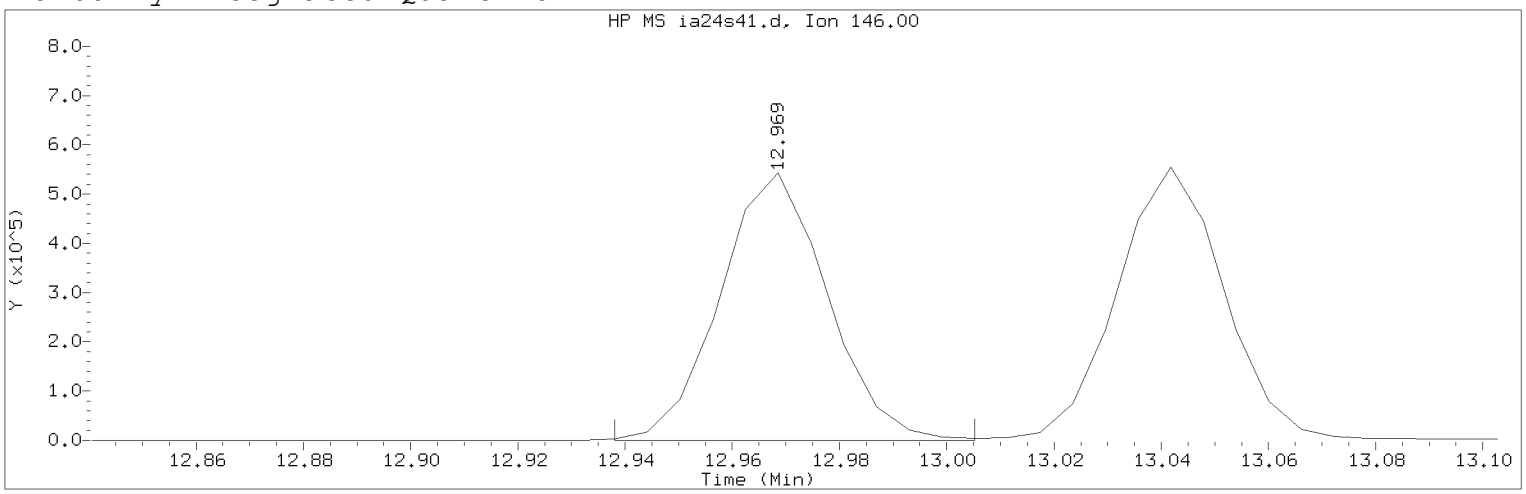
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.536
Quant Ion : 43.00
Area : 1440398
On-column Amount (ng) : 30.9422
Integration start scan : 1294 Integration stop scan: 1335
Y at integration start : 0 Y at integration end: 183

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

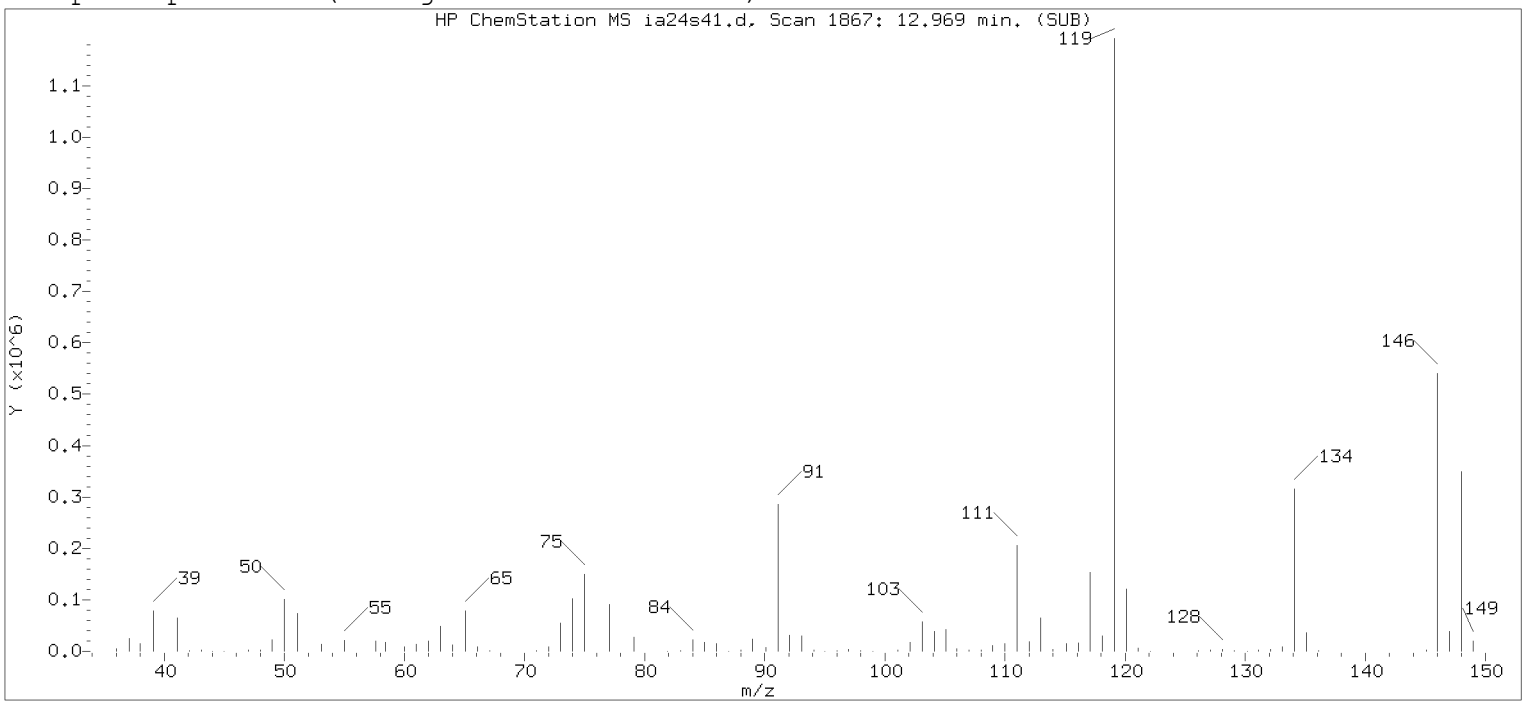
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area (flag) : 748395M
On-Column Amount (ng) : 5.1582
Integration start scan : 1861 Integration stop scan: 1872
Y at integration start : 453 Y at integration end: 453

Reason for manual integration: improper integration

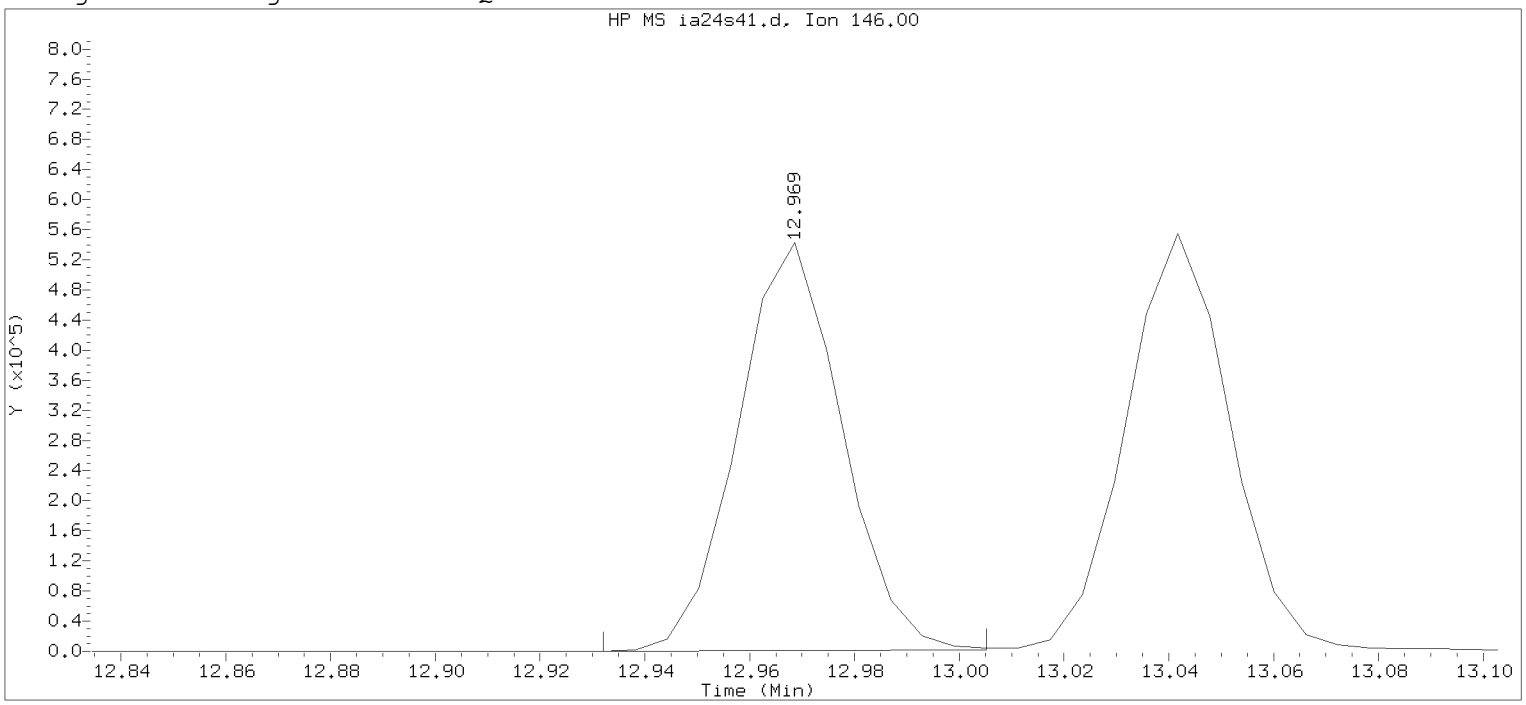
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

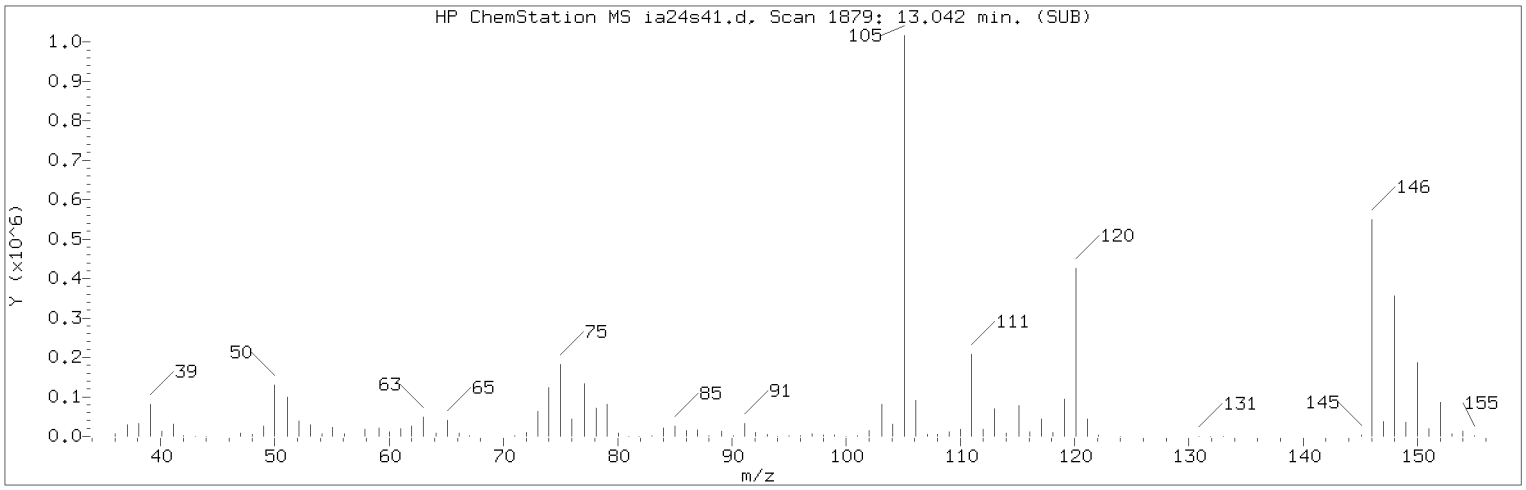
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:49 Automation

Sample Name: LCSI95 Lab Sample ID: LCSI95

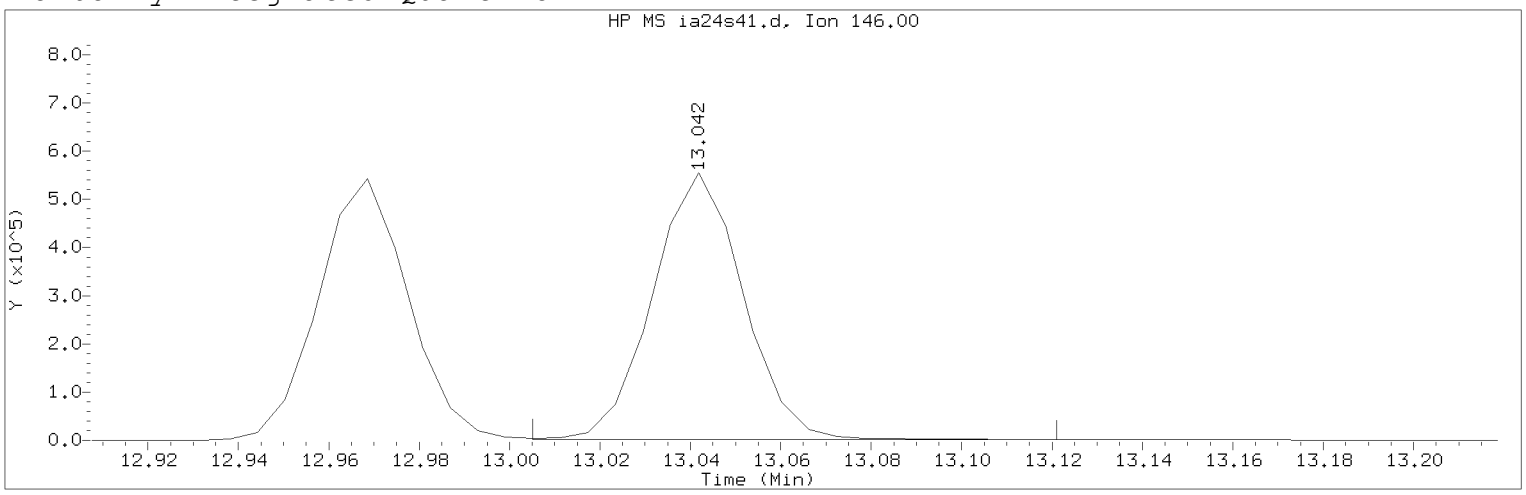
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area : 745006
On-column Amount (ng) : 5.1348
Integration start scan : 1860 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 2116

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature used. FID Page 1373

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:27 dvv10203

Sample Name: LCSI95 Lab Sample ID: LCSI95

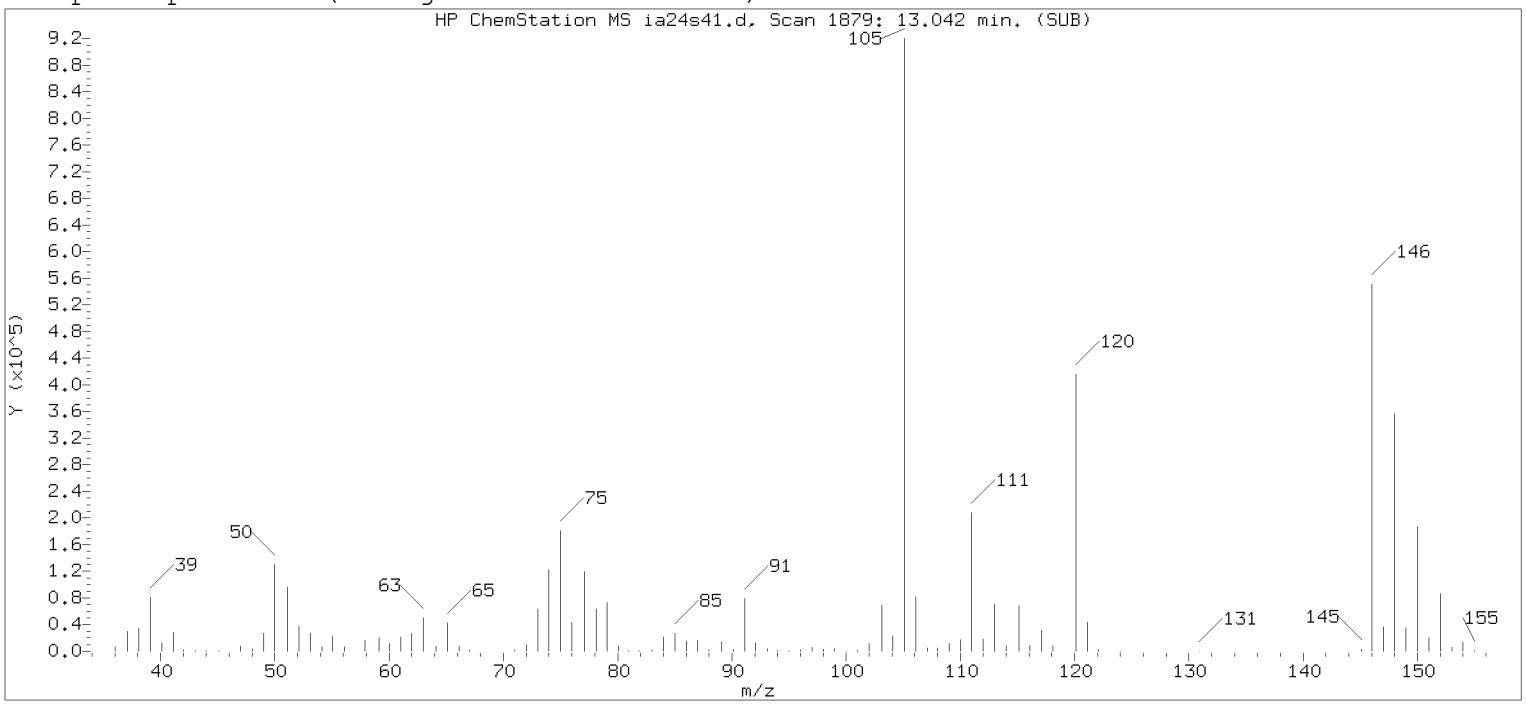
Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area (flag) : 770355M
On-Column Amount (ng) : 5.2118
Integration start scan : 1872 Integration stop scan: 1891
Y at integration start : 1008 Y at integration end: 1008

Reason for manual integration: improper integration

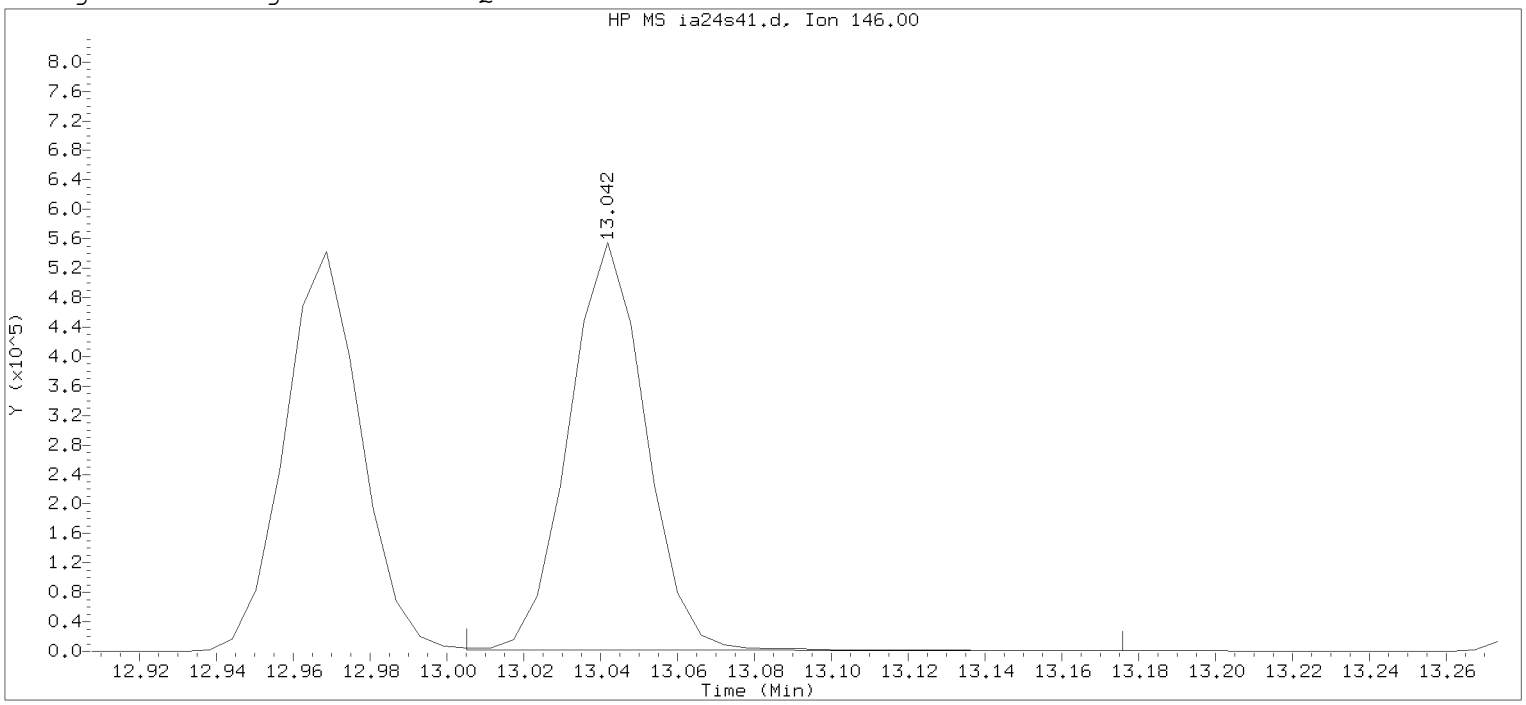
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s41.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:31 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:28
Date, time and analyst ID of latest file update: 24-Apr-2018 21:49 Automation

Sample Name: LCSI95 Lab Sample ID: LCSI95

Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area : 766587
On-column Amount (ng) : 5.1864
Integration start scan : 1872 Integration stop scan: 1900
Y at integration start : 2116 Y at integration end: 500

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Target 3.5 esignature used. FD6 Page 1375

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19930.i/18apr24b.b/ia24s42.d Injection date and time: **24-APR-2018 21:52**
Data file Sample Info. Line: LCDI95;LCDI95;1;3;LCSD;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.147(-0.012)	420	65	151151M (-8)	50.00	
63) Fluorobenzene	7.665(0.000)	997	96	2198767 (0)	10.00	
97) Chlorobenzene-d5	11.146(0.000)	1568	117	1646318 (-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.024(0.000)	1876	152	881940 (0)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	6.769(0.000)	113	529947	10.327	103%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.232(0.000)	102	111141	9.956	100%		80 - 120
82) Toluene-d8	(3)	9.689(-0.001)	98	2217121	9.974	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.146(0.000)	95	782900	9.975	100%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	1.898(0.000)	85	406515	4.017	4.02			0.1	1
2) Chloromethane	(2)	2.093(0.000)	50	448655	4.789	4.79			0.2	0.5
5) Vinyl Chloride	(2)	2.203(0.000)	62	417949	4.956	4.96			0.2	1
7) Bromomethane	(2)	2.538(0.000)	94	302508	5.104	5.10			0.5	1
8) Chloroethane	(2)	2.617(0.000)	64	236064	4.913	4.91			0.1	0.5
10) Trichlorofluoromethane	(2)	2.922(0.000)	101	574320M	5.420	5.42			0.2	1
11) Ethyl ether	(2)	3.154(0.000)	59	268350	5.132	5.13		J	1	13
13) Acrolein	(1)	3.330(0.002)	56	267688	37.000	37.00			5	25
15) 1,1-Dichloroethene	(2)	3.471(-0.000)	96	294411	5.893	5.89			0.2	1
16) Freon 113	(2)	3.507(-0.000)	101	320864	5.602	5.60			0.2	1
14) Acetone	(1)	3.501(0.001)	43	387373	36.472	36.47			3	10
17) Methyl Iodide	(2)	3.672(-0.000)	142	501872	5.433	5.43		J	0.6	10
18) Carbon Disulfide	(2)	3.782(0.001)	76	698332	4.943	4.94		J	0.4	10
22) Allyl Chloride	(2)	3.940(0.000)	41	535641	5.820	5.82		J	0.8	10
23) Methylene Chloride	(2)	4.129(-0.000)	84	321684	5.273	5.27			0.2	1
29) Acrylonitrile	(1)	4.464(0.003)	53	326551	27.437	27.44			1	10
31) trans-1,2-Dichloroethene	(2)	4.550(-0.000)	96	318954	5.590	5.59			0.2	1
33) 1,1-Dichloroethane	(2)	5.226(-0.000)	63	639938	5.615	5.61			0.1	1
35) 2-Chloro-1,3-Butadiene	(2)	5.330(-0.000)	53	572021	5.883	5.88		J	0.5	10
38) 2-Butanone	(1)	6.031(0.002)	43	763955	46.045	46.05			1	10
42) Propionitrile	(1)	6.122(0.001)	54	178179	37.706	37.71		J	10	100
45) Methacrylonitrile	(1)	6.330(0.004)	67	675308	43.796	43.80		J	10	100
48) Tetrahydrofuran	(1)	6.409(0.004)	71	138890	30.806	30.81			2	25
49) Chloroform	(2)	6.549(-0.000)	83	600287	5.598	5.60			0.1	1
51) 1,1,1-Trichloroethane	(2)	6.781(0.000)	97	519640	5.818	5.82			0.1	1
54) Carbon Tetrachloride	(2)	6.994(-0.000)	117	448877	5.951	5.95			0.2	1
56) Isobutyl Alcohol	(1)	7.122(0.003)	41	181534	123.845	123.85		J	10	200
58) Benzene	(2)	7.256(0.000)	78	1359008	5.309	5.31			0.1	1
59) 1,2-Dichloroethane	(2)	7.342(-0.000)	62	418349	5.596	5.60			0.1	1
67) Trichloroethene	(2)	8.146(0.000)	95	357350	5.514	5.51			0.2	1

M = Compound was manually integrated.

Digitally signed by Don V. Viray on 04/24/2018 at 23:39. Target 3.5 esignature user ID: dvv10203

Data file: /chem2/HP19930.i/18apr24b.b/ia24s42.d Injection date and time: **24-APR-2018 21:52**
Data file Sample Info. Line: LCDI95;LCDI95;1;3;LCSD;;DAA3568;;ia24b41; Instrument ID: **HP19930.i** Batch: **I181142AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Blank Data file reference: **/chem2/HP19930.i/18apr24b.b/ia24b41.d**

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: **27091-SM**
Calibration date and time (Last Method Edit): 24-APR-2018 21:52
Mid Level Daily Calibration Standard Reference: **/chem2/HP19930.i/18apr24b.b/ia24c05.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

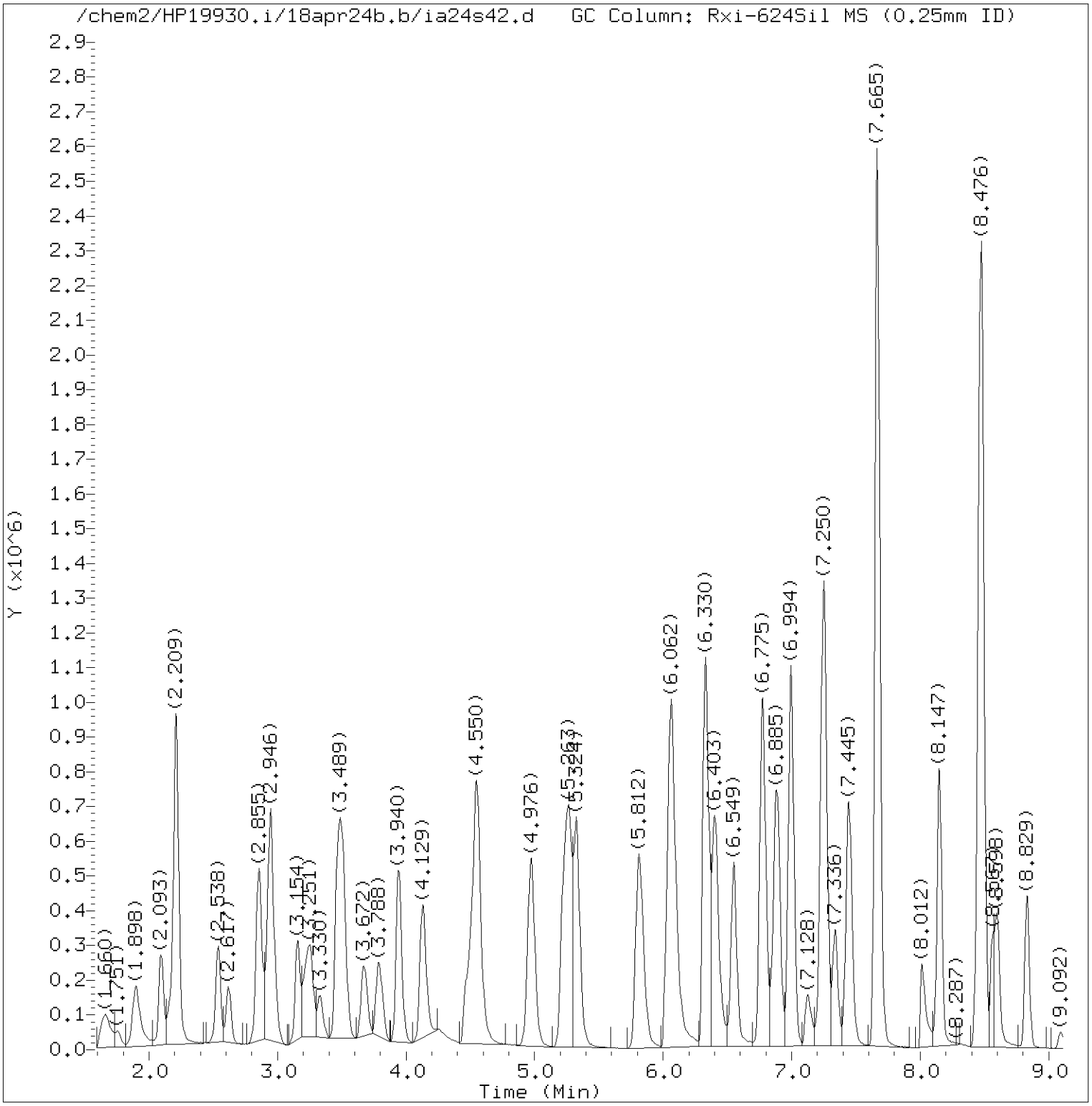
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
70) 1,2-Dichloropropane	(2)	8.488(-0.000)	63	365691	5.508	5.51			0.1	1
71) Methyl Methacrylate	(1)	8.567(0.004)	69	167111	6.455	6.46		J	4	10
73) Dibromomethane	(2)	8.598(0.000)	93	160544	5.401	5.40			0.1	1
72) 1,4-Dioxane	(1)	8.579(0.004)	88	33889M	132.366	132.37		J	45	200
74) Bromodichloromethane	(2)	8.829(0.000)	83	384475	5.402	5.40			0.1	1
81) 4-Methyl-2-Pentanone	(1)	9.536(0.006)	43	1324322M	32.120	32.12			1	10
83) Toluene	(3)	9.762(-0.000)	92	867833	5.348	5.35			0.1	1
84) trans-1,3-Dichloropropene	(3)	10.024(-0.000)	75	370586	5.400	5.40			0.1	1
86) Ethyl Methacrylate	(3)	10.079(-0.000)	69	352690	5.248	5.25		J	0.8	10
88) 1,1,2-Trichloroethane	(3)	10.232(-0.000)	97	243765	5.326	5.33			0.1	1
89) Tetrachloroethene	(3)	10.317(-0.000)	166	399413	5.794	5.79			0.1	1
90) 1,3-Dichloropropane	(3)	10.396(-0.000)	76	424415	5.210	5.21			0.1	1
91) 2-Hexanone	(1)	10.433(0.005)	43	977565	33.587	33.59			1	10
93) Dibromochloromethane	(3)	10.610(-0.000)	129	238581	5.293	5.29			0.1	1
95) 1,2-Dibromoethane	(3)	10.725(-0.000)	107	220565	5.296	5.30			0.1	1
99) 1,1,1,2-Tetrachloroethane	(3)	11.256(0.000)	131	308165	5.495	5.49			0.1	1
100) Ethylbenzene	(3)	11.256(0.000)	91	1681287	5.467	5.47			0.1	1
101) m+p-Xylene	(3)	11.372(0.000)	106	1313773	11.118	11.12			0.1	0.5
104) o-Xylene	(3)	11.701(0.000)	106	628010	5.462	5.46			0.1	0.5
105) Xylene (Total)	(3)		106	1941783	16.580	16.58			0.2	3
106) Styrene	(3)	11.719(-0.000)	104	1016441	5.727	5.73			0.1	1
107) Bromoform	(3)	11.884(-0.000)	173	113365	4.305	4.31			0.1	1
113) 1,1,2,2-Tetrachloroethane	(4)	12.243(-0.000)	83	299186	4.822	4.82			0.2	1
115) trans-1,4-Dichloro-2-butene	(1)	12.268(0.008)	53	249354A	24.123	24.12			1	10
116) 1,2,3-Trichloropropane	(4)	12.292(-0.000)	110	83991	5.168	5.17			0.3	1
126) Pentachloroethane	(4)	12.737(-0.000)	167	221245	5.396	5.40		J	0.8	10
131) 1,3-Dichlorobenzene	(4)	12.969(-0.000)	146	745514M	5.187	5.19			0.1	1
134) 1,4-Dichlorobenzene	(4)	13.042(-0.000)	146	760150M	5.192	5.19			0.1	1
139) 1,2-Dichlorobenzene	(4)	13.298(0.000)	146	692611	5.196	5.20			0.1	1
143) 1,2-Dibromo-3-chloropropane	(1)	13.840(0.009)	155	32263	5.773	5.77			0.2	1
145) 1,2,4-Trichlorobenzene	(4)	14.383(-0.000)	180	422832	4.970	4.97			0.1	1
146) Hexachlorobutadiene	(4)	14.462(0.000)	225	181094	5.883	5.88			0.1	1
147) Naphthalene	(4)	14.566(0.000)	128	823513	4.941	4.94			0.1	1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 63

Digitally signed by Don V. Viray on 04/24/2018 at 23:39. Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

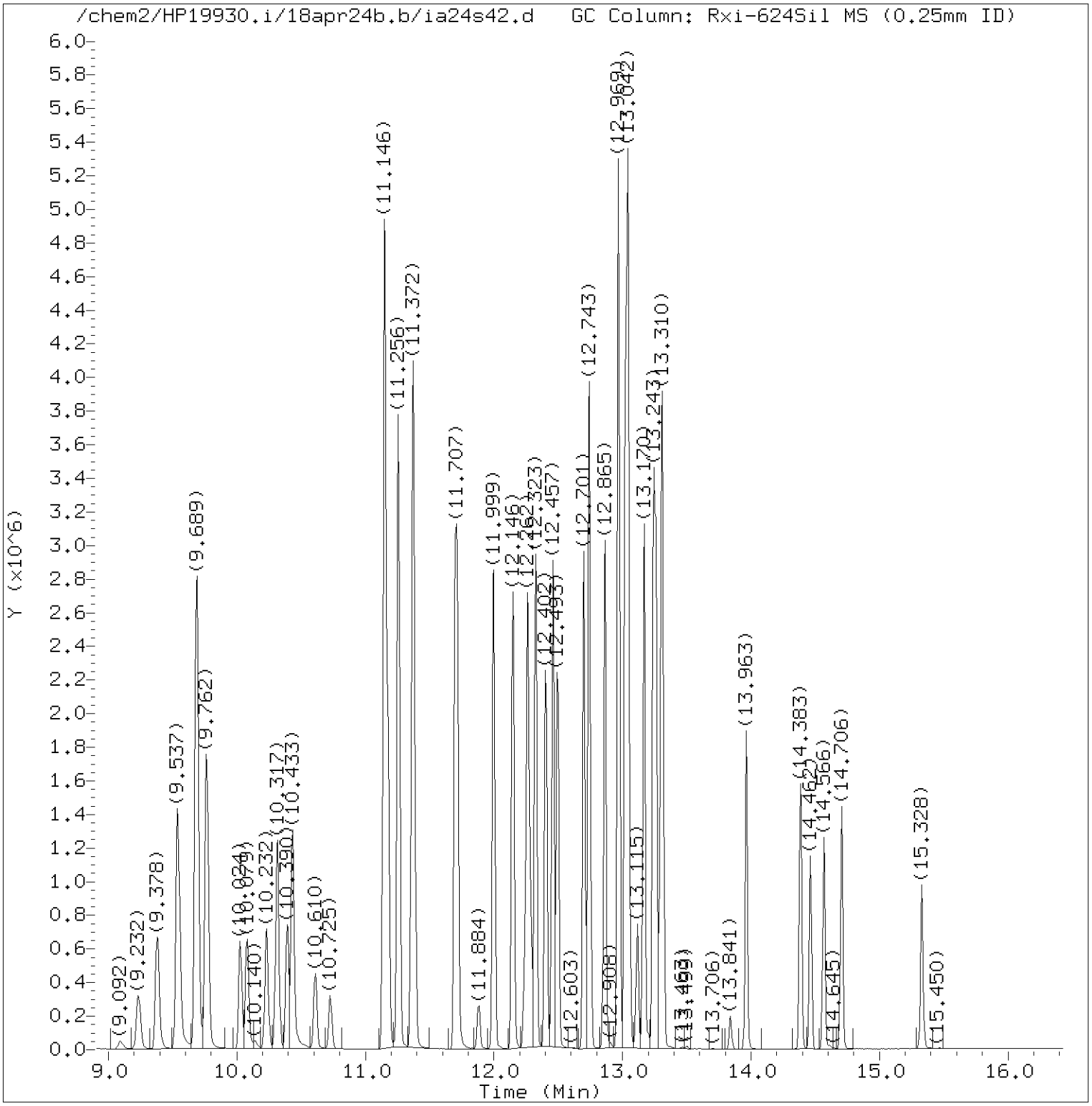
Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	1.898	85	406515	4.017
2) Chloromethane	(2)	2.093	50	448655	4.789
5) Vinyl Chloride	(2)	2.203	62	417949	4.956
7) Bromomethane	(2)	2.538	94	302508	5.104
8) Chloroethane	(2)	2.617	64	236064	4.913
10) Trichlorofluoromethane	(2)	2.922	101	574320M	5.420
11) Ethyl ether	(2)	3.154	59	268350	5.132
13) Acrolein	(1)	3.330	56	267688	37.000
15) 1,1-Dichloroethene	(2)	3.471	96	294411	5.893
14) Acetone	(1)	3.501	43	387373	36.472
16) Freon 113	(2)	3.507	101	320864	5.602
17) Methyl Iodide	(2)	3.672	142	501872	5.433
18) Carbon Disulfide	(2)	3.782	76	698332	4.943
22) Allyl Chloride	(2)	3.940	41	535641	5.820
23) Methylene Chloride	(2)	4.129	84	321684	5.273
26)*t-Butyl Alcohol-d10	(1)	4.147	65	151151M	50.000
29) Acrylonitrile	(1)	4.464	53	326551	27.437
31) trans-1,2-Dichloroethene	(2)	4.550	96	318954	5.590
33) 1,1-Dichloroethane	(2)	5.226	63	639938	5.615
35) 2-Chloro-1,3-Butadiene	(2)	5.330	53	572021	5.883
38) 2-Butanone	(1)	6.031	43	763955	46.045
42) Propionitrile	(1)	6.123	54	178179	37.706
45) Methacrylonitrile	(1)	6.330	67	675308	43.796
48) Tetrahydrofuran	(1)	6.409	71	138890	30.806
49) Chloroform	(2)	6.549	83	600287	5.598
50)$Dibromofluoromethane	(2)	6.769	113	529947	10.327
51) 1,1,1-Trichloroethane	(2)	6.781	97	519640	5.818
54) Carbon Tetrachloride	(2)	6.994	117	448877	5.951
56) Isobutyl Alcohol	(1)	7.122	41	181534	123.845
57)$1,2-Dichloroethane-d4	(2)	7.232	102	111141	9.956
58) Benzene	(2)	7.256	78	1359008	5.309
59) 1,2-Dichloroethane	(2)	7.342	62	418349	5.596
63)*Fluorobenzene	(2)	7.665	96	2198767	10.000
67) Trichloroethene	(2)	8.147	95	357350	5.514
70) 1,2-Dichloropropane	(2)	8.488	63	365691	5.508
71) Methyl Methacrylate	(1)	8.567	69	167111	6.455
72) 1,4-Dioxane	(1)	8.579	88	33889M	132.366
73) Dibromomethane	(2)	8.598	93	160544	5.401

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

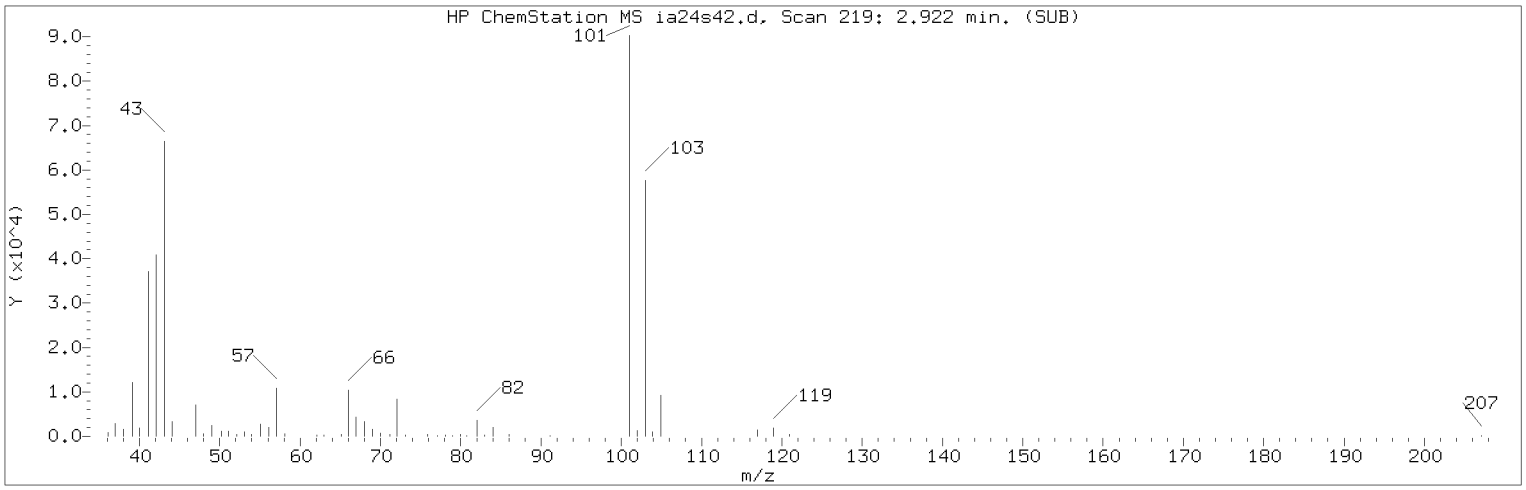
Sample Name: LCDI95 Lab Sample ID: LCDI95

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
74) Bromodichloromethane	(2)	8.829	83	384475	5.402
81) 4-Methyl-2-Pentanone	(1)	9.537	43	1324322M	32.120
82)$Toluene-d8	(3)	9.689	98	2217121	9.974
83) Toluene	(3)	9.762	92	867833	5.348
84) trans-1,3-Dichloropropene	(3)	10.024	75	370586	5.400
86) Ethyl Methacrylate	(3)	10.079	69	352690	5.248
88) 1,1,2-Trichloroethane	(3)	10.232	97	243765	5.326
89) Tetrachloroethene	(3)	10.317	166	399413	5.794
90) 1,3-Dichloropropane	(3)	10.396	76	424415	5.210
91) 2-Hexanone	(1)	10.433	43	977565	33.587
93) Dibromochloromethane	(3)	10.610	129	238581	5.293
95) 1,2-Dibromoethane	(3)	10.725	107	220565	5.296
97)*Chlorobenzene-d5	(3)	11.146	117	1646318	10.000
99) 1,1,1,2-Tetrachloroethane	(3)	11.256	131	308165	5.495
100) Ethylbenzene	(3)	11.256	91	1681287	5.467
101) m+p-Xylene	(3)	11.372	106	1313773	11.118
104) o-Xylene	(3)	11.701	106	628010	5.462
106) Styrene	(3)	11.719	104	1016441	5.727
105) Xylene (Total)	(3)		106	1941783	16.580
107) Bromoform	(3)	11.884	173	113365	4.305
111)$4-Bromofluorobenzene	(3)	12.146	95	782900	9.975
113) 1,1,2,2-Tetrachloroethane	(4)	12.243	83	299186	4.822
115) trans-1,4-Dichloro-2-butene	(1)	12.268	53	249354A	24.123
116) 1,2,3-Trichloropropane	(4)	12.292	110	83991	5.168
126) Pentachloroethane	(4)	12.737	167	221245	5.396
131) 1,3-Dichlorobenzene	(4)	12.969	146	745514M	5.187
133)*1,4-Dichlorobenzene-d4	(4)	13.024	152	881940	10.000
134) 1,4-Dichlorobenzene	(4)	13.042	146	760150M	5.192
139) 1,2-Dichlorobenzene	(4)	13.298	146	692611	5.196
143) 1,2-Dibromo-3-chloropropane	(1)	13.841	155	32263	5.773
145) 1,2,4-Trichlorobenzene	(4)	14.383	180	422832	4.970
146) Hexachlorobutadiene	(4)	14.462	225	181094	5.883
147) Naphthalene	(4)	14.566	128	823513	4.941

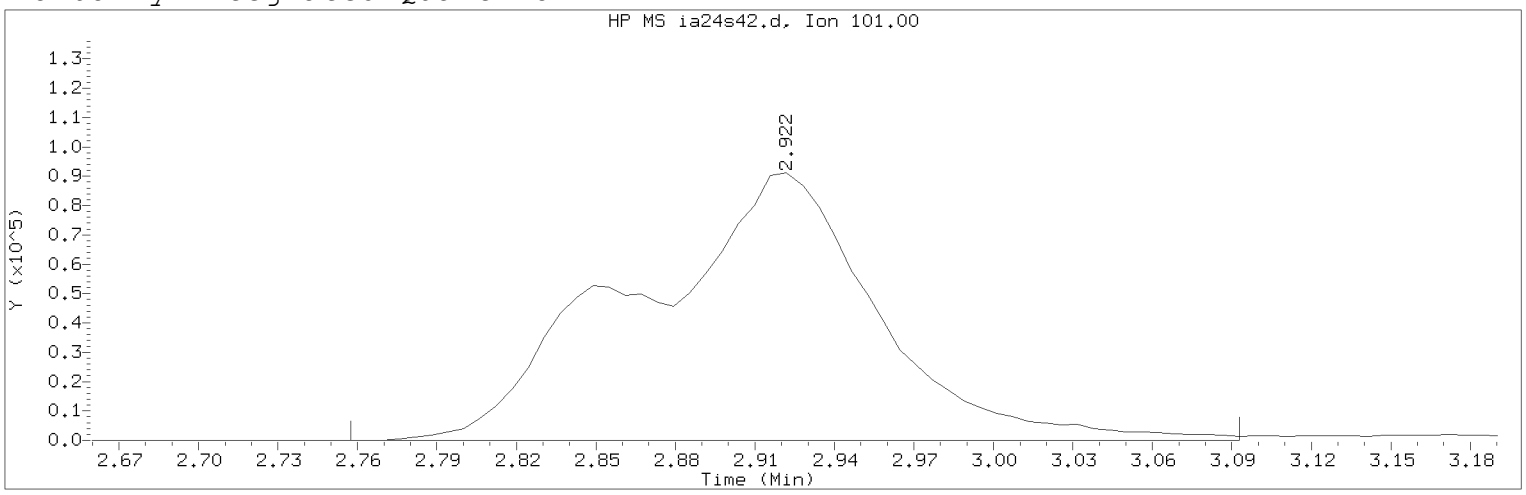
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

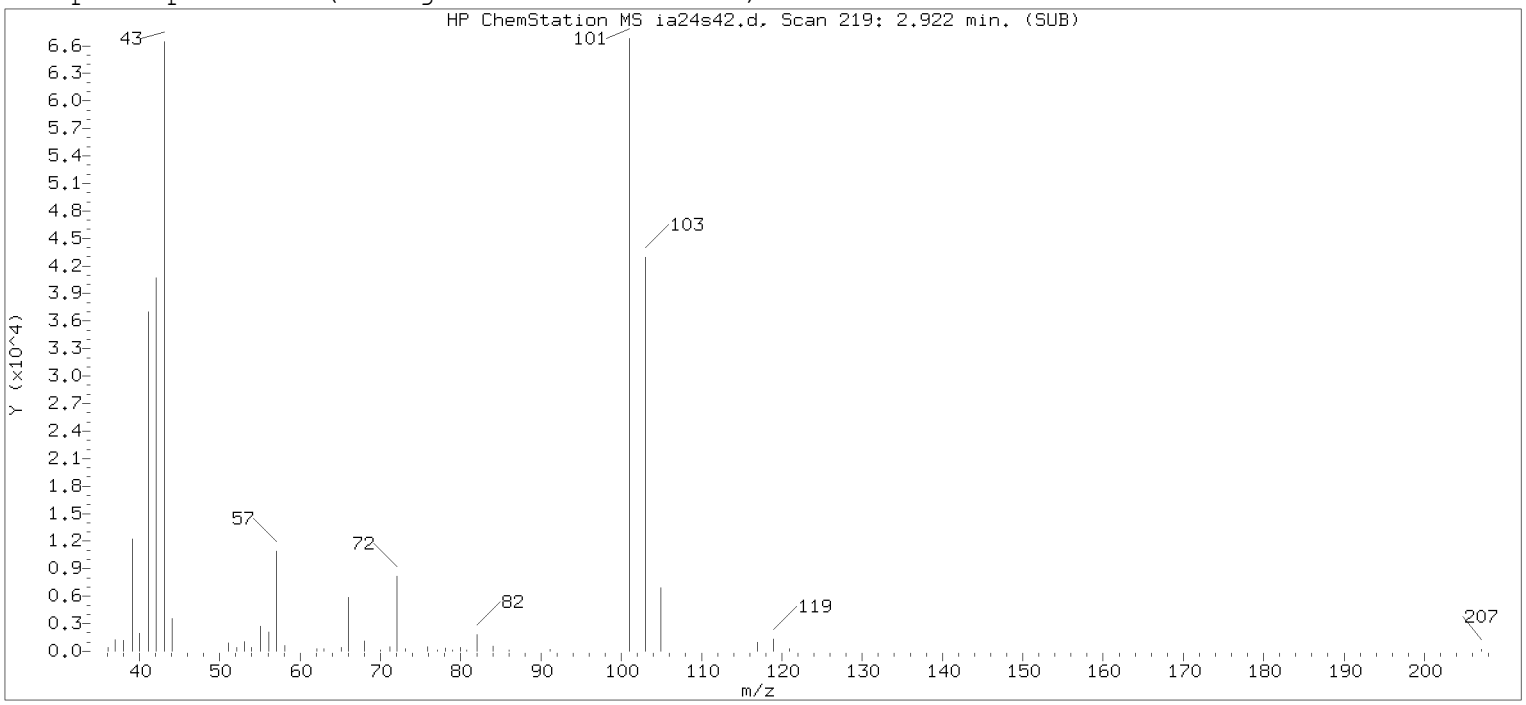
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area (flag) : 574320M
On-Column Amount (ng) : 5.4196
Integration start scan : 191 Integration stop scan: 246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

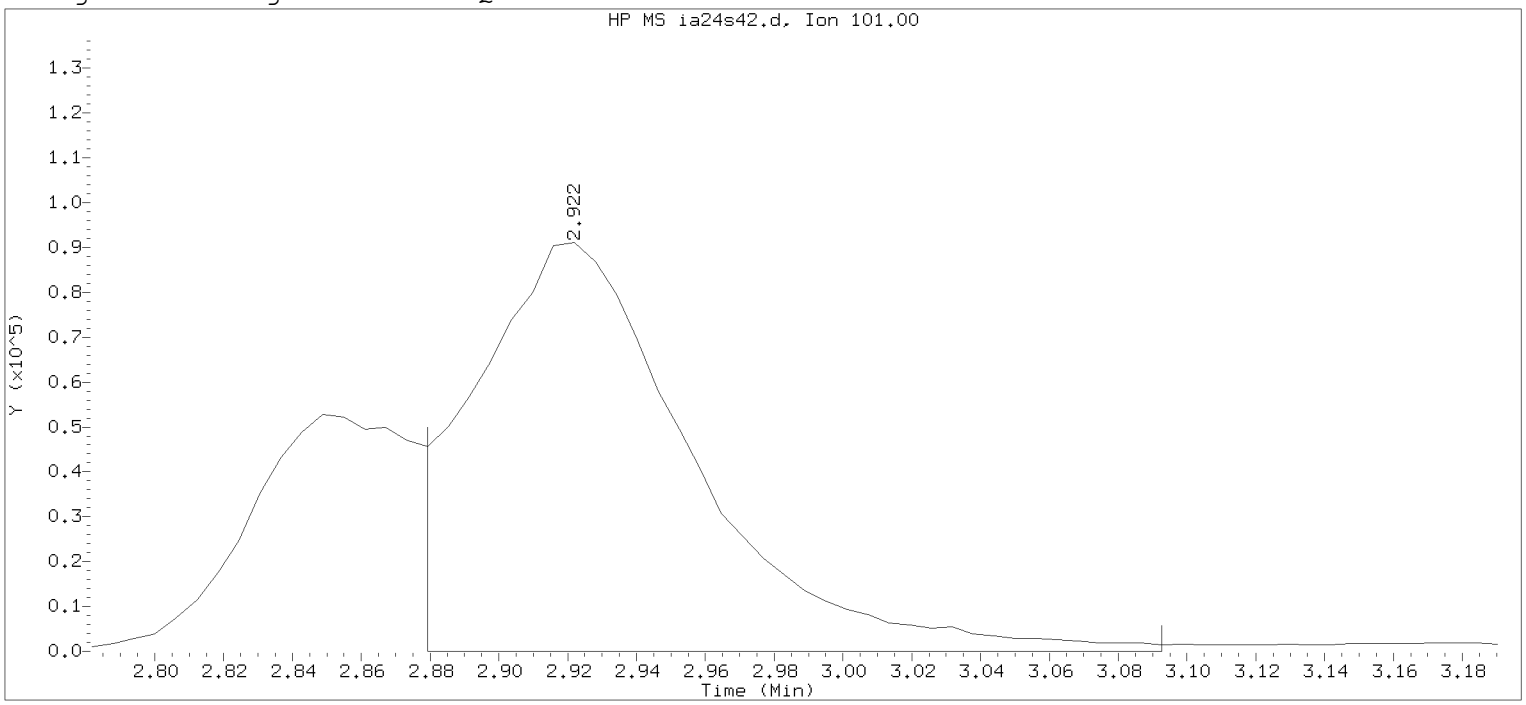
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

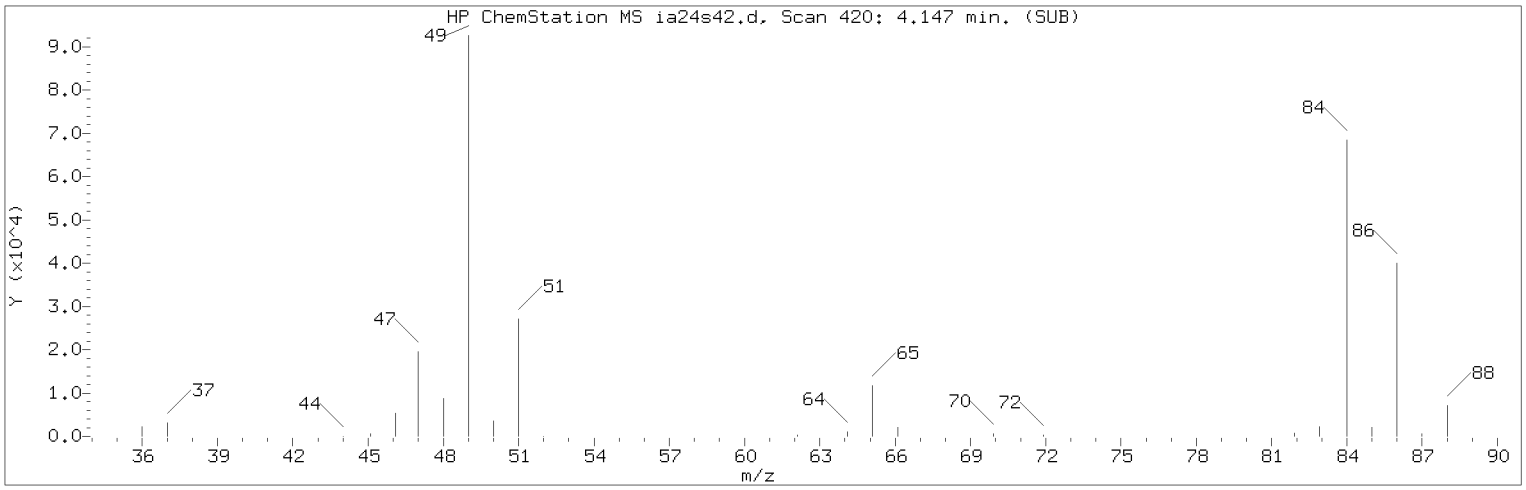
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

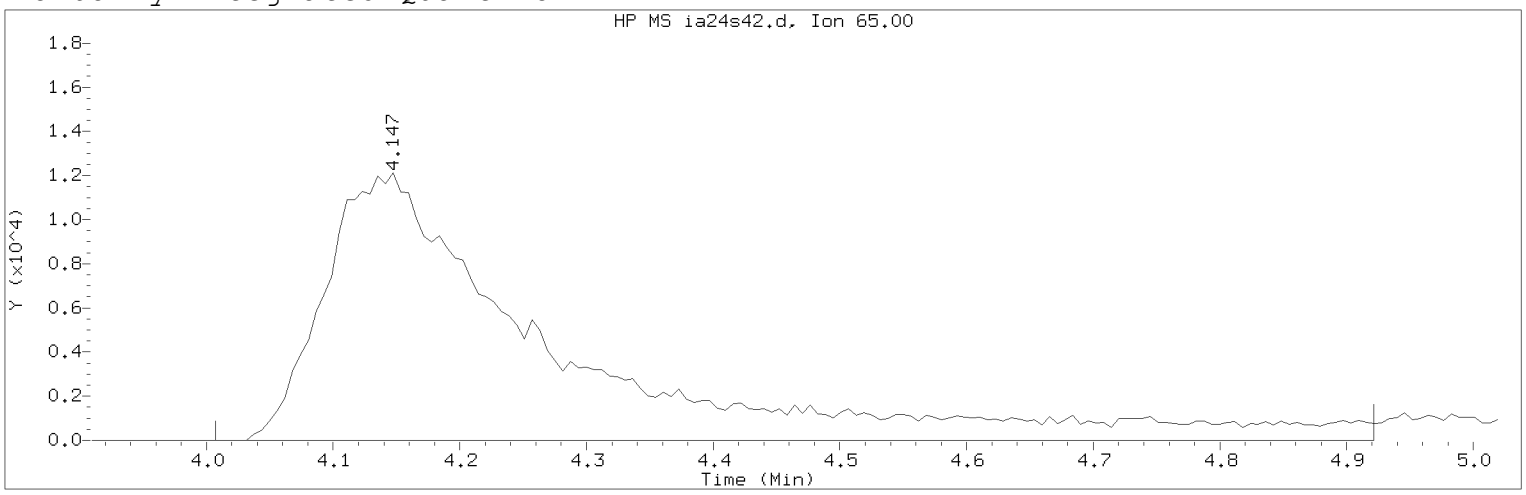
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 219
Retention Time (minutes): 2.922
Quant Ion : 101.00
Area : 401272
On-column Amount (ng) : 3.7867
Integration start scan : 211 Integration stop scan: 246
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

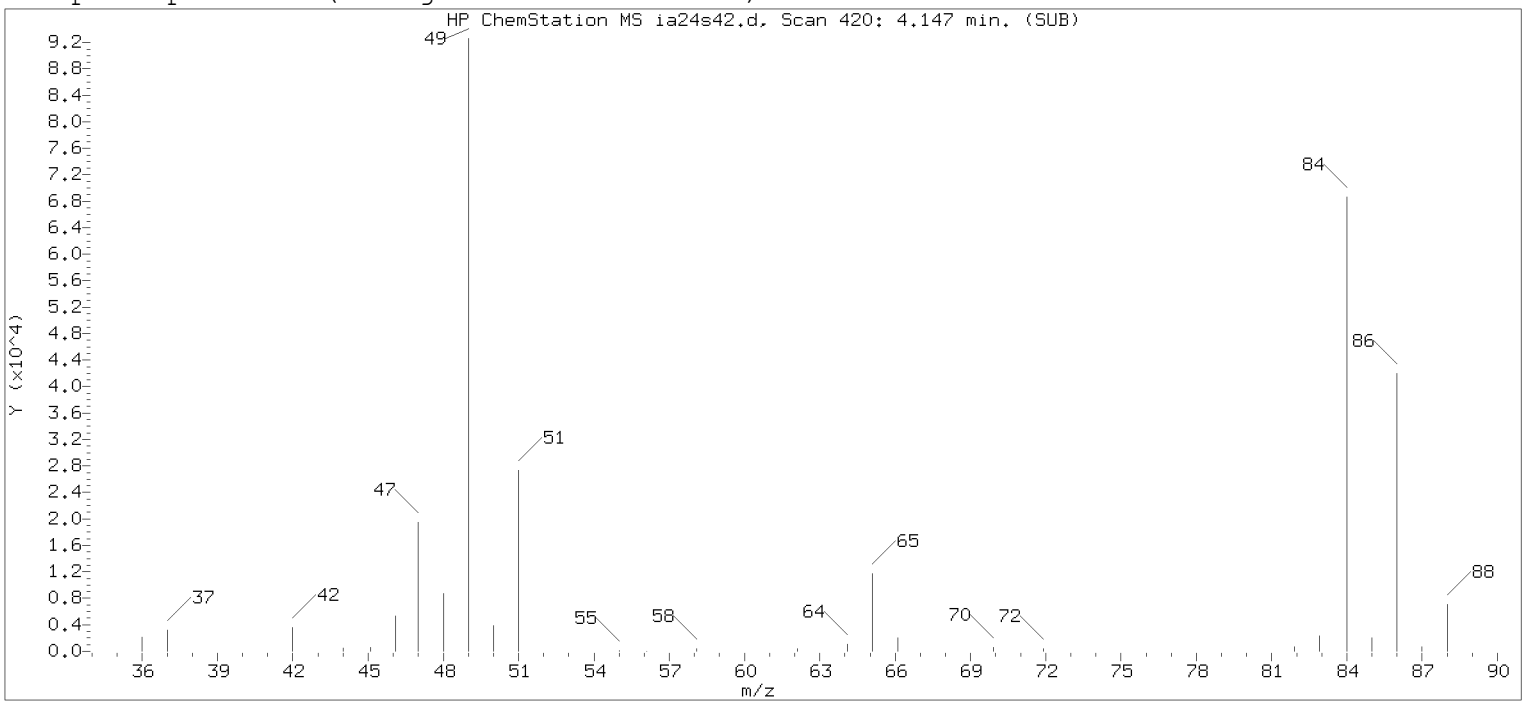
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 420
Retention Time (minutes): 4.147
Quant Ion : 65.00
Area (flag) : 151151M
On-Column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 546
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

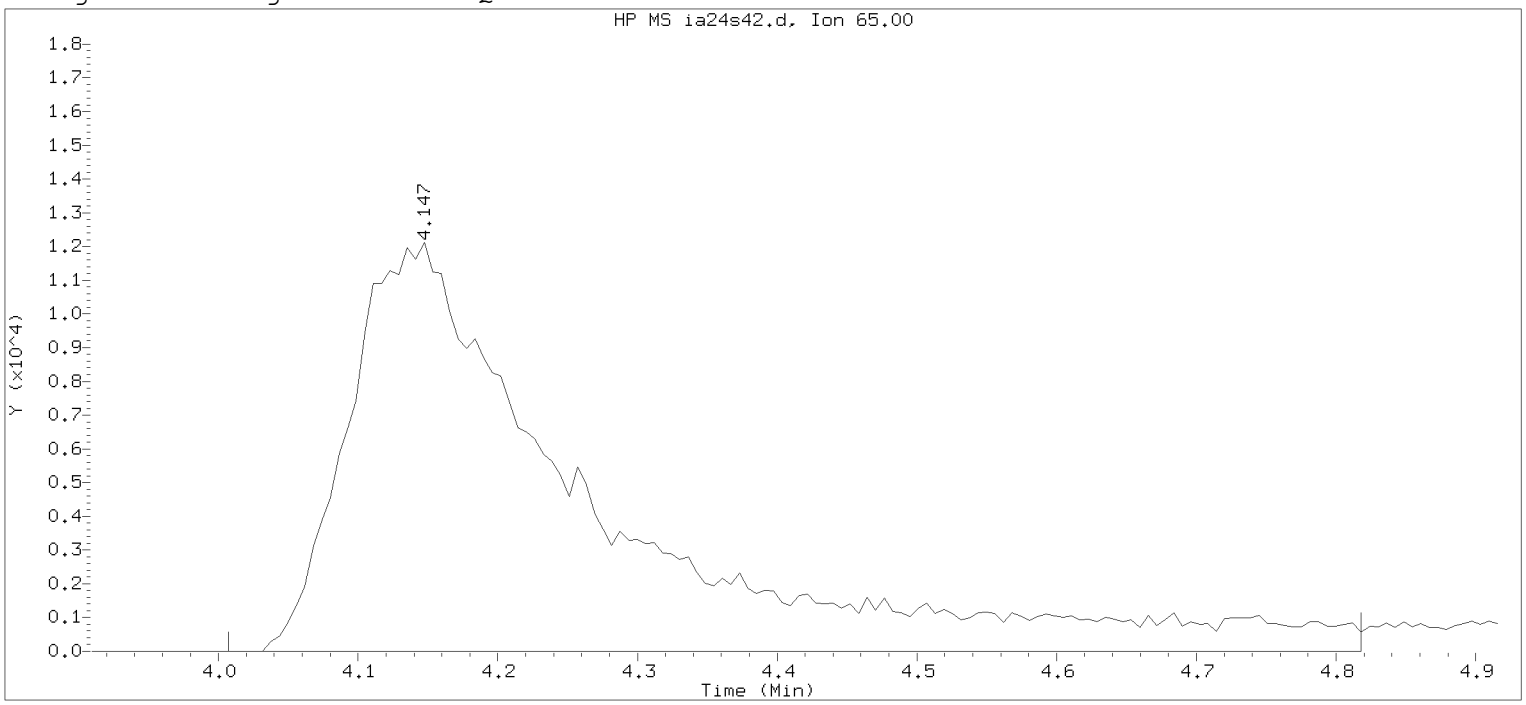
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 420
Retention Time (minutes): 4.147
Quant Ion : 65.00
Area : 146202
On-column Amount (ng) : 50.0000
Integration start scan : 396 Integration stop scan: 529
Y at integration start : 0 Y at integration end: 0

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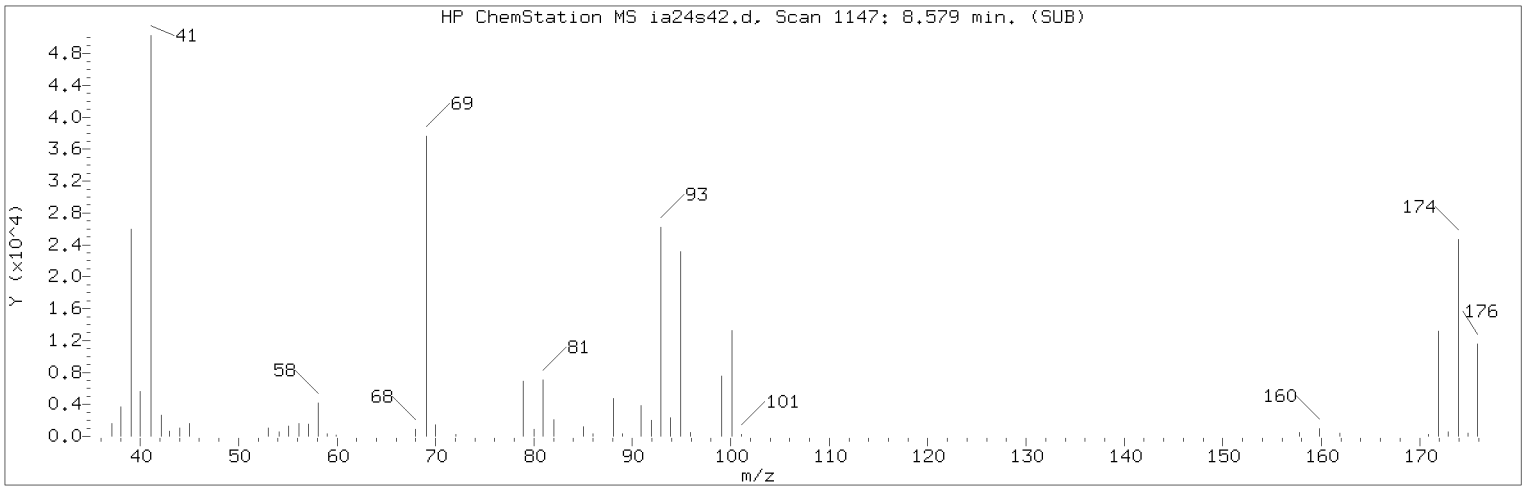
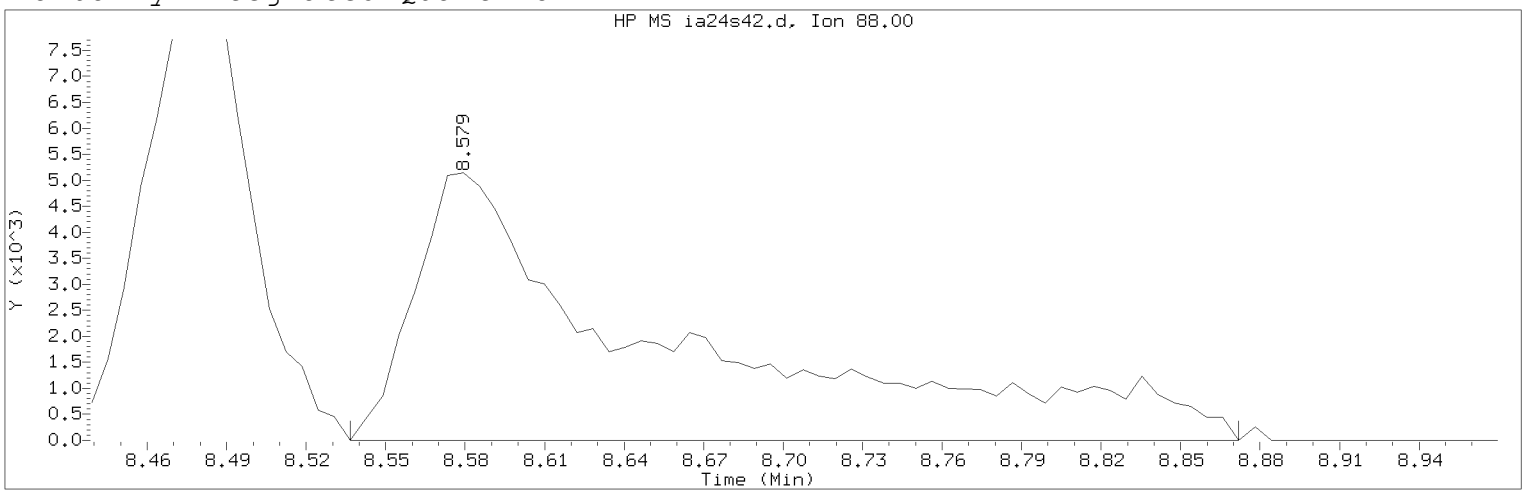
Target 3.5 esignature user FD Page 1385

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

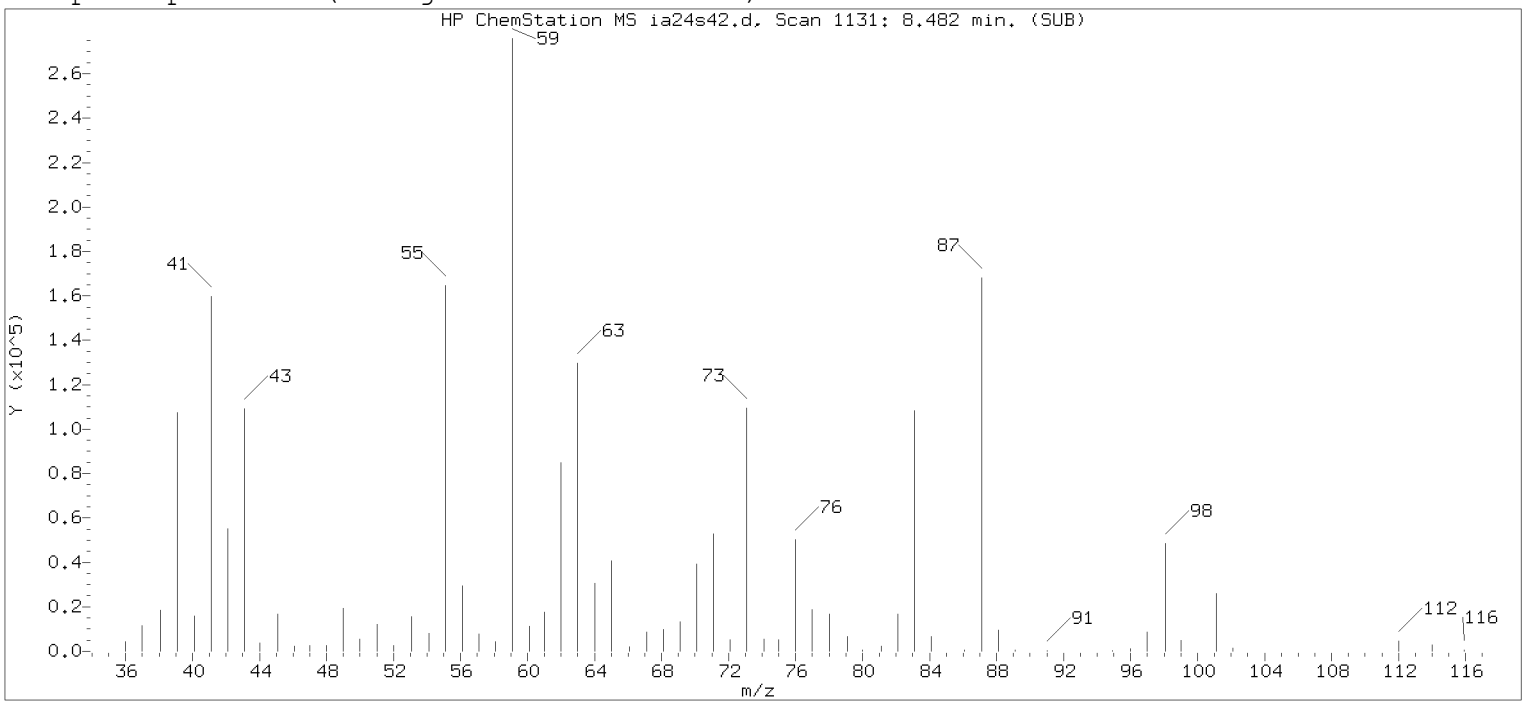
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1147
Retention Time (minutes): 8.579
Quant Ion : 88.00
Area (flag) : 33889M
On-Column Amount (ng) : 132.3658
Integration start scan : 1139 Integration stop scan: 1194
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

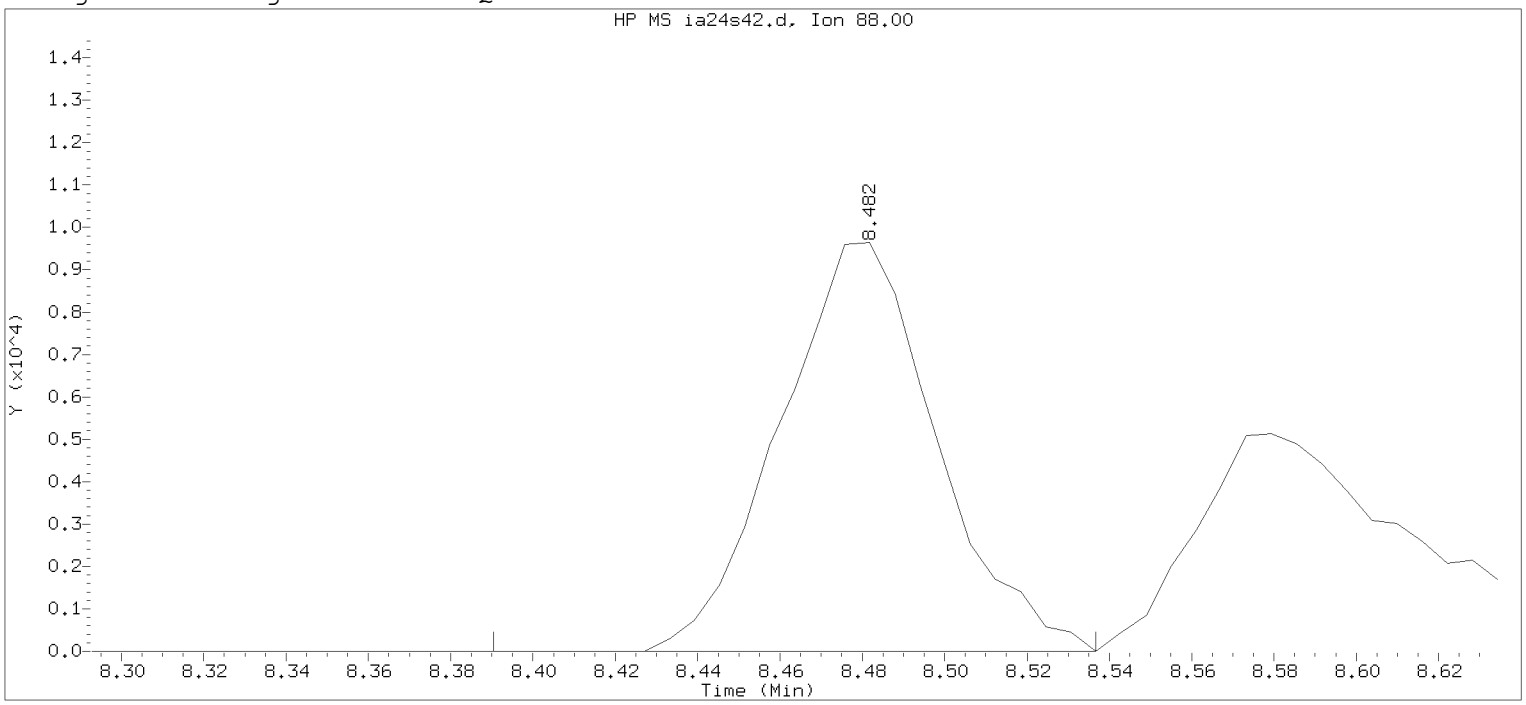
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1131
Retention Time (minutes): 8.482
Quant Ion : 88.00
Area : 25372
On-column Amount (ng) : 102.4550
Integration start scan : 1115 Integration stop scan: 1139
Y at integration start : 0 Y at integration end: 0

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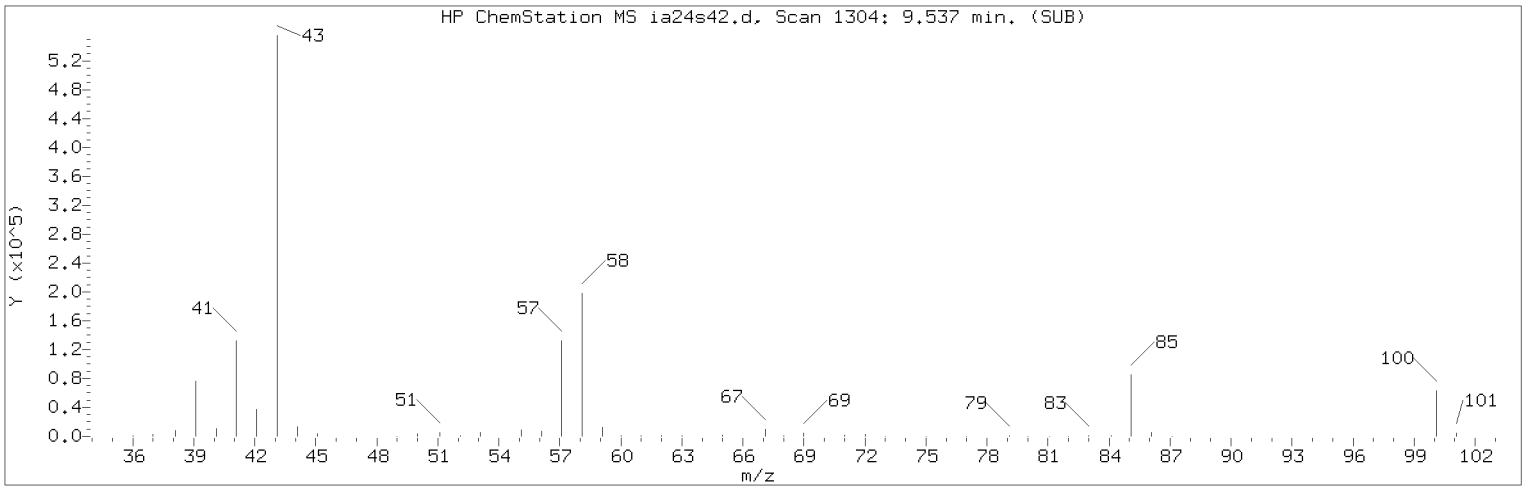
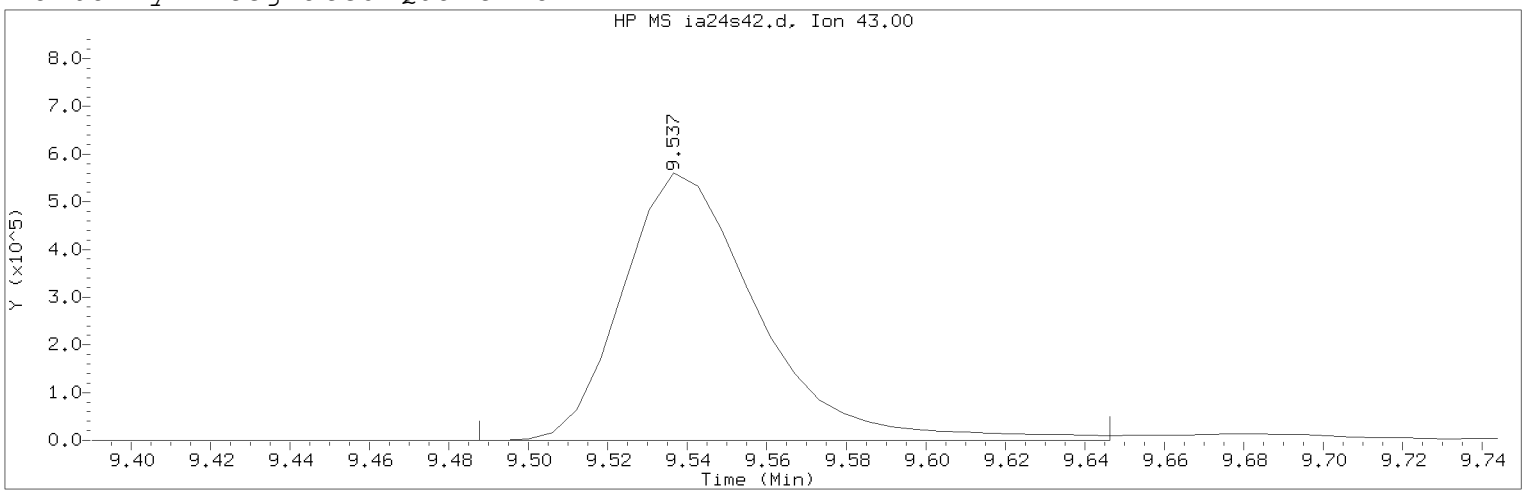
Target 3.5 esignature used. FID Page 1387

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

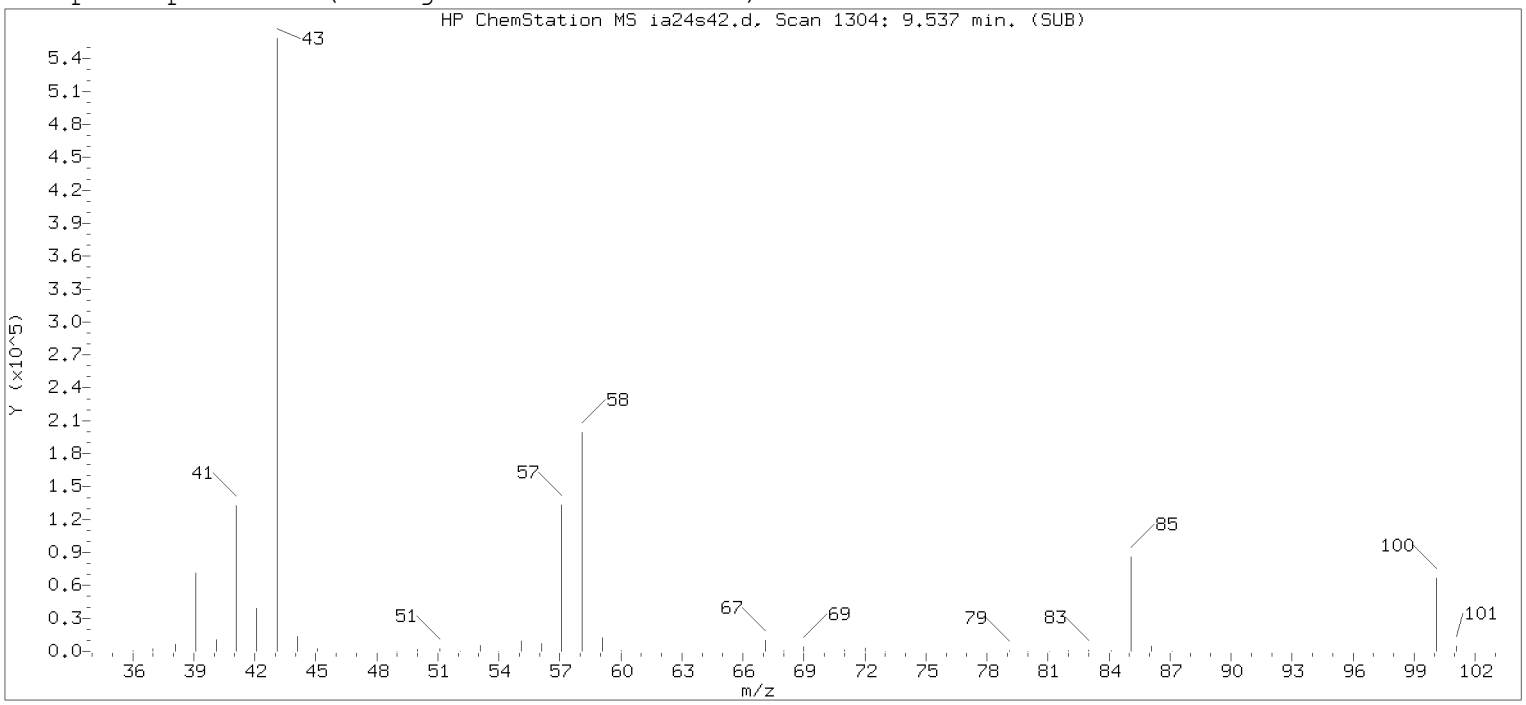
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.537
Quant Ion : 43.00
Area (flag) : 1324322M
On-Column Amount (ng) : 32.1201
Integration start scan : 1295 Integration stop scan: 1321
Y at integration start : 137 Y at integration end: 137

Reason for manual integration: improper integration

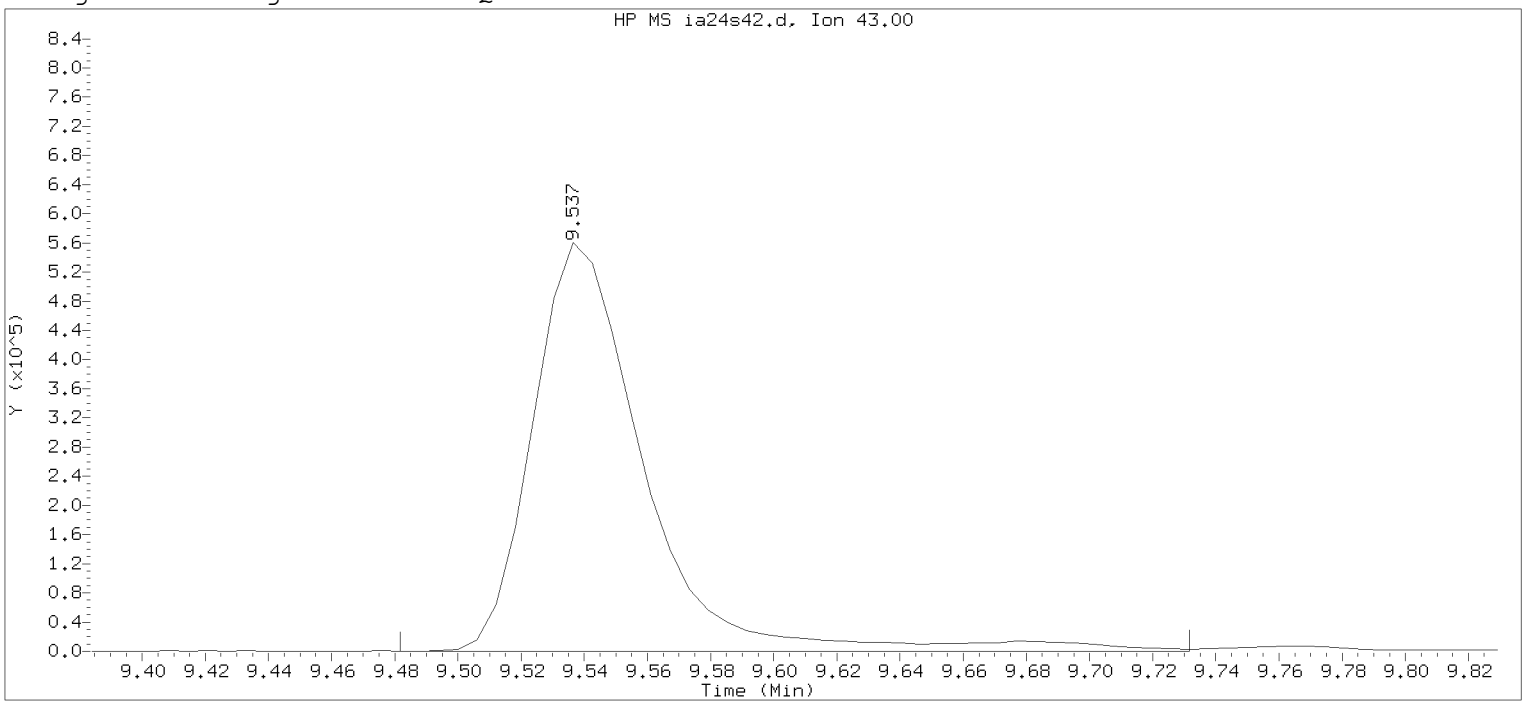
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1304
Retention Time (minutes): 9.537
Quant Ion : 43.00
Area : 1371493
On-column Amount (ng) : 34.3900
Integration start scan : 1294 Integration stop scan: 1335
Y at integration start : 0 Y at integration end: 67

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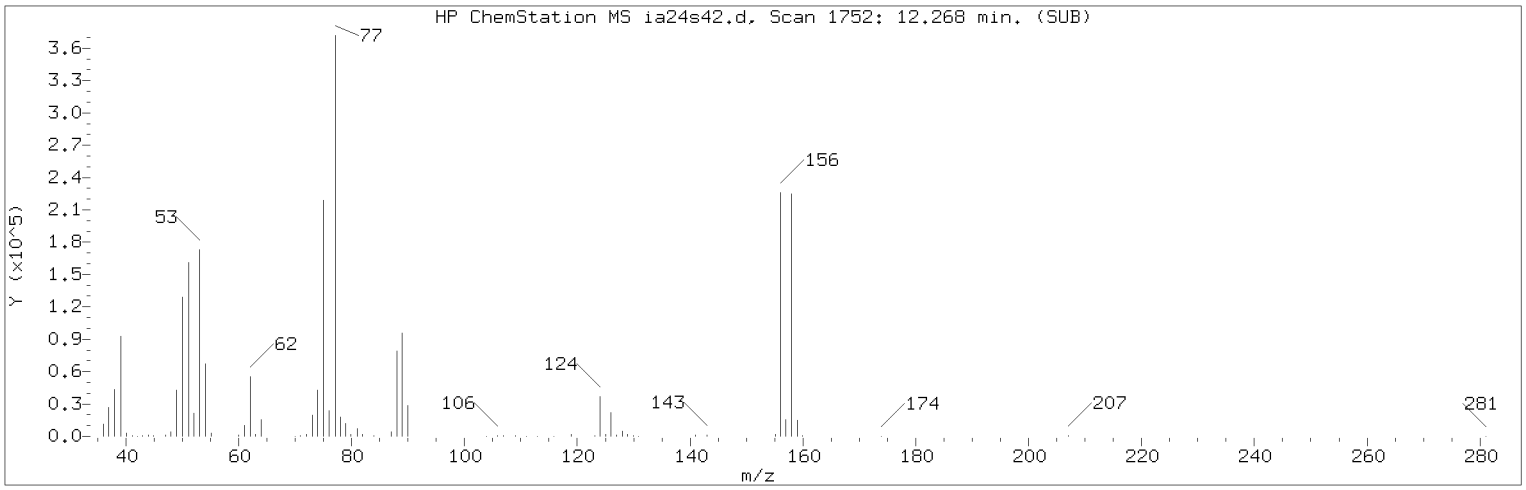
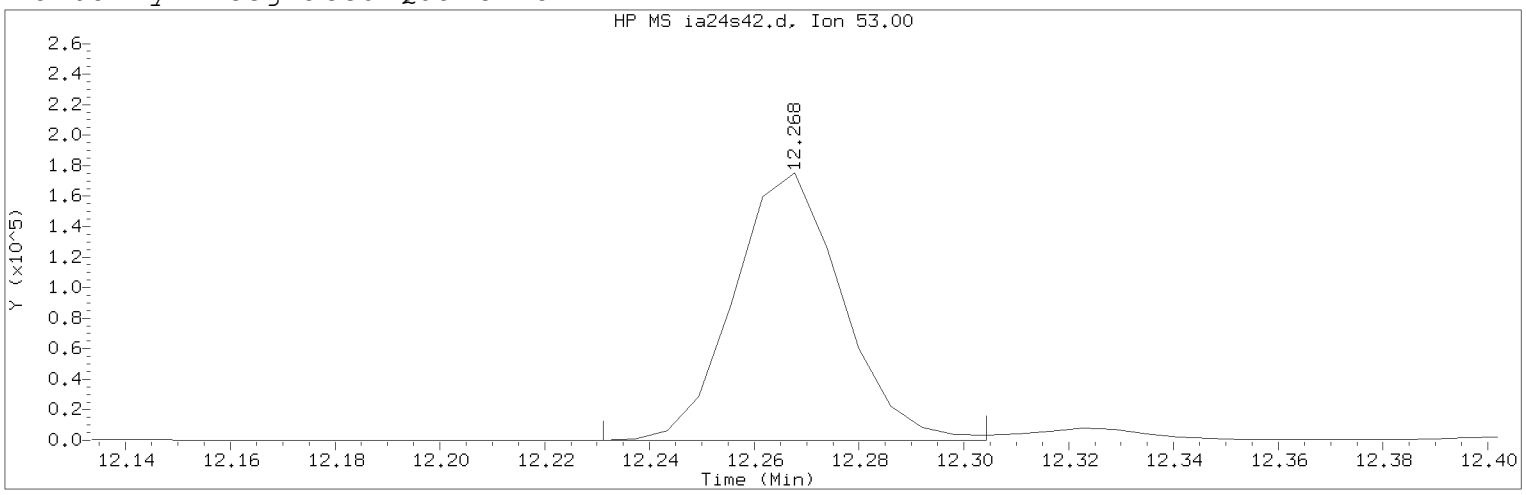
Target 3.5 esignature user FD6 Page 1389 of 2168

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

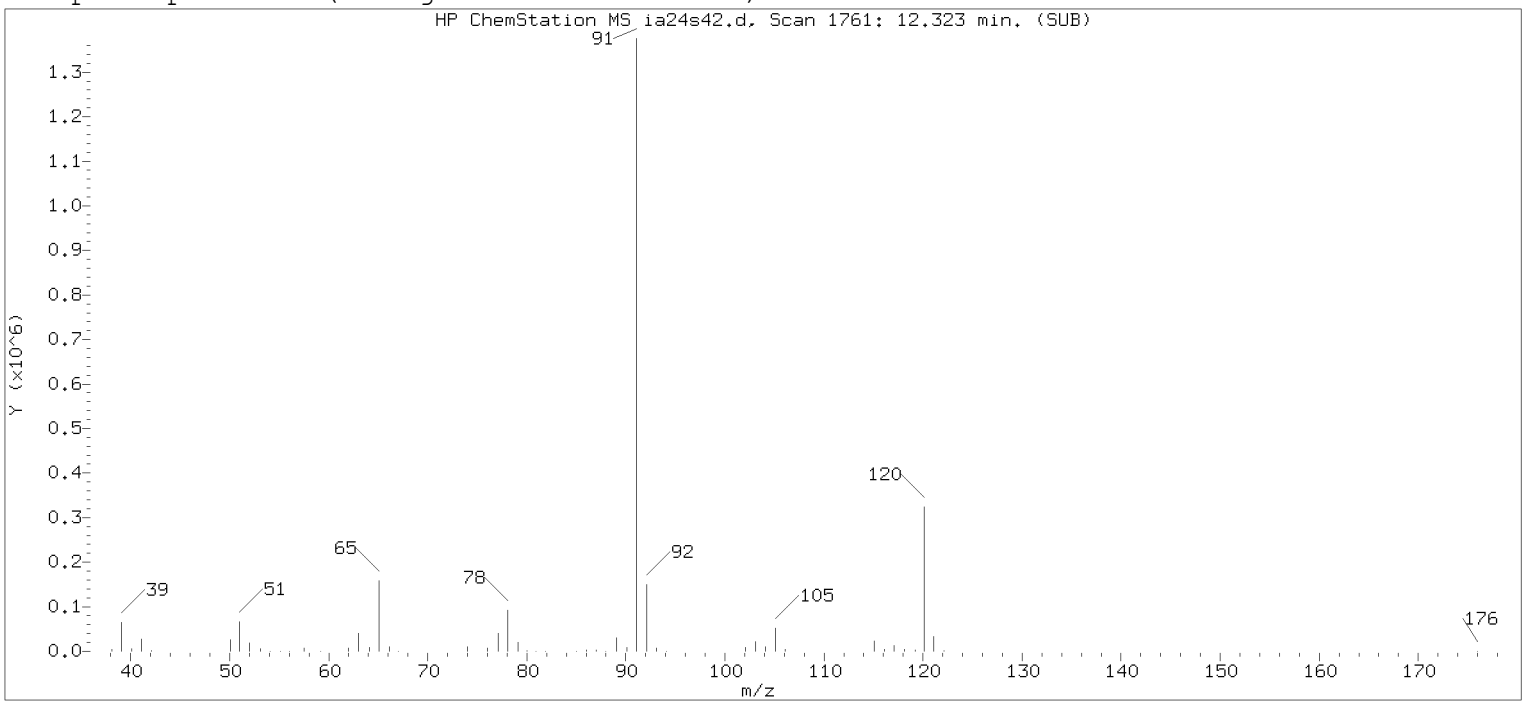
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1752
Retention Time (minutes): 12.268
Quant Ion : 53.00
Area (flag) : 249354A
On-Column Amount (ng) : 24.1233
Integration start scan : 1745 Integration stop scan: 1757
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

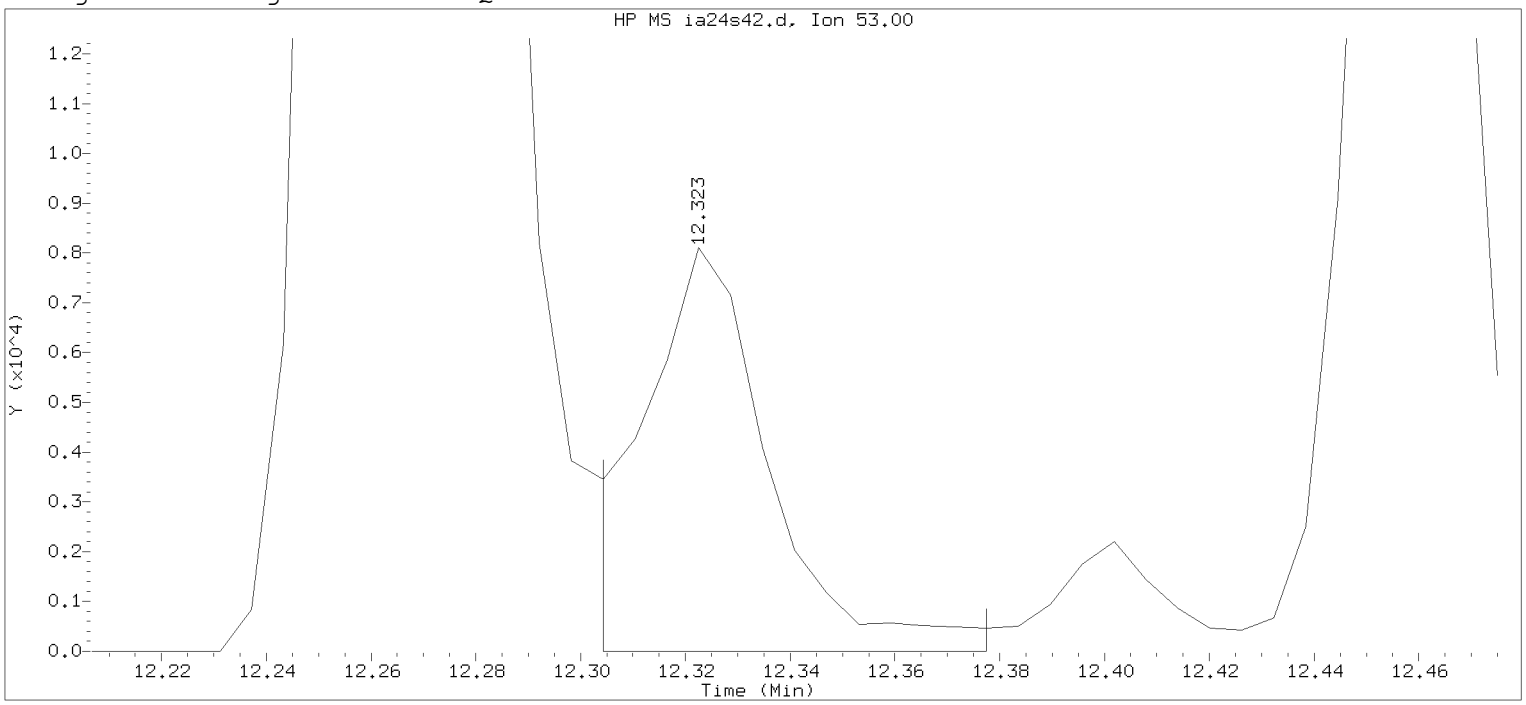
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

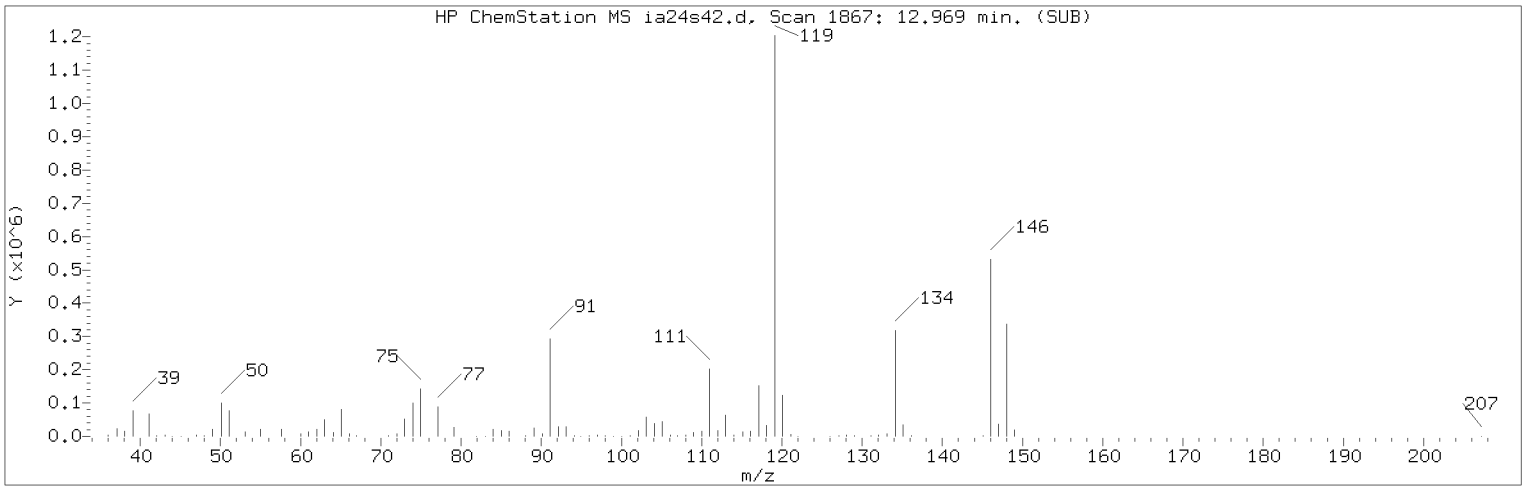
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

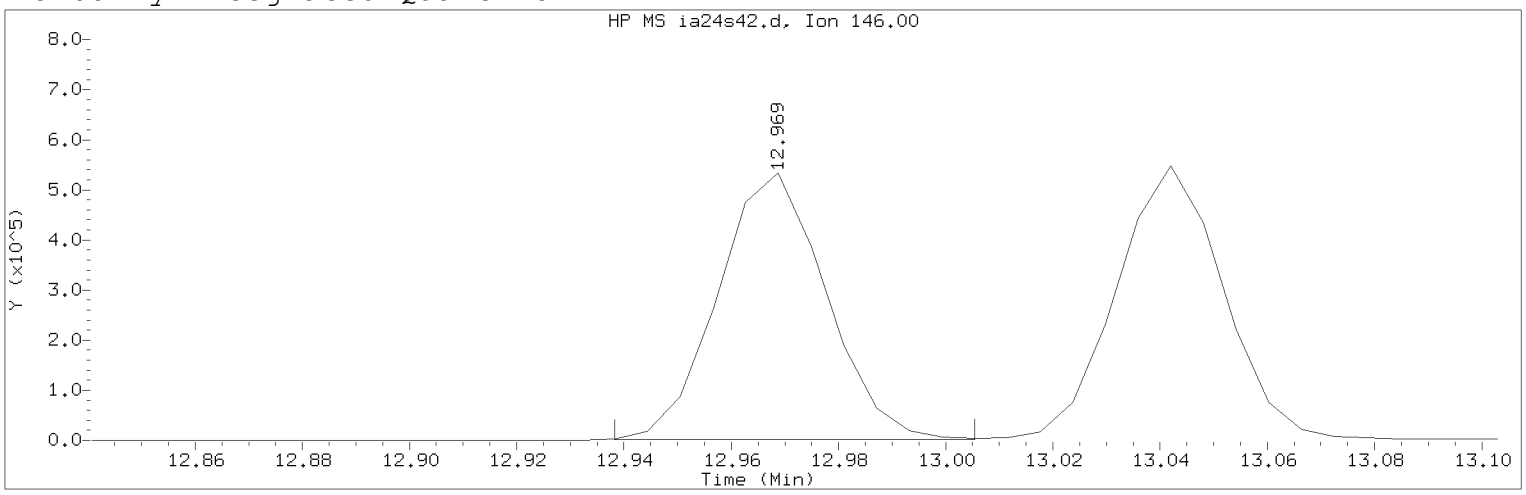
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1761
Retention Time (minutes): 12.323
Quant Ion : 53.00
Area : 13438
On-column Amount (ng) : 1.3441
Integration start scan : 1757 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

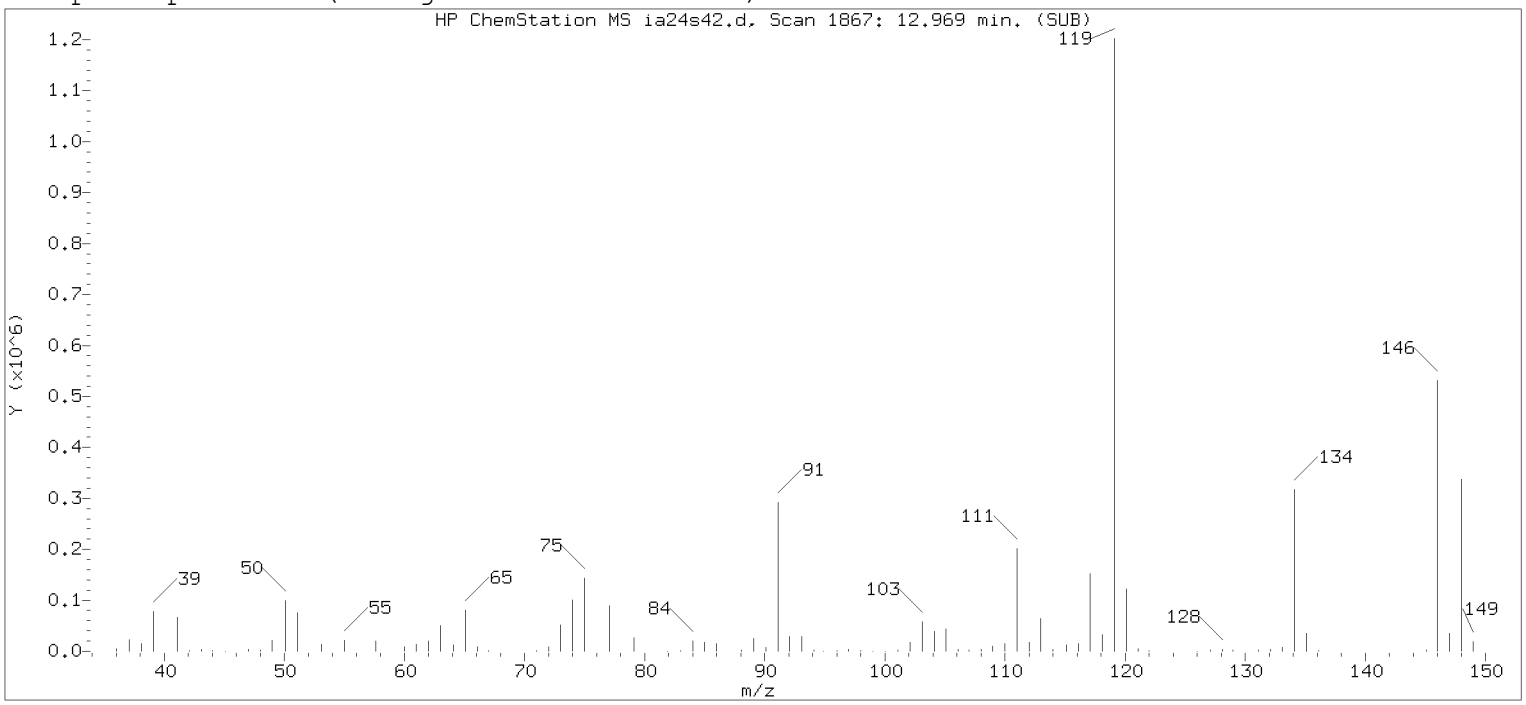
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area (flag) : 745514M
On-Column Amount (ng) : 5.1874
Integration start scan : 1861 Integration stop scan: 1872
Y at integration start : 930 Y at integration end: 930

Reason for manual integration: improper integration

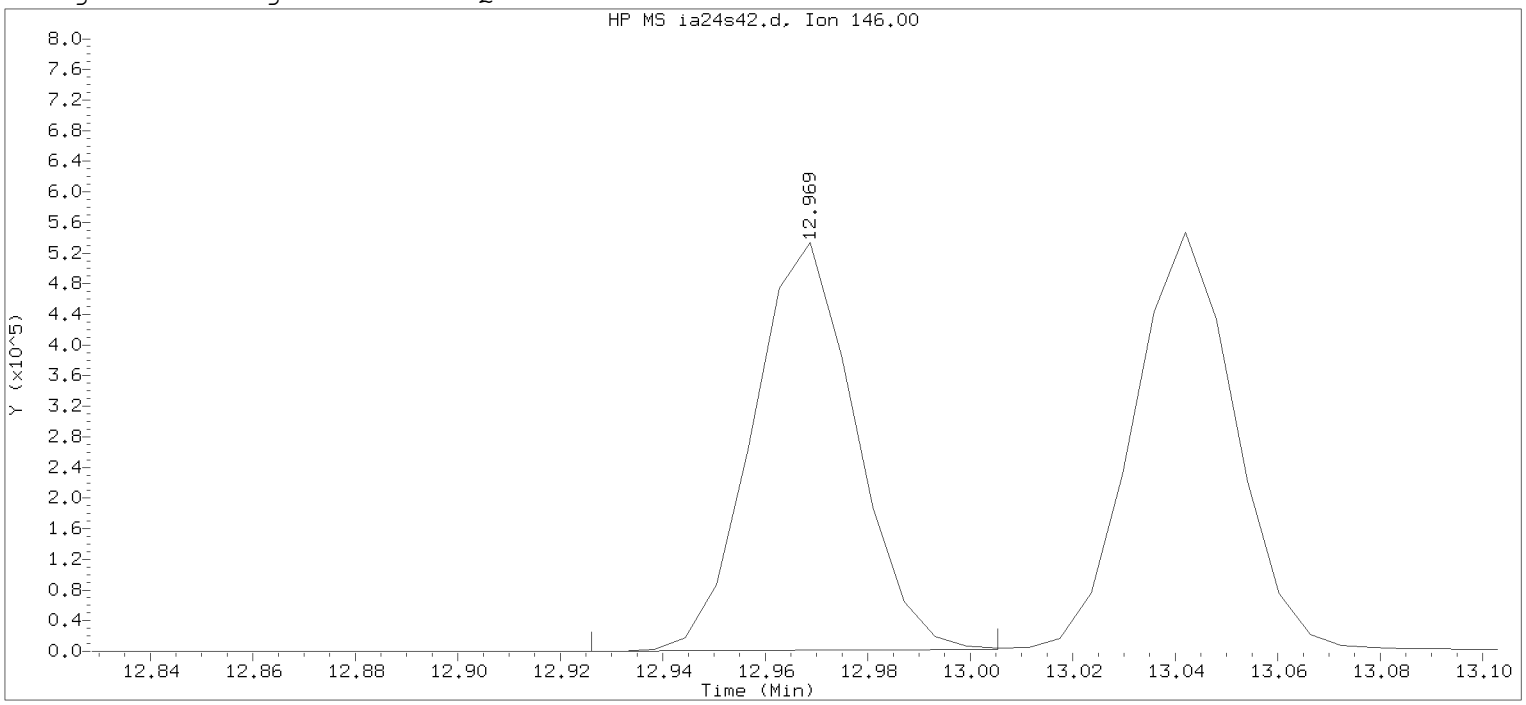
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

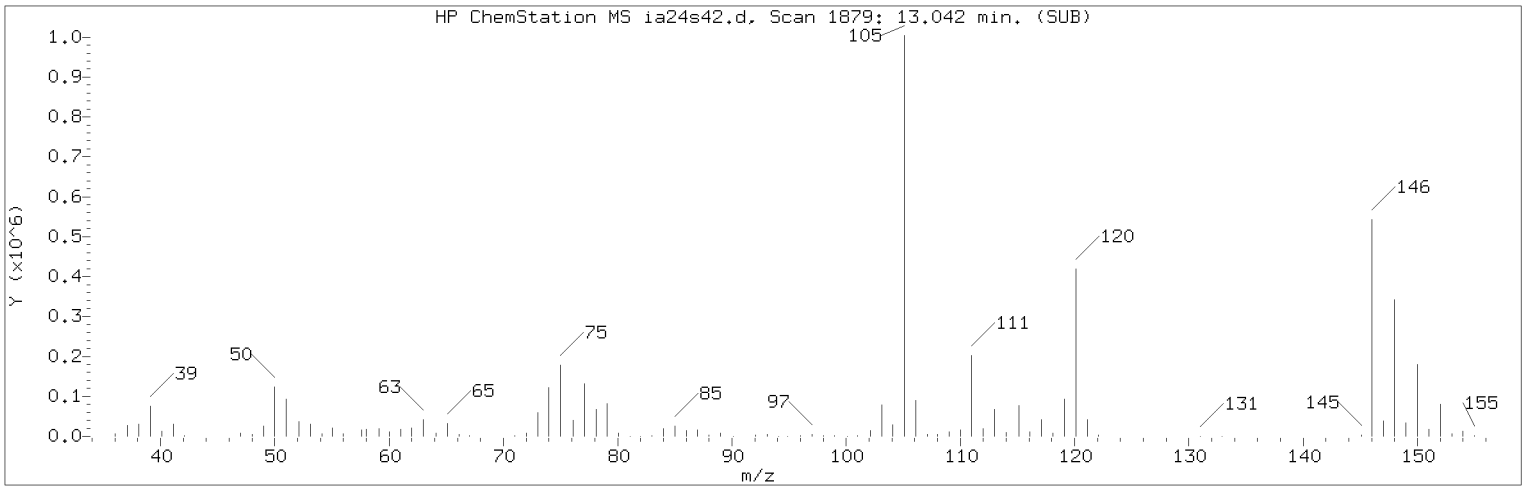
Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

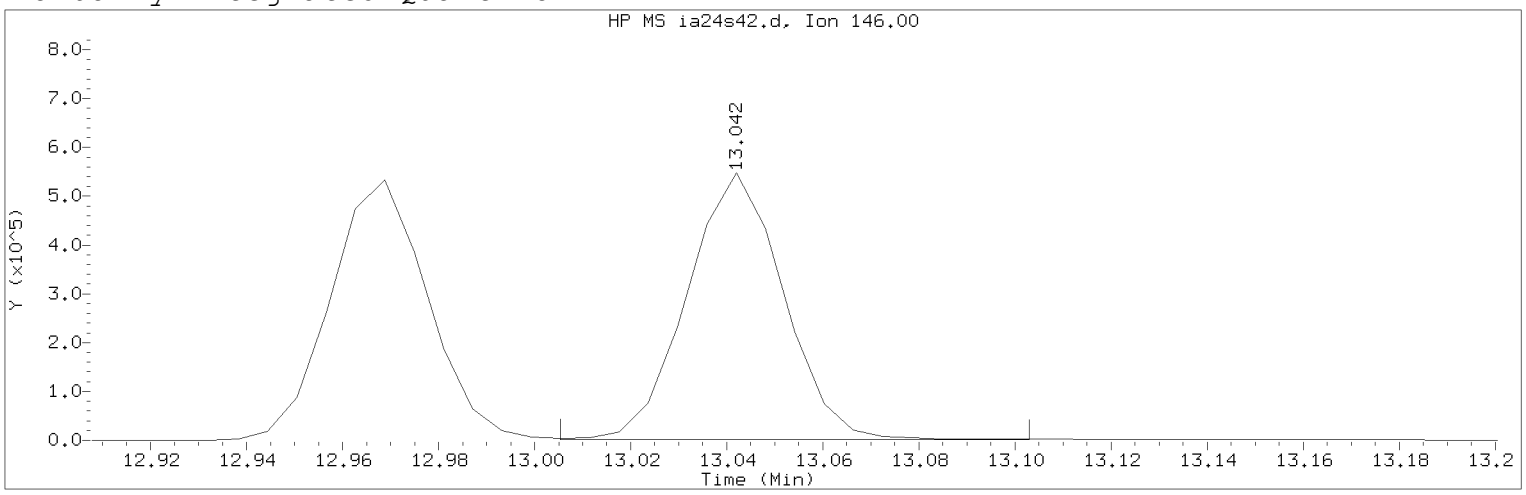
Compound Number : 131
Compound Name : 1,3-Dichlorobenzene
Scan Number : 1867
Retention Time (minutes): 12.969
Quant Ion : 146.00
Area : 743624
On-column Amount (ng) : 5.1742
Integration start scan : 1859 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 2248

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: DVV10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 23:28 dvv10203

Sample Name: LCDI95 Lab Sample ID: LCDI95

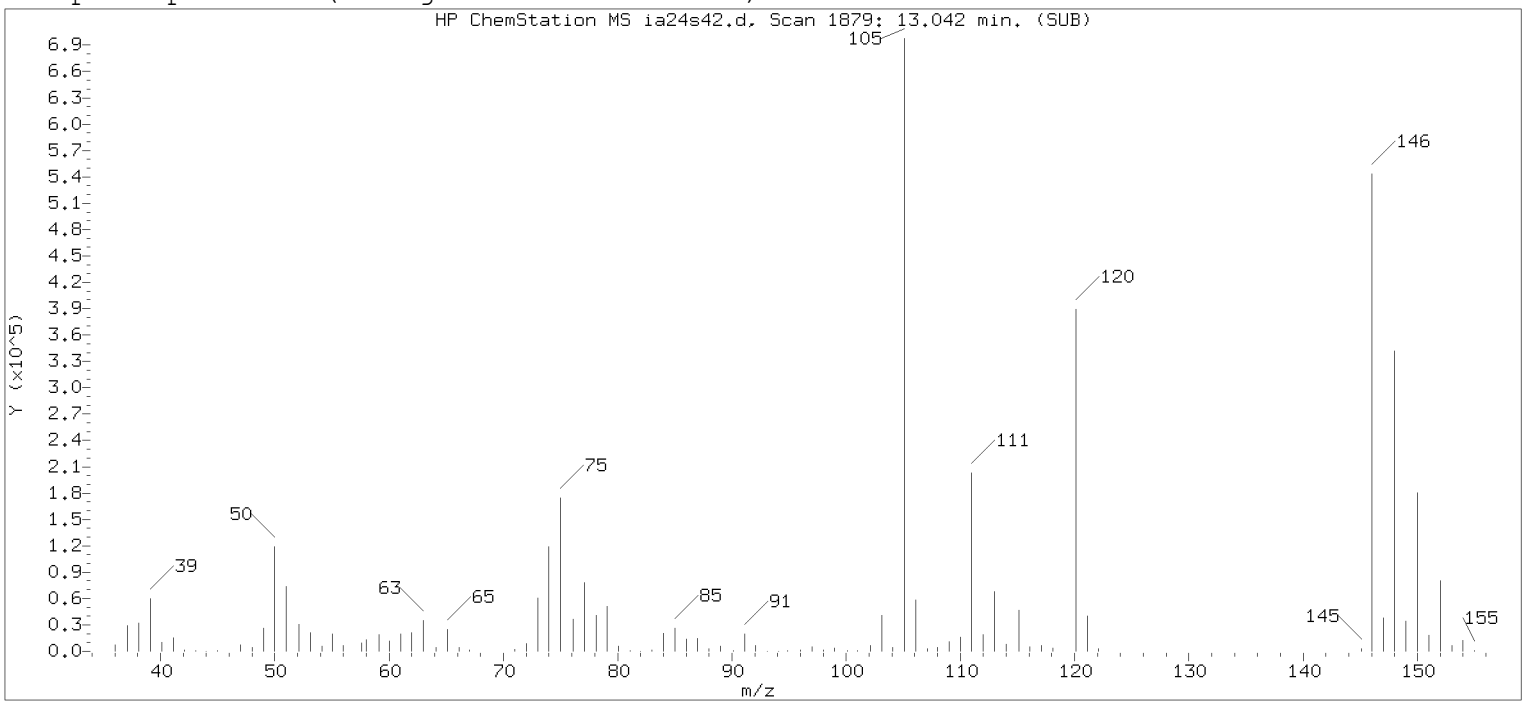
Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area (flag) : 760150M
On-Column Amount (ng) : 5.1919
Integration start scan : 1872 Integration stop scan: 1888
Y at integration start : 1368 Y at integration end: 1368

Reason for manual integration: improper integration

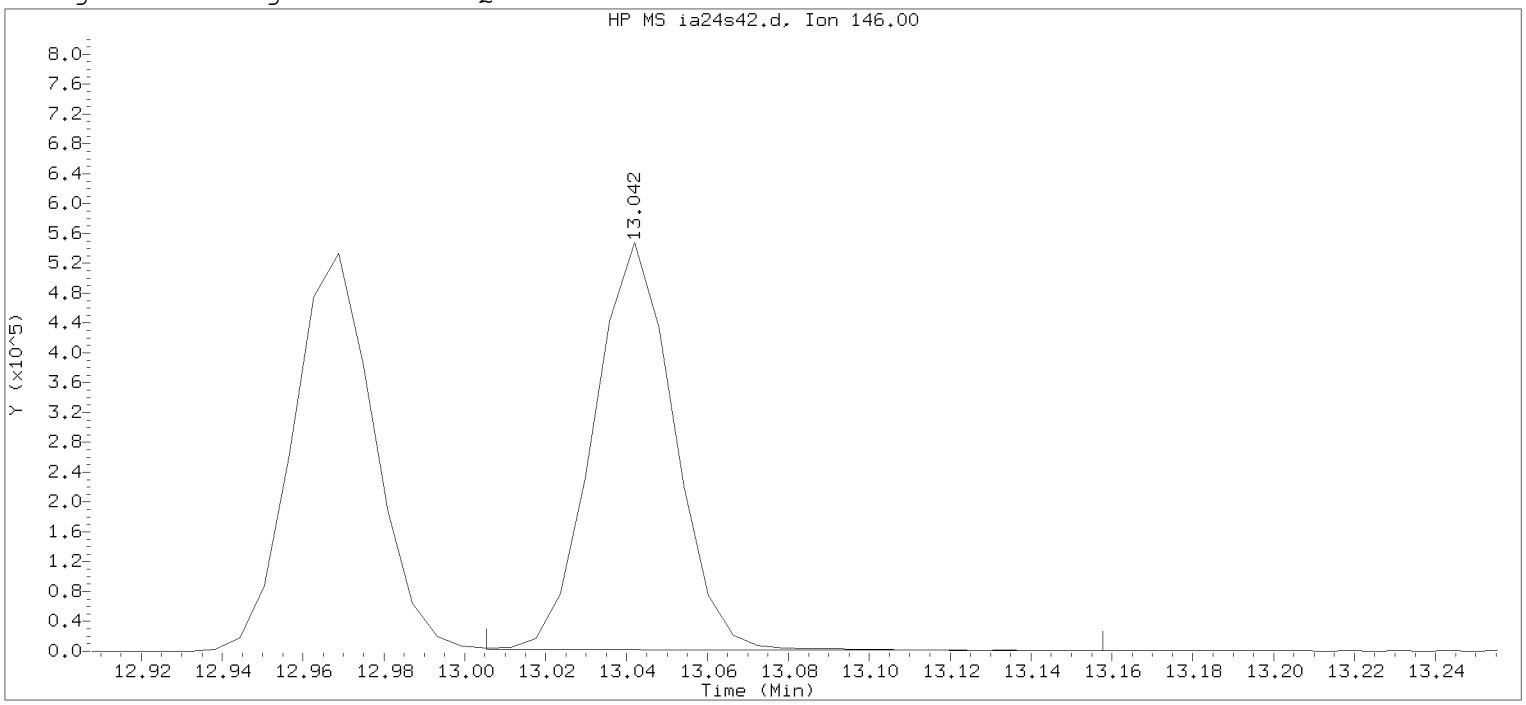
Analyst responsible for change: Digitally signed by Don V. Viray
on 04/24/2018 at 23:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 04/25/2018 at 21:43.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19930.i/18apr24b.b/ia24s42.d Instrument ID: HP19930.i
Injection date and time: 24-APR-2018 21:52 Analyst ID: DVV10203

Method used: /chem2/HP19930.i/18apr24b.b/m8260c25.m Sublist used: 27091-SM
Calibration date and time: 24-APR-2018 21:52
Date, time and analyst ID of latest file update: 24-Apr-2018 22:10 Automation

Sample Name: LCDI95 Lab Sample ID: LCDI95

Compound Number : 134
Compound Name : 1,4-Dichlorobenzene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 146.00
Area : 758203
On-column Amount (ng) : 5.1786
Integration start scan : 1872 Integration stop scan: 1897
Y at integration start : 2248 Y at integration end: 786

Digitally signed by Don V. Viray on 04/24/2018 at 23:39.
Target 3.5 esignature used. FID Page 1395

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

3 SVOCs 8270D

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9558695	16C1	X		1	
9558696	16MW8	X		1	
9558697	16MW9	X		1	
9558698	16WC1A	X		1	Unspiked
9558699	16WC1A MS	X		1	Matrix Spike
9558700	16WC1A MSD	X		1	Matrix Spike Duplicate
9558702	16WDUP	X		1	Field Duplicate Sample
9558703	16WC1B	X		1	
9558704	16-2	X		1	
9558705	16-3	X		1	
9558706	16-5	X		1	
9558707	16WC2B	X		1	
9558708	16SPRING	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 18106WAO026 (Sample number(s): 9558695-9558700, 9558702-9558703, UNSPK: 9558698)
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 1,4-Naphthoquinone

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeded the acceptance window indicating a positive bias. a,a-Dimethylphenethylamine

Refer to the QC Summary forms for more information.

The recovery(ies) for the following analyte(s) in the LCS and LCSD were below the acceptance window: 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, Famphur, Kepone

Refer to the QC Summary forms for more information.

Batch#: 18113WAN026
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 1,4-Naphthoquinone

The recovery(ies) for the following analyte(s) in the LCS and LCSD exceeded the acceptance window indicating a positive bias. a,a-Dimethylphenethylamine

Refer to the QC Summary forms for more information.

The recovery(ies) for the following analyte(s) in the LCS and LCSD were below the acceptance window: 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, Famphur, Kepone

Refer to the QC Summary forms for more information.

(Sample number(s): 9558695-9558700, 9558702-9558703: Analysis: 14241)
The stated QC limits for 1,4-Naphthoquinone, 1,4-Phenylenediamine, Aramite, a,a-Dimethylphenethylamine, Famphur, and Kepone are advisory only until sufficient data points can be obtained to calculate statistical limits.

MS/MSD

Batch#: 18106WAO026 (Sample number(s): 9558695-9558700, 9558702-9558703, UNSPK: 9558698)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 2-Methylphenol, 4-Chloro-3-methylphenol, 4-Methylphenol, Pentachlorophenol

The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: 2,3,4,6-Tetrachlorophenol, 2,4,5-Trichlorophenol, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2-Chlorophenol, 3,3'-Dimethylbenzidine, Pentachlorophenol

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Batch#: 18106WAO026 (Sample number(s): 9558695-9558700, 9558702-9558703, UNSPK: 9558698)
The recovery(ies) for the following surrogate(s) were below the acceptance window: 2,4,6-Tribromophenol (9558699, 9558702), 2-Fluorophenol (9558698 UNSPK, 9558702), Phenol-d6 (9558702)

Batch#: 18113WAN026
The recovery(ies) for the following surrogate(s) were below the acceptance window: 2,4,6-Tribromophenol (9558699 MS), 2-Fluorophenol (9558702RE)

(Sample number(s): 9558698: Analysis: 14241)
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
3 SVOCs 8270D	18106WAY026	SBLKWY106	04/20/2018 11:51:00
		106WYLCS	04/20/2018 12:19:00
		9558704	04/20/2018 16:57:00
		9558705	04/20/2018 17:25:00
		9558706	04/20/2018 17:53:00
		9558707	04/20/2018 18:20:00
		9558708	04/21/2018 04:06:00
SVOAs 8270D MINI	18106WAO026	SBLKWO106	04/20/2018 11:51:00
		106WOLCS	04/20/2018 12:19:00
		106WOLCS2	04/23/2018 12:24:00
		106WOLCSD2	04/23/2018 12:52:00
		9558695	04/20/2018 14:38:00
		9558696	04/20/2018 15:06:00
		9558697	04/20/2018 15:34:00
		9558698 UNSPK	04/20/2018 13:15:00
		9558699 MS	04/20/2018 13:43:00
		9558700 MSD	04/20/2018 14:11:00
		9558702	04/20/2018 16:02:00
		9558703	04/20/2018 16:29:00
SVOAs 8270D MINI	18113WAN026	SBLKWN113	04/24/2018 23:20:00
		113WNLCS	04/24/2018 23:48:00
		113WNLCS1	04/25/2018 00:16:00
		113WNLCSD1	04/25/2018 00:44:00
		9558698RE	04/25/2018 03:31:00
		9558699 MS	04/25/2018 03:58:00
		9558700 MSD	04/25/2018 04:26:00
		9558702RE	04/25/2018 04:54:00

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAF06
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18106WAO026 / SBLKWO106 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
N-Nitrosodimethylamine	04/20/18	N.D.	ug/l	2	10
Pyridine	04/20/18	N.D.	ug/l	2	10
2-Picoline	04/20/18	N.D.	ug/l	2	10
N-Nitrosomethylethylamine	04/20/18	N.D.	ug/l	2	10
Methyl methanesulfonate	04/20/18	N.D.	ug/l	1	10
N-Nitrosodiethylamine	04/20/18	N.D.	ug/l	0.5	10
Ethyl methanesulfonate	04/20/18	N.D.	ug/l	0.5	10
Phenol	04/20/18	N.D.	ug/l	0.8	10
Aniline	04/20/18	N.D.	ug/l	0.5	10
bis(2-Chloroethyl)ether	04/20/18	N.D.	ug/l	0.5	5
2-Chlorophenol	04/20/18	N.D.	ug/l	1	10
o-Toluidine	04/20/18	N.D.	ug/l	0.5	10
Benzyl alcohol	04/20/18	N.D.	ug/l	10	30
2-Methylphenol	04/20/18	N.D.	ug/l	0.5	5
bis(2-Chloroisopropyl)ether	04/20/18	N.D.	ug/l	0.5	10
2,4-Dichlorophenol	04/20/18	N.D.	ug/l	2	10
N-Nitrosopyrrolidine	04/20/18	N.D.	ug/l	0.5	10
Acetophenone	04/20/18	N.D.	ug/l	0.5	10
4-Methylphenol	04/20/18	N.D.	ug/l	0.5	5
N-Nitroso-di-n-propylamine	04/20/18	N.D.	ug/l	0.5	10
N-Nitrosomorpholine	04/20/18	N.D.	ug/l	2	10
Hexachloroethane	04/20/18	N.D.	ug/l	1	10
Nitrobenzene	04/20/18	N.D.	ug/l	0.5	10
N-Nitrosopiperidine	04/20/18	N.D.	ug/l	0.5	10
Isophorone	04/20/18	N.D.	ug/l	0.5	10
2-Nitrophenol	04/20/18	N.D.	ug/l	1	10
2,4-Dimethylphenol	04/20/18	N.D.	ug/l	1	10
O,O,O-Triethylphosphorothioate	04/20/18	N.D.	ug/l	2	10
bis(2-Chloroethoxy)methane	04/20/18	N.D.	ug/l	0.5	5
a,a-Dimethylphenethylamine	04/20/18	N.D.	ug/l	5	50
4-Chloroaniline	04/20/18	N.D.	ug/l	2	10
2,6-Dichlorophenol	04/20/18	N.D.	ug/l	0.5	10
Hexachloropropene	04/20/18	N.D.	ug/l	2	10
N-Nitrosodi-n-butylamine	04/20/18	N.D.	ug/l	2	10
1,4-Phenylenediamine	04/20/18	N.D.	ug/l	75	300
4-Chloro-3-methylphenol	04/20/18	N.D.	ug/l	1	10
Safrole	04/20/18	N.D.	ug/l	2	10
2-Methylnaphthalene	04/20/18	N.D.	ug/l	0.3	10
Hexachlorocyclopentadiene	04/20/18	N.D.	ug/l	5	15
1,2,4,5-Tetrachlorobenzene	04/20/18	N.D.	ug/l	2	10
2,4,6-Trichlorophenol	04/20/18	N.D.	ug/l	0.6	10
2,4,5-Trichlorophenol	04/20/18	N.D.	ug/l	0.8	10
Isosafrole	04/20/18	N.D.	ug/l	2	10
2-Chloronaphthalene	04/20/18	N.D.	ug/l	0.5	10
2-Nitroaniline	04/20/18	N.D.	ug/l	0.5	10

Fraction: Semivolatiles by GC/MS

18106WAO026 / SBLKWO106 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,4-Naphthoquinone	04/20/18	N.D.	ug/l	25	60
Dimethylphthalate	04/20/18	N.D.	ug/l	2	10
1,3-Dinitrobenzene	04/20/18	N.D.	ug/l	2	10
2,6-Dinitrotoluene	04/20/18	N.D.	ug/l	0.5	10
Acenaphthylene	04/20/18	N.D.	ug/l	0.5	10
3-Nitroaniline	04/20/18	N.D.	ug/l	0.5	10
Acenaphthene	04/20/18	N.D.	ug/l	0.4	10
2,4-Dinitrophenol	04/20/18	N.D.	ug/l	10	30
4-Nitrophenol	04/20/18	N.D.	ug/l	10	30
Pentachlorobenzene	04/20/18	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	04/20/18	N.D.	ug/l	1	10
Dibenzofuran	04/20/18	N.D.	ug/l	0.6	10
1-Naphthylamine	04/20/18	N.D.	ug/l	5	15
2,3,4,6-Tetrachlorophenol	04/20/18	N.D.	ug/l	0.7	10
2-Naphthylamine	04/20/18	N.D.	ug/l	5	15
Diethylphthalate	04/20/18	N.D.	ug/l	2	10
Thionazin	04/20/18	N.D.	ug/l	2	10
Fluorene	04/20/18	N.D.	ug/l	0.4	10
4-Chlorophenyl-phenylether	04/20/18	N.D.	ug/l	0.5	10
5-Nitro-o-toluidine	04/20/18	N.D.	ug/l	0.5	10
4-Nitroaniline	04/20/18	N.D.	ug/l	0.7	10
4,6-Dinitro-2-methylphenol	04/20/18	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	04/20/18	N.D.	ug/l	0.6	10
NDPA as diphenylamine	04/20/18	N.D.	ug/l	0.5	10
1,3,5-Trinitrobenzene	04/20/18	N.D.	ug/l	5	15
Phorate	04/20/18	N.D.	ug/l	0.5	10
Phenacetin	04/20/18	N.D.	ug/l	0.5	10
4-Bromophenyl-phenylether	04/20/18	N.D.	ug/l	0.6	10
Diallate trans/cis	04/20/18	N.D.	ug/l	1	10
Hexachlorobenzene	04/20/18	N.D.	ug/l	0.9	10
Dimethoate	04/20/18	N.D.	ug/l	3	10
Pentachlorophenol	04/20/18	N.D.	ug/l	3	10
4-Aminobiphenyl	04/20/18	N.D.	ug/l	0.5	10
Pentachloronitrobenzene	04/20/18	N.D.	ug/l	2	10
Pronamide	04/20/18	N.D.	ug/l	0.5	10
Phenanthrene	04/20/18	N.D.	ug/l	0.5	10
Anthracene	04/20/18	N.D.	ug/l	0.5	10
Disulfoton	04/20/18	N.D.	ug/l	25	50
Methyl parathion	04/20/18	N.D.	ug/l	1	10
Di-n-butylphthalate	04/20/18	N.D.	ug/l	2	10
Parathion	04/20/18	N.D.	ug/l	2	10
4-Nitroquinoline-1-oxide	04/20/18	N.D.	ug/l	20	60
Methapyrilene	04/20/18	N.D.	ug/l	15	50
Isodrin	04/20/18	N.D.	ug/l	0.5	10
Fluoranthene	04/20/18	N.D.	ug/l	0.4	10

Fraction: Semivolatiles by GC/MS

18106WAO026 / SBLKWO106 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Pyrene	04/20/18	N.D.	ug/l	0.4	10
Aramite	04/20/18	N.D.	ug/l	5	15
p-Dimethylaminoazobenzene	04/20/18	N.D.	ug/l	0.5	10
Chlorobenzilate	04/20/18	N.D.	ug/l	3	10
3,3'-Dimethylbenzidine	04/20/18	N.D.	ug/l	25	75
Butylbenzylphthalate	04/20/18	N.D.	ug/l	2	10
Famphur	04/20/18	N.D.	ug/l	25	50
Kepone	04/20/18	N.D.	ug/l	25	50
2-Acetylaminofluorene	04/20/18	N.D.	ug/l	2	10
3,3'-Dichlorobenzidine	04/20/18	N.D.	ug/l	2	10
Benzo(a)anthracene	04/20/18	N.D.	ug/l	0.5	10
Chrysene	04/20/18	N.D.	ug/l	0.3	10
bis(2-Ethylhexyl)phthalate	04/20/18	N.D.	ug/l	2	10
Di-n-octylphthalate	04/20/18	N.D.	ug/l	2	10
Benzo(b)fluoranthene	04/20/18	N.D.	ug/l	1	10
7,12-Dimethylbenz[a]anthracene	04/20/18	N.D.	ug/l	0.5	10
Benzo(k)fluoranthene	04/20/18	N.D.	ug/l	2	10
Benzo(a)pyrene	04/20/18	N.D.	ug/l	2	10
3-Methylcholanthrene	04/20/18	N.D.	ug/l	0.5	10
Indeno(1,2,3-cd)pyrene	04/20/18	N.D.	ug/l	0.2	10
Dibenz(a,h)anthracene	04/20/18	N.D.	ug/l	0.4	10
Benzo(g,h,i)perylene	04/20/18	N.D.	ug/l	0.4	10

18106WAY026 / SBLKWY106 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	04/20/18	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	04/20/18	N.D.	ug/l	1	10
Diethylphthalate	04/20/18	N.D.	ug/l	2	5

18113WAN026 / SBLKWN113 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
N-Nitrosodimethylamine	04/24/18	N.D.	ug/l	2	10
Pyridine	04/24/18	N.D.	ug/l	2	10
2-Picoline	04/24/18	N.D.	ug/l	2	10
N-Nitrosomethylethylamine	04/24/18	N.D.	ug/l	2	10
Methyl methanesulfonate	04/24/18	N.D.	ug/l	1	10
N-Nitrosodiethylamine	04/24/18	N.D.	ug/l	0.5	10
Ethyl methanesulfonate	04/24/18	N.D.	ug/l	0.5	10
Phenol	04/24/18	N.D.	ug/l	0.8	10
Aniline	04/24/18	N.D.	ug/l	0.5	10
bis(2-Chloroethyl)ether	04/24/18	N.D.	ug/l	0.5	5
2-Chlorophenol	04/24/18	N.D.	ug/l	1	10
o-Toluidine	04/24/18	N.D.	ug/l	0.5	10
Benzyl alcohol	04/24/18	N.D.	ug/l	10	30
2-Methylphenol	04/24/18	N.D.	ug/l	0.5	5

Fraction: Semivolatiles by GC/MS

18113WAN026 / SBLKWN113 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
bis(2-Chloroisopropyl)ether	04/24/18	N.D.	ug/l	0.5	10
2,4-Dichlorophenol	04/24/18	N.D.	ug/l	2	10
N-Nitrosopyrrolidine	04/24/18	N.D.	ug/l	0.5	10
Acetophenone	04/24/18	N.D.	ug/l	0.5	10
4-Methylphenol	04/24/18	N.D.	ug/l	0.5	5
N-Nitroso-di-n-propylamine	04/24/18	N.D.	ug/l	0.5	10
N-Nitrosomorpholine	04/24/18	N.D.	ug/l	2	10
Hexachloroethane	04/24/18	N.D.	ug/l	1	10
Nitrobenzene	04/24/18	N.D.	ug/l	0.5	10
N-Nitrosopiperidine	04/24/18	N.D.	ug/l	0.5	10
Isophorone	04/24/18	N.D.	ug/l	0.5	10
2-Nitrophenol	04/24/18	N.D.	ug/l	1	10
2,4-Dimethylphenol	04/24/18	N.D.	ug/l	1	10
O,O,O-Triethylphosphorothioate	04/24/18	N.D.	ug/l	2	10
bis(2-Chloroethoxy)methane	04/24/18	N.D.	ug/l	0.5	5
a,a-Dimethylphenethylamine	04/24/18	N.D.	ug/l	5	50
4-Chloroaniline	04/24/18	N.D.	ug/l	2	10
2,6-Dichlorophenol	04/24/18	N.D.	ug/l	0.5	10
Hexachloropropene	04/24/18	N.D.	ug/l	2	10
N-Nitrosodi-n-butylamine	04/24/18	N.D.	ug/l	2	10
1,4-Phenylenediamine	04/24/18	N.D.	ug/l	75	300
4-Chloro-3-methylphenol	04/24/18	N.D.	ug/l	1	10
Safrole	04/24/18	N.D.	ug/l	2	10
2-Methylnaphthalene	04/24/18	N.D.	ug/l	0.3	10
Hexachlorocyclopentadiene	04/24/18	N.D.	ug/l	5	15
1,2,4,5-Tetrachlorobenzene	04/24/18	N.D.	ug/l	2	10
2,4,6-Trichlorophenol	04/24/18	N.D.	ug/l	0.6	10
2,4,5-Trichlorophenol	04/24/18	N.D.	ug/l	0.8	10
Isosafrole	04/24/18	N.D.	ug/l	2	10
2-Chloronaphthalene	04/24/18	N.D.	ug/l	0.5	10
2-Nitroaniline	04/24/18	N.D.	ug/l	0.5	10
1,4-Naphthoquinone	04/24/18	N.D.	ug/l	25	60
Dimethylphthalate	04/24/18	N.D.	ug/l	2	10
1,3-Dinitrobenzene	04/24/18	N.D.	ug/l	2	10
2,6-Dinitrotoluene	04/24/18	N.D.	ug/l	0.5	10
Acenaphthylene	04/24/18	N.D.	ug/l	0.5	10
3-Nitroaniline	04/24/18	N.D.	ug/l	0.5	10
Acenaphthene	04/24/18	N.D.	ug/l	0.4	10
2,4-Dinitrophenol	04/24/18	N.D.	ug/l	10	30
4-Nitrophenol	04/24/18	N.D.	ug/l	10	30
Pentachlorobenzene	04/24/18	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	04/24/18	N.D.	ug/l	1	10
Dibenzofuran	04/24/18	N.D.	ug/l	0.6	10
1-Naphthylamine	04/24/18	N.D.	ug/l	5	15
2,3,4,6-Tetrachlorophenol	04/24/18	N.D.	ug/l	0.7	10

Fraction: Semivolatiles by GC/MS

18113WAN026 / SBLKWN113 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2-Naphthylamine	04/24/18	N.D.	ug/l	5	15
Diethylphthalate	04/24/18	N.D.	ug/l	2	10
Thionazin	04/24/18	N.D.	ug/l	2	10
Fluorene	04/24/18	N.D.	ug/l	0.4	10
4-Chlorophenyl-phenylether	04/24/18	N.D.	ug/l	0.5	10
5-Nitro-o-toluidine	04/24/18	N.D.	ug/l	0.5	10
4-Nitroaniline	04/24/18	N.D.	ug/l	0.7	10
4,6-Dinitro-2-methylphenol	04/24/18	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	04/24/18	N.D.	ug/l	0.6	10
NDPA as diphenylamine	04/24/18	N.D.	ug/l	0.5	10
1,3,5-Trinitrobenzene	04/24/18	N.D.	ug/l	5	15
Phorate	04/24/18	N.D.	ug/l	0.5	10
Phenacetin	04/24/18	N.D.	ug/l	0.5	10
4-Bromophenyl-phenylether	04/24/18	N.D.	ug/l	0.6	10
Diallate trans/cis	04/24/18	N.D.	ug/l	1	10
Hexachlorobenzene	04/24/18	N.D.	ug/l	0.9	10
Dimethoate	04/24/18	N.D.	ug/l	3	10
Pentachlorophenol	04/24/18	N.D.	ug/l	3	10
4-Aminobiphenyl	04/24/18	N.D.	ug/l	0.5	10
Pentachloronitrobenzene	04/24/18	N.D.	ug/l	2	10
Pronamide	04/24/18	N.D.	ug/l	0.5	10
Phenanthrene	04/24/18	N.D.	ug/l	0.5	10
Anthracene	04/24/18	N.D.	ug/l	0.5	10
Disulfoton	04/24/18	N.D.	ug/l	25	50
Methyl parathion	04/24/18	N.D.	ug/l	1	10
Di-n-butylphthalate	04/24/18	N.D.	ug/l	2	10
Parathion	04/24/18	N.D.	ug/l	2	10
4-Nitroquinoline-1-oxide	04/24/18	N.D.	ug/l	20	60
Methapyrilene	04/24/18	N.D.	ug/l	15	50
Isodrin	04/24/18	N.D.	ug/l	0.5	10
Fluoranthene	04/24/18	N.D.	ug/l	0.4	10
Pyrene	04/24/18	N.D.	ug/l	0.4	10
Aramite	04/24/18	N.D.	ug/l	5	15
p-Dimethylaminoazobenzene	04/24/18	N.D.	ug/l	0.5	10
Chlorobenzilate	04/24/18	N.D.	ug/l	3	10
3,3'-Dimethylbenzidine	04/24/18	N.D.	ug/l	25	75
Butylbenzylphthalate	04/24/18	N.D.	ug/l	2	10
Famphur	04/24/18	N.D.	ug/l	25	50
Kepone	04/24/18	N.D.	ug/l	25	50
2-Acetylaminofluorene	04/24/18	N.D.	ug/l	2	10
3,3'-Dichlorobenzidine	04/24/18	N.D.	ug/l	2	10
Benzo(a)anthracene	04/24/18	N.D.	ug/l	0.5	10
Chrysene	04/24/18	N.D.	ug/l	0.3	10
bis(2-Ethylhexyl)phthalate	04/24/18	N.D.	ug/l	2	10
Di-n-octylphthalate	04/24/18	N.D.	ug/l	2	10

Fraction: Semivolatiles by GC/MS

18113WAN026 / SBLKWN113 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzo(b)fluoranthene	04/24/18	N.D.	ug/l	1	10
7,12-Dimethylbenz[a]anthracene	04/24/18	N.D.	ug/l	0.5	10
Benzo(k)fluoranthene	04/24/18	N.D.	ug/l	2	10
Benzo(a)pyrene	04/24/18	N.D.	ug/l	2	10
3-Methylcholanthrene	04/24/18	N.D.	ug/l	0.5	10
Indeno(1,2,3-cd)pyrene	04/24/18	N.D.	ug/l	0.2	10
Dibenz(a,h)anthracene	04/24/18	N.D.	ug/l	0.4	10
Benzo(g,h,i)perylene	04/24/18	N.D.	ug/l	0.4	10

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF06
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18106WAO026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWO106	84	21 - 134	73	39 - 105	40	10 - 82	72	30 - 111	29	10 - 71	89	27 - 116
106WOLCS	102	21 - 134	89	39 - 105	63	10 - 82	92	30 - 111	50	10 - 71	94	27 - 116
106WOLCSD2	99	21 - 134	86	39 - 105	56	10 - 82	92	30 - 111	42	10 - 71	92	27 - 116
9558695	87	21 - 134	75	39 - 105	45	10 - 82	77	30 - 111	42	10 - 71	90	27 - 116
9558696	87	21 - 134	75	39 - 105	39	10 - 82	72	30 - 111	37	10 - 71	76	27 - 116
9558697	77	21 - 134	73	39 - 105	34	10 - 82	68	30 - 111	39	10 - 71	86	27 - 116
9558698 UNSPK	27	21 - 134	66	39 - 105	4 *	10 - 82	61	30 - 111	12	10 - 71	70	27 - 116
9558699 MS	17 *	21 - 134	90	39 - 105	23	10 - 82	98	30 - 111	22	10 - 71	86	27 - 116
9558700 MSD	26	21 - 134	89	39 - 105	11	10 - 82	93	30 - 111	32	10 - 71	86	27 - 116
9558702	20 *	21 - 134	72	39 - 105	3 *	10 - 82	67	30 - 111	9 *	10 - 71	66	27 - 116
9558703	34	21 - 134	70	39 - 105	21	10 - 82	71	30 - 111	17	10 - 71	59	27 - 116

18106WAY026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWY106	73	39 - 105	72	30 - 111	89	27 - 116
106WYLCS	89	39 - 105	92	30 - 111	94	27 - 116
9558704	74	39 - 105	72	30 - 111	92	27 - 116
9558705	81	39 - 105	82	30 - 111	83	27 - 116
9558706	80	39 - 105	81	30 - 111	93	27 - 116
9558707	76	39 - 105	78	30 - 111	87	27 - 116
9558708	84	39 - 105	88	30 - 111	98	27 - 116

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF06
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18113WAN026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWN113	97	21 - 134	81	39 - 105	46	10 - 82	86	30 - 111	34	10 - 71	98	27 - 116
113WNLCS	104	21 - 134	92	39 - 105	60	10 - 82	95	30 - 111	45	10 - 71	94	27 - 116
113WNLCSD1	92	21 - 134	88	39 - 105	63	10 - 82	96	30 - 111	47	10 - 71	93	27 - 116
9558698RE	35	21 - 134	81	39 - 105	15	10 - 82	84	30 - 111	22	10 - 71	57	27 - 116
9558699 MS	17 *	21 - 134	86	39 - 105	10	10 - 82	93	30 - 111	27	10 - 71	81	27 - 116
9558700 MSD	34	21 - 134	87	39 - 105	18	10 - 82	93	30 - 111	35	10 - 71	86	27 - 116
9558702RE	33	21 - 134	88	39 - 105	7 *	10 - 82	92	30 - 111	19	10 - 71	58	27 - 116

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9558698 MS: 9558699 MSD: 9558700 **Analyte**	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodimethylamine	52.74 / 50.4	N.D.	34.76	31.11	66	62	10-113	11	30
Pyridine	52.74 / 50.4	N.D.	22.27	20.55	42	41	19-67	8	30
2-Picoline	52.74 / 50.4	N.D.	37.92	33.68	72	67	41-87	12	30
Phenol	52.74 / 50.4	N.D.	14.48	19.05	27	38	10-92	27	30
Aniline	52.74 / 50.4	N.D.	34.53	31.56	65	63	22-92	9	30
bis(2-Chloroethyl)ether	52.74 / 50.4	N.D.	48.63	45.67	92	91	48-119	6	30
2-Chlorophenol	52.74 / 50.4	N.D.	21.16	15.86	40 *	31 *	47-116	29	30
o-Toluidine	52.74 / 50.4	N.D.	31.22	27.67	59	55	13-100	12	30
Benzyl alcohol	52.74 / 50.4	N.D.	48.36	44.79	92	89	50-113	8	30
2-Methylphenol	52.74 / 50.4	N.D.	27.99	42.19	53	84	46-113	40 *	30
bis(2-Chloroisopropyl)ether	52.74 / 50.4	N.D.	53.17	49.9	101	99	35-128	6	30
2,4-Dichlorophenol	52.74 / 50.4	N.D.	19.71	17.12	37 *	34 *	53-126	14	30
Acetophenone	52.74 / 50.4	N.D.	52.3	49.08	99	97	53-118	6	30
4-Methylphenol	52.74 / 50.4	N.D.	24.18	39.84	46	79	42-115	49 *	30
N-Nitroso-di-n-propylamine	52.74 / 50.4	N.D.	53.22	50.03	101	99	48-128	6	30
Hexachloroethane	52.74 / 50.4	N.D.	39.02	35.98	74	71	19-105	8	30
Nitrobenzene	52.74 / 50.4	N.D.	55.03	50.14	104	99	43-128	9	30
Isophorone	52.74 / 50.4	N.D.	56.22	51.94	107	103	49-129	8	30
2-Nitrophenol	52.74 / 50.4	N.D.	45.57	41.64	86	83	58-125	9	30
2,4-Dimethylphenol	52.74 / 50.4	N.D.	44.06	42.53	84	84	41-103	4	30
bis(2-Chloroethoxy)methane	52.74 / 50.4	N.D.	53.2	49.07	101	97	54-127	8	30
4-Chloroaniline	52.74 / 50.4	N.D.	39.41	34.44	75	68	33-106	13	30
4-Chloro-3-methylphenol	52.74 / 50.4	N.D.	26.7	47.28	51	94	50-130	56 *	30
2-Methylnaphthalene	52.74 / 50.4	N.D.	50.83	45.34	96	90	42-120	11	30
Hexachlorocyclopentadiene	105.49 / 100.81	N.D.	96.87	89.91	92	89	10-104	7	30
1,2,4,5-Tetrachlorobenzene	52.74 / 50.4	N.D.	48.59	45.08	92	89	30-117	7	30
2,4,6-Trichlorophenol	52.74 / 50.4	N.D.	13.56	13.03	26 *	26 *	61-130	4	30
2,4,5-Trichlorophenol	52.74 / 50.4	N.D.	23.21	18.9	44 *	37 *	59-129	20	30
2-Chloronaphthalene	52.74 / 50.4	N.D.	47.43	44.27	90	88	41-123	7	30
2-Nitroaniline	52.74 / 50.4	N.D.	53.71	51.89	102	103	54-133	3	30
Dimethylphthalate	52.74 / 50.4	N.D.	48.99	48.63	93	96	19-119	1	30
1,3-Dinitrobenzene	52.74 / 50.4	N.D.	54.24	52.87	103	105	60-118	3	30
2,6-Dinitrotoluene	52.74 / 50.4	N.D.	54.06	51.58	103	102	57-131	5	30
Acenaphthylene	52.74 / 50.4	N.D.	57.67	54.52	109	108	67-111	6	30
3-Nitroaniline	52.74 / 50.4	N.D.	48.31	45.07	92	89	41-123	7	30
Acenaphthene	52.74 / 50.4	N.D.	53.75	50.09	102	99	49-123	7	30
2,4-Dinitrophenol	105.49 / 100.81	N.D.	97.17	102.14	92	101	19-140	5	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9558698 MS: 9558699 MSD: 9558700 **Analyte**	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
4-Nitrophenol	52.74 / 50.4	N.D.	34.91	31.03	66	62	10-96	12	30
2,4-Dinitrotoluene	52.74 / 50.4	N.D.	52.34	50.07	99	99	56-128	4	30
Dibenzofuran	52.74 / 50.4	N.D.	52.57	49.36	100	98	50-124	6	30
1-Naphthylamine	105.49 / 100.81	N.D.	53.09	44.37	50	44	10-73	18	30
2,3,4,6-Tetrachlorophenol	52.74 / 50.4	N.D.	13.32	16.95	25 *	34 *	60-128	24	30
2-Naphthylamine	105.49 / 100.81	N.D.	52.77	45.13	50	45	10-68	16	30
Diethylphthalate	52.74 / 50.4	N.D.	51.26	49.27	97	98	42-124	4	30
Fluorene	52.74 / 50.4	N.D.	52.89	50.47	100	100	48-124	5	30
4-Chlorophenyl-phenylether	52.74 / 50.4	N.D.	51.51	48.77	98	97	45-124	5	30
4-Nitroaniline	52.74 / 50.4	N.D.	46.21	43.24	88	86	46-114	7	30
4,6-Dinitro-2-methylphenol	52.74 / 50.4	N.D.	50.41	49.81	96	99	50-132	1	30
N-Nitrosodiphenylamine	52.74 / 50.4	N.D.	53.82	50.58	102	100	55-128	6	30
NDPA as diphenylamine	52.74 / 50.4	N.D.	53.82	50.58	102	100	70-130	6	30
4-Bromophenyl-phenylether	52.74 / 50.4	N.D.	52.5	48.75	100	97	53-127	7	30
Hexachlorobenzene	52.74 / 50.4	N.D.	51.87	49.19	98	98	57-123	5	30
Pentachlorophenol	52.74 / 50.4	N.D.	11.72	20.9	22 *	41 *	50-127	56 *	30
Phenanthrene	52.74 / 50.4	N.D.	53.52	49.45	101	98	54-122	8	30
Anthracene	52.74 / 50.4	N.D.	53.88	51.3	102	102	55-126	5	30
Di-n-butylphthalate	52.74 / 50.4	N.D.	51.72	49.62	98	98	58-119	4	30
Fluoranthene	52.74 / 50.4	N.D.	55.35	51.88	105	103	61-123	6	30
Pyrene	52.74 / 50.4	N.D.	51.38	48.57	97	96	54-123	6	30
3,3'-Dimethylbenzidine	105.49 / 100.81	N.D.	N.D.	N.D.	0 *	0 *	10-58	0	30
Butylbenzylphthalate	52.74 / 50.4	N.D.	49.1	48.48	93	96	40-131	1	30
3,3'-Dichlorobenzidine	52.74 / 50.4	N.D.	36.87	35.62	70	71	32-106	3	30
Benzo(a)anthracene	52.74 / 50.4	N.D.	53.12	51.06	101	101	63-124	4	30
Chrysene	52.74 / 50.4	N.D.	53.15	51.8	101	103	65-124	3	30
bis(2-Ethylhexyl)phthalate	52.74 / 50.4	N.D.	50.52	48.97	96	97	52-132	3	30
Di-n-octylphthalate	52.74 / 50.4	N.D.	50.51	48.11	96	95	51-134	5	30
Benzo(b)fluoranthene	52.74 / 50.4	N.D.	53.6	50.61	102	100	58-127	6	30
7,12-Dimethylbenz[a]anthracene	52.74 / 50.4	N.D.	52.82	50.02	100	99	52-122	5	30
Benzo(k)fluoranthene	52.74 / 50.4	N.D.	53.57	49.96	102	99	63-123	7	30
Benzo(a)pyrene	52.74 / 50.4	N.D.	52.38	49.92	99	99	50-128	5	30
Indeno(1,2,3-cd)pyrene	52.74 / 50.4	N.D.	52.73	50.27	100	100	52-127	5	30
Dibenz(a,h)anthracene	52.74 / 50.4	N.D.	54.37	51.51	103	102	53-132	5	30
Benzo(g,h,i)perylene	52.74 / 50.4	N.D.	50.78	48.45	96	96	51-124	5	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 106WOLCS	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodimethylamine	50	31.85	NA	64	NA	10-113	NA	NA
Pyridine	50	19.32	NA	39	NA	19-67	NA	NA
2-Picoline	50	31.95	NA	64	NA	41-87	NA	NA
Phenol	50	28.19	NA	56	NA	10-92	NA	NA
Aniline	50	36.42	NA	73	NA	22-92	NA	NA
bis(2-Chloroethyl)ether	50	43.84	NA	88	NA	48-119	NA	NA
2-Chlorophenol	50	44.64	NA	89	NA	47-116	NA	NA
o-Toluidine	50	31.56	NA	63	NA	13-100	NA	NA
Benzyl alcohol	50	45.83	NA	92	NA	50-113	NA	NA
2-Methylphenol	50	45	NA	90	NA	46-113	NA	NA
bis(2-Chloroisopropyl)ether	50	48.4	NA	97	NA	35-128	NA	NA
2,4-Dichlorophenol	50	49.94	NA	100	NA	53-126	NA	NA
Acetophenone	50	46.81	NA	94	NA	53-118	NA	NA
4-Methylphenol	50	45.42	NA	91	NA	42-115	NA	NA
N-Nitroso-di-n-propylamine	50	47.92	NA	96	NA	48-128	NA	NA
Hexachloroethane	50	35.59	NA	71	NA	19-105	NA	NA
Nitrobenzene	50	49.49	NA	99	NA	43-128	NA	NA
Isophorone	50	51.37	NA	103	NA	49-129	NA	NA
2-Nitrophenol	50	47.51	NA	95	NA	58-125	NA	NA
2,4-Dimethylphenol	50	45.1	NA	90	NA	41-103	NA	NA
bis(2-Chloroethoxy)methane	50	48.31	NA	97	NA	54-127	NA	NA
4-Chloroaniline	50	38.1	NA	76	NA	33-106	NA	NA
4-Chloro-3-methylphenol	50	51.49	NA	103	NA	50-130	NA	NA
2-Methylnaphthalene	50	45.83	NA	92	NA	42-120	NA	NA
Hexachlorocyclopentadiene	100	77.2	NA	77	NA	10-104	NA	NA
1,2,4,5-Tetrachlorobenzene	50	45.09	NA	90	NA	30-117	NA	NA
2,4,6-Trichlorophenol	50	51.87	NA	104	NA	61-130	NA	NA
2,4,5-Trichlorophenol	50	53.94	NA	108	NA	59-129	NA	NA
2-Chloronaphthalene	50	43.91	NA	88	NA	41-123	NA	NA
2-Nitroaniline	50	50.48	NA	101	NA	54-133	NA	NA
Dimethylphthalate	50	38.29	NA	77	NA	19-119	NA	NA
1,3-Dinitrobenzene	50	52.46	NA	105	NA	60-118	NA	NA
2,6-Dinitrotoluene	50	51.98	NA	104	NA	57-131	NA	NA
Acenaphthylene	50	54.02	NA	108	NA	67-111	NA	NA
3-Nitroaniline	50	46.98	NA	94	NA	41-123	NA	NA
Acenaphthene	50	50.11	NA	100	NA	49-123	NA	NA
2,4-Dinitrophenol	100	93.96	NA	94	NA	19-140	NA	NA
4-Nitrophenol	50	34.69	NA	69	NA	10-96	NA	NA
2,4-Dinitrotoluene	50	49.19	NA	98	NA	56-128	NA	NA
Dibenzofuran	50	49.52	NA	99	NA	50-124	NA	NA
1-Naphthylamine	100	55.25	NA	55	NA	10-73	NA	NA
2,3,4,6-Tetrachlorophenol	50	54.18	NA	108	NA	60-128	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 106WOLCS	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Naphthylamine	100	52.23	NA	52	NA	10-68	NA	NA
Diethylphthalate	50	45.91	NA	92	NA	42-124	NA	NA
Fluorene	50	49.73	NA	99	NA	48-124	NA	NA
4-Chlorophenyl-phenylether	50	48.46	NA	97	NA	45-124	NA	NA
4-Nitroaniline	50	43.1	NA	86	NA	46-114	NA	NA
4,6-Dinitro-2-methylphenol	50	46.78	NA	94	NA	50-132	NA	NA
N-Nitrosodiphenylamine	50	49.54	NA	99	NA	55-128	NA	NA
NDPA as diphenylamine	50	49.54	NA	99	NA	70-130	NA	NA
4-Bromophenyl-phenylether	50	49.81	NA	100	NA	53-127	NA	NA
Hexachlorobenzene	50	48.25	NA	96	NA	57-123	NA	NA
Pentachlorophenol	50	44.85	NA	90	NA	50-127	NA	NA
Phenanthrene	50	50.42	NA	101	NA	54-122	NA	NA
Anthracene	50	50.65	NA	101	NA	55-126	NA	NA
Di-n-butylphthalate	50	48.13	NA	96	NA	58-119	NA	NA
Fluoranthene	50	53.06	NA	106	NA	61-123	NA	NA
Pyrene	50	49.39	NA	99	NA	54-123	NA	NA
3,3'-Dimethylbenzidine	100	16.74 J	NA	17	NA	10-58	NA	NA
Butylbenzylphthalate	50	45.11	NA	90	NA	40-131	NA	NA
3,3'-Dichlorobenzidine	50	34.34	NA	69	NA	32-106	NA	NA
Benzo(a)anthracene	50	52.76	NA	106	NA	63-124	NA	NA
Chrysene	50	52.29	NA	105	NA	65-124	NA	NA
bis(2-Ethylhexyl)phthalate	50	50.05	NA	100	NA	52-132	NA	NA
Di-n-octylphthalate	50	49.12	NA	98	NA	51-134	NA	NA
Benzo(b)fluoranthene	50	50.39	NA	101	NA	58-127	NA	NA
7,12-Dimethylbenz[a]anthracene	50	51.38	NA	103	NA	52-122	NA	NA
Benzo(k)fluoranthene	50	50.5	NA	101	NA	63-123	NA	NA
Benzo(a)pyrene	50	52.26	NA	105	NA	50-128	NA	NA
Indeno(1,2,3-cd)pyrene	50	49.79	NA	100	NA	52-127	NA	NA
Dibenz(a,h)anthracene	50	51.23	NA	102	NA	53-132	NA	NA
Benzo(g,h,i)perylene	50	49.48	NA	99	NA	51-124	NA	NA

LCS: 106WOLCS2 LCSD: 106WOLCSD2	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosomethylethylamine	50	37.45	40.37	75	81	34-106	8	30
Methyl methanesulfonate	50	33.85	35.85	68	72	34-99	6	30
N-Nitrosodiethylamine	50	40.88	44.61	82	89	39-117	9	30
Ethyl methanesulfonate	50	40.9	43.45	82	87	38-117	6	30
N-Nitrosopyrrolidine	50	42.22	44.88	84	90	36-117	6	30
N-Nitrosomorpholine	50	40.06	42.05	80	84	37-103	5	30
N-Nitrosopiperidine	50	42.38	45.25	85	91	38-120	7	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 106WOLCS2 LCSD: 106WOLCSD2	Batch: **18106WAO026** (Sample number(s): 9558695-9558700, 9558702-9558703)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
O,O,O-Triethylphosphorothioate	50	40.83	44.31	82	89	38-122	8	30
a,a-Dimethylphenethylamine	50	93	113.59	186 *	227 *	70-130	20	30
2,6-Dichlorophenol	50	43.11	46.5	86	93	40-125	8	30
Hexachloropropene	50	26.99	28.47	54	57	10-105	5	30
N-Nitrosodi-n-butylamine	50	39.1	41.29	78	83	33-113	5	30
1,4-Phenylenediamine	1000	203.26 J	179.47 J	20 *	18 *	70-130	12	30
Safrole	50	40.54	42.62	81	85	37-117	5	30
Isosafrole	50	44.14	47.03	88	94	48-141	6	30
1,4-Naphthoquinone	100	8.98 J	14.94 J	9 *	15 *	70-130	50 *	30
Pentachlorobenzene	50	42.87	43.75	86	87	30-121	2	30
Thionazin	50	44.46	47.61	89	95	32-131	7	30
5-Nitro-o-toluidine	50	33.44	33.64	67	67	26-103	1	30
1,3,5-Trinitrobenzene	50	29.64	32.9	59	66	10-100	10	30
Phorate	50	60.89	63.31	122	127	30-134	4	30
Phenacetin	50	49.77	51.77	100	104	38-134	4	30
Diallate trans/cis	50	46.11	47.66	92	95	36-123	3	30
Dimethoate	50	27.35	28.49	55	57	10-94	4	30
4-Aminobiphenyl	50	23.07	21.82	46	44	10-126	6	30
Pentachloronitrobenzene	50	45.15	47.26	90	95	41-132	5	30
Pronamide	50	49.26	49.74	99	99	38-134	1	30
Disulfoton	100	106.99	109.75	107	110	30-156	3	30
Methyl parathion	50	43.71	43.72	87	87	31-125	0	30
Parathion	50	46.15	49.23	92	98	40-140	6	30
4-Nitroquinoline-1-oxide	500	438.06	462.95	88	93	31-111	6	30
Methapyrilene	400	459.96	489.47	115	122	18-159	6	30
Isodrin	50	46.66	48.69	93	97	45-130	4	30
Aramite	50	8.03 J	10.49 J	16 *	21 *	70-130	27	30
p-Dimethylaminoazobenzene	50	51.99	57.37	104	115	50-145	10	30
Chlorobenzilate	50	33.79	36.63	68	73	10-124	8	30
Famphur	100	9.84 J	9.73 J	10 *	10 *	70-130	1	20
Kepone	100	27.73 J	27.17 J	28 *	27 *	70-130	2	30
2-Acetylaminofluorene	50	47.35	51.3	95	103	42-146	8	30
3-Methylcholanthrene	50	50.97	54.99	102	110	50-163	8	30

LCS: 106WYLCS	Batch: **18106WAY026** (Sample number(s): 9558704-9558708)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	51.98	NA	104	NA	57-131	NA	NA
2,4-Dinitrotoluene	50	49.19	NA	98	NA	56-128	NA	NA
Diethylphthalate	50	45.91	NA	92	NA	42-124	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 113WNLCS	Batch: **18113WAN026** (Sample number(s): 9558698-9558700, 9558702)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodimethylamine	50	28.83	NA	58	NA	10-113	NA	NA
Pyridine	50	20.16	NA	40	NA	19-67	NA	NA
2-Picoline	50	31.31	NA	63	NA	41-87	NA	NA
Phenol	50	23.92	NA	48	NA	10-92	NA	NA
Aniline	50	34.33	NA	69	NA	22-92	NA	NA
bis(2-Chloroethyl)ether	50	45.64	NA	91	NA	48-119	NA	NA
2-Chlorophenol	50	44.52	NA	89	NA	47-116	NA	NA
o-Toluidine	50	29.32	NA	59	NA	13-100	NA	NA
Benzyl alcohol	50	43.96	NA	88	NA	50-113	NA	NA
2-Methylphenol	50	42.94	NA	86	NA	46-113	NA	NA
bis(2-Chloroisopropyl)ether	50	50.89	NA	102	NA	35-128	NA	NA
2,4-Dichlorophenol	50	48.19	NA	96	NA	53-126	NA	NA
Acetophenone	50	48.41	NA	97	NA	53-118	NA	NA
4-Methylphenol	50	40.46	NA	81	NA	42-115	NA	NA
N-Nitroso-di-n-propylamine	50	50.23	NA	100	NA	48-128	NA	NA
Hexachloroethane	50	31.19	NA	62	NA	19-105	NA	NA
Nitrobenzene	50	49.79	NA	100	NA	43-128	NA	NA
Isophorone	50	51.43	NA	103	NA	49-129	NA	NA
2-Nitrophenol	50	48.36	NA	97	NA	58-125	NA	NA
2,4-Dimethylphenol	50	42.69	NA	85	NA	41-103	NA	NA
bis(2-Chloroethoxy)methane	50	48.11	NA	96	NA	54-127	NA	NA
4-Chloroaniline	50	35.68	NA	71	NA	33-106	NA	NA
4-Chloro-3-methylphenol	50	48.7	NA	97	NA	50-130	NA	NA
2-Methylnaphthalene	50	43.52	NA	87	NA	42-120	NA	NA
Hexachlorocyclopentadiene	100	63.51	NA	64	NA	10-104	NA	NA
1,2,4,5-Tetrachlorobenzene	50	40.2	NA	80	NA	30-117	NA	NA
2,4,6-Trichlorophenol	50	51.77	NA	104	NA	61-130	NA	NA
2,4,5-Trichlorophenol	50	52.44	NA	105	NA	59-129	NA	NA
2-Chloronaphthalene	50	43.11	NA	86	NA	41-123	NA	NA
2-Nitroaniline	50	50.42	NA	101	NA	54-133	NA	NA
Dimethylphthalate	50	37.24	NA	74	NA	19-119	NA	NA
1,3-Dinitrobenzene	50	51.01	NA	102	NA	60-118	NA	NA
2,6-Dinitrotoluene	50	51.02	NA	102	NA	57-131	NA	NA
Acenaphthylene	50	52.64	NA	105	NA	67-111	NA	NA
3-Nitroaniline	50	46.61	NA	93	NA	41-123	NA	NA
Acenaphthene	50	48.9	NA	98	NA	49-123	NA	NA
2,4-Dinitrophenol	100	85.56	NA	86	NA	19-140	NA	NA
4-Nitrophenol	50	25.57 J	NA	51	NA	10-96	NA	NA
2,4-Dinitrotoluene	50	49.3	NA	99	NA	56-128	NA	NA
Dibenzofuran	50	48.44	NA	97	NA	50-124	NA	NA
1-Naphthylamine	100	52.87	NA	53	NA	10-73	NA	NA
2,3,4,6-Tetrachlorophenol	50	50.52	NA	101	NA	60-128	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 113WNLCS	Batch: **18113WAN026** (Sample number(s): 9558698-9558700, 9558702)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2-Naphthylamine	100	52.98	NA	53	NA	10-68	NA	NA
Diethylphthalate	50	45.62	NA	91	NA	42-124	NA	NA
Fluorene	50	49.5	NA	99	NA	48-124	NA	NA
4-Chlorophenyl-phenylether	50	47.15	NA	94	NA	45-124	NA	NA
4-Nitroaniline	50	42.71	NA	85	NA	46-114	NA	NA
4,6-Dinitro-2-methylphenol	50	46.78	NA	94	NA	50-132	NA	NA
N-Nitrosodiphenylamine	50	49.46	NA	99	NA	55-128	NA	NA
NDPA as diphenylamine	50	49.46	NA	99	NA	70-130	NA	NA
4-Bromophenyl-phenylether	50	48.48	NA	97	NA	53-127	NA	NA
Hexachlorobenzene	50	47.68	NA	95	NA	57-123	NA	NA
Pentachlorophenol	50	39.8	NA	80	NA	50-127	NA	NA
Phenanthrene	50	49.25	NA	99	NA	54-122	NA	NA
Anthracene	50	49.99	NA	100	NA	55-126	NA	NA
Di-n-butylphthalate	50	47.97	NA	96	NA	58-119	NA	NA
Fluoranthene	50	52.38	NA	105	NA	61-123	NA	NA
Pyrene	50	48.58	NA	97	NA	54-123	NA	NA
3,3'-Dimethylbenzidine	100	15.97 J	NA	16	NA	10-58	NA	NA
Butylbenzylphthalate	50	45.81	NA	92	NA	40-131	NA	NA
3,3'-Dichlorobenzidine	50	36.95	NA	74	NA	32-106	NA	NA
Benzo(a)anthracene	50	53.13	NA	106	NA	63-124	NA	NA
Chrysene	50	52.97	NA	106	NA	65-124	NA	NA
bis(2-Ethylhexyl)phthalate	50	50.14	NA	100	NA	52-132	NA	NA
Di-n-octylphthalate	50	47.59	NA	95	NA	51-134	NA	NA
Benzo(b)fluoranthene	50	48.88	NA	98	NA	58-127	NA	NA
7,12-Dimethylbenz[a]anthracene	50	49.89	NA	100	NA	52-122	NA	NA
Benzo(k)fluoranthene	50	50.21	NA	100	NA	63-123	NA	NA
Benzo(a)pyrene	50	50.67	NA	101	NA	50-128	NA	NA
Indeno(1,2,3-cd)pyrene	50	43.06	NA	86	NA	52-127	NA	NA
Dibenz(a,h)anthracene	50	45.58	NA	91	NA	53-132	NA	NA
Benzo(g,h,i)perylene	50	40.95	NA	82	NA	51-124	NA	NA

LCS: 113WNLCS1 LCSD: 113WNLCSD1	Batch: **18113WAN026** (Sample number(s): 9558698-9558700, 9558702)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosomethylethylamine	50	42.59	44.25	85	88	34-106	4	30
Methyl methanesulfonate	50	37.61	39	75	78	34-99	4	30
N-Nitrosodiethylamine	50	46.09	46.51	92	93	39-117	1	30
Ethyl methanesulfonate	50	44.69	44.46	89	89	38-117	1	30
N-Nitrosopyrrolidine	50	47.61	46.94	95	94	36-117	1	30
N-Nitrosomorpholine	50	44.27	44.47	89	89	37-103	0	30
N-Nitrosopiperidine	50	46.83	46.14	94	92	38-120	1	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 113WNLCS1 LCSD: 113WNLCSD1 **Analyte**	Batch: **18113WAN026** (Sample number(s): 9558698-9558700, 9558702) **Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
O,O,O-Triethylphosphorothioate	50	45.85	45.82	92	92	38-122	0	30
a,a-Dimethylphenethylamine	50	116.46	126.32	233 *	253 *	70-130	8	30
2,6-Dichlorophenol	50	45.81	43.24	92	86	40-125	6	30
Hexachloropropene	50	39.13	41.83	78	84	10-105	7	30
N-Nitrosodi-n-butylamine	50	42.33	42.02	85	84	33-113	1	30
1,4-Phenylenediamine	1000	191.47 J	189.6 J	19 *	19 *	70-130	1	30
Safrole	50	44.24	45.11	88	90	37-117	2	30
Isosafrole	50	48.64	47.45	97	95	48-141	2	30
1,4-Naphthoquinone	100	3.20 J	1.12 J	3 *	1 *	70-130	96 *	30
Pentachlorobenzene	50	47.92	47.87	96	96	30-121	0	30
Thionazin	50	47.42	47.43	95	95	32-131	0	30
5-Nitro-o-toluidine	50	33.66	31.88	67	64	26-103	5	30
1,3,5-Trinitrobenzene	50	28.1	23.99	56	48	10-100	16	30
Phorate	50	61.54	57.5	123	115	30-134	7	30
Phenacetin	50	51.6	50.74	103	101	38-134	2	30
Diallate trans/cis	50	47.46	47.01	95	94	36-123	1	30
Dimethoate	50	26.48	21.8	53	44	10-94	19	30
4-Aminobiphenyl	50	22.77	20.21	46	40	10-126	12	30
Pentachloronitrobenzene	50	49.18	45.62	98	91	41-132	8	30
Pronamide	50	51.34	50.89	103	102	38-134	1	30
Disulfoton	100	108.21	106.08	108	106	30-156	2	30
Methyl parathion	50	39.61	37.35	79	75	31-125	6	30
Parathion	50	50.19	48.69	100	97	40-140	3	30
4-Nitroquinoline-1-oxide	500	392.96	384.45	79	77	31-111	2	30
Methapyrilene	400	428.91	447.04	107	112	18-159	4	30
Isodrin	50	49.5	47.69	99	95	45-130	4	30
Aramite	50	15.75	12.01 J	32 *	24 *	70-130	27	30
p-Dimethylaminoazobenzene	50	55.56	55.57	111	111	50-145	0	30
Chlorobenzilate	50	40.69	36.53	81	73	10-124	11	30
Famphur	100	25.05 J	27.22 J	25 *	27 *	70-130	8	20
Kepone	100	33.2 J	34.91 J	33 *	35 *	70-130	5	30
2-Acetylaminofluorene	50	53.97	53.55	108	107	42-146	1	30
3-Methylcholanthrene	50	54.14	53.01	108	106	50-163	2	30

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0410z.d DFTPP Injection Date: 04/11/18

Instrument ID: HP20296 DFTPP Injection Time: 07:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.0
68	Less than 2.0% of mass 69	0.74 (1.64)1
69	Mass 69 relative abundance	45.4
70	Less than 2.0% of mass 69	0.27 (0.59)1
127	10.0 - 80.00% of mass 198	48.3
197	Less than 2.0% of mass 198	0.37
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.7
275	10.0 - 60.0% of mass 198	21.7
365	Greater than 1.00% of mass 198	2.06
441	Present, and less than mass 443	9.78
442	Greater than 50.00% of mass 198	64.0
443	15.00 - 24.00% of mass 442	12.0 (18.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0411a.d	04/11/18	07:59
02	rvSTD0968 - SSTD.125	ld0412.d	04/11/18	09:33
03	rvSTD0968 - SSTD30	ld0413.d	04/11/18	10:01
04	rvSTD0968 - SSTD20	ld0414.d	04/11/18	10:28
05	rvSTD0968 - SSTD12.5	ld0415.d	04/11/18	10:56
06	rvSTD0968 - SSTD3.75	ld0416.d	04/11/18	11:24
07	rvSTD0968 - SSTD1.25	ld0417.d	04/11/18	11:52
08	rvSTD0968 - SSTD.25	ld0418.d	04/11/18	12:20
09	rvMDL0968 - SSTD0.125	ld0419.d	04/11/18	12:47
10	rvPAHMDL0968 - SSTD0.025	ld0420.d	04/11/18	13:15
11	rvIVC0648 - SSTD12.5	ld0421.d	04/11/18	13:43
12	rvBASICV0648 - SSTD12.5	ld0422.d	04/11/18	14:11
13	ms1808526A - SSTD12.5	ld0423.d	04/11/18	14:39

FORM V SV

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0780.d DFTPP Injection Date: 04/19/18

Instrument ID: HP20296 DFTPP Injection Time: 18:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.5
68	Less than 2.0% of mass 69	0.78 (1.64)1
69	Mass 69 relative abundance	47.5
70	Less than 2.0% of mass 69	0.27 (0.57)1
127	10.0 - 80.00% of mass 198	48.2
197	Less than 2.0% of mass 198	0.79
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.51
275	10.0 - 60.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.35
441	Present, and less than mass 443	9.61
442	Greater than 50.00% of mass 198	62.2
443	15.00 - 24.00% of mass 442	11.6 (18.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0781.d	04/19/18	19:38
02	rvABC0538 - SSTD30	ld0782.d	04/19/18	20:22
03	rvABC0538 - SSTD20	ld0783.d	04/19/18	20:50
04	rvABC0538 - SSTD12.5	ld0784.d	04/19/18	21:18
05	rvABC0538 - SSTD7.5	ld0785.d	04/19/18	21:46
06	rvABC0538 - SSTD3.75	ld0786.d	04/19/18	22:13
07	rvABC0538 - SSTD1.25	ld0787.d	04/19/18	22:41
08	rvABC0538 - SSTD1.25	ld0787a.d	04/19/18	22:41
09	rvABC0538 - SSTD006	ld0788.d	04/19/18	23:09
10	rvPDA0448 - SSTD30	ld0789.d	04/19/18	23:36
11	rvPDA0448 - SSTD20	ld0790.d	04/20/18	00:04
12	rvPDA0448 - SSTD12.5	ld0791.d	04/20/18	00:32
13	rvPDA0448 - SSTD7.5	ld0792.d	04/20/18	01:00
14	rvPDA0448 - SSTD3.75	ld0793.d	04/20/18	01:27
15	rvPDA0448 - SSTD3.75	ld0793a.d	04/20/18	01:27
16	SBLKWK106	ld0794.d	04/20/18	01:55
17	106WKLCS	ld0795.d	04/20/18	02:23
18	9554908	ld0798.d	04/20/18	02:50

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0780.d DFTPP Injection Date: 04/19/18

Instrument ID: HP20296 DFTPP Injection Time: 18:55

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.5
68	Less than 2.0% of mass 69	0.78 (1.64)1
69	Mass 69 relative abundance	47.5
70	Less than 2.0% of mass 69	0.27 (0.57)1
127	10.0 - 80.00% of mass 198	48.2
197	Less than 2.0% of mass 198	0.79
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.51
275	10.0 - 60.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.35
441	Present, and less than mass 443	9.61
442	Greater than 50.00% of mass 198	62.2
443	15.00 - 24.00% of mass 442	11.6 (18.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9554908MSD	ld0796.d	04/20/18	03:18
20	9554908MS	ld0797.d	04/20/18	03:46
21	9554911	ld0799.d	04/20/18	04:13
22	9554914	ld0800.d	04/20/18	04:41
23	9554917	ld0801.d	04/20/18	05:09
24	9554920	ld0802.d	04/20/18	05:37
25	RVSTD0968	ld0803.d	04/20/18	06:04

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0810.d DFTPP Injection Date: 04/20/18

Instrument ID: HP20296 DFTPP Injection Time: 06:42

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.8
68	Less than 2.0% of mass 69	0.62 (1.36)1
69	Mass 69 relative abundance	45.5
70	Less than 2.0% of mass 69	0.25 (0.54)1
127	10.0 - 80.00% of mass 198	46.9
197	Less than 2.0% of mass 198	1.37
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.8
275	10.0 - 60.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.61
441	Present, and less than mass 443	10.8
442	Greater than 50.00% of mass 198	69.5
443	15.00 - 24.00% of mass 442	13.3 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD125	ld0811a.d	04/20/18	07:43
02	RVPDA0448 - SSTD125	ld0812.d	04/20/18	08:20
03	RVABC0538 - SSTD125	ld0813.d	04/20/18	08:48
04	RVAP1108 - SSTD12.5	ld0813o.d	04/20/18	11:24
05	SBLKWO106	ld0814o.d	04/20/18	11:51
06	SBLKWY106	ld0814y.d	04/20/18	11:51
07	SBLKWZ106	ld0814z.d	04/20/18	11:51
08	106WOLCS	ld0815o.d	04/20/18	12:19
09	106WYLCS	ld0815y.d	04/20/18	12:19
10	106WZLCS	ld0815z.d	04/20/18	12:19
11	9558698	ld0818o.d	04/20/18	13:15
12	106WYUS	ld0818y.d	04/20/18	13:15
13	106WZUS	ld0818z.d	04/20/18	13:15
14	9558699MS	ld0819o.d	04/20/18	13:43
15	106WYMSMS	ld0819y.d	04/20/18	13:43
16	106WZMSMS	ld0819z.d	04/20/18	13:43
17	9558700MSD	ld0820o.d	04/20/18	14:11
18	106WYMSDMSD	ld0820y.d	04/20/18	14:11

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0810.d DFTPP Injection Date: 04/20/18

Instrument ID: HP20296 DFTPP Injection Time: 06:42

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.8
68	Less than 2.0% of mass 69	0.62 (1.36)1
69	Mass 69 relative abundance	45.5
70	Less than 2.0% of mass 69	0.25 (0.54)1
127	10.0 - 80.00% of mass 198	46.9
197	Less than 2.0% of mass 198	1.37
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.8
275	10.0 - 60.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.61
441	Present, and less than mass 443	10.8
442	Greater than 50.00% of mass 198	69.5
443	15.00 - 24.00% of mass 442	13.3 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	106WZMSDMSD	ld0820z.d	04/20/18	14:11
20	9558695	ld0821.d	04/20/18	14:38
21	9558696	ld0822.d	04/20/18	15:06
22	9558697	ld0823.d	04/20/18	15:34
23	9558702	ld0824.d	04/20/18	16:02
24	9558703	ld0825.d	04/20/18	16:29
25	9558704	ld0826.d	04/20/18	16:57
26	9558705	ld0827.d	04/20/18	17:25
27	9558706	ld0828.d	04/20/18	17:53
28	9558707	ld0829.d	04/20/18	18:20

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0850.d DFTPP Injection Date: 04/20/18

Instrument ID: HP20296 DFTPP Injection Time: 19:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.2
68	Less than 2.0% of mass 69	0.82 (1.76)1
69	Mass 69 relative abundance	46.6
70	Less than 2.0% of mass 69	0.25 (0.53)1
127	10.0 - 80.00% of mass 198	48.4
197	Less than 2.0% of mass 198	0.99
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.92
275	10.0 - 60.0% of mass 198	23.4
365	Greater than 1.00% of mass 198	2.59
441	Present, and less than mass 443	11.4
442	Greater than 50.00% of mass 198	70.7
443	15.00 - 24.00% of mass 442	13.9 (19.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0851.d	04/20/18	19:55
02	SBLKWI109	ld0852.d	04/20/18	21:12
03	109WILCS	ld0853.d	04/20/18	21:40
04	109WILCSD	ld0854.d	04/20/18	22:07
05	SBLKWJ108	ld0855.d	04/20/18	22:35
06	108WJLCS	ld0856.d	04/20/18	23:03
07	108WJLCSD	ld0857.d	04/20/18	23:30
08	9557112	ld0860.d	04/21/18	00:53
09	9563717	ld0861.d	04/21/18	01:21
10	9564825	ld0862.d	04/21/18	01:48
11	9564826	ld0863.d	04/21/18	02:16
12	9565542	ld0864.d	04/21/18	02:44
13	9565543	ld0865.d	04/21/18	03:11
14	RVSTD0968	ld0866.d	04/21/18	03:39
15	9558708	ld0867.d	04/21/18	04:06
16	9557948	ld0868.d	04/21/18	04:34

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0870z.d DFTPP Injection Date: 04/23/18

Instrument ID: HP20296 DFTPP Injection Time: 09:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	50.0
68	Less than 2.0% of mass 69	0.91 (1.89)1
69	Mass 69 relative abundance	48.0
70	Less than 2.0% of mass 69	0.27 (0.57)1
127	10.0 - 80.00% of mass 198	48.3
197	Less than 2.0% of mass 198	0.47
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.82
275	10.0 - 60.0% of mass 198	22.2
365	Greater than 1.00% of mass 198	2.41
441	Present, and less than mass 443	9.79
442	Greater than 50.00% of mass 198	58.9
443	15.00 - 24.00% of mass 442	12.1 (20.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0871.d	04/23/18	10:00
02	RVPDA0448 - SSTD125	ld0872.d	04/23/18	10:43
03	RVABC0538 - SSTD125	ld0873.d	04/23/18	11:11
04	RVAAP1108 - SSTD12.5	ld0874.d	04/23/18	11:39
05	106WOLCS2	ld0875.d	04/23/18	12:24
06	106WOLCSD2	ld0876.d	04/23/18	12:52
07	SBLKWI110	ld0877.d	04/23/18	13:20
08	110WILCS	ld0878.d	04/23/18	13:48
09	110WILCSD	ld0879.d	04/23/18	14:15
10	SBLKWD110	ld0880.d	04/23/18	14:43
11	110WDLCS	ld0881.d	04/23/18	15:11
12	110WDLCSD	ld0882.d	04/23/18	15:39
13	9565150	ld0883.d	04/23/18	16:07
14	9565153	ld0884.d	04/23/18	16:34
15	9566472	ld0885.d	04/23/18	17:02
16	9567319	ld0886.d	04/23/18	17:30
17	9567320	ld0887.d	04/23/18	17:58
18	9567321	ld0888.d	04/23/18	18:26

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0870z.d DFTPP Injection Date: 04/23/18

Instrument ID: HP20296 DFTPP Injection Time: 09:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	50.0
68	Less than 2.0% of mass 69	0.91 (1.89)1
69	Mass 69 relative abundance	48.0
70	Less than 2.0% of mass 69	0.27 (0.57)1
127	10.0 - 80.00% of mass 198	48.3
197	Less than 2.0% of mass 198	0.47
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.82
275	10.0 - 60.0% of mass 198	22.2
365	Greater than 1.00% of mass 198	2.41
441	Present, and less than mass 443	9.79
442	Greater than 50.00% of mass 198	58.9
443	15.00 - 24.00% of mass 442	12.1 (20.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9567322	ld0889.d	04/23/18	18:54

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0980.d DFTPP Injection Date: 04/24/18

Instrument ID: HP20296 DFTPP Injection Time: 19:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.2
68	Less than 2.0% of mass 69	0.76 (1.63)1
69	Mass 69 relative abundance	46.9
70	Less than 2.0% of mass 69	0.25 (0.54)1
127	10.0 - 80.00% of mass 198	46.9
197	Less than 2.0% of mass 198	1.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.76
275	10.0 - 60.0% of mass 198	21.4
365	Greater than 1.00% of mass 198	2.23
441	Present, and less than mass 443	9.71
442	Greater than 50.00% of mass 198	59.9
443	15.00 - 24.00% of mass 442	12.1 (20.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD0968 - SSTD7.5	ld0981.d	04/24/18	19:41
02	RVABC0538 - SSTD125	ld0982.d	04/24/18	20:20
03	RVPDA0448 - SSTD125	ld0983.d	04/24/18	20:48
04	AAP1108 - SSTD12.5	ld0984.d	04/24/18	21:15
05	SBLKWO113	ld0985.d	04/24/18	21:57
06	113WOLCS	ld0986.d	04/24/18	22:25
07	113WOLCSD	ld0987.d	04/24/18	22:52
08	SBLKWN113	ld0988.d	04/24/18	23:20
09	113WNLCS	ld0989.d	04/24/18	23:48
10	113WNLCS1	ld0990.d	04/25/18	00:16
11	113WNLCSD1	ld0991.d	04/25/18	00:44
12	SBLKWB113	ld0992.d	04/25/18	01:11
13	113WBLCS	ld0993.d	04/25/18	01:39
14	113WBLCSD	ld0994.d	04/25/18	02:07
15	9567427	ld0995.d	04/25/18	02:35
16	RVSTD0968	ld1003.d	04/25/18	03:03
17	9558698RE	ld0996.d	04/25/18	03:31
18	9558699RE	ld0997.d	04/25/18	03:58

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ld0980.d DFTPP Injection Date: 04/24/18

Instrument ID: HP20296 DFTPP Injection Time: 19:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.2
68	Less than 2.0% of mass 69	0.76 (1.63)1
69	Mass 69 relative abundance	46.9
70	Less than 2.0% of mass 69	0.25 (0.54)1
127	10.0 - 80.00% of mass 198	46.9
197	Less than 2.0% of mass 198	1.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.76
275	10.0 - 60.0% of mass 198	21.4
365	Greater than 1.00% of mass 198	2.23
441	Present, and less than mass 443	9.71
442	Greater than 50.00% of mass 198	59.9
443	15.00 - 24.00% of mass 442	12.1 (20.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9558700MSDSD	ld0998.d	04/25/18	04:26
20	9558702RE	ld0999.d	04/25/18	04:54
21	9569768	ld1000.d	04/25/18	05:22
22	9569770	ld1001.d	04/25/18	05:50
23	9569771	ld1002.d	04/25/18	06:18

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

Calibration Times: 07:59 12:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.711	0.564	0.661	0.648	0.660	0.678	0.654	8	AVG
N-Nitrosodimethylamine			0.917	0.920	1.011	1.025	1.040	1.059	0.995	6	AVG
Pyridine			1.781	1.662	1.751	1.779	1.824	1.859	1.776	4	AVG
2-Picoline			1.757	1.682	1.782	1.829	1.862	1.863	1.796	4	AVG
N-Nitrosomethylethylamine			0.707	0.664	0.720	0.733	0.749	0.745	0.720	4	AVG
Methyl methanesulfonate			0.866	0.821	0.870	0.883	0.890	0.901	0.872	3	AVG
N-Nitrosodiethylamine		0.473	0.663	0.647	0.702	0.718	0.739	0.731	0.668	14	AVG
Ethyl methanesulfonate		0.639	0.741	0.696	0.735	0.757	0.760	0.761	0.727	6	AVG
Benzaldehyde			1.299	1.300	1.416	1.382	1.398	1.356	1.358	4	AVG
Phenol		1.590	2.153	2.045	2.134	2.184	2.189	2.172	2.067	10	AVG
Aniline		1.732	2.461	2.344	2.497	2.536	2.567	2.545	2.383	12	AVG
a-methylstyrene			0.494	0.526	0.488	0.520	0.542	0.554	0.521	5	AVG
bis(2-Chloroethyl)ether		1.153	1.628	1.540	1.619	1.612	1.621	1.597	1.539	11	AVG
2-Chlorophenol		0.968	1.404	1.309	1.411	1.434	1.449	1.415	1.341	13	AVG
1,3-Dichlorobenzene		1.062	1.600	1.532	1.571	1.616	1.616	1.600	1.514	13	AVG
1,4-Dichlorobenzene		1.105	1.634	1.533	1.575	1.636	1.627	1.615	1.532	13	AVG
Benzyl alcohol			0.819	0.882	0.840	0.914	0.953	0.963	0.895	7	AVG
1,2-Dichlorobenzene		1.085	1.521	1.440	1.519	1.563	1.558	1.527	1.459	12	AVG
Indene			2.009	2.162	2.020	2.147	2.221	2.267	2.138	5	AVG
2-Methylphenol		1.055	1.370	1.300	1.356	1.390	1.399	1.387	1.322	9	AVG
2,2'-oxybis(1-Chloropropane)		1.745	2.374	2.155	2.223	2.270	2.273	2.250	2.184	9	AVG
bis(2-Chloroisopropyl)ether		1.745	2.374	2.155	2.223	2.270	2.273	2.250	2.184	9	AVG
N-Nitrosopyrrolidine		0.570	0.726	0.688	0.738	0.785	0.783	0.779	0.724	11	AVG
Acetophenone		1.168	2.050	2.010	2.224	2.222	2.203	2.238	2.017	19	AVG
4-Methylphenol		1.116	1.441	1.379	1.446	1.476	1.461	1.460	1.397	9	AVG
Total Cresols		1.085	1.405	1.340	1.401	1.433	1.430	1.423	1.360	9	AVG
N-Nitroso-di-n-propylamine		0.944	1.186	1.124	1.180	1.204	1.203	1.205	1.150	8	AVG
N-Nitrosomorpholine			0.959	0.912	0.970	0.983	0.973	0.968	0.961	3	AVG
o-Toluidine		1.807	2.484	2.324	2.415	2.470	2.461	2.411	2.339	10	AVG
Hexachloroethane			0.663	0.627	0.648	0.663	0.664	0.654	0.653	2	AVG
Nitrobenzene		0.336	0.456	0.433	0.455	0.472	0.462	0.465	0.440	11	AVG
N-Nitrosopiperidine		0.150	0.180	0.175	0.183	0.192	0.192	0.194	0.181	8	AVG
Isophorone		0.623	0.772	0.747	0.779	0.819	0.818	0.824	0.769	9	AVG
2-Nitrophenol		0.127	0.176	0.173	0.181	0.196	0.194	0.197	0.178	14	AVG
2,4-Dimethylphenol		0.304	0.392	0.370	0.393	0.405	0.403	0.400	0.381	9	AVG
O,O,O-Triethylphosphorothioat			0.194	0.179	0.185	0.191	0.192	0.191	0.189	3	AVG
bis(2-Chloroethoxy)methane		0.426	0.513	0.492	0.505	0.522	0.516	0.523	0.500	7	AVG
Benzoic acid			0.127	0.183	0.185	0.232	0.257	0.261	0.207	25	1STDEG
2,4-Dichlorophenol		0.225	0.302	0.286	0.307	0.322	0.318	0.317	0.297	11	AVG
1,2,4-Trichlorobenzene		0.260	0.346	0.322	0.337	0.353	0.348	0.347	0.331	10	AVG
Naphthalene	0.874	0.851	1.121	1.031	1.079	1.110	1.103	1.096	1.033	11	AVG
4-Chloroaniline		0.353	0.430	0.408	0.426	0.452	0.442	0.441	0.422	8	AVG
2,6-Dichlorophenol		0.238	0.295	0.289	0.301	0.314	0.311	0.309	0.294	9	AVG
Hexachloropropene			0.237	0.224	0.237	0.249	0.244	0.245	0.239	4	AVG
Hexachlorobutadiene		0.150	0.212	0.200	0.209	0.210	0.211	0.211	0.200	11	AVG
Quinoline			0.650	0.626	0.641	0.682	0.676	0.675	0.658	3	AVG
Caprolactam			0.092	0.087	0.095	0.098	0.092	0.094	0.093	4	AVG
N-Nitrosodi-n-butylamine			0.277	0.275	0.286	0.372	0.366	0.371	0.324	15	AVG
4-Chloro-3-methylphenol		0.250	0.324	0.319	0.335	0.351	0.350	0.349	0.326	11	AVG
Safrole			0.276	0.265	0.272	0.286	0.282	0.282	0.277	3	AVG
2-Methylnaphthalene	0.580	0.571	0.754	0.685	0.707	0.740	0.728	0.727	0.686	10	AVG
1-Methylnaphthalene	0.566	0.549	0.666	0.623	0.648	0.666	0.662	0.658	0.630	7	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

Calibration Times: 07:59 12:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.378	0.374	0.408	0.420	0.427	0.420	0.404	6	AVG
1,2,4,5-Tetrachlorobenzene		0.597	0.722	0.658	0.683	0.701	0.711	0.689	0.680	6	AVG
cis-Isosafrole			0.590	0.547	0.587	0.600	0.636		0.592	5	AVG
2,4,6-Trichlorophenol		0.323	0.414	0.412	0.436	0.455	0.475	0.474	0.427	12	AVG
2,4,5-Trichlorophenol		0.319	0.466	0.443	0.468	0.485	0.485	0.471	0.448	13	AVG
trans-Isosafrole			0.641	0.603	0.625	0.647	0.668		0.637	4	AVG
Isosafrole			0.632	0.593	0.618	0.639	0.662		0.629	4	AVG
1,1'-Biphenyl		1.061	1.764	1.590	1.721	1.689	1.693	1.703	1.603	15	AVG
2-Chloronaphthalene		1.126	1.471	1.356	1.331	1.343	1.433	1.477	1.362	9	AVG
1-Chloronaphthalene		1.184	1.331	1.225	1.270	1.319	1.309	1.184	1.260	5	AVG
Diphenyl ether		0.798	0.938	0.880	0.896	0.914	0.933	0.908	0.895	5	AVG
2-Nitroaniline		0.315	0.385	0.383	0.408	0.430	0.438	0.432	0.399	11	AVG
1,4-Naphthoquinone			0.500	0.505	0.534	0.564	0.572	0.555	0.538	6	AVG
1,4-Dinitrobenzene			0.184	0.191	0.228	0.218	0.225	0.225	0.212	9	AVG
Dimethylphthalate			1.590	1.494	1.507	1.555	1.567	1.443	1.526	4	AVG
1,3-Dinitrobenzene			0.208	0.220	0.202	0.240	0.252	0.239	0.227	9	AVG
2,6-Dinitrotoluene		0.239	0.319	0.323	0.334	0.348	0.357	0.350	0.324	12	AVG
Acenaphthylene	1.622	1.596	2.001	1.883	1.962	2.022	2.059	2.003	1.894	10	AVG
3-Nitroaniline		0.238	0.333	0.339	0.349	0.367	0.383	0.381	0.341	15	AVG
Acenaphthene	1.323	1.225	1.414	1.314	1.338	1.376	1.401	1.352	1.343	4	AVG
2,4-Dinitrophenol				0.163	0.179	0.205	0.218	0.209	0.195	12	AVG
4-Nitrophenol				0.220	0.235	0.249	0.254	0.246	0.241	6	AVG
Pentachlorobenzene		0.495	0.577	0.543	0.557	0.571	0.583	0.558	0.555	5	AVG
2,4-Dinitrotoluene			0.427	0.429	0.442	0.465	0.481	0.451	0.449	5	AVG
2,4_2,6-Dinitrotoluenes		0.275	0.373	0.376	0.388	0.406	0.419	0.400	0.377	13	AVG
Dibenzofuran		1.705	1.979	1.824	1.875	1.907	1.920	1.848	1.865	5	AVG
1-Naphthylamine				1.253	1.266	1.350	1.393	1.374	1.327	5	AVG
2,3,4,6-Tetrachlorophenol		0.238	0.344	0.351	0.357	0.376	0.391	0.385	0.349	15	AVG
2-Naphthylamine				1.167	1.168	1.286	1.330	1.337	1.258	7	AVG
Diethylphthalate			1.532	1.419	1.497	1.544	1.547	1.474	1.502	3	AVG
Thionazin			0.256	0.243	0.253	0.266	0.264	0.252	0.256	3	AVG
Fluorene	1.345	1.297	1.527	1.476	1.500	1.523	1.520	1.470	1.457	6	AVG
4-Chlorophenyl-phenylether		0.655	0.782	0.707	0.725	0.731	0.738	0.718	0.722	5	AVG
5-Nitro-o-toluidine		0.315	0.393	0.389	0.402	0.421	0.435	0.423	0.397	10	AVG
4-Nitroaniline		0.261	0.354	0.342	0.357	0.368	0.374	0.360	0.345	11	AVG
4,6-Dinitro-2-methylphenol				0.114	0.128	0.139	0.139	0.142	0.132	9	AVG
N-Nitrosodiphenylamine (1)		0.546	0.643	0.612	0.600	0.627	0.621	0.634	0.612	5	AVG
NDPA as diphenylamine		0.546	0.643	0.612	0.600	0.627	0.621	0.634	0.612	5	AVG
1,2-Diphenylhydrazine		0.754	0.903	0.843	0.855	0.889	0.861	0.873	0.854	6	AVG
Tetraethyldithiopyrophosphate			0.154	0.139	0.144	0.150	0.141	0.143	0.145	4	AVG
1,3,5-Trinitrobenzene				0.071	0.077	0.085	0.085	0.089	0.082	9	AVG
Diallate (peak 1)			0.398	0.374	0.382	0.392	0.388	0.386	0.387	2	AVG
Phorate		0.469	0.562	0.549	0.567	0.581	0.555	0.549	0.548	7	AVG
Phenacetin		0.266	0.388	0.379	0.400	0.430	0.414	0.429	0.387	15	AVG
4-Bromophenyl-phenylether		0.182	0.225	0.200	0.202	0.208	0.204	0.211	0.204	6	AVG
Diallate (peak 2)			0.300	0.309	0.307	0.311	0.304	0.306	0.306	1	AVG
Diallate trans/cis			0.381	0.363	0.369	0.378	0.374	0.372	0.373	2	AVG
Hexachlorobenzene	0.220	0.201	0.224	0.201	0.205	0.212	0.205	0.212	0.210	4	AVG
Dimethoate			0.304	0.314	0.332	0.347	0.335	0.344	0.330	5	AVG
Atrazine			0.225	0.204	0.215	0.206	0.194	0.197	0.207	5	AVG
Pentachlorophenol			0.113	0.115	0.123	0.139	0.138	0.143	0.129	10	AVG
4-Aminobiphenyl		0.562	0.724	0.677	0.700	0.756	0.718	0.740	0.697	9	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/11/18 04/11/18

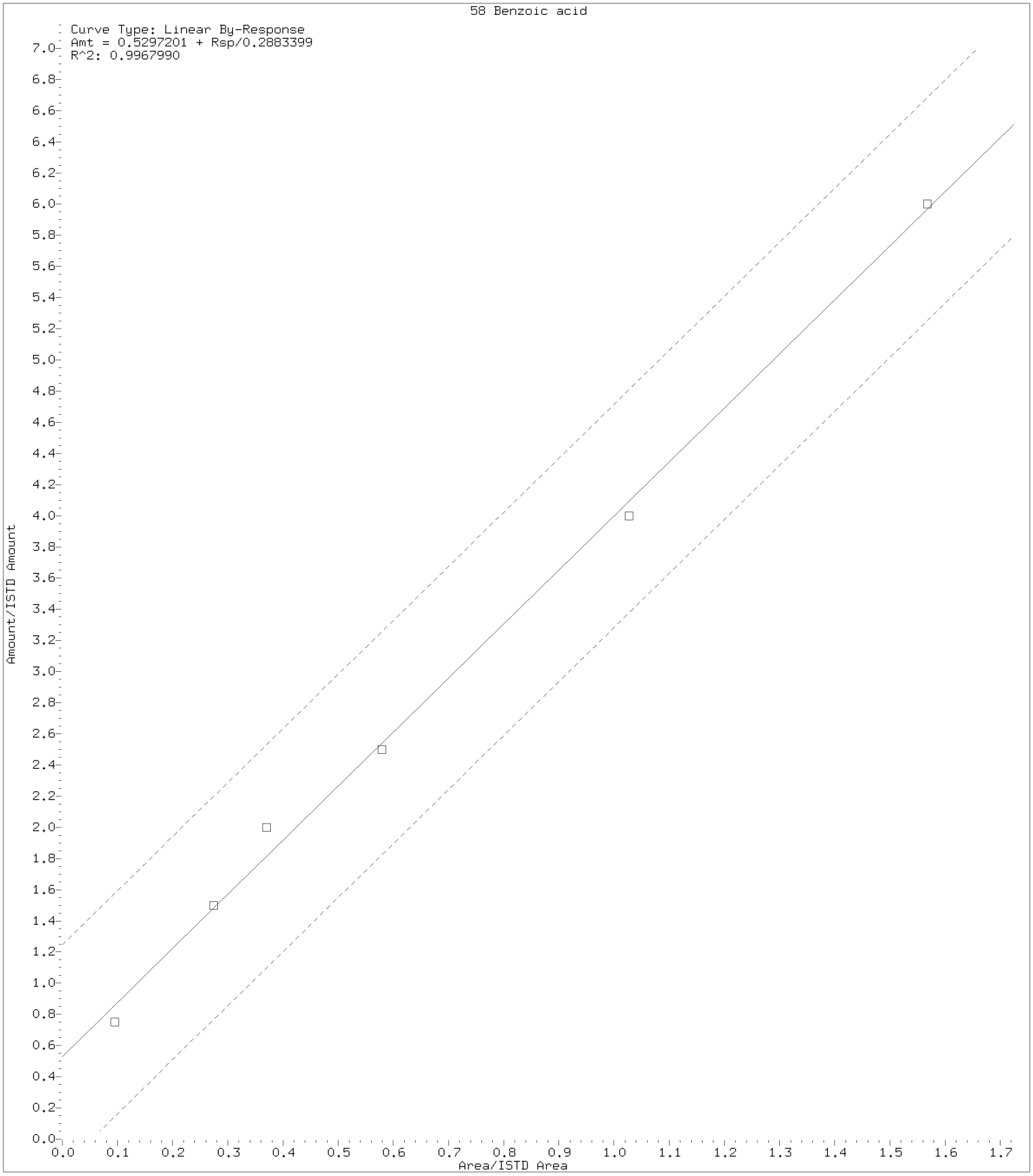
Calibration Times: 07:59 12:20

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.125 = ld0412.d RRF0.25 = ld0418.d RRF1.25 = ld0417.d RRF3.75 = ld0416.d
RRF7.5 = ld0411a.d RRF12.5 = ld0415.d RRF20 = ld0414.d RRF30 = ld0413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Pentachloronitrobenzene			0.094	0.095	0.099	0.105	0.103	0.105	0.100	5	AVG
Pronamide		0.251	0.340	0.343	0.362	0.378	0.367	0.374	0.345	13	AVG
Dinoseb			0.166	0.180	0.202	0.228	0.229	0.238	0.207	14	AVG
Phenanthrene	1.106	1.010	1.175	1.081	1.097	1.137	1.129	1.085	1.102	4	AVG
Anthracene	1.017	0.952	1.177	1.099	1.126	1.173	1.143	1.154	1.105	7	AVG
Carbazole		0.845	0.994	0.939	0.983	1.042	1.011	1.036	0.979	7	AVG
Methyl parathion			0.216	0.228	0.253	0.270	0.266	0.274	0.251	10	AVG
Di-n-butylphthalate			1.239	1.244	1.301	1.377	1.353	1.390	1.317	5	AVG
Parathion			0.134	0.146	0.160	0.176	0.176	0.183	0.163	12	AVG
4-Nitroquinoline-1-oxide				0.098	0.120	0.140	0.142	0.153	0.131	17	AVG
Octachlorostyrene			0.082	0.075	0.072	0.079	0.079	0.084	0.079	6	AVG
Isodrin		0.133	0.146	0.127	0.133	0.140	0.137	0.140	0.137	5	AVG
Fluoranthene	1.143	1.059	1.280	1.211	1.261	1.334	1.297	1.334	1.240	8	AVG
Benzidine				0.683	0.727	0.771	0.747	0.756	0.737	5	AVG
Pyrene	1.257	1.210	1.336	1.228	1.266	1.310	1.283	1.286	1.272	3	AVG
p-Dimethylaminoazobenzene		0.135	0.171	0.183	0.202	0.221	0.219	0.227	0.194	17	AVG
Chlorobenzilate			0.360	0.357	0.376	0.398	0.389	0.394	0.379	5	AVG
3,3'-Dimethylbenzidine			0.650	0.711	0.810	0.876	0.879	0.881	0.801	12	AVG
Butylbenzylphthalate			0.540	0.549	0.589	0.625	0.617	0.626	0.591	7	AVG
2-Acetylaminofluorene			0.383	0.413	0.463	0.512	0.509	0.526	0.468	13	AVG
3,3'-Dichlorobenzidine			0.363	0.370	0.409	0.437	0.434	0.440	0.409	9	AVG
4,4'-Methylenebis(2-chloroani				0.222	0.242	0.262	0.258	0.257	0.248	7	AVG
Benzo(a)anthracene	1.001	0.969	1.174	1.117	1.168	1.231	1.215	1.217	1.136	9	AVG
Chrysene	1.005	0.974	1.168	1.092	1.123	1.163	1.130	1.139	1.099	7	AVG
bis(2-Ethylhexyl)phthalate			0.749	0.770	0.828	0.888	0.881	0.894	0.835	8	AVG
6-Methylchrysene			0.758	0.717	0.761	0.797	0.792	0.818	0.774	5	AVG
Di-n-octylphthalate			1.325	1.428	1.546	1.732	1.696	1.706	1.572	11	AVG
Benzo(b)fluoranthene	1.118	1.057	1.276	1.201	1.233	1.322	1.282	1.318	1.226	8	AVG
7,12-Dimethylbenz[a]anthracen		0.384	0.471	0.489	0.525	0.565	0.551	0.555	0.506	13	AVG
Benzo(k)fluoranthene	1.061	1.087	1.265	1.185	1.186	1.257	1.215	1.186	1.180	6	AVG
Benzo(a)pyrene	0.951	0.938	1.140	1.076	1.129	1.214	1.178	1.198	1.103	10	AVG
3-Methylcholanthrene		0.466	0.515	0.500	0.543	0.581	0.569	0.579	0.536	8	AVG
Dibenz(a,h)acridine			0.918	0.860	0.915	0.980	0.969	0.983	0.937	5	AVG
Dibenz(a,j)acridine			0.911	0.892	0.940	1.003	0.983	0.984	0.952	5	AVG
Indeno(1,2,3-cd)pyrene	0.963	0.918	1.031	1.000	1.054	1.153	1.115	1.146	1.047	8	AVG
Dibenz(a,h)anthracene	0.913	0.912	1.110	1.023	1.102	1.172	1.135	1.145	1.064	10	AVG
Benzo(g,h,i)perylene	0.985	0.977	1.095	1.057	1.107	1.163	1.137	1.138	1.082	6	AVG
Total PAHs	1.002	0.963	1.124	1.057	1.088	1.152	1.112	1.096	1.074	6	AVG
2-Fluorophenol		0.993	1.396	1.337	1.434	1.465	1.479	1.479	1.369	13	AVG
Phenol-d6		1.364	1.857	1.776	1.840	1.912	1.917	1.901	1.795	11	AVG
Nitrobenzene-d5		0.338	0.446	0.423	0.441	0.461	0.456	0.454	0.431	10	AVG
2-Fluorobiphenyl		1.368	1.662	1.529	1.574	1.584	1.608	1.557	1.554	6	AVG
2,4,6-Tribromophenol		0.133	0.174	0.169	0.173	0.182	0.190	0.188	0.173	11	AVG
Terphenyl-d14		0.713	0.847	0.778	0.807	0.839	0.817	0.813	0.802	6	AVG
								Average %RSD		8	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Ashley R. Transue on 04/11/2018 at 18:23.
Target 3.5 esignature user ID: art12405

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d SSTD7.5
/chem/HP20296.i/18apr11.b/ld0412.d SSTD0.125
/chem/HP20296.i/18apr11.b/ld0413.d SSTD30
/chem/HP20296.i/18apr11.b/ld0414.d SSTD20
/chem/HP20296.i/18apr11.b/ld0415.d SSTD12.5
/chem/HP20296.i/18apr11.b/ld0416.d SSTD3.75
/chem/HP20296.i/18apr11.b/ld0417.d SSTD1.25
/chem/HP20296.i/18apr11.b/ld0418.d SSTD0.25

Area Summary

	File ID:										
Internal Standard Name	ld0411a.d	ld0412.d	ld0413.d	ld0414.d	ld0415.d	ld0416.d	ld0417.d	ld0418.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	219894	221518	207168	208633	211752	216786	201608	222764	213765	4	Yes
Naphthalene-d8	846035	870407	793995	806502	809630	836120	777233	854280	824275	4	Yes
Acenaphthene-d10	428686	427128	408206	404835	421078	423912	396437	434849	418141	3	Yes
Phenanthrene-d10	847675	822379	799312	834360	827854	834381	772431	841976	822546	3	Yes
Pyrene-d10	871904	846867	842063	853042	857466	864134	801267	858273	849377	3	Yes
Perylene-d12	795931	751073	782499	779313	765985	779658	727312	762938	768089	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:								
Internal Standard Name	ld0411a.d	ld0412.d	ld0413.d	ld0414.d	ld0415.d	ld0416.d	ld0417.d	ld0418.d	Avg. RT
1,4-Dichlorobenzene-d4	6.968	6.968	6.969	6.968	6.969	6.969	6.968	6.969	6.969
Naphthalene-d8	8.958	8.953	8.958	8.958	8.958	8.953	8.953	8.953	8.956
Acenaphthene-d10	11.788	11.788	11.793	11.793	11.793	11.788	11.788	11.788	11.790
Phenanthrene-d10	13.718	13.718	13.724	13.718	13.719	13.719	13.713	13.713	13.718
Pyrene-d10	15.778	15.772	15.778	15.778	15.778	15.778	15.772	15.772	15.776
Perylene-d12	20.377	20.378	20.383	20.378	20.378	20.378	20.378	20.378	20.378

Comments:_____

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Report generated on 04/11/2018 at 18:24

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP20296

Method: SW-846 8270D MINI | File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 | BATCH: 18APR11026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	14.73	18	30	YES
N-Nitrosodimethylamine	12.50	12.14	-3	30	YES
Pyridine	12.50	11.76	-6	30	YES
2-Picoline	12.50	11.79	-6	30	YES
N-Nitrosomethylethylamine	12.50	11.60	-7	30	YES
Methyl methanesulfonate	12.50	12.08	-3	30	YES
N-Nitrosodiethylamine	12.50	12.32	-1	30	YES
Ethyl methanesulfonate	12.50	12.05	-4	30	YES
Phenol	12.50	12.47	0	30	YES
Aniline	12.50	12.41	-1	30	YES
bis(2-Chloroethyl)ether	12.50	12.10	-3	30	YES
2-Chlorophenol	12.50	12.60	1	30	YES
1,3-Dichlorobenzene	12.50	12.48	0	30	YES
1,4-Dichlorobenzene	12.50	12.75	2	30	YES
Benzyl alcohol	12.50	13.62	9	30	YES
1,2-Dichlorobenzene	12.50	12.77	2	30	YES
Indene	12.50	15.33	23	30	YES
2-Methylphenol	12.50	12.35	-1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.20	-2	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.20	-2	30	YES
N-Nitrosopyrrolidine	12.50	12.23	-2	30	YES
Acetophenone	12.50	12.85	3	30	YES
4-Methylphenol	12.50	12.27	-2	30	YES
N-Nitroso-di-n-propylamine	12.50	12.27	-2	30	YES
N-Nitrosomorpholine	12.50	11.85	-5	30	YES
o-Toluidine	12.50	12.17	-3	30	YES
Total Cresols	25.00	24.62	-2	30	YES
Hexachloroethane	12.50	11.70	-6	30	YES
Nitrobenzene	12.50	12.30	-2	30	YES
N-Nitrosopiperidine	12.50	12.03	-4	30	YES
Isophorone	12.50	12.92	3	30	YES
2-Nitrophenol	12.50	13.04	4	30	YES
2,4-Dimethylphenol	12.50	11.00	-12	30	YES
bis(2-Chloroethoxy)methane	12.50	12.42	-1	30	YES
O,O,O-Triethylphosphorothio	12.50	12.15	-3	30	YES
2,4-Dichlorophenol	12.50	12.70	2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	12.62	1	30	YES
Naphthalene	12.50	12.56	0	30	YES
4-Chloroaniline	12.50	12.67	1	30	YES
2,6-Dichlorophenol	12.50	12.47	0	30	YES
Hexachloropropene	12.50	12.73	2	30	YES
Hexachlorobutadiene	12.50	12.54	0	30	YES
Quinoline	12.50	12.47	0	30	YES
N-Nitrosodi-n-butylamine	12.50	10.67	-15	30	YES
4-Chloro-3-methylphenol	12.50	12.98	4	30	YES
Safrole	12.50	12.04	-4	30	YES
2-Methylnaphthalene	12.50	12.70	2	30	YES
1-Methylnaphthalene	12.50	12.86	3	30	YES
Hexachlorocyclopentadiene	25.00	26.54	6	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	12.03	-4	30	YES
cis-Isosafrole	1.50	1.56	4	30	YES
2,4,6-Trichlorophenol	12.50	12.78	2	30	YES
2,4,5-Trichlorophenol	12.50	12.84	3	30	YES
trans-Isosafrole	11.00	11.08	1	30	YES
1,1'-Biphenyl	12.50	12.76	2	30	YES
2-Chloronaphthalene	12.50	12.43	-1	30	YES
Isosafrole	12.50	12.64	1	30	YES
2-Nitroaniline	12.50	12.57	1	30	YES
1,4-Naphthoquinone	15.63	15.52	-1	30	YES
1,4-Dinitrobenzene	12.50	12.17	-3	30	YES
Dimethylphthalate	12.50	11.91	-5	30	YES
1,3-Dinitrobenzene	12.50	12.62	1	30	YES
2,6-Dinitrotoluene	12.50	12.66	1	30	YES
Acenaphthylene	12.50	13.73	10	30	YES
3-Nitroaniline	12.50	12.99	4	30	YES
Acenaphthene	12.50	12.76	2	30	YES
2,4-Dinitrophenol	25.00	25.56	2	30	YES
4-Nitrophenol	12.50	12.14	-3	30	YES
Pentachlorobenzene	12.50	12.06	-4	30	YES
2,4-Dinitrotoluene	12.50	12.30	-2	30	YES
Dibenzofuran	12.50	12.18	-3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	24.96	0	30	YES
1-Naphthylamine	25.00	23.37	-7	30	YES
2-Naphthylamine	25.00	24.28	-3	30	YES
Diethylphthalate	12.50	11.96	-4	30	YES
Thionazin	12.50	12.26	-2	30	YES
Fluorene	12.50	12.17	-3	30	YES
4-Chlorophenyl-phenylether	12.50	11.81	-6	30	YES
5-Nitro-o-toluidine	12.50	12.81	3	30	YES
4-Nitroaniline	12.50	12.58	1	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.21	-2	30	YES
N-Nitrosodiphenylamine	12.50	11.99	-4	30	YES
NDPA as diphenylamine	12.50	11.99	-4	30	YES
1,2-Diphenylhydrazine	12.50	12.21	-2	30	YES
Tetraethyldithiopyrophospha	12.50	11.39	-9	30	YES
1,3,5-Trinitrobenzene	12.50	11.96	-4	30	YES
Diallate (peak 1)	9.38	8.16	-13	30	YES
Phorate	12.50	11.94	-4	30	YES
Phenacetin	12.50	12.59	1	30	YES
4-Bromophenyl-phenylether	12.50	11.38	-9	30	YES
Diallate (peak 2)	3.13	3.08	-2	30	YES
Hexachlorobenzene	12.50	11.40	-9	30	YES
Diallate trans/cis	12.50	11.23	-10	30	YES
Dimethoate	12.50	12.60	1	30	YES
Pentachlorophenol	12.50	13.24	6	30	YES
4-Aminobiphenyl	12.50	13.87	11	30	YES
Pentachloronitrobenzene	12.50	11.78	-6	30	YES
Pronamide	12.50	12.19	-3	30	YES
Dinoseb	12.50	12.08	-3	30	YES
Phenanthrene	12.50	12.01	-4	30	YES
Anthracene	12.50	12.18	-3	30	YES
Carbazole	12.50	12.58	1	30	YES
Methyl parathion	12.50	13.20	6	30	YES
Di-n-butylphthalate	12.50	12.13	-3	30	YES
Parathion	12.50	12.83	3	30	YES
4-Nitroquinoline-1-oxide	150.00	169.16	13	30	YES
Isodrin	12.50	11.50	-8	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0421.d

ICV SAMPLE ID: rvIVC0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	12.10	-3	30	YES
Benzidine	62.50	58.82	-6	30	YES
Pyrene	12.50	11.83	-5	30	YES
p-Dimethylaminoazobenzene	12.50	15.24	22	30	YES
Chlorobenzilate	12.50	12.54	0	30	YES
3,3'-Dimethylbenzidine	25.00	23.39	-6	30	YES
Butylbenzylphthalate	12.50	12.47	0	30	YES
2-Acetylaminofluorene	12.50	12.45	0	30	YES
3,3'-Dichlorobenzidine	12.50	12.79	2	30	YES
Benzo(a)anthracene	12.50	12.58	1	30	YES
Chrysene	12.50	12.26	-2	30	YES
4,4'-Methylenebis(2-chloroa	12.50	11.91	-5	30	YES
bis(2-Ethylhexyl)phthalate	12.50	12.59	1	30	YES
6-Methylchrysene	12.50	12.04	-4	30	YES
Di-n-octylphthalate	12.50	12.53	0	30	YES
Benzo(b)fluoranthene	12.50	12.23	-2	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	12.67	1	30	YES
Benzo(k)fluoranthene	12.50	12.24	-2	30	YES
Benzo(a)pyrene	12.50	12.56	1	30	YES
3-Methylcholanthrene	12.50	13.54	8	30	YES
Dibenz(a,h)acridine	12.50	12.00	-4	30	YES
Dibenz(a,j)acridine	12.50	10.98	-12	30	YES
Indeno(1,2,3-cd)pyrene	12.50	12.38	-1	30	YES
Dibenz(a,h)anthracene	12.50	12.75	2	30	YES
Benzo(g,h,i)perylene	12.50	11.97	-4	30	YES
Total PAHs	225.00	223.88	-1	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0422.d

ICV SAMPLE ID: rvBASICV0648 BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	12.52	0	30	YES
Caprolactam	12.50	12.11	-3	30	YES
Atrazine	12.50	12.95	4	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: ld0423.d

ICV SAMPLE ID: ms1808526A BATCH: 18APR11026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.15	-3	30	YES
Benzoic acid	25.00	26.54	6	30	YES
1-Chloronaphthalene	12.50	13.06	4	30	YES
Diphenyl ether	12.50	13.19	6	30	YES
2,3,4,6-Tetrachlorophenol	12.50	14.05	12	30	YES

NC = Could not calculate

Comments: _____

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6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/19/18 04/19/18

Calibration Times: 20:22 22:41

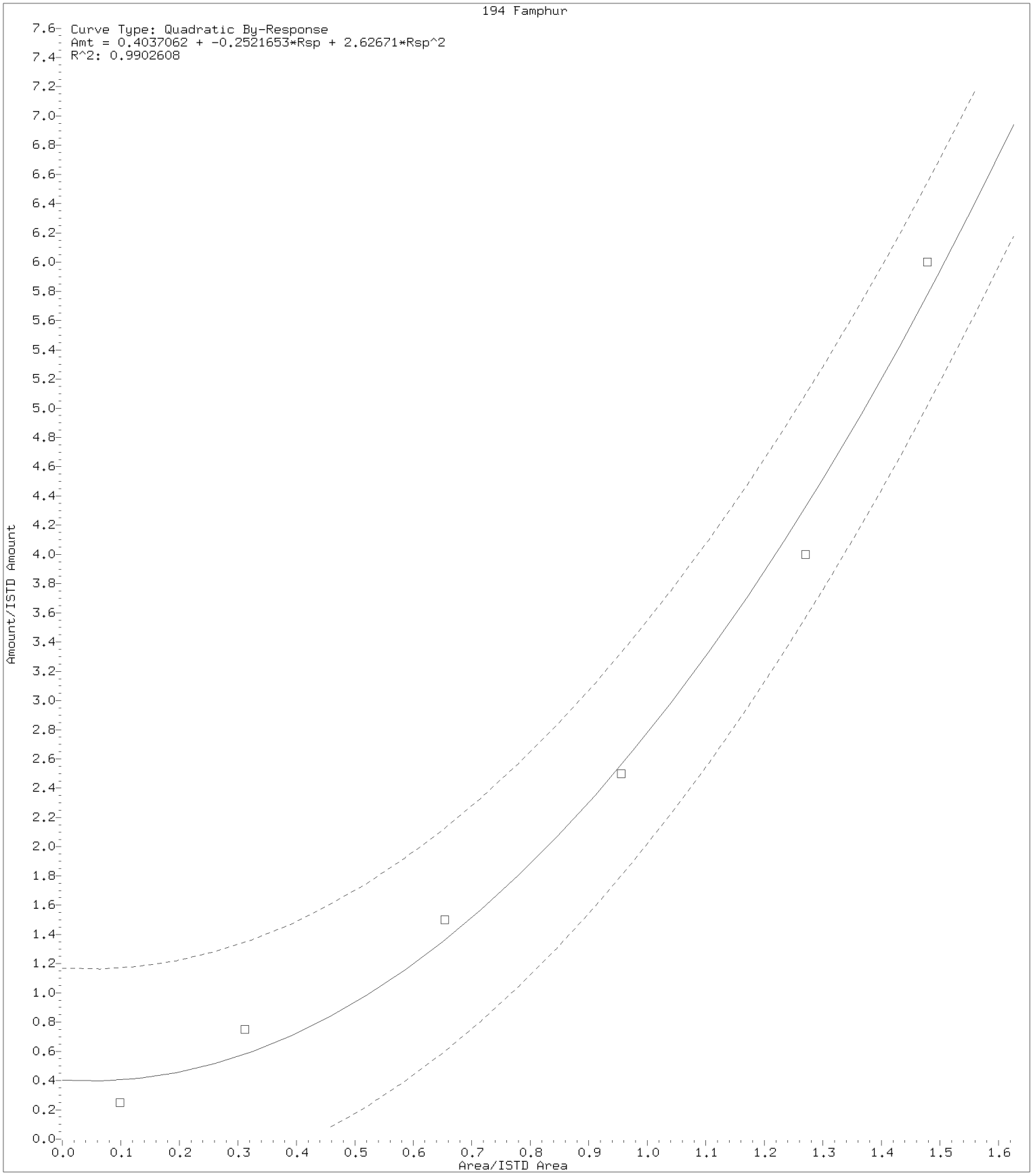
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF1.25 = ld0787.d RRF3.75 = ld0786.d
RRF7.5 = ld0785.d RRF12.5 = ld0784.d RRF20 = ld0783.d RRF30 = ld0782.d

COMPOUND	RRF	RRF	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Disulfoton			0.318	0.366	0.398	0.426	0.438	0.441	0.398	12	AVG
Methapyrilene				0.287	0.333	0.349	0.345	0.331	0.329	8	AVG
Famphur			0.394	0.416	0.436	0.382	0.318	0.246	0.365	19	2NDDEG
Kepone			0.103	0.109	0.116	0.116	0.111	0.106	0.110	5	AVG

Average %RSD 11

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr19a.b/ld0782.d SSTD30
/chem/HP20296.i/18apr19a.b/ld0783.d SSTD020
/chem/HP20296.i/18apr19a.b/ld0784.d SSTD12.5
/chem/HP20296.i/18apr19a.b/ld0785.d SSTD7.5
/chem/HP20296.i/18apr19a.b/ld0786.d SSTD3.75
/chem/HP20296.i/18apr19a.b/ld0787.d SSTD1.25

Area Summary

	File ID:								
Internal Standard Name	ld0782.d	ld0783.d	ld0784.d	ld0785.d	ld0786.d	ld0787.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	192822	185133	194102	181693	184015	171847	184935	4	Yes
Naphthalene-d8	718315	700256	723490	682096	698547	646740	694907	4	Yes
Acenaphthene-d10	354810	342945	354175	333760	335085	318011	339798	4	Yes
Phenanthrene-d10	710045	697283	725984	676182	681529	644018	689174	4	Yes
Pyrene-d10	741000	724944	759797	700132	701793	663823	715248	5	Yes
Perylene-d12	651985	650974	699917	626358	597310	604230	638462	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:						
Internal Standard Name	ld0782.d	ld0783.d	ld0784.d	ld0785.d	ld0786.d	ld0787.d	Avg. RT
1,4-Dichlorobenzene-d4	6.592	6.591	6.586	6.587	6.586	6.586	6.588
Naphthalene-d8	8.571	8.570	8.571	8.571	8.571	8.570	8.571
Acenaphthene-d10	11.411	11.411	11.411	11.406	11.405	11.405	11.408
Phenanthrene-d10	13.352	13.352	13.352	13.347	13.352	13.352	13.351
Pyrene-d10	15.337	15.331	15.331	15.332	15.331	15.331	15.332
Perylene-d12	19.846	19.840	19.840	19.840	19.840	19.840	19.841

Comments:_____

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Report generated on 04/20/2018 at 08:49

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 04/19/18 04/20/18

Calibration Times: 23:36 01:27

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF3.75 = ld0793.d

RRF7.5 = ld0792.d RRF12.5 = ld0791.d RRF20 = ld0790.d RRF30 = ld0789.d

COMPOUND	RRF	RRF	RRF	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Phenylenediamine				0.359	0.398	0.408	0.413	0.489	0.413	11	AVG

Average %RSD 6

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr19a.b/ld0789.d SSTD030
/chem/HP20296.i/18apr19a.b/ld0790.d SSTD020
/chem/HP20296.i/18apr19a.b/ld0791.d SSTD12.5
/chem/HP20296.i/18apr19a.b/ld0792.d SSTD7.5
/chem/HP20296.i/18apr19a.b/ld0793.d SSTD3.75

Area Summary

	File ID:							
Internal Standard Name	ld0789.d	ld0790.d	ld0791.d	ld0792.d	ld0793.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	175919	185798	205123	187995	186244	188216	6	Yes
Naphthalene-d8	659753	696649	762297	702274	699407	704076	5	Yes
Acenaphthene-d10	328152	351787	381117	345436	345175	350333	6	Yes
Phenanthrene-d10	659605	717883	772168	691242	696700	707520	6	Yes
Pyrene-d10	669072	735566	773328	696034	705874	715975	6	Yes
Perylene-d12	608650	666234	697872	638154	635268	649236	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:					
Internal Standard Name	ld0789.d	ld0790.d	ld0791.d	ld0792.d	ld0793.d	Avg. RT
1,4-Dichlorobenzene-d4	6.586	6.586	6.586	6.586	6.586	6.586
Naphthalene-d8	8.571	8.570	8.565	8.571	8.565	8.568
Acenaphthene-d10	11.405	11.405	11.406	11.405	11.405	11.405
Phenanthrene-d10	13.352	13.352	13.352	13.352	13.347	13.351
Pyrene-d10	15.331	15.331	15.331	15.331	15.331	15.331
Perylene-d12	19.840	19.840	19.840	19.840	19.840	19.840

Comments:_____

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Report generated on 04/24/2018 at 10:32

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 07:43

Lab File ID: ld0811a.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.654	0.620	11.860	12.5	-5
N-Nitrosodimethylamine	0.995	1.047	13.150	12.5	5
Pyridine	1.776	1.605	11.300	12.5	-10
2-Picoline	1.796	1.779	12.380	12.5	-1
N-Nitrosomethylethylamine	0.720	0.748	13.000	12.5	4
Methyl methanesulfonate	0.872	0.925	13.260	12.5	6
N-Nitrosodiethylamine	0.668	0.714	13.380	12.5	7
Ethyl methanesulfonate	0.727	0.760	13.070	12.5	5
Benzaldehyde	1.358	1.344	12.360	12.5	-1
Phenol	2.067	2.232	13.500	12.5	8
Aniline	2.383	2.582	13.540	12.5	8
a-methylstyrene	0.521	0.518	12.430	12.5	-1
bis(2-Chloroethyl)ether	1.539	1.604	13.030	12.5	4
2-Chlorophenol	1.341	1.403	13.080	12.5	5
1,3-Dichlorobenzene	1.514	1.598	13.190	12.5	6
1,4-Dichlorobenzene	1.532	1.613	13.160	12.5	5
Benzyl alcohol	0.895	0.839	11.720	12.5	-6
1,2-Dichlorobenzene	1.459	1.538	13.180	12.5	5
Indene	2.138	2.118	12.390	12.5	-1
2-Methylphenol	1.322	1.415	13.370	12.5	7
2,2'-oxybis(1-Chloropropane)	2.184	2.443	13.980	12.5	12
bis(2-Chloroisopropyl)ether	2.184	2.443	13.980	12.5	12
N-Nitrosopyrrolidine	0.724	0.798	13.780	12.5	10
Acetophenone	2.016	2.186	13.550	12.5	8
4-Methylphenol	1.397	1.577	14.110	12.5	13
Total Cresols	1.360	1.496	27.480	25.0	10
N-Nitroso-di-n-propylamine	1.150	1.270	13.800	12.5	10
N-Nitrosomorpholine	0.961	0.983	12.790	12.5	2
o-Toluidine	2.339	2.453	13.110	12.5	5
Hexachloroethane	0.653	0.665	12.730	12.5	2
Nitrobenzene	0.440	0.499	14.190	12.5	13
N-Nitrosopiperidine	0.181	0.193	13.370	12.5	7
Isophorone	0.769	0.852	13.850	12.5	11
2-Nitrophenol	0.178	0.199	13.980	12.5	12
2,4-Dimethylphenol	0.381	0.408	13.390	12.5	7
O,O,O-Triethylphosphorothioate	0.189	0.198	13.120	12.5	5

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 07:43

Lab File ID: ld0811a.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.500	0.535	13.390	12.5	7
Benzoic acid	0.207	0.125	8.090	12.5	-35
2,4-Dichlorophenol	0.297	0.327	13.760	12.5	10
1,2,4-Trichlorobenzene	0.331	0.356	13.460	12.5	8
Naphthalene	1.033	1.120	13.540	12.5	8
4-Chloroaniline	0.422	0.451	13.350	12.5	7
2,6-Dichlorophenol	0.294	0.320	13.610	12.5	9
Hexachloropropene	0.239	0.264	13.770	12.5	10
Hexachlorobutadiene	0.200	0.228	14.200	12.5	14
Quinoline	0.658	0.685	13.020	12.5	4
Caprolactam	0.093	0.101	13.560	12.5	8
N-Nitrosodi-n-butylamine	0.324	0.309	11.900	12.5	-5
4-Chloro-3-methylphenol	0.326	0.358	13.740	12.5	10
Safrole	0.277	0.292	13.150	12.5	5
2-Methylnaphthalene	0.686	0.735	13.390	12.5	7
1-Methylnaphthalene	0.630	0.669	13.290	12.5	6
Hexachlorocyclopentadiene	0.404	0.434	13.420	12.5	7
1,2,4,5-Tetrachlorobenzene	0.680	0.732	13.450	12.5	8
cis-Isosafrole	0.592	0.607	2.180	2.1	3
2,4,6-Trichlorophenol	0.427	0.474	13.880	12.5	11
2,4,5-Trichlorophenol	0.448	0.495	13.800	12.5	10
trans-Isosafrole	0.637	0.660	10.750	10.4	4
Isosafrole	0.629	0.651	12.930	12.5	3
1,1'-Biphenyl	1.603	1.713	13.360	12.5	7
2-Chloronaphthalene	1.362	1.364	12.510	12.5	0
1-Chloronaphthalene	1.260	1.336	13.260	12.5	6
Diphenyl ether	0.895	0.935	13.050	12.5	4
2-Nitroaniline	0.399	0.437	13.700	12.5	10
1,4-Naphthoquinone	0.538	0.570	13.240	12.5	6
1,4-Dinitrobenzene	0.212	0.227	13.410	12.5	7
Dimethylphthalate	1.526	1.572	12.880	12.5	3
1,3-Dinitrobenzene	0.227	0.252	13.880	12.5	11
2,6-Dinitrotoluene	0.324	0.355	13.690	12.5	10
Acenaphthylene	1.894	2.061	13.610	12.5	9
3-Nitroaniline	0.341	0.386	14.120	12.5	13
Acenaphthene	1.343	1.413	13.160	12.5	5

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 07:43

Lab File ID: ld0811a.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.195	0.198	12.710	12.5	2
4-Nitrophenol	0.241	0.261	13.540	12.5	8
Pentachlorobenzene	0.555	0.606	13.670	12.5	9
2,4-Dinitrotoluene	0.449	0.484	13.470	12.5	8
2,4_2,6-Dinitrotoluenes	0.377	0.419	27.170	25.0	9
Dibenzofuran	1.865	1.977	13.250	12.5	6
1-Naphthylamine	1.327	1.410	13.280	12.5	6
2,3,4,6-Tetrachlorophenol	0.349	0.402	14.390	12.5	15
2-Naphthylamine	1.258	1.387	13.790	12.5	10
Diethylphthalate	1.502	1.596	13.280	12.5	6
Thionazin	0.256	0.266	13.030	12.5	4
Fluorene	1.457	1.571	13.470	12.5	8
4-Chlorophenyl-phenylether	0.722	0.781	13.510	12.5	8
5-Nitro-o-toluidine	0.397	0.440	13.870	12.5	11
4-Nitroaniline	0.345	0.389	14.080	12.5	13
4,6-Dinitro-2-methylphenol	0.132	0.134	12.670	12.5	1
N-Nitrosodiphenylamine (1)	0.612	0.621	12.680	12.5	1
NDPA as diphenylamine	0.612	0.621	12.680	12.5	1
1,2-Diphenylhydrazine	0.854	0.909	13.310	12.5	7
Tetraethyldithiopyrophosphate	0.145	0.155	13.320	12.5	7
1,3,5-Trinitrobenzene	0.082	0.089	13.600	12.5	9
Diallate (peak 1)	0.387	0.386	10.360	10.4	0
Phorate	0.548	0.669	15.280	12.5	22
Phenacetin	0.387	0.429	13.870	12.5	11
4-Bromophenyl-phenylether	0.204	0.210	12.850	12.5	3
Diallate (peak 2)	0.306	0.329	2.280	2.1	7
Diallate trans/cis	0.373	0.376	12.640	12.5	1
Hexachlorobenzene	0.210	0.211	12.590	12.5	1
Dimethoate	0.330	0.345	13.070	12.5	5
Atrazine	0.207	0.205	12.370	12.5	-1
Pentachlorophenol	0.129	0.126	12.280	12.5	-2
4-Aminobiphenyl	0.697	0.734	13.170	12.5	5
Pentachloronitrobenzene	0.100	0.109	13.590	12.5	9
Pronamide	0.345	0.377	13.640	12.5	9
Dinoseb	0.207	0.214	12.910	12.5	3
Phenanthrene	1.102	1.148	13.010	12.5	4

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 07:43

Lab File ID: ld0811a.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.105	1.178	13.320	12.5	7
Carbazole	0.979	1.045	13.340	12.5	7
Methyl parathion	0.251	0.274	13.640	12.5	9
Di-n-butylphthalate	1.317	1.354	12.840	12.5	3
Parathion	0.163	0.177	13.590	12.5	9
4-Nitroquinoline-1-oxide	0.131	0.114	10.890	12.5	-13
Octachlorostyrene	0.079	0.081	12.830	12.5	3
Isodrin	0.137	0.139	12.750	12.5	2
Fluoranthene	1.240	1.364	13.750	12.5	10
Benzidine	0.737	0.768	39.090	37.5	4
Pyrene	1.272	1.304	12.820	12.5	3
p-Dimethylaminoazobenzene	0.194	0.219	14.100	12.5	13
Chlorobenzilate	0.379	0.391	12.890	12.5	3
3,3'-Dimethylbenzidine	0.801	0.864	13.480	12.5	8
Butylbenzylphthalate	0.591	0.613	12.970	12.5	4
2-Acetylaminofluorene	0.468	0.533	14.250	12.5	14
3,3'-Dichlorobenzidine	0.409	0.459	14.030	12.5	12
4,4'-Methylenebis(2-chloroanil	0.248	0.270	13.570	12.5	9
Benzo(a)anthracene	1.136	1.257	13.830	12.5	11
Chrysene	1.099	1.204	13.700	12.5	10
bis(2-Ethylhexyl)phthalate	0.835	0.878	13.140	12.5	5
6-Methylchrysene	0.774	0.834	13.470	12.5	8
Di-n-octylphthalate	1.572	1.612	12.810	12.5	3
Benzo(b)fluoranthene	1.226	1.318	13.440	12.5	7
7,12-Dimethylbenz[a]anthracene	0.506	0.542	13.400	12.5	7
Benzo(k)fluoranthene	1.180	1.219	12.910	12.5	3
Benzo(a)pyrene	1.103	1.198	13.580	12.5	9
3-Methylcholanthrene	0.536	0.567	13.220	12.5	6
Dibenz(a,h)acridine	0.937	0.976	13.010	12.5	4
Dibenz(a,j)acridine	0.952	0.988	12.970	12.5	4
Indeno(1,2,3-cd)pyrene	1.048	1.143	13.640	12.5	9
Dibenz(a,h)anthracene	1.064	1.149	13.500	12.5	8
Benzo(g,h,i)perylene	1.082	1.159	13.380	12.5	7
Total PAHs	1.074	1.063	241.340	225.0	7
2-Fluorophenol	1.369	1.452	26.520	25.0	6

FORM VII SV-1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 07:43

Lab File ID: ld0811a.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.795	1.887	26.270	25.0	5
Nitrobenzene-d5	0.431	0.489	28.360	25.0	13
2-Fluorobiphenyl	1.554	1.631	26.230	25.0	5
2,4,6-Tribromophenol	0.173	0.199	28.790	25.0	15
Terphenyl-d14	0.802	0.838	26.140	25.0	5
			Average %Drift:		7

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d **
/chem/HP20296.i/18apr11.b/ld0412.d
/chem/HP20296.i/18apr11.b/ld0413.d
/chem/HP20296.i/18apr11.b/ld0414.d
/chem/HP20296.i/18apr11.b/ld0415.d
/chem/HP20296.i/18apr11.b/ld0416.d
/chem/HP20296.i/18apr11.b/ld0417.d
/chem/HP20296.i/18apr11.b/ld0418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18apr20.b/ld0811a.d

Area Summary

File ID:

Internal Standard Name	ld0811a.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	200435	219894	109947	439788	Yes
Naphthalene-d8	745064	846035	423018	1692070	Yes
Acenaphthene-d10	386246	428686	214343	857372	Yes
Phenanthrene-d10	802737	847675	423838	1695350	Yes
Pyrene-d10	854720	871904	435952	1743808	Yes
Perylene-d12	838322	795931	397966	1591862	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ld0811a.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.581	6.968	No
Naphthalene-d8	8.565	8.958	No
Acenaphthene-d10	11.405	11.788	No
Phenanthrene-d10	13.352	13.718	No
Pyrene-d10	15.331	15.778	No
Perylene-d12	19.840	20.377	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: * Column maintenance

BB 10208
4/20/18

Report generated on 04/20/2018 at 09:13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 08:48

Lab File ID: ld0813.d Init. Calib. Date(s): 04/19/18 04/19/18

Init. Calib. Times(s): 20:22 22:41

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.398	0.423	13.300	12.5	6
Methapyrilene	0.329	0.335	12.710	12.5	2
Famphur	0.365	0.383	13.110	12.5	5
Kepone	0.110	0.113	61.450	60.0	2
			Average	%Drift:	4

FORM VII SV-1

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 08:20

Lab File ID: ld0812.d Init. Calib. Date(s): 04/19/18 04/20/18

Init. Calib. Times(s): 23:36 01:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.413	0.385	11.650	12.5	-7
			Average %Drift:		7

FORM VII SV-1

page 1 of 1

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 19:55

Lab File ID: ld0851.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.654	0.607	6.970	7.5	-7
N-Nitrosodimethylamine	0.995	1.028	7.740	7.5	3
Pyridine	1.776	1.424	6.010	7.5	-20
2-Picoline	1.796	1.645	6.870	7.5	-8
N-Nitrosomethylethylamine	0.720	0.716	7.460	7.5	-1
Methyl methanesulfonate	0.872	0.886	7.620	7.5	2
N-Nitrosodiethylamine	0.668	0.683	7.680	7.5	2
Ethyl methanesulfonate	0.727	0.732	7.560	7.5	1
Benzaldehyde	1.358	1.379	7.620	7.5	2
Phenol	2.067	2.181	7.920	7.5	6
Aniline	2.383	2.500	7.870	7.5	5
a-methylstyrene	0.521	0.490	7.060	7.5	-6
bis(2-Chloroethyl)ether	1.539	1.586	7.730	7.5	3
2-Chlorophenol	1.341	1.369	7.660	7.5	2
1,3-Dichlorobenzene	1.514	1.570	7.780	7.5	4
1,4-Dichlorobenzene	1.532	1.578	7.730	7.5	3
Benzyl alcohol	0.895	0.734	6.150	7.5	-18
1,2-Dichlorobenzene	1.459	1.490	7.660	7.5	2
Indene	2.138	1.993	6.990	7.5	-7
2-Methylphenol	1.322	1.387	7.860	7.5	5
2,2'-oxybis(1-Chloropropane)	2.184	2.530	8.690	7.5	16
bis(2-Chloroisopropyl)ether	2.184	2.530	8.690	7.5	16
N-Nitrosopyrrolidine	0.724	0.760	7.870	7.5	5
Acetophenone	2.016	2.194	8.160	7.5	9
4-Methylphenol	1.397	1.540	8.270	7.5	10
Total Cresols	1.360	1.464	16.130	15.0	8
N-Nitroso-di-n-propylamine	1.150	1.273	8.310	7.5	11
N-Nitrosomorpholine	0.961	0.991	7.740	7.5	3
o-Toluidine	2.339	2.415	7.750	7.5	3
Hexachloroethane	0.653	0.653	7.500	7.5	0
Nitrobenzene	0.440	0.486	8.280	7.5	10
N-Nitrosopiperidine	0.181	0.186	7.730	7.5	3
Isophorone	0.769	0.821	8.000	7.5	7
2-Nitrophenol	0.178	0.184	7.740	7.5	3
2,4-Dimethylphenol	0.381	0.392	7.710	7.5	3
O,O,O-Triethylphosphorothioate	0.189	0.185	7.340	7.5	-2

FORM VII SV-1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 19:55

Lab File ID: ld0851.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.500	0.519	7.790	7.5	4
Benzoic acid	0.207	0.092	5.850	10.0	-41
2,4-Dichlorophenol	0.297	0.312	7.890	7.5	5
1,2,4-Trichlorobenzene	0.331	0.344	7.810	7.5	4
Naphthalene	1.033	1.094	7.940	7.5	6
4-Chloroaniline	0.422	0.434	7.720	7.5	3
2,6-Dichlorophenol	0.294	0.307	7.830	7.5	4
Hexachloropropene	0.239	0.243	7.620	7.5	2
Hexachlorobutadiene	0.200	0.212	7.940	7.5	6
Quinoline	0.658	0.655	7.460	7.5	-1
Caprolactam	0.093	0.102	8.240	7.5	10
N-Nitrosodi-n-butylamine	0.324	0.297	6.870	7.5	-8
4-Chloro-3-methylphenol	0.326	0.335	7.720	7.5	3
Safrole	0.277	0.280	7.570	7.5	1
2-Methylnaphthalene	0.686	0.736	8.040	7.5	7
1-Methylnaphthalene	0.630	0.655	7.800	7.5	4
Hexachlorocyclopentadiene	0.404	0.404	7.500	7.5	0
1,2,4,5-Tetrachlorobenzene	0.680	0.699	7.710	7.5	3
cis-Isosafrole	0.592	0.570	1.230	1.3	-4
2,4,6-Trichlorophenol	0.427	0.444	7.800	7.5	4
2,4,5-Trichlorophenol	0.448	0.460	7.690	7.5	3
trans-Isosafrole	0.637	0.633	6.190	6.2	-1
Isosafrole	0.629	0.622	7.410	7.5	-1
1,1'-Biphenyl	1.603	1.752	8.200	7.5	9
2-Chloronaphthalene	1.362	1.383	7.610	7.5	2
1-Chloronaphthalene	1.260	1.253	7.460	7.5	-1
Diphenyl ether	0.895	0.905	7.580	7.5	1
2-Nitroaniline	0.399	0.406	7.640	7.5	2
1,4-Naphthoquinone	0.538	0.525	7.320	7.5	-2
1,4-Dinitrobenzene	0.212	0.210	7.430	7.5	-1
Dimethylphthalate	1.526	1.526	7.500	7.5	0
1,3-Dinitrobenzene	0.227	0.230	7.590	7.5	1
2,6-Dinitrotoluene	0.324	0.340	7.870	7.5	5
Acenaphthylene	1.894	1.982	7.850	7.5	5
3-Nitroaniline	0.341	0.355	7.810	7.5	4
Acenaphthene	1.343	1.356	7.580	7.5	1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 19:55

Lab File ID: ld0851.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.195	0.166	8.520	10.0	-15
4-Nitrophenol	0.241	0.224	6.980	7.5	-7
Pentachlorobenzene	0.555	0.571	7.720	7.5	3
2,4-Dinitrotoluene	0.449	0.448	7.480	7.5	0
2,4_2,6-Dinitrotoluenes	0.377	0.394	15.350	15.0	2
Dibenzofuran	1.865	1.923	7.730	7.5	3
1-Naphthylamine	1.327	1.324	7.480	7.5	0
2,3,4,6-Tetrachlorophenol	0.349	0.367	7.890	7.5	5
2-Naphthylamine	1.258	1.292	7.700	7.5	3
Diethylphthalate	1.502	1.503	7.510	7.5	0
Thionazin	0.256	0.256	7.510	7.5	0
Fluorene	1.457	1.545	7.950	7.5	6
4-Chlorophenyl-phenylether	0.722	0.742	7.710	7.5	3
5-Nitro-o-toluidine	0.397	0.410	7.750	7.5	3
4-Nitroaniline	0.345	0.368	7.990	7.5	7
4,6-Dinitro-2-methylphenol	0.132	0.116	6.560	7.5	-13
N-Nitrosodiphenylamine (1)	0.612	0.609	7.460	7.5	0
NDPA as diphenylamine	0.612	0.609	7.460	7.5	0
1,2-Diphenylhydrazine	0.854	0.922	8.100	7.5	8
Tetraethyldithiopyrophosphate	0.145	0.151	7.790	7.5	4
1,3,5-Trinitrobenzene	0.082	0.078	7.190	7.5	-4
Diallate (peak 1)	0.387	0.383	6.170	6.2	-1
Phorate	0.548	0.798	10.920	7.5	46
Phenacetin	0.387	0.406	7.870	7.5	5
4-Bromophenyl-phenylether	0.204	0.206	7.550	7.5	1
Diallate (peak 2)	0.306	0.324	1.350	1.3	6
Diallate trans/cis	0.373	0.373	7.520	7.5	0
Hexachlorobenzene	0.210	0.206	7.350	7.5	-2
Dimethoate	0.330	0.330	7.510	7.5	0
Atrazine	0.207	0.213	7.710	7.5	3
Pentachlorophenol	0.129	0.105	6.110	7.5	-18
4-Aminobiphenyl	0.697	0.668	7.190	7.5	-4
Pentachloronitrobenzene	0.100	0.102	7.600	7.5	1
Pronamide	0.345	0.355	7.710	7.5	3
Dinoseb	0.207	0.176	6.380	7.5	-15
Phenanthrene	1.102	1.114	7.580	7.5	1

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 19:55

Lab File ID: ld0851.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.105	1.139	7.730	7.5	3
Carbazole	0.979	1.003	7.690	7.5	3
Methyl parathion	0.251	0.252	7.530	7.5	0
Di-n-butylphthalate	1.317	1.272	7.240	7.5	-3
Parathion	0.163	0.157	7.230	7.5	-4
4-Nitroquinoline-1-oxide	0.131	0.073	4.200	7.5	-44
Octachlorostyrene	0.079	0.071	6.820	7.5	-9
Isodrin	0.137	0.133	7.290	7.5	-3
Fluoranthene	1.240	1.297	7.840	7.5	5
Benzidine	0.737	0.738	22.520	22.5	0
Pyrene	1.272	1.273	7.510	7.5	0
p-Dimethylaminoazobenzene	0.194	0.195	7.540	7.5	1
Chlorobenzilate	0.379	0.370	7.320	7.5	-2
3,3'-Dimethylbenzidine	0.801	0.770	7.200	7.5	-4
Butylbenzylphthalate	0.591	0.578	7.330	7.5	-2
2-Acetylaminofluorene	0.468	0.463	7.420	7.5	-1
3,3'-Dichlorobenzidine	0.409	0.418	7.670	7.5	2
4,4'-Methylenebis(2-chloroanil	0.248	0.248	7.500	7.5	0
Benzo(a)anthracene	1.136	1.197	7.900	7.5	5
Chrysene	1.099	1.166	7.950	7.5	6
bis(2-Ethylhexyl)phthalate	0.835	0.826	7.420	7.5	-1
6-Methylchrysene	0.774	0.784	7.600	7.5	1
Di-n-octylphthalate	1.572	1.475	7.040	7.5	-6
Benzo(b)fluoranthene	1.226	1.272	7.780	7.5	4
7,12-Dimethylbenz[a]anthracene	0.506	0.501	7.440	7.5	-1
Benzo(k)fluoranthene	1.180	1.204	7.650	7.5	2
Benzo(a)pyrene	1.103	1.151	7.820	7.5	4
3-Methylcholanthrene	0.536	0.533	7.460	7.5	-1
Dibenz(a,h)acridine	0.937	0.904	7.240	7.5	-4
Dibenz(a,j)acridine	0.952	0.918	7.230	7.5	-4
Indeno(1,2,3-cd)pyrene	1.048	1.071	7.670	7.5	2
Dibenz(a,h)anthracene	1.064	1.088	7.670	7.5	2
Benzo(g,h,i)perylene	1.082	1.102	7.640	7.5	2
Total PAHs	1.074	1.046	139.900	135.0	4
2-Fluorophenol	1.369	1.390	15.230	15.0	2

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/20/18 Time: 19:55

Lab File ID: ld0851.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.795	1.854	15.490	15.0	3
Nitrobenzene-d5	0.431	0.473	16.450	15.0	10
2-Fluorobiphenyl	1.554	1.586	15.300	15.0	2
2,4,6-Tribromophenol	0.173	0.181	15.740	15.0	5
Terphenyl-d14	0.802	0.809	15.140	15.0	1
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d **
/chem/HP20296.i/18apr11.b/ld0412.d
/chem/HP20296.i/18apr11.b/ld0413.d
/chem/HP20296.i/18apr11.b/ld0414.d
/chem/HP20296.i/18apr11.b/ld0415.d
/chem/HP20296.i/18apr11.b/ld0416.d
/chem/HP20296.i/18apr11.b/ld0417.d
/chem/HP20296.i/18apr11.b/ld0418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18apr20a.b/ld0851.d

Area Summary

Internal Standard Name	File ID: ld0851.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	186854	219894	109947	439788	Yes
Naphthalene-d8	702476	846035	423018	1692070	Yes
Acenaphthene-d10	362513	428686	214343	857372	Yes
Phenanthrene-d10	738790	847675	423838	1695350	Yes
Pyrene-d10	784610	871904	435952	1743808	Yes
Perylene-d12	752704	795931	397966	1591862	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: ld0851.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.576	6.968	No
Naphthalene-d8	8.560	8.958	No
Acenaphthene-d10	11.400	11.788	No
Phenanthrene-d10	13.347	13.718	No
Pyrene-d10	15.321	15.778	No
Perylene-d12	19.829	20.377	No

(8)

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: (8) Column Maintenance AT12405
4/20/18

Report generated on 04/20/2018 at 20:41

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:00

Lab File ID: ld0871.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.654	0.615	7.050	7.5	-6
N-Nitrosodimethylamine	0.995	1.019	7.680	7.5	2
Pyridine	1.776	1.654	6.990	7.5	-7
2-Picoline	1.796	1.719	7.180	7.5	-4
N-Nitrosomethylethylamine	0.720	0.724	7.540	7.5	1
Methyl methanesulfonate	0.872	0.898	7.730	7.5	3
N-Nitrosodiethylamine	0.668	0.701	7.870	7.5	5
Ethyl methanesulfonate	0.727	0.738	7.610	7.5	2
Benzaldehyde	1.358	1.383	7.640	7.5	2
Phenol	2.067	2.003	7.270	7.5	-3
Aniline	2.383	2.452	7.720	7.5	3
a-methylstyrene	0.521	0.478	6.890	7.5	-8
bis(2-Chloroethyl)ether	1.539	1.616	7.880	7.5	5
2-Chlorophenol	1.341	1.382	7.730	7.5	3
1,3-Dichlorobenzene	1.514	1.563	7.740	7.5	3
1,4-Dichlorobenzene	1.532	1.587	7.770	7.5	4
Benzyl alcohol	0.895	0.753	6.310	7.5	-16
1,2-Dichlorobenzene	1.459	1.494	7.680	7.5	2
Indene	2.138	1.984	6.960	7.5	-7
2-Methylphenol	1.322	1.342	7.610	7.5	1
2,2'-oxybis(1-Chloropropane)	2.184	2.450	8.410	7.5	12
bis(2-Chloroisopropyl)ether	2.184	2.450	8.410	7.5	12
N-Nitrosopyrrolidine	0.724	0.776	8.040	7.5	7
Acetophenone	2.016	2.186	8.130	7.5	8
4-Methylphenol	1.397	1.428	7.670	7.5	2
Total Cresols	1.360	1.385	15.270	15.0	2
N-Nitroso-di-n-propylamine	1.150	1.243	8.110	7.5	8
N-Nitrosomorpholine	0.961	0.973	7.590	7.5	1
o-Toluidine	2.339	2.392	7.670	7.5	2
Hexachloroethane	0.653	0.660	7.580	7.5	1
Nitrobenzene	0.440	0.481	8.210	7.5	9
N-Nitrosopiperidine	0.181	0.185	7.660	7.5	2
Isophorone	0.769	0.811	7.910	7.5	6
2-Nitrophenol	0.178	0.185	7.800	7.5	4
2,4-Dimethylphenol	0.381	0.400	7.860	7.5	5
O,O,O-Triethylphosphorothioate	0.189	0.186	7.390	7.5	-1

FORM VII SV-1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:00

Lab File ID: ld0871.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.500	0.511	7.660	7.5	2
Benzoic acid	0.207	0.149	7.800	10.0	-22
2,4-Dichlorophenol	0.297	0.315	7.950	7.5	6
1,2,4-Trichlorobenzene	0.331	0.348	7.900	7.5	5
Naphthalene	1.033	1.076	7.810	7.5	4
4-Chloroaniline	0.422	0.428	7.610	7.5	2
2,6-Dichlorophenol	0.294	0.310	7.910	7.5	5
Hexachloropropene	0.239	0.256	8.040	7.5	7
Hexachlorobutadiene	0.200	0.219	8.180	7.5	9
Quinoline	0.658	0.652	7.430	7.5	-1
Caprolactam	0.093	0.099	7.960	7.5	6
N-Nitrosodi-n-butylamine	0.324	0.292	6.760	7.5	-10
4-Chloro-3-methylphenol	0.326	0.344	7.930	7.5	6
Safrole	0.277	0.275	7.430	7.5	-1
2-Methylnaphthalene	0.686	0.721	7.870	7.5	5
1-Methylnaphthalene	0.630	0.641	7.640	7.5	2
Hexachlorocyclopentadiene	0.404	0.430	7.980	7.5	6
1,2,4,5-Tetrachlorobenzene	0.680	0.714	7.870	7.5	5
cis-Isosafrole	0.592	0.580	1.250	1.3	-2
2,4,6-Trichlorophenol	0.427	0.453	7.950	7.5	6
2,4,5-Trichlorophenol	0.448	0.471	7.870	7.5	5
trans-Isosafrole	0.637	0.641	6.270	6.2	1
Isosafrole	0.629	0.631	7.520	7.5	0
1,1'-Biphenyl	1.603	1.720	8.050	7.5	7
2-Chloronaphthalene	1.362	1.354	7.450	7.5	-1
1-Chloronaphthalene	1.260	1.250	7.440	7.5	-1
Diphenyl ether	0.895	0.901	7.550	7.5	1
2-Nitroaniline	0.399	0.411	7.730	7.5	3
1,4-Naphthoquinone	0.538	0.528	7.360	7.5	-2
1,4-Dinitrobenzene	0.212	0.217	7.670	7.5	2
Dimethylphthalate	1.526	1.502	7.380	7.5	-2
1,3-Dinitrobenzene	0.227	0.239	7.880	7.5	5
2,6-Dinitrotoluene	0.324	0.341	7.890	7.5	5
Acenaphthylene	1.894	1.971	7.810	7.5	4
3-Nitroaniline	0.341	0.354	7.770	7.5	4
Acenaphthene	1.343	1.338	7.470	7.5	0

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:00

Lab File ID: ld0871.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.195	0.199	10.190	10.0	2
4-Nitrophenol	0.241	0.229	7.140	7.5	-5
Pentachlorobenzene	0.555	0.578	7.810	7.5	4
2,4-Dinitrotoluene	0.449	0.444	7.420	7.5	-1
2,4_2,6-Dinitrotoluenes	0.377	0.393	15.310	15.0	2
Dibenzofuran	1.865	1.906	7.660	7.5	2
1-Naphthylamine	1.327	1.288	7.280	7.5	-3
2,3,4,6-Tetrachlorophenol	0.349	0.362	7.780	7.5	4
2-Naphthylamine	1.258	1.218	7.270	7.5	-3
Diethylphthalate	1.502	1.489	7.440	7.5	-1
Thionazin	0.256	0.251	7.370	7.5	-2
Fluorene	1.457	1.508	7.760	7.5	4
4-Chlorophenyl-phenylether	0.722	0.737	7.650	7.5	2
5-Nitro-o-toluidine	0.397	0.421	7.960	7.5	6
4-Nitroaniline	0.345	0.373	8.100	7.5	8
4,6-Dinitro-2-methylphenol	0.132	0.133	7.530	7.5	0
N-Nitrosodiphenylamine (1)	0.612	0.609	7.460	7.5	0
NDPA as diphenylamine	0.612	0.609	7.460	7.5	0
1,2-Diphenylhydrazine	0.854	0.909	7.990	7.5	6
Tetraethyldithiopyrophosphate	0.145	0.149	7.680	7.5	2
1,3,5-Trinitrobenzene	0.082	0.081	7.440	7.5	-1
Diallate (peak 1)	0.387	0.375	6.050	6.2	-3
Phorate	0.548	0.795	10.890	7.5	45
Phenacetin	0.387	0.414	8.040	7.5	7
4-Bromophenyl-phenylether	0.204	0.209	7.670	7.5	2
Diallate (peak 2)	0.306	0.319	1.330	1.3	4
Diallate trans/cis	0.373	0.366	7.380	7.5	-2
Hexachlorobenzene	0.210	0.206	7.370	7.5	-2
Dimethoate	0.330	0.326	7.410	7.5	-1
Atrazine	0.207	0.210	7.620	7.5	2
Pentachlorophenol	0.129	0.113	6.610	7.5	-12
4-Aminobiphenyl	0.697	0.668	7.200	7.5	-4
Pentachloronitrobenzene	0.100	0.102	7.650	7.5	2
Pronamide	0.345	0.356	7.730	7.5	3
Dinoseb	0.207	0.210	7.610	7.5	1
Phenanthrene	1.102	1.107	7.530	7.5	0

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:00

Lab File ID: ld0871.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.105	1.137	7.720	7.5	3
Carbazole	0.979	0.999	7.660	7.5	2
Methyl parathion	0.251	0.248	7.410	7.5	-1
Di-n-butylphthalate	1.317	1.272	7.240	7.5	-3
Parathion	0.163	0.156	7.210	7.5	-4
4-Nitroquinoline-1-oxide	0.131	0.090	5.160	7.5	-31
Octachlorostyrene	0.079	0.074	7.110	7.5	-5
Isodrin	0.137	0.134	7.340	7.5	-2
Fluoranthene	1.240	1.287	7.780	7.5	4
Benzidine	0.737	0.736	22.490	22.5	0
Pyrene	1.272	1.256	7.410	7.5	-1
p-Dimethylaminoazobenzene	0.194	0.201	7.750	7.5	3
Chlorobenzilate	0.379	0.370	7.320	7.5	-2
3,3'-Dimethylbenzidine	0.801	0.791	7.400	7.5	-1
Butylbenzylphthalate	0.591	0.571	7.250	7.5	-3
2-Acetylaminofluorene	0.468	0.480	7.700	7.5	3
3,3'-Dichlorobenzidine	0.409	0.422	7.740	7.5	3
4,4'-Methylenebis(2-chloroanil	0.248	0.250	7.560	7.5	1
Benzo(a)anthracene	1.136	1.175	7.750	7.5	3
Chrysene	1.099	1.134	7.740	7.5	3
bis(2-Ethylhexyl)phthalate	0.835	0.820	7.360	7.5	-2
6-Methylchrysene	0.774	0.764	7.400	7.5	-1
Di-n-octylphthalate	1.572	1.559	7.440	7.5	-1
Benzo(b)fluoranthene	1.226	1.259	7.700	7.5	3
7,12-Dimethylbenz[a]anthracene	0.506	0.501	7.440	7.5	-1
Benzo(k)fluoranthene	1.180	1.213	7.710	7.5	3
Benzo(a)pyrene	1.103	1.154	7.840	7.5	5
3-Methylcholanthrene	0.536	0.547	7.650	7.5	2
Dibenz(a,h)acridine	0.937	0.956	7.650	7.5	2
Dibenz(a,j)acridine	0.952	0.962	7.580	7.5	1
Indeno(1,2,3-cd)pyrene	1.048	1.127	8.070	7.5	8
Dibenz(a,h)anthracene	1.064	1.124	7.920	7.5	6
Benzo(g,h,i)perylene	1.082	1.145	7.930	7.5	6
Total PAHs	1.074	1.075	139.480	135.0	3
2-Fluorophenol	1.369	1.423	15.590	15.0	4

FORM VII SV-1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:00

Lab File ID: ld0871.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.795	1.849	15.450	15.0	3
Nitrobenzene-d5	0.431	0.473	16.440	15.0	10
2-Fluorobiphenyl	1.554	1.558	15.040	15.0	0
2,4,6-Tribromophenol	0.173	0.187	16.240	15.0	8
Terphenyl-d14	0.802	0.806	15.080	15.0	1
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d **
/chem/HP20296.i/18apr11.b/ld0412.d
/chem/HP20296.i/18apr11.b/ld0413.d
/chem/HP20296.i/18apr11.b/ld0414.d
/chem/HP20296.i/18apr11.b/ld0415.d
/chem/HP20296.i/18apr11.b/ld0416.d
/chem/HP20296.i/18apr11.b/ld0417.d
/chem/HP20296.i/18apr11.b/ld0418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18apr23.b/ld0871.d

Area Summary

File ID:

Internal Standard Name	ld0871.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	188735	219894	109947	439788	Yes
Naphthalene-d8	714475	846035	423018	1692070	Yes
Acenaphthene-d10	368022	428686	214343	857372	Yes
Phenanthrene-d10	740159	847675	423838	1695350	Yes
Pyrene-d10	781408	871904	435952	1743808	Yes
Perylene-d12	722599	795931	397966	1591862	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ld0871.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.560	6.968	No
Naphthalene-d8	8.544	8.958	No
Acenaphthene-d10	11.384	11.788	No
Phenanthrene-d10	13.331	13.718	No
Pyrene-d10	15.305	15.778	No
Perylene-d12	19.813	20.377	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: * Column maintenance

BB (0)08
4/25/18

Report generated on 04/23/2018 at 10:39

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 11:11

Lab File ID: ld0873.d Init. Calib. Date(s): 04/19/18 04/19/18

Init. Calib. Times(s): 20:22 22:41

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.398	0.418	13.130	12.5	5
Methapyrilene	0.329	0.330	12.520	12.5	0
Famphur	0.365	0.377	12.890	12.5	3
Kepone	0.110	0.112	61.240	60.0	2
				Average %Drift:	3

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/23/18 Time: 10:43

Lab File ID: ld0872.d Init. Calib. Date(s): 04/19/18 04/20/18

Init. Calib. Times(s): 23:36 01:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.413	0.382	11.540	12.5	-8
				Average %Drift:	8

FORM VII SV-1

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 19:41

Lab File ID: ld0981.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.654	0.599	6.870	7.5	-8
N-Nitrosodimethylamine	0.995	1.023	7.710	7.5	3
Pyridine	1.776	1.488	6.280	7.5	-16
2-Picoline	1.796	1.650	6.890	7.5	-8
N-Nitrosomethylethylamine	0.720	0.645	6.720	7.5	-10
Methyl methanesulfonate	0.872	0.892	7.680	7.5	2
N-Nitrosodiethylamine	0.668	0.686	7.700	7.5	3
Ethyl methanesulfonate	0.727	0.725	7.480	7.5	0
Benzaldehyde	1.358	1.365	7.540	7.5	0
Phenol	2.067	1.955	7.100	7.5	-5
Aniline	2.383	2.420	7.620	7.5	2
a-methylstyrene	0.521	0.485	6.990	7.5	-7
bis(2-Chloroethyl)ether	1.539	1.583	7.710	7.5	3
2-Chlorophenol	1.341	1.356	7.580	7.5	1
1,3-Dichlorobenzene	1.514	1.526	7.560	7.5	1
1,4-Dichlorobenzene	1.532	1.565	7.660	7.5	2
Benzyl alcohol	0.895	0.743	6.220	7.5	-17
1,2-Dichlorobenzene	1.459	1.487	7.640	7.5	2
Indene	2.138	1.966	6.900	7.5	-8
2-Methylphenol	1.322	1.351	7.660	7.5	2
2,2'-oxybis(1-Chloropropane)	2.184	2.413	8.290	7.5	10
bis(2-Chloroisopropyl)ether	2.184	2.413	8.290	7.5	10
N-Nitrosopyrrolidine	0.724	0.759	7.860	7.5	5
Acetophenone	2.016	2.173	8.080	7.5	8
4-Methylphenol	1.397	1.404	7.540	7.5	0
Total Cresols	1.360	1.377	15.200	15.0	1
N-Nitroso-di-n-propylamine	1.150	1.215	7.920	7.5	6
N-Nitrosomorpholine	0.961	0.966	7.540	7.5	1
o-Toluidine	2.339	2.353	7.540	7.5	1
Hexachloroethane	0.653	0.650	7.470	7.5	0
Nitrobenzene	0.440	0.485	8.270	7.5	10
N-Nitrosopiperidine	0.181	0.190	7.890	7.5	5
Isophorone	0.769	0.826	8.060	7.5	7
2-Nitrophenol	0.178	0.190	8.010	7.5	7
2,4-Dimethylphenol	0.381	0.400	7.870	7.5	5
O,O,O-Triethylphosphorothioate	0.189	0.193	7.660	7.5	2

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 19:41

Lab File ID: ld0981.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.500	0.517	7.760	7.5	3
Benzoic acid	0.207	0.128	7.080	10.0	-29
2,4-Dichlorophenol	0.297	0.316	8.000	7.5	7
1,2,4-Trichlorobenzene	0.331	0.352	7.990	7.5	7
Naphthalene	1.033	1.092	7.930	7.5	6
4-Chloroaniline	0.422	0.431	7.670	7.5	2
2,6-Dichlorophenol	0.294	0.316	8.060	7.5	7
Hexachloropropene	0.239	0.254	7.960	7.5	6
Hexachlorobutadiene	0.200	0.225	8.410	7.5	12
Quinoline	0.658	0.653	7.440	7.5	-1
Caprolactam	0.093	0.103	8.300	7.5	11
N-Nitrosodi-n-butylamine	0.324	0.299	6.920	7.5	-8
4-Chloro-3-methylphenol	0.326	0.344	7.920	7.5	6
Safrole	0.277	0.281	7.600	7.5	1
2-Methylnaphthalene	0.686	0.729	7.960	7.5	6
1-Methylnaphthalene	0.630	0.656	7.810	7.5	4
Hexachlorocyclopentadiene	0.404	0.406	7.530	7.5	0
1,2,4,5-Tetrachlorobenzene	0.680	0.720	7.940	7.5	6
cis-Isosafrole	0.592	0.586	1.260	1.3	-1
2,4,6-Trichlorophenol	0.427	0.459	8.060	7.5	7
2,4,5-Trichlorophenol	0.448	0.476	7.970	7.5	6
trans-Isosafrole	0.637	0.641	6.270	6.2	1
Isosafrole	0.629	0.632	7.530	7.5	0
1,1'-Biphenyl	1.603	1.733	8.110	7.5	8
2-Chloronaphthalene	1.362	1.411	7.770	7.5	4
1-Chloronaphthalene	1.260	1.197	7.120	7.5	-5
Diphenyl ether	0.895	0.908	7.610	7.5	1
2-Nitroaniline	0.399	0.412	7.760	7.5	3
1,4-Naphthoquinone	0.538	0.539	7.510	7.5	0
1,4-Dinitrobenzene	0.212	0.212	7.510	7.5	0
Dimethylphthalate	1.526	1.521	7.480	7.5	0
1,3-Dinitrobenzene	0.227	0.240	7.920	7.5	6
2,6-Dinitrotoluene	0.324	0.345	7.980	7.5	6
Acenaphthylene	1.894	1.997	7.910	7.5	5
3-Nitroaniline	0.341	0.364	7.990	7.5	7
Acenaphthene	1.343	1.355	7.570	7.5	1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 19:41

Lab File ID: ld0981.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.195	0.174	8.910	10.0	-11
4-Nitrophenol	0.241	0.219	6.820	7.5	-9
Pentachlorobenzene	0.555	0.589	7.960	7.5	6
2,4-Dinitrotoluene	0.449	0.448	7.490	7.5	0
2,4_2,6-Dinitrotoluenes	0.377	0.396	15.470	15.0	3
Dibenzofuran	1.865	1.916	7.700	7.5	3
1-Naphthylamine	1.327	1.318	7.450	7.5	-1
2,3,4,6-Tetrachlorophenol	0.349	0.363	7.800	7.5	4
2-Naphthylamine	1.258	1.290	7.690	7.5	3
Diethylphthalate	1.502	1.512	7.550	7.5	1
Thionazin	0.256	0.258	7.550	7.5	1
Fluorene	1.457	1.537	7.910	7.5	5
4-Chlorophenyl-phenylether	0.722	0.746	7.740	7.5	3
5-Nitro-o-toluidine	0.397	0.409	7.730	7.5	3
4-Nitroaniline	0.345	0.364	7.910	7.5	5
4,6-Dinitro-2-methylphenol	0.132	0.125	7.060	7.5	-6
N-Nitrosodiphenylamine (1)	0.612	0.609	7.460	7.5	0
NDPA as diphenylamine	0.612	0.609	7.460	7.5	0
1,2-Diphenylhydrazine	0.854	0.899	7.900	7.5	5
Tetraethyldithiopyrophosphate	0.145	0.148	7.650	7.5	2
1,3,5-Trinitrobenzene	0.082	0.082	7.530	7.5	0
Diallate (peak 1)	0.387	0.383	6.170	6.2	-1
Phorate	0.548	0.627	8.590	7.5	15
Phenacetin	0.387	0.410	7.950	7.5	6
4-Bromophenyl-phenylether	0.204	0.212	7.780	7.5	4
Diallate (peak 2)	0.306	0.325	1.350	1.3	6
Diallate trans/cis	0.373	0.373	7.520	7.5	0
Hexachlorobenzene	0.210	0.209	7.480	7.5	0
Dimethoate	0.330	0.332	7.560	7.5	1
Atrazine	0.207	0.216	7.840	7.5	5
Pentachlorophenol	0.129	0.109	6.380	7.5	-15
4-Aminobiphenyl	0.697	0.704	7.570	7.5	1
Pentachloronitrobenzene	0.100	0.104	7.800	7.5	4
Pronamide	0.345	0.368	7.990	7.5	7
Dinoseb	0.207	0.200	7.250	7.5	-3
Phenanthrene	1.102	1.107	7.530	7.5	0

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 19:41

Lab File ID: ld0981.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.105	1.153	7.820	7.5	4
Carbazole	0.979	1.014	7.770	7.5	4
Methyl parathion	0.251	0.256	7.650	7.5	2
Di-n-butylphthalate	1.317	1.304	7.430	7.5	-1
Parathion	0.163	0.168	7.750	7.5	3
4-Nitroquinoline-1-oxide	0.131	0.075	4.290	7.5	-43
Octachlorostyrene	0.079	0.076	7.280	7.5	-3
Isodrin	0.137	0.134	7.340	7.5	-2
Fluoranthene	1.240	1.312	7.930	7.5	6
Benzidine	0.737	0.716	21.860	22.5	-3
Pyrene	1.272	1.257	7.410	7.5	-1
p-Dimethylaminoazobenzene	0.194	0.203	7.830	7.5	4
Chlorobenzilate	0.379	0.370	7.320	7.5	-2
3,3'-Dimethylbenzidine	0.801	0.788	7.380	7.5	-2
Butylbenzylphthalate	0.591	0.584	7.410	7.5	-1
2-Acetylaminofluorene	0.468	0.505	8.100	7.5	8
3,3'-Dichlorobenzidine	0.409	0.433	7.940	7.5	6
4,4'-Methylenebis(2-chloroanil	0.248	0.251	7.590	7.5	1
Benzo(a)anthracene	1.136	1.211	7.990	7.5	7
Chrysene	1.099	1.187	8.100	7.5	8
bis(2-Ethylhexyl)phthalate	0.835	0.840	7.540	7.5	1
6-Methylchrysene	0.774	0.808	7.830	7.5	4
Di-n-octylphthalate	1.572	1.509	7.200	7.5	-4
Benzo(b)fluoranthene	1.226	1.248	7.630	7.5	2
7,12-Dimethylbenz[a]anthracene	0.506	0.491	7.280	7.5	-3
Benzo(k)fluoranthene	1.180	1.192	7.580	7.5	1
Benzo(a)pyrene	1.103	1.166	7.930	7.5	6
3-Methylcholanthrene	0.536	0.539	7.540	7.5	1
Dibenz(a,h)acridine	0.937	0.904	7.230	7.5	-4
Dibenz(a,j)acridine	0.952	0.901	7.090	7.5	-5
Indeno(1,2,3-cd)pyrene	1.048	1.038	7.430	7.5	-1
Dibenz(a,h)anthracene	1.064	1.063	7.490	7.5	0
Benzo(g,h,i)perylene	1.082	1.029	7.130	7.5	-5
Total PAHs	1.074	1.006	139.080	135.0	3
2-Fluorophenol	1.369	1.389	15.220	15.0	1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 19:41

Lab File ID: ld0981.d Init. Calib. Date(s): 04/11/18 04/11/18

Init. Calib. Times(s): 07:59 12:20

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	1.795	1.831	15.300	15.0	2
Nitrobenzene-d5	0.431	0.478	16.620	15.0	11
2-Fluorobiphenyl	1.554	1.592	15.360	15.0	2
2,4,6-Tribromophenol	0.173	0.189	16.450	15.0	10
Terpheny1-d14	0.802	0.813	15.200	15.0	1
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18apr11.b/ld0411a.d **
/chem/HP20296.i/18apr11.b/ld0412.d
/chem/HP20296.i/18apr11.b/ld0413.d
/chem/HP20296.i/18apr11.b/ld0414.d
/chem/HP20296.i/18apr11.b/ld0415.d
/chem/HP20296.i/18apr11.b/ld0416.d
/chem/HP20296.i/18apr11.b/ld0417.d
/chem/HP20296.i/18apr11.b/ld0418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18apr24a.b/ld0981.d

Area Summary

File ID:

Internal Standard Name	ld0981.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	194873	219894	109947	439788	Yes
Naphthalene-d8	719719	846035	423018	1692070	Yes
Acenaphthene-d10	375643	428686	214343	857372	Yes
Phenanthrene-d10	764016	847675	423838	1695350	Yes
Pyrene-d10	828416	871904	435952	1743808	Yes
Perylene-d12	824556	795931	397966	1591862	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ld0981.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.570	6.968	No
Naphthalene-d8	8.554	8.958	No
Acenaphthene-d10	11.395	11.788	No
Phenanthrene-d10	13.336	13.718	No
Pyrene-d10	15.315	15.778	No
Perylene-d12	19.824	20.377	No

(8)

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: (8) Column Maintenance
WS-2981 4/24/18

Report generated on 04/24/2018 at 20:11

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 04/24/18 Time: 20:20

Lab File ID: ld0982.d Init. Calib. Date(s): 04/19/18 04/19/18

Init. Calib. Times(s): 20:22 22:41

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Disulfoton	0.398	0.462	14.510	12.5	16
Methapyrilene	0.329	0.344	13.050	12.5	4
Famphur	0.365	0.375	12.820	12.5	3
Kepone	0.110	0.113	61.430	60.0	2
			Average %Drift:		6

FORM VII SV-1

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID.: HP20296 Calibration Date: 04/24/18 Time: 20:48

Lab File ID: ld0983.d Init. Calib. Date(s): 04/19/18 04/20/18

Init. Calib. Times(s): 23:36 01:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Phenylenediamine	0.413	0.319	9.640	12.5	-23
			Average %Drift:		23

FORM VII SV-1

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0811a.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 07:43

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	200435	6.581	745064	8.565	386246	11.405
UPPER LIMIT	400870	7.081	1490128	9.065	772492	11.905
LOWER LIMIT	100218	6.081	372532	8.065	193123	10.905
LLI SAMPLE NO.						
01 SBLKWO106	171930	6.581	640518	8.560	321760	11.400
02 SBLKWY106	171930	6.581	640518	8.560	321760	11.400
03 SBLKWZ106	171930	6.581	640518	8.560	321760	11.400
04 106WOLCS	163798	6.581	603965	8.565	304176	11.405
05 106WYLCS	163798	6.581	603965	8.565	304176	11.405
06 106WZLCS	163798	6.581	603965	8.565	304176	11.405
07 106WYUS	161910	6.575	598346	8.560	304211	11.400
08 106WZUS	161910	6.575	598346	8.560	304211	11.400
09 9558698	161910	6.575	598346	8.560	304211	11.400
10 106WYMS	146854	6.581	538724	8.560	275440	11.405
11 106WZMS	146854	6.581	538724	8.560	275440	11.405
12 9558699MS	146854	6.581	538724	8.560	275440	11.405
13 106WYMSD	152777	6.581	572196	8.560	285669	11.405
14 106WZMSD	152777	6.581	572196	8.560	285669	11.405
15 9558700MSD	152777	6.581	572196	8.560	285669	11.405
16 9558695	156912	6.575	579635	8.560	293540	11.400
17 9558696	152764	6.575	564193	8.560	282371	11.400

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0811a.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 07:43

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	802737	13.352	854720	15.331	838322	19.840
	UPPER LIMIT	1605474	13.852	1709440	15.831	1676644	20.340
	LOWER LIMIT	401369	12.852	427360	14.831	419161	19.340
	LLI SAMPLE NO.						
01	SBLKWO106	656198	13.342	667781	15.321	628369	19.830
02	SBLKWY106	656198	13.342	667781	15.321	628369	19.830
03	SBLKWZ106	656198	13.342	667781	15.321	628369	19.830
04	106WOLCS	611711	13.347	659755	15.326	650607	19.835
05	106WYLCS	611711	13.347	659755	15.326	650607	19.835
06	106WZLCS	611711	13.347	659755	15.326	650607	19.835
07	106WYUS	606396	13.341	628541	15.320	595917	19.829
08	106WZUS	606396	13.341	628541	15.320	595917	19.829
09	9558698	606396	13.341	628541	15.320	595917	19.829
10	106WYMS	542961	13.347	582694	15.326	544897	19.835
11	106WZMS	542961	13.347	582694	15.326	544897	19.835
12	9558699MS	542961	13.347	582694	15.326	544897	19.835
13	106WYMSD	570599	13.347	610786	15.326	587752	19.835
14	106WZMSD	570599	13.347	610786	15.326	587752	19.835
15	9558700MSD	570599	13.347	610786	15.326	587752	19.835
16	9558695	595090	13.341	613903	15.320	577727	19.829
17	9558696	582417	13.341	593828	15.320	552658	19.835

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0811a.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 07:43

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	200435	6.581	745064	8.565	386246	11.405
UPPER LIMIT	400870	7.081	1490128	9.065	772492	11.905
LOWER LIMIT	100218	6.081	372532	8.065	193123	10.905
LLI SAMPLE NO.						
18 9558697	160456	6.576	605626	8.560	302523	11.400
19 9558702	147226	6.581	550653	8.560	274346	11.400
20 9558703	160523	6.576	606254	8.560	301485	11.400
21 9558704	162623	6.576	601541	8.560	299253	11.400
22 9558705	161748	6.575	615086	8.560	304479	11.400
23 9558706	156896	6.576	589159	8.560	287747	11.400
24 9558707	161498	6.576	609283	8.560	304022	11.400

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0811a.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 07:43

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	802737	13.352	854720	15.331	838322	19.840
	UPPER LIMIT	1605474	13.852	1709440	15.831	1676644	20.340
	LOWER LIMIT	401369	12.852	427360	14.831	419161	19.340
	LLI SAMPLE NO.						
18	9558697	612509	13.342	627708	15.321	578650	19.829
19	9558702	539305	13.342	554298	15.321	502630	19.829
20	9558703	608677	13.342	605307	15.321	545916	19.829
21	9558704	602084	13.342	597487	15.321	543439	19.829
22	9558705	606826	13.341	616415	15.320	564785	19.829
23	9558706	582285	13.342	587513	15.321	535848	19.829
24	9558707	602706	13.342	611680	15.321	552672	19.830

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0851.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 19:55

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	186854	6.576	702476	8.560	362513	11.400
UPPER LIMIT	373708	7.076	1404952	9.060	725026	11.900
LOWER LIMIT	93427	6.076	351238	8.060	181257	10.900
LLI SAMPLE NO.						
01 SBLKWI109	151748	6.576	579971	8.560	292229	11.400
02 109WILCS	147857	6.576	549777	8.560	276586	11.395
03 109WILCSD	143084	6.575	531829	8.560	272697	11.395
04 SBLKWJ108	158069	6.576	592438	8.555	300013	11.395
05 108WJLCS	161839	6.576	601024	8.555	305415	11.395
06 108WJLCSD	153501	6.576	567630	8.555	289195	11.395
07 9557112	143415	6.570	540133	8.554	277162	11.395
08 9563717	148364	6.570	553051	8.555	277552	11.395
09 9564825	156257	6.570	586271	8.555	292149	11.395
10 9564826	162641	6.570	612793	8.554	312029	11.395
11 9565542	156066	6.570	580818	8.554	287918	11.395
12 9565543	161459	6.570	598042	8.554	292782	11.389
13 RVSTD0968	206127	6.570	775364	8.555	404843	11.395
14 9558708	157692	6.570	586732	8.554	299135	11.395
15 9557948	530272*	6.570	2058695*	8.560	1025652*	11.411

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0851.d Date Analyzed: 04/20/18

Instrument ID: HP20296 Time Analyzed: 19:55

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	738790	13.347	784610	15.321	752704	19.830
UPPER LIMIT	1477580	13.847	1569220	15.821	1505408	20.330
LOWER LIMIT	369395	12.847	392305	14.821	376352	19.330
LLI SAMPLE NO.						
01 SBLKWI109	603019	13.342	624660	15.321	548254	19.830
02 109WILCS	542797	13.342	572198	15.321	553767	19.830
03 109WILCSD	528050	13.341	557291	15.320	526465	19.824
04 SBLKWJ108	611139	13.336	631615	15.315	596258	19.824
05 108WJLCS	603700	13.342	629628	15.315	604877	19.824
06 108WJLCSD	571492	13.342	616399	15.321	597458	19.824
07 9557112	563617	13.336	596569	15.315	554491	19.824
08 9563717	555916	13.336	573394	15.315	542744	19.824
09 9564825	589328	13.336	590813	15.315	548505	19.824
10 9564826	637292	13.336	660305	15.315	593376	19.824
11 9565542	572497	13.336	584408	15.315	543506	19.824
12 9565543	592232	13.336	604471	15.315	571400	19.824
13 RVSTD0968	789075	13.342	863388	15.321	869932	19.830
14 9558708	598793	13.336	598638	15.315	561277	19.824
15 9557948	3035424*	13.358	1352745	15.347	397556	19.872

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0871.d Date Analyzed: 04/23/18

Instrument ID: HP20296 Time Analyzed: 10:00

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	188735	6.560	714475	8.544	368022	11.384
UPPER LIMIT	377470	7.060	1428950	9.044	736044	11.884
LOWER LIMIT	94368	6.060	357238	8.044	184011	10.884
LLI SAMPLE NO.						
01 106WOLCS2	163001	6.559	603487	8.544	301683	11.384
02 106WOLCSD2	171107	6.565	639632	8.544	320716	11.379
03 SBLKWI110	159598	6.559	599446	8.544	298241	11.384
04 110WILCS	159416	6.565	580506	8.544	293881	11.384
05 110WILCSD	160773	6.565	596341	8.544	299040	11.384
06 SBLKWD110	149837	6.559	559594	8.544	282702	11.379
07 110WDLCS	149296	6.565	560568	8.544	281072	11.384
08 110WDLCSD	146074	6.565	544086	8.544	275899	11.384
09 9565150	157784	6.560	577834	8.544	290008	11.384
10 9565153	139304	6.565	493612	8.560	213700	11.411
11 9566472	149082	6.559	560445	8.544	280607	11.384
12 9567319	157112	6.560	578040	8.544	291666	11.384
13 9567320	155377	6.559	572194	8.544	287361	11.384
14 9567321	140035	6.560	518153	8.544	257854	11.384
15 9567322	156463	6.559	582986	8.544	281990	11.384

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0871.d Date Analyzed: 04/23/18

Instrument ID: HP20296 Time Analyzed: 10:00

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	740159	13.331	781408	15.305	722599	19.813
UPPER LIMIT	1480318	13.831	1562816	15.805	1445198	20.313
LOWER LIMIT	370080	12.831	390704	14.805	361300	19.313
LLI SAMPLE NO.						
01 106WOLCS2	588959	13.331	613511	15.304	559242	19.813
02 106WOLCSD2	637181	13.331	652738	15.305	601727	19.808
03 SBLKWI110	587731	13.325	591039	15.304	542117	19.808
04 110WILCS	573781	13.331	593837	15.304	563128	19.813
05 110WILCSD	587663	13.331	617569	15.304	583030	19.813
06 SBLKWD110	548314	13.326	553714	15.299	514383	19.808
07 110WDLCS	547999	13.331	580973	15.304	537668	19.813
08 110WDLCSD	539176	13.331	567593	15.305	538117	19.813
09 9565150	502898	13.331	576597	15.310	570933	19.813
10 9565153	500550	13.352	582334	15.331	599023	19.819
11 9566472	570354	13.331	580747	15.304	536411	19.808
12 9567319	576440	13.326	599647	15.305	579131	19.814
13 9567320	573004	13.331	584973	15.304	571578	19.813
14 9567321	516289	13.326	518904	15.305	499363	19.808
15 9567322	569560	13.326	581413	15.305	543011	19.808

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0981.d Date Analyzed: 04/24/18

Instrument ID: HP20296 Time Analyzed: 19:41

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	194873	6.570	719719	8.554	375643	11.395
UPPER LIMIT	389746	7.070	1439438	9.054	751286	11.895
LOWER LIMIT	97437	6.070	359860	8.054	187822	10.895
LLI SAMPLE NO.						
01 SBLKWO113	150222	6.570	555332	8.554	276758	11.389
02 113WOLCS	150283	6.576	552195	8.555	276727	11.389
03 113WOLCSD	152325	6.575	560125	8.554	285767	11.395
04 SBLKWN113	158476	6.570	590097	8.555	292626	11.389
05 113WNLCS	144506	6.575	544621	8.554	271730	11.395
06 113WNLCS1	164601	6.575	616772	8.554	309735	11.394
07 113WNLCSD1	153502	6.575	571042	8.554	289348	11.389
08 SBLKWB113	161267	6.575	596077	8.554	294777	11.395
09 113WBLCS	150269	6.581	555325	8.560	279177	11.395
10 113WBLCSD	150446	6.581	566287	8.560	283026	11.395
11 9567427	154227	6.576	566610	8.555	288167	11.395
12 RVSTD0968	218978	6.581	820874	8.560	423768	11.400
13 9558698RE	154511	6.575	571263	8.560	280459	11.394
14 9558699RE	153668	6.581	566763	8.560	285246	11.400
15 9558700MSDSD	152194	6.581	555724	8.560	281669	11.400
16 9558702RE	147322	6.576	561772	8.560	275019	11.395
17 9569768	166451	6.581	616457	8.560	307275	11.395

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0981.d Date Analyzed: 04/24/18

Instrument ID: HP20296 Time Analyzed: 19:41

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	764016	13.336	828416	15.315	824556	19.824
	UPPER LIMIT	1528032	13.836	1656832	15.815	1649112	20.324
	LOWER LIMIT	382008	12.836	414208	14.815	412278	19.324
	LLI SAMPLE NO.						
01	SBLKWO113	539922	13.336	562839	15.310	520613	19.819
02	113WOLCS	558421	13.336	588871	15.310	587861	19.819
03	113WOLCSD	563631	13.336	599764	15.315	597221	19.819
04	SBLKWN113	588447	13.331	603012	15.310	564884	19.819
05	113WNLCS	550440	13.336	598196	15.315	600392	19.819
06	113WNLCS1	613339	13.336	642021	15.315	623625	19.819
07	113WNLCSD1	589340	13.336	596141	15.315	580331	19.819
08	SBLKWB113	587897	13.336	600179	15.310	537530	19.819
09	113WBLCS	555550	13.342	591604	15.315	580494	19.824
10	113WBLCSD	580783	13.341	592683	15.315	570886	19.824
11	9567427	576371	13.336	594041	15.315	568312	19.824
12	RVSTD0968	851057	13.341	902384	15.320	872684	19.829
13	9558698RE	567013	13.336	582904	15.315	500239	19.824
14	9558699RE	563285	13.341	597611	15.315	565830	19.824
15	9558700MSDSD	556496	13.341	602140	15.320	571835	19.824
16	9558702RE	547374	13.342	575647	15.315	498745	19.824
17	9569768	615722	13.342	643944	15.315	545778	19.824

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0981.d Date Analyzed: 04/24/18

Instrument ID: HP20296 Time Analyzed: 19:41

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	194873	6.570	719719	8.554	375643	11.395
	UPPER LIMIT	389746	7.070	1439438	9.054	751286	11.895
	LOWER LIMIT	97437	6.070	359860	8.054	187822	10.895
	LLI SAMPLE NO.						
18	9569770	161136	6.575	594994	8.560	290871	11.400
19	9569771	161519	6.576	590628	8.560	294086	11.395

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ld0981.d Date Analyzed: 04/24/18

Instrument ID: HP20296 Time Analyzed: 19:41

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	764016	13.336	828416	15.315	824556	19.824
	UPPER LIMIT	1528032	13.836	1656832	15.815	1649112	20.324
	LOWER LIMIT	382008	12.836	414208	14.815	412278	19.324
	LLI SAMPLE NO.						
18	9569770	589056	13.341	606065	15.315	507901	19.824
19	9569771	586983	13.342	616312	15.315	509140	19.824

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D MINI Analyte Name	Default MDL	Default LOQ	Units
N-Nitrosodimethylamine	2	10	ug/l
Pyridine	2	10	ug/l
2-Picoline	2	10	ug/l
N-Nitrosomethylethylamine	2	10	ug/l
Methyl methanesulfonate	1	10	ug/l
N-Nitrosodiethylamine	0.5	10	ug/l
Ethyl methanesulfonate	0.5	10	ug/l
Phenol	0.8	10	ug/l
Aniline	0.5	10	ug/l
bis(2-Chloroethyl)ether	0.5	5	ug/l
2-Chlorophenol	1	10	ug/l
o-Toluidine	0.5	10	ug/l
Benzyl alcohol	10	30	ug/l
2-Methylphenol	0.5	5	ug/l
bis(2-Chloroisopropyl)ether	0.5	10	ug/l
2,4-Dichlorophenol	2	10	ug/l
N-Nitrosopyrrolidine	0.5	10	ug/l
Acetophenone	0.5	10	ug/l
4-Methylphenol	0.5	5	ug/l
N-Nitroso-di-n-propylamine	0.5	10	ug/l
N-Nitrosomorpholine	2	10	ug/l
Hexachloroethane	1	10	ug/l
Nitrobenzene	0.5	10	ug/l
N-Nitrosopiperidine	0.5	10	ug/l
Isophorone	0.5	10	ug/l
2-Nitrophenol	1	10	ug/l
2,4-Dimethylphenol	1	10	ug/l
O,O,O-Triethylphosphorothioate	2	10	ug/l
bis(2-Chloroethoxy)methane	0.5	5	ug/l
a,a-Dimethylphenethylamine	5	50	ug/l
4-Chloroaniline	2	10	ug/l
2,6-Dichlorophenol	0.5	10	ug/l
Hexachloropropene	2	10	ug/l
N-Nitrosodi-n-butylamine	2	10	ug/l
1,4-Phenylenediamine	75	300	ug/l
4-Chloro-3-methylphenol	1	10	ug/l
Safrole	2	10	ug/l
2-Methylnaphthalene	0.3	10	ug/l
Hexachlorocyclopentadiene	5	15	ug/l
1,2,4,5-Tetrachlorobenzene	2	10	ug/l
2,4,6-Trichlorophenol	0.6	10	ug/l
2,4,5-Trichlorophenol	0.8	10	ug/l
Isosafrole	2	10	ug/l
2-Chloronaphthalene	0.5	10	ug/l
2-Nitroaniline	0.5	10	ug/l
1,4-Naphthoquinone	25	60	ug/l
Dimethylphthalate	2	10	ug/l

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D MINI Analyte Name	Default MDL	Default LOQ	Units
1,3-Dinitrobenzene	2	10	ug/l
2,6-Dinitrotoluene	0.5	10	ug/l
Acenaphthylene	0.5	10	ug/l
3-Nitroaniline	0.5	10	ug/l
Acenaphthene	0.4	10	ug/l
2,4-Dinitrophenol	10	30	ug/l
4-Nitrophenol	10	30	ug/l
Pentachlorobenzene	0.5	10	ug/l
2,4-Dinitrotoluene	1	10	ug/l
Dibenzofuran	0.6	10	ug/l
1-Naphthylamine	5	15	ug/l
2,3,4,6-Tetrachlorophenol	0.7	10	ug/l
2-Naphthylamine	5	15	ug/l
Diethylphthalate	2	10	ug/l
Thionazin	2	10	ug/l
Fluorene	0.4	10	ug/l
4-Chlorophenyl-phenylether	0.5	10	ug/l
5-Nitro-o-toluidine	0.5	10	ug/l
4-Nitroaniline	0.7	10	ug/l
4,6-Dinitro-2-methylphenol	5	15	ug/l
N-Nitrosodiphenylamine	0.6	10	ug/l
NDPA as diphenylamine	0.5	10	ug/l
1,3,5-Trinitrobenzene	5	15	ug/l
Phorate	0.5	10	ug/l
Phenacetin	0.5	10	ug/l
4-Bromophenyl-phenylether	0.6	10	ug/l
Diallate trans/cis	1	10	ug/l
Hexachlorobenzene	0.9	10	ug/l
Dimethoate	3	10	ug/l
Pentachlorophenol	3	10	ug/l
4-Aminobiphenyl	0.5	10	ug/l
Pentachloronitrobenzene	2	10	ug/l
Pronamide	0.5	10	ug/l
Phenanthrene	0.5	10	ug/l
Anthracene	0.5	10	ug/l
Disulfoton	25	50	ug/l
Methyl parathion	1	10	ug/l
Di-n-butylphthalate	2	10	ug/l
Parathion	2	10	ug/l
4-Nitroquinoline-1-oxide	20	60	ug/l
Methapyrilene	15	50	ug/l
Isodrin	0.5	10	ug/l
Fluoranthene	0.4	10	ug/l
Pyrene	0.4	10	ug/l
Aramite	5	15	ug/l
p-Dimethylaminoazobenzene	0.5	10	ug/l
Chlorobenzilate	3	10	ug/l

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D MINI Analyte Name	Default MDL	Default LOQ	Units
3,3'-Dimethylbenzidine	25	75	ug/l
Butylbenzylphthalate	2	10	ug/l
Famphur	25	50	ug/l
Kepone	25	50	ug/l
2-Acetylaminofluorene	2	10	ug/l
3,3'-Dichlorobenzidine	2	10	ug/l
Benzo(a)anthracene	0.5	10	ug/l
Chrysene	0.3	10	ug/l
bis(2-Ethylhexyl)phthalate	2	10	ug/l
Di-n-octylphthalate	2	10	ug/l
Benzo(b)fluoranthene	1	10	ug/l
7,12-Dimethylbenz[a]anthracene	0.5	10	ug/l
Benzo(k)fluoranthene	2	10	ug/l
Benzo(a)pyrene	2	10	ug/l
3-Methylcholanthrene	0.5	10	ug/l
Indeno(1,2,3-cd)pyrene	0.2	10	ug/l
Dibenz(a,h)anthracene	0.4	10	ug/l
Benzo(g,h,i)perylene	0.4	10	ug/l

R0601 Lancaster Laboratories, Inc. 9558695
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0821.d Injection date and time: **20-APR-2018 14:38**
Data file Sample Info. Line: R0601;9558695;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.005)	914	152	156912	(-22)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	579635	(-22)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	293540	(-24)	5.00	
158) Phenanthrene-d10	13.341	(0.011)	2179	188	595090	(-26)	5.00	
180) Pyrene-d10	15.320	(0.011)	2549	212	613903	(-28)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	577727	(-31)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687	(0.001)	112	962766	22.407	45%		10 - 82
18) Phenol-d6	(1)	6.126	(0.001)	99	1179313	20.932	42%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	957257	19.148	77%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1708856	18.726	75%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	441254	43.486	87%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2223195	22.581	90%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/18apr20.b/ld0821.d Injection date and time: **20-APR-2018 14:38**
Data file Sample Info. Line: R0601;9558695;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.1
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					3
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					0.2
128) 2-Naphthylamine	(3)			Not Detected					1
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
137) NDPA as diphenylamine	(4)			Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)			Not Detected					0.7

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Data file: /chem/HP20296.i/18apr20.b/ld0821.d Injection date and time: **20-APR-2018 14:38**
Data file Sample Info. Line: R0601;9558695;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

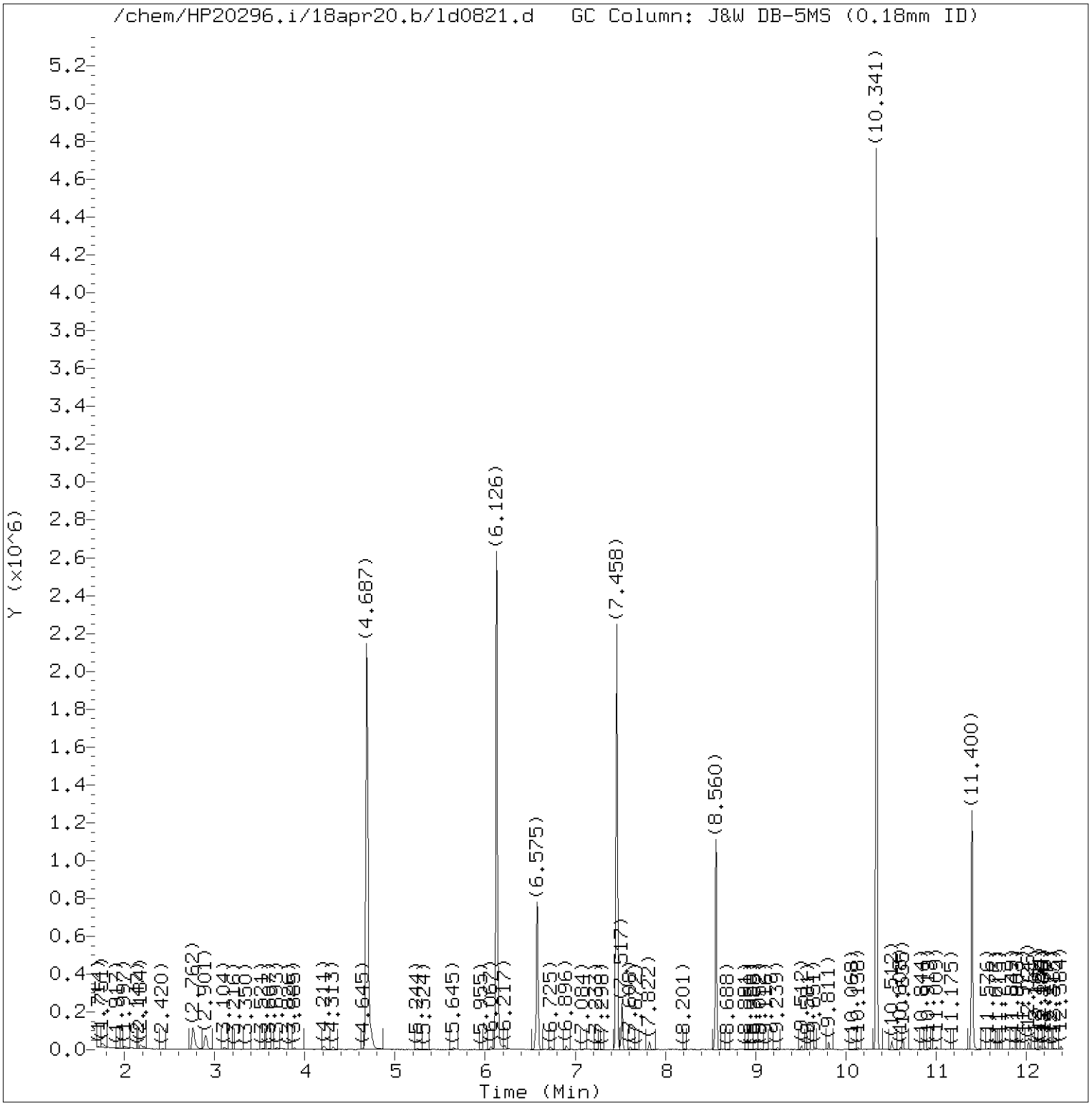
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:00. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

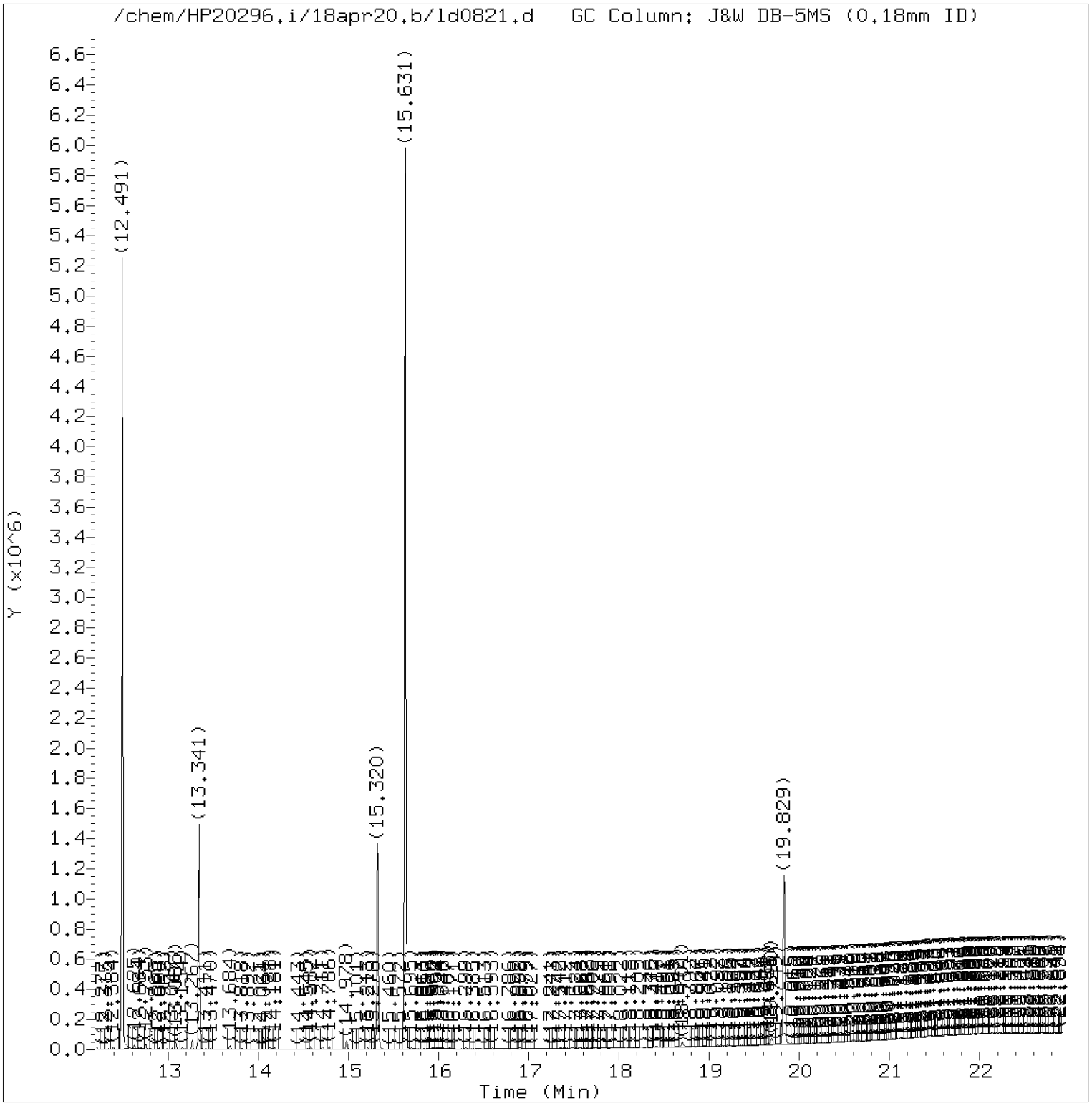
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0821.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:38 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:00.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0821.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:38 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Sample Name: R0601 Lab Sample ID: 9558695

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:00.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0821.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:38 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:51 bhs10208

Sample Name: R0601 Lab Sample ID: 9558695

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	962766	22.407
18)$Phenol-d6	(1)	6.126	99	1179313	20.932
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	156912	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	957257	19.148
68)*Naphthalene-d8	(2)	8.560	136	579635	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1708856	18.726
118)*Acenaphthene-d10	(3)	11.400	164	293540	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	441254	43.486
158)*Phenanthrene-d10	(4)	13.341	188	595090	5.000
180)*Pyrene-d10	(5)	15.320	212	613903	5.000
184)$Terphenyl-d14	(5)	15.631	244	2223195	22.581
218)*Perylene-d12	(6)	19.829	264	577727	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:00.
Target 3.5 esignature user ID: bhs10208

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0822.d
Data file Sample Info. Line: R0602;9558696;1;0;SAMPLE;;RAAP;
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Injection date and time: **20-APR-2018 15:06**
Instrument ID: **HP20296.i** Batch: **18106WAO**

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.006)	914	152	152764	(-24)	5.00	
68) Naphthalene-d8	8.560	(0.006)	1285	136	564193	(-24)	5.00	
118) Acenaphthene-d10	11.400	(0.006)	1816	164	282371	(-27)	5.00	
158) Phenanthrene-d10	13.341	(0.011)	2179	188	582417	(-27)	5.00	
180) Pyrene-d10	15.320	(0.011)	2549	212	593828	(-31)	5.00	
218) Perylene-d12	19.835	(0.006)	3393	264	552658	(-34)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687	(0.001)	112	818716	19.572	39%		10 - 82
18) Phenol-d6	(1)	6.126	(0.001)	99	1024834	18.684	37%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	878616	18.056	72%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1639193	18.673	75%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	425172	43.559	87%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	1810566	19.012	76%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/18apr20.b/ld0822.d Injection date and time: **20-APR-2018 15:06**
Data file Sample Info. Line: R0602;9558696;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8
154) Pentachlorophenol	(4)				Not Detected					0.7

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Data file: /chem/HP20296.i/18apr20.b/ld0822.d Injection date and time: **20-APR-2018 15:06**
Data file Sample Info. Line: R0602;9558696;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

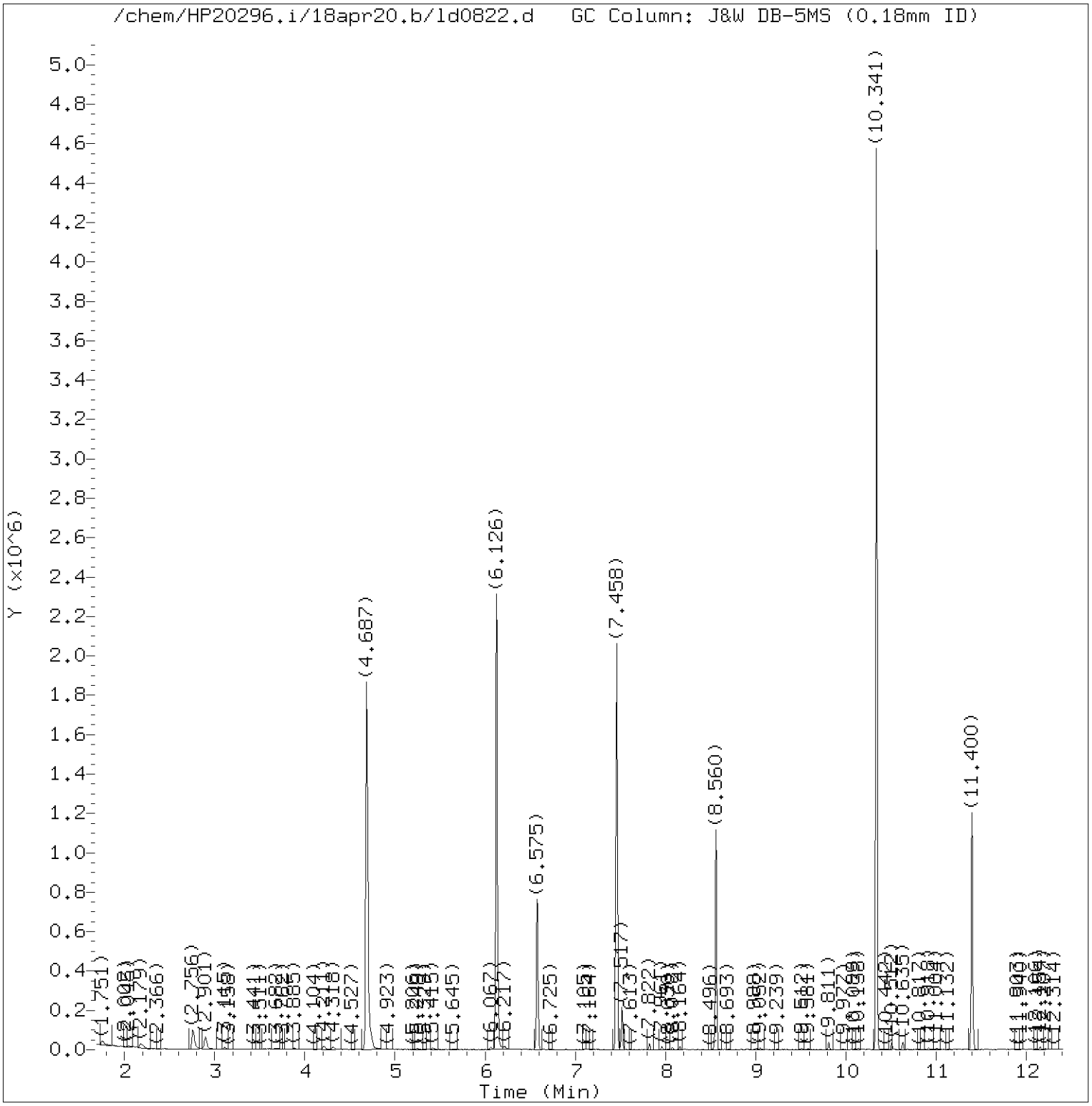
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
210) Di-n-octylphthalate	(6)			Not Detected					0.5
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					0.1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/25/2018 at 13:56. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 08:24. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

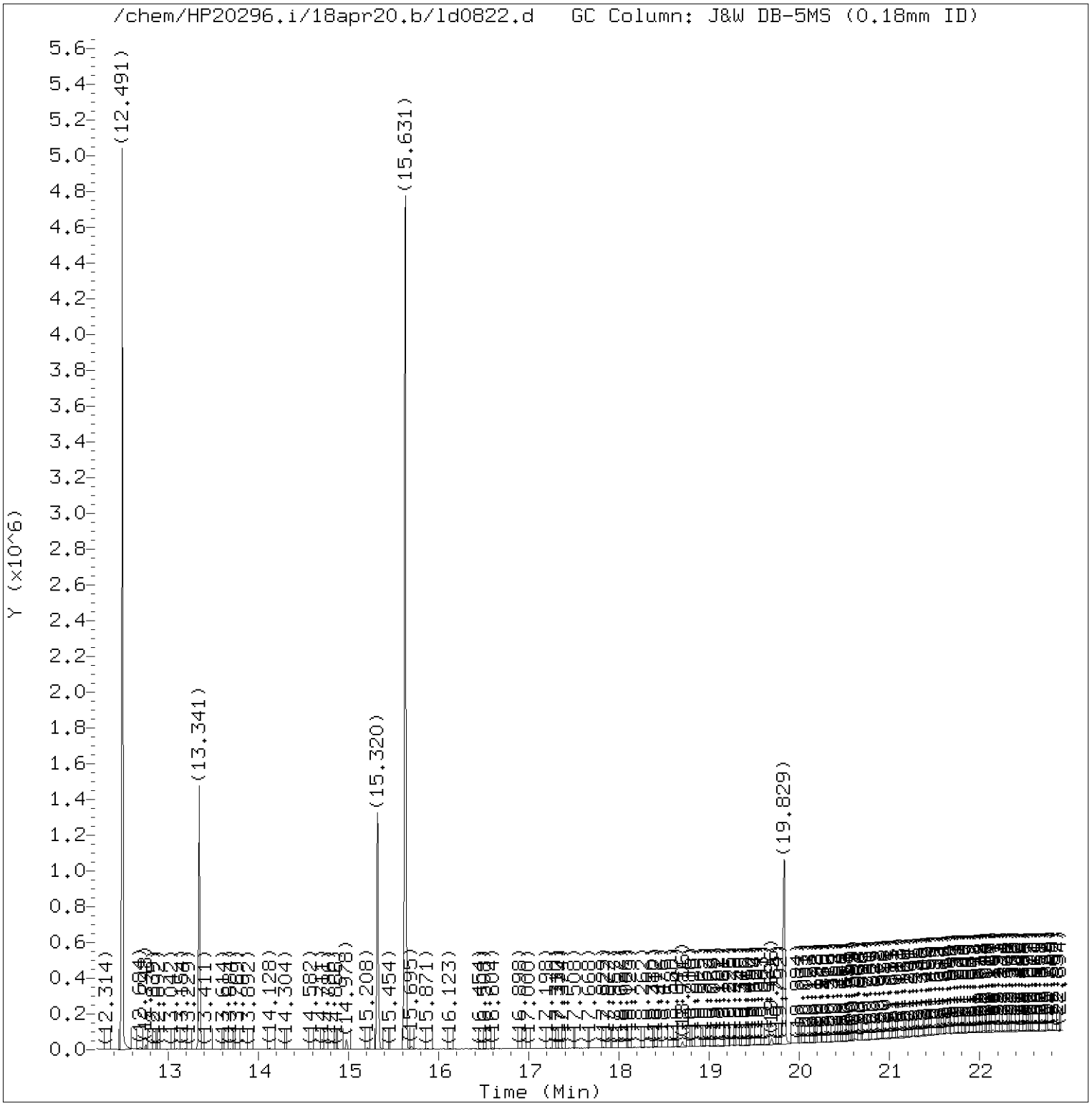
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0822.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:06 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Brandon H. Smith
on 04/25/2018 at 13:56.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0822.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:06 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Sample Name: R0602 Lab Sample ID: 9558696

Digitally signed by Brandon H. Smith
on 04/25/2018 at 13:56.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0822.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:06 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 25-Apr-2018 13:55 bhs10208

Sample Name: R0602 Lab Sample ID: 9558696

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	818716	19.572
18)$Phenol-d6	(1)	6.126	99	1024834	18.684
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	152764	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	878616	18.056
68)*Naphthalene-d8	(2)	8.560	136	564193	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1639193	18.673
118)*Acenaphthene-d10	(3)	11.400	164	282371	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	425172	43.559
158)*Phenanthrene-d10	(4)	13.341	188	582417	5.000
180)*Pyrene-d10	(5)	15.320	212	593828	5.000
184)$Terphenyl-d14	(5)	15.631	244	1810566	19.012
218)*Perylene-d12	(6)	19.835	264	552658	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/25/2018 at 13:56.
Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0823.d Injection date and time: **20-APR-2018 15:34**
Data file Sample Info. Line: R0603;9558697;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.576	(0.005)	914	152	160456	(-20)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	605626	(-19)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	302523	(-22)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	612509	(-24)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	627708	(-27)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	578650	(-31)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687	(0.001)	112	745126	16.959	34%		10 - 82
18) Phenol-d6	(1)	6.126	(0.001)	99	1122580	19.485	39%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	883494	16.914	68%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1715131	18.237	73%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	404696	38.699	77%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2164298	21.500	86%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/18apr20.b/ld0823.d Injection date and time: **20-APR-2018 15:34**
Data file Sample Info. Line: R0603;9558697;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
62) 2,4-Dichlorophenol	(2)			Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)			Not Detected					0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)			Not Detected					0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)			Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)			Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)			Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)			Not Detected					0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)			Not Detected					0.1
104) 2-Nitroaniline	(3)			Not Detected					0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)			Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
114) Acenaphthylene	(3)			Not Detected					0.1
117) 3-Nitroaniline	(3)			Not Detected					0.1
119) Acenaphthene	(3)			Not Detected					0.09
120) 2,4-Dinitrophenol	(3)			Not Detected					3
121) 4-Nitrophenol	(3)			Not Detected					3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
124) Dibenzofuran	(3)			Not Detected					0.1
126) 1-Naphthylamine	(3)			Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					0.2
128) 2-Naphthylamine	(3)			Not Detected					1
129) Diethylphthalate	(3)			Not Detected					0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)			Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)			Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
136) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
137) NDPA as diphenylamine	(4)			Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)			Not Detected					0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)			Not Detected					0.7

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Data file: /chem/HP20296.i/18apr20.b/ld0823.d Injection date and time: **20-APR-2018 15:34**
Data file Sample Info. Line: R0603;9558697;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Total number of targets = 120

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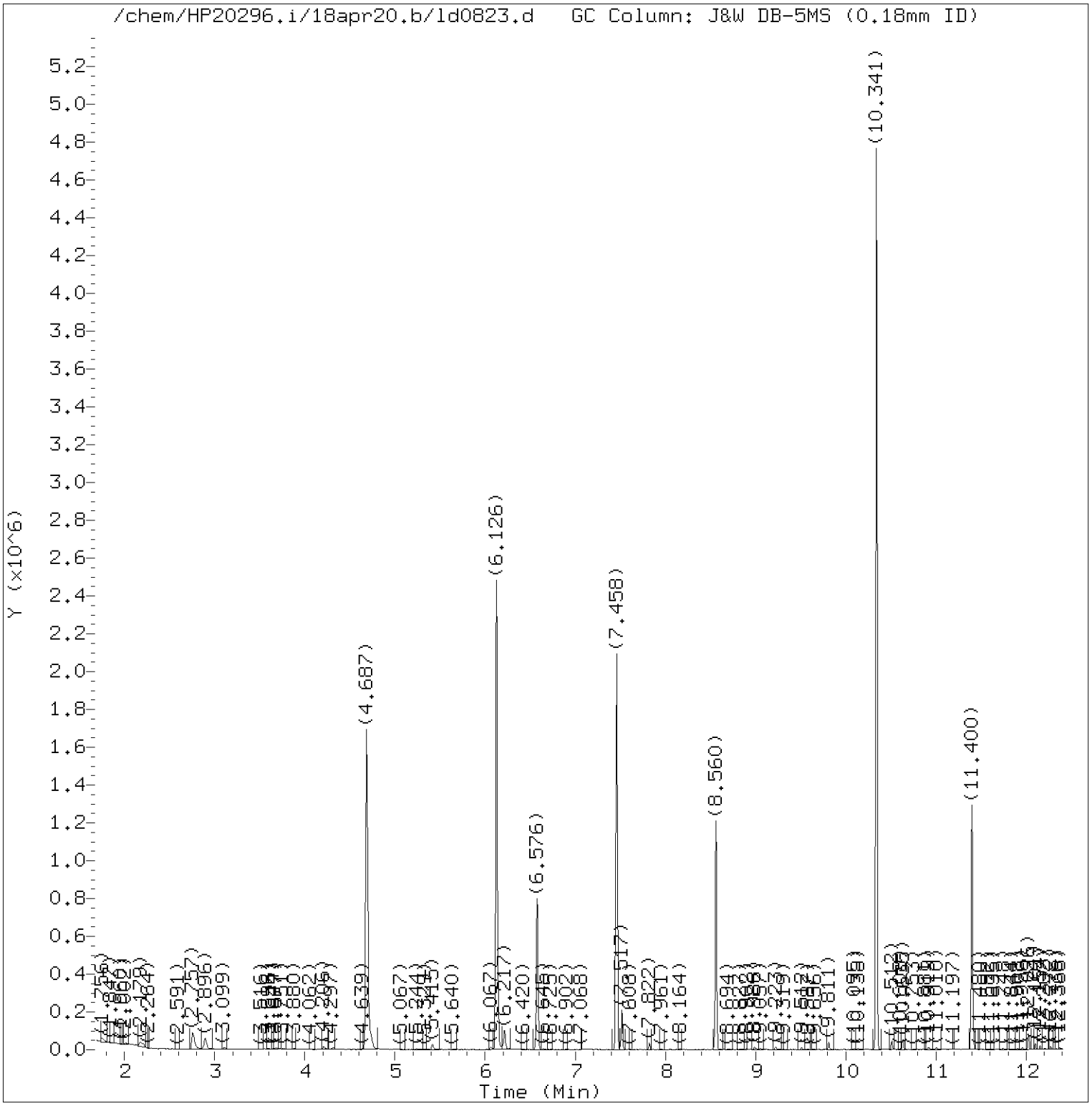
Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

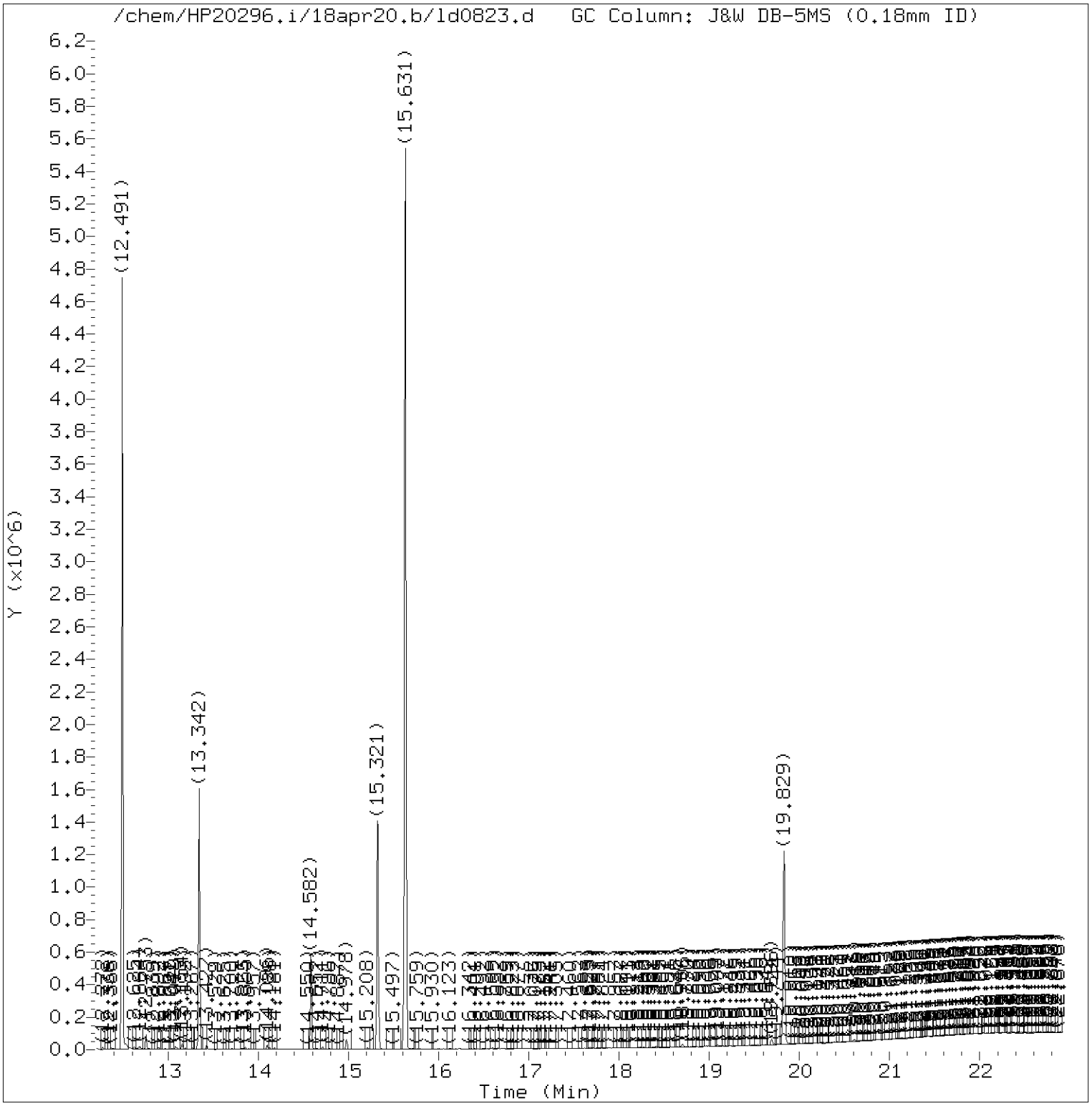
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0823.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:34 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0823.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:34 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Sample Name: R0603 Lab Sample ID: 9558697

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0823.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 15:34 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:54 bhs10208

Sample Name: R0603 Lab Sample ID: 9558697

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	745126	16.959
18)$Phenol-d6	(1)	6.126	99	1122580	19.485
26)*1,4-Dichlorobenzene-d4	(1)	6.576	152	160456	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	883494	16.914
68)*Naphthalene-d8	(2)	8.560	136	605626	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1715131	18.237
118)*Acenaphthene-d10	(3)	11.400	164	302523	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	404696	38.699
158)*Phenanthrene-d10	(4)	13.342	188	612509	5.000
180)*Pyrene-d10	(5)	15.321	212	627708	5.000
184)$Terphenyl-d14	(5)	15.631	244	2164298	21.500
218)*Perylene-d12	(6)	19.829	264	578650	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

R0604 Lancaster Laboratories, Inc. 9558698
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0818o.d Injection date and time: **20-APR-2018 13:15**
Data file Sample Info. Line: R0604;9558698;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.006)	914	152	161910	(-19)	5.00	
68) Naphthalene-d8	8.560	(0.006)	1285	136	598346	(-20)	5.00	
118) Acenaphthene-d10	11.400	(0.006)	1816	164	304211	(-21)	5.00	
158) Phenanthrene-d10	13.341	(0.011)	2179	188	606396	(-24)	5.00	
180) Pyrene-d10	15.320	(0.011)	2549	212	628541	(-26)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	595917	(-29)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687	(0.001)	112	86180	1.944	4%	*	10 - 82
18) Phenol-d6	(1)	6.126	(0.001)	99	340866	5.863	12%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	786579	15.242	61%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1561108	16.507	66%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	140467	13.358	27%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	1758801	17.448	70%		27 - 116

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0818o.d Injection date and time: **20-APR-2018 13:15**
Data file Sample Info. Line: R0604;9558698;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0818o.d Injection date and time: **20-APR-2018 13:15**
Data file Sample Info. Line: R0604;9558698;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)				Not Detected					0.7
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0818o.d Injection date and time: **20-APR-2018 13:15**
Data file Sample Info. Line: R0604;9558698;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

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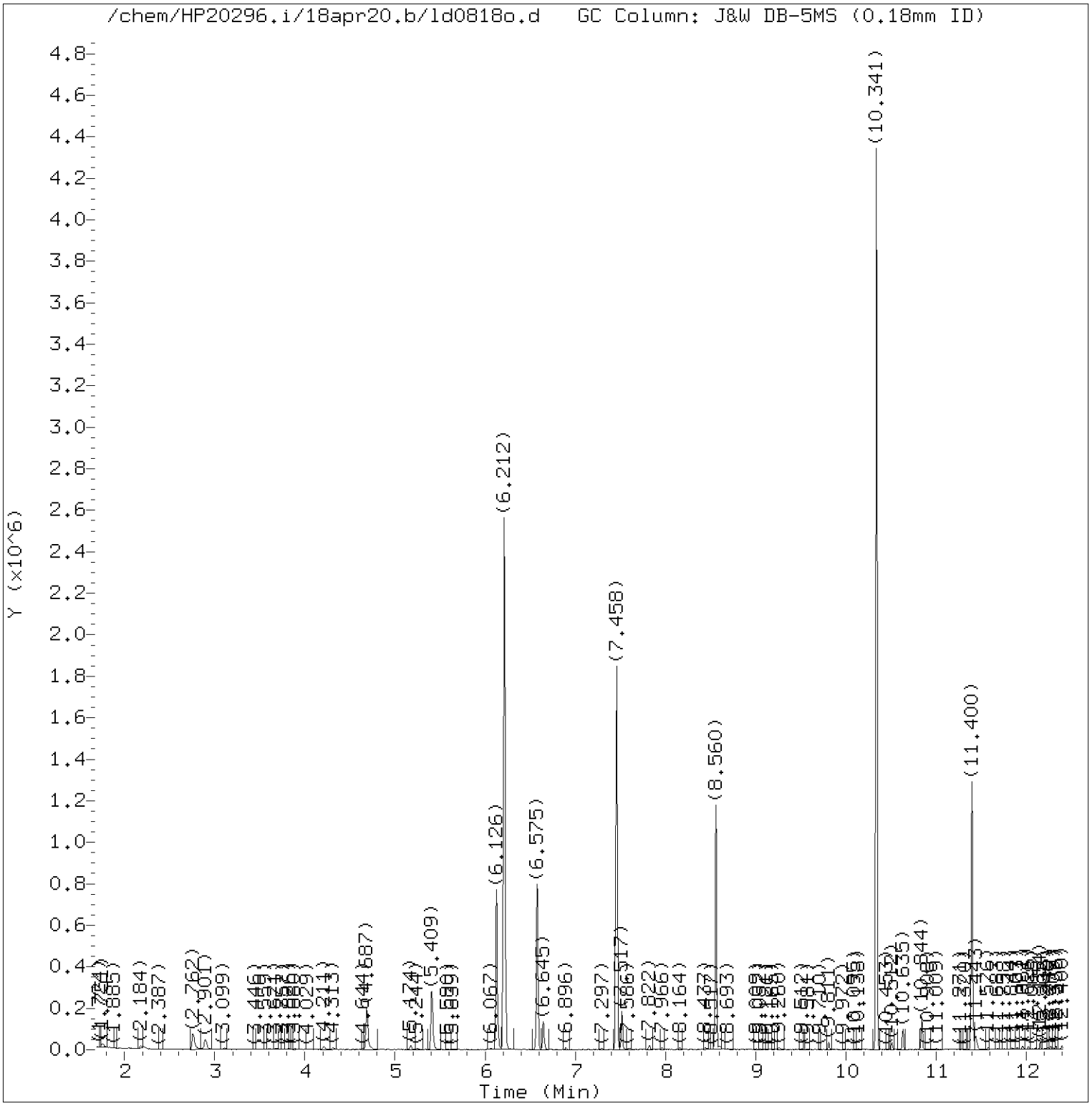
Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

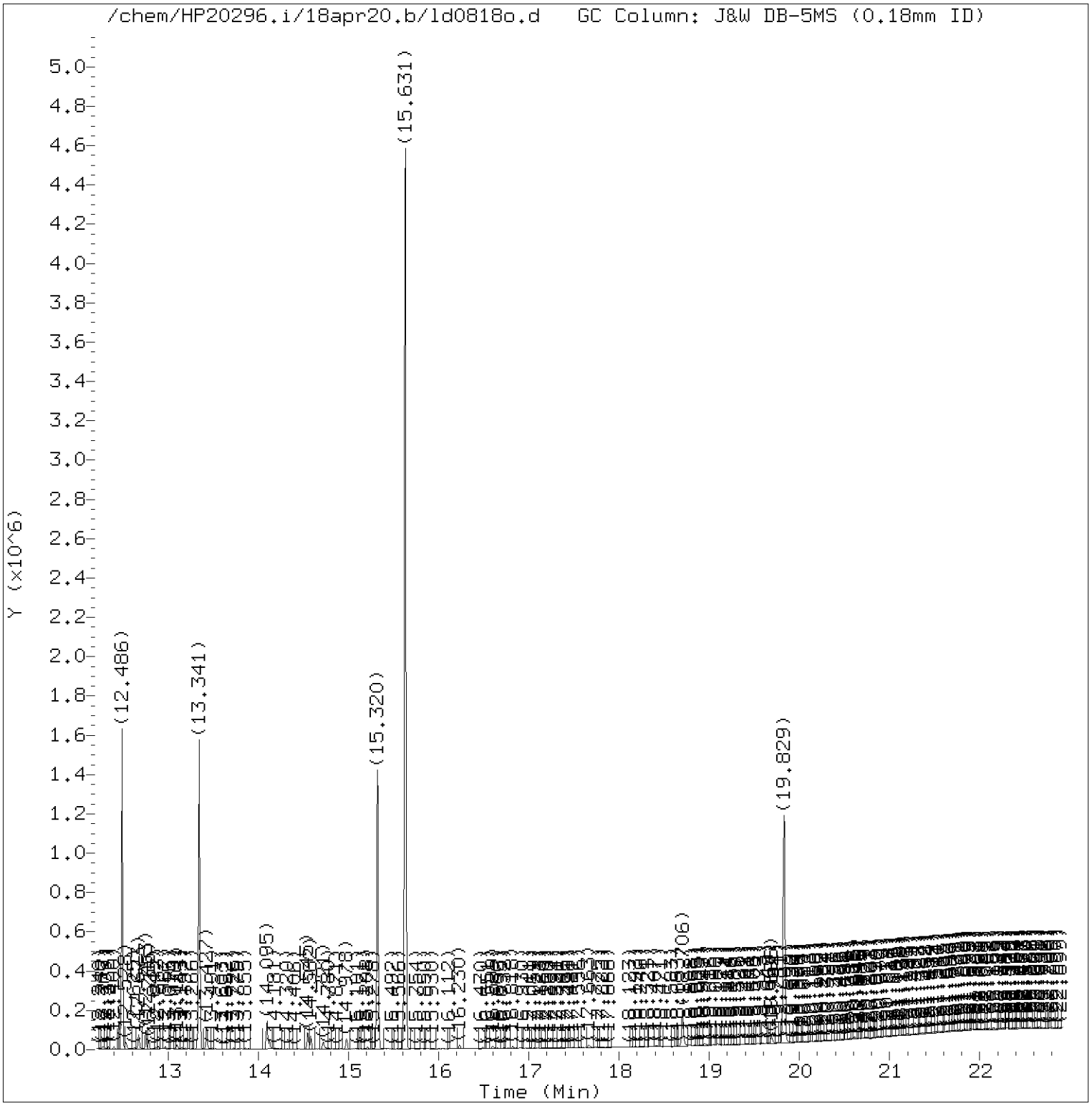
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0818o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:15 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0818o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:15 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Sample Name: R0604 Lab Sample ID: 9558698

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0818o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:15 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 12:00 bhs10208

Sample Name: R0604 Lab Sample ID: 9558698

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	86180	1.944
18)$Phenol-d6	(1)	6.126	99	340866	5.863
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	161910	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	786579	15.242
68)*Naphthalene-d8	(2)	8.560	136	598346	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1561108	16.507
118)*Acenaphthene-d10	(3)	11.400	164	304211	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	140467	13.358
158)*Phenanthrene-d10	(4)	13.341	188	606396	5.000
180)*Pyrene-d10	(5)	15.320	212	628541	5.000
184)$Terphenyl-d14	(5)	15.631	244	1758801	17.448
218)*Perylene-d12	(6)	19.829	264	595917	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr24a.b/ld0996.d Injection date and time: **25-APR-2018 03:31**
Data file Sample Info. Line: R0604RE;9558698RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(-0.005)	914	152	154511	(-21)	5.00	
68) Naphthalene-d8	8.560	(-0.005)	1285	136	571263	(-21)	5.00	
118) Acenaphthene-d10	11.394	(0.000)	1815	164	280459	(-25)	5.00	
158) Phenanthrene-d10	13.336	(0.000)	2178	188	567013	(-26)	5.00	
180) Pyrene-d10	15.315	(0.000)	2548	212	582904A	(-30)	5.00	
218) Perylene-d12	19.824	(0.000)	3391	264	500239	(-39)	5.00	

A = User selected an alternate peak

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.725	(0.001)	112	323767	7.652	15%		10 - 82
18) Phenol-d6	(1)	6.174	(0.001)	99	607262	10.946	22%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	1039857	21.105	84%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.335	(0.000)	172	1756894	20.150	81%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	169348	17.468	35%		21 - 134
184) Terphenyl-d14	(5)	15.620	(0.000)	244	1326214	14.187	57%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0996.d Injection date and time: **25-APR-2018 03:31**
Data file Sample Info. Line: R0604RE;9558698RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0996.d Injection date and time: **25-APR-2018 03:31**
Data file Sample Info. Line: R0604RE;9558698RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)				Not Detected					0.7
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0996.d Injection date and time: **25-APR-2018 03:31**
Data file Sample Info. Line: R0604RE;9558698RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 1 ul

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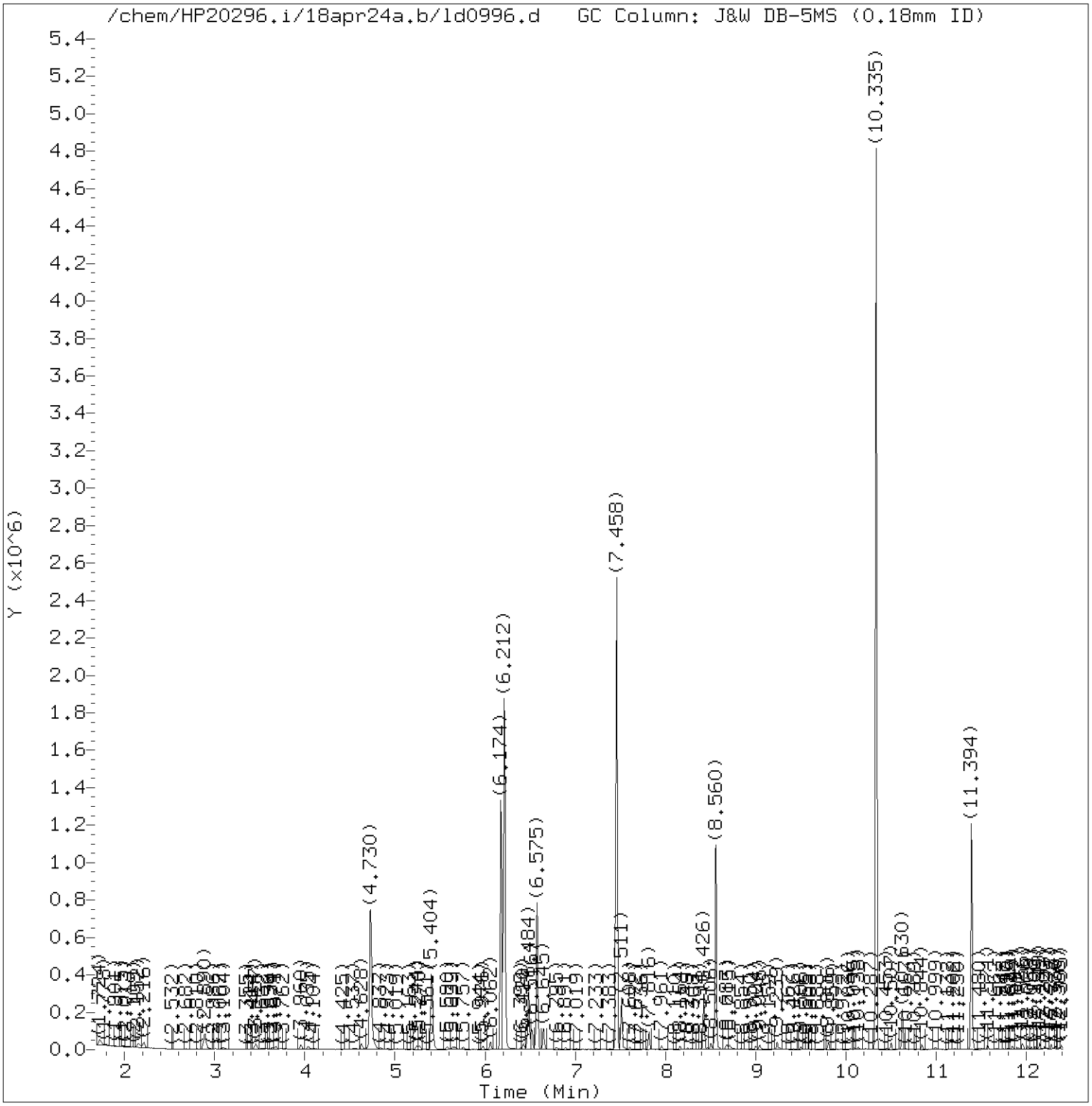
Total number of targets = 120

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

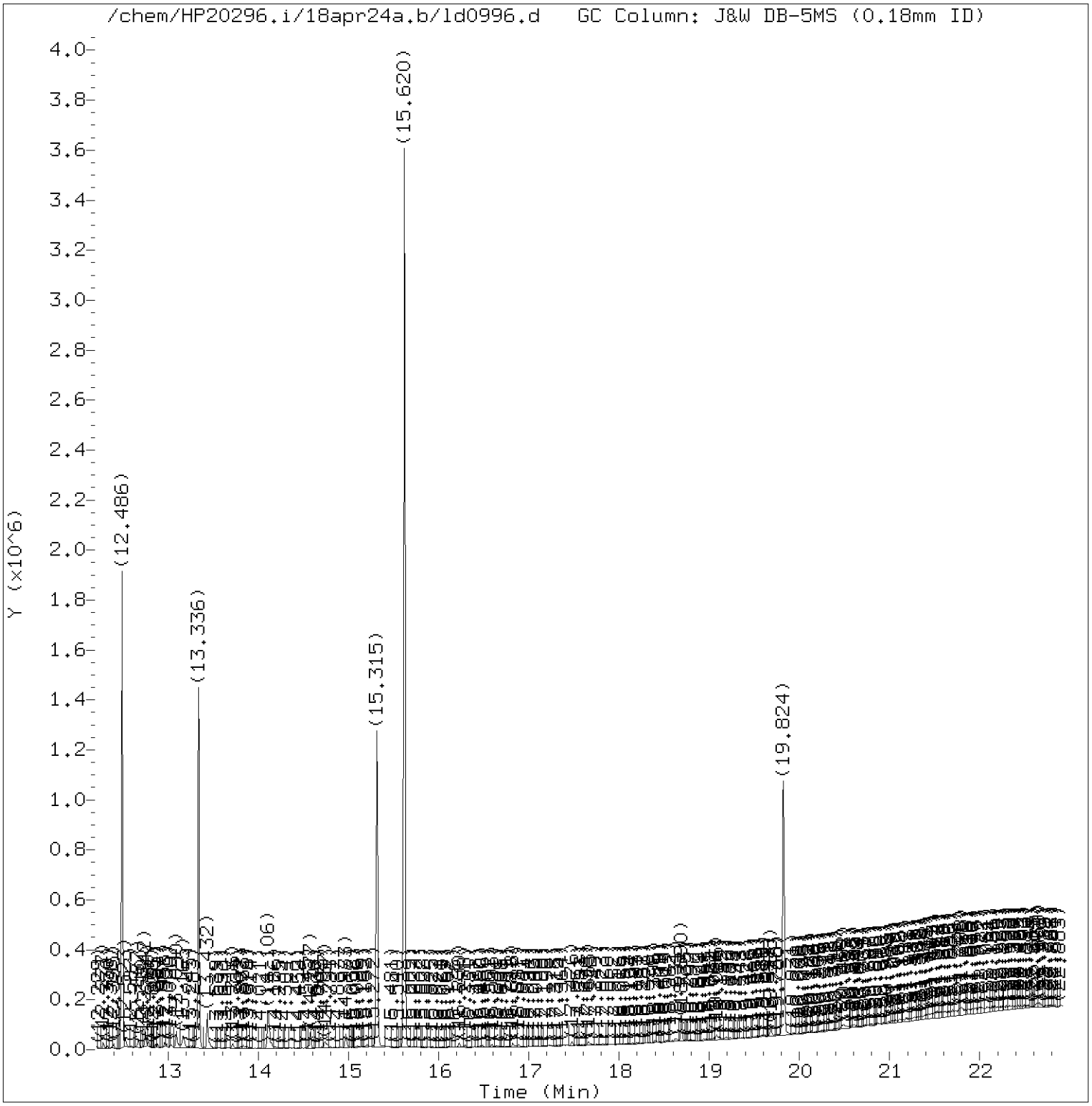
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0996.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:31 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604RE Lab Sample ID: 9558698RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0996.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:31 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604RE Lab Sample ID: 9558698RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0996.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:31 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

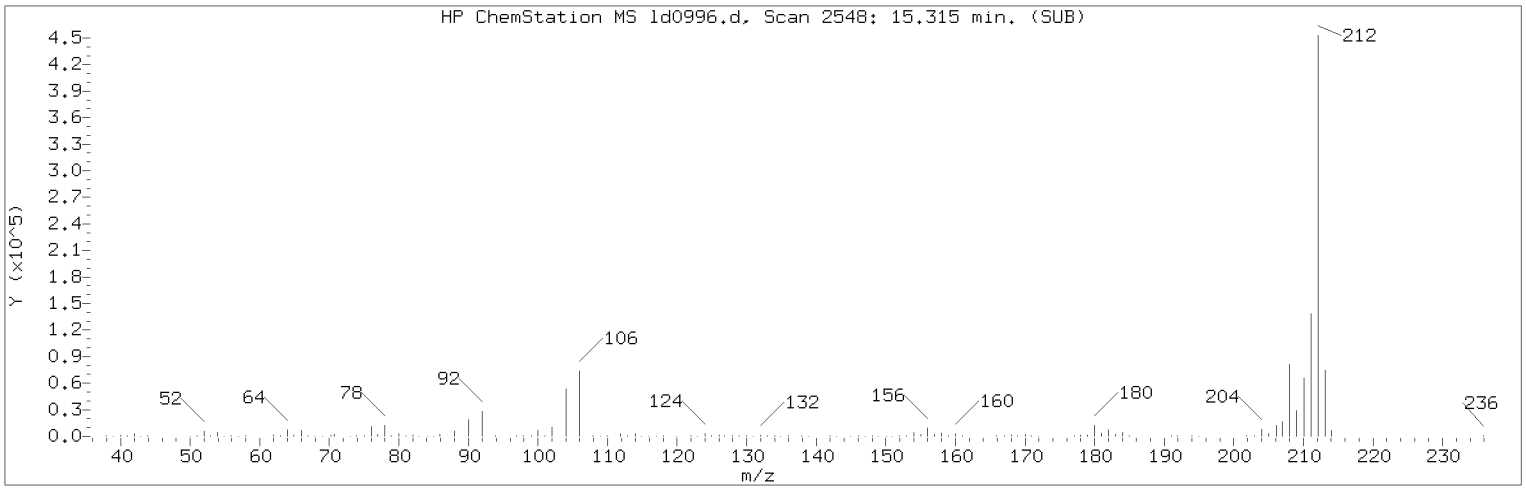
Sample Name: R0604RE Lab Sample ID: 9558698RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.725	112	323767	7.652
18)$Phenol-d6	(1)	6.174	99	607262	10.946
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	154511	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	1039857	21.105
68)*Naphthalene-d8	(2)	8.560	136	571263	5.000
96)$2-Fluorobiphenyl	(3)	10.335	172	1756894	20.150
118)*Acenaphthene-d10	(3)	11.394	164	280459	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	169348	17.468
158)*Phenanthrene-d10	(4)	13.336	188	567013	5.000
180)*Pyrene-d10	(5)	15.315	212	582904A	5.000
184)$Terphenyl-d14	(5)	15.620	244	1326214	14.187
218)*Perylene-d12	(6)	19.824	264	500239	5.000

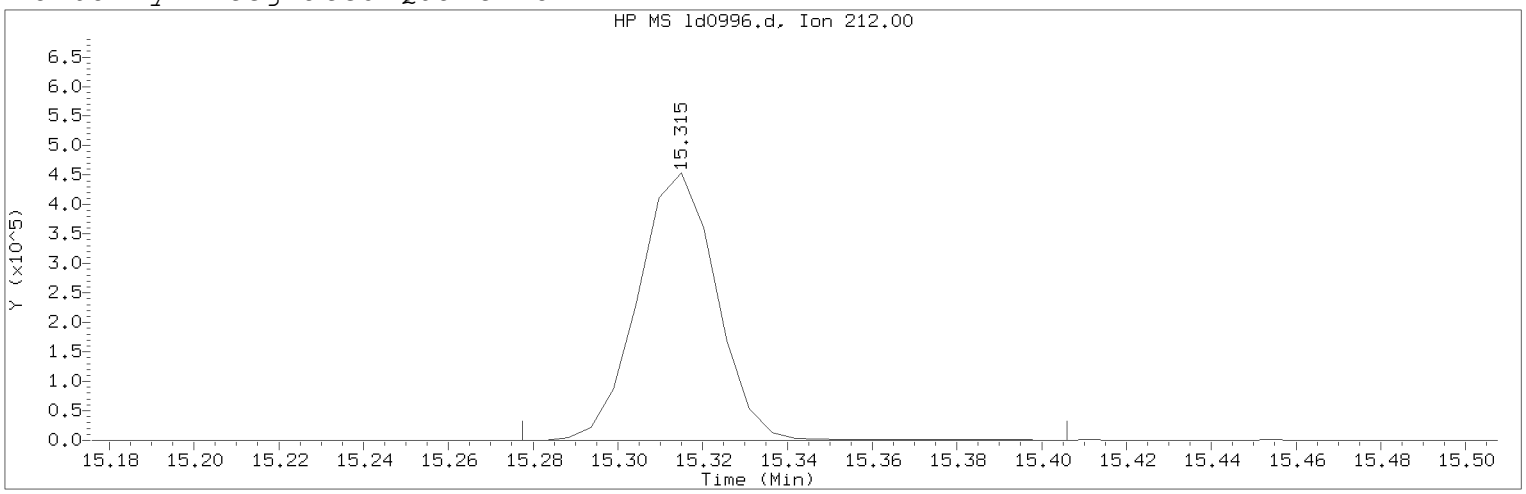
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0996.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:31 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604RE Lab Sample ID: 9558698RE

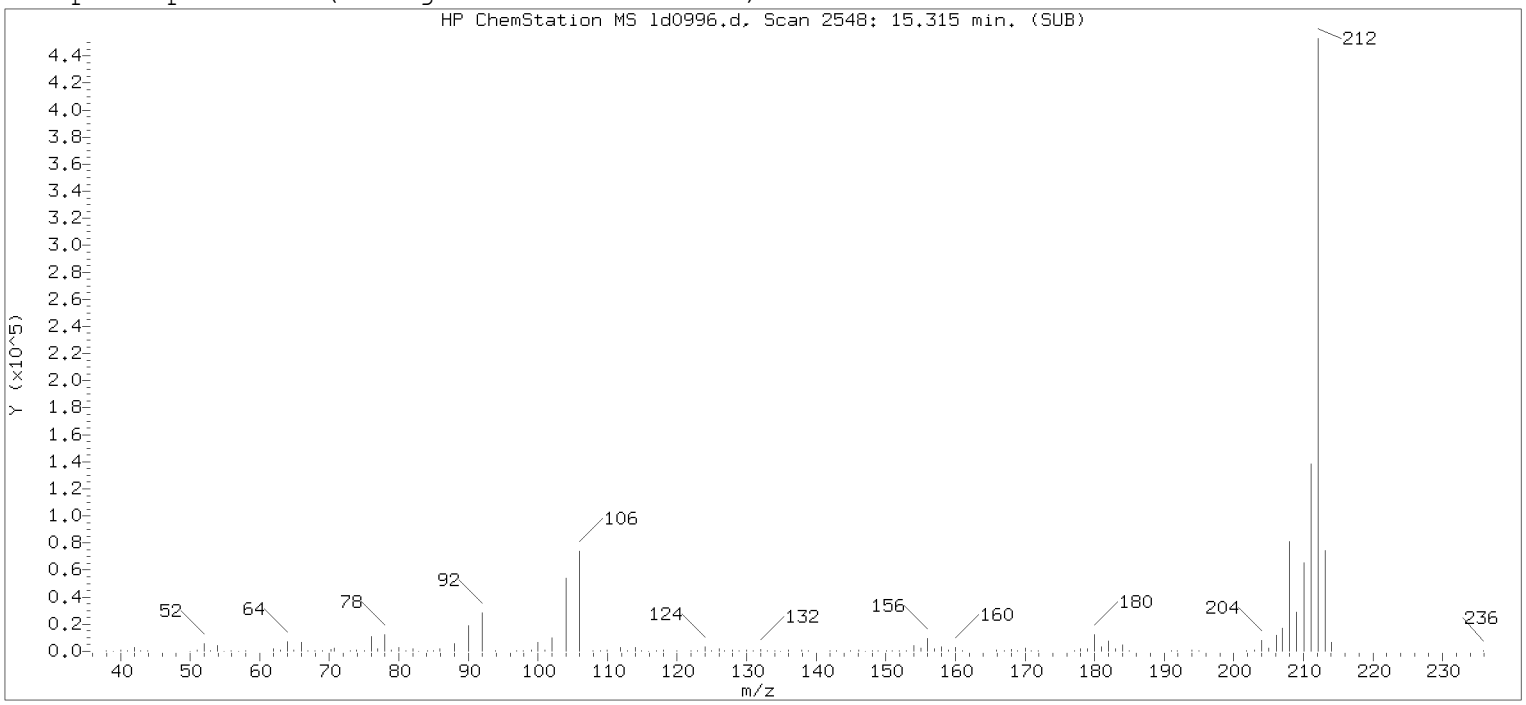
Compound Number : 180
Compound Name : Pyrene-d10
Scan Number : 2548
Retention Time (minutes) : 15.315
Quant Ion : 212.00
Area (flag) : 582904A
On-column Amount (ng/ul) : 5.0000
Integration start scan : 2540 Integration stop scan: 2564
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

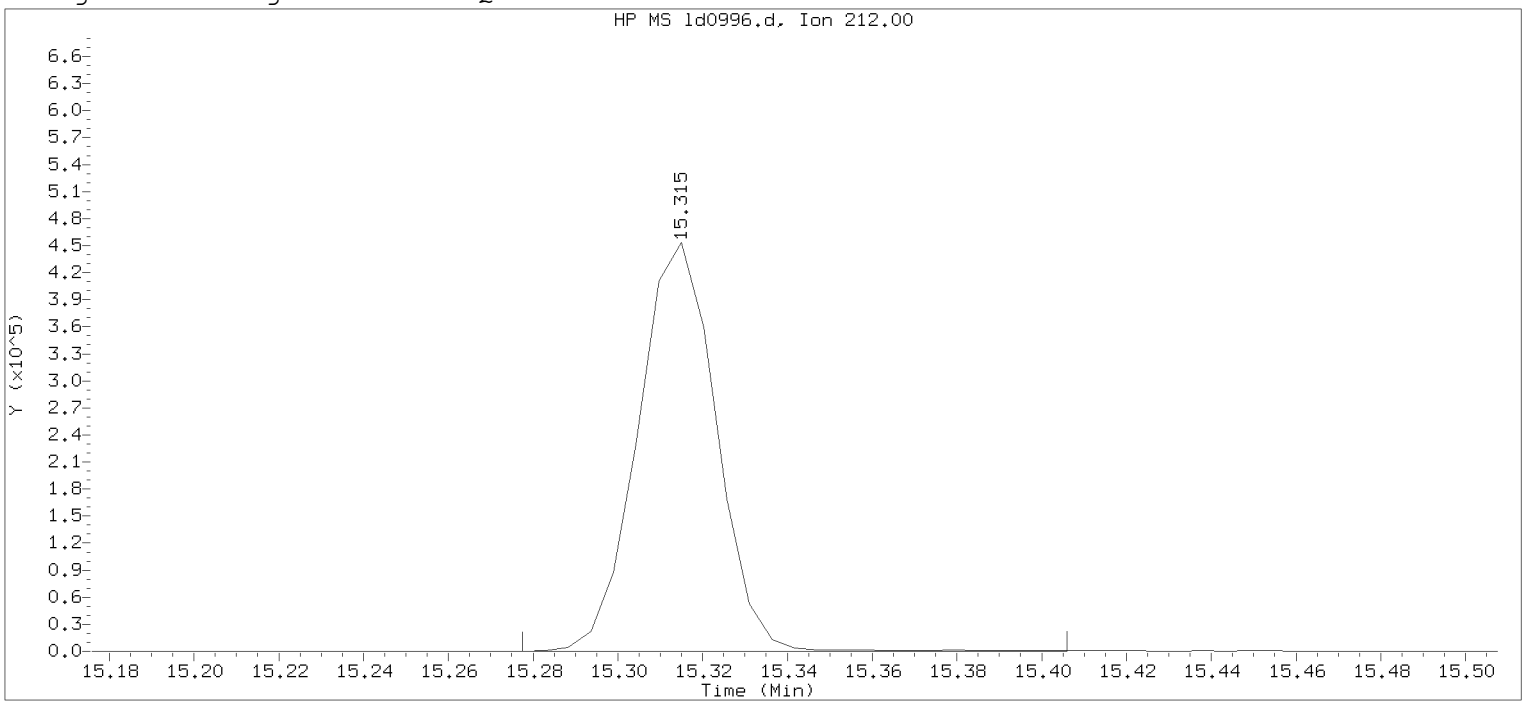
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0996.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:31 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 24-APR-2018 21:43
Date, time and analyst ID of latest file update: 25-Apr-2018 03:57 Unknown

Sample Name: R0604RE Lab Sample ID: 9558698RE

Compound Number : 180
Compound Name : Pyrene-d10
Scan Number : 2548
Retention Time (minutes) : 15.315
Quant Ion : 212.00
Area : 582904
On-column Amount (ng/ul) : 5.0000
Integration start scan : 2540 Integration stop scan: 2564
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: Brandon H. Smith

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0824.d
Injection date and time: **20-APR-2018 16:02**
Data file Sample Info. Line: R0605;9558702;1;0;SAMPLE;;RAAP;
Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581(0.000)	915	152	147226 (-27)	5.00	
68) Naphthalene-d8	8.560(0.005)	1285	136	550653 (-26)	5.00	
118) Acenaphthene-d10	11.400(0.005)	1816	164	274346 (-29)	5.00	
158) Phenanthrene-d10	13.342(0.011)	2179	188	539305 (-33)	5.00	
180) Pyrene-d10	15.321(0.011)	2549	212	554298 (-35)	5.00	
218) Perylene-d12	19.829(0.011)	3392	264	502630 (-40)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687(0.002)	112	68532	1.700	3%	*	10 - 82
18) Phenol-d6	(1)	6.126(0.002)	99	242446	4.586	9%	*	10 - 71
45) Nitrobenzene-d5	(2)	7.458(0.001)	82	793546	16.709	67%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341(0.001)	172	1534738	17.995	72%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(0.000)	330	93408	9.850	20%	*	21 - 134
184) Terphenyl-d14	(5)	15.625(0.000)	244	1473677	16.578	66%		27 - 116

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					0.1
38) 4-Methylphenol	(1)			Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					0.1
44) Hexachloroethane	(1)			Not Detected					0.3
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.3
55) 2,4-Dimethylphenol	(2)			Not Detected					0.2

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0824.d Injection date and time: **20-APR-2018 16:02**
Data file Sample Info. Line: R0605;9558702;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0824.d Injection date and time: **20-APR-2018 16:02**
Data file Sample Info. Line: R0605;9558702;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)				Not Detected					0.7
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0824.d Injection date and time: **20-APR-2018 16:02**
Data file Sample Info. Line: R0605;9558702;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

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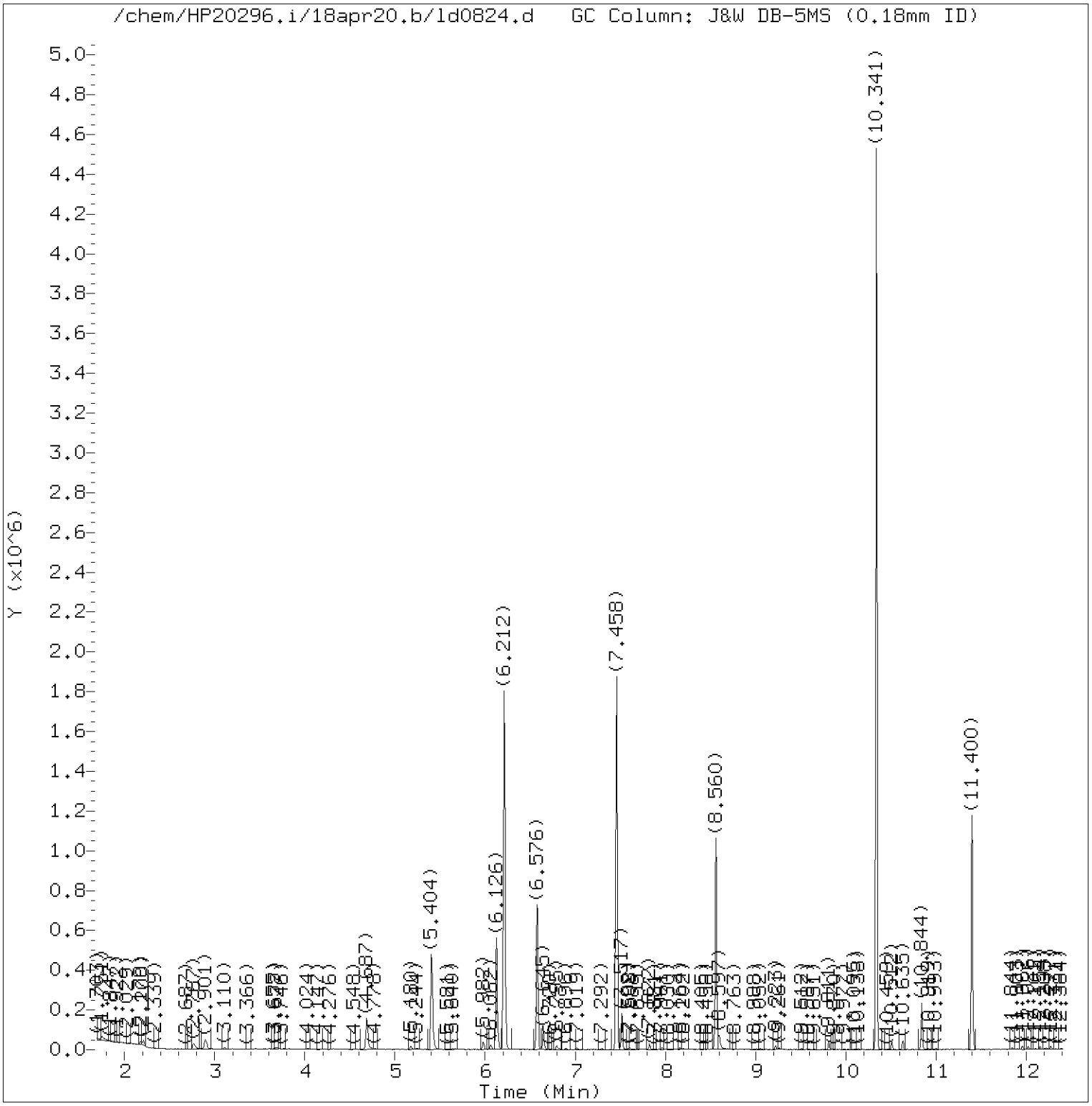
BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

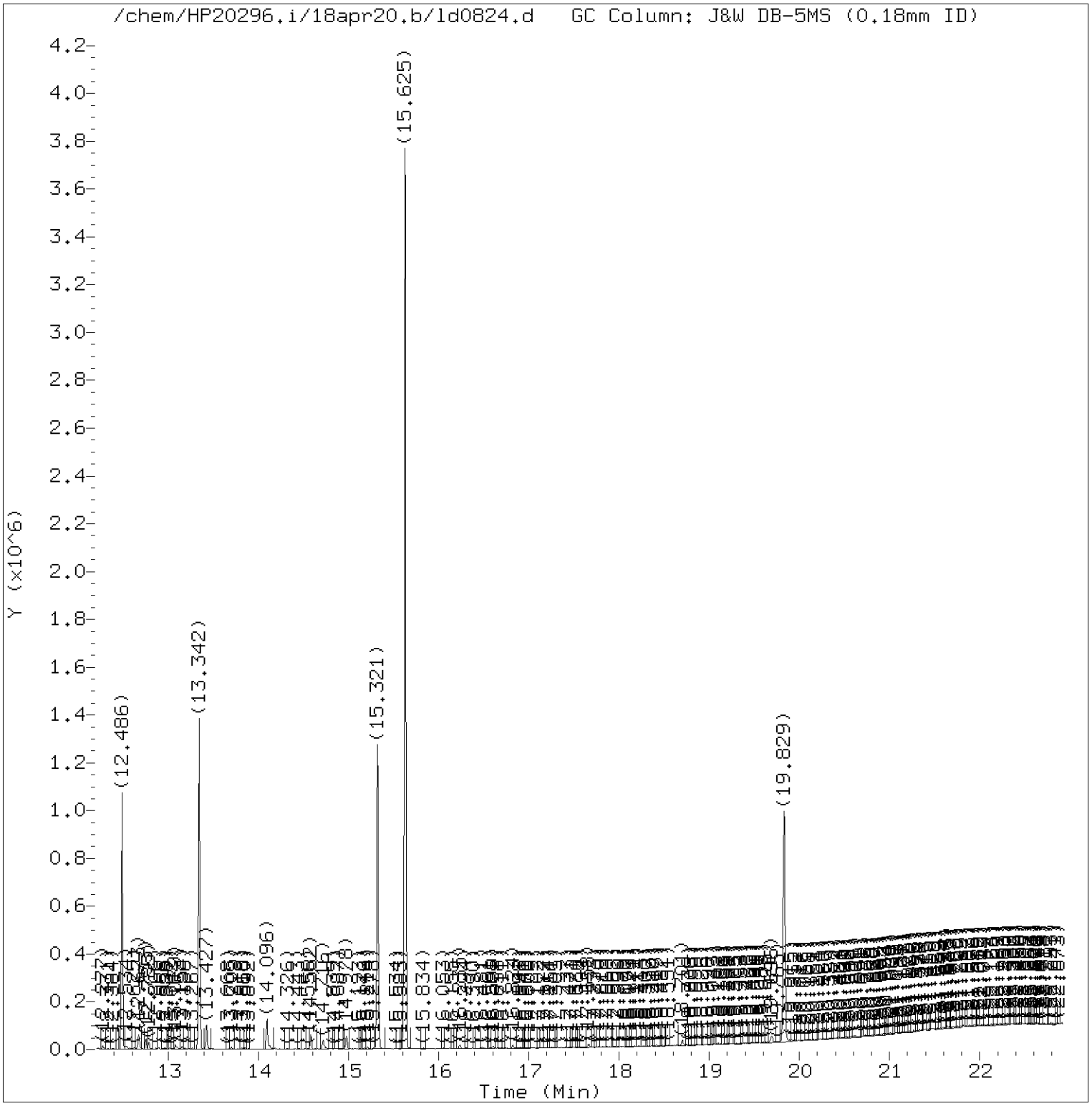
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0824.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:02 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0824.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:02 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Sample Name: R0605 Lab Sample ID: 9558702

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0824.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:02 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:55 bhs10208

Sample Name: R0605 Lab Sample ID: 9558702

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	68532	1.700
18)$Phenol-d6	(1)	6.126	99	242446	4.586
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	147226	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	793546	16.709
68)*Naphthalene-d8	(2)	8.560	136	550653	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1534738	17.995
118)*Acenaphthene-d10	(3)	11.400	164	274346	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	93408	9.850
158)*Phenanthrene-d10	(4)	13.342	188	539305	5.000
180)*Pyrene-d10	(5)	15.321	212	554298	5.000
184)$Terphenyl-d14	(5)	15.625	244	1473677	16.578
218)*Perylene-d12	(6)	19.829	264	502630	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0999.d Injection date and time: **25-APR-2018 04:54**
Data file Sample Info. Line: R0605RE;9558702RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 227 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.576(-0.005)	914	152	147322 (-24)	5.00	
68) Naphthalene-d8	8.560(-0.005)	1285	136	561772 (-22)	5.00	
118) Acenaphthene-d10	11.395(0.000)	1815	164	275019 (-27)	5.00	
158) Phenanthrene-d10	13.342(-0.005)	2179	188	547374 (-28)	5.00	
180) Pyrene-d10	15.315(0.000)	2548	212	575647 (-31)	5.00	
218) Perylene-d12	19.824(0.000)	3391	264	498745 (-40)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.730(0.001)	112	149465	3.705	7%	*	10 - 82
18) Phenol-d6	(1)	6.174(0.001)	99	509074	9.624	19%		10 - 71
45) Nitrobenzene-d5	(2)	7.458(0.001)	82	1117636	23.067	92%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341(0.000)	172	1877573	21.960	88%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(0.000)	330	157235	16.539	33%		21 - 134
184) Terphenyl-d14	(5)	15.620(0.000)	244	1332829	14.437	58%		27 - 116

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)			Not Detected					0.5
6) Pyridine	(1)			Not Detected					0.5
8) 2-Picoline	(1)			Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)			Not Detected					0.2
20) Aniline	(1)			Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
24) 2-Chlorophenol	(1)			Not Detected					0.2
28) Benzyl alcohol	(1)			Not Detected					3
32) 2-Methylphenol	(1)			Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)			Not Detected					0.1
38) 4-Methylphenol	(1)			Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)			Not Detected					0.1
44) Hexachloroethane	(1)			Not Detected					0.3
46) Nitrobenzene	(2)			Not Detected					0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)			Not Detected					0.1
53) 2-Nitrophenol	(2)			Not Detected					0.3
55) 2,4-Dimethylphenol	(2)			Not Detected					0.2

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Data file: /chem/HP20296.i/18apr24a.b/ld0999.d Injection date and time: **25-APR-2018 04:54**
Data file Sample Info. Line: R0605RE;9558702RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 227 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr24a.b/ld0999.d Injection date and time: **25-APR-2018 04:54**
Data file Sample Info. Line: R0605RE;9558702RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 227 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)				Not Detected					0.7
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

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Data file: /chem/HP20296.i/18apr24a.b/ld0999.d Injection date and time: **25-APR-2018 04:54**
Data file Sample Info. Line: R0605RE;9558702RE;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 227 ml Volume Injected (Vi): 1 ul

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Total number of targets = 120

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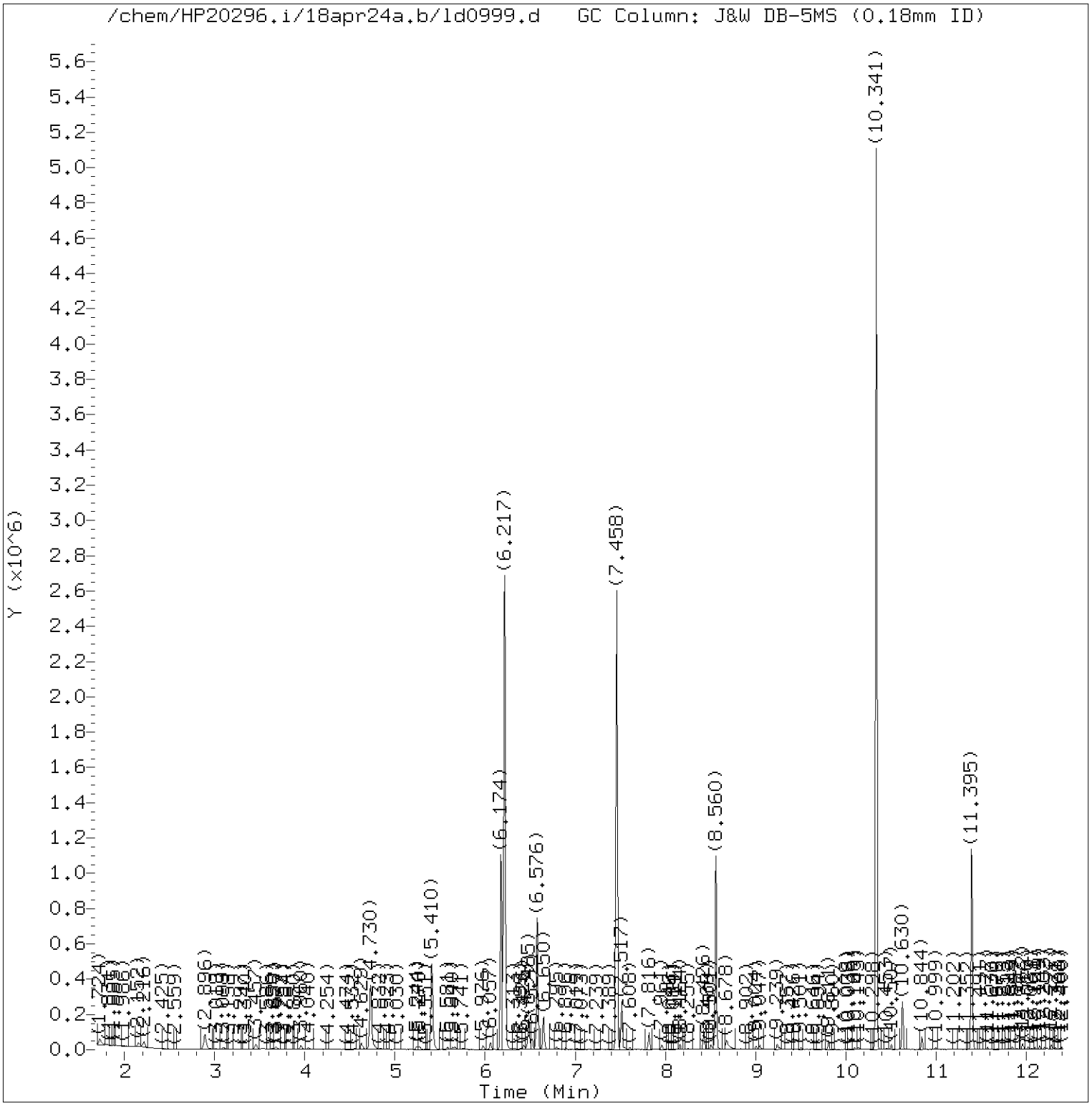
Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

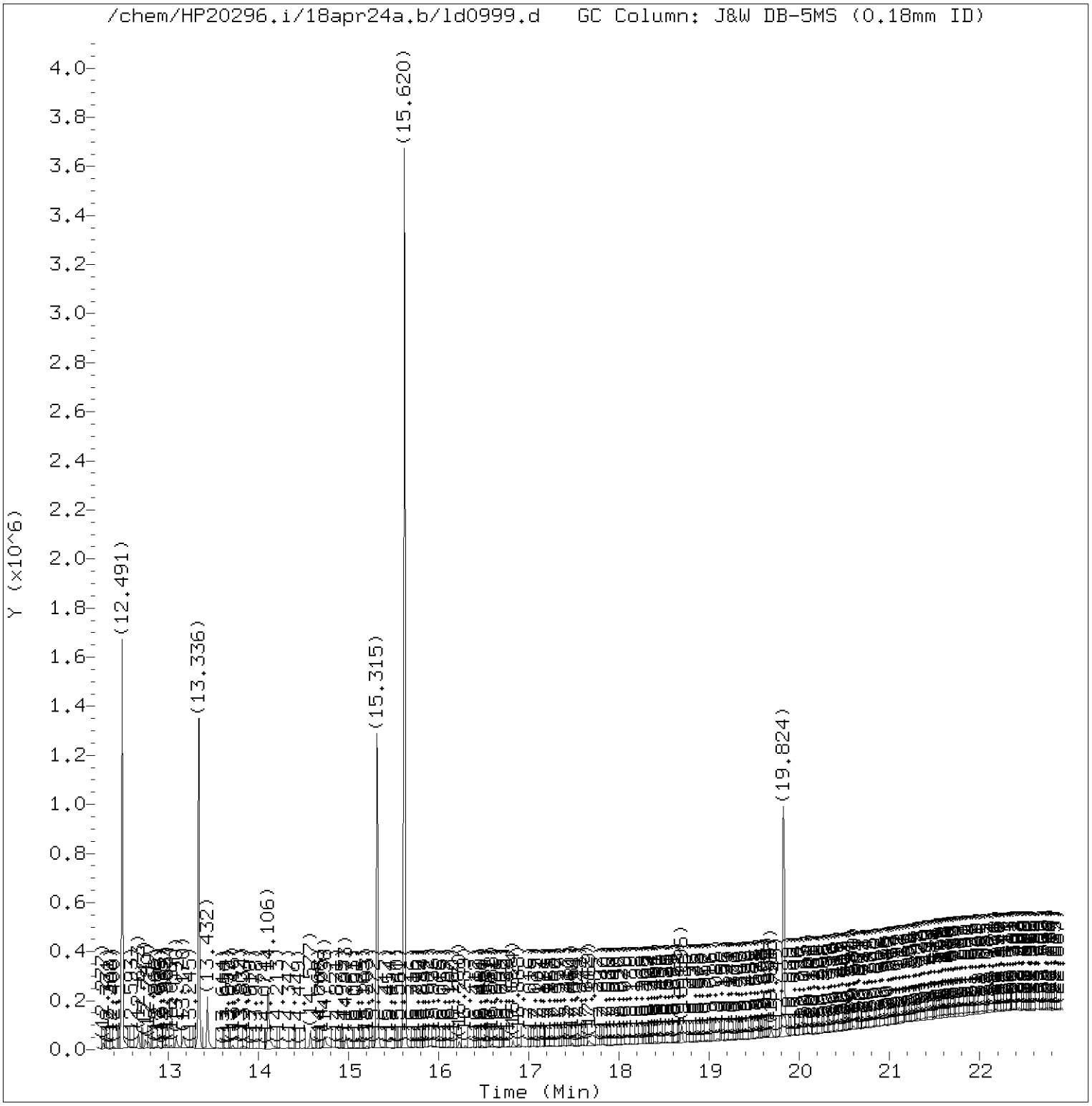
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0999.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:54 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0605RE Lab Sample ID: 9558702RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:20.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0999.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:54 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0605RE Lab Sample ID: 9558702RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:20.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0999.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:54 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0605RE Lab Sample ID: 9558702RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.730	112	149465	3.705
18)$Phenol-d6	(1)	6.174	99	509074	9.624
26)*1,4-Dichlorobenzene-d4	(1)	6.576	152	147322	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	1117636	23.067
68)*Naphthalene-d8	(2)	8.560	136	561772	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1877573	21.960
118)*Acenaphthene-d10	(3)	11.395	164	275019	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	157235	16.539
158)*Phenanthrene-d10	(4)	13.342	188	547374	5.000
180)*Pyrene-d10	(5)	15.315	212	575647	5.000
184)$Terphenyl-d14	(5)	15.620	244	1332829	14.437
218)*Perylene-d12	(6)	19.824	264	498745	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:20.
Target 3.5 esignature user ID: bhs10208

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0825.d
Injection date and time: **20-APR-2018 16:29**
Data file Sample Info. Line: R0606;9558703;1;0;SAMPLE;;RAAP;
Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.576	(0.005)	914	152	160523	(-20)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	606254	(-19)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	301485	(-22)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	608677	(-24)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	605307	(-29)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	545916	(-35)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.687	(0.001)	112	462928	10.532	21%		10 - 82
18) Phenol-d6	(1)	6.126	(0.001)	99	503581	8.737	17%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	926343	17.716	71%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1628913	17.380	70%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	175049	16.797	34%		21 - 134
184) Terphenyl-d14	(5)	15.625	(0.000)	244	1432816	14.760	59%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0825.d Injection date and time: **20-APR-2018 16:29**
Data file Sample Info. Line: R0606;9558703;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8
154) Pentachlorophenol	(4)				Not Detected					0.7

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0825.d Injection date and time: **20-APR-2018 16:29**
Data file Sample Info. Line: R0606;9558703;1;0;SAMPLE;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

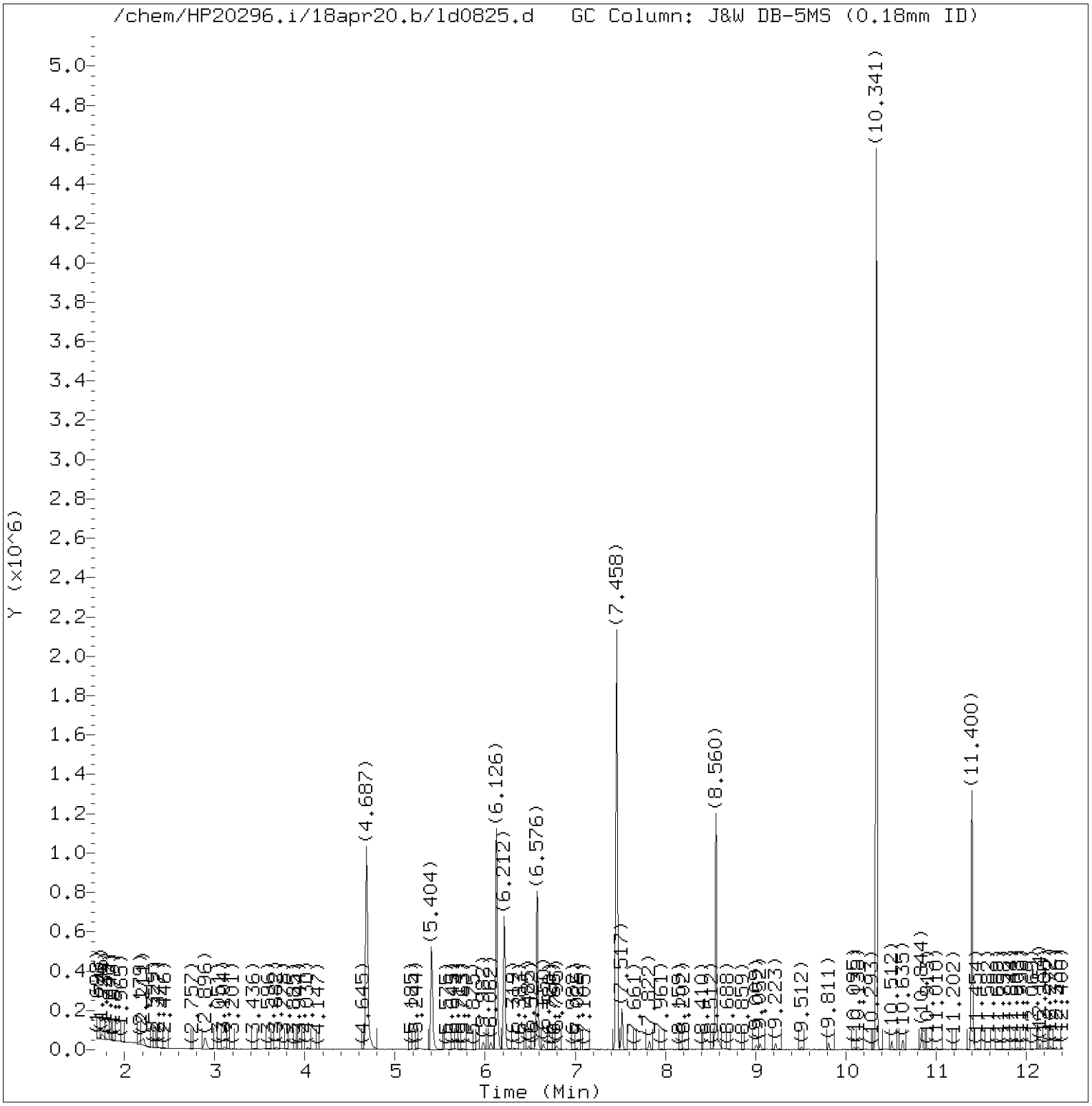
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
210) Di-n-octylphthalate	(6)			Not Detected					0.5
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					0.1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/23/2018 at 14:01. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

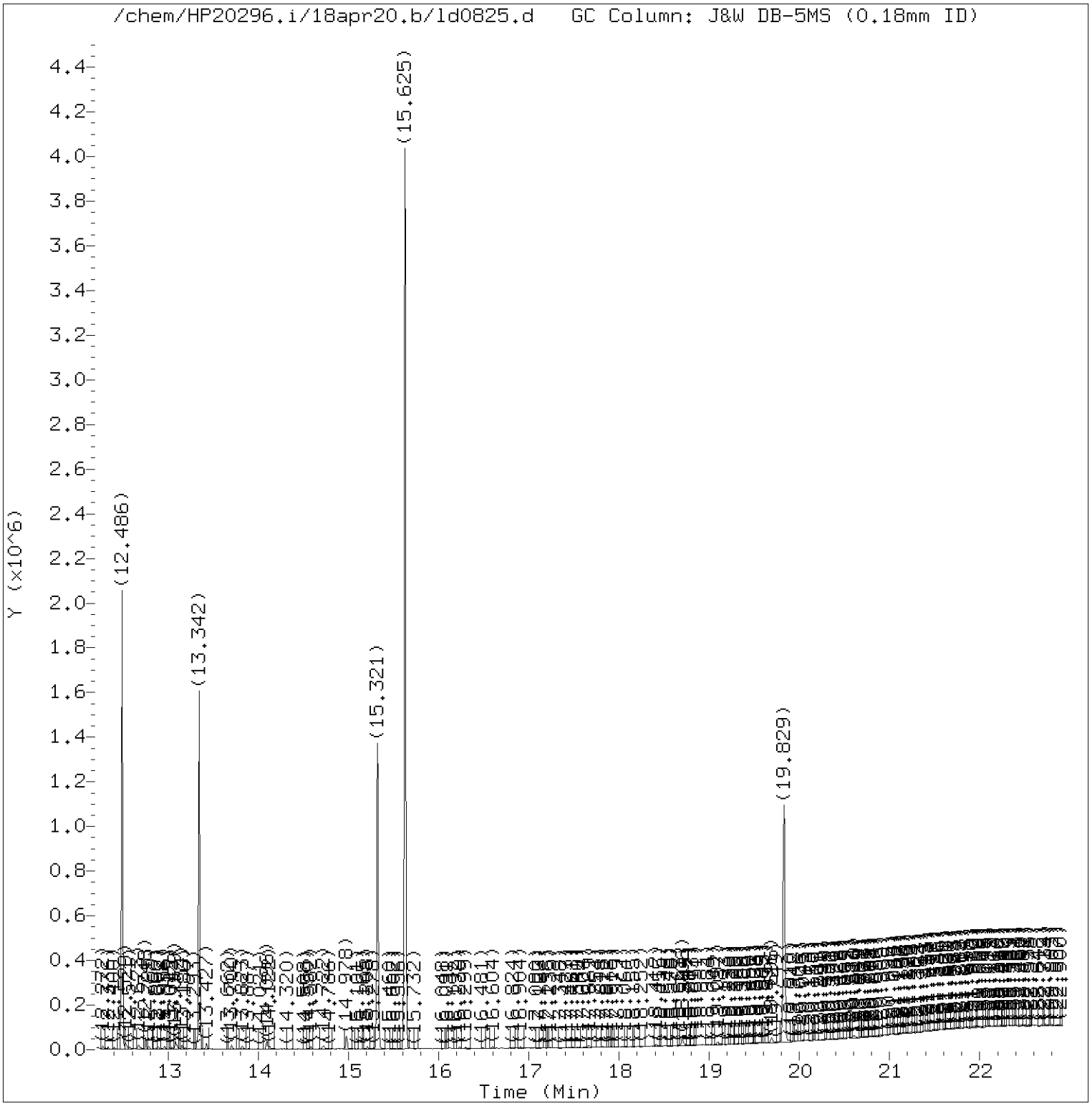
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0825.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:29 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0825.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:29 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Sample Name: R0606 Lab Sample ID: 9558703

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0825.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:29 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 13:57 bhs10208

Sample Name: R0606 Lab Sample ID: 9558703

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.687	112	462928	10.532
18)$Phenol-d6	(1)	6.126	99	503581	8.737
26)*1,4-Dichlorobenzene-d4	(1)	6.576	152	160523	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	926343	17.716
68)*Naphthalene-d8	(2)	8.560	136	606254	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1628913	17.380
118)*Acenaphthene-d10	(3)	11.400	164	301485	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	175049	16.797
158)*Phenanthrene-d10	(4)	13.342	188	608677	5.000
180)*Pyrene-d10	(5)	15.321	212	605307	5.000
184)$Terphenyl-d14	(5)	15.625	244	1432816	14.760
218)*Perylene-d12	(6)	19.829	264	545916	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 14:01.
Target 3.5 esignature user ID: bhs10208

R0607 Lancaster Laboratories, Inc. 9558704
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0826.d Injection date and time: **20-APR-2018 16:57**
Data file Sample Info. Line: R0607;9558704;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.005)	914	152	162623	(-19)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	601541	(-19)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	299253	(-23)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	602084	(-25)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	597487	(-30)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	543439	(-35)	5.00	

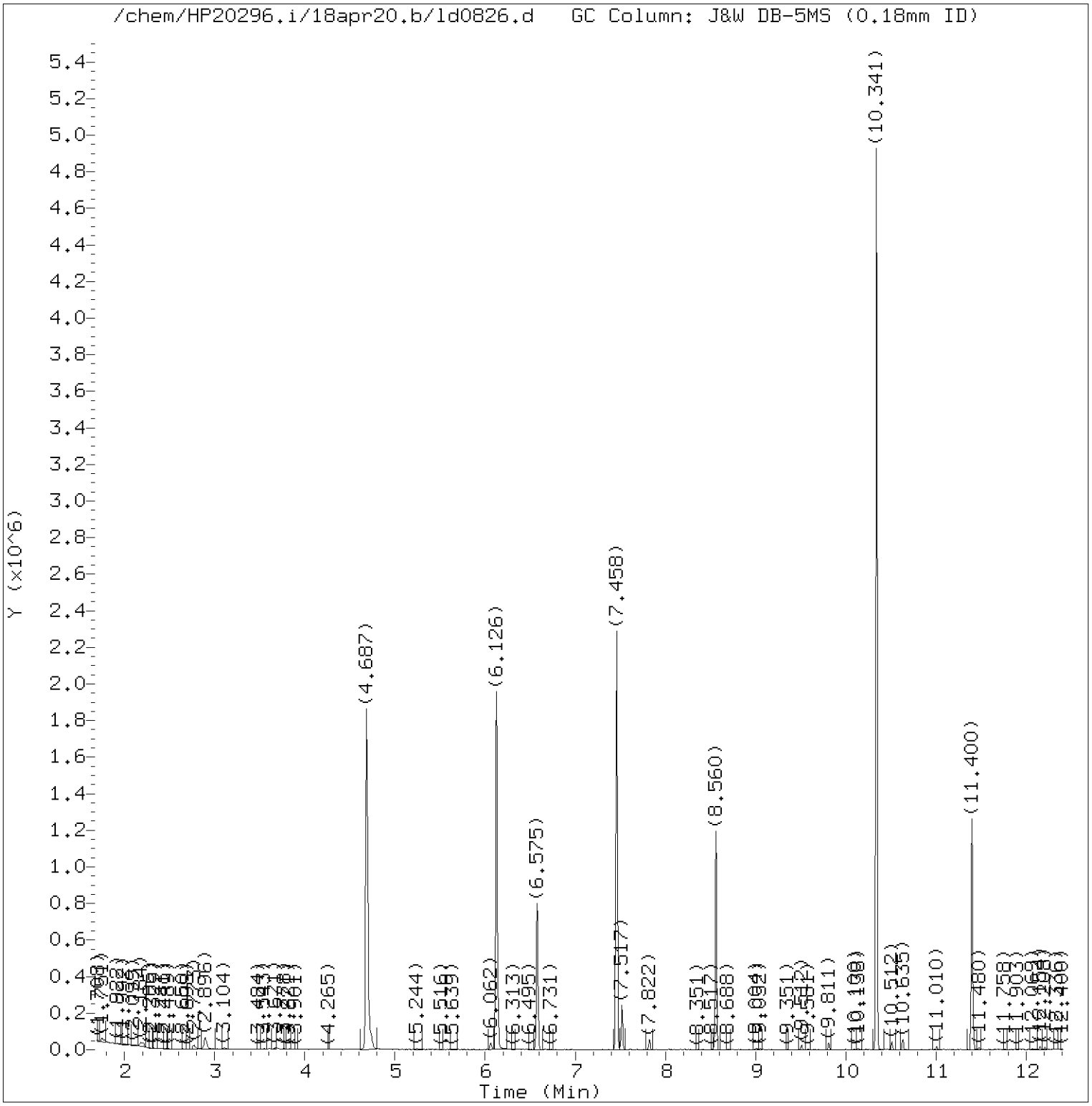
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	928669	17.900	72%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1726688	18.560	74%		39 - 105
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2202971	22.991	92%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:04. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

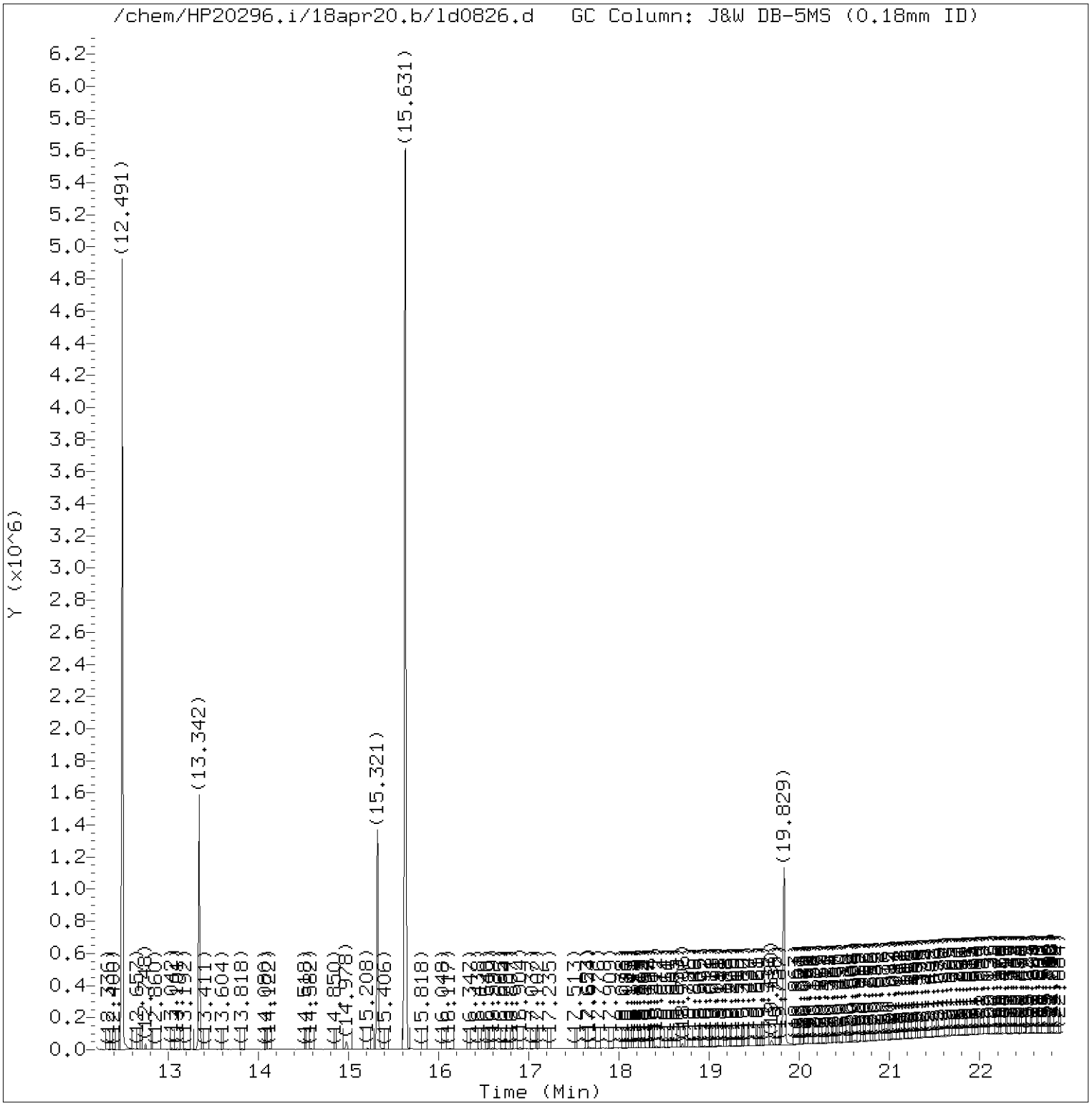
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0826.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:57 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0607 Lab Sample ID: 9558704

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0826.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:57 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0607 Lab Sample ID: 9558704

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0826.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 16:57 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0607 Lab Sample ID: 9558704

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	162623	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	928669	17.900
68)*Naphthalene-d8	(2)	8.560	136	601541	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1726688	18.560
118)*Acenaphthene-d10	(3)	11.400	164	299253	5.000
158)*Phenanthrene-d10	(4)	13.342	188	602084	5.000
180)*Pyrene-d10	(5)	15.321	212	597487	5.000
184)$Terphenyl-d14	(5)	15.631	244	2202971	22.991
218)*Perylene-d12	(6)	19.829	264	543439	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

R0608 Lancaster Laboratories, Inc. 9558705
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0827.d Injection date and time: **20-APR-2018 17:25**
Data file Sample Info. Line: R0608;9558705;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.005)	914	152	161748	(-19)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	615086	(-17)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	304479	(-21)	5.00	
158) Phenanthrene-d10	13.341	(0.011)	2179	188	606826	(-24)	5.00	
180) Pyrene-d10	15.320	(0.011)	2549	212	616415	(-28)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	564785	(-33)	5.00	

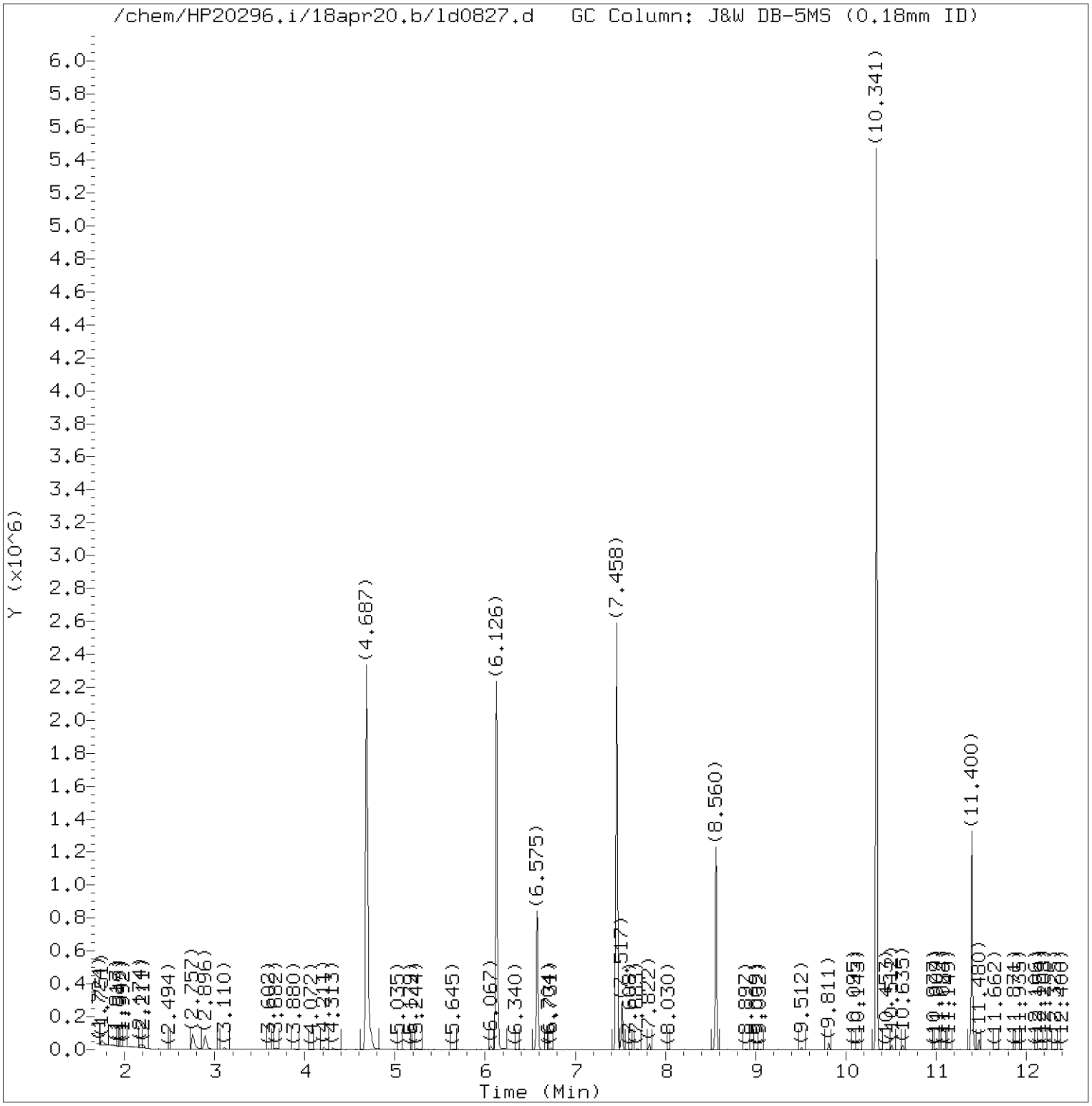
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	1089779	20.543	82%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1910317	20.182	81%		39 - 105
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2041847	20.655	83%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:04. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

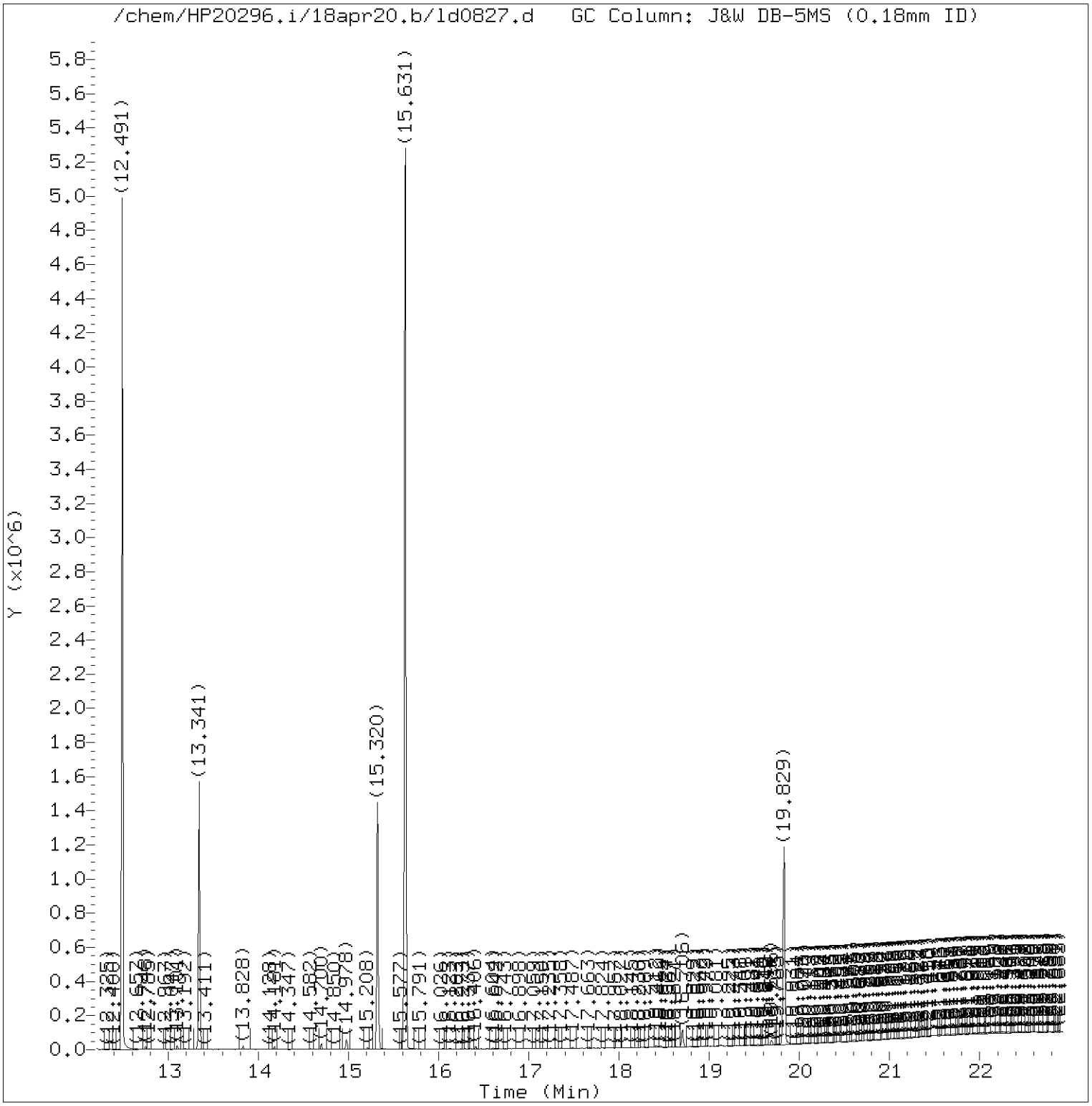
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0827.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:25 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0608 Lab Sample ID: 9558705

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0827.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:25 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0608 Lab Sample ID: 9558705

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0827.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:25 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0608 Lab Sample ID: 9558705

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	161748	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	1089779	20.543
68)*Naphthalene-d8	(2)	8.560	136	615086	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1910317	20.182
118)*Acenaphthene-d10	(3)	11.400	164	304479	5.000
158)*Phenanthrene-d10	(4)	13.341	188	606826	5.000
180)*Pyrene-d10	(5)	15.320	212	616415	5.000
184)$Terphenyl-d14	(5)	15.631	244	2041847	20.655
218)*Perylene-d12	(6)	19.829	264	564785	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0828.d
Injection date and time: **20-APR-2018 17:53**
Data file Sample Info. Line: R0609;9558706;1;0;SAMPLE;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(0.005)	914	152	156896	(-22)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	589159	(-21)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	287747	(-26)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	582285	(-27)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	587513	(-31)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	535848	(-36)	5.00	

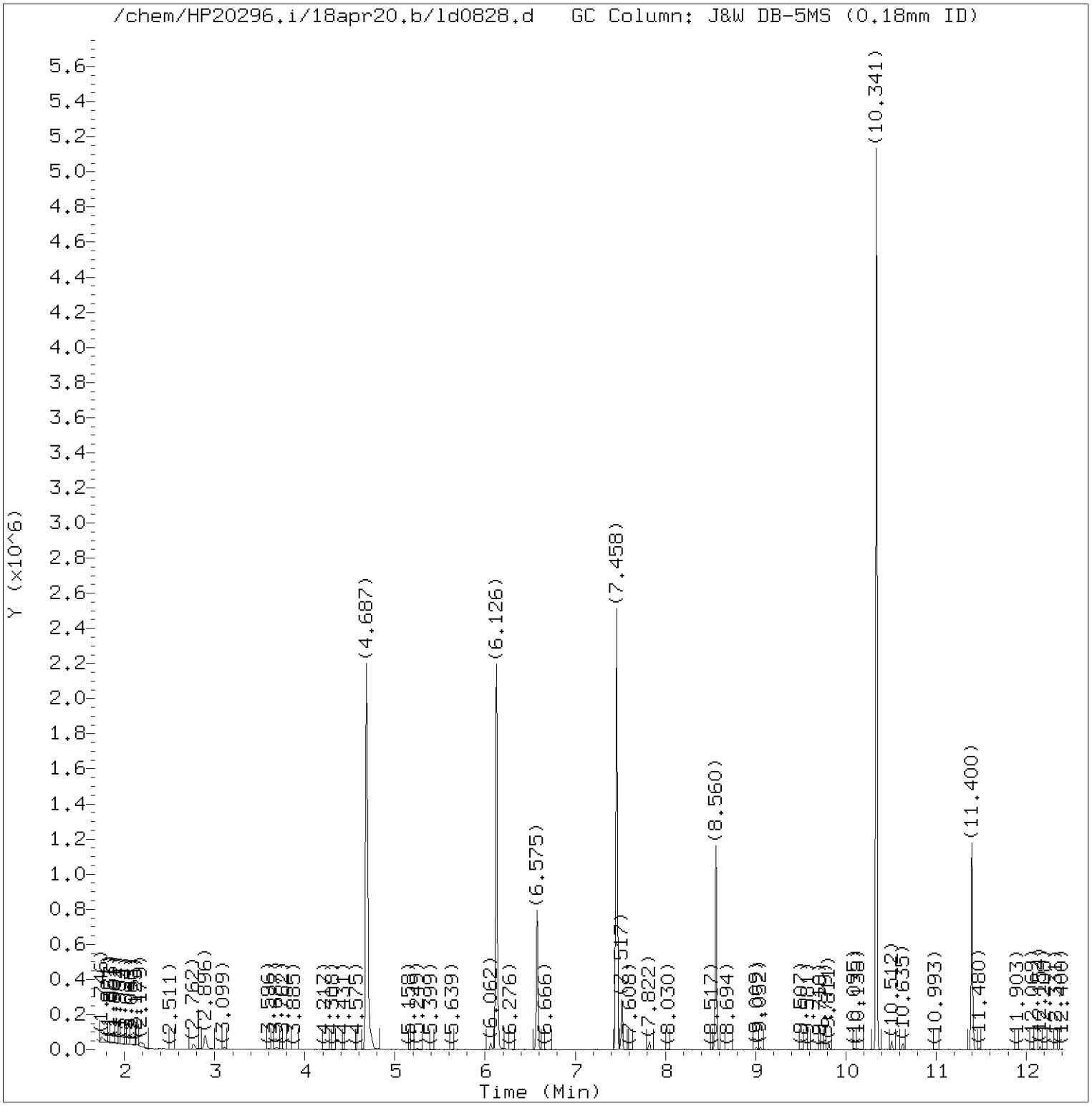
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	1023513	20.142	81%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1798996	20.111	80%		39 - 105
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2200311	23.353	93%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:05. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

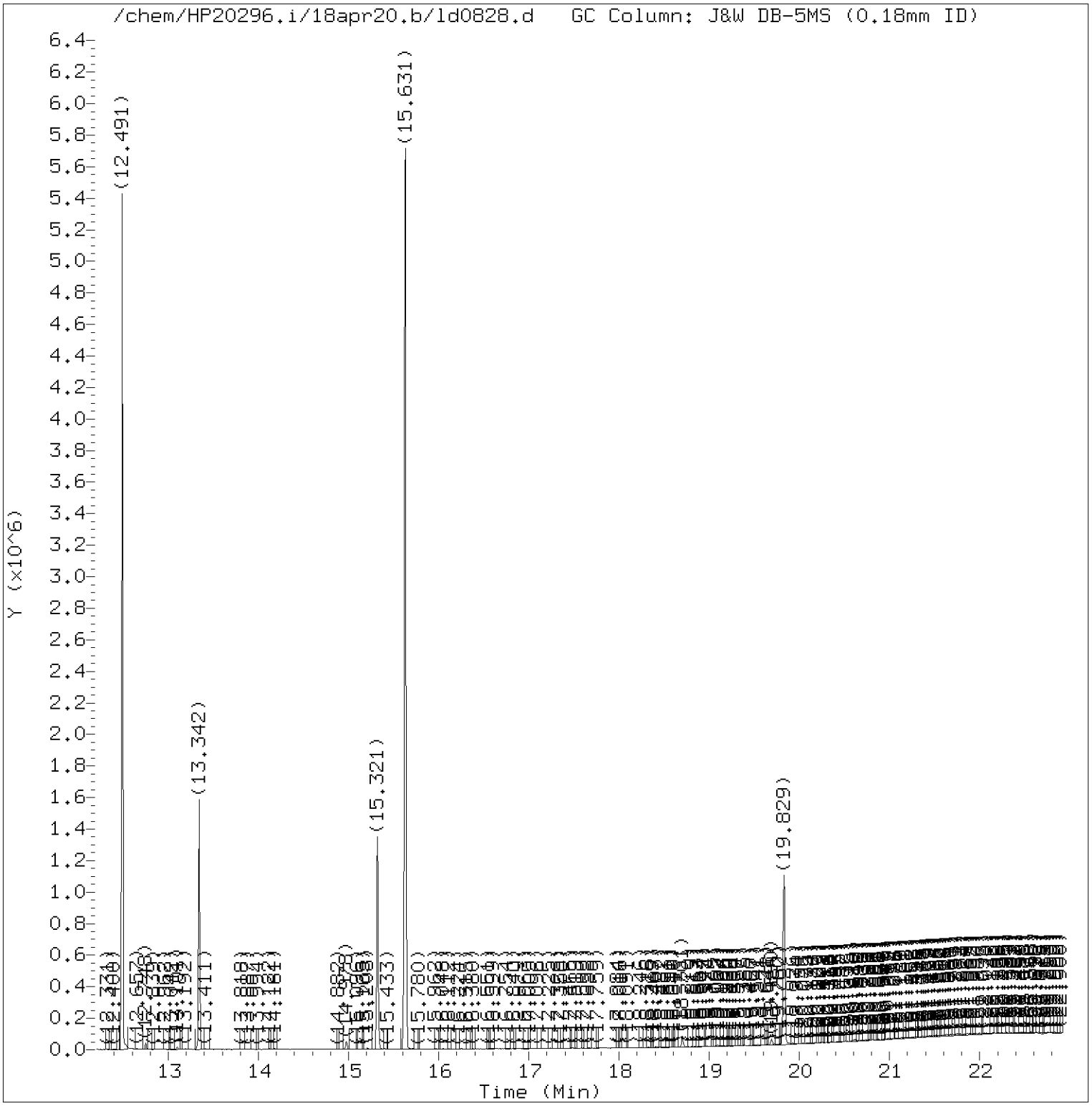
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0828.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:53 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0609 Lab Sample ID: 9558706

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0828.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:53 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0609 Lab Sample ID: 9558706

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0828.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 17:53 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:58 art12405

Sample Name: R0609 Lab Sample ID: 9558706

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	156896	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	1023513	20.142
68)*Naphthalene-d8	(2)	8.560	136	589159	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1798996	20.111
118)*Acenaphthene-d10	(3)	11.400	164	287747	5.000
158)*Phenanthrene-d10	(4)	13.342	188	582285	5.000
180)*Pyrene-d10	(5)	15.321	212	587513	5.000
184)$Terphenyl-d14	(5)	15.631	244	2200311	23.353
218)*Perylene-d12	(6)	19.829	264	535848	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0829.d
Injection date and time: **20-APR-2018 18:20**
Data file Sample Info. Line: R0610;9558707;1;0;SAMPLE;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 17:03 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.576	(0.005)	914	152	161498	(-19)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	609283	(-18)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	304022	(-21)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	602706	(-25)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	611680	(-28)	5.00	
218) Perylene-d12	19.830	(0.011)	3392	264	552672	(-34)	5.00	

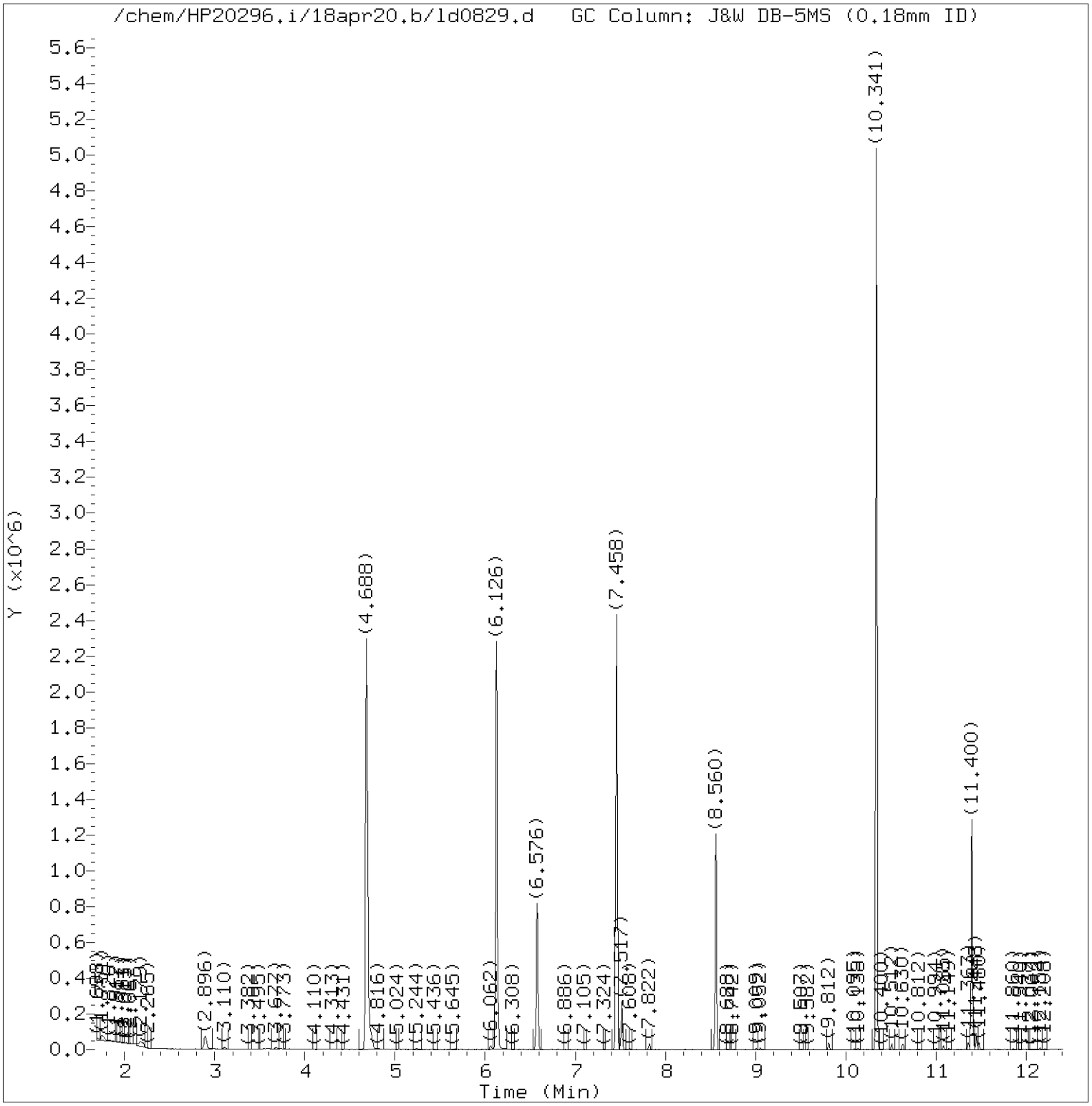
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	1024361	19.493	78%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1788748	18.926	76%		39 - 105
184) Terphenyl-d14	(5)	15.626	(0.000)	244	2132490	21.739	87%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:05. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

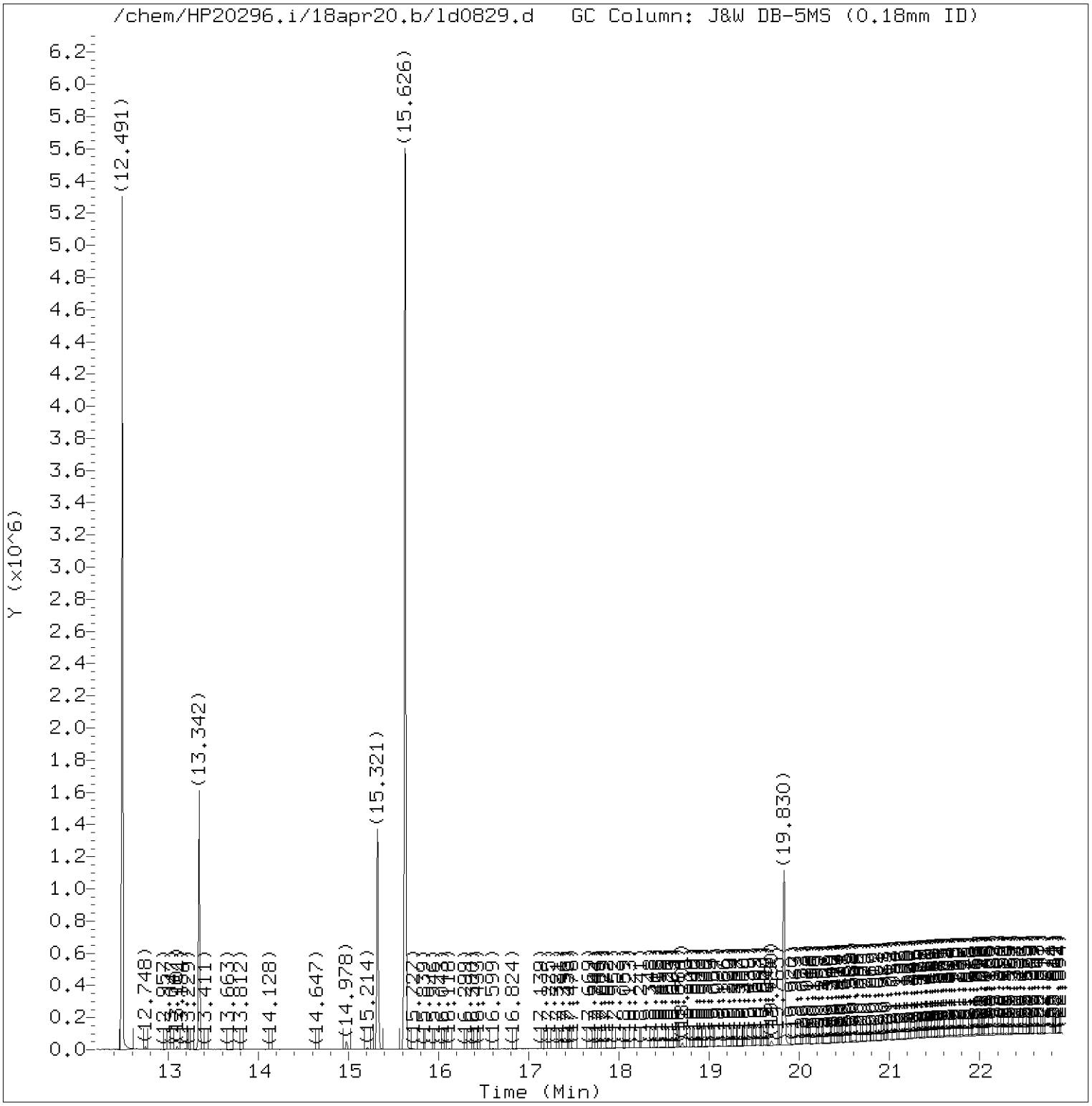
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0829.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 18:20 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:03 art12405

Sample Name: R0610 Lab Sample ID: 9558707

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0829.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 18:20 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:03 art12405

Sample Name: R0610 Lab Sample ID: 9558707

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0829.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 18:20 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:03 art12405

Sample Name: R0610 Lab Sample ID: 9558707

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.576	152	161498	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	1024361	19.493
68)*Naphthalene-d8	(2)	8.560	136	609283	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1788748	18.926
118)*Acenaphthene-d10	(3)	11.400	164	304022	5.000
158)*Phenanthrene-d10	(4)	13.342	188	602706	5.000
180)*Pyrene-d10	(5)	15.321	212	611680	5.000
184)$Terphenyl-d14	(5)	15.626	244	2132490	21.739
218)*Perylene-d12	(6)	19.830	264	552672	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:05.
Target 3.5 esignature user ID: art12405

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20a.b/ld0867.d
Injection date and time: **21-APR-2018 04:06**
Data file Sample Info. Line: R0611;9558708;1;0;SAMPLE;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 17:07 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 17:07
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20a.b/ld0851.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.570	(0.005)	913	152	157692	(-16)	5.00	
68) Naphthalene-d8	8.554	(0.005)	1284	136	586732	(-16)	5.00	
118) Acenaphthene-d10	11.395	(0.005)	1815	164	299135	(-17)	5.00	
158) Phenanthrene-d10	13.336	(0.011)	2178	188	598793	(-19)	5.00	
180) Pyrene-d10	15.315	(0.005)	2548	212	598638	(-24)	5.00	
218) Perylene-d12	19.824	(0.005)	3391	264	561277	(-25)	5.00	

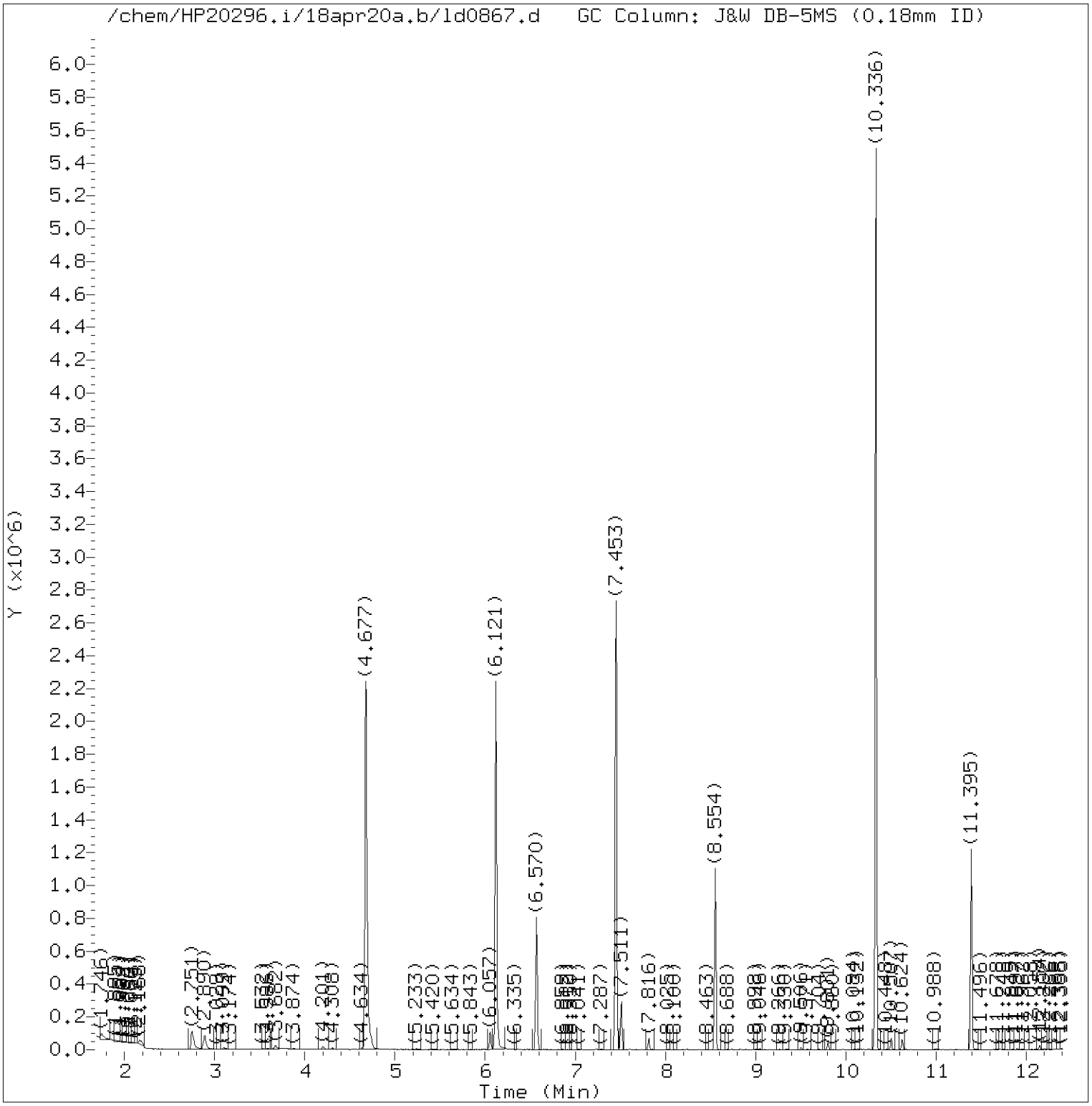
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.453	(0.000)	82	1118346	22.100	88%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.336	(0.000)	172	1961452	21.092	84%		39 - 105
184) Terphenyl-d14	(5)	15.620	(0.000)	244	2344713	24.423	98%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:08. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

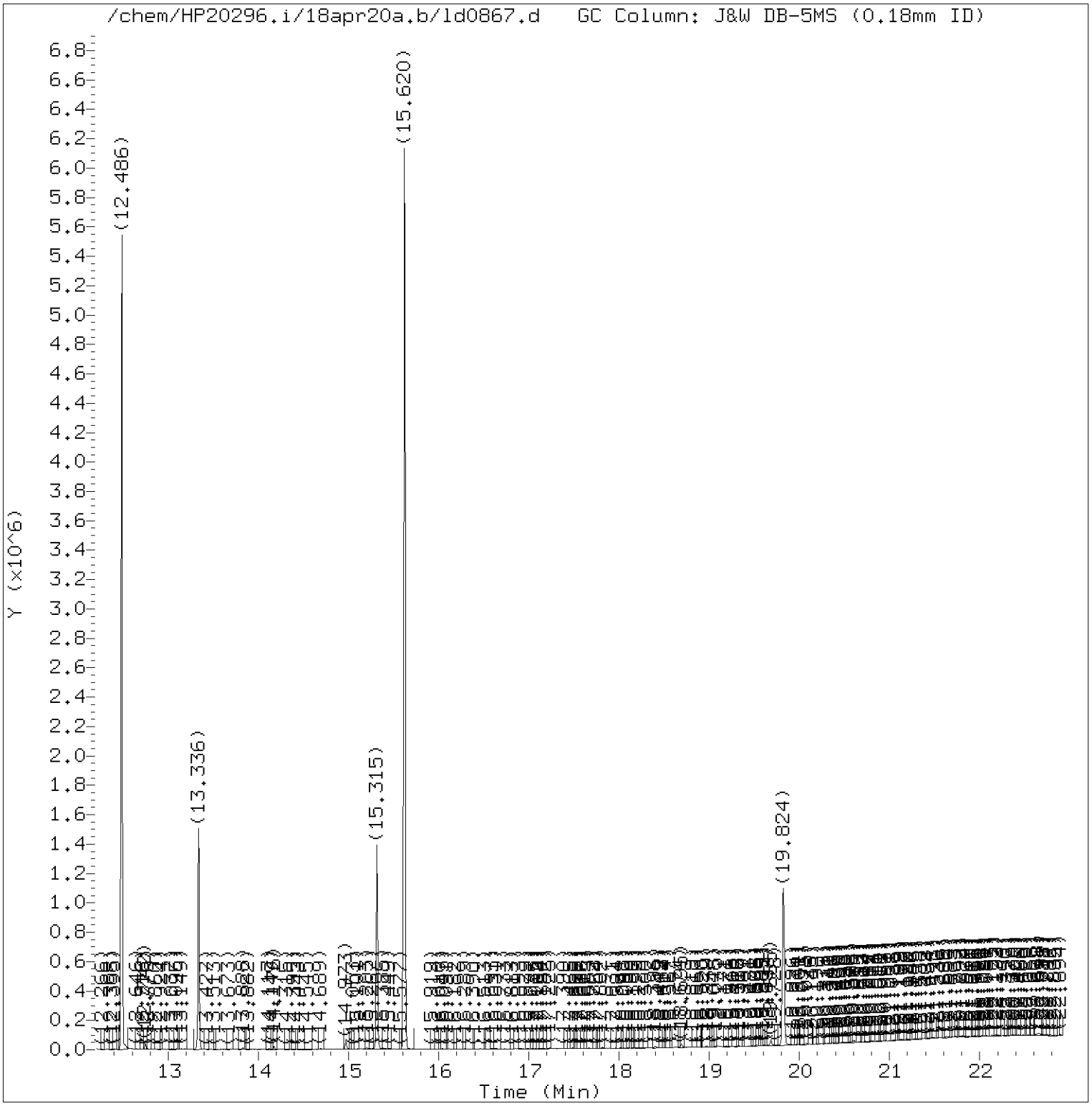
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0867.d Instrument ID: HP20296.i
Injection date and time: 21-APR-2018 04:06 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 17:07
Date, time and analyst ID of latest file update: 21-Apr-2018 17:07 art12405

Sample Name: R0611 Lab Sample ID: 9558708

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:08.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0867.d Instrument ID: HP20296.i
Injection date and time: 21-APR-2018 04:06 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 17:07
Date, time and analyst ID of latest file update: 21-Apr-2018 17:07 art12405

Sample Name: R0611 Lab Sample ID: 9558708

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:08.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0867.d Instrument ID: HP20296.i
Injection date and time: 21-APR-2018 04:06 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 17:07
Date, time and analyst ID of latest file update: 21-Apr-2018 17:07 art12405

Sample Name: R0611 Lab Sample ID: 9558708

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.570	152	157692	5.000
45)$Nitrobenzene-d5	(2)	7.453	82	1118346	22.100
68)*Naphthalene-d8	(2)	8.554	136	586732	5.000
96)$2-Fluorobiphenyl	(3)	10.336	172	1961452	21.092
118)*Acenaphthene-d10	(3)	11.395	164	299135	5.000
158)*Phenanthrene-d10	(4)	13.336	188	598793	5.000
180)*Pyrene-d10	(5)	15.315	212	598638	5.000
184)$Terphenyl-d14	(5)	15.620	244	2344713	24.423
218)*Perylene-d12	(6)	19.824	264	561277	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:08.
Target 3.5 esignature user ID: art12405

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr11\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
hbz01996	LD0410.D	RVDFTPP0878	04/11/2018	06:11		
hbz01996	LD0411.D	RVSTD0968	04/11/2018	06:26		
hbz01996	LD0410z.D	RVDFTPP0878	04/11/2018	07:24		
hbz01996	LD0411a.D	RVSTD0968	04/11/2018	07:59		
hbz01996	Ld0412.D	rvSTD0968	04/11/2018	09:33		
hbz01996	Ld0413.D	rvSTD0968	04/11/2018	10:01		
hbz01996	Ld0414.D	rvSTD0968	04/11/2018	10:28		
hbz01996	Ld0415.D	rvSTD0968	04/11/2018	10:56		
hbz01996	Ld0416.D	rvSTD0968	04/11/2018	11:24		
hbz01996	Ld0417.D	rvSTD0968	04/11/2018	11:52		
hbz01996	Ld0418.D	rvSTD0968	04/11/2018	12:20		
hbz01996	Ld0419.D	rvMDL0968	04/11/2018	12:47		
hbz01996	Ld0420.D	rvPAHMDL0968	04/11/2018	13:15		
hbz01996	Ld0421.D	rvIVC0648	04/11/2018	13:43		
hbz01996	Ld0422.D	rvBASICV0648	04/11/2018	14:11		
hbz01996	Ld0423.D	ms1808526A	04/11/2018	14:39		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr19a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	LD0780.D	RVDFTPP0878	04/19/2018	18:55		
art12405	LD0781.D	RVSTD0968	04/19/2018	19:38		
art12405	LD0782.D	rvABC0538	04/19/2018	20:22		
art12405	LD0783.D	rvABC0538	04/19/2018	20:50		
art12405	LD0784.D	rvABC0538	04/19/2018	21:18		
art12405	LD0785.D	rvABC0538	04/19/2018	21:46		
art12405	LD0786.D	rvABC0538	04/19/2018	22:13		
art12405	LD0787.D	rvABC0538	04/19/2018	22:41		
art12405	LD0788.D	rvABC0538	04/19/2018	23:09		
art12405	LD0790.D	rvPDA0448	04/20/2018	00:04		
art12405	LD0791.D	rvPDA0448	04/20/2018	00:32		
art12405	LD0792.D	rvPDA0448	04/20/2018	01:00		
art12405	LD0793.D	rvPDA0448	04/20/2018	01:27		
art12405	LD0794.D	SBLKWK106	04/20/2018	01:55	18106WAK	
art12405	LD0795.D	106WKLCS	04/20/2018	02:23	18106WAK	
art12405	LD0798.D	9554908	04/20/2018	02:50	18106WAK	
art12405	LD0796.D	9554908	04/20/2018	03:18	18106WAK	
art12405	LD0797.D	9554908	04/20/2018	03:46	18106WAK	
art12405	LD0799.D	9554911	04/20/2018	04:13	18106WAK	
art12405	LD0800.D	9554914	04/20/2018	04:41	18106WAK	
art12405	LD0801.D	9554917	04/20/2018	05:09	18106WAK	
art12405	LD0802.D	9554920	04/20/2018	05:37	18106WAK	
art12405	LD0803.D	SECC12.5	04/20/2018	06:04		
bhs10208	LD0810.D	RVDFTPP0878	04/20/2018	06:42		
bhs10208	LD0811.D	RVSTD0968	04/20/2018	06:57		

←&l5.40C ←(s12H

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr20\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
bhs10208	LD0810.D	RVDFTPP0878	04/20/2018	06:42		
bhs10208	LD0811.D	RVSTD0968	04/20/2018	06:57		
bhs10208	LD0811a.D	RVSTD0968	04/20/2018	07:43		
bhs10208	LD0812.D	RVPDA0448	04/20/2018	08:20		
bhs10208	LD0813.D	RVABC0538	04/20/2018	08:48		
bhs10208	LD0814.D	SBLKWO106	04/20/2018	09:53	18106WAO	
bhs10208	LD0815.D	106WOLCS	04/20/2018	10:20	18106WAO	
bhs10208	LD0813O.D	RVAP1108	04/20/2018	11:24		
bhs10208	LD0814o.D	SBLKWO106	04/20/2018	11:51	18106WAO	
bhs10208	LD0815o.D	106WOLCS	04/20/2018	12:19	18106WAO	
bhs10208	LD0817o.D	106WOLCSD2	04/20/2018	12:47	18106WAO	
bhs10208	LD0818o.D	9558698	04/20/2018	13:15	18106WAO	
bhs10208	LD0819o.D	9558699	04/20/2018	13:43	18106WAO	
bhs10208	LD0820o.D	9558700	04/20/2018	14:11	18106WAO	
bhs10208	LD0821.D	9558695	04/20/2018	14:38	18106WAO	
bhs10208	LD0822.D	9558696	04/20/2018	15:06	18106WAO	
bhs10208	LD0823.D	9558697	04/20/2018	15:34	18106WAO	
bhs10208	LD0824.D	9558702	04/20/2018	16:02	18106WAO	
bhs10208	LD0825.D	9558703	04/20/2018	16:29	18106WAO	
bhs10208	LD0826.D	9558704	04/20/2018	16:57	18106WAY	
bhs10208	LD0827.D	9558705	04/20/2018	17:25	18106WAY	
bhs10208	LD0828.D	9558706	04/20/2018	17:53	18106WAY	
bhs10208	LD0829.D	9558707	04/20/2018	18:20	18106WAY	
bhs10208	LD0830.D	9558708	04/20/2018	18:48	18106WAY	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr20a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	LD0850.D	RVDFTPP0878	04/20/2018	19:41		
art12405	LD0851.D	RVSTD0968	04/20/2018	19:55		
art12405	LD0852.D	SBLKWI109	04/20/2018	21:12	18109WAI	
art12405	LD0853.D	109WILCS	04/20/2018	21:40	18109WAI	
art12405	LD0854.D	109WILCSD	04/20/2018	22:07	18109WAI	
art12405	LD0855.D	SBLKWJ108	04/20/2018	22:35	18108WAJ	
art12405	LD0856.D	108WJLCS	04/20/2018	23:03	18108WAJ	
art12405	LD0857.D	108WJLCSD	04/20/2018	23:30	18108WAJ	
art12405	LD0858.D	108WJLCS	04/20/2018	23:58	18108WAJ	
art12405	LD0859.D	108WJLCSD	04/21/2018	00:25	18108WAJ	
art12405	LD0860.D	9557112	04/21/2018	00:53	18109WAI	
art12405	LD0861.D	9563717	04/21/2018	01:21	18109WAI	
art12405	LD0862.D	9564825	04/21/2018	01:48	18108WAJ	
art12405	LD0863.D	9564826	04/21/2018	02:16	18108WAJ	
art12405	LD0864.D	9565542	04/21/2018	02:44	18108WAJ	
art12405	LD0865.D	9565543	04/21/2018	03:11	18108WAJ	
art12405	LD0866.D	RVSTD0968	04/21/2018	03:39		
art12405	LD0867.D	9558708	04/21/2018	04:06	18106WAY	
art12405	LD0868.D	9557948	04/21/2018	04:34	18106WAZ	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr23\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
bhs10208	LD0870.D	RVDFTPP0878	04/23/2018	07:27		
bhs10208	LD0870z.D	RVDFTPP0878	04/23/2018	09:36		
bhs10208	LD0871.D	RVSTD0968	04/23/2018	10:00		
bhs10208	LD0872.D	RVPDA0448	04/23/2018	10:43		
bhs10208	LD0873.D	RVABC0538	04/23/2018	11:11		
bhs10208	LD0874.D	RVAAP1108	04/23/2018	11:39		
bhs10208	LD0875.D	106WOLCS	04/23/2018	12:24	18106WAO	
bhs10208	LD0876.D	106WOLCSD	04/23/2018	12:52	18106WAO	
bhs10208	LD0877.D	SBLKWI110	04/23/2018	13:20	18110WAI	
bhs10208	LD0878.D	110WILCS	04/23/2018	13:48	18110WAI	
bhs10208	LD0879.D	110WILCSD	04/23/2018	14:15	18110WAI	
bhs10208	LD0880.D	SBLKWD110	04/23/2018	14:43	18110WAD	
bhs10208	LD0881.D	110WDLCS	04/23/2018	15:11	18110WAD	
bhs10208	LD0882.D	110WDLCSD	04/23/2018	15:39	18110WAD	
bhs10208	LD0883.D	9565150	04/23/2018	16:07	18110WAD	
bhs10208	LD0884.D	9565153	04/23/2018	16:34	18110WAD	
bhs10208	LD0885.D	9566472	04/23/2018	17:02	18110WAD	
bhs10208	LD0886.D	9567319	04/23/2018	17:30	18110WAI	
bhs10208	LD0887.D	9567320	04/23/2018	17:58	18110WAI	
bhs10208	LD0888.D	9567321	04/23/2018	18:26	18110WAI	
bhs10208	LD0889.D	9567322	04/23/2018	18:54	18110WAI	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18apr24a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
whs02991	LD0980.D	RVDFTPP0878	04/24/2018	19:23		
whs02991	LD0981.D	RVSTD0968	04/24/2018	19:41		
whs02991	LD0982.D	RVABC0538	04/24/2018	20:20		
whs02991	LD0983.D	RVPDA0448	04/24/2018	20:48		
whs02991	LD0984.D	AAP1108	04/24/2018	21:15		
whs02991	LD0985.D	SBLKWO113	04/24/2018	21:57	18113WAO	
whs02991	LD0986.D	113WOLCS	04/24/2018	22:25	18113WAO	
whs02991	LD0987.D	113WOLCSD	04/24/2018	22:52	18113WAO	
whs02991	LD0988.D	SBLKWN113	04/24/2018	23:20	18113WAN	
whs02991	LD0989.D	113WNLCS	04/24/2018	23:48	18113WAN	
whs02991	LD0990.D	113WNLCS1	04/25/2018	00:16	18113WAN	
whs02991	LD0991.D	113WNLCSD1	04/25/2018	00:44	18113WAN	
whs02991	LD0992.D	SBLKWB113	04/25/2018	01:11	18113WAB	
whs02991	LD0993.D	113WBLCS	04/25/2018	01:39	18113WAB	
whs02991	LD0994.D	113WBLCSD	04/25/2018	02:07	18113WAB	
whs02991	LD0995.D	9567427	04/25/2018	02:35	18113WAO	
whs02991	LD1003.D	RVSTD0968	04/25/2018	03:03		
whs02991	LD0996.D	9558698RE	04/25/2018	03:31	18113WAN	
whs02991	LD0997.D	9558699RE	04/25/2018	03:58	18113WAN	
whs02991	LD0998.D	9558700RE	04/25/2018	04:26	18113WAN	
whs02991	LD0999.D	9558702RE	04/25/2018	04:54	18113WAN	
whs02991	LD1000.D	9569768	04/25/2018	05:22	18113WAB	
whs02991	LD1001.D	9569770	04/25/2018	05:50	18113WAB	
whs02991	LD1002.D	9569771	04/25/2018	06:18	18113WAB	

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

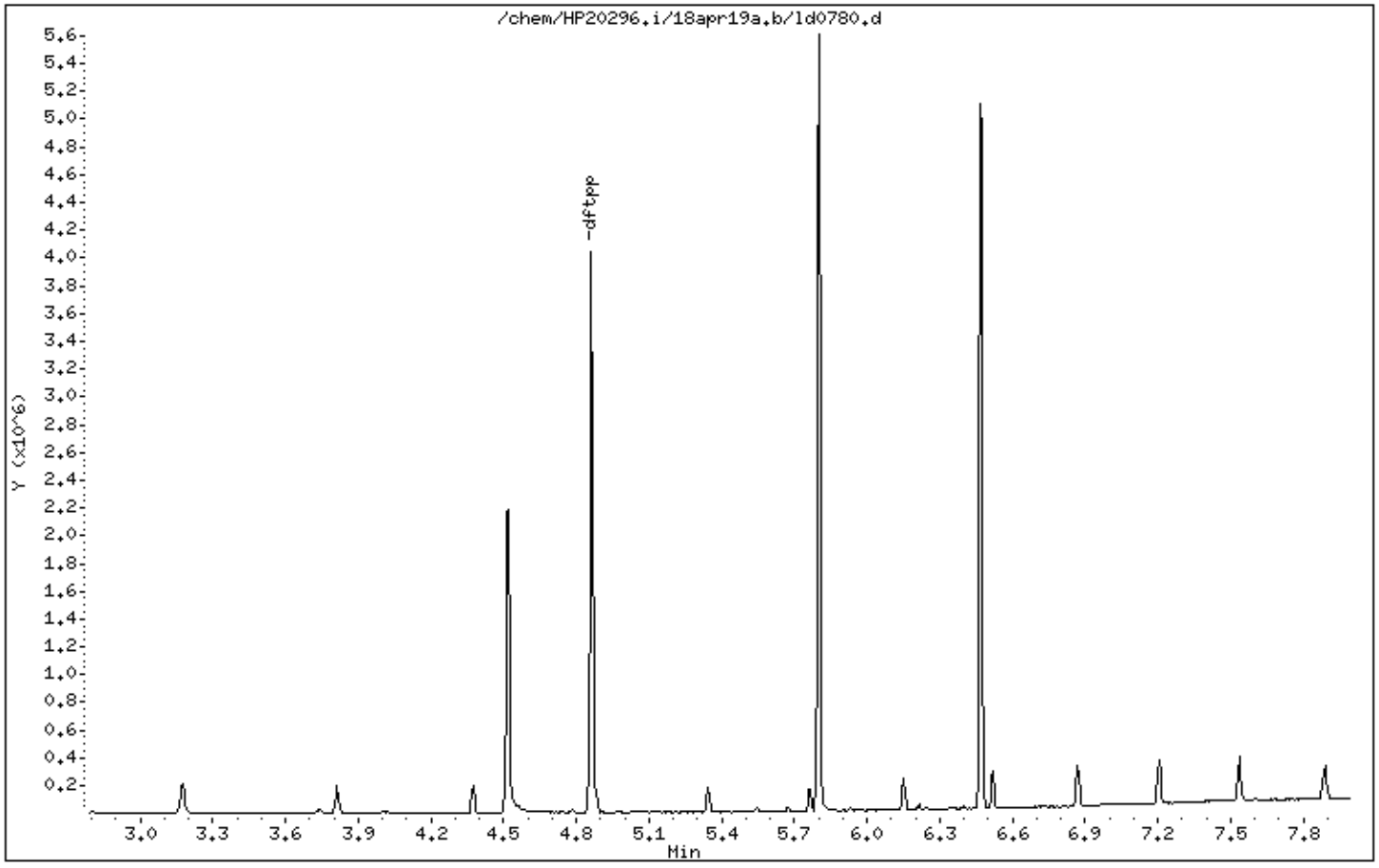
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

Instrument: HP20296.i

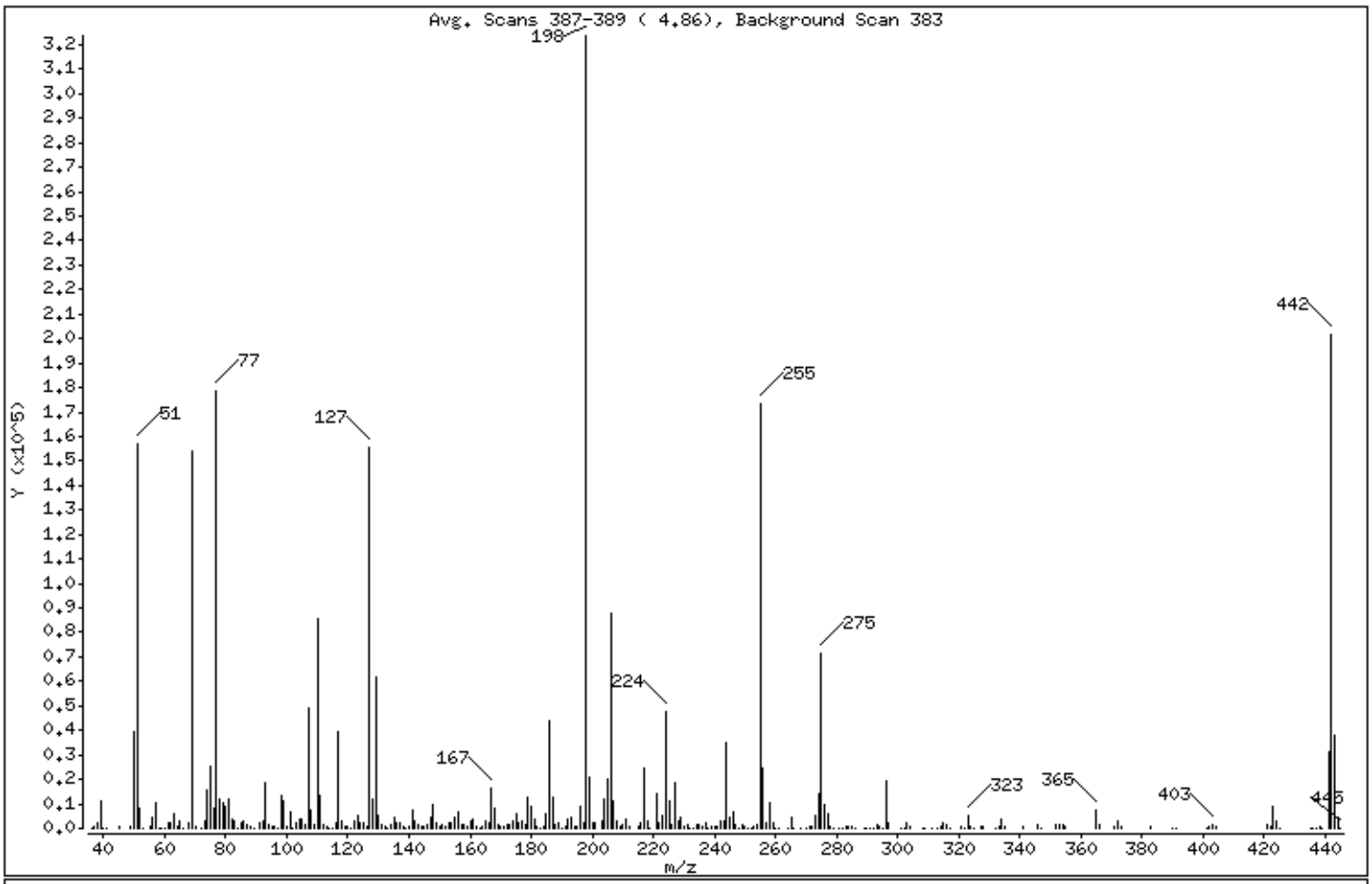
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.50
68	Less than 2.00% of mass 69	0.78 (1.64)
69	Mass 69 relative abundance	47.50
70	Less than 2.00% of mass 69	0.27 (0.57)
127	10.00 - 80.00% of mass 198	48.15
197	Less than 2.00% of mass 198	0.79
199	5.00 - 9.00% of mass 198	6.51
275	10.00 - 60.00% of mass 198	22.06
365	Greater than 1.00% of mass 198	2.35
441	0.01 - 24.00% of mass 442	9.61 (15.45)
442	50.00 - 99.99% of mass 198	62.21
443	15.00 - 24.00% of mass 442	11.64 (18.71)

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	155	121.00	91	196.00	9081	279.00	90
37.00	602	122.00	2964	197.00	2570	281.00	346
38.00	1898	123.00	4899	198.00	323712	282.00	319
39.00	11393	124.00	2086	199.00	21088	283.00	875
40.00	146	125.00	2017	200.00	1985	284.00	590
41.00	291	126.00	1038	201.00	2049	285.00	1101
45.00	416	127.00	155840	203.00	2787	286.00	104
49.00	840	128.00	11990	204.00	11891	289.00	224
50.00	39296	129.00	61512	205.00	20392	290.00	84
51.00	156992	130.00	5375	206.00	87512	291.00	91
52.00	8106	131.00	1175	207.00	11283	292.00	232
53.00	332	132.00	500	208.00	3146	293.00	1492
55.00	529	133.00	40	209.00	871	294.00	405
56.00	4619	134.00	1396	210.00	1486	295.00	157
57.00	10378	135.00	4766	211.00	3460	296.00	19472
58.00	309	136.00	1926	212.00	919	297.00	2539
59.00	229	137.00	2563	215.00	992	301.00	354
60.00	84	138.00	499	216.00	2065	302.00	110
61.00	1930	139.00	151	217.00	24272	303.00	2418
62.00	2021	140.00	831	218.00	3122	304.00	414
63.00	5731	141.00	7130	219.00	285	308.00	258
64.00	907	142.00	2724	221.00	13997	309.00	86
65.00	3198	143.00	1645	222.00	1922	311.00	87
66.00	231	144.00	470	223.00	5113	313.00	146
68.00	2521	145.00	479	224.00	47296	314.00	1111
69.00	153728	146.00	1554	225.00	11529	315.00	2354
70.00	878	147.00	4329	226.00	1456	316.00	1134
72.00	97	148.00	9992	227.00	18840	317.00	117
73.00	2723	149.00	2368	228.00	2680	321.00	702
74.00	15645	150.00	659	229.00	4294	322.00	244
75.00	24968	151.00	1412	230.00	699	323.00	5253
76.00	8500	152.00	520	231.00	1509	324.00	1092
77.00	178560	153.00	2581	232.00	287	325.00	103
78.00	11851	154.00	2082	233.00	186	327.00	1108
79.00	10296	155.00	4775	234.00	1218	328.00	461

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Date : 19-APR-2018 18:55

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8653	156.00	6778	235.00	1230	332.00	309
81.00	11938	157.00	1224	236.00	925	333.00	734
82.00	3434	158.00	1700	237.00	1988	334.00	3497
83.00	2957	159.00	983	238.00	101	335.00	931
84.00	114	160.00	2720	239.00	783	341.00	928
85.00	2381	161.00	3941	240.00	641	346.00	1126
86.00	3111	162.00	1102	241.00	972	347.00	105
87.00	1549	163.00	314	242.00	2648	352.00	1662
88.00	608	164.00	500	243.00	2963	353.00	1133
89.00	130	165.00	2715	244.00	35280	354.00	1758
91.00	2155	166.00	2434	245.00	4502	355.00	463
92.00	2843	167.00	16392	246.00	6763	365.00	7612
93.00	18680	168.00	8513	247.00	1472	366.00	1179
94.00	1179	169.00	1340	248.00	354	371.00	382
95.00	405	170.00	530	249.00	1467	372.00	2857
96.00	1031	171.00	602	250.00	385	373.00	664
97.00	283	172.00	1612	251.00	361	383.00	632
98.00	13761	173.00	1642	252.00	363	390.00	186
99.00	11019	174.00	3339	253.00	1092	391.00	222
100.00	949	175.00	6171	254.00	1853	401.00	186
101.00	6361	176.00	1962	255.00	173184	402.00	1052
102.00	276	177.00	2880	256.00	24896	403.00	1282
103.00	2000	178.00	1204	257.00	2183	404.00	509
104.00	3924	179.00	12500	258.00	10120	421.00	1265
105.00	4004	180.00	8732	259.00	2011	422.00	1107
106.00	1525	181.00	3922	260.00	130	423.00	9063
107.00	48912	182.00	777	261.00	200	424.00	2649
108.00	7537	183.00	235	264.00	364	425.00	246
109.00	1315	184.00	1021	265.00	4207	435.00	85
110.00	85376	185.00	5696	266.00	124	436.00	83
111.00	13103	186.00	43968	268.00	290	437.00	107
112.00	1661	187.00	12850	270.00	263	438.00	466
113.00	559	188.00	1594	271.00	453	439.00	344
114.00	107	189.00	2589	272.00	479	441.00	31112
115.00	139	190.00	367	273.00	5270	442.00	201344

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Date : 19-APR-2018 18:55

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

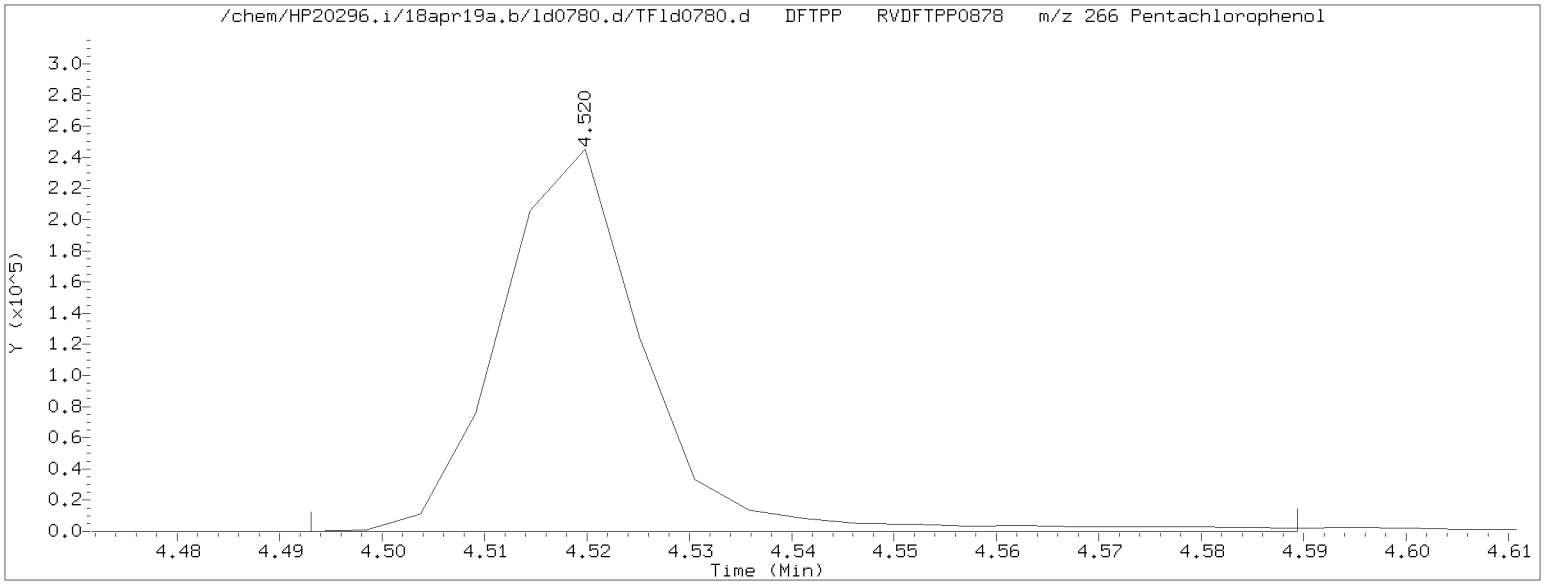
Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2500	191.00	1033	274.00	13825	443.00	37672
117.00	39800	192.00	3655	275.00	71400	444.00	3976
118.00	2911	193.00	4282	276.00	9600	445.00	277
119.00	442	194.00	1073	277.00	5703		
120.00	704	195.00	671	278.00	950		

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

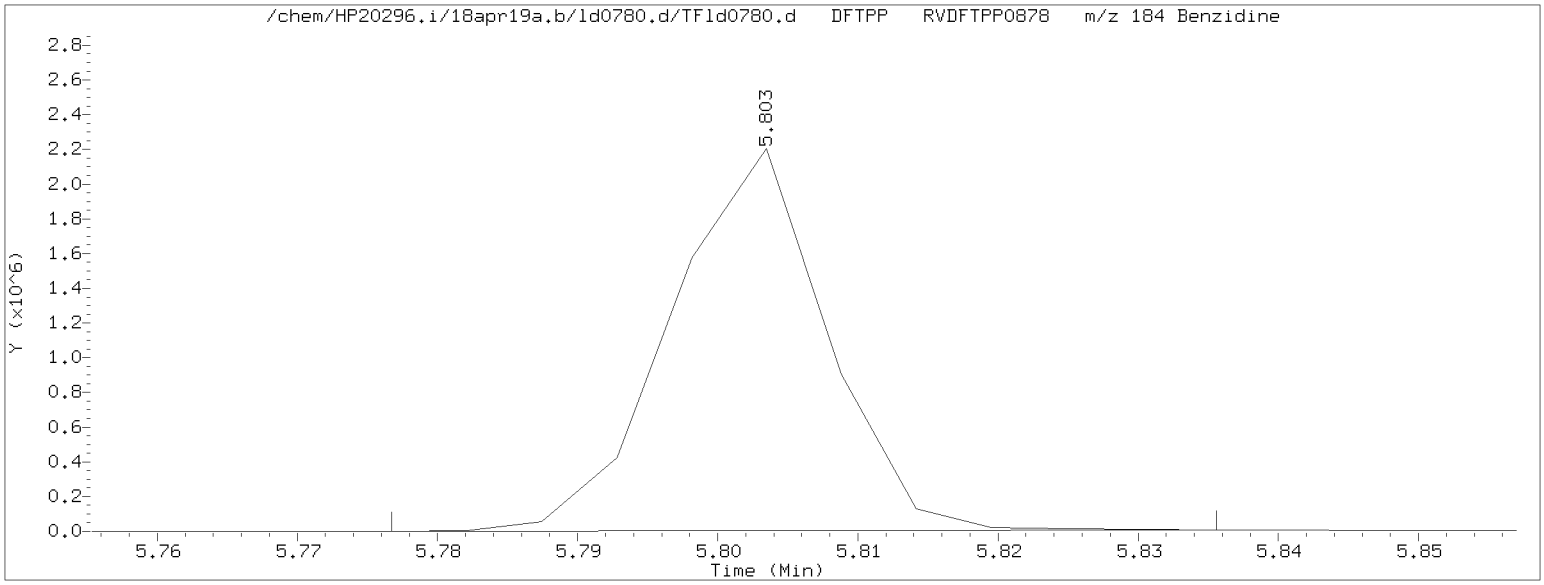
Instrument ID: HP20296.i Injection Date: 19-APR-2018 18:55 Operator: art12405



Pentachlorophenol EICP peak height = 245312 EICP peak height at 10% = 24531 Pentachlorophenol EICP area = 239510

Pentachlorophenol EICP peak apex (min.) = 4.520
RT at 10% of front half of EICP (min.) = 4.505 'Front' peak width (min.) = 0.0149000000
RT at 10% of back half of EICP (min.) = 4.533 'Tailing' peak width (min.) = 0.0128666667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0128666667}{0.0149000000} = 0.864$$



Benzidine EICP peak height = 2201989 EICP peak height at 10% = 220199 Benzidine EICP area = 1703834

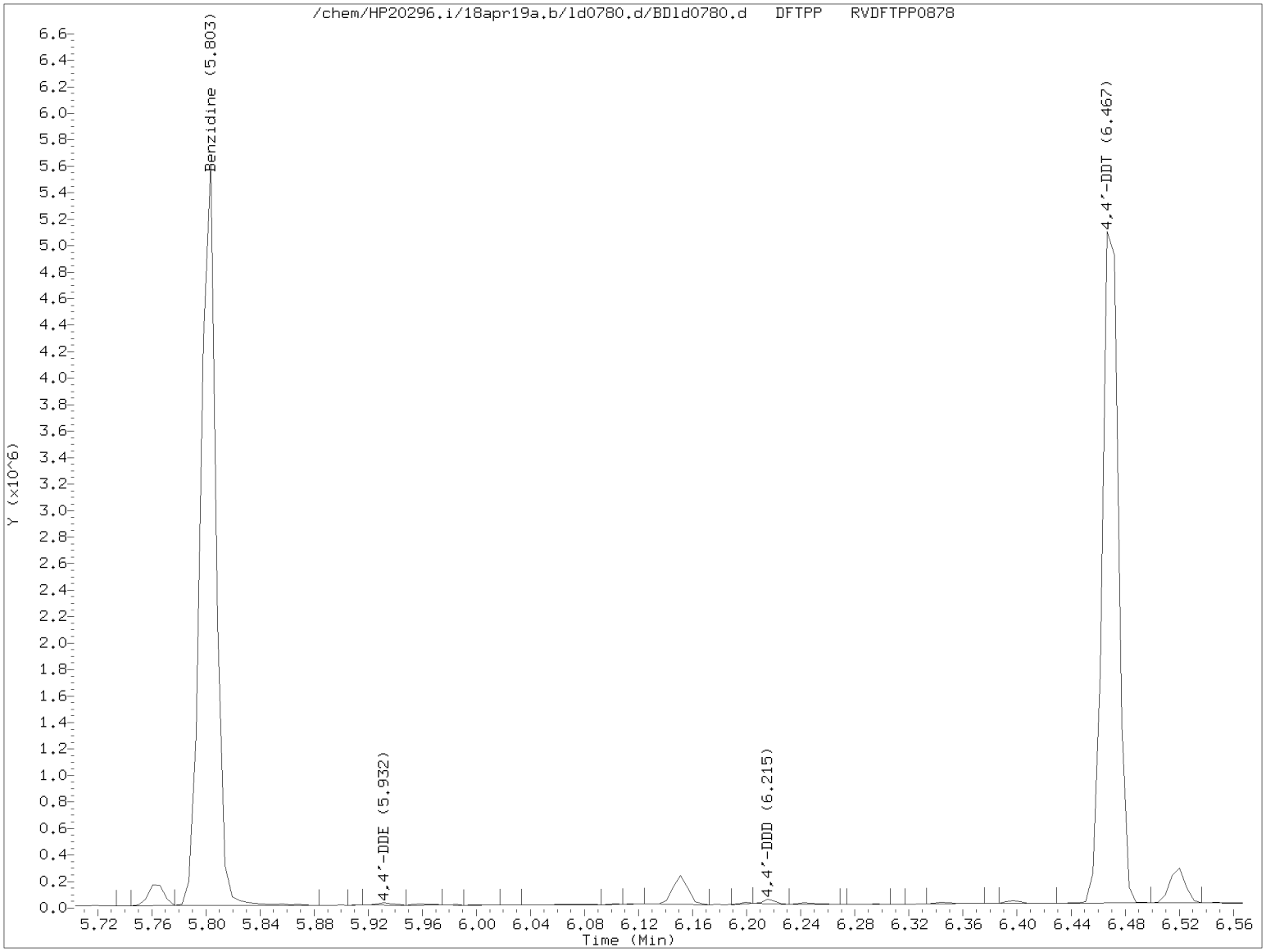
Benzidine EICP peak apex (min.) = 5.803
RT at 10% of front half of EICP (min.) = 5.790 'Front' peak width (min.) = 0.0136000000
RT at 10% of back half of EICP (min.) = 5.814 'Tailing' peak width (min.) = 0.0100333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0100333333}{0.0136000000} = 0.738$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/20/2018 at 13:55. PARALLAX ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

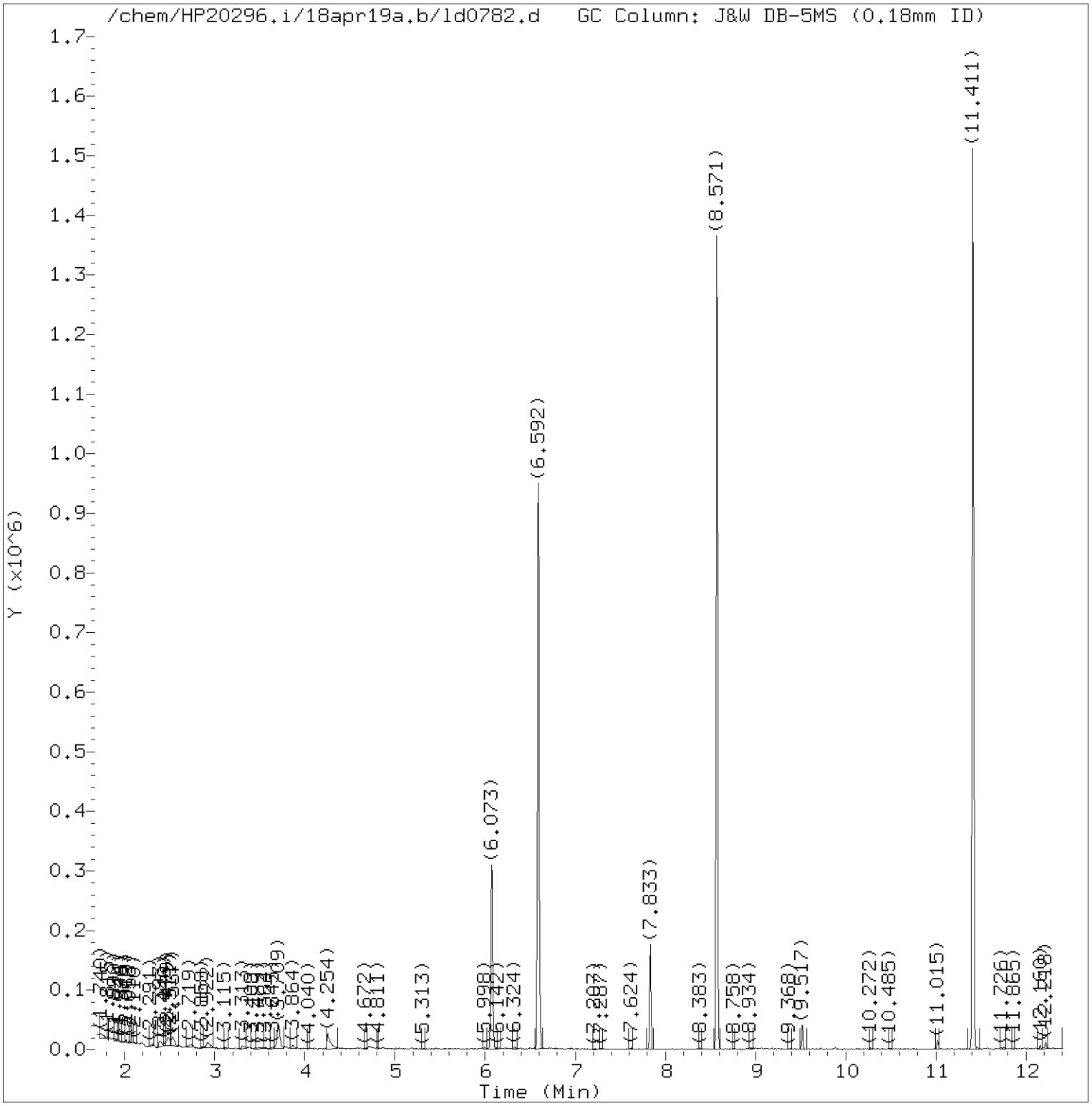
Instrument ID: HP20296.i Injection Date: 19-APR-2018 18:55 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{13651 + 21438}{13651 + 21438 + 4308446} \times 100 = 0.8$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/20/2018 at 13:55. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

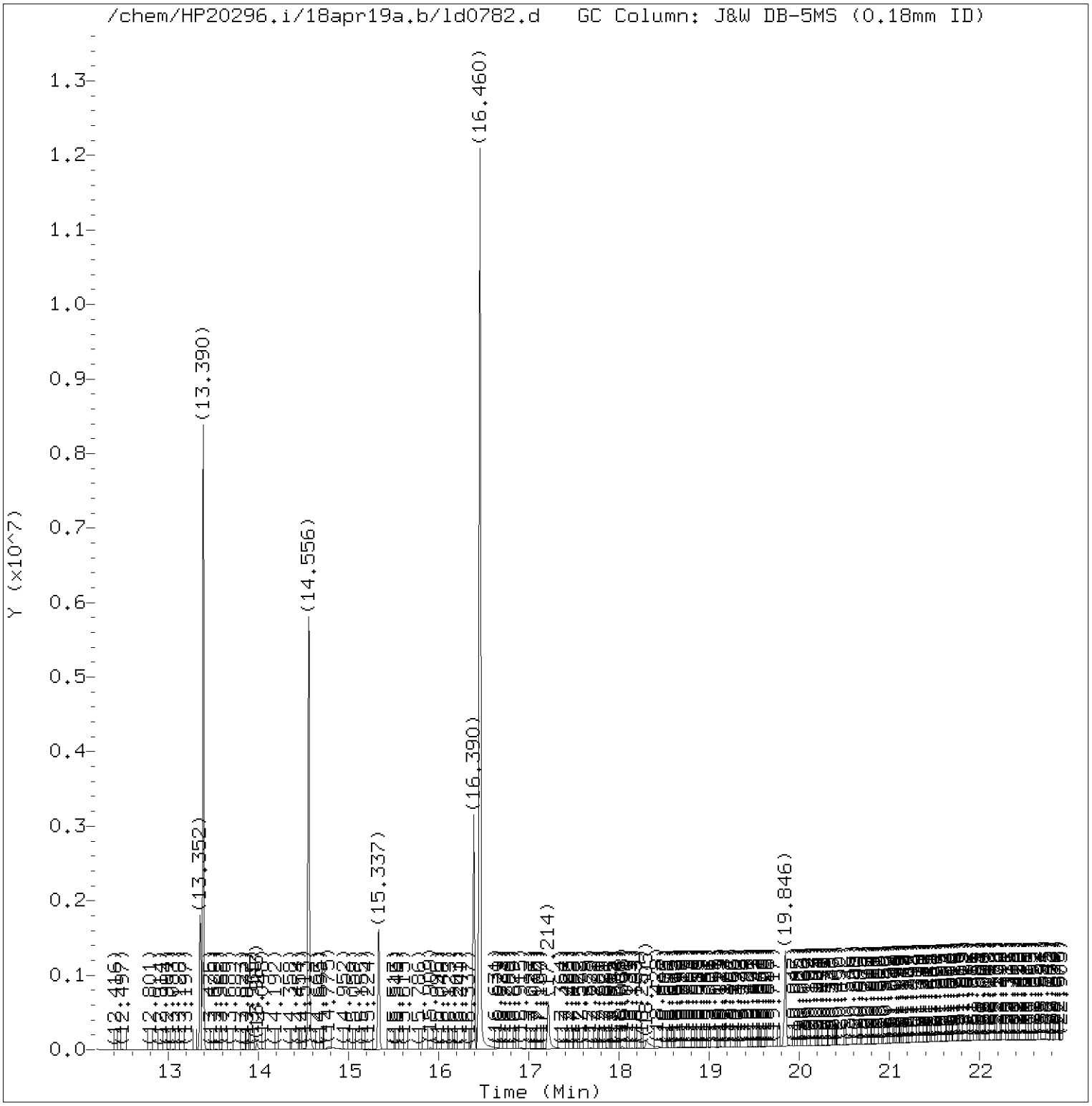
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

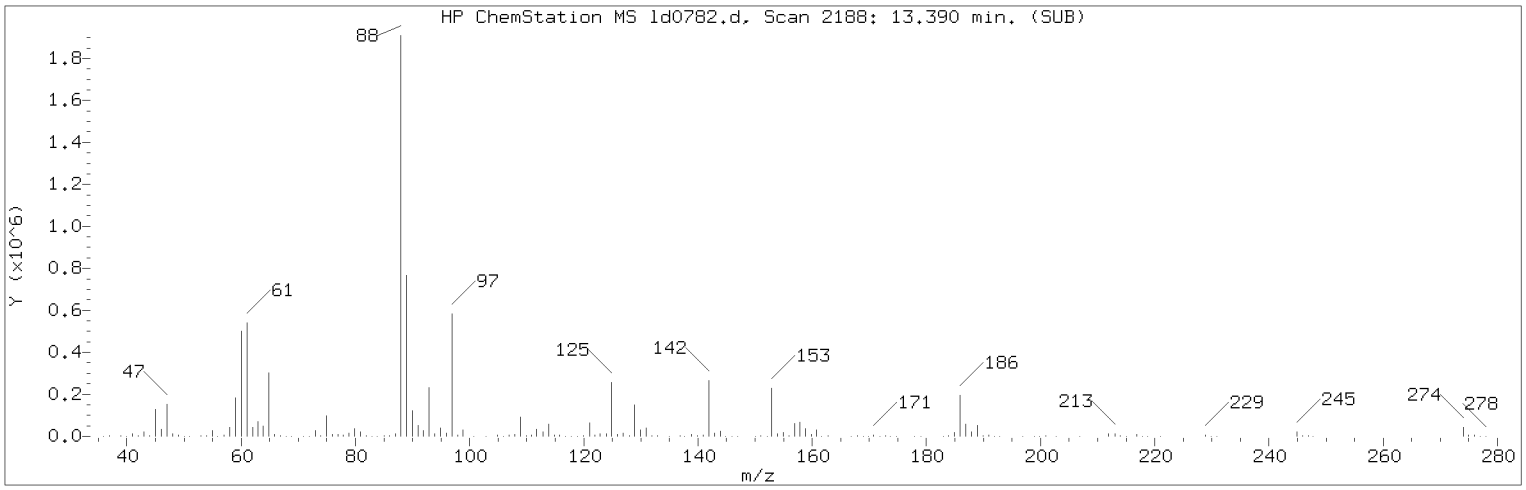
Sample Name: SSTD30 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.592	152	192822	5.000
68)*Naphthalene-d8	(2)	8.571	136	718315	5.000
118)*Acenaphthene-d10	(3)	11.411	164	354810	5.000
158)*Phenanthrene-d10	(4)	13.352	188	710045	5.000
167) Disulfoton	(4)	13.390	88	1878101M	33.244
175) Methapyrilene	(4)	14.556	97	1411087M	30.179
180)*Pyrene-d10	(5)	15.337	212	741000	5.000
194) Famphur	(5)	16.390	218	1095481	20.237
195) Kepone	(5)	16.460	272	1567773	96.183
218)*Perylene-d12	(6)	19.846	264	651985	5.000

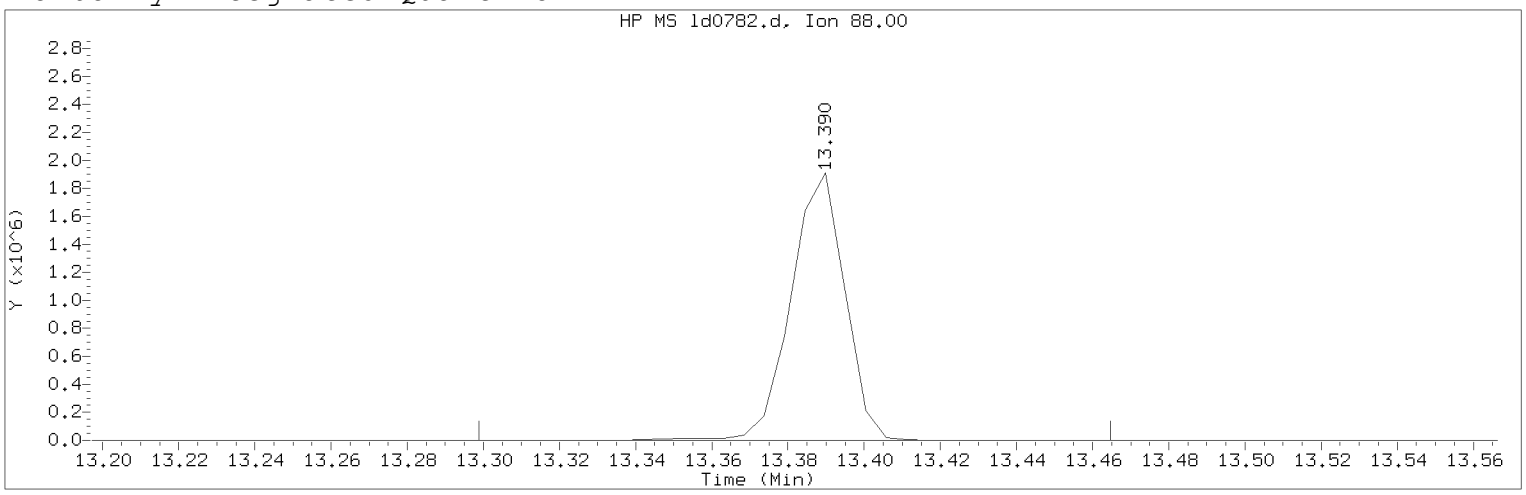
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

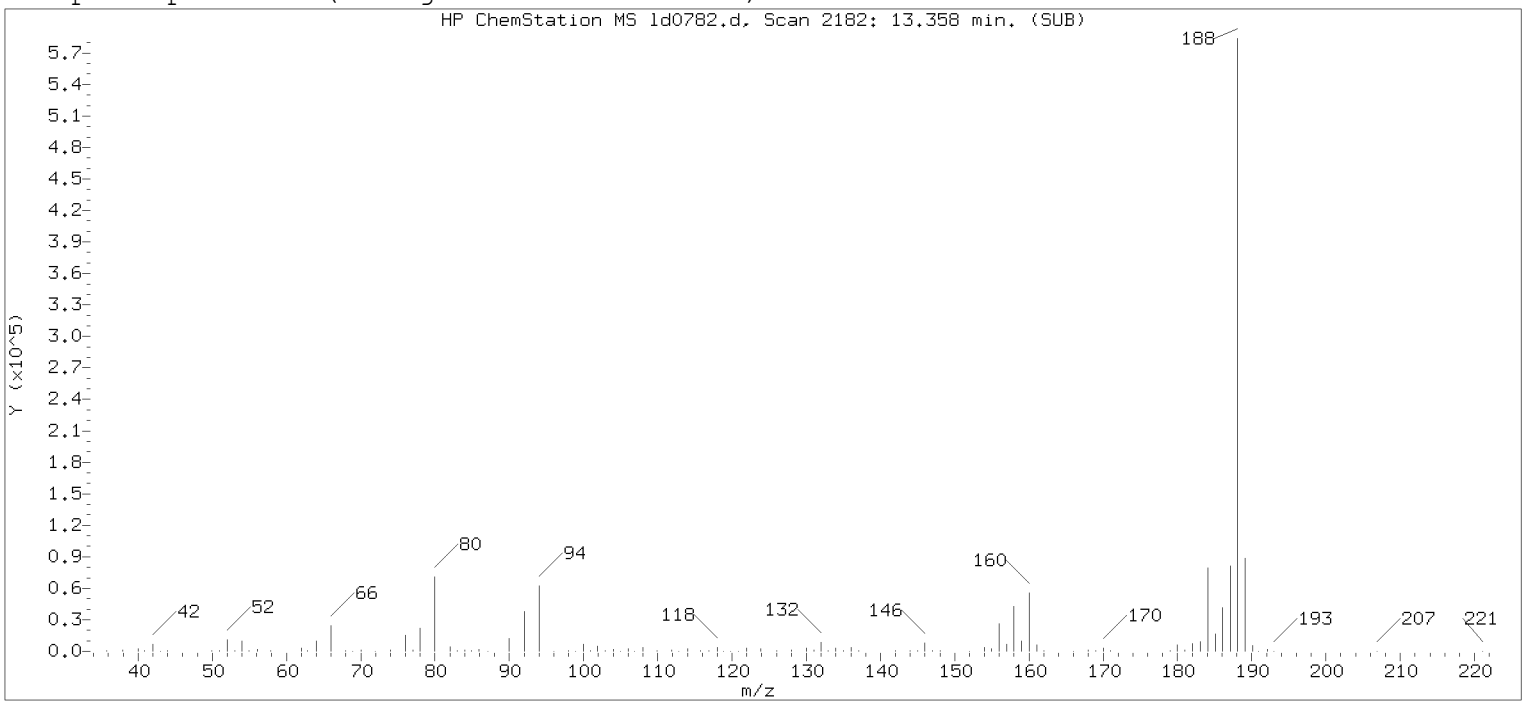
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2188
Retention Time (minutes) : 13.390
Quant Ion : 88.00
Area (flag) : 1878101M
On-Column Amount (ng/ul) : 33.2442
Integration start scan : 2170 Integration stop scan: 2201
Y at integration start : 0 Y at integration end: 301

Reason for manual integration: improper integration

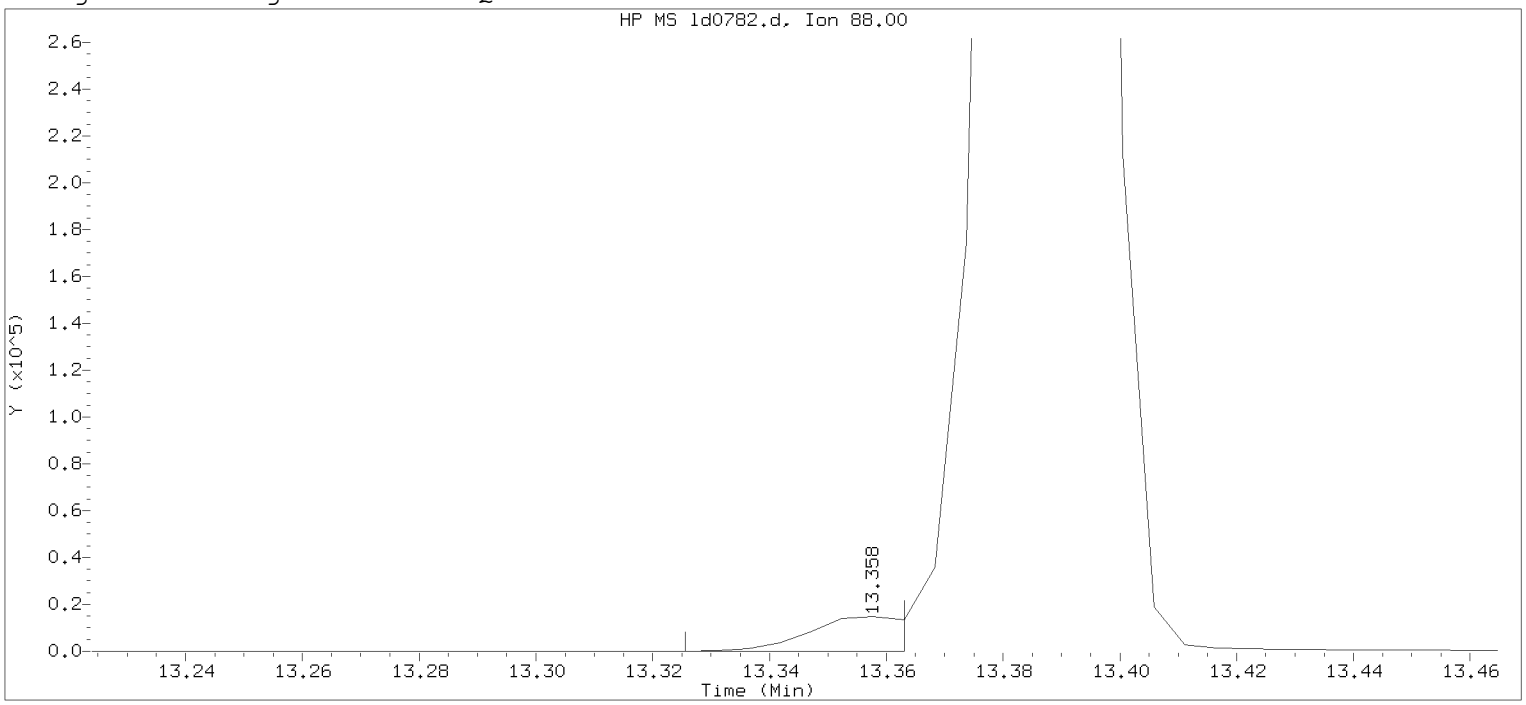
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

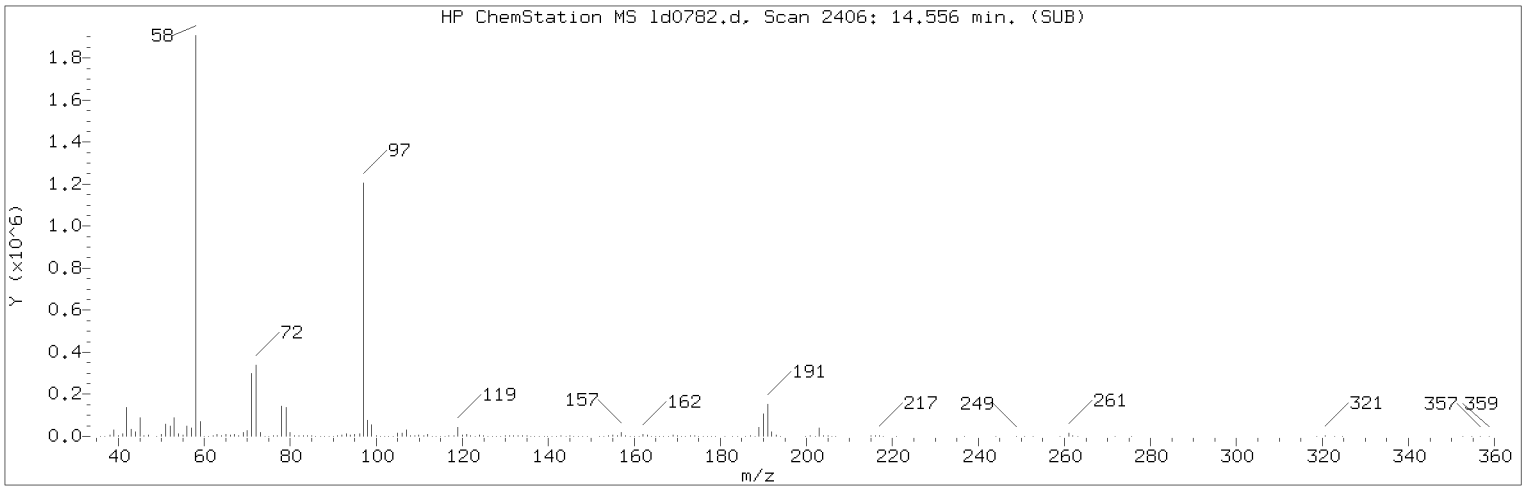
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:38
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

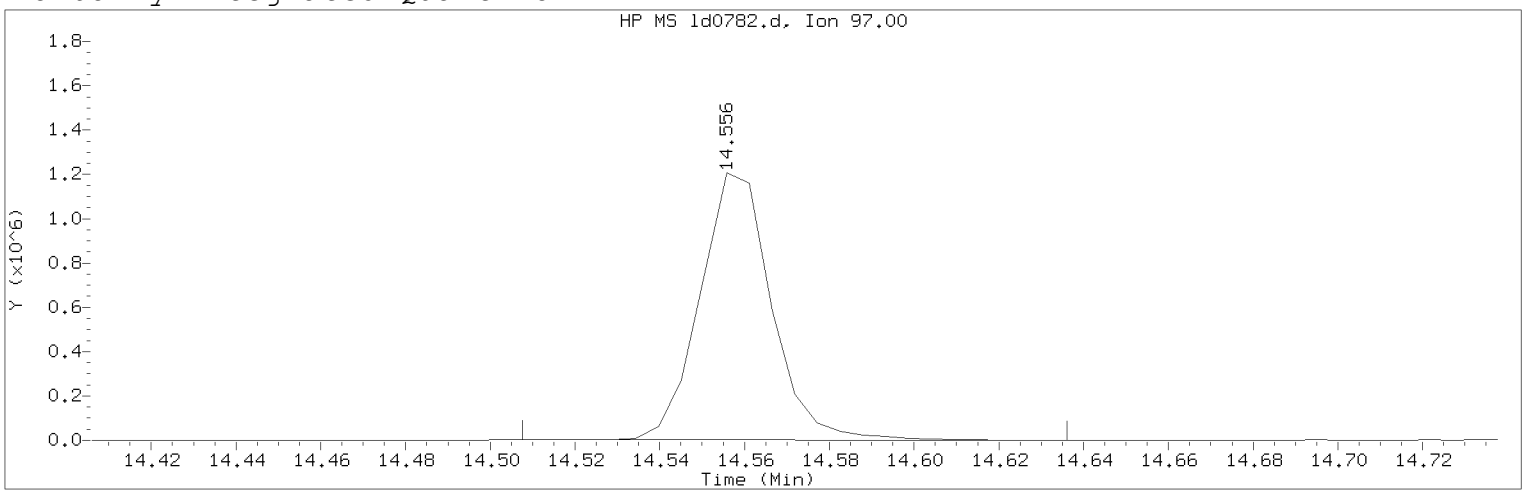
Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2182		
Retention Time (minutes)	: 13.358		
Quant Ion	: 88.00		
Area	: 15613		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 2175	Integration stop scan:	2182
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used. FID Part 1583

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

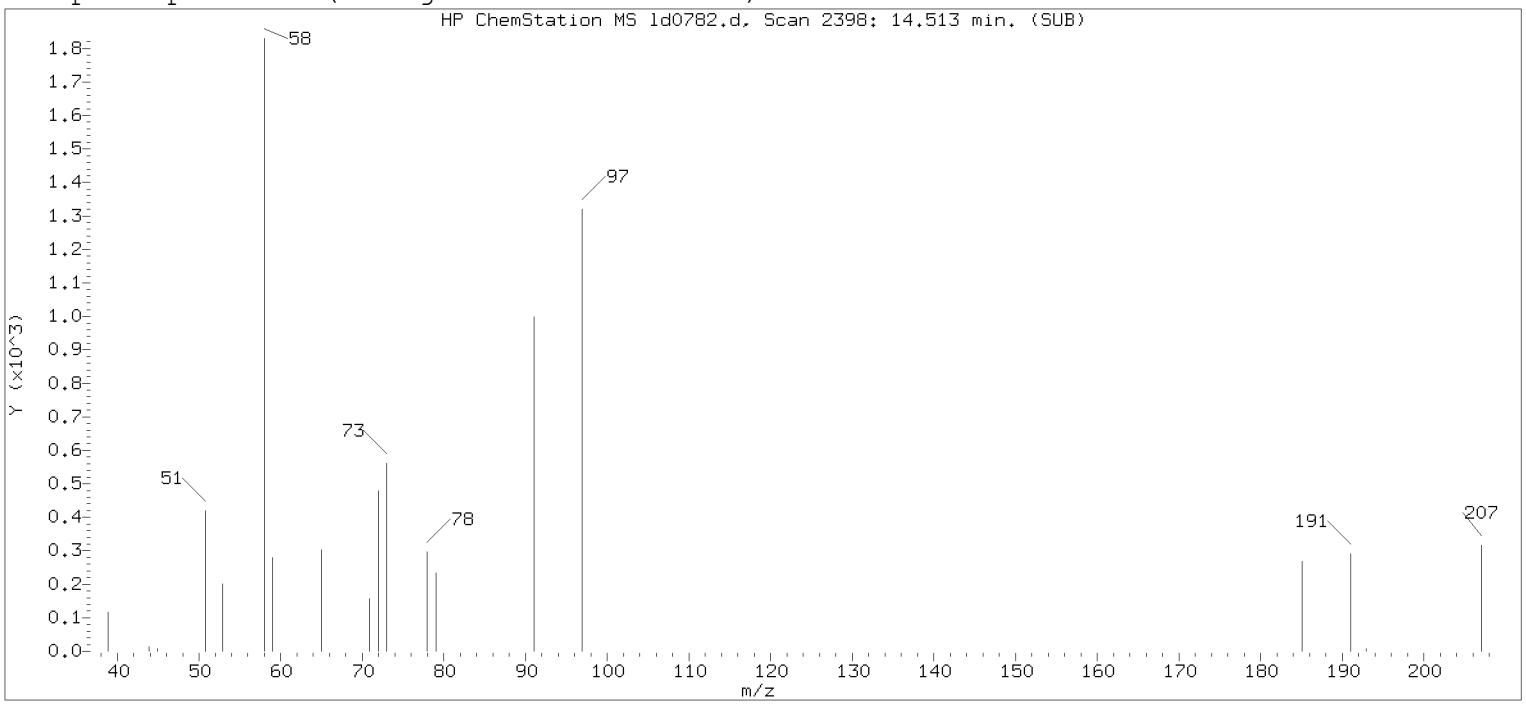
Compound Number : 175
Compound Name : Methapyrilene
Scan Number : 2406
Retention Time (minutes) : 14.556
Quant Ion : 97.00
Area (flag) : 1411087M
On-Column Amount (ng/ul) : 30.1793
Integration start scan : 2396 Integration stop scan: 2420
Y at integration start : 2285 Y at integration end: 1300

Reason for manual integration: improper integration

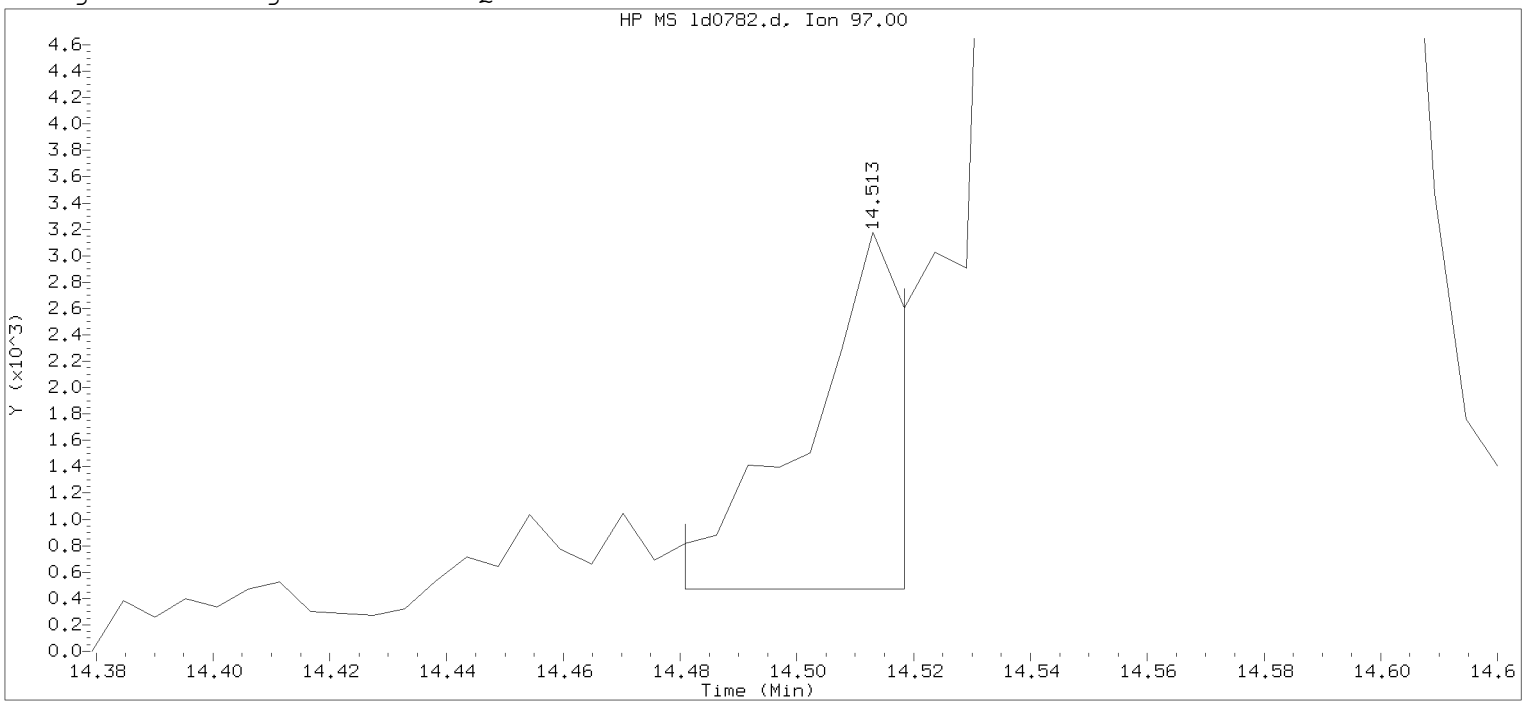
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



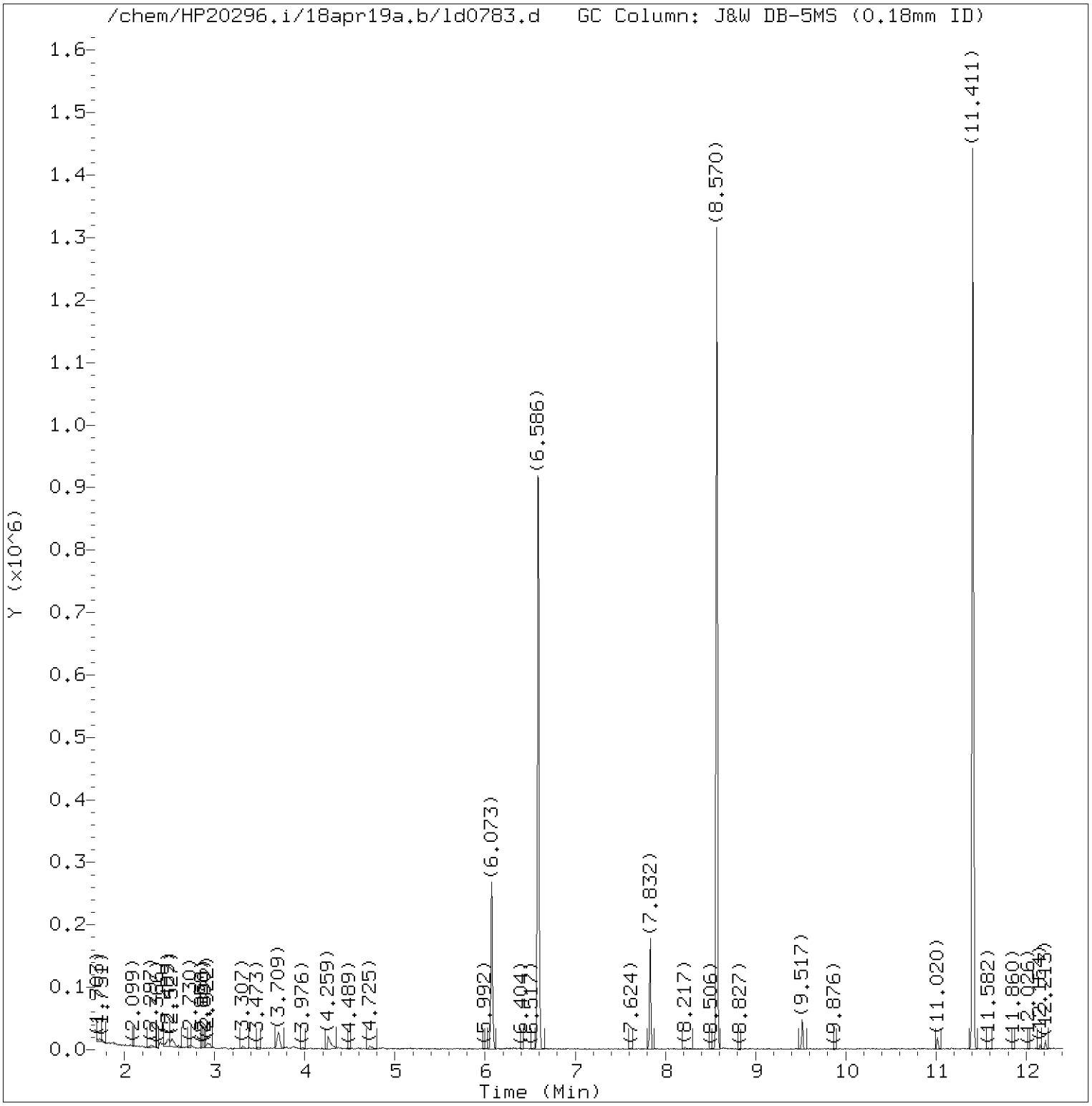
Data File: /chem/HP20296.i/18apr19a.b/ld0782.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:22 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:38
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD30 Lab Sample ID: rvABC0538

Compound Number	: 175		
Compound Name	: Methapyrilene		
Scan Number	: 2398		
Retention Time (minutes)	: 14.513		
Quant Ion	: 97.00		
Area	: 2906		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 2391	Integration stop scan:	2398
Y at integration start	: 473	Y at integration end:	473

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used. FDA Part 11 Compliant



Total Ion Chromatogram (TIC)

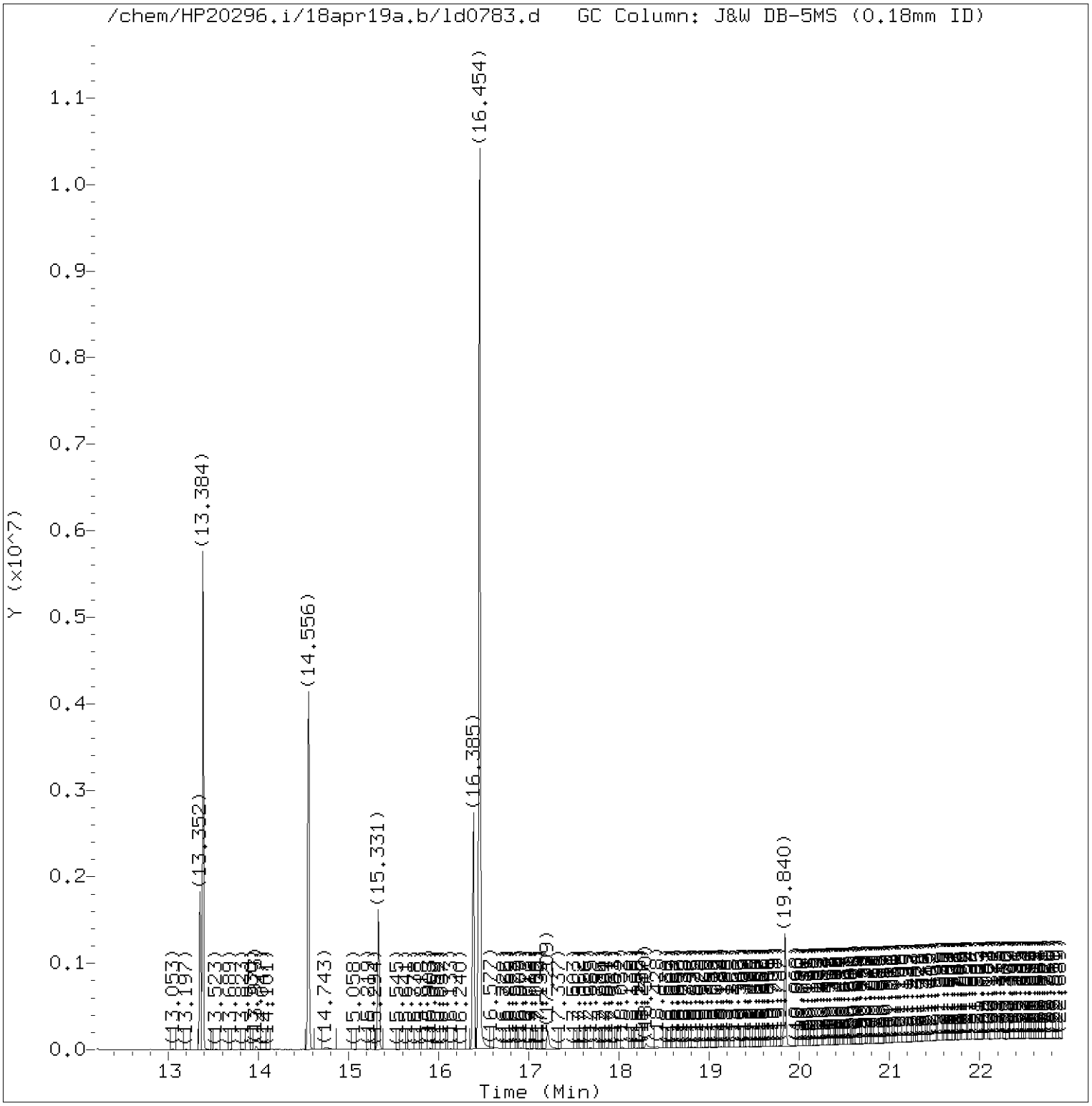
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0783.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:50 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0783.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:50 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0783.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:50 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

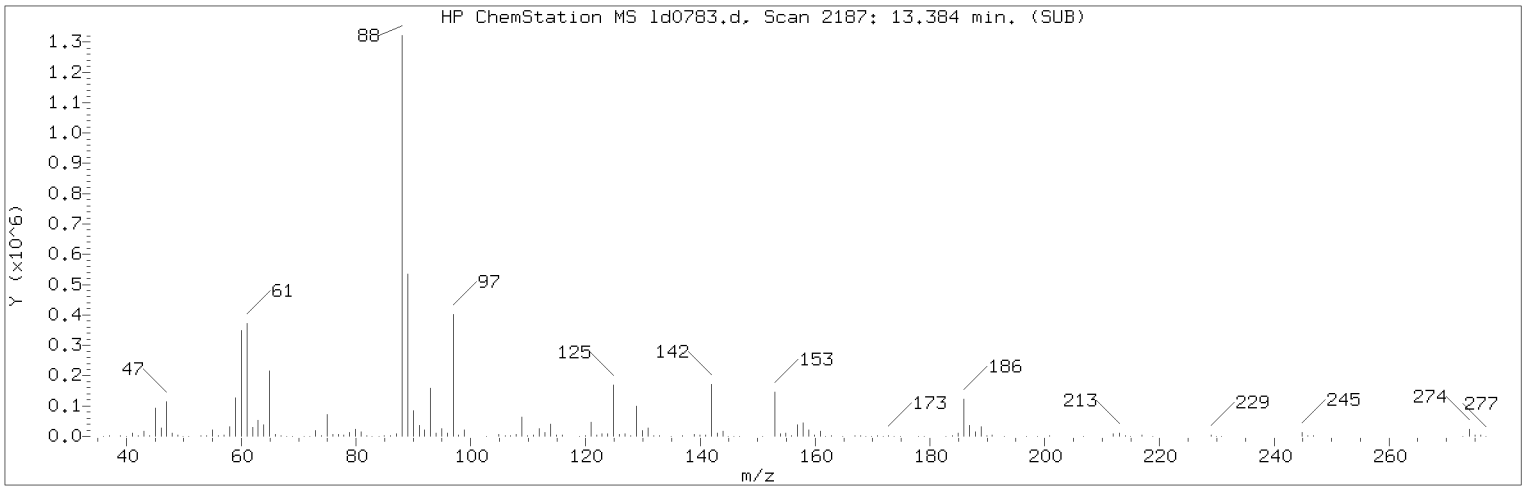
Sample Name: SSTD020 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.591	152	185133	5.000
68)*Naphthalene-d8	(2)	8.570	136	700256	5.000
118)*Acenaphthene-d10	(3)	11.411	164	342945	5.000
158)*Phenanthrene-d10	(4)	13.352	188	697283	5.000
167) Disulfoton	(4)	13.384	88	1220978M	22.008
175) Methapyrilene	(4)	14.556	97	963098	20.975
180)*Pyrene-d10	(5)	15.331	212	724944	5.000
194) Famphur	(5)	16.385	218	920768	17.387
195) Kepone	(5)	16.454	272	1289711	80.876
218)*Perylene-d12	(6)	19.840	264	650974	5.000

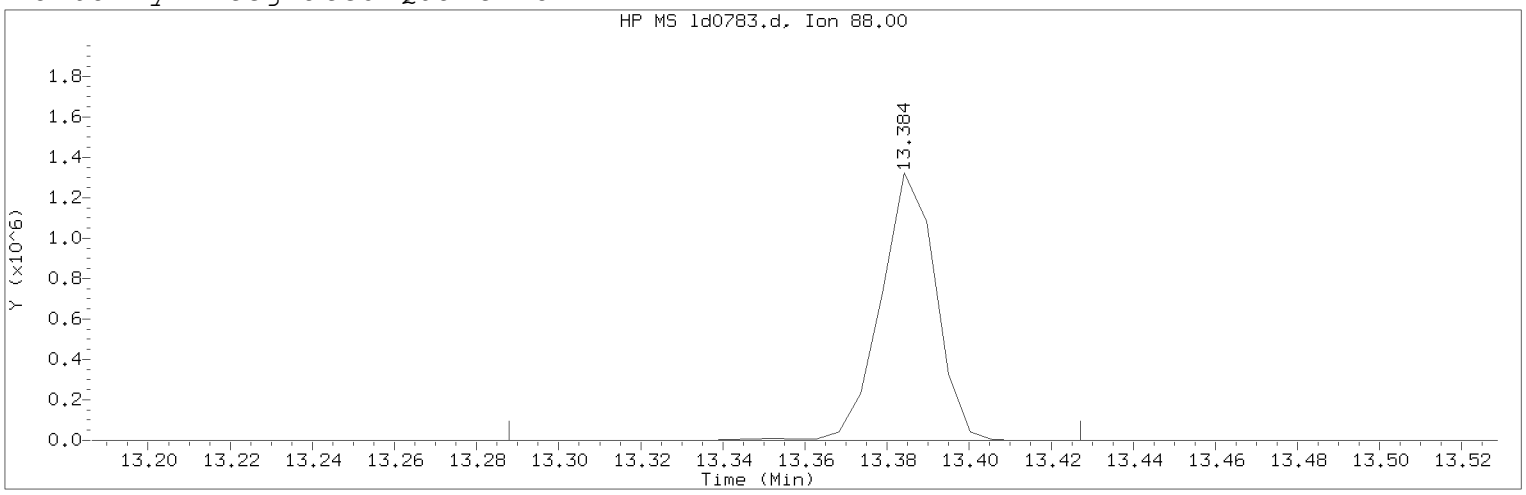
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0783.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:50 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvABC0538

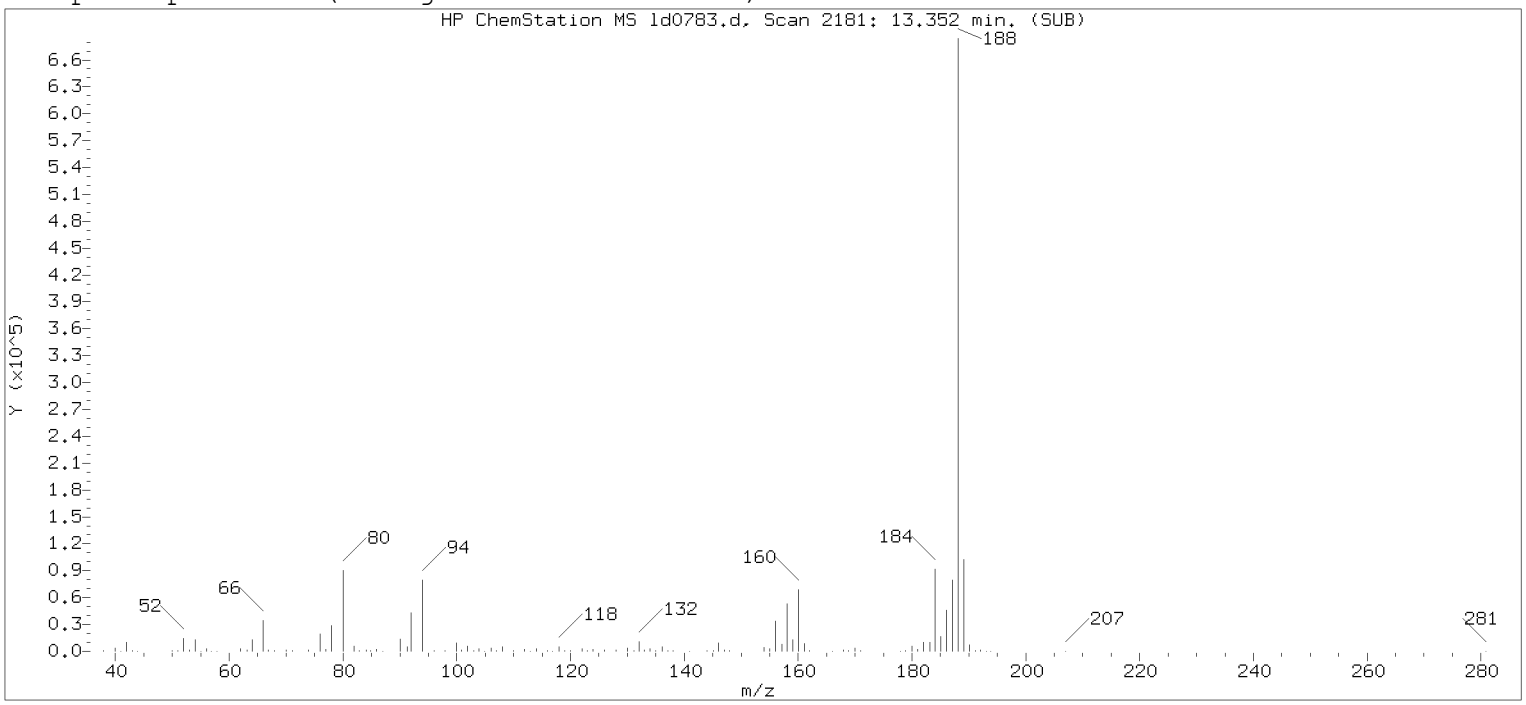
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2187
Retention Time (minutes) : 13.384
Quant Ion : 88.00
Area (flag) : 1220978M
On-Column Amount (ng/ul) : 22.0081
Integration start scan : 2168 Integration stop scan: 2194
Y at integration start : 0 Y at integration end: 369

Reason for manual integration: improper integration

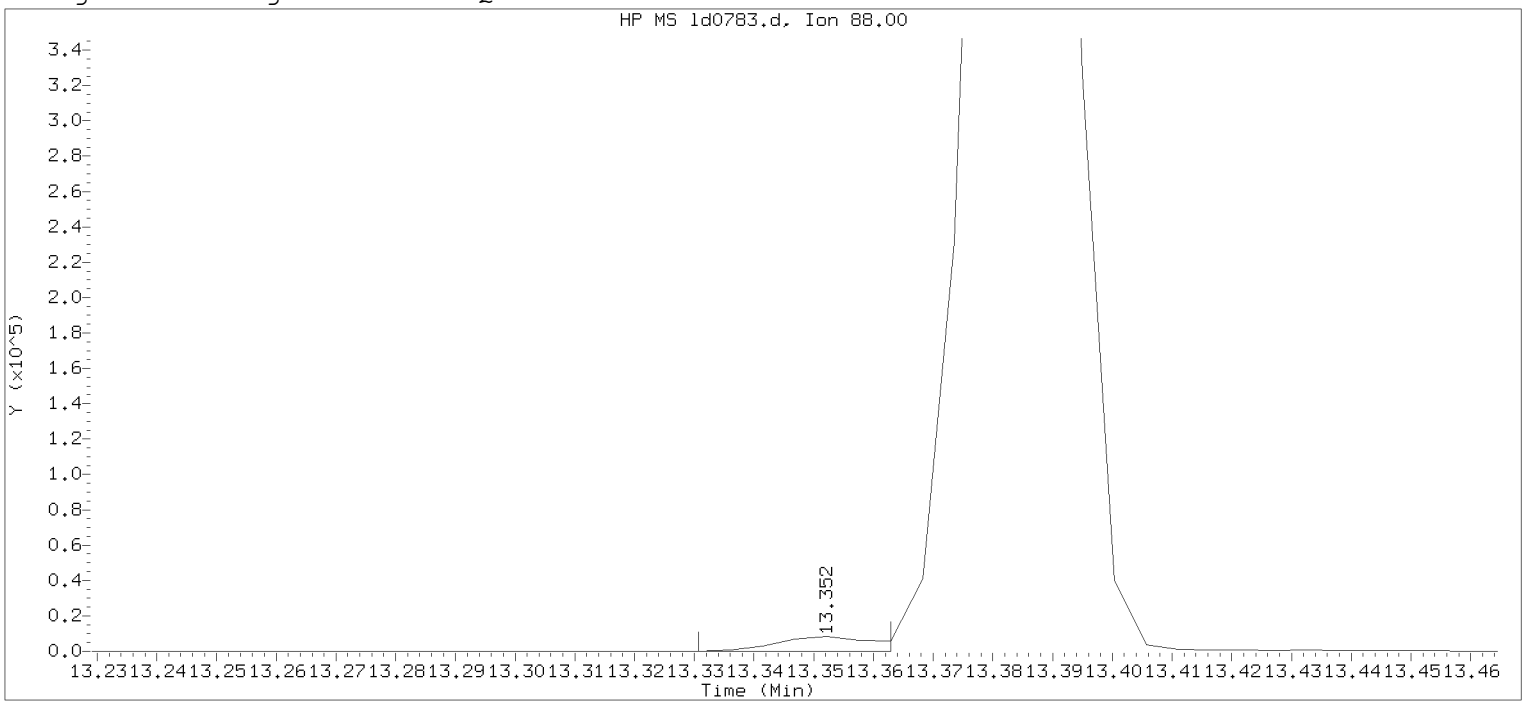
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



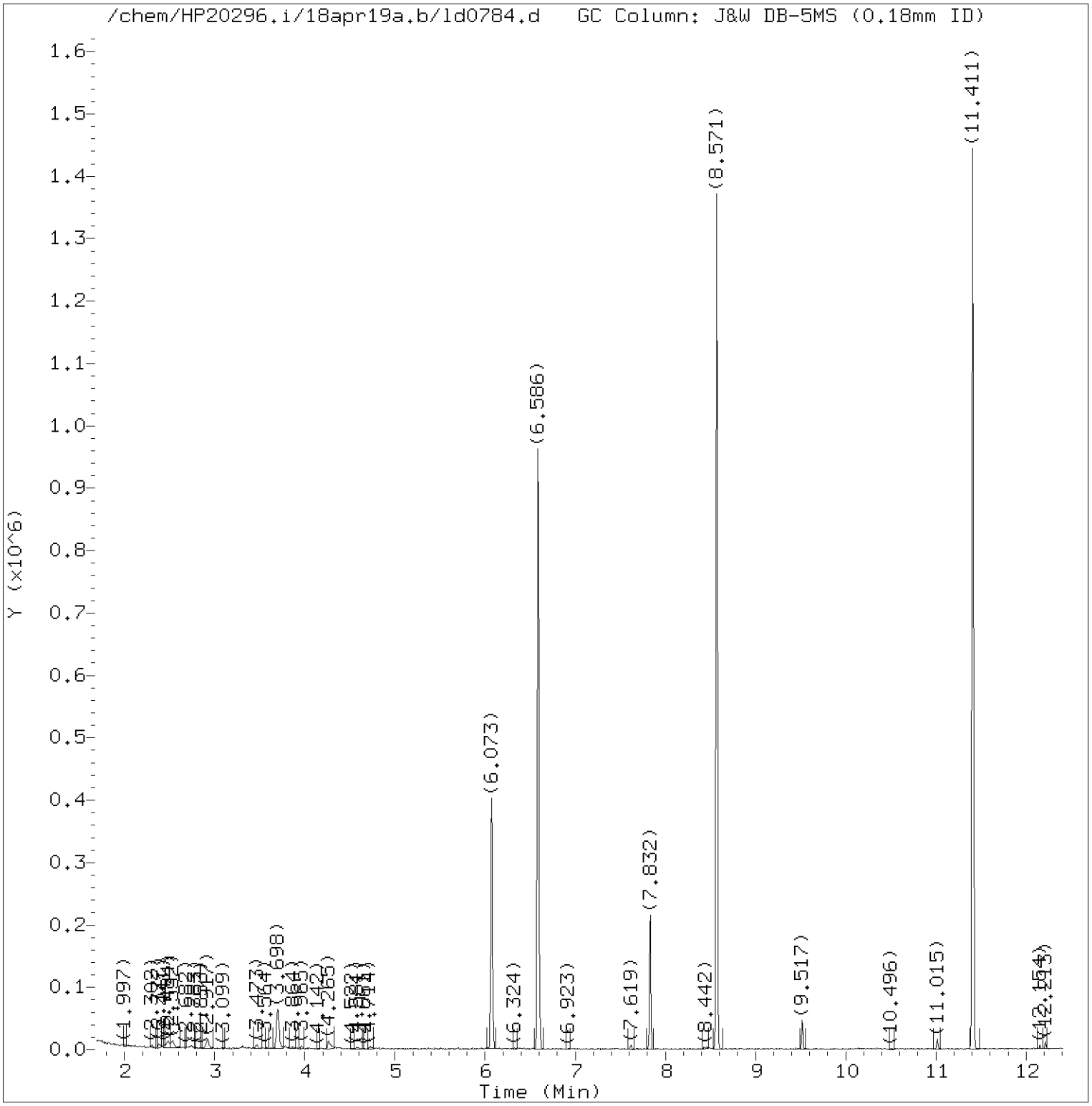
Data File: /chem/HP20296.i/18apr19a.b/ld0783.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 20:50 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvABC0538

Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2181		
Retention Time (minutes)	: 13.352		
Quant Ion	: 88.00		
Area	: 8959		
On-column Amount (ng/ul)	: 18.6845		
Integration start scan	: 2176	Integration stop scan:	2182
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: BHS10208



Total Ion Chromatogram (TIC)

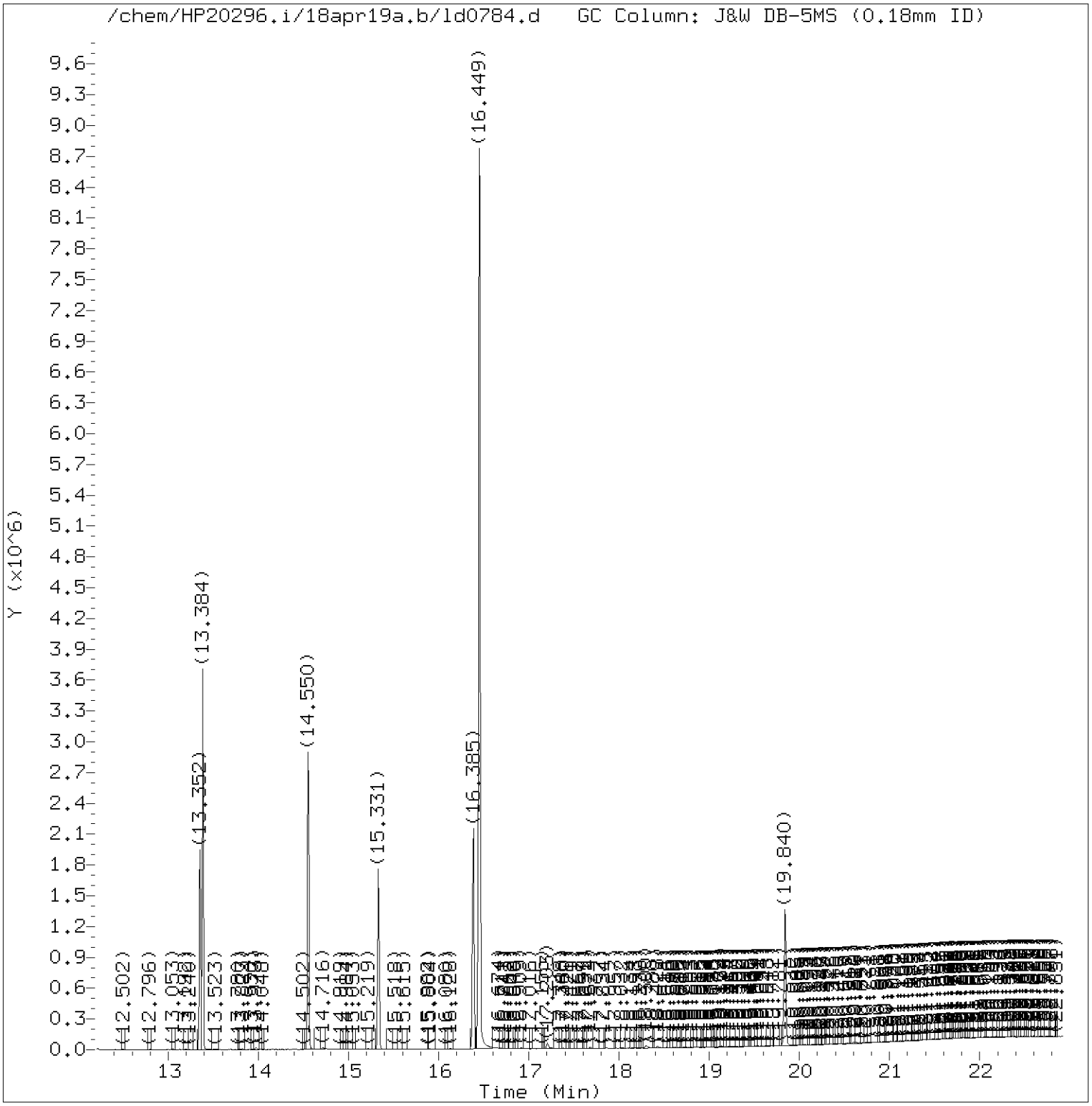
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0784.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:18 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0784.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:18 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0784.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:18 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

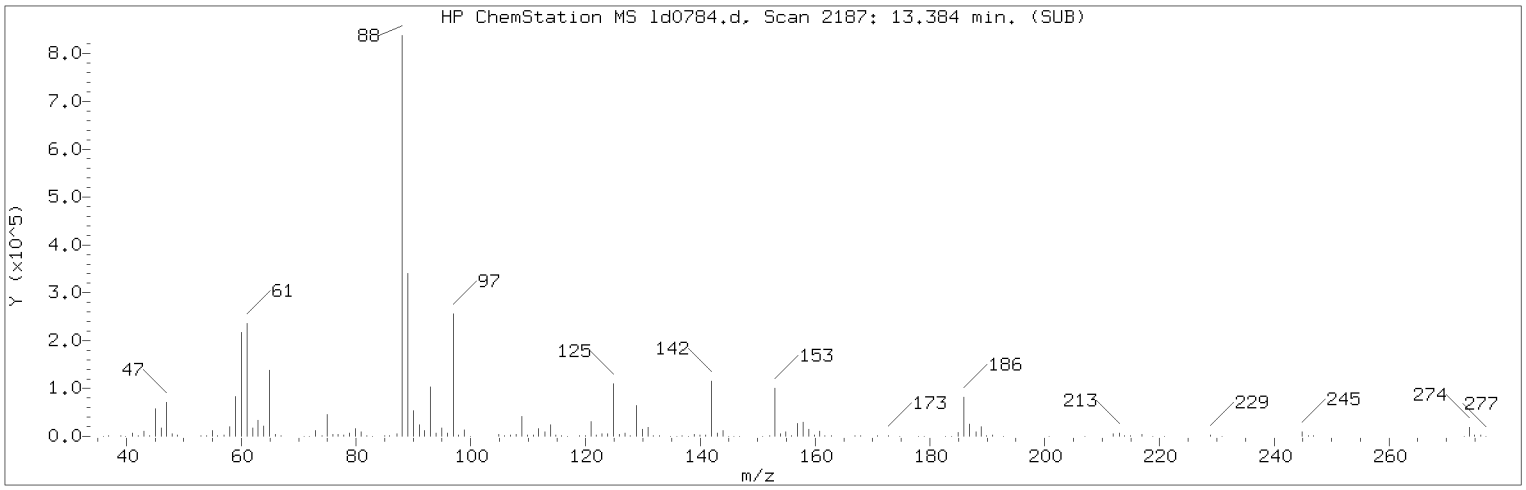
Sample Name: SSTD12.5 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	194102	5.000
68)*Naphthalene-d8	(2)	8.571	136	723490	5.000
118)*Acenaphthene-d10	(3)	11.411	164	354175	5.000
158)*Phenanthrene-d10	(4)	13.352	188	725984	5.000
167) Disulfoton	(4)	13.384	88	772742M	13.378
175) Methapyrilene	(4)	14.550	97	634017	13.262
180)*Pyrene-d10	(5)	15.331	212	759797	5.000
194) Famphur	(5)	16.385	218	725848	13.077
195) Kepone	(5)	16.449	272	1055960	63.180
218)*Perylene-d12	(6)	19.840	264	699917	5.000

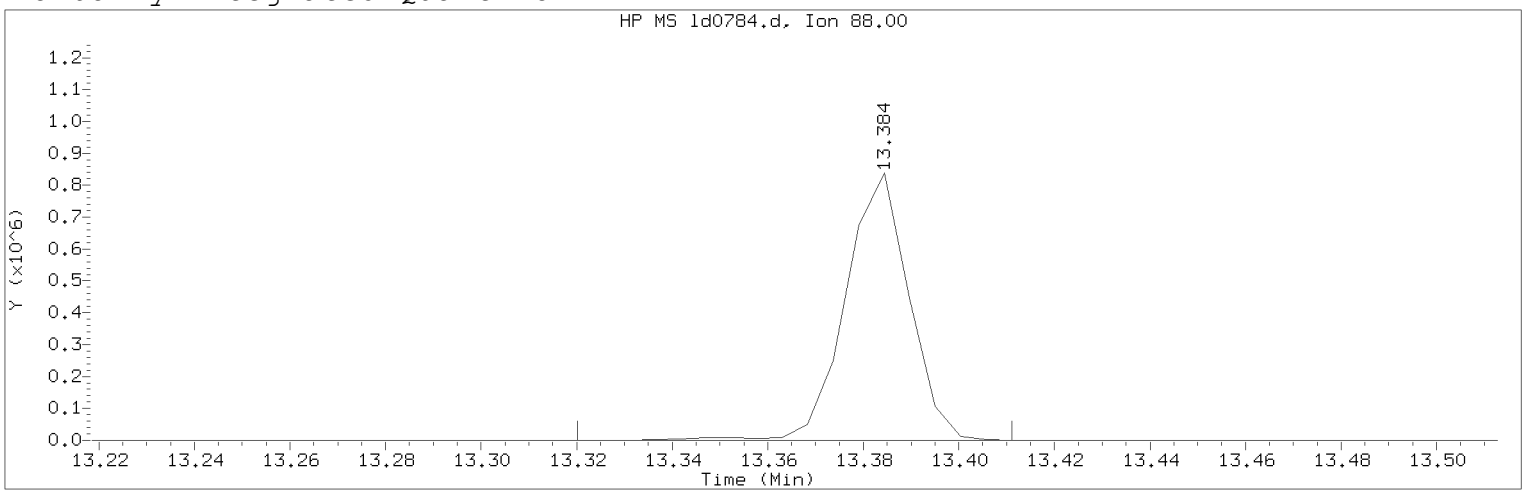
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0784.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:18 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:52 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvABC0538

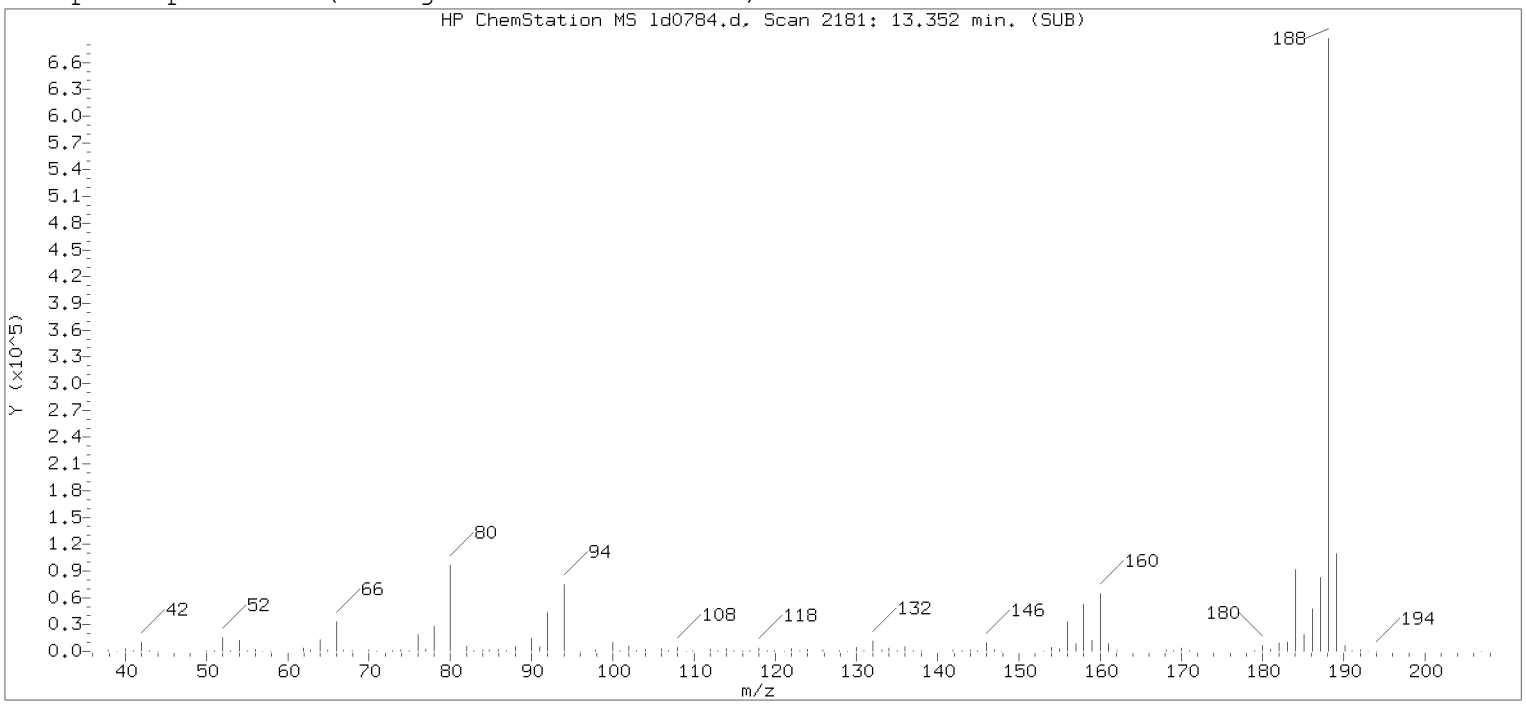
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2187
Retention Time (minutes) : 13.384
Quant Ion : 88.00
Area (flag) : 772742M
On-Column Amount (ng/ul) : 13.3780
Integration start scan : 2174 Integration stop scan: 2191
Y at integration start : 0 Y at integration end: 725

Reason for manual integration: improper integration

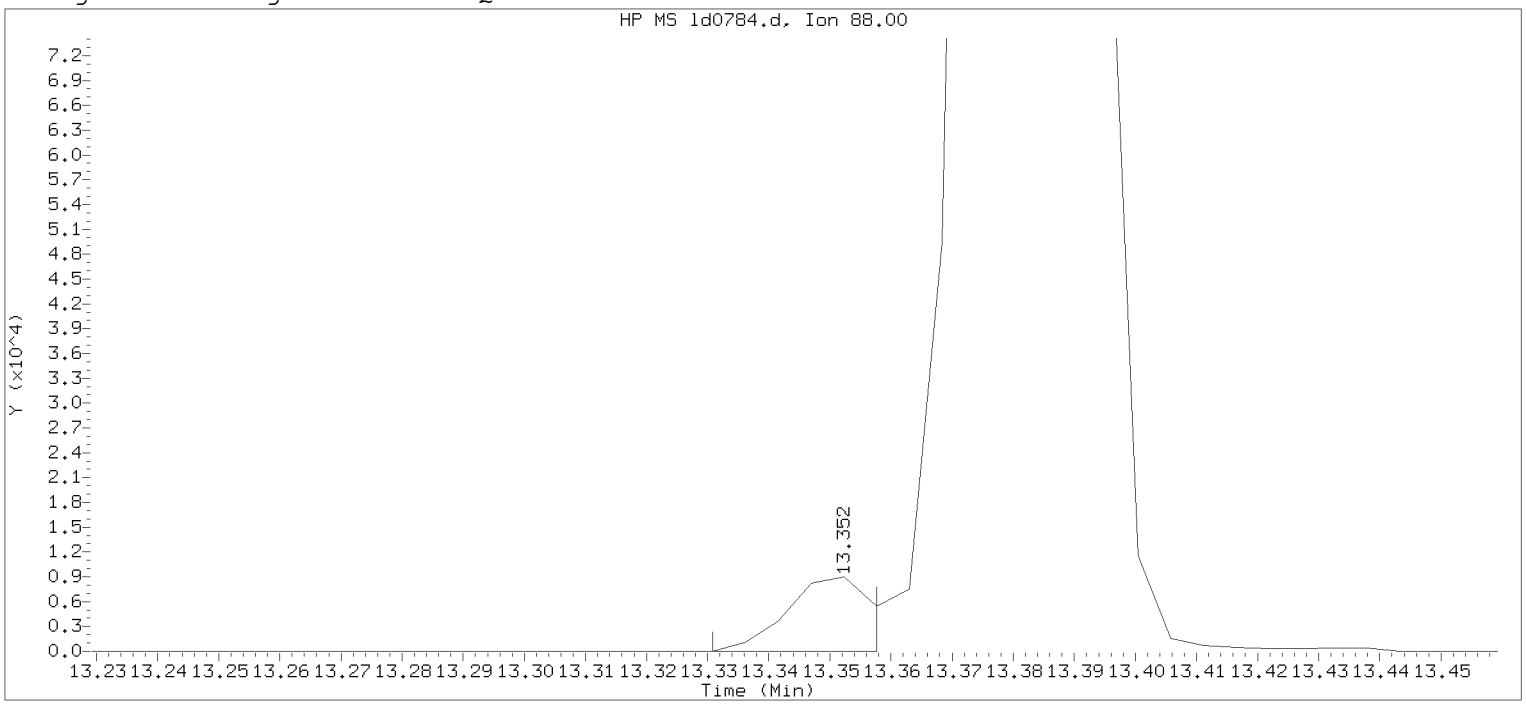
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



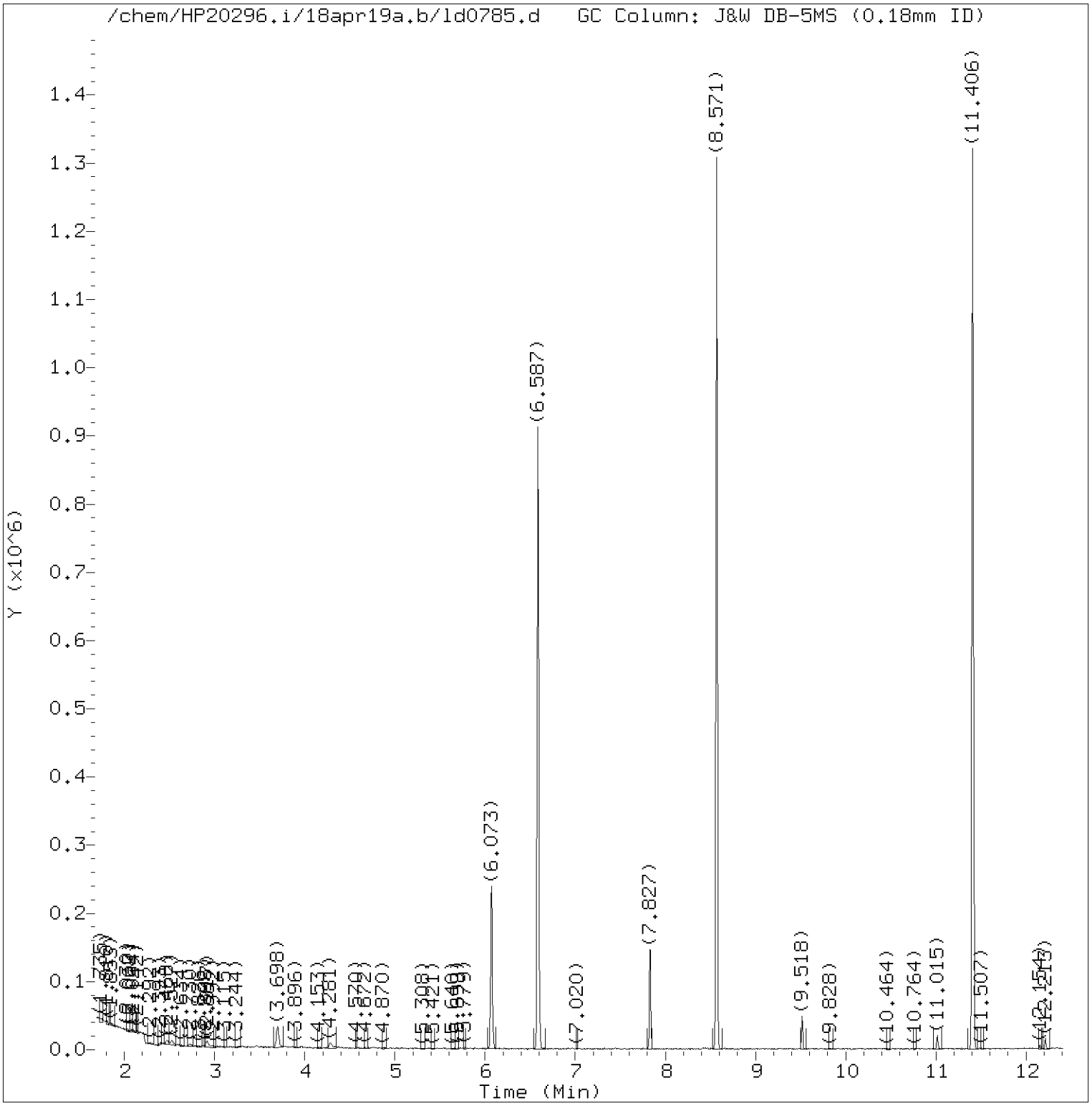
Data File: /chem/HP20296.i/18apr19a.b/ld0784.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:18 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvABC0538

Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2181		
Retention Time (minutes)	: 13.352		
Quant Ion	: 88.00		
Area	: 7922		
On-column Amount (ng/ul)	: 14.5610		
Integration start scan	: 2176	Integration stop scan:	2181
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used. FD6 Part 1195



Total Ion Chromatogram (TIC)

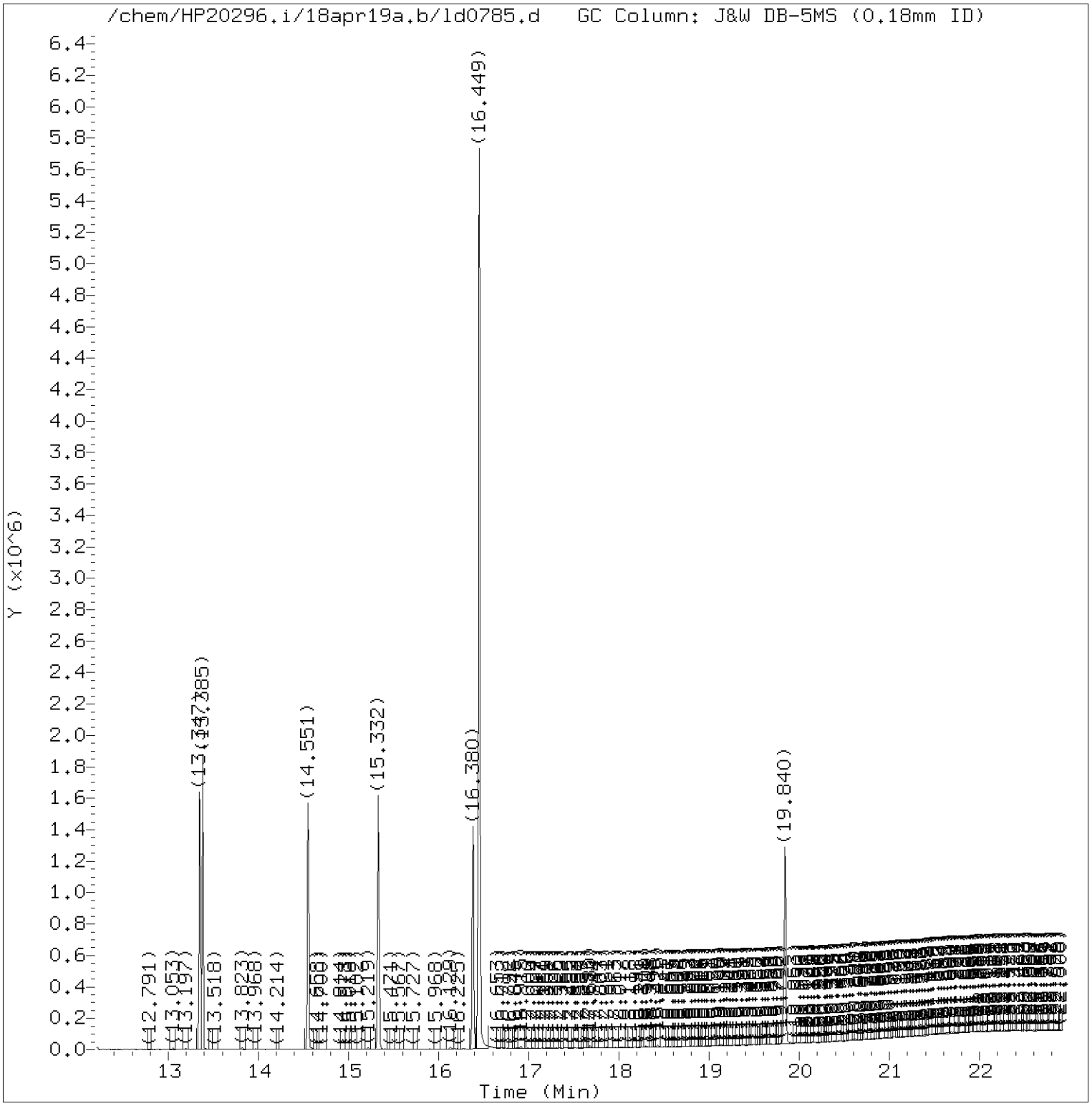
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0785.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:46 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0785.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:46 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0785.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:46 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

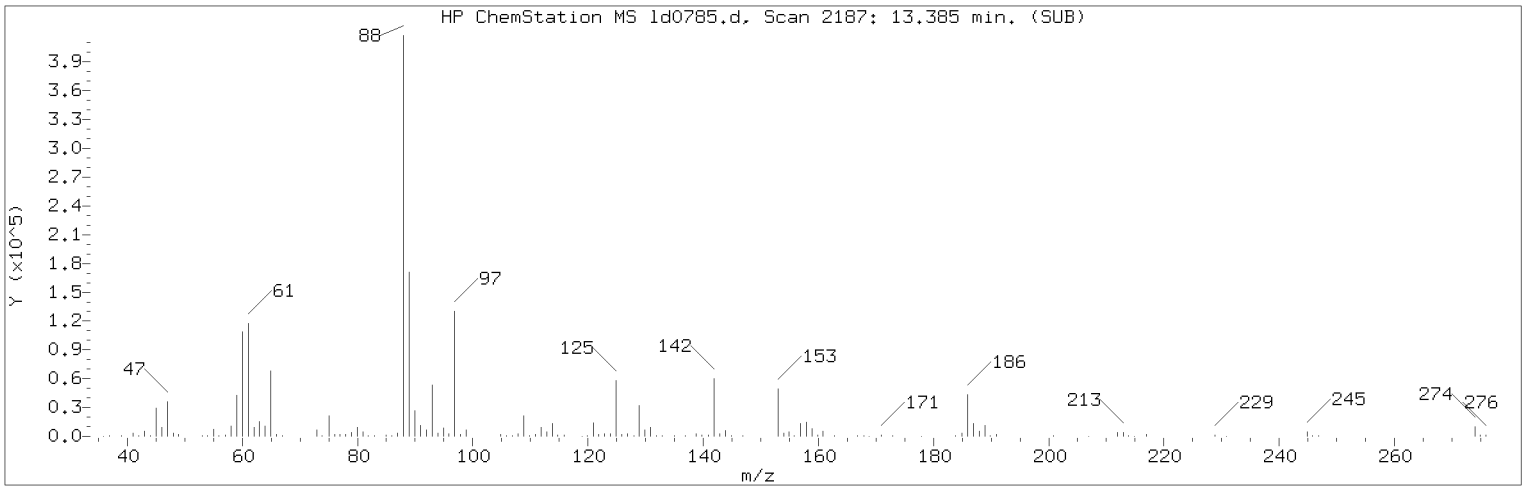
Sample Name: SSTD7.5 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.587	152	181693	5.000
68)*Naphthalene-d8	(2)	8.571	136	682096	5.000
118)*Acenaphthene-d10	(3)	11.406	164	333760	5.000
158)*Phenanthrene-d10	(4)	13.347	188	676182	5.000
167) Disulfoton	(4)	13.385	88	404170M	7.512
175) Methapyrilene	(4)	14.551	97	338180	7.595
180)*Pyrene-d10	(5)	15.332	212	700132	5.000
194) Famphur	(5)	16.380	218	457926	8.953
195) Kepone	(5)	16.449	272	647667	42.054
218)*Perylene-d12	(6)	19.840	264	626358	5.000

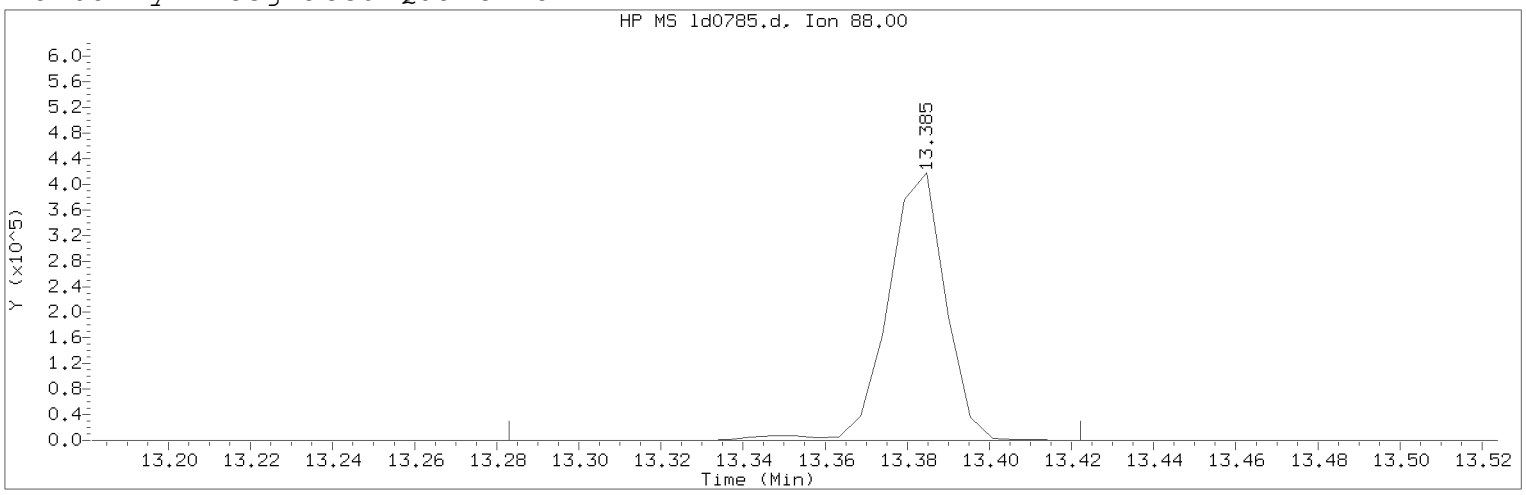
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0785.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:46 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:52
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvABC0538

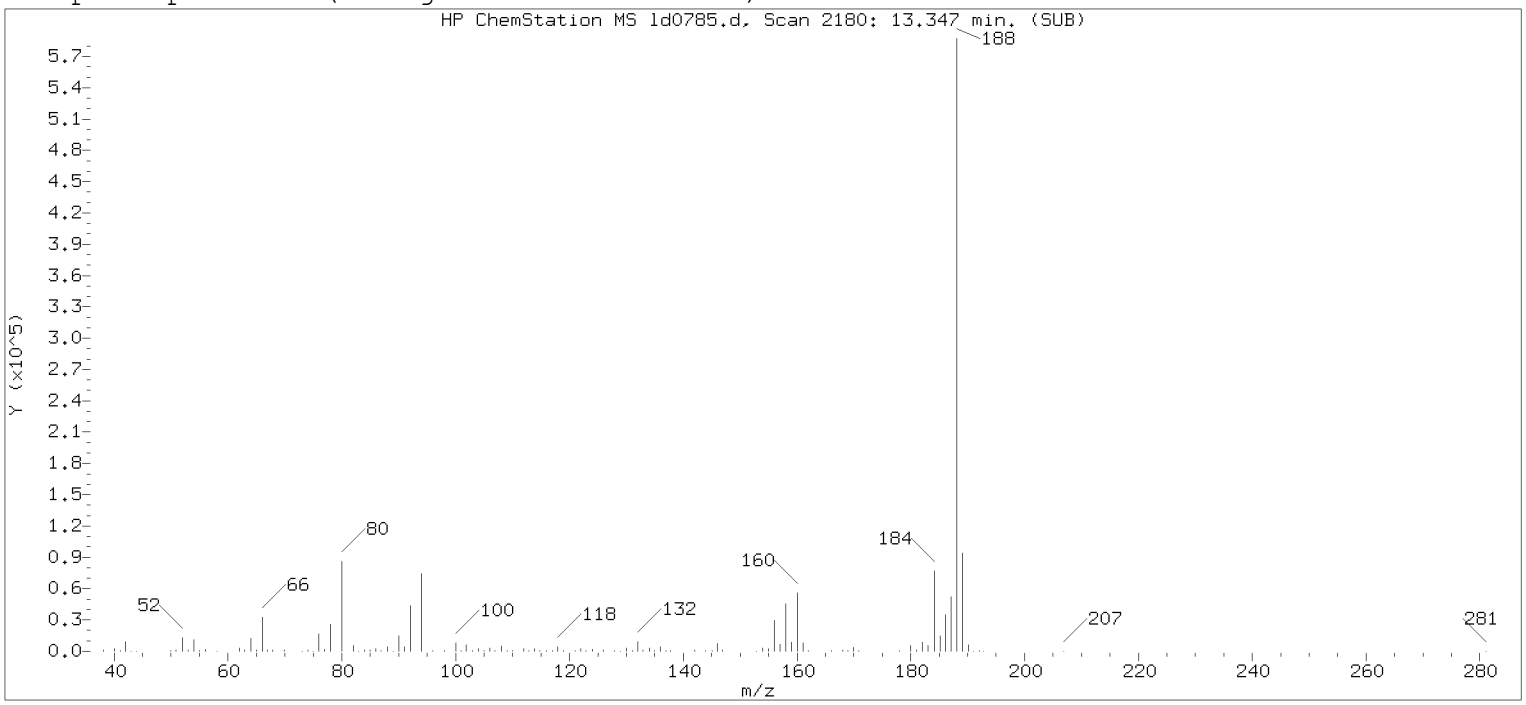
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2187
Retention Time (minutes) : 13.385
Quant Ion : 88.00
Area (flag) : 404170M
On-Column Amount (ng/ul) : 7.5125
Integration start scan : 2167 Integration stop scan: 2193
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

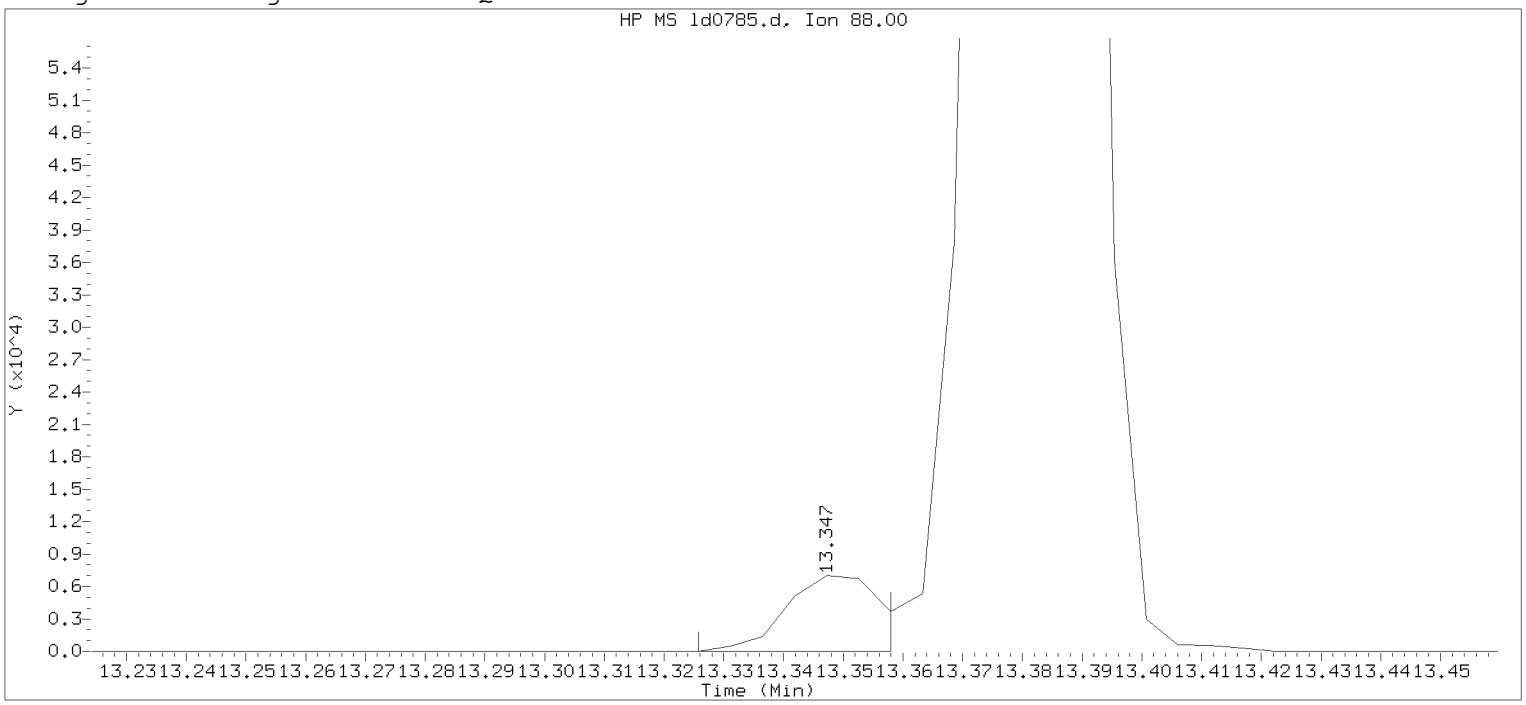
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



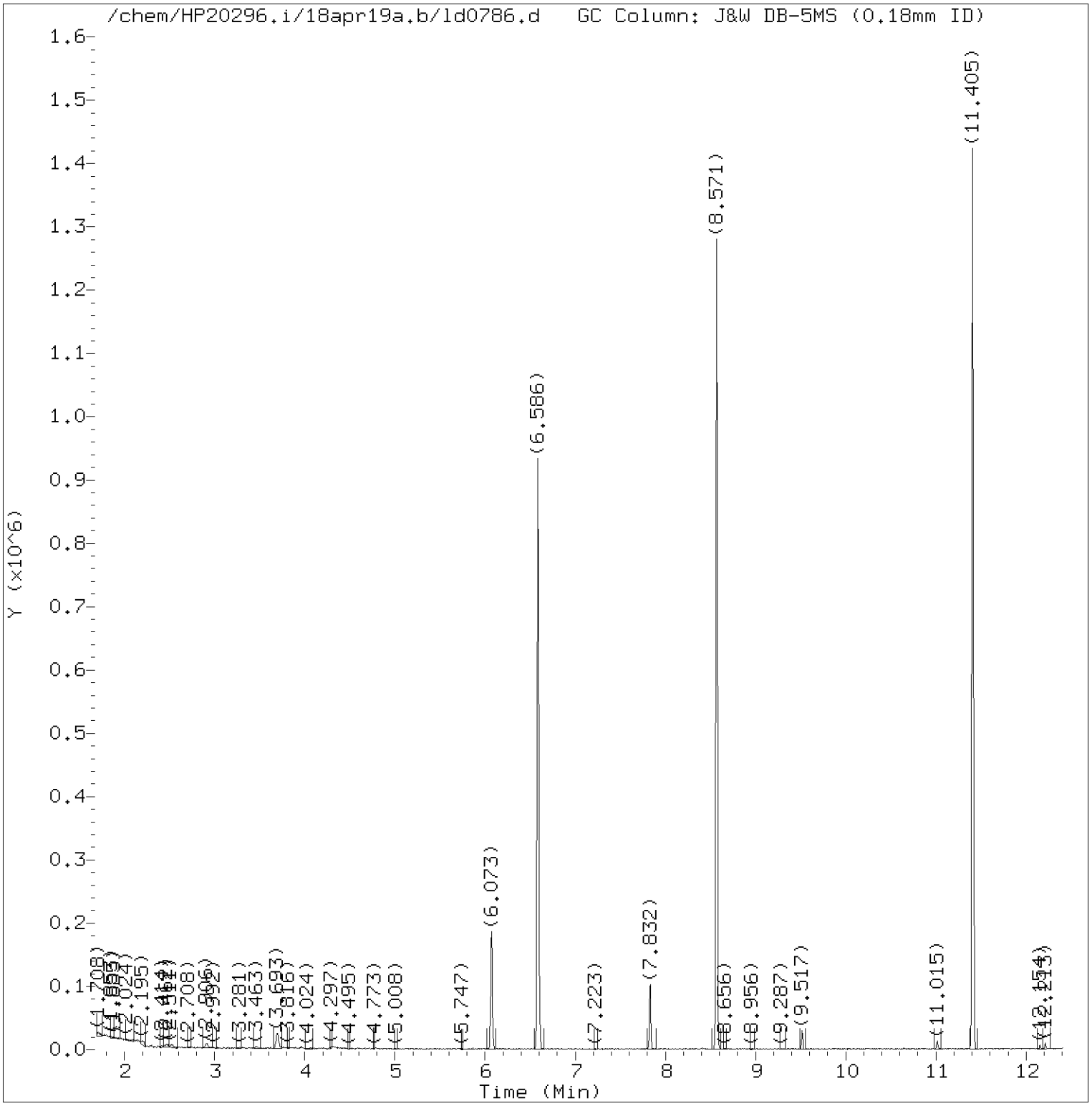
Data File: /chem/HP20296.i/18apr19a.b/ld0785.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 21:46 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvABC0538

Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2180		
Retention Time (minutes)	: 13.347		
Quant Ion	: 88.00		
Area	: 7234		
On-column Amount (ng/ul)	: 11.6457		
Integration start scan	: 2175	Integration stop scan:	2181
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used. FD6 Part 1600



Total Ion Chromatogram (TIC)

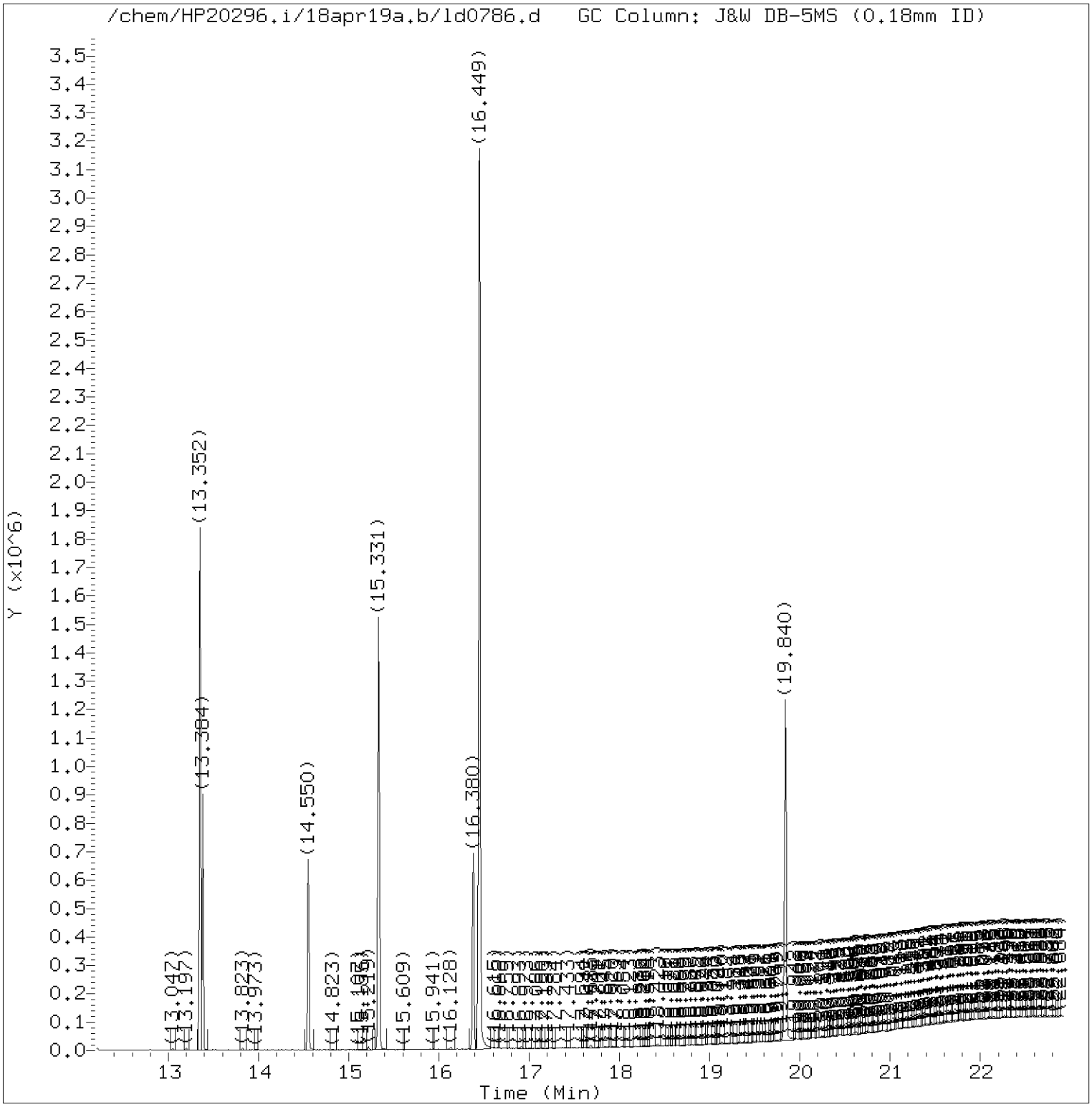
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

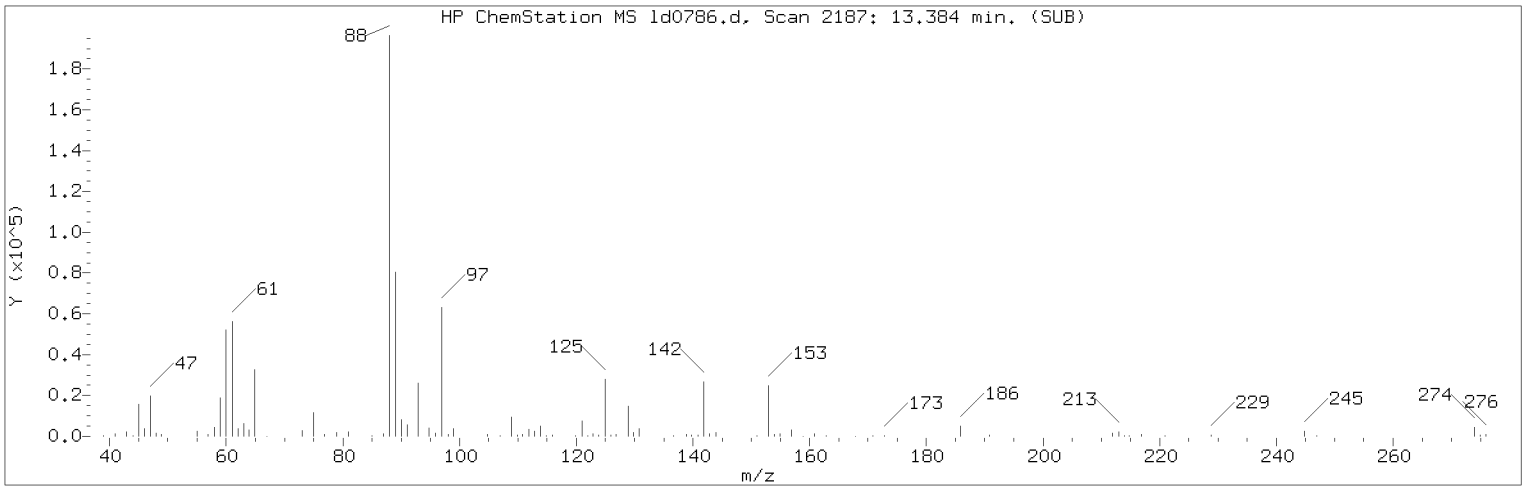
Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	184015	5.000
68)*Naphthalene-d8	(2)	8.571	136	698547	5.000
118)*Acenaphthene-d10	(3)	11.405	164	335085	5.000
158)*Phenanthrene-d10	(4)	13.352	188	681529	5.000
167) Disulfoton	(4)	13.384	88	187297M	3.454
175) Methapyrilene	(4)	14.550	97	146694	3.269
180)*Pyrene-d10	(5)	15.331	212	701793	5.000
194) Famphur	(5)	16.380	218	218811	4.268
195) Kepone	(5)	16.449	272	381309M	24.700
218)*Perylene-d12	(6)	19.840	264	597310	5.000

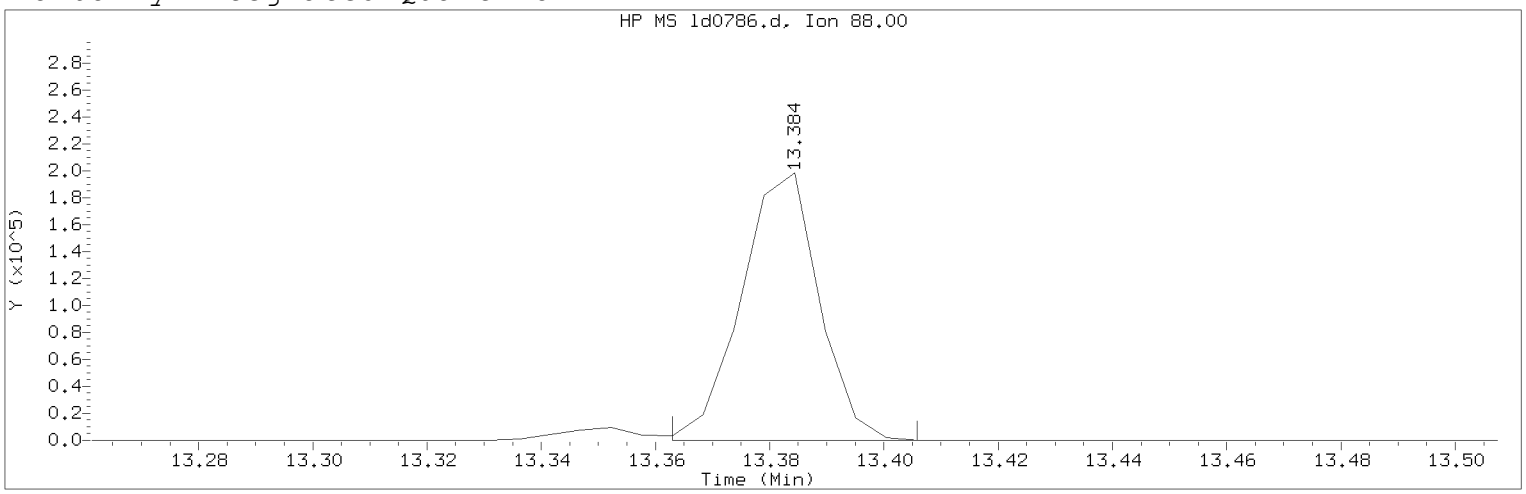
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

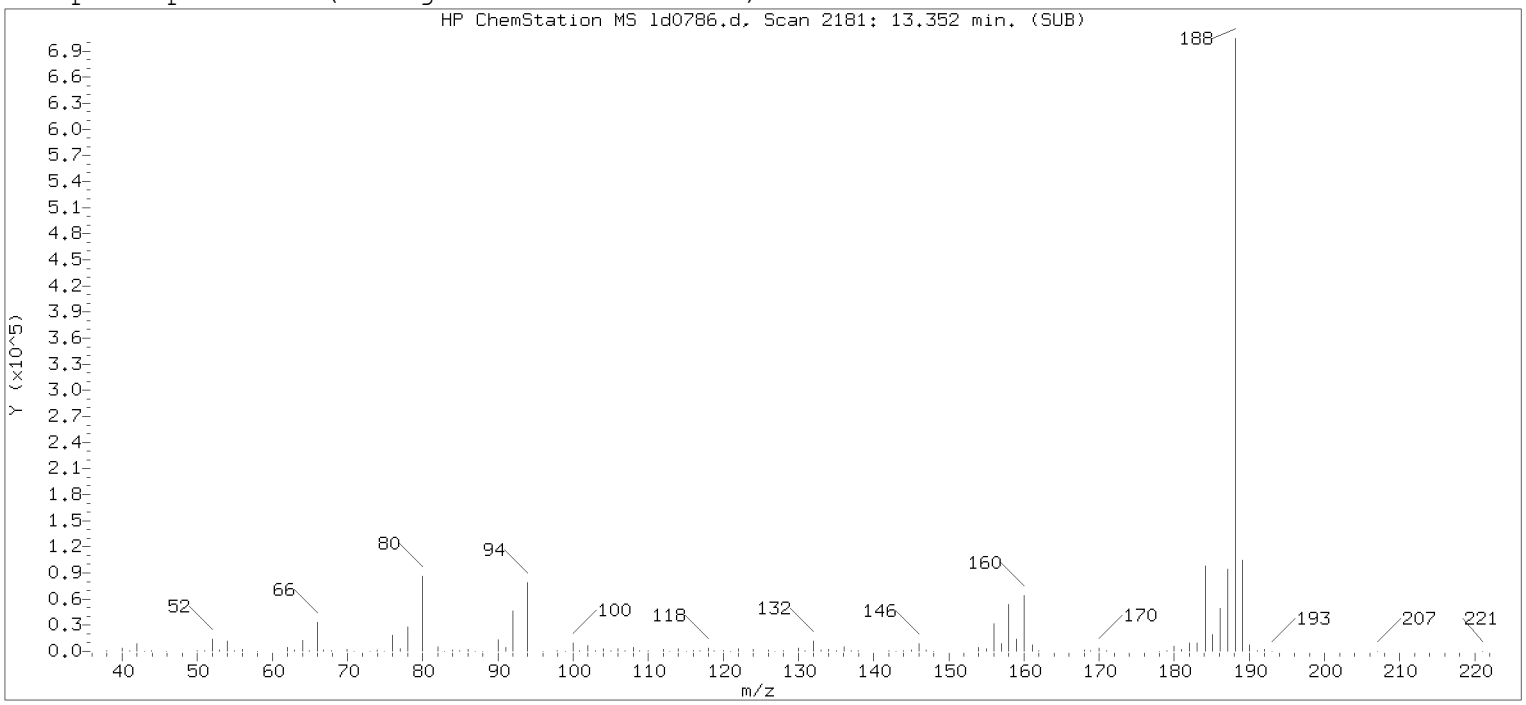
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2187
Retention Time (minutes) : 13.384
Quant Ion : 88.00
Area (flag) : 187297M
On-Column Amount (ng/ul) : 3.4541
Integration start scan : 2182 Integration stop scan: 2190
Y at integration start : 2 Y at integration end: 2

Reason for manual integration: improper integration

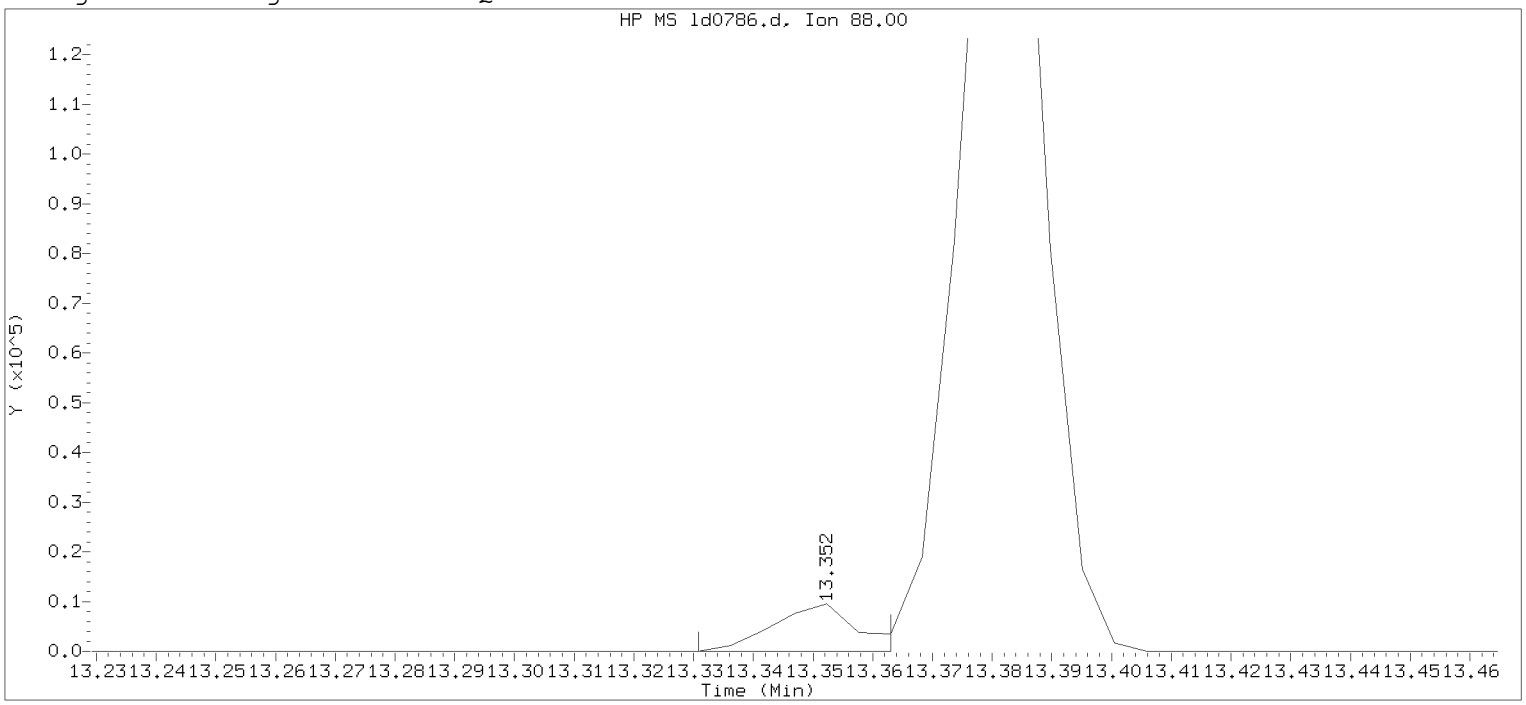
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

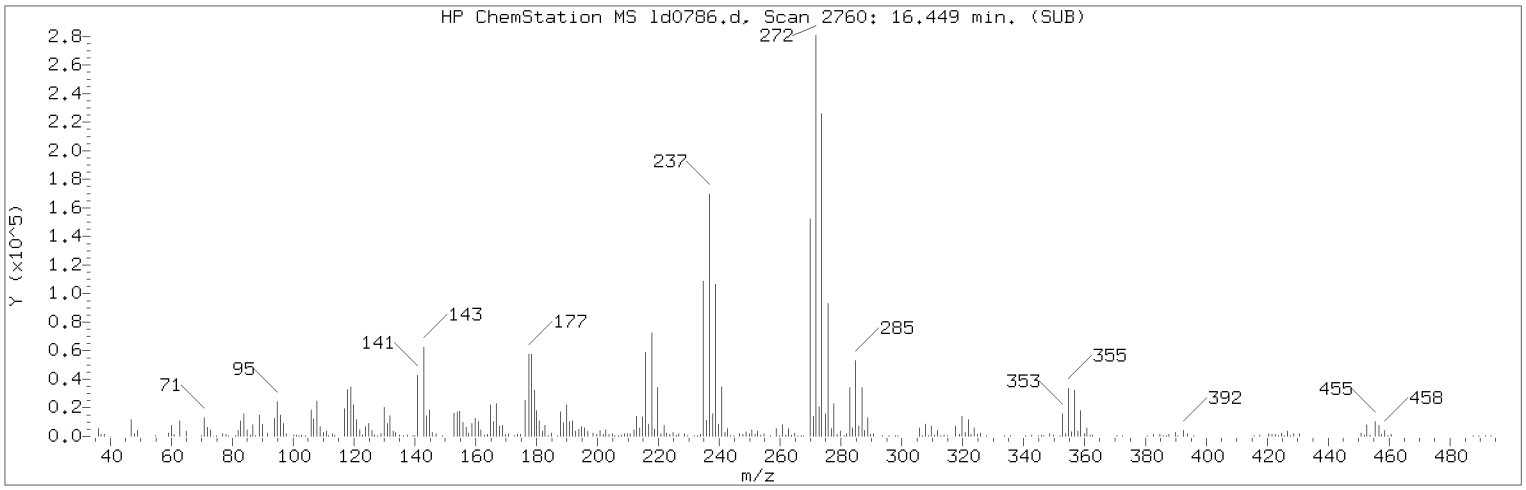
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

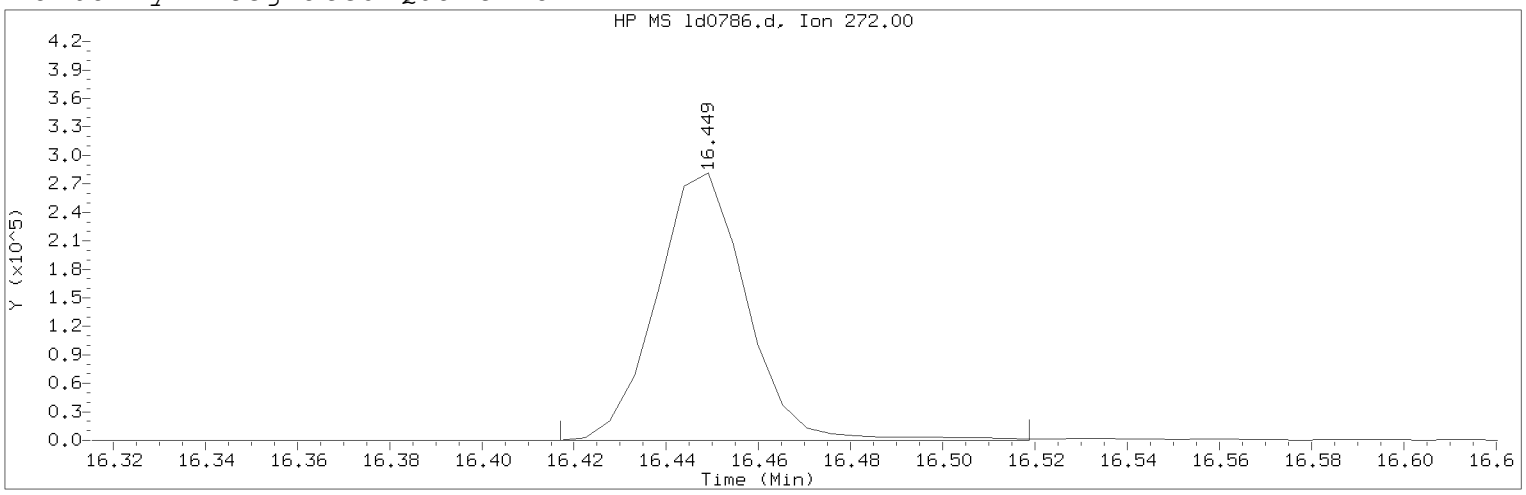
Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2181		
Retention Time (minutes)	: 13.352		
Quant Ion	: 88.00		
Area	: 8967		
On-column Amount (ng/ul)	: 9.1582		
Integration start scan	: 2176	Integration stop scan:	2182
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used for this data.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

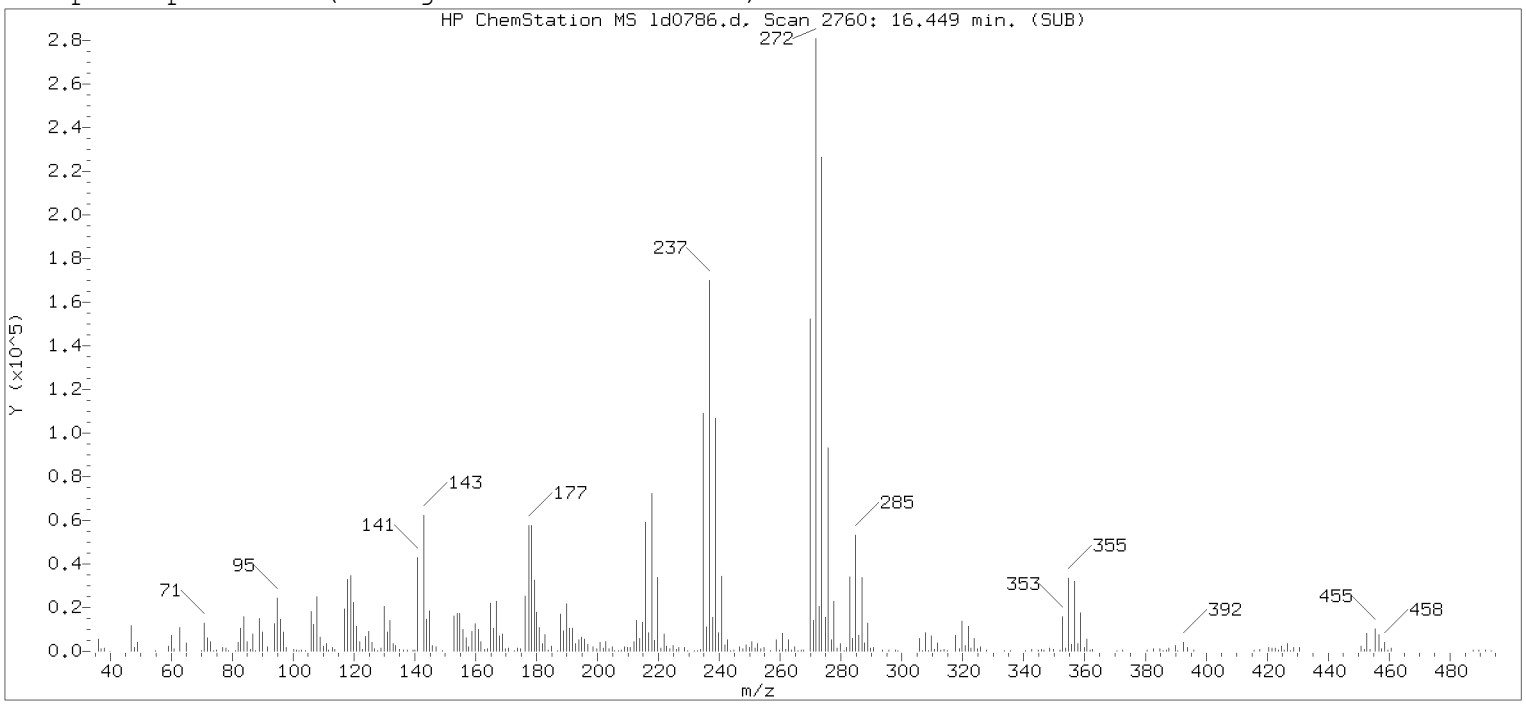
Compound Number : 195
Compound Name : Kepone
Scan Number : 2760
Retention Time (minutes) : 16.449
Quant Ion : 272.00
Area (flag) : 381309M
On-Column Amount (ng/ul) : 24.7002
Integration start scan : 2753 Integration stop scan: 2772
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

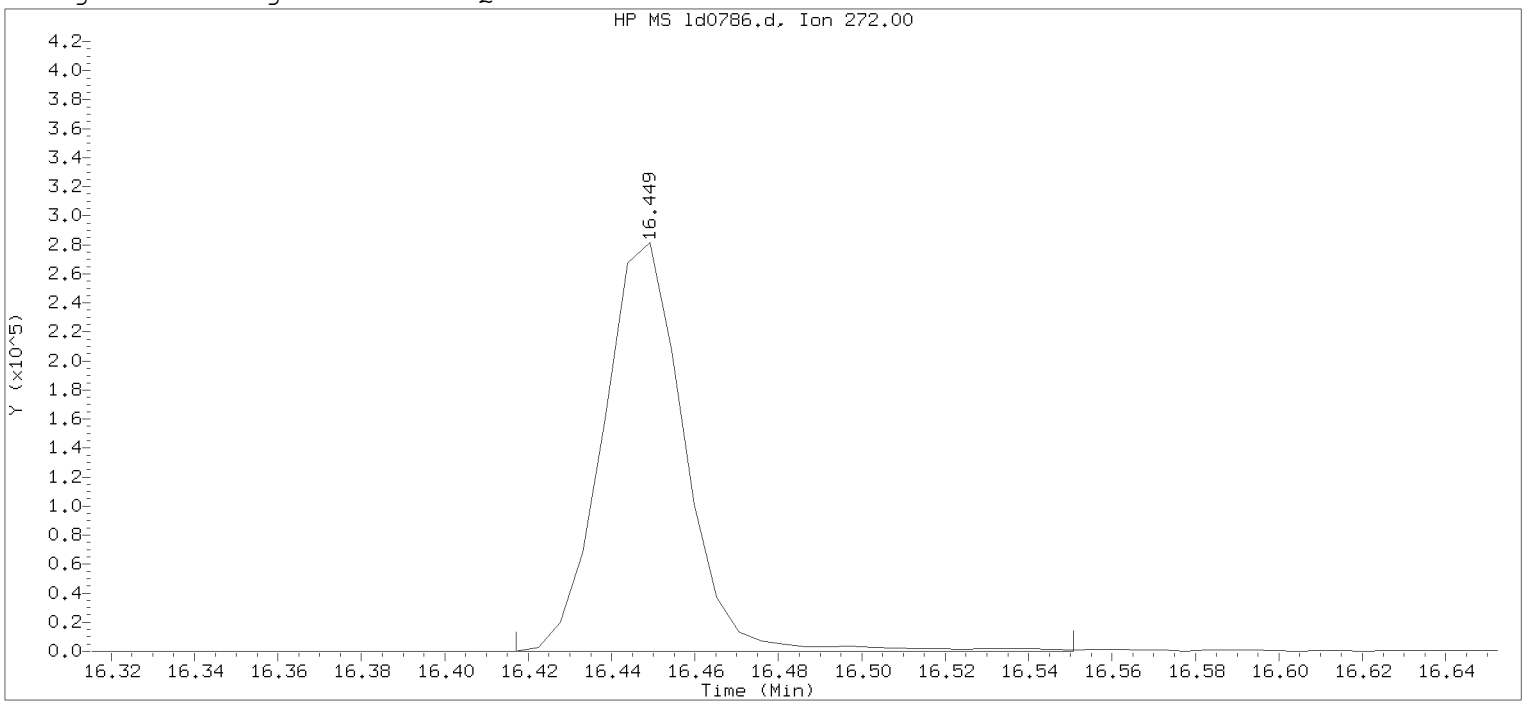
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



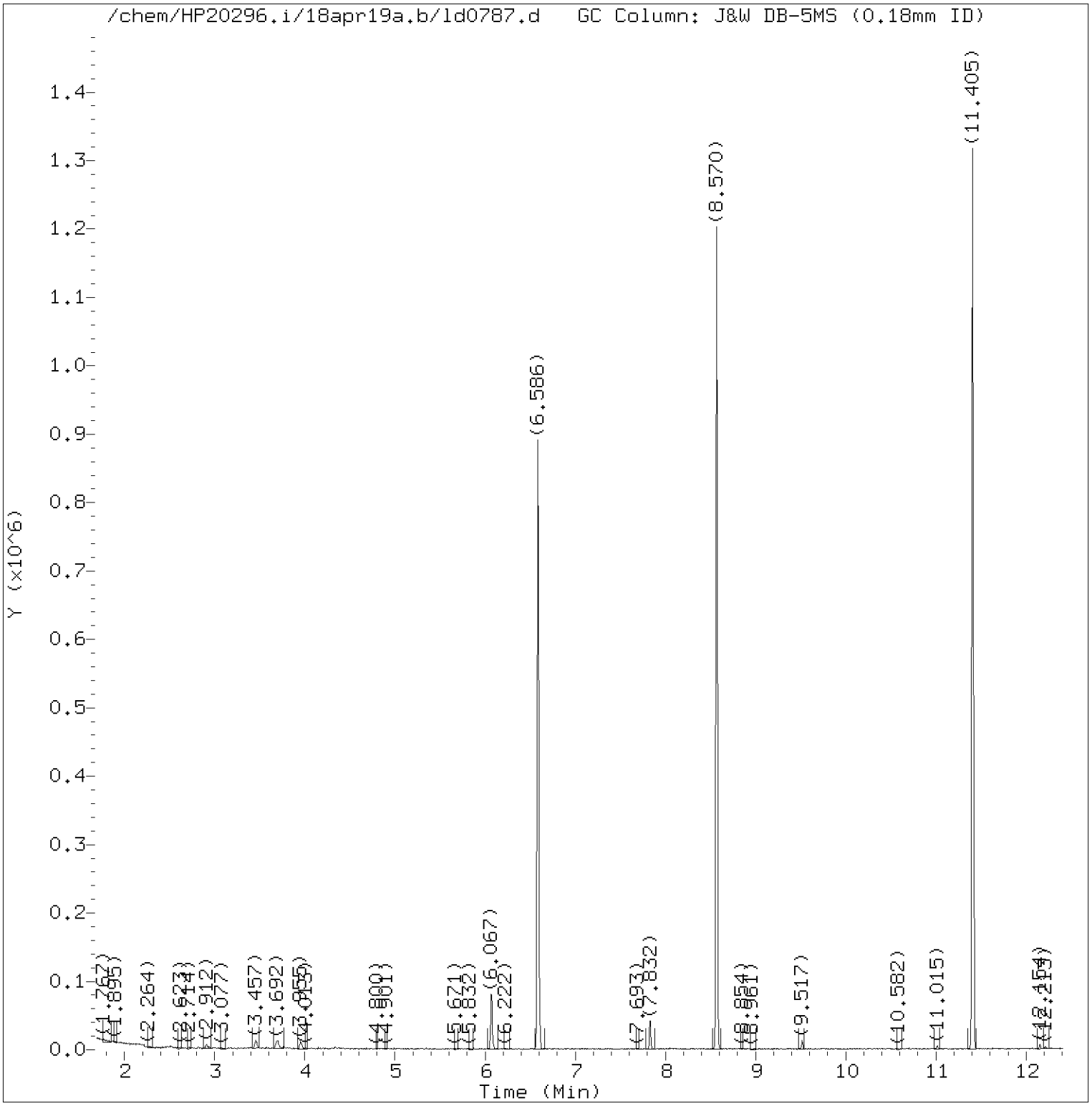
Data File: /chem/HP20296.i/18apr19a.b/ld0786.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:13 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvABC0538

Compound Number	: 195		
Compound Name	: Kepone		
Scan Number	: 2760		
Retention Time (minutes)	: 16.449		
Quant Ion	: 272.00		
Area	: 384023		
On-column Amount (ng/ul)	: 24.5221		
Integration start scan	: 2753	Integration stop scan:	2778
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:07.
Target 3.5 esignature used for this report



Total Ion Chromatogram (TIC)

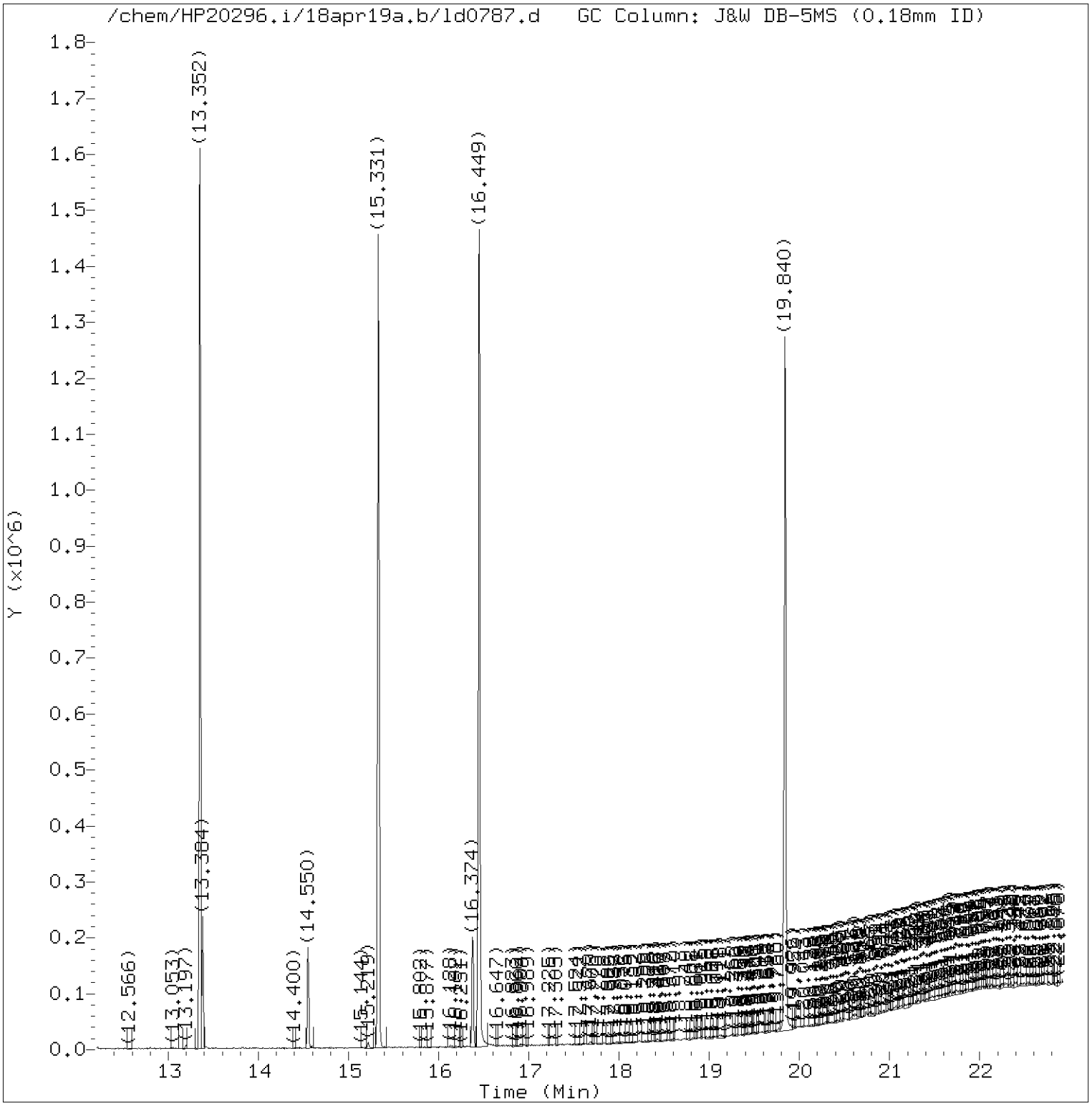
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

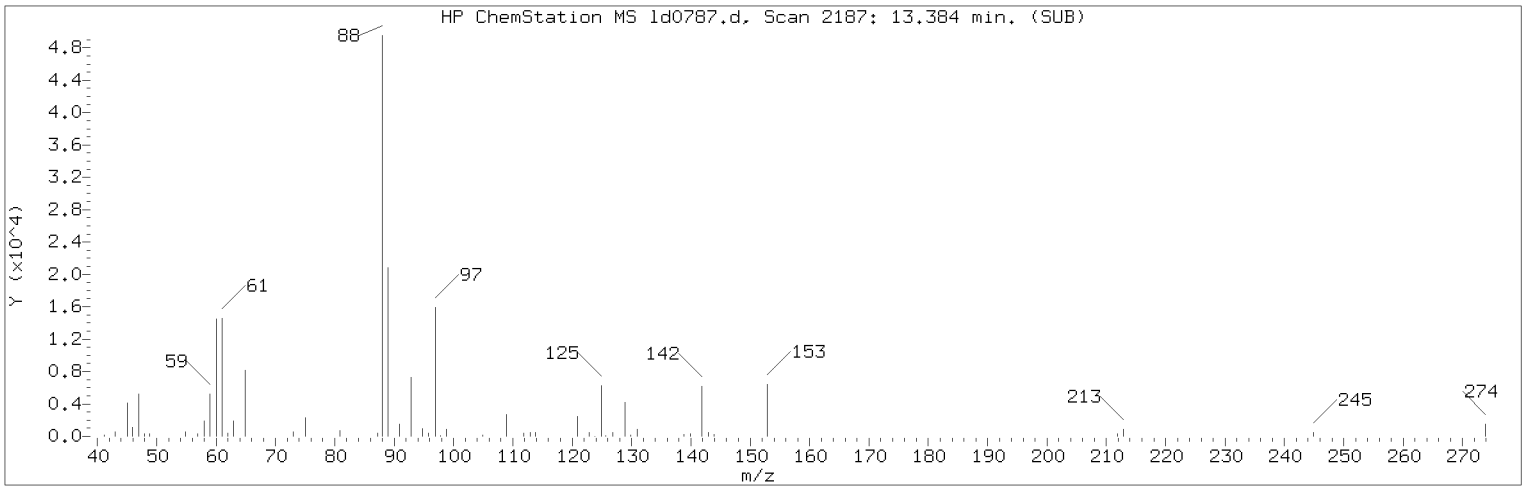
Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	171847	5.000
68)*Naphthalene-d8	(2)	8.570	136	646740	5.000
118)*Acenaphthene-d10	(3)	11.405	164	318011	5.000
158)*Phenanthrene-d10	(4)	13.352	188	644018	5.000
167) Disulfoton	(4)	13.384	88	51143M	0.998
175) Methapyrilene	(4)	14.550	97	39414M	0.929
180)*Pyrene-d10	(5)	15.331	212	663823	5.000
194) Famphur	(5)	16.374	218	65344	1.347
195) Kepone	(5)	16.449	272	170641	11.686
218)*Perylene-d12	(6)	19.840	264	604230	5.000

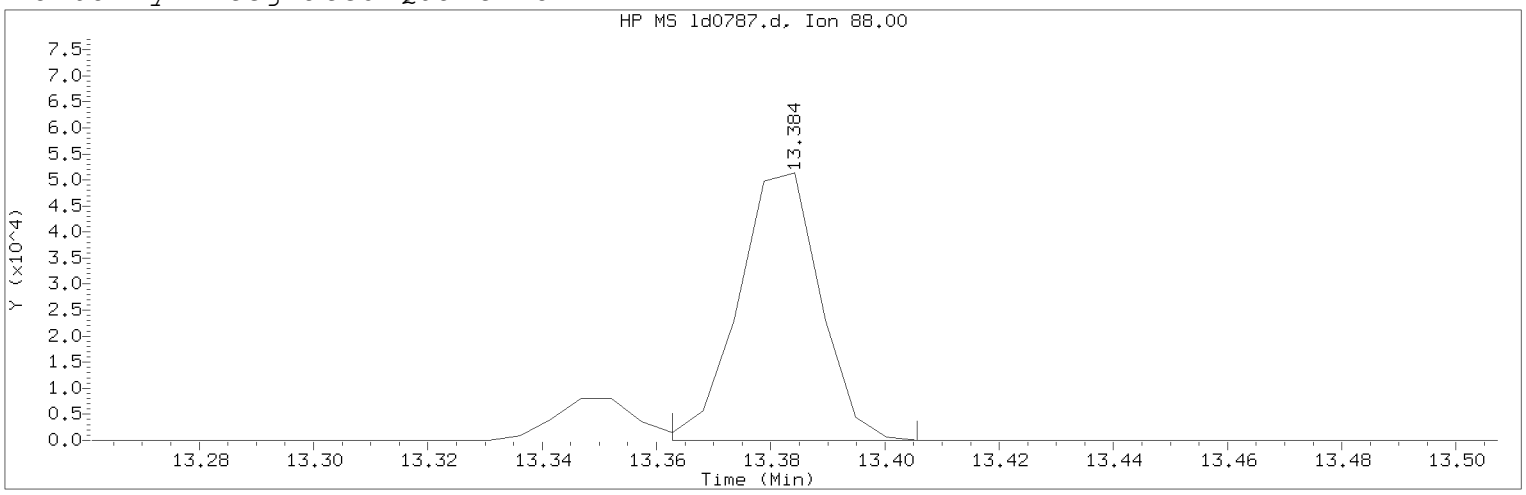
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

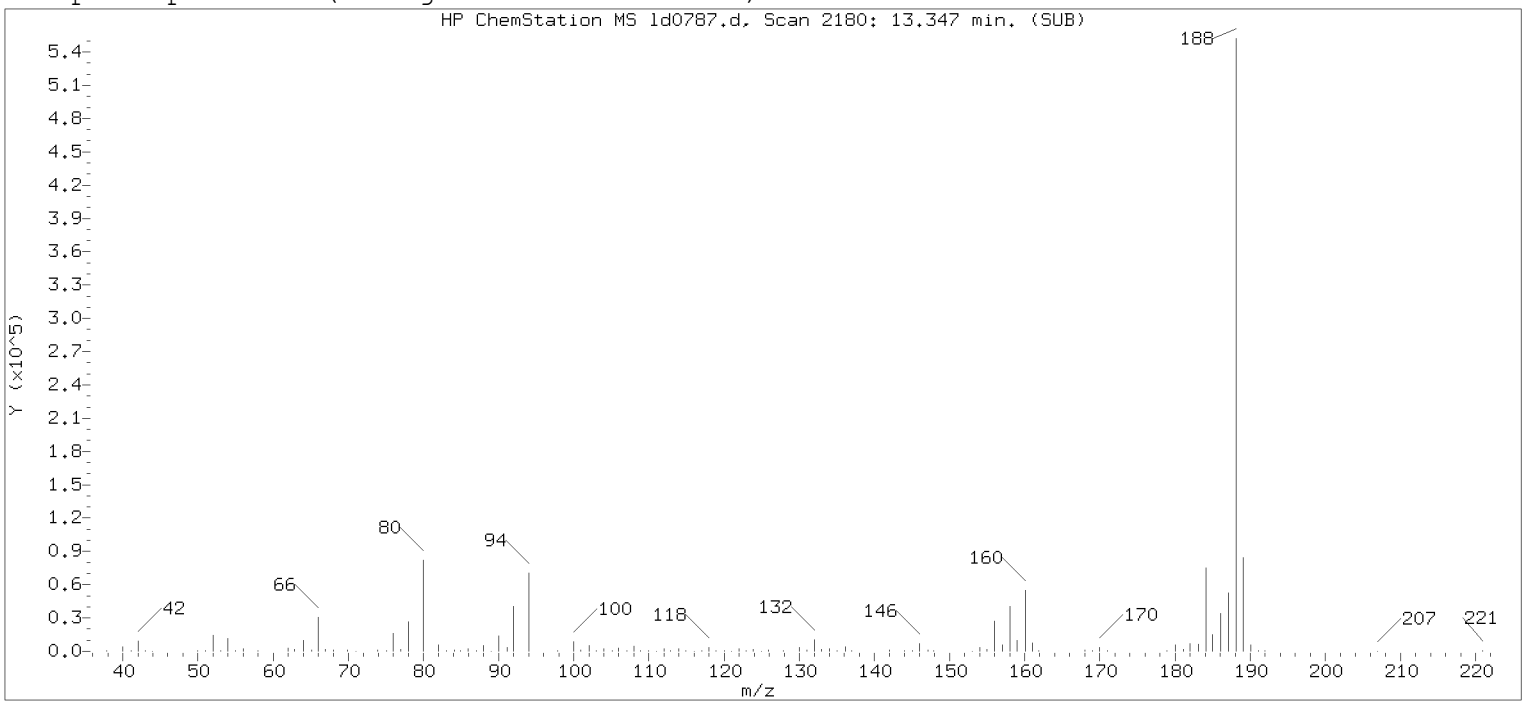
Compound Number : 167
Compound Name : Disulfoton
Scan Number : 2187
Retention Time (minutes) : 13.384
Quant Ion : 88.00
Area (flag) : 51143M
On-Column Amount (ng/ul) : 0.9981
Integration start scan : 2182 Integration stop scan: 2190
Y at integration start : -3 Y at integration end: -6

Reason for manual integration: improper integration

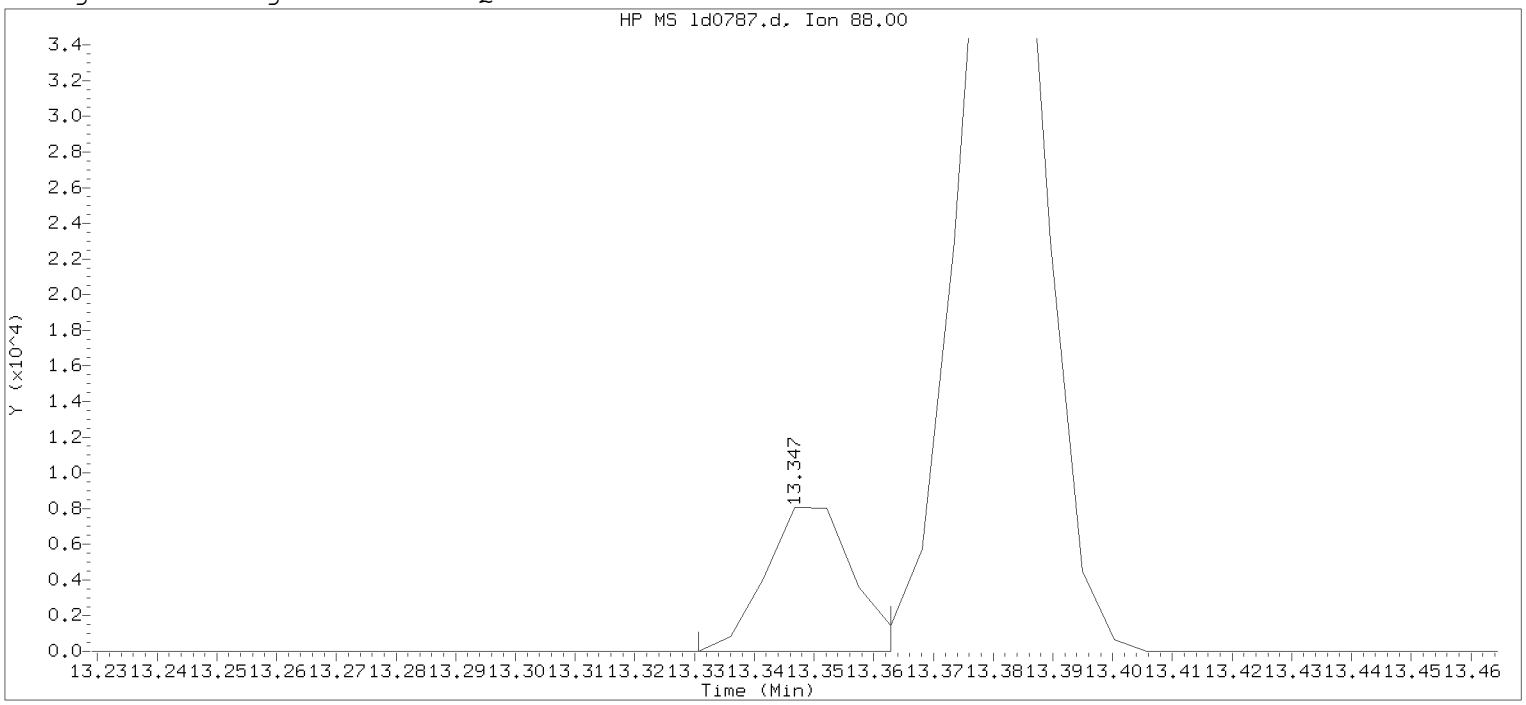
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

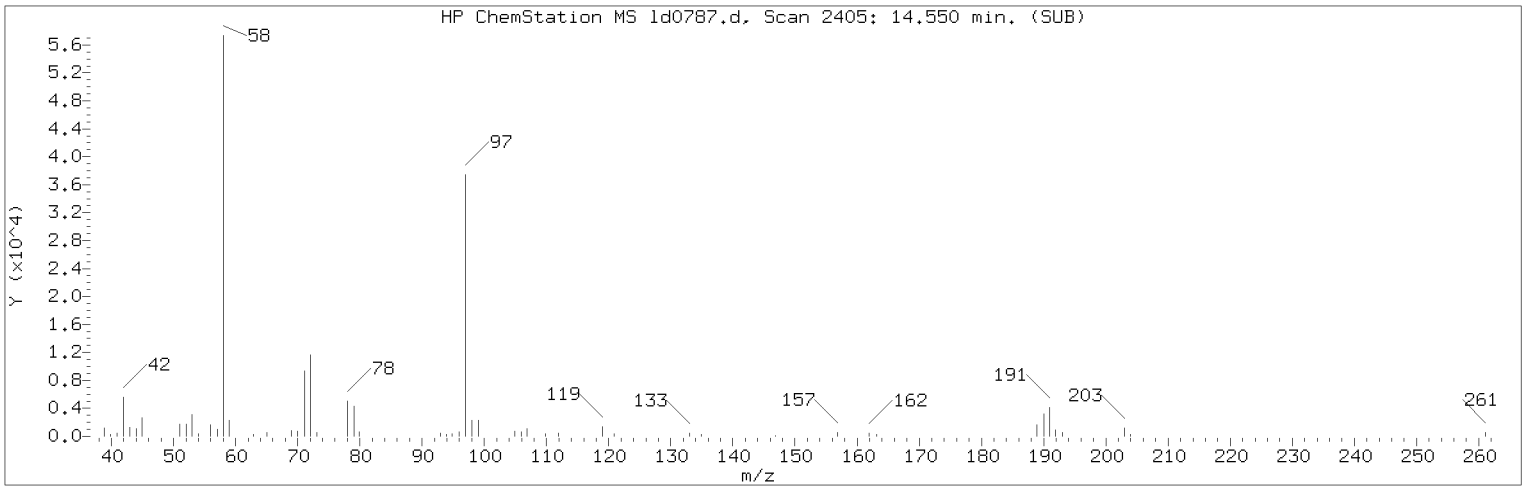
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

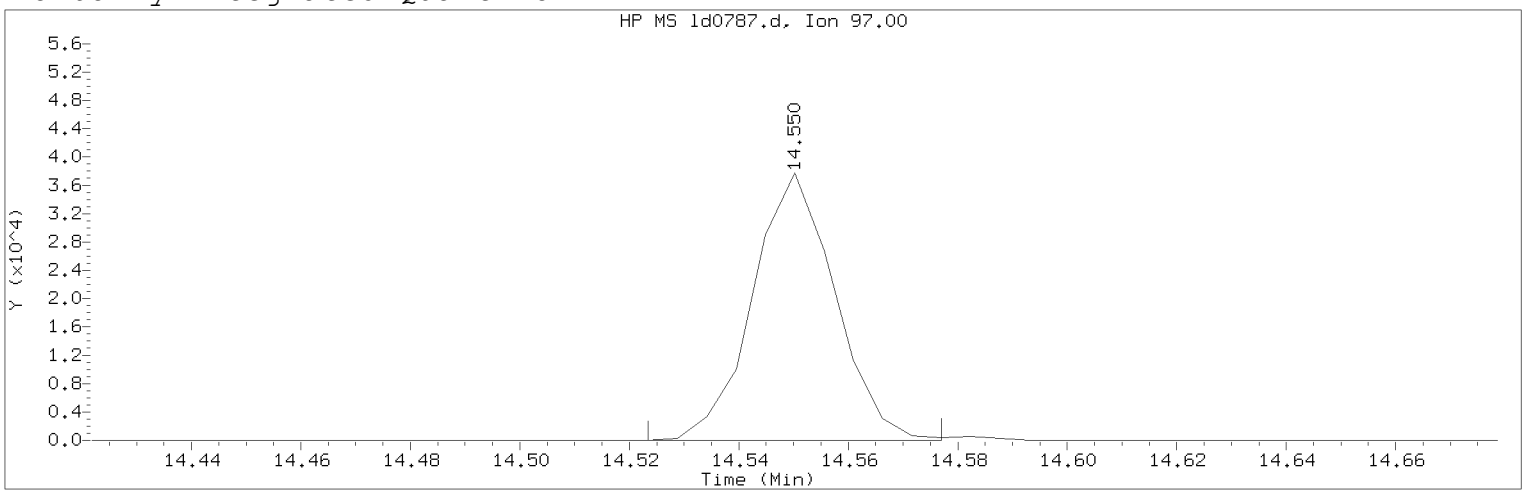
Compound Number	: 167		
Compound Name	: Disulfoton		
Scan Number	: 2180		
Retention Time (minutes)	: 13.347		
Quant Ion	: 88.00		
Area	: 8102		
On-column Amount (ng/ul)	: 4.3764		
Integration start scan	: 2176	Integration stop scan:	2182
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:08.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

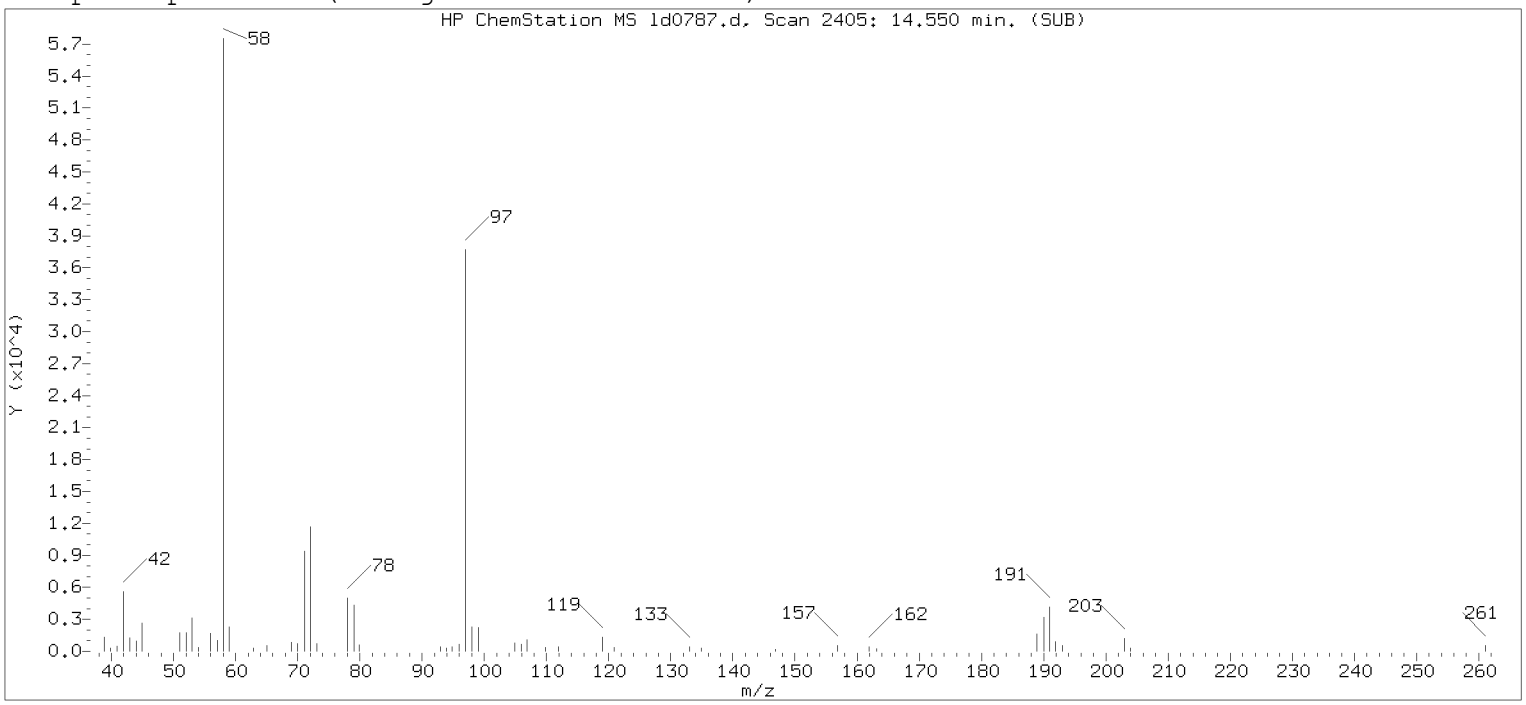
Compound Number : 175
Compound Name : Methapyrilene
Scan Number : 2405
Retention Time (minutes) : 14.550
Quant Ion : 97.00
Area (flag) : 39414M
On-Column Amount (ng/ul) : 0.9294
Integration start scan : 2399 Integration stop scan: 2409
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

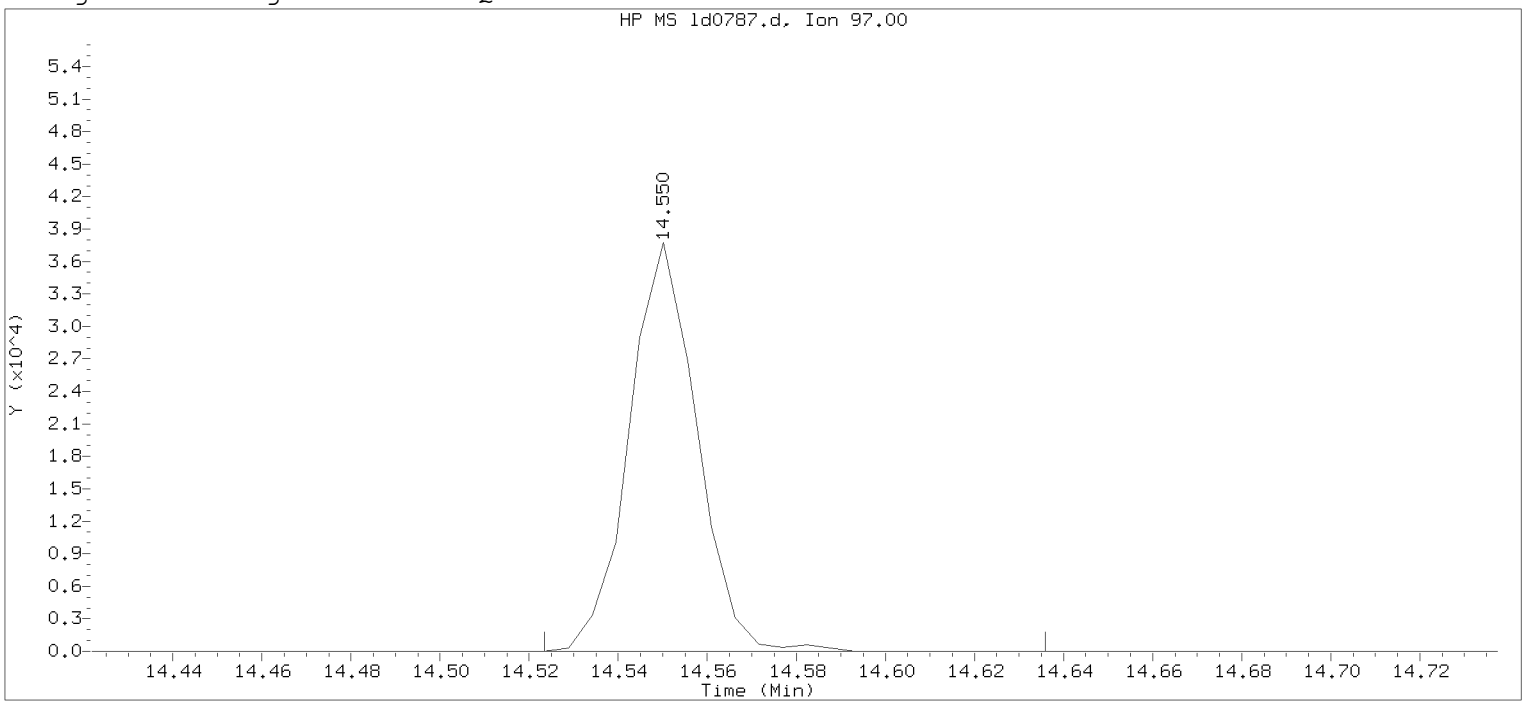
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



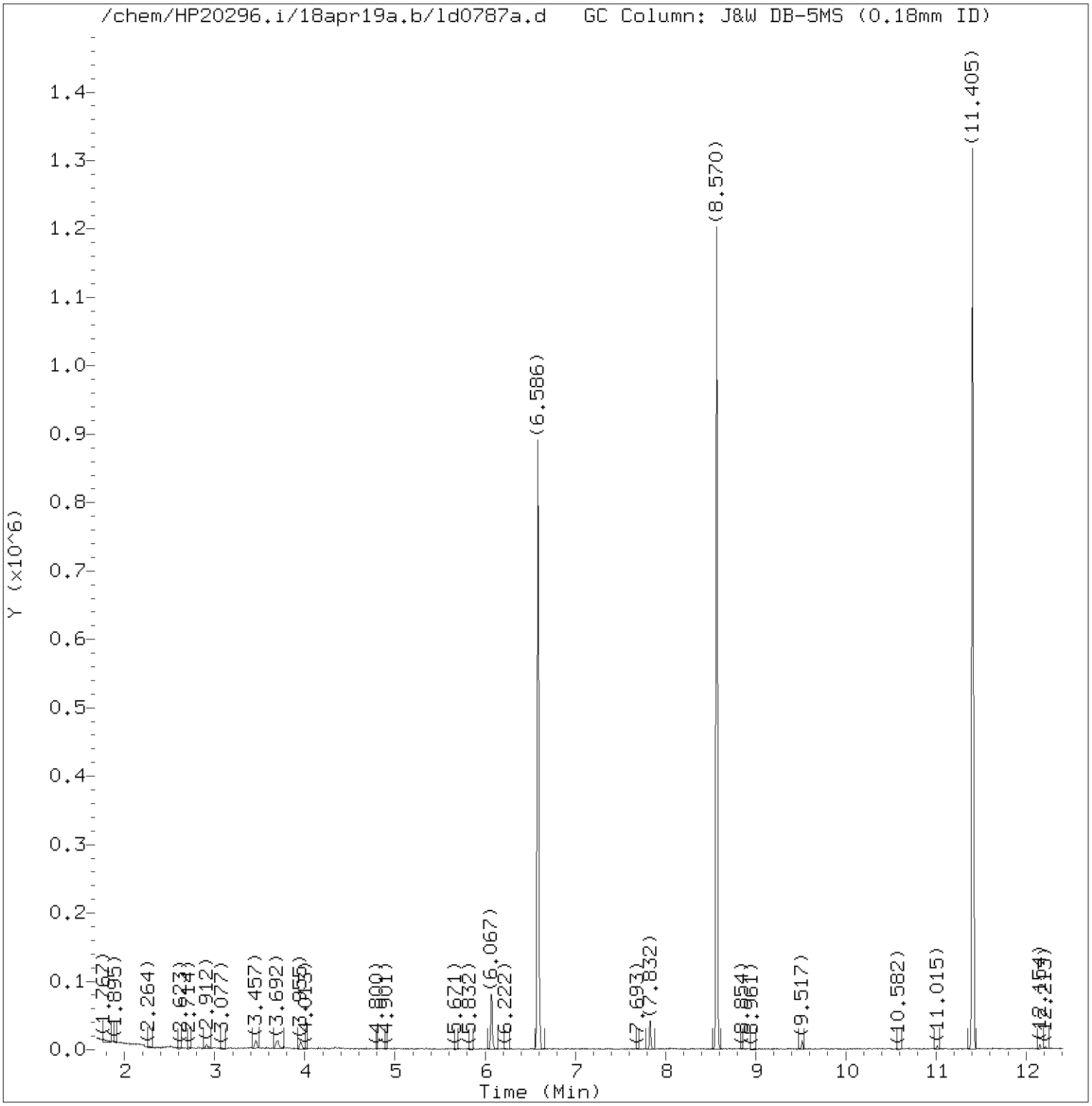
Data File: /chem/HP20296.i/18apr19a.b/ld0787.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Compound Number	: 175		
Compound Name	: Methapyrilene		
Scan Number	: 2405		
Retention Time (minutes)	: 14.550		
Quant Ion	: 97.00		
Area	: 39696		
On-column Amount (ng/ul)	: 1.1712		
Integration start scan	: 2399	Integration stop scan:	2420
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: BHS10208



Total Ion Chromatogram (TIC)

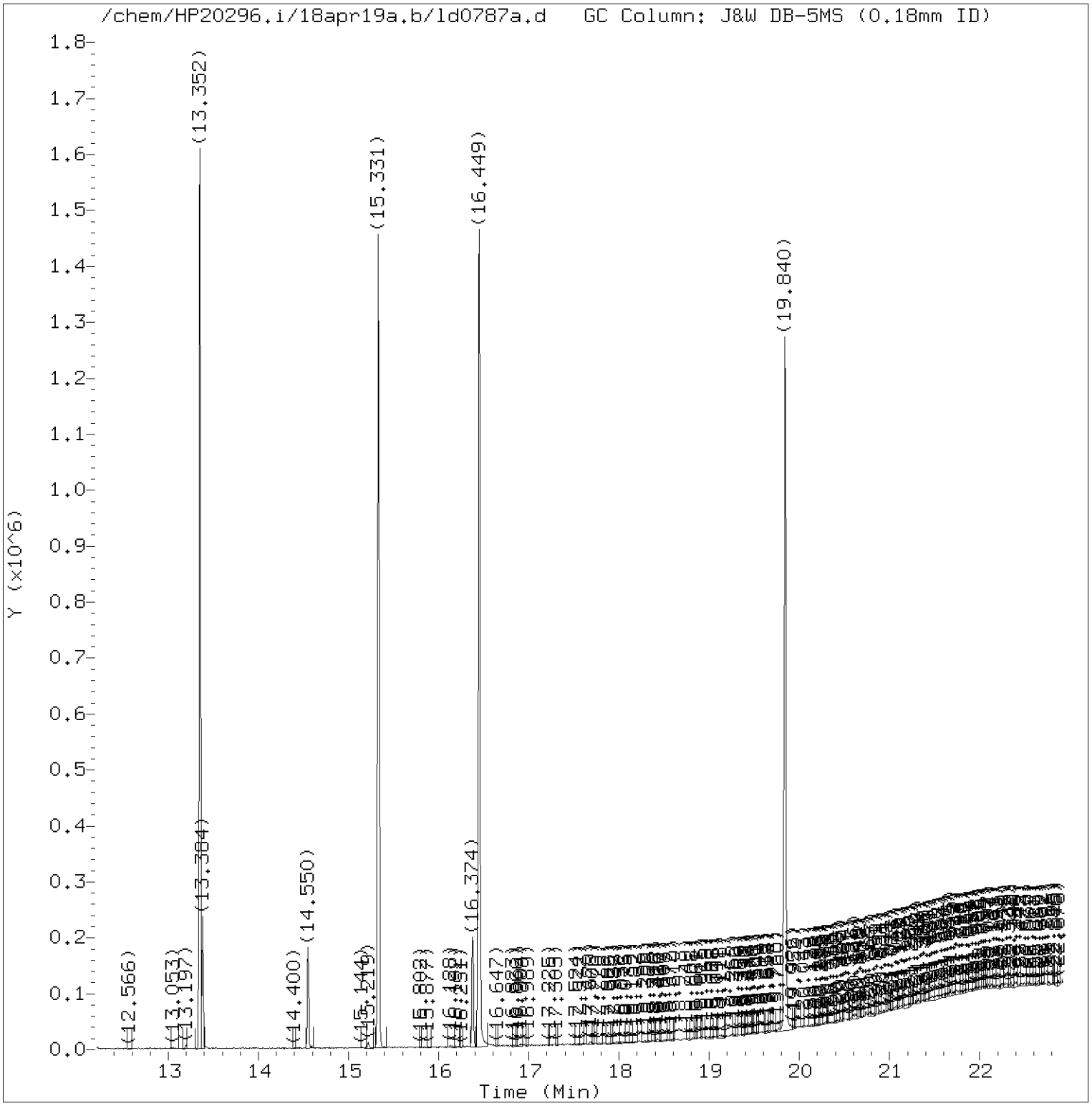
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787a.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: fam
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787a.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: fam
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0787a.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 22:41 Analyst ID: art12405

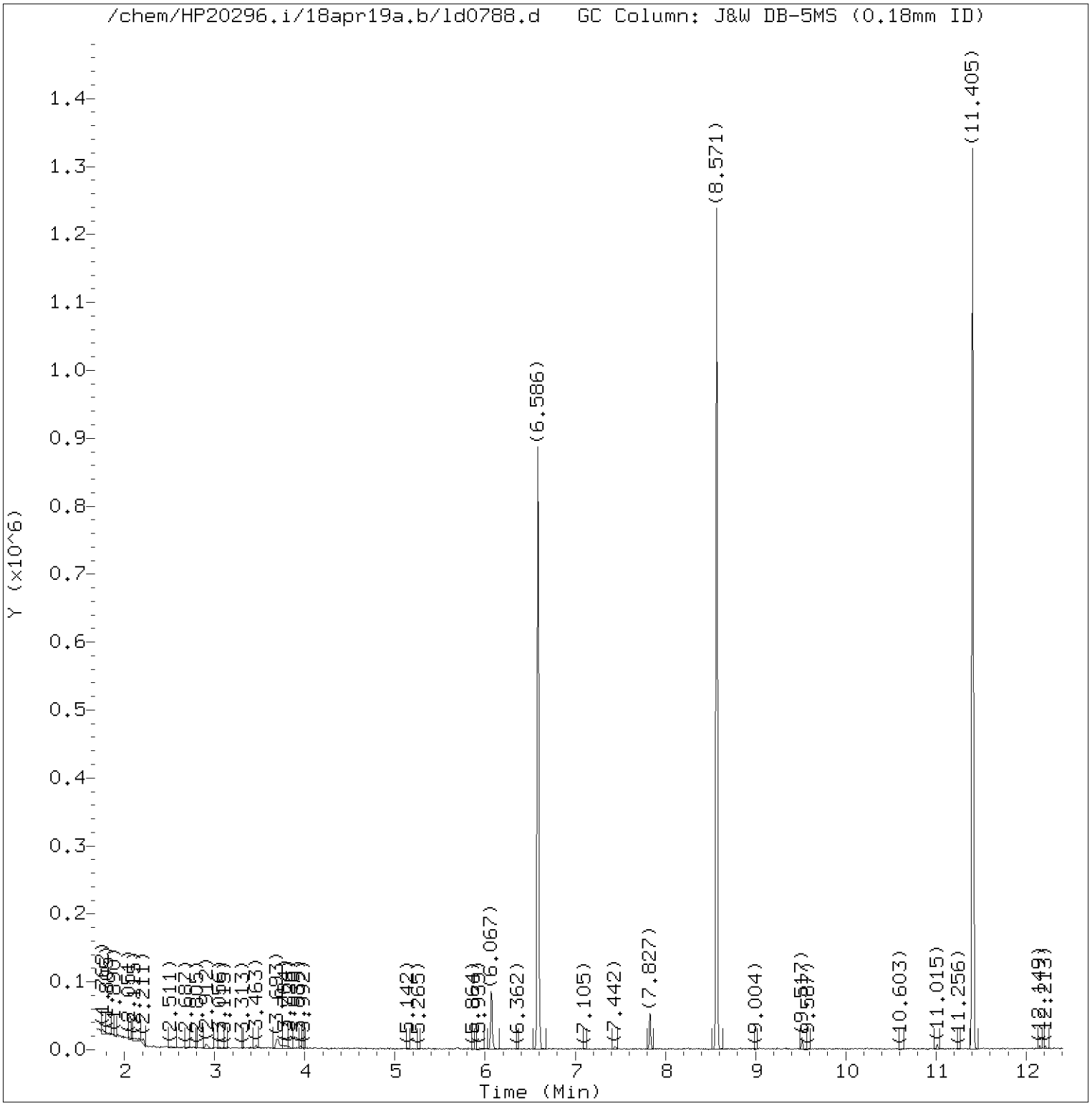
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: fam
Calibration date and time: 24-APR-2018 11:53
Date, time and analyst ID of latest file update: 24-Apr-2018 11:53 bhs10208

Sample Name: SSTD1.25 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	171847	5.000
68)*Naphthalene-d8	(2)	8.570	136	646739	5.000
118)*Acenaphthene-d10	(3)	11.405	164	318010	5.000
158)*Phenanthrene-d10	(4)	13.352	188	644017	5.000
180)*Pyrene-d10	(5)	15.331	212	663822	5.000
194) Famphur	(5)	16.374	218	65344	1.347
218)*Perylene-d12	(6)	19.840	264	604219	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 12:08.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

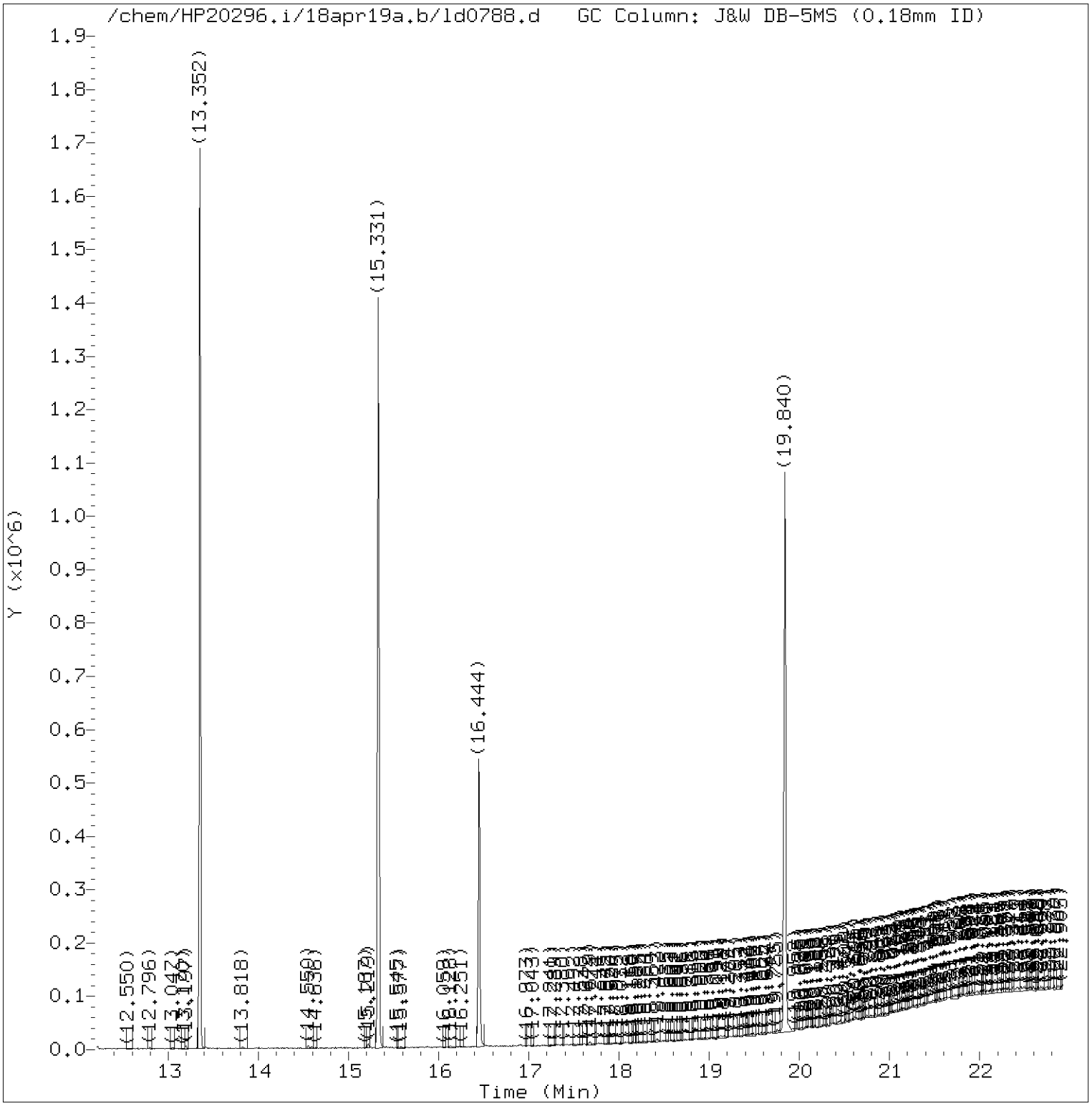
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0788.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:09 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: kep
Calibration date and time: 24-APR-2018 10:03
Date, time and analyst ID of latest file update: 24-Apr-2018 10:04 bhs10208

Sample Name: SSTD006 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 10:04.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0788.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:09 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: kep
Calibration date and time: 24-APR-2018 10:03
Date, time and analyst ID of latest file update: 24-Apr-2018 10:04 bhs10208

Sample Name: SSTD006 Lab Sample ID: rvABC0538

Digitally signed by Brandon H. Smith
on 04/24/2018 at 10:04.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0788.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:09 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: kep
Calibration date and time: 24-APR-2018 10:03
Date, time and analyst ID of latest file update: 24-Apr-2018 10:04 bhs10208

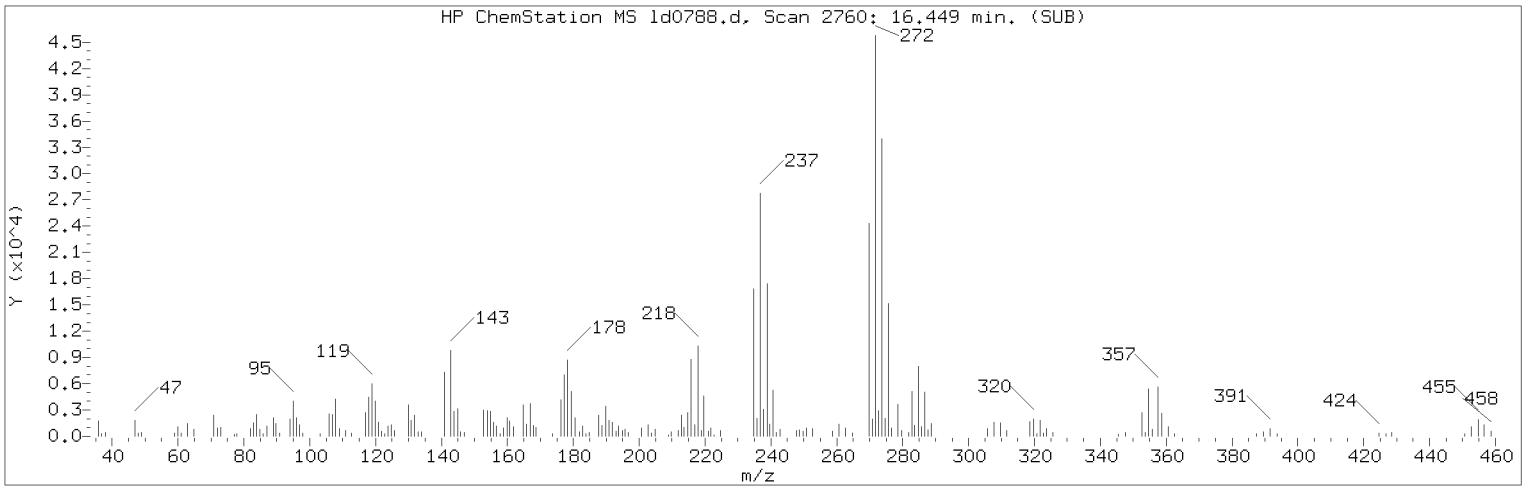
Sample Name: SSTD006 Lab Sample ID: rvABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	175936	5.000
68)*Naphthalene-d8	(2)	8.571	136	660857	5.000
118)*Acenaphthene-d10	(3)	11.405	164	323701	5.000
158)*Phenanthrene-d10	(4)	13.352	188	637988	5.000
180)*Pyrene-d10	(5)	15.331	212	640041	5.000
195) Kepone	(5)	16.449	272	62445M	4.435
218)*Perylene-d12	(6)	19.840	264	526911	5.000

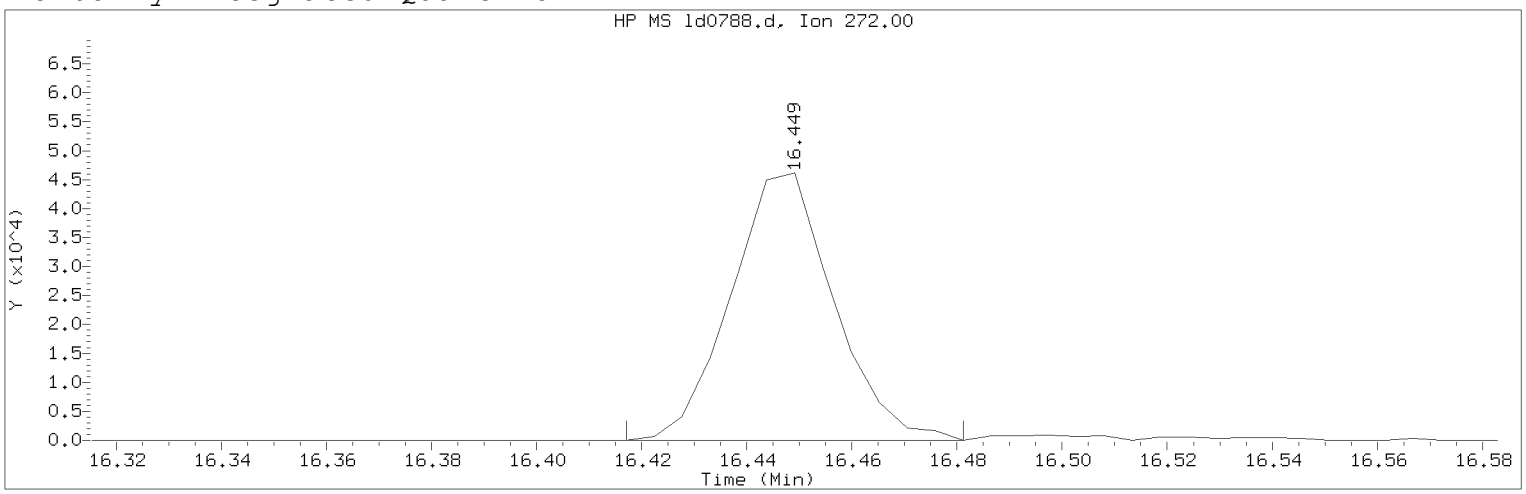
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/24/2018 at 10:04.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0788.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:09 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: kep
Calibration date and time: 24-APR-2018 10:03
Date, time and analyst ID of latest file update: 24-Apr-2018 10:04 bhs10208

Sample Name: SSTD006 Lab Sample ID: rvABC0538

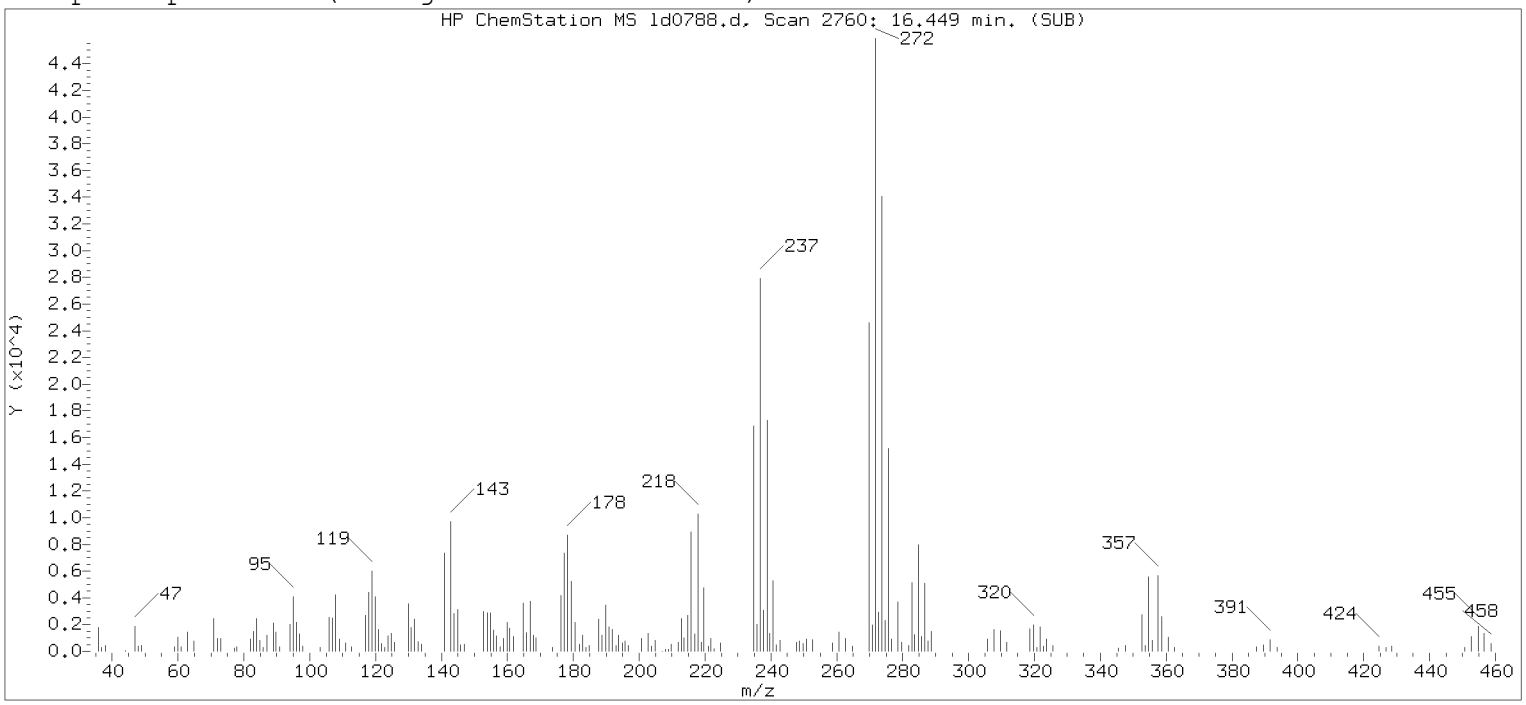
Compound Number : 195
Compound Name : Kepone
Scan Number : 2760
Retention Time (minutes) : 16.449
Quant Ion : 272.00
Area (flag) : 62445M
On-Column Amount (ng/ul) : 4.4353
Integration start scan : 2753 Integration stop scan: 2765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

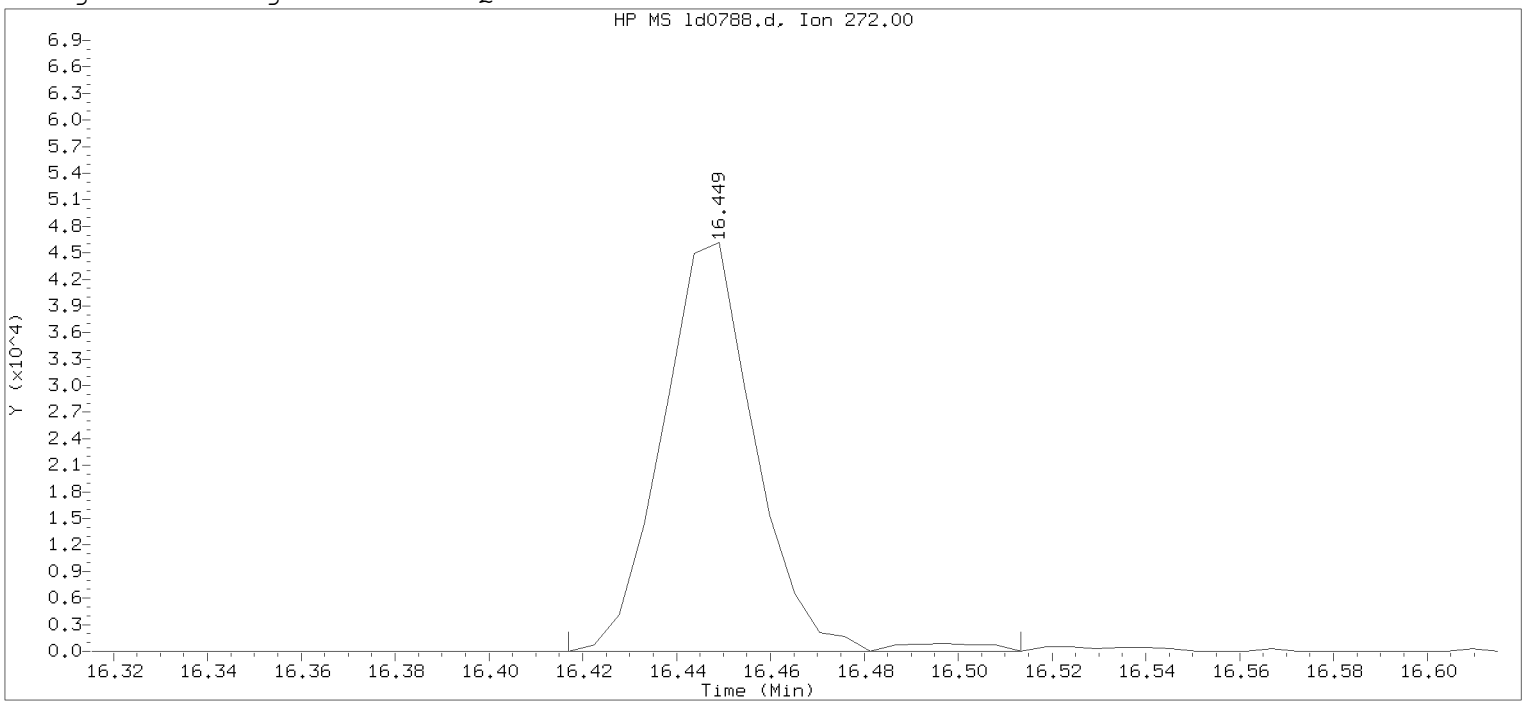
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/24/2018 at 10:04.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 12:11.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr19a.b/ld0788.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:09 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 08:39
Date, time and analyst ID of latest file update: 20-Apr-2018 08:39 bhs10208

Sample Name: SSTD006 Lab Sample ID: rvABC0538

Compound Number	: 195		
Compound Name	: Kepone		
Scan Number	: 2760		
Retention Time (minutes)	: 16.449		
Quant Ion	: 272.00		
Area	: 63663		
On-column Amount (ng/ul)	: 4.5166		
Integration start scan	: 2753	Integration stop scan:	2771
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/24/2018 at 10:04.
Target 3.5 esignature used. FD6 Page 1622

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

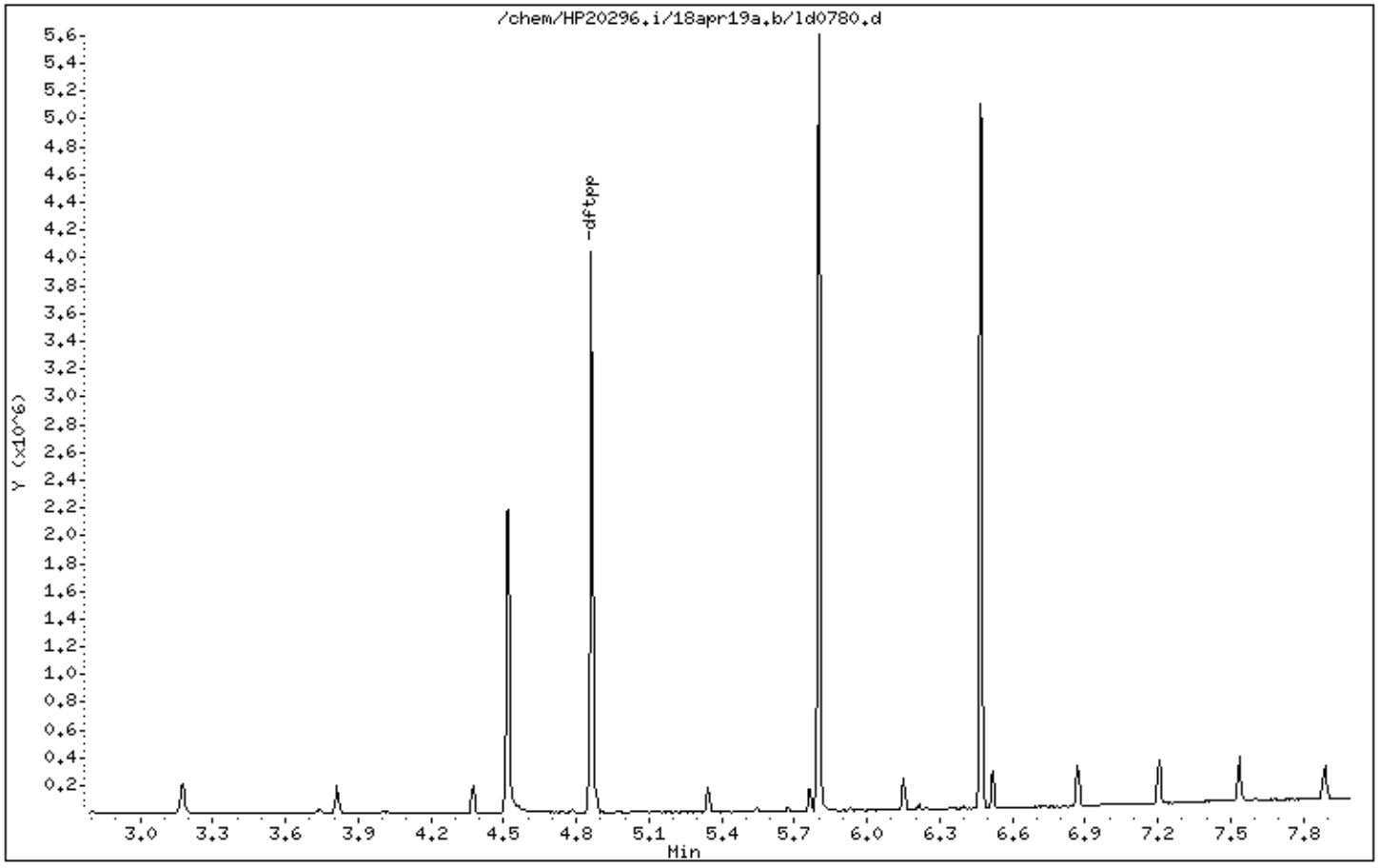
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

Instrument: HP20296.i

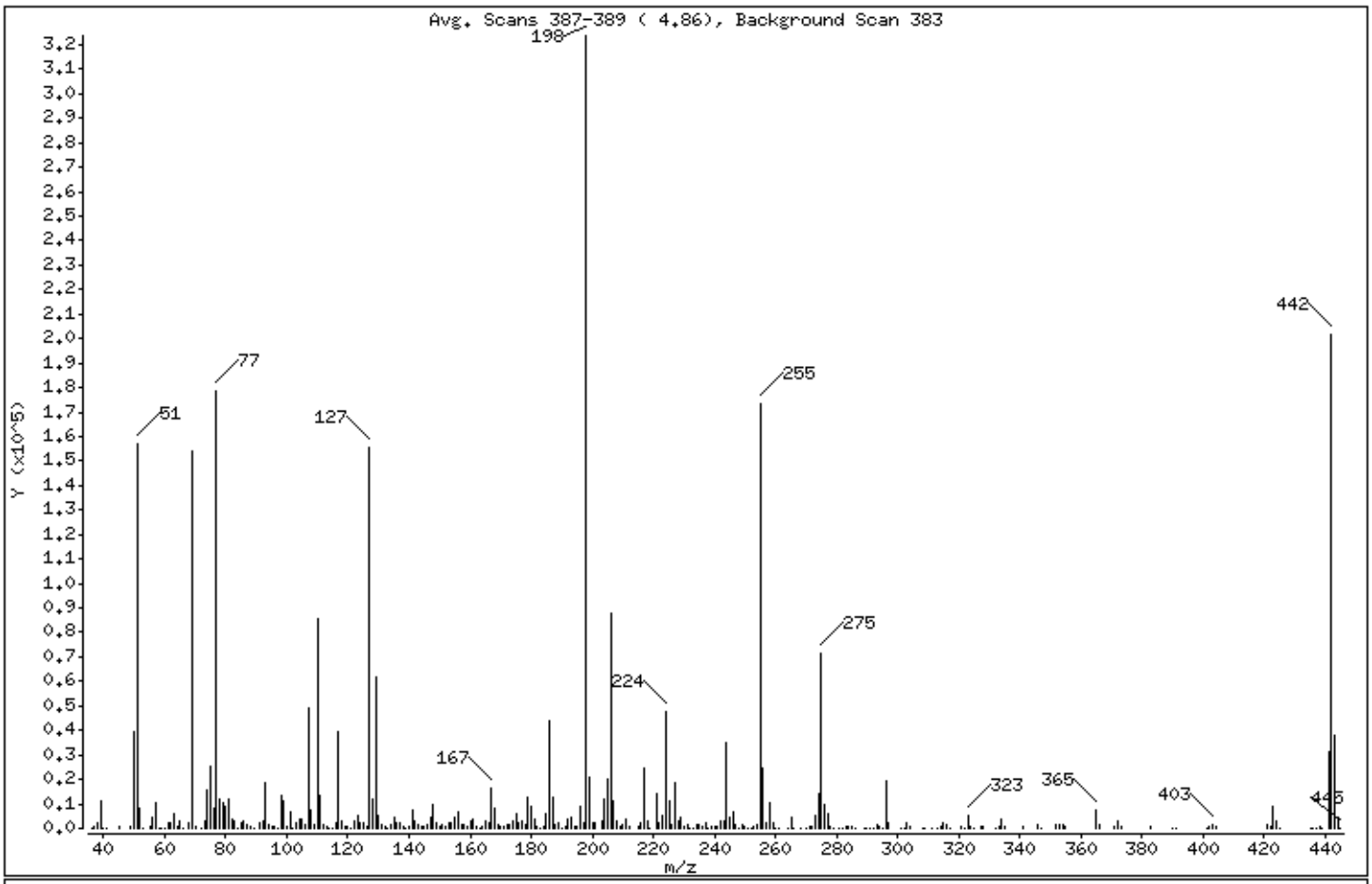
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.50
68	Less than 2.00% of mass 69	0.78 (1.64)
69	Mass 69 relative abundance	47.50
70	Less than 2.00% of mass 69	0.27 (0.57)
127	10.00 - 80.00% of mass 198	48.15
197	Less than 2.00% of mass 198	0.79
199	5.00 - 9.00% of mass 198	6.51
275	10.00 - 60.00% of mass 198	22.06
365	Greater than 1.00% of mass 198	2.35
441	0.01 - 24.00% of mass 442	9.61 (15.45)
442	50.00 - 99.99% of mass 198	62.21
443	15.00 - 24.00% of mass 442	11.64 (18.71)

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr19a.b/ld0780.d

Date : 19-APR-2018 18:55

Client ID: DFTPP

Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	155	121.00	91	196.00	9081	279.00	90
37.00	602	122.00	2964	197.00	2570	281.00	346
38.00	1898	123.00	4899	198.00	323712	282.00	319
39.00	11393	124.00	2086	199.00	21088	283.00	875
40.00	146	125.00	2017	200.00	1985	284.00	590
41.00	291	126.00	1038	201.00	2049	285.00	1101
45.00	416	127.00	155840	203.00	2787	286.00	104
49.00	840	128.00	11990	204.00	11891	289.00	224
50.00	39296	129.00	61512	205.00	20392	290.00	84
51.00	156992	130.00	5375	206.00	87512	291.00	91
52.00	8106	131.00	1175	207.00	11283	292.00	232
53.00	332	132.00	500	208.00	3146	293.00	1492
55.00	529	133.00	40	209.00	871	294.00	405
56.00	4619	134.00	1396	210.00	1486	295.00	157
57.00	10378	135.00	4766	211.00	3460	296.00	19472
58.00	309	136.00	1926	212.00	919	297.00	2539
59.00	229	137.00	2563	215.00	992	301.00	354
60.00	84	138.00	499	216.00	2065	302.00	110
61.00	1930	139.00	151	217.00	24272	303.00	2418
62.00	2021	140.00	831	218.00	3122	304.00	414
63.00	5731	141.00	7130	219.00	285	308.00	258
64.00	907	142.00	2724	221.00	13997	309.00	86
65.00	3198	143.00	1645	222.00	1922	311.00	87
66.00	231	144.00	470	223.00	5113	313.00	146
68.00	2521	145.00	479	224.00	47296	314.00	1111
69.00	153728	146.00	1554	225.00	11529	315.00	2354
70.00	878	147.00	4329	226.00	1456	316.00	1134
72.00	97	148.00	9992	227.00	18840	317.00	117
73.00	2723	149.00	2368	228.00	2680	321.00	702
74.00	15645	150.00	659	229.00	4294	322.00	244
75.00	24968	151.00	1412	230.00	699	323.00	5253
76.00	8500	152.00	520	231.00	1509	324.00	1092
77.00	178560	153.00	2581	232.00	287	325.00	103
78.00	11851	154.00	2082	233.00	186	327.00	1108
79.00	10296	155.00	4775	234.00	1218	328.00	461

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Target 3.5 esignature user ID: bhs10208

Date : 19-APR-2018 18:55

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8653	156.00	6778	235.00	1230	332.00	309
81.00	11938	157.00	1224	236.00	925	333.00	734
82.00	3434	158.00	1700	237.00	1988	334.00	3497
83.00	2957	159.00	983	238.00	101	335.00	931
84.00	114	160.00	2720	239.00	783	341.00	928
85.00	2381	161.00	3941	240.00	641	346.00	1126
86.00	3111	162.00	1102	241.00	972	347.00	105
87.00	1549	163.00	314	242.00	2648	352.00	1662
88.00	608	164.00	500	243.00	2963	353.00	1133
89.00	130	165.00	2715	244.00	35280	354.00	1758
91.00	2155	166.00	2434	245.00	4502	355.00	463
92.00	2843	167.00	16392	246.00	6763	365.00	7612
93.00	18680	168.00	8513	247.00	1472	366.00	1179
94.00	1179	169.00	1340	248.00	354	371.00	382
95.00	405	170.00	530	249.00	1467	372.00	2857
96.00	1031	171.00	602	250.00	385	373.00	664
97.00	283	172.00	1612	251.00	361	383.00	632
98.00	13761	173.00	1642	252.00	363	390.00	186
99.00	11019	174.00	3339	253.00	1092	391.00	222
100.00	949	175.00	6171	254.00	1853	401.00	186
101.00	6361	176.00	1962	255.00	173184	402.00	1052
102.00	276	177.00	2880	256.00	24896	403.00	1282
103.00	2000	178.00	1204	257.00	2183	404.00	509
104.00	3924	179.00	12500	258.00	10120	421.00	1265
105.00	4004	180.00	8732	259.00	2011	422.00	1107
106.00	1525	181.00	3922	260.00	130	423.00	9063
107.00	48912	182.00	777	261.00	200	424.00	2649
108.00	7537	183.00	235	264.00	364	425.00	246
109.00	1315	184.00	1021	265.00	4207	435.00	85
110.00	85376	185.00	5696	266.00	124	436.00	83
111.00	13103	186.00	43968	268.00	290	437.00	107
112.00	1661	187.00	12850	270.00	263	438.00	466
113.00	559	188.00	1594	271.00	453	439.00	344
114.00	107	189.00	2589	272.00	479	441.00	31112
115.00	139	190.00	367	273.00	5270	442.00	201344

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Date : 19-APR-2018 18:55

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

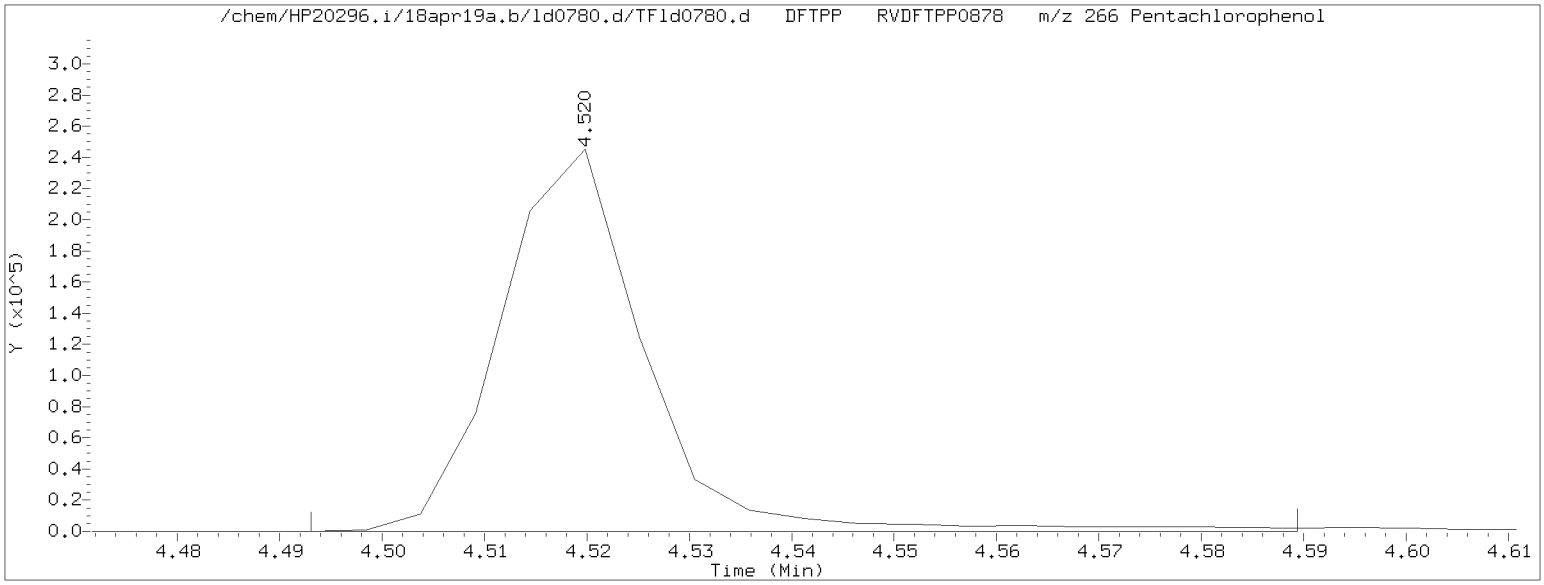
Data File: ld0780.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 383
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2500	191.00	1033	274.00	13825	443.00	37672
117.00	39800	192.00	3655	275.00	71400	444.00	3976
118.00	2911	193.00	4282	276.00	9600	445.00	277
119.00	442	194.00	1073	277.00	5703		
120.00	704	195.00	671	278.00	950		

Digitally signed by Brandon H. Smith on 04/20/2018 at 06:57.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

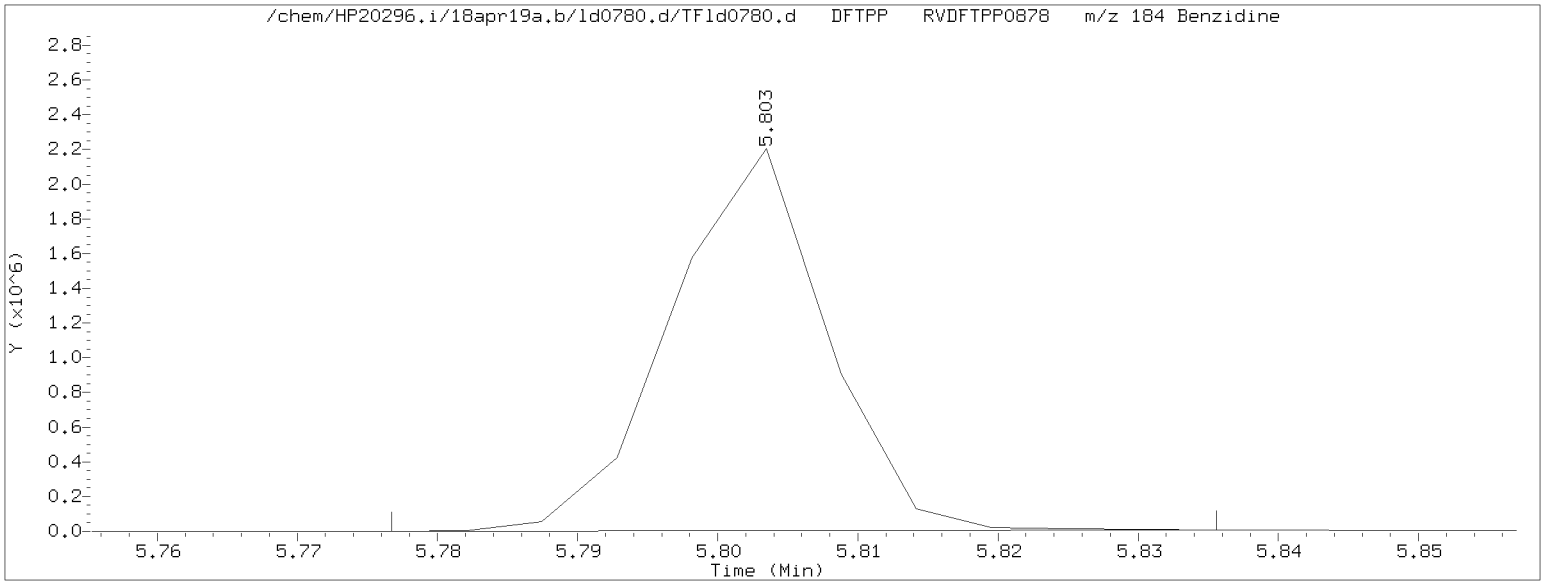
Instrument ID: HP20296.i Injection Date: 19-APR-2018 18:55 Operator: art12405



Pentachlorophenol EICP peak height = 245312 EICP peak height at 10% = 24531 Pentachlorophenol EICP area = 239510

Pentachlorophenol EICP peak apex (min.) = 4.520
RT at 10% of front half of EICP (min.) = 4.505 'Front' peak width (min.) = 0.0149000000
RT at 10% of back half of EICP (min.) = 4.533 'Tailing' peak width (min.) = 0.0128666667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0128666667}{0.0149000000} = 0.864$$



Benzidine EICP peak height = 2201989 EICP peak height at 10% = 220199 Benzidine EICP area = 1703834

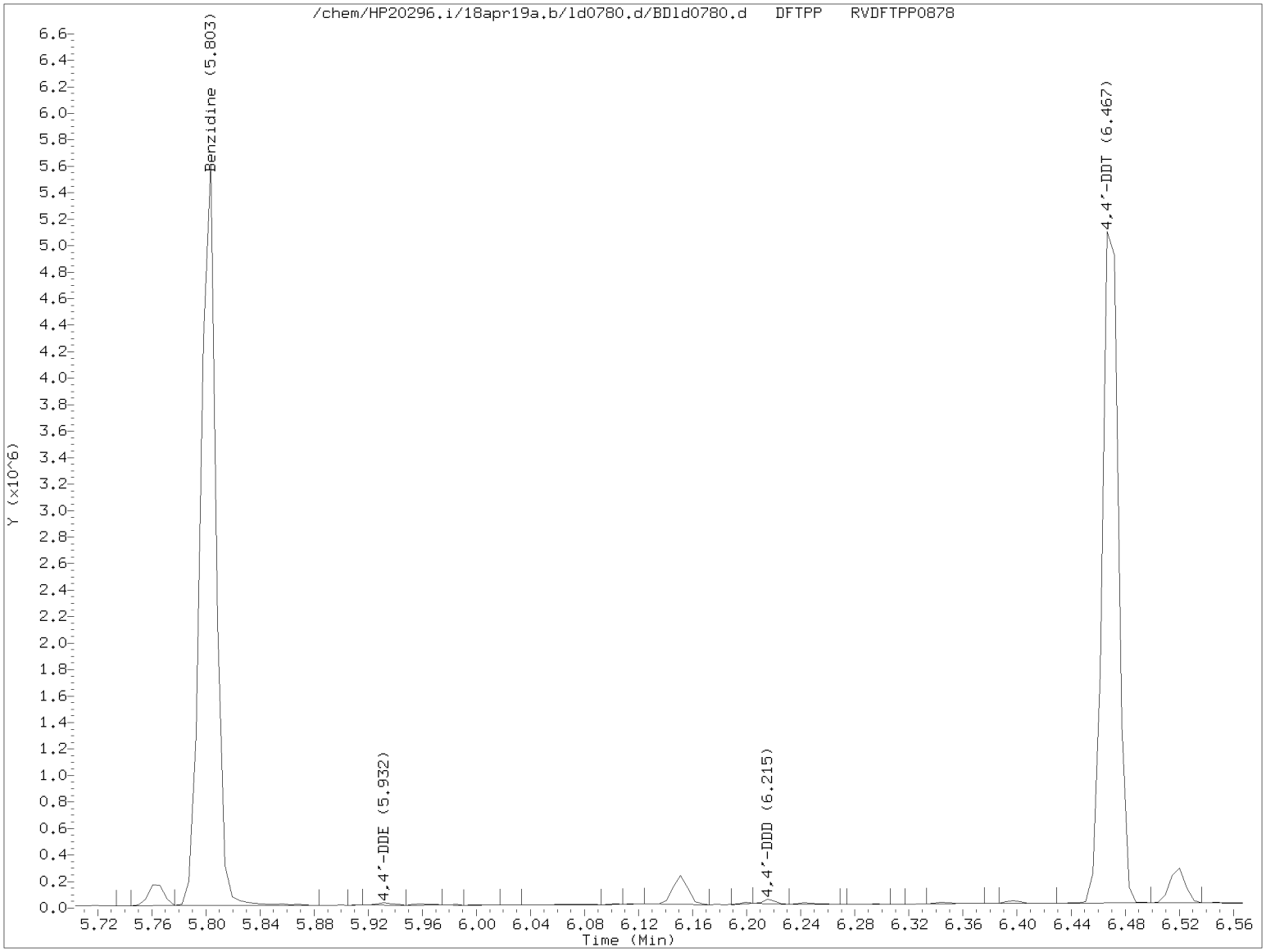
Benzidine EICP peak apex (min.) = 5.803
RT at 10% of front half of EICP (min.) = 5.790 'Front' peak width (min.) = 0.0136000000
RT at 10% of back half of EICP (min.) = 5.814 'Tailing' peak width (min.) = 0.0100333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0100333333}{0.0136000000} = 0.738$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/20/2018 at 13:55. PARALLAX ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

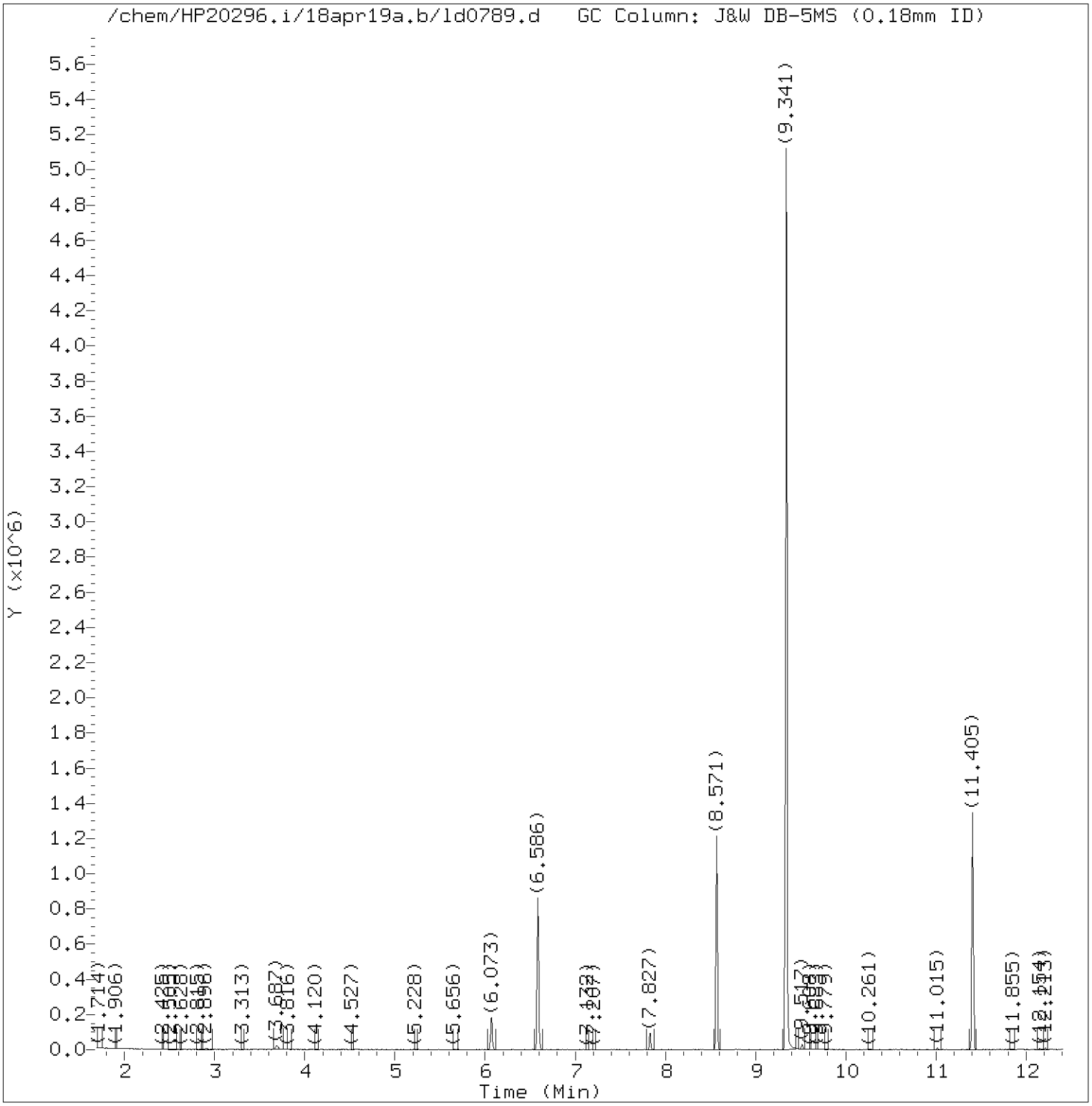
Instrument ID: HP20296.i Injection Date: 19-APR-2018 18:55 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{13651 + 21438}{13651 + 21438 + 4308446} \times 100 = 0.8$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/20/2018 at 13:55. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

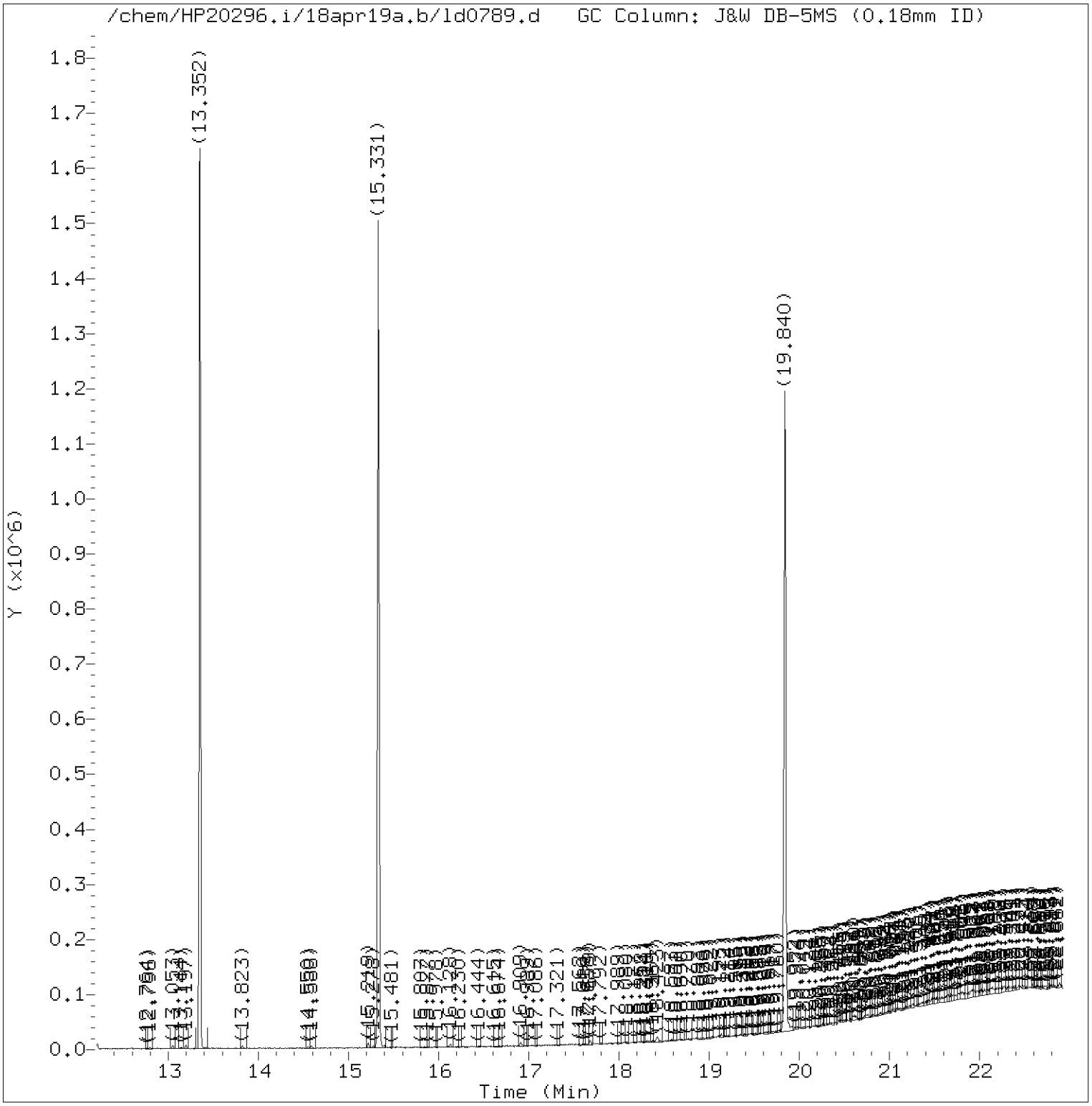
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0789.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:36 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD030 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0789.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:36 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD030 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0789.d Instrument ID: HP20296.i
Injection date and time: 19-APR-2018 23:36 Analyst ID: art12405

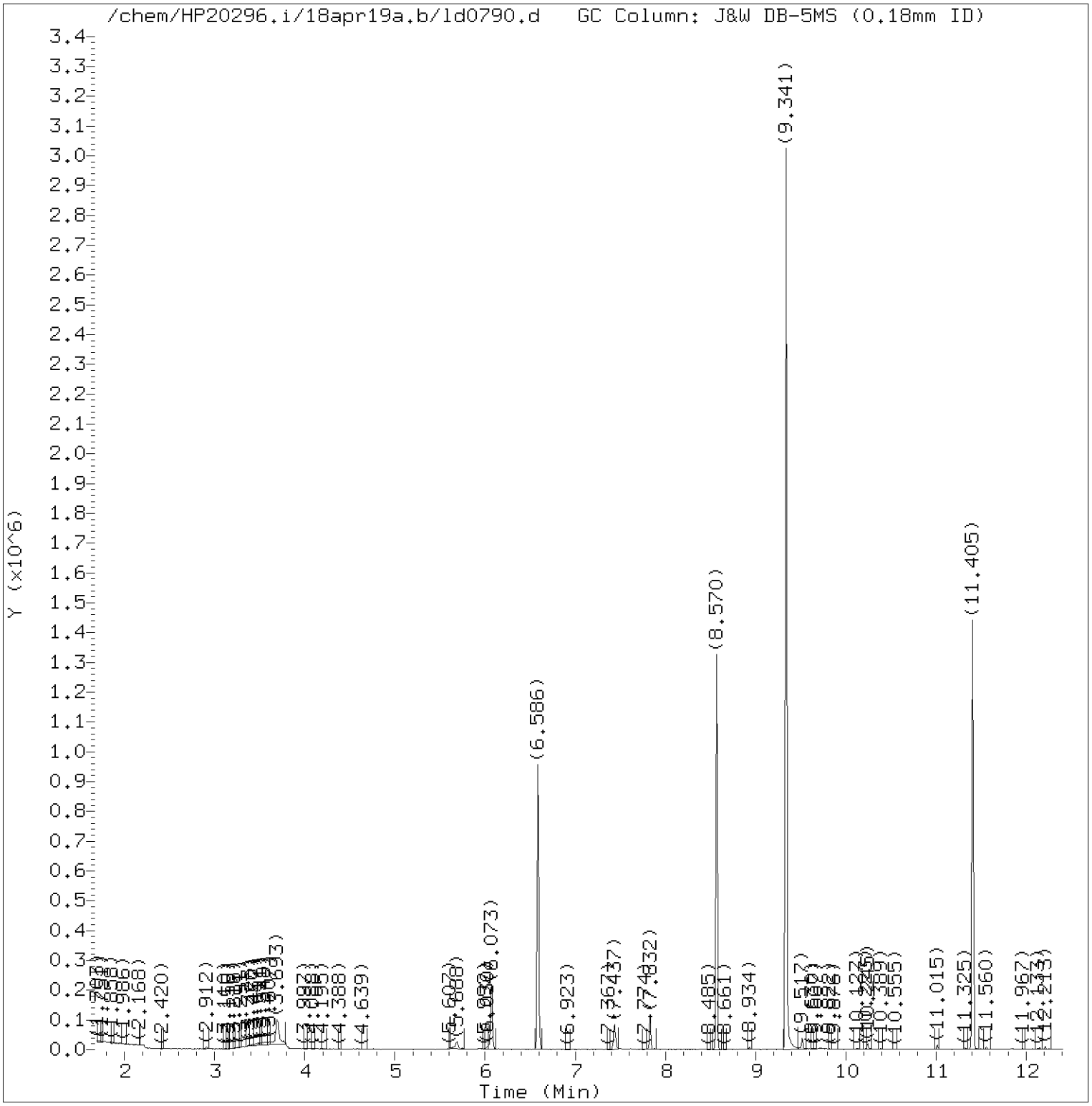
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD030 Lab Sample ID: rvPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	175919	5.000
68)*Naphthalene-d8	(2)	8.571	136	659753	5.000
84) 1,4-Phenylenediamine	(2)	9.341	108	1937655	35.519
118)*Acenaphthene-d10	(3)	11.405	164	328152	5.000
158)*Phenanthrene-d10	(4)	13.352	188	659605	5.000
180)*Pyrene-d10	(5)	15.331	212	669072	5.000
218)*Perylene-d12	(6)	19.840	264	608650	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

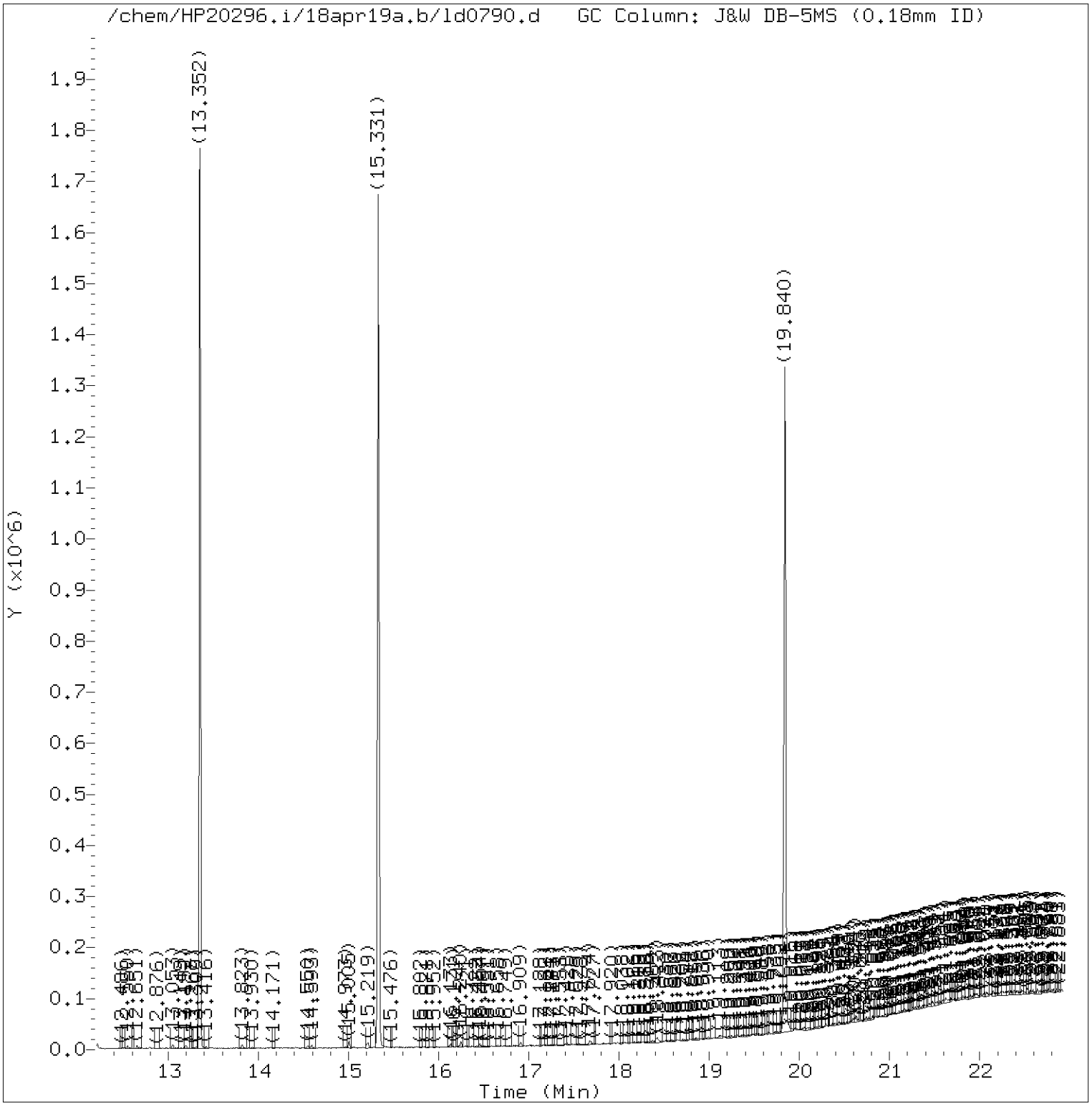
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0790.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:04 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0790.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:04 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0790.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:04 Analyst ID: art12405

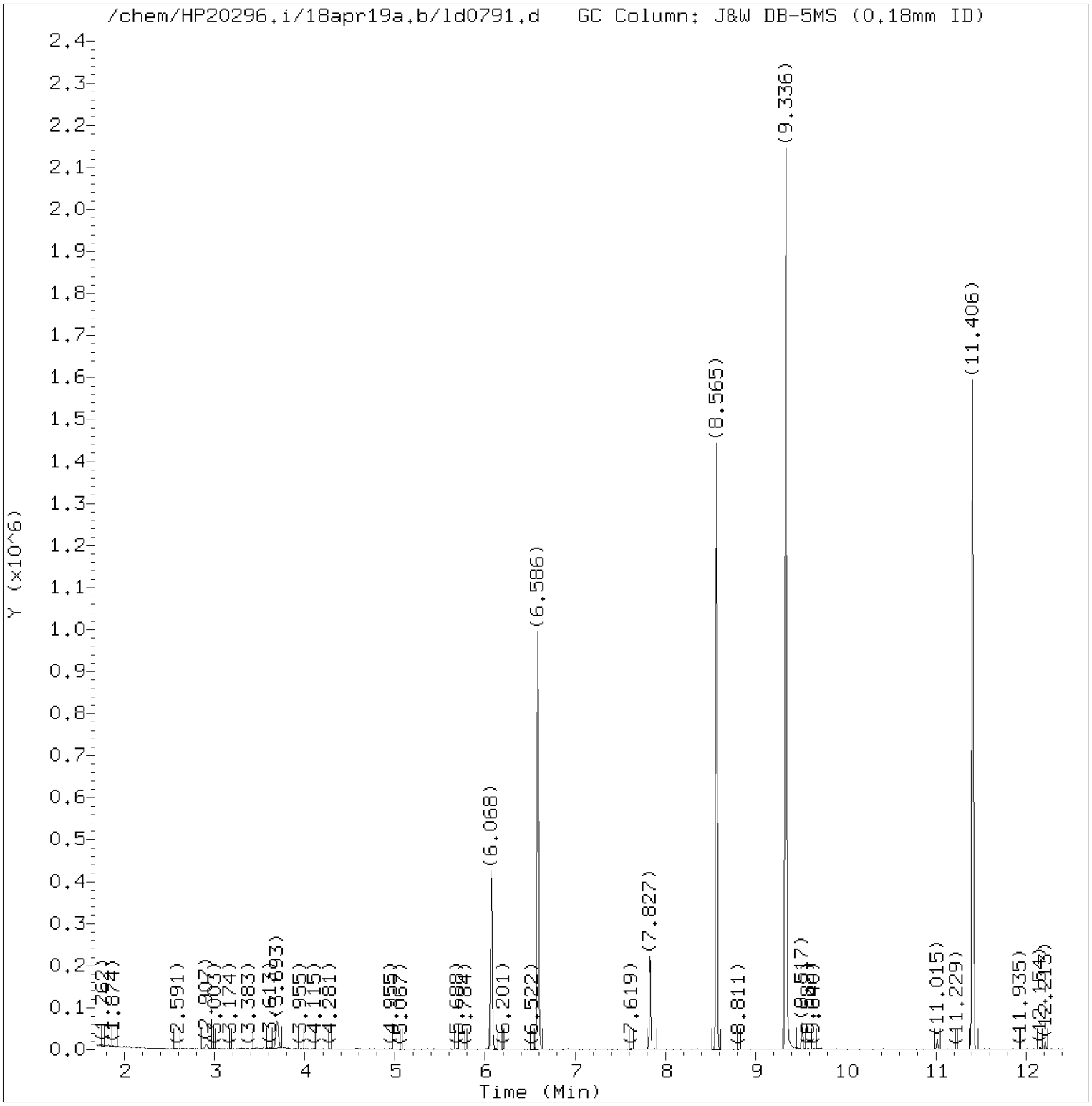
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD020 Lab Sample ID: rvPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	185798	5.000
68)*Naphthalene-d8	(2)	8.570	136	696649	5.000
84) 1,4-Phenylenediamine	(2)	9.341	108	1150558	19.974
118)*Acenaphthene-d10	(3)	11.405	164	351787	5.000
158)*Phenanthrene-d10	(4)	13.352	188	717883	5.000
180)*Pyrene-d10	(5)	15.331	212	735566	5.000
218)*Perylene-d12	(6)	19.840	264	666234	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

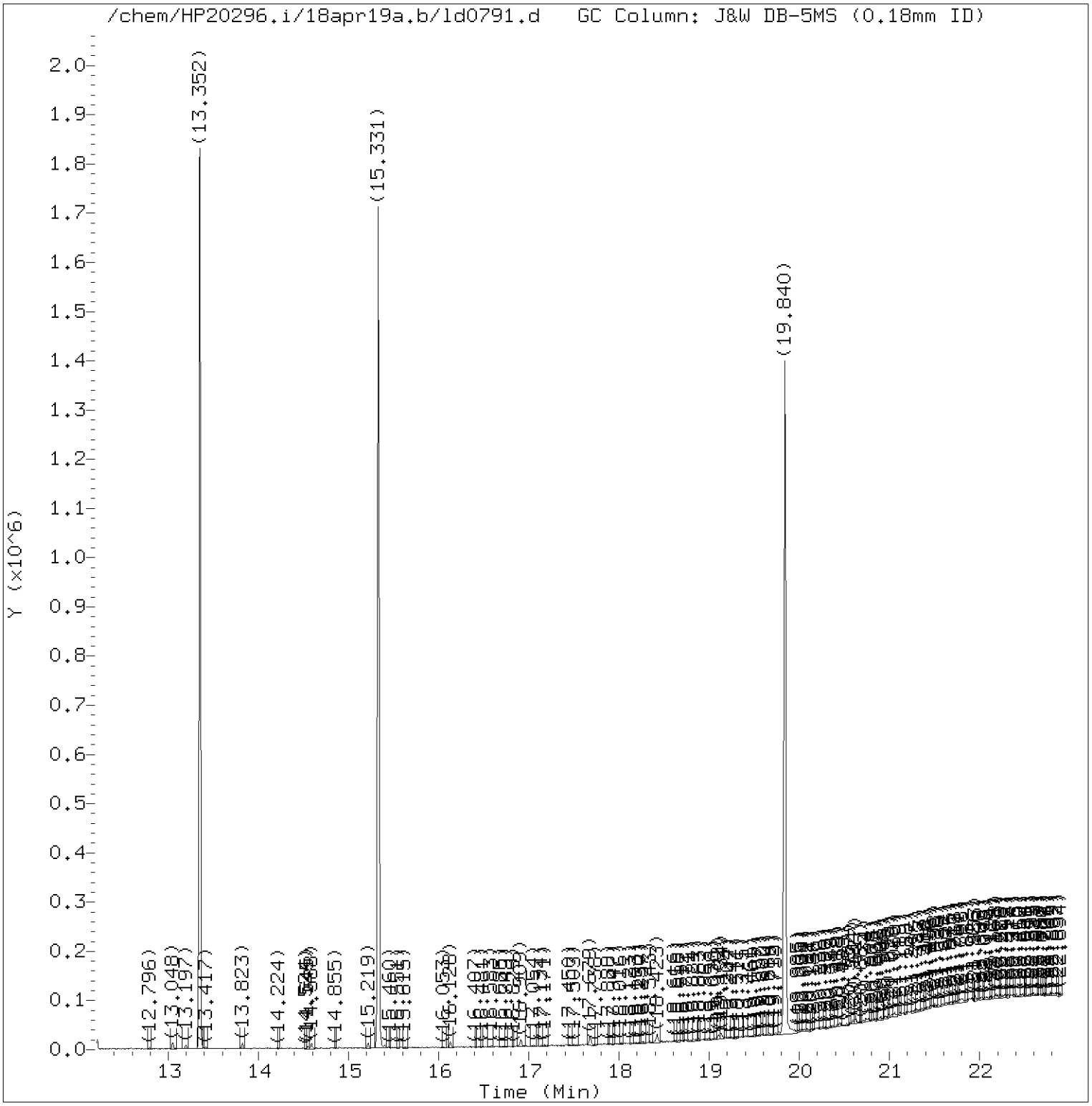
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0791.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:32 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0791.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:32 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0791.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 00:32 Analyst ID: art12405

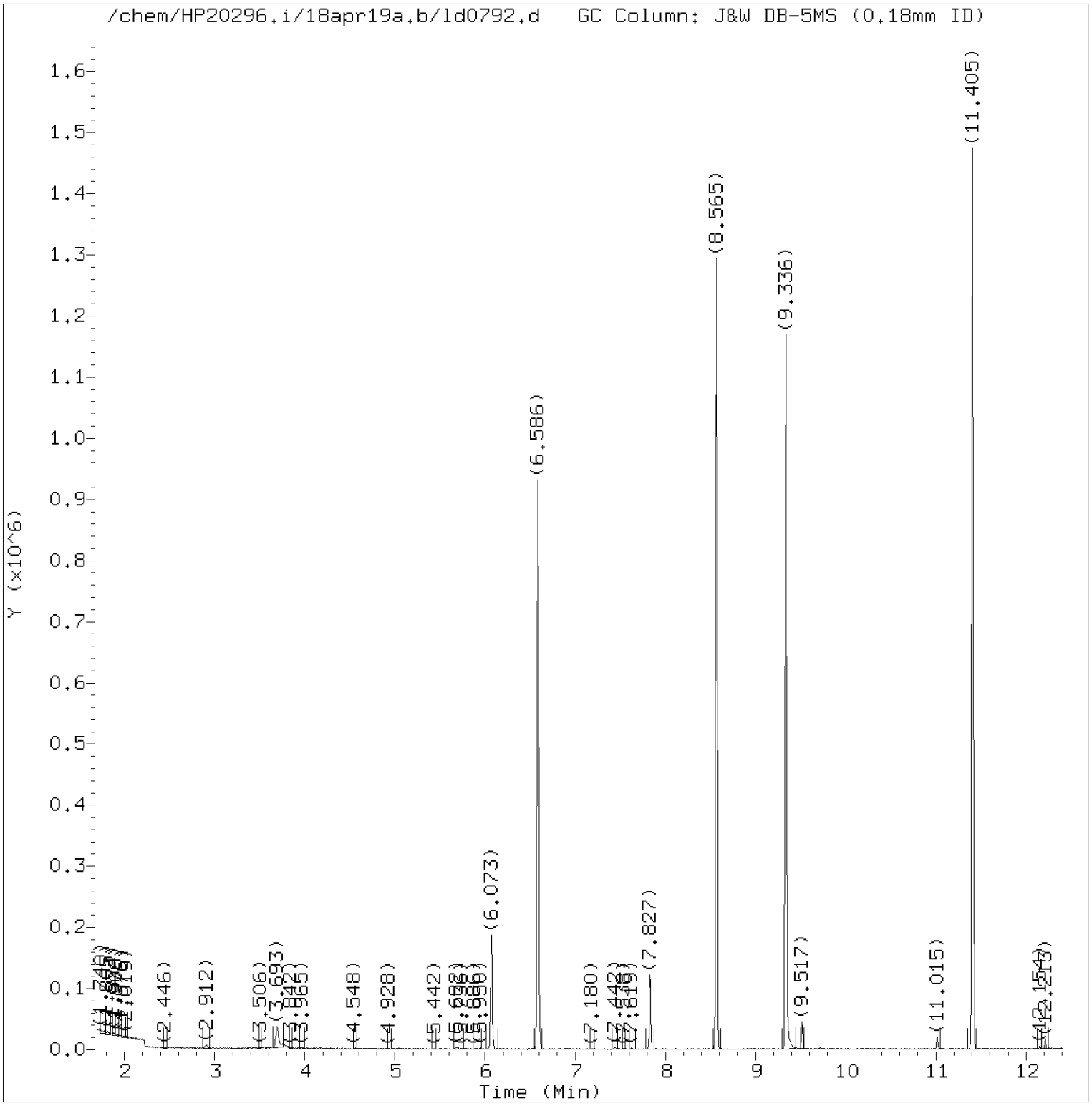
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: rvPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	205123	5.000
68)*Naphthalene-d8	(2)	8.565	136	762297	5.000
84) 1,4-Phenylenediamine	(2)	9.336	108	776751	12.323
118)*Acenaphthene-d10	(3)	11.406	164	381117	5.000
158)*Phenanthrene-d10	(4)	13.352	188	772168	5.000
180)*Pyrene-d10	(5)	15.331	212	773328	5.000
218)*Perylene-d12	(6)	19.840	264	697872	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

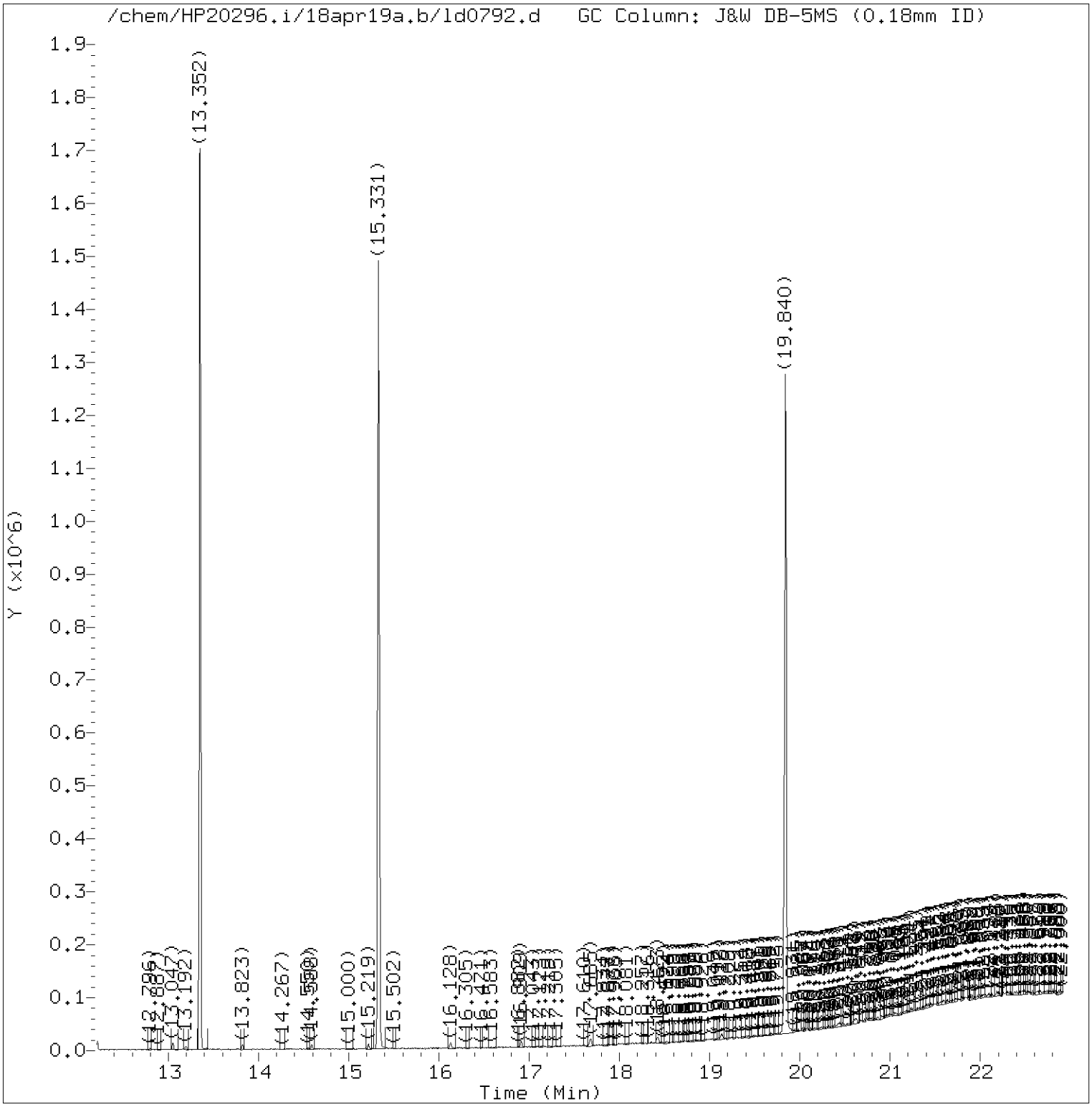
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0792.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:00 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0792.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:00 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0792.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:00 Analyst ID: art12405

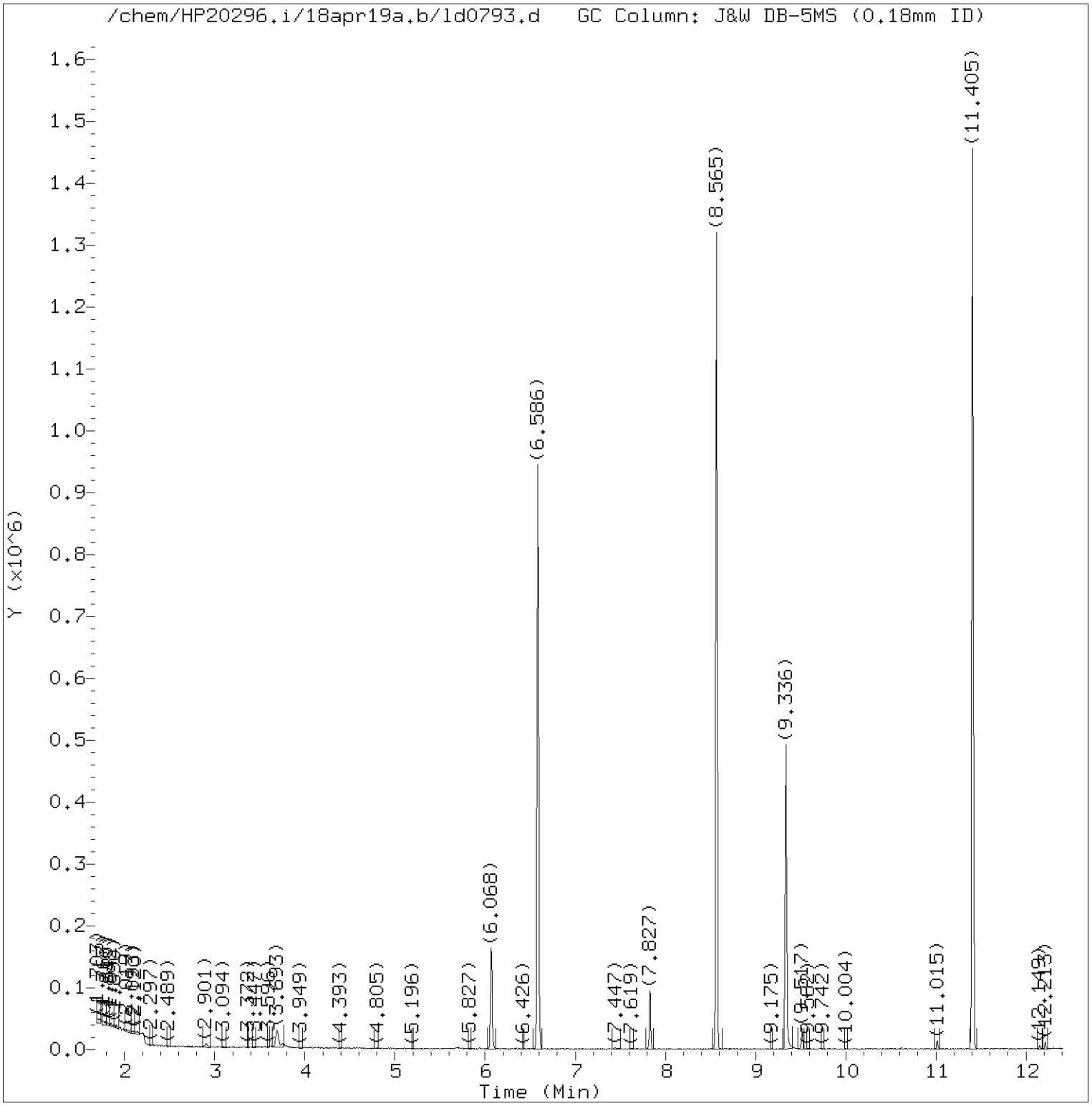
Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: rvPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	187995	5.000
68)*Naphthalene-d8	(2)	8.571	136	702274	5.000
84) 1,4-Phenylenediamine	(2)	9.336	108	419655	7.227
118)*Acenaphthene-d10	(3)	11.405	164	345436	5.000
158)*Phenanthrene-d10	(4)	13.352	188	691242	5.000
180)*Pyrene-d10	(5)	15.331	212	696034	5.000
218)*Perylene-d12	(6)	19.840	264	638154	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

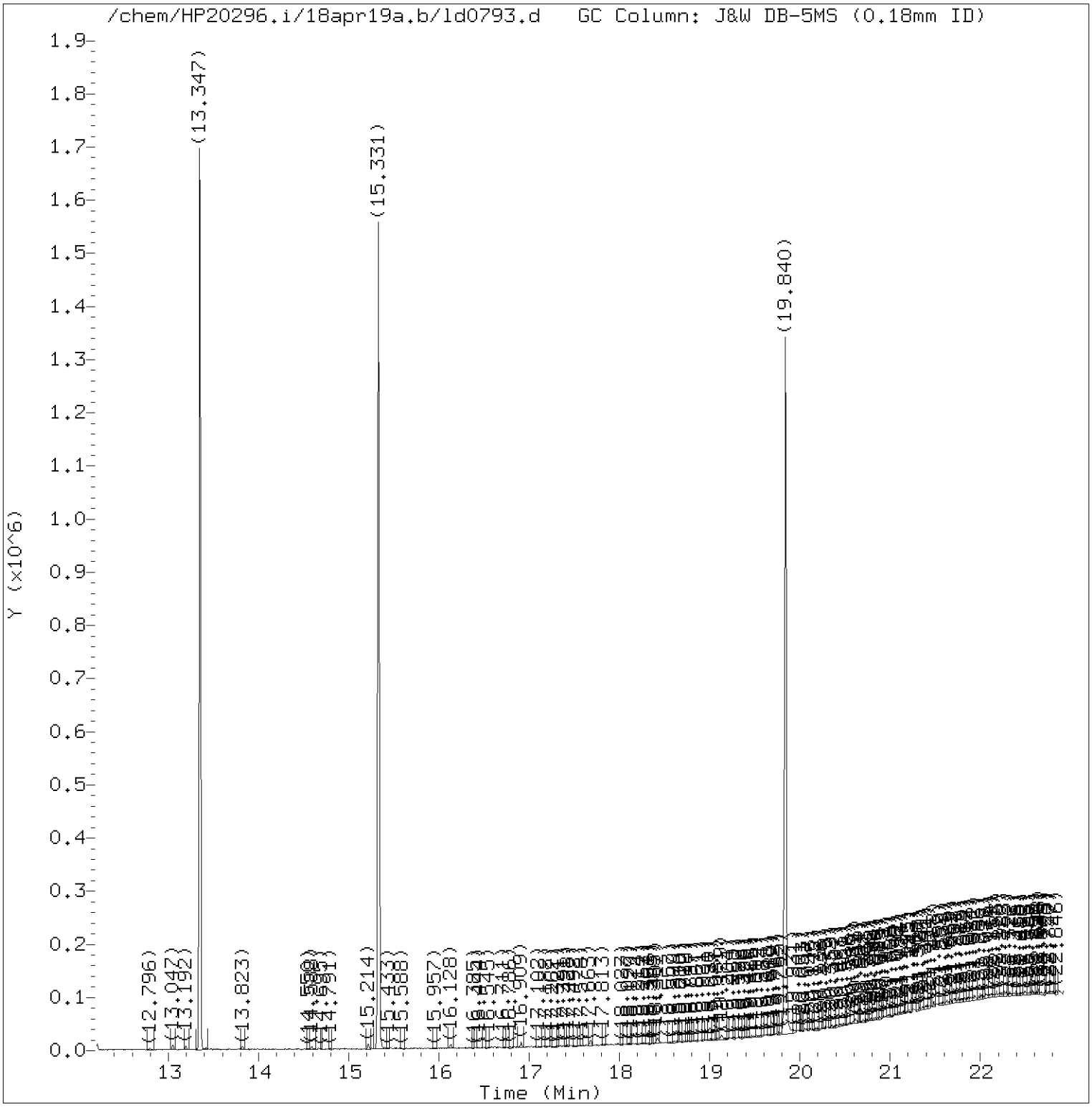
Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0793.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0793.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr19a.b/ld0793.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 01:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr19a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 08:56
Date, time and analyst ID of latest file update: 20-Apr-2018 08:56 bhs10208

Sample Name: SSTD3.75 Lab Sample ID: rvPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.586	152	186244	5.000
68)*Naphthalene-d8	(2)	8.565	136	699407	5.000
84) 1,4-Phenylenediamine	(2)	9.336	108	188234	3.255
118)*Acenaphthene-d10	(3)	11.405	164	345175	5.000
158)*Phenanthrene-d10	(4)	13.347	188	696700	5.000
180)*Pyrene-d10	(5)	15.331	212	705874	5.000
218)*Perylene-d12	(6)	19.840	264	635268	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 08:57.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr11.b/ld0410z.d

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5

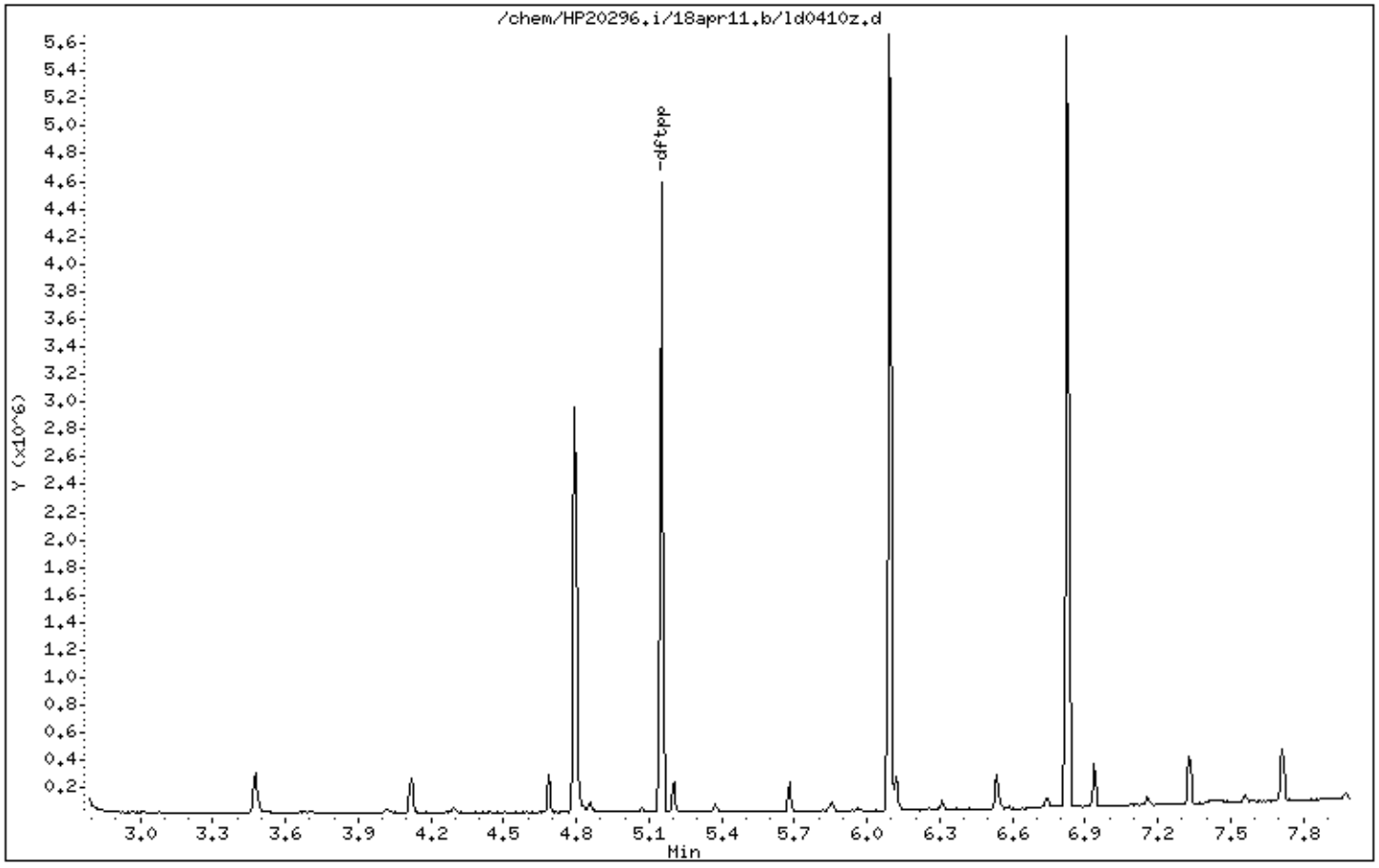
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr11.b/ld0410z.d

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5

Instrument: HP20296.i

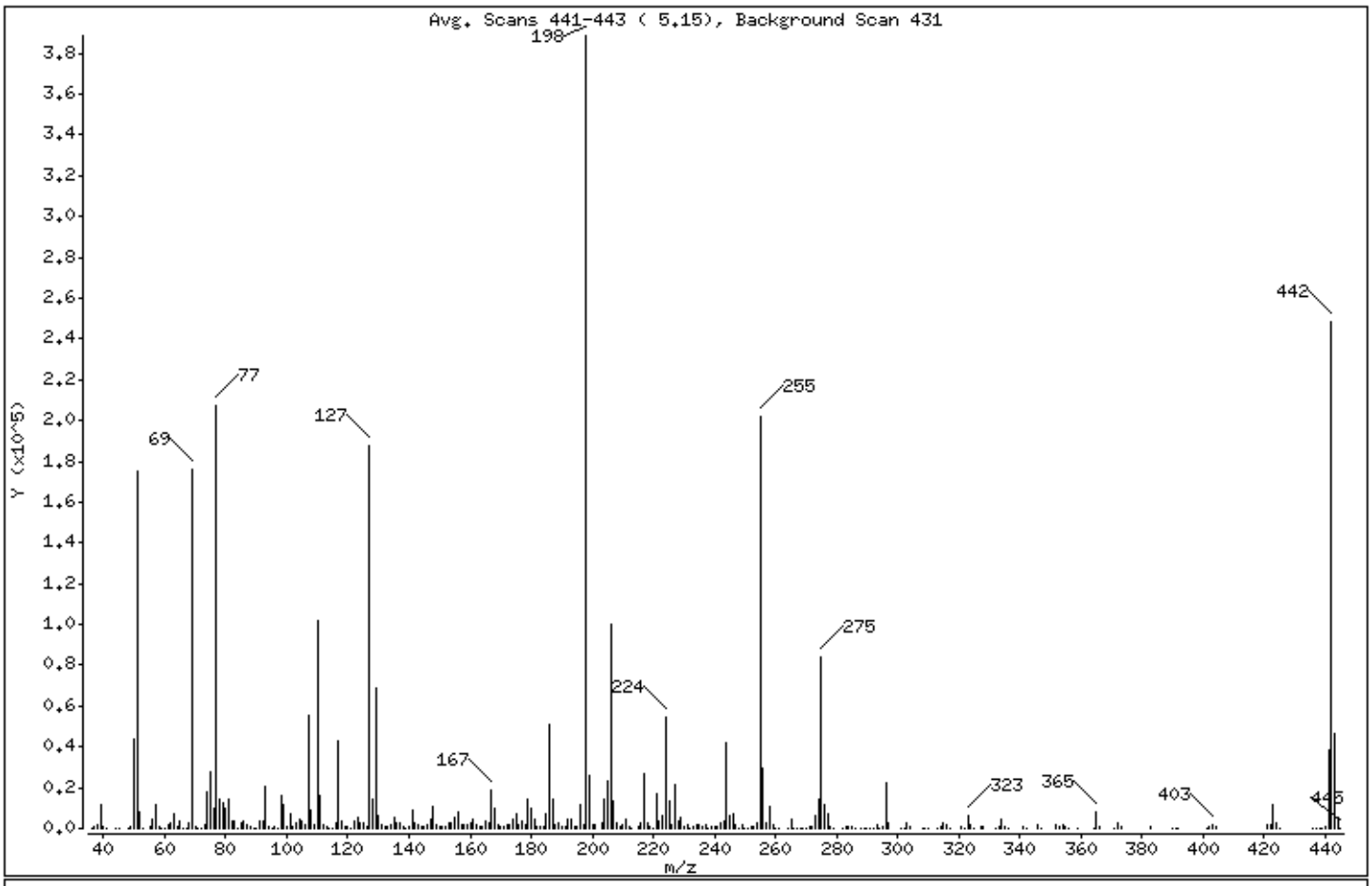
Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	44.96
68	Less than 2.00% of mass 69	0.74 (1.64)
69	Mass 69 relative abundance	45.36
70	Less than 2.00% of mass 69	0.27 (0.59)
127	10.00 - 80.00% of mass 198	48.27
197	Less than 2.00% of mass 198	0.37
199	5.00 - 9.00% of mass 198	6.70
275	10.00 - 60.00% of mass 198	21.70
365	Greater than 1.00% of mass 198	2.06
441	0.01 - 24.00% of mass 442	9.78 (15.29)
442	50.00 - 99.99% of mass 198	63.99
443	15.00 - 24.00% of mass 442	11.99 (18.74)

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	214	120.00	962	199.00	26048	284.00	514
37.00	650	121.00	328	200.00	1660	285.00	1051
38.00	1746	122.00	3191	201.00	2190	286.00	188
39.00	11925	123.00	5192	203.00	2768	288.00	102
40.00	712	124.00	2379	204.00	14270	289.00	277
41.00	322	125.00	2550	205.00	23384	290.00	87
44.00	259	126.00	764	206.00	100072	291.00	133
45.00	133	127.00	187520	207.00	13069	292.00	114
48.00	101	128.00	14220	208.00	2790	293.00	1758
49.00	1282	129.00	69144	209.00	945	294.00	388
50.00	43928	130.00	6355	210.00	1794	295.00	602
51.00	174656	131.00	1511	211.00	4035	296.00	22424
52.00	8368	132.00	740	212.00	505	297.00	3000
53.00	101	133.00	560	213.00	303	301.00	416
55.00	833	134.00	2115	215.00	1206	302.00	445
56.00	4778	135.00	5455	216.00	2451	303.00	2765
57.00	11760	136.00	2366	217.00	26768	304.00	640
58.00	481	137.00	2970	218.00	3060	308.00	285
59.00	419	138.00	590	219.00	480	309.00	116
60.00	245	139.00	370	220.00	116	310.00	304
61.00	2086	140.00	978	221.00	17056	313.00	229
62.00	2632	141.00	8976	222.00	3202	314.00	1127
63.00	7021	142.00	2891	223.00	6007	315.00	2312
64.00	1040	143.00	2009	224.00	54504	316.00	1357
65.00	3624	144.00	581	225.00	13673	317.00	225
66.00	430	145.00	651	226.00	1656	321.00	768
67.00	339	146.00	1821	227.00	21152	322.00	353
68.00	2886	147.00	4356	228.00	3175	323.00	6668
69.00	176256	148.00	10498	229.00	5175	324.00	1437
70.00	1039	149.00	1821	230.00	766	325.00	104
71.00	126	150.00	818	231.00	2063	327.00	1205
72.00	117	151.00	1268	232.00	158	328.00	562
73.00	1915	152.00	710	233.00	568	332.00	431
74.00	17608	153.00	2634	234.00	1369	333.00	615
75.00	27440	154.00	2418	235.00	1655	334.00	4210

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr11.b/ld0410z.d

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP; Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	9829	155.00	5733	236.00	1029	335.00	1001
77.00	206976	156.00	8109	237.00	1823	336.00	120
78.00	13974	157.00	1667	238.00	373	341.00	834
79.00	12894	158.00	1404	239.00	936	342.00	318
80.00	9439	159.00	1399	240.00	804	346.00	1638
81.00	14323	160.00	2681	241.00	1310	347.00	129
82.00	3201	161.00	4121	242.00	2944	352.00	1959
83.00	3298	162.00	1392	243.00	3178	353.00	1295
84.00	405	163.00	484	244.00	41600	354.00	1860
85.00	2658	164.00	645	245.00	5985	355.00	573
86.00	3714	165.00	3334	246.00	7457	356.00	112
87.00	1838	166.00	2844	247.00	1646	359.00	97
88.00	666	167.00	19104	248.00	425	364.00	166
89.00	349	168.00	9385	249.00	1555	365.00	8022
90.00	86	169.00	1643	250.00	333	366.00	1295
91.00	3186	170.00	560	251.00	373	371.00	416
92.00	3154	171.00	766	252.00	459	372.00	2682
93.00	20416	172.00	1644	253.00	1223	373.00	832
94.00	1336	173.00	2228	254.00	2490	383.00	780
95.00	389	174.00	4241	255.00	202176	390.00	362
96.00	949	175.00	7051	256.00	29616	391.00	287
97.00	185	176.00	2096	257.00	2804	392.00	128
98.00	16053	177.00	3243	258.00	10892	401.00	344
99.00	12005	178.00	1494	259.00	1634	402.00	961
100.00	1182	179.00	14302	260.00	394	403.00	1876
101.00	7436	180.00	9605	261.00	336	404.00	759
102.00	459	181.00	4199	264.00	334	421.00	1547
103.00	2494	182.00	1017	265.00	4240	422.00	1531
104.00	4525	183.00	447	266.00	406	423.00	11186
105.00	3821	184.00	1138	267.00	131	424.00	2786
106.00	1507	185.00	6963	268.00	95	425.00	406
107.00	55128	186.00	50680	269.00	105	436.00	108
108.00	8869	187.00	14237	270.00	277	437.00	136
109.00	1596	188.00	1746	271.00	486	438.00	393
110.00	101968	189.00	2939	272.00	723	439.00	183

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Date : 11-APR-2018 07:24

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP0878;1;3;DFTPP;

Operator: hbz01996

Column phase: DB-5MS Column diameter: 0.18

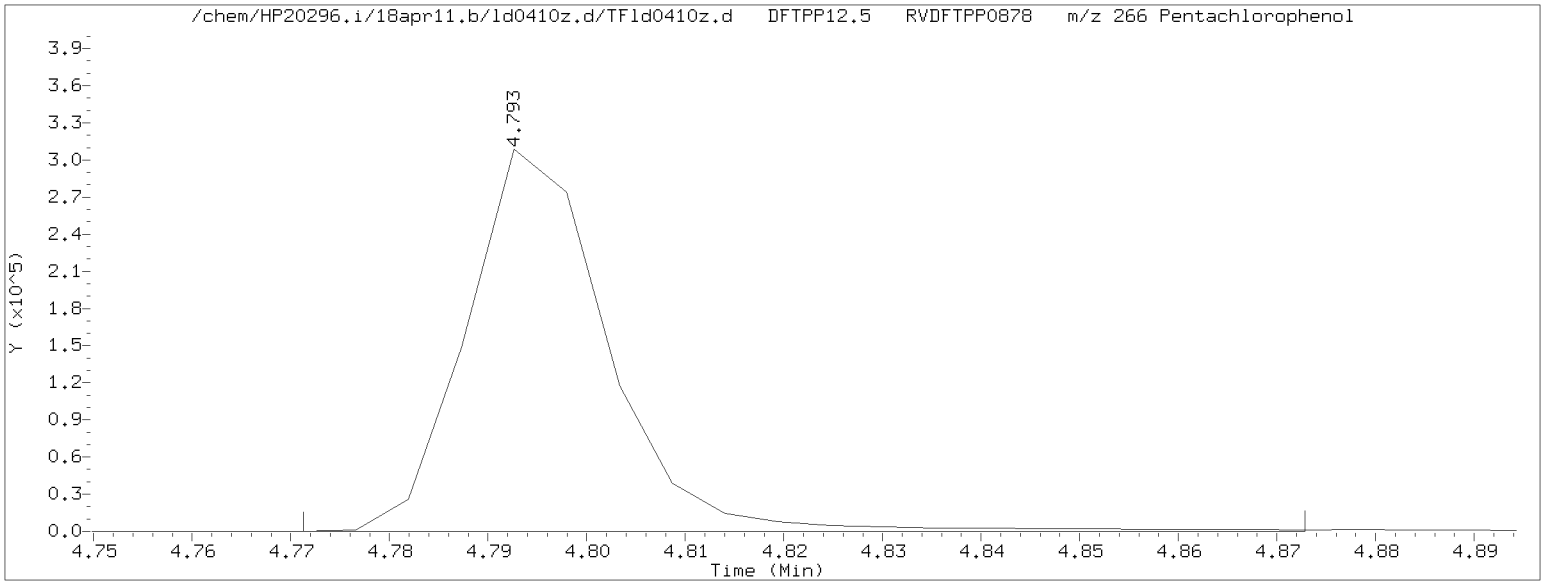
Data File: ld0410z.d
Spectrum: Avg. Scans 441-443 (5.15), Background Scan 431
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	15833	190.00	682	273.00	5966	440.00	528
112.00	2146	191.00	1209	274.00	14719	441.00	38016
113.00	663	192.00	4178	275.00	84336	442.00	248640
114.00	85	193.00	4757	276.00	11776	443.00	46600
115.00	399	194.00	1023	277.00	6741	444.00	4503
116.00	3104	195.00	1016	278.00	1184	445.00	164
117.00	42984	196.00	11637	279.00	323		
118.00	3539	197.00	1427	282.00	151		
119.00	528	198.00	388608	283.00	924		

Digitally signed by Brandon H. Smith on 04/13/2018 at 08:40.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

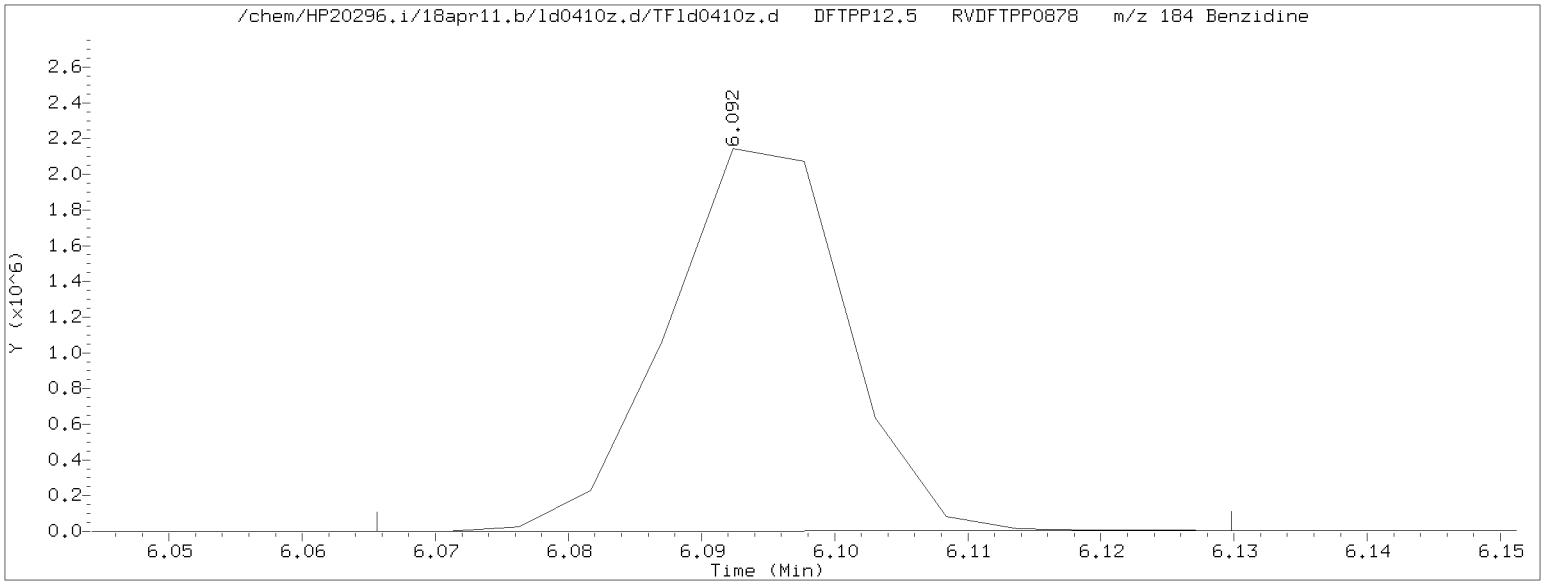
Instrument ID: HP20296.i Injection Date: 11-APR-2018 07:24 Operator: hbz01996



Pentachlorophenol EICP peak height = 308800 EICP peak height at 10% = 30880 Pentachlorophenol EICP area = 308021

Pentachlorophenol EICP peak apex (min.) = 4.793
RT at 10% of front half of EICP (min.) = 4.782 'Front' peak width (min.) = 0.0104500000
RT at 10% of back half of EICP (min.) = 4.810 'Tailing' peak width (min.) = 0.0177500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0177500000}{0.0104500000} = 1.699$$



Benzidine EICP peak height = 2141262 EICP peak height at 10% = 214126 Benzidine EICP area = 2006523

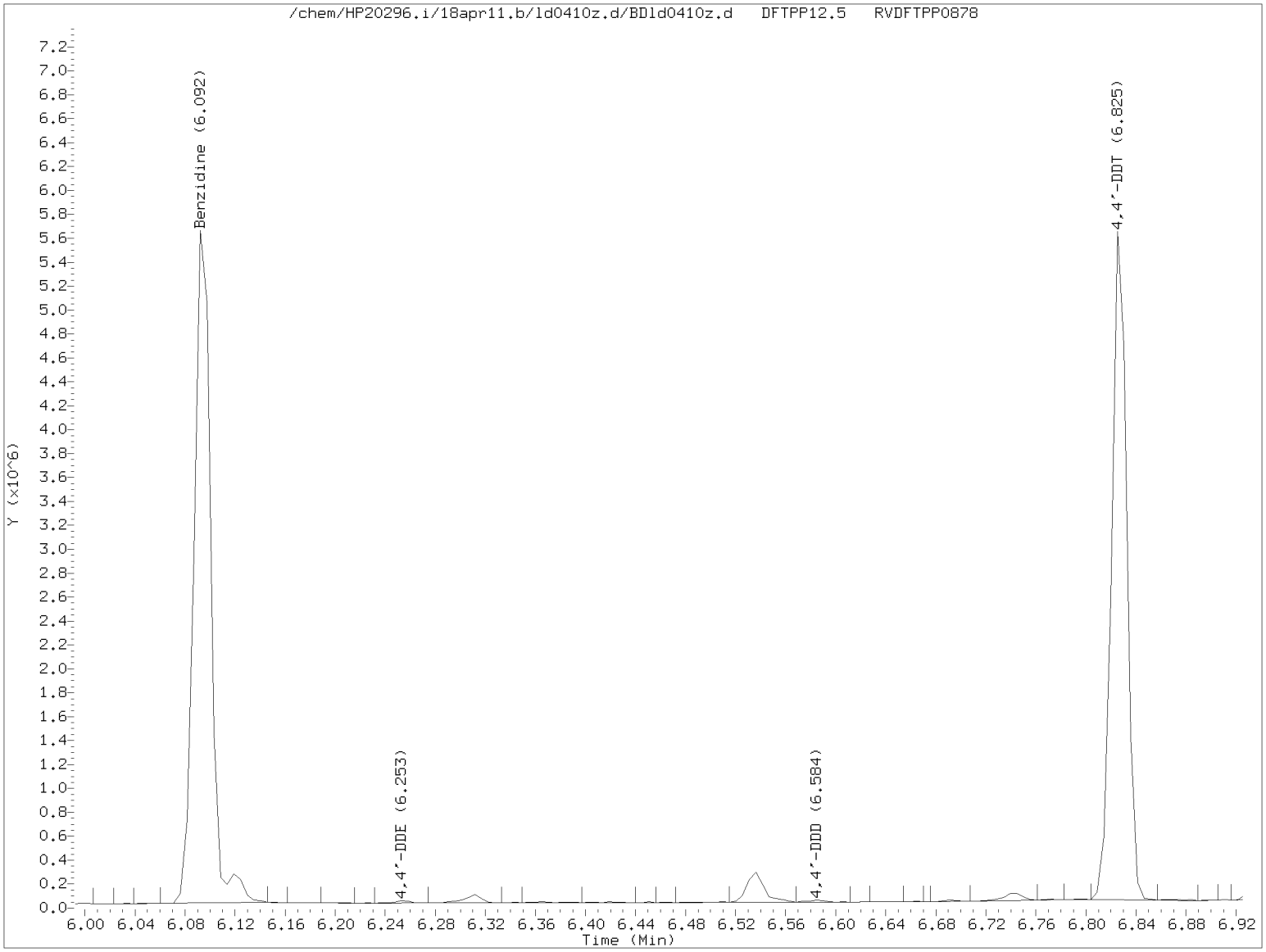
Benzidine EICP peak apex (min.) = 6.092
RT at 10% of front half of EICP (min.) = 6.081 'Front' peak width (min.) = 0.0111000000
RT at 10% of back half of EICP (min.) = 6.107 'Tailing' peak width (min.) = 0.0147166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0147166667}{0.0111000000} = 1.326$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

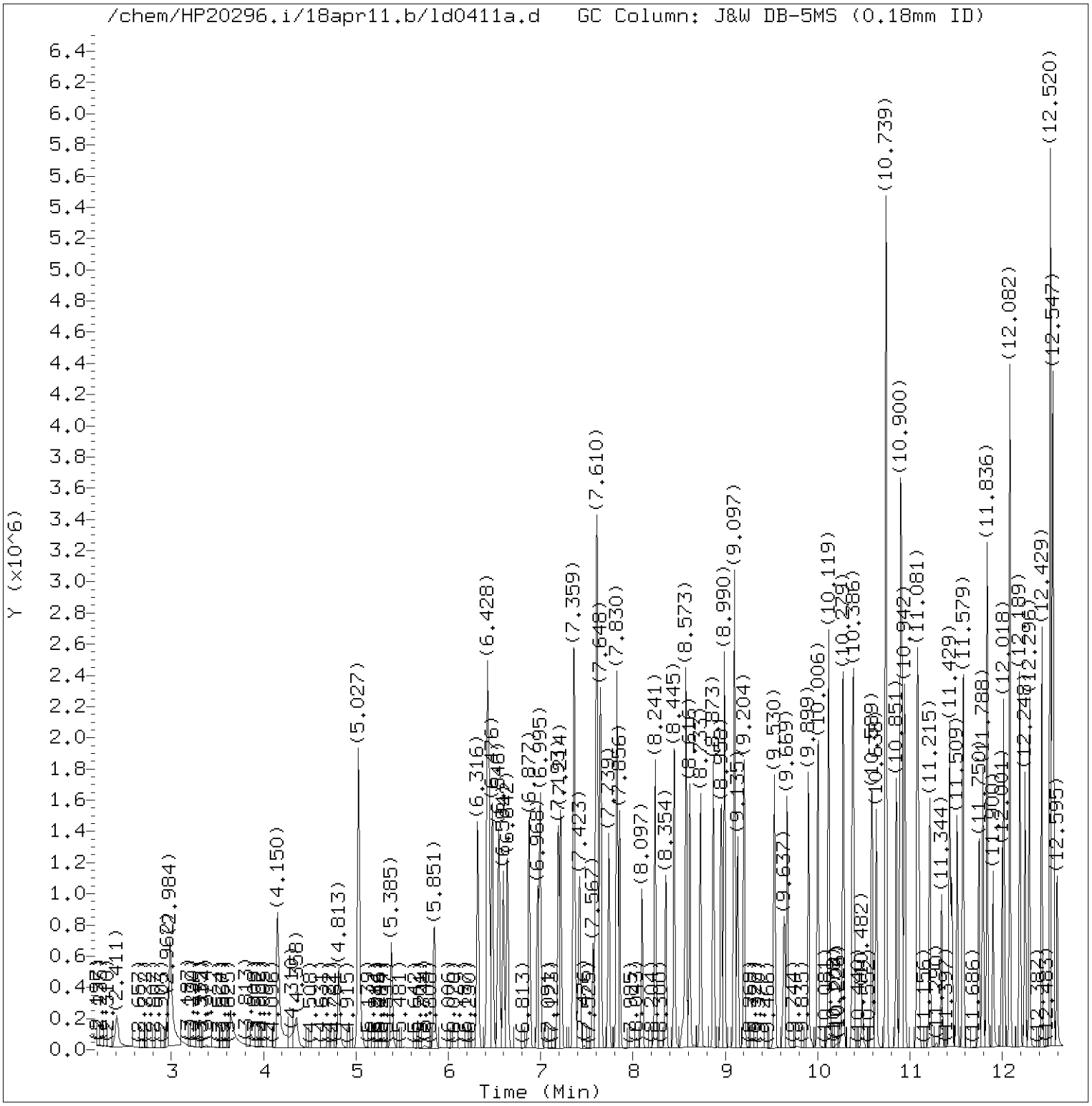
Instrument ID: HP20296.i Injection Date: 11-APR-2018 07:24 Operator: hbz01996



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{15587 + 17791}{15587 + 17791 + 4771824} \times 100 = 0.7$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

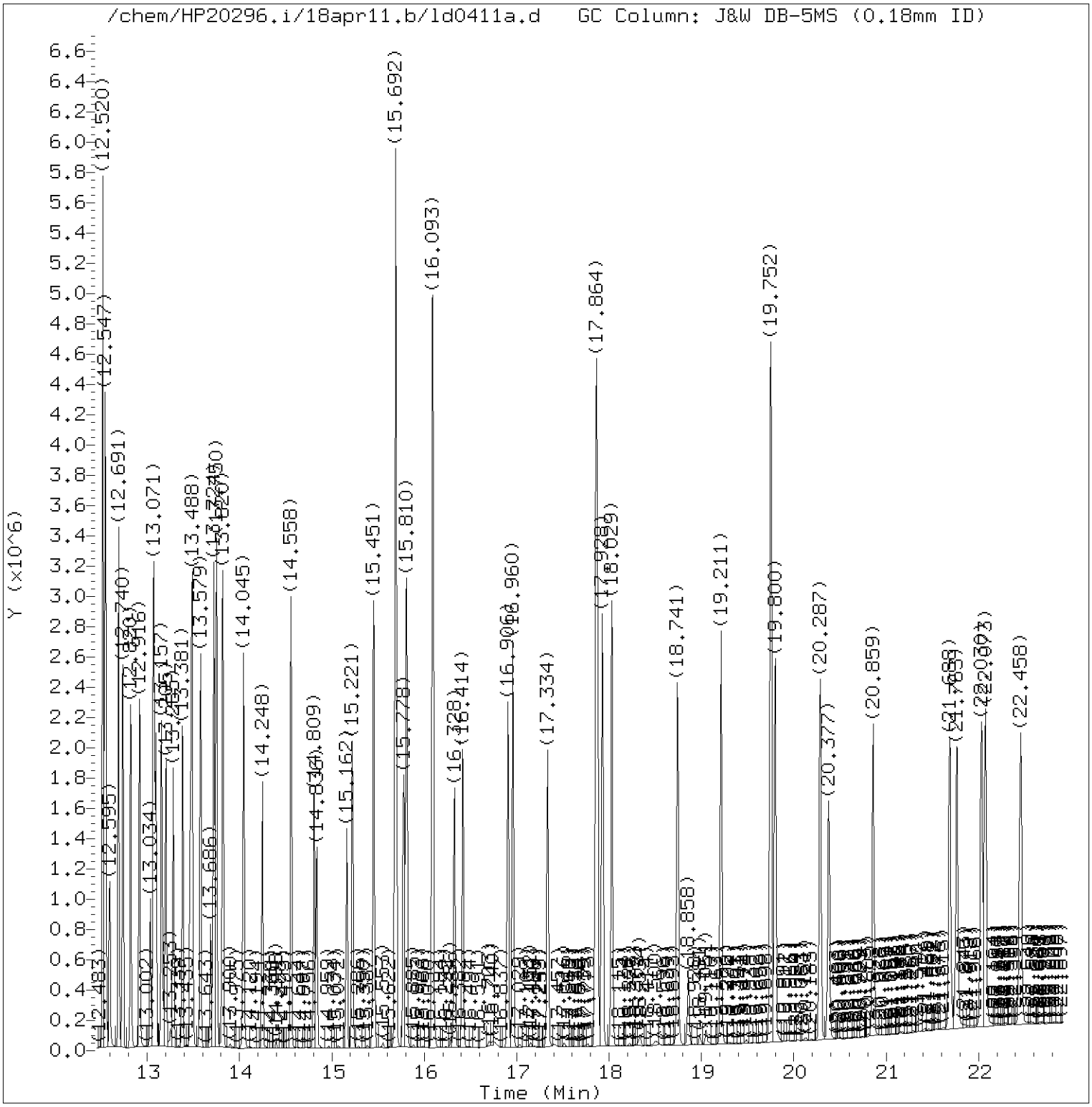
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.411	88	217982	7.582
5) N-Nitrosodimethylamine	(1)	2.962	74	333412	7.616
6) Pyridine	(1)	2.989	79	577705	7.396
8) 2-Picoline	(1)	4.150	93	587778	7.442
9) N-Nitrosomethylethylamine	(1)	4.358	88	237321	7.498
10) Methyl methanesulfonate	(1)	4.813	80	287126	7.489
12)$2-Fluorophenol	(1)	5.027	112	945841	15.708
14) N-Nitrosodiethylamine	(1)	5.385	102	231651	7.892
43) Total Cresols	(1)			923895	15.448
16) Ethyl methanesulfonate	(1)	5.851	109	242352	7.581
17) Benzaldehyde	(1)	6.316	77	467030	7.818
18)$Phenol-d6	(1)	6.423	99	1213509	15.370
19) Phenol	(1)	6.444	94	704017	7.745
20) Aniline	(1)	6.476	93	823646	7.859
21) a-methylstyrene	(1)	6.551	118	160951	7.030
23) bis(2-Chloroethyl)ether	(1)	6.594	93	533902	7.890
24) 2-Chlorophenol	(1)	6.642	128	465477	7.892
25) 1,3-Dichlorobenzene	(1)	6.877	146	518250	7.783
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	219894	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	519431	7.709
28) Benzyl alcohol	(1)	7.193	108	276998	7.036
29) 1,2-Dichlorobenzene	(1)	7.214	146	501023	7.809
31) Indene	(1)	7.359	115	666361	7.088
32) 2-Methylphenol	(1)	7.364	108	447101	7.687
100) Isosafrole	(3)			397646	7.373
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	733333	7.634
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	733333	7.634
36) N-Nitrosopyrrolidine	(1)	7.567	100	243305	7.640
37) Acetophenone	(1)	7.600	105	733625	8.272
38) 4-Methylphenol	(1)	7.610	108	476794	7.761
39) N-Nitroso-di-n-propylamine	(1)	7.616	70	389329	7.701
40) N-Nitrosomorpholine	(1)	7.642	56	320050	7.575
41) o-Toluidine	(1)	7.648	106	796456	7.744
44) Hexachloroethane	(1)	7.739	117	213835	7.443
45)$Nitrobenzene-d5	(2)	7.830	82	1120068	15.350
46) Nitrobenzene	(2)	7.856	77	576823	7.750
125) 2,4_2,6-Dinitrotoluenes	(3)			498715	15.106
50) N-Nitrosopiperidine	(2)	8.097	114	231680	7.574
52) Isophorone	(2)	8.241	82	988371	7.597
53) 2-Nitrophenol	(2)	8.354	139	230200	7.654

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	498320	7.729
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	234627	7.353
58) Benzoic acid	(2)	8.578	105	312985	9.064
57) bis(2-Chloroethoxy)methane	(2)	8.616	93	640987	7.580
62) 2,4-Dichlorophenol	(2)	8.733	162	389151	7.752
151) Diallate trans/cis	(4)			469119	7.424
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	428199	7.655
68)*Naphthalene-d8	(2)	8.958	136	846035	5.000
69) Naphthalene	(2)	8.990	128	1369378	7.833
70) 4-Chloroaniline	(2)	9.097	127	540137	7.569
71) 2,6-Dichlorophenol	(2)	9.102	162	381866	7.681
72) Hexachloropropene	(2)	9.135	213	300172	7.416
74) Hexachlorobutadiene	(2)	9.204	225	264869	7.810
78) Quinoline	(2)	9.536	129	813359	7.303
79) Caprolactam	(2)	9.637	113	120307	7.643
80) N-Nitrosodi-n-butylamine	(2)	9.669	84	362783	6.612
83) 4-Chloro-3-methylphenol	(2)	9.899	107	425702	7.728
85) Safrole	(2)	10.006	162	344726	7.350
86) 2-Methylnaphthalene	(2)	10.119	142	897640	7.728
87) 1-Methylnaphthalene	(2)	10.279	142	822044	7.714
88) Hexachlorocyclopentadiene	(3)	10.375	237	262136	7.561
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	439043	7.529
91) cis-Isosafrole	(3)	10.482	162	64130	1.264
93) 2,4,6-Trichlorophenol	(3)	10.589	196	280628	7.664
95) 2,4,5-Trichlorophenol	(3)	10.638	196	301099	7.834
96)$2-Fluorobiphenyl	(3)	10.739	172	2023719	15.185
97) trans-Isosafrole	(3)	10.851	162	333516	6.109
98) 1,1'-Biphenyl	(3)	10.900	154	1106868	8.053
99) 2-Chloronaphthalene	(3)	10.910	162	855845	7.327
101) 1-Chloronaphthalene	(3)	10.942	162	816450	7.557
103) Diphenyl ether	(3)	11.081	170	576142	7.505
104) 2-Nitroaniline	(3)	11.098	138	262202	7.670
108) 1,4-Naphthoquinone	(3)	11.215	158	343508	7.443
111) 1,3-Dinitrobenzene	(3)	11.344	168	130074	6.684
110) Dimethylphthalate	(3)	11.429	163	969316	7.408
109) 1,4-Dinitrobenzene	(3)	11.456	168	146800	8.080
113) 2,6-Dinitrotoluene	(3)	11.509	165	214783	7.731
114) Acenaphthylene	(3)	11.579	152	1261562	7.771
117) 3-Nitroaniline	(3)	11.750	138	224394	7.666
118)*Acenaphthene-d10	(3)	11.788	164	428686	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	860432	7.474
120) 2,4-Dinitrophenol	(3)	11.900	184	153840	9.211
121) 4-Nitrophenol	(3)	12.001	109	150985	7.318
122) Pentachlorobenzene	(3)	12.018	250	357974	7.528
124) Dibenzofuran	(3)	12.082	168	1205707	7.539
123) 2,4-Dinitrotoluene	(3)	12.087	165	283932	7.375
126) 1-Naphthylamine	(3)	12.189	143	814127	7.154
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	229384	7.670
128) 2-Naphthylamine	(3)	12.296	143	750921	6.965
129) Diethylphthalate	(3)	12.429	149	962321	7.473
130) Thionazin	(3)	12.520	107	162580	7.416
131) Fluorene	(3)	12.520	166	964347	7.719
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	466114	7.527
133) 5-Nitro-o-toluidine	(3)	12.547	152	258699	7.602
134) 4-Nitroaniline	(3)	12.558	138	229388	7.754
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	162508	7.241
136) N-Nitrosodiphenylamine	(4)	12.691	169	762715	7.353
137) NDPA as diphenylamine	(4)	12.691	169	762715	7.353
139) 1,2-Diphenylhydrazine	(4)	12.740	77	1086688	7.507
140)$2,4,6-Tribromophenol	(3)	12.825	330	222268	14.999
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	183233	7.443
144) 1,3,5-Trinitrobenzene	(4)	13.034	213	98364	7.115
145) Diallate (peak 1)	(4)	13.066	86	402675	6.145
146) Phorate	(4)	13.077	75	721210	7.768
147) Phenacetin	(4)	13.098	108	508748	7.760
148) 4-Bromophenyl-phenylether	(4)	13.157	248	256706	7.406
149) Diallate (peak 2)	(4)	13.173	86	66444	1.279
150) Hexachlorobenzene	(4)	13.205	284	260514	7.318
152) Dimethoate	(4)	13.285	87	422646	7.565
153) Atrazine	(4)	13.387	200	272821	7.774
154) Pentachlorophenol	(4)	13.467	266	156591	7.182
156) Pentachloronitrobenzene	(4)	13.478	237	125575	7.391
155) 4-Aminobiphenyl	(4)	13.488	169	890155	7.537
157) Pronamide	(4)	13.579	173	460703	7.875
158)*Phenanthrene-d10	(4)	13.718	188	847675	5.000
159) Dinoseb	(4)	13.724	211	256926	7.314
160) Phenanthrene	(4)	13.750	178	1394297	7.460
162) Anthracene	(4)	13.820	178	1432349	7.644
168) Carbazole	(4)	14.045	167	1249511	7.531
169) Methyl parathion	(4)	14.248	109	321668	7.553

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	1654142	7.407
172) Parathion	(4)	14.804	109	203503	7.384
173) 4-Nitroquinoline-1-oxide	(4)	14.836	190	152875	6.907
227) Total PAHs	(6)			23389246	137.546
174) Octachlorostyrene	(4)	15.162	308	92041	6.911
176) Isodrin	(4)	15.221	193	169601	7.324
178) Fluoranthene	(4)	15.451	202	1603710	7.629
179) Benzidine	(5)	15.692	184	2853827	22.213
180)*Pyrene-d10	(5)	15.778	212	871904	5.000
182) Pyrene	(5)	15.810	202	1655514	7.464
184)$Terphenyl-d14	(5)	16.093	244	2110890	15.096
187) p-Dimethylaminoazobenzene	(5)	16.328	225	263672	7.792
190) Chlorobenzilate	(5)	16.414	139	491277	7.435
192) 3,3'-Dimethylbenzidine	(5)	16.906	212	1059762	7.584
193) Butylbenzylphthalate	(5)	16.960	149	770750	7.479
196) 2-Acetylaminofluorene	(5)	17.334	181	605629	7.425
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	535227	7.506
200) Benzo(a)anthracene	(5)	17.864	228	1527968	7.711
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	316789	7.315
201) Chrysene	(5)	17.928	228	1468906	7.663
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	1083068	7.438
208) 6-Methylchrysene	(5)	18.741	242	995773	7.378
210) Di-n-octylphthalate	(6)	19.211	149	1846002	7.375
211) Benzo(b)fluoranthene	(6)	19.752	252	1471661	7.541
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.752	256	626398	7.781
213) Benzo(k)fluoranthene	(6)	19.800	252	1416403	7.538
216) Benzo(a)pyrene	(6)	20.287	252	1347641	7.675
218)*Perylene-d12	(6)	20.377	264	795931	5.000
220) 3-Methylcholanthrene	(6)	20.859	268	648743	7.599
222) Dibenz(a,h)acridine	(6)	21.688	279	1092313	7.320
223) Dibenz(a,j)acridine	(6)	21.768	279	1122303	7.405
224) Indeno(1,2,3-cd)pyrene	(6)	22.030	276	1257937M	7.544
225) Dibenz(a,h)anthracene	(6)	22.073	278	1315620	7.767
226) Benzo(g,h,i)perylene	(6)	22.458	276	1321837	7.672

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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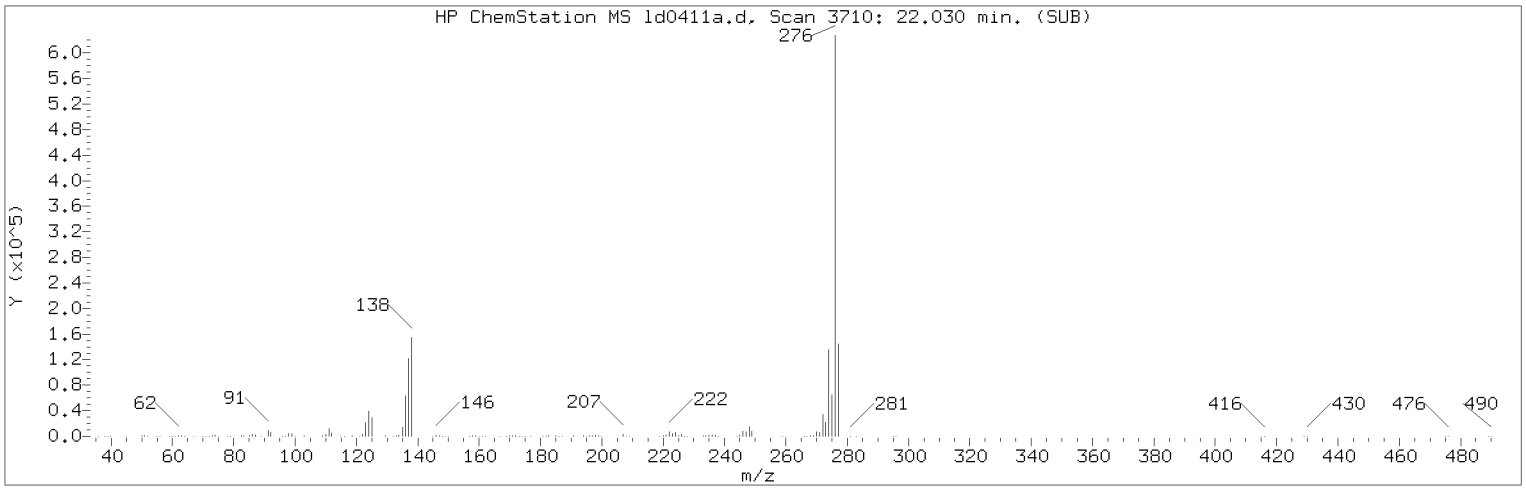
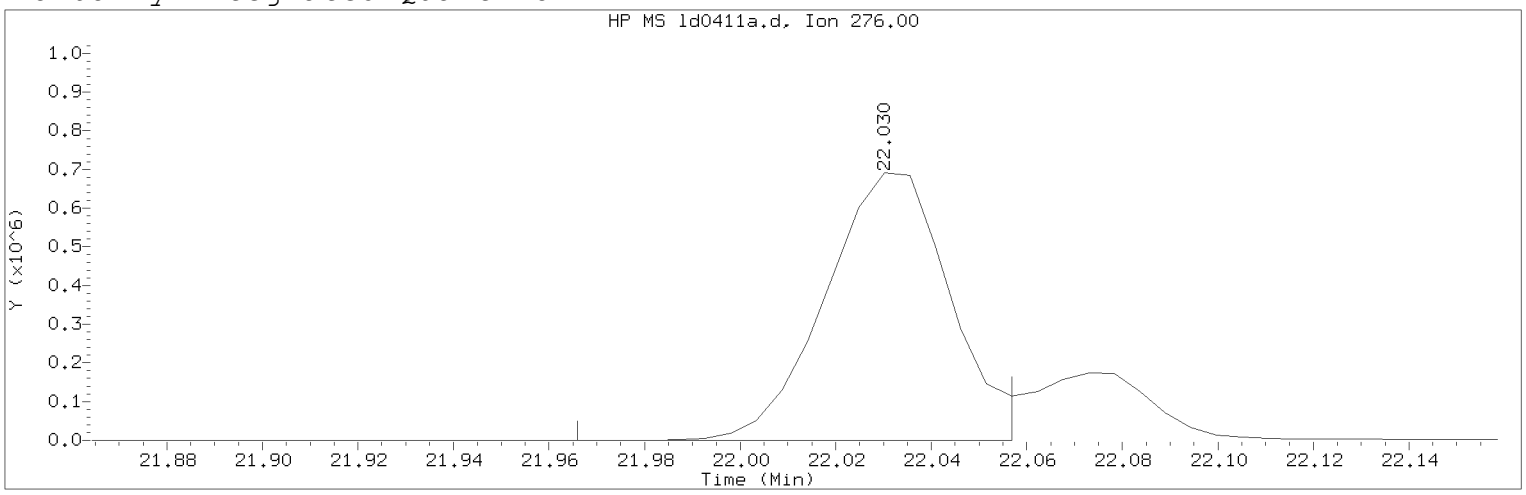
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

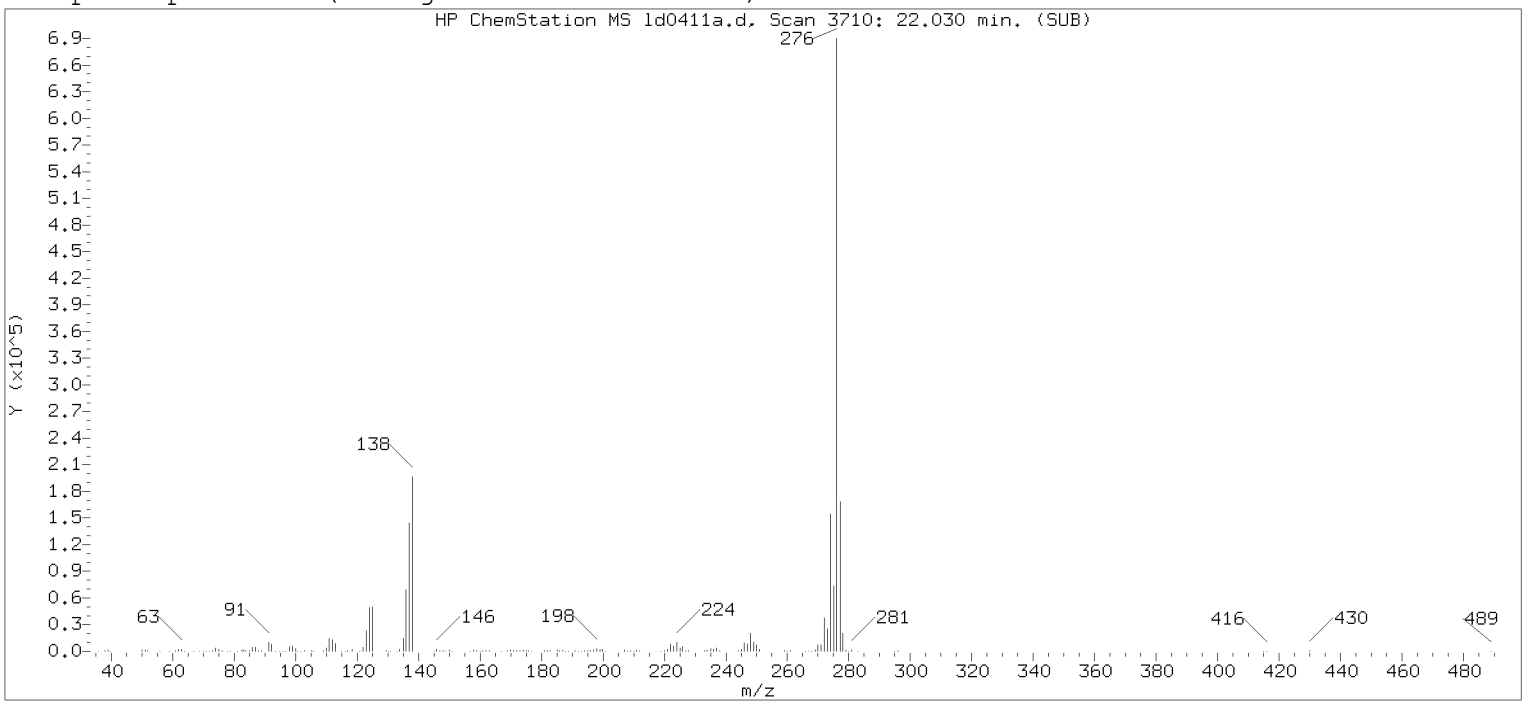
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3710
Retention Time (minutes) : 22.030
Quant Ion : 276.00
Area (flag) : 1257937M
On-Column Amount (ng/ul) : 7.5442
Integration start scan : 3697 Integration stop scan: 3714
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

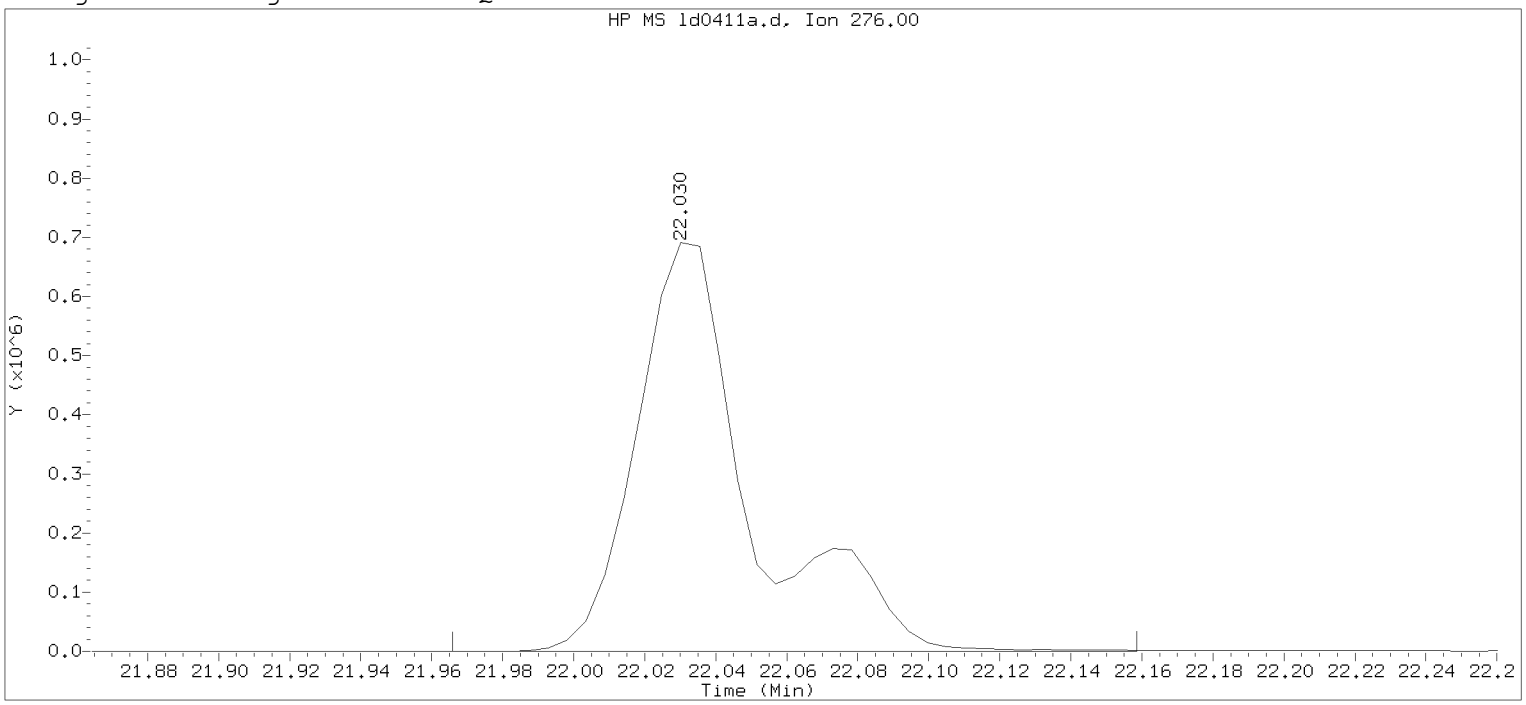
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0411a.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 07:59 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270c.m Sublist used: all1
Calibration date and time: 11-APR-2018 08:42
Date, time and analyst ID of latest file update: 11-Apr-2018 08:42 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3710		
Retention Time (minutes)	: 22.030		
Quant Ion	: 276.00		
Area	: 1549553		
On-column Amount (ng/ul)	: 8.8069		
Integration start scan	: 3697	Integration stop scan:	3733
Y at integration start	: 0	Y at integration end:	0

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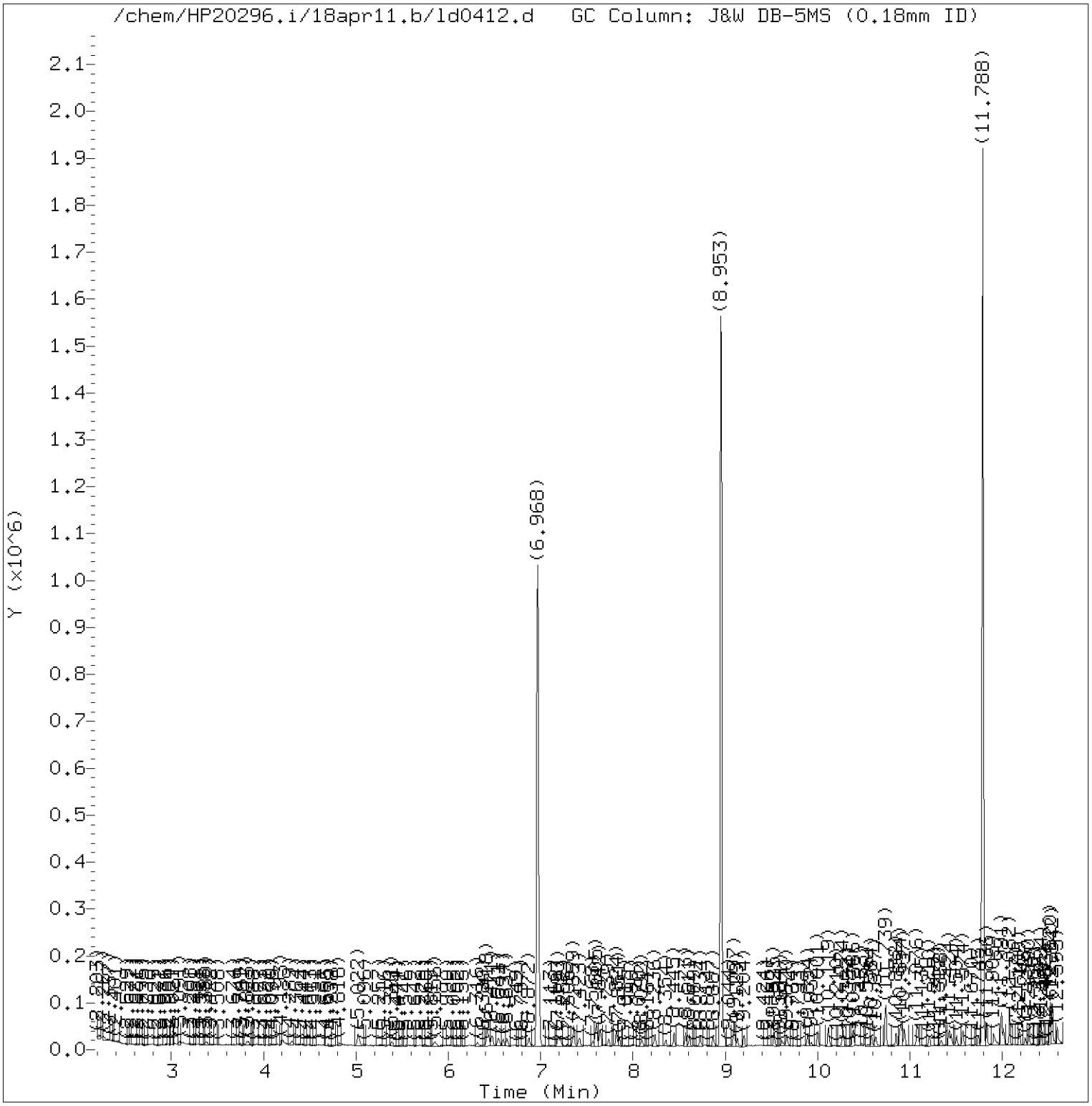
Target 3.5 esignature used. FID Page 1659



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

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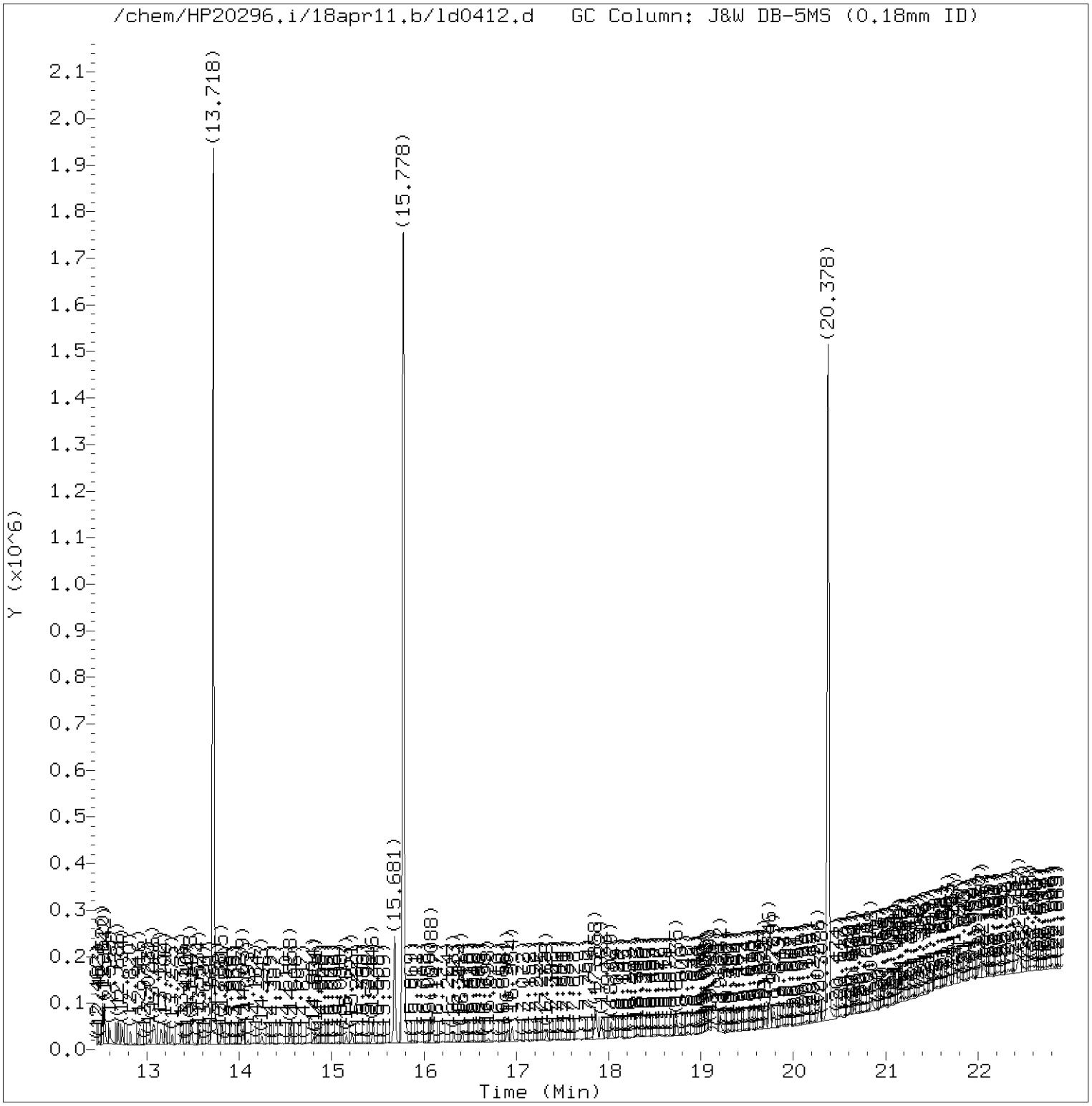
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	3.037	74	4401	0.100
6) Pyridine	(1)	3.091	79	7230	0.092
8) 2-Picoline	(1)	4.193	93	4931	0.062
10) Methyl methanesulfonate	(1)	4.824	80	3355	0.087
12)$2-Fluorophenol	(1)	5.022	112	11166	0.184
14) N-Nitrosodiethylamine	(1)	5.391	102	2576	0.087
43) Total Cresols	(1)			13296	0.221
17) Benzaldehyde	(1)	6.316	77	1808	0.030
18)$Phenol-d6	(1)	6.418	99	16035	0.202
19) Phenol	(1)	6.439	94	8650	0.094
20) Aniline	(1)	6.476	93	10419	0.099
23) bis(2-Chloroethyl)ether	(1)	6.594	93	6292	0.092
24) 2-Chlorophenol	(1)	6.637	128	5370	0.090
25) 1,3-Dichlorobenzene	(1)	6.872	146	5746	0.086
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	221518	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	6388	0.094
28) Benzyl alcohol	(1)	7.193	108	3697	0.093
29) 1,2-Dichlorobenzene	(1)	7.220	146	5569	0.086
31) Indene	(1)	7.359	115	8442	0.089
32) 2-Methylphenol	(1)	7.364	108	6565	0.112
100) Isosafrole	(3)			6215	0.116
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	11159	0.115
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	11159	0.115
36) N-Nitrosopyrrolidine	(1)	7.568	100	3895	0.121
37) Acetophenone	(1)	7.594	105	7300	0.082
38) 4-Methylphenol	(1)	7.600	108	6731	0.109
39) N-Nitroso-di-n-propylamine	(1)	7.605	70	5607	0.110
40) N-Nitrosomorpholine	(1)	7.632	56	5068	0.119
41) o-Toluidine	(1)	7.648	106	10638	0.103
44) Hexachloroethane	(1)	7.733	117	2667	0.092
45)$Nitrobenzene-d5	(2)	7.819	82	14962	0.199
46) Nitrobenzene	(2)	7.851	77	7020	0.092
125) 2,4_2,6-Dinitrotoluenes	(3)			6291	0.192
50) N-Nitrosopiperidine	(2)	8.092	114	3499	0.111
52) Isophorone	(2)	8.236	82	13965	0.104
53) 2-Nitrophenol	(2)	8.354	139	2810	0.091
55) 2,4-Dimethylphenol	(2)	8.445	107	7133	0.108
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	3364	0.102
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	9067	0.104
62) 2,4-Dichlorophenol	(2)	8.734	162	5725	0.111

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
151) Diallate trans/cis	(4)			11168	0.199
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	5698	0.099
68)*Naphthalene-d8	(2)	8.953	136	870407	5.000
69) Naphthalene	(2)	8.990	128	19025	0.106
70) 4-Chloroaniline	(2)	9.092	127	8746	0.119
71) 2,6-Dichlorophenol	(2)	9.103	162	5351	0.105
72) Hexachloropropene	(2)	9.135	213	3674	0.088
74) Hexachlorobutadiene	(2)	9.204	225	3654	0.105
78) Quinoline	(2)	9.525	129	12918	0.113
79) Caprolactam	(2)	9.616	113	1381	0.085
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	5816	0.103
83) 4-Chloro-3-methylphenol	(2)	9.894	107	6176	0.109
85) Safrole	(2)	10.001	162	5124	0.106
86) 2-Methylnaphthalene	(2)	10.119	142	12612	0.106
87) 1-Methylnaphthalene	(2)	10.274	142	12322	0.112
88) Hexachlorocyclopentadiene	(3)	10.376	237	3092	0.090
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	7149	0.123
91) cis-Isosafrole	(3)	10.488	162	928	0.018
93) 2,4,6-Trichlorophenol	(3)	10.584	196	4033	0.111
95) 2,4,5-Trichlorophenol	(3)	10.627	196	4203	0.110
96)$2-Fluorobiphenyl	(3)	10.739	172	32097	0.242
97) trans-Isosafrole	(3)	10.852	162	5287	0.097
98) 1,1'-Biphenyl	(3)	10.894	154	12448	0.091
101) 1-Chloronaphthalene	(3)	10.905	162	13616	0.126
99) 2-Chloronaphthalene	(3)	10.905	162	13616	0.117
103) Diphenyl ether	(3)	11.076	170	10395	0.136
104) 2-Nitroaniline	(3)	11.087	138	3486	0.102
108) 1,4-Naphthoquinone	(3)	11.210	158	3753	0.082
109) 1,4-Dinitrobenzene	(3)	11.344	168	1576	0.087
110) Dimethylphthalate	(3)	11.424	163	14727	0.113
111) 1,3-Dinitrobenzene	(3)	11.445	168	1646	0.085
113) 2,6-Dinitrotoluene	(3)	11.504	165	2766	0.100
114) Acenaphthylene	(3)	11.574	152	17319	0.107
117) 3-Nitroaniline	(3)	11.745	138	2767	0.095
118)*Acenaphthene-d10	(3)	11.788	164	427128	5.000
119) Acenaphthene	(3)	11.836	153	14126	0.123
120) 2,4-Dinitrophenol	(3)	11.905	184	4692	0.282
121) 4-Nitrophenol	(3)	11.991	109	7888	0.384
122) Pentachlorobenzene	(3)	12.018	250	5614	0.118
123) 2,4-Dinitrotoluene	(3)	12.082	165	3525	0.092

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
124) Dibenzofuran	(3)	12.082	168	19939	0.125
126) 1-Naphthylamine	(3)	12.189	143	11896	0.105
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	2762	0.093
128) 2-Naphthylamine	(3)	12.290	143	12867	0.120
129) Diethylphthalate	(3)	12.424	149	15596	0.122
131) Fluorene	(3)	12.520	166	14357	0.115
130) Thionazin	(3)	12.520	107	2550	0.117
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	7380	0.120
133) 5-Nitro-o-toluidine	(3)	12.542	152	3495	0.103
134) 4-Nitroaniline	(3)	12.547	138	2742	0.093
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	6751	0.310
137) NDPA as diphenylamine	(4)	12.686	169	11436	0.114
136) N-Nitrosodiphenylamine	(4)	12.686	169	11436	0.114
139) 1,2-Diphenylhydrazine	(4)	12.734	77	15290	0.109
140)$2,4,6-Tribromophenol	(3)	12.820	330	3064	0.208
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1083	0.081
149) Diallate (peak 2)	(4)	13.061	86	5584	0.111
145) Diallate (peak 1)	(4)	13.061	86	5584	0.088
142) Tetraethyldithiopyrophosphate	(4)	13.071	97	2519	0.105
146) Phorate	(4)	13.071	75	9311	0.103
147) Phenacetin	(4)	13.082	108	6395	0.101
148) 4-Bromophenyl-phenylether	(4)	13.157	248	3676	0.109
150) Hexachlorobenzene	(4)	13.200	284	4515	0.131
152) Dimethoate	(4)	13.275	87	5008	0.092
153) Atrazine	(4)	13.376	200	3239	0.095
154) Pentachlorophenol	(4)	13.472	266	1047	0.049
156) Pentachloronitrobenzene	(4)	13.483	237	1456	0.088
155) 4-Aminobiphenyl	(4)	13.488	169	12244	0.107
157) Pronamide	(4)	13.574	173	5193	0.091
158)*Phenanthrene-d10	(4)	13.718	188	822379	5.000
160) Phenanthrene	(4)	13.745	178	22749M	0.125
162) Anthracene	(4)	13.815	178	20899	0.115
168) Carbazole	(4)	14.045	167	18533	0.115
169) Methyl parathion	(4)	14.248	109	2957	0.072
170) Di-n-butylphthalate	(4)	14.558	149	22120	0.102
172) Parathion	(4)	14.804	109	2388	0.089
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	1199	0.056
227) Total PAHs	(6)			338503	2.043
174) Octachlorostyrene	(4)	15.163	308	1309	0.101
176) Isodrin	(4)	15.221	193	2897	0.129

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
178) Fluoranthene	(4)	15.446	202	23508	0.115
179) Benzidine	(5)	15.681	184	111103	0.890
180)*Pyrene-d10	(5)	15.772	212	846867	5.000
182) Pyrene	(5)	15.804	202	26623	0.124
184)$Terphenyl-d14	(5)	16.088	244	32387	0.238
187) p-Dimethylaminoazobenzene	(5)	16.323	225	3037	0.092
190) Chlorobenzilate	(5)	16.414	139	5933	0.092
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	12556	0.093
193) Butylbenzylphthalate	(5)	16.954	149	9093	0.091
196) 2-Acetylaminofluorene	(5)	17.329	181	6765	0.085
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	6633	0.096
200) Benzo(a)anthracene	(5)	17.864	228	21199	0.110
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	3700	0.088
201) Chrysene	(5)	17.922	228	21273	0.114
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	12987	0.092
208) 6-Methylchrysene	(5)	18.735	242	13851	0.106
210) Di-n-octylphthalate	(6)	19.212	149	21296	0.090
211) Benzo(b)fluoranthene	(6)	19.741	252	20999	0.114
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	7051	0.093
213) Benzo(k)fluoranthene	(6)	19.789	252	19923	0.112
216) Benzo(a)pyrene	(6)	20.281	252	17853	0.108
218)*Perylene-d12	(6)	20.378	264	751073	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	9860	0.122
222) Dibenz(a,h)acridine	(6)	21.683	279	16441	0.117
223) Dibenz(a,j)acridine	(6)	21.757	279	17171	0.120
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	18076M	0.115
225) Dibenz(a,h)anthracene	(6)	22.068	278	17137	0.107
226) Benzo(g,h,i)perylene	(6)	22.442	276	18503	0.114

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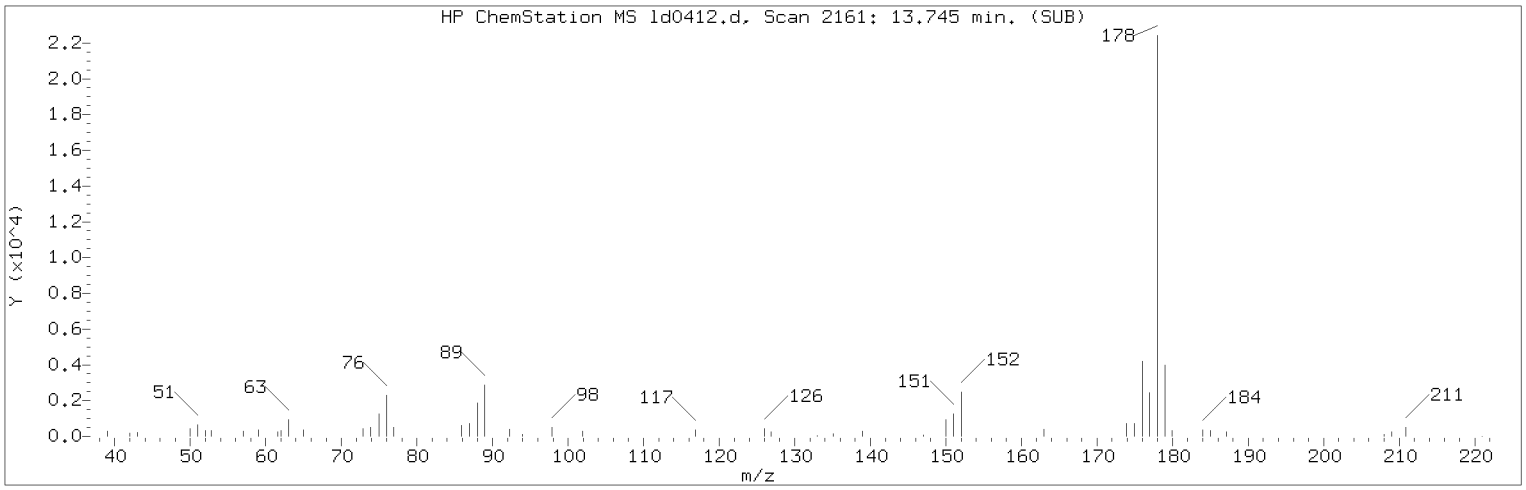
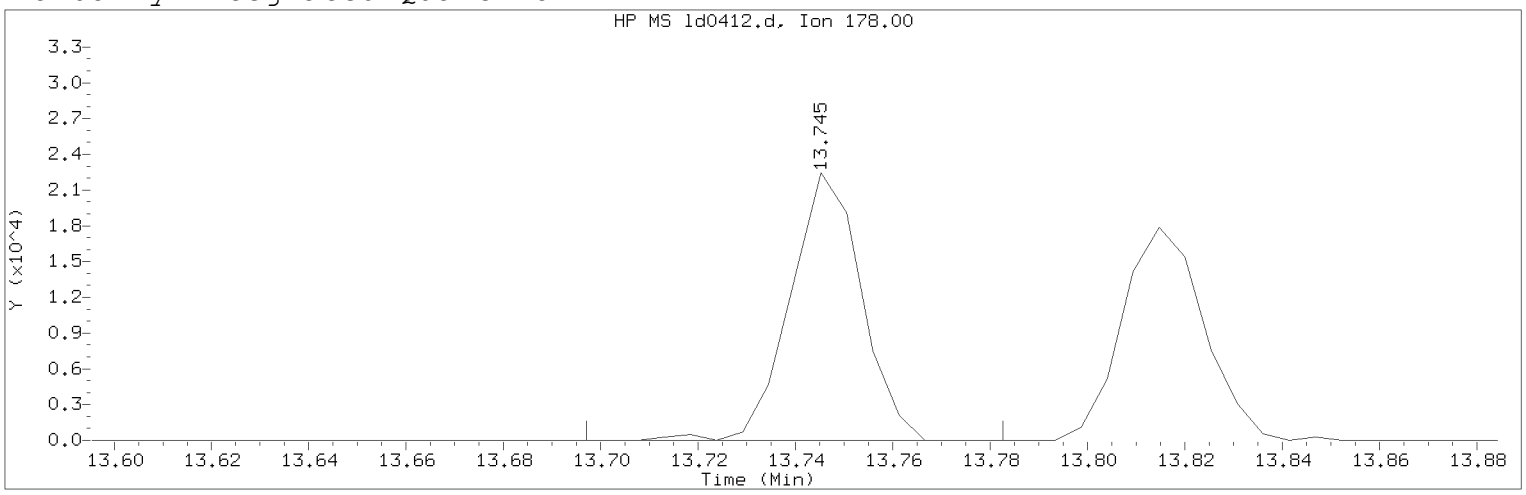
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

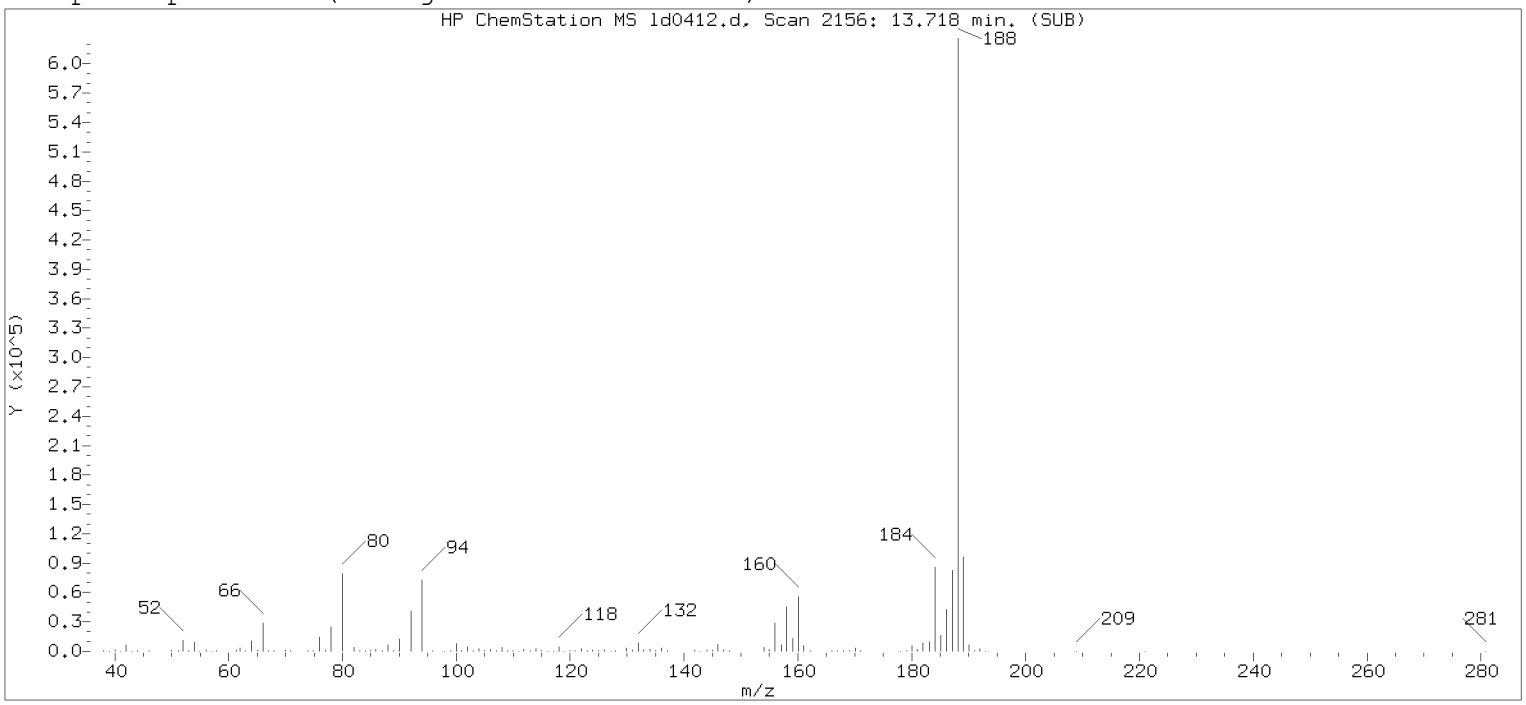
Compound Number : 160
Compound Name : Phenanthrene
Scan Number : 2161
Retention Time (minutes) : 13.745
Quant Ion : 178.00
Area (flag) : 22749M
On-Column Amount (ng/ul) : 0.1255
Integration start scan : 2151 Integration stop scan: 2167
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

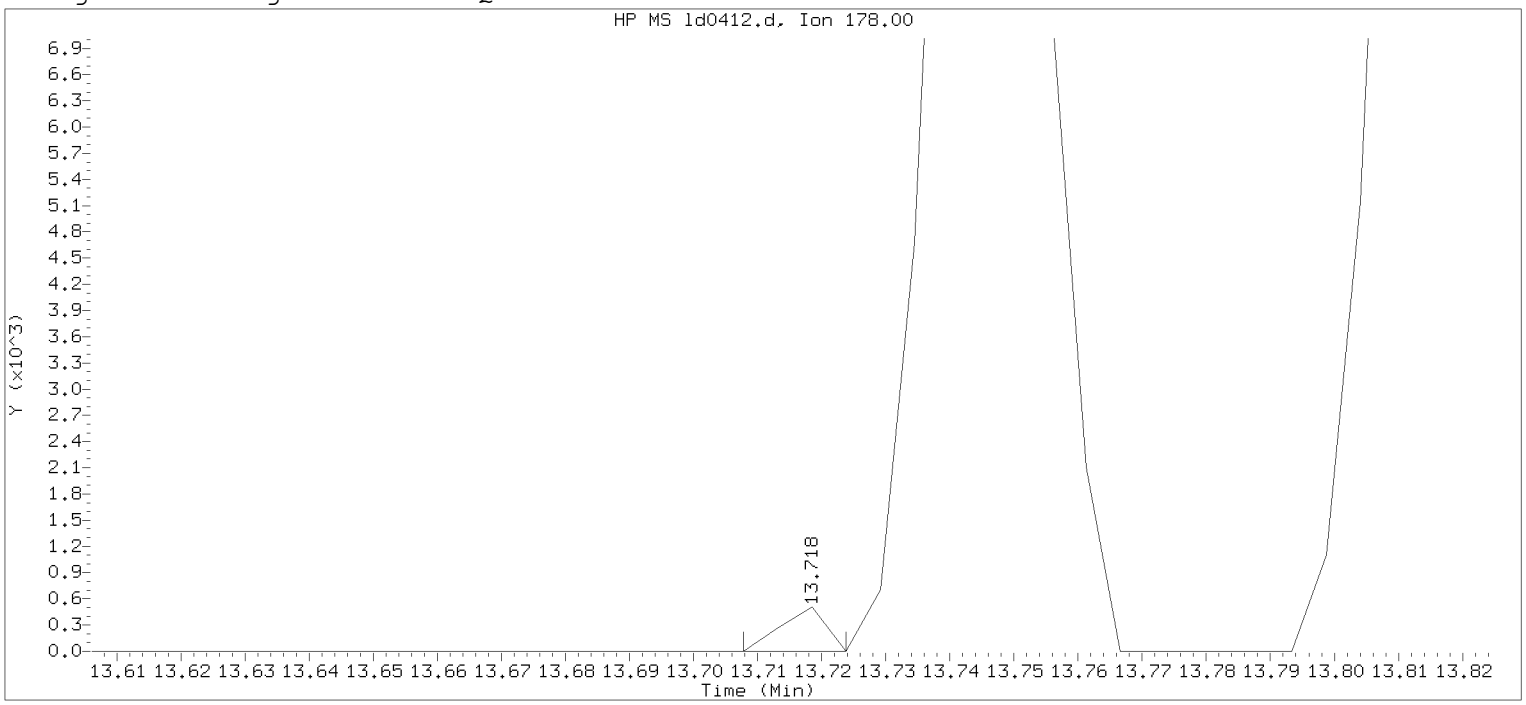
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

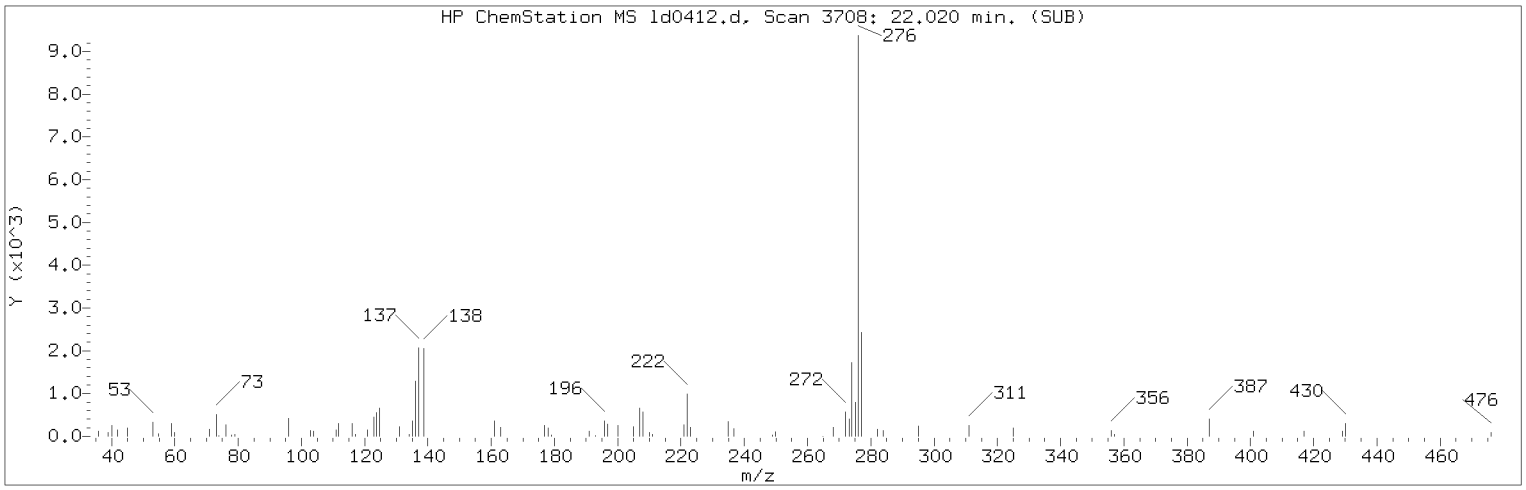
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 09:59
Date, time and analyst ID of latest file update: 11-Apr-2018 09:59 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

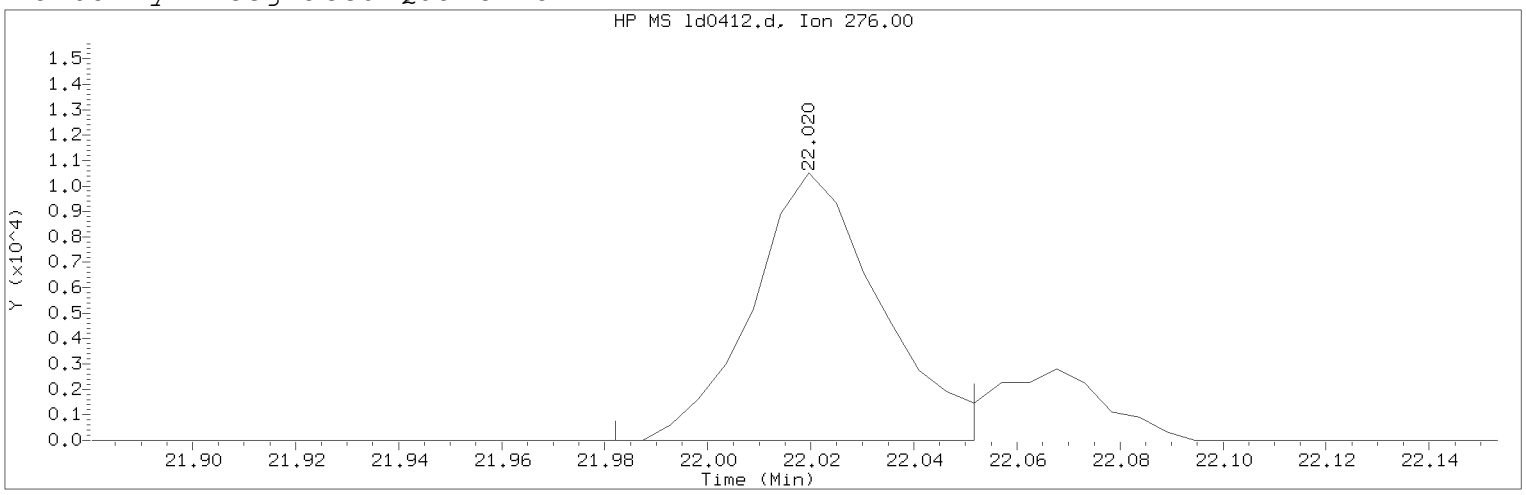
Compound Number	: 160		
Compound Name	: Phenanthrene		
Scan Number	: 2156		
Retention Time (minutes)	: 13.718		
Quant Ion	: 178.00		
Area	: 247		
On-column Amount (ng/ul)	: 0.0013		
Integration start scan	: 2153	Integration stop scan:	2156
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: 1667

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

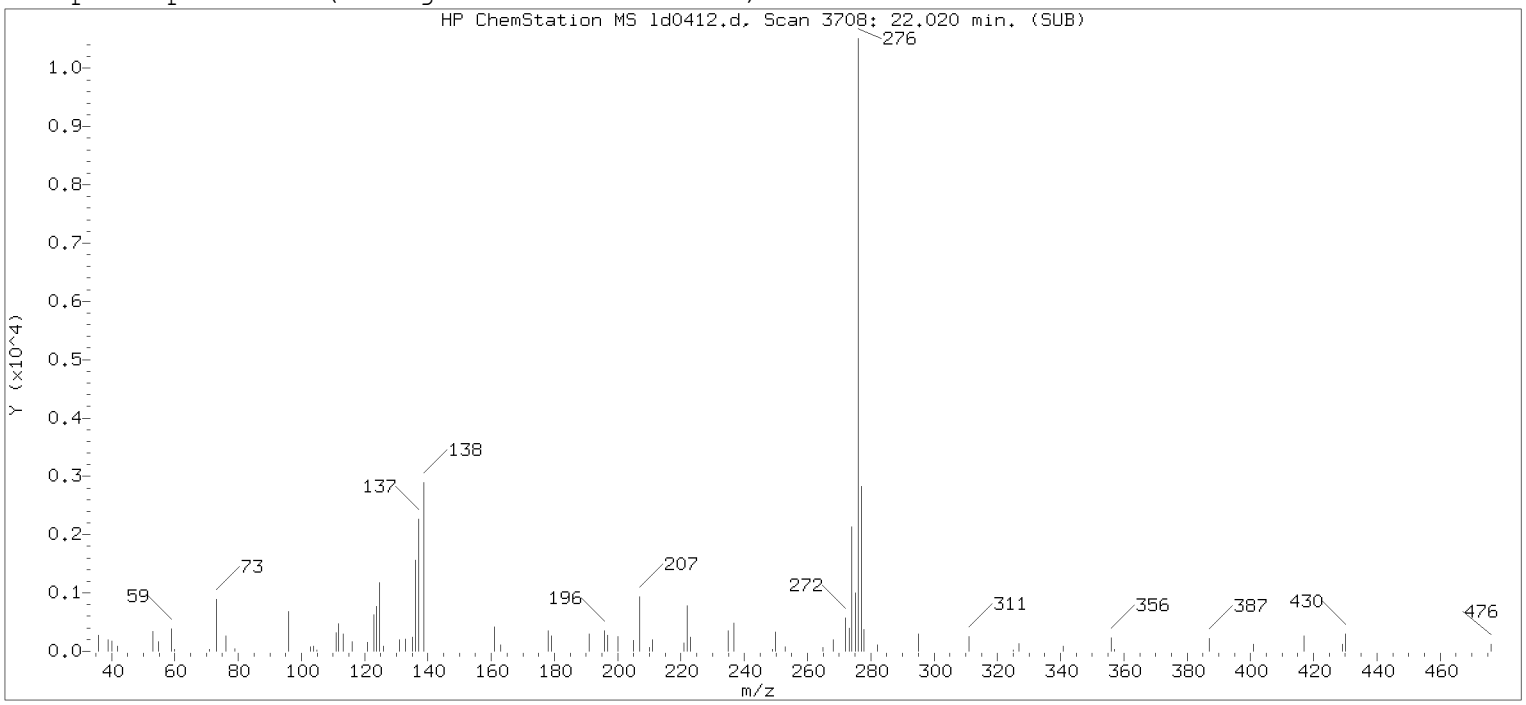
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3708
Retention Time (minutes) : 22.020
Quant Ion : 276.00
Area (flag) : 18076M
On-Column Amount (ng/ul) : 0.1149
Integration start scan : 3700 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

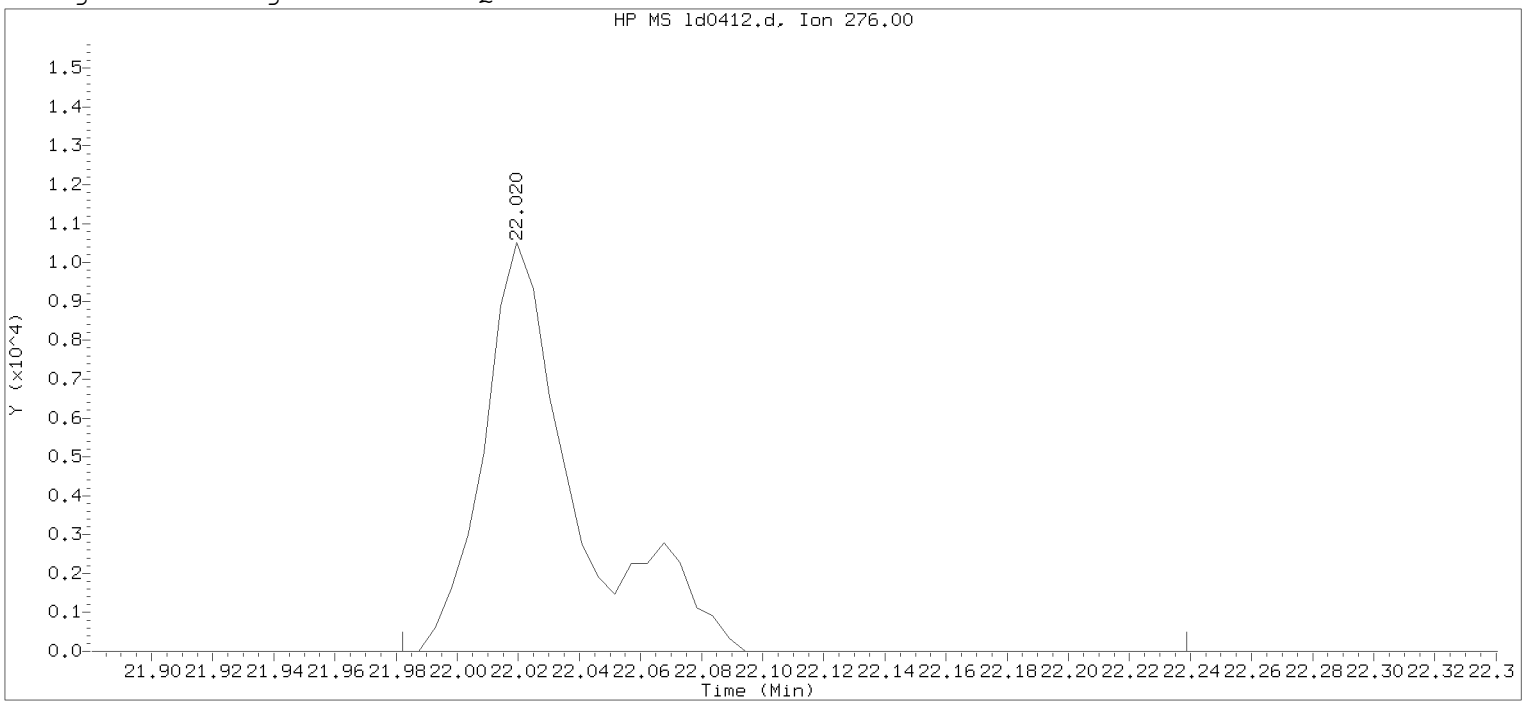
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



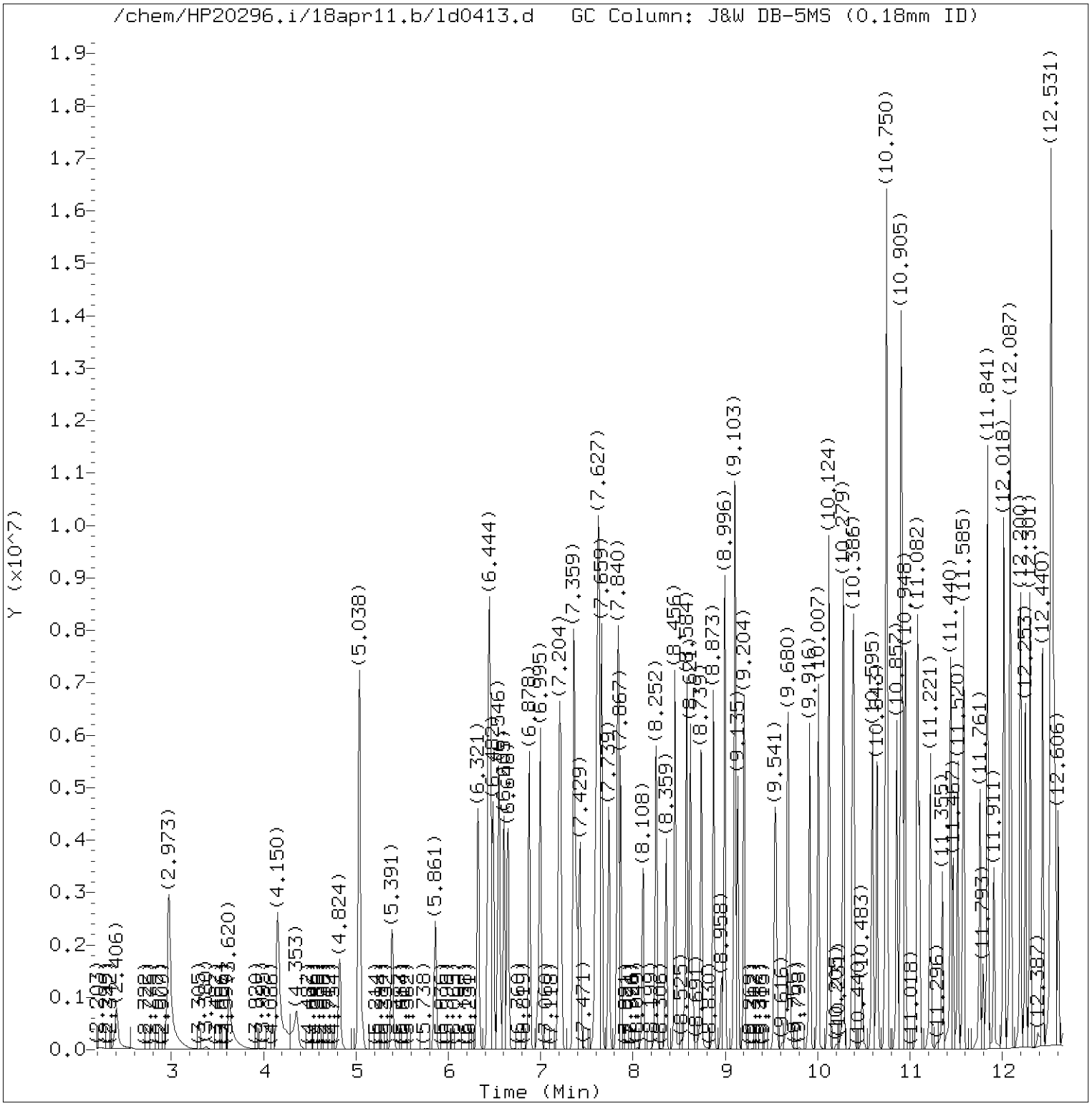
Data File: /chem/HP20296.i/18apr11.b/ld0412.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 09:33 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 09:59
Date, time and analyst ID of latest file update: 11-Apr-2018 09:59 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3708		
Retention Time (minutes)	: 22.020		
Quant Ion	: 276.00		
Area	: 21912		
On-column Amount (ng/ul)	: 0.1320		
Integration start scan	: 3700	Integration stop scan:	3748
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature used. FD6 Part 1669



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

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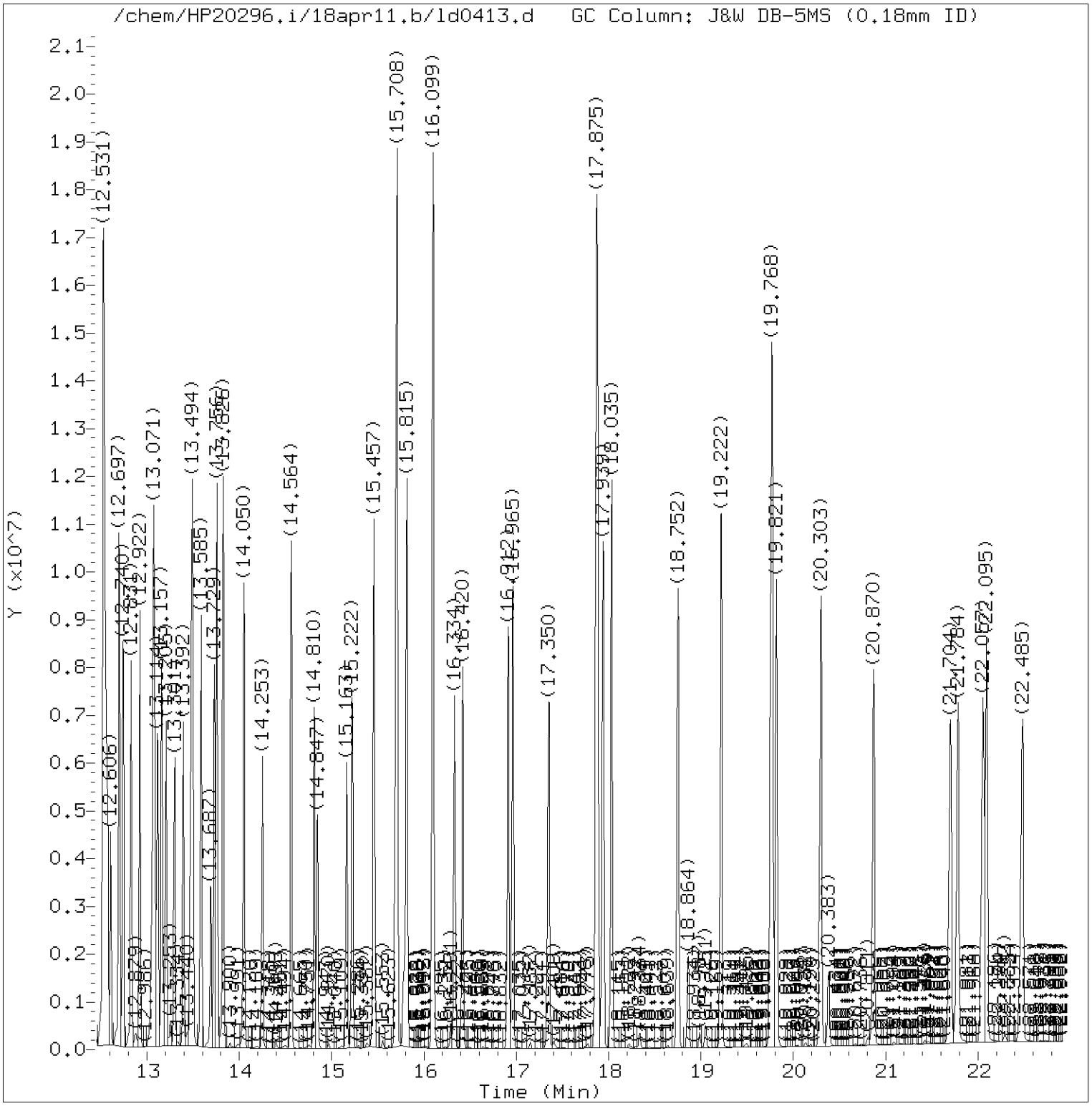
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	843327	31.135
5) N-Nitrosodimethylamine	(1)	2.962	74	1316393	31.918
6) Pyridine	(1)	2.979	79	2310460	31.397
8) 2-Picoline	(1)	4.150	93	2315416	31.119
9) N-Nitrosomethylethylamine	(1)	4.353	88	925857	31.048
10) Methyl methanesulfonate	(1)	4.824	80	1119501	30.994
12)$2-Fluorophenol	(1)	5.038	112	3677169	64.821
14) N-Nitrosodiethylamine	(1)	5.391	102	908768	32.860
43) Total Cresols	(1)			3538617	62.814
16) Ethyl methanesulfonate	(1)	5.861	109	946030	31.412
17) Benzaldehyde	(1)	6.321	77	1685843	29.953
18)$Phenol-d6	(1)	6.439	99	4725835	63.531
19) Phenol	(1)	6.461	94	2699814	31.527
20) Aniline	(1)	6.482	93	3163579	32.038
21) a-methylstyrene	(1)	6.551	118	688329	31.910
23) bis(2-Chloroethyl)ether	(1)	6.605	93	1985568	31.147
24) 2-Chlorophenol	(1)	6.648	128	1758393	31.642
25) 1,3-Dichlorobenzene	(1)	6.878	146	1988953	31.706
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	207168	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	2007784	31.627
28) Benzyl alcohol	(1)	7.199	108	1197465	32.286
29) 1,2-Dichlorobenzene	(1)	7.220	146	1898213	31.402
31) Indene	(1)	7.359	115	2817861	31.815
32) 2-Methylphenol	(1)	7.375	108	1723793	31.458
100) Isosafrole	(3)			1585932	30.877
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.429	45	2796772	30.902
35) bis(2-Chloroisopropyl)ether	(1)	7.429	45	2796772	30.902
36) N-Nitrosopyrrolidine	(1)	7.594	100	968109	32.268
37) Acetophenone	(1)	7.610	105	2781334	33.289
38) 4-Methylphenol	(1)	7.627	108	1814824	31.356
39) N-Nitroso-di-n-propylamine	(1)	7.637	70	1497931	31.449
41) o-Toluidine	(1)	7.659	106	2996457	30.923
40) N-Nitrosomorpholine	(1)	7.664	56	1202908	30.220
44) Hexachloroethane	(1)	7.739	117	812726	30.026
45)$Nitrobenzene-d5	(2)	7.840	82	4323239	63.131
46) Nitrobenzene	(2)	7.867	77	2216878	31.738
125) 2,4_2,6-Dinitrotoluenes	(3)			1961320	62.511
50) N-Nitrosopiperidine	(2)	8.108	114	922717	32.144
52) Isophorone	(2)	8.252	82	3926402	32.160
53) 2-Nitrophenol	(2)	8.359	139	936165	33.169

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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.456	107	1905409	31.491
59) O,O,O-Triethylphosphorothioate	(2)	8.584	198	907984	30.319
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	2493378	31.416
58) Benzoic acid	(2)	8.653	105	1244643M	29.831
62) 2,4-Dichlorophenol	(2)	8.744	162	1511419	32.080
151) Diallate trans/cis	(4)			1785202	29.948
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	1654622	31.519
68)*Naphthalene-d8	(2)	8.958	136	793995	5.000
69) Naphthalene	(2)	8.996	128	5220488	31.818
70) 4-Chloroaniline	(2)	9.103	127	2102691	31.399
71) 2,6-Dichlorophenol	(2)	9.108	162	1472357	31.555
72) Hexachloropropene	(2)	9.135	213	1169148	30.779
74) Hexachlorobutadiene	(2)	9.204	225	1004900	31.575
78) Quinoline	(2)	9.541	129	3215304	30.764
80) N-Nitrosodi-n-butylamine	(2)	9.680	84	1768188	34.338
79) Caprolactam	(2)	9.702	113	447290M	30.279
83) 4-Chloro-3-methylphenol	(2)	9.916	107	1663176	32.170
85) Safrole	(2)	10.012	162	1343460	30.524
86) 2-Methylnaphthalene	(2)	10.124	142	3461545	31.756
87) 1-Methylnaphthalene	(2)	10.279	142	3133760	31.335
88) Hexachlorocyclopentadiene	(3)	10.381	237	1029792	31.193
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	1687944	30.399
91) cis-Isosafrole	(3)	10.483	162	253939	5.255
93) 2,4,6-Trichlorophenol	(3)	10.595	196	1159881	33.264
95) 2,4,5-Trichlorophenol	(3)	10.649	196	1153054	31.506
96)$2-Fluorobiphenyl	(3)	10.750	172	7626208	60.095
97) trans-Isosafrole	(3)	10.857	162	1331993	25.622
98) 1,1'-Biphenyl	(3)	10.905	154	4170989	31.870
99) 2-Chloronaphthalene	(3)	10.921	162	3617887	32.527
101) 1-Chloronaphthalene	(3)	10.953	162	2899527M	28.182
103) Diphenyl ether	(3)	11.082	170	2224404	30.428
104) 2-Nitroaniline	(3)	11.103	138	1057586	32.491
108) 1,4-Naphthoquinone	(3)	11.221	158	1359202	30.927
109) 1,4-Dinitrobenzene	(3)	11.355	168	551302	31.866
110) Dimethylphthalate	(3)	11.440	163	3534822	28.371
111) 1,3-Dinitrobenzene	(3)	11.467	168	586369	31.642
113) 2,6-Dinitrotoluene	(3)	11.520	165	856131	32.363
114) Acenaphthylene	(3)	11.585	152	4906430	31.738
117) 3-Nitroaniline	(3)	11.761	138	933785	33.503
118)*Acenaphthene-d10	(3)	11.793	164	408206	5.000

M = Compound was manually integrated.
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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.841	153	3310637	30.201
120) 2,4-Dinitrophenol	(3)	11.911	184	512425	32.221
121) 4-Nitrophenol	(3)	12.018	109	601572	30.618
122) Pentachlorobenzene	(3)	12.023	250	1365555	30.157
124) Dibenzofuran	(3)	12.087	168	4525287	29.713
123) 2,4-Dinitrotoluene	(3)	12.098	165	1105189	30.148
126) 1-Naphthylamine	(3)	12.200	143	3366289	31.063
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	943272	33.121
128) 2-Naphthylamine	(3)	12.301	143	3273413	31.884
129) Diethylphthalate	(3)	12.440	149	3610263	29.443
131) Fluorene	(3)	12.526	166	3600101	30.261
130) Thionazin	(3)	12.531	107	618391	29.624
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	1759094	29.833
133) 5-Nitro-o-toluidine	(3)	12.558	152	1035448	31.954
134) 4-Nitroaniline	(3)	12.574	138	880503	31.256
135) 4,6-Dinitro-2-methylphenol	(4)	12.606	198	681438	32.203
136) N-Nitrosodiphenylamine	(4)	12.697	169	3042816	31.108
137) NDPA as diphenylamine	(4)	12.697	169	3042816	31.108
139) 1,2-Diphenylhydrazine	(4)	12.740	77	4184949	30.661
140)$2,4,6-Tribromophenol	(3)	12.831	330	918790	65.113
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	685635M	29.535
144) 1,3,5-Trinitrobenzene	(4)	13.055	213	426345	32.707
145) Diallate (peak 1)	(4)	13.066	86	1535641	24.852
146) Phorate	(4)	13.082	75	2634738	30.096
147) Phenacetin	(4)	13.114	108	2057034	33.273
148) 4-Bromophenyl-phenylether	(4)	13.157	248	1013064	30.996
149) Diallate (peak 2)	(4)	13.173	86	249561M	5.096
150) Hexachlorobenzene	(4)	13.210	284	1017424	30.309
152) Dimethoate	(4)	13.301	87	1651486	31.347
153) Atrazine	(4)	13.398	200	946672	28.608
154) Pentachlorophenol	(4)	13.473	266	684993	33.319
156) Pentachloronitrobenzene	(4)	13.489	237	505442	31.548
155) 4-Aminobiphenyl	(4)	13.494	169	3549849	31.877
157) Pronamide	(4)	13.585	173	1794609	32.530
158)*Phenanthrene-d10	(4)	13.724	188	799312	5.000
159) Dinoseb	(4)	13.729	211	1141333	34.456
160) Phenanthrene	(4)	13.756	178	5201356M	29.512
162) Anthracene	(4)	13.826	178	5535955	31.332
168) Carbazole	(4)	14.050	167	4969725	31.767
169) Methyl parathion	(4)	14.253	109	1316372	32.780

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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.564	149	6666427	31.657
172) Parathion	(4)	14.810	109	879624	33.848
173) 4-Nitroquinoline-1-oxide	(4)	14.847	190	733096	35.128
227) Total PAHs	(6)			92639944	565.346
174) Octachlorostyrene	(4)	15.163	308	403671	32.146
176) Isodrin	(4)	15.222	193	671141	30.735
178) Fluoranthene	(4)	15.462	202	6396451	32.269
179) Benzidine	(5)	15.708	184	11457973	92.343
180)*Pyrene-d10	(5)	15.778	212	842063	5.000
182) Pyrene	(5)	15.815	202	6497355	30.331
184)$Terphenyl-d14	(5)	16.099	244	8210731	60.801
187) p-Dimethylaminoazobenzene	(5)	16.334	225	1148123	35.130
190) Chlorobenzilate	(5)	16.420	139	1990409	31.189
192) 3,3'-Dimethylbenzidine	(5)	16.912	212	4451885	32.989
193) Butylbenzylphthalate	(5)	16.965	149	3162723	31.777
196) 2-Acetylaminofluorene	(5)	17.350	181	2657663	33.738
198) 3,3'-Dichlorobenzidine	(5)	17.864	252	2225516	32.315
200) Benzo(a)anthracene	(5)	17.875	228	6146650	32.117
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.885	231	1298349	31.042
201) Chrysene	(5)	17.939	228	5752746	31.075
204) bis(2-Ethylhexyl)phthalate	(5)	18.035	149	4516212	32.115
208) 6-Methylchrysene	(5)	18.752	242	4135345	31.725
210) Di-n-octylphthalate	(6)	19.222	149	8009395	32.550
211) Benzo(b)fluoranthene	(6)	19.768	252	6187894	32.254
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.768	256	2604673	32.908
213) Benzo(k)fluoranthene	(6)	19.821	252	5568913M	30.145
216) Benzo(a)pyrene	(6)	20.303	252	5625182	32.587
218)*Perylene-d12	(6)	20.383	264	782499	5.000
220) 3-Methylcholanthrene	(6)	20.870	268	2717189	32.372
222) Dibenz(a,h)acridine	(6)	21.704	279	4616558	31.468
223) Dibenz(a,j)acridine	(6)	21.784	279	4618062	30.992
224) Indeno(1,2,3-cd)pyrene	(6)	22.057	276	5379958M	32.819
225) Dibenz(a,h)anthracene	(6)	22.095	278	5373947	32.272
226) Benzo(g,h,i)perylene	(6)	22.485	276	5340576	31.527

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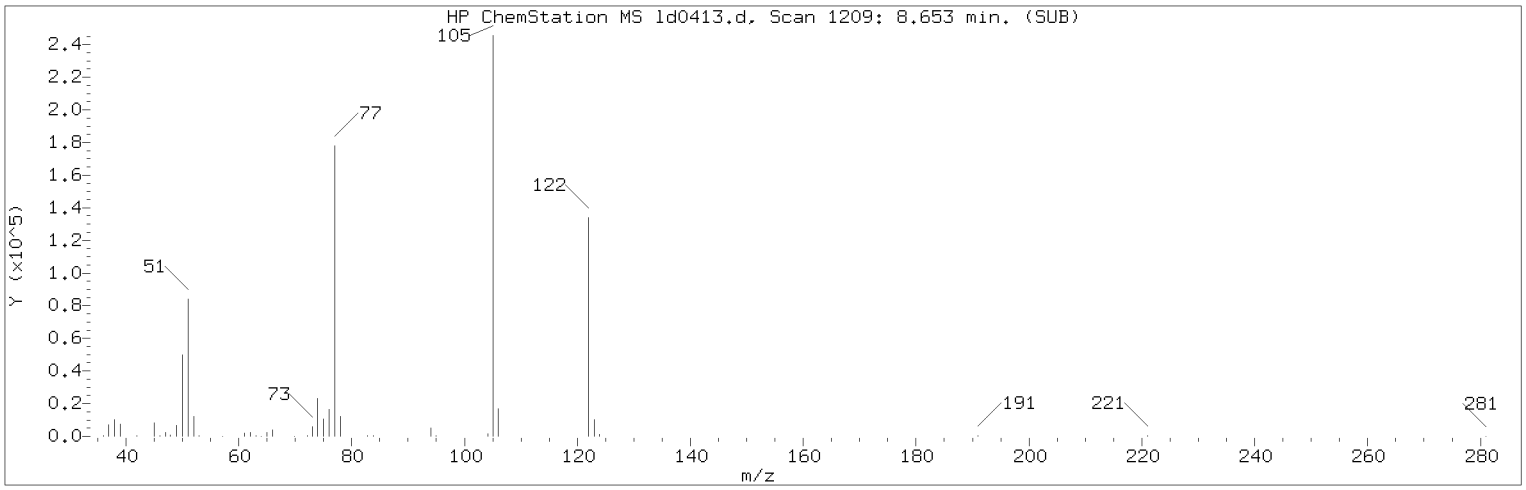
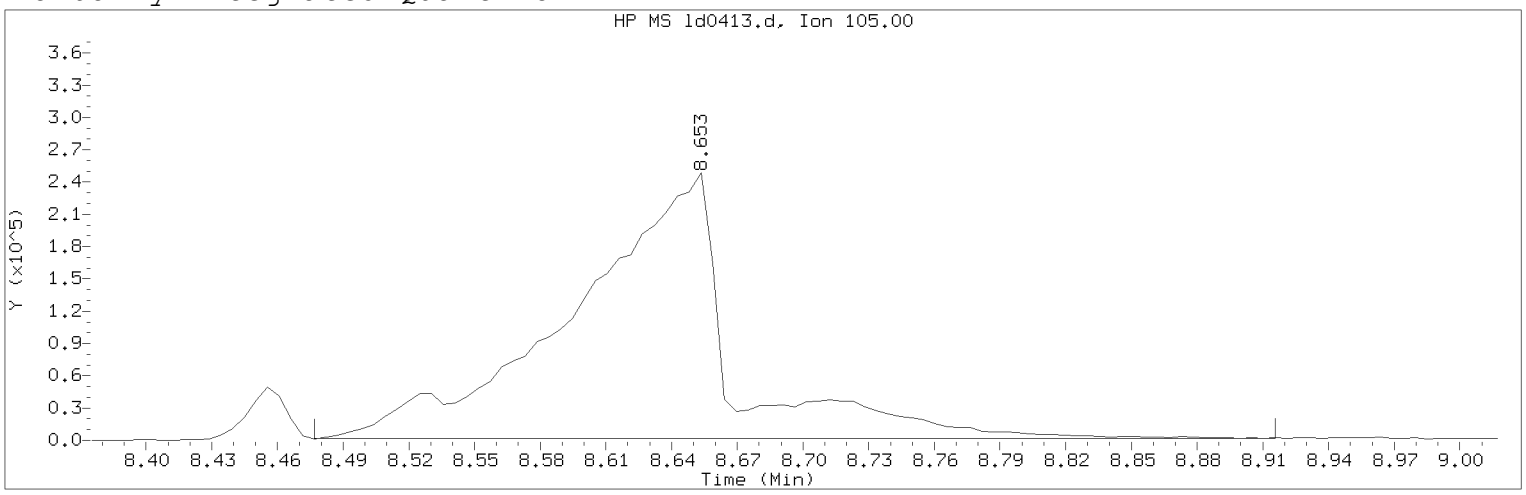
Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

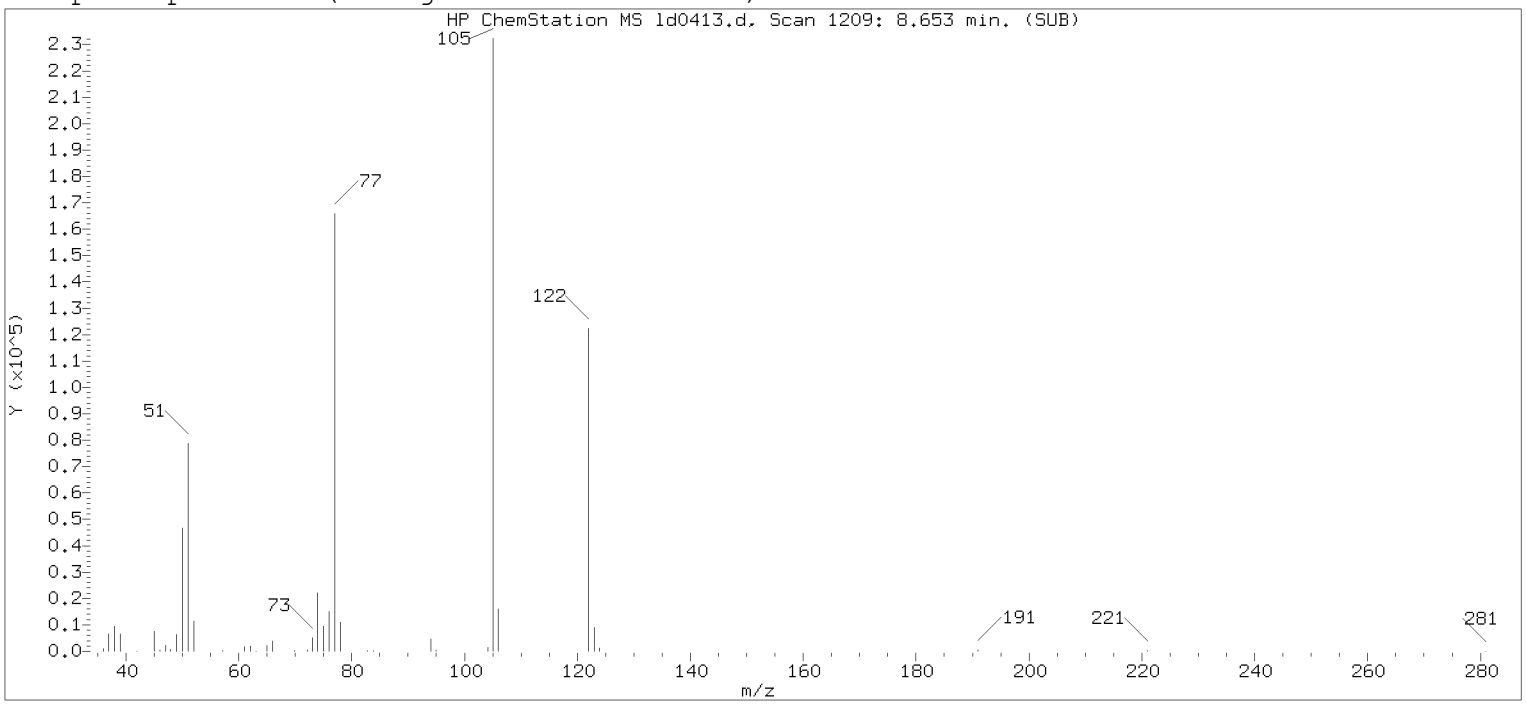
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1209
Retention Time (minutes) : 8.653
Quant Ion : 105.00
Area (flag) : 1244643M
On-Column Amount (ng/ul) : 29.8313
Integration start scan : 1175 Integration stop scan: 1257
Y at integration start : 1541 Y at integration end: 1541

Reason for manual integration: improper integration

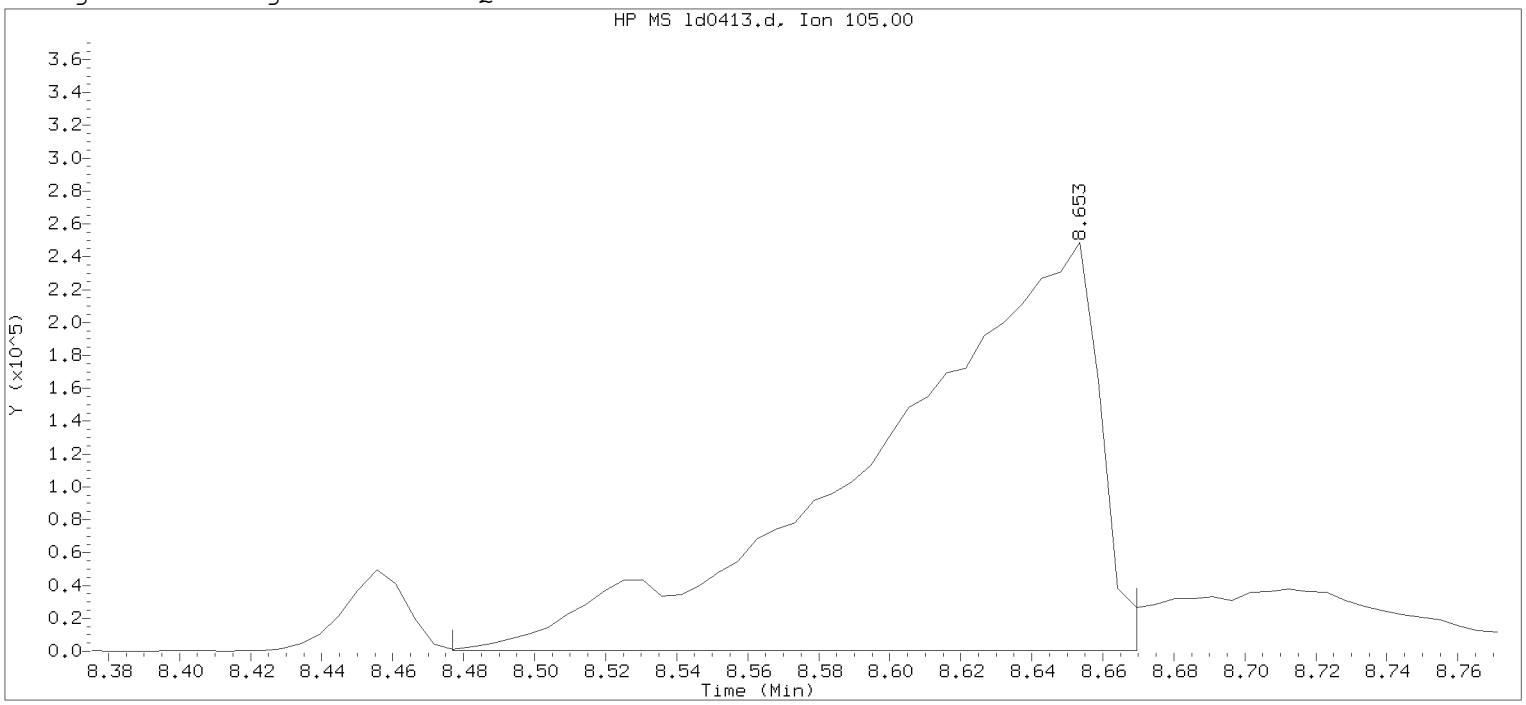
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

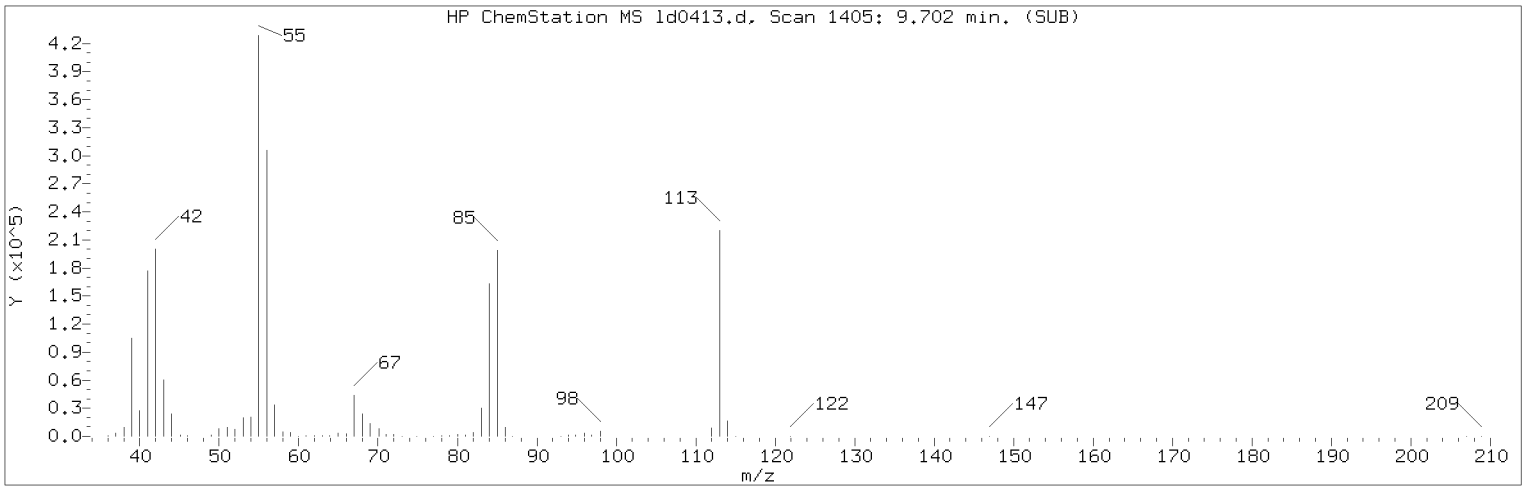
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

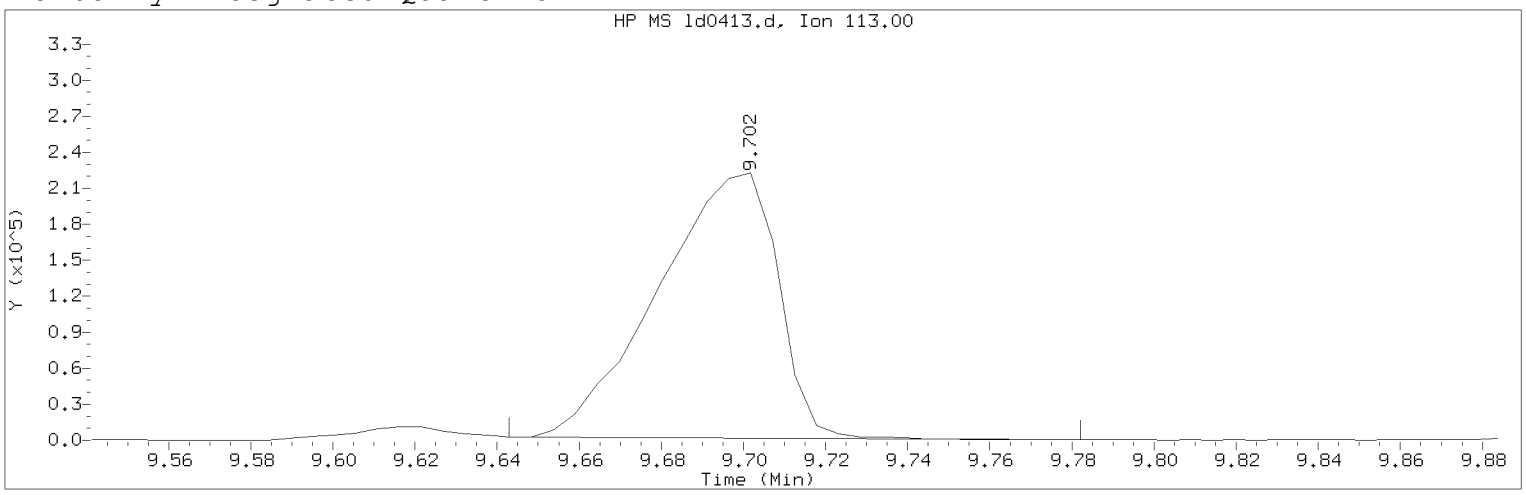
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1209		
Retention Time (minutes)	: 8.653		
Quant Ion	: 105.00		
Area	: 1070951		
On-column Amount (ng/ul)	: 27.9373		
Integration start scan	: 1175	Integration stop scan:	1211
Y at integration start	: 428	Y at integration end:	428

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

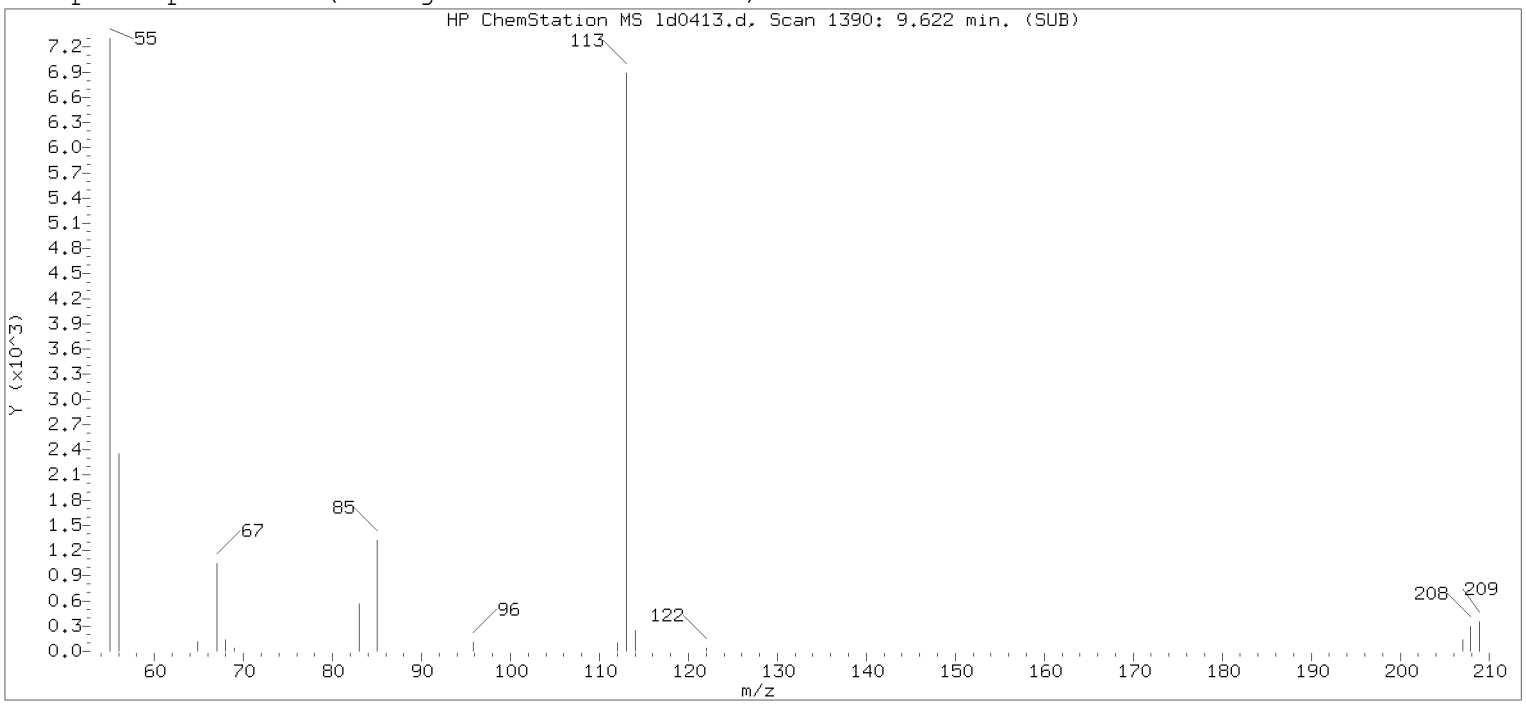
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1405
Retention Time (minutes) : 9.702
Quant Ion : 113.00
Area (flag) : 447290M
On-Column Amount (ng/ul) : 30.2788
Integration start scan : 1393 Integration stop scan: 1419
Y at integration start : 2707 Y at integration end: 452

Reason for manual integration: improper integration

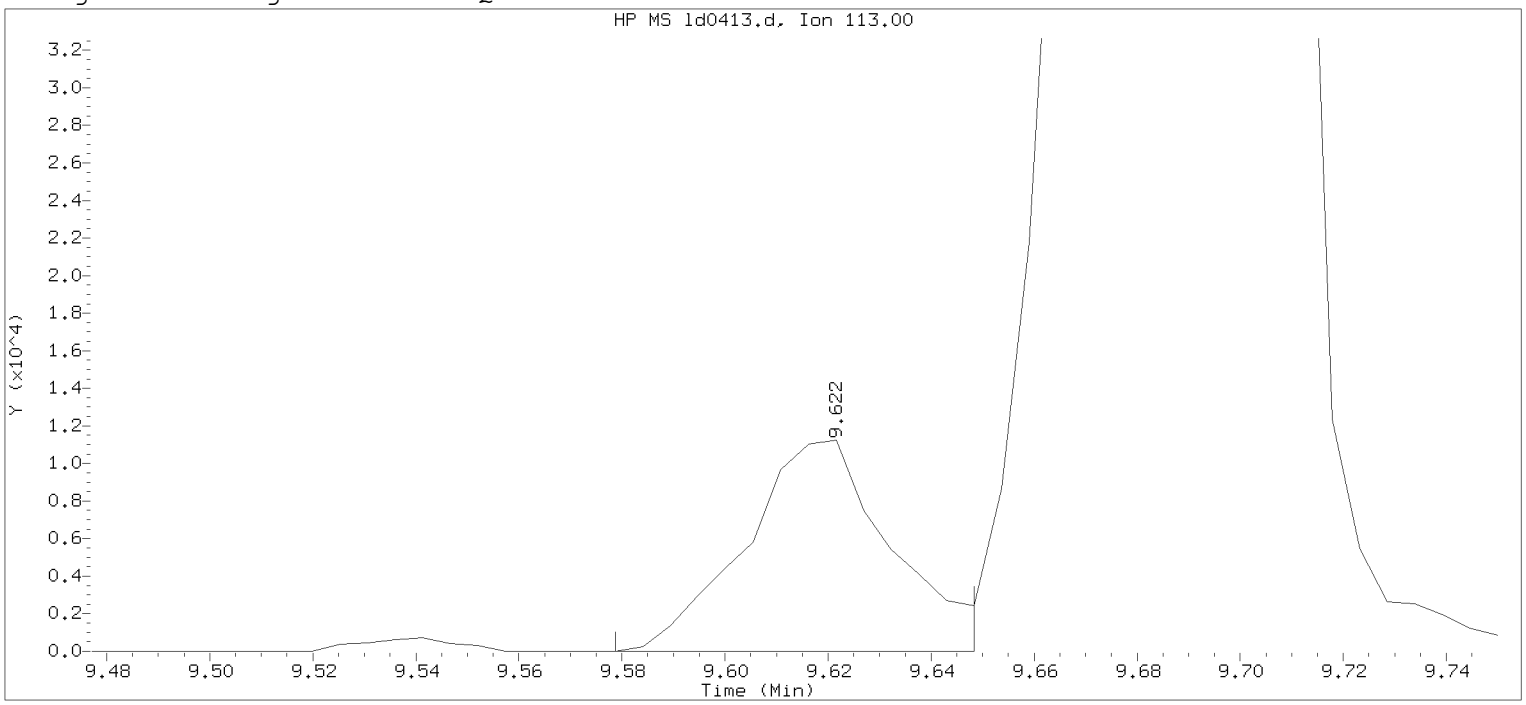
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

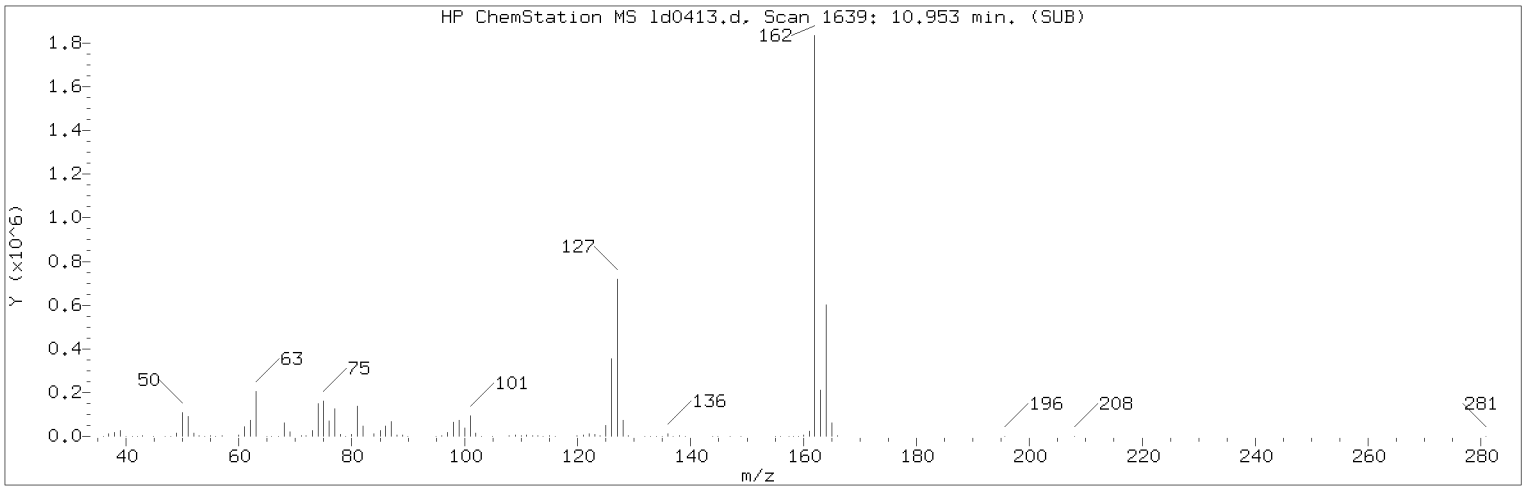
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

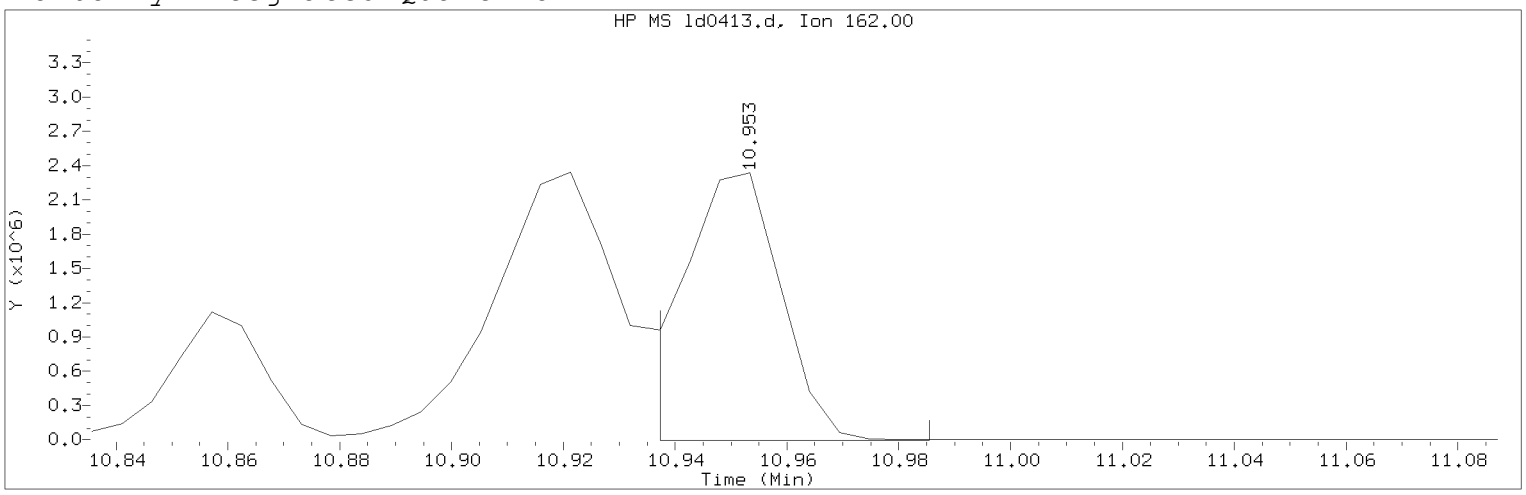
Compound Number	: 79		
Compound Name	: Caprolactam		
Scan Number	: 1390		
Retention Time (minutes)	: 9.622		
Quant Ion	: 113.00		
Area	: 21743		
On-column Amount (ng/ul)	: 1.4317		
Integration start scan	: 1381	Integration stop scan:	1394
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: 1679

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

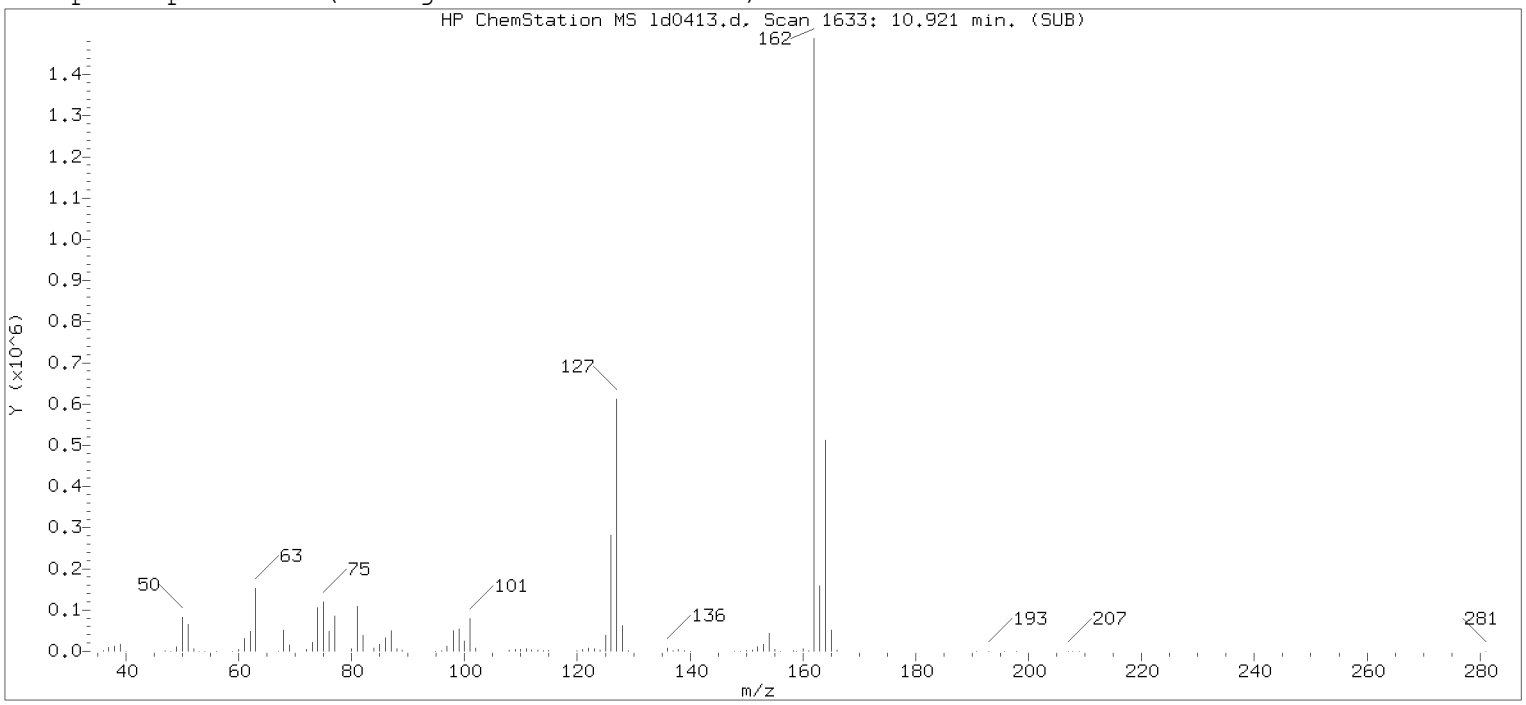
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1639
Retention Time (minutes) : 10.953
Quant Ion : 162.00
Area (flag) : 2899527M
On-Column Amount (ng/ul) : 28.1825
Integration start scan : 1635 Integration stop scan: 1644
Y at integration start : -3652 Y at integration end: -3652

Reason for manual integration: improper integration

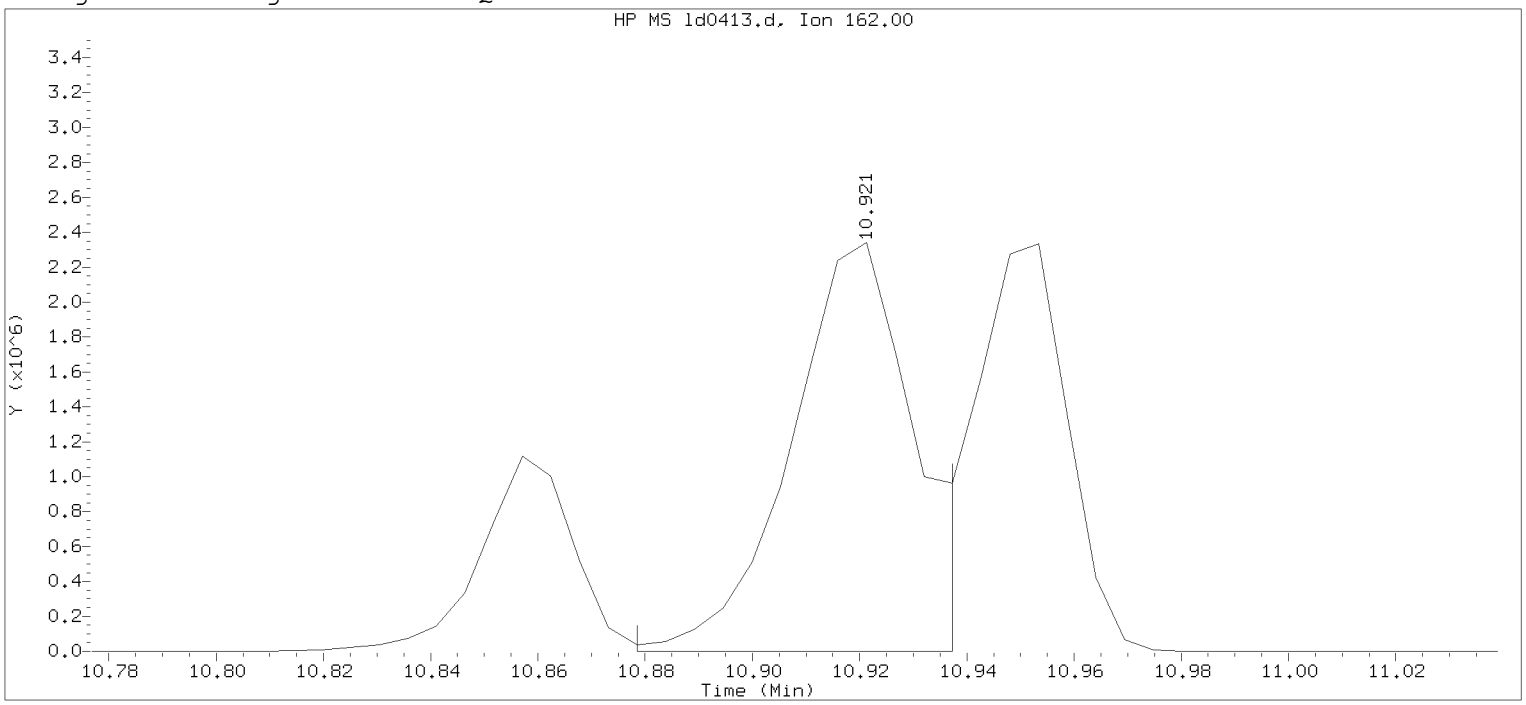
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

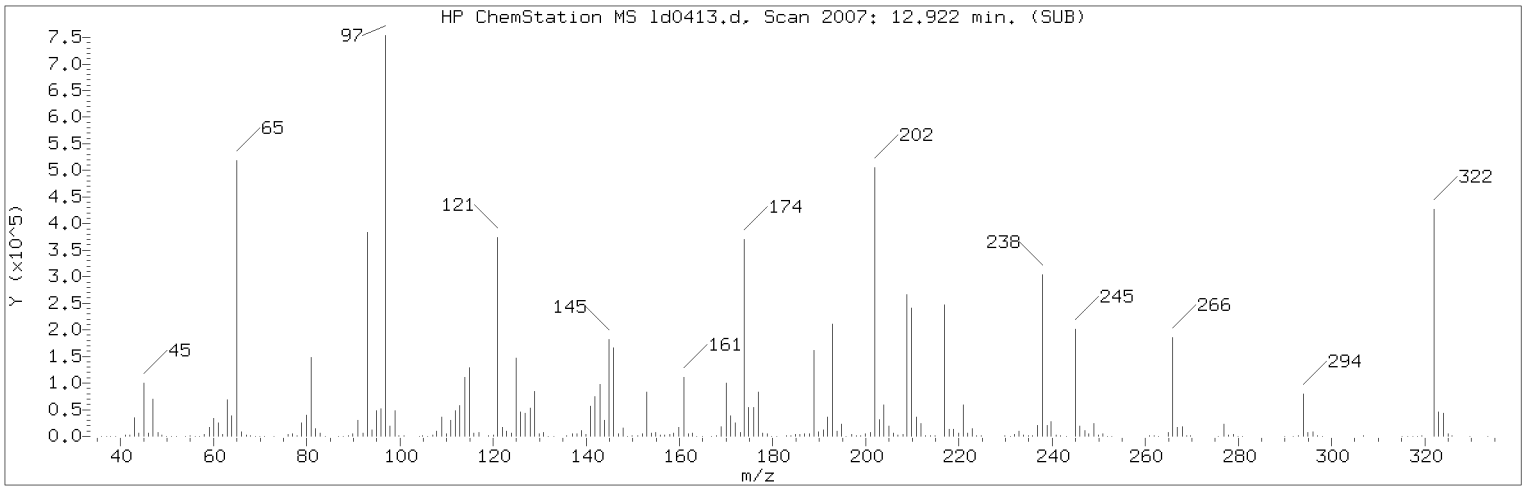
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

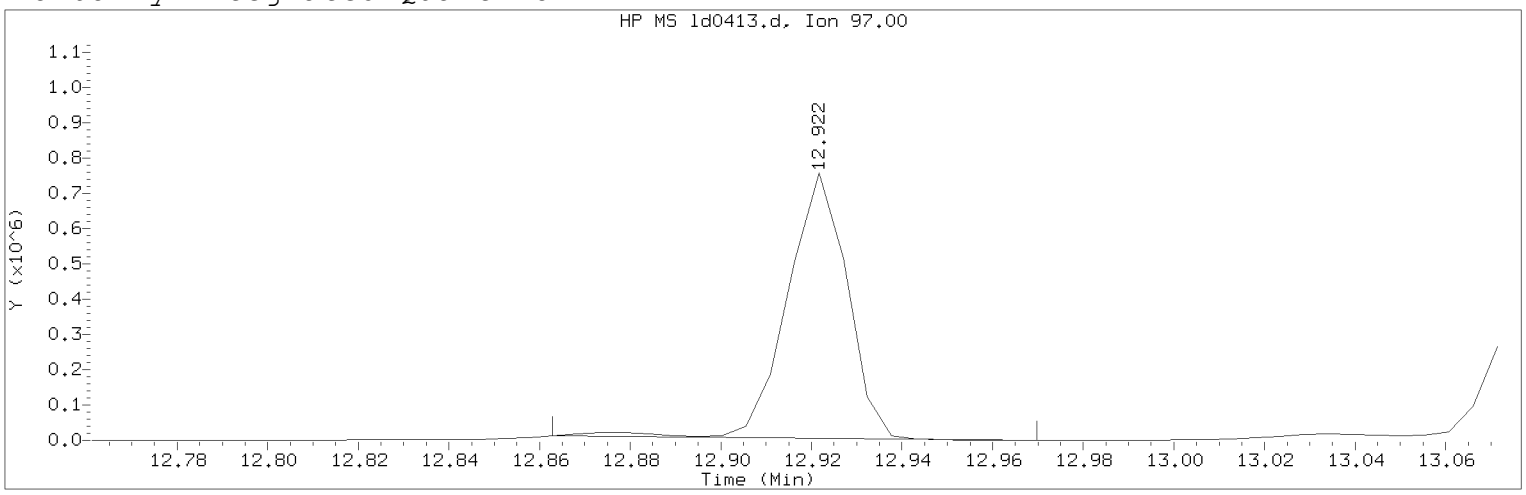
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1633
Retention Time (minutes) : 10.921
Quant Ion : 162.00
Area : 3617887
On-column Amount (ng/ul) : 35.1696
Integration start scan : 1624 Integration stop scan: 1635
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

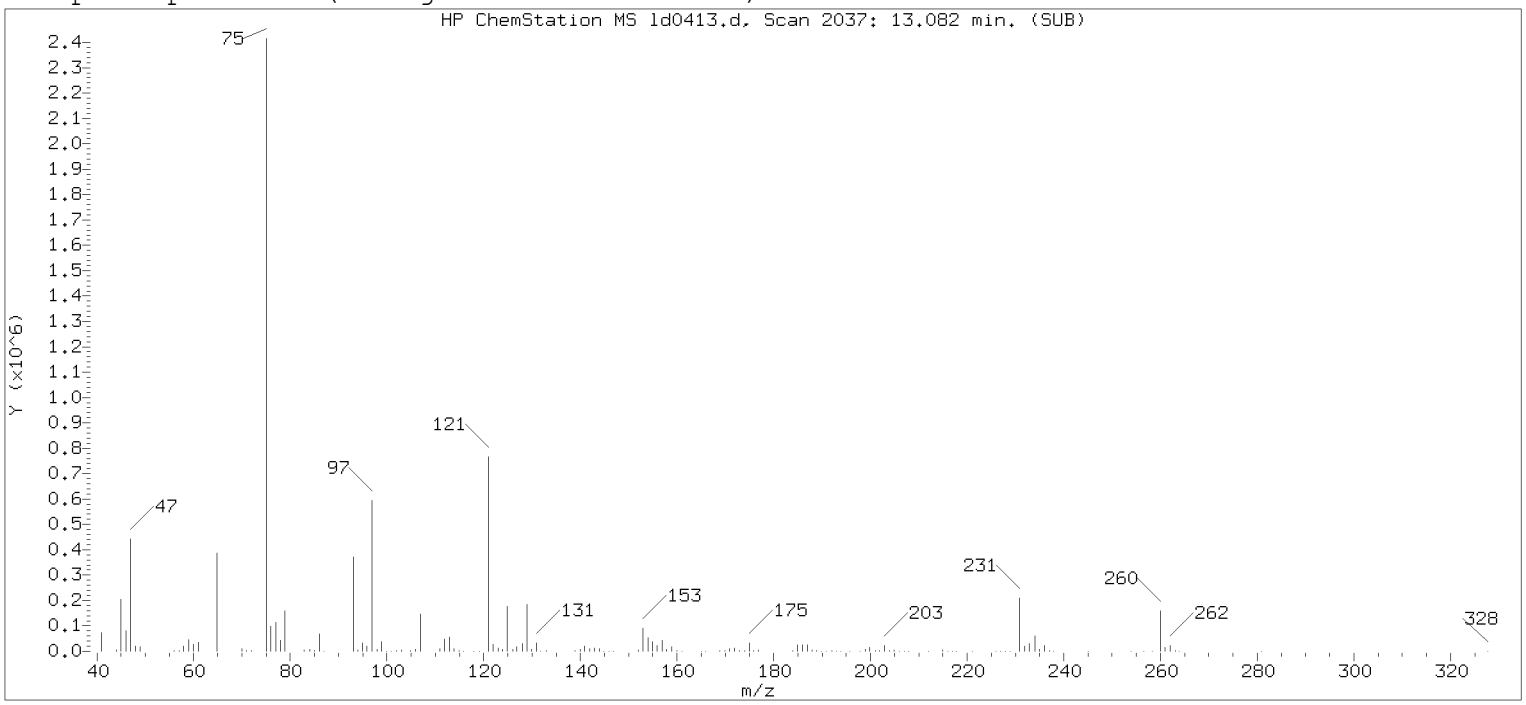
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 685635M
On-Column Amount (ng/ul) : 29.5350
Integration start scan : 1995 Integration stop scan: 2015
Y at integration start : 13572 Y at integration end: 359

Reason for manual integration: improper integration

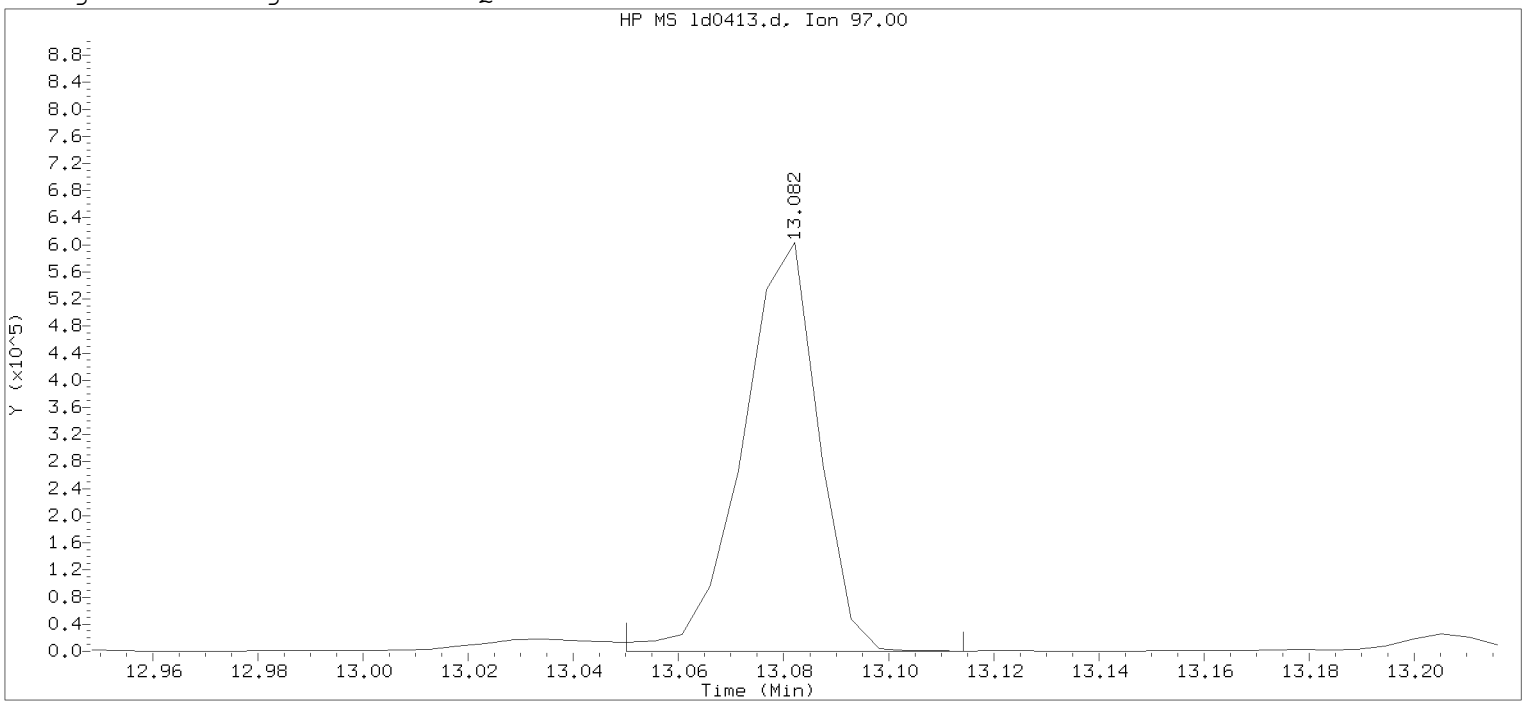
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

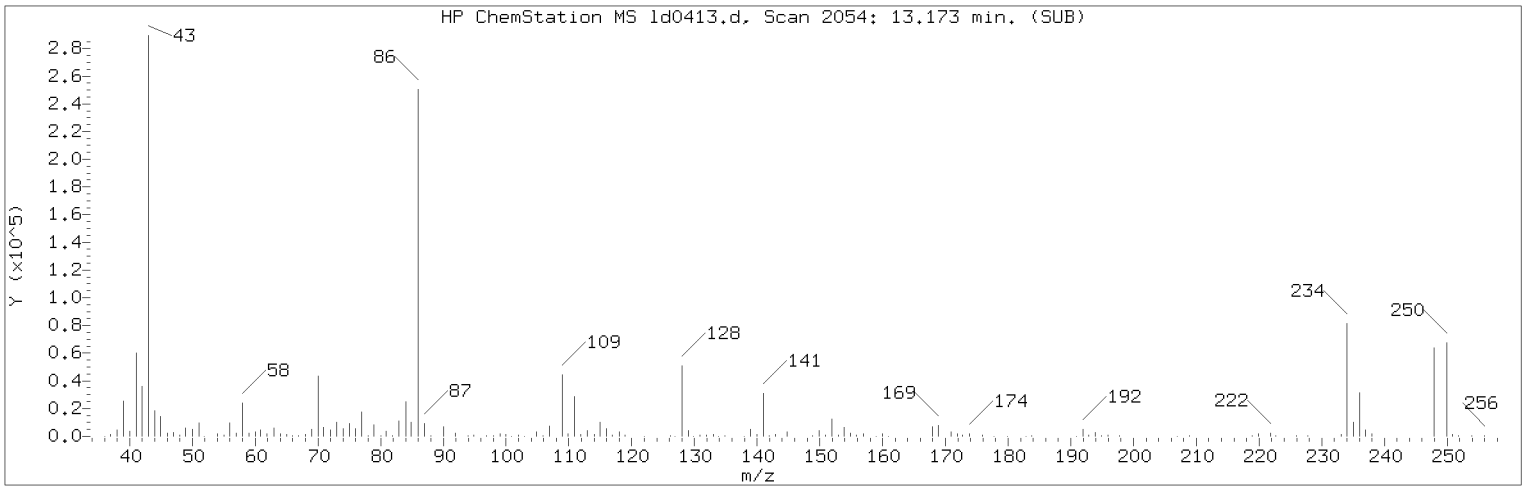
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

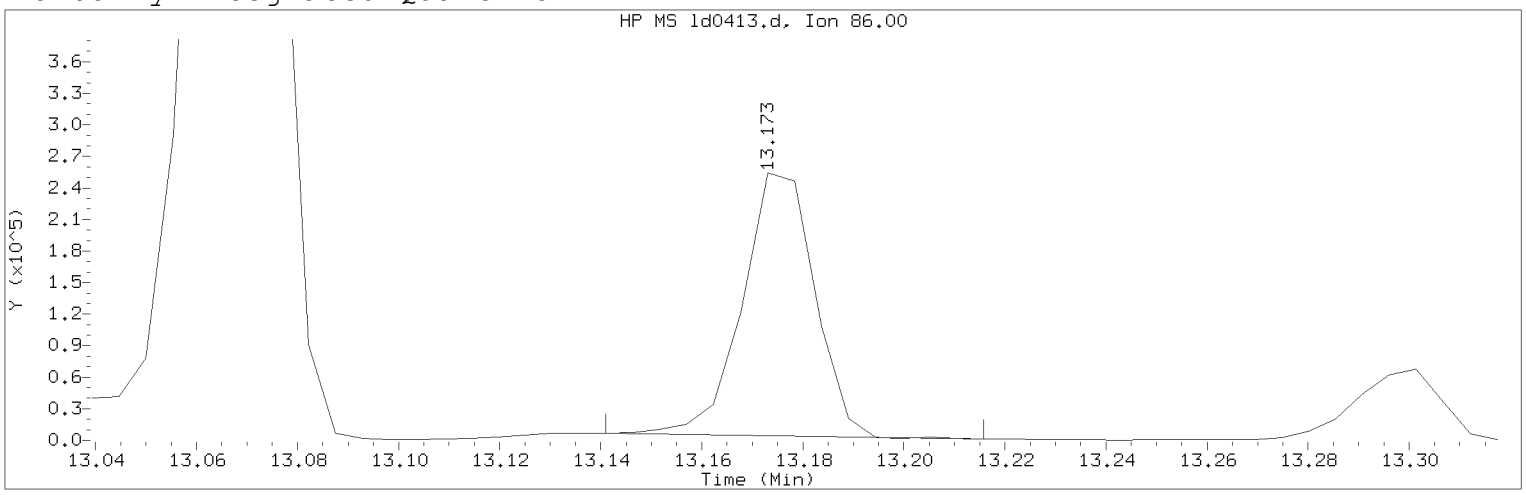
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2037
Retention Time (minutes) : 13.082
Quant Ion : 97.00
Area : 601520
On-column Amount (ng/ul) : 24.6838
Integration start scan : 2030 Integration stop scan: 2042
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature used. FD6 Page 1683

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

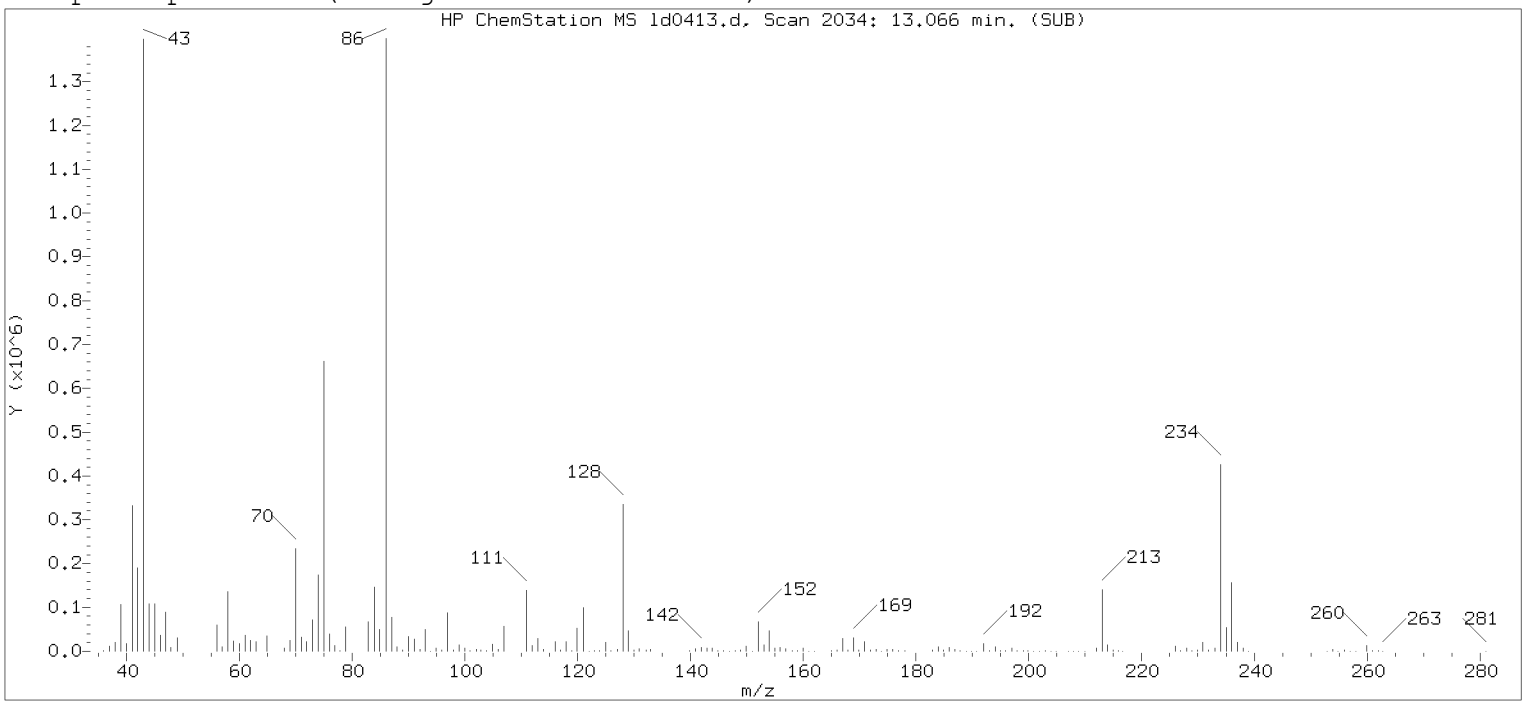
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 249561M
On-Column Amount (ng/ul) : 5.0957
Integration start scan : 2047 Integration stop scan: 2061
Y at integration start : 6432 Y at integration end: 1049

Reason for manual integration: improper integration

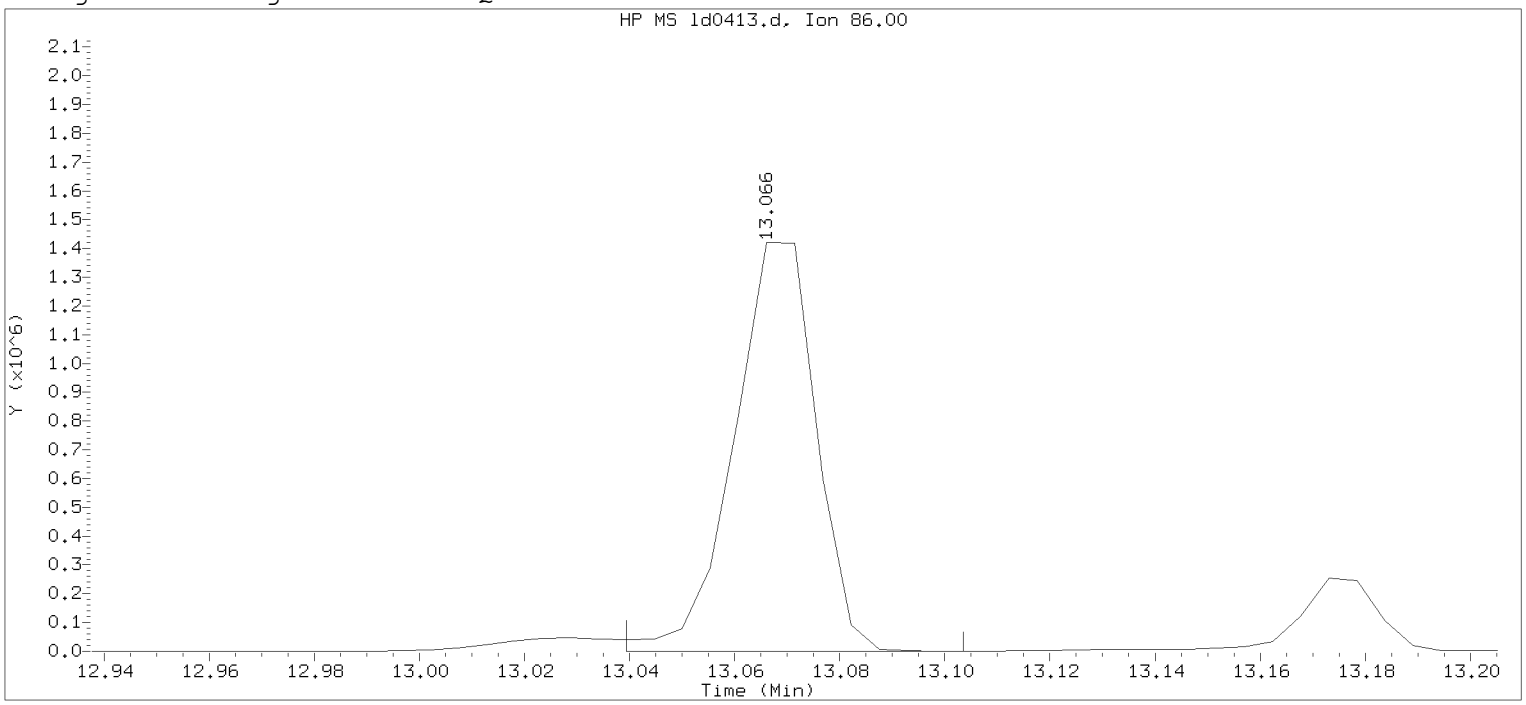
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

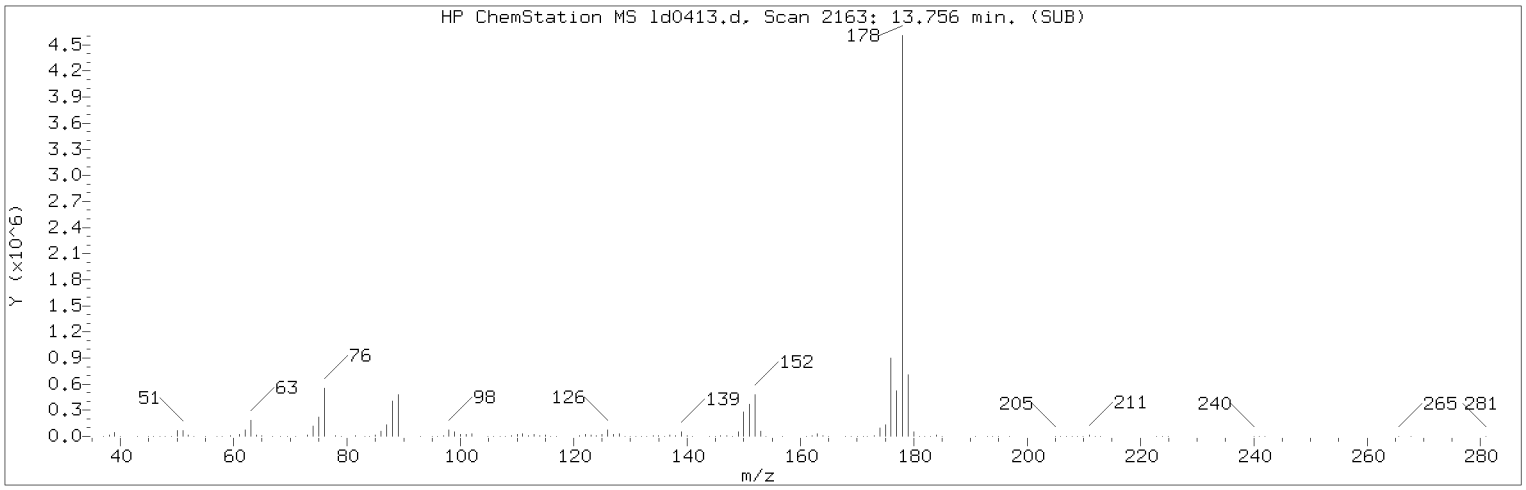
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

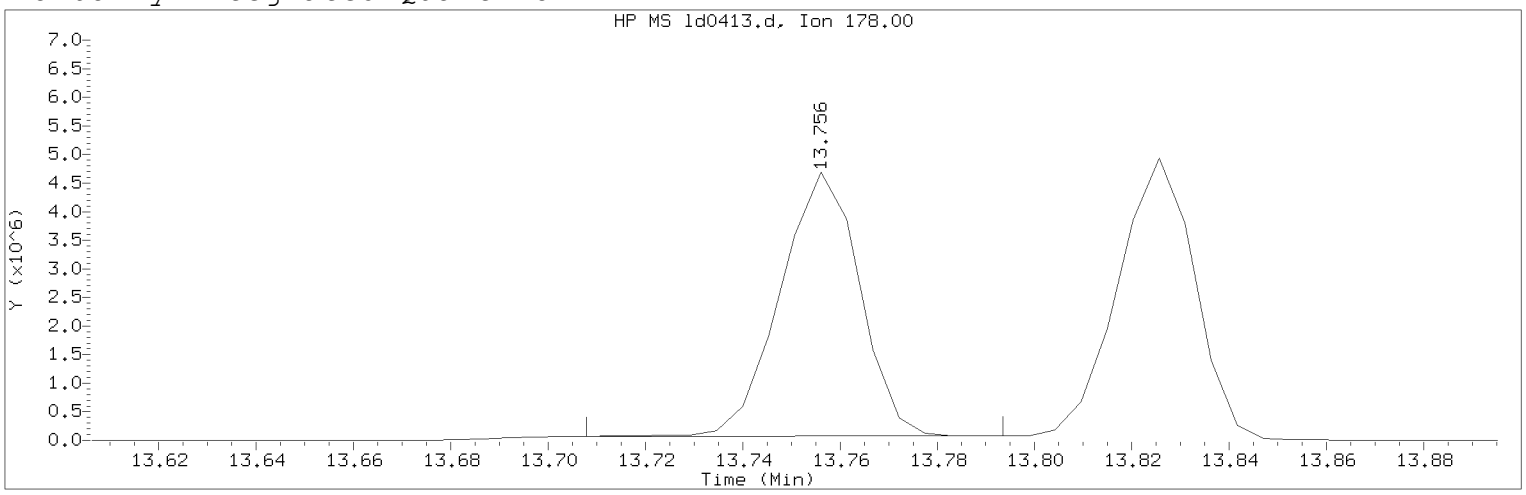
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 1535641		
On-column Amount (ng/ul)	: 29.9742		
Integration start scan	: 2028	Integration stop scan:	2040
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature used. FD6 Part 11

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

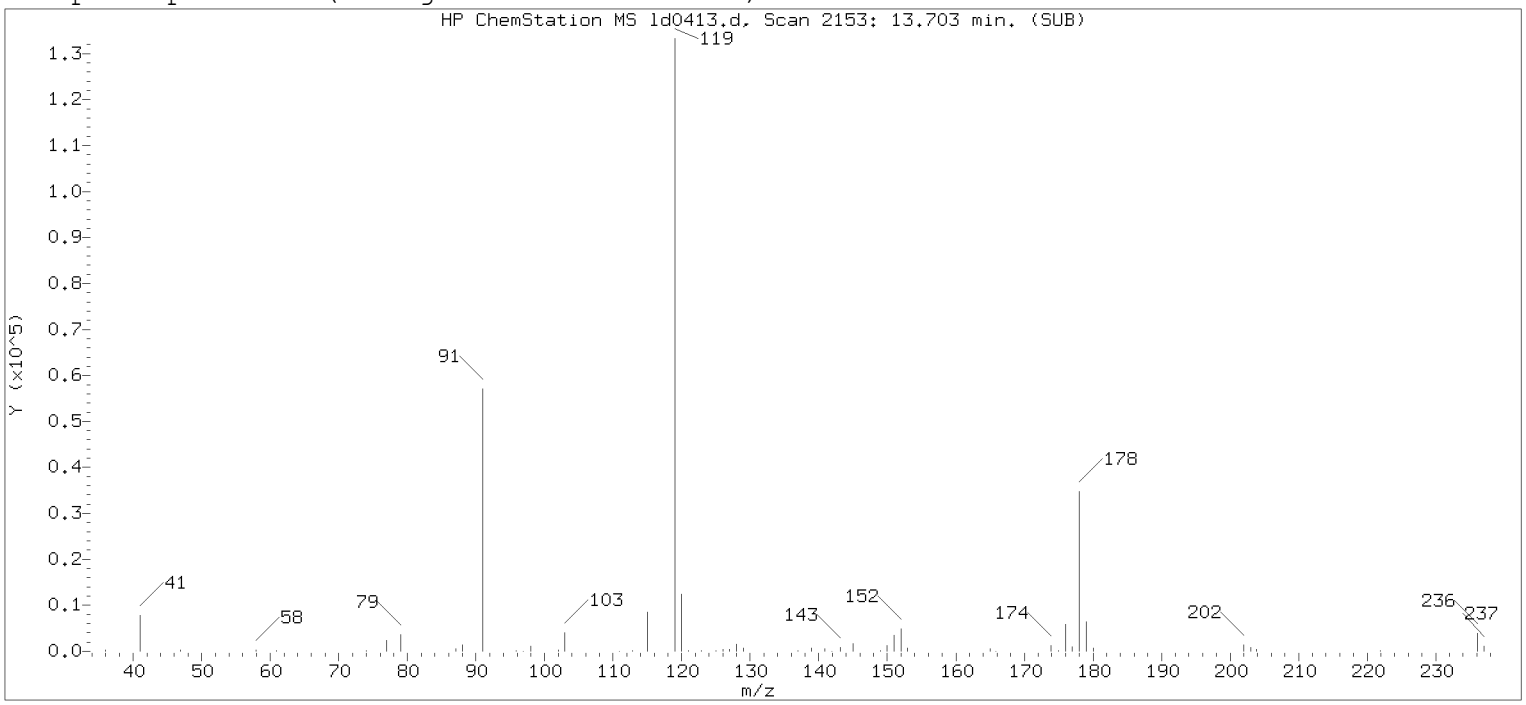
Compound Number : 160
Compound Name : Phenanthrene
Scan Number : 2163
Retention Time (minutes) : 13.756
Quant Ion : 178.00
Area (flag) : 5201356M
On-Column Amount (ng/ul) : 29.5119
Integration start scan : 2153 Integration stop scan: 2169
Y at integration start : 71072 Y at integration end: 77864

Reason for manual integration: improper integration

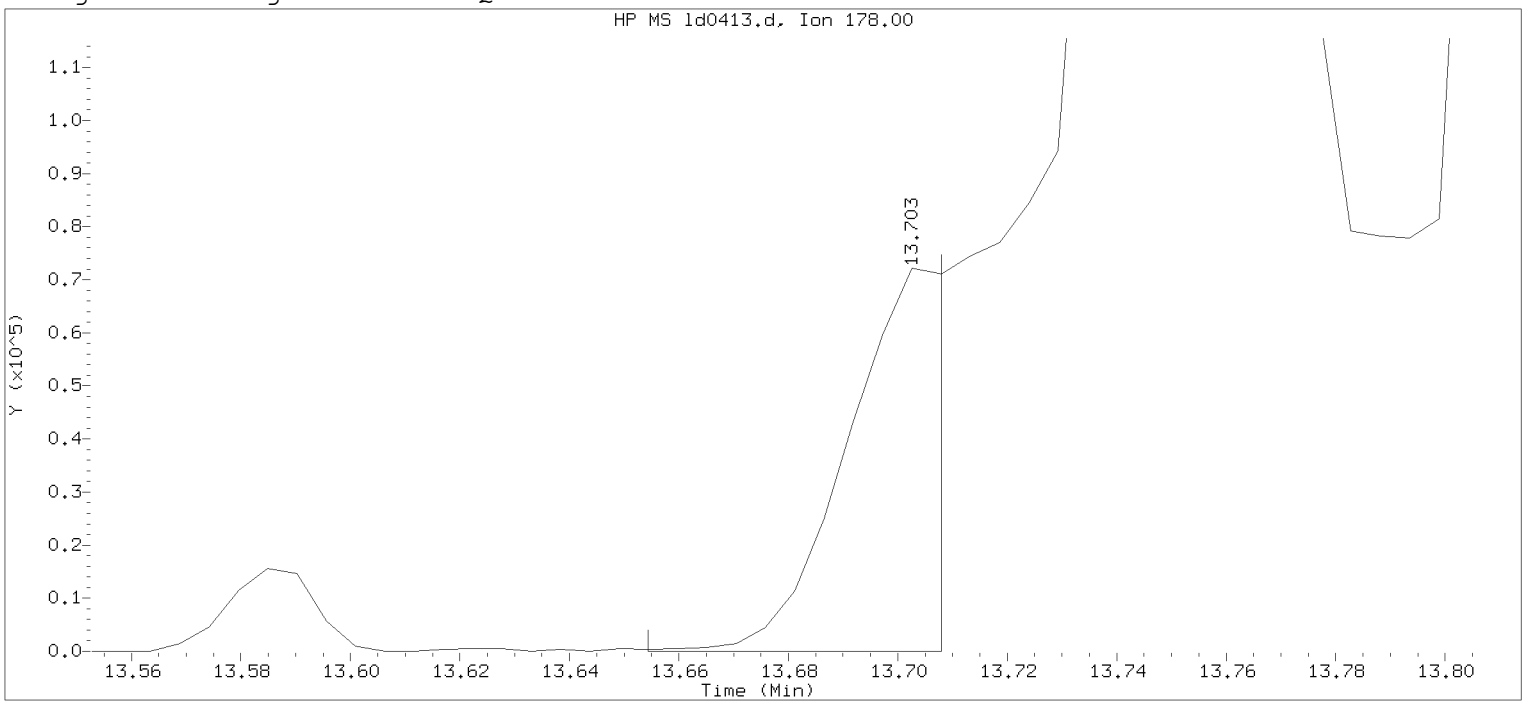
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

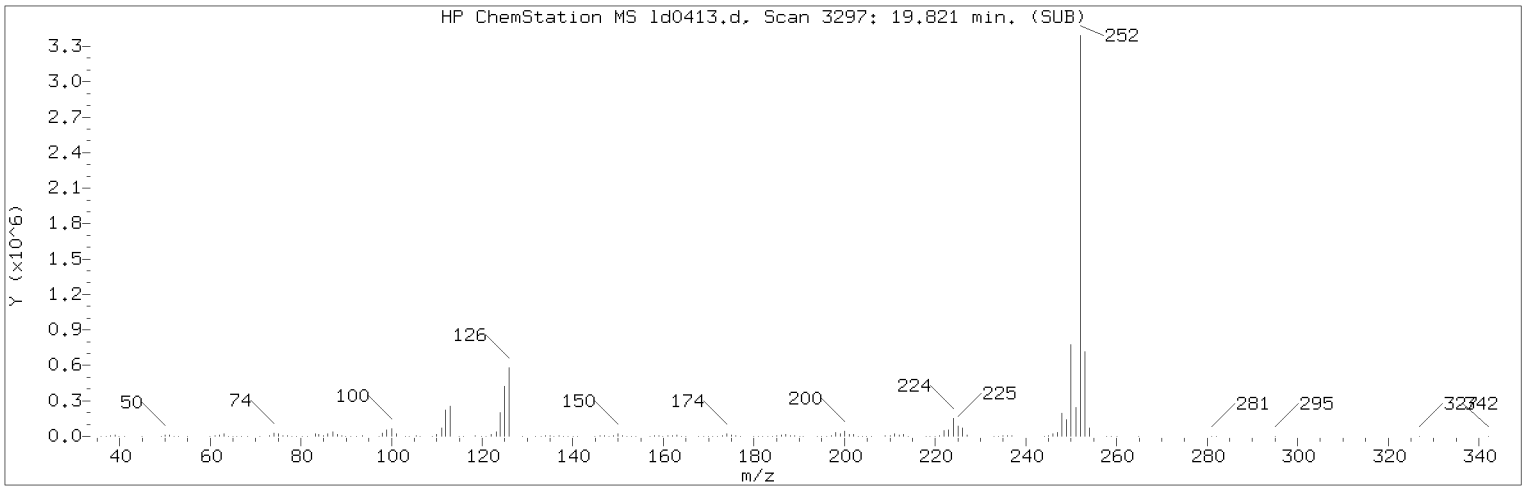
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

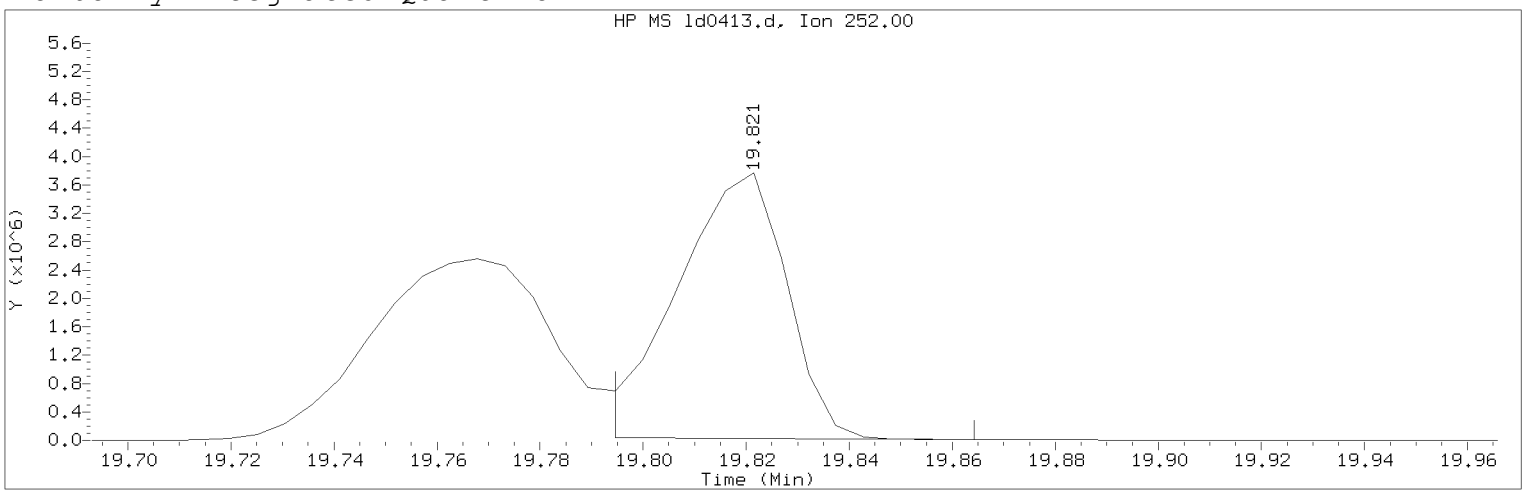
Compound Number	: 160		
Compound Name	: Phenanthrene		
Scan Number	: 2153		
Retention Time (minutes)	: 13.703		
Quant Ion	: 178.00		
Area	: 81581		
On-column Amount (ng/ul)	: 0.4327		
Integration start scan	: 2143	Integration stop scan:	2153
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

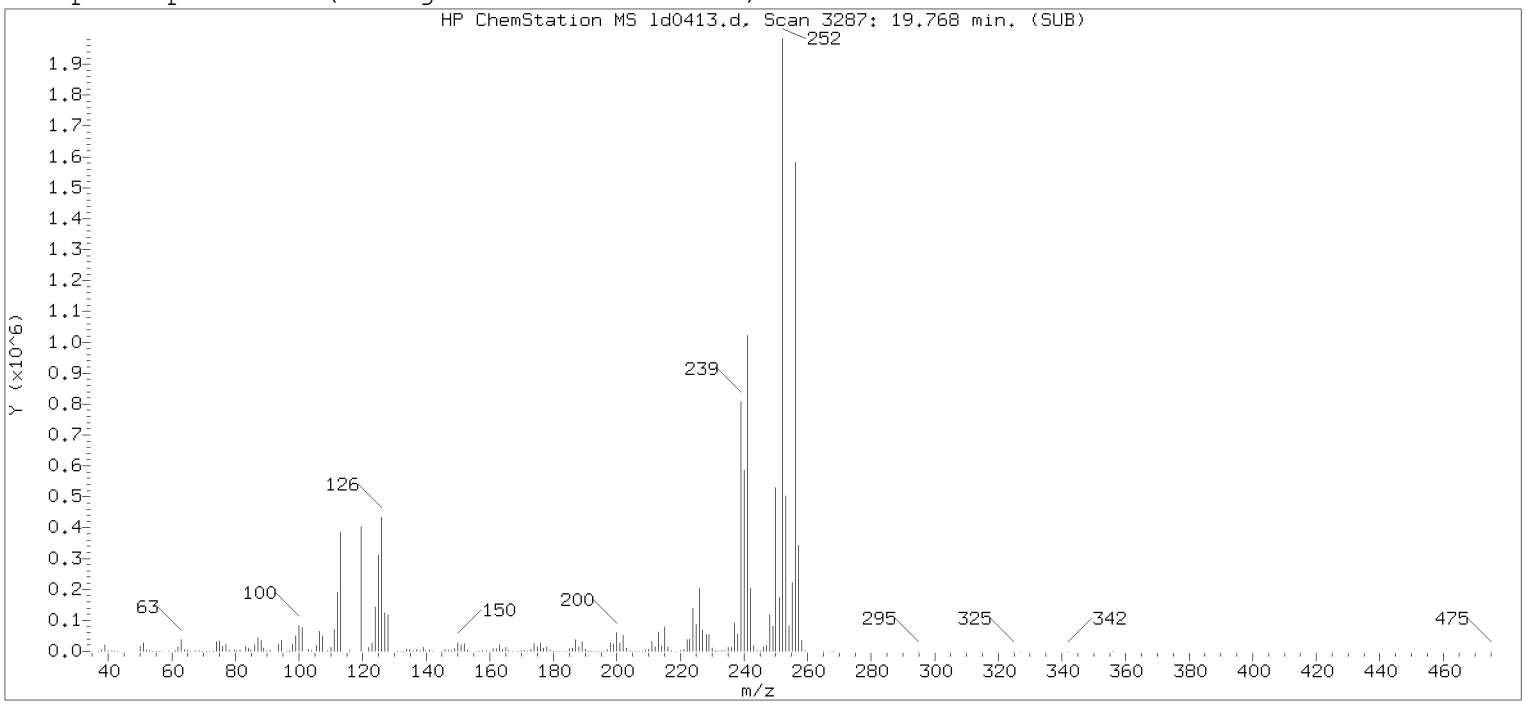
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3297
Retention Time (minutes) : 19.821
Quant Ion : 252.00
Area (flag) : 5568913M
On-Column Amount (ng/ul) : 30.1446
Integration start scan : 3291 Integration stop scan: 3304
Y at integration start : 38462 Y at integration end: 8808

Reason for manual integration: improper integration

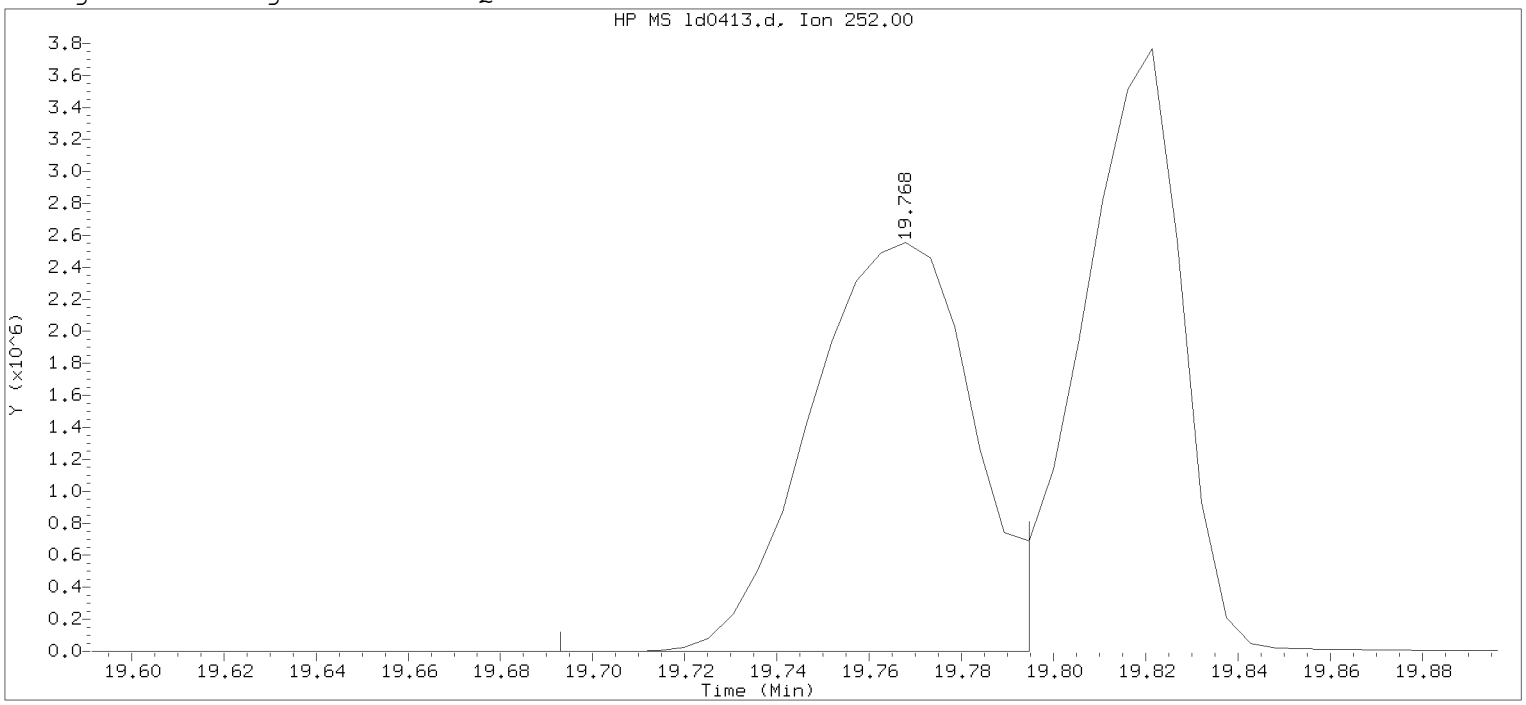
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

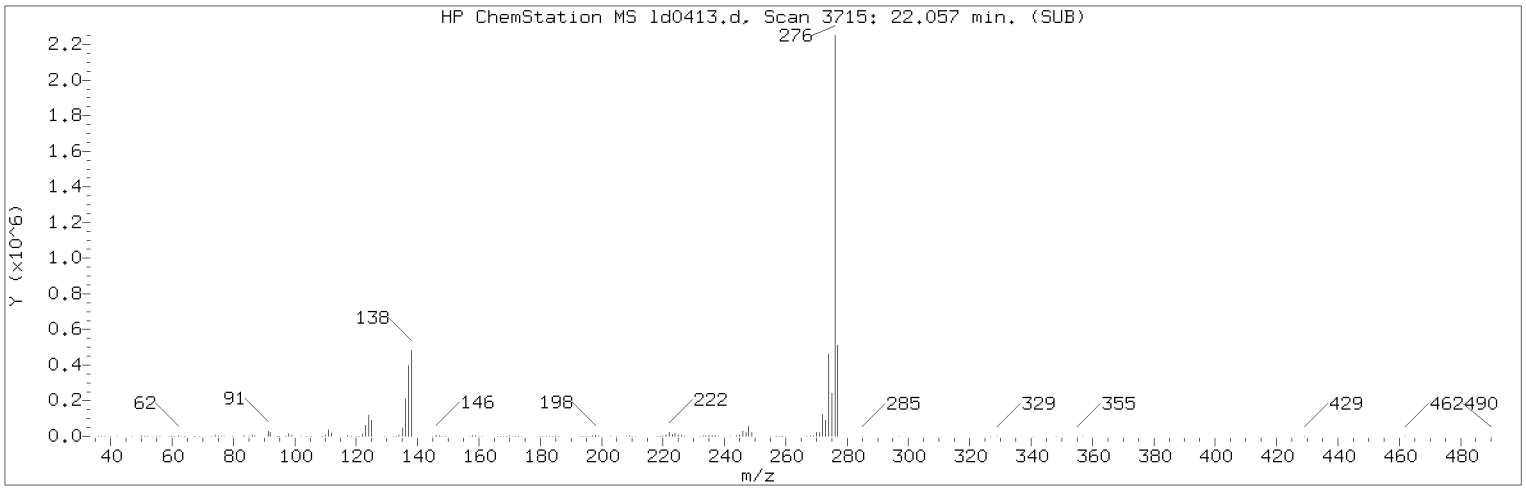
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

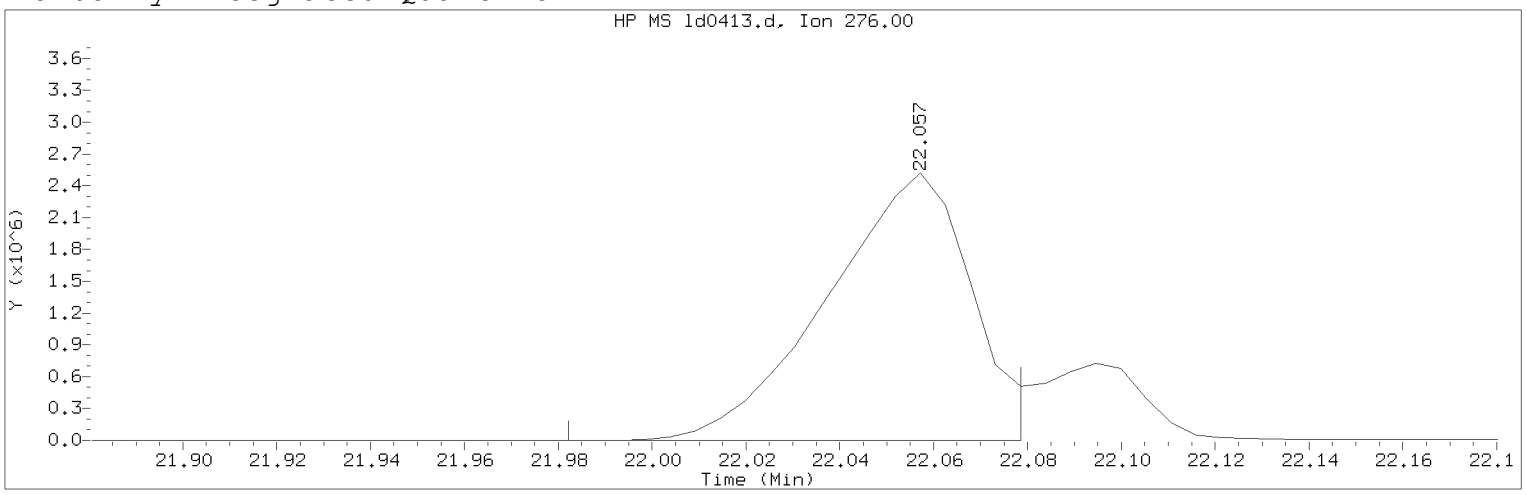
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3287		
Retention Time (minutes)	: 19.768		
Quant Ion	: 252.00		
Area	: 6187894		
On-column Amount (ng/ul)	: 32.1898		
Integration start scan	: 3272	Integration stop scan:	3291
Y at integration start	: 290	Y at integration end:	290

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

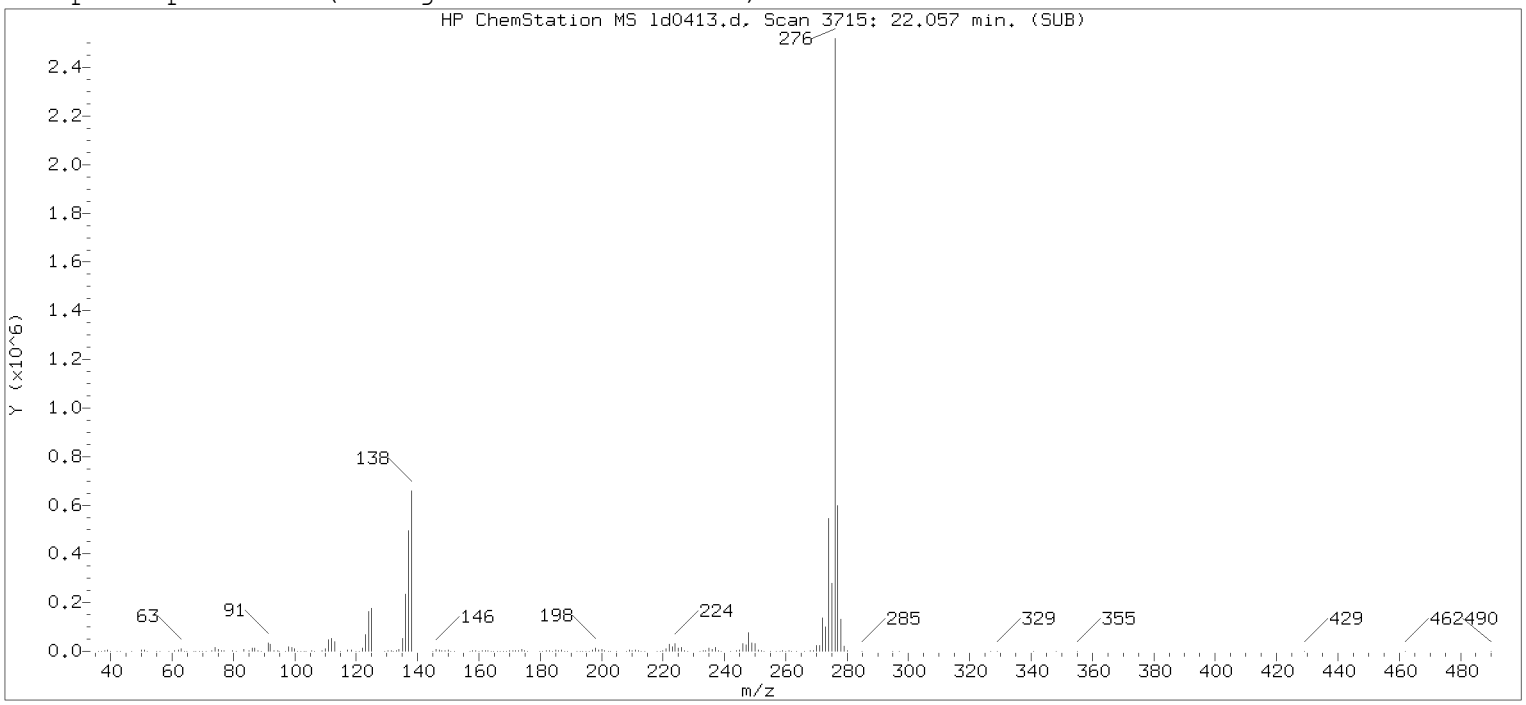
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3715
Retention Time (minutes) : 22.057
Quant Ion : 276.00
Area (flag) : 5379958M
On-Column Amount (ng/ul) : 32.8188
Integration start scan : 3700 Integration stop scan: 3718
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

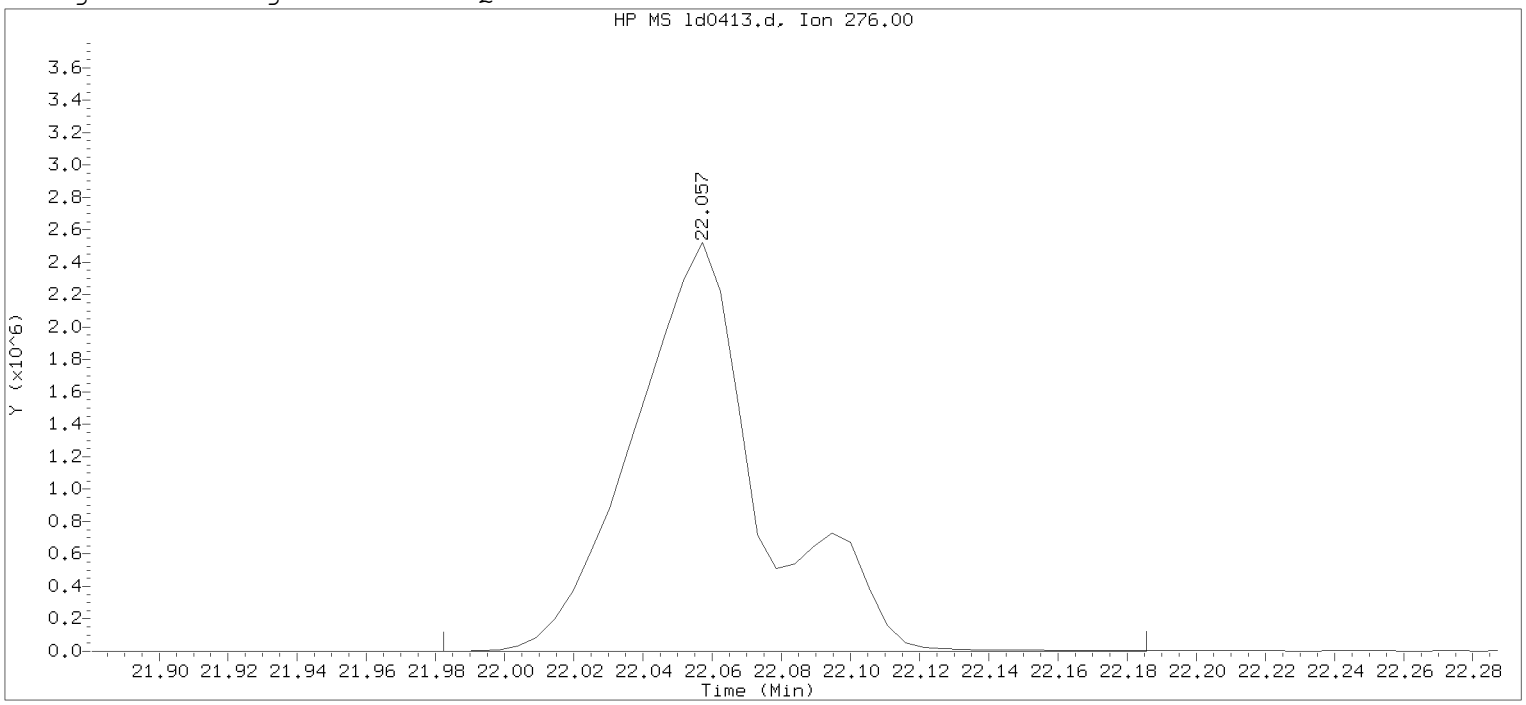
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



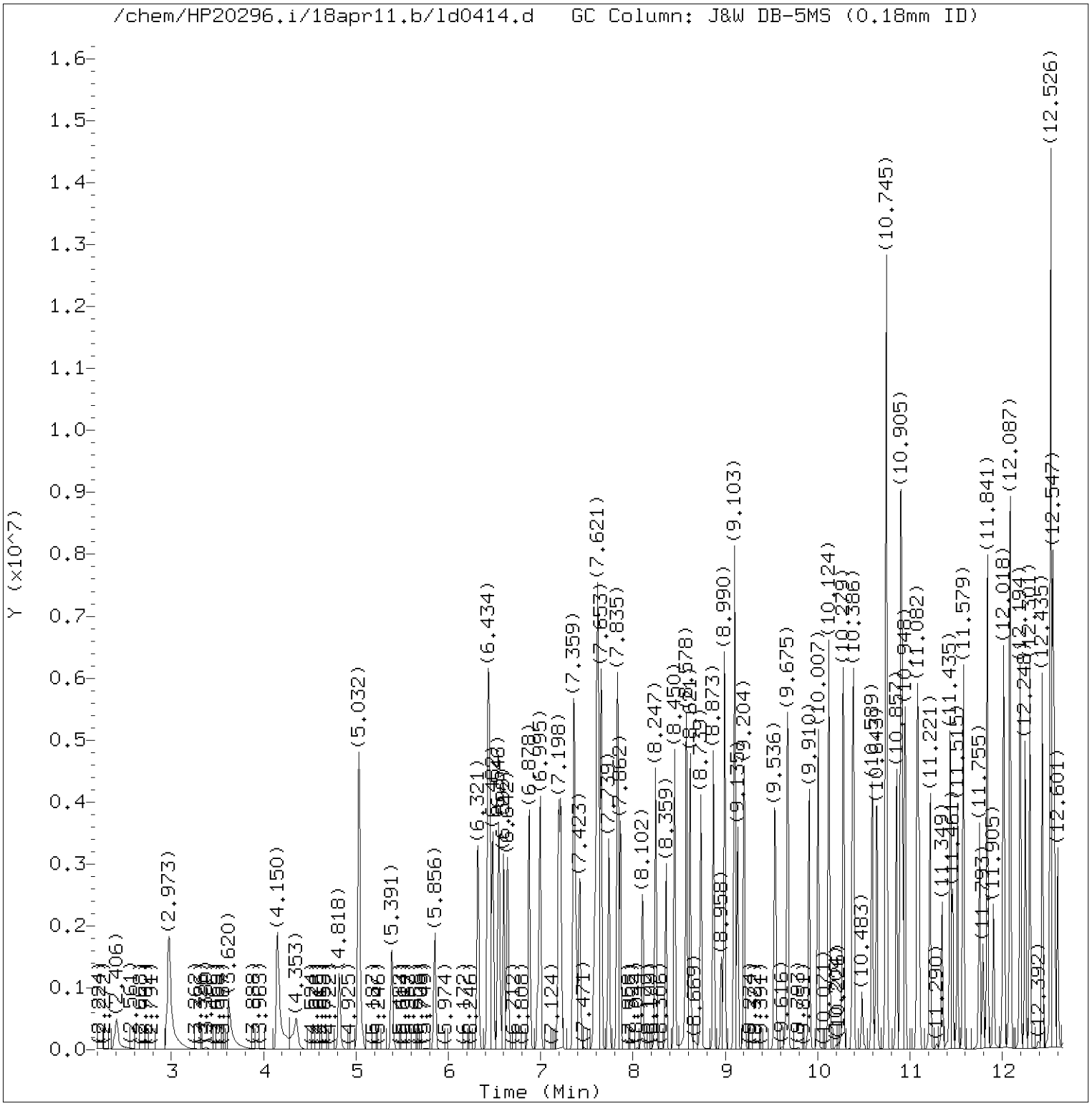
Data File: /chem/HP20296.i/18apr11.b/ld0413.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:01 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:27
Date, time and analyst ID of latest file update: 11-Apr-2018 10:27 Unknown

Sample Name: SSTD30 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3715		
Retention Time (minutes)	: 22.057		
Quant Ion	: 276.00		
Area	: 6437679		
On-column Amount (ng/ul)	: 37.2171		
Integration start scan	: 3700	Integration stop scan:	3738
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: 1691



Total Ion Chromatogram (TIC)

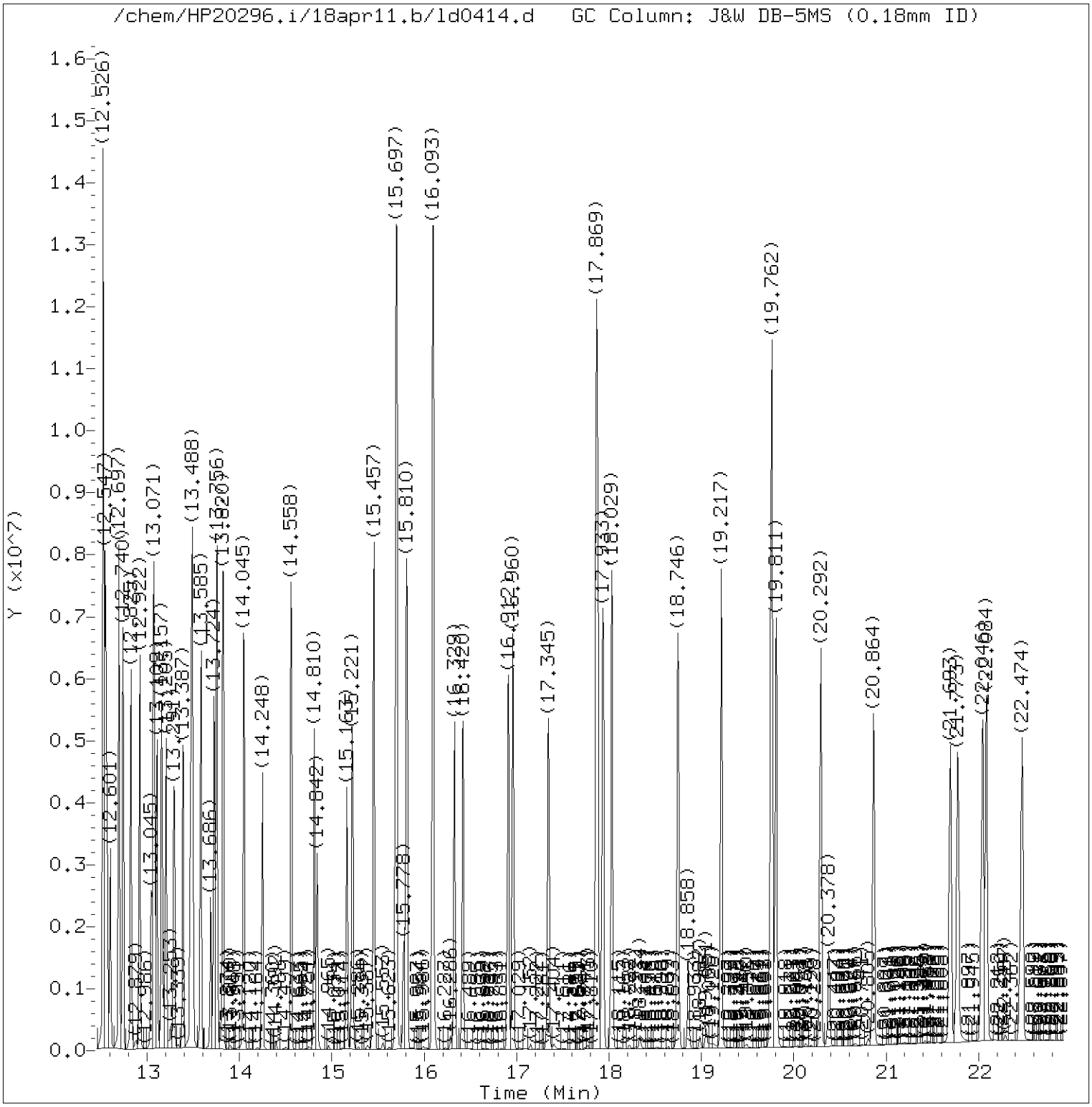
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.406	88	550868	20.195
5) N-Nitrosodimethylamine	(1)	2.957	74	868311	20.906
6) Pyridine	(1)	2.978	79	1522457	20.543
8) 2-Picoline	(1)	4.150	93	1553703	20.735
9) N-Nitrosomethylethylamine	(1)	4.353	88	625167	20.818
10) Methyl methanesulfonate	(1)	4.818	80	742475	20.412
12)$2-Fluorophenol	(1)	5.032	112	2469045	43.219
14) N-Nitrosodiethylamine	(1)	5.391	102	616614	22.140
43) Total Cresols	(1)			2387046	42.080
16) Ethyl methanesulfonate	(1)	5.856	109	633909	20.900
17) Benzaldehyde	(1)	6.321	77	1166276	20.576
18)$Phenol-d6	(1)	6.434	99	3200369	42.722
19) Phenol	(1)	6.455	94	1826386	21.178
20) Aniline	(1)	6.482	93	2142435	21.545
21) a-methylstyrene	(1)	6.551	118	452390	20.825
23) bis(2-Chloroethyl)ether	(1)	6.599	93	1352581	21.068
24) 2-Chlorophenol	(1)	6.642	128	1209011	21.603
25) 1,3-Dichlorobenzene	(1)	6.878	146	1348787	21.350
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	208633	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	1358132	21.243
28) Benzyl alcohol	(1)	7.198	108	795106	21.287
29) 1,2-Dichlorobenzene	(1)	7.215	146	1300404	21.362
31) Indene	(1)	7.359	115	1853296	20.778
32) 2-Methylphenol	(1)	7.370	108	1167891	21.164
100) Isosafrole	(3)			1072740	21.064
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	1896576	20.809
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	1896576	20.809
36) N-Nitrosopyrrolidine	(1)	7.584	100	653642	21.633
37) Acetophenone	(1)	7.605	105	1838672	21.852
38) 4-Methylphenol	(1)	7.621	108	1219155	20.916
39) N-Nitroso-di-n-propylamine	(1)	7.626	70	1004210	20.935
40) N-Nitrosomorpholine	(1)	7.653	56	811682	20.248
41) o-Toluidine	(1)	7.653	106	2054101	21.049
44) Hexachloroethane	(1)	7.739	117	554404	20.338
45)$Nitrobenzene-d5	(2)	7.835	82	2941078	42.282
46) Nitrobenzene	(2)	7.862	77	1490945	21.014
125) 2,4_2,6-Dinitrotoluenes	(3)			1356192	43.436
50) N-Nitrosopiperidine	(2)	8.102	114	619026	21.230
52) Isophorone	(2)	8.247	82	2638823	21.278
53) 2-Nitrophenol	(2)	8.359	139	627002	21.870

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.450	107	1299649	21.146
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	619077	20.351
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	1665662	20.662
58) Benzoic acid	(2)	8.621	105	828554	20.463
62) 2,4-Dichlorophenol	(2)	8.739	162	1025304	21.425
151) Diallate trans/cis	(4)			1248157	20.051
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	1123189	21.064
68)*Naphthalene-d8	(2)	8.958	136	806502	5.000
69) Naphthalene	(2)	8.990	128	3559430	21.357
70) 4-Chloroaniline	(2)	9.103	127	1425518	20.956
71) 2,6-Dichlorophenol	(2)	9.103	162	1003154	21.166
72) Hexachloropropene	(2)	9.135	213	786015	20.372
74) Hexachlorobutadiene	(2)	9.204	225	680762	21.058
78) Quinoline	(2)	9.541	129	2179955	20.534
80) N-Nitrosodi-n-butylamine	(2)	9.675	84	1179937	22.559
79) Caprolactam	(2)	9.680	113	297577M	19.832
83) 4-Chloro-3-methylphenol	(2)	9.910	107	1128296	21.485
85) Safrole	(2)	10.007	162	910409	20.364
86) 2-Methylnaphthalene	(2)	10.124	142	2348740	21.213
87) 1-Methylnaphthalene	(2)	10.279	142	2134408	21.011
88) Hexachlorocyclopentadiene	(3)	10.376	237	691191	21.111
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	1151304	20.907
91) cis-Isosafrole	(3)	10.483	162	175018	3.652
93) 2,4,6-Trichlorophenol	(3)	10.589	196	769791	22.261
95) 2,4,5-Trichlorophenol	(3)	10.643	196	785232	21.634
96)$2-Fluorobiphenyl	(3)	10.745	172	5206496	41.369
97) trans-Isosafrole	(3)	10.857	162	897722	17.412
98) 1,1'-Biphenyl	(3)	10.900	154	2741855	21.124
99) 2-Chloronaphthalene	(3)	10.916	162	2320484	21.037
101) 1-Chloronaphthalene	(3)	10.948	162	2119536M	20.773
103) Diphenyl ether	(3)	11.082	170	1511412	20.847
104) 2-Nitroaniline	(3)	11.103	138	708796	21.957
108) 1,4-Naphthoquinone	(3)	11.221	158	925777	21.241
109) 1,4-Dinitrobenzene	(3)	11.349	168	364974	21.272
110) Dimethylphthalate	(3)	11.435	163	2537714	20.538
111) 1,3-Dinitrobenzene	(3)	11.461	168	407726	22.185
113) 2,6-Dinitrotoluene	(3)	11.515	165	577967	22.030
114) Acenaphthylene	(3)	11.579	152	3334928	21.752
117) 3-Nitroaniline	(3)	11.755	138	619836	22.424
118)*Acenaphthene-d10	(3)	11.793	164	404835	5.000

M = Compound was manually integrated.
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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.841	153	2267952	20.861
120) 2,4-Dinitrophenol	(3)	11.905	184	352569	22.354
121) 4-Nitrophenol	(3)	12.007	109	410704	21.078
122) Pentachlorobenzene	(3)	12.018	250	944364	21.029
124) Dibenzofuran	(3)	12.082	168	3109790	20.589
123) 2,4-Dinitrotoluene	(3)	12.092	165	778225	21.406
126) 1-Naphthylamine	(3)	12.194	143	2256137	20.992
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	633870	22.442
128) 2-Naphthylamine	(3)	12.301	143	2154227	21.158
129) Diethylphthalate	(3)	12.435	149	2505333	20.602
130) Thionazin	(3)	12.526	107	427082	20.629
131) Fluorene	(3)	12.526	166	2462040	20.867
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	1194748	20.431
133) 5-Nitro-o-toluidine	(3)	12.558	152	705058	21.939
134) 4-Nitroaniline	(3)	12.569	138	605046	21.657
135) 4,6-Dinitro-2-methylphenol	(4)	12.601	198	463447	20.981
136) N-Nitrosodiphenylamine	(4)	12.697	169	2072286	20.296
137) NDPA as diphenylamine	(4)	12.697	169	2072286	20.296
139) 1,2-Diphenylhydrazine	(4)	12.740	77	2872392	20.160
140)$2,4,6-Tribromophenol	(3)	12.825	330	616614	44.062
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	469535M	19.376
144) 1,3,5-Trinitrobenzene	(4)	13.050	213	285075	20.951
145) Diallate (peak 1)	(4)	13.066	86	1075700	16.677
146) Phorate	(4)	13.077	75	1851481	20.261
147) Phenacetin	(4)	13.109	108	1382816	21.428
148) 4-Bromophenyl-phenylether	(4)	13.157	248	680537	19.947
149) Diallate (peak 2)	(4)	13.173	86	172457M	3.373
150) Hexachlorobenzene	(4)	13.205	284	685269	19.556
152) Dimethoate	(4)	13.291	87	1119566	20.358
153) Atrazine	(4)	13.392	200	649079	18.791
154) Pentachlorophenol	(4)	13.472	266	461946	21.526
156) Pentachloronitrobenzene	(4)	13.483	237	342875	20.502
155) 4-Aminobiphenyl	(4)	13.494	169	2395526	20.608
157) Pronamide	(4)	13.585	173	1225609	21.283
158)*Phenanthrene-d10	(4)	13.718	188	834360	5.000
159) Dinoseb	(4)	13.729	211	764270	22.103
160) Phenanthrene	(4)	13.756	178	3768058	20.481
162) Anthracene	(4)	13.825	178	3814740	20.684
168) Carbazole	(4)	14.045	167	3373725	20.660
169) Methyl parathion	(4)	14.248	109	888464	21.195

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	4516479	20.546
172) Parathion	(4)	14.810	109	587966	21.674
173) 4-Nitroquinoline-1-oxide	(4)	14.842	190	472482	21.689
227) Total PAHs	(6)			62410132	377.743
174) Octachlorostyrene	(4)	15.163	308	263277	20.085
176) Isodrin	(4)	15.221	193	457091	20.054
178) Fluoranthene	(4)	15.457	202	4329796	20.925
179) Benzidine	(5)	15.703	184	7642226	60.798
180)*Pyrene-d10	(5)	15.778	212	853042	5.000
182) Pyrene	(5)	15.810	202	4376710	20.168
184)$Terphenyl-d14	(5)	16.099	244	5572921	40.736
187) p-Dimethylaminoazobenzene	(5)	16.329	225	748286	22.601
190) Chlorobenzilate	(5)	16.420	139	1328566	20.550
192) 3,3'-Dimethylbenzidine	(5)	16.912	212	2998314	21.932
193) Butylbenzylphthalate	(5)	16.960	149	2106242	20.890
196) 2-Acetylaminofluorene	(5)	17.345	181	1736227	21.757
198) 3,3'-Dichlorobenzidine	(5)	17.858	252	1481517	21.235
200) Benzo(a)anthracene	(5)	17.869	228	4145184	21.380
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.880	231	879651	20.761
201) Chrysene	(5)	17.933	228	3856065	20.561
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	3004808	21.093
208) 6-Methylchrysene	(5)	18.746	242	2701478	20.458
210) Di-n-octylphthalate	(6)	19.217	149	5286424	21.572
211) Benzo(b)fluoranthene	(6)	19.762	252	3996917	20.919
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.762	256	1718884	21.806
213) Benzo(k)fluoranthene	(6)	19.811	252	3786214M	20.579
216) Benzo(a)pyrene	(6)	20.292	252	3672996	21.365
218)*Perylene-d12	(6)	20.378	264	779313	5.000
220) 3-Methylcholanthrene	(6)	20.864	268	1773997	21.221
222) Dibenz(a,h)acridine	(6)	21.699	279	3020756	20.675
223) Dibenz(a,j)acridine	(6)	21.773	279	3064201	20.648
224) Indeno(1,2,3-cd)pyrene	(6)	22.046	276	3474549M	21.282
225) Dibenz(a,h)anthracene	(6)	22.089	278	3538362	21.336
226) Benzo(g,h,i)perylene	(6)	22.474	276	3543043	21.001

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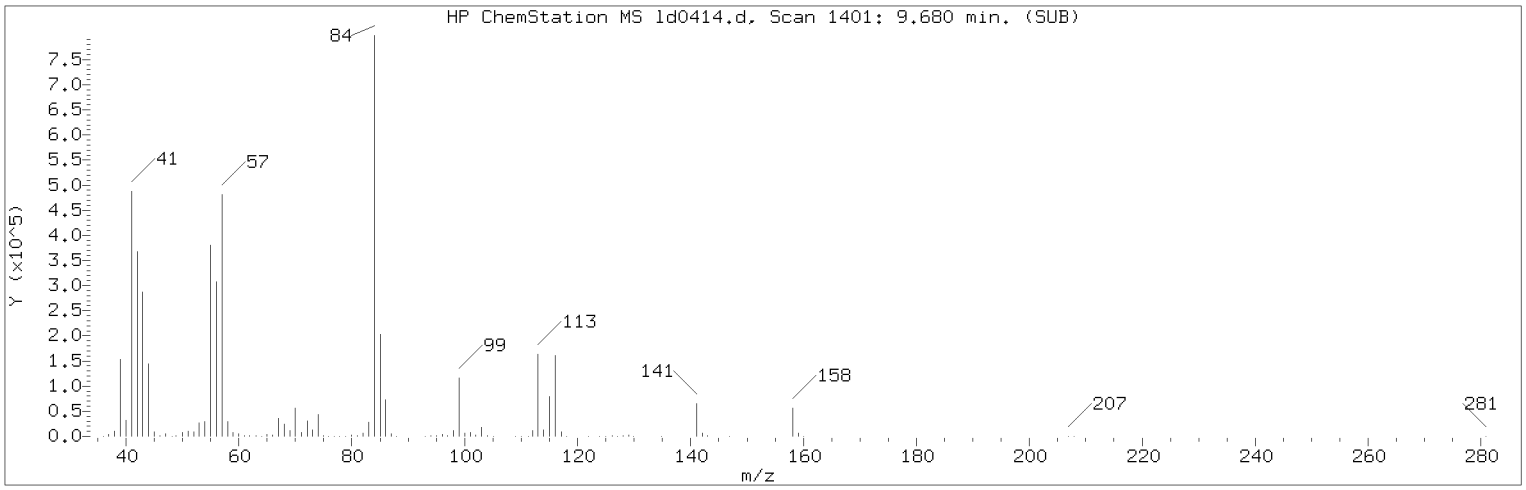
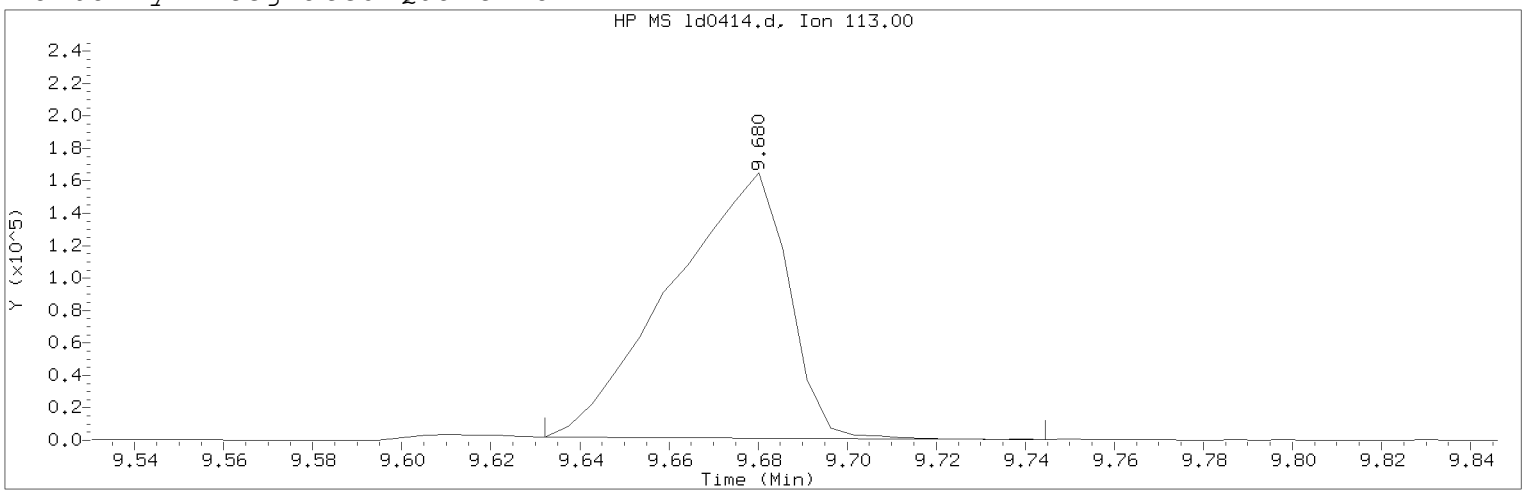
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

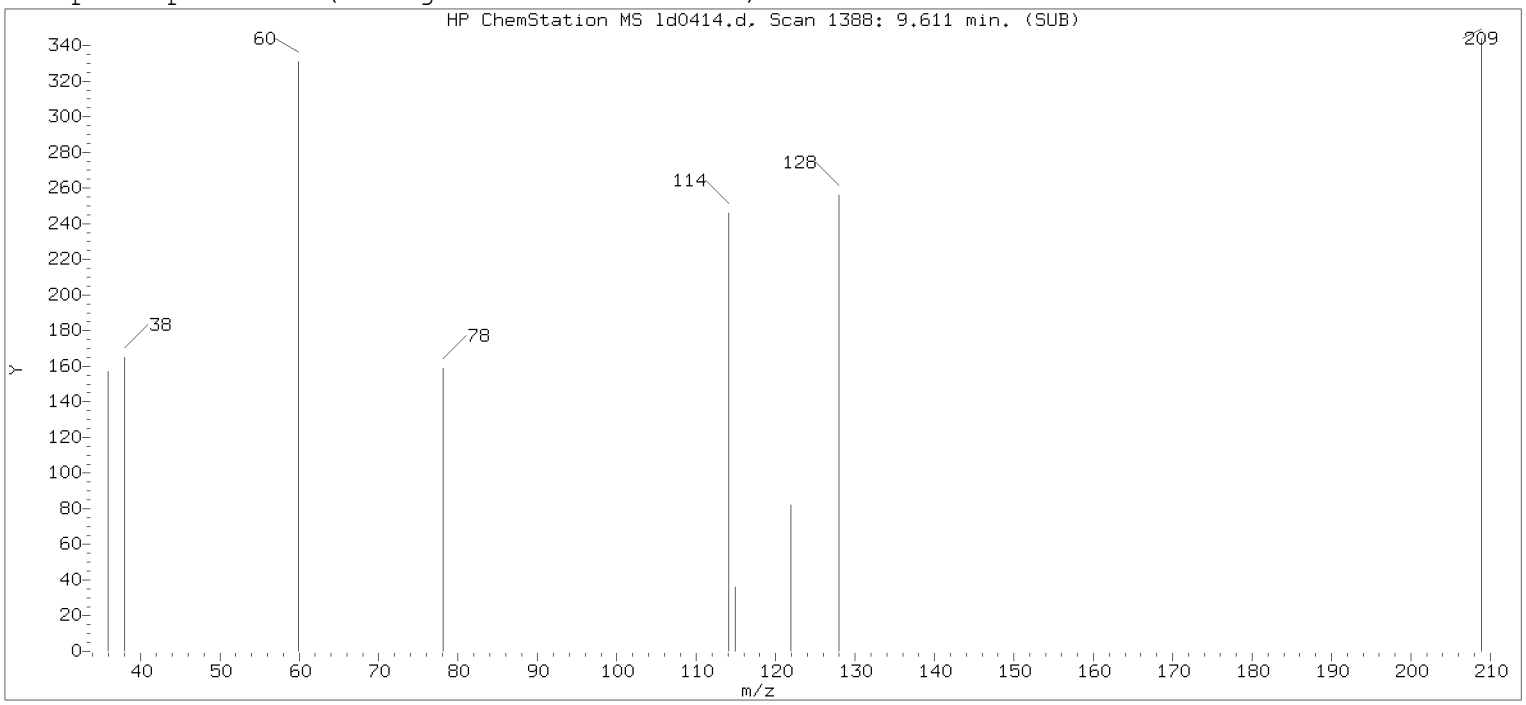
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1401
Retention Time (minutes) : 9.680
Quant Ion : 113.00
Area (flag) : 297577M
On-Column Amount (ng/ul) : 19.8318
Integration start scan : 1391 Integration stop scan: 1412
Y at integration start : 2161 Y at integration end: 446

Reason for manual integration: improper integration

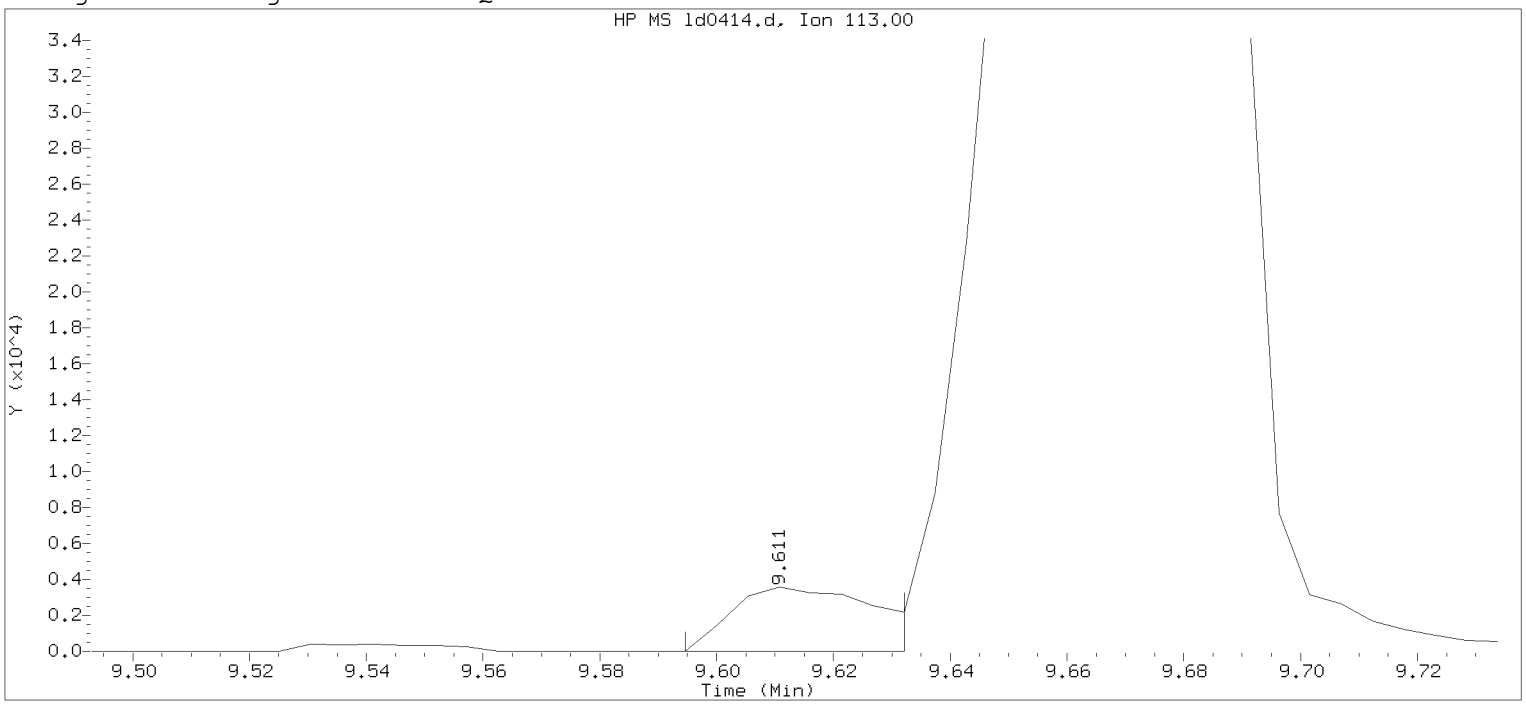
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

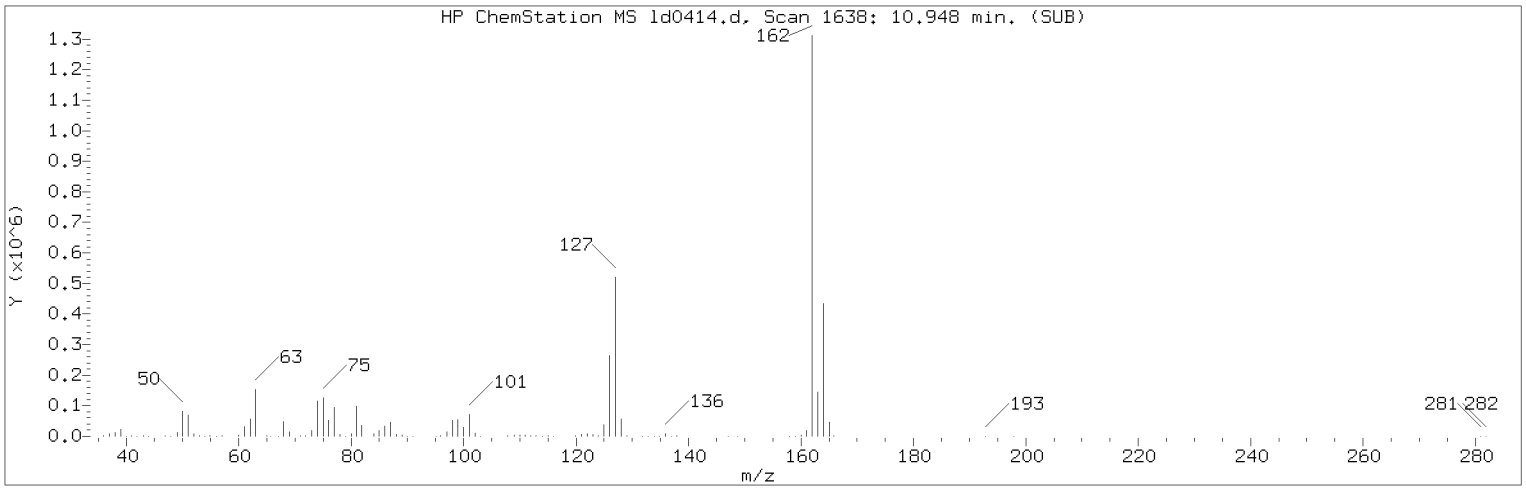
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

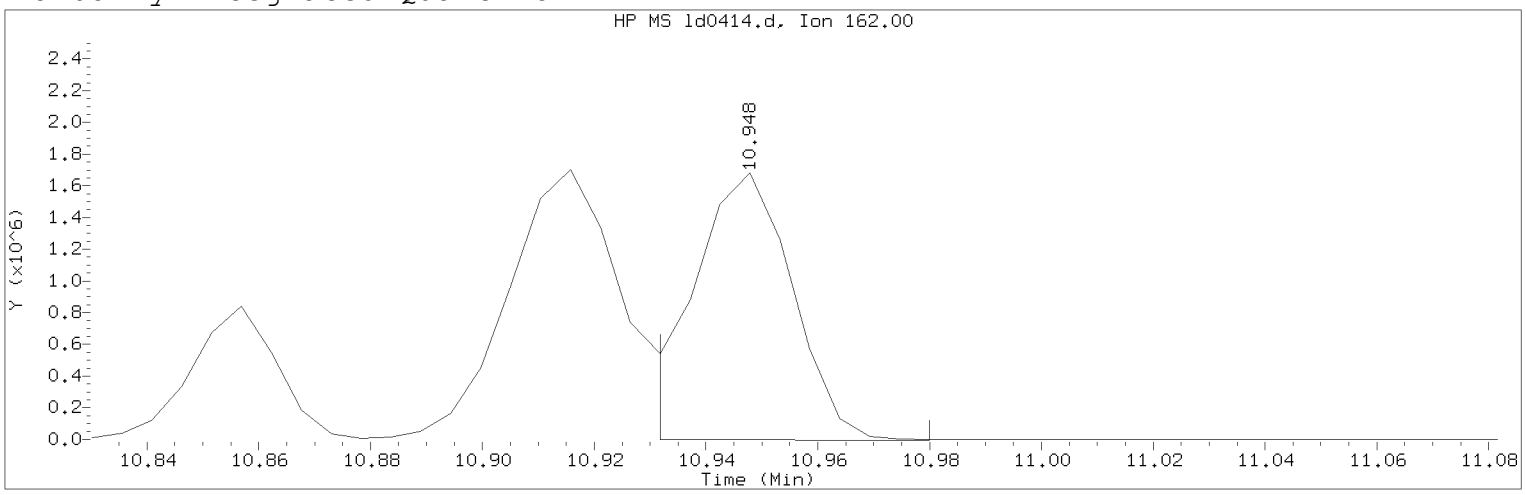
Compound Number	: 79		
Compound Name	: Caprolactam		
Scan Number	: 1388		
Retention Time (minutes)	: 9.611		
Quant Ion	: 113.00		
Area	: 5801		
On-column Amount (ng/ul)	: 0.3761		
Integration start scan	: 1384	Integration stop scan:	1391
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

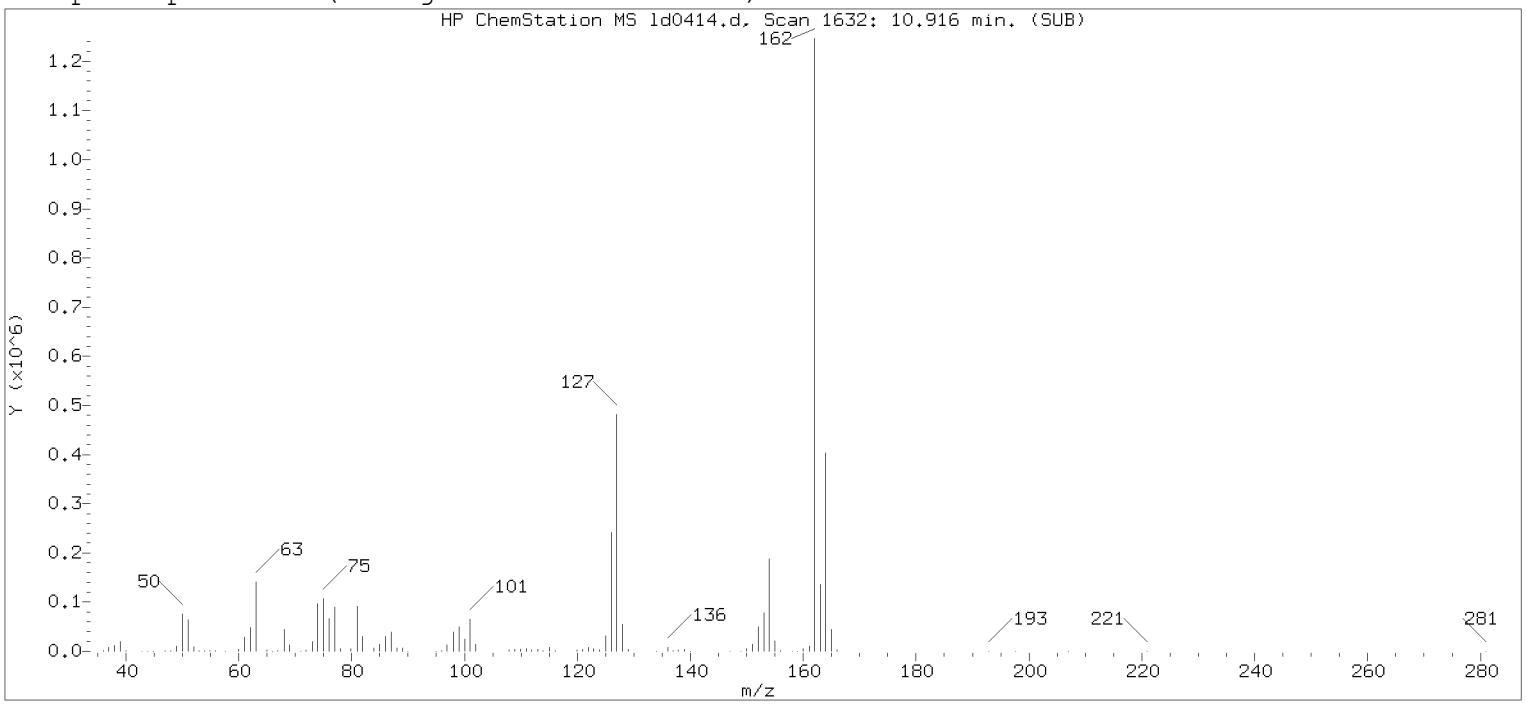
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 2119536M
On-Column Amount (ng/ul) : 20.7728
Integration start scan : 1634 Integration stop scan: 1643
Y at integration start : -897 Y at integration end: -5099

Reason for manual integration: improper integration

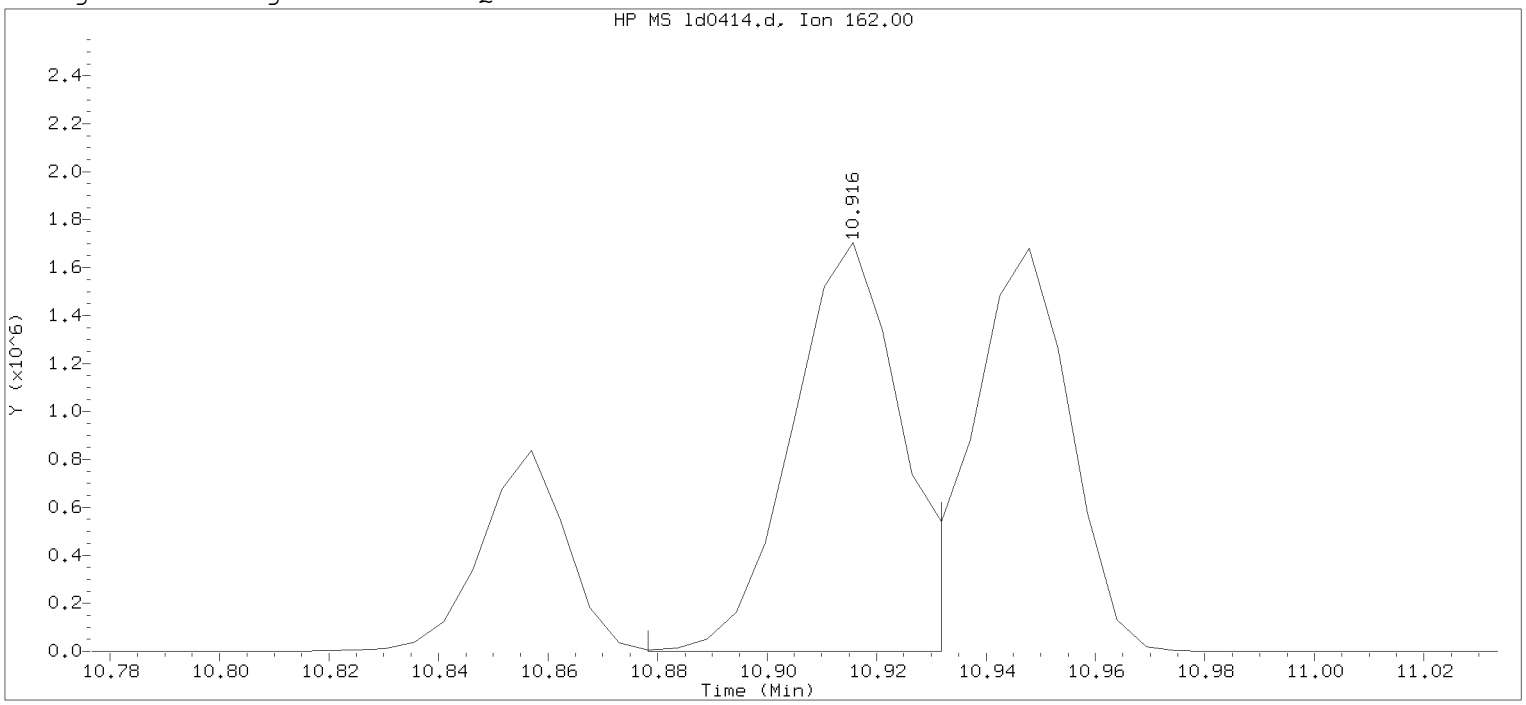
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

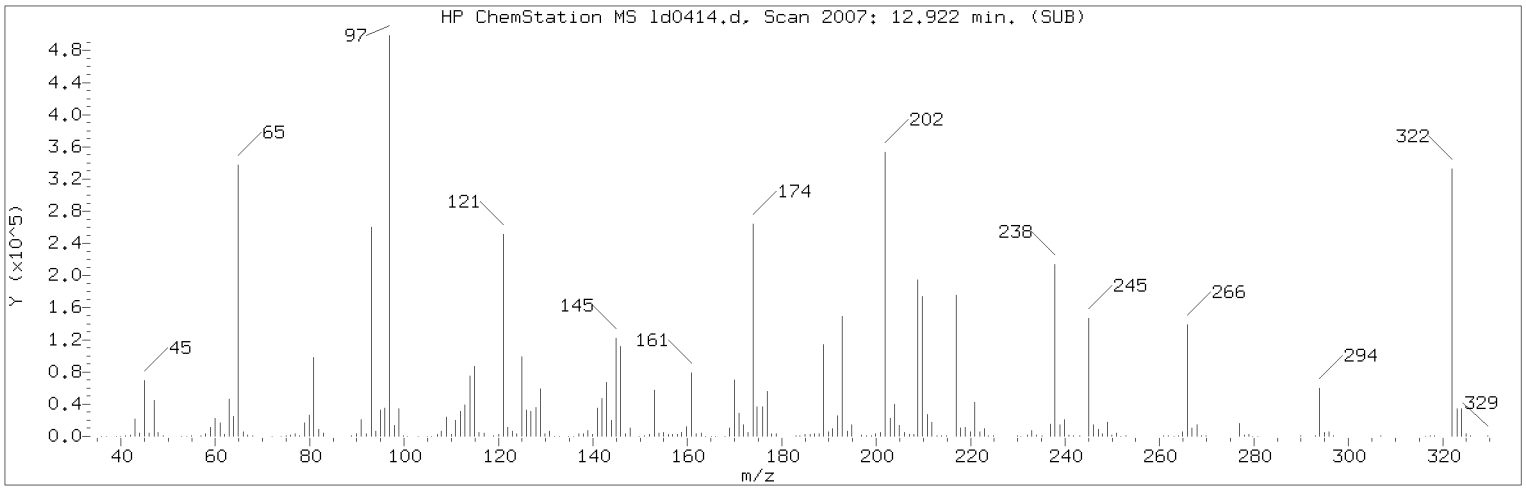
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

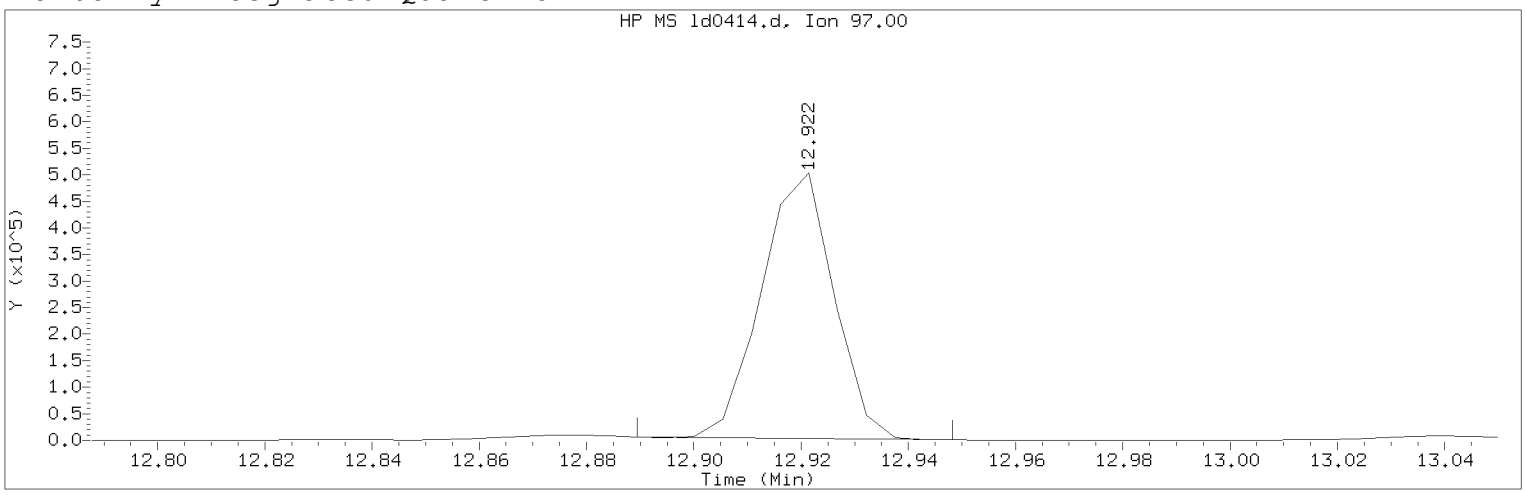
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1632
Retention Time (minutes) : 10.916
Quant Ion : 162.00
Area : 2320484
On-column Amount (ng/ul) : 22.7453
Integration start scan : 1624 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

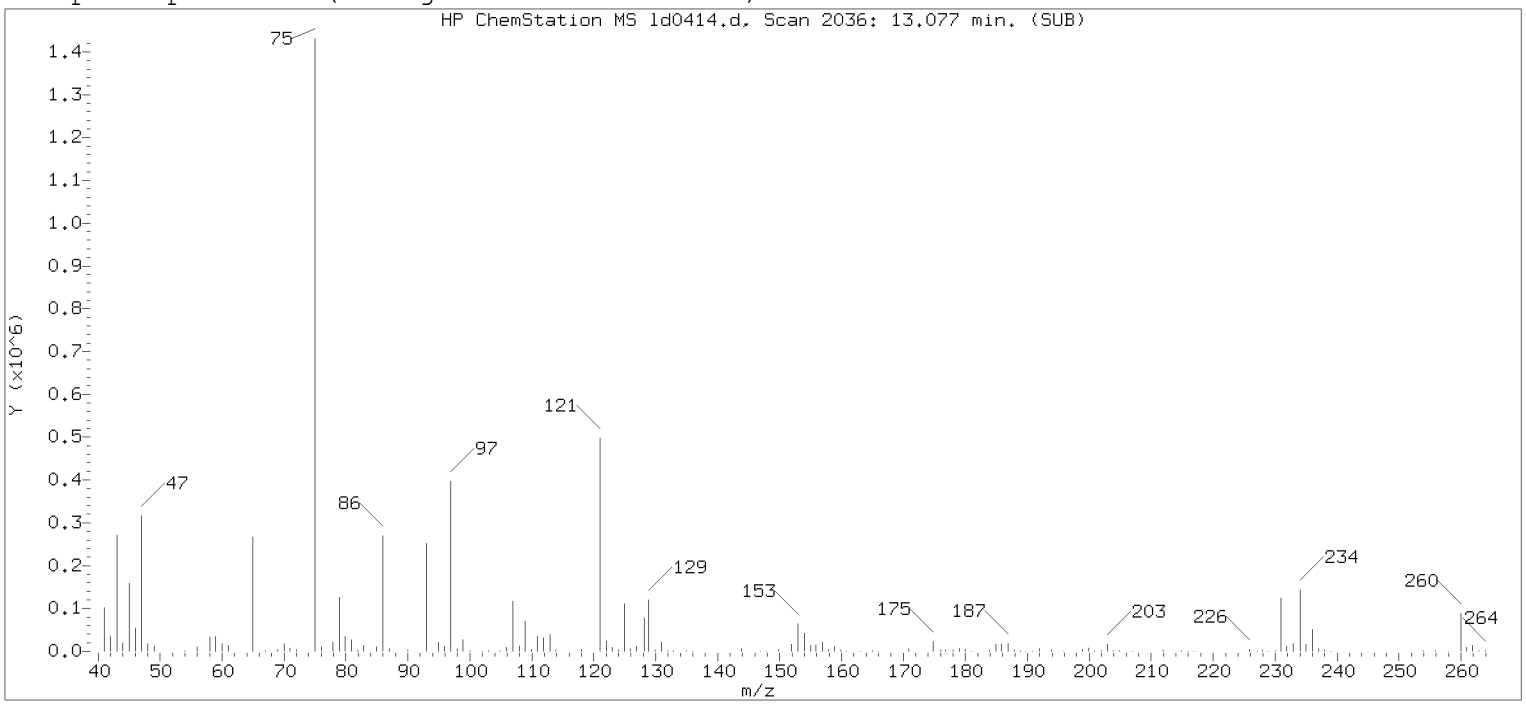
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 469535M
On-Column Amount (ng/ul) : 19.3765
Integration start scan : 2000 Integration stop scan: 2011
Y at integration start : 5521 Y at integration end: 1626

Reason for manual integration: improper integration

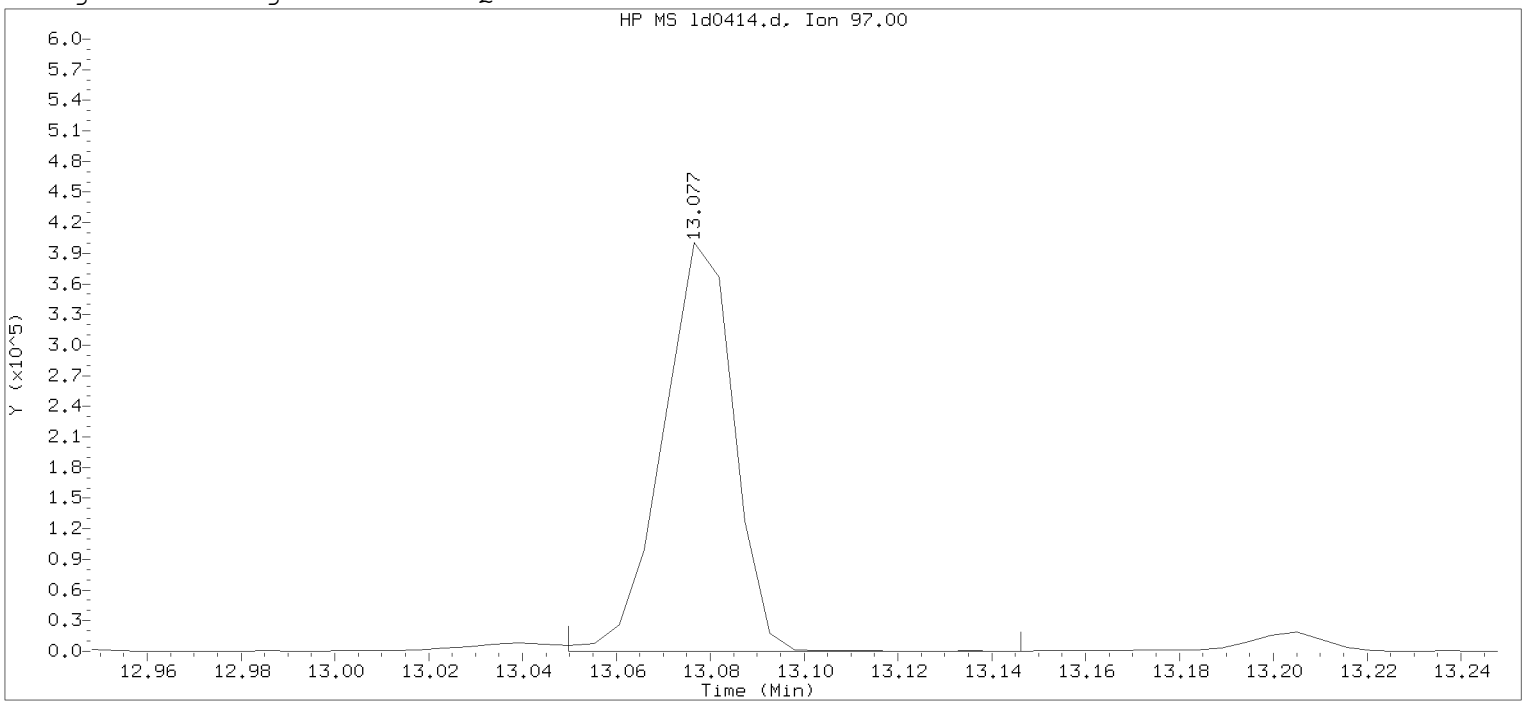
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

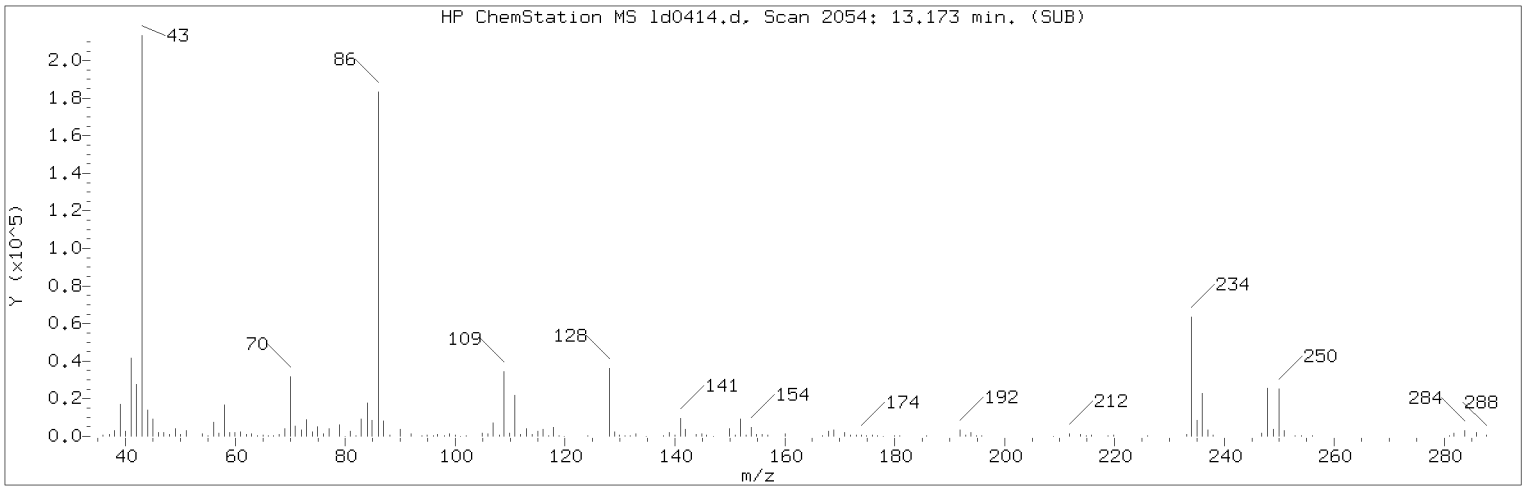
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

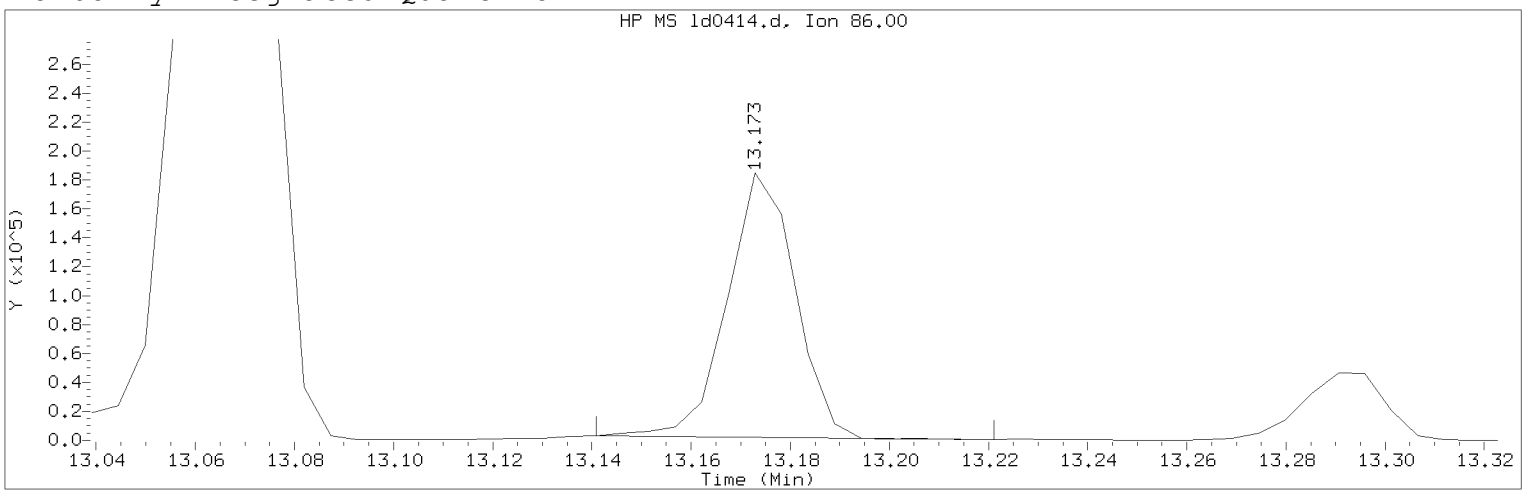
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 417910		
On-column Amount (ng/ul)	: 16.4289		
Integration start scan	: 2030	Integration stop scan:	2048
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature used. FID Page 1703

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

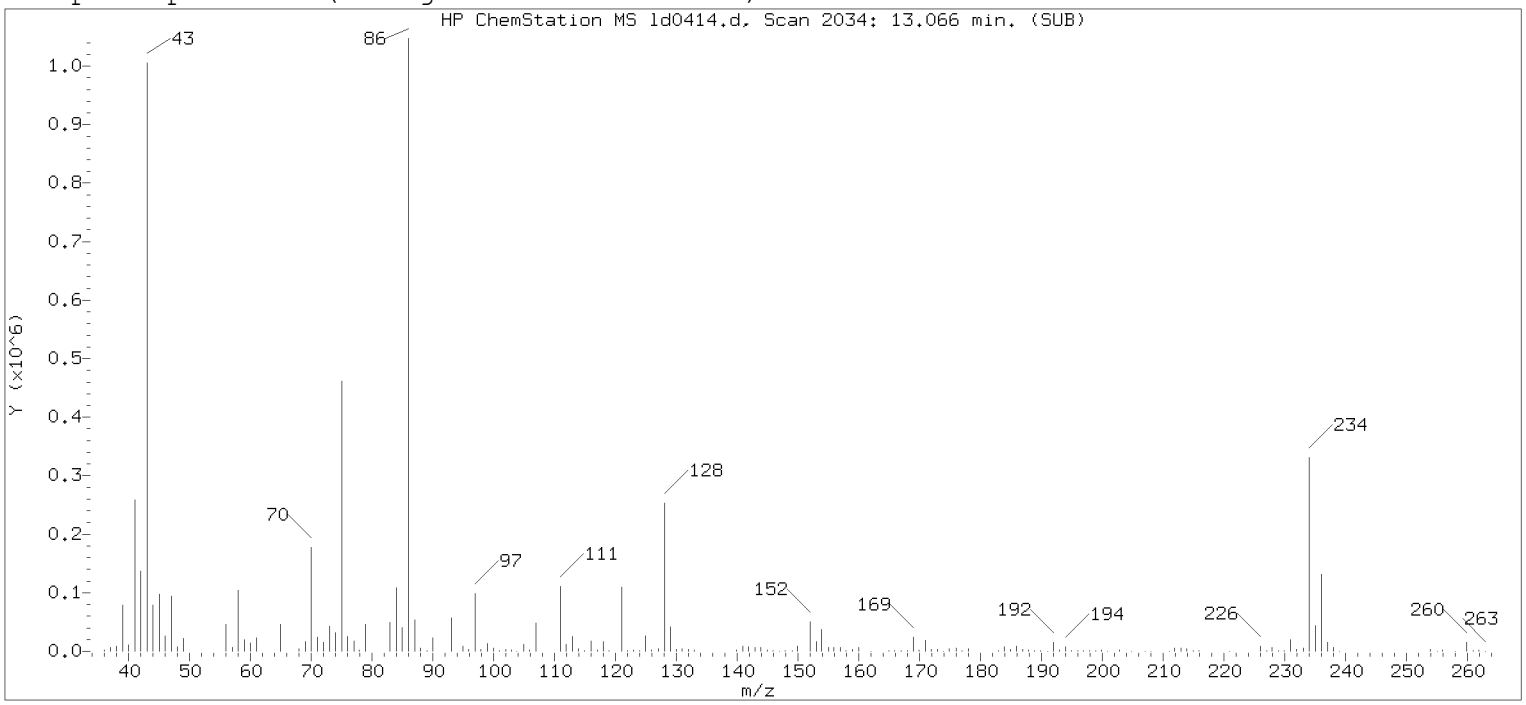
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 172457M
On-Column Amount (ng/ul) : 3.3734
Integration start scan : 2047 Integration stop scan: 2062
Y at integration start : 3313 Y at integration end: 525

Reason for manual integration: improper integration

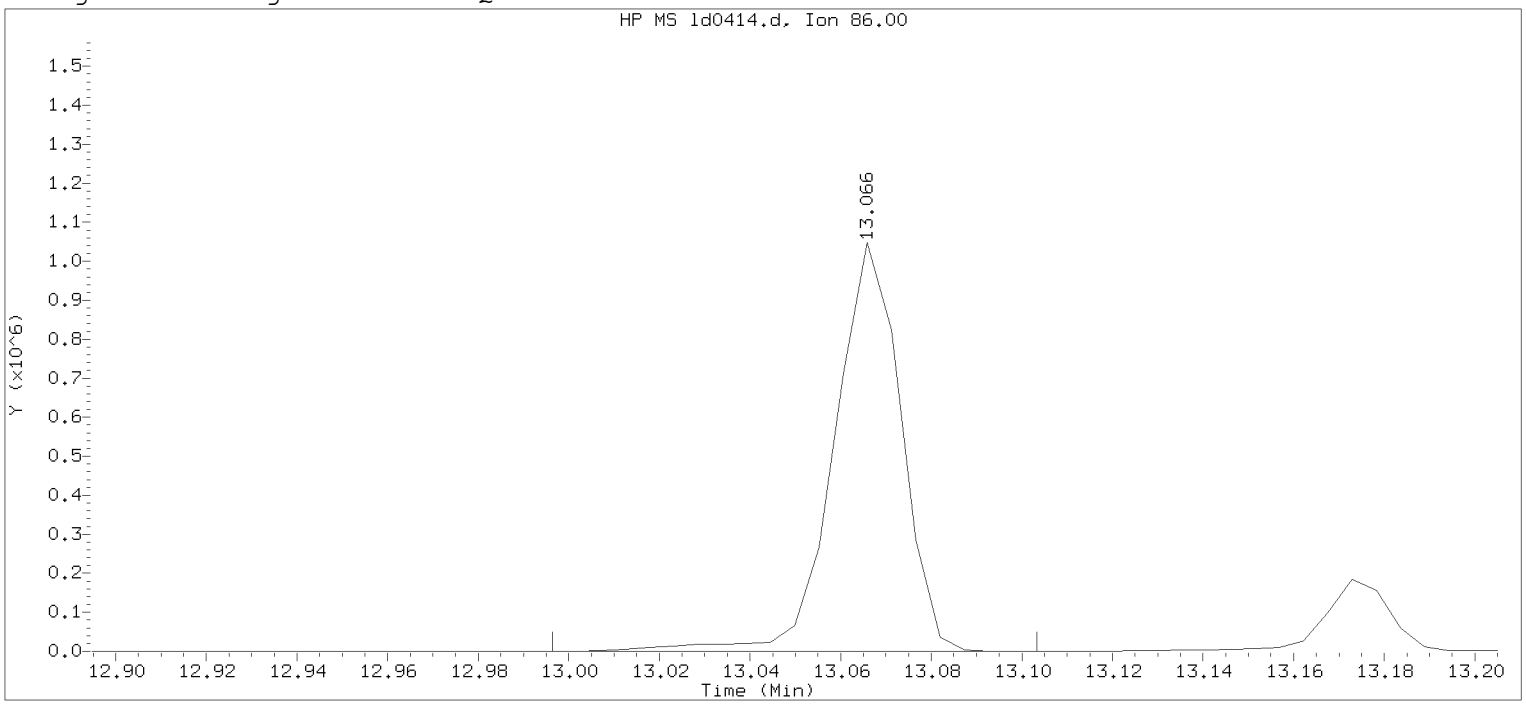
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 1075700		
On-column Amount (ng/ul)	: 20.1146		
Integration start scan	: 2020	Integration stop scan:	2040
Y at integration start	: 0	Y at integration end:	0

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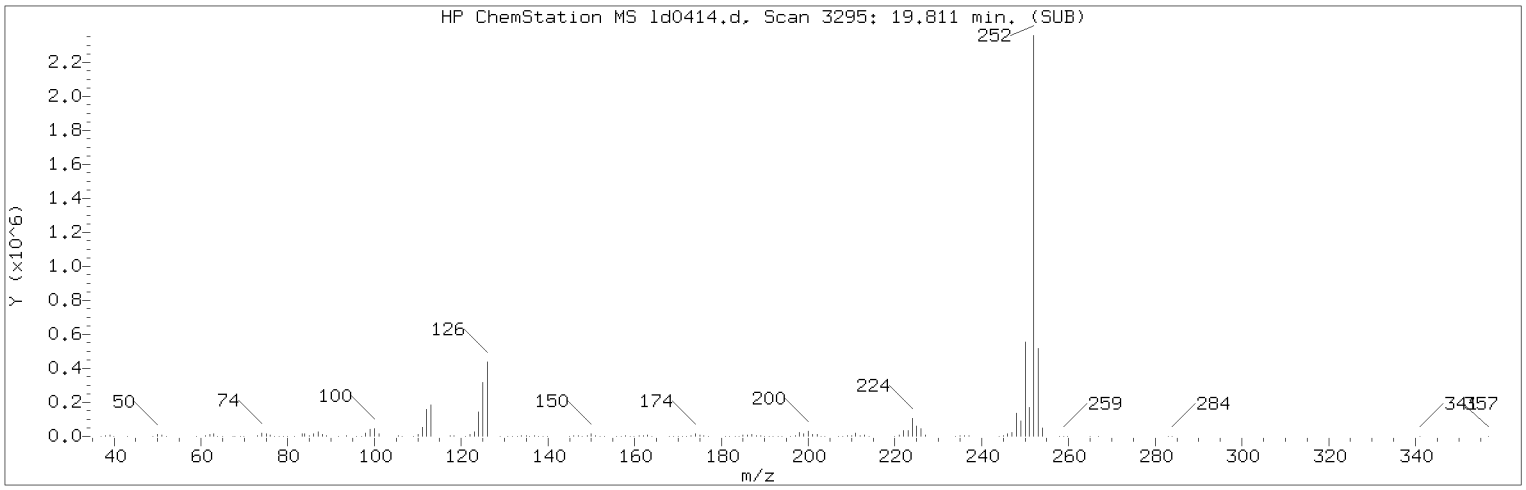
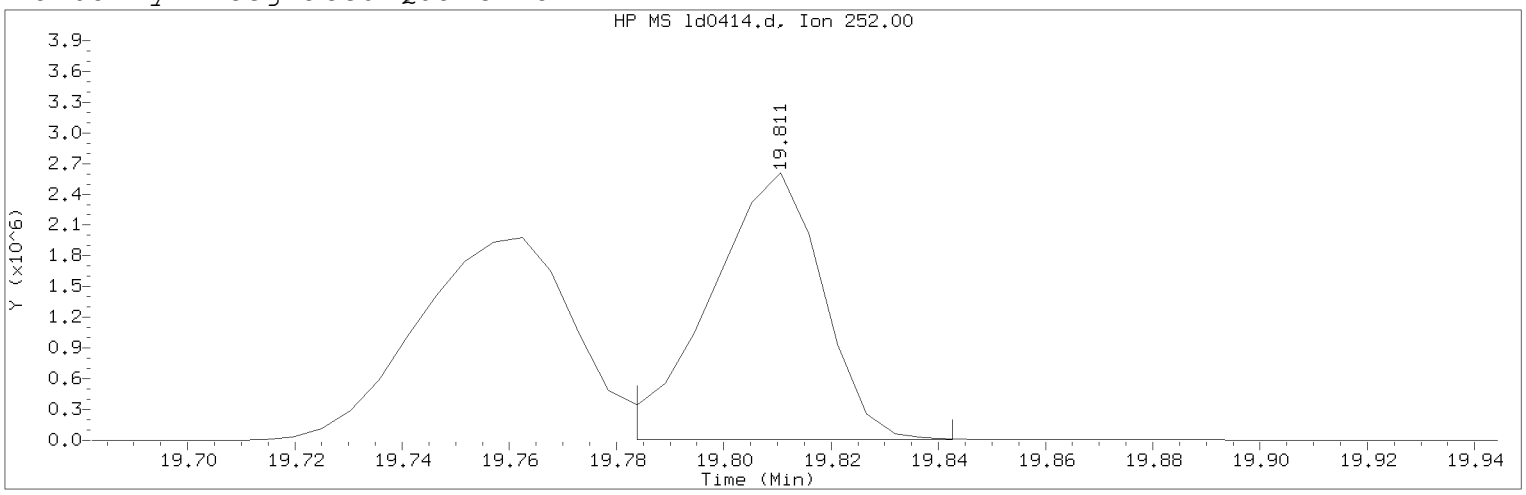
Target 3.5 esignature used. FID Page 1705

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

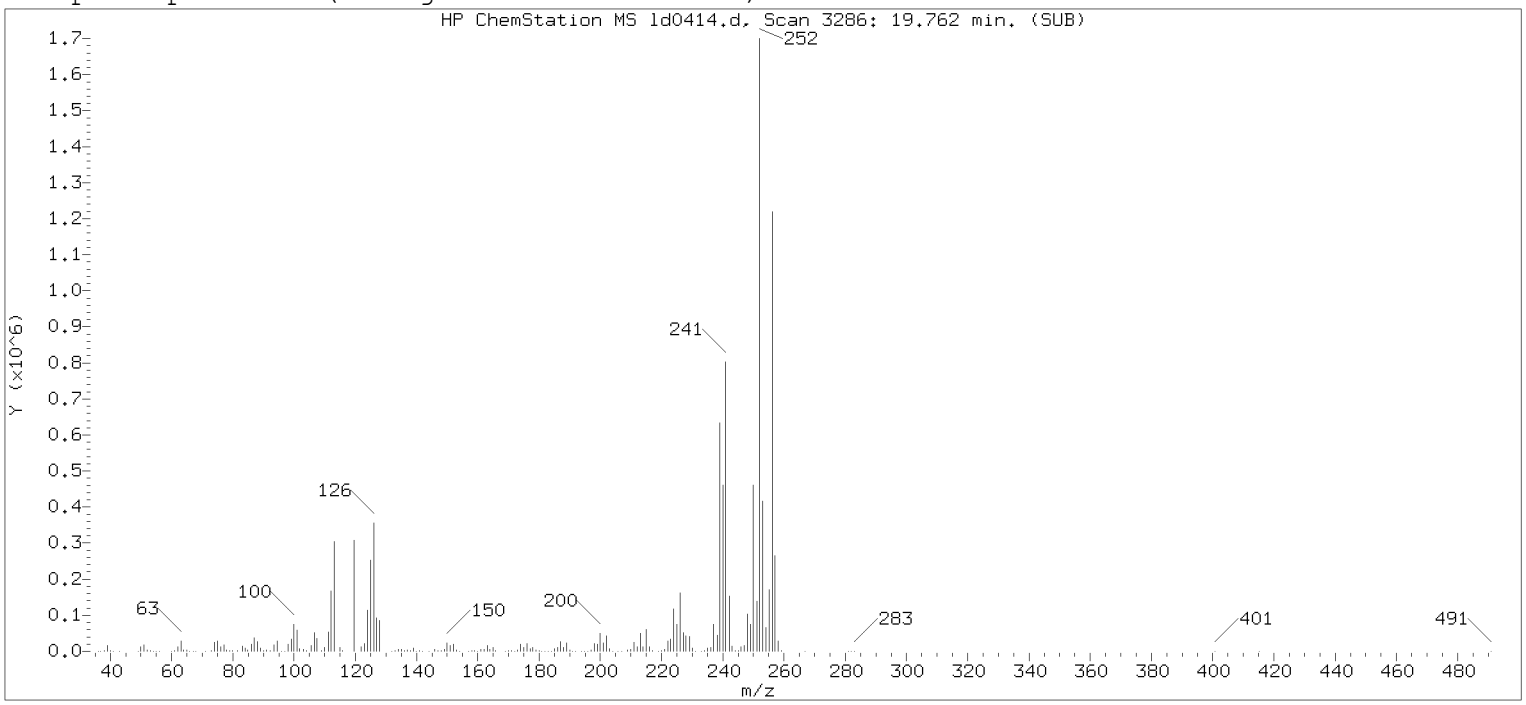
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3295
Retention Time (minutes) : 19.811
Quant Ion : 252.00
Area (flag) : 3786214M
On-Column Amount (ng/ul) : 20.5786
Integration start scan : 3289 Integration stop scan: 3300
Y at integration start : 5259 Y at integration end: 5259

Reason for manual integration: improper integration

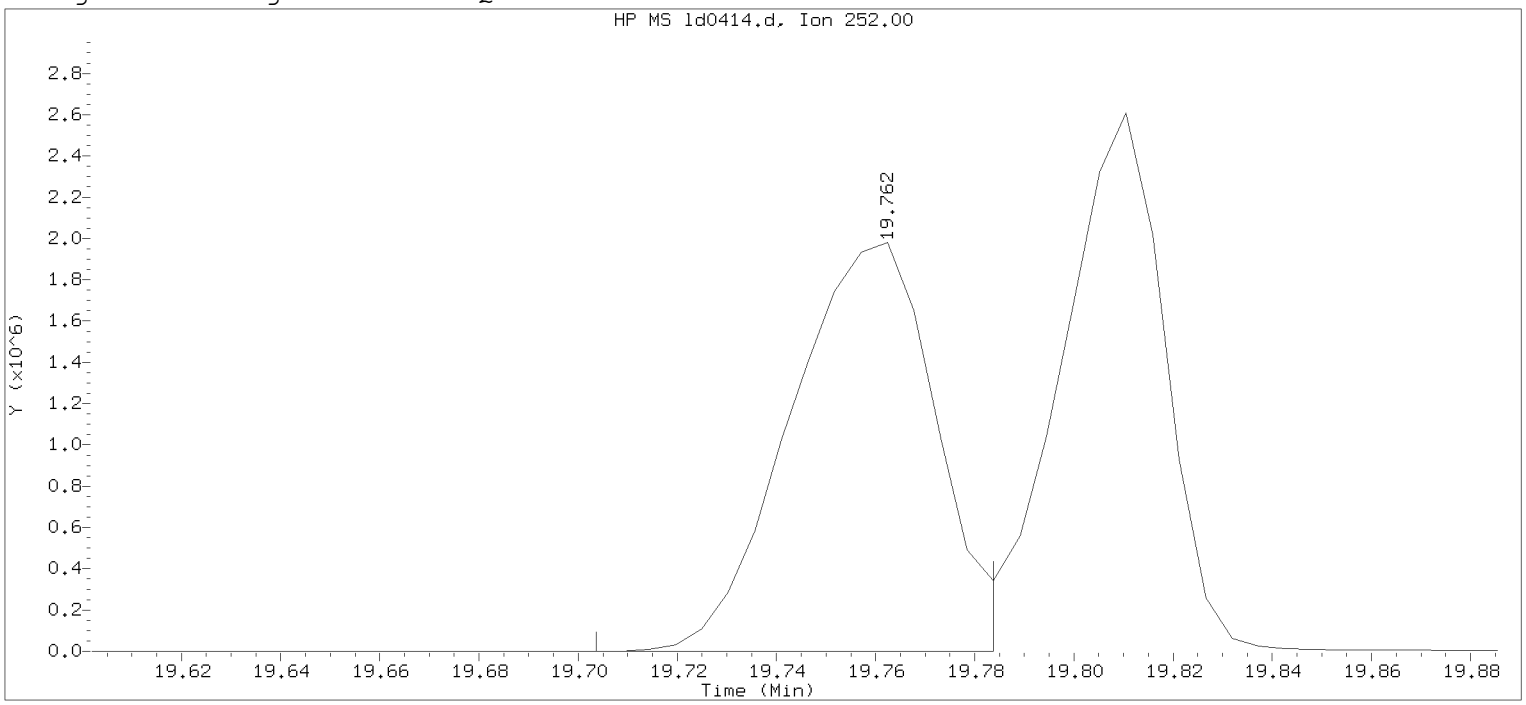
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3286		
Retention Time (minutes)	: 19.762		
Quant Ion	: 252.00		
Area	: 3996917		
On-column Amount (ng/ul)	: 20.8772		
Integration start scan	: 3274	Integration stop scan:	3289
Y at integration start	: 0	Y at integration end:	0

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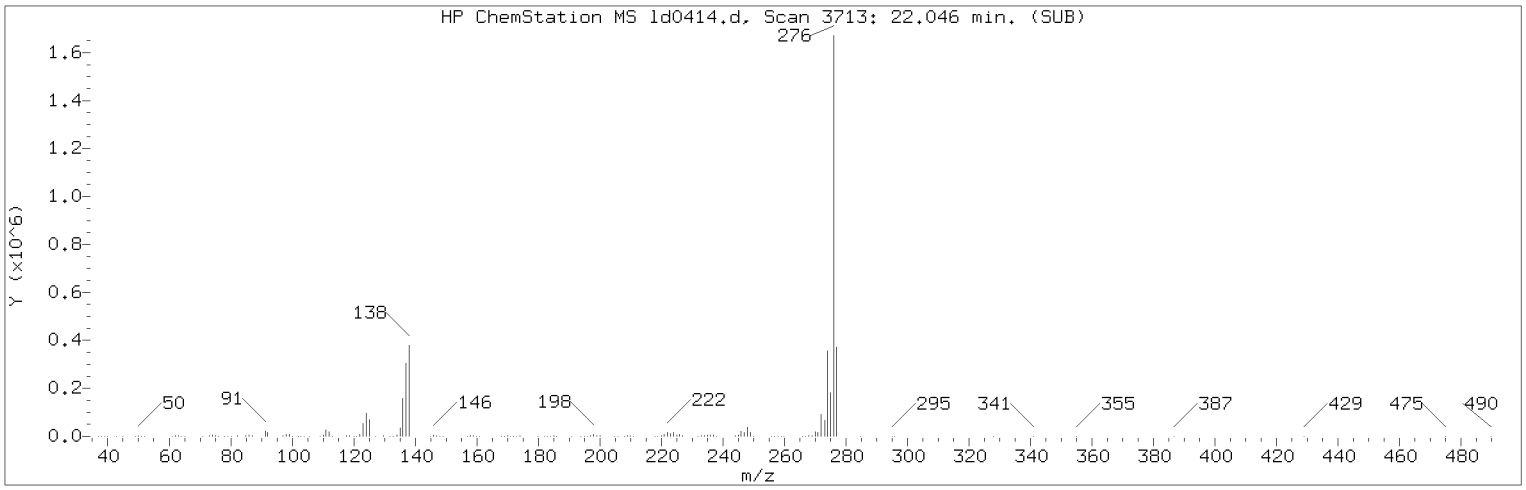
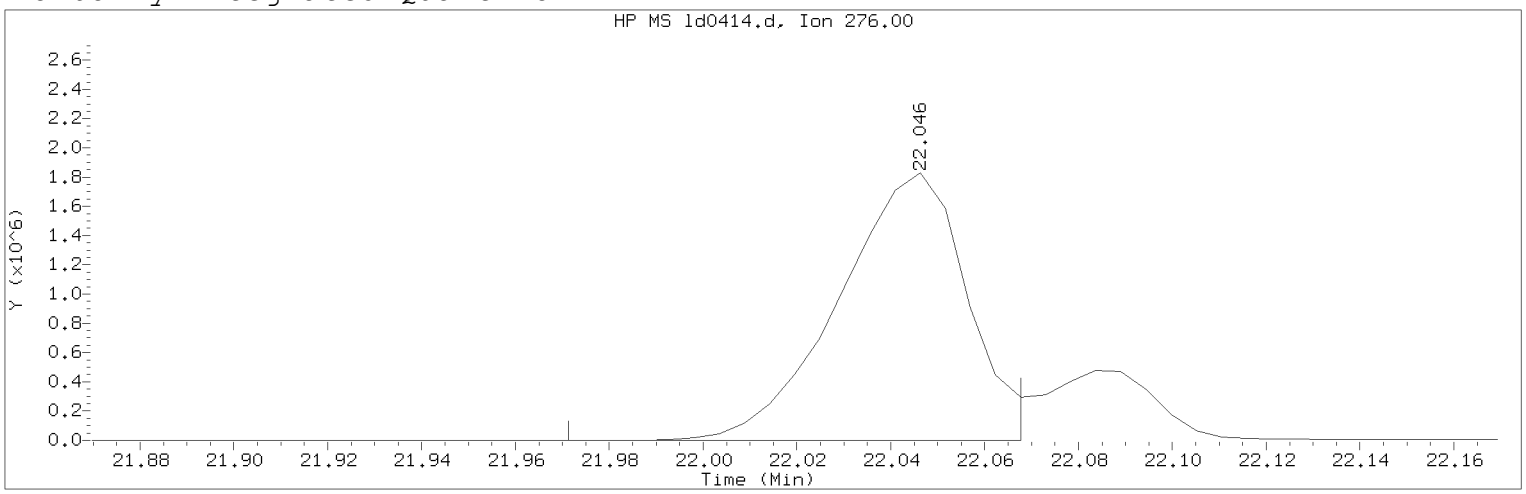
Target 3.5 esignature used. FID Page 1707

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

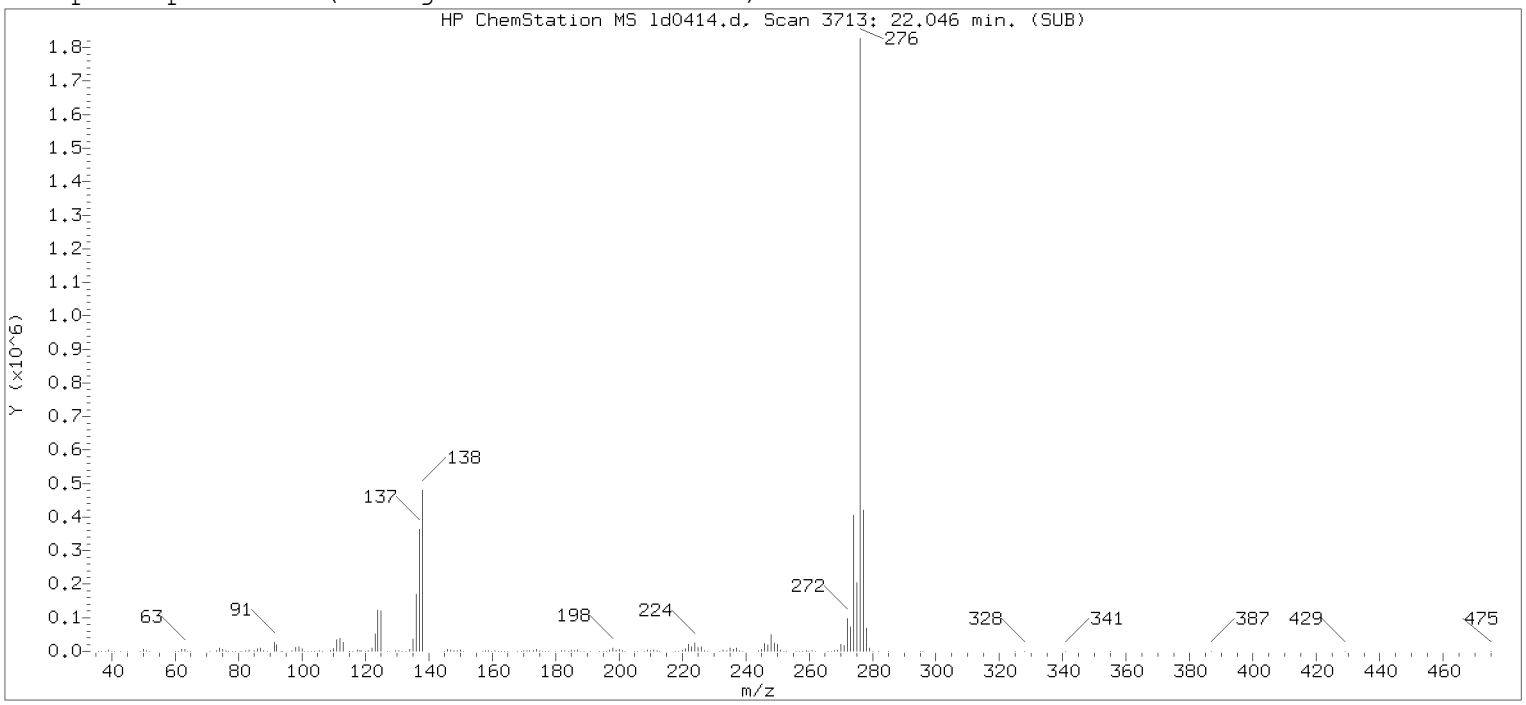
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3713
Retention Time (minutes) : 22.046
Quant Ion : 276.00
Area (flag) : 3474549M
On-Column Amount (ng/ul) : 21.2821
Integration start scan : 3698 Integration stop scan: 3716
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

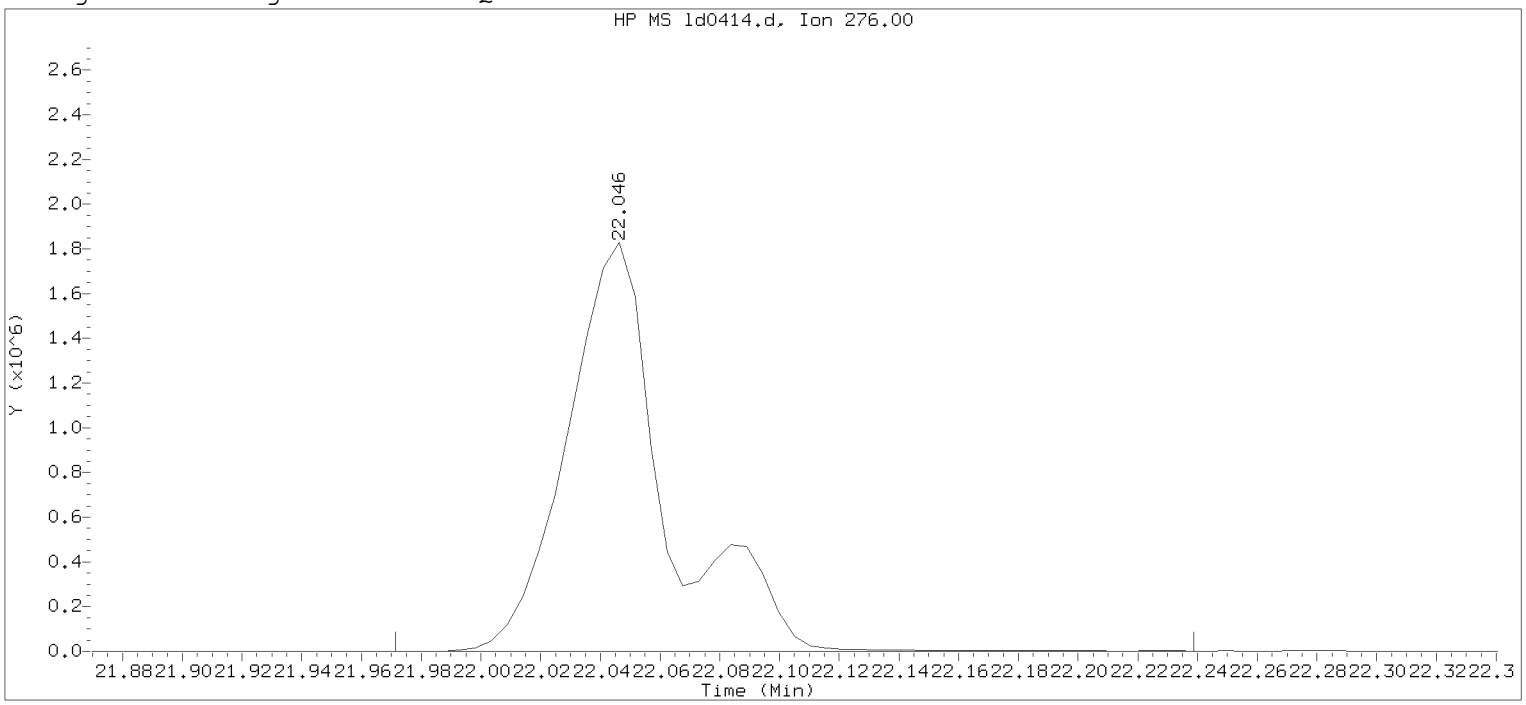
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



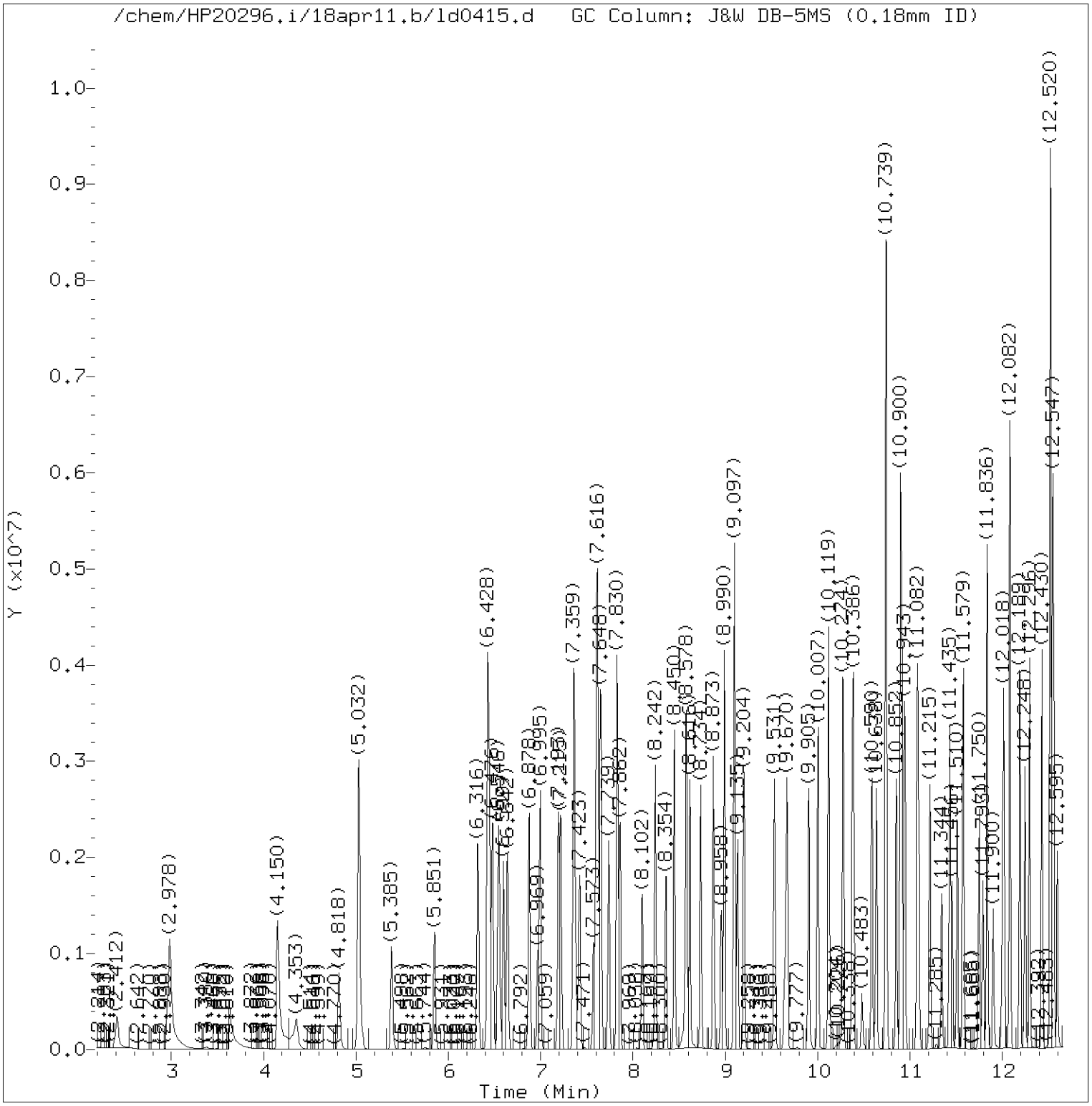
Data File: /chem/HP20296.i/18apr11.b/ld0414.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:28 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 10:54
Date, time and analyst ID of latest file update: 11-Apr-2018 10:54 Unknown

Sample Name: SSTD20 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3713		
Retention Time (minutes)	: 22.046		
Quant Ion	: 276.00		
Area	: 4232201		
On-column Amount (ng/ul)	: 24.5670		
Integration start scan	: 3698	Integration stop scan:	3748
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: 1709



Total Ion Chromatogram (TIC)

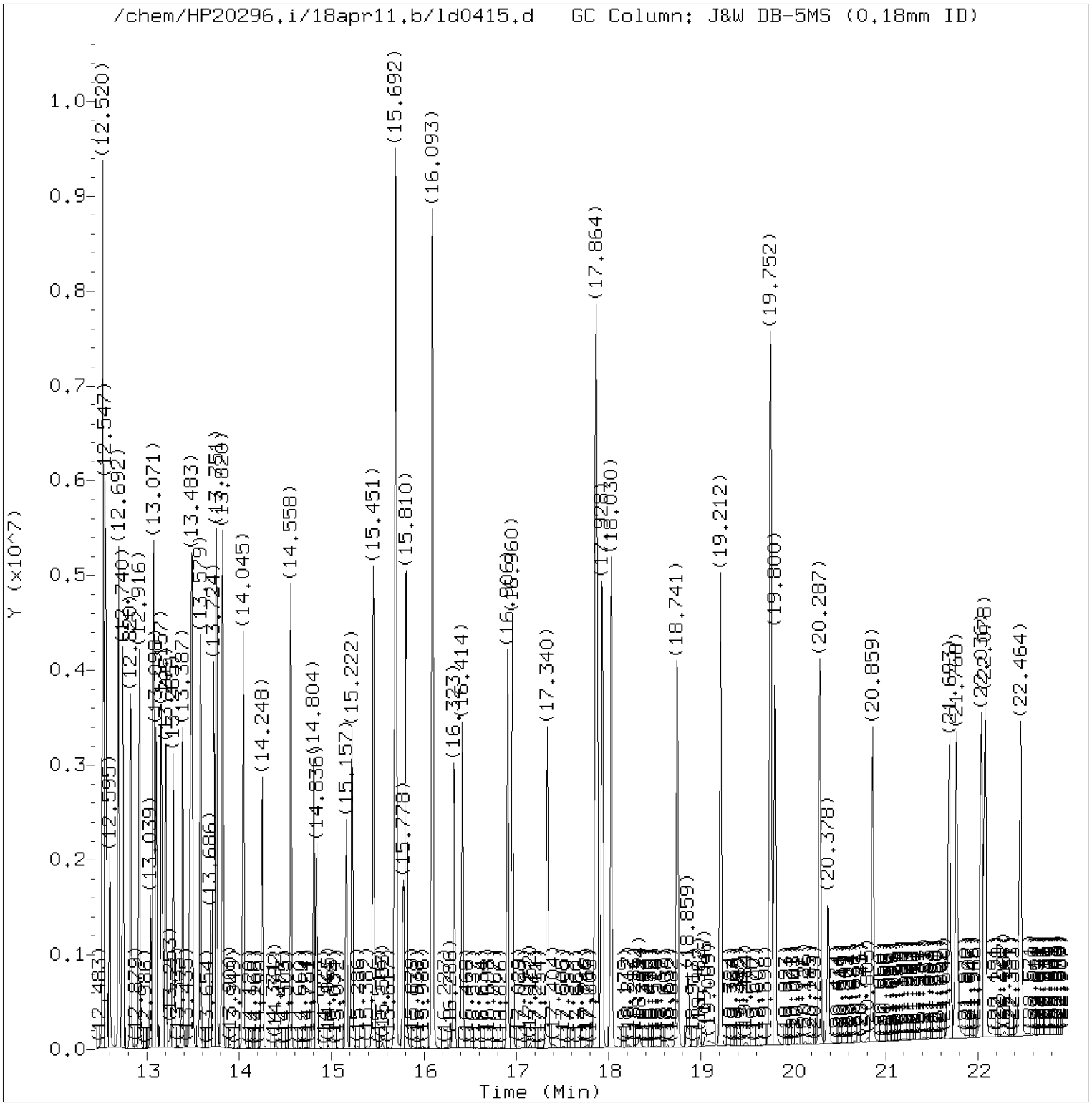
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.412	88	343276	12.399
5) N-Nitrosodimethylamine	(1)	2.962	74	542818	12.877
6) Pyridine	(1)	2.984	79	941658	12.519
8) 2-Picoline	(1)	4.150	93	967983	12.728
9) N-Nitrosomethylethylamine	(1)	4.353	88	388091	12.733
10) Methyl methanesulfonate	(1)	4.813	80	467358	12.659
12)$2-Fluorophenol	(1)	5.032	112	1551518	26.758
14) N-Nitrosodiethylamine	(1)	5.385	102	379964	13.442
43) Total Cresols	(1)			1517590	26.353
16) Ethyl methanesulfonate	(1)	5.851	109	400792	13.020
17) Benzaldehyde	(1)	6.316	77	731684	12.719
18)$Phenol-d6	(1)	6.428	99	2024132	26.622
19) Phenol	(1)	6.450	94	1156386	13.211
20) Aniline	(1)	6.482	93	1342572	13.302
21) a-methylstyrene	(1)	6.551	118	275509	12.496
23) bis(2-Chloroethyl)ether	(1)	6.599	93	853504	13.099
24) 2-Chlorophenol	(1)	6.642	128	758993	13.362
25) 1,3-Dichlorobenzene	(1)	6.878	146	855615	13.344
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	211752	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	865912	13.345
28) Benzyl alcohol	(1)	7.193	108	483854	12.763
29) 1,2-Dichlorobenzene	(1)	7.220	146	827218	13.388
31) Indene	(1)	7.359	115	1136528	12.554
32) 2-Methylphenol	(1)	7.370	108	735994	13.141
100) Isosafrole	(3)			673014	12.702
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	1201938	12.993
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	1201938	12.993
36) N-Nitrosopyrrolidine	(1)	7.573	100	415378	13.545
37) Acetophenone	(1)	7.600	105	1176534	13.777
38) 4-Methylphenol	(1)	7.616	108	781596	13.212
39) N-Nitroso-di-n-propylamine	(1)	7.621	70	637428	13.093
40) N-Nitrosomorpholine	(1)	7.648	56	520245	12.787
41) o-Toluidine	(1)	7.653	106	1307419	13.200
44) Hexachloroethane	(1)	7.739	117	351118	12.691
45)$Nitrobenzene-d5	(2)	7.830	82	1865065	26.709
46) Nitrobenzene	(2)	7.862	77	956357	13.427
125) 2,4_2,6-Dinitrotoluenes	(3)			855073	26.344
50) N-Nitrosopiperidine	(2)	8.102	114	388510	13.273
52) Isophorone	(2)	8.242	82	1658622	13.323
53) 2-Nitrophenol	(2)	8.359	139	397185	13.801

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.450	107	820198	13.294
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	387375	12.685
58) Benzoic acid	(2)	8.595	105	468704	12.687
57) bis(2-Chloroethoxy)methane	(2)	8.616	93	1056918	13.060
62) 2,4-Dichlorophenol	(2)	8.734	162	651095	13.553
151) Diallate trans/cis	(4)			783297	12.688
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	714899	13.355
68)*Naphthalene-d8	(2)	8.958	136	809630	5.000
69) Naphthalene	(2)	8.990	128	2246678	13.428
70) 4-Chloroaniline	(2)	9.097	127	914704	13.395
71) 2,6-Dichlorophenol	(2)	9.103	162	634941	13.345
72) Hexachloropropene	(2)	9.135	213	504229	13.018
74) Hexachlorobutadiene	(2)	9.204	225	425376	13.108
78) Quinoline	(2)	9.536	129	1380558	12.954
79) Caprolactam	(2)	9.659	113	198285	13.163
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	752237	14.326
83) 4-Chloro-3-methylphenol	(2)	9.905	107	711112	13.489
85) Safrole	(2)	10.007	162	579048	12.902
86) 2-Methylnaphthalene	(2)	10.119	142	1497089	13.469
87) 1-Methylnaphthalene	(2)	10.279	142	1348170	13.220
88) Hexachlorocyclopentadiene	(3)	10.376	237	441901	12.976
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	737628	12.878
91) cis-Isosafrole	(3)	10.483	162	107378	2.154
93) 2,4,6-Trichlorophenol	(3)	10.590	196	478567	13.305
95) 2,4,5-Trichlorophenol	(3)	10.638	196	510889	13.533
96)$2-Fluorobiphenyl	(3)	10.745	172	3335794	25.483
97) trans-Isosafrole	(3)	10.852	162	565636	10.548
98) 1,1'-Biphenyl	(3)	10.900	154	1778184	13.171
99) 2-Chloronaphthalene	(3)	10.911	162	1413643	12.321
101) 1-Chloronaphthalene	(3)	10.943	162	1388386M	13.082
103) Diphenyl ether	(3)	11.082	170	962458	12.763
104) 2-Nitroaniline	(3)	11.098	138	453067	13.493
108) 1,4-Naphthoquinone	(3)	11.215	158	594110	13.105
109) 1,4-Dinitrobenzene	(3)	11.344	168	229128	12.839
110) Dimethylphthalate	(3)	11.435	163	1636482	12.733
111) 1,3-Dinitrobenzene	(3)	11.456	168	253098	13.240
113) 2,6-Dinitrotoluene	(3)	11.515	165	365821	13.406
114) Acenaphthylene	(3)	11.579	152	2128808	13.349
117) 3-Nitroaniline	(3)	11.750	138	385864	13.421
118)*Acenaphthene-d10	(3)	11.793	164	421078	5.000

M = Compound was manually integrated.
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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	1448303	12.808
120) 2,4-Dinitrophenol	(3)	11.905	184	215832	13.157
121) 4-Nitrophenol	(3)	12.002	109	262395	12.947
122) Pentachlorobenzene	(3)	12.018	250	600636	12.859
124) Dibenzofuran	(3)	12.082	168	2007396	12.778
123) 2,4-Dinitrotoluene	(3)	12.087	165	489252	12.938
126) 1-Naphthylamine	(3)	12.194	143	1421355	12.715
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	396135	13.484
128) 2-Naphthylamine	(3)	12.296	143	1353622	12.782
129) Diethylphthalate	(3)	12.430	149	1624883	12.846
131) Fluorene	(3)	12.520	166	1603449	13.066
130) Thionazin	(3)	12.526	107	279967	13.002
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	769368	12.649
133) 5-Nitro-o-toluidine	(3)	12.553	152	443390	13.265
134) 4-Nitroaniline	(3)	12.563	138	387388	13.331
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	288121	13.146
136) N-Nitrosodiphenylamine	(4)	12.692	169	1298424	12.816
137) NDPA as diphenylamine	(4)	12.692	169	1298424	12.816
139) 1,2-Diphenylhydrazine	(4)	12.740	77	1839236	13.010
140)$2,4,6-Tribromophenol	(3)	12.825	330	384151	26.392
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	310636M	12.920
144) 1,3,5-Trinitrobenzene	(4)	13.039	213	176303	13.059
145) Diallate (peak 1)	(4)	13.066	86	673721	10.527
146) Phorate	(4)	13.077	75	1203177	13.270
147) Phenacetin	(4)	13.098	108	890698	13.911
148) 4-Bromophenyl-phenylether	(4)	13.157	248	429634	12.692
149) Diallate (peak 2)	(4)	13.173	86	109576M	2.160
150) Hexachlorobenzene	(4)	13.205	284	439629	12.645
152) Dimethoate	(4)	13.285	87	718759	13.173
153) Atrazine	(4)	13.387	200	426688	12.450
154) Pentachlorophenol	(4)	13.467	266	286835	13.471
156) Pentachloronitrobenzene	(4)	13.478	237	217743	13.122
155) 4-Aminobiphenyl	(4)	13.489	169	1565620	13.574
157) Pronamide	(4)	13.579	173	781837	13.684
158)*Phenanthrene-d10	(4)	13.719	188	827854	5.000
159) Dinoseb	(4)	13.724	211	471187	13.734
160) Phenanthrene	(4)	13.751	178	2353941	12.896
162) Anthracene	(4)	13.820	178	2427163	13.264
168) Carbazole	(4)	14.045	167	2156503	13.309
169) Methyl parathion	(4)	14.248	109	558636	13.431

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on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

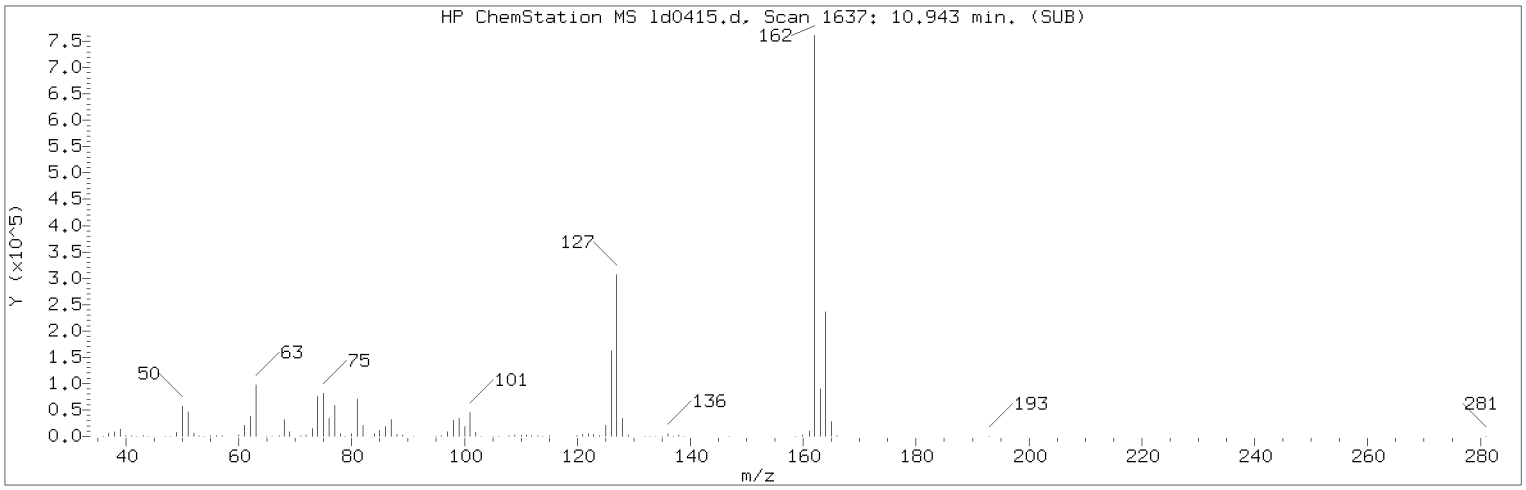
Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	2849939	13.067
172) Parathion	(4)	14.804	109	364046	13.525
173) 4-Nitroquinoline-1-oxide	(4)	14.836	190	289404	13.389
227) Total PAHs	(6)			39698460	240.101
174) Octachlorostyrene	(4)	15.157	308	162502	12.494
176) Isodrin	(4)	15.222	193	288730	12.767
178) Fluoranthene	(4)	15.451	202	2761164	13.449
179) Benzidine	(5)	15.692	184	4958640	39.245
180)*Pyrene-d10	(5)	15.778	212	857466	5.000
182) Pyrene	(5)	15.810	202	2807255	12.869
184)$Terphenyl-d14	(5)	16.093	244	3595323	26.145
187) p-Dimethylaminoazobenzene	(5)	16.329	225	472693	14.204
190) Chlorobenzilate	(5)	16.414	139	853683	13.137
192) 3,3'-Dimethylbenzidine	(5)	16.906	212	1877616	13.663
193) Butylbenzylphthalate	(5)	16.960	149	1339126	13.213
196) 2-Acetylaminofluorene	(5)	17.340	181	1097143	13.678
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	936418	13.353
200) Benzo(a)anthracene	(5)	17.864	228	2637798	13.535
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	562322	13.203
201) Chrysene	(5)	17.928	228	2493318	13.226
204) bis(2-Ethylhexyl)phthalate	(5)	18.030	149	1902902	13.289
208) 6-Methylchrysene	(5)	18.741	242	1709431	12.879
210) Di-n-octylphthalate	(6)	19.212	149	3317041	13.771
211) Benzo(b)fluoranthene	(6)	19.752	252	2532431	13.485
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.757	256	1082034	13.965
213) Benzo(k)fluoranthene	(6)	19.805	252	2407845M	13.315
216) Benzo(a)pyrene	(6)	20.287	252	2324318	13.755
218)*Perylene-d12	(6)	20.378	264	765985	5.000
220) 3-Methylcholanthrene	(6)	20.859	268	1112827	13.544
222) Dibenz(a,h)acridine	(6)	21.693	279	1876158	13.064
223) Dibenz(a,j)acridine	(6)	21.768	279	1921081	13.170
224) Indeno(1,2,3-cd)pyrene	(6)	22.041	276	2208804M	13.765
225) Dibenz(a,h)anthracene	(6)	22.078	278	2244818	13.771
226) Benzo(g,h,i)perylene	(6)	22.464	276	2227108	13.431

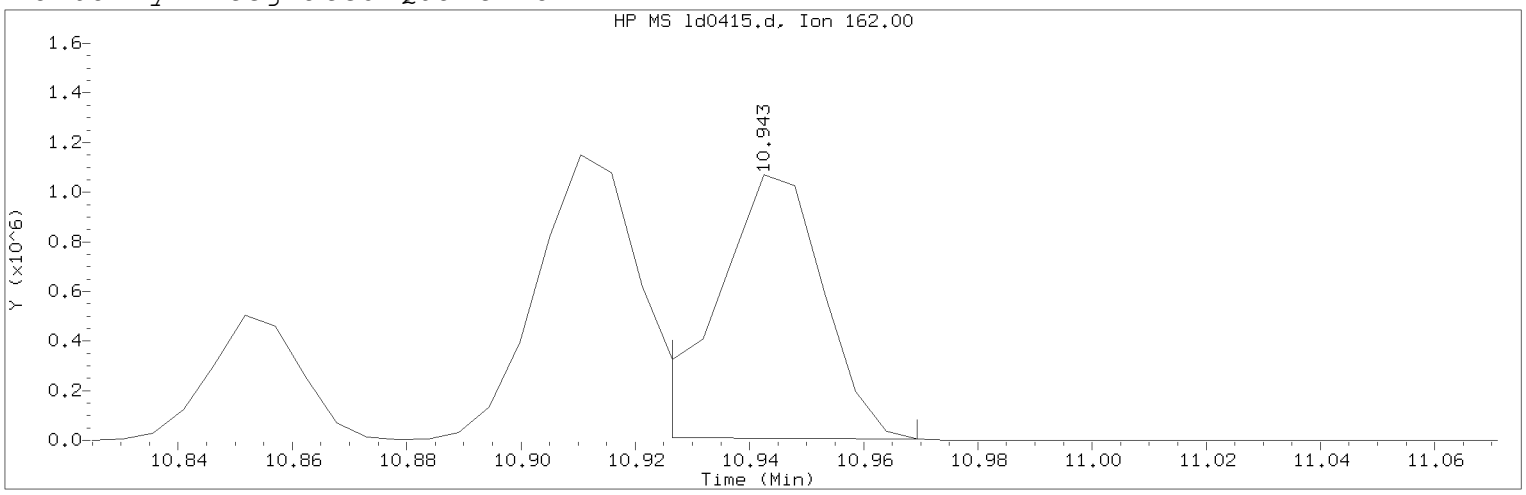
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

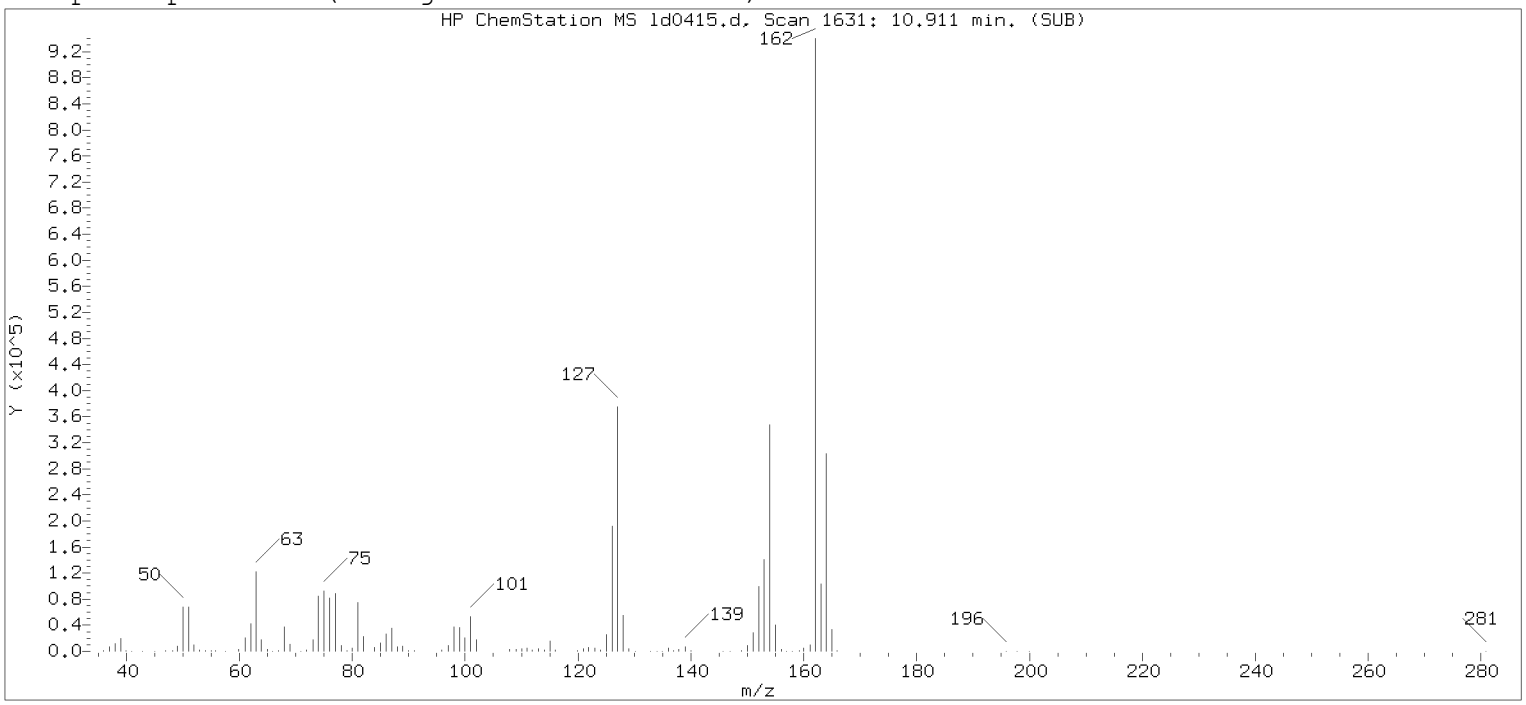
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1637
Retention Time (minutes) : 10.943
Quant Ion : 162.00
Area (flag) : 1388386M
On-Column Amount (ng/ul) : 13.0822
Integration start scan : 1633 Integration stop scan: 1641
Y at integration start : 11218 Y at integration end: 5087

Reason for manual integration: improper integration

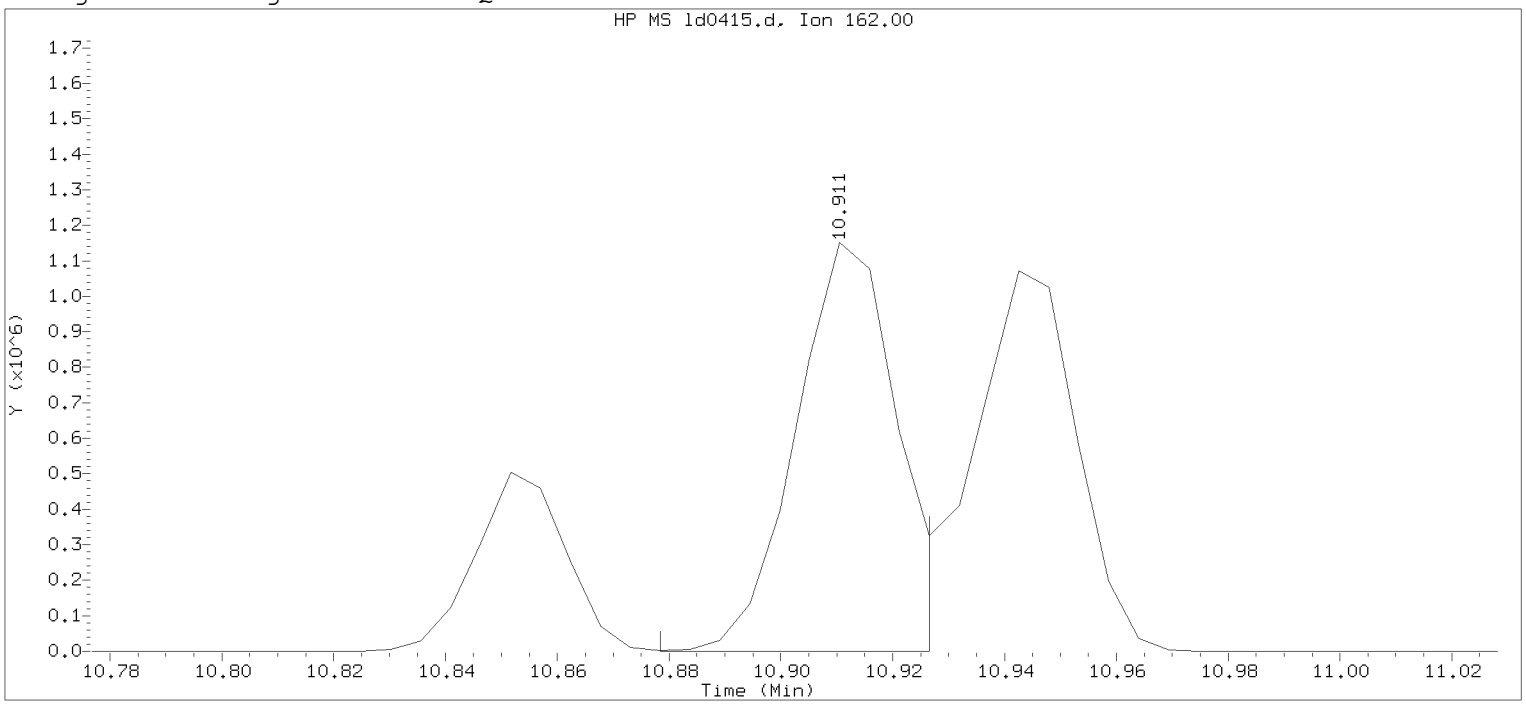
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1631
Retention Time (minutes) : 10.911
Quant Ion : 162.00
Area : 1413643
On-column Amount (ng/ul) : 13.3220
Integration start scan : 1624 Integration stop scan: 1633
Y at integration start : 0 Y at integration end: 0

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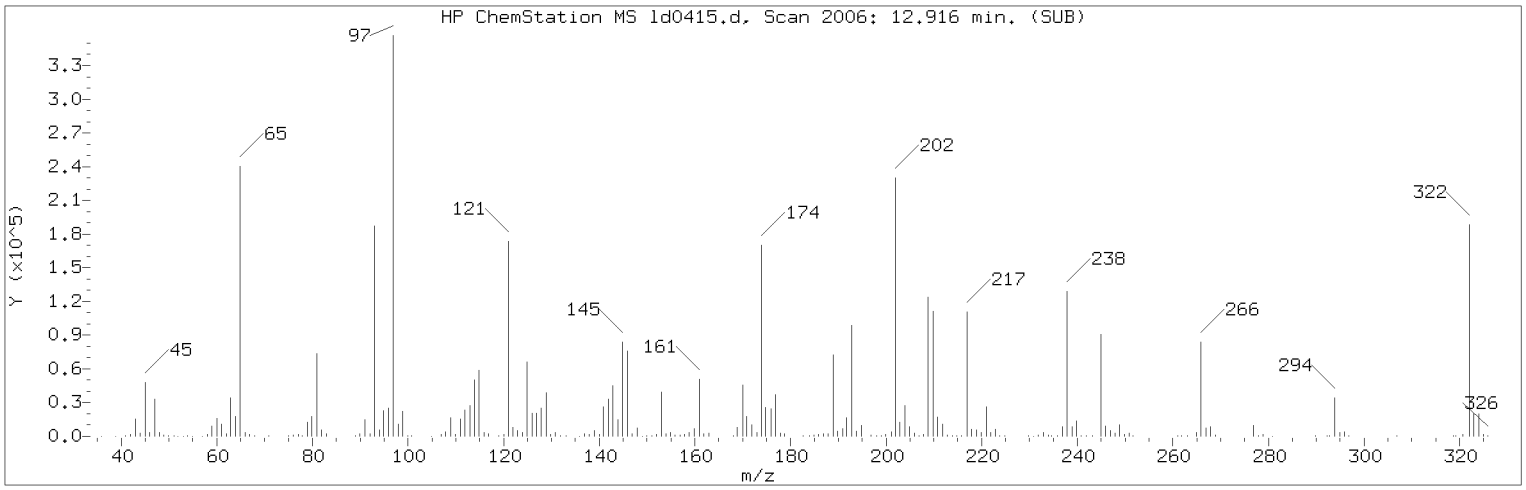
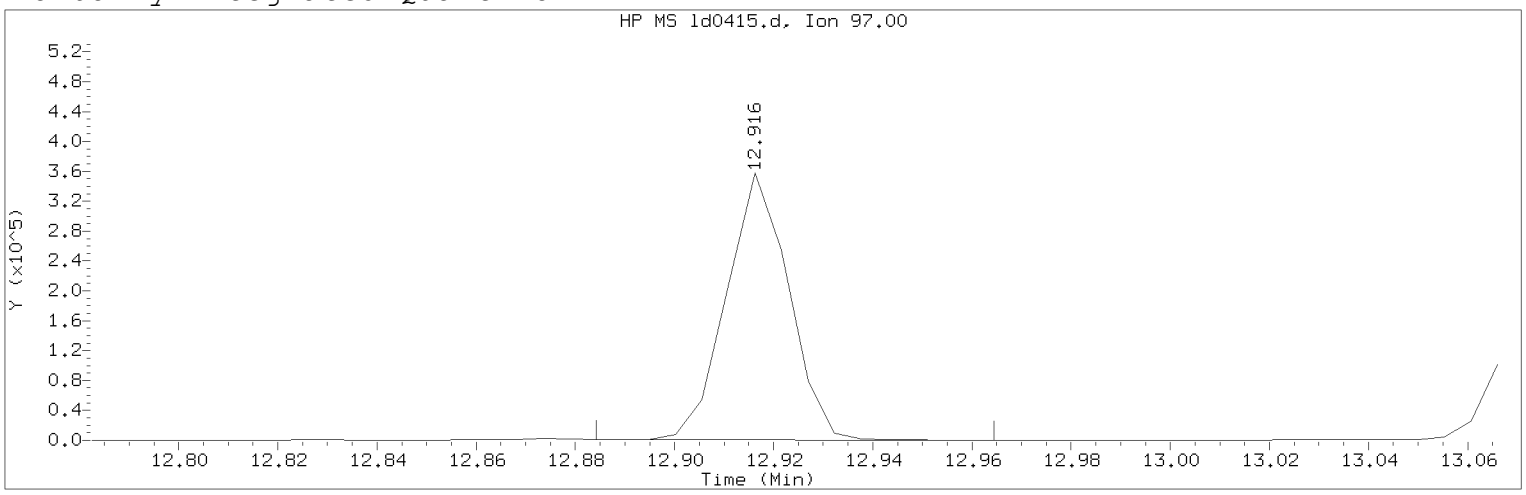
Target 3.5 esignature used for FD Page 1717

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

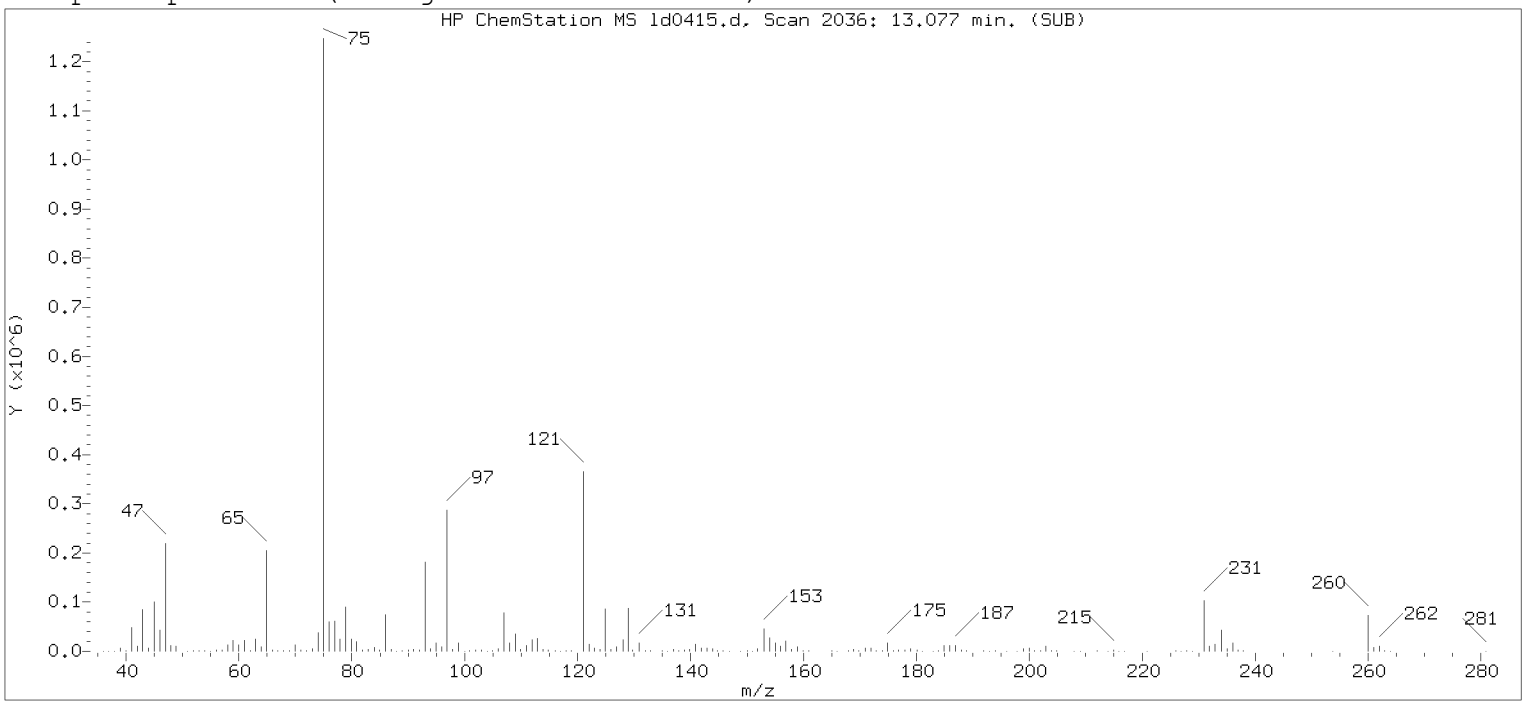
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 310636M
On-Column Amount (ng/ul) : 12.9199
Integration start scan : 1999 Integration stop scan: 2014
Y at integration start : 1134 Y at integration end: 0

Reason for manual integration: improper integration

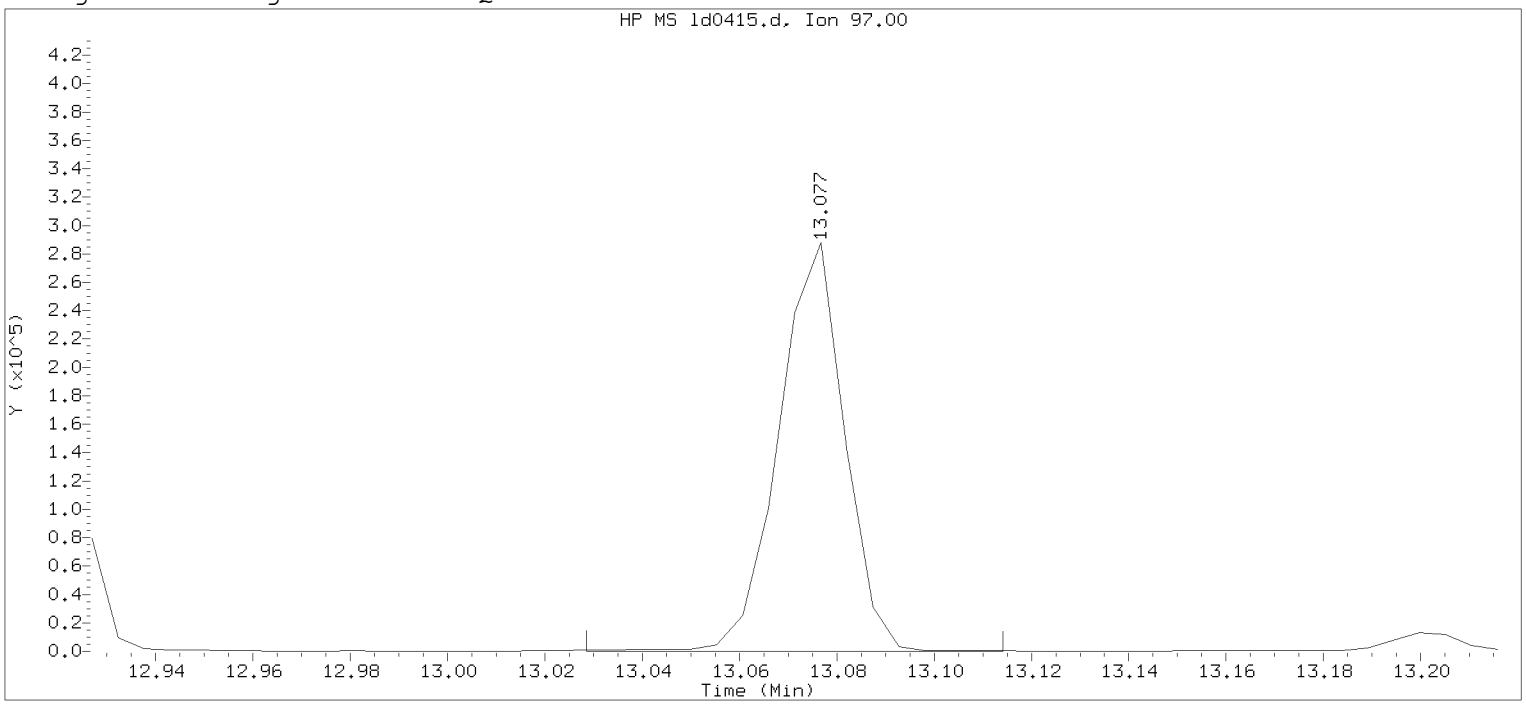
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 269969		
On-column Amount (ng/ul)	: 10.6965		
Integration start scan	: 2026	Integration stop scan:	2042
Y at integration start	: 0	Y at integration end:	0

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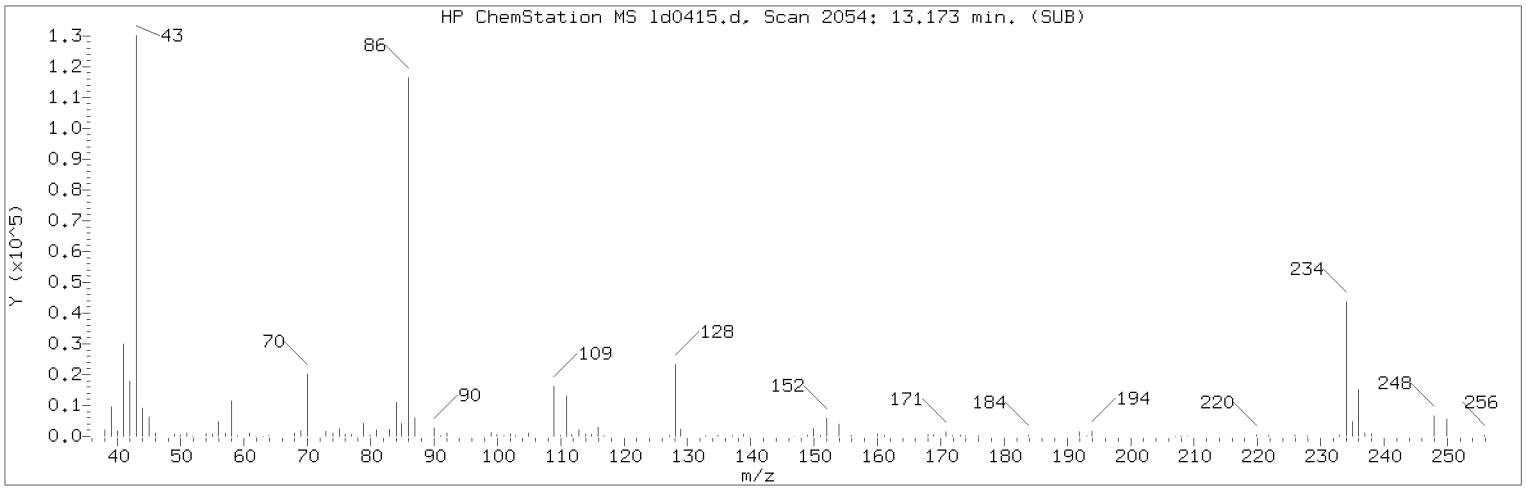
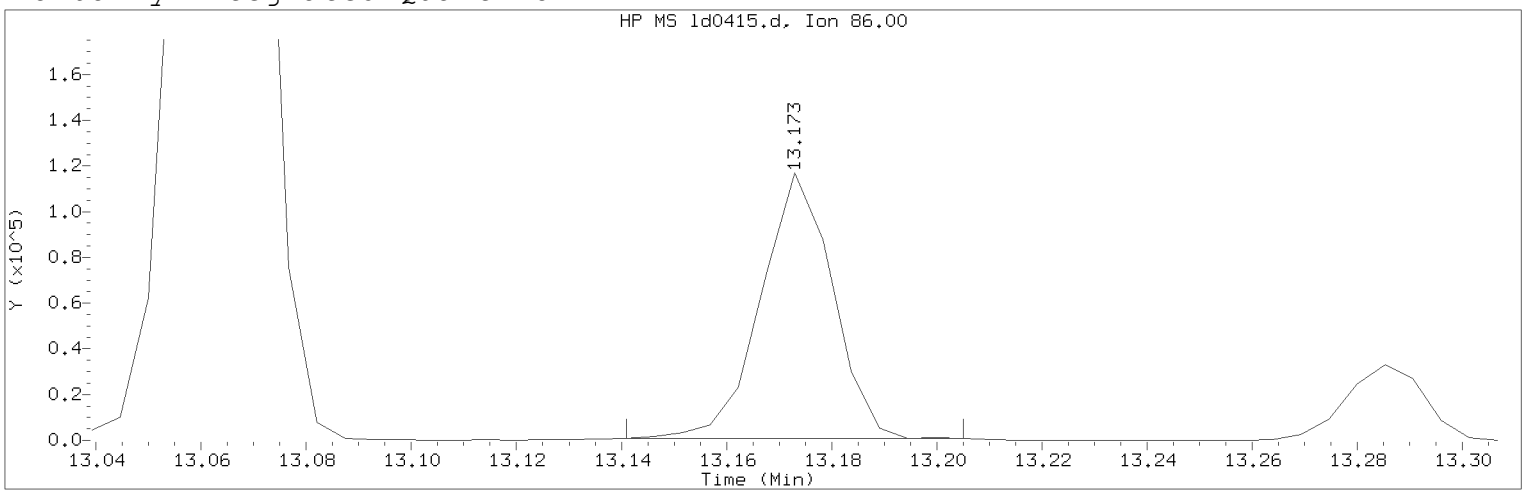
Target 3.5 esignature used. FD6 Page 1719

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

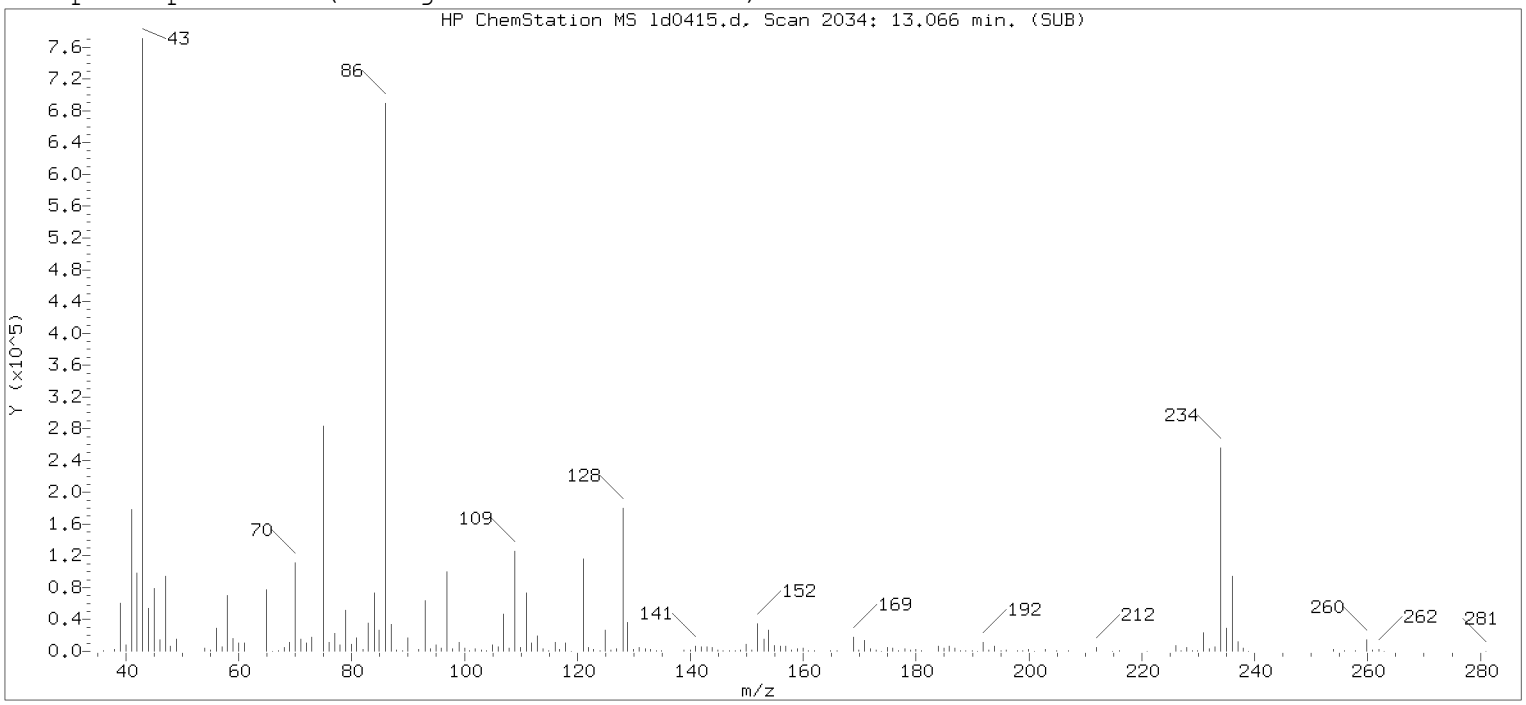
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 109576M
On-Column Amount (ng/ul) : 2.1603
Integration start scan : 2047 Integration stop scan: 2059
Y at integration start : 763 Y at integration end: 945

Reason for manual integration: improper integration

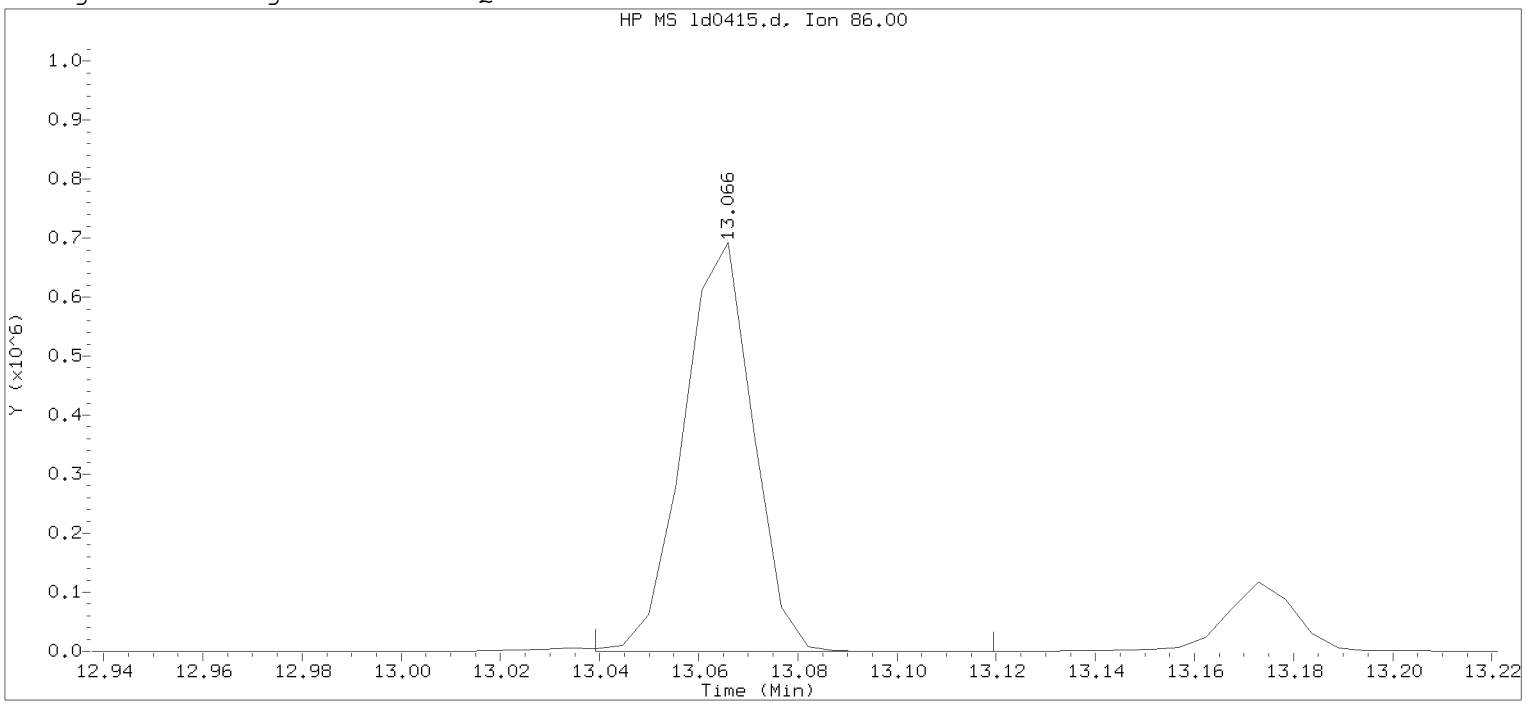
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 673721		
On-column Amount (ng/ul)	: 12.6970		
Integration start scan	: 2028	Integration stop scan:	2043
Y at integration start	: 0	Y at integration end:	0

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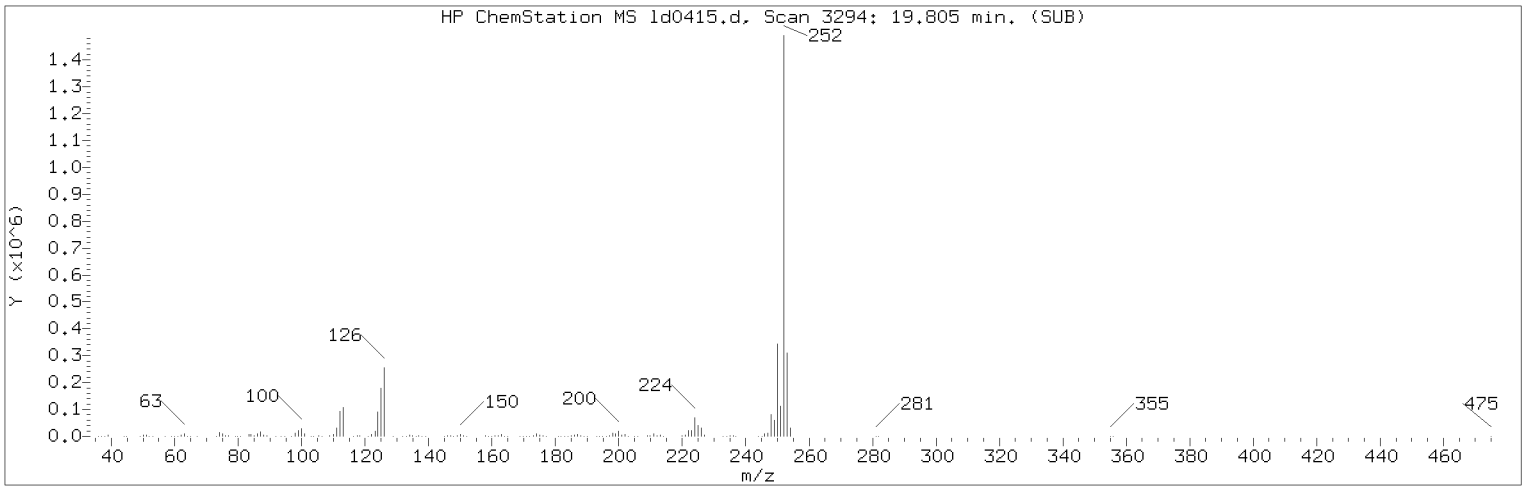
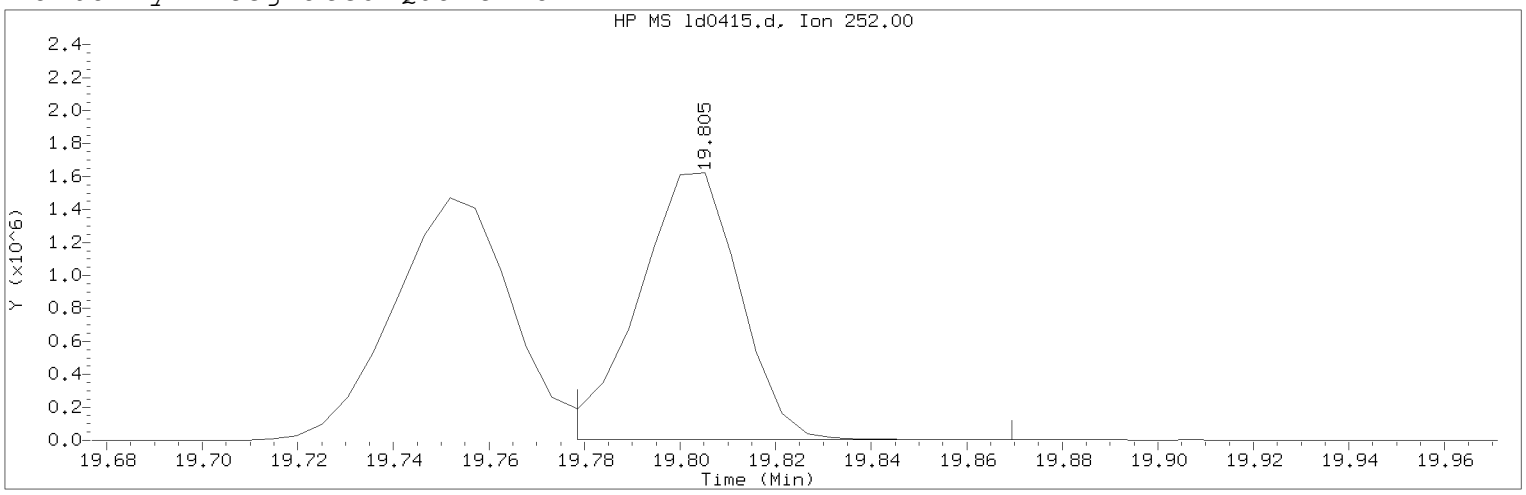
Target 3.5 esignature used. FID Page 1721

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

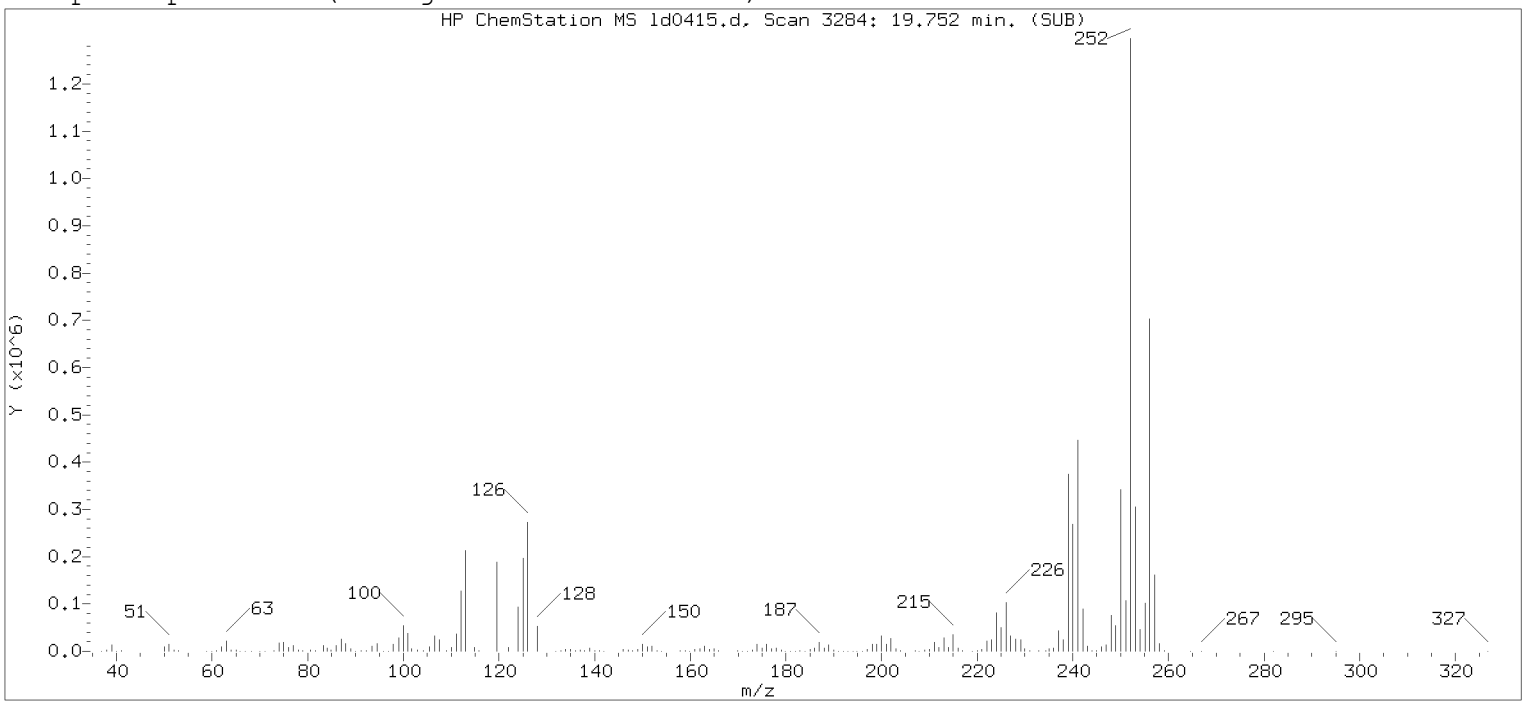
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3294
Retention Time (minutes) : 19.805
Quant Ion : 252.00
Area (flag) : 2407845M
On-Column Amount (ng/ul) : 13.3147
Integration start scan : 3288 Integration stop scan: 3305
Y at integration start : 2646 Y at integration end: 3200

Reason for manual integration: improper integration

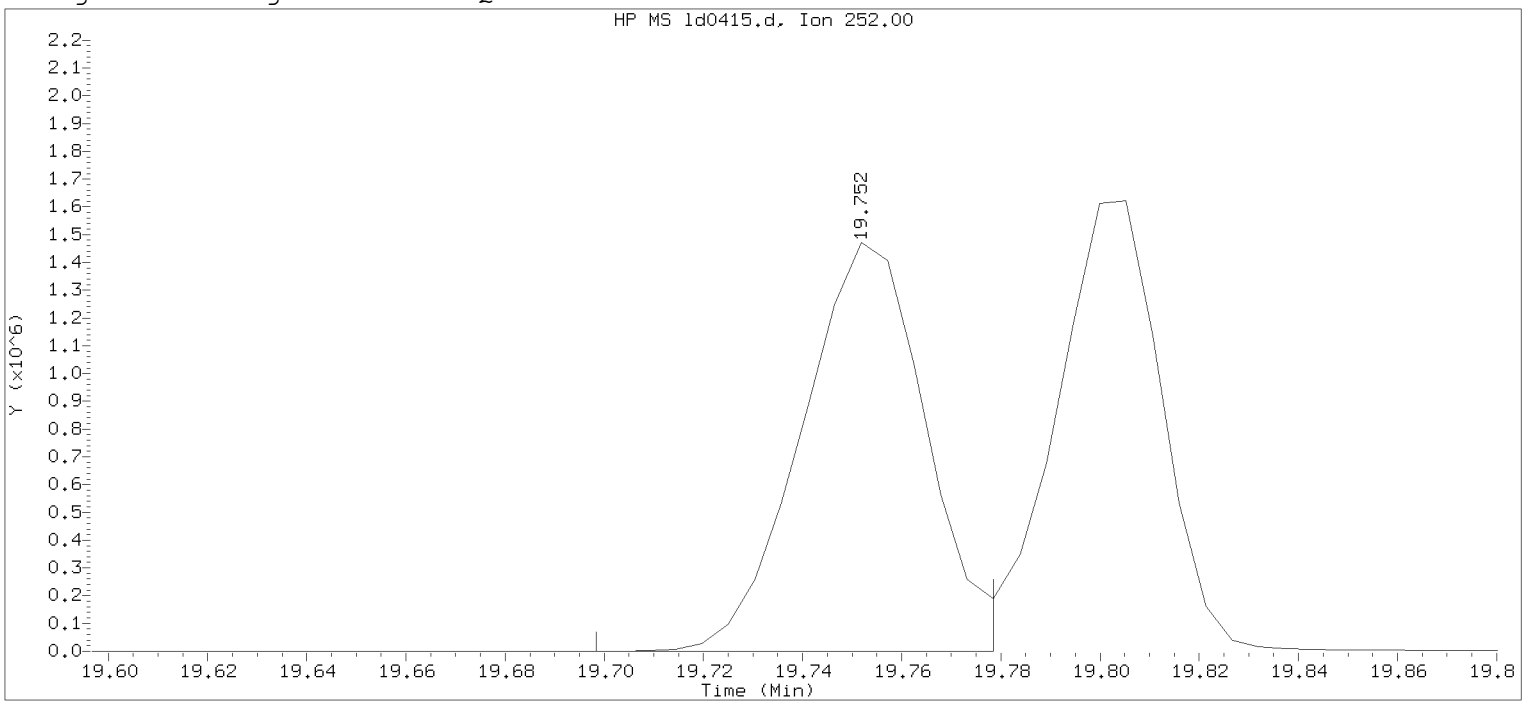
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

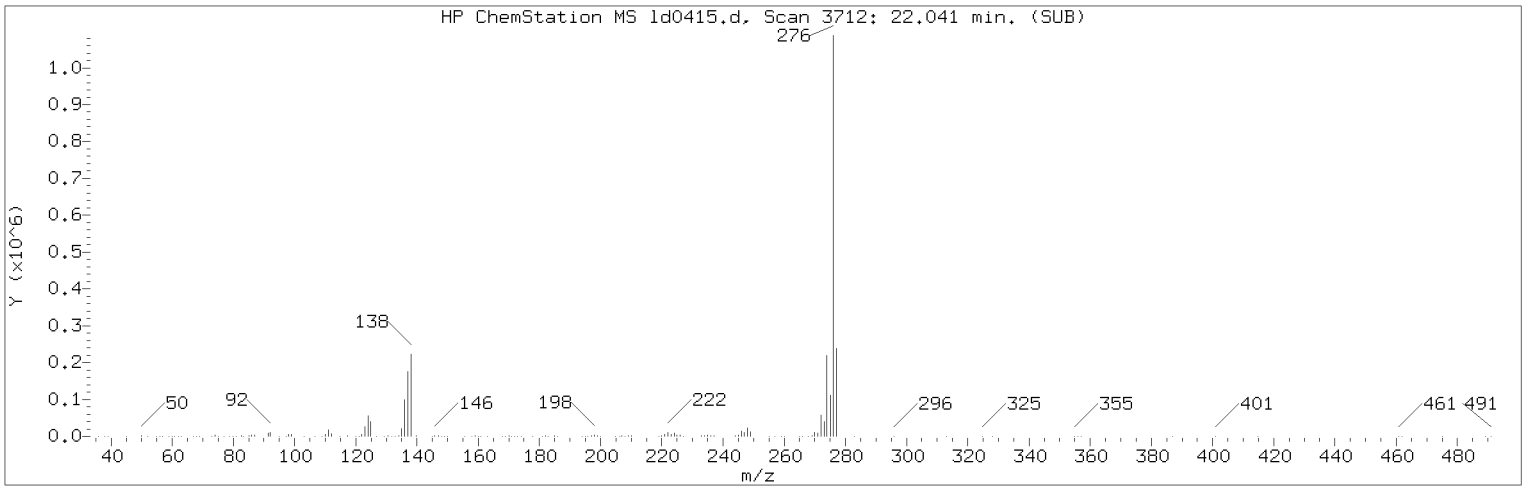
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

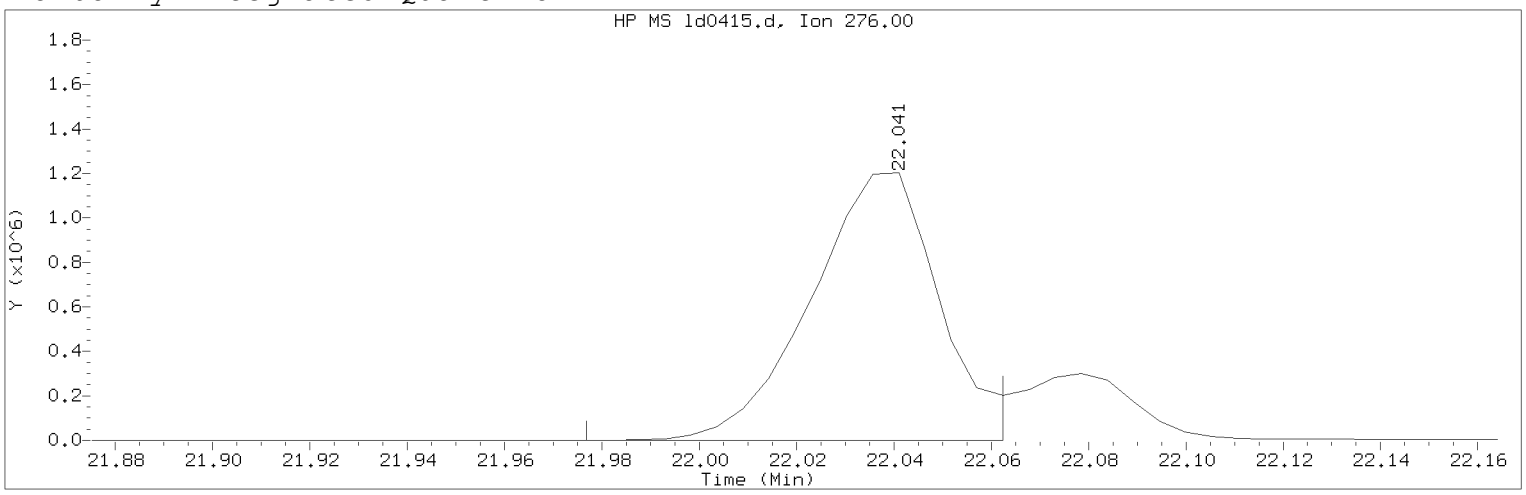
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3284		
Retention Time (minutes)	: 19.752		
Quant Ion	: 252.00		
Area	: 2532431		
On-column Amount (ng/ul)	: 13.4579		
Integration start scan	: 3273	Integration stop scan:	3288
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: Ashley R.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

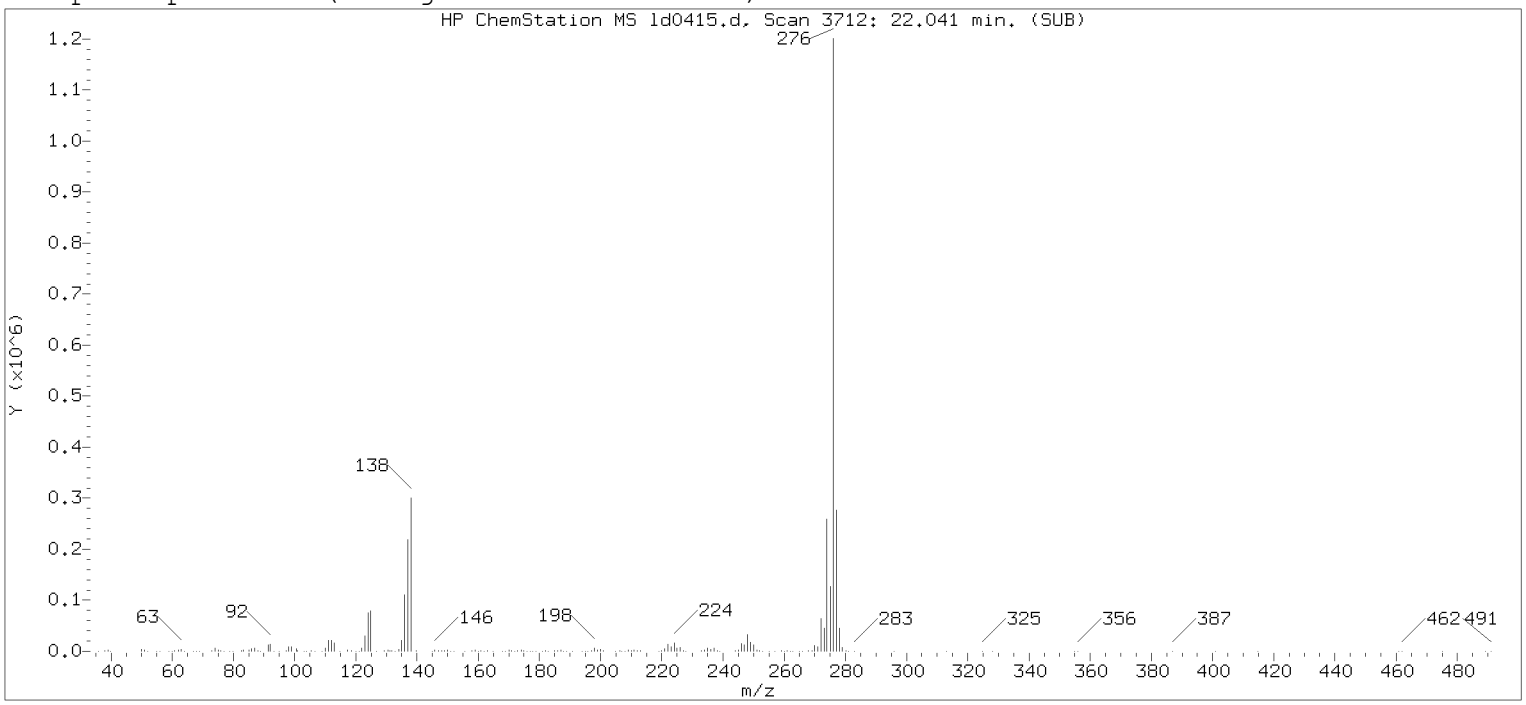
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3712
Retention Time (minutes) : 22.041
Quant Ion : 276.00
Area (flag) : 2208804M
On-Column Amount (ng/ul) : 13.7646
Integration start scan : 3699 Integration stop scan: 3715
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

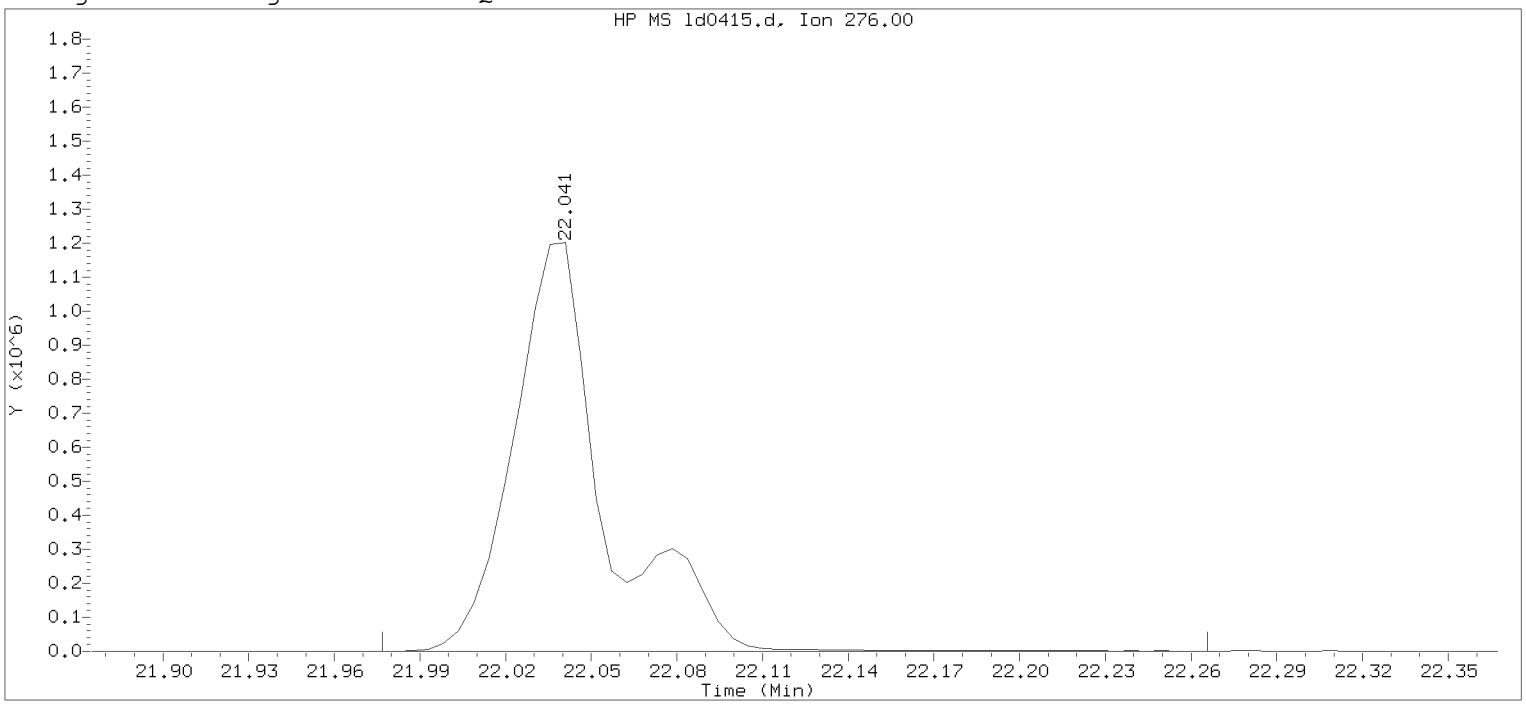
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:18.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



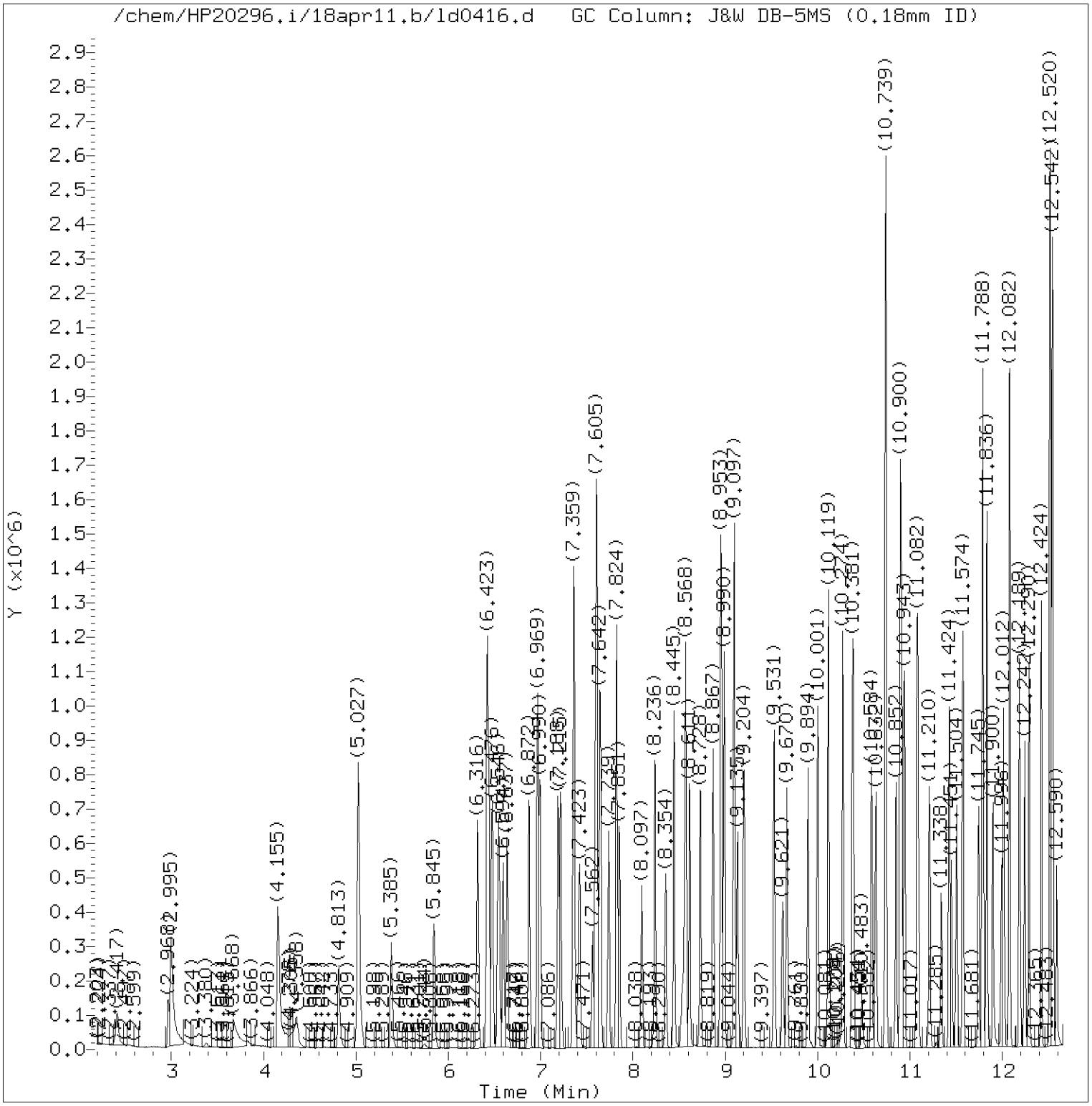
Data File: /chem/HP20296.i/18apr11.b/ld0415.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 10:56 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:22
Date, time and analyst ID of latest file update: 11-Apr-2018 11:22 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3712		
Retention Time (minutes)	: 22.041		
Quant Ion	: 276.00		
Area	: 2679567		
On-column Amount (ng/ul)	: 15.8249		
Integration start scan	: 3699	Integration stop scan:	3753
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:18.
Target 3.5 esignature user FID Page 1725



Total Ion Chromatogram (TIC)

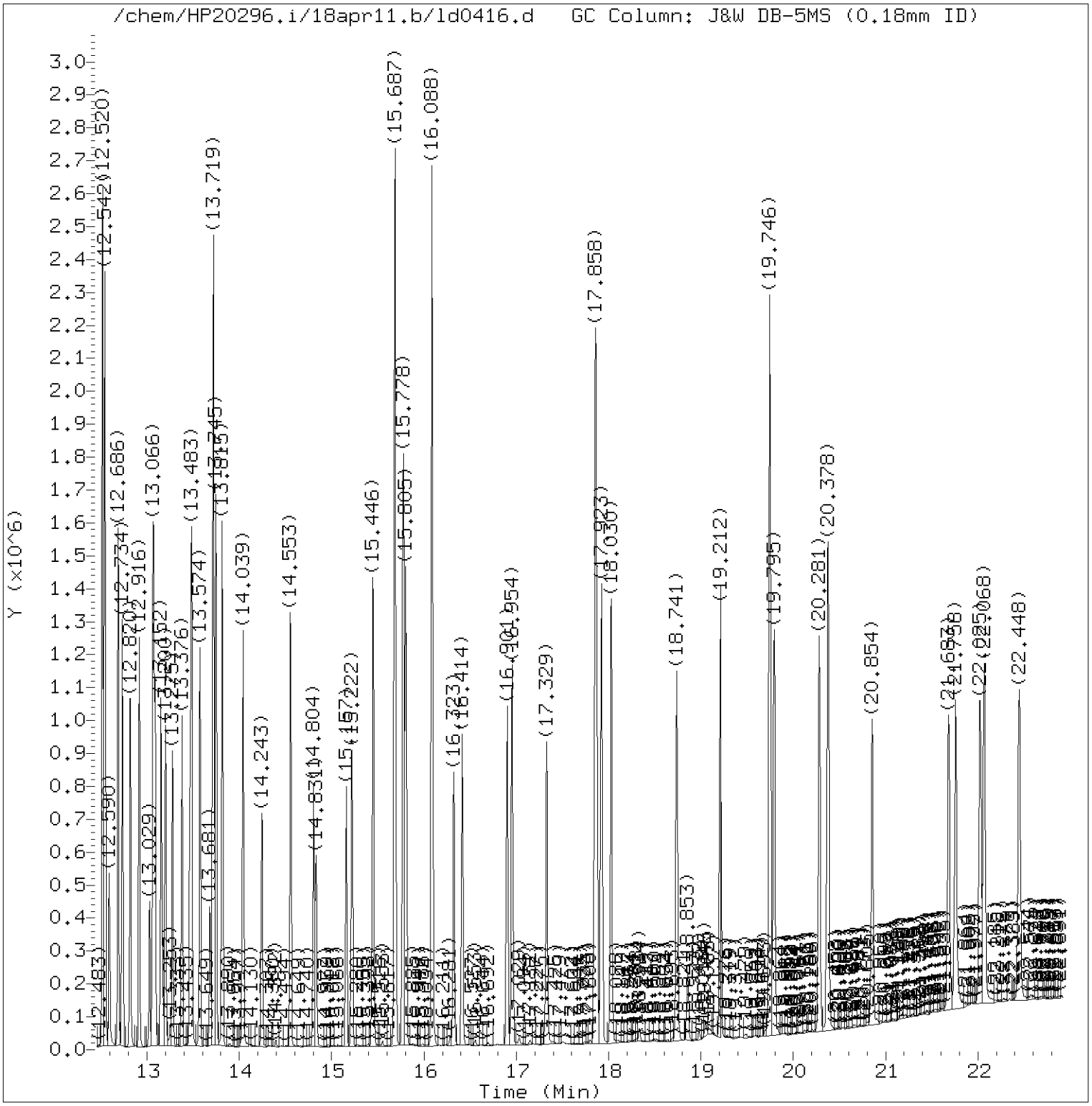
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.417	88	91632	3.233
5) N-Nitrosodimethylamine	(1)	2.962	74	149554	3.465
6) Pyridine	(1)	2.995	79	270200	3.509
8) 2-Picoline	(1)	4.155	93	273501	3.513
9) N-Nitrosomethylethylamine	(1)	4.358	88	108012	3.461
10) Methyl methanesulfonate	(1)	4.813	80	133421	3.530
12)$2-Fluorophenol	(1)	5.027	112	434884	7.326
14) N-Nitrosodiethylamine	(1)	5.385	102	105157	3.634
43) Total Cresols	(1)			435690	7.390
16) Ethyl methanesulfonate	(1)	5.845	109	113189	3.592
17) Benzaldehyde	(1)	6.316	77	211365	3.589
18)$Phenol-d6	(1)	6.423	99	577605	7.420
19) Phenol	(1)	6.439	94	332478	3.710
20) Aniline	(1)	6.476	93	381051	3.688
21) a-methylstyrene	(1)	6.551	118	85485	3.787
23) bis(2-Chloroethyl)ether	(1)	6.594	93	250443	3.754
24) 2-Chlorophenol	(1)	6.637	128	212812	3.660
25) 1,3-Dichlorobenzene	(1)	6.872	146	249168	3.796
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	216786	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	249243	3.752
28) Benzyl alcohol	(1)	7.188	108	143342	3.693
29) 1,2-Dichlorobenzene	(1)	7.215	146	234054	3.700
31) Indene	(1)	7.354	115	351468	3.792
32) 2-Methylphenol	(1)	7.364	108	211447	3.688
100) Isosafrole	(3)			188586	3.535
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	350332	3.699
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	350332	3.699
36) N-Nitrosopyrrolidine	(1)	7.562	100	111912	3.565
37) Acetophenone	(1)	7.594	105	326868	3.739
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	182754	3.667
38) 4-Methylphenol	(1)	7.610	108	224243	3.703
40) N-Nitrosomorpholine	(1)	7.637	56	148215	3.558
41) o-Toluidine	(1)	7.648	106	377825	3.726
44) Hexachloroethane	(1)	7.739	117	101866	3.596
45)$Nitrobenzene-d5	(2)	7.824	82	530449	7.356
46) Nitrobenzene	(2)	7.851	77	271293	3.688
125) 2,4_2,6-Dinitrotoluenes	(3)			239009	7.317
50) N-Nitrosopiperidine	(2)	8.097	114	109537	3.624
52) Isophorone	(2)	8.242	82	468175	3.641
53) 2-Nitrophenol	(2)	8.354	139	108439	3.648

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	231770	3.637
58) Benzoic acid	(2)	8.568	105	229387M	7.406
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	112255	3.560
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	308734	3.694
62) 2,4-Dichlorophenol	(2)	8.734	162	179204	3.612
151) Diallate trans/cis	(4)			226931	3.652
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	201763	3.650
68)*Naphthalene-d8	(2)	8.953	136	836120	5.000
69) Naphthalene	(2)	8.990	128	646580	3.742
70) 4-Chloroaniline	(2)	9.097	127	256050	3.631
71) 2,6-Dichlorophenol	(2)	9.097	162	180986	3.683
72) Hexachloropropene	(2)	9.135	213	140443	3.511
74) Hexachlorobutadiene	(2)	9.204	225	125549	3.746
78) Quinoline	(2)	9.531	129	392401	3.565
79) Caprolactam	(2)	9.621	113	54428	3.499
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	172154	3.175
83) 4-Chloro-3-methylphenol	(2)	9.894	107	200203	3.677
85) Safrole	(2)	10.001	162	166384	3.590
86) 2-Methylnaphthalene	(2)	10.119	142	429669	3.743
87) 1-Methylnaphthalene	(2)	10.274	142	390682	3.710
88) Hexachlorocyclopentadiene	(3)	10.376	237	118886	3.468
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	209332	3.630
91) cis-Isosafrole	(3)	10.483	162	29561	0.589
93) 2,4,6-Trichlorophenol	(3)	10.584	196	131104	3.621
95) 2,4,5-Trichlorophenol	(3)	10.632	196	140983	3.709
96)$2-Fluorobiphenyl	(3)	10.739	172	972065	7.376
97) trans-Isosafrole	(3)	10.852	162	159025	2.946
98) 1,1'-Biphenyl	(3)	10.894	154	505511	3.719
99) 2-Chloronaphthalene	(3)	10.911	162	430991	3.731
101) 1-Chloronaphthalene	(3)	10.943	162	389519M	3.646
103) Diphenyl ether	(3)	11.076	170	279705	3.684
104) 2-Nitroaniline	(3)	11.092	138	121862	3.605
108) 1,4-Naphthoquinone	(3)	11.210	158	160480	3.516
109) 1,4-Dinitrobenzene	(3)	11.344	168	60701	3.379
110) Dimethylphthalate	(3)	11.429	163	474935	3.671
111) 1,3-Dinitrobenzene	(3)	11.451	168	69943	3.634
113) 2,6-Dinitrotoluene	(3)	11.510	165	102550	3.733
114) Acenaphthylene	(3)	11.574	152	598671	3.729
117) 3-Nitroaniline	(3)	11.745	138	107657	3.719
118)*Acenaphthene-d10	(3)	11.788	164	423912	5.000

M = Compound was manually integrated.
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on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	417608	3.668
120) 2,4-Dinitrophenol	(3)	11.900	184	103377	6.259
121) 4-Nitrophenol	(3)	11.996	109	69937	3.428
122) Pentachlorobenzene	(3)	12.018	250	172560	3.670
124) Dibenzofuran	(3)	12.076	168	579980	3.667
123) 2,4-Dinitrotoluene	(3)	12.082	165	136459	3.584
126) 1-Naphthylamine	(3)	12.189	143	398346	3.540
127) 2,3,4,6-Tetrachlorophenol	(3)	12.242	232	111550	3.772
128) 2-Naphthylamine	(3)	12.290	143	371079	3.481
129) Diethylphthalate	(3)	12.424	149	451021	3.542
130) Thionazin	(3)	12.515	107	77339	3.568
131) Fluorene	(3)	12.520	166	469205	3.798
133) 5-Nitro-o-toluidine	(3)	12.542	152	123614	3.673
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	224880	3.673
134) 4-Nitroaniline	(3)	12.553	138	108847	3.721
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	71262	3.226
136) N-Nitrosodiphenylamine	(4)	12.686	169	382764	3.749
137) NDPA as diphenylamine	(4)	12.686	169	382764	3.749
139) 1,2-Diphenylhydrazine	(4)	12.734	77	527610	3.703
140)$2,4,6-Tribromophenol	(3)	12.820	330	107746	7.353
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	87231M	3.600
144) 1,3,5-Trinitrobenzene	(4)	13.029	213	44335	3.258
145) Diallate (peak 1)	(4)	13.061	86	194060	3.009
146) Phorate	(4)	13.071	75	343413	3.758
147) Phenacetin	(4)	13.087	108	237413	3.679
148) 4-Bromophenyl-phenylether	(4)	13.152	248	125088	3.666
149) Diallate (peak 2)	(4)	13.173	86	32871M	0.643
150) Hexachlorobenzene	(4)	13.200	284	125605	3.584
152) Dimethoate	(4)	13.275	87	196320	3.570
153) Atrazine	(4)	13.382	200	127874	3.702
154) Pentachlorophenol	(4)	13.462	266	72197	3.364
156) Pentachloronitrobenzene	(4)	13.478	237	59316	3.547
155) 4-Aminobiphenyl	(4)	13.483	169	423371	3.642
157) Pronamide	(4)	13.574	173	214439	3.724
158)*Phenanthrene-d10	(4)	13.719	188	834381	5.000
159) Dinoseb	(4)	13.724	211	112738	3.260
160) Phenanthrene	(4)	13.745	178	676165	3.675
162) Anthracene	(4)	13.815	178	688038	3.730
168) Carbazole	(4)	14.039	167	587720	3.599
169) Methyl parathion	(4)	14.243	109	142602	3.402

M = Compound was manually integrated.
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Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.553	149	778295	3.541
172) Parathion	(4)	14.804	109	91374	3.368
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	61477	2.822
227) Total PAHs	(6)			11128057	66.438
174) Octachlorostyrene	(4)	15.157	308	47041	3.589
176) Isodrin	(4)	15.222	193	79486	3.487
178) Fluoranthene	(4)	15.446	202	757906	3.663
179) Benzidine	(5)	15.687	184	1327791	10.428
180)*Pyrene-d10	(5)	15.778	212	864134	5.000
182) Pyrene	(5)	15.805	202	796146	3.622
184)$Terphenyl-d14	(5)	16.088	244	1008418	7.277
187) p-Dimethylaminoazobenzene	(5)	16.323	225	118907	3.545
190) Chlorobenzilate	(5)	16.414	139	231107	3.529
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	461122	3.330
193) Butylbenzylphthalate	(5)	16.954	149	355577	3.481
196) 2-Acetylaminofluorene	(5)	17.329	181	267876	3.314
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	239642	3.391
200) Benzo(a)anthracene	(5)	17.858	228	723930	3.686
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	144154	3.359
201) Chrysene	(5)	17.923	228	707477	3.724
204) bis(2-Ethylhexyl)phthalate	(5)	18.030	149	499327	3.460
208) 6-Methylchrysene	(5)	18.736	242	464826	3.475
210) Di-n-octylphthalate	(6)	19.212	149	835146	3.406
211) Benzo(b)fluoranthene	(6)	19.746	252	702149	3.673
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	285763	3.624
213) Benzo(k)fluoranthene	(6)	19.795	252	693189M	3.766
216) Benzo(a)pyrene	(6)	20.281	252	629087	3.658
218)*Perylene-d12	(6)	20.378	264	779658	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	292657	3.499
222) Dibenz(a,h)acridine	(6)	21.683	279	502824	3.440
223) Dibenz(a,j)acridine	(6)	21.758	279	521393	3.512
224) Indeno(1,2,3-cd)pyrene	(6)	22.025	276	585026M	3.582
225) Dibenz(a,h)anthracene	(6)	22.068	278	598366	3.606
226) Benzo(g,h,i)perylene	(6)	22.448	276	618163	3.663

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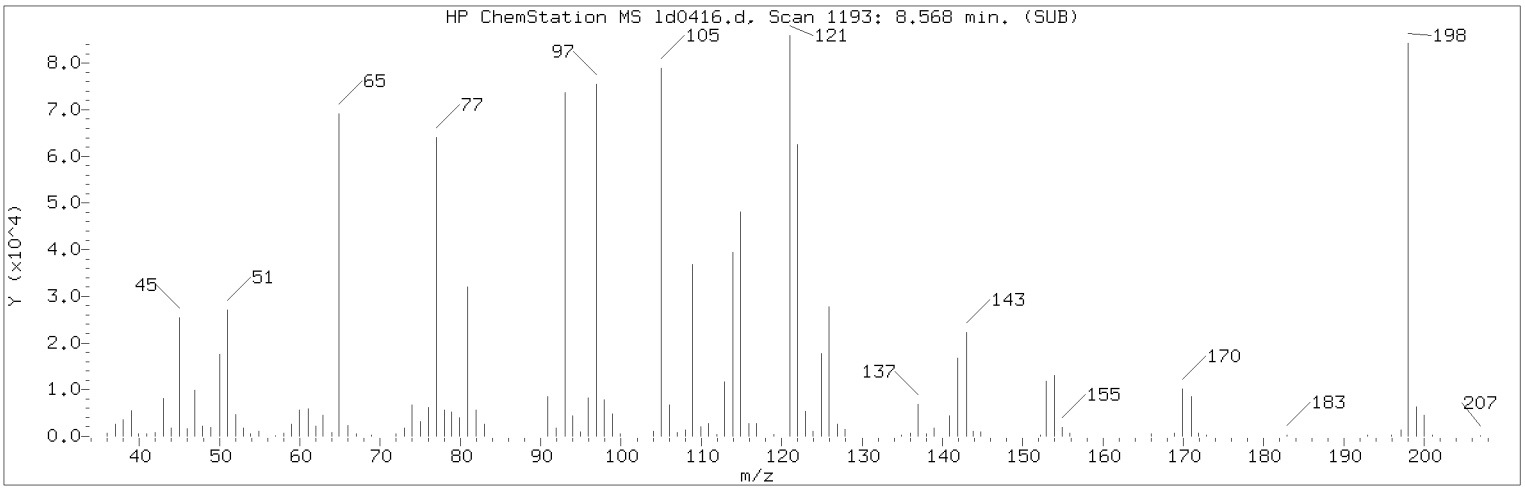
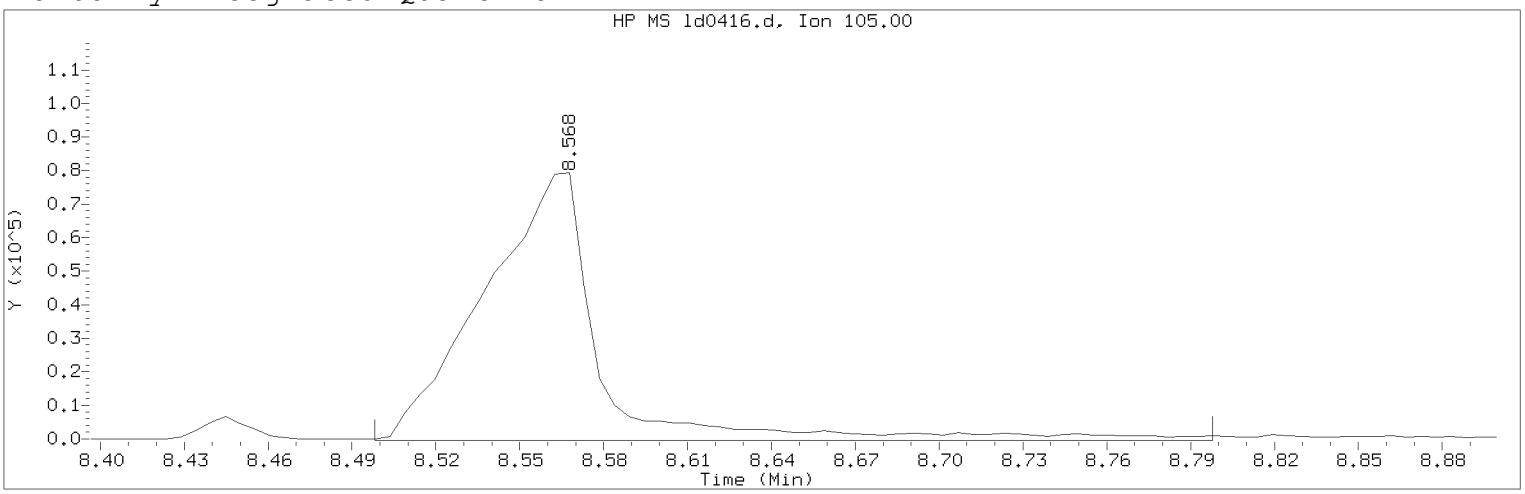
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

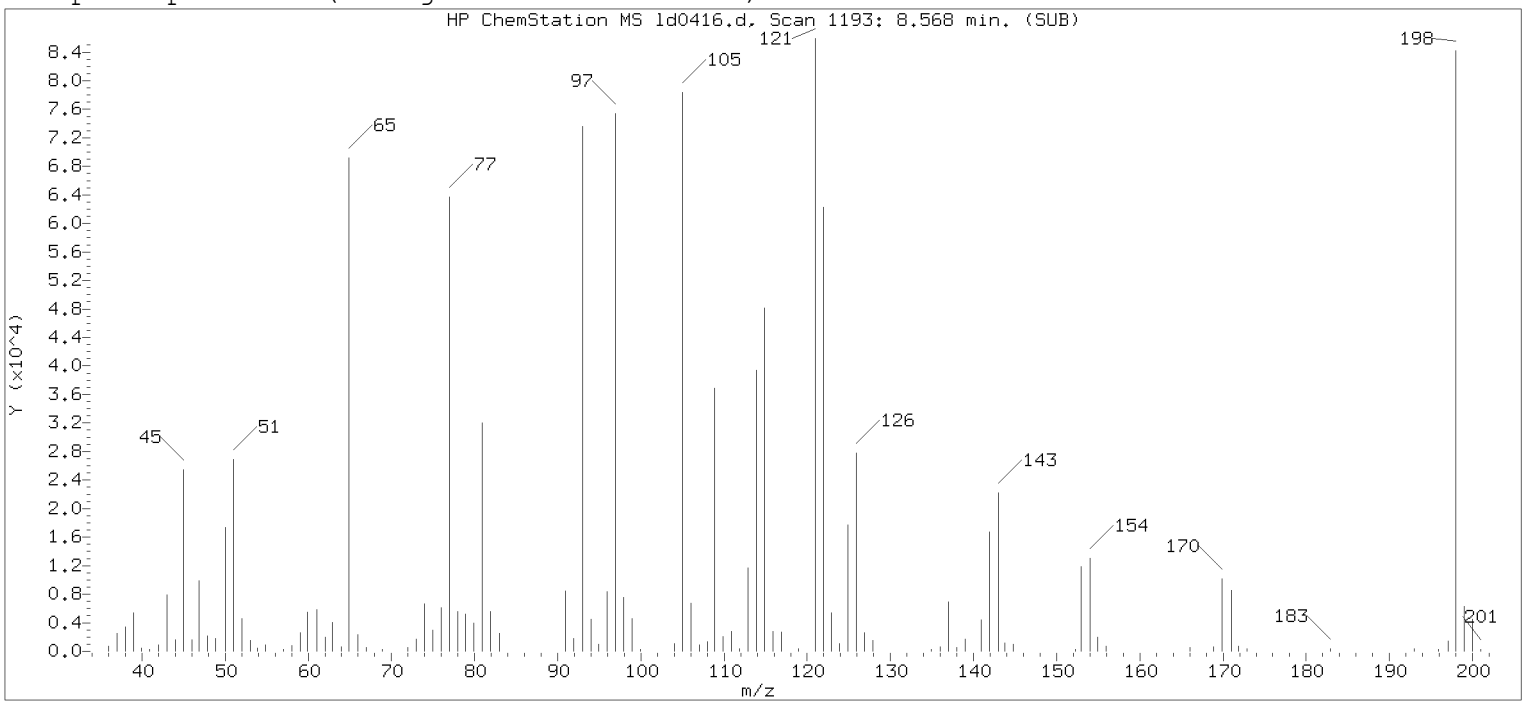
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1193
Retention Time (minutes) : 8.568
Quant Ion : 105.00
Area (flag) : 229387M
On-Column Amount (ng/ul) : 7.4060
Integration start scan : 1179 Integration stop scan: 1235
Y at integration start : -417 Y at integration end: -417

Reason for manual integration: improper integration

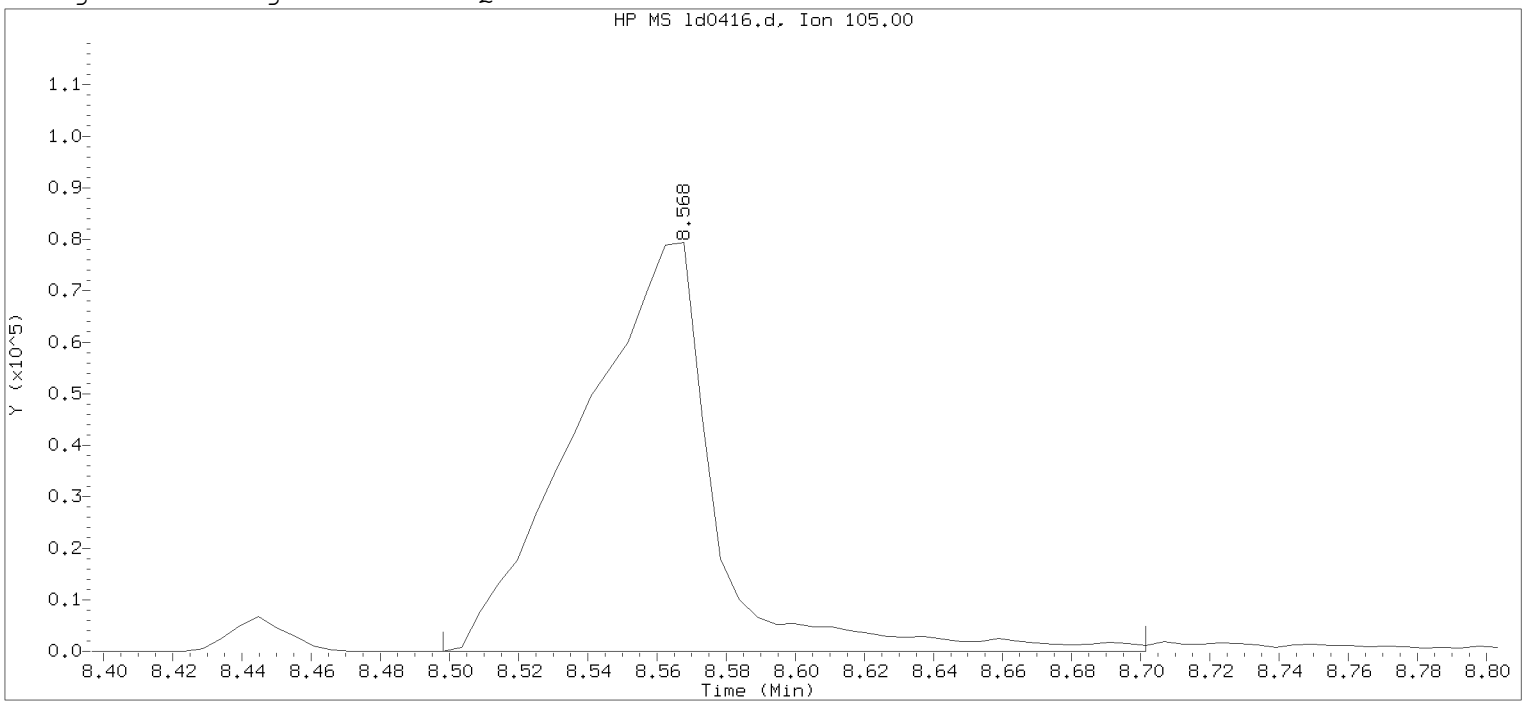
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

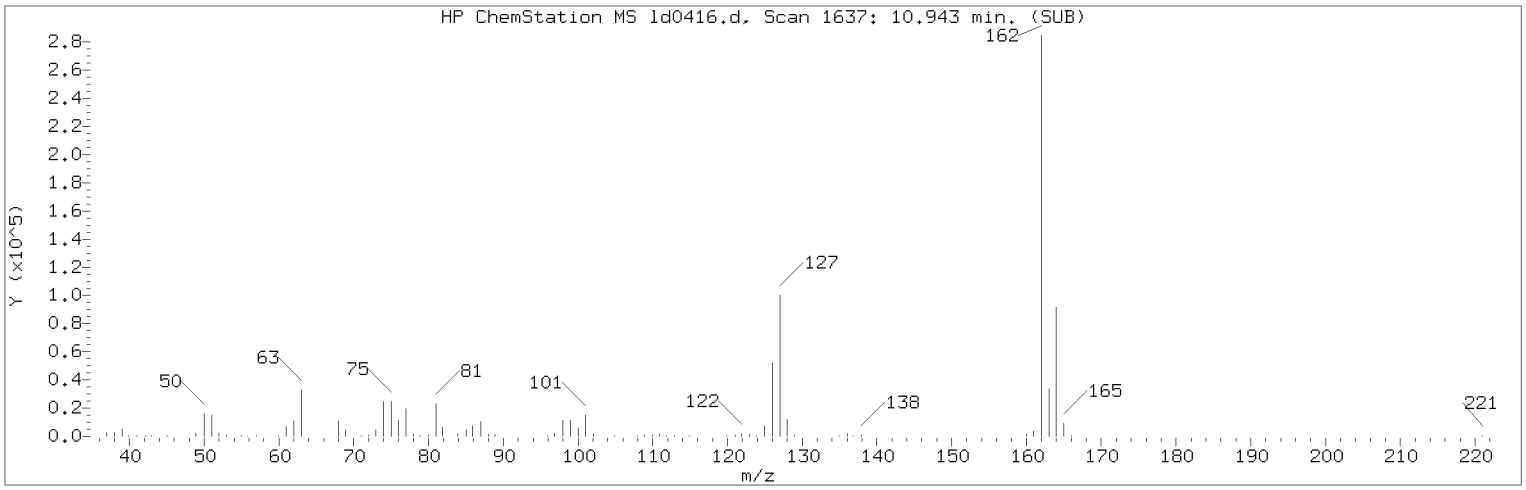
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

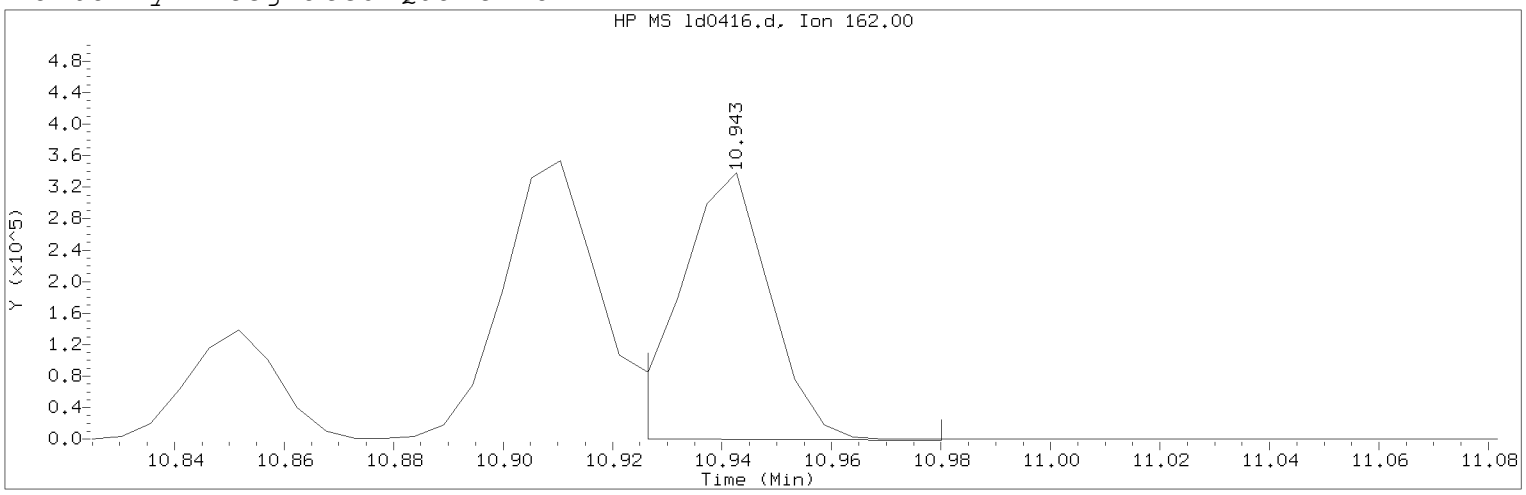
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1193		
Retention Time (minutes)	: 8.568		
Quant Ion	: 105.00		
Area	: 215134		
On-column Amount (ng/ul)	: 7.4128		
Integration start scan	: 1179	Integration stop scan:	1217
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used for FD6 Page 1733

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

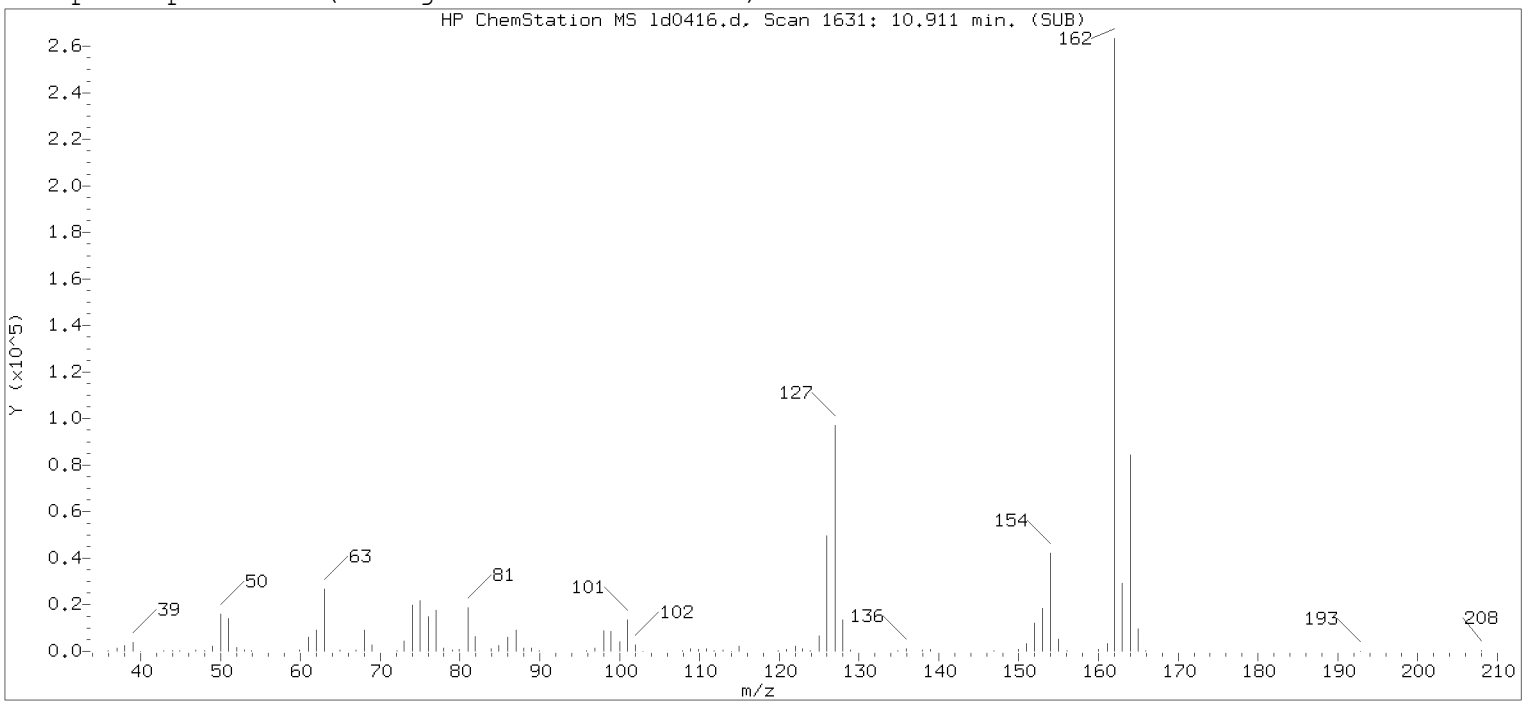
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1637
Retention Time (minutes) : 10.943
Quant Ion : 162.00
Area (flag) : 389519M
On-Column Amount (ng/ul) : 3.6457
Integration start scan : 1633 Integration stop scan: 1643
Y at integration start : -163 Y at integration end: -1434

Reason for manual integration: improper integration

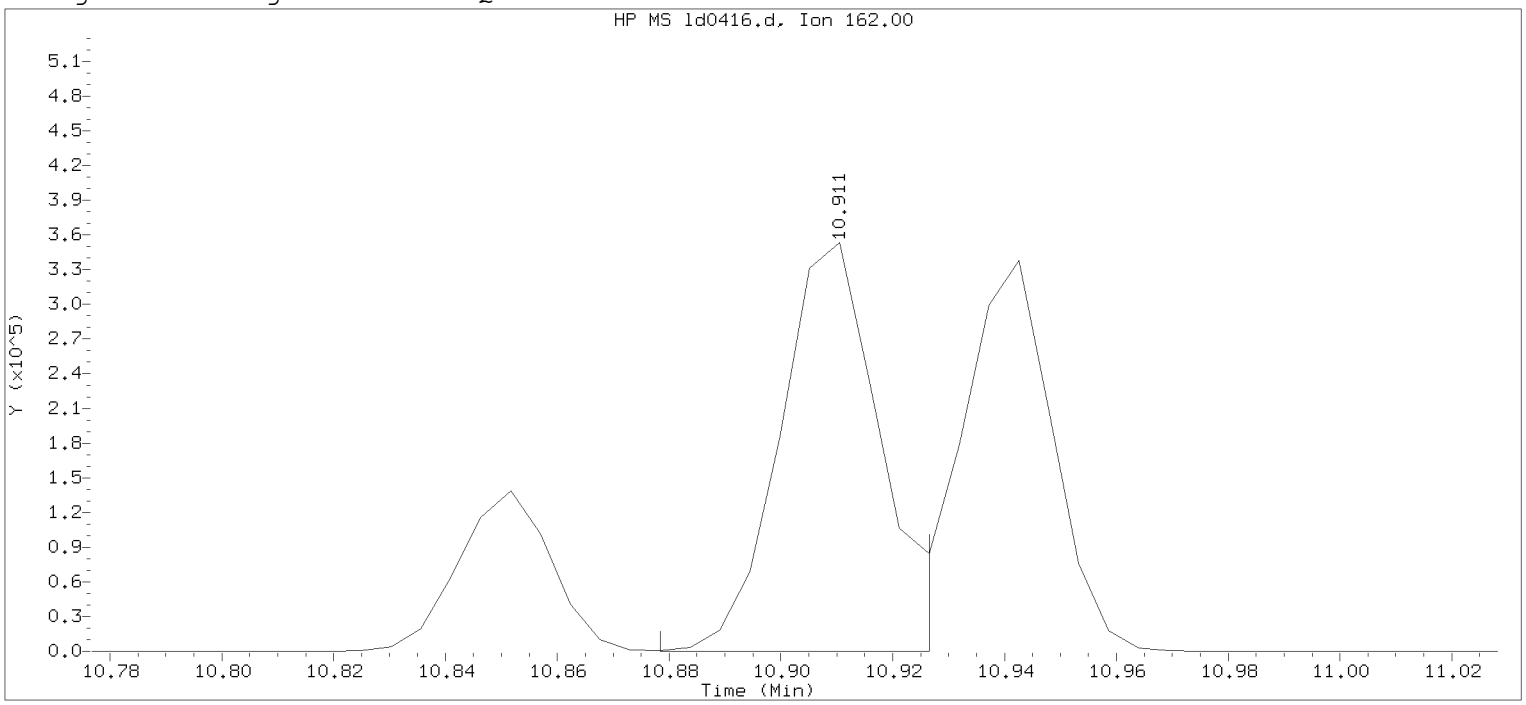
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

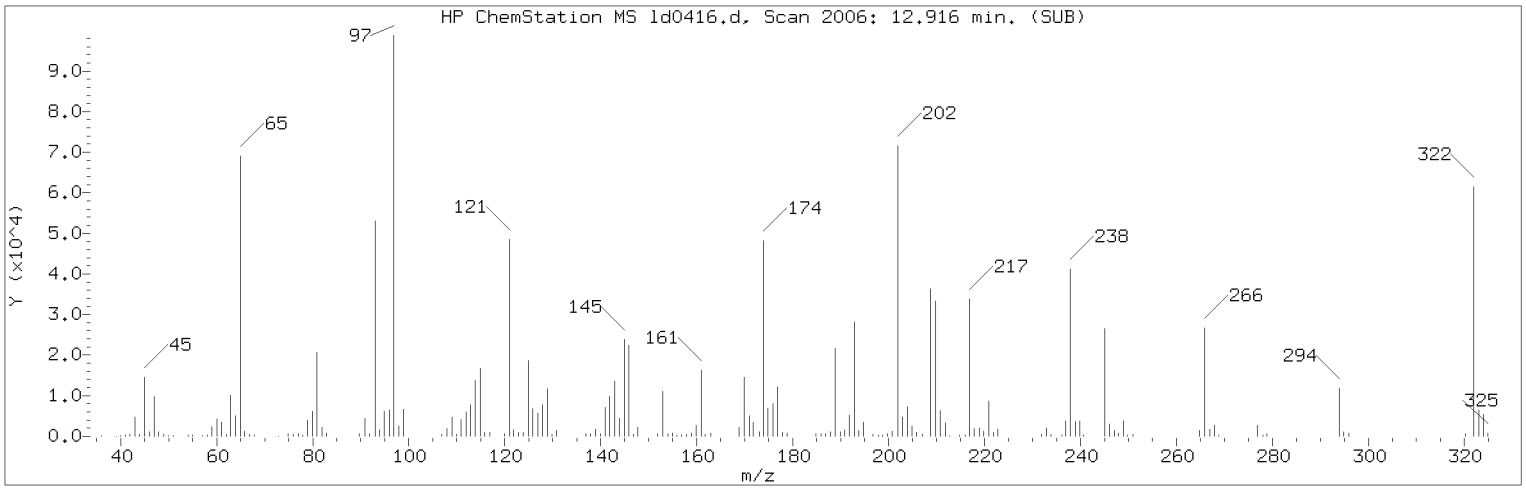
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

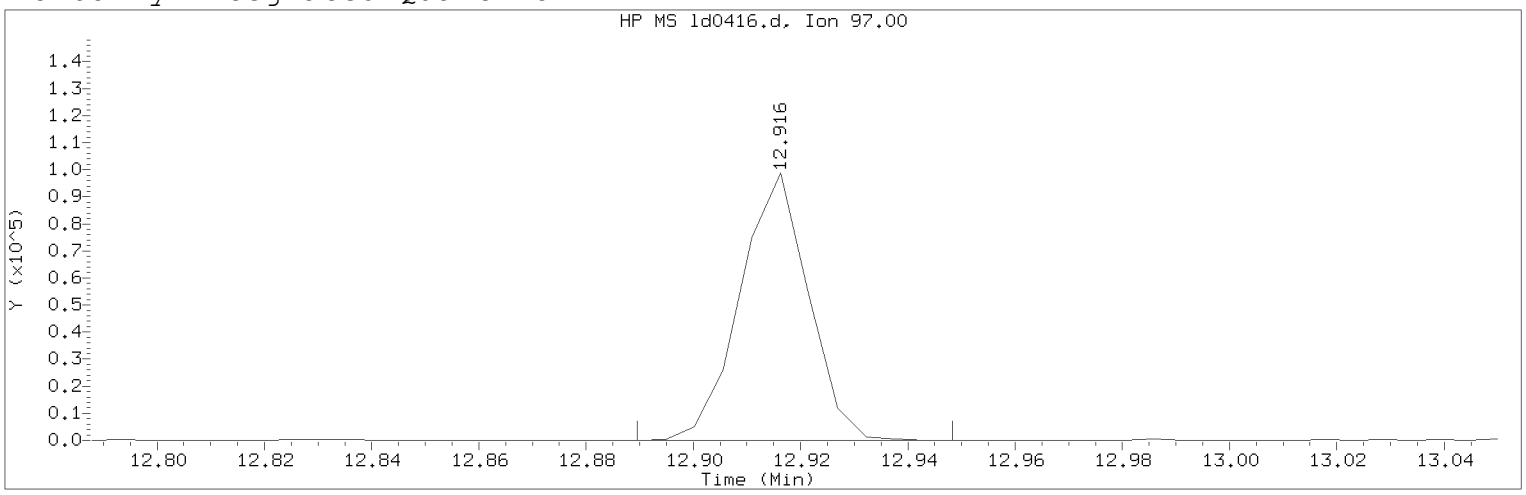
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1631		
Retention Time (minutes)	: 10.911		
Quant Ion	: 162.00		
Area	: 430991		
On-column Amount (ng/ul)	: 4.0344		
Integration start scan	: 1624	Integration stop scan:	1633
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used for RAFD6 Page 1735

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

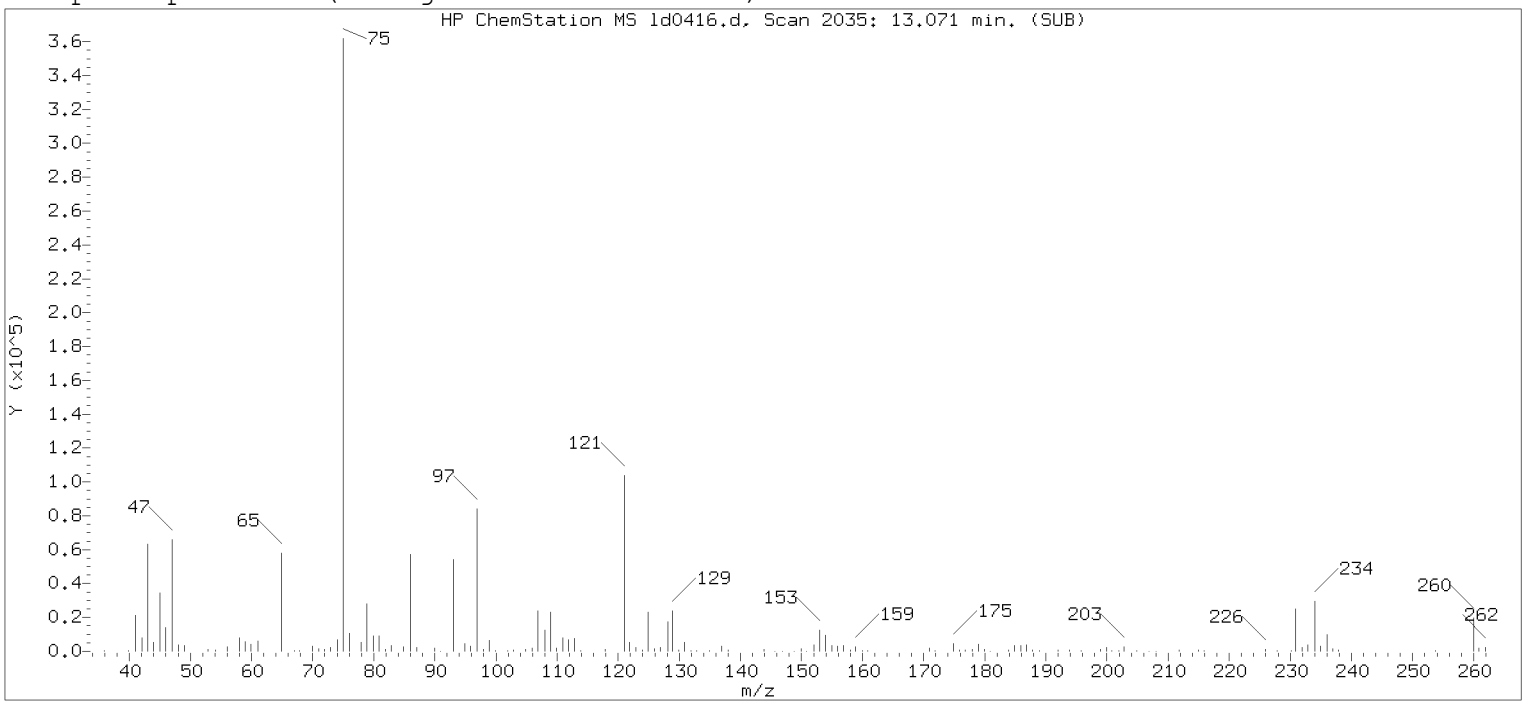
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 87231M
On-Column Amount (ng/ul) : 3.5997
Integration start scan : 2000 Integration stop scan: 2011
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

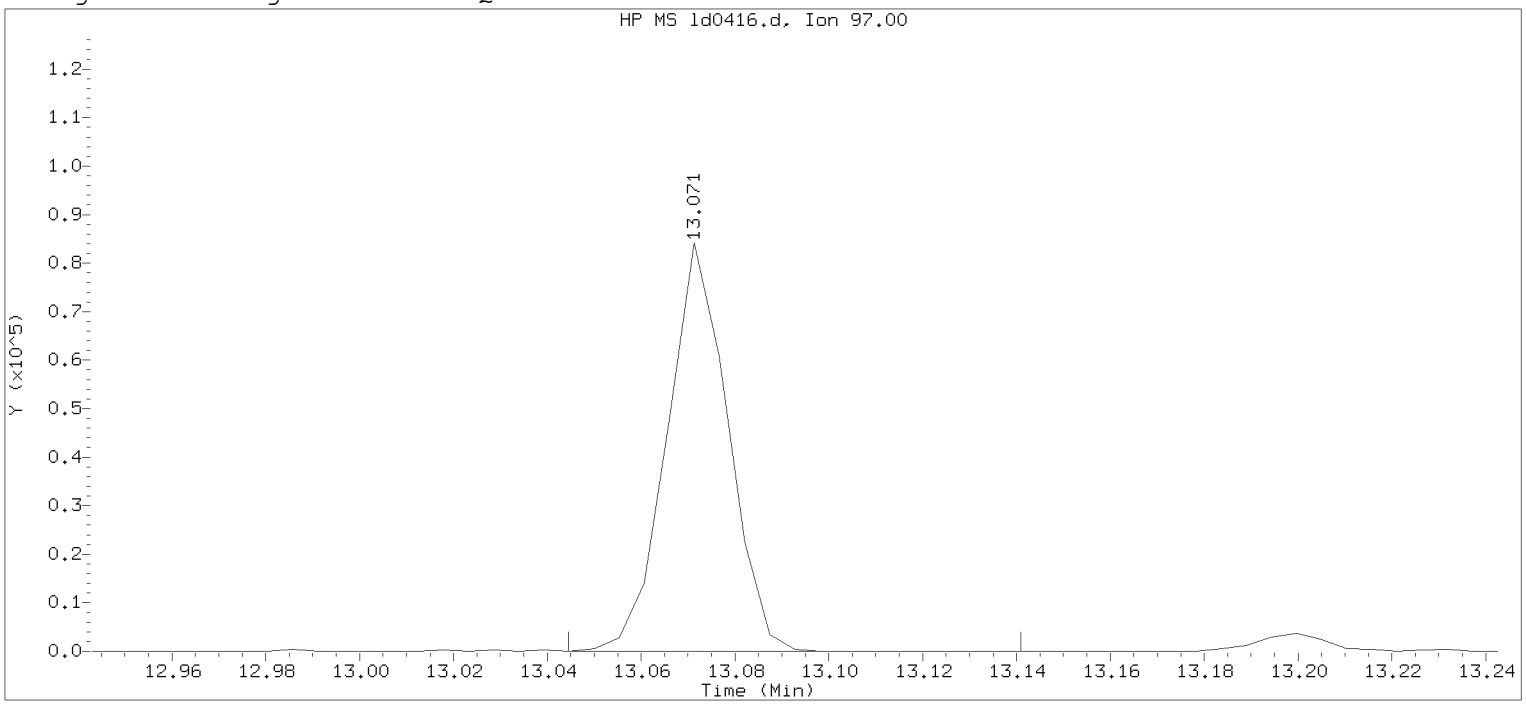
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

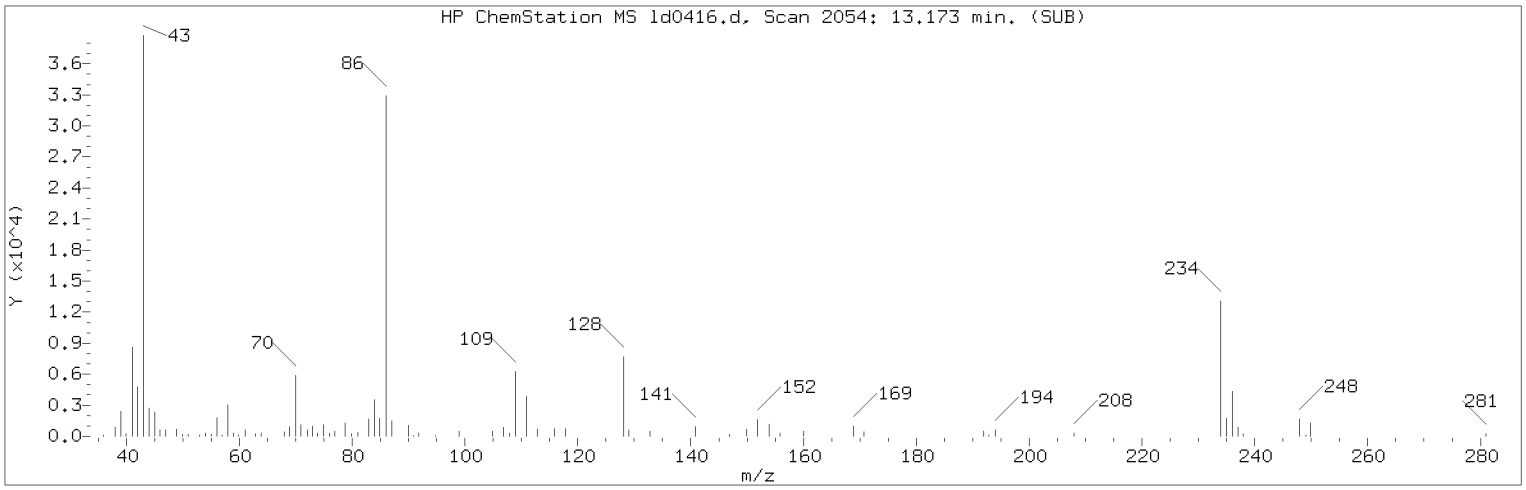
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

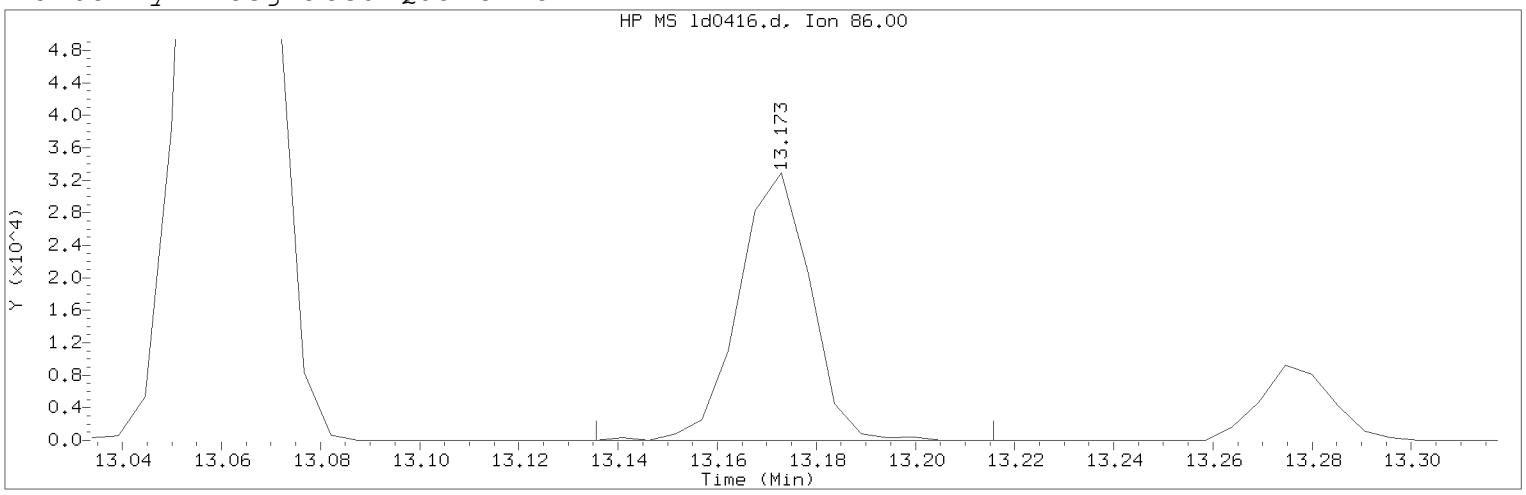
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 75883		
On-column Amount (ng/ul)	: 2.9831		
Integration start scan	: 2029	Integration stop scan:	2047
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: 1737

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

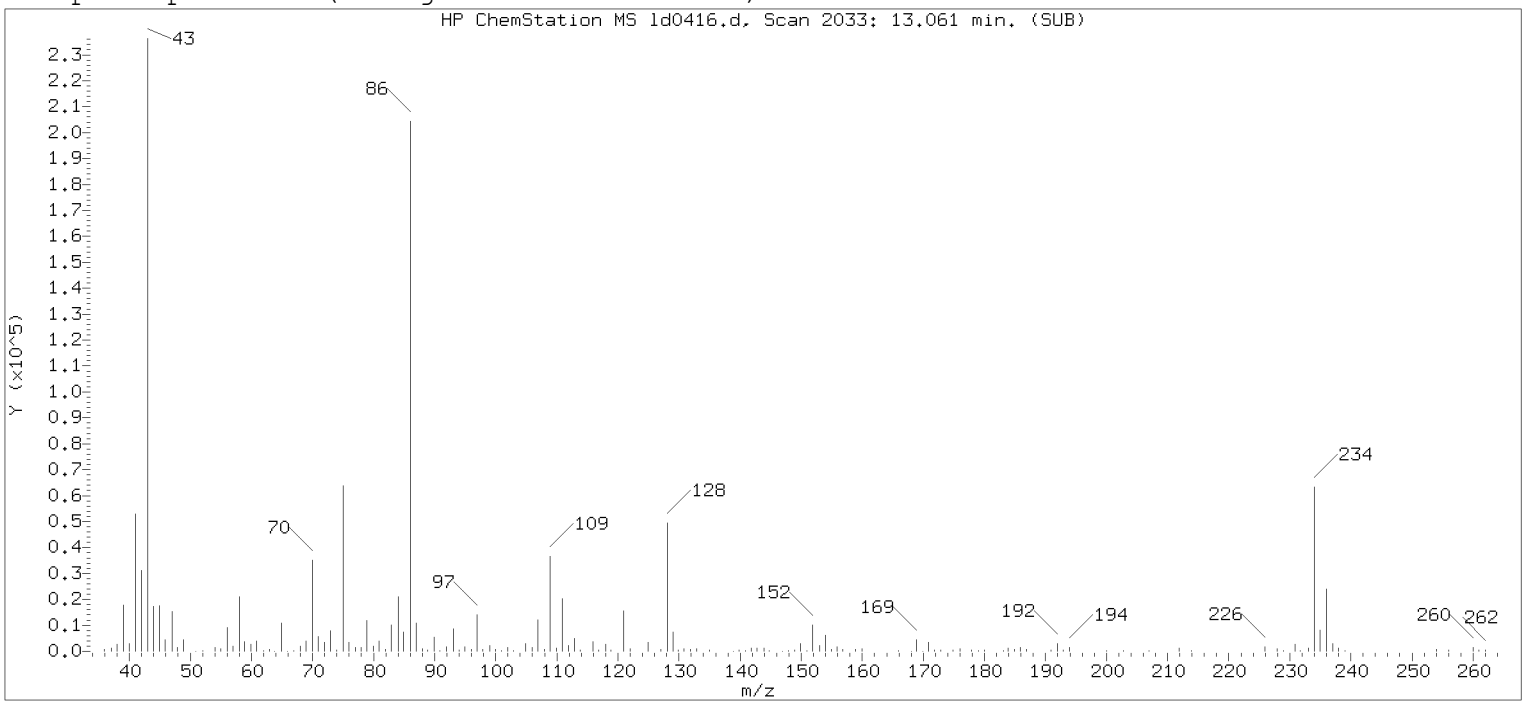
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2054		
Retention Time (minutes)	: 13.173		
Quant Ion	: 86.00		
Area (flag)	: 32871M		
On-Column Amount (ng/ul)	: 0.6430		
Integration start scan	: 2046	Integration stop scan:	2061
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

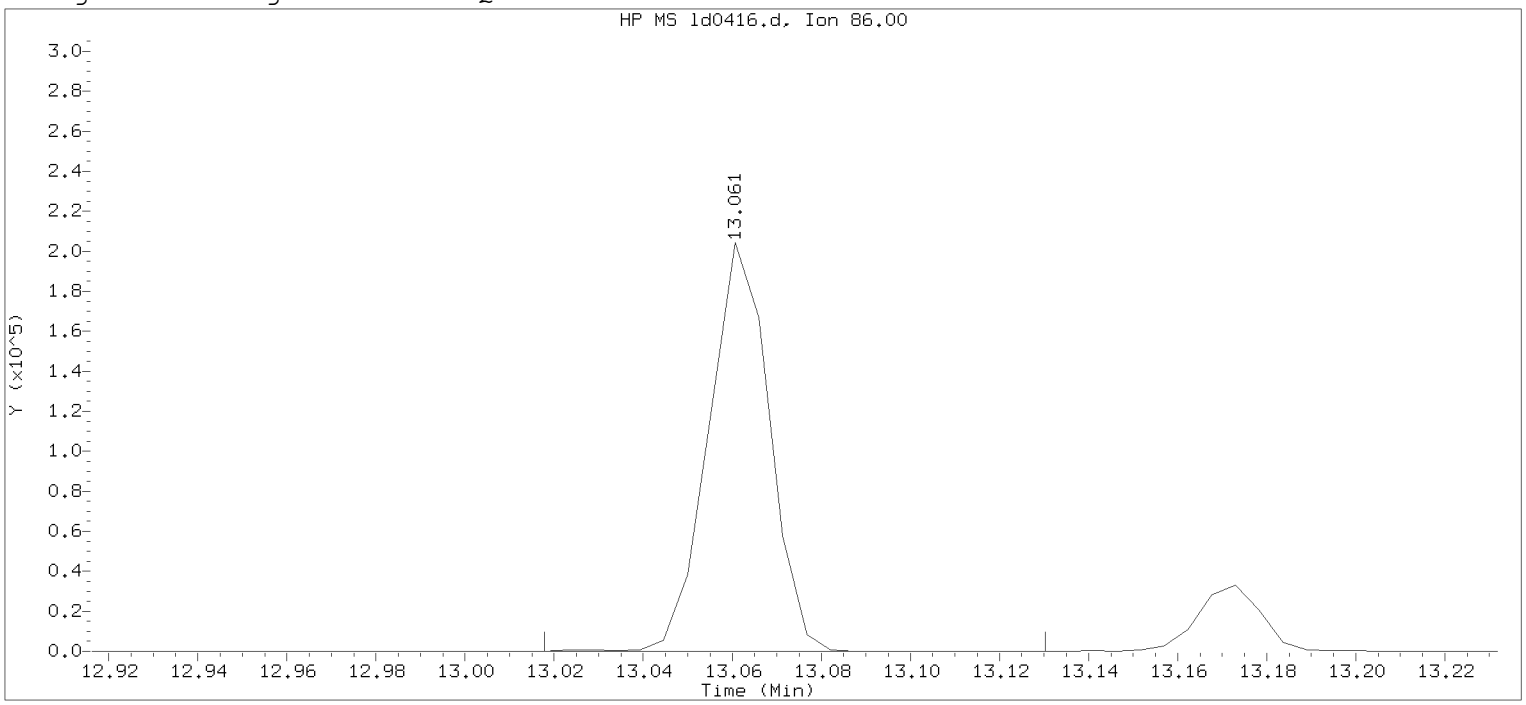
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

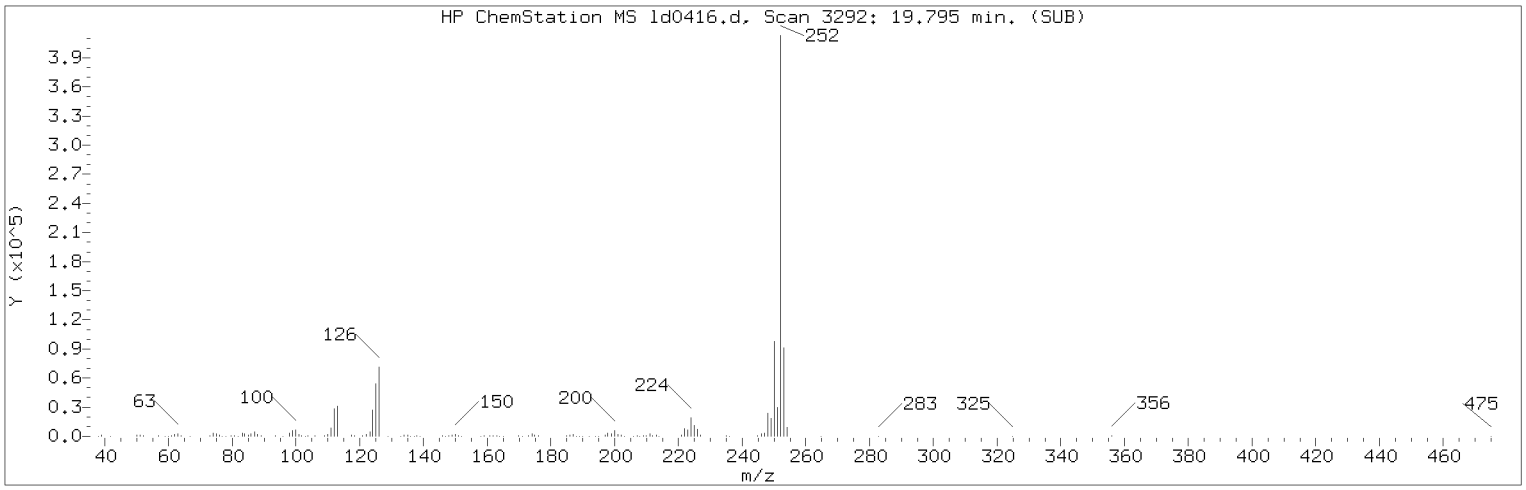
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

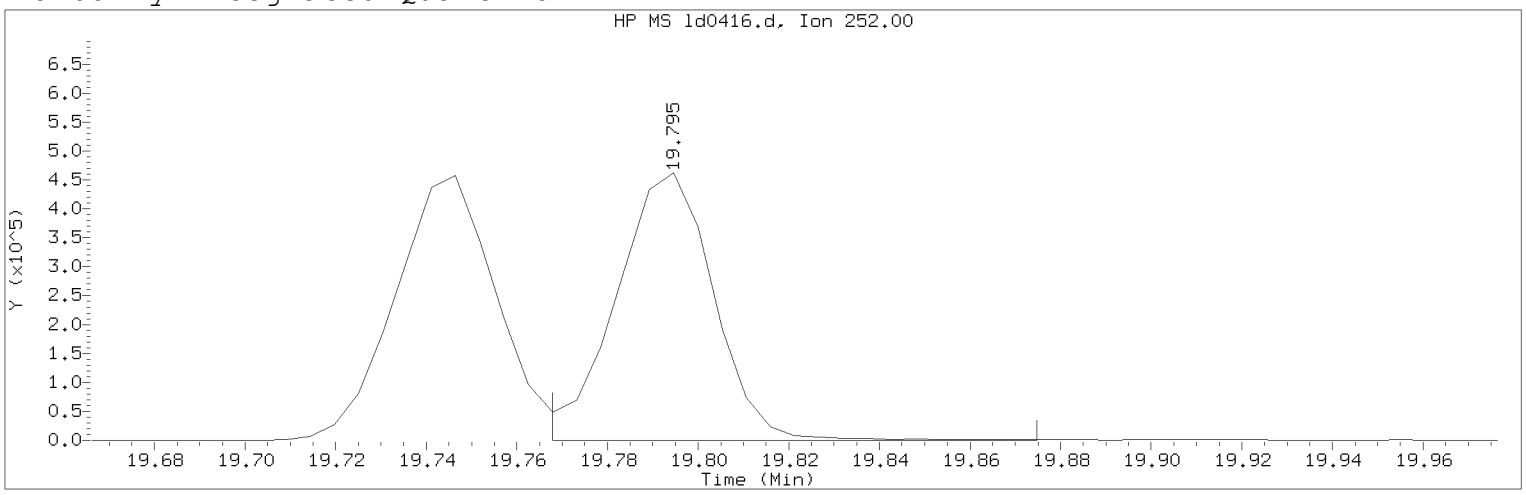
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 194060		
On-column Amount (ng/ul)	: 3.6287		
Integration start scan	: 2024	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used for Part 1739

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

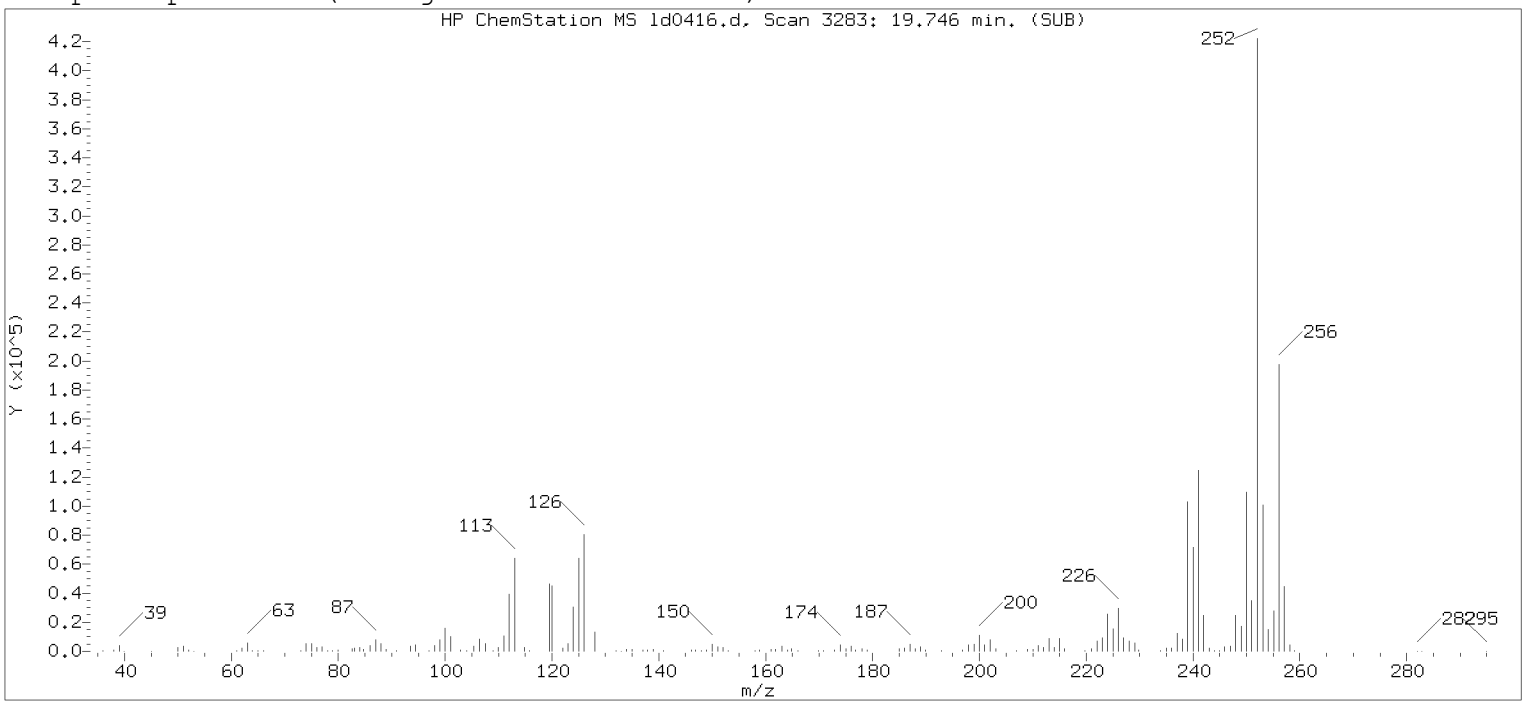
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3292
Retention Time (minutes) : 19.795
Quant Ion : 252.00
Area (flag) : 693189M
On-Column Amount (ng/ul) : 3.7659
Integration start scan : 3286 Integration stop scan: 3306
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

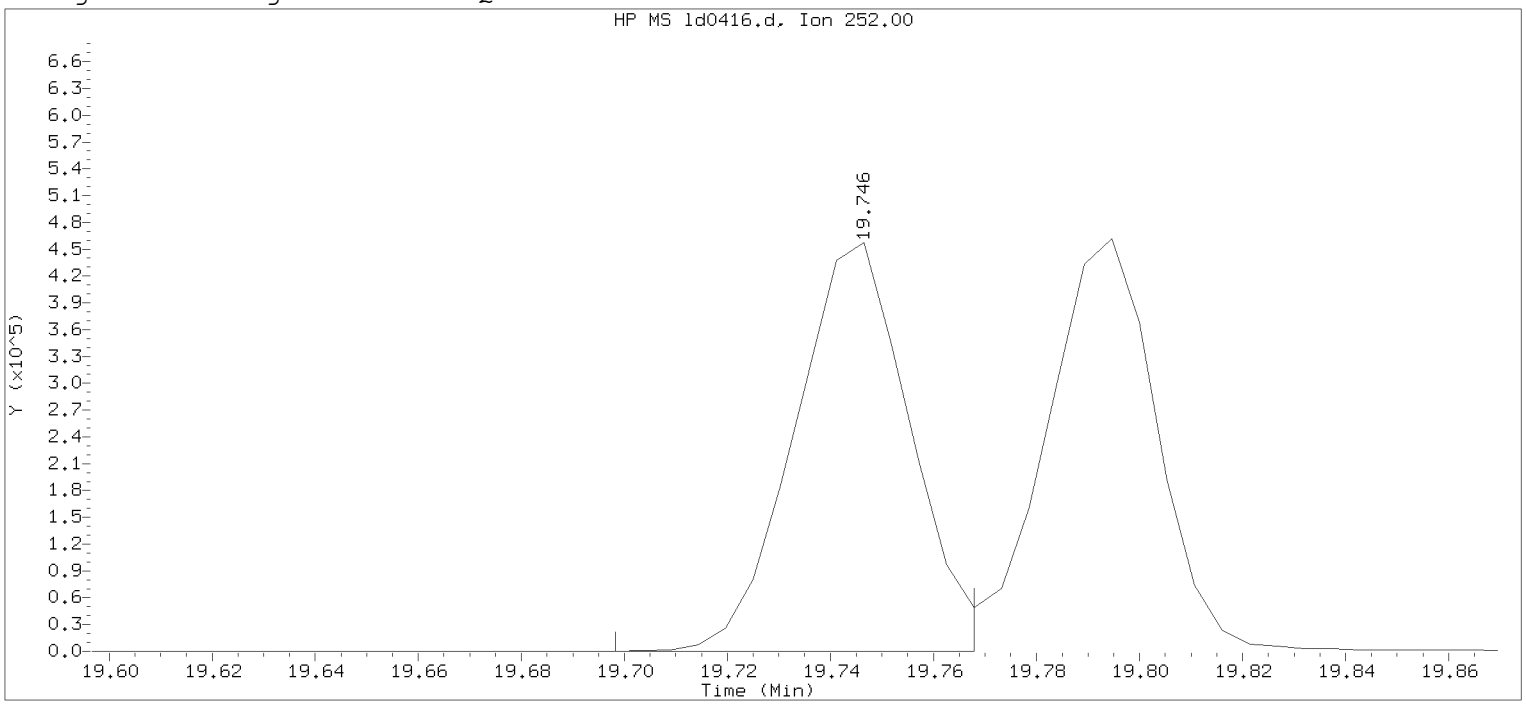
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

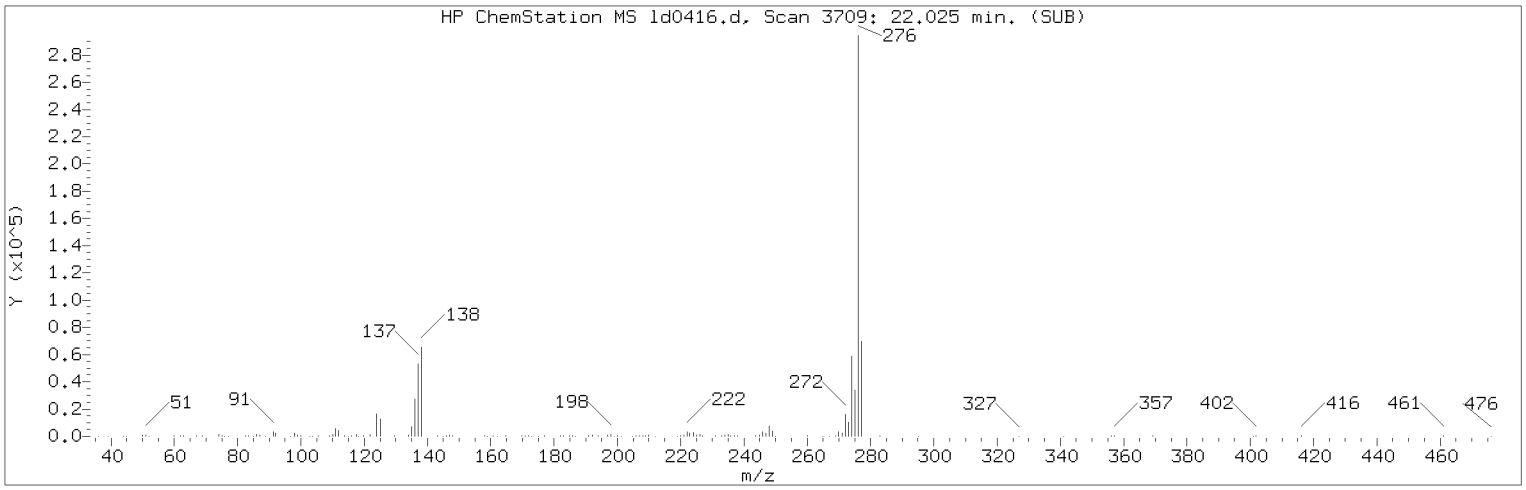
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

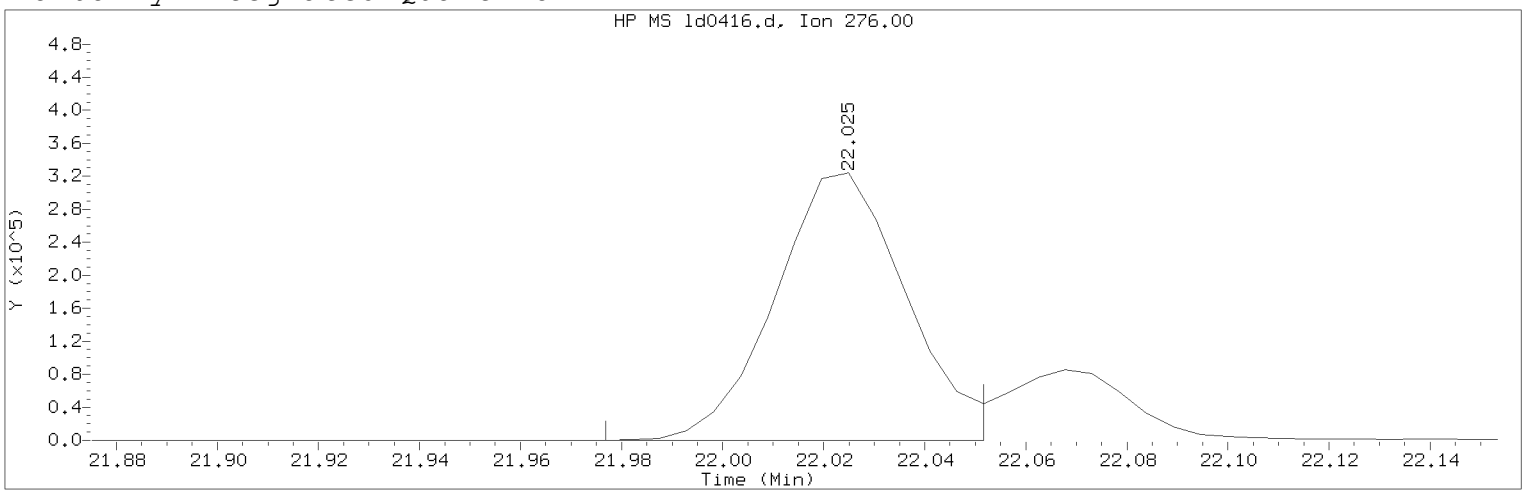
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3283		
Retention Time (minutes)	: 19.746		
Quant Ion	: 252.00		
Area	: 702149		
On-column Amount (ng/ul)	: 3.6659		
Integration start scan	: 3273	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

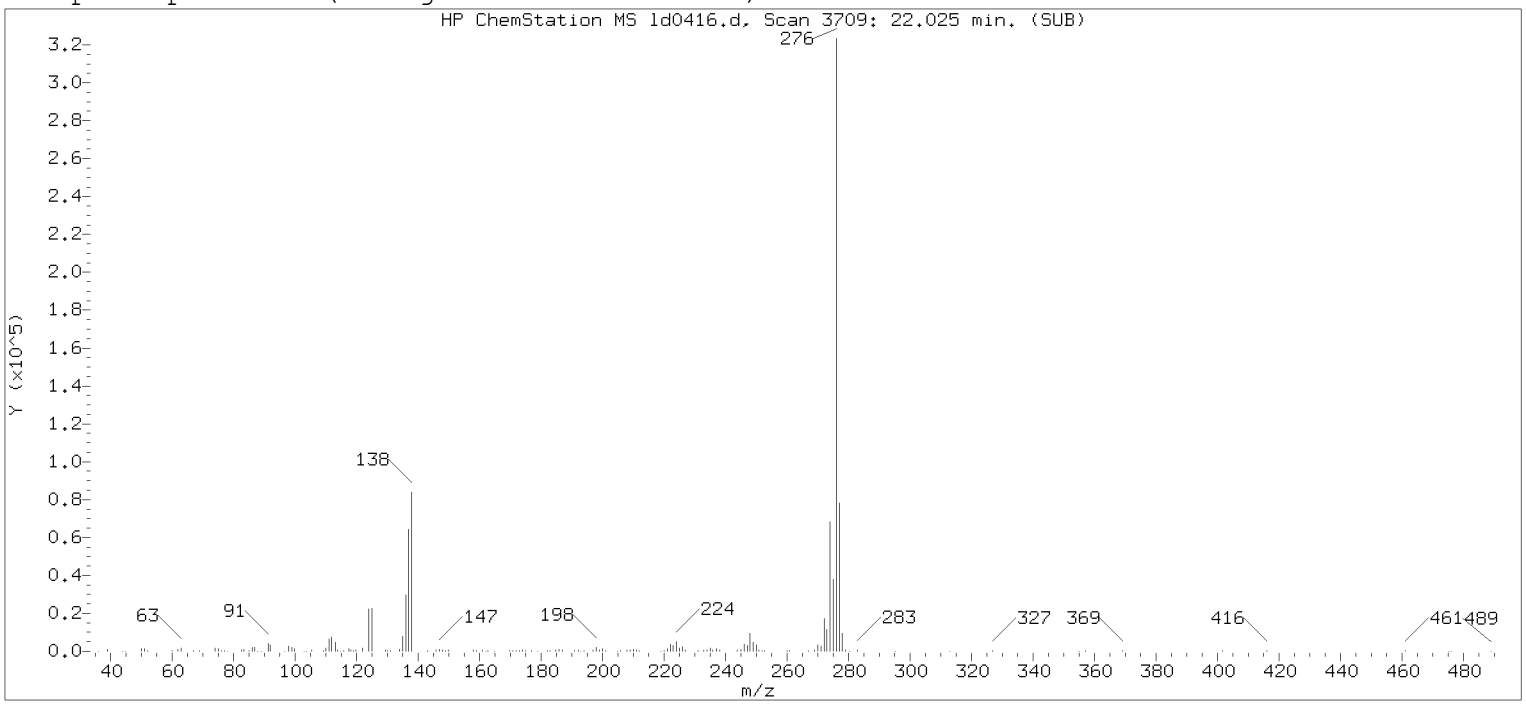
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3709
Retention Time (minutes) : 22.025
Quant Ion : 276.00
Area (flag) : 585026M
On-Column Amount (ng/ul) : 3.5818
Integration start scan : 3699 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

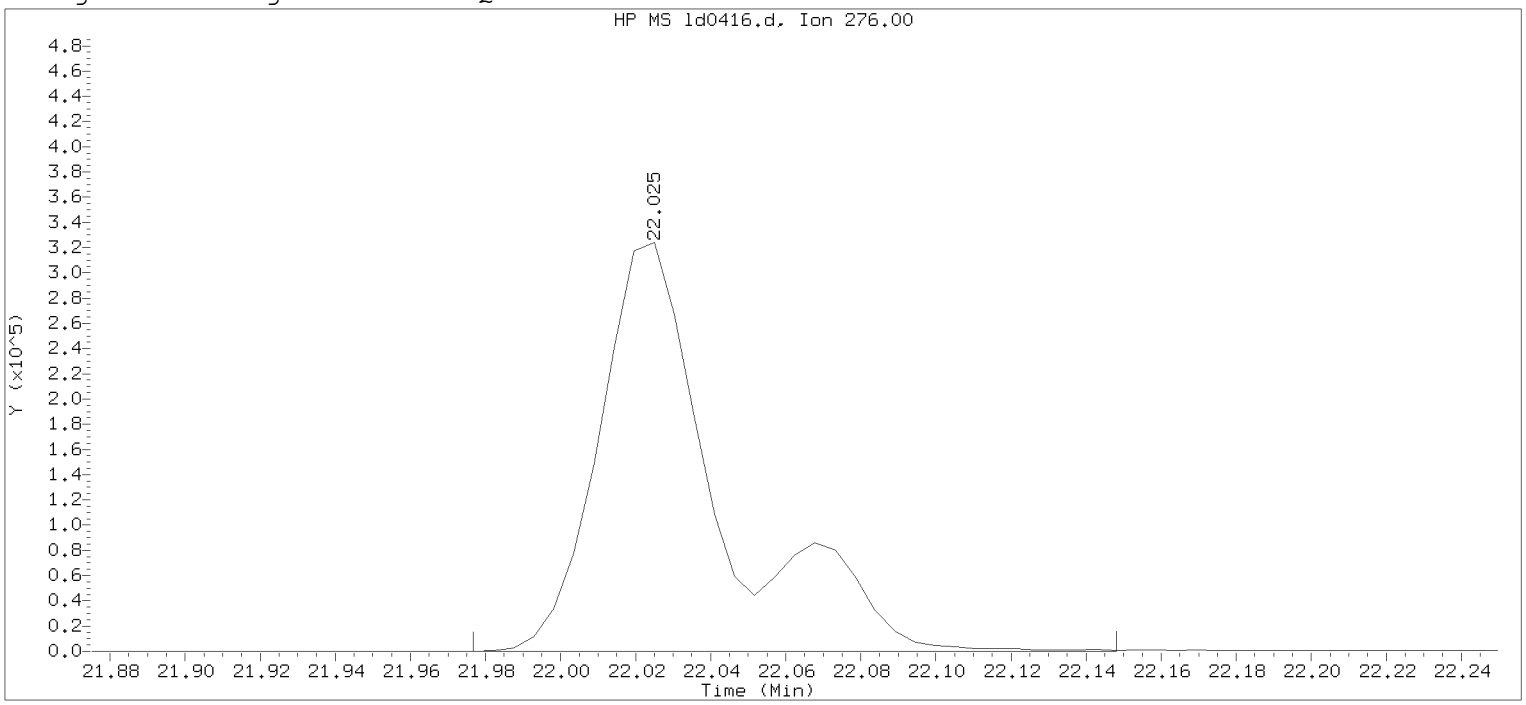
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



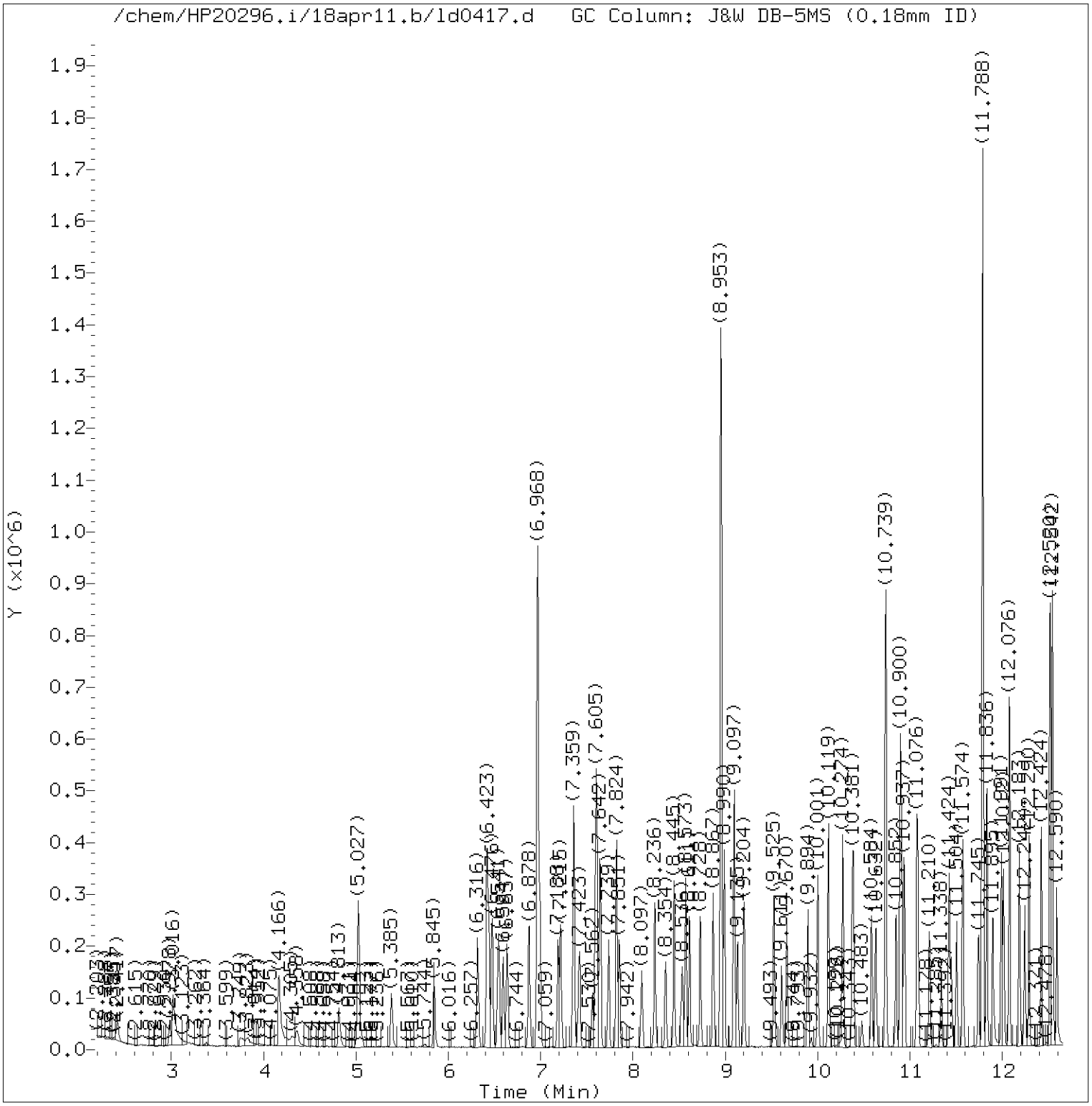
Data File: /chem/HP20296.i/18apr11.b/ld0416.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:24 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 11:50
Date, time and analyst ID of latest file update: 11-Apr-2018 11:50 Unknown

Sample Name: SSTD3.75 Lab Sample ID: rvSTD0968

Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3709
Retention Time (minutes) : 22.025
Quant Ion : 276.00
Area : 724870
On-column Amount (ng/ul) : 4.2058
Integration start scan : 3699 Integration stop scan: 3731
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1743



Total Ion Chromatogram (TIC)

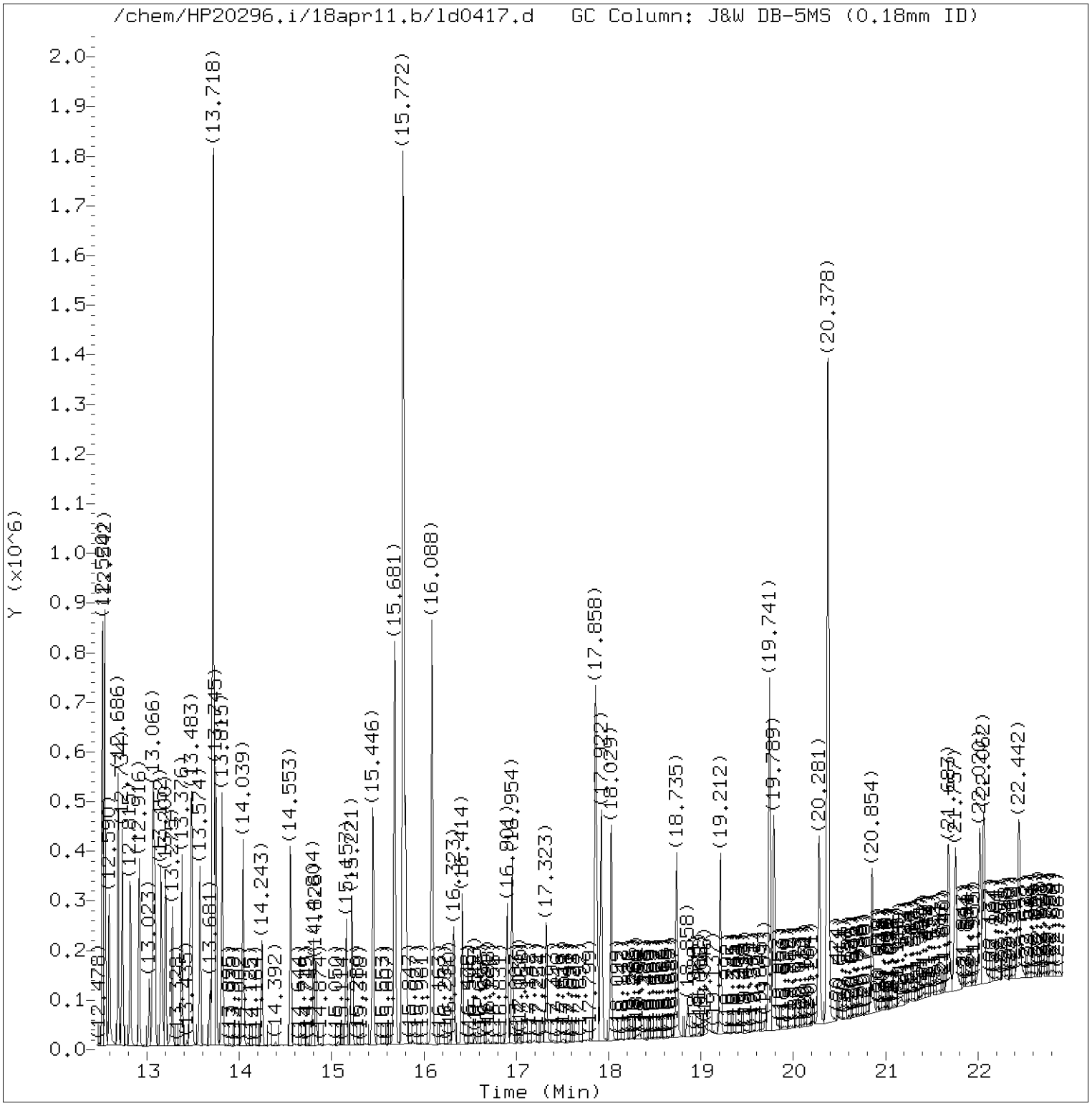
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.417	88	35833M	1.359
5) N-Nitrosodimethylamine	(1)	2.978	74	46207	1.151
6) Pyridine	(1)	3.016	79	89782	1.254
8) 2-Picoline	(1)	4.160	93	88578	1.223
9) N-Nitrosomethylethylamine	(1)	4.358	88	35649	1.228
10) Methyl methanesulfonate	(1)	4.813	80	43659	1.242
12)$2-Fluorophenol	(1)	5.027	112	140703	2.549
14) N-Nitrosodiethylamine	(1)	5.385	102	33400	1.241
43) Total Cresols	(1)			141666	2.584
16) Ethyl methanesulfonate	(1)	5.845	109	37329	1.274
17) Benzaldehyde	(1)	6.316	77	65451	1.195
18)$Phenol-d6	(1)	6.418	99	187215	2.586
19) Phenol	(1)	6.439	94	108504	1.302
20) Aniline	(1)	6.476	93	124049	1.291
21) a-methylstyrene	(1)	6.551	118	24880	1.185
23) bis(2-Chloroethyl)ether	(1)	6.594	93	82049	1.323
24) 2-Chlorophenol	(1)	6.637	128	70742	1.308
25) 1,3-Dichlorobenzene	(1)	6.878	146	80624	1.321
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	201608	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	82362	1.333
28) Benzyl alcohol	(1)	7.188	108	41302	1.144
29) 1,2-Dichlorobenzene	(1)	7.215	146	76651	1.303
31) Indene	(1)	7.354	115	101263	1.175
32) 2-Methylphenol	(1)	7.364	108	69056	1.295
100) Isosafrole	(3)			62670	1.256
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	119640	1.358
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	119640	1.358
36) N-Nitrosopyrrolidine	(1)	7.562	100	36591	1.253
37) Acetophenone	(1)	7.594	105	103307	1.271
38) 4-Methylphenol	(1)	7.605	108	72610	1.289
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	59781	1.290
40) N-Nitrosomorpholine	(1)	7.637	56	48342	1.248
41) o-Toluidine	(1)	7.648	106	125179	1.327
44) Hexachloroethane	(1)	7.733	117	33439	1.269
45)$Nitrobenzene-d5	(2)	7.824	82	173441	2.587
46) Nitrobenzene	(2)	7.851	77	88596	1.296
125) 2,4_2,6-Dinitrotoluenes	(3)			73888	2.418
50) N-Nitrosopiperidine	(2)	8.097	114	35022	1.246
52) Isophorone	(2)	8.236	82	149916	1.254
53) 2-Nitrophenol	(2)	8.354	139	34123	1.235

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	76262	1.288
58) Benzoic acid	(2)	8.536	105	73947M	4.298
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	37650	1.284
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	99630	1.282
62) 2,4-Dichlorophenol	(2)	8.734	162	58777	1.274
151) Diallate trans/cis	(4)			73596	1.276
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	67280	1.309
68)*Naphthalene-d8	(2)	8.953	136	777233	5.000
69) Naphthalene	(2)	8.990	128	217823	1.356
70) 4-Chloroaniline	(2)	9.092	127	83551	1.275
71) 2,6-Dichlorophenol	(2)	9.097	162	57396	1.257
72) Hexachloropropene	(2)	9.135	213	45963	1.236
74) Hexachlorobutadiene	(2)	9.204	225	41189	1.322
78) Quinoline	(2)	9.530	129	126222	1.234
79) Caprolactam	(2)	9.611	113	17966	1.242
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	53753	1.066
83) 4-Chloro-3-methylphenol	(2)	9.894	107	62932	1.243
85) Safrole	(2)	10.001	162	53579	1.244
86) 2-Methylnaphthalene	(2)	10.119	142	146464	1.373
87) 1-Methylnaphthalene	(2)	10.274	142	129490	1.323
88) Hexachlorocyclopentadiene	(3)	10.376	237	37419	1.167
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	71583	1.327
91) cis-Isosafrole	(3)	10.483	162	9941	0.212
93) 2,4,6-Trichlorophenol	(3)	10.584	196	41026	1.212
95) 2,4,5-Trichlorophenol	(3)	10.627	196	46179	1.299
96)$2-Fluorobiphenyl	(3)	10.739	172	329358	2.672
97) trans-Isosafrole	(3)	10.852	162	52729	1.044
98) 1,1'-Biphenyl	(3)	10.894	154	174850	1.376
99) 2-Chloronaphthalene	(3)	10.910	162	145782	1.350
101) 1-Chloronaphthalene	(3)	10.937	162	131882M	1.320
103) Diphenyl ether	(3)	11.076	170	92979	1.310
104) 2-Nitroaniline	(3)	11.092	138	38117	1.206
108) 1,4-Naphthoquinone	(3)	11.210	158	49542	1.161
109) 1,4-Dinitrobenzene	(3)	11.338	168	18246	1.086
110) Dimethylphthalate	(3)	11.424	163	157629	1.303
111) 1,3-Dinitrobenzene	(3)	11.451	168	20615	1.145
113) 2,6-Dinitrotoluene	(3)	11.504	165	31588	1.230
114) Acenaphthylene	(3)	11.574	152	198335	1.321
117) 3-Nitroaniline	(3)	11.745	138	33049	1.221
118)*Acenaphthene-d10	(3)	11.788	164	396437	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	140135	1.316
120) 2,4-Dinitrophenol	(3)	11.900	184	39202	2.538
121) 4-Nitrophenol	(3)	11.991	109	41795	2.190
122) Pentachlorobenzene	(3)	12.018	250	57166	1.300
124) Dibenzofuran	(3)	12.076	168	196118	1.326
123) 2,4-Dinitrotoluene	(3)	12.082	165	42300	1.188
126) 1-Naphthylamine	(3)	12.183	143	130295	1.238
127) 2,3,4,6-Tetrachlorophenol	(3)	12.242	232	34083	1.232
128) 2-Naphthylamine	(3)	12.290	143	132645	1.330
129) Diethylphthalate	(3)	12.424	149	151801	1.275
130) Thionazin	(3)	12.515	107	25360	1.251
131) Fluorene	(3)	12.520	166	151329	1.310
133) 5-Nitro-o-toluidine	(3)	12.542	152	38984	1.239
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	77457	1.353
134) 4-Nitroaniline	(3)	12.547	138	35082	1.282
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	42223	2.065
136) N-Nitrosodiphenylamine	(4)	12.686	169	124158	1.313
137) NDPA as diphenylamine	(4)	12.686	169	124158	1.313
139) 1,2-Diphenylhydrazine	(4)	12.734	77	174399	1.322
140)$2,4,6-Tribromophenol	(3)	12.820	330	34436	2.513
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	29747M	1.326
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	13223	1.050
145) Diallate (peak 1)	(4)	13.061	86	63739	1.067
146) Phorate	(4)	13.071	75	108609	1.284
147) Phenacetin	(4)	13.087	108	74841	1.253
148) 4-Bromophenyl-phenylether	(4)	13.152	248	43367	1.373
149) Diallate (peak 2)	(4)	13.173	86	9857M	0.208
150) Hexachlorobenzene	(4)	13.200	284	43261	1.334
152) Dimethoate	(4)	13.275	87	58729	1.154
153) Atrazine	(4)	13.376	200	43456	1.359
154) Pentachlorophenol	(4)	13.462	266	21869	1.101
156) Pentachloronitrobenzene	(4)	13.478	237	18238	1.178
155) 4-Aminobiphenyl	(4)	13.483	169	139727	1.298
157) Pronamide	(4)	13.574	173	65695	1.232
158)*Phenanthrene-d10	(4)	13.713	188	772431	5.000
159) Dinoseb	(4)	13.724	211	32130	1.004
160) Phenanthrene	(4)	13.745	178	226892	1.332
162) Anthracene	(4)	13.815	178	227274	1.331
168) Carbazole	(4)	14.039	167	192011	1.270
169) Methyl parathion	(4)	14.243	109	41665	1.074

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on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.553	149	239209	1.175
172) Parathion	(4)	14.804	109	25843	1.029
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	16127	0.800
227) Total PAHs	(6)			3679438	23.617
174) Octachlorostyrene	(4)	15.157	308	15870	1.308
176) Isodrin	(4)	15.221	193	28283	1.340
178) Fluoranthene	(4)	15.446	202	247085	1.290
179) Benzidine	(5)	15.681	184	393183	3.330
180)*Pyrene-d10	(5)	15.772	212	801267	5.000
182) Pyrene	(5)	15.799	202	267607	1.313
184)$Terphenyl-d14	(5)	16.088	244	339478	2.642
187) p-Dimethylaminoazobenzene	(5)	16.323	225	34249	1.101
190) Chlorobenzilate	(5)	16.414	139	72078	1.187
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	130271	1.014
193) Butylbenzylphthalate	(5)	16.954	149	108162	1.142
196) 2-Acetylaminofluorene	(5)	17.323	181	76800	1.025
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	72729	1.110
200) Benzo(a)anthracene	(5)	17.858	228	235153	1.291
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.874	231	41420	1.041
201) Chrysene	(5)	17.922	228	233997	1.328
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	150085	1.122
208) 6-Methylchrysene	(5)	18.741	242	151769	1.224
210) Di-n-octylphthalate	(6)	19.212	149	241010	1.054
211) Benzo(b)fluoranthene	(6)	19.741	252	231955	1.301
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	85700	1.165
213) Benzo(k)fluoranthene	(6)	19.789	252	230033M	1.340
216) Benzo(a)pyrene	(6)	20.281	252	207318	1.292
218)*Perylene-d12	(6)	20.378	264	727312	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	93704	1.201
222) Dibenz(a,h)acridine	(6)	21.683	279	166856	1.224
223) Dibenz(a,j)acridine	(6)	21.757	279	165710	1.196
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	187482M	1.230
225) Dibenz(a,h)anthracene	(6)	22.062	278	201907	1.304
226) Benzo(g,h,i)perylene	(6)	22.442	276	199159	1.265

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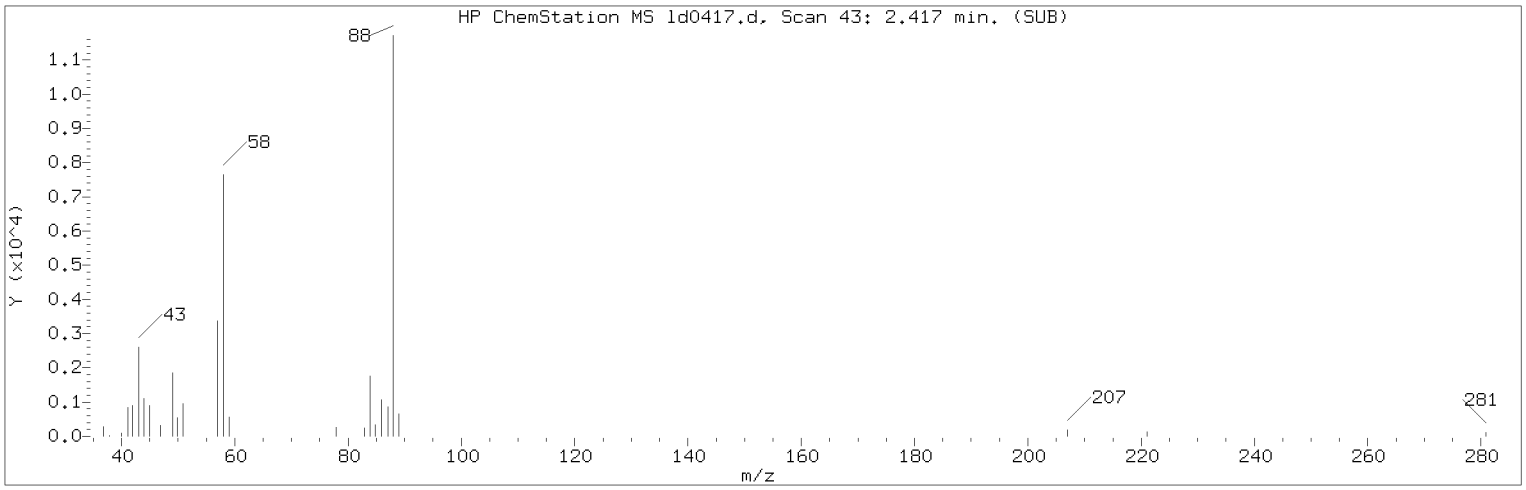
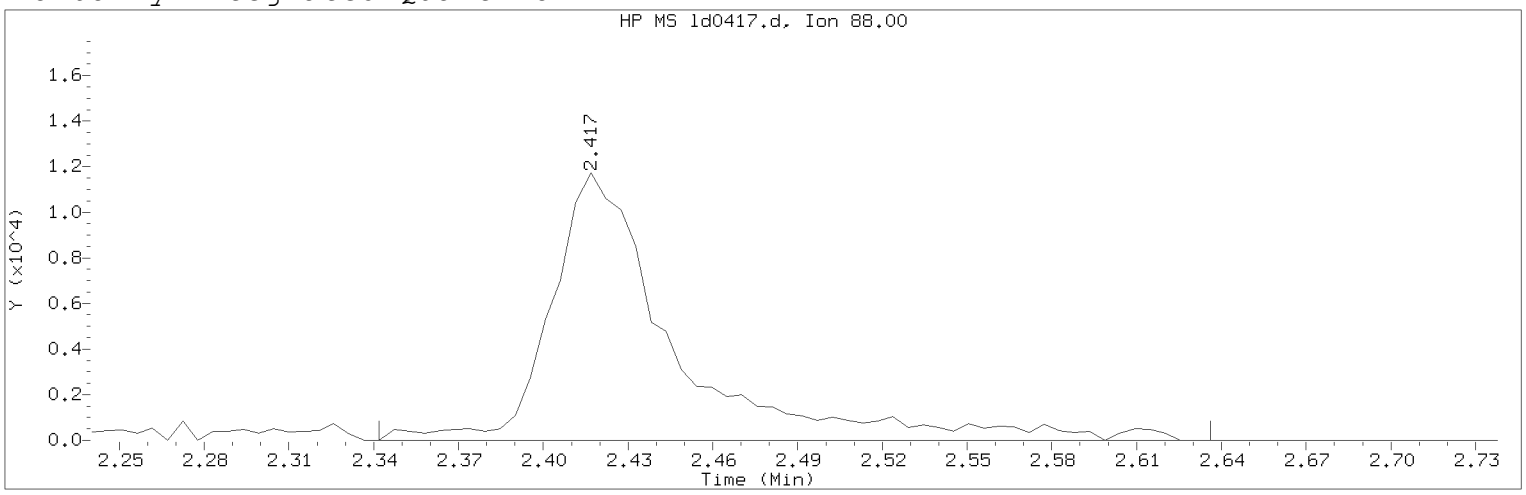
Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

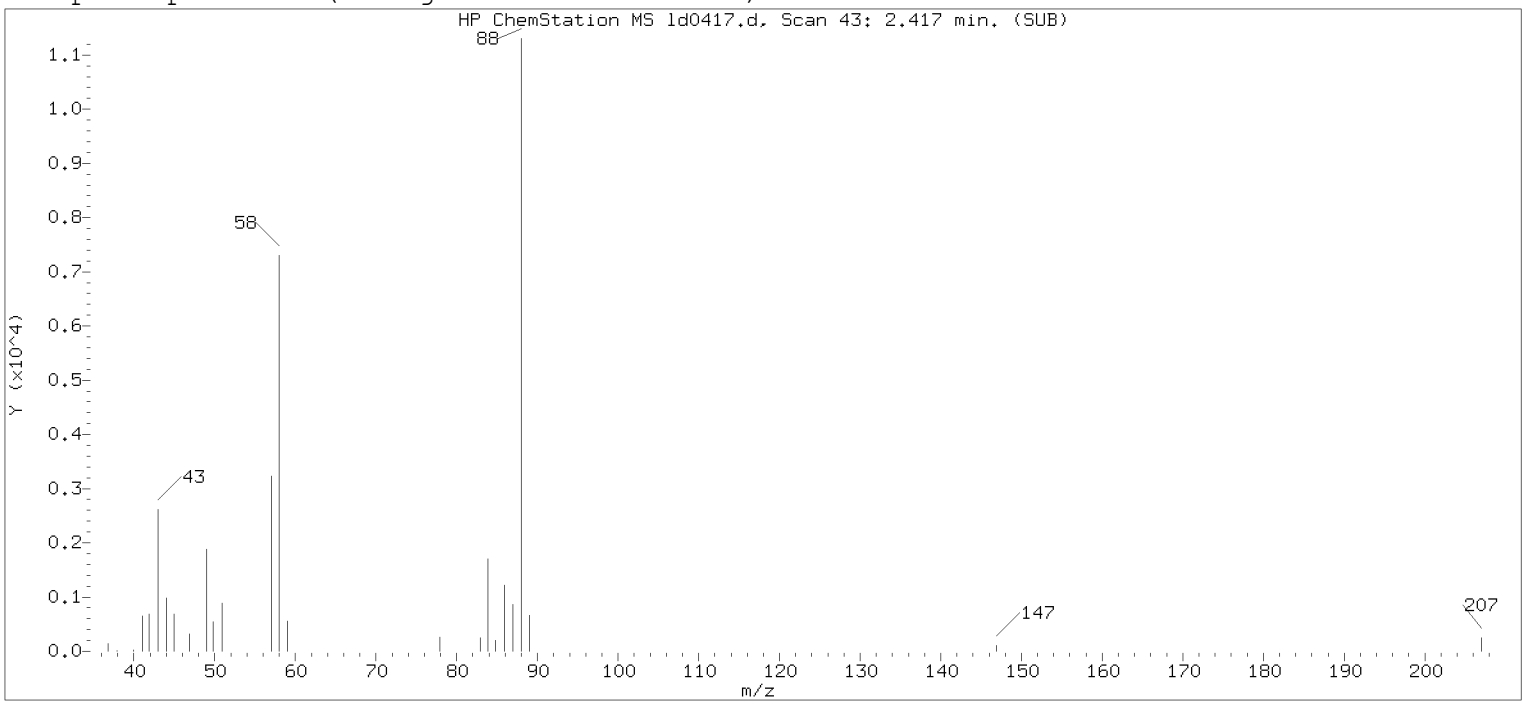
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 43
Retention Time (minutes) : 2.417
Quant Ion : 88.00
Area (flag) : 35833M
On-Column Amount (ng/ul) : 1.3594
Integration start scan : 28 Integration stop scan: 83
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

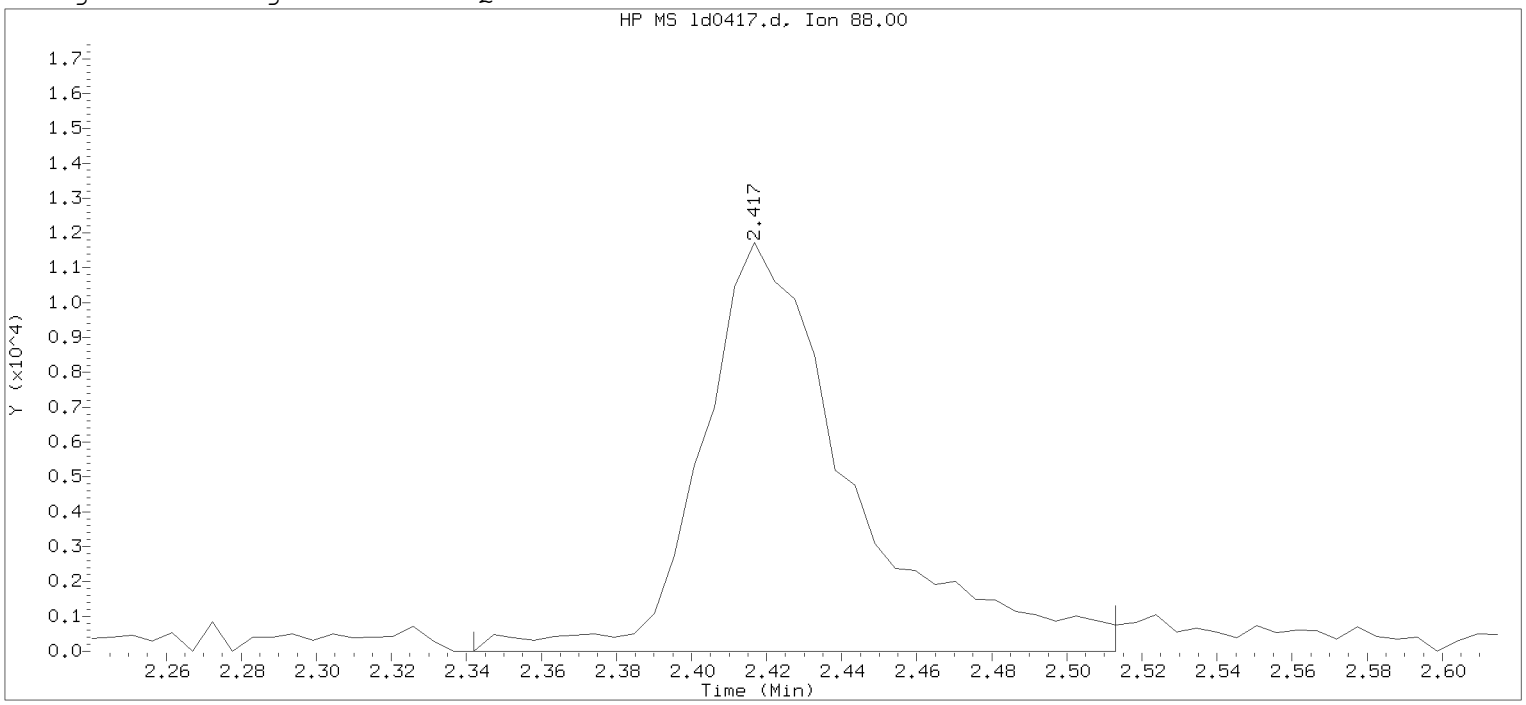
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

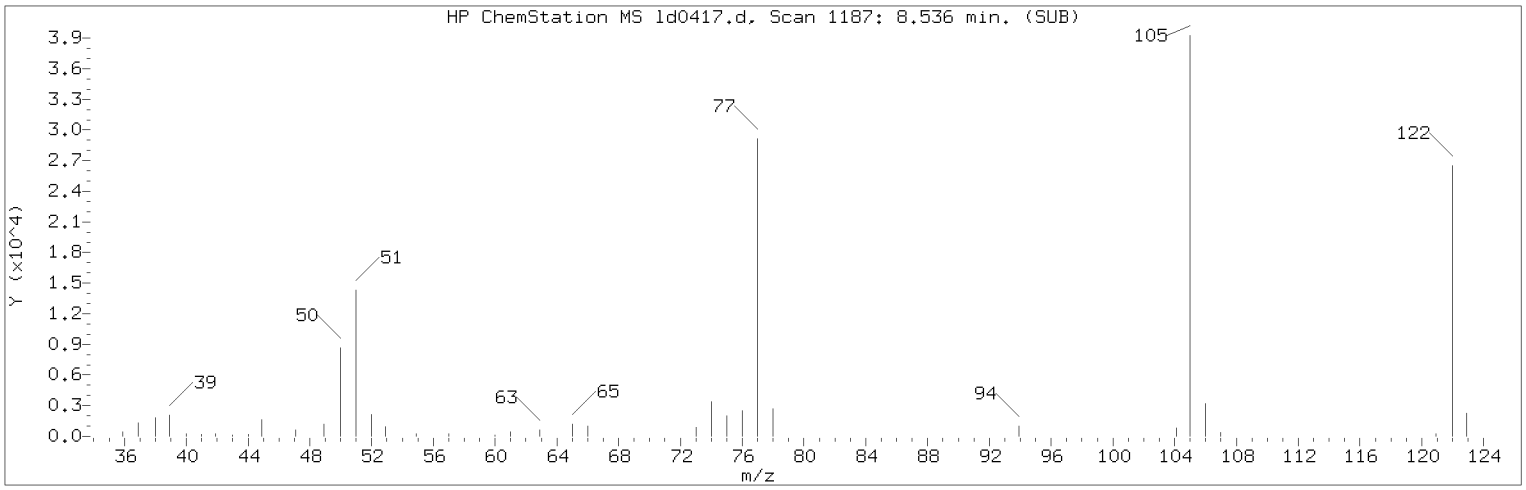
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

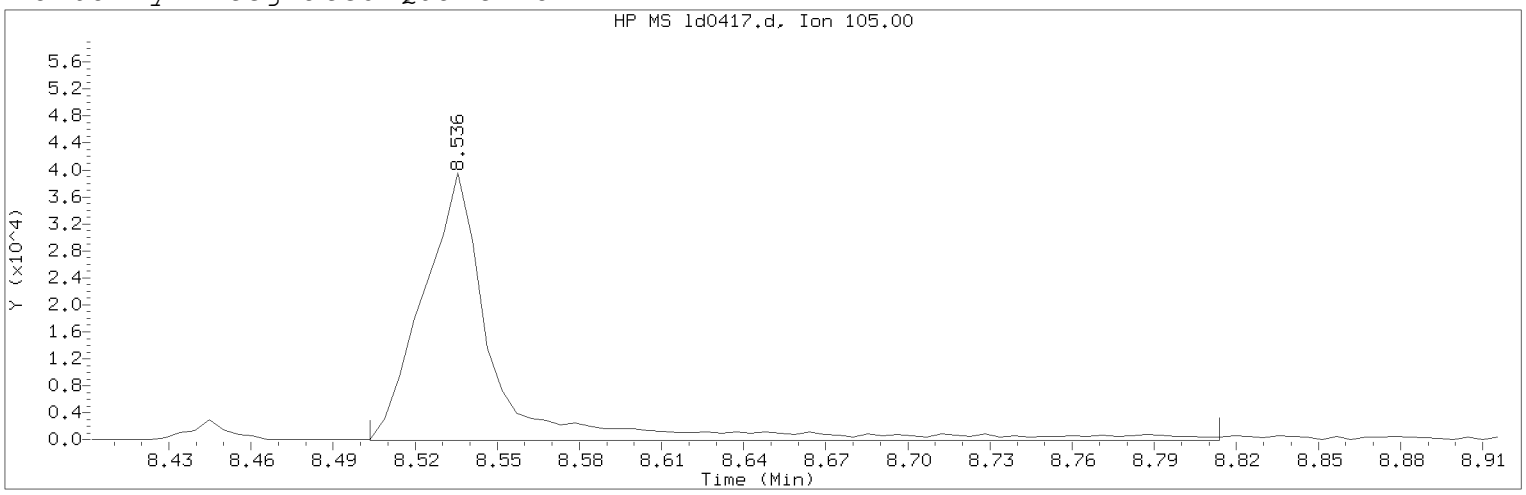
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 43		
Retention Time (minutes)	: 2.417		
Quant Ion	: 88.00		
Area	: 32404		
On-column Amount (ng/ul)	: 1.2453		
Integration start scan	: 28	Integration stop scan:	60
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: 1751

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

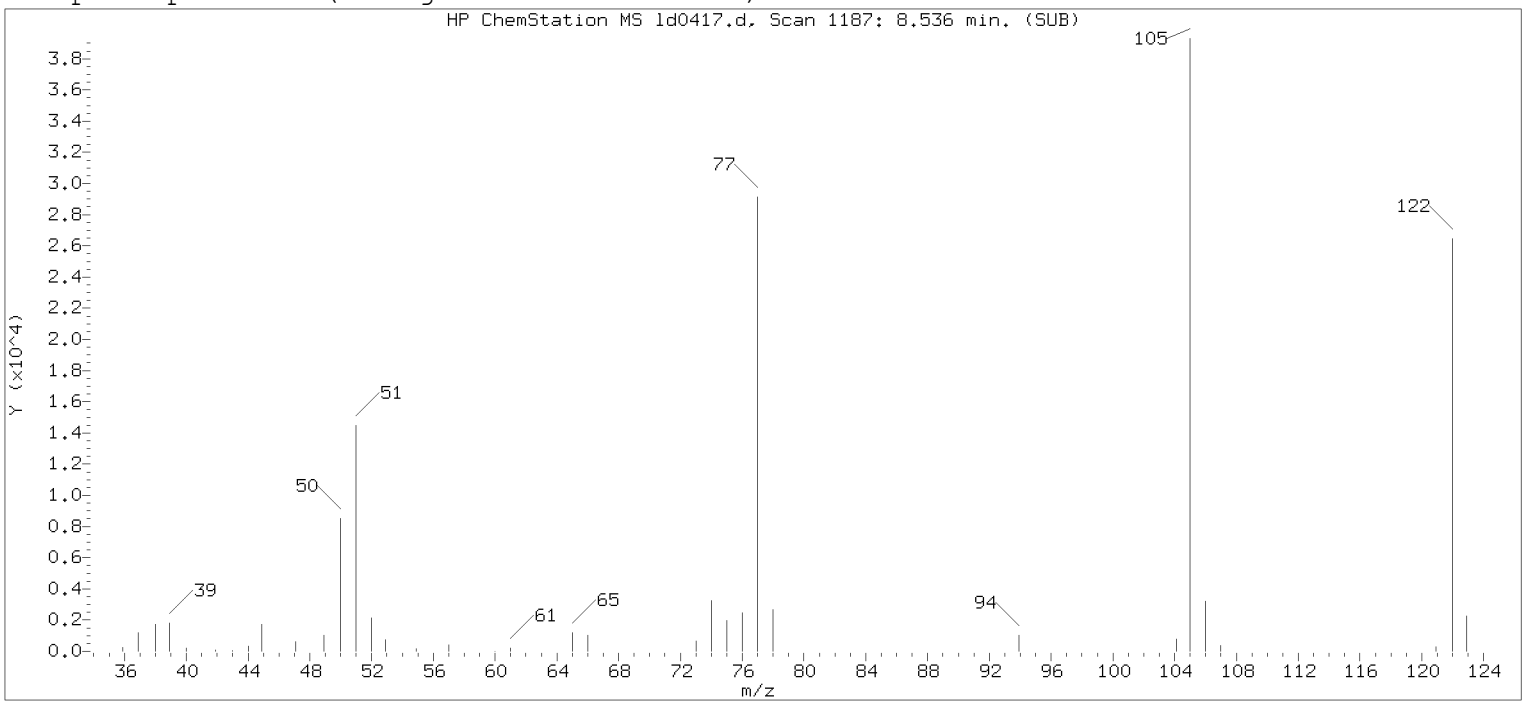
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1187
Retention Time (minutes) : 8.536
Quant Ion : 105.00
Area (flag) : 73947M
On-Column Amount (ng/ul) : 4.2984
Integration start scan : 1180 Integration stop scan: 1238
Y at integration start : -62 Y at integration end: -62

Reason for manual integration: improper integration

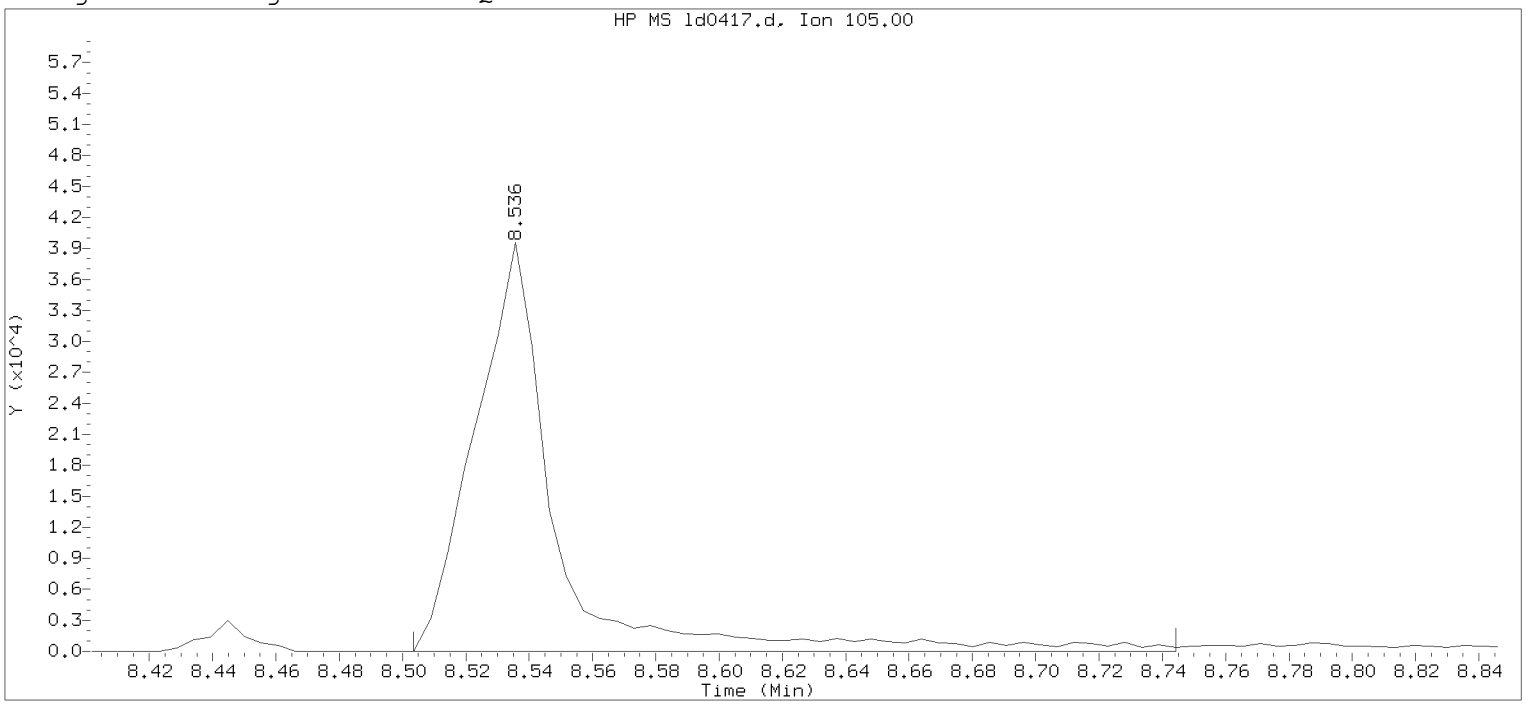
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1187		
Retention Time (minutes)	: 8.536		
Quant Ion	: 105.00		
Area	: 70404		
On-column Amount (ng/ul)	: 4.6564		
Integration start scan	: 1180	Integration stop scan:	1225
Y at integration start	: 0	Y at integration end:	0

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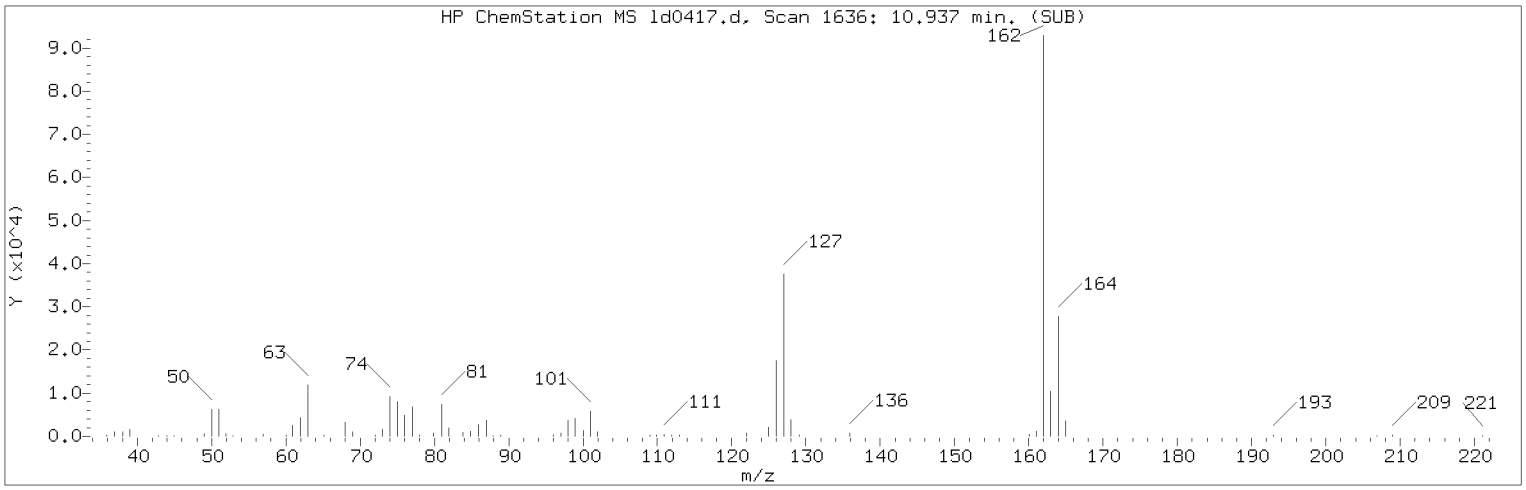
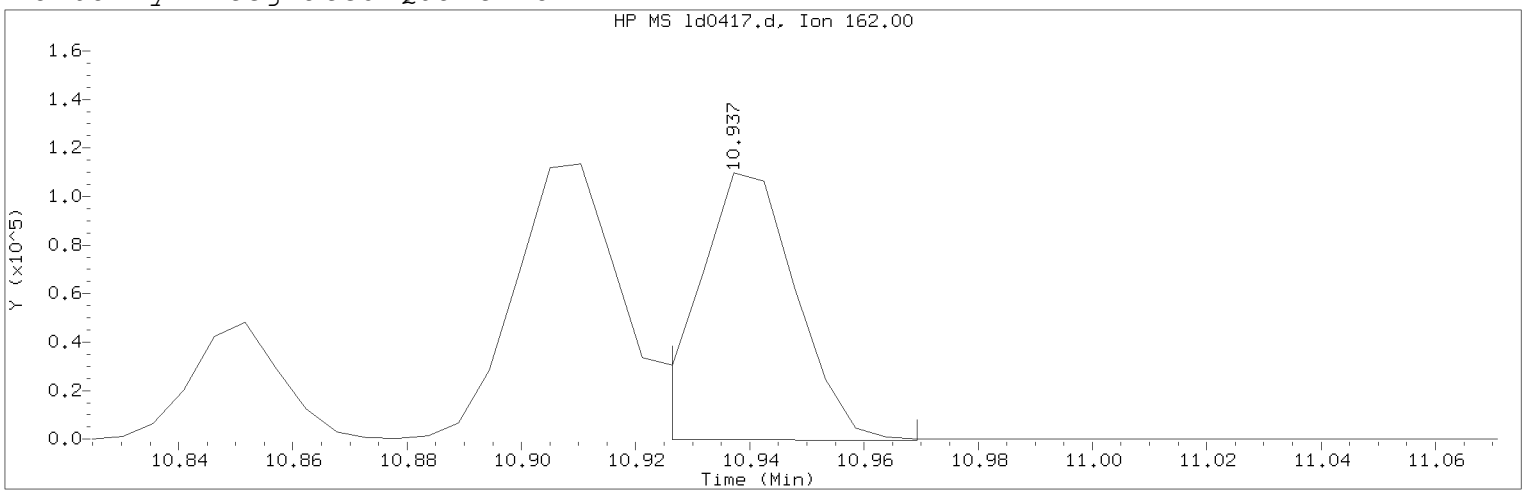
Target 3.5 esignature user ID: 1753

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

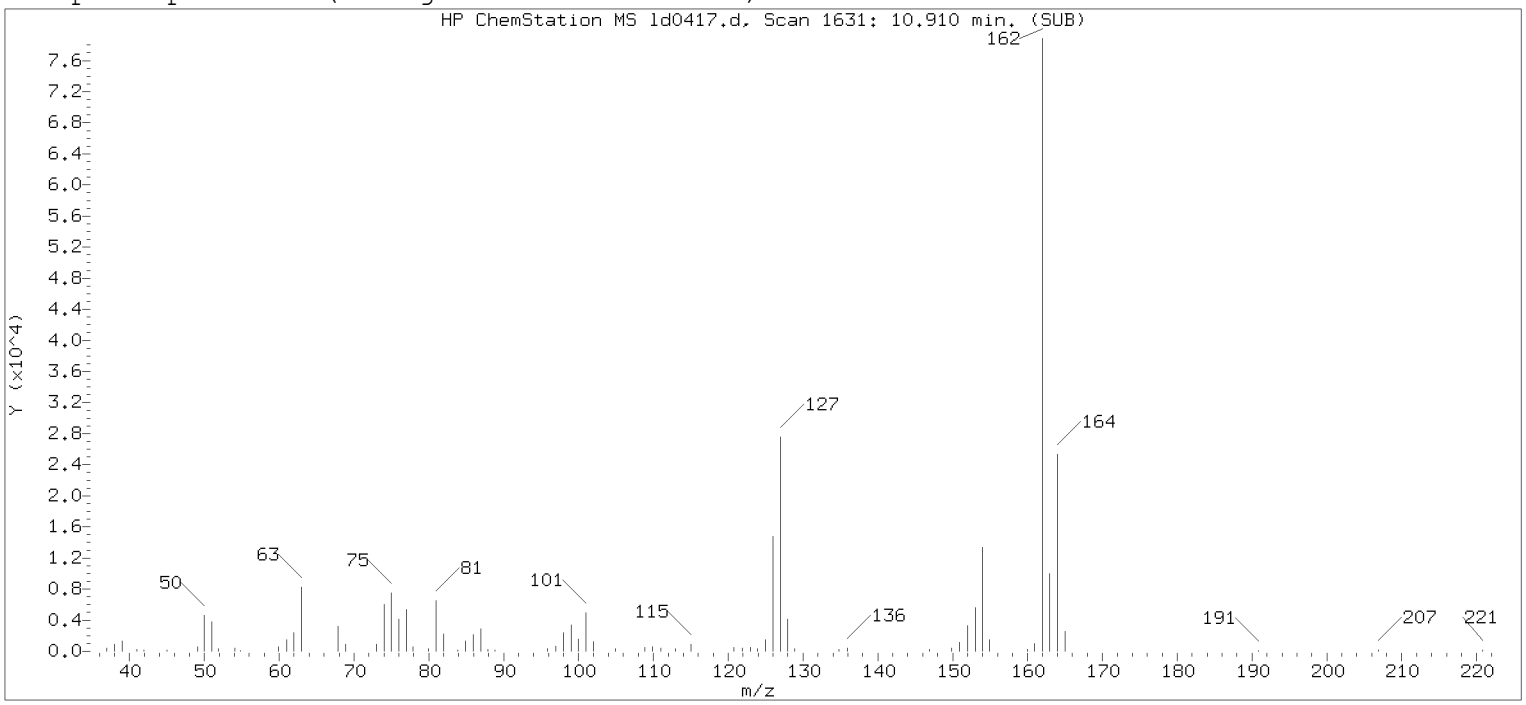
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 131882M
On-Column Amount (ng/ul) : 1.3199
Integration start scan : 1633 Integration stop scan: 1641
Y at integration start : -283 Y at integration end: -441

Reason for manual integration: improper integration

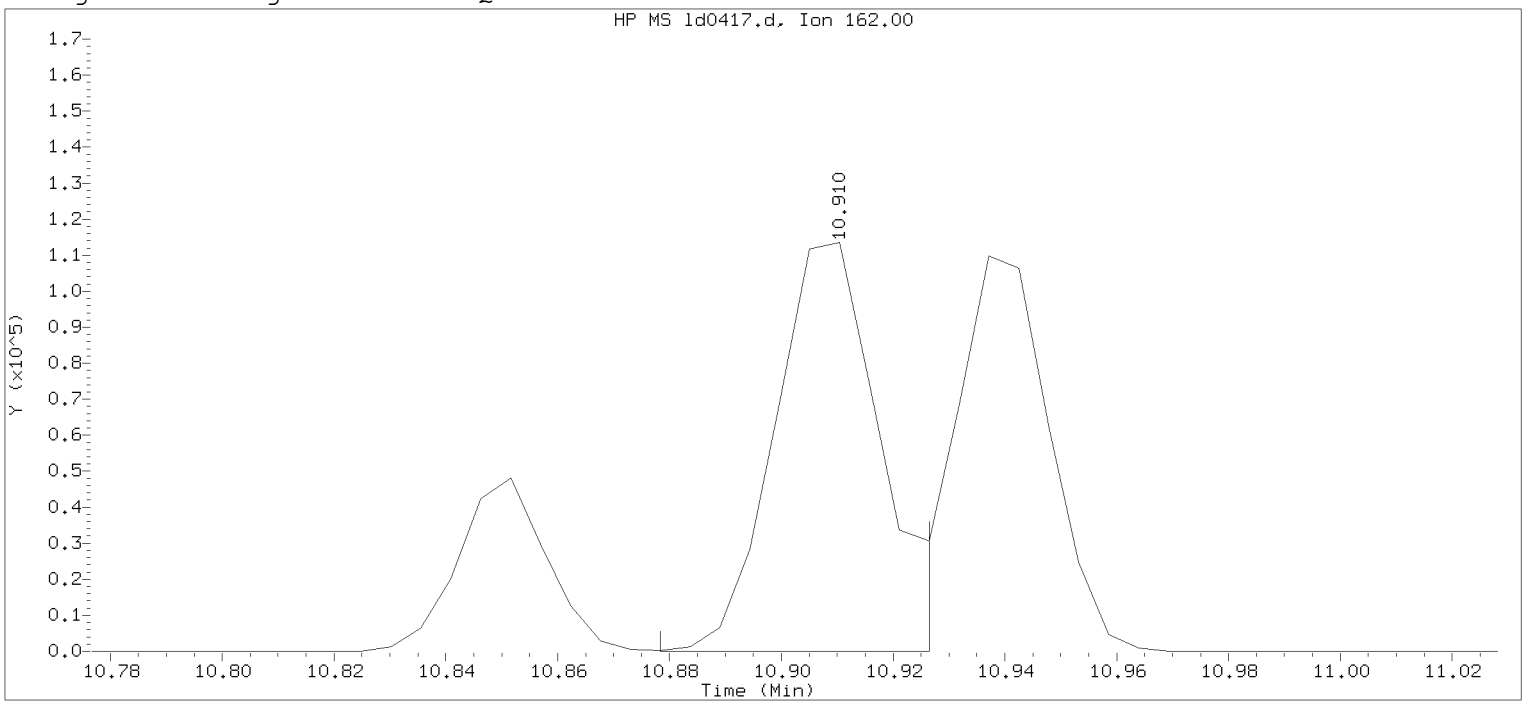
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

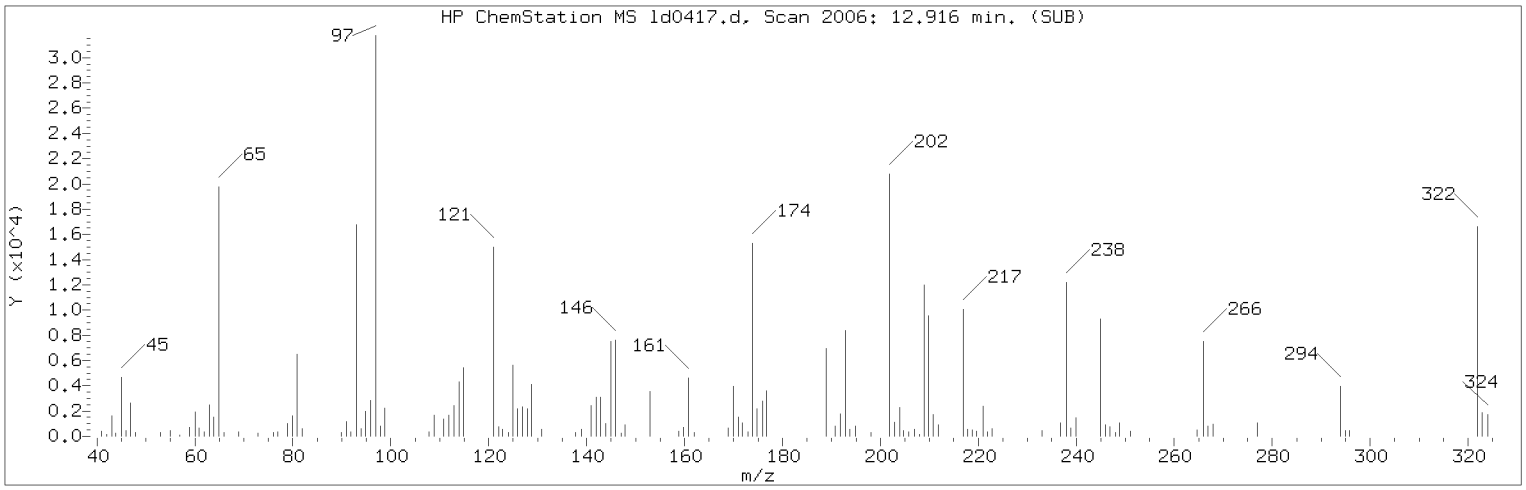
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

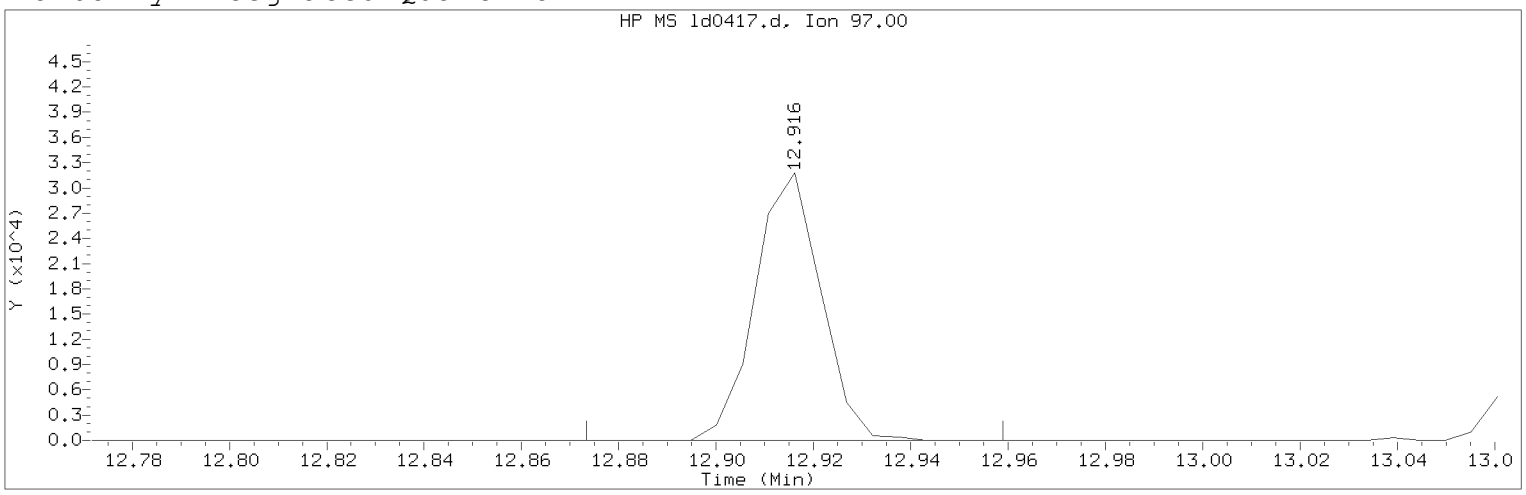
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1631		
Retention Time (minutes)	: 10.910		
Quant Ion	: 162.00		
Area	: 145782		
On-column Amount (ng/ul)	: 1.4592		
Integration start scan	: 1624	Integration stop scan:	1633
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: Page 1755

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

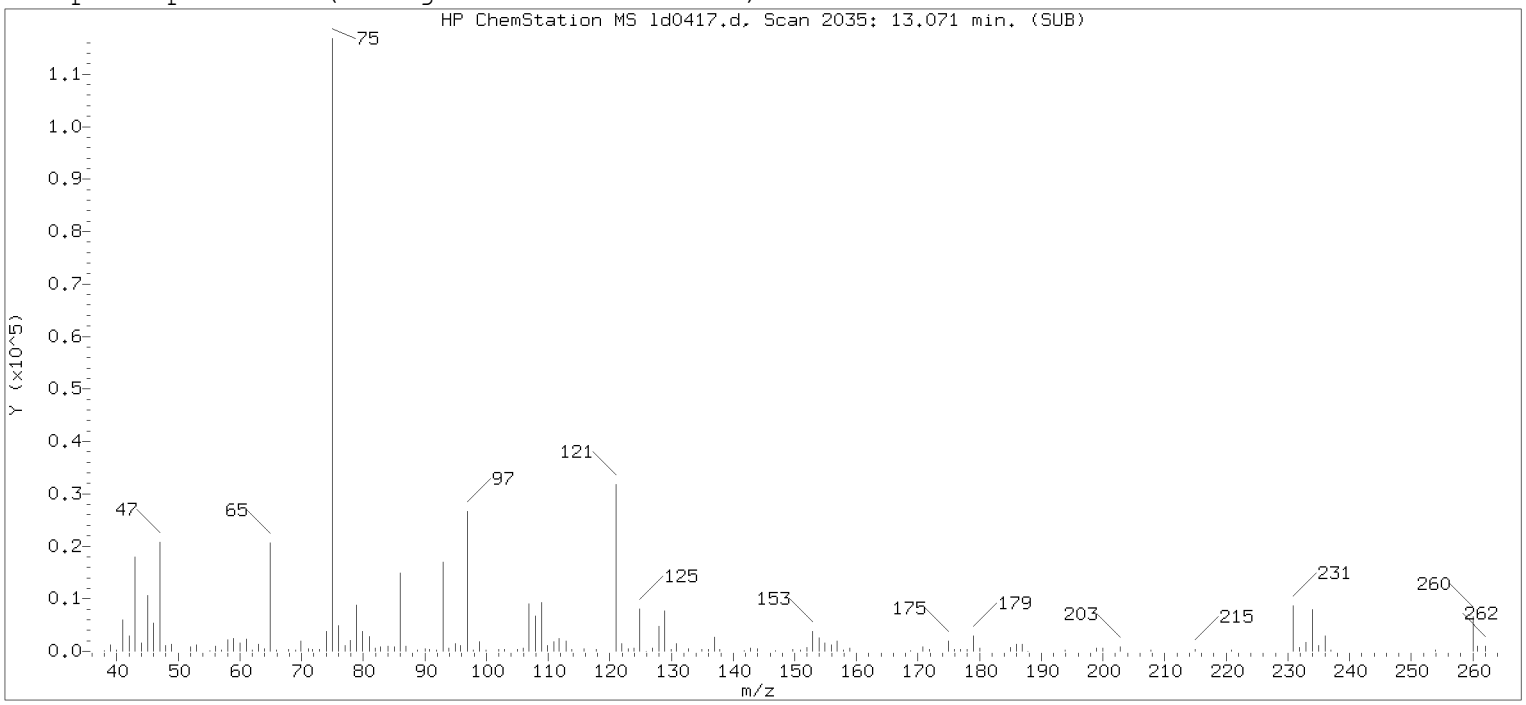
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 29747M
On-Column Amount (ng/ul) : 1.3260
Integration start scan : 1997 Integration stop scan: 2013
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

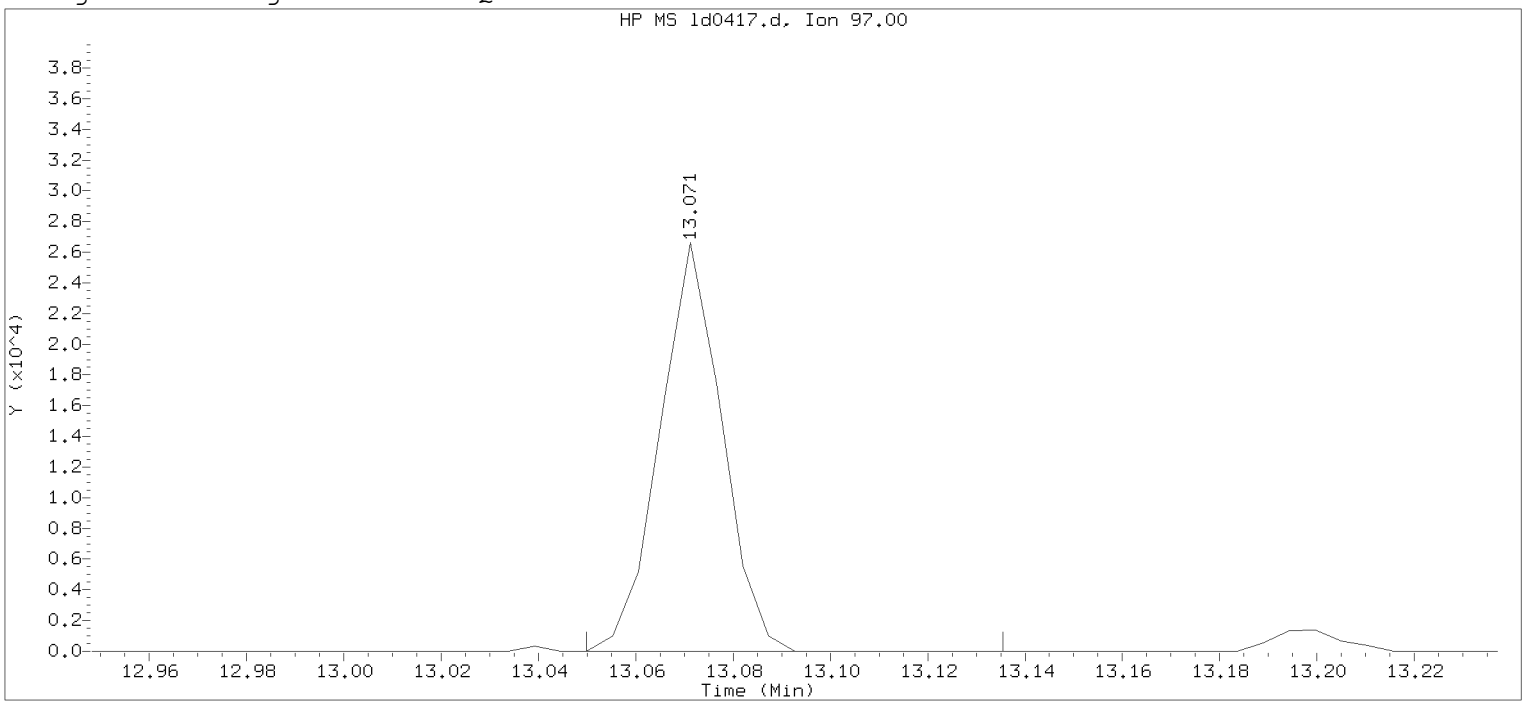
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

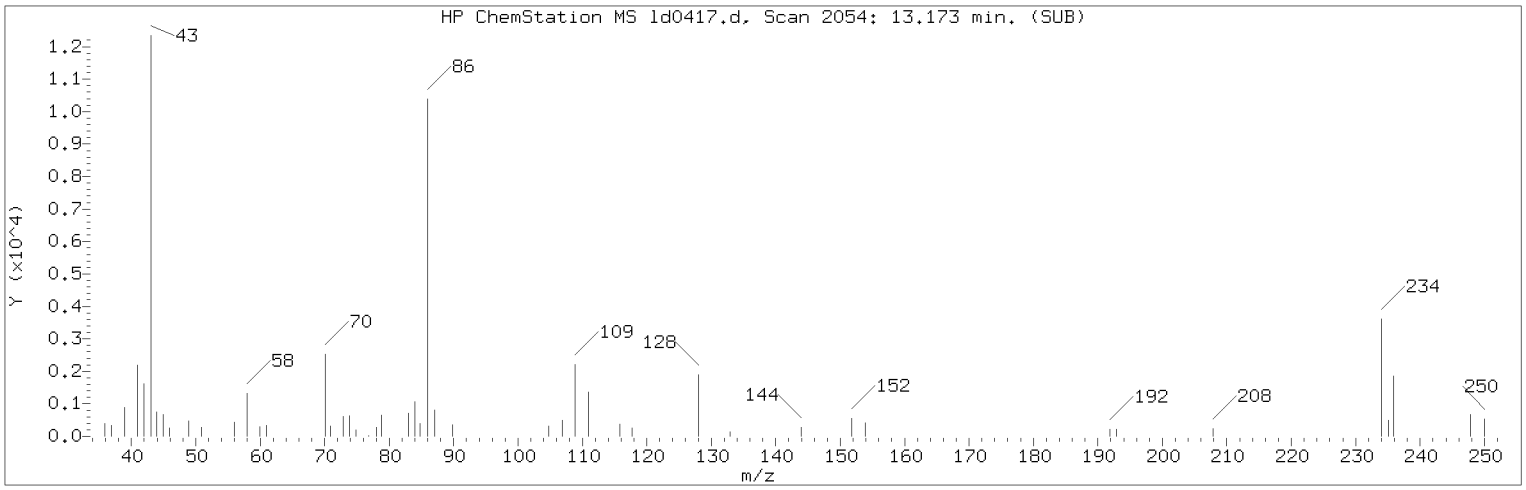
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

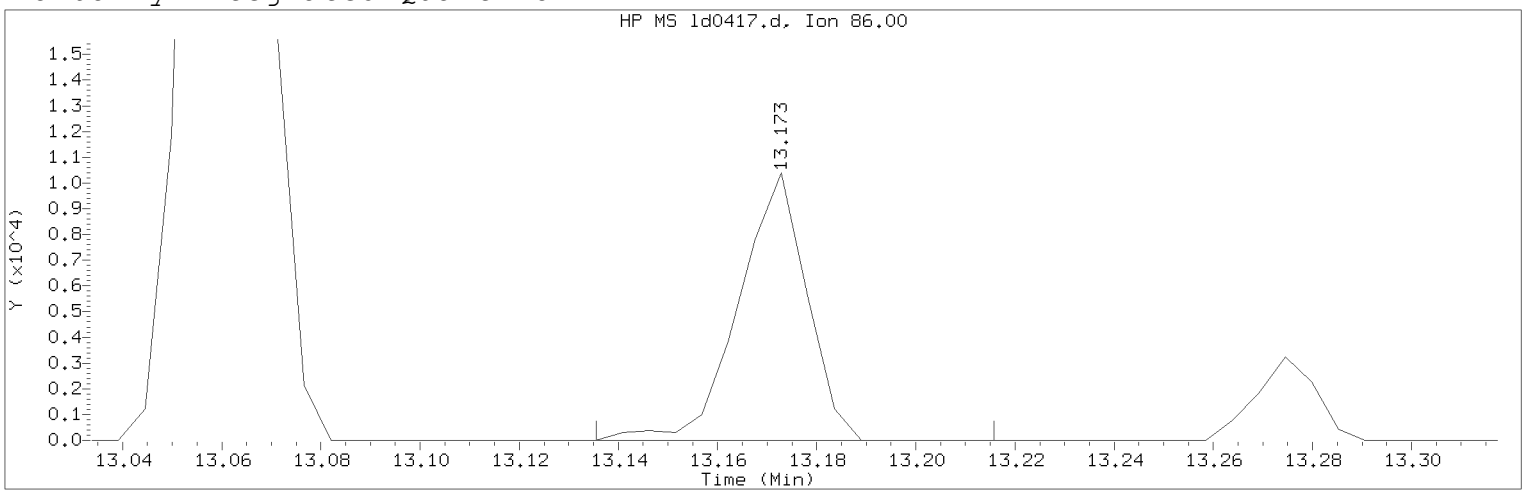
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 23553		
On-column Amount (ng/ul)	: 1.0002		
Integration start scan	: 2030	Integration stop scan:	2046
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1757

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

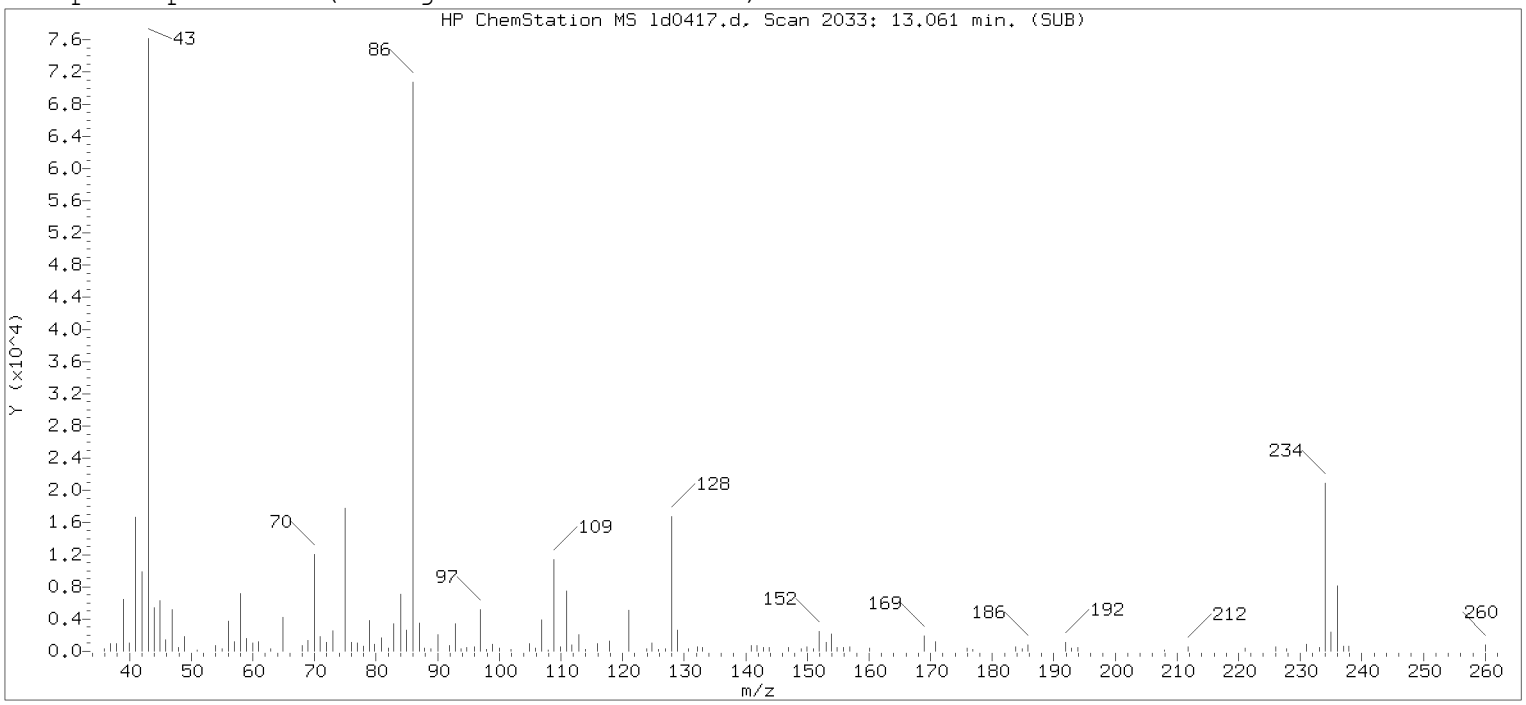
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 9857M
On-Column Amount (ng/ul) : 0.2083
Integration start scan : 2046 Integration stop scan: 2061
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

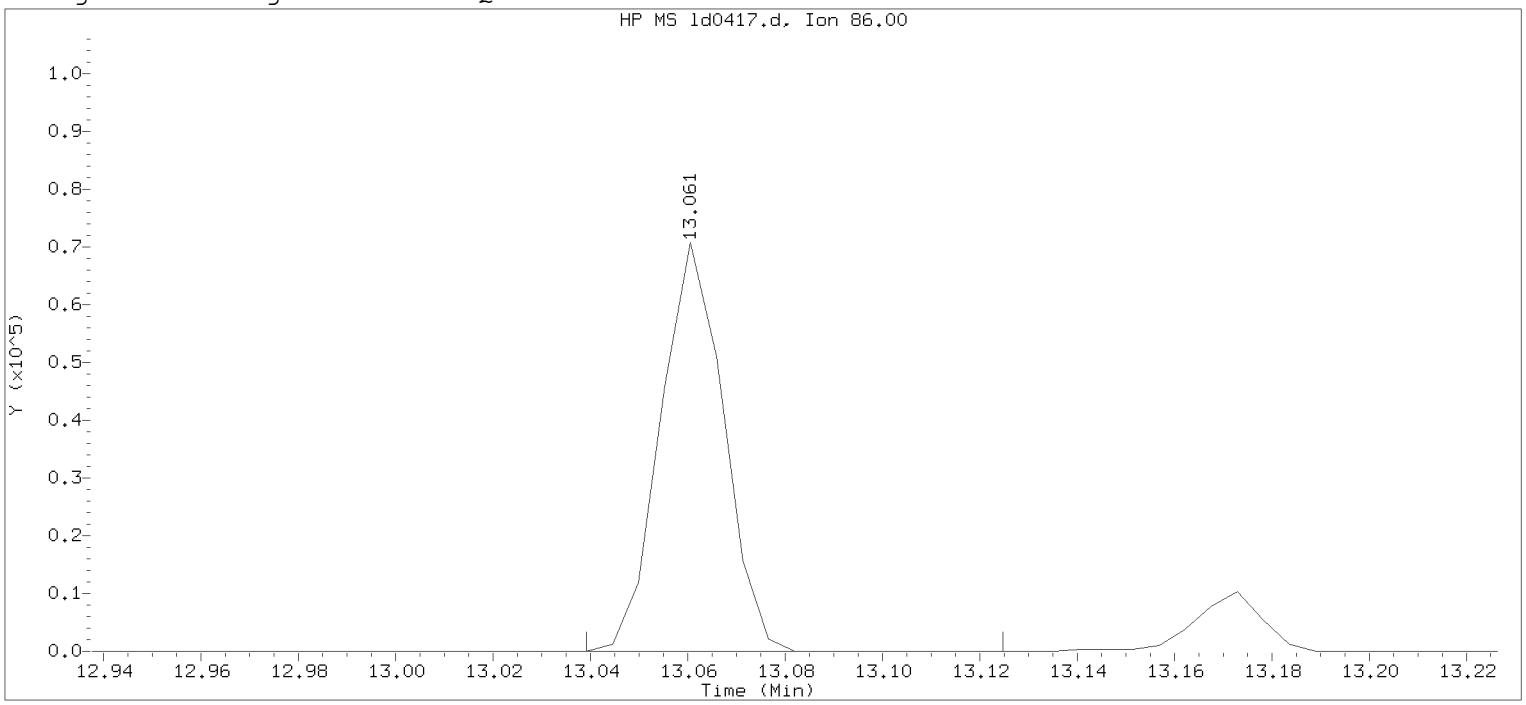
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 63739		
On-column Amount (ng/ul)	: 1.2874		
Integration start scan	: 2028	Integration stop scan:	2044
Y at integration start	: 0	Y at integration end:	0

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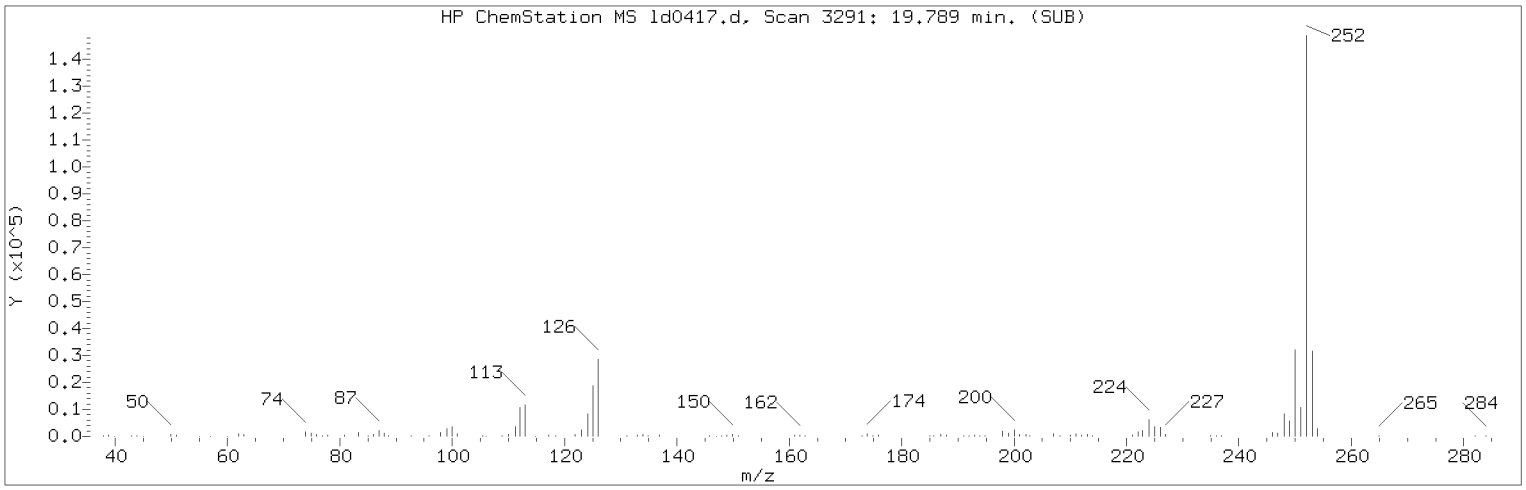
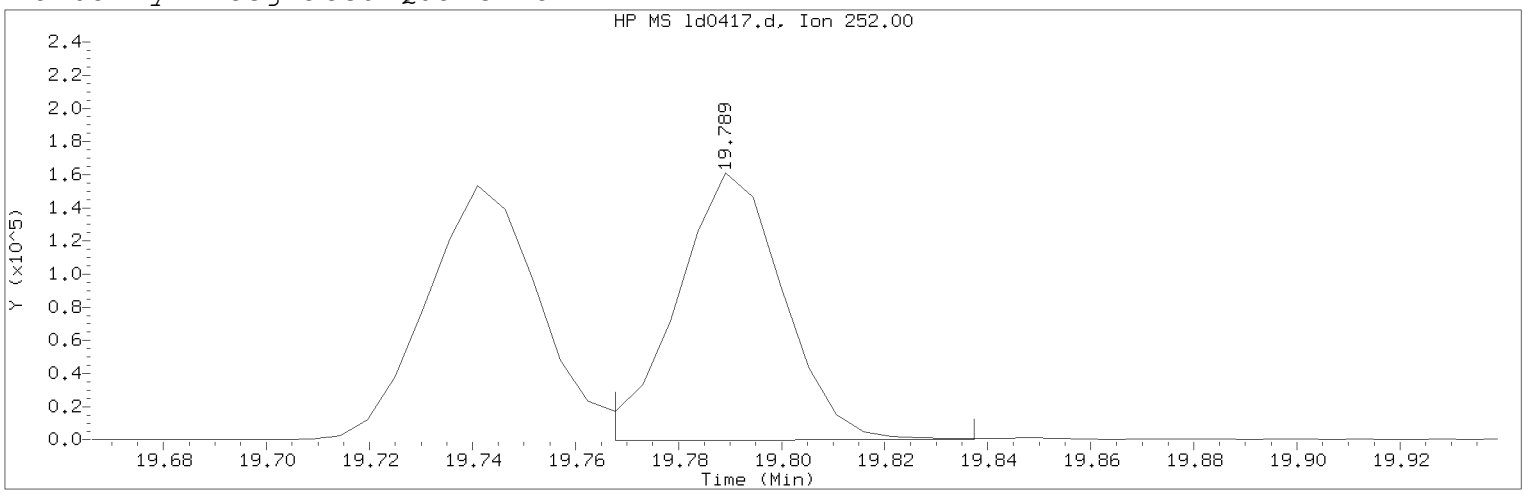
Target 3.5 esignature used. FD6 Page 1759

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

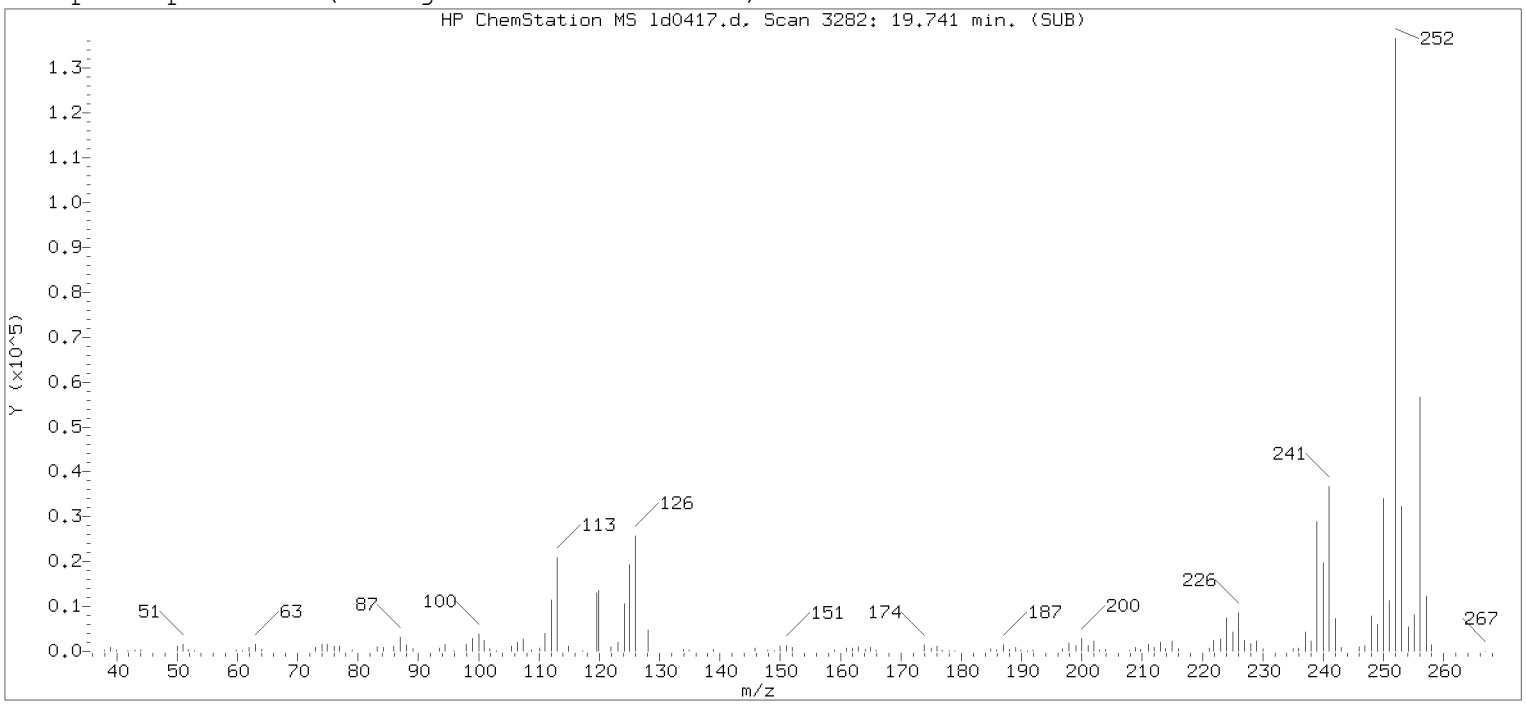
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 230033M
On-Column Amount (ng/ul) : 1.3397
Integration start scan : 3286 Integration stop scan: 3299
Y at integration start : -248 Y at integration end: 229

Reason for manual integration: improper integration

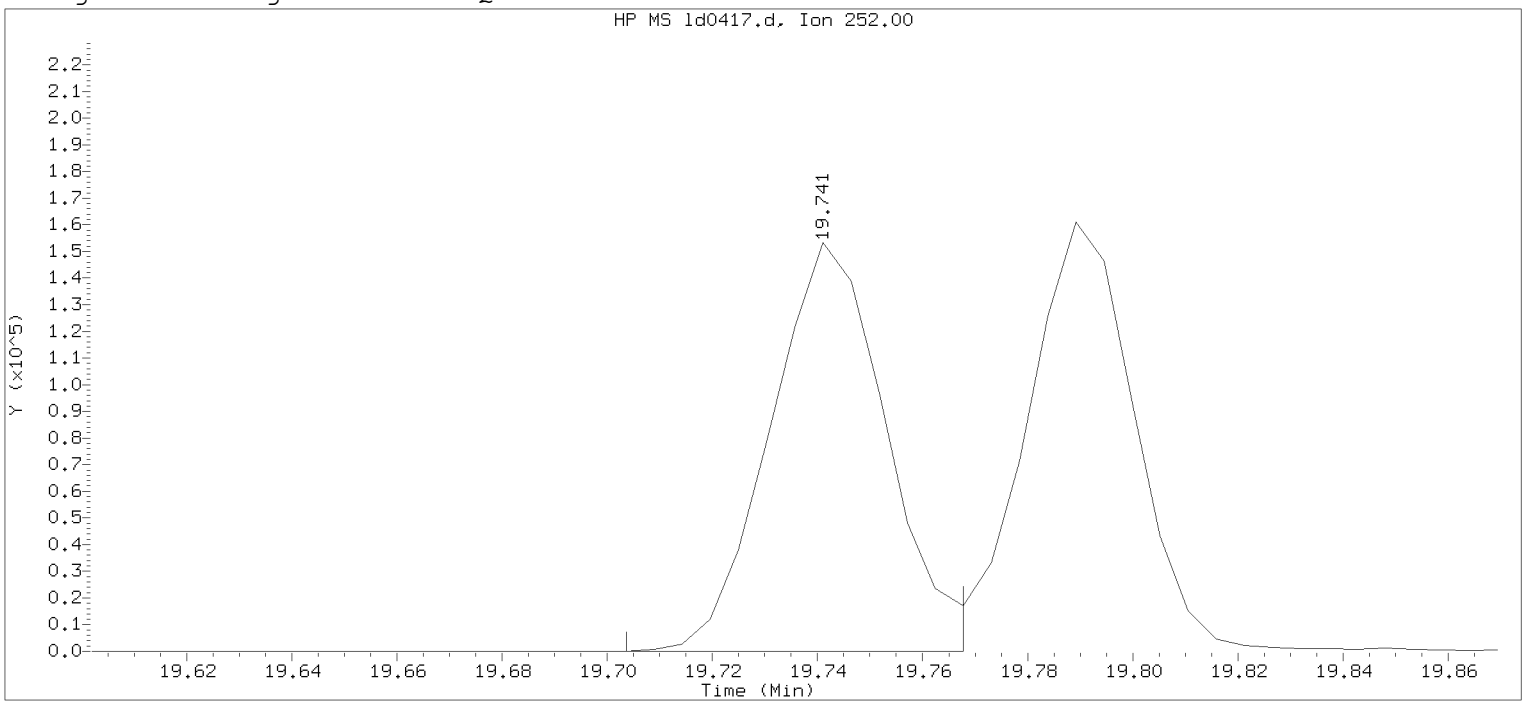
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 231955		
On-column Amount (ng/ul)	: 1.2982		
Integration start scan	: 3274	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

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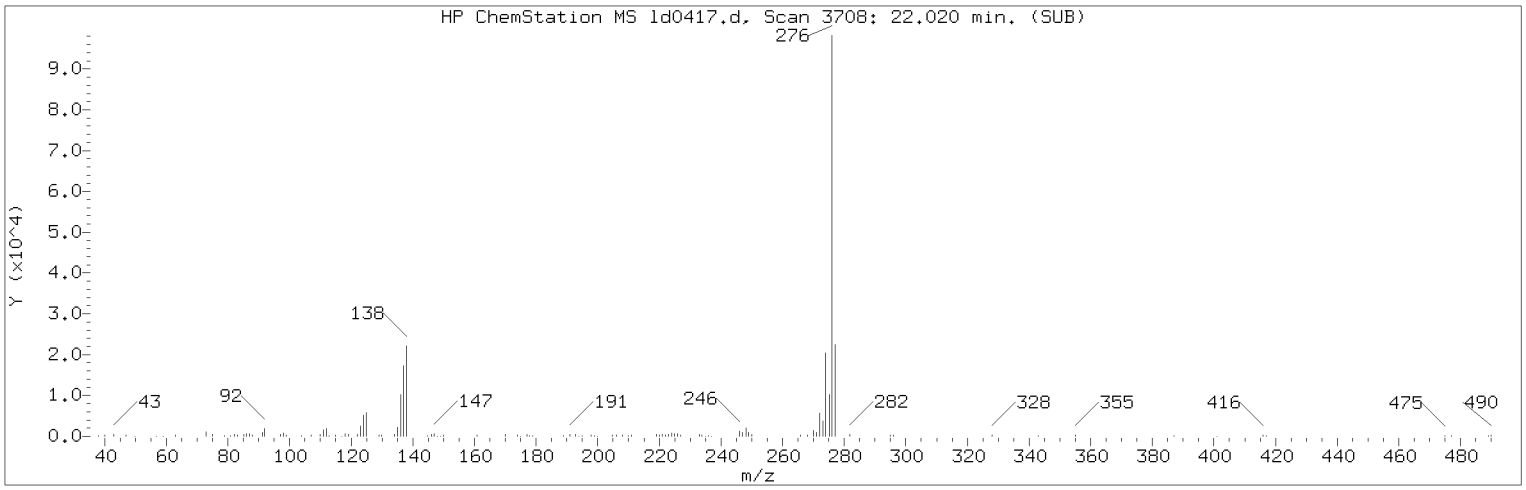
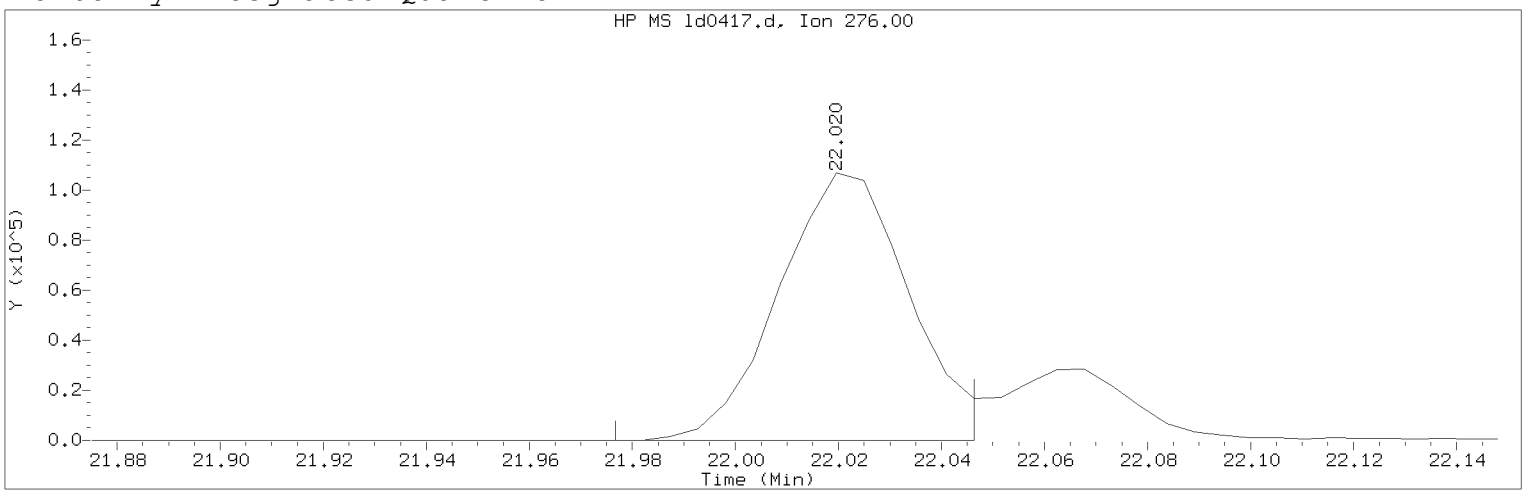
Target 3.5 esignature used. FID Page 1761

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

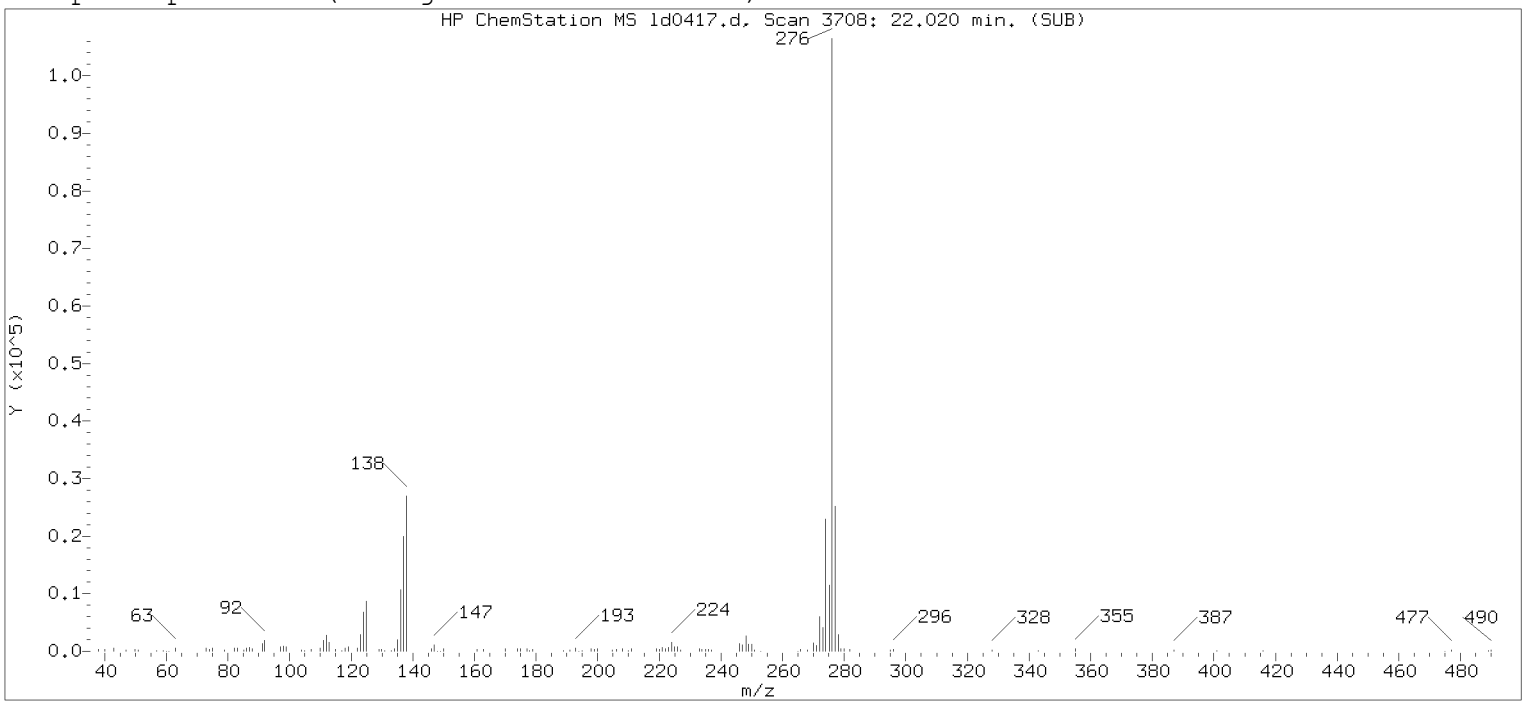
Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3708		
Retention Time (minutes)	: 22.020		
Quant Ion	: 276.00		
Area (flag)	: 187482M		
On-Column Amount (ng/ul)	: 1.2305		
Integration start scan	: 3699	Integration stop scan:	3712
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

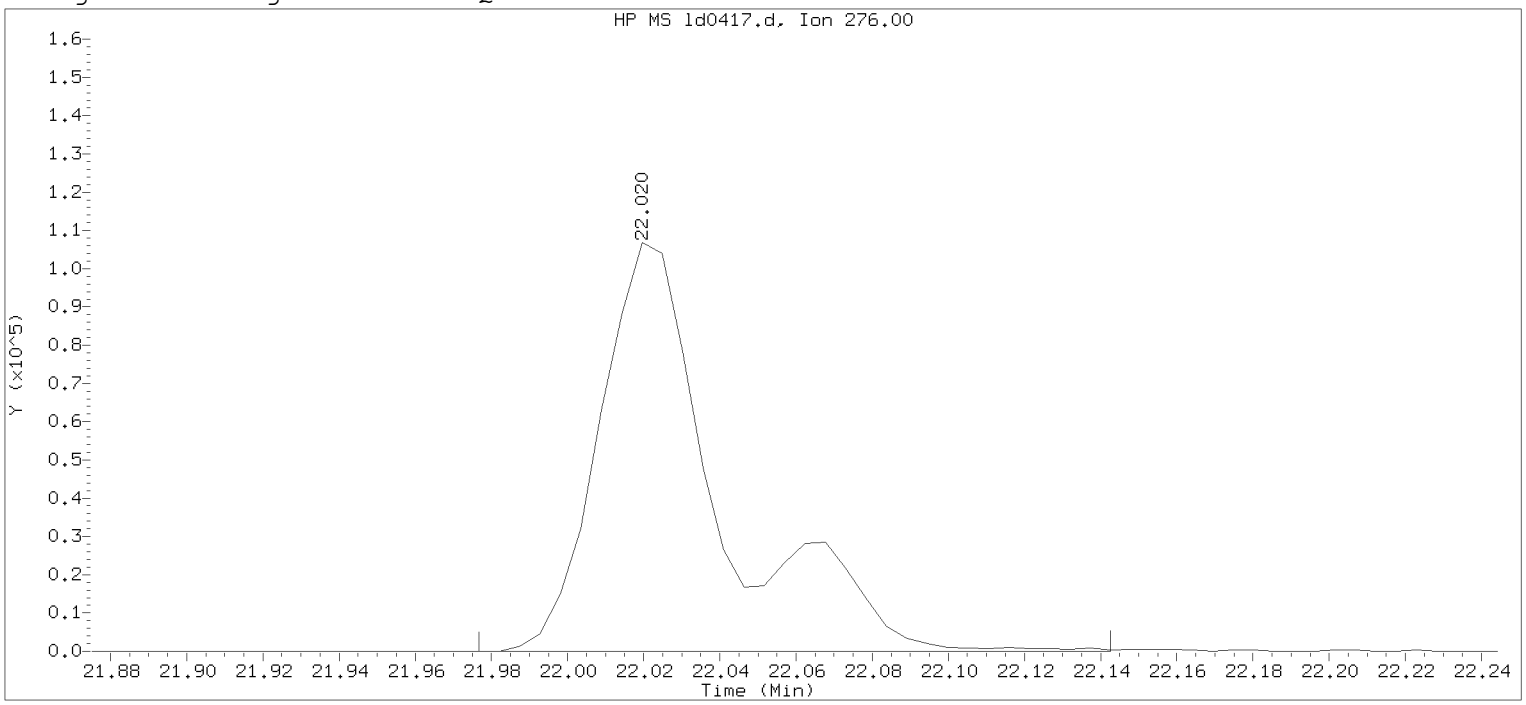
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0417.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 11:52 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:18
Date, time and analyst ID of latest file update: 11-Apr-2018 12:18 Unknown

Sample Name: SSTD1.25 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3708		
Retention Time (minutes)	: 22.020		
Quant Ion	: 276.00		
Area	: 235976		
On-column Amount (ng/ul)	: 1.4677		
Integration start scan	: 3699	Integration stop scan:	3730
Y at integration start	: 0	Y at integration end:	0

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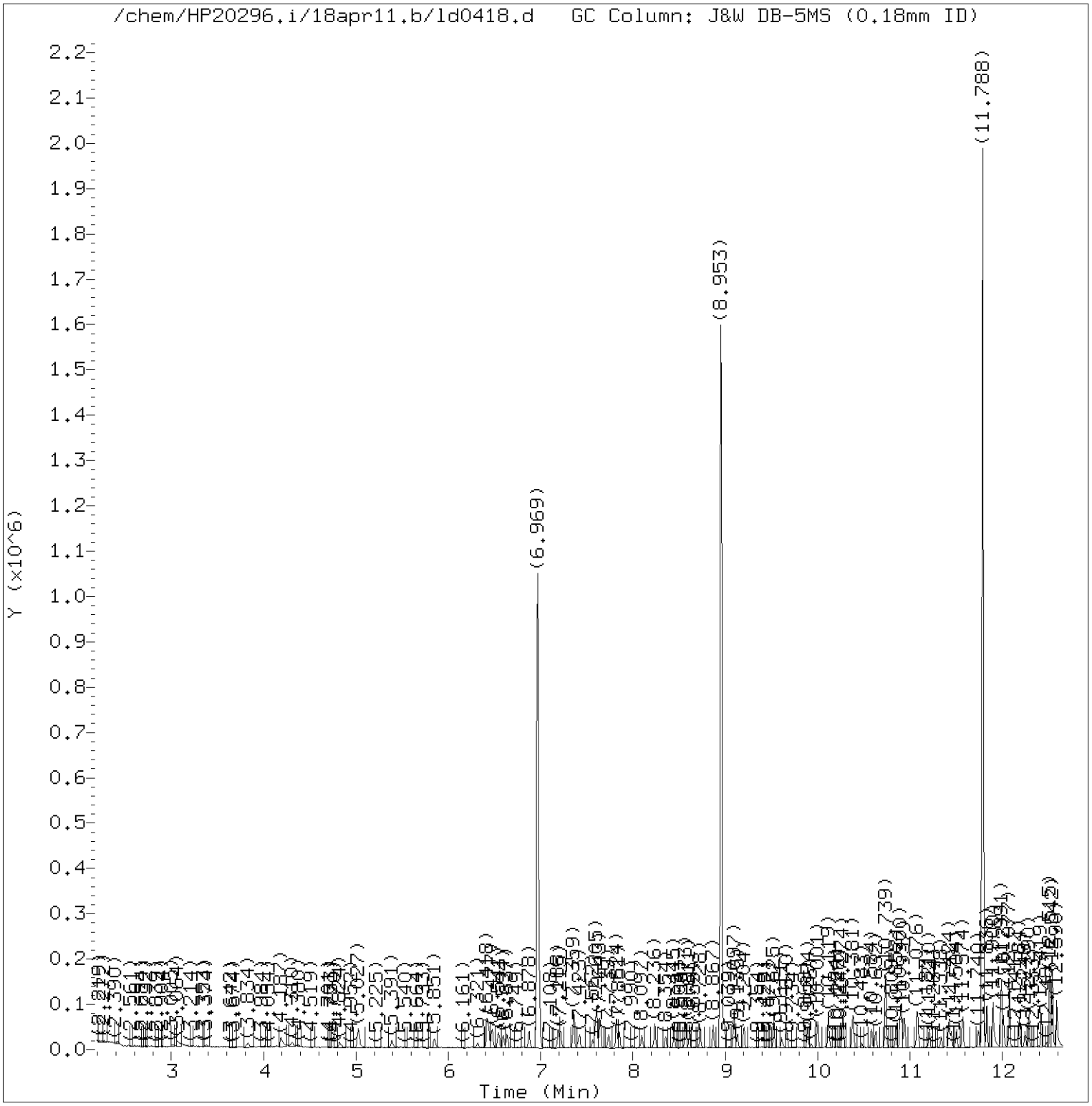
Target 3.5 esignature user ID: 1763



Total Ion Chromatogram (TIC)

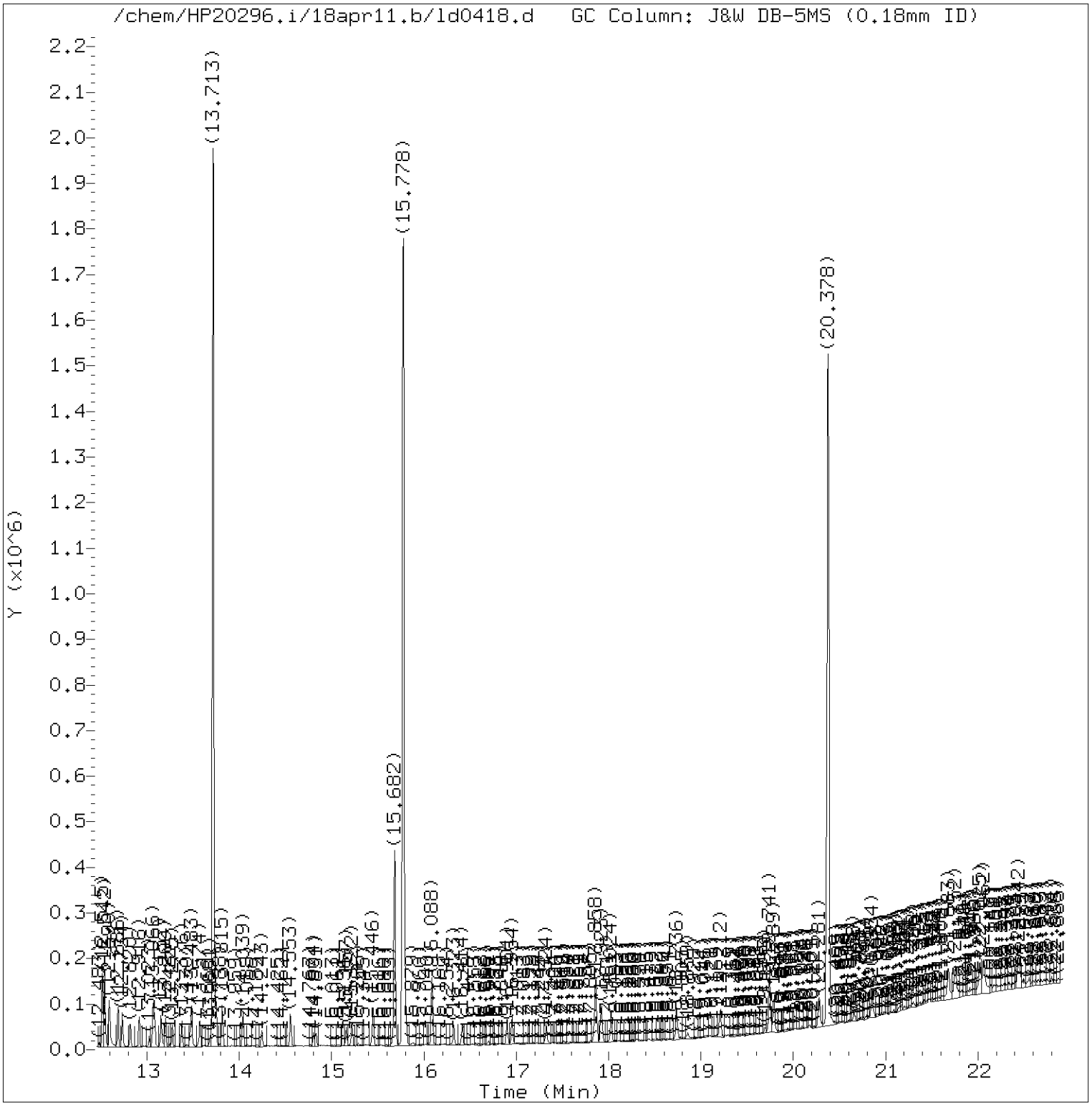
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.433	88	5492M	0.189
5) N-Nitrosodimethylamine	(1)	3.021	74	7404M	0.167
6) Pyridine	(1)	3.085	79	16320M	0.206
8) 2-Picoline	(1)	4.187	93	14709M	0.184
9) N-Nitrosomethylethylamine	(1)	4.380	88	6058M	0.189
10) Methyl methanesulfonate	(1)	4.824	80	6375M	0.164
12)$2-Fluorophenol	(1)	5.027	112	22122	0.363
14) N-Nitrosodiethylamine	(1)	5.391	102	5266	0.177
43) Total Cresols	(1)			24174	0.399
16) Ethyl methanesulfonate	(1)	5.851	109	7115	0.220
17) Benzaldehyde	(1)	6.311	77	3152	0.052
18)$Phenol-d6	(1)	6.418	99	30382	0.380
19) Phenol	(1)	6.439	94	17715	0.192
20) Aniline	(1)	6.477	93	19290	0.182
21) a-methylstyrene	(1)	6.551	118	3554	0.153
23) bis(2-Chloroethyl)ether	(1)	6.594	93	12839	0.187
24) 2-Chlorophenol	(1)	6.637	128	10778	0.180
25) 1,3-Dichlorobenzene	(1)	6.872	146	11832	0.175
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	222764	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	12308	0.180
28) Benzyl alcohol	(1)	7.188	108	7963	0.200
29) 1,2-Dichlorobenzene	(1)	7.220	146	12087	0.186
31) Indene	(1)	7.354	115	15685	0.165
32) 2-Methylphenol	(1)	7.364	108	11749	0.199
100) Isosafrole	(3)			11242	0.205
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	19439	0.200
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	19439	0.200
36) N-Nitrosopyrrolidine	(1)	7.562	100	6350	0.197
37) Acetophenone	(1)	7.594	105	13010	0.145
38) 4-Methylphenol	(1)	7.605	108	12425	0.200
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	10515	0.205
40) N-Nitrosomorpholine	(1)	7.637	56	9472	0.221
41) o-Toluidine	(1)	7.648	106	20130	0.193
44) Hexachloroethane	(1)	7.733	117	4915	0.169
45)$Nitrobenzene-d5	(2)	7.824	82	28860	0.392
46) Nitrobenzene	(2)	7.851	77	14349	0.191
125) 2,4_2,6-Dinitrotoluenes	(3)			11938	0.357
50) N-Nitrosopiperidine	(2)	8.097	114	6424	0.208
52) Isophorone	(2)	8.236	82	26625	0.203
53) 2-Nitrophenol	(2)	8.354	139	5430	0.179

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	13003	0.200
58) Benzoic acid	(2)	8.546	105	1809M	2.685
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	6611	0.205
57) bis(2-Chloroethoxy)methane	(2)	8.611	93	18216	0.213
62) 2,4-Dichlorophenol	(2)	8.728	162	9617	0.190
151) Diallate trans/cis	(4)			13376	0.213
65) 1,2,4-Trichlorobenzene	(2)	8.867	180	11103	0.197
68)*Naphthalene-d8	(2)	8.953	136	854280	5.000
69) Naphthalene	(2)	8.990	128	36359	0.206
70) 4-Chloroaniline	(2)	9.092	127	15074	0.209
71) 2,6-Dichlorophenol	(2)	9.097	162	10173	0.203
72) Hexachloropropene	(2)	9.135	213	6774	0.166
74) Hexachlorobutadiene	(2)	9.204	225	6403	0.187
78) Quinoline	(2)	9.525	129	24382	0.217
79) Caprolactam	(2)	9.611	113	2788	0.175
80) N-Nitrosodi-n-butylamine	(2)	9.670	84	10054	0.181
83) 4-Chloro-3-methylphenol	(2)	9.894	107	10688	0.192
85) Safrole	(2)	10.001	162	9448	0.200
86) 2-Methylnaphthalene	(2)	10.119	142	24403	0.208
87) 1-Methylnaphthalene	(2)	10.274	142	23464	0.218
88) Hexachlorocyclopentadiene	(3)	10.376	237	6282	0.179
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	12972	0.219
91) cis-Isosafrole	(3)	10.483	162	1755	0.034
93) 2,4,6-Trichlorophenol	(3)	10.584	196	7032	0.189
95) 2,4,5-Trichlorophenol	(3)	10.627	196	6943	0.178
96)$2-Fluorobiphenyl	(3)	10.739	172	59491	0.440
97) trans-Isosafrole	(3)	10.852	162	9487	0.171
98) 1,1'-Biphenyl	(3)	10.894	154	23059	0.165
99) 2-Chloronaphthalene	(3)	10.905	162	24485	0.207
101) 1-Chloronaphthalene	(3)	10.937	162	25748M	0.235
103) Diphenyl ether	(3)	11.076	170	17357	0.223
104) 2-Nitroaniline	(3)	11.087	138	6857	0.198
108) 1,4-Naphthoquinone	(3)	11.210	158	7732	0.165
109) 1,4-Dinitrobenzene	(3)	11.338	168	3262	0.177
110) Dimethylphthalate	(3)	11.424	163	28591	0.215
111) 1,3-Dinitrobenzene	(3)	11.451	168	3118	0.158
113) 2,6-Dinitrotoluene	(3)	11.504	165	5195	0.184
114) Acenaphthylene	(3)	11.574	152	34694	0.211
117) 3-Nitroaniline	(3)	11.745	138	5178	0.174
118)*Acenaphthene-d10	(3)	11.788	164	434849	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.836	153	26641	0.228
120) 2,4-Dinitrophenol	(3)	11.900	184	15746	0.929
121) 4-Nitrophenol	(3)	11.991	109	15880	0.759
122) Pentachlorobenzene	(3)	12.018	250	10761	0.223
124) Dibenzofuran	(3)	12.077	168	37074	0.229
123) 2,4-Dinitrotoluene	(3)	12.082	165	6743	0.173
126) 1-Naphthylamine	(3)	12.184	143	21246	0.184
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	5164	0.170
128) 2-Naphthylamine	(3)	12.290	143	23223	0.212
129) Diethylphthalate	(3)	12.424	149	27822	0.213
130) Thionazin	(3)	12.515	107	5268	0.237
131) Fluorene	(3)	12.520	166	28209	0.223
133) 5-Nitro-o-toluidine	(3)	12.542	152	6840	0.198
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	14242	0.227
134) 4-Nitroaniline	(3)	12.547	138	5679	0.189
135) 4,6-Dinitro-2-methylphenol	(4)	12.590	198	16584	0.744
136) N-Nitrosodiphenylamine	(4)	12.686	169	22983	0.223
137) NDPA as diphenylamine	(4)	12.686	169	22983	0.223
139) 1,2-Diphenylhydrazine	(4)	12.734	77	31737	0.221
140)$2,4,6-Tribromophenol	(3)	12.820	330	5803	0.386
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	5094M	0.208
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1870	0.136
145) Diallate (peak 1)	(4)	13.061	86	11520	0.177
146) Phorate	(4)	13.071	75	19764	0.214
147) Phenacetin	(4)	13.082	108	11215	0.172
148) 4-Bromophenyl-phenylether	(4)	13.152	248	7664	0.223
149) Diallate (peak 2)	(4)	13.173	86	1856M	0.036
150) Hexachlorobenzene	(4)	13.200	284	8452	0.239
152) Dimethoate	(4)	13.275	87	9216	0.166
153) Atrazine	(4)	13.376	200	5938	0.170
154) Pentachlorophenol	(4)	13.467	266	3408	0.157
156) Pentachloronitrobenzene	(4)	13.478	237	2740	0.162
155) 4-Aminobiphenyl	(4)	13.483	169	23642	0.202
157) Pronamide	(4)	13.574	173	10577	0.182
158)*Phenanthrene-d10	(4)	13.713	188	841976	5.000
159) Dinoseb	(4)	13.729	211	4630M	0.133
160) Phenanthrene	(4)	13.745	178	42538	0.229
162) Anthracene	(4)	13.815	178	40094	0.215
168) Carbazole	(4)	14.039	167	35570	0.216
169) Methyl parathion	(4)	14.243	109	6566	0.155

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

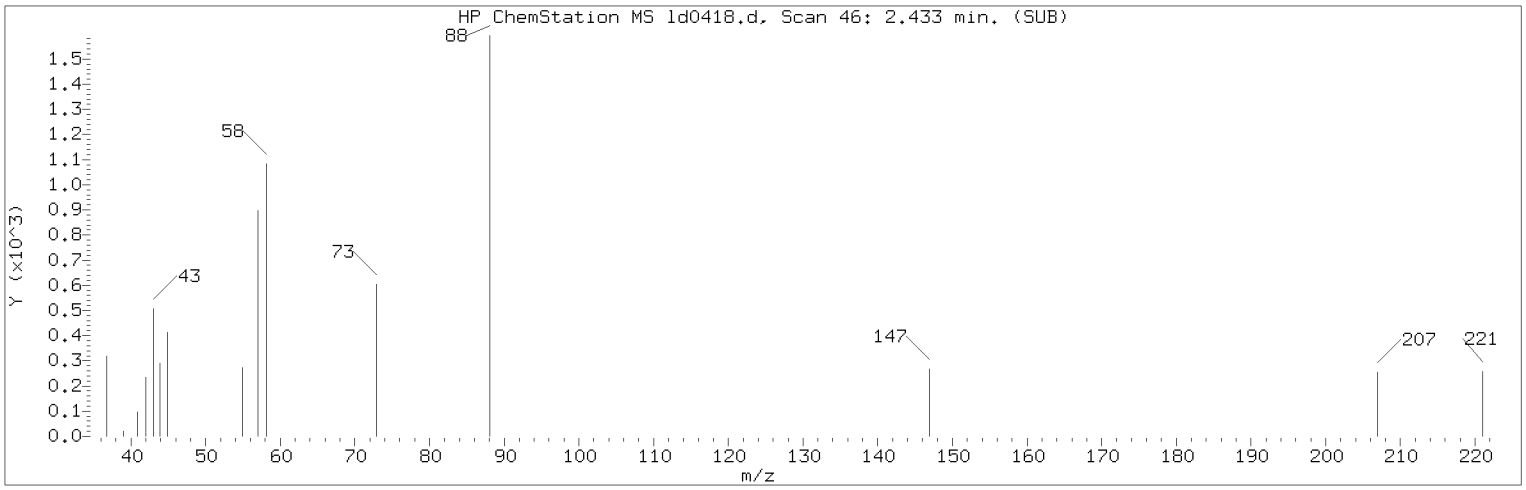
Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.558	149	41784	0.188
172) Parathion	(4)	14.799	109	3930	0.144
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	2488	0.113
227) Total PAHs	(6)			660970	3.942
174) Octachlorostyrene	(4)	15.163	308	2947	0.223
176) Isodrin	(4)	15.222	193	5594	0.243
178) Fluoranthene	(4)	15.446	202	44594	0.214
179) Benzidine	(5)	15.682	184	207079	1.637
180)*Pyrene-d10	(5)	15.772	212	858273	5.000
182) Pyrene	(5)	15.805	202	51918	0.238
184)$Terphenyl-d14	(5)	16.088	244	61187	0.445
187) p-Dimethylaminoazobenzene	(5)	16.323	225	5807	0.174
190) Chlorobenzilate	(5)	16.414	139	11797	0.181
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	21670	0.158
193) Butylbenzylphthalate	(5)	16.954	149	16458	0.162
196) 2-Acetylaminofluorene	(5)	17.324	181	12069	0.150
198) 3,3'-Dichlorobenzidine	(5)	17.848	252	12622	0.180
200) Benzo(a)anthracene	(5)	17.858	228	41572	0.213
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	7492	0.176
201) Chrysene	(5)	17.923	228	41813	0.222
204) bis(2-Ethylhexyl)phthalate	(5)	18.024	149	23621	0.165
208) 6-Methylchrysene	(5)	18.736	242	26806	0.202
210) Di-n-octylphthalate	(6)	19.212	149	37574	0.157
211) Benzo(b)fluoranthene	(6)	19.741	252	40317	0.216
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.746	256	14661	0.190
213) Benzo(k)fluoranthene	(6)	19.789	252	41484M	0.230
216) Benzo(a)pyrene	(6)	20.281	252	35793	0.213
218)*Perylene-d12	(6)	20.378	264	762938	5.000
220) 3-Methylcholanthrene	(6)	20.854	268	17784	0.217
222) Dibenz(a,h)acridine	(6)	21.677	279	29703	0.208
223) Dibenz(a,j)acridine	(6)	21.752	279	30638	0.211
224) Indeno(1,2,3-cd)pyrene	(6)	22.025	276	35016M	0.219
225) Dibenz(a,h)anthracene	(6)	22.062	278	34790	0.214
226) Benzo(g,h,i)perylene	(6)	22.442	276	37271	0.226

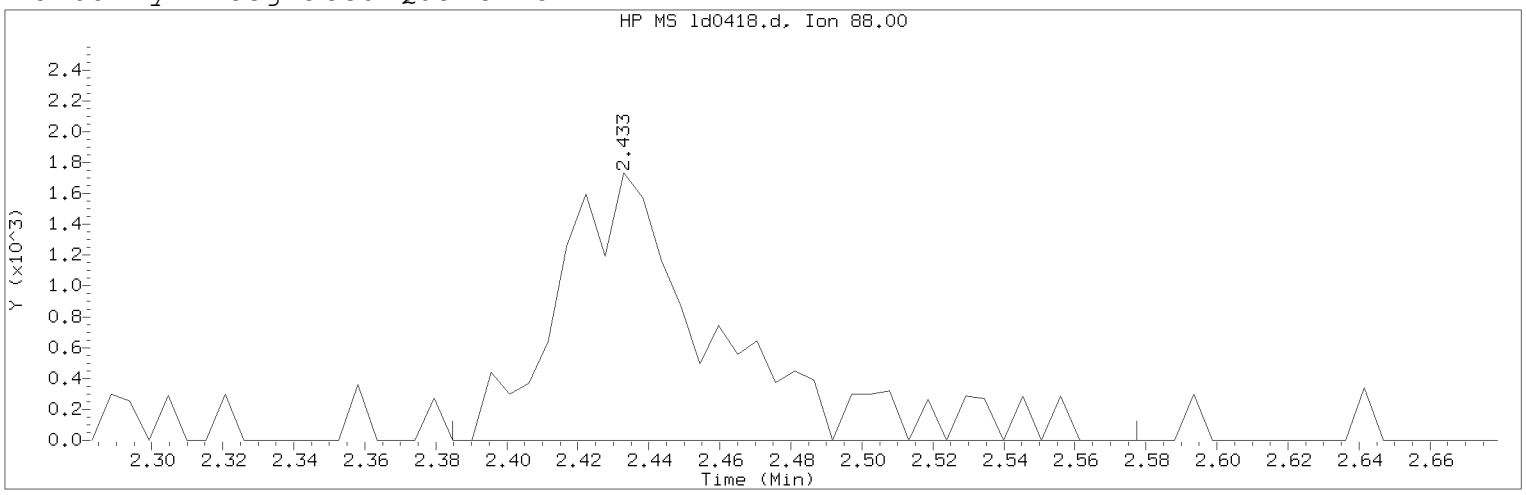
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

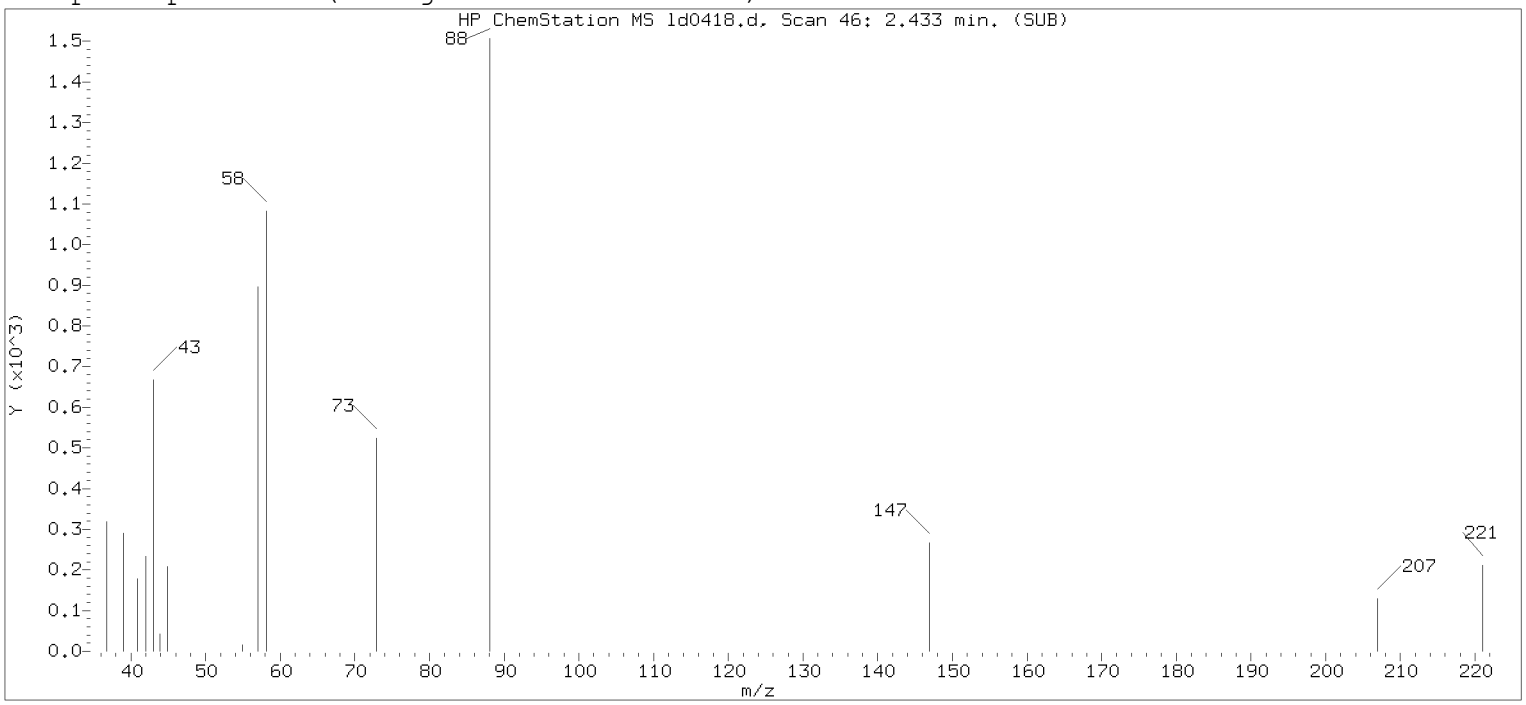
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.433
Quant Ion : 88.00
Area (flag) : 5492M
On-Column Amount (ng/ul) : 0.1886
Integration start scan : 36 Integration stop scan: 72
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

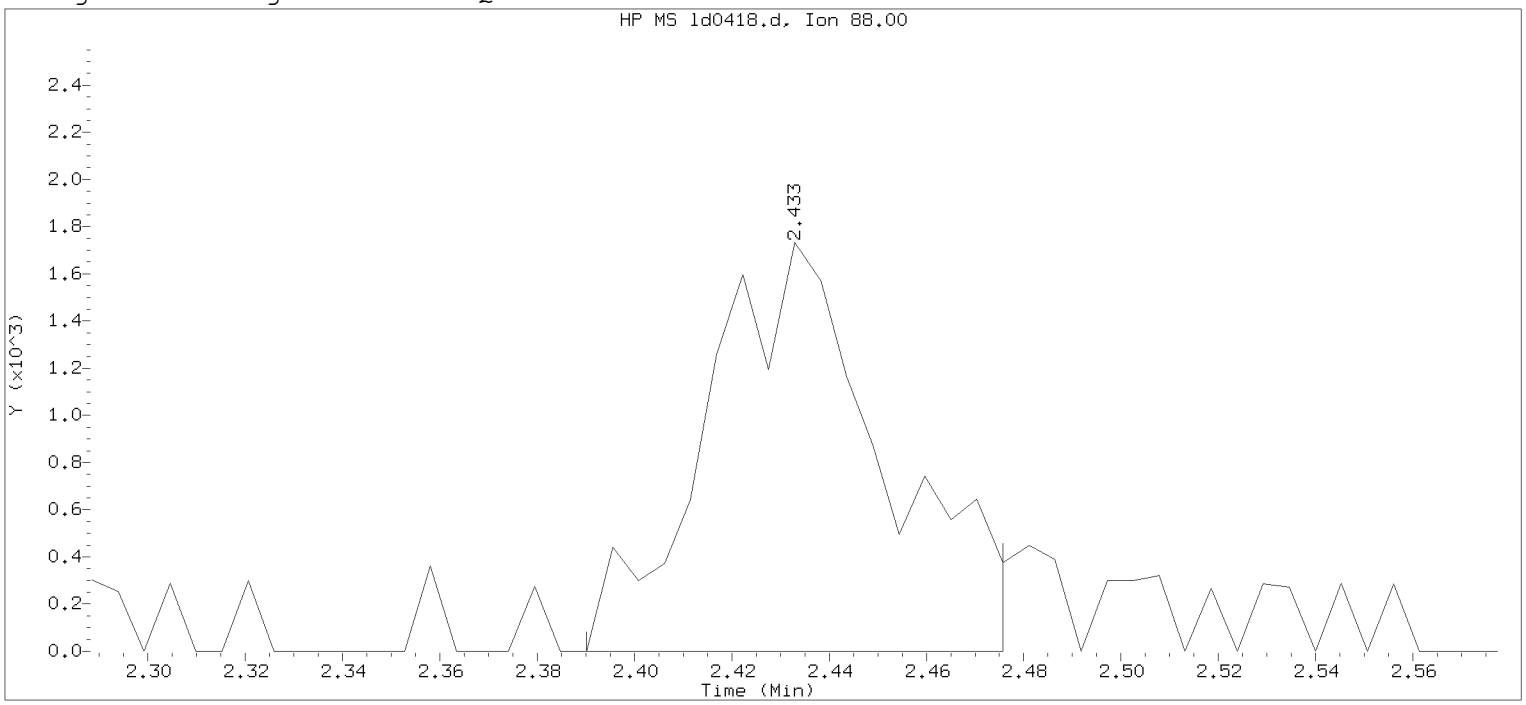
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

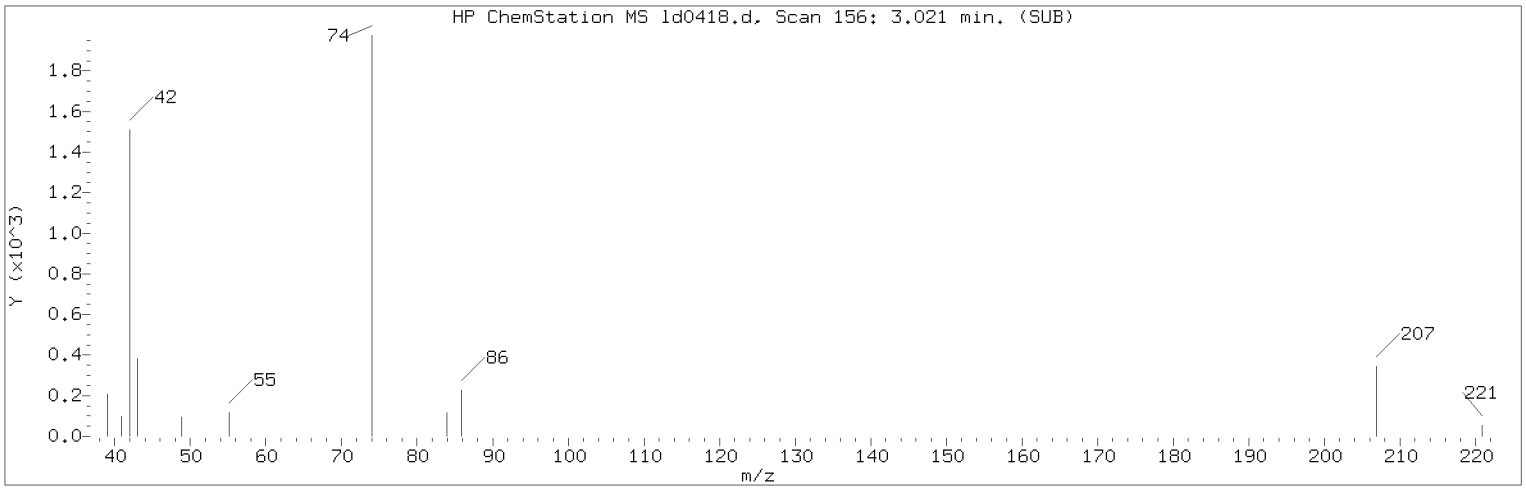
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

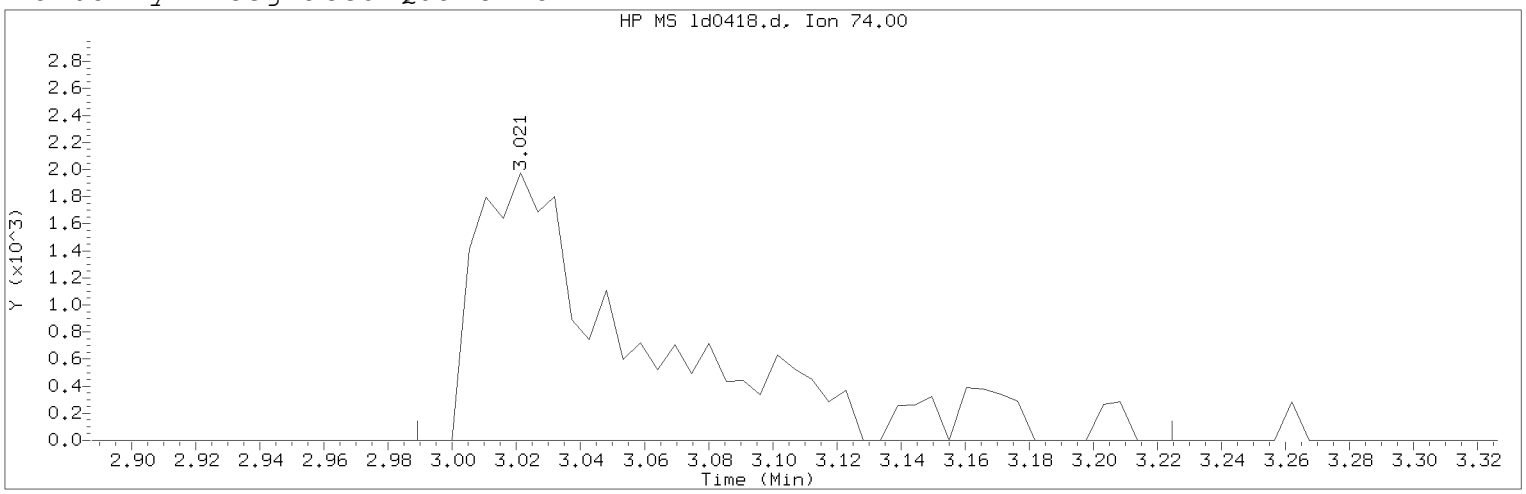
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 2.433		
Quant Ion	: 88.00		
Area	: 4420		
On-column Amount (ng/ul)	: 0.1537		
Integration start scan	: 37	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1771

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

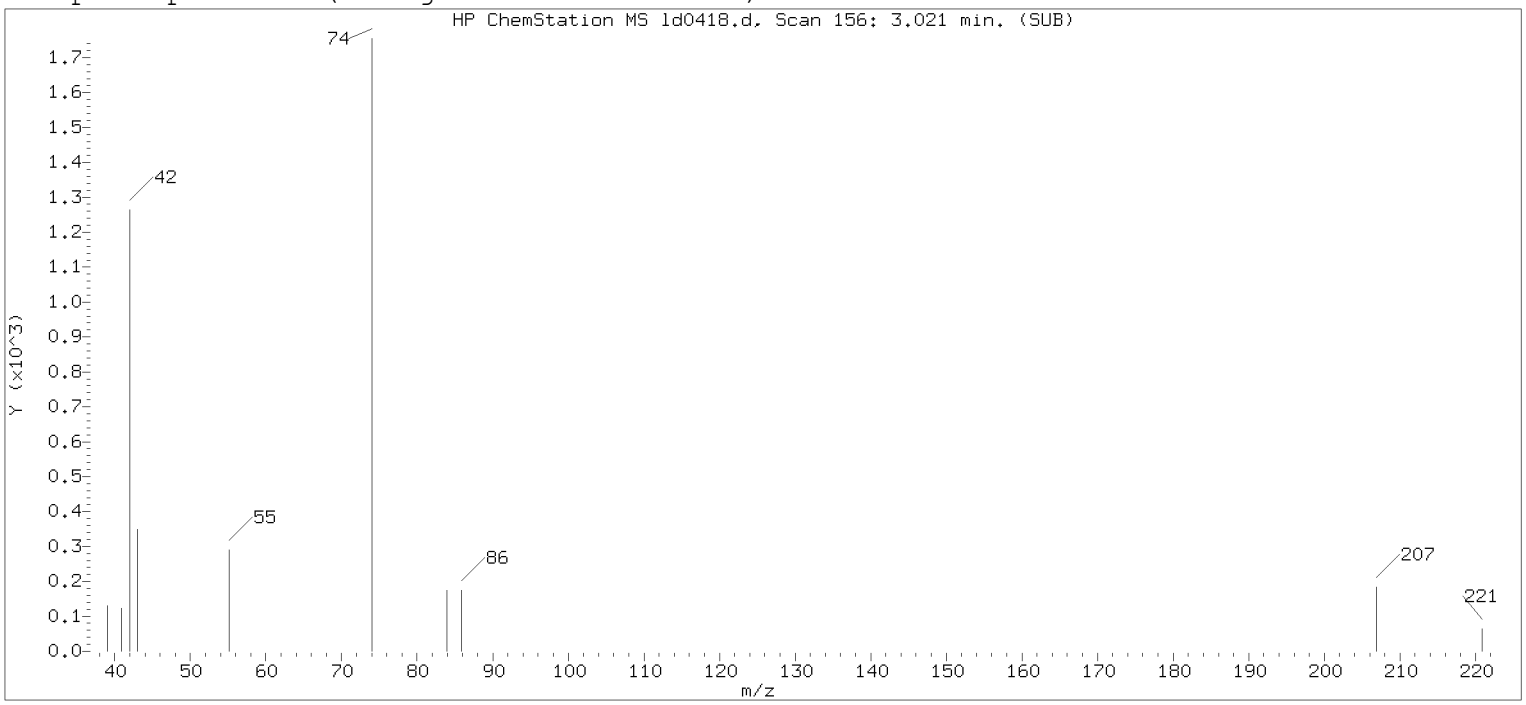
Compound Number : 5
Compound Name : N-Nitrosodimethylamine
Scan Number : 156
Retention Time (minutes) : 3.021
Quant Ion : 74.00
Area (flag) : 7404M
On-Column Amount (ng/ul) : 0.1670
Integration start scan : 149 Integration stop scan: 193
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

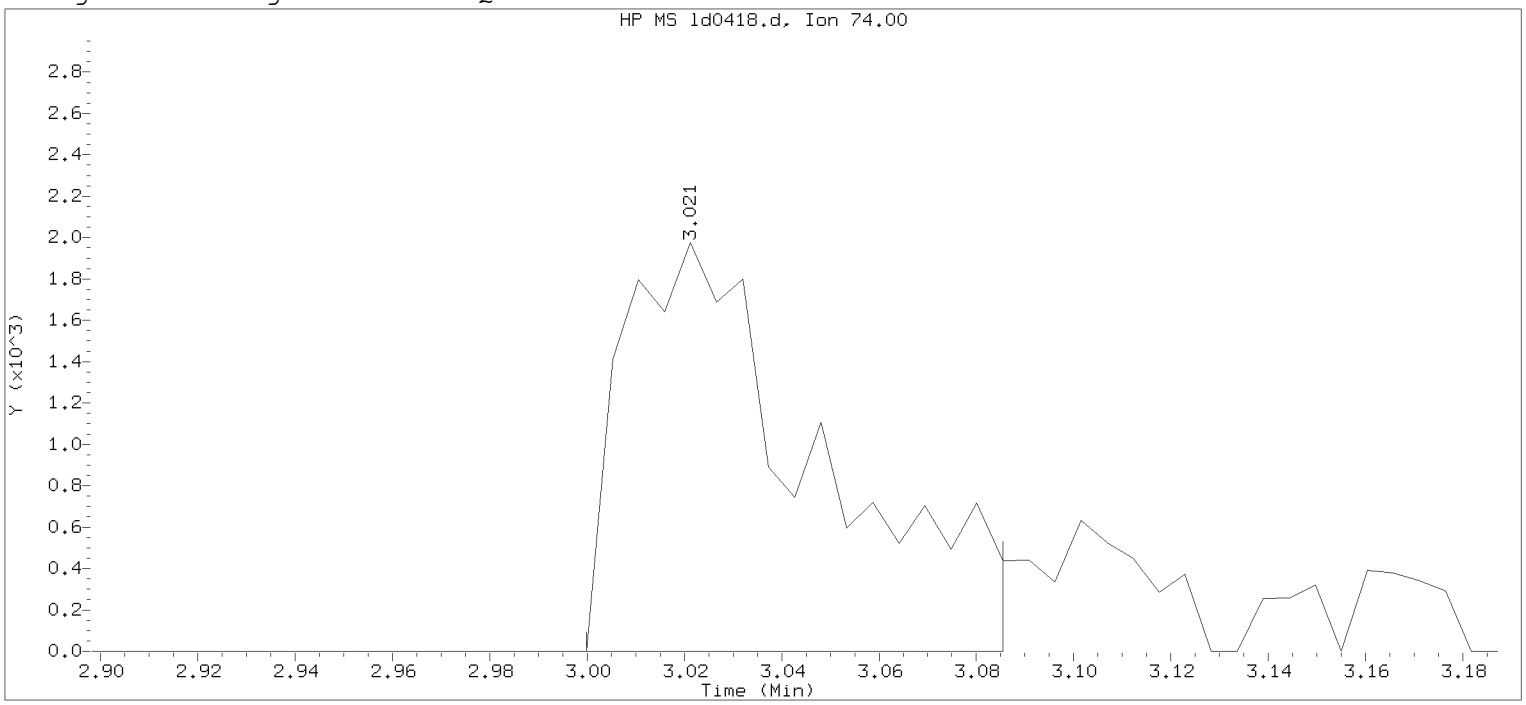
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

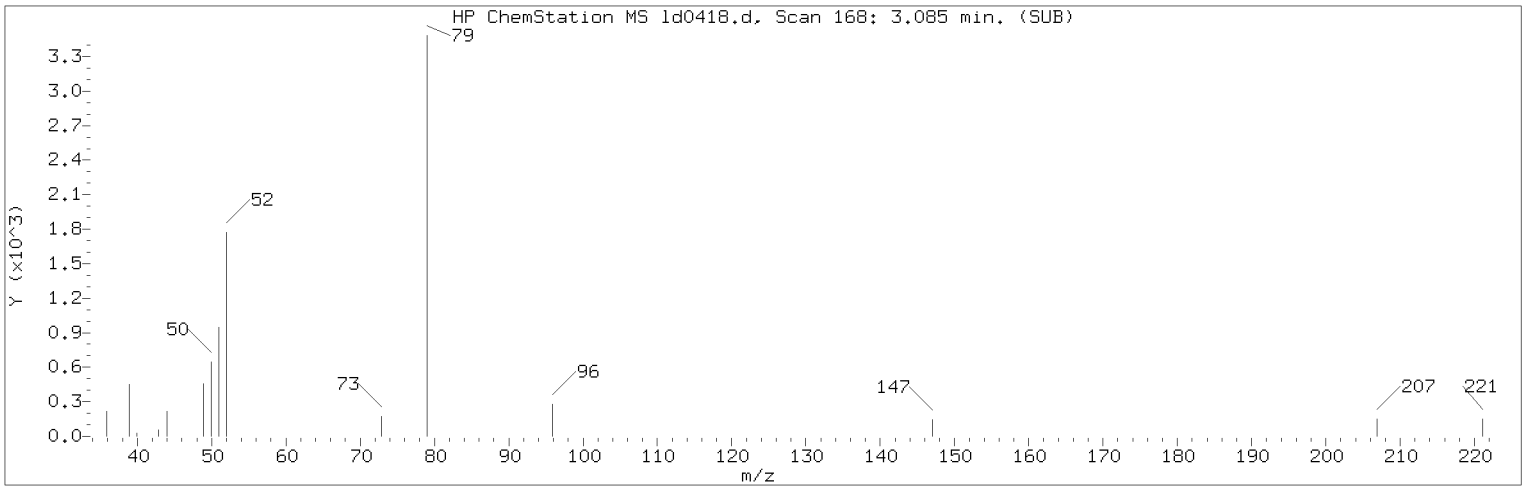
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

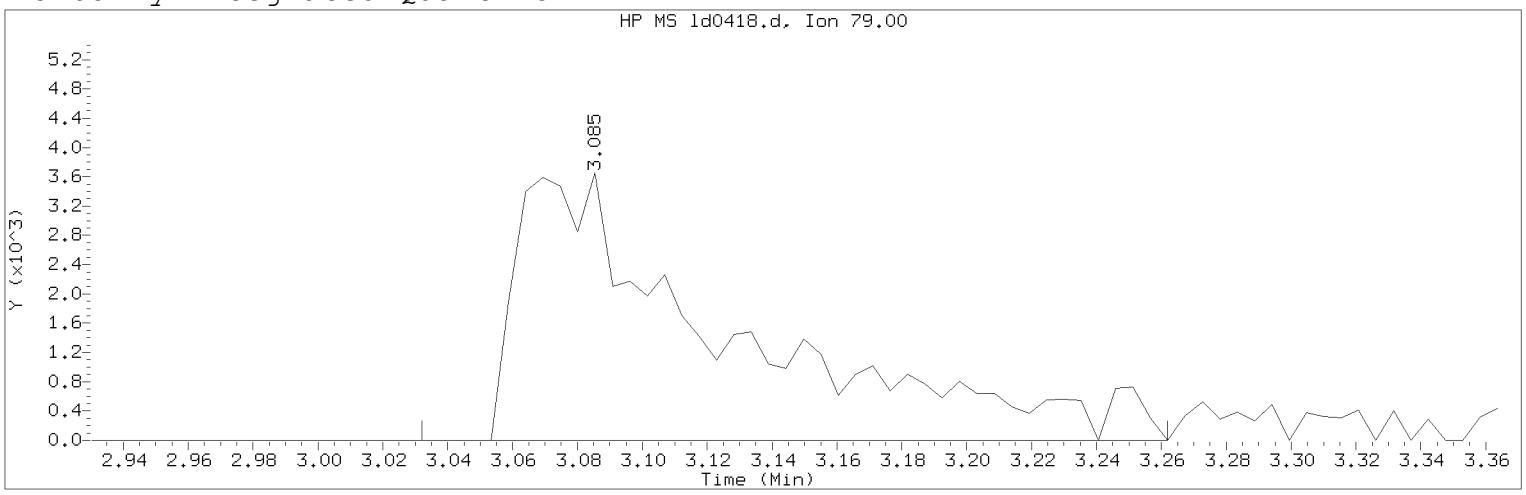
Compound Number	: 5		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 156		
Retention Time (minutes)	: 3.021		
Quant Ion	: 74.00		
Area	: 5464		
On-column Amount (ng/ul)	: 0.1237		
Integration start scan	: 151	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user FD6 Page 1773

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

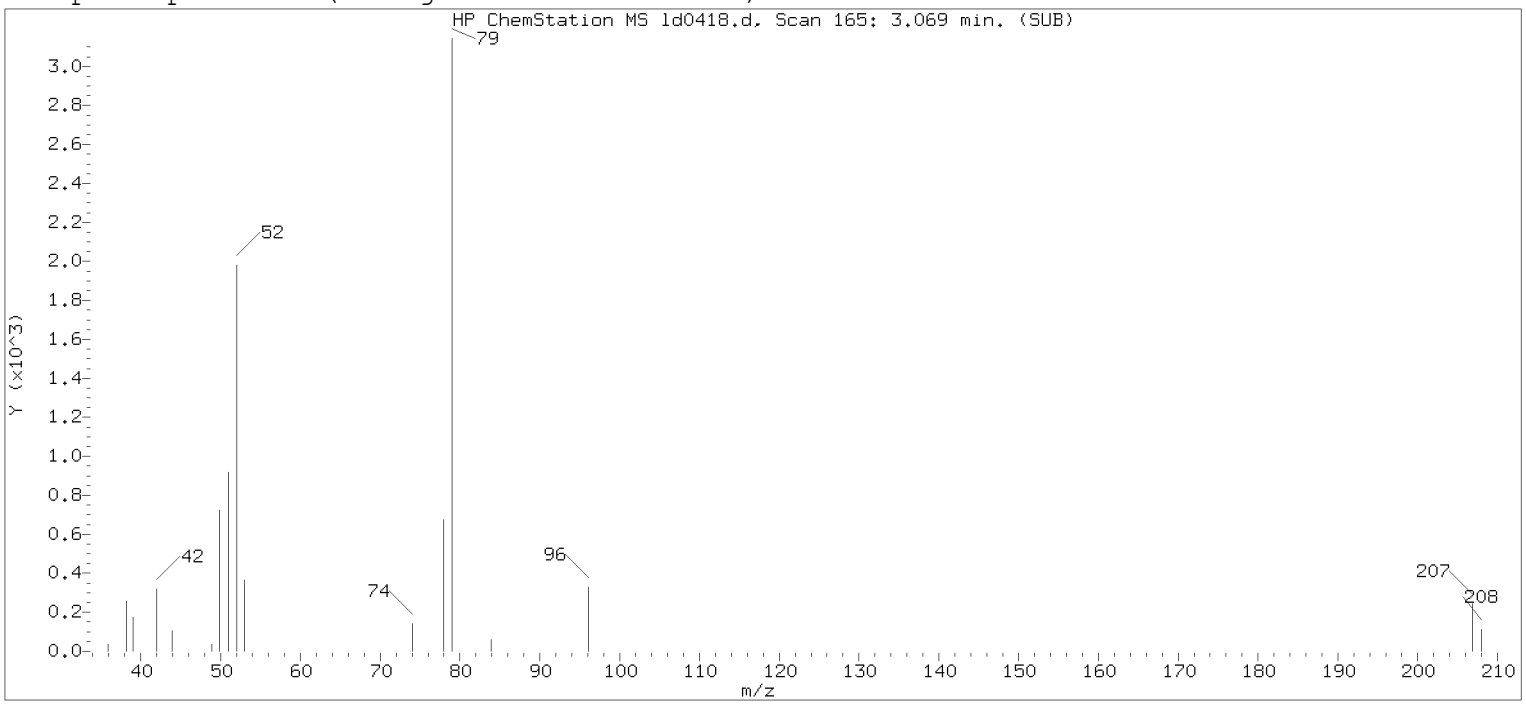
Compound Number : 6
Compound Name : Pyridine
Scan Number : 168
Retention Time (minutes) : 3.085
Quant Ion : 79.00
Area (flag) : 16320M
On-Column Amount (ng/ul) : 0.2062
Integration start scan : 157 Integration stop scan: 200
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

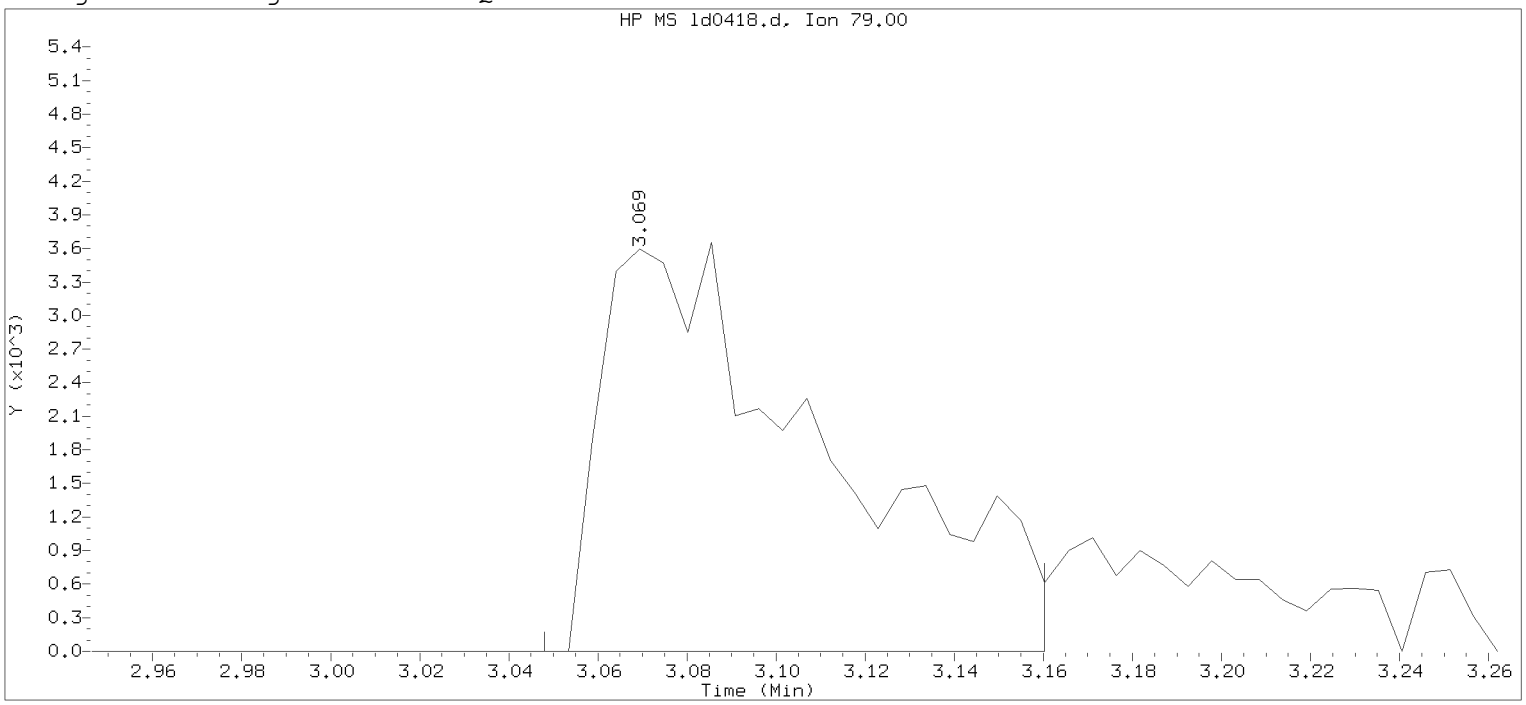
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

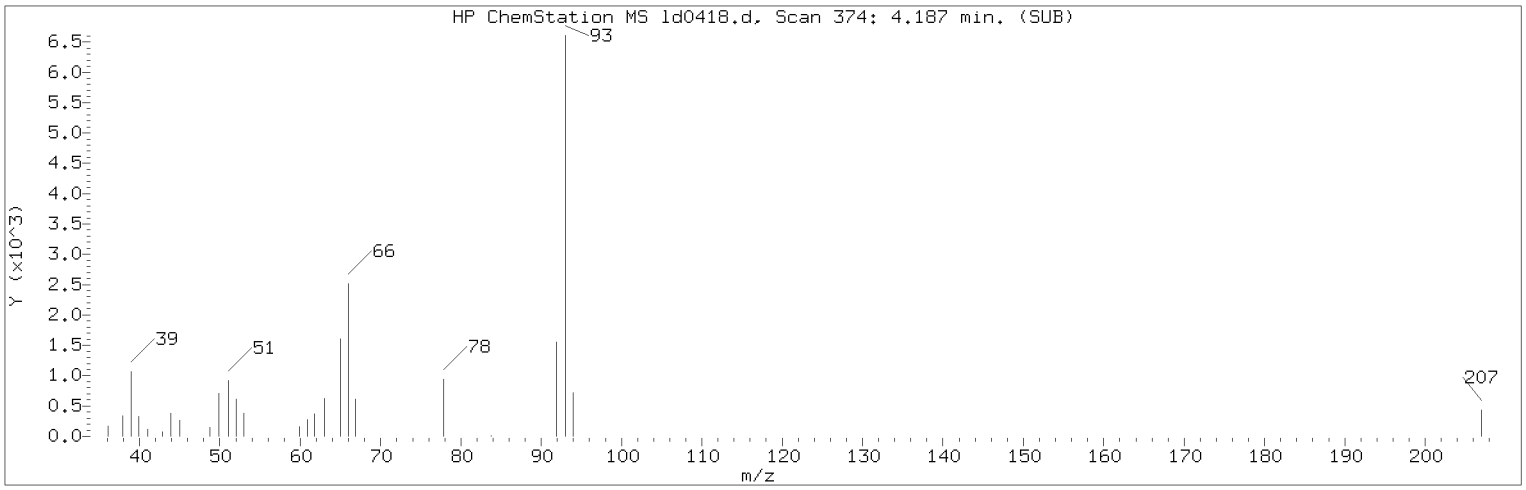
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

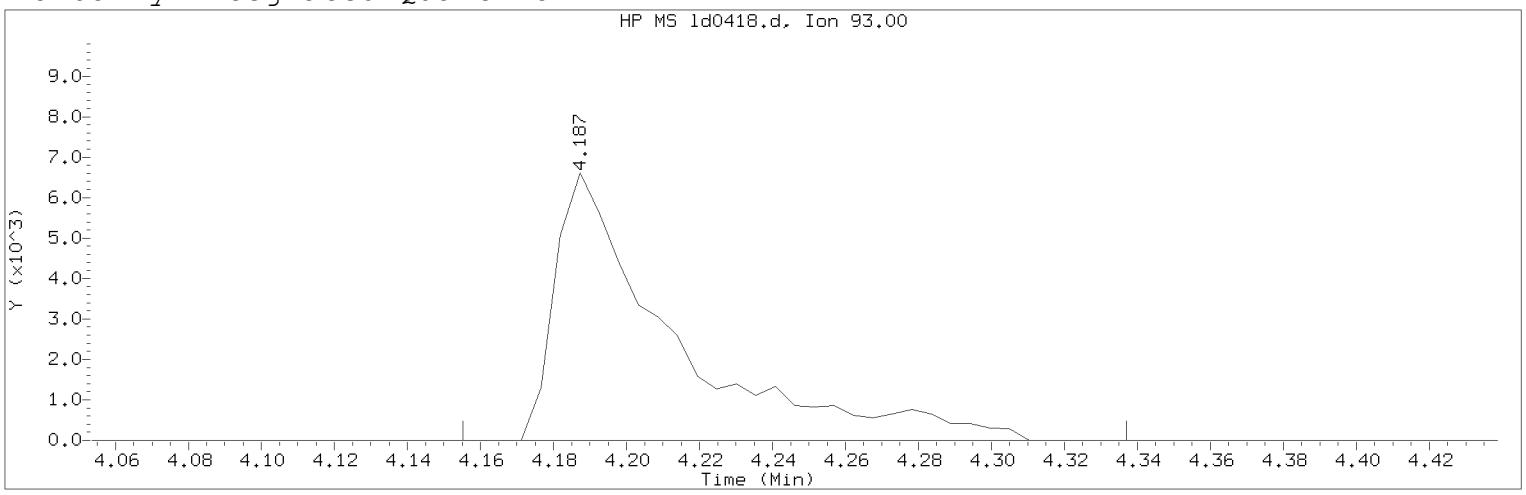
Compound Number	: 6		
Compound Name	: Pyridine		
Scan Number	: 165		
Retention Time (minutes)	: 3.069		
Quant Ion	: 79.00		
Area	: 12640		
On-column Amount (ng/ul)	: 0.1604		
Integration start scan	: 160	Integration stop scan:	181
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: 1775

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

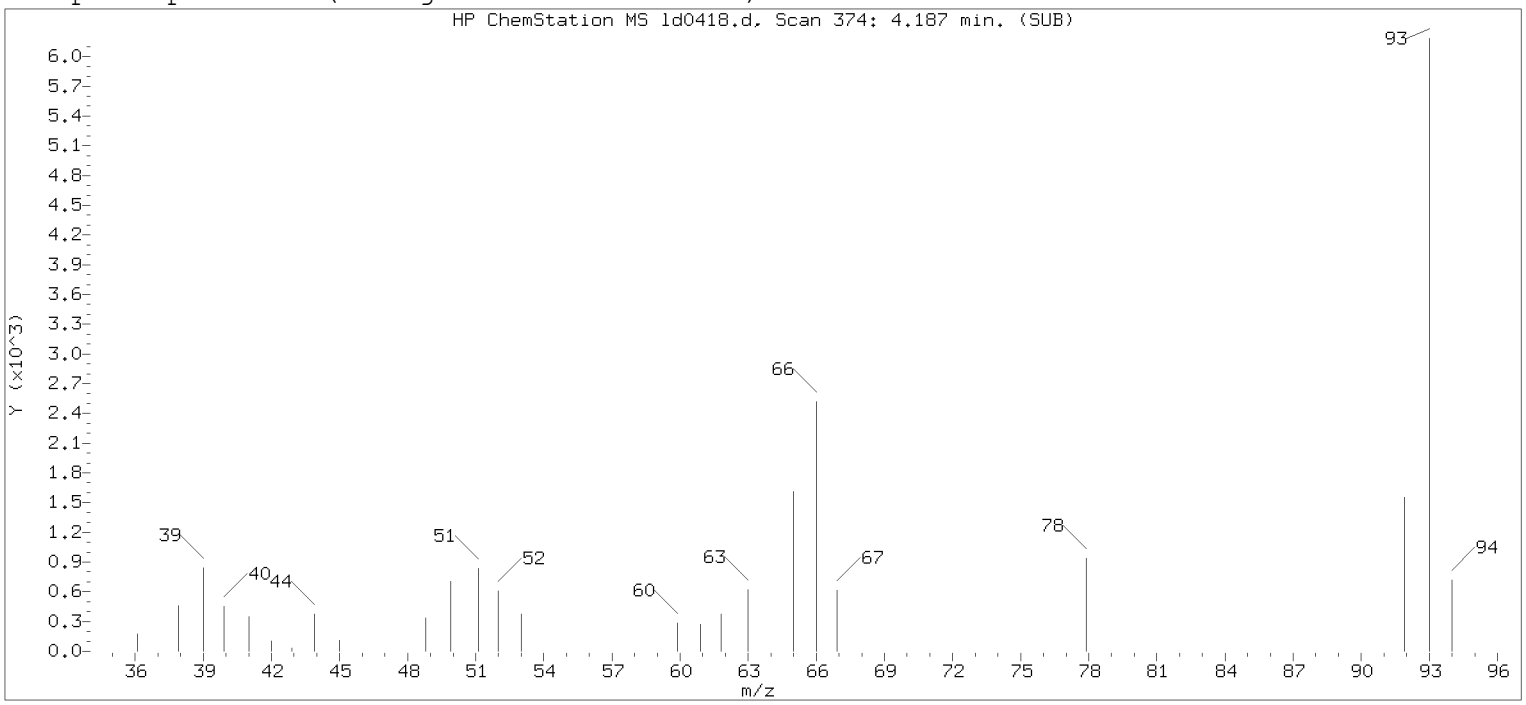
Compound Number : 8
Compound Name : 2-Picoline
Scan Number : 374
Retention Time (minutes) : 4.187
Quant Ion : 93.00
Area (flag) : 14709M
On-Column Amount (ng/ul) : 0.1838
Integration start scan : 367 Integration stop scan: 401
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

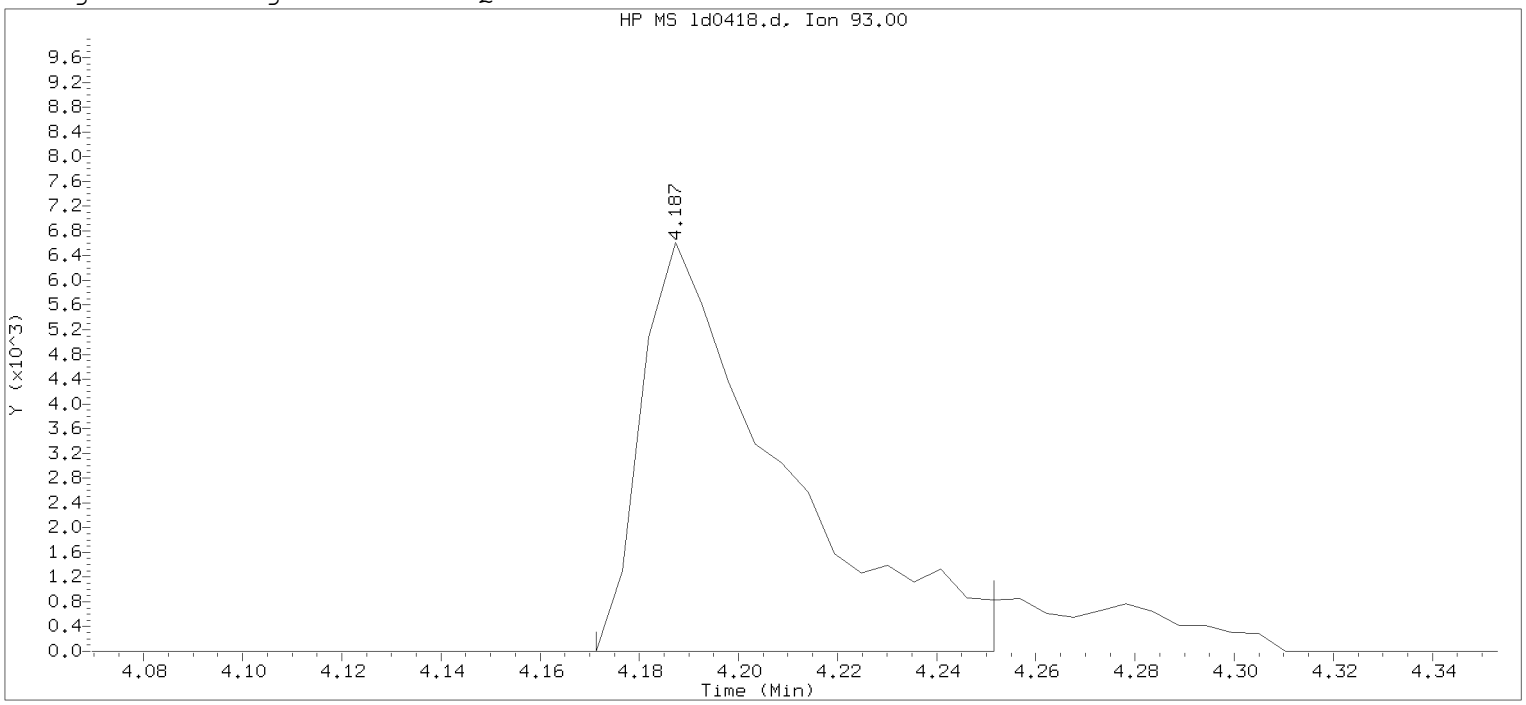
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

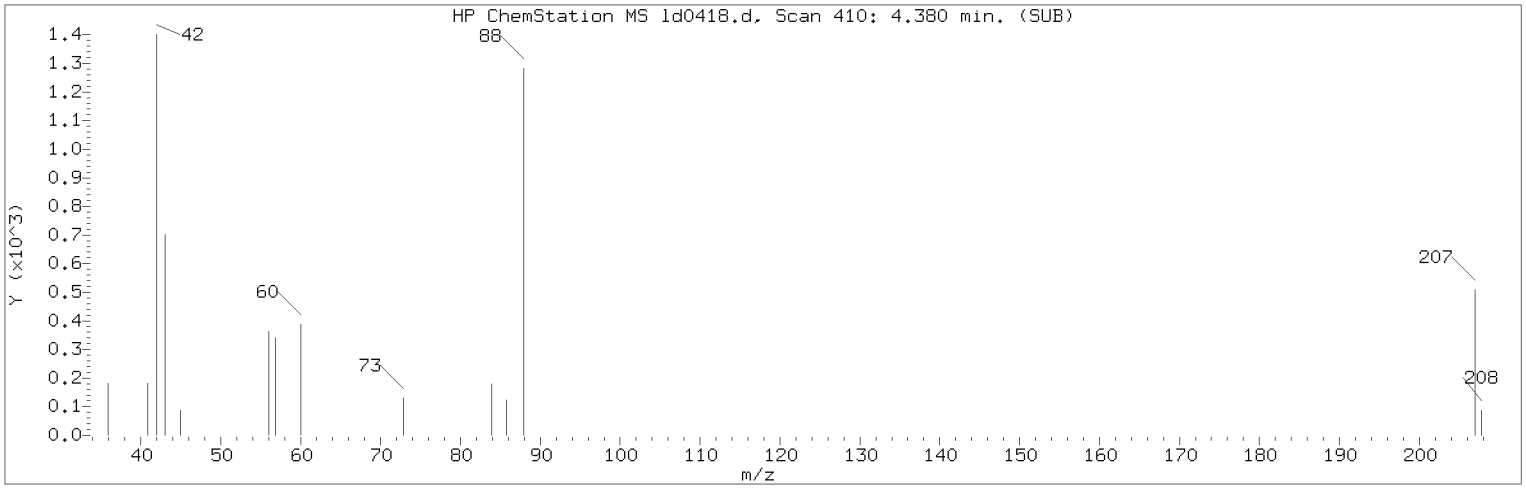
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

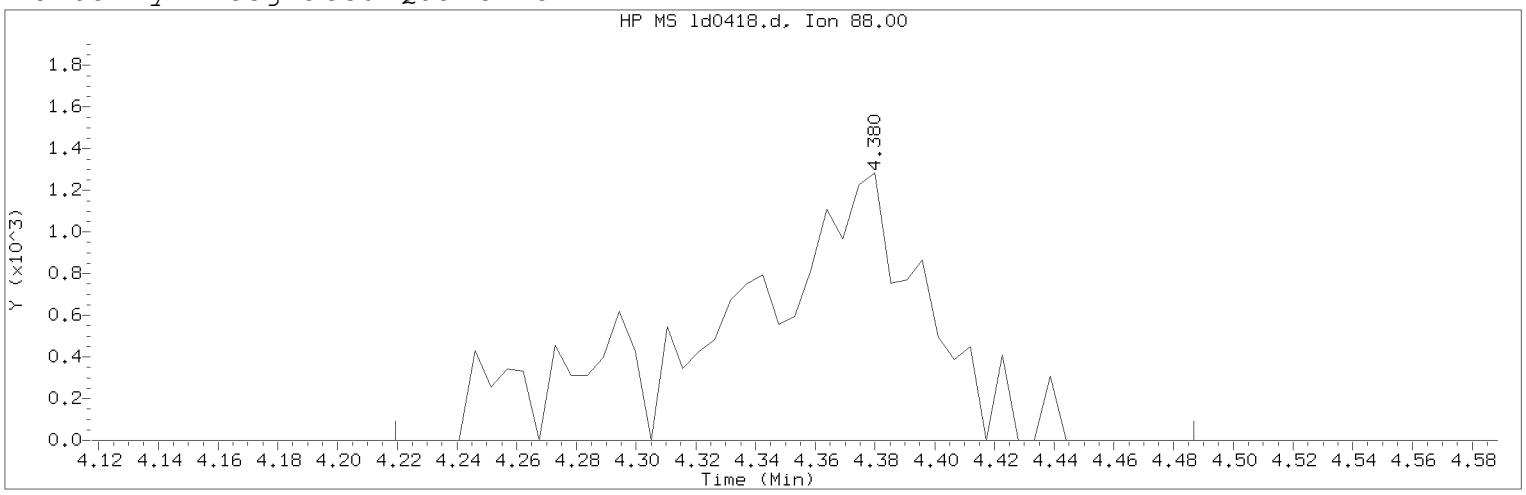
Compound Number	: 8		
Compound Name	: 2-Picoline		
Scan Number	: 374		
Retention Time (minutes)	: 4.187		
Quant Ion	: 93.00		
Area	: 12808		
On-column Amount (ng/ul)	: 0.1558		
Integration start scan	: 370	Integration stop scan:	385
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1777

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

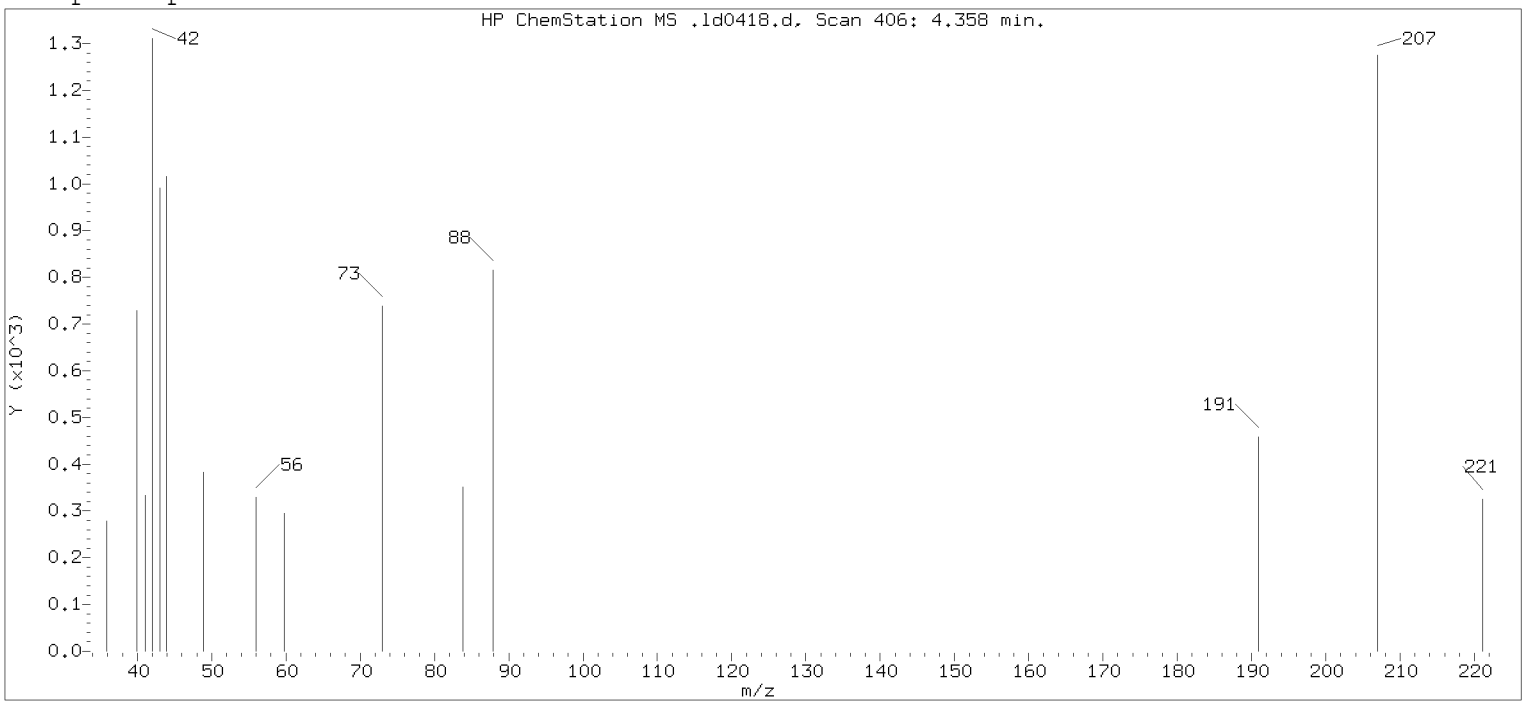
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 410
Retention Time (minutes) : 4.380
Quant Ion : 88.00
Area (flag) : 6058M
On-Column Amount (ng/ul) : 0.1889
Integration start scan : 379 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

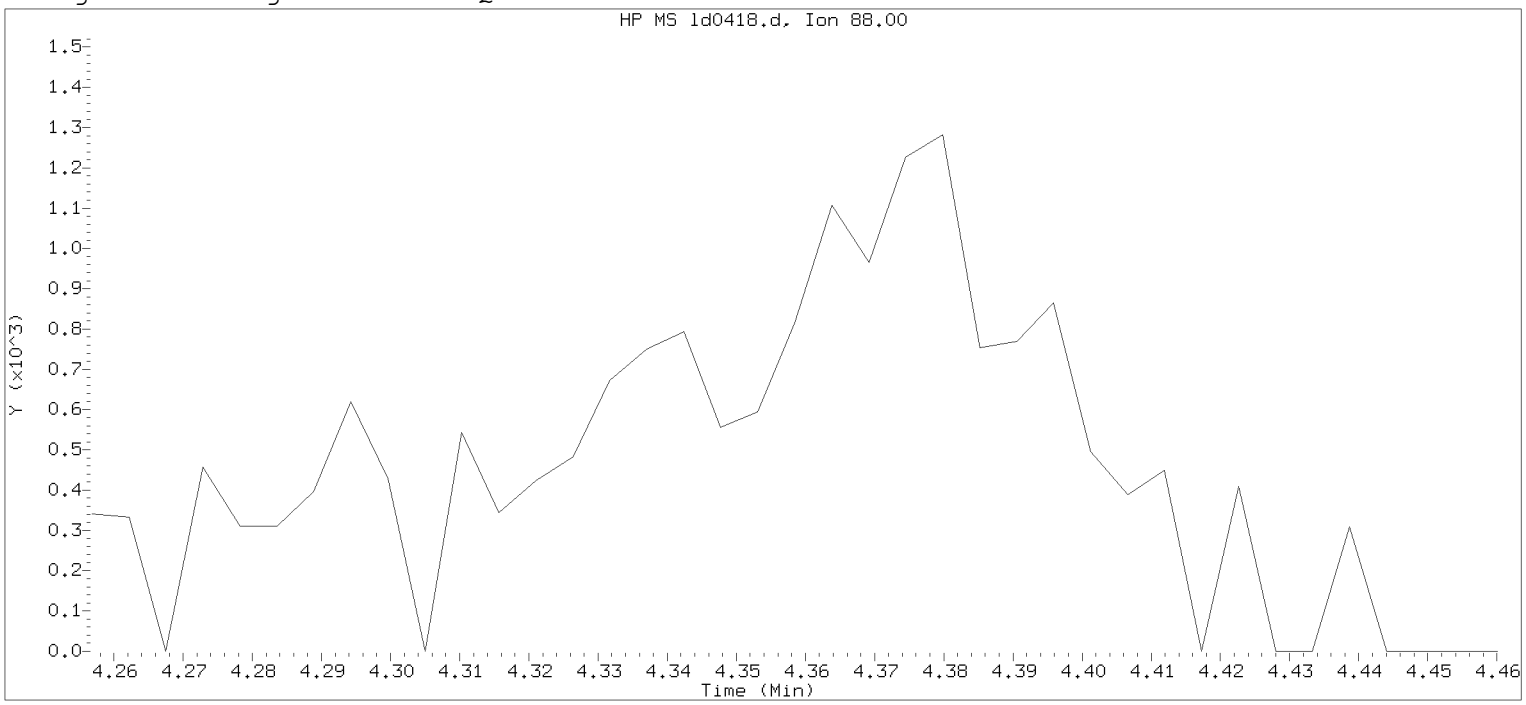
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

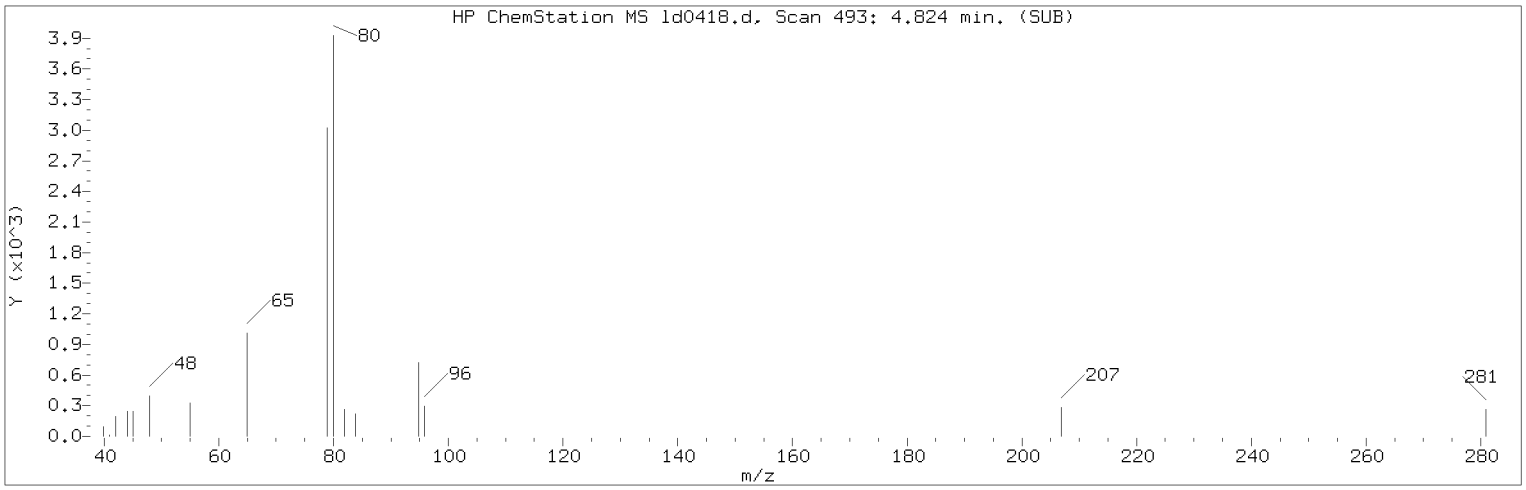
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

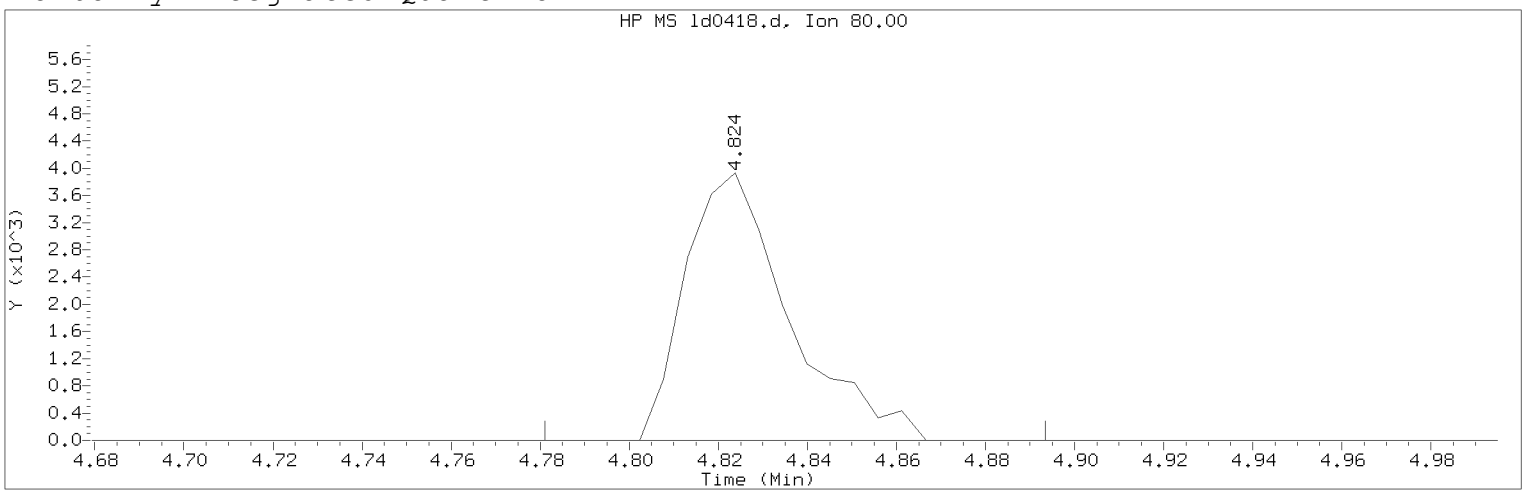
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.358
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

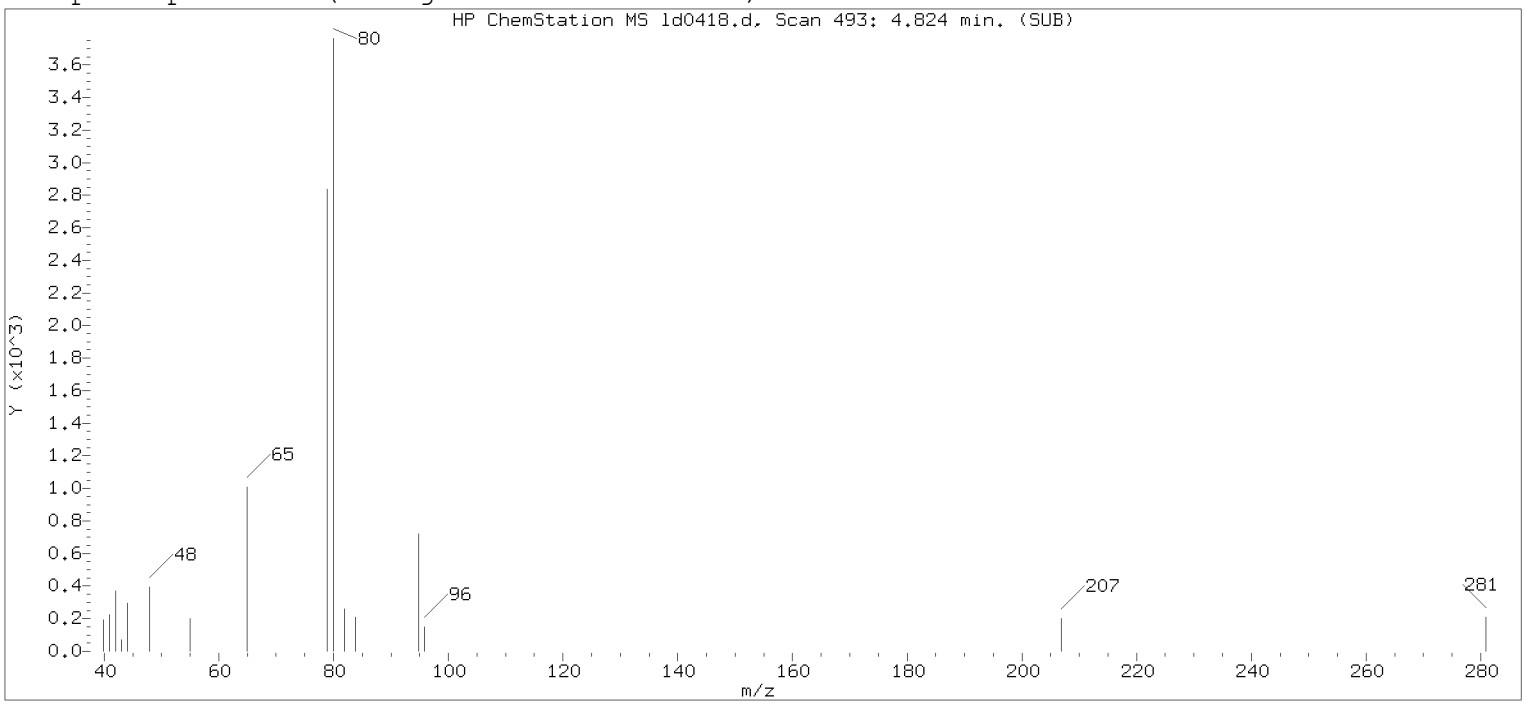
Compound Number : 10
Compound Name : Methyl methanesulfonate
Scan Number : 493
Retention Time (minutes) : 4.824
Quant Ion : 80.00
Area (flag) : 6375M
On-Column Amount (ng/ul) : 0.1641
Integration start scan : 484 Integration stop scan: 505
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

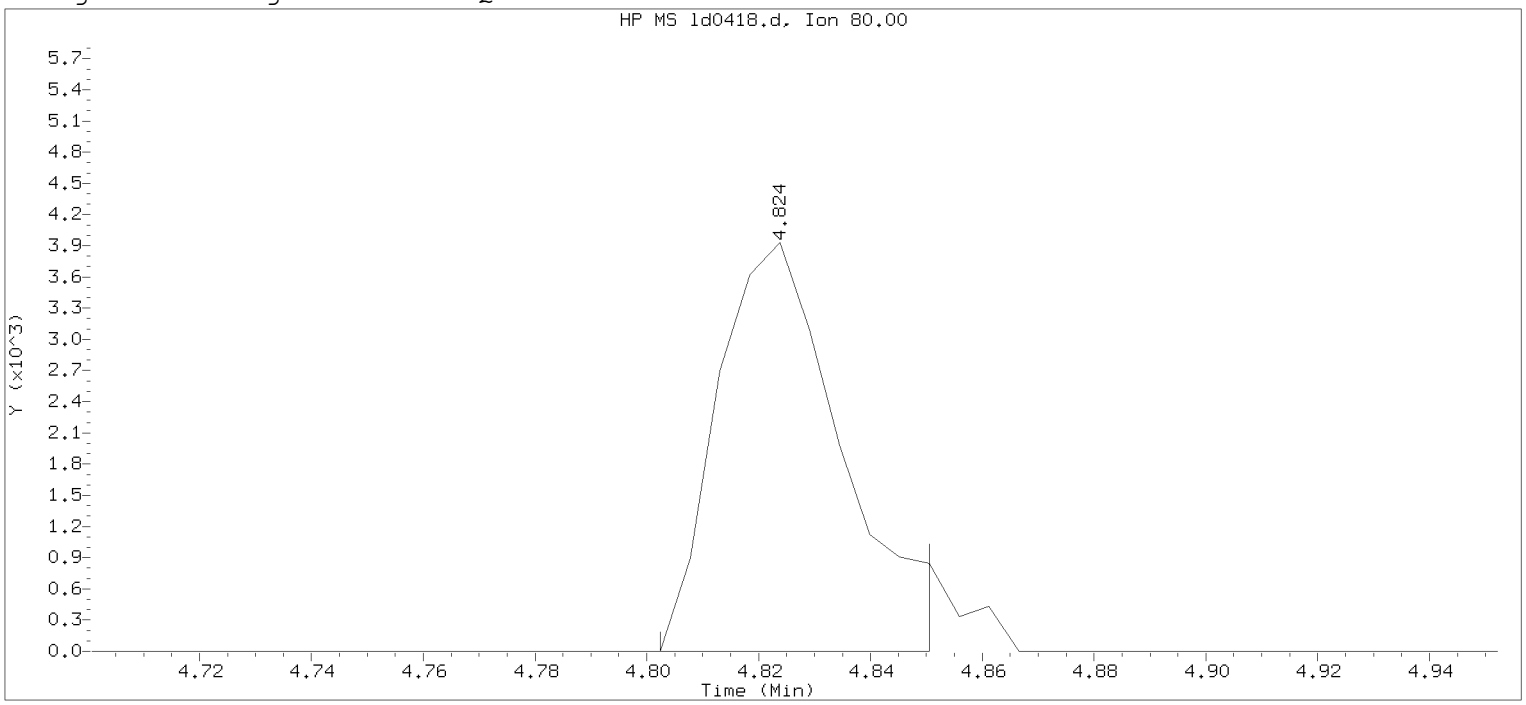
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

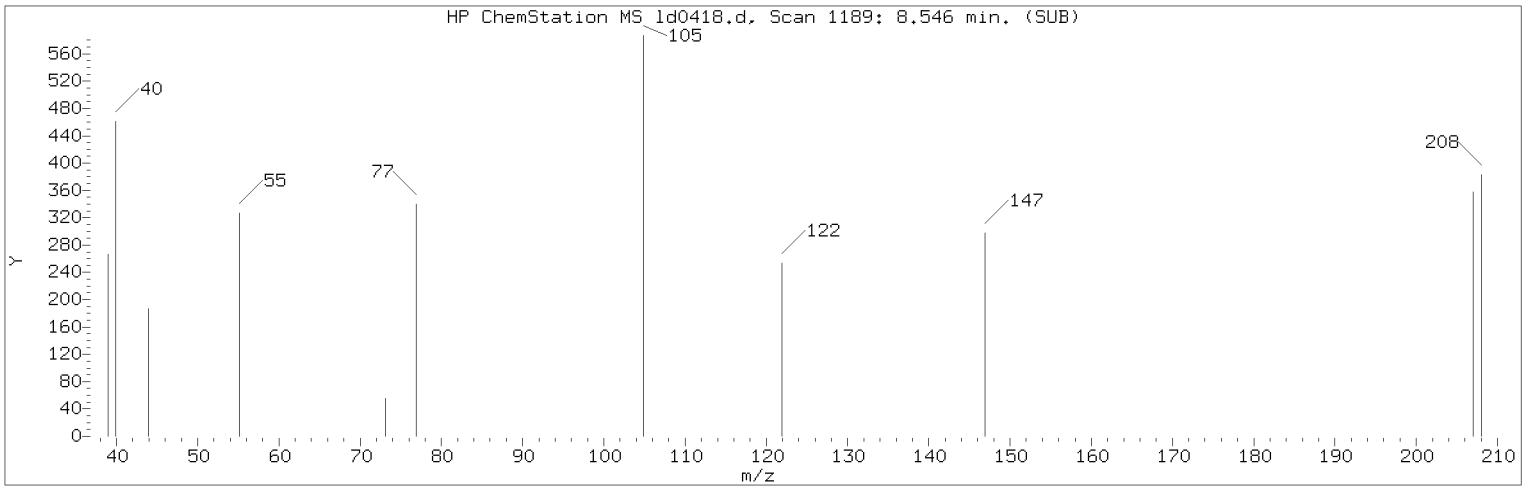
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

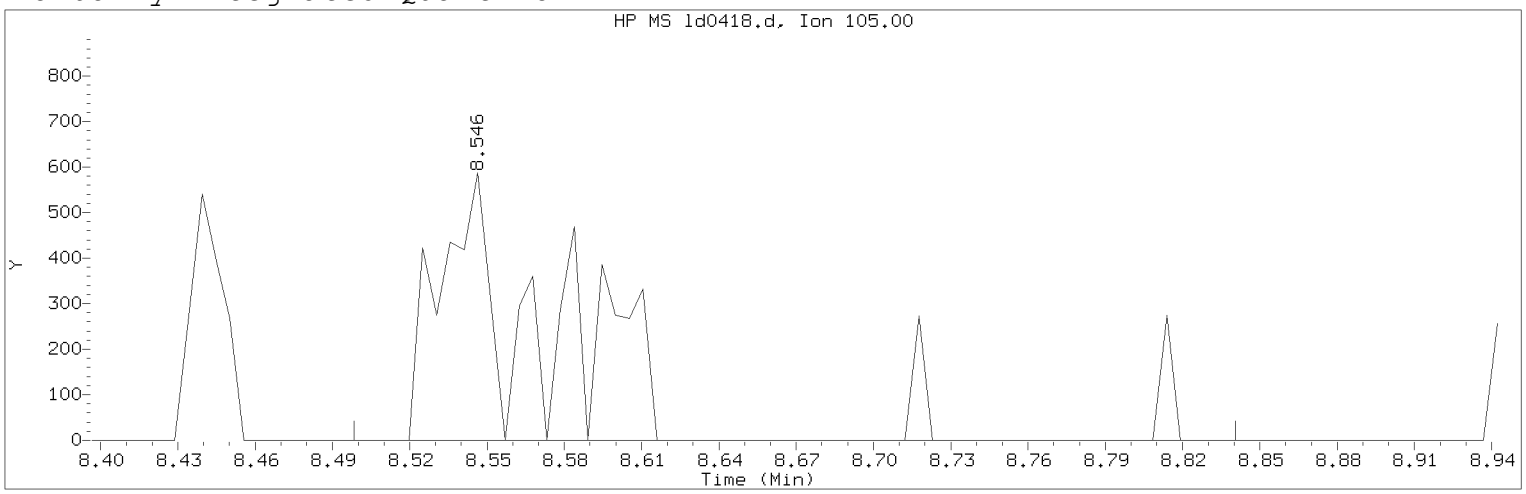
Compound Number	: 10		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 493		
Retention Time (minutes)	: 4.824		
Quant Ion	: 80.00		
Area	: 5993		
On-column Amount (ng/ul)	: 0.1538		
Integration start scan	: 488	Integration stop scan:	497
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FD6 Page 1781

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

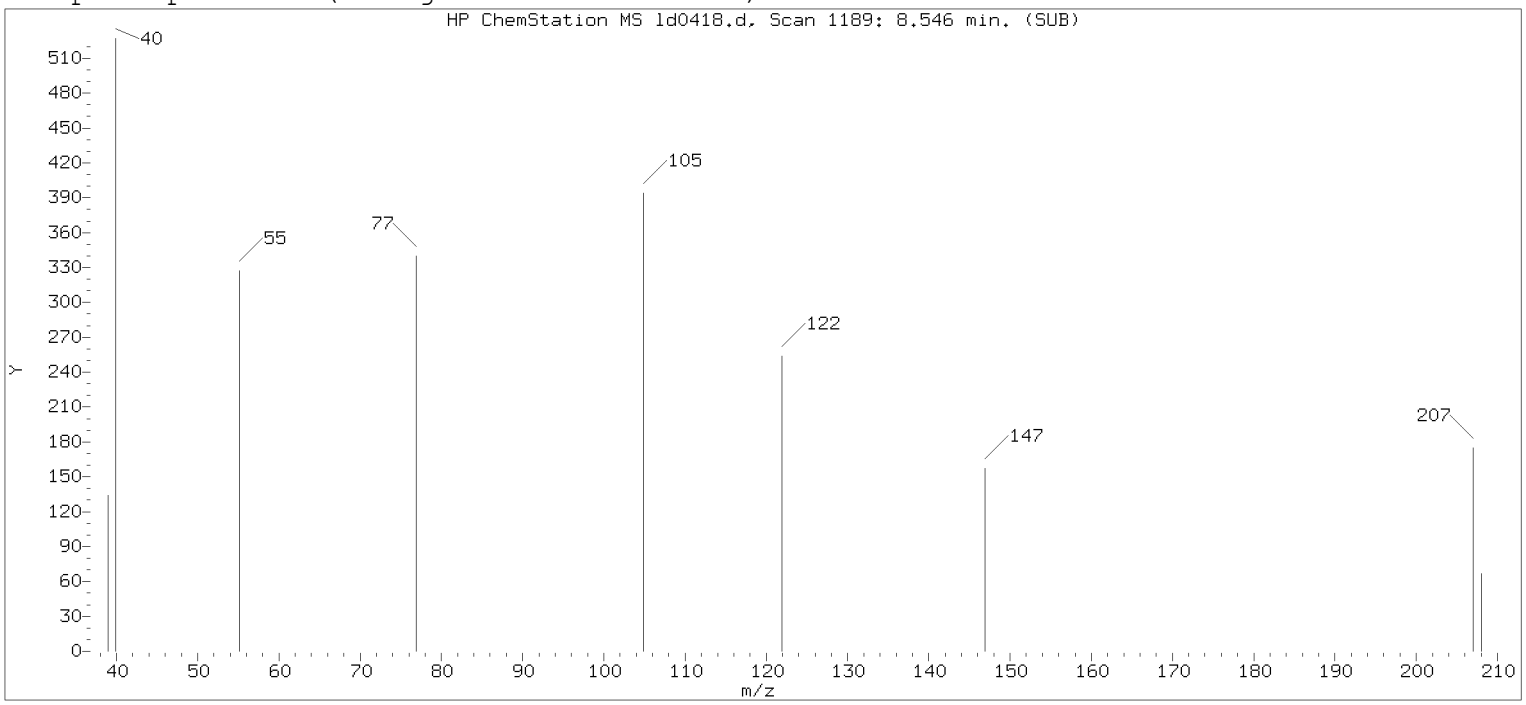
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1189
Retention Time (minutes) : 8.546
Quant Ion : 105.00
Area (flag) : 1809M
On-Column Amount (ng/ul) : 2.6853
Integration start scan : 1179 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

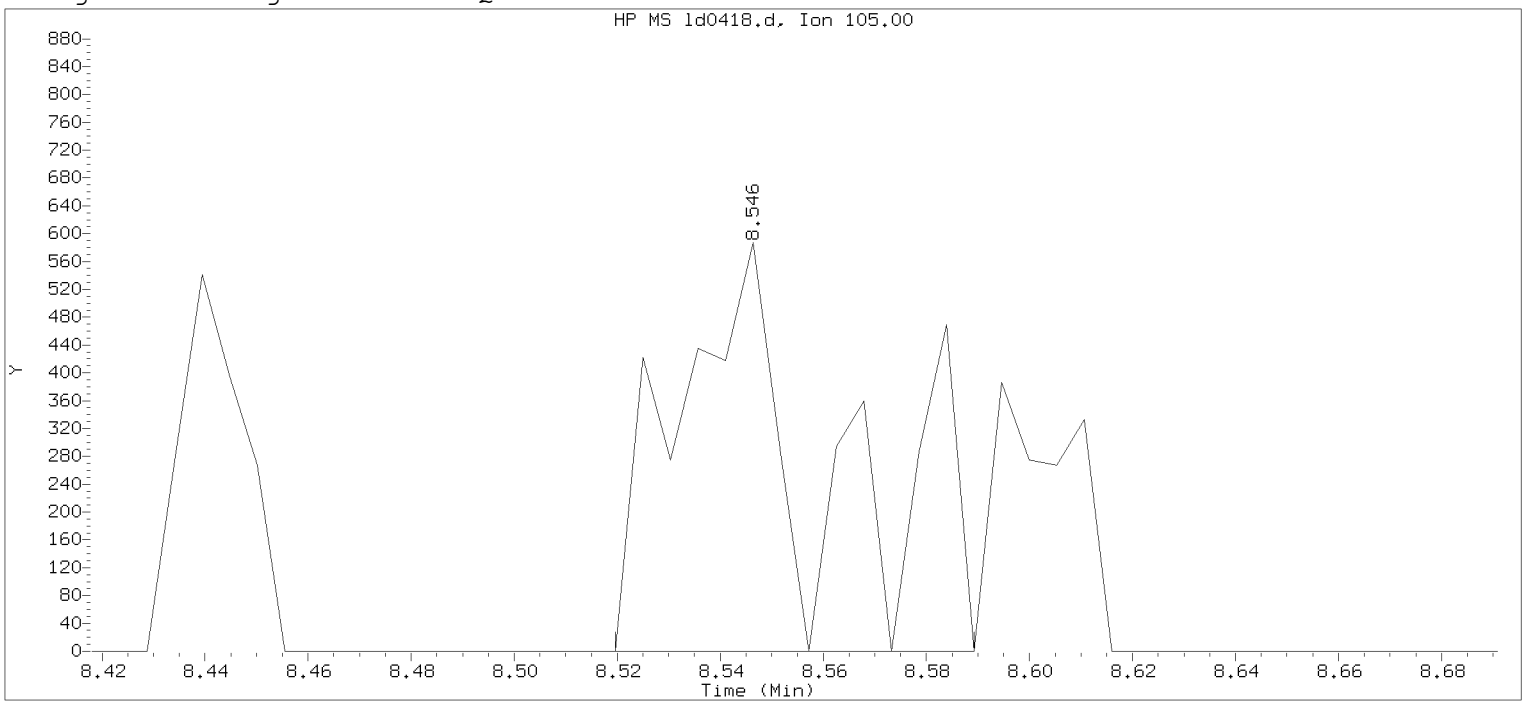
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

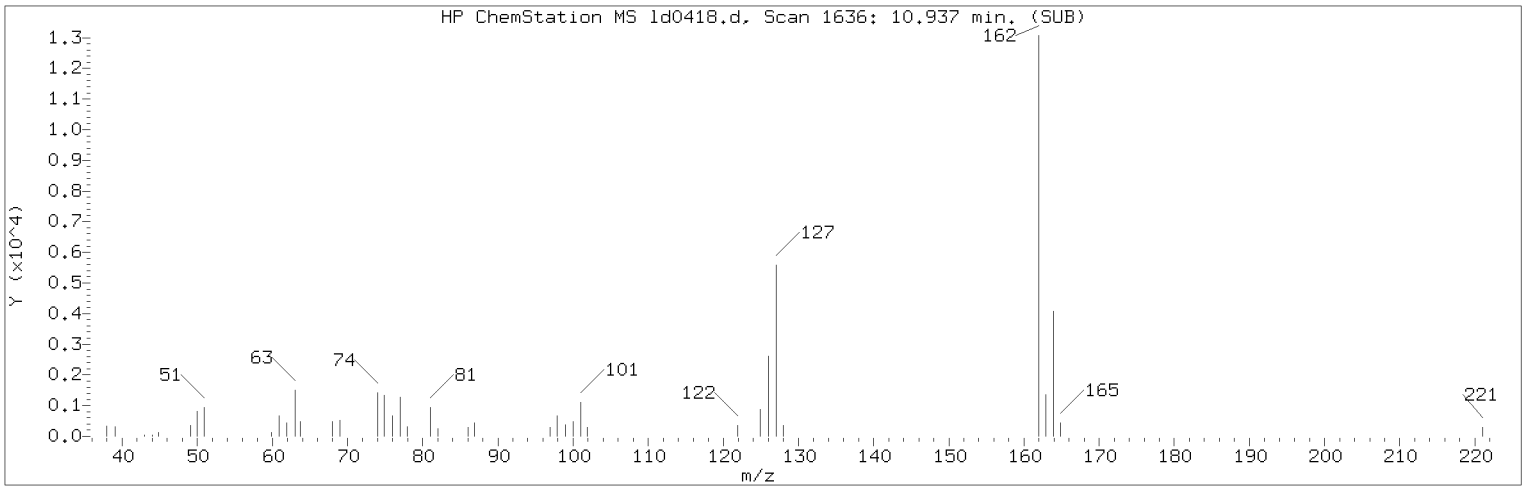
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

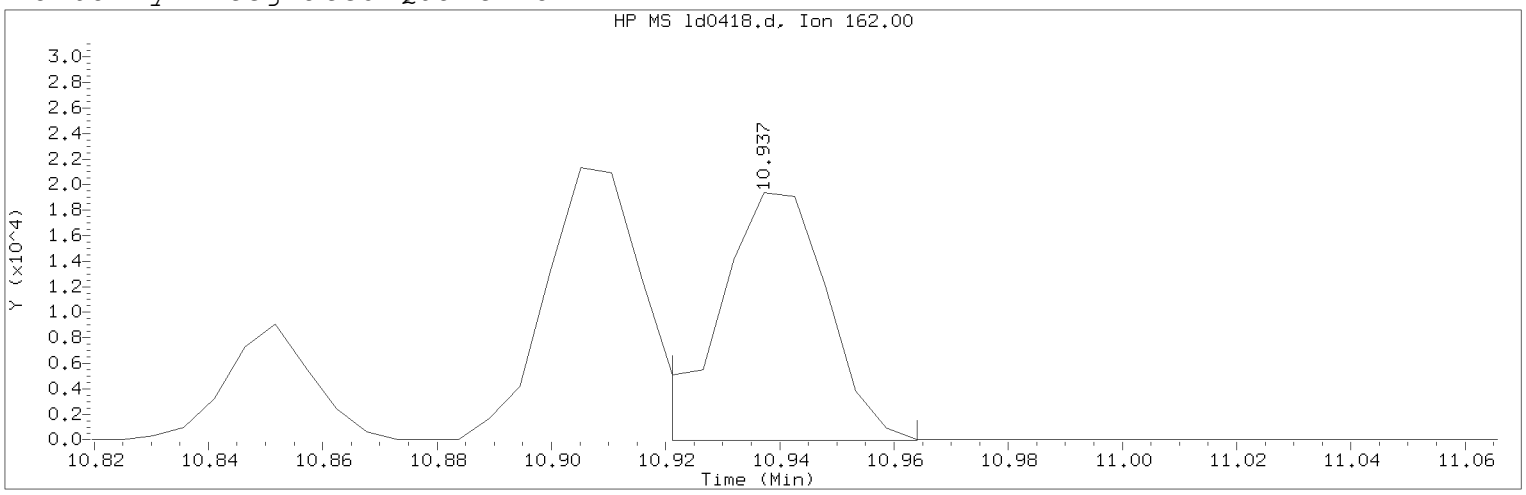
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1189		
Retention Time (minutes)	: 8.546		
Quant Ion	: 105.00		
Area	: 1229		
On-column Amount (ng/ul)	: 3.2237		
Integration start scan	: 1183	Integration stop scan:	1196
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: 1783

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

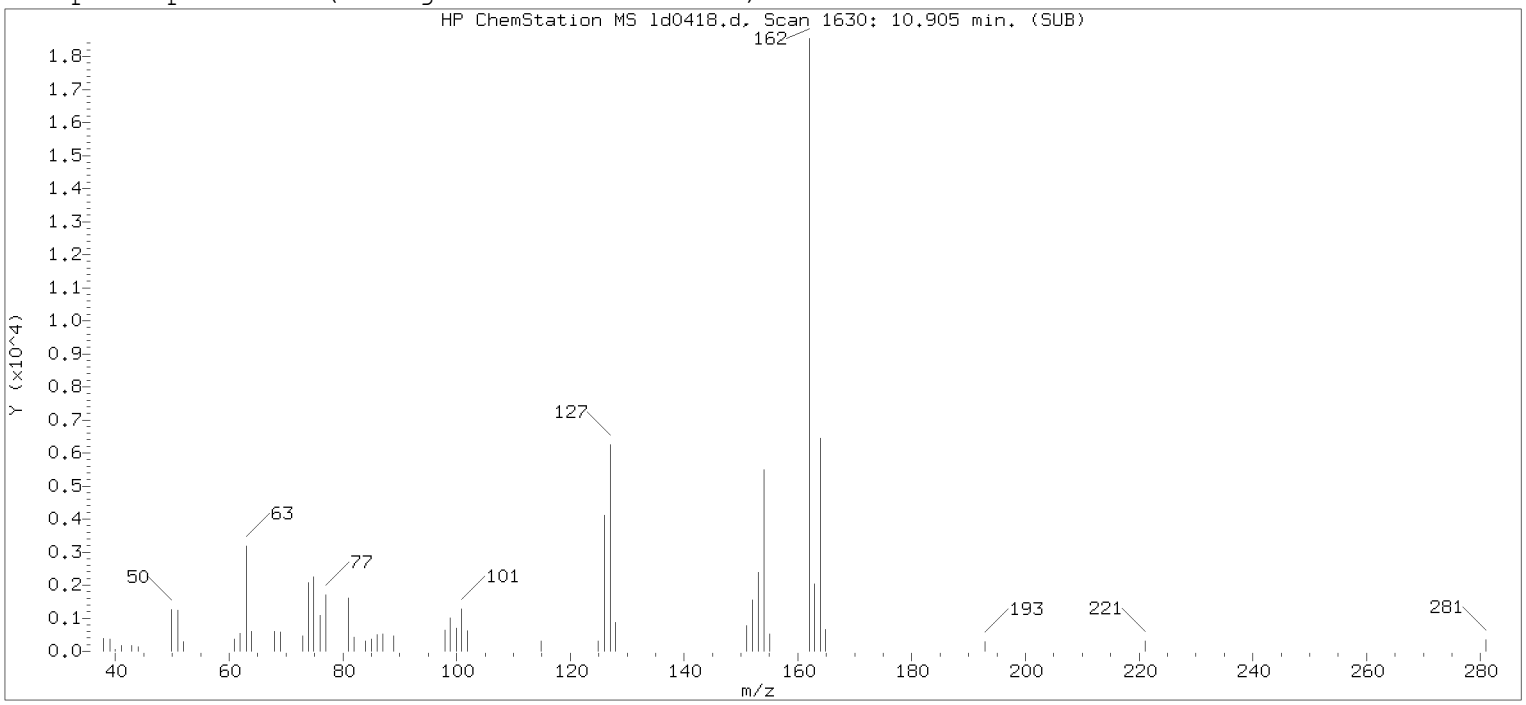
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 25748M
On-Column Amount (ng/ul) : 0.2349
Integration start scan : 1632 Integration stop scan: 1640
Y at integration start : -30 Y at integration end: -30

Reason for manual integration: improper integration

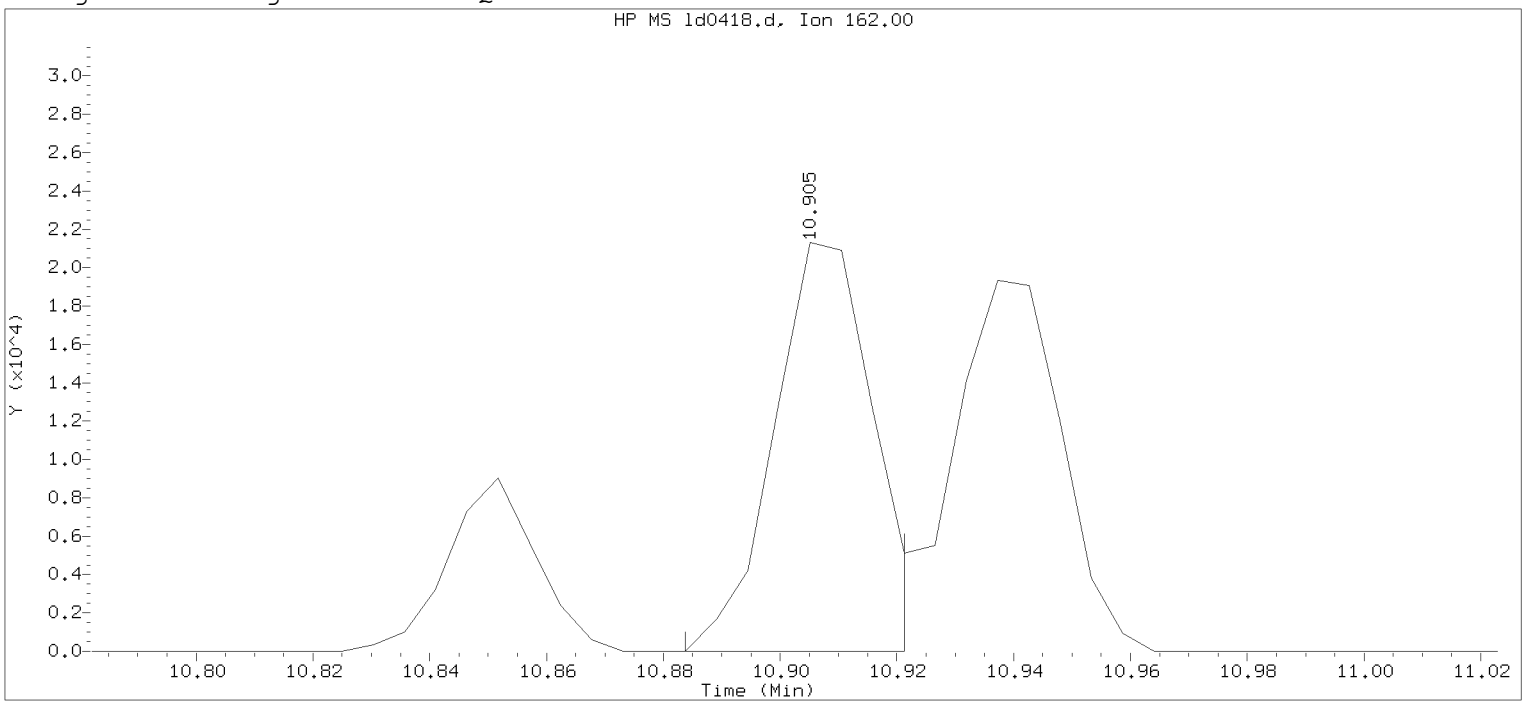
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

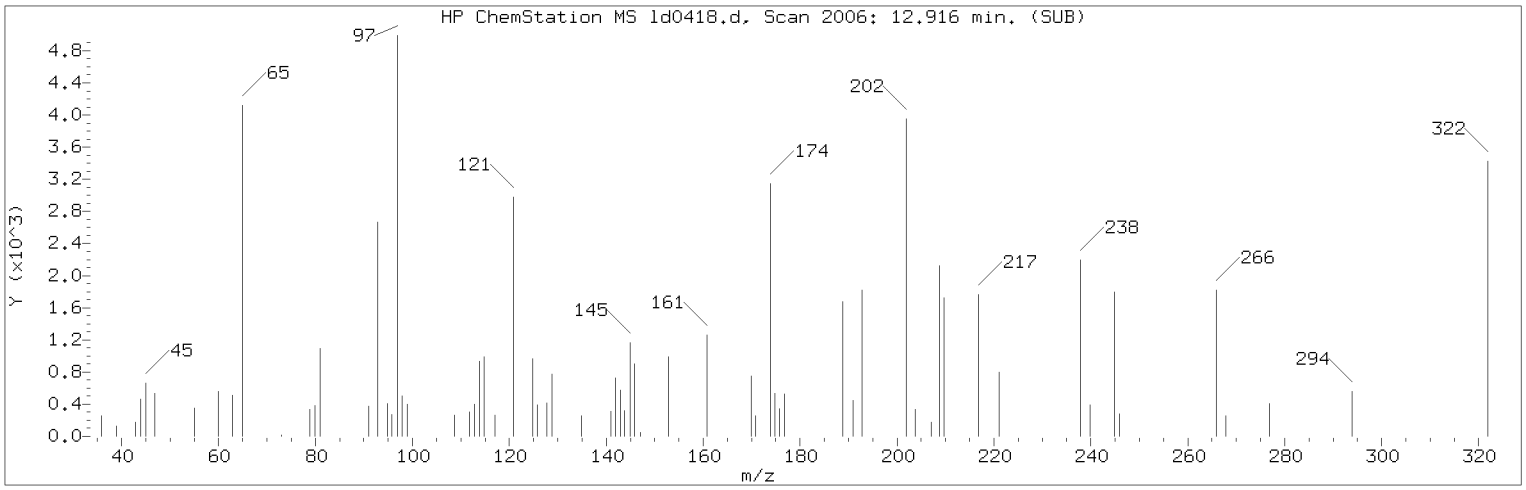
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

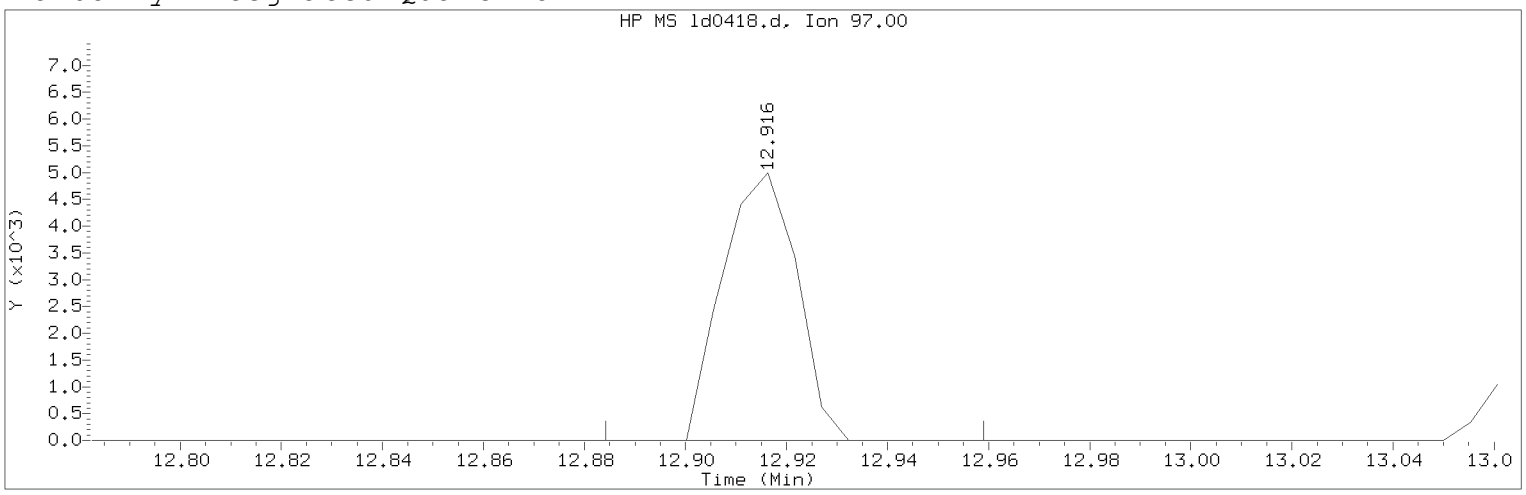
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1630
Retention Time (minutes) : 10.905
Quant Ion : 162.00
Area : 24485
On-column Amount (ng/ul) : 0.2234
Integration start scan : 1625 Integration stop scan: 1632
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1785

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

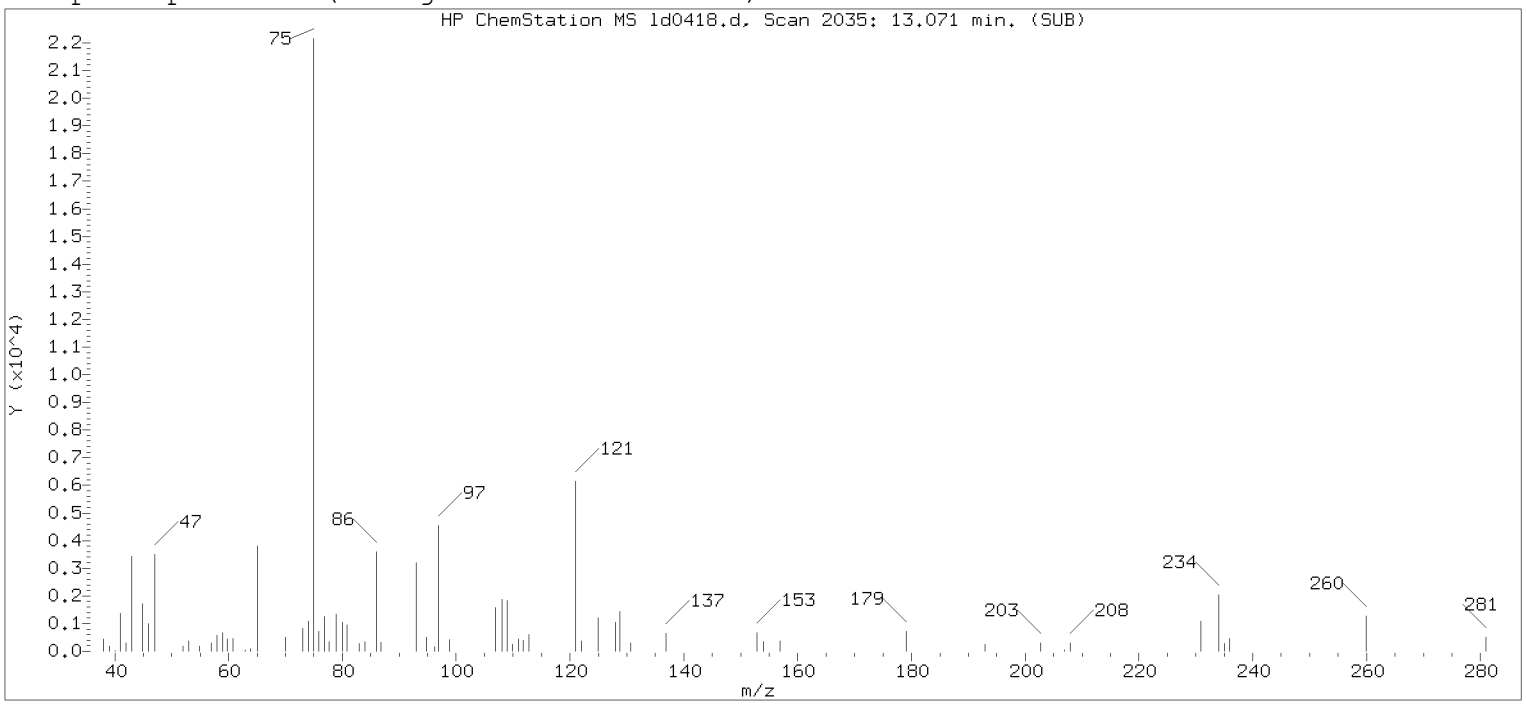
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 5094M
On-Column Amount (ng/ul) : 0.2083
Integration start scan : 1999 Integration stop scan: 2013
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

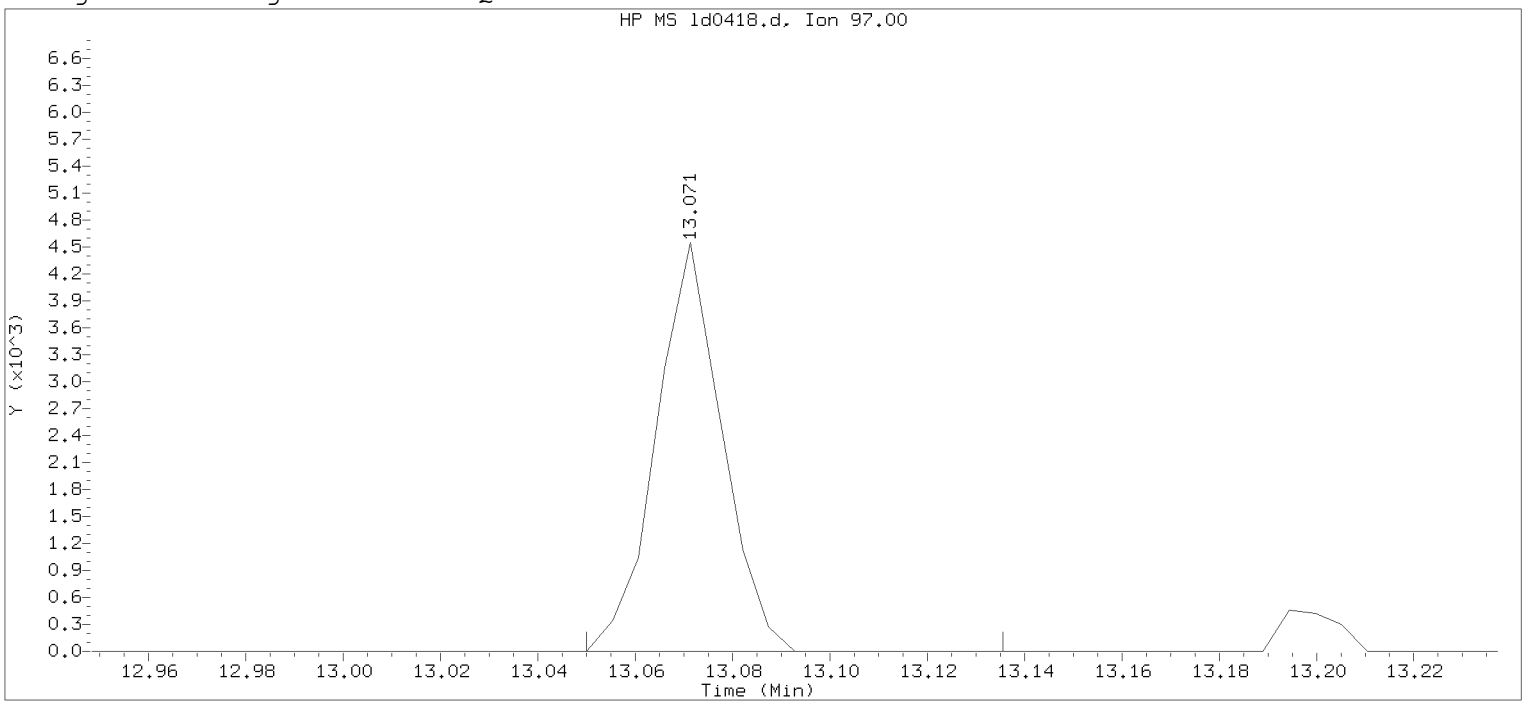
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

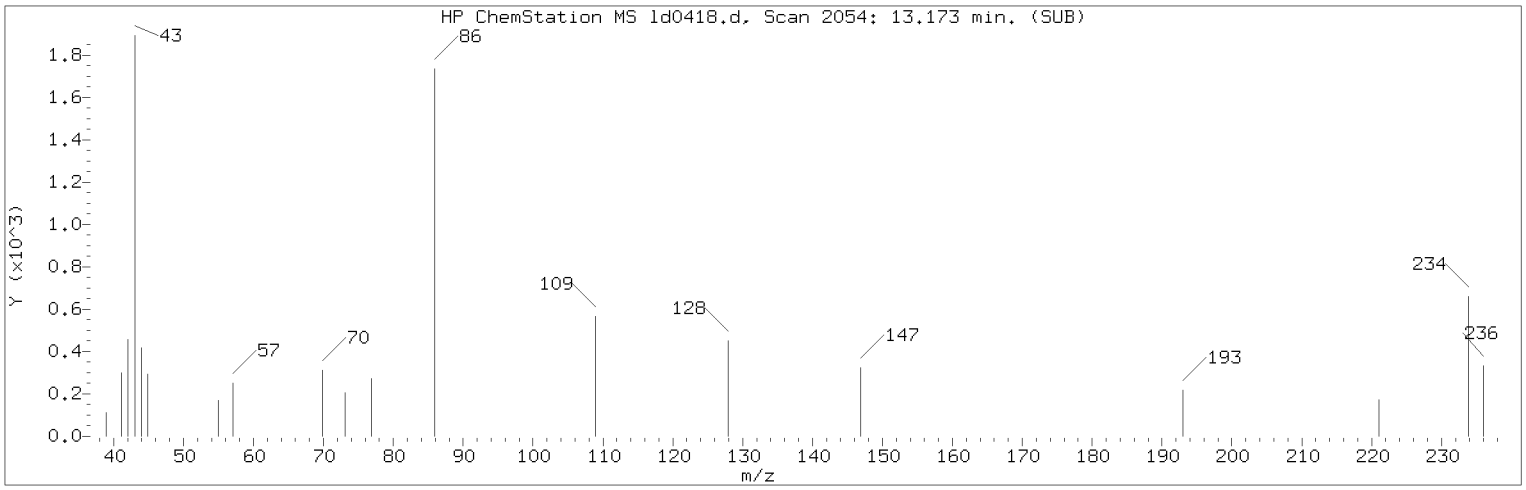
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

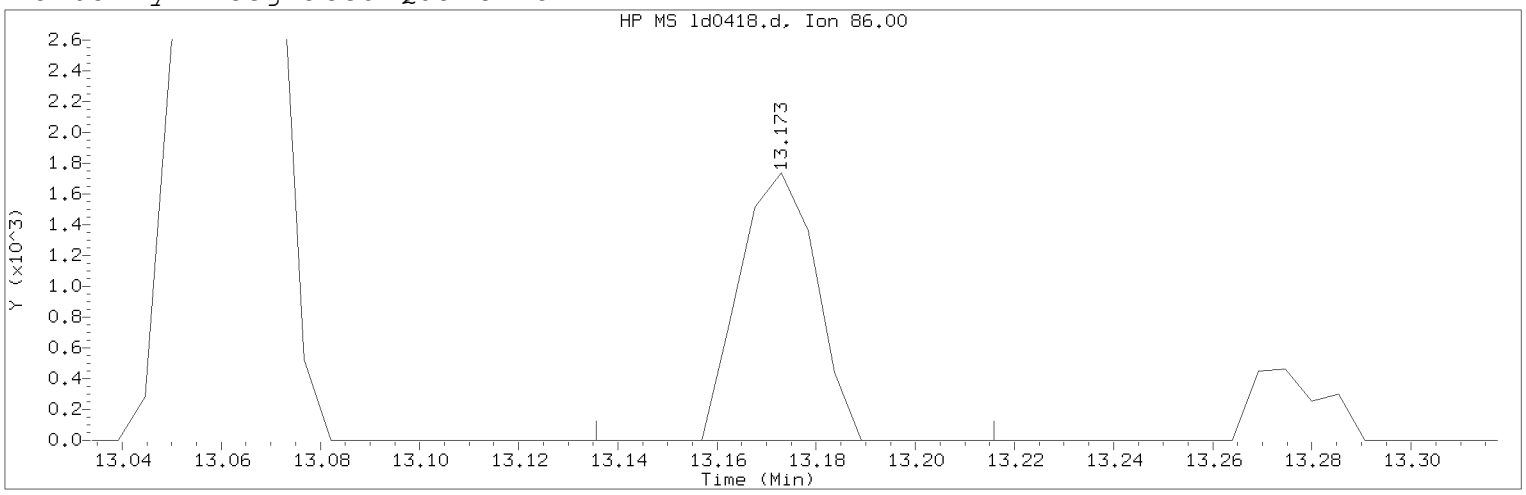
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2035		
Retention Time (minutes)	: 13.071		
Quant Ion	: 97.00		
Area	: 4266		
On-column Amount (ng/ul)	: 0.1662		
Integration start scan	: 2030	Integration stop scan:	2046
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FD6 Page 1787

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

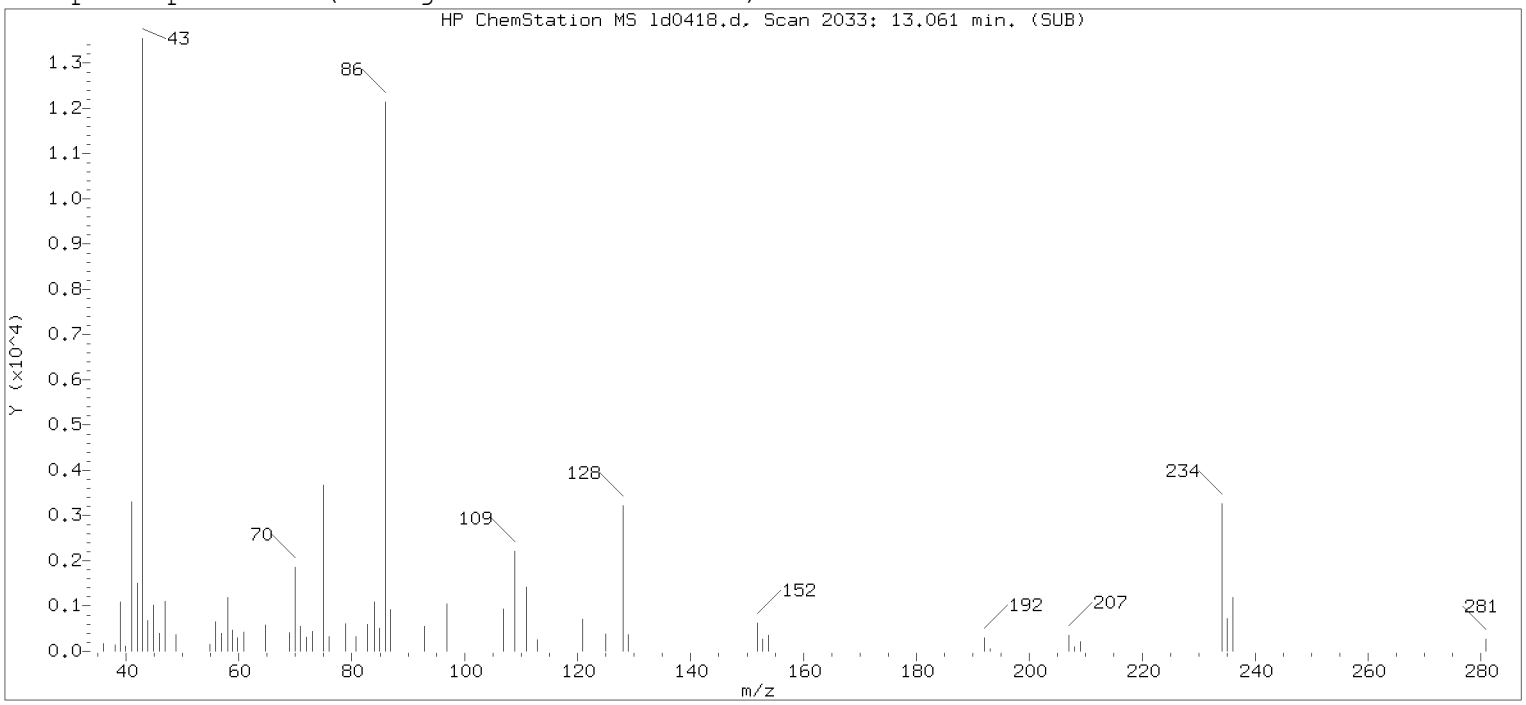
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2054
Retention Time (minutes) : 13.173
Quant Ion : 86.00
Area (flag) : 1856M
On-Column Amount (ng/ul) : 0.0360
Integration start scan : 2046 Integration stop scan: 2061
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

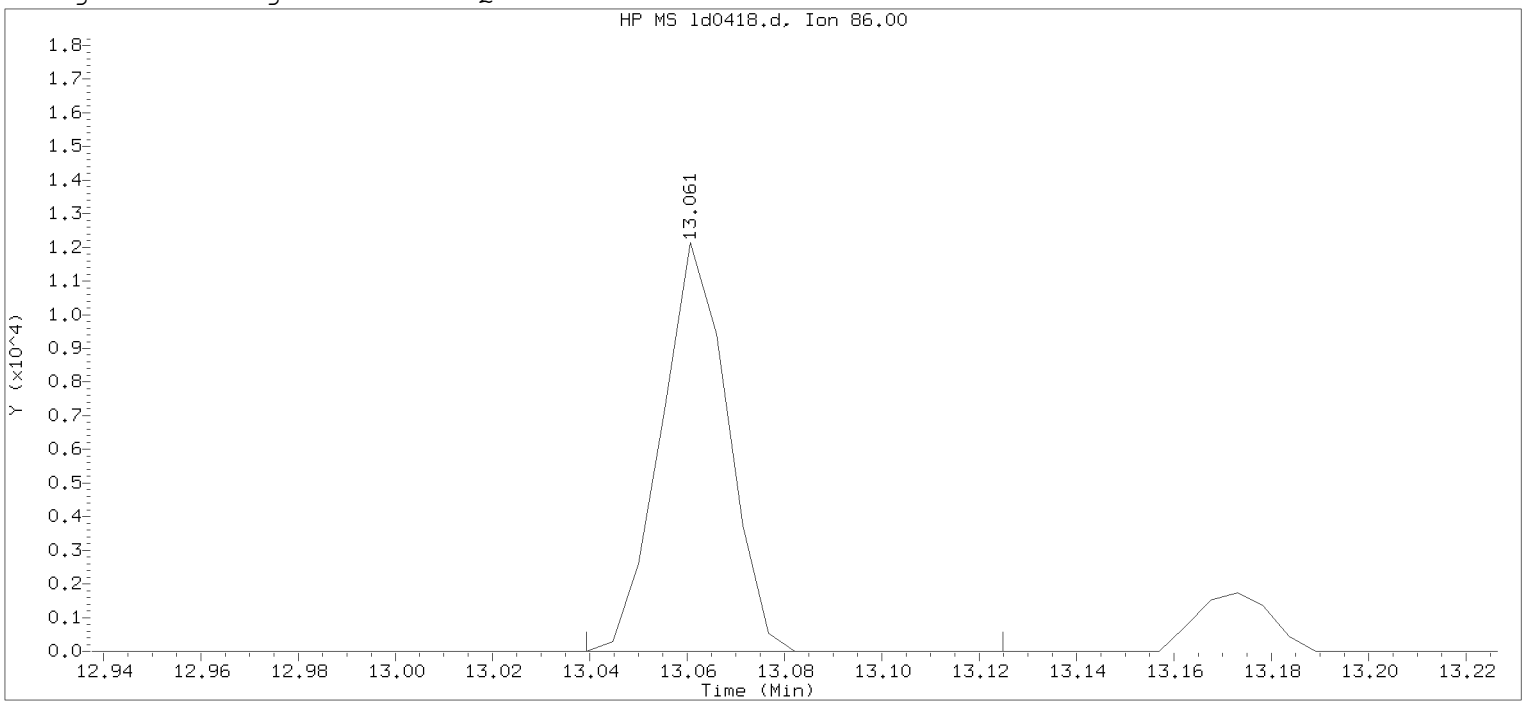
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

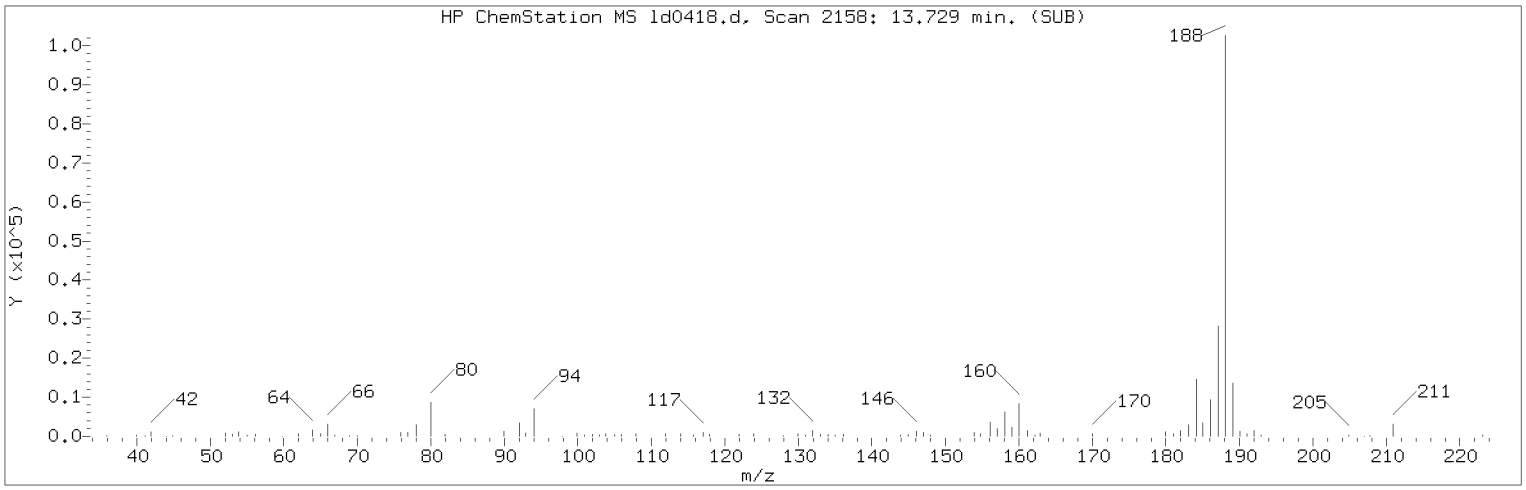
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

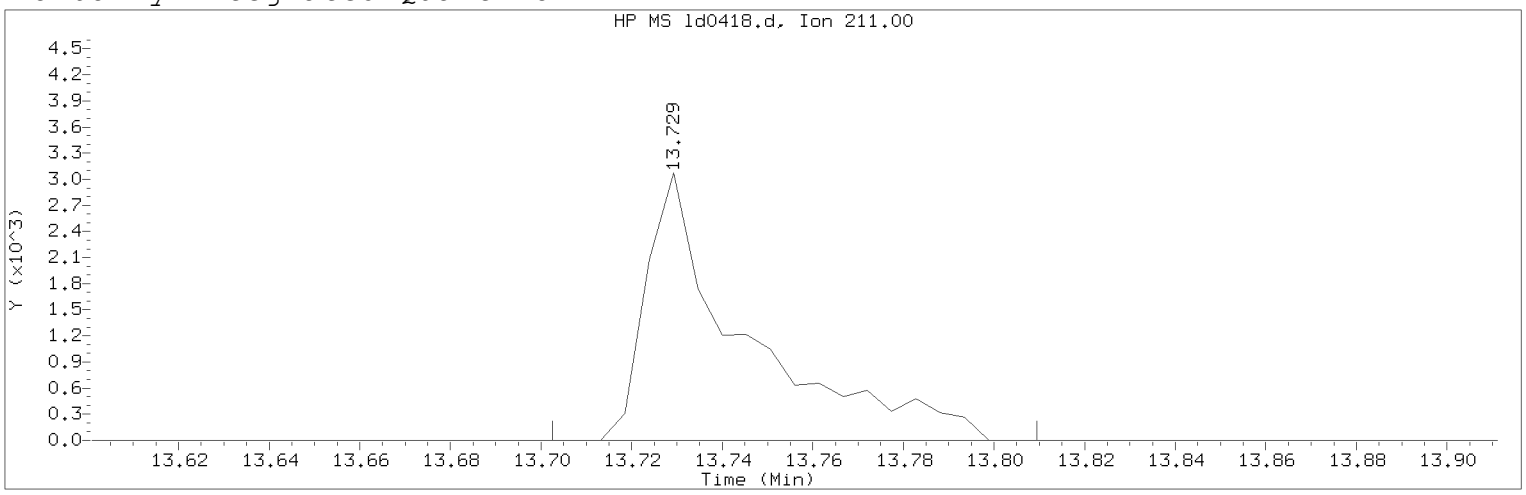
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.061		
Quant Ion	: 86.00		
Area	: 11520		
On-column Amount (ng/ul)	: 0.2135		
Integration start scan	: 2028	Integration stop scan:	2044
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FD6 Part 1789

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

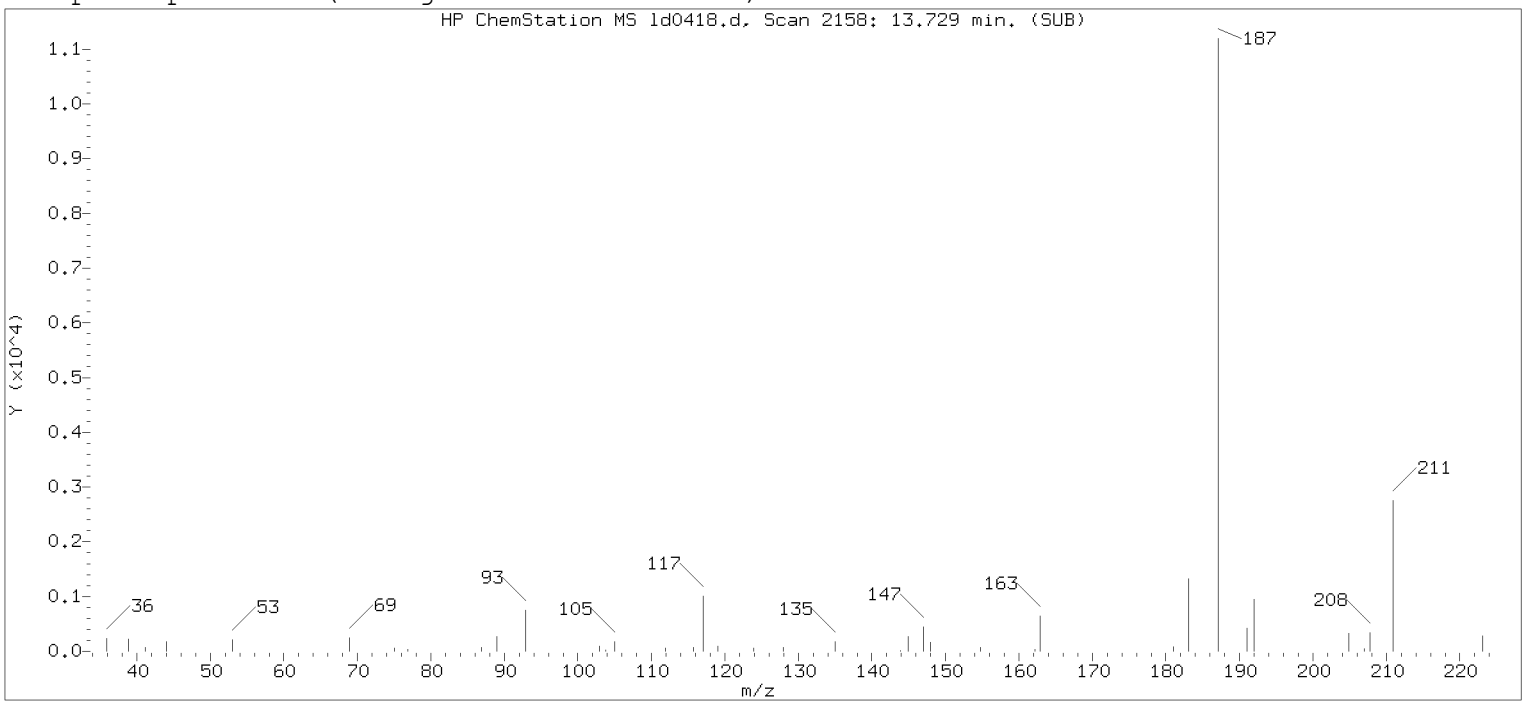
Compound Number : 159
Compound Name : Dinoseb
Scan Number : 2158
Retention Time (minutes) : 13.729
Quant Ion : 211.00
Area (flag) : 4630M
On-Column Amount (ng/ul) : 0.1327
Integration start scan : 2152 Integration stop scan: 2172
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

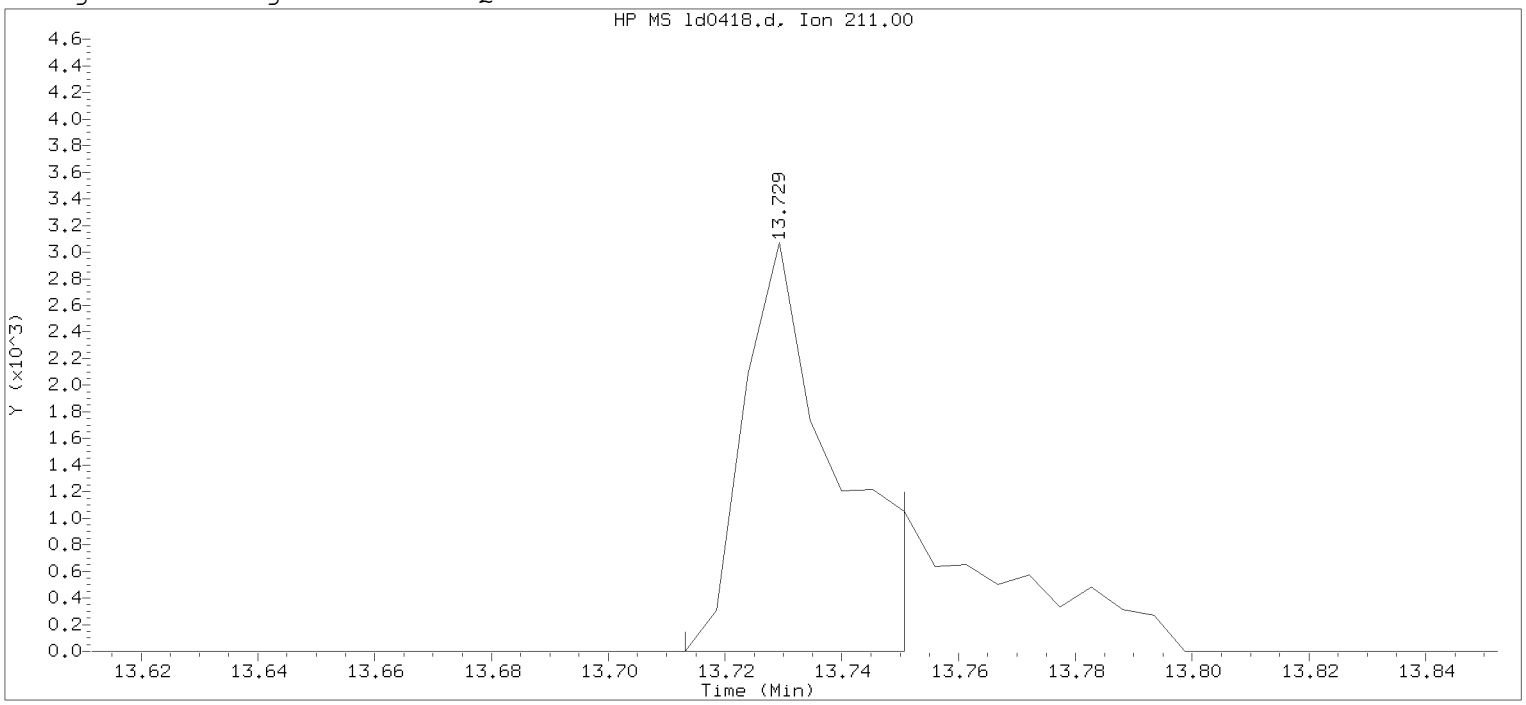
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

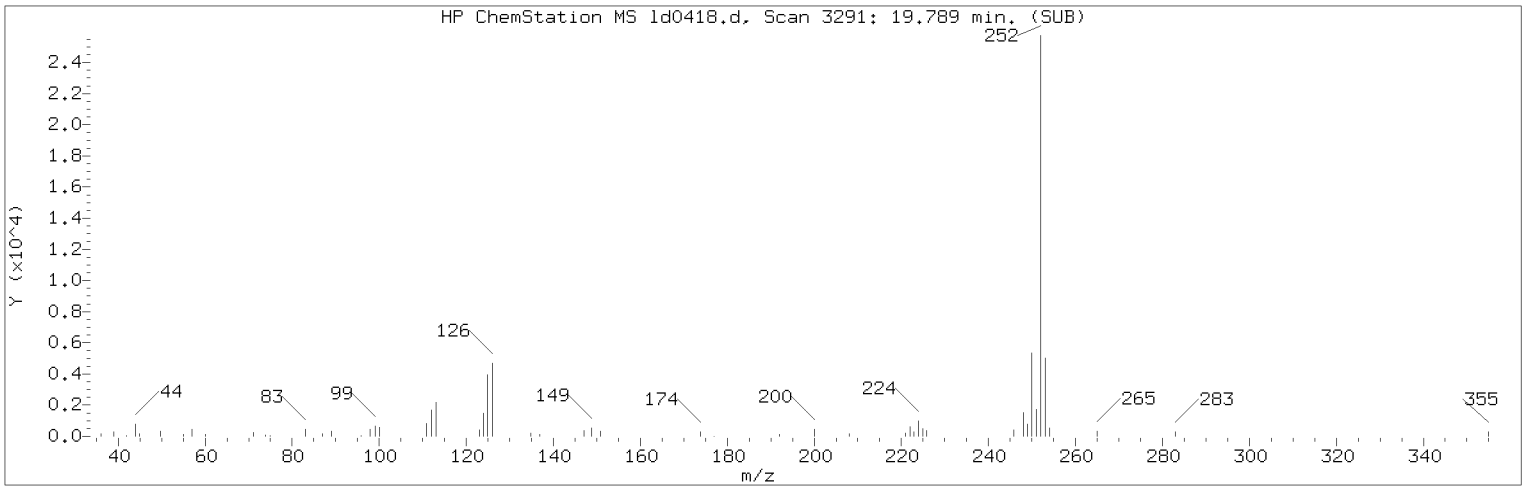
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

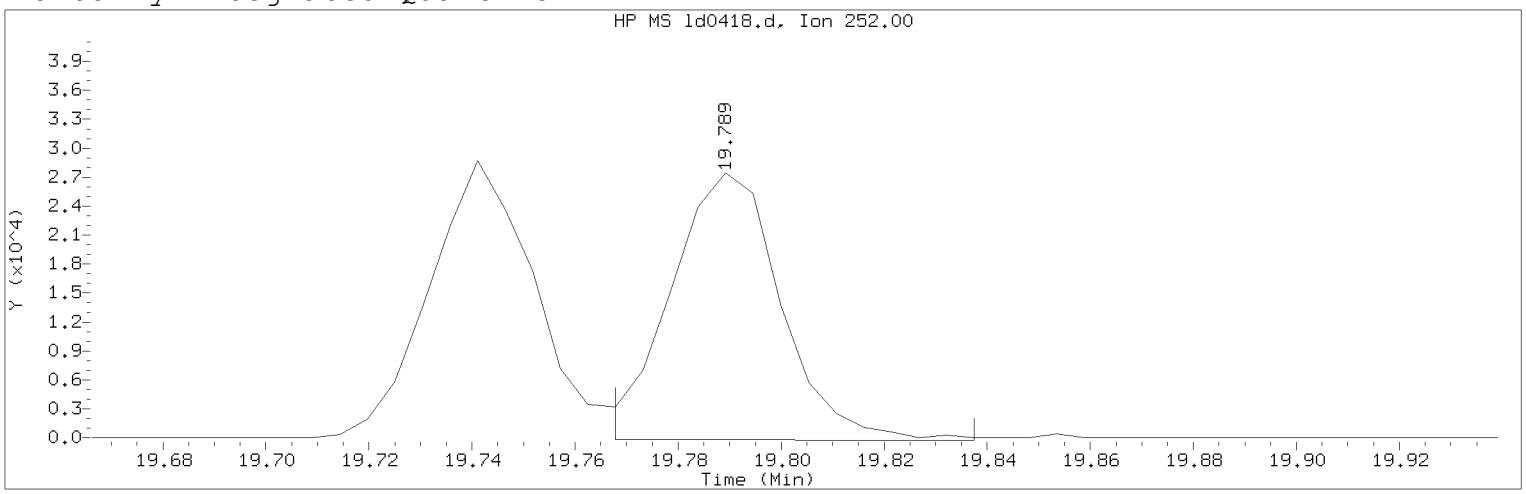
Compound Number	: 159		
Compound Name	: Dinoseb		
Scan Number	: 2158		
Retention Time (minutes)	: 13.729		
Quant Ion	: 211.00		
Area	: 3256		
On-column Amount (ng/ul)	: 0.0919		
Integration start scan	: 2154	Integration stop scan:	2161
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1791

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

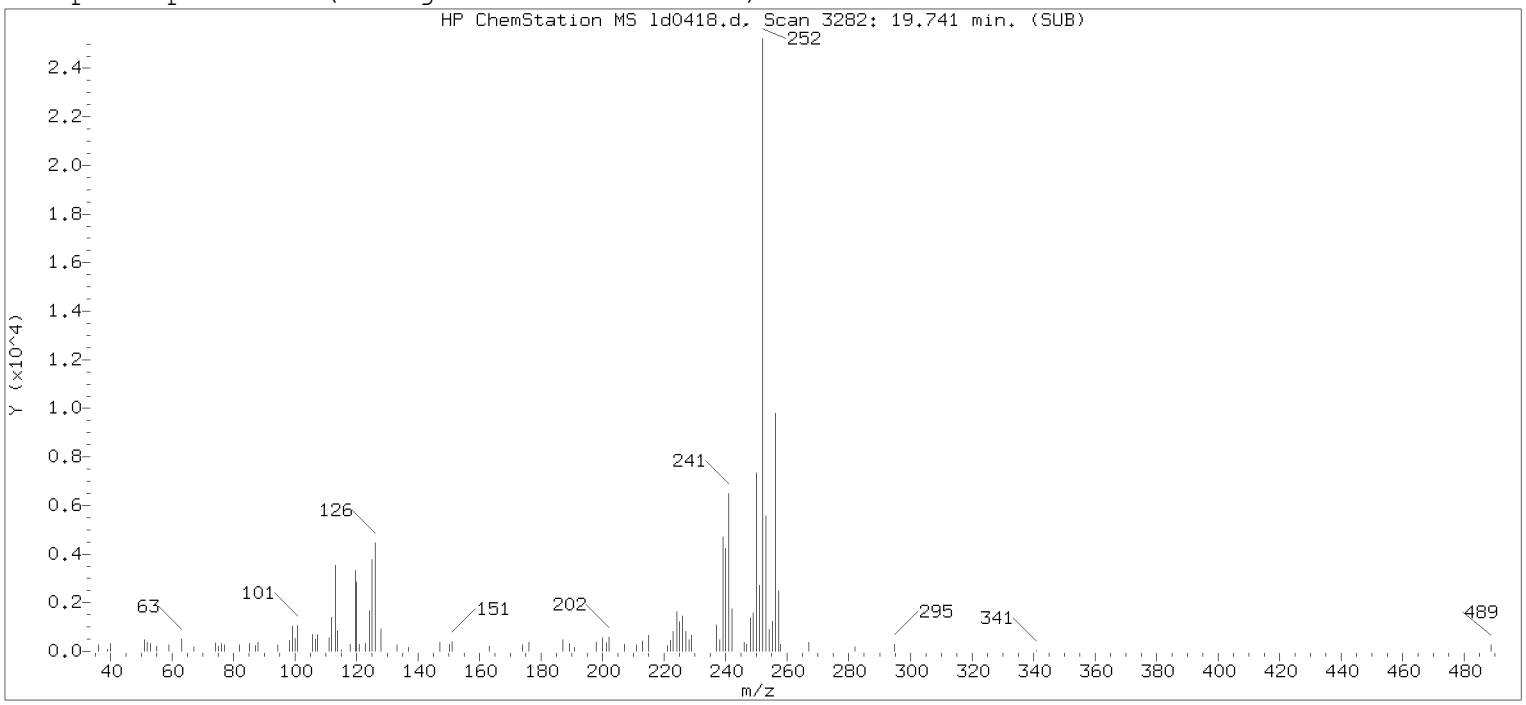
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 41484M
On-Column Amount (ng/ul) : 0.2303
Integration start scan : 3286 Integration stop scan: 3299
Y at integration start : -207 Y at integration end: -251

Reason for manual integration: improper integration

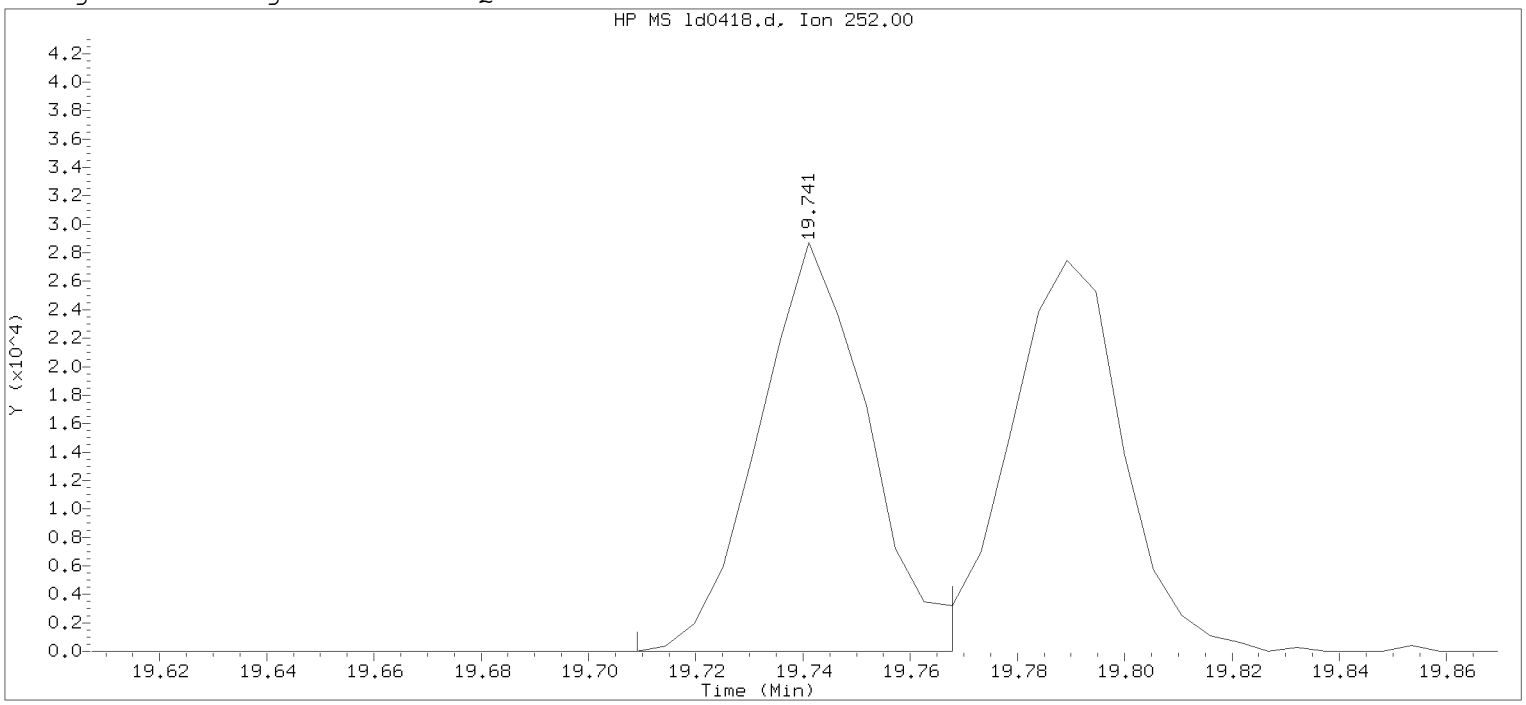
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

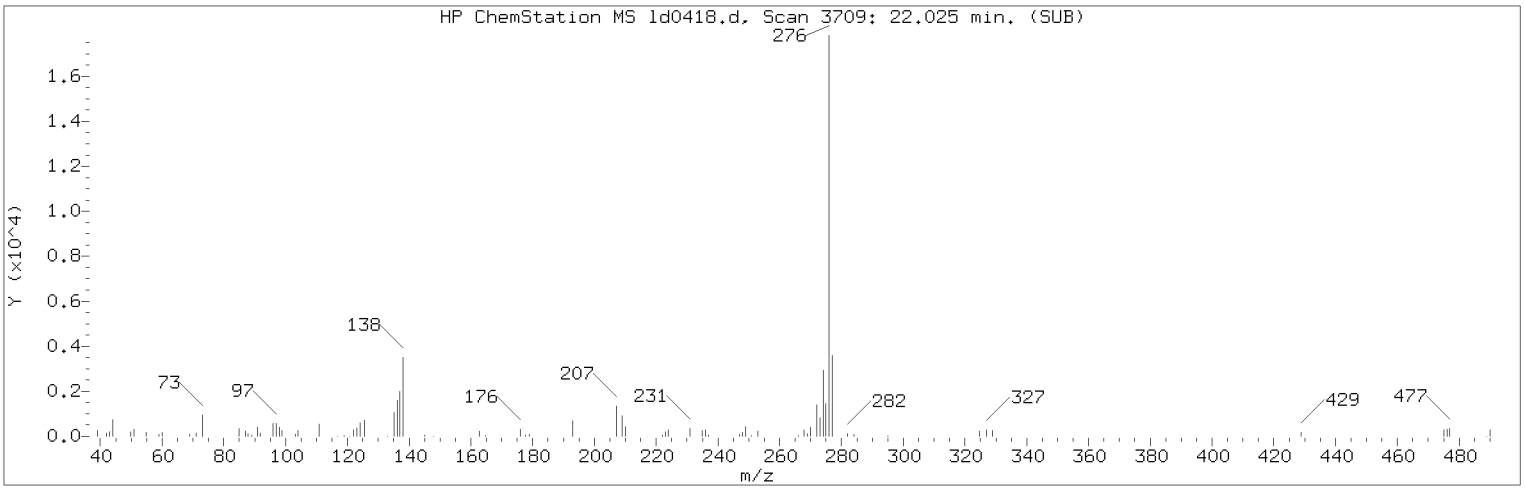
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

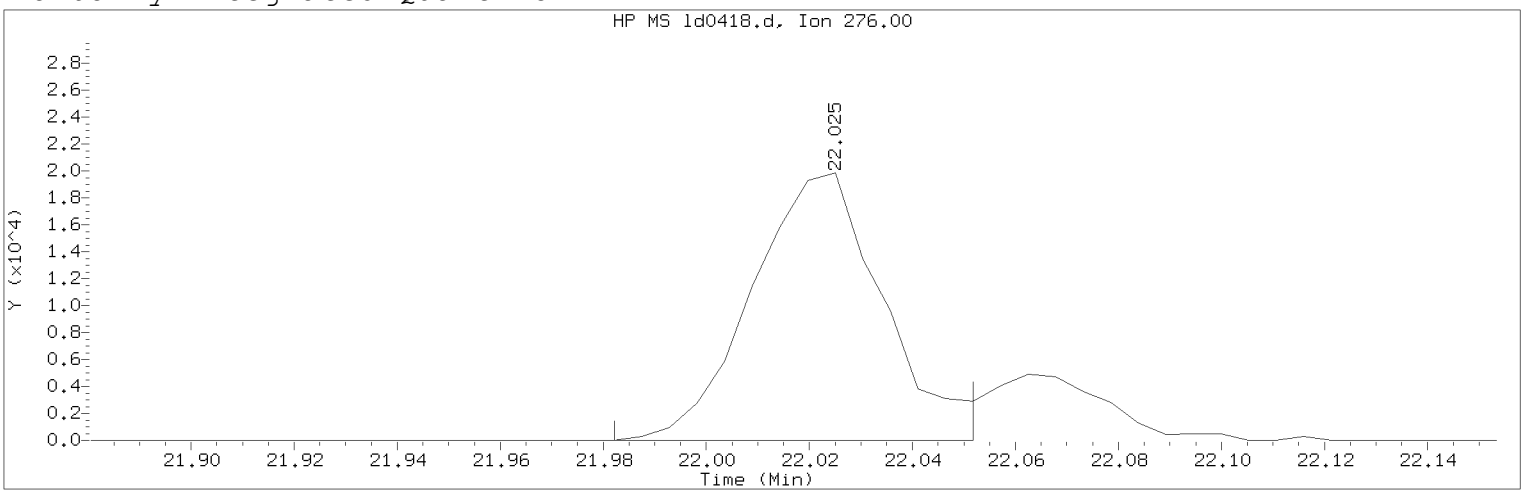
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 40317		
On-column Amount (ng/ul)	: 0.2151		
Integration start scan	: 3275	Integration stop scan:	3286
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Page 1793

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:06 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

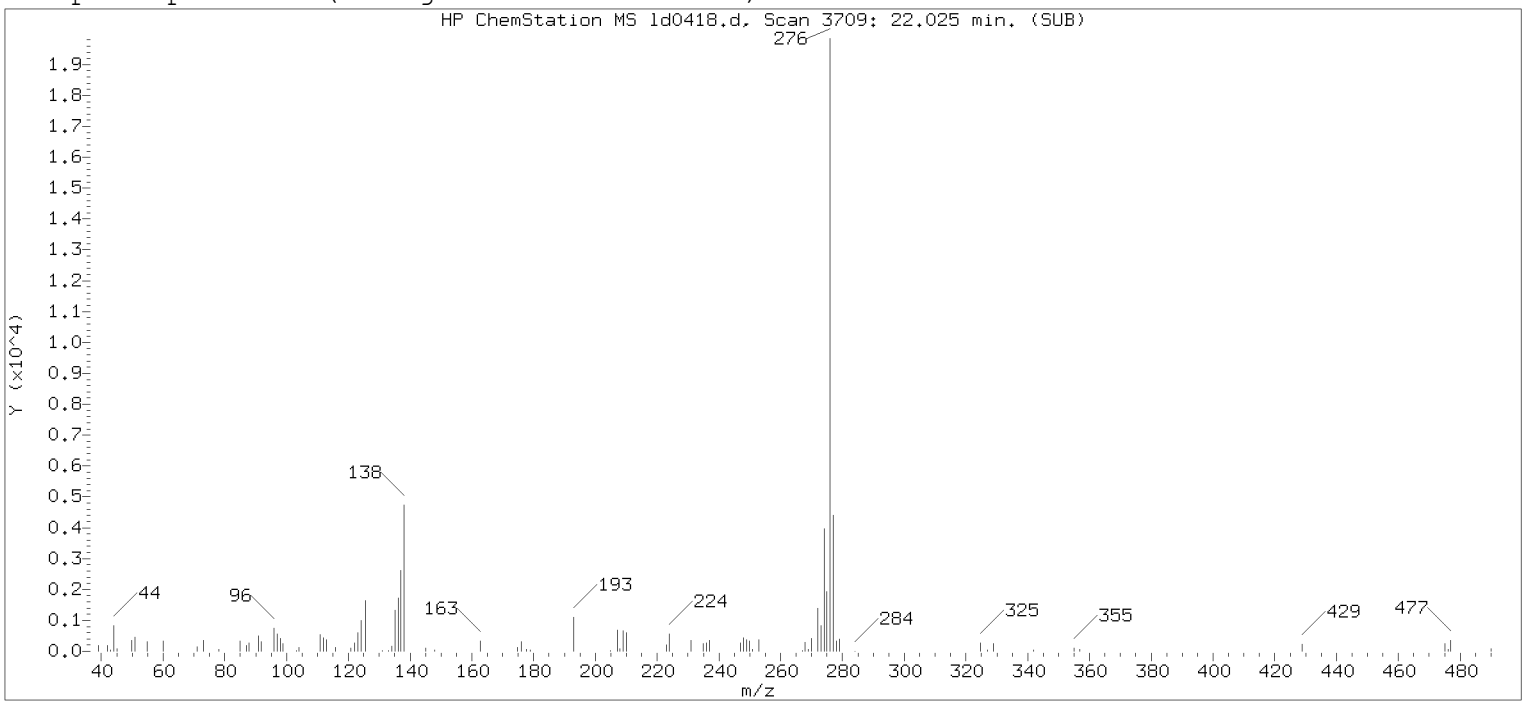
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3709
Retention Time (minutes) : 22.025
Quant Ion : 276.00
Area (flag) : 35016M
On-Column Amount (ng/ul) : 0.2191
Integration start scan : 3700 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

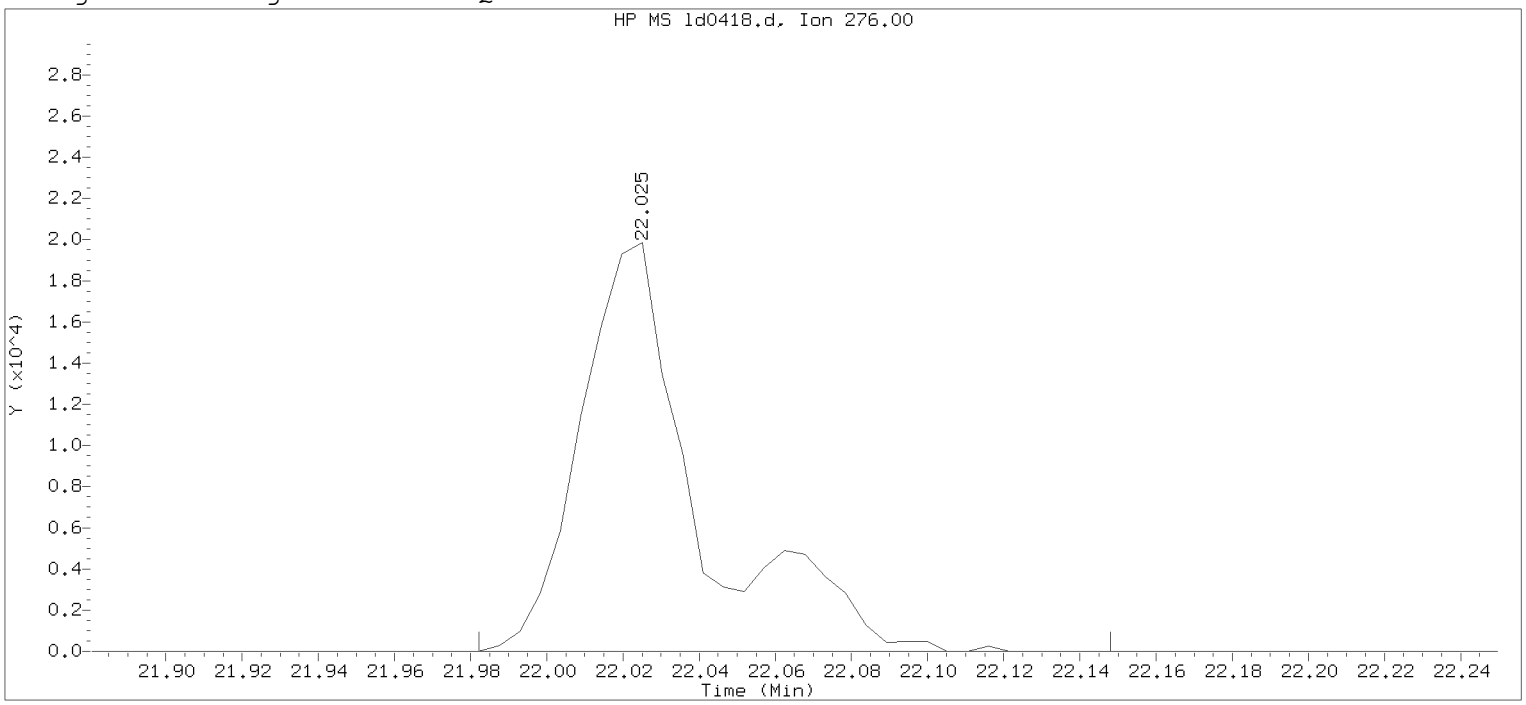
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:19.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



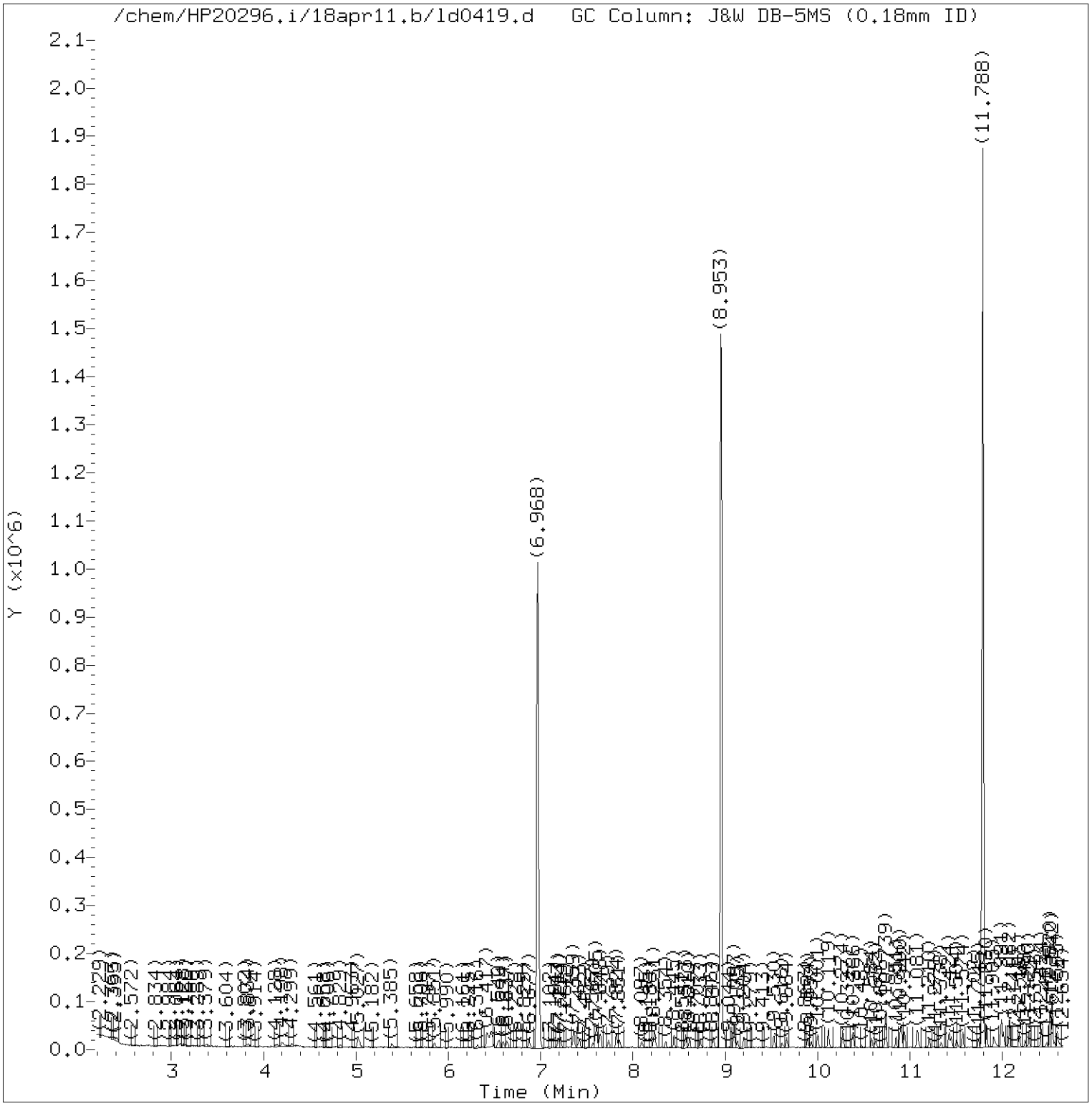
Data File: /chem/HP20296.i/18apr11.b/ld0418.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:20 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: all1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 12:45 Unknown

Sample Name: SSTD0.25 Lab Sample ID: rvSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3709		
Retention Time (minutes)	: 22.025		
Quant Ion	: 276.00		
Area	: 42411		
On-column Amount (ng/ul)	: 0.2515		
Integration start scan	: 3700	Integration stop scan:	3731
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:19.
Target 3.5 esignature used. FID Part 1795



Total Ion Chromatogram (TIC)

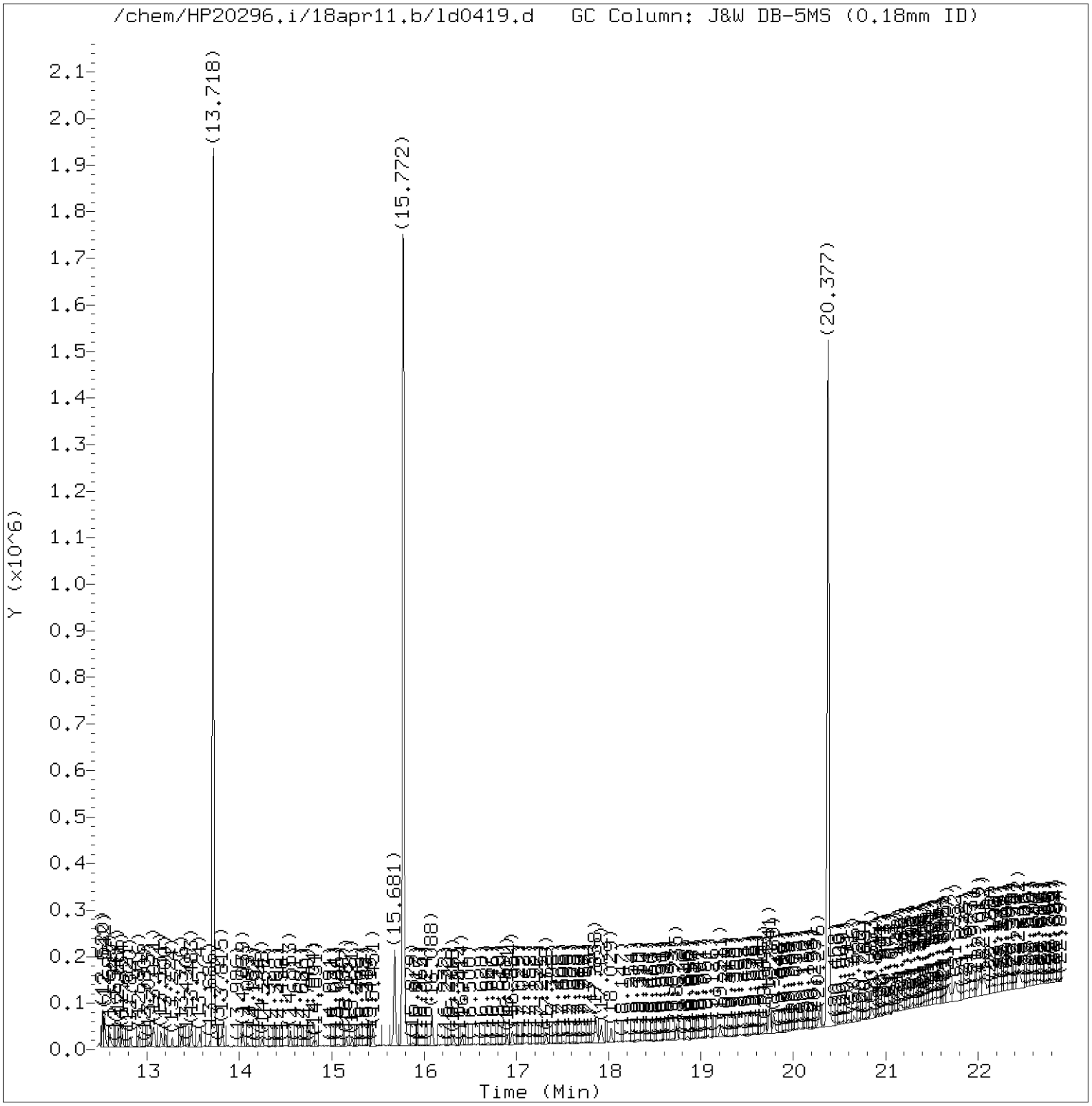
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.433	88	4809M	0.167
5) N-Nitrosodimethylamine	(1)	3.042	74	3110	0.071
6) Pyridine	(1)	3.107	79	7447M	0.095
8) 2-Picoline	(1)	4.198	93	6688M	0.085
9) N-Nitrosomethylethylamine	(1)	4.380	88	2517M	0.079
10) Methyl methanesulfonate	(1)	4.824	80	2936	0.077
12)$2-Fluorophenol	(1)	5.027	112	10387	0.172
14) N-Nitrosodiethylamine	(1)	5.396	102	2062	0.070
43) Total Cresols	(1)			12471	0.208
16) Ethyl methanesulfonate	(1)	5.856	109	2806	0.088
17) Benzaldehyde	(1)	6.316	77	1651M	0.028
18)$Phenol-d6	(1)	6.417	99	14721	0.186
19) Phenol	(1)	6.439	94	8341	0.092
20) Aniline	(1)	6.476	93	9272	0.088
21) a-methylstyrene	(1)	6.551	118	1653	0.072
23) bis(2-Chloroethyl)ether	(1)	6.594	93	5947	0.088
24) 2-Chlorophenol	(1)	6.637	128	5720	0.097
25) 1,3-Dichlorobenzene	(1)	6.877	146	6440	0.097
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	220096	5.000
27) 1,4-Dichlorobenzene	(1)	6.995	146	6333	0.094
28) Benzyl alcohol	(1)	7.193	108	3628	0.092
29) 1,2-Dichlorobenzene	(1)	7.214	146	5828	0.091
31) Indene	(1)	7.353	115	8170	0.087
32) 2-Methylphenol	(1)	7.364	108	5811	0.100
100) Isosafrole	(3)			5144	0.097
35) bis(2-Chloroisopropyl)ether	(1)	7.423	45	10907	0.113
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.423	45	10907	0.113
36) N-Nitrosopyrrolidine	(1)	7.567	100	3156	0.099
37) Acetophenone	(1)	7.594	105	6495	0.073
38) 4-Methylphenol	(1)	7.600	108	6660	0.108
39) N-Nitroso-di-n-propylamine	(1)	7.610	70	4500	0.089
40) N-Nitrosomorpholine	(1)	7.642	56	4189	0.099
41) o-Toluidine	(1)	7.648	106	9904	0.096
44) Hexachloroethane	(1)	7.739	117	2433	0.085
45)$Nitrobenzene-d5	(2)	7.824	82	13645	0.187
46) Nitrobenzene	(2)	7.856	77	7169	0.096
125) 2,4_2,6-Dinitrotoluenes	(3)			5389	0.168
50) N-Nitrosopiperidine	(2)	8.097	114	3385	0.111
52) Isophorone	(2)	8.241	82	12518	0.096
53) 2-Nitrophenol	(2)	8.354	139	2446	0.081

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.445	107	6133	0.095
59) O,O,O-Triethylphosphorothioate	(2)	8.573	198	3130	0.098
57) bis(2-Chloroethoxy)methane	(2)	8.610	93	9139	0.108
62) 2,4-Dichlorophenol	(2)	8.733	162	4862	0.097
151) Diallate trans/cis	(4)			6123	0.099
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	5669	0.101
68)*Naphthalene-d8	(2)	8.953	136	847103	5.000
70) 4-Chloroaniline	(2)	9.092	127	7160	0.100
71) 2,6-Dichlorophenol	(2)	9.097	162	4401	0.088
72) Hexachloropropene	(2)	9.135	213	3484	0.086
74) Hexachlorobutadiene	(2)	9.204	225	3359	0.099
78) Quinoline	(2)	9.530	129	11421	0.102
79) Caprolactam	(2)	9.611	113	966M	0.061
80) N-Nitrosodi-n-butylamine	(2)	9.669	84	4709	0.086
83) 4-Chloro-3-methylphenol	(2)	9.894	107	5297	0.096
85) Safrole	(2)	10.001	162	4373	0.093
88) Hexachlorocyclopentadiene	(3)	10.375	237	2599	0.076
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.386	216	6659	0.116
91) cis-Isosafrole	(3)	10.477	162	835	0.017
93) 2,4,6-Trichlorophenol	(3)	10.589	196	3505	0.097
95) 2,4,5-Trichlorophenol	(3)	10.632	196	3775	0.100
96)$2-Fluorobiphenyl	(3)	10.739	172	28896	0.220
97) trans-Isosafrole	(3)	10.851	162	4309	0.080
98) 1,1'-Biphenyl	(3)	10.894	154	11008	0.081
101) 1-Chloronaphthalene	(3)	10.937	162	12077M	0.114
103) Diphenyl ether	(3)	11.076	170	7965	0.105
104) 2-Nitroaniline	(3)	11.092	138	2952	0.088
108) 1,4-Naphthoquinone	(3)	11.210	158	3917	0.086
109) 1,4-Dinitrobenzene	(3)	11.344	168	1105M	0.062
110) Dimethylphthalate	(3)	11.424	163	13914	0.108
111) 1,3-Dinitrobenzene	(3)	11.445	168	1886M	0.098
113) 2,6-Dinitrotoluene	(3)	11.504	165	2517	0.092
117) 3-Nitroaniline	(3)	11.745	138	2327	0.081
118)*Acenaphthene-d10	(3)	11.788	164	422017	5.000
120) 2,4-Dinitrophenol	(3)	11.911	184	6095M	0.371
121) 4-Nitrophenol	(3)	11.991	109	6718	0.331
122) Pentachlorobenzene	(3)	12.018	250	5134	0.110
124) Dibenzofuran	(3)	12.076	168	17625	0.112
123) 2,4-Dinitrotoluene	(3)	12.082	165	2872	0.076
126) 1-Naphthylamine	(3)	12.189	143	10745	0.096

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	2339	0.079
128) 2-Naphthylamine	(3)	12.290	143	11817	0.111
129) Diethylphthalate	(3)	12.424	149	13045	0.103
130) Thionazin	(3)	12.515	107	2382	0.110
133) 5-Nitro-o-toluidine	(3)	12.542	152	2695	0.080
132) 4-Chlorophenyl-phenylether	(3)	12.542	204	7058	0.116
134) 4-Nitroaniline	(3)	12.547	138	2673	0.092
135) 4,6-Dinitro-2-methylphenol	(4)	12.595	198	6596M	0.301
136) N-Nitrosodiphenylamine	(4)	12.686	169	10715	0.106
137) NDPA as diphenylamine	(4)	12.686	169	10715	0.106
139) 1,2-Diphenylhydrazine	(4)	12.734	77	14921	0.106
140)$2,4,6-Tribromophenol	(3)	12.820	330	2540	0.174
142) Tetraethyldithiopyrophosphate	(4)	12.916	97	2437M	0.101
144) 1,3,5-Trinitrobenzene	(4)	13.023	213	1129	0.084
145) Diallate (peak 1)	(4)	13.060	86	5296	0.083
146) Phorate	(4)	13.071	75	8657	0.095
147) Phenacetin	(4)	13.082	108	5446	0.085
148) 4-Bromophenyl-phenylether	(4)	13.151	248	3605	0.106
149) Diallate (peak 2)	(4)	13.173	86	827M	0.016
152) Dimethoate	(4)	13.269	87	4382	0.080
153) Atrazine	(4)	13.376	200	2955	0.086
154) Pentachlorophenol	(4)	13.467	266	1148	0.054
156) Pentachloronitrobenzene	(4)	13.472	237	1259	0.076
155) 4-Aminobiphenyl	(4)	13.483	169	11145	0.097
157) Pronamide	(4)	13.574	173	4616	0.081
158)*Phenanthrene-d10	(4)	13.718	188	827942	5.000
159) Dinoseb	(4)	13.734	211	1057M	0.031
168) Carbazole	(4)	14.039	167	17431	0.108
169) Methyl parathion	(4)	14.248	109	3032	0.073
170) Di-n-butylphthalate	(4)	14.553	149	20337	0.093
172) Parathion	(4)	14.804	109	1701	0.063
173) 4-Nitroquinoline-1-oxide	(4)	14.831	190	1100M	0.051
174) Octachlorostyrene	(4)	15.162	308	1507	0.116
176) Isodrin	(4)	15.216	193	3557	0.157
179) Benzidine	(5)	15.681	184	98345	0.804
180)*Pyrene-d10	(5)	15.772	212	830375	5.000
184)$Terphenyl-d14	(5)	16.088	244	29397	0.221
187) p-Dimethylaminoazobenzene	(5)	16.323	225	2224	0.069
190) Chlorobenzilate	(5)	16.414	139	5530	0.088
192) 3,3'-Dimethylbenzidine	(5)	16.901	212	10209	0.077

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

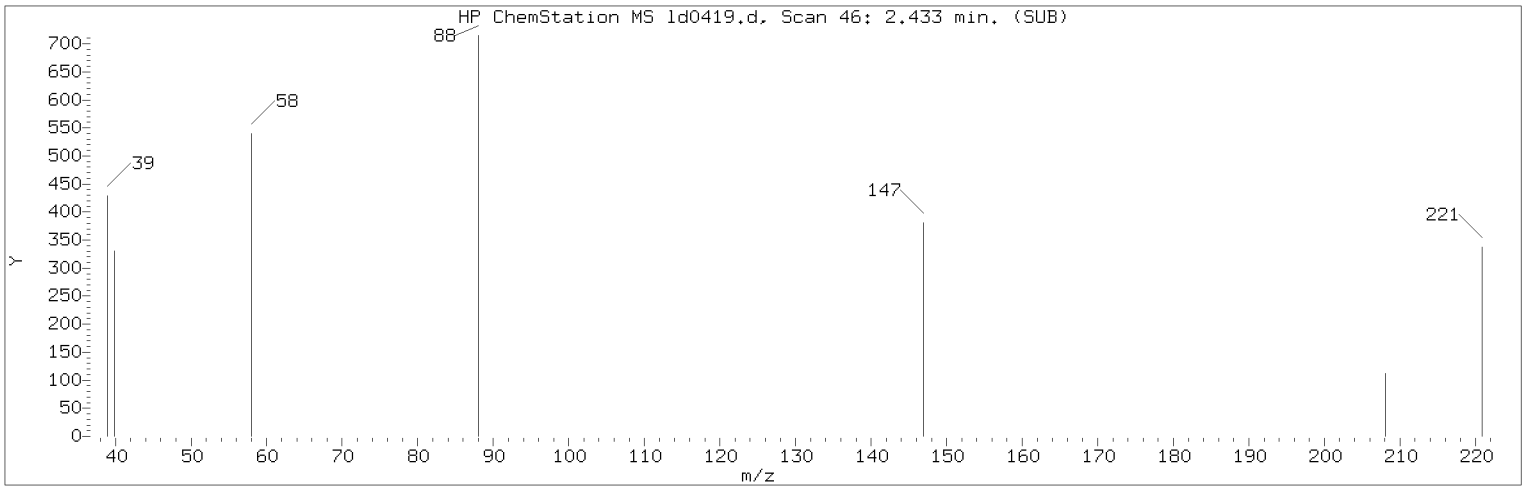
Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
193) Butylbenzylphthalate	(5)	16.954	149	8514	0.087
196) 2-Acetylaminofluorene	(5)	17.323	181	5831	0.075
198) 3,3'-Dichlorobenzidine	(5)	17.853	252	5961	0.088
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.869	231	3002	0.073
204) bis(2-Ethylhexyl)phthalate	(5)	18.029	149	11220	0.081
208) 6-Methylchrysene	(5)	18.735	242	11992	0.093
210) Di-n-octylphthalate	(6)	19.211	149	17883	0.077
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.741	256	6456	0.086
218)*Perylene-d12	(6)	20.377	264	741028	5.000
220) 3-Methylcholanthrene	(6)	20.853	268	8933	0.112
222) Dibenz(a,h)acridine	(6)	21.682	279	14185	0.102
223) Dibenz(a,j)acridine	(6)	21.757	279	14851	0.105

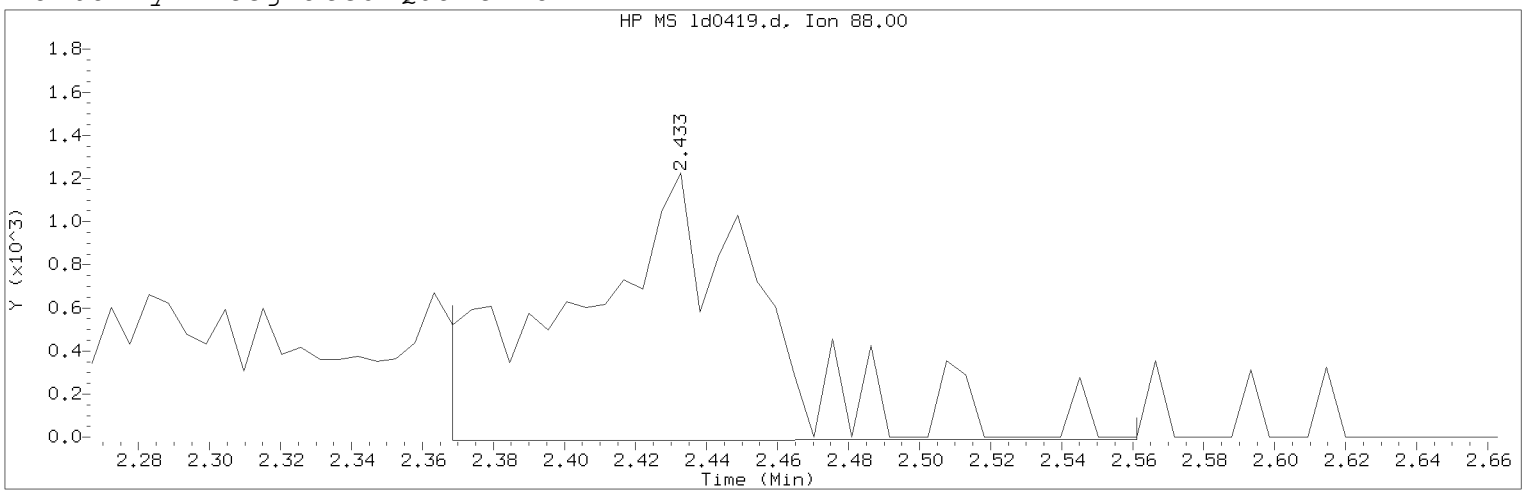
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

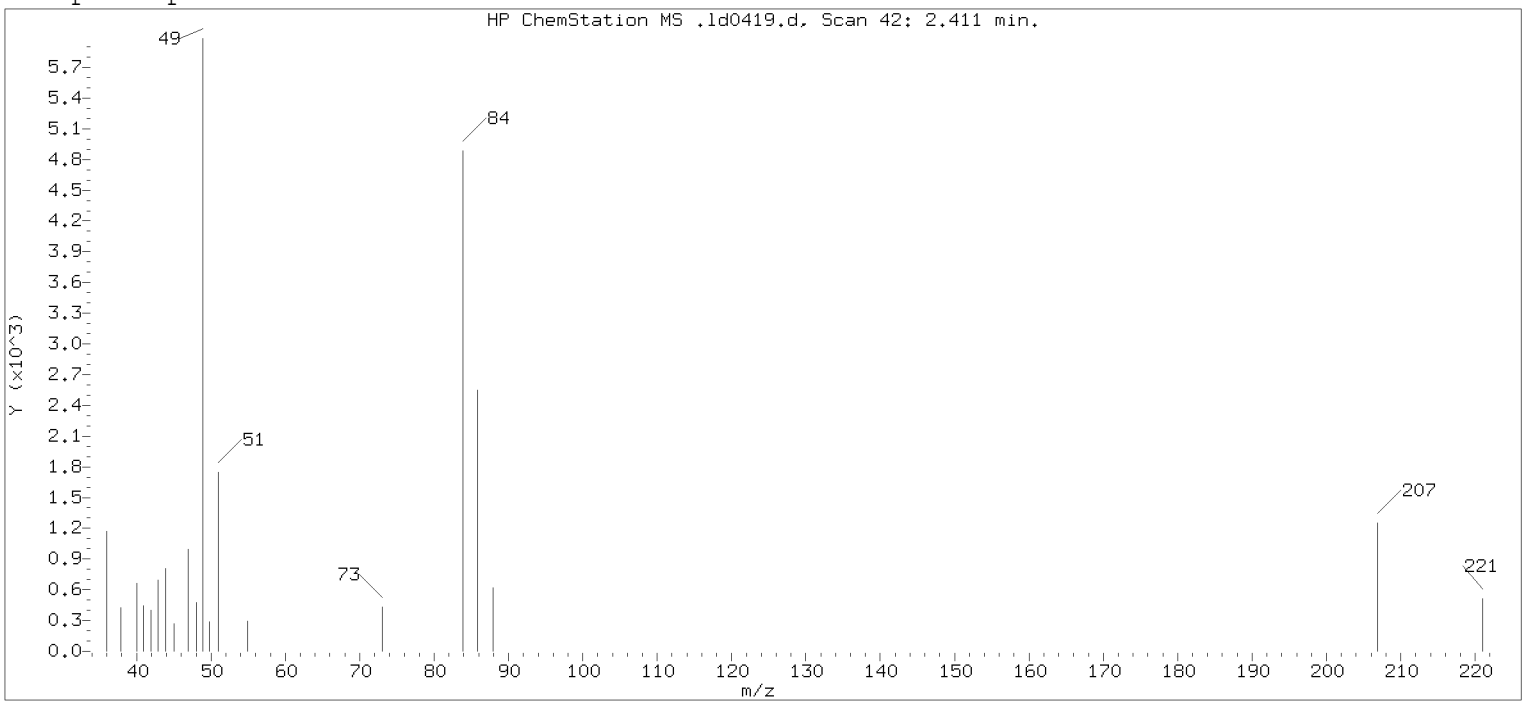
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.433
Quant Ion : 88.00
Area (flag) : 4809M
On-Column Amount (ng/ul) : 0.1671
Integration start scan : 33 Integration stop scan: 69
Y at integration start : -14 Y at integration end: -10

Reason for manual integration: missed peak

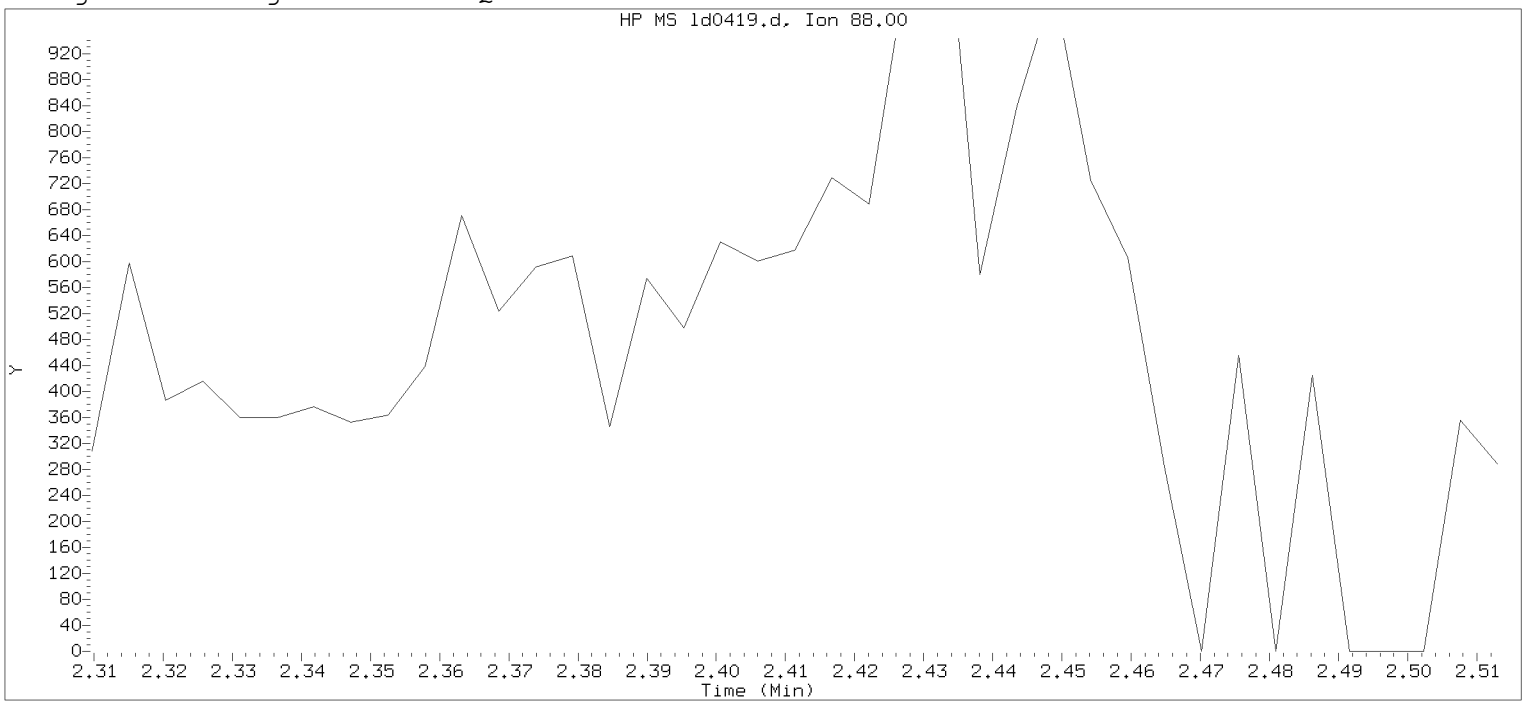
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

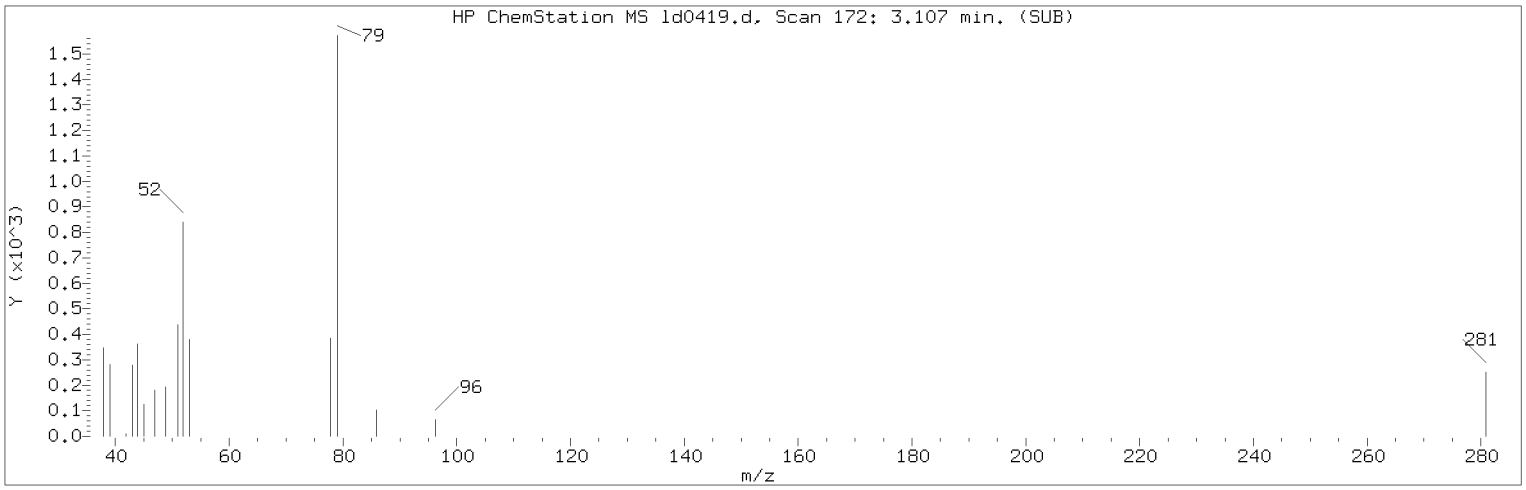
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

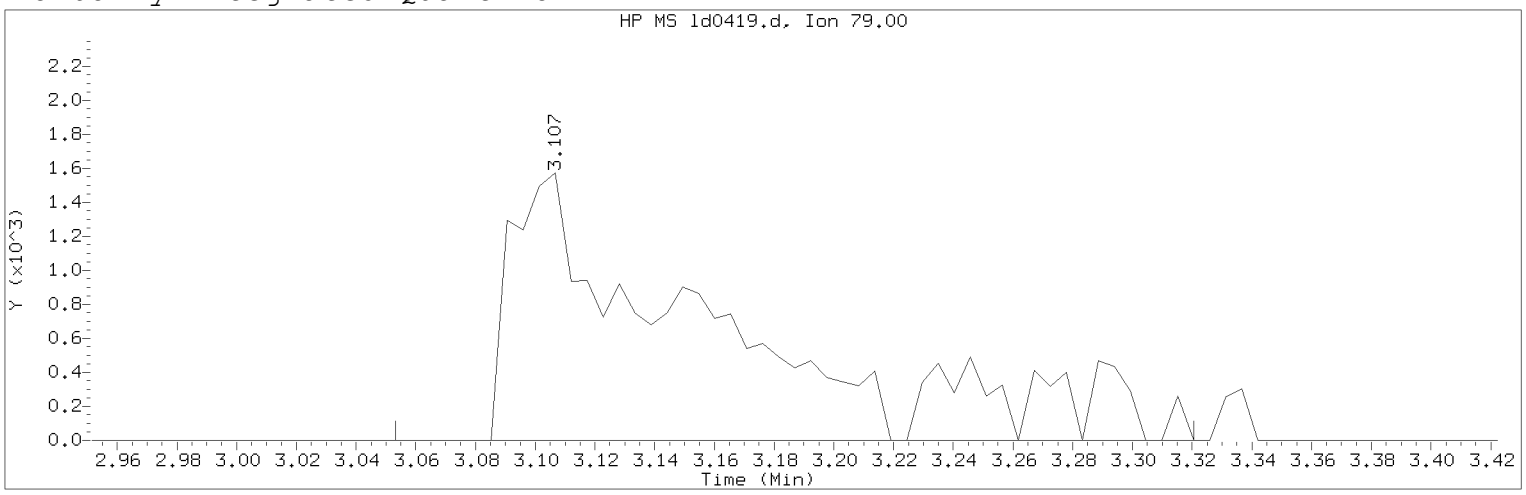
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.411
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FID Part 1 of 3

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

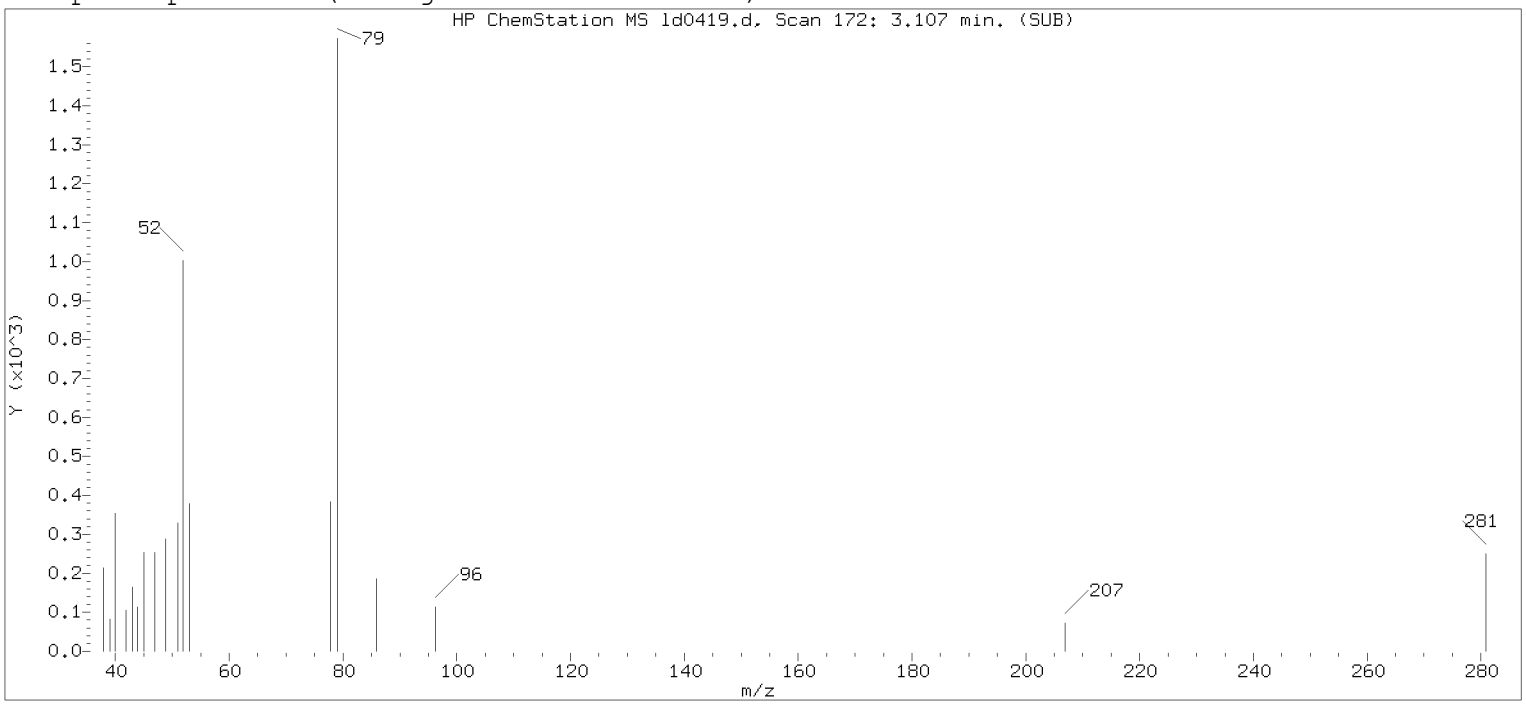
Compound Number : 6
Compound Name : Pyridine
Scan Number : 172
Retention Time (minutes) : 3.107
Quant Ion : 79.00
Area (flag) : 7447M
On-Column Amount (ng/ul) : 0.0953
Integration start scan : 161 Integration stop scan: 211
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

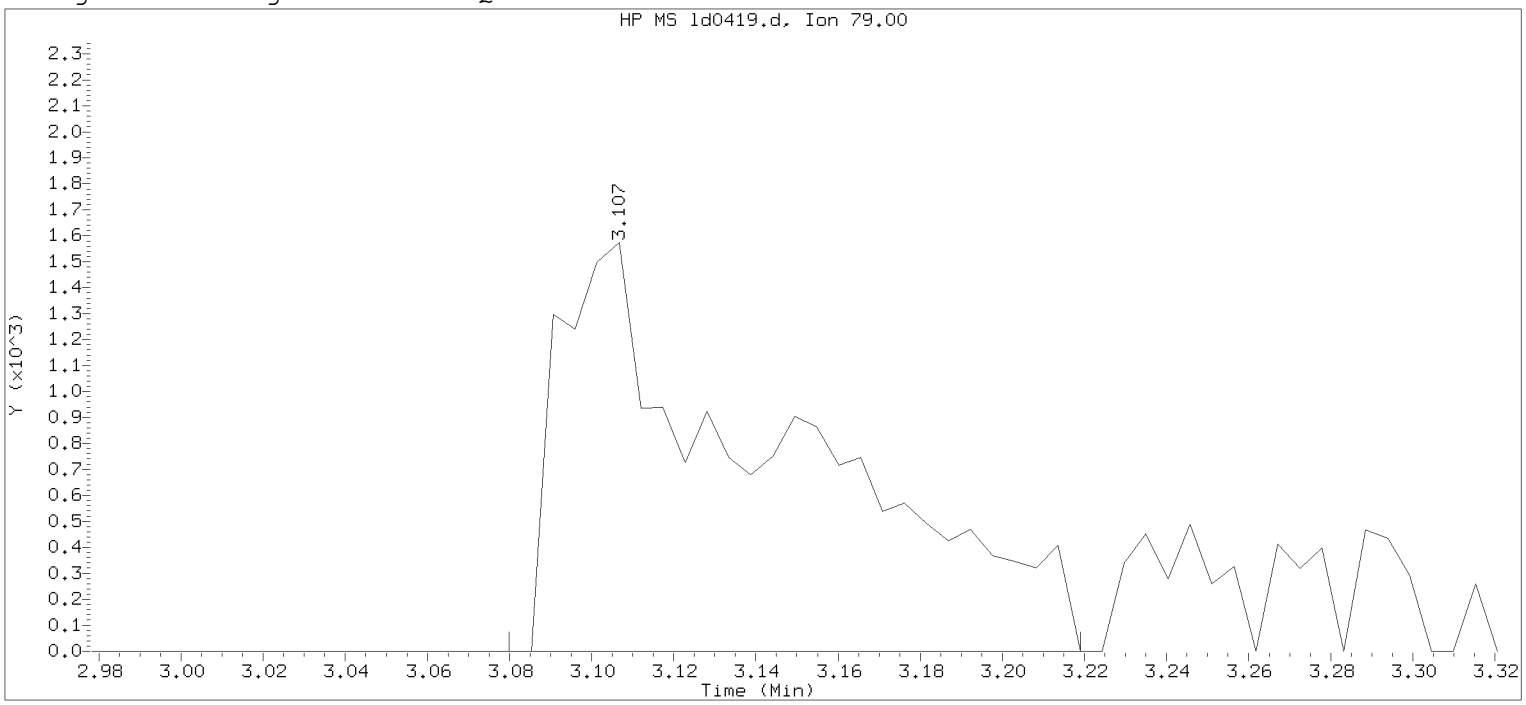
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

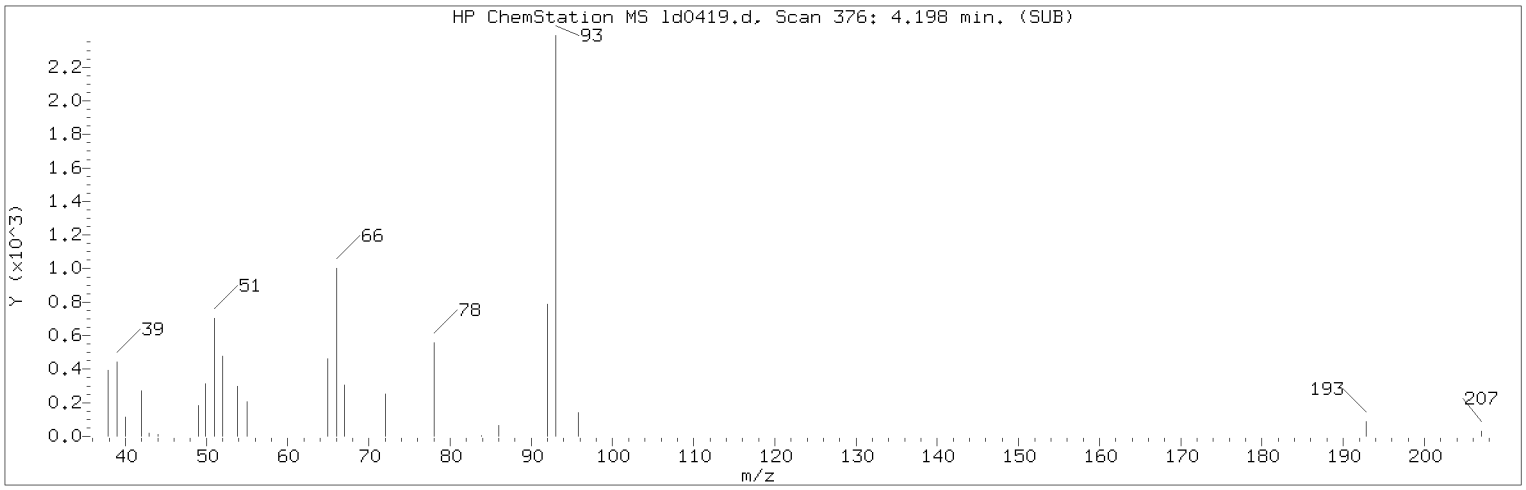
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

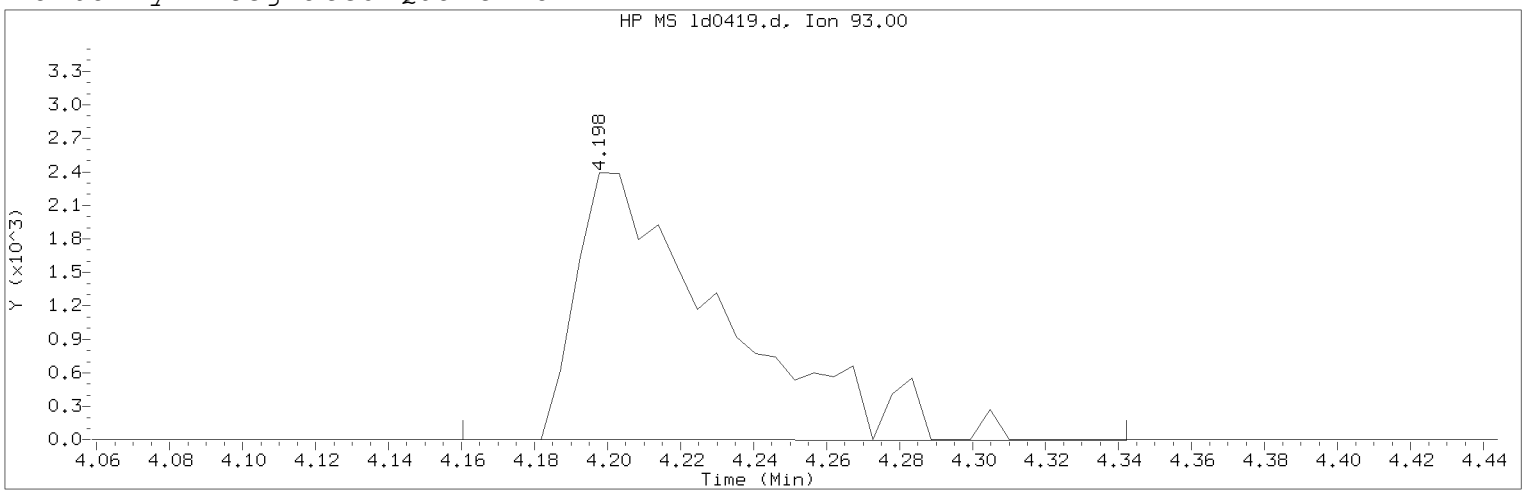
Compound Number	: 6		
Compound Name	: Pyridine		
Scan Number	: 172		
Retention Time (minutes)	: 3.107		
Quant Ion	: 79.00		
Area	: 5929		
On-column Amount (ng/ul)	: 0.0762		
Integration start scan	: 166	Integration stop scan:	192
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

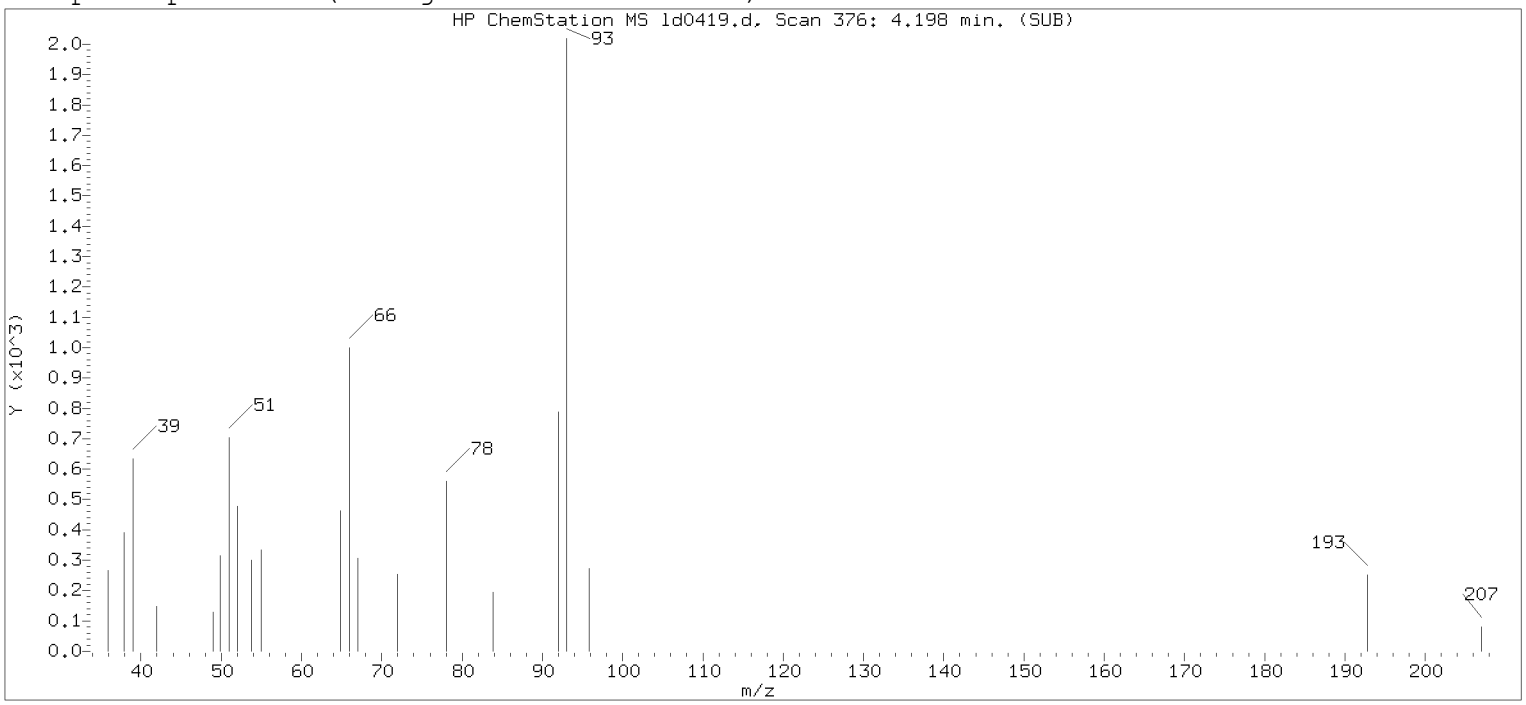
Compound Number : 8
Compound Name : 2-Picoline
Scan Number : 376
Retention Time (minutes) : 4.198
Quant Ion : 93.00
Area (flag) : 6688M
On-Column Amount (ng/ul) : 0.0846
Integration start scan : 368 Integration stop scan: 402
Y at integration start : 2 Y at integration end: -3

Reason for manual integration: improper integration

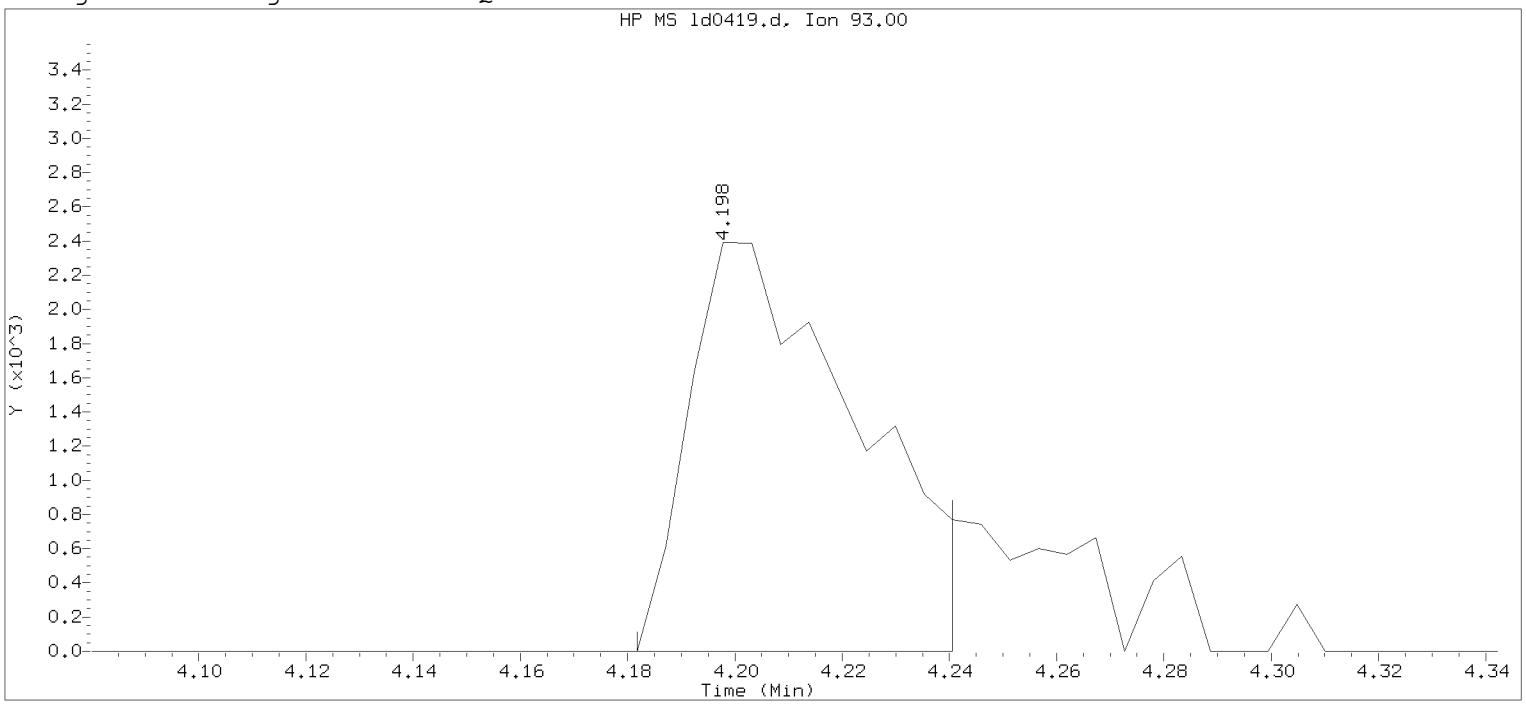
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

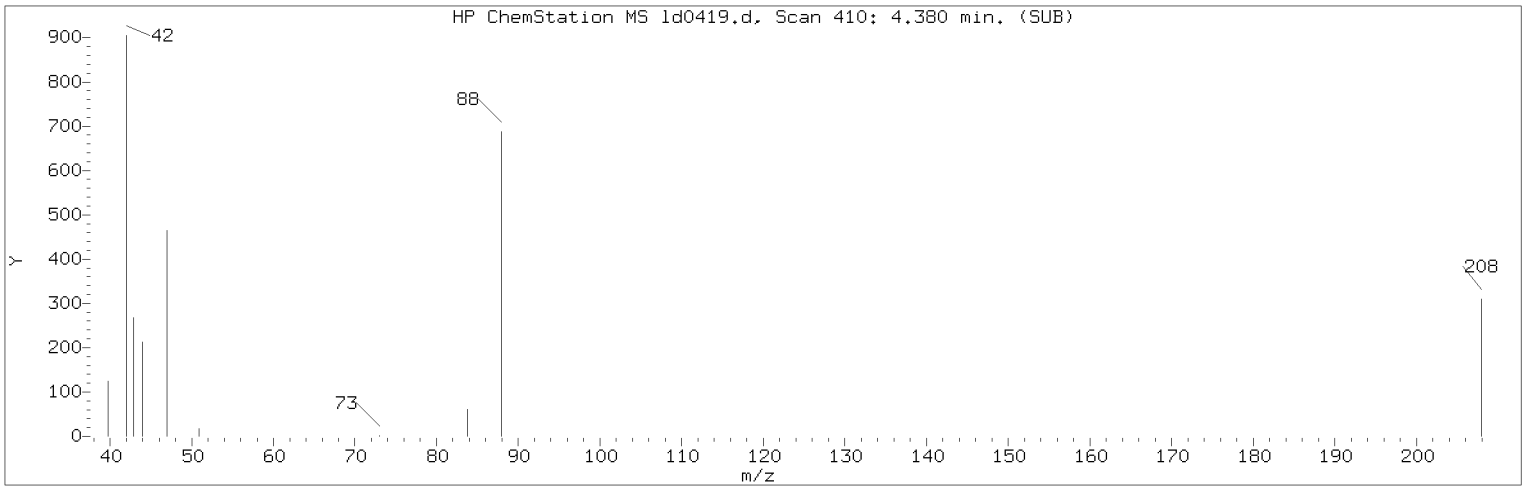
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

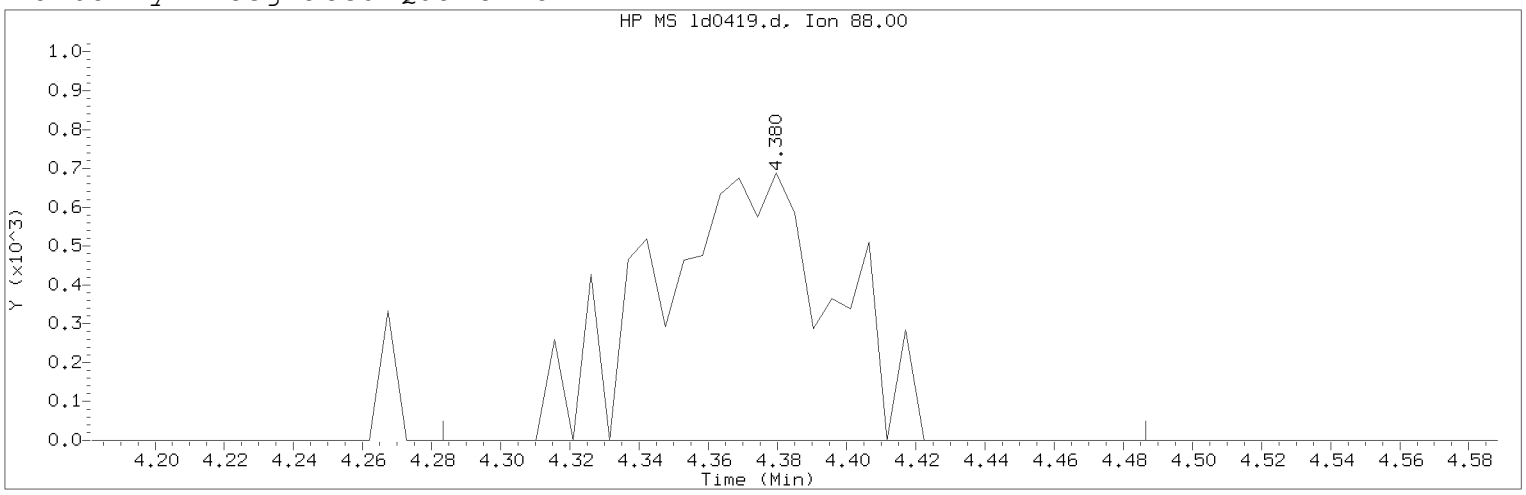
Compound Number	: 8		
Compound Name	: 2-Picoline		
Scan Number	: 376		
Retention Time (minutes)	: 4.198		
Quant Ion	: 93.00		
Area	: 5162		
On-column Amount (ng/ul)	: 0.0635		
Integration start scan	: 372	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

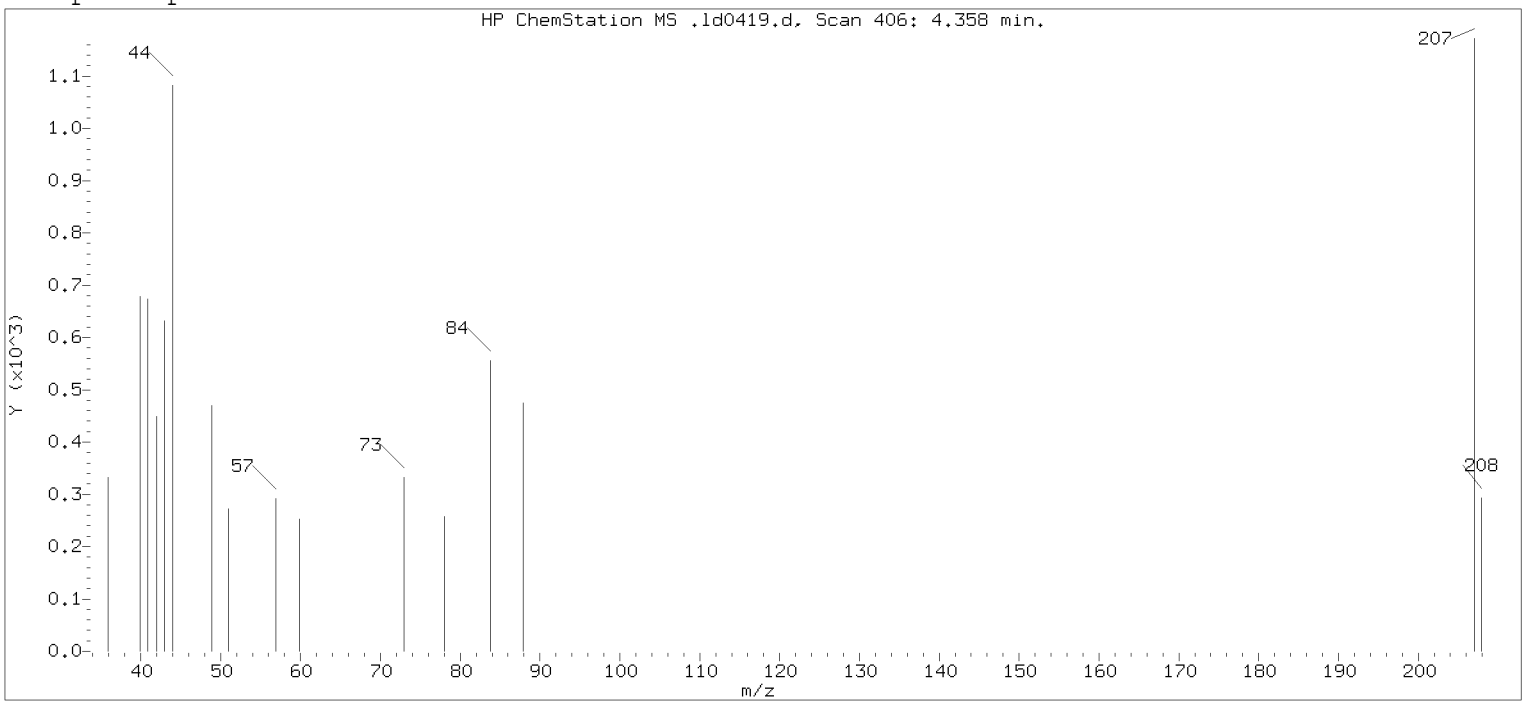
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 410
Retention Time (minutes) : 4.380
Quant Ion : 88.00
Area (flag) : 2517M
On-Column Amount (ng/ul) : 0.0794
Integration start scan : 391 Integration stop scan: 429
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

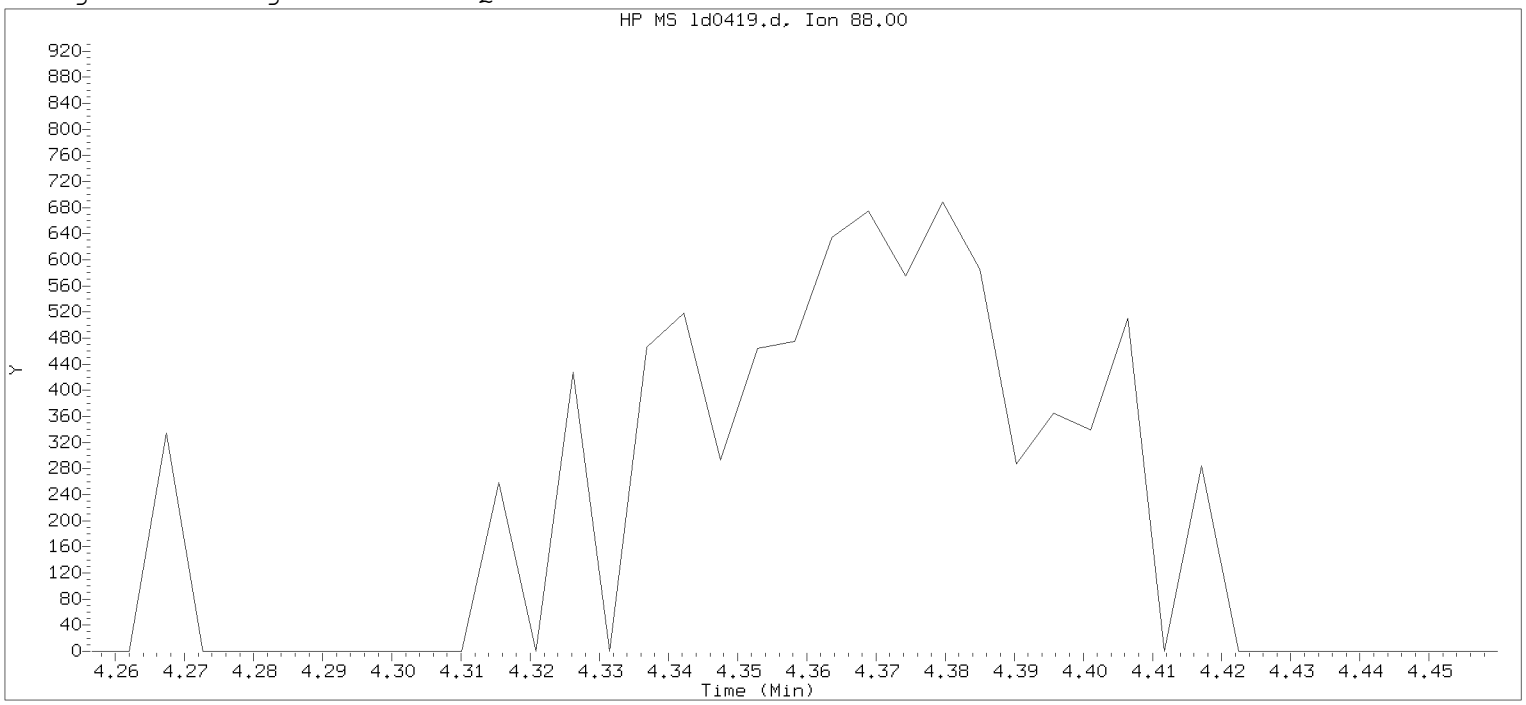
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

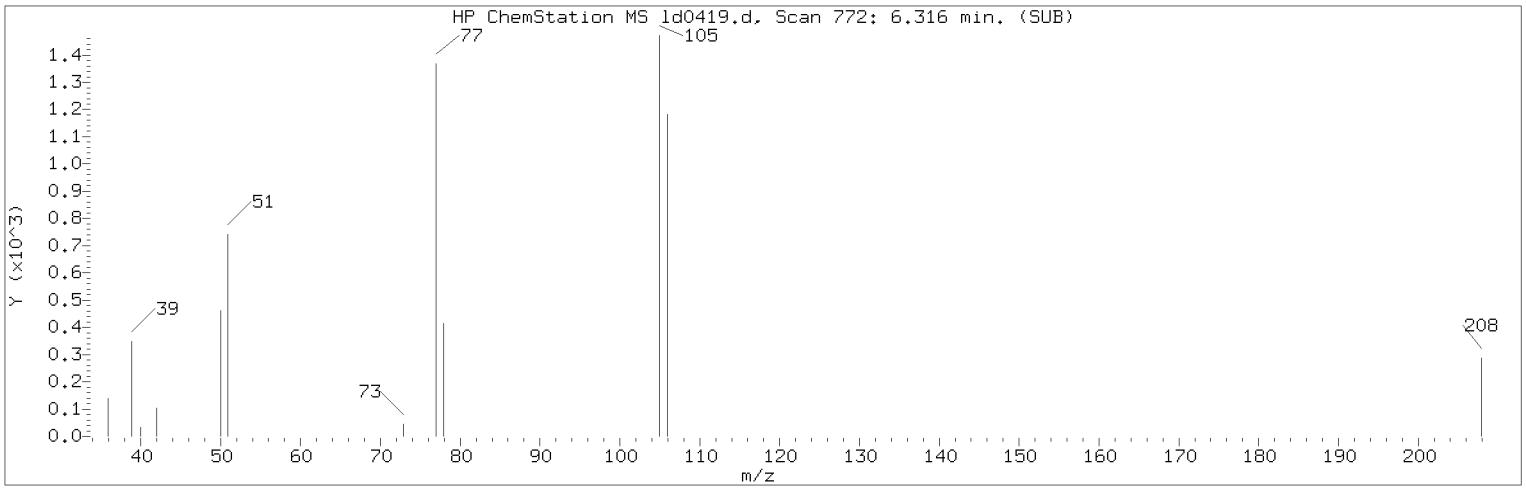
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

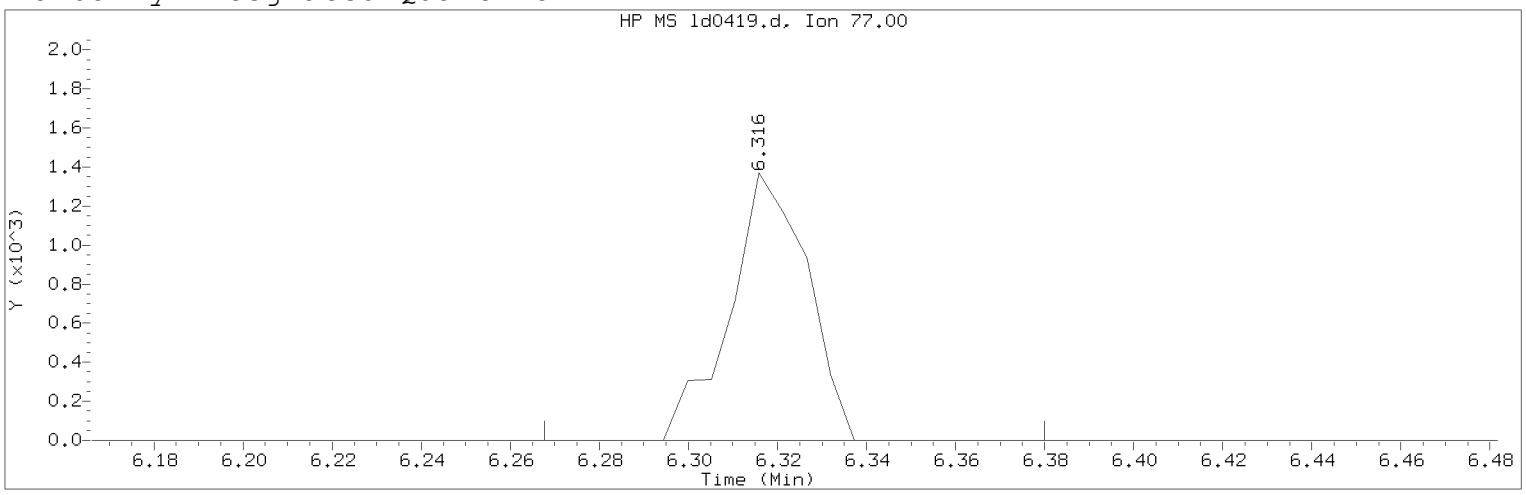
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.358
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD Page 1809

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

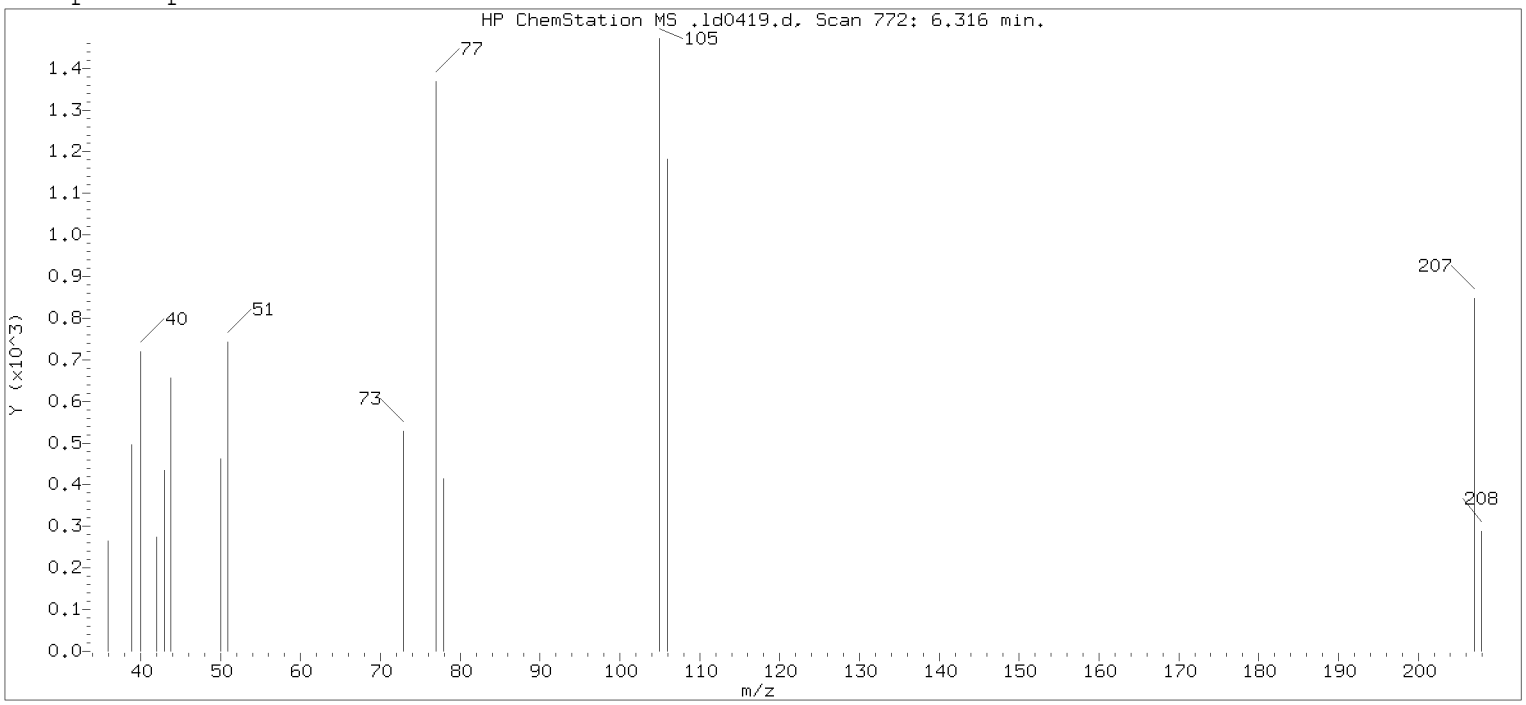
Compound Number : 17
Compound Name : Benzaldehyde
Scan Number : 772
Retention Time (minutes) : 6.316
Quant Ion : 77.00
Area (flag) : 1651M
On-Column Amount (ng/ul) : 0.0276
Integration start scan : 762 Integration stop scan: 783
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

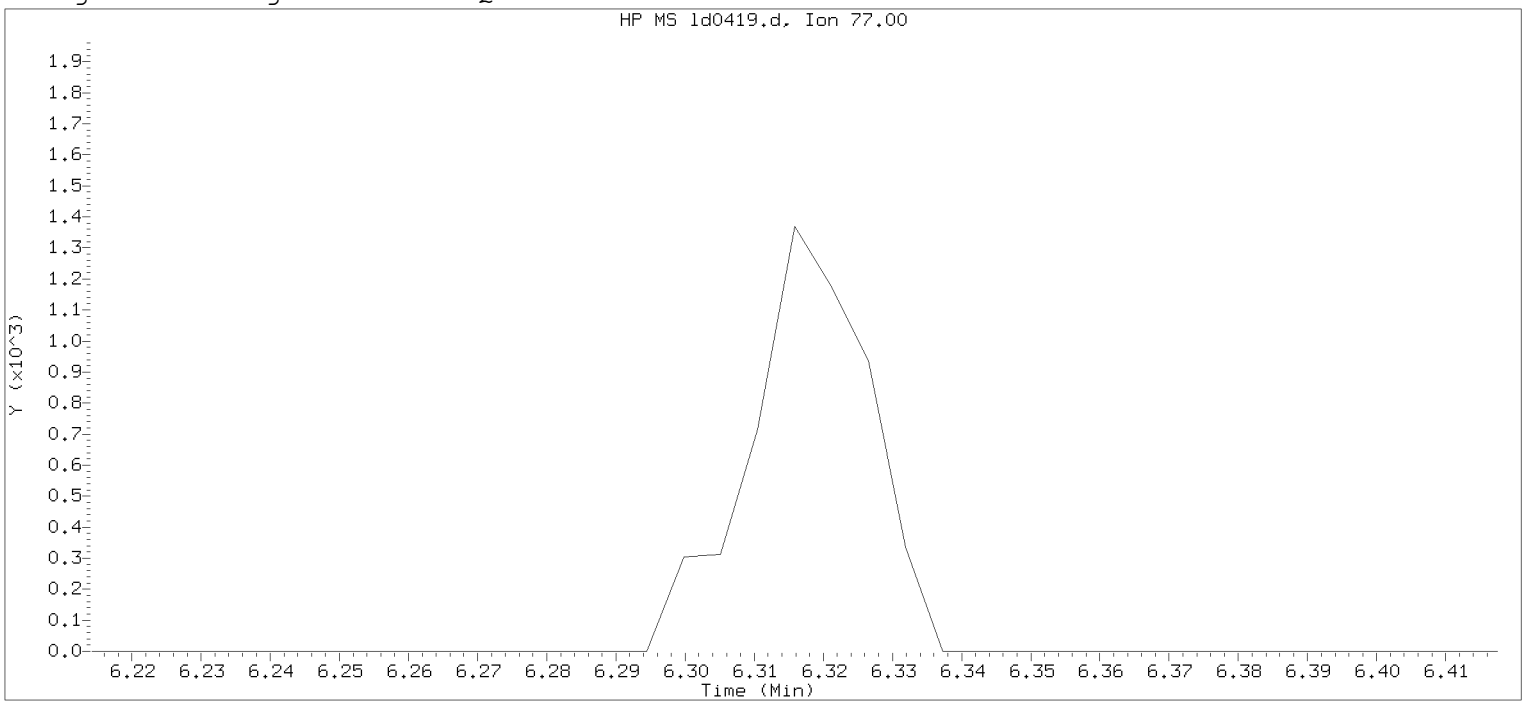
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

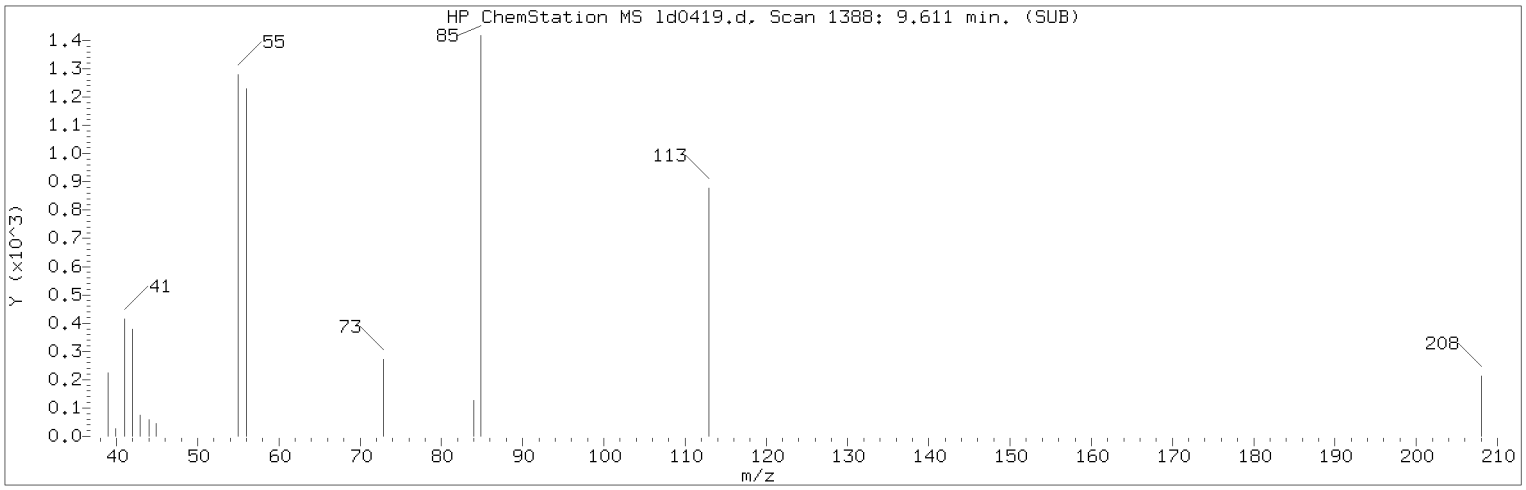
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

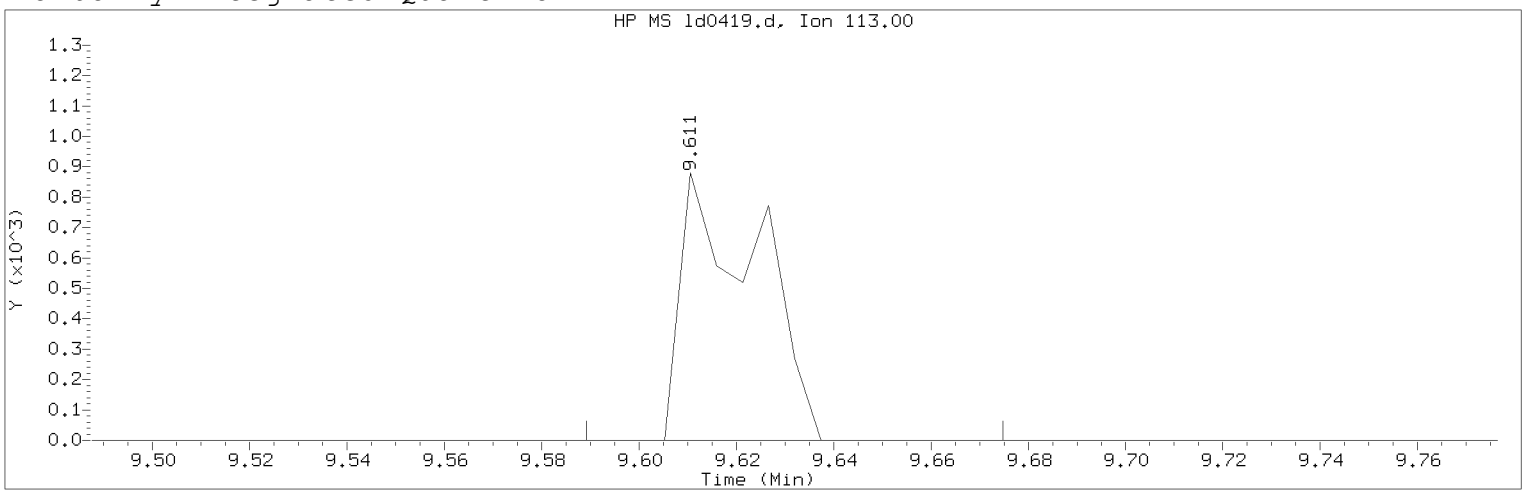
Compound Number : 17
Compound Name : Benzaldehyde
Expected RT (minutes) : 6.316
Quant Ion : 77.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1811

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

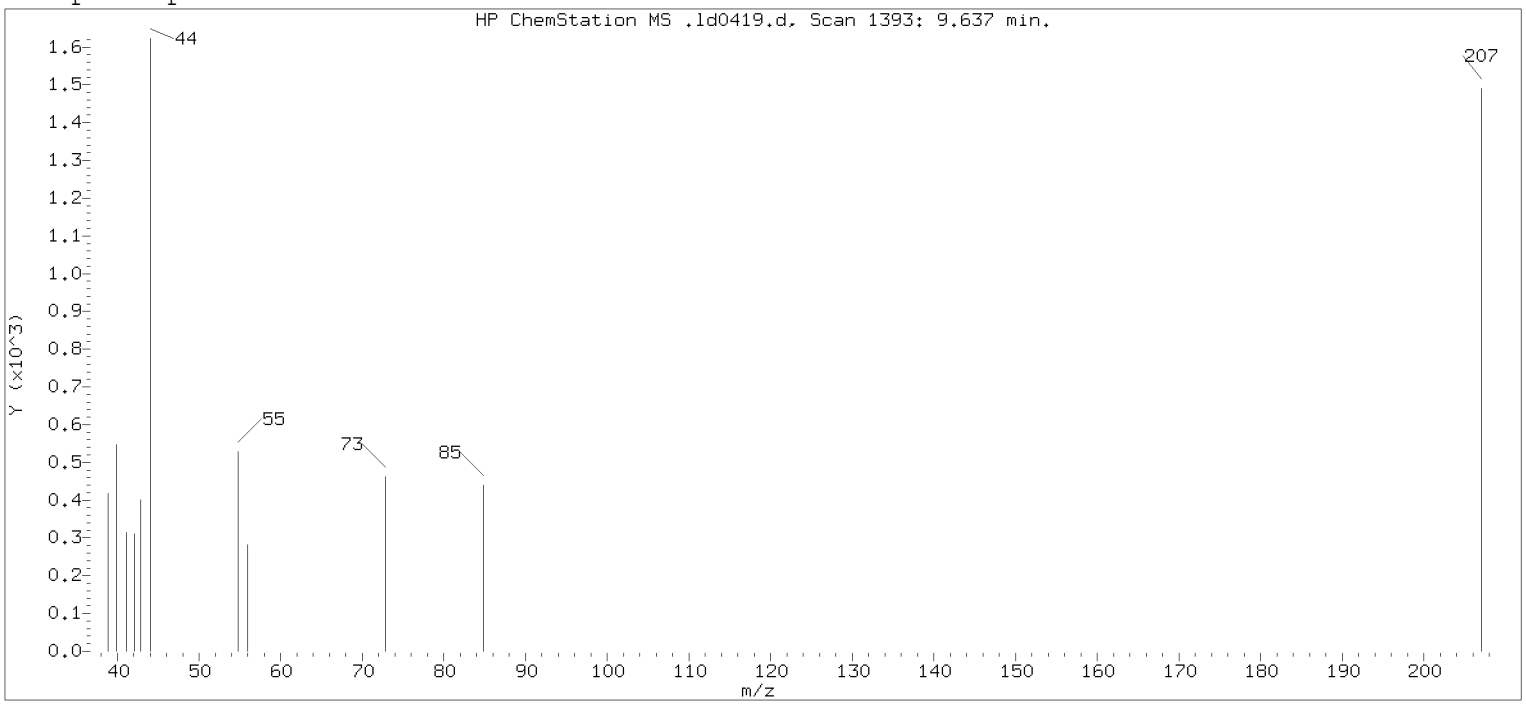
Compound Number : 79
Compound Name : Caprolactam
Scan Number : 1388
Retention Time (minutes) : 9.611
Quant Ion : 113.00
Area (flag) : 966M
On-Column Amount (ng/ul) : 0.0613
Integration start scan : 1383 Integration stop scan: 1399
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

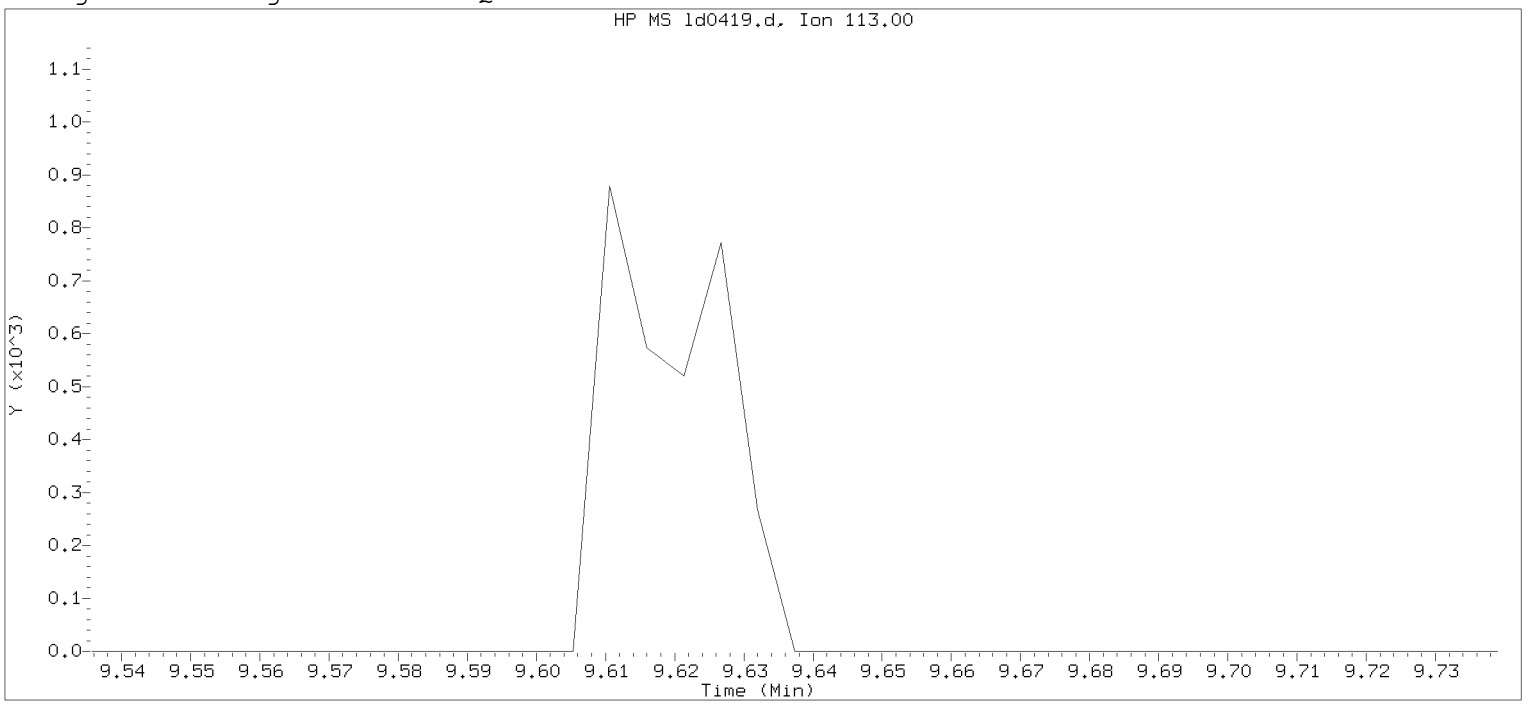
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

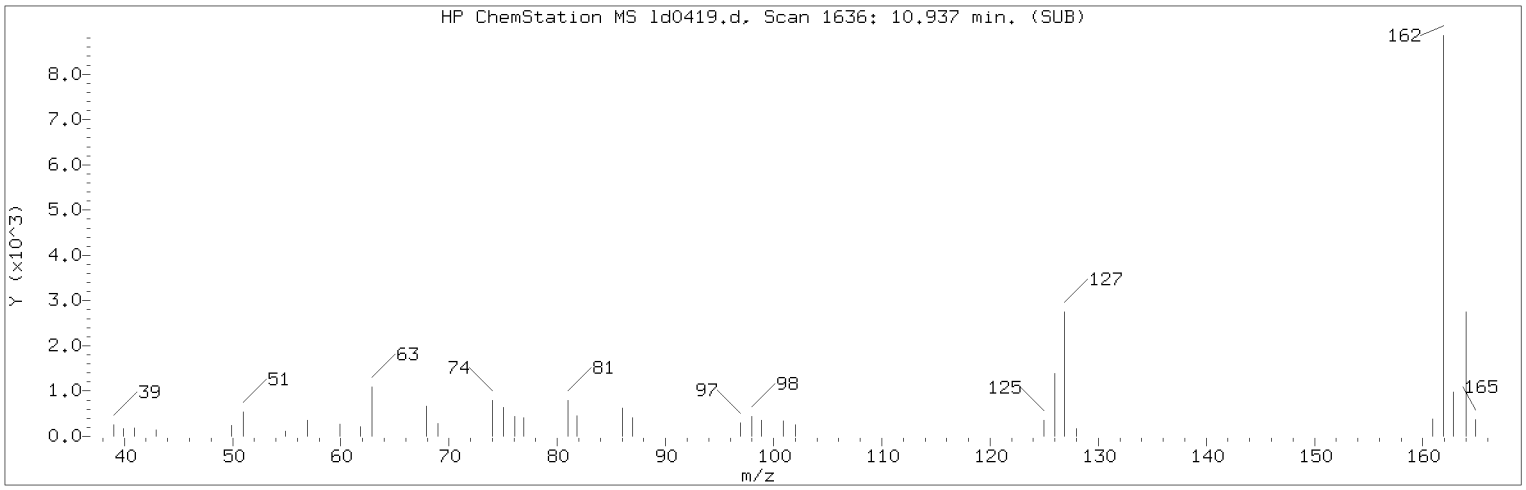
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

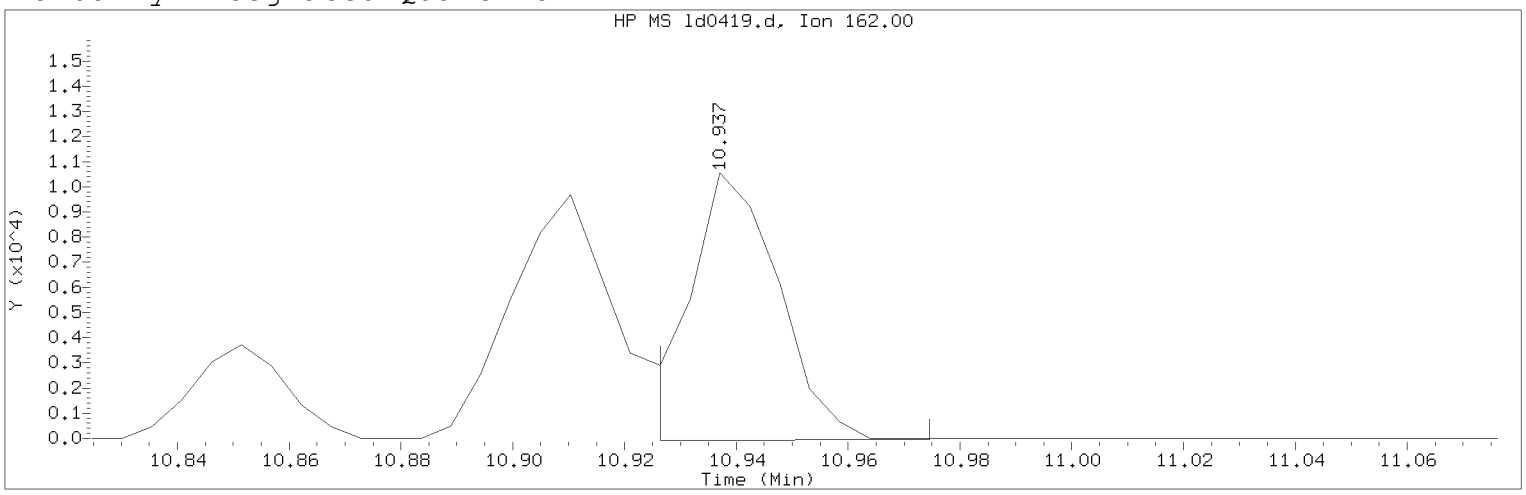
Compound Number : 79
Compound Name : Caprolactam
Expected RT (minutes) : 9.637
Quant Ion : 113.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1813

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

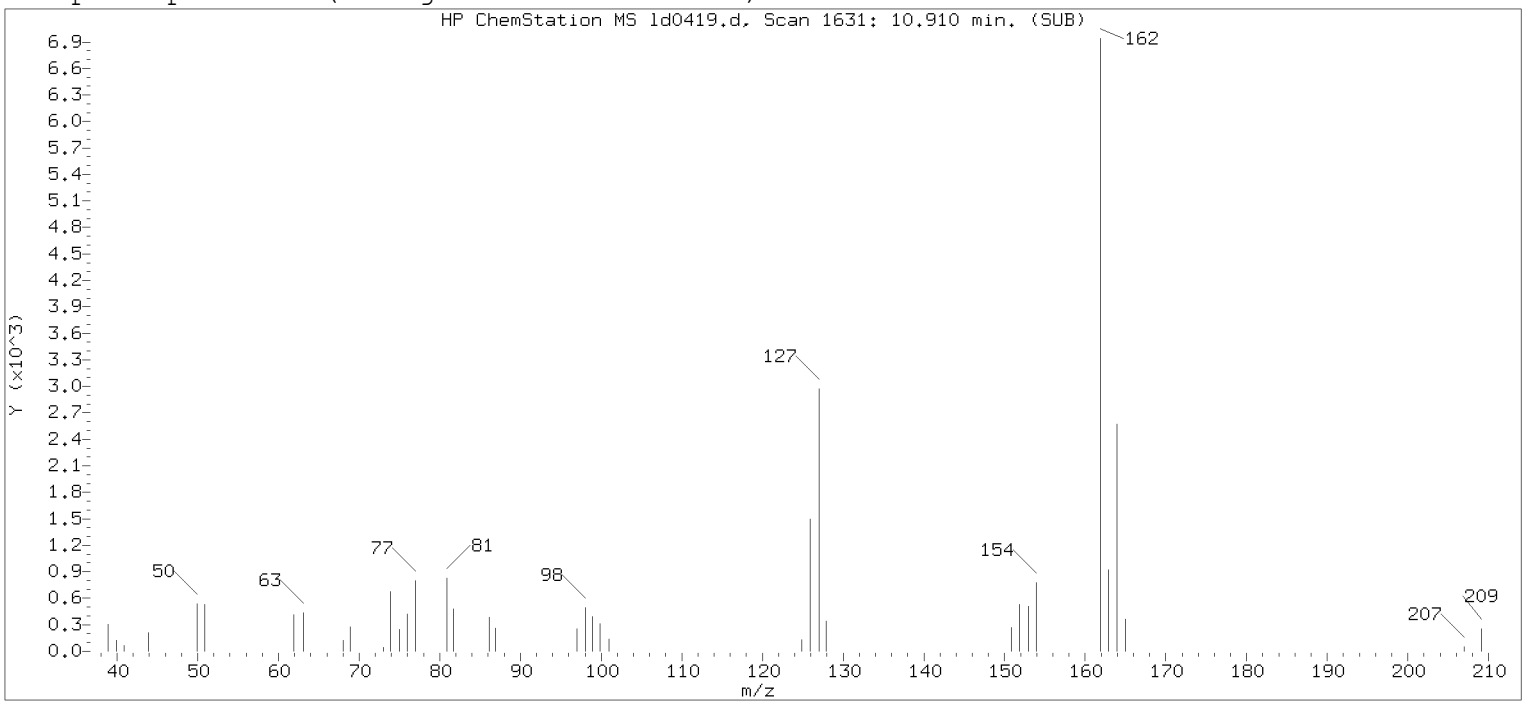
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1636
Retention Time (minutes) : 10.937
Quant Ion : 162.00
Area (flag) : 12077M
On-Column Amount (ng/ul) : 0.1136
Integration start scan : 1633 Integration stop scan: 1642
Y at integration start : -76 Y at integration end: -54

Reason for manual integration: improper integration

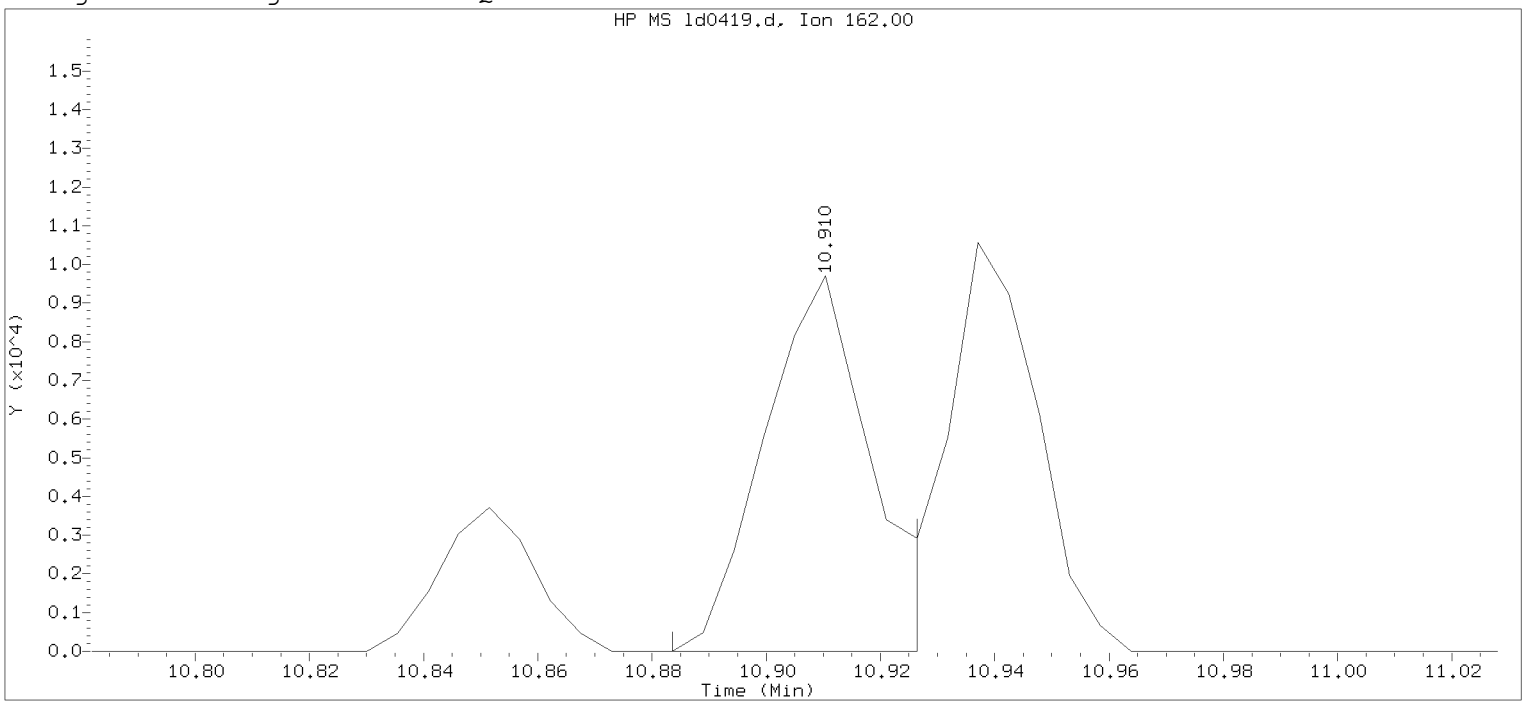
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

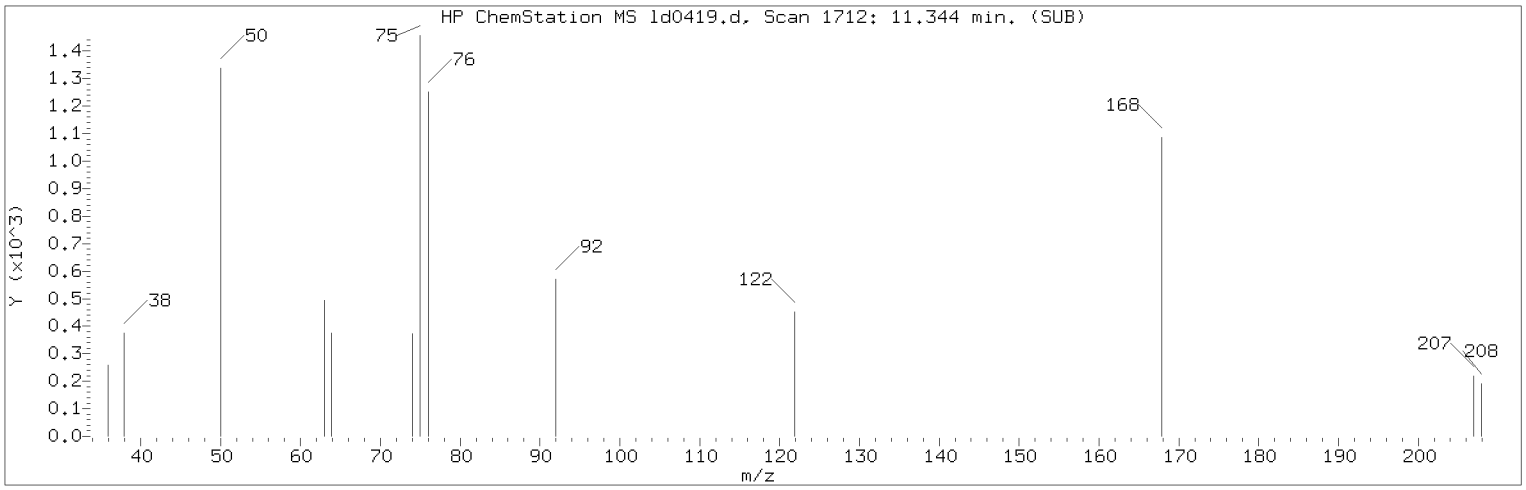
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

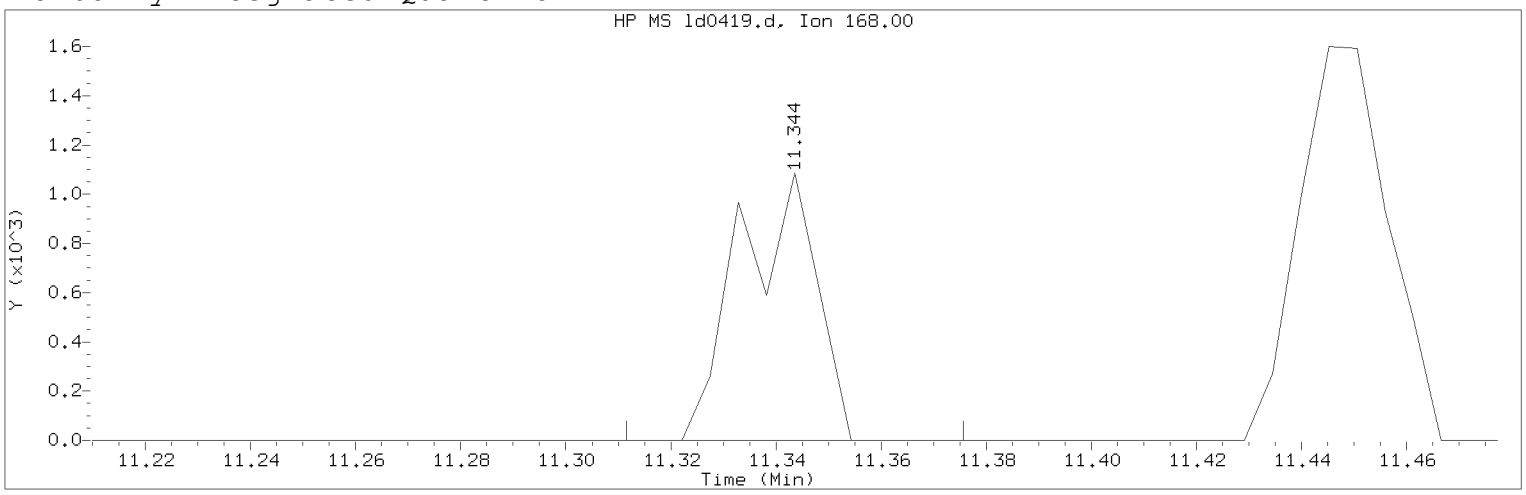
Compound Number	: 101		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1631		
Retention Time (minutes)	: 10.910		
Quant Ion	: 162.00		
Area	: 12159		
On-column Amount (ng/ul)	: 0.1143		
Integration start scan	: 1625	Integration stop scan:	1633
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

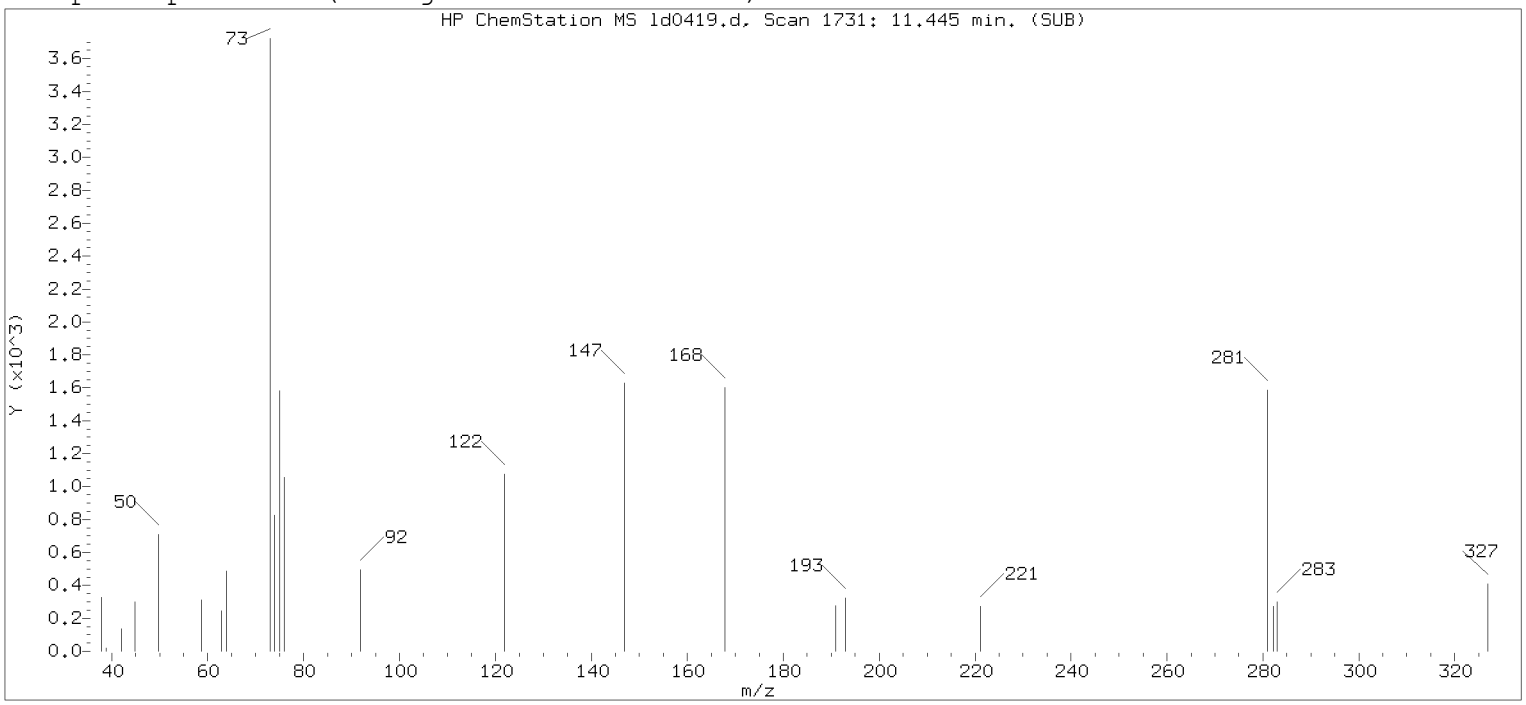
Compound Number : 109
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1712
Retention Time (minutes) : 11.344
Quant Ion : 168.00
Area (flag) : 1105M
On-Column Amount (ng/ul) : 0.0618
Integration start scan : 1705 Integration stop scan: 1717
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

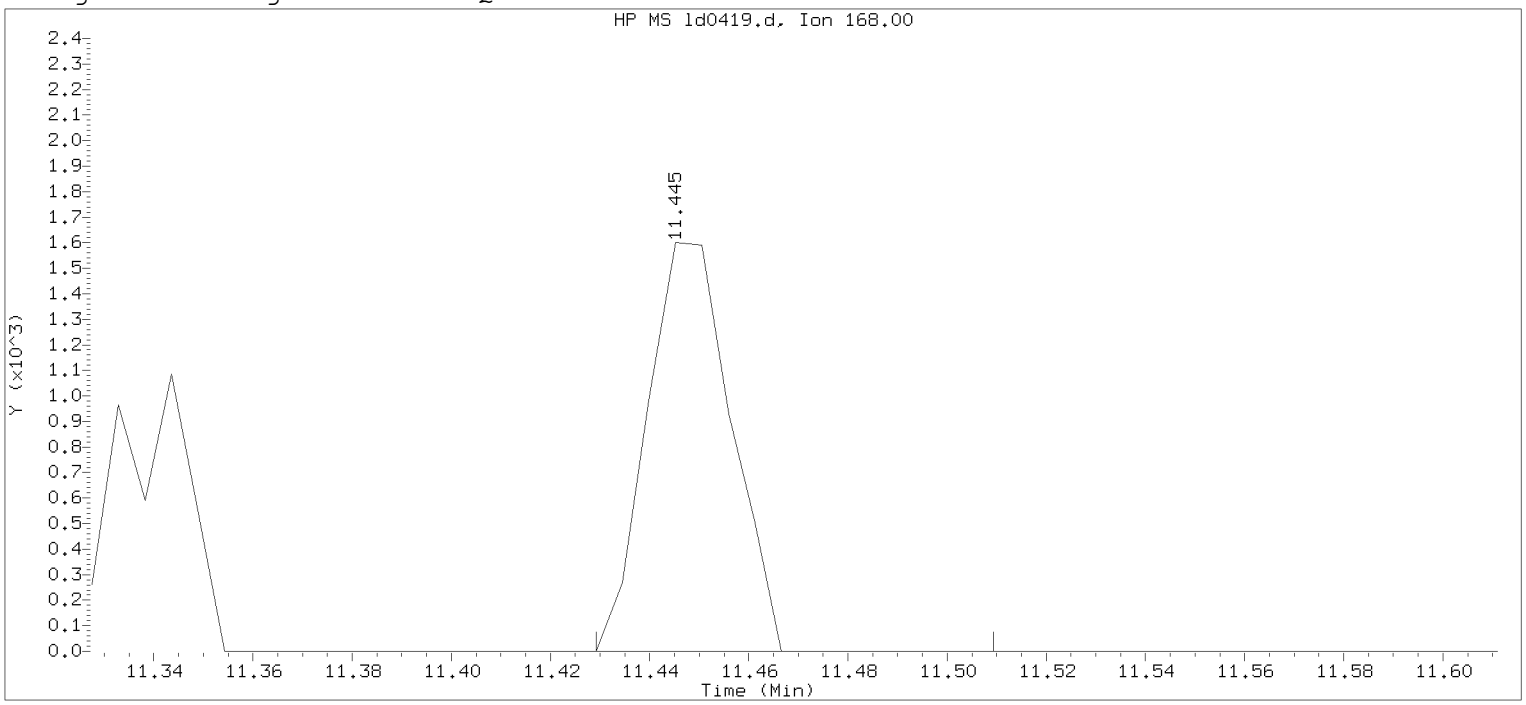
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

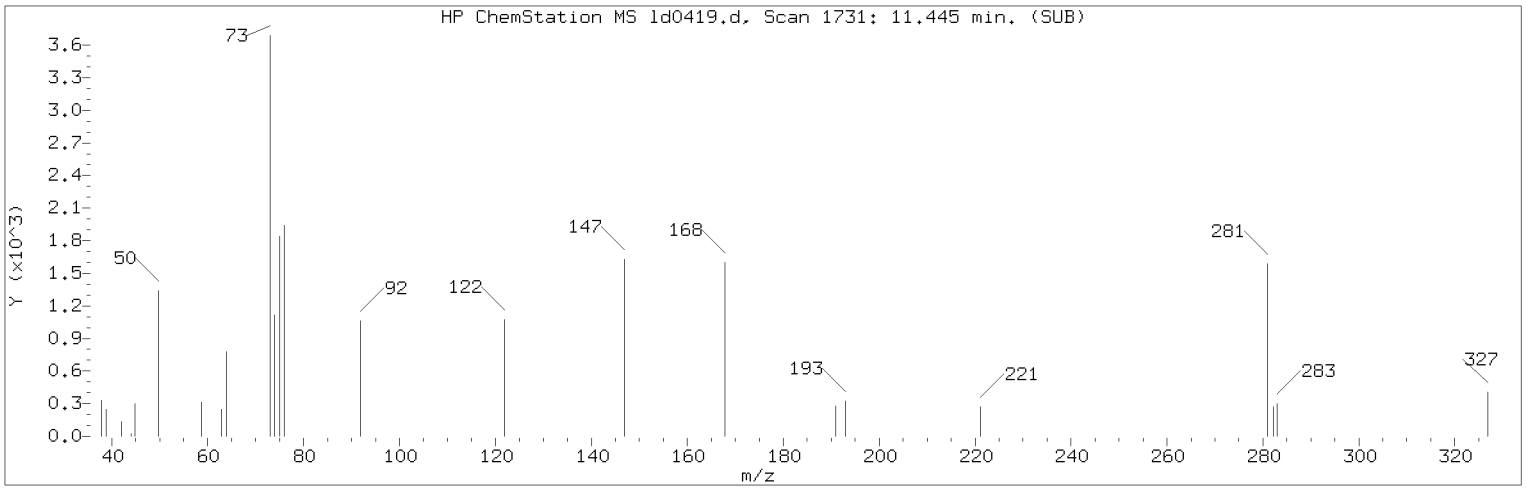
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

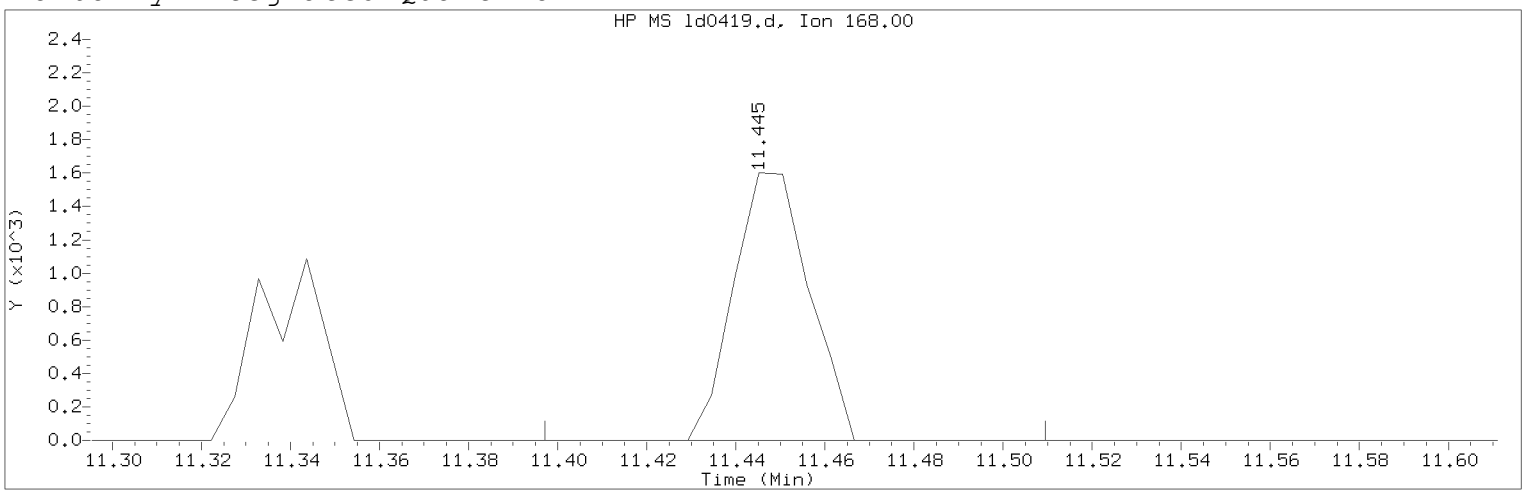
Compound Number	: 109		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1731		
Retention Time (minutes)	: 11.445		
Quant Ion	: 168.00		
Area	: 1886		
On-column Amount (ng/ul)	: 0.1024		
Integration start scan	: 1727	Integration stop scan:	1742
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used for FD6 Page 1817

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

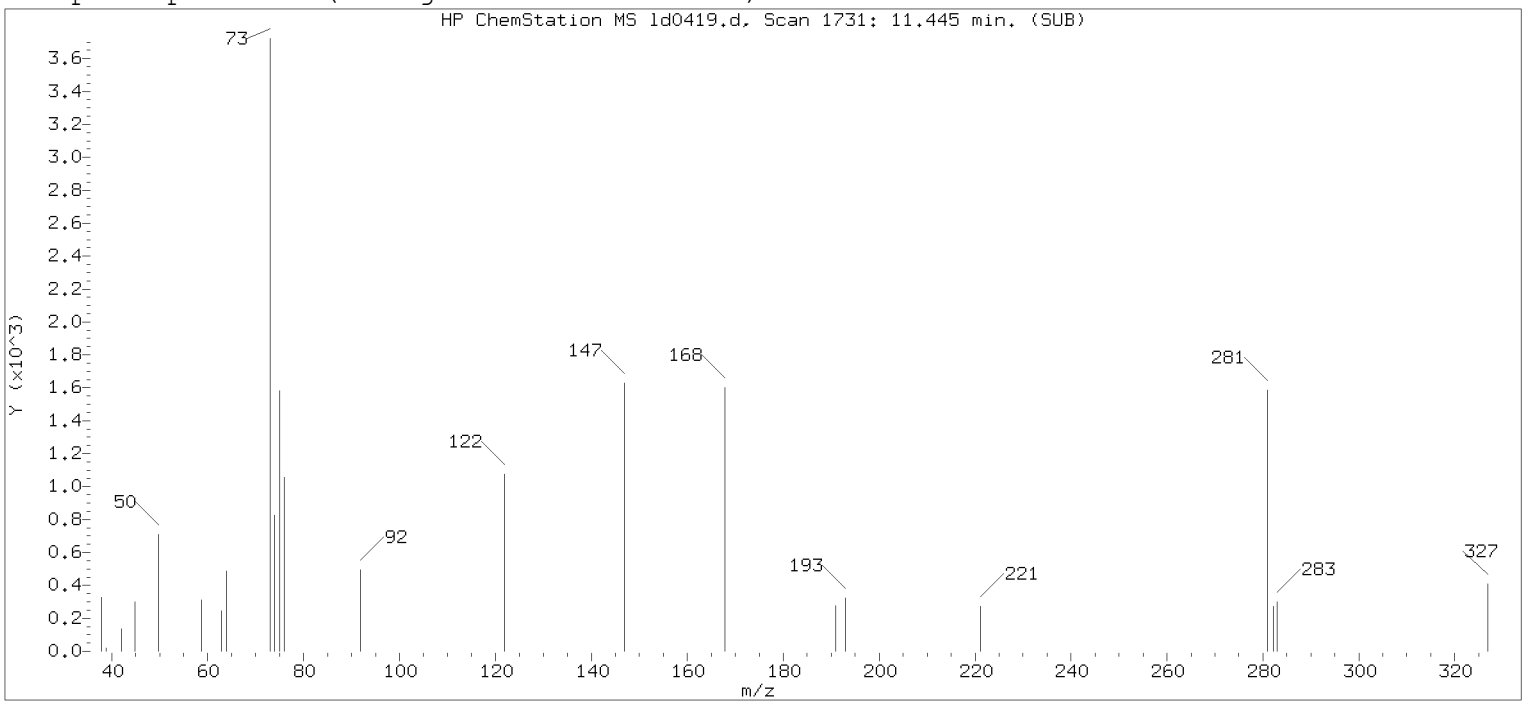
Compound Number : 111
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1731
Retention Time (minutes) : 11.445
Quant Ion : 168.00
Area (flag) : 1886M
On-Column Amount (ng/ul) : 0.0984
Integration start scan : 1721 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

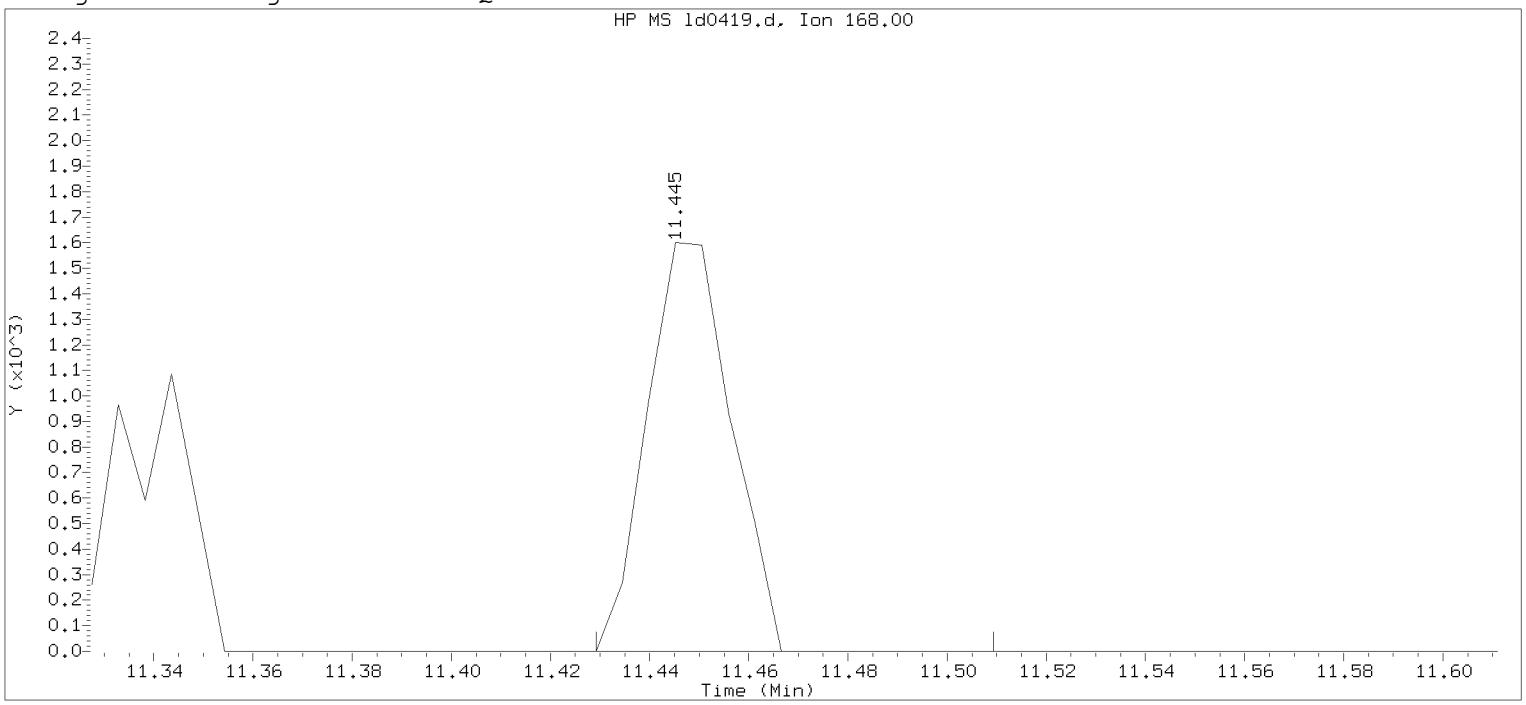
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

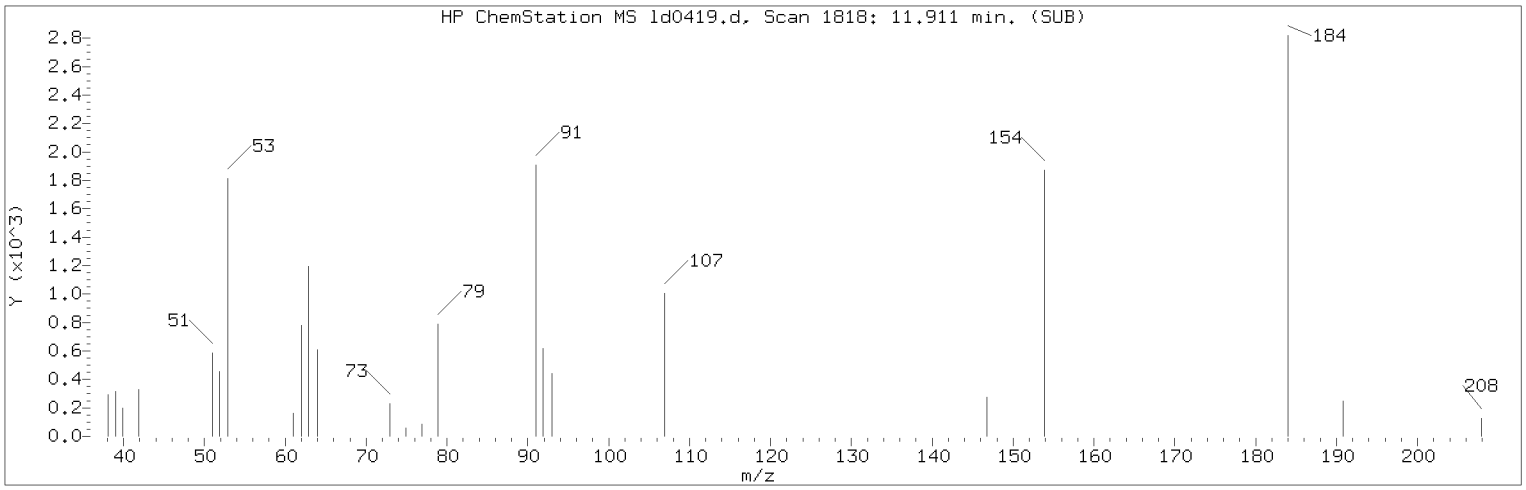
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

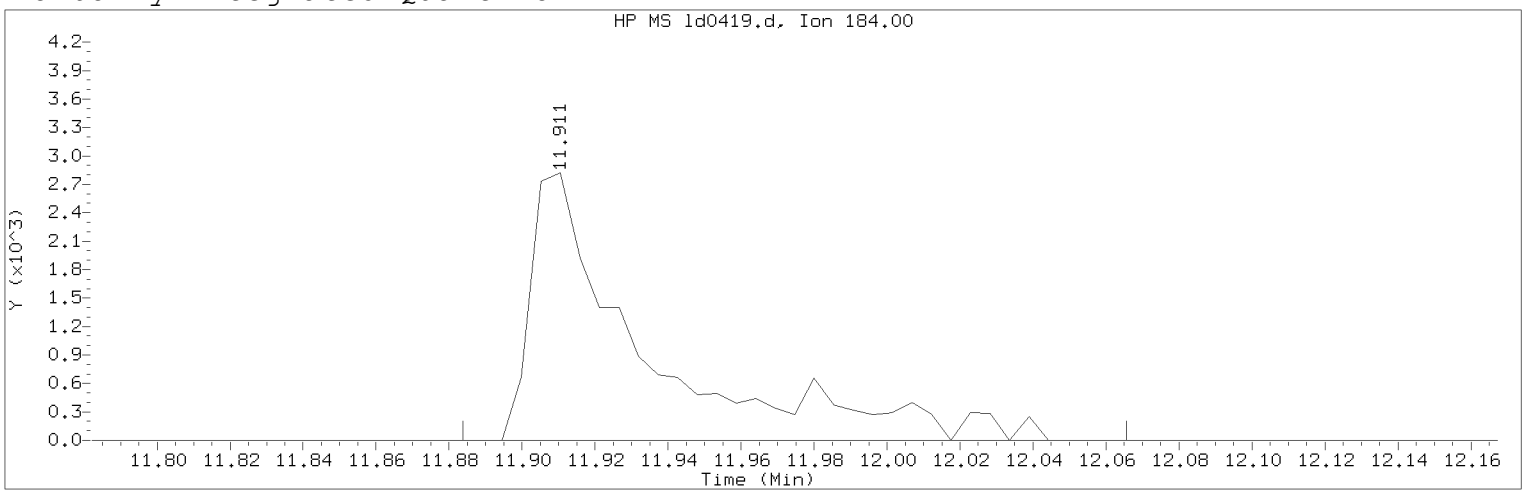
Compound Number	: 111		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1731		
Retention Time (minutes)	: 11.445		
Quant Ion	: 168.00		
Area	: 1886		
On-column Amount (ng/ul)	: 0.0906		
Integration start scan	: 1727	Integration stop scan:	1742
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

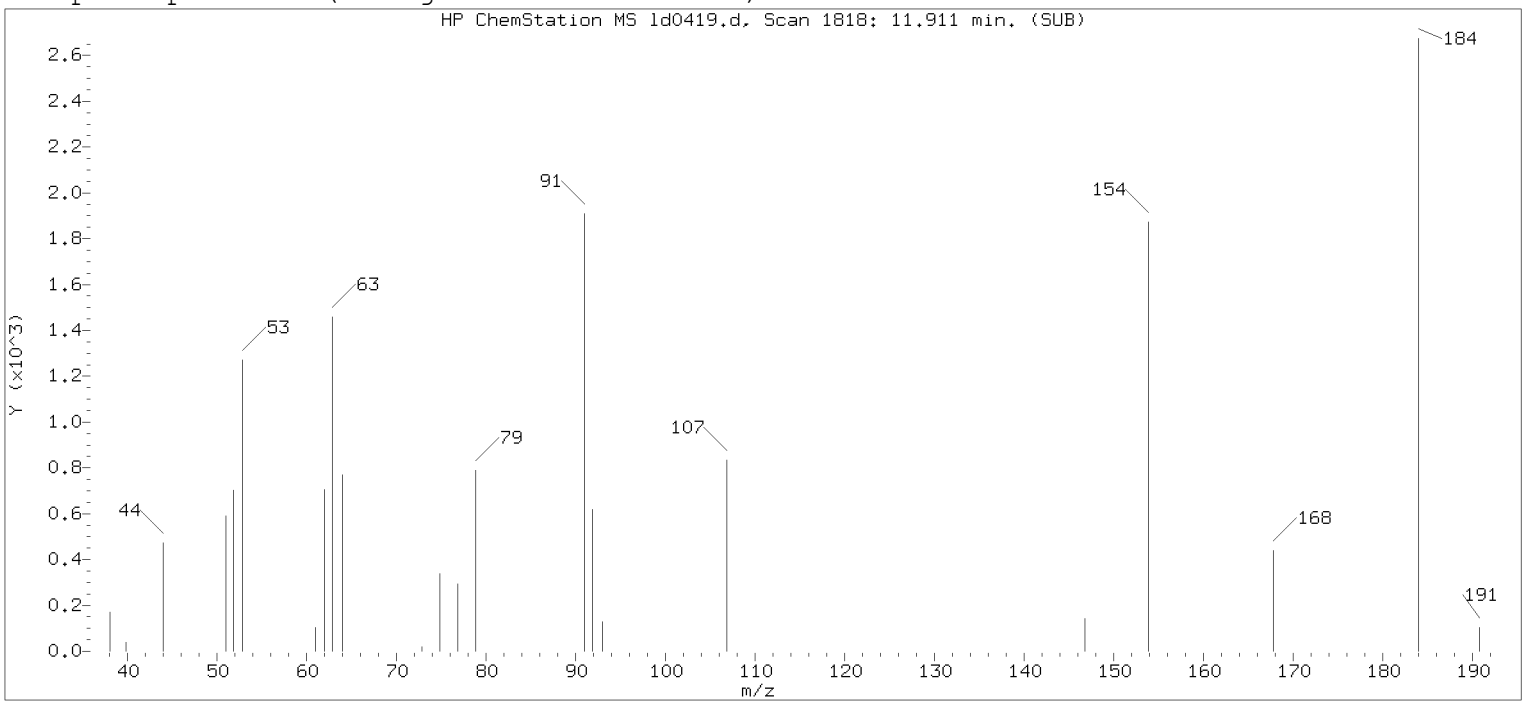
Compound Number : 120
Compound Name : 2,4-Dinitrophenol
Scan Number : 1818
Retention Time (minutes) : 11.911
Quant Ion : 184.00
Area (flag) : 6095M
On-Column Amount (ng/ul) : 0.3707
Integration start scan : 1812 Integration stop scan: 1846
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

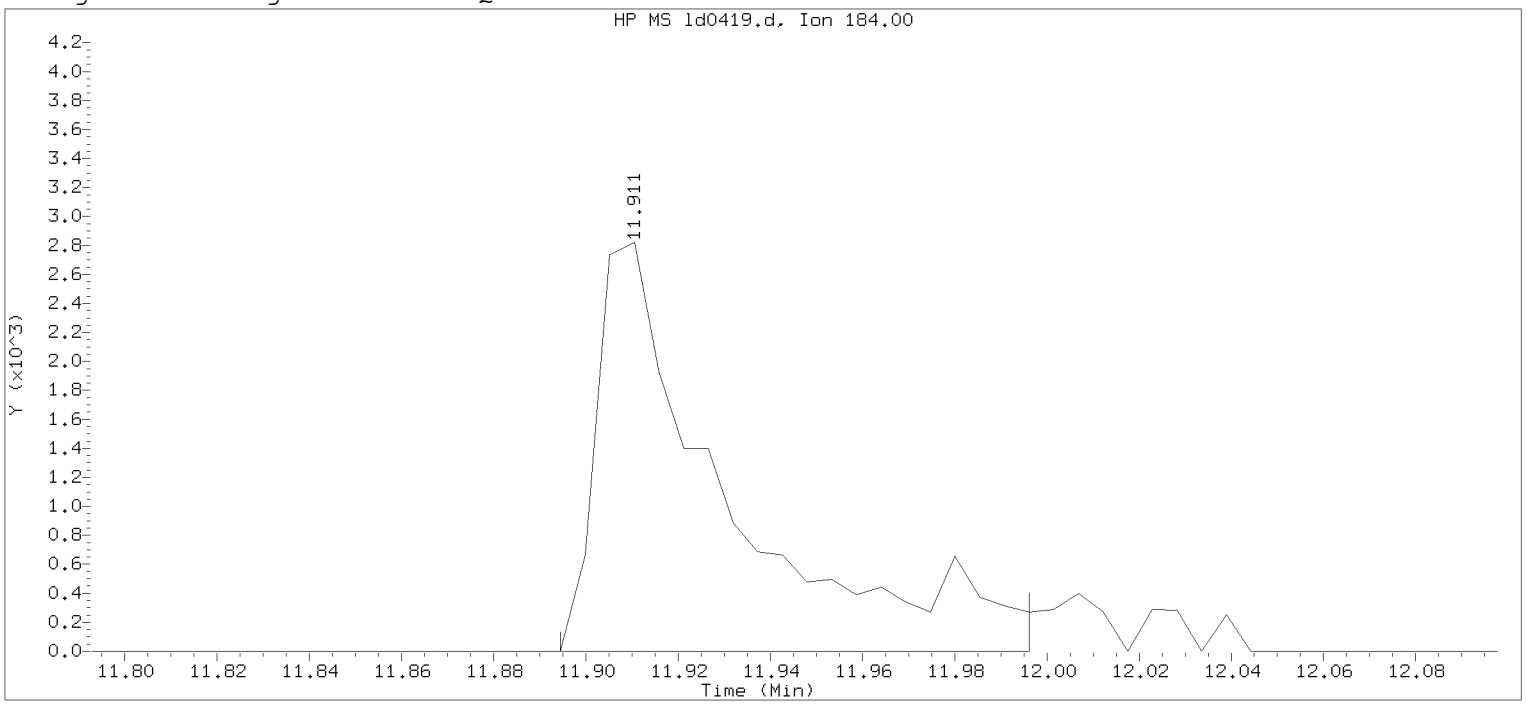
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

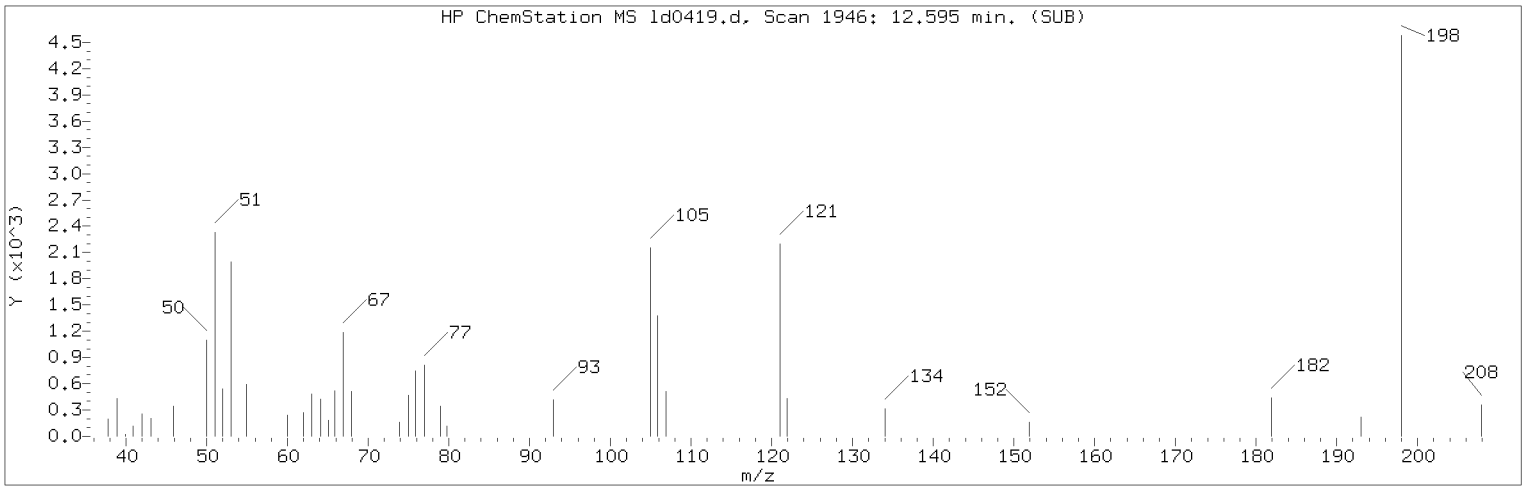
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

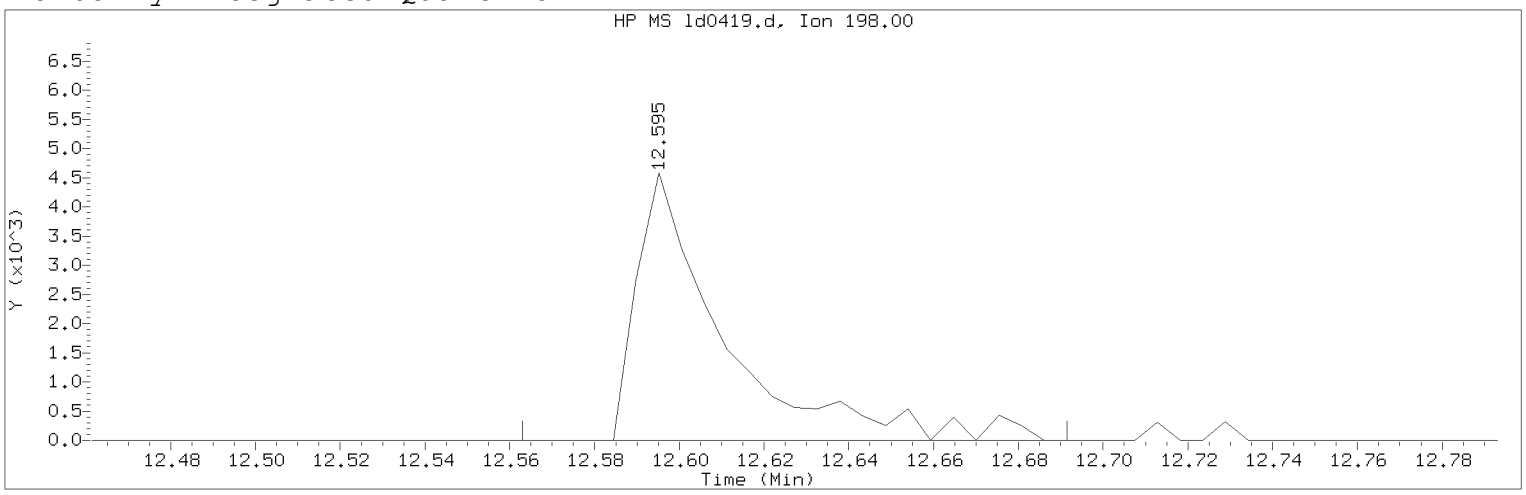
Compound Number	: 120		
Compound Name	: 2,4-Dinitrophenol		
Scan Number	: 1818		
Retention Time (minutes)	: 11.911		
Quant Ion	: 184.00		
Area	: 5478		
On-column Amount (ng/ul)	: 0.3490		
Integration start scan	: 1814	Integration stop scan:	1833
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

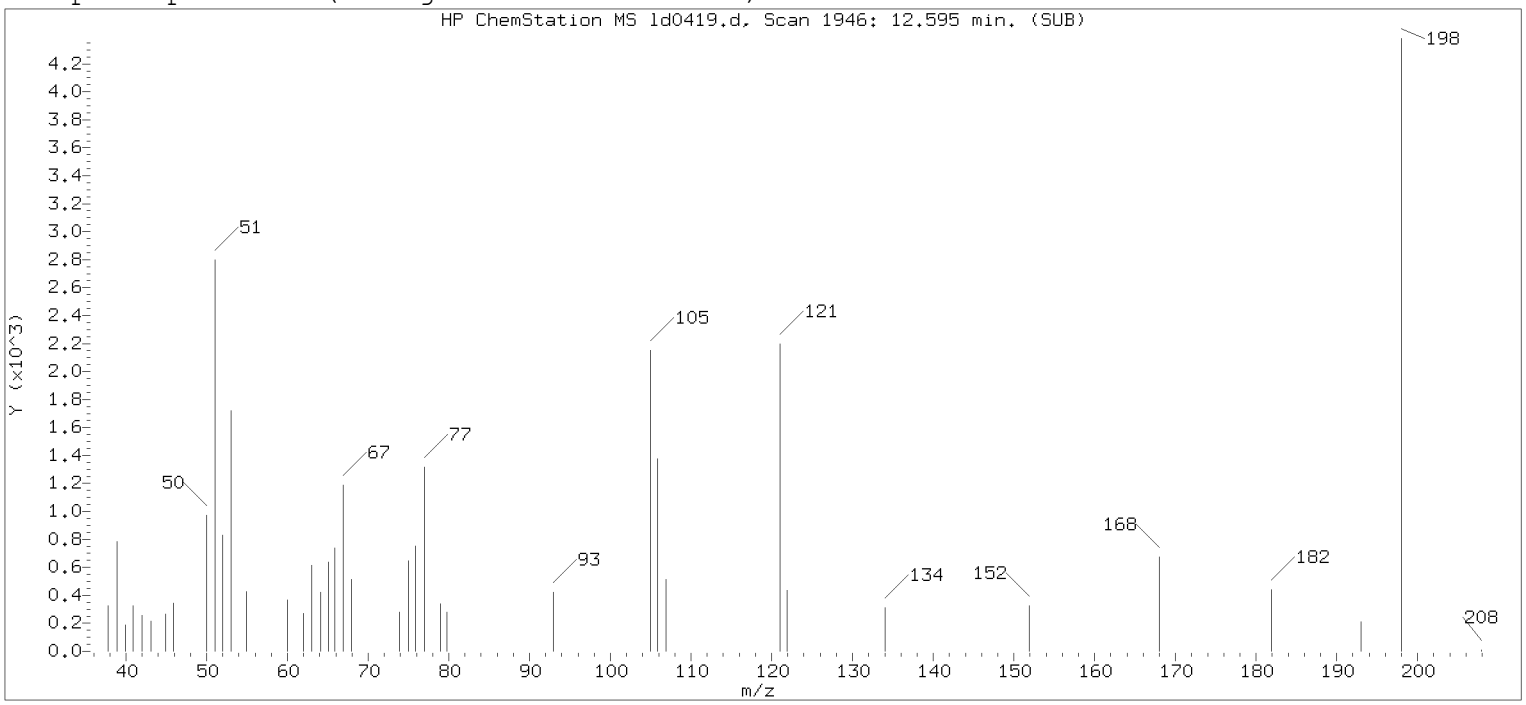
Compound Number : 135
Compound Name : 4,6-Dinitro-2-methylphenol
Scan Number : 1946
Retention Time (minutes) : 12.595
Quant Ion : 198.00
Area (flag) : 6596M
On-Column Amount (ng/ul) : 0.3009
Integration start scan : 1939 Integration stop scan: 1963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

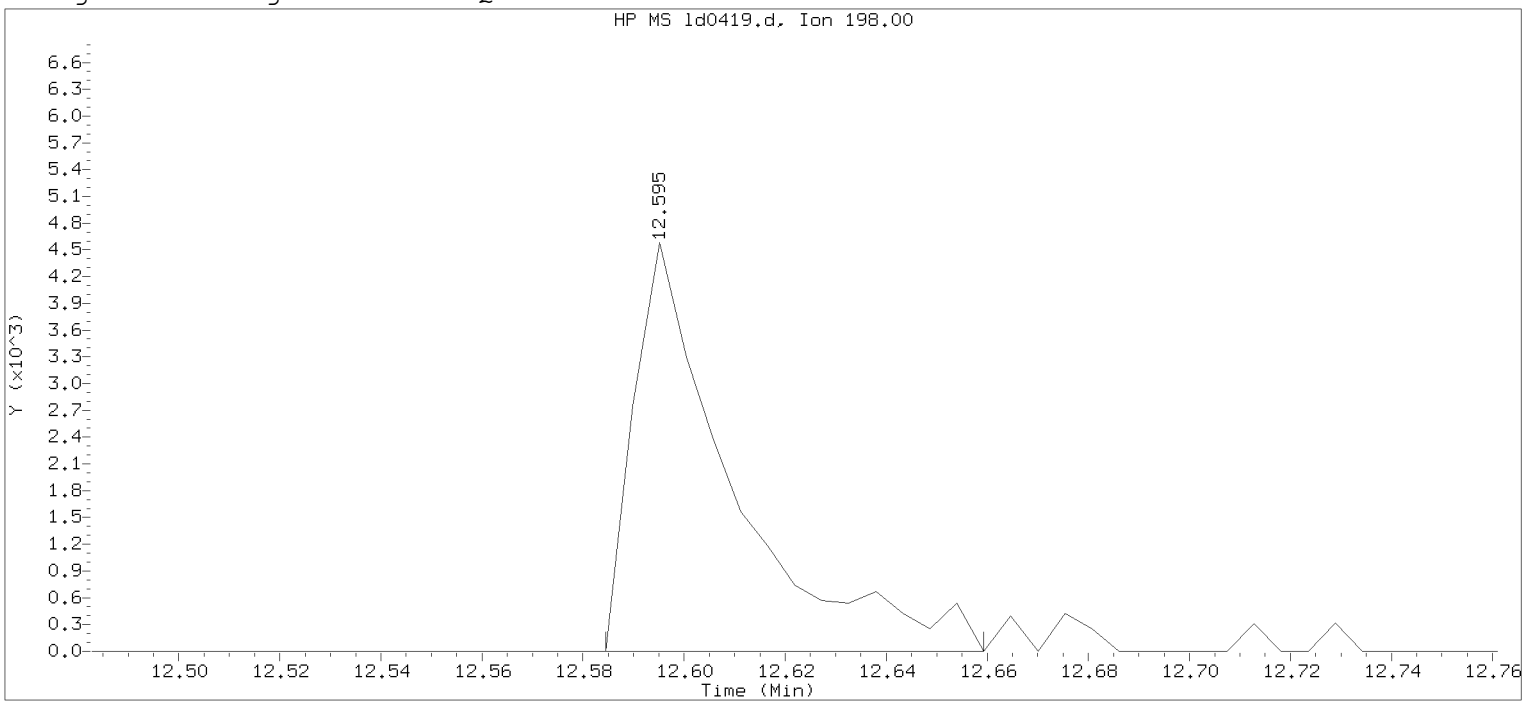
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

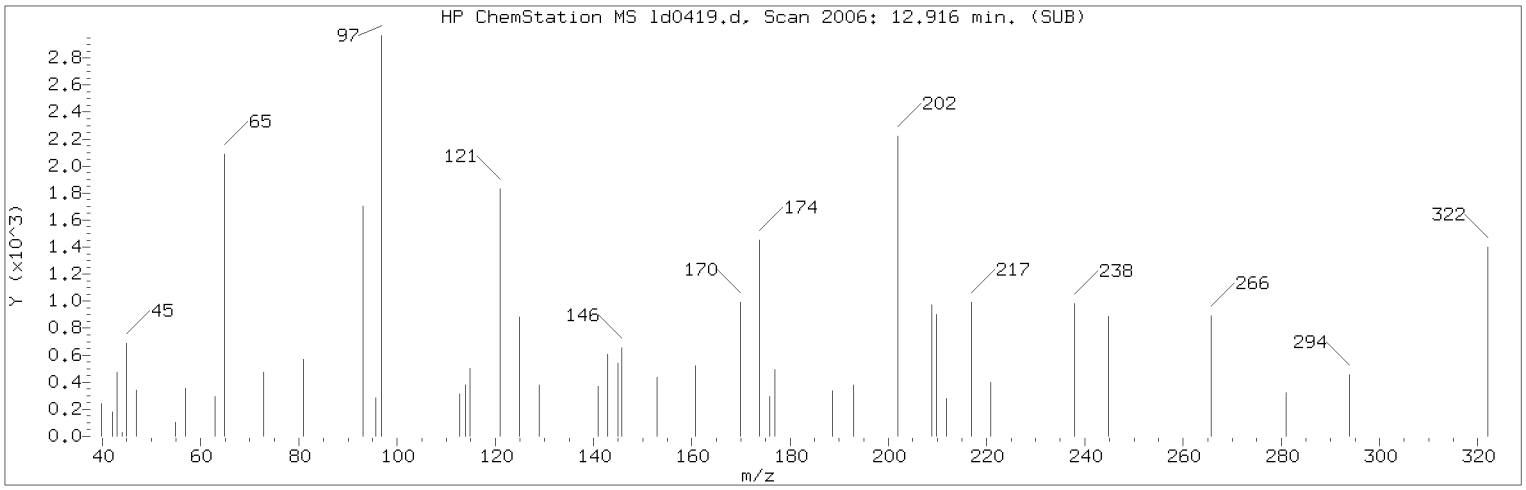
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

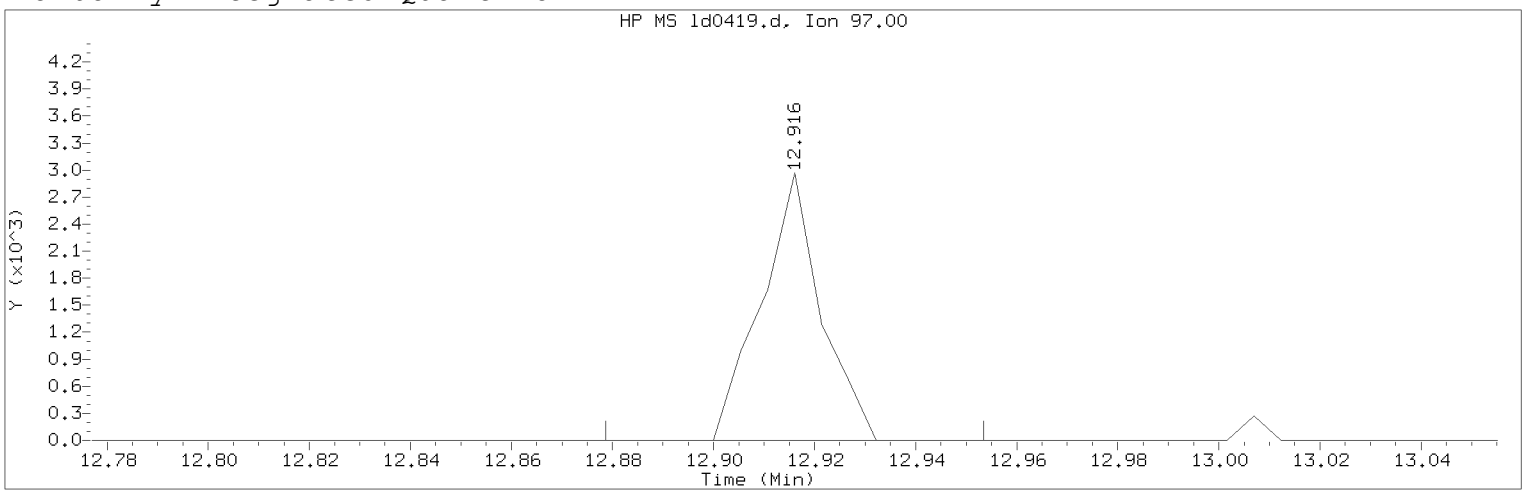
Compound Number	: 135		
Compound Name	: 4,6-Dinitro-2-methylphenol		
Scan Number	: 1946		
Retention Time (minutes)	: 12.595		
Quant Ion	: 198.00		
Area	: 6250		
On-column Amount (ng/ul)	: 0.2871		
Integration start scan	: 1943	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1823

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

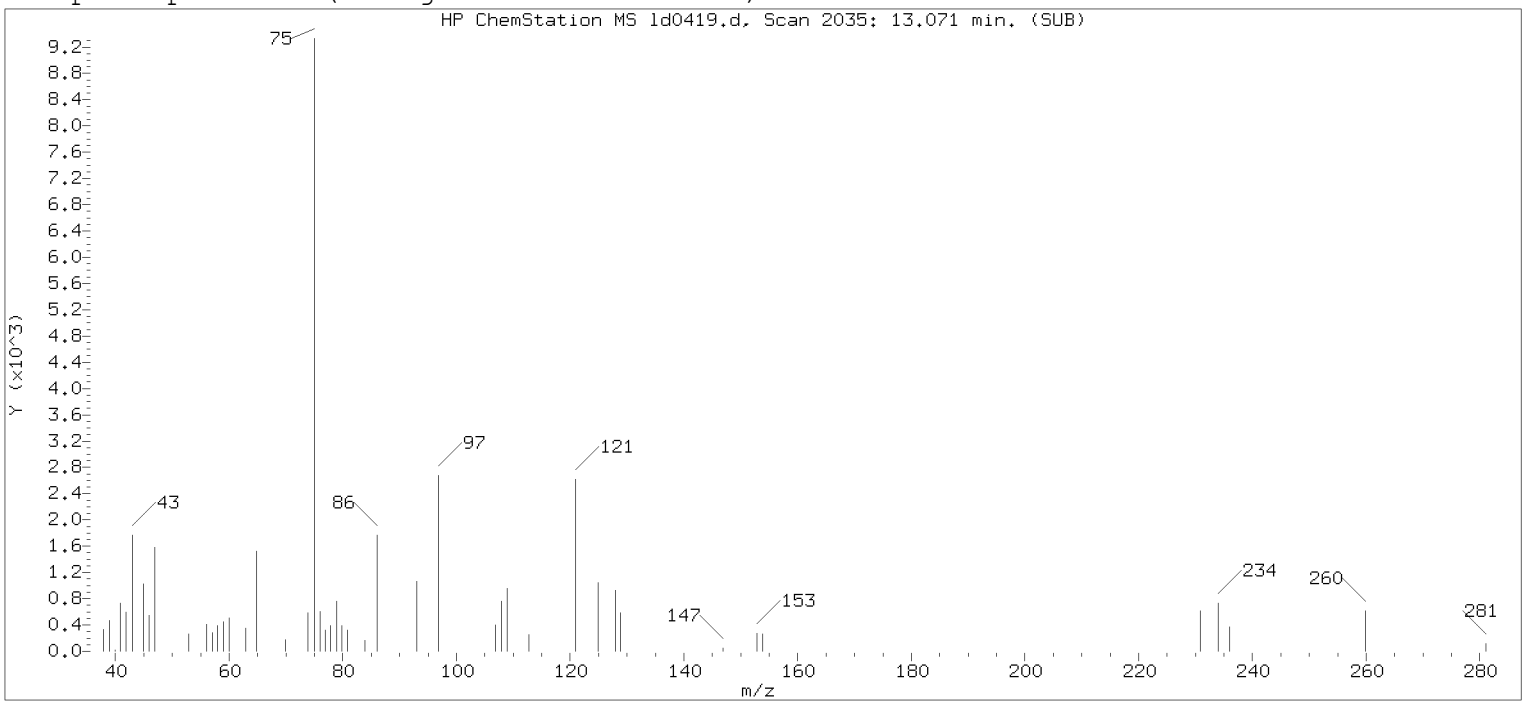
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2006
Retention Time (minutes) : 12.916
Quant Ion : 97.00
Area (flag) : 2437M
On-Column Amount (ng/ul) : 0.1013
Integration start scan : 1998 Integration stop scan: 2012
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

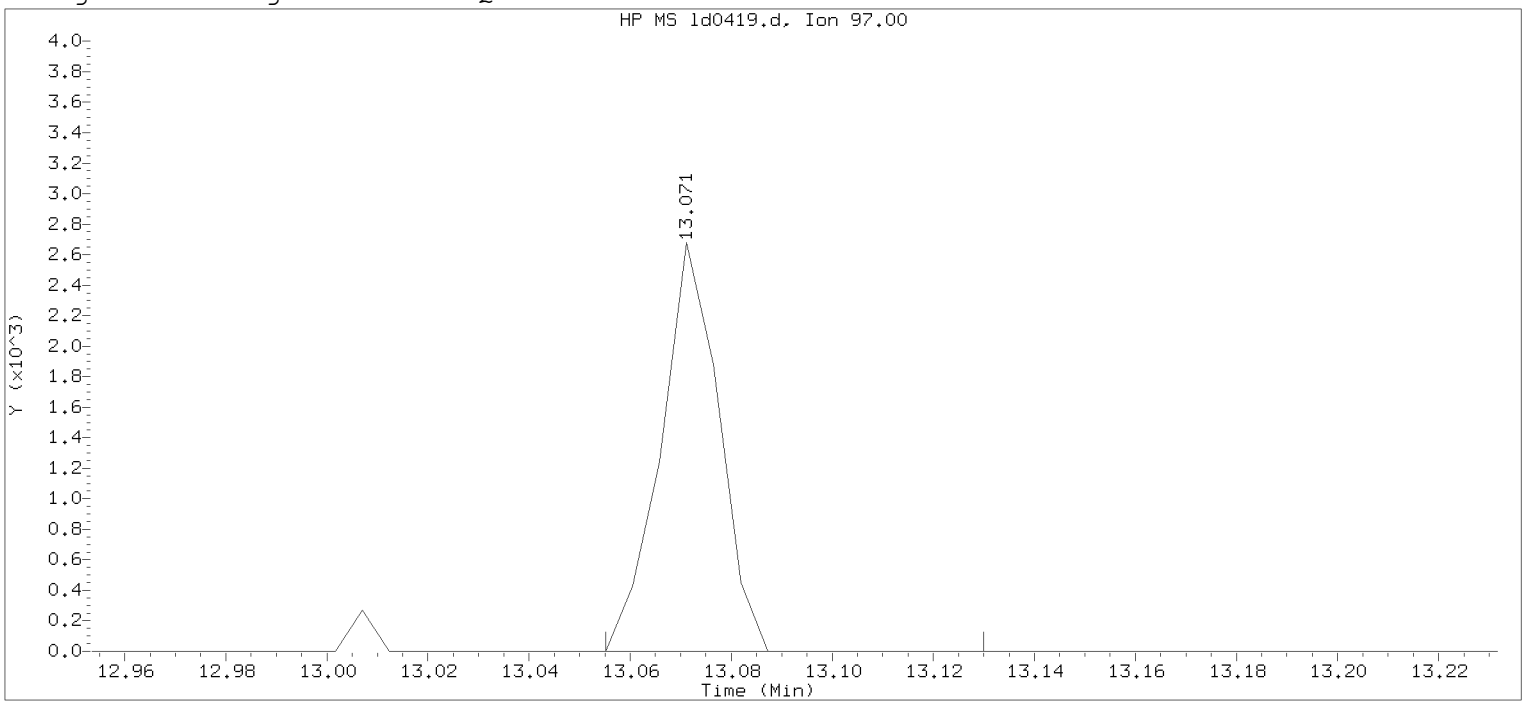
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

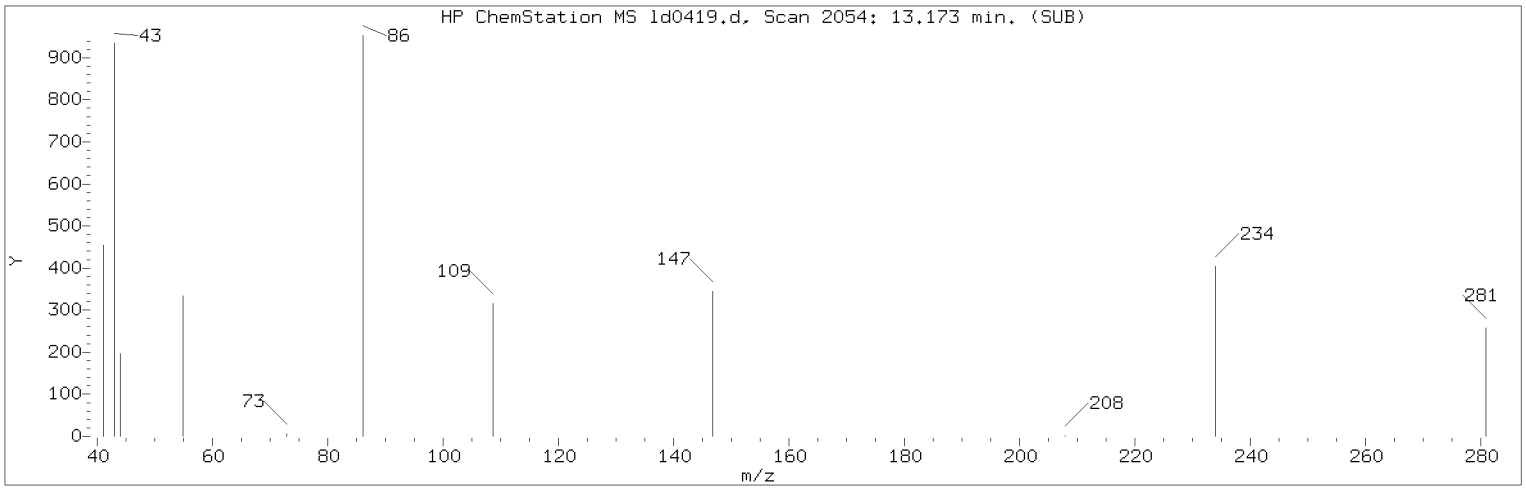
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

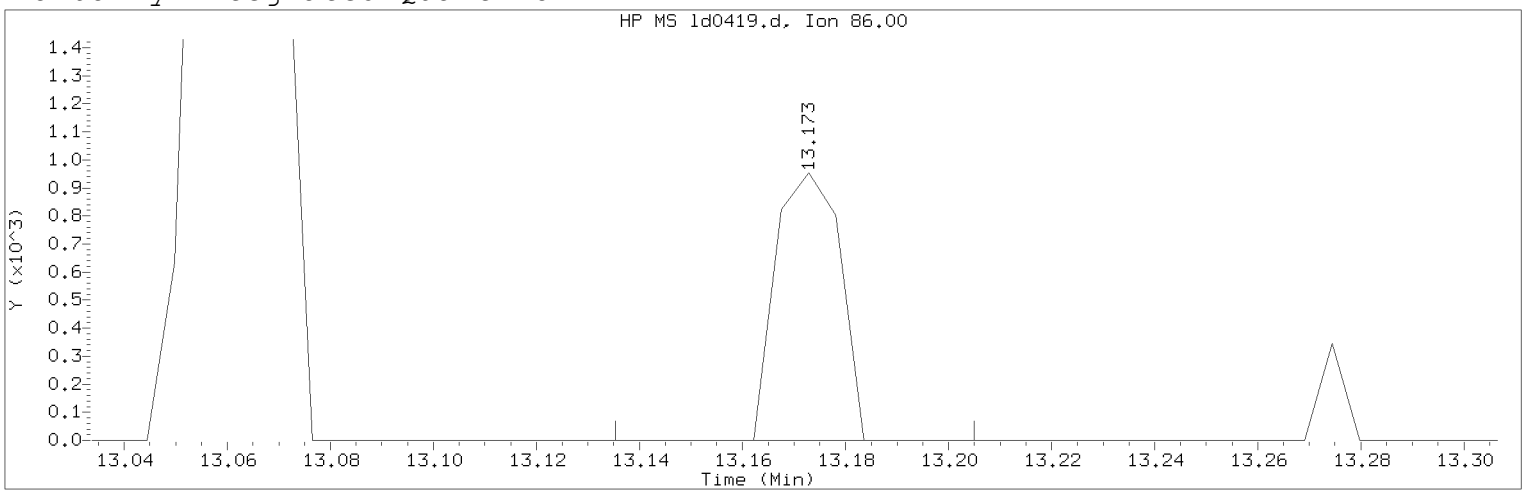
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2035
Retention Time (minutes) : 13.071
Quant Ion : 97.00
Area : 2145
On-column Amount (ng/ul) : 0.0850
Integration start scan : 2031 Integration stop scan: 2045
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R. Transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

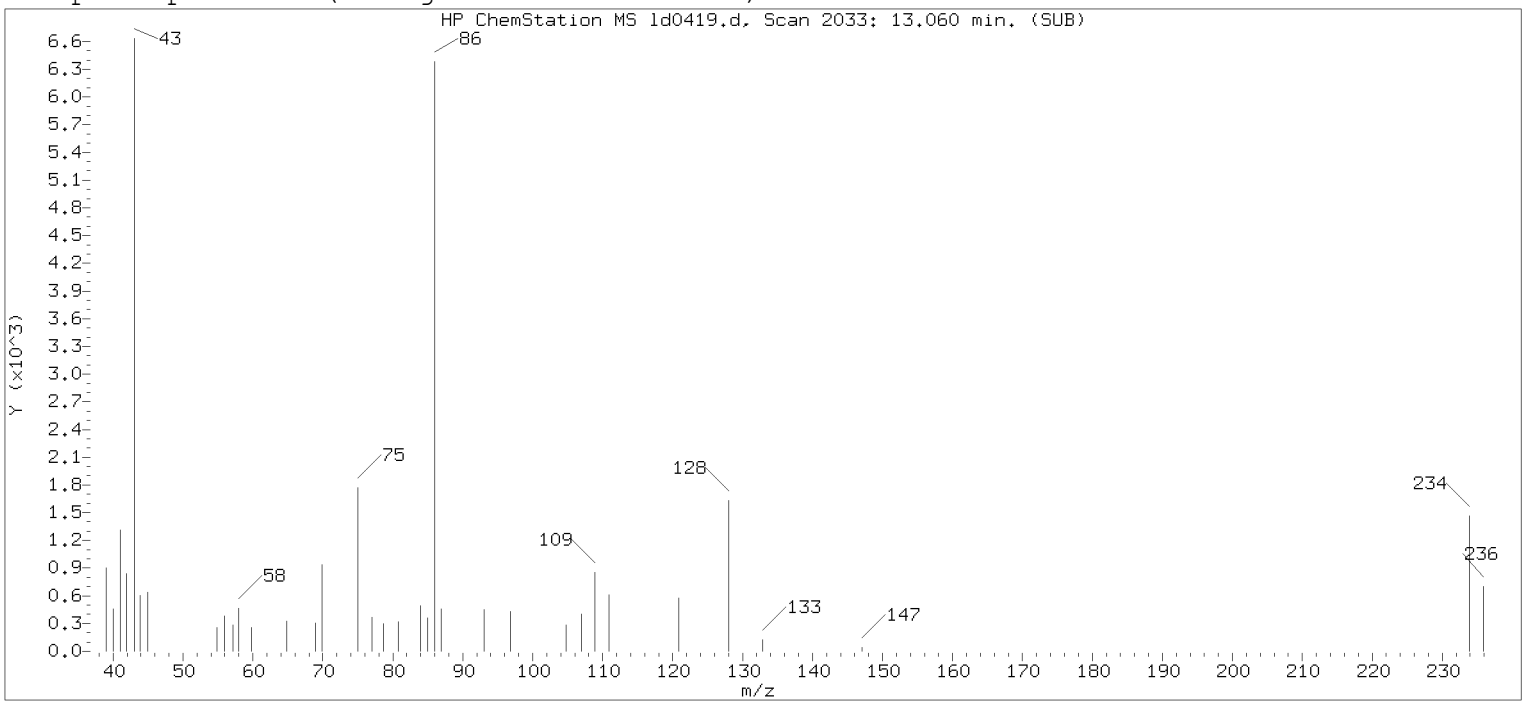
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2054		
Retention Time (minutes)	: 13.173		
Quant Ion	: 86.00		
Area (flag)	: 827M		
On-Column Amount (ng/ul)	: 0.0163		
Integration start scan	: 2046	Integration stop scan:	2059
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

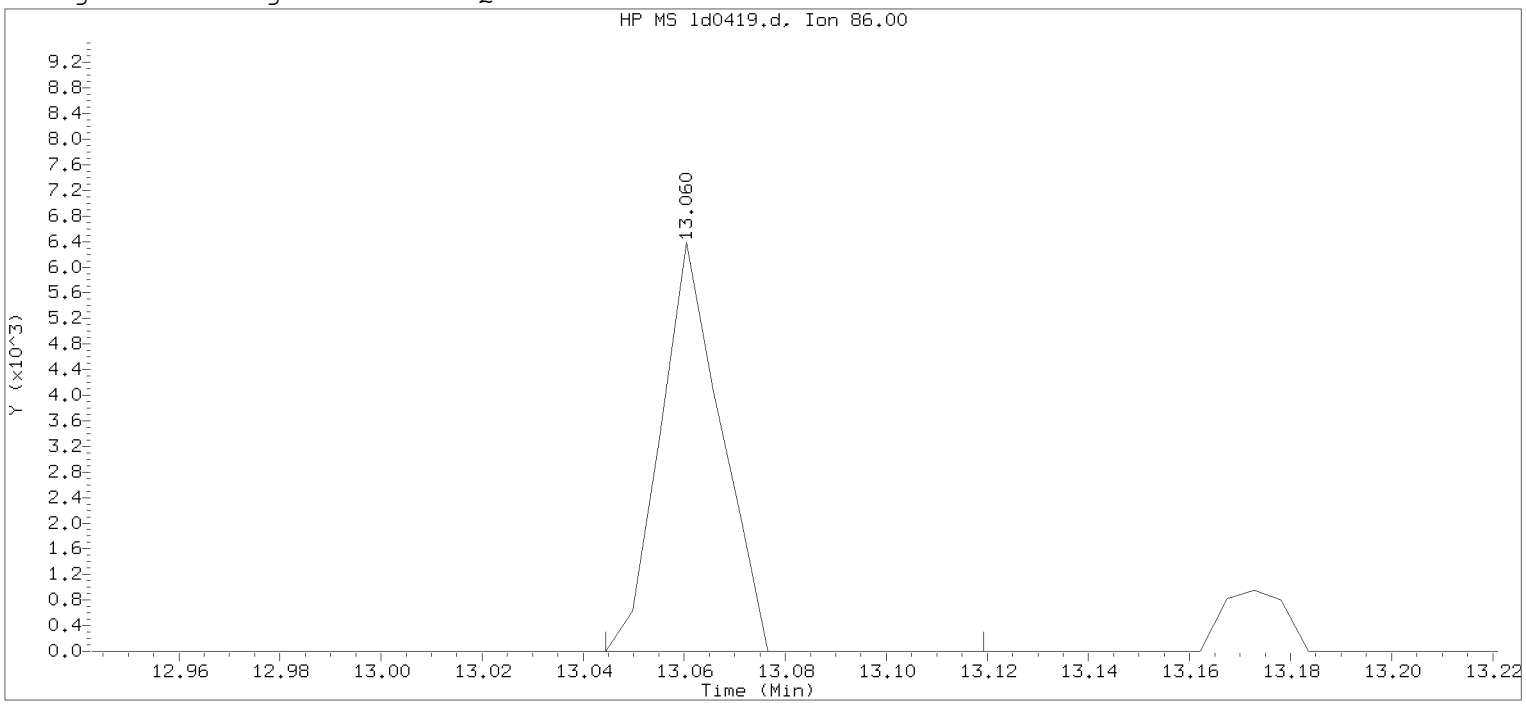
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

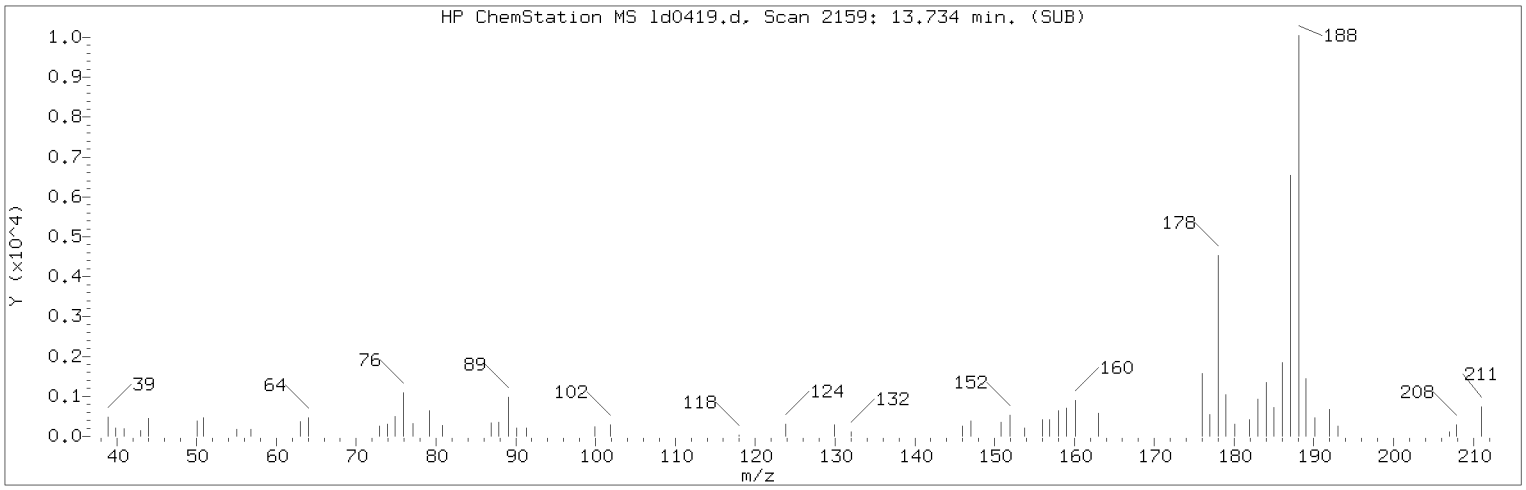
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

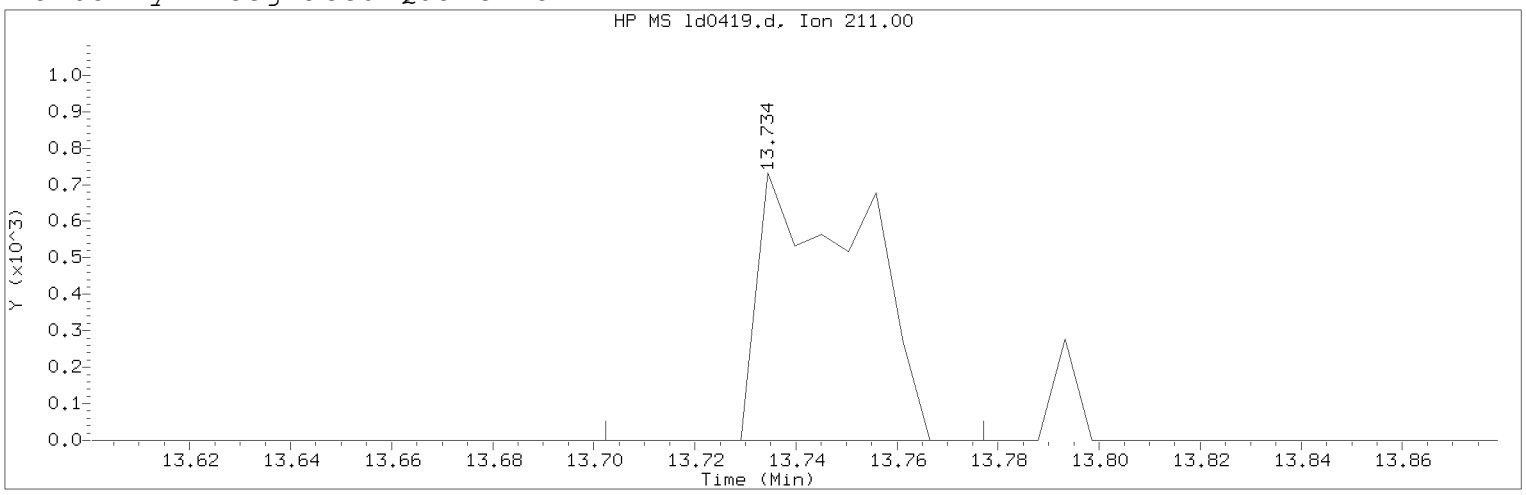
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2033		
Retention Time (minutes)	: 13.060		
Quant Ion	: 86.00		
Area	: 5296		
On-column Amount (ng/ul)	: 0.0998		
Integration start scan	: 2029	Integration stop scan:	2043
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

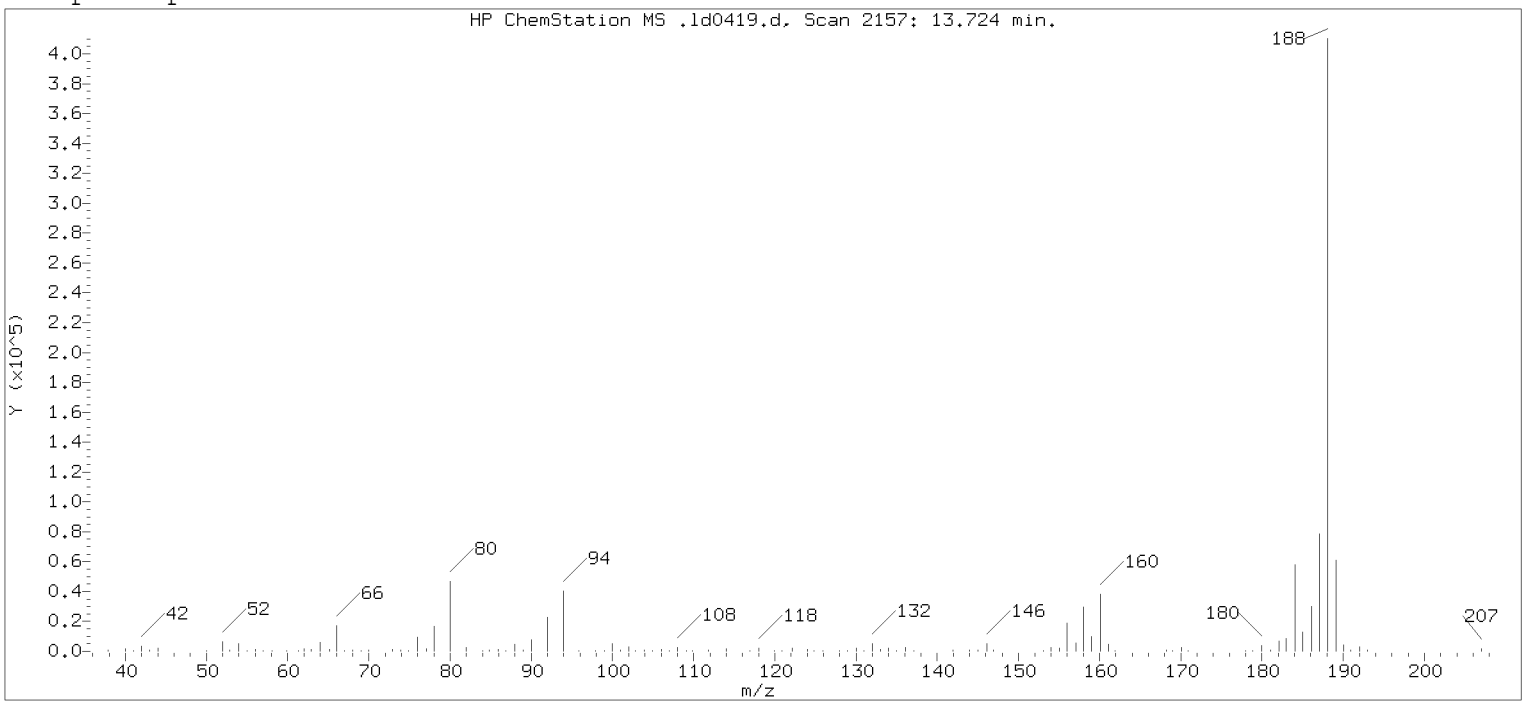
Compound Number : 159
Compound Name : Dinoseb
Scan Number : 2159
Retention Time (minutes) : 13.734
Quant Ion : 211.00
Area (flag) : 1057M
On-Column Amount (ng/ul) : 0.0308
Integration start scan : 2152 Integration stop scan: 2166
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

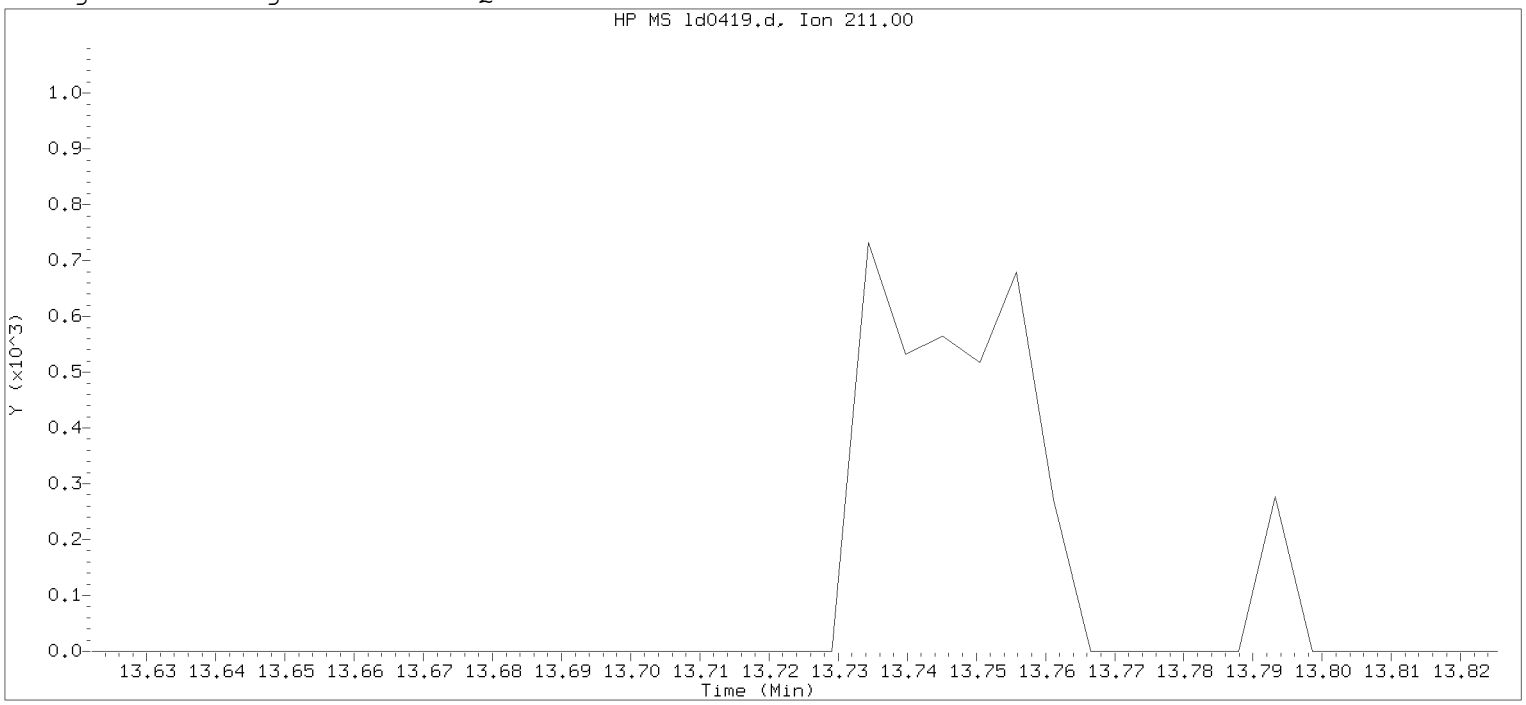
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

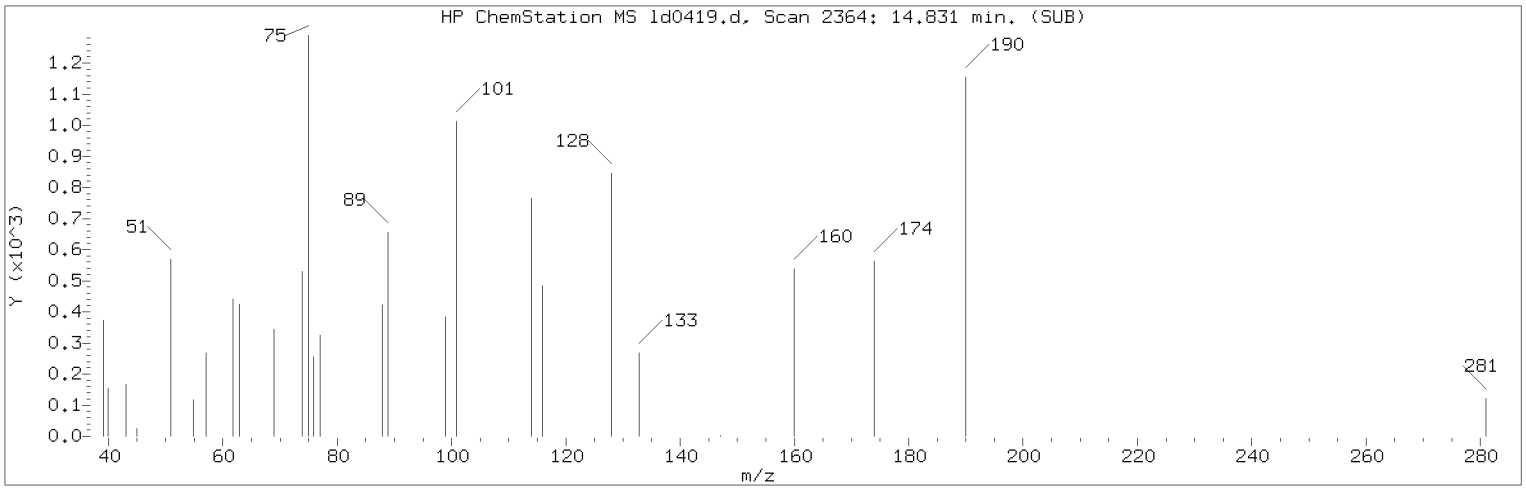
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

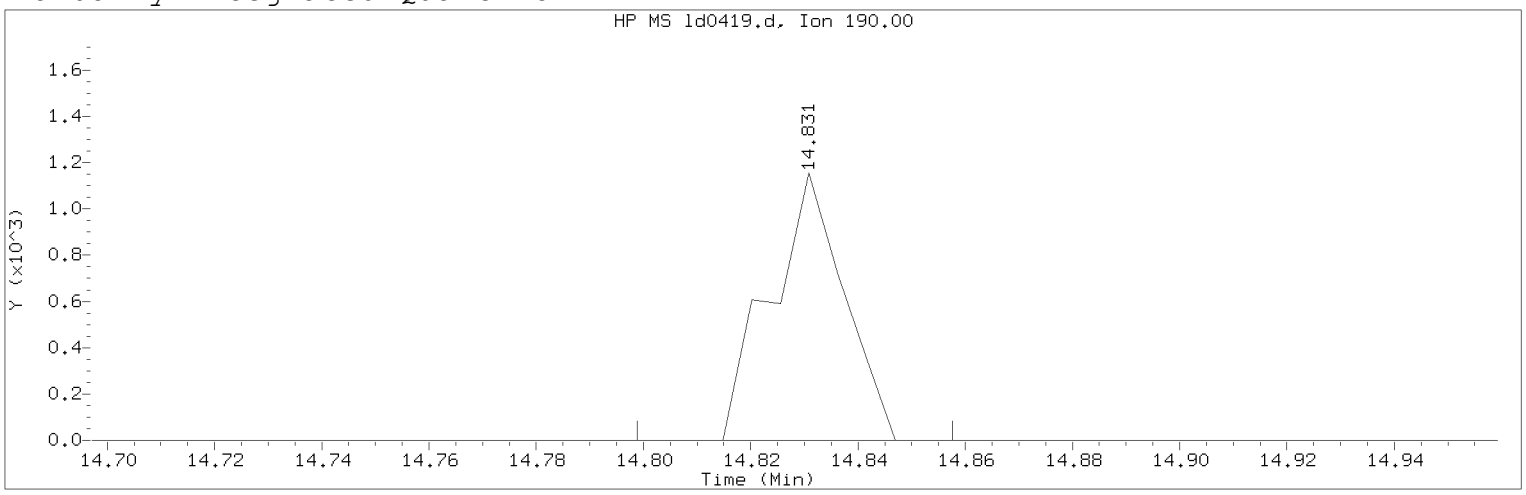
Compound Number : 159
Compound Name : Dinoseb
Expected RT (minutes) : 13.724
Quant Ion : 211.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Page 1829

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

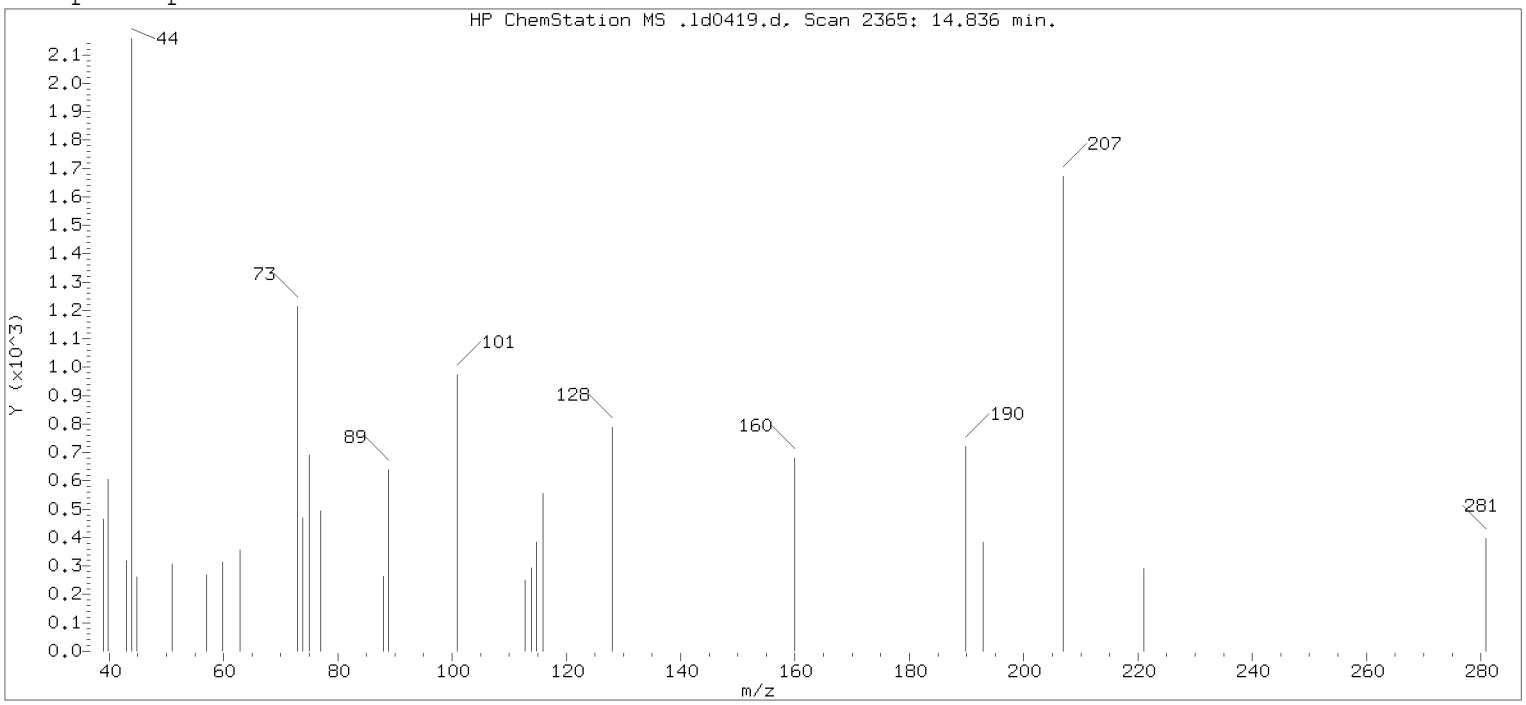
Compound Number : 173
Compound Name : 4-Nitroquinoline-1-oxide
Scan Number : 2364
Retention Time (minutes) : 14.831
Quant Ion : 190.00
Area (flag) : 1100M
On-Column Amount (ng/ul) : 0.0509
Integration start scan : 2357 Integration stop scan: 2368
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

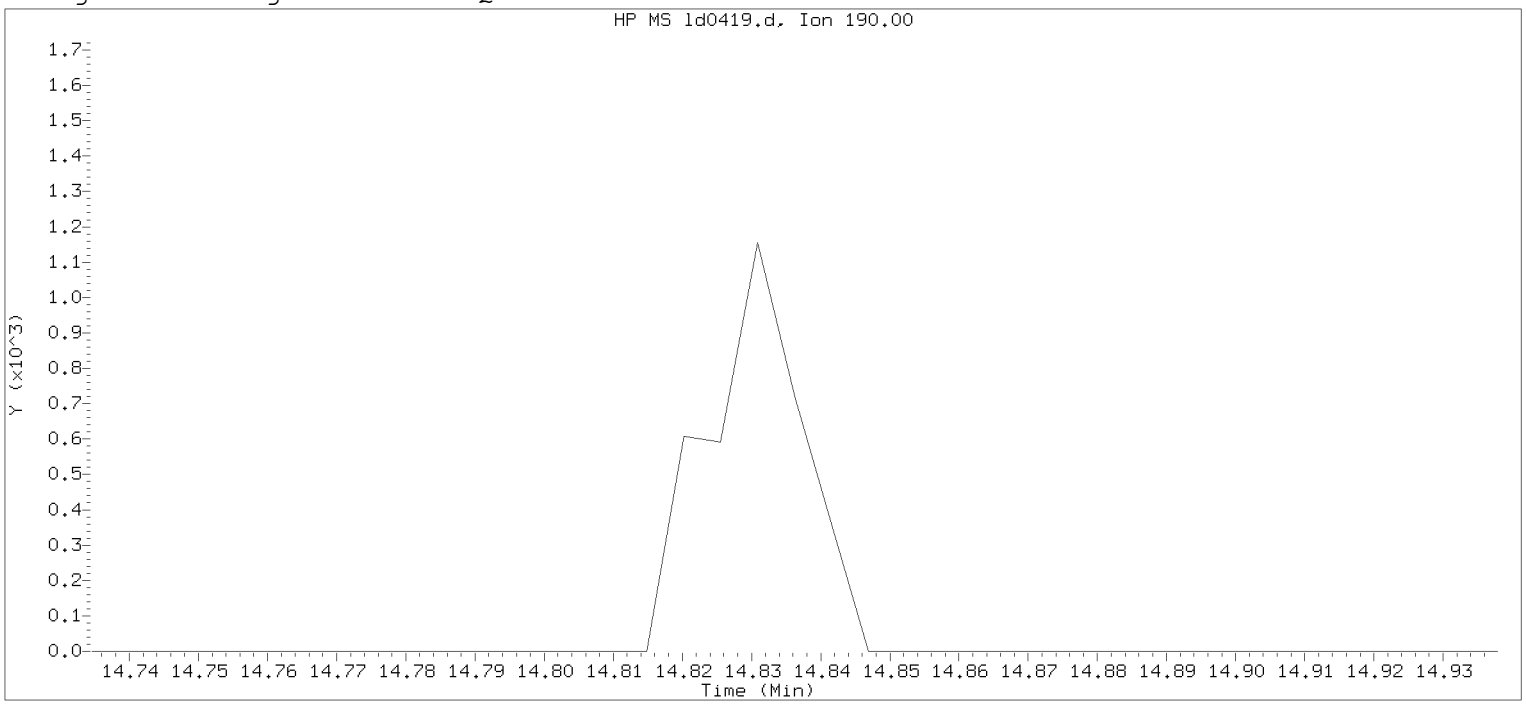
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



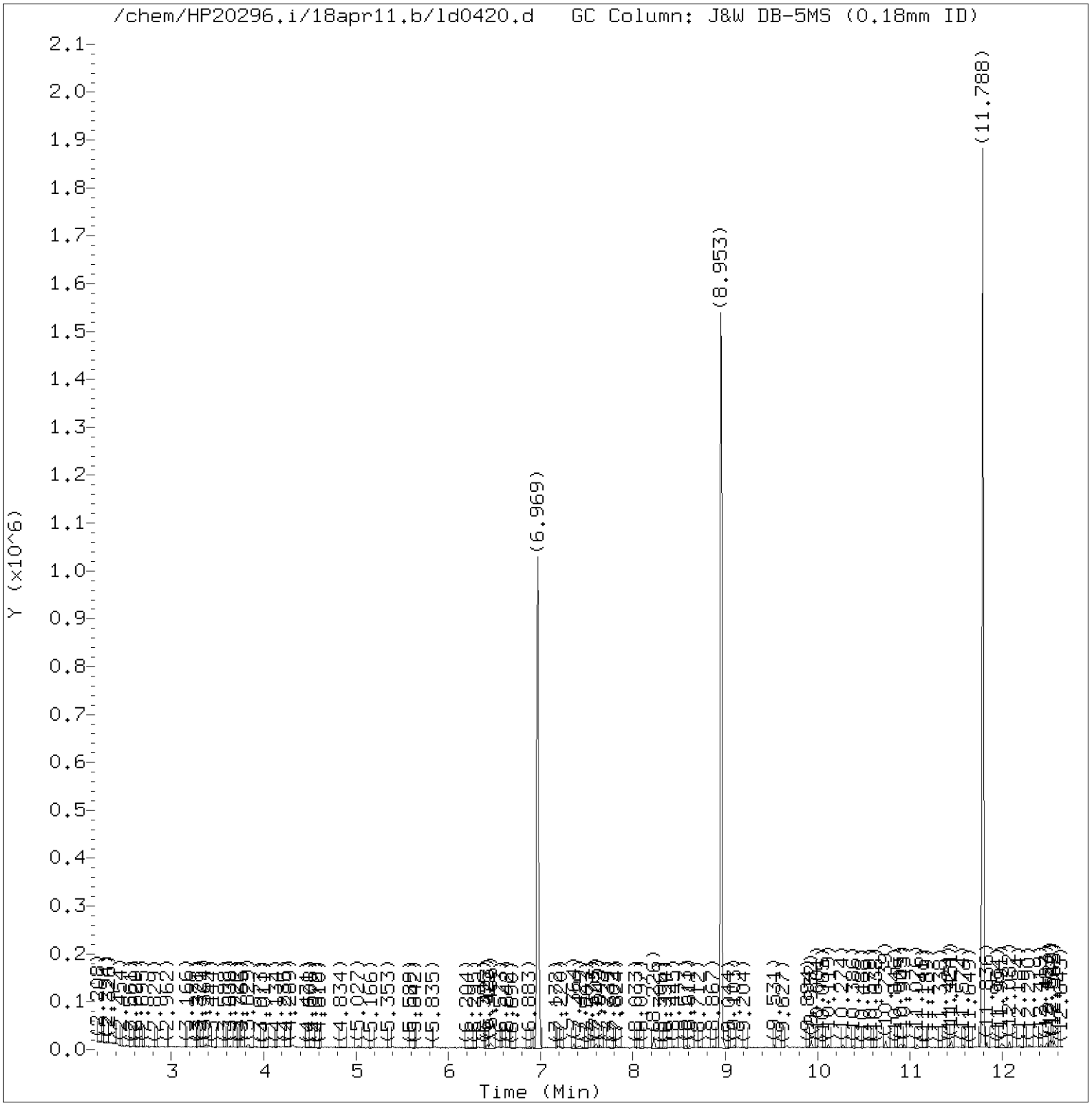
Data File: /chem/HP20296.i/18apr11.b/ld0419.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 12:47 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:13 Unknown

Sample Name: SSTD0.125 Lab Sample ID: rvMDL0968

Compound Number : 173
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 14.836
Quant Ion : 190.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1831



Total Ion Chromatogram (TIC)

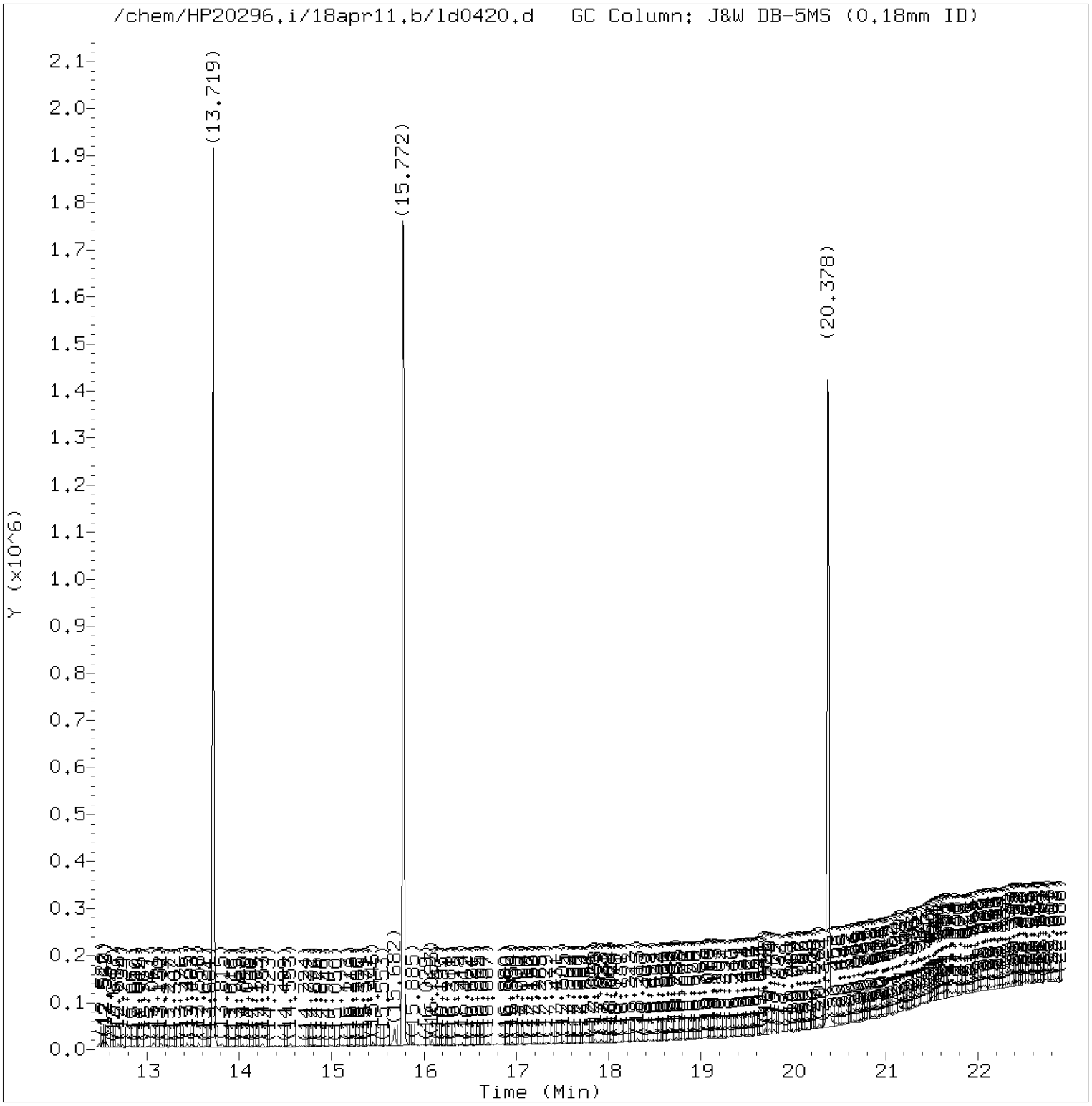
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

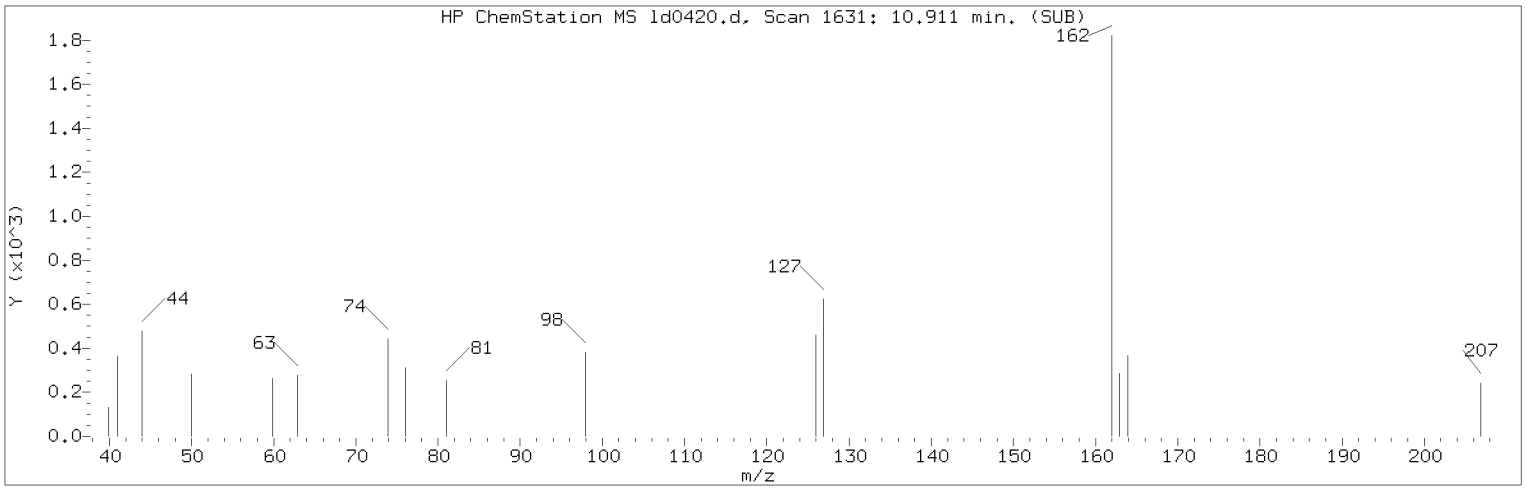
Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	215106	5.000
45)$Nitrobenzene-d5	(2)	7.819	82	2760	0.037
68)*Naphthalene-d8	(2)	8.953	136	853867	5.000
69) Naphthalene	(2)	8.990	128	3645	0.021
86) 2-Methylnaphthalene	(2)	10.119	142	2527	0.022
87) 1-Methylnaphthalene	(2)	10.274	142	2204	0.020
96)$2-Fluorobiphenyl	(3)	10.739	172	6223	0.047
99) 2-Chloronaphthalene	(3)	10.911	162	2391M	0.021
114) Acenaphthylene	(3)	11.579	152	3138	0.019
118)*Acenaphthene-d10	(3)	11.788	164	426102	5.000
119) Acenaphthene	(3)	11.836	153	2595	0.023
131) Fluorene	(3)	12.520	166	2742	0.022
150) Hexachlorobenzene	(4)	13.200	284	593	0.017
158)*Phenanthrene-d10	(4)	13.719	188	825161	5.000
160) Phenanthrene	(4)	13.745	178	4633	0.025
162) Anthracene	(4)	13.815	178	3455	0.019
227) Total PAHs	(6)			64547	0.393
178) Fluoranthene	(4)	15.446	202	4216	0.021
180)*Pyrene-d10	(5)	15.772	212	830500	5.000
182) Pyrene	(5)	15.805	202	5149	0.024
184)$Terphenyl-d14	(5)	16.088	244	6189	0.046
200) Benzo(a)anthracene	(5)	17.858	228	4163	0.022
201) Chrysene	(5)	17.928	228	3818	0.021
211) Benzo(b)fluoranthene	(6)	19.741	252	3766	0.021
213) Benzo(k)fluoranthene	(6)	19.789	252	4296M	0.024
216) Benzo(a)pyrene	(6)	20.281	252	3327M	0.020
218)*Perylene-d12	(6)	20.378	264	746641	5.000
224) Indeno(1,2,3-cd)pyrene	(6)	22.020	276	3718	0.024
225) Dibenz(a,h)anthracene	(6)	22.068	278	3436	0.022
226) Benzo(g,h,i)perylene	(6)	22.442	276	3719	0.023

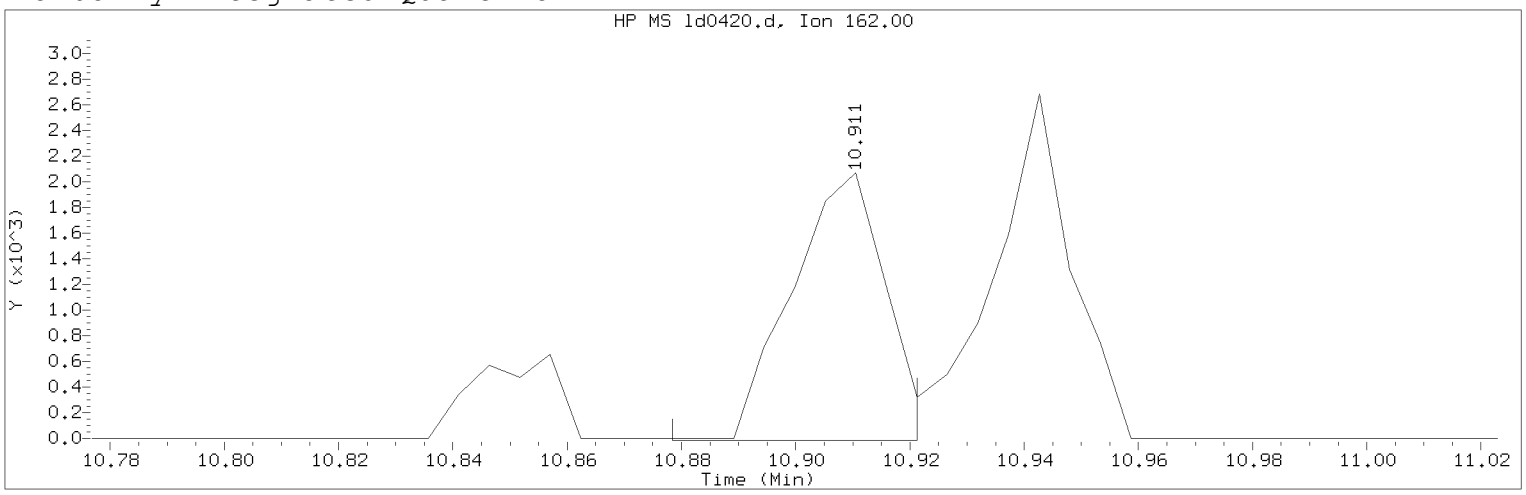
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

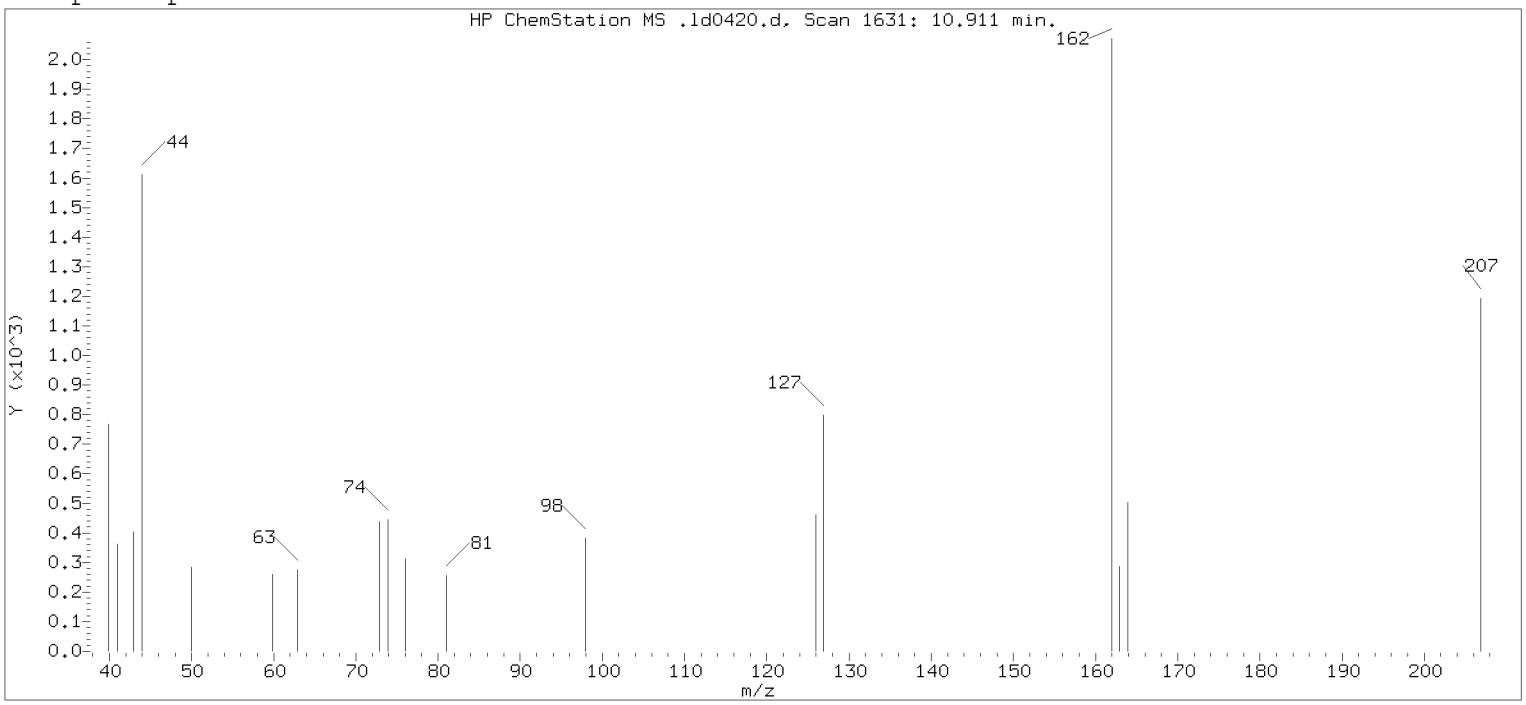
Compound Number : 99
Compound Name : 2-Chloronaphthalene
Scan Number : 1631
Retention Time (minutes) : 10.911
Quant Ion : 162.00
Area (flag) : 2391M
On-Column Amount (ng/ul) : 0.0206
Integration start scan : 1624 Integration stop scan: 1632
Y at integration start : -13 Y at integration end: -13

Reason for manual integration: missed peak

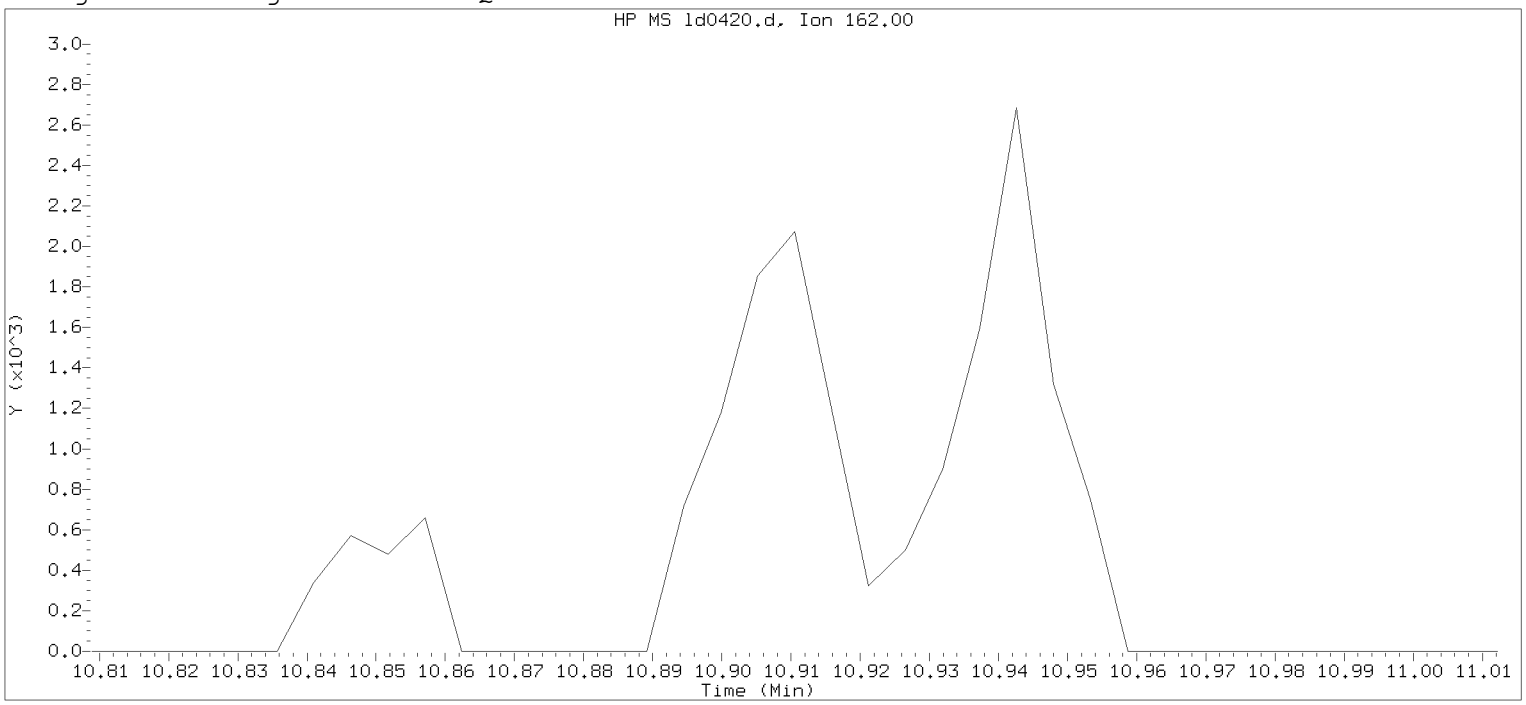
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

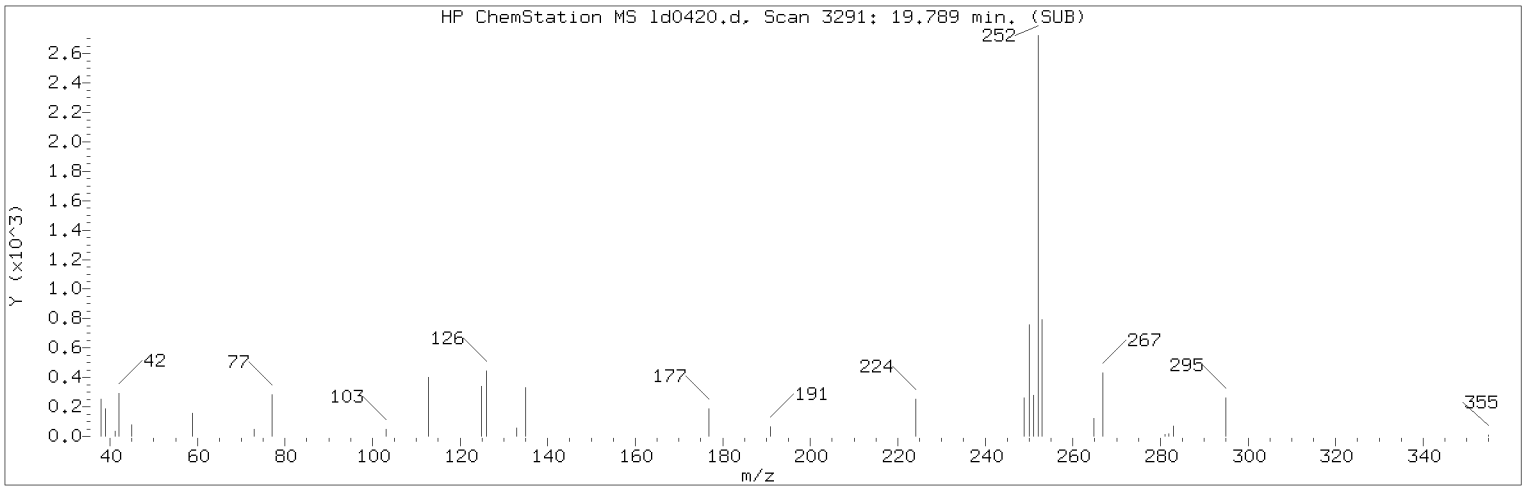
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

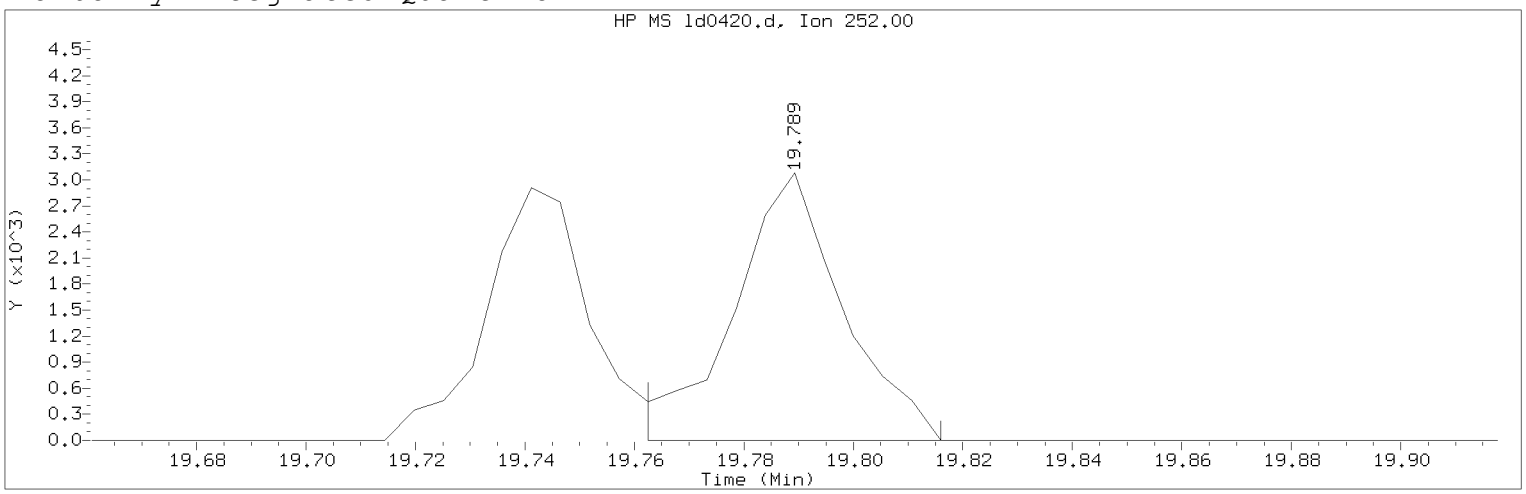
Compound Number : 99
Compound Name : 2-Chloronaphthalene
Expected RT (minutes) : 10.910
Quant Ion : 162.00

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Part 1835

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

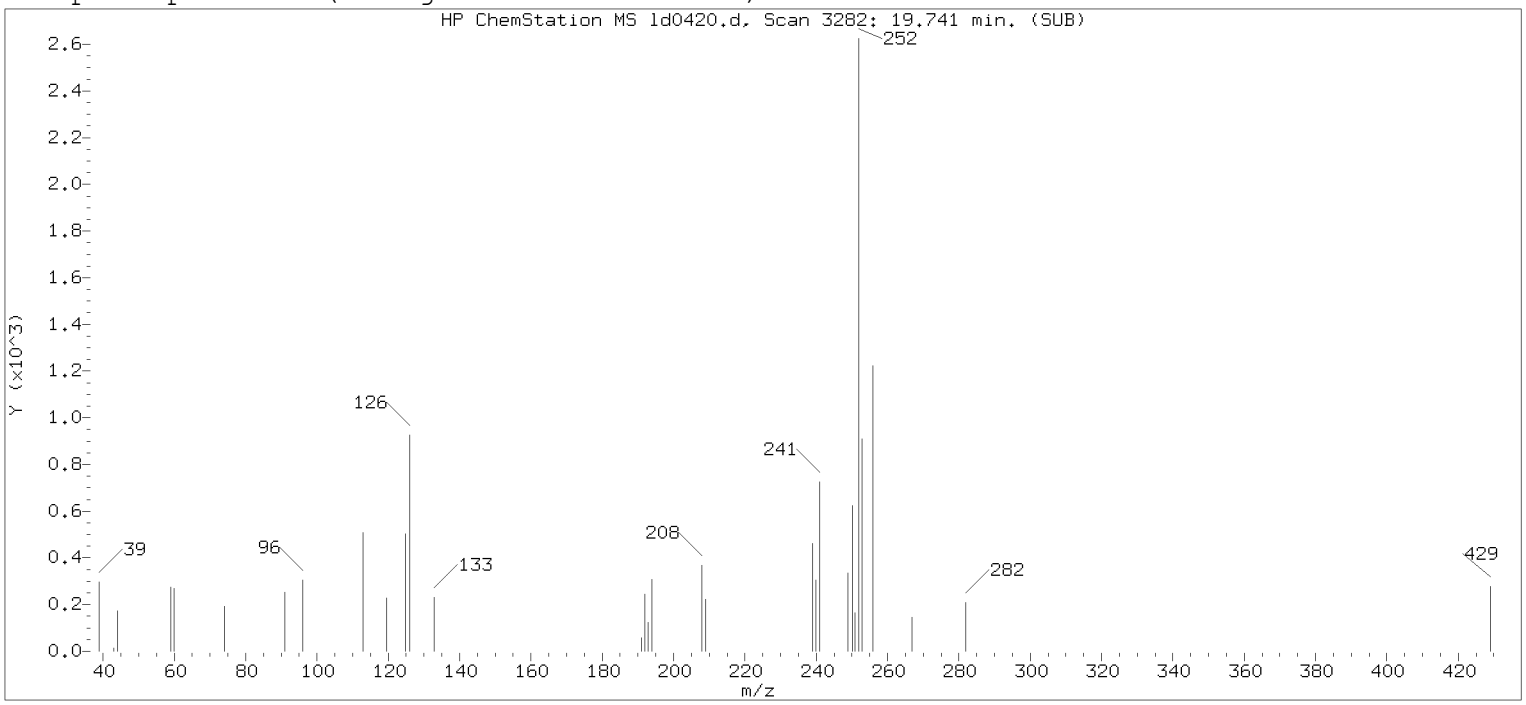
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3291
Retention Time (minutes) : 19.789
Quant Ion : 252.00
Area (flag) : 4296M
On-Column Amount (ng/ul) : 0.0244
Integration start scan : 3285 Integration stop scan: 3295
Y at integration start : -1 Y at integration end: 2

Reason for manual integration: improper integration

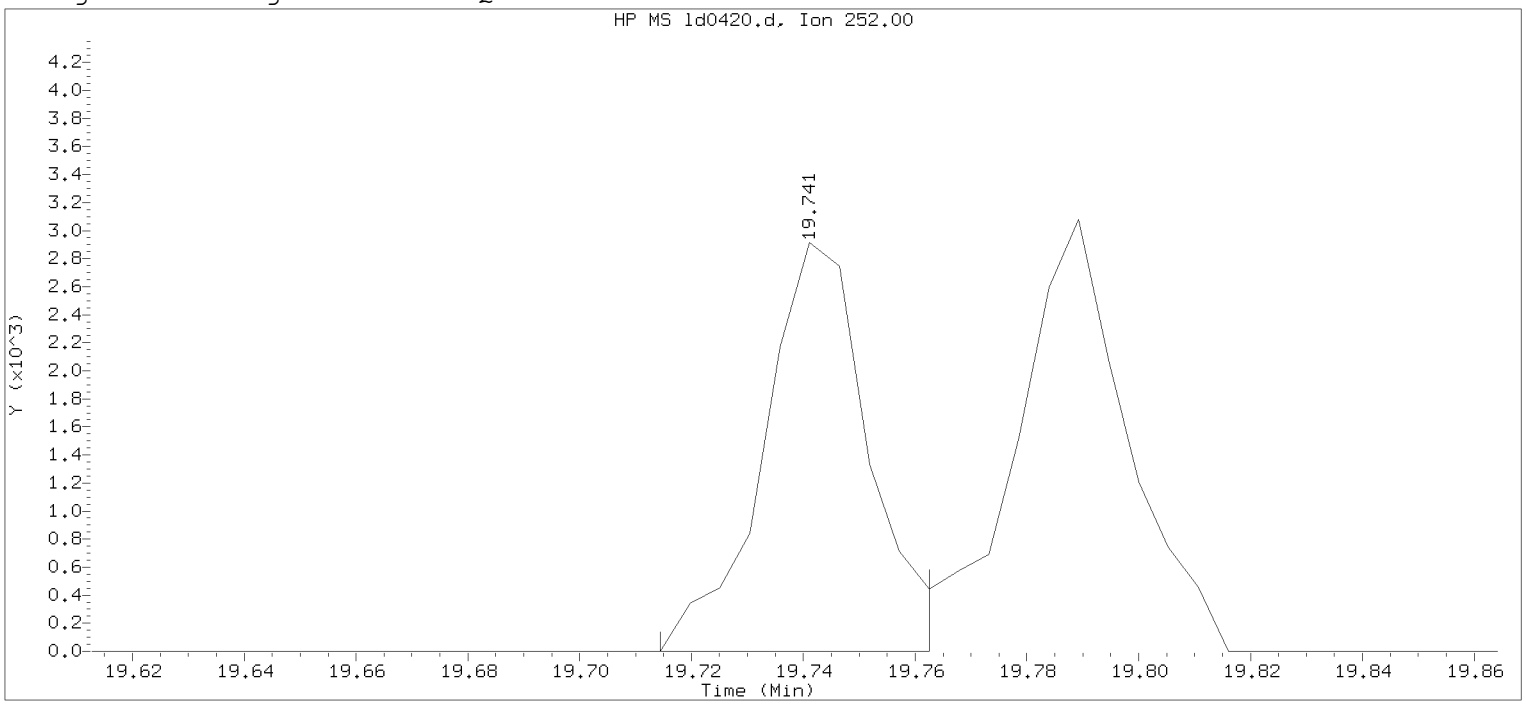
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

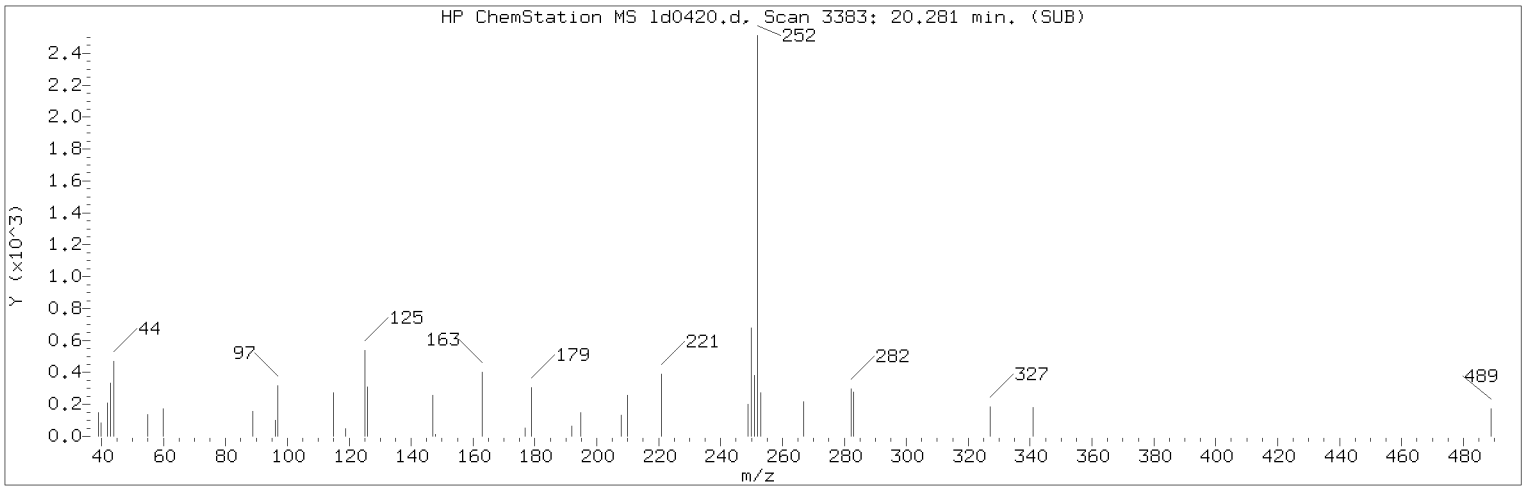
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

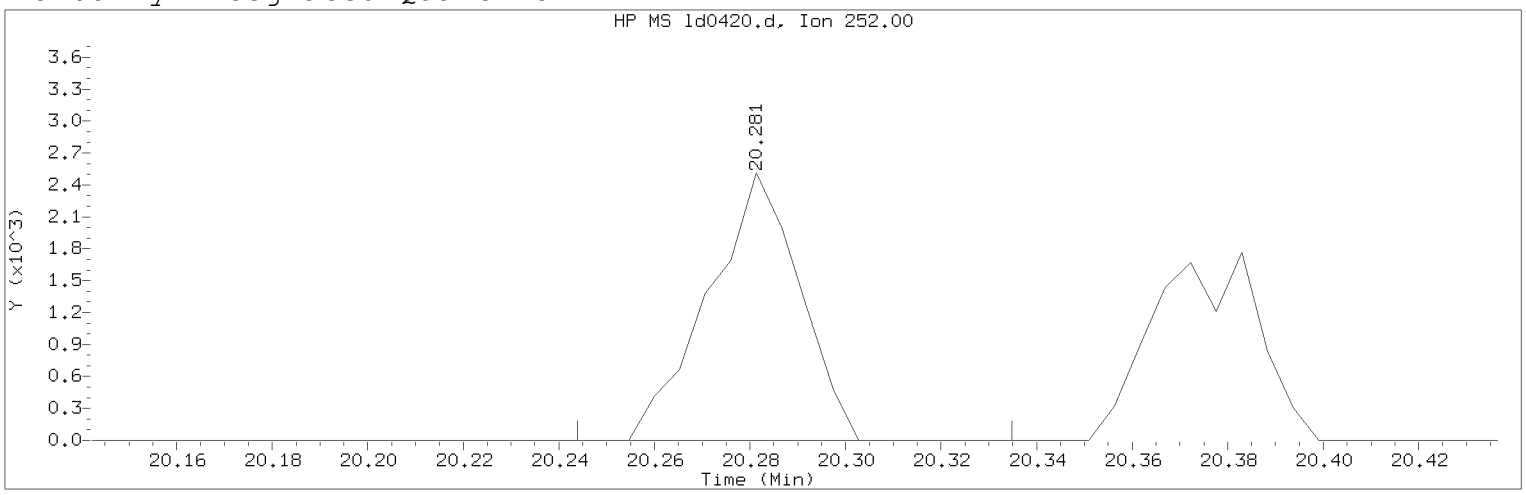
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3282		
Retention Time (minutes)	: 19.741		
Quant Ion	: 252.00		
Area	: 3766		
On-column Amount (ng/ul)	: 0.0205		
Integration start scan	: 3276	Integration stop scan:	3285
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1838

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 17:53
Date, time and analyst ID of latest file update: 11-Apr-2018 18:16 art12405

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

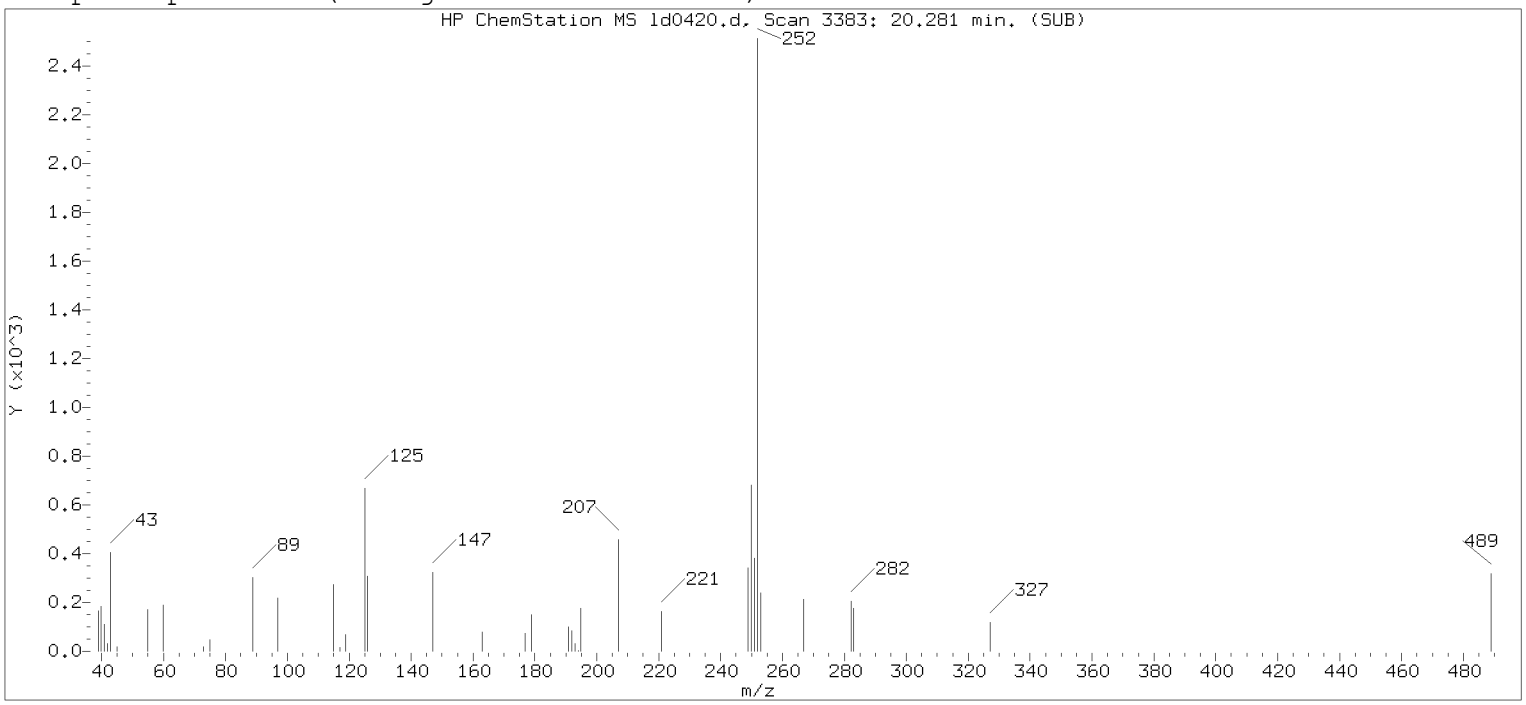
Compound Number : 216
Compound Name : Benzo(a)pyrene
Scan Number : 3383
Retention Time (minutes) : 20.281
Quant Ion : 252.00
Area (flag) : 3327M
On-Column Amount (ng/ul) : 0.0202
Integration start scan : 3375 Integration stop scan: 3392
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

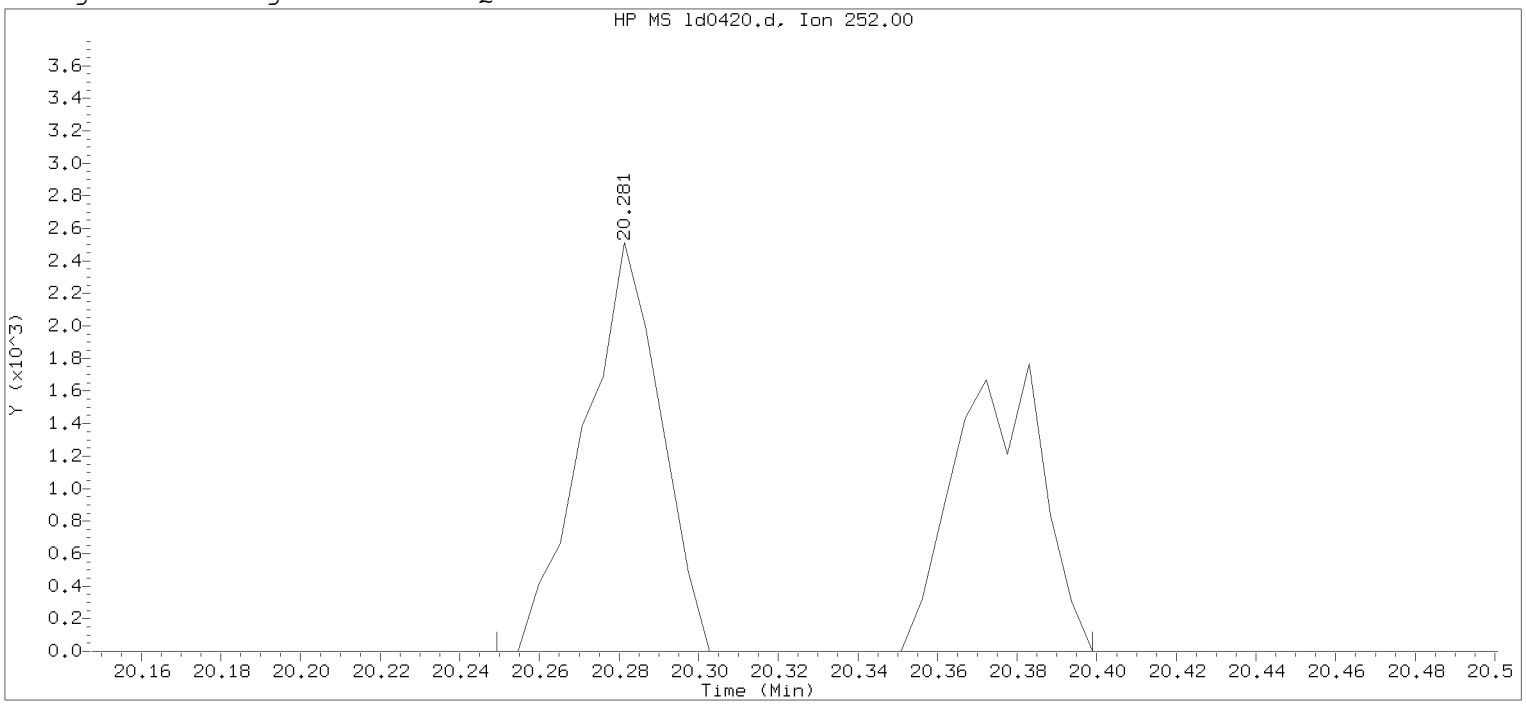
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



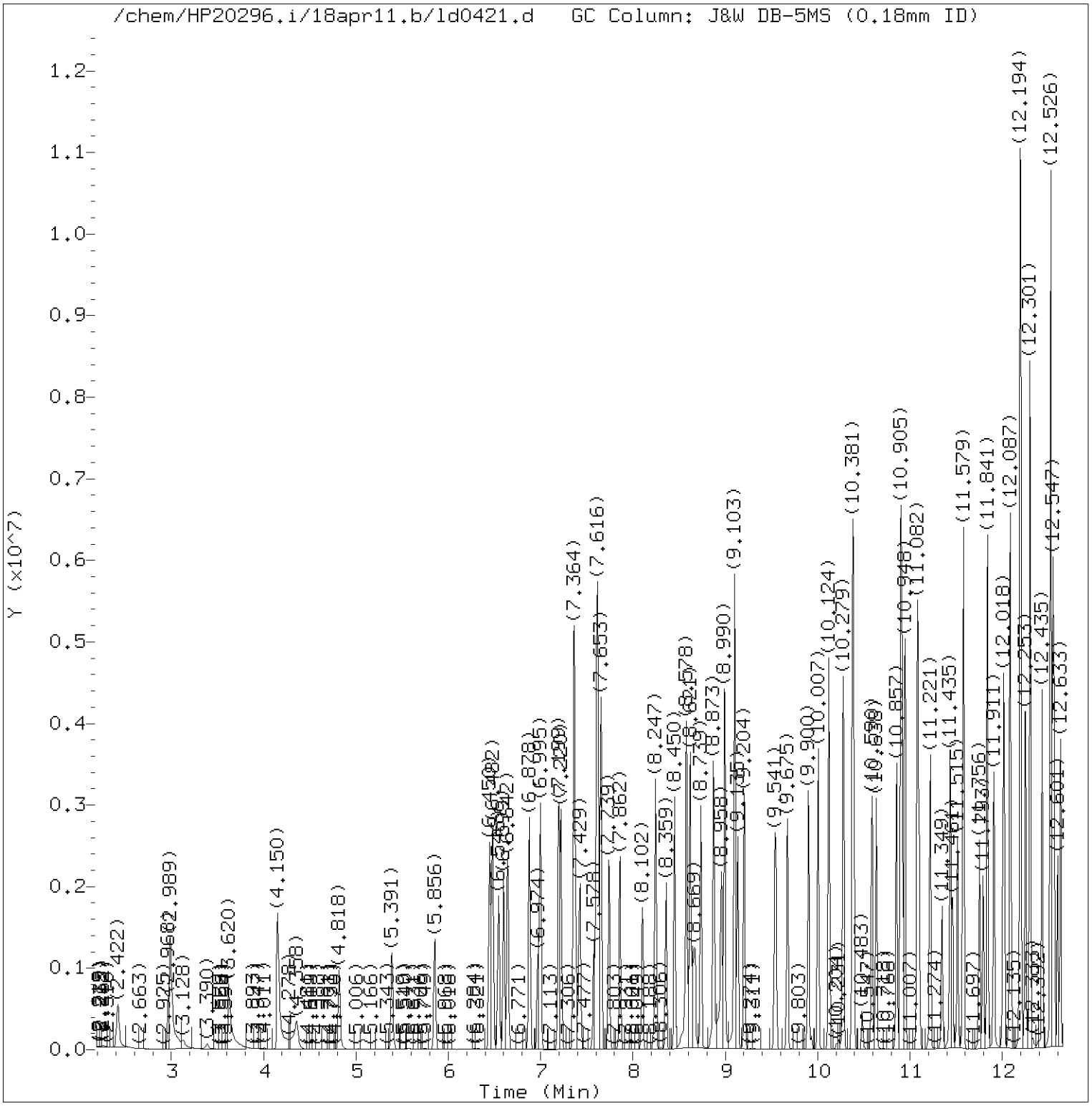
Data File: /chem/HP20296.i/18apr11.b/ld0420.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:15 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 13:41 Unknown

Sample Name: SSTD0.025 Lab Sample ID: rvPAHMDL0968

Compound Number	: 216		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3383		
Retention Time (minutes)	: 20.281		
Quant Ion	: 252.00		
Area	: 6035		
On-column Amount (ng/ul)	: 0.0346		
Integration start scan	: 3376	Integration stop scan:	3404
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1840



Total Ion Chromatogram (TIC)

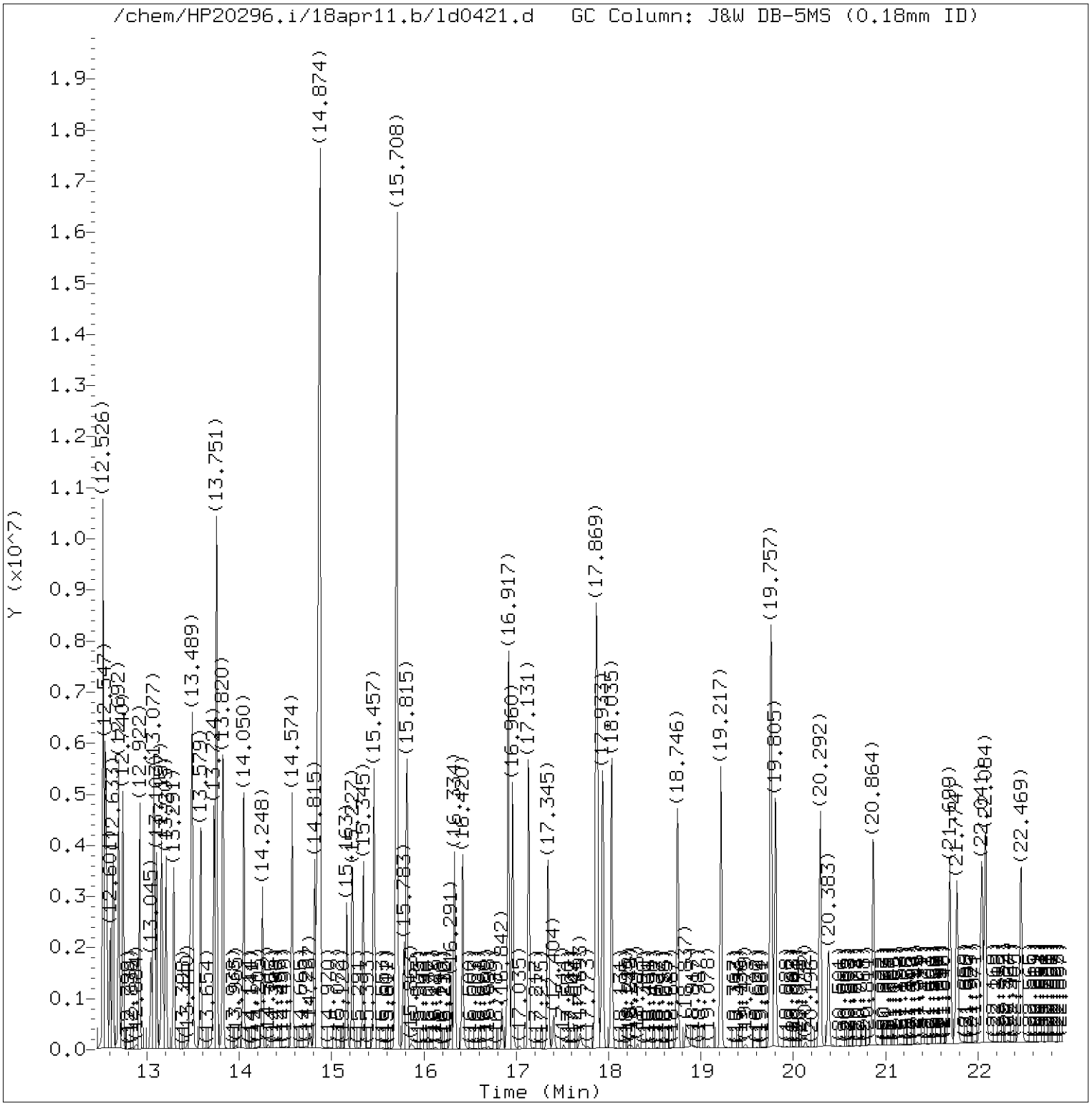
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.422	88	487279	14.729
5) N-Nitrosodimethylamine	(1)	2.968	74	611775	12.145
6) Pyridine	(1)	2.989	79	1057169	11.762
8) 2-Picoline	(1)	4.150	93	1071723	11.793
9) N-Nitrosomethylethylamine	(1)	4.358	88	422634	11.604
10) Methyl methanesulfonate	(1)	4.818	80	532797	12.077
14) N-Nitrosodiethylamine	(1)	5.391	102	416051	12.317
43) Total Cresols	(1)	5.660	100	1694138	24.623
16) Ethyl methanesulfonate	(1)	5.856	109	443402	12.054
19) Phenol	(1)	6.450	94	1304791	12.475
20) Aniline	(1)	6.482	93	1496739	12.410
23) bis(2-Chloroethyl)ether	(1)	6.599	93	941914	12.097
24) 2-Chlorophenol	(1)	6.642	128	855272	12.601
25) 1,3-Dichlorobenzene	(1)	6.878	146	956228	12.480
26)*1,4-Dichlorobenzene-d4	(1)	6.969	152	253033	5.000
27) 1,4-Dichlorobenzene	(1)	7.001	146	988253	12.745
28) Benzyl alcohol	(1)	7.199	108	617204	13.624
29) 1,2-Dichlorobenzene	(1)	7.220	146	943098	12.774
31) Indene	(1)	7.359	115	1657930	15.326
32) 2-Methylphenol	(1)	7.370	108	826533	12.350
100) Isosafrole	(3)	7.383	162	787801	12.638
35) bis(2-Chloroisopropyl)ether	(1)	7.429	45	1348541	12.200
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.429	45	1348541	12.200
36) N-Nitrosopyrrolidine	(1)	7.578	100	448305	12.234
37) Acetophenone	(1)	7.605	105	1311258	12.849
39) N-Nitroso-di-n-propylamine	(1)	7.621	70	713762	12.269
38) 4-Methylphenol	(1)	7.621	108	867605	12.273
40) N-Nitrosomorpholine	(1)	7.648	56	575940	11.846
41) o-Toluidine	(1)	7.653	106	1440114	12.168
44) Hexachloroethane	(1)	7.739	117	386812	11.700
46) Nitrobenzene	(2)	7.862	77	1031643	12.305
125) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	950574	24.961
50) N-Nitrosopiperidine	(2)	8.102	114	414601	12.033
52) Isophorone	(2)	8.247	82	1893207	12.919
53) 2-Nitrophenol	(2)	8.359	139	441643	13.037
55) 2,4-Dimethylphenol	(2)	8.450	107	798786	10.999
59) O,O,O-Triethylphosphorothioate	(2)	8.578	198	436658	12.148
57) bis(2-Chloroethoxy)methane	(2)	8.621	93	1182885	12.417
58) Benzoic acid	(2)	8.669	105	1593380M	31.641
62) 2,4-Dichlorophenol	(2)	8.739	162	718082	12.698

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
151) Diallate trans/cis	(4)	8.775	86	823707	11.232
65) 1,2,4-Trichlorobenzene	(2)	8.873	180	795259	12.621
68)*Naphthalene-d8	(2)	8.958	136	953023	5.000
69) Naphthalene	(2)	8.996	128	2473208	12.558
71) 2,6-Dichlorophenol	(2)	9.103	162	698375	12.470
70) 4-Chloroaniline	(2)	9.103	127	1018259	12.668
72) Hexachloropropene	(2)	9.135	213	580357	12.729
74) Hexachlorobutadiene	(2)	9.204	225	478891	12.536
78) Quinoline	(2)	9.541	129	1564292	12.469
80) N-Nitrosodi-n-butylamine	(2)	9.675	84	659697	10.674
83) 4-Chloro-3-methylphenol	(2)	9.900	107	805192	12.975
85) Safrole	(2)	10.007	162	636184	12.042
86) 2-Methylnaphthalene	(2)	10.124	142	1661350	12.698
87) 1-Methylnaphthalene	(2)	10.279	142	1544258	12.865
88) Hexachlorocyclopentadiene	(3)	10.381	237	1059748	26.538
89) 1,2,4,5-Tetrachlorobenzene	(3)	10.392	216	808103	12.031
91) cis-Isosafrole	(3)	10.483	162	90904	1.555
93) 2,4,6-Trichlorophenol	(3)	10.590	196	539189	12.784
95) 2,4,5-Trichlorophenol	(3)	10.638	196	568218	12.835
97) trans-Isosafrole	(3)	10.857	162	696897	11.082
98) 1,1'-Biphenyl	(3)	10.900	154	2019671	12.758
99) 2-Chloronaphthalene	(3)	10.916	162	1672227	12.429
101) 1-Chloronaphthalene	(3)	10.948	162	1918410M	15.415
103) Diphenyl ether	(3)	11.082	170	1394091	15.765
104) 2-Nitroaniline	(3)	11.103	138	494834	12.568
108) 1,4-Naphthoquinone	(3)	11.221	158	824950	15.518
109) 1,4-Dinitrobenzene	(3)	11.349	168	254696	12.171
110) Dimethylphthalate	(3)	11.435	163	1794260	11.905
111) 1,3-Dinitrobenzene	(3)	11.461	168	282971	12.624
113) 2,6-Dinitrotoluene	(3)	11.515	165	405143	12.661
114) Acenaphthylene	(3)	11.579	152	2566706	13.726
117) 3-Nitroaniline	(3)	11.756	138	437942	12.990
118)*Acenaphthene-d10	(3)	11.793	164	493774	5.000
119) Acenaphthene	(3)	11.841	153	1692353	12.763
120) 2,4-Dinitrophenol	(3)	11.911	184	491672	25.559
121) 4-Nitrophenol	(3)	12.012	109	288409	12.135
122) Pentachlorobenzene	(3)	12.023	250	660614	12.061
124) Dibenzofuran	(3)	12.087	168	2244556	12.184
123) 2,4-Dinitrotoluene	(3)	12.093	165	545431	12.300
126) 1-Naphthylamine	(3)	12.200	143	3063439	23.370

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on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
127) 2,3,4,6-Tetrachlorophenol	(3)	12.253	232	594710	17.263
128) 2-Naphthylamine	(3)	12.301	143	3014886	24.277
129) Diethylphthalate	(3)	12.435	149	1774643	11.965
131) Fluorene	(3)	12.526	166	1751560	12.171
130) Thionazin	(3)	12.526	107	309594	12.261
132) 4-Chlorophenyl-phenylether	(3)	12.547	204	842228	11.808
133) 5-Nitro-o-toluidine	(3)	12.558	152	502295	12.815
134) 4-Nitroaniline	(3)	12.569	138	428584	12.577
135) 4,6-Dinitro-2-methylphenol	(4)	12.601	198	325165	12.212
136) N-Nitrosodiphenylamine	(4)	12.697	169	1476179	11.993
137) NDPA as diphenylamine	(4)	12.697	169	1476179	11.993
139) 1,2-Diphenylhydrazine	(4)	12.740	77	2096671	12.207
142) Tetraethyldithiopyrophosphate	(4)	12.922	97	332794M	11.393
144) 1,3,5-Trinitrobenzene	(4)	13.045	213	196110	11.956
145) Diallate (peak 1)	(4)	13.066	86	634147	8.156
146) Phorate	(4)	13.077	75	1315873	11.945
147) Phenacetin	(4)	13.103	108	979328	12.589
148) 4-Bromophenyl-phenylether	(4)	13.157	248	468038	11.380
149) Diallate (peak 2)	(4)	13.178	86	189560M	3.076
150) Hexachlorobenzene	(4)	13.205	284	481622	11.402
152) Dimethoate	(4)	13.291	87	835628	12.605
154) Pentachlorophenol	(4)	13.472	266	342570	13.242
156) Pentachloronitrobenzene	(4)	13.483	237	237483	11.779
155) 4-Aminobiphenyl	(4)	13.494	169	1943709	13.871
157) Pronamide	(4)	13.585	173	846079	12.188
158)*Phenanthrene-d10	(4)	13.719	188	1005811	5.000
159) Dinoseb	(4)	13.729	211	503686	12.084
160) Phenanthrene	(4)	13.756	178	2663427	12.009
162) Anthracene	(4)	13.820	178	2708432	12.182
168) Carbazole	(4)	14.050	167	2477235	12.584
169) Methyl parathion	(4)	14.248	109	666855	13.196
170) Di-n-butylphthalate	(4)	14.574	149	3214181	12.130
172) Parathion	(4)	14.815	109	419718	12.835
173) 4-Nitroquinoline-1-oxide	(4)	14.874	190	4442437	169.164
227) Total PAHs	(6)	15.000	100	44192512	223.882
176) Isodrin	(4)	15.227	193	315886	11.496
178) Fluoranthene	(4)	15.462	202	3018275	12.100
179) Benzidine	(5)	15.708	184	8803974	58.818
180)*Pyrene-d10	(5)	15.783	212	1015793	5.000
182) Pyrene	(5)	15.815	202	3058230	11.835

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on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) p-Dimethylaminoazobenzene	(5)	16.334	225	600693	15.236
190) Chlorobenzilate	(5)	16.420	139	965023	12.535
192) 3,3'-Dimethylbenzidine	(5)	16.917	212	3808514	23.395
193) Butylbenzylphthalate	(5)	16.960	149	1496910	12.468
196) 2-Acetylaminofluorene	(5)	17.345	181	1182747	12.447
198) 3,3'-Dichlorobenzidine	(5)	17.858	252	1062440	12.789
200) Benzo(a)anthracene	(5)	17.869	228	2903735	12.577
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.880	231	601071	11.913
201) Chrysene	(5)	17.933	228	2737303	12.257
204) bis(2-Ethylhexyl)phthalate	(5)	18.035	149	2135778	12.590
208) 6-Methylchrysene	(5)	18.746	242	1893349	12.041
210) Di-n-octylphthalate	(6)	19.217	149	3667697	12.530
211) Benzo(b)fluoranthene	(6)	19.757	252	2791758	12.233
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.757	256	1192736	12.668
213) Benzo(k)fluoranthene	(6)	19.811	252	2688786M	12.235
216) Benzo(a)pyrene	(6)	20.292	252	2579997	12.564
218)*Perylene-d12	(6)	20.383	264	930825	5.000
220) 3-Methylcholanthrene	(6)	20.870	268	1351578	13.536
222) Dibenz(a,h)acridine	(6)	21.699	279	2094454	12.002
223) Dibenz(a,j)acridine	(6)	21.774	279	1946396	10.981
224) Indeno(1,2,3-cd)pyrene	(6)	22.041	276	2414505M	12.382
225) Dibenz(a,h)anthracene	(6)	22.084	278	2525832	12.751
226) Benzo(g,h,i)perylene	(6)	22.469	276	2412796	11.974

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* = Compound is an internal standard.

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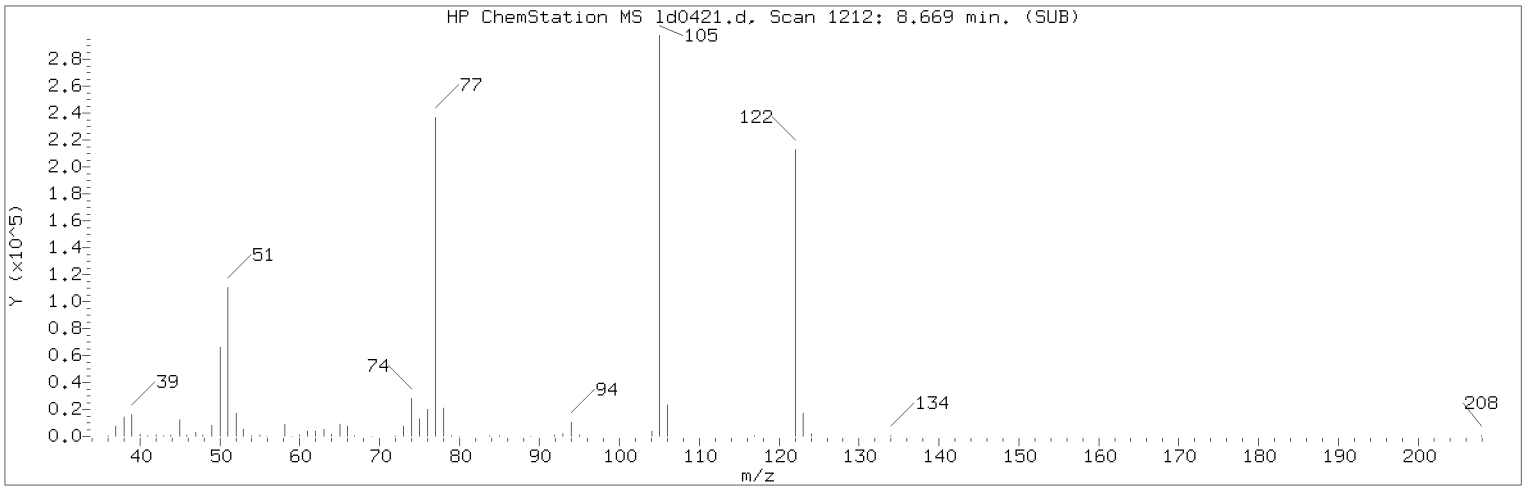
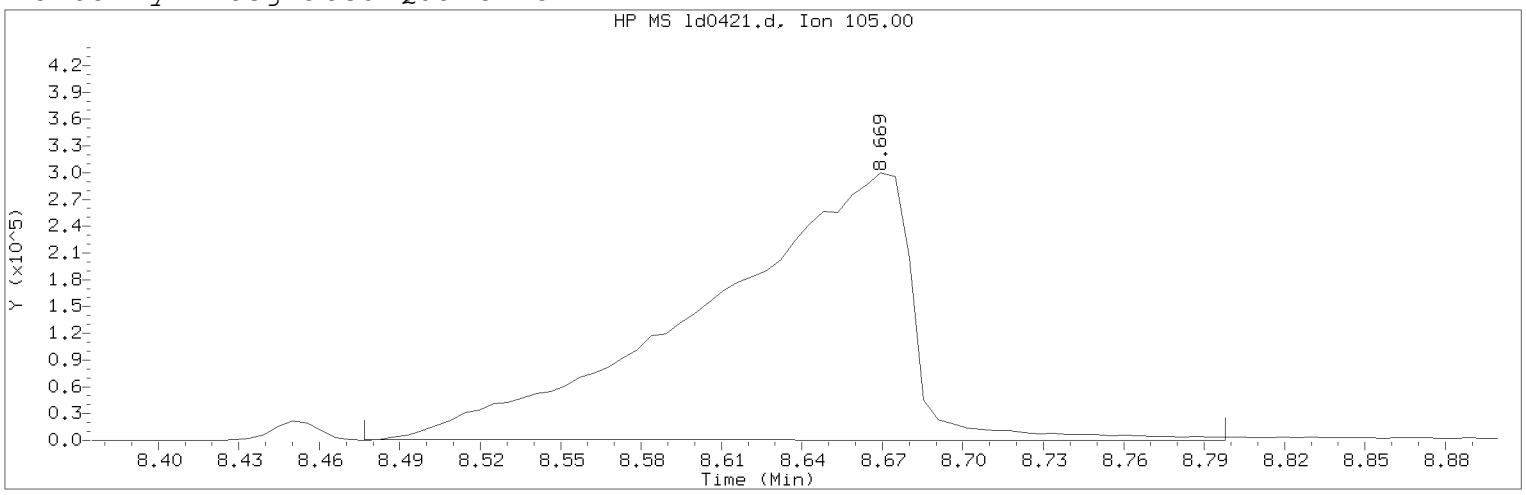
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

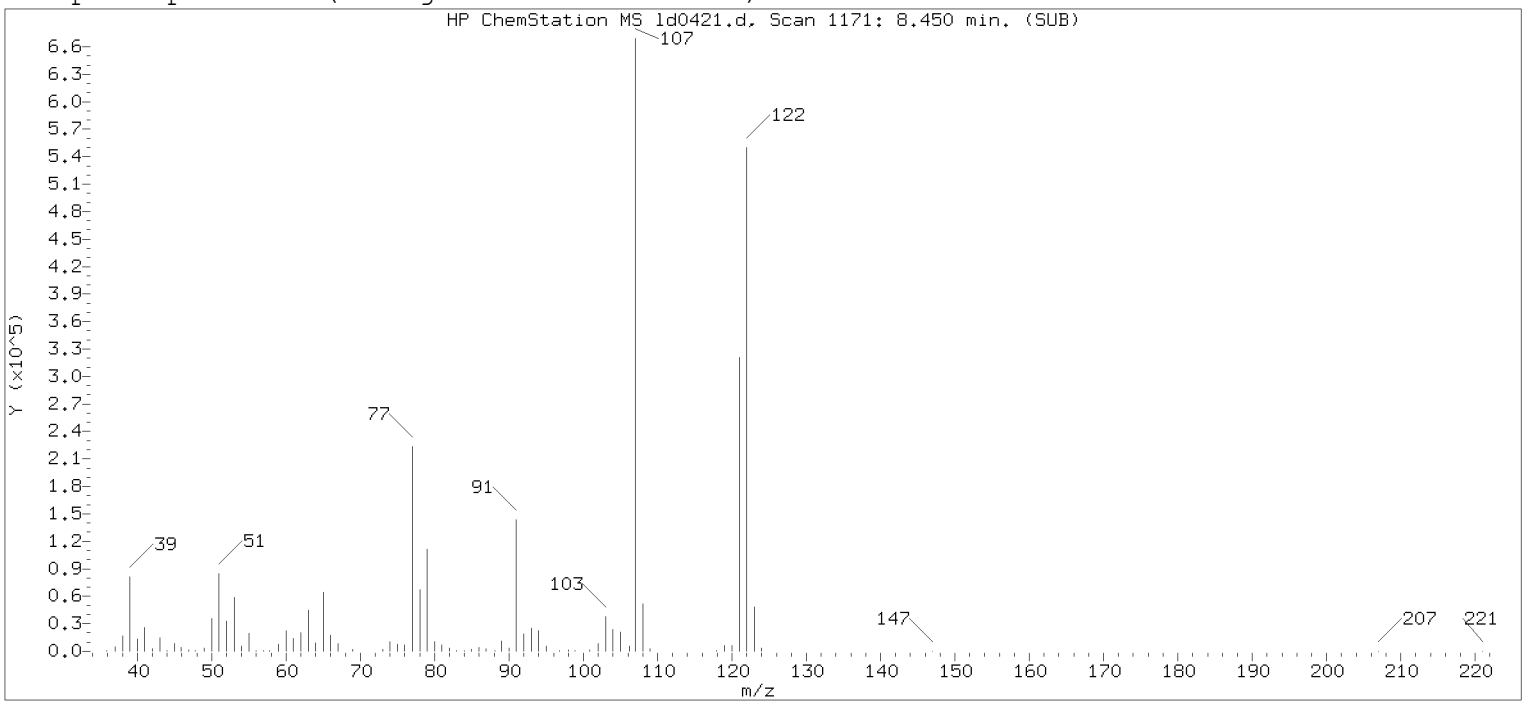
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1212
Retention Time (minutes) : 8.669
Quant Ion : 105.00
Area (flag) : 1593380M
On-Column Amount (ng/ul) : 31.6408
Integration start scan : 1175 Integration stop scan: 1235
Y at integration start : 458 Y at integration end: 168

Reason for manual integration: improper integration

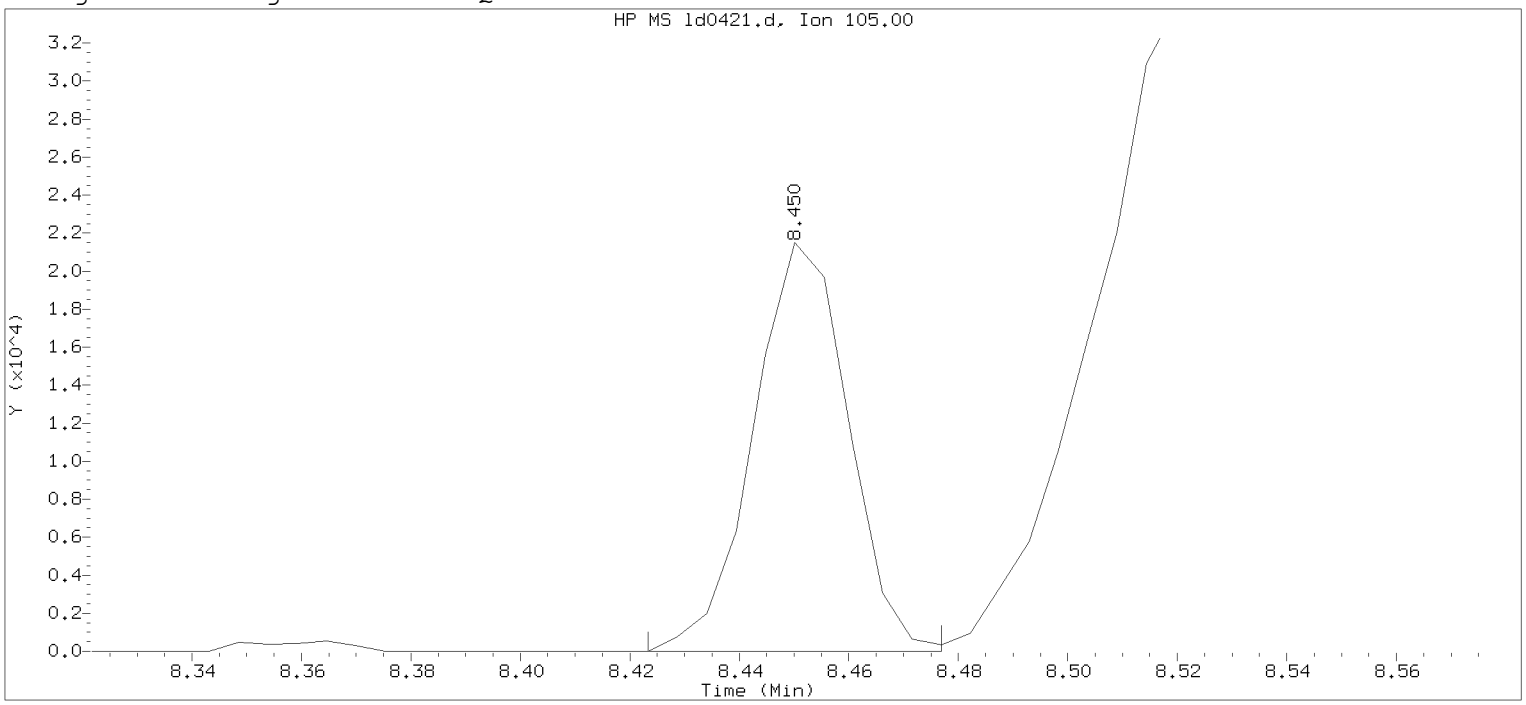
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1171		
Retention Time (minutes)	: 8.450		
Quant Ion	: 105.00		
Area	: 25864		
On-column Amount (ng/ul)	: 3.6338		
Integration start scan	: 1165	Integration stop scan:	1175
Y at integration start	: 0	Y at integration end:	0

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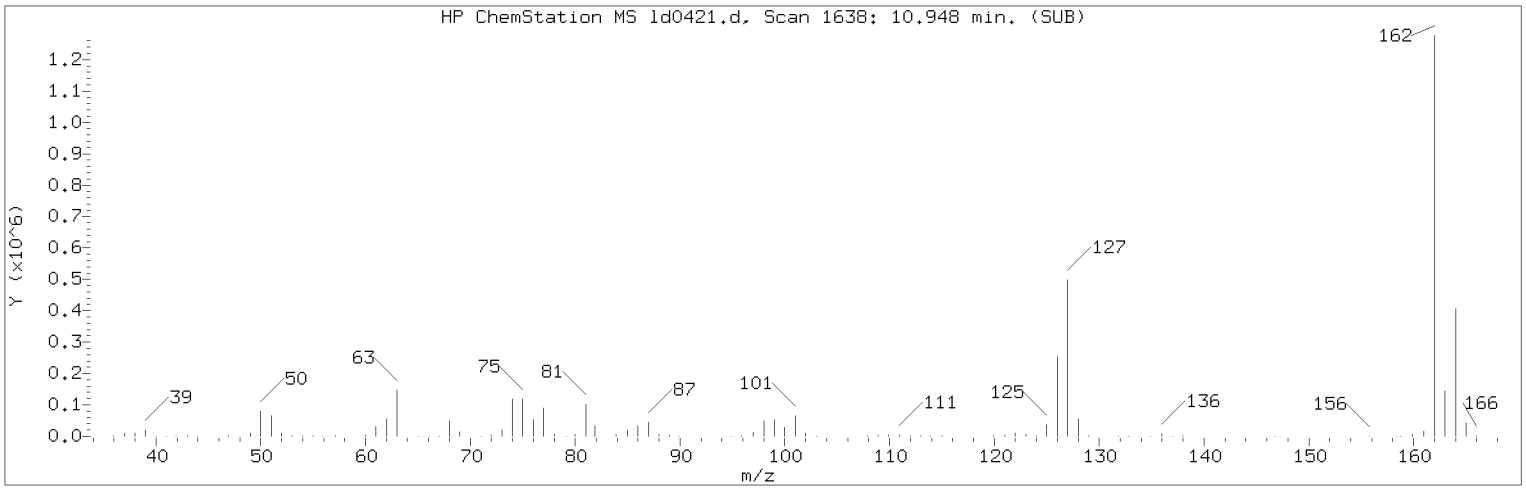
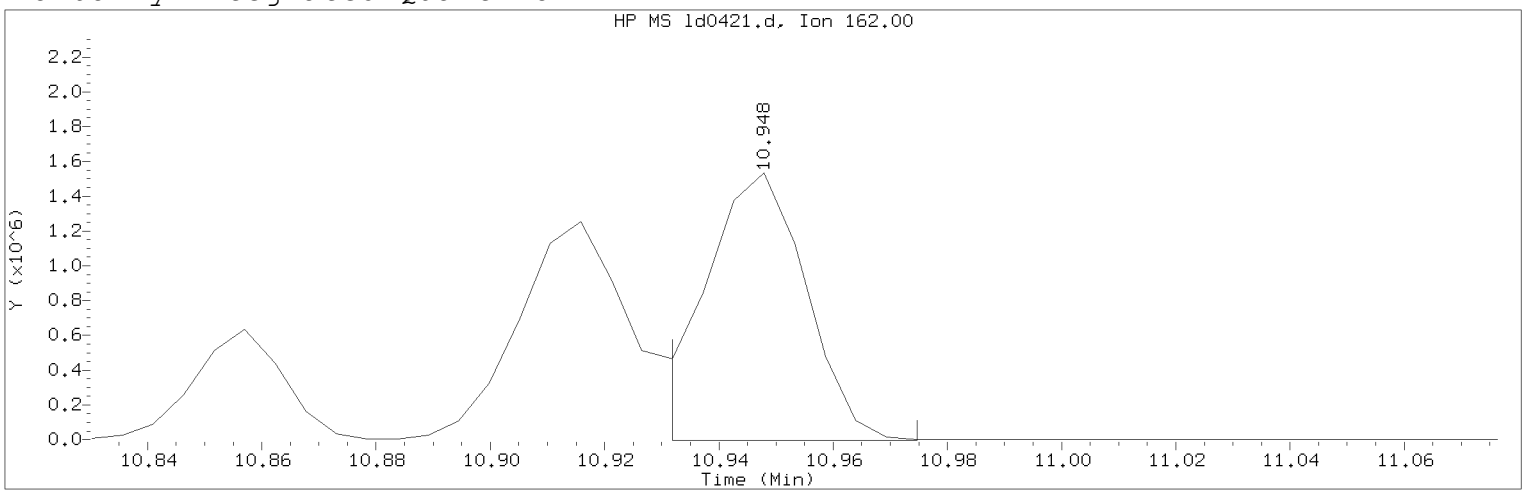
Target 3.5 esignature used for this page.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

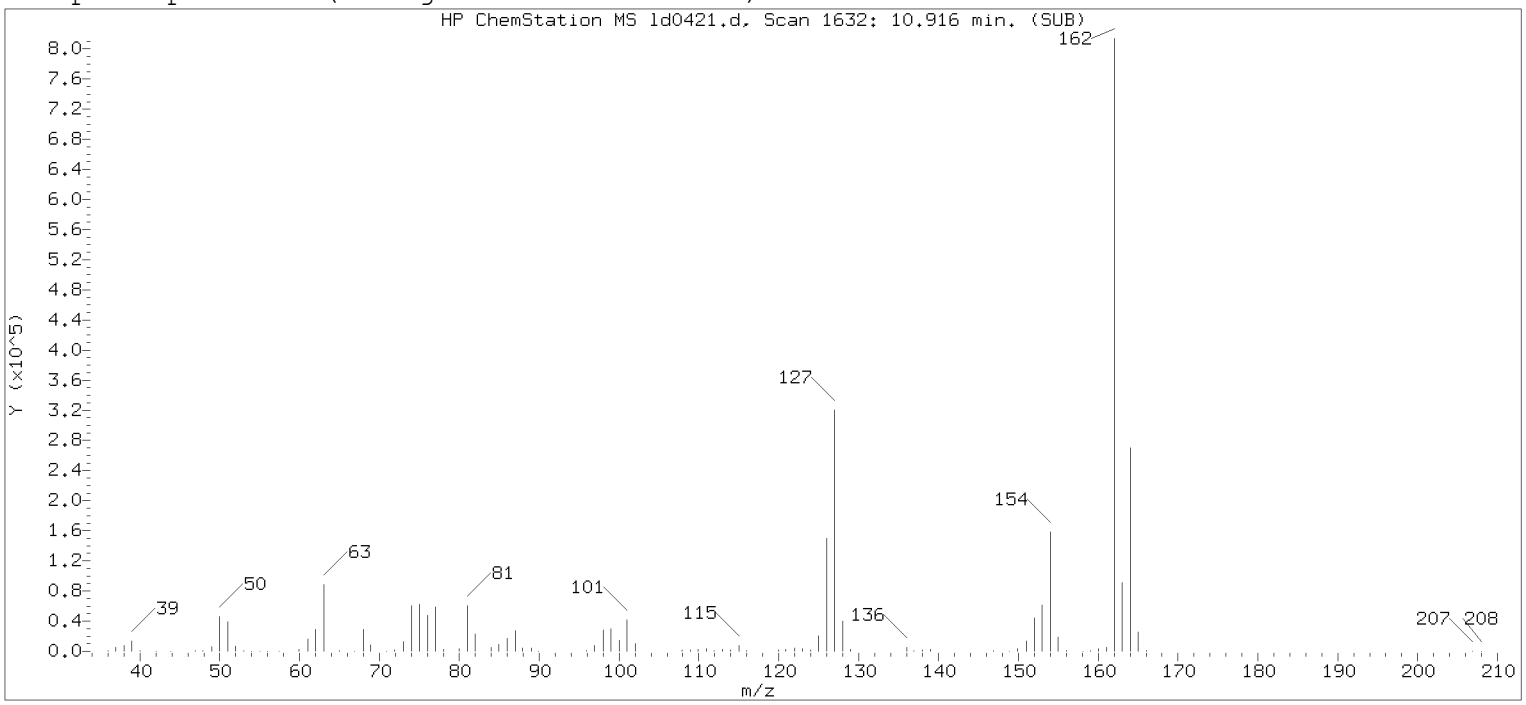
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 1918410M
On-Column Amount (ng/ul) : 15.4151
Integration start scan : 1634 Integration stop scan: 1642
Y at integration start : -3292 Y at integration end: -3292

Reason for manual integration: improper integration

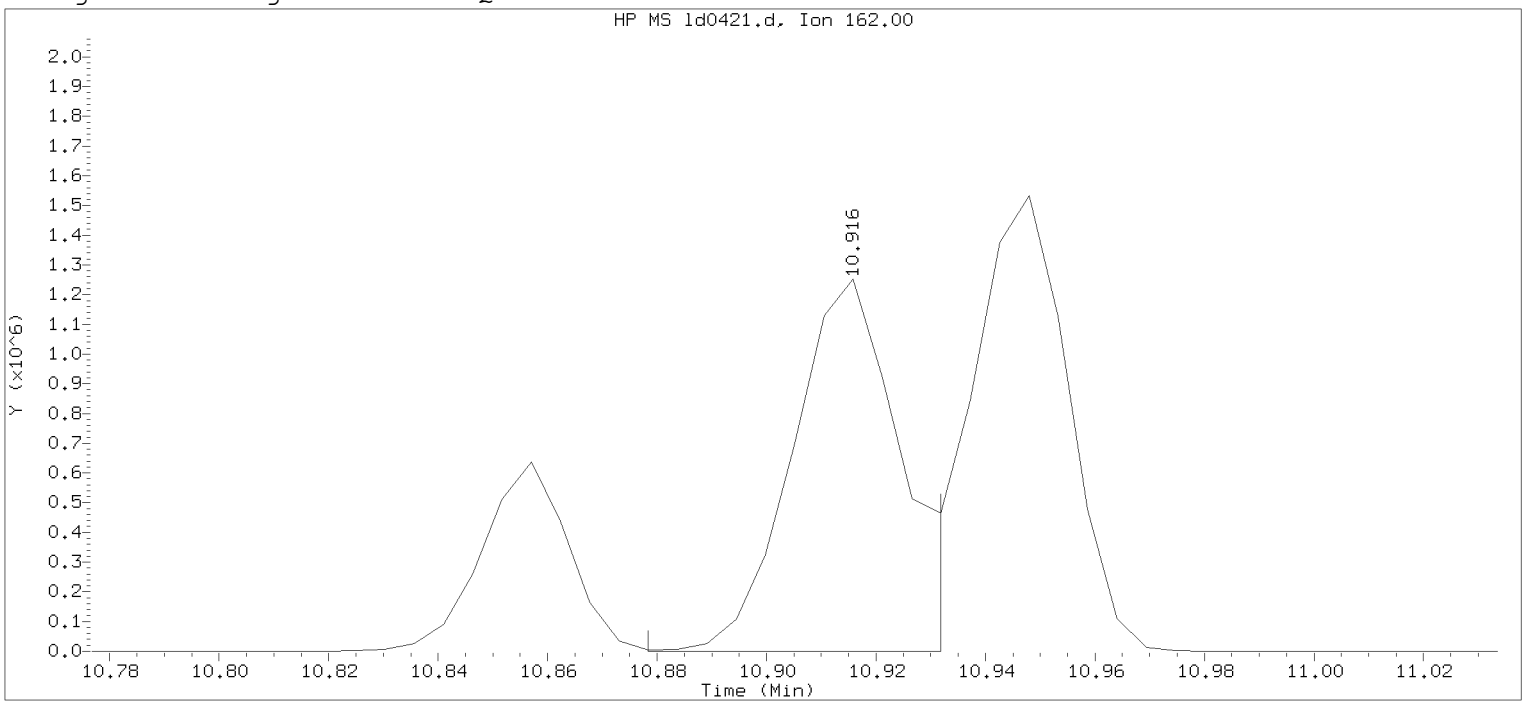
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1632
Retention Time (minutes) : 10.916
Quant Ion : 162.00
Area : 1672227
On-column Amount (ng/ul) : 13.4387
Integration start scan : 1624 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

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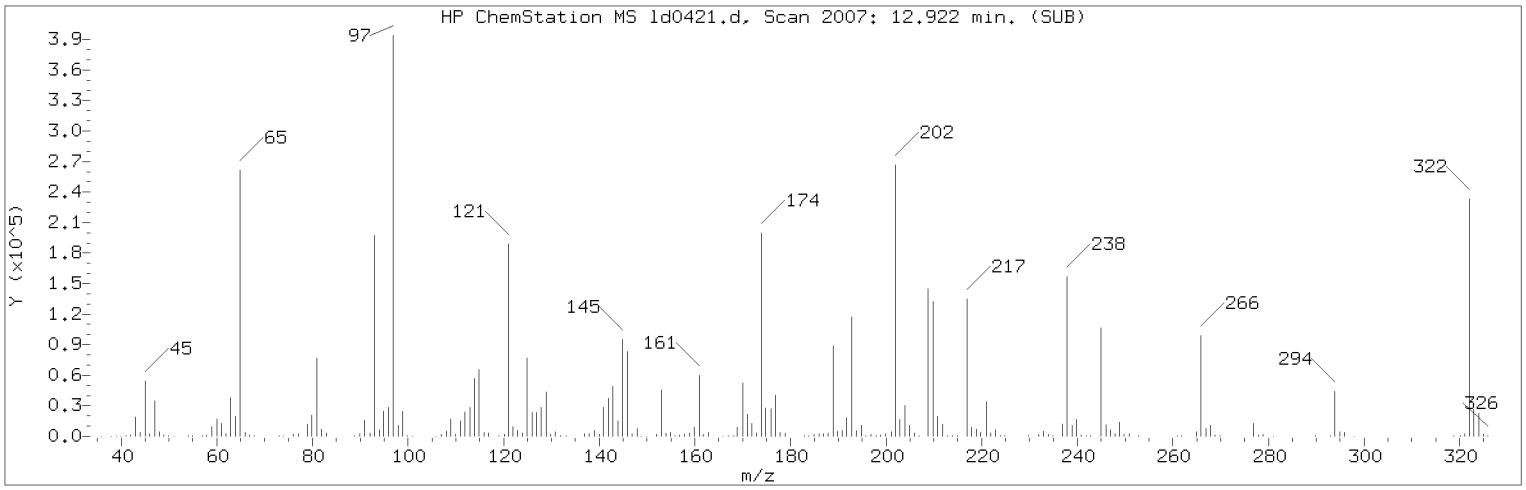
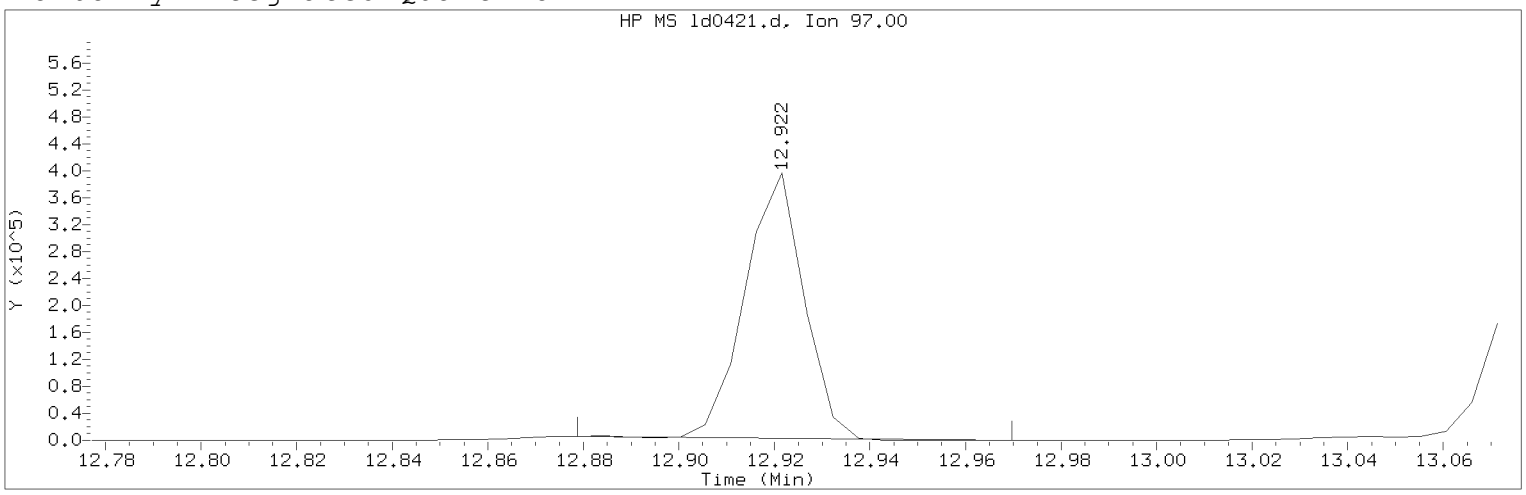
Target 3.5 esignature used. FID Page 1855

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

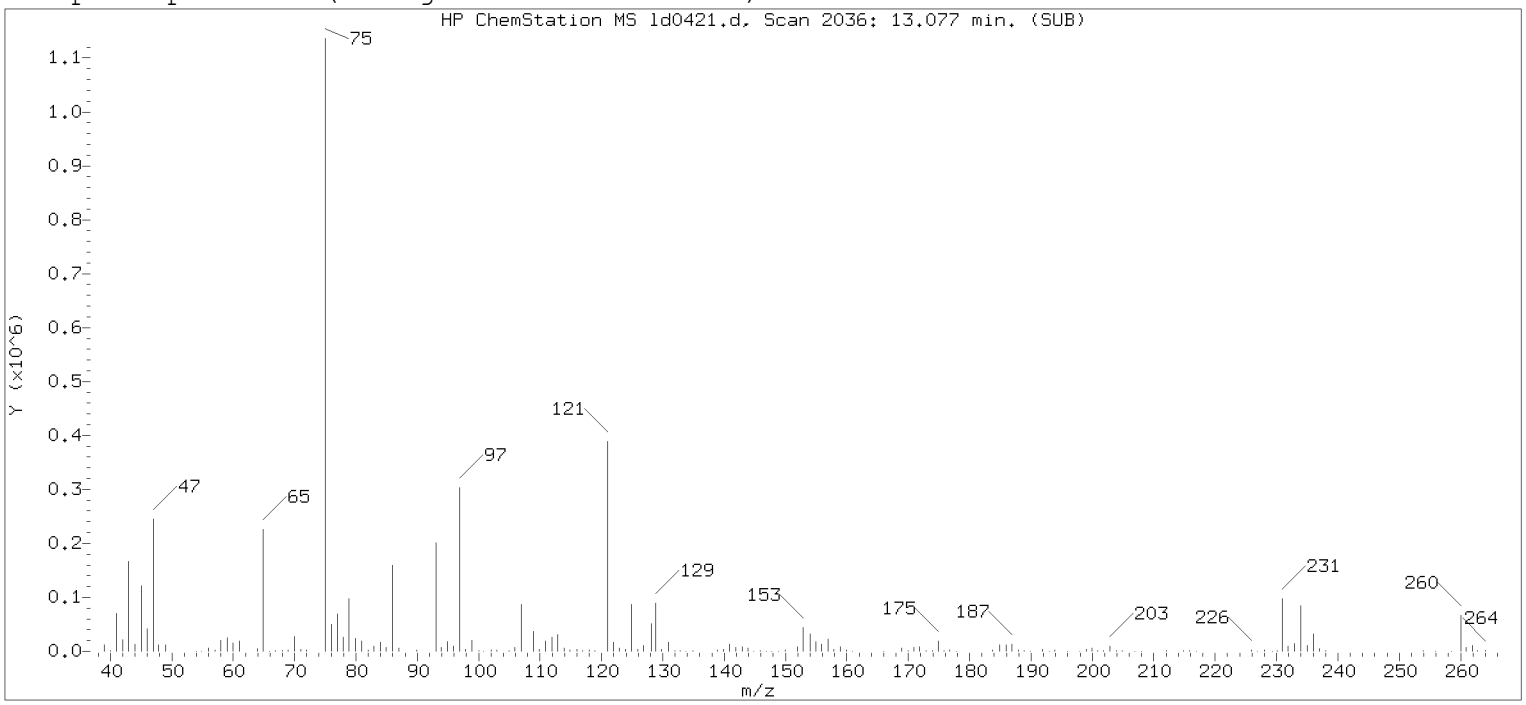
Compound Number : 142
Compound Name : Tetraethyldithiopyrophosphate
Scan Number : 2007
Retention Time (minutes) : 12.922
Quant Ion : 97.00
Area (flag) : 332794M
On-Column Amount (ng/ul) : 11.3925
Integration start scan : 1998 Integration stop scan: 2015
Y at integration start : 5896 Y at integration end: 0

Reason for manual integration: improper integration

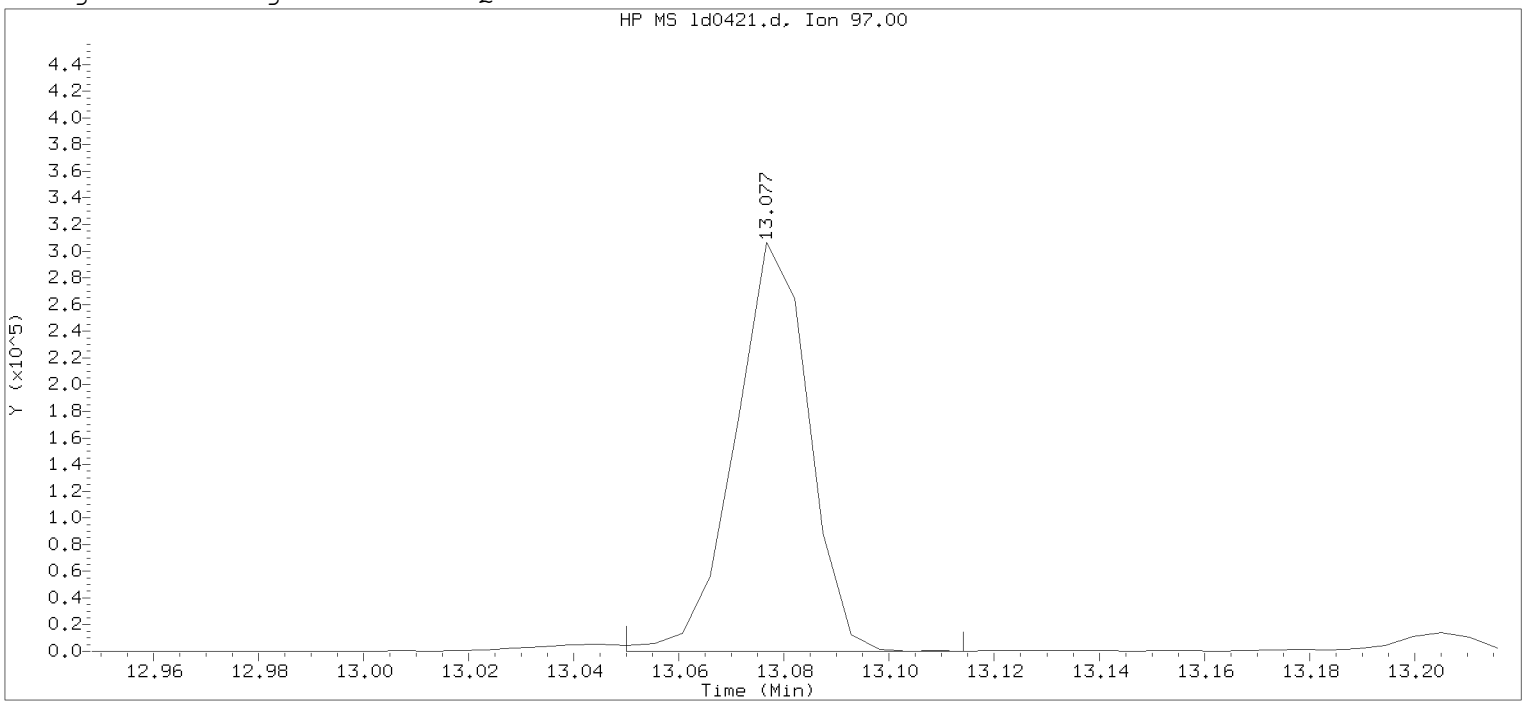
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

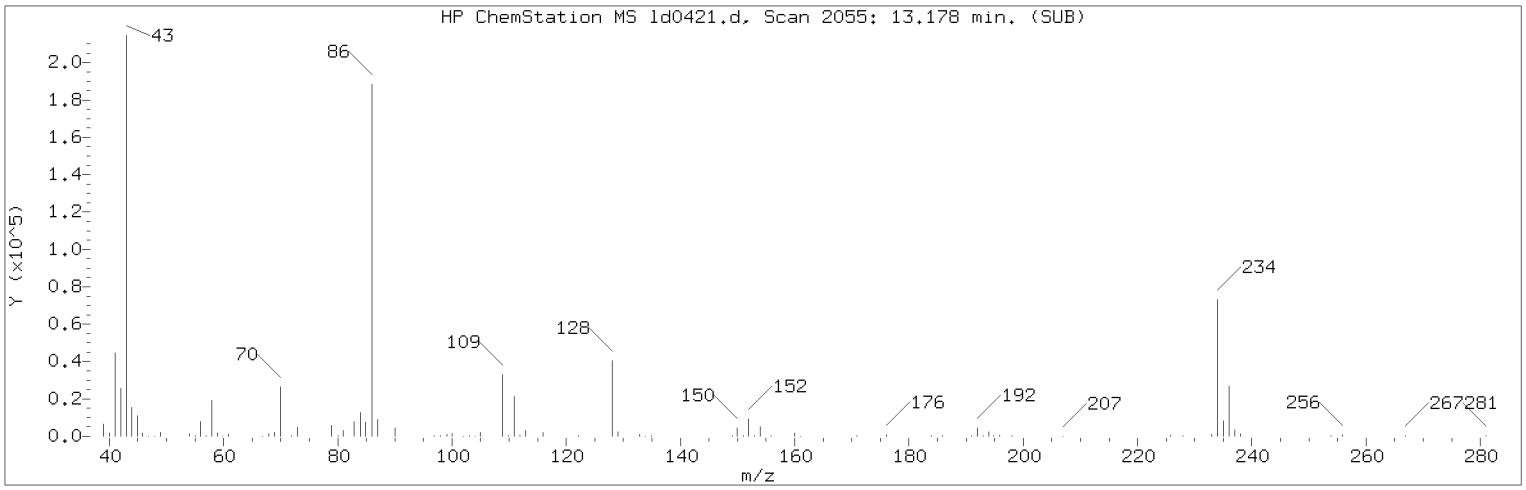
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

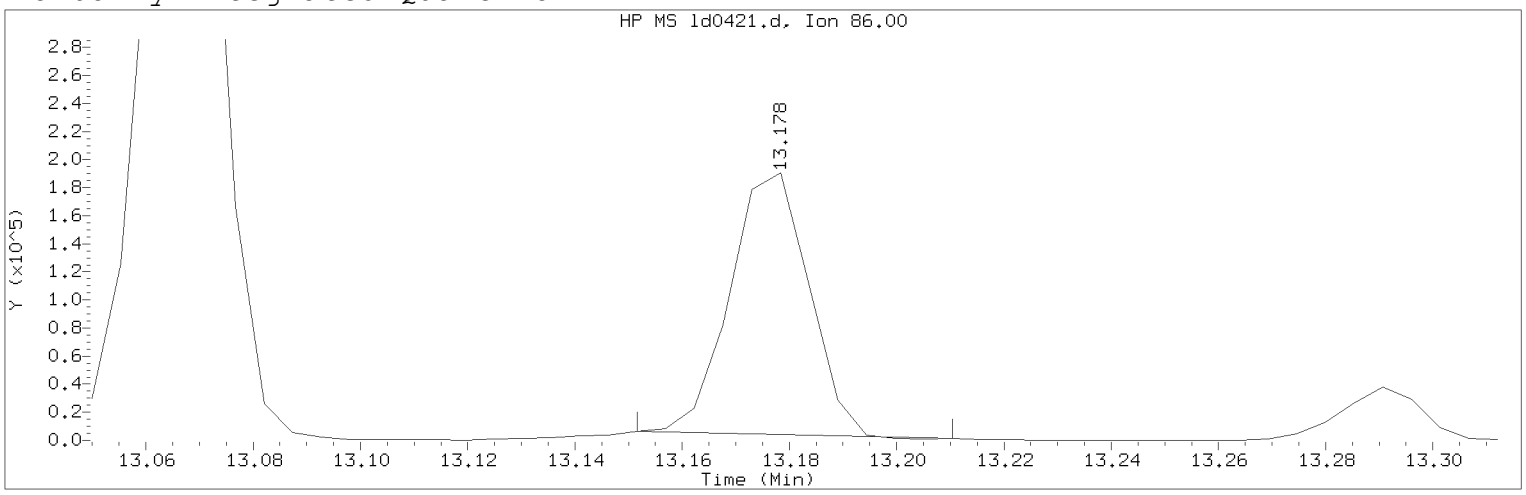
Compound Number	: 142		
Compound Name	: Tetraethyldithiopyrophosphate		
Scan Number	: 2036		
Retention Time (minutes)	: 13.077		
Quant Ion	: 97.00		
Area	: 296943		
On-column Amount (ng/ul)	: 9.6836		
Integration start scan	: 2030	Integration stop scan:	2042
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FD6 Page 1852

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

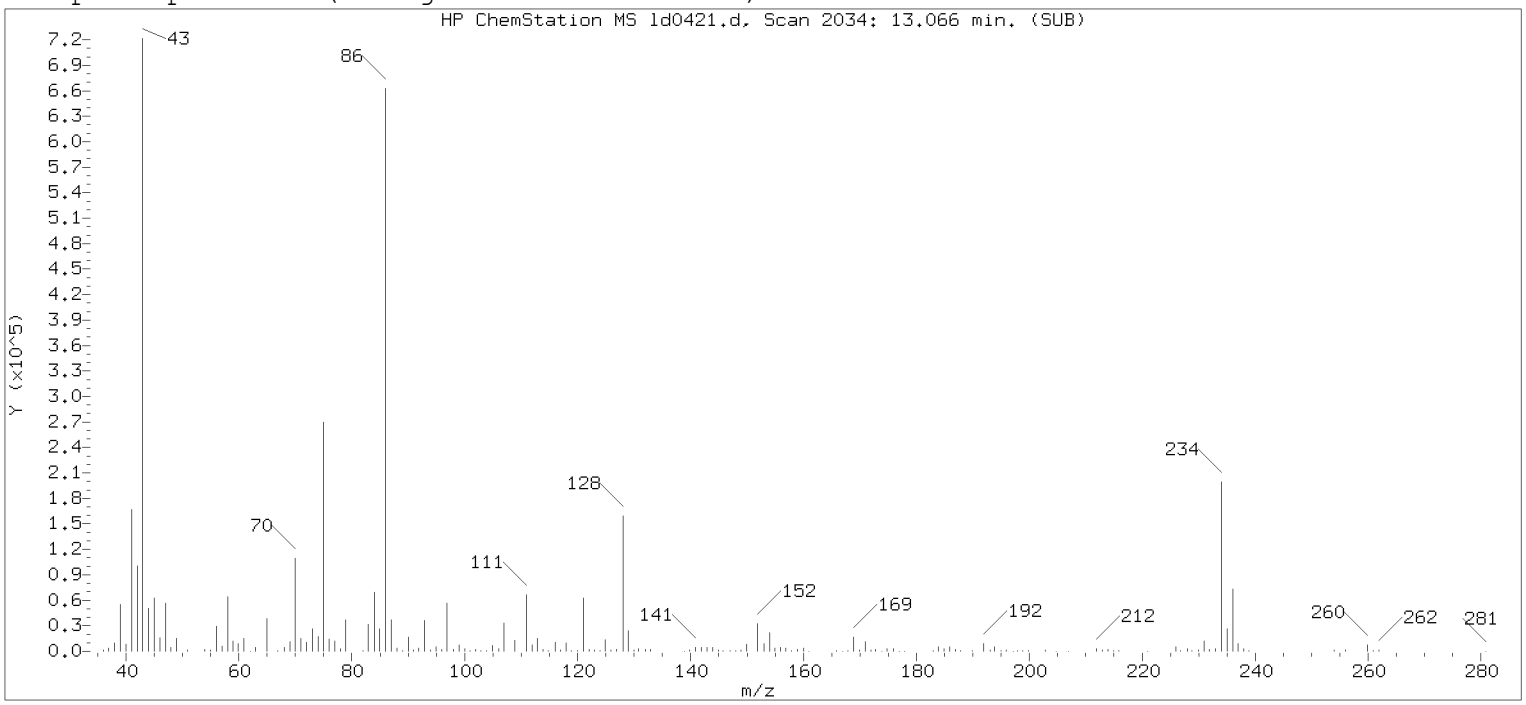
Compound Number : 149
Compound Name : Diallate (peak 2)
Scan Number : 2055
Retention Time (minutes) : 13.178
Quant Ion : 86.00
Area (flag) : 189560M
On-Column Amount (ng/ul) : 3.0759
Integration start scan : 2049 Integration stop scan: 2060
Y at integration start : 6592 Y at integration end: 1178

Reason for manual integration: improper integration

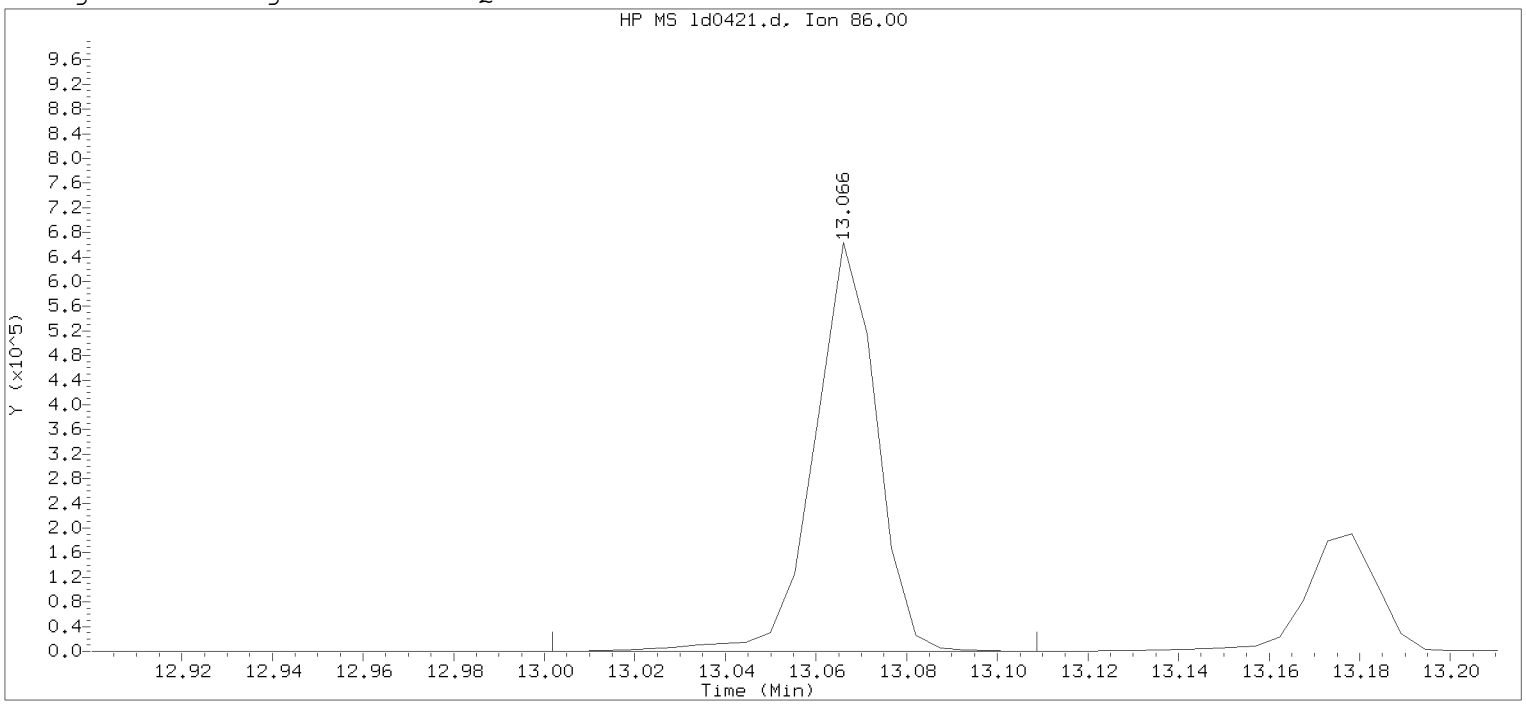
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

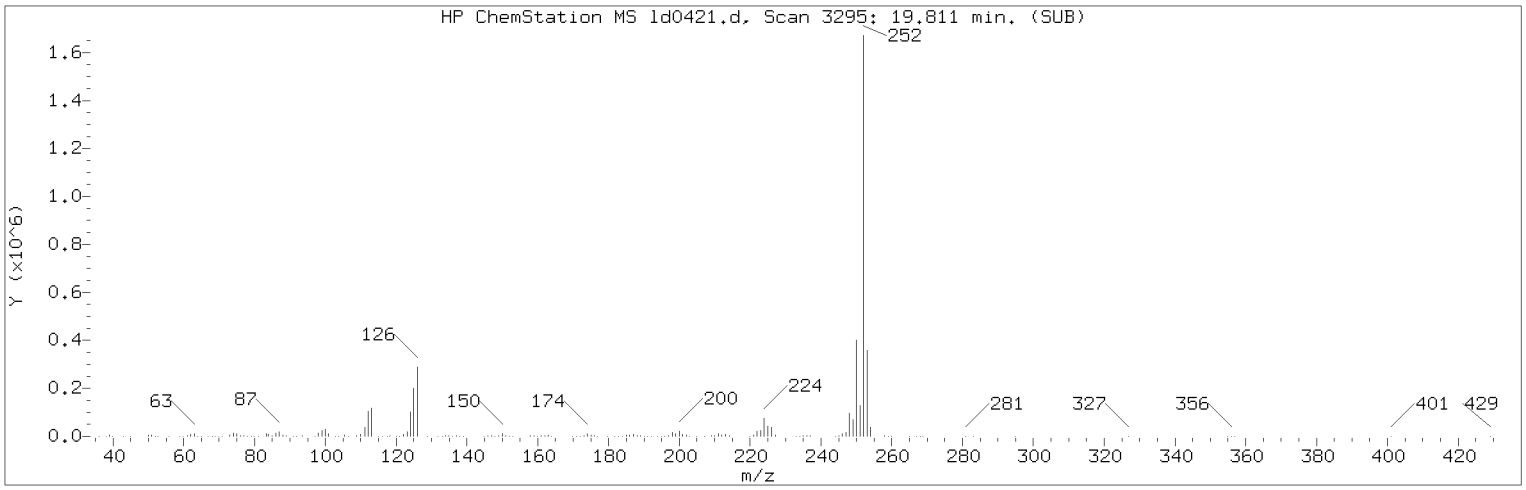
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

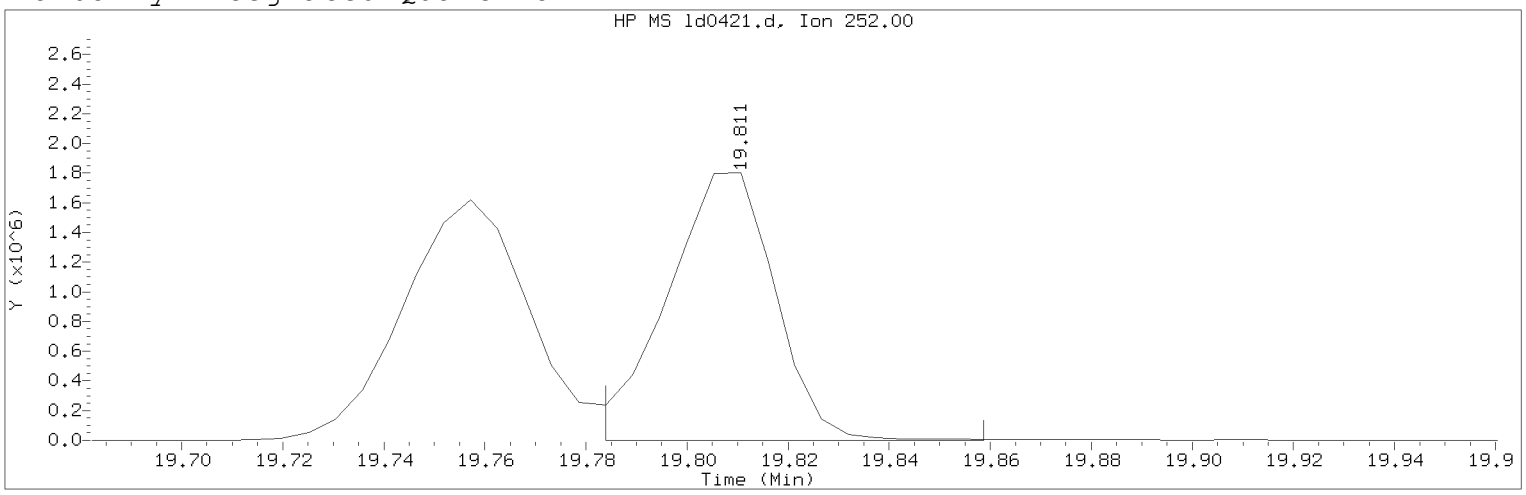
Compound Number	: 149		
Compound Name	: Diallate (peak 2)		
Scan Number	: 2034		
Retention Time (minutes)	: 13.066		
Quant Ion	: 86.00		
Area	: 634147		
On-column Amount (ng/ul)	: 9.8367		
Integration start scan	: 2021	Integration stop scan:	2041
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

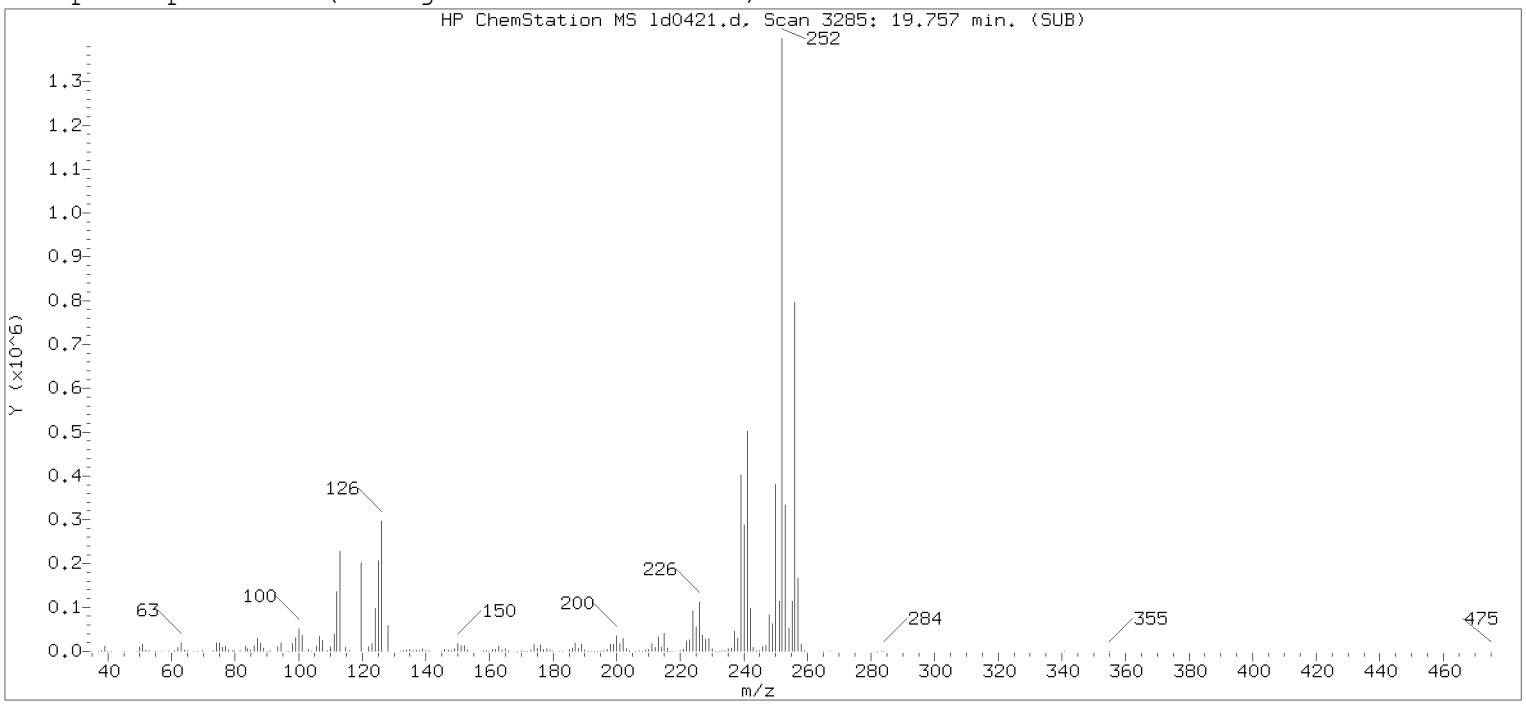
Compound Number : 213
Compound Name : Benzo(k)fluoranthene
Scan Number : 3295
Retention Time (minutes) : 19.811
Quant Ion : 252.00
Area (flag) : 2688786M
On-Column Amount (ng/ul) : 12.2352
Integration start scan : 3289 Integration stop scan: 3303
Y at integration start : -117 Y at integration end: -117

Reason for manual integration: improper integration

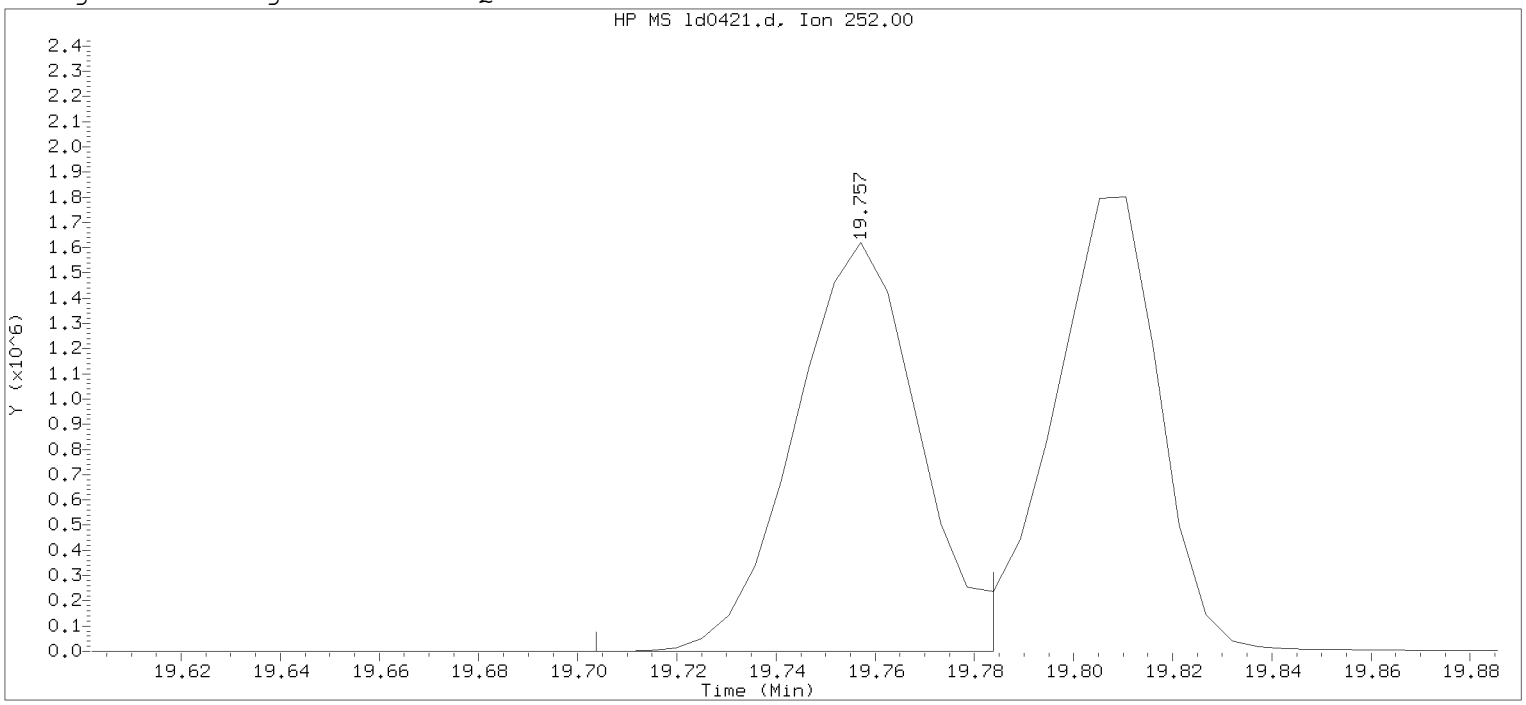
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

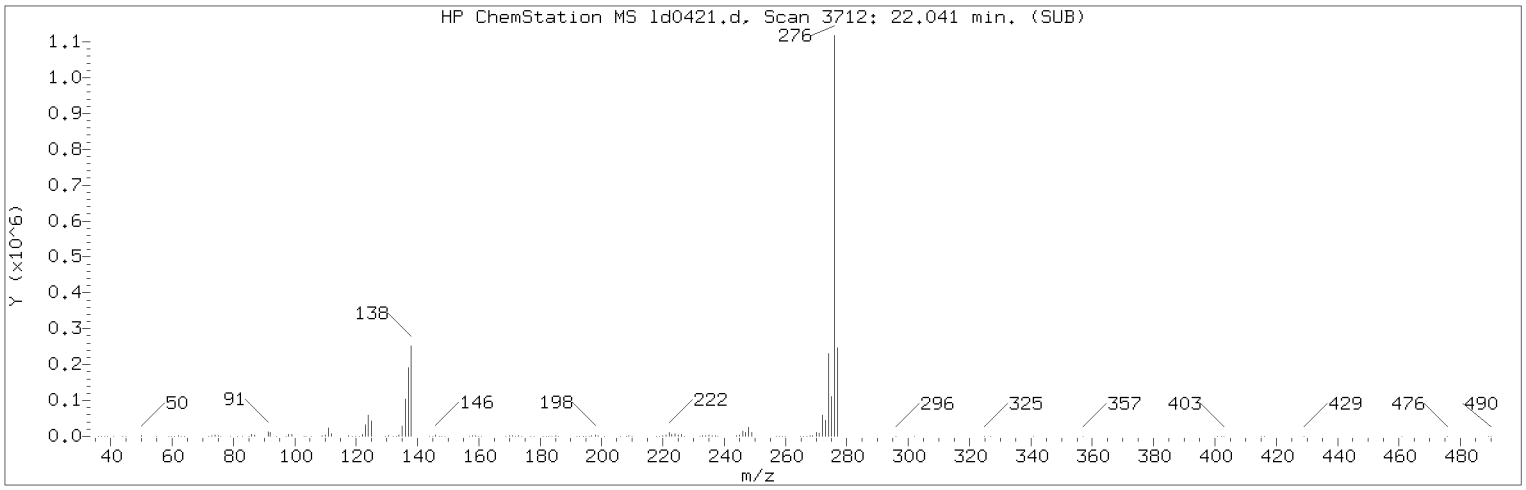
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

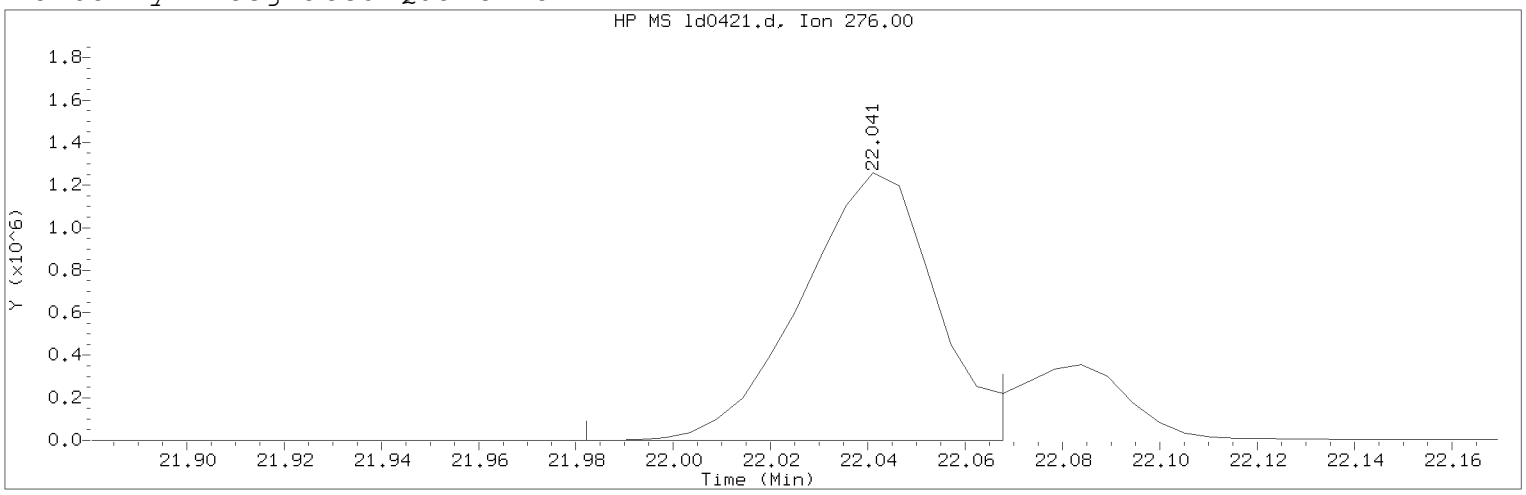
Compound Number	: 213		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 3285		
Retention Time (minutes)	: 19.757		
Quant Ion	: 252.00		
Area	: 2791758		
On-column Amount (ng/ul)	: 12.2087		
Integration start scan	: 3274	Integration stop scan:	3289
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature used. FID Page 1855

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:13 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

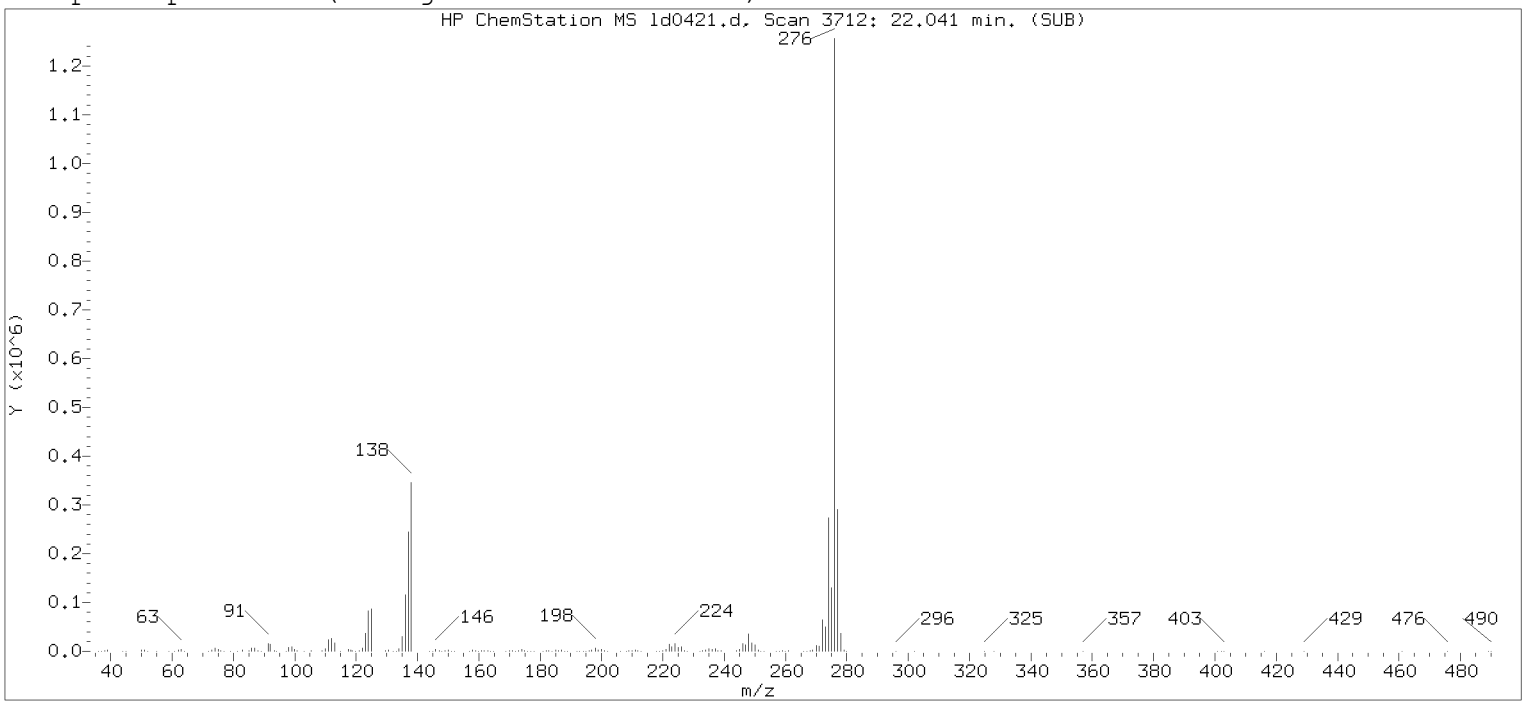
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3712
Retention Time (minutes) : 22.041
Quant Ion : 276.00
Area (flag) : 2414505M
On-Column Amount (ng/ul) : 12.3819
Integration start scan : 3700 Integration stop scan: 3716
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

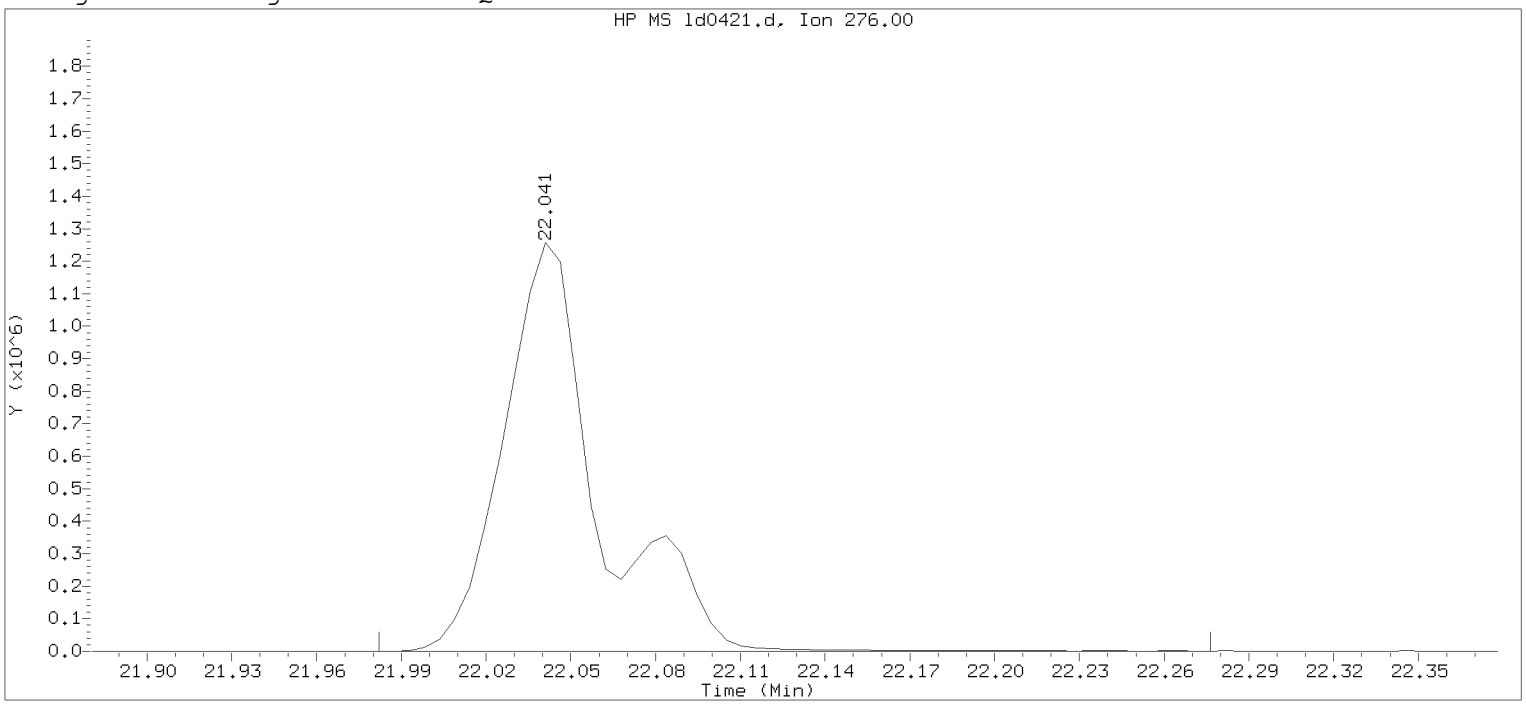
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



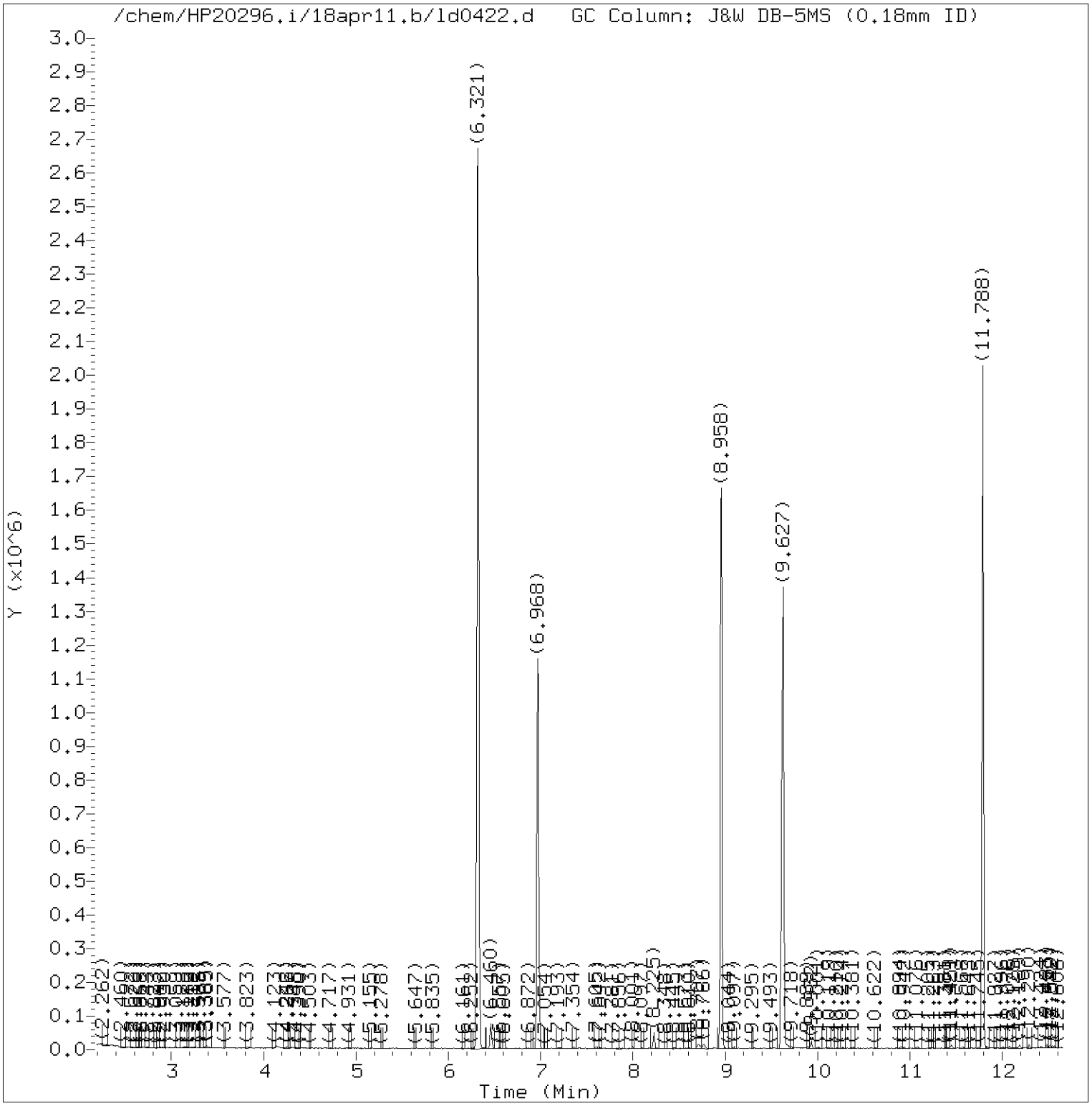
Data File: /chem/HP20296.i/18apr11.b/ld0421.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 13:43 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 14:10 Unknown

Sample Name: SSTD12.5 Lab Sample ID: rvIVC0648

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3712		
Retention Time (minutes)	: 22.041		
Quant Ion	: 276.00		
Area	: 2946612		
On-column Amount (ng/ul)	: 14.3203		
Integration start scan	: 3700	Integration stop scan:	3755
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:25.
Target 3.5 esignature user ID: Ashley R.



Total Ion Chromatogram (TIC)

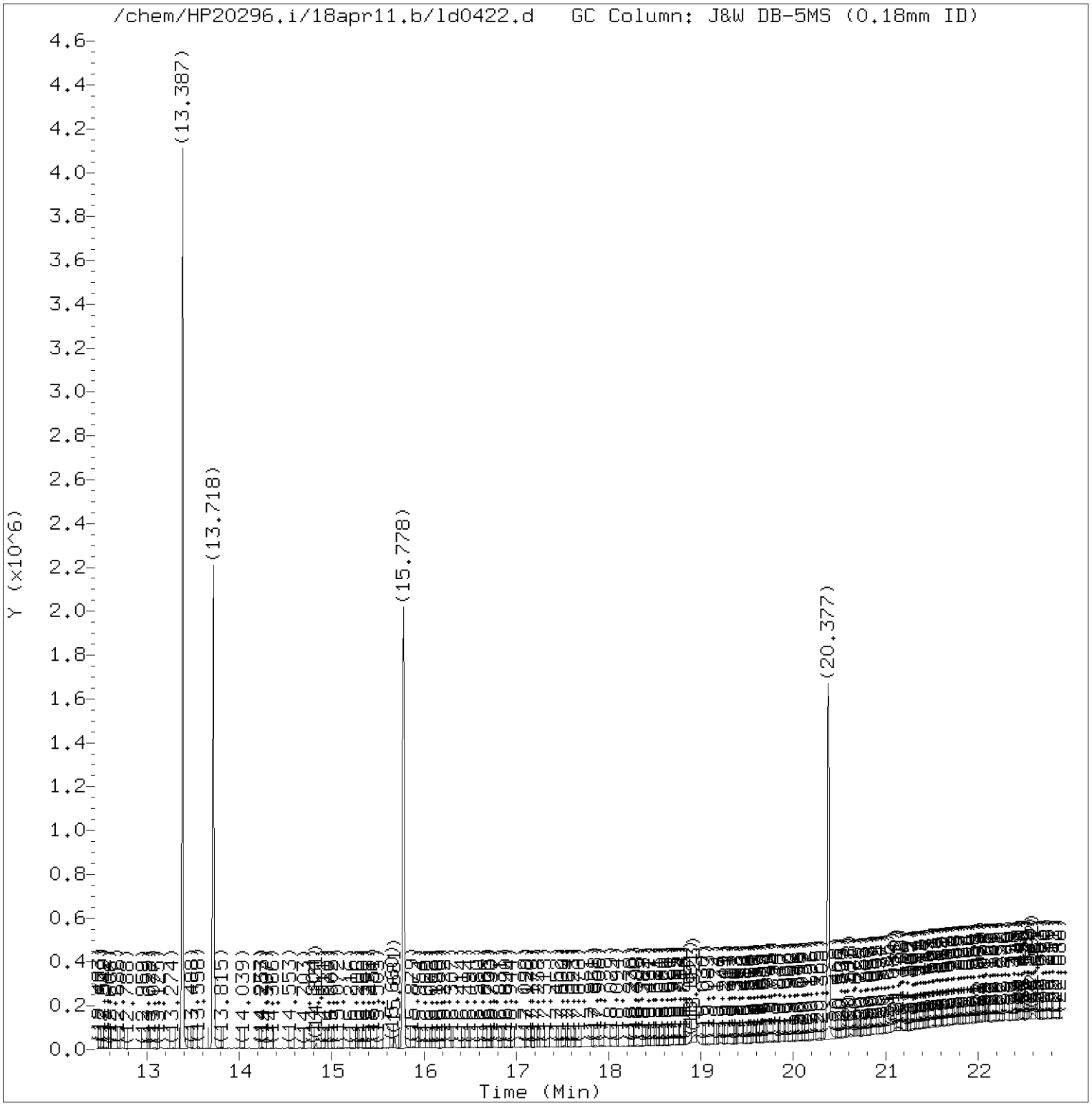
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0422.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:11 Analyst ID: hbz01996

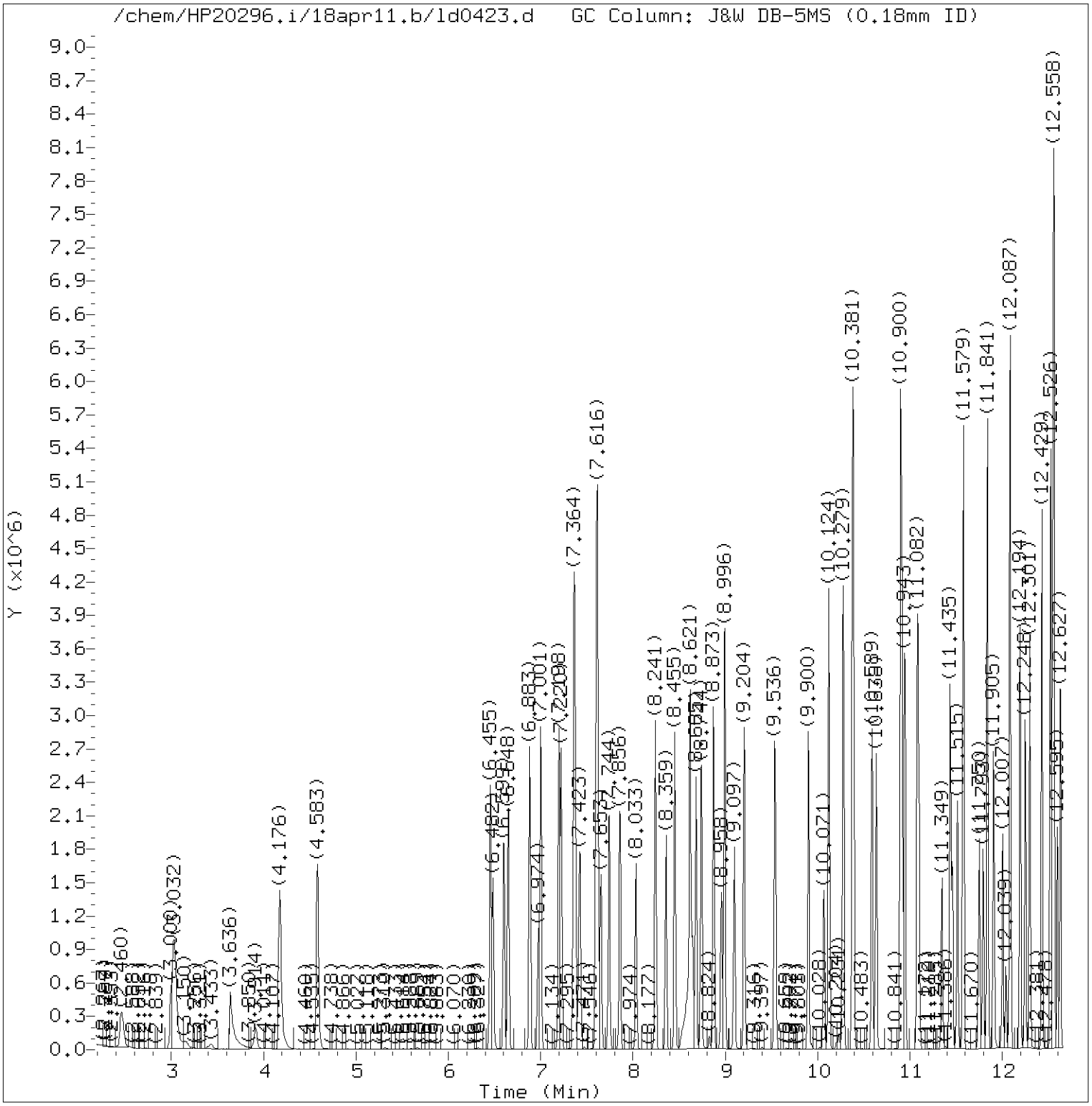
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:08 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV0648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
17) Benzaldehyde	(1)	6.321	77	839075	12.516
26)*1,4-Dichlorobenzene-d4	(1)	6.968	152	246757	5.000
68)*Naphthalene-d8	(2)	8.958	136	936542	5.000
79) Caprolactam	(2)	9.627	113	210928	12.105
118)*Acenaphthene-d10	(3)	11.788	164	470619	5.000
153) Atrazine	(4)	13.387	200	497799	12.945
158)*Phenanthrene-d10	(4)	13.718	188	928842	5.000
180)*Pyrene-d10	(5)	15.778	212	926796	5.000
218)*Perylene-d12	(6)	20.377	264	853557	5.000

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

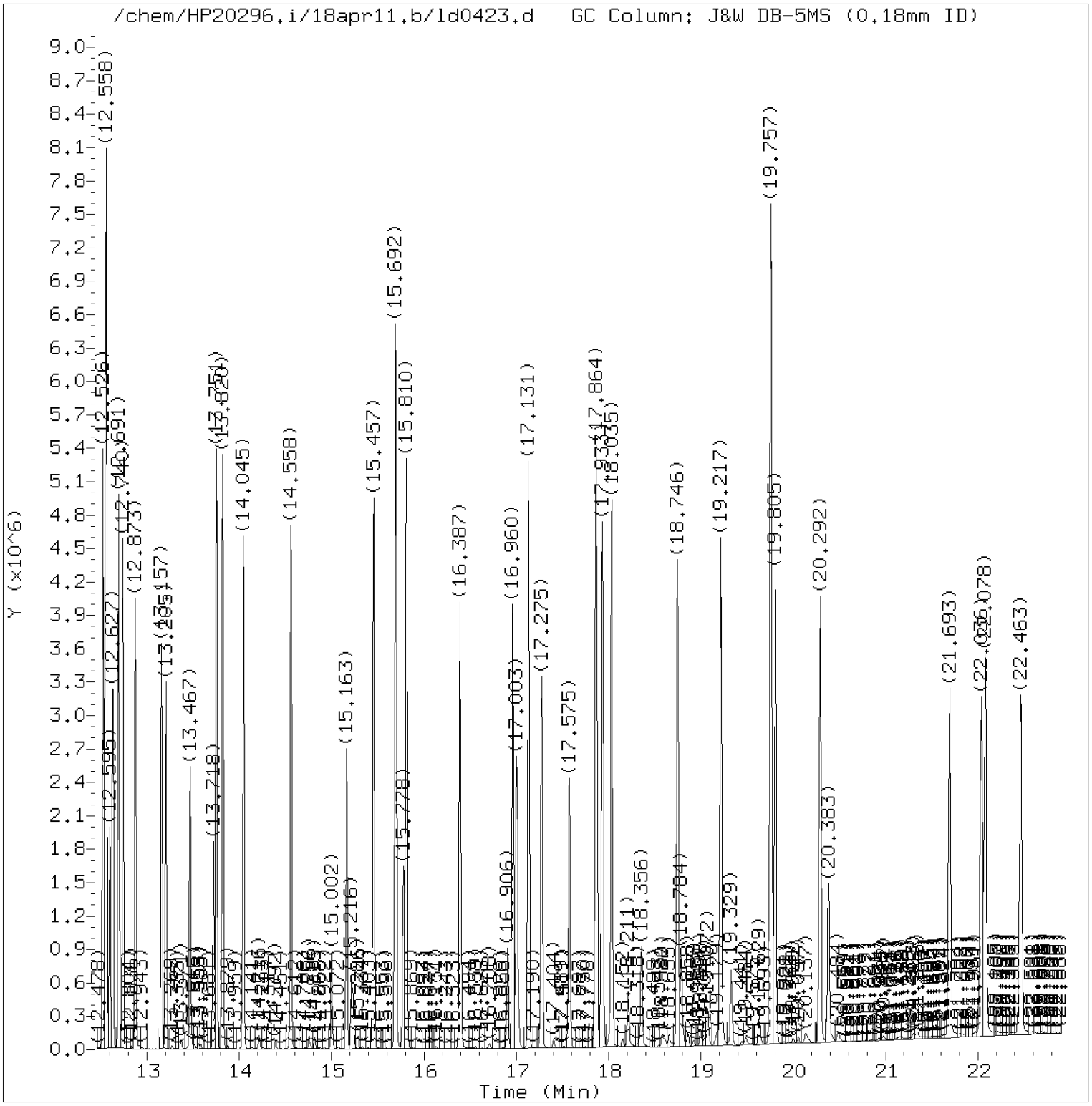
Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icval15
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icval15
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

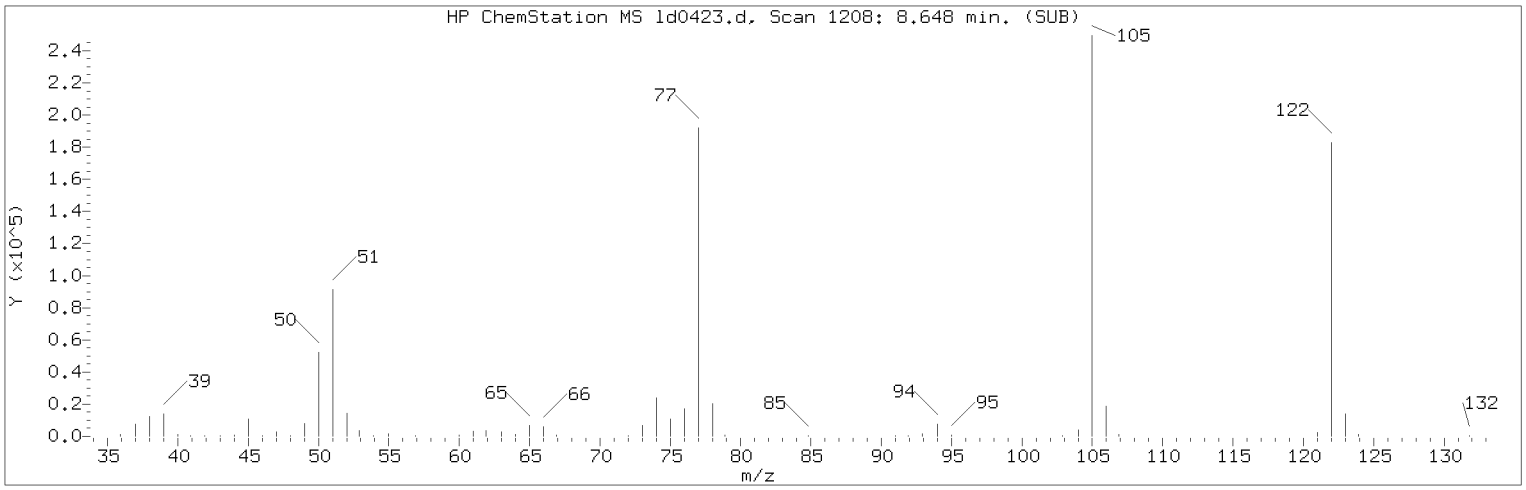
Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.460	88	344448	12.148
26)*1,4-Dichlorobenzene-d4	(1)	6.974	152	216865	5.000
58) Benzoic acid	(2)	8.648	105	1115551M	26.543
68)*Naphthalene-d8	(2)	8.958	136	809576	5.000
101) 1-Chloronaphthalene	(3)	10.948	162	1343643M	13.061
103) Diphenyl ether	(3)	11.082	170	964182	13.190
118)*Acenaphthene-d10	(3)	11.793	164	408165	5.000
127) 2,3,4,6-Tetrachlorophenol	(3)	12.248	232	399961	14.045
158)*Phenanthrene-d10	(4)	13.718	188	798260	5.000
180)*Pyrene-d10	(5)	15.778	212	835845	5.000
218)*Perylene-d12	(6)	20.383	264	749000	5.000

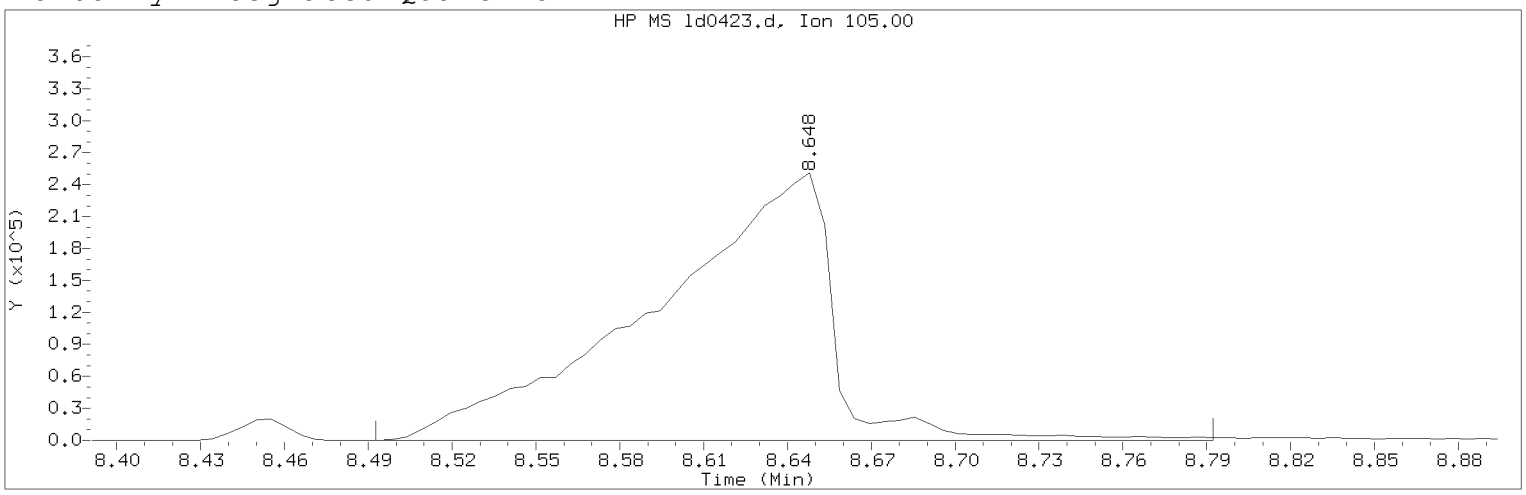
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icval15
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

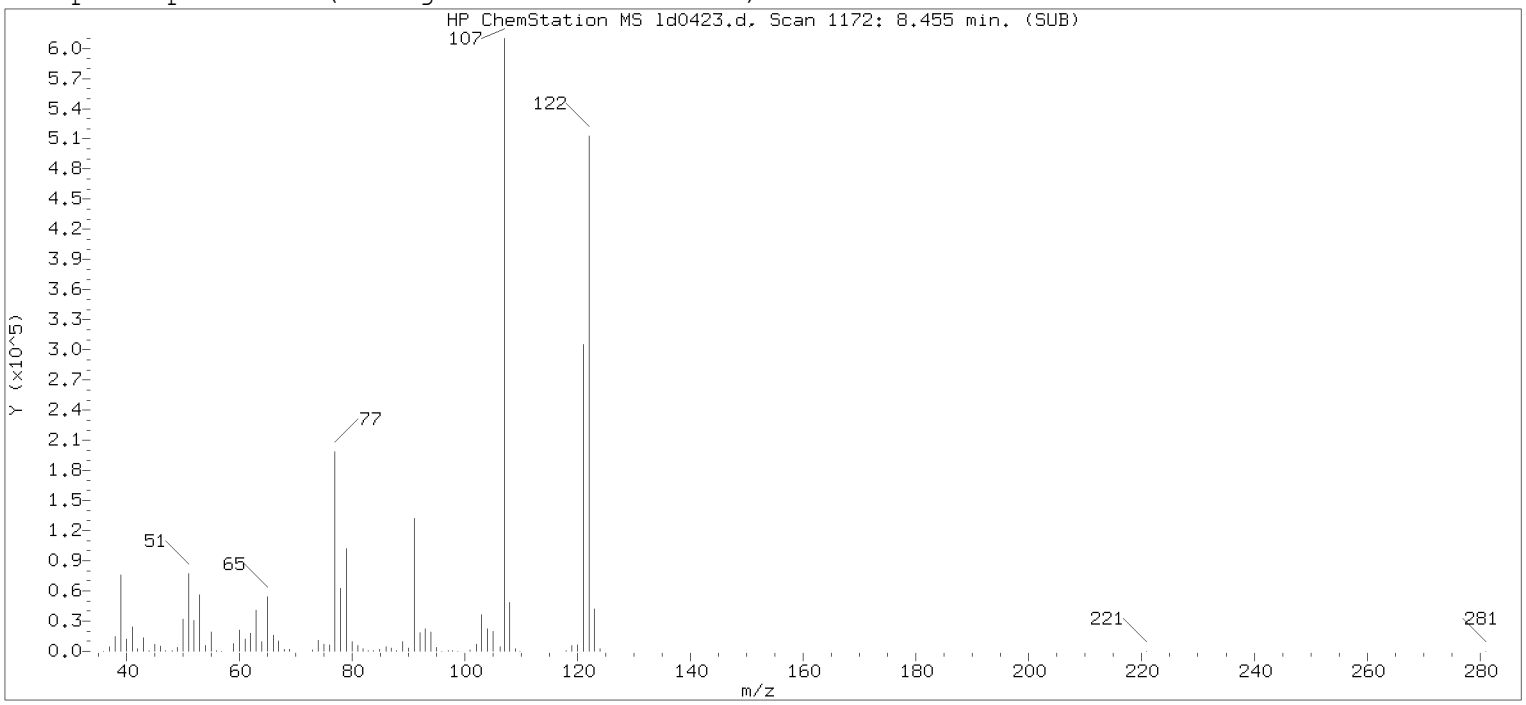
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1208
Retention Time (minutes) : 8.648
Quant Ion : 105.00
Area (flag) : 1115551M
On-Column Amount (ng/ul) : 26.5431
Integration start scan : 1178 Integration stop scan: 1234
Y at integration start : 97 Y at integration end: 97

Reason for manual integration: improper integration

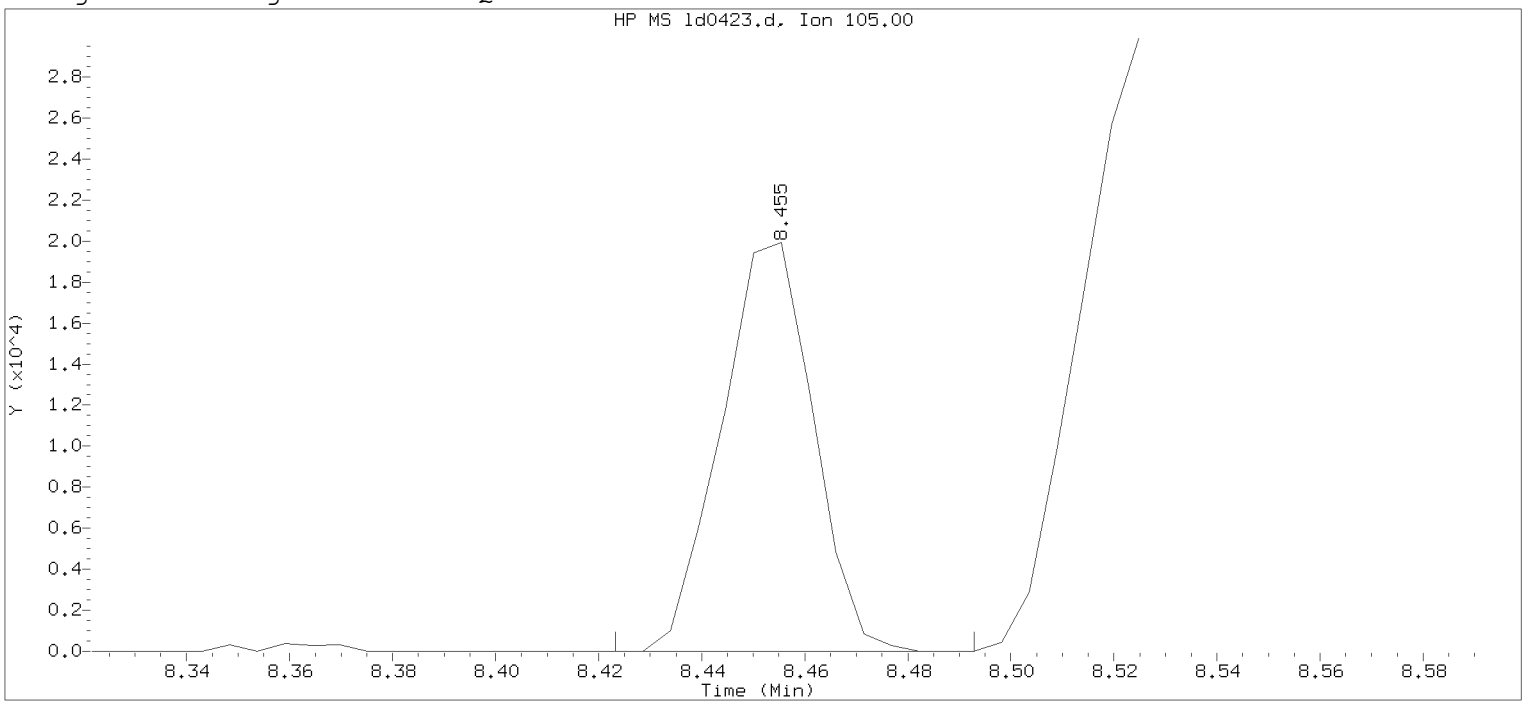
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

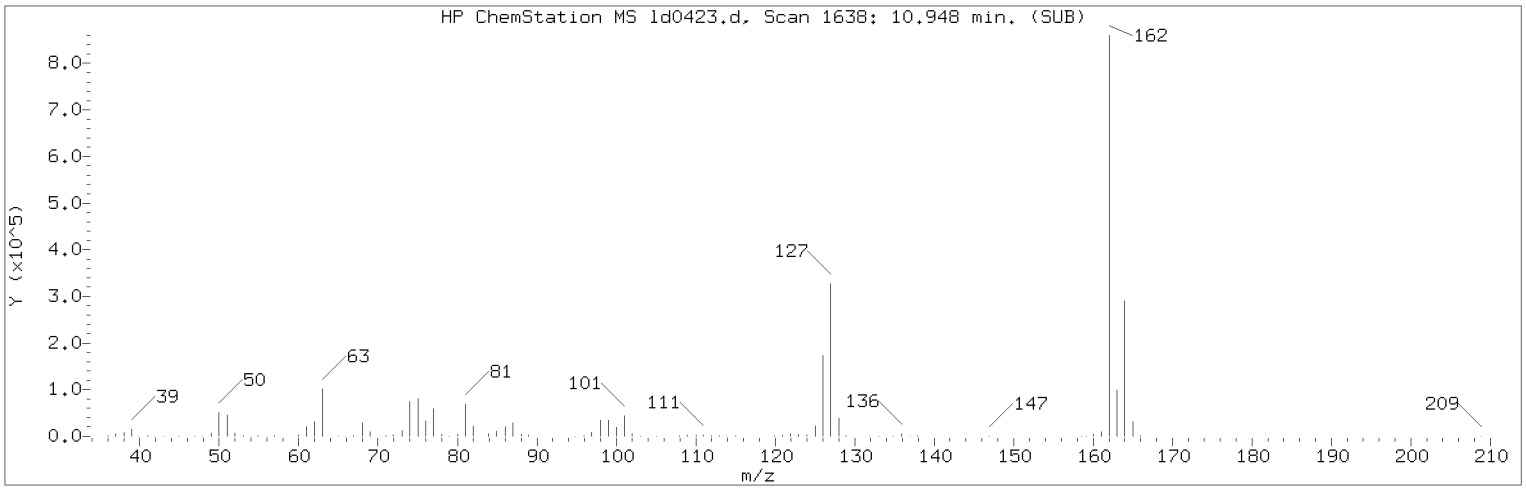
Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 15:05 Unknown

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

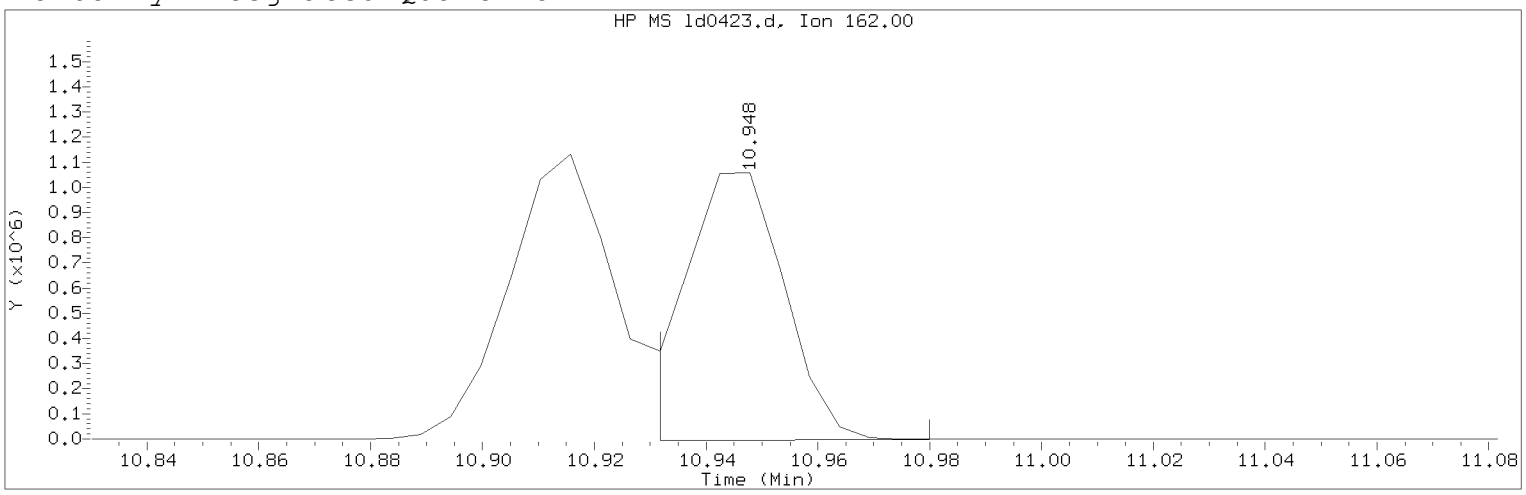
Compound Number	: 58		
Compound Name	: Benzoic acid		
Scan Number	: 1172		
Retention Time (minutes)	: 8.455		
Quant Ion	: 105.00		
Area	: 24686		
On-column Amount (ng/ul)	: 3.6875		
Integration start scan	: 1165	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:26.
Target 3.5 esignature used for this data file.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 18:06
Date, time and analyst ID of latest file update: 11-Apr-2018 18:15 art12405

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

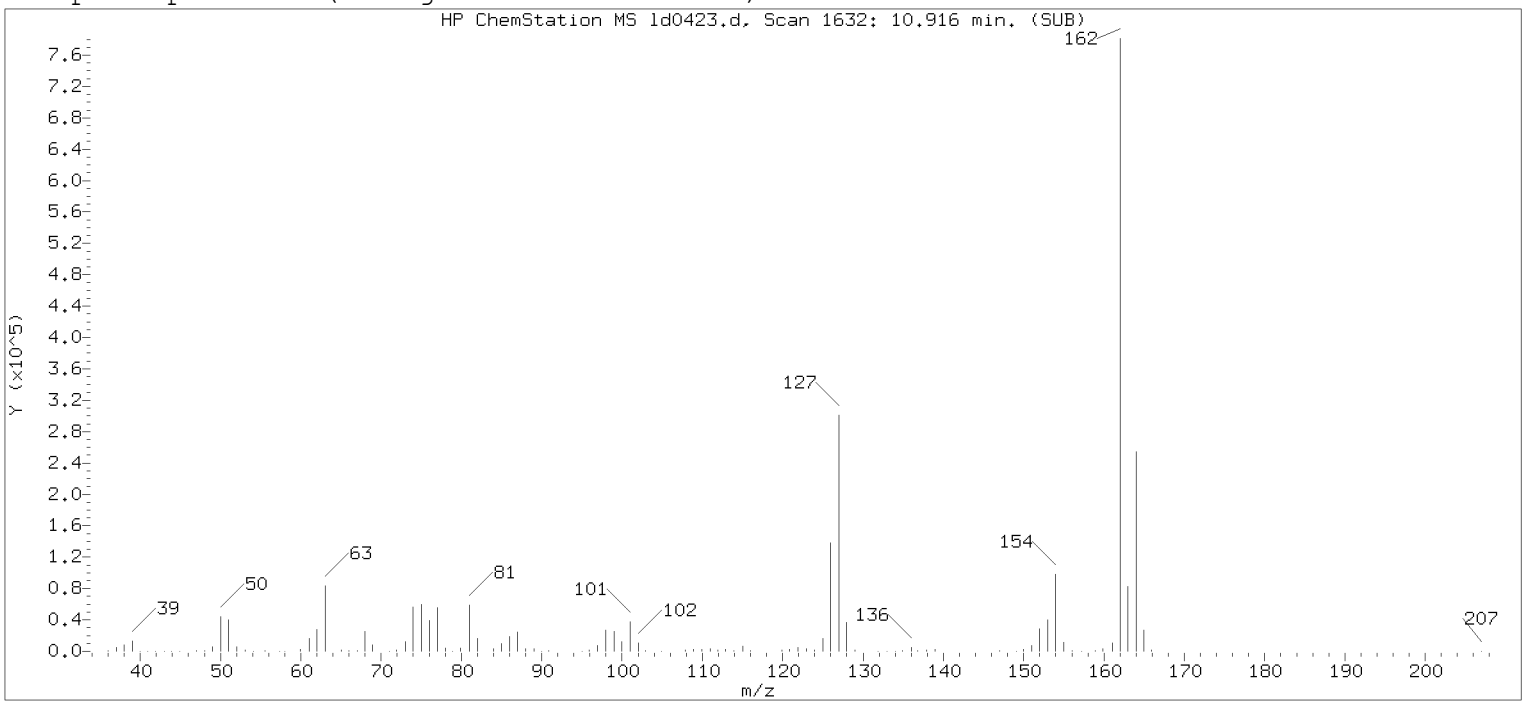
Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1638
Retention Time (minutes) : 10.948
Quant Ion : 162.00
Area (flag) : 1343643M
On-Column Amount (ng/ul) : 13.0611
Integration start scan : 1634 Integration stop scan: 1643
Y at integration start : -5388 Y at integration end: -2518

Reason for manual integration: improper integration

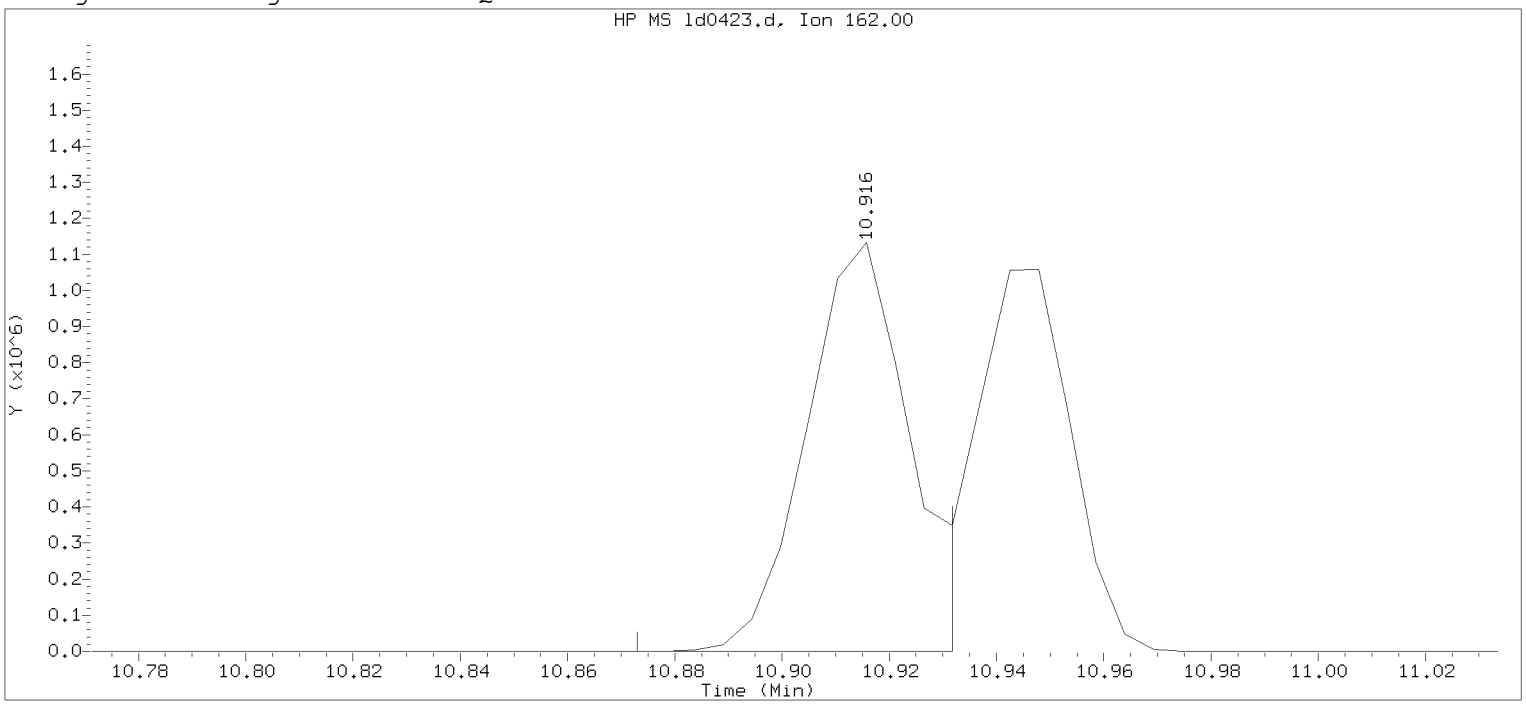
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/11/2018 at 18:26.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 04/13/2018 at 08:57.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr11.b/ld0423.d Instrument ID: HP20296.i
Injection date and time: 11-APR-2018 14:39 Analyst ID: hbz01996

Method used: /chem/HP20296.i/18apr11.b/rv8270d.m Sublist used: icvall5
Calibration date and time: 11-APR-2018 12:45
Date, time and analyst ID of latest file update: 11-Apr-2018 15:05 Unknown

Sample Name: SSTD12.5 Lab Sample ID: ms1808526A

Compound Number : 101
Compound Name : 1-Chloronaphthalene
Scan Number : 1632
Retention Time (minutes) : 10.916
Quant Ion : 162.00
Area : 1470542
On-column Amount (ng/ul) : 14.2966
Integration start scan : 1623 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 04/11/2018 at 18:26.
Target 3.5 esignature used. FD6 Page 1868

Data File: /chem/HP20296.i/18apr20.b/ld0810.d

Date : 20-APR-2018 06:42

Client ID: DFTPP

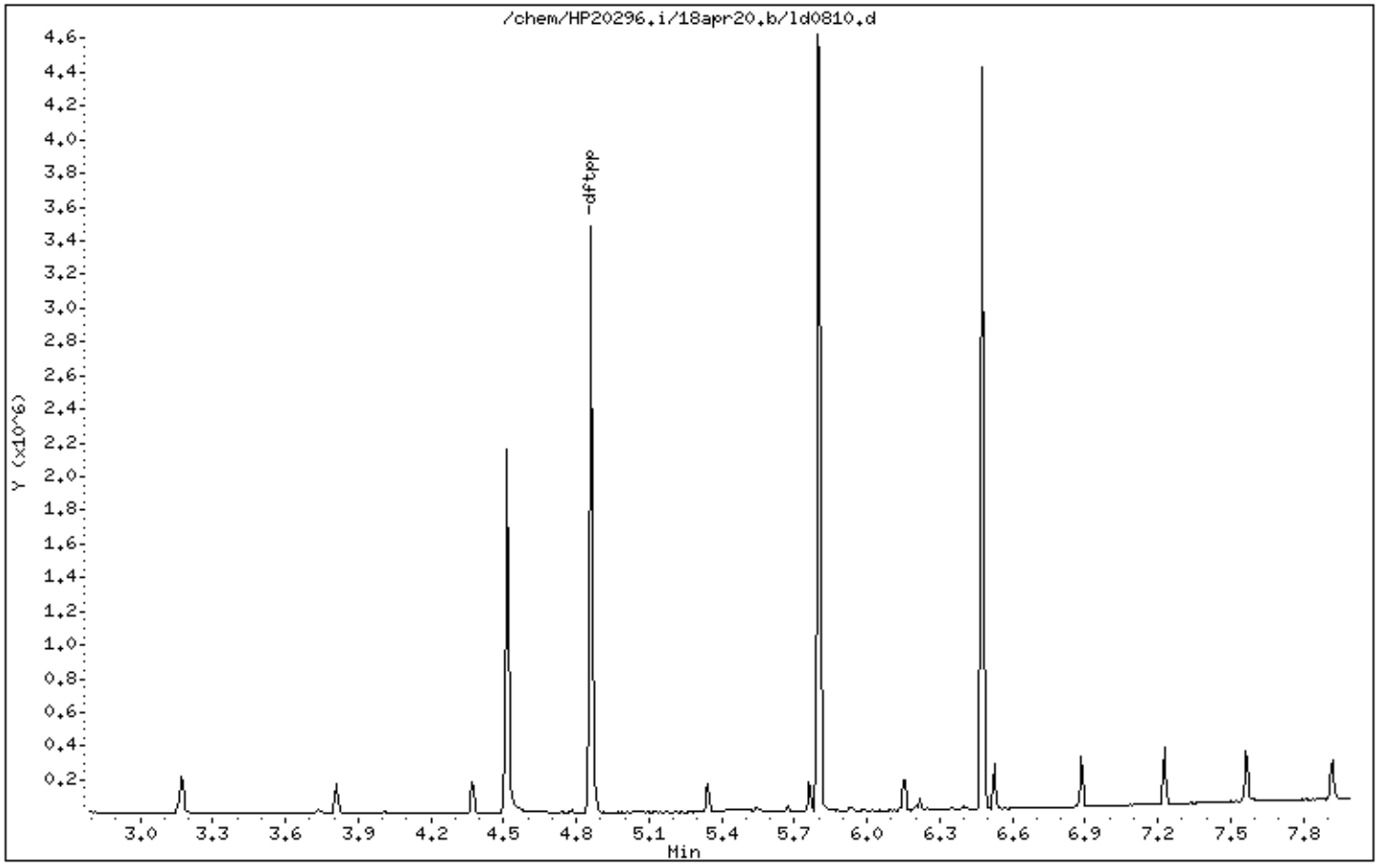
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr20.b/ld0810.d

Date : 20-APR-2018 06:42

Client ID: DFTPP

Instrument: HP20296.i

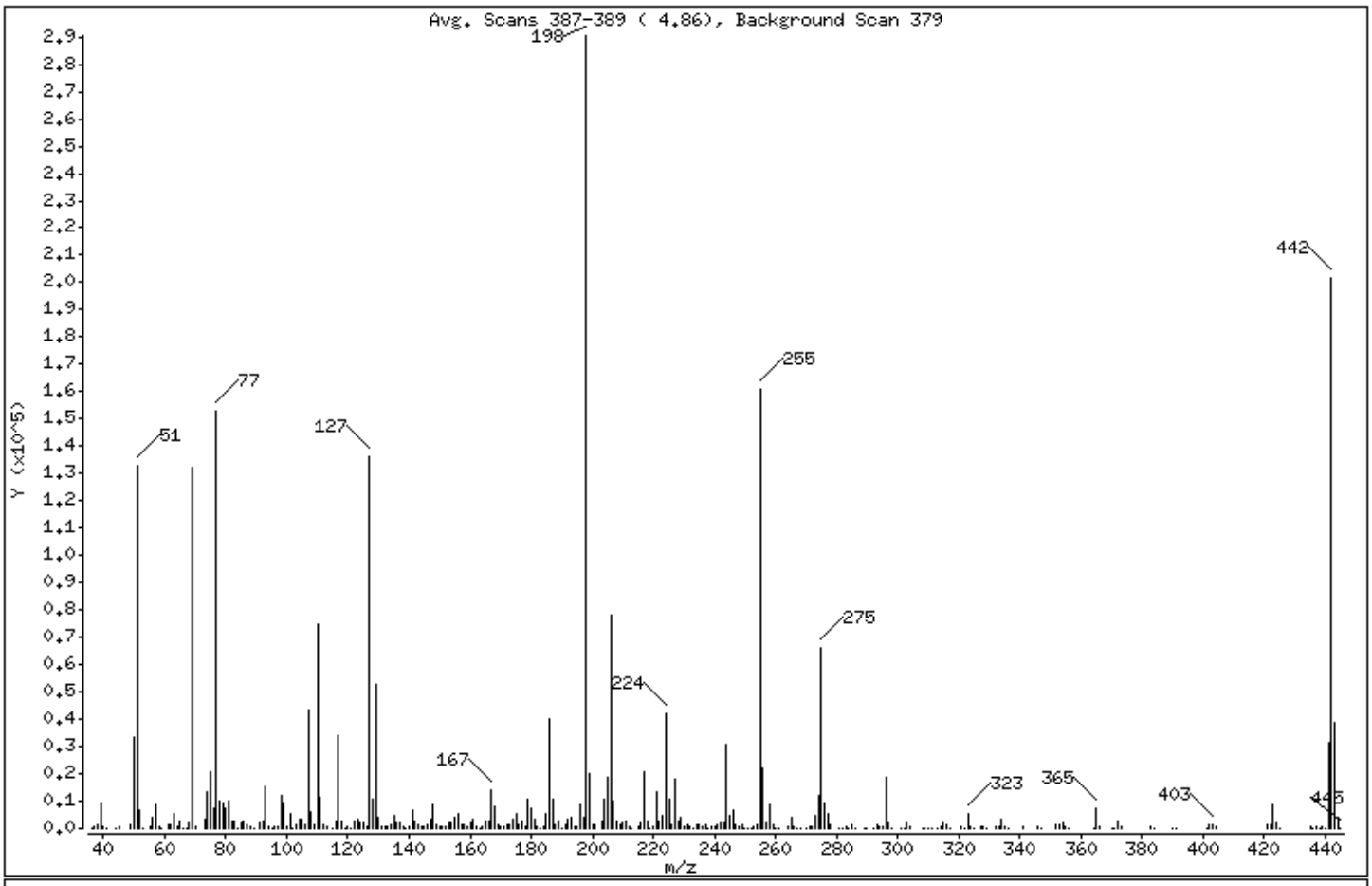
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.77
68	Less than 2.00% of mass 69	0.62 (1.36)
69	Mass 69 relative abundance	45.55
70	Less than 2.00% of mass 69	0.25 (0.54)
127	10.00 - 80.00% of mass 198	46.93
197	Less than 2.00% of mass 198	1.37
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 60.00% of mass 198	22.70
365	Greater than 1.00% of mass 198	2.61
441	0.01 - 24.00% of mass 442	10.78 (15.51)
442	50.00 - 99.99% of mass 198	69.50
443	15.00 - 24.00% of mass 442	13.32 (19.17)

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr20.b/ld0810.d

Date : 20-APR-2018 06:42

Client ID: DFTPP

Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18

Data File: ld0810.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 379
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	187	124.00	1858	201.00	1639	285.00	1026
37.00	470	125.00	1903	203.00	2507	286.00	121
38.00	1537	126.00	570	204.00	10681	289.00	197
39.00	9514	127.00	136320	205.00	18512	290.00	104
40.00	353	128.00	10443	206.00	78216	292.00	85
41.00	130	129.00	52992	207.00	10065	293.00	1331
44.00	248	130.00	4289	208.00	2677	294.00	397
45.00	487	131.00	872	209.00	1038	295.00	681
49.00	1036	132.00	408	210.00	1681	296.00	18648
50.00	33352	133.00	401	211.00	2822	297.00	2313
51.00	132928	134.00	1593	212.00	483	298.00	148
52.00	6896	135.00	4347	213.00	180	301.00	233
53.00	262	136.00	1888	215.00	866	302.00	276
55.00	527	137.00	2061	216.00	2098	303.00	2177
56.00	3805	138.00	373	217.00	20984	304.00	650
57.00	8565	139.00	236	218.00	2467	308.00	219
58.00	495	140.00	784	219.00	97	309.00	100
59.00	92	141.00	6533	220.00	478	310.00	229
61.00	1444	142.00	2479	221.00	13038	311.00	87
62.00	1603	143.00	1525	222.00	2822	313.00	161
63.00	5009	144.00	514	223.00	4790	314.00	917
64.00	563	145.00	606	224.00	42248	315.00	1961
65.00	2702	146.00	1035	225.00	10975	316.00	1017
66.00	92	147.00	3609	226.00	1341	317.00	173
67.00	224	148.00	8566	227.00	17888	321.00	438
68.00	1803	149.00	1598	228.00	2936	322.00	287
69.00	132288	150.00	454	229.00	3715	323.00	5289
70.00	712	151.00	872	230.00	523	324.00	979
73.00	3220	152.00	502	231.00	1497	325.00	117
74.00	13469	153.00	2194	232.00	395	327.00	984
75.00	20624	154.00	1694	233.00	310	328.00	566
76.00	7380	155.00	4222	234.00	1168	329.00	90
77.00	152576	156.00	5670	235.00	1337	332.00	347
78.00	10317	157.00	1229	236.00	729	333.00	660
79.00	9249	158.00	1242	237.00	1436	334.00	3425

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Date : 20-APR-2018 06:42

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0810.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 379
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	7422	159.00	931	238.00	114	335.00	800
81.00	10243	160.00	1945	239.00	695	336.00	123
82.00	2733	161.00	3480	240.00	730	341.00	752
83.00	2439	162.00	931	241.00	1043	346.00	857
84.00	64	163.00	113	242.00	2109	347.00	85
85.00	1889	164.00	465	243.00	2294	352.00	1460
86.00	2995	165.00	2789	244.00	30632	353.00	1016
87.00	1629	166.00	2445	245.00	4670	354.00	1689
88.00	439	167.00	14314	246.00	6438	355.00	455
89.00	261	168.00	7715	247.00	1207	356.00	138
91.00	1996	169.00	1358	248.00	371	364.00	91
92.00	2584	170.00	479	249.00	1223	365.00	7575
93.00	15645	171.00	583	250.00	146	366.00	980
94.00	840	172.00	1333	251.00	272	370.00	206
95.00	287	173.00	1663	252.00	323	371.00	194
96.00	769	174.00	3041	253.00	966	372.00	2525
97.00	521	175.00	5227	254.00	1524	373.00	739
98.00	11915	176.00	1358	255.00	160832	383.00	762
99.00	9436	177.00	2905	256.00	22264	384.00	175
100.00	816	178.00	864	257.00	1998	390.00	275
101.00	5328	179.00	10982	258.00	8403	391.00	150
102.00	118	180.00	7348	259.00	1520	401.00	87
103.00	1590	181.00	3449	260.00	298	402.00	1059
104.00	3506	182.00	492	261.00	124	403.00	1380
105.00	3397	183.00	316	264.00	391	404.00	434
106.00	1040	184.00	690	265.00	3688	421.00	1417
107.00	43368	185.00	5062	266.00	473	422.00	1104
108.00	6217	186.00	39936	267.00	89	423.00	8702
109.00	1163	187.00	10920	268.00	239	424.00	2300
110.00	74832	188.00	1201	270.00	83	425.00	100
111.00	11366	189.00	2728	271.00	559	435.00	355
112.00	1410	190.00	283	272.00	485	436.00	102
113.00	340	191.00	1421	273.00	4739	437.00	383
115.00	271	192.00	3588	274.00	12029	438.00	246
116.00	2410	193.00	4030	275.00	65928	439.00	445

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Date : 20-APR-2018 06:42

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS Column diameter: 0.18

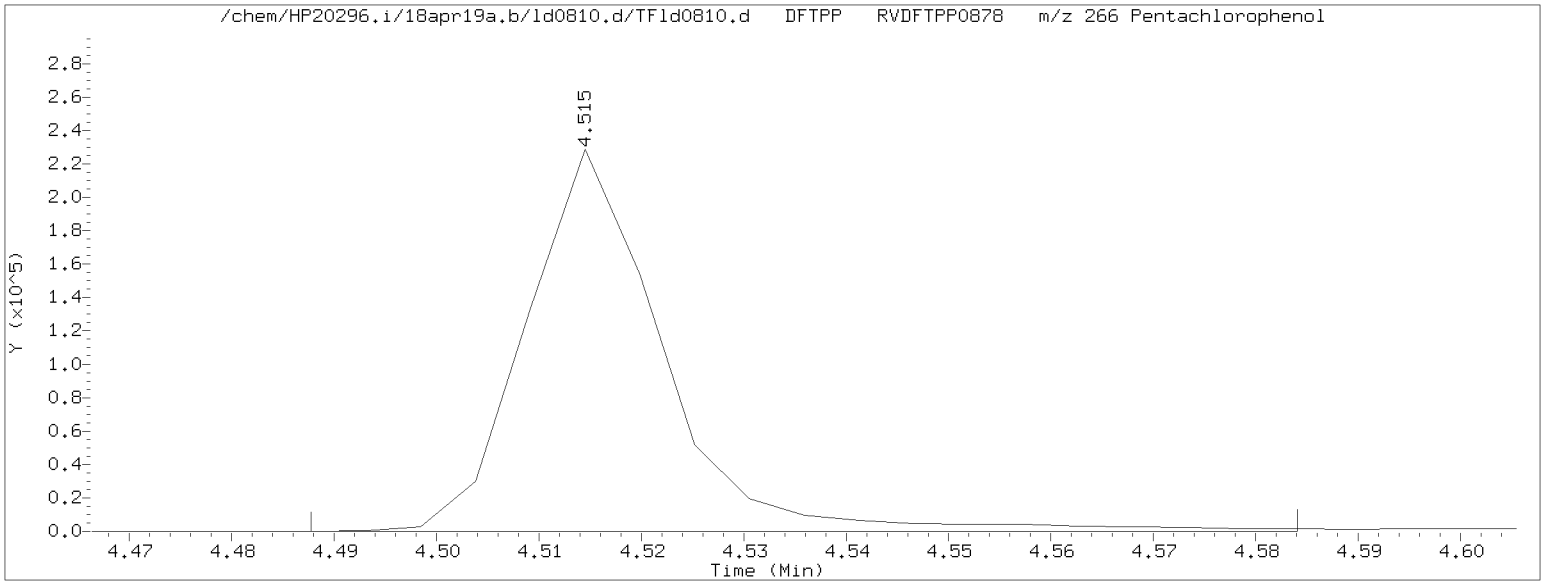
Data File: ld0810.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 379
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	34024	194.00	944	276.00	9353	440.00	321
118.00	2585	195.00	505	277.00	5619	441.00	31312
119.00	182	196.00	8550	278.00	1098	442.00	201856
120.00	502	197.00	3993	281.00	82	443.00	38696
121.00	200	198.00	290432	282.00	209	444.00	3782
122.00	2411	199.00	19744	283.00	944	445.00	112
123.00	3542	200.00	1548	284.00	325		

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

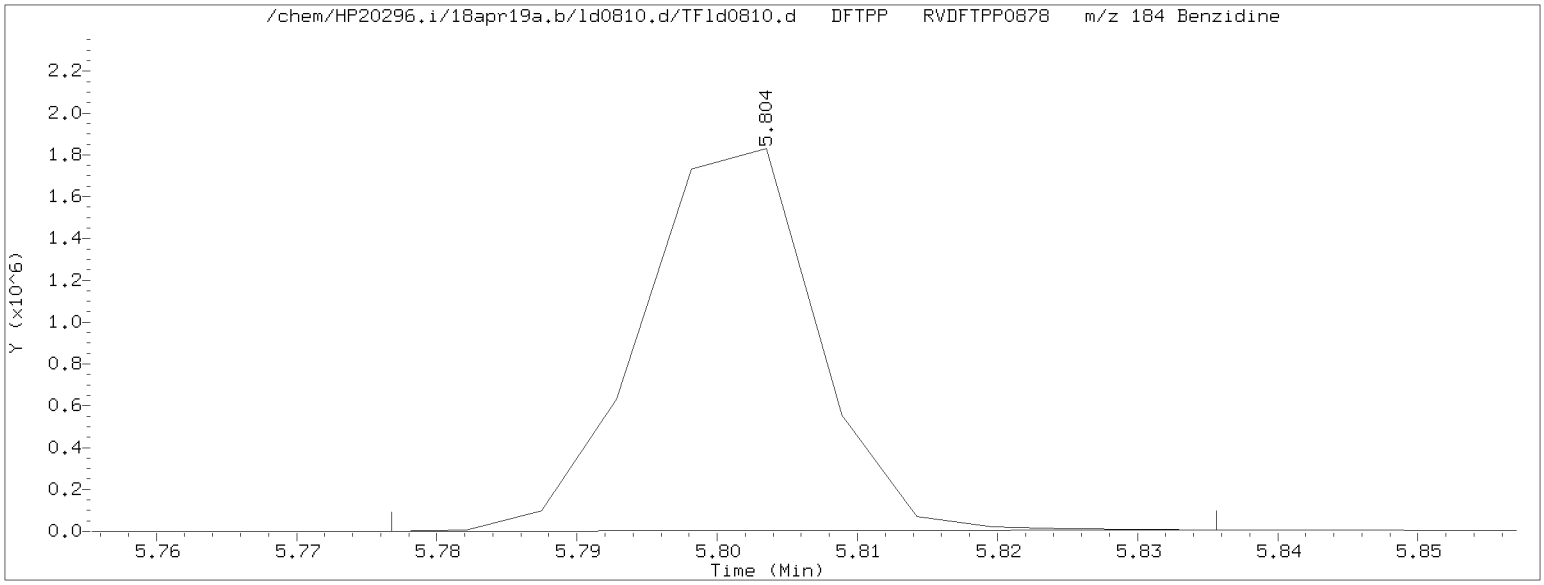
Instrument ID: HP20296.i Injection Date: 20-APR-2018 06:42 Operator: bhs10208



Pentachlorophenol EICP peak height = 228864 EICP peak height at 10% = 22886 Pentachlorophenol EICP area = 211878

Pentachlorophenol EICP peak apex (min.) = 4.515
RT at 10% of front half of EICP (min.) = 4.503 'Front' peak width (min.) = 0.0120000000
RT at 10% of back half of EICP (min.) = 4.530 'Tailing' peak width (min.) = 0.0153833333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0153833333}{0.0120000000} = 1.282$$



Benzidine EICP peak height = 1827519 EICP peak height at 10% = 182752 Benzidine EICP area = 1582577

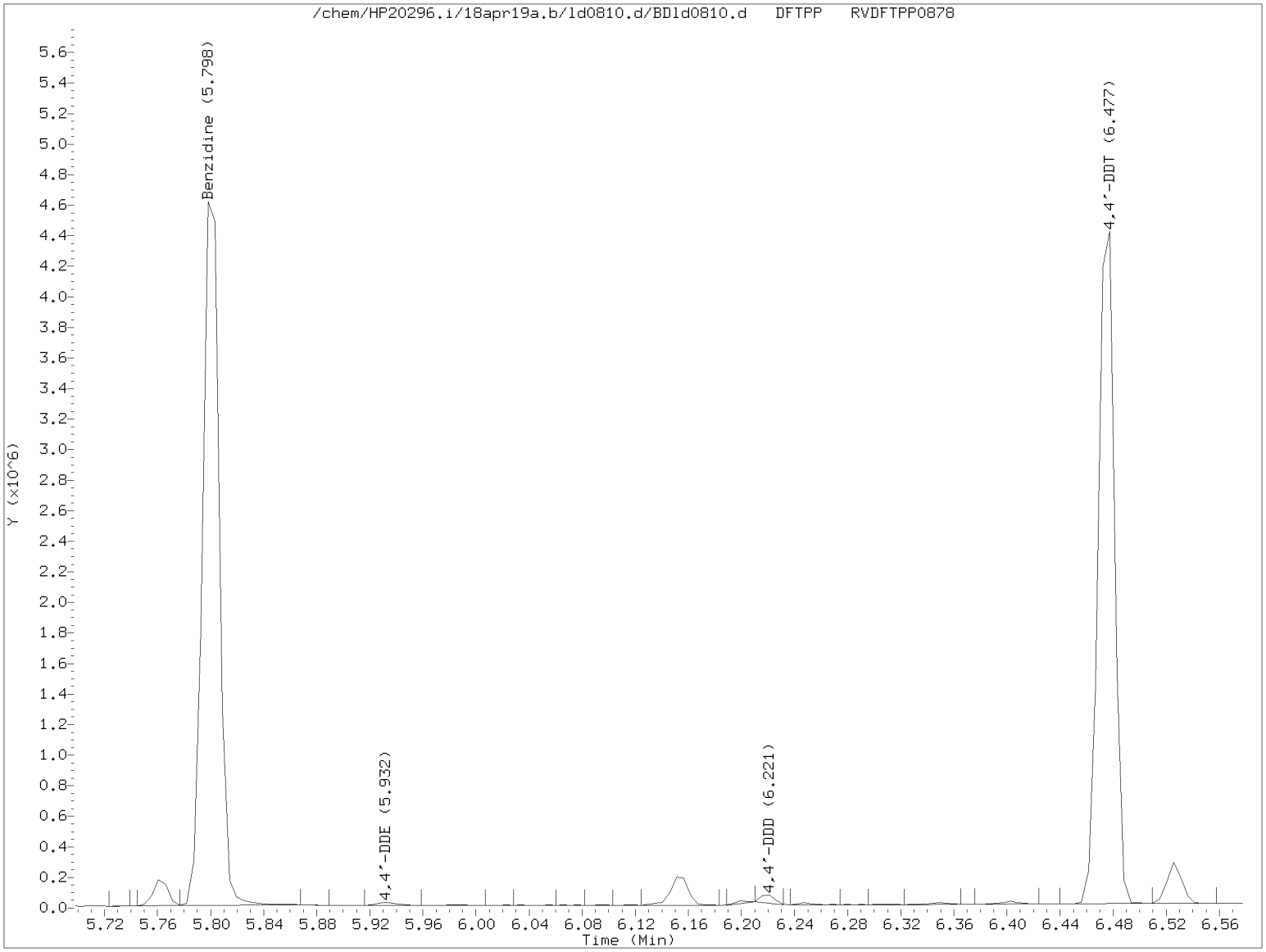
Benzidine EICP peak apex (min.) = 5.804
RT at 10% of front half of EICP (min.) = 5.788 'Front' peak width (min.) = 0.0151666667
RT at 10% of back half of EICP (min.) = 5.813 'Tailing' peak width (min.) = 0.0094166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0094166667}{0.0151666667} = 0.621$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

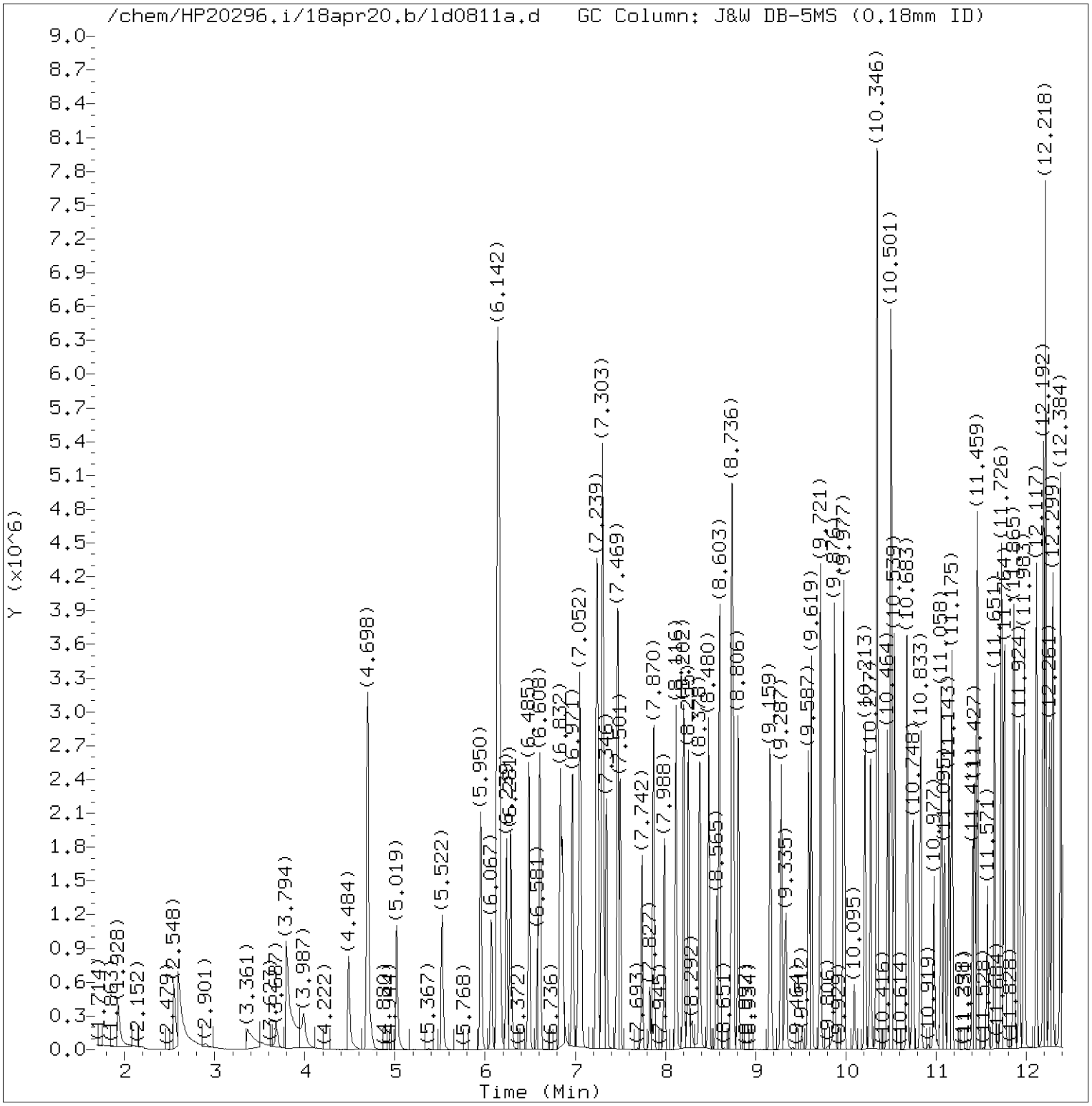
Instrument ID: HP20296.i Injection Date: 20-APR-2018 06:42 Operator: bhs10208



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{20298 + 41319}{20298 + 41319 + 3818967} \times 100 = 1.6$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

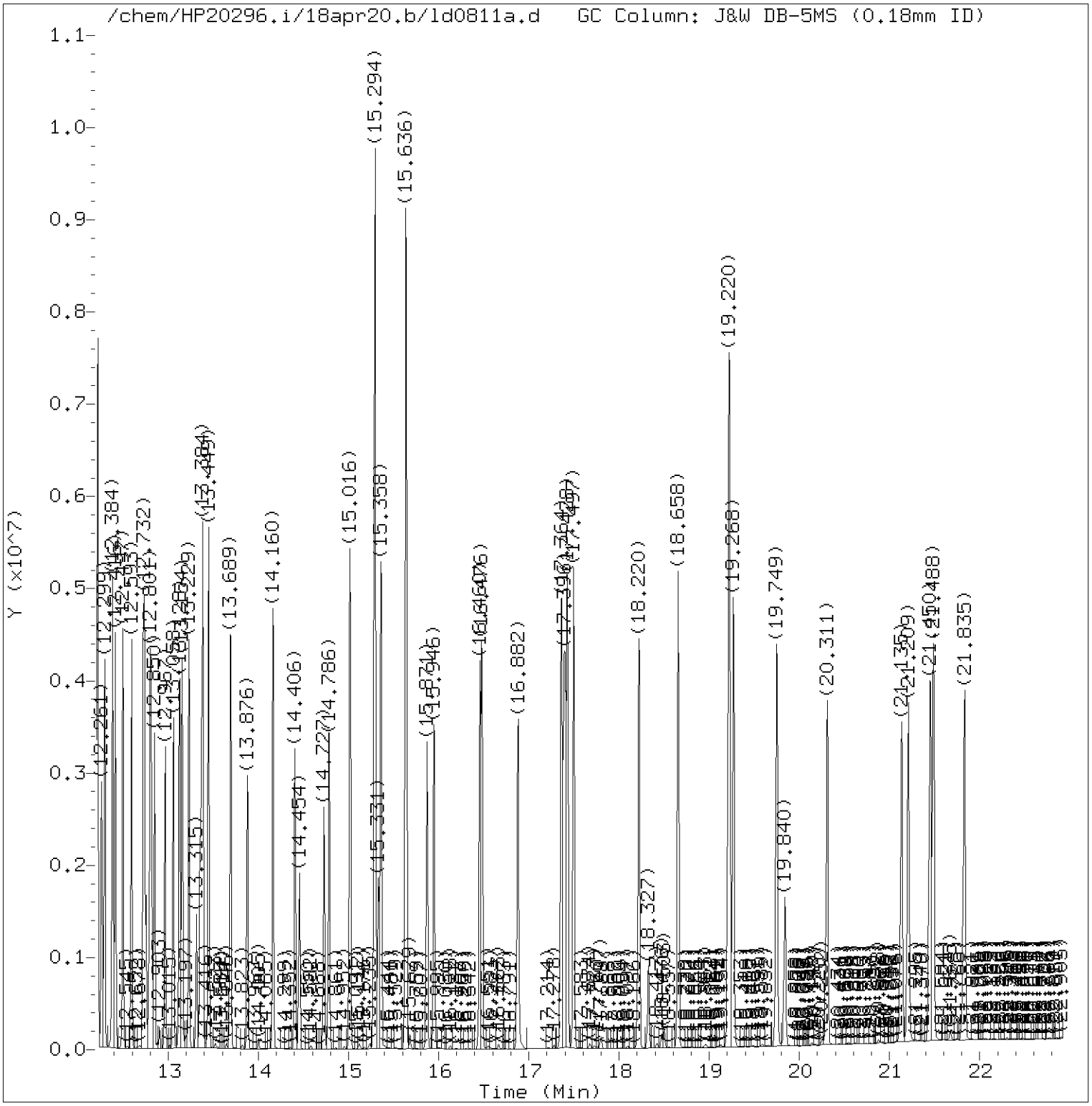
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.928	88	310807	11.860
5) N-Nitrosodimethylamine	(1)	2.548	74	524628	13.148
6) Pyridine	(1)	2.596	79	804448	11.299
8) 2-Picoline	(1)	3.794	93	891255	12.381
9) N-Nitrosomethylethylamine	(1)	3.987	88	374965	12.997
10) Methyl methanesulfonate	(1)	4.484	80	463259	13.257
12)$2-Fluorophenol	(1)	4.698	112	1455603	26.521
14) N-Nitrosodiethylamine	(1)	5.019	102	357936	13.377
16) Ethyl methanesulfonate	(1)	5.522	109	380881	13.072
43) Total Cresols	(1)			1499141	27.484
17) Benzaldehyde	(1)	5.950	77	673291	12.364
20) Aniline	(1)	6.137	93	1293987	13.545
18)$Phenol-d6	(1)	6.137	99	1890821	26.273
19) Phenol	(1)	6.158	94	1118407	13.499
21) a-methylstyrene	(1)	6.164	118	259420	12.430
23) bis(2-Chloroethyl)ether	(1)	6.239	93	803721	13.031
24) 2-Chlorophenol	(1)	6.287	128	703163	13.079
25) 1,3-Dichlorobenzene	(1)	6.485	146	800549	13.190
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	200435	5.000
27) 1,4-Dichlorobenzene	(1)	6.608	146	808311	13.160
29) 1,2-Dichlorobenzene	(1)	6.832	146	770566	13.176
28) Benzyl alcohol	(1)	6.859	108	420493	11.718
31) Indene	(1)	6.971	115	1061287	12.385
35) bis(2-Chloroisopropyl)ether	(1)	7.046	45	1224394	13.983
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.046	45	1224394	13.983
32) 2-Methylphenol	(1)	7.057	108	708987	13.373
36) N-Nitrosopyrrolidine	(1)	7.239	100	400099	13.783
37) Acetophenone	(1)	7.239	105	1095610	13.554
39) N-Nitroso-di-n-propylamine	(1)	7.255	70	636138	13.804
41) o-Toluidine	(1)	7.298	106	1229167	13.111
40) N-Nitrosomorpholine	(1)	7.303	56	492536	12.789
38) 4-Methylphenol	(1)	7.308	108	790154	14.111
44) Hexachloroethane	(1)	7.346	117	333403	12.731
100) Isosafrole	(3)			628492	12.931
45)$Nitrobenzene-d5	(2)	7.469	82	1822215	28.357
46) Nitrobenzene	(2)	7.501	77	929909	14.187
50) N-Nitrosopiperidine	(2)	7.742	114	360131	13.369
52) Isophorone	(2)	7.870	82	1586240	13.845
53) 2-Nitrophenol	(2)	7.993	139	370270	13.980
125) 2,4_2,6-Dinitrotoluenes	(3)			810100	27.166

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.116	107	760060	13.386
59) O,O,O-Triethylphosphorothioate	(2)	8.207	198	368772	13.123
57) bis(2-Chloroethoxy)methane	(2)	8.255	93	997313	13.391
58) Benzoic acid	(2)	8.298	105	233731M	8.088
62) 2,4-Dichlorophenol	(2)	8.383	162	608288	13.759
65) 1,2,4-Trichlorobenzene	(2)	8.480	180	663058	13.460
68)*Naphthalene-d8	(2)	8.565	136	745064	5.000
69) Naphthalene	(2)	8.603	128	2085251	13.544
72) Hexachloropropene	(2)	8.736	213	490850	13.771
71) 2,6-Dichlorophenol	(2)	8.742	162	595929	13.611
70) 4-Chloroaniline	(2)	8.752	127	839177	13.354
151) Diallate trans/cis	(4)			755045	12.641
74) Hexachlorobutadiene	(2)	8.806	225	424013	14.198
78) Quinoline	(2)	9.164	129	1276627	13.017
80) N-Nitrosodi-n-butylamine	(2)	9.287	84	575164	11.903
79) Caprolactam	(2)	9.335	113	187966	13.560
83) 4-Chloro-3-methylphenol	(2)	9.587	107	666352	13.735
85) Safrole	(2)	9.619	162	543172	13.151
86) 2-Methylnaphthalene	(2)	9.721	142	1369615	13.390
87) 1-Methylnaphthalene	(2)	9.876	142	1246969	13.287
88) Hexachlorocyclopentadiene	(3)	9.972	237	419243	13.421
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.983	216	706786	13.452
91) cis-Isosafrole	(3)	10.095	162	99670	2.180
93) 2,4,6-Trichlorophenol	(3)	10.213	196	457859	13.877
95) 2,4,5-Trichlorophenol	(3)	10.277	196	477987	13.803
96)$2-Fluorobiphenyl	(3)	10.352	172	3149502	26.229
97) trans-Isosafrole	(3)	10.464	162	528822	10.751
98) 1,1'-Biphenyl	(3)	10.501	154	1654409	13.360
99) 2-Chloronaphthalene	(3)	10.512	162	1316762	12.512
101) 1-Chloronaphthalene	(3)	10.539	162	1290512	13.257
103) Diphenyl ether	(3)	10.683	170	902940	13.054
104) 2-Nitroaniline	(3)	10.748	138	421805	13.695
108) 1,4-Naphthoquinone	(3)	10.833	158	550528	13.239
109) 1,4-Dinitrobenzene	(3)	10.983	168	219475	13.407
110) Dimethylphthalate	(3)	11.058	163	1518040	12.877
111) 1,3-Dinitrobenzene	(3)	11.095	168	243346	13.878
113) 2,6-Dinitrotoluene	(3)	11.143	165	342745	13.693
114) Acenaphthylene	(3)	11.175	152	1990157	13.605
118)*Acenaphthene-d10	(3)	11.405	164	386246	5.000
117) 3-Nitroaniline	(3)	11.427	138	372358	14.119

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.459	153	1364752	13.158
120) 2,4-Dinitrophenol	(3)	11.571	184	191207	12.707
122) Pentachlorobenzene	(3)	11.651	250	585542	13.666
124) Dibenzofuran	(3)	11.726	168	1909203	13.249
121) 4-Nitrophenol	(3)	11.758	109	251670	13.538
123) 2,4-Dinitrotoluene	(3)	11.764	165	467355	13.474
126) 1-Naphthylamine	(3)	11.865	143	1361484	13.278
127) 2,3,4,6-Tetrachlorophenol	(3)	11.924	232	387760	14.390
128) 2-Naphthylamine	(3)	11.983	143	1339124	13.785
129) Diethylphthalate	(3)	12.117	149	1540867	13.281
131) Fluorene	(3)	12.192	166	1516770	13.474
130) Thionazin	(3)	12.213	107	257281	13.026
132) 4-Chlorophenyl-phenylether	(3)	12.218	204	753959	13.514
133) 5-Nitro-o-toluidine	(3)	12.261	152	425317	13.871
135) 4,6-Dinitro-2-methylphenol	(4)	12.299	198	269325	12.673
134) 4-Nitroaniline	(3)	12.299	138	375302	14.080
137) NDPA as diphenylamine	(4)	12.384	169	1245973	12.684
136) N-Nitrosodiphenylamine	(4)	12.384	169	1245973	12.684
139) 1,2-Diphenylhydrazine	(4)	12.416	77	1824969	13.313
140)$2,4,6-Tribromophenol	(3)	12.497	330	384336	28.786
142) Tetraethyldithiopyrophosphate	(4)	12.593	97	310482	13.318
145) Diallate (peak 1)	(4)	12.721	86	642743	10.357
146) Phorate	(4)	12.732	75	1342992M	15.275
144) 1,3,5-Trinitrobenzene	(4)	12.753	213	178085	13.603
147) Phenacetin	(4)	12.796	108	860932	13.866
148) 4-Bromophenyl-phenylether	(4)	12.812	248	421779	12.850
149) Diallate (peak 2)	(4)	12.828	86	112302	2.283
150) Hexachlorobenzene	(4)	12.850	284	424329	12.587
152) Dimethoate	(4)	12.967	87	691536	13.070
153) Atrazine	(4)	13.058	200	411175	12.373
156) Pentachloronitrobenzene	(4)	13.122	237	218622	13.587
154) Pentachlorophenol	(4)	13.128	266	253613	12.284
155) 4-Aminobiphenyl	(4)	13.154	169	1472374	13.165
157) Pronamide	(4)	13.229	173	755590	13.638
158)*Phenanthrene-d10	(4)	13.352	188	802737	5.000
159) Dinoseb	(4)	13.368	211	429499	12.911
160) Phenanthrene	(4)	13.384	178	2303120	13.012
162) Anthracene	(4)	13.449	178	2364350	13.325
168) Carbazole	(4)	13.695	167	2096355	13.343
169) Methyl parathion	(4)	13.876	109	550064	13.639

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on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.160	149	2716386	12.844
172) Parathion	(4)	14.406	109	354804	13.595
173) 4-Nitroquinoline-1-oxide	(4)	14.454	190	228148	10.885
174) Octachlorostyrene	(4)	14.727	308	161826	12.832
176) Isodrin	(4)	14.786	193	279699	12.754
227) Total PAHs	(6)			40086074	241.336
178) Fluoranthene	(4)	15.016	202	2737806	13.753
179) Benzidine	(5)	15.294	184	4922846	39.087
180)*Pyrene-d10	(5)	15.331	212	854720	5.000
182) Pyrene	(5)	15.358	202	2786873	12.817
184)$Terphenyl-d14	(5)	15.636	244	3582463	26.135
187) p-Dimethylaminoazobenzene	(5)	15.871	225	467601	14.096
190) Chlorobenzilate	(5)	15.946	139	834660	12.885
192) 3,3'-Dimethylbenzidine	(5)	16.454	212	1847113	13.485
193) Butylbenzylphthalate	(5)	16.481	149	1310122	12.968
196) 2-Acetylaminofluorene	(5)	16.882	181	1139390	14.250
200) Benzo(a)anthracene	(5)	17.358	228	2686532	13.830
198) 3,3'-Dichlorobenzidine	(5)	17.385	252	980753	14.030
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.401	231	575949	13.567
201) Chrysene	(5)	17.428	228	2573774	13.697
204) bis(2-Ethylhexyl)phthalate	(5)	17.497	149	1876242	13.145
208) 6-Methylchrysene	(5)	18.220	242	1781856	13.468
210) Di-n-octylphthalate	(6)	18.658	149	3378273	12.815
211) Benzo(b)fluoranthene	(6)	19.220	252	2761787	13.437
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.225	256	1136547	13.403
213) Benzo(k)fluoranthene	(6)	19.268	252	2555631	12.912
216) Benzo(a)pyrene	(6)	19.749	252	2510828	13.577
218)*Perylene-d12	(6)	19.840	264	838322	5.000
220) 3-Methylcholanthrene	(6)	20.311	268	1188657	13.218
222) Dibenz(a,h)acridine	(6)	21.135	279	2044741	13.010
223) Dibenz(a,j)acridine	(6)	21.209	279	2071136	12.974
224) Indeno(1,2,3-cd)pyrene	(6)	21.455	276	2395857M	13.642
225) Dibenz(a,h)anthracene	(6)	21.488	278	2407784	13.496
226) Benzo(g,h,i)perylene	(6)	21.835	276	2428218	13.380

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$ = Compound is a surrogate standard.

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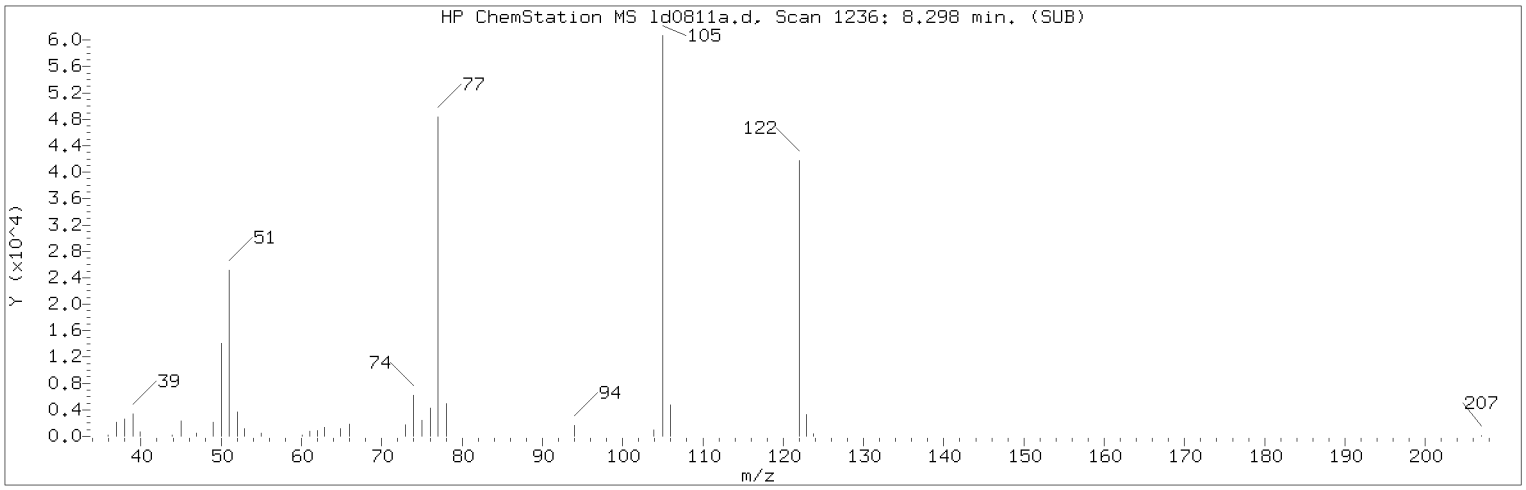
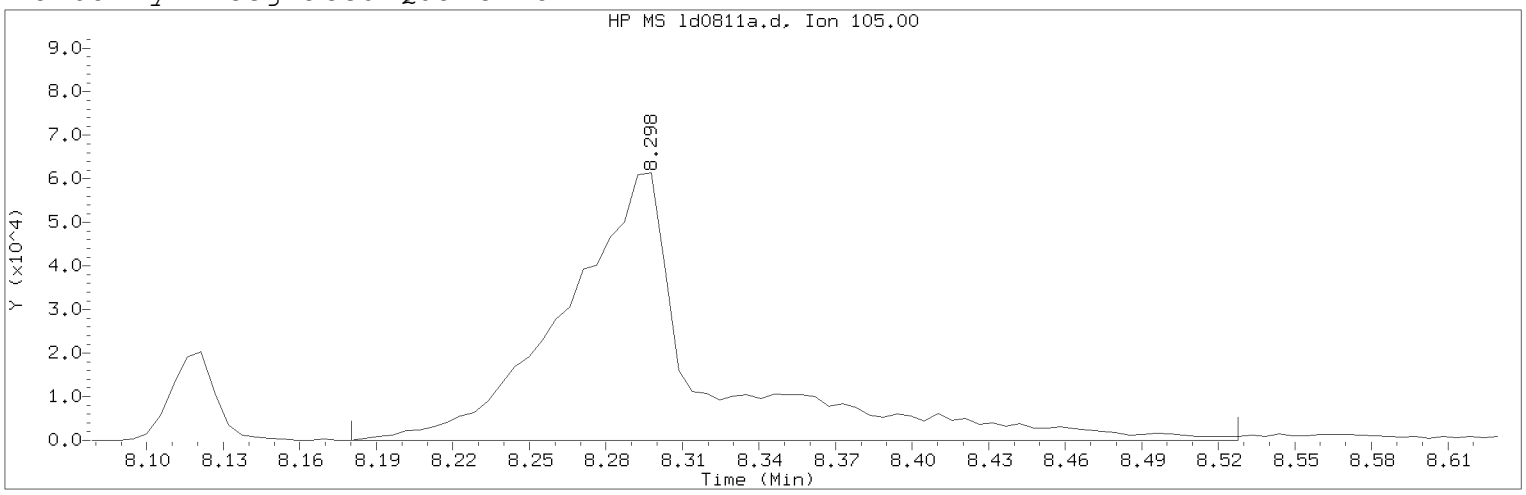
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

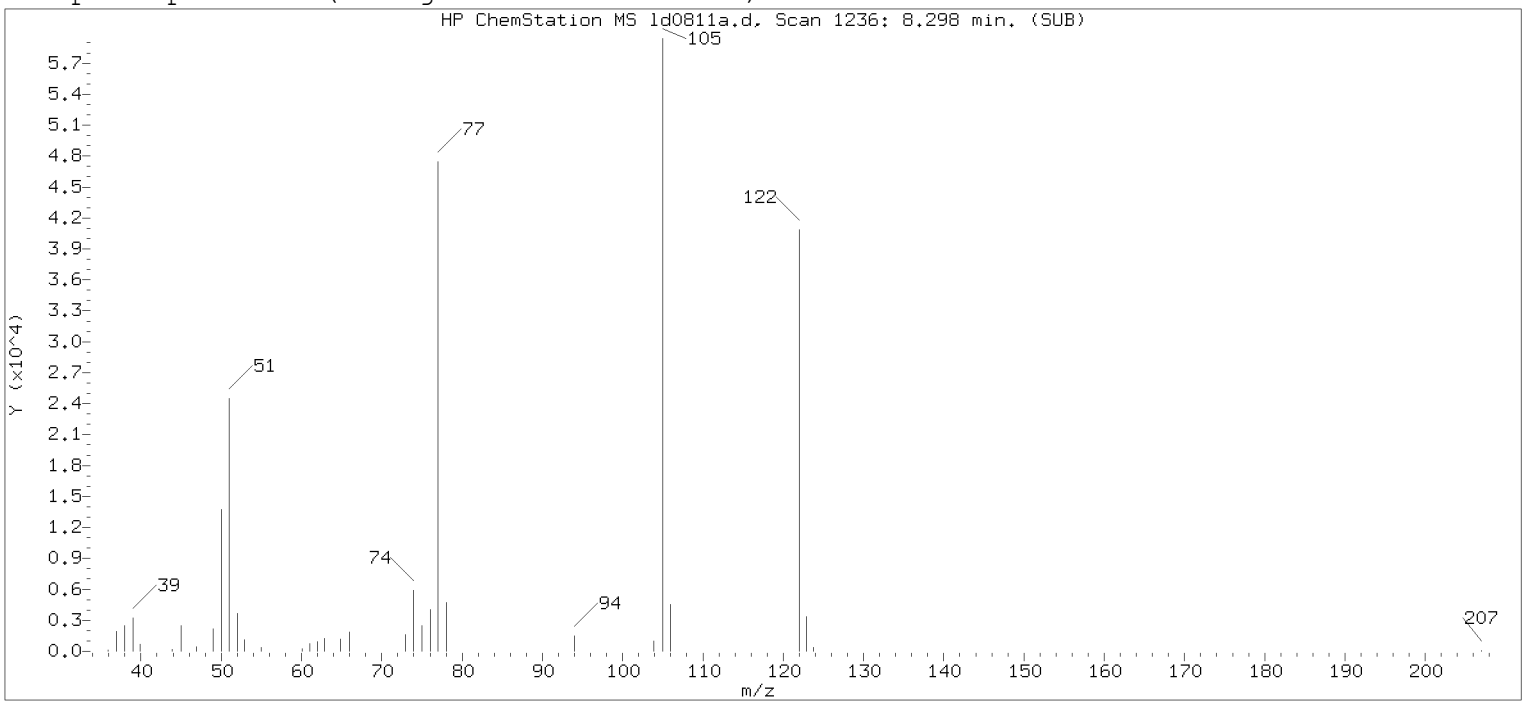
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1236
Retention Time (minutes) : 8.298
Quant Ion : 105.00
Area (flag) : 233731M
On-Column Amount (ng/ul) : 8.0885
Integration start scan : 1213 Integration stop scan: 1278
Y at integration start : 21 Y at integration end: 56

Reason for manual integration: improper integration

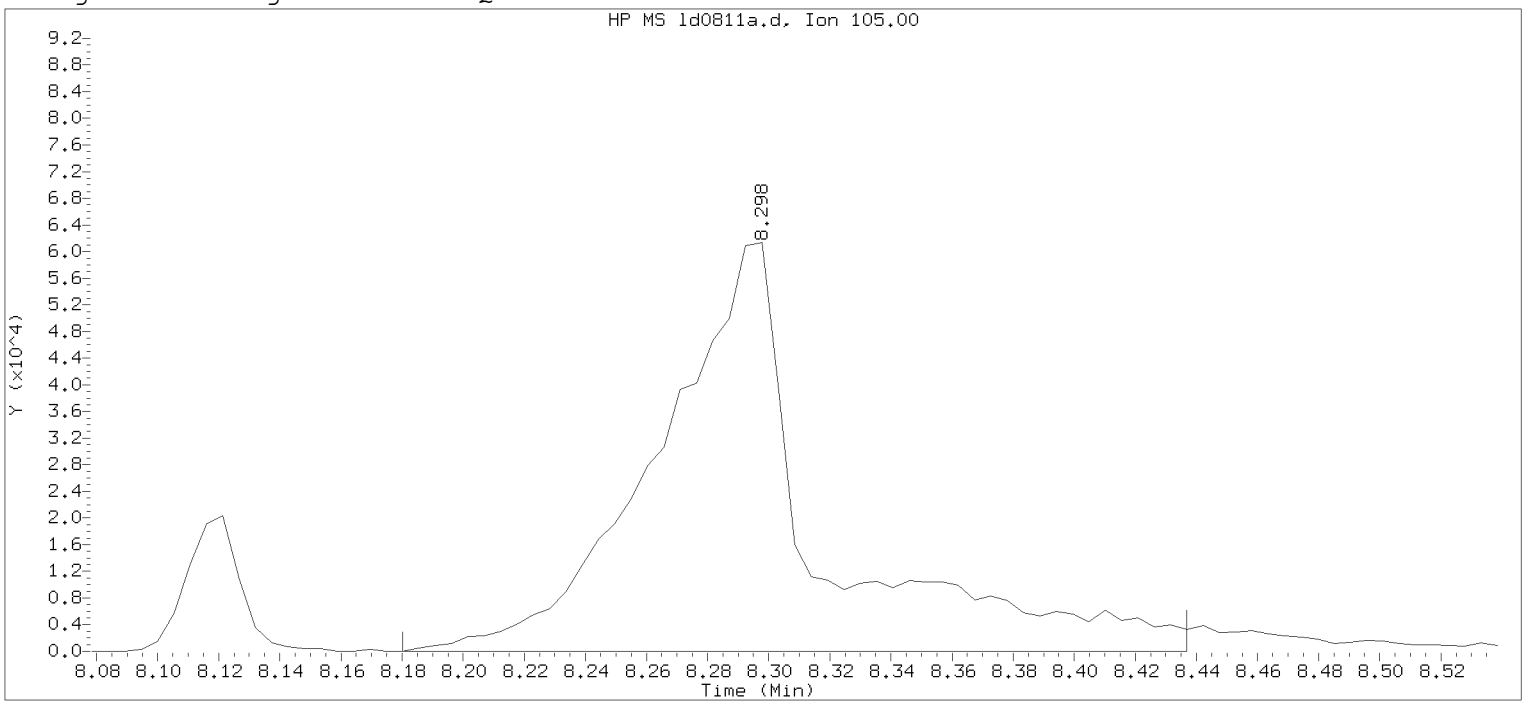
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

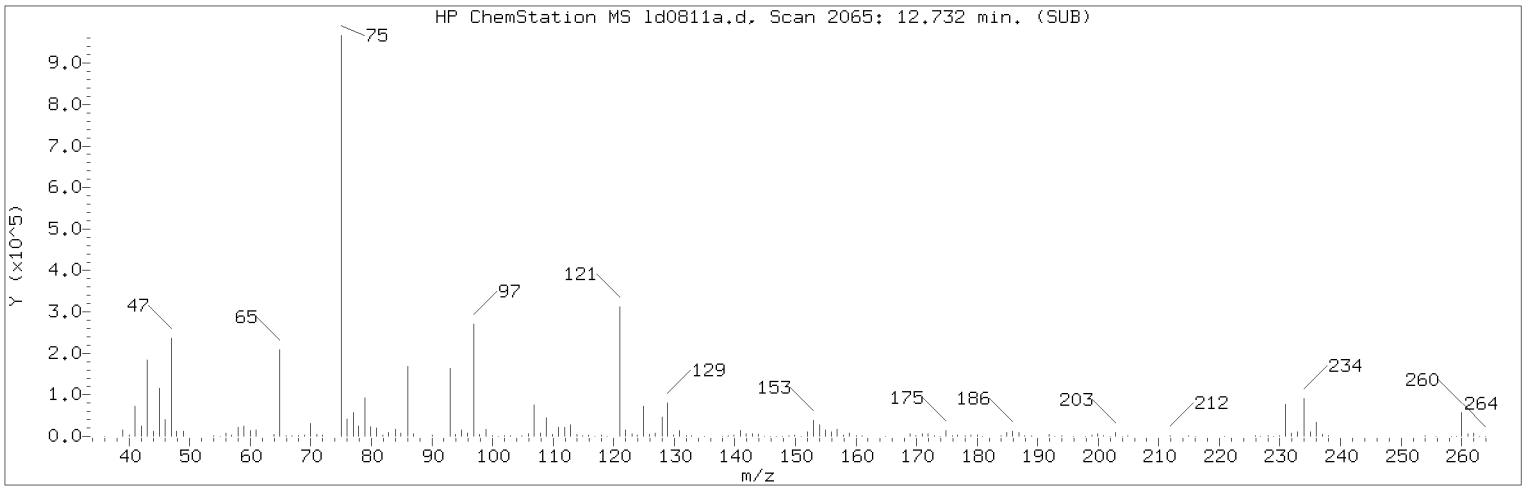
Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:09
Date, time and analyst ID of latest file update: 20-Apr-2018 09:09 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

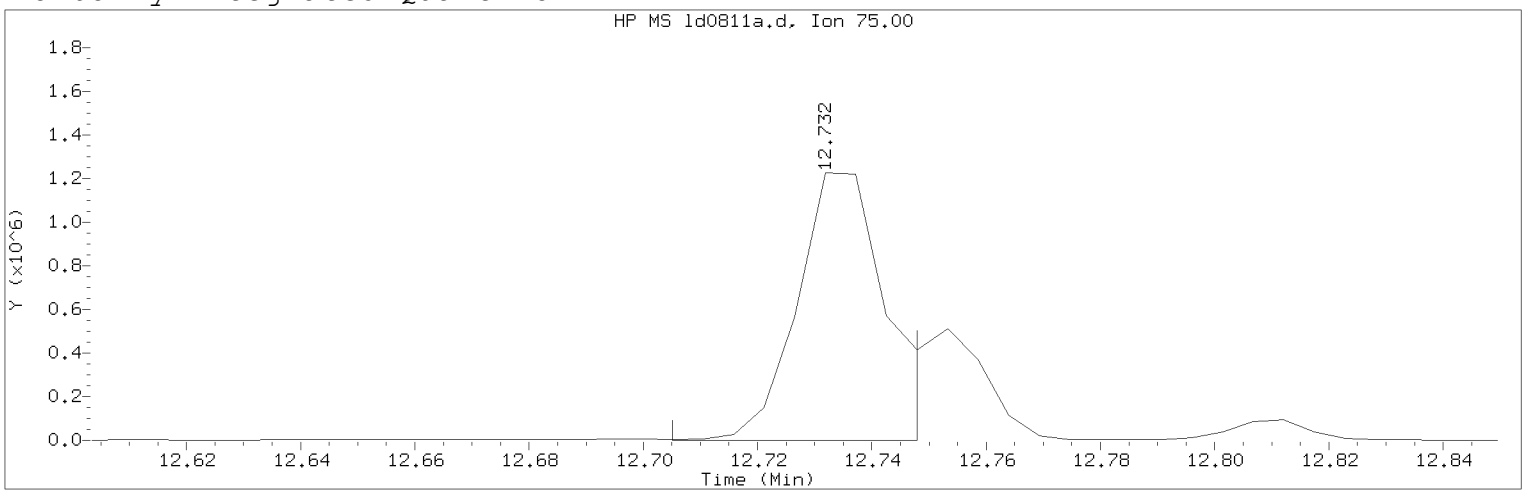
Compound Number : 58
Compound Name : Benzoic acid
Scan Number : 1236
Retention Time (minutes) : 8.298
Quant Ion : 105.00
Area : 223842
On-column Amount (ng/ul) : 7.8583
Integration start scan : 1213 Integration stop scan: 1261
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature used. FID Plot 1883

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

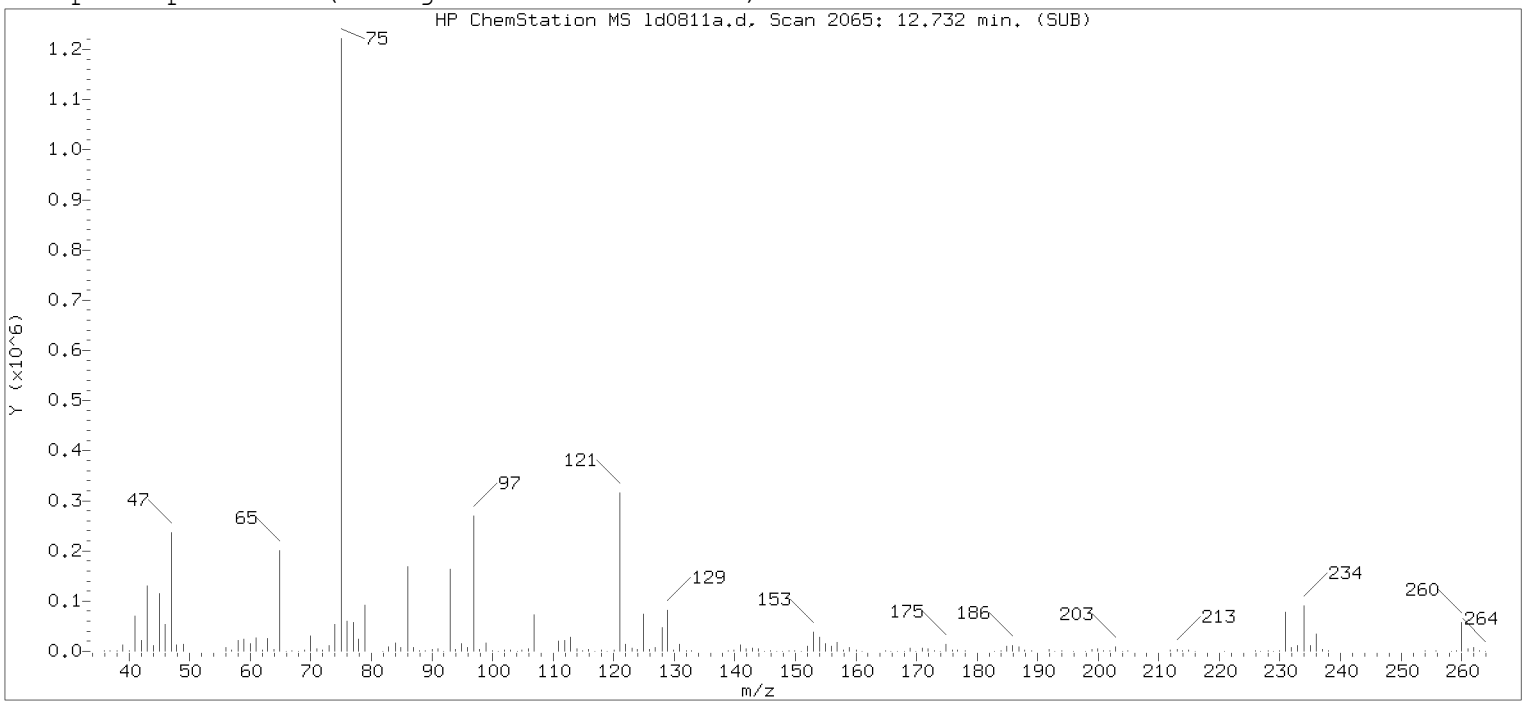
Compound Number : 146
Compound Name : Phorate
Scan Number : 2065
Retention Time (minutes) : 12.732
Quant Ion : 75.00
Area (flag) : 1342992M
On-Column Amount (ng/ul) : 15.2753
Integration start scan : 2059 Integration stop scan: 2067
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

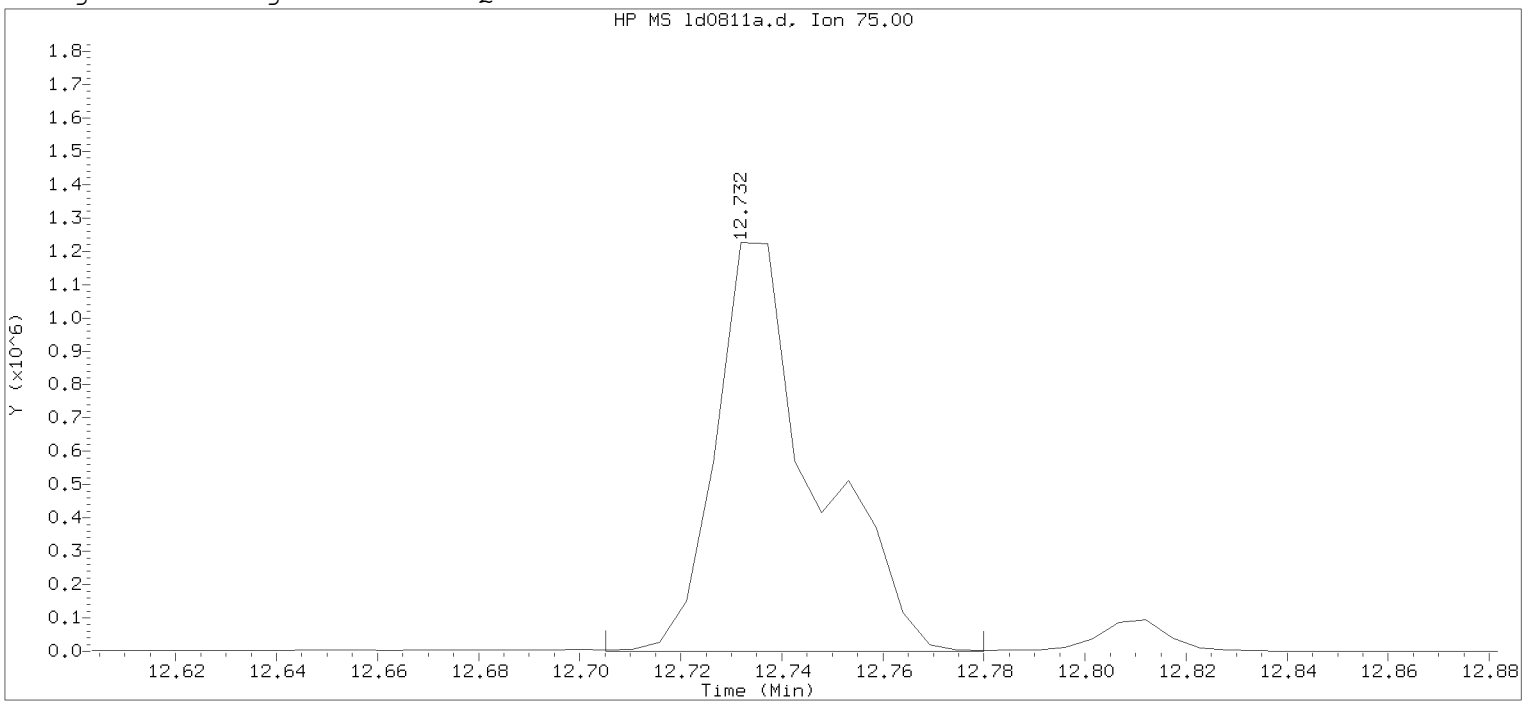
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:09
Date, time and analyst ID of latest file update: 20-Apr-2018 09:09 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compound Number	: 146		
Compound Name	: Phorate		
Scan Number	: 2065		
Retention Time (minutes)	: 12.732		
Quant Ion	: 75.00		
Area	: 1671365		
On-column Amount (ng/ul)	: 19.0102		
Integration start scan	: 2059	Integration stop scan:	2073
Y at integration start	: 0	Y at integration end:	0

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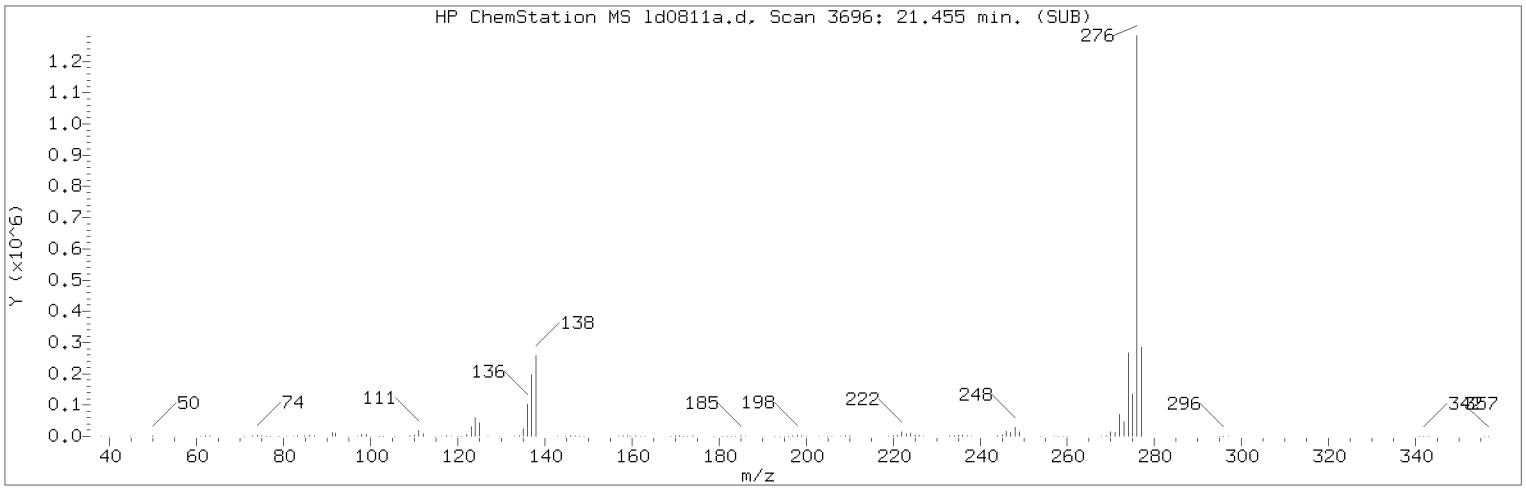
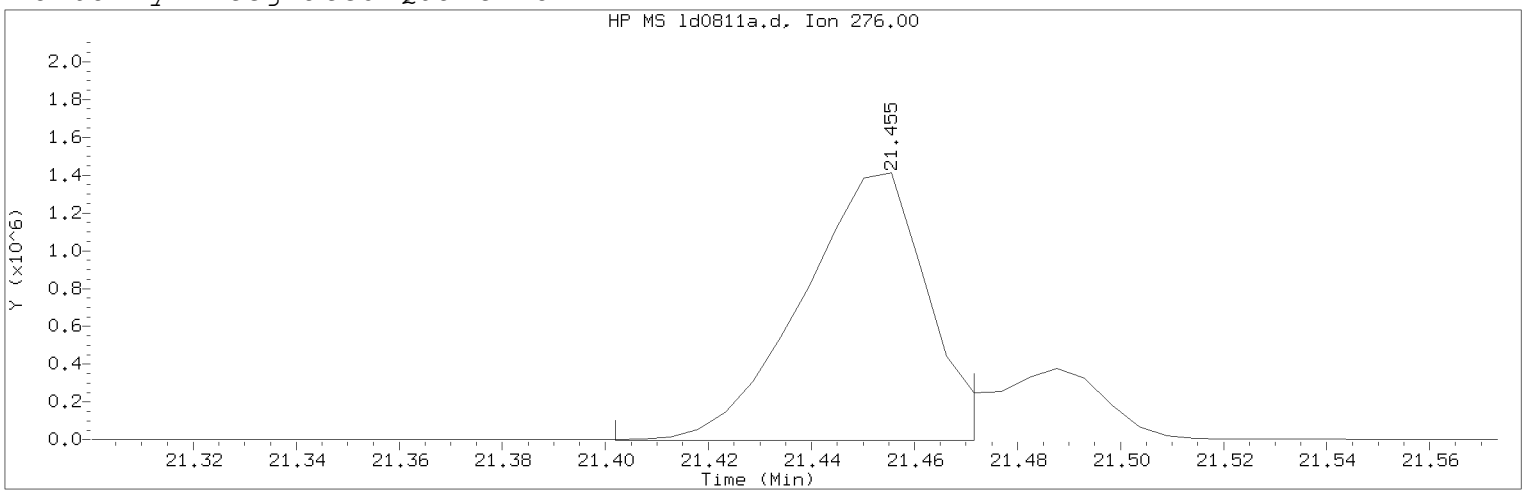
Target 3.5 esignature used. FD6 Page 1885

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:15
Date, time and analyst ID of latest file update: 20-Apr-2018 09:15 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

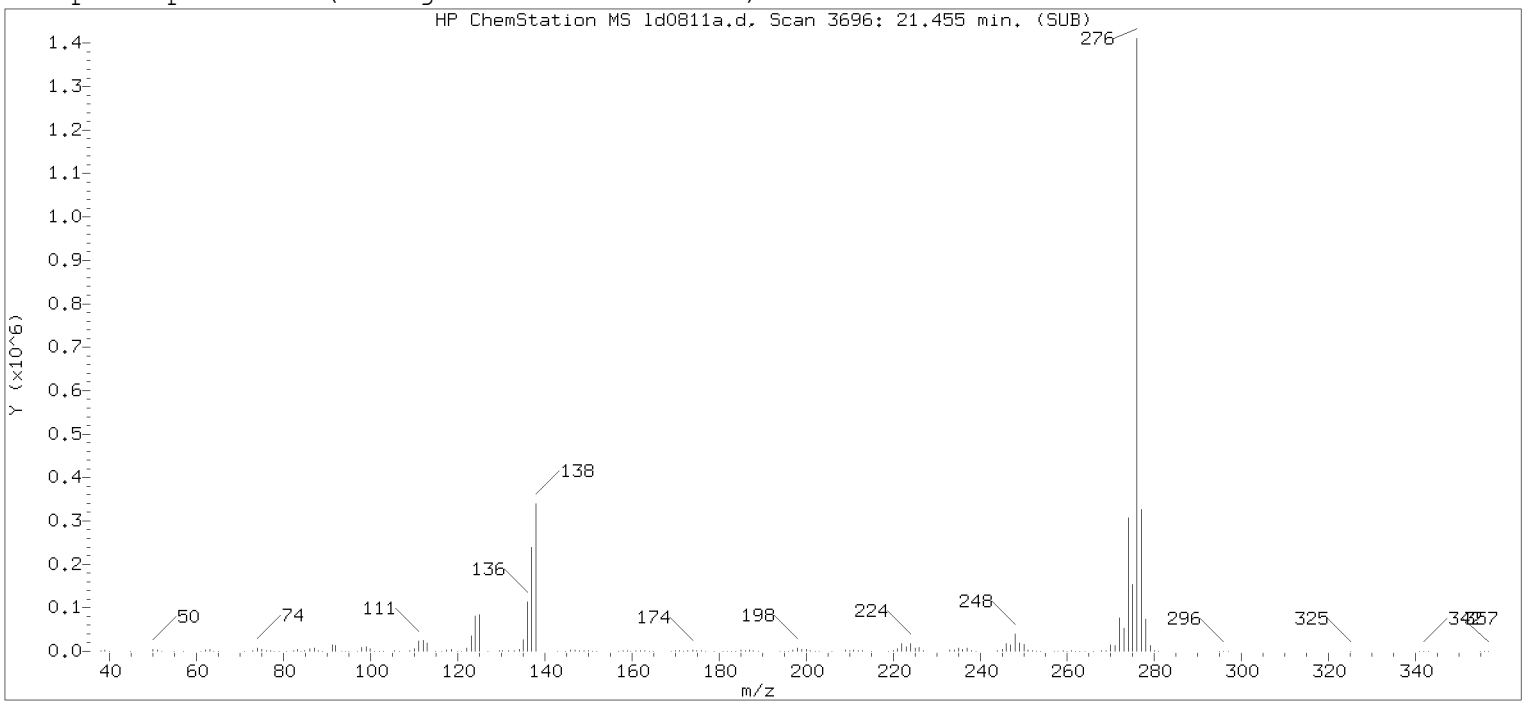
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3696
Retention Time (minutes) : 21.455
Quant Ion : 276.00
Area (flag) : 2395857M
On-Column Amount (ng/ul) : 13.6420
Integration start scan : 3685 Integration stop scan: 3698
Y at integration start : -2198 Y at integration end: -2198

Reason for manual integration: improper integration

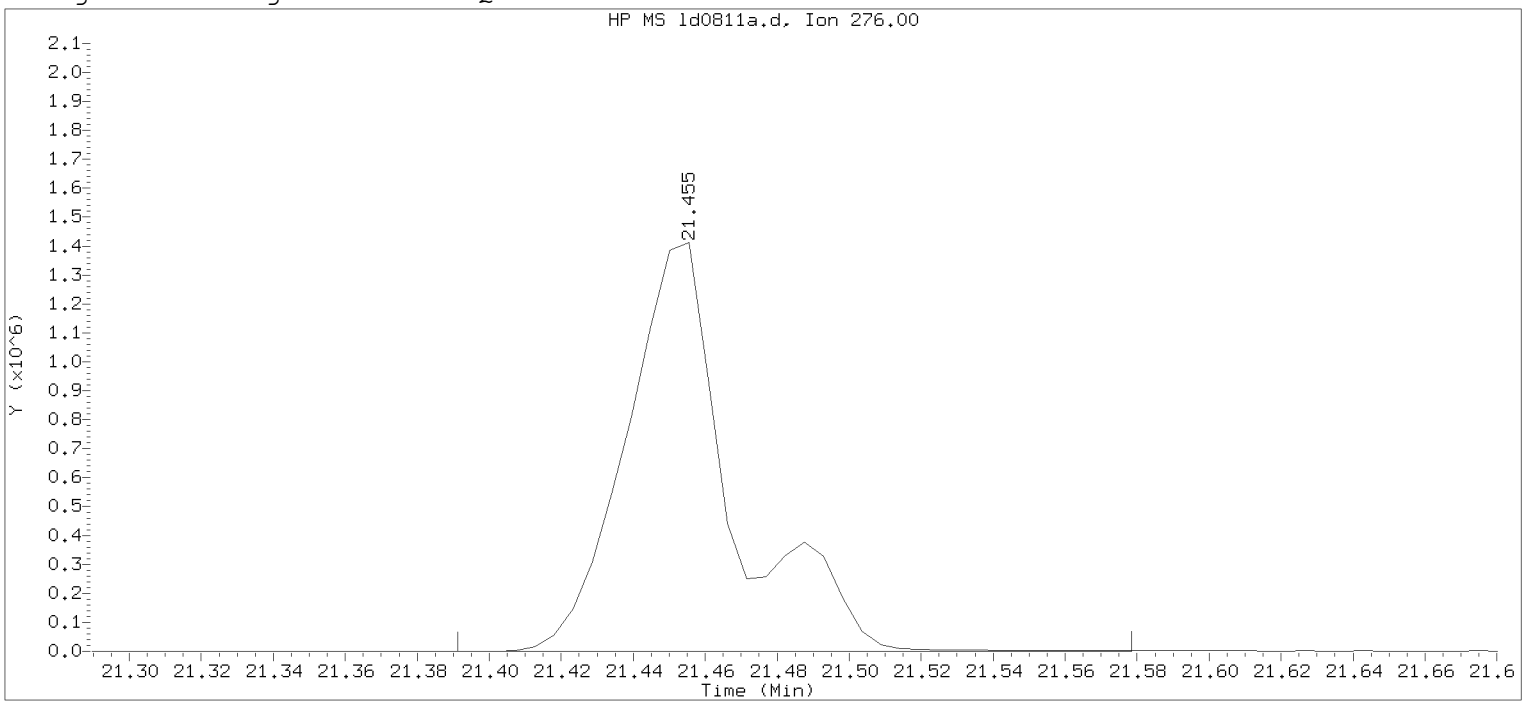
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



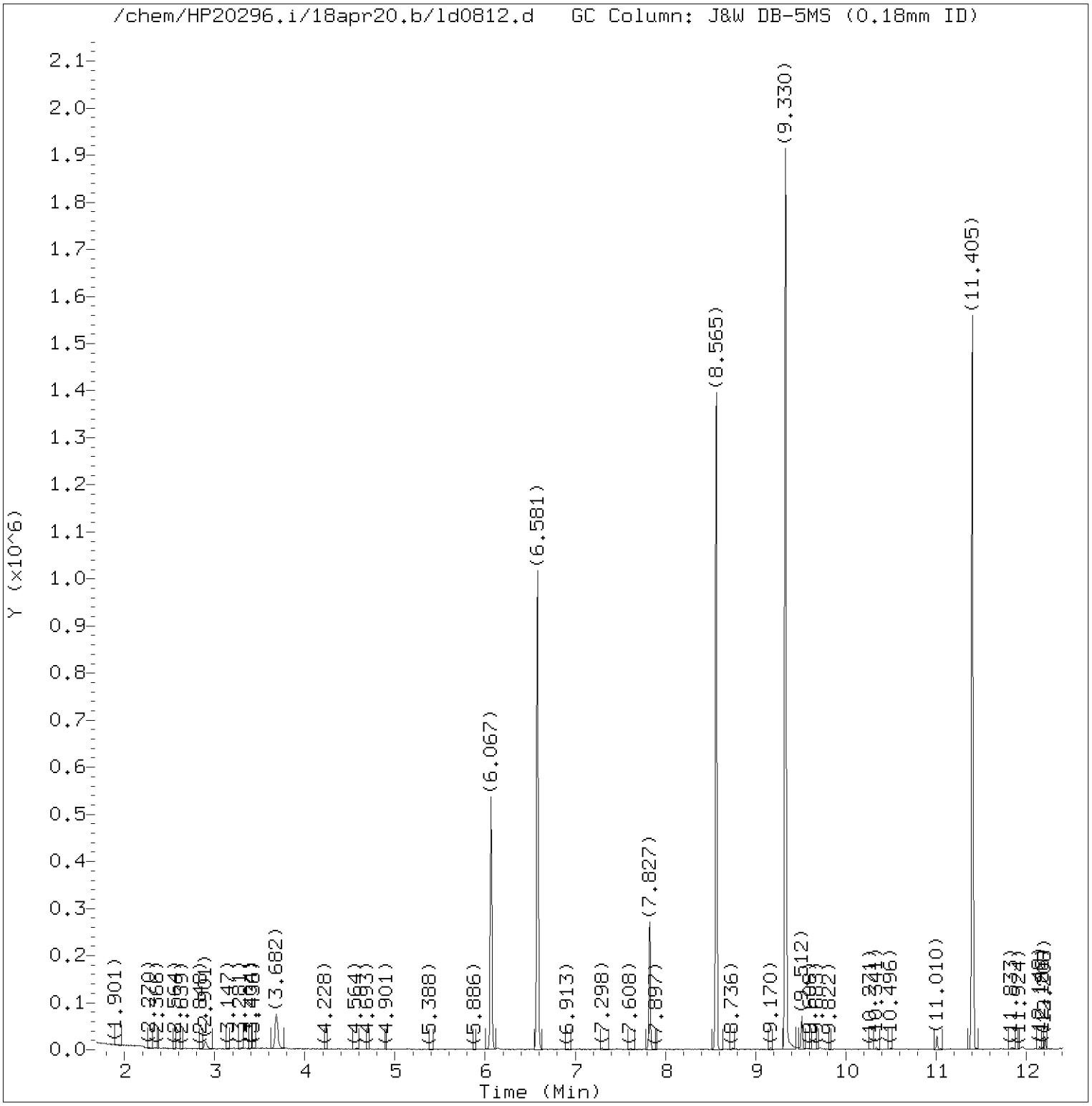
Data File: /chem/HP20296.i/18apr20.b/ld0811a.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 07:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 09:09
Date, time and analyst ID of latest file update: 20-Apr-2018 09:09 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3696		
Retention Time (minutes)	: 21.455		
Quant Ion	: 276.00		
Area	: 2901812		
On-column Amount (ng/ul)	: 16.5229		
Integration start scan	: 3683	Integration stop scan:	3718
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/20/2018 at 09:17.
Target 3.5 esignature used. FD6 Part 11



Total Ion Chromatogram (TIC)

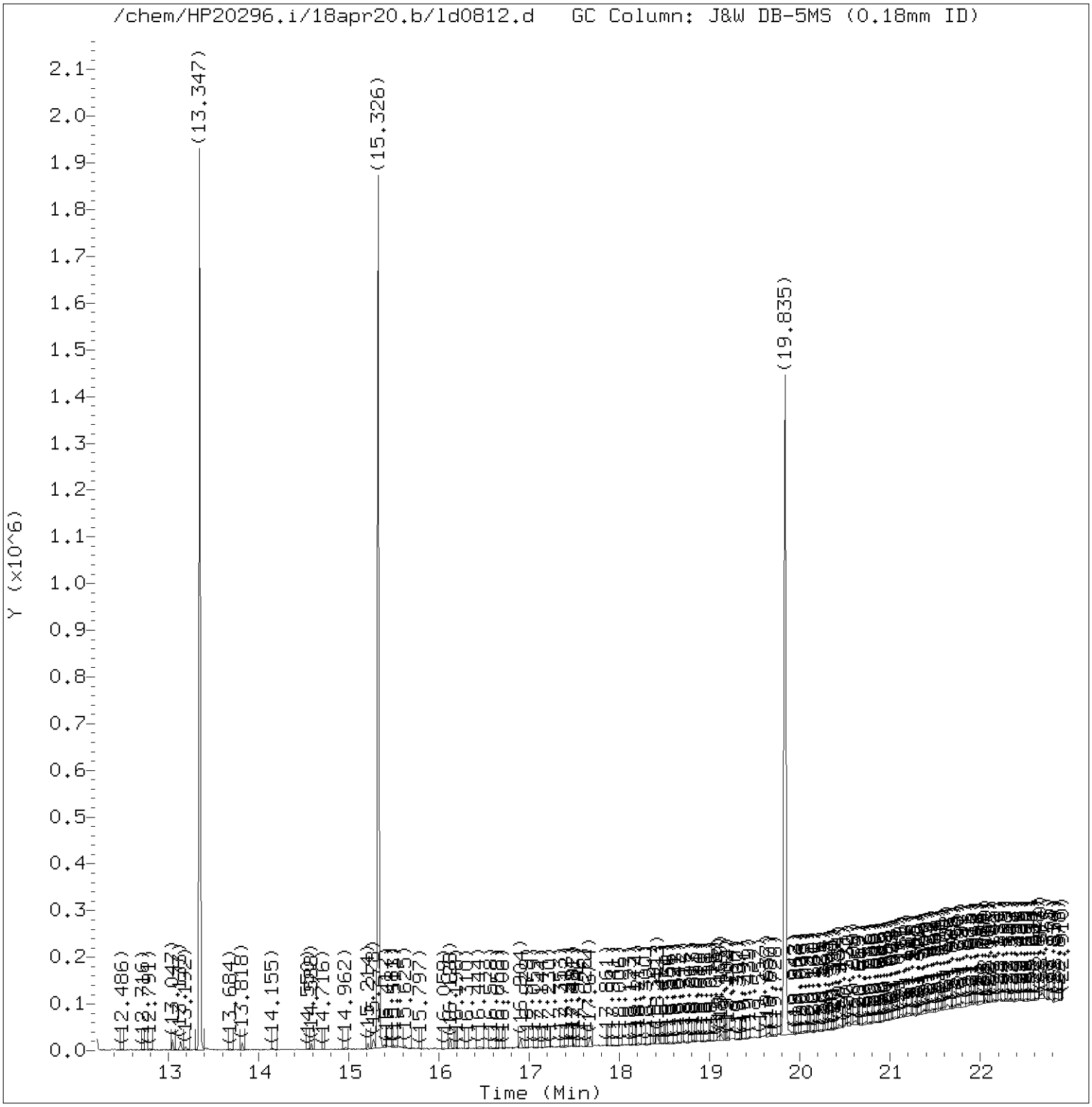
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0812.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:20 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 09:14
Date, time and analyst ID of latest file update: 20-Apr-2018 09:14 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0812.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:20 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 09:14
Date, time and analyst ID of latest file update: 20-Apr-2018 09:14 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0812.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:20 Analyst ID: bhs10208

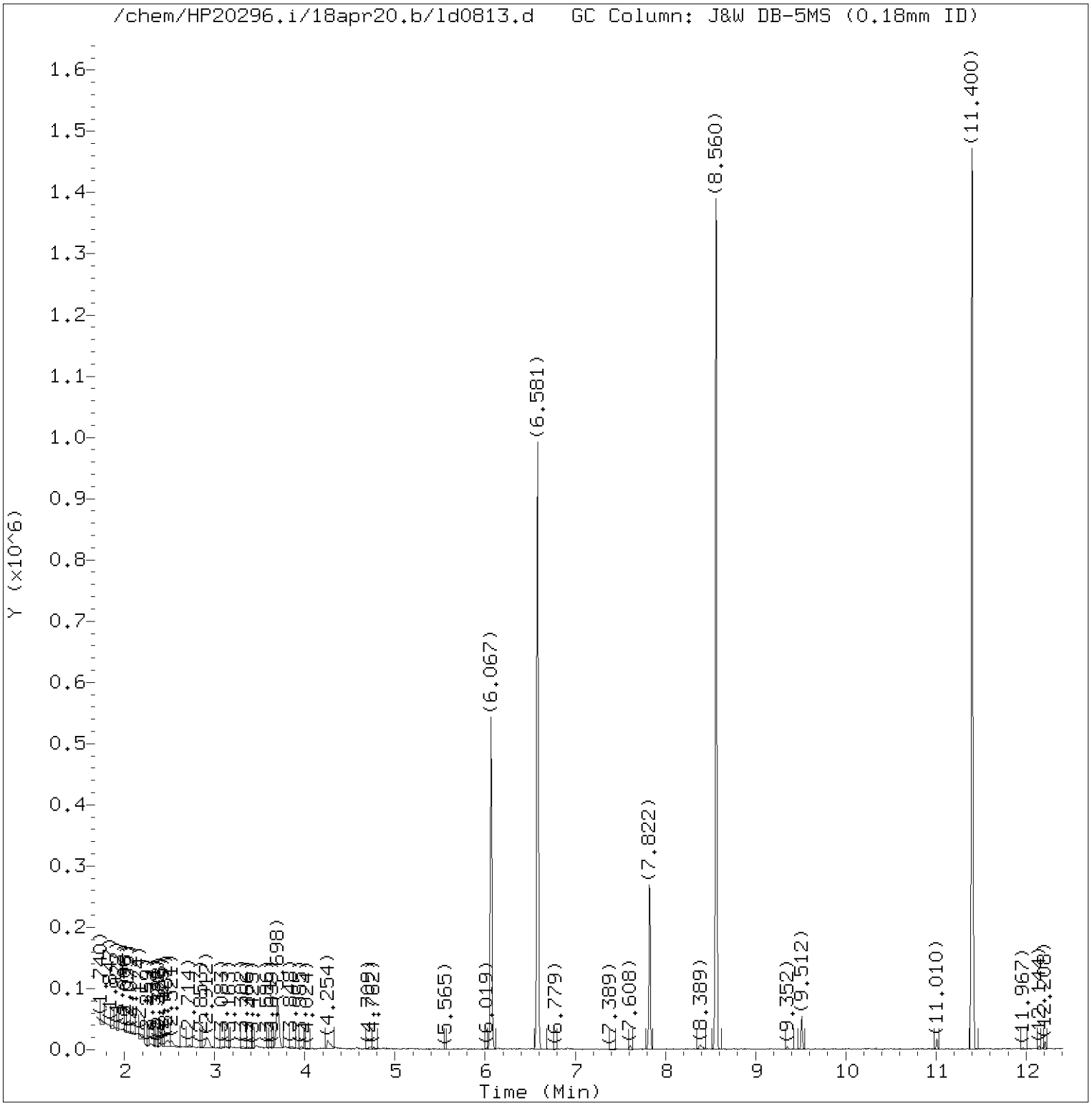
Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 20-APR-2018 09:14
Date, time and analyst ID of latest file update: 20-Apr-2018 09:14 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	203904	5.000
68)*Naphthalene-d8	(2)	8.565	136	748624	5.000
84) 1,4-Phenylenediamine	(2)	9.330	108	721280	11.652
118)*Acenaphthene-d10	(3)	11.405	164	379096	5.000
158)*Phenanthrene-d10	(4)	13.347	188	763579	5.000
180)*Pyrene-d10	(5)	15.326	212	799162	5.000
218)*Perylene-d12	(6)	19.835	264	746008	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

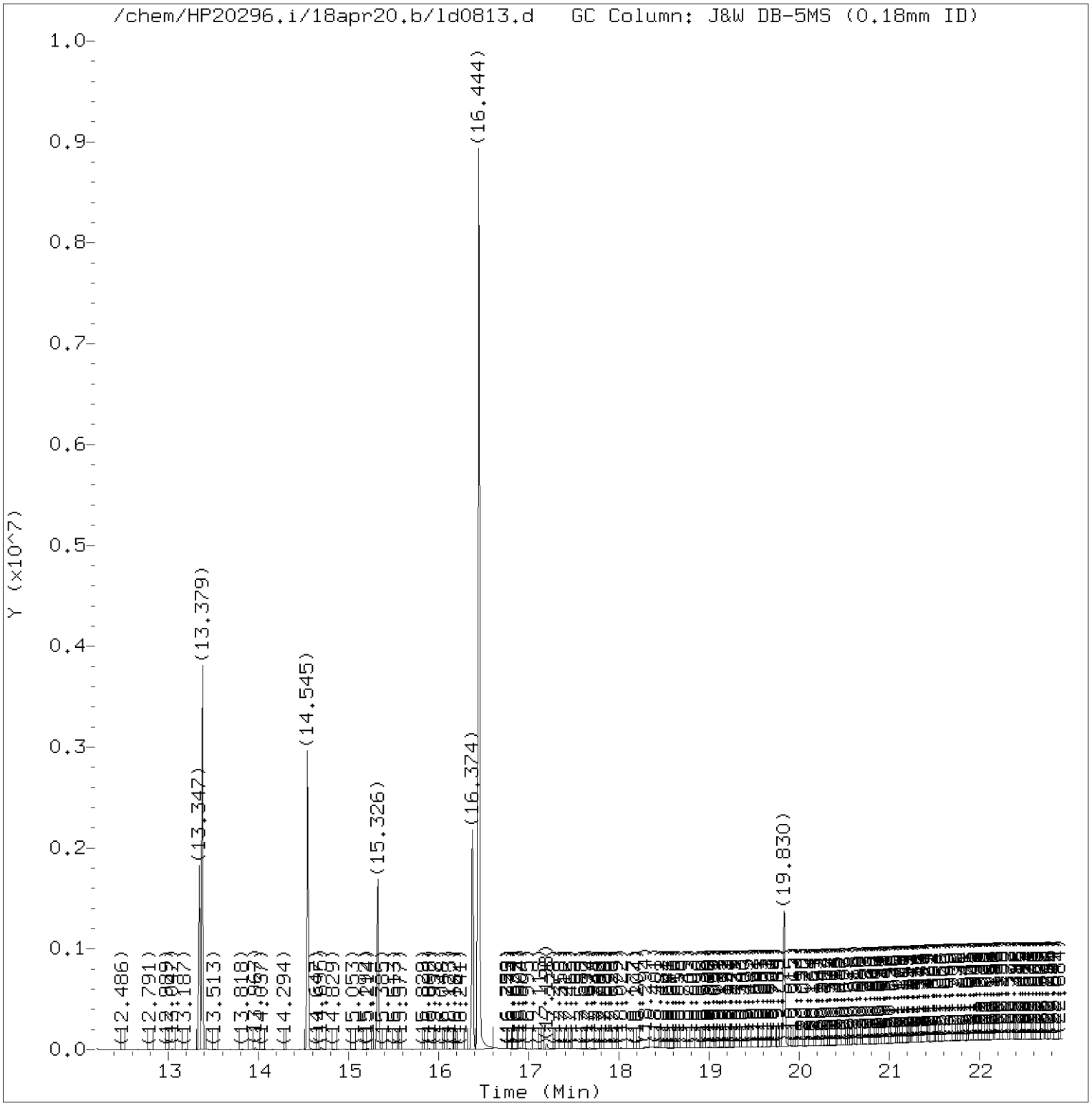
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0813.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:48 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 09:16
Date, time and analyst ID of latest file update: 20-Apr-2018 09:16 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0813.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:48 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 09:16
Date, time and analyst ID of latest file update: 20-Apr-2018 09:16 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0813.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 08:48 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: abc
Calibration date and time: 20-APR-2018 09:16
Date, time and analyst ID of latest file update: 20-Apr-2018 09:16 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	195477	5.000
68)*Naphthalene-d8	(2)	8.560	136	723271	5.000
118)*Acenaphthene-d10	(3)	11.400	164	361811	5.000
158)*Phenanthrene-d10	(4)	13.347	188	726971	5.000
167) Disulfoton	(4)	13.379	88	769548	13.305
175) Methapyrilene	(4)	14.545	97	608485	12.711
180)*Pyrene-d10	(5)	15.326	212	755496	5.000
194) Famphur	(5)	16.374	218	723371	13.107
195) Kepone	(5)	16.444	272	1021269	61.453
218)*Perylene-d12	(6)	19.830	264	690997	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/20/2018 at 09:17.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr20a.b/ld0850.d

Date : 20-APR-2018 19:41

Client ID: DFTPP

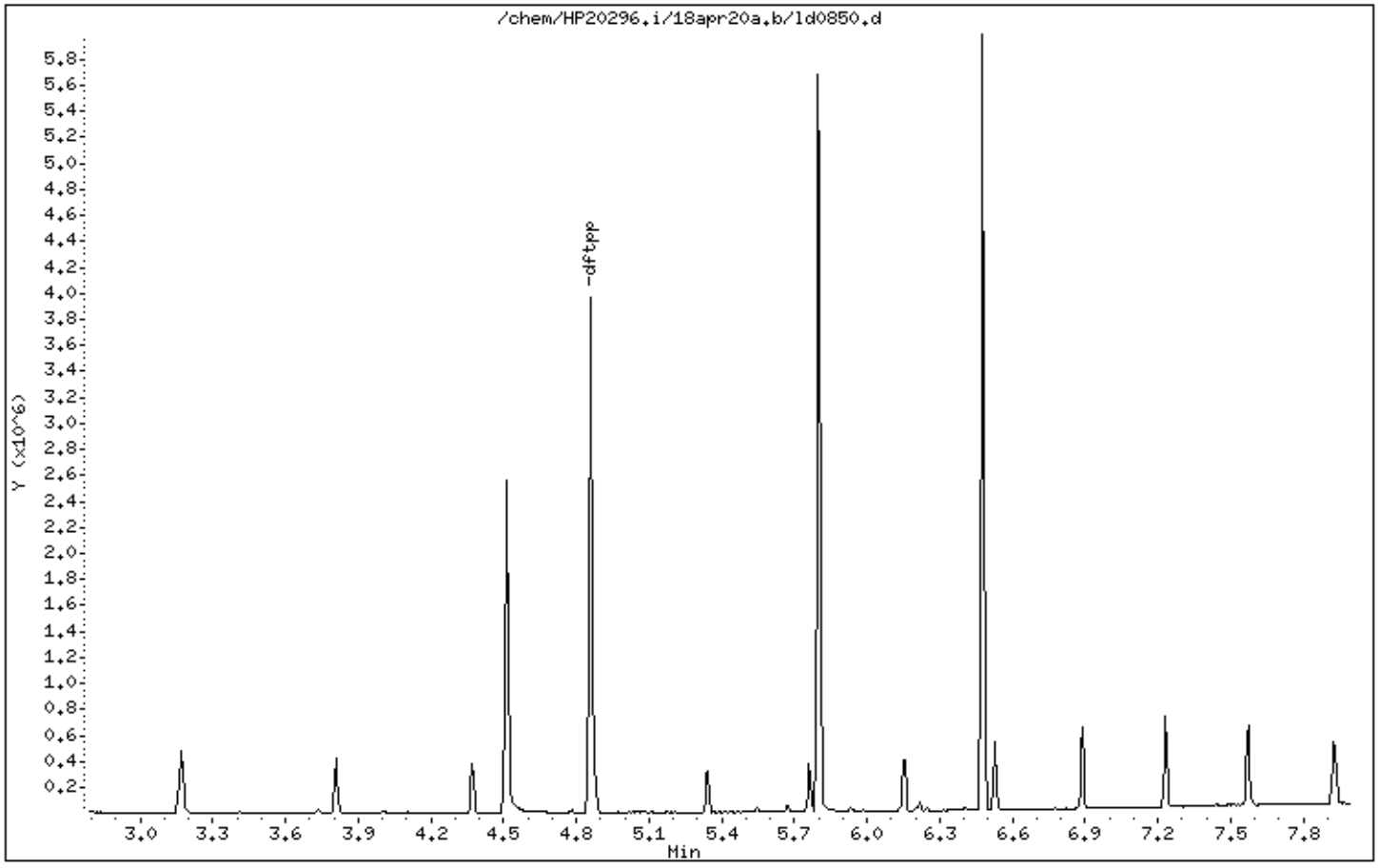
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP20296.i/18apr20a.b/ld0850.d

Date : 20-APR-2018 19:41

Client ID: DFTPP

Instrument: HP20296.i

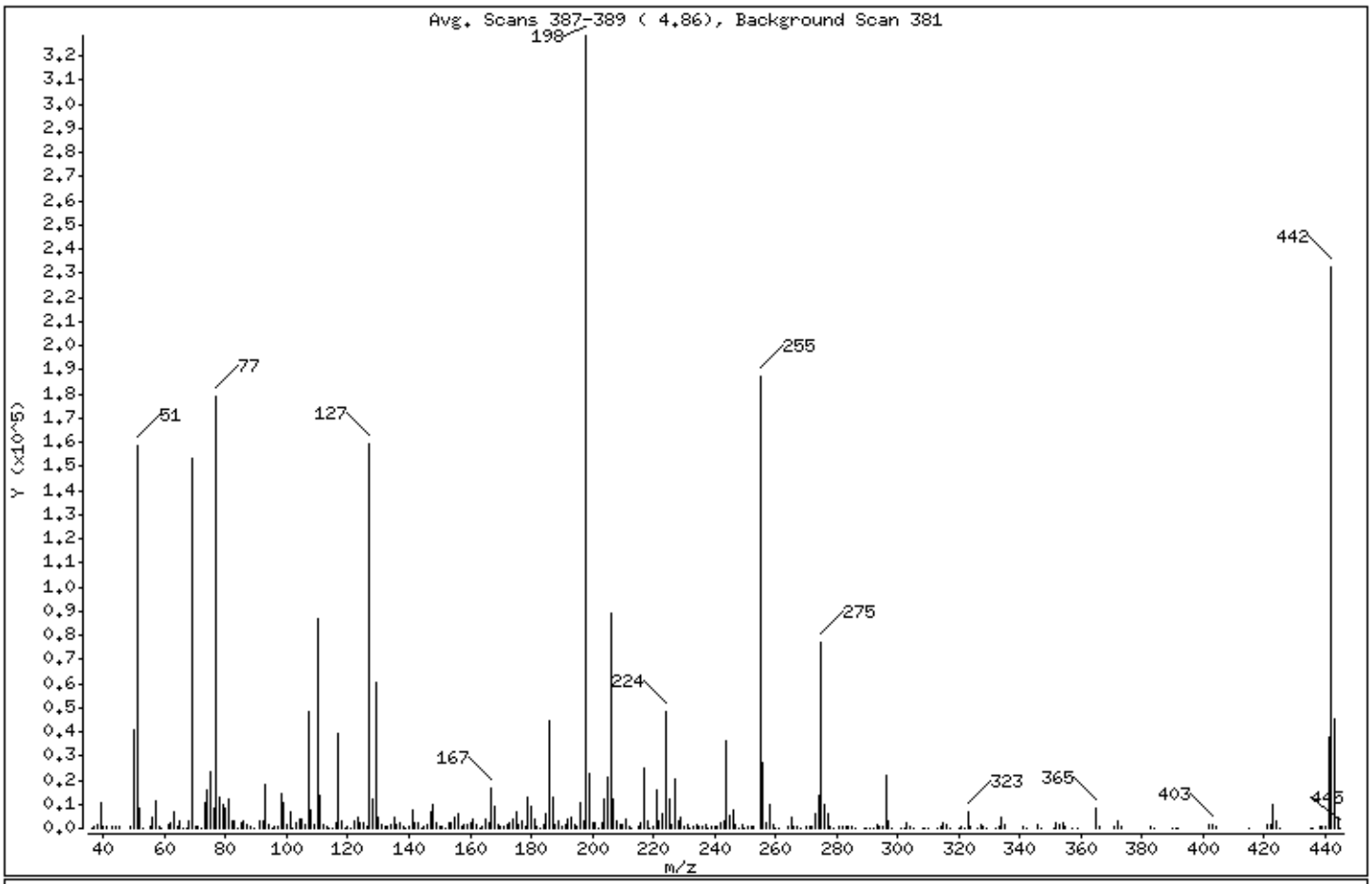
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.22
68	Less than 2.00% of mass 69	0.82 (1.76)
69	Mass 69 relative abundance	46.62
70	Less than 2.00% of mass 69	0.25 (0.53)
127	10.00 - 80.00% of mass 198	48.43
197	Less than 2.00% of mass 198	0.99
199	5.00 - 9.00% of mass 198	6.92
275	10.00 - 60.00% of mass 198	23.41
365	Greater than 1.00% of mass 198	2.59
441	0.01 - 24.00% of mass 442	11.40 (16.12)
442	50.00 - 99.99% of mass 198	70.70
443	15.00 - 24.00% of mass 442	13.89 (19.65)

Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Date : 20-APR-2018 19:41

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0850.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 381
Location of Maximum: 198.00
Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	138	122.00	3075	201.00	1951	286.00	91
37.00	501	123.00	4606	202.00	129	289.00	260
38.00	1649	124.00	2152	203.00	2496	290.00	133
39.00	10905	125.00	2112	204.00	12411	291.00	115
40.00	586	126.00	496	205.00	21440	292.00	116
41.00	540	127.00	159040	206.00	89432	293.00	1400
43.00	424	128.00	11733	207.00	11972	294.00	515
44.00	406	129.00	60576	208.00	3107	295.00	713
45.00	584	130.00	4761	209.00	1188	296.00	21704
49.00	825	131.00	1255	210.00	1538	297.00	2922
50.00	40640	132.00	766	211.00	3681	298.00	127
51.00	158400	133.00	620	212.00	676	301.00	292
52.00	7946	134.00	1694	213.00	103	302.00	358
53.00	280	135.00	4752	215.00	1129	303.00	2585
55.00	920	136.00	1857	216.00	2422	304.00	664
56.00	4416	137.00	2557	217.00	24768	305.00	88
57.00	11279	138.00	658	218.00	3105	308.00	214
58.00	553	139.00	259	219.00	307	309.00	118
59.00	221	140.00	748	220.00	507	310.00	225
61.00	1832	141.00	7353	221.00	15617	313.00	194
62.00	2019	142.00	2628	222.00	3364	314.00	828
63.00	6761	143.00	1918	223.00	5735	315.00	2588
64.00	986	144.00	358	224.00	48344	316.00	1253
65.00	3088	145.00	548	225.00	12109	317.00	210
66.00	302	146.00	1414	226.00	1537	320.00	84
67.00	211	147.00	7028	227.00	20376	321.00	786
68.00	2698	148.00	10155	228.00	2851	322.00	252
69.00	153088	149.00	1964	229.00	4510	323.00	6772
70.00	815	150.00	459	230.00	801	324.00	993
71.00	428	151.00	889	231.00	1691	326.00	100
72.00	115	152.00	250	232.00	261	327.00	1372
73.00	10925	153.00	2533	233.00	537	328.00	564
74.00	15747	154.00	2005	234.00	1353	329.00	188
75.00	23576	155.00	4367	235.00	1119	332.00	351
76.00	8386	156.00	6163	236.00	921	333.00	462

Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP20296.i/18apr20a.b/ld0850.d

Date : 20-APR-2018 19:41

Client ID: DFTPP

Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

Data File: ld0850.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 381
Location of Maximum: 198.00
Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	178944	157.00	1111	237.00	1881	334.00	4308
78.00	12767	158.00	1440	238.00	227	335.00	1151
79.00	10072	159.00	1207	239.00	985	341.00	906
80.00	8202	160.00	2318	240.00	775	342.00	270
81.00	11815	161.00	3643	241.00	1119	346.00	1334
82.00	3177	162.00	1342	242.00	2226	347.00	103
83.00	3180	163.00	328	243.00	2959	351.00	98
84.00	96	164.00	409	244.00	36552	352.00	2012
85.00	2394	165.00	3670	245.00	5136	353.00	1277
86.00	3178	166.00	2336	246.00	7507	354.00	2110
87.00	1693	167.00	16792	247.00	1512	355.00	771
88.00	592	168.00	9142	248.00	375	357.00	90
89.00	257	169.00	1617	249.00	1309	359.00	89
91.00	2777	170.00	681	250.00	257	365.00	8517
92.00	2731	171.00	761	251.00	541	366.00	1074
93.00	17912	172.00	1570	252.00	631	371.00	380
94.00	1135	173.00	1932	253.00	1060	372.00	3182
95.00	376	174.00	3443	255.00	187328	373.00	744
96.00	686	175.00	6487	256.00	27216	383.00	753
97.00	450	176.00	1849	257.00	2336	384.00	102
98.00	14012	177.00	2762	258.00	9862	390.00	333
99.00	10678	178.00	1074	259.00	1633	391.00	109
100.00	1227	179.00	12568	260.00	274	392.00	135
101.00	6472	180.00	8692	261.00	83	402.00	1249
102.00	261	181.00	3585	264.00	453	403.00	1764
103.00	1916	182.00	500	265.00	4709	404.00	715
104.00	3906	183.00	337	266.00	604	415.00	110
105.00	4112	184.00	1140	267.00	405	421.00	1553
106.00	1182	185.00	6094	268.00	108	422.00	1409
107.00	48440	186.00	44752	270.00	422	423.00	10028
108.00	7611	187.00	12620	271.00	381	424.00	3154
109.00	1270	188.00	1552	272.00	536	425.00	334
110.00	86744	189.00	2950	273.00	5863	435.00	178
111.00	13352	190.00	533	274.00	13644	436.00	156
112.00	1872	191.00	1692	275.00	76888	438.00	818

Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Date : 20-APR-2018 19:41

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

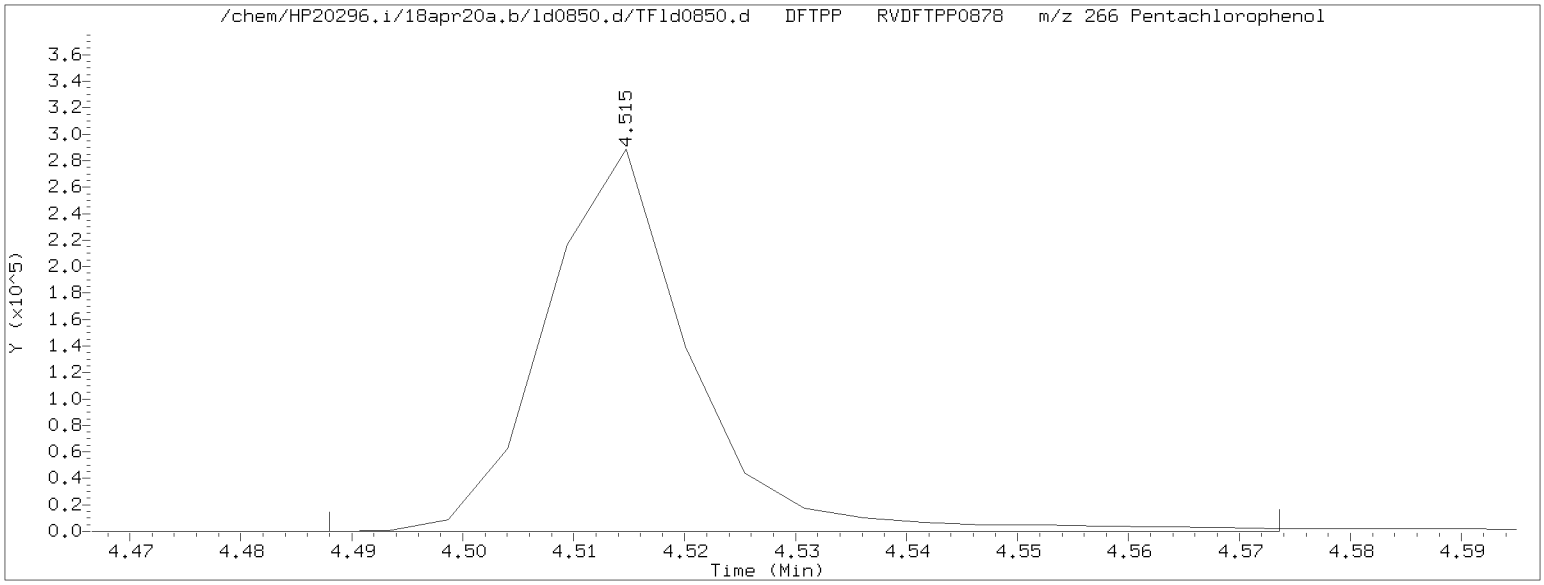
Data File: ld0850.d
Spectrum: Avg. Scans 387-389 (4.86), Background Scan 381
Location of Maximum: 198.00
Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	671	192.00	3793	276.00	9587	439.00	625
114.00	127	193.00	4801	277.00	6350	440.00	472
115.00	341	194.00	1143	278.00	934	441.00	37440
116.00	2525	195.00	971	279.00	101	442.00	232192
117.00	38992	196.00	10861	281.00	760	443.00	45632
118.00	2797	197.00	3261	282.00	385	444.00	4131
119.00	334	198.00	328448	283.00	1016	445.00	96
120.00	488	199.00	22736	284.00	450		
121.00	120	200.00	1997	285.00	1076		

Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

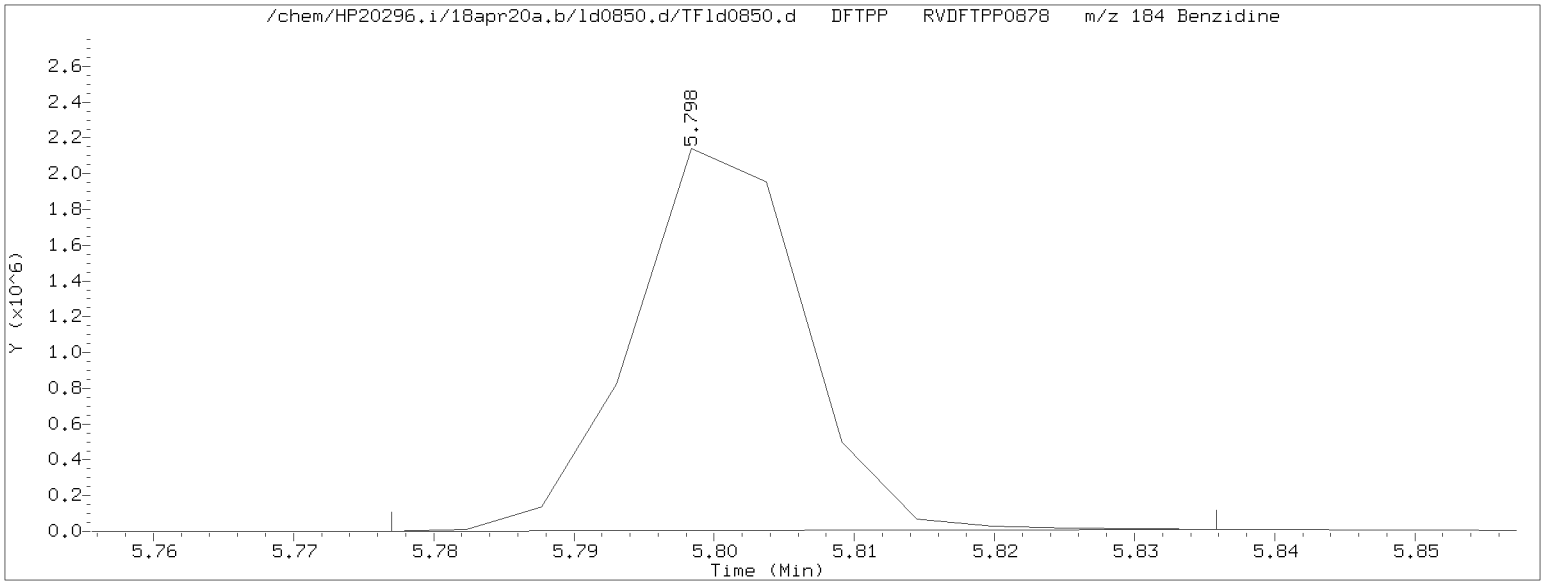
Instrument ID: HP20296.i Injection Date: 20-APR-2018 19:41 Operator: art12405



Pentachlorophenol EICP peak height = 288768 EICP peak height at 10% = 28877 Pentachlorophenol EICP area = 261649

Pentachlorophenol EICP peak apex (min.) = 4.515
RT at 10% of front half of EICP (min.) = 4.501 'Front' peak width (min.) = 0.0140000000
RT at 10% of back half of EICP (min.) = 4.528 'Tailing' peak width (min.) = 0.0136000000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0136000000}{0.0140000000} = 0.971$$



Benzidine EICP peak height = 2137788 EICP peak height at 10% = 213779 Benzidine EICP area = 1811993

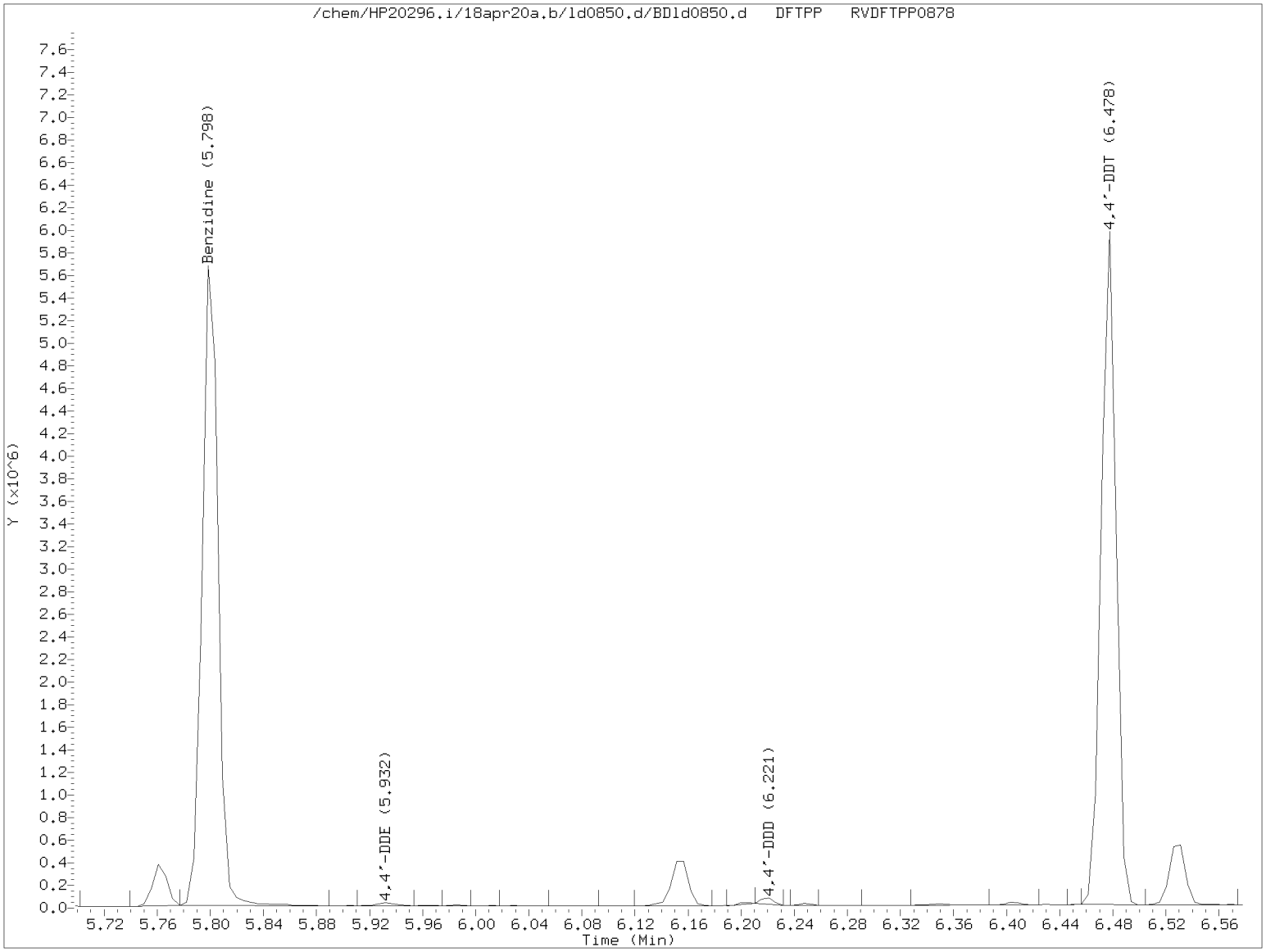
Benzidine EICP peak apex (min.) = 5.798
RT at 10% of front half of EICP (min.) = 5.788 'Front' peak width (min.) = 0.0100500000
RT at 10% of back half of EICP (min.) = 5.813 'Tailing' peak width (min.) = 0.0141833333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0141833333}{0.0100500000} = 1.411$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/23/2018 at 09:11. PARALLAX ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

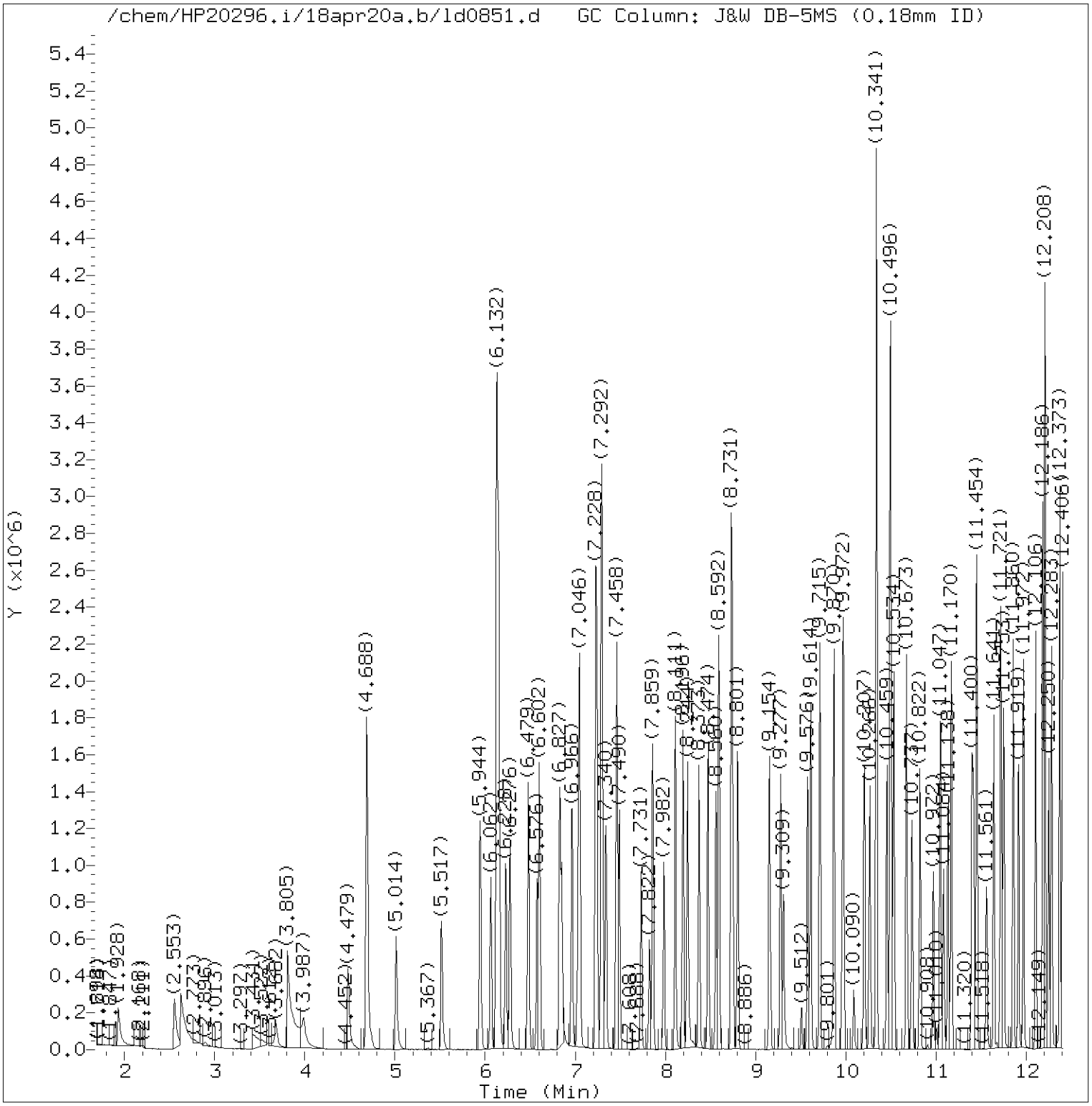
Instrument ID: HP20296.i Injection Date: 20-APR-2018 19:41 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{23002 + 38557}{23002 + 38557 + 4664441} \times 100 = 1.3$$

Secondary review performed and digitally signed by Holly B. Ziegler on 04/23/2018 at 09:11. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

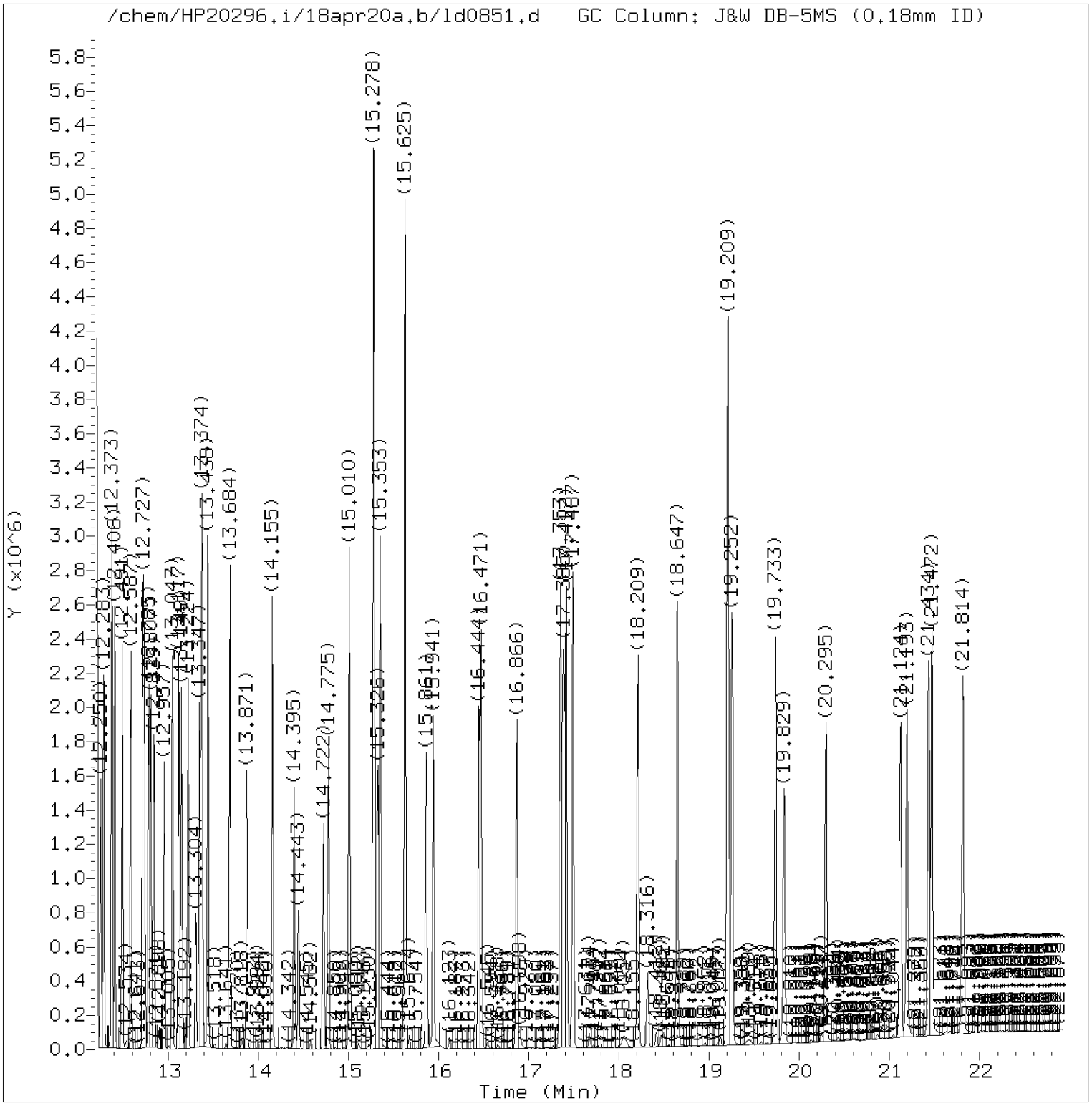
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.928	88	170223	6.968
5) N-Nitrosodimethylamine	(1)	2.553	74	288009	7.743
6) Pyridine	(1)	2.623	79	398990	6.011
8) 2-Picoline	(1)	3.805	93	461081	6.871
9) N-Nitrosomethylethylamine	(1)	3.987	88	200560	7.457
10) Methyl methanesulfonate	(1)	4.479	80	248324	7.622
12)$2-Fluorophenol	(1)	4.688	112	779363	15.232
14) N-Nitrosodiethylamine	(1)	5.014	102	191500	7.677
16) Ethyl methanesulfonate	(1)	5.517	109	205259	7.556
43) Total Cresols	(1)			820405	16.135
17) Benzaldehyde	(1)	5.944	77	386584	7.615
20) Aniline	(1)	6.126	93	700698	7.868
18)$Phenol-d6	(1)	6.132	99	1039447	15.493
19) Phenol	(1)	6.148	94	611390	7.916
21) a-methylstyrene	(1)	6.158	118	137370	7.061
23) bis(2-Chloroethyl)ether	(1)	6.228	93	444554	7.732
24) 2-Chlorophenol	(1)	6.276	128	383715	7.656
25) 1,3-Dichlorobenzene	(1)	6.479	146	440082	7.778
26)*1,4-Dichlorobenzene-d4	(1)	6.576	152	186854	5.000
27) 1,4-Dichlorobenzene	(1)	6.602	146	442391	7.726
29) 1,2-Dichlorobenzene	(1)	6.827	146	417517	7.658
28) Benzyl alcohol	(1)	6.848	108	205650	6.147
31) Indene	(1)	6.966	115	558729	6.994
35) bis(2-Chloroisopropyl)ether	(1)	7.041	45	709251	8.689
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.041	45	709251	8.689
32) 2-Methylphenol	(1)	7.052	108	388702	7.865
36) N-Nitrosopyrrolidine	(1)	7.223	100	213041	7.873
37) Acetophenone	(1)	7.228	105	615035	8.161
39) N-Nitroso-di-n-propylamine	(1)	7.239	70	356840	8.306
41) o-Toluidine	(1)	7.287	106	676970	7.746
40) N-Nitrosomorpholine	(1)	7.292	56	277707	7.735
38) 4-Methylphenol	(1)	7.298	108	431703	8.270
44) Hexachloroethane	(1)	7.340	117	183088	7.499
100) Isosafrole	(3)			338240	7.413
45)$Nitrobenzene-d5	(2)	7.458	82	996799	16.452
46) Nitrobenzene	(2)	7.490	77	511693	8.280
50) N-Nitrosopiperidine	(2)	7.731	114	196260	7.728
52) Isophorone	(2)	7.859	82	864606	8.004
53) 2-Nitrophenol	(2)	7.982	139	193389	7.745
125) 2,4_2,6-Dinitrotoluenes	(3)			428304	15.346

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.111	107	412566	7.707
59) O,O,O-Triethylphosphorothioate	(2)	8.196	198	194560	7.343
57) bis(2-Chloroethoxy)methane	(2)	8.244	93	547120	7.792
58) Benzoic acid	(2)	8.266	105	129749	5.851
62) 2,4-Dichlorophenol	(2)	8.373	162	328955	7.892
65) 1,2,4-Trichlorobenzene	(2)	8.474	180	362785	7.811
68)*Naphthalene-d8	(2)	8.560	136	702476	5.000
69) Naphthalene	(2)	8.592	128	1153055	7.943
72) Hexachloropropene	(2)	8.731	213	256102	7.621
71) 2,6-Dichlorophenol	(2)	8.731	162	323120	7.827
70) 4-Chloroaniline	(2)	8.747	127	457335	7.719
151) Diallate trans/cis	(4)			413594	7.521
74) Hexachlorobutadiene	(2)	8.806	225	223481	7.937
78) Quinoline	(2)	9.154	129	689899	7.461
80) N-Nitrosodi-n-butylamine	(2)	9.277	84	313034	6.871
79) Caprolactam	(2)	9.309	113	107682	8.239
83) 4-Chloro-3-methylphenol	(2)	9.576	107	353149	7.721
85) Safrole	(2)	9.614	162	294897	7.573
86) 2-Methylnaphthalene	(2)	9.715	142	775033	8.036
87) 1-Methylnaphthalene	(2)	9.870	142	690328	7.802
88) Hexachlorocyclopentadiene	(3)	9.967	237	219831	7.498
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	216	379977	7.706
91) cis-Isosafrole	(3)	10.090	162	52649	1.227
93) 2,4,6-Trichlorophenol	(3)	10.207	196	241520	7.800
95) 2,4,5-Trichlorophenol	(3)	10.266	196	249968	7.691
96)$2-Fluorobiphenyl	(3)	10.341	172	1724546	15.302
97) trans-Isosafrole	(3)	10.459	162	285591	6.186
98) 1,1'-Biphenyl	(3)	10.491	154	952539	8.196
99) 2-Chloronaphthalene	(3)	10.501	162	752043	7.614
101) 1-Chloronaphthalene	(3)	10.534	162	681578	7.460
103) Diphenyl ether	(3)	10.673	170	492004	7.578
104) 2-Nitroaniline	(3)	10.737	138	220734	7.636
108) 1,4-Naphthoquinone	(3)	10.822	158	285582	7.317
109) 1,4-Dinitrobenzene	(3)	10.972	168	114119	7.428
110) Dimethylphthalate	(3)	11.052	163	829999	7.501
111) 1,3-Dinitrobenzene	(3)	11.084	168	124878	7.588
113) 2,6-Dinitrotoluene	(3)	11.138	165	184822	7.867
114) Acenaphthylene	(3)	11.170	152	1077524	7.849
118)*Acenaphthene-d10	(3)	11.400	164	362513	5.000
117) 3-Nitroaniline	(3)	11.416	138	193231	7.807

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.454	153	737440	7.575
120) 2,4-Dinitrophenol	(3)	11.561	184	120274	8.516
122) Pentachlorobenzene	(3)	11.646	250	310514	7.722
124) Dibenzofuran	(3)	11.721	168	1045803	7.732
121) 4-Nitrophenol	(3)	11.748	109	121789	6.980
123) 2,4-Dinitrotoluene	(3)	11.758	165	243482	7.479
126) 1-Naphthylamine	(3)	11.860	143	719828	7.480
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	199657	7.894
128) 2-Naphthylamine	(3)	11.972	143	702404	7.704
129) Diethylphthalate	(3)	12.106	149	817499	7.507
131) Fluorene	(3)	12.186	166	840148	7.952
130) Thionazin	(3)	12.208	107	139282	7.513
132) 4-Chlorophenyl-phenylether	(3)	12.213	204	403473	7.705
133) 5-Nitro-o-toluidine	(3)	12.250	152	222955	7.748
134) 4-Nitroaniline	(3)	12.283	138	199897	7.990
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	128213	6.555
137) NDPA as diphenylamine	(4)	12.373	169	674738	7.463
136) N-Nitrosodiphenylamine	(4)	12.373	169	674738	7.463
139) 1,2-Diphenylhydrazine	(4)	12.406	77	1021754	8.099
140)$2,4,6-Tribromophenol	(3)	12.491	330	197302	15.745
142) Tetraethyldithiopyrophosphate	(4)	12.587	97	167194	7.792
145) Diallate (peak 1)	(4)	12.716	86	352617	6.174
146) Phorate	(4)	12.727	75	883848	10.923
144) 1,3,5-Trinitrobenzene	(4)	12.743	213	86614	7.189
147) Phenacetin	(4)	12.785	108	449433	7.865
148) 4-Bromophenyl-phenylether	(4)	12.807	248	227956	7.546
149) Diallate (peak 2)	(4)	12.823	86	60977	1.347
150) Hexachlorobenzene	(4)	12.844	284	227941	7.346
152) Dimethoate	(4)	12.957	87	365802	7.512
153) Atrazine	(4)	13.047	200	235805	7.710
156) Pentachloronitrobenzene	(4)	13.117	237	112540	7.600
154) Pentachlorophenol	(4)	13.122	266	116154	6.113
155) 4-Aminobiphenyl	(4)	13.149	169	740082	7.190
157) Pronamide	(4)	13.224	173	393235	7.712
158)*Phenanthrene-d10	(4)	13.347	188	738790	5.000
159) Dinoseb	(4)	13.358	211	195444	6.384
160) Phenanthrene	(4)	13.374	178	1234544	7.578
162) Anthracene	(4)	13.438	178	1262510	7.731
168) Carbazole	(4)	13.684	167	1111772	7.689
169) Methyl parathion	(4)	13.871	109	279403	7.528

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

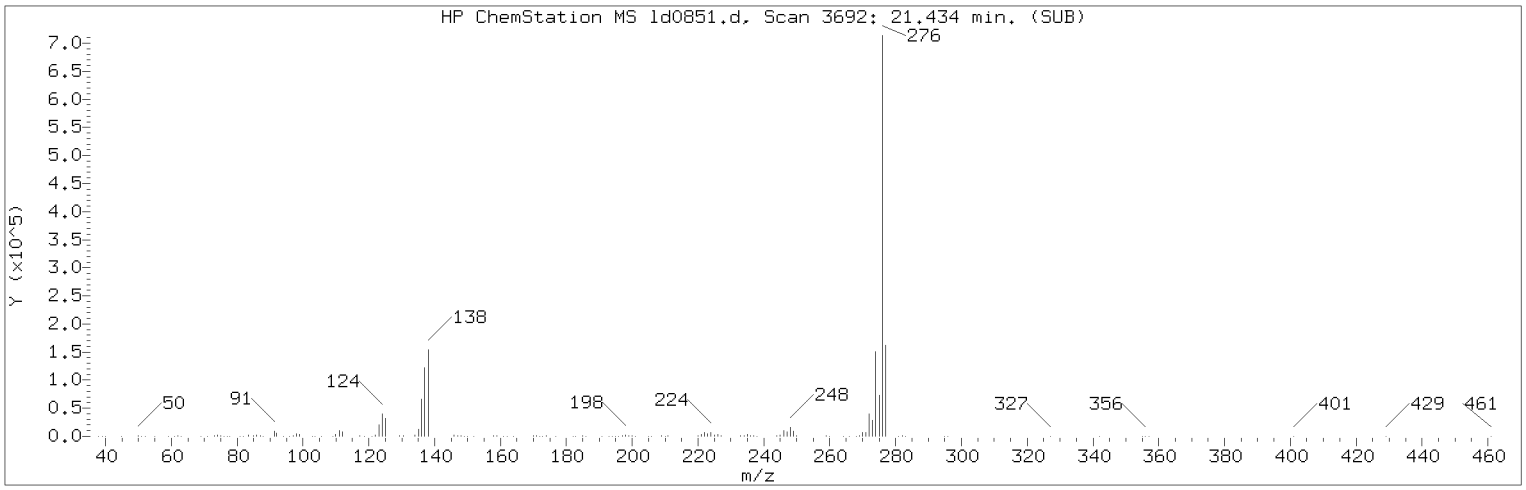
Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.155	149	1409420	7.241
172) Parathion	(4)	14.395	109	173713	7.232
173) 4-Nitroquinoline-1-oxide	(4)	14.449	190	81104	4.205
174) Octachlorostyrene	(4)	14.722	308	79204	6.824
176) Isodrin	(4)	14.775	193	147093	7.288
227) Total PAHs	(6)			21262632	139.896
178) Fluoranthene	(4)	15.010	202	1436907	7.843
179) Benzidine	(5)	15.283	184	2604035	22.523
180)*Pyrene-d10	(5)	15.321	212	784610	5.000
182) Pyrene	(5)	15.353	202	1498436	7.507
184)$Terphenyl-d14	(5)	15.625	244	1905169	15.141
187) p-Dimethylaminoazobenzene	(5)	15.866	225	229667	7.542
190) Chlorobenzilate	(5)	15.941	139	434998	7.315
192) 3,3'-Dimethylbenzidine	(5)	16.444	212	905751	7.203
193) Butylbenzylphthalate	(5)	16.471	149	679896	7.331
196) 2-Acetylaminofluorene	(5)	16.866	181	544764	7.422
200) Benzo(a)anthracene	(5)	17.353	228	1408882	7.901
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	492446	7.674
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.391	231	292322	7.501
201) Chrysene	(5)	17.417	228	1371971	7.954
204) bis(2-Ethylhexyl)phthalate	(5)	17.487	149	971593	7.415
208) 6-Methylchrysene	(5)	18.209	242	922624	7.596
210) Di-n-octylphthalate	(6)	18.647	149	1665259	7.035
211) Benzo(b)fluoranthene	(6)	19.204	252	1435761	7.780
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.209	256	566202	7.437
213) Benzo(k)fluoranthene	(6)	19.257	252	1359036	7.648
216) Benzo(a)pyrene	(6)	19.739	252	1299070	7.823
218)*Perylene-d12	(6)	19.829	264	752704	5.000
220) 3-Methylcholanthrene	(6)	20.300	268	602196	7.458
222) Dibenz(a,h)acridine	(6)	21.124	279	1021162	7.236
223) Dibenz(a,j)acridine	(6)	21.193	279	1036791	7.233
224) Indeno(1,2,3-cd)pyrene	(6)	21.434	276	1209338M	7.669
225) Dibenz(a,h)anthracene	(6)	21.472	278	1228278	7.668
226) Benzo(g,h,i)perylene	(6)	21.814	276	1244371	7.637

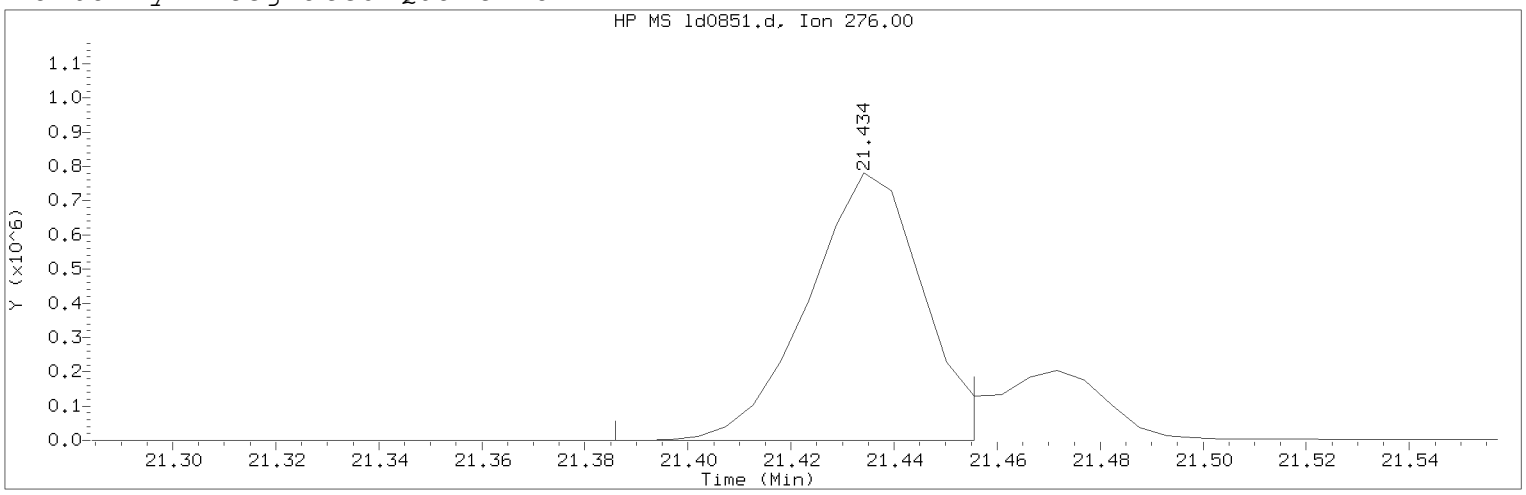
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:40
Date, time and analyst ID of latest file update: 20-Apr-2018 20:40 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

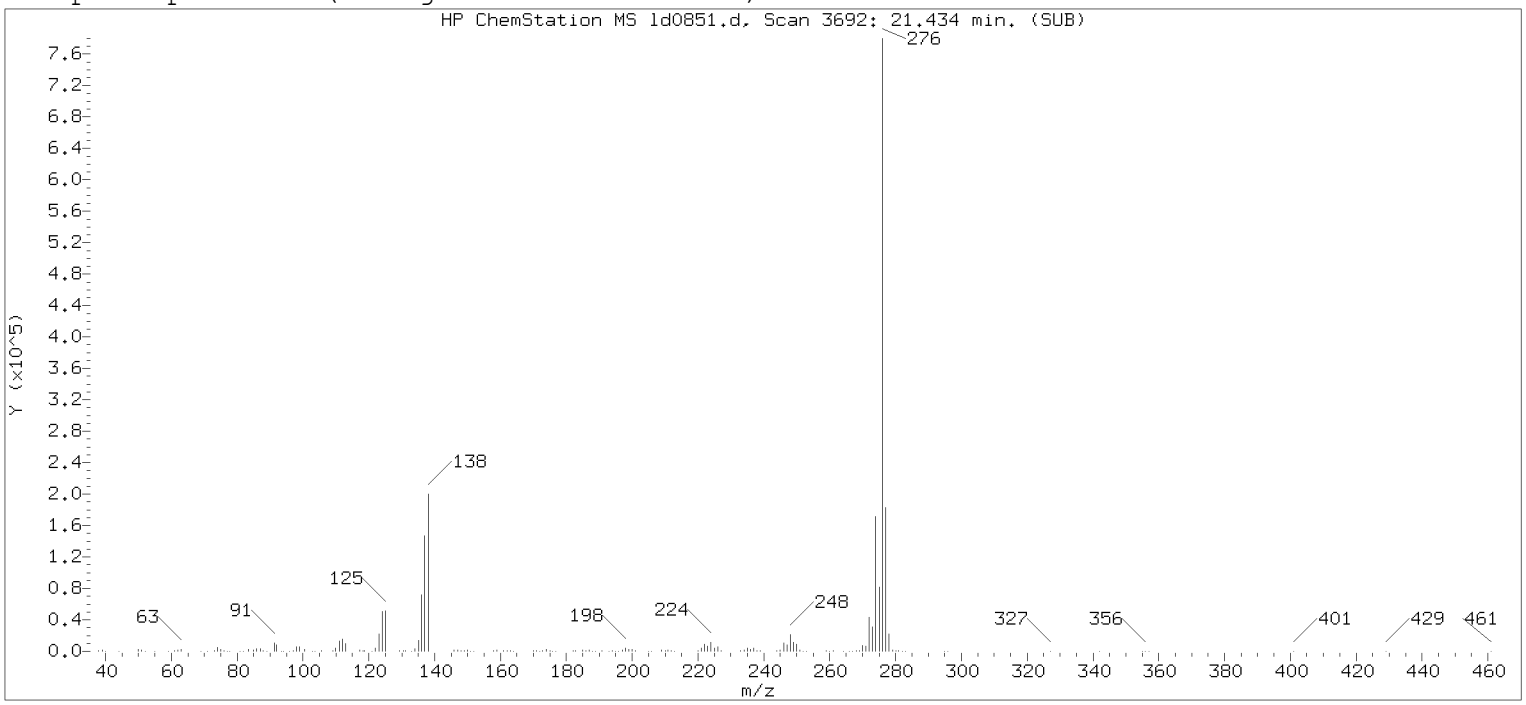
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3692
Retention Time (minutes) : 21.434
Quant Ion : 276.00
Area (flag) : 1209338M
On-Column Amount (ng/ul) : 7.6692
Integration start scan : 3682 Integration stop scan: 3695
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

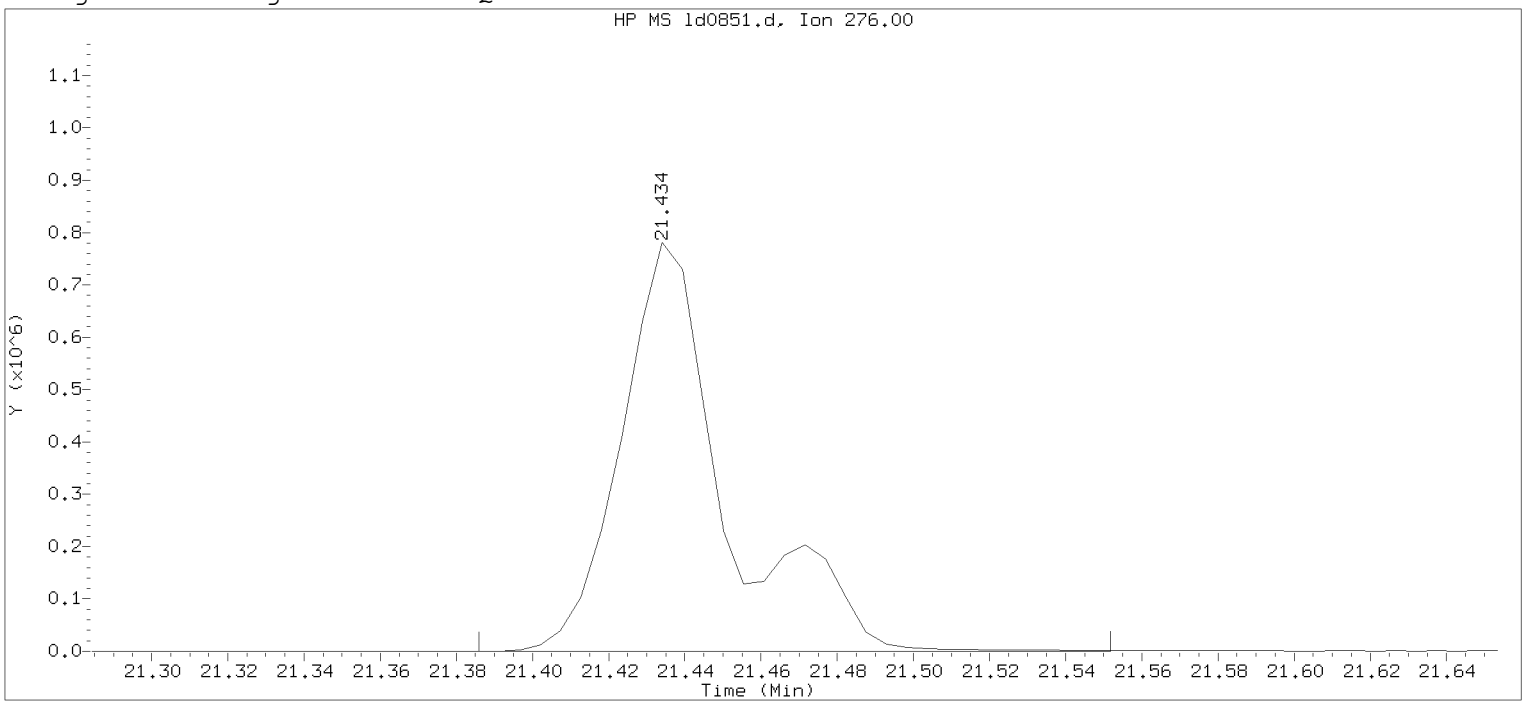
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 04/20/2018 at 20:44.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Holly B. Ziegler on 04/23/2018 at 09:11.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20a.b/ld0851.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 19:55 Analyst ID: art12405

Method used: /chem/HP20296.i/18apr20a.b/rv8270d.m Sublist used: all1
Calibration date and time: 20-APR-2018 20:23
Date, time and analyst ID of latest file update: 20-Apr-2018 20:23 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3692		
Retention Time (minutes)	: 21.434		
Quant Ion	: 276.00		
Area	: 1493002		
On-column Amount (ng/ul)	: 9.4683		
Integration start scan	: 3682	Integration stop scan:	3713
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 04/20/2018 at 20:44.
Target 3.5 esignature used for this page

Data File: /chem/HP20296.i/18apr23.b/ld0870z.d

Date : 23-APR-2018 09:36

Client ID: DFTPP

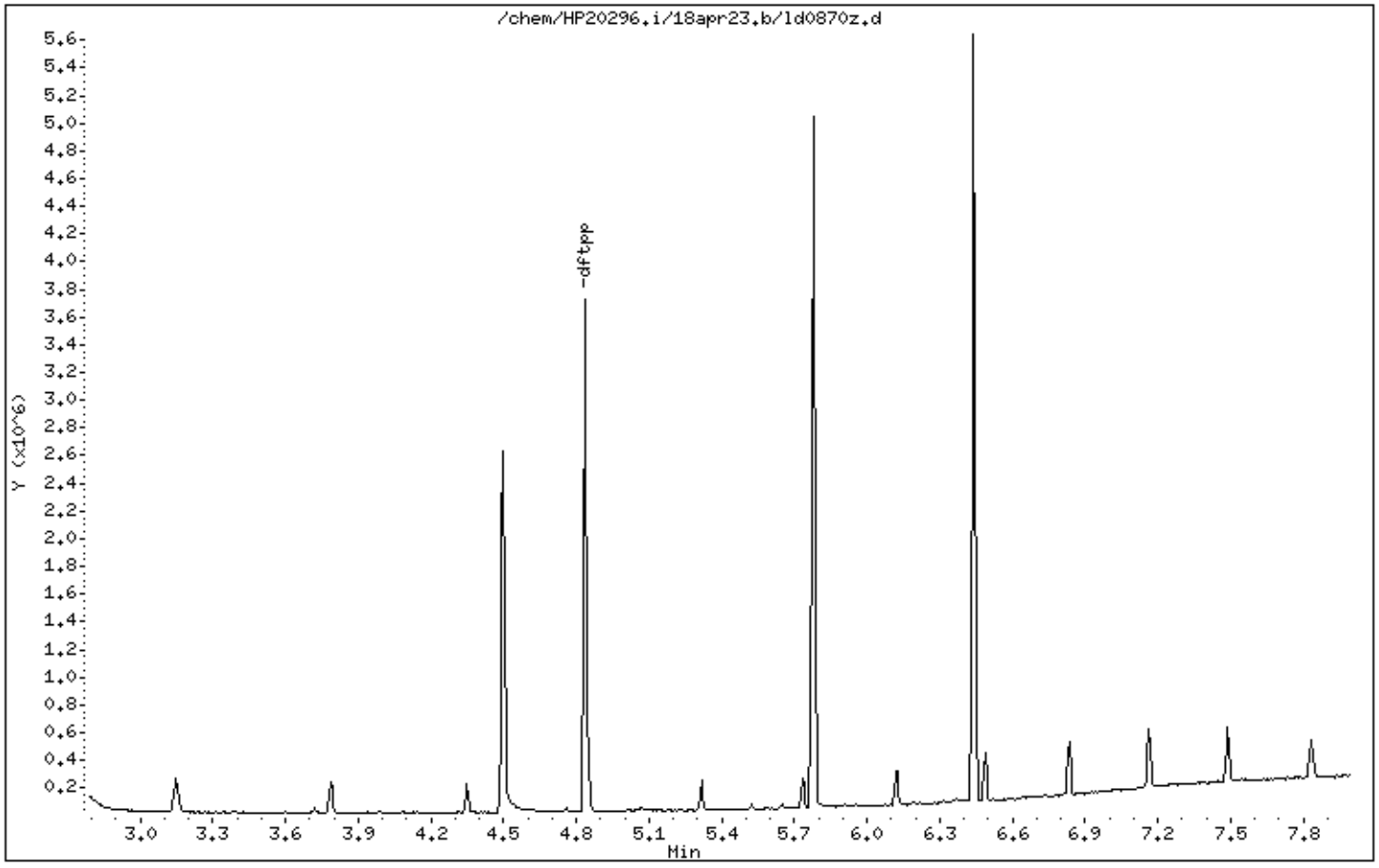
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr23.b/ld0870z.d

Date : 23-APR-2018 09:36

Client ID: DFTPP

Instrument: HP20296.i

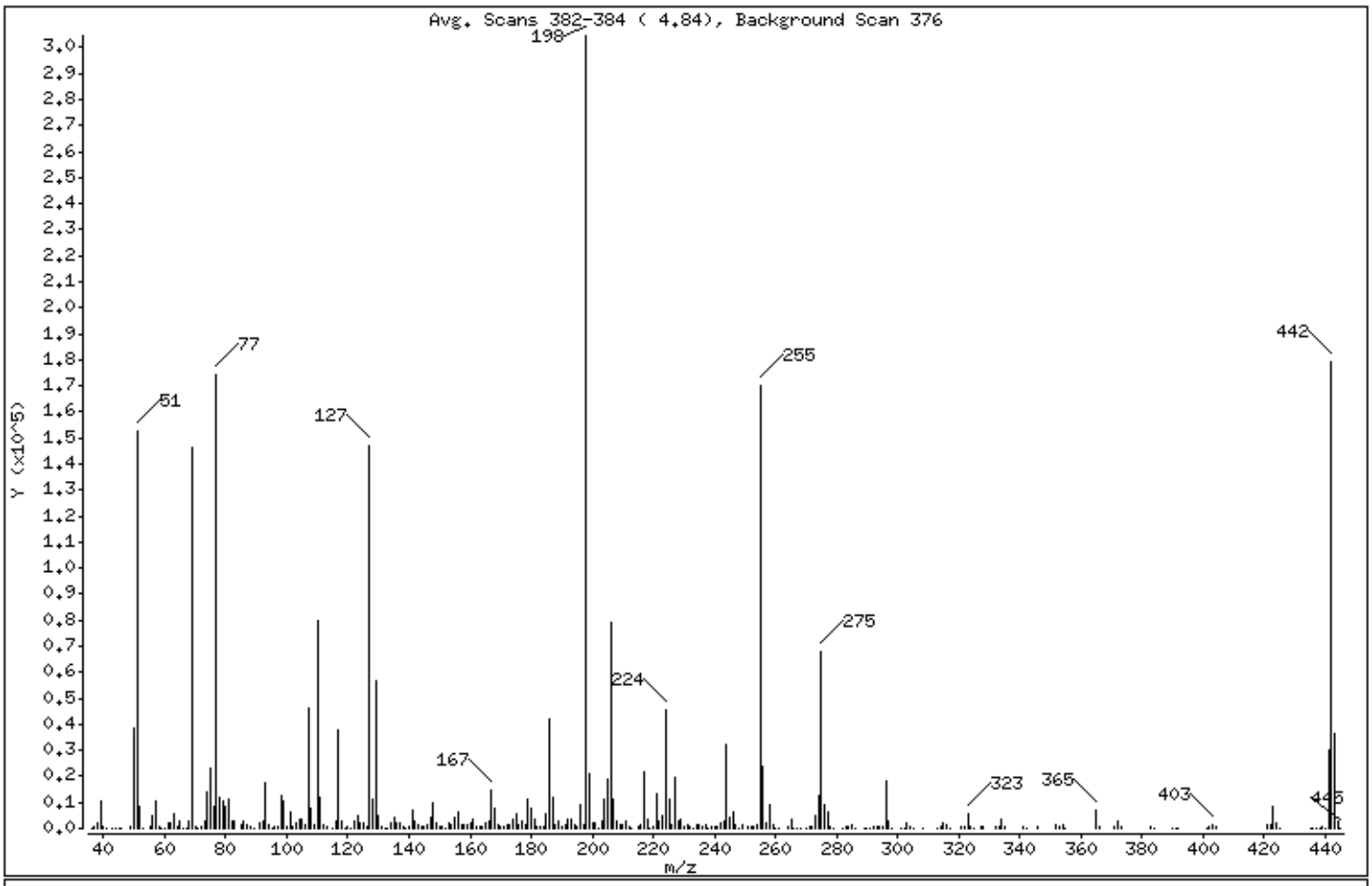
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	50.05
68	Less than 2.00% of mass 69	0.91 (1.89)
69	Mass 69 relative abundance	47.97
70	Less than 2.00% of mass 69	0.27 (0.57)
127	10.00 - 80.00% of mass 198	48.26
197	Less than 2.00% of mass 198	0.47
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 60.00% of mass 198	22.24
365	Greater than 1.00% of mass 198	2.41
441	0.01 - 24.00% of mass 442	9.79 (16.61)
442	50.00 - 99.99% of mass 198	58.92
443	15.00 - 24.00% of mass 442	12.07 (20.48)

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr23.b/ld0870z.d

Date : 23-APR-2018 09:36

Client ID: DFTPP

Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS

Column diameter: 0.18

Data File: ld0870z.d
Spectrum: Avg. Scans 382-384 (4.84), Background Scan 376
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	84	120.00	480	197.00	1438	279.00	91
37.00	658	121.00	195	198.00	304448	282.00	253
38.00	2103	122.00	3039	199.00	20768	283.00	825
39.00	10409	123.00	4602	200.00	1944	284.00	478
40.00	491	124.00	1887	201.00	1865	285.00	1159
41.00	103	125.00	1945	202.00	233	286.00	119
43.00	52	126.00	454	203.00	2751	289.00	343
44.00	301	127.00	146880	204.00	11175	290.00	100
45.00	123	128.00	11360	205.00	18760	291.00	90
46.00	106	129.00	56880	206.00	79240	292.00	365
49.00	1035	130.00	4717	207.00	10965	293.00	1004
50.00	38616	131.00	894	208.00	2956	294.00	430
51.00	152320	132.00	229	209.00	1061	295.00	514
52.00	8134	133.00	189	210.00	1468	296.00	18480
53.00	346	134.00	2051	211.00	2872	297.00	2548
55.00	457	135.00	4519	212.00	541	298.00	200
56.00	4755	136.00	1843	213.00	99	301.00	230
57.00	10274	137.00	2043	215.00	736	302.00	343
58.00	642	138.00	503	216.00	1561	303.00	2053
59.00	93	139.00	160	217.00	21720	304.00	590
60.00	150	140.00	624	218.00	3261	305.00	103
61.00	1760	141.00	7082	219.00	240	308.00	293
62.00	1866	142.00	2488	220.00	508	313.00	106
63.00	5734	143.00	1716	221.00	13340	314.00	753
64.00	935	144.00	466	222.00	2706	315.00	1979
65.00	3134	145.00	508	223.00	4946	316.00	1124
66.00	314	146.00	1347	224.00	45344	317.00	154
67.00	116	147.00	4133	225.00	10891	321.00	666
68.00	2758	148.00	9484	226.00	1389	322.00	387
69.00	145984	149.00	1982	227.00	19496	323.00	5457
70.00	835	150.00	624	228.00	2549	324.00	994
71.00	103	151.00	1012	229.00	3727	325.00	84
72.00	374	152.00	112	230.00	647	327.00	1029
73.00	2908	153.00	2300	231.00	1688	328.00	685
74.00	13846	154.00	1625	232.00	407	332.00	375

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Date : 23-APR-2018 09:36

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0870z.d
Spectrum: Avg. Scans 382-384 (4.84), Background Scan 376
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	23008	155.00	4039	233.00	322	333.00	412
76.00	8096	156.00	6296	234.00	1364	334.00	3732
77.00	174080	157.00	1175	235.00	1312	335.00	1045
78.00	12065	158.00	1284	236.00	914	341.00	875
79.00	10386	159.00	1261	237.00	1539	342.00	184
80.00	8142	160.00	2265	238.00	205	346.00	1002
81.00	10974	161.00	3247	239.00	842	352.00	1463
82.00	2849	162.00	929	240.00	795	353.00	846
83.00	2672	163.00	496	241.00	956	354.00	1534
85.00	1745	164.00	552	242.00	2179	355.00	99
86.00	3048	165.00	2257	243.00	2495	365.00	7348
87.00	1389	166.00	2812	244.00	32112	366.00	749
88.00	665	167.00	14844	245.00	4078	371.00	408
89.00	154	168.00	7834	246.00	6509	372.00	2596
91.00	2343	169.00	1301	247.00	1325	373.00	634
92.00	2575	170.00	476	248.00	284	383.00	701
93.00	17248	171.00	707	249.00	1377	384.00	100
94.00	1251	172.00	1332	251.00	539	390.00	269
95.00	346	173.00	1623	252.00	373	391.00	96
96.00	618	174.00	3447	253.00	1049	392.00	196
97.00	669	175.00	5929	254.00	1343	401.00	91
98.00	12845	176.00	1686	255.00	169920	402.00	1021
99.00	10277	177.00	2949	256.00	23480	403.00	1232
100.00	1012	178.00	1220	257.00	1841	404.00	435
101.00	6429	179.00	11449	258.00	9306	421.00	1191
102.00	505	180.00	7633	259.00	1350	422.00	1176
103.00	2014	181.00	3719	260.00	219	423.00	8418
104.00	3830	182.00	754	261.00	111	424.00	1937
105.00	3487	183.00	518	264.00	637	425.00	172
106.00	1329	184.00	983	265.00	3721	435.00	89
107.00	45984	185.00	5885	266.00	178	436.00	101
108.00	7552	186.00	41792	267.00	54	437.00	85
109.00	1325	187.00	11909	268.00	253	438.00	238
110.00	79800	188.00	1289	270.00	285	439.00	630
111.00	12075	189.00	2575	271.00	486	440.00	184

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Date : 23-APR-2018 09:36

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: bhs10208

Column phase: DB-5MS Column diameter: 0.18

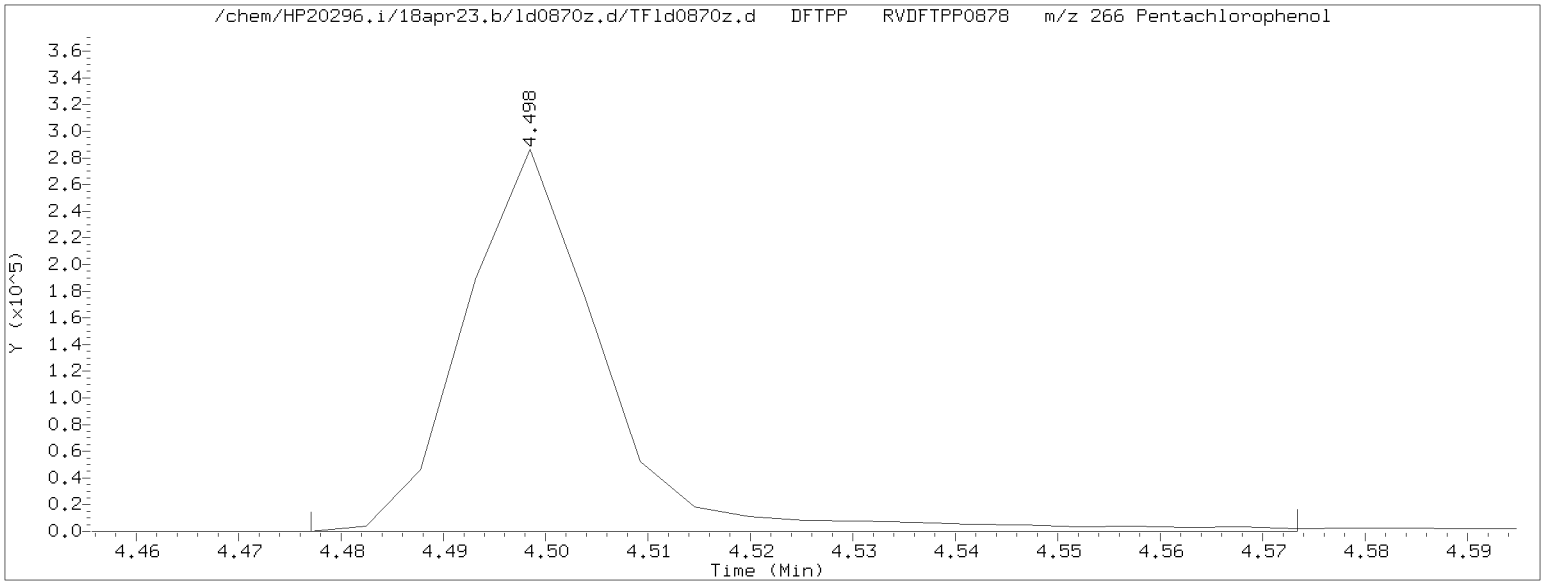
Data File: ld0870z.d
Spectrum: Avg. Scans 382-384 (4.84), Background Scan 376
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
112.00	1396	190.00	525	272.00	425	441.00	29800
113.00	639	191.00	1453	273.00	4924	442.00	179392
115.00	308	192.00	3647	274.00	12681	443.00	36736
116.00	2574	193.00	3844	275.00	67720	444.00	3076
117.00	37848	194.00	1140	276.00	9421	445.00	149
118.00	2994	195.00	752	277.00	6283		
119.00	328	196.00	8798	278.00	963		

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Assessment of GC Column Performance and Injection Port Inertness for

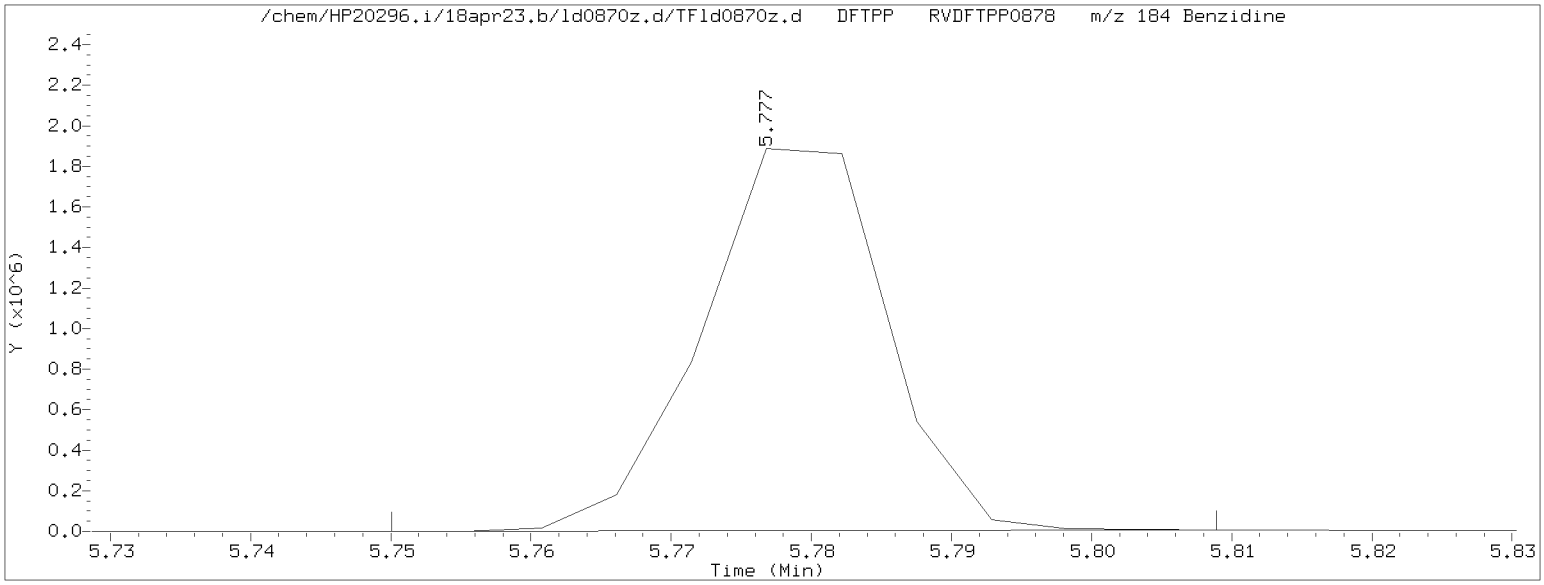
Instrument ID: HP20296.i Injection Date: 23-APR-2018 09:36 Operator: bhs10208



Pentachlorophenol EICP peak height = 286592 EICP peak height at 10% = 28659 Pentachlorophenol EICP area = 266614

Pentachlorophenol EICP peak apex (min.) = 4.498
RT at 10% of front half of EICP (min.) = 4.486 'Front' peak width (min.) = 0.0128333333
RT at 10% of back half of EICP (min.) = 4.513 'Tailing' peak width (min.) = 0.0143500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0143500000}{0.0128333333} = 1.118$$



Benzidine EICP peak height = 1885186 EICP peak height at 10% = 188519 Benzidine EICP area = 1723007

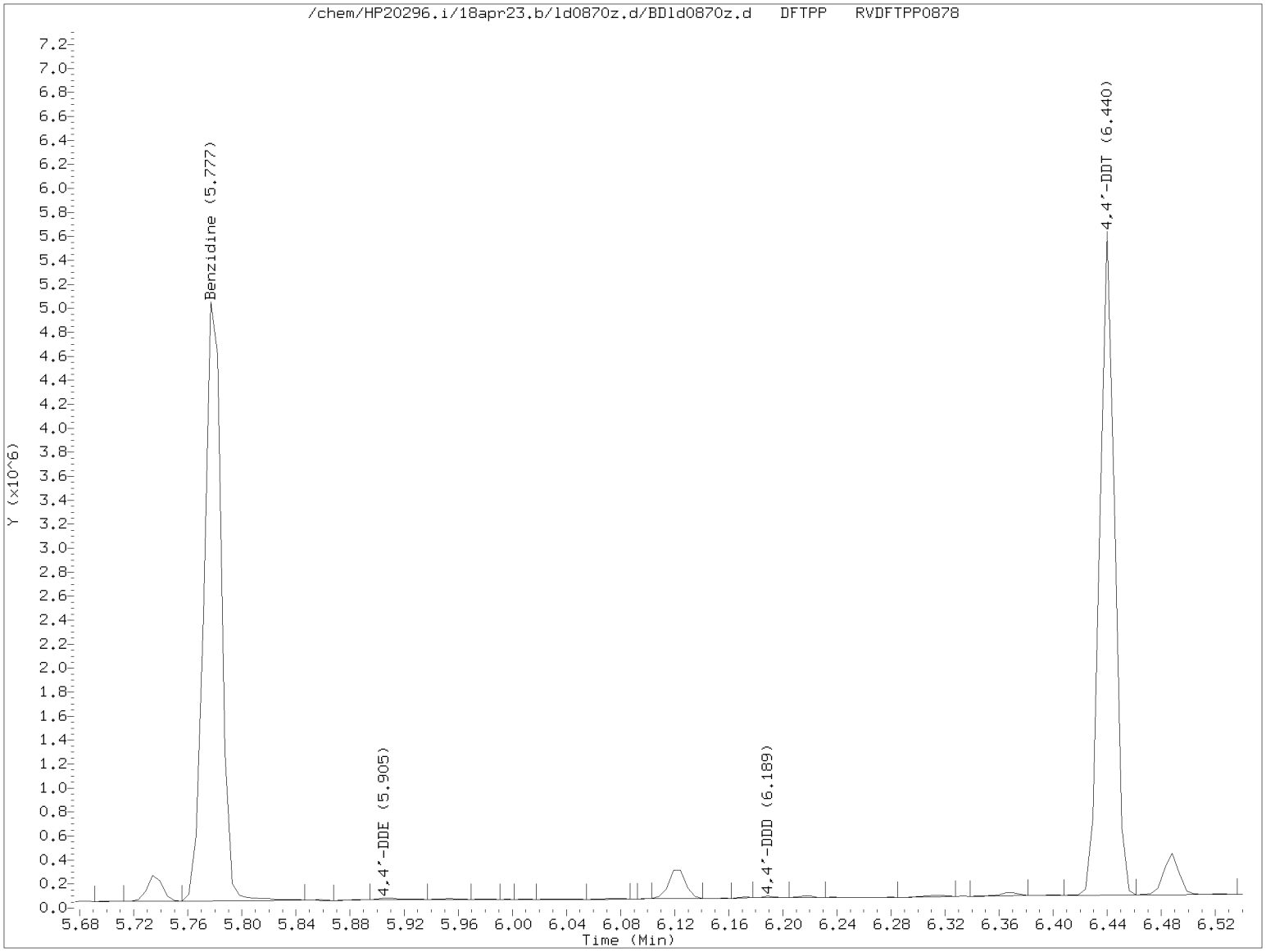
Benzidine EICP peak apex (min.) = 5.777
RT at 10% of front half of EICP (min.) = 5.766 'Front' peak width (min.) = 0.0106000000
RT at 10% of back half of EICP (min.) = 5.791 'Tailing' peak width (min.) = 0.0145500000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0145500000}{0.0106000000} = 1.373$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

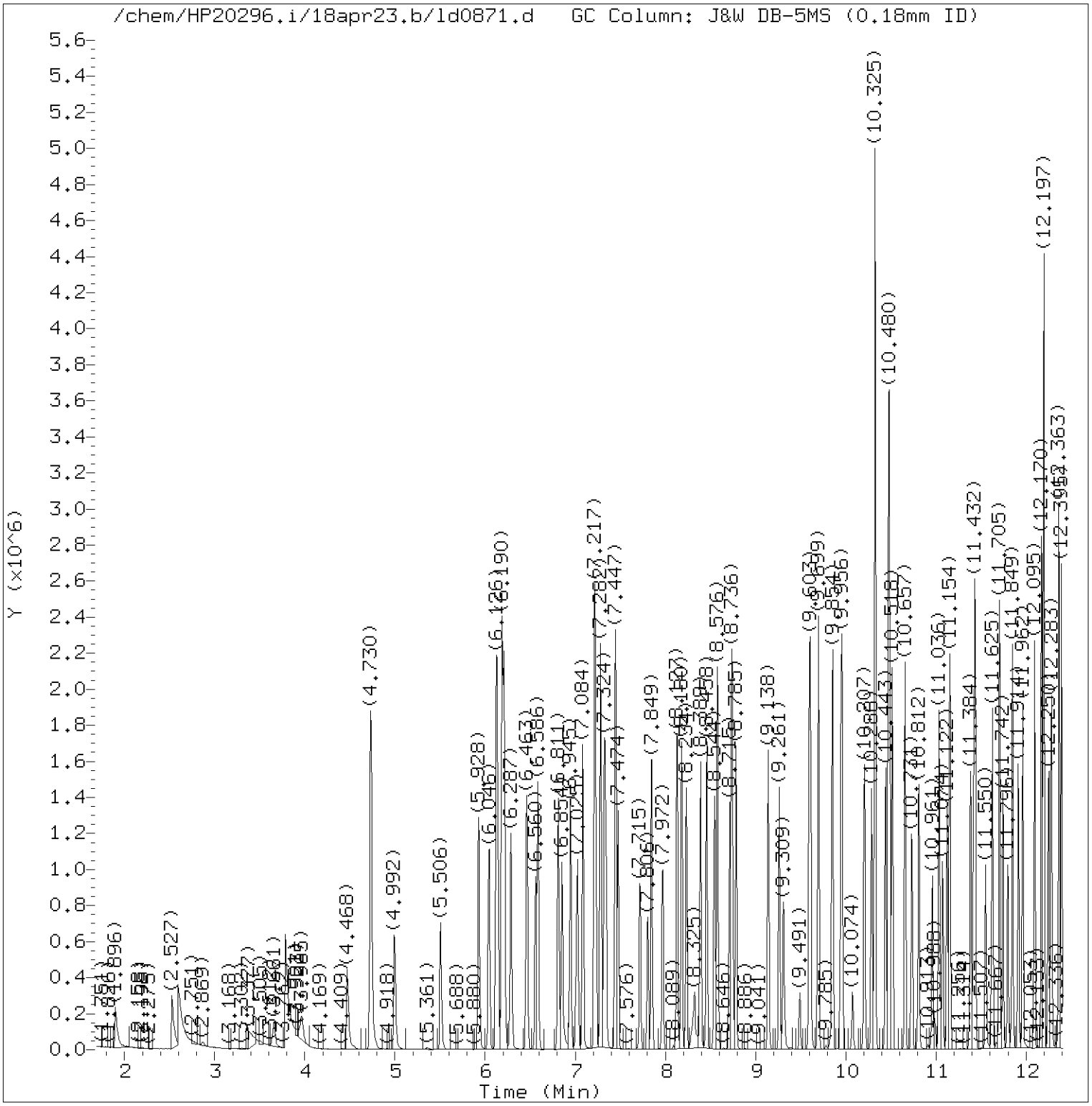
Instrument ID: HP20296.i Injection Date: 23-APR-2018 09:36 Operator: bhs10208



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{13041 + 6785}{13041 + 6785 + 4281063} \times 100 = 0.5$$

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

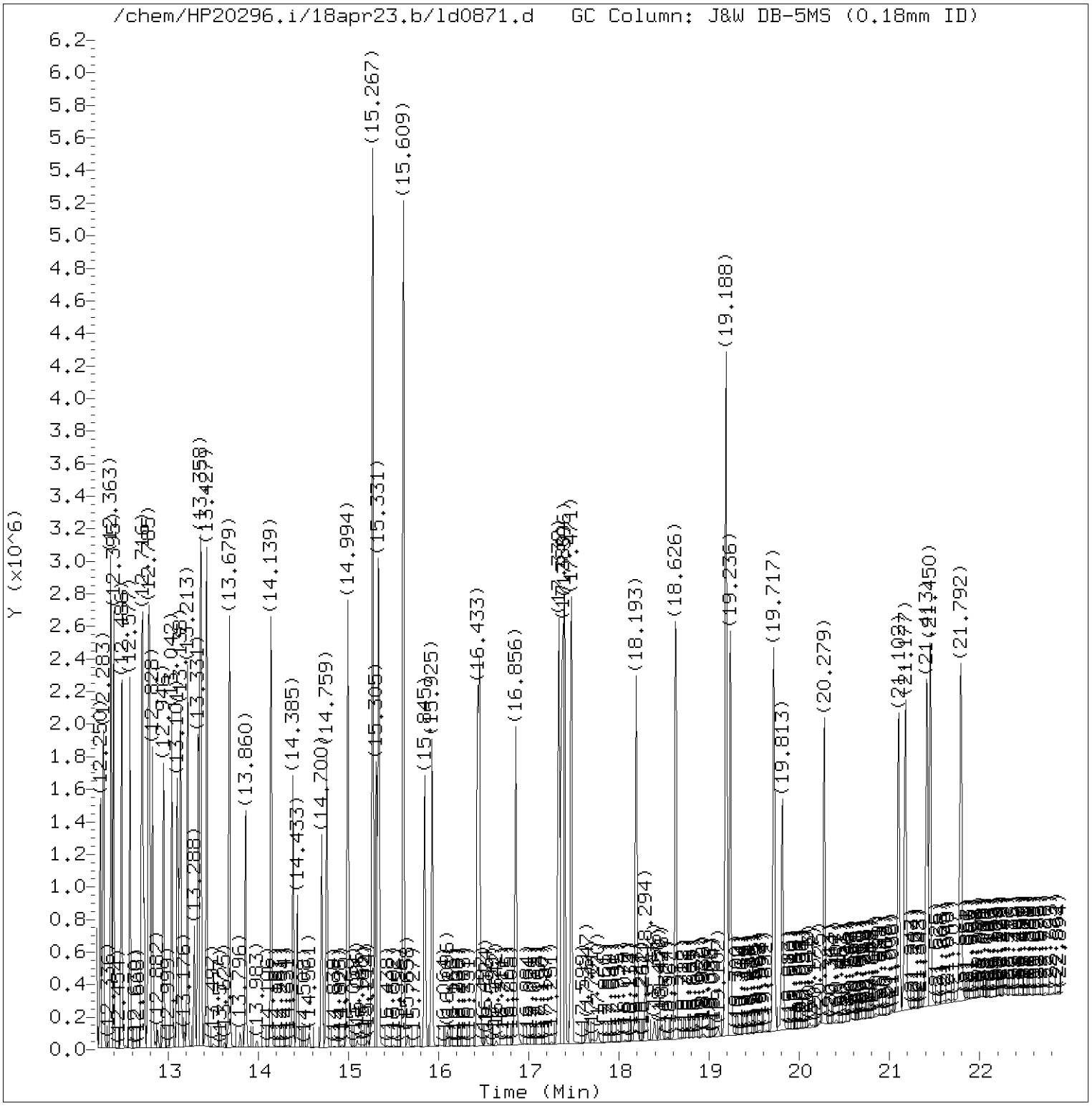
Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.896	88	174021	7.052
5) N-Nitrosodimethylamine	(1)	2.527	74	288593	7.681
6) Pyridine	(1)	2.596	79	468319M	6.985
8) 2-Picoline	(1)	3.784	93	486683M	7.180
9) N-Nitrosomethylethylamine	(1)	3.965	88	204943M	7.544
10) Methyl methanesulfonate	(1)	4.468	80	254315	7.729
12)$2-Fluorophenol	(1)	4.730	112	805746	15.591
14) N-Nitrosodiethylamine	(1)	4.998	102	198398	7.875
16) Ethyl methanesulfonate	(1)	5.506	109	208885	7.613
43) Total Cresols	(1)			784003	15.274
17) Benzaldehyde	(1)	5.928	77	391549	7.636
20) Aniline	(1)	6.121	93	694124	7.716
21) a-methylstyrene	(1)	6.142	118	135333	6.887
18)$Phenol-d6	(1)	6.190	99	1046695	15.445
19) Phenol	(1)	6.207	94	567042	7.268
23) bis(2-Chloroethyl)ether	(1)	6.212	93	457540	7.878
24) 2-Chlorophenol	(1)	6.287	128	391357	7.730
25) 1,3-Dichlorobenzene	(1)	6.463	146	442617	7.745
26)*1,4-Dichlorobenzene-d4	(1)	6.560	152	188735	5.000
27) 1,4-Dichlorobenzene	(1)	6.586	146	449339	7.769
29) 1,2-Dichlorobenzene	(1)	6.811	146	422884	7.679
28) Benzyl alcohol	(1)	6.854	108	213097	6.307
31) Indene	(1)	6.945	115	561724	6.962
35) bis(2-Chloroisopropyl)ether	(1)	7.025	45	693629	8.413
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.025	45	693629	8.413
32) 2-Methylphenol	(1)	7.084	108	379804	7.608
36) N-Nitrosopyrrolidine	(1)	7.212	100	219636	8.036
37) Acetophenone	(1)	7.212	105	618857	8.130
39) N-Nitroso-di-n-propylamine	(1)	7.228	70	351759	8.106
40) N-Nitrosomorpholine	(1)	7.282	56	275322	7.592
41) o-Toluidine	(1)	7.282	106	677261	7.672
44) Hexachloroethane	(1)	7.319	117	186855	7.577
38) 4-Methylphenol	(1)	7.335	108	404199	7.666
100) Isosafrole	(3)			348367	7.521
45)$Nitrobenzene-d5	(2)	7.447	82	1013229	16.443
46) Nitrobenzene	(2)	7.474	77	515894	8.208
50) N-Nitrosopiperidine	(2)	7.720	114	197798	7.657
52) Isophorone	(2)	7.849	82	869364	7.913
53) 2-Nitrophenol	(2)	7.972	139	197986	7.795
125) 2,4_2,6-Dinitrotoluenes	(3)			433454	15.311

M = Compound was manually integrated.
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Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.132	107	428191	7.864
59) O,O,O-Triethylphosphorothioate	(2)	8.180	198	199243	7.393
57) bis(2-Chloroethoxy)methane	(2)	8.234	93	547389	7.665
58) Benzoic acid	(2)	8.325	105	212347	7.802
62) 2,4-Dichlorophenol	(2)	8.389	162	337135	7.952
65) 1,2,4-Trichlorobenzene	(2)	8.458	180	373409	7.905
68)*Naphthalene-d8	(2)	8.544	136	714475	5.000
69) Naphthalene	(2)	8.576	128	1153467	7.813
72) Hexachloropropene	(2)	8.715	213	274660	8.035
71) 2,6-Dichlorophenol	(2)	8.731	162	332162	7.911
70) 4-Chloroaniline	(2)	8.742	127	458819	7.614
151) Diallate trans/cis	(4)			406273	7.376
74) Hexachlorobutadiene	(2)	8.785	225	234245	8.179
78) Quinoline	(2)	9.138	129	699231	7.435
80) N-Nitrosodi-n-butylamine	(2)	9.261	84	313354	6.763
79) Caprolactam	(2)	9.309	113	105848	7.963
85) Safrole	(2)	9.598	162	294301	7.431
83) 4-Chloro-3-methylphenol	(2)	9.614	107	369070	7.933
86) 2-Methylnaphthalene	(2)	9.699	142	772253	7.873
87) 1-Methylnaphthalene	(2)	9.854	142	687396	7.638
88) Hexachlorocyclopentadiene	(3)	9.951	237	237421	7.977
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.961	216	394110	7.873
91) cis-Isosafrole	(3)	10.074	162	54442	1.250
93) 2,4,6-Trichlorophenol	(3)	10.207	196	249798	7.946
95) 2,4,5-Trichlorophenol	(3)	10.288	196	259753	7.872
96)$2-Fluorobiphenyl	(3)	10.325	172	1720431	15.037
97) trans-Isosafrole	(3)	10.443	162	293925	6.271
98) 1,1'-Biphenyl	(3)	10.475	154	949281	8.045
99) 2-Chloronaphthalene	(3)	10.485	162	747211	7.451
101) 1-Chloronaphthalene	(3)	10.518	162	690142	7.440
103) Diphenyl ether	(3)	10.657	170	497419	7.547
104) 2-Nitroaniline	(3)	10.737	138	226738	7.726
108) 1,4-Naphthoquinone	(3)	10.812	158	291607	7.360
109) 1,4-Dinitrobenzene	(3)	10.961	168	119610	7.669
110) Dimethylphthalate	(3)	11.036	163	829383	7.384
111) 1,3-Dinitrobenzene	(3)	11.074	168	131662	7.881
113) 2,6-Dinitrotoluene	(3)	11.127	165	188159	7.889
114) Acenaphthylene	(3)	11.154	152	1088065	7.807
118)*Acenaphthene-d10	(3)	11.384	164	368022	5.000
117) 3-Nitroaniline	(3)	11.421	138	195219	7.769

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Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.432	153	738670	7.474
120) 2,4-Dinitrophenol	(3)	11.555	184	146147	10.193
122) Pentachlorobenzene	(3)	11.625	250	319033	7.815
124) Dibenzofuran	(3)	11.705	168	1052144	7.663
123) 2,4-Dinitrotoluene	(3)	11.742	165	245295	7.422
121) 4-Nitrophenol	(3)	11.796	109	126451	7.139
126) 1-Naphthylamine	(3)	11.849	143	711026	7.278
127) 2,3,4,6-Tetrachlorophenol	(3)	11.914	232	199652	7.776
128) 2-Naphthylamine	(3)	11.962	143	672486	7.265
129) Diethylphthalate	(3)	12.095	149	821965	7.435
131) Fluorene	(3)	12.170	166	832691	7.763
130) Thionazin	(3)	12.192	107	138702	7.370
132) 4-Chlorophenyl-phenylether	(3)	12.197	204	406789	7.652
133) 5-Nitro-o-toluidine	(3)	12.250	152	232644	7.963
135) 4,6-Dinitro-2-methylphenol	(4)	12.277	198	147517	7.528
134) 4-Nitroaniline	(3)	12.283	138	205799	8.103
136) N-Nitrosodiphenylamine	(4)	12.363	169	675964	7.463
137) NDPA as diphenylamine	(4)	12.363	169	675964	7.463
139) 1,2-Diphenylhydrazine	(4)	12.395	77	1009351	7.986
140)$2,4,6-Tribromophenol	(3)	12.486	330	206565	16.237
142) Tetraethyldithiopyrophosphate	(4)	12.577	97	165139	7.682
145) Diallate (peak 1)	(4)	12.705	86	346016	6.047
146) Phorate	(4)	12.716	75	882673	10.888
144) 1,3,5-Trinitrobenzene	(4)	12.732	213	89819	7.441
147) Phenacetin	(4)	12.780	108	460164	8.038
148) 4-Bromophenyl-phenylether	(4)	12.791	248	231998	7.666
149) Diallate (peak 2)	(4)	12.807	86	60257	1.329
150) Hexachlorobenzene	(4)	12.828	284	229042	7.368
152) Dimethoate	(4)	12.946	87	361495	7.410
153) Atrazine	(4)	13.042	200	233619	7.624
156) Pentachloronitrobenzene	(4)	13.101	237	113432	7.646
154) Pentachlorophenol	(4)	13.117	266	125894	6.613
155) 4-Aminobiphenyl	(4)	13.138	169	741968	7.195
157) Pronamide	(4)	13.213	173	395010	7.733
158)*Phenanthrene-d10	(4)	13.331	188	740159	5.000
159) Dinoseb	(4)	13.347	211	233385	7.609
160) Phenanthrene	(4)	13.363	178	1229310	7.532
162) Anthracene	(4)	13.427	178	1262548	7.717
168) Carbazole	(4)	13.679	167	1109661	7.660
169) Methyl parathion	(4)	13.860	109	275532	7.410

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Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.139	149	1412743	7.245
172) Parathion	(4)	14.385	109	173455	7.208
173) 4-Nitroquinoline-1-oxide	(4)	14.433	190	99804	5.164
174) Octachlorostyrene	(4)	14.706	308	82640	7.107
176) Isodrin	(4)	14.759	193	148495	7.344
178) Fluoranthene	(4)	14.994	202	1428419	7.782
227) Total PAHs	(6)			20982578	139.480
179) Benzidine	(5)	15.267	184	2589296	22.488
180)*Pyrene-d10	(5)	15.305	212	781408	5.000
182) Pyrene	(5)	15.337	202	1472064	7.405
184)$Terphenyl-d14	(5)	15.609	244	1890288	15.084
187) p-Dimethylaminoazobenzene	(5)	15.845	225	235098	7.752
190) Chlorobenzilate	(5)	15.925	139	433496	7.320
192) 3,3'-Dimethylbenzidine	(5)	16.433	212	927188	7.404
193) Butylbenzylphthalate	(5)	16.454	149	669733	7.251
196) 2-Acetylaminofluorene	(5)	16.856	181	563087	7.703
200) Benzo(a)anthracene	(5)	17.332	228	1377152	7.754
198) 3,3'-Dichlorobenzidine	(5)	17.358	252	494519	7.738
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.380	231	293396	7.559
201) Chrysene	(5)	17.396	228	1329191	7.737
204) bis(2-Ethylhexyl)phthalate	(5)	17.471	149	960978	7.364
208) 6-Methylchrysene	(5)	18.193	242	895537	7.404
210) Di-n-octylphthalate	(6)	18.626	149	1689709	7.436
211) Benzo(b)fluoranthene	(6)	19.188	252	1364985	7.705
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.188	256	543464	7.435
213) Benzo(k)fluoranthene	(6)	19.236	252	1314818	7.707
216) Benzo(a)pyrene	(6)	19.717	252	1250441	7.844
218)*Perylene-d12	(6)	19.813	264	722599	5.000
220) 3-Methylcholanthrene	(6)	20.279	268	592978	7.650
222) Dibenz(a,h)acridine	(6)	21.102	279	1036467	7.651
223) Dibenz(a,j)acridine	(6)	21.177	279	1043114	7.581
224) Indeno(1,2,3-cd)pyrene	(6)	21.418	276	1222040M	8.073
225) Dibenz(a,h)anthracene	(6)	21.455	278	1217826	7.920
226) Benzo(g,h,i)perylene	(6)	21.792	276	1241242	7.935

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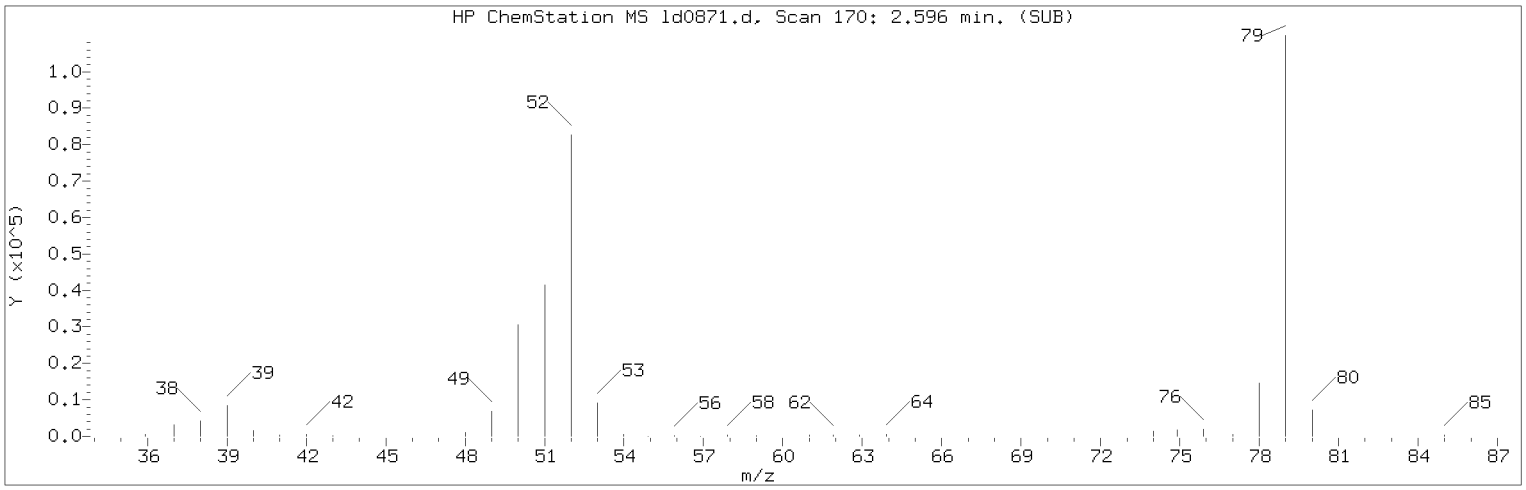
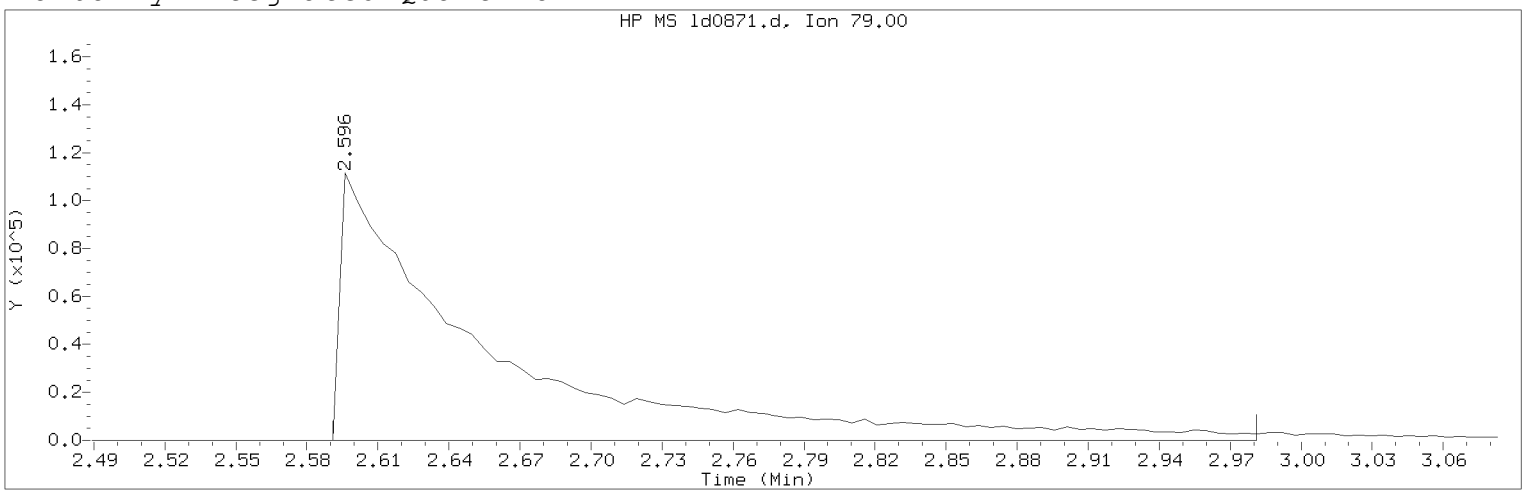
Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

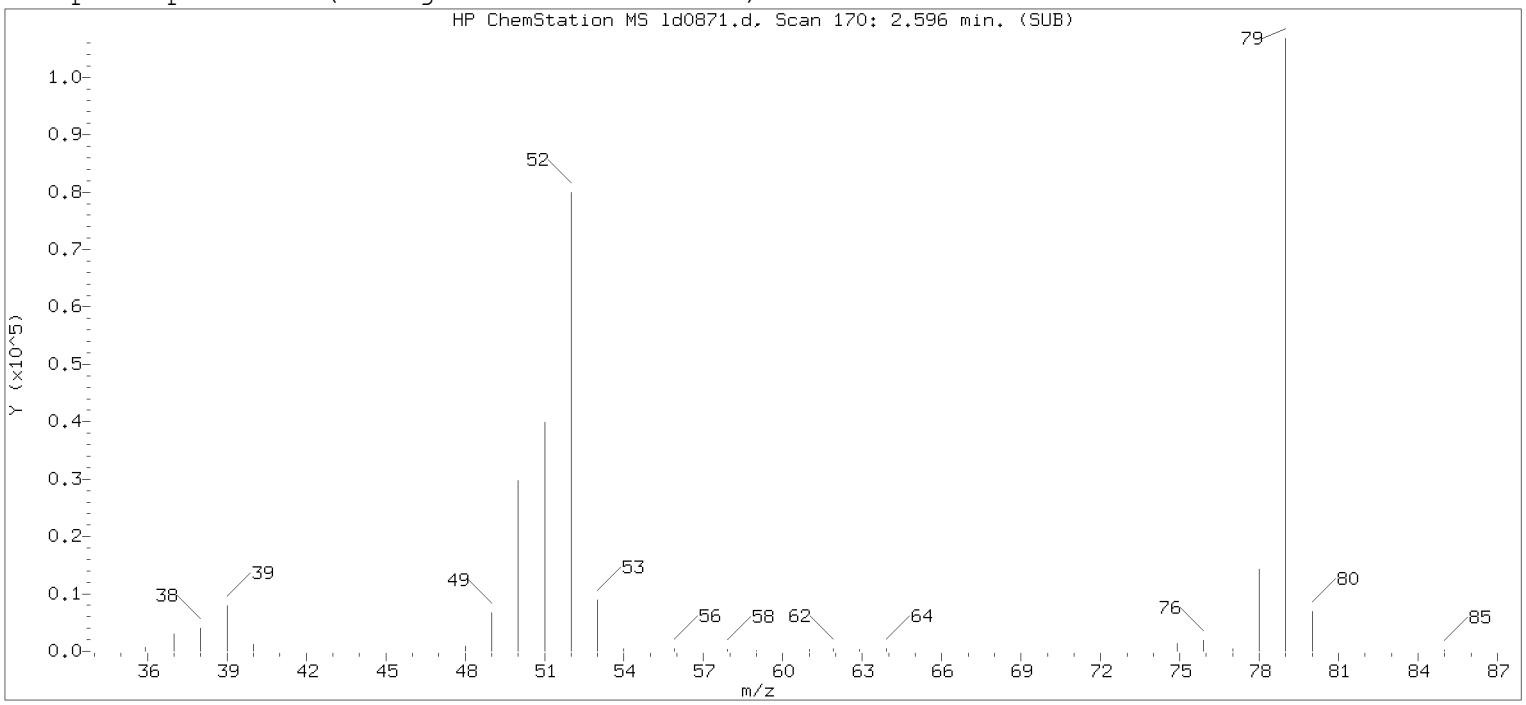
Compound Number : 6
Compound Name : Pyridine
Scan Number : 170
Retention Time (minutes) : 2.596
Quant Ion : 79.00
Area (flag) : 468319M
On-Column Amount (ng/ul) : 6.9855
Integration start scan : 168 Integration stop scan: 241
Y at integration start : 14 Y at integration end: -21

Reason for manual integration: improper integration

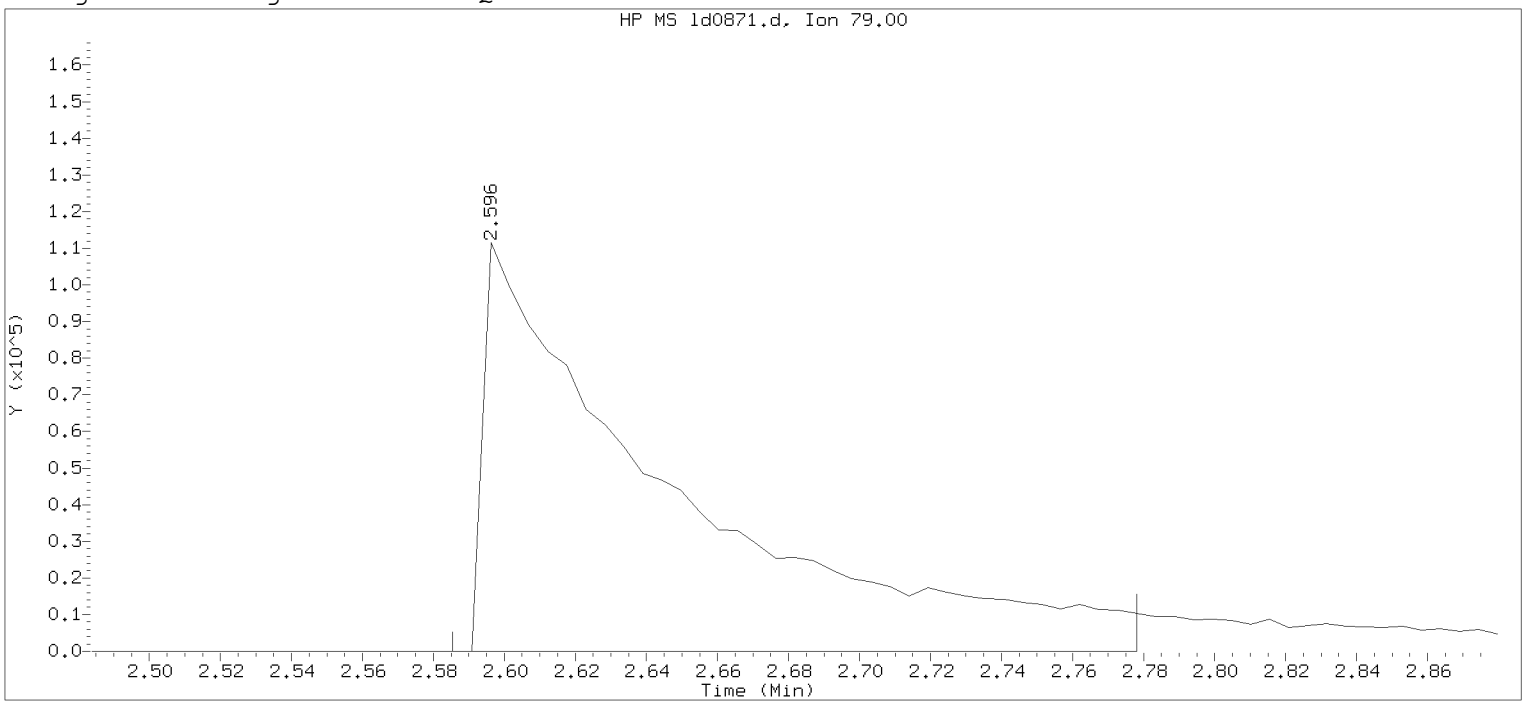
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

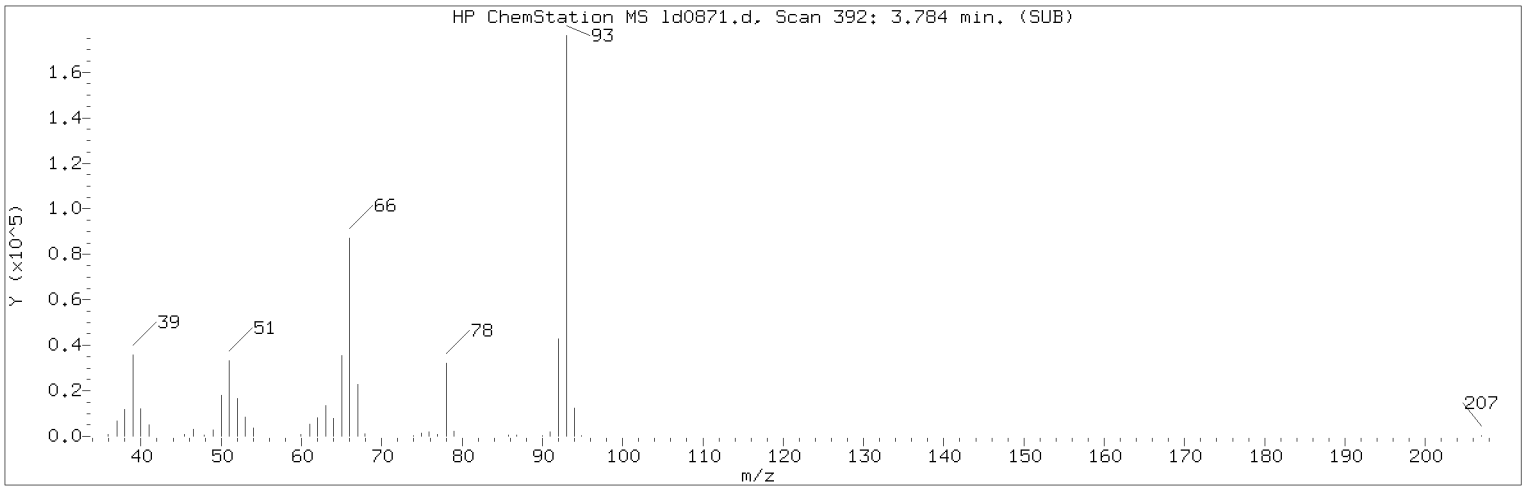
Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:34
Date, time and analyst ID of latest file update: 23-Apr-2018 10:34 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

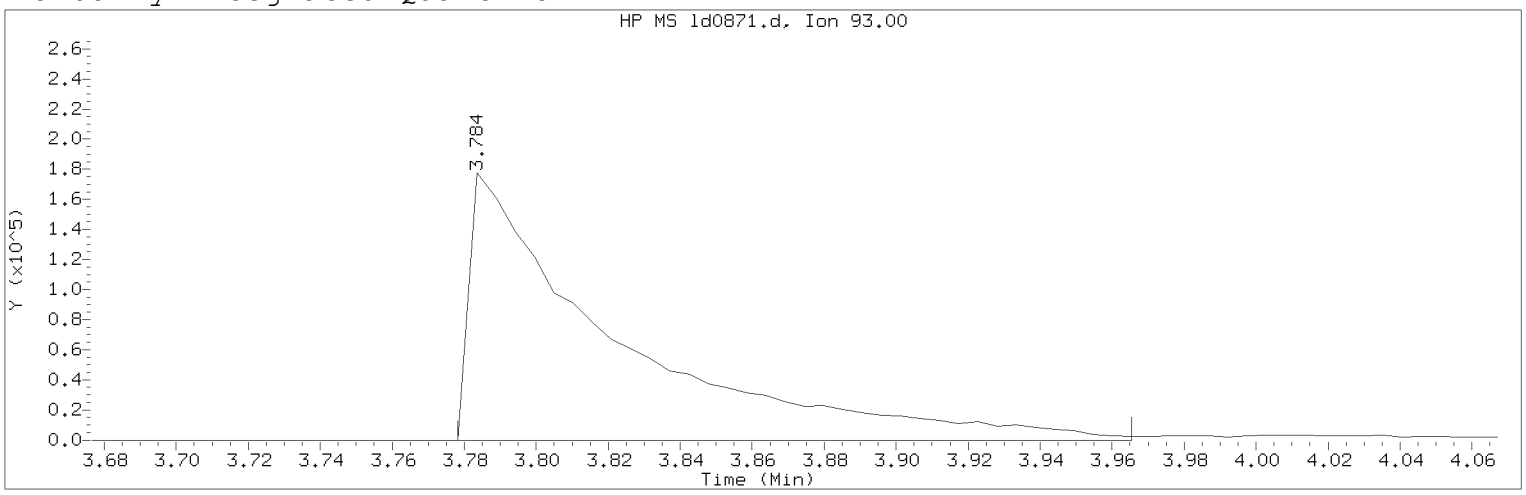
Compound Number	: 6		
Compound Name	: Pyridine		
Scan Number	: 170		
Retention Time (minutes)	: 2.596		
Quant Ion	: 79.00		
Area	: 398129		
On-column Amount (ng/ul)	: 5.9385		
Integration start scan	: 167	Integration stop scan:	203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature used. FID Part 1023

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

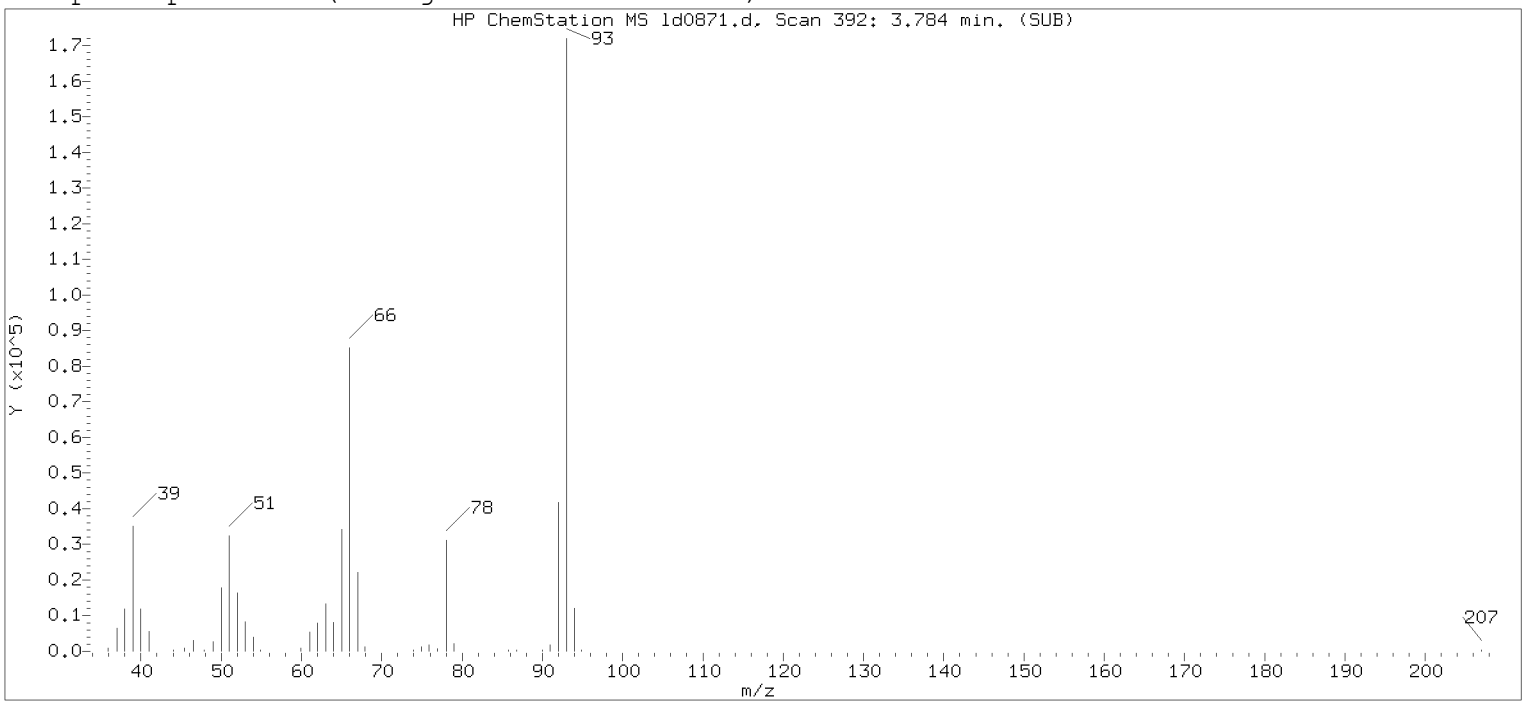
Compound Number : 8
Compound Name : 2-Picoline
Scan Number : 392
Retention Time (minutes) : 3.784
Quant Ion : 93.00
Area (flag) : 486683M
On-Column Amount (ng/ul) : 7.1798
Integration start scan : 390 Integration stop scan: 425
Y at integration start : -101 Y at integration end: -192

Reason for manual integration: improper integration

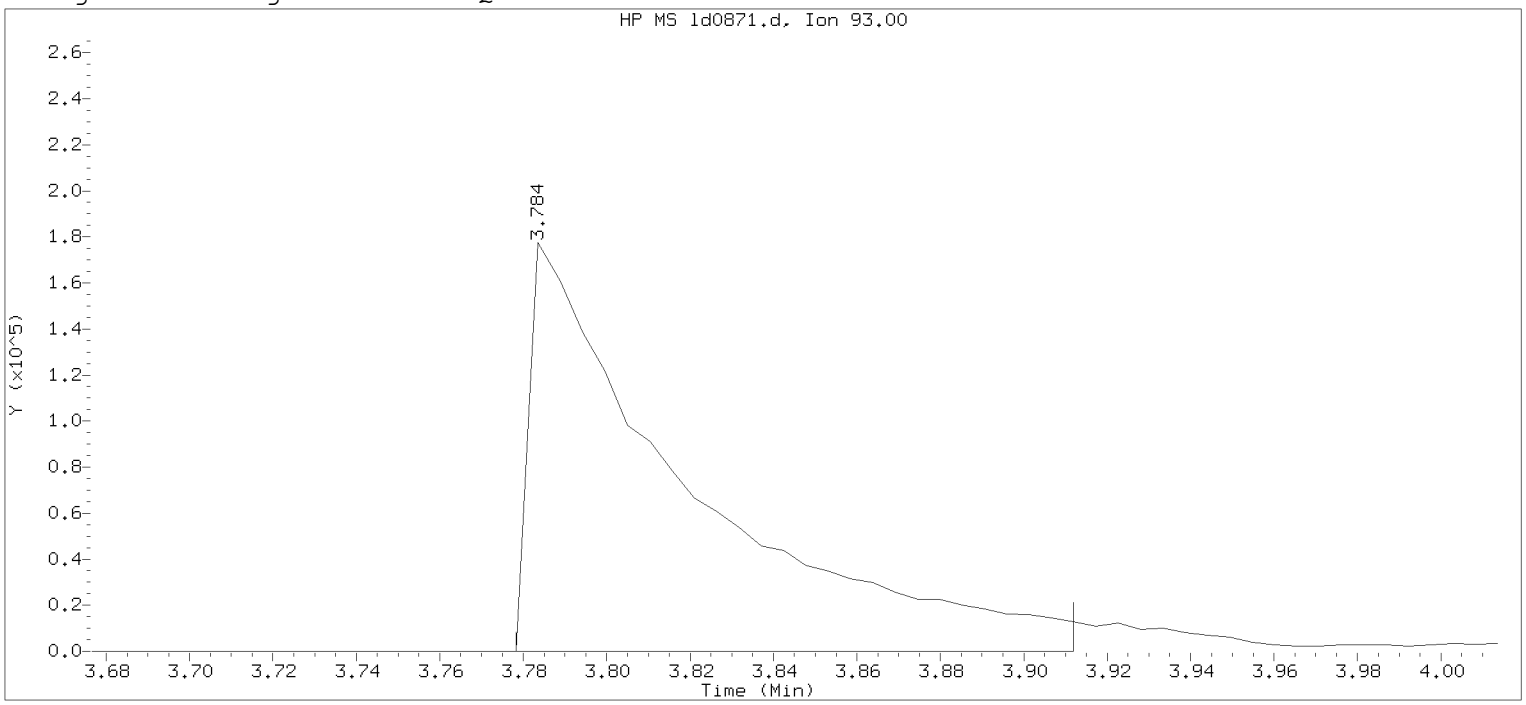
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

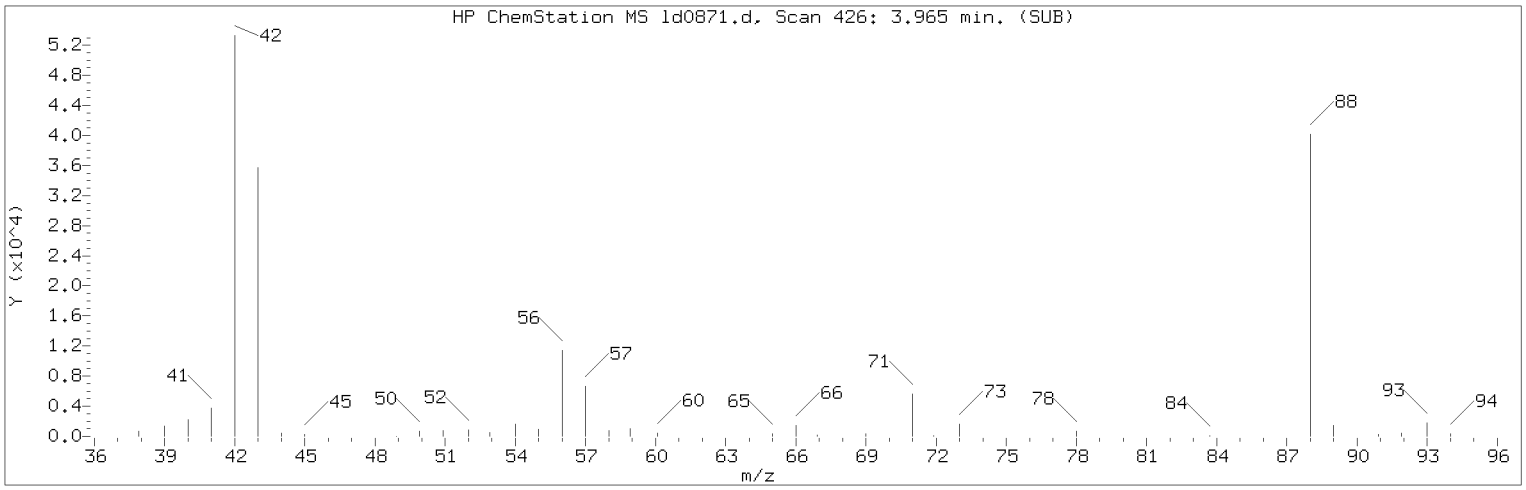
Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:34
Date, time and analyst ID of latest file update: 23-Apr-2018 10:34 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

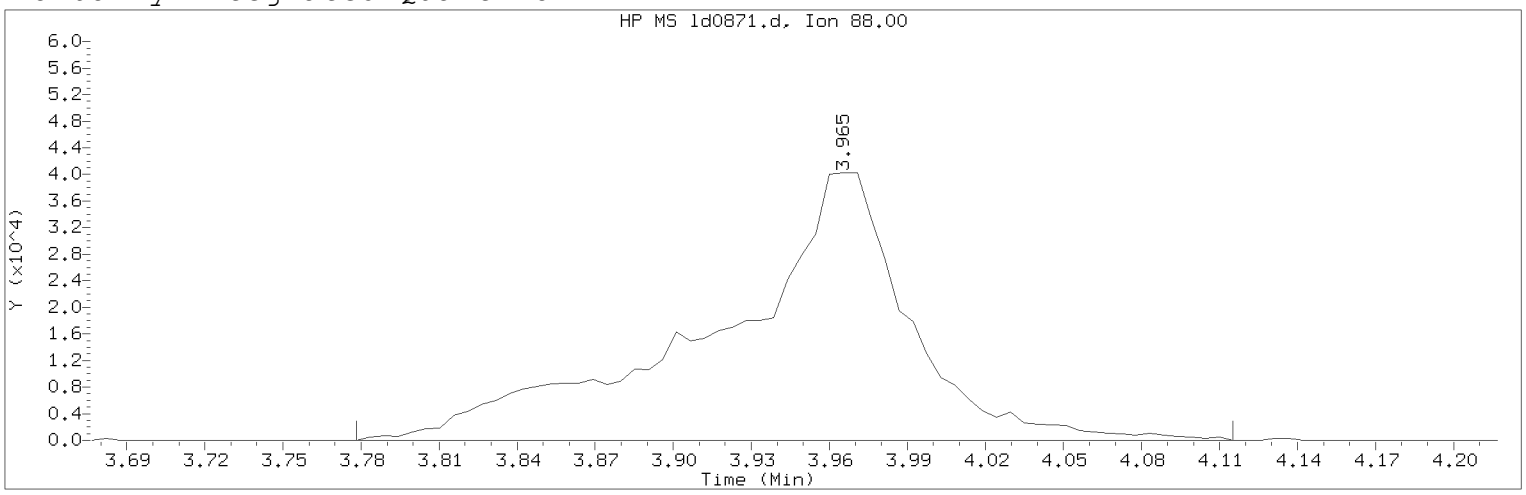
Compound Number	: 8		
Compound Name	: 2-Picoline		
Scan Number	: 392		
Retention Time (minutes)	: 3.784		
Quant Ion	: 93.00		
Area	: 459609		
On-column Amount (ng/ul)	: 6.7804		
Integration start scan	: 390	Integration stop scan:	415
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature used for Pkg 1025

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

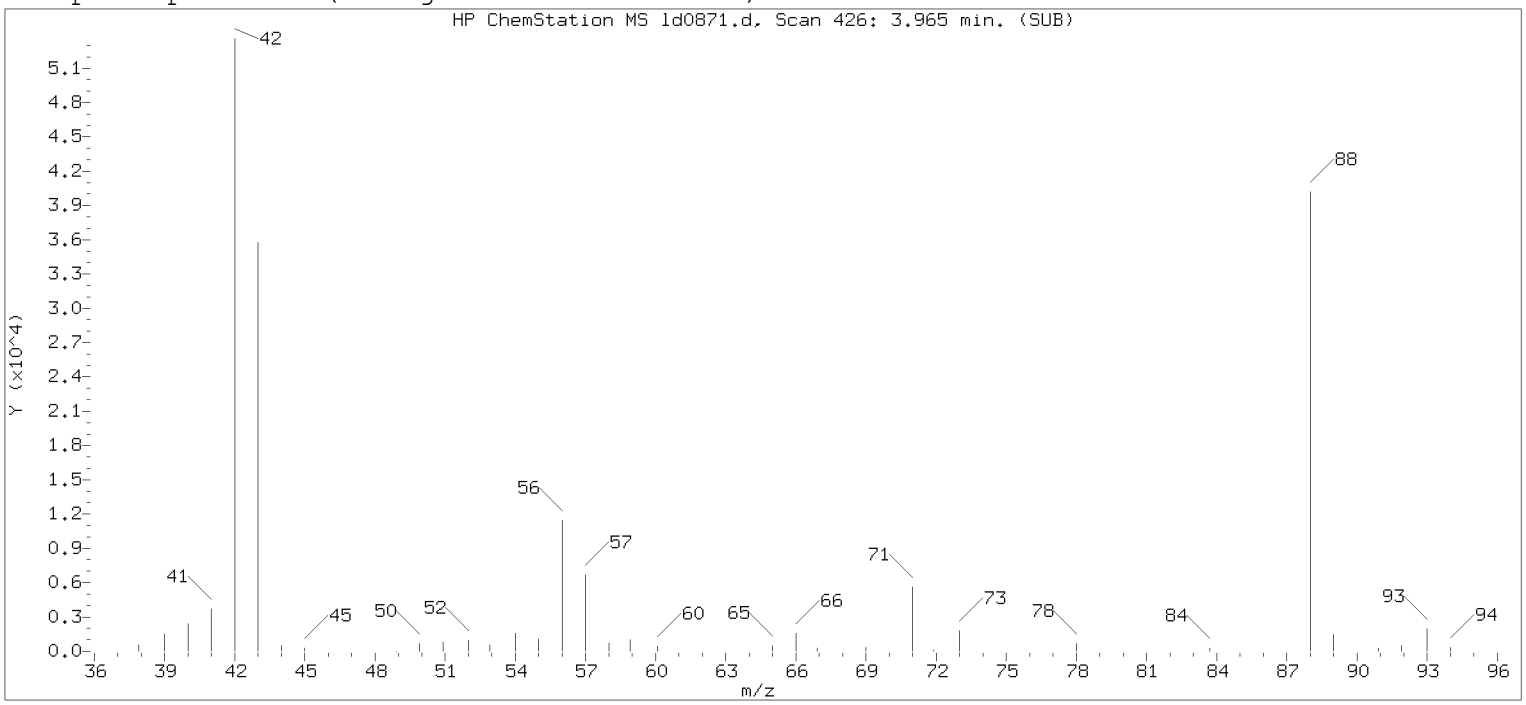
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 426
Retention Time (minutes) : 3.965
Quant Ion : 88.00
Area (flag) : 204943M
On-Column Amount (ng/ul) : 7.5440
Integration start scan : 390 Integration stop scan: 453
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

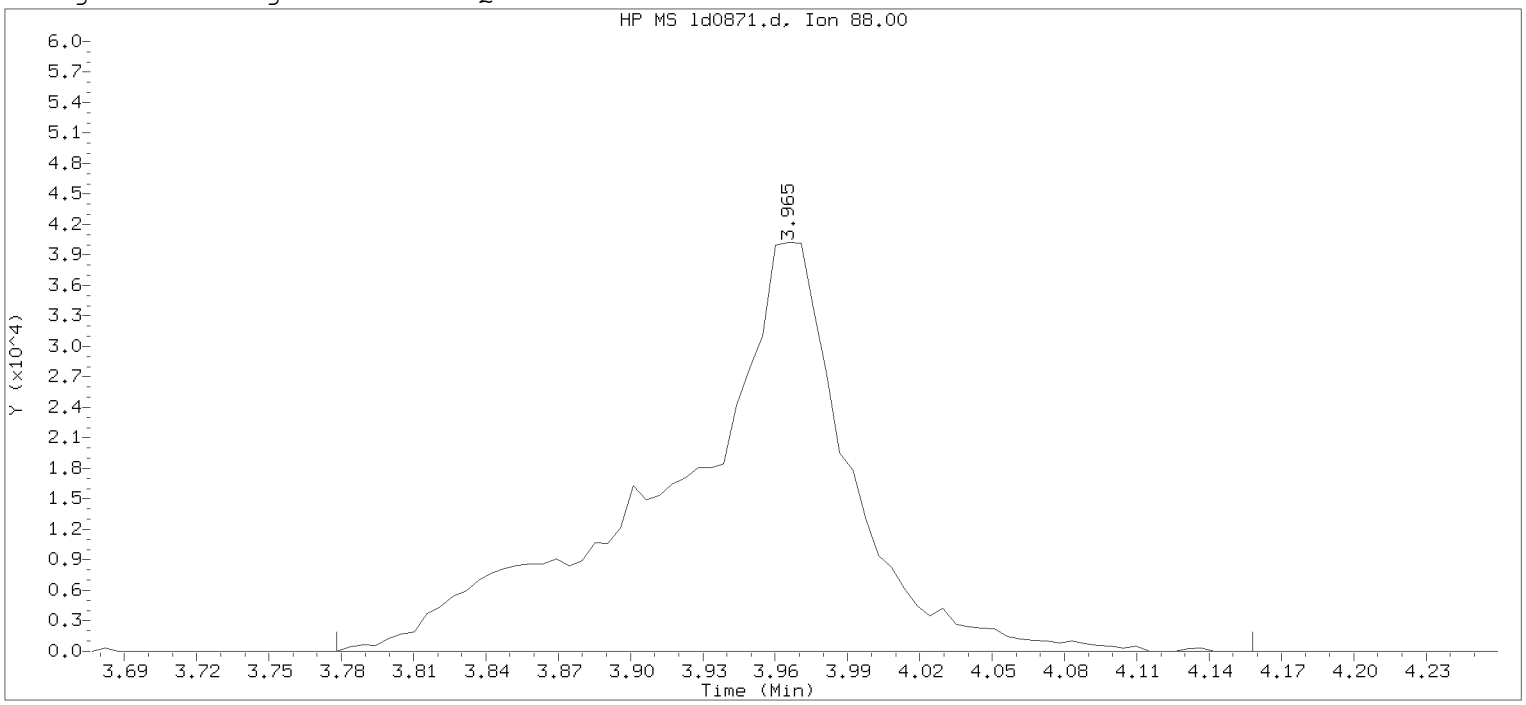
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

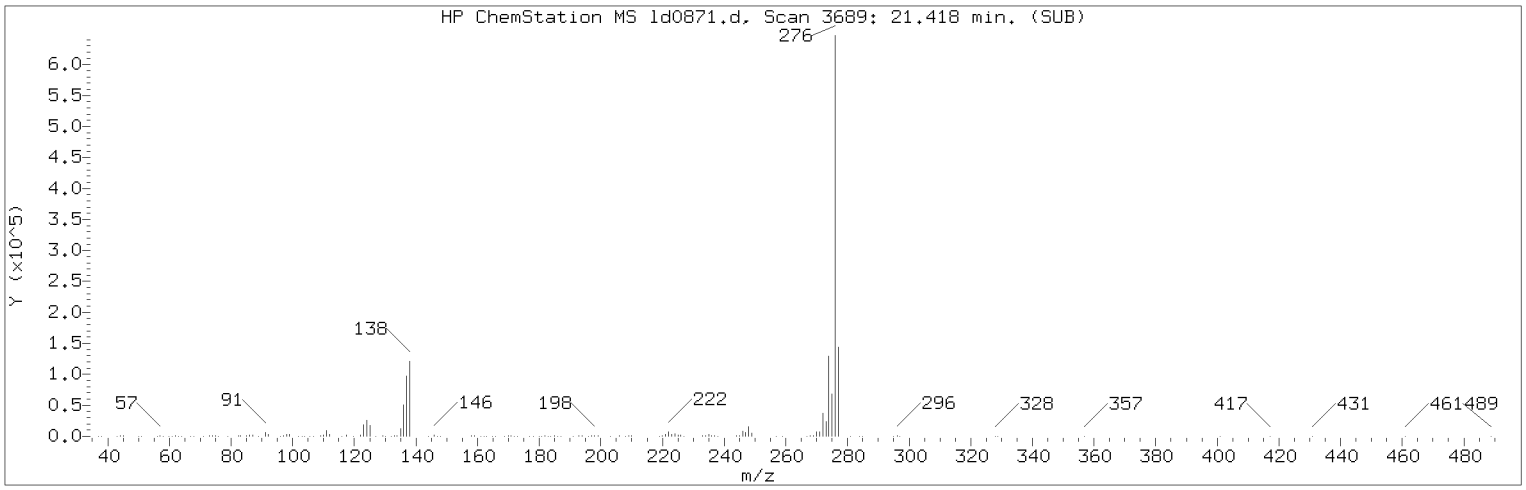
Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:34
Date, time and analyst ID of latest file update: 23-Apr-2018 10:34 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

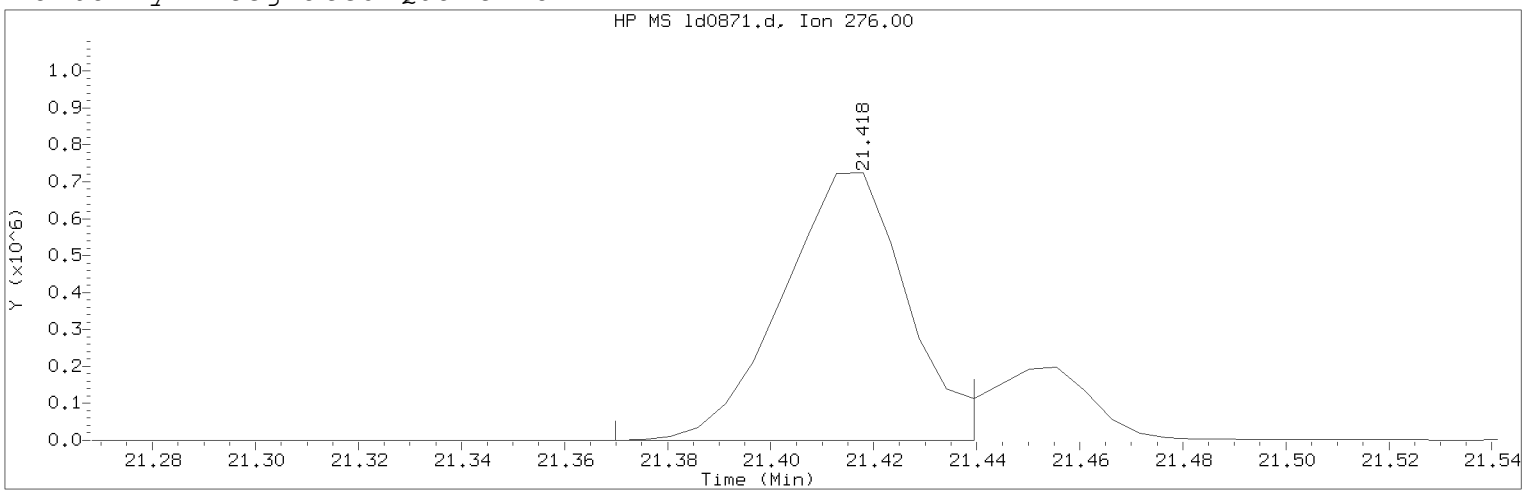
Compound Number	: 9		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 426		
Retention Time (minutes)	: 3.965		
Quant Ion	: 88.00		
Area	: 205113		
On-column Amount (ng/ul)	: 7.5502		
Integration start scan	: 390	Integration stop scan:	461
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature used. FID Plot 1027

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:38
Date, time and analyst ID of latest file update: 23-Apr-2018 10:38 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

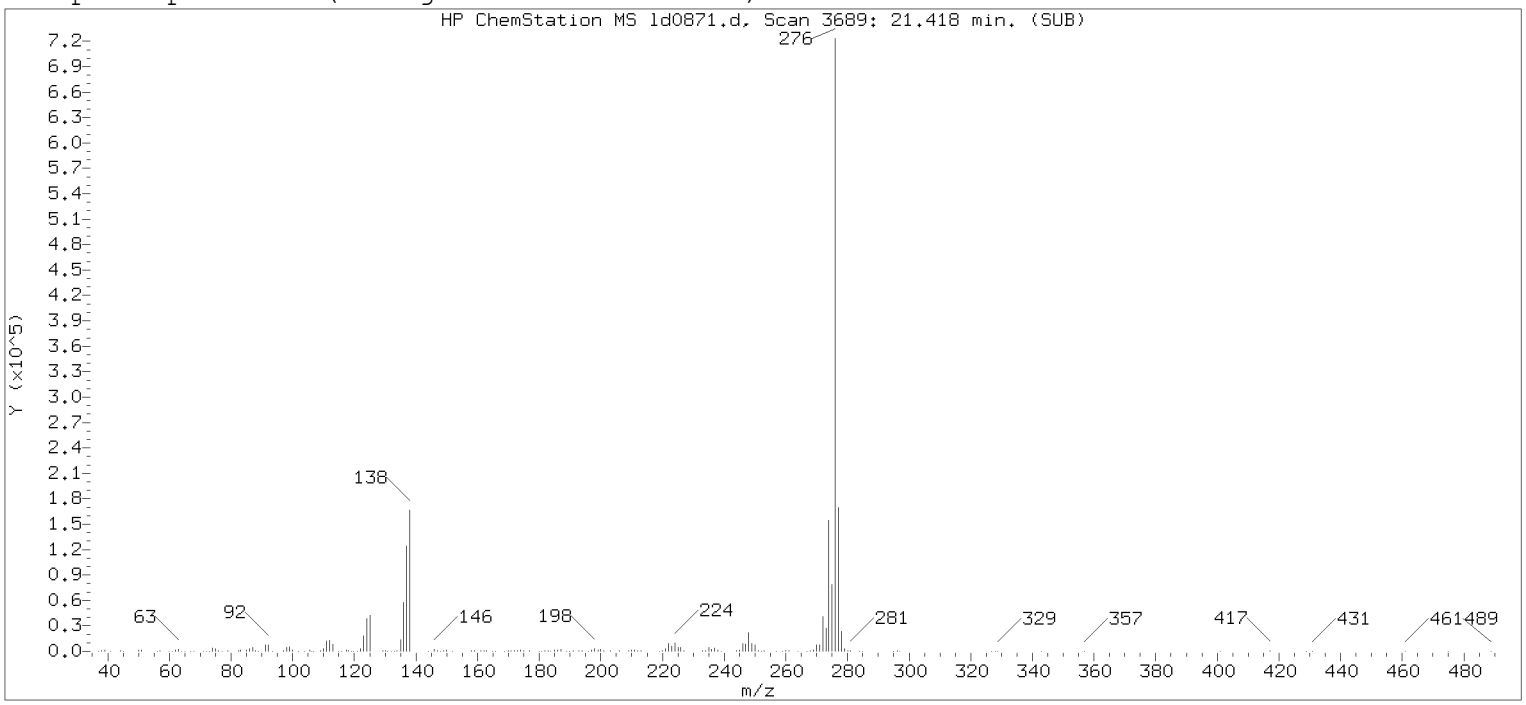
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3689
Retention Time (minutes) : 21.418
Quant Ion : 276.00
Area (flag) : 1222040M
On-Column Amount (ng/ul) : 8.0726
Integration start scan : 3679 Integration stop scan: 3692
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

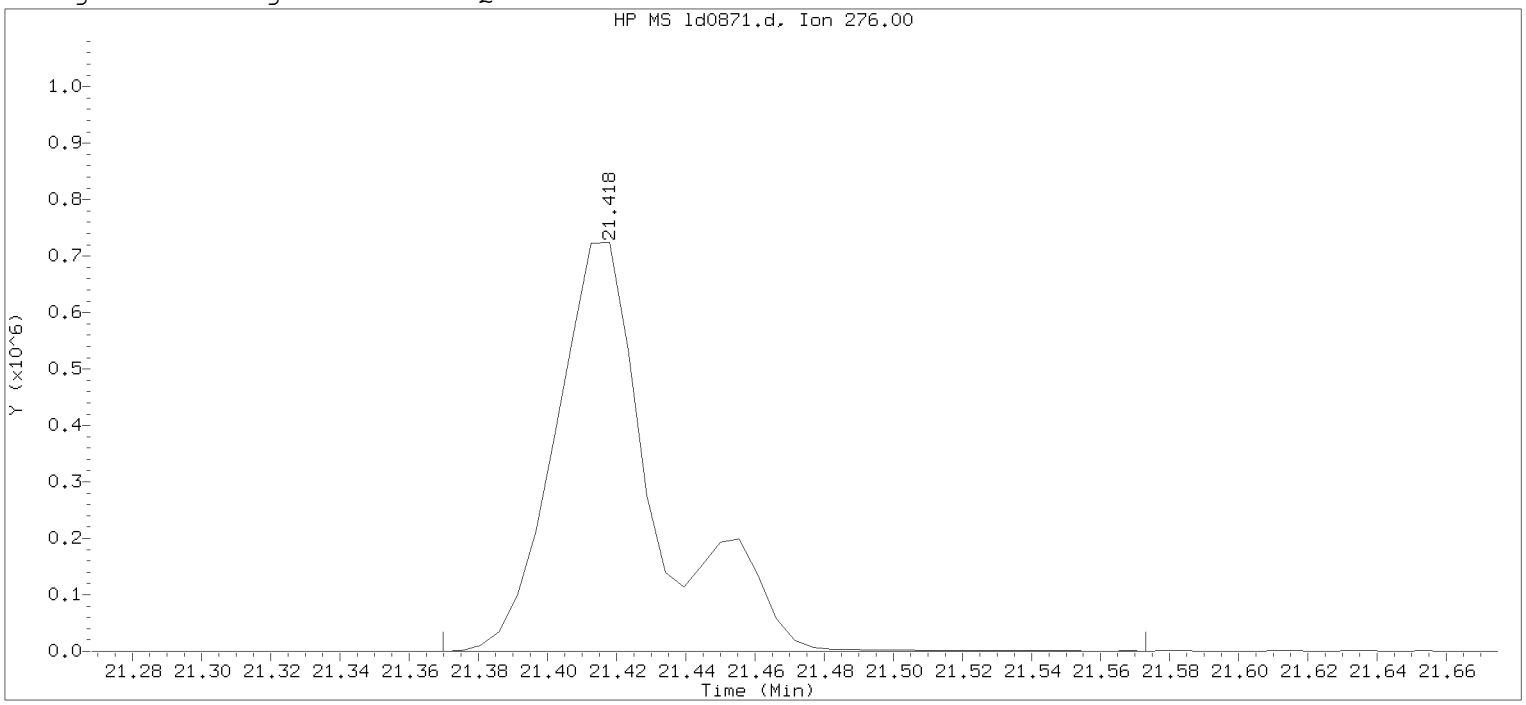
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



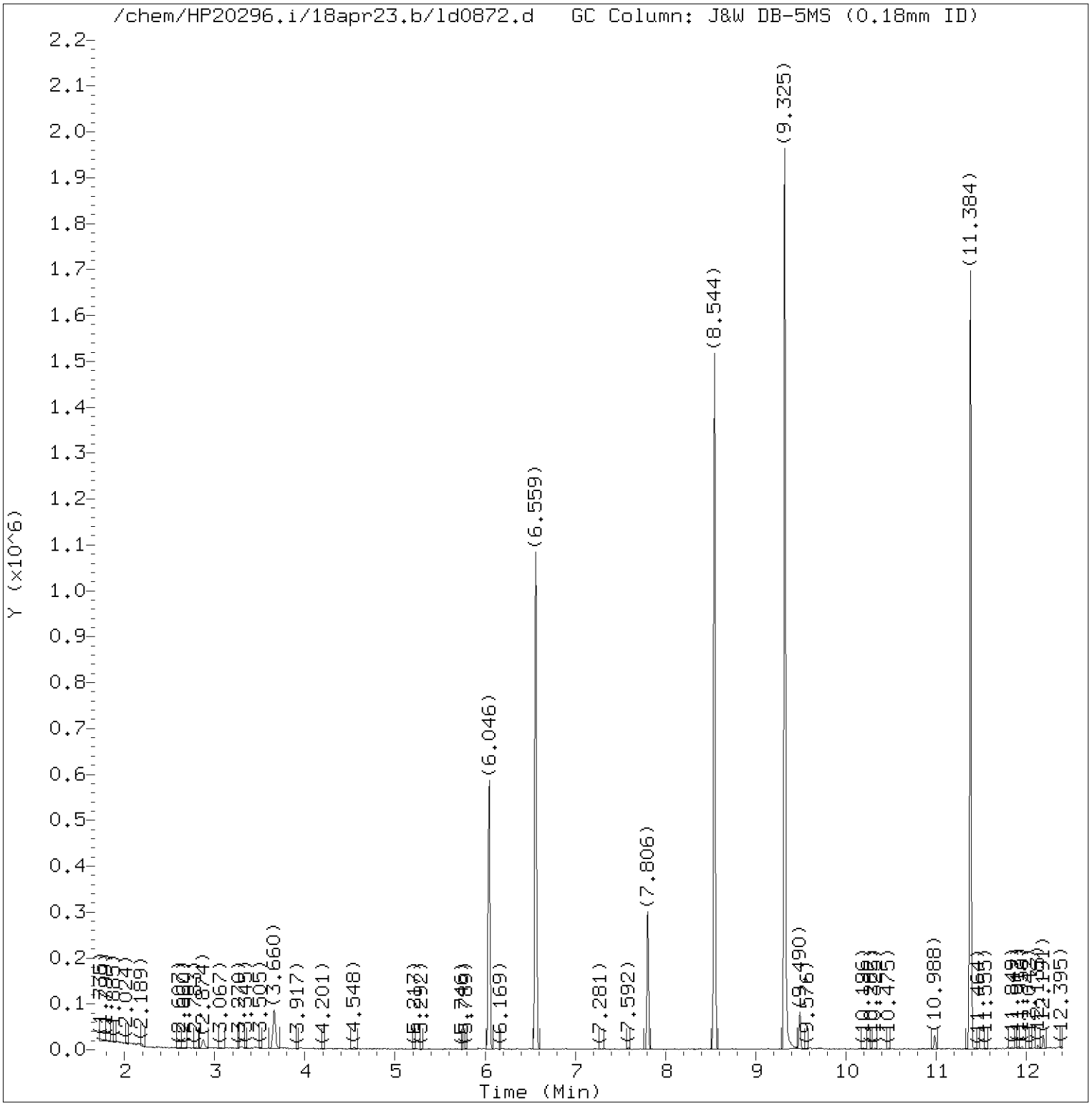
Data File: /chem/HP20296.i/18apr23.b/ld0871.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:00 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-APR-2018 10:34
Date, time and analyst ID of latest file update: 23-Apr-2018 10:34 bhs10208

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3689		
Retention Time (minutes)	: 21.418		
Quant Ion	: 276.00		
Area	: 1475071		
On-column Amount (ng/ul)	: 9.7441		
Integration start scan	: 3679	Integration stop scan:	3717
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/23/2018 at 12:02.
Target 3.5 esignature used for this report



Total Ion Chromatogram (TIC)

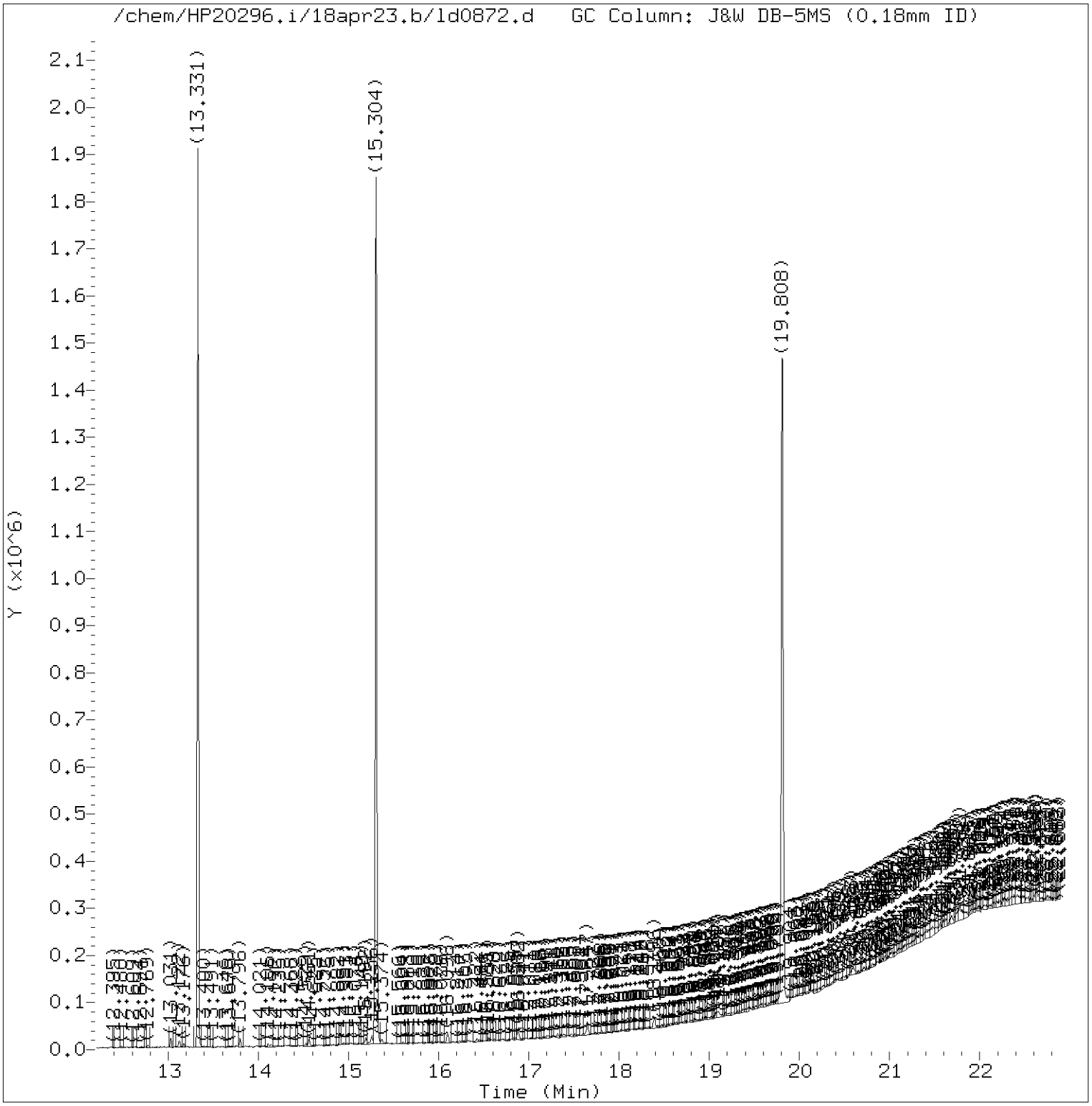
Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0872.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0872.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0872.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 10:43 Analyst ID: bhs10208

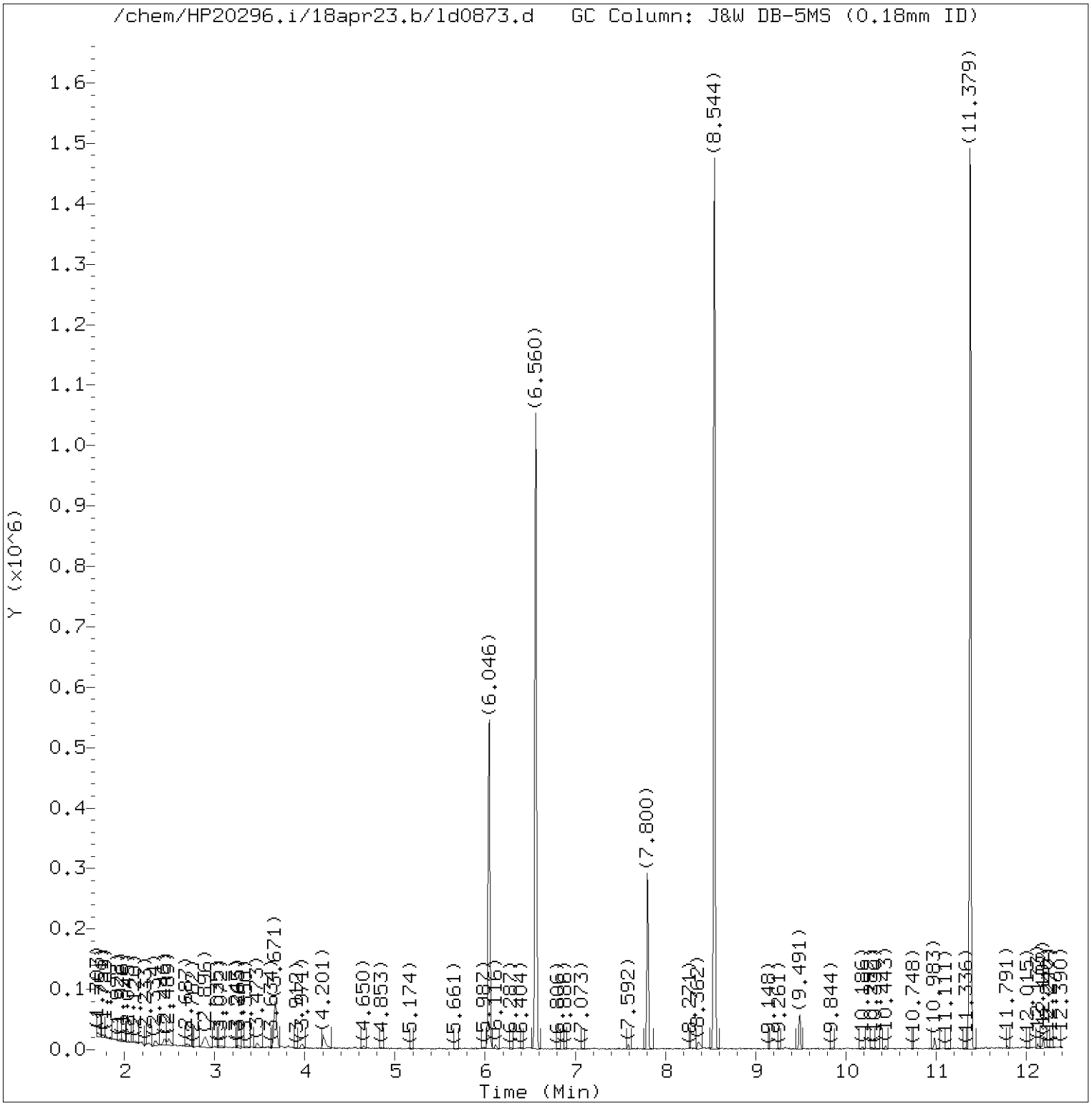
Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.559	152	215260	5.000
68)*Naphthalene-d8	(2)	8.544	136	792767	5.000
84) 1,4-Phenylenediamine	(2)	9.325	108	756486	11.540
118)*Acenaphthene-d10	(3)	11.384	164	394553	5.000
158)*Phenanthrene-d10	(4)	13.331	188	785241	5.000
180)*Pyrene-d10	(5)	15.304	212	820264	5.000
218)*Perylene-d12	(6)	19.813	264	730010	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

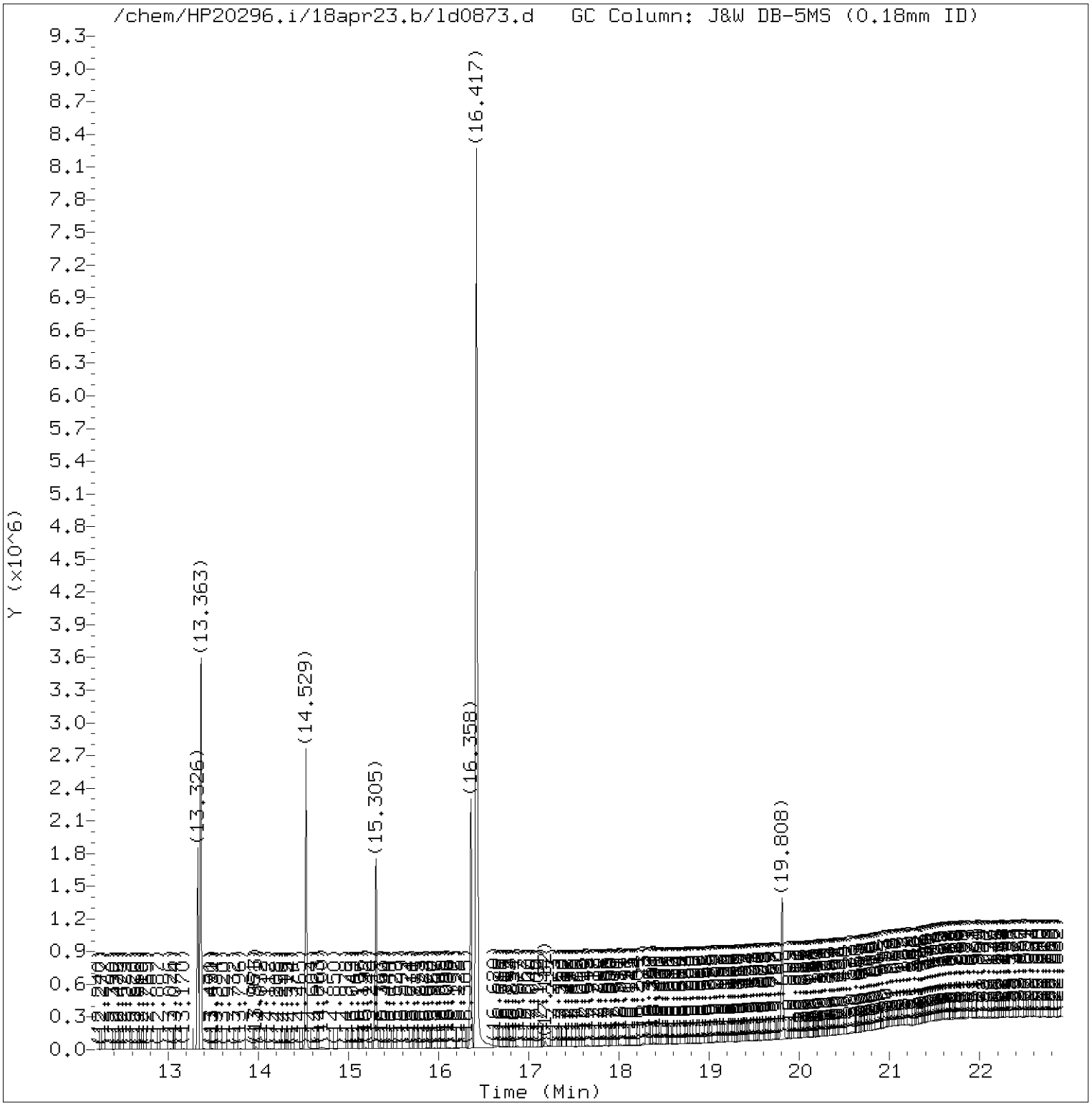
Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0873.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 11:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: abc
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0873.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 11:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: abc
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0873.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 11:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: abc
Calibration date and time: 23-APR-2018 12:01
Date, time and analyst ID of latest file update: 23-Apr-2018 12:01 bhs10208

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.560	152	202963	5.000
68)*Naphthalene-d8	(2)	8.544	136	755722	5.000
118)*Acenaphthene-d10	(3)	11.379	164	371412	5.000
158)*Phenanthrene-d10	(4)	13.326	188	741196	5.000
167) Disulfoton	(4)	13.363	88	774598	13.135
175) Methapyrilene	(4)	14.529	97	611162	12.522
180)*Pyrene-d10	(5)	15.305	212	764406	5.000
194) Famphur	(5)	16.358	218	719740	12.889
195) Kepone	(5)	16.417	272	1029684	61.237
218)*Perylene-d12	(6)	19.808	264	674506	5.000

* = Compound is an internal standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 12:02.
Target 3.5 esignature user ID: bhs10208

Data File: /chem/HP20296.i/18apr24a.b/ld0980.d

Date : 24-APR-2018 19:23

Client ID: DFTPP

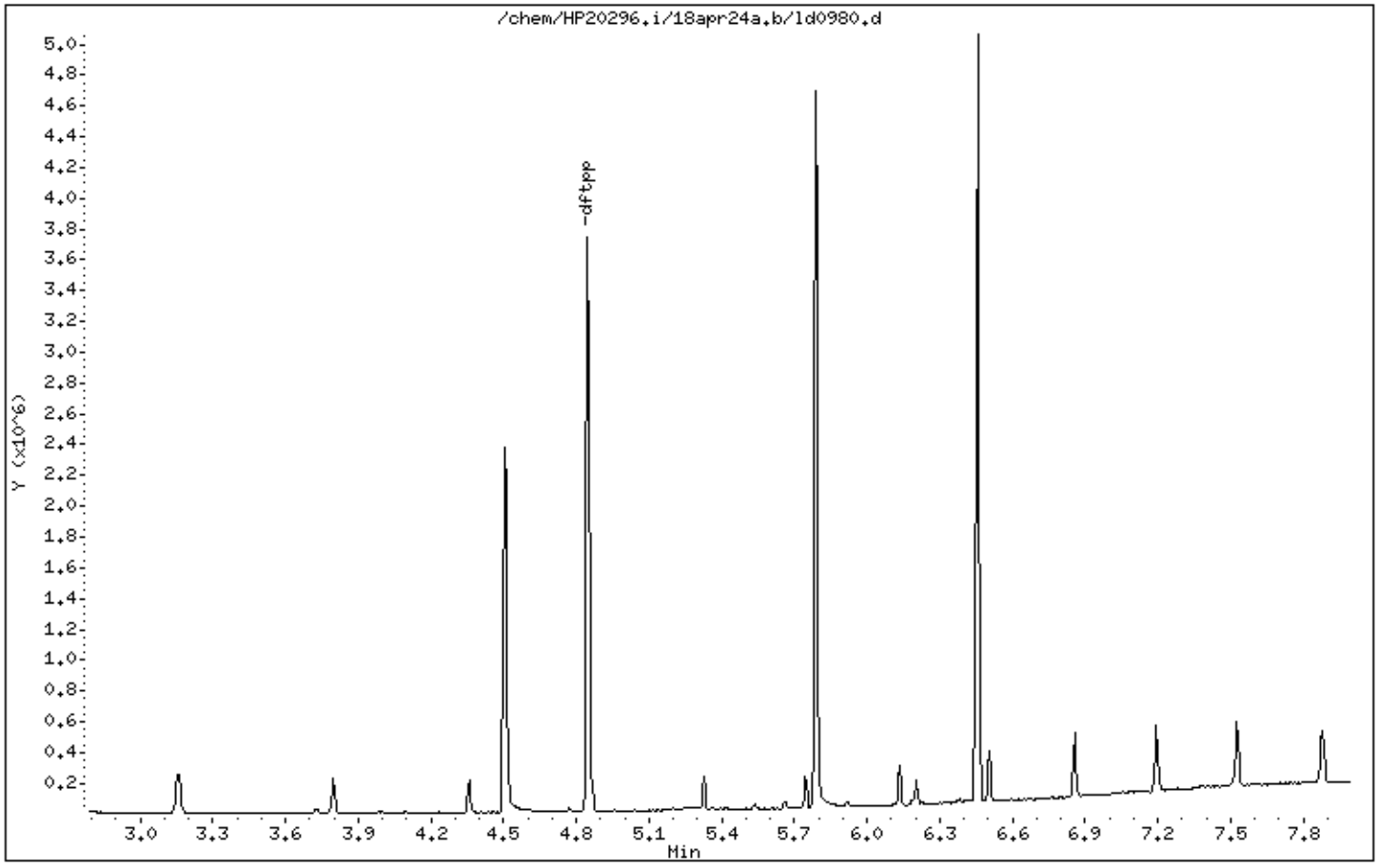
Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by William H Saadeh on 04/24/2018 at 20:48.
Target 3.5 esignature user ID: whs02991

Data File: /chem/HP20296.i/18apr24a.b/ld0980.d

Date : 24-APR-2018 19:23

Client ID: DFTPP

Instrument: HP20296.i

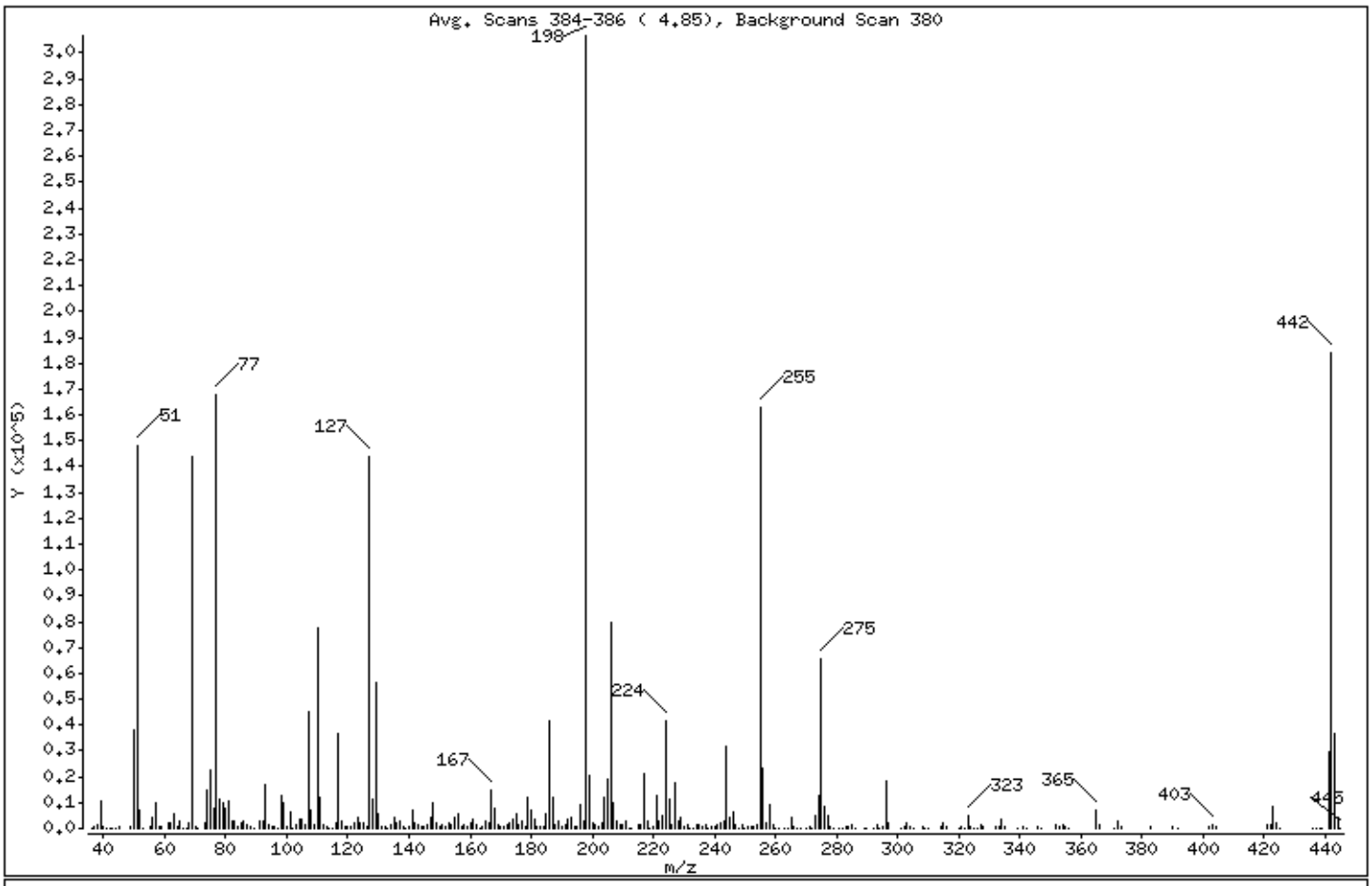
Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.20
68	Less than 2.00% of mass 69	0.76 (1.63)
69	Mass 69 relative abundance	46.92
70	Less than 2.00% of mass 69	0.25 (0.54)
127	10.00 - 80.00% of mass 198	46.94
197	Less than 2.00% of mass 198	1.00
199	5.00 - 9.00% of mass 198	6.76
275	10.00 - 60.00% of mass 198	21.44
365	Greater than 1.00% of mass 198	2.23
441	0.01 - 24.00% of mass 442	9.71 (16.21)
442	50.00 - 99.99% of mass 198	59.90
443	15.00 - 24.00% of mass 442	12.06 (20.13)

Digitally signed by William H Saadeh on 04/24/2018 at 20:48.
Target 3.5 esignature user ID: whs02991

Date : 24-APR-2018 19:23

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0980.d
Spectrum: Avg. Scans 384-386 (4.85), Background Scan 380
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	41	120.00	535	197.00	3076	277.00	4999
37.00	426	121.00	356	198.00	306688	278.00	905
38.00	1684	122.00	2459	199.00	20744	279.00	84
39.00	10752	123.00	4051	200.00	1930	281.00	311
40.00	493	124.00	1985	201.00	1233	282.00	345
41.00	175	125.00	2117	202.00	435	283.00	608
42.00	87	126.00	1008	203.00	2057	284.00	412
43.00	146	127.00	143936	204.00	11664	285.00	1155
44.00	178	128.00	11618	205.00	18952	286.00	219
45.00	490	129.00	56288	206.00	79800	289.00	223
49.00	1000	130.00	5297	207.00	9616	290.00	119
50.00	38312	131.00	818	208.00	2780	292.00	233
51.00	147840	132.00	664	209.00	1102	293.00	1334
52.00	7342	133.00	221	210.00	1374	294.00	280
53.00	321	134.00	1754	211.00	2920	295.00	562
55.00	629	135.00	4260	212.00	143	296.00	18368
56.00	4310	136.00	2080	213.00	116	297.00	2385
57.00	9859	137.00	2556	215.00	1098	301.00	277
58.00	472	138.00	447	216.00	1748	302.00	368
59.00	376	139.00	350	217.00	21208	303.00	2143
61.00	2170	140.00	770	218.00	2931	304.00	718
62.00	2107	141.00	7271	219.00	300	305.00	96
63.00	5628	142.00	2226	220.00	360	308.00	363
64.00	990	143.00	1689	221.00	12694	309.00	222
65.00	2728	144.00	583	222.00	3005	310.00	223
66.00	123	145.00	581	223.00	4985	314.00	761
67.00	223	146.00	1261	224.00	41664	315.00	1900
68.00	2341	147.00	4152	225.00	10988	316.00	1006
69.00	143872	148.00	10095	226.00	1595	320.00	99
70.00	776	149.00	1992	227.00	17936	321.00	518
71.00	133	150.00	525	228.00	2695	322.00	351
73.00	2282	151.00	1069	229.00	3954	323.00	5205
74.00	14501	152.00	570	230.00	492	324.00	971
75.00	22664	153.00	2284	231.00	1633	325.00	108
76.00	7542	154.00	1658	232.00	281	326.00	122

Digitally signed by William H Saadeh on 04/24/2018 at 20:48.
Target 3.5 esignature user ID: whs02991

Date : 24-APR-2018 19:23

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

Data File: ld0980.d
Spectrum: Avg. Scans 384-386 (4.85), Background Scan 380
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	167552	155.00	4234	233.00	294	327.00	1129
78.00	10967	156.00	5640	234.00	1427	328.00	652
79.00	10191	157.00	1026	235.00	1435	332.00	452
80.00	7523	158.00	1346	236.00	814	333.00	546
81.00	10792	159.00	1056	237.00	1601	334.00	3457
82.00	2758	160.00	2354	238.00	232	335.00	949
83.00	2525	161.00	3755	239.00	687	339.00	92
84.00	502	162.00	1072	240.00	452	341.00	583
85.00	2011	163.00	328	241.00	1305	342.00	213
86.00	3104	164.00	355	242.00	2030	346.00	999
87.00	1621	165.00	2599	243.00	2827	347.00	252
88.00	546	166.00	2123	244.00	31656	352.00	1502
89.00	193	167.00	14731	245.00	4270	353.00	973
91.00	2497	168.00	7550	246.00	6202	354.00	1380
92.00	2946	169.00	1204	247.00	1261	355.00	445
93.00	16608	170.00	372	248.00	308	356.00	88
94.00	1125	171.00	764	249.00	1237	365.00	6848
95.00	826	172.00	1363	250.00	304	366.00	1110
96.00	815	173.00	1810	251.00	422	371.00	328
97.00	217	174.00	3210	252.00	552	372.00	2575
98.00	12941	175.00	5851	253.00	936	373.00	570
99.00	10056	176.00	1684	254.00	1192	383.00	646
100.00	779	177.00	2748	255.00	162624	390.00	457
101.00	6061	178.00	993	256.00	23504	392.00	116
102.00	336	179.00	11798	257.00	2175	402.00	711
103.00	1432	180.00	7311	258.00	9342	403.00	1226
104.00	3691	181.00	3584	259.00	1521	404.00	446
105.00	3591	182.00	683	260.00	282	421.00	1187
106.00	1092	183.00	359	261.00	289	422.00	1381
107.00	45128	184.00	1015	263.00	98	423.00	8666
108.00	6713	185.00	5374	264.00	245	424.00	2086
109.00	1304	186.00	41296	265.00	4000	425.00	350
110.00	77888	187.00	12012	266.00	566	436.00	220
111.00	11709	188.00	1327	267.00	240	437.00	233
112.00	1658	189.00	2799	268.00	65	438.00	256

Digitally signed by William H Saadeh on 04/24/2018 at 20:48.
Target 3.5 esignature user ID: whs02991

Date : 24-APR-2018 19:23

Client ID: DFTPP Instrument: HP20296.i

Sample Info: DFTPP;RVDFTPP0878;1;3;DFTPP;

Operator: whs02991

Column phase: DB-5MS Column diameter: 0.18

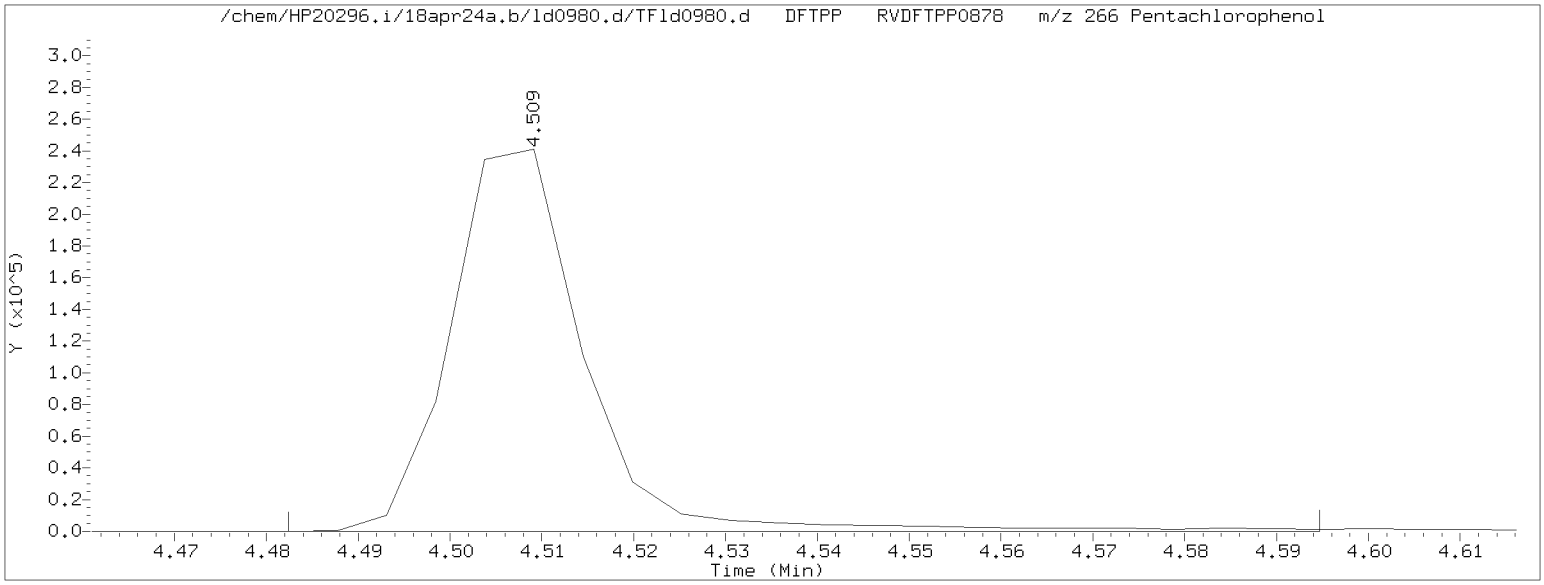
Data File: ld0980.d
Spectrum: Avg. Scans 384-386 (4.85), Background Scan 380
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	455	190.00	571	270.00	197	439.00	208
114.00	115	191.00	1513	271.00	353	441.00	29784
115.00	201	192.00	3576	272.00	345	442.00	183680
116.00	2356	193.00	4246	273.00	5013	443.00	36976
117.00	36760	194.00	1015	274.00	12462	444.00	3279
118.00	2695	195.00	843	275.00	65760	445.00	306
119.00	400	196.00	9165	276.00	8754		

Digitally signed by William H Saadeh on 04/24/2018 at 20:48.
Target 3.5 esignature user ID: whs02991

Assessment of GC Column Performance and Injection Port Inertness for

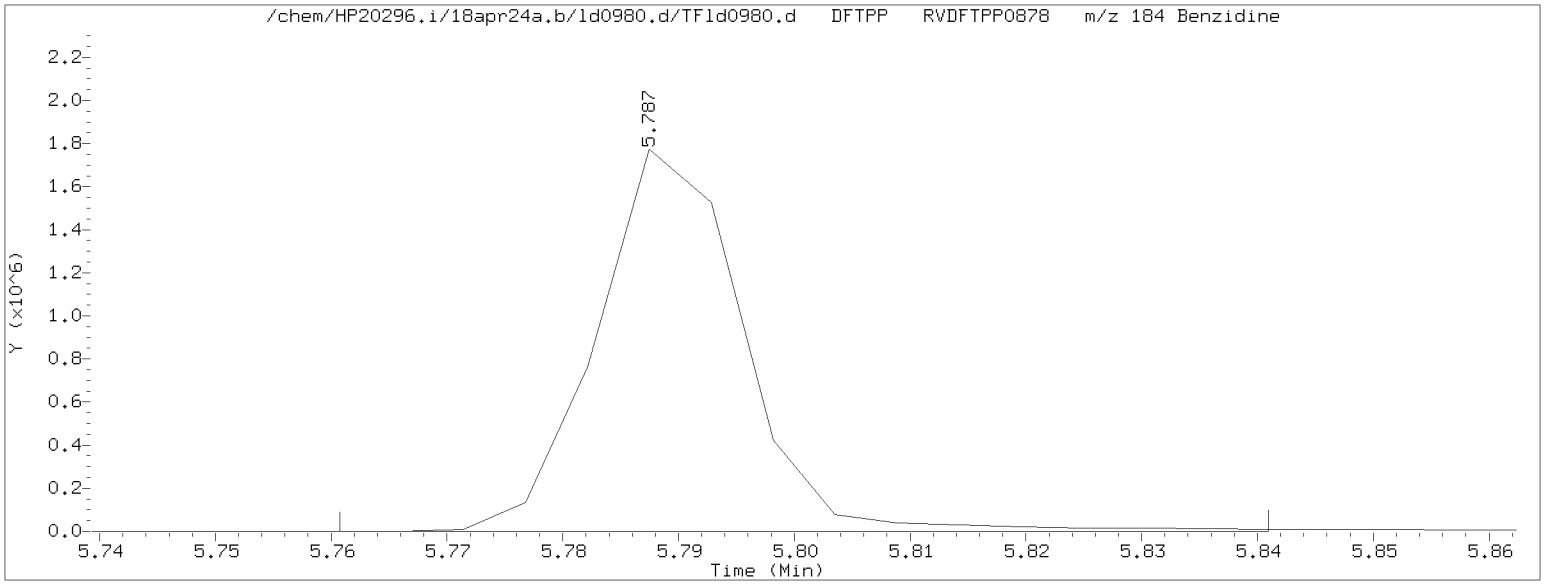
Instrument ID: HP20296.i Injection Date: 24-APR-2018 19:23 Operator: whs02991



Pentachlorophenol EICP peak height = 241152 EICP peak height at 10% = 24115 Pentachlorophenol EICP area = 243367

Pentachlorophenol EICP peak apex (min.) = 4.509
RT at 10% of front half of EICP (min.) = 4.494 'Front' peak width (min.) = 0.0149833333
RT at 10% of back half of EICP (min.) = 4.522 'Tailing' peak width (min.) = 0.0124666667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0124666667}{0.0149833333} = 0.832$$



Benzidine EICP peak height = 1774105 EICP peak height at 10% = 177410 Benzidine EICP area = 1552087

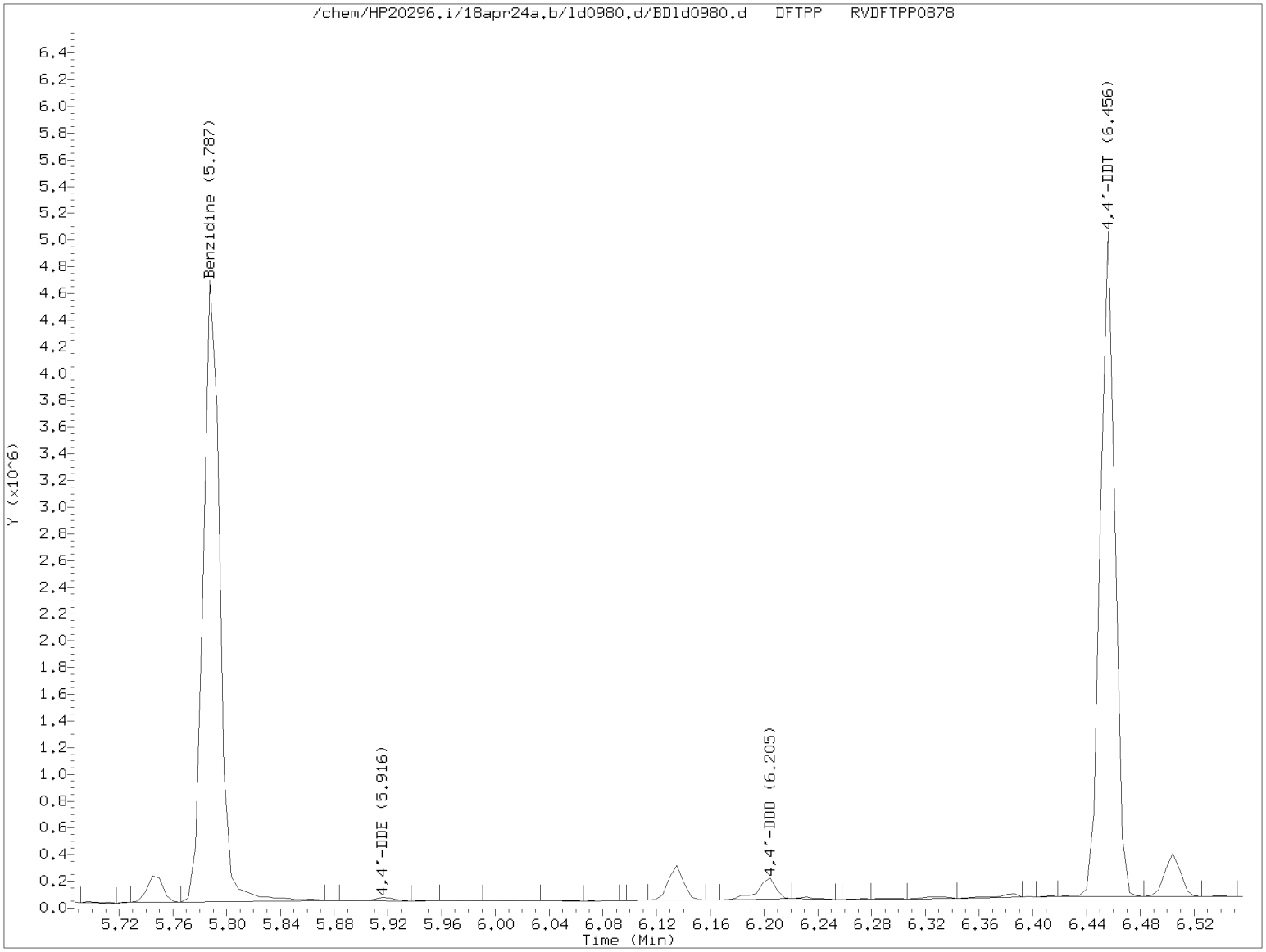
Benzidine EICP peak apex (min.) = 5.787
RT at 10% of front half of EICP (min.) = 5.777 'Front' peak width (min.) = 0.0102833333
RT at 10% of back half of EICP (min.) = 5.802 'Tailing' peak width (min.) = 0.0144666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0144666667}{0.0102833333} = 1.407$$

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 16:25. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

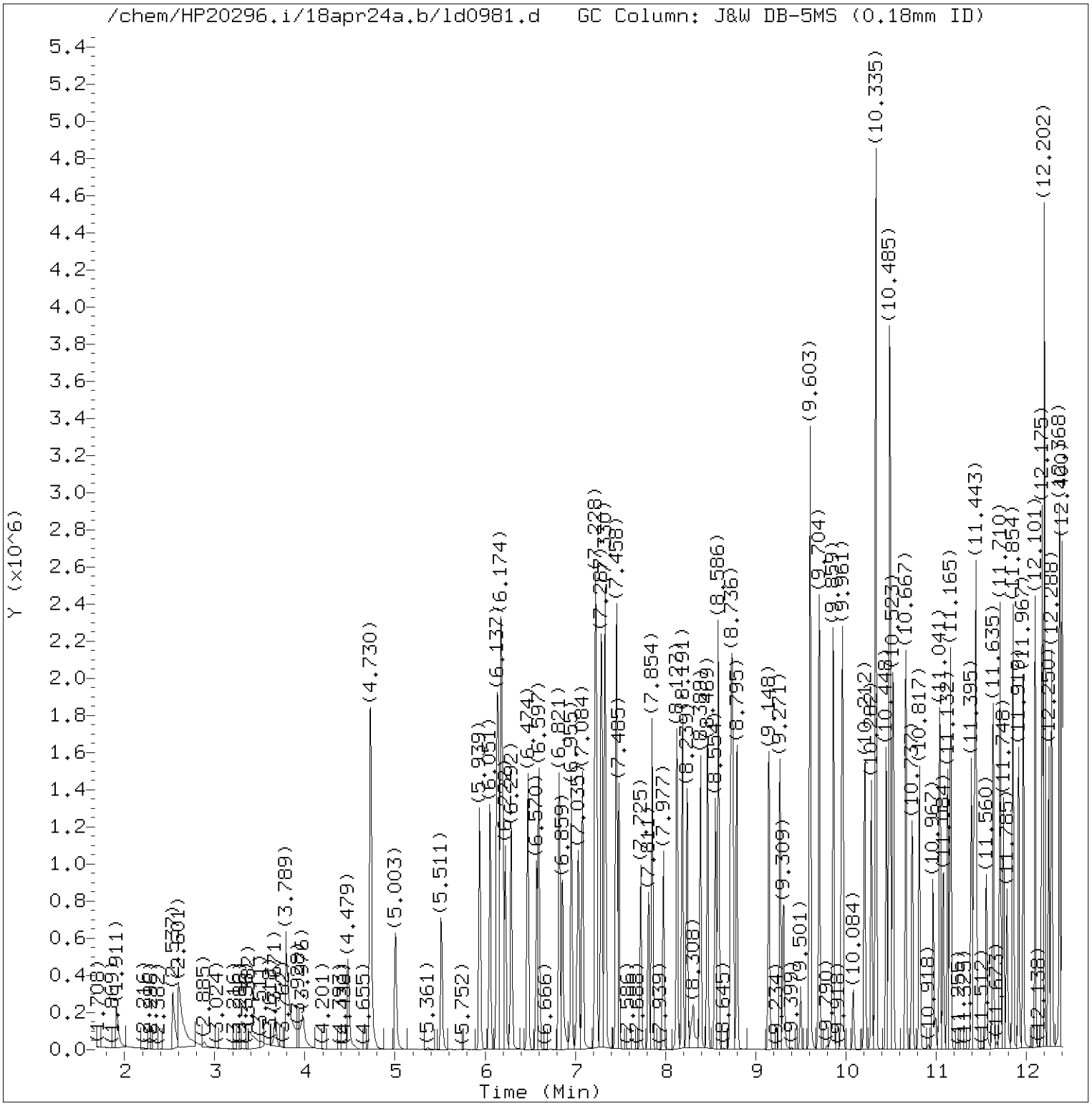
Instrument ID: HP20296.i Injection Date: 24-APR-2018 19:23 Operator: whs02991



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{22809 + 147676}{22809 + 147676 + 3775402} \times 100 = 4.3$$

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 16:25. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

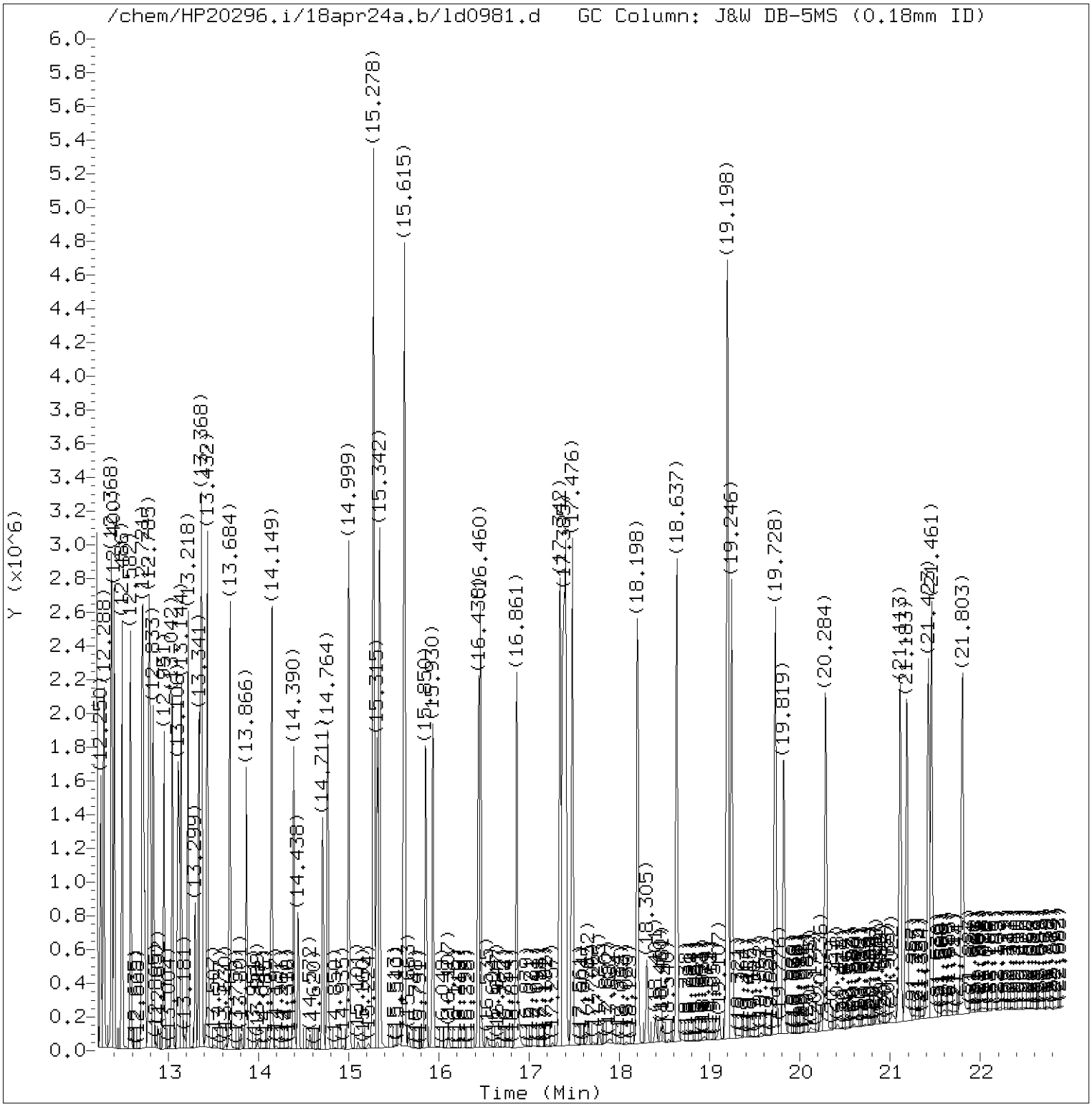
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.911	88	175147	6.874
5) N-Nitrosodimethylamine	(1)	2.537	74	298946	7.706
6) Pyridine	(1)	2.601	79	435053	6.285
8) 2-Picoline	(1)	3.789	93	482390	6.892
9) N-Nitrosomethylethylamine	(1)	3.976	88	188418	6.717
10) Methyl methanesulfonate	(1)	4.479	80	260853	7.678
12)$2-Fluorophenol	(1)	4.730	112	812135	15.220
14) N-Nitrosodiethylamine	(1)	5.003	102	200422	7.704
16) Ethyl methanesulfonate	(1)	5.511	109	211987	7.483
43) Total Cresols	(1)			805240	15.199
17) Benzaldehyde	(1)	5.939	77	398967	7.536
20) Aniline	(1)	6.131	93	707524	7.617
21) a-methylstyrene	(1)	6.153	118	141854	6.991
18)$Phenol-d6	(1)	6.174	99	1070480	15.299
19) Phenol	(1)	6.196	94	571581	7.096
23) bis(2-Chloroethyl)ether	(1)	6.222	93	462581	7.714
24) 2-Chlorophenol	(1)	6.292	128	396254	7.580
25) 1,3-Dichlorobenzene	(1)	6.474	146	446068	7.559
26)*1,4-Dichlorobenzene-d4	(1)	6.570	152	194873	5.000
27) 1,4-Dichlorobenzene	(1)	6.597	146	457418	7.660
29) 1,2-Dichlorobenzene	(1)	6.821	146	434654	7.644
28) Benzyl alcohol	(1)	6.859	108	217155	6.224
31) Indene	(1)	6.955	115	574683	6.898
35) bis(2-Chloroisopropyl)ether	(1)	7.035	45	705340	8.285
34) 2,2'-oxybis(1-Chloropropane)	(1)	7.035	45	705340	8.285
32) 2-Methylphenol	(1)	7.084	108	394968	7.663
36) N-Nitrosopyrrolidine	(1)	7.223	100	221844	7.861
37) Acetophenone	(1)	7.223	105	635106	8.081
39) N-Nitroso-di-n-propylamine	(1)	7.239	70	355020	7.924
41) o-Toluidine	(1)	7.287	106	687715	7.545
40) N-Nitrosomorpholine	(1)	7.292	56	282358	7.541
44) Hexachloroethane	(1)	7.330	117	190108	7.467
38) 4-Methylphenol	(1)	7.330	108	410272	7.536
100) Isosafrole	(3)			356059	7.532
45)$Nitrobenzene-d5	(2)	7.458	82	1031500	16.617
46) Nitrobenzene	(2)	7.485	77	523879	8.274
50) N-Nitrosopiperidine	(2)	7.725	114	205243	7.888
52) Isophorone	(2)	7.854	82	892188	8.062
53) 2-Nitrophenol	(2)	7.977	139	204846	8.007
125) 2,4_2,6-Dinitrotoluenes	(3)			446816	15.467

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 2,4-Dimethylphenol	(2)	8.127	107	431575	7.869
59) O,O,O-Triethylphosphorothioate	(2)	8.191	198	207870	7.657
57) bis(2-Chloroethoxy)methane	(2)	8.239	93	558301	7.761
58) Benzoic acid	(2)	8.308	105	183802	7.077
62) 2,4-Dichlorophenol	(2)	8.389	162	341481	7.996
65) 1,2,4-Trichlorobenzene	(2)	8.469	180	380144	7.989
68)*Naphthalene-d8	(2)	8.554	136	719719	5.000
69) Naphthalene	(2)	8.586	128	1179234	7.929
72) Hexachloropropene	(2)	8.720	213	274172	7.963
71) 2,6-Dichlorophenol	(2)	8.736	162	340788	8.058
70) 4-Chloroaniline	(2)	8.747	127	465709	7.672
151) Diallate trans/cis	(4)			427887	7.525
74) Hexachlorobutadiene	(2)	8.795	225	242681	8.412
78) Quinoline	(2)	9.148	129	705124	7.443
80) N-Nitrosodi-n-butylamine	(2)	9.271	84	323114	6.922
79) Caprolactam	(2)	9.309	113	111079	8.295
85) Safrole	(2)	9.603	162	303256	7.601
83) 4-Chloro-3-methylphenol	(2)	9.603	107	371347	7.924
86) 2-Methylnaphthalene	(2)	9.704	142	786815	7.963
87) 1-Methylnaphthalene	(2)	9.859	142	707908	7.809
88) Hexachlorocyclopentadiene	(3)	9.956	237	228800	7.531
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.966	216	405479	7.935
91) cis-Isosafrole	(3)	10.084	162	56138	1.262
93) 2,4,6-Trichlorophenol	(3)	10.212	196	258506	8.056
95) 2,4,5-Trichlorophenol	(3)	10.282	196	268392	7.969
96)$2-Fluorobiphenyl	(3)	10.335	172	1793584	15.359
97) trans-Isosafrole	(3)	10.448	162	299921	6.269
98) 1,1'-Biphenyl	(3)	10.485	154	976497	8.108
99) 2-Chloronaphthalene	(3)	10.496	162	795109	7.768
101) 1-Chloronaphthalene	(3)	10.523	162	674241	7.122
103) Diphenyl ether	(3)	10.667	170	511632	7.605
104) 2-Nitroaniline	(3)	10.737	138	232304	7.755
108) 1,4-Naphthoquinone	(3)	10.817	158	303861	7.513
109) 1,4-Dinitrobenzene	(3)	10.967	168	119612	7.513
110) Dimethylphthalate	(3)	11.041	163	857196	7.476
111) 1,3-Dinitrobenzene	(3)	11.084	168	135027	7.918
113) 2,6-Dinitrotoluene	(3)	11.132	165	194280	7.981
114) Acenaphthylene	(3)	11.165	152	1125300	7.910
118)*Acenaphthene-d10	(3)	11.395	164	375643	5.000
117) 3-Nitroaniline	(3)	11.421	138	204924	7.990

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.443	153	763449	7.568
120) 2,4-Dinitrophenol	(3)	11.560	184	130401	8.910
122) Pentachlorobenzene	(3)	11.635	250	331869	7.964
124) Dibenzofuran	(3)	11.715	168	1079822	7.705
123) 2,4-Dinitrotoluene	(3)	11.753	165	252536	7.486
121) 4-Nitrophenol	(3)	11.785	109	123355	6.823
126) 1-Naphthylamine	(3)	11.854	143	742904	7.450
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	204515	7.804
128) 2-Naphthylamine	(3)	11.972	143	726987	7.695
129) Diethylphthalate	(3)	12.101	149	851733	7.548
131) Fluorene	(3)	12.181	166	865955	7.910
130) Thionazin	(3)	12.202	107	145123	7.555
132) 4-Chlorophenyl-phenylether	(3)	12.208	204	420117	7.743
133) 5-Nitro-o-toluidine	(3)	12.250	152	230467	7.729
135) 4,6-Dinitro-2-methylphenol	(4)	12.282	198	142886	7.064
134) 4-Nitroaniline	(3)	12.288	138	205007	7.908
136) N-Nitrosodiphenylamine	(4)	12.368	169	697918	7.465
137) NDPA as diphenylamine	(4)	12.368	169	697918	7.465
139) 1,2-Diphenylhydrazine	(4)	12.400	77	1030154	7.896
140)$2,4,6-Tribromophenol	(3)	12.491	330	213549	16.446
142) Tetraethyldithiopyrophosphate	(4)	12.582	97	169689	7.647
145) Diallate (peak 1)	(4)	12.710	86	364622	6.173
146) Phorate	(4)	12.721	75	718764M	8.590
144) 1,3,5-Trinitrobenzene	(4)	12.737	213	93787	7.527
147) Phenacetin	(4)	12.785	108	469555	7.946
148) 4-Bromophenyl-phenylether	(4)	12.796	248	242927	7.776
149) Diallate (peak 2)	(4)	12.812	86	63265	1.351
150) Hexachlorobenzene	(4)	12.833	284	240087	7.482
152) Dimethoate	(4)	12.951	87	380687	7.560
153) Atrazine	(4)	13.047	200	247997	7.841
156) Pentachloronitrobenzene	(4)	13.106	237	119496	7.803
154) Pentachlorophenol	(4)	13.122	266	125276	6.375
155) 4-Aminobiphenyl	(4)	13.144	169	806231	7.574
157) Pronamide	(4)	13.218	173	421339	7.990
158)*Phenanthrene-d10	(4)	13.336	188	764016	5.000
159) Dinoseb	(4)	13.352	211	229503	7.249
160) Phenanthrene	(4)	13.368	178	1268946	7.532
162) Anthracene	(4)	13.432	178	1321094	7.823
168) Carbazole	(4)	13.684	167	1162296	7.773
169) Methyl parathion	(4)	13.866	109	293499	7.646

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

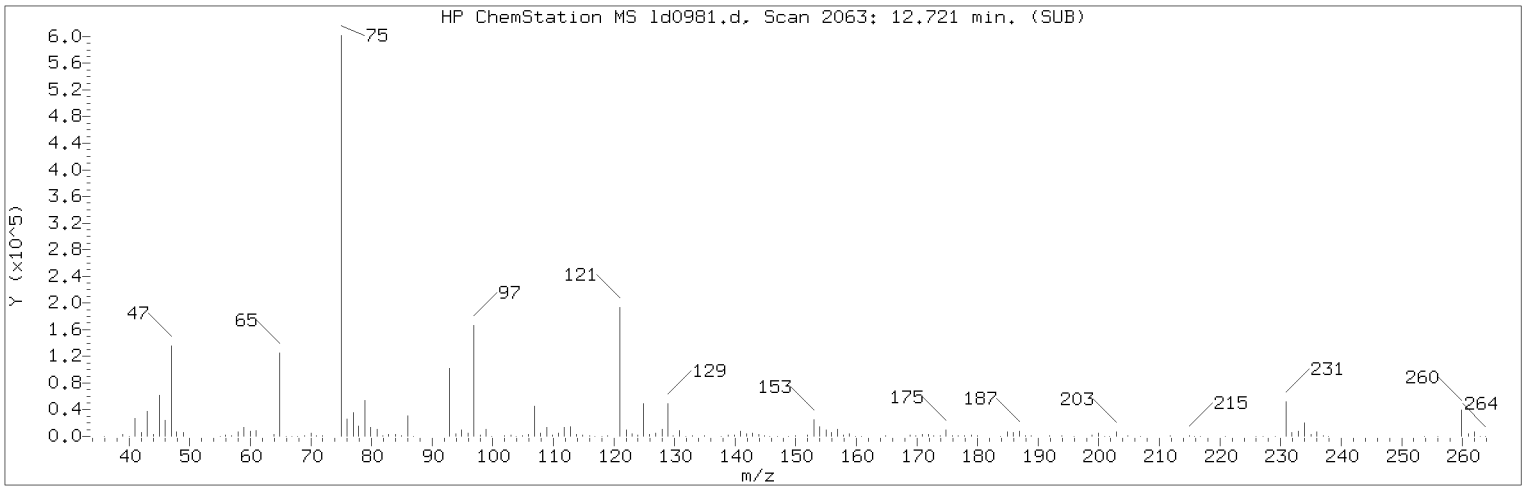
Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	14.149	149	1494863	7.427
172) Parathion	(4)	14.390	109	192403	7.746
173) 4-Nitroquinoline-1-oxide	(4)	14.443	190	85578	4.290
174) Octachlorostyrene	(4)	14.711	308	87385	7.280
176) Isodrin	(4)	14.764	193	153169	7.339
178) Fluoranthene	(4)	14.999	202	1503012	7.933
227) Total PAHs	(6)			22395935	139.077
179) Benzidine	(5)	15.278	184	2668184	21.858
180)*Pyrene-d10	(5)	15.315	212	828416	5.000
182) Pyrene	(5)	15.342	202	1562053	7.412
184)$Terphenyl-d14	(5)	15.615	244	2019873	15.204
187) p-Dimethylaminoazobenzene	(5)	15.855	225	251712	7.829
190) Chlorobenzilate	(5)	15.930	139	459514	7.319
192) 3,3'-Dimethylbenzidine	(5)	16.438	212	979178	7.375
193) Butylbenzylphthalate	(5)	16.460	149	725607	7.411
196) 2-Acetylaminofluorene	(5)	16.861	181	627776	8.101
200) Benzo(a)anthracene	(5)	17.342	228	1505063	7.994
198) 3,3'-Dichlorobenzidine	(5)	17.369	252	538201	7.944
203) 4,4'-Methylenebis(2-chloroanil	(5)	17.385	231	312497	7.595
201) Chrysene	(5)	17.406	228	1475494	8.102
204) bis(2-Ethylhexyl)phthalate	(5)	17.476	149	1043402	7.542
208) 6-Methylchrysene	(5)	18.198	242	1003493	7.825
210) Di-n-octylphthalate	(6)	18.637	149	1865842	7.196
211) Benzo(b)fluoranthene	(6)	19.198	252	1543164	7.633
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.198	256	607405	7.283
213) Benzo(k)fluoranthene	(6)	19.246	252	1474876	7.576
216) Benzo(a)pyrene	(6)	19.728	252	1441901	7.927
218)*Perylene-d12	(6)	19.824	264	824556	5.000
220) 3-Methylcholanthrene	(6)	20.289	268	667270	7.544
222) Dibenz(a,h)acridine	(6)	21.113	279	1118468	7.235
223) Dibenz(a,j)acridine	(6)	21.188	279	1113919	7.094
224) Indeno(1,2,3-cd)pyrene	(6)	21.423	276	1283802M	7.432
225) Dibenz(a,h)anthracene	(6)	21.461	278	1314937	7.494
226) Benzo(g,h,i)perylene	(6)	21.803	276	1272932	7.131

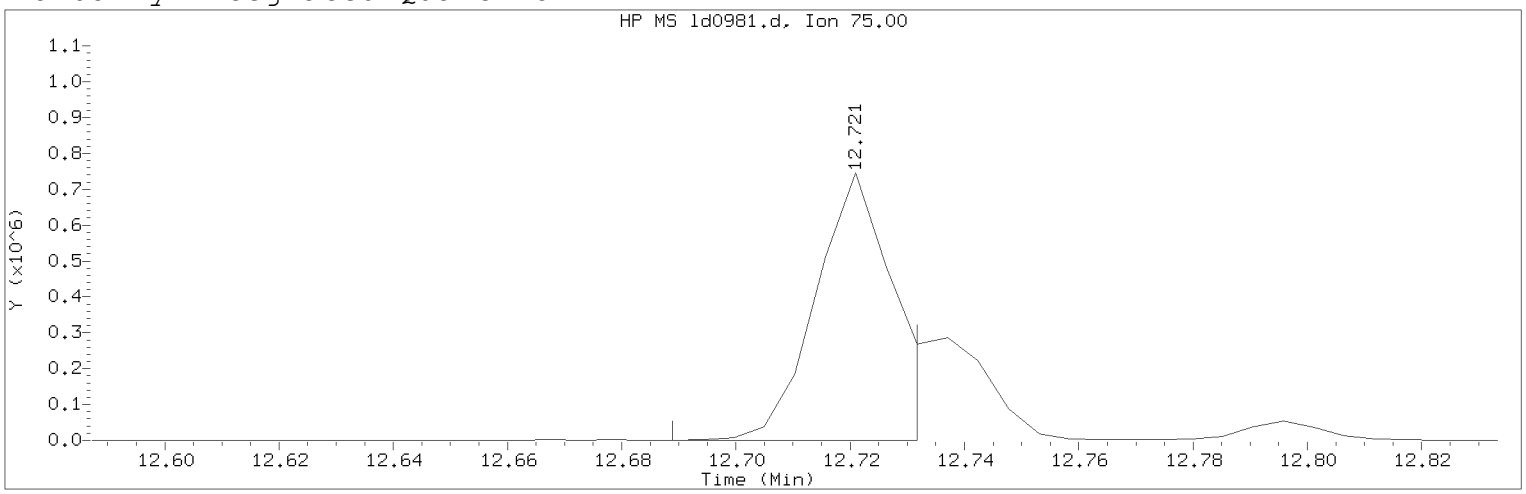
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

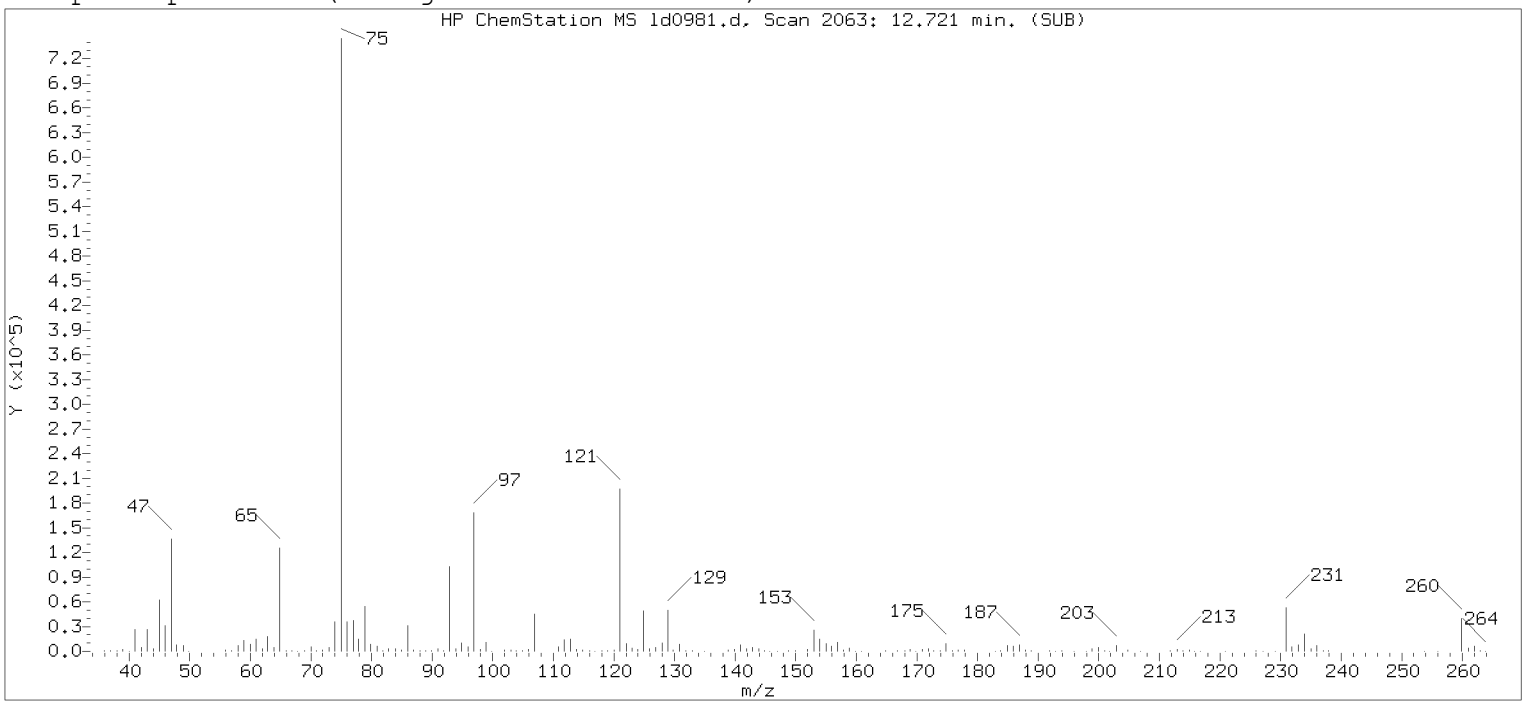
Compound Number : 146
Compound Name : Phorate
Scan Number : 2063
Retention Time (minutes) : 12.721
Quant Ion : 75.00
Area (flag) : 718764M
On-Column Amount (ng/ul) : 8.5896
Integration start scan : 2056 Integration stop scan: 2064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

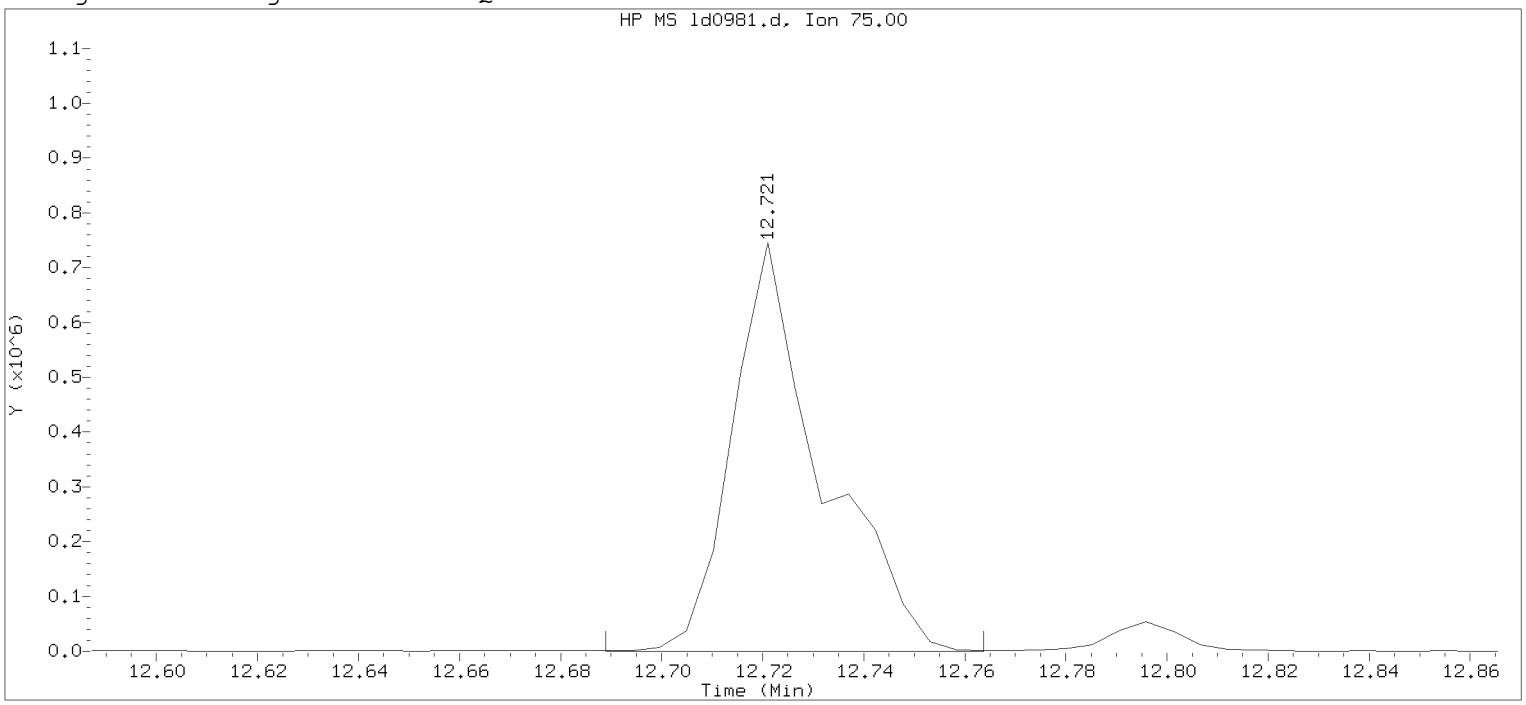
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 16:25.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

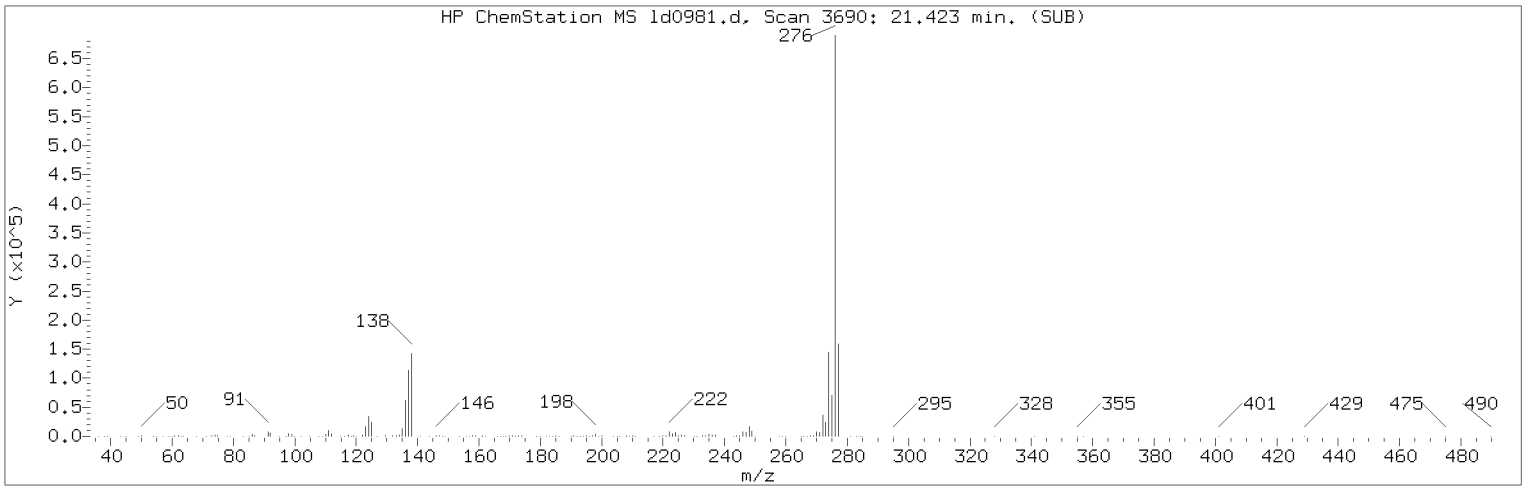
Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:08
Date, time and analyst ID of latest file update: 24-Apr-2018 20:08 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

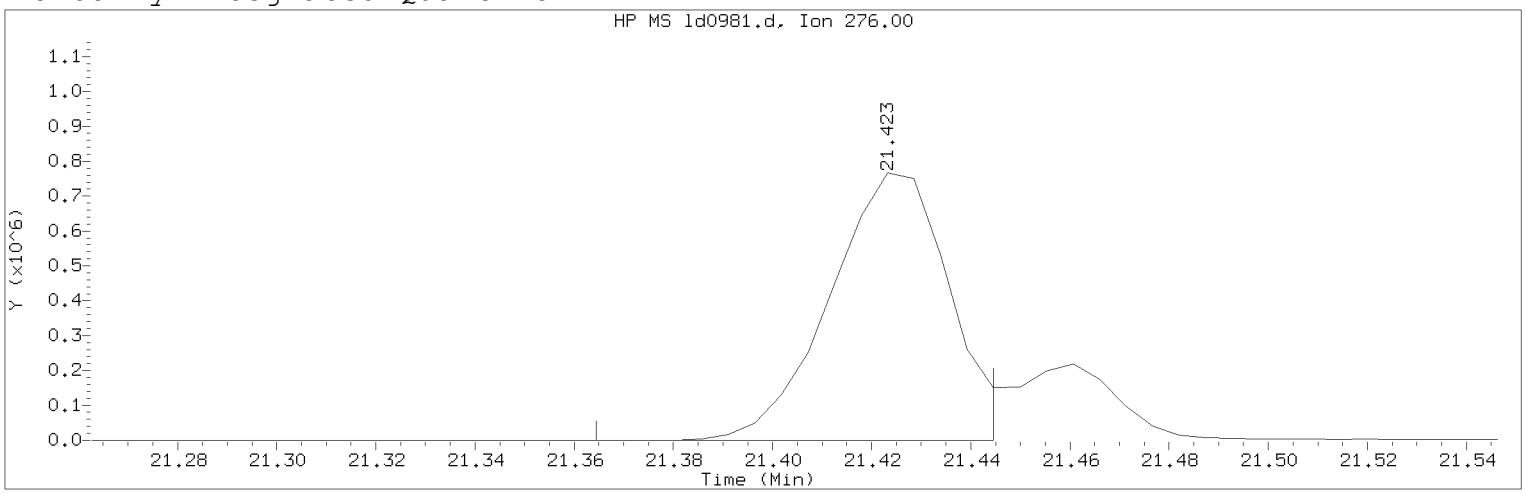
Compound Number	: 146		
Compound Name	: Phorate		
Scan Number	: 2063		
Retention Time (minutes)	: 12.721		
Quant Ion	: 75.00		
Area	: 916271		
On-column Amount (ng/ul)	: 10.9499		
Integration start scan	: 2056	Integration stop scan:	2070
Y at integration start	: 0	Y at integration end:	0

Digitally signed by William H Saadeh on 04/24/2018 at 20:54.
Target 3.5 esignature used. FID Page 1951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:53
Date, time and analyst ID of latest file update: 24-Apr-2018 20:53 whs02991

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

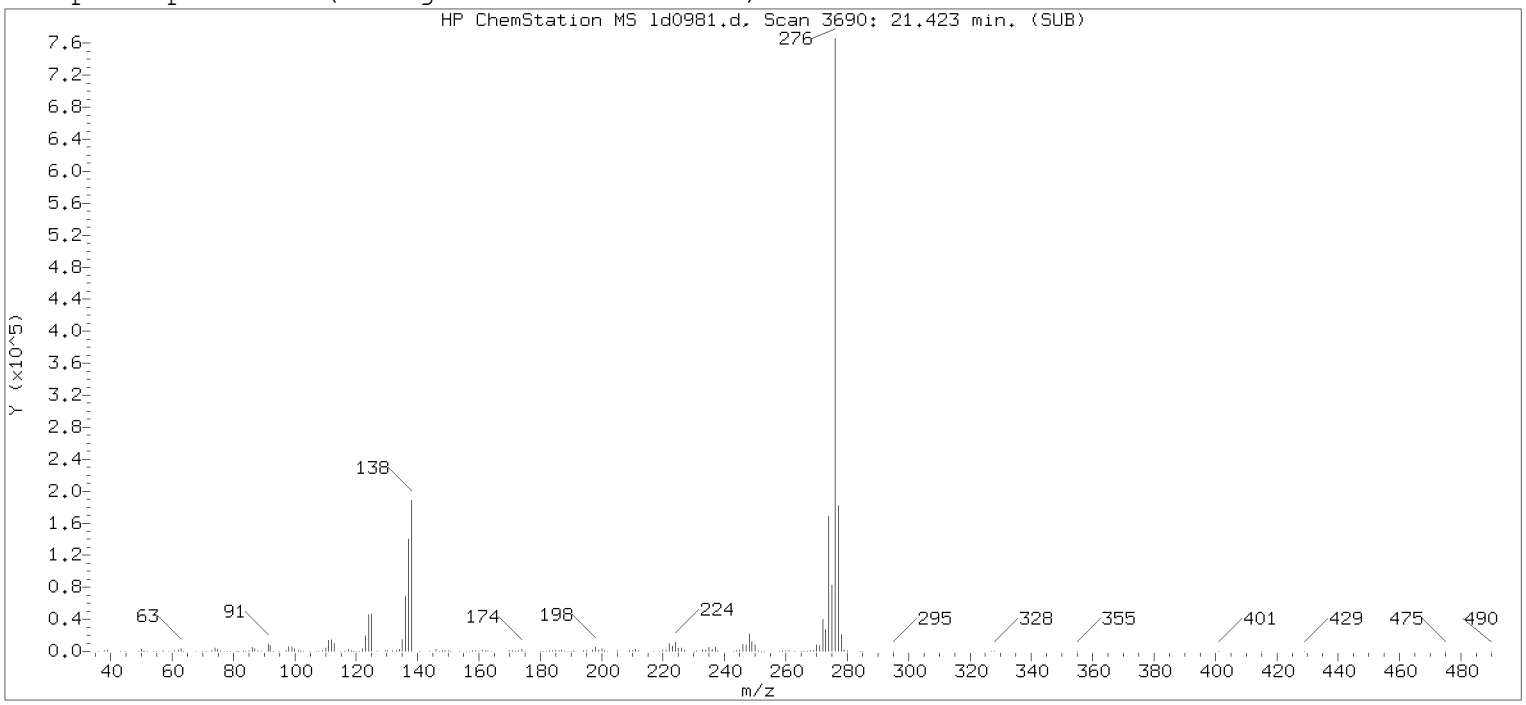
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3690
Retention Time (minutes) : 21.423
Quant Ion : 276.00
Area (flag) : 1283802M
On-Column Amount (ng/ul) : 7.4320
Integration start scan : 3678 Integration stop scan: 3693
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

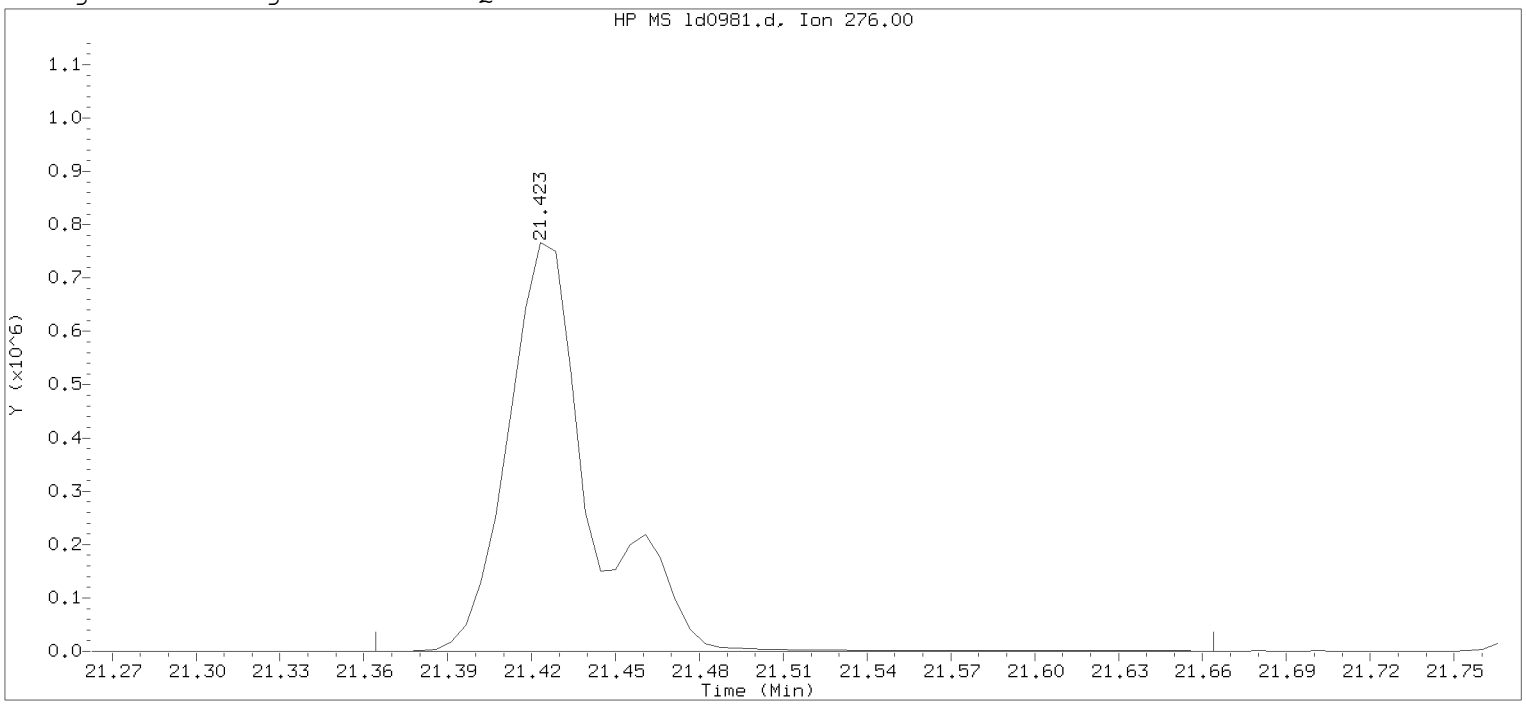
Analyst responsible for change: Digitally signed by William H Saadeh
on 04/24/2018 at 20:54.
Target 3.5 esignature user ID: whs02991

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 16:25.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



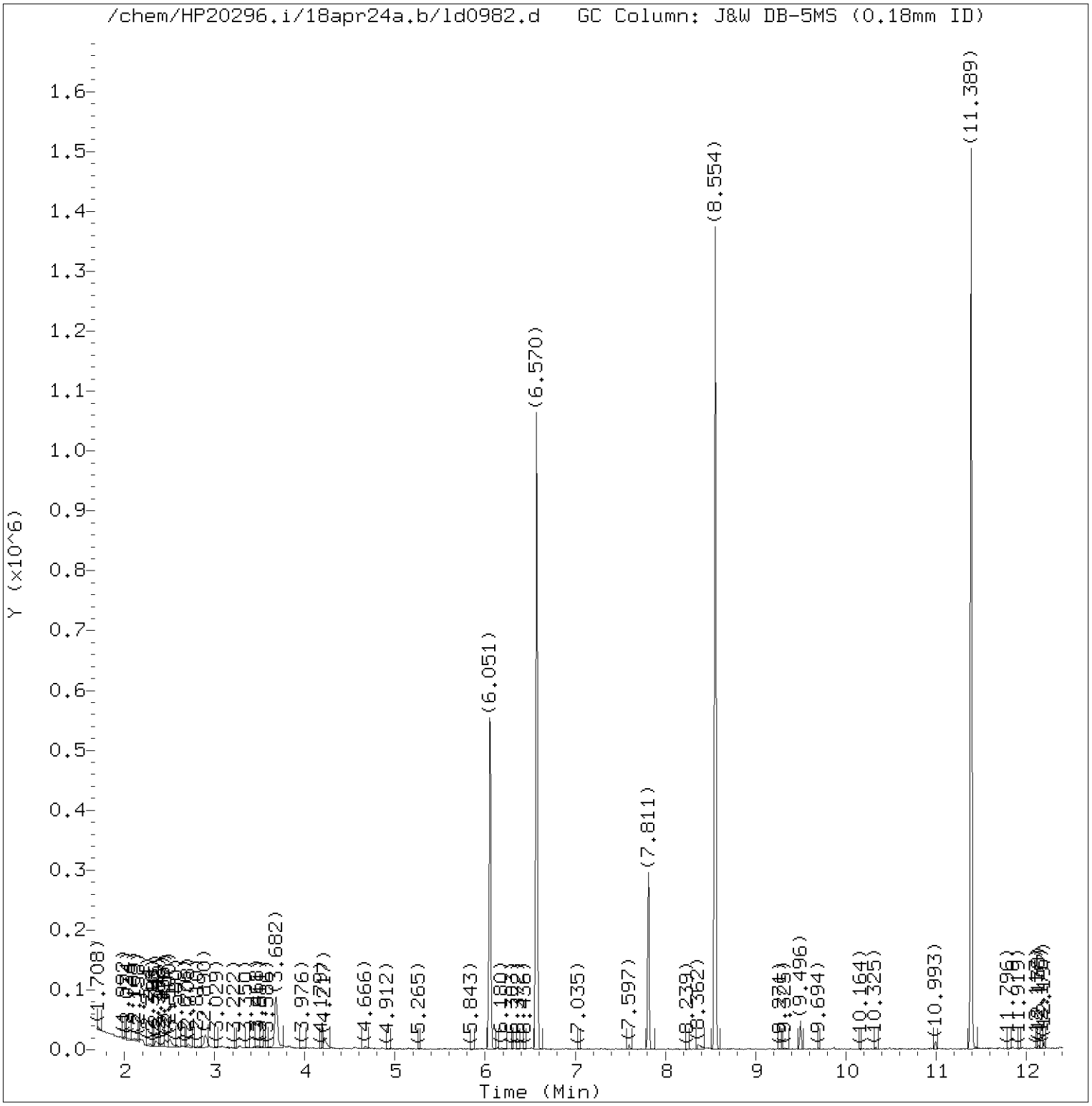
Data File: /chem/HP20296.i/18apr24a.b/ld0981.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 19:41 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: all1
Calibration date and time: 24-APR-2018 20:08
Date, time and analyst ID of latest file update: 24-Apr-2018 20:08 Unknown

Sample Name: SSTD7.5 Lab Sample ID: RVSTD0968

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3690		
Retention Time (minutes)	: 21.423		
Quant Ion	: 276.00		
Area	: 1590936		
On-column Amount (ng/ul)	: 9.2100		
Integration start scan	: 3678	Integration stop scan:	3734
Y at integration start	: 0	Y at integration end:	0

Digitally signed by William H Saadeh on 04/24/2018 at 20:54.
Target 3.5 esignature used. FID Peak 2 RAFD6 Page 1952 of 2168



Total Ion Chromatogram (TIC)

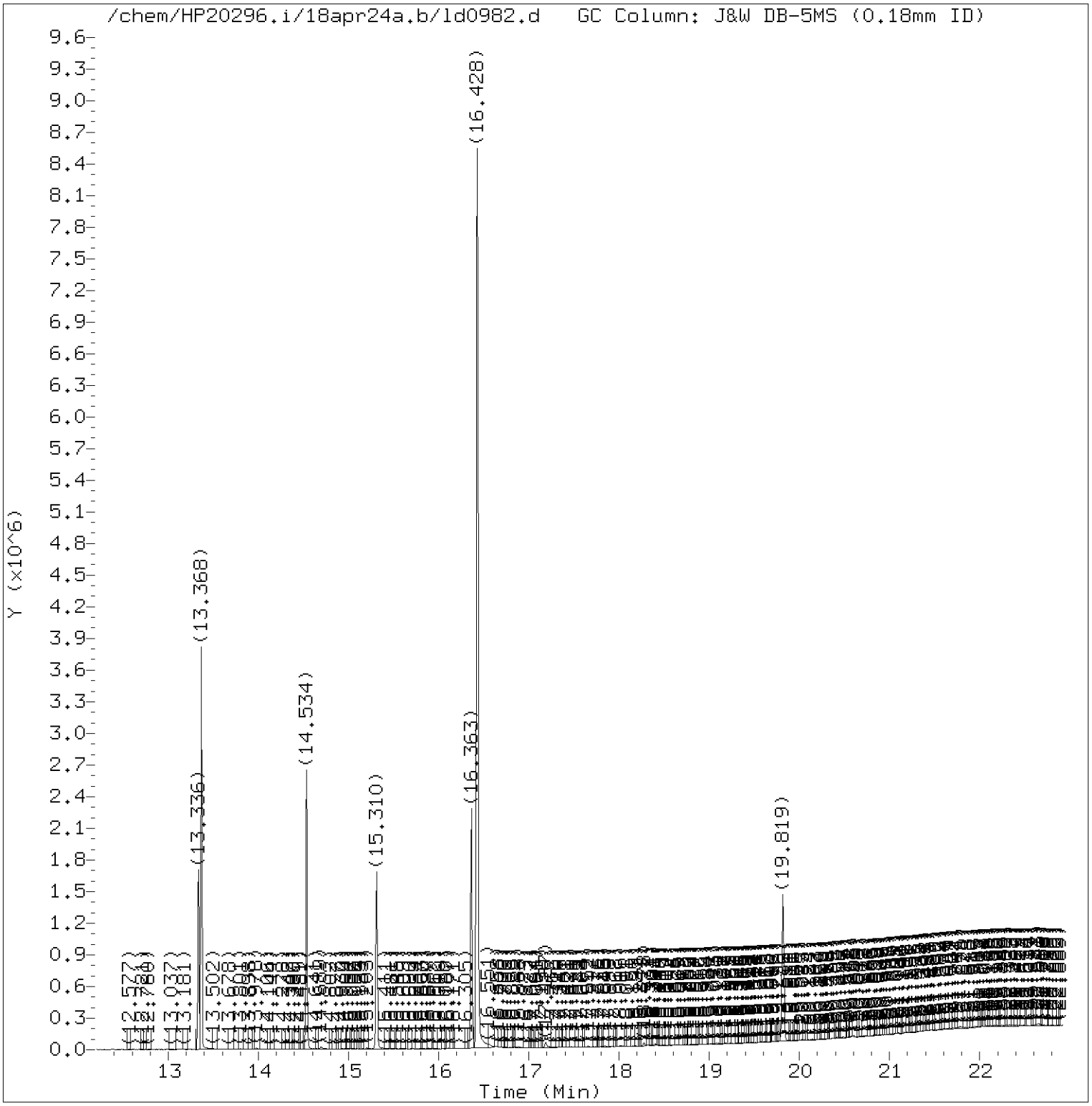
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0982.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:20 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 20:48
Date, time and analyst ID of latest file update: 24-Apr-2018 20:48 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0982.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:20 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 20:48
Date, time and analyst ID of latest file update: 24-Apr-2018 20:48 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0982.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:20 Analyst ID: whs02991

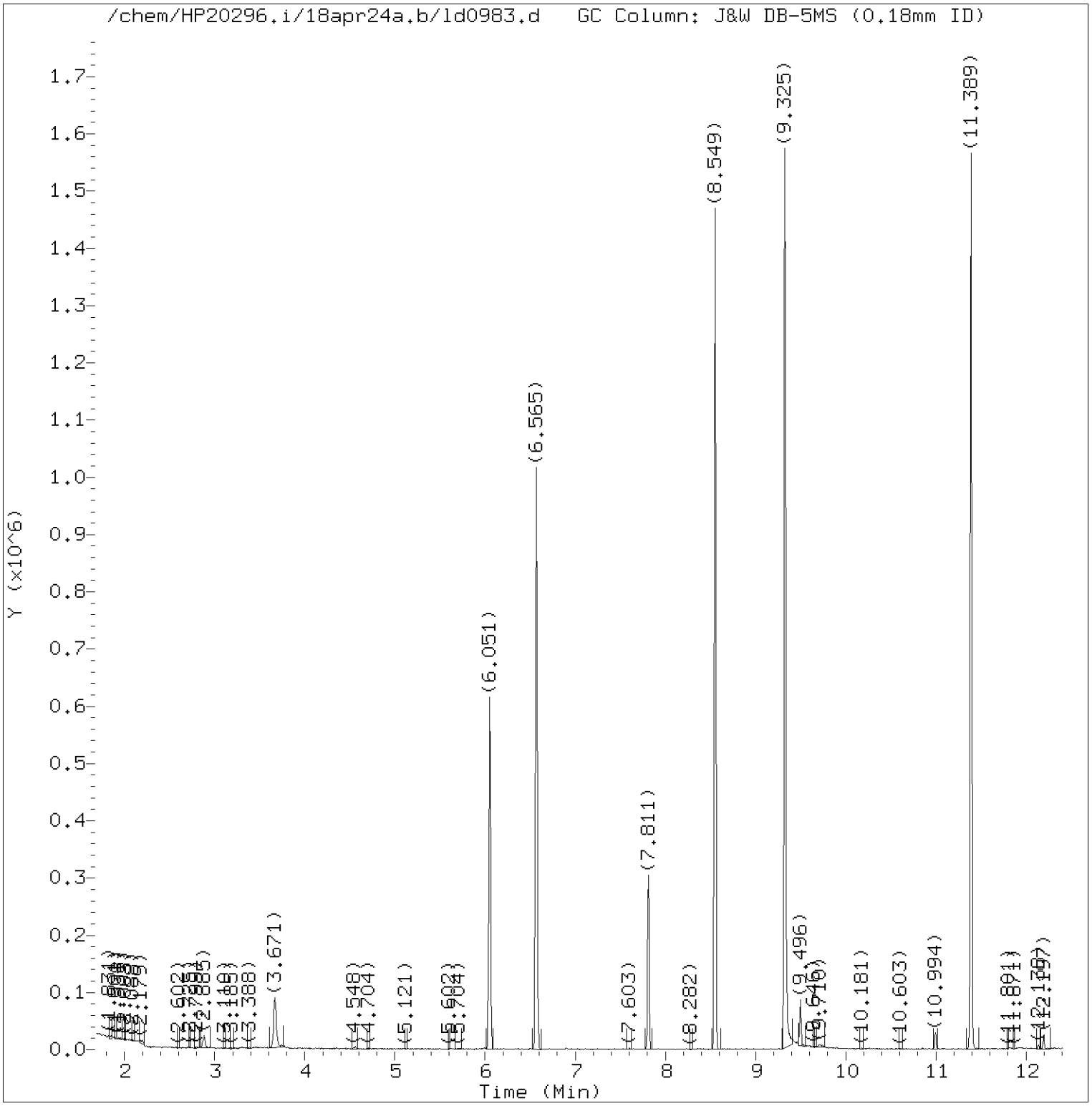
Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: abc
Calibration date and time: 24-APR-2018 20:48
Date, time and analyst ID of latest file update: 24-Apr-2018 20:48 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVABC0538

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.570	152	200290	5.000
68)*Naphthalene-d8	(2)	8.554	136	739259	5.000
118)*Acenaphthene-d10	(3)	11.389	164	350333	5.000
158)*Phenanthrene-d10	(4)	13.336	188	673926	5.000
167) Disulfoton	(4)	13.368	88	777953	14.509
175) Methapyrilene	(4)	14.534	97	579115	13.049
180)*Pyrene-d10	(5)	15.310	212	765660	5.000
194) Famphur	(5)	16.363	218	716886	12.817
195) Kepone	(5)	16.428	272	1034661	61.432
218)*Perylene-d12	(6)	19.819	264	717281	5.000

* = Compound is an internal standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

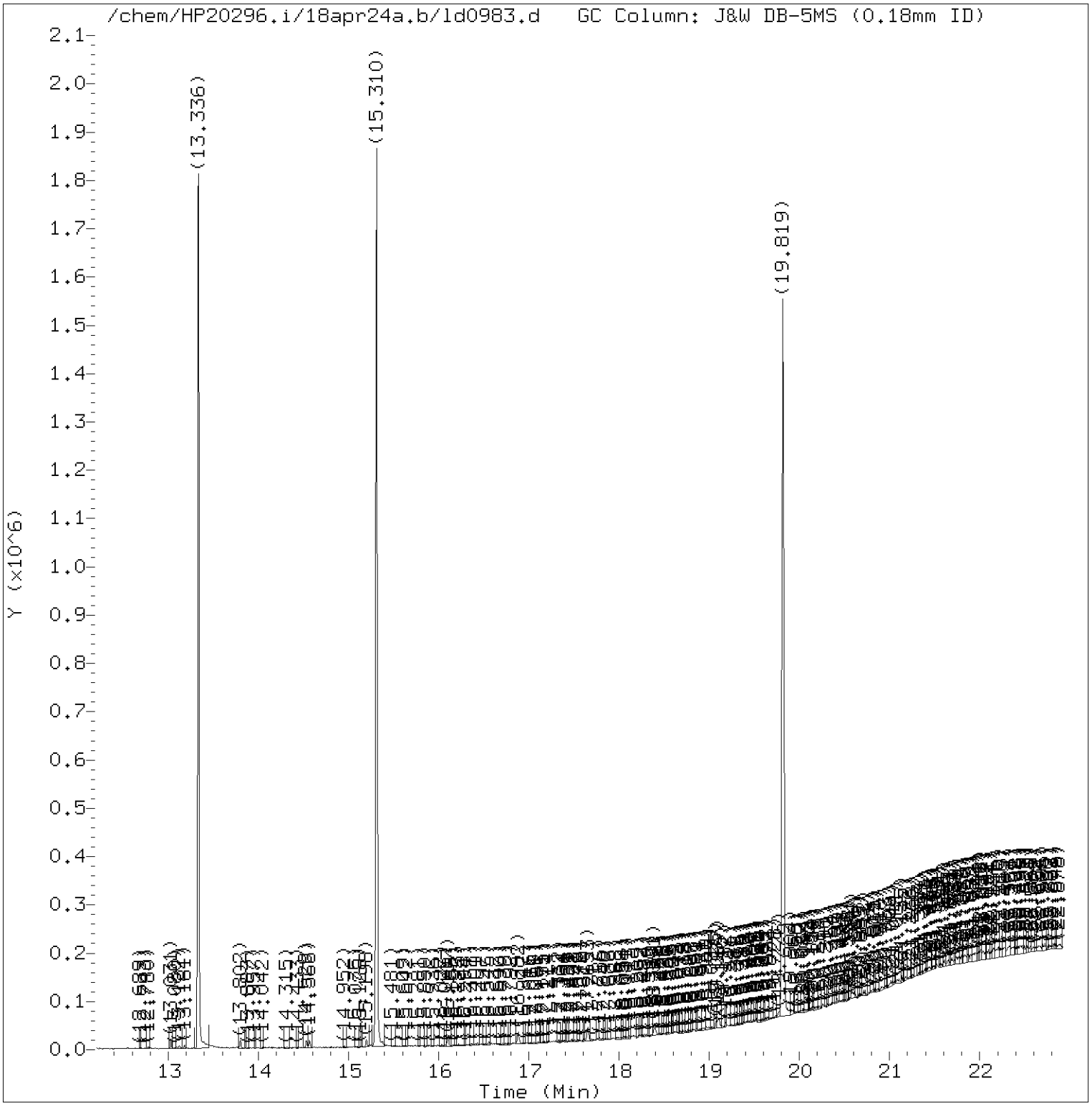
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0983.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 24-APR-2018 21:25
Date, time and analyst ID of latest file update: 24-Apr-2018 21:25 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0983.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 24-APR-2018 21:25
Date, time and analyst ID of latest file update: 24-Apr-2018 21:25 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0983.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 20:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 14pda
Calibration date and time: 24-APR-2018 21:25
Date, time and analyst ID of latest file update: 24-Apr-2018 21:25 whs02991

Sample Name: SSTD12.5 Lab Sample ID: RVPDA0448

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.570	152	210291	5.000
68)*Naphthalene-d8	(2)	8.549	136	773202	5.000
84) 1,4-Phenylenediamine	(2)	9.325	108	616534	9.643
118)*Acenaphthene-d10	(3)	11.389	164	380679	5.000
158)*Phenanthrene-d10	(4)	13.336	188	749847	5.000
180)*Pyrene-d10	(5)	15.310	212	795376	5.000
218)*Perylene-d12	(6)	19.819	264	773605	5.000

* = Compound is an internal standard.

Digitally signed by William H Saadeh
on 04/24/2018 at 21:44.
Target 3.5 esignature user ID: whs02991

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP20296.i/18apr20.b/ld0814o.d Injection date and time: **20-APR-2018 11:51**
Data file Sample Info. Line: SBLKWO106;SBLKWO106;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	171930	(-14)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	640518	(-14)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	321760	(-17)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	656198	(-18)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	667781	(-22)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	628369	(-25)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.688	(0.002)	112	930148	19.757	40%		10 - 82
18) Phenol-d6	(1)	6.126	(0.002)	99	887684	14.379	29%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	993186	17.978	72%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1821689	18.212	73%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	469699	42.230	84%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2395642	22.370	89%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0814o.d Injection date and time: **20-APR-2018 11:51**
Data file Sample Info. Line: SBLKWO106;SBLKWO106;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8
154) Pentachlorophenol	(4)				Not Detected					0.7

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Data file: /chem/HP20296.i/18apr20.b/ld0814o.d Injection date and time: **20-APR-2018 11:51**
Data file Sample Info. Line: SBLKWO106;SBLKWO106;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

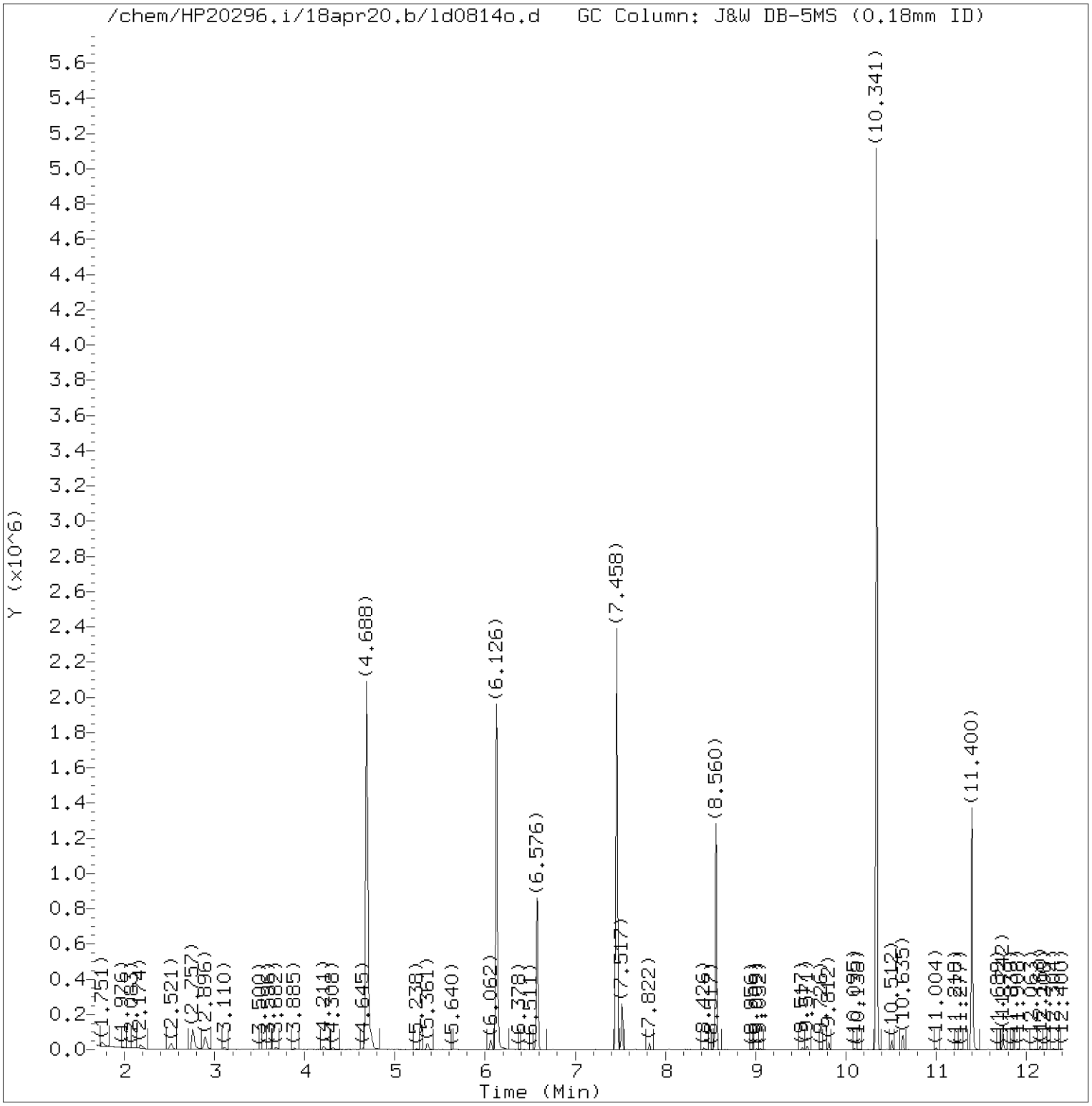
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)			Not Detected					0.1
162) Anthracene	(4)			Not Detected					0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)			Not Detected					0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)			Not Detected					0.1
182) Pyrene	(5)			Not Detected					0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)			Not Detected					0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
200) Benzo(a)anthracene	(5)			Not Detected					0.1
201) Chrysene	(5)			Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
210) Di-n-octylphthalate	(6)			Not Detected					0.5
211) Benzo(b)fluoranthene	(6)			Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					0.1
213) Benzo(k)fluoranthene	(6)			Not Detected					0.4
216) Benzo(a)pyrene	(6)			Not Detected					0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/23/2018 at 13:58. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/24/2018 at 20:44. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

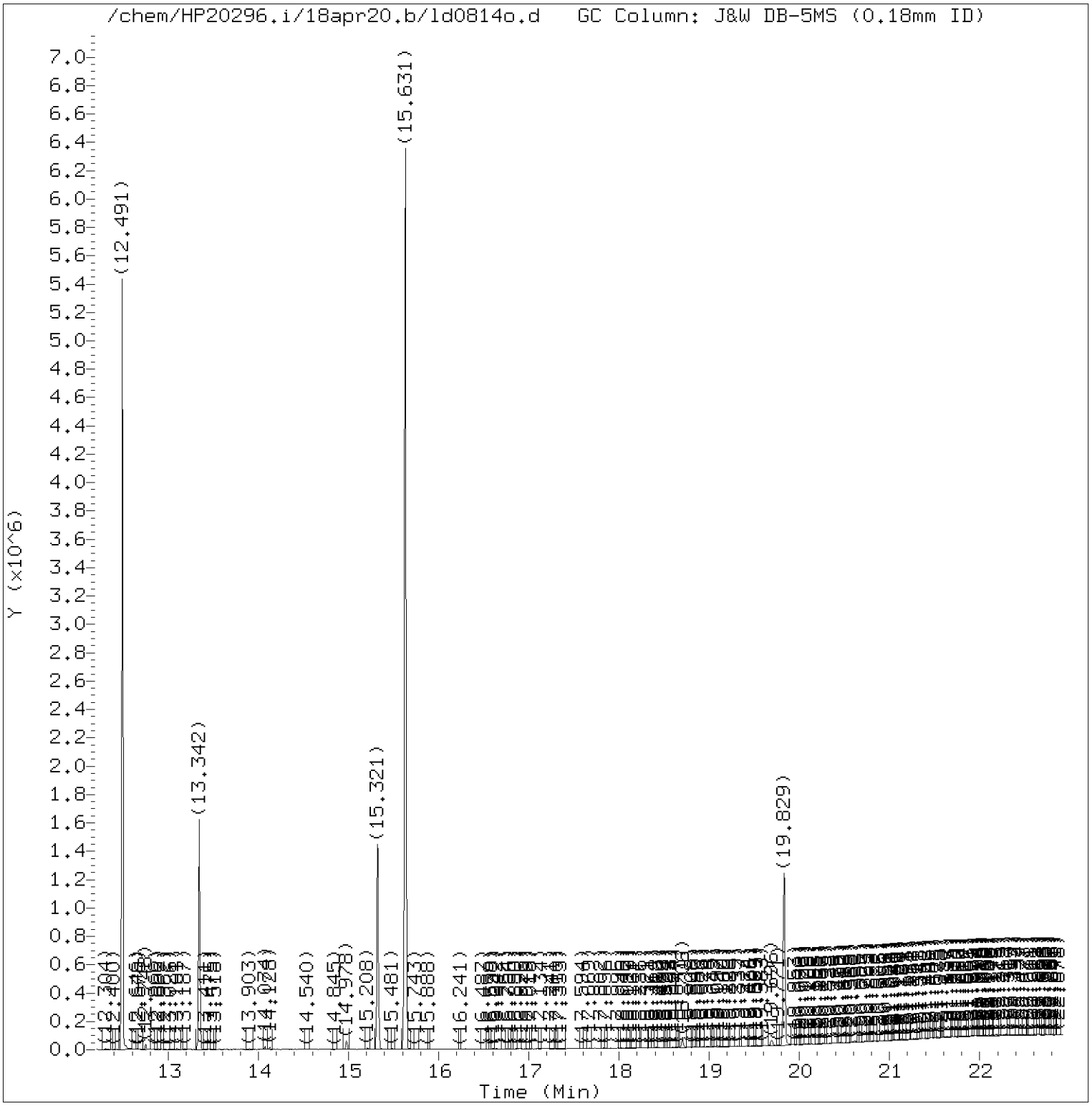
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Sample Name: SBLKWO106 Lab Sample ID: SBLKWO106

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Sample Name: SBLKWO106 Lab Sample ID: SBLKWO106

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 23-Apr-2018 10:07 bhs10208

Sample Name: SBLKWO106 Lab Sample ID: SBLKWO106

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.688	112	930148	19.757
18)$Phenol-d6	(1)	6.126	99	887684	14.379
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	171930	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	993186	17.978
68)*Naphthalene-d8	(2)	8.560	136	640518	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1821689	18.212
118)*Acenaphthene-d10	(3)	11.400	164	321760	5.000
140)$2,4,6-Tribromophenol	(3)	12.491	330	469699	42.230
158)*Phenanthrene-d10	(4)	13.342	188	656198	5.000
180)*Pyrene-d10	(5)	15.321	212	667781	5.000
184)$Terphenyl-d14	(5)	15.631	244	2395642	22.370
218)*Perylene-d12	(6)	19.829	264	628369	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/23/2018 at 13:58.
Target 3.5 esignature user ID: bhs10208

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0814y.d Injection date and time: **20-APR-2018 11:51**
Data file Sample Info. Line: SBLKWY106;SBLKWY106;1;3;BLANK;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 16:57 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	171930	(-14)	5.00	
68) Naphthalene-d8	8.560	(0.005)	1285	136	640518	(-14)	5.00	
118) Acenaphthene-d10	11.400	(0.005)	1816	164	321760	(-17)	5.00	
158) Phenanthrene-d10	13.342	(0.011)	2179	188	656198	(-18)	5.00	
180) Pyrene-d10	15.321	(0.011)	2549	212	667781	(-22)	5.00	
218) Perylene-d12	19.829	(0.011)	3392	264	628369	(-25)	5.00	

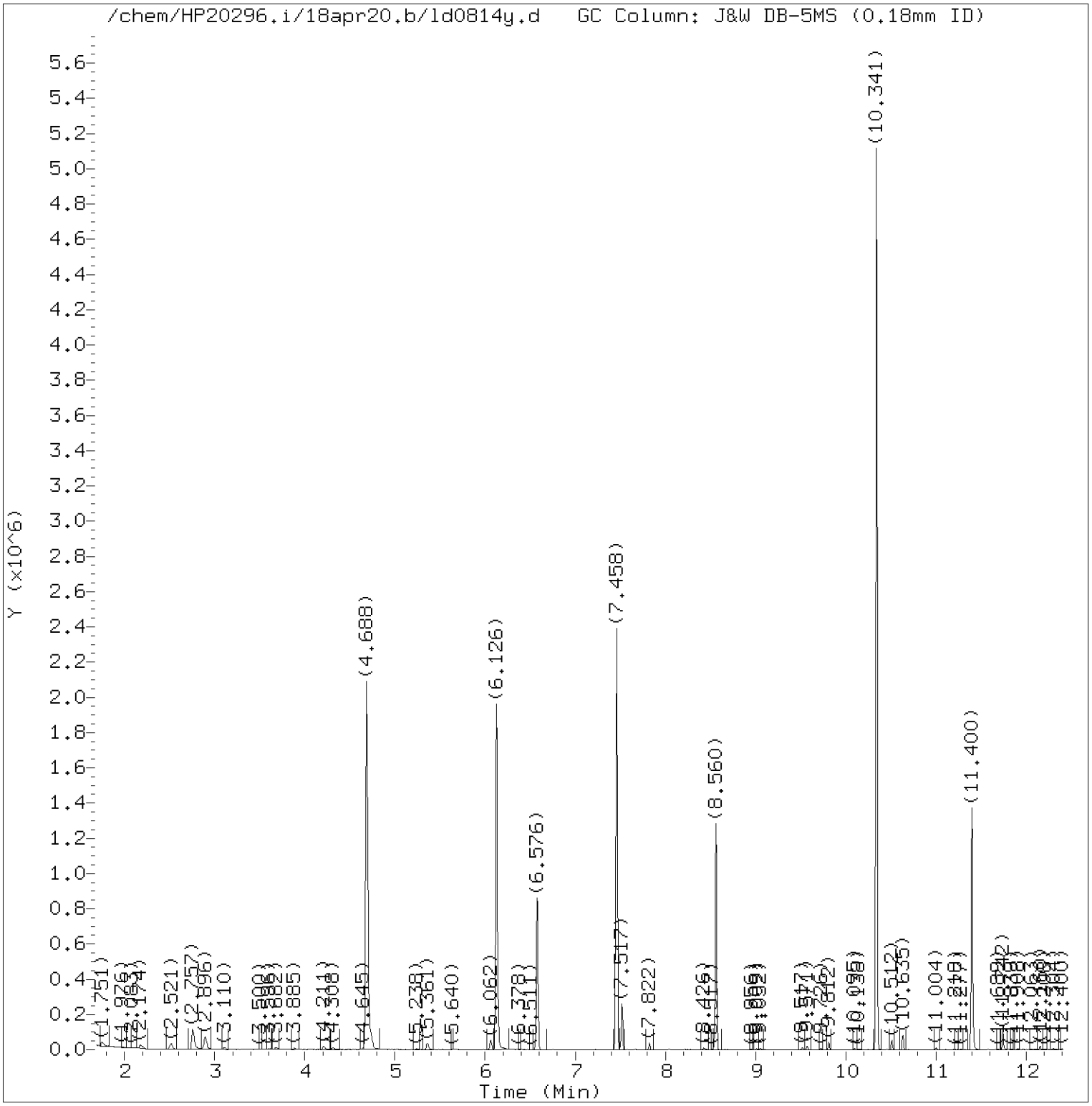
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.458	(0.001)	82	993186	17.978	72%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1821689	18.212	73%		39 - 105
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2395642	22.370	89%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:04. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

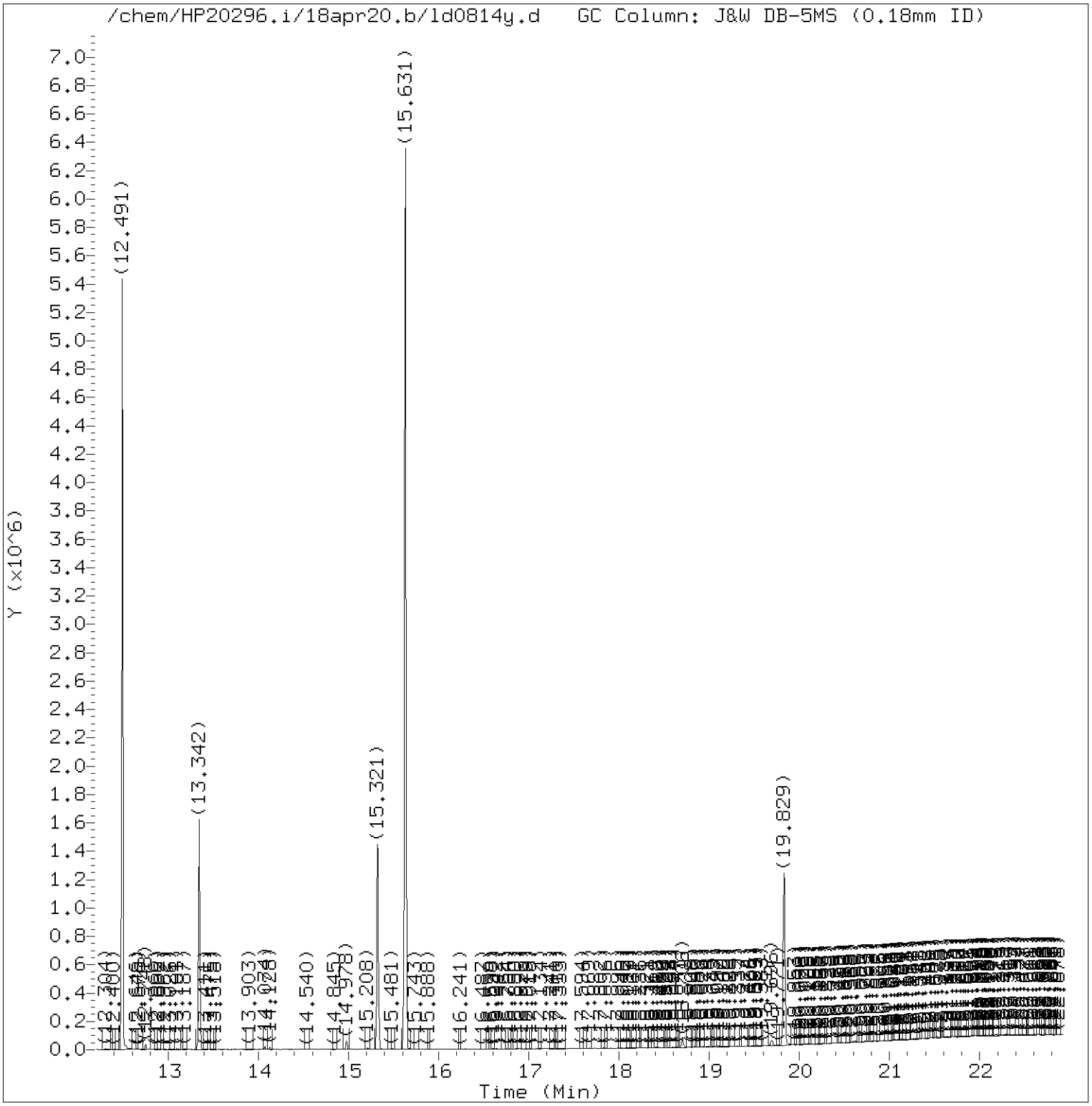
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:57 art12405

Sample Name: SBLKWY106 Lab Sample ID: SBLKWY106

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:57 art12405

Sample Name: SBLKWY106 Lab Sample ID: SBLKWY106

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0814y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 11:51 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 16:57 art12405

Sample Name: SBLKWY106 Lab Sample ID: SBLKWY106

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	171930	5.000
45)$Nitrobenzene-d5	(2)	7.458	82	993186	17.978
68)*Naphthalene-d8	(2)	8.560	136	640518	5.000
96)$2-Fluorobiphenyl	(3)	10.341	172	1821689	18.212
118)*Acenaphthene-d10	(3)	11.400	164	321760	5.000
158)*Phenanthrene-d10	(4)	13.342	188	656198	5.000
180)*Pyrene-d10	(5)	15.321	212	667781	5.000
184)$Terphenyl-d14	(5)	15.631	244	2395642	22.370
218)*Perylene-d12	(6)	19.829	264	628369	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:04.
Target 3.5 esignature user ID: art12405

Data file: /chem/HP20296.i/18apr24a.b/ld0988.d Injection date and time: **24-APR-2018 23:20**
Data file Sample Info. Line: SBLKWN113;SBLKWN113;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.570	(0.000)	913	152	158476	(-19)	5.00	
68) Naphthalene-d8	8.555	(0.000)	1284	136	590097	(-18)	5.00	
118) Acenaphthene-d10	11.389	(0.005)	1814	164	292626	(-22)	5.00	
158) Phenanthrene-d10	13.331	(0.005)	2177	188	588447	(-23)	5.00	
180) Pyrene-d10	15.310	(0.005)	2547	212	603012	(-27)	5.00	
218) Perylene-d12	19.819	(0.005)	3390	264	564884	(-31)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.720	(0.002)	112	998179	23.002	46%		10 - 82
18) Phenol-d6	(1)	6.174	(0.000)	99	974909	17.133	34%		10 - 71
45) Nitrobenzene-d5	(2)	7.453	(0.001)	82	1097986	21.574	86%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.330	(0.000)	172	1852638	20.365	81%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.486	(0.000)	330	488105	48.254	97%		21 - 134
184) Terphenyl-d14	(5)	15.615	(0.000)	244	2359486	24.398	98%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)				Not Detected					0.5
6) Pyridine	(1)				Not Detected					0.5
8) 2-Picoline	(1)				Not Detected					0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)				Not Detected					0.2
20) Aniline	(1)				Not Detected					0.1
23) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
24) 2-Chlorophenol	(1)				Not Detected					0.2
28) Benzyl alcohol	(1)				Not Detected					3
32) 2-Methylphenol	(1)				Not Detected					0.1
35) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)				Not Detected					0.1
38) 4-Methylphenol	(1)				Not Detected					0.1
39) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)				Not Detected					0.1
44) Hexachloroethane	(1)				Not Detected					0.3
46) Nitrobenzene	(2)				Not Detected					0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)				Not Detected					0.1
53) 2-Nitrophenol	(2)				Not Detected					0.3
55) 2,4-Dimethylphenol	(2)				Not Detected					0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

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Data file: /chem/HP20296.i/18apr24a.b/ld0988.d Injection date and time: **24-APR-2018 23:20**
Data file Sample Info. Line: SBLKWN113;SBLKWN113;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
62) 2,4-Dichlorophenol	(2)				Not Detected					0.4
67) a,a-Dimethylphenethylamine	(2)				Not Detected					1
70) 4-Chloroaniline	(2)				Not Detected					0.5
71) 2,6-Dichlorophenol	(2)				Not Detected					0.1
72) Hexachloropropene	(2)				Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)				Not Detected					0.5
84) 1,4-Phenylenediamine	(2)				Not Detected					19
83) 4-Chloro-3-methylphenol	(2)				Not Detected					0.3
85) Safrole	(2)				Not Detected					0.5
86) 2-Methylnaphthalene	(2)				Not Detected					0.07
88) Hexachlorocyclopentadiene	(3)				Not Detected					1
89) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.5
91) cis-Isosafrole	(3)				Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)				Not Detected					0.2
95) 2,4,5-Trichlorophenol	(3)				Not Detected					0.2
97) trans-Isosafrole	(3)				Not Detected					0.1
100) Isosafrole	(3)				Not Detected					0.5
99) 2-Chloronaphthalene	(3)				Not Detected					0.1
104) 2-Nitroaniline	(3)				Not Detected					0.1
108) 1,4-Naphthoquinone	(3)				Not Detected					6
110) Dimethylphthalate	(3)				Not Detected					0.5
111) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
114) Acenaphthylene	(3)				Not Detected					0.1
117) 3-Nitroaniline	(3)				Not Detected					0.1
119) Acenaphthene	(3)				Not Detected					0.09
120) 2,4-Dinitrophenol	(3)				Not Detected					3
121) 4-Nitrophenol	(3)				Not Detected					3
122) Pentachlorobenzene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Dibenzofuran	(3)				Not Detected					0.1
126) 1-Naphthylamine	(3)				Not Detected					1
127) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					0.2
128) 2-Naphthylamine	(3)				Not Detected					1
129) Diethylphthalate	(3)				Not Detected					0.5
130) Thionazin	(3)				Not Detected					0.5
131) Fluorene	(3)				Not Detected					0.1
132) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
133) 5-Nitro-o-toluidine	(3)				Not Detected					0.1
134) 4-Nitroaniline	(3)				Not Detected					0.2
135) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					1
136) N-Nitrosodiphenylamine	(4)				Not Detected					0.1
137) NDPA as diphenylamine	(4)				Not Detected					0.1
144) 1,3,5-Trinitrobenzene	(4)				Not Detected					1
145) Diallate (peak 1)	(4)				Not Detected					0.06
146) Phorate	(4)				Not Detected					0.1
147) Phenacetin	(4)				Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Diallate (peak 2)	(4)				Not Detected					0.06
151) Diallate trans/cis	(4)				Not Detected					0.3
150) Hexachlorobenzene	(4)				Not Detected					0.2
152) Dimethoate	(4)				Not Detected					0.8
154) Pentachlorophenol	(4)				Not Detected					0.7

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Data file: /chem/HP20296.i/18apr24a.b/ld0988.d Injection date and time: **24-APR-2018 23:20**
Data file Sample Info. Line: SBLKWN113;SBLKWN113;1;3;BLANK;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)				Not Detected					0.1
156) Pentachloronitrobenzene	(4)				Not Detected					0.5
157) Pronamide	(4)				Not Detected					0.1
160) Phenanthrene	(4)				Not Detected					0.1
162) Anthracene	(4)				Not Detected					0.1
167) Disulfoton	(4)				Not Detected					6
169) Methyl parathion	(4)				Not Detected					0.3
170) Di-n-butylphthalate	(4)				Not Detected					0.5
172) Parathion	(4)				Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)				Not Detected					5
175) Methapyrilene	(4)				Not Detected					4
176) Isodrin	(4)				Not Detected					0.1
178) Fluoranthene	(4)				Not Detected					0.1
182) Pyrene	(5)				Not Detected					0.1
185) Aramite (1)	(5)				Not Detected					0.3
186) Aramite (2)	(5)				Not Detected					0.3
188) Aramite (3)	(5)				Not Detected					0.3
189) Aramite (4)	(5)				Not Detected					0.3
191) Aramite	(5)				Not Detected					1
187) p-Dimethylaminoazobenzene	(5)				Not Detected					0.1
190) Chlorobenzilate	(5)				Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)				Not Detected					6
193) Butylbenzylphthalate	(5)				Not Detected					0.5
194) Famphur	(5)				Not Detected					6
195) Kepone	(5)				Not Detected					6
196) 2-Acetylaminofluorene	(5)				Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.5
200) Benzo(a)anthracene	(5)				Not Detected					0.1
201) Chrysene	(5)				Not Detected					0.08
204) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					0.5
210) Di-n-octylphthalate	(6)				Not Detected					0.5
211) Benzo(b)fluoranthene	(6)				Not Detected					0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					0.1
213) Benzo(k)fluoranthene	(6)				Not Detected					0.4
216) Benzo(a)pyrene	(6)				Not Detected					0.4
220) 3-Methylcholanthrene	(6)				Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.04
225) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
226) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Total number of targets = 120

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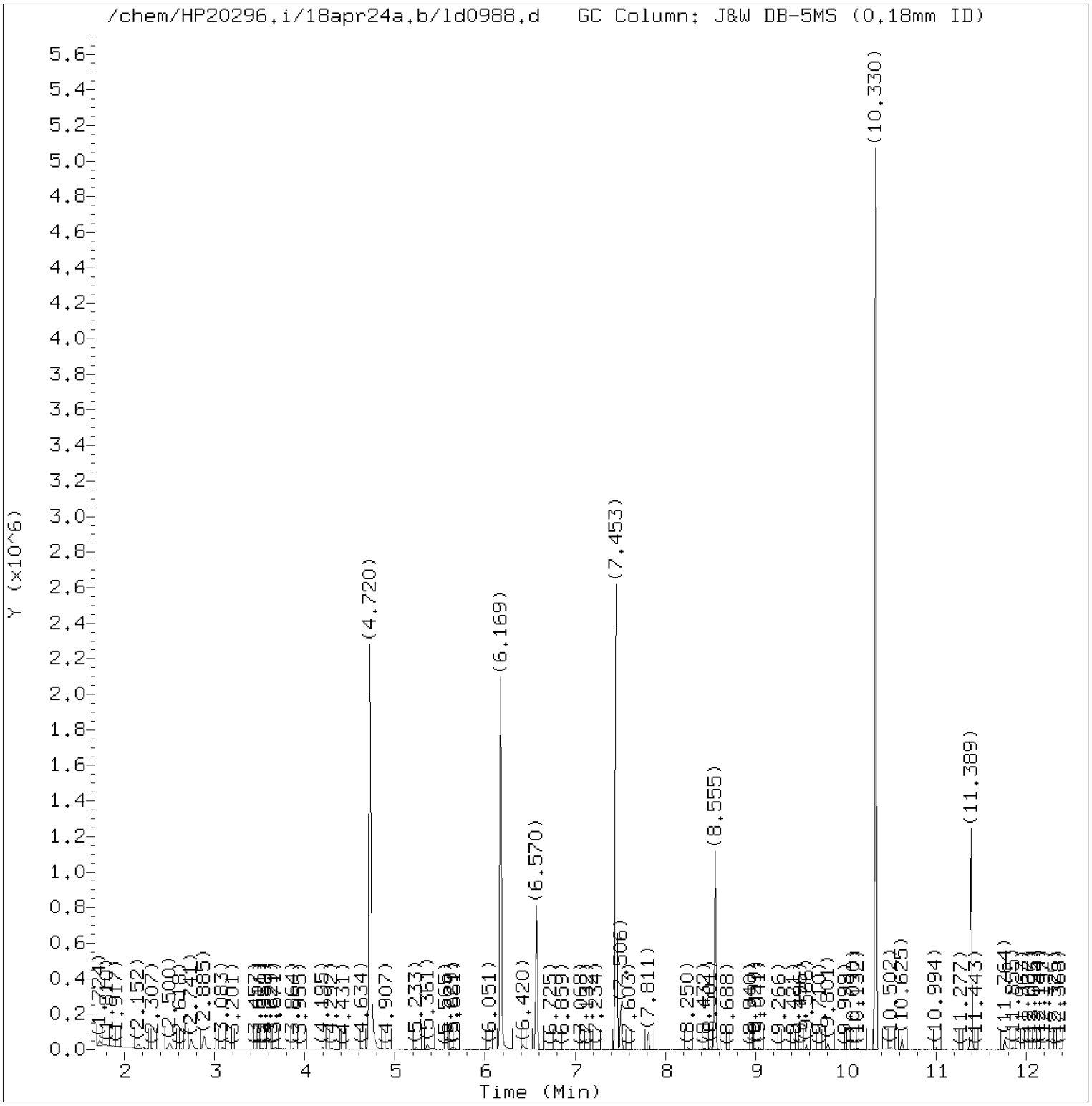
Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

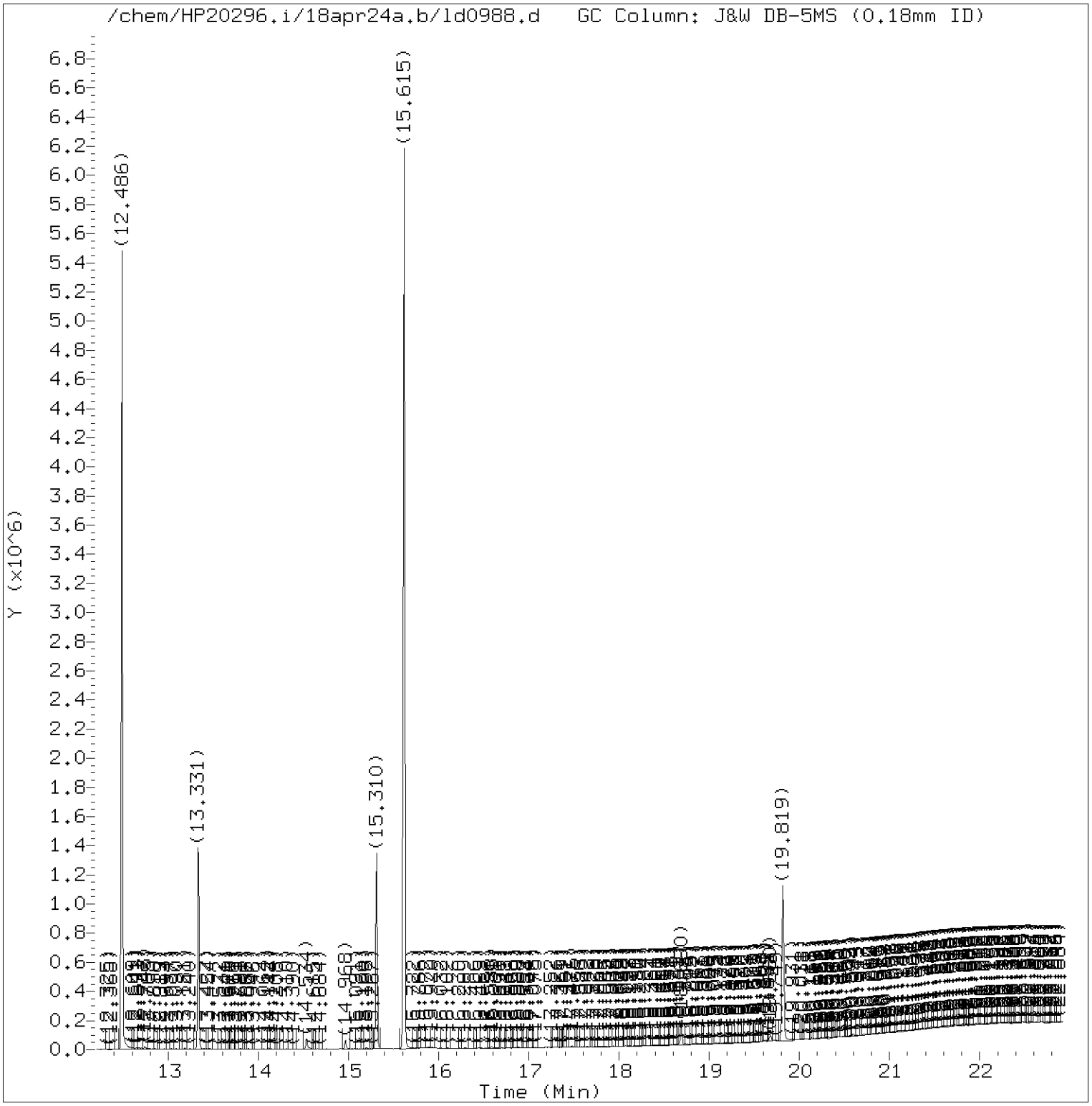
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0988.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:20 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: SBLKWN113 Lab Sample ID: SBLKWN113

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0988.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:20 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: SBLKWN113 Lab Sample ID: SBLKWN113

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0988.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:20 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: SBLKWN113 Lab Sample ID: SBLKWN113

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12)$2-Fluorophenol	(1)	4.720	112	998179	23.002
18)$Phenol-d6	(1)	6.174	99	974909	17.133
26)*1,4-Dichlorobenzene-d4	(1)	6.570	152	158476	5.000
45)$Nitrobenzene-d5	(2)	7.453	82	1097986	21.574
68)*Naphthalene-d8	(2)	8.555	136	590097	5.000
96)$2-Fluorobiphenyl	(3)	10.330	172	1852638	20.365
118)*Acenaphthene-d10	(3)	11.389	164	292626	5.000
140)$2,4,6-Tribromophenol	(3)	12.486	330	488105	48.254
158)*Phenanthrene-d10	(4)	13.331	188	588447	5.000
180)*Pyrene-d10	(5)	15.310	212	603012	5.000
184)$Terphenyl-d14	(5)	15.615	244	2359486	24.398
218)*Perylene-d12	(6)	19.819	264	564884	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0819o.d
Data file Sample Info. Line: R0604MS;9558699;1;3;MS;;RAAP;
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Injection date and time: **20-APR-2018 13:43**
Instrument ID: **HP20296.i** Batch: **18106WAO**

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	146854	(-27)	5.00	
68) Naphthalene-d8	8.560	(0.006)	1285	136	538724	(-28)	5.00	
118) Acenaphthene-d10	11.405	(0.000)	1817	164	275440	(-29)	5.00	
158) Phenanthrene-d10	13.347	(0.006)	2180	188	542961	(-32)	5.00	
180) Pyrene-d10	15.326	(0.006)	2550	212	582694	(-32)	5.00	
218) Perylene-d12	19.835	(0.006)	3393	264	544897	(-35)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.714	(-0.002)	112	458513	11.402	23%		10 - 82
18) Phenol-d6	(1)	6.137	(0.000)	99	592737	11.241	22%		10 - 71
45) Nitrobenzene-d5	(2)	7.463	(0.000)	82	1143955	24.620	98%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1931093	22.552	90%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	83176	8.736	17%	*	21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2001787	21.421	86%		27 - 116

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.596	(-0.007)	74	240853	8.238	34.76			0.5
6) Pyridine	(1)	2.698	(-0.015)	79	275323	5.278	22.27			0.5
8) 2-Picoline	(1)	3.832	(-0.005)	93	473986	8.987	37.92			0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)	6.153	(0.000)	94	208283	3.431	14.48			0.2
20) Aniline	(1)	6.131	(0.000)	93	572901	8.185	34.53			0.1
23) bis(2-Chloroethyl)ether	(1)	6.233	(0.000)	93	520788	11.525	48.63			0.1
24) 2-Chlorophenol	(1)	6.286	(0.000)	128	197543	5.015	21.16			0.2
28) Benzyl alcohol	(1)	6.854	(0.000)	108	301363	11.462	48.36			3
32) 2-Methylphenol	(1)	7.051	(0.000)	108	257687	6.634	27.99			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.046	(-0.000)	45	808378	12.600	53.17			0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)	7.233	(0.000)	105	734125	12.395	52.30			0.1
38) 4-Methylphenol	(1)	7.297	(0.001)	108	235119	5.731	24.18			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.244	(0.001)	70	425834	12.612	53.22			0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)	7.292	(0.000)	106	508269	7.399	31.22			0.1
44) Hexachloroethane	(1)	7.340	(0.000)	117	177446	9.248	39.02			0.3
46) Nitrobenzene	(2)	7.490	(0.000)	77	618086	13.042	55.03			0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)	7.859	(0.000)	82	1103829	13.325	56.22			0.1
53) 2-Nitrophenol	(2)	7.987	(0.000)	139	206830	10.800	45.57			0.3
55) 2,4-Dimethylphenol	(2)	8.116	(-0.000)	107	428718	10.443	44.06			0.2

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Data file: /chem/HP20296.i/18apr20.b/ld0819o.d Injection date and time: **20-APR-2018 13:43**
Data file Sample Info. Line: R0604MS;9558699;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)	8.249(0.000)	93	678992	12.609	53.20			0.1
62) 2,4-Dichlorophenol	(2)	8.378(0.000)	162	149330	4.671	19.71			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.747(-0.000)	127	424384	9.340	39.41			0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.576(0.000)	107	221985	6.328	26.70			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.715(-0.000)	142	890901	12.046	50.83			0.07
88) Hexachlorocyclopentadiene	(3)	9.966(0.000)	237	511417	22.958	96.87			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977(0.000)	216	431495	11.517	48.59			0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)	10.207(0.000)	196	75628	3.214	13.56			0.2
95) 2,4,5-Trichlorophenol	(3)	10.266(0.000)	196	135834	5.500	23.21			0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)	10.507(0.000)	162	843573	11.240	47.43			0.1
104) 2-Nitroaniline	(3)	10.737(0.000)	138	279565	12.728	53.71			0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	11.052(0.000)	163	976049	11.610	48.99			0.5
111) 1,3-Dinitrobenzene	(3)	11.090(0.000)	168	160739	12.855	54.24			0.5
113) 2,6-Dinitrotoluene	(3)	11.138(0.000)	165	228716	12.813	54.06			0.1
114) Acenaphthylene	(3)	11.170(0.000)	152	1425703	13.668	57.67			0.1
117) 3-Nitroaniline	(3)	11.421(0.000)	138	215331	11.450	48.31			0.1
119) Acenaphthene	(3)	11.453(0.000)	153	942228	12.738	53.75			0.09
120) 2,4-Dinitrophenol	(3)	11.566(0.000)	184	247135	23.030	97.17			3
121) 4-Nitrophenol	(3)	11.748(0.000)	109	109691	8.274	34.91			3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.758(0.000)	165	306855	12.405	52.34			0.3
124) Dibenzofuran	(3)	11.721(0.000)	168	1280396	12.460	52.57			0.1
126) 1-Naphthylamine	(3)	11.860(0.000)	143	920075	12.583	53.09			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919(0.000)	232	60662	3.157	13.32			0.2
128) 2-Naphthylamine	(3)	11.972(0.000)	143	866388	12.507	52.77			1
129) Diethylphthalate	(3)	12.106(0.000)	149	1005137	12.148	51.26			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.186(0.000)	166	1006320	12.536	52.89			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.213(0.000)	204	485712	12.208	51.51			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)	12.288(0.000)	138	208155	10.951	46.21			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.288(0.000)	198	171739	11.948	50.41			1
136) N-Nitrosodiphenylamine	(4)	12.373(0.000)	169	847579	12.756	53.82			0.1
137) NDPA as diphenylamine	(4)	12.373(0.000)	169	847579	12.756	53.82			0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.806(0.000)	248	276261	12.443	52.50			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.844(0.000)	284	280296	12.292	51.87			0.2
152) Dimethoate	(4)			Not Detected					0.8

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Data file: /chem/HP20296.i/18apr20.b/ld0819o.d Injection date and time: **20-APR-2018 13:43**
Data file Sample Info. Line: R0604MS;9558699;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)	13.122(0.000)	266	38782	2.777	11.72			0.7
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.373(0.000)	178	1518712	12.685	53.52			0.1
162) Anthracene	(4)	13.438(0.000)	178	1532705	12.770	53.88			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.154(-0.000)	149	1753266	12.257	51.72			0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)	15.010(-0.000)	202	1766341	13.118	55.35			0.1
182) Pyrene	(5)	15.352(-0.000)	202	1804886	12.176	51.38			0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.470(0.000)	149	801388	11.636	49.10			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)	17.380(-0.000)	252	416388	8.737	36.87			0.5
200) Benzo(a)anthracene	(5)	17.353(-0.000)	228	1667132	12.588	53.12			0.1
201) Chrysene	(5)	17.417(0.000)	228	1613518	12.595	53.15			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.492(-0.000)	149	1165125	11.973	50.52			0.5
210) Di-n-octylphthalate	(6)	18.652(0.000)	149	2051251	11.971	50.51			0.5
211) Benzo(b)fluoranthene	(6)	19.209(0.000)	252	1697084	12.703	53.60			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214(0.000)	256	689959	12.518	52.82			0.1
213) Benzo(k)fluoranthene	(6)	19.257(0.000)	252	1633204	12.695	53.57			0.4
216) Benzo(a)pyrene	(6)	19.744(0.000)	252	1492292	12.415	52.38			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)	21.439(0.000)	276	1426504M	12.496	52.73			0.04
225) Dibenz(a,h)anthracene	(6)	21.477(0.000)	278	1494187	12.886	54.37			0.1
226) Benzo(g,h,i)perylene	(6)	21.819(0.000)	276	1419755	12.036	50.78			0.1

M = Compound was manually integrated.

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:16. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0819o.d Injection date and time: **20-APR-2018 13:43**
Data file Sample Info. Line: R0604MS;9558699;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 1 ul

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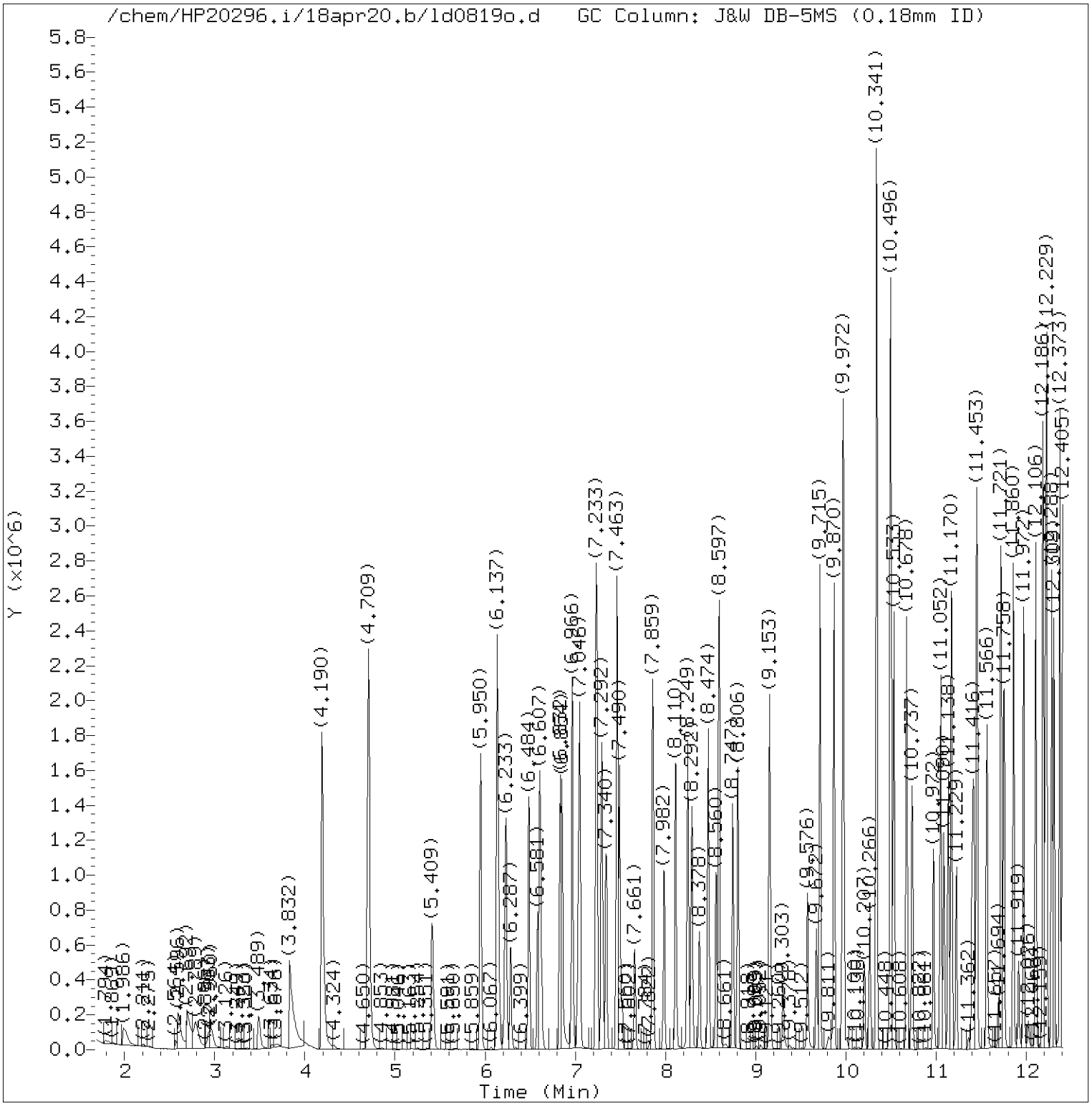
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:16. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/30/2018 at 13:28. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

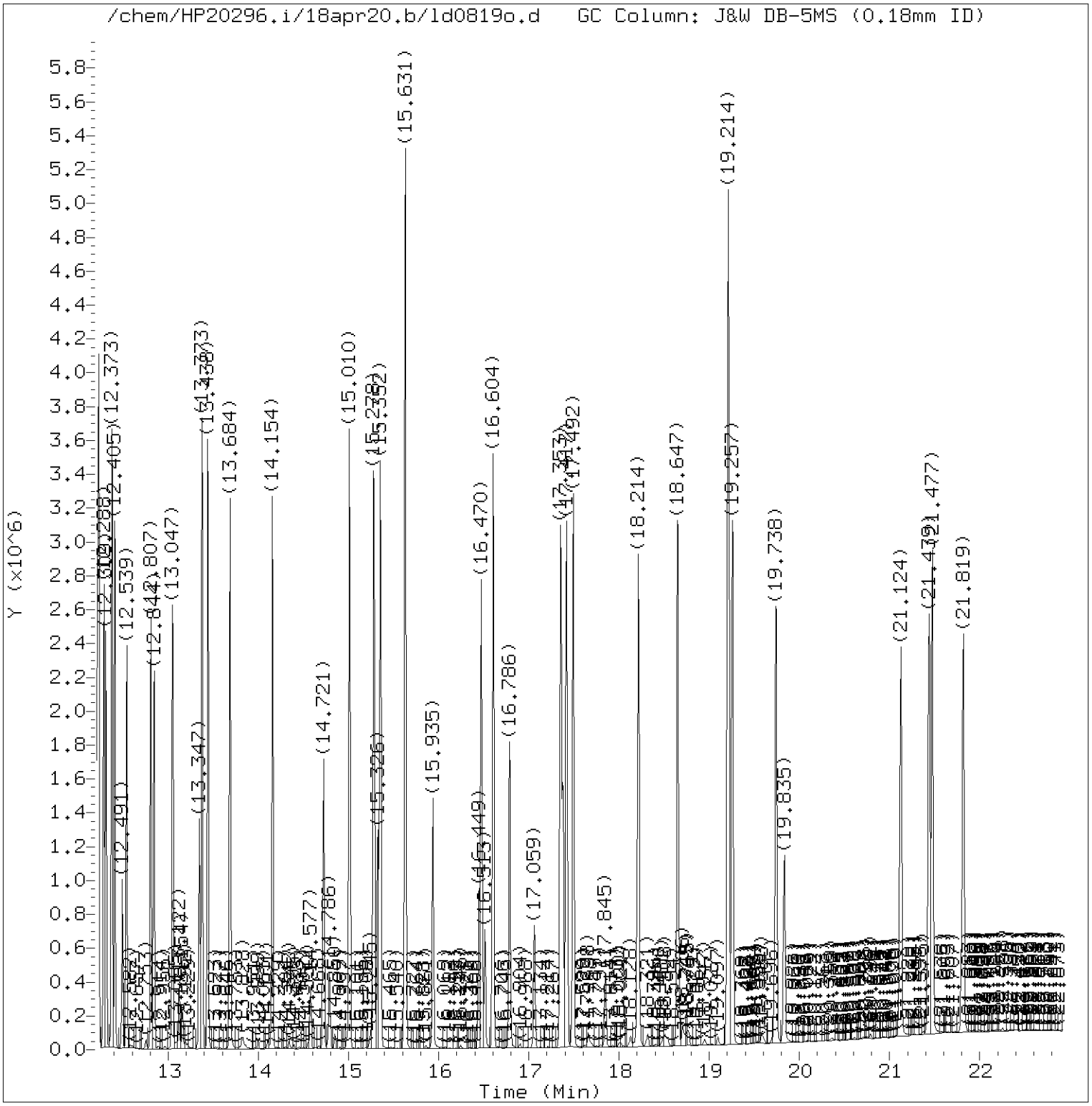
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.596	74	240853	8.238
6) Pyridine	(1)	2.698	79	275323	5.278
8) 2-Picoline	(1)	3.832	93	473986	8.987
12)$2-Fluorophenol	(1)	4.714	112	458513	11.402
20) Aniline	(1)	6.131	93	572901	8.185
18)$Phenol-d6	(1)	6.137	99	592737	11.241
19) Phenol	(1)	6.153	94	208283	3.431
23) bis(2-Chloroethyl)ether	(1)	6.233	93	520788	11.525
24) 2-Chlorophenol	(1)	6.287	128	197543	5.015
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	146854	5.000
28) Benzyl alcohol	(1)	6.854	108	301363	11.462
35) bis(2-Chloroisopropyl)ether	(1)	7.046	45	808378	12.600
32) 2-Methylphenol	(1)	7.051	108	257687	6.634
37) Acetophenone	(1)	7.233	105	734125	12.395
39) N-Nitroso-di-n-propylamine	(1)	7.244	70	425834	12.612
41) o-Toluidine	(1)	7.292	106	508269	7.399
38) 4-Methylphenol	(1)	7.297	108	235119	5.731
44) Hexachloroethane	(1)	7.340	117	177446	9.248
45)$Nitrobenzene-d5	(2)	7.463	82	1143955	24.620
46) Nitrobenzene	(2)	7.490	77	618086	13.042
52) Isophorone	(2)	7.859	82	1103829	13.325
53) 2-Nitrophenol	(2)	7.987	139	206830	10.800
55) 2,4-Dimethylphenol	(2)	8.116	107	428718	10.443
57) bis(2-Chloroethoxy)methane	(2)	8.249	93	678992	12.609
62) 2,4-Dichlorophenol	(2)	8.378	162	149330	4.671
68)*Naphthalene-d8	(2)	8.560	136	538724	5.000
70) 4-Chloroaniline	(2)	8.747	127	424384	9.340
83) 4-Chloro-3-methylphenol	(2)	9.576	107	221985	6.328
86) 2-Methylnaphthalene	(2)	9.715	142	890901	12.046
88) Hexachlorocyclopentadiene	(3)	9.966	237	511417	22.958
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	216	431495	11.517
93) 2,4,6-Trichlorophenol	(3)	10.207	196	75628	3.214
95) 2,4,5-Trichlorophenol	(3)	10.266	196	135834	5.500
96)$2-Fluorobiphenyl	(3)	10.341	172	1931093	22.552
99) 2-Chloronaphthalene	(3)	10.507	162	843573	11.240
104) 2-Nitroaniline	(3)	10.737	138	279565	12.728
110) Dimethylphthalate	(3)	11.052	163	976049	11.610
111) 1,3-Dinitrobenzene	(3)	11.090	168	160739	12.855
113) 2,6-Dinitrotoluene	(3)	11.138	165	228716	12.813
114) Acenaphthylene	(3)	11.170	152	1425703	13.668

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.405	164	275440	5.000
117) 3-Nitroaniline	(3)	11.421	138	215331	11.450
119) Acenaphthene	(3)	11.453	153	942228	12.738
120) 2,4-Dinitrophenol	(3)	11.566	184	247135	23.030
124) Dibenzofuran	(3)	11.721	168	1280396	12.460
121) 4-Nitrophenol	(3)	11.748	109	109691	8.274
123) 2,4-Dinitrotoluene	(3)	11.758	165	306855	12.405
126) 1-Naphthylamine	(3)	11.860	143	920075	12.583
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	60662	3.157
128) 2-Naphthylamine	(3)	11.972	143	866388	12.507
129) Diethylphthalate	(3)	12.106	149	1005137	12.148
131) Fluorene	(3)	12.186	166	1006320	12.536
132) 4-Chlorophenyl-phenylether	(3)	12.213	204	485712	12.208
134) 4-Nitroaniline	(3)	12.288	138	208155	10.951
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	171739	11.948
136) N-Nitrosodiphenylamine	(4)	12.373	169	847579	12.756
137) NDPA as diphenylamine	(4)	12.373	169	847579	12.756
140)$2,4,6-Tribromophenol	(3)	12.491	330	83176	8.736
148) 4-Bromophenyl-phenylether	(4)	12.807	248	276261	12.443
150) Hexachlorobenzene	(4)	12.844	284	280296	12.292
154) Pentachlorophenol	(4)	13.122	266	38782	2.777
158)*Phenanthrene-d10	(4)	13.347	188	542961	5.000
160) Phenanthrene	(4)	13.373	178	1518712	12.685
162) Anthracene	(4)	13.438	178	1532705	12.770
170) Di-n-butylphthalate	(4)	14.154	149	1753266	12.257
178) Fluoranthene	(4)	15.010	202	1766341	13.118
180)*Pyrene-d10	(5)	15.326	212	582694	5.000
182) Pyrene	(5)	15.352	202	1804886	12.176
184)$Terphenyl-d14	(5)	15.631	244	2001787	21.421
193) Butylbenzylphthalate	(5)	16.470	149	801388	11.636
200) Benzo(a)anthracene	(5)	17.353	228	1667132	12.588
198) 3,3'-Dichlorobenzidine	(5)	17.380	252	416388	8.737
201) Chrysene	(5)	17.417	228	1613518	12.595
204) bis(2-Ethylhexyl)phthalate	(5)	17.492	149	1165125	11.973
210) Di-n-octylphthalate	(6)	18.653	149	2051251	11.971
211) Benzo(b)fluoranthene	(6)	19.209	252	1697084	12.703
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214	256	689959	12.518
213) Benzo(k)fluoranthene	(6)	19.257	252	1633204	12.695
216) Benzo(a)pyrene	(6)	19.744	252	1492292	12.415
218)*Perylene-d12	(6)	19.835	264	544897	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

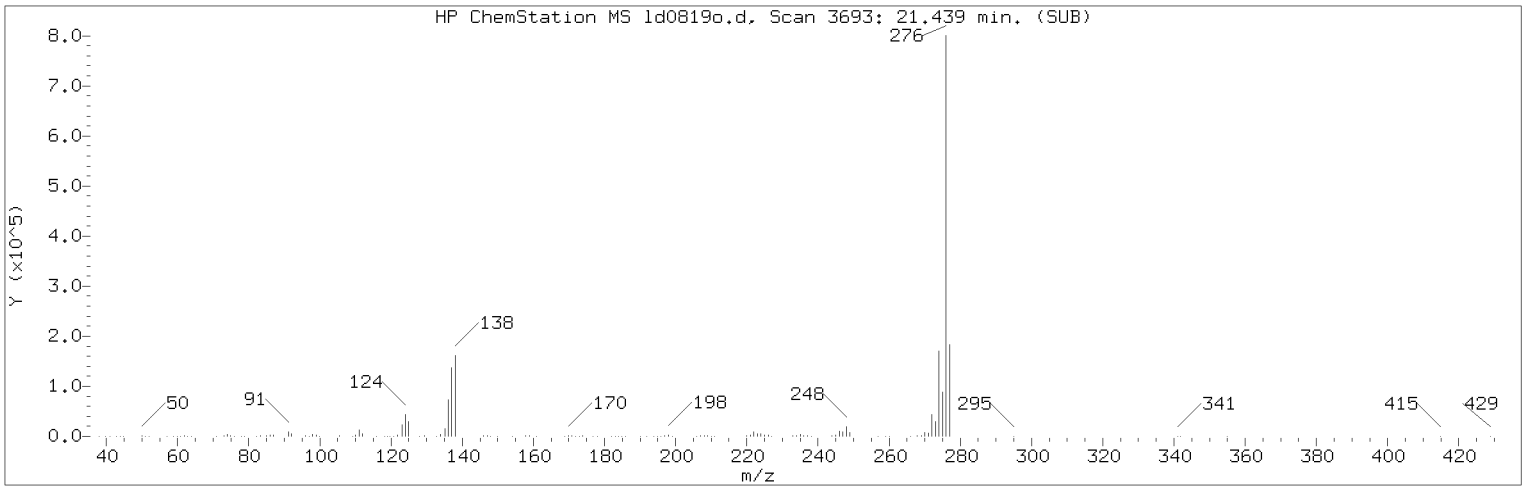
Sample Name: R0604MS Lab Sample ID: 9558699

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.439	276	1426504M	12.496
225) Dibenz(a,h)anthracene	(6)	21.477	278	1494187	12.886
226) Benzo(g,h,i)perylene	(6)	21.819	276	1419755	12.036

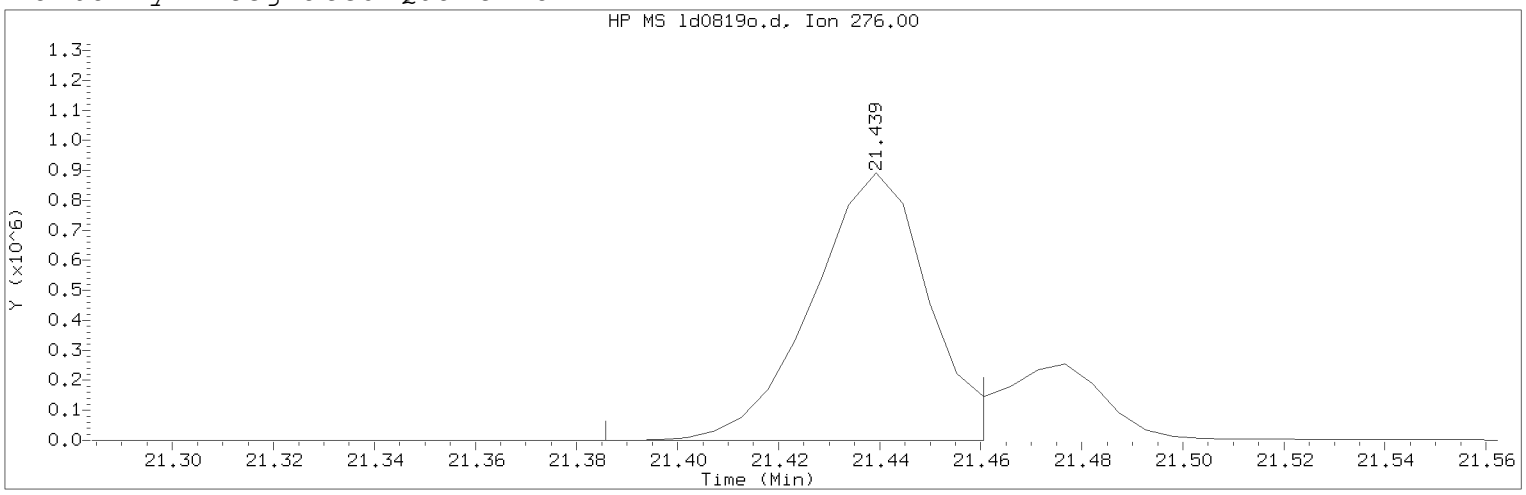
M = Compound was manually integrated.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:14 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

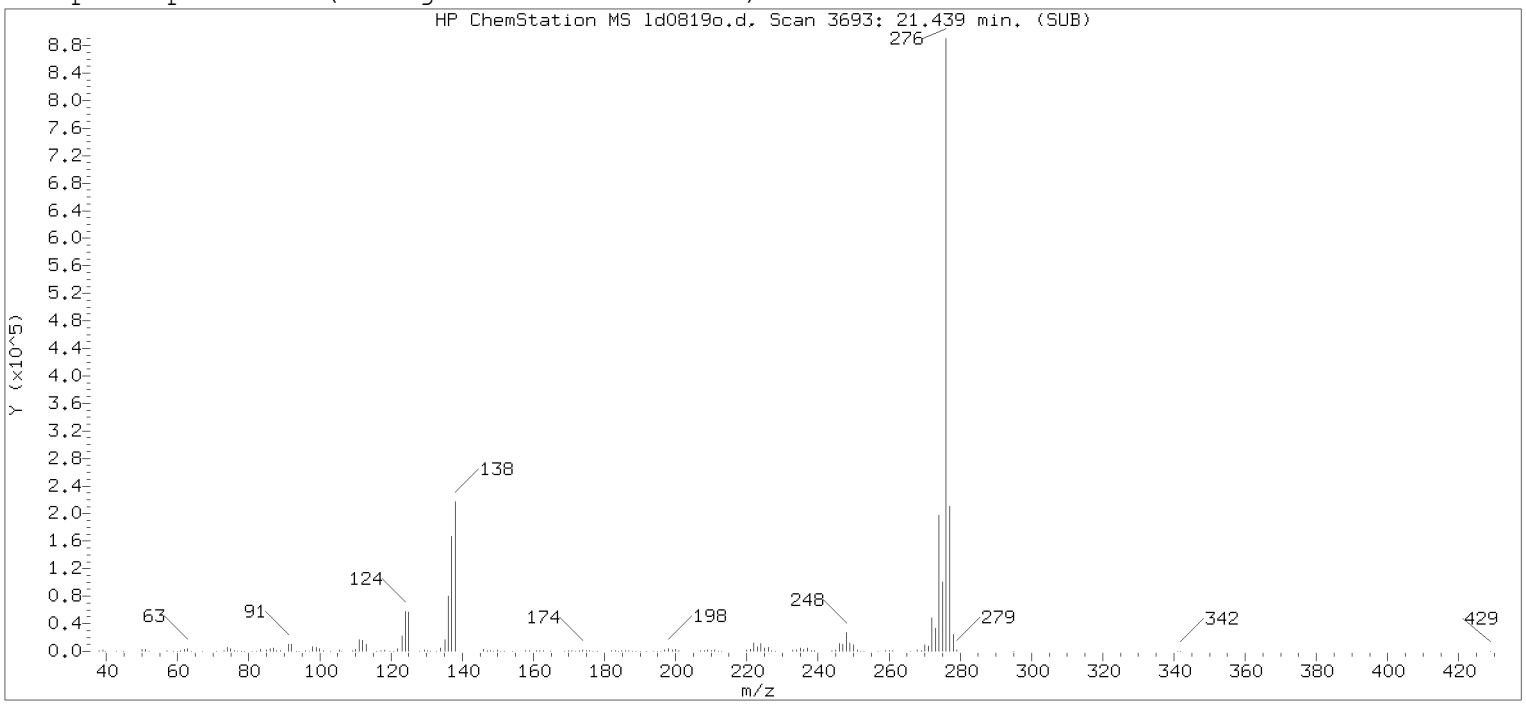
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3693
Retention Time (minutes) : 21.439
Quant Ion : 276.00
Area (flag) : 1426504M
On-Column Amount (ng/ul) : 12.4964
Integration start scan : 3682 Integration stop scan: 3696
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

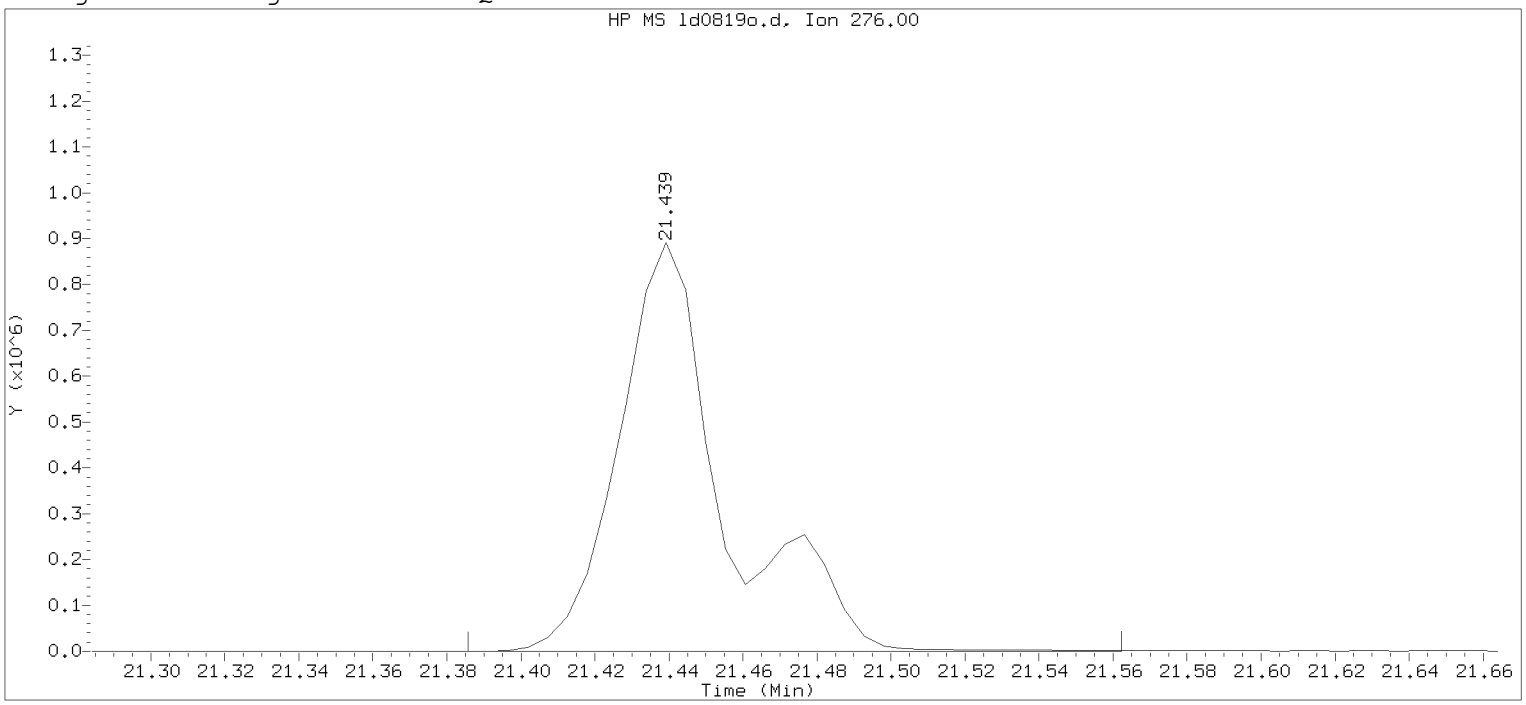
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/30/2018 at 13:28.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0819o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 13:43 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 11:54 bhs10208

Sample Name: R0604MS Lab Sample ID: 9558699

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3693		
Retention Time (minutes)	: 21.439		
Quant Ion	: 276.00		
Area	: 1757145		
On-column Amount (ng/ul)	: 15.3929		
Integration start scan	: 3682	Integration stop scan:	3715
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:16.
Target 3.5 esignature user ID: BHS10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr20.b/ld0820o.d
Injection date and time: **20-APR-2018 14:11**
Data file Sample Info. Line: R0604MSD;9558700;1;3;MSD;;RAAP;
Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	152777	(-24)	5.00	
68) Naphthalene-d8	8.560	(0.006)	1285	136	572196	(-23)	5.00	
118) Acenaphthene-d10	11.405	(0.000)	1817	164	285669	(-26)	5.00	
158) Phenanthrene-d10	13.347	(0.006)	2180	188	570599	(-29)	5.00	
180) Pyrene-d10	15.326	(0.006)	2550	212	610786	(-29)	5.00	
218) Perylene-d12	19.835	(0.006)	3393	264	587752	(-30)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.714	(-0.002)	112	220794	5.278	11%		10 - 82
18) Phenol-d6	(1)	6.137	(0.000)	99	879804	16.038	32%		10 - 71
45) Nitrobenzene-d5	(2)	7.463	(0.000)	82	1153462	23.373	93%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341	(0.001)	172	1967081	22.150	89%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	129145	13.078	26%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2094074	21.378	86%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.596	(-0.007)	74	234654	7.715	31.11			0.5
6) Pyridine	(1)	2.692	(-0.014)	79	276633	5.097	20.55			0.5
8) 2-Picoline	(1)	3.832	(-0.005)	93	458360	8.353	33.68			0.5
9) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
10) Methyl methanesulfonate	(1)				Not Detected					0.3
14) N-Nitrosodiethylamine	(1)				Not Detected					0.1
16) Ethyl methanesulfonate	(1)				Not Detected					0.1
19) Phenol	(1)	6.153	(0.000)	94	298306	4.724	19.05			0.2
20) Aniline	(1)	6.131	(0.000)	93	569885	7.826	31.56			0.1
23) bis(2-Chloroethyl)ether	(1)	6.233	(0.000)	93	532466	11.326	45.67			0.1
24) 2-Chlorophenol	(1)	6.281	(0.000)	128	161148	3.932	15.86			0.2
28) Benzyl alcohol	(1)	6.853	(0.000)	108	303815	11.108	44.79			3
32) 2-Methylphenol	(1)	7.051	(0.000)	108	422827	10.464	42.19			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.046	(-0.000)	45	826024	12.376	49.90			0.1
36) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
37) Acetophenone	(1)	7.233	(0.000)	105	749910	12.171	49.08			0.1
38) 4-Methylphenol	(1)	7.303	(0.000)	108	421698	9.880	39.84			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.244	(0.001)	70	435850	12.408	50.03			0.1
40) N-Nitrosomorpholine	(1)				Not Detected					0.5
41) o-Toluidine	(1)	7.292	(0.000)	106	490407A	6.863	27.67			0.1
44) Hexachloroethane	(1)	7.340	(0.000)	117	178104	8.922	35.98			0.3
46) Nitrobenzene	(2)	7.490	(0.000)	77	625885	12.434	50.14			0.1
50) N-Nitrosopiperidine	(2)				Not Detected					0.1
52) Isophorone	(2)	7.859	(0.000)	82	1133433	12.882	51.94			0.1
53) 2-Nitrophenol	(2)	7.987	(0.000)	139	210024	10.326	41.64			0.3
55) 2,4-Dimethylphenol	(2)	8.116	(-0.000)	107	459956	10.548	42.53			0.2
59) O,O,O-Triethylphosphorothioate	(2)				Not Detected					0.5

A = User selected an alternate peak.

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:17. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0820o.d Injection date and time: **20-APR-2018 14:11**
Data file Sample Info. Line: R0604MSD;9558700;1;3;MSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)	8.249(0.000)	93	696030	12.169	49.07			0.1
62) 2,4-Dichlorophenol	(2)	8.378(0.000)	162	144158	4.246	17.12			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.747(-0.000)	127	412220	8.542	34.44			0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.581(-0.000)	107	436822	11.724	47.28			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.715(-0.000)	142	883289	11.244	45.34			0.07
88) Hexachlorocyclopentadiene	(3)	9.966(0.000)	237	515122	22.297	89.91			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977(0.000)	216	434456	11.180	45.08			0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)	10.207(0.000)	196	78849	3.231	13.03			0.2
95) 2,4,5-Trichlorophenol	(3)	10.266(0.000)	196	120022	4.686	18.90			0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)	10.507(0.000)	162	854537	10.978	44.27			0.1
104) 2-Nitroaniline	(3)	10.737(0.000)	138	293160	12.870	51.89			0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	11.052(0.000)	163	1051584	12.061	48.63			0.5
111) 1,3-Dinitrobenzene	(3)	11.090(0.000)	168	170025	13.111	52.87			0.5
113) 2,6-Dinitrotoluene	(3)	11.138(0.000)	165	236835	12.793	51.58			0.1
114) Acenaphthylene	(3)	11.175(0.000)	152	1462806	13.521	54.52			0.1
117) 3-Nitroaniline	(3)	11.421(0.000)	138	218021	11.178	45.07			0.1
119) Acenaphthene	(3)	11.453(0.000)	153	953057	12.423	50.09			0.09
120) 2,4-Dinitrophenol	(3)	11.566(0.000)	184	281903	25.330	102.14			3
121) 4-Nitrophenol	(3)	11.747(0.000)	109	105802	7.695	31.03			3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.758(0.000)	165	318539	12.417	50.07			0.3
124) Dibenzofuran	(3)	11.721(0.000)	168	1304557	12.240	49.36			0.1
126) 1-Naphthylamine	(3)	11.860(0.000)	143	834497	11.004	44.37			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919(0.000)	232	83786	4.204	16.95			0.2
128) 2-Naphthylamine	(3)	11.972(0.000)	143	804070	11.191	45.13			1
129) Diethylphthalate	(3)	12.111(0.000)	149	1048613	12.220	49.27			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.186(0.000)	166	1042183	12.518	50.47			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.218(0.000)	204	499108	12.096	48.77			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)	12.288(0.000)	138	211394	10.723	43.24			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.288(0.000)	198	186599	12.353	49.81			1
136) N-Nitrosodiphenylamine	(4)	12.379(0.000)	169	875852	12.543	50.58			0.1
137) NDPA as diphenylamine	(4)	12.379(0.000)	169	875852	12.543	50.58			0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.806(0.000)	248	282107	12.091	48.75			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.844(0.000)	284	292363	12.200	49.19			0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)	13.122(0.000)	266	76081	5.184	20.90			0.7

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Data file: /chem/HP20296.i/18apr20.b/ld0820o.d Injection date and time: **20-APR-2018 14:11**
Data file Sample Info. Line: R0604MSD;9558700;1;3;MSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 23-APR-2018 11:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 248 ml Volume Injected (Vi): 1 ul

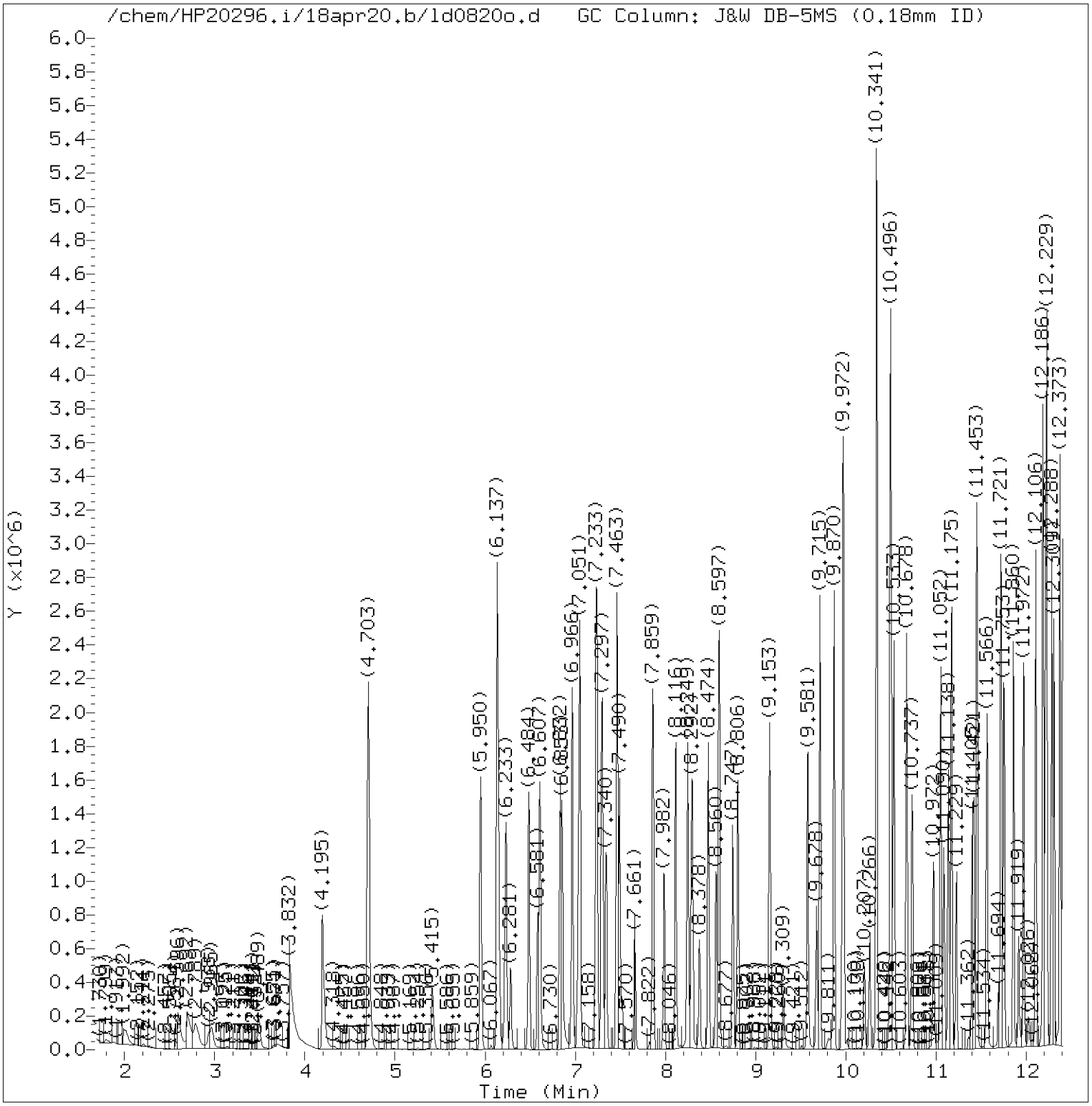
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.373(0.000)	178	1542959	12.264	49.45			0.1
162) Anthracene	(4)	13.438(0.000)	178	1604566	12.722	51.30			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.154(-0.000)	149	1849880	12.306	49.62			0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)	15.010(-0.000)	202	1820710	12.867	51.88			0.1
182) Pyrene	(5)	15.352(0.000)	202	1871527	12.045	48.57			0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.470(0.000)	149	867968	12.023	48.48			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)	17.380(-0.000)	252	441273	8.834	35.62			0.5
200) Benzo(a)anthracene	(5)	17.353(-0.000)	228	1757748	12.662	51.06			0.1
201) Chrysene	(5)	17.417(0.000)	228	1725008	12.846	51.80			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.492(-0.000)	149	1238735	12.144	48.97			0.5
210) Di-n-octylphthalate	(6)	18.652(0.000)	149	2205358	11.932	48.11			0.5
211) Benzo(b)fluoranthene	(6)	19.209(0.000)	252	1808812	12.552	50.61			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214(0.000)	256	737455	12.404	50.02			0.1
213) Benzo(k)fluoranthene	(6)	19.262(0.000)	252	1719149	12.389	49.96			0.4
216) Benzo(a)pyrene	(6)	19.744(0.000)	252	1605061	12.379	49.92			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)	21.439(0.000)	276	1535153M	12.468	50.27			0.04
225) Dibenz(a,h)anthracene	(6)	21.477(0.000)	278	1597763	12.774	51.51			0.1
226) Benzo(g,h,i)perylene	(6)	21.819(0.000)	276	1528744	12.015	48.45			0.1

M = Compound was manually integrated.

Total number of targets = 120

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:17. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/30/2018 at 13:28. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

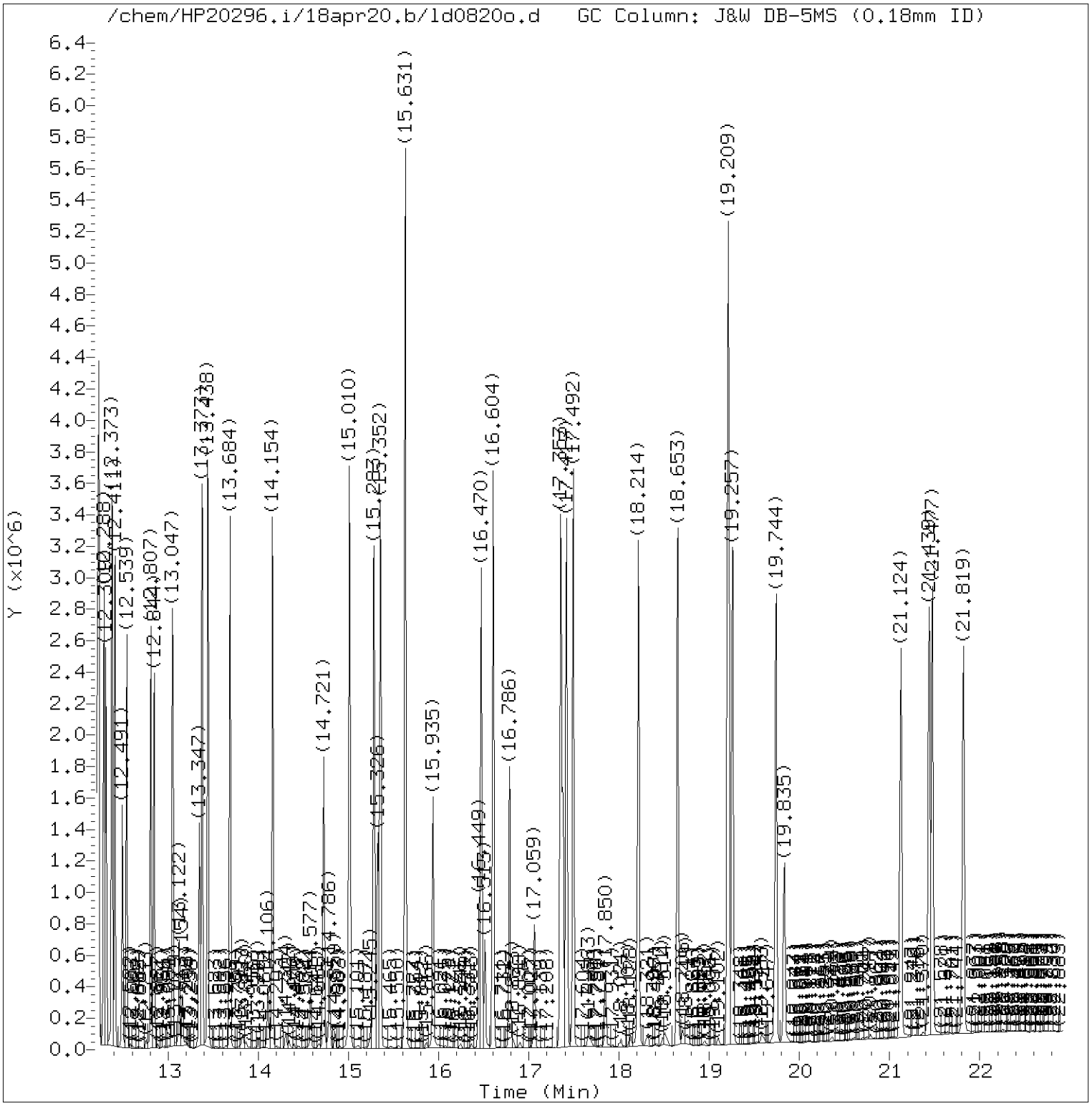
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.596	74	234654	7.715
6) Pyridine	(1)	2.692	79	276633	5.097
8) 2-Picoline	(1)	3.832	93	458360	8.353
12)$2-Fluorophenol	(1)	4.714	112	220794	5.278
20) Aniline	(1)	6.131	93	569885	7.826
18)$Phenol-d6	(1)	6.137	99	879804	16.038
19) Phenol	(1)	6.153	94	298306	4.724
23) bis(2-Chloroethyl)ether	(1)	6.233	93	532466	11.326
24) 2-Chlorophenol	(1)	6.281	128	161148	3.932
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	152777	5.000
28) Benzyl alcohol	(1)	6.853	108	303815	11.108
35) bis(2-Chloroisopropyl)ether	(1)	7.046	45	826024	12.376
32) 2-Methylphenol	(1)	7.051	108	422827	10.464
37) Acetophenone	(1)	7.233	105	749910	12.171
39) N-Nitroso-di-n-propylamine	(1)	7.244	70	435850	12.408
41) o-Toluidine	(1)	7.292	106	490407A	6.863
38) 4-Methylphenol	(1)	7.303	108	421698	9.880
44) Hexachloroethane	(1)	7.340	117	178104	8.922
45)$Nitrobenzene-d5	(2)	7.463	82	1153462	23.373
46) Nitrobenzene	(2)	7.490	77	625885	12.434
52) Isophorone	(2)	7.859	82	1133433	12.882
53) 2-Nitrophenol	(2)	7.987	139	210024	10.326
55) 2,4-Dimethylphenol	(2)	8.116	107	459956	10.548
57) bis(2-Chloroethoxy)methane	(2)	8.249	93	696030	12.169
62) 2,4-Dichlorophenol	(2)	8.378	162	144158	4.246
68)*Naphthalene-d8	(2)	8.560	136	572196	5.000
70) 4-Chloroaniline	(2)	8.747	127	412220	8.542
83) 4-Chloro-3-methylphenol	(2)	9.581	107	436822	11.724
86) 2-Methylnaphthalene	(2)	9.715	142	883289	11.244
88) Hexachlorocyclopentadiene	(3)	9.966	237	515122	22.297
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	216	434456	11.180
93) 2,4,6-Trichlorophenol	(3)	10.207	196	78849	3.231
95) 2,4,5-Trichlorophenol	(3)	10.266	196	120022	4.686
96)$2-Fluorobiphenyl	(3)	10.341	172	1967081	22.150
99) 2-Chloronaphthalene	(3)	10.507	162	854537	10.978
104) 2-Nitroaniline	(3)	10.737	138	293160	12.870
110) Dimethylphthalate	(3)	11.052	163	1051584	12.061
111) 1,3-Dinitrobenzene	(3)	11.090	168	170025	13.111
113) 2,6-Dinitrotoluene	(3)	11.138	165	236835	12.793
114) Acenaphthylene	(3)	11.175	152	1462806	13.521

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.405	164	285669	5.000
117) 3-Nitroaniline	(3)	11.421	138	218021	11.178
119) Acenaphthene	(3)	11.453	153	953057	12.423
120) 2,4-Dinitrophenol	(3)	11.566	184	281903	25.330
124) Dibenzofuran	(3)	11.721	168	1304557	12.240
121) 4-Nitrophenol	(3)	11.747	109	105802	7.695
123) 2,4-Dinitrotoluene	(3)	11.758	165	318539	12.417
126) 1-Naphthylamine	(3)	11.860	143	834497	11.004
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	83786	4.204
128) 2-Naphthylamine	(3)	11.972	143	804070	11.191
129) Diethylphthalate	(3)	12.111	149	1048613	12.220
131) Fluorene	(3)	12.186	166	1042183	12.518
132) 4-Chlorophenyl-phenylether	(3)	12.218	204	499108	12.096
134) 4-Nitroaniline	(3)	12.288	138	211394	10.723
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	186599	12.353
137) NDPA as diphenylamine	(4)	12.379	169	875852	12.543
136) N-Nitrosodiphenylamine	(4)	12.379	169	875852	12.543
140)$2,4,6-Tribromophenol	(3)	12.491	330	129145	13.078
148) 4-Bromophenyl-phenylether	(4)	12.807	248	282107	12.091
150) Hexachlorobenzene	(4)	12.844	284	292363	12.200
154) Pentachlorophenol	(4)	13.122	266	76081	5.184
158)*Phenanthrene-d10	(4)	13.347	188	570599	5.000
160) Phenanthrene	(4)	13.373	178	1542959	12.264
162) Anthracene	(4)	13.438	178	1604566	12.722
170) Di-n-butylphthalate	(4)	14.154	149	1849880	12.306
178) Fluoranthene	(4)	15.010	202	1820710	12.867
180)*Pyrene-d10	(5)	15.326	212	610786	5.000
182) Pyrene	(5)	15.352	202	1871527	12.045
184)$Terphenyl-d14	(5)	15.631	244	2094074	21.378
193) Butylbenzylphthalate	(5)	16.470	149	867968	12.023
200) Benzo(a)anthracene	(5)	17.353	228	1757748	12.662
198) 3,3'-Dichlorobenzidine	(5)	17.380	252	441273	8.834
201) Chrysene	(5)	17.417	228	1725008	12.846
204) bis(2-Ethylhexyl)phthalate	(5)	17.492	149	1238735	12.144
210) Di-n-octylphthalate	(6)	18.653	149	2205358	11.932
211) Benzo(b)fluoranthene	(6)	19.209	252	1808812	12.552
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214	256	737455	12.404
213) Benzo(k)fluoranthene	(6)	19.262	252	1719149	12.389
216) Benzo(a)pyrene	(6)	19.744	252	1605061	12.379
218)*Perylene-d12	(6)	19.835	264	587752	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

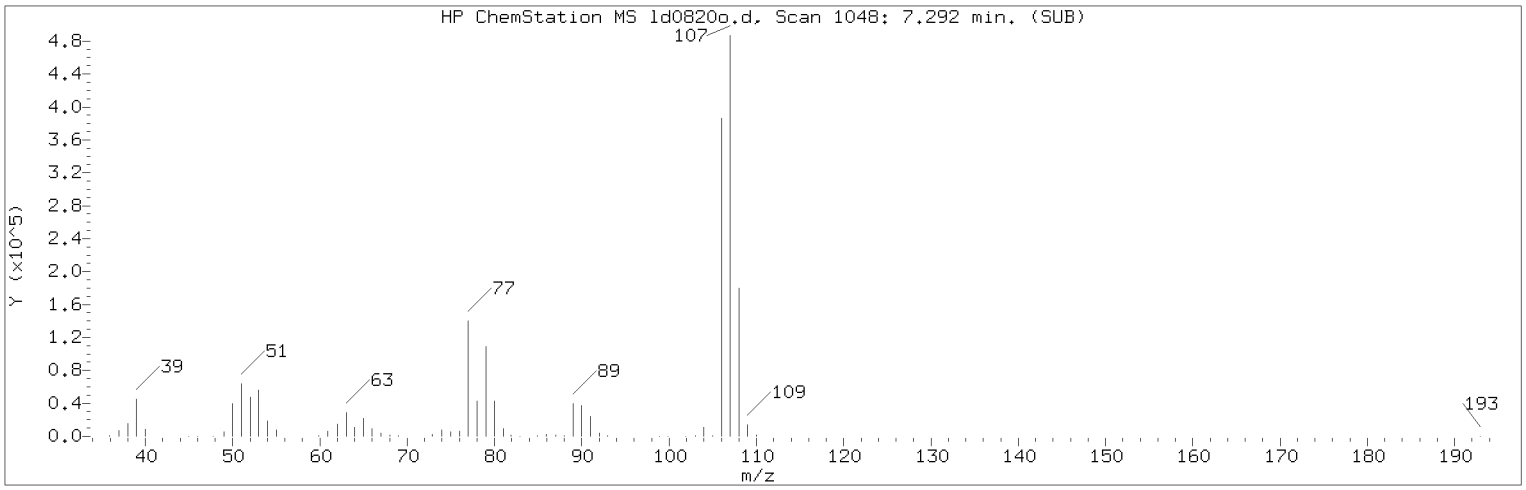
Sample Name: R0604MSD Lab Sample ID: 9558700

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.439	276	1535153M	12.468
225) Dibenz(a,h)anthracene	(6)	21.477	278	1597763	12.774
226) Benzo(g,h,i)perylene	(6)	21.819	276	1528744	12.015

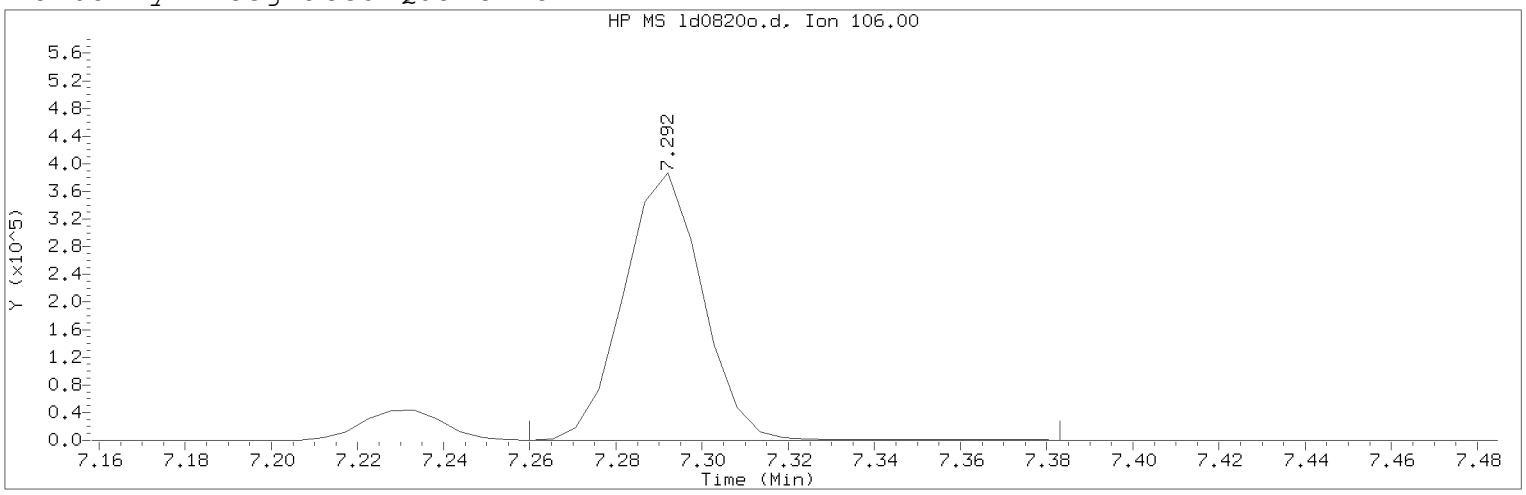
M = Compound was manually integrated.

Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

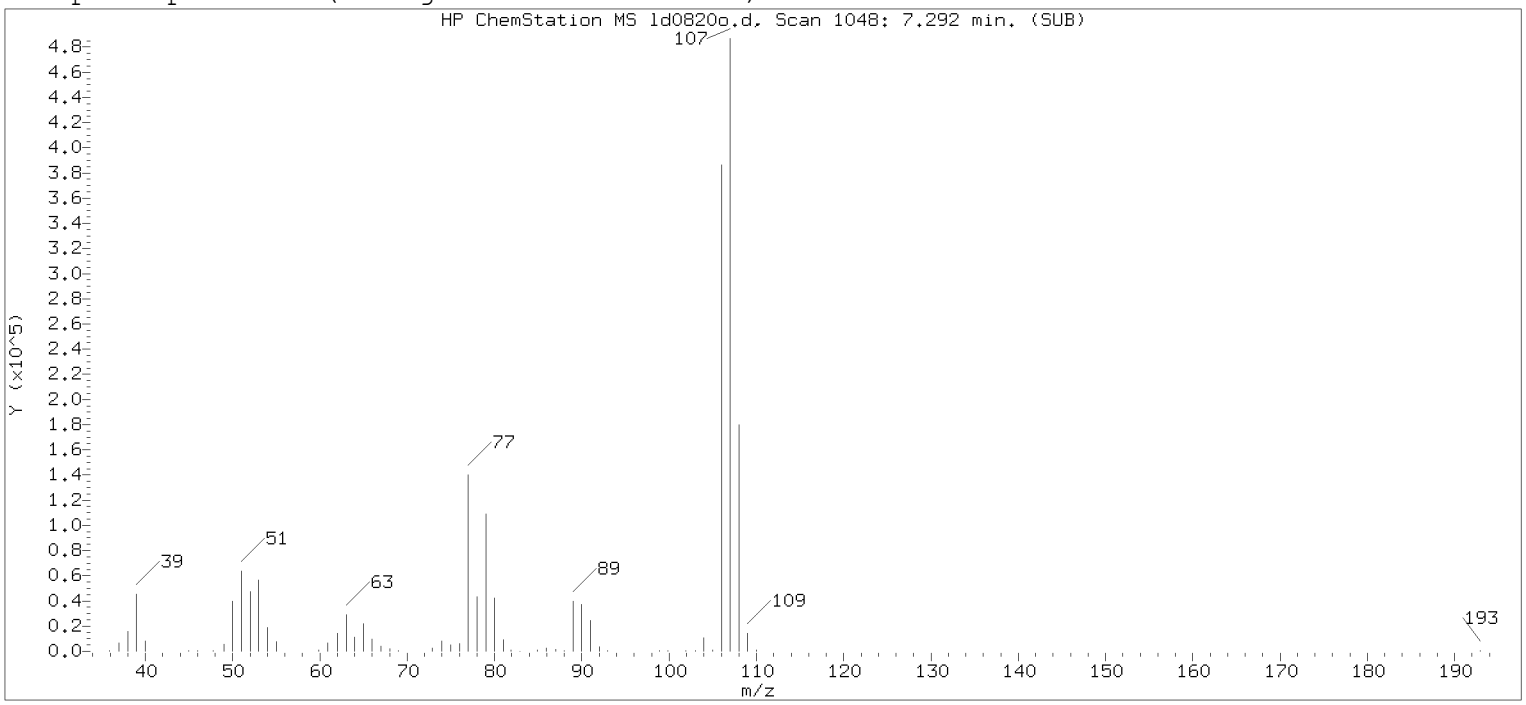
Compound Number : 41
Compound Name : o-Toluidine
Scan Number : 1048
Retention Time (minutes) : 7.292
Quant Ion : 106.00
Area (flag) : 490407A
On-Column Amount (ng/ul) : 6.8626
Integration start scan : 1041 Integration stop scan: 1064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

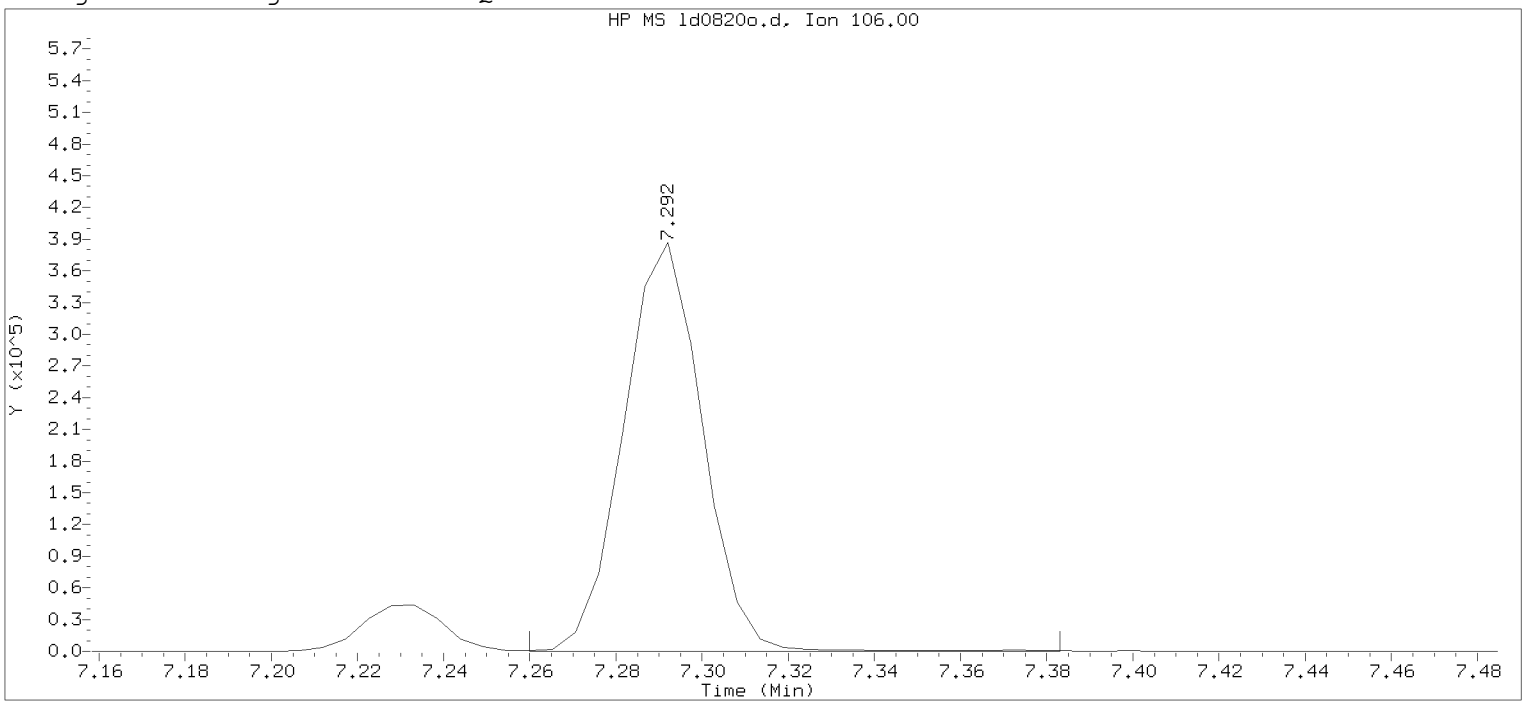
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/30/2018 at 13:28.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

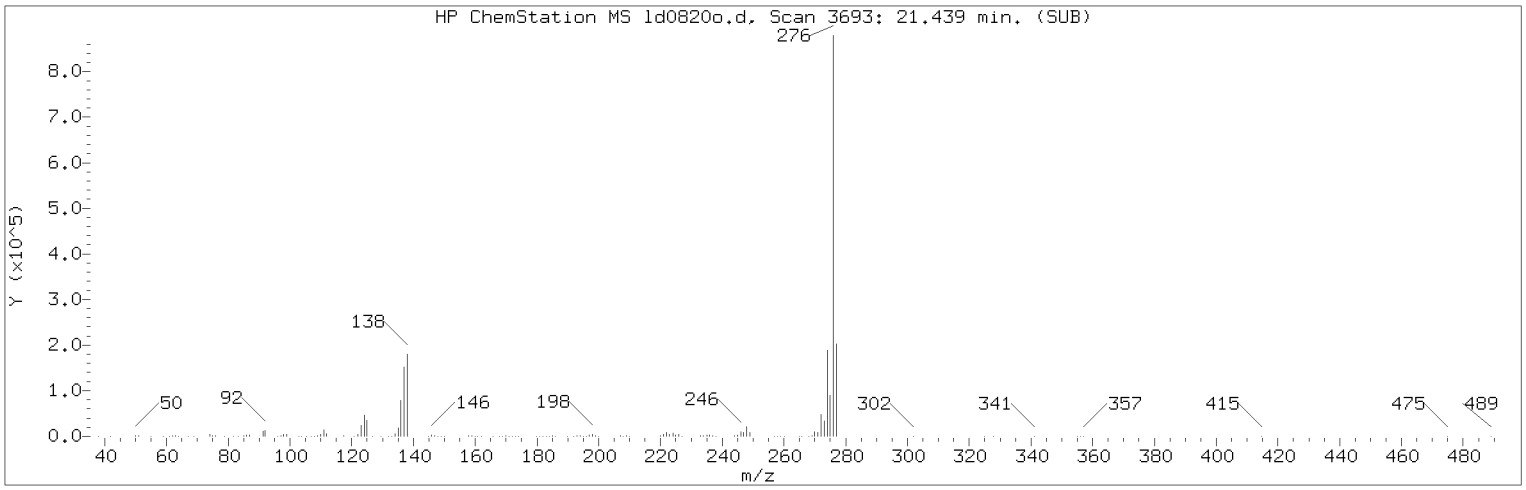
Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 11:54 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

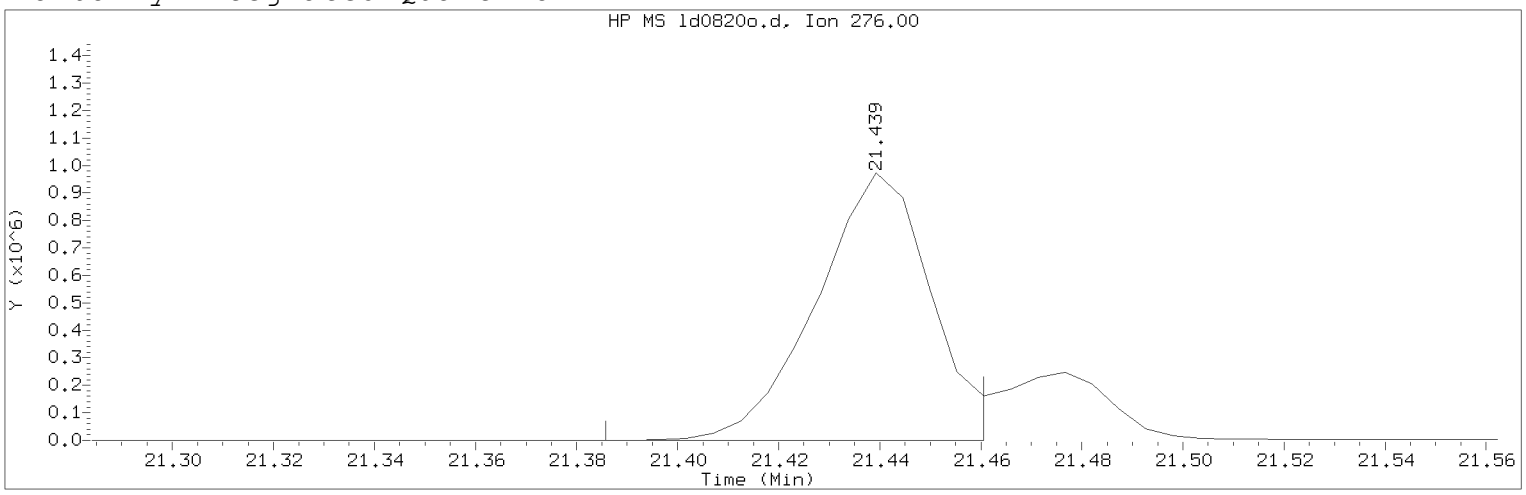
Compound Number	: 41		
Compound Name	: o-Toluidine		
Scan Number	: 1048		
Retention Time (minutes)	: 7.292		
Quant Ion	: 106.00		
Area	: 490407		
On-column Amount (ng/ul)	: 6.8626		
Integration start scan	: 1041	Integration stop scan:	1064
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: BHS10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 30-Apr-2018 13:15 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

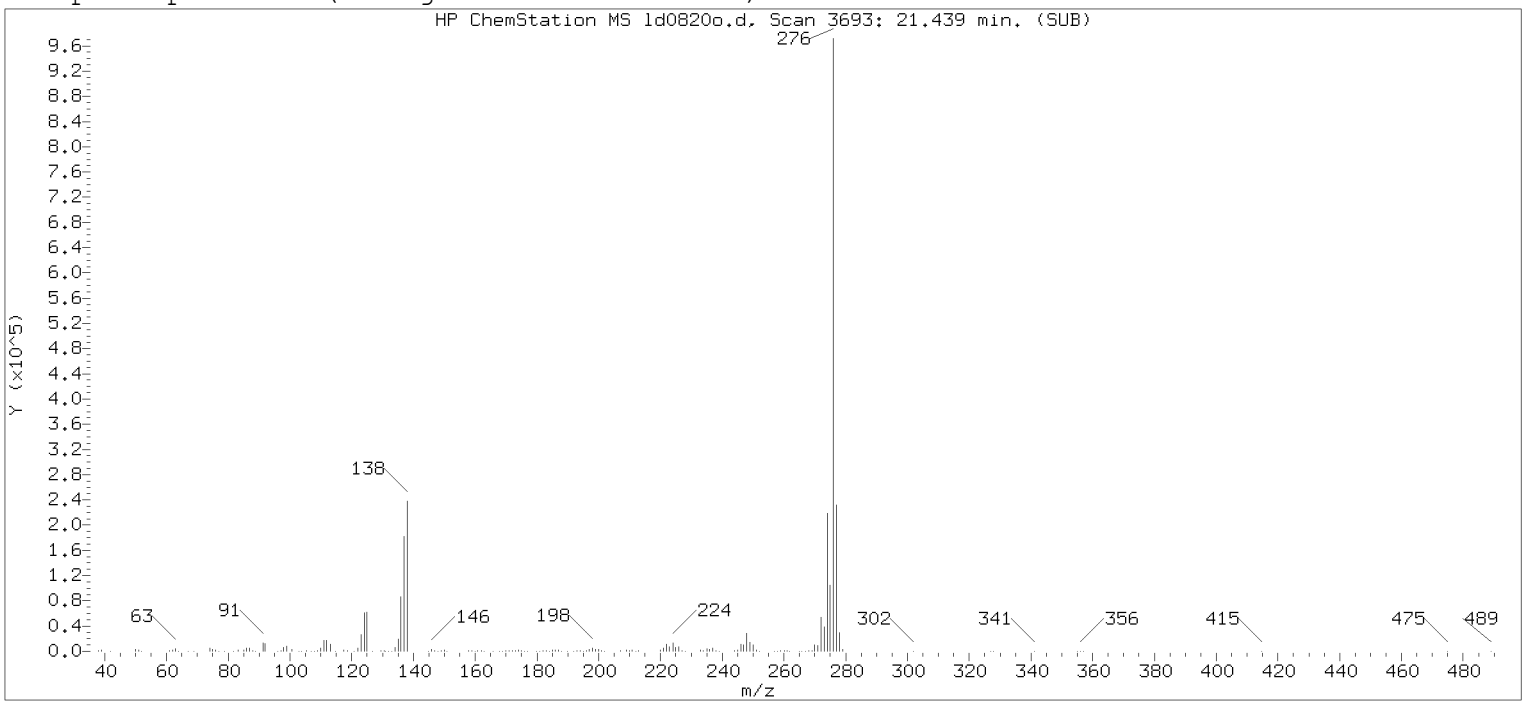
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3693
Retention Time (minutes) : 21.439
Quant Ion : 276.00
Area (flag) : 1535153M
On-Column Amount (ng/ul) : 12.4677
Integration start scan : 3682 Integration stop scan: 3696
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

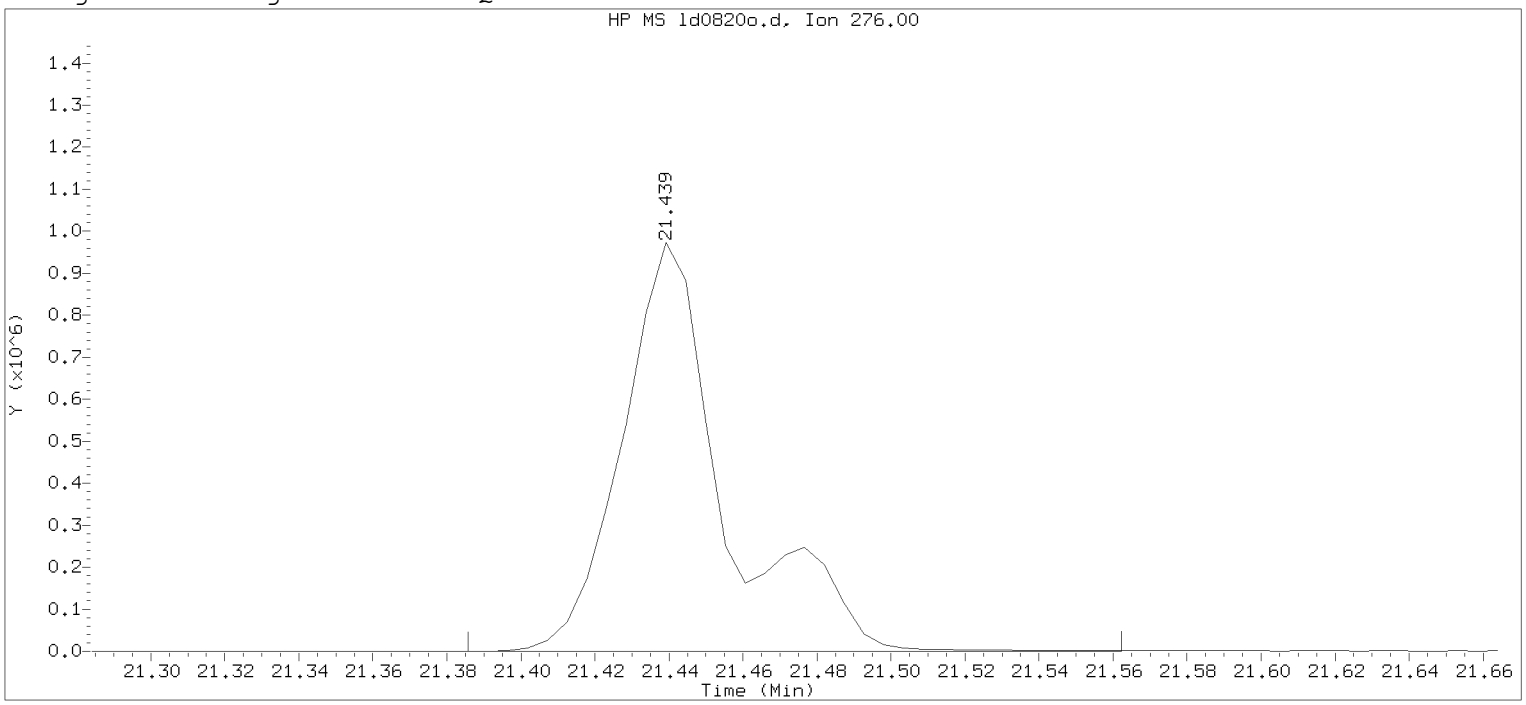
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/30/2018 at 13:28.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0820o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 14:11 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 23-APR-2018 11:31
Date, time and analyst ID of latest file update: 23-Apr-2018 11:54 bhs10208

Sample Name: R0604MSD Lab Sample ID: 9558700

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3693		
Retention Time (minutes)	: 21.439		
Quant Ion	: 276.00		
Area	: 1880377		
On-column Amount (ng/ul)	: 15.2714		
Integration start scan	: 3682	Integration stop scan:	3715
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 04/30/2018 at 13:17.
Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0997.d Injection date and time: **25-APR-2018 03:58**
Data file Sample Info. Line: R0604REMS;9558699RE;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581(-0.011)	915	152	153668 (-21)	5.00	
68) Naphthalene-d8	8.560(-0.005)	1285	136	566763 (-21)	5.00	
118) Acenaphthene-d10	11.400(-0.005)	1816	164	285246 (-24)	5.00	
158) Phenanthrene-d10	13.341(-0.005)	2179	188	563285 (-26)	5.00	
180) Pyrene-d10	15.315(0.000)	2548	212	597611 (-28)	5.00	
218) Perylene-d12	19.824(0.000)	3391	264	565830 (-31)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.752(-0.002)	112	210752	5.009	10%		10 - 82
18) Phenol-d6	(1)	6.185(0.000)	99	735850	13.336	27%		10 - 71
45) Nitrobenzene-d5	(2)	7.463(0.000)	82	1131136	23.140	93%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341(0.000)	172	1908994	21.527	86%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(0.001)	330	82390	8.356	17%	*	21 - 134
184) Terphenyl-d14	(5)	15.620(0.000)	244	1945447	20.299	81%		27 - 116

*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.580(-0.005)	74	240431	7.859	31.82			0.5
6) Pyridine	(1)	2.671(-0.009)	79	292085	5.351	21.66			0.5
8) 2-Picoline	(1)	3.816(-0.003)	93	470457	8.524	34.51			0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)	6.201(0.000)	94	226630	3.568	14.44			0.2
20) Aniline	(1)	6.137(0.000)	93	541648	7.395	29.94			0.1
23) bis(2-Chloroethyl)ether	(1)	6.233(-0.000)	93	513073	10.850	43.93			0.1
24) 2-Chlorophenol	(1)	6.303(-0.000)	128	133796	3.246	13.14			0.2
28) Benzyl alcohol	(1)	6.864(0.000)	108	289301	10.516	42.57			3
32) 2-Methylphenol	(1)	7.084(0.001)	108	381197	9.379	37.97			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.041(0.000)	45	804254	11.980	48.50			0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)	7.228(0.000)	105	716129	11.555	46.78			0.1
38) 4-Methylphenol	(1)	7.335(0.001)	108	344832	8.032	32.52			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.244(0.000)	70	413629	11.707	47.40			0.1
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)	7.292(0.000)	106	461485	6.420	25.99			0.1
44) Hexachloroethane	(1)	7.340(0.000)	117	184592	9.194	37.22			0.3
46) Nitrobenzene	(2)	7.490(-0.000)	77	601283	12.060	48.82			0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)	7.859(-0.000)	82	1069958	12.277	49.71			0.1
53) 2-Nitrophenol	(2)	7.982(-0.000)	139	202330	10.043	40.66			0.3
55) 2,4-Dimethylphenol	(2)	8.132(-0.000)	107	435894	10.092	40.86			0.2

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0997.d Injection date and time: **25-APR-2018 03:58**
Data file Sample Info. Line: R0604REMS;9558699RE;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5
57) bis(2-Chloroethoxy)methane	(2)	8.244(-0.000)	93	653214	11.530	46.68			0.1
62) 2,4-Dichlorophenol	(2)	8.394(-0.000)	162	107300	3.191	12.92			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.752(0.000)	127	386146	8.078	32.70			0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.608(0.000)	107	386140	10.463	42.36			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.710(0.000)	142	862856	11.089	44.90			0.07
88) Hexachlorocyclopentadiene	(3)	9.961(-0.000)	237	499036	21.632	87.58			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.972(-0.000)	216	434036	11.186	45.29			0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)	10.212(0.000)	196	55902	2.294	9.29		J	0.2
95) 2,4,5-Trichlorophenol	(3)	10.287(-0.000)	196	96868	3.788	15.34			0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)	10.501(-0.000)	162	869628	11.189	45.30			0.1
104) 2-Nitroaniline	(3)	10.742(-0.000)	138	270552	11.895	48.16			0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	11.052(-0.000)	163	1015385	11.663	47.22			0.5
111) 1,3-Dinitrobenzene	(3)	11.090(-0.000)	168	157352	12.151	49.20			0.5
113) 2,6-Dinitrotoluene	(3)	11.138(-0.000)	165	225594	12.204	49.41			0.1
114) Acenaphthylene	(3)	11.170(-0.000)	152	1375055	12.729	51.53			0.1
117) 3-Nitroaniline	(3)	11.427(0.000)	138	214383	11.007	44.56			0.1
119) Acenaphthene	(3)	11.448(0.000)	153	919989	12.010	48.62			0.09
120) 2,4-Dinitrophenol	(3)	11.566(0.000)	184	242559	21.827	88.37			3
121) 4-Nitrophenol	(3)	11.790(0.000)	109	92019	6.702	27.14		J	3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.758(0.000)	165	296397	11.571	46.84			0.3
124) Dibenzofuran	(3)	11.721(0.000)	168	1252652	11.771	47.65			0.1
126) 1-Naphthylamine	(3)	11.860(0.000)	143	833726	11.010	44.57			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.924(0.000)	232	49179	2.471	10.00		J	0.2
128) 2-Naphthylamine	(3)	11.972(0.000)	143	786897	10.969	44.41			1
129) Diethylphthalate	(3)	12.106(0.000)	149	994401	11.606	46.99			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.186(0.000)	166	974181	11.718	47.44			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.213(0.000)	204	466866	11.331	45.87			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)	12.288(0.000)	138	204928	10.410	42.15			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.288(-0.000)	198	173805	11.655	47.19			1
136) N-Nitrosodiphenylamine	(4)	12.373(-0.000)	169	823296	11.944	48.35			0.1
137) NDPA as diphenylamine	(4)	12.373(-0.000)	169	823296	11.944	48.35			0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.801(-0.000)	248	269607	11.705	47.39			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.839(-0.000)	284	284147	12.011	48.63			0.2
152) Dimethoate	(4)			Not Detected					0.8

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Data file: /chem/HP20296.i/18apr24a.b/ld0997.d Injection date and time: **25-APR-2018 03:58**
Data file Sample Info. Line: R0604REMS;9558699RE;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
154) Pentachlorophenol	(4)	13.122(0.000)	266	36195	2.498	10.11		J	0.7
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.368(0.000)	178	1483074	11.941	48.34			0.1
162) Anthracene	(4)	13.438(0.000)	178	1525622	12.253	49.61			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.149(0.000)	149	1748953	11.785	47.71			0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)	15.005(0.000)	202	1759170	12.593	50.98			0.1
182) Pyrene	(5)	15.347(-0.000)	202	1796516	11.817	47.84			0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.465(-0.000)	149	796771	11.280	45.67			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)	17.374(-0.000)	252	403245	8.250	33.40			0.5
200) Benzo(a)anthracene	(5)	17.348(-0.000)	228	1664684	12.256	49.62			0.1
201) Chrysene	(5)	17.412(-0.000)	228	1637869	12.466	50.47			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.481(-0.000)	149	1137098	11.394	46.13			0.5
210) Di-n-octylphthalate	(6)	18.642(-0.000)	149	2008342	11.287	45.70			0.5
211) Benzo(b)fluoranthene	(6)	19.204(-0.000)	252	1667468	12.020	48.66			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.204(-0.000)	256	654471	11.435	46.30			0.1
213) Benzo(k)fluoranthene	(6)	19.252(-0.000)	252	1626229	12.174	49.29			0.4
216) Benzo(a)pyrene	(6)	19.733(-0.000)	252	1451634	11.630	47.08			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)	21.428(-0.000)	276	1256643M	10.601	42.92			0.04
225) Dibenz(a,h)anthracene	(6)	21.466(-0.000)	278	1327588	11.025	44.64			0.1
226) Benzo(g,h,i)perylene	(6)	21.808(-0.000)	276	1207708	9.860	39.92			0.1

M = Compound was manually integrated.

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Data file: /chem/HP20296.i/18apr24a.b/ld0997.d Injection date and time: **25-APR-2018 03:58**
Data file Sample Info. Line: R0604REMS;9558699RE;1;3;MS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 1 ul

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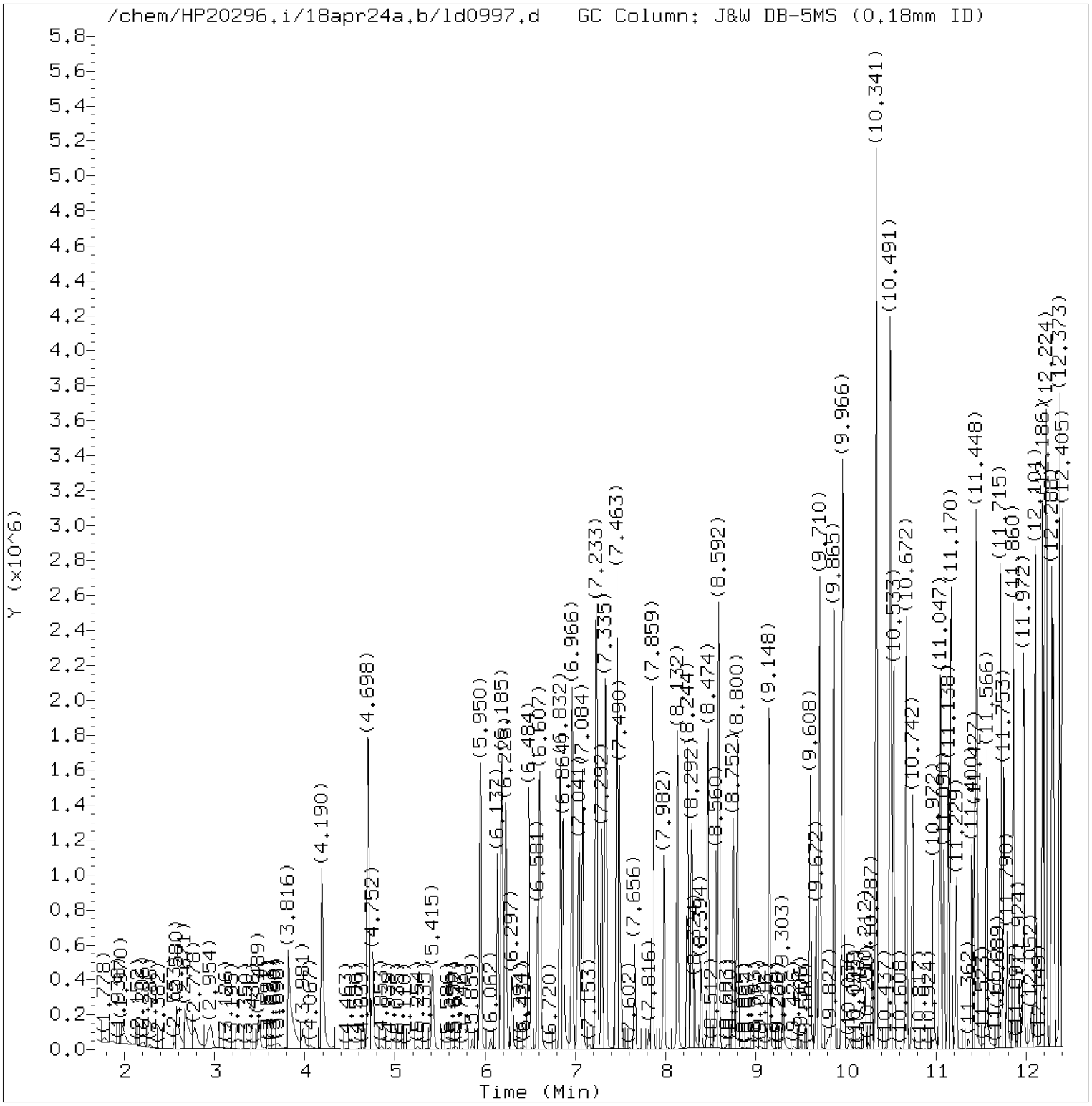
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 120

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

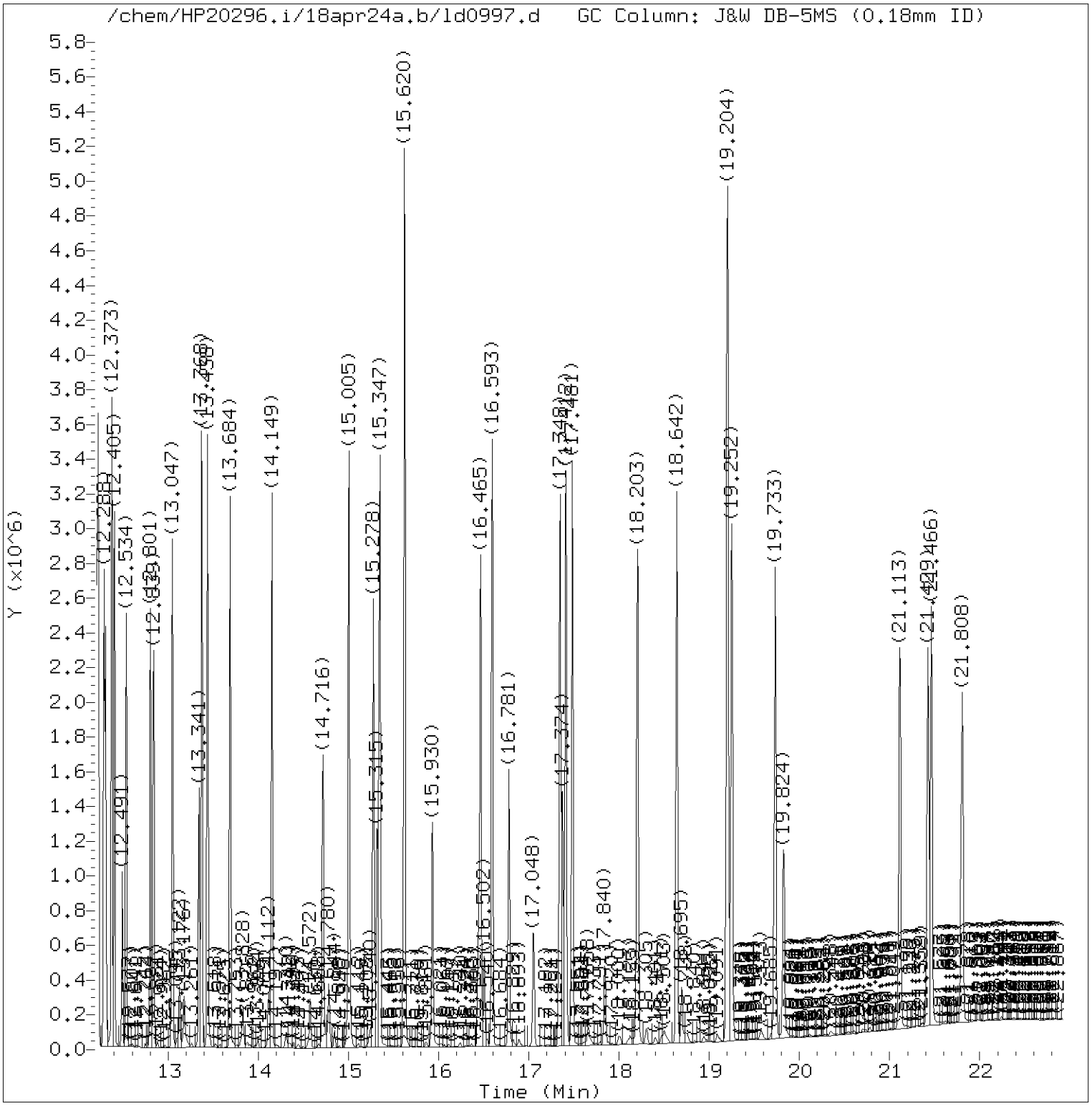
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604REMS Lab Sample ID: 9558699RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604REMS Lab Sample ID: 9558699RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604REMS Lab Sample ID: 9558699RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.580	74	240431	7.859
6) Pyridine	(1)	2.671	79	292085	5.351
8) 2-Picoline	(1)	3.816	93	470457	8.524
12)$2-Fluorophenol	(1)	4.752	112	210752	5.009
20) Aniline	(1)	6.137	93	541648	7.395
18)$Phenol-d6	(1)	6.185	99	735850	13.336
19) Phenol	(1)	6.201	94	226630	3.568
23) bis(2-Chloroethyl)ether	(1)	6.233	93	513073	10.850
24) 2-Chlorophenol	(1)	6.303	128	133796	3.246
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	153668	5.000
28) Benzyl alcohol	(1)	6.864	108	289301	10.516
35) bis(2-Chloroisopropyl)ether	(1)	7.041	45	804254	11.980
32) 2-Methylphenol	(1)	7.084	108	381197	9.379
37) Acetophenone	(1)	7.228	105	716129	11.555
39) N-Nitroso-di-n-propylamine	(1)	7.244	70	413629	11.707
41) o-Toluidine	(1)	7.292	106	461485	6.420
38) 4-Methylphenol	(1)	7.335	108	344832	8.032
44) Hexachloroethane	(1)	7.340	117	184592	9.194
45)$Nitrobenzene-d5	(2)	7.463	82	1131136	23.140
46) Nitrobenzene	(2)	7.490	77	601283	12.060
52) Isophorone	(2)	7.859	82	1069958	12.277
53) 2-Nitrophenol	(2)	7.982	139	202330	10.043
55) 2,4-Dimethylphenol	(2)	8.132	107	435894	10.092
57) bis(2-Chloroethoxy)methane	(2)	8.244	93	653214	11.530
62) 2,4-Dichlorophenol	(2)	8.394	162	107300	3.191
68)*Naphthalene-d8	(2)	8.560	136	566763	5.000
70) 4-Chloroaniline	(2)	8.752	127	386146	8.078
83) 4-Chloro-3-methylphenol	(2)	9.608	107	386140	10.463
86) 2-Methylnaphthalene	(2)	9.710	142	862856	11.089
88) Hexachlorocyclopentadiene	(3)	9.961	237	499036	21.632
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.972	216	434036	11.186
93) 2,4,6-Trichlorophenol	(3)	10.212	196	55902	2.294
95) 2,4,5-Trichlorophenol	(3)	10.287	196	96868	3.788
96)$2-Fluorobiphenyl	(3)	10.341	172	1908994	21.527
99) 2-Chloronaphthalene	(3)	10.501	162	869628	11.189
104) 2-Nitroaniline	(3)	10.742	138	270552	11.895
110) Dimethylphthalate	(3)	11.052	163	1015385	11.663
111) 1,3-Dinitrobenzene	(3)	11.090	168	157352	12.151
113) 2,6-Dinitrotoluene	(3)	11.138	165	225594	12.204
114) Acenaphthylene	(3)	11.170	152	1375055	12.729

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604REMS Lab Sample ID: 9558699RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.400	164	285246	5.000
117) 3-Nitroaniline	(3)	11.427	138	214383	11.007
119) Acenaphthene	(3)	11.448	153	919989	12.010
120) 2,4-Dinitrophenol	(3)	11.566	184	242559	21.827
124) Dibenzofuran	(3)	11.721	168	1252652	11.771
123) 2,4-Dinitrotoluene	(3)	11.758	165	296397	11.571
121) 4-Nitrophenol	(3)	11.790	109	92019	6.702
126) 1-Naphthylamine	(3)	11.860	143	833726	11.010
127) 2,3,4,6-Tetrachlorophenol	(3)	11.924	232	49179	2.471
128) 2-Naphthylamine	(3)	11.972	143	786897	10.969
129) Diethylphthalate	(3)	12.106	149	994401	11.606
131) Fluorene	(3)	12.186	166	974181	11.718
132) 4-Chlorophenyl-phenylether	(3)	12.213	204	466866	11.331
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	173805	11.655
134) 4-Nitroaniline	(3)	12.288	138	204928	10.410
137) NDPA as diphenylamine	(4)	12.373	169	823296	11.944
136) N-Nitrosodiphenylamine	(4)	12.373	169	823296	11.944
140)$2,4,6-Tribromophenol	(3)	12.491	330	82390	8.356
148) 4-Bromophenyl-phenylether	(4)	12.801	248	269607	11.705
150) Hexachlorobenzene	(4)	12.839	284	284147	12.011
154) Pentachlorophenol	(4)	13.122	266	36195	2.498
158)*Phenanthrene-d10	(4)	13.341	188	563285	5.000
160) Phenanthrene	(4)	13.368	178	1483074	11.941
162) Anthracene	(4)	13.438	178	1525622	12.253
170) Di-n-butylphthalate	(4)	14.149	149	1748953	11.785
178) Fluoranthene	(4)	15.005	202	1759170	12.593
180)*Pyrene-d10	(5)	15.315	212	597611	5.000
182) Pyrene	(5)	15.347	202	1796516	11.817
184)$Terphenyl-d14	(5)	15.620	244	1945447	20.299
193) Butylbenzylphthalate	(5)	16.465	149	796771	11.280
200) Benzo(a)anthracene	(5)	17.348	228	1664684	12.256
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	403245	8.250
201) Chrysene	(5)	17.412	228	1637869	12.466
204) bis(2-Ethylhexyl)phthalate	(5)	17.481	149	1137098	11.394
210) Di-n-octylphthalate	(6)	18.642	149	2008342	11.287
211) Benzo(b)fluoranthene	(6)	19.204	252	1667468	12.020
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.204	256	654471	11.435
213) Benzo(k)fluoranthene	(6)	19.252	252	1626229	12.174
216) Benzo(a)pyrene	(6)	19.733	252	1451634	11.630
218)*Perylene-d12	(6)	19.824	264	565830	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

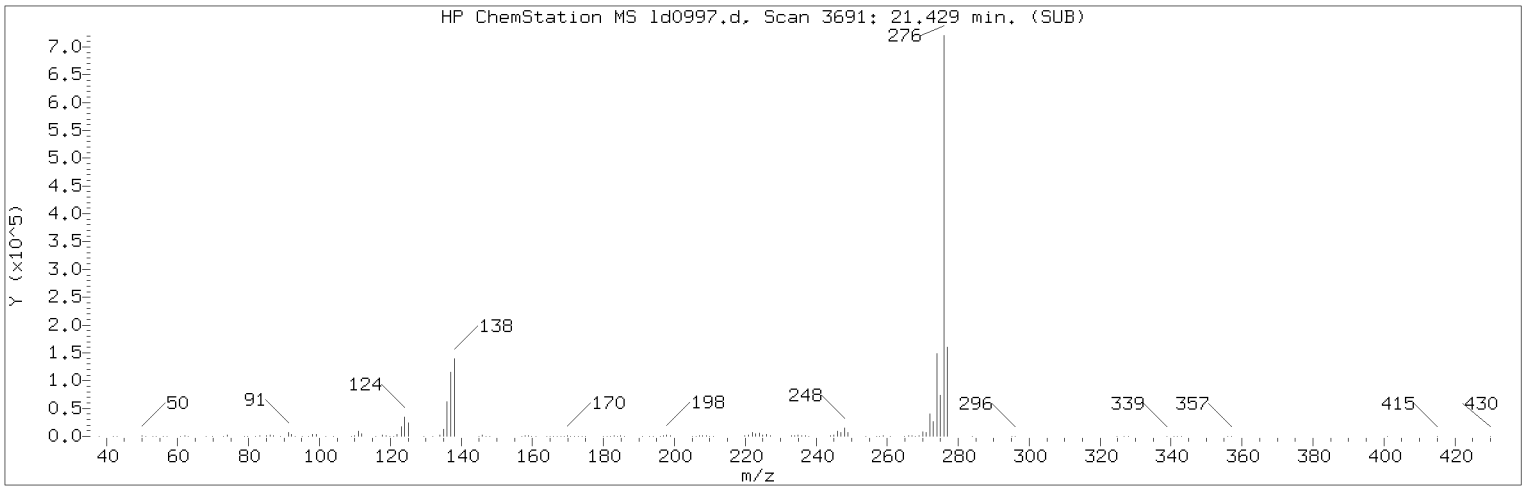
Sample Name: R0604REMS Lab Sample ID: 9558699RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.429	276	1256643M	10.601
225) Dibenz(a,h)anthracene	(6)	21.466	278	1327588	11.025
226) Benzo(g,h,i)perylene	(6)	21.808	276	1207708	9.860

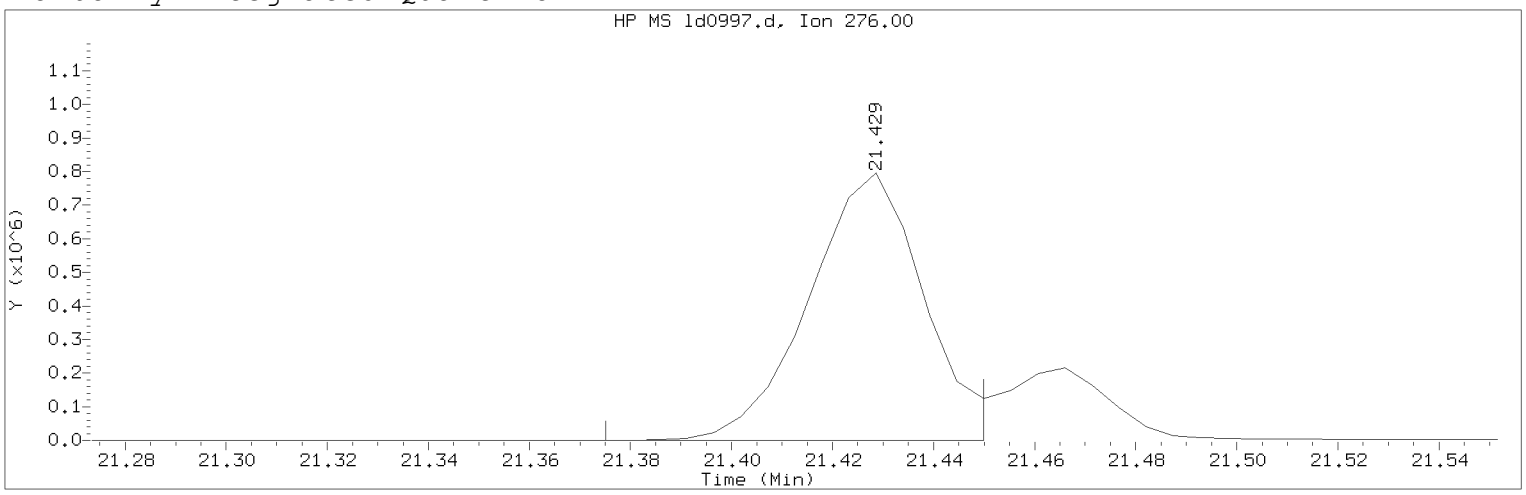
M = Compound was manually integrated.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 07:17 bhs10208

Sample Name: R0604REMS Lab Sample ID: 9558699RE

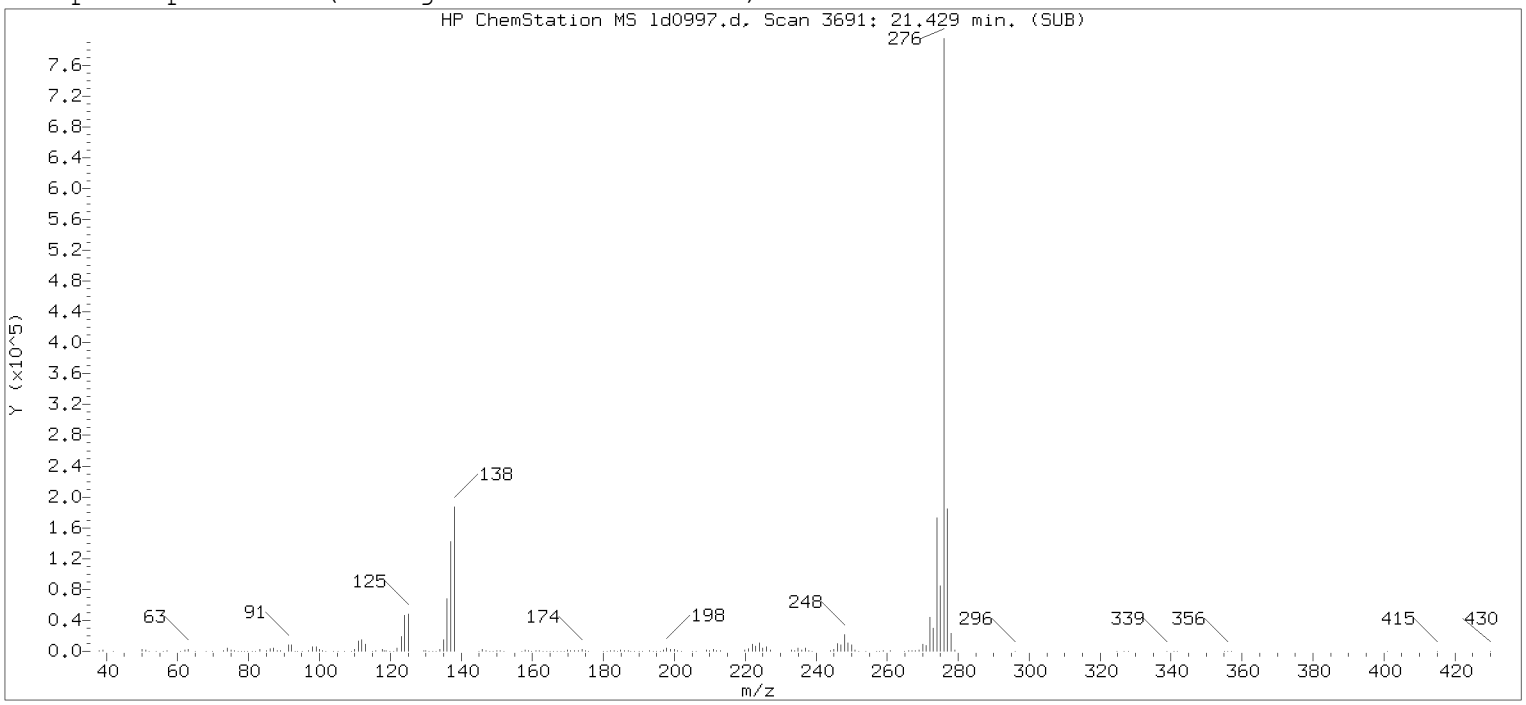
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3691
Retention Time (minutes) : 21.429
Quant Ion : 276.00
Area (flag) : 1256643M
On-Column Amount (ng/ul) : 10.6012
Integration start scan : 3680 Integration stop scan: 3694
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

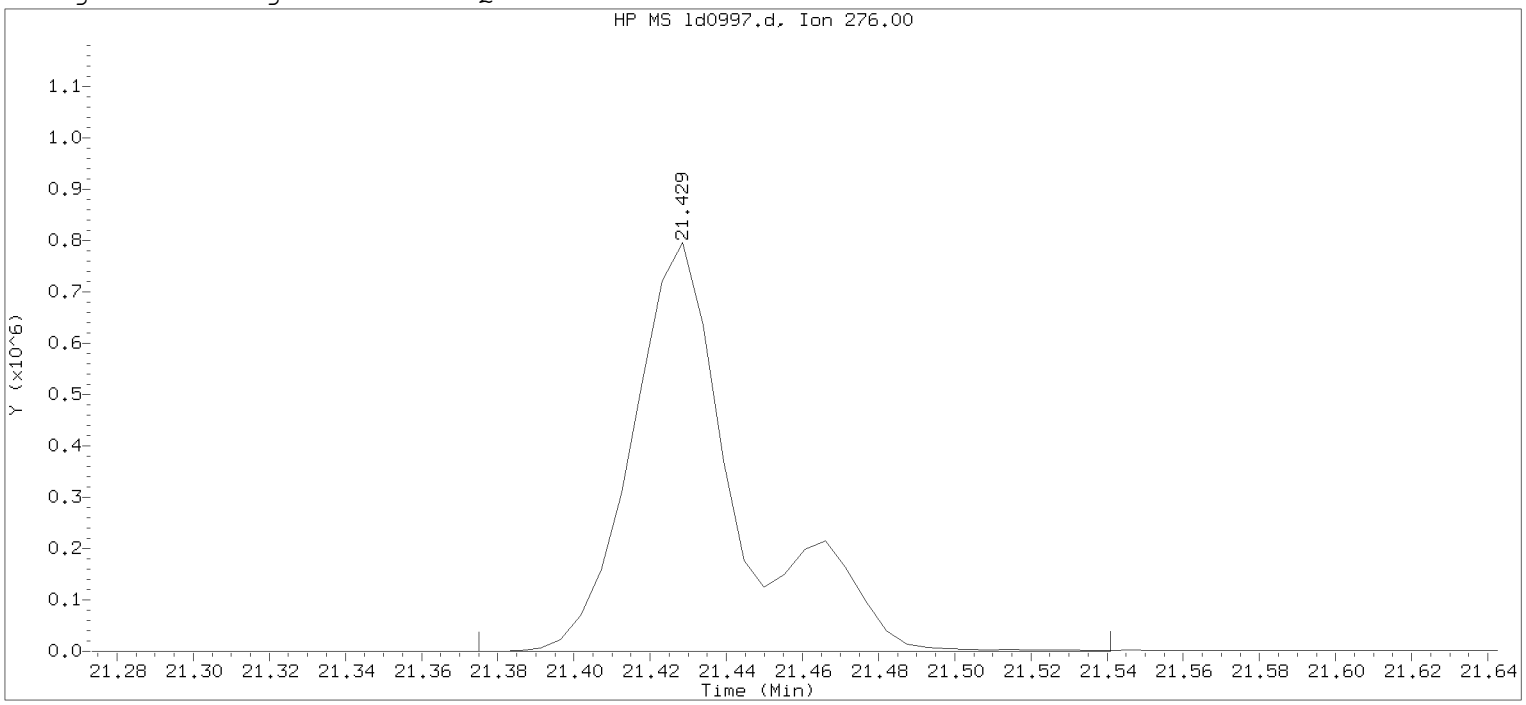
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0997.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 03:58 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 24-APR-2018 21:43
Date, time and analyst ID of latest file update: 25-Apr-2018 04:25 Unknown

Sample Name: R0604REMS Lab Sample ID: 9558699RE

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3691		
Retention Time (minutes)	: 21.429		
Quant Ion	: 276.00		
Area	: 1548875		
On-column Amount (ng/ul)	: 13.0665		
Integration start scan	: 3680	Integration stop scan:	3711
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:18.
Target 3.5 esignature user ID: BHSmith

Data file: /chem/HP20296.i/18apr24a.b/ld0998.d Injection date and time: **25-APR-2018 04:26**
Data file Sample Info. Line: R0604REMSD;9558700RE;1;3;MSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581(-0.011)	915	152	152194	(-22)	5.00	
68) Naphthalene-d8	8.560(-0.005)	1285	136	555724	(-23)	5.00	
118) Acenaphthene-d10	11.400(-0.005)	1816	164	281669	(-25)	5.00	
158) Phenanthrene-d10	13.341(-0.005)	2179	188	556496	(-27)	5.00	
180) Pyrene-d10	15.320(-0.005)	2549	212	602140	(-27)	5.00	
218) Perylene-d12	19.824(0.000)	3391	264	571835	(-31)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.752(-0.002)	112	373109	8.953	18%		10 - 82
18) Phenol-d6	(1)	6.185(0.000)	99	969526	17.742	35%		10 - 71
45) Nitrobenzene-d5	(2)	7.463(0.000)	82	1115130	23.266	93%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.341(0.000)	172	1895281	21.644	87%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(0.001)	330	165278	16.975	34%		21 - 134
184) Terphenyl-d14	(5)	15.620(0.000)	244	2078168	21.521	86%		27 - 116

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.580(-0.005)	74	228902	7.555	30.71			0.5
6) Pyridine	(1)	2.671(-0.009)	79	281571	5.208	21.17			0.5
8) 2-Picoline	(1)	3.816(-0.003)	93	451559	8.261	33.58			0.5
9) N-Nitrosomethylethylamine	(1)			Not Detected					0.5
10) Methyl methanesulfonate	(1)			Not Detected					0.3
14) N-Nitrosodiethylamine	(1)			Not Detected					0.1
16) Ethyl methanesulfonate	(1)			Not Detected					0.1
19) Phenol	(1)	6.201(0.000)	94	298983	4.753	19.32			0.2
20) Aniline	(1)	6.137(0.000)	93	550785	7.593	30.86			0.1
23) bis(2-Chloroethyl)ether	(1)	6.233(-0.000)	93	512167	10.936	44.46			0.1
24) 2-Chlorophenol	(1)	6.303(-0.000)	128	218234	5.346	21.73			0.2
28) Benzyl alcohol	(1)	6.864(0.000)	108	278869	10.235	41.60			3
32) 2-Methylphenol	(1)	7.084(0.001)	108	396574	9.851	40.05			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.041(0.000)	45	798218	12.006	48.80			0.1
36) N-Nitrosopyrrolidine	(1)			Not Detected					0.1
37) Acetophenone	(1)	7.228(0.000)	105	708272	11.539	46.91			0.1
38) 4-Methylphenol	(1)	7.335(0.000)	108	380490	8.949	36.38			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.244(0.000)	70	412441	11.787	47.91			0.1
40) N-Nitrosomorpholine	(1)			Not Detected					0.5
41) o-Toluidine	(1)	7.292(0.000)	106	469117	6.590	26.79			0.1
44) Hexachloroethane	(1)	7.340(0.000)	117	179999	9.052	36.80			0.3
46) Nitrobenzene	(2)	7.490(-0.000)	77	594034	12.151	49.39			0.1
50) N-Nitrosopiperidine	(2)			Not Detected					0.1
52) Isophorone	(2)	7.859(-0.000)	82	1071736	12.542	50.98			0.1
53) 2-Nitrophenol	(2)	7.987(-0.000)	139	220906	11.183	45.46			0.3
55) 2,4-Dimethylphenol	(2)	8.132(-0.000)	107	439973	10.389	42.23			0.2
59) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5

Digitally signed by Brandon H. Smith on 05/02/2018 at 11:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0998.d Injection date and time: **25-APR-2018 04:26**
Data file Sample Info. Line: R0604REMSD;9558700RE;1;3;MSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
57) bis(2-Chloroethoxy)methane	(2)	8.244(-0.000)	93	644685	11.606	47.18			0.1
62) 2,4-Dichlorophenol	(2)	8.394(-0.000)	162	183121	5.553	22.57			0.4
67) a,a-Dimethylphenethylamine	(2)			Not Detected					1
70) 4-Chloroaniline	(2)	8.752(0.000)	127	397809	8.487	34.50			0.5
71) 2,6-Dichlorophenol	(2)			Not Detected					0.1
72) Hexachloropropene	(2)			Not Detected					0.5
80) N-Nitrosodi-n-butylamine	(2)			Not Detected					0.5
84) 1,4-Phenylenediamine	(2)			Not Detected					19
83) 4-Chloro-3-methylphenol	(2)	9.608(0.000)	107	409048	11.304	45.95			0.3
85) Safrole	(2)			Not Detected					0.5
86) 2-Methylnaphthalene	(2)	9.710(0.000)	142	845518	11.082	45.05			0.07
88) Hexachlorocyclopentadiene	(3)	9.961(-0.000)	237	485535	21.314	86.64			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977(-0.000)	216	417518	10.897	44.30			0.5
91) cis-Isosafrole	(3)			Not Detected					0.1
93) 2,4,6-Trichlorophenol	(3)	10.212(0.000)	196	114044	4.740	19.27			0.2
95) 2,4,5-Trichlorophenol	(3)	10.287(-0.000)	196	164120	6.499	26.42			0.2
97) trans-Isosafrole	(3)			Not Detected					0.1
100) Isosafrole	(3)			Not Detected					0.5
99) 2-Chloronaphthalene	(3)	10.501(-0.000)	162	832833	10.852	44.11			0.1
104) 2-Nitroaniline	(3)	10.742(-0.000)	138	272137	12.116	49.25			0.1
108) 1,4-Naphthoquinone	(3)			Not Detected					6
110) Dimethylphthalate	(3)	11.052(-0.000)	163	1008732	11.733	47.70			0.5
111) 1,3-Dinitrobenzene	(3)	11.090(-0.000)	168	159007	12.435	50.55			0.5
113) 2,6-Dinitrotoluene	(3)	11.138(-0.000)	165	225975	12.380	50.32			0.1
114) Acenaphthylene	(3)	11.170(-0.000)	152	1366884	12.814	52.09			0.1
117) 3-Nitroaniline	(3)	11.427(0.000)	138	215573	11.209	45.57			0.1
119) Acenaphthene	(3)	11.448(0.000)	153	902942	11.937	48.53			0.09
120) 2,4-Dinitrophenol	(3)	11.566(0.000)	184	252242	22.986	93.44			3
121) 4-Nitrophenol	(3)	11.790(0.000)	109	94562	6.975	28.35		J	3
122) Pentachlorobenzene	(3)			Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)	11.758(0.000)	165	301176A	11.906	48.40			0.3
124) Dibenzofuran	(3)	11.721(0.000)	168	1234688	11.749	47.76			0.1
126) 1-Naphthylamine	(3)	11.860(0.000)	143	892607	11.937	48.52			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.924(0.000)	232	103865	5.285	21.49			0.2
128) 2-Naphthylamine	(3)	11.972(0.000)	143	815329	11.509	46.79			1
129) Diethylphthalate	(3)	12.106(0.000)	149	1017519	12.026	48.89			0.5
130) Thionazin	(3)			Not Detected					0.5
131) Fluorene	(3)	12.181(0.000)	166	979883	11.937	48.52			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.213(0.000)	204	462215	11.361	46.18			0.1
133) 5-Nitro-o-toluidine	(3)			Not Detected					0.1
134) 4-Nitroaniline	(3)	12.293(0.000)	138	205099	10.551	42.89			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.288(-0.000)	198	183115	12.429	50.53			1
136) N-Nitrosodiphenylamine	(4)	12.373(-0.000)	169	837358	12.296	49.98			0.1
137) NDPA as diphenylamine	(4)	12.373(-0.000)	169	837358	12.296	49.98			0.1
144) 1,3,5-Trinitrobenzene	(4)			Not Detected					1
145) Diallate (peak 1)	(4)			Not Detected					0.06
146) Phorate	(4)			Not Detected					0.1
147) Phenacetin	(4)			Not Detected					0.1
148) 4-Bromophenyl-phenylether	(4)	12.801(-0.000)	248	267045	11.736	47.71			0.1
149) Diallate (peak 2)	(4)			Not Detected					0.06
151) Diallate trans/cis	(4)			Not Detected					0.3
150) Hexachlorobenzene	(4)	12.839(-0.000)	284	282114	12.071	49.07			0.2
152) Dimethoate	(4)			Not Detected					0.8
154) Pentachlorophenol	(4)	13.122(0.000)	266	73176	5.112	20.78			0.7

A = User selected an alternate peak.

Digitally signed by Brandon H. Smith on 05/02/2018 at 11:58. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0998.d Injection date and time: **25-APR-2018 04:26**
Data file Sample Info. Line: R0604REMSD;9558700RE;1;3;MSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090M**
Calibration date and time (Last Method Edit): 02-MAY-2018 07:17
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 1 ul

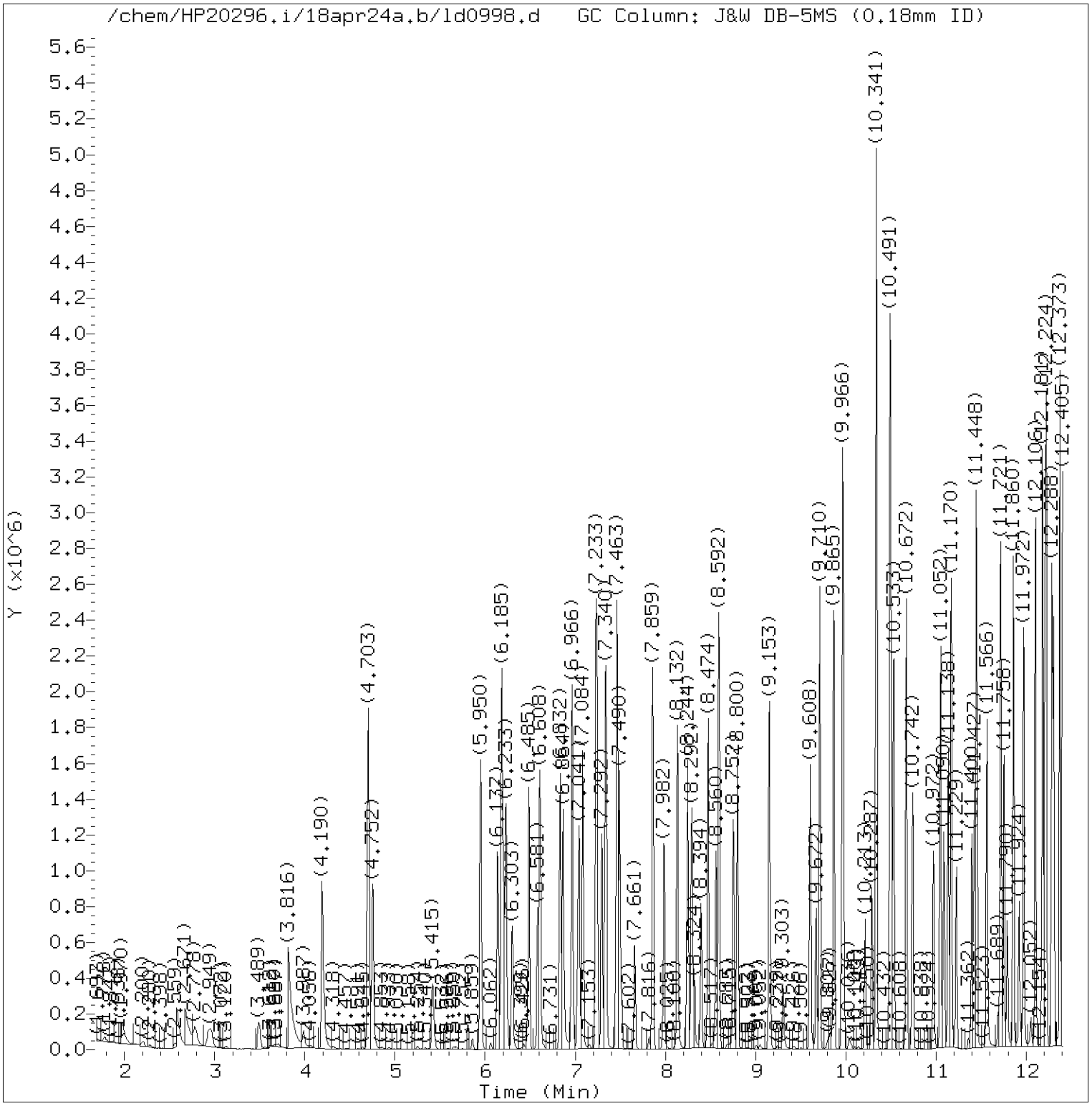
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
155) 4-Aminobiphenyl	(4)			Not Detected					0.1
156) Pentachloronitrobenzene	(4)			Not Detected					0.5
157) Pronamide	(4)			Not Detected					0.1
160) Phenanthrene	(4)	13.374(0.000)	178	1523381	12.415	50.47			0.1
162) Anthracene	(4)	13.438(0.000)	178	1530245	12.440	50.57			0.1
167) Disulfoton	(4)			Not Detected					6
169) Methyl parathion	(4)			Not Detected					0.3
170) Di-n-butylphthalate	(4)	14.149(0.000)	149	1800867	12.283	49.93			0.5
172) Parathion	(4)			Not Detected					0.5
173) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
175) Methapyrilene	(4)			Not Detected					4
176) Isodrin	(4)			Not Detected					0.1
178) Fluoranthene	(4)	15.005(0.000)	202	1790469	12.974	52.74			0.1
182) Pyrene	(5)	15.347(0.000)	202	1817941	11.868	48.24			0.1
185) Aramite (1)	(5)			Not Detected					0.3
186) Aramite (2)	(5)			Not Detected					0.3
188) Aramite (3)	(5)			Not Detected					0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			Not Detected					1
187) p-Dimethylaminoazobenzene	(5)			Not Detected					0.1
190) Chlorobenzilate	(5)			Not Detected					0.8
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.465(0.000)	149	843204	11.848	48.16			0.5
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)			Not Detected					6
196) 2-Acetylaminofluorene	(5)			Not Detected					0.5
198) 3,3'-Dichlorobenzidine	(5)	17.374(0.000)	252	422108	8.571	34.84			0.5
200) Benzo(a)anthracene	(5)	17.348(0.000)	228	1723094	12.591	51.18			0.1
201) Chrysene	(5)	17.412(0.000)	228	1690285	12.769	51.90			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.481(0.000)	149	1198955	11.923	48.47			0.5
210) Di-n-octylphthalate	(6)	18.642(-0.000)	149	2121402	11.797	47.96			0.5
211) Benzo(b)fluoranthene	(6)	19.204(-0.000)	252	1721453	12.279	49.91			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.204(-0.000)	256	685792	11.856	48.20			0.1
213) Benzo(k)fluoranthene	(6)	19.252(-0.000)	252	1712736	12.687	51.57			0.4
216) Benzo(a)pyrene	(6)	19.733(-0.000)	252	1514959	12.009	48.82			0.4
220) 3-Methylcholanthrene	(6)			Not Detected					0.1
224) Indeno(1,2,3-cd)pyrene	(6)	21.429(-0.000)	276	1278009MA	10.668	43.37			0.04
225) Dibenz(a,h)anthracene	(6)	21.466(-0.000)	278	1373089	11.283	45.87			0.1
226) Benzo(g,h,i)perylene	(6)	21.808(-0.000)	276	1248826	10.088	41.01			0.1

M = Compound was manually integrated. A = User selected an alternate peak.

Total number of targets = 120

Digitally signed by Brandon H. Smith on 05/02/2018 at 11:58. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 13:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

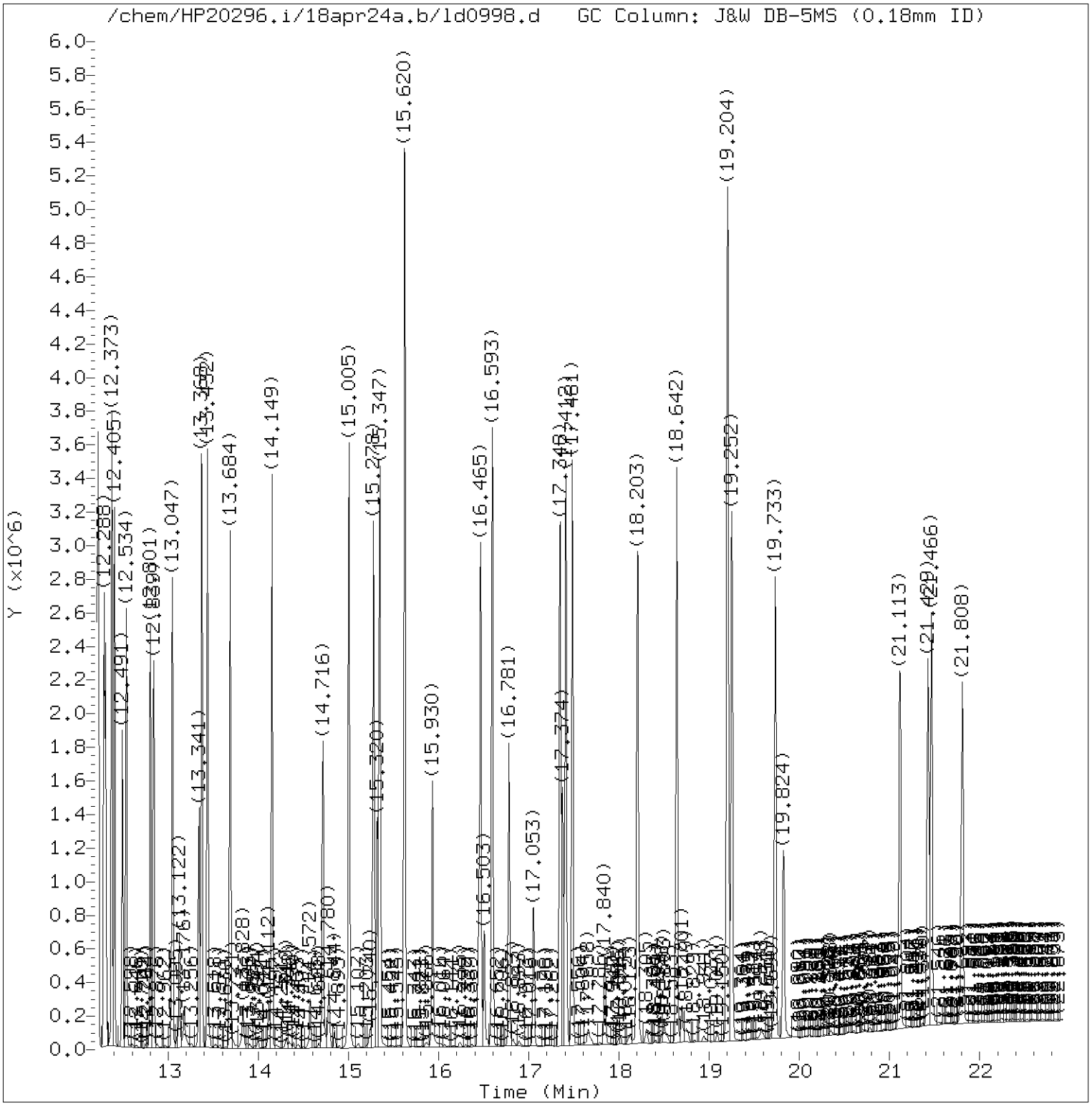
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.580	74	228902	7.555
6) Pyridine	(1)	2.671	79	281571	5.208
8) 2-Picoline	(1)	3.816	93	451559	8.261
12)$2-Fluorophenol	(1)	4.752	112	373109	8.953
20) Aniline	(1)	6.137	93	550785	7.593
18)$Phenol-d6	(1)	6.185	99	969526	17.742
19) Phenol	(1)	6.201	94	298983	4.753
23) bis(2-Chloroethyl)ether	(1)	6.233	93	512167	10.936
24) 2-Chlorophenol	(1)	6.303	128	218234	5.346
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	152194	5.000
28) Benzyl alcohol	(1)	6.864	108	278869	10.235
35) bis(2-Chloroisopropyl)ether	(1)	7.041	45	798218	12.006
32) 2-Methylphenol	(1)	7.084	108	396574	9.851
37) Acetophenone	(1)	7.228	105	708272	11.539
39) N-Nitroso-di-n-propylamine	(1)	7.244	70	412441	11.787
41) o-Toluidine	(1)	7.292	106	469117	6.590
38) 4-Methylphenol	(1)	7.335	108	380490	8.949
44) Hexachloroethane	(1)	7.340	117	179999	9.052
45)$Nitrobenzene-d5	(2)	7.463	82	1115130	23.266
46) Nitrobenzene	(2)	7.490	77	594034	12.151
52) Isophorone	(2)	7.859	82	1071736	12.542
53) 2-Nitrophenol	(2)	7.987	139	220906	11.183
55) 2,4-Dimethylphenol	(2)	8.132	107	439973	10.389
57) bis(2-Chloroethoxy)methane	(2)	8.244	93	644685	11.606
62) 2,4-Dichlorophenol	(2)	8.394	162	183121	5.553
68)*Naphthalene-d8	(2)	8.560	136	555724	5.000
70) 4-Chloroaniline	(2)	8.752	127	397809	8.487
83) 4-Chloro-3-methylphenol	(2)	9.608	107	409048	11.304
86) 2-Methylnaphthalene	(2)	9.710	142	845518	11.082
88) Hexachlorocyclopentadiene	(3)	9.961	237	485535	21.314
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	216	417518	10.897
93) 2,4,6-Trichlorophenol	(3)	10.213	196	114044	4.740
95) 2,4,5-Trichlorophenol	(3)	10.287	196	164120	6.499
96)$2-Fluorobiphenyl	(3)	10.341	172	1895281	21.644
99) 2-Chloronaphthalene	(3)	10.501	162	832833	10.852
104) 2-Nitroaniline	(3)	10.742	138	272137	12.116
110) Dimethylphthalate	(3)	11.052	163	1008732	11.733
111) 1,3-Dinitrobenzene	(3)	11.090	168	159007	12.435
113) 2,6-Dinitrotoluene	(3)	11.138	165	225975	12.380
114) Acenaphthylene	(3)	11.170	152	1366884	12.814

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.400	164	281669	5.000
117) 3-Nitroaniline	(3)	11.427	138	215573	11.209
119) Acenaphthene	(3)	11.448	153	902942	11.937
120) 2,4-Dinitrophenol	(3)	11.566	184	252242	22.986
124) Dibenzofuran	(3)	11.721	168	1234688	11.749
123) 2,4-Dinitrotoluene	(3)	11.758	165	301176A	11.906
121) 4-Nitrophenol	(3)	11.790	109	94562	6.975
126) 1-Naphthylamine	(3)	11.860	143	892607	11.937
127) 2,3,4,6-Tetrachlorophenol	(3)	11.924	232	103865	5.285
128) 2-Naphthylamine	(3)	11.972	143	815329	11.509
129) Diethylphthalate	(3)	12.106	149	1017519	12.026
131) Fluorene	(3)	12.181	166	979883	11.937
132) 4-Chlorophenyl-phenylether	(3)	12.213	204	462215	11.361
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	183115	12.429
134) 4-Nitroaniline	(3)	12.293	138	205099	10.551
137) NDPA as diphenylamine	(4)	12.373	169	837358	12.296
136) N-Nitrosodiphenylamine	(4)	12.373	169	837358	12.296
140)$2,4,6-Tribromophenol	(3)	12.491	330	165278	16.975
148) 4-Bromophenyl-phenylether	(4)	12.801	248	267045	11.736
150) Hexachlorobenzene	(4)	12.839	284	282114	12.071
154) Pentachlorophenol	(4)	13.122	266	73176	5.112
158)*Phenanthrene-d10	(4)	13.341	188	556496	5.000
160) Phenanthrene	(4)	13.374	178	1523381	12.415
162) Anthracene	(4)	13.438	178	1530245	12.440
170) Di-n-butylphthalate	(4)	14.149	149	1800867	12.283
178) Fluoranthene	(4)	15.005	202	1790469	12.974
180)*Pyrene-d10	(5)	15.320	212	602140	5.000
182) Pyrene	(5)	15.347	202	1817941	11.868
184)$Terphenyl-d14	(5)	15.620	244	2078168	21.521
193) Butylbenzylphthalate	(5)	16.465	149	843204	11.848
200) Benzo(a)anthracene	(5)	17.348	228	1723094	12.591
198) 3,3'-Dichlorobenzidine	(5)	17.374	252	422108	8.571
201) Chrysene	(5)	17.412	228	1690285	12.769
204) bis(2-Ethylhexyl)phthalate	(5)	17.481	149	1198955	11.923
210) Di-n-octylphthalate	(6)	18.642	149	2121402	11.797
211) Benzo(b)fluoranthene	(6)	19.204	252	1721453	12.279
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.204	256	685792	11.856
213) Benzo(k)fluoranthene	(6)	19.252	252	1712736	12.687
216) Benzo(a)pyrene	(6)	19.733	252	1514959	12.009
218)*Perylene-d12	(6)	19.824	264	571835	5.000

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

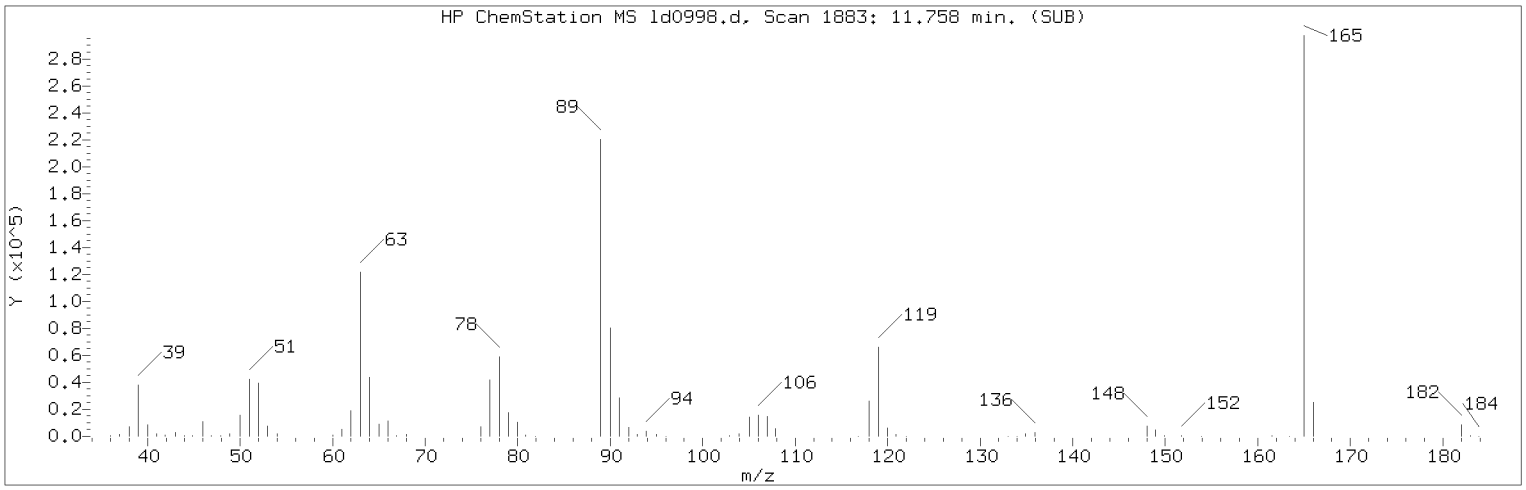
Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.429	276	1278009MA	10.668
225) Dibenz(a,h)anthracene	(6)	21.466	278	1373089	11.283
226) Benzo(g,h,i)perylene	(6)	21.808	276	1248826	10.088

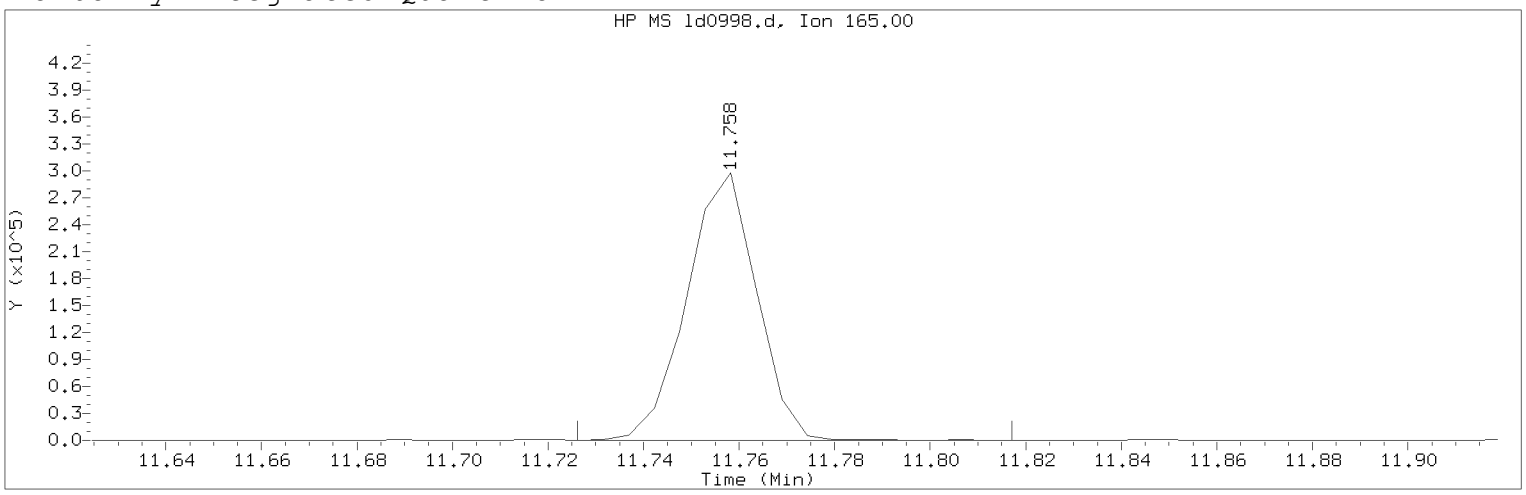
M = Compound was manually integrated.
A = User selected an alternate hit.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

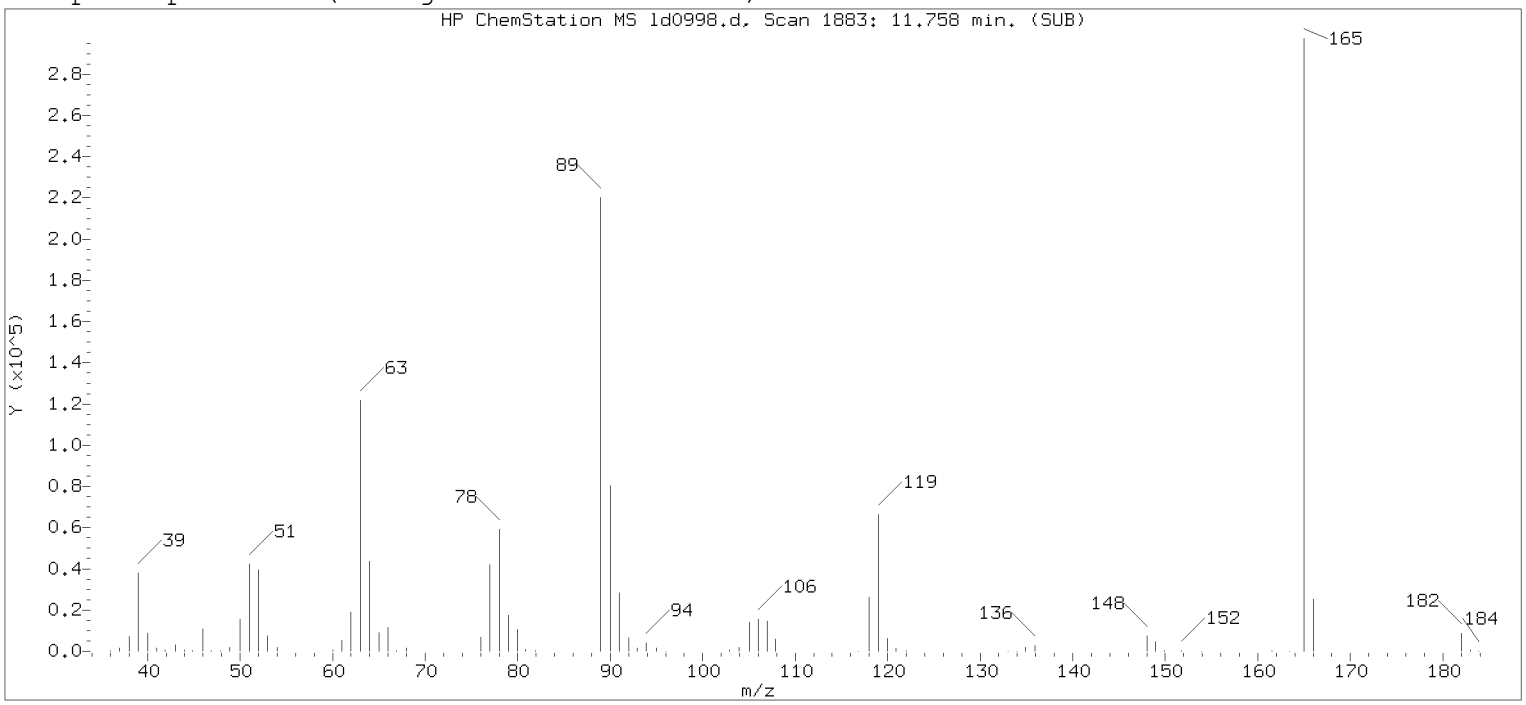
Compound Number : 123
Compound Name : 2,4-Dinitrotoluene
Scan Number : 1883
Retention Time (minutes) : 11.758
Quant Ion : 165.00
Area (flag) : 301176A
On-Column Amount (ng/ul) : 11.9064
Integration start scan : 1876 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

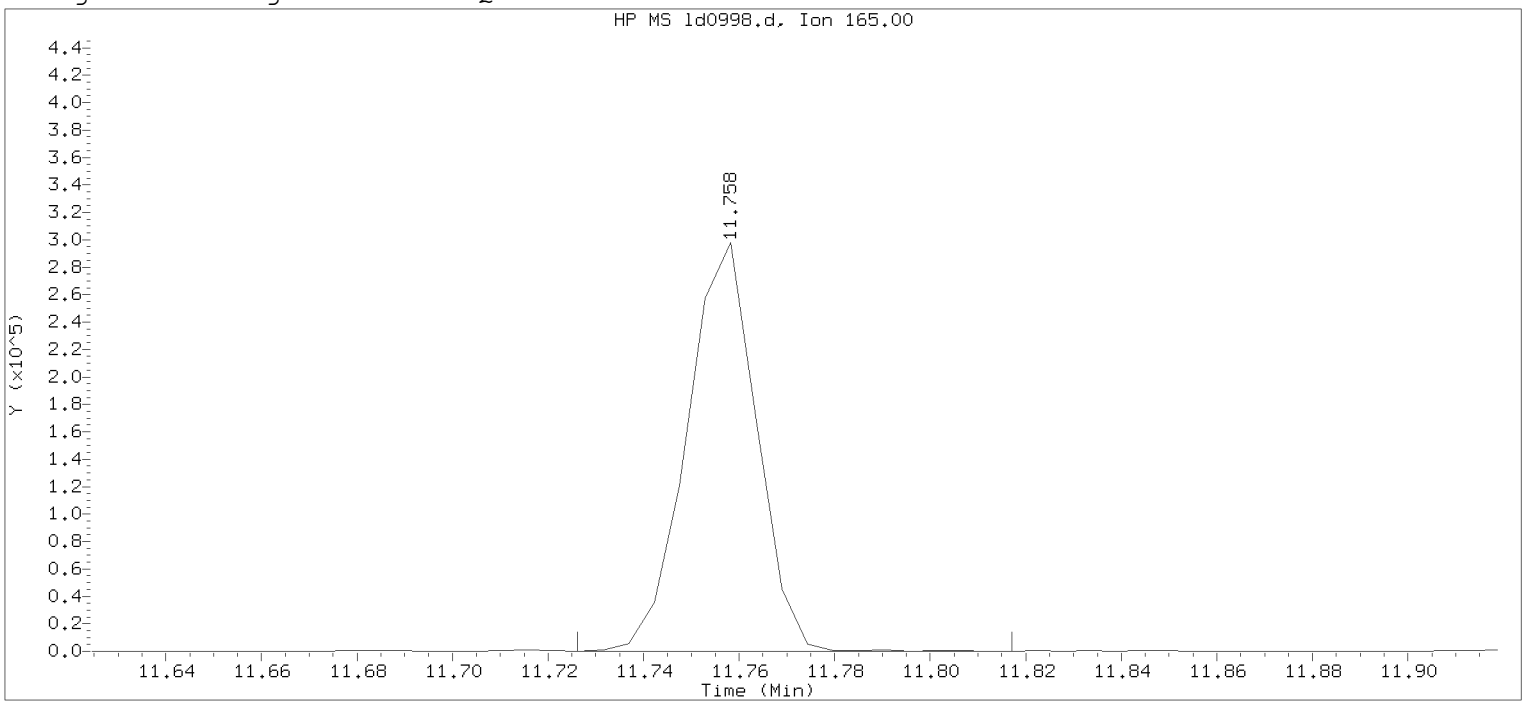
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 13:41.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

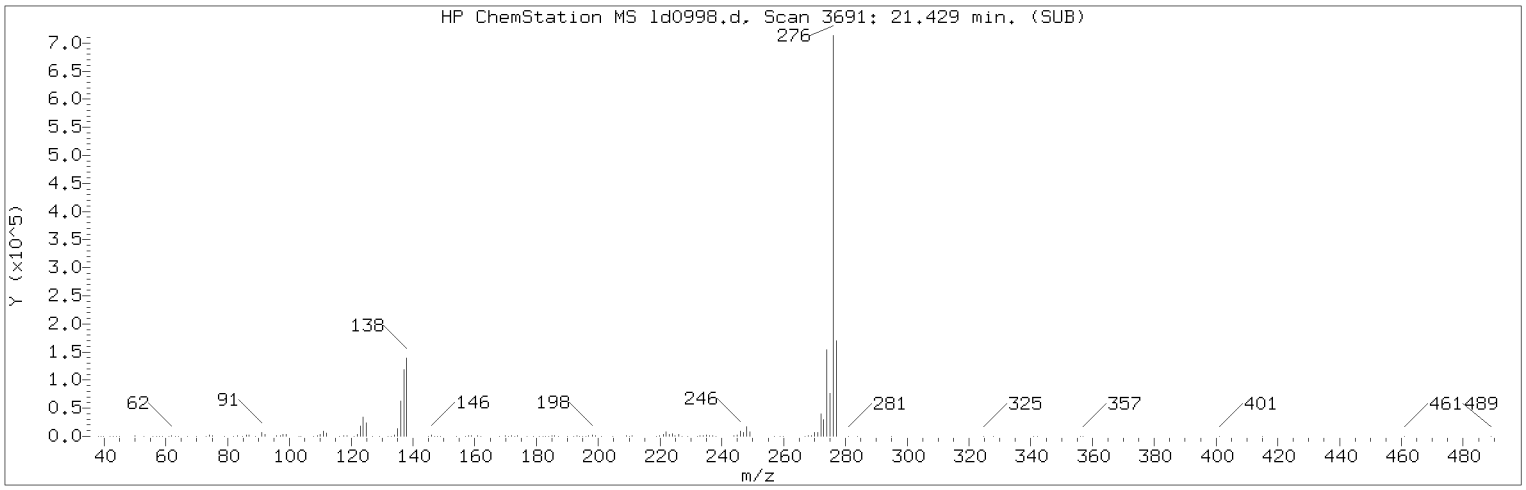
Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 24-APR-2018 21:43
Date, time and analyst ID of latest file update: 25-Apr-2018 04:53 Unknown

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

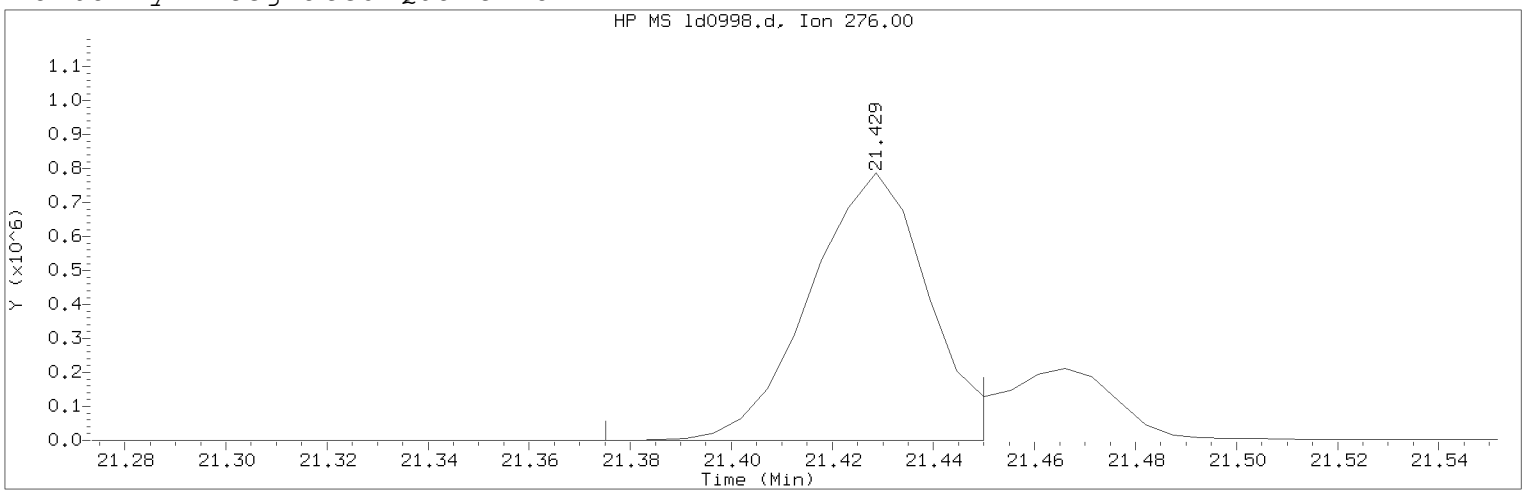
Compound Number	: 123		
Compound Name	: 2,4-Dinitrotoluene		
Scan Number	: 1883		
Retention Time (minutes)	: 11.758		
Quant Ion	: 165.00		
Area	: 301176		
On-column Amount (ng/ul)	: 11.9064		
Integration start scan	: 1876	Integration stop scan:	1893
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 05/02/2018 at 11:58.
Target 3.5 esignature used for this report

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 02-MAY-2018 07:17
Date, time and analyst ID of latest file update: 02-May-2018 11:58 bhs10208

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

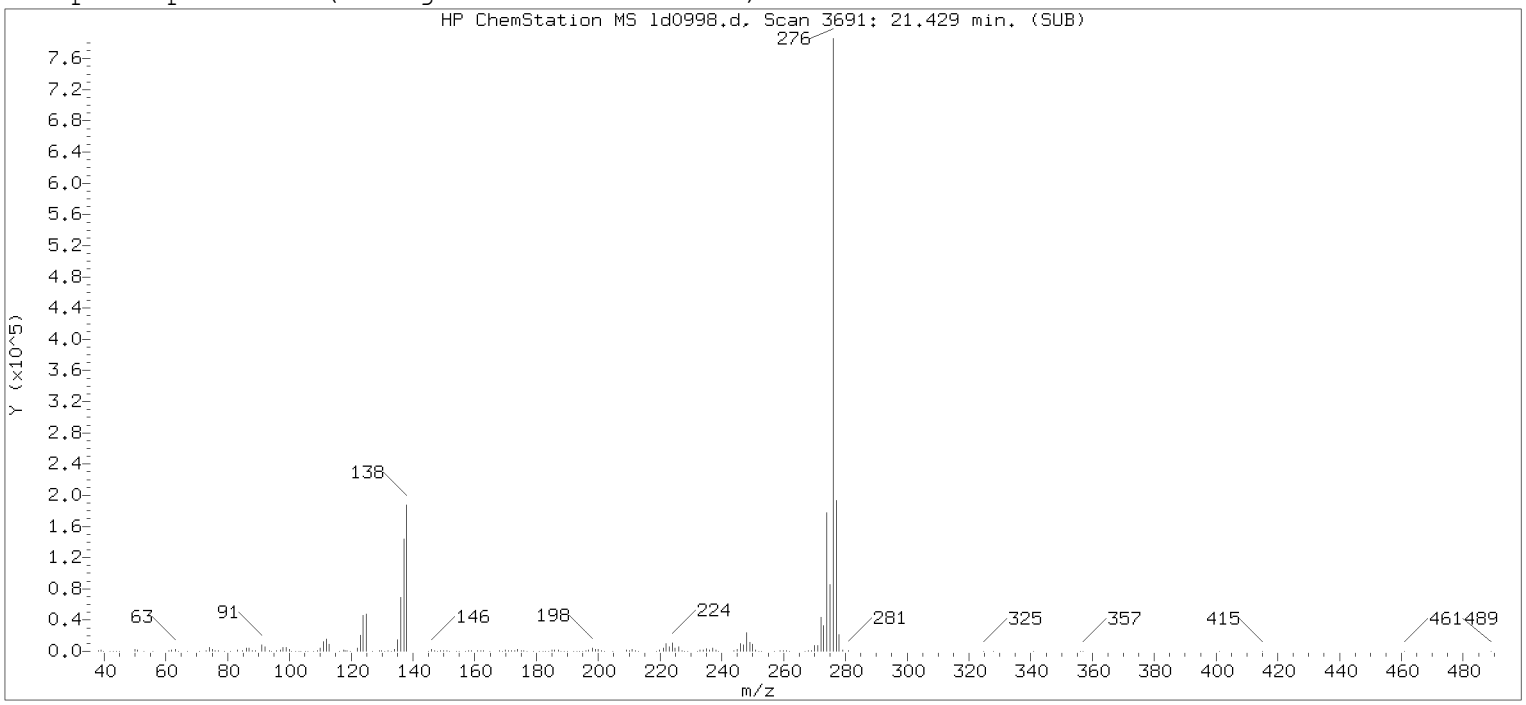
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3691
Retention Time (minutes) : 21.429
Quant Ion : 276.00
Area (flag) : 1278009MA
On-Column Amount (ng/ul) : 10.6682
Integration start scan : 3680 Integration stop scan: 3694
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

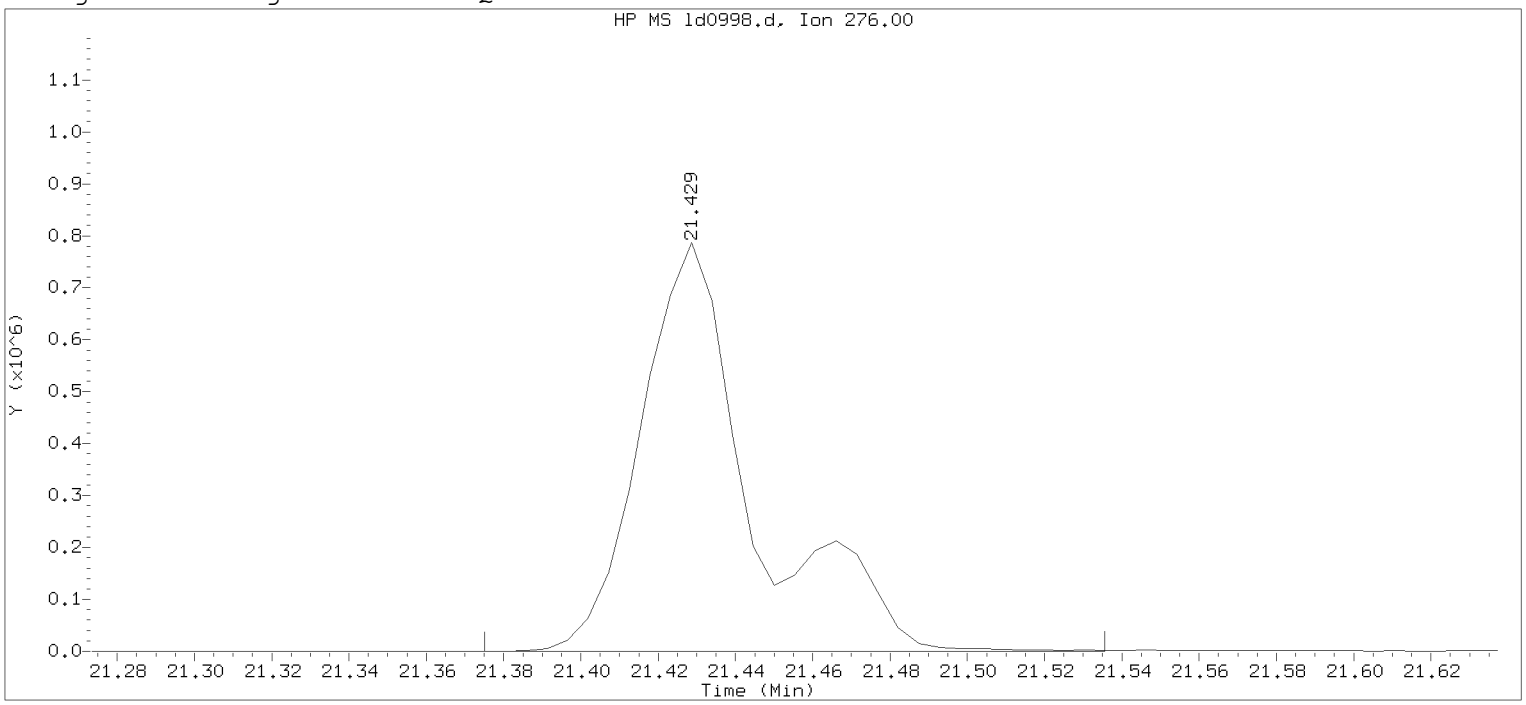
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 13:41.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0998.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 04:26 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 24-APR-2018 21:43
Date, time and analyst ID of latest file update: 25-Apr-2018 04:53 Unknown

Sample Name: R0604REMSD Lab Sample ID: 9558700RE

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3691		
Retention Time (minutes)	: 21.429		
Quant Ion	: 276.00		
Area	: 1581412		
On-column Amount (ng/ul)	: 13.2009		
Integration start scan	: 3680	Integration stop scan:	3710
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brandon H. Smith on 05/02/2018 at 11:58.
Target 3.5 esignature user ID: BHSmith

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr23.b/ld0875.d Injection date and time: **23-APR-2018 12:24**
Data file Sample Info. Line: 106WOLCS2;106WOLCS2;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 26-APR-2018 10:09
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr23.b/ld0871.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.559	(0.000)	911	152	163001	(-14)	5.00	
68) Naphthalene-d8	8.544	(0.000)	1282	136	603487	(-16)	5.00	
118) Acenaphthene-d10	11.384	(0.000)	1813	164	301683	(-18)	5.00	
158) Phenanthrene-d10	13.331	(0.000)	2177	188	588959	(-20)	5.00	
180) Pyrene-d10	15.304	(0.000)	2546	212	613511	(-21)	5.00	
218) Perylene-d12	19.813	(0.000)	3389	264	559242	(-23)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.741	(-0.002)	112	1215724	27.238	54%		10 - 82
18) Phenol-d6	(1)	6.185	(0.001)	99	1228671	20.993	42%		10 - 71
45) Nitrobenzene-d5	(2)	7.447	(0.000)	82	1131443	21.738	87%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.325	(0.000)	172	1959450	20.892	84%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.486	(0.000)	330	484798	46.488	93%		21 - 134
184) Terphenyl-d14	(5)	15.609	(0.000)	244	2164934	22.004	88%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	3.976	(-0.001)	88	219691	9.364	37.45			0.5
10) Methyl methanesulfonate	(1)	4.479	(-0.001)	80	240532	8.464	33.85			0.3
14) N-Nitrosodiethylamine	(1)	4.998	(0.000)	102	222362	10.219	40.88			0.1
16) Ethyl methanesulfonate	(1)	5.506	(0.000)	109	242313	10.226	40.90			0.1
36) N-Nitrosopyrrolidine	(1)	7.206	(0.000)	100	249172	10.555	42.22			0.1
40) N-Nitrosomorpholine	(1)	7.281	(-0.000)	56	313688	10.016	40.06			0.5
50) N-Nitrosopiperidine	(2)	7.715	(0.000)	114	231183	10.596	42.38			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.180	(0.000)	198	232361	10.208	40.83			0.5
67) a,a-Dimethylphenethylamine	(2)	8.319	(0.000)	58	1073459	23.250	93.00		E	1
71) 2,6-Dichlorophenol	(2)	8.736	(-0.000)	162	382176	10.776	43.11			0.1
72) Hexachloropropene	(2)	8.709	(0.000)	213	194804	6.747	26.99			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.266	(-0.000)	84	382552	9.774	39.10			0.5
84) 1,4-Phenylenediamine	(2)	9.335	(-0.001)	108	2535701	50.815	203.26		EJ	19
85) Safrole	(2)	9.597	(-0.000)	162	339020	10.134	40.54			0.5
91) cis-Isosafrole	(3)	10.073	(0.000)	162	46392	1.299	5.20			0.1
97) trans-Isosafrole	(3)	10.442	(0.000)	162	374081	9.737	38.95			0.1
100) Isosafrole	(3)				420473	11.036	44.14			0.5
108) 1,4-Naphthoquinone	(3)				Not Detected					6
122) Pentachlorobenzene	(3)	11.624	(-0.000)	250	358637	10.717	42.87			0.1
130) Thionazin	(3)	12.191	(-0.000)	107	171458	11.114	44.46			0.5
133) 5-Nitro-o-toluidine	(3)	12.250	(-0.000)	152	200222	8.361	33.44			0.1
144) 1,3,5-Trinitrobenzene	(4)	12.732	(0.000)	213	71175	7.410	29.64			1
145) Diallate (peak 1)	(4)	12.705	(0.000)	86	370693	8.142	32.57			0.06
146) Phorate	(4)	12.716	(0.000)	75	981958	15.223	60.89			0.1
147) Phenacetin	(4)	12.780	(0.000)	108	566775	12.442	49.77			0.1
149) Diallate (peak 2)	(4)	12.806	(0.000)	86	122141	3.385	13.54			0.06
151) Diallate trans/cis	(4)				492834	11.526	46.11			0.3

E = Compound concentration above calibration range.

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:18. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr23.b/ld0875.d Injection date and time: **23-APR-2018 12:24**
Data file Sample Info. Line: 106WOLCS2;106WOLCS2;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 26-APR-2018 10:09
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr23.b/ld0871.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

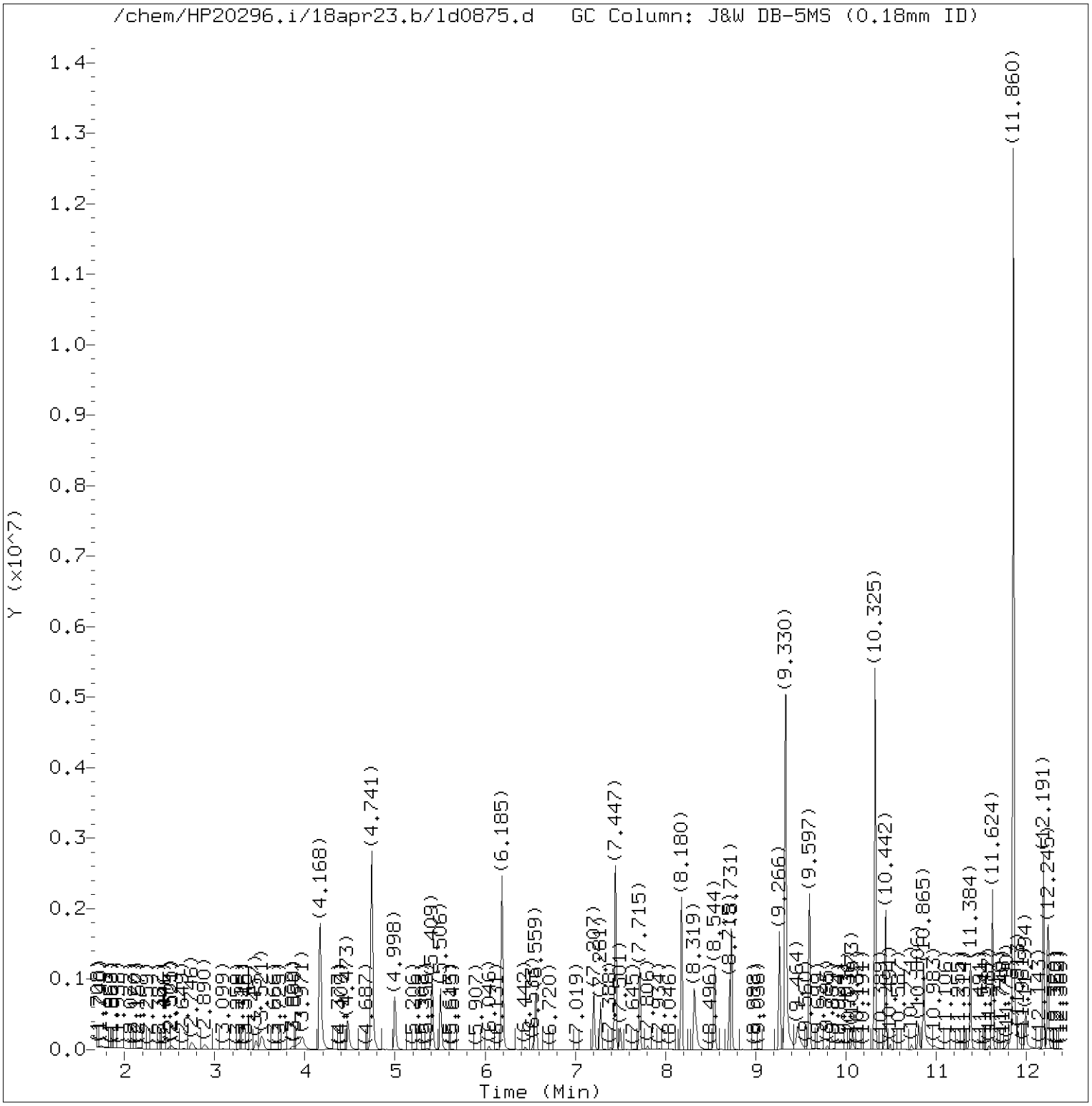
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
152) Dimethoate	(4)	12.946(0.000)	87	265424	6.837	27.35			0.8
155) 4-Aminobiphenyl	(4)	13.138(0.000)	169	473236	5.767	23.07			0.1
156) Pentachloronitrobenzene	(4)	13.101(0.000)	237	133261	11.288	45.15			0.5
157) Pronamide	(4)	13.213(0.000)	173	500609	12.315	49.26			0.1
167) Disulfoton	(4)	13.363(0.000)	88	1253379	26.747	106.99			6
169) Methyl parathion	(4)	13.860(-0.000)	109	323355	10.928	43.71			0.3
172) Parathion	(4)	14.390(-0.000)	109	220934	11.538	46.15			0.5
173) 4-Nitroquinoline-1-oxide	(4)	14.459(-0.002)	190	1684045	109.515	438.06		E	5
175) Methapyrilene	(4)	14.540(-0.000)	97	4459678	114.990	459.96		E	4
176) Isodrin	(4)	14.759(-0.000)	193	187693	11.666	46.66			0.1
185) Aramite (1)	(5)	15.492(-0.000)	185	1736	0.880	3.52		J	0.3
186) Aramite (2)	(5)	15.524(-0.000)	185	1412	0.745	2.98		J	0.3
188) Aramite (3)	(5)	15.598(-0.000)	185	58655	0.381	1.53		J	0.3
189) Aramite (4)	(5)			Not Detected					0.3
191) Aramite	(5)			61803	2.006	8.03		J	1
187) p-Dimethylaminoazobenzene	(5)	15.850(-0.000)	225	309474	12.997	51.99			0.1
190) Chlorobenzilate	(5)	15.925(-0.000)	139	392782	8.448	33.79			0.8
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)	16.545(-0.008)	272	93555M	6.932	27.73		J	6
196) 2-Acetylaminofluorene	(5)	16.855(-0.000)	181	679346	11.837	47.35			0.5
220) 3-Methylcholanthrene	(6)	20.284(-0.000)	268	764358	12.742	50.97			0.1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:18. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

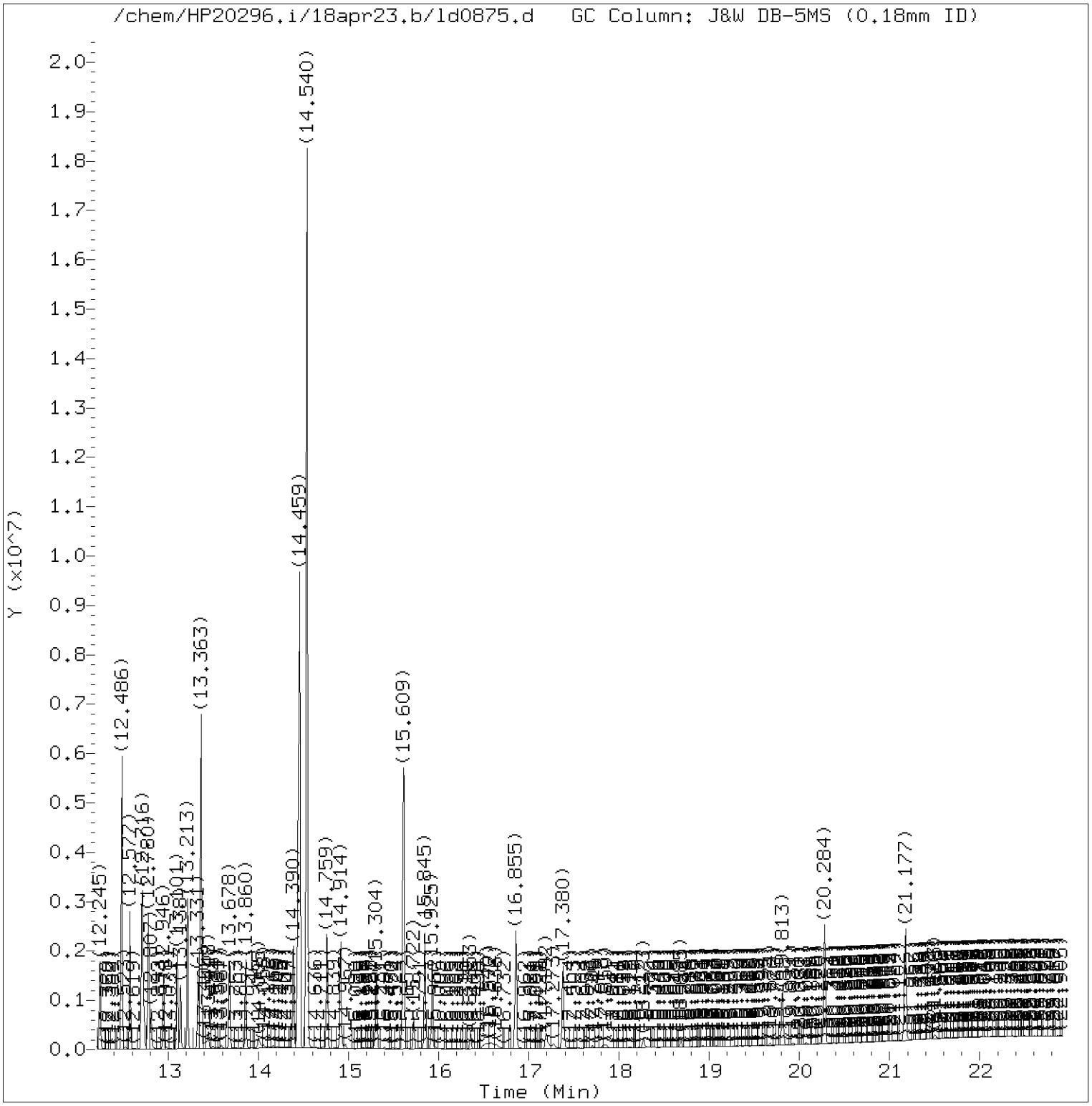
Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9) N-Nitrosomethylethylamine	(1)	3.976	88	219691	9.364
10) Methyl methanesulfonate	(1)	4.479	80	240532	8.464
12)$2-Fluorophenol	(1)	4.741	112	1215724	27.238
14) N-Nitrosodiethylamine	(1)	4.998	102	222362	10.219
16) Ethyl methanesulfonate	(1)	5.506	109	242313	10.226
18)$Phenol-d6	(1)	6.185	99	1228671	20.993
26)*1,4-Dichlorobenzene-d4	(1)	6.559	152	163001	5.000
36) N-Nitrosopyrrolidine	(1)	7.207	100	249172	10.555
40) N-Nitrosomorpholine	(1)	7.281	56	313688	10.016
100) Isosafrole	(3)			420473	11.036
45)$Nitrobenzene-d5	(2)	7.447	82	1131443	21.738
50) N-Nitrosopiperidine	(2)	7.715	114	231183	10.596
59) O,O,O-Triethylphosphorothioate	(2)	8.180	198	232361	10.208
67) a,a-Dimethylphenethylamine	(2)	8.319	58	1073459	23.250
68)*Naphthalene-d8	(2)	8.544	136	603487	5.000
72) Hexachloropropene	(2)	8.709	213	194804	6.747
71) 2,6-Dichlorophenol	(2)	8.736	162	382176	10.776
151) Diallate trans/cis	(4)			492834	11.526
80) N-Nitrosodi-n-butylamine	(2)	9.266	84	382552	9.774
84) 1,4-Phenylenediamine	(2)	9.335	108	2535701	50.815
85) Safrole	(2)	9.597	162	339020	10.134
91) cis-Isosafrole	(3)	10.073	162	46392	1.299
96)$2-Fluorobiphenyl	(3)	10.325	172	1959450	20.892
97) trans-Isosafrole	(3)	10.442	162	374081	9.737
191) Aramite	(5)			61803	2.006
118)*Acenaphthene-d10	(3)	11.384	164	301683	5.000
122) Pentachlorobenzene	(3)	11.624	250	358637	10.717
130) Thionazin	(3)	12.191	107	171458	11.114
133) 5-Nitro-o-toluidine	(3)	12.250	152	200222	8.361
140)$2,4,6-Tribromophenol	(3)	12.486	330	484798	46.488
145) Diallate (peak 1)	(4)	12.705	86	370693	8.142
146) Phorate	(4)	12.716	75	981958	15.223
144) 1,3,5-Trinitrobenzene	(4)	12.732	213	71175	7.410
147) Phenacetin	(4)	12.780	108	566775	12.442
149) Diallate (peak 2)	(4)	12.807	86	122141	3.385
152) Dimethoate	(4)	12.946	87	265424	6.837
156) Pentachloronitrobenzene	(4)	13.101	237	133261	11.288
155) 4-Aminobiphenyl	(4)	13.138	169	473236	5.767
157) Pronamide	(4)	13.213	173	500609	12.315
158)*Phenanthrene-d10	(4)	13.331	188	588959	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

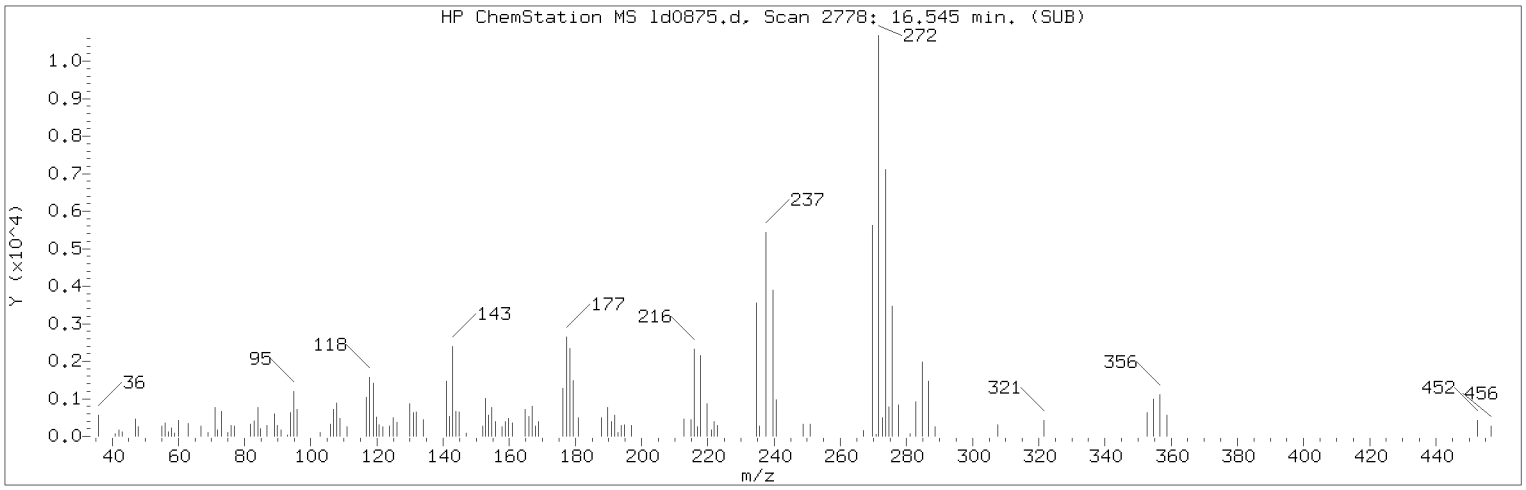
Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Disulfoton	(4)	13.363	88	1253379	26.747
169) Methyl parathion	(4)	13.860	109	323355	10.928
172) Parathion	(4)	14.390	109	220934	11.538
173) 4-Nitroquinoline-1-oxide	(4)	14.459	190	1684045	109.515
175) Methapyrilene	(4)	14.540	97	4459678	114.990
176) Isodrin	(4)	14.759	193	187693	11.666
180)*Pyrene-d10	(5)	15.304	212	613511	5.000
185) Aramite (1)	(5)	15.492	185	1736	0.880
186) Aramite (2)	(5)	15.524	185	1412	0.745
188) Aramite (3)	(5)	15.599	185	58655	0.381
184)$Terphenyl-d14	(5)	15.609	244	2164934	22.004
187) p-Dimethylaminoazobenzene	(5)	15.850	225	309474	12.997
190) Chlorobenzilate	(5)	15.925	139	392782	8.448
195) Kepone	(5)	16.545	272	93555M	6.932
196) 2-Acetylaminofluorene	(5)	16.855	181	679346	11.837
218)*Perylene-d12	(6)	19.813	264	559242	5.000
220) 3-Methylcholanthrene	(6)	20.284	268	764358	12.742

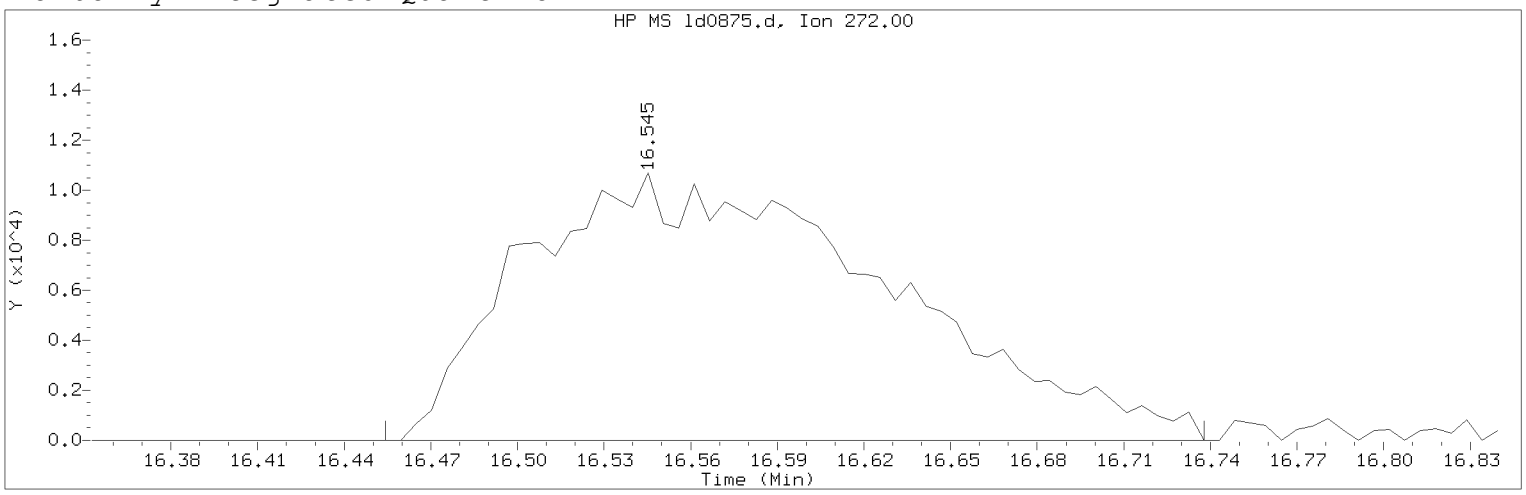
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

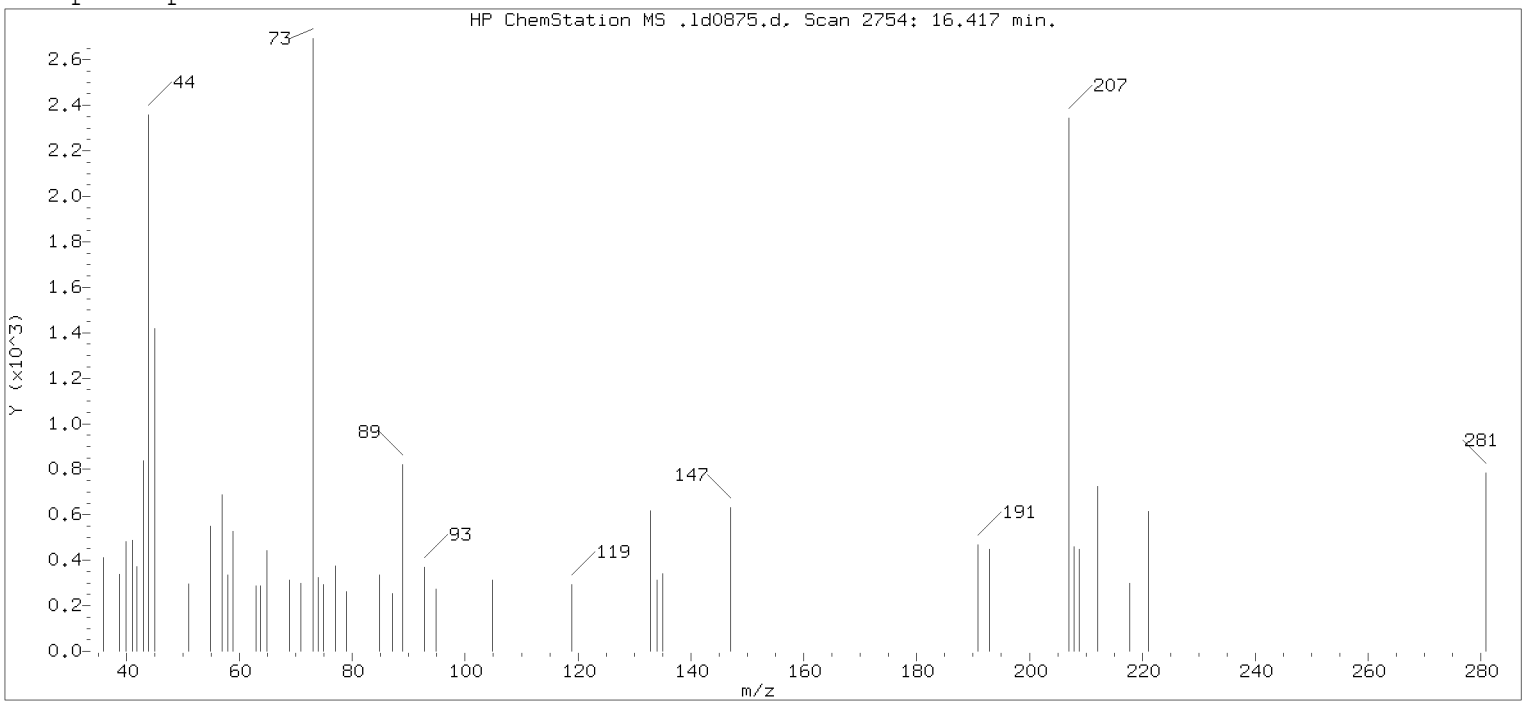
Compound Number : 195
Compound Name : Kepone
Scan Number : 2778
Retention Time (minutes) : 16.545
Quant Ion : 272.00
Area (flag) : 93555M
On-Column Amount (ng/ul) : 6.9323
Integration start scan : 2760 Integration stop scan: 2813
Y at integration start : -3 Y at integration end: -3

Reason for manual integration: missed peak

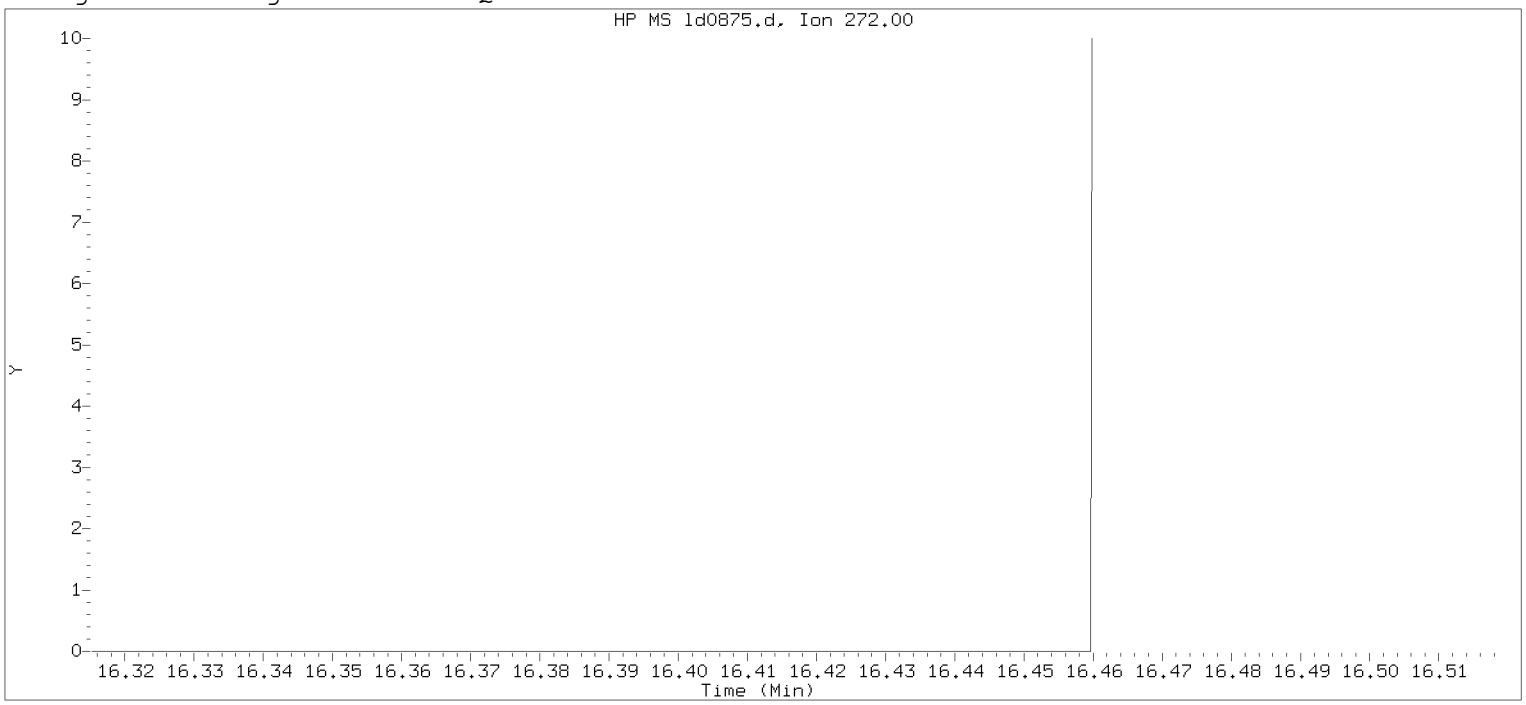
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0875.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:24 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 23-APR-2018 12:08
Date, time and analyst ID of latest file update: 23-Apr-2018 13:37 bhs10208

Sample Name: 106WOLCS2 Lab Sample ID: 106WOLCS2

Compound Number : 195
Compound Name : Kepone
Expected RT (minutes) : 16.417
Quant Ion : 272.00

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:18.
Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr23.b/ld0876.d Injection date and time: **23-APR-2018 12:52**
Data file Sample Info. Line: 106WOLCSD2;106WOLCSD2;1;3;LCSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 26-APR-2018 10:09
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr23.b/ld0871.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.565	(-0.005)	912	152	171107	(-9)	5.00	
68) Naphthalene-d8	8.544	(0.000)	1282	136	639632	(-10)	5.00	
118) Acenaphthene-d10	11.379	(0.005)	1812	164	320716	(-13)	5.00	
158) Phenanthrene-d10	13.331	(0.000)	2177	188	637181	(-14)	5.00	
180) Pyrene-d10	15.305	(0.000)	2546	212	652738	(-16)	5.00	
218) Perylene-d12	19.808	(0.005)	3388	264	601727	(-17)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.746	(-0.002)	112	1316882	28.106	56%		10 - 82
18) Phenol-d6	(1)	6.185	(0.002)	99	1286088	20.933	42%		10 - 71
45) Nitrobenzene-d5	(2)	7.447	(0.000)	82	1272049	23.058	92%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.325	(0.000)	172	2152212	21.586	86%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.486	(-0.001)	330	548842	49.506	99%		21 - 134
184) Terphenyl-d14	(5)	15.609	(0.000)	244	2413669	23.057	92%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	3.971	(-0.000)	88	248594	10.093	40.37			0.5
10) Methyl methanesulfonate	(1)	4.479	(-0.001)	80	267389	8.963	35.85			0.3
14) N-Nitrosodiethylamine	(1)	4.998	(0.000)	102	254750	11.153	44.61			0.1
16) Ethyl methanesulfonate	(1)	5.506	(0.000)	109	270205	10.863	43.45			0.1
36) N-Nitrosopyrrolidine	(1)	7.207	(0.001)	100	278023	11.220	44.88			0.1
40) N-Nitrosomorpholine	(1)	7.282	(0.000)	56	345600	10.512	42.05			0.5
50) N-Nitrosopiperidine	(2)	7.715	(0.000)	114	261622	11.313	45.25			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.180	(0.000)	198	267233	11.077	44.31			0.5
67) a,a-Dimethylphenethylamine	(2)	8.319	(0.000)	58	1389687	28.398	113.59		E	1
71) 2,6-Dichlorophenol	(2)	8.731	(0.000)	162	436998	11.626	46.50			0.1
72) Hexachloropropene	(2)	8.715	(0.000)	213	217765	7.116	28.47			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.266	(-0.000)	84	428153	10.321	41.29			0.5
84) 1,4-Phenylenediamine	(2)	9.330	(-0.000)	108	2373056	44.868	179.47		EJ	19
85) Safrole	(2)	9.598	(0.000)	162	377802	10.655	42.62			0.5
91) cis-Isosafrole	(3)	10.074	(-0.000)	162	52346	1.379	5.52			0.1
97) trans-Isosafrole	(3)	10.437	(0.000)	162	423921	10.379	41.52			0.1
100) Isosafrole	(3)				476267	11.758	47.03			0.5
108) 1,4-Naphthoquinone	(3)				Not Detected					6
122) Pentachlorobenzene	(3)	11.625	(-0.000)	250	389089	10.937	43.75			0.1
130) Thionazin	(3)	12.192	(-0.000)	107	195195	11.902	47.61			0.5
133) 5-Nitro-o-toluidine	(3)	12.245	(-0.000)	152	214128	8.411	33.64			0.1
144) 1,3,5-Trinitrobenzene	(4)	12.726	(0.000)	213	85481	8.226	32.90			1
145) Diallate (peak 1)	(4)	12.700	(0.000)	86	413450	8.394	33.57			0.06
146) Phorate	(4)	12.716	(0.000)	75	1104484	15.827	63.31			0.1
147) Phenacetin	(4)	12.780	(0.000)	108	637821	12.942	51.77			0.1
149) Diallate (peak 2)	(4)	12.807	(0.000)	86	137482	3.522	14.09			0.06
151) Diallate trans/cis	(4)				550932	11.915	47.66			0.3

E = Compound concentration above calibration range.

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:19. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr23.b/ld0876.d Injection date and time: **23-APR-2018 12:52**
Data file Sample Info. Line: 106WOLCSD2;106WOLCSD2;1;3;LCSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 26-APR-2018 10:09
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr23.b/ld0871.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

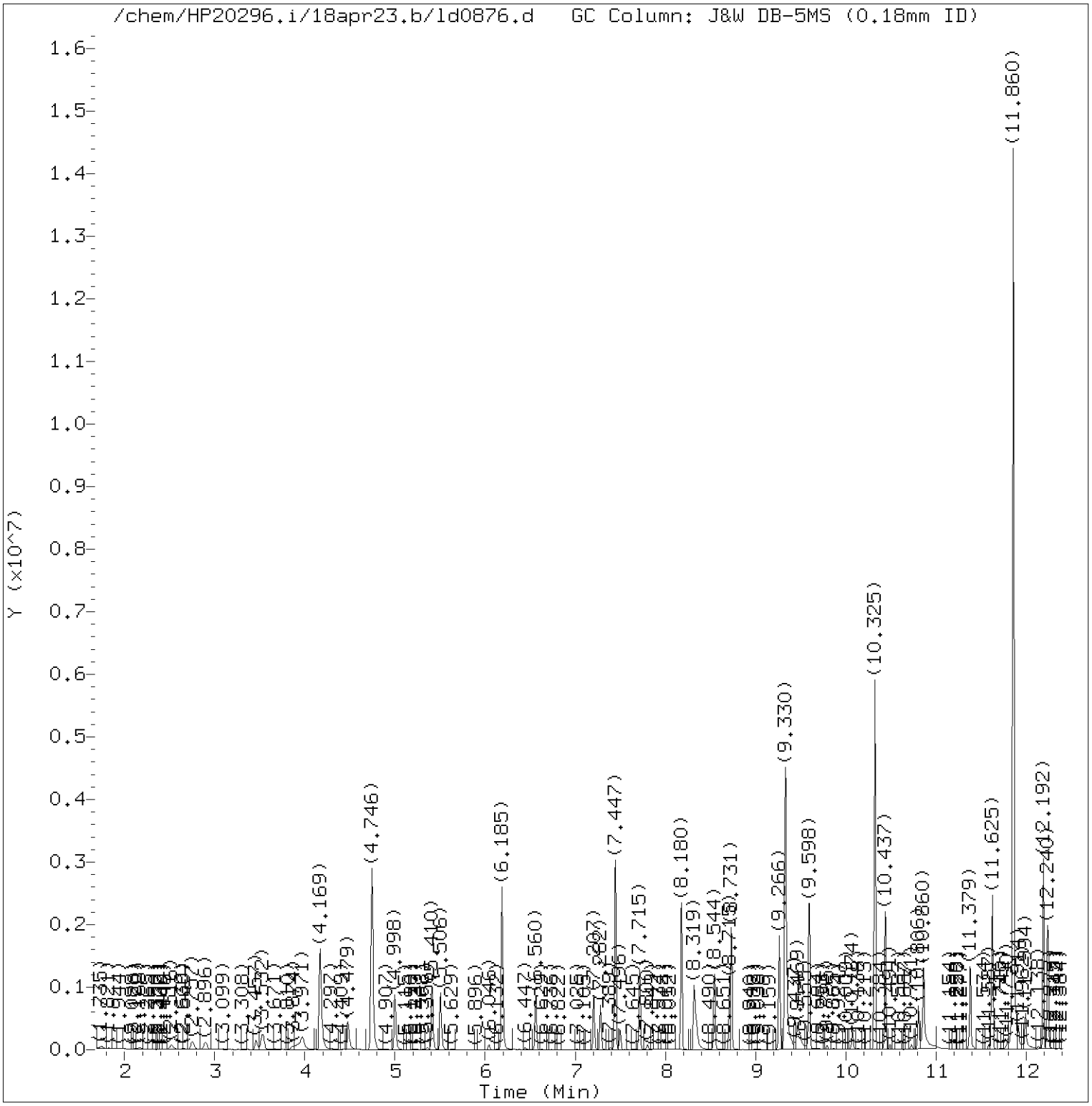
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
152) Dimethoate	(4)	12.946(0.000)	87	299119	7.122	28.49			0.8
155) 4-Aminobiphenyl	(4)	13.133(0.000)	169	484325	5.456	21.82			0.1
156) Pentachloronitrobenzene	(4)	13.101(0.000)	237	150889	11.814	47.26			0.5
157) Pronamide	(4)	13.213(0.000)	173	546803	12.434	49.74			0.1
167) Disulfoton	(4)	13.363(0.000)	88	1391016	27.438	109.75			6
169) Methyl parathion	(4)	13.860(0.000)	109	349911	10.930	43.72			0.3
172) Parathion	(4)	14.384(0.000)	109	254945	12.306	49.23			0.5
173) 4-Nitroquinoline-1-oxide	(4)	14.459(-0.002)	190	1925441	115.737	462.95		E	5
175) Methapyrilene	(4)	14.540(-0.000)	97	5134340	122.366	489.47		E	4
176) Isodrin	(4)	14.759(0.000)	193	211865	12.171	48.69			0.1
185) Aramite (1)	(5)	15.486(0.000)	185	1926	0.918	3.67		J	0.3
186) Aramite (2)	(5)	15.524(-0.000)	185	1908	0.946	3.78			0.3
188) Aramite (3)	(5)	15.599(-0.000)	185	66947	0.409	1.64		J	0.3
189) Aramite (4)	(5)	15.722(-0.000)	185	72370	0.350	1.40		J	0.3
191) Aramite	(5)			143151	2.623	10.49		J	1
187) p-Dimethylaminoazobenzene	(5)	15.845(0.000)	225	363329	14.342	57.37			0.1
190) Chlorobenzilate	(5)	15.925(0.000)	139	453014	9.158	36.63			0.8
194) Famphur	(5)			Not Detected					6
195) Kepone	(5)	16.599(-0.011)	272	97521M	6.792	27.17		J	6
196) 2-Acetylaminofluorene	(5)	16.856(0.000)	181	783078	12.824	51.30			0.5
220) 3-Methylcholanthrene	(6)	20.279(-0.000)	268	887310	13.747	54.99			0.1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:19. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

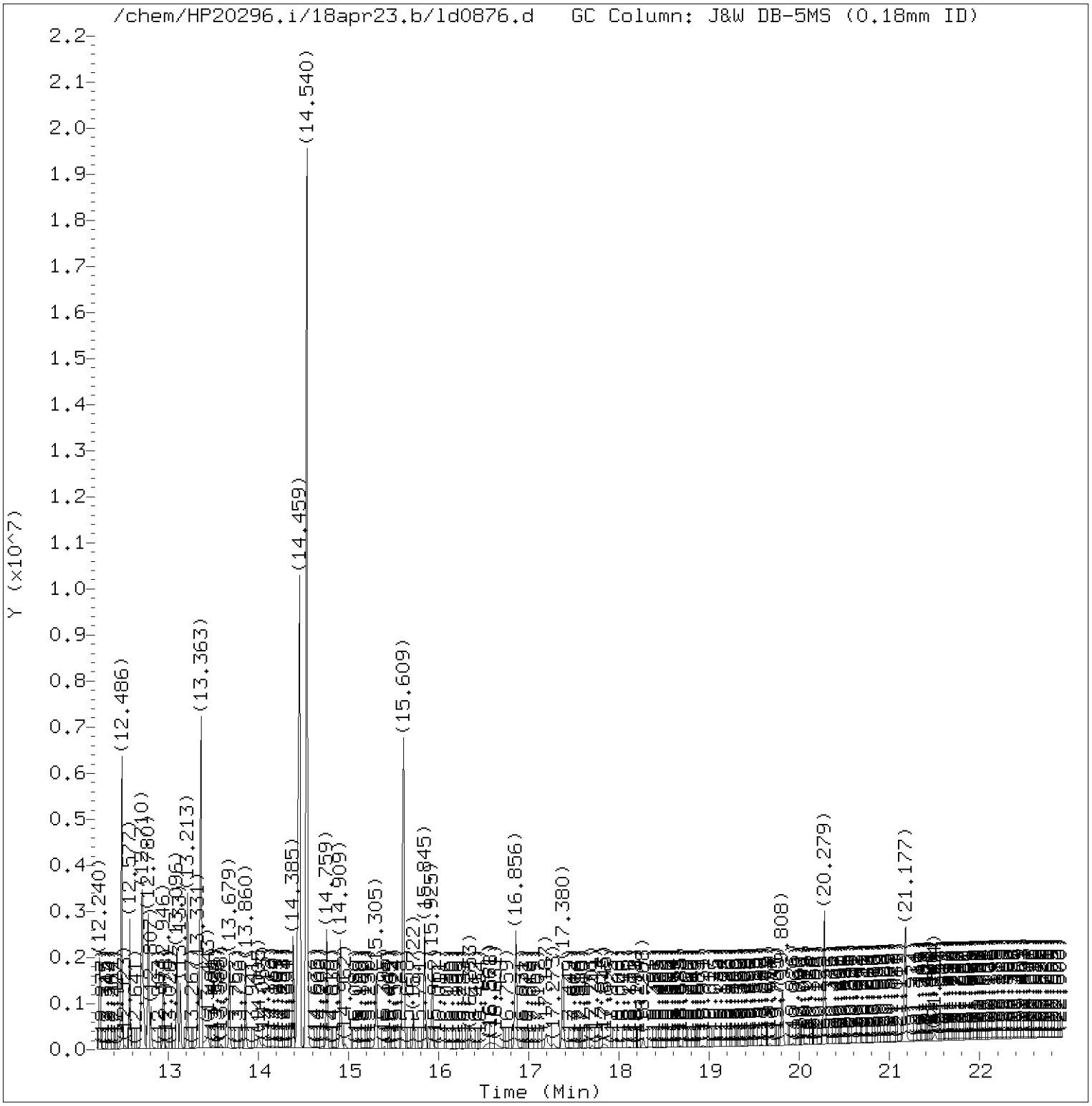
Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:19.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:19.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9) N-Nitrosomethylethylamine	(1)	3.971	88	248594	10.093
10) Methyl methanesulfonate	(1)	4.479	80	267389	8.963
12)$2-Fluorophenol	(1)	4.746	112	1316882	28.106
14) N-Nitrosodiethylamine	(1)	4.998	102	254750	11.153
16) Ethyl methanesulfonate	(1)	5.506	109	270205	10.863
18)$Phenol-d6	(1)	6.185	99	1286088	20.933
26)*1,4-Dichlorobenzene-d4	(1)	6.565	152	171107	5.000
36) N-Nitrosopyrrolidine	(1)	7.207	100	278023	11.220
40) N-Nitrosomorpholine	(1)	7.282	56	345600	10.512
100) Isosafrole	(3)			476267	11.758
45)$Nitrobenzene-d5	(2)	7.447	82	1272049	23.058
50) N-Nitrosopiperidine	(2)	7.715	114	261622	11.313
59) O,O,O-Triethylphosphorothioate	(2)	8.180	198	267233	11.077
67) a,a-Dimethylphenethylamine	(2)	8.319	58	1389687	28.398
68)*Naphthalene-d8	(2)	8.544	136	639632	5.000
72) Hexachloropropene	(2)	8.715	213	217765	7.116
71) 2,6-Dichlorophenol	(2)	8.731	162	436998	11.626
151) Diallate trans/cis	(4)			550932	11.915
80) N-Nitrosodi-n-butylamine	(2)	9.266	84	428153	10.321
84) 1,4-Phenylenediamine	(2)	9.330	108	2373056	44.868
85) Safrole	(2)	9.598	162	377802	10.655
91) cis-Isosafrole	(3)	10.074	162	52346	1.379
96)$2-Fluorobiphenyl	(3)	10.325	172	2152212	21.586
97) trans-Isosafrole	(3)	10.437	162	423921	10.379
191) Aramite	(5)			143151	2.623
118)*Acenaphthene-d10	(3)	11.379	164	320716	5.000
122) Pentachlorobenzene	(3)	11.625	250	389089	10.937
130) Thionazin	(3)	12.192	107	195195	11.902
133) 5-Nitro-o-toluidine	(3)	12.245	152	214128	8.411
140)$2,4,6-Tribromophenol	(3)	12.486	330	548842	49.506
145) Diallate (peak 1)	(4)	12.700	86	413450	8.394
146) Phorate	(4)	12.716	75	1104484	15.827
144) 1,3,5-Trinitrobenzene	(4)	12.726	213	85481	8.226
147) Phenacetin	(4)	12.780	108	637821	12.942
149) Diallate (peak 2)	(4)	12.807	86	137482	3.522
152) Dimethoate	(4)	12.946	87	299119	7.122
156) Pentachloronitrobenzene	(4)	13.101	237	150889	11.814
155) 4-Aminobiphenyl	(4)	13.133	169	484325	5.456
157) Pronamide	(4)	13.213	173	546803	12.434
158)*Phenanthrene-d10	(4)	13.331	188	637181	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:19.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

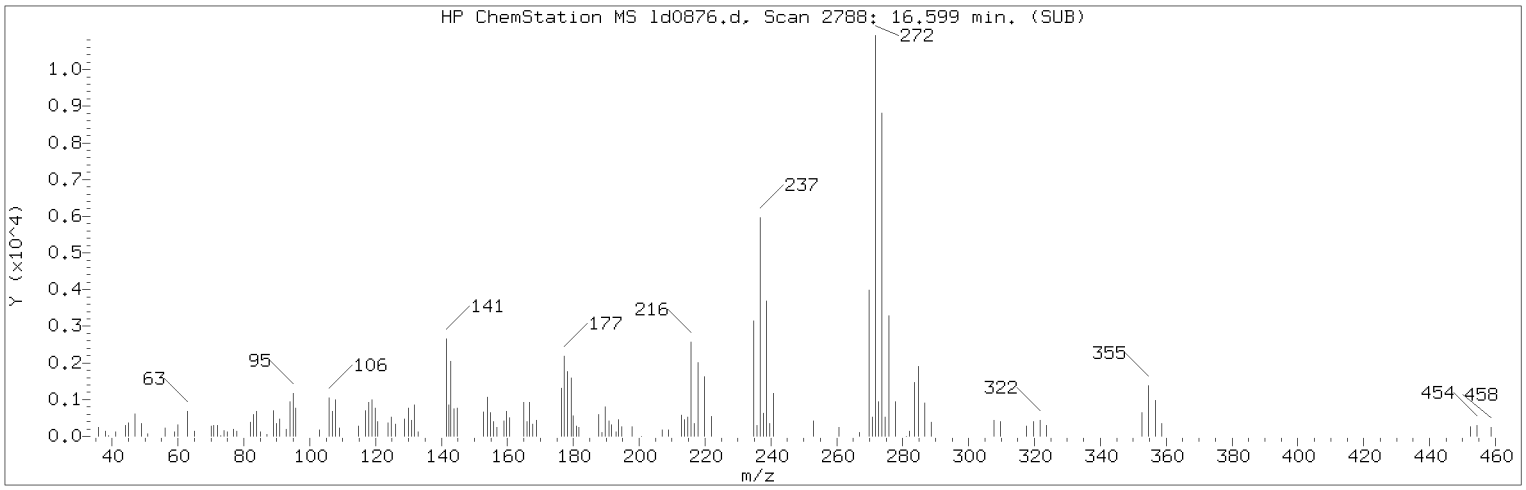
Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Disulfoton	(4)	13.363	88	1391016	27.438
169) Methyl parathion	(4)	13.860	109	349911	10.930
172) Parathion	(4)	14.385	109	254945	12.306
173) 4-Nitroquinoline-1-oxide	(4)	14.459	190	1925441	115.737
175) Methapyrilene	(4)	14.540	97	5134340	122.366
176) Isodrin	(4)	14.759	193	211865	12.171
180)*Pyrene-d10	(5)	15.305	212	652738	5.000
185) Aramite (1)	(5)	15.486	185	1926	0.918
186) Aramite (2)	(5)	15.524	185	1908	0.946
188) Aramite (3)	(5)	15.599	185	66947	0.409
184)$Terphenyl-d14	(5)	15.609	244	2413669	23.057
189) Aramite (4)	(5)	15.722	185	72370	0.350
187) p-Dimethylaminoazobenzene	(5)	15.845	225	363329	14.342
190) Chlorobenzilate	(5)	15.925	139	453014	9.158
195) Kepone	(5)	16.599	272	97521M	6.792
196) 2-Acetylaminofluorene	(5)	16.856	181	783078	12.824
218)*Perylene-d12	(6)	19.808	264	601727	5.000
220) 3-Methylcholanthrene	(6)	20.279	268	887310	13.747

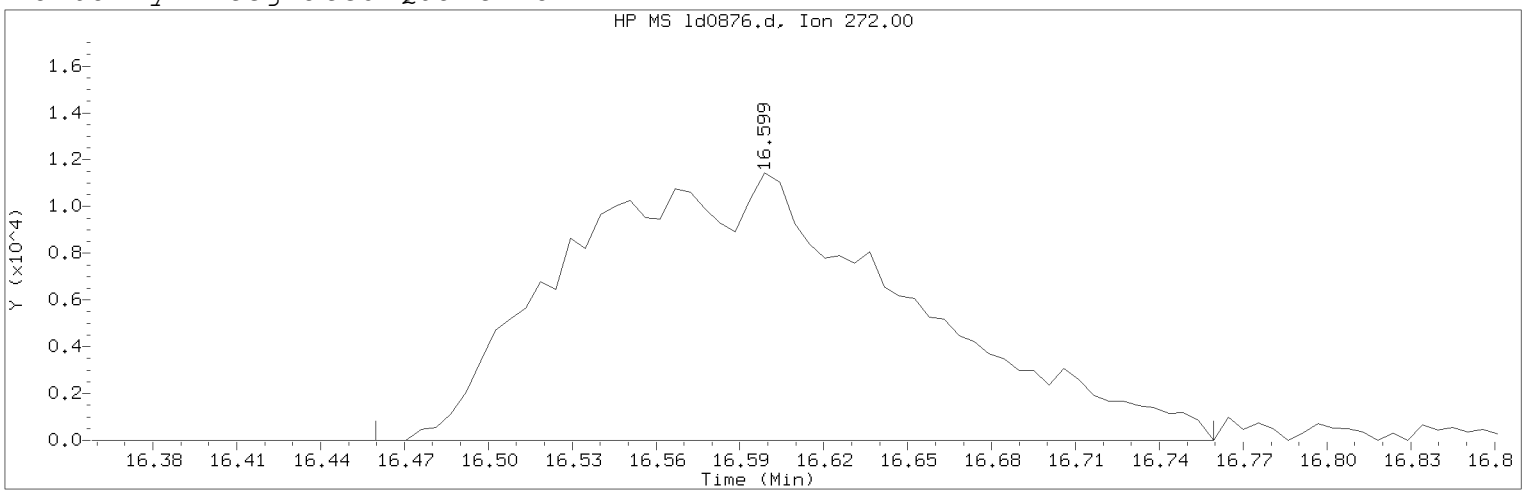
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:19.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 26-APR-2018 10:09
Date, time and analyst ID of latest file update: 26-Apr-2018 10:14 bhs10208

Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

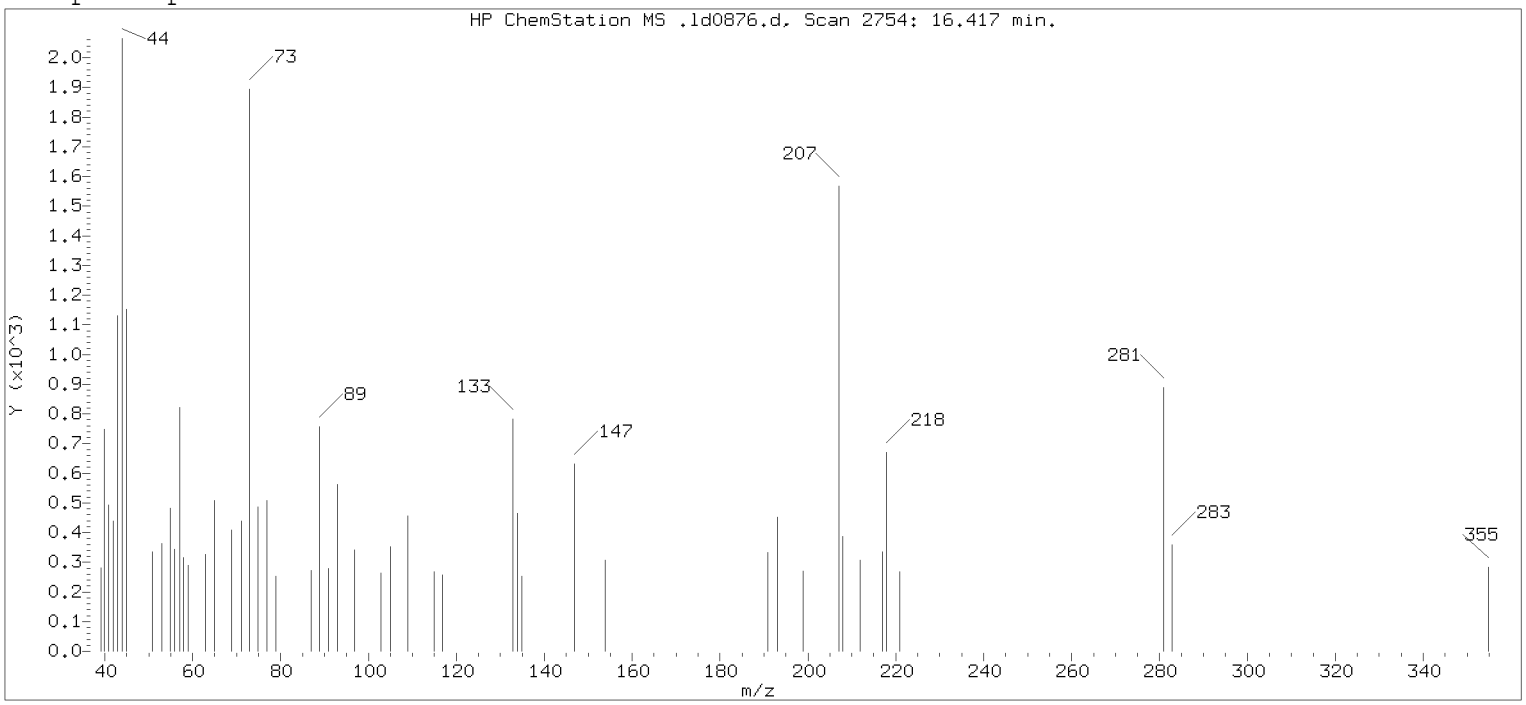
Compound Number : 195
Compound Name : Kepone
Scan Number : 2788
Retention Time (minutes) : 16.599
Quant Ion : 272.00
Area (flag) : 97521M
On-Column Amount (ng/ul) : 6.7919
Integration start scan : 2761 Integration stop scan: 2817
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

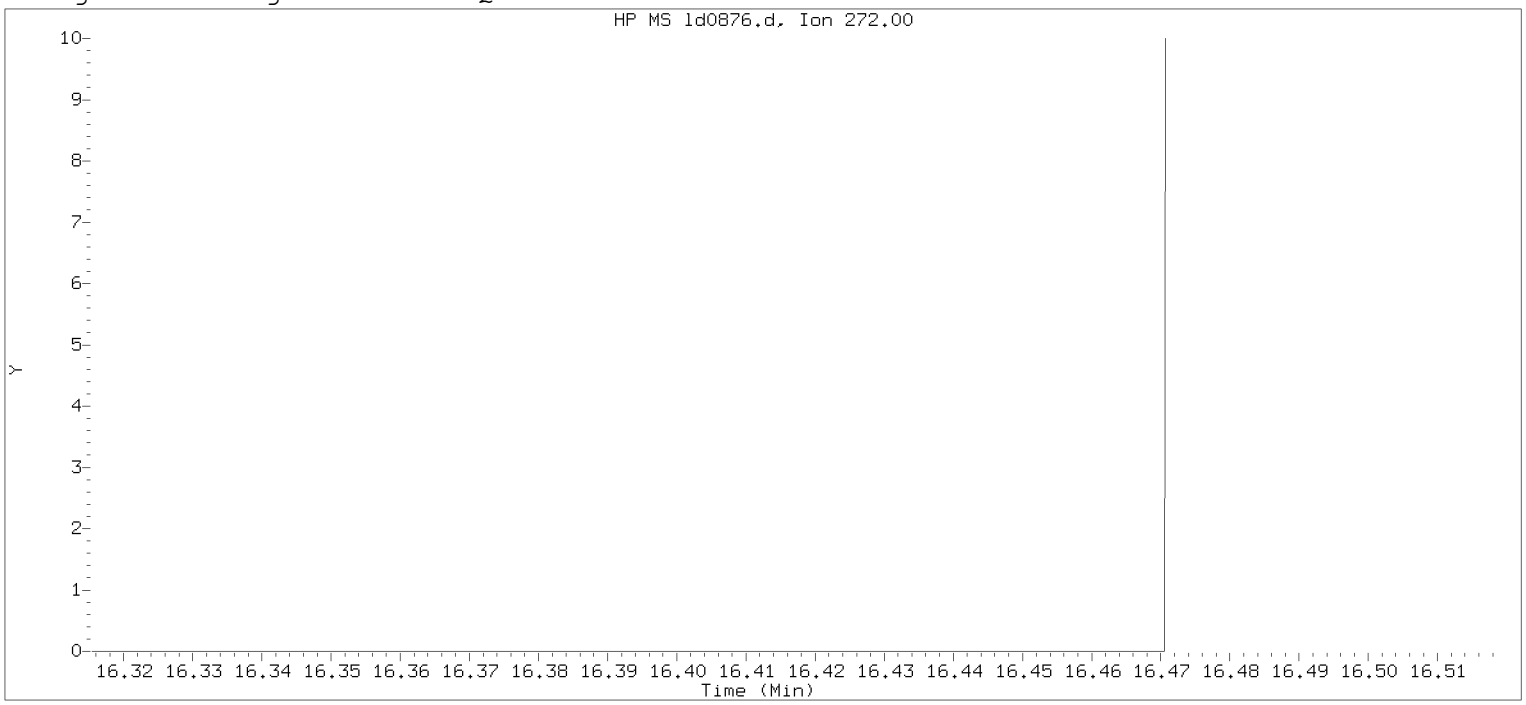
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:19.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr23.b/ld0876.d Instrument ID: HP20296.i
Injection date and time: 23-APR-2018 12:52 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr23.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 23-APR-2018 12:08
Date, time and analyst ID of latest file update: 23-Apr-2018 13:37 bhs10208

Sample Name: 106WOLCSD2 Lab Sample ID: 106WOLCSD2

Compound Number : 195
Compound Name : Kepone
Expected RT (minutes) : 16.417
Quant Ion : 272.00

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:19.
Target 3.5 esignature used. FD6 Part 2037

Data file: /chem/HP20296.i/18apr20.b/ld0815o.d Injection date and time: **20-APR-2018 12:19**
Data file Sample Info. Line: 106WOLCS;106WOLCS;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 23-APR-2018 14:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	163798	(-18)	5.00	
68) Naphthalene-d8	8.565	(0.000)	1286	136	603965	(-19)	5.00	
118) Acenaphthene-d10	11.405	(0.000)	1817	164	304176	(-21)	5.00	
158) Phenanthrene-d10	13.347	(0.005)	2180	188	611711	(-24)	5.00	
180) Pyrene-d10	15.326	(0.005)	2550	212	659755	(-23)	5.00	
218) Perylene-d12	19.835	(0.005)	3393	264	650607	(-22)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.714	(-0.002)	112	1419545	31.650	63%		10 - 82
18) Phenol-d6	(1)	6.137	(0.000)	99	1480341	25.170	50%		10 - 71
45) Nitrobenzene-d5	(2)	7.463	(0.001)	82	1203923	23.112	92%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.346	(0.000)	172	2115157	22.368	89%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.496	(0.000)	330	537320	51.102	102%		21 - 134
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2483441	23.472	94%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.585	(-0.005)	74	259630	7.962	31.85			0.5
6) Pyridine	(1)	2.682	(-0.012)	79	281079	4.831	19.32			0.5
8) 2-Picoline	(1)	3.826	(-0.004)	93	469903	7.988	31.95			0.5
19) Phenol	(1)	6.158	(0.000)	94	477118	7.047	28.19			0.2
20) Aniline	(1)	6.131	(0.000)	93	710892	9.106	36.42			0.1
23) bis(2-Chloroethyl)ether	(1)	6.233	(0.000)	93	552452	10.961	43.84			0.1
24) 2-Chlorophenol	(1)	6.287	(0.000)	128	490345	11.160	44.64			0.2
28) Benzyl alcohol	(1)	6.854	(0.000)	108	336016	11.458	45.83			3
32) 2-Methylphenol	(1)	7.051	(0.000)	108	487362	11.249	45.00			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.046	(-0.000)	45	865821	12.100	48.40			0.1
37) Acetophenone	(1)	7.233	(0.000)	105	773030	11.702	46.81			0.1
38) 4-Methylphenol	(1)	7.303	(0.000)	108	519624	11.355	45.42			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.244	(0.001)	70	451194	11.981	47.92			0.1
41) o-Toluidine	(1)	7.292	(0.000)	106	604470	7.890	31.56			0.1
44) Hexachloroethane	(1)	7.340	(0.000)	117	190410	8.897	35.59			0.3
46) Nitrobenzene	(2)	7.490	(0.001)	77	657357	12.372	49.49			0.1
52) Isophorone	(2)	7.859	(0.001)	82	1192701	12.843	51.37			0.1
53) 2-Nitrophenol	(2)	7.987	(0.000)	139	254984	11.877	47.51			0.3
55) 2,4-Dimethylphenol	(2)	8.116	(0.000)	107	518948	11.275	45.10			0.2
57) bis(2-Chloroethoxy)methane	(2)	8.250	(0.000)	93	729134	12.078	48.31			0.1
62) 2,4-Dichlorophenol	(2)	8.378	(0.000)	162	447393	12.484	49.94			0.4
70) 4-Chloroaniline	(2)	8.747	(0.000)	127	485238	9.526	38.10			0.5
83) 4-Chloro-3-methylphenol	(2)	9.581	(0.000)	107	506255	12.873	51.49			0.3
86) 2-Methylnaphthalene	(2)	9.715	(0.000)	142	950039	11.458	45.83			0.07
88) Hexachlorocyclopentadiene	(3)	9.966	(0.000)	237	474794	19.301	77.20			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	(0.000)	216	466435	11.273	45.09			0.5
93) 2,4,6-Trichlorophenol	(3)	10.207	(0.000)	196	336929	12.967	51.87			0.2

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:12. Target 3.5 esignature user ID: bhs10208

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

106WOLCS

Data file: /chem/HP20296.i/18apr20.b/ld0815o.d Injection date and time: **20-APR-2018 12:19**
Data file Sample Info. Line: 106WOLCS;106WOLCS;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 23-APR-2018 14:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
95) 2,4,5-Trichlorophenol	(3)	10.266(0.000)	196	367754	13.485	53.94			0.2
99) 2-Chloronaphthalene	(3)	10.507(0.000)	162	909851	10.978	43.91			0.1
104) 2-Nitroaniline	(3)	10.737(0.000)	138	306084	12.619	50.48			0.1
110) Dimethylphthalate	(3)	11.052(0.000)	163	888799	9.573	38.29			0.5
111) 1,3-Dinitrobenzene	(3)	11.090(0.000)	168	181084	13.114	52.46			0.5
113) 2,6-Dinitrotoluene	(3)	11.138(0.000)	165	256168	12.995	51.98			0.1
114) Acenaphthylene	(3)	11.175(0.000)	152	1555607	13.504	54.02			0.1
117) 3-Nitroaniline	(3)	11.421(0.000)	138	243926	11.745	46.98			0.1
119) Acenaphthene	(3)	11.453(0.000)	153	1023212	12.526	50.11			0.09
120) 2,4-Dinitrophenol	(3)	11.566(0.000)	184	278364	23.490	93.96			3
121) 4-Nitrophenol	(3)	11.753(0.000)	109	126985	8.674	34.69			3
123) 2,4-Dinitrotoluene	(3)	11.758(0.000)	165	335894	12.296	49.19			0.3
124) Dibenzofuran	(3)	11.721(0.000)	168	1404850	12.379	49.52			0.1
126) 1-Naphthylamine	(3)	11.860(0.000)	143	1115361	13.812	55.25			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919(0.000)	232	287467	13.546	54.18			0.2
128) 2-Naphthylamine	(3)	11.978(0.000)	143	998962	13.058	52.23			1
129) Diethylphthalate	(3)	12.111(0.000)	149	1048613	11.477	45.91			0.5
131) Fluorene	(3)	12.186(0.000)	166	1102055	12.431	49.73			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.213(0.000)	204	532297	12.115	48.46			0.1
134) 4-Nitroaniline	(3)	12.288(0.000)	138	226190	10.775	43.10			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.288(0.000)	198	189386	11.695	46.78			1
136) N-Nitrosodiphenylamine	(4)	12.379(0.000)	169	927208	12.386	49.54			0.1
137) NDPA as diphenylamine	(4)	12.379(0.000)	169	927208	12.386	49.54			0.1
148) 4-Bromophenyl-phenylether	(4)	12.806(0.000)	248	311459	12.452	49.81			0.1
150) Hexachlorobenzene	(4)	12.844(0.000)	284	309885	12.062	48.25			0.2
154) Pentachlorophenol	(4)	13.122(0.000)	266	176425	11.213	44.85			0.7
160) Phenanthrene	(4)	13.374(0.000)	178	1700018	12.604	50.42			0.1
162) Anthracene	(4)	13.443(-0.000)	178	1712153	12.662	50.65			0.1
170) Di-n-butylphthalate	(4)	14.160(-0.000)	149	1939243	12.033	48.13			0.5
178) Fluoranthene	(4)	15.010(-0.000)	202	2012492	13.266	53.06			0.1
182) Pyrene	(5)	15.352(0.000)	202	2072314	12.347	49.39			0.1
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.476(-0.000)	149	879340	11.276	45.11			0.5
198) 3,3'-Dichlorobenzidine	(5)	17.380(-0.000)	252	463172	8.584	34.34			0.5
200) Benzo(a)anthracene	(5)	17.353(-0.000)	228	1977832	13.190	52.76			0.1
201) Chrysene	(5)	17.417(0.000)	228	1895972	13.072	52.29			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.492(-0.000)	149	1378691	12.513	50.05			0.5
210) Di-n-octylphthalate	(6)	18.653(0.000)	149	2512557	12.281	49.12			0.5
211) Benzo(b)fluoranthene	(6)	19.209(0.000)	252	2009483	12.598	50.39			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214(0.000)	256	845347	12.845	51.38			0.1
213) Benzo(k)fluoranthene	(6)	19.262(0.000)	252	1939161	12.625	50.50			0.4
216) Benzo(a)pyrene	(6)	19.744(0.000)	252	1875261	13.066	52.26			0.4
224) Indeno(1,2,3-cd)pyrene	(6)	21.439(0.000)	276	1696500M	12.447	49.79			0.04
225) Dibenz(a,h)anthracene	(6)	21.477(0.000)	278	1773308	12.808	51.23			0.1
226) Benzo(g,h,i)perylene	(6)	21.819(0.000)	276	1742202	12.370	49.48			0.1

M = Compound was manually integrated.

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:12. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr20.b/ld0815o.d Injection date and time: **20-APR-2018 12:19**
Data file Sample Info. Line: 106WOLCS;106WOLCS;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18106WAO**
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814o.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 23-APR-2018 14:31
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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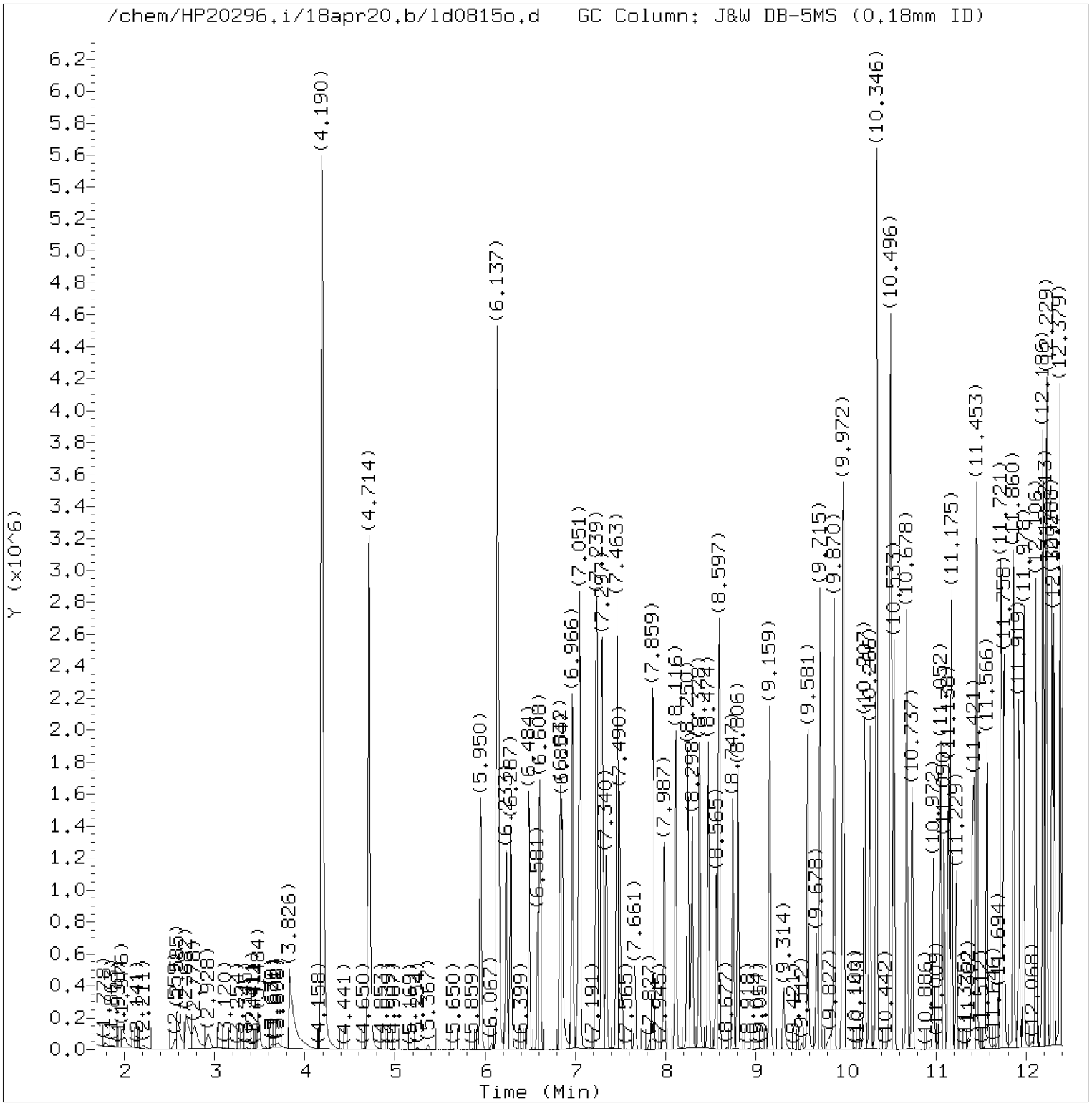
Total number of targets = 72

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:12. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

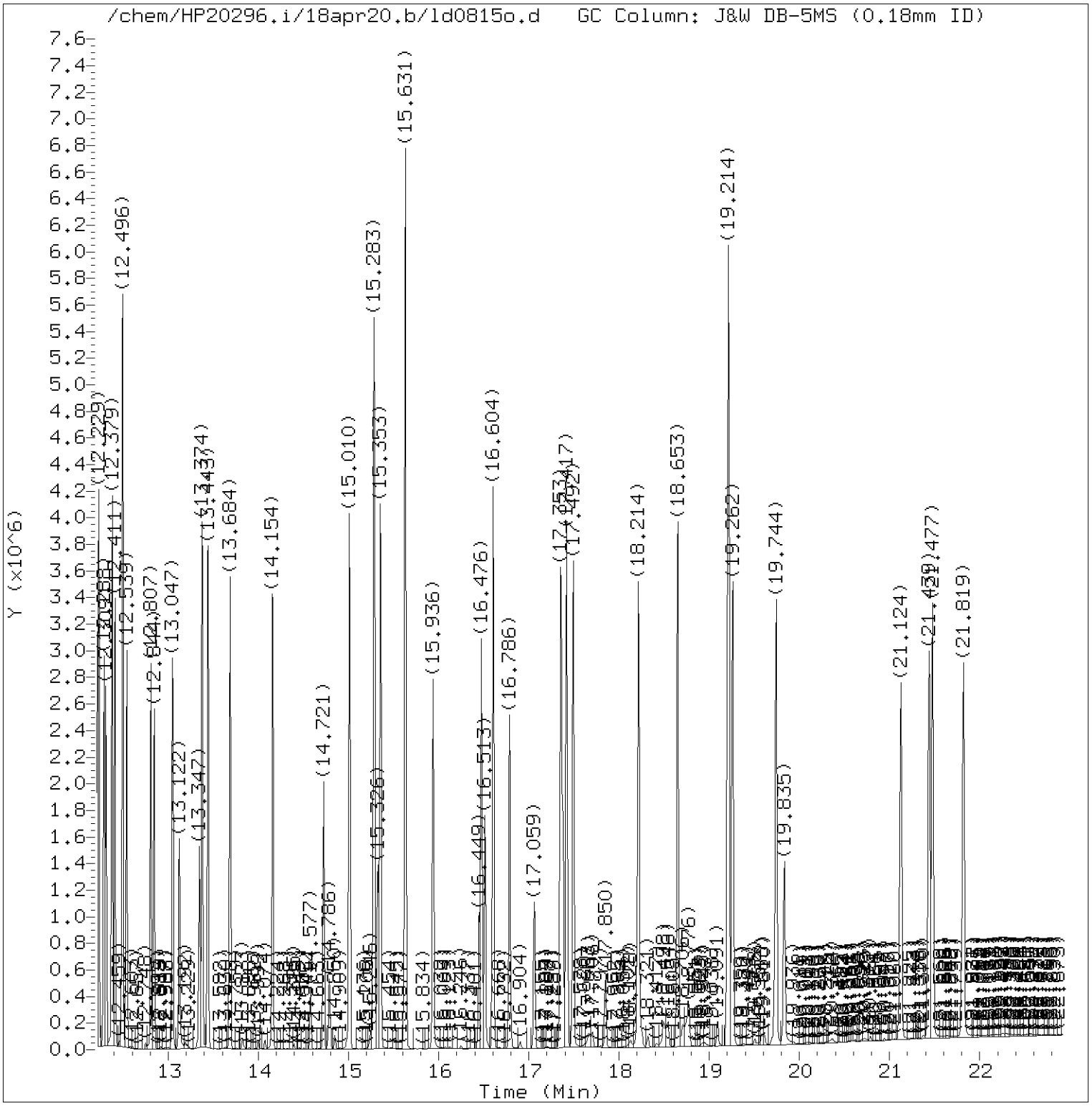
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.585	74	259630	7.962
6) Pyridine	(1)	2.682	79	281079	4.831
8) 2-Picoline	(1)	3.826	93	469903	7.988
12)$2-Fluorophenol	(1)	4.714	112	1419545	31.650
20) Aniline	(1)	6.131	93	710892	9.106
18)$Phenol-d6	(1)	6.137	99	1480341	25.170
19) Phenol	(1)	6.158	94	477118	7.047
23) bis(2-Chloroethyl)ether	(1)	6.233	93	552452	10.961
24) 2-Chlorophenol	(1)	6.287	128	490345	11.160
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	163798	5.000
28) Benzyl alcohol	(1)	6.854	108	336016	11.458
35) bis(2-Chloroisopropyl)ether	(1)	7.046	45	865821	12.100
32) 2-Methylphenol	(1)	7.051	108	487362	11.249
37) Acetophenone	(1)	7.233	105	773030	11.702
39) N-Nitroso-di-n-propylamine	(1)	7.244	70	451194	11.981
41) o-Toluidine	(1)	7.292	106	604470	7.890
38) 4-Methylphenol	(1)	7.303	108	519624	11.355
44) Hexachloroethane	(1)	7.340	117	190410	8.897
45)$Nitrobenzene-d5	(2)	7.463	82	1203923	23.112
46) Nitrobenzene	(2)	7.490	77	657357	12.372
52) Isophorone	(2)	7.859	82	1192701	12.843
53) 2-Nitrophenol	(2)	7.987	139	254984	11.877
55) 2,4-Dimethylphenol	(2)	8.116	107	518948	11.275
57) bis(2-Chloroethoxy)methane	(2)	8.250	93	729134	12.078
62) 2,4-Dichlorophenol	(2)	8.378	162	447393	12.484
68)*Naphthalene-d8	(2)	8.565	136	603965	5.000
70) 4-Chloroaniline	(2)	8.747	127	485238	9.526
83) 4-Chloro-3-methylphenol	(2)	9.581	107	506255	12.873
86) 2-Methylnaphthalene	(2)	9.715	142	950039	11.458
88) Hexachlorocyclopentadiene	(3)	9.966	237	474794	19.301
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.977	216	466435	11.273
93) 2,4,6-Trichlorophenol	(3)	10.207	196	336929	12.967
95) 2,4,5-Trichlorophenol	(3)	10.266	196	367754	13.485
96)$2-Fluorobiphenyl	(3)	10.346	172	2115157	22.368
99) 2-Chloronaphthalene	(3)	10.507	162	909851	10.978
104) 2-Nitroaniline	(3)	10.737	138	306084	12.619
110) Dimethylphthalate	(3)	11.052	163	888799	9.573
111) 1,3-Dinitrobenzene	(3)	11.090	168	181084	13.114
113) 2,6-Dinitrotoluene	(3)	11.138	165	256168	12.995
114) Acenaphthylene	(3)	11.175	152	1555607	13.504

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.405	164	304176	5.000
117) 3-Nitroaniline	(3)	11.421	138	243926	11.745
119) Acenaphthene	(3)	11.453	153	1023212	12.526
120) 2,4-Dinitrophenol	(3)	11.566	184	278364	23.490
124) Dibenzofuran	(3)	11.721	168	1404850	12.379
121) 4-Nitrophenol	(3)	11.753	109	126985	8.674
123) 2,4-Dinitrotoluene	(3)	11.758	165	335894	12.296
126) 1-Naphthylamine	(3)	11.860	143	1115361	13.812
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	287467	13.546
128) 2-Naphthylamine	(3)	11.978	143	998962	13.058
129) Diethylphthalate	(3)	12.111	149	1048613	11.477
131) Fluorene	(3)	12.186	166	1102055	12.431
132) 4-Chlorophenyl-phenylether	(3)	12.213	204	532297	12.115
134) 4-Nitroaniline	(3)	12.288	138	226190	10.775
135) 4,6-Dinitro-2-methylphenol	(4)	12.288	198	189386	11.695
137) NDPA as diphenylamine	(4)	12.379	169	927208	12.386
136) N-Nitrosodiphenylamine	(4)	12.379	169	927208	12.386
140)$2,4,6-Tribromophenol	(3)	12.496	330	537320	51.102
148) 4-Bromophenyl-phenylether	(4)	12.807	248	311459	12.452
150) Hexachlorobenzene	(4)	12.844	284	309885	12.062
154) Pentachlorophenol	(4)	13.122	266	176425	11.213
158)*Phenanthrene-d10	(4)	13.347	188	611711	5.000
160) Phenanthrene	(4)	13.374	178	1700018	12.604
162) Anthracene	(4)	13.443	178	1712153	12.662
170) Di-n-butylphthalate	(4)	14.160	149	1939243	12.033
178) Fluoranthene	(4)	15.010	202	2012492	13.266
180)*Pyrene-d10	(5)	15.326	212	659755	5.000
182) Pyrene	(5)	15.353	202	2072314	12.347
184)$Terphenyl-d14	(5)	15.631	244	2483441	23.472
193) Butylbenzylphthalate	(5)	16.476	149	879340	11.276
200) Benzo(a)anthracene	(5)	17.353	228	1977832	13.190
198) 3,3'-Dichlorobenzidine	(5)	17.380	252	463172	8.584
201) Chrysene	(5)	17.417	228	1895972	13.072
204) bis(2-Ethylhexyl)phthalate	(5)	17.492	149	1378691	12.513
210) Di-n-octylphthalate	(6)	18.653	149	2512557	12.281
211) Benzo(b)fluoranthene	(6)	19.209	252	2009483	12.598
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.214	256	845347	12.845
213) Benzo(k)fluoranthene	(6)	19.262	252	1939161	12.625
216) Benzo(a)pyrene	(6)	19.744	252	1875261	13.066
218)*Perylene-d12	(6)	19.835	264	650607	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

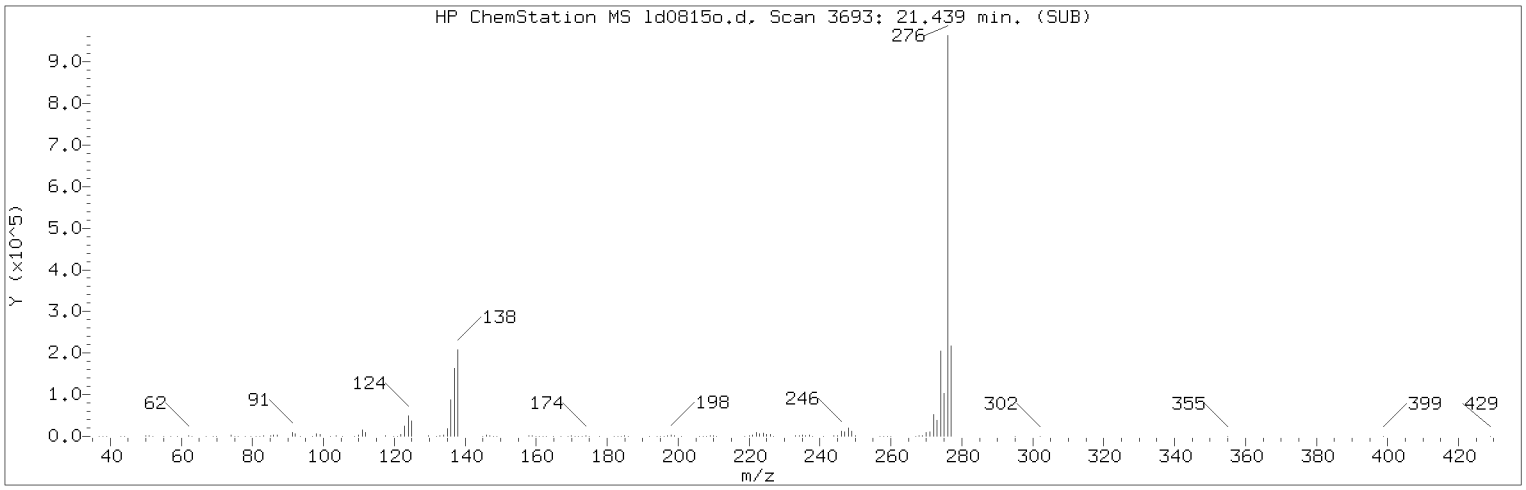
Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.439	276	1696500M	12.447
225) Dibenz(a,h)anthracene	(6)	21.477	278	1773308	12.808
226) Benzo(g,h,i)perylene	(6)	21.819	276	1742202	12.370

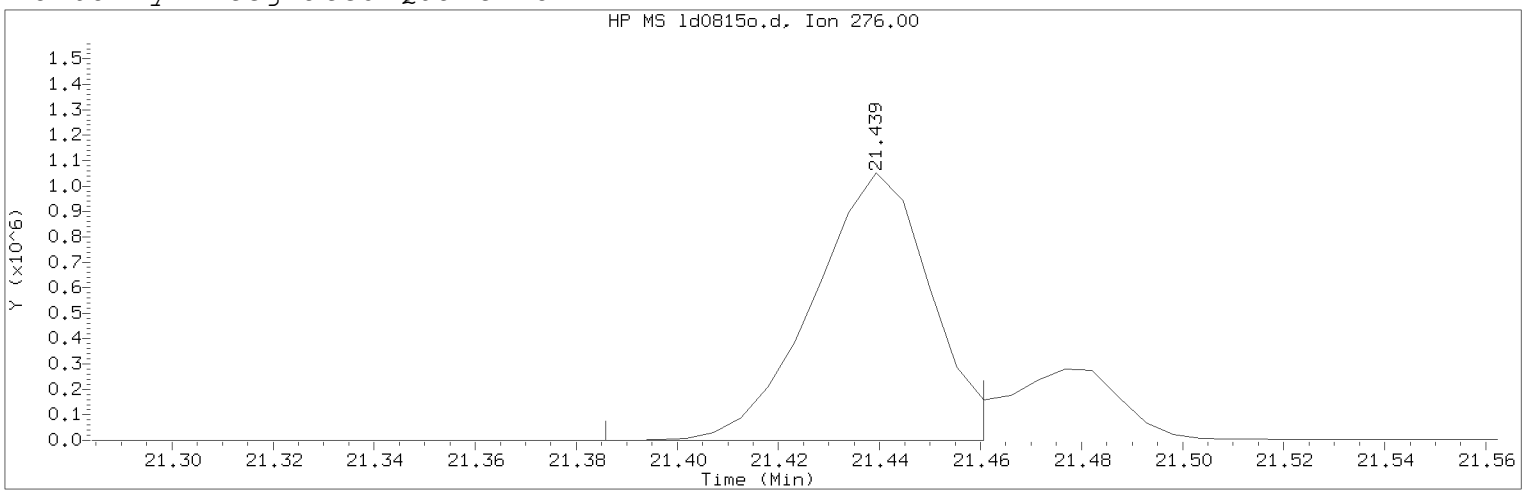
M = Compound was manually integrated.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 23-APR-2018 14:31
Date, time and analyst ID of latest file update: 26-Apr-2018 10:11 bhs10208

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

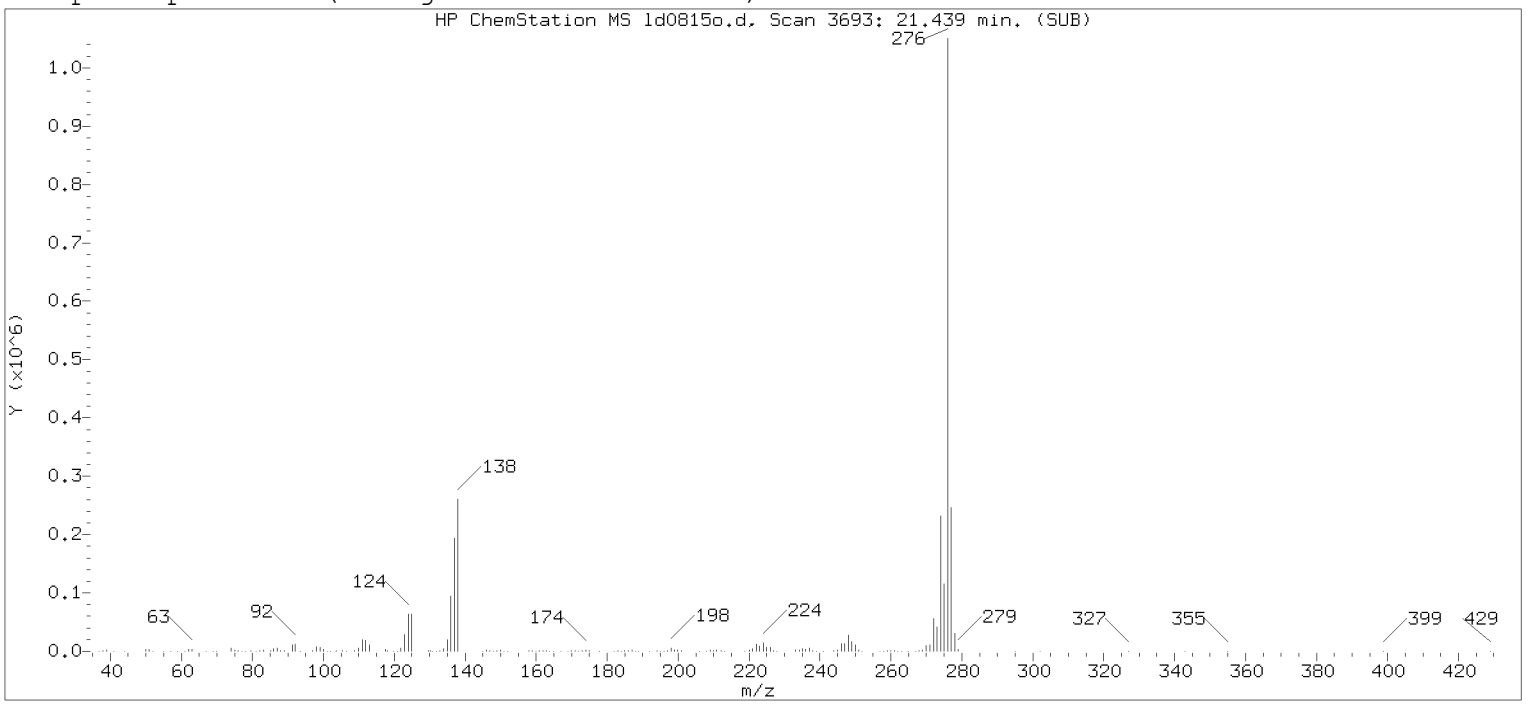
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3693
Retention Time (minutes) : 21.439
Quant Ion : 276.00
Area (flag) : 1696500M
On-Column Amount (ng/ul) : 12.4469
Integration start scan : 3682 Integration stop scan: 3696
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

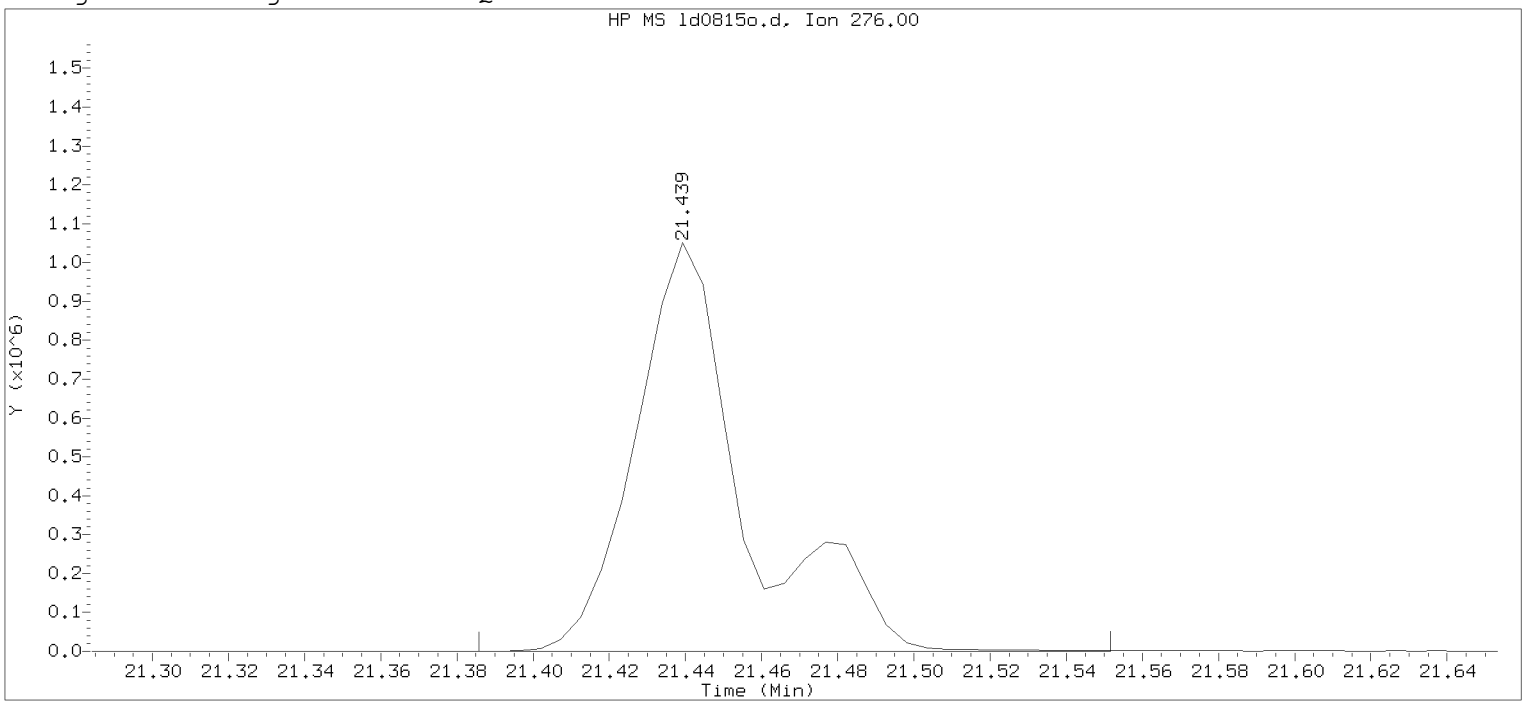
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/26/2018 at 10:12.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Matthew E. Barton on 04/26/2018 at 10:22.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr20.b/ld0815o.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 27090M
Calibration date and time: 20-APR-2018 12:12
Date, time and analyst ID of latest file update: 20-Apr-2018 12:45 Unknown

Sample Name: 106WOLCS Lab Sample ID: 106WOLCS

Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3693
Retention Time (minutes) : 21.439
Quant Ion : 276.00
Area : 2100419
On-column Amount (ng/ul) : 15.4104
Integration start scan : 3682 Integration stop scan: 3713
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 04/26/2018 at 10:12.
Target 3.5 esignature used. FID Plot 2047

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

106WYLCS

Data file: /chem/HP20296.i/18apr20.b/ld0815y.d
Injection date and time: **20-APR-2018 12:19**
Data file Sample Info. Line: 106WYLCS;106WYLCS;1;3;LCS;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **18106WAY**
Date, time and analyst ID of latest file update: 21-Apr-2018 17:12 art12405

Blank Data file reference: **/chem/HP20296.i/18apr20.b/ld0814y.d**

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-APR-2018 16:56
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr20.b/ld0811a.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.581	(0.000)	915	152	163798	(-18)	5.00	
68) Naphthalene-d8	8.565	(0.000)	1286	136	603965	(-19)	5.00	
118) Acenaphthene-d10	11.405	(0.000)	1817	164	304176	(-21)	5.00	
158) Phenanthrene-d10	13.347	(0.005)	2180	188	611711	(-24)	5.00	
180) Pyrene-d10	15.326	(0.005)	2550	212	659755	(-23)	5.00	
218) Perylene-d12	19.835	(0.005)	3393	264	650607	(-22)	5.00	

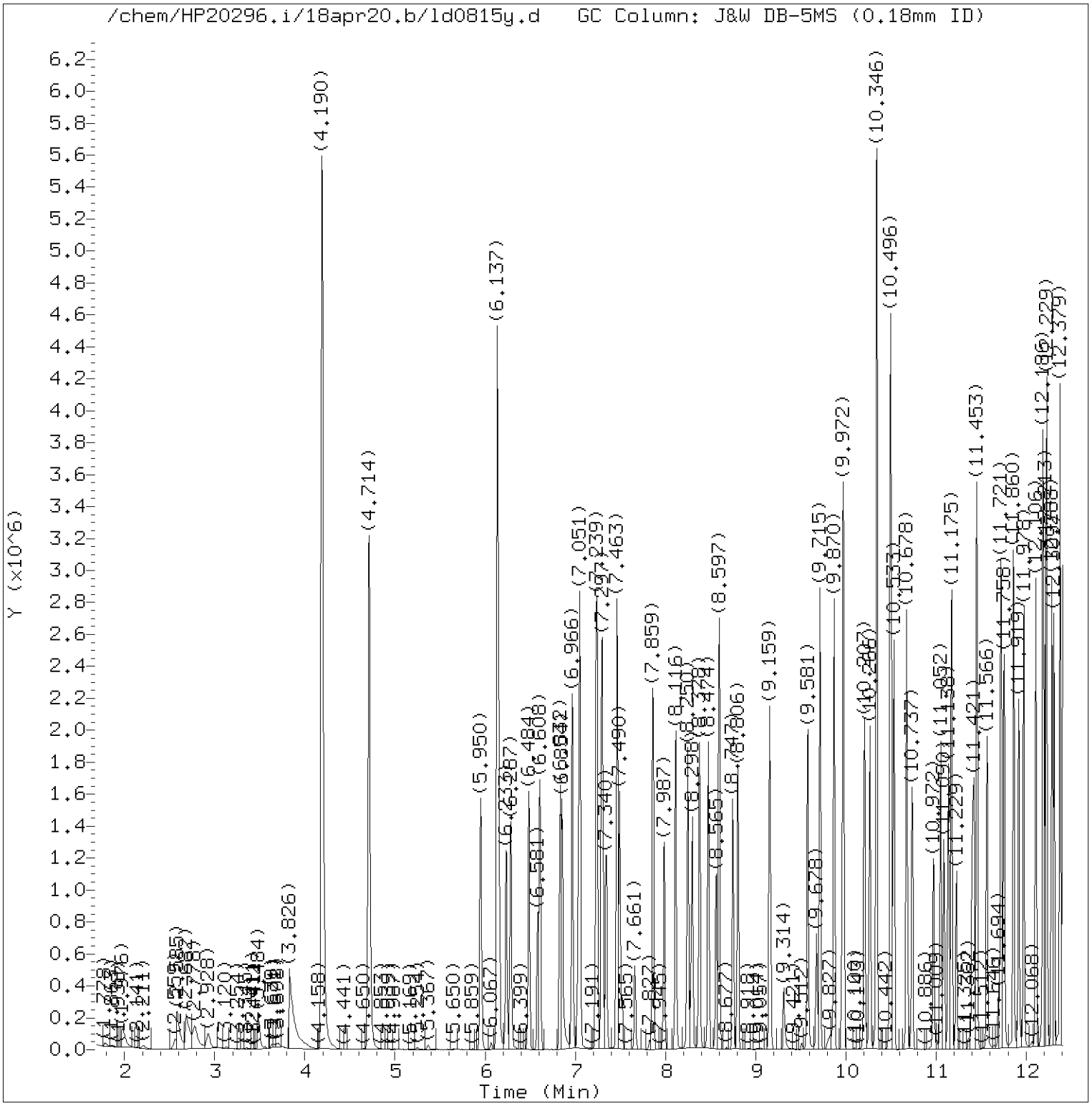
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.463	(0.001)	82	1203923	23.112	92%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.346	(0.000)	172	2115157	22.368	89%		39 - 105
184) Terphenyl-d14	(5)	15.631	(0.000)	244	2483441	23.472	94%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)	11.138	(0.000)	165	256168	12.995	51.98			0.1
123) 2,4-Dinitrotoluene	(3)	11.758	(0.000)	165	335894	12.296	49.19			0.3
129) Diethylphthalate	(3)	12.111	(0.000)	149	1048613	11.477	45.91			0.5

Total number of targets = 3

Digitally signed by Ashley R. Transue on 04/21/2018 at 17:12. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 04/26/2018 at 09:33. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

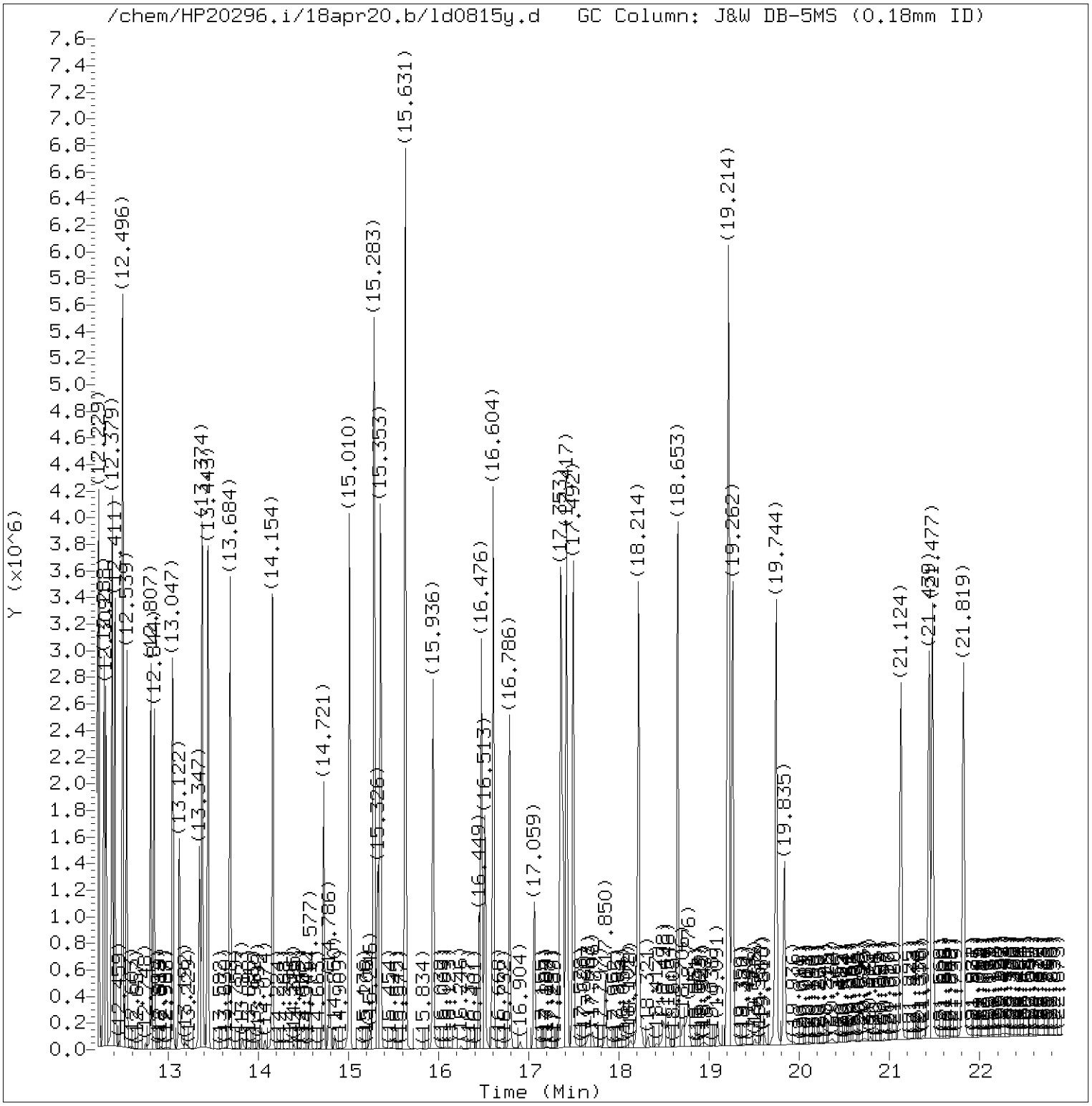
Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:12 art12405

Sample Name: 106WYLCS Lab Sample ID: 106WYLCS

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:12.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:12 art12405

Sample Name: 106WYLCS Lab Sample ID: 106WYLCS

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:12.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr20.b/ld0815y.d Instrument ID: HP20296.i
Injection date and time: 20-APR-2018 12:19 Analyst ID: bhs10208

Method used: /chem/HP20296.i/18apr20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-APR-2018 16:56
Date, time and analyst ID of latest file update: 21-Apr-2018 17:12 art12405

Sample Name: 106WYLCS Lab Sample ID: 106WYLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.581	152	163798	5.000
45)$Nitrobenzene-d5	(2)	7.463	82	1203923	23.112
68)*Naphthalene-d8	(2)	8.565	136	603965	5.000
96)$2-Fluorobiphenyl	(3)	10.346	172	2115157	22.368
113) 2,6-Dinitrotoluene	(3)	11.138	165	256168	12.995
118)*Acenaphthene-d10	(3)	11.405	164	304176	5.000
123) 2,4-Dinitrotoluene	(3)	11.758	165	335894	12.296
129) Diethylphthalate	(3)	12.111	149	1048613	11.477
158)*Phenanthrene-d10	(4)	13.347	188	611711	5.000
180)*Pyrene-d10	(5)	15.326	212	659755	5.000
184)$Terphenyl-d14	(5)	15.631	244	2483441	23.472
218)*Perylene-d12	(6)	19.835	264	650607	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 04/21/2018 at 17:12.
Target 3.5 esignature user ID: art12405

Data file: /chem/HP20296.i/18apr24a.b/ld0990.d Injection date and time: **25-APR-2018 00:16**
Data file Sample Info. Line: 113WNLCS1;113WNLCS1;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 02-MAY-2018 06:46
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575(-0.005)	914	152	164601 (-16)	5.00	
68) Naphthalene-d8	8.554(0.000)	1284	136	616772 (-14)	5.00	
118) Acenaphthene-d10	11.394(0.000)	1815	164	309735 (-18)	5.00	
158) Phenanthrene-d10	13.336(0.000)	2178	188	613339 (-20)	5.00	
180) Pyrene-d10	15.315(0.000)	2548	212	642021 (-23)	5.00	
218) Perylene-d12	19.819(0.005)	3390	264	623625 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.746(-0.002)	112	1371315	30.425	61%		10 - 82
18) Phenol-d6	(1)	6.180(0.000)	99	1331702	22.532	45%		10 - 71
45) Nitrobenzene-d5	(2)	7.458(0.000)	82	1256595	23.622	94%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.335(0.000)	172	2145951	22.286	89%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(0.000)	330	532318	49.718	99%		21 - 134
184) Terphenyl-d14	(5)	15.620(0.000)	244	2442013	23.718	95%		27 - 116

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	3.987(-0.001)	88	252294	10.649	42.59			0.5
10) Methyl methanesulfonate	(1)	4.489(-0.001)	80	269859	9.403	37.61			0.3
14) N-Nitrosodiethylamine	(1)	5.014(-0.001)	102	253182	11.522	46.09			0.1
16) Ethyl methanesulfonate	(1)	5.516(-0.000)	109	267372	11.174	44.69			0.1
36) N-Nitrosopyrrolidine	(1)	7.217(0.001)	100	283744	11.903	47.61			0.1
40) N-Nitrosomorpholine	(1)	7.292(0.000)	56	349986	11.066	44.27			0.5
50) N-Nitrosopiperidine	(2)	7.725(0.000)	114	261066	11.708	46.83			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.191(0.000)	198	266661	11.463	45.85			0.5
67) a,a-Dimethylphenethylamine	(2)	8.324(0.000)	58	1300655	29.115	116.46		E	1
71) 2,6-Dichlorophenol	(2)	8.742(-0.000)	162	415133	11.454	45.81			0.1
72) Hexachloropropene	(2)	8.726(-0.000)	213	288679	9.783	39.13			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.271(0.000)	84	423320	10.583	42.33			0.5
84) 1,4-Phenylenediamine	(2)	9.341(-0.001)	108	2441180	47.867	191.47		EJ	19
85) Safrole	(2)	9.608(-0.000)	162	378148	11.060	44.24			0.5
91) cis-Isosafrole	(3)	10.084(0.000)	162	52450	1.431	5.72			0.1
97) trans-Isosafrole	(3)	10.448(0.000)	162	423208	10.729	42.92			0.1
100) Isosafrole	(3)			475658	12.159	48.64			0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
122) Pentachlorobenzene	(3)	11.635(-0.000)	250	411570	11.979	47.92			0.1
130) Thionazin	(3)	12.197(0.000)	107	187782	11.855	47.42			0.5
133) 5-Nitro-o-toluidine	(3)	12.250(-0.000)	152	206908	8.415	33.66			0.1
144) 1,3,5-Trinitrobenzene	(4)	12.737(0.000)	213	70278	7.026	28.10			1
145) Diallate (peak 1)	(4)	12.710(0.000)	86	398516	8.405	33.62			0.06
146) Phorate	(4)	12.721(0.000)	75	1033426	15.384	61.54			0.1
147) Phenacetin	(4)	12.780(0.000)	108	611970	12.900	51.60			0.1
149) Diallate (peak 2)	(4)	12.812(0.000)	86	130065	3.461	13.84			0.06
151) Diallate trans/cis	(4)			528581	11.866	47.46			0.3

E = Compound concentration above calibration range.

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07. Target 3.5 esignature user ID: bhs10208

Data file: /chem/HP20296.i/18apr24a.b/ld0990.d Injection date and time: **25-APR-2018 00:16**
Data file Sample Info. Line: 113WNLCS1;113WNLCS1;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 02-MAY-2018 06:46
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

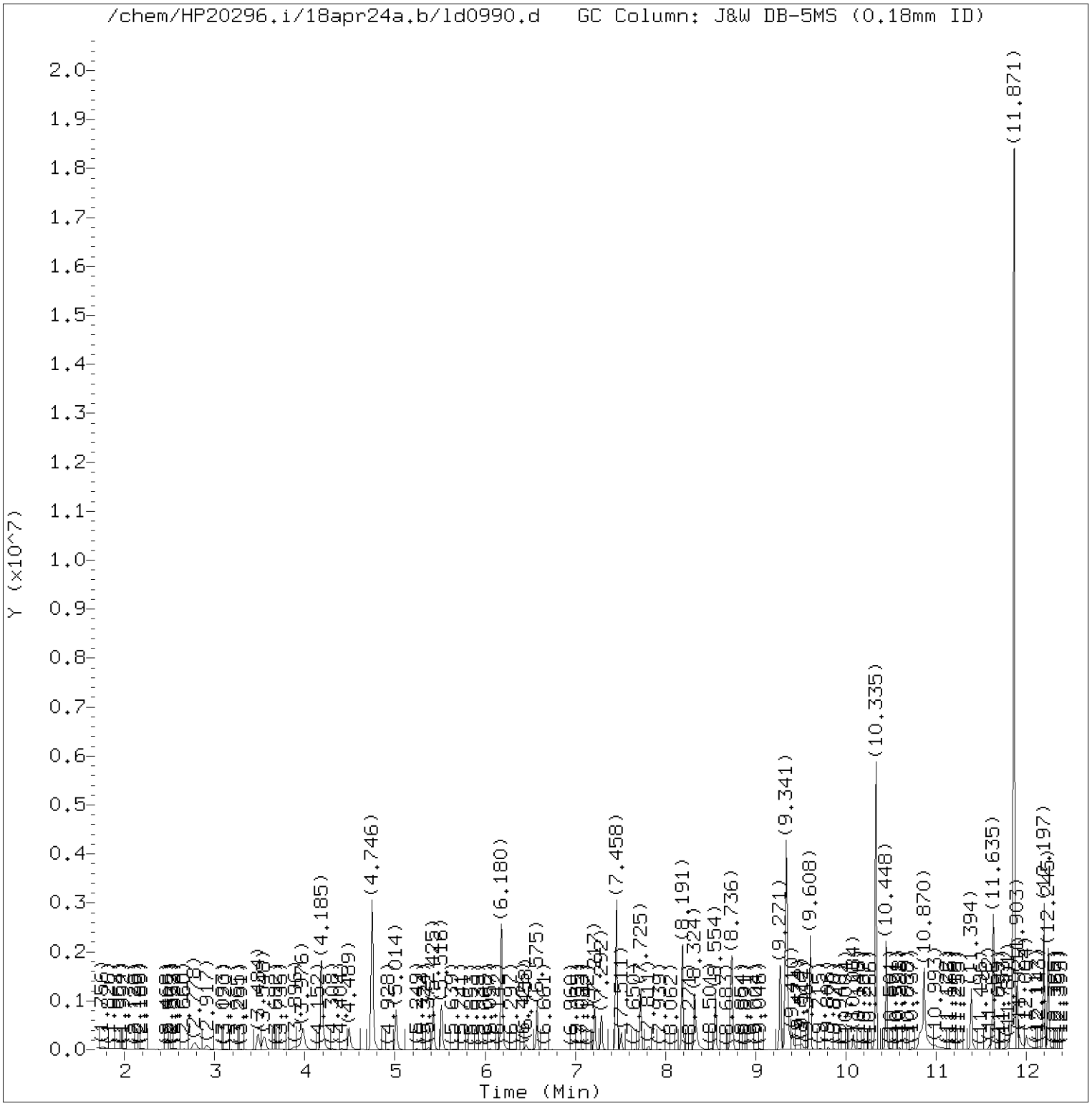
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
152) Dimethoate	(4)	12.951(0.000)	87	267575	6.619	26.48			0.8
155) 4-Aminobiphenyl	(4)	13.138(0.000)	169	486397	5.692	22.77			0.1
156) Pentachloronitrobenzene	(4)	13.106(0.000)	237	151149	12.295	49.18			0.5
157) Pronamide	(4)	13.218(0.000)	173	543310	12.835	51.34			0.1
167) Disulfoton	(4)	13.368(0.000)	88	1320147	27.052	108.21			6
169) Methyl parathion	(4)	13.866(0.000)	109	305164	9.903	39.61			0.3
172) Parathion	(4)	14.390(0.000)	109	250234	12.549	50.19			0.5
173) 4-Nitroquinoline-1-oxide	(4)	14.459(-0.001)	190	1573213	98.241	392.96		E	5
175) Methapyrilene	(4)	14.545(-0.000)	97	4330769	107.227	428.91		E	4
176) Isodrin	(4)	14.769(-0.000)	193	207371	12.376	49.50			0.1
185) Aramite (1)	(5)	15.497(-0.000)	185	3324	1.502	6.01			0.3
186) Aramite (2)	(5)	15.529(-0.000)	185	2962	1.477	5.91			0.3
188) Aramite (3)	(5)	15.604(-0.000)	185	85796	0.514	2.06		J	0.3
189) Aramite (4)	(5)	15.727(-0.000)	185	93817	0.445	1.78		J	0.3
191) Aramite	(5)			185899	3.938	15.75			1
187) p-Dimethylaminoazobenzene	(5)	15.855(-0.000)	225	346128	13.891	55.56			0.1
190) Chlorobenzilate	(5)	15.930(-0.000)	139	494968	10.173	40.69			0.8
194) Famphur	(5)	16.358(0.000)	218	293760	6.263	25.05		J	6
195) Kepone	(5)	16.583(-0.010)	272	117217M	8.300	33.20		J	6
196) 2-Acetylaminofluorene	(5)	16.861(-0.000)	181	810356	13.492	53.97			0.5
220) 3-Methylcholanthrene	(6)	20.289(-0.000)	268	905432	13.535	54.14			0.1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

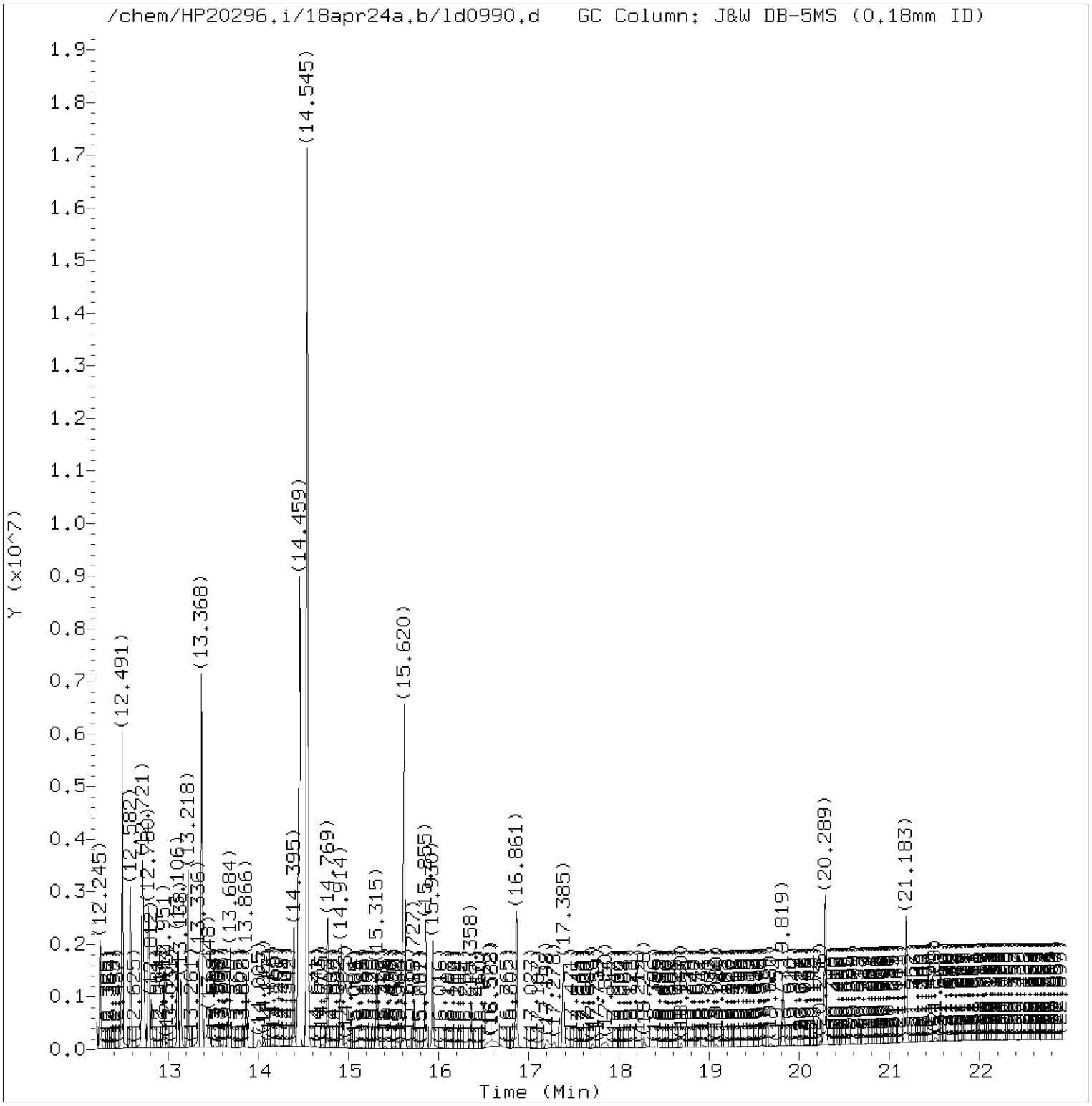
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9) N-Nitrosomethylethylamine	(1)	3.987	88	252294	10.649
10) Methyl methanesulfonate	(1)	4.489	80	269859	9.403
12)$2-Fluorophenol	(1)	4.746	112	1371315	30.425
14) N-Nitrosodiethylamine	(1)	5.014	102	253182	11.522
16) Ethyl methanesulfonate	(1)	5.516	109	267372	11.174
18)$Phenol-d6	(1)	6.180	99	1331702	22.532
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	164601	5.000
36) N-Nitrosopyrrolidine	(1)	7.217	100	283744	11.903
40) N-Nitrosomorpholine	(1)	7.292	56	349986	11.066
100) Isosafrole	(3)			475658	12.159
45)$Nitrobenzene-d5	(2)	7.458	82	1256595	23.622
50) N-Nitrosopiperidine	(2)	7.725	114	261066	11.708
59) O,O,O-Triethylphosphorothioate	(2)	8.191	198	266661	11.463
67) a,a-Dimethylphenethylamine	(2)	8.324	58	1300655	29.115
68)*Naphthalene-d8	(2)	8.554	136	616772	5.000
72) Hexachloropropene	(2)	8.726	213	288679	9.783
71) 2,6-Dichlorophenol	(2)	8.742	162	415133	11.454
151) Diallate trans/cis	(4)			528581	11.866
80) N-Nitrosodi-n-butylamine	(2)	9.271	84	423320	10.583
84) 1,4-Phenylenediamine	(2)	9.341	108	2441180	47.867
85) Safrole	(2)	9.608	162	378148	11.060
91) cis-Isosafrole	(3)	10.084	162	52450	1.431
96)$2-Fluorobiphenyl	(3)	10.335	172	2145951	22.286
97) trans-Isosafrole	(3)	10.448	162	423208	10.729
191) Aramite	(5)			185899	3.938
118)*Acenaphthene-d10	(3)	11.394	164	309735	5.000
122) Pentachlorobenzene	(3)	11.635	250	411570	11.979
130) Thionazin	(3)	12.197	107	187782	11.855
133) 5-Nitro-o-toluidine	(3)	12.250	152	206908	8.415
140)$2,4,6-Tribromophenol	(3)	12.491	330	532318	49.718
145) Diallate (peak 1)	(4)	12.710	86	398516	8.405
146) Phorate	(4)	12.721	75	1033426	15.384
144) 1,3,5-Trinitrobenzene	(4)	12.737	213	70278	7.026
147) Phenacetin	(4)	12.780	108	611970	12.900
149) Diallate (peak 2)	(4)	12.812	86	130065	3.461
152) Dimethoate	(4)	12.951	87	267575	6.619
156) Pentachloronitrobenzene	(4)	13.106	237	151149	12.295
155) 4-Aminobiphenyl	(4)	13.138	169	486397	5.692
157) Pronamide	(4)	13.218	173	543310	12.835
158)*Phenanthrene-d10	(4)	13.336	188	613339	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

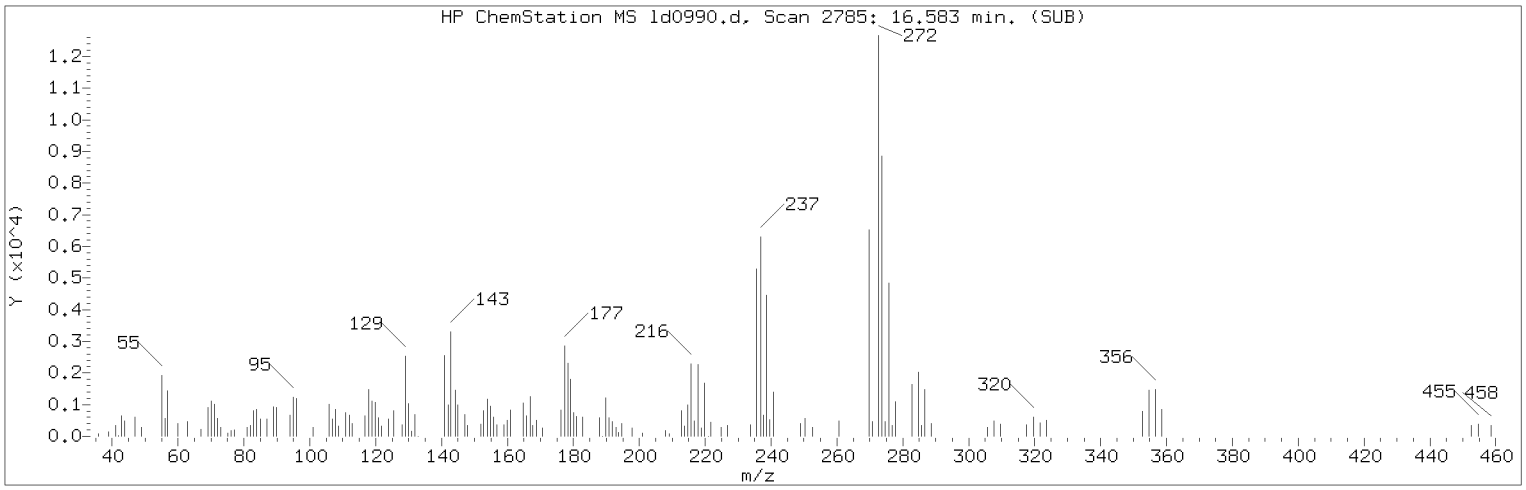
Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Disulfoton	(4)	13.368	88	1320147	27.052
169) Methyl parathion	(4)	13.866	109	305164	9.903
172) Parathion	(4)	14.390	109	250234	12.549
173) 4-Nitroquinoline-1-oxide	(4)	14.459	190	1573213	98.241
175) Methapyrilene	(4)	14.545	97	4330769	107.227
176) Isodrin	(4)	14.769	193	207371	12.376
180)*Pyrene-d10	(5)	15.315	212	642021	5.000
185) Aramite (1)	(5)	15.497	185	3324	1.502
186) Aramite (2)	(5)	15.529	185	2962	1.477
188) Aramite (3)	(5)	15.604	185	85796	0.514
184)$Terphenyl-d14	(5)	15.620	244	2442013	23.718
189) Aramite (4)	(5)	15.727	185	93817	0.445
187) p-Dimethylaminoazobenzene	(5)	15.855	225	346128	13.891
190) Chlorobenzilate	(5)	15.930	139	494968	10.173
194) Famphur	(5)	16.358	218	293760	6.263
195) Kepone	(5)	16.583	272	117217M	8.300
196) 2-Acetylaminofluorene	(5)	16.861	181	810356	13.492
218)*Perylene-d12	(6)	19.819	264	623625	5.000
220) 3-Methylcholanthrene	(6)	20.289	268	905432	13.535

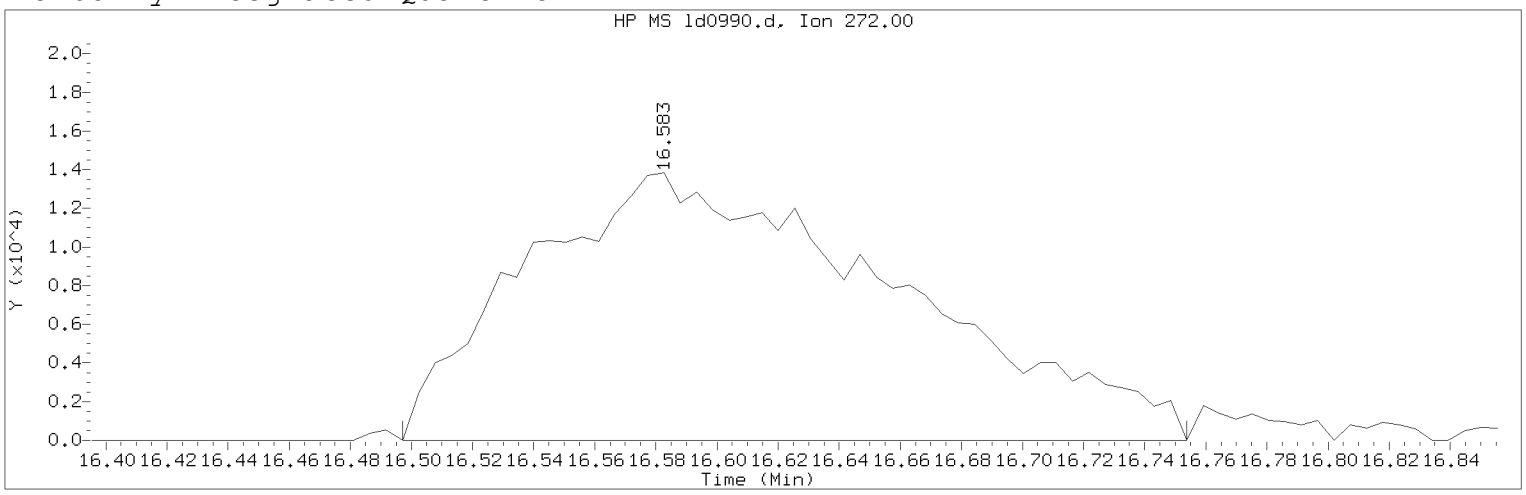
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

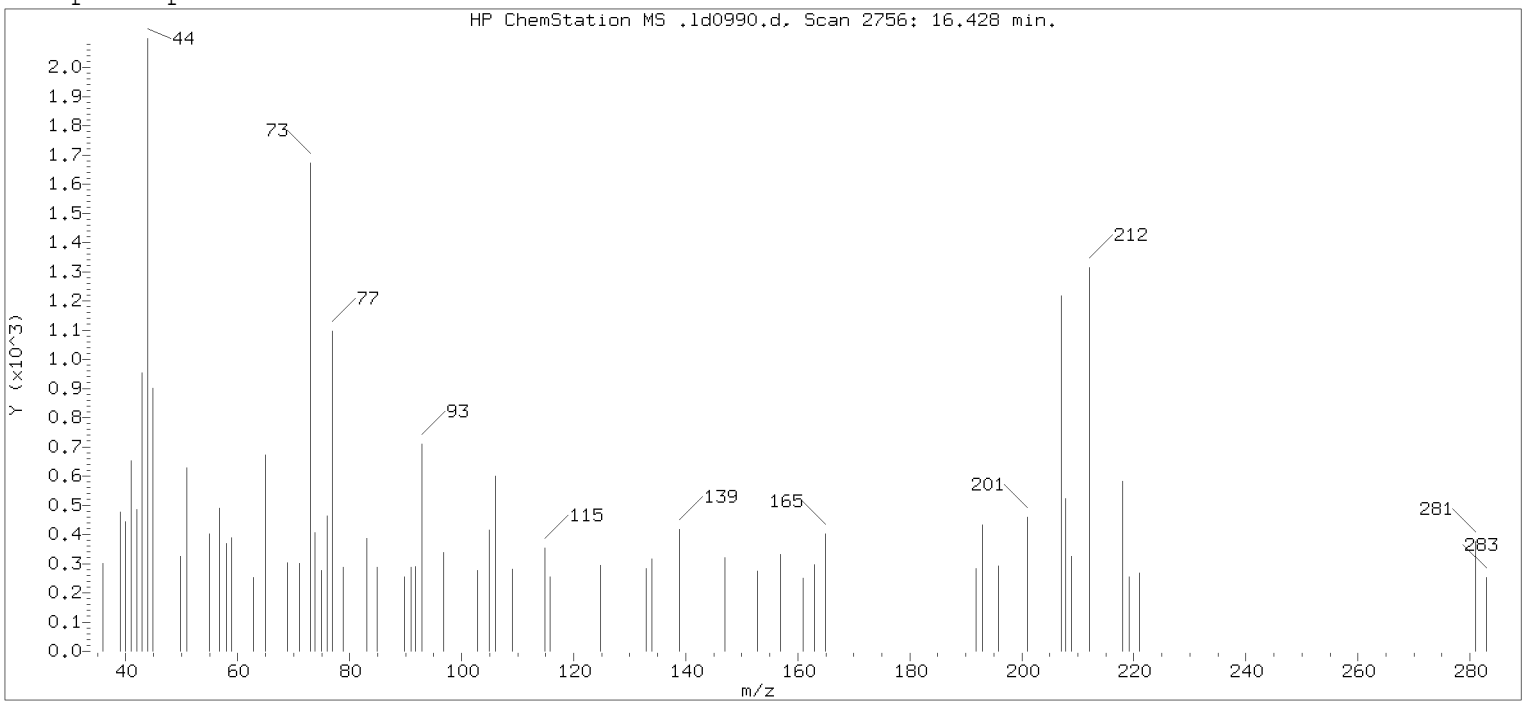
Compound Number	: 195		
Compound Name	: Kepone		
Scan Number	: 2785		
Retention Time (minutes)	: 16.583		
Quant Ion	: 272.00		
Area (flag)	: 117217M		
On-Column Amount (ng/ul)	: 8.2999		
Integration start scan	: 2768	Integration stop scan:	2816
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

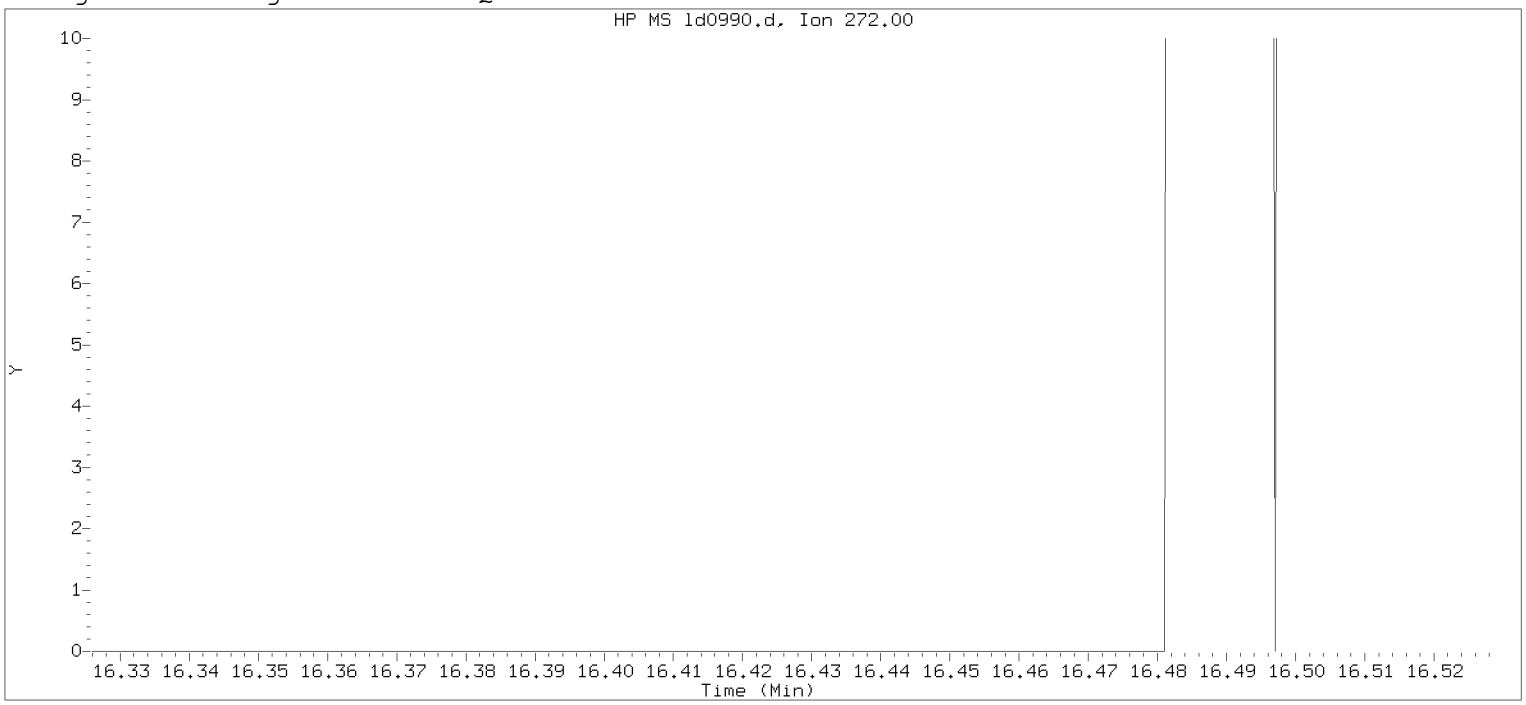
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51.
PARALLAX ID: hb01996

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0990.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:16 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:13 bhs10208

Sample Name: 113WNLCS1 Lab Sample ID: 113WNLCS1

Compound Number : 195
Compound Name : Kepone
Expected RT (minutes) : 16.428
Quant Ion : 272.00

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07.
Target 3.5 esignature used. FD6 Page 2059

Data file: /chem/HP20296.i/18apr24a.b/ld0991.d Injection date and time: **25-APR-2018 00:44**
Data file Sample Info. Line: 113WNLCSD1;113WNLCSD1;1;3;LCSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 02-MAY-2018 06:46
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575(-0.005)	914	152	153502 (-21)	5.00	
68) Naphthalene-d8	8.554(0.000)	1284	136	571042 (-21)	5.00	
118) Acenaphthene-d10	11.389(0.005)	1814	164	289348 (-23)	5.00	
158) Phenanthrene-d10	13.336(0.000)	2178	188	589340 (-23)	5.00	
180) Pyrene-d10	15.315(0.000)	2548	212	596141 (-28)	5.00	
218) Perylene-d12	19.819(0.005)	3390	264	580331 (-30)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.746(-0.002)	112	1325434	31.533	63%		10 - 82
18) Phenol-d6	(1)	6.180(0.000)	99	1304078	23.660	47%		10 - 71
45) Nitrobenzene-d5	(2)	7.458(0.000)	82	1177995	23.918	96%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.335(0.000)	172	1969927	21.900	88%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491(-0.001)	330	458807	45.871	92%		21 - 134
184) Terphenyl-d14	(5)	15.620(0.000)	244	2231895	23.345	93%		27 - 116

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
9) N-Nitrosomethylethylamine	(1)	3.987(-0.001)	88	244404	11.061	44.25			0.5
10) Methyl methanesulfonate	(1)	4.489(-0.001)	80	260949	9.750	39.00			0.3
14) N-Nitrosodiethylamine	(1)	5.014(-0.001)	102	238282	11.628	46.51			0.1
16) Ethyl methanesulfonate	(1)	5.516(-0.000)	109	248062	11.116	44.46			0.1
36) N-Nitrosopyrrolidine	(1)	7.217(0.001)	100	260901	11.736	46.94			0.1
40) N-Nitrosomorpholine	(1)	7.292(0.000)	56	327862	11.116	44.47			0.5
50) N-Nitrosopiperidine	(2)	7.725(0.000)	114	238157	11.536	46.14			0.1
59) O,O,O-Triethylphosphorothioate	(2)	8.191(0.000)	198	246727	11.455	45.82			0.5
67) a,a-Dimethylphenethylamine	(2)	8.319(0.000)	58	1306177	31.580	126.32		E	1
71) 2,6-Dichlorophenol	(2)	8.742(-0.000)	162	362789	10.811	43.24			0.1
72) Hexachloropropene	(2)	8.726(-0.000)	213	285656	10.456	41.83			0.5
80) N-Nitrosodi-n-butylamine	(2)	9.271(0.000)	84	389053	10.505	42.02			0.5
84) 1,4-Phenylenediamine	(2)	9.341(-0.001)	108	2238131	47.400	189.60		EJ	19
85) Safrole	(2)	9.608(-0.000)	162	357011	11.278	45.11			0.5
91) cis-Isosafrole	(3)	10.084(-0.000)	162	49850	1.455	5.82			0.1
97) trans-Isosafrole	(3)	10.453(-0.000)	162	383485	10.407	41.63			0.1
100) Isosafrole	(3)			433335	11.862	47.45			0.5
108) 1,4-Naphthoquinone	(3)			Not Detected					6
122) Pentachlorobenzene	(3)	11.635(-0.000)	250	384136	11.968	47.87			0.1
130) Thionazin	(3)	12.197(-0.000)	107	175438	11.857	47.43			0.5
133) 5-Nitro-o-toluidine	(3)	12.250(-0.000)	152	183066	7.970	31.88			0.1
144) 1,3,5-Trinitrobenzene	(4)	12.737(0.000)	213	57636	5.997	23.99			1
145) Diallate (peak 1)	(4)	12.710(0.000)	86	377026	8.276	33.10			0.06
146) Phorate	(4)	12.721(0.000)	75	927797	14.374	57.50			0.1
147) Phenacetin	(4)	12.780(0.000)	108	578166	12.684	50.74			0.1
149) Diallate (peak 2)	(4)	12.812(0.000)	86	125587	3.478	13.91			0.06
151) Diallate trans/cis	(4)			502613	11.753	47.01			0.3

E = Compound concentration above calibration range.

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07. Target 3.5 esignature user ID: bhs10208

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18apr24a.b/ld0991.d Injection date and time: **25-APR-2018 00:44**
Data file Sample Info. Line: 113WNLCSD1;113WNLCSD1;1;3;LCSD;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090B**
Calibration date and time (Last Method Edit): 02-MAY-2018 06:46
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

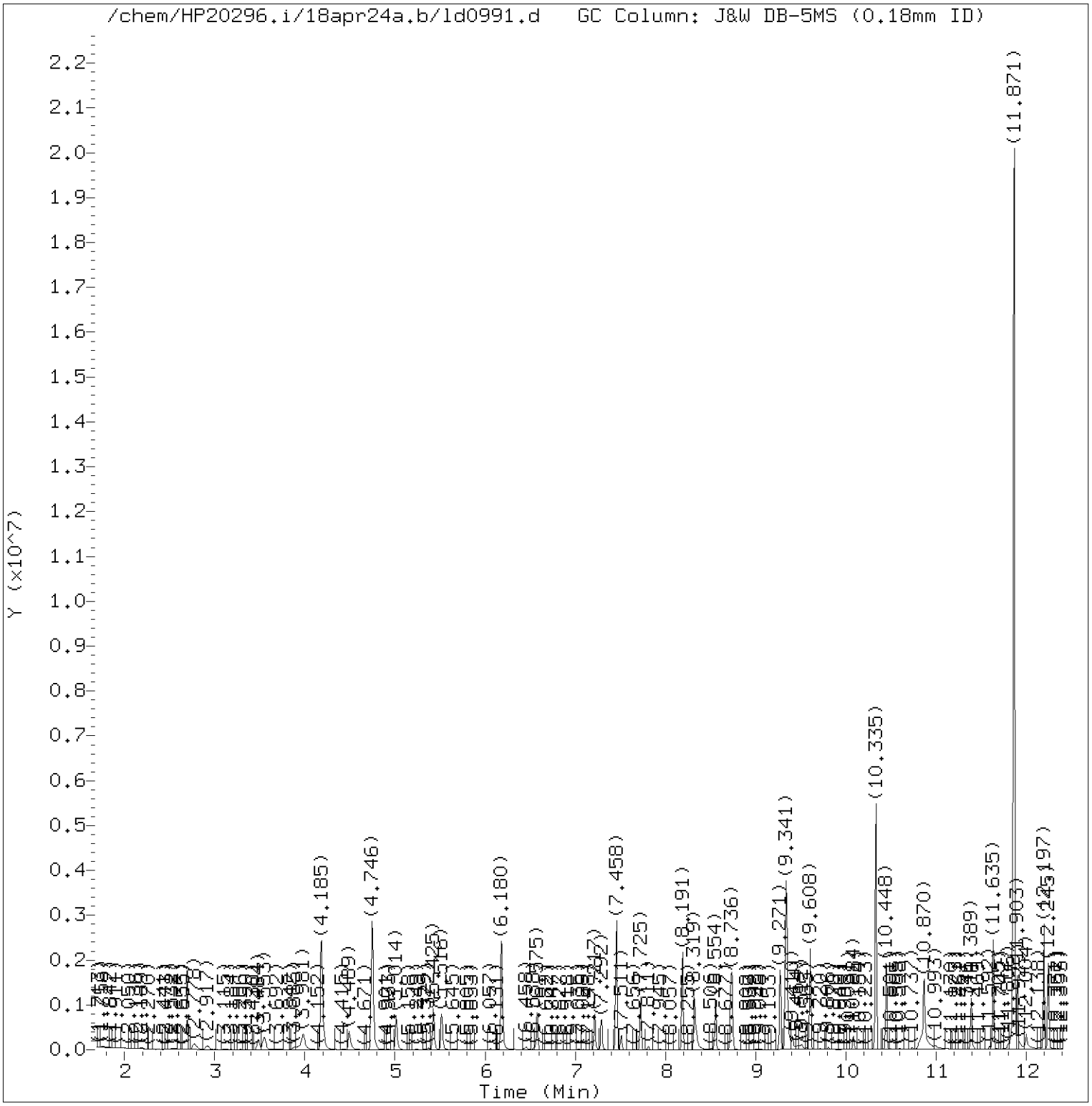
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
152) Dimethoate	(4)	12.946(0.000)	87	211682	5.450	21.80			0.8
155) 4-Aminobiphenyl	(4)	13.143(0.000)	169	414946	5.054	20.21			0.1
156) Pentachloronitrobenzene	(4)	13.106(0.000)	237	134730	11.405	45.62			0.5
157) Pronamide	(4)	13.218(0.000)	173	517453	12.722	50.89			0.1
167) Disulfoton	(4)	13.368(0.000)	88	1243575	26.521	106.08			6
169) Methyl parathion	(4)	13.866(-0.000)	109	276445	9.337	37.35			0.3
172) Parathion	(4)	14.395(-0.000)	109	233230	12.172	48.69			0.5
173) 4-Nitroquinoline-1-oxide	(4)	14.459(-0.001)	190	1478895	96.111	384.45		E	5
175) Methapyrilene	(4)	14.545(-0.000)	97	4337206	111.760	447.04		E	4
176) Isodrin	(4)	14.769(-0.000)	193	191934	11.921	47.69			0.1
185) Aramite (1)	(5)	15.502(-0.000)	185	2046	0.996	3.98			0.3
186) Aramite (2)	(5)	15.529(-0.000)	185	2185	1.173	4.69			0.3
188) Aramite (3)	(5)	15.604(-0.000)	185	69668	0.450	1.80		J	0.3
189) Aramite (4)	(5)	15.732(-0.000)	185	74995	0.383	1.53		J	0.3
191) Aramite	(5)			148894	3.002	12.01		J	1
187) p-Dimethylaminoazobenzene	(5)	15.855(-0.000)	225	321444	13.893	55.57			0.1
190) Chlorobenzilate	(5)	15.935(-0.000)	139	412586	9.132	36.53			0.8
194) Famphur	(5)	16.363(0.000)	218	296365	6.805	27.22		J	6
195) Kepone	(5)	16.615(-0.012)	272	114448M	8.728	34.91		J	6
196) 2-Acetylaminofluorene	(5)	16.861(0.000)	181	746563	13.387	53.55			0.5
220) 3-Methylcholanthrene	(6)	20.289(-0.000)	268	824991	13.253	53.01			0.1

E = Compound concentration above calibration range. M = Compound was manually integrated.

Total number of targets = 48

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07. Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

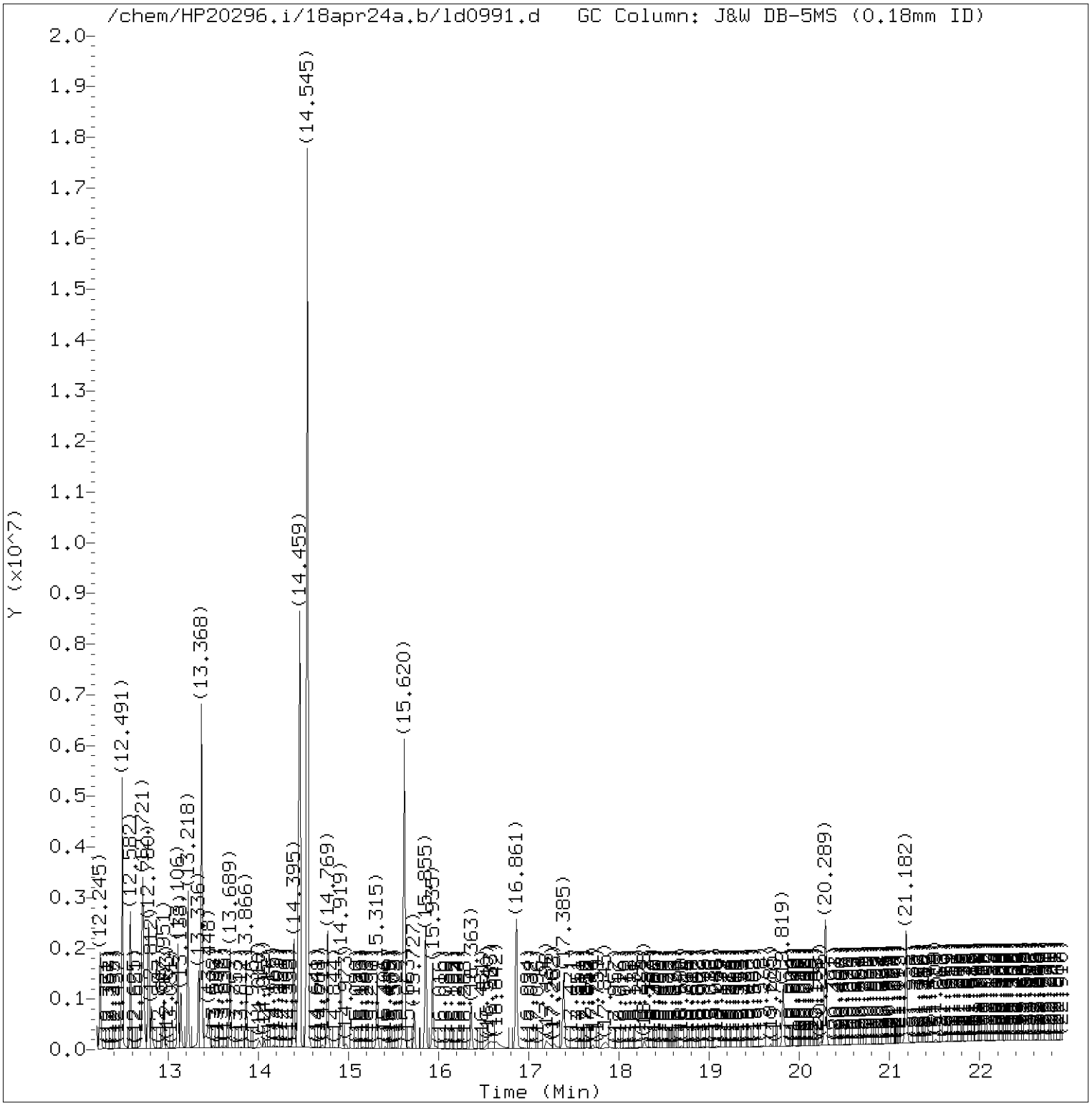
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9) N-Nitrosomethylethylamine	(1)	3.987	88	244404	11.061
10) Methyl methanesulfonate	(1)	4.489	80	260949	9.750
12)$2-Fluorophenol	(1)	4.746	112	1325434	31.533
14) N-Nitrosodiethylamine	(1)	5.014	102	238282	11.628
16) Ethyl methanesulfonate	(1)	5.516	109	248062	11.116
18)$Phenol-d6	(1)	6.180	99	1304078	23.660
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	153502	5.000
36) N-Nitrosopyrrolidine	(1)	7.217	100	260901	11.736
40) N-Nitrosomorpholine	(1)	7.292	56	327862	11.116
100) Isosafrole	(3)			433335	11.862
45)$Nitrobenzene-d5	(2)	7.458	82	1177995	23.918
50) N-Nitrosopiperidine	(2)	7.725	114	238157	11.536
59) O,O,O-Triethylphosphorothioate	(2)	8.191	198	246727	11.455
67) a,a-Dimethylphenethylamine	(2)	8.319	58	1306177	31.580
68)*Naphthalene-d8	(2)	8.554	136	571042	5.000
72) Hexachloropropene	(2)	8.726	213	285656	10.456
71) 2,6-Dichlorophenol	(2)	8.742	162	362789	10.811
151) Diallate trans/cis	(4)			502613	11.753
80) N-Nitrosodi-n-butylamine	(2)	9.271	84	389053	10.505
84) 1,4-Phenylenediamine	(2)	9.341	108	2238131	47.400
85) Safrole	(2)	9.608	162	357011	11.278
91) cis-Isosafrole	(3)	10.084	162	49850	1.455
96)$2-Fluorobiphenyl	(3)	10.335	172	1969927	21.900
97) trans-Isosafrole	(3)	10.453	162	383485	10.407
191) Aramite	(5)			148894	3.002
118)*Acenaphthene-d10	(3)	11.389	164	289348	5.000
122) Pentachlorobenzene	(3)	11.635	250	384136	11.968
130) Thionazin	(3)	12.197	107	175438	11.857
133) 5-Nitro-o-toluidine	(3)	12.250	152	183066	7.970
140)$2,4,6-Tribromophenol	(3)	12.491	330	458807	45.871
145) Diallate (peak 1)	(4)	12.710	86	377026	8.276
146) Phorate	(4)	12.721	75	927797	14.374
144) 1,3,5-Trinitrobenzene	(4)	12.737	213	57636	5.997
147) Phenacetin	(4)	12.780	108	578166	12.684
149) Diallate (peak 2)	(4)	12.812	86	125587	3.478
152) Dimethoate	(4)	12.946	87	211682	5.450
156) Pentachloronitrobenzene	(4)	13.106	237	134730	11.405
155) 4-Aminobiphenyl	(4)	13.143	169	414946	5.054
157) Pronamide	(4)	13.218	173	517453	12.722
158)*Phenanthrene-d10	(4)	13.336	188	589340	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

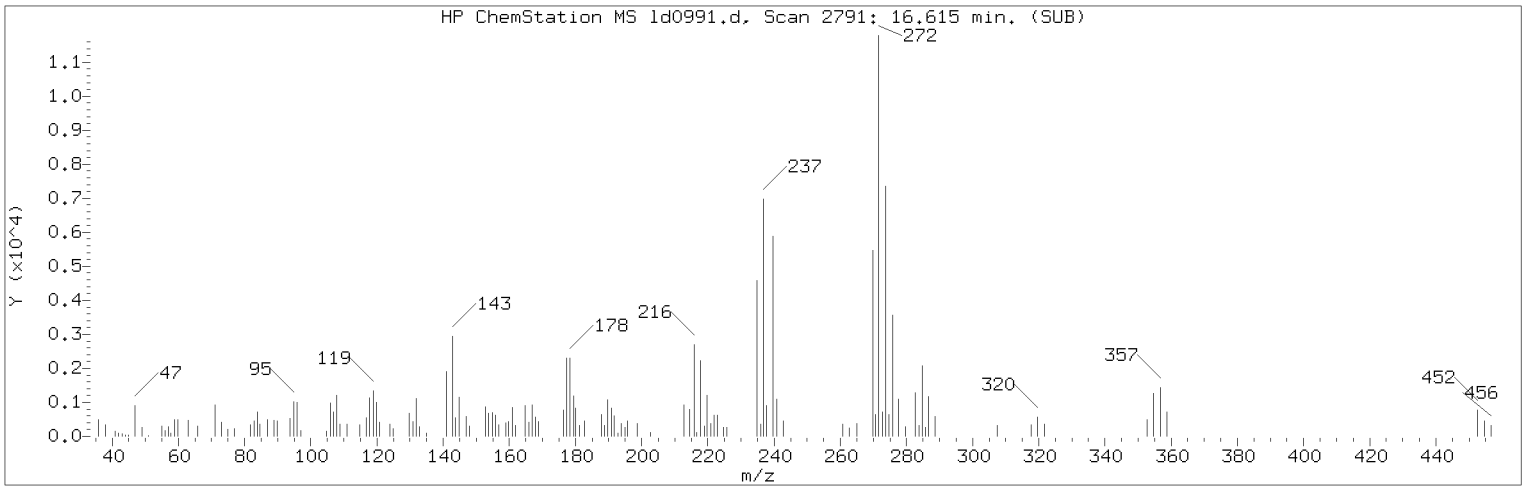
Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167) Disulfoton	(4)	13.368	88	1243575	26.521
169) Methyl parathion	(4)	13.866	109	276445	9.337
172) Parathion	(4)	14.395	109	233230	12.172
173) 4-Nitroquinoline-1-oxide	(4)	14.459	190	1478895	96.111
175) Methapyrilene	(4)	14.545	97	4337206	111.760
176) Isodrin	(4)	14.769	193	191934	11.921
180)*Pyrene-d10	(5)	15.315	212	596141	5.000
185) Aramite (1)	(5)	15.502	185	2046	0.996
186) Aramite (2)	(5)	15.529	185	2185	1.173
188) Aramite (3)	(5)	15.604	185	69668	0.450
184)$Terphenyl-d14	(5)	15.620	244	2231895	23.345
189) Aramite (4)	(5)	15.732	185	74995	0.383
187) p-Dimethylaminoazobenzene	(5)	15.855	225	321444	13.893
190) Chlorobenzilate	(5)	15.935	139	412586	9.132
194) Famphur	(5)	16.363	218	296365	6.805
195) Kepone	(5)	16.615	272	114448M	8.728
196) 2-Acetylaminofluorene	(5)	16.861	181	746563	13.387
218)*Perylene-d12	(6)	19.819	264	580331	5.000
220) 3-Methylcholanthrene	(6)	20.289	268	824991	13.253

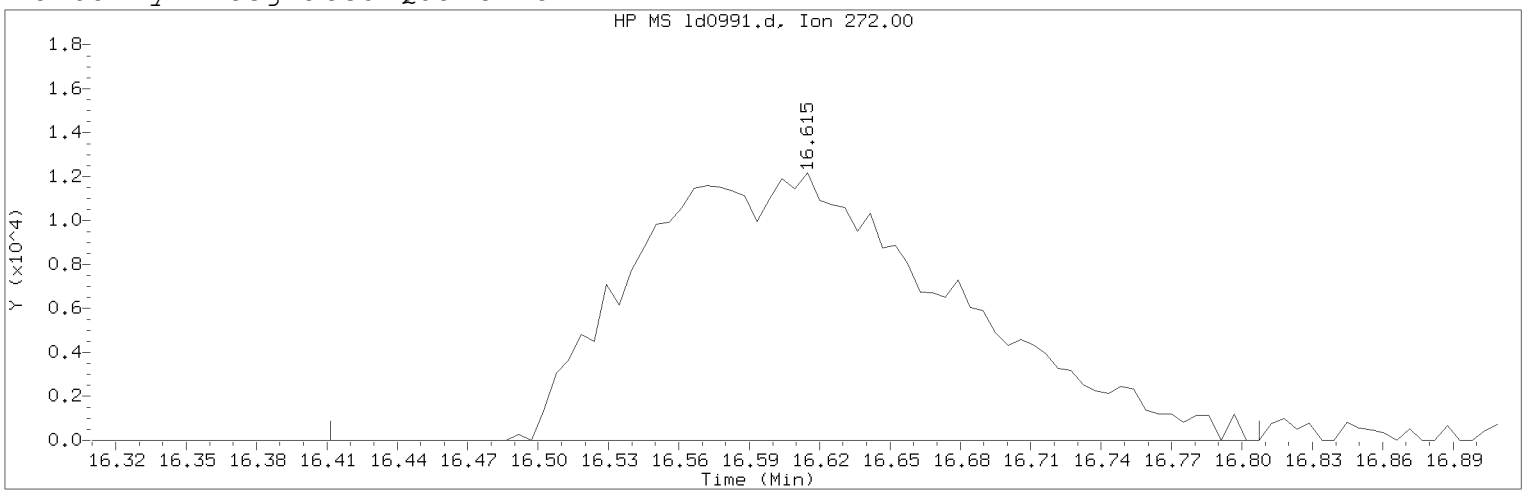
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 02-MAY-2018 06:46
Date, time and analyst ID of latest file update: 02-May-2018 06:47 bhs10208

Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

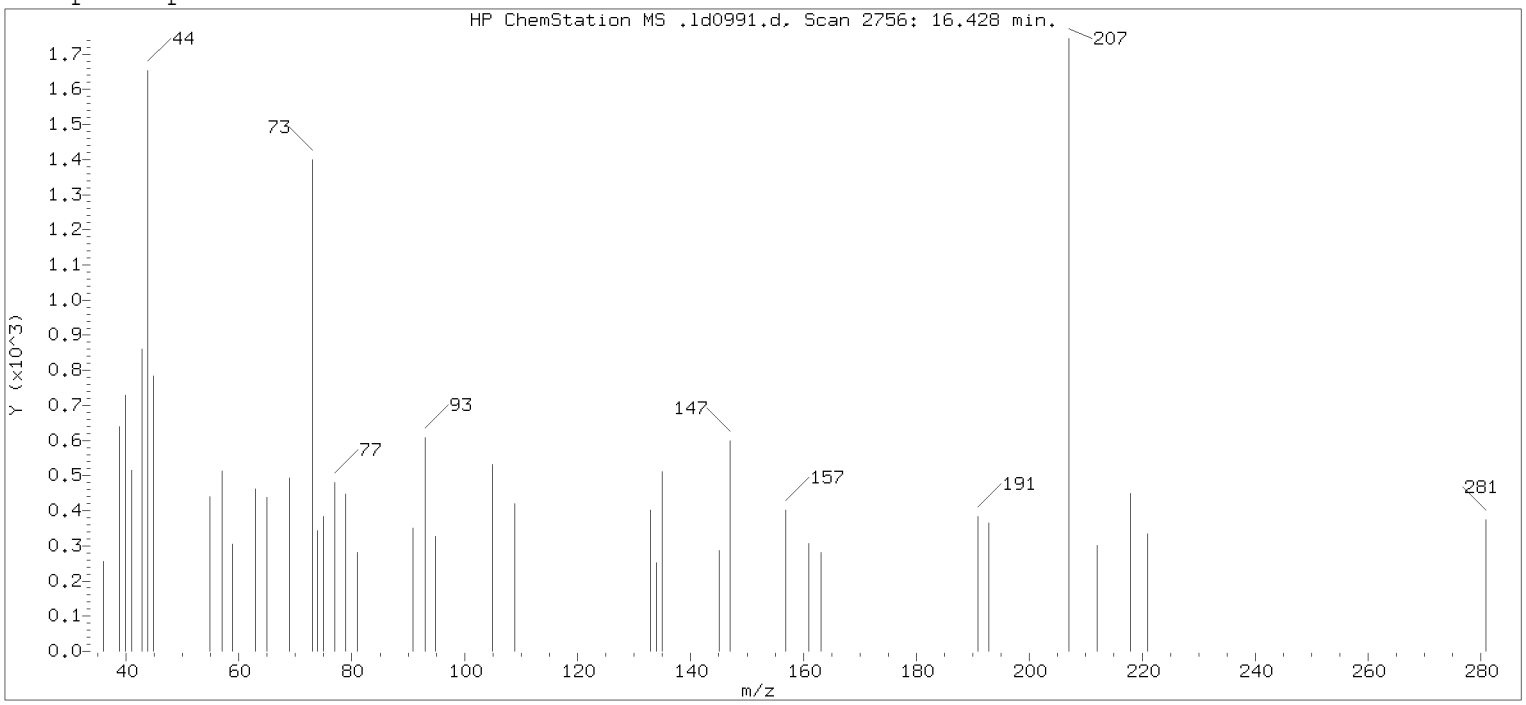
Compound Number : 195
Compound Name : Kepone
Scan Number : 2791
Retention Time (minutes) : 16.615
Quant Ion : 272.00
Area (flag) : 114448M
On-Column Amount (ng/ul) : 8.7275
Integration start scan : 2752 Integration stop scan: 2826
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

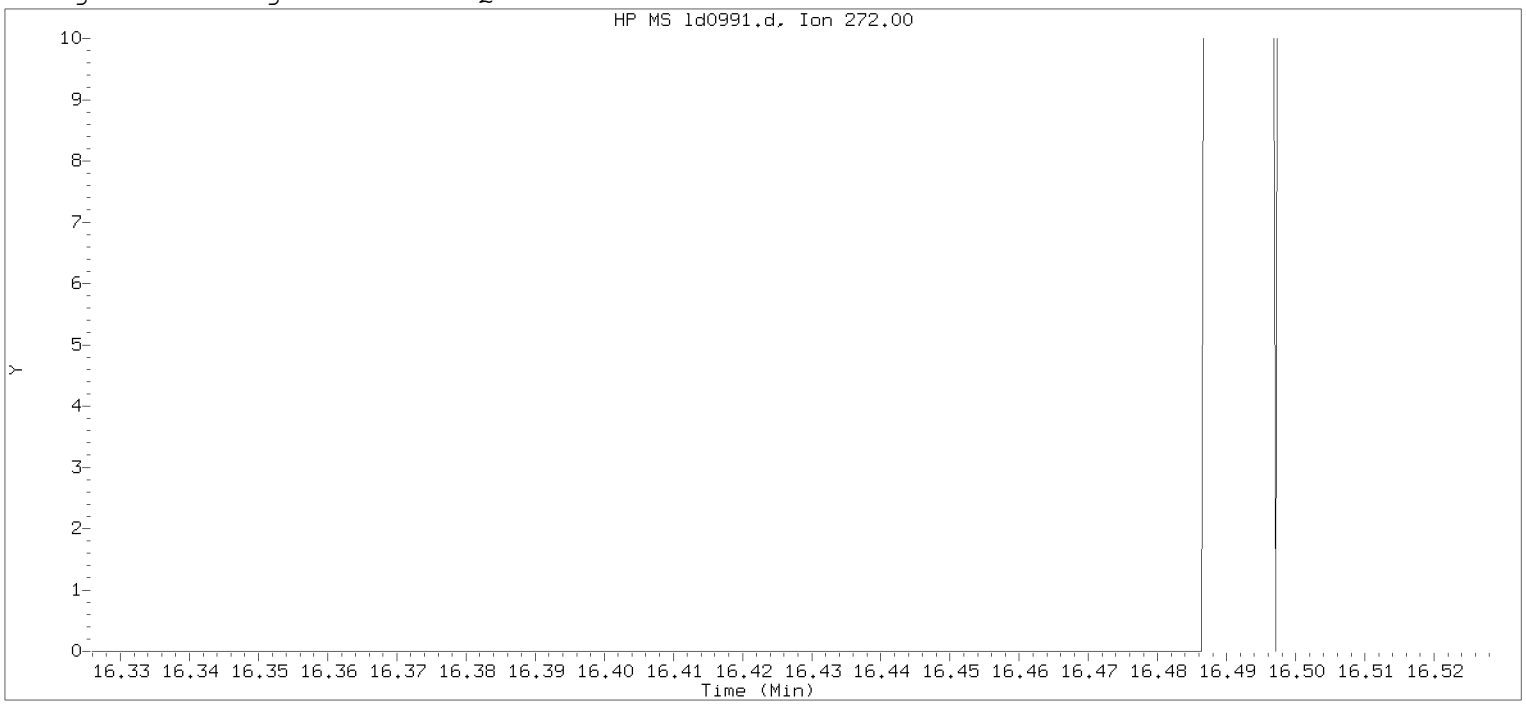
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 05/02/2018 at 07:07.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/02/2018 at 07:51.
PARALLAX ID: hb01996

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0991.d Instrument ID: HP20296.i
Injection date and time: 25-APR-2018 00:44 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090B
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:14 bhs10208

Sample Name: 113WNLCSD1 Lab Sample ID: 113WNLCSD1

Compound Number : 195
Compound Name : Kepone
Expected RT (minutes) : 16.428
Quant Ion : 272.00

Digitally signed by Brandon H. Smith on 05/02/2018 at 07:07.
Target 3.5 esignature used. Page 2067

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

113WNLCS

Data file: /chem/HP20296.i/18apr24a.b/ld0989.d
Data file Sample Info. Line: 113WNLCS;113WNLCS;1;3;LCS;;RAAP;
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Injection date and time: **24-APR-2018 23:48**
Instrument ID: **HP20296.i** Batch: **18113WAN**

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 25-APR-2018 15:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.575	(-0.005)	914	152	144506	(-26)	5.00	
68) Naphthalene-d8	8.554	(0.000)	1284	136	544621	(-24)	5.00	
118) Acenaphthene-d10	11.395	(0.000)	1815	164	271730	(-28)	5.00	
158) Phenanthrene-d10	13.336	(0.000)	2178	188	550440	(-28)	5.00	
180) Pyrene-d10	15.315	(0.000)	2548	212	598196	(-28)	5.00	
218) Perylene-d12	19.819	(0.005)	3390	264	600392	(-27)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
12) 2-Fluorophenol	(1)	4.746	(-0.002)	112	1187037	29.999	60%		10 - 82
18) Phenol-d6	(1)	6.180	(0.000)	99	1164924	22.451	45%		10 - 71
45) Nitrobenzene-d5	(2)	7.458	(0.000)	82	1114564	23.728	95%		30 - 111
96) 2-Fluorobiphenyl	(3)	10.336	(0.000)	172	1933358	22.887	92%		39 - 105
140) 2,4,6-Tribromophenol	(3)	12.491	(0.000)	330	490232	52.191	104%		21 - 134
184) Terphenyl-d14	(5)	15.615	(0.000)	244	2250675	23.461	94%		27 - 116

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) N-Nitrosodimethylamine	(1)	2.575	(-0.005)	74	207373	7.208	28.83			0.5
6) Pyridine	(1)	2.682	(-0.011)	79	258757	5.041	20.16			0.5
8) 2-Picoline	(1)	3.816	(-0.003)	93	406271	7.828	31.31			0.5
19) Phenol	(1)	6.201	(-0.000)	94	357161	5.979	23.92			0.2
20) Aniline	(1)	6.132	(0.000)	93	591200	8.583	34.33			0.1
23) bis(2-Chloroethyl)ether	(1)	6.228	(-0.000)	93	507362	11.410	45.64			0.1
24) 2-Chlorophenol	(1)	6.297	(-0.000)	128	431463	11.131	44.52			0.2
28) Benzyl alcohol	(1)	6.859	(0.000)	108	284336	10.990	43.96			3
32) 2-Methylphenol	(1)	7.078	(0.001)	108	410314	10.735	42.94			0.1
35) bis(2-Chloroisopropyl)ether	(1)	7.035	(0.000)	45	803228	12.724	50.89			0.1
37) Acetophenone	(1)	7.223	(0.000)	105	705391	12.104	48.41			0.1
38) 4-Methylphenol	(1)	7.330	(0.000)	108	408346	10.115	40.46			0.1
39) N-Nitroso-di-n-propylamine	(1)	7.239	(0.000)	70	417210	12.557	50.23			0.1
41) o-Toluidine	(1)	7.287	(0.000)	106	495517	7.331	29.32			0.1
44) Hexachloroethane	(1)	7.335	(0.000)	117	147241	7.799	31.19			0.3
46) Nitrobenzene	(2)	7.485	(0.000)	77	596363	12.447	49.79			0.1
52) Isophorone	(2)	7.854	(-0.000)	82	1076798	12.858	51.43			0.1
53) 2-Nitrophenol	(2)	7.982	(-0.000)	139	234064	12.090	48.36			0.3
55) 2,4-Dimethylphenol	(2)	8.126	(0.000)	107	442929	10.672	42.69			0.2
57) bis(2-Chloroethoxy)methane	(2)	8.244	(-0.000)	93	654750	12.027	48.11			0.1
62) 2,4-Dichlorophenol	(2)	8.389	(0.000)	162	389306	12.047	48.19			0.4
70) 4-Chloroaniline	(2)	8.747	(0.000)	127	409782	8.921	35.68			0.5
83) 4-Chloro-3-methylphenol	(2)	9.603	(0.000)	107	431781	12.176	48.70			0.3
86) 2-Methylnaphthalene	(2)	9.704	(0.000)	142	813577	10.881	43.52			0.07
88) Hexachlorocyclopentadiene	(3)	9.956	(-0.000)	237	348927	15.878	63.51			1
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.972	(-0.000)	216	371475	10.050	40.20			0.5
93) 2,4,6-Trichlorophenol	(3)	10.207	(0.000)	196	300409	12.942	51.77			0.2

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Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

113WNLCS

Data file: /chem/HP20296.i/18apr24a.b/ld0989.d
Injection date and time: **24-APR-2018 23:48**
Data file Sample Info. Line: 113WNLCS;113WNLCS;1;3;LCS;;RAAP;
Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 25-APR-2018 15:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
95) 2,4,5-Trichlorophenol	(3)	10.282(-0.000)	196	319377	13.110	52.44			0.2
99) 2-Chloronaphthalene	(3)	10.496(-0.000)	162	797877	10.776	43.11			0.1
104) 2-Nitroaniline	(3)	10.737(-0.000)	138	273138	12.606	50.42			0.1
110) Dimethylphthalate	(3)	11.047(-0.000)	163	772091	9.309	37.24			0.5
111) 1,3-Dinitrobenzene	(3)	11.084(-0.000)	168	157298	12.752	51.01			0.5
113) 2,6-Dinitrotoluene	(3)	11.132(-0.000)	165	224627	12.756	51.02			0.1
114) Acenaphthylene	(3)	11.164(-0.000)	152	1354299	13.160	52.64			0.1
117) 3-Nitroaniline	(3)	11.421(0.000)	138	216210	11.653	46.61			0.1
119) Acenaphthene	(3)	11.443(-0.000)	153	892049	12.225	48.90			0.09
120) 2,4-Dinitrophenol	(3)	11.560(0.000)	184	226444	21.390	85.56			3
121) 4-Nitrophenol	(3)	11.790(-0.000)	109	83591M	6.391	25.57		J	3
123) 2,4-Dinitrotoluene	(3)	11.753(0.000)	165	300785	12.326	49.30			0.3
124) Dibenzofuran	(3)	11.715(-0.000)	168	1227617	12.109	48.44			0.1
126) 1-Naphthylamine	(3)	11.854(0.000)	143	953468	13.217	52.87			1
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919(0.000)	232	239428	12.629	50.52			0.2
128) 2-Naphthylamine	(3)	11.972(-0.000)	143	905170	13.245	52.98			1
129) Diethylphthalate	(3)	12.100(-0.000)	149	931003	11.406	45.62			0.5
131) Fluorene	(3)	12.181(0.000)	166	980108	12.376	49.50			0.1
132) 4-Chlorophenyl-phenylether	(3)	12.208(0.000)	204	462677	11.788	47.15			0.1
134) 4-Nitroaniline	(3)	12.288(-0.000)	138	200206	10.676	42.71			0.2
135) 4,6-Dinitro-2-methylphenol	(4)	12.282(0.000)	198	170436	11.696	46.78			1
136) N-Nitrosodiphenylamine	(4)	12.373(-0.000)	169	832884	12.365	49.46			0.1
137) NDPA as diphenylamine	(4)	12.373(-0.000)	169	832884	12.365	49.46			0.1
148) 4-Bromophenyl-phenylether	(4)	12.796(0.000)	248	272762	12.119	48.48			0.1
150) Hexachlorobenzene	(4)	12.833(0.000)	284	275552	11.920	47.68			0.2
154) Pentachlorophenol	(4)	13.122(0.000)	266	140876	9.951	39.80			0.7
160) Phenanthrene	(4)	13.368(0.000)	178	1494503	12.314	49.25			0.1
162) Anthracene	(4)	13.432(0.000)	178	1520548	12.497	49.99			0.1
170) Di-n-butylphthalate	(4)	14.144(0.000)	149	1739205	11.993	47.97			0.5
178) Fluoranthene	(4)	15.000(0.000)	202	1787670	13.096	52.38			0.1
182) Pyrene	(5)	15.342(0.000)	202	1848187	12.145	48.58			0.1
192) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
193) Butylbenzylphthalate	(5)	16.460(0.000)	149	809815	11.454	45.81			0.5
198) 3,3'-Dichlorobenzidine	(5)	17.369(0.000)	252	451906	9.237	36.95			0.5
200) Benzo(a)anthracene	(5)	17.342(-0.000)	228	1805702	13.281	53.13			0.1
201) Chrysene	(5)	17.406(-0.000)	228	1741542	13.243	52.97			0.08
204) bis(2-Ethylhexyl)phthalate	(5)	17.476(0.000)	149	1252233	12.535	50.14			0.5
210) Di-n-octylphthalate	(6)	18.637(-0.000)	149	2246213	11.897	47.59			0.5
211) Benzo(b)fluoranthene	(6)	19.198(-0.000)	252	1798701	12.219	48.88			0.3
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.198(-0.000)	256	757523	12.474	49.89			0.1
213) Benzo(k)fluoranthene	(6)	19.246(-0.000)	252	1779315	12.553	50.21			0.4
216) Benzo(a)pyrene	(6)	19.733(-0.000)	252	1677764	12.667	50.67			0.4
224) Indeno(1,2,3-cd)pyrene	(6)	21.423(-0.000)	276	1354124M	10.766	43.06			0.04
225) Dibenz(a,h)anthracene	(6)	21.461(-0.000)	278	1456004	11.396	45.58			0.1
226) Benzo(g,h,i)perylene	(6)	21.803(-0.000)	276	1330694	10.238	40.95			0.1

M = Compound was manually integrated.

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Data file: /chem/HP20296.i/18apr24a.b/ld0989.d Injection date and time: **24-APR-2018 23:48**
Data file Sample Info. Line: 113WNLCS;113WNLCS;1;3;LCS;;RAAP; Instrument ID: **HP20296.i** Batch: **18113WAN**
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Blank Data file reference: **/chem/HP20296.i/18apr24a.b/ld0988.d**

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: **27090L**
Calibration date and time (Last Method Edit): 25-APR-2018 15:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18apr24a.b/ld0981.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

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WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 72

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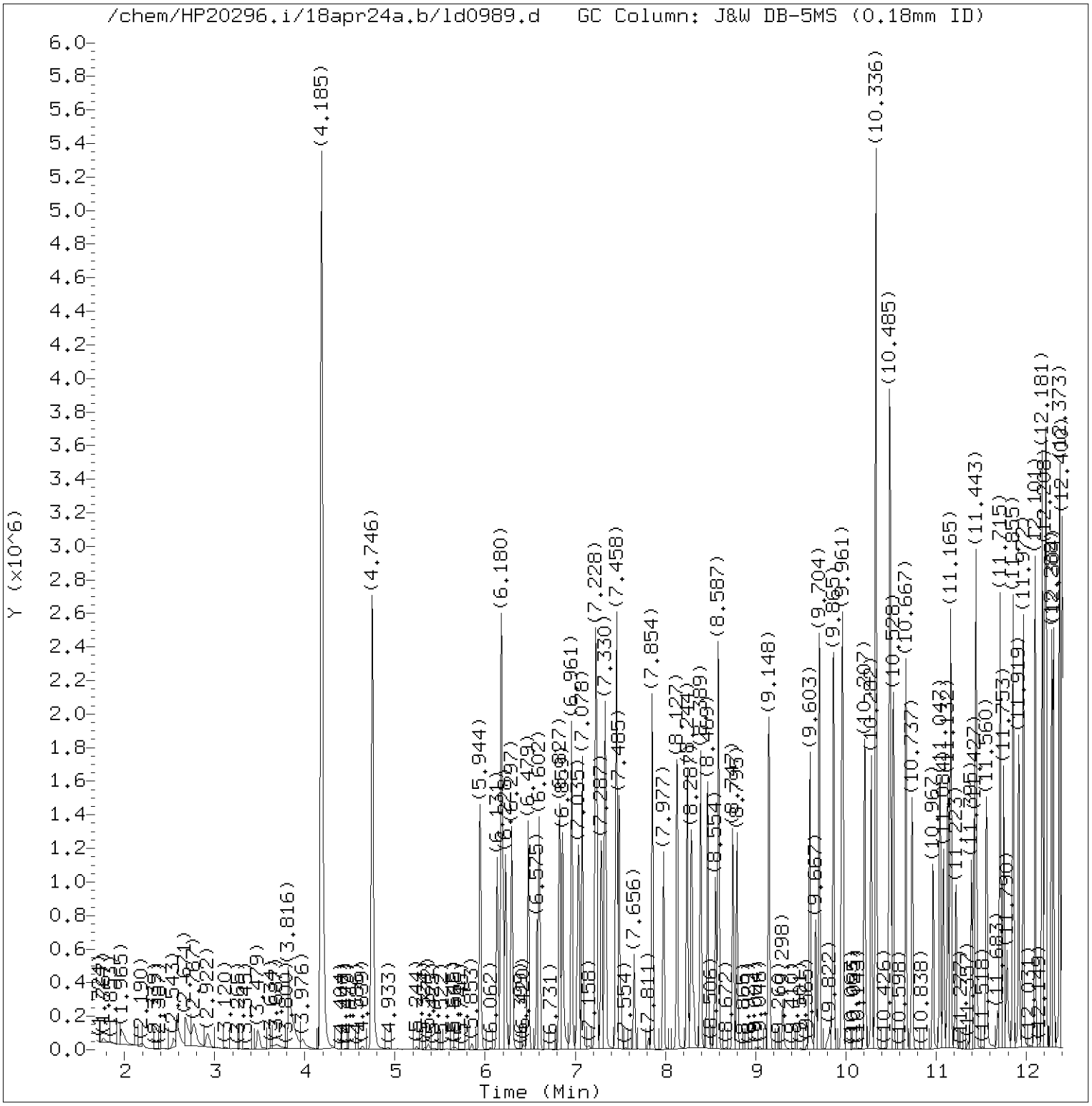
Secondary review performed and digitally signed by Holly B. Ziegler on 05/01/2018 at 12:53. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

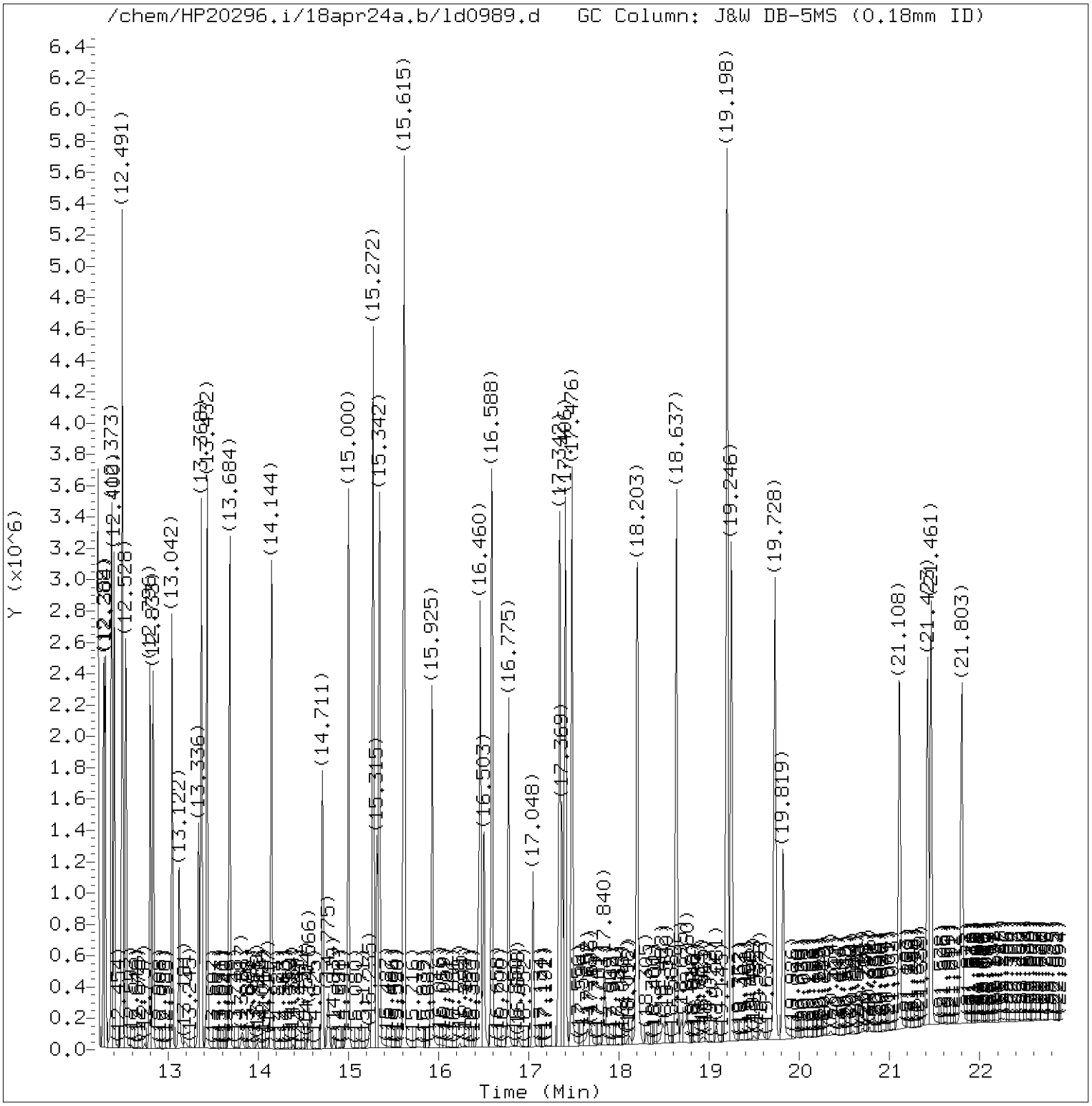
Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Digitally signed by Brandon H. Smith
on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Digitally signed by Brandon H. Smith
on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) N-Nitrosodimethylamine	(1)	2.575	74	207373	7.208
6) Pyridine	(1)	2.682	79	258757	5.041
8) 2-Picoline	(1)	3.816	93	406271	7.828
12)$2-Fluorophenol	(1)	4.746	112	1187037	29.999
20) Aniline	(1)	6.131	93	591200	8.583
18)$Phenol-d6	(1)	6.180	99	1164924	22.451
19) Phenol	(1)	6.201	94	357161	5.979
23) bis(2-Chloroethyl)ether	(1)	6.228	93	507362	11.410
24) 2-Chlorophenol	(1)	6.297	128	431463	11.131
26)*1,4-Dichlorobenzene-d4	(1)	6.575	152	144506	5.000
28) Benzyl alcohol	(1)	6.859	108	284336	10.990
35) bis(2-Chloroisopropyl)ether	(1)	7.035	45	803228	12.724
32) 2-Methylphenol	(1)	7.078	108	410314	10.735
37) Acetophenone	(1)	7.223	105	705391	12.104
39) N-Nitroso-di-n-propylamine	(1)	7.239	70	417210	12.557
41) o-Toluidine	(1)	7.287	106	495517	7.331
38) 4-Methylphenol	(1)	7.330	108	408346	10.115
44) Hexachloroethane	(1)	7.335	117	147241	7.799
45)$Nitrobenzene-d5	(2)	7.458	82	1114564	23.728
46) Nitrobenzene	(2)	7.485	77	596363	12.447
52) Isophorone	(2)	7.854	82	1076798	12.858
53) 2-Nitrophenol	(2)	7.982	139	234064	12.090
55) 2,4-Dimethylphenol	(2)	8.127	107	442929	10.672
57) bis(2-Chloroethoxy)methane	(2)	8.244	93	654750	12.027
62) 2,4-Dichlorophenol	(2)	8.389	162	389306	12.047
68)*Naphthalene-d8	(2)	8.554	136	544621	5.000
70) 4-Chloroaniline	(2)	8.747	127	409782	8.921
83) 4-Chloro-3-methylphenol	(2)	9.603	107	431781	12.176
86) 2-Methylnaphthalene	(2)	9.704	142	813577	10.881
88) Hexachlorocyclopentadiene	(3)	9.956	237	348927	15.878
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.972	216	371475	10.050
93) 2,4,6-Trichlorophenol	(3)	10.207	196	300409	12.942
95) 2,4,5-Trichlorophenol	(3)	10.282	196	319377	13.110
96)$2-Fluorobiphenyl	(3)	10.336	172	1933358	22.887
99) 2-Chloronaphthalene	(3)	10.496	162	797877	10.776
104) 2-Nitroaniline	(3)	10.737	138	273138	12.606
110) Dimethylphthalate	(3)	11.047	163	772091	9.309
111) 1,3-Dinitrobenzene	(3)	11.084	168	157298	12.752
113) 2,6-Dinitrotoluene	(3)	11.132	165	224627	12.756
114) Acenaphthylene	(3)	11.165	152	1354299	13.160

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
118)*Acenaphthene-d10	(3)	11.395	164	271730	5.000
117) 3-Nitroaniline	(3)	11.421	138	216210	11.653
119) Acenaphthene	(3)	11.443	153	892049	12.225
120) 2,4-Dinitrophenol	(3)	11.560	184	226444	21.390
124) Dibenzofuran	(3)	11.715	168	1227617	12.109
123) 2,4-Dinitrotoluene	(3)	11.753	165	300785	12.326
121) 4-Nitrophenol	(3)	11.790	109	83591M	6.391
126) 1-Naphthylamine	(3)	11.855	143	953468	13.217
127) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	239428	12.629
128) 2-Naphthylamine	(3)	11.972	143	905170	13.245
129) Diethylphthalate	(3)	12.101	149	931003	11.406
131) Fluorene	(3)	12.181	166	980108	12.376
132) 4-Chlorophenyl-phenylether	(3)	12.208	204	462677	11.788
135) 4,6-Dinitro-2-methylphenol	(4)	12.282	198	170436	11.696
134) 4-Nitroaniline	(3)	12.288	138	200206	10.676
137) NDPA as diphenylamine	(4)	12.373	169	832884	12.365
136) N-Nitrosodiphenylamine	(4)	12.373	169	832884	12.365
140)$2,4,6-Tribromophenol	(3)	12.491	330	490232	52.191
148) 4-Bromophenyl-phenylether	(4)	12.796	248	272762	12.119
150) Hexachlorobenzene	(4)	12.833	284	275552	11.920
154) Pentachlorophenol	(4)	13.122	266	140876	9.951
158)*Phenanthrene-d10	(4)	13.336	188	550440	5.000
160) Phenanthrene	(4)	13.368	178	1494503	12.314
162) Anthracene	(4)	13.432	178	1520548	12.497
170) Di-n-butylphthalate	(4)	14.144	149	1739205	11.993
178) Fluoranthene	(4)	15.000	202	1787670	13.096
180)*Pyrene-d10	(5)	15.315	212	598196	5.000
182) Pyrene	(5)	15.342	202	1848187	12.145
184)$Terphenyl-d14	(5)	15.615	244	2250675	23.461
193) Butylbenzylphthalate	(5)	16.460	149	809815	11.454
200) Benzo(a)anthracene	(5)	17.342	228	1805702	13.281
198) 3,3'-Dichlorobenzidine	(5)	17.369	252	451906	9.237
201) Chrysene	(5)	17.406	228	1741542	13.243
204) bis(2-Ethylhexyl)phthalate	(5)	17.476	149	1252233	12.535
210) Di-n-octylphthalate	(6)	18.637	149	2246213	11.897
211) Benzo(b)fluoranthene	(6)	19.198	252	1798701	12.219
212) 7,12-Dimethylbenz[a]anthracene	(6)	19.198	256	757523	12.474
213) Benzo(k)fluoranthene	(6)	19.246	252	1779315	12.553
216) Benzo(a)pyrene	(6)	19.733	252	1677764	12.667
218)*Perylene-d12	(6)	19.819	264	600392	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

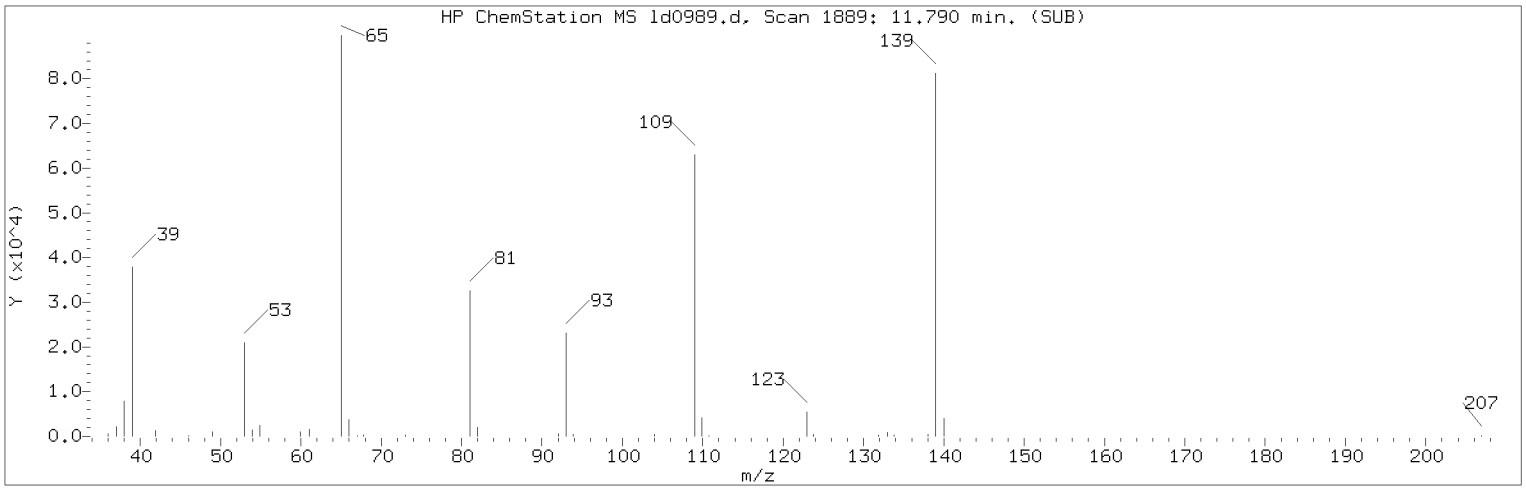
Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
224) Indeno(1,2,3-cd)pyrene	(6)	21.423	276	1354124M	10.766
225) Dibenz(a,h)anthracene	(6)	21.461	278	1456004	11.396
226) Benzo(g,h,i)perylene	(6)	21.803	276	1330694	10.238

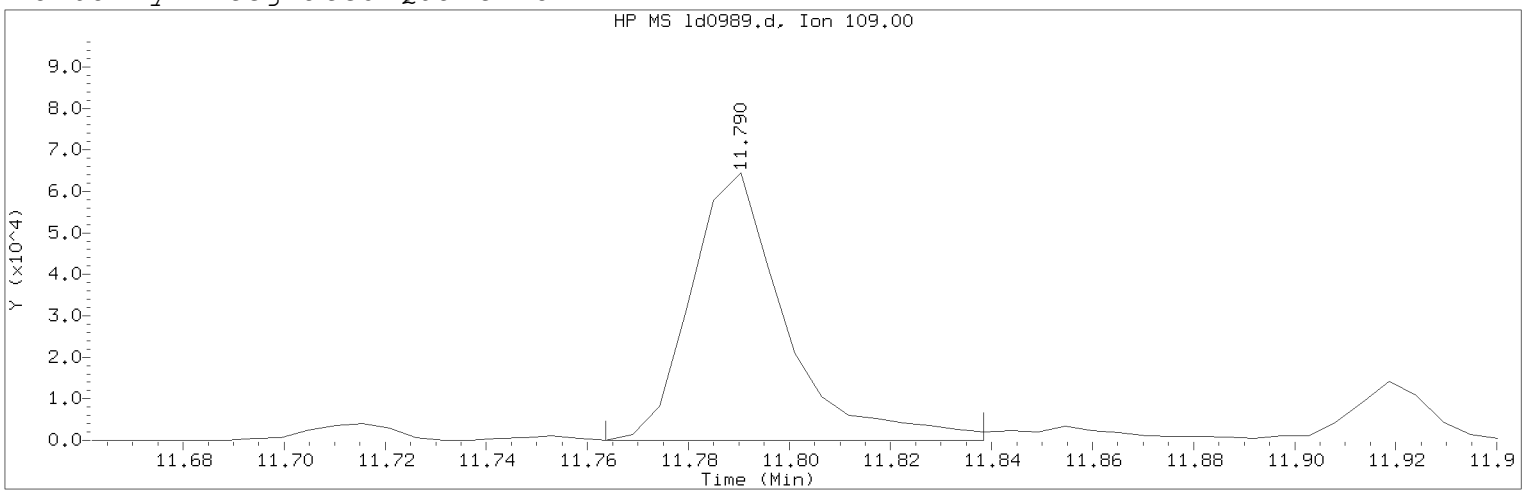
M = Compound was manually integrated.

Digitally signed by Brandon H. Smith
on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

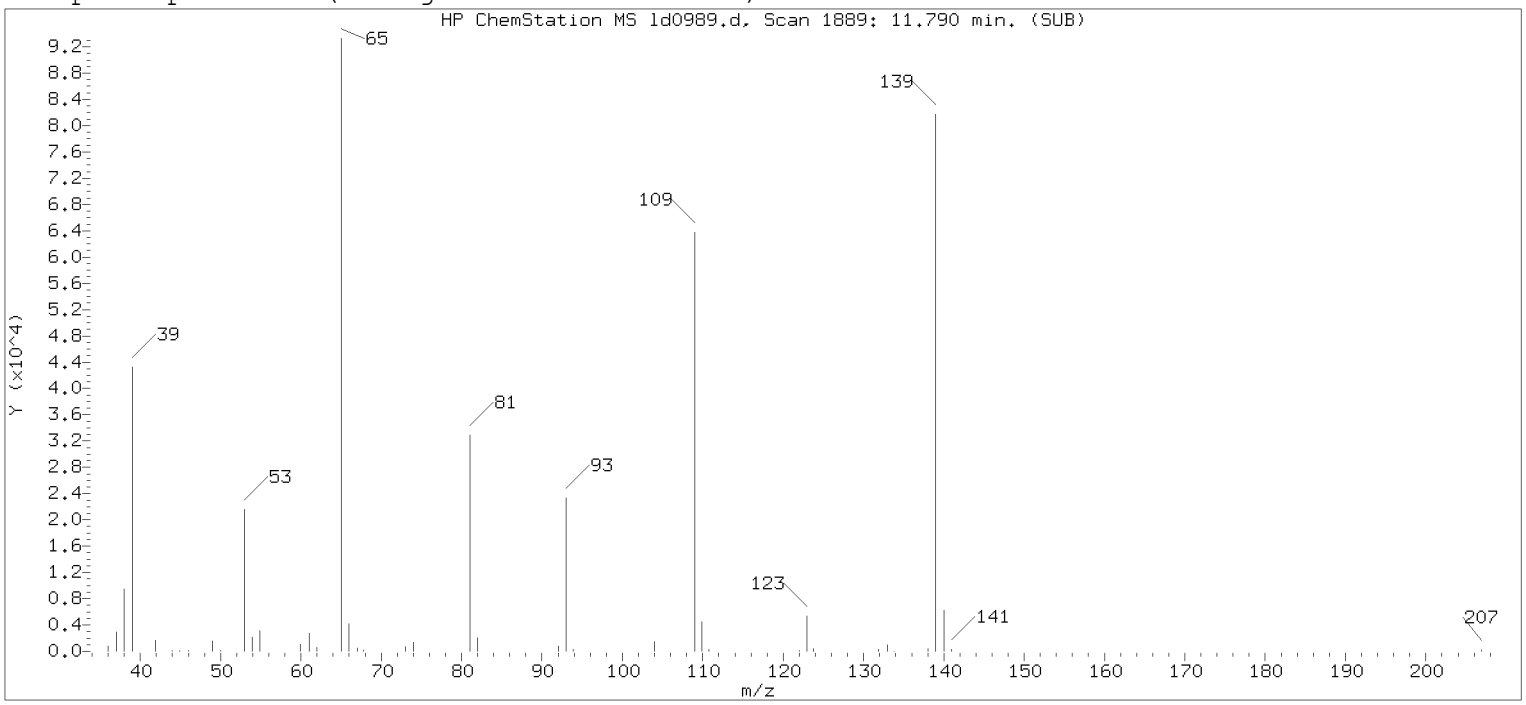
Compound Number : 121
Compound Name : 4-Nitrophenol
Scan Number : 1889
Retention Time (minutes) : 11.790
Quant Ion : 109.00
Area (flag) : 83591M
On-Column Amount (ng/ul) : 6.3914
Integration start scan : 1883 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

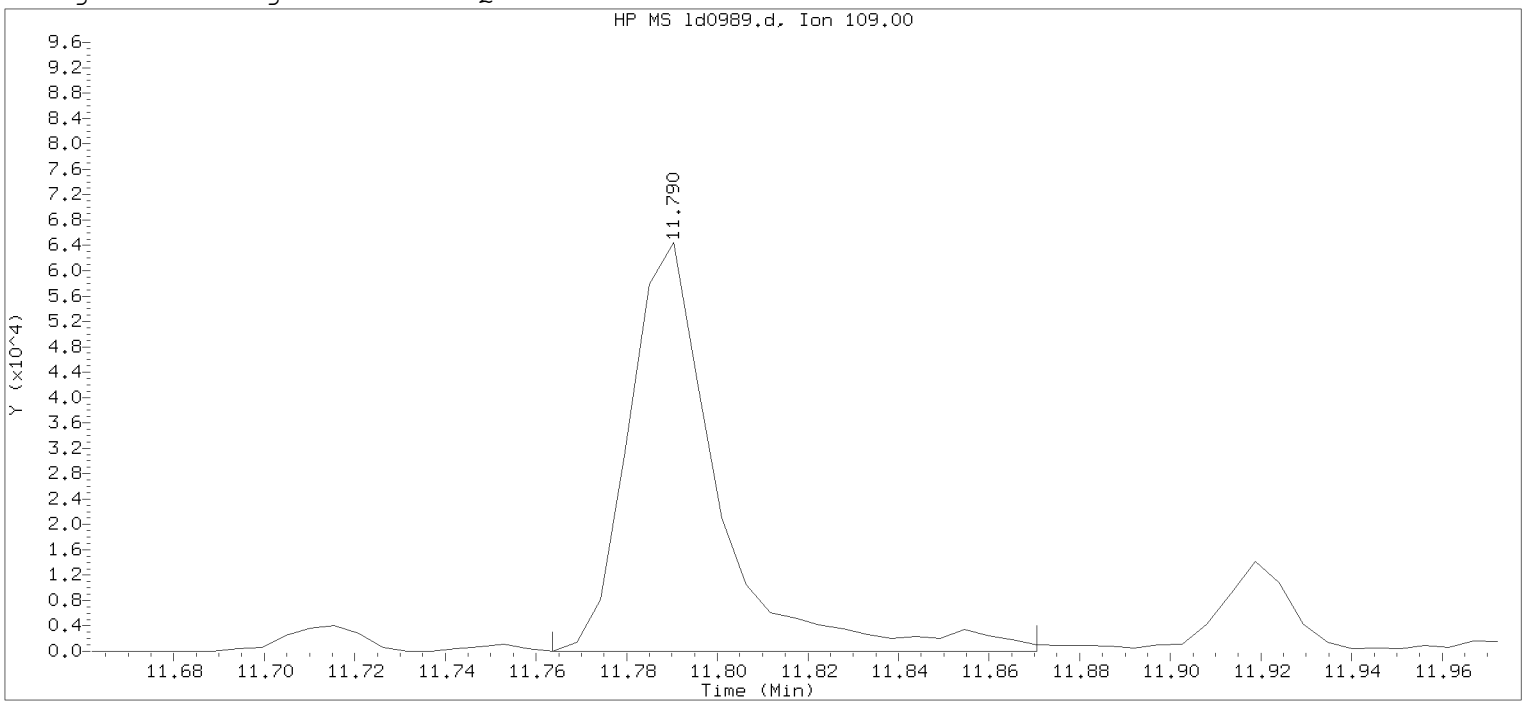
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/01/2018 at 12:53.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

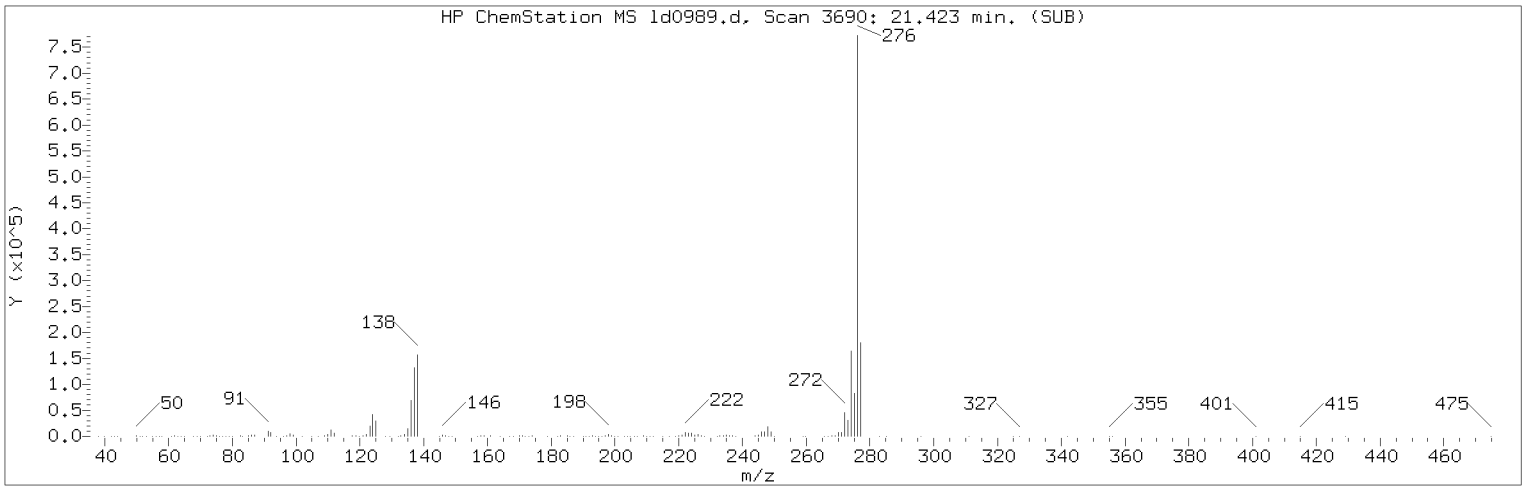
Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:13 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

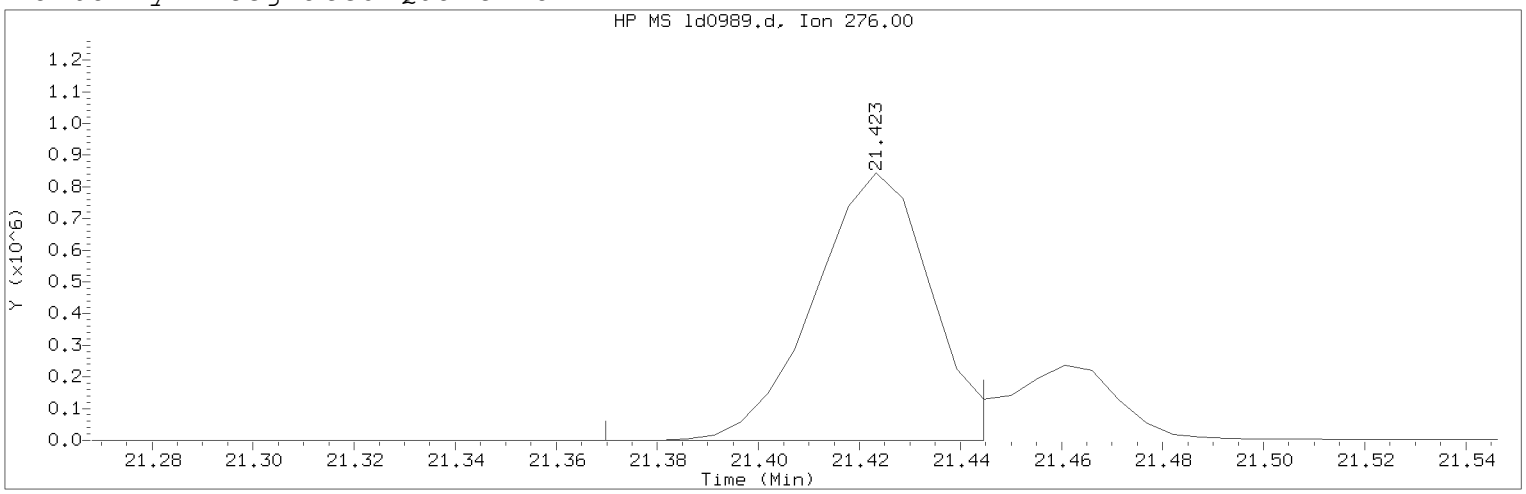
Compound Number : 121
Compound Name : 4-Nitrophenol
Scan Number : 1889
Retention Time (minutes) : 11.790
Quant Ion : 109.00
Area : 87593
On-column Amount (ng/ul) : 6.6975
Integration start scan : 1883 Integration stop scan: 1903
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 04/26/2018 at 06:37.
Target 3.5 esignature used. PFOS Part 2 of 2

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:19 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

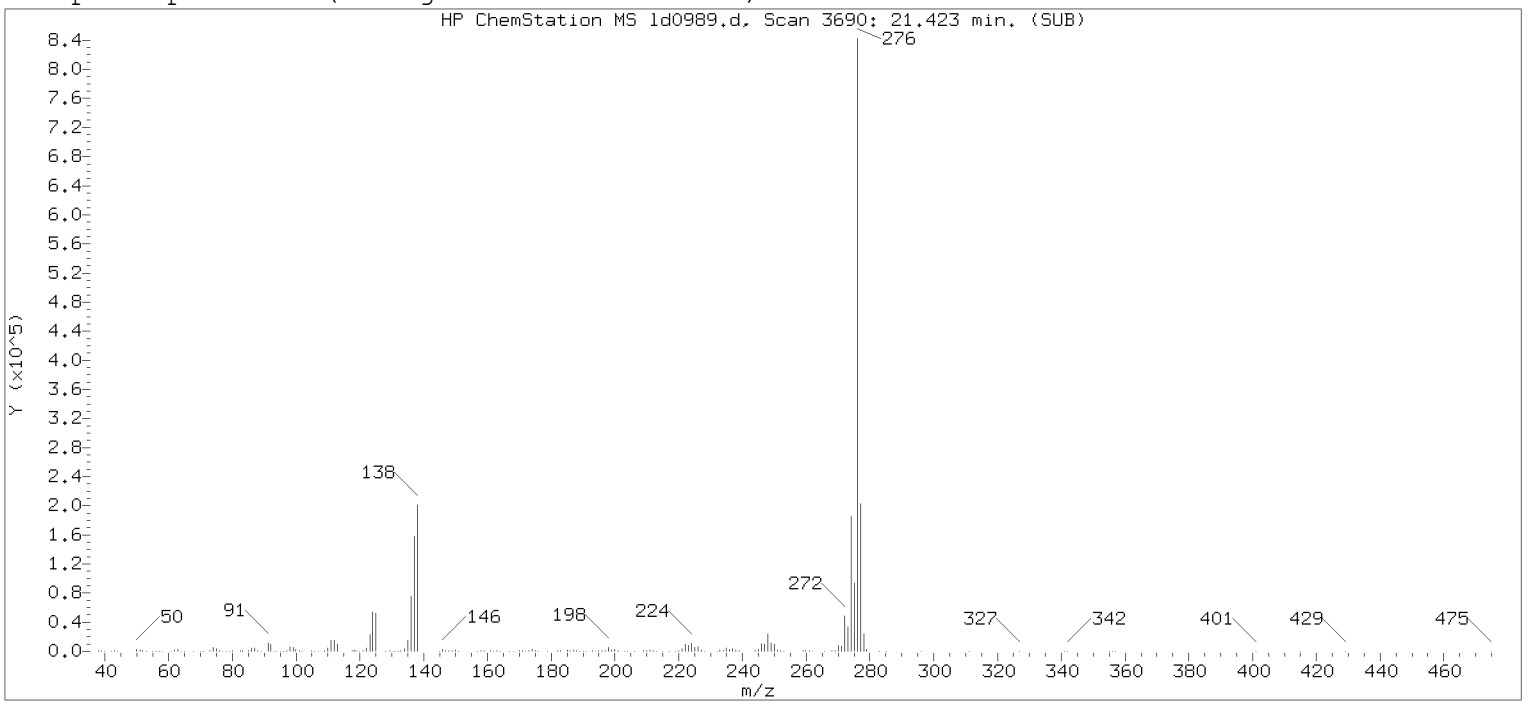
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3690
Retention Time (minutes) : 21.423
Quant Ion : 276.00
Area (flag) : 1354124M
On-Column Amount (ng/ul) : 10.7659
Integration start scan : 3679 Integration stop scan: 3693
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

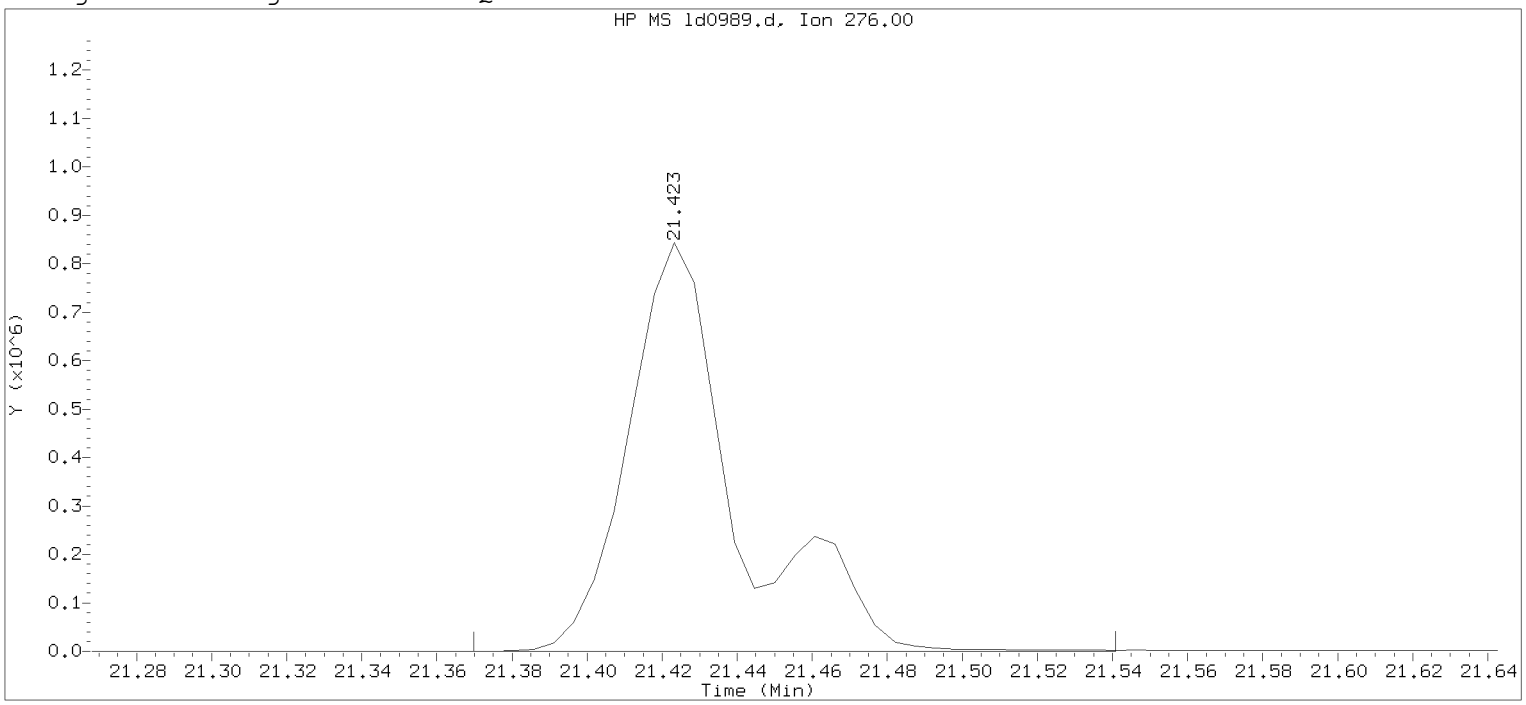
Analyst responsible for change: Digitally signed by Brandon H. Smith
on 04/26/2018 at 06:37.
Target 3.5 esignature user ID: bhs10208

Secondary review performed and digitally signed by Holly B. Ziegler on 05/01/2018 at 12:53.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18apr24a.b/ld0989.d Instrument ID: HP20296.i
Injection date and time: 24-APR-2018 23:48 Analyst ID: whs02991

Method used: /chem/HP20296.i/18apr24a.b/rv8270d.m Sublist used: 27090L
Calibration date and time: 25-APR-2018 15:11
Date, time and analyst ID of latest file update: 25-Apr-2018 15:13 bhs10208

Sample Name: 113WNLCS Lab Sample ID: 113WNLCS

Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3690
Retention Time (minutes) : 21.423
Quant Ion : 276.00
Area : 1688452
On-column Amount (ng/ul) : 13.4240
Integration start scan : 3679 Integration stop scan: 3711
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brandon H. Smith on 04/26/2018 at 06:37.
Target 3.5 esignature used. Reason: I am the author of this document

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 26557 Logan Brosemer Reviewed by: [illegible] 10008 4/20/18 Start Date: 4-17-18 Start time: 9:30

18106WAO026

Tech 1: JSR12364 Tech 2: LMB 26557

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9558699MS	R0604	237	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓	153A	Tan Tint
9558700MSD	R0604	248	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓	153A	Tan Tint
BLANKA ☆	SBLKWO106	250	SS1809626A	1.0	—	—	1	✓	✓		Tap H_2O
LCSA	106WOLCS	250	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓		Tap H_2O
LCSAPI	106WOLCS	250	SS1809626A	1.0	MS1807926A MS1809626B	~~1.0~~ 1.0	(8) 1	✓	✓		Tap H_2O
LCSDAPI	106WOLCSD	250	SS1809626A	1.0	MS1807926A MS1809626B	~~1.0~~ 1.0	(8) 1	✓	✓		Tap H_2O

Solvent Used	Lot No.
10N NaOH	4708B00
Methylene Chloride	181348
Sodium Sulfate	18103A
Sulfuric Acid	179162

(8) 0.28 mL LMB 26557 4-17-18

(8a) Sample moved to 18106WA2026. WS 2991 4/19/18

(8b) Samples moved to 18106WA1026. WS 2991 4/19/18

☆ Split with 18106WA1026

Spike Solutions: Witness:

MS1809626B	APPIX #1 MINI SPIKE
MS1807926A	APPIX MIX #2
MS1810126B	MINI SEP. LCS SPIKE #1
MS1810126D	MINI SEP. LCS SPIKE #2
SS1809626A	MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
(8c) 1 9557948BKG ☆	01T01	226	SS1809626A	1.0	1	✓	✓	153A	Black	14241	26033	04/25/2018	Q
2 9558695	R0601	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
3 9558696	R0602	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
4 9558697	R0603	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
5 9558698BKG	R0604	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
6 9558702	R0605	249	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
7 9558703	R0606	250	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
(8b) 8 9558704	R0607	249	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 9 9558705	R0608	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 10 9558706	R0609	246	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 11 9558707	R0610	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 12 9558708	R0611	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N

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Bench#	Bench#	Bench#		
Rack ID:	—	Work Station	Tumbz	Micro Temp 100? ✓
Internal Standard	RVISTD 1038	Balance #	25996	

R-VAP ID2	90 C	R-VAP ID3	90 C	R-VAP ID4	90 C
S-bath ID	C	S-bath ID	C	N-Evap	C
M-vap	C	18106WAO026			

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

rganic Extraction Batchlog Assigned to: 26557 Logan Brosemer Reviewed by: LB 10308 4/26/18 Start Date: _____ Start time: _____

18106WAY026 (8)

Tech 1: _____ Tech 2: _____

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
106WYMSD	106WYMSD		SS1809626A		MS1810126B MS1810126D						
106WYMS	106WYMS		SS1809626A		MS1810126B MS1810126D						
BLANKA	SBLKWY106		SS1809626A								
LCSA	106WYLCS		SS1809626A		MS1810126B MS1810126D						
LCSAPI	106WYLCS		SS1809626A		MS1807926A MS1809626B						
LCSDAPI	106WYLCSD		SS1809626A		MS1807926A MS1809626B						

Solvent Used	Lot No.
10N NaOH	
Methylene Chloride	
Sodium Sulfate	
Sulfuric Acid	

(8) Samples split from 18106WA00026. See attached for extraction info.
W57991 4/9/18

Spike Solutions: Witness: _____

MS1809626B	APPIX #1 MINI SPIKE
MS1807926A	APPIX MIX #2
MS1810126B	MINI SEP. LCS SPIKE #1
MS1810126D	MINI SEP. LCS SPIKE #2
SS1809626A	MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt ( )	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
1 106WY	106WYUS		SS1809626A							14241			
2 9558704	R0607		SS1809626A							14241	22230	04/26/2018	N
3 9558705	R0608		SS1809626A							14241	22230	04/26/2018	N
4 9558706	R0609		SS1809626A							14241	22230	04/26/2018	N
5 9558707	R0610		SS1809626A							14241	22230	04/26/2018	N
6 9558708	R0611		SS1809626A							14241	22230	04/26/2018	N

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Bench#	Bench#	Bench#	
Rack ID:		Work Station	Micro Temp 100?
Internal Standard	RVIS7D 1038	Balance #	

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C		
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C

18106WAY026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

~~Organic~~ Extraction Batchlog Assigned to: 26557 Logan Brosemer Reviewed by:_____ Start Date: 4-17-18 Start time: 9:30

18106WAO026

Tech 1: JSR12368 Tech 2: LMB 26557

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9558699MS	R0604	237	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓	153A	Tan Tint
9558700MSD	R0604	248	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓	153A	Tan Tint
BLANKA ☆	SBLKWO106	250	SS1809626A	1.0	—	—	1	✓	✓		Tap H_2O
LCSA	106WOLCS	250	SS1809626A	1.0	MS1810126B MS1810126D	1.0 1.0	1	✓	✓		Tap H_2O
LCSAPI	106WOLCS	250	SS1809626A	1.0	MS1807926A MS1809626B	~~1.0~~ (8) 1.0	1	✓	✓		Tap H_2O
LCSDAPI	106WOLCSD	250	SS1809626A	1.0	MS1807926A MS1809626B	~~1.0~~ (8) 1.0	1	✓	✓		Tap H_2O

Solvent Used	Lot No.
10N NaOH	4708B00
Methylene Chloride	181348
Sodium Sulfate	18103A
Sulfuric Acid	179162

(8) 0.28 mL LMB 26557 4-17-18

(8a) Sample moved to 18106WA2026. WS 2991 4/19/18

(8b) Samples moved to 18106WA1026. WS 2991 4/19/18

☆Split with 18106WAP026

Spike Solutions: Witness:_____

MS1809626B	APPIX #1 MINI SPIKE
MS1807926A	APPIX MIX #2
MS1810126B	MINI SEP. LCS SPIKE #1
MS1810126D	MINI SEP. LCS SPIKE #2
SS1809626A	MINI SEP. BNA SURROGAT

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
(8a) 1 9557948BKG ☆	01T01	226	SS1809626A	1.0	1	✓	✓	153A	Black	14241	26033	04/25/2018	Q
2 9558695	R0601	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
3 9558696	R0602	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
4 9558697	R0603	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
5 9558698BKG	R0604	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
6 9558702	R0605	249	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
7 9558703	R0606	250	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	27090	04/26/2018	N
(8b) 8 9558704	R0607	249	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 9 9558705	R0608	247	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 10 9558706	R0609	246	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 11 9558707	R0610	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N
(8b) 12 9558708	R0611	248	SS1809626A	1.0	1	✓	✓	153A	Clear	14241	22230	04/26/2018	N

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Bench#	Bench#	Bench#		
Rack ID:		Work Station	Tumbl	Micro Temp 100? —
Internal Standard		Balance #	25996	

R-VAP ID 2	90 C	R-VAP ID 3	90 C	R-VAP ID 4	90 C
S-bath ID	C	S-bath ID	C	N-Evap	C

M-vap C 18106WAO026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Extraction Batchlog

Assigned to: 26557 Logan Brosemer

Reviewed by: WS2591 11/24/18 Start Date: 4-24-18 Start time: 8:15

Tech 1: LMB 26557 Tech 2:

18113WAN026

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9558699MS	R0604	247	SS1811026A	1.0	MS1811126A ~~MS1811326B~~	1.0 1.0	1	✓	✓	153B	Clear
9558700MSD	R0604	246	SS1811026A	1.0	MS1811126A ~~MS1811326B~~	1.0 1.0	1	✓	✓	153B	Clear
BLANKA	SBLKWN113	250	SS1811026A	1.0	—	—	1	✓	✓		Tap H_2O
LCSA	113WNLCS	250	SS1811026A	1.0	MS1811126A ~~MS1811326B~~	1.0 1.0	1	✓	✓		Tap H_2O
LCSAPI	113WNLCS	250	SS1811026A	1.0	MS1811026A ~~MS1811326C~~	0.25 1.0	1	✓	✓		Tap H_2O
LCSDAPI	113WNLCSD	250	SS1811026A	1.0	MS1811026A ~~MS1811326C~~	0.25 1.0	1	✓	✓		Tap H_2O

Solvent Used	Lot No.
10N NaOH	4208800
Methylene Chloride	181348
Sodium Sulfate	18111A
Sulfuric Acid	179162

(8B) Sample moved to 18113WAE026. See attached for extraction info. WS 2591 4/24/18

MS181107260 (A) LMB26557 4-24-18

MS181012 6D (8A) LMB26557 4-24-18

Spike Solutions: Witness:

~~MS1811326C~~	APPIX #1 MINI SPIKE
MS1811026A	APPIX MIX #2
MS1811126A	MINI SEP. LCS SPIKE #1
~~MS1811326B~~	MINI SEP. LCS SPIKE #2
SS1811026A	MINI SEP. BNA SURROGATE

	Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
1	9558698BKGR	R0604	231	SS1811026A	1.0	1	✓	✓	153B	Clear	14241	27090	04/26/2018	N
2	9558702 R	R0605	227	SS1811026A	1.0	1	✓	✓	153B	Clear	14241	27090	04/26/2018	N
(8B) 3	9569240	T1515	243	SS1811026A	1.0	1	✓	✓	153A	Muddy	14241	26654	05/02/2018	N

4-24-18

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10A

Bench#	Bench#	Bench#		
Rack ID:	—	Work Station	Tumble	Micro Temp 100? —
Internal Standard	RVISTD1038	Balance #	25996	

R-VAP ID3	90 C	R-VAP ID4	90 C	R-VAP ID	C			18113WAN026
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9558695	16C1	X		1	
9558696	16MW8	X		1	
9558697	16MW9	X		1	
9558698	16WC1A	X		1	Background/Unspiked
9558699	16WC1A MS	X		1	Matrix Spike
9558701	16WC1A DUP	X		1	Duplicate
9558702	16WDUP	X		1	Field Duplicate Sample
9558703	16WC1B	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

(Sample number(s): 9558696: Analysis: 08255-Total Cyanide (water)
The holding time was not met. The sample was originally analyzed on 4/20/2018, but the laboratory control standard (LCS) was out of specification at 73%. The sample was re-prepped and re-analyzed on 4/24/2018, but the LCS was out of specification again (89%). The sample was re-prepped and re-analyzed once more on 4/26/2018 with an acceptable LCS. The result for all three trials was non-detect. The initial trial is being reported.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 18108117101A (Sample number(s): 9558696)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: Total Cyanide (water)

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Draper Aden Associates, Inc.
SDG: RAF06

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
Total Cyanide (water)	18108117101A	P10817AB	04/20/2018 11:18:00
		P10817AQ	04/20/2018 11:16:00
		9558696	04/20/2018 11:19:00
Total Cyanide (water)	18115117101A	P11517AB	04/26/2018 16:21:00
		P11517AQ	04/26/2018 16:20:00
		9558695	04/26/2018 16:36:00
		9558697	04/26/2018 16:39:00
		9558702	04/26/2018 16:40:00
Total Cyanide (water)	18115117101B	9558698 UNSPK/BKG, MSD	04/26/2018 16:41:00
		9558698 MSD	04/28/2018 12:16:00
		9558699 MS	04/26/2018 16:43:00
		9558701 DUP	04/26/2018 16:44:00
		9558703	04/26/2018 16:45:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: RAF06
Matrix: LIQUID

Fraction: Instrumental Wet Chemistry

18108117101A / P10817AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Cyanide (water)	AK	04/20/18	N.D.	mg/l	0.0050	0.010

18115117101A / P11517AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Cyanide (water)	AK	04/26/18	N.D.	mg/l	0.0050	0.010

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

UNSPK: 9558698 MS: 9558699 MSD: 9558698 **Parameter**	Batch: **18115117101B** (Sample number(s): 9558698-9558699, 9558701, 9558703) **ME**	**Spike Added mg/l**	**Unspiked Conc mg/l**	**MS Conc mg/l**	**MSD Conc mg/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	0.200	N.D.	0.192	0.164	96	82	72-114	16	20

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

BKG: 9558698 DUP: 9558701	Batch: **18115117101B** (Sample number(s): 9558698-9558699, 9558701, 9558703)				
Parameter	**ME**	**Unspiked Conc mg/l**	**DUP Conc mg/l**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	N.D.	N.D.	0 (1)	20

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

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Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF06
Matrix: LIQUID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: P10817AQ	Batch: **18108117101A** (Sample number(s): 9558696)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	0.200	0.169	NA	84 *	NA	90-110	NA	NA

LCS: P11517AQ	Batch: **18115117101A** (Sample number(s): 9558695, 9558697, 9558702) Batch: **18115117101B** (Sample number(s): 9558698-9558699, 9558701, 9558703)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Cyanide (water)	AK	0.200	0.198	NA	99	NA	90-110	NA	NA

Instrument ID: 07343
Calibration Date: 04/20/2018

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	AUTO CAL7	CC
Total Cyanide	124042.6000	74047.3000	38263.1000	19682.2000	9178.7000	5228.5000	2077.7000	0.9996

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < MDL

Concentration units: mg/L

Batch Numbers: 18108117101A
Run Start Dates: 04/20/2018
Run Names: 1811001C07

Sample	Total Cyanide		
	True	Result	%Rec
ICV	0.15	0.14600	97
ICB	0	ND	NA
CCV2	0.15	0.14950	100
CCB 2	0	ND	NA
CCV2	0.15	0.14370	96
CCB 3	0	ND	NA

* = Out of Specifications

Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/SCN

SDG: RAF06

Instrument ID: 07343
Calibration Date: 04/26/2018

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	AUTO CAL7	CC
Total Cyanide	124074.3000	74482.1000	37227.8000	18473.3000	7440.0000	3939.2000	347.0000	0.9993

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < MDL

Concentration units: mg/L

Batch Numbers: 18115117101A, 18115117101B
Run Start Dates: 04/26/2018
Run Names: 1811602C07

	Total Cyanide		
Sample	True	Result	%Rec
ICV	0.15	0.14340	96
ICB	0	ND	NA
CCV2	0.15	0.15060	100
CCB 1	0	ND	NA
CCV2	0.15	0.14610	97
CCB 2	0	ND	NA

* = Out of Specifications

Instrument ID: 07343
Calibration Date: 04/28/2018

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	AUTO CAL7	CC
Total Cyanide	122821.7000	72832.5000	36505.7000	18112.8000	7277.6000	3920.9000	198.6000	0.9996

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < MDL

Concentration units: mg/L

Batch Numbers: 18115117101B
Run Start Dates: 04/28/2018
Run Names: 1811801C07

	Total Cyanide		
Sample	True	Result	%Rec
ICV	0.15	0.15280	102
ICB	0	ND	NA
CCV2	0.15	0.15280	102
CCB 3	0	ND	NA
CCV2	0.15	0.15030	100
CCB 4	0	ND	NA

* = Out of Specifications

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LOQ/MDL Summary
Instrumental Water Quality

SDG: RAF06

Fraction: Instrumental Wet Chemistry

08255: Total Cyanide (water) Analyte Name	Default MDL	Default LOQ	Units
Total Cyanide (water)	0.0050	0.010	mg/l

Raw Data

Instrumental Wet Chemistry

Instrumental Water Quality Report

Analyte: Total Cyanide
Run Start Date/Time: 4/20/2018 10:26:02AM
Instrument Name: 07343

Calibration Information

Curve Information Location:
Book # 261181
Page # 4

Sample Names	Volts	Detected Result	True Result
S1	2077.7000	~~0.00000~~ -0.0008	-
S2	5228.5000	0.01000 0.0082	0.01
S3	9178.7000	0.02000 0.0195	0.02
S4	19682.2000	0.05000 0.0494	0.05
S5	38263.1000	0.10000 0.1024	0.1
S6	74047.3000	0.20000 0.2044	0.2
S7	124042.6000	~~0.35000~~ 0.3470	0.35

Number of Calibrants: 7

③ BW9932 4/20/18

Correlation Coefficient: 0.99961
Y-Intercept: -0.00672
Slope: 0.00000

QC Information

QC Names	Units	True Values	QC Ranges
ICV	mg/L	0.15	0.13425 - 0.165
ICB/CCB	mg/L	0	0 - 0.005
CCV2	mg/L	0.15	0.13425 - 0.165
PB Soils	mg/kg	0	0 - 0.005
PB Waters	mg/L	0	0 - 0.005
LCS Soils	mg/kg	1000	765 - 1 134
LCS Waters	mg/L	0.15	0.1343 - 0.165
LCS Waters	mg/L	0.2	0.159 - 0.24

Analyst: BW9932 Date: 4/20/18

Verifier: EF/CS Date: 4/21/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
SYNC	1			4/20/2018 10:26:02AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		127647.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CARRYOV	2			4/20/2018 10:27:22AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		797.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	3			4/20/2018 10:28:42AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		244.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S7	4			4/20/2018 10:30:02AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.35000	0.3470	124042.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S6	5			4/20/2018 10:31:22AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.20000	0.2044	74047.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S5	6			4/20/2018 10:32:42AM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.10000	0.1024	38263.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S4	7			4/20/2018 10:34:02AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.05000	0.0494	19682.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S3	8			4/20/2018 10:35:22AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.02000	0.0195	9178.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S2	9			4/20/2018 10:36:42AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01000	0.008L	5228.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S1	10			4/20/2018 10:38:02AM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	-0.0008	2077.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	11			4/20/2018 10:39:22AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580		318.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	12			4/20/2018 10:40:42AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		212.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICV	13			4/20/2018 10:42:02AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14600		53547.50	1.0000	1.0	1	97	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICB	14			4/20/2018 10:43:22AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620		199.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	15	Q	18109102101A	4/20/2018 10:44:42AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.18850	0.189	68454.70	50.0000	50.0	1	94	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	16	B	18109102101A	4/20/2018 10:46:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00380	-0.004	1017.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555122	17		18109102101A	4/20/2018 10:47:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00590	-0.006	275.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563836	18		18109102101A	4/20/2018 10:48:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00500	-0.005	592.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562619	19	U	18109102101A	4/20/2018 10:50:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.006	226.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562619	20	D	18109102101A	4/20/2018 10:51:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00560	-0.006	387.40	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562619	21	R	18109102101A	4/20/2018 10:52:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19610	0.196	71138.30	50.0000	50.0	1	98	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562542	22		18109102101A	4/20/2018 10:54:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00430	-0.004	842.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562543	23		18109102101A	4/20/2018 10:55:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00500	-0.005	610.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562544	24		18109102101A	4/20/2018 10:56:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00370	-0.004	1065.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	25			4/20/2018 10:58:03AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14800		54265.70	1.0000	1.0	1	99	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 1	26			4/20/2018 10:59:23AM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630		164.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562622	27		18109102101A	4/20/2018 11:00:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00530	-0.005	493.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562625	28		18109102101A	4/20/2018 11:02:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00400	-0.004	941.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562628	29		18109102101A	4/20/2018 11:03:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.006	364.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9562631	30		18109102101A	4/20/2018 11:04:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.006	343.00	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	31	Q	18110114101A	4/20/2018 11:06:03AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.14640	0.146	53715.90	1.0000	1.0	1	98	0.15	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	32	B	18110114101A	4/20/2018 11:07:23AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00240	-0.002	1524.10	1.0000	1.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555518	33	U	18110114101A	4/20/2018 11:08:43AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00410	-0.004	918.80	1.0000	1.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555518	34	D	18110114101A	4/20/2018 11:10:03AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00070	-0.001	2114.10	1.0000	1.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555518	35	R	18110114101A	4/20/2018 11:11:23AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.18980	0.190	68912.30	1.0000	1.0	1	95	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555519	36		18110114101A	4/20/2018 11:12:43AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00180	-0.002	1735.70	1.0000	1.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	37			4/20/2018 11:14:03AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14950		54775.30	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 2	38			4/20/2018 11:15:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00450		774.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	39	Q	18108117101A	4/20/2018 11:16:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.16850	0.169	61442.70	50.0000	50.0	1			☐

Comments: Analyst Decision or failed QC Review Low recovery. Batch being re-prepped

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	40	B	18108117101A	4/20/2018 11:18:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00510	-0.005	556.80	50.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558696	41		18108117101A	4/20/2018 11:19:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.006	259.40	50.0000	50.0	1	☐

Comments: Analyst Decision Batch being re-prepped.

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558576	42		18108117101A	4/20/2018 11:20:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00590	-0.006	302.50	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558570	43	U	18108117101A	4/20/2018 11:22:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.006	165.60	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558571	44	R	18108117101A	4/20/2018 11:23:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19270	0.193	69925.00	50.0000	50.0	1	96	0.2	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558573	45	D	18108117101A	4/20/2018 11:24:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00520	-0.005	531.90	50.0000	50.0	1	0	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558574	46		18108117101A	4/20/2018 11:26:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00540	-0.005	468.80	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558575	47		18108117101A	4/20/2018 11:27:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.006	206.50	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558577	48		18108117101A	4/20/2018 11:28:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.006	364.50	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	49			4/20/2018 11:30:03AM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14370		52751.50	1.0000	1.0	1	96	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 3	50			4/20/2018 11:31:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		251.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558583	51		18108117101A	4/20/2018 11:32:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580	-0.006	323.50	50.0000	50.0	1	☐

Comments: Analyst Decision Batch being re-prepped

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558578	52		18108117101A	4/20/2018 11:34:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.006	375.00	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558695	53		18108117101A	4/20/2018 11:35:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.006	171.20	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558697	54		18108117101A	4/20/2018 11:36:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630	-0.006	140.90	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558698	55	U	18108117101B	4/20/2018 11:38:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.006	189.20	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558699	56	R	18108117101B	4/20/2018 11:39:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19900	0.199	72163.50	50.0000	50.0	1	100	0.2	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558701	57	D	18108117101B	4/20/2018 11:40:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00560	-0.006	387.00	50.0000	50.0	1	0	☐

Comments: Analyst Decision Being re-prepped

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558702	58		18108117101B	4/20/2018 11:42:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00560	-0.006	398.90	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558703	59		18108117101B	4/20/2018 11:43:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.006	171.70	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561305	60		18108117101B	4/20/2018 11:44:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.006	189.50	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	61			4/20/2018 11:46:03AM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14680		53842.00	1.0000	1.0	1	98	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 4	62			4/20/2018 11:47:23AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		260.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561306	63		18108117101B	4/20/2018 11:48:43AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.006	269.60	50.0000	50.0	1	☐

Comments: Analyst Decision Being re-prepped

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561307	64		18108117101B	4/20/2018 11:50:03AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.006	246.00	50.0000	50.0	1	☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	65	Q	18109102102A	4/20/2018 11:51:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.18160	0.182	66049.70	50.0000	50.0	1	91	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	66	B	18109102102A	4/20/2018 11:52:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00510	-0.005	568.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563358	67		18109102102A	4/20/2018 11:54:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00550	-0.006	427.50	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563720	68		18109102102A	4/20/2018 11:55:23AM	QCG70	TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.04910	0.049	19584.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563955	69		18109102102A	4/20/2018 11:56:43AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00480	-0.005	682.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9564778	70		18109102102A	4/20/2018 11:58:03AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00470	-0.005	692.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9564929	71		18109102102A	4/20/2018 11:59:23AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00560	-0.006	408.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565257	72		18109102102A	4/20/2018 12:00:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00530	-0.005	510.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	73			4/20/2018 12:02:04PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14430		52960.60	1.0000	1.0	1	96	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 5	74			4/20/2018 12:03:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		266.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565259	75		18109102102A	4/20/2018 12:04:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00560	-0.006	402.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565261	76		18109102102A	4/20/2018 12:06:04PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00550	-0.006	427.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565263	77		18109102102A	4/20/2018 12:07:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00480	-0.005	685.50	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565265	78	U	18109102102A	4/20/2018 12:08:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580	-0.006	308.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565265	79	R	18109102102A	4/20/2018 12:10:04PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.18650	0.186	67764.50	50.0000	50.0	1	93	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565265	80	D	18109102102A	4/20/2018 12:11:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00500	-0.005	591.50	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565267	81	U	18109102102B	4/20/2018 12:12:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00540	-0.005	452.50	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565267	82	R	18109102102B	4/20/2018 12:14:04PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.21250	0.213	76884.00	50.0000	50.0	1	106	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9565267	83	D	18109102102B	4/20/2018 12:15:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00450	-0.005	768.30	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566138	84		18109102102B	4/20/2018 12:16:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00290	-0.003	1338.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	85			4/20/2018 12:18:04PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15020		55017.90	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 6	86			4/20/2018 12:19:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		246.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566222	87		18109102102B	4/20/2018 12:20:44PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00520	-0.005	532.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	88	B	18110104201A	4/20/2018 12:22:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630	-0.315	131.60	10.0000	500.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	89	Q	18110104201A	4/20/2018 12:23:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	SPK	Verified
0.14354	932.984	52696.90	10.0000	260.0	250	1000	☑

Comments: Analyst Decision or failed QC Review

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	90	Q	18110104201A	4/20/2018 12:24:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.03859	19.295	15889.60	10.0000	500.0	10	95	1000	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558775	91		18110104201A	4/20/2018 12:26:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.284	342.00	10.0200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558778	92		18110104201A	4/20/2018 12:27:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.298	201.50	10.2200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558781	93		18110104201A	4/20/2018 12:28:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.291	245.70	10.3200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558784	94		18110104201A	4/20/2018 12:30:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.296	212.90	10.2900	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558787	95		18110104201A	4/20/2018 12:31:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.298	260.30	10.0700	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558790	96		18110104201A	4/20/2018 12:32:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.293	227.30	10.4000	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	97			4/20/2018 12:34:04PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15150		55488.70	1.0000	1.0	1	101	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 7	98			4/20/2018 12:35:24PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630		150.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558793	99		18110104201A	4/20/2018 12:36:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.301	193.50	10.2900	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558796	100		18110104201A	4/20/2018 12:38:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620	-0.309	167.70	10.0200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558799	101		18110104201A	4/20/2018 12:39:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.294	205.70	10.3900	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558802	102		18110104201A	4/20/2018 12:40:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.298	218.10	10.2200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558805	103		18110104201A	4/20/2018 12:42:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650	-0.317	79.10	10.2400	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558808	104		18110104201A	4/20/2018 12:43:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00660	-0.328	54.20	10.0600	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558811	105		18110104201A	4/20/2018 12:44:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00660	-0.325	55.10	10.1600	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558814	106		18110104201A	4/20/2018 12:46:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00690	-0.336	-56.80	10.2700	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558817	107		18110104201A	4/20/2018 12:47:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00700	-0.343	-97.80	10.1900	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558820	108		18110104201A	4/20/2018 12:48:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00690	-0.336	-54.30	10.2700	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	109			4/20/2018 12:50:04PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15030		55084.90	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 8	110			4/20/2018 12:51:24PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		243.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558823	111		18110104201A	4/20/2018 12:52:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630	-0.306	146.50	10.3000	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558826	112	U	18110104201A	4/20/2018 12:54:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650	-0.320	76.10	10.1600	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558826	113	R	18110104201A	4/20/2018 12:55:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.05790	14.247	22662.30	10.1600	500.0	5	1 (6)	1000	☑

Comments: 0 11/6/18 11/8

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558826	114	M	18110104201A	4/20/2018 12:56:44PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.04134	10.223	16857.40	10.1100	500.0	5	1 (6)	1000	☑

Comments: 0 11/6 11/21/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558829	115		18110104201A	4/20/2018 12:58:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.279	348.40	10.2300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558832	116		18110104201A	4/20/2018 12:59:24PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.300	231.30	10.1500	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	117	Q	18108117101A	4/20/2018 1:00:44PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.17420	0.174	63455.10	50.0000	50.0	1			☐

Comments: Analyst Decision Batch being re-prepped

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	118	Q	18108117101A	4/20/2018 1:02:04PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.17510	0.175	63778.10	50.0000	50.0	1			☐

Comments: Analyst Decision

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	119	Q	18110117101A	4/20/2018 1:03:24PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20070	0.201	72760.40	50.0000	50.0	1	100	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	120	B	18110117101A	4/20/2018 1:04:44PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	2014.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	121			4/20/2018 1:06:04PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14910		54641.10	1.0000	1.0	1	99	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 9	122			4/20/2018 1:07:24PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		210.40	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558578	123	U	18110117101A	4/20/2018 1:08:44PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00370	-0.004	1072.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558578	124	D	18110117101A	4/20/2018 1:10:04PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00570	-0.006	370.70	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558578	125	R	18110117101A	4/20/2018 1:11:24PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19110	0.191	69366.10	50.0000	50.0	1	96	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566583	126		18110117101A	4/20/2018 1:12:44PM	LVE07	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00270	-0.003	1413.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566584	127		18110117101A	4/20/2018 1:14:04PM	LVE07	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00420	-0.004	886.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566585	128		18110117101A	4/20/2018 1:15:24PM	LVE07	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.006	237.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9567319	129		18110117101A	4/20/2018 1:16:44PM	SLB19	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00550	-0.006	432.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9567320	130		18110117101A	4/20/2018 1:18:04PM	SLB19	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00490	-0.005	652.50	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9567321	131		18110117101A	4/20/2018 1:19:24PM	SLB19	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00590	-0.006	296.00	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9567322	132		18110117101A	4/20/2018 1:20:44PM	SLB19	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00500	-0.005	600.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	133			4/20/2018 1:22:04PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14860		54468.10	1.0000	1.0	1	99	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 10	134			4/20/2018 1:23:24PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630		158.40	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555573	135		18110117101A	4/20/2018 1:24:45PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01360	0.014	7139.00	50.0000	50.0	1	☑

Comments: Analyst Decision or failed QC Review ~~Completed in parallax~~

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555568	136		18110117101A	4/20/2018 1:26:04PM	4/21/18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01250	0.013	6750.10	50.0000	50.0	1	☑

Comments: Analyst Decision or failed QC Review ~~verified in parallax~~

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	137	Q	18110115101A	4/20/2018 1:27:25PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20410	0.204	73937.40	50.0000	50.0	1	102	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	138	B	18110115101A	4/20/2018 1:28:45PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00170	-0.002	1759.50	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566583	139	U	18110115101A	4/20/2018 1:30:05PM	LVE07	WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00410	-0.004	930.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566583	140	D	18110115101A	4/20/2018 1:31:25PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00400	-0.004	943.60	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566583	141	R	18110115101A	4/20/2018 1:32:45PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.18160	0.182	66062.40	50.0000	50.0	1	91	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566584	142		18110115101A	4/20/2018 1:34:05PM	LVE07	WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00230	-0.002	1538.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9566585	143		18110115101A	4/20/2018 1:35:25PM	LVE07	WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00530	-0.005	506.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	144			4/20/2018 1:36:45PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01800		8670.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	145			4/20/2018 1:38:05PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15140		55457.30	1.0000	1.0	1	101	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 11	146			4/20/2018 1:39:25PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		219.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	147			4/20/2018 1:40:45PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		230.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	148			4/20/2018 1:42:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00640		104.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	149			4/20/2018 1:43:25PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00640		109.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	150			4/20/2018 1:44:45PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630		163.40	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	151			4/20/2018 1:46:05PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650		94.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	152			4/20/2018 1:47:25PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650		91.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	153			4/20/2018 1:48:45PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650		88.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	154			4/20/2018 1:50:05PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630		161.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	155			4/20/2018 1:51:25PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00640		117.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	156			4/20/2018 1:52:45PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620		198.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	157			4/20/2018 1:54:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620		176.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	158			4/20/2018 1:55:25PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00620		192.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	159			4/20/2018 1:56:45PM		FCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		205.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	160			4/20/2018 1:58:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580		309.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	161			4/20/2018 1:59:25PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600		246.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	162			4/20/2018 2:00:45PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570		358.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	163			4/20/2018 2:02:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570		368.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	164			4/20/2018 2:03:25PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580		337.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	165			4/20/2018 2:04:45PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00590		280.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	166			4/20/2018 2:06:05PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14820		54334.40	1.0000	1.0	1	99	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 12	167			4/20/2018 2:07:25PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610		210.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	168	B	18110104202A	4/20/2018 2:08:45PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00660	-0.330	31.50	10.0000	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	169	Q	18110104202A	4/20/2018 2:10:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	SPK	Verified
0.14246	926.016	52321.00	10.0000	260.0	250	1000	☑

Comments: Analyst Decision or failed QC Review

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	170	Q	18110104202A	4/20/2018 2:11:25PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.05608	28.040	22026.00	10.0000	500.0	10	95	1000	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9554879	171		18110104202A	4/20/2018 2:12:45PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00600	-0.291	261.90	10.3200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9553558	172		18110104202A	4/20/2018 2:14:05PM	GDP79	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650	-0.324	90.30	10.0300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9553576	173		18110104202A	4/20/2018 2:15:25PM	GDP80	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00660	-0.319	51.70	10.3300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9553733	174		18110104202A	4/20/2018 2:16:45PM	SFF44	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00670	-0.323	19.60	10.3600	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9554670	175		18110104202A	4/20/2018 2:18:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00630	-0.313	151.30	10.0800	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555119	176		18110104202A	4/20/2018 2:19:25PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00650	-0.312	70.00	10.4300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9555676	177		18110104202A	4/20/2018 2:20:45PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00610	-0.296	226.90	10.2900	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	178			4/20/2018 2:22:05PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14950		54789.50	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 13	179			4/20/2018 2:23:26PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00540		449.40	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560451	180		18110104202A	4/20/2018 2:24:45PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00570	-0.276	342.50	10.3300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561155	181		18110104202A	4/20/2018 2:26:05PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00580	-0.287	324.80	10.1200	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563716	182	U	18110104202A	4/20/2018 2:27:25PM	AGV46	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00550	-0.264	439.00	10.4300	500.0	1	☑

Comments: MS 4/20/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563716	183	R	18110104202A	4/20/2018 2:28:46PM	AGV46	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec (2)	SPK	Verified
0.06820	16.505	26275.70	10.3300	500.0	5	120	1000	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9563716	184	M	18110104202A	4/20/2018 2:30:06PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.12380	30.019	45773.80	10.3100	500.0	5	120	1000	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9567510	185		18110104202A	4/20/2018 2:31:26PM	EMK49	RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00380	-0.185	1019.30	10.2800	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560577	186		18110104202A	4/20/2018 2:32:46PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00380	-0.187	1015.50	10.1800	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560581	187		18110104202A	4/20/2018 2:34:06PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00350	-0.171	1112.20	10.2300	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560585	188		18110104202A	4/20/2018 2:35:26PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00330	-0.162	1182.70	10.1600	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560589	189		18110104202A	4/20/2018 2:36:46PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00340	-0.168	1175.20	10.1400	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	190			4/20/2018 2:38:06PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15130		55420.10	1.0000	1.0	1	101	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 14	191			4/20/2018 2:39:26PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00670		0.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9560593	192		18110104202A	4/20/2018 2:40:46PM		RCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00760	-0.371	-302.00	10.2500	500.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	193			4/20/2018 2:42:06PM		WCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15130		55412.10	1.0000	1.0	1	101	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 15	194			4/20/2018 2:43:26PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00080		2082.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	195			4/20/2018 2:44:46PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00280		1363.90	1.0000	1.0	1	☐

Comments:

FlowView - Result

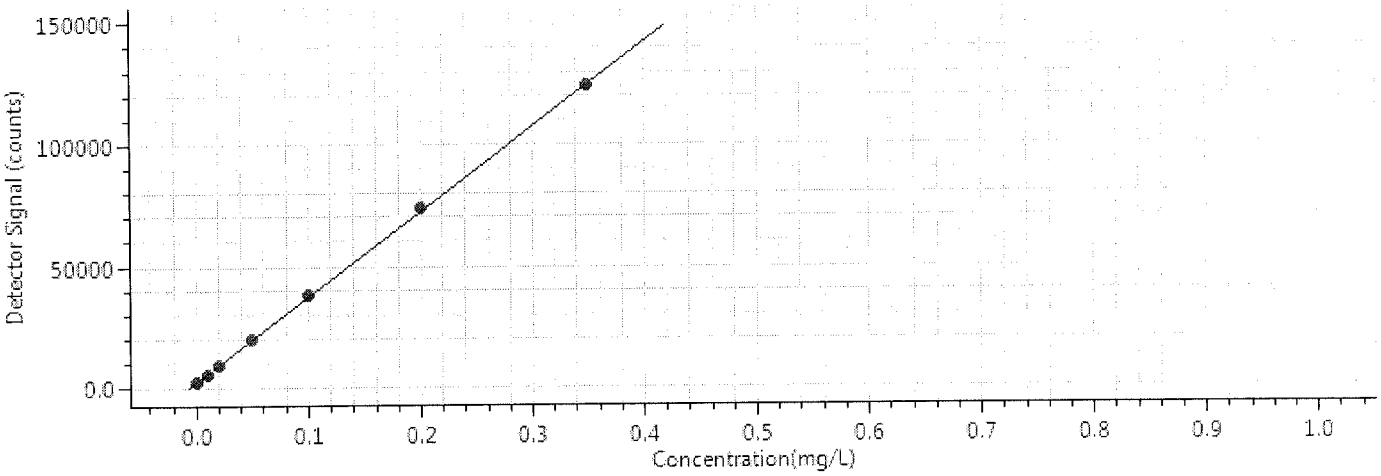
InstrumentID: B632837343
Operator ID: 9932
File Version: 110
Created On: 4/20/2018 10:25:48 AM
Last Modified On: 4/20/2018 2:55:20 PM
Exported on 4/20/2018 3:04:43 PM

Calibration Results - Channel2

Calibration Summary

Curve Fit: =	Linear		
R^2: =	0.99960845	a: =	n/a
RF: =	2.851347E-006	b: =	n/a
Offset:	-0.00672131	c:	n/a
HLCAVG:	0.00000000	LHCAVG:	0.00000000

Calibration Details



Name	Type	Std Conc(mg/L)	Avg Height	Calc Avg Conc(mg/L)	%RSD	Flags	Date/Time
S1	STD1	0.0000	2077.7	-0.0008	0.0		04/20/2018 10:38:02 AM
S2	STD2	0.0100	5228.5	0.0082	0.0		04/20/2018 10:36:42 AM
S3	STD3	0.0200	9178.7	0.0195	0.0		04/20/2018 10:35:22 AM
S4	STD4	0.0500	19682.2	0.0494	0.0		04/20/2018 10:34:02 AM
S5	STD5	0.1000	38263.1	0.1024	0.0		04/20/2018 10:32:42 AM
S6	STD6	0.2000	74047.3	0.2044	0.0		04/20/2018 10:31:22 AM
S7	STD7	0.3500	124042.6	0.3470	0.0		04/20/2018 10:30:02 AM

FlowView - Result

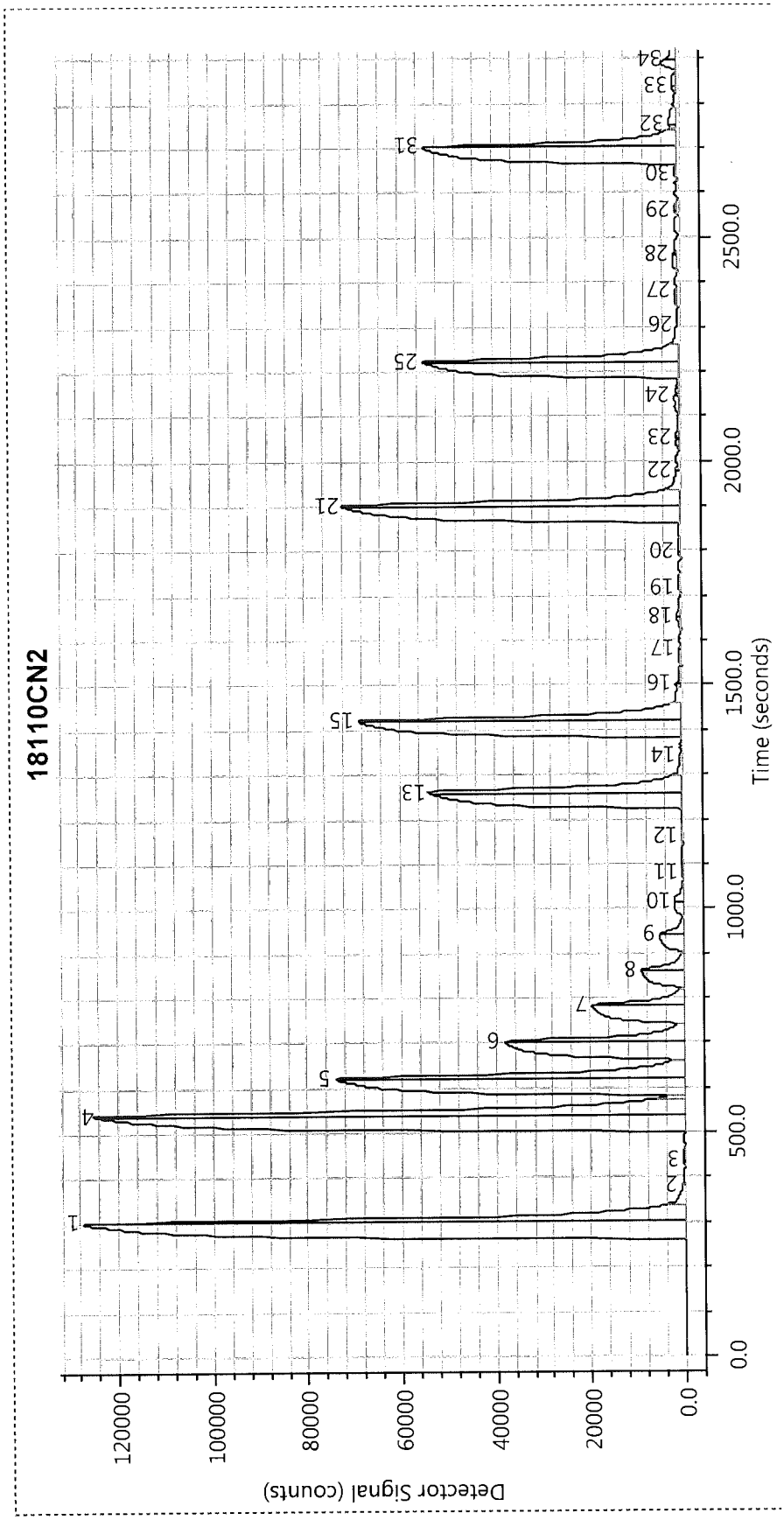
InstrumentID: B632837343
Operator ID: 9932
Methodology: EPA 3247.1 2009
File Version: 110
Created On: 4/20/2018 10:25:48 AM
Last Modified On: 4/20/2018 2:55:20 PM
Exported on 4/20/2018 3:02:23 PM

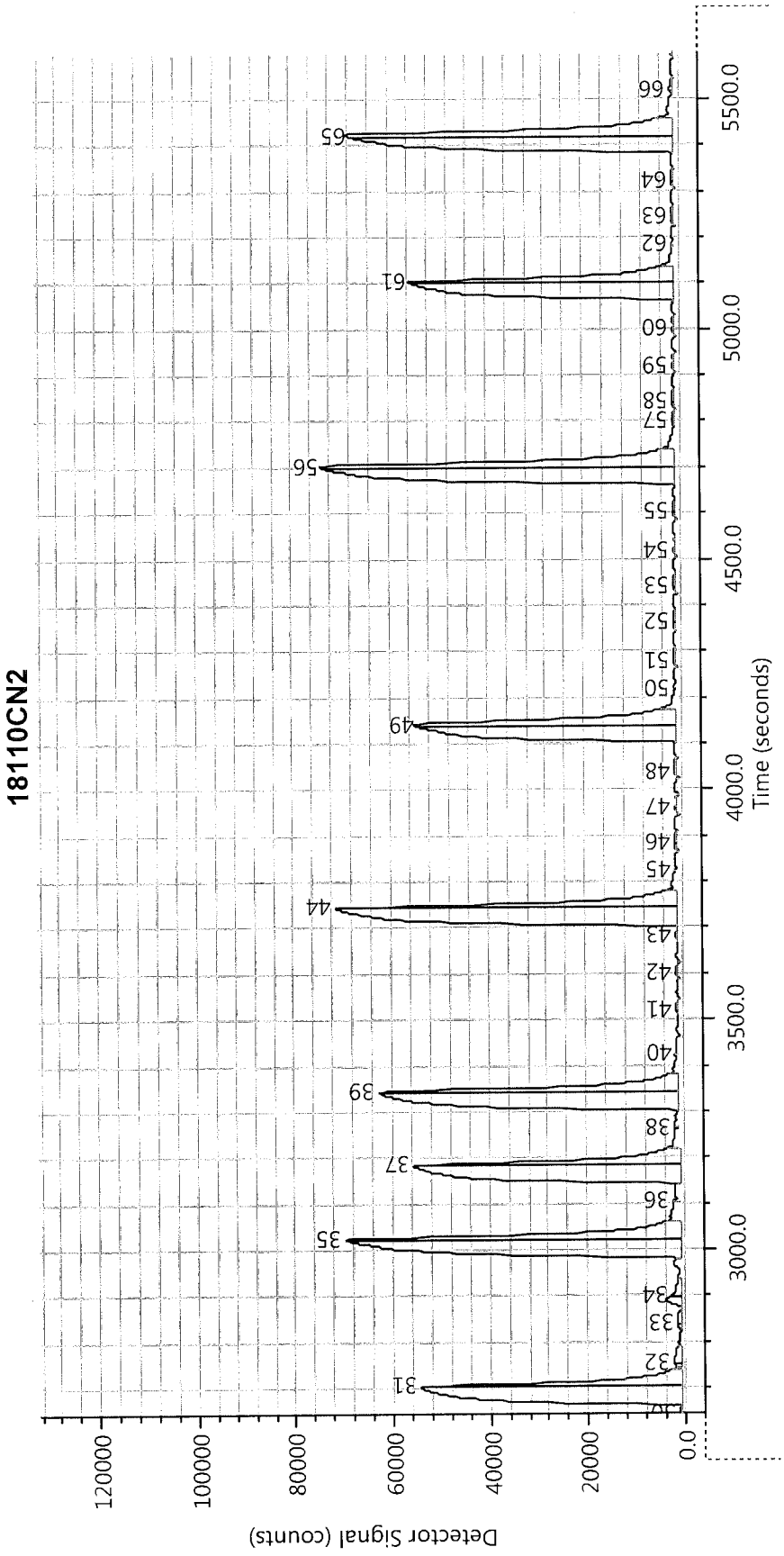
Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel R
4/20/2018 10:26:02 AM	1	107	SYNC	0.0000	1	127647.5	1		Ch 2
4/20/2018 10:27:22 AM	2	900	CARRYOVER	0.0000	1	797.9	1		Ch 2
4/20/2018 10:28:42 AM	3	900	BLANK	0.0000	1	244.6	1		Ch 2
4/20/2018 10:30:02 AM	4	107	S7	0.3500	1	124042.6	1		Ch 2
4/20/2018 10:31:22 AM	5	106	S6	0.2000	1	74047.3	1		Ch 2
4/20/2018 10:32:42 AM	6	105	S5	0.1000	1	38263.1	1		Ch 2
4/20/2018 10:34:02 AM	7	104	S4	0.0500	1	19682.2	1		Ch 2
4/20/2018 10:35:22 AM	8	103	S3	0.0200	1	9178.7	1		Ch 2
4/20/2018 10:36:42 AM	9	102	S2	0.0100	1	5228.5	1		Ch 2
4/20/2018 10:38:02 AM	10	101	S1	0.0000	1	2077.7	1		Ch 2
4/20/2018 10:39:22 AM	11	900	RINSE	-0.0058	1	318.9	1		Ch 2
4/20/2018 10:40:42 AM	12	900	BLANK	-0.0061	1	212.7	1		Ch 2
4/20/2018 10:42:02 AM	13	115	ICV	0.1460	1	53547.5	1		Ch 2
4/20/2018 10:43:22 AM	14	900	ICB	-0.0062	1	199.7	1		Ch 2
4/20/2018 10:44:42 AM	15	131	LCSW	0.1885	1	68454.7	1		Ch 2
4/20/2018 10:46:03 AM	16	132	PBW	-0.0038	1	1017.8	1		Ch 2
4/20/2018 10:47:23 AM	17	133	9555122	-0.0059	1	275.3	1		Ch 2
4/20/2018 10:48:43 AM	18	134	9563836	-0.0050	1	592.4	1		Ch 2
4/20/2018 10:50:03 AM	19	135	9562619;U	-0.0061	1	226.7	1		Ch 2
4/20/2018 10:51:23 AM	20	136	9562619;D	-0.0056	1	387.4	1		Ch 2
4/20/2018 10:52:43 AM	21	137	9562619;R	0.1961	1	71138.3	1		Ch 2
4/20/2018 10:54:03 AM	22	138	9562542	-0.0043	1	842.8	1		Ch 2
4/20/2018 10:55:23 AM	23	139	9562543	-0.0050	1	610.2	1		Ch 2
4/20/2018 10:56:43 AM	24	140	9562544	-0.0037	1	1065.9	1		Ch 2
4/20/2018 10:58:03 AM	25	115	CCV2	0.1480	1	54265.7	1		Ch 2
4/20/2018 10:59:23 AM	26	900	CCB	-0.0063	1	164.0	1		Ch 2
4/20/2018 11:00:43 AM	27	141	9562622	-0.0053	1	493.3	1		Ch 2
4/20/2018 11:02:03 AM	28	142	9562625	-0.0040	1	941.2	1		Ch 2
4/20/2018 11:03:23 AM	29	143	9562628	-0.0057	1	364.9	1		Ch 2
4/20/2018 11:04:43 AM	30	144	9562631	-0.0057	1	343.0	1		Ch 2
4/20/2018 11:06:03 AM	31	145	LCSW	0.1464	1	53715.9	1		Ch 2
4/20/2018 11:07:23 AM	32	146	PBW	-0.0024	1	1524.1	1		Ch 2
4/20/2018 11:08:43 AM	33	147	9555518;U	-0.0041	1	918.8	1		Ch 2
4/20/2018 11:10:03 AM	34	148	9555518;D	-0.0007	1	2114.1	1		Ch 2
4/20/2018 11:11:23 AM	35	149	9555518;R	0.1898	1	68912.3	1		Ch 2
4/20/2018 11:12:43 AM	36	150	9555519	-0.0018	1	1735.7	1		Ch 2
4/20/2018 11:14:03 AM	37	115	CCV2	0.1495	1	54775.3	1		Ch 2
4/20/2018 11:15:23 AM	38	900	CCB	-0.0045	1	774.3	1		Ch 2
4/20/2018 11:16:43 AM	39	151	LCSW	0.1685	1	61442.7	1		Ch 2
4/20/2018 11:18:03 AM	40	152	PBW	-0.0051	1	556.8	1		Ch 2
4/20/2018 11:19:23 AM	41	153	9558696	-0.0060	1	259.4	1		Ch 2
4/20/2018 11:20:43 AM	42	154	9558576	-0.0059	1	302.5	1		Ch 2
4/20/2018 11:22:03 AM	43	155	9558570;U	-0.0062	1	165.6	1		Ch 2
4/20/2018 11:23:23 AM	44	156	9558571;R	0.1927	1	69925.0	1		Ch 2
4/20/2018 11:24:43 AM	45	157	9558573;D	-0.0052	1	531.9	1		Ch 2
4/20/2018 11:26:03 AM	46	158	9558574	-0.0054	1	468.8	1		Ch 2
4/20/2018 11:27:23 AM	47	159	9558575	-0.0061	1	206.5	1		Ch 2
4/20/2018 11:28:43 AM	48	160	9558577	-0.0057	1	364.5	1		Ch 2
4/20/2018 11:30:03 AM	49	115	CCV2	0.1437	1	52751.5	1		Ch 2

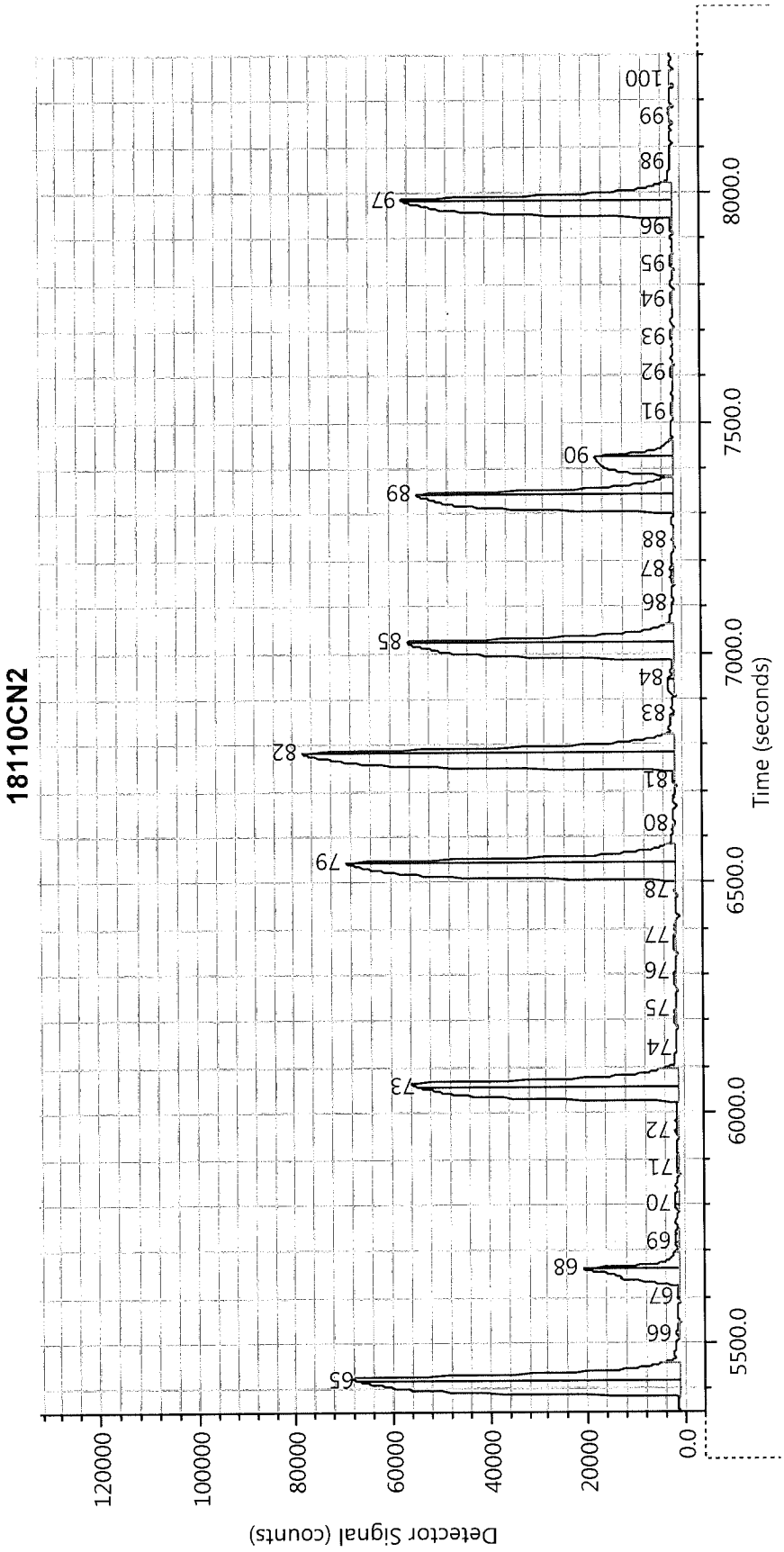
Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel R
4/20/2018 11:31:23 AM	50	900	CCB	-0.0060	1	251.6	1		Ch 2
4/20/2018 11:32:43 AM	51	161	9558583	-0.0058	1	323.5	1		Ch 2
4/20/2018 11:34:03 AM	52	162	9558578	-0.0057	1	375.0	1		Ch 2
4/20/2018 11:35:23 AM	53	163	9558695	-0.0062	1	171.2	1		Ch 2
4/20/2018 11:36:43 AM	54	164	9558697	-0.0063	1	140.9	1		Ch 2
4/20/2018 11:38:03 AM	55	165	9558698;U	-0.0062	1	189.2	1		Ch 2
4/20/2018 11:39:23 AM	56	166	9558699;R	0.1990	1	72163.5	1		Ch 2
4/20/2018 11:40:43 AM	57	167	9558701;D	-0.0056	1	387.0	1		Ch 2
4/20/2018 11:42:03 AM	58	168	9558702	-0.0056	1	398.9	1		Ch 2
4/20/2018 11:43:23 AM	59	169	9558703	-0.0062	1	171.7	1		Ch 2
4/20/2018 11:44:43 AM	60	170	9561305	-0.0062	1	189.5	1		Ch 2
4/20/2018 11:46:03 AM	61	115	CCV2	0.1468	1	53842.0	1		Ch 2
4/20/2018 11:47:23 AM	62	900	CCB	-0.0060	1	260.7	1		Ch 2
4/20/2018 11:48:43 AM	63	171	9561306	-0.0060	1	269.6	1		Ch 2
4/20/2018 11:50:03 AM	64	172	9561307	-0.0060	1	246.0	1		Ch 2
4/20/2018 11:51:23 AM	65	173	LCSW	0.1816	1	66049.7	1		Ch 2
4/20/2018 11:52:43 AM	66	174	PBW	-0.0051	1	568.8	1		Ch 2
4/20/2018 11:54:03 AM	67	175	9563358	-0.0055	1	427.5	1		Ch 2
4/20/2018 11:55:23 AM	68	176	9563720	0.0491	1	19584.4	1		Ch 2
4/20/2018 11:56:43 AM	69	177	9563955	-0.0048	1	682.1	1		Ch 2
4/20/2018 11:58:03 AM	70	178	9564778	-0.0047	1	692.1	1		Ch 2
4/20/2018 11:59:23 AM	71	179	9564929	-0.0056	1	408.7	1		Ch 2
4/20/2018 12:00:44 PM	72	180	9565257	-0.0053	1	510.1	1		Ch 2
4/20/2018 12:02:04 PM	73	115	CCV2	0.1443	1	52960.6	1		Ch 2
4/20/2018 12:03:24 PM	74	900	CCB	-0.0060	1	266.7	1		Ch 2
4/20/2018 12:04:44 PM	75	181	9565259	-0.0056	1	402.2	1		Ch 2
4/20/2018 12:06:04 PM	76	182	9565261	-0.0055	1	427.9	1		Ch 2
4/20/2018 12:07:24 PM	77	183	9565263	-0.0048	1	685.5	1		Ch 2
4/20/2018 12:08:44 PM	78	184	9565265;U	-0.0058	1	308.2	1		Ch 2
4/20/2018 12:10:04 PM	79	185	9565265;R	0.1865	1	67764.5	1		Ch 2
4/20/2018 12:11:24 PM	80	186	9565265;D	-0.0050	1	591.5	1		Ch 2
4/20/2018 12:12:44 PM	81	187	9565267;U	-0.0054	1	452.5	1		Ch 2
4/20/2018 12:14:04 PM	82	188	9565267;R	0.2125	1	76884.0	1		Ch 2
4/20/2018 12:15:24 PM	83	189	9565267;D	-0.0045	1	768.3	1		Ch 2
4/20/2018 12:16:44 PM	84	190	9566138	-0.0029	1	1338.8	1		Ch 2
4/20/2018 12:18:04 PM	85	115	CCV2	0.1502	1	55017.9	1		Ch 2
4/20/2018 12:19:24 PM	86	900	CCB	-0.0060	1	246.5	1		Ch 2
4/20/2018 12:20:44 PM	87	131	9566222	-0.0052	1	532.8	1		Ch 2
4/20/2018 12:22:04 PM	88	132	REACBLK	-0.0063	1	131.6	1		Ch 2
4/20/2018 12:23:24 PM	89	133	REACFLSK	35.8840	250	52696.9	1		Ch 2
4/20/2018 12:24:44 PM	90	134	REACSTD	0.3859	10	15889.6	1		Ch 2
4/20/2018 12:26:04 PM	91	135	9558775	-0.0057	1	342.0	1		Ch 2
4/20/2018 12:27:24 PM	92	136	9558778	-0.0061	1	201.5	1		Ch 2
4/20/2018 12:28:44 PM	93	137	9558781	-0.0060	1	245.7	1		Ch 2
4/20/2018 12:30:04 PM	94	138	9558784	-0.0061	1	212.9	1		Ch 2
4/20/2018 12:31:24 PM	95	139	9558787	-0.0060	1	260.3	1		Ch 2
4/20/2018 12:32:44 PM	96	140	9558790	-0.0061	1	227.3	1		Ch 2
4/20/2018 12:34:04 PM	97	115	CCV2	0.1515	1	55488.7	1		Ch 2
4/20/2018 12:35:24 PM	98	900	CCB	-0.0063	1	150.1	1		Ch 2
4/20/2018 12:36:44 PM	99	141	9558793	-0.0062	1	193.5	1		Ch 2
4/20/2018 12:38:04 PM	100	142	9558796	-0.0062	1	167.7	1		Ch 2
4/20/2018 12:39:24 PM	101	143	9558799	-0.0061	1	205.7	1		Ch 2
4/20/2018 12:40:44 PM	102	144	9558802	-0.0061	1	218.1	1		Ch 2
4/20/2018 12:42:04 PM	103	145	9558805	-0.0065	1	79.1	1		Ch 2
4/20/2018 12:43:24 PM	104	146	9558808	-0.0066	1	54.2	1		Ch 2
4/20/2018 12:44:44 PM	105	147	9558811	-0.0066	1	55.1	1		Ch 2
4/20/2018 12:46:04 PM	106	148	9558814	-0.0069	1	-56.8	1		Ch 2
4/20/2018 12:47:24 PM	107	149	9558817	-0.0070	1	-97.8	1		Ch 2

Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel R
4/20/2018 12:48:44 PM	108	150	9558820	-0.0069	1	-54.3	1		Ch 2
4/20/2018 12:50:04 PM	109	115	CCV2	0.1503	1	55084.9	1		Ch 2
4/20/2018 12:51:24 PM	110	900	CCB	-0.0060	1	243.7	1		Ch 2
4/20/2018 12:52:44 PM	111	151	9558823	-0.0063	1	146.5	1		Ch 2
4/20/2018 12:54:04 PM	112	152	9558826;U	-0.0065	1	76.1	1		Ch 2
4/20/2018 12:55:24 PM	113	153	9558826;R	0.2895	5	22662.3	1		Ch 2
4/20/2018 12:56:44 PM	114	154	9558826;M	0.2067	5	16857.4	1		Ch 2
4/20/2018 12:58:04 PM	115	155	9558829	-0.0057	1	348.4	1		Ch 2
4/20/2018 12:59:24 PM	116	156	9558832	-0.0061	1	231.3	1		Ch 2
4/20/2018 1:00:44 PM	117	157	LCSW	0.1742	1	63455.1	1		Ch 2
4/20/2018 1:02:04 PM	118	158	LCSW	0.1751	1	63778.1	1		Ch 2
4/20/2018 1:03:24 PM	119	159	LCSW	0.2007	1	72760.4	1		Ch 2
4/20/2018 1:04:44 PM	120	160	PBW	-0.0010	1	2014.4	1		Ch 2
4/20/2018 1:06:04 PM	121	115	CCV2	0.1491	1	54641.1	1		Ch 2
4/20/2018 1:07:24 PM	122	900	CCB	-0.0061	1	210.4	1		Ch 2
4/20/2018 1:08:44 PM	123	161	9558578;U	-0.0037	1	1072.3	1		Ch 2
4/20/2018 1:10:04 PM	124	162	9558578;D	-0.0057	1	370.7	1		Ch 2
4/20/2018 1:11:24 PM	125	163	9558578;R	0.1911	1	69366.1	1		Ch 2
4/20/2018 1:12:44 PM	126	164	9566583	-0.0027	1	1413.3	1		Ch 2
4/20/2018 1:14:04 PM	127	165	9566584	-0.0042	1	886.4	1		Ch 2
4/20/2018 1:15:24 PM	128	166	9566585	-0.0060	1	237.2	1		Ch 2
4/20/2018 1:16:44 PM	129	167	9567319	-0.0055	1	432.8	1		Ch 2
4/20/2018 1:18:04 PM	130	168	9567320	-0.0049	1	652.5	1		Ch 2
4/20/2018 1:19:24 PM	131	169	9567321	-0.0059	1	296.0	1		Ch 2
4/20/2018 1:20:44 PM	132	170	9567322	-0.0050	1	600.6	1		Ch 2
4/20/2018 1:22:04 PM	133	115	CCV2	0.1486	1	54468.1	1		Ch 2
4/20/2018 1:23:24 PM	134	900	CCB	-0.0063	1	158.4	1		Ch 2
4/20/2018 1:24:45 PM	135	171	9555573	0.0136	1	7139.0	1		Ch 2
4/20/2018 1:26:04 PM	136	172	9555568	0.0125	1	6750.1	1		Ch 2
4/20/2018 1:27:25 PM	137	173	LCSW	0.2041	1	73937.4	1		Ch 2
4/20/2018 1:28:45 PM	138	174	PBW	-0.0017	1	1759.5	1		Ch 2
4/20/2018 1:30:05 PM	139	175	9566583;U	-0.0041	1	930.8	1		Ch 2
4/20/2018 1:31:25 PM	140	176	9566583;D	-0.0040	1	943.6	1		Ch 2
4/20/2018 1:32:45 PM	141	177	9566583;R	0.1816	1	66062.4	1		Ch 2
4/20/2018 1:34:05 PM	142	178	9566584	-0.0023	1	1538.8	1		Ch 2
4/20/2018 1:35:25 PM	143	179	9566585	-0.0053	1	506.4	1		Ch 2
4/20/2018 1:36:45 PM	144	180	RINSE	0.0180	1	8670.3	1		Ch 2
4/20/2018 1:38:05 PM	145	115	CCV2	0.1514	1	55457.3	1		Ch 2
4/20/2018 1:39:25 PM	146	900	CCB	-0.0061	1	219.2	1		Ch 2
4/20/2018 1:40:45 PM	147	900	RINSE	-0.0061	1	230.1	1		Ch 2
4/20/2018 1:42:05 PM	148	900	RINSE	-0.0064	1	104.8	1		Ch 2
4/20/2018 1:43:25 PM	149	900	RINSE	-0.0064	1	109.7	1		Ch 2
4/20/2018 1:44:45 PM	150	900	RINSE	-0.0063	1	163.4	1		Ch 2
4/20/2018 1:46:05 PM	151	900	RINSE	-0.0065	1	94.7	1		Ch 2
4/20/2018 1:47:25 PM	152	900	RINSE	-0.0065	1	91.6	1		Ch 2
4/20/2018 1:48:45 PM	153	900	RINSE	-0.0065	1	88.8	1		Ch 2
4/20/2018 1:50:05 PM	154	900	RINSE	-0.0063	1	161.3	1		Ch 2
4/20/2018 1:51:25 PM	155	900	RINSE	-0.0064	1	117.2	1		Ch 2
4/20/2018 1:52:45 PM	156	900	RINSE	-0.0062	1	198.3	1		Ch 2
4/20/2018 1:54:05 PM	157	900	RINSE	-0.0062	1	176.9	1		Ch 2
4/20/2018 1:55:25 PM	158	900	RINSE	-0.0062	1	192.5	1		Ch 2
4/20/2018 1:56:45 PM	159	900	RINSE	-0.0061	1	205.1	1		Ch 2
4/20/2018 1:58:05 PM	160	900	RINSE	-0.0058	1	309.6	1		Ch 2
4/20/2018 1:59:25 PM	161	900	RINSE	-0.0060	1	246.0	1		Ch 2
4/20/2018 2:00:45 PM	162	900	RINSE	-0.0057	1	358.0	1		Ch 2
4/20/2018 2:02:05 PM	163	900	RINSE	-0.0057	1	368.7	1		Ch 2
4/20/2018 2:03:25 PM	164	900	RINSE	-0.0058	1	337.1	1		Ch 2
4/20/2018 2:04:45 PM	165	900	RINSE	-0.0059	1	280.2	1		Ch 2

Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel R
4/20/2018 2:06:05 PM	166	115	CCV2	0.1482	1	54334.4	1		Ch 2
4/20/2018 2:07:25 PM	167	900	CCB	-0.0061	1	210.7	1		Ch 2
4/20/2018 2:08:45 PM	168	180	REACBLK	-0.0066	1	31.5	1		Ch 2
4/20/2018 2:10:05 PM	169	181	REACFLSK	35.6160	250	52321.0	1		Ch 2
4/20/2018 2:11:25 PM	170	182	REACSTD	0.5608	10	22026.0	1		Ch 2
4/20/2018 2:12:45 PM	171	183	9554879	-0.0060	1	261.9	1		Ch 2
4/20/2018 2:14:05 PM	172	184	9553558	-0.0065	1	90.3	1		Ch 2
4/20/2018 2:15:25 PM	173	185	9553576	-0.0066	1	51.7	1		Ch 2
4/20/2018 2:16:45 PM	174	186	9553733	-0.0067	1	19.6	1		Ch 2
4/20/2018 2:18:05 PM	175	187	9554670	-0.0063	1	151.3	1		Ch 2
4/20/2018 2:19:25 PM	176	188	9555119	-0.0065	1	70.0	1		Ch 2
4/20/2018 2:20:45 PM	177	189	9555676	-0.0061	1	226.9	1		Ch 2
4/20/2018 2:22:05 PM	178	115	CCV2	0.1495	1	54789.5	1		Ch 2
4/20/2018 2:23:26 PM	179	900	CCB	-0.0054	1	449.4	1		Ch 2
4/20/2018 2:24:45 PM	180	190	9560451	-0.0057	1	342.5	1		Ch 2
4/20/2018 2:26:05 PM	181	116	9561155	-0.0058	1	324.8	1		Ch 2
4/20/2018 2:27:25 PM	182	117	9563716	-0.0055	1	439.0	1		Ch 2
4/20/2018 2:28:46 PM	183	118	9563716;R	0.3410	5	26275.7	1		Ch 2
4/20/2018 2:30:06 PM	184	119	9563716;M	0.6190	5	45773.8	1		Ch 2
4/20/2018 2:31:26 PM	185	120	9567510	-0.0038	1	1019.3	1		Ch 2
4/20/2018 2:32:46 PM	186	121	9560577	-0.0038	1	1015.5	1		Ch 2
4/20/2018 2:34:06 PM	187	122	9560581	-0.0035	1	1112.2	1		Ch 2
4/20/2018 2:35:26 PM	188	123	9560585	-0.0033	1	1182.7	1		Ch 2
4/20/2018 2:36:46 PM	189	124	9560589	-0.0034	1	1175.2	1		Ch 2
4/20/2018 2:38:06 PM	190	115	CCV2	0.1513	1	55420.1	1		Ch 2
4/20/2018 2:39:26 PM	191	900	CCB	-0.0067	1	0.0	1		Ch 2
4/20/2018 2:40:46 PM	192	125	9560593	-0.0076	1	-302.0	1		Ch 2
4/20/2018 2:42:06 PM	193	115	CCV2	0.1513	1	55412.1	1		Ch 2
4/20/2018 2:43:26 PM	194	900	CCB	-0.0008	1	2082.9	1		Ch 2
4/20/2018 2:44:46 PM	195	900	RINSE	-0.0028	1	1363.9	1		Ch 2
		900	RINSE		1		1		Ch 2


18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
0.0
500.0
1000.0
1500.0
2000.0
2500.0
Time (seconds)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34


18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
3000.0
3500.0
4000.0
4500.0
5000.0
5500.0
Time (seconds)
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66


18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
5500.0
6000.0
6500.0
7000.0
7500.0
8000.0
Time (seconds)
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
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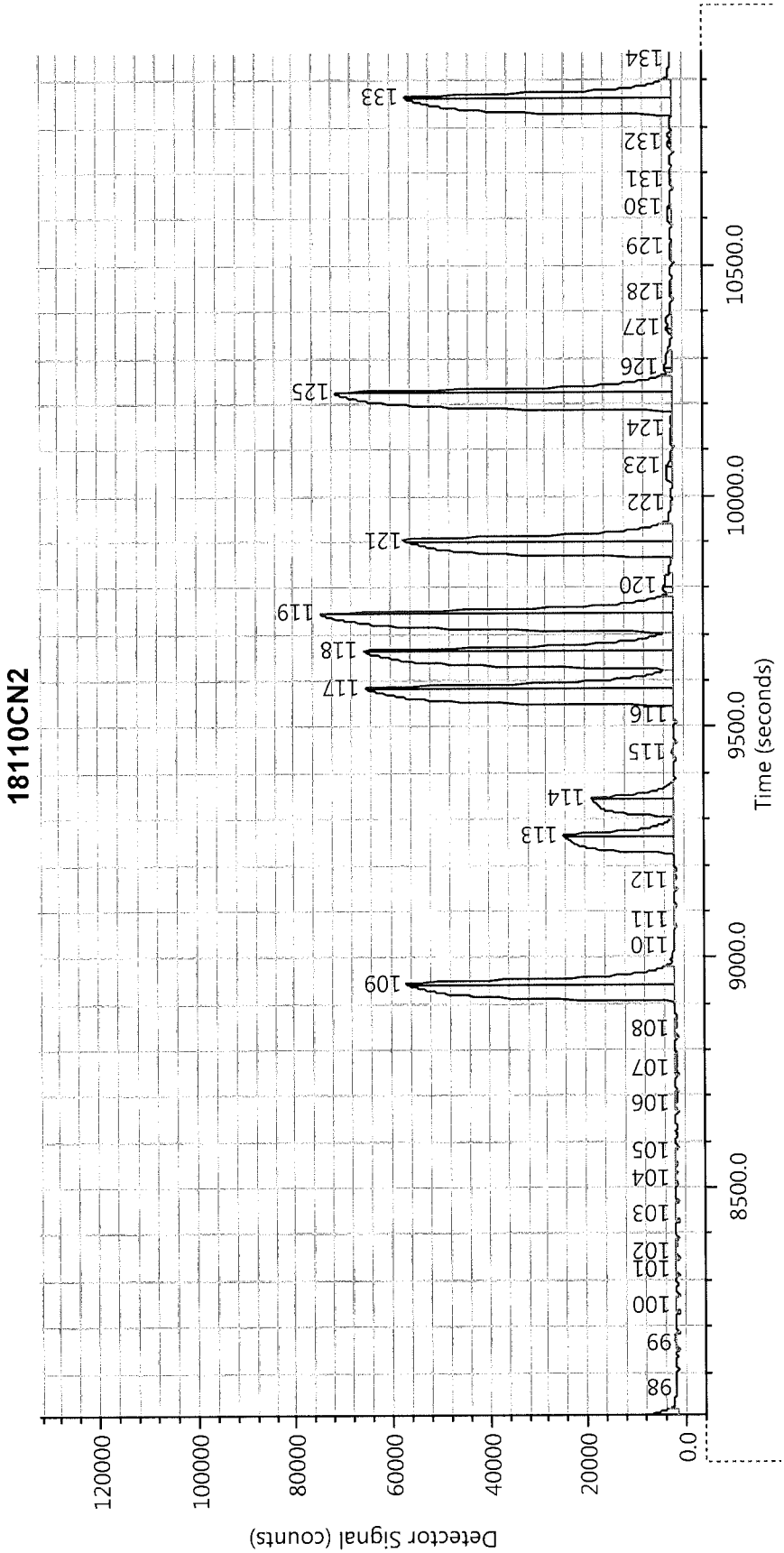
96
97
98
99
100


18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
8500.0
9000.0
9500.0
10000.0
10500.0
Time (seconds)
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134

18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
10500.0
11000.0
11500.0
12000.0
12500.0
13000.0
Time (seconds)
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
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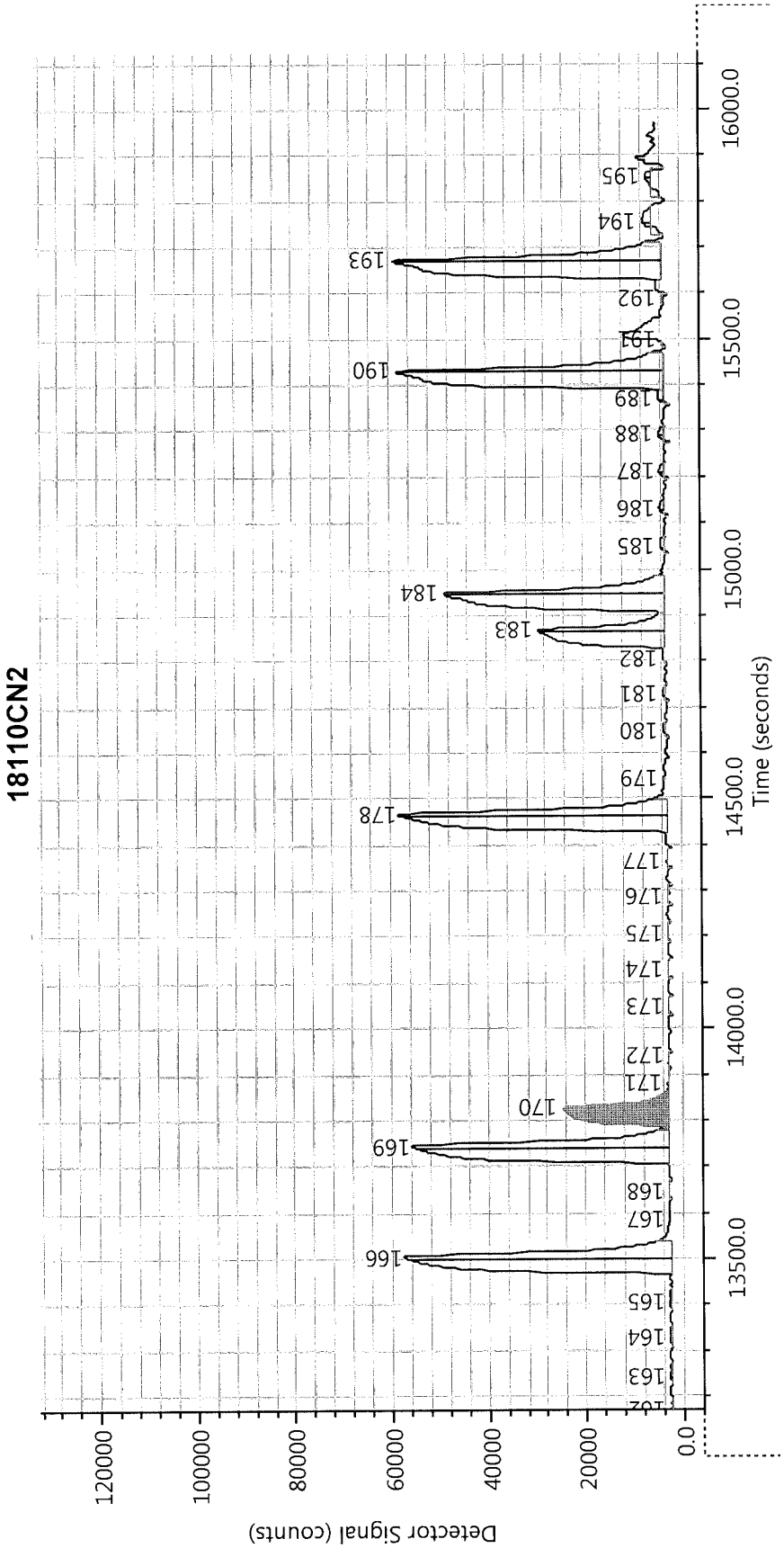
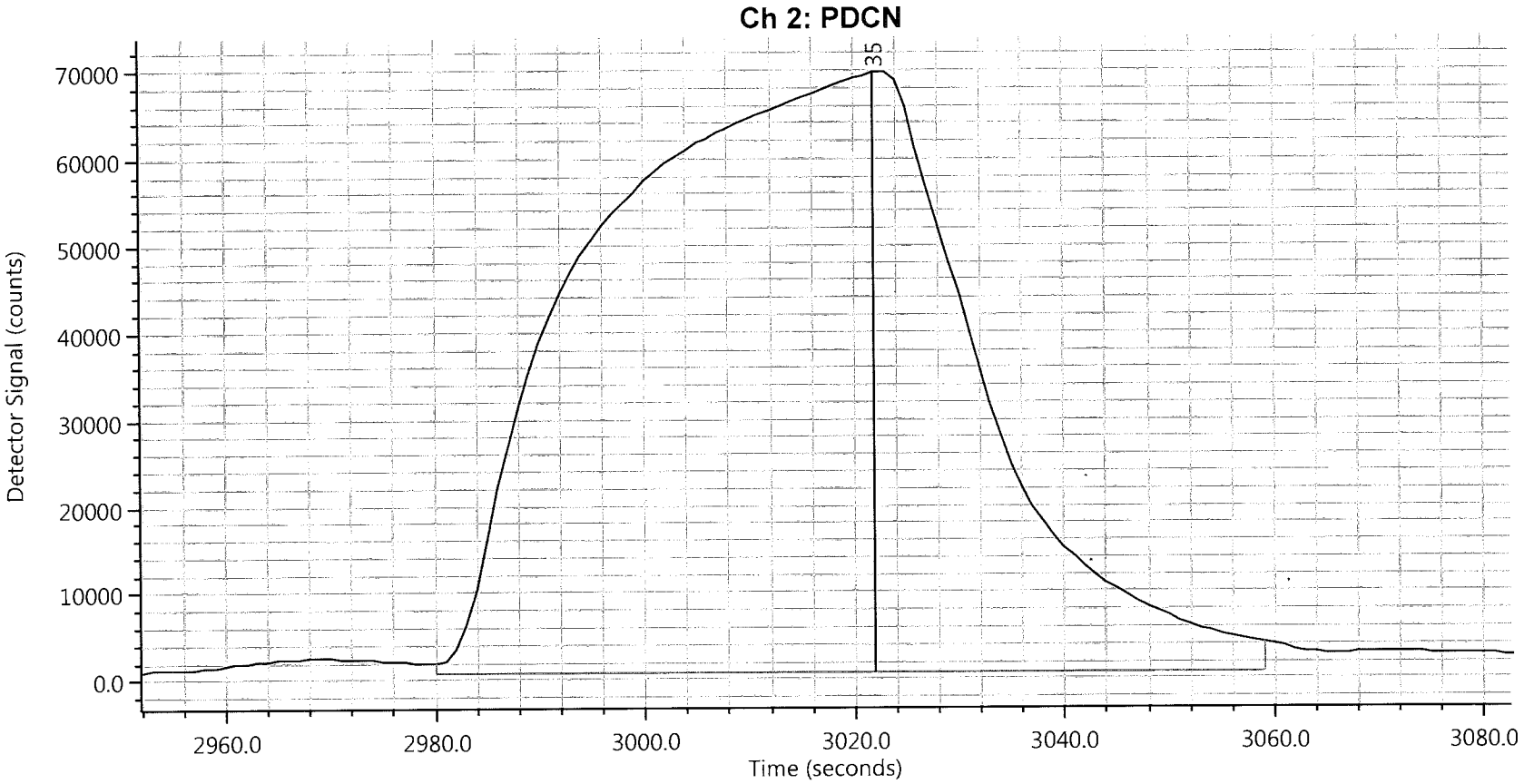
162
163
164


18110CN2
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
13500.0
14000.0
14500.0
15000.0
15500.0
16000.0
Time (seconds)
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195

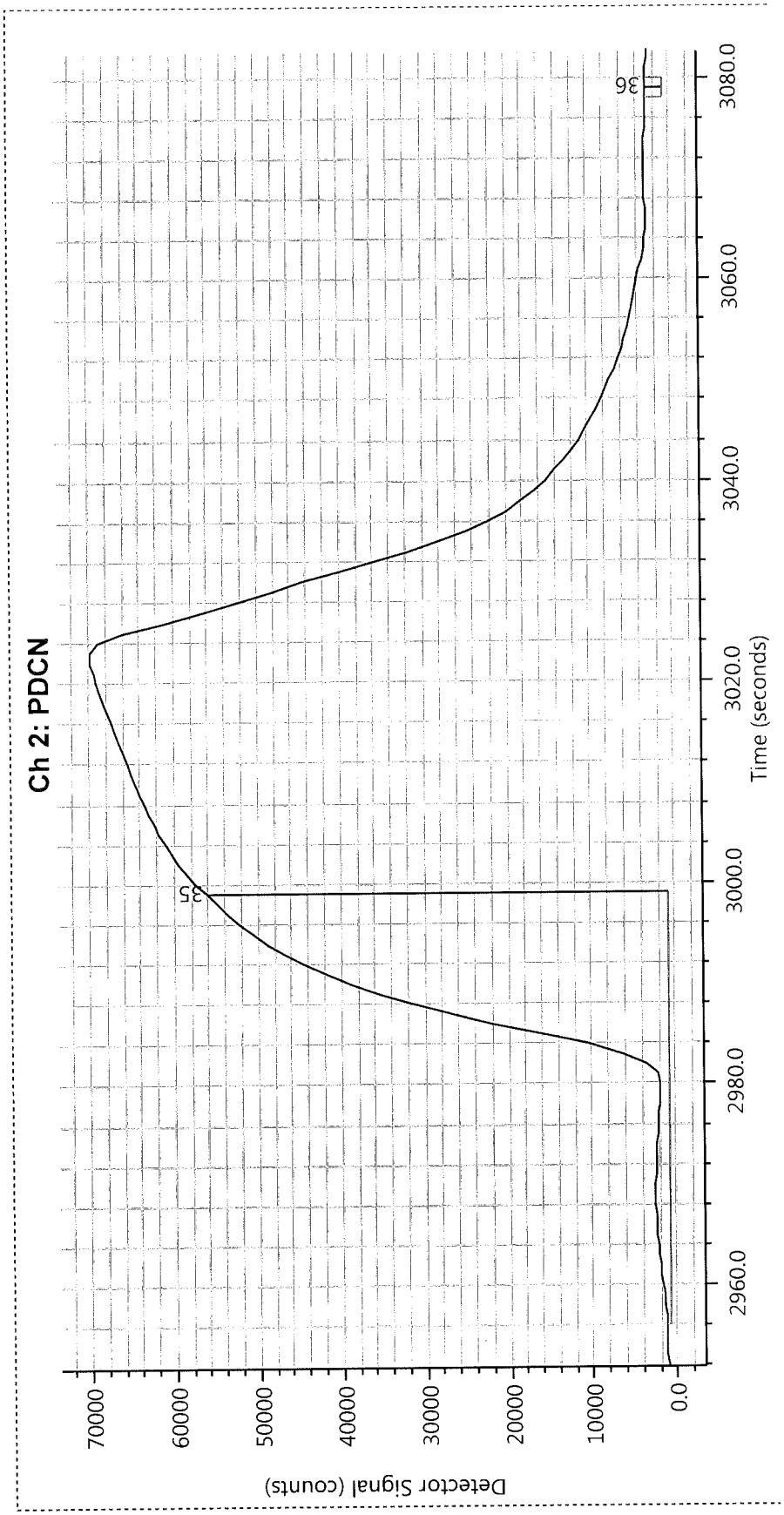


M=Manually Integrated

Analyst BW9932

approved by EKS 9/21/18

reason Picked wrong


Ch 2: PDCN
Detector Signal (counts)
70000
60000
50000
40000
30000
20000
10000
0.0
2960.0
2980.0
3000.0
3020.0
3040.0
3060.0
3080.0
Time (seconds)
35
36

Instrumental Water Quality Report

Analyte: Total Cyanide
Run Start Date/Time: 4/26/2018 4:01:41PM
Instrument Name: 07343

Calibration Information

Curve Information Location:
Book # 261181
Page # 6 (3) GJB 13347 4/26/18

Sample Names	Volts	Detected Result	True Result
S1	347.0000	~~0.00000~~ -0.0013	-
S2	3939.2000	0.01000 0.0087	0.01
S3	7440.0000	0.02000 0.0186	0.02
S4	18473.3000	0.05000 0.0495	0.05
S5	37227.8000	0.10000 0.1031	0.1
S6	74482.1000	0.20000 0.2066	0.2
S7	124074.3000	~~0.35000~~ 0.3458	0.35

Number of Calibrants: 7
Correlation Coefficient: 0.99927
Y-Intercept: -0.00232
Slope: 0.00000

QC Information

QC Names	Units	True Values	QC Ranges
ICV	mg/L	0.15	0.13425 - 0.165
ICB/CCB	mg/L	0	0 - 0.005
CCV2	mg/L	0.15	0.13425 - 0.165
PB Waters	mg/L	0	0 - 0.005
LCS Waters	mg/L	0.2	0.179 - 0.2208

Analyst: Gregory J. Bellree 13347 Date: 4/26/18

Verifier: [signature] Date: 4.26.18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
SYNC	1			4/26/2018 4:01:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		123444.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CARRYOV	2			4/26/2018 4:03:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		837.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	3			4/26/2018 4:04:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		179.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S7	4			4/26/2018 4:05:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.35000	0.3458	124074.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S6	5			4/26/2018 4:07:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.20000	0.2066	74482.10	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S5	6			4/26/2018 4:08:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.10000	0.1031	37227.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S4	7			4/26/2018 4:09:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.05000	0.0495	18473.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S3	8			4/26/2018 4:11:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.02000	0.0186	7440.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S2	9			4/26/2018 4:12:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01000	0.0087	3939.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S1	10			4/26/2018 4:13:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	-0.0013	347.00	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	11			4/26/2018 4:15:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00210		87.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	12			4/26/2018 4:16:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00170		230.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICV	13			4/26/2018 4:17:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14340		51929.40	1.0000	1.0	1	96	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICB	14			4/26/2018 4:19:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00160		258.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	15	Q	18115117101A	4/26/2018 4:20:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19810	0.198	71433.50	50.0000	50.0	1	99	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	16	B	18115117101A	4/26/2018 4:21:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	483.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558570	17	U	18115117101A	4/26/2018 4:23:01PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120	-0.001	411.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558571	18	R	18115117101A	4/26/2018 4:24:21PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20140	0.201	72598.70	50.0000	50.0	1	101	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558573	19	D	18115117101A	4/26/2018 4:25:41PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00050	-0.001	661.00	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558574	20		18115117101A	4/26/2018 4:27:01PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00090	-0.001	504.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558575	21		18115117101A	4/26/2018 4:28:21PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00080	-0.001	524.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558576	22		18115117101A	4/26/2018 4:29:41PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	463.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558577	23		18115117101A	4/26/2018 4:31:01PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00030	0.000	724.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558583	24		18115117101A	4/26/2018 4:32:21PM	SLB18	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00070	-0.001	583.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	25			4/26/2018 4:33:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15060		54507.50	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 1	26			4/26/2018 4:35:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00180		192.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558695	27		18115117101A	4/26/2018 4:36:21PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00160	-0.002	258.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558696	28		18115117101A	4/26/2018 4:37:41PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00010	0.000	873.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558697	29		18115117101A	4/26/2018 4:39:01PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00090	-0.001	489.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558702	30		18115117101A	4/26/2018 4:40:21PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	0.000	819.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558698	31	U	18115117101B	4/26/2018 4:41:41PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00040	0.000	676.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558699	32	R	18115117101B	4/26/2018 4:43:01PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19200	0.192	69275.30	50.0000	50.0	1	96	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558701	33	D	18115117101B	4/26/2018 4:44:21PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00050	-0.001	655.40	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558703	34		18115117101B	4/26/2018 4:45:41PM	RAF06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00020	0.000	908.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561305	35		18115117101B	4/26/2018 4:47:01PM	LVE06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00010	0.000	868.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561306	36		18115117101B	4/26/2018 4:48:21PM	LVE06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	0.000	842.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	37			4/26/2018 4:49:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14610		52903.50	1.0000	1.0	1	97	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 2	38			4/26/2018 4:51:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00180		191.40	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9561307	39		18115117101B	4/26/2018 4:52:21PM	LVE06	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00160	-0.002	261.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9569322	40		18115117101B	4/26/2018 4:53:41PM	SLB20	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00050	0.001	1003.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9569828	41		18115117101B	4/26/2018 4:55:01PM	ABD61	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	486.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9573404	42		18115117101B	4/26/2018 4:56:21PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00180	-0.002	177.40	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9573405	43		18115117101B	4/26/2018 4:57:41PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00150	-0.002	290.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9573533	44		18115117101B	4/26/2018 4:59:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00140	-0.001	343.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	45			4/26/2018 5:00:21PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.14720		53300.70	1.0000	1.0	1	98	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 3	46			4/26/2018 5:01:41PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00080		539.30	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	47			4/26/2018 5:03:01PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00230		14.80	1.0000	1.0	1	☐

Comments:

FlowView - Result

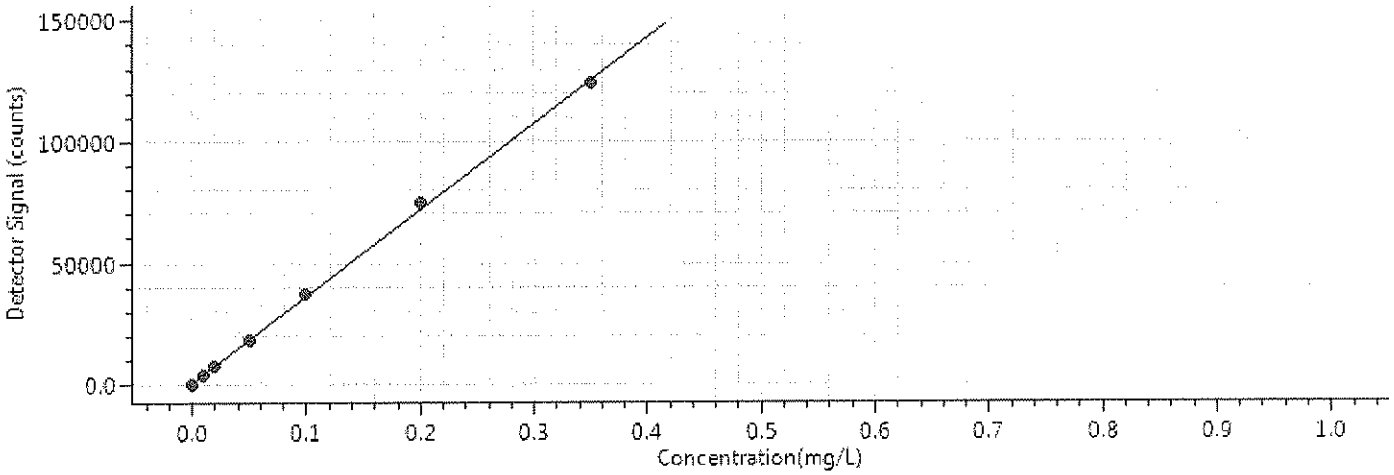
InstrumentID: B632837343
Operator ID: 13347
File Version: 110
Created On: 4/26/2018 4:01:27 PM
Last Modified On: 4/26/2018 5:09:54 PM
Exported on 4/26/2018 5:43:06 PM

Calibration Results - Channel2

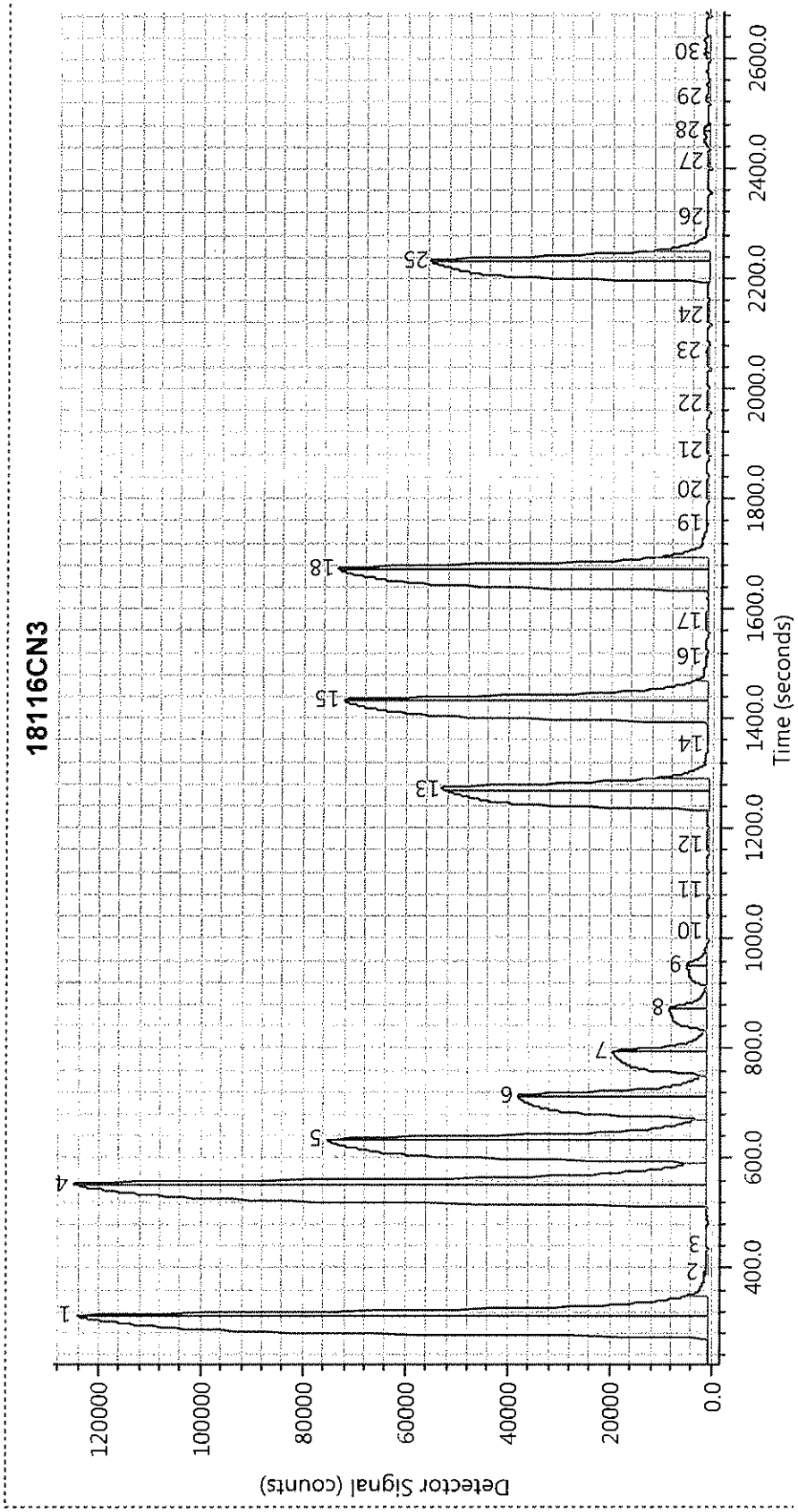
Calibration Summary

Curve Fit: =	Linear		
R^2: =	0.99927353	a: =	n/a
RF: =	2.805616E-006	b: =	n/a
Offset:	-0.00232119	c:	n/a
HLCAVG:	0.00000000	LHCAVG:	0.00000000

Calibration Details



Name	Type	Std Conc(mg/L)	Avg Height	Calc Avg Conc(mg/L)	%RSD	Flags	Date/Time
S1	STD1	0.0000	347.0	-0.0013	0.0		04/26/2018 4:13:41 PM
S2	STD2	0.0100	3939.2	0.0087	0.0		04/26/2018 4:12:21 PM
S3	STD3	0.0200	7440.0	0.0186	0.0		04/26/2018 4:11:01 PM
S4	STD4	0.0500	18473.3	0.0495	0.0		04/26/2018 4:09:41 PM
S5	STD5	0.1000	37227.8	0.1021	0.0		04/26/2018 4:08:21 PM
S6	STD6	0.2000	74482.1	0.2066	0.0		04/26/2018 4:07:01 PM
S7	STD7	0.3500	124074.3	0.3458	0.0		04/26/2018 4:05:41 PM


18116CN3
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
400.0
600.0
800.0
1000.0
1200.0
1400.0
1600.0
1800.0
2000.0
2200.0
2400.0
2600.0
Time (seconds)
1
2
3
4
5
6
7
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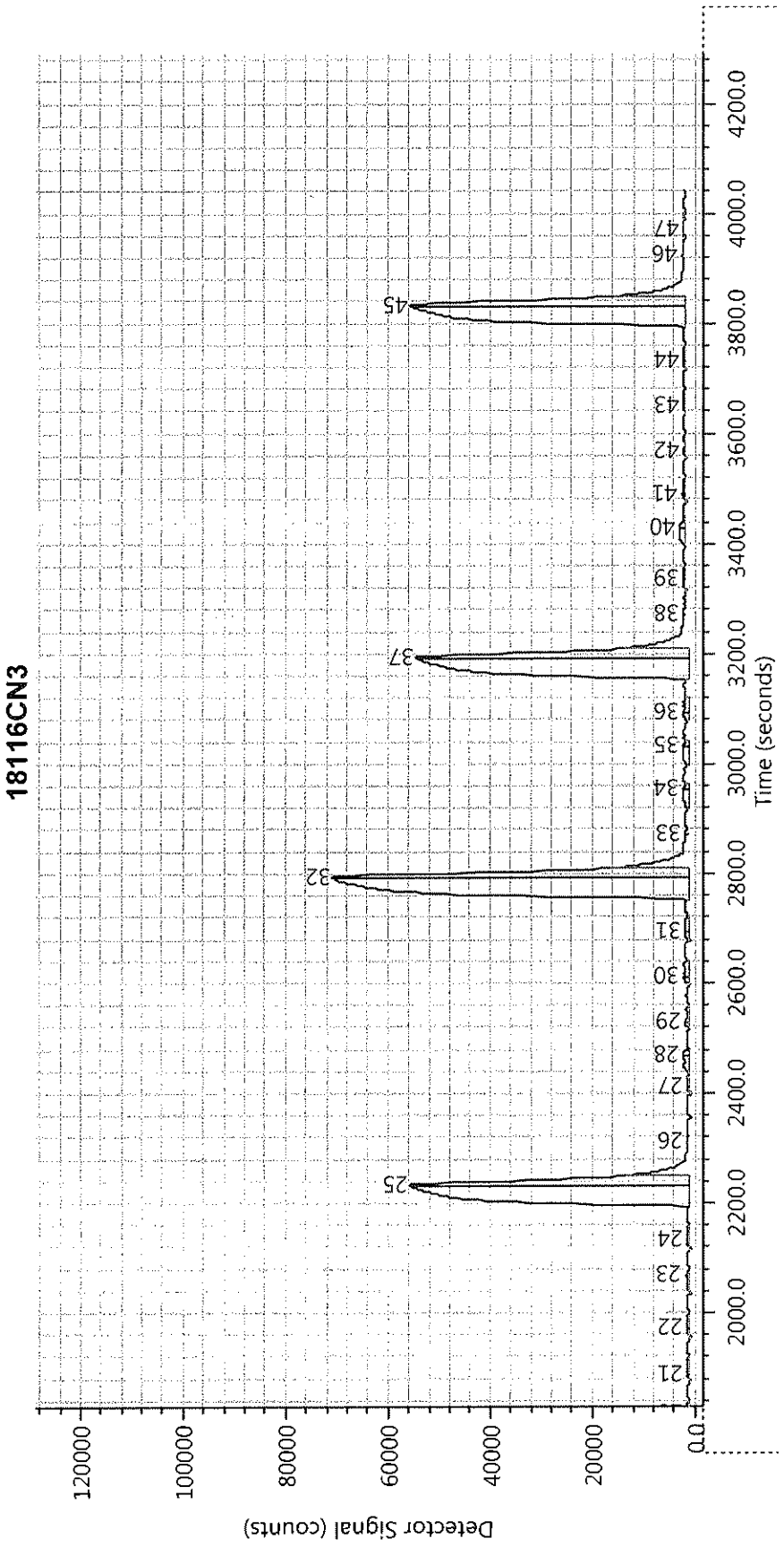
18116CN3
Detector Signal (counts)
120000
100000
80000
60000
40000
20000
0.0
2000.0
2200.0
2400.0
2600.0
2800.0
3000.0
3200.0
3400.0
3600.0
3800.0
4000.0
4200.0
Time (seconds)
21
22
23
24
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Instrumental Water Quality Report

Analyte: Total Cyanide
Run Start Date/Time: 4/28/2018 11:04:54AM
Instrument Name: 07343

Calibration Information

Curve Information Location:
Book # 261181
Page # 7

③ GJB 13347 4/28/18

Sample Names	Volts	Detected Result	True Result
S1	198.6000	~~0.00000~~ -0.0013	-
S2	3920.9000	0.01000 0.0093	0.01
S3	7277.6000	0.02000 0.0188	0.02
S4	18112.8000	0.05000 0.0496	0.05
S5	36505.7000	0.10000 0.1018	0.1
S6	72832.5000	0.20000 0.2049	0.2
S7	122821.7000	~~0.35000~~ 0.3468	0.35

Number of Calibrants: 7
Correlation Coefficient: 0.99959
Y-Intercept: -0.00183
Slope: 0.00000

QC Information

QC Names	Units	True Values	QC Ranges
ICV	mg/L	0.15	0.13425 - 0.165
ICB/CCB	mg/L	0	0 - 0.005
CCV2	mg/L	0.15	0.13425 - 0.165
PB Waters	mg/L	0	0 - 0.005
LCS Waters	mg/L	0.2	0.179 - 0.2208

Analyst: Gregory J. Bolden 13347 Date: 4/28/18

Verifier: [signature] Date: 5/4/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
SYNC	1			4/28/2018 11:04:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		125070.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CARRYOV	2			4/28/2018 11:06:14AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		637.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	3			4/28/2018 11:07:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000		144.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S7	4			4/28/2018 11:08:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.35000	0.3468	122821.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S6	5			4/28/2018 11:10:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.20000	0.2049	72832.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S5	6			4/28/2018 11:11:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.10000	0.1018	36505.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S4	7			4/28/2018 11:12:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.05000	0.0496	18112.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S3	8			4/28/2018 11:14:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.02000	0.0188	7277.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S2	9			4/28/2018 11:15:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.01000	0.0093	3920.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
S1	10			4/28/2018 11:16:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	-0.0013	198.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	11			4/28/2018 11:18:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00140		154.20	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
BLANK	12			4/28/2018 11:19:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120		214.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICV	13			4/28/2018 11:20:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15280		54470.50	1.0000	1.0	1	102	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
ICB	14			4/28/2018 11:22:14AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120		218.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	15	Q	18116102101A	4/28/2018 11:23:34AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19630	0.196	69810.00	50.0000	50.0	1	98	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	16	B	18116102101A	4/28/2018 11:24:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00030	0.000	548.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9574488	17		18116102101A	4/28/2018 11:26:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00040	0.000	515.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9574364	18		18116102101A	4/28/2018 11:27:34AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00030	0.000	535.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575021	19		18116102101A	4/28/2018 11:28:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00060	-0.001	448.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576671	20		18116102101A	4/28/2018 11:30:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00000	0.000	653.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576326	21	U	18116102101A	4/28/2018 11:31:34AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00190	0.002	1310.00	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576326	22	R	18116102101A	4/28/2018 11:32:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.19720	0.197	70118.50	50.0000	50.0	1	99	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576326	23	D	18116102101A	4/28/2018 11:34:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
0.00090	0.001	976.30	50.0000	50.0	1	71	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	24	Q	18116117101A	4/28/2018 11:35:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20080	0.201	71374.40	50.0000	50.0	1	100	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	25			4/28/2018 11:36:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15700		55950.10	1.0000	1.0	1	105	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 1	26			4/28/2018 11:38:14AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00090		338.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	27	B	18116117101A	4/28/2018 11:39:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00070	-0.001	383.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575815	28		18116117101A	4/28/2018 11:40:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00210	0.002	1387.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575816	29		18116117101A	4/28/2018 11:42:14AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00010	0.000	695.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575817	30		18116117101A	4/28/2018 11:43:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00070	-0.001	396.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575039	31		18116117101A	4/28/2018 11:44:54AM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00110	-0.001	268.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575040	32	U	18116117101A	4/28/2018 11:46:14AM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00140	-0.001	134.80	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575040	33	R	18116117101A	4/28/2018 11:47:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.12020	0.120	42985.90	50.0000	50.0	1	60	0.2	☑

Comments: 80s-105%

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575040	34	D	18116117101A	4/28/2018 11:48:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00050	-0.001	469.10	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575041	35		18116117101A	4/28/2018 11:50:14AM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00080	-0.001	344.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576329	36		18116117101A	4/28/2018 11:51:34AM	SMC55	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.00110	0.001	1018.60	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	37			4/28/2018 11:52:54AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15060		53701.00	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 2	38			4/28/2018 11:54:14AM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120		210.50	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
LCS	39	Q	18117117101A	4/28/2018 11:55:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20730	0.207	73674.90	50.0000	50.0	1	104	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
PB	40	B	18117117101A	4/28/2018 11:56:54AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	306.90	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575815	41		18117117101A	4/28/2018 11:58:14AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00090	-0.001	336.20	50.0000	50.0	1	☐

Comments: Analyst Decision or failed QC Review Analyzed in 18116117101A

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9576329	42		18117117101A	4/28/2018 11:59:34AM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00130	-0.001	200.10	50.0000	50.0	1	☐

Comments: Analyst Decision or failed QC Review

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9577666	43		18117117101A	4/28/2018 12:00:54PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	290.00	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9577667	44	U	18117117101A	4/28/2018 12:02:14PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100	-0.001	296.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9577668	45	R	18117117101A	4/28/2018 12:03:34PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.05680	0.057	20659.20	50.0000	50.0	1	28	0.2	☑

Comments: see RDS@12

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9577670	46	D	18117117101A	4/28/2018 12:04:54PM	BBC31	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	RPD	Verified
-0.00070	-0.001	409.50	50.0000	50.0	1	0	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578808	47		18117117101A	4/28/2018 12:06:14PM	SLB21	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00080	-0.001	351.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578809	48		18117117101A	4/28/2018 12:07:34PM	SLB21	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00050	-0.001	460.70	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	49			4/28/2018 12:08:54PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15280		54488.40	1.0000	1.0	1	102	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 3	50			4/28/2018 12:10:14PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120		213.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578810	51		18117117101A	4/28/2018 12:11:34PM	SLB21	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00130	-0.001	181.30	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578811	52		18117117101A	4/28/2018 12:12:54PM	SLB21	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00140	-0.001	137.10	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578817	53		18117117101A	4/28/2018 12:14:14PM	SMC56	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00130	-0.001	200.20	50.0000	50.0	1	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9578818	54		18117117101A	4/28/2018 12:15:34PM	SMC56	SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120	-0.001	214.60	50.0000	50.0	1	☑

Comments: CM 6/18/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9558698	55	M	~~18117117101A~~ 18115117101B	4/28/2018 12:16:54PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.16400	0.164	58401.40	50.0000	50.0	1	82	0.2	☑

Comments: RE 4/29/18

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575040	56	R	18117117101A	4/28/2018 12:18:14PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	SPK	Verified
0.20660	0.207	73410.50	50.0000	50.0	1	103	0.2	☑

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	57			4/28/2018 12:19:34PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15030		53583.20	1.0000	1.0	1	100	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 4	58			4/28/2018 12:20:54PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100		289.80	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9575040	59	P	18117117101A	4/28/2018 12:22:14PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.19670	0.197	69947.70	50.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	60			4/28/2018 12:23:34PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00100		273.70	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	61			4/28/2018 12:24:54PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00160		89.90	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
9577667	62	P	18117117101A	4/28/2018 12:26:14PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
0.19860	0.199	70595.70	50.0000	50.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCV2	63			4/28/2018 12:27:34PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	%Rec	Verified
0.15280		54485.30	1.0000	1.0	1	102	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
CCB 5	64			4/28/2018 12:28:54PM		SCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00120		235.60	1.0000	1.0	1	☐

Comments:

Sample	Cup	QC?	Batch Number	Analysis Date/Time	SDG	Analyte
RINSE	65			4/28/2018 12:30:14PM		TCN

Raw Result	Calc Result	Volts	Init Vol	Fin Vol	DF	Verified
-0.00130		175.40	1.0000	1.0	1	☐

Comments:

FlowView - Result

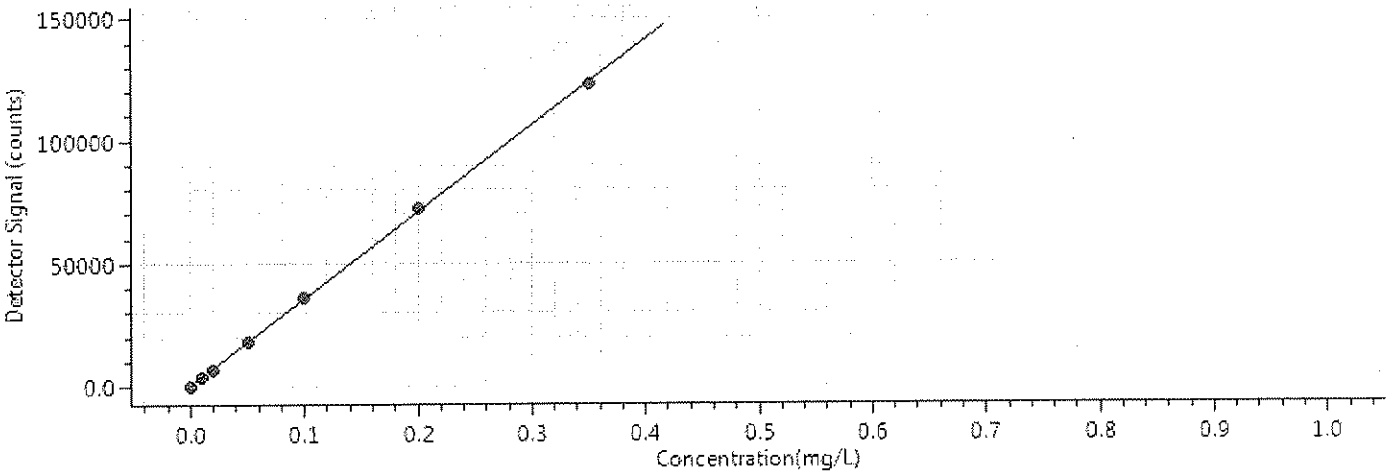
InstrumentID: B632837343
Operator ID: 13347
File Version: 110
Created On: 4/28/2018 11:04:39 AM
Last Modified On: 4/28/2018 12:37:07 PM
Exported on 4/28/2018 12:42:12 PM

Calibration Results - Channel2

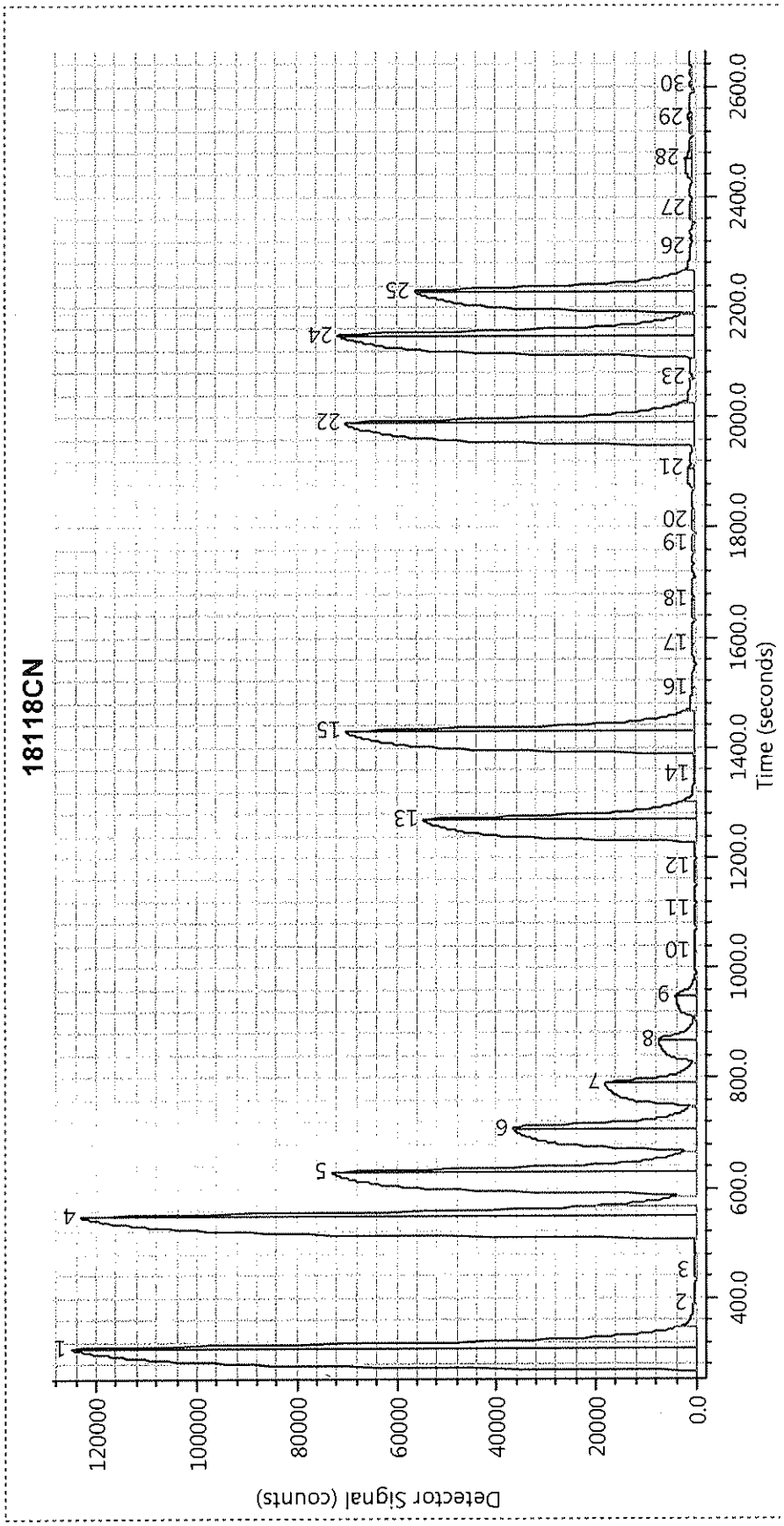
Calibration Summary

Curve Fit: =	Linear		
R^2: =	0.99958599	a: =	n/a
RF: =	2.838644E-006	b: =	n/a
Offset:	-0.00182683	c:	n/a
HLCAVG:	0.00000000	LHCAVG:	0.00000000

Calibration Details



Name	Type	Std Conc(mg/L)	Avg Height	Calc Avg Conc(mg/L)	%RSD	Flags	Date/Time
S1	STD1	0.0000	198.6	-0.0013	0.0		04/28/2018 11:16:54 AM
S2	STD2	0.0100	3920.9	0.0093	0.0		04/28/2018 11:15:34 AM
S3	STD3	0.0200	7277.6	0.0188	0.0		04/28/2018 11:14:14 AM
S4	STD4	0.0500	18112.8	0.0496	0.0		04/28/2018 11:12:54 AM
S5	STD5	0.1000	36505.7	0.1018	0.0		04/28/2018 11:11:34 AM
S6	STD6	0.2000	72832.5	0.2049	0.0		04/28/2018 11:10:14 AM
S7	STD7	0.3500	122821.7	0.3468	0.0		04/28/2018 11:08:54 AM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Detector Signal (counts)
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80000
60000
40000
20000
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1000.0
1200.0
1400.0
1600.0
1800.0
2000.0
2200.0
2400.0
2600.0
Time (seconds)
1
2
3
4
5
6
7
8
9
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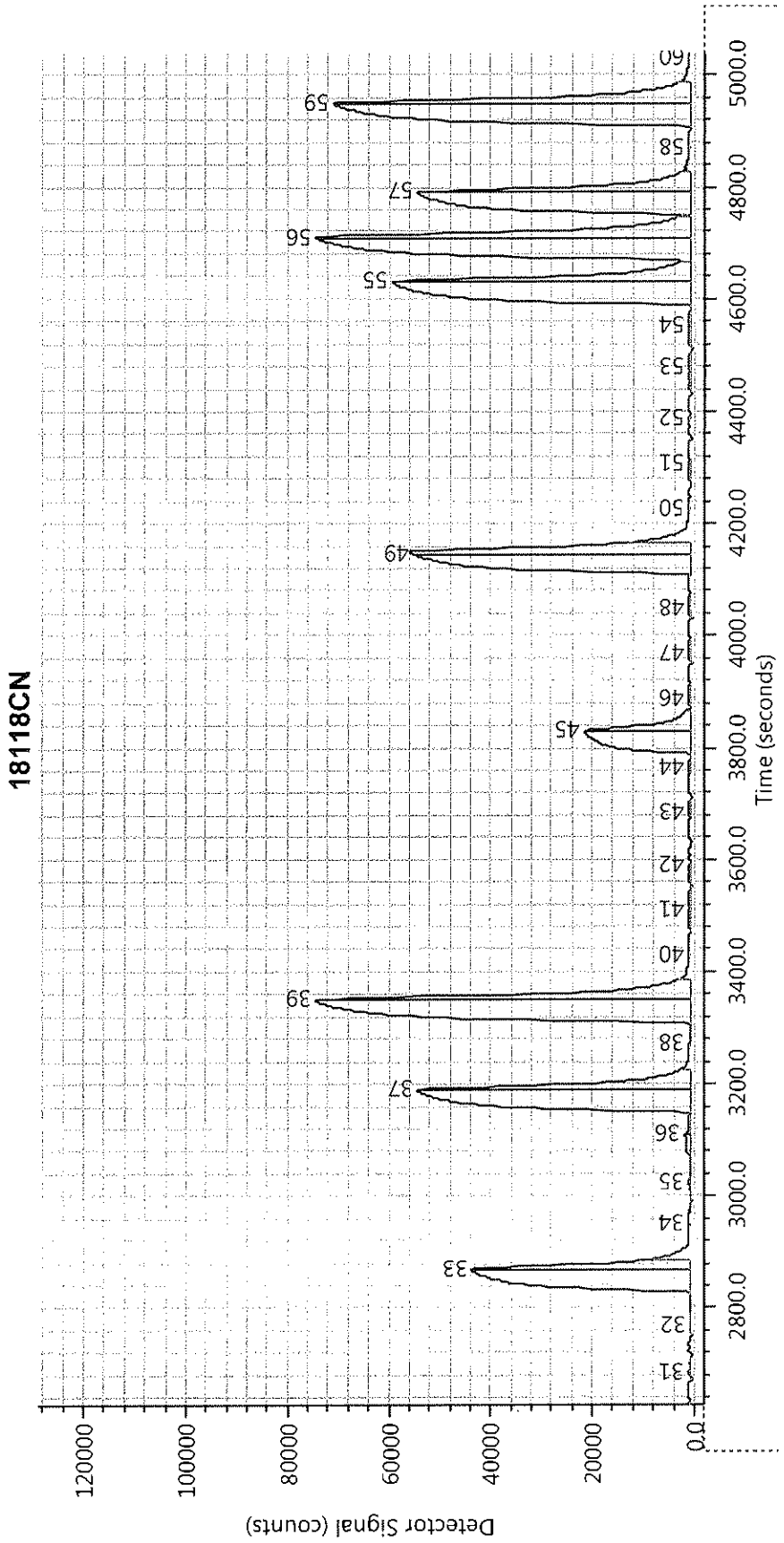
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Detector Signal (counts)
Time (seconds)
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40000
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3400.0
3600.0
3800.0
4000.0
4200.0
4400.0
4600.0
4800.0
5000.0
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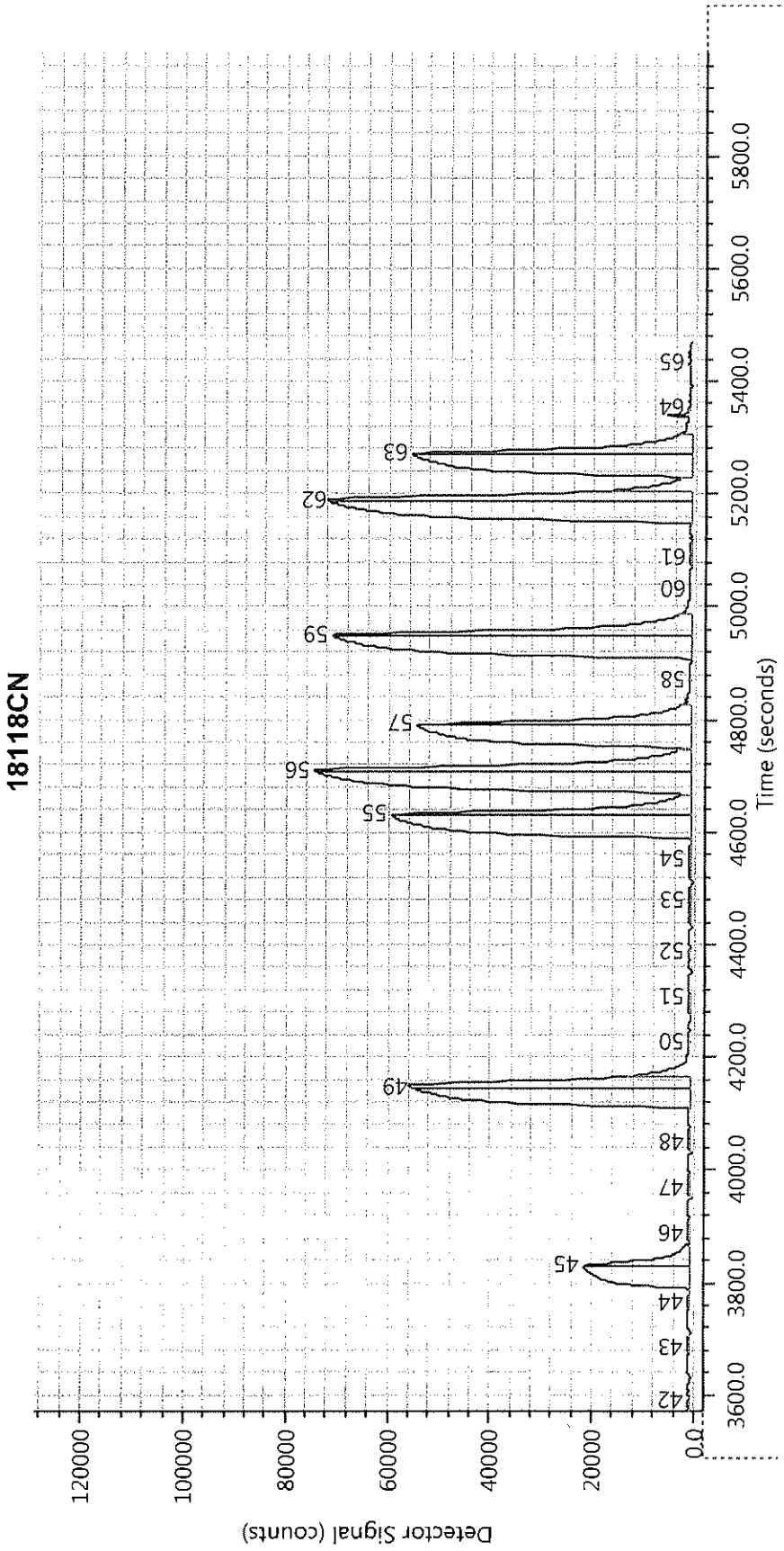
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Detector Signal (counts)
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Time (seconds)
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4800.0
5000.0
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5800.0
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43
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64
65

FlowView - Result

InstrumentID: B632837343
Operator ID: 13347
Methodology: EPA 3247.1 2009
File Version: 110
Created On: 4/28/2018 11:04:39 AM
Last Modified On: 4/28/2018 12:37:07 PM
Exported on 4/28/2018 12:42:05 PM

Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel
4/28/2018 11:04:54 AM	1	107	SYNC	0.0000	1	125070.8	1		Ch 2
4/28/2018 11:06:14 AM	2	900	CARRYOVER	0.0000	1	637.6	1		Ch 2
4/28/2018 11:07:34 AM	3	900	BLANK	0.0000	1	144.7	1		Ch 2
4/28/2018 11:08:54 AM	4	107	S7	0.3500	1	122821.7	1		Ch 2
4/28/2018 11:10:14 AM	5	106	S6	0.2000	1	72832.5	1		Ch 2
4/28/2018 11:11:34 AM	6	105	S5	0.1000	1	36505.7	1		Ch 2
4/28/2018 11:12:54 AM	7	104	S4	0.0500	1	18112.8	1		Ch 2
4/28/2018 11:14:14 AM	8	103	S3	0.0200	1	7277.6	1		Ch 2
4/28/2018 11:15:34 AM	9	102	S2	0.0100	1	3920.9	1		Ch 2
4/28/2018 11:16:54 AM	10	101	S1	0.0000	1	198.6	1		Ch 2
4/28/2018 11:18:14 AM	11	900	RINSE	-0.0014	1	154.2	1		Ch 2
4/28/2018 11:19:34 AM	12	900	BLANK	-0.0012	1	214.8	1		Ch 2
4/28/2018 11:20:54 AM	13	115	ICV	0.1528	1	54470.5	1		Ch 2
4/28/2018 11:22:14 AM	14	900	ICB	-0.0012	1	218.9	1		Ch 2
4/28/2018 11:23:34 AM	15	131	LCSW	0.1963	1	69810.0	1		Ch 2
4/28/2018 11:24:54 AM	16	132	PBW	-0.0003	1	548.9	1		Ch 2
4/28/2018 11:26:14 AM	17	133	9574488	-0.0004	1	515.3	1		Ch 2
4/28/2018 11:27:34 AM	18	134	9574364	-0.0003	1	535.7	1		Ch 2
4/28/2018 11:28:54 AM	19	135	9575021	-0.0006	1	448.9	1		Ch 2
4/28/2018 11:30:14 AM	20	136	9576671	0.0000	1	653.8	1		Ch 2
4/28/2018 11:31:34 AM	21	137	9576326;U	0.0019	1	1310.0	1		Ch 2
4/28/2018 11:32:54 AM	22	138	9576326;R	0.1972	1	70118.5	1		Ch 2
4/28/2018 11:34:14 AM	23	139	9576326;D	0.0009	1	976.3	1		Ch 2
4/28/2018 11:35:34 AM	24	140	LCSW	0.2008	1	71374.4	1		Ch 2
4/28/2018 11:36:54 AM	25	115	CCV2	0.1570	1	55950.1	1		Ch 2
4/28/2018 11:38:14 AM	26	900	CCB	-0.0009	1	338.8	1		Ch 2
4/28/2018 11:39:34 AM	27	141	PBW	-0.0007	1	383.6	1		Ch 2
4/28/2018 11:40:54 AM	28	142	9575815	0.0021	1	1387.6	1		Ch 2
4/28/2018 11:42:14 AM	29	143	9575816	0.0001	1	695.2	1		Ch 2
4/28/2018 11:43:34 AM	30	144	9575817	-0.0007	1	396.7	1		Ch 2
4/28/2018 11:44:54 AM	31	145	9575039	-0.0011	1	268.1	1		Ch 2
4/28/2018 11:46:14 AM	32	146	9575040;U	-0.0014	1	134.8	1		Ch 2
4/28/2018 11:47:34 AM	33	147	9575040;R	0.1202	1	42985.9	1		Ch 2
4/28/2018 11:48:54 AM	34	148	9575040;D	-0.0005	1	469.1	1		Ch 2
4/28/2018 11:50:14 AM	35	149	9575041	-0.0008	1	344.9	1		Ch 2
4/28/2018 11:51:34 AM	36	150	9576329	0.0011	1	1018.6	1		Ch 2
4/28/2018 11:52:54 AM	37	115	CCV2	0.1506	1	53701.0	1		Ch 2
4/28/2018 11:54:14 AM	38	900	CCB	-0.0012	1	210.5	1		Ch 2
4/28/2018 11:55:34 AM	39	151	LCSW	0.2073	1	73674.9	1		Ch 2
4/28/2018 11:56:54 AM	40	152	PBW	-0.0010	1	306.9	1		Ch 2
4/28/2018 11:58:14 AM	41	153	9575815	-0.0009	1	336.2	1		Ch 2
4/28/2018 11:59:34 AM	42	154	9576329	-0.0013	1	200.1	1		Ch 2
4/28/2018 12:00:54 PM	43	155	9577666	-0.0010	1	290.0	1		Ch 2
4/28/2018 12:02:14 PM	44	156	9577667;U	-0.0010	1	296.2	1		Ch 2
4/28/2018 12:03:34 PM	45	157	9577668;R	0.0568	1	20659.2	1		Ch 2
4/28/2018 12:04:54 PM	46	158	9577670;D	-0.0007	1	409.5	1		Ch 2
4/28/2018 12:06:14 PM	47	159	9578808	-0.0008	1	351.1	1		Ch 2
4/28/2018 12:07:34 PM	48	160	9578809	-0.0005	1	460.7	1		Ch 2
4/28/2018 12:08:54 PM	49	115	CCV2	0.1528	1	54488.4	1		Ch 2

Date/Time	Peak #	Cup #	Sample Name	Calc (mg/L)	M-Dil	Peak Response	A-Dil	Comment	Channel
4/28/2018 12:10:14 PM	50	900	CCB	-0.0012	1	213.6	1		Ch 2
4/28/2018 12:11:34 PM	51	161	9578810	-0.0013	1	181.3	1		Ch 2
4/28/2018 12:12:54 PM	52	162	9578811	-0.0014	1	137.1	1		Ch 2
4/28/2018 12:14:14 PM	53	163	9578817	-0.0013	1	200.2	1		Ch 2
4/28/2018 12:15:34 PM	54	164	9578818	-0.0012	1	214.6	1		Ch 2
4/28/2018 12:16:54 PM	55	165	9558698;M	0.1640	1	58401.4	1	18115117101B	Ch 2
4/28/2018 12:18:14 PM	56	166	9575040;R	0.2066	1	73410.5	1	18116117101A	Ch 2
4/28/2018 12:19:34 PM	57	115	CCV2	0.1503	1	53583.2	1		Ch 2
4/28/2018 12:20:54 PM	58	900	CCB	-0.0010	1	289.8	1		Ch 2
4/28/2018 12:22:14 PM	59	167	9575040;P	0.1967	1	69947.7	1		Ch 2
4/28/2018 12:23:34 PM	60	900	RINSE	-0.0010	1	273.7	1		Ch 2
4/28/2018 12:24:54 PM	61	900	RINSE	-0.0016	1	89.9	1		Ch 2
4/28/2018 12:26:14 PM	62	168	9577667;P	0.1986	1	70595.7	1		Ch 2
4/28/2018 12:27:34 PM	63	115	CCV2	0.1528	1	54485.3	1		Ch 2
4/28/2018 12:28:54 PM	64	900	CCB	-0.0012	1	235.6	1		Ch 2
4/28/2018 12:30:14 PM	65	900	RINSE	-0.0013	1	175.4	1		Ch 2

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

eurofins | Lancaster Laboratories Environmental	Document Title: Raw Data Logbook Total Cyanide/Distillations - Analysis #492, 5896, 8256		
	Eurofins Document Reference: T-WC-FRM10328	Revision: 2.2	Historical Reference: 1-P-QM-FOR-9009814; Form 1095
	Effective Date: 08 Jan 2017		Effective

Start Time: 17:00 Cool Time: 18:45 Finish: 19:00 **Note: Final Volume 50mL**

Batch No. 1 8 1 0 8 | 1 1 7 | 1 0 1 |

Balance ID: ———

Enter 102 for Analysis 492, 5896
Enter 117 for Analysis 8256

Analysis: 8256 Date: 4-18-18 Analyst: BW 9263 Std. Ref. (Bk/Pg/Ln): 266337/62/2,3

NaOH: 266337/58 H_3NSO_3: 266337/45 H_2SO_4: 266337/55 $MgCl_2$: 266337/40

Bottle Code	Sample Number	Initial Vol. (mL)	Initial Wt. (g)	Comments/True Values	SDG
	KCSW	50	N.A.	+.5mL 20 mg/L KCN	
	PBW	50			
O2A	9558696	50		A	RAF06
O2A	9558576	50			SLB18
O2A	9558576-U	50			
O2A	9558571-R	50		+.5mL 20 mg/L KCN	
O2A	9558573-D	50			
O2A	9558574	50			
O2A	9558575	50			
O2A	9558577	50			
O2A	9558583	50			↓
O2A	9558578	50			RAF06
O2A	9558695	50			
O2A	9558697	50			
O2A	9558698-U	50		B	
O2A	9558699-R	50		+.5mL 20 mg/L KCN	
O2A	9558701-D	50			
O2A	9558702	50			
O2A	9558703	50			↓
O2A	9561305	50			LVE06
O2A	9561306	50			LVE06
O2A	9561307	50	↓		LVE06

Verified: [signature] Date: 4/19/18

eurofins | Lancaster Laboratories Environmental	Document Title: Raw Data Logbook Total Cyanide/Distillations - Analysis #492, 5896, 8256		
	Eurofins Document Reference: T-WC-FRM10328	Revision: 2.2	Historical Reference: 1-P-QM-FOR-9009814; Form 1095
	Effective Date: 08 Jan 2017		Effective

Start Time: 0845 Cool Time: 1030 Finish: 1045 **Note: Final Volume 50mL**

Batch No. 18115 117 101

Enter 102 for Analysis 492, 5896
Enter 117 for Analysis 8256

Balance ID: _____

Analysis: 8256 Date: 4-25-18 Analyst: TJS123 Std. Ref. (Bk/Pg/Ln): 266337 p.69 l1-2

NaOH: 266337/61 H_3NSO_3: 266337/45 H_2SO_4: 266337/55 $MgCl_2$: 266337/40

Bottle Code	Sample Number	Initial Vol. (mL)	Initial Wt. (g)	Comments/True Values	SDG
	LCSW	50		+.5mL 20mg/L KCN	
	PBW	50			
O2A	9558570 (4)	50		A	SLB81
O2A	9558571 (A)	50			
O2A	9558573 (D)	50		+.5mL 20mg/L KCN	
O2A	9558574	50			
O2A	9558575	50			
O2A	9558576	50			
O2A	9558577	50			
O2A	9558583	50			↓
O2A	9558695	50			RAF06
O2A	9558696	50			
O2A	9558697	50			
O2A	9558702	50		↓	
O2A	9558698 (4)	50		B	
O2A	9558699 (A)	50		+.5mL 20mg/L KCN	
O2A	9558701 (D)	50			
O2A	9558703	50			↓
O2A	9561305	50			LVE06
O2A	9561306	50			
O2A	9561307	50			↓
O2A	9569322	50			SLB20
O2A	9569828	50			ABD61
O2A	9573404	50			BBC31
O2A	9573405	50			↓
O2A	9573533	50		↓	

(3) TJS123 4-25-18

Verified: _____ Date: 4/26/18

eurofins | Lancaster Laboratories Environmental	Document Title: Raw Data Logbook Total Cyanide/Distillations - Analysis #492, 5896, 8256		
	Eurofins Document Reference: T-WC-FRM10328	Revision: 2.2	Historical Reference: 1-P-QM-FOR-9009814; Form 1095
	Effective Date: 08 Jan 2017		Effective

Start Time: 16:45 Cool Time: 18:30 Finish: 18:45 **Note: Final Volume 50mL**

Batch No. 1 8 1 1 7 | 1 1 7 | 1 0 1 | A

Enter 102 for Analysis 492, 5896
Enter 117 for Analysis 8256

Balance ID: ———

Analysis: 8256 Date: 4-27-18 Analyst: BW/9263 Std. Ref. (Bk/Pg/Ln): 266337/72/1,2

NaOH: 266337/61 H_3NSO_3: 266337/45 H_2SO_4: 266337/55 $MgCl_2$: 266337/40

Bottle Code	Sample Number	Initial Vol. (mL)	Initial Wt. (g)	Comments/True Values	SDG
	LCSW	50	N.A.	+.5mL 20 mg/L KCN	
	PBW	50			
02A	9575815	50			
02A	9576329	50			SMC55
02A	95776666	50			BBC31
02A	95776667-U	50			
02A	95776668-R	50		+.5mL 20mg/L KCN	
02A	95776670-D	50			
02A	9578808	50			SLB21
02A	9578809	50			
02A	9578810	50			
02A	9578811	50			
02A	9578817	50			SMC56
02A	9578818	50			SMC56
02A	9558698-M	50		BATCH# 181151171018 (+.5mL 20mg/L KCN)	
02A	9575040-R	50		BATCH# 181161171018	

Verified: [signature] Date: 4/30/18

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-94103-1

Job Description: RAAP

For:
Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg, VA 24060

Attention: Janet Frazier

Approved for release.
Opal Johnson
Project Manager II
4/26/2018 12:36 PM

Opal Johnson, Project Manager II
4101 Shuffel Street NW, North Canton, OH, 44720
opal.johnson@testamericainc.com
04/26/2018

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Draper Aden Associates, Inc.

Project: RAAP

Report Number: 240-94103-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 4/14/2018 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.7º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples 16C1 (240-94103-1), 16MW8 (240-94103-2), 16MW9 (240-94103-3), 16WC1A (240-94103-4), 16WDUP (240-94103-5) and 16WC1B (240-94103-6) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/16/2018 and 04/23/2018 and analyzed on 04/20/2018, 04/23/2018 and 04/25/2018.

Terphenyl-d14 (Surr) failed the surrogate recovery criteria high for 16WC1B (240-94103-6). Six surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. These results have been reported and qualified.

Samples were re-extracted due to associated QC for Prep Batch 240-322624 (LCS,MS and MSD) not properly spiked. Upon re-extraction all QC were appropriate spike, but were prepped outside of hold time. Both sets of data are reported for the following samples: 16C1 (240-94103-1), 16MW8 (240-94103-2), 16MW9 (240-94103-3), 16WC1A (240-94103-4), 16WC1A (240-94103-4[MS]), 16WC1A (240-94103-4[MSD]), 16WDUP (240-94103-5) and 16WC1B (240-94103-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Client Sample ID: 16C1 — Lab Sample ID: 240-94103-1

No Detections.

Client Sample ID: 16MW8 — Lab Sample ID: 240-94103-2

No Detections.

Client Sample ID: 16MW9 — Lab Sample ID: 240-94103-3

No Detections.

Client Sample ID: 16WC1A — Lab Sample ID: 240-94103-4

No Detections.

Client Sample ID: 16WDUP — Lab Sample ID: 240-94103-5

No Detections.

Client Sample ID: 16WC1B — Lab Sample ID: 240-94103-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 16C1 — Lab Sample ID: 240-94103-1

Date Collected: 04/13/18 10:05 — **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		04/16/18 10:31	04/20/18 16:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*89*	*U*	*ug/L*			*70-30-4*	*04/16/18 10:31*	*04/20/18 16:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*86*		*28 - 128*	*04/16/18 10:31*	*04/20/18 16:27*	*1*
Phenol-d5 (Surr)	*42*		*15 - 120*	*04/16/18 10:31*	*04/20/18 16:27*	*1*
Nitrobenzene-d5 (Surr)	*69*		*35 - 120*	*04/16/18 10:31*	*04/20/18 16:27*	*1*
2-Fluorophenol (Surr)	*49*		*17 - 120*	*04/16/18 10:31*	*04/20/18 16:27*	*1*
2-Fluorobiphenyl (Surr)	*67*		*32 - 120*	*04/16/18 10:31*	*04/20/18 16:27*	*1*
2,4,6-Tribromophenol (Surr)	*73*		*33 - 120*	*04/16/18 10:31*	*04/20/18 16:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	9.3	U H	9.3	0.93	ug/L		04/23/18 12:07	04/25/18 08:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*93*	*U H*	*ug/L*			*70-30-4*	*04/23/18 12:07*	*04/25/18 08:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*91*		*28 - 128*	*04/23/18 12:07*	*04/25/18 08:39*	*1*
Phenol-d5 (Surr)	*41*		*15 - 120*	*04/23/18 12:07*	*04/25/18 08:39*	*1*
Nitrobenzene-d5 (Surr)	*62*		*35 - 120*	*04/23/18 12:07*	*04/25/18 08:39*	*1*
2-Fluorophenol (Surr)	*43*		*17 - 120*	*04/23/18 12:07*	*04/25/18 08:39*	*1*
2-Fluorobiphenyl (Surr)	*62*		*32 - 120*	*04/23/18 12:07*	*04/25/18 08:39*	*1*
2,4,6-Tribromophenol (Surr)	*59*		*33 - 120*	*04/23/18 12:07*	*04/25/18 08:39*	*1*

Client Sample ID: 16MW8 — Lab Sample ID: 240-94103-2

Date Collected: 04/10/18 14:20 — **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	10	U	10	1.0	ug/L		04/16/18 10:31	04/20/18 16:52	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*100*	*U*	*ug/L*			*70-30-4*	*04/16/18 10:31*	*04/20/18 16:52*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*101*		*28 - 128*	*04/16/18 10:31*	*04/20/18 16:52*	*1*
Phenol-d5 (Surr)	*58*		*15 - 120*	*04/16/18 10:31*	*04/20/18 16:52*	*1*
Nitrobenzene-d5 (Surr)	*81*		*35 - 120*	*04/16/18 10:31*	*04/20/18 16:52*	*1*
2-Fluorophenol (Surr)	*67*		*17 - 120*	*04/16/18 10:31*	*04/20/18 16:52*	*1*
2-Fluorobiphenyl (Surr)	*77*		*32 - 120*	*04/16/18 10:31*	*04/20/18 16:52*	*1*
2,4,6-Tribromophenol (Surr)	*82*		*33 - 120*	*04/16/18 10:31*	*04/20/18 16:52*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	10	U H	10	1.0	ug/L		04/23/18 12:07	04/25/18 09:04	1

Client Sample ID: 16MW8 — Lab Sample ID: 240-94103-2

Date Collected: 04/10/18 14:20 — **Matrix: Water**
Date Received: 04/14/18 08:00

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	100	U H	ug/L			70-30-4	04/23/18 12:07	04/25/18 09:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	75		28 - 128	04/23/18 12:07	04/25/18 09:04	1
Phenol-d5 (Surr)	40		15 - 120	04/23/18 12:07	04/25/18 09:04	1
Nitrobenzene-d5 (Surr)	52		35 - 120	04/23/18 12:07	04/25/18 09:04	1
2-Fluorophenol (Surr)	43		17 - 120	04/23/18 12:07	04/25/18 09:04	1
2-Fluorobiphenyl (Surr)	54		32 - 120	04/23/18 12:07	04/25/18 09:04	1
2,4,6-Tribromophenol (Surr)	47		33 - 120	04/23/18 12:07	04/25/18 09:04	1

Client Sample ID: 16MW9 — Lab Sample ID: 240-94103-3

Date Collected: 04/13/18 09:10 — **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	9.3	U	9.3	0.93	ug/L		04/16/18 10:31	04/20/18 17:16	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	93	U	ug/L			70-30-4	04/16/18 10:31	04/20/18 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	83		28 - 128	04/16/18 10:31	04/20/18 17:16	1
Phenol-d5 (Surr)	48		15 - 120	04/16/18 10:31	04/20/18 17:16	1
Nitrobenzene-d5 (Surr)	61		35 - 120	04/16/18 10:31	04/20/18 17:16	1
2-Fluorophenol (Surr)	46		17 - 120	04/16/18 10:31	04/20/18 17:16	1
2-Fluorobiphenyl (Surr)	62		32 - 120	04/16/18 10:31	04/20/18 17:16	1
2,4,6-Tribromophenol (Surr)	66		33 - 120	04/16/18 10:31	04/20/18 17:16	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U H	8.9	0.89	ug/L		04/23/18 12:07	04/25/18 09:28	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	89	U H	ug/L			70-30-4	04/23/18 12:07	04/25/18 09:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	102		28 - 128	04/23/18 12:07	04/25/18 09:28	1
Phenol-d5 (Surr)	59		15 - 120	04/23/18 12:07	04/25/18 09:28	1
Nitrobenzene-d5 (Surr)	69		35 - 120	04/23/18 12:07	04/25/18 09:28	1
2-Fluorophenol (Surr)	55		17 - 120	04/23/18 12:07	04/25/18 09:28	1
2-Fluorobiphenyl (Surr)	71		32 - 120	04/23/18 12:07	04/25/18 09:28	1
2,4,6-Tribromophenol (Surr)	65		33 - 120	04/23/18 12:07	04/25/18 09:28	1

Client Sample ID: 16WC1A — Lab Sample ID: 240-94103-4

Date Collected: 04/12/18 15:15 — **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	9.3	U	9.3	0.93	ug/L		04/16/18 10:31	04/20/18 17:41	1

Client Sample ID: 16WC1A — Lab Sample ID: 240-94103-4

Date Collected: 04/12/18 15:15 **Matrix: Water**
Date Received: 04/14/18 08:00

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	93	U	ug/L			70-30-4	04/16/18 10:31	04/20/18 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	85		28 - 128	04/16/18 10:31	04/20/18 17:41	1
Phenol-d5 (Surr)	44		15 - 120	04/16/18 10:31	04/20/18 17:41	1
Nitrobenzene-d5 (Surr)	66		35 - 120	04/16/18 10:31	04/20/18 17:41	1
2-Fluorophenol (Surr)	52		17 - 120	04/16/18 10:31	04/20/18 17:41	1
2-Fluorobiphenyl (Surr)	67		32 - 120	04/16/18 10:31	04/20/18 17:41	1
2,4,6-Tribromophenol (Surr)	71		33 - 120	04/16/18 10:31	04/20/18 17:41	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	9.3	U H	9.3	0.93	ug/L		04/23/18 12:07	04/25/18 09:53	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	93	U H	ug/L			70-30-4	04/23/18 12:07	04/25/18 09:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	105		28 - 128	04/23/18 12:07	04/25/18 09:53	1
Phenol-d5 (Surr)	68		15 - 120	04/23/18 12:07	04/25/18 09:53	1
Nitrobenzene-d5 (Surr)	72		35 - 120	04/23/18 12:07	04/25/18 09:53	1
2-Fluorophenol (Surr)	66		17 - 120	04/23/18 12:07	04/25/18 09:53	1
2-Fluorobiphenyl (Surr)	73		32 - 120	04/23/18 12:07	04/25/18 09:53	1
2,4,6-Tribromophenol (Surr)	71		33 - 120	04/23/18 12:07	04/25/18 09:53	1

Client Sample ID: 16WDUP — Lab Sample ID: 240-94103-5

Date Collected: 04/12/18 15:30 **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		04/16/18 10:31	04/23/18 16:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	89	U	ug/L			70-30-4	04/16/18 10:31	04/23/18 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	93		28 - 128	04/16/18 10:31	04/23/18 16:01	1
Phenol-d5 (Surr)	47		15 - 120	04/16/18 10:31	04/23/18 16:01	1
Nitrobenzene-d5 (Surr)	63		35 - 120	04/16/18 10:31	04/23/18 16:01	1
2-Fluorophenol (Surr)	60		17 - 120	04/16/18 10:31	04/23/18 16:01	1
2-Fluorobiphenyl (Surr)	64		32 - 120	04/16/18 10:31	04/23/18 16:01	1
2,4,6-Tribromophenol (Surr)	64		33 - 120	04/16/18 10:31	04/23/18 16:01	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U H	8.9	0.89	ug/L		04/23/18 12:07	04/25/18 11:06	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	89	U H	ug/L			70-30-4	04/23/18 12:07	04/25/18 11:06	1

Client Sample ID: 16WDUP — Lab Sample ID: 240-94103-5

Date Collected: 04/12/18 15:30 **Matrix: Water**
Date Received: 04/14/18 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	105		28 - 128	04/23/18 12:07	04/25/18 11:06	1
Phenol-d5 (Surr)	59		15 - 120	04/23/18 12:07	04/25/18 11:06	1
Nitrobenzene-d5 (Surr)	75		35 - 120	04/23/18 12:07	04/25/18 11:06	1
2-Fluorophenol (Surr)	62		17 - 120	04/23/18 12:07	04/25/18 11:06	1
2-Fluorobiphenyl (Surr)	75		32 - 120	04/23/18 12:07	04/25/18 11:06	1
2,4,6-Tribromophenol (Surr)	68		33 - 120	04/23/18 12:07	04/25/18 11:06	1

Client Sample ID: 16WC1B — Lab Sample ID: 240-94103-6

Date Collected: 04/12/18 14:20 **Matrix: Water**
Date Received: 04/14/18 08:00

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	8.9	U	8.9	0.89	ug/L		04/16/18 10:31	04/23/18 16:25	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	89	U	ug/L			70-30-4	04/16/18 10:31	04/23/18 16:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	139	X	28 - 128	04/16/18 10:31	04/23/18 16:25	1
Phenol-d5 (Surr)	50		15 - 120	04/16/18 10:31	04/23/18 16:25	1
Nitrobenzene-d5 (Surr)	95		35 - 120	04/16/18 10:31	04/23/18 16:25	1
2-Fluorophenol (Surr)	65		17 - 120	04/16/18 10:31	04/23/18 16:25	1
2-Fluorobiphenyl (Surr)	89		32 - 120	04/16/18 10:31	04/23/18 16:25	1
2,4,6-Tribromophenol (Surr)	99		33 - 120	04/16/18 10:31	04/23/18 16:25	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	9.3	U H	9.3	0.93	ug/L		04/23/18 12:07	04/25/18 11:31	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Hexachlorophene TIC	93	U H	ug/L			70-30-4	04/23/18 12:07	04/25/18 11:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	99		28 - 128	04/23/18 12:07	04/25/18 11:31	1
Phenol-d5 (Surr)	46		15 - 120	04/23/18 12:07	04/25/18 11:31	1
Nitrobenzene-d5 (Surr)	70		35 - 120	04/23/18 12:07	04/25/18 11:31	1
2-Fluorophenol (Surr)	50		17 - 120	04/23/18 12:07	04/25/18 11:31	1
2-Fluorobiphenyl (Surr)	77		32 - 120	04/23/18 12:07	04/25/18 11:31	1
2,4,6-Tribromophenol (Surr)	70		33 - 120	04/23/18 12:07	04/25/18 11:31	1

Default Detection Limits

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	RL	MDL	Units	Method
Sulfotepp	10	1.0	ug/L	8270D

Surrogate Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TPHL	PHL	NBZ	2FP	FBP	TBP
Lab Sample ID	Client Sample ID	(28-128)	(15-120)	(35-120)	(17-120)	(32-120)	(33-120)
240-94103-1	16C1	86	42	69	49	67	73
240-94103-1 - RE	16C1	91	41	62	43	62	59
240-94103-2	16MW8	101	58	81	67	77	82
240-94103-2 - RE	16MW8	75	40	52	43	54	47
240-94103-3	16MW9	83	48	61	46	62	66
240-94103-3 - RE	16MW9	102	59	69	55	71	65
240-94103-4	16WC1A	85	44	66	52	67	71
240-94103-4 - RE	16WC1A	105	68	72	66	73	71
240-94103-4 MS	16WC1A	87	61	78	63	72	79
240-94103-4 MS - RE	16WC1A	88	44	81	54	83	98
240-94103-4 MSD	16WC1A	80	58	78	73	75	83
240-94103-4 MSD - RE	16WC1A	81	33	72	49	76	88
240-94103-5	16WDUP	93	47	63	60	64	64
240-94103-5 - RE	16WDUP	105	59	75	62	75	68
240-94103-6	16WC1B	139 X	50	95	65	89	99
240-94103-6 - RE	16WC1B	99	46	70	50	77	70
LCS 240-322624/19-A	Lab Control Sample	84	46	83	60	77	85
LCS 240-323647/10-A	Lab Control Sample	84	21	70	39	74	89
MB 240-322624/18-A	Method Blank	86	50	67	54	65	72
MB 240-323647/9-A	Method Blank	93	50	69	50	68	63

Surrogate Legend

TPHL = Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)
NBZ = Nitrobenzene-d5 (Surr)
2FP = 2-Fluorophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-322624/18-A
Matrix: Water
Analysis Batch: 323078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 322624

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	10	U	10	1.0	ug/L		04/16/18 10:31	04/19/18 09:45	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*100*	*U*	*ug/L*			*70-30-4*	*04/16/18 10:31*	*04/19/18 09:45*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*86*		*28 - 128*	*04/16/18 10:31*	*04/19/18 09:45*	*1*
Phenol-d5 (Surr)	*50*		*15 - 120*	*04/16/18 10:31*	*04/19/18 09:45*	*1*
Nitrobenzene-d5 (Surr)	*67*		*35 - 120*	*04/16/18 10:31*	*04/19/18 09:45*	*1*
2-Fluorophenol (Surr)	*54*		*17 - 120*	*04/16/18 10:31*	*04/19/18 09:45*	*1*
2-Fluorobiphenyl (Surr)	*65*		*32 - 120*	*04/16/18 10:31*	*04/19/18 09:45*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*33 - 120*	*04/16/18 10:31*	*04/19/18 09:45*	*1*

Lab Sample ID: LCS 240-322624/19-A
Matrix: Water
Analysis Batch: 323078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 322624

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*84*		*28 - 128*
Phenol-d5 (Surr)	*46*		*15 - 120*
Nitrobenzene-d5 (Surr)	*83*		*35 - 120*
2-Fluorophenol (Surr)	*60*		*17 - 120*
2-Fluorobiphenyl (Surr)	*77*		*32 - 120*
2,4,6-Tribromophenol (Surr)	*85*		*33 - 120*

Lab Sample ID: 240-94103-4 MS
Matrix: Water
Analysis Batch: 323282

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 322624

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*87*		*28 - 128*
Phenol-d5 (Surr)	*61*		*15 - 120*
Nitrobenzene-d5 (Surr)	*78*		*35 - 120*
2-Fluorophenol (Surr)	*63*		*17 - 120*
2-Fluorobiphenyl (Surr)	*72*		*32 - 120*
2,4,6-Tribromophenol (Surr)	*79*		*33 - 120*

Lab Sample ID: 240-94103-4 MSD
Matrix: Water
Analysis Batch: 323501

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 322624

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*80*		*28 - 128*
Phenol-d5 (Surr)	*58*		*15 - 120*
Nitrobenzene-d5 (Surr)	*78*		*35 - 120*
2-Fluorophenol (Surr)	*73*		*17 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-94103-4 MSD
Matrix: Water
Analysis Batch: 323501

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 322624

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*75*		*32 - 120*
2,4,6-Tribromophenol (Surr)	*83*		*33 - 120*

Lab Sample ID: MB 240-323647/9-A
Matrix: Water
Analysis Batch: 323952

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 323647

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfotepp	10	U	10	1.0	ug/L		04/23/18 12:07	04/25/18 07:50	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexachlorophene TIC	*100*	*U*	*ug/L*			*70-30-4*	*04/23/18 12:07*	*04/25/18 07:50*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14 (Surr)	*93*		*28 - 128*	*04/23/18 12:07*	*04/25/18 07:50*	*1*
Phenol-d5 (Surr)	*50*		*15 - 120*	*04/23/18 12:07*	*04/25/18 07:50*	*1*
Nitrobenzene-d5 (Surr)	*69*		*35 - 120*	*04/23/18 12:07*	*04/25/18 07:50*	*1*
2-Fluorophenol (Surr)	*50*		*17 - 120*	*04/23/18 12:07*	*04/25/18 07:50*	*1*
2-Fluorobiphenyl (Surr)	*68*		*32 - 120*	*04/23/18 12:07*	*04/25/18 07:50*	*1*
2,4,6-Tribromophenol (Surr)	*63*		*33 - 120*	*04/23/18 12:07*	*04/25/18 07:50*	*1*

Lab Sample ID: LCS 240-323647/10-A
Matrix: Water
Analysis Batch: 323952

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 323647

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfotepp			32.0	24.7		ug/L		77	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Terphenyl-d14 (Surr)	*84*		*28 - 128*
Phenol-d5 (Surr)	*21*		*15 - 120*
Nitrobenzene-d5 (Surr)	*70*		*35 - 120*
2-Fluorophenol (Surr)	*39*		*17 - 120*
2-Fluorobiphenyl (Surr)	*74*		*32 - 120*
2,4,6-Tribromophenol (Surr)	*89*		*33 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE

Lab Sample ID: 240-94103-4 MS
Matrix: Water
Analysis Batch: 323952

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 323647

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfotepp - RE	9.3	U H	32.0	26.5	H	ug/L		83	10 - 120		

Method: 8270D - Semivolatile Organic Compounds (GC/MS) - RE (Continued)

Lab Sample ID: 240-94103-4 MS
Matrix: Water
Analysis Batch: 323952

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 323647

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Terphenyl-d14 (Surr) - RE	*88*		*28 - 128*
Phenol-d5 (Surr) - RE	*44*		*15 - 120*
Nitrobenzene-d5 (Surr) - RE	*81*		*35 - 120*
2-Fluorophenol (Surr) - RE	*54*		*17 - 120*
2-Fluorobiphenyl (Surr) - RE	*83*		*32 - 120*
2,4,6-Tribromophenol (Surr) - RE	*98*		*33 - 120*

Lab Sample ID: 240-94103-4 MSD
Matrix: Water
Analysis Batch: 323952

Client Sample ID: 16WC1A
Prep Type: Total/NA
Prep Batch: 323647

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfotepp - RE	9.3	U H	32.0	24.9	H	ug/L		78	10 - 120	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Terphenyl-d14 (Surr) - RE	*81*		*28 - 128*
Phenol-d5 (Surr) - RE	*33*		*15 - 120*
Nitrobenzene-d5 (Surr) - RE	*72*		*35 - 120*
2-Fluorophenol (Surr) - RE	*49*		*17 - 120*
2-Fluorobiphenyl (Surr) - RE	*76*		*32 - 120*
2,4,6-Tribromophenol (Surr) - RE	*88*		*33 - 120*

GC/MS Semi VOA

Prep Batch: 322624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94103-1	16C1	Total/NA	Water	3510C	
240-94103-2	16MW8	Total/NA	Water	3510C	
240-94103-3	16MW9	Total/NA	Water	3510C	
240-94103-4	16WC1A	Total/NA	Water	3510C	
240-94103-5	16WDUP	Total/NA	Water	3510C	
240-94103-6	16WC1B	Total/NA	Water	3510C	
MB 240-322624/18-A	Method Blank	Total/NA	Water	3510C	
LCS 240-322624/19-A	Lab Control Sample	Total/NA	Water	3510C	
240-94103-4 MS	16WC1A	Total/NA	Water	3510C	
240-94103-4 MSD	16WC1A	Total/NA	Water	3510C	

Analysis Batch: 323078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-322624/18-A	Method Blank	Total/NA	Water	8270D	322624
LCS 240-322624/19-A	Lab Control Sample	Total/NA	Water	8270D	322624

Analysis Batch: 323282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94103-1	16C1	Total/NA	Water	8270D	322624
240-94103-2	16MW8	Total/NA	Water	8270D	322624
240-94103-3	16MW9	Total/NA	Water	8270D	322624
240-94103-4	16WC1A	Total/NA	Water	8270D	322624
240-94103-4 MS	16WC1A	Total/NA	Water	8270D	322624

Analysis Batch: 323501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94103-5	16WDUP	Total/NA	Water	8270D	322624
240-94103-6	16WC1B	Total/NA	Water	8270D	322624
240-94103-4 MSD	16WC1A	Total/NA	Water	8270D	322624

Prep Batch: 323647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94103-1 - RE	16C1	Total/NA	Water	3510C	
240-94103-2 - RE	16MW8	Total/NA	Water	3510C	
240-94103-3 - RE	16MW9	Total/NA	Water	3510C	
240-94103-4 - RE	16WC1A	Total/NA	Water	3510C	
240-94103-5 - RE	16WDUP	Total/NA	Water	3510C	
240-94103-6 - RE	16WC1B	Total/NA	Water	3510C	
MB 240-323647/9-A	Method Blank	Total/NA	Water	3510C	
LCS 240-323647/10-A	Lab Control Sample	Total/NA	Water	3510C	
240-94103-4 MS - RE	16WC1A	Total/NA	Water	3510C	
240-94103-4 MSD - RE	16WC1A	Total/NA	Water	3510C	

Analysis Batch: 323952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-94103-1 - RE	16C1	Total/NA	Water	8270D	323647
240-94103-2 - RE	16MW8	Total/NA	Water	8270D	323647
240-94103-3 - RE	16MW9	Total/NA	Water	8270D	323647
240-94103-4 - RE	16WC1A	Total/NA	Water	8270D	323647
240-94103-5 - RE	16WDUP	Total/NA	Water	8270D	323647
240-94103-6 - RE	16WC1B	Total/NA	Water	8270D	323647

GC/MS Semi VOA (Continued)

Analysis Batch: 323952 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-323647/9-A	Method Blank	Total/NA	Water	8270D	323647
LCS 240-323647/10-A	Lab Control Sample	Total/NA	Water	8270D	323647
240-94103-4 MS - RE	16WC1A	Total/NA	Water	8270D	323647
240-94103-4 MSD - RE	16WC1A	Total/NA	Water	8270D	323647

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Client Sample ID: 16C1
Date Collected: 04/13/18 10:05
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323282	04/20/18 16:27	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 08:39	TMH	TAL CAN

Client Sample ID: 16MW8
Date Collected: 04/10/18 14:20
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323282	04/20/18 16:52	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 09:04	TMH	TAL CAN

Client Sample ID: 16MW9
Date Collected: 04/13/18 09:10
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323282	04/20/18 17:16	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 09:28	TMH	TAL CAN

Client Sample ID: 16WC1A
Date Collected: 04/12/18 15:15
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323282	04/20/18 17:41	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 09:53	TMH	TAL CAN

Client Sample ID: 16WDUP
Date Collected: 04/12/18 15:30
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323501	04/23/18 16:01	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN

Lab Chronicle

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Client Sample ID: 16WDUP
Date Collected: 04/12/18 15:30
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 11:06	TMH	TAL CAN

Client Sample ID: 16WC1B
Date Collected: 04/12/18 14:20
Date Received: 04/14/18 08:00

Lab Sample ID: 240-94103-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			322624	04/16/18 10:31	SDE	TAL CAN
Total/NA	Analysis	8270D		1	323501	04/23/18 16:25	TMH	TAL CAN
Total/NA	Prep	3510C	RE		323647	04/23/18 12:07	WKD	TAL CAN
Total/NA	Analysis	8270D	RE	1	323952	04/25/18 11:31	TMH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Draper Aden Associates, Inc. TestAmerica Job ID: 240-94103-1
Project/Site: RAAP

Laboratory: TestAmerica Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Virginia	NELAP	3	460175	09-14-18

Method Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Draper Aden Associates, Inc.
Project/Site: RAAP

TestAmerica Job ID: 240-94103-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-94103-1	16C1	Water	04/13/18 10:05	04/14/18 08:00
240-94103-2	16MW8	Water	04/10/18 14:20	04/14/18 08:00
240-94103-3	16MW9	Water	04/13/18 09:10	04/14/18 08:00
240-94103-4	16WC1A	Water	04/12/18 15:15	04/14/18 08:00
240-94103-5	16WDUP	Water	04/12/18 15:30	04/14/18 08:00
240-94103-6	16WC1B	Water	04/12/18 14:20	04/14/18 08:00

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: STD9 240-322037/2 IC Client Sample ID:

Date Analyzed: 04/11/18 11:32 Lab File ID: 80411002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	7.65	Peak assignment corrected	hulat	04/11/18 12:11
Naphthalene	7.94	Peak assignment corrected	hulat	04/11/18 12:11
1,2-Diphenylhydrazine(as Azobenzene)	10.00	Peak assignment corrected	hulat	04/11/18 12:12
Benzo[g,h,i]perylene	18.95	Peak assignment corrected	hulat	04/11/18 12:33

Lab Sample ID: STD8 240-322037/3 IC Client Sample ID:

Date Analyzed: 04/11/18 11:57 Lab File ID: 80411003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrophenol	9.44	Peak assignment corrected	hulat	04/11/18 12:32
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/11/18 12:32
Benzo[g,h,i]perylene	18.93	Peak assignment corrected	hulat	04/11/18 12:33

Lab Sample ID: STD7 240-322037/4 IC Client Sample ID:

Date Analyzed: 04/11/18 12:21 Lab File ID: 80411004.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/11/18 12:48

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: STD6 240-322037/5 ICIS Client Sample ID:

Date Analyzed: 04/11/18 12:46 Lab File ID: 80411005.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/11/18 13:08
3 & 4 Methylphenol	7.12	Peak assignment corrected	hulat	04/11/18 13:09
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/11/18 13:10

Lab Sample ID: STD5 240-322037/6 IC Client Sample ID:

Date Analyzed: 04/11/18 13:11 Lab File ID: 80411006.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/12/18 05:42

Lab Sample ID: STD4 240-322037/7 IC Client Sample ID:

Date Analyzed: 04/11/18 13:35 Lab File ID: 80411007.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:40
3 & 4 Methylphenol	7.12	Peak assignment corrected	hulat	04/12/18 05:40
Benzoic acid	7.59	Poor chromatography	hulat	04/12/18 05:40
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/12/18 05:42

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: STD3 240-322037/8 IC Client Sample ID:

Date Analyzed: 04/11/18 14:00 Lab File ID: 80411008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:39
Benzoic acid	7.59	Poor chromatography	hulat	04/12/18 05:41
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/12/18 05:40

Lab Sample ID: STD2 240-322037/9 IC Client Sample ID:

Date Analyzed: 04/11/18 14:25 Lab File ID: 80411009.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:38
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/12/18 05:39
Benzo[g,h,i]perylene	18.90	Peak assignment corrected	hulat	04/12/18 05:38

Lab Sample ID: STD1 240-322037/10 IC Client Sample ID:

Date Analyzed: 04/11/18 14:49 Lab File ID: 80411010.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:31
Benzaldehyde		Invalid Compound ID	hulat	04/12/18 06:12
Benzo[a]anthracene	13.66	Peak assignment corrected	hulat	04/12/18 05:32
Dibenz(a,h)anthracene	18.26	Poor chromatography	hulat	04/12/18 05:32

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: ICV 240-322037/11 Client Sample ID:

Date Analyzed: 04/11/18 15:14 Lab File ID: 80411011.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/12/18 05:44

Lab Sample ID: STD9 240-322037/12 IC Client Sample ID:

Date Analyzed: 04/11/18 15:39 Lab File ID: 80411012.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:51
alpha,alpha-Dimethyl phenethylamine	7.74	Poor chromatography	hulat	04/12/18 05:52
Famphur		Invalid Compound ID	hulat	04/12/18 06:04

Lab Sample ID: STD8 240-322037/13 IC Client Sample ID:

Date Analyzed: 04/11/18 16:03 Lab File ID: 80411013.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:52
alpha,alpha-Dimethyl phenethylamine	7.74	Poor chromatography	hulat	04/12/18 05:53
Famphur		Invalid Compound ID	hulat	04/12/18 06:04

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: STD7 240-322037/14 IC Client Sample ID:

Date Analyzed: 04/11/18 16:28 Lab File ID: 80411014.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:53
alpha,alpha-Dimethyl phenethylamine	7.75	Poor chromatography	hulat	04/12/18 05:54
Famphur		Invalid Compound ID	hulat	04/12/18 06:05

Lab Sample ID: STD6 240-322037/15 IC Client Sample ID:

Date Analyzed: 04/11/18 16:53 Lab File ID: 80411015.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 05:59
alpha,alpha-Dimethyl phenethylamine	7.75	Poor chromatography	hulat	04/12/18 05:59

Lab Sample ID: STD5 240-322037/16 IC Client Sample ID:

Date Analyzed: 04/11/18 17:17 Lab File ID: 80411016.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 06:00

Lab Sample ID: STD4 240-322037/17 IC Client Sample ID:

Date Analyzed: 04/11/18 17:42 Lab File ID: 80411017.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 06:00
Acrylamide		Invalid Compound ID	hulat	04/12/18 06:12

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 322037

Lab Sample ID: STD3 240-322037/18 IC Client Sample ID:

Date Analyzed: 04/11/18 18:07 Lab File ID: 80411018.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 06:02
1,3,5-Trinitrobenzene		Invalid Compound ID	hulat	04/12/18 06:13
Acrylamide		Invalid Compound ID	hulat	04/12/18 06:12

Lab Sample ID: STD2 240-322037/19 IC Client Sample ID:

Date Analyzed: 04/11/18 18:32 Lab File ID: 80411019.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.85	Peak assignment corrected	hulat	04/12/18 06:02
1,3,5-Trinitrobenzene		Invalid Compound ID	hulat	04/12/18 06:13
4-Nitroquinoline-1-oxide		Invalid Compound ID	hulat	04/12/18 06:03
Acrylamide		Invalid Compound ID	hulat	04/12/18 06:02

Lab Sample ID: ICV 240-322037/20 Client Sample ID:

Date Analyzed: 04/11/18 18:56 Lab File ID: 80411020.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.85	Peak assignment corrected	hulat	04/12/18 06:03

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323078

Lab Sample ID: STD6 240-323078/2 CCVIS Client Sample ID:

Date Analyzed: 04/19/18 07:17 Lab File ID: 80419002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	10.00	Peak assignment corrected	hulat	04/19/18 07:43

Lab Sample ID: STD6 240-323078/3 CCV Client Sample ID:

Date Analyzed: 04/19/18 07:42 Lab File ID: 80419003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
alpha,alpha-Dimethyl phenethylamine	7.76	Poor chromatography	hulat	04/19/18 08:10
1-Chloronaphthalene	8.98	Poor chromatography	hulat	04/19/18 08:10

Lab Sample ID: MB 240-322624/18-A Client Sample ID:

Date Analyzed: 04/19/18 09:45 Lab File ID: 80419008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.86	Peak assignment corrected	hulat	04/19/18 10:22

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323282

Lab Sample ID: STD6 240-323282/2 CCVIS Client Sample ID:

Date Analyzed: 04/20/18 07:10 Lab File ID: 80420002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	9.99	Peak assignment corrected	hulat	04/20/18 07:34

Lab Sample ID: STD6 240-323282/3 CCV Client Sample ID:

Date Analyzed: 04/20/18 08:14 Lab File ID: 80420003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.85	Peak assignment corrected	hulat	04/20/18 08:35

Lab Sample ID: 240-94103-2 Client Sample ID:

Date Analyzed: 04/20/18 16:52 Lab File ID: 80420022.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.85	Peak assignment corrected	hulat	04/21/18 07:04

Lab Sample ID: 240-94103-3 Client Sample ID:

Date Analyzed: 04/20/18 17:16 Lab File ID: 80420023.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.85	Peak assignment corrected	hulat	04/21/18 07:04

Lab Sample ID: 240-94103-4 Client Sample ID:

Date Analyzed: 04/20/18 17:41 Lab File ID: 80420024.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.85	Peak assignment corrected	hulat	04/21/18 07:05

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD9 240-323501/2 IC Client Sample ID:

Date Analyzed: 04/23/18 06:35 Lab File ID: 80423002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrophenol	9.36	Peak assignment corrected	hulat	04/23/18 06:59
N-Nitrosodiphenylamine	9.88	Peak assignment corrected	hulat	04/23/18 07:02
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 06:59
Benzaldehyde		Invalid Compound ID	hulat	04/23/18 09:49
Phenanthrene-d10 (IS)	10.64	Peak assignment corrected	hulat	04/23/18 07:01
Phenanthrene	10.66	Peak assignment corrected	hulat	04/23/18 06:59
Anthracene	10.71	Peak assignment corrected	hulat	04/23/18 07:00

Lab Sample ID: STD8 240-323501/3 IC Client Sample ID:

Date Analyzed: 04/23/18 07:02 Lab File ID: 80423003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 07:30

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD7 240-323501/4 IC Client Sample ID:

Date Analyzed: 04/23/18 07:26 Lab File ID: 80423004.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pyridine	4.61	Peak assignment corrected	hulat	04/23/18 07:51
Phenol-d5 (Surr)	6.42	Peak assignment corrected	hulat	04/23/18 07:48
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 07:49
n-Decane	6.61	Peak assignment corrected	hulat	04/23/18 07:49
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 07:48
3 & 4 Methylphenol	7.05	Peak assignment corrected	hulat	04/23/18 07:49
Naphthalene	7.86	Peak assignment corrected	hulat	04/23/18 07:49
4-Chloroaniline	7.88	Peak assignment corrected	hulat	04/23/18 07:49
2,4-Dinitrophenol	9.36	Peak assignment corrected	hulat	04/23/18 07:50
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 07:50

Lab Sample ID: STD6 240-323501/5 ICIS Client Sample ID:

Date Analyzed: 04/23/18 07:50 Lab File ID: 80423005.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 09:09
n-Decane	6.61	Peak assignment corrected	hulat	04/23/18 09:14
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 09:09
3 & 4 Methylphenol	7.05	Peak assignment corrected	hulat	04/23/18 09:10
Caprolactam	8.16	Peak assignment corrected	hulat	04/23/18 09:10
2,4-Dinitrophenol	9.36	Peak assignment corrected	hulat	04/23/18 09:10
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 09:10

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD5 240-323501/6 IC Client Sample ID:

Date Analyzed: 04/23/18 08:15 Lab File ID: 80423006.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Phenol-d5 (Surr)	6.42	Peak assignment corrected	hulat	04/23/18 09:11
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 09:11
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 09:11
2,4-Dinitrophenol	9.35	Peak assignment corrected	hulat	04/23/18 09:11
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 09:12

Lab Sample ID: STD4 240-323501/7 IC Client Sample ID:

Date Analyzed: 04/23/18 08:39 Lab File ID: 80423007.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 09:12
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 09:12
3 & 4 Methylphenol	7.05	Peak assignment corrected	hulat	04/23/18 09:12
Caprolactam	8.14	Peak assignment corrected	hulat	04/23/18 09:12
2,4-Dinitrophenol	9.35	Peak assignment corrected	hulat	04/23/18 09:13
4-Nitrophenol	9.37	Peak assignment corrected	hulat	04/23/18 09:13
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 09:13

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD3 240-323501/8 IC Client Sample ID:

Date Analyzed: 04/23/18 09:04 Lab File ID: 80423008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 09:32
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 09:31
Naphthalene	7.86	Peak assignment corrected	hulat	04/23/18 09:32
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 09:34
2,4-Dinitrophenol		Invalid Compound ID	hulat	04/23/18 09:48
Pentachlorophenol		Invalid Compound ID	hulat	04/23/18 09:43

Lab Sample ID: STD2 240-323501/9 IC Client Sample ID:

Date Analyzed: 04/23/18 09:28 Lab File ID: 80423009.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Naphthalene	7.86	Peak assignment corrected	hulat	04/23/18 09:57
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 09:57
4,6-Dinitro-2-methylphenol		Invalid Compound ID	hulat	04/23/18 09:57
4-Nitrophenol		Invalid Compound ID	hulat	04/23/18 09:57
Benzoic acid		Invalid Compound ID	hulat	04/23/18 09:56
Pentachlorophenol		Invalid Compound ID	hulat	04/23/18 09:57

Lab Sample ID: STD1 240-323501/10 IC Client Sample ID:

Date Analyzed: 04/23/18 09:53 Lab File ID: 80423010.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 10:26
Benzaldehyde		Invalid Compound ID	hulat	04/23/18 10:27
Indeno[1,2,3-cd]pyrene	18.02	Poor chromatography	hulat	04/23/18 10:26
Benzo[g,h,i]perylene	18.67	Poor chromatography	hulat	04/23/18 10:26

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: ICV 240-323501/11 Client Sample ID:

Date Analyzed: 04/23/18 10:17 Lab File ID: 80423011.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bis(2-chloroethyl)ether	6.52	Peak assignment corrected	hulat	04/23/18 10:48
n-Decane	6.61	Peak assignment corrected	hulat	04/23/18 10:53
1,3-Dichlorobenzene	6.74	Peak assignment corrected	hulat	04/23/18 10:53
1,4-Dichlorobenzene-d4	6.78	Peak assignment corrected	hulat	04/23/18 10:41
1,4-Dichlorobenzene	6.79	Peak assignment corrected	hulat	04/24/18 06:58
3 & 4 Methylphenol	7.05	Peak assignment corrected	hulat	04/23/18 10:48
2,4-Dinitrophenol	9.36	Peak assignment corrected	hulat	04/23/18 10:52
1,2-Diphenylhydrazine(as Azobenzene)	9.92	Peak assignment corrected	hulat	04/23/18 10:52

Lab Sample ID: STD9 240-323501/12 IC Client Sample ID:

Date Analyzed: 04/23/18 10:42 Lab File ID: 80423012.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Picoline	5.24	Peak assignment corrected	hulat	04/23/18 13:09
Acrylamide	5.49	Peak assignment corrected	hulat	04/23/18 13:10
Pentachloroethane	6.55	Peak assignment corrected	hulat	04/23/18 12:46
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 12:45
alpha,alpha-Dimethyl phenethylamine	7.67	Poor chromatography	hulat	04/23/18 12:46
2-Naphthylamine	9.64	Poor chromatography	hulat	04/23/18 12:47
Famphur		Invalid Compound ID	hulat	04/24/18 05:27

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD8 240-323501/13 IC Client Sample ID:

Date Analyzed: 04/23/18 11:06 Lab File ID: 80423013.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Picoline	5.24	Peak assignment corrected	hulat	04/23/18 12:48
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 12:48
alpha,alpha-Dimethyl phenethylamine	7.67	Poor chromatography	hulat	04/23/18 12:48
2-Naphthylamine	9.64	Poor chromatography	hulat	04/23/18 12:49
Famphur		Invalid Compound ID	hulat	04/24/18 05:28

Lab Sample ID: STD7 240-323501/14 IC Client Sample ID:

Date Analyzed: 04/23/18 11:31 Lab File ID: 80423014.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Picoline	5.24	Peak assignment corrected	hulat	04/23/18 12:50
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 12:50
alpha,alpha-Dimethyl phenethylamine	7.67	Poor chromatography	hulat	04/23/18 12:51
2-Naphthylamine	9.64	Poor chromatography	hulat	04/23/18 12:51
Famphur		Invalid Compound ID	hulat	04/24/18 05:28

Lab Sample ID: STD6 240-323501/15 IC Client Sample ID:

Date Analyzed: 04/23/18 11:55 Lab File ID: 80423015.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 12:52
alpha,alpha-Dimethyl phenethylamine	7.67	Poor chromatography	hulat	04/23/18 12:52
2-Naphthylamine	9.64	Poor chromatography	hulat	04/23/18 12:52

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD5 240-323501/16 IC Client Sample ID:

Date Analyzed: 04/23/18 12:20 Lab File ID: 80423016.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 12:53
2-Naphthylamine	9.64	Peak assignment corrected	hulat	04/23/18 12:53

Lab Sample ID: STD4 240-323501/17 IC Client Sample ID:

Date Analyzed: 04/23/18 12:44 Lab File ID: 80423017.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 13:08

Lab Sample ID: STD3 240-323501/18 IC Client Sample ID:

Date Analyzed: 04/23/18 13:09 Lab File ID: 80423018.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Peak assignment corrected	hulat	04/23/18 13:35
alpha,alpha-Dimethyl phenethylamine	7.68	Poor chromatography	hulat	04/23/18 13:35
1,3,5-Trinitrobenzene		Invalid Compound ID	hulat	04/24/18 05:36
2,3,5,6-Tetrachlorophenol		Invalid Compound ID	hulat	04/24/18 05:36
2-Acetylaminofluorene		Invalid Compound ID	hulat	04/24/18 05:37
3,3'-Dimethylbenzidine		Invalid Compound ID	hulat	04/24/18 05:37
4-Nitroquinoline-1-oxide		Invalid Compound ID	hulat	04/24/18 05:37
Acrylamide		Invalid Compound ID	hulat	04/23/18 13:35
Dinoseb		Invalid Compound ID	hulat	04/24/18 05:37

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: STD2 240-323501/19 IC Client Sample ID:

Date Analyzed: 04/23/18 13:33 Lab File ID: 80423019.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4 (IS)	6.78	Poor chromatography	hulat	04/24/18 05:24
alpha,alpha-Dimethyl phenethylamine	7.78	Poor chromatography	hulat	04/24/18 05:24
1,3,5-Trinitrobenzene		Invalid Compound ID	hulat	04/24/18 05:25
2,3,5,6-Tetrachlorophenol		Invalid Compound ID	hulat	04/24/18 05:36
2-Acetylaminofluorene		Invalid Compound ID	hulat	04/24/18 05:36
3,3'-Dimethylbenzidine		Invalid Compound ID	hulat	04/24/18 05:36
Acrylamide		Invalid Compound ID	hulat	04/24/18 05:25
Dinoseb		Invalid Compound ID	hulat	04/24/18 05:25

Lab Sample ID: ICV 240-323501/20 Client Sample ID:

Date Analyzed: 04/23/18 13:58 Lab File ID: 80423020.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.78	Peak assignment corrected	hulat	04/24/18 05:17
alpha,alpha-Dimethyl phenethylamine	7.67	Poor chromatography	hulat	04/24/18 05:26

Lab Sample ID: 240-94103-5 Client Sample ID:

Date Analyzed: 04/23/18 16:01 Lab File ID: 80423025.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.78	Peak assignment corrected	hulat	04/24/18 06:39

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323501

Lab Sample ID: 240-94103-6 Client Sample ID:

Date Analyzed: 04/23/18 16:25 Lab File ID: 80423026.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.78	Peak assignment corrected	hulat	04/24/18 06:39

Lab Sample ID: 240-94103-4 MSD Client Sample ID:

Date Analyzed: 04/23/18 16:50 Lab File ID: 80423027.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.78	Peak assignment corrected	hulat	04/24/18 06:40

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323952

Lab Sample ID: STD6 240-323952/2 CCVIS Client Sample ID:

Date Analyzed: 04/25/18 07:00 Lab File ID: 80425002.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrophenol	9.34	Peak assignment corrected	hulat	04/25/18 07:23
1,2-Diphenylhydrazine(as Azobenzene)	9.90	Peak assignment corrected	hulat	04/25/18 07:23

Lab Sample ID: STD6 240-323952/3 CCV Client Sample ID:

Date Analyzed: 04/25/18 07:26 Lab File ID: 80425003.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 07:48
Isosafrole Peak 2	8.76	Peak assignment corrected	hulat	04/25/18 07:50
Dimethoate	10.26	Peak assignment corrected	hulat	04/25/18 07:50

Lab Sample ID: MB 240-323647/9-A Client Sample ID:

Date Analyzed: 04/25/18 07:50 Lab File ID: 80425004.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 09:42
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 09:42

Lab Sample ID: LCS 240-323647/10-A Client Sample ID:

Date Analyzed: 04/25/18 08:15 Lab File ID: 80425005.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 09:41
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 09:40

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323952

Lab Sample ID: 240-94103-1 RE Client Sample ID: 16C1 RE

Date Analyzed: 04/25/18 08:39 Lab File ID: 80425006.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 09:44
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 09:43

Lab Sample ID: 240-94103-2 Client Sample ID:

Date Analyzed: 04/25/18 09:04 Lab File ID: 80425007.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 09:45

Lab Sample ID: 240-94103-3 RE Client Sample ID: 16MW9 RE

Date Analyzed: 04/25/18 09:28 Lab File ID: 80425008.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 10:00
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 09:59

Lab Sample ID: 240-94103-4 Client Sample ID:

Date Analyzed: 04/25/18 09:53 Lab File ID: 80425009.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 10:21

Lab Sample ID: 240-94103-4 MS Client Sample ID:

Date Analyzed: 04/25/18 10:17 Lab File ID: 80425010.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 10:47

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Analysis Batch Number: 323952

Lab Sample ID: 240-94103-4 MSD RE Client Sample ID: 16WC1A MSD RE

Date Analyzed: 04/25/18 10:42 Lab File ID: 80425011.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 11:46
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 11:45

Lab Sample ID: 240-94103-5 RE Client Sample ID: 16WDUP RE

Date Analyzed: 04/25/18 11:06 Lab File ID: 80425012.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 11:46
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 11:46

Lab Sample ID: 240-94103-6 RE Client Sample ID: 16WC1B RE

Date Analyzed: 04/25/18 11:31 Lab File ID: 80425013.D GC Column: RXI-5SILMS/II ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	5.67	Peak assignment corrected	hulat	04/25/18 11:55
1,4-Dichlorobenzene-d4	6.76	Peak assignment corrected	hulat	04/25/18 11:55

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
exBENZALDEHYD_00054	09/07/18	03/07/18	MEOH, Lot 0000177891	500 mL	exLIST1_S11_00005	10 mL	Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
.exLIST1_S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
exBNASPIKE_00086	06/30/18	03/22/18	MEOH, Lot 0000177891	500 mL	exLIST1_S1_00011	10 mL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Methylphenol	10 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Methylphenol	10 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17.1 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					EXLIST1_S10_00005	10 mL	Benzoic acid	40 ug/mL
							Indene	40 ug/mL
					exLIST1_S9_00007	10 mL	3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
.exLIST1_S1_00011	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	500 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	500 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	855 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.EXLIST1_S10_00005	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.exLIST1_S9_00007	06/30/18		Restek, Lot A0123497		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
exBNASURR W_00058	05/23/18	03/29/18	MEOH, Lot 0000177891	2000 mL	SMLIST1 SURR_00006	8 mL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMLIST1 SURR_00006	02/22/18		Restek, Lot A093638		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
EXLIST2spike_00016	05/31/18	02/01/18	MEOH, Lot 0000147462	25 mL	SMLIST2 S1_00013	0.5 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,4-Dinitrobenzene	20 ug/mL
							1-Naphthylamine	20 ug/mL
							2-Acetylaminofluorene	20 ug/mL
							2-Naphthylamine	20 ug/mL
							2-Picoline	20 ug/mL
							2-Toluidine	20 ug/mL
							3,3'-Dimethylbenzidine	20 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	20 ug/mL
							4-Aminobiphenyl	20 ug/mL
							4-Nitroquinoline-1-oxide	20 ug/mL
							Acrylamide	20 ug/mL
							alpha,alpha-Dimethyl phenethylamine	20 ug/mL
							Dibenz[a,h]acridine	20 ug/mL
							N-Nitro-o-toluidine	20 ug/mL
							N-Nitrosodi-n-butylamine	20 ug/mL
							N-Nitrosodiethylamine	20 ug/mL
							N-Nitrosomethylethylamine	20 ug/mL
							N-Nitrosomorpholine	20 ug/mL
							N-Nitrosopiperidine	20 ug/mL
							N-Nitrosopyrrolidine	20 ug/mL
							p-Dimethylamino azobenzene	20 ug/mL
							p-Phenylene diamine	20 ug/mL
							Pentachloronitrobenzene	20 ug/mL
							Phenacetin	20 ug/mL
							Pronamide	20 ug/mL
							Quinoline	20 ug/mL
					SMLIST2 S2_00015	0.5 mL	1,4-Naphthoquinone	20 ug/mL
							1-Chloronaphthalene	20 ug/mL
							2,3,5,6-Tetrachlorophenol	20 ug/mL
							7,12-Dimethylbenz(a)anthracene	20 ug/mL
							Chlorobenzilate	20 ug/mL
							Dinoseb	20 ug/mL
							Ethyl methanesulfonate	20 ug/mL
							Hexachloropropene	20 ug/mL
							Isodrin	20 ug/mL
							Isosafrole	20 ug/mL
							Isosafrole Peak 1	16.6 ug/mL
							Isosafrole Peak 2	3.4 ug/mL
							Methyl methanesulfonate	20 ug/mL
							Pentachlorobenzene	20 ug/mL
							Pentachloroethane	20 ug/mL
					SMLIST2 S3_00015	0.5 mL	3-Methylcholanthrene	40 ug/mL
							6-Methylchrysene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST2 S4_00013	0.5 mL	Aramite Peak 1	10.2 ug/mL
							Aramite Peak 2	9.8 ug/mL
							Aramite, Total	20 ug/mL
							Diallate	20 ug/mL
							Diallate Peak 1	17.2 ug/mL
							Diallate Peak 2	2.8 ug/mL
							Dimethoate	20 ug/mL
							Disulfoton	20 ug/mL
							Ethyl Parathion	20 ug/mL
							Famphur	20 ug/mL
							Methyl parathion	20 ug/mL
							o,o',o''-Triethylphosphorothioate	20 ug/mL
							Phorate	20 ug/mL
							Safrole, Total	20 ug/mL
							Sulfotepp	20 ug/mL
							Thionazin	20 ug/mL
					SMLIST2 S5_00012	0.5 mL	Methapyrilene	40 ug/mL
.SMLIST2 S1_00013	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
.SMLIST2 S2_00015	07/31/18		Restek, Lot A0124780		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole	1000 ug/mL
							Isosafrole Peak 1	830 ug/mL
							Isosafrole Peak 2	170 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
.SMLIST2 S3_00015	05/31/18		Restek, Lot A0127589		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
.SMLIST2 S4_00013	10/31/19		Restek, Lot A0131880		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Aramite, Total	1000 ug/mL
							Diallate	1000 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
.SMLIST2 S5_00012	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMDFTPPW_00013							4,4'-DDD	
							4,4'-DDE	
							4-Methyl-1-cyclohexanemethanol	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	
							Tentatively Identified Compound	
					SMDFTPPR_00007	1 mL	4,4'-DDT	25 ug/mL
							Benzidine	25 ug/mL
							DFTPP	25 ug/mL
							Pentachlorophenol	25 ug/mL
.SMDFTPPR_00007	04/30/20		Restek, Lot A0126573		(Purchased Reagent)		4,4'-DDT	1000 ug/mL
							Benzidine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							DFTPP	1000 ug/mL
							Pentachlorophenol	1000 ug/mL
SMIS80PPMW_00017	08/28/18	08/28/17	MECL2, Lot 0000174847	40 mL	SMIS R_00008	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
.SMIS R_00008	01/31/22		Restek, Lot A0123893		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 L1+ W_00004	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1PAH+ST_00004	2 uL	1,1'-Biphenyl	0.1 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							2-Chloronaphthalene	0.1 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Dibenzofuran	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Hexachlorobenzene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							Pyridine	0.2 ug/mL
							Atrazine	0.2 ug/mL
							Benzaldehyde	0.2 ug/mL
							Caprolactam	0.2 ug/mL
							2-Fluorobiphenyl (Surr)	0.1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5 (Surr)	0.1 ug/mL
							Terphenyl-d14 (Surr)	0.1 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1PAH+ST_00004	09/30/18	01/16/18	MECL2, Lot 0000161829	10 mL	SMLIST1 PAH_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Anthracene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Chrysene	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Naphthalene	100 ug/mL
							Phenanthrene	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2-Fluorobiphenyl (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 PAH_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2-Fluorobiphenyl (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L2 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	10 uL	1,1'-Biphenyl	0.5 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.5 ug/mL
							1,2,4-Trichlorobenzene	0.5 ug/mL
							1,2-Dichlorobenzene	0.5 ug/mL
							1,2-Diphenylhydrazine	0.5 ug/mL
							1,3-Dichlorobenzene	0.5 ug/mL
							1,3-Dinitrobenzene	0.5 ug/mL
							1,4-Dichlorobenzene	0.5 ug/mL
							1,4-Dioxane	0.5 ug/mL
							1-Methylnaphthalene	0.5 ug/mL
							2,2'-oxybis[1-chloropropane]	0.5 ug/mL
							2,3,4,6-Tetrachlorophenol	0.5 ug/mL
							2,4,5-Trichlorophenol	0.5 ug/mL
							2,4,6-Trichlorophenol	0.5 ug/mL
							2,4-Dichlorophenol	0.5 ug/mL
							2,4-Dimethylphenol	0.5 ug/mL
							2,4-Dinitrophenol	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	0.5 ug/mL
							2,6-Dichlorophenol	0.5 ug/mL
							2,6-Dinitrotoluene	0.5 ug/mL
							2-Chloronaphthalene	0.5 ug/mL
							2-Chlorophenol	0.5 ug/mL
							2-Methylnaphthalene	0.5 ug/mL
							2-Methylphenol	0.5 ug/mL
							2-Nitroaniline	0.5 ug/mL
							2-Nitrophenol	0.5 ug/mL
							3 & 4 Methylphenol	0.5 ug/mL
							3-Nitroaniline	0.5 ug/mL
							4,6-Dinitro-2-methylphenol	1 ug/mL
							4-Bromophenyl phenyl ether	0.5 ug/mL
							4-Chloro-3-methylphenol	0.5 ug/mL
							4-Chloroaniline	0.5 ug/mL
							4-Chlorophenyl phenyl ether	0.5 ug/mL
							4-Nitroaniline	0.5 ug/mL
							4-Nitrophenol	1 ug/mL
							Acenaphthene	0.5 ug/mL
							Acenaphthylene	0.5 ug/mL
							Acetophenone	0.5 ug/mL
							Aniline	0.5 ug/mL
							Anthracene	0.5 ug/mL
							Azobenzene	0.5 ug/mL
							Benzo[a]anthracene	0.5 ug/mL
							Benzo[a]pyrene	0.5 ug/mL
							Benzo[b]fluoranthene	0.5 ug/mL
							Benzo[g,h,i]perylene	0.5 ug/mL
							Benzo[k]fluoranthene	0.5 ug/mL
							Benzyl alcohol	0.5 ug/mL
							Bis(2-chloroethoxy)methane	0.5 ug/mL
							Bis(2-chloroethyl)ether	0.5 ug/mL
							Bis(2-ethylhexyl) phthalate	0.5 ug/mL
							Butyl benzyl phthalate	0.5 ug/mL
							Carbazole	0.5 ug/mL
							Chrysene	0.5 ug/mL
							Di-n-butyl phthalate	0.5 ug/mL
							Di-n-octyl phthalate	0.5 ug/mL
							Dibenz(a,h)anthracene	0.5 ug/mL
							Dibenzofuran	0.5 ug/mL
							Diethyl phthalate	0.5 ug/mL
							Dimethyl phthalate	0.5 ug/mL
							Diphenylamine	0.425 ug/mL
							Fluoranthene	0.5 ug/mL
							Fluorene	0.5 ug/mL
							Hexachlorobenzene	0.5 ug/mL
							Hexachlorobutadiene	0.5 ug/mL
							Hexachlorocyclopentadiene	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	0.5 ug/mL
							Hexadecane	0.5 ug/mL
							Indeno[1,2,3-cd]pyrene	0.5 ug/mL
							Isophorone	0.5 ug/mL
							n-Decane	0.5 ug/mL
							N-Nitrosodi-n-propylamine	0.5 ug/mL
							N-Nitrosodimethylamine	0.5 ug/mL
							N-Nitrosodiphenylamine	0.5 ug/mL
							n-Octadecane	0.5 ug/mL
							Naphthalene	0.5 ug/mL
							Nitrobenzene	0.5 ug/mL
							Pentachlorophenol	1 ug/mL
							Phenanthrene	0.5 ug/mL
							Phenol	0.5 ug/mL
							Pyrene	0.5 ug/mL
							Pyridine	1 ug/mL
							Benzoic acid	1 ug/mL
							Indene	1 ug/mL
							Atrazine	1 ug/mL
							Benzaldehyde	1 ug/mL
							Caprolactam	1 ug/mL
							3,3'-Dichlorobenzidine	1 ug/mL
							Benzidine	1 ug/mL
							2,4,6-Tribromophenol (Surr)	0.5 ug/mL
							2-Fluorobiphenyl (Surr)	0.5 ug/mL
							2-Fluorophenol (Surr)	0.5 ug/mL
							Nitrobenzene-d5 (Surr)	0.5 ug/mL
							Phenol-d5 (Surr)	0.5 ug/mL
							Terphenyl-d14 (Surr)	0.5 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L3 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	20 uL	1,1'-Biphenyl	1 ug/mL
							1,2,4,5-Tetrachlorobenzene	1 ug/mL
							1,2,4-Trichlorobenzene	1 ug/mL
							1,2-Dichlorobenzene	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1 ug/mL
							1,3-Dichlorobenzene	1 ug/mL
							1,3-Dinitrobenzene	1 ug/mL
							1,4-Dichlorobenzene	1 ug/mL
							1,4-Dioxane	1 ug/mL
							1-Methylnaphthalene	1 ug/mL
							2,2'-oxybis[1-chloropropane]	1 ug/mL
							2,3,4,6-Tetrachlorophenol	1 ug/mL
							2,4,5-Trichlorophenol	1 ug/mL
							2,4,6-Trichlorophenol	1 ug/mL
							2,4-Dichlorophenol	1 ug/mL
							2,4-Dimethylphenol	1 ug/mL
							2,4-Dinitrophenol	2 ug/mL
							2,4-Dinitrotoluene	1 ug/mL
							2,6-Dichlorophenol	1 ug/mL
							2,6-Dinitrotoluene	1 ug/mL
							2-Chloronaphthalene	1 ug/mL
							2-Chlorophenol	1 ug/mL
							2-Methylnaphthalene	1 ug/mL
							2-Methylphenol	1 ug/mL
							2-Nitroaniline	1 ug/mL
							2-Nitrophenol	1 ug/mL
							3 & 4 Methylphenol	1 ug/mL
							3-Nitroaniline	1 ug/mL
							4,6-Dinitro-2-methylphenol	2 ug/mL
							4-Bromophenyl phenyl ether	1 ug/mL
							4-Chloro-3-methylphenol	1 ug/mL
							4-Chloroaniline	1 ug/mL
							4-Chlorophenyl phenyl ether	1 ug/mL
							4-Nitroaniline	1 ug/mL
							4-Nitrophenol	2 ug/mL
							Acenaphthene	1 ug/mL
							Acenaphthylene	1 ug/mL
							Acetophenone	1 ug/mL
							Aniline	1 ug/mL
							Anthracene	1 ug/mL
							Azobenzene	1 ug/mL
							Benzo[a]anthracene	1 ug/mL
							Benzo[a]pyrene	1 ug/mL
							Benzo[b]fluoranthene	1 ug/mL
							Benzo[g,h,i]perylene	1 ug/mL
							Benzo[k]fluoranthene	1 ug/mL
							Benzyl alcohol	1 ug/mL
							Bis(2-chloroethoxy)methane	1 ug/mL
							Bis(2-chloroethyl)ether	1 ug/mL
							Bis(2-ethylhexyl) phthalate	1 ug/mL
							Butyl benzyl phthalate	1 ug/mL
							Carbazole	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	1 ug/mL
							Di-n-butyl phthalate	1 ug/mL
							Di-n-octyl phthalate	1 ug/mL
							Dibenz(a,h)anthracene	1 ug/mL
							Dibenzofuran	1 ug/mL
							Diethyl phthalate	1 ug/mL
							Dimethyl phthalate	1 ug/mL
							Diphenylamine	0.85 ug/mL
							Fluoranthene	1 ug/mL
							Fluorene	1 ug/mL
							Hexachlorobenzene	1 ug/mL
							Hexachlorobutadiene	1 ug/mL
							Hexachlorocyclopentadiene	1 ug/mL
							Hexachloroethane	1 ug/mL
							Hexadecane	1 ug/mL
							Indeno[1,2,3-cd]pyrene	1 ug/mL
							Isophorone	1 ug/mL
							n-Decane	1 ug/mL
							N-Nitrosodi-n-propylamine	1 ug/mL
							N-Nitrosodimethylamine	1 ug/mL
							N-Nitrosodiphenylamine	1 ug/mL
							n-Octadecane	1 ug/mL
							Naphthalene	1 ug/mL
							Nitrobenzene	1 ug/mL
							Pentachlorophenol	2 ug/mL
							Phenanthrene	1 ug/mL
							Phenol	1 ug/mL
							Pyrene	1 ug/mL
							Pyridine	2 ug/mL
							Benzoic acid	2 ug/mL
							Indene	2 ug/mL
							Atrazine	2 ug/mL
							Benzaldehyde	2 ug/mL
							Caprolactam	2 ug/mL
							3,3'-Dichlorobenzidine	2 ug/mL
							Benzidine	2 ug/mL
							2,4,6-Tribromophenol (Surr)	1 ug/mL
							2-Fluorobiphenyl (Surr)	1 ug/mL
							2-Fluorophenol (Surr)	1 ug/mL
							Nitrobenzene-d5 (Surr)	1 ug/mL
							Phenol-d5 (Surr)	1 ug/mL
							Terphenyl-d14 (Surr)	1 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L4 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	40 uL	1,1'-Biphenyl	2 ug/mL
							1,2,4,5-Tetrachlorobenzene	2 ug/mL
							1,2,4-Trichlorobenzene	2 ug/mL
							1,2-Dichlorobenzene	2 ug/mL
							1,2-Diphenylhydrazine	2 ug/mL
							1,3-Dichlorobenzene	2 ug/mL
							1,3-Dinitrobenzene	2 ug/mL
							1,4-Dichlorobenzene	2 ug/mL
							1,4-Dioxane	2 ug/mL
							1-Methylnaphthalene	2 ug/mL
							2,2'-oxybis[1-chloropropane]	2 ug/mL
							2,3,4,6-Tetrachlorophenol	2 ug/mL
							2,4,5-Trichlorophenol	2 ug/mL
							2,4,6-Trichlorophenol	2 ug/mL
							2,4-Dichlorophenol	2 ug/mL
							2,4-Dimethylphenol	2 ug/mL
							2,4-Dinitrophenol	4 ug/mL
							2,4-Dinitrotoluene	2 ug/mL
							2,6-Dichlorophenol	2 ug/mL
							2,6-Dinitrotoluene	2 ug/mL
							2-Chloronaphthalene	2 ug/mL
							2-Chlorophenol	2 ug/mL
							2-Methylnaphthalene	2 ug/mL
							2-Methylphenol	2 ug/mL
							2-Nitroaniline	2 ug/mL
							2-Nitrophenol	2 ug/mL
							3 & 4 Methylphenol	2 ug/mL
							3-Nitroaniline	2 ug/mL
							4,6-Dinitro-2-methylphenol	4 ug/mL
							4-Bromophenyl phenyl ether	2 ug/mL
							4-Chloro-3-methylphenol	2 ug/mL
							4-Chloroaniline	2 ug/mL
							4-Chlorophenyl phenyl ether	2 ug/mL
							4-Nitroaniline	2 ug/mL
							4-Nitrophenol	4 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Acetophenone	2 ug/mL
							Aniline	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	2 ug/mL
							Azobenzene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Benzyl alcohol	2 ug/mL
							Bis(2-chloroethoxy)methane	2 ug/mL
							Bis(2-chloroethyl)ether	2 ug/mL
							Bis(2-ethylhexyl) phthalate	2 ug/mL
							Butyl benzyl phthalate	2 ug/mL
							Carbazole	2 ug/mL
							Chrysene	2 ug/mL
							Di-n-butyl phthalate	2 ug/mL
							Di-n-octyl phthalate	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Dibenzofuran	2 ug/mL
							Diethyl phthalate	2 ug/mL
							Dimethyl phthalate	2 ug/mL
							Diphenylamine	1.7 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Hexachlorobenzene	2 ug/mL
							Hexachlorobutadiene	2 ug/mL
							Hexachlorocyclopentadiene	2 ug/mL
							Hexachloroethane	2 ug/mL
							Hexadecane	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Isophorone	2 ug/mL
							n-Decane	2 ug/mL
							N-Nitrosodi-n-propylamine	2 ug/mL
							N-Nitrosodimethylamine	2 ug/mL
							N-Nitrosodiphenylamine	2 ug/mL
							n-Octadecane	2 ug/mL
							Naphthalene	2 ug/mL
							Nitrobenzene	2 ug/mL
							Pentachlorophenol	4 ug/mL
							Phenanthrene	2 ug/mL
							Phenol	2 ug/mL
							Pyrene	2 ug/mL
							Pyridine	4 ug/mL
							Benzoic acid	4 ug/mL
							Indene	4 ug/mL
							Atrazine	4 ug/mL
							Benzaldehyde	4 ug/mL
							Caprolactam	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzidine	4 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl (Surr)	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							Nitrobenzene-d5 (Surr)	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Terphenyl-d14 (Surr)	2 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L5 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	100 uL	1,1'-Biphenyl	5 ug/mL
							1,2,4,5-Tetrachlorobenzene	5 ug/mL
							1,2,4-Trichlorobenzene	5 ug/mL
							1,2-Dichlorobenzene	5 ug/mL
							1,2-Diphenylhydrazine	5 ug/mL
							1,3-Dichlorobenzene	5 ug/mL
							1,3-Dinitrobenzene	5 ug/mL
							1,4-Dichlorobenzene	5 ug/mL
							1,4-Dioxane	5 ug/mL
							1-Methylnaphthalene	5 ug/mL
							2,2'-oxybis[1-chloropropane]	5 ug/mL
							2,3,4,6-Tetrachlorophenol	5 ug/mL
							2,4,5-Trichlorophenol	5 ug/mL
							2,4,6-Trichlorophenol	5 ug/mL
							2,4-Dichlorophenol	5 ug/mL
							2,4-Dimethylphenol	5 ug/mL
							2,4-Dinitrophenol	10 ug/mL
							2,4-Dinitrotoluene	5 ug/mL
							2,6-Dichlorophenol	5 ug/mL
							2,6-Dinitrotoluene	5 ug/mL
							2-Chloronaphthalene	5 ug/mL
							2-Chlorophenol	5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							2-Methylphenol	5 ug/mL
							2-Nitroaniline	5 ug/mL
							2-Nitrophenol	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3 & 4 Methylphenol	5 ug/mL
							3-Nitroaniline	5 ug/mL
							4,6-Dinitro-2-methylphenol	10 ug/mL
							4-Bromophenyl phenyl ether	5 ug/mL
							4-Chloro-3-methylphenol	5 ug/mL
							4-Chloroaniline	5 ug/mL
							4-Chlorophenyl phenyl ether	5 ug/mL
							4-Nitroaniline	5 ug/mL
							4-Nitrophenol	10 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Acetophenone	5 ug/mL
							Aniline	5 ug/mL
							Anthracene	5 ug/mL
							Azobenzene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Benzyl alcohol	5 ug/mL
							Bis(2-chloroethoxy)methane	5 ug/mL
							Bis(2-chloroethyl)ether	5 ug/mL
							Bis(2-ethylhexyl) phthalate	5 ug/mL
							Butyl benzyl phthalate	5 ug/mL
							Carbazole	5 ug/mL
							Chrysene	5 ug/mL
							Di-n-butyl phthalate	5 ug/mL
							Di-n-octyl phthalate	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Dibenzofuran	5 ug/mL
							Diethyl phthalate	5 ug/mL
							Dimethyl phthalate	5 ug/mL
							Diphenylamine	4.25 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Hexachlorobenzene	5 ug/mL
							Hexachlorobutadiene	5 ug/mL
							Hexachlorocyclopentadiene	5 ug/mL
							Hexachloroethane	5 ug/mL
							Hexadecane	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Isophorone	5 ug/mL
							n-Decane	5 ug/mL
							N-Nitrosodi-n-propylamine	5 ug/mL
							N-Nitrosodimethylamine	5 ug/mL
							N-Nitrosodiphenylamine	5 ug/mL
							n-Octadecane	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	5 ug/mL
							Nitrobenzene	5 ug/mL
							Pentachlorophenol	10 ug/mL
							Phenanthrene	5 ug/mL
							Phenol	5 ug/mL
							Pyrene	5 ug/mL
							Pyridine	10 ug/mL
							Benzoic acid	10 ug/mL
							Indene	10 ug/mL
							Atrazine	10 ug/mL
							Benzaldehyde	10 ug/mL
							Caprolactam	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzidine	10 ug/mL
							2,4,6-Tribromophenol (Surr)	5 ug/mL
							2-Fluorobiphenyl (Surr)	5 ug/mL
							2-Fluorophenol (Surr)	5 ug/mL
							Nitrobenzene-d5 (Surr)	5 ug/mL
							Phenol-d5 (Surr)	5 ug/mL
							Terphenyl-d14 (Surr)	5 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L6 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	200 uL	1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,2'-oxybis[1-chloropropane]	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.5 ug/mL
							Fluoranthene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Hexadecane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL
							Isophorone	10 ug/mL
							n-Decane	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							n-Octadecane	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	20 ug/mL
							Benzoic acid	20 ug/mL
							Indene	20 ug/mL
							Atrazine	20 ug/mL
							Benzaldehyde	20 ug/mL
							Caprolactam	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzidine	20 ug/mL
							2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L7 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST1 STOCK_00010	300 uL	1,1'-Biphenyl	15 ug/mL
							1,2,4,5-Tetrachlorobenzene	15 ug/mL
							1,2,4-Trichlorobenzene	15 ug/mL
							1,2-Dichlorobenzene	15 ug/mL
							1,2-Diphenylhydrazine	15 ug/mL
							1,3-Dichlorobenzene	15 ug/mL
							1,3-Dinitrobenzene	15 ug/mL
							1,4-Dichlorobenzene	15 ug/mL
							1,4-Dioxane	15 ug/mL
							1-Methylnaphthalene	15 ug/mL
							2,2'-oxybis[1-chloropropane]	15 ug/mL
							2,3,4,6-Tetrachlorophenol	15 ug/mL
							2,4,5-Trichlorophenol	15 ug/mL
							2,4,6-Trichlorophenol	15 ug/mL
							2,4-Dichlorophenol	15 ug/mL
							2,4-Dimethylphenol	15 ug/mL
							2,4-Dinitrophenol	30 ug/mL
							2,4-Dinitrotoluene	15 ug/mL
							2,6-Dichlorophenol	15 ug/mL
							2,6-Dinitrotoluene	15 ug/mL
							2-Chloronaphthalene	15 ug/mL
							2-Chlorophenol	15 ug/mL
							2-Methylnaphthalene	15 ug/mL
							2-Methylphenol	15 ug/mL
							2-Nitroaniline	15 ug/mL
							2-Nitrophenol	15 ug/mL
							3 & 4 Methylphenol	15 ug/mL
							3-Nitroaniline	15 ug/mL
							4,6-Dinitro-2-methylphenol	30 ug/mL
							4-Bromophenyl phenyl ether	15 ug/mL
							4-Chloro-3-methylphenol	15 ug/mL
							4-Chloroaniline	15 ug/mL
							4-Chlorophenyl phenyl ether	15 ug/mL
							4-Nitroaniline	15 ug/mL
							4-Nitrophenol	30 ug/mL
							Acenaphthene	15 ug/mL
							Acenaphthylene	15 ug/mL
							Acetophenone	15 ug/mL
							Aniline	15 ug/mL
							Anthracene	15 ug/mL
							Azobenzene	15 ug/mL
							Benzo[a]anthracene	15 ug/mL
							Benzo[a]pyrene	15 ug/mL
							Benzo[b]fluoranthene	15 ug/mL
							Benzo[g,h,i]perylene	15 ug/mL
							Benzo[k]fluoranthene	15 ug/mL
							Benzyl alcohol	15 ug/mL
							Bis(2-chloroethoxy)methane	15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	15 ug/mL
							Bis(2-ethylhexyl) phthalate	15 ug/mL
							Butyl benzyl phthalate	15 ug/mL
							Carbazole	15 ug/mL
							Chrysene	15 ug/mL
							Di-n-butyl phthalate	15 ug/mL
							Di-n-octyl phthalate	15 ug/mL
							Dibenz(a,h)anthracene	15 ug/mL
							Dibenzofuran	15 ug/mL
							Diethyl phthalate	15 ug/mL
							Dimethyl phthalate	15 ug/mL
							Diphenylamine	12.75 ug/mL
							Fluoranthene	15 ug/mL
							Fluorene	15 ug/mL
							Hexachlorobenzene	15 ug/mL
							Hexachlorobutadiene	15 ug/mL
							Hexachlorocyclopentadiene	15 ug/mL
							Hexachloroethane	15 ug/mL
							Hexadecane	15 ug/mL
							Indeno[1,2,3-cd]pyrene	15 ug/mL
							Isophorone	15 ug/mL
							n-Decane	15 ug/mL
							N-Nitrosodi-n-propylamine	15 ug/mL
							N-Nitrosodimethylamine	15 ug/mL
							N-Nitrosodiphenylamine	15 ug/mL
							n-Octadecane	15 ug/mL
							Naphthalene	15 ug/mL
							Nitrobenzene	15 ug/mL
							Pentachlorophenol	30 ug/mL
							Phenanthrene	15 ug/mL
							Phenol	15 ug/mL
							Pyrene	15 ug/mL
							Pyridine	30 ug/mL
							Benzoic acid	30 ug/mL
							Indene	30 ug/mL
							Atrazine	30 ug/mL
							Benzaldehyde	30 ug/mL
							Caprolactam	30 ug/mL
							3,3'-Dichlorobenzidine	30 ug/mL
							Benzidine	30 ug/mL
							2,4,6-Tribromophenol (Surr)	15 ug/mL
							2-Fluorobiphenyl (Surr)	15 ug/mL
							2-Fluorophenol (Surr)	15 ug/mL
							Nitrobenzene-d5 (Surr)	15 ug/mL
							Phenol-d5 (Surr)	15 ug/mL
							Terphenyl-d14 (Surr)	15 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L8 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	400 uL	1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL
							1,2-Diphenylhydrazine	20 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,2'-oxybis[1-chloropropane]	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Hexadecane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							n-Decane	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							n-Octadecane	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
							Benzoic acid	40 ug/mL
							Indene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Atrazine	40 ug/mL
							Benzaldehyde	40 ug/mL
							Caprolactam	40 ug/mL
							3,3'-Dichlorobenzidine	40 ug/mL
							Benzidine	40 ug/mL
							2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl (Surr)	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5 (Surr)	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14 (Surr)	20 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 L9 W_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST1 STOCK_00010	500 uL	1,1'-Biphenyl	25 ug/mL
							1,2,4,5-Tetrachlorobenzene	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Diphenylhydrazine	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dinitrobenzene	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	25 ug/mL
							1-Methylnaphthalene	25 ug/mL
							2,2'-oxybis[1-chloropropane]	25 ug/mL
							2,3,4,6-Tetrachlorophenol	25 ug/mL
							2,4,5-Trichlorophenol	25 ug/mL
							2,4,6-Trichlorophenol	25 ug/mL
							2,4-Dichlorophenol	25 ug/mL
							2,4-Dimethylphenol	25 ug/mL
							2,4-Dinitrophenol	50 ug/mL
							2,4-Dinitrotoluene	25 ug/mL
							2,6-Dichlorophenol	25 ug/mL
							2,6-Dinitrotoluene	25 ug/mL
							2-Chloronaphthalene	25 ug/mL
							2-Chlorophenol	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	25 ug/mL
							2-Methylphenol	25 ug/mL
							2-Nitroaniline	25 ug/mL
							2-Nitrophenol	25 ug/mL
							3 & 4 Methylphenol	25 ug/mL
							3-Nitroaniline	25 ug/mL
							4,6-Dinitro-2-methylphenol	50 ug/mL
							4-Bromophenyl phenyl ether	25 ug/mL
							4-Chloro-3-methylphenol	25 ug/mL
							4-Chloroaniline	25 ug/mL
							4-Chlorophenyl phenyl ether	25 ug/mL
							4-Nitroaniline	25 ug/mL
							4-Nitrophenol	50 ug/mL
							Acenaphthene	25 ug/mL
							Acenaphthylene	25 ug/mL
							Acetophenone	25 ug/mL
							Aniline	25 ug/mL
							Anthracene	25 ug/mL
							Azobenzene	25 ug/mL
							Benzo[a]anthracene	25 ug/mL
							Benzo[a]pyrene	25 ug/mL
							Benzo[b]fluoranthene	25 ug/mL
							Benzo[g,h,i]perylene	25 ug/mL
							Benzo[k]fluoranthene	25 ug/mL
							Benzyl alcohol	25 ug/mL
							Bis(2-chloroethoxy)methane	25 ug/mL
							Bis(2-chloroethyl)ether	25 ug/mL
							Bis(2-ethylhexyl) phthalate	25 ug/mL
							Butyl benzyl phthalate	25 ug/mL
							Carbazole	25 ug/mL
							Chrysene	25 ug/mL
							Di-n-butyl phthalate	25 ug/mL
							Di-n-octyl phthalate	25 ug/mL
							Dibenz(a,h)anthracene	25 ug/mL
							Dibenzofuran	25 ug/mL
							Diethyl phthalate	25 ug/mL
							Dimethyl phthalate	25 ug/mL
							Diphenylamine	21.25 ug/mL
							Fluoranthene	25 ug/mL
							Fluorene	25 ug/mL
							Hexachlorobenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexachlorocyclopentadiene	25 ug/mL
							Hexachloroethane	25 ug/mL
							Hexadecane	25 ug/mL
							Indeno[1,2,3-cd]pyrene	25 ug/mL
							Isophorone	25 ug/mL
							n-Decane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	25 ug/mL
							N-Nitrosodimethylamine	25 ug/mL
							N-Nitrosodiphenylamine	25 ug/mL
							n-Octadecane	25 ug/mL
							Naphthalene	25 ug/mL
							Nitrobenzene	25 ug/mL
							Pentachlorophenol	50 ug/mL
							Phenanthrene	25 ug/mL
							Phenol	25 ug/mL
							Pyrene	25 ug/mL
							Pyridine	50 ug/mL
							Benzoic acid	50 ug/mL
							Indene	50 ug/mL
							Atrazine	50 ug/mL
							Benzaldehyde	50 ug/mL
							Caprolactam	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzidine	50 ug/mL
							2,4,6-Tribromophenol (Surr)	25 ug/mL
							2-Fluorobiphenyl (Surr)	25 ug/mL
							2-Fluorophenol (Surr)	25 ug/mL
							Nitrobenzene-d5 (Surr)	25 ug/mL
							Phenol-d5 (Surr)	25 ug/mL
							Terphenyl-d14 (Surr)	25 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST1 STOCK_00010	09/30/18	01/16/18	MECL2, Lot 0000184111	10 mL	SMLIST1 S1_00008	1 mL	1,1'-Biphenyl	100 ug/mL
							1,2,4,5-Tetrachlorobenzene	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Diphenylhydrazine	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dinitrobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							1-Methylnaphthalene	100 ug/mL
							2,2'-oxybis[1-chloropropane]	100 ug/mL
							2,3,4,6-Tetrachlorophenol	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dichlorophenol	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylnaphthalene	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL
							Acenaphthene	100 ug/mL
							Acenaphthylene	100 ug/mL
							Acetophenone	100 ug/mL
							Aniline	100 ug/mL
							Anthracene	100 ug/mL
							Azobenzene	100 ug/mL
							Benzo[a]anthracene	100 ug/mL
							Benzo[a]pyrene	100 ug/mL
							Benzo[b]fluoranthene	100 ug/mL
							Benzo[g,h,i]perylene	100 ug/mL
							Benzo[k]fluoranthene	100 ug/mL
							Benzyl alcohol	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Chrysene	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenz(a,h)anthracene	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Diphenylamine	85 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluoranthene	100 ug/mL
							Fluorene	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Hexadecane	100 ug/mL
							Indeno[1,2,3-cd]pyrene	100 ug/mL
							Isophorone	100 ug/mL
							n-Decane	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodimethylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							n-Octadecane	100 ug/mL
							Naphthalene	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenanthrene	100 ug/mL
							Phenol	100 ug/mL
							Pyrene	100 ug/mL
							Pyridine	200 ug/mL
					SMLIST1 S10_00004	1 mL	Benzoic acid	200 ug/mL
							Indene	200 ug/mL
					SMLIST1 S11_00005	1 mL	Atrazine	200 ug/mL
							Benzaldehyde	200 ug/mL
							Caprolactam	200 ug/mL
					SMLIST1 S9_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
							Benzidine	200 ug/mL
					SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 S1_00008	09/30/18		Restek, Lot A0125805		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
..SMLIST1 S10_00004	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
..SMLIST1 S11_00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
..SMLIST1 S9_00004	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
							Benzidine	2000 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST1 SS W_00010	01/16/19	01/16/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST1 SS W_00010	01/16/19	01/16/18	MECL2, Lot 0000184111	2 mL	SMLIST1 SS ST_00010	200 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl (Surr)	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5 (Surr)	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14 (Surr)	10 ug/mL
.SMLIST1 SS ST_00010	01/16/19	01/16/18	MECL2, Lot 000018411	10 mL	SMLIST1 SURR_00007	200 uL	2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl (Surr)	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5 (Surr)	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Terphenyl-d14 (Surr)	100 ug/mL
..SMLIST1 SURR_00007	12/31/21		Restek, Lot A0123269		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl (Surr)	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
SMLIST2 L2 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	10 uL	1,3,5-Trinitrobenzene	0.5 ug/mL
							1,4-Dinitrobenzene	0.5 ug/mL
							1-Naphthylamine	0.5 ug/mL
							2-Acetylaminofluorene	0.5 ug/mL
							2-Naphthylamine	0.5 ug/mL
							2-Picoline	0.5 ug/mL
							2-Toluidine	0.5 ug/mL
							3,3'-Dimethylbenzidine	0.5 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	0.5 ug/mL
							4-Aminobiphenyl	0.5 ug/mL
							4-Nitroquinoline-1-oxide	0.5 ug/mL
							Acrylamide	0.5 ug/mL
							alpha,alpha-Dimethyl phenethylamine	0.5 ug/mL
							Dibenz[a,h]acridine	0.5 ug/mL
							N-Nitro-o-toluidine	0.5 ug/mL
							N-Nitrosodi-n-butylamine	0.5 ug/mL
							N-Nitrosodiethylamine	0.5 ug/mL
							N-Nitrosomethylethylamine	0.5 ug/mL
							N-Nitrosomorpholine	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopiperidine	0.5 ug/mL
							N-Nitrosopyrrolidine	0.5 ug/mL
							p-Dimethylamino azobenzene	0.5 ug/mL
							p-Phenylene diamine	0.5 ug/mL
							Pentachloronitrobenzene	0.5 ug/mL
							Phenacetin	0.5 ug/mL
							Pronamide	0.5 ug/mL
							Quinoline	0.5 ug/mL
							1,4-Naphthoquinone	0.5 ug/mL
							1-Chloronaphthalene	0.5 ug/mL
							2,3,5,6-Tetrachlorophenol	0.5 ug/mL
							7,12-Dimethylbenz(a)anthracene	0.5 ug/mL
							Chlorobenzilate	0.5 ug/mL
							Dinoseb	0.5 ug/mL
							Ethyl methanesulfonate	0.5 ug/mL
							Hexachloropropene	0.5 ug/mL
							Isodrin	0.5 ug/mL
							Isosafrole Peak 1	0.42 ug/mL
							Isosafrole Peak 2	0.08 ug/mL
							Methyl methanesulfonate	0.5 ug/mL
							Pentachlorobenzene	0.5 ug/mL
							Pentachloroethane	0.5 ug/mL
							3-Methylcholanthrene	1 ug/mL
							6-Methylchrysene	1 ug/mL
							Aramite Peak 1	0.255 ug/mL
							Aramite Peak 2	0.245 ug/mL
							Diallate Peak 1	0.43 ug/mL
							Diallate Peak 2	0.07 ug/mL
							Dimethoate	0.5 ug/mL
							Disulfoton	0.5 ug/mL
							Ethyl Parathion	0.5 ug/mL
							Famphur	0.5 ug/mL
							Methyl parathion	0.5 ug/mL
							o,o',o''-Triethylphosphorothioate	0.5 ug/mL
							Phorate	0.5 ug/mL
							Safrole, Total	0.5 ug/mL
							Sulfotepp	0.5 ug/mL
							Thionazin	0.5 ug/mL
							Methapyrilene	1 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L3 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	20 uL	1,3,5-Trinitrobenzene	1 ug/mL
							1,4-Dinitrobenzene	1 ug/mL
							1-Naphthylamine	1 ug/mL
							2-Acetylaminofluorene	1 ug/mL
							2-Naphthylamine	1 ug/mL
							2-Picoline	1 ug/mL
							2-Toluidine	1 ug/mL
							3,3'-Dimethylbenzidine	1 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1 ug/mL
							4-Aminobiphenyl	1 ug/mL
							4-Nitroquinoline-1-oxide	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylamide	1 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1 ug/mL
							Dibenz[a,h]acridine	1 ug/mL
							N-Nitro-o-toluidine	1 ug/mL
							N-Nitrosodi-n-butylamine	1 ug/mL
							N-Nitrosodiethylamine	1 ug/mL
							N-Nitrosomethylethylamine	1 ug/mL
							N-Nitrosomorpholine	1 ug/mL
							N-Nitrosopiperidine	1 ug/mL
							N-Nitrosopyrrolidine	1 ug/mL
							p-Dimethylamino azobenzene	1 ug/mL
							p-Phenylene diamine	1 ug/mL
							Pentachloronitrobenzene	1 ug/mL
							Phenacetin	1 ug/mL
							Pronamide	1 ug/mL
							Quinoline	1 ug/mL
							1,4-Naphthoquinone	1 ug/mL
							1-Chloronaphthalene	1 ug/mL
							2,3,5,6-Tetrachlorophenol	1 ug/mL
							7,12-Dimethylbenz(a)anthracene	1 ug/mL
							Chlorobenzilate	1 ug/mL
							Dinoseb	1 ug/mL
							Ethyl methanesulfonate	1 ug/mL
							Hexachloropropene	1 ug/mL
							Isodrin	1 ug/mL
							Isosafrole Peak 1	0.84 ug/mL
							Isosafrole Peak 2	0.16 ug/mL
							Methyl methanesulfonate	1 ug/mL
							Pentachlorobenzene	1 ug/mL
							Pentachloroethane	1 ug/mL
							3-Methylcholanthrene	2 ug/mL
							6-Methylchrysene	2 ug/mL
							Aramite Peak 1	0.51 ug/mL
							Aramite Peak 2	0.49 ug/mL
							Diallate Peak 1	0.86 ug/mL
							Diallate Peak 2	0.14 ug/mL
							Dimethoate	1 ug/mL
							Disulfoton	1 ug/mL
							Ethyl Parathion	1 ug/mL
							Famphur	1 ug/mL
							Methyl parathion	1 ug/mL
							o,o',o''-Triethylphosphorothioate	1 ug/mL
							Phorate	1 ug/mL
							Safrole, Total	1 ug/mL
							Sulfotepp	1 ug/mL
							Thionazin	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methapyrilene	2 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L4 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	40 uL	1,3,5-Trinitrobenzene	2 ug/mL
							1,4-Dinitrobenzene	2 ug/mL
							1-Naphthylamine	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Acetylaminofluorene	2 ug/mL
							2-Naphthylamine	2 ug/mL
							2-Picoline	2 ug/mL
							2-Toluidine	2 ug/mL
							3,3'-Dimethylbenzidine	2 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	2 ug/mL
							4-Aminobiphenyl	2 ug/mL
							4-Nitroquinoline-1-oxide	2 ug/mL
							Acrylamide	2 ug/mL
							alpha,alpha-Dimethyl phenethylamine	2 ug/mL
							Dibenz[a,h]acridine	2 ug/mL
							N-Nitro-o-toluidine	2 ug/mL
							N-Nitrosodi-n-butylamine	2 ug/mL
							N-Nitrosodiethylamine	2 ug/mL
							N-Nitrosomethylethylamine	2 ug/mL
							N-Nitrosomorpholine	2 ug/mL
							N-Nitrosopiperidine	2 ug/mL
							N-Nitrosopyrrolidine	2 ug/mL
							p-Dimethylamino azobenzene	2 ug/mL
							p-Phenylene diamine	2 ug/mL
							Pentachloronitrobenzene	2 ug/mL
							Phenacetin	2 ug/mL
							Pronamide	2 ug/mL
							Quinoline	2 ug/mL
							1,4-Naphthoquinone	2 ug/mL
							1-Chloronaphthalene	2 ug/mL
							2,3,5,6-Tetrachlorophenol	2 ug/mL
							7,12-Dimethylbenz(a)anthracene	2 ug/mL
							Chlorobenzilate	2 ug/mL
							Dinoseb	2 ug/mL
							Ethyl methanesulfonate	2 ug/mL
							Hexachloropropene	2 ug/mL
							Isodrin	2 ug/mL
							Isosafrole Peak 1	1.68 ug/mL
							Isosafrole Peak 2	0.32 ug/mL
							Methyl methanesulfonate	2 ug/mL
							Pentachlorobenzene	2 ug/mL
							Pentachloroethane	2 ug/mL
							3-Methylcholanthrene	4 ug/mL
							6-Methylchrysene	4 ug/mL
							Aramite Peak 1	1.02 ug/mL
							Aramite Peak 2	0.98 ug/mL
							Diallate Peak 1	1.72 ug/mL
							Diallate Peak 2	0.28 ug/mL
							Dimethoate	2 ug/mL
							Disulfoton	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethyl Parathion	2 ug/mL
							Famphur	2 ug/mL
							Methyl parathion	2 ug/mL
							o,o',o''-Triethylphosphorothioate	2 ug/mL
							Phorate	2 ug/mL
							Safrole, Total	2 ug/mL
							Sulfotepp	2 ug/mL
							Thionazin	2 ug/mL
							Methapyrilene	4 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
SMLIST2 L5 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	100 uL	1,3,5-Trinitrobenzene	5 ug/mL
							1,4-Dinitrobenzene	5 ug/mL
							1-Naphthylamine	5 ug/mL
							2-Acetylaminofluorene	5 ug/mL
							2-Naphthylamine	5 ug/mL
							2-Picoline	5 ug/mL
							2-Toluidine	5 ug/mL
							3,3'-Dimethylbenzidine	5 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	5 ug/mL
							4-Aminobiphenyl	5 ug/mL
							4-Nitroquinoline-1-oxide	5 ug/mL
							Acrylamide	5 ug/mL
							alpha,alpha-Dimethyl phenethylamine	5 ug/mL
							Dibenz[a,h]acridine	5 ug/mL
							N-Nitro-o-toluidine	5 ug/mL
							N-Nitrosodi-n-butylamine	5 ug/mL
							N-Nitrosodiethylamine	5 ug/mL
							N-Nitrosomethylethylamine	5 ug/mL
							N-Nitrosomorpholine	5 ug/mL
							N-Nitrosopiperidine	5 ug/mL
							N-Nitrosopyrrolidine	5 ug/mL
							p-Dimethylamino azobenzene	5 ug/mL
							p-Phenylene diamine	5 ug/mL
							Pentachloronitrobenzene	5 ug/mL
							Phenacetin	5 ug/mL
							Pronamide	5 ug/mL
							Quinoline	5 ug/mL
							1,4-Naphthoquinone	5 ug/mL
							1-Chloronaphthalene	5 ug/mL
							2,3,5,6-Tetrachlorophenol	5 ug/mL
							7,12-Dimethylbenz(a)anthracene	5 ug/mL
							Chlorobenzilate	5 ug/mL
							Dinoseb	5 ug/mL
							Ethyl methanesulfonate	5 ug/mL
							Hexachloropropene	5 ug/mL
							Isodrin	5 ug/mL
							Isosafrole Peak 1	4.2 ug/mL
							Isosafrole Peak 2	0.8 ug/mL
							Methyl methanesulfonate	5 ug/mL
							Pentachlorobenzene	5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachloroethane	5 ug/mL
							3-Methylcholanthrene	10 ug/mL
							6-Methylchrysene	10 ug/mL
							Aramite Peak 1	2.55 ug/mL
							Aramite Peak 2	2.45 ug/mL
							Diallate Peak 1	4.3 ug/mL
							Diallate Peak 2	0.7 ug/mL
							Dimethoate	5 ug/mL
							Disulfoton	5 ug/mL
							Ethyl Parathion	5 ug/mL
							Famphur	5 ug/mL
							Methyl parathion	5 ug/mL
							o,o',o''-Triethylphosphorothioate	5 ug/mL
							Phorate	5 ug/mL
							Safrole, Total	5 ug/mL
							Sulfotepp	5 ug/mL
							Thionazin	5 ug/mL
							Methapyrilene	10 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19	Restek, Lot A0125047			(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L6 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	200 uL	1,3,5-Trinitrobenzene	10 ug/mL
							1,4-Dinitrobenzene	10 ug/mL
							1-Naphthylamine	10 ug/mL
							2-Acetylaminofluorene	10 ug/mL
							2-Naphthylamine	10 ug/mL
							2-Picoline	10 ug/mL
							2-Toluidine	10 ug/mL
							3,3'-Dimethylbenzidine	10 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	10 ug/mL
							4-Aminobiphenyl	10 ug/mL
							4-Nitroquinoline-1-oxide	10 ug/mL
							Acrylamide	10 ug/mL
							alpha,alpha-Dimethyl phenethylamine	10 ug/mL
							Dibenz[a,h]acridine	10 ug/mL
							N-Nitro-o-toluidine	10 ug/mL
							N-Nitrosodi-n-butylamine	10 ug/mL
							N-Nitrosodiethylamine	10 ug/mL
							N-Nitrosomethylethylamine	10 ug/mL
							N-Nitrosomorpholine	10 ug/mL
							N-Nitrosopiperidine	10 ug/mL
							N-Nitrosopyrrolidine	10 ug/mL
							p-Dimethylamino azobenzene	10 ug/mL
							p-Phenylene diamine	10 ug/mL
							Pentachloronitrobenzene	10 ug/mL
							Phenacetin	10 ug/mL
							Pronamide	10 ug/mL
							Quinoline	10 ug/mL
							1,4-Naphthoquinone	10 ug/mL
							1-Chloronaphthalene	10 ug/mL
							2,3,5,6-Tetrachlorophenol	10 ug/mL
							7,12-Dimethylbenz(a)anthracene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzilate	10 ug/mL
							Dinoseb	10 ug/mL
							Ethyl methanesulfonate	10 ug/mL
							Hexachloropropene	10 ug/mL
							Isodrin	10 ug/mL
							Isosafrole Peak 1	8.4 ug/mL
							Isosafrole Peak 2	1.6 ug/mL
							Methyl methanesulfonate	10 ug/mL
							Pentachlorobenzene	10 ug/mL
							Pentachloroethane	10 ug/mL
							3-Methylcholanthrene	20 ug/mL
							6-Methylchrysene	20 ug/mL
							Aramite Peak 1	5.1 ug/mL
							Aramite Peak 2	4.9 ug/mL
							Diallate Peak 1	8.6 ug/mL
							Diallate Peak 2	1.4 ug/mL
							Dimethoate	10 ug/mL
							Disulfoton	10 ug/mL
							Ethyl Parathion	10 ug/mL
							Famphur	10 ug/mL
							Methyl parathion	10 ug/mL
							o,o',o''-Triethylphosphorothioate	10 ug/mL
							Phorate	10 ug/mL
							Safrole, Total	10 ug/mL
							Sulfotepp	10 ug/mL
							Thionazin	10 ug/mL
							Methapyrilene	20 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L7 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	300 uL	1,3,5-Trinitrobenzene	15 ug/mL
							1,4-Dinitrobenzene	15 ug/mL
							1-Naphthylamine	15 ug/mL
							2-Acetylaminofluorene	15 ug/mL
							2-Naphthylamine	15 ug/mL
							2-Picoline	15 ug/mL
							2-Toluidine	15 ug/mL
							3,3'-Dimethylbenzidine	15 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	15 ug/mL
							4-Aminobiphenyl	15 ug/mL
							4-Nitroquinoline-1-oxide	15 ug/mL
							Acrylamide	15 ug/mL
							alpha,alpha-Dimethyl phenethylamine	15 ug/mL
							Dibenz[a,h]acridine	15 ug/mL
							N-Nitro-o-toluidine	15 ug/mL
							N-Nitrosodi-n-butylamine	15 ug/mL
							N-Nitrosodiethylamine	15 ug/mL
							N-Nitrosomethylethylamine	15 ug/mL
							N-Nitrosomorpholine	15 ug/mL
							N-Nitrosopiperidine	15 ug/mL
							N-Nitrosopyrrolidine	15 ug/mL
							p-Dimethylamino azobenzene	15 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							p-Phenylene diamine	15 ug/mL
							Pentachloronitrobenzene	15 ug/mL
							Phenacetin	15 ug/mL
							Pronamide	15 ug/mL
							Quinoline	15 ug/mL
							1,4-Naphthoquinone	15 ug/mL
							1-Chloronaphthalene	15 ug/mL
							2,3,5,6-Tetrachlorophenol	15 ug/mL
							7,12-Dimethylbenz(a)anthracene	15 ug/mL
							Chlorobenzilate	15 ug/mL
							Dinoseb	15 ug/mL
							Ethyl methanesulfonate	15 ug/mL
							Hexachloropropene	15 ug/mL
							Isodrin	15 ug/mL
							Isosafrole Peak 1	12.6 ug/mL
							Isosafrole Peak 2	2.4 ug/mL
							Methyl methanesulfonate	15 ug/mL
							Pentachlorobenzene	15 ug/mL
							Pentachloroethane	15 ug/mL
							3-Methylcholanthrene	30 ug/mL
							6-Methylchrysene	30 ug/mL
							Aramite Peak 1	7.65 ug/mL
							Aramite Peak 2	7.35 ug/mL
							Diallate Peak 1	12.9 ug/mL
							Diallate Peak 2	2.1 ug/mL
							Dimethoate	15 ug/mL
							Disulfoton	15 ug/mL
							Ethyl Parathion	15 ug/mL
							Famphur	15 ug/mL
							Methyl parathion	15 ug/mL
							o,o',o''-Triethylphosphorothioate	15 ug/mL
							Phorate	15 ug/mL
							Safrole, Total	15 ug/mL
							Sulfotepp	15 ug/mL
							Thionazin	15 ug/mL
							Methapyrilene	30 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L8 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	400 uL	1,3,5-Trinitrobenzene	20 ug/mL
							1,4-Dinitrobenzene	20 ug/mL
							1-Naphthylamine	20 ug/mL
							2-Acetylaminofluorene	20 ug/mL
							2-Naphthylamine	20 ug/mL
							2-Picoline	20 ug/mL
							2-Toluidine	20 ug/mL
							3,3'-Dimethylbenzidine	20 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	20 ug/mL
							4-Aminobiphenyl	20 ug/mL
							4-Nitroquinoline-1-oxide	20 ug/mL
							Acrylamide	20 ug/mL
							alpha,alpha-Dimethyl phenethylamine	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenz[a,h]acridine	20 ug/mL
							N-Nitro-o-toluidine	20 ug/mL
							N-Nitrosodi-n-butylamine	20 ug/mL
							N-Nitrosodiethylamine	20 ug/mL
							N-Nitrosomethylethylamine	20 ug/mL
							N-Nitrosomorpholine	20 ug/mL
							N-Nitrosopiperidine	20 ug/mL
							N-Nitrosopyrrolidine	20 ug/mL
							p-Dimethylamino azobenzene	20 ug/mL
							p-Phenylene diamine	20 ug/mL
							Pentachloronitrobenzene	20 ug/mL
							Phenacetin	20 ug/mL
							Pronamide	20 ug/mL
							Quinoline	20 ug/mL
							1,4-Naphthoquinone	20 ug/mL
							1-Chloronaphthalene	20 ug/mL
							2,3,5,6-Tetrachlorophenol	20 ug/mL
							7,12-Dimethylbenz(a)anthracene	20 ug/mL
							Chlorobenzilate	20 ug/mL
							Dinoseb	20 ug/mL
							Ethyl methanesulfonate	20 ug/mL
							Hexachloropropene	20 ug/mL
							Isodrin	20 ug/mL
							Isosafrole Peak 1	16.8 ug/mL
							Isosafrole Peak 2	3.2 ug/mL
							Methyl methanesulfonate	20 ug/mL
							Pentachlorobenzene	20 ug/mL
							Pentachloroethane	20 ug/mL
							3-Methylcholanthrene	40 ug/mL
							6-Methylchrysene	40 ug/mL
							Aramite Peak 1	10.2 ug/mL
							Aramite Peak 2	9.8 ug/mL
							Diallate Peak 1	17.2 ug/mL
							Diallate Peak 2	2.8 ug/mL
							Dimethoate	20 ug/mL
							Disulfoton	20 ug/mL
							Ethyl Parathion	20 ug/mL
							Famphur	20 ug/mL
							Methyl parathion	20 ug/mL
							o,o',o''-Triethylphosphorothioate	20 ug/mL
							Phorate	20 ug/mL
							Safrole, Total	20 ug/mL
							Sulfotepp	20 ug/mL
							Thionazin	20 ug/mL
							Methapyrilene	40 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 L9 W_00015	07/31/18	01/17/18	MECL2, Lot 0000184111	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
					SMLIST2 STOCK_00017	500 uL	1,3,5-Trinitrobenzene	25 ug/mL
							1,4-Dinitrobenzene	25 ug/mL
							1-Naphthylamine	25 ug/mL
							2-Acetylaminofluorene	25 ug/mL
							2-Naphthylamine	25 ug/mL
							2-Picoline	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Toluidine	25 ug/mL
							3,3'-Dimethylbenzidine	25 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	25 ug/mL
							4-Aminobiphenyl	25 ug/mL
							4-Nitroquinoline-1-oxide	25 ug/mL
							Acrylamide	25 ug/mL
							alpha,alpha-Dimethyl phenethylamine	25 ug/mL
							Dibenz[a,h]acridine	25 ug/mL
							N-Nitro-o-toluidine	25 ug/mL
							N-Nitrosodi-n-butylamine	25 ug/mL
							N-Nitrosodiethylamine	25 ug/mL
							N-Nitrosomethylethylamine	25 ug/mL
							N-Nitrosomorpholine	25 ug/mL
							N-Nitrosopiperidine	25 ug/mL
							N-Nitrosopyrrolidine	25 ug/mL
							p-Dimethylamino azobenzene	25 ug/mL
							p-Phenylene diamine	25 ug/mL
							Pentachloronitrobenzene	25 ug/mL
							Phenacetin	25 ug/mL
							Pronamide	25 ug/mL
							Quinoline	25 ug/mL
							1,4-Naphthoquinone	25 ug/mL
							1-Chloronaphthalene	25 ug/mL
							2,3,5,6-Tetrachlorophenol	25 ug/mL
							7,12-Dimethylbenz(a)anthracene	25 ug/mL
							Chlorobenzilate	25 ug/mL
							Dinoseb	25 ug/mL
							Ethyl methanesulfonate	25 ug/mL
							Hexachloropropene	25 ug/mL
							Isodrin	25 ug/mL
							Isosafrole Peak 1	21 ug/mL
							Isosafrole Peak 2	4 ug/mL
							Methyl methanesulfonate	25 ug/mL
							Pentachlorobenzene	25 ug/mL
							Pentachloroethane	25 ug/mL
							3-Methylcholanthrene	50 ug/mL
							6-Methylchrysene	50 ug/mL
							Aramite Peak 1	12.75 ug/mL
							Aramite Peak 2	12.25 ug/mL
							Diallate Peak 1	21.5 ug/mL
							Diallate Peak 2	3.5 ug/mL
							Dimethoate	25 ug/mL
							Disulfoton	25 ug/mL
							Ethyl Parathion	25 ug/mL
							Famphur	25 ug/mL
							Methyl parathion	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							o,o',o''-Triethylphosphorothioate	25 ug/mL
							Phorate	25 ug/mL
							Safrole, Total	25 ug/mL
							Sulfotepp	25 ug/mL
							Thionazin	25 ug/mL
							Methapyrilene	50 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.SMLIST2 STOCK_00017	07/31/18	01/17/18	MECL2, Lot 0000184111	10 mL	SMLIST2 S1_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,4-Dinitrobenzene	100 ug/mL
							1-Naphthylamine	100 ug/mL
							2-Acetylaminofluorene	100 ug/mL
							2-Naphthylamine	100 ug/mL
							2-Picoline	100 ug/mL
							2-Toluidine	100 ug/mL
							3,3'-Dimethylbenzidine	100 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	100 ug/mL
							4-Aminobiphenyl	100 ug/mL
							4-Nitroquinoline-1-oxide	100 ug/mL
							Acrylamide	100 ug/mL
							alpha,alpha-Dimethyl phenethylamine	100 ug/mL
							Dibenz[a,h]acridine	100 ug/mL
							N-Nitro-o-toluidine	100 ug/mL
							N-Nitrosodi-n-butylamine	100 ug/mL
							N-Nitrosodiethylamine	100 ug/mL
							N-Nitrosomethylethylamine	100 ug/mL
							N-Nitrosomorpholine	100 ug/mL
							N-Nitrosopiperidine	100 ug/mL
							N-Nitrosopyrrolidine	100 ug/mL
							p-Dimethylamino azobenzene	100 ug/mL
							p-Phenylene diamine	100 ug/mL
							Pentachloronitrobenzene	100 ug/mL
							Phenacetin	100 ug/mL
							Pronamide	100 ug/mL
							Quinoline	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					SMLIST2 S2_00014	1 mL	1,4-Naphthoquinone	100 ug/mL
							1-Chloronaphthalene	100 ug/mL
							2,3,5,6-Tetrachlorophenol	100 ug/mL
							7,12-Dimethylbenz(a)anthracene	100 ug/mL
							Chlorobenzilate	100 ug/mL
							Dinoseb	100 ug/mL
							Ethyl methanesulfonate	100 ug/mL
							Hexachloropropene	100 ug/mL
							Isodrin	100 ug/mL
							Isosafrole Peak 1	84 ug/mL
							Isosafrole Peak 2	16 ug/mL
							Methyl methanesulfonate	100 ug/mL
							Pentachlorobenzene	100 ug/mL
							Pentachloroethane	100 ug/mL
					SMLIST2 S3_00014	1 mL	3-Methylcholanthrene	200 ug/mL
							6-Methylchrysene	200 ug/mL
					SMLIST2 S4_00012	1 mL	Aramite Peak 1	51 ug/mL
							Aramite Peak 2	49 ug/mL
							Diallate Peak 1	86 ug/mL
							Diallate Peak 2	14 ug/mL
							Dimethoate	100 ug/mL
							Disulfoton	100 ug/mL
							Ethyl Parathion	100 ug/mL
							Famphur	100 ug/mL
							Methyl parathion	100 ug/mL
							o,o',o''-Triethylphosphorothioate	100 ug/mL
							Phorate	100 ug/mL
							Safrole, Total	100 ug/mL
							Sulfotepp	100 ug/mL
							Thionazin	100 ug/mL
					SMLIST2 S5_00011	1 mL	Methapyrilene	200 ug/mL
..SMLIST2 S1_00011	01/31/19		Restek, Lot A0124058		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,4-Dinitrobenzene	1000 ug/mL
							1-Naphthylamine	1000 ug/mL
							2-Acetylaminofluorene	1000 ug/mL
							2-Naphthylamine	1000 ug/mL
							2-Picoline	1000 ug/mL
							2-Toluidine	1000 ug/mL
							3,3'-Dimethylbenzidine	1000 ug/mL
							4,4'-Methylene bis(2-chloroaniline)	1000 ug/mL
							4-Aminobiphenyl	1000 ug/mL
							4-Nitroquinoline-1-oxide	1000 ug/mL
							Acrylamide	1000 ug/mL
							alpha,alpha-Dimethyl phenethylamine	1000 ug/mL
							Dibenz[a,h]acridine	1000 ug/mL

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitro-o-toluidine	1000 ug/mL
							N-Nitrosodi-n-butylamine	1000 ug/mL
							N-Nitrosodiethylamine	1000 ug/mL
							N-Nitrosomethylethylamine	1000 ug/mL
							N-Nitrosomorpholine	1000 ug/mL
							N-Nitrosopiperidine	1000 ug/mL
							N-Nitrosopyrrolidine	1000 ug/mL
							p-Dimethylamino azobenzene	1000 ug/mL
							p-Phenylene diamine	1000 ug/mL
							Pentachloronitrobenzene	1000 ug/mL
							Phenacetin	1000 ug/mL
							Pronamide	1000 ug/mL
							Quinoline	1000 ug/mL
..SMLIST2 S2_00014	07/31/18		Restek, Lot A0129110		(Purchased Reagent)		1,4-Naphthoquinone	1000 ug/mL
							1-Chloronaphthalene	1000 ug/mL
							2,3,5,6-Tetrachlorophenol	1000 ug/mL
							7,12-Dimethylbenz(a)anthracene	1000 ug/mL
							Chlorobenzilate	1000 ug/mL
							Dinoseb	1000 ug/mL
							Ethyl methanesulfonate	1000 ug/mL
							Hexachloropropene	1000 ug/mL
							Isodrin	1000 ug/mL
							Isosafrole Peak 1	840 ug/mL
							Isosafrole Peak 2	160 ug/mL
							Methyl methanesulfonate	1000 ug/mL
							Pentachlorobenzene	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..SMLIST2 S3_00014	12/31/18		Restek, Lot A0133130		(Purchased Reagent)		3-Methylcholanthrene	2000 ug/mL
							6-Methylchrysene	2000 ug/mL
..SMLIST2 S4_00012	01/31/19		Restek, Lot A0124571		(Purchased Reagent)		Aramite Peak 1	510 ug/mL
							Aramite Peak 2	490 ug/mL
							Diallate Peak 1	860 ug/mL
							Diallate Peak 2	140 ug/mL
							Dimethoate	1000 ug/mL
							Disulfoton	1000 ug/mL
							Ethyl Parathion	1000 ug/mL
							Famphur	1000 ug/mL
							Methyl parathion	1000 ug/mL
							o,o',o''-Triethylphosphorothioate	1000 ug/mL
							Phorate	1000 ug/mL
							Safrole, Total	1000 ug/mL
							Sulfotepp	1000 ug/mL
							Thionazin	1000 ug/mL
..SMLIST2 S5_00011	02/28/19		Restek, Lot A0125047		(Purchased Reagent)		Methapyrilene	2000 ug/mL
SMLIST2 SS W_00014	11/30/18	01/17/18	MECL2, Lot 000018411	2 mL	SMIS80PPMW_00018	100 uL	1,4-Dichlorobenzene-d4	4 ug/mL
							Acenaphthene-d10	4 ug/mL
							Chrysene-d12	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	4 ug/mL
							Perylene-d12	4 ug/mL
							Phenanthrene-d10	4 ug/mL
.SMIS80PPMW_00018	01/31/19	01/15/18	MECL2, Lot 0000184111	40 mL	SMIS R_00009	1.6 mL	1,4-Dichlorobenzene-d4	80 ug/mL
							Acenaphthene-d10	80 ug/mL
							Chrysene-d12	80 ug/mL
							Naphthalene-d8	80 ug/mL
							Perylene-d12	80 ug/mL
							Phenanthrene-d10	80 ug/mL
..SMIS R_00009	01/31/22	Restek, Lot A0129635			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
SMLIST2 SS W_00014	11/30/18	01/17/18	MECL2, Lot 000018411	2 mL	SMLIST2 SS ST_00018	200 uL	Sulfotepp	10 ug/mL
.SMLIST2 SS ST_00018	11/30/18	01/17/18	MECL2, Lot 000184111	5 mL	SMLIST2 SS S4_00008	500 uL	Sulfotepp	100 ug/mL
..SMLIST2 SS S4_00008	02/28/19	Restek, Lot A0124787			(Purchased Reagent)		Sulfotepp	1000 ug/mL

Reagent

exBENZALDEHYD_00054

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

Standard No. 3490978 ID: exBENZALDEHYD_00054 Exp: 09/07/18 Prpd: BMB Crl: 03/07/18 Benzaldehyde BNA Spike

Standard Name _____

Date Created 3/7/18

Extractionist Initials BB

Extractionist Comments Please confirm new spike

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 4/3/18

Passed? Yes ☑

No ☐

Returned copy of chromatogram and recovery page to Extractions? Yes ☑

No ☐

Analyst Initials MV/SG

Analyst Comments _____

WI-NC-020A_101207

Report Date: 04-Apr-2018 13:25:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403034.D

Injection Date: 04-Apr-2018 03:23:30 Instrument ID: A4HP7 Operator ID: 001710

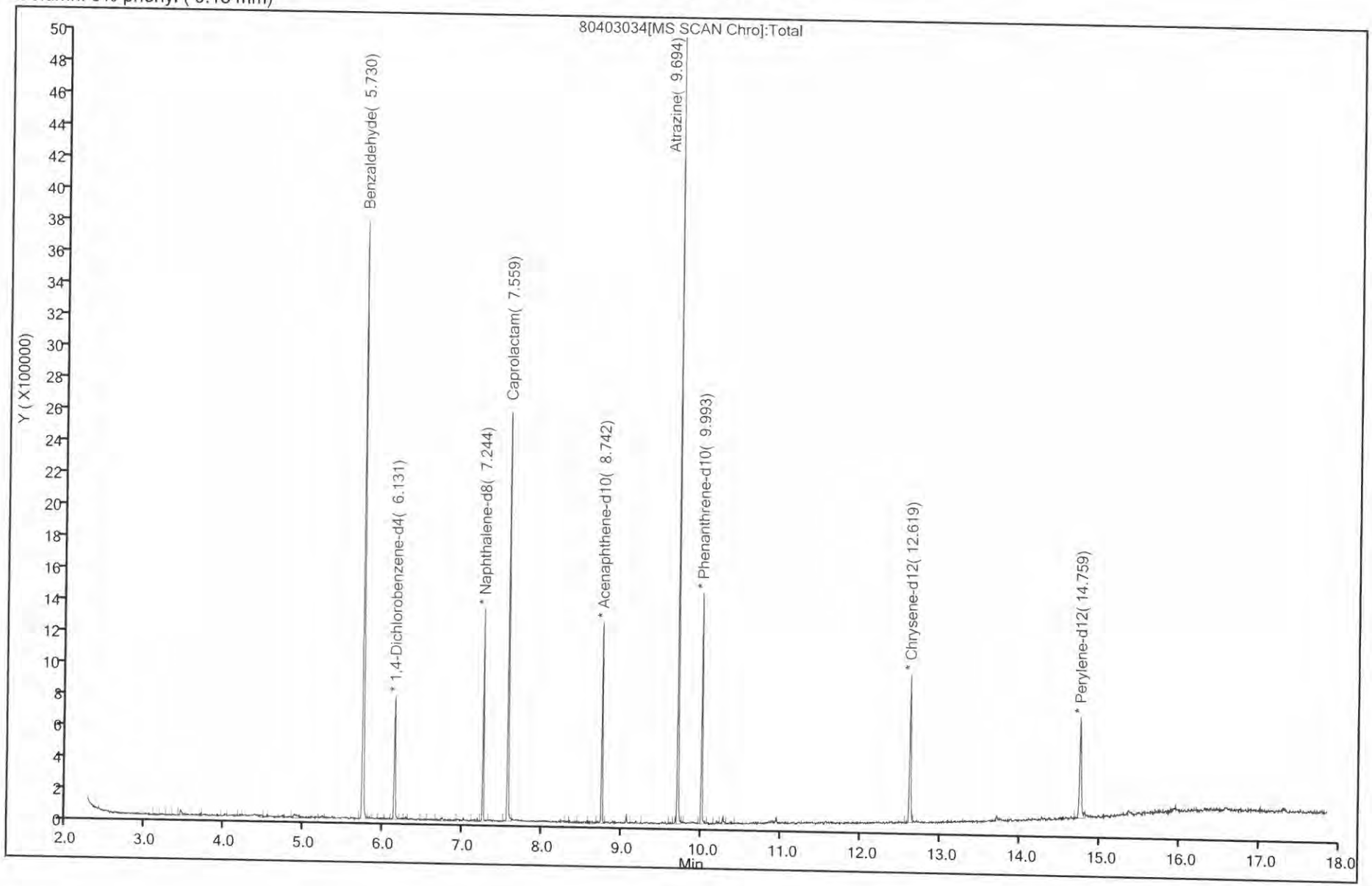
Lims ID: BENZALD spk Lab Sample ID: Client 240-321081/34-A Worklist Smp#: 34

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 34

Method: 8270_hp7 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 04-Apr-2018 13:25:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403034.D
Lims ID: BENZALD spk
Client ID:
Sample Type: Client
Inject. Date: 04-Apr-2018 03:23:30 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074603-034
Misc. Info.: BENZALD SPK
Operator ID: 001710 Instrument ID: A4HP7

Method: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\8270_hp7.m
Limit Group: MSS 8270D ICAL
Last Update: 04-Apr-2018 13:25:16 Calib Date: 04-Apr-2018 00:59:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403028.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK009

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.131	6.126	0.005	97	109663	4.00	
* 2 Naphthalene-d8	136	7.244	7.244	0.000	100	440742	4.00	
* 3 Acenaphthene-d10	164	8.742	8.742	0.000	94	220294	4.00	
* 4 Phenanthrene-d10	188	9.993	9.993	0.000	97	454996	4.00	
* 5 Chrysene-d12	240	12.619	12.619	0.000	98	386726	4.00	
* 6 Perylene-d12	264	14.759	14.759	0.000	99	339262	4.00	
$ 7 2-Fluorophenol	112		4.885				ND	
$ 8 Phenol-d5	99		5.768				ND	
$ 9 Nitrobenzene-d5	82		6.607				ND	
$ 10 2-Fluorobiphenyl (Surr)	172		8.148				ND	
$ 11 2,4,6-Tribromophenol	330		9.405				ND	
$ 12 Terphenyl-d14	244		11.362				ND	
24 1,4-Dioxane	88		2.655				ND	
25 N-Nitrosodimethylamine	74		3.163				ND	
26 Pyridine	79		3.227				ND	
18 Dimethylformamide	73		3.740				ND	
27 Ethyl methacrylate	69		3.858				ND	
30 2-Picoline	93		4.510				ND	igU
31 N-Nitrosomethylethylamine	88		4.612				ND	iU
233 n,n'-Dimethylacetamide	44		4.783				ND	
33 Acrylamide	71		4.874				ND	igU
34 Methyl methanesulfonate	80		4.911				ND	iU
35 N-Nitrosodiethylamine	102		5.307				ND	iU
36 Ethyl methanesulfonate	79		5.569				ND	iU
37 2-Methylcyclohexanone	68		5.612				ND	U
38 3-Methylcyclohexanone	69		5.650				ND	
39 4-Methylcyclohexanone	55		5.698				ND	U
40 Benzaldehyde	77	5.730	5.730	0.005	91	713357	24.6	
41 Phenol	94		5.778				ND	
43 Aniline	93		5.821				ND	
44 Bis(2-chloroethyl)ether	93		5.869				ND	

Report Date: 04-Apr-2018 13:25:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403034.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
46 2-Chlorophenol	128		5.939				ND	
244 n-Decane	57		5.976				ND	U
42 Phenylmercaptan	110		6.004				ND	iU
45 Pentachloroethane	167		6.040				ND	igU
47 1,3-Dichlorobenzene	146		6.083				ND	
48 1,4-Dichlorobenzene	146		6.142				ND	
232 1-Methyl-2-pyrrilidinone	99		6.227				ND	U
49 Benzyl alcohol	108		6.233				ND	
50 1,2-Dichlorobenzene	146		6.286				ND	
51 2-Methylphenol	108		6.324				ND	
52 2,2'-oxybis[1-chloropropan	45		6.351				ND	
53 Indene	115		6.361				ND	
191 3 & 4 Methylphenol	108		6.452				ND	
285 4-Methyl-1-cyclohexanemeth	55		6.458				ND	U
56 N-Nitrosodi-n-propylamine	70		6.463				ND	
57 Acetophenone	105		6.468				ND	
60 Hexachloroethane	117		6.591				ND	
286 4-Methyl-1-cyclohexanemeth	55		6.591				ND	U
55 N-Nitrosopyrrolidine	100		6.596				ND	iU
58 N-Nitrosomorpholine	56		6.623				ND	igU
61 Nitrobenzene	77		6.623				ND	
59 2-Toluidine	106		6.655				ND	igU
63 Isophorone	82		6.827				ND	
254 2-Chloroaniline	127		6.869				ND	U
62 N-Nitrosopiperidine	114		6.901				ND	iU
65 2-Nitrophenol	139		6.901				ND	
64 2,4-Dimethylphenol	107		6.917				ND	
66 1,3,5-Trichlorobenzene	180		6.923				ND	
69 Benzoic acid	122		6.976				ND	
68 Bis(2-chloroethoxy)methane	93		6.992				ND	
67 o,o',o''-Triethylphosphoro	198		7.110				ND	iU
71 2,4-Dichlorophenol	162		7.110				ND	
304 3 & 4 Chlorophenol	128		7.174				ND	
72 1,2,4-Trichlorobenzene	180		7.190				ND	
70 alpha,alpha-Dimethyl phene	58		7.227				ND	igU
73 Naphthalene	128		7.260				ND	
74 4-Chloroaniline	127		7.287				ND	
75 2,6-Dichlorophenol	162		7.303				ND	
77 Hexachlorobutadiene	225		7.367				ND	
78 1,2,3-Trichlorobenzene	180		7.383				ND	
79 Benzothiazole	135		7.474				ND	
290 1-Phenoxy-2-propanol	94		7.485				ND	U
76 Hexachloropropene	213		7.489				ND	igU
83 Caprolactam	113	7.559	7.565	-0.006	74	215567	19.6	
84 4-Chloro-3-methylphenol	107		7.682				ND	
80 Quinoline	129		7.693				ND	iU
81 N-Nitrosodi-n-butylamine	84		7.703				ND	igU
252 4-tert-Butylphenol	135		7.704				ND	U
82 p-Phenylene diamine	108		7.735				ND	iU
85 2-Methylnaphthalene	142		7.848				ND	
93 Safrole, Total	162		7.901				ND	iU

Report Date: 04-Apr-2018 13:25:55 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403034.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
228 Diallate Peak 1	86		9.650				ND	igU
272 3 & 4 Phenoxyphenol	186		9.651				ND	
135 Phenacetin	108		9.656				ND	igU
136 Phorate	121		9.661				ND	igU
139 Hexachlorobenzene	284		9.683				ND	
140 Atrazine	200	9.694	9.699	-0.005	89	395596	20.0	
230 Diallate Peak 2	86		9.736				ND	igU
138 Dimethoate	87		9.811				ND	iU
245 n-Octadecane	57		9.832				ND	U
141 Pentachlorophenol	266		9.832				ND	
127 4-Aminobiphenyl	169		9.966				ND	iU
142 Pronamide	173		9.987				ND	iU
143 Pentachloronitrobenzene	237		10.003				ND	iU
146 Phenanthrene	178		10.020				ND	
147 Anthracene	178		10.062				ND	
144 Disulfoton	88		10.099				ND	iU
145 Dinoseb	211		10.110				ND	iU
149 Carbazole	167		10.175				ND	
151 Di-n-butyl phthalate	149		10.421				ND	
150 Methyl parathion	109		10.426				ND	iU
152 Diphenylsulfone	125		10.448				ND	U
278 Chlorpyrifos	97		10.538				ND	
153 Ethyl Parathion	97		10.741				ND	igU
154 4-Nitroquinoline-1-oxide	190		10.816				ND	iU
155 Methapyrilene	58		10.848				ND	igU
157 Fluoranthene	202		11.036				ND	
156 Isodrin	66		11.078				ND	iU
158 Benzidine	184		11.122				ND	
160 Pyrene	202		11.261				ND	
226 Aramite Peak 1	185		11.479				ND	igU
229 Aramite Peak 2	185		11.554				ND	igU
280 Kepone	272		11.568				ND	igU
161 p-Dimethylamino azobenzene	225		11.693				ND	iU
162 Chlorobenzilate	251		11.725				ND	igU
166 Butyl benzyl phthalate	149		11.849				ND	
165 Famphur	218		11.998				ND	iU
167 3,3'-Dimethylbenzidine	212		12.068				ND	iU
169 2-Acetylaminofluorene	181		12.383				ND	iU
170 3,3'-Dimethoxybenzidine	244		12.480				ND	
173 3,3'-Dichlorobenzidine	252		12.534				ND	
171 Bis(2-ethylhexyl) phthalat	149		12.539				ND	
175 Benzo[a]anthracene	228		12.608				ND	
176 Chrysene	228		12.657				ND	
174 Hexabromobenzene	232		12.662				ND	
172 4,4'-Methylene bis(2-chlor	231		12.758				ND	iU
178 Di-n-octyl phthalate	149		13.459				ND	
177 6-Methylchrysene	242		13.544				ND	iU
180 Benzo[b]fluoranthene	252		14.165				ND	
181 Benzo[k]fluoranthene	252		14.202				ND	
179 7,12-Dimethylbenz(a)anthra	256		14.432				ND	iU
182 Benzo[a]pyrene	252		14.673				ND	

Reagent

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exBNASPIKE_00086

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

Standard No. ___ 3515795 ID: exBNASPIKE_00086 Exp: 06/30/18 Prpd: BMB Crl: 03/22/18 List 1 BNA Spike – 3515800 ID: exBNA TCLPspk_00031 Exp: 06/30/18 Prpd: BMB Crl: 03/22/18 List 1 TCLP BNA Spike

Standard Name _____

Date Created 3/22/18

Extractionist Initials BMB

Extractionist Comments Please confirm new spike.

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 4/3/18

Passed? **Yes** ☑ **No** ☐

Returned copy of chromatogram and recovery page to Extractions? **Yes** ☑ **No** ☐

Analyst Initials JG/MV

Analyst Comments _____

WI-NC-020A_101207

Report Date: 04-Apr-2018 13:23:02 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403032.D

Injection Date: 04-Apr-2018 02:35:30 Instrument ID: A4HP7 Operator ID: 001710

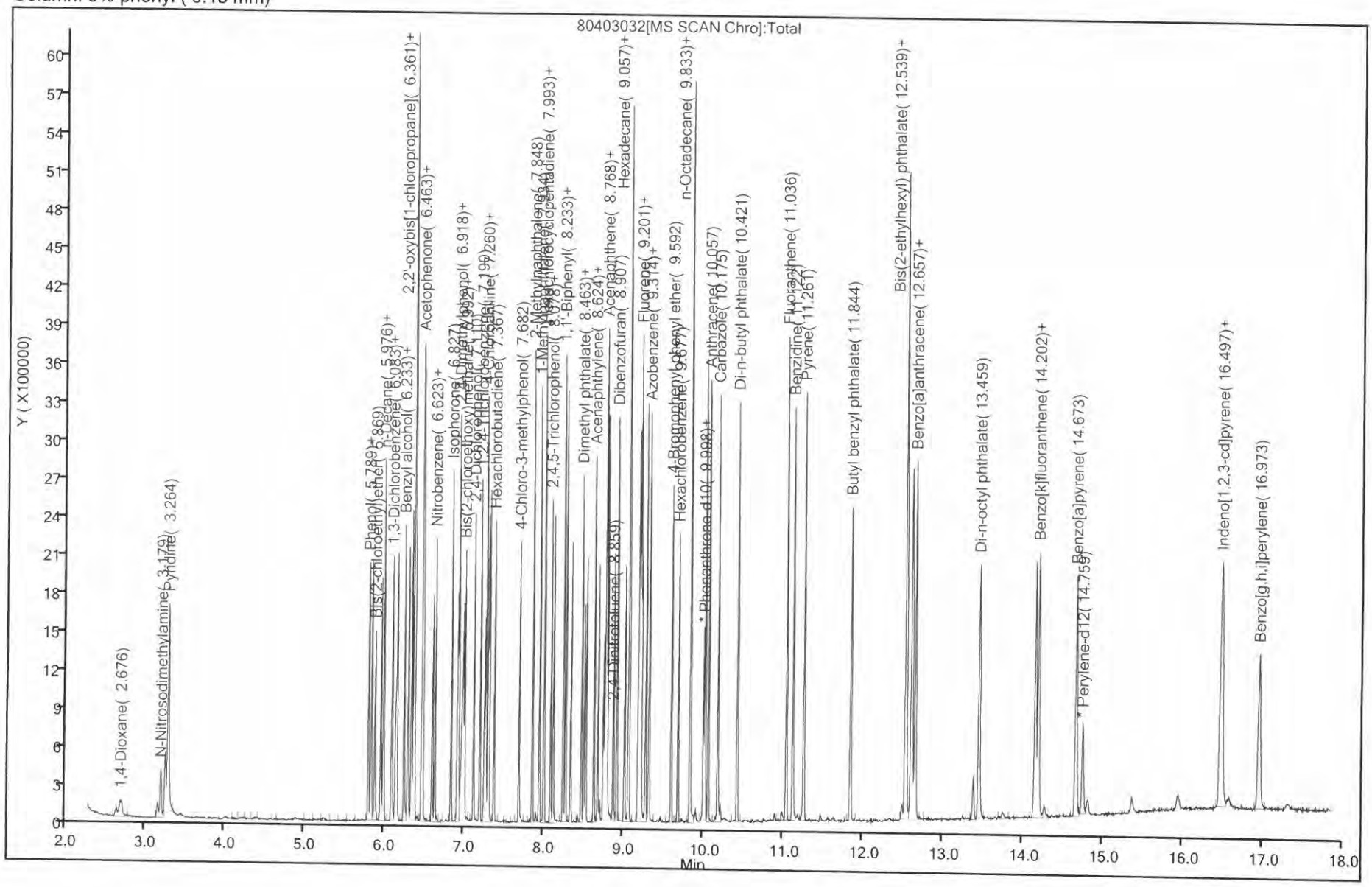
Lims ID: BNA spk Worklist Smp#: 32

Client ID:

Injection Vol: 1.0 ul Dil. Factor: 1.0000 ALS Bottle#: 32

Method: 8270_hp7 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Report Date: 04-Apr-2018 13:23:00 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

TestAmerica Canton

Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403032.D
Lims ID: BNA spk
Client ID:
Sample Type: LCS
Inject. Date: 04-Apr-2018 02:35:30 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074603-032
Misc. Info.: BNA SPK
Operator ID: 001710 Instrument ID: A4HP7

Method: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\8270_hp7.m
Limit Group: MSS 8270D ICAL
Last Update: 04-Apr-2018 13:20:18 Calib Date: 04-Apr-2018 00:59:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403028.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK009

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.131	6.126	0.005	95	123088	4.00	4.00	
* 2 Naphthalene-d8	136	7.244	7.244	0.000	100	498194	4.00	4.00	
* 3 Acenaphthene-d10	164	8.741	8.742	-0.001	93	243244	4.00	4.00	
* 4 Phenanthrene-d10	188	9.998	9.993	0.005	98	498085	4.00	4.00	
* 5 Chrysene-d12	240	12.619	12.619	0.000	99	470365	4.00	4.00	
* 6 Perylene-d12	264	14.759	14.759	0.000	98	408930	4.00	4.00	
$ 7 2-Fluorophenol	112		4.885					ND	
$ 8 Phenol-d5	99		5.768					ND	
$ 9 Nitrobenzene-d5	82		6.607					ND	
$ 10 2-Fluorobiphenyl (Surr)	172		8.148					ND	
$ 11 2,4,6-Tribromophenol	330		9.405					ND	
$ 12 Terphenyl-d14	244		11.362					ND	
24 1,4-Dioxane	88	2.676	2.655	0.021	92	159889		8.68	M
25 N-Nitrosodimethylamine	74	3.179	3.163	0.016	85	248173		9.08	M
26 Pyridine	79	3.264	3.227	0.037	86	919667		18.1	M
18 Dimethylformamide	73		3.740					ND	
27 Ethyl methacrylate	69		3.858					ND	
30 2-Picoline	93		4.510					ND	igU
31 N-Nitrosomethylethylamine	88		4.612					ND	igU
233 n,n'-Dimethylacetamide	44		4.783					ND	U
33 Acrylamide	71		4.874					ND	igU
34 Methyl methanesulfonate	80		4.911					ND	igU
35 N-Nitrosodiethylamine	102		5.307					ND	iU
36 Ethyl methanesulfonate	79		5.569					ND	igU
37 2-Methylcyclohexanone	68		5.612					ND	U
38 3-Methylcyclohexanone	69		5.650					ND	
39 4-Methylcyclohexanone	55		5.698					ND	U
40 Benzaldehyde	77		5.725					ND	
41 Phenol	94	5.789	5.778	0.011	98	512835		8.96	
43 Aniline	93	5.821	5.821	0.000	95	631945		9.00	
44 Bis(2-chloroethyl)ether	93	5.869	5.869	0.000	94	421169		9.31	

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403032.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
46 2-Chlorophenol	128	5.944	5.939	0.005	97	378093		9.01	
244 n-Decane	57	5.976	5.976	0.000	0	563149		9.01	
42 Phenylmercaptan	110		6.004					ND	igU
45 Pentachloroethane	167		6.040					ND	iU
47 1,3-Dichlorobenzene	146	6.083	6.083	0.000	94	422586		9.25	
48 1,4-Dichlorobenzene	146	6.142	6.142	0.000	90	418829		8.95	
232 1-Methyl-2-pyrrilidinone	99		6.227					ND	U
49 Benzyl alcohol	108	6.233	6.233	0.000	89	237861		8.33	
50 1,2-Dichlorobenzene	146	6.286	6.286	0.000	93	401154		9.20	
51 2-Methylphenol	108	6.329	6.324	0.005	97	362647		8.85	
52 2,2'-oxybis[1-chloropropan	45	6.351	6.351	0.000	91	741718		9.05	
53 Indene	115	6.361	6.361	0.000	91	1351462		19.8	
191 3 & 4 Methylphenol	108	6.458	6.452	0.006	89	377988		8.83	
285 4-Methyl-1-cyclohexanemeth	55		6.458					ND	U
56 N-Nitrosodi-n-propylamine	70	6.463	6.463	0.000	94	284368		9.30	
57 Acetophenone	105	6.468	6.468	0.000	95	546773		8.87	
60 Hexachloroethane	117	6.591	6.591	0.000	93	168885		8.99	
286 4-Methyl-1-cyclohexanemeth	55		6.591					ND	U
55 N-Nitrosopyrrolidine	100		6.596					ND	igU
58 N-Nitrosomorpholine	56		6.623					ND	igU
61 Nitrobenzene	77	6.623	6.623	0.000	95	458242		8.94	
59 2-Toluidine	106		6.655					ND	igU
63 Isophorone	82	6.827	6.827	0.000	99	780698		8.80	
254 2-Chloroaniline	127		6.869					ND	
62 N-Nitrosopiperidine	114		6.901					ND	iU
65 2-Nitrophenol	139	6.902	6.901	0.001	96	205045		9.15	
64 2,4-Dimethylphenol	107	6.918	6.917	0.001	95	391496		8.83	
66 1,3,5-Trichlorobenzene	180		6.923					ND	
69 Benzoic acid	122	6.976	6.976	0.000	93	390622		16.3	
68 Bis(2-chloroethoxy)methane	93	6.992	6.992	0.000	97	484619		8.87	
67 o,o',o''-Triethylphosphoro	198		7.110					ND	iU
71 2,4-Dichlorophenol	162	7.110	7.110	0.000	98	308158		8.83	
304 3 & 4 Chlorophenol	128		7.174					ND	U
72 1,2,4-Trichlorobenzene	180	7.190	7.190	0.000	94	347338		9.01	
70 alpha,alpha-Dimethyl phene	58		7.227					ND	igU
73 Naphthalene	128	7.260	7.260	0.000	98	1089531		8.95	
74 4-Chloroaniline	127	7.287	7.287	0.000	93	432352		8.44	
75 2,6-Dichlorophenol	162	7.303	7.303	0.000	94	307674		9.11	
77 Hexachlorobutadiene	225	7.367	7.367	0.000	96	199663		9.00	
78 1,2,3-Trichlorobenzene	180		7.383					ND	U
79 Benzothiazole	135		7.474					ND	
290 1-Phenoxy-2-propanol	94		7.485					ND	U
76 Hexachloropropene	213		7.489					ND	igU
83 Caprolactam	113		7.565					ND	
84 4-Chloro-3-methylphenol	107	7.682	7.682	0.000	98	333027		8.81	
80 Quinoline	129		7.693					ND	igU
81 N-Nitrosodi-n-butylamine	84		7.703					ND	igU
252 4-tert-Butylphenol	135		7.704					ND	U
82 p-Phenylene diamine	108		7.735					ND	igU
85 2-Methylnaphthalene	142	7.848	7.848	0.000	93	755880		9.05	
93 Safrole, Total	162		7.901					ND	iU

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
86 1-Methylnaphthalene	142	7.934	7.934	0.000	95	716765		9.01	
87 1,2,3,5-Tetrachlorobenzene	216		7.982					ND	
88 Hexachlorocyclopentadiene	237	7.993	7.993	0.000	97	198068		8.59	
89 1,2,4,5-Tetrachlorobenzene	216	7.998	7.998	0.000	98	346935		9.27	
90 2,4,6-Trichlorophenol	196	8.078	8.078	0.000	95	235619		9.45	
91 2,4,5-Trichlorophenol	196	8.110	8.110	0.000	92	233477		9.04	
225 Isosafrole Peak 1	162		8.147					ND	igU
94 2,4-Toluene diamine	121		8.212					ND	
96 1,2,3,4 -Tetrachlorobenzen	216		8.239					ND	U
95 1,1'-Biphenyl	154	8.233	8.239	-0.006	95	914724		9.26	
97 3,4-Dichloronitrobenzene	109		8.260					ND	
98 2-Chloronaphthalene	162	8.265	8.265	0.000	97	673543		9.02	
99 Phenyl ether	170		8.319					ND	
100 2-Nitroaniline	65	8.330	8.330	0.000	80	251659		9.09	
227 Isosafrole Peak 2	162		8.340					ND	igU
247 1-Chloronaphthalene	162		8.441					ND	igU
103 Dimethyl phthalate	163	8.463	8.463	0.000	97	761326		9.02	
104 1,3-Dinitrobenzene	168	8.495	8.495	0.000	84	126017		9.40	
105 2,6-Dinitrotoluene	165	8.522	8.522	0.000	88	165070		8.76	
101 1,4-Naphthoquinone	158		8.548					ND	iU
102 1,4-Dinitrobenzene	168		8.580					ND	igU
107 Acenaphthylene	152	8.624	8.624	0.000	98	1033681		8.86	
108 3-Nitroaniline	138	8.672	8.672	0.000	92	190325		8.48	
109 2,4-Dinitrophenol	184	8.758	8.757	0.001	81	118164		10.9	
110 Acenaphthene	153	8.768	8.768	0.000	93	701329		9.21	
111 4-Nitrophenol	109	8.784	8.784	0.000	98	246934		18.8	
259 o-Phenylphenol	170		8.838					ND	
112 2,4-Dinitrotoluene	165	8.864	8.864	0.000	87	221921		9.07	
114 Dibenzofuran	168	8.907	8.913	-0.006	97	1038688		9.07	
117 2,3,4,6-Tetrachlorophenol	232	9.009	9.009	0.000	75	186284		8.77	
113 Pentachlorobenzene	250		9.035					ND	iU
119 Diethyl phthalate	149	9.052	9.052	0.000	97	769163		8.68	
248 Hexadecane	57	9.062	9.062	0.000	0	629313		8.94	
116 1-Naphthylamine	143		9.121					ND	igU
115 2,3,5,6-Tetrachlorophenol	232		9.126					ND	igU
121 4-Chlorophenyl phenyl ethe	204	9.180	9.180	0.000	92	419887		8.97	
118 2-Naphthylamine	143		9.185					ND	igU
123 4-Nitroaniline	138	9.185	9.191	-0.006	81	207312		9.23	
124 Fluorene	166	9.201	9.201	0.000	97	809677		8.88	
125 Tributyl phosphate	99		9.212					ND	
126 4,6-Dinitro-2-methylphenol	198	9.218	9.217	0.001	78	198438		15.7	
120 Thionazin	97		9.270					ND	igU
128 Diphenylamine	169	9.271	9.271	0.000	95	586142		7.63	
130 N-Nitrosodiphenylamine	169	9.271	9.271	0.000	0	586142		8.98	a
131 Azobenzene	77	9.314	9.314	0.000	98	898619		9.19	
129 1,2-Diphenylhydrazine	77	9.314	9.314	0.000	0	898619		9.19	a
292 Benzophenone	105		9.319					ND	U
122 N-Nitro-o-toluidine	152		9.340					ND	igU
132 Sulfotepp	202		9.516					ND	iU
137 4-Bromophenyl phenyl ether	248	9.592	9.592	0.000	71	217638		8.88	
133 1,3,5-Trinitrobenzene	213		9.618					ND	igU

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403032.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
228 Diallate Peak 1	86		9.650					ND	igU
272 3 & 4 Phenoxyphenol	186		9.651					ND	
135 Phenacetin	108		9.656					ND	igU
136 Phorate	121		9.661					ND	igU
139 Hexachlorobenzene	284	9.677	9.683	-0.006	92	208231		8.95	
140 Atrazine	200		9.699					ND	
230 Diallate Peak 2	86		9.736					ND	igU
138 Dimethoate	87		9.811					ND	igU
245 n-Octadecane	57	9.833	9.832	0.001	0	636693		9.59	
141 Pentachlorophenol	266	9.833	9.832	0.001	86	199131		15.4	
127 4-Aminobiphenyl	169		9.966					ND	igU
142 Pronamide	173		9.987					ND	igU
143 Pentachloronitrobenzene	237		10.003					ND	iU
146 Phenanthrene	178	10.014	10.020	-0.006	97	1141902		8.98	
147 Anthracene	178	10.063	10.062	0.001	97	1173693		9.31	
144 Disulfoton	88		10.099					ND	igU
145 Dinoseb	211		10.110					ND	iU
149 Carbazole	167	10.175	10.175	0.000	95	1099598		8.94	
151 Di-n-butyl phthalate	149	10.421	10.421	0.000	100	1337775		8.96	
150 Methyl parathion	109		10.426					ND	igU
152 Diphenylsulfone	125		10.448					ND	U
278 Chlorpyrifos	97		10.538					ND	U
153 Ethyl Parathion	97		10.741					ND	igU
154 4-Nitroquinoline-1-oxide	190		10.816					ND	iU
155 Methapyrilene	58		10.848					ND	igU
157 Fluoranthene	202	11.036	11.036	0.000	96	1372419		9.36	
156 Isodrin	66		11.078					ND	igU
158 Benzidine	184	11.122	11.122	0.000	99	1151589		14.8	
160 Pyrene	202	11.261	11.261	0.000	99	1439783		9.28	
226 Aramite Peak 1	185		11.479					ND	igU
229 Aramite Peak 2	185		11.554					ND	igU
280 Kepone	272		11.568					ND	iU
161 p-Dimethylamino azobenzene	225		11.693					ND	iU
162 Chlorobenzilate	251		11.725					ND	igU
166 Butyl benzyl phthalate	149	11.849	11.849	0.000	98	614122		9.16	
165 Famphur	218		11.998					ND	iU
167 3,3'-Dimethylbenzidine	212		12.068					ND	iU
169 2-Acetylaminofluorene	181		12.383					ND	iU
170 3,3'-Dimethoxybenzidine	244		12.480					ND	
173 3,3'-Dichlorobenzidine	252	12.534	12.534	0.000	74	803280		16.9	
171 Bis(2-ethylhexyl) phthalat	149	12.539	12.539	0.000	98	802139		9.34	
175 Benzo[a]anthracene	228	12.603	12.608	-0.005	98	1225581		8.81	
176 Chrysene	228	12.657	12.657	0.000	96	1194656		8.90	
174 Hexabromobenzene	232		12.662					ND	
172 4,4'-Methylene bis(2-chlor	231		12.758					ND	iU
178 Di-n-octyl phthalate	149	13.459	13.459	0.000	99	1423003		9.16	
177 6-Methylchrysene	242		13.544					ND	iU
180 Benzo[b]fluoranthene	252	14.160	14.165	-0.005	96	1217424		9.27	
181 Benzo[k]fluoranthene	252	14.202	14.202	0.000	98	1274116		9.25	
179 7,12-Dimethylbenz(a)anthra	256		14.432					ND	iU
182 Benzo[a]pyrene	252	14.673	14.673	0.000	76	1159749		9.32	

Report Date: 04-Apr-2018 13:23:00 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

Data File: \\ChromNA\Canton\ChromData\A4HP7\20180403-74603.b\80403032.D

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
183 3-Methylcholanthrene	268		15.534				ND		igU
184 Dibenz[a,j]acridine	279		16.155				ND		
185 Dibenz[a,h]acridine	279		16.443				ND		igU
186 Indeno[1,2,3-cd]pyrene	276	16.486	16.486	0.000	97	1147809		9.14	p
187 Dibenz(a,h)anthracene	278	16.502	16.502	0.000	87	982373		9.44	p
188 Benzo[g,h,i]perylene	276	16.973	16.973	0.000	98	982152		9.28	
236 4-isopropylphenol TIC	1		0.000				ND		U
302 3,3'-Dimethoxybenzidine TI	1		0.000				ND		iU
291 1-Phenoxy-2-propanol TIC	1		0.000				ND		iU
270 Dibenzo[a,e]pyrene	1		0.000				ND		iU
288 Chlorobenzene TIC	1		0.000				ND		U
243 3-(1,1-Dimethylethyl Pheno	1		0.000				ND		U
240 3-isopropylphenol TIC	1		0.000				ND		U
305 1,2,4,5-Tetrachlorobenzene	1		0.000				ND		U
300 1-Dodecanol	1		0.000				ND		iU
301 2-Chloroaniline TIC	1		0.000				ND		iU
234 2-Isopropylphenol TIC	1		0.000				ND		U
303 Perylene TIC	1		0.000				ND		U
S 92 Isosafrole	162		5.138				ND		7
S 134 Diallate	86		6.337				ND		7
S 159 Aramite, Total	185		7.806				ND		7
S 287 4-Methyl-1-cyclohexanemeth	1		0.000				ND		
S 246 Total Cresols	100				0			17.7	
S 189 Methyl Phenols,Total	100				0			17.7	
T 192 Decane TIC	142		3.050				ND		U
T 238 Trimethyl phosphate TIC	110		6.000				ND		U
T 194 Octadecane (TIC)	254		6.300				ND		U
T 298 Alpha-Terpineol TIC	59		7.200				ND		U
T 249 4-Chlorophenol TIC	128		7.400				ND		U
T 195 Hexamethylphosphoramide TI	135		7.750				ND		U
T 231 2,3,7,8-TCDD	322		8.700				ND		U
T 299 Diisobutyl phthalate TIC	149		10.247				ND		U
T 196 Kepone TIC	272		12.250				ND		U
T 197 Hexachlorophene TIC	198		12.500				ND		U
T 242 Triphenyl Phosphate TIC	326		13.250				ND		U
T 241 Tricresyl phosphate TIC	368		13.600				ND		U
T 239 2,3,7,8 TCDF TIC	306		14.000				ND		U
T 237 Tris(2,3-dibromopropyl)pho	201		15.500				ND		U
T 193 Hydroquinone TIC	110		0.000				ND		U
T 282 2,3,7,8-TCDD TIC	322		12.600				ND		6U
148 DFTPP									U
164 4,4'-DDE	246		11.303				ND		U
163 4,4'-DDD	235		11.699				ND		U
168 4,4'-DDT	235		11.993				ND		U

Preliminary Report

QC Flag Legend

Processing Flags

6 - Missing Quant Standard
7 - Failed Limit of Detection
i - Failed Initial Calibration Limits
p - Peak ID'ed as Multiple Compounds
g - Not in Limit Group or Failed to Calibrate

Review Flags

M - Manually Integrated
U - Marked Undetected
a - User Assigned ID

Reagents:

SMIS80PPMW_00018 Amount Added: 5.00 Units: uL Run Reagent

Reagent

exBNASURR W_00058

LABORATORY STANDARDS DOCUMENTATION FORM
FOR TESTAMERICA LABORATORIES, INC.

3523642
ID: exBNASURR W_00058
Exp: 05/23/18 Prpd: BMB Crl: 03/29/18
BNA Surrogates

Standard No. ____ _____

Standard Name _____

Date Created 3-29-18

Extractionist Initials WICP

Extractionist Comments PLEASE CONFIRM RE-CERTIFICATION OF SURROGATE

♦ **Please return copy of chromatogram and recovery results** ♦

Date Analyzed 3/29/18

Passed? **Yes** ☑

No ☐

Returned copy of chromatogram and recovery page to Extractions? **Yes** ☑

No ☐

Analyst Initials MV 3/30/18

Analyst Comments _____

WI-NC-020A_101207

Report Date: 30-Mar-2018 09:11:45 Chrom Revision: 2.2 13-Mar-2018 08:45:20

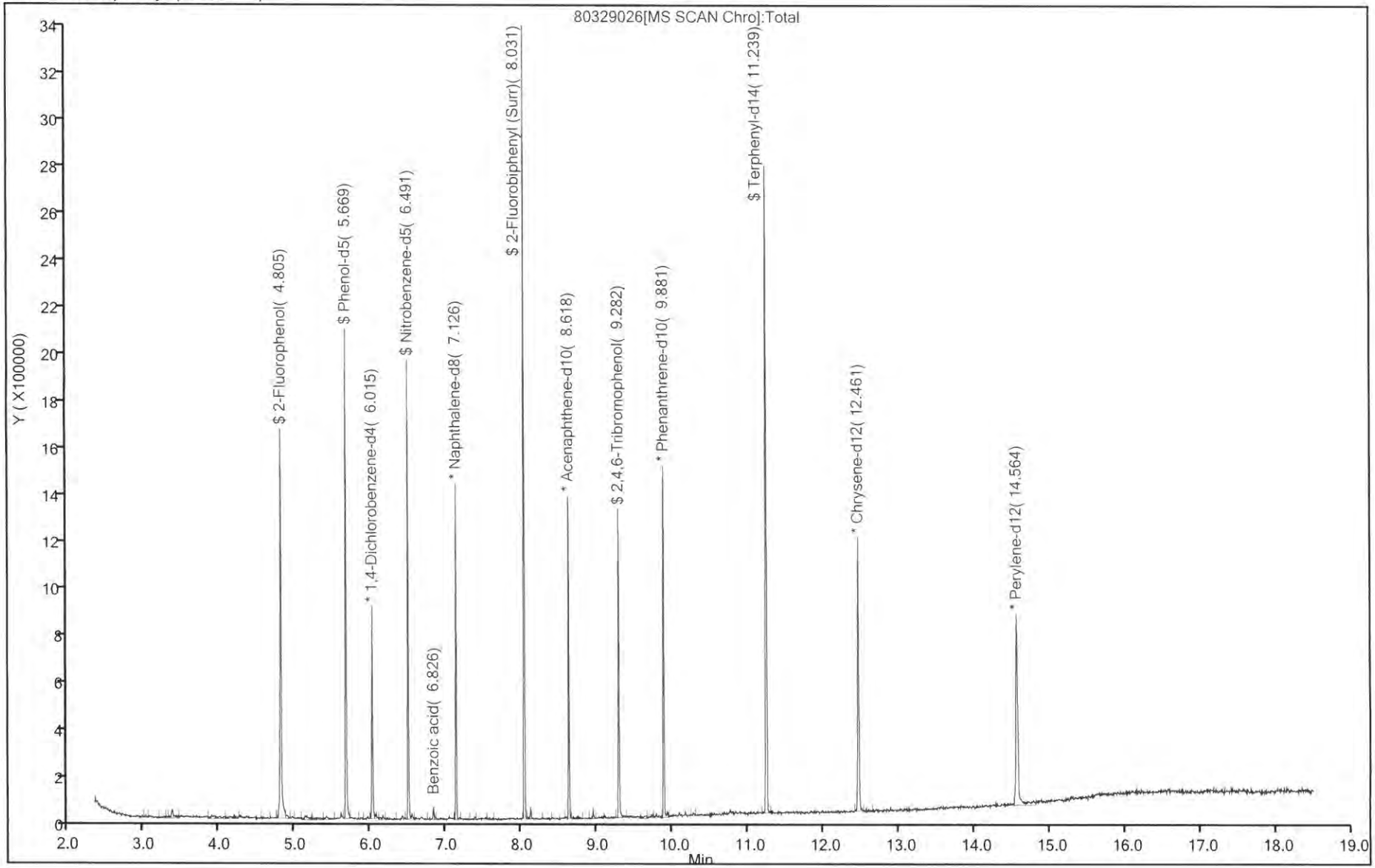
Preliminary Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4HP10\20180329-74481.b\80329026.D

Injection Date:	29-Mar-2018 21:56:30	Instrument ID:	A4HP10	Operator ID:	001710
Lims ID:	bnasur58	Lab Sample ID:	Client 240-320548/26-A	Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8270_10	Limit Group:	MSS 8270C ICAL		

Column: 5% phenyl (0.18 mm)



Report Date: 30-Mar-2018 09:10:13 Chrom Revision: 2.2 13-Mar-2018 08:45:20

Preliminary Report

TestAmerica Canton

Target Compound Quantitation Report

Data File:	\\ChromNA\Canton\ChromData\A4HP10\20180329-74481.b\80329026.D			
Lims ID:	bnasur58			
Client ID:				
Sample Type:	Client			
Inject. Date:	29-Mar-2018 21:56:30	ALS Bottle#:	26	Worklist Smp#: 26
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	
Sample Info:	240-0074481-026			
Misc. Info.:	bnasur588			
Operator ID:	001710	Instrument ID:	A4HP10	
Method:	\\ChromNA\Canton\ChromData\A4HP10\20180329-74481.b\8270_10.m			
Limit Group:	MSS 8270C ICAL			
Last Update:	30-Mar-2018 07:35:45	Calib Date:	29-Mar-2018 15:16:30	
Integrator:	RTE	ID Type:	Deconvolution ID	
Quant Method:	Internal Standard	Quant By:	Initial Calibration	
Last ICal File:	\\ChromNA\Canton\ChromData\A4HP10\20180329-74481.b\80329010.D			
Column 1 :	5% phenyl (0.18 mm)		Det: MS SCAN	
Process Host:	XAWRK020			

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.015	6.015	0.000	98	124379	4.00	
* 2 Naphthalene-d8	136	7.126	7.126	0.000	100	483610	4.00	
* 3 Acenaphthene-d10	164	8.618	8.624	-0.006	96	245057	4.00	
* 4 Phenanthrene-d10	188	9.881	9.882	-0.001	97	479854	4.00	
* 5 Chrysene-d12	240	12.461	12.467	-0.006	98	515601	4.00	
* 6 Perylene-d12	264	14.564	14.570	-0.006	98	493401	4.00	
$ 7 2-Fluorophenol	112	4.805	4.782	0.023	94	462092	10.1	104%
$ 8 Phenol-d5	99	5.669	5.657	0.012	97	516684	9.55	96%
$ 9 Nitrobenzene-d5	82	6.491	6.491	0.000	94	440793	9.22	92%
$ 10 2-Fluorobiphenyl (Surr)	172	8.031	8.031	0.000	99	782582	9.08	91%
$ 11 2,4,6-Tribromophenol	330	9.288	9.288	0.000	93	115415	8.80	88%
$ 12 Terphenyl-d14	244	11.239	11.245	-0.006	99	933699	8.78	88%
25 1,4-Dioxane	88		2.584				ND	
26 N-Nitrosodimethylamine	74		3.066				ND	
27 Pyridine	79		3.119				ND	
30 2-Picoline	93		3.890				ND	igU
13 Dimethylformamide	73		3.986				ND	igU
31 N-Nitrosomethylethylamine	88		4.037				ND	iU
28 Ethyl methacrylate	69		4.074				ND	igU
34 Acrylamide	71		4.360				ND	igU
33 Methyl methanesulfonate	80		4.395				ND	iU
36 N-Nitrosodiethylamine	102		4.836				ND	iU
233 n,n'-Dimethylacetamide	44		4.914				ND	igU
37 Ethyl methanesulfonate	79		5.135				ND	igU
41 Benzaldehyde	77		5.610				ND	
46 Pentachloroethane	167		5.623				ND	iU
43 Phenol	94		5.669				ND	
38 2-Methylcyclohexanone	68		5.707				ND	igU
44 Aniline	93		5.710				ND	
42 Phenylmercaptan	110		5.719				ND	iU
39 3-Methylcyclohexanone	69		5.736				ND	igU

Reagent

exLIST1_S1_00011

RESTEK®
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0125805

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2018 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBG1461V) **Purity** 99%	1,000.6 µg/mL	+/- 5.8176 µg/mL +/- 11.9612 µg/mL +/- 19.0361 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 170310JLM) **Purity** 99%	1,002.3 µg/mL	+/- 5.8275 µg/mL +/- 11.9816 µg/mL +/- 19.0685 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,003.5 µg/mL	+/- 11.6485 µg/mL +/- 23.9500 µg/mL +/- 38.1160 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8183 µg/mL +/- 11.9628 µg/mL +/- 19.0387 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,001.7 µg/mL	+/- 5.8238 µg/mL +/- 11.9740 µg/mL +/- 19.0564 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,000.5 µg/mL	+/- 5.8172 µg/mL +/- 11.9604 µg/mL +/- 19.0349 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBD4608V) **Purity** 99%	1,001.3 µg/mL	+/- 5.8215 µg/mL +/- 11.9692 µg/mL +/- 19.0488 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBM5751V)	1,001.2	µg/mL	+/- 5.8213 +/- 11.9688 +/- 19.0482	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,001.6	µg/mL	+/- 5.8232 +/- 11.9728 +/- 19.0545	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBC1850V)	1,000.8	µg/mL	+/- 5.8185 +/- 11.9632 +/- 19.0393	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBD7331V)	1,000.5	µg/mL	+/- 5.8168 +/- 11.9596 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,001.1	µg/mL	+/- 5.8207 +/- 11.9676 +/- 19.0463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 98%	(Lot 5922200)	1,000.7	µg/mL	+/- 5.8184 +/- 11.9629 +/- 19.0389	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9127 +/- 5.9886 +/- 9.5307	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.8	µg/mL	+/- 2.9115 +/- 5.9862 +/- 9.5269	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot NOPCF)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,000.0	µg/mL	+/- 5.8139 +/- 11.9537 +/- 19.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.5	µg/mL	+/- 5.8230 +/- 11.9724 +/- 19.0539	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	981.1	µg/mL	+/- 5.7043 +/- 11.7283 +/- 18.6653	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,000.2	µg/mL	+/- 5.8152 +/- 11.9565 +/- 19.0285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,001.8	µg/mL	+/- 5.8244 +/- 11.9752 +/- 19.0583	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.4	µg/mL	+/- 5.8162	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/- 11.9584	µg/mL	Unstressed
	Purity 99%				+/- 19.0317	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.7	µg/mL	+/- 5.8180	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/- 11.9620	µg/mL	Unstressed
	Purity 99%				+/- 19.0374	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,002.0	µg/mL	+/- 5.8259	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBC5541V)			+/- 11.9784	µg/mL	Unstressed
	Purity 99%				+/- 19.0634	µg/mL	Stressed
27	Naphthalene		1,001.8	µg/mL	+/- 5.8244	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/- 11.9752	µg/mL	Unstressed
	Purity 99%				+/- 19.0583	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.0	µg/mL	+/- 5.8197	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/- 11.9656	µg/mL	Unstressed
	Purity 99%				+/- 19.0431	µg/mL	Stressed
29	4-Chloroaniline		1,000.6	µg/mL	+/- 5.8174	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/- 11.9608	µg/mL	Unstressed
	Purity 99%				+/- 19.0355	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.2	µg/mL	+/- 5.8151	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/- 11.9561	µg/mL	Unstressed
	Purity 99%				+/- 19.0279	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,002.0	µg/mL	+/- 5.8255	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/- 11.9776	µg/mL	Unstressed
	Purity 99%				+/- 19.0621	µg/mL	Stressed
32	2-Methylnaphthalene		1,000.4	µg/mL	+/- 5.8161	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/- 11.9582	µg/mL	Unstressed
	Purity 95%				+/- 19.0314	µg/mL	Stressed
33	1-Methylnaphthalene		999.5	µg/mL	+/- 5.8110	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/- 11.9477	µg/mL	Unstressed
	Purity 98%				+/- 19.0146	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.7	µg/mL	+/- 5.8183	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/- 11.9628	µg/mL	Unstressed
	Purity 99%				+/- 19.0387	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,000.0	µg/mL	+/- 5.8143	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/- 11.9545	µg/mL	Unstressed
	Purity 99%				+/- 19.0253	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,001.1	µg/mL	+/- 5.8207	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot MKBL4698V)			+/- 11.9676	µg/mL	Unstressed
	Purity 99%				+/- 19.0463	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.5	µg/mL	+/- 5.8168	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/- 11.9596	µg/mL	Unstressed
	Purity 99%				+/- 19.0336	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.4	µg/mL	+/- 5.8164	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/- 11.9588	µg/mL	Unstressed
	Purity 99%				+/- 19.0323	µg/mL	Stressed
39	Biphenyl		1,001.3	µg/mL	+/- 5.8218	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/- 11.9700	µg/mL	Unstressed
	Purity 99%				+/- 19.0501	µg/mL	Stressed

40	2-Nitroaniline		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
41	Acenaphthylene		1,000.1	µg/mL	+/-	5.8146	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot L18Q)			+/-	11.9551	µg/mL	Unstressed
	Purity 98%				+/-	19.0264	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
43	Dimethylphthalate		1,002.0	µg/mL	+/-	5.8255	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9776	µg/mL	Unstressed
	Purity 99%				+/-	19.0621	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
45	3-Nitroaniline		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot 12836338V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
46	Acenaphthene		1,002.2	µg/mL	+/-	5.8267	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBW9515V)			+/-	11.9800	µg/mL	Unstressed
	Purity 99%				+/-	19.0659	µg/mL	Stressed
47	2,4-Dinitrophenol		2,001.9	µg/mL	+/-	11.6392	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	23.9308	µg/mL	Unstressed
	Purity 99%				+/-	38.0856	µg/mL	Stressed
48	Dibenzofuran		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
49	4-Nitrophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B16W09031)			+/-	12.0186	µg/mL	Unstressed
	Purity 99%				+/-	19.1274	µg/mL	Stressed
52	Fluorene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.2	µg/mL	+/-	5.8209	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG9095V)			+/-	11.9680	µg/mL	Unstressed
	Purity 99%				+/-	19.0469	µg/mL	Stressed
54	Diethylphthalate		1,002.4	µg/mL	+/-	5.8280	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9828	µg/mL	Unstressed
	Purity 99%				+/-	19.0704	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed

56	4-Nitroaniline		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9563	µg/mL	Unstressed
	Purity 98%				+/-	19.0283	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.6	µg/mL	+/-	11.6319	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC22071V)			+/-	23.9157	µg/mL	Unstressed
	Purity 98%				+/-	38.0615	µg/mL	Stressed
58	Diphenylamine		850.3	µg/mL	+/-	4.9435	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1641	µg/mL	Unstressed
	Purity 99%				+/-	16.1761	µg/mL	Stressed
59	Azobenzene		1,001.6	µg/mL	+/-	5.8236	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	11.9736	µg/mL	Unstressed
	Purity 99%				+/-	19.0558	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.1	µg/mL	+/-	5.8148	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	11.9555	µg/mL	Unstressed
	Purity 98%				+/-	19.0270	µg/mL	Stressed
61	Hexachlorobenzene		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LC24211V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
62	Pentachlorophenol		2,007.3	µg/mL	+/-	11.6708	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9958	µg/mL	Unstressed
	Purity 99%				+/-	38.1889	µg/mL	Stressed
63	n-Octadecane (C18)		1,000.6	µg/mL	+/-	5.8176	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot 27SOF)			+/-	11.9612	µg/mL	Unstressed
	Purity 99%				+/-	19.0361	µg/mL	Stressed
64	Phenanthrene		1,001.0	µg/mL	+/-	5.8199	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9660	µg/mL	Unstressed
	Purity 99%				+/-	19.0437	µg/mL	Stressed
65	Anthracene		1,001.7	µg/mL	+/-	5.8242	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9748	µg/mL	Unstressed
	Purity 99%				+/-	19.0577	µg/mL	Stressed
66	Carbazole		1,000.7	µg/mL	+/-	5.8182	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 5571400)			+/-	11.9626	µg/mL	Unstressed
	Purity 98%				+/-	19.0382	µg/mL	Stressed
67	Di-n-butylphthalate		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed
68	Fluoranthene		1,000.4	µg/mL	+/-	5.8163	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9587	µg/mL	Unstressed
	Purity 98%				+/-	19.0320	µg/mL	Stressed
69	Pyrene		1,001.7	µg/mL	+/-	5.8240	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBR9108V)			+/-	11.9744	µg/mL	Unstressed
	Purity 99%				+/-	19.0571	µg/mL	Stressed
70	Benzyl butyl phthalate		1,001.2	µg/mL	+/-	5.8209	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9680	µg/mL	Unstressed
	Purity 98%				+/-	19.0469	µg/mL	Stressed
71	Benz(a)anthracene		1,000.3	µg/mL	+/-	5.8158	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	11.9576	µg/mL	Unstressed
	Purity 99%				+/-	19.0304	µg/mL	Stressed

72	Chrysene		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
74	Di-n-octyl phthalate		1,002.6	µg/mL	+/-	5.8290	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 5555000)			+/-	11.9847	µg/mL	Unstressed
	Purity 99%				+/-	19.0735	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.2	µg/mL	+/-	5.8151	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	11.9561	µg/mL	Unstressed
	Purity 99%				+/-	19.0279	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.4	µg/mL	+/-	5.8162	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9584	µg/mL	Unstressed
	Purity 99%				+/-	19.0317	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.6	µg/mL	+/-	5.8232	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9728	µg/mL	Unstressed
	Purity 99%				+/-	19.0545	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

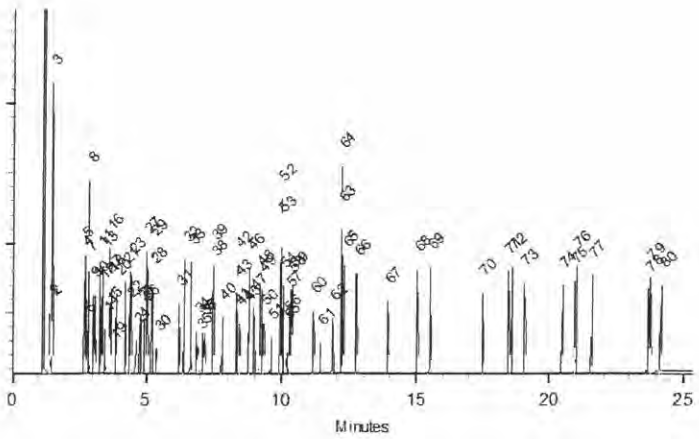
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Jozefick - Mix Technician

Date Mixed: 15-Mar-2017 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 30-Mar-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

EXLIST1_S10_00005

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Indene	2,013.6 µg/mL	+/- 11.7071	µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991	µg/mL	Unstressed
	Purity 98%		+/- 115.5408	µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406	µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220	µg/mL	Unstressed
	Purity 99%		+/- 115.8713	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

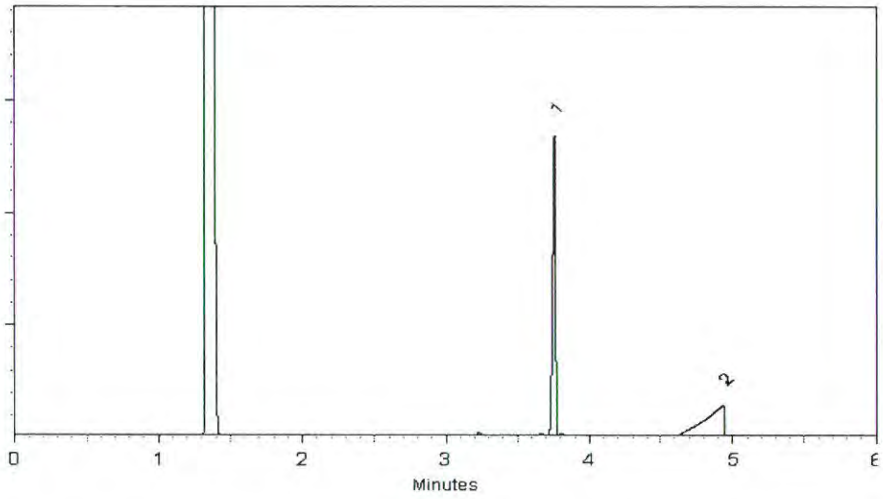
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 28-Nov-2017 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 30-Nov-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0127580

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzaldehyde **CAS #** 100-52-7 (Lot SHBG8690V) **Purity** 99%	2,019.2 µg/mL	+/- 11.7396 µg/mL +/- 64.7257 µg/mL +/- 75.2411 µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam **CAS #** 105-60-2 (Lot I16X016) **Purity** 99%	2,014.2 µg/mL	+/- 11.7105 µg/mL +/- 64.5654 µg/mL +/- 75.0548 µg/mL	Gravimetric Unstressed Stressed
3	Atrazine **CAS #** 1912-24-9 (Lot P7XPN) **Purity** 99%	2,018.1 µg/mL	+/- 11.7333 µg/mL +/- 64.6910 µg/mL +/- 75.2008 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

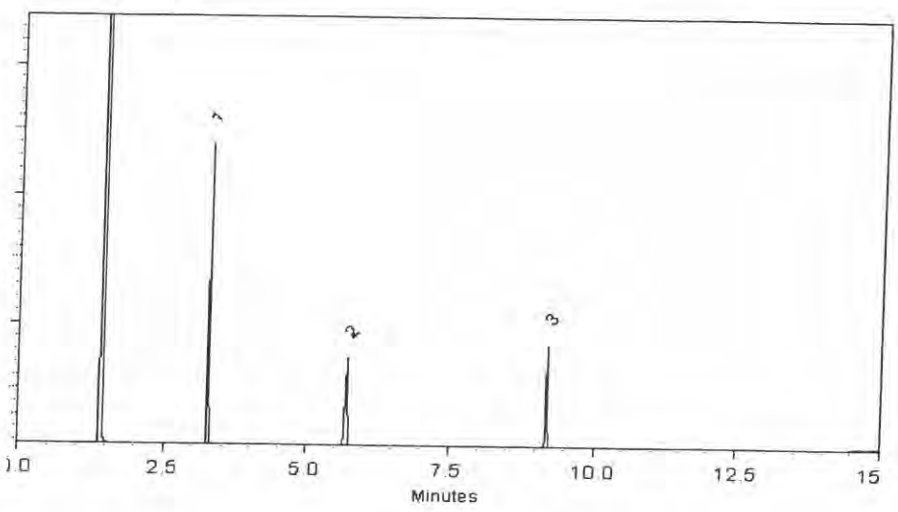
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician **Date Mixed:** 15-May-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 17-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569730 **Lot No.:** A0123497

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2018 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	1,981.3 µg/mL	+/- 11.5193 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 160809JLM)		+/- 23.6842 µg/mL	Unstressed
	Purity 99%		+/- 37.6930 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,009.8 µg/mL	+/- 11.6852 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 161027KJA)		+/- 24.0253 µg/mL	Unstressed
	Purity 99%		+/- 38.2359 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

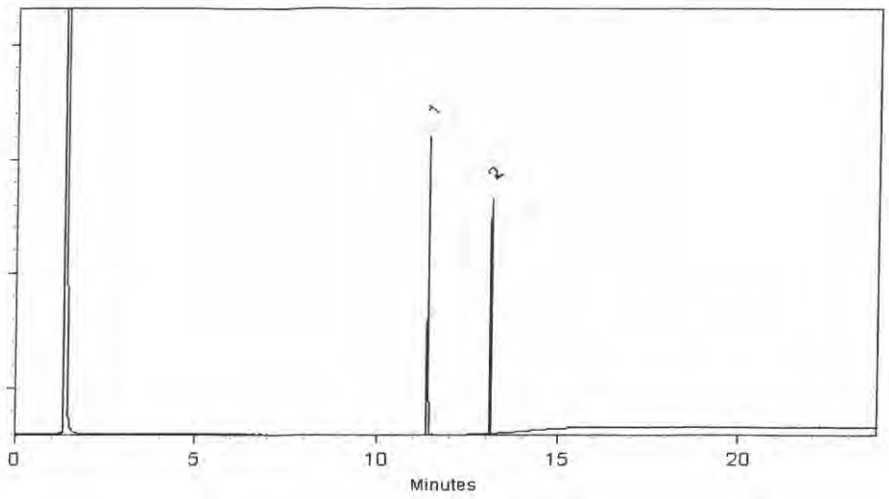
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician **Date Mixed:** 14-Dec-2016 **Balance:** 1128360905

Amanda Miller - Operations Tech-ARM QC **Date Passed:** 28-Dec-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31615 **Lot No.:** A0126573

Description : GC/MS Tuning Mixture

GC/MS Tuning Mixture 1,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2020 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Pentachlorophenol		1,006.8	µg/mL	+/- 5.9085	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/- 45.8590	µg/mL	Unstressed
	Purity 99%				+/- 66.2141	µg/mL	Stressed
2	DFTPP (Decafluorotriphenylphosphine)		1,001.0	µg/mL	+/- 5.8747	µg/mL	Gravimetric
	CAS # 5074-71-5	(Lot 10109917)			+/- 45.5966	µg/mL	Unstressed
	Purity 97%				+/- 65.8353	µg/mL	Stressed
3	Benzidine		1,007.6	µg/mL	+/- 5.9132	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 161215KJA)			+/- 45.8954	µg/mL	Unstressed
	Purity 99%				+/- 66.2667	µg/mL	Stressed
4	4,4'-DDT		1,004.0	µg/mL	+/- 5.8920	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/- 45.7314	µg/mL	Unstressed
	Purity 99%				+/- 66.0300	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

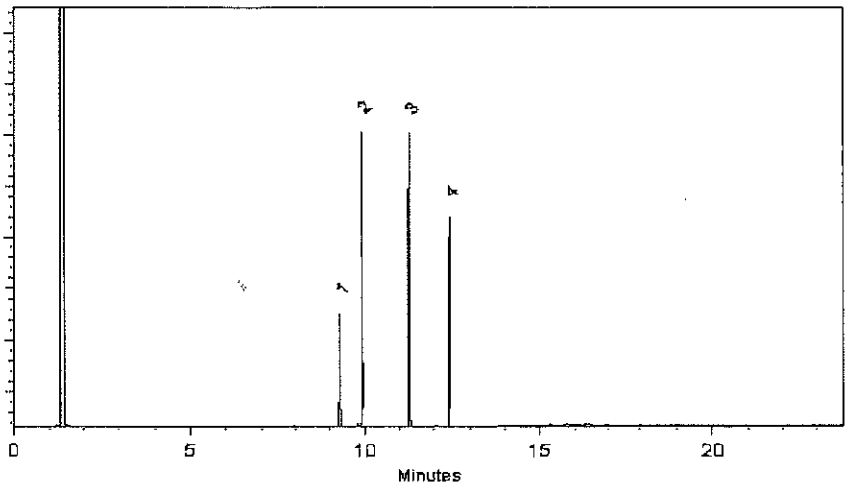
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 07-Apr-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 11-Apr-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0123893

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4	2,002.5 µg/mL	+/- 11.6424	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 90.1915	µg/mL	Unstressed
	Purity 99%		+/- 100.0787	µg/mL	Stressed
2	Naphthalene-d8	2,001.0 µg/mL	+/- 11.6337	µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot M-1452)		+/- 90.1240	µg/mL	Unstressed
	Purity 99%		+/- 100.0037	µg/mL	Stressed
3	Acenaphthene-d10	2,000.7 µg/mL	+/- 11.6322	µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-25444)		+/- 90.1127	µg/mL	Unstressed
	Purity 99%		+/- 99.9912	µg/mL	Stressed
4	Phenanthrene-d10	2,004.4 µg/mL	+/- 11.6538	µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-23065)		+/- 90.2794	µg/mL	Unstressed
	Purity 99%		+/- 100.1761	µg/mL	Stressed
5	Chrysene-d12	2,000.1 µg/mL	+/- 11.6288	µg/mL	Gravimetric
	CAS # 1719-03-5 (Lot PR1998604229CR1)		+/- 90.0857	µg/mL	Unstressed
	Purity 99%		+/- 99.9612	µg/mL	Stressed
6	Perylene-d12	2,000.6 µg/mL	+/- 11.6314	µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-24113)		+/- 90.1060	µg/mL	Unstressed
	Purity 99%		+/- 99.9837	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

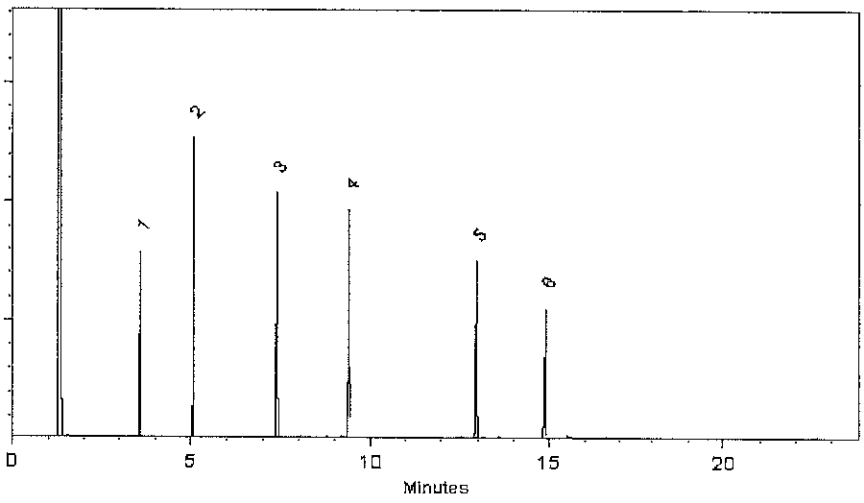
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sauer

Date Mixed: 03-Jan-2017 **Balance:** 1128360905

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

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Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMIS R_00009

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567684 **Lot No.:** A0129635

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dichlorobenzene-d4	2,014.1 µg/mL	+/- 11.7102 µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/- 90.7163 µg/mL	Unstressed
	Purity 99%		+/- 100.6609 µg/mL	Stressed
2	Naphthalene-d8	2,004.1 µg/mL	+/- 11.6520 µg/mL	Gravimetric
	CAS # 1146-65-2 (Lot M-1452)		+/- 90.2659 µg/mL	Unstressed
	Purity 99%		+/- 100.1611 µg/mL	Stressed
3	Acenaphthene-d10	2,011.1 µg/mL	+/- 11.6927 µg/mL	Gravimetric
	CAS # 15067-26-2 (Lot PR-25444)		+/- 90.5811 µg/mL	Unstressed
	Purity 99%		+/- 100.5110 µg/mL	Stressed
4	Phenanthrene-d10	2,014.5 µg/mL	+/- 11.7125 µg/mL	Gravimetric
	CAS # 1517-22-2 (Lot PR-27621)		+/- 90.7343 µg/mL	Unstressed
	Purity 99%		+/- 100.6809 µg/mL	Stressed
5	Chrysene-d12	2,013.6 µg/mL	+/- 11.7072 µg/mL	Gravimetric
	CAS # 1719-03-5 (Lot PR-27952)		+/- 90.6938 µg/mL	Unstressed
	Purity 99%		+/- 100.6359 µg/mL	Stressed
6	Perylene-d12	2,012.2 µg/mL	+/- 11.6991 µg/mL	Gravimetric
	CAS # 1520-96-3 (Lot PR-27342)		+/- 90.6307 µg/mL	Unstressed
	Purity 99%		+/- 100.5659 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

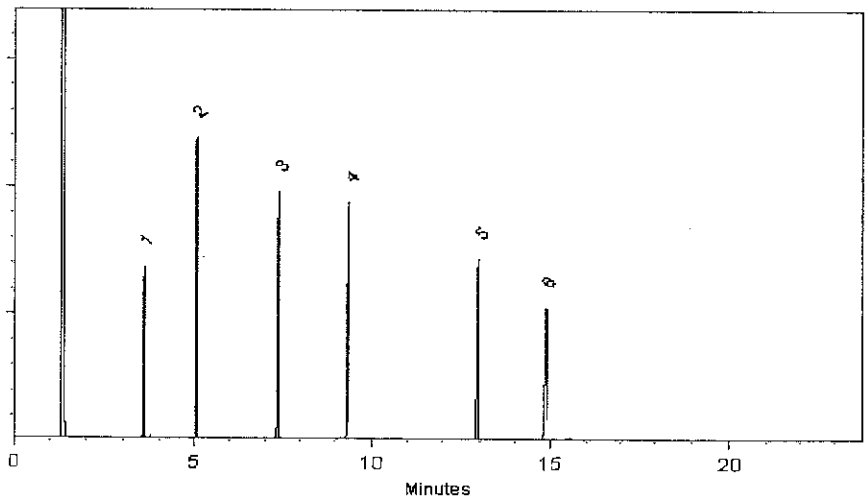
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglewski - Mix Technician **Date Mixed:** 02-Aug-2017 **Balance:** 1128353505

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 04-Aug-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0125805

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2018 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBG1461V) **Purity** 99%	1,000.6 µg/mL	+/- 5.8176 µg/mL +/- 11.9612 µg/mL +/- 19.0361 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 170310JLM) **Purity** 99%	1,002.3 µg/mL	+/- 5.8275 µg/mL +/- 11.9816 µg/mL +/- 19.0685 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,003.5 µg/mL	+/- 11.6485 µg/mL +/- 23.9500 µg/mL +/- 38.1160 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8183 µg/mL +/- 11.9628 µg/mL +/- 19.0387 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,001.7 µg/mL	+/- 5.8238 µg/mL +/- 11.9740 µg/mL +/- 19.0564 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,000.5 µg/mL	+/- 5.8172 µg/mL +/- 11.9604 µg/mL +/- 19.0349 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBD4608V) **Purity** 99%	1,001.3 µg/mL	+/- 5.8215 µg/mL +/- 11.9692 µg/mL +/- 19.0488 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBM5751V)	1,001.2	µg/mL	+/- 5.8213 +/- 11.9688 +/- 19.0482	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,001.6	µg/mL	+/- 5.8232 +/- 11.9728 +/- 19.0545	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBC1850V)	1,000.8	µg/mL	+/- 5.8185 +/- 11.9632 +/- 19.0393	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBD7331V)	1,000.5	µg/mL	+/- 5.8168 +/- 11.9596 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,001.1	µg/mL	+/- 5.8207 +/- 11.9676 +/- 19.0463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 98%	(Lot 5922200)	1,000.7	µg/mL	+/- 5.8184 +/- 11.9629 +/- 19.0389	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9127 +/- 5.9886 +/- 9.5307	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylpbenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.8	µg/mL	+/- 2.9115 +/- 5.9862 +/- 9.5269	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot NOPCF)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,000.0	µg/mL	+/- 5.8139 +/- 11.9537 +/- 19.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.5	µg/mL	+/- 5.8230 +/- 11.9724 +/- 19.0539	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	981.1	µg/mL	+/- 5.7043 +/- 11.7283 +/- 18.6653	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,000.2	µg/mL	+/- 5.8152 +/- 11.9565 +/- 19.0285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,001.8	µg/mL	+/- 5.8244 +/- 11.9752 +/- 19.0583	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

3&4 Methyl Phenol 1000 ug/mL

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 5670100)	1,000.4	µg/mL	+/- 5.8162 +/- 11.9584 +/- 19.0317	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBH1617V)	1,000.7	µg/mL	+/- 5.8180 +/- 11.9620 +/- 19.0374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBC5541V)	1,002.0	µg/mL	+/- 5.8259 +/- 11.9784 +/- 19.0634	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBW2603V)	1,001.8	µg/mL	+/- 5.8244 +/- 11.9752 +/- 19.0583	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBP8620V)	1,001.0	µg/mL	+/- 5.8197 +/- 11.9656 +/- 19.0431	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot BCBJ1580V)	1,000.6	µg/mL	+/- 5.8174 +/- 11.9608 +/- 19.0355	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorohutadiene **CAS #** 87-68-3 **Purity** 99%	(Lot J31X013)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC7309V)	1,002.0	µg/mL	+/- 5.8255 +/- 11.9776 +/- 19.0621	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 95%	(Lot STBF0201V)	1,000.4	µg/mL	+/- 5.8161 +/- 11.9582 +/- 19.0314	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 98%	(Lot 523400-9)	999.5	µg/mL	+/- 5.8110 +/- 11.9477 +/- 19.0146	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot MKBW7717V)	1,000.7	µg/mL	+/- 5.8183 +/- 11.9628 +/- 19.0387	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 99%	(Lot 0012015)	1,000.0	µg/mL	+/- 5.8143 +/- 11.9545 +/- 19.0253	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBL4698V)	1,001.1	µg/mL	+/- 5.8207 +/- 11.9676 +/- 19.0463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHN01)	1,000.5	µg/mL	+/- 5.8168 +/- 11.9596 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI)	1,000.4	µg/mL	+/- 5.8164 +/- 11.9588 +/- 19.0323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot MKBV9808V)	1,001.3	µg/mL	+/- 5.8218 +/- 11.9700 +/- 19.0501	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
41	Acenaphthylene		1,000.1	µg/mL	+/-	5.8146	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot L18Q)			+/-	11.9551	µg/mL	Unstressed
	Purity 98%				+/-	19.0264	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
43	Dimethylphthalate		1,002.0	µg/mL	+/-	5.8255	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9776	µg/mL	Unstressed
	Purity 99%				+/-	19.0621	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
45	3-Nitroaniline		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot 12836338V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
46	Acenaphthene		1,002.2	µg/mL	+/-	5.8267	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBW9515V)			+/-	11.9800	µg/mL	Unstressed
	Purity 99%				+/-	19.0659	µg/mL	Stressed
47	2,4-Dinitrophenol		2,001.9	µg/mL	+/-	11.6392	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	23.9308	µg/mL	Unstressed
	Purity 99%				+/-	38.0856	µg/mL	Stressed
48	Dibenzofuran		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
49	4-Nitrophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B16W09031)			+/-	12.0186	µg/mL	Unstressed
	Purity 99%				+/-	19.1274	µg/mL	Stressed
52	Fluorene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.2	µg/mL	+/-	5.8209	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG9095V)			+/-	11.9680	µg/mL	Unstressed
	Purity 99%				+/-	19.0469	µg/mL	Stressed
54	Diethylphthalate		1,002.4	µg/mL	+/-	5.8280	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9828	µg/mL	Unstressed
	Purity 99%				+/-	19.0704	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed

56	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/-	23.9081	µg/mL	Unstressed
	Purity 99%				+/-	38.0494	µg/mL	Stressed
58	Diphenylamine		850.0	µg/mL	+/-	4.9534	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1665	µg/mL	Unstressed
	Purity 99%	1,2-Diphenylhydrazine 122-66-7			+/-	16.1745	µg/mL	Stressed
59	Azobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
61	Hexachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G120431)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
62	Pentachlorophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5784900)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
63	n-Octadecane (C18)		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 4708400)			+/-	11.9839	µg/mL	Unstressed
	Purity 98%				+/-	19.0660	µg/mL	Stressed
65	Anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9605	µg/mL	Unstressed
	Purity 98%				+/-	19.0287	µg/mL	Stressed
71	Benz(a)anthracene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed

72	chrysene **CAS #** 218-01-9.SEC **Purity** 99%	(Lot NICZC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7.SEC **Purity** 99%	(Lot MT8AG)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0.SEC **Purity** 99%	(Lot O8DLD)	1,000.8	µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2.SEC **Purity** 99%	(Lot 022011)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9.SEC **Purity** 99%	(Lot ER041513-01)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8.SEC **Purity** 97%	(Lot M8DFD)	1,000.5	µg/mL	+/- 5.8302 +/- 11.9661 +/- 19.0375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5.SEC **Purity** 99%	(Lot 0012014)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3.SEC **Purity** 99%	(Lot 0012011)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2.SEC **Purity** 97%	(Lot 0022012)	1,000.1	µg/mL	+/- 5.8279 +/- 11.9614 +/- 19.0302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene chloride **CAS #** 75-09-2 **Purity** 99%						

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

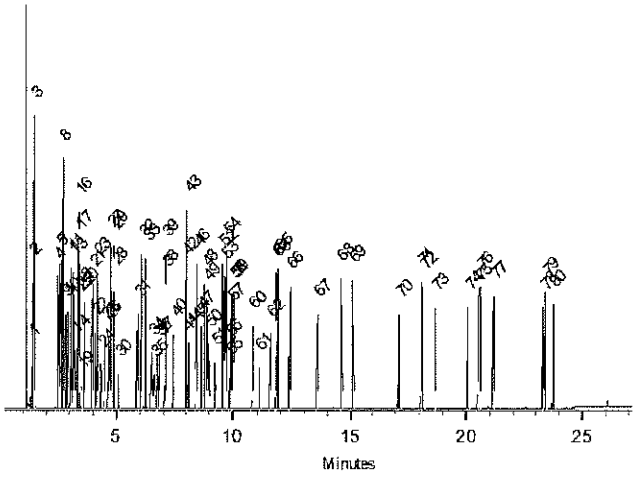
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Date Mixed: 28-Sep-2017 **Balance:** 1128342313

Justine Albertson - Operations Tech-ARM QC

Date Passed: 13-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 S1_00008

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0125805

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2018 **Storage:** 10°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane		1,000.6 µg/mL	+/- 5.8176 µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBG1461V)		+/- 11.9612 µg/mL	Unstressed
	Purity 99%			+/- 19.0361 µg/mL	Stressed
2	N-Nitrosodimethylamine		1,002.3 µg/mL	+/- 5.8275 µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 170310JLM)		+/- 11.9816 µg/mL	Unstressed
	Purity 99%			+/- 19.0685 µg/mL	Stressed
3	Pyridine		2,003.5 µg/mL	+/- 11.6485 µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 23.9500 µg/mL	Unstressed
	Purity 99%			+/- 38.1160 µg/mL	Stressed
4	Phenol		1,000.7 µg/mL	+/- 5.8183 µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF1351V)		+/- 11.9628 µg/mL	Unstressed
	Purity 99%			+/- 19.0387 µg/mL	Stressed
5	Aniline		1,001.7 µg/mL	+/- 5.8238 µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 11.9740 µg/mL	Unstressed
	Purity 99%			+/- 19.0564 µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,000.5 µg/mL	+/- 5.8172 µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 11.9604 µg/mL	Unstressed
	Purity 99%			+/- 19.0349 µg/mL	Stressed
7	n-Decane (C10)		1,001.3 µg/mL	+/- 5.8215 µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBD4608V)		+/- 11.9692 µg/mL	Unstressed
	Purity 99%			+/- 19.0488 µg/mL	Stressed

8	2-Chlorophenol **CAS #** 95-57-8 **Purity** 99%	(Lot MKBD3900V)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene **CAS #** 541-73-1 **Purity** 99%	(Lot BCBM5751V)	1,001.2	µg/mL	+/- 5.8213 +/- 11.9688 +/- 19.0482	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene **CAS #** 106-46-7 **Purity** 99%	(Lot MKBS4401V)	1,001.6	µg/mL	+/- 5.8232 +/- 11.9728 +/- 19.0545	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol **CAS #** 100-51-6 **Purity** 99%	(Lot SHBC1850V)	1,000.8	µg/mL	+/- 5.8185 +/- 11.9632 +/- 19.0393	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene **CAS #** 95-50-1 **Purity** 99%	(Lot SHBD7331V)	1,000.5	µg/mL	+/- 5.8168 +/- 11.9596 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) **CAS #** 95-48-7 **Purity** 99%	(Lot SHBC1479V)	1,001.1	µg/mL	+/- 5.8207 +/- 11.9676 +/- 19.0463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) **CAS #** 108-60-1 **Purity** 98%	(Lot 5922200)	1,000.7	µg/mL	+/- 5.8184 +/- 11.9629 +/- 19.0389	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone **CAS #** 98-86-2 **Purity** 99%	(Lot MKBR7156V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) **CAS #** 108-39-4 **Purity** 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9127 +/- 5.9886 +/- 9.5307	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylpbenol (p-cresol) **CAS #** 106-44-5 **Purity** 99%	(Lot 49396APV)	500.8	µg/mL	+/- 2.9115 +/- 5.9862 +/- 9.5269	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine **CAS #** 621-64-7 **Purity** 99%	(Lot NOPCF)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane **CAS #** 67-72-1 **Purity** 99%	(Lot 4H3SF)	1,000.0	µg/mL	+/- 5.8139 +/- 11.9537 +/- 19.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.5	µg/mL	+/- 5.8230 +/- 11.9724 +/- 19.0539	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone **CAS #** 78-59-1 **Purity** 98%	(Lot MKBG2442V)	981.1	µg/mL	+/- 5.7043 +/- 11.7283 +/- 18.6653	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol **CAS #** 88-75-5 **Purity** 99%	(Lot BCBH7602V)	1,000.2	µg/mL	+/- 5.8152 +/- 11.9565 +/- 19.0285	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol **CAS #** 105-67-9 **Purity** 99%	(Lot 10165155)	1,001.8	µg/mL	+/- 5.8244 +/- 11.9752 +/- 19.0583	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

3&4 Methyl Phenol 1000 µg/mL

24	Bis(2-chloroethoxy)methane **CAS #** 111-91-1 **Purity** 99%	(Lot 5670100)	1,000.4	µg/mL	+/- 5.8162 +/- 11.9584 +/- 19.0317	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	2,4-Dichlorophenol **CAS #** 120-83-2 **Purity** 99%	(Lot BCBH1617V)	1,000.7	µg/mL	+/- 5.8180 +/- 11.9620 +/- 19.0374	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2,4-Trichlorobenzene **CAS #** 120-82-1 **Purity** 99%	(Lot SHBC5541V)	1,002.0	µg/mL	+/- 5.8259 +/- 11.9784 +/- 19.0634	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Naphthalene **CAS #** 91-20-3 **Purity** 99%	(Lot MKBW2603V)	1,001.8	µg/mL	+/- 5.8244 +/- 11.9752 +/- 19.0583	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	2,6-Dichlorophenol **CAS #** 87-65-0 **Purity** 99%	(Lot MKBP8620V)	1,001.0	µg/mL	+/- 5.8197 +/- 11.9656 +/- 19.0431	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	4-Chloroaniline **CAS #** 106-47-8 **Purity** 99%	(Lot BCBJ1580V)	1,000.6	µg/mL	+/- 5.8174 +/- 11.9608 +/- 19.0355	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	Hexachlorohutadiene **CAS #** 87-68-3 **Purity** 99%	(Lot J31X013)	1,000.2	µg/mL	+/- 5.8151 +/- 11.9561 +/- 19.0279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	4-Chloro-3-methylphenol **CAS #** 59-50-7 **Purity** 99%	(Lot STBC7309V)	1,002.0	µg/mL	+/- 5.8255 +/- 11.9776 +/- 19.0621	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	2-Methylnaphthalene **CAS #** 91-57-6 **Purity** 95%	(Lot STBF0201V)	1,000.4	µg/mL	+/- 5.8161 +/- 11.9582 +/- 19.0314	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	1-Methylnaphthalene **CAS #** 90-12-0 **Purity** 98%	(Lot 523400-9)	999.5	µg/mL	+/- 5.8110 +/- 11.9477 +/- 19.0146	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	1,2,4,5-Tetrachlorobenzene **CAS #** 95-94-3 **Purity** 99%	(Lot MKBW7717V)	1,000.7	µg/mL	+/- 5.8183 +/- 11.9628 +/- 19.0387	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Hexachlorocyclopentadiene **CAS #** 77-47-4 **Purity** 99%	(Lot 0012015)	1,000.0	µg/mL	+/- 5.8143 +/- 11.9545 +/- 19.0253	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	2,4,6-Trichlorophenol **CAS #** 88-06-2 **Purity** 99%	(Lot MKBL4698V)	1,001.1	µg/mL	+/- 5.8207 +/- 11.9676 +/- 19.0463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	2,4,5-Trichlorophenol **CAS #** 95-95-4 **Purity** 99%	(Lot FHN01)	1,000.5	µg/mL	+/- 5.8168 +/- 11.9596 +/- 19.0336	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	2-Chloronaphthalene **CAS #** 91-58-7 **Purity** 99%	(Lot AJ2UI)	1,000.4	µg/mL	+/- 5.8164 +/- 11.9588 +/- 19.0323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Biphenyl **CAS #** 92-52-4 **Purity** 99%	(Lot MKBV9808V)	1,001.3	µg/mL	+/- 5.8218 +/- 11.9700 +/- 19.0501	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	2-Nitroaniline		1,001.1	µg/mL	+/-	5.8205	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	11.9672	µg/mL	Unstressed
	Purity 99%				+/-	19.0456	µg/mL	Stressed
41	Acenaphthylene		1,000.1	µg/mL	+/-	5.8146	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot L18Q)			+/-	11.9551	µg/mL	Unstressed
	Purity 98%				+/-	19.0264	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.4	µg/mL	+/-	5.8220	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9704	µg/mL	Unstressed
	Purity 99%				+/-	19.0507	µg/mL	Stressed
43	Dimethylphthalate		1,002.0	µg/mL	+/-	5.8255	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9776	µg/mL	Unstressed
	Purity 99%				+/-	19.0621	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.1	µg/mL	+/-	5.8145	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9549	µg/mL	Unstressed
	Purity 99%				+/-	19.0260	µg/mL	Stressed
45	3-Nitroaniline		1,000.6	µg/mL	+/-	5.8178	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot 12836338V)			+/-	11.9616	µg/mL	Unstressed
	Purity 99%				+/-	19.0368	µg/mL	Stressed
46	Acenaphthene		1,002.2	µg/mL	+/-	5.8267	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBW9515V)			+/-	11.9800	µg/mL	Unstressed
	Purity 99%				+/-	19.0659	µg/mL	Stressed
47	2,4-Dinitrophenol		2,001.9	µg/mL	+/-	11.6392	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	23.9308	µg/mL	Unstressed
	Purity 99%				+/-	38.0856	µg/mL	Stressed
48	Dibenzofuran		1,001.0	µg/mL	+/-	5.8201	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	11.9664	µg/mL	Unstressed
	Purity 99%				+/-	19.0444	µg/mL	Stressed
49	4-Nitrophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.4	µg/mL	+/-	5.8455	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B16W09031)			+/-	12.0186	µg/mL	Unstressed
	Purity 99%				+/-	19.1274	µg/mL	Stressed
52	Fluorene		1,000.5	µg/mL	+/-	5.8170	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9600	µg/mL	Unstressed
	Purity 99%				+/-	19.0342	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.2	µg/mL	+/-	5.8209	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG9095V)			+/-	11.9680	µg/mL	Unstressed
	Purity 99%				+/-	19.0469	µg/mL	Stressed
54	Diethylphthalate		1,002.4	µg/mL	+/-	5.8280	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9828	µg/mL	Unstressed
	Purity 99%				+/-	19.0704	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.4	µg/mL	+/-	5.8224	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9712	µg/mL	Unstressed
	Purity 99%				+/-	19.0520	µg/mL	Stressed

56	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/-	23.9081	µg/mL	Unstressed
	Purity 99%				+/-	38.0494	µg/mL	Stressed
58	Diphenylamine		850.0	µg/mL	+/-	4.9534	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1665	µg/mL	Unstressed
	Purity 99%	1,2-Diphenylhydrazine 122-66-7			+/-	16.1745	µg/mL	Stressed
59	Azobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
61	Hexachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G120431)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
62	Pentachlorophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5784900)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
63	n-Octadecane (C18)		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 4708400)			+/-	11.9839	µg/mL	Unstressed
	Purity 98%				+/-	19.0660	µg/mL	Stressed
65	Anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9605	µg/mL	Unstressed
	Purity 98%				+/-	19.0287	µg/mL	Stressed
71	Benz(a)anthracene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed

72	chrysene **CAS #** 218-01-9.SEC **Purity** 99%	(Lot NICZC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7.SEC **Purity** 99%	(Lot MT8AG)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0.SEC **Purity** 99%	(Lot O8DLD)	1,000.8	µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2.SEC **Purity** 99%	(Lot 022011)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9.SEC **Purity** 99%	(Lot ER041513-01)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8.SEC **Purity** 97%	(Lot M8DFD)	1,000.5	µg/mL	+/- 5.8302 +/- 11.9661 +/- 19.0375	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5.SEC **Purity** 99%	(Lot 0012014)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3.SEC **Purity** 99%	(Lot 0012011)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2.SEC **Purity** 97%	(Lot 0022012)	1,000.1	µg/mL	+/- 5.8279 +/- 11.9614 +/- 19.0302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent:	Methylene chloride **CAS #** 75-09-2 **Purity** 99%						

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

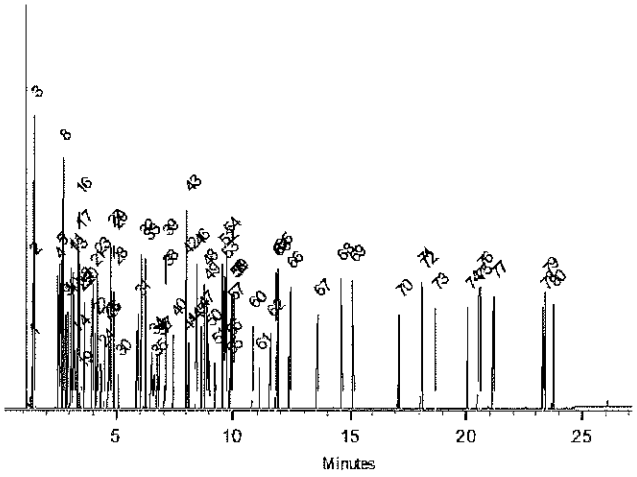
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Z. Mosher

Date Mixed: 28-Sep-2017 **Balance:** 1128342313

Justine Albertson – Operations Tech-ARM QC

Date Passed: 13-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0130477

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	1,996.3 µg/mL	+/- 11.6064 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 111.9283 µg/mL	Unstressed
	Purity 98%		+/- 114.5473 µg/mL	Stressed
2	Benzoic acid	2,000.8 µg/mL	+/- 11.6328 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 112.1829 µg/mL	Unstressed
	Purity 99%		+/- 114.8078 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

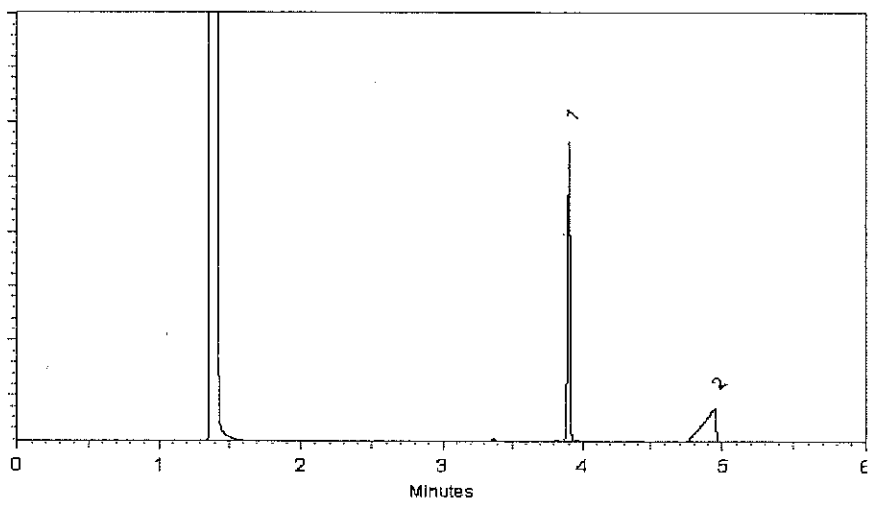
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 05-Sep-2017 **Balance:** 1128360905

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Sep-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0127580

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzaldehyde	2,019.2 µg/mL	+/- 11.7396 µg/mL	Gravimetric
	CAS # 100-52-7 (Lot SHBG8690V)		+/- 64.7257 µg/mL	Unstressed
	Purity 99%		+/- 75.2411 µg/mL	Stressed
2	epsilon-Caprolactam	2,014.2 µg/mL	+/- 11.7105 µg/mL	Gravimetric
	CAS # 105-60-2 (Lot I16X016)		+/- 64.5654 µg/mL	Unstressed
	Purity 99%		+/- 75.0548 µg/mL	Stressed
3	Atrazine	2,018.1 µg/mL	+/- 11.7333 µg/mL	Gravimetric
	CAS # 1912-24-9 (Lot P7XPN)		+/- 64.6910 µg/mL	Unstressed
	Purity 99%		+/- 75.2008 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

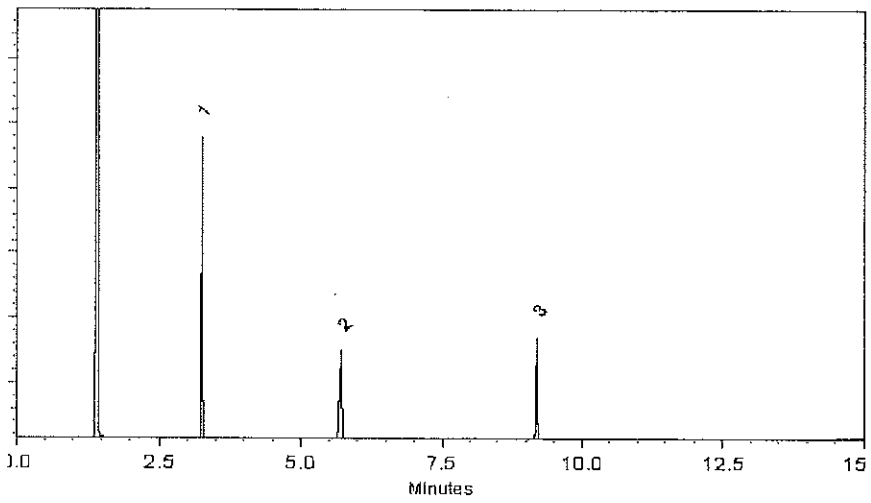
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 15-May-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 17-May-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Testing Laboratory
Certificate #3223.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 569730 **Lot No.:** A0127472

Description: 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size: 10 mL **Pkg Amt:** > 5 mL

Expiration Date: November 30, 2018 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	2,003.5 µg/mL	+/- 11.6483 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 170428KJA)		+/- 23.9496 µg/mL	Unstressed
	Purity 99%		+/- 38.1154 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,002.1 µg/mL	+/- 11.6402 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 170123KJA)		+/- 23.9328 µg/mL	Unstressed
	Purity 99%		+/- 38.0887 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

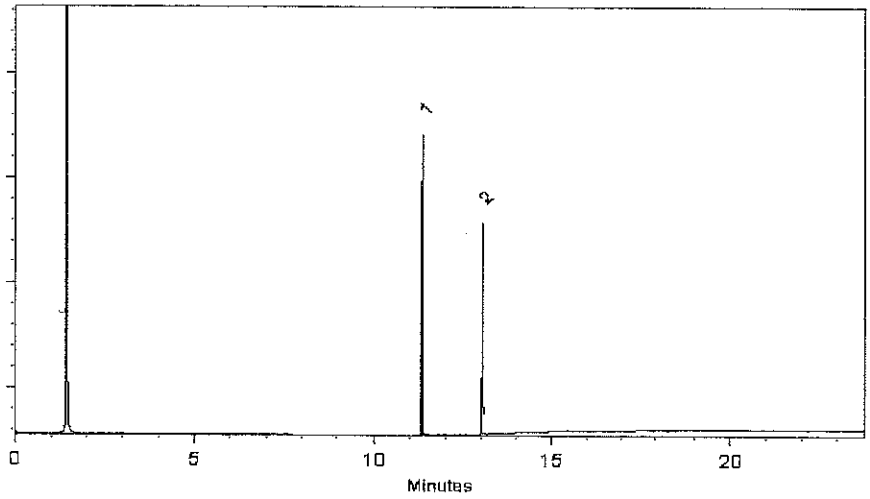
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 10-May-2017 **Balance:** 1122030677

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 12-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST1 SURR_00007

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Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.01

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ISO/IEC 17025 Accredited
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0123269

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2021 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,017.0	µg/mL	+/- 29.1677	µg/mL	Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)			+/- 146.4126	µg/mL	Unstressed
	Purity 99%				+/- 177.6661	µg/mL	Stressed
2	Phenol-d5		4,965.4	µg/mL	+/- 28.8690	µg/mL	Gravimetric
	CAS # 4165-62-2	(Lot X-479)			+/- 144.9056	µg/mL	Unstressed
	Purity 99%				+/- 175.8373	µg/mL	Stressed
3	Nitrobenzene-d5		5,019.4	µg/mL	+/- 29.1814	µg/mL	Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)			+/- 146.4812	µg/mL	Unstressed
	Purity 99%				+/- 177.7494	µg/mL	Stressed
4	2-Fluorobiphenyl		5,031.5	µg/mL	+/- 29.2518	µg/mL	Gravimetric
	CAS # 321-60-8	(Lot 10194342)			+/- 146.8343	µg/mL	Unstressed
	Purity 99%				+/- 178.1779	µg/mL	Stressed
5	2,4,6-Tribromophenol		5,026.7	µg/mL	+/- 29.2238	µg/mL	Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)			+/- 146.6942	µg/mL	Unstressed
	Purity 99%				+/- 178.0079	µg/mL	Stressed
6	p-Terphenyl-d14		5,029.2	µg/mL	+/- 29.2387	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-21037)			+/- 146.7686	µg/mL	Unstressed
	Purity 99%				+/- 178.0982	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

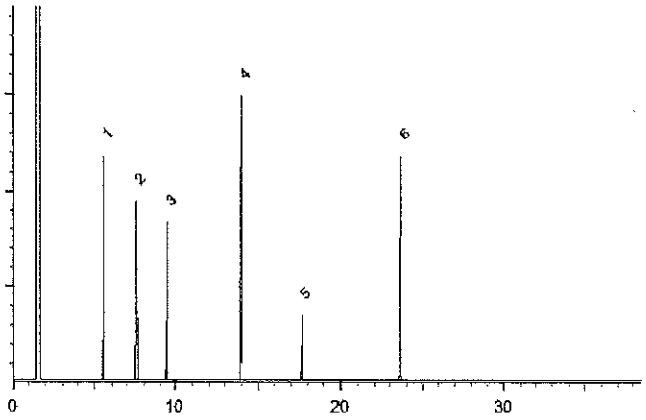
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dawn Brownson - Mix Technician

Date Mixed: 06-Dec-2016 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 08-Dec-2016

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570667 **Lot No.:** A0124058

Description : 8270 Supplemental Standard #1

8270 Supplemental Standard #1 1,000 ug/ml, Methylene Chloride, 1 ml/ampul
Also described as 8270 List 2 / Std #1

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Picoline		1,000.4 µg/mL	+/- 5.8709	µg/mL	Gravimetric
	CAS # 109-06-8	(Lot STBD4888V)		+/- 11.9854	µg/mL	Unstressed
	Purity 99%			+/- 19.0490	µg/mL	Stressed
2	N-Nitrosomethylethylamine		1,000.0 µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 10595-95-6	(Lot 5107900)		+/- 11.9807	µg/mL	Unstressed
	Purity 99%			+/- 19.0414	µg/mL	Stressed
3	Acrylamide		1,001.6 µg/mL	+/- 5.8779	µg/mL	Gravimetric
	CAS # 79-06-1	(Lot 01402JA)		+/- 11.9998	µg/mL	Unstressed
	Purity 99%			+/- 19.0719	µg/mL	Stressed
4	N-Nitrosodiethylamine		1,000.8 µg/mL	+/- 5.8733	µg/mL	Gravimetric
	CAS # 55-18-5	(Lot PEI3F-ES)		+/- 11.9902	µg/mL	Unstressed
	Purity 99%			+/- 19.0567	µg/mL	Stressed
5	N-Nitrosopyrrolidine		1,002.8 µg/mL	+/- 5.8850	µg/mL	Gravimetric
	CAS # 930-55-2	(Lot MKBC5211V)		+/- 12.0142	µg/mL	Unstressed
	Purity 99%			+/- 19.0947	µg/mL	Stressed
6	o-Toluidine		1,000.4 µg/mL	+/- 5.8709	µg/mL	Gravimetric
	CAS # 95-53-4	(Lot 03417PZ)		+/- 11.9854	µg/mL	Unstressed
	Purity 99%			+/- 19.0490	µg/mL	Stressed
7	N-Nitrosomorpholine		1,004.4 µg/mL	+/- 5.8944	µg/mL	Gravimetric
	CAS # 59-89-2	(Lot MV7MC)		+/- 12.0334	µg/mL	Unstressed
	Purity 99%			+/- 19.1252	µg/mL	Stressed

8	N-Nitrosopiperidine		1,001.6	µg/mL	+/-	5.8779	µg/mL	Gravimetric
	CAS # 100-75-4	(Lot 5062900)			+/-	11.9998	µg/mL	Unstressed
	Purity 99%				+/-	19.0719	µg/mL	Stressed
9	Phentermine (a,a-Dimethylphenethylamine)		1,003.6	µg/mL	+/-	5.8897	µg/mL	Gravimetric
	CAS # 122-09-8	(Lot 161222JLM)			+/-	12.0238	µg/mL	Unstressed
	Purity 99%				+/-	19.1100	µg/mL	Stressed
10	Quinoline		1,000.4	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 91-22-5	(Lot Y448A)			+/-	11.9854	µg/mL	Unstressed
	Purity 99%				+/-	19.0490	µg/mL	Stressed
11	N-Nitrosodi-n-butylamine		1,003.6	µg/mL	+/-	5.8897	µg/mL	Gravimetric
	CAS # 924-16-3	(Lot S47KJ)			+/-	12.0238	µg/mL	Unstressed
	Purity 99%				+/-	19.1100	µg/mL	Stressed
12	1,4-Phenylenediamine		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 106-50-3	(Lot 2247500)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
13	1,4-Dinitrobenzene		1,002.4	µg/mL	+/-	5.8826	µg/mL	Gravimetric
	CAS # 100-25-4	(Lot STBF8844V)			+/-	12.0094	µg/mL	Unstressed
	Purity 99%				+/-	19.0871	µg/mL	Stressed
14	1-Naphthylamine (1-aminonaphthalene)		1,000.8	µg/mL	+/-	5.8731	µg/mL	Gravimetric
	CAS # 134-32-7	(Lot R7NAN-IP)			+/-	11.9899	µg/mL	Unstressed
	Purity 98%				+/-	19.0562	µg/mL	Stressed
15	2-Naphthylamine (2-aminonaphthalene)		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 91-59-8	(Lot SLBN2887V)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
16	5-Nitro-o-toluidine		997.5	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 99-55-8	(Lot 71910/1)			+/-	11.9513	µg/mL	Unstressed
	Purity 97%				+/-	18.9947	µg/mL	Stressed
17	1,3,5-Trinitrobenzene		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot UNVVB)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
18	Phenacetin		1,002.8	µg/mL	+/-	5.8850	µg/mL	Gravimetric
	CAS # 62-44-2	(Lot 88F0225)			+/-	12.0142	µg/mL	Unstressed
	Purity 99%				+/-	19.0947	µg/mL	Stressed
19	4-Aminobiphenyl		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 92-67-1	(Lot SLBF0806V)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
20	Propyzamide		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 23950-58-5	(Lot 5227700)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
21	Pentachloronitrobenzene (quintozene)		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 82-68-8	(Lot 5523500)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
22	4-Nitroquinoline-N-oxide		1,003.2	µg/mL	+/-	5.8873	µg/mL	Gravimetric
	CAS # 56-57-5	(Lot LB98879V)			+/-	12.0190	µg/mL	Unstressed
	Purity 99%				+/-	19.1024	µg/mL	Stressed
23	p-Dimethylaminoazobenzene		1,002.0	µg/mL	+/-	5.8800	µg/mL	Gravimetric
	CAS # 60-11-7	(Lot BCBP8840V)			+/-	12.0040	µg/mL	Unstressed
	Purity 98%				+/-	19.0786	µg/mL	Stressed

24	3,3'-Dimethylbenzidine (o-tolidine)		1,001.3	µg/mL	+/-	5.8762	µg/mL	Gravimetric
	CAS # 119-93-7	(Lot HO6DO)			+/-	11.9962	µg/mL	Unstressed
	Purity 95%				+/-	19.0662	µg/mL	Stressed
25	2-Acetylaminofluorene		1,004.0	µg/mL	+/-	5.8920	µg/mL	Gravimetric
	CAS # 53-96-3	(Lot FCW01)			+/-	12.0286	µg/mL	Unstressed
	Purity 99%				+/-	19.1176	µg/mL	Stressed
26	4,4-Methylene-bis(2-chloroaniline)		1,002.4	µg/mL	+/-	5.8829	µg/mL	Gravimetric
	CAS # 101-14-4	(Lot 5150500)			+/-	12.0099	µg/mL	Unstressed
	Purity 95%				+/-	19.0879	µg/mL	Stressed
27	Dibenz(a,h)acridine		1,000.8	µg/mL	+/-	5.8733	µg/mL	Gravimetric
	CAS # 226-36-8	(Lot PN090412-01)			+/-	11.9902	µg/mL	Unstressed
	Purity 99%				+/-	19.0567	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

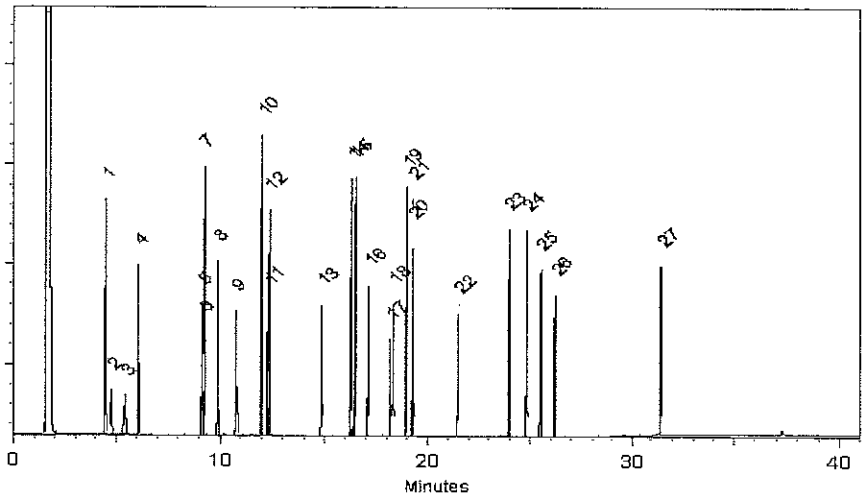
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sawyer

Date Mixed: 09-Jan-2017 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Jan-2017

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 570667 **Lot No.:** A0124058

Description : 8270 Supplemental Standard #1

8270 Supplemental Standard #1 1,000 ug/ml, Methylene Chloride, 1 ml/ampul
Also described as 8270 List 2 / Std #1

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Picoline		1,000.4 µg/mL	+/- 5.8709	µg/mL	Gravimetric
	CAS # 109-06-8	(Lot STBD4888V)		+/- 11.9854	µg/mL	Unstressed
	Purity 99%			+/- 19.0490	µg/mL	Stressed
2	N-Nitrosomethylethylamine		1,000.0 µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 10595-95-6	(Lot 5107900)		+/- 11.9807	µg/mL	Unstressed
	Purity 99%			+/- 19.0414	µg/mL	Stressed
3	Acrylamide		1,001.6 µg/mL	+/- 5.8779	µg/mL	Gravimetric
	CAS # 79-06-1	(Lot 01402JA)		+/- 11.9998	µg/mL	Unstressed
	Purity 99%			+/- 19.0719	µg/mL	Stressed
4	N-Nitrosodiethylamine		1,000.8 µg/mL	+/- 5.8733	µg/mL	Gravimetric
	CAS # 55-18-5	(Lot PEI3F-ES)		+/- 11.9902	µg/mL	Unstressed
	Purity 99%			+/- 19.0567	µg/mL	Stressed
5	N-Nitrosopyrrolidine		1,002.8 µg/mL	+/- 5.8850	µg/mL	Gravimetric
	CAS # 930-55-2	(Lot MKBC5211V)		+/- 12.0142	µg/mL	Unstressed
	Purity 99%			+/- 19.0947	µg/mL	Stressed
6	o-Toluidine		1,000.4 µg/mL	+/- 5.8709	µg/mL	Gravimetric
	CAS # 95-53-4	(Lot 03417PZ)		+/- 11.9854	µg/mL	Unstressed
	Purity 99%			+/- 19.0490	µg/mL	Stressed
7	N-Nitrosomorpholine		1,004.4 µg/mL	+/- 5.8944	µg/mL	Gravimetric
	CAS # 59-89-2	(Lot MV7MC)		+/- 12.0334	µg/mL	Unstressed
	Purity 99%			+/- 19.1252	µg/mL	Stressed

8	N-Nitrosopiperidine		1,001.6	µg/mL	+/-	5.8779	µg/mL	Gravimetric
	CAS # 100-75-4	(Lot 5062900)			+/-	11.9998	µg/mL	Unstressed
	Purity 99%				+/-	19.0719	µg/mL	Stressed
9	Phentermine (a,a-Dimethylphenethylamine)		1,003.6	µg/mL	+/-	5.8897	µg/mL	Gravimetric
	CAS # 122-09-8	(Lot 161222JLM)			+/-	12.0238	µg/mL	Unstressed
	Purity 99%				+/-	19.1100	µg/mL	Stressed
10	Quinoline		1,000.4	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 91-22-5	(Lot Y448A)			+/-	11.9854	µg/mL	Unstressed
	Purity 99%				+/-	19.0490	µg/mL	Stressed
11	N-Nitrosodi-n-butylamine		1,003.6	µg/mL	+/-	5.8897	µg/mL	Gravimetric
	CAS # 924-16-3	(Lot S47KJ)			+/-	12.0238	µg/mL	Unstressed
	Purity 99%				+/-	19.1100	µg/mL	Stressed
12	1,4-Phenylenediamine		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 106-50-3	(Lot 2247500)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
13	1,4-Dinitrobenzene		1,002.4	µg/mL	+/-	5.8826	µg/mL	Gravimetric
	CAS # 100-25-4	(Lot STBF8844V)			+/-	12.0094	µg/mL	Unstressed
	Purity 99%				+/-	19.0871	µg/mL	Stressed
14	1-Naphthylamine (1-aminonaphthalene)		1,000.8	µg/mL	+/-	5.8731	µg/mL	Gravimetric
	CAS # 134-32-7	(Lot R7NAN-IP)			+/-	11.9899	µg/mL	Unstressed
	Purity 98%				+/-	19.0562	µg/mL	Stressed
15	2-Naphthylamine (2-aminonaphthalene)		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 91-59-8	(Lot SLBN2887V)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
16	5-Nitro-o-toluidine		997.5	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 99-55-8	(Lot 71910/1)			+/-	11.9513	µg/mL	Unstressed
	Purity 97%				+/-	18.9947	µg/mL	Stressed
17	1,3,5-Trinitrobenzene		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 99-35-4	(Lot UNVVB)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
18	Phenacetin		1,002.8	µg/mL	+/-	5.8850	µg/mL	Gravimetric
	CAS # 62-44-2	(Lot 88F0225)			+/-	12.0142	µg/mL	Unstressed
	Purity 99%				+/-	19.0947	µg/mL	Stressed
19	4-Aminobiphenyl		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 92-67-1	(Lot SLBF0806V)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
20	Propyzamide		1,001.2	µg/mL	+/-	5.8756	µg/mL	Gravimetric
	CAS # 23950-58-5	(Lot 5227700)			+/-	11.9950	µg/mL	Unstressed
	Purity 99%				+/-	19.0643	µg/mL	Stressed
21	Pentachloronitrobenzene (quintozene)		1,000.0	µg/mL	+/-	5.8686	µg/mL	Gravimetric
	CAS # 82-68-8	(Lot 5523500)			+/-	11.9807	µg/mL	Unstressed
	Purity 99%				+/-	19.0414	µg/mL	Stressed
22	4-Nitroquinoline-N-oxide		1,003.2	µg/mL	+/-	5.8873	µg/mL	Gravimetric
	CAS # 56-57-5	(Lot LB98879V)			+/-	12.0190	µg/mL	Unstressed
	Purity 99%				+/-	19.1024	µg/mL	Stressed
23	p-Dimethylaminoazobenzene		1,002.0	µg/mL	+/-	5.8800	µg/mL	Gravimetric
	CAS # 60-11-7	(Lot BCBP8840V)			+/-	12.0040	µg/mL	Unstressed
	Purity 98%				+/-	19.0786	µg/mL	Stressed

24	3,3'-Dimethylbenzidine (o-tolidine)		1,001.3	µg/mL	+/-	5.8762	µg/mL	Gravimetric
	CAS # 119-93-7	(Lot HO6DO)			+/-	11.9962	µg/mL	Unstressed
	Purity 95%				+/-	19.0662	µg/mL	Stressed
25	2-Acetylaminofluorene		1,004.0	µg/mL	+/-	5.8920	µg/mL	Gravimetric
	CAS # 53-96-3	(Lot FCW01)			+/-	12.0286	µg/mL	Unstressed
	Purity 99%				+/-	19.1176	µg/mL	Stressed
26	4,4-Methylene-bis(2-chloroaniline)		1,002.4	µg/mL	+/-	5.8829	µg/mL	Gravimetric
	CAS # 101-14-4	(Lot 5150500)			+/-	12.0099	µg/mL	Unstressed
	Purity 95%				+/-	19.0879	µg/mL	Stressed
27	Dibenz(a,h)acridine		1,000.8	µg/mL	+/-	5.8733	µg/mL	Gravimetric
	CAS # 226-36-8	(Lot PN090412-01)			+/-	11.9902	µg/mL	Unstressed
	Purity 99%				+/-	19.0567	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

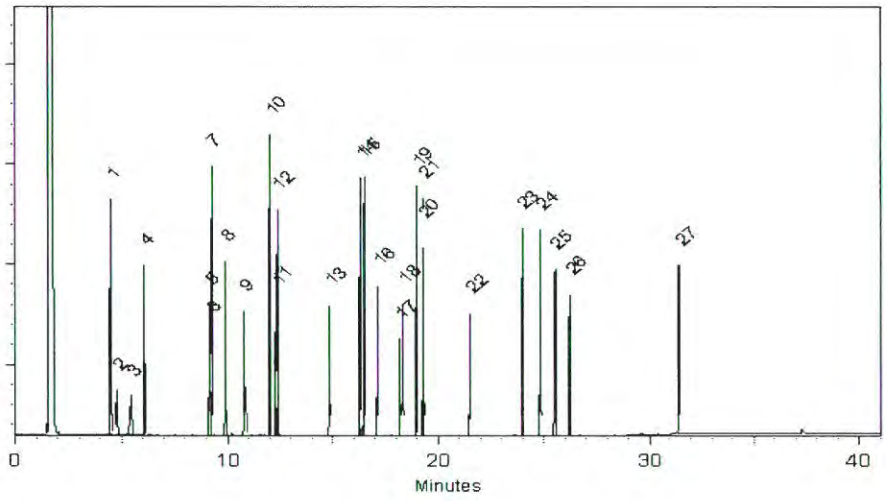
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Sawyer

Date Mixed: 09-Jan-2017 **Balance:** 1128360905

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST2 S2_00014

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569733 **Lot No.:** A0129110

Description : 8270 List 2 / Std #2 (2015)

8270 List 2 / Std #2 (2015) 1000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Methyl methanesulfonate		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 66-27-3	(Lot MKBX5165V)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
2	Ethyl methanesulfonate		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 62-50-0	(Lot DGMLA)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
3	Pentachloroethane		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 76-01-7	(Lot 160830B-BL2)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
4	Hexachloropropene		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 1888-71-7	(Lot 44391/3)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
5	Isosafrole (cis & trans)		1,002.6	µg/mL	+/- 5.8838	µg/mL	Gravimetric
	CAS # 120-58-1	(Lot MKBK3786V)			+/- 46.0610	µg/mL	Unstressed
	Purity 97%	84% trans; 16% cis			+/- 47.2397	µg/mL	Stressed
6	1-Chloronaphthalene		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 90-13-1	(Lot BBPYI)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
7	1,4-Naphthoquinone		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 130-15-4	(Lot 3232134094)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed

8	Pentachlorobenzene **CAS #** 608-93-5 **Purity** 99%	(Lot MKBV7714V)	1,000.0	µg/mL	+/- 5.8686 +/- 45.9419 +/- 47.1176	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	2,3,5,6-Tetrachlorophenol **CAS #** 935-95-5 **Purity** 99%	(Lot ER090607-01)	1,000.0	µg/mL	+/- 5.8686 +/- 45.9419 +/- 47.1176	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Dinoseb **CAS #** 88-85-7 **Purity** 97%	(Lot 012015)	1,001.0	µg/mL	+/- 5.8747 +/- 45.9897 +/- 47.1666	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Isodrin **CAS #** 465-73-6 **Purity** 98%	(Lot 6324900)	999.6	µg/mL	+/- 5.8662 +/- 45.9235 +/- 47.0988	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Chlorobenzilate **CAS #** 510-15-6 **Purity** 99%	(Lot 4784800)	1,000.0	µg/mL	+/- 5.8686 +/- 45.9419 +/- 47.1176	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	7,12-Dimethylbenz(a)anthracene **CAS #** 57-97-6 **Purity** 99%	(Lot R8JWN)	1,000.0	µg/mL	+/- 5.8686 +/- 45.9419 +/- 47.1176	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

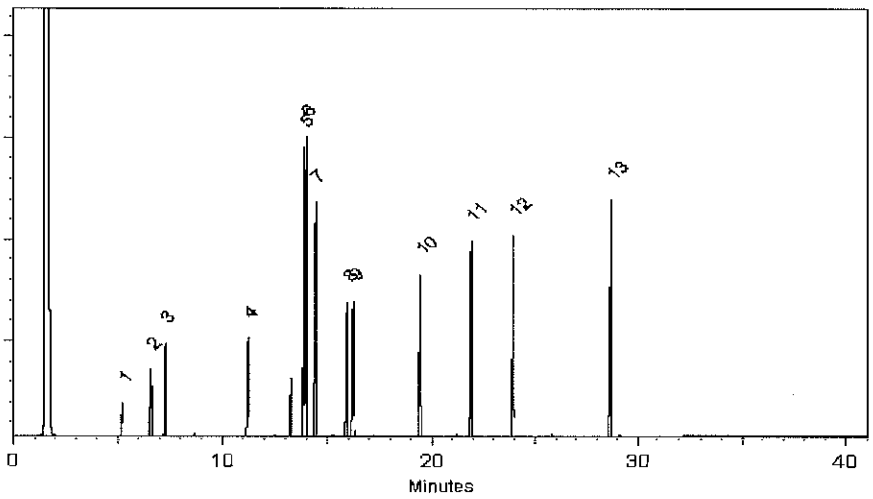
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Z Marsh

Date Mixed: 12-Jul-2017 **Balance:** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569733 **Lot No.:** A0129110

Description : 8270 List 2 / Std #2 (2015)

8270 List 2 / Std #2 (2015) 1000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2018 **Storage:** 0°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Methyl methanesulfonate **CAS #** 66-27-3 **Purity** 99%	(Lot MKBX5165V)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed
2	Ethyl methanesulfonate **CAS #** 62-50-0 **Purity** 99%	(Lot DGMLA)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed
3	Pentachloroethane **CAS #** 76-01-7 **Purity** 99%	(Lot 160830B-BL2)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed
4	Hexachloropropene **CAS #** 1888-71-7 **Purity** 99%	(Lot 44391/3)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed
5	Isosafrole (cis & trans) **CAS #** 120-58-1 **Purity** 97%	(Lot MKBK3786V) 84% trans; 16% cis	1,002.6 µg/mL	+/- 5.8838 µg/mL +/- 46.0610 µg/mL +/- 47.2397 µg/mL	Gravimetric Unstressed Stressed
6	1-Chloronaphthalene **CAS #** 90-13-1 **Purity** 99%	(Lot BBPYI)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed
7	1,4-Naphthoquinone **CAS #** 130-15-4 **Purity** 99%	(Lot 3232134094)	1,000.0 µg/mL	+/- 5.8686 µg/mL +/- 45.9419 µg/mL +/- 47.1176 µg/mL	Gravimetric Unstressed Stressed

8	Pentachlorobenzene		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 608-93-5	(Lot MKBV7714V)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
9	2,3,5,6-Tetrachlorophenol		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 935-95-5	(Lot ER090607-01)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
10	Dinoseb		1,001.0	µg/mL	+/- 5.8747	µg/mL	Gravimetric
	CAS # 88-85-7	(Lot 012015)			+/- 45.9897	µg/mL	Unstressed
	Purity 97%				+/- 47.1666	µg/mL	Stressed
11	Isodrin		999.6	µg/mL	+/- 5.8662	µg/mL	Gravimetric
	CAS # 465-73-6	(Lot 6324900)			+/- 45.9235	µg/mL	Unstressed
	Purity 98%				+/- 47.0988	µg/mL	Stressed
12	Chlorobenzilate		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 510-15-6	(Lot 4784800)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed
13	7,12-Dimethylbenz(a)anthracene		1,000.0	µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 57-97-6	(Lot R8JWN)			+/- 45.9419	µg/mL	Unstressed
	Purity 99%				+/- 47.1176	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

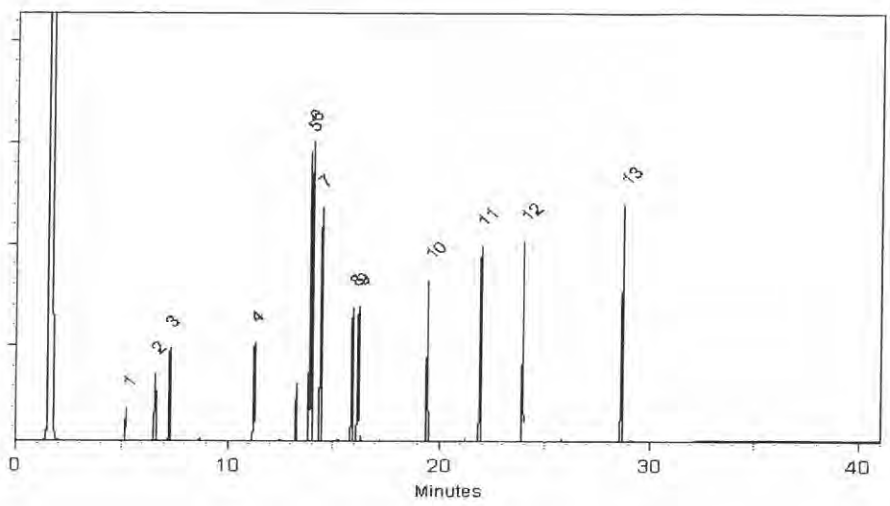
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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Joseph Z Mondl

Date Mixed: 12-Jul-2017 **Balance:** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567680 **Lot No.:** A0133130

Description : 8270 List 2 / Std #3

8270 List 2 / Std #3 2,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2018 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	6-Methylchrysene		2,000.0	µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 1705-85-7	(Lot ER030711-01)			+/- 90.0953	µg/mL	Unstressed
	Purity 99%				+/- 99.9689	µg/mL	Stressed
2	3-Methylcholanthrene		2,003.0	µg/mL	+/- 11.7547	µg/mL	Gravimetric
	CAS # 56-49-5	(Lot MKBS1548V)			+/- 90.2305	µg/mL	Unstressed
	Purity 99%				+/- 100.1189	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

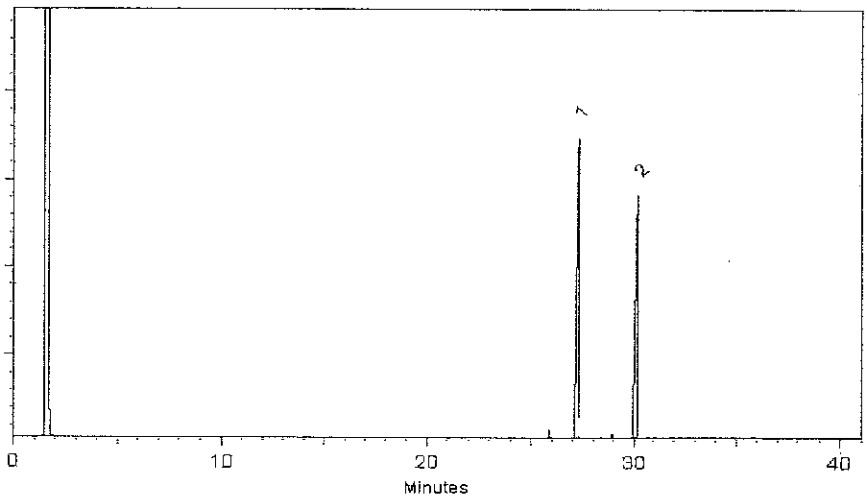
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Talion - Mix Technician **Date Mixed:** 08-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 12-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567680 **Lot No.:** A0127589

Description : 8270 List 2 / Std #3

8270 List 2 / Std #3 2,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2018 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	6-Methylchrysene		2,018.5 µg/mL	+/- 11.8457	µg/mL	Gravimetric
	CAS # 1705-85-7	(Lot ER030711-01)		+/- 90.9287	µg/mL	Unstressed
	Purity 99%			+/- 100.8937	µg/mL	Stressed
2	3-Methylcholanthrene		2,013.2 µg/mL	+/- 11.8148	µg/mL	Gravimetric
	CAS # 56-49-5	(Lot 092911AG)		+/- 90.6915	µg/mL	Unstressed
	Purity 97%			+/- 100.6305	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

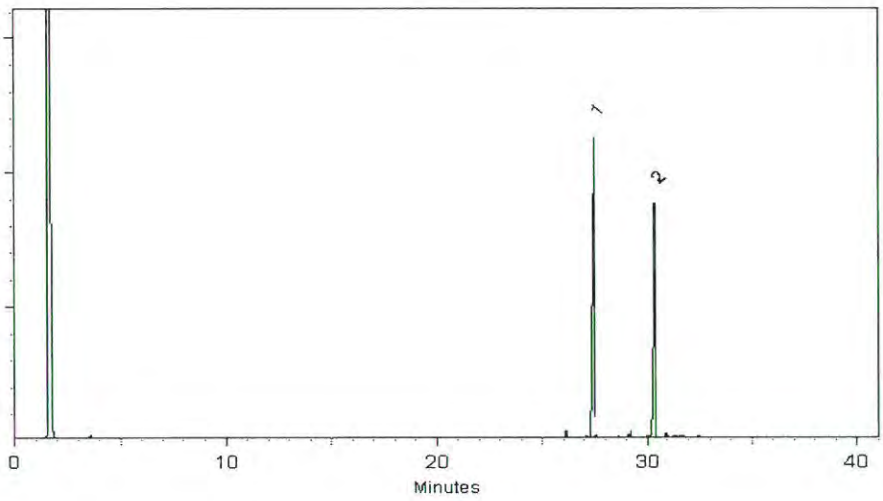
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 15-May-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 22-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681 **Lot No.:** A0124571

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	o,o,o-Triethyl phosphorothioate		1,000.0 µg/mL	+/- 5.8686	µg/mL	Gravimetric
	CAS # 126-68-1	(Lot 5652500)		+/- 42.8944	µg/mL	Unstressed
	Purity 99%			+/- 42.9129	µg/mL	Stressed
2	Safrole		1,001.5 µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 94-59-7	(Lot 322225/11292)		+/- 42.9587	µg/mL	Unstressed
	Purity 99%			+/- 42.9772	µg/mL	Stressed
3	Zinophos (thionazine)		1,001.5 µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 297-97-2	(Lot 5730500)		+/- 42.9587	µg/mL	Unstressed
	Purity 99%			+/- 42.9772	µg/mL	Stressed
4	Sulfotepp		1,001.5 µg/mL	+/- 5.8775	µg/mL	Gravimetric
	CAS # 3689-24-5	(Lot 5825600)		+/- 42.9598	µg/mL	Unstressed
	Purity 97%			+/- 42.9783	µg/mL	Stressed
5	Diallate (cis and trans)		1,000.6 µg/mL	+/- 5.8720	µg/mL	Gravimetric
	CAS # 2303-16-4	(Lot 5199100)		+/- 42.9192	µg/mL	Unstressed
	Purity 98%	86% cis-isomer; 14% trans-isomer		+/- 42.9378	µg/mL	Stressed
6	Phorate		1,000.3 µg/mL	+/- 5.8704	µg/mL	Gravimetric
	CAS # 298-02-2	(Lot 5683900)		+/- 42.9081	µg/mL	Unstressed
	Purity 96%			+/- 42.9266	µg/mL	Stressed
7	Dimethoate		1,001.5 µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 60-51-5	(Lot 5561900)		+/- 42.9587	µg/mL	Unstressed
	Purity 99%			+/- 42.9772	µg/mL	Stressed

8	Disulfoton		1,001.5	µg/mL	+/- 5.8774	µg/mL	Gravimetric
	CAS # 298-04-4	(Lot 5197100)			+/- 42.9587	µg/mL	Unstressed
	Purity 99%				+/- 42.9772	µg/mL	Stressed
9	Methyl parathion		1,000.5	µg/mL	+/- 5.8715	µg/mL	Gravimetric
	CAS # 298-00-0	(Lot 5652600)			+/- 42.9158	µg/mL	Unstressed
	Purity 99%				+/- 42.9343	µg/mL	Stressed
10	Parathion (ethyl parathion)		1,000.1	µg/mL	+/- 5.8691	µg/mL	Gravimetric
	CAS # 56-38-2	(Lot 5684200)			+/- 42.8982	µg/mL	Unstressed
	Purity 98%				+/- 42.9167	µg/mL	Stressed
11	Aramite		1,000.1	µg/mL	+/- 5.8690	µg/mL	Gravimetric
	CAS # 140-57-8	(Lot 012012)			+/- 42.8974	µg/mL	Unstressed
	Purity 97%	51% I; 49% II			+/- 42.9159	µg/mL	Stressed
12	Famphur		1,000.5	µg/mL	+/- 5.8715	µg/mL	Gravimetric
	CAS # 52-85-7	(Lot 5684100)			+/- 42.9158	µg/mL	Unstressed
	Purity 99%				+/- 42.9343	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

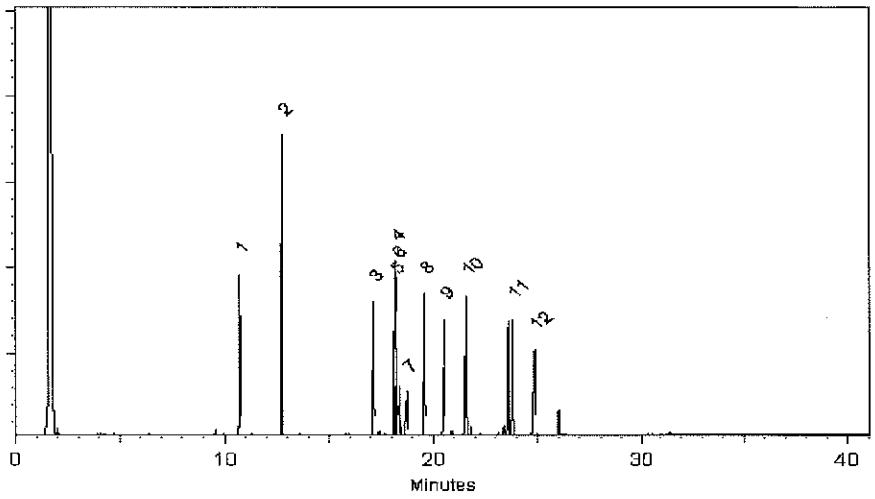
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 30-Jan-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681 **Lot No.:** A0131880

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000µg/mL, Methylene chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	o,o,o-Triethyl phosphorothioate		1,004.7 µg/mL	+/- 5.9674	µg/mL	Gravimetric
	CAS # 126-68-1	(Lot 5652500)		+/- 43.1044	µg/mL	Unstressed
	Purity 99%			+/- 43.1230	µg/mL	Stressed
2	Safrole		1,002.7 µg/mL	+/- 5.9555	µg/mL	Gravimetric
	CAS # 94-59-7	(Lot 322225/11292)		+/- 43.0186	µg/mL	Unstressed
	Purity 99%			+/- 43.0371	µg/mL	Stressed
3	Zinophos (thionazine)		993.3 µg/mL	+/- 5.9001	µg/mL	Gravimetric
	CAS # 297-97-2	(Lot 6716400)		+/- 42.6181	µg/mL	Unstressed
	Purity 99%			+/- 42.6365	µg/mL	Stressed
4	Sulfotepp		1,002.3 µg/mL	+/- 5.9536	µg/mL	Gravimetric
	CAS # 3689-24-5	(Lot 6681500)		+/- 43.0043	µg/mL	Unstressed
	Purity 97%			+/- 43.0228	µg/mL	Stressed
5	Diallate (cis and trans)		1,004.8 µg/mL	+/- 5.9684	µg/mL	Gravimetric
	CAS # 2303-16-4	(Lot 6675800)		+/- 43.1112	µg/mL	Unstressed
	Purity 98%	85% cis-Isomer; 15% trans- isomer		+/- 43.1298	µg/mL	Stressed
6	Phorate		1,005.6 µg/mL	+/- 5.9728	µg/mL	Gravimetric
	CAS # 298-02-2	(Lot 6681800)		+/- 43.1430	µg/mL	Unstressed
	Purity 97%			+/- 43.1616	µg/mL	Stressed
7	Dimethoate		998.7 µg/mL	+/- 5.9318	µg/mL	Gravimetric
	CAS # 60-51-5	(Lot 6334200)		+/- 42.8470	µg/mL	Unstressed
	Purity 99%			+/- 42.8654	µg/mL	Stressed

8	Disulfoton		1,002.7	µg/mL	+/- 5.9555	µg/mL	Gravimetric
	CAS # 298-04-4	(Lot 6513300)			+/- 43.0186	µg/mL	Unstressed
	Purity 99%				+/- 43.0371	µg/mL	Stressed
9	Methyl parathion		1,009.3	µg/mL	+/- 5.9951	µg/mL	Gravimetric
	CAS # 298-00-0	(Lot 6513200)			+/- 43.3046	µg/mL	Unstressed
	Purity 99%				+/- 43.3233	µg/mL	Stressed
10	Parathion (ethyl parathion)		995.7	µg/mL	+/- 5.9140	µg/mL	Gravimetric
	CAS # 56-38-2	(Lot 6586500)			+/- 42.7188	µg/mL	Unstressed
	Purity 98%				+/- 42.7372	µg/mL	Stressed
11	Aramite		992.0	µg/mL	+/- 5.8921	µg/mL	Gravimetric
	CAS # 140-57-8	(Lot 012012)			+/- 42.5604	µg/mL	Unstressed
	Purity 97%				+/- 42.5787	µg/mL	Stressed
12	Famphur		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 52-85-7	(Lot 5684100)			+/- 42.9900	µg/mL	Unstressed
	Purity 99%				+/- 43.0085	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

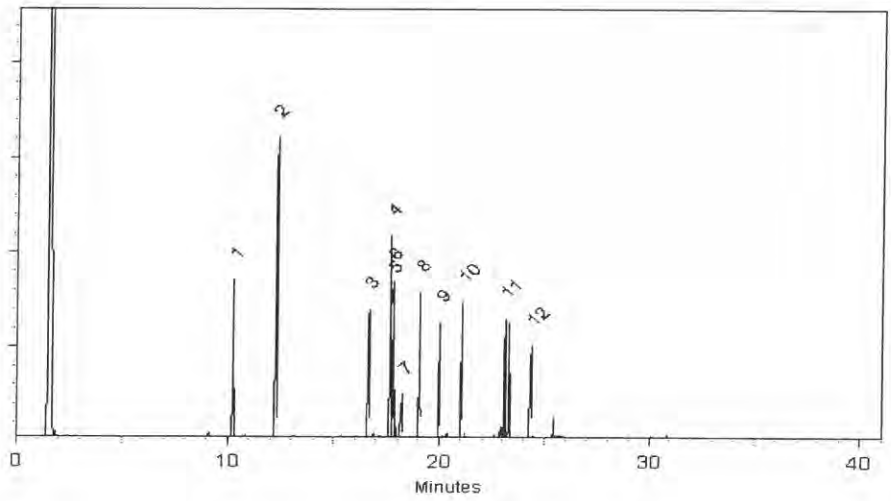
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 25-Oct-2017 **Balance:** B442140311

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 27-Oct-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SMLIST2 S5_00011

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567682 **Lot No.:** A0125047

Description : 8270 List 2 / Std #5 Methapyrilene

8270 List 2 / Std #5 Methapyrilene 2,000µg/mL, Methylene Chloride, 1mL/ampul
*The reported compound masses are for Methapyrilene HCl. Purity is adjusted to correct for the HCl salt. The reported concentration is of Methapyrilene.

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Methapyrilene hydrochloride	1,984.5 µg/mL	+/- 11.6460	µg/mL	Gravimetric
	CAS # ~~135-23-9~~ (Lot 037F09291)		+/- 23.7752	µg/mL	Unstressed
	Purity 87% 91-80-5		+/- 37.7871	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:
*The reported compound masses are for Methapyrilene HCl. Purity is adjusted to correct for the HCl salt. The reported concentration is of Methapyrilene, CAS # 91-80-5

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

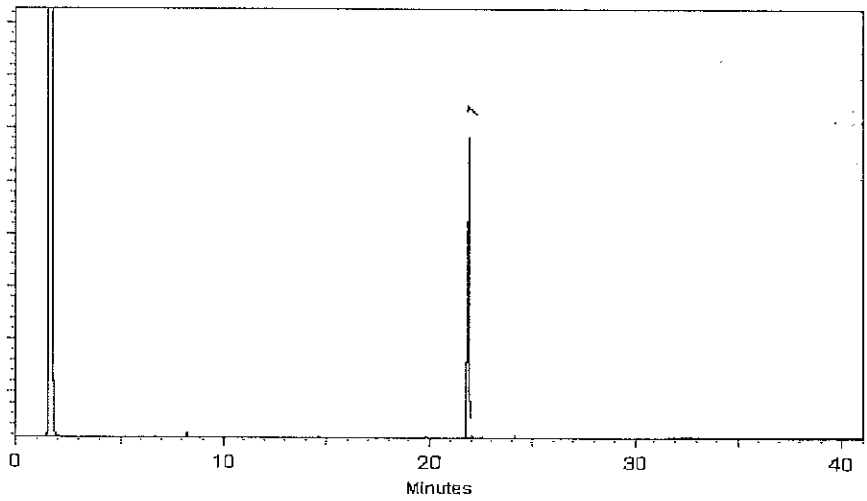
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 19-Feb-2017 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 22-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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Reagent

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Catalog No. : 567682 **Lot No.:** A0125047

Description : 8270 List 2 / Std #5 Methapyrilene

8270 List 2 / Std #5 Methapyrilene 2,000µg/mL, Methylene Chloride, 1mL/ampul
*The reported compound masses are for Methapyrilene HCl. Purity is adjusted to correct for the HCl salt. The reported concentration is of Methapyrilene.

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Methapyrilene hydrochloride	1,984.5 µg/mL	+/- 11.6460	µg/mL	Gravimetric
	CAS # 135-23-9 (Lot 037F09291)		+/- 23.7752	µg/mL	Unstressed
	Purity 87%		+/- 37.7871	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:
*The reported compound masses are for Methapyrilene HCl. Purity is adjusted to correct for the HCl salt. The reported concentration is of Methapyrilene, CAS # 91-80-5

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

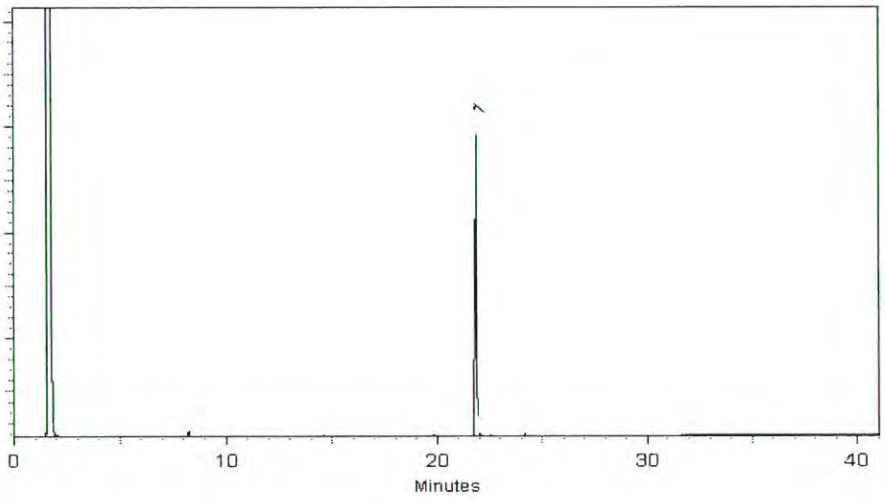
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cheryl Graham - Mix Technician

Date Mixed: 19-Feb-2017 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 22-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
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Reagent

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CERTIFIED REFERENCE MATERIAL

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ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567681.sec **Lot No.:** A0124787

Description : 8270 List 2 / Std #4

8270 List 2 / Std #4 1,000 ug/ml, Methylene Chloride, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	o,o,o-Triethyl phosphorothioate		1,003.0	µg/mL	+/- 5.9575	µg/mL	Gravimetric
	CAS # 126-68-1 *	(Lot 5652500)			+/- 43.0329	µg/mL	Unstressed
	Purity 99%				+/- 43.0514	µg/mL	Stressed
2	Safrole		1,003.0	µg/mL	+/- 5.9575	µg/mL	Gravimetric
	CAS # 94-59-7.SEC	(Lot 793000)			+/- 43.0329	µg/mL	Unstressed
	Purity 99%				+/- 43.0514	µg/mL	Stressed
3	Zinophos (thionazine)		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 297-97-2.SEC	(Lot 50903)			+/- 43.0758	µg/mL	Unstressed
	Purity 99%				+/- 43.0943	µg/mL	Stressed
4	Sulfotepp		1,000.0	µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 3689-24-5.SEC	(Lot 104303)			+/- 42.9042	µg/mL	Unstressed
	Purity 99%				+/- 42.9227	µg/mL	Stressed
5	Diallate (cis and trans)		1,003.0	µg/mL	+/- 5.9574	µg/mL	Gravimetric
	CAS # 2303-16-4.SEC	(Lot 40325)			+/- 43.0320	µg/mL	Unstressed
	Purity 97%	75% cis-Isomer; 25% trans-Isomer			+/- 43.0506	µg/mL	Stressed
6	Phorate		1,006.1	µg/mL	+/- 5.9758	µg/mL	Gravimetric
	CAS # 298-02-2.SEC	(Lot SZBF054XV)			+/- 43.1650	µg/mL	Unstressed
	Purity 96%				+/- 43.1836	µg/mL	Stressed
7	Dimethoate		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 60-51-5.SEC	(Lot 109217)			+/- 42.9900	µg/mL	Unstressed
	Purity 99%				+/- 43.0085	µg/mL	Stressed

8	Disulfoton		1,005.0	µg/mL	+/-	5.9694	µg/mL	Gravimetric
	CAS # 298-04-4.SEC	(Lot 31120)			+/-	43.1187	µg/mL	Unstressed
	Purity 99%				+/-	43.1373	µg/mL	Stressed
9	Methyl parathion		1,005.0	µg/mL	+/-	5.9694	µg/mL	Gravimetric
	CAS # 298-00-0.SEC	(Lot 121549)			+/-	43.1187	µg/mL	Unstressed
	Purity 99%				+/-	43.1373	µg/mL	Stressed
10	Parathion (ethyl parathion)		1,001.0	µg/mL	+/-	5.9456	µg/mL	Gravimetric
	CAS # 56-38-2.SEC	(Lot 50617)			+/-	42.9471	µg/mL	Unstressed
	Purity 99%				+/-	42.9656	µg/mL	Stressed
11	Aramite		1,000.1	µg/mL	+/-	5.9401	µg/mL	Gravimetric
	CAS # 140-57-8 *	(Lot 012012)			+/-	42.9072	µg/mL	Unstressed
	Purity 97%	51% I; 49% II			+/-	42.9257	µg/mL	Stressed
12	Famphur		1,003.0	µg/mL	+/-	5.9574	µg/mL	Gravimetric
	CAS # 52-85-7.SEC	(Lot 40512)			+/-	43.0320	µg/mL	Unstressed
	Purity 94%				+/-	43.0506	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

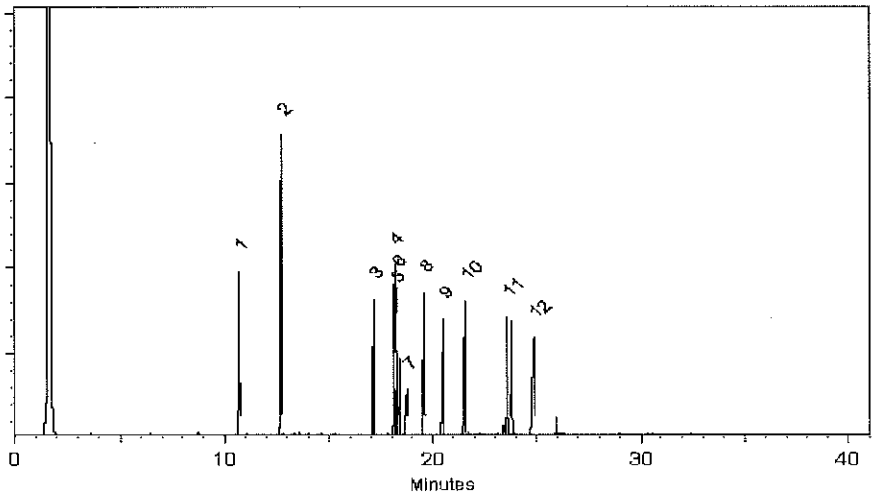
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 08-Feb-2017 **Balance:** 1128353505

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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Manufacturing Notes:

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Handling Notes:

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Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS/ ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #	
16C1	240-94103-1	49	42	69	67	73	86	
16C1 RE	240-94103-1 RE	43	41	62	62	59	91	
16MW8	240-94103-2	67	58	81	77	82	101	
16MW8 RE	240-94103-2 RE	43	40	52	54	47	75	
16MW9	240-94103-3	46	48	61	62	66	83	
16MW9 RE	240-94103-3 RE	55	59	69	71	65	102	
16WC1A	240-94103-4	52	44	66	67	71	85	
16WC1A RE	240-94103-4 RE	66	68	72	73	71	105	
16WDUP	240-94103-5	60	47	63	64	64	93	
16WDUP RE	240-94103-5 RE	62	59	75	75	68	105	
16WC1B	240-94103-6	65	50	95	89	99	139	X
16WC1B RE	240-94103-6 RE	50	46	70	77	70	99	
	MB 240-322624/18-A	54	50	67	65	72	86	
	MB 240-323647/9-A	50	50	69	68	63	93	
	LCS 240-322624/19-A	60	46	83	77	85	84	
	LCS 240-323647/10-A	39	21	70	74	89	84	
16WC1A MS	240-94103-4 MS	63	61	78	72	79	87	
16WC1A MS RE	240-94103-4 MS RE	54	44	81	83	98	88	
16WC1A MSD	240-94103-4 MSD	73	58	78	75	83	80	
16WC1A MSD RE	240-94103-4 MSD RE	49	33	72	76	88	81	

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	17-120
PHL = Phenol-d5 (Surr)	15-120
NBZ = Nitrobenzene-d5 (Surr)	35-120
FBP = 2-Fluorobiphenyl (Surr)	32-120
TBP = 2,4,6-Tribromophenol (Surr)	33-120
TPHL = Terphenyl-d14 (Surr)	28-128

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 80425005.D

Lab ID: LCS 240-323647/10-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Sulfotepp	32.0	24.7	77	10-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 80425010.D

Lab ID: 240-94103-4 MS RE Client ID: 16WC1A MS RE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Sulfotepp	32.0	9.3 U	26.5	83	10-120	H

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 80425011.D

Lab ID: 240-94103-4 MSD RE Client ID: 16WC1A MSD RE

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Sulfotepp	32.0	24.9	78	6	35	10-120	H

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80419008.D Lab Sample ID: MB 240-322624/18-A

Matrix: Water Date Extracted: 04/16/2018 10:31

Instrument ID: A4AG2 Date Analyzed: 04/19/2018 09:45

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-322624/19-A	80419009.D	04/19/2018 10:10
16C1	240-94103-1	80420021.D	04/20/2018 16:27
16MW8	240-94103-2	80420022.D	04/20/2018 16:52
16MW9	240-94103-3	80420023.D	04/20/2018 17:16
16WC1A	240-94103-4	80420024.D	04/20/2018 17:41
16WC1A MS	240-94103-4 MS	80420025.D	04/20/2018 18:05
16WDUP	240-94103-5	80423025.D	04/23/2018 16:01
16WC1B	240-94103-6	80423026.D	04/23/2018 16:25
16WC1A MSD	240-94103-4 MSD	80423027.D	04/23/2018 16:50

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80425004.D Lab Sample ID: MB 240-323647/9-A

Matrix: Water Date Extracted: 04/23/2018 12:07

Instrument ID: A4AG2 Date Analyzed: 04/25/2018 07:50

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-323647/10-A	80425005.D	04/25/2018 08:15
16C1 RE	240-94103-1 RE	80425006.D	04/25/2018 08:39
16MW8 RE	240-94103-2 RE	80425007.D	04/25/2018 09:04
16MW9 RE	240-94103-3 RE	80425008.D	04/25/2018 09:28
16WC1A RE	240-94103-4 RE	80425009.D	04/25/2018 09:53
16WC1A MS RE	240-94103-4 MS RE	80425010.D	04/25/2018 10:17
16WC1A MSD RE	240-94103-4 MSD RE	80425011.D	04/25/2018 10:42
16WDUP RE	240-94103-5 RE	80425012.D	04/25/2018 11:06
16WC1B RE	240-94103-6 RE	80425013.D	04/25/2018 11:31

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80411001.D DFTPP Injection Date: 04/11/2018

Instrument ID: A4AG2 DFTPP Injection Time: 11:14

Analysis Batch No.: 322037

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	57.3	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	44.3	
70	Less than 2.0% of mass 69	0.2	(0.4) 1
127	25.0 - 75.0% of mass 198	53.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	25.9	
365	Greater than 0.75% of mass 198	3.5	
441	Present, but less than mass 443	9.2	
442	40.0 - 110.0% of mass 198	60.3	
443	15.0 - 24.0% of mass 442	11.8	(19.6) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-322037/2	80411002.D	04/11/2018	11:32
	STD8 240-322037/3	80411003.D	04/11/2018	11:57
	STD7 240-322037/4	80411004.D	04/11/2018	12:21
	STD6 240-322037/5	80411005.D	04/11/2018	12:46
	STD5 240-322037/6	80411006.D	04/11/2018	13:11
	STD4 240-322037/7	80411007.D	04/11/2018	13:35
	STD3 240-322037/8	80411008.D	04/11/2018	14:00
	STD2 240-322037/9	80411009.D	04/11/2018	14:25
	STD1 240-322037/10	80411010.D	04/11/2018	14:49
	ICV 240-322037/11	80411011.D	04/11/2018	15:14
	STD9 240-322037/12	80411012.D	04/11/2018	15:39
	STD8 240-322037/13	80411013.D	04/11/2018	16:03
	STD7 240-322037/14	80411014.D	04/11/2018	16:28
	STD6 240-322037/15	80411015.D	04/11/2018	16:53
	STD5 240-322037/16	80411016.D	04/11/2018	17:17
	STD4 240-322037/17	80411017.D	04/11/2018	17:42
	STD3 240-322037/18	80411018.D	04/11/2018	18:07
	STD2 240-322037/19	80411019.D	04/11/2018	18:32
	ICV 240-322037/20	80411020.D	04/11/2018	18:56

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80419001.D DFTPP Injection Date: 04/19/2018

Instrument ID: A4AG2 DFTPP Injection Time: 06:58

Analysis Batch No.: 323078

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	54.6	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	44.8	
70	Less than 2.0% of mass 69	0.2	(0.4) 1
127	25.0 - 75.0% of mass 198	53.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	27.2	
365	Greater than 0.75% of mass 198	4.1	
441	Present, but less than mass 443	11.6	
442	40.0 - 110.0% of mass 198	74.0	
443	15.0 - 24.0% of mass 442	14.9	(20.1) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-323078/2	80419002.D	04/19/2018	07:17
	STD6 240-323078/3	80419003.D	04/19/2018	07:42
	MB 240-322624/18-A	80419008.D	04/19/2018	09:45
	LCS 240-322624/19-A	80419009.D	04/19/2018	10:10

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80420001.D DFTPP Injection Date: 04/20/2018

Instrument ID: A4AG2 DFTPP Injection Time: 06:25

Analysis Batch No.: 323282

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	54.5	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	43.8	
70	Less than 2.0% of mass 69	0.3	(0.6) 1
127	25.0 - 75.0% of mass 198	53.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	28.5	
365	Greater than 0.75% of mass 198	4.3	
441	Present, but less than mass 443	11.9	
442	40.0 - 110.0% of mass 198	80.6	
443	15.0 - 24.0% of mass 442	15.9	(19.7) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-323282/2	80420002.D	04/20/2018	07:10
	STD6 240-323282/3	80420003.D	04/20/2018	08:14
16C1	240-94103-1	80420021.D	04/20/2018	16:27
16MW8	240-94103-2	80420022.D	04/20/2018	16:52
16MW9	240-94103-3	80420023.D	04/20/2018	17:16
16WC1A	240-94103-4	80420024.D	04/20/2018	17:41
16WC1A MS	240-94103-4 MS	80420025.D	04/20/2018	18:05

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80423001.D DFTPP Injection Date: 04/23/2018

Instrument ID: A4AG2 DFTPP Injection Time: 06:16

Analysis Batch No.: 323501

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0- 80.0% of mass 198	52.4
68	Less than 2.0% of mass 69	0.0 (0.0) 1
69	Mass 69 relative abundance	42.4
70	Less than 2.0% of mass 69	0.1 (0.3) 1
127	25.0 - 75.0% of mass 198	52.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0- 30.0% of mass 198	26.3
365	Greater than 0.75% of mass 198	3.4
441	Present, but less than mass 443	9.3
442	40.0 - 110.0% of mass 198	64.9
443	15.0 - 24.0% of mass 442	12.3 (18.9) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-323501/2	80423002.D	04/23/2018	06:35
	STD8 240-323501/3	80423003.D	04/23/2018	07:02
	STD7 240-323501/4	80423004.D	04/23/2018	07:26
	STD6 240-323501/5	80423005.D	04/23/2018	07:50
	STD5 240-323501/6	80423006.D	04/23/2018	08:15
	STD4 240-323501/7	80423007.D	04/23/2018	08:39
	STD3 240-323501/8	80423008.D	04/23/2018	09:04
	STD2 240-323501/9	80423009.D	04/23/2018	09:28
	STD1 240-323501/10	80423010.D	04/23/2018	09:53
	ICV 240-323501/11	80423011.D	04/23/2018	10:17
	STD9 240-323501/12	80423012.D	04/23/2018	10:42
	STD8 240-323501/13	80423013.D	04/23/2018	11:06
	STD7 240-323501/14	80423014.D	04/23/2018	11:31
	STD6 240-323501/15	80423015.D	04/23/2018	11:55
	STD5 240-323501/16	80423016.D	04/23/2018	12:20
	STD4 240-323501/17	80423017.D	04/23/2018	12:44
	STD3 240-323501/18	80423018.D	04/23/2018	13:09
	STD2 240-323501/19	80423019.D	04/23/2018	13:33
	ICV 240-323501/20	80423020.D	04/23/2018	13:58
16WDUP	240-94103-5	80423025.D	04/23/2018	16:01
16WC1B	240-94103-6	80423026.D	04/23/2018	16:25
16WC1A MSD	240-94103-4 MSD	80423027.D	04/23/2018	16:50

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab File ID: 80425001.D DFTPP Injection Date: 04/25/2018

Instrument ID: A4AG2 DFTPP Injection Time: 06:41

Analysis Batch No.: 323952

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	50.0	
68	Less than 2.0% of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	41.3	
70	Less than 2.0% of mass 69	0.2	(0.4) 1
127	25.0 - 75.0% of mass 198	52.4	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	28.7	
365	Greater than 0.75% of mass 198	3.5	
441	Present, but less than mass 443	10.5	
442	40.0 - 110.0% of mass 198	71.2	
443	15.0 - 24.0% of mass 442	13.5	(18.9) 2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-323952/2	80425002.D	04/25/2018	07:00
	STD6 240-323952/3	80425003.D	04/25/2018	07:26
	MB 240-323647/9-A	80425004.D	04/25/2018	07:50
	LCS 240-323647/10-A	80425005.D	04/25/2018	08:15
16C1 RE	240-94103-1 RE	80425006.D	04/25/2018	08:39
16MW8 RE	240-94103-2 RE	80425007.D	04/25/2018	09:04
16MW9 RE	240-94103-3 RE	80425008.D	04/25/2018	09:28
16WC1A RE	240-94103-4 RE	80425009.D	04/25/2018	09:53
16WC1A MS RE	240-94103-4 MS RE	80425010.D	04/25/2018	10:17
16WC1A MSD RE	240-94103-4 MSD RE	80425011.D	04/25/2018	10:42
16WDUP RE	240-94103-5 RE	80425012.D	04/25/2018	11:06
16WC1B RE	240-94103-6 RE	80425013.D	04/25/2018	11:31

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-322037/5 Date Analyzed: 04/11/2018 12:46

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80411005.D Heated Purge: (Y/N) N

Calibration ID: 44613

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		144449	6.85	711760	7.92	356911	9.42
UPPER LIMIT		288898	7.35	1423520	8.42	713822	9.92
LOWER LIMIT		72225	6.35	355880	7.42	178456	8.92
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-322037/11		138717	6.85	722407	7.92	360689	9.42
ICV 240-322037/20		115453	6.85	643986	7.92	340807	9.42
STD6 240-323078/2 CCVIS		100291	6.86	515106	7.93	268731	9.43
STD6 240-323282/2 CCVIS		81323	6.85	438275	7.92	226653	9.42

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-322037/5 Date Analyzed: 04/11/2018 12:46

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80411005.D Heated Purge: (Y/N) N

Calibration ID: 44613

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		621408	10.71	604149	13.68	580641	16.07
UPPER LIMIT		1242816	11.21	1208298	14.18	1161282	16.57
LOWER LIMIT		310704	10.21	302075	13.18	290321	15.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-322037/11		643236	10.71	622459	13.68	580069	16.07
ICV 240-322037/20		590252	10.71	518058	13.68	471139	16.07
STD6 240-323078/2 CCVIS		452152	10.72	421780	13.69	417842	16.07
STD6 240-323282/2 CCVIS		393610	10.71	324150	13.67	314700	16.05

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323078/2 Date Analyzed: 04/19/2018 07:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80419002.D Heated Purge: (Y/N) N

Calibration ID: 44616

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		100291	6.86	515106	7.93	268731	9.43
UPPER LIMIT		200582	7.36	1030212	8.43	537462	9.93
LOWER LIMIT		50146	6.36	257553	7.43	134366	8.93
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323078/3 CCV		78752	6.86	480934	7.93	259320	9.43
MB 240-322624/18-A		89696	6.86	519017	7.93	281356	9.43
LCS 240-322624/19-A		79377	6.86	434758	7.93	227156	9.43

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323078/2 Date Analyzed: 04/19/2018 07:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80419002.D Heated Purge: (Y/N) N

Calibration ID: 44616

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		452152	10.72	421780	13.69	417842	16.07
UPPER LIMIT		904304	11.22	843560	14.19	835684	16.57
LOWER LIMIT		226076	10.22	210890	13.19	208921	15.57
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323078/3 CCV		447762	10.72	407529	13.69	387119	16.07
MB 240-322624/18-A		531221	10.71	452075	13.68	469366	16.07
LCS 240-322624/19-A		399386	10.71	405414	13.69	385168	16.07

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323282/2 Date Analyzed: 04/20/2018 07:10

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80420002.D Heated Purge: (Y/N) N

Calibration ID: 44616

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		81323	6.85	438275	7.92	226653	9.42
UPPER LIMIT		162646	7.35	876550	8.42	453306	9.92
LOWER LIMIT		40662	6.35	219138	7.42	113327	8.92
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323282/3 CCV		90731	6.85	445785	7.92	233685	9.42
240-94103-1	16C1	110940	6.85	585571	7.92	290655	9.42
240-94103-2	16MW8	97982	6.85	543433	7.92	268544	9.42
240-94103-3	16MW9	103179	6.85	600391	7.92	271244	9.42
240-94103-4	16WC1A	100156	6.85	502396	7.92	257546	9.42
240-94103-4 MS	16WC1A MS	103977	6.85	561566	7.92	294431	9.42

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323282/2 Date Analyzed: 04/20/2018 07:10

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80420002.D Heated Purge: (Y/N) N

Calibration ID: 44616

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		393610	10.71	324150	13.67	314700	16.05
UPPER LIMIT		787220	11.21	648300	14.17	629400	16.55
LOWER LIMIT		196805	10.21	162075	13.17	157350	15.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323282/3 CCV		447015	10.71	362766	13.66	374966	16.05
240-94103-1	16C1	641410	10.70	545978	13.66	498734	16.05
240-94103-2	16MW8	557466	10.70	498905	13.66	456498	16.05
240-94103-3	16MW9	582517	10.70	495483	13.66	458374	16.05
240-94103-4	16WC1A	568672	10.70	495046	13.66	449476	16.05
240-94103-4 MS	16WC1A MS	502190	10.70	489607	13.66	448446	16.05

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323501/5 Date Analyzed: 04/23/2018 07:50

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80423005.D Heated Purge: (Y/N) N

Calibration ID: 44863

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		208592	6.78	949160	7.85	469457	9.35
UPPER LIMIT		417184	7.28	1898320	8.35	938914	9.85
LOWER LIMIT		104296	6.28	474580	7.35	234729	8.85
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-323501/11		221435	6.78	985586	7.85	495033	9.35
ICV 240-323501/20		187834	6.78	924904	7.85	446855	9.35
240-94103-5	16WDUP	178826	6.78	850544	7.85	416420	9.35
240-94103-6	16WC1B	187515	6.78	884851	7.85	461918	9.35
240-94103-4 MSD	16WC1A MSD	195066	6.78	901953	7.85	446439	9.35
STD6 240-323952/2 CCVIS		169679	6.76	858867	7.83	422917	9.33

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323501/5 Date Analyzed: 04/23/2018 07:50

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80423005.D Heated Purge: (Y/N) N

Calibration ID: 44863

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		767707	10.63	692992	13.56	560310	15.92
UPPER LIMIT		1535414	11.13	1385984	14.06	1120620	16.42
LOWER LIMIT		383854	10.13	346496	13.06	280155	15.42
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-323501/11		818447	10.63	737990	13.56	594388	15.93
ICV 240-323501/20		720832	10.63	586241	13.56	451803	15.92
240-94103-5	16WDUP	803879	10.63	593765	13.56	451098	15.93
240-94103-6	16WC1B	880743	10.63	641600	13.56	517642	15.92
240-94103-4 MSD	16WC1A MSD	729797	10.63	650117	13.56	502952	15.92
STD6 240-323952/2 CCVIS		722401	10.62	681101	13.54	623334	15.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323952/2 Date Analyzed: 04/25/2018 07:00

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80425002.D Heated Purge: (Y/N) N

Calibration ID: 44866

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		169679	6.76	858867	7.83	422917	9.33
UPPER LIMIT		339358	7.26	1717734	8.33	845834	9.83
LOWER LIMIT		84840	6.26	429434	7.33	211459	8.83
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323952/3 CCV		153650	6.76	847402	7.83	422387	9.33
MB 240-323647/9-A		159533	6.76	930448	7.83	463121	9.33
LCS 240-323647/10-A		143206	6.76	823660	7.83	408084	9.33
240-94103-1 RE	16C1 RE	135382	6.76	796164	7.83	449038	9.33
240-94103-2 RE	16MW8 RE	147496	6.76	763207	7.83	442197	9.33
240-94103-3 RE	16MW9 RE	152549	6.76	863104	7.83	426601	9.33
240-94103-4 RE	16WC1A RE	128821	6.76	804342	7.83	415716	9.33
240-94103-4 MS RE	16WC1A MS RE	130828	6.76	773382	7.83	392964	9.33
240-94103-4 MSD RE	16WC1A MSD RE	145896	6.76	828653	7.83	413155	9.33
240-94103-5 RE	16WDUP RE	157574	6.76	812762	7.83	403711	9.33
240-94103-6 RE	16WC1B RE	142337	6.76	731150	7.83	398960	9.33

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Sample No.: STD6 240-323952/2 Date Analyzed: 04/25/2018 07:00

Instrument ID: A4AG2 GC Column: RXI-5SILMS/IIG ID: 0.25(mm)

Lab File ID (Standard): 80425002.D Heated Purge: (Y/N) N

Calibration ID: 44866

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		722401	10.62	681101	13.54	623334	15.89
UPPER LIMIT		1444802	11.12	1362202	14.04	1246668	16.39
LOWER LIMIT		361201	10.12	340551	13.04	311667	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
STD6 240-323952/3 CCV		747422	10.62	631760	13.54	579597	15.89
MB 240-323647/9-A		846609	10.62	668778	13.53	656375	15.89
LCS 240-323647/10-A		738339	10.62	614914	13.53	549029	15.89
240-94103-1 RE	16C1 RE	819099	10.62	608628	13.53	611225	15.89
240-94103-2 RE	16MW8 RE	800442	10.62	619743	13.53	603065	15.89
240-94103-3 RE	16MW9 RE	783200	10.62	570697	13.53	575513	15.89
240-94103-4 RE	16WC1A RE	766590	10.62	569558	13.53	555504	15.89
240-94103-4 MS RE	16WC1A MS RE	715347	10.62	618098	13.53	524456	15.89
240-94103-4 MSD RE	16WC1A MSD RE	746387	10.62	633302	13.53	534057	15.89
240-94103-5 RE	16WDUP RE	752544	10.62	568292	13.53	538452	15.89
240-94103-6 RE	16WC1B RE	752626	10.62	564880	13.53	531222	15.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16C1 | Lab Sample ID: 240-94103-1

Matrix: Water | Lab File ID: 80420021.D

Analysis Method: 8270D | Date Collected: 04/13/2018 10:05

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/20/2018 16:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	86		28-128
4165-62-2	Phenol-d5 (Surr)	42		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	69		35-120
367-12-4	2-Fluorophenol (Surr)	49		17-120
321-60-8	2-Fluorobiphenyl (Surr)	67		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	73		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16C1 | Lab Sample ID: 240-94103-1

Matrix: Water | Lab File ID: 80420021.D

Analysis Method: 8270D | Date Collected: 04/13/2018 10:05

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/20/2018 16:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		89	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420021.D
Lims ID: 240-94103-B-1-A
Client ID: 16C1
Sample Type: Client
Inject. Date: 20-Apr-2018 16:27:30 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-021
Misc. Info.: 240-94103-B-1-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:04:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	110940	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	585571	400.0	
* 3 Acenaphthene-d10	164	9.417	9.423	-0.006	96	290655	400.0	
* 4 Phenanthrene-d10	188	10.699	10.705	-0.006	97	641410	400.0	
* 5 Chrysene-d12	240	13.664	13.670	-0.006	99	545978	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	97	498734	400.0	
$ 7 2-Fluorophenol	112	5.764	5.770	-0.006	93	178870	781.8	
$ 8 Phenol-d5	99	6.488	6.444	-0.006	0	258024	672.6	
$ 9 Nitrobenzene-d5	82	7.299	7.300	0.000	96	627300	1102.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.806	-0.006	99	1077123	1065.9	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	82	118940	1168.1	
$ 12 Terphenyl-d14	244	12.199	12.195	-0.006	98	1497749	1379.6	
132 Sulfotepp	202		10.035				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

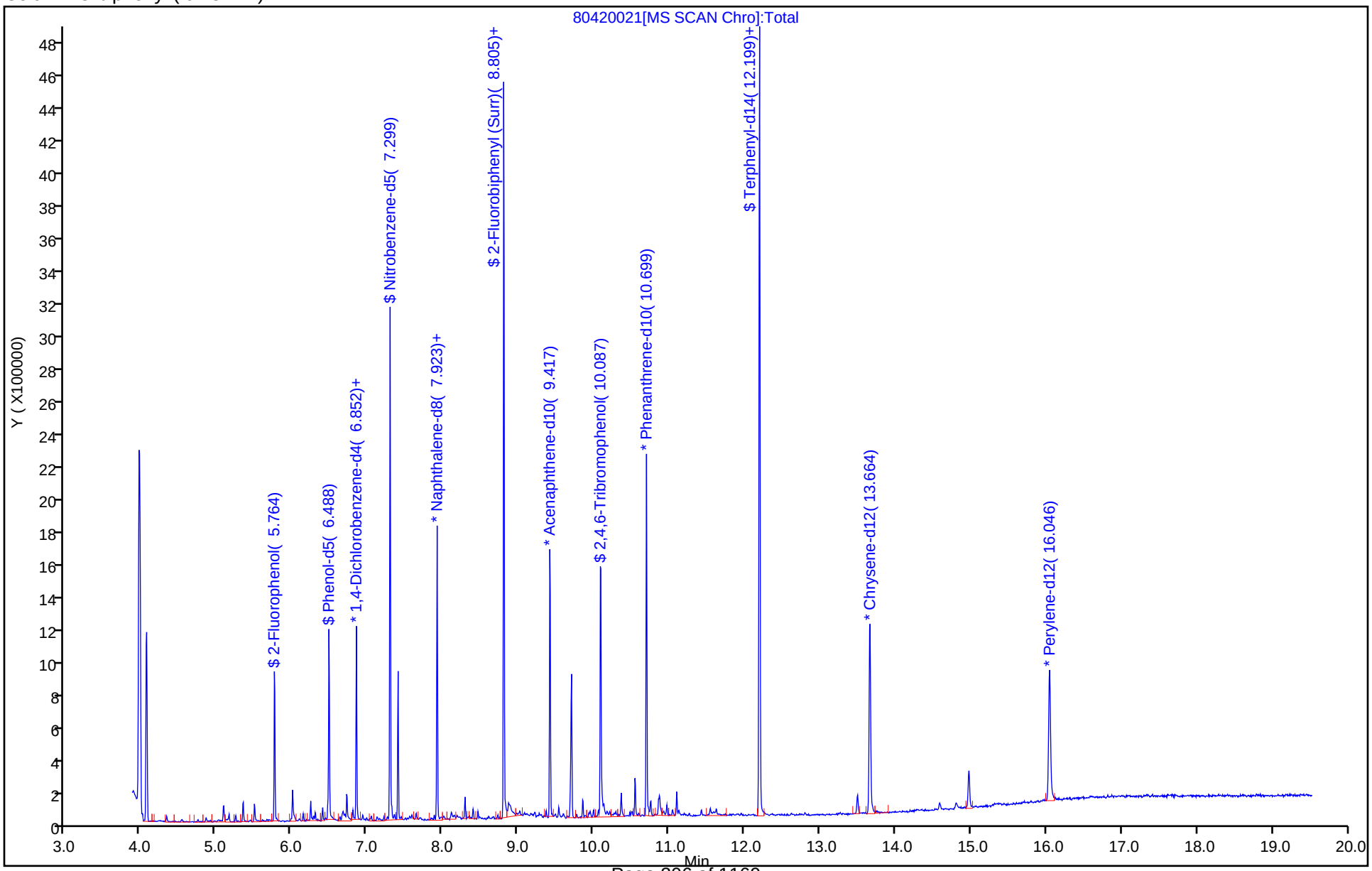
Report Date: 21-Apr-2018 07:35:01 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420021.D

Injection Date:	20-Apr-2018 16:27:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-1-A	Lab Sample ID:	240-94103-1	Worklist Smp#:	21
Client ID:	16C1				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420021.D
Lims ID: 240-94103-B-1-A
Client ID: 16C1
Sample Type: Client
Inject. Date: 20-Apr-2018 16:27:30 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-021
Misc. Info.: 240-94103-B-1-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:04:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	781.8	48.86
$ 8 Phenol-d5	1600.0	672.6	42.04
$ 9 Nitrobenzene-d5	1600.0	1102.2	68.89
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1065.9	66.62
$ 11 2,4,6-Tribromophenol	1600.0	1168.1	73.00
$ 12 Terphenyl-d14	1600.0	1379.6	86.23

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16C1 RE | Lab Sample ID: 240-94103-1 RE

Matrix: Water | Lab File ID: 80425006.D

Analysis Method: 8270D | Date Collected: 04/13/2018 10:05

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 08:39

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*9.3*	*U H*	*9.3*	*0.93*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	91		28-128
4165-62-2	Phenol-d5 (Surr)	41		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	62		35-120
367-12-4	2-Fluorophenol (Surr)	43		17-120
321-60-8	2-Fluorobiphenyl (Surr)	62		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	59		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16C1 RE | Lab Sample ID: 240-94103-1 RE

Matrix: Water | Lab File ID: 80425006.D

Analysis Method: 8270D | Date Collected: 04/13/2018 10:05

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 08:39

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*93*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425006.D
Lims ID: 240-94103-A-1-A
Client ID: 16C1
Sample Type: Client
Inject. Date: 25-Apr-2018 08:39:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-006
Misc. Info.: 240-94103-A-1-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:45:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	135382	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	796164	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	449038	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	819099	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	608628	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	611225	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	197868	692.3	a
$ 8 Phenol-d5	99	6.397	6.403	-0.006	0	299159	658.9	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	95	728162	984.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1515555	995.1	
$ 11 2,4,6-Tribromophenol	330	10.003	10.009	-0.006	84	128614	946.0	
$ 12 Terphenyl-d14	244	12.097	12.103	-0.006	99	1799763	1448.4	
132 Sulfotepp	202		9.950				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

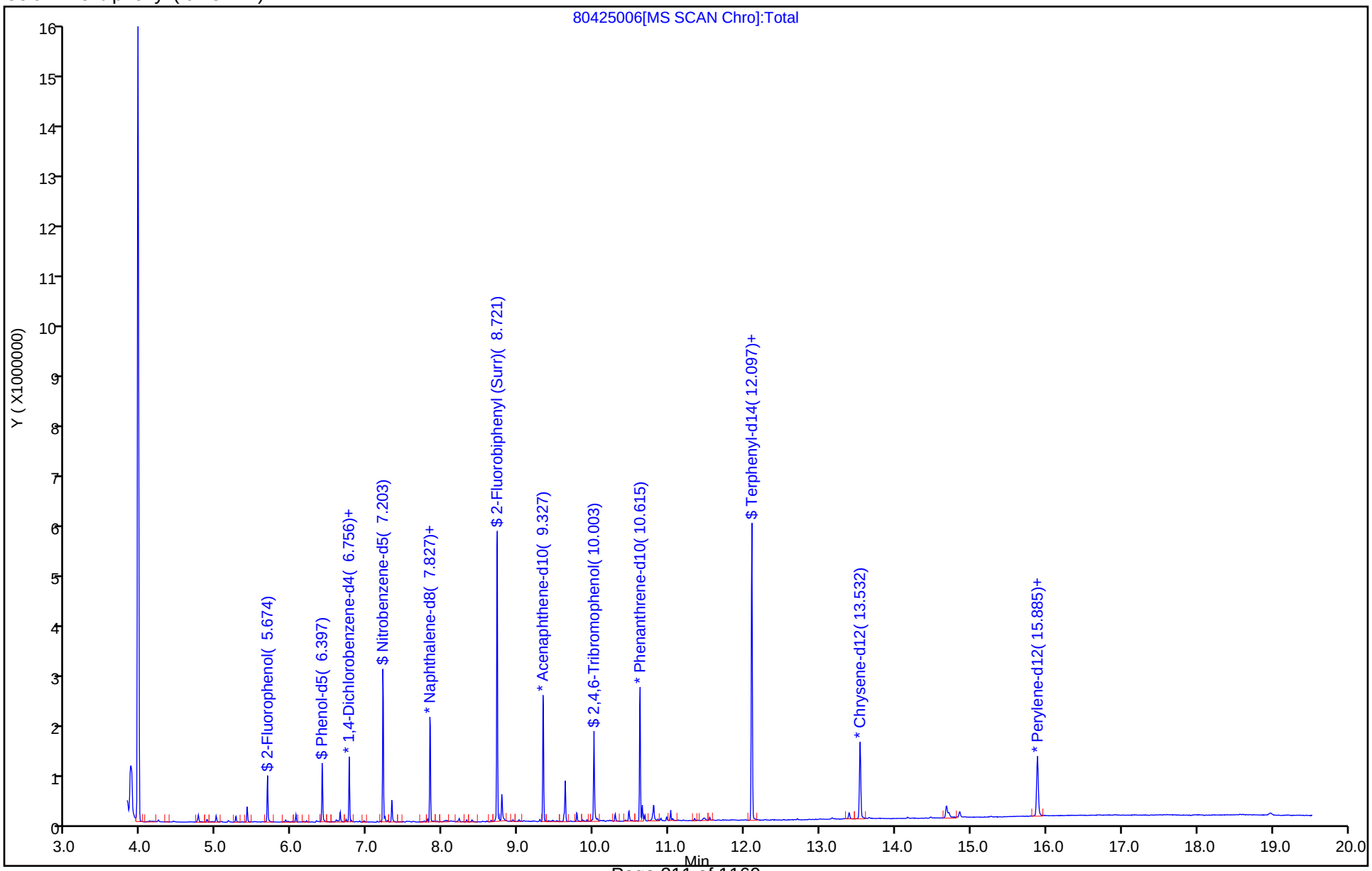
Report Date: 25-Apr-2018 10:03:43 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425006.D

Injection Date:	25-Apr-2018 08:39:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-1-A	Lab Sample ID:	240-94103-1	Worklist Smp#:	6
Client ID:	16C1				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425006.D
Lims ID: 240-94103-A-1-A
Client ID: 16C1
Sample Type: Client
Inject. Date: 25-Apr-2018 08:39:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-006
Misc. Info.: 240-94103-A-1-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:45:08

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	692.3	43.27
$ 8 Phenol-d5	1600.0	658.9	41.18
$ 9 Nitrobenzene-d5	1600.0	984.9	61.55
$ 10 2-Fluorobiphenyl (Surr)	1600.0	995.1	62.19
$ 11 2,4,6-Tribromophenol	1600.0	946.0	59.12
$ 12 Terphenyl-d14	1600.0	1448.4	90.52

Manual Integration/User Assign Peak Report

TestAmerica Canton

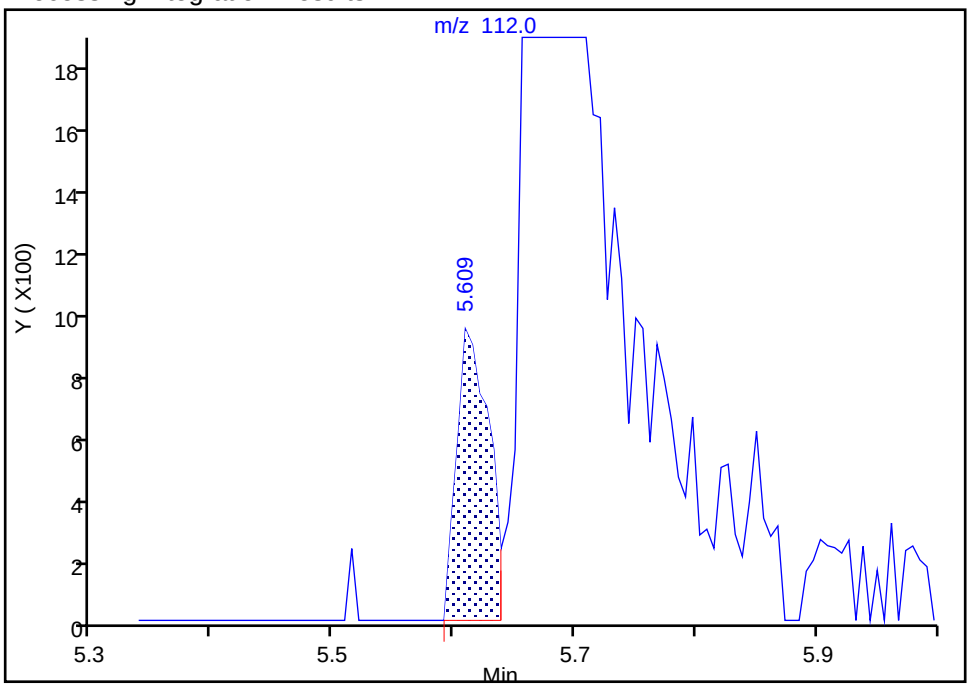
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425006.D				
Injection Date:	25-Apr-2018 08:39:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-1-A	Lab Sample ID:	240-94103-1		
Client ID:	16C1				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

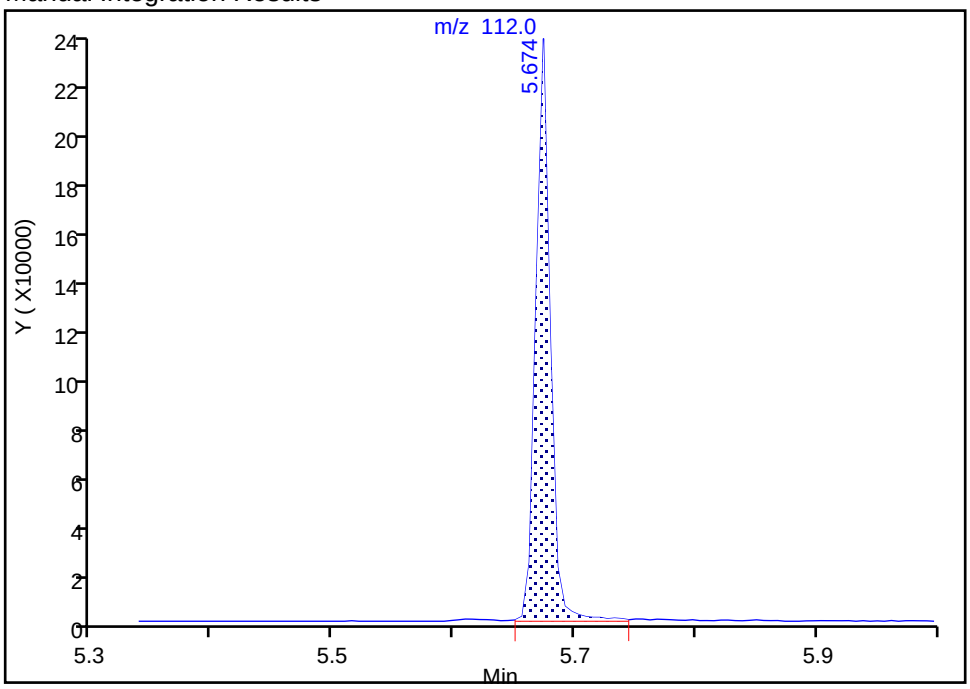
Processing Integration Results

RT: 5.61
Area: 1674
Amount: 5.857030
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 197868
Amount: 692.3051
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:44:12

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

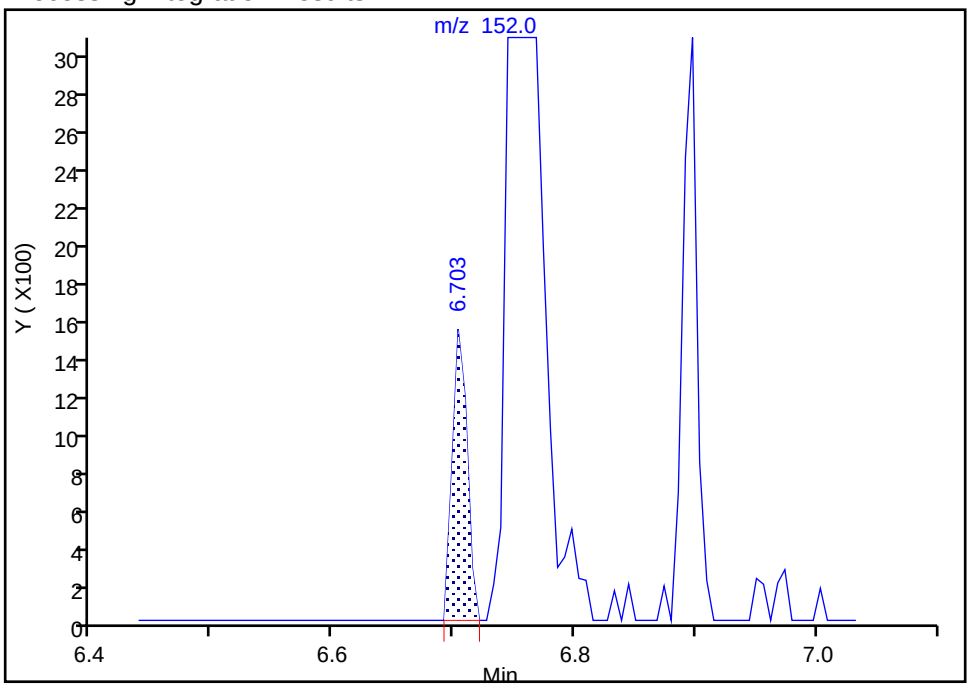
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425006.D				
Injection Date:	25-Apr-2018 08:39:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-1-A	Lab Sample ID:	240-94103-1		
Client ID:	16C1				
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

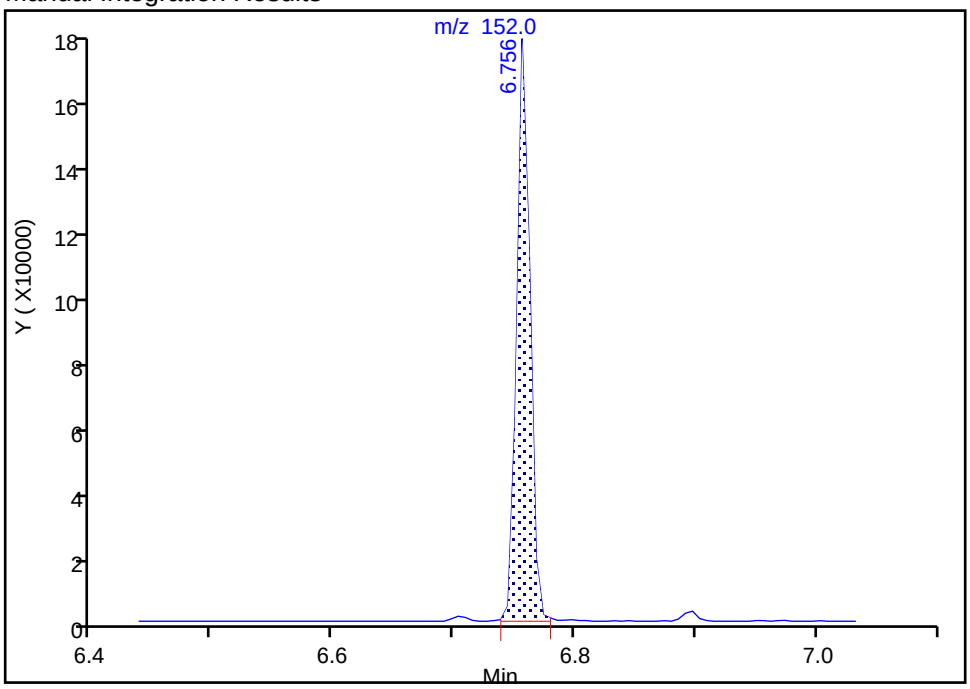
Processing Integration Results

RT: 6.70
Area: 1305
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 135382
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:43:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW8 | Lab Sample ID: 240-94103-2

Matrix: Water | Lab File ID: 80420022.D

Analysis Method: 8270D | Date Collected: 04/10/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 250(mL) | Date Analyzed: 04/20/2018 16:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	101		28-128
4165-62-2	Phenol-d5 (Surr)	58		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	81		35-120
367-12-4	2-Fluorophenol (Surr)	67		17-120
321-60-8	2-Fluorobiphenyl (Surr)	77		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	82		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW8 | Lab Sample ID: 240-94103-2

Matrix: Water | Lab File ID: 80420022.D

Analysis Method: 8270D | Date Collected: 04/10/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 250(mL) | Date Analyzed: 04/20/2018 16:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		100	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420022.D
Lims ID: 240-94103-A-2-A
Client ID: 16MW8
Sample Type: Client
Inject. Date: 20-Apr-2018 16:52:30 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-022
Misc. Info.: 240-94103-A-2-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:04:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	97982	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	543433	400.0	
* 3 Acenaphthene-d10	164	9.417	9.423	-0.006	95	268544	400.0	
* 4 Phenanthrene-d10	188	10.699	10.705	-0.006	98	557466	400.0	
* 5 Chrysene-d12	240	13.664	13.670	-0.006	99	498905	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	97	456498	400.0	
$ 7 2-Fluorophenol	112	5.770	5.770	0.000	94	216999	1073.9	
$ 8 Phenol-d5	99	6.488	6.444	-0.006	0	316211	933.3	
$ 9 Nitrobenzene-d5	82	7.299	7.300	0.000	96	682785	1292.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.806	-0.006	99	1157532	1239.8	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	81	123904	1317.0	
$ 12 Terphenyl-d14	244	12.199	12.195	-0.006	98	1602779	1615.7	
132 Sulfotepp	202		10.035				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

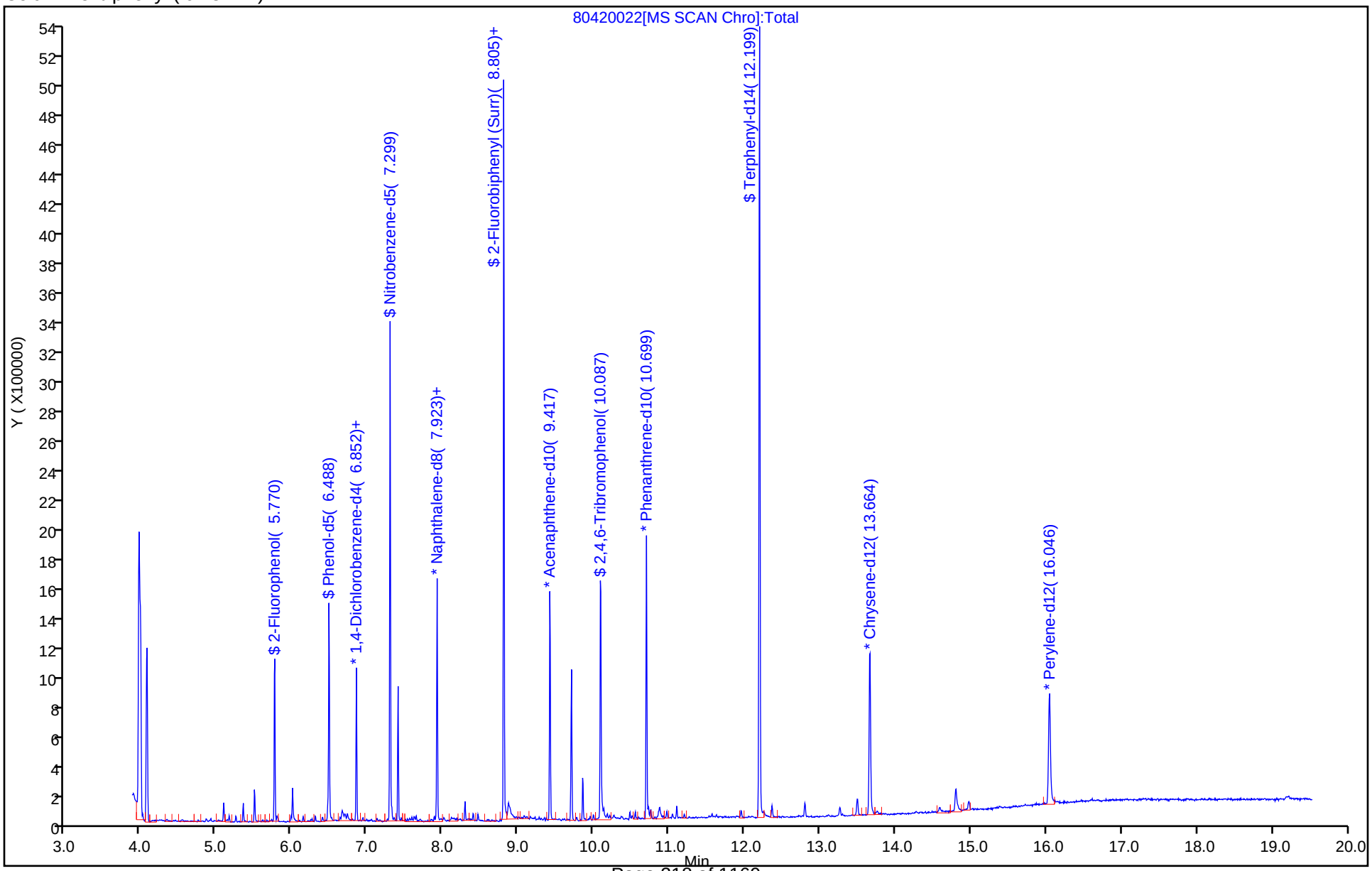
Report Date: 21-Apr-2018 07:35:08 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420022.D

Injection Date:	20-Apr-2018 16:52:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-2-A	Lab Sample ID:	240-94103-2	Worklist Smp#:	22
Client ID:	16MW8				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420022.D
Lims ID: 240-94103-A-2-A
Client ID: 16MW8
Sample Type: Client
Inject. Date: 20-Apr-2018 16:52:30 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-022
Misc. Info.: 240-94103-A-2-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:04:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	1073.9	67.12
$ 8 Phenol-d5	1600.0	933.3	58.33
$ 9 Nitrobenzene-d5	1600.0	1292.7	80.79
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1239.8	77.49
$ 11 2,4,6-Tribromophenol	1600.0	1317.0	82.31
$ 12 Terphenyl-d14	1600.0	1615.7	100.98

Manual Integration/User Assign Peak Report

TestAmerica Canton

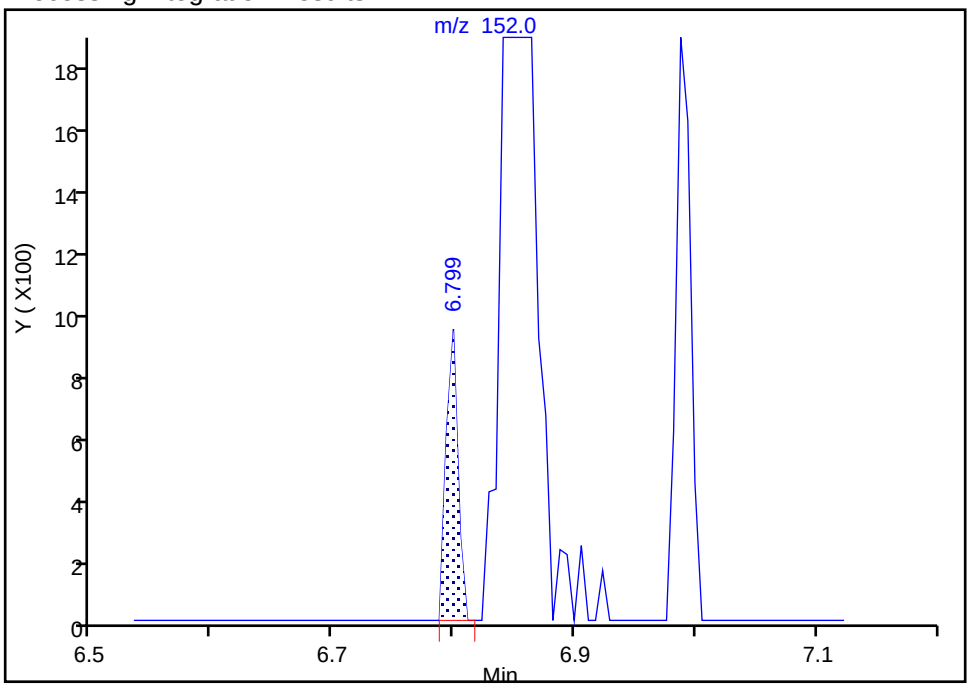
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420022.D				
Injection Date:	20-Apr-2018 16:52:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-2-A	Lab Sample ID:	240-94103-2		
Client ID:	16MW8				
Operator ID:		ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

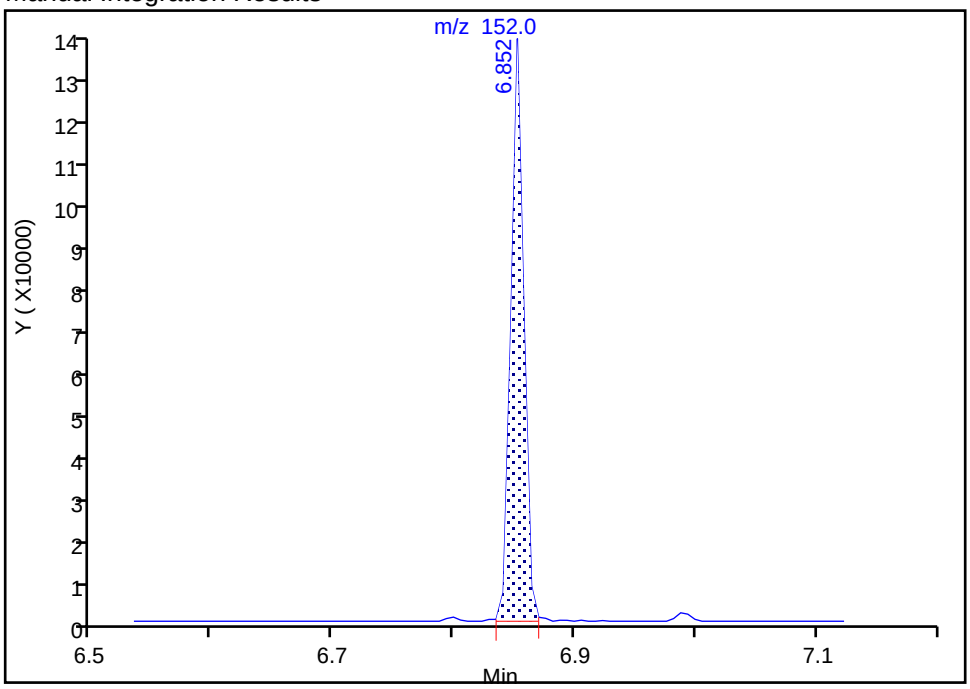
Processing Integration Results

RT: 6.80
Area: 641
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 97982
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 21-Apr-2018 07:04:17

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW8 RE | Lab Sample ID: 240-94103-2 RE

Matrix: Water | Lab File ID: 80425007.D

Analysis Method: 8270D | Date Collected: 04/10/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 09:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*10*	*U H*	*10*	*1.0*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	75		28-128
4165-62-2	Phenol-d5 (Surr)	40		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	52		35-120
367-12-4	2-Fluorophenol (Surr)	43		17-120
321-60-8	2-Fluorobiphenyl (Surr)	54		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	47		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW8 RE | Lab Sample ID: 240-94103-2 RE

Matrix: Water | Lab File ID: 80425007.D

Analysis Method: 8270D | Date Collected: 04/10/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 09:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*100*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425007.D
Lims ID: 240-94103-B-2-A
Client ID: 16MW8
Sample Type: Client
Inject. Date: 25-Apr-2018 09:04:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-007
Misc. Info.: 240-94103-B-2-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:59:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	147496	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	763207	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	442197	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	800442	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	619743	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	603065	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	214897	690.1	
$ 8 Phenol-d5	99	6.397	6.403	-0.006	0	313641	634.1	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	95	593689	837.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1293823	862.7	
$ 11 2,4,6-Tribromophenol	330	10.003	10.009	-0.006	83	99831	745.6	
$ 12 Terphenyl-d14	244	12.097	12.103	-0.006	98	1515367	1197.6	
132 Sulfotepp	202		9.950				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

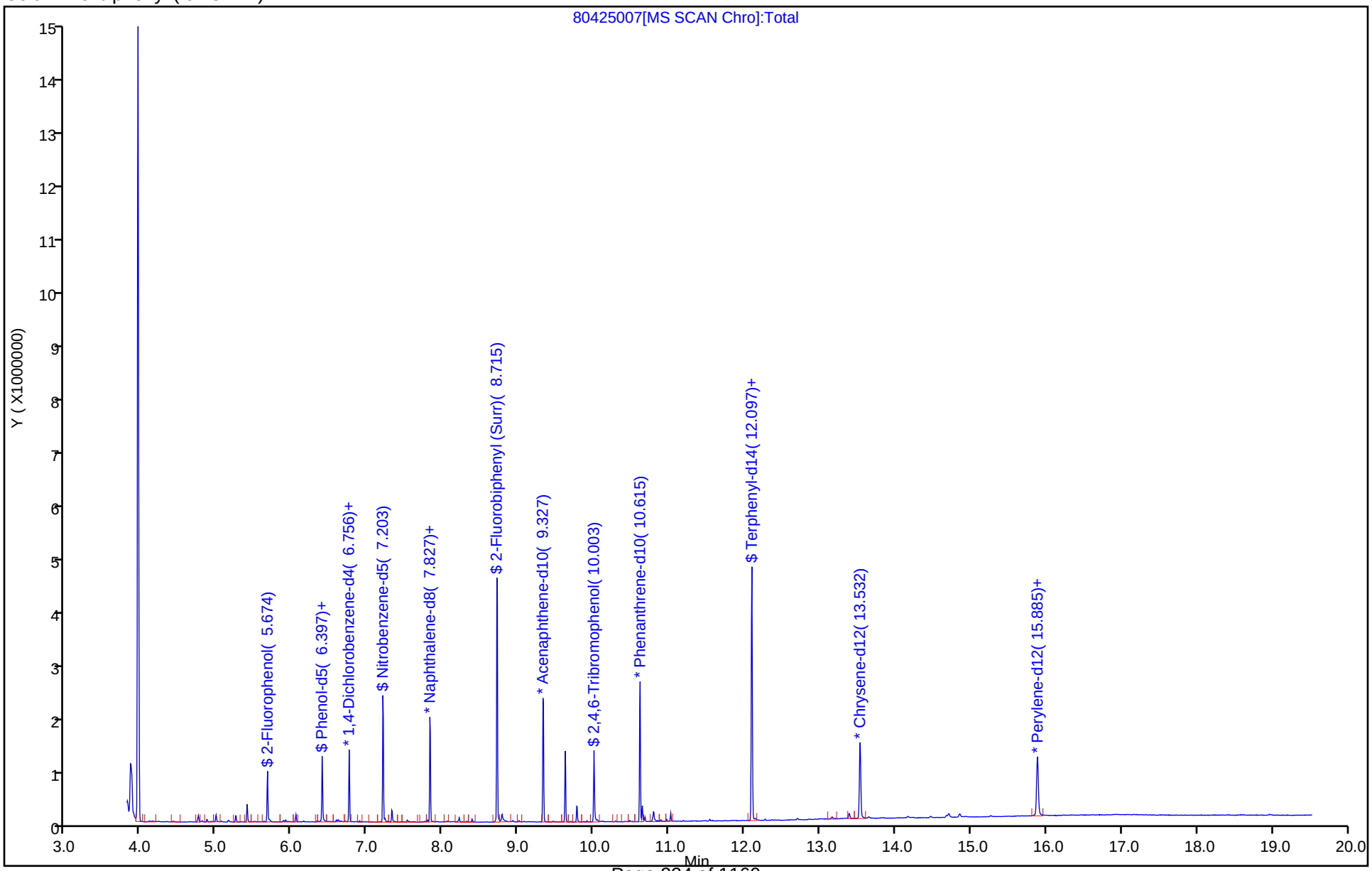
Report Date: 25-Apr-2018 10:03:46 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425007.D

Injection Date:	25-Apr-2018 09:04:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-2-A	Lab Sample ID:	240-94103-2	Worklist Smp#:	7
Client ID:	16MW8				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425007.D
Lims ID: 240-94103-B-2-A
Client ID: 16MW8
Sample Type: Client
Inject. Date: 25-Apr-2018 09:04:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-007
Misc. Info.: 240-94103-B-2-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:59:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	690.1	43.13
$ 8 Phenol-d5	1600.0	634.1	39.63
$ 9 Nitrobenzene-d5	1600.0	837.7	52.35
$ 10 2-Fluorobiphenyl (Surr)	1600.0	862.7	53.92
$ 11 2,4,6-Tribromophenol	1600.0	745.6	46.60
$ 12 Terphenyl-d14	1600.0	1197.6	74.85

Manual Integration/User Assign Peak Report

TestAmerica Canton

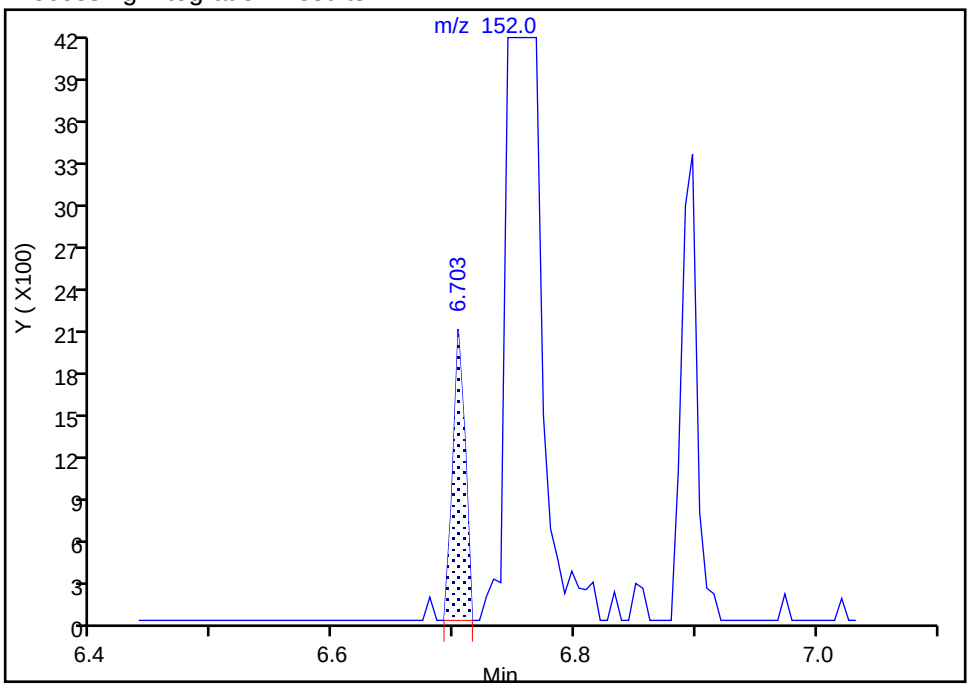
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425007.D				
Injection Date:	25-Apr-2018 09:04:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-2-A	Lab Sample ID:	240-94103-2		
Client ID:	16MW8				
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

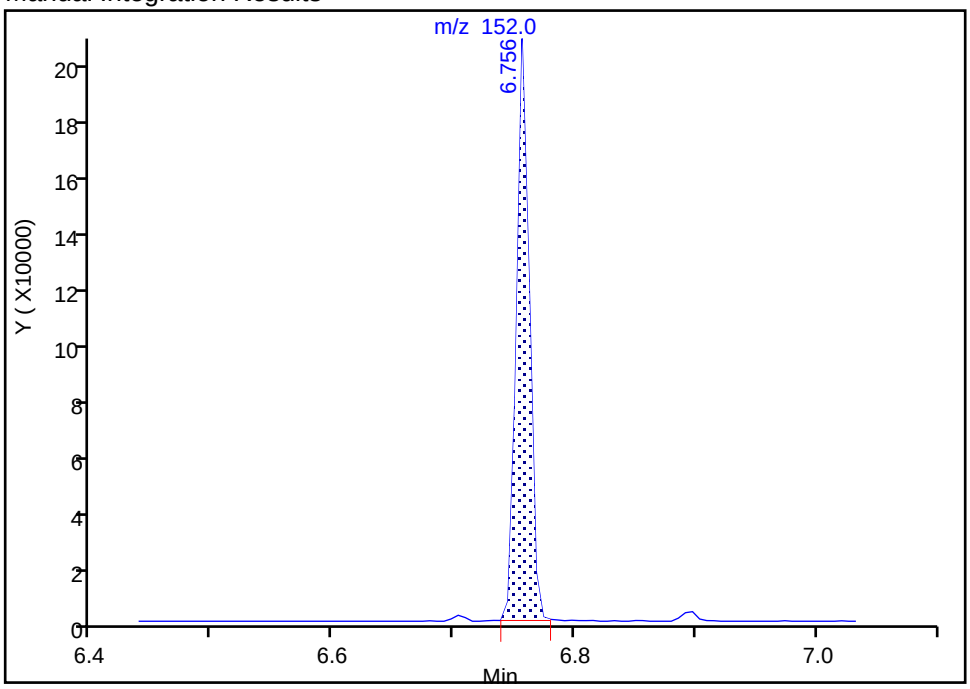
Processing Integration Results

RT: 6.70
Area: 1447
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 147496
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:45:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW9 | Lab Sample ID: 240-94103-3

Matrix: Water | Lab File ID: 80420023.D

Analysis Method: 8270D | Date Collected: 04/13/2018 09:10

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 270(mL) | Date Analyzed: 04/20/2018 17:16

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	9.3	U	9.3	0.93

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	83		28-128
4165-62-2	Phenol-d5 (Surr)	48		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	61		35-120
367-12-4	2-Fluorophenol (Surr)	46		17-120
321-60-8	2-Fluorobiphenyl (Surr)	62		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	66		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW9 | Lab Sample ID: 240-94103-3

Matrix: Water | Lab File ID: 80420023.D

Analysis Method: 8270D | Date Collected: 04/13/2018 09:10

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 270(mL) | Date Analyzed: 04/20/2018 17:16

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		93	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420023.D
Lims ID: 240-94103-B-3-A
Client ID: 16MW9
Sample Type: Client
Inject. Date: 20-Apr-2018 17:16:30 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-023
Misc. Info.: 240-94103-B-3-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:05:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	103179	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	600391	400.0	
* 3 Acenaphthene-d10	164	9.417	9.423	-0.006	97	271244	400.0	
* 4 Phenanthrene-d10	188	10.699	10.705	-0.006	98	582517	400.0	
* 5 Chrysene-d12	240	13.658	13.670	-0.012	99	495483	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	97	458374	400.0	
$ 7 2-Fluorophenol	112	5.770	5.770	0.000	94	156287	734.5	
$ 8 Phenol-d5	99	6.488	6.444	-0.006	0	272836	764.7	
$ 9 Nitrobenzene-d5	82	7.299	7.300	0.000	97	572938	981.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.806	-0.006	99	928054	984.1	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	79	100000	1052.4	
$ 12 Terphenyl-d14	244	12.199	12.195	-0.006	98	1313780	1333.5	
132 Sulfotepp	202		10.035				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

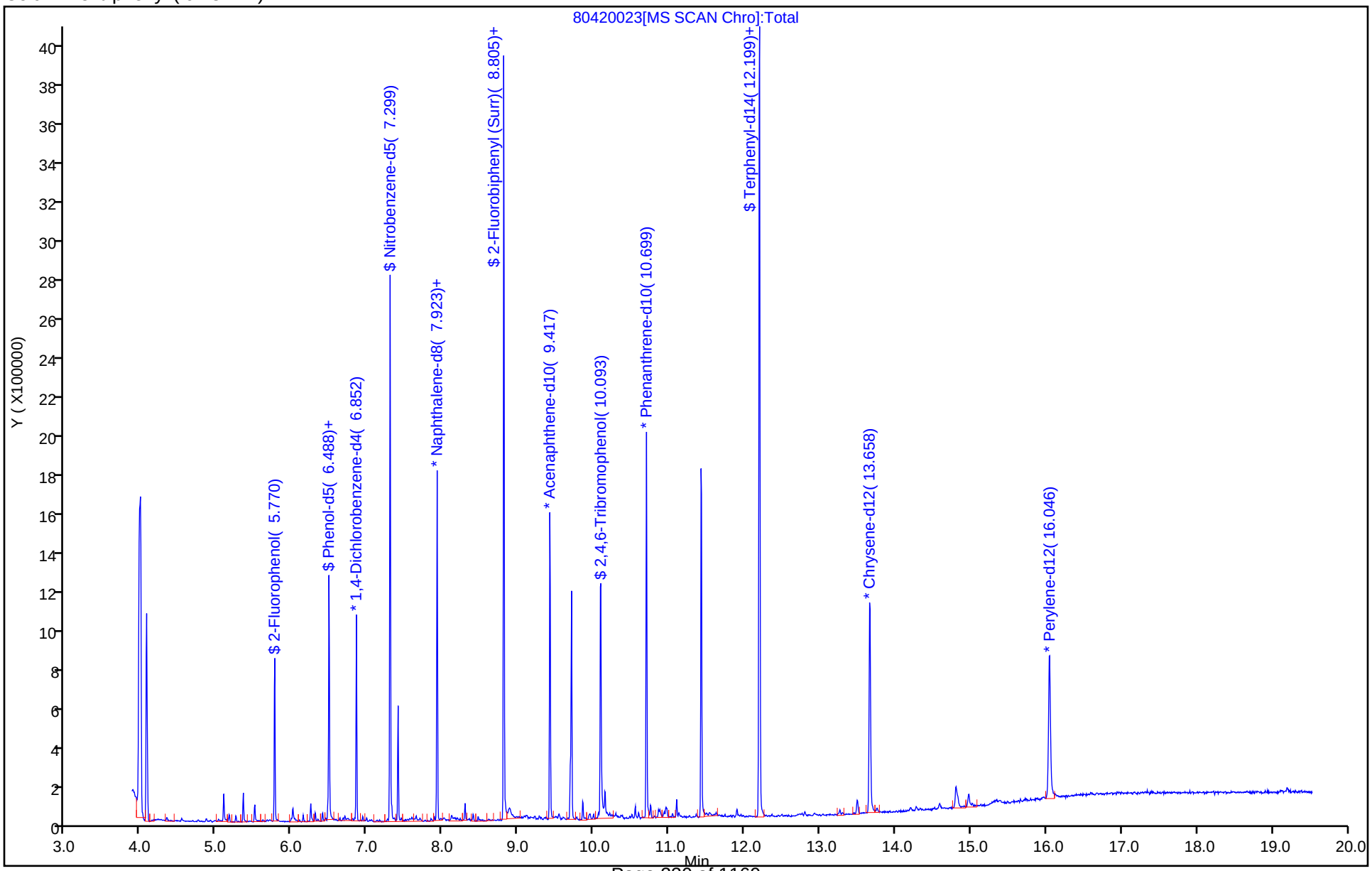
Report Date: 21-Apr-2018 07:35:12 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420023.D

Injection Date:	20-Apr-2018 17:16:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-3-A	Lab Sample ID:	240-94103-3	Worklist Smp#:	23
Client ID:	16MW9				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420023.D
Lims ID: 240-94103-B-3-A
Client ID: 16MW9
Sample Type: Client
Inject. Date: 20-Apr-2018 17:16:30 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-023
Misc. Info.: 240-94103-B-3-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:05:18

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	734.5	45.90
$ 8 Phenol-d5	1600.0	764.7	47.79
$ 9 Nitrobenzene-d5	1600.0	981.8	61.36
$ 10 2-Fluorobiphenyl (Surr)	1600.0	984.1	61.51
$ 11 2,4,6-Tribromophenol	1600.0	1052.4	65.77
$ 12 Terphenyl-d14	1600.0	1333.5	83.34

Manual Integration/User Assign Peak Report

TestAmerica Canton

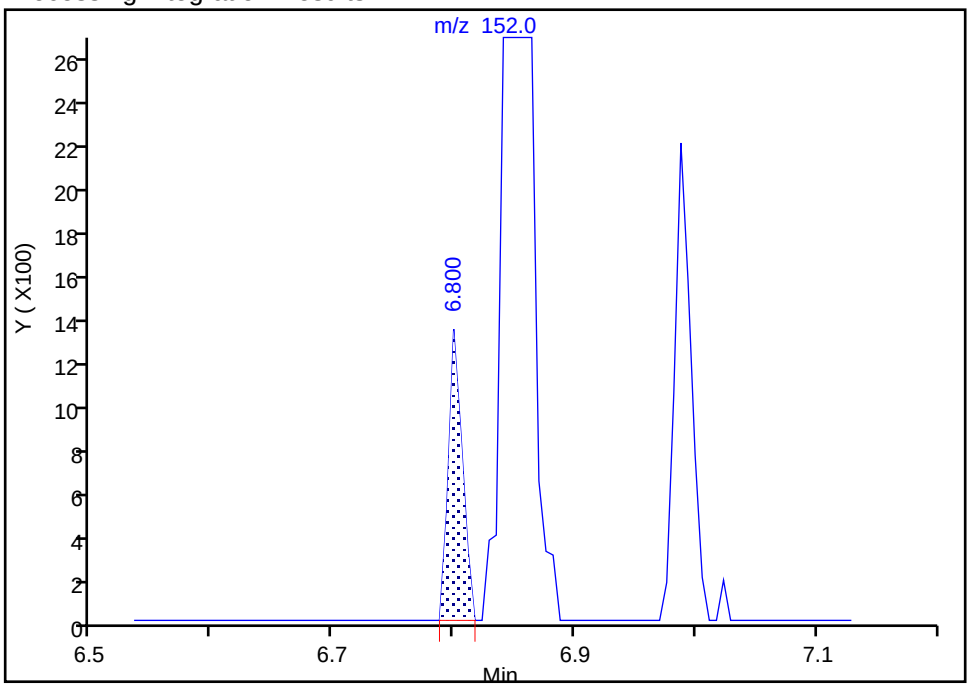
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420023.D				
Injection Date:	20-Apr-2018 17:16:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-3-A	Lab Sample ID:	240-94103-3		
Client ID:	16MW9				
Operator ID:		ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

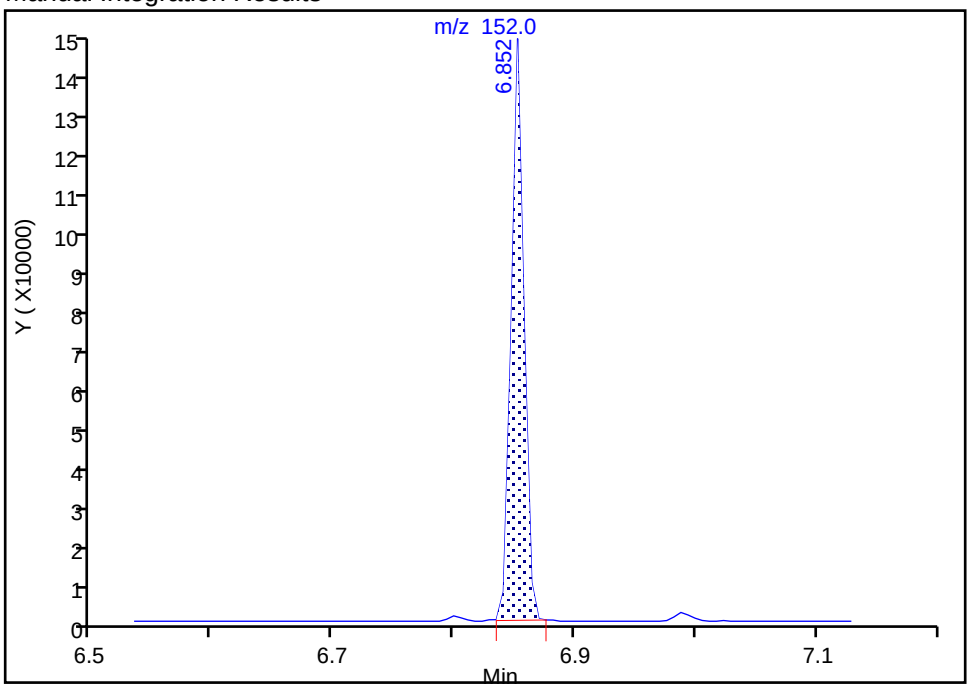
Processing Integration Results

RT: 6.80
Area: 1049
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 103179
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 21-Apr-2018 07:04:46

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW9 RE | Lab Sample ID: 240-94103-3 RE

Matrix: Water | Lab File ID: 80425008.D

Analysis Method: 8270D | Date Collected: 04/13/2018 09:10

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 280(mL) | Date Analyzed: 04/25/2018 09:28

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*8.9*	*U H*	*8.9*	*0.89*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	102		28-128
4165-62-2	Phenol-d5 (Surr)	59		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	69		35-120
367-12-4	2-Fluorophenol (Surr)	55		17-120
321-60-8	2-Fluorobiphenyl (Surr)	71		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	65		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16MW9 RE | Lab Sample ID: 240-94103-3 RE

Matrix: Water | Lab File ID: 80425008.D

Analysis Method: 8270D | Date Collected: 04/13/2018 09:10

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 280(mL) | Date Analyzed: 04/25/2018 09:28

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*89*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425008.D
Lims ID: 240-94103-A-3-A
Client ID: 16MW9
Sample Type: Client
Inject. Date: 25-Apr-2018 09:28:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-008
Misc. Info.: 240-94103-A-3-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 10:02:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	152549	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	863104	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	96	426601	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	783200	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	570697	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	575513	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	284450	883.2	a
$ 8 Phenol-d5	99	6.398	6.403	-0.005	0	486962	951.8	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	95	886582	1106.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1645786	1137.5	
$ 11 2,4,6-Tribromophenol	330	10.003	10.009	-0.006	84	135036	1045.4	
$ 12 Terphenyl-d14	244	12.097	12.103	-0.006	98	1897265	1628.3	
132 Sulfotepp	202		9.950				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

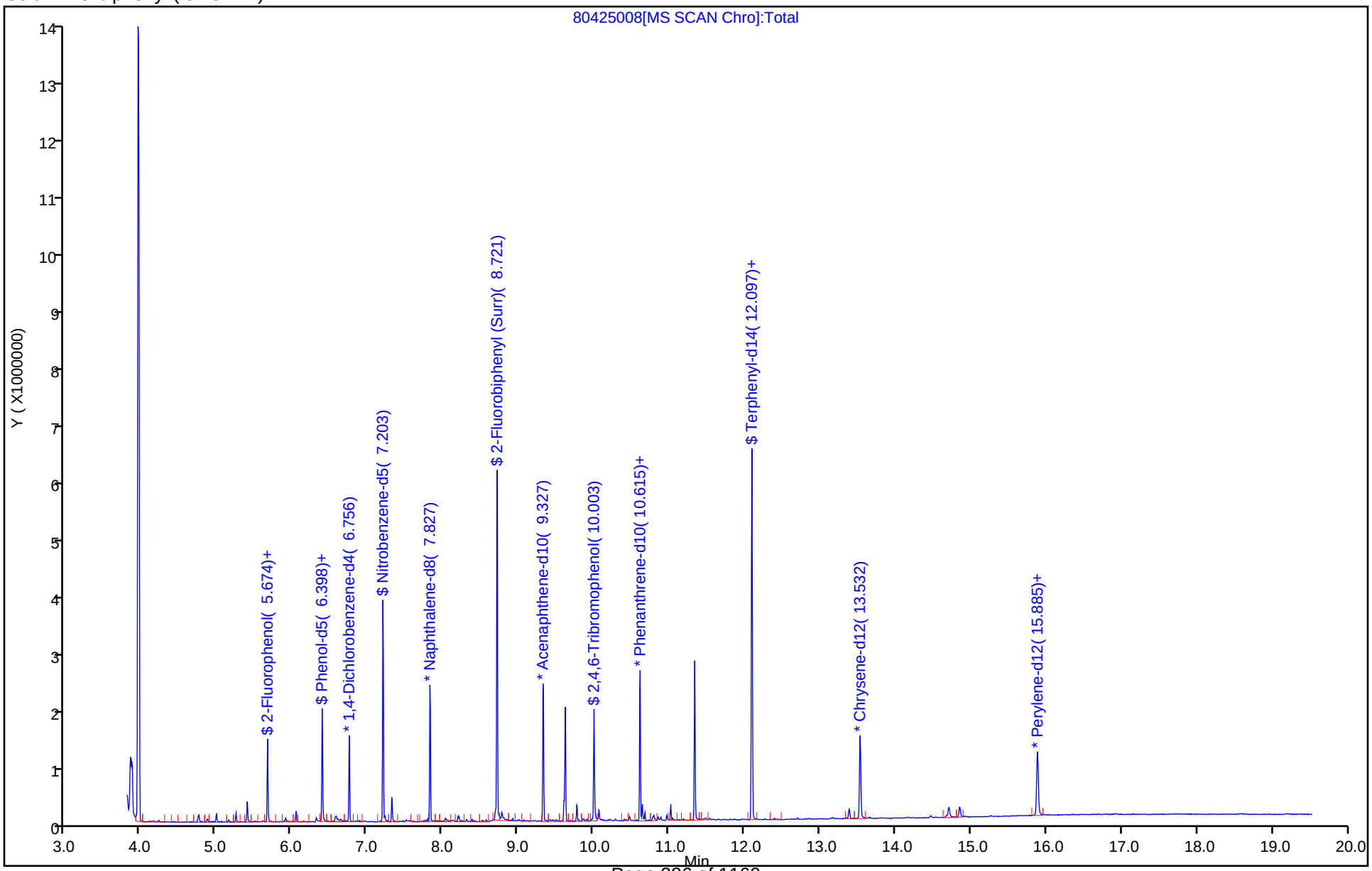
Report Date: 25-Apr-2018 10:03:49 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425008.D

Injection Date:	25-Apr-2018 09:28:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-3-A	Lab Sample ID:	240-94103-3	Worklist Smp#:	8
Client ID:	16MW9				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425008.D
Lims ID: 240-94103-A-3-A
Client ID: 16MW9
Sample Type: Client
Inject. Date: 25-Apr-2018 09:28:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-008
Misc. Info.: 240-94103-A-3-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 10:02:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	883.2	55.20
$ 8 Phenol-d5	1600.0	951.8	59.49
$ 9 Nitrobenzene-d5	1600.0	1106.1	69.13
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1137.5	71.09
$ 11 2,4,6-Tribromophenol	1600.0	1045.4	65.34
$ 12 Terphenyl-d14	1600.0	1628.3	101.77

Manual Integration/User Assign Peak Report

TestAmerica Canton

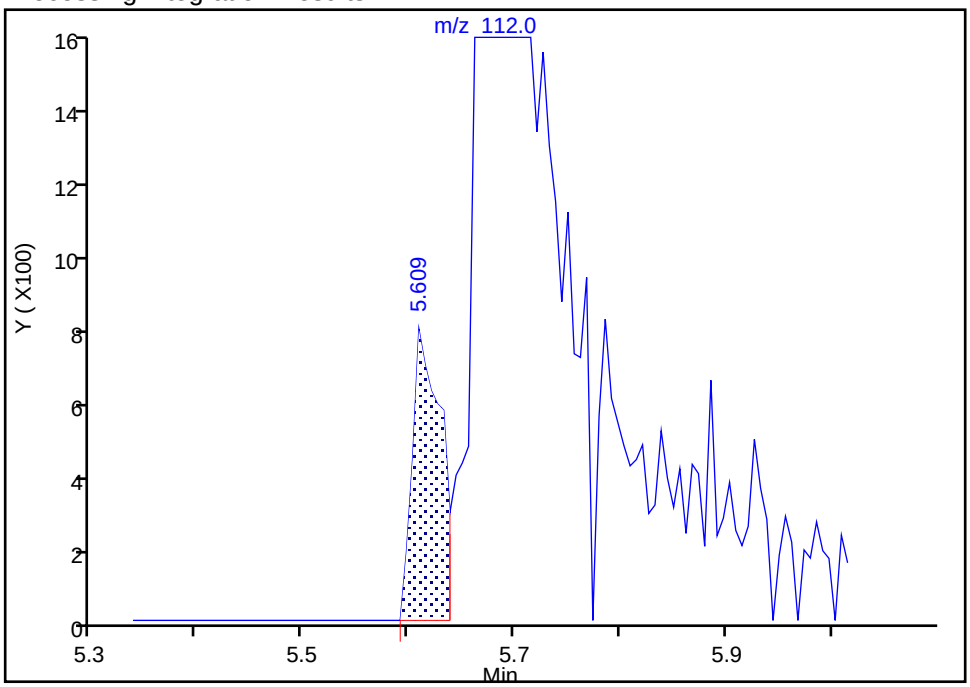
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425008.D				
Injection Date:	25-Apr-2018 09:28:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-3-A	Lab Sample ID:	240-94103-3		
Client ID:	16MW9				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

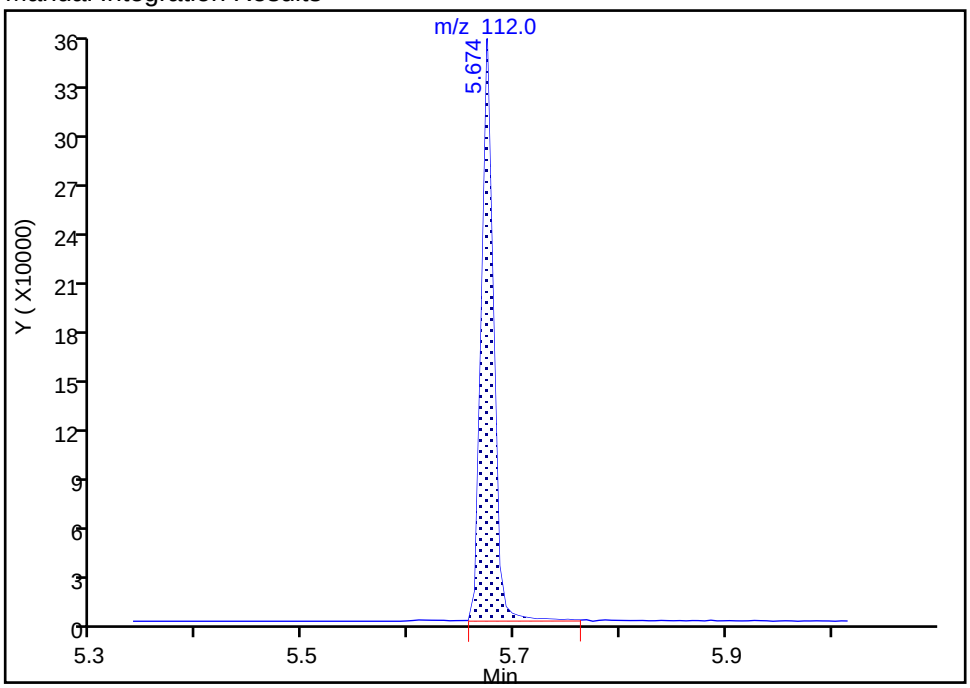
Processing Integration Results

RT: 5.61
Area: 1475
Amount: 4.580001
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 284450
Amount: 883.2415
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 10:00:14

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

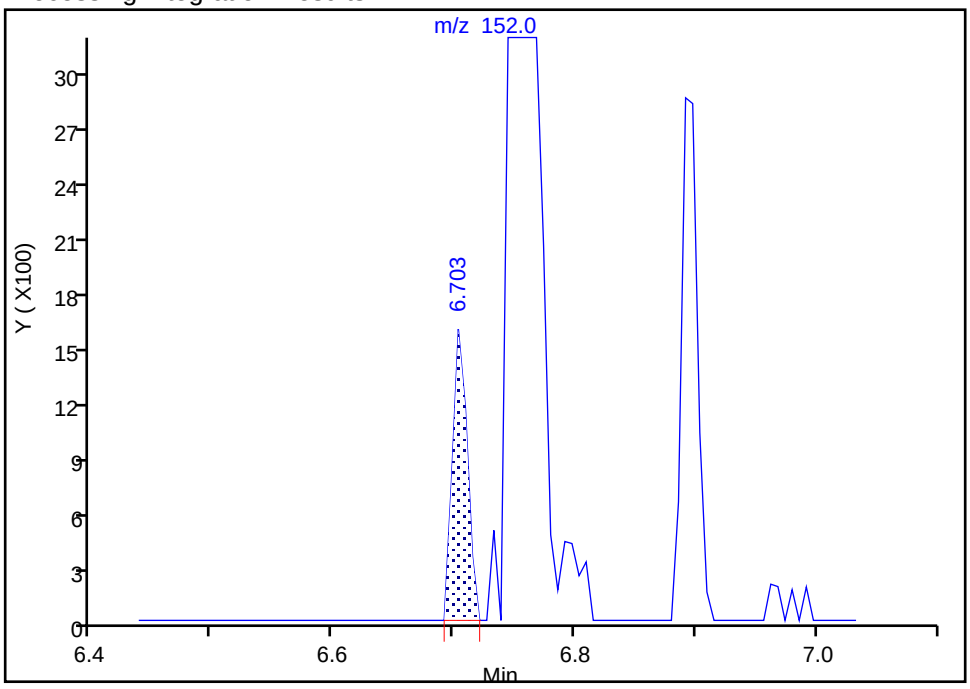
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425008.D				
Injection Date:	25-Apr-2018 09:28:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-3-A	Lab Sample ID:	240-94103-3		
Client ID:	16MW9				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

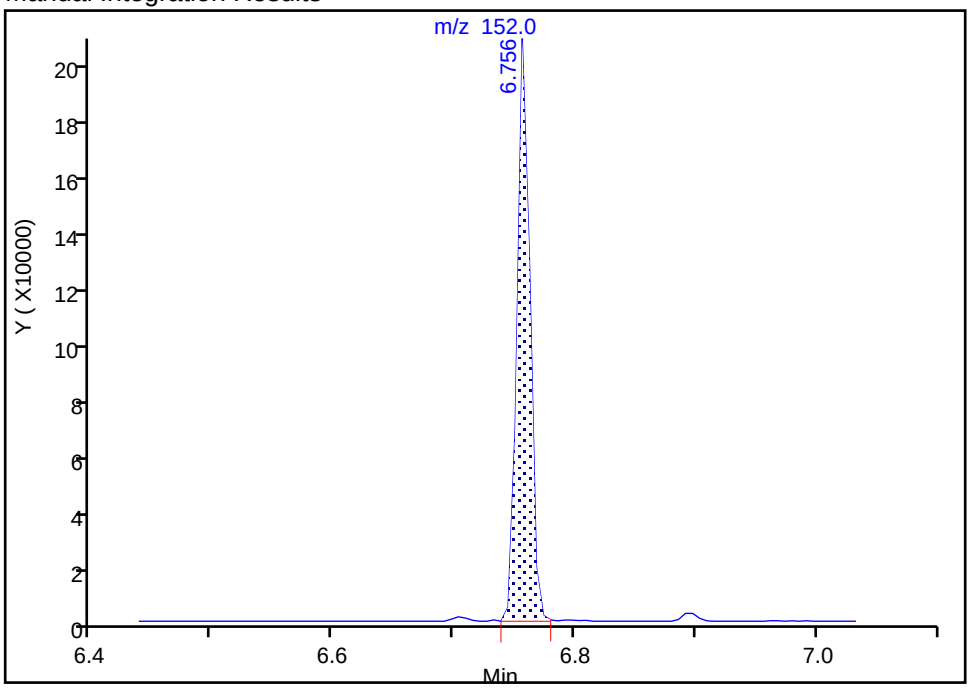
Processing Integration Results

RT: 6.70
Area: 1336
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 152549
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:59:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A | Lab Sample ID: 240-94103-4

Matrix: Water | Lab File ID: 80420024.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 270(mL) | Date Analyzed: 04/20/2018 17:41

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	9.3	U	9.3	0.93

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	85		28-128
4165-62-2	Phenol-d5 (Surr)	44		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	66		35-120
367-12-4	2-Fluorophenol (Surr)	52		17-120
321-60-8	2-Fluorobiphenyl (Surr)	67		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	71		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A | Lab Sample ID: 240-94103-4

Matrix: Water | Lab File ID: 80420024.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 270(mL) | Date Analyzed: 04/20/2018 17:41

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		93	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420024.D
Lims ID: 240-94103-B-4-A
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 20-Apr-2018 17:41:30 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-024
Misc. Info.: 240-94103-B-4-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:05:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	100156	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	502396	400.0	
* 3 Acenaphthene-d10	164	9.417	9.423	-0.006	97	257546	400.0	
* 4 Phenanthrene-d10	188	10.699	10.705	-0.006	98	568672	400.0	
* 5 Chrysene-d12	240	13.664	13.670	-0.006	99	495046	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	97	449476	400.0	
$ 7 2-Fluorophenol	112	5.770	5.770	0.000	94	170604	826.0	
$ 8 Phenol-d5	99	6.488	6.444	-0.006	0	245948	710.2	
$ 9 Nitrobenzene-d5	82	7.299	7.300	0.000	95	514240	1053.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.806	-0.006	99	958574	1070.5	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	80	102438	1135.3	
$ 12 Terphenyl-d14	244	12.199	12.195	-0.006	98	1342324	1363.7	
132 Sulfotepp	202		10.035				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

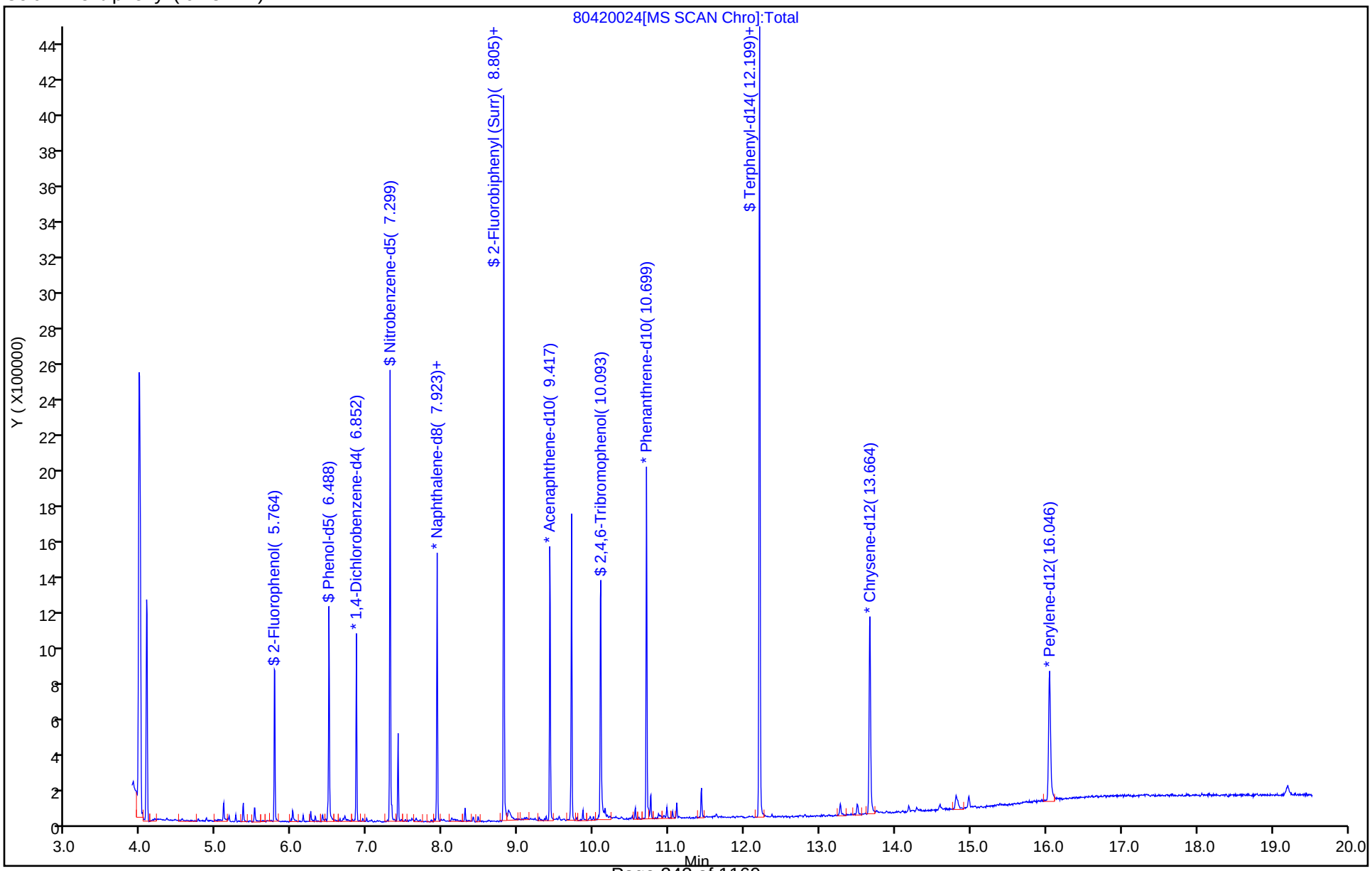
Report Date: 21-Apr-2018 07:35:16 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420024.D

Injection Date:	20-Apr-2018 17:41:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-4-A	Lab Sample ID:	240-94103-4	Worklist Smp#:	24
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420024.D
Lims ID: 240-94103-B-4-A
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 20-Apr-2018 17:41:30 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-024
Misc. Info.: 240-94103-B-4-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:05:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	826.0	51.62
$ 8 Phenol-d5	1600.0	710.2	44.38
$ 9 Nitrobenzene-d5	1600.0	1053.1	65.82
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1070.5	66.91
$ 11 2,4,6-Tribromophenol	1600.0	1135.3	70.96
$ 12 Terphenyl-d14	1600.0	1363.7	85.23

Manual Integration/User Assign Peak Report

TestAmerica Canton

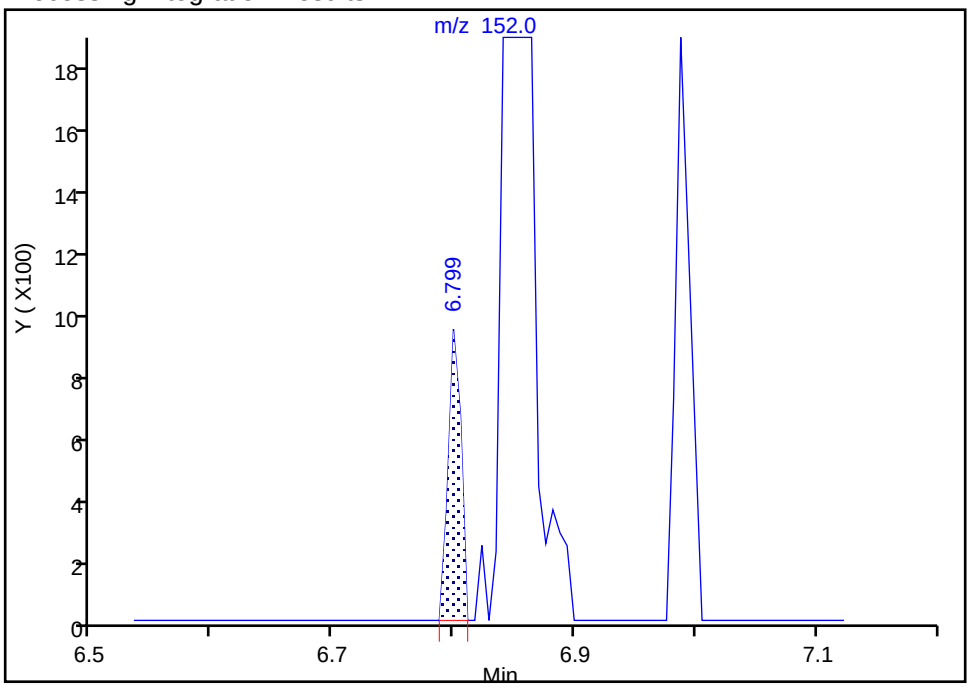
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420024.D				
Injection Date:	20-Apr-2018 17:41:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-4-A	Lab Sample ID:	240-94103-4		
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	24	Worklist Smp#:	24
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

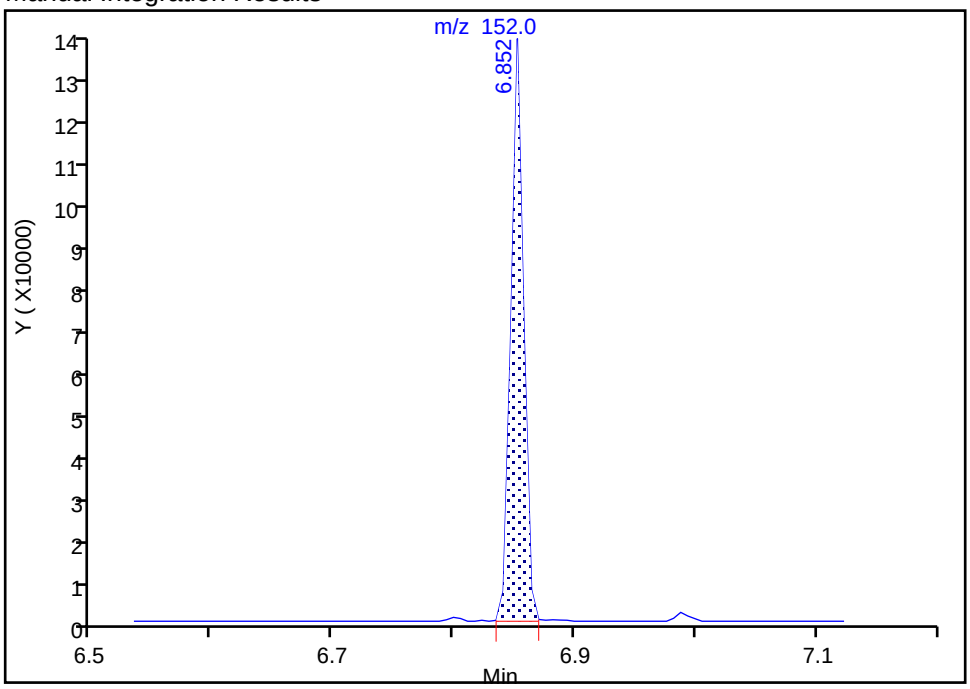
Processing Integration Results

RT: 6.80
Area: 677
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 100156
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 21-Apr-2018 07:05:35

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A RE | Lab Sample ID: 240-94103-4 RE

Matrix: Water | Lab File ID: 80425009.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 09:53

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*9.3*	*U H*	*9.3*	*0.93*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	105		28-128
4165-62-2	Phenol-d5 (Surr)	68		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	72		35-120
367-12-4	2-Fluorophenol (Surr)	66		17-120
321-60-8	2-Fluorobiphenyl (Surr)	73		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	71		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A RE | Lab Sample ID: 240-94103-4 RE

Matrix: Water | Lab File ID: 80425009.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 09:53

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*93*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425009.D
Lims ID: 240-94103-D-4-A
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 25-Apr-2018 09:53:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-009
Misc. Info.: 240-94103-D-4-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:21:36 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 10:21:36

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
*	1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	128821	400.0	a
*	2 Naphthalene-d8	136	7.827	7.833	-0.006	100	804342	400.0	
*	3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	415716	400.0	
*	4 Phenanthrene-d10	188	10.615	10.615	0.000	98	766590	400.0	
*	5 Chrysene-d12	240	13.532	13.538	-0.006	98	569558	400.0	
*	6 Perylene-d12	264	15.885	15.891	-0.006	96	555504	400.0	
$	7 2-Fluorophenol	112	5.674	5.630	0.000	95	287256	1056.2	
$	8 Phenol-d5	99	6.398	6.353	-0.005	0	471463	1091.3	
$	9 Nitrobenzene-d5	82	7.203	7.198	0.000	94	862302	1154.4	
$	10 2-Fluorobiphenyl (Surr)	172	8.721	8.715	0.000	100	1652386	1171.9	
$	11 2,4,6-Tribromophenol	330	10.003	10.003	-0.006	83	143544	1140.4	
$	12 Terphenyl-d14	244	12.097	12.098	-0.006	98	1945089	1672.7	
	132 Sulfotepp	202		9.950				ND	
T	202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

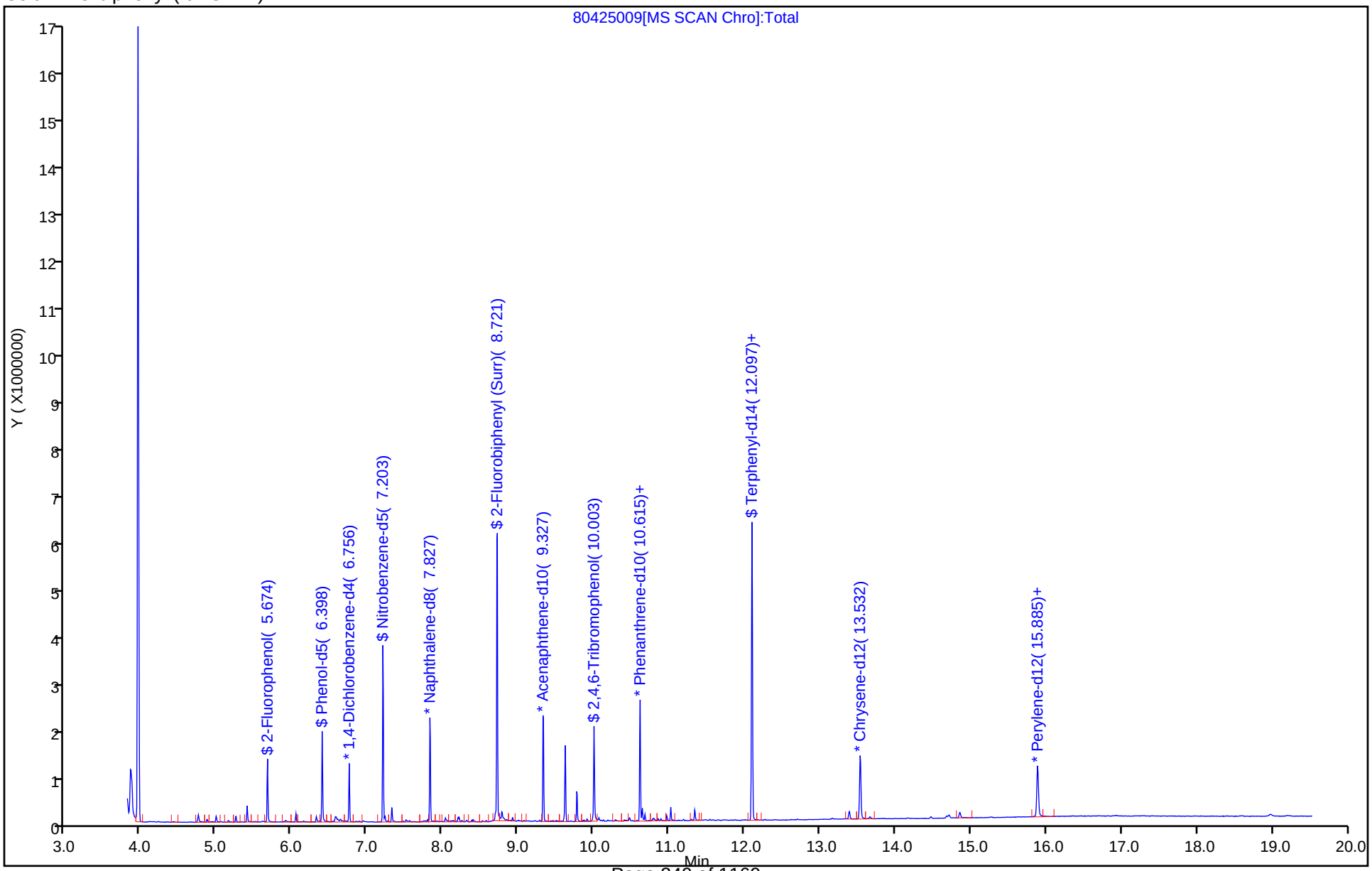
Report Date: 25-Apr-2018 10:21:43 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425009.D

Injection Date:	25-Apr-2018 09:53:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-D-4-A	Lab Sample ID:	240-94103-4	Worklist Smp#:	9
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425009.D
Lims ID: 240-94103-D-4-A
Client ID: 16WC1A
Sample Type: Client
Inject. Date: 25-Apr-2018 09:53:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-009
Misc. Info.: 240-94103-D-4-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:21:36 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 10:21:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	1056.2	66.02
$ 8 Phenol-d5	1600.0	1091.3	68.21
$ 9 Nitrobenzene-d5	1600.0	1154.4	72.15
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1171.9	73.25
$ 11 2,4,6-Tribromophenol	1600.0	1140.4	71.28
$ 12 Terphenyl-d14	1600.0	1672.7	104.54

Manual Integration/User Assign Peak Report

TestAmerica Canton

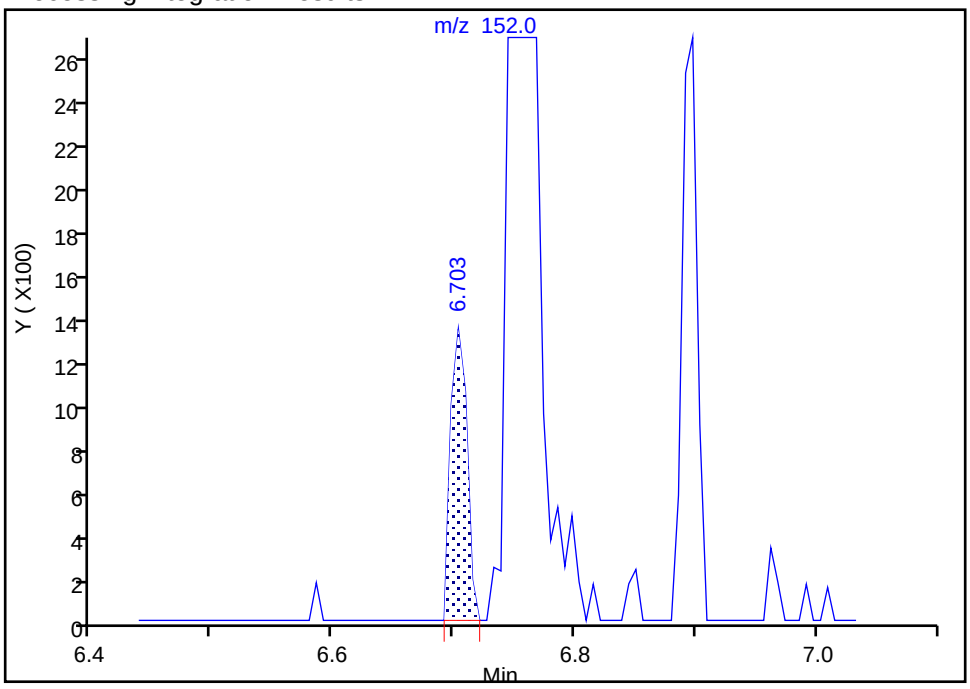
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425009.D				
Injection Date:	25-Apr-2018 09:53:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-D-4-A	Lab Sample ID:	240-94103-4		
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

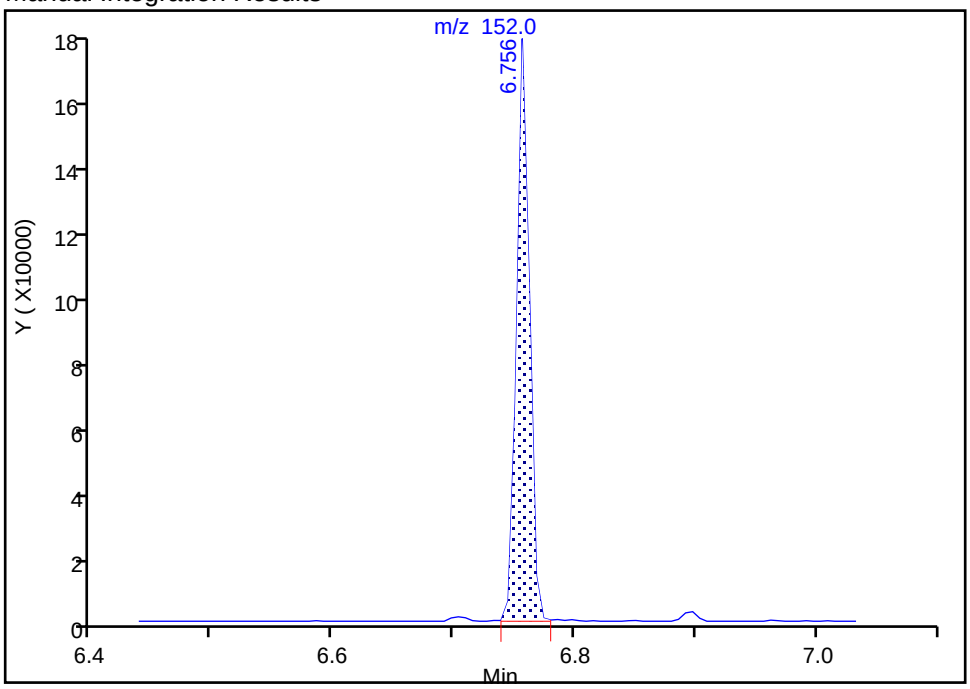
Processing Integration Results

RT: 6.70
Area: 1267
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 128821
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 10:21:07

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WDUP | Lab Sample ID: 240-94103-5

Matrix: Water | Lab File ID: 80423025.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:30

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/23/2018 16:01

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	93		28-128
4165-62-2	Phenol-d5 (Surr)	47		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	63		35-120
367-12-4	2-Fluorophenol (Surr)	60		17-120
321-60-8	2-Fluorobiphenyl (Surr)	64		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	64		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WDUP | Lab Sample ID: 240-94103-5

Matrix: Water | Lab File ID: 80423025.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:30

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/23/2018 16:01

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323501 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		89	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423025.D
Lims ID: 240-94103-B-5-A
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 23-Apr-2018 16:01:30 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-025
Misc. Info.: 240-94103-B-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:39:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	178826	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	850544	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	416420	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	803879	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	593765	400.0	
* 6 Perylene-d12	264	15.928	15.922	0.006	95	451098	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	95	364678	966.0	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	452048	753.8	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	94	798352	1010.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	1439894	1019.5	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	90	129195	1024.7	
$ 12 Terphenyl-d14	244	12.123	12.117	0.006	99	1805676	1489.5	
132 Sulfotepp	202		9.964				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

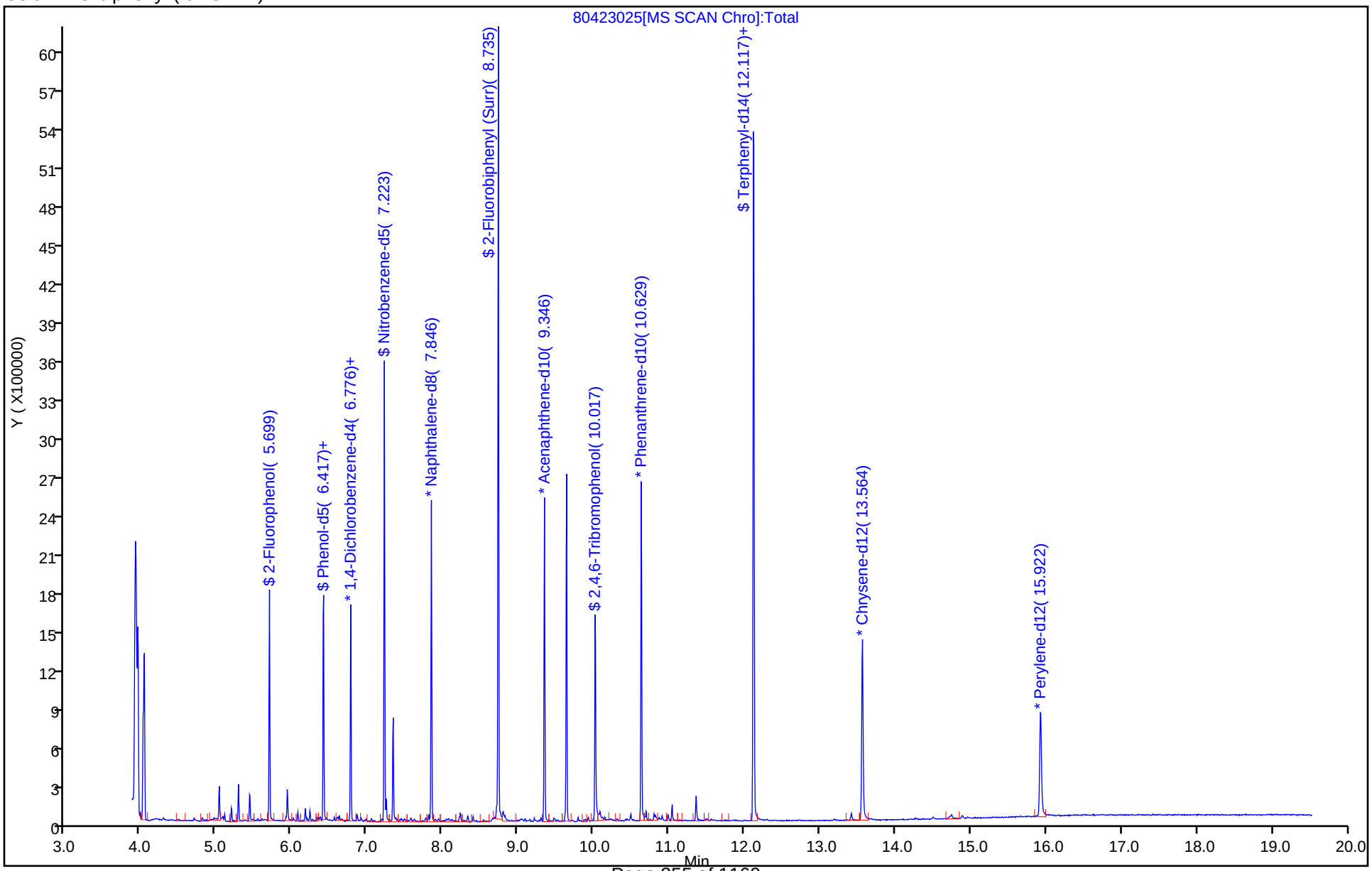
Report Date: 24-Apr-2018 07:02:53 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423025.D

Injection Date:	23-Apr-2018 16:01:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-5-A	Lab Sample ID:	240-94103-5	Worklist Smp#:	25
Client ID:	16WDUP				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423025.D
Lims ID: 240-94103-B-5-A
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 23-Apr-2018 16:01:30 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-025
Misc. Info.: 240-94103-B-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:39:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	966.0	60.37
$ 8 Phenol-d5	1600.0	753.8	47.11
$ 9 Nitrobenzene-d5	1600.0	1010.8	63.17
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1019.5	63.72
$ 11 2,4,6-Tribromophenol	1600.0	1024.7	64.04
$ 12 Terphenyl-d14	1600.0	1489.5	93.09

Manual Integration/User Assign Peak Report

TestAmerica Canton

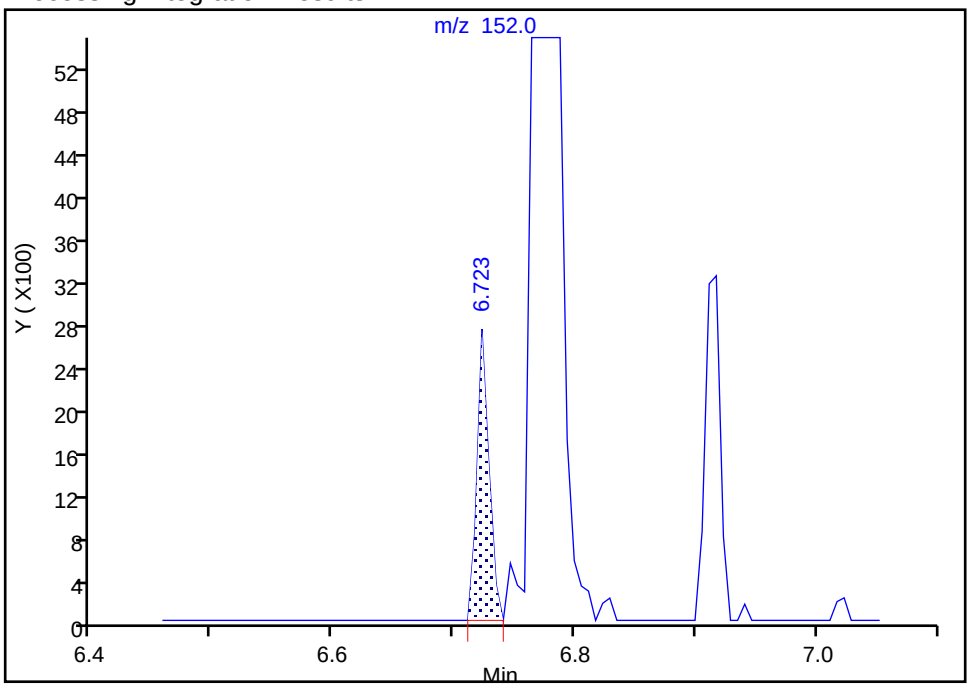
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423025.D				
Injection Date:	23-Apr-2018 16:01:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-5-A	Lab Sample ID:	240-94103-5		
Client ID:	16WDUP				
Operator ID:		ALS Bottle#:	25	Worklist Smp#:	25
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

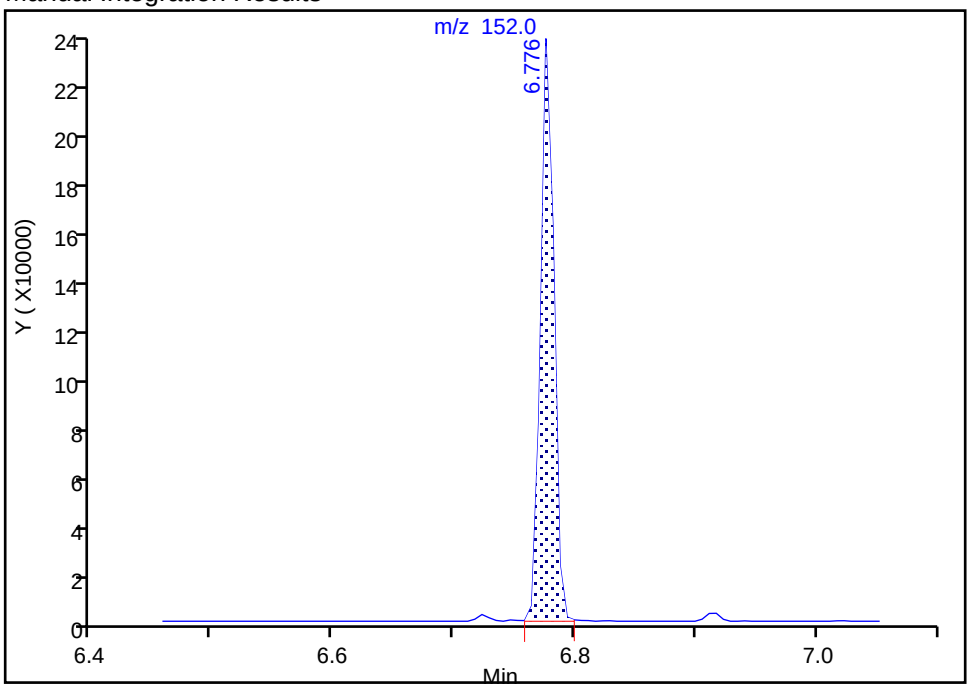
Processing Integration Results

RT: 6.72
Area: 1869
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 178826
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 06:39:31

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WDUP RE | Lab Sample ID: 240-94103-5 RE

Matrix: Water | Lab File ID: 80425012.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:30

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 280(mL) | Date Analyzed: 04/25/2018 11:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*8.9*	*U H*	*8.9*	*0.89*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	105		28-128
4165-62-2	Phenol-d5 (Surr)	59		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	75		35-120
367-12-4	2-Fluorophenol (Surr)	62		17-120
321-60-8	2-Fluorobiphenyl (Surr)	75		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	68		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WDUP RE | Lab Sample ID: 240-94103-5 RE

Matrix: Water | Lab File ID: 80425012.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:30

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 280(mL) | Date Analyzed: 04/25/2018 11:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*89*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425012.D
Lims ID: 240-94103-A-5-A
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 25-Apr-2018 11:06:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-012
Misc. Info.: 240-94103-A-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:46:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	157574	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	812762	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	403711	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	752544	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	568292	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	538452	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	331800	997.4	a
$ 8 Phenol-d5	99	6.397	6.353	-0.006	0	499645	945.5	
$ 9 Nitrobenzene-d5	82	7.203	7.198	0.000	95	900086	1192.5	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.715	0.000	100	1652701	1207.0	
$ 11 2,4,6-Tribromophenol	330	10.003	10.003	-0.006	85	132299	1082.3	
$ 12 Terphenyl-d14	244	12.097	12.098	-0.006	98	1943047	1674.7	
132 Sulfotepp	202		9.950				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

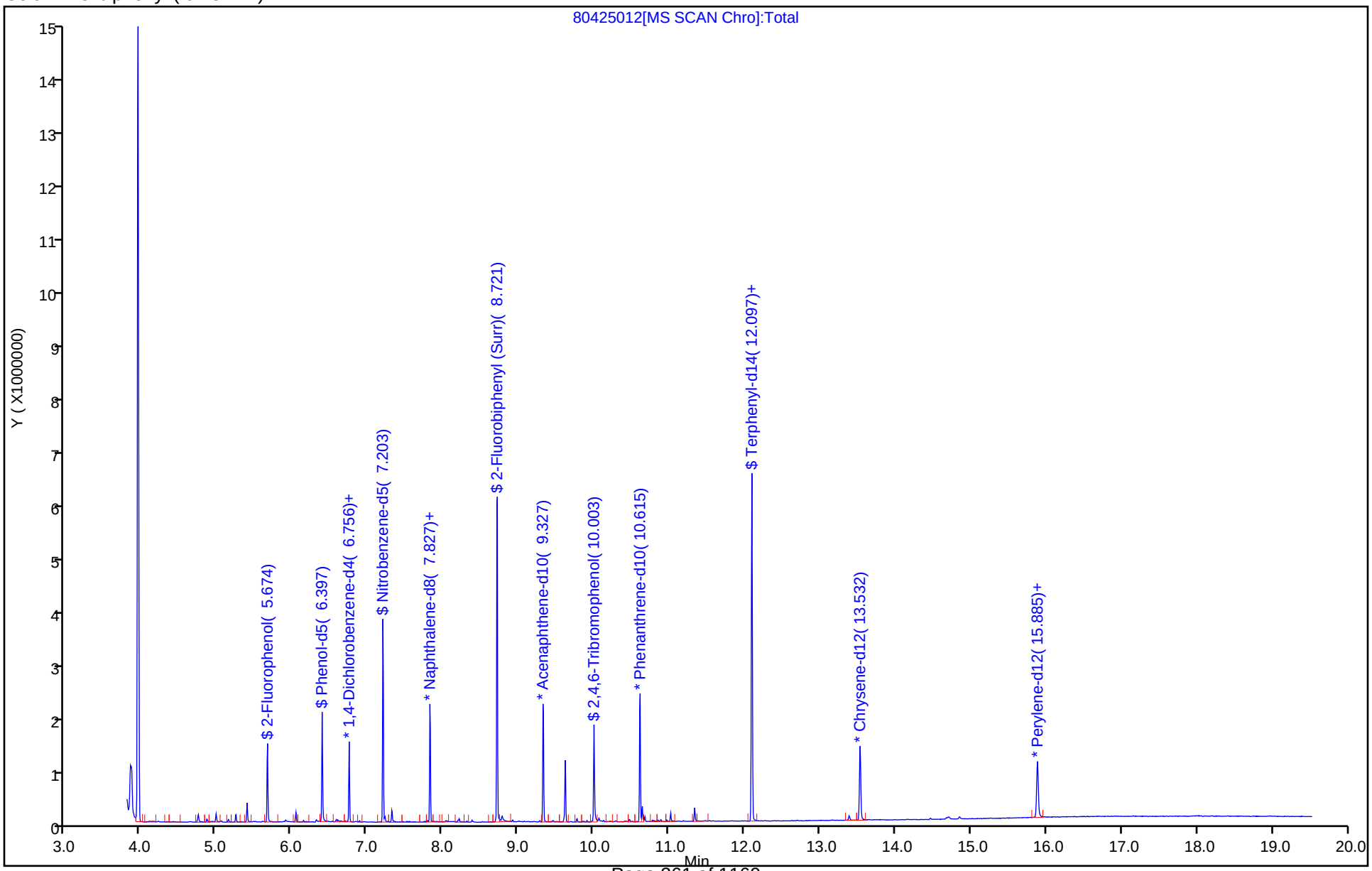
Report Date: 25-Apr-2018 11:47:01 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425012.D

Injection Date:	25-Apr-2018 11:06:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-5-A	Lab Sample ID:	240-94103-5	Worklist Smp#:	12
Client ID:	16WDUP				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425012.D
Lims ID: 240-94103-A-5-A
Client ID: 16WDUP
Sample Type: Client
Inject. Date: 25-Apr-2018 11:06:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-012
Misc. Info.: 240-94103-A-5-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:46:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	997.4	62.34
$ 8 Phenol-d5	1600.0	945.5	59.09
$ 9 Nitrobenzene-d5	1600.0	1192.5	74.53
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1207.0	75.44
$ 11 2,4,6-Tribromophenol	1600.0	1082.3	67.65
$ 12 Terphenyl-d14	1600.0	1674.7	104.67

Manual Integration/User Assign Peak Report

TestAmerica Canton

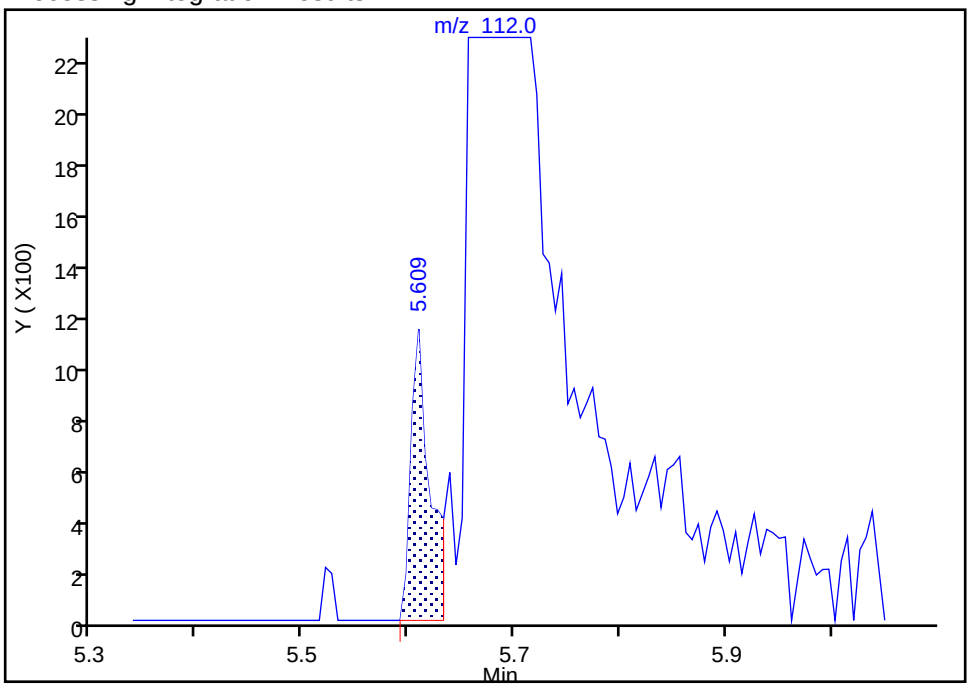
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425012.D				
Injection Date:	25-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-5-A	Lab Sample ID:	240-94103-5		
Client ID:	16WDUP				
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

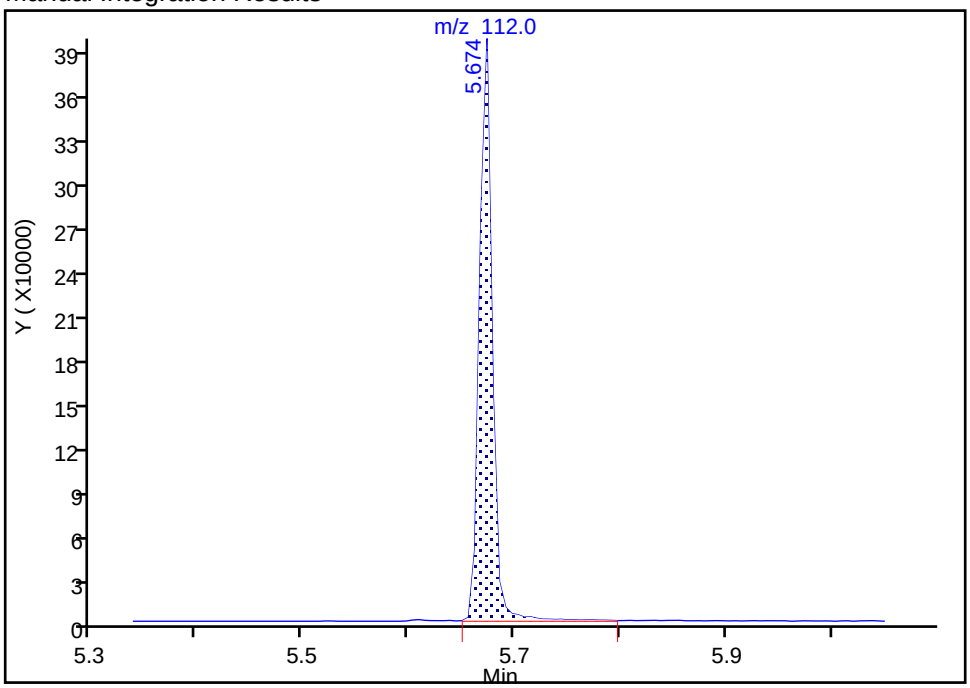
Processing Integration Results

RT: 5.61
Area: 1398
Amount: 4.202479
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 331800
Amount: 997.4123
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:46:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

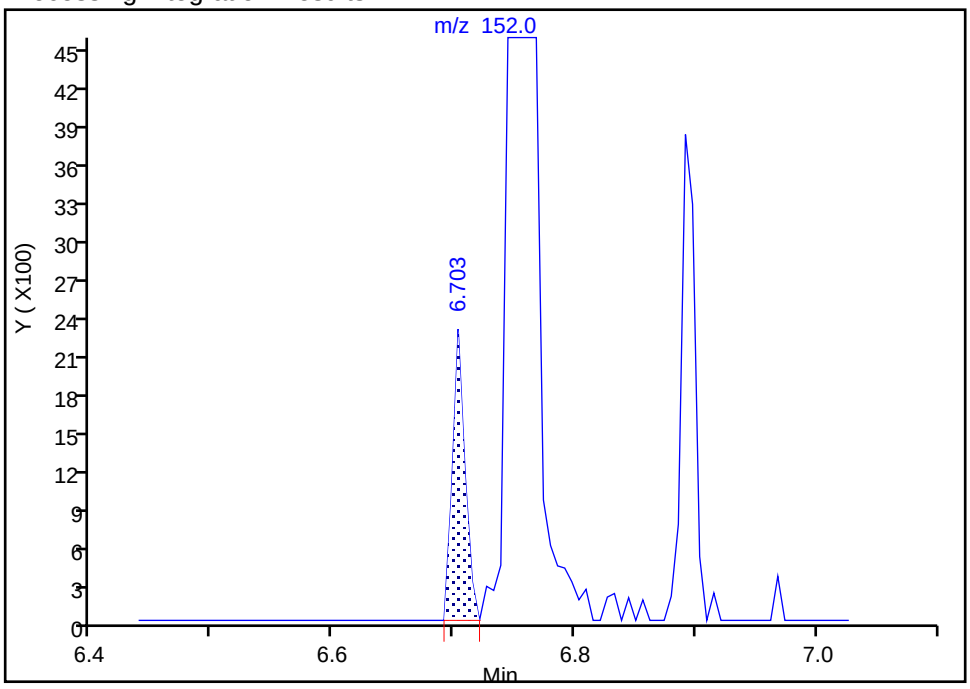
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425012.D				
Injection Date:	25-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-5-A	Lab Sample ID:	240-94103-5		
Client ID:	16WDUP				
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

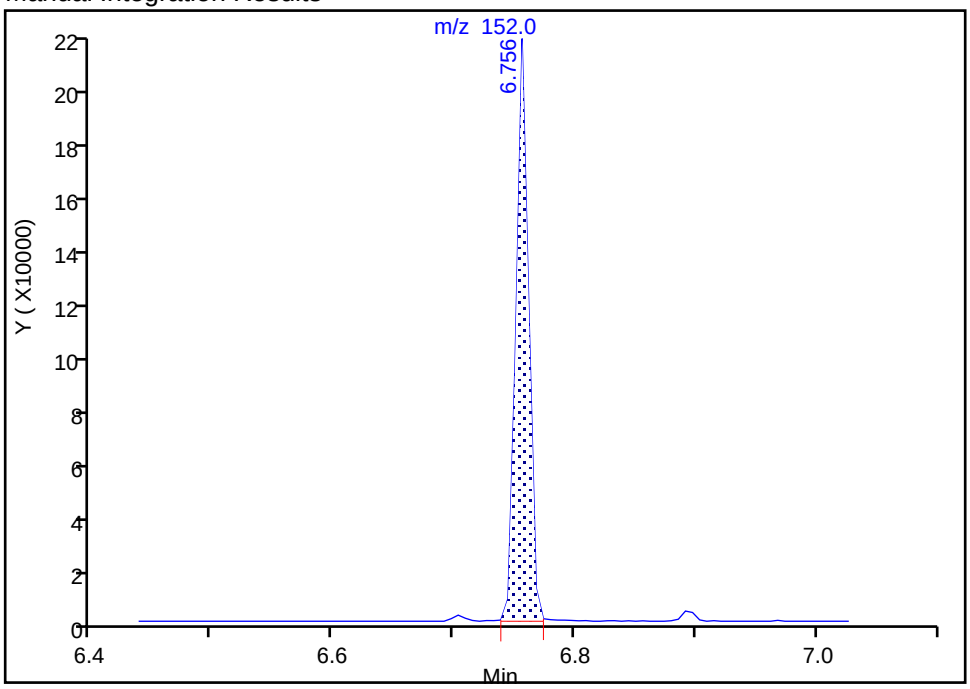
Processing Integration Results

RT: 6.70
Area: 1640
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 157574
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:46:19

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1B | Lab Sample ID: 240-94103-6

Matrix: Water | Lab File ID: 80423026.D

Analysis Method: 8270D | Date Collected: 04/12/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/23/2018 16:25

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	8.9	U	8.9	0.89

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	139	X	28-128
4165-62-2	Phenol-d5 (Surr)	50		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	95		35-120
367-12-4	2-Fluorophenol (Surr)	65		17-120
321-60-8	2-Fluorobiphenyl (Surr)	89		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	99		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1B | Lab Sample ID: 240-94103-6

Matrix: Water | Lab File ID: 80423026.D

Analysis Method: 8270D | Date Collected: 04/12/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 280(mL) | Date Analyzed: 04/23/2018 16:25

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323501 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		89	U	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423026.D
Lims ID: 240-94103-A-6-A
Client ID: 16WC1B
Sample Type: Client
Inject. Date: 23-Apr-2018 16:25:30 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-026
Misc. Info.: 240-94103-A-6-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:40:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	187515	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	884851	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	461918	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	880743	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	641600	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	97	517642	400.0	
$ 7 2-Fluorophenol	112	5.700	5.699	0.001	94	413885	1045.5	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	500608	796.0	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	94	1247456	1518.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	2219162	1416.5	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	91	220552	1577.0	
$ 12 Terphenyl-d14	244	12.123	12.117	0.006	99	2905927	2218.4	
132 Sulfotepp	202		9.964				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

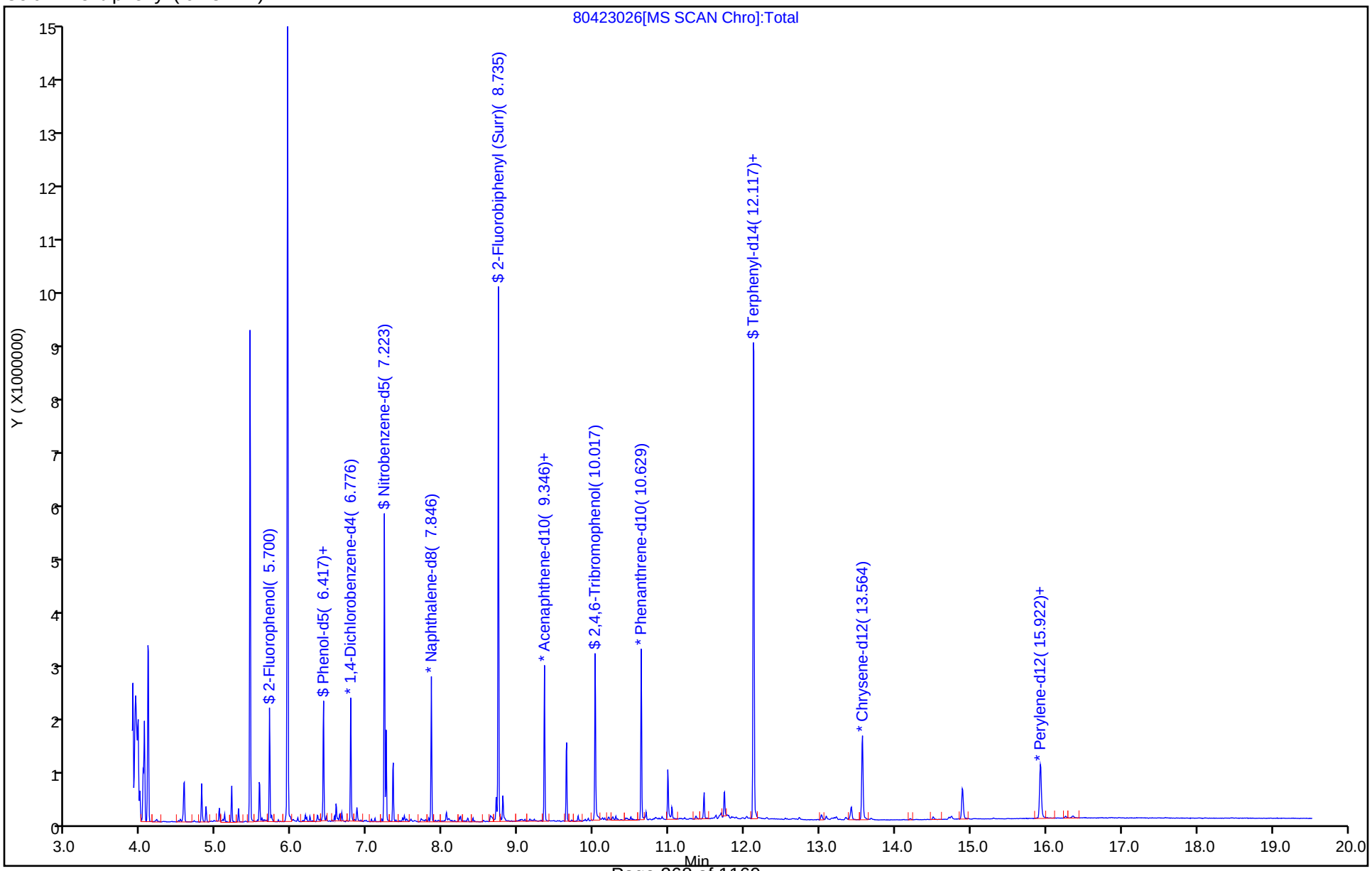
Report Date: 24-Apr-2018 07:02:55 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423026.D

Injection Date:	23-Apr-2018 16:25:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-6-A	Lab Sample ID:	240-94103-6	Worklist Smp#:	26
Client ID:	16WC1B				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423026.D
Lims ID: 240-94103-A-6-A
Client ID: 16WC1B
Sample Type: Client
Inject. Date: 23-Apr-2018 16:25:30 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-026
Misc. Info.: 240-94103-A-6-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:40:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	1045.5	65.34
$ 8 Phenol-d5	1600.0	796.0	49.75
$ 9 Nitrobenzene-d5	1600.0	1518.1	94.88
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1416.5	88.53
$ 11 2,4,6-Tribromophenol	1600.0	1577.0	98.56
$ 12 Terphenyl-d14	1600.0	2218.4	138.65

Manual Integration/User Assign Peak Report

TestAmerica Canton

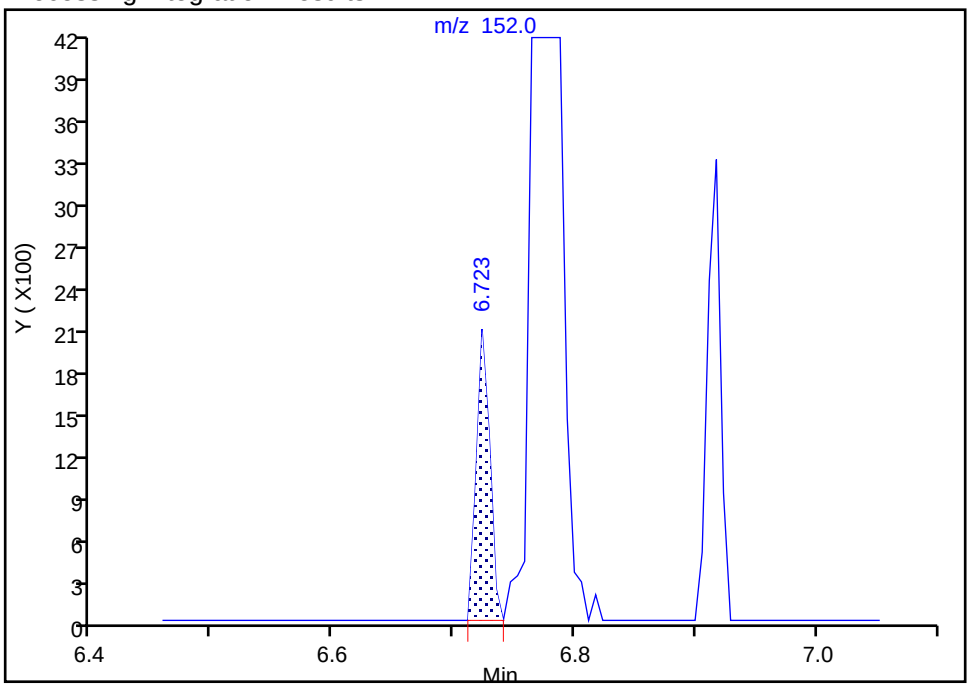
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423026.D				
Injection Date:	23-Apr-2018 16:25:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-6-A	Lab Sample ID:	240-94103-6		
Client ID:	16WC1B				
Operator ID:		ALS Bottle#:	26	Worklist Smp#:	26
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

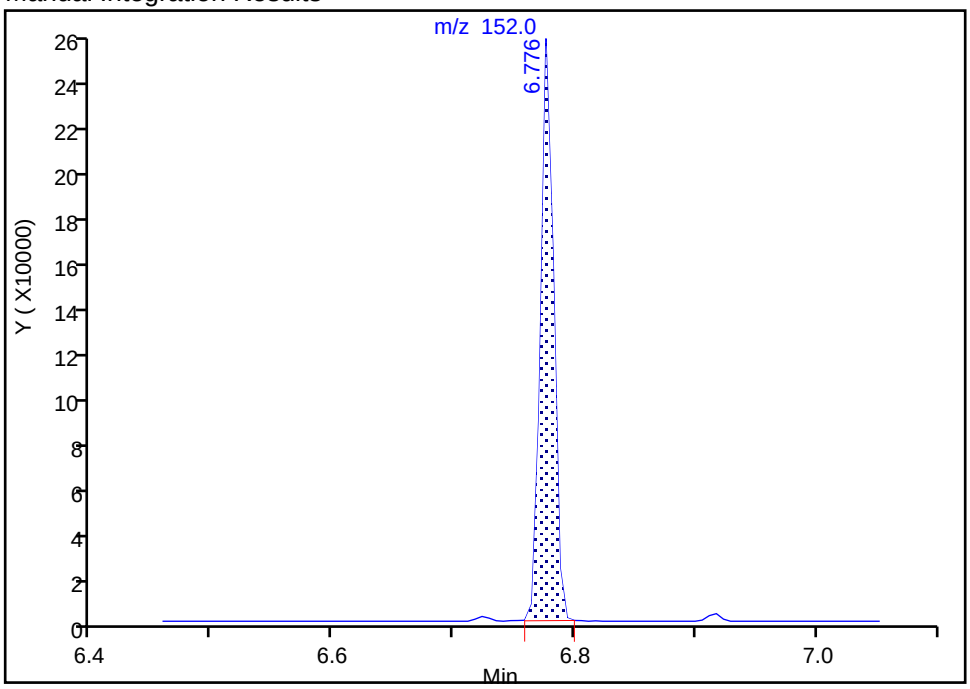
Processing Integration Results

RT: 6.72
Area: 1599
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 187515
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 06:39:51

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1B RE | Lab Sample ID: 240-94103-6 RE

Matrix: Water | Lab File ID: 80425013.D

Analysis Method: 8270D | Date Collected: 04/12/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 11:31

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*9.3*	*U H*	*9.3*	*0.93*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	99		28-128
4165-62-2	Phenol-d5 (Surr)	46		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	70		35-120
367-12-4	2-Fluorophenol (Surr)	50		17-120
321-60-8	2-Fluorobiphenyl (Surr)	77		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	70		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1B RE | Lab Sample ID: 240-94103-6 RE

Matrix: Water | Lab File ID: 80425013.D

Analysis Method: 8270D | Date Collected: 04/12/2018 14:20

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 270(mL) | Date Analyzed: 04/25/2018 11:31

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	*Hexachlorophene TIC*		*93*	*U H*	

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425013.D
Lims ID: 240-94103-B-6-A
Client ID: 16WC1B
Sample Type: Client
Inject. Date: 25-Apr-2018 11:31:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-013
Misc. Info.: 240-94103-B-6-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:55:55 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:55:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	142337	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	731150	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	398960	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	752626	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	564880	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	531222	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	95	241749	804.5	a
$ 8 Phenol-d5	99	6.398	6.353	-0.005	0	350346	733.9	
$ 9 Nitrobenzene-d5	82	7.203	7.198	0.000	95	765235	1127.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.715	0.000	100	1660755	1227.3	
$ 11 2,4,6-Tribromophenol	330	10.003	10.003	-0.006	83	135121	1118.6	
$ 12 Terphenyl-d14	244	12.097	12.098	-0.006	98	1825468	1582.8	
132 Sulfotepp	202		9.950				ND	
T 202 Hexachlorophene TIC	198		14.400				ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

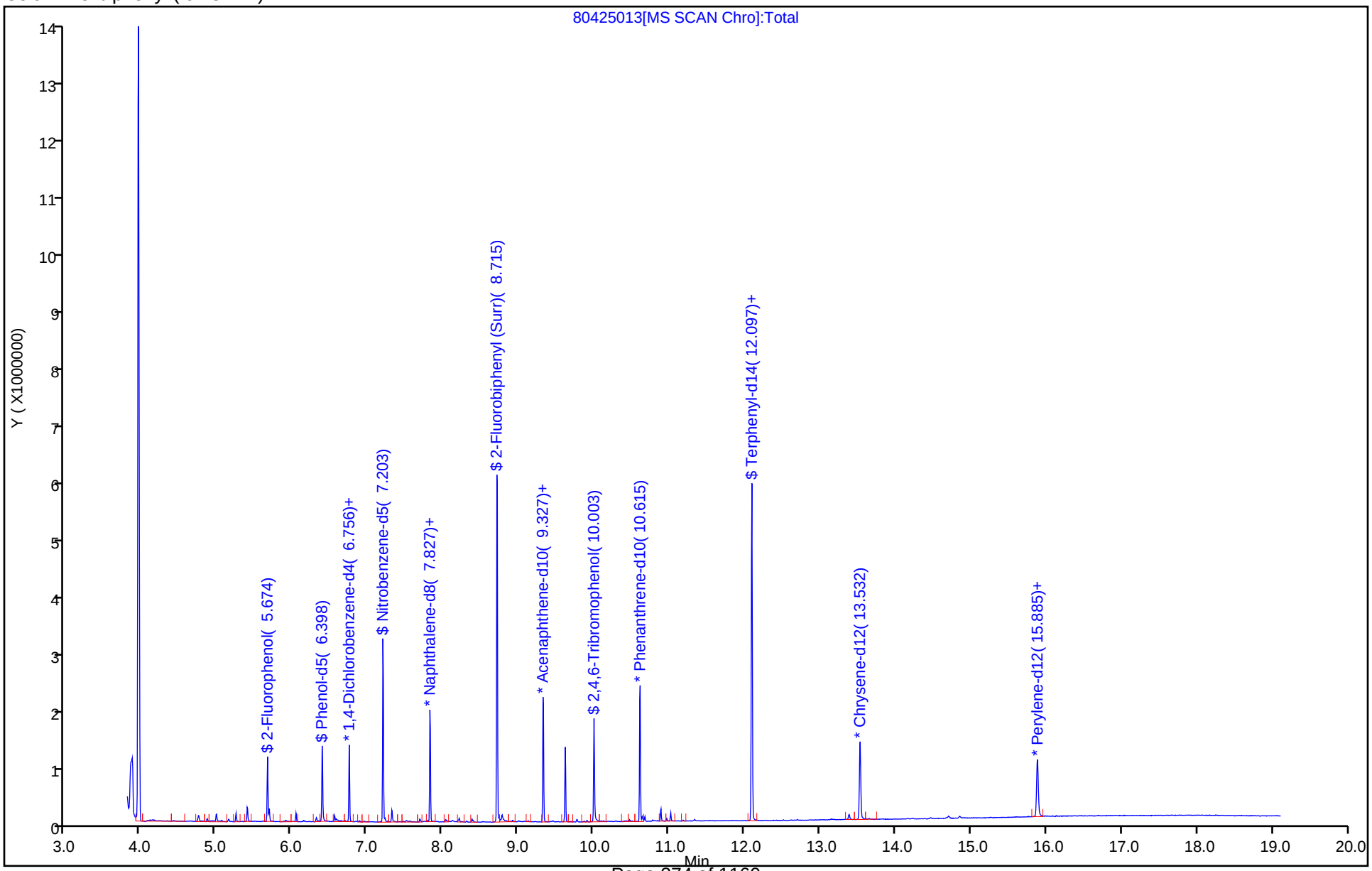
Report Date: 25-Apr-2018 11:56:01 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425013.D

Injection Date:	25-Apr-2018 11:31:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-B-6-A	Lab Sample ID:	240-94103-6	Worklist Smp#:	13
Client ID:	16WC1B				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425013.D
Lims ID: 240-94103-B-6-A
Client ID: 16WC1B
Sample Type: Client
Inject. Date: 25-Apr-2018 11:31:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-013
Misc. Info.: 240-94103-B-6-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:55:55 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:55:55

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	804.5	50.28
$ 8 Phenol-d5	1600.0	733.9	45.87
$ 9 Nitrobenzene-d5	1600.0	1127.0	70.44
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1227.3	76.71
$ 11 2,4,6-Tribromophenol	1600.0	1118.6	69.91
$ 12 Terphenyl-d14	1600.0	1582.8	98.93

Manual Integration/User Assign Peak Report

TestAmerica Canton

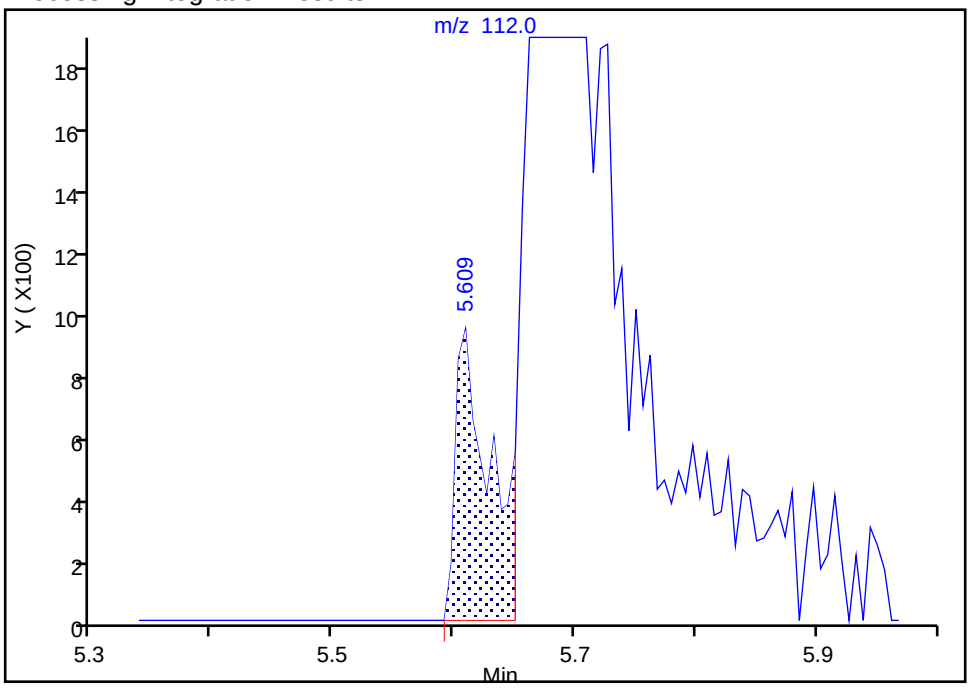
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425013.D				
Injection Date:	25-Apr-2018 11:31:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-6-A	Lab Sample ID:	240-94103-6		
Client ID:	16WC1B				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

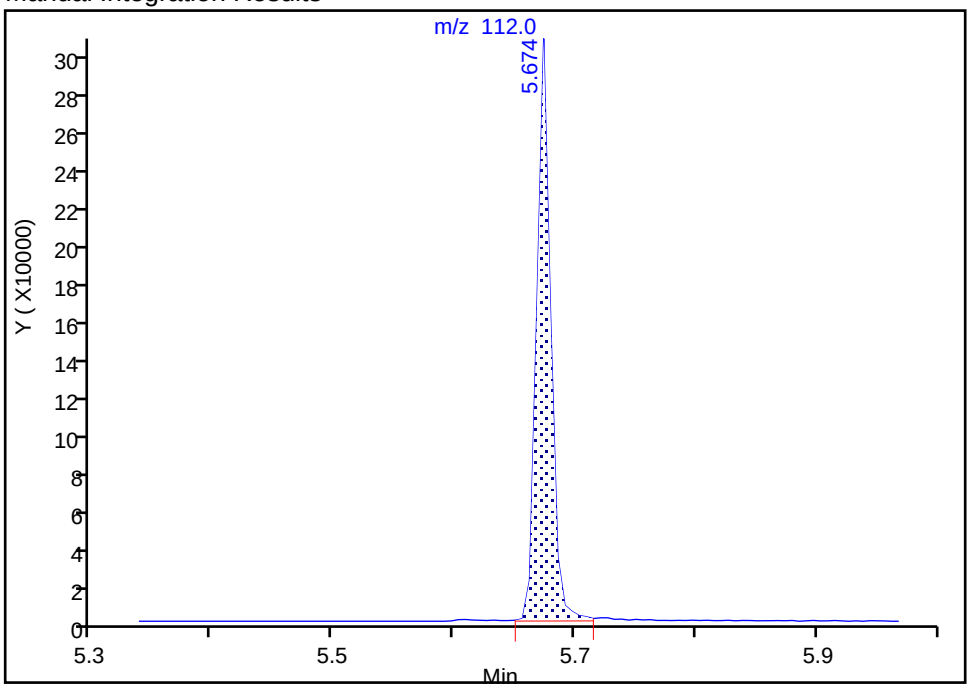
Processing Integration Results

RT: 5.61
Area: 1837
Amount: 6.113279
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 241749
Amount: 804.5069
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:55:44

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

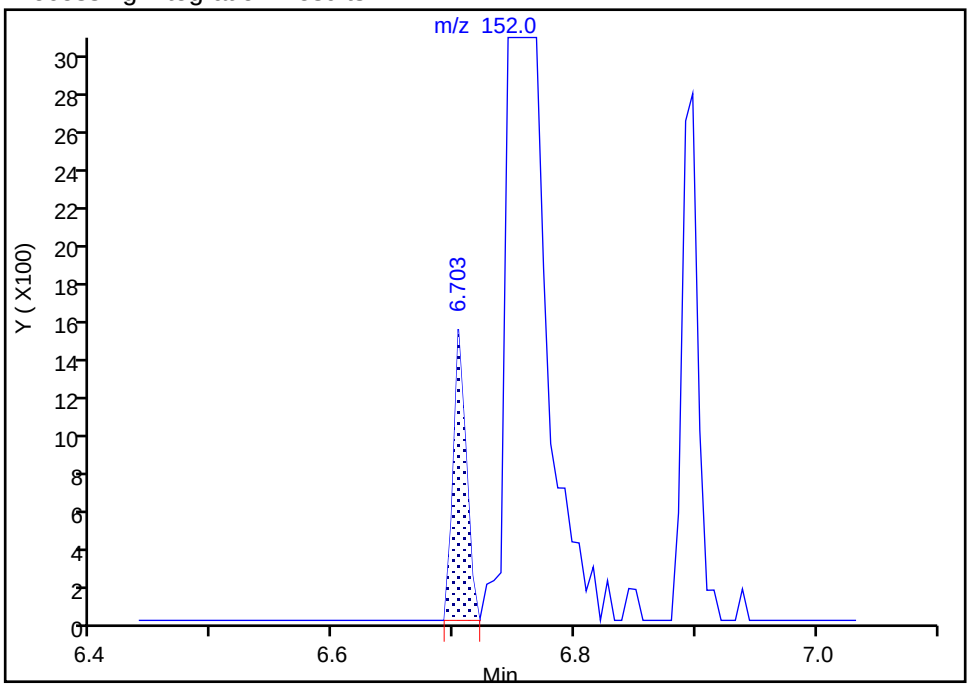
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425013.D				
Injection Date:	25-Apr-2018 11:31:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-B-6-A	Lab Sample ID:	240-94103-6		
Client ID:	16WC1B				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

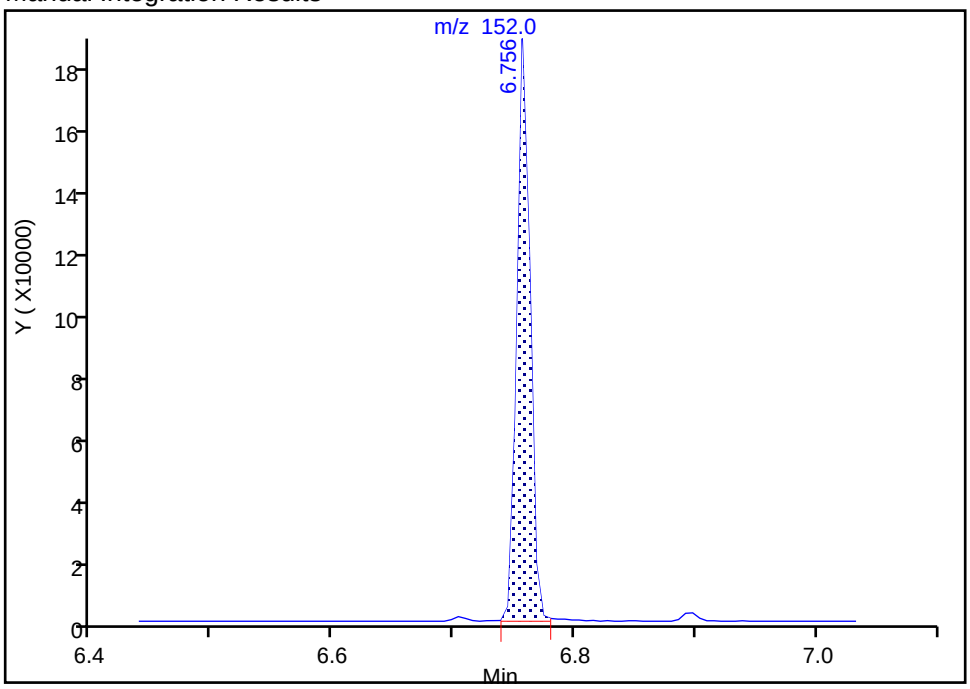
Processing Integration Results

RT: 6.70
Area: 1124
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 142337
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:55:32

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-322037/10	80411010.D
Level 2	STD2 240-322037/9	80411009.D
Level 3	STD3 240-322037/8	80411008.D
Level 4	STD4 240-322037/7	80411007.D
Level 5	STD5 240-322037/6	80411006.D
Level 6	STD6 240-322037/5	80411005.D
Level 7	STD7 240-322037/4	80411004.D
Level 8	STD8 240-322037/3	80411003.D
Level 9	STD9 240-322037/2	80411002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.2484	0.3347 0.2341	0.2946 0.2574	0.2404 0.2465	0.2603	Ave		0.2645				12.8		20.0			
N-Nitrosodimethylamine	0.8209	0.7154 0.7525	0.7509 0.8422	0.7360 0.8360	0.7675	Ave		0.7777				6.2		20.0			
Pyridine	0.8939 0.7494	0.6518 0.6787	0.7521 0.7603	0.6724 0.7394	0.7292	Ave		0.7364				9.7		20.0			
Benzaldehyde	+++++ 0.7991	1.1123 0.7649	1.1797 0.7340	1.1463 0.6144	0.9503	Qua	38.134	0.9666	-0.000069		0.0100				0.9960		0.9900
Phenol	1.2297	1.6262 1.3720	1.6795 1.3470	1.9069 1.6278	1.4809	Ave		1.5337			0.8000	14.2		20.0			
Aniline	2.3762	2.2662 2.6881	2.6594 2.7144	2.8915 2.6657	2.5502	Ave		2.6015				7.7		20.0			
Bis(2-chloroethyl)ether	1.5770	1.7672 1.8591	1.9995 1.9186	1.8537 1.9038	1.6586	Ave		1.8172			0.7000	7.8		20.0			
n-Decane	2.1609	2.3441 2.0366	2.3402 2.1104	2.1138 1.9357	2.3030	Ave		2.1681				6.9		20.0			
2-Chlorophenol	1.3043	1.4002 1.3238	1.5162 1.3517	1.5857 1.4000	1.3678	Ave		1.4062			0.8000	6.9		20.0			
1,3-Dichlorobenzene	1.5915	1.5478 1.5443	1.6123 1.5791	1.5563 1.5934	1.5491	Ave		1.5717				1.6		20.0			
1,4-Dichlorobenzene	1.5946	1.7194 1.5803	1.6665 1.6375	1.6584 1.6474	1.6176	Ave		1.6402				2.7		20.0			
Benzyl alcohol	0.8892	1.0439 1.1569	1.0602 1.1487	0.9731 1.1046	0.9191	Ave		1.0370				9.8		20.0			
1,2-Dichlorobenzene	1.5185	1.6505 1.5488	1.6949 1.5609	1.7034 1.5782	1.5714	Ave		1.6033				4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylphenol	1.0586	1.3546 1.3793	1.4847 1.4103	1.5316 1.4485	1.2091	Ave		1.3596			0.7000	11.4		20.0			
bis (2-chloroisopropyl) ether	3.8227	4.5464 4.3048	4.7898 4.1658	4.6367 3.8954	4.1578	Ave		4.2899				8.1		20.0			
Indene	2.6285	3.0645 2.8048	3.1130 2.8594	3.0325 2.7711	2.7436	Ave		2.8772				6.0		20.0			
3 & 4 Methylphenol	1.1032	1.4180 1.5057	1.5128 1.4767	1.3763 1.4629	1.1725	Ave		1.3785				11.3		20.0			
N-Nitrosodi-n-propylamine	1.3060	1.4037 1.5472	1.5535 1.4651	1.4131 1.4053	1.4257	Ave		1.4399			0.5000	5.7		20.0			
Acetophenone	2.2816	2.4773 2.7094	2.6502 2.6210	2.5220 2.4633	2.3602	Ave		2.5106			0.0100	5.8		20.0			
Hexachloroethane	0.6696	0.6517 0.6712	0.6943 0.6826	0.6910 0.6968	0.6760	Ave		0.6792			0.3000	2.2		20.0			
Nitrobenzene	0.3823	0.3799 0.3851	0.3775 0.3841	0.3931 0.3910	0.3790	Ave		0.3840			0.2000	1.5		20.0			
Isophorone	0.6424	0.6093 0.6541	0.6774 0.6380	0.5822 0.6461	0.7200	Ave		0.6462			0.4000	6.4		20.0			
2,4-Dimethylphenol	0.3005	0.2882 0.3257	0.3256 0.3238	0.2415 0.3295	0.3059	Ave		0.3051			0.2000	9.7		20.0			
2-Nitrophenol	0.1934	0.1607 0.1930	0.1843 0.1918	0.1803 0.1931	0.1858	Ave		0.1853			0.1000	6.0		20.0			
Benzoic acid	0.1470	+++++ 0.1709	0.1018 0.1622	0.0718 0.1809	0.1333	Lin1	-26.03	0.1746							0.9920		0.9900
Bis(2-chloroethoxy)methane	0.4058	0.4088 0.4010	0.4324 0.3905	0.3938 0.3880	0.4349	Ave		0.4069			0.3000	4.4		20.0			
2,4-Dichlorophenol	0.2120	0.2002 0.2365	0.2366 0.2416	0.1891 0.2453	0.2218	Ave		0.2229			0.2000	9.3		20.0			
1,2,4-Trichlorobenzene	0.2715	0.2795 0.2698	0.2876 0.2848	0.2807 0.2923	0.2743	Ave		0.2801				2.8		20.0			
Naphthalene	1.0805 1.0185	0.9997 1.0171	1.0759 1.0192	1.0255 1.0087	1.0188	Ave		1.0293			0.7000	2.8		20.0			
4-Chloroaniline	0.5230	0.3911 0.5216	0.5402 0.4583	0.4594 0.4515	0.5476	Ave		0.4866			0.0100	11.3		20.0			
2,6-Dichlorophenol	0.2524	0.2334 0.2627	0.2653 0.2631	0.2206 0.2603	0.2479	Ave		0.2507				6.4		20.0			
Hexachlorobutadiene	0.1513	0.1564 0.1509	0.1665 0.1616	0.1529 0.1638	0.1541	Ave		0.1572			0.0100	3.8		20.0			
Caprolactam	0.1013 0.1034	0.1001 0.0894	0.1192 0.0819	0.1011 0.0845	0.1141	Ave		0.0994			0.0100	12.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.2596	0.2093 0.2702	0.2354 0.2670	0.1776 0.2805	0.2850	Ave		0.2481			0.2000	15.2		20.0			
2-Methylnaphthalene	0.6481 0.7045	0.7040 0.7154	0.7461 0.7050	0.6775 0.7028	0.7634	Ave		0.7074			0.4000	4.8		20.0			
1-Methylnaphthalene	0.6453 0.6522	0.6527 0.6704	0.7053 0.6634	0.6421 0.6571	0.7177	Ave		0.6674				4.0		20.0			
Hexachlorocyclopentadiene	0.3447	0.3001 0.3618	0.2793 0.3827	0.3008 0.3904	0.2989	Ave		0.3323			0.0500	12.9		20.0			
1,2,4,5-Tetrachlorobenzene	0.5030	0.5141 0.5282	0.4952 0.5397	0.4339 0.5435	0.4664	Ave		0.5030			0.0100	7.5		20.0			
2,4,6-Trichlorophenol	0.3566	0.2716 0.3735	0.2929 0.3767	0.2707 0.3842	0.3360	Ave		0.3328			0.2000	14.4		20.0			
2,4,5-Trichlorophenol	0.3553	0.2804 0.3694	0.2973 0.3851	0.2552 0.3995	0.3400	Ave		0.3353			0.2000	15.6		20.0			
1,1'-Biphenyl	1.5043 1.5943	1.6431 1.6370	1.5408 1.6301	1.5933 1.6456	1.5957	Ave		1.5982			0.0100	3.0		20.0			
2-Chloronaphthalene	1.1656 1.2245	1.2176 1.2840	1.1777 1.2597	1.1451 1.2702	1.2141	Ave		1.2176			0.8000	4.0		20.0			
2-Nitroaniline	0.5031	0.4218 0.5111	0.4426 0.5178	0.4496 0.5303	0.4772	Ave		0.4817			0.0100	8.3		20.0			
Dimethyl phthalate	1.4930	1.6556 1.5188	1.6527 1.5023	1.4272 1.5162	1.4476	Ave		1.5267			0.0100	5.6		20.0			
1,3-Dinitrobenzene	0.2474	0.1934 0.2556	0.2014 0.2545	0.1964 0.2619	0.2328	Ave		0.2304				12.6		20.0			
2,6-Dinitrotoluene	0.3409	0.3122 0.3523	0.3451 0.3536	0.3117 0.3591	0.3274	Ave		0.3378				5.5		20.0			
Acenaphthylene	1.5911 1.7995	1.7047 1.8226	1.7380 1.8402	1.7391 1.8740	1.7609	Ave		1.7633			0.9000	4.8		20.0			
3-Nitroaniline	0.3337	0.2274 0.3004	0.2921 0.2809	0.3162 0.2883	0.3386	Ave		0.2972			0.0100	11.8		20.0			
2,4-Dinitrophenol	0.2013	0.0823 0.2012	0.1174 0.2079	0.1374 0.2227	0.1746	Lin1	-18.60	0.2141			0.0100				0.9960		0.9900
4-Nitrophenol	0.2268	0.1411 0.2440	0.1950 0.2482	0.1817 0.2492	0.2212	Ave		0.2134				17.9		20.0			
Acenaphthene	1.3683 1.2104	1.3049 1.1995	1.2856 1.1948	1.2351 1.2336	1.2088	Ave		1.2490			0.9000	4.7		20.0			
2,4-Dinitrotoluene	0.4523	0.3781 0.4536	0.4264 0.4466	0.4202 0.4658	0.4359	Ave		0.4349			0.2000	6.3		20.0			
Dibenzofuran	1.6132 1.7237	1.8343 1.7569	1.8622 1.7715	1.7486 1.8268	1.6978	Ave		1.7594			0.8000	4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3,4,6-Tetrachlorophenol	0.3046	0.2360 0.3144	0.2572 0.2990	0.2471 0.3189	0.2784	Ave		0.2819			0.0100	11.4		20.0			
Hexadecane	1.3540	1.6863 1.3004	1.6346 1.2409	1.4853 1.2020	1.4170	Ave		1.4151				12.5		20.0			
Diethyl phthalate	1.4649	1.7293 1.4742	1.6588 1.4632	1.5044 1.4840	1.4642	Ave		1.5304			0.0100	6.8		20.0			
4-Chlorophenyl phenyl ether	0.6630	0.7721 0.6888	0.7268 0.6890	0.6540 0.7146	0.6449	Ave		0.6942			0.4000	6.1		20.0			
4-Nitroaniline	0.2848	0.3414 0.2776	0.3546 0.2449	0.3568 0.2341	0.3088	Ave		0.3004			0.0100	16.0		20.0			
Fluorene	1.5990 1.4264	1.6521 1.4789	1.6146 1.4759	1.4287 1.5001	1.3917	Ave		1.5075			0.9000	6.2		20.0			
4,6-Dinitro-2-methylphenol	0.1284	0.0651 0.1355	0.0846 0.1410	0.1028 0.1403	0.1142	Lin1	-10.32	0.1395			0.0100				0.9980		0.9900
Diphenylamine	0.7378	0.6820 0.7353	0.6874 0.7263	0.6900 0.7140	0.6878	Ave		0.7076				3.3		20.0			
N-Nitrosodiphenylamine	0.6271	0.5797 0.6250	0.5843 0.6174	0.5865 0.6069	0.5847	Ave		0.6015			0.0100	3.3		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.9369	0.8980 0.9396	0.8931 0.9575	0.8653 0.9350	0.8716	Ave		0.9125				3.8		20.0			
Azobenzene	0.9370	0.9037 0.9396	0.8903 0.9574	0.8653 0.9350	0.8720	Ave		0.9125				3.8		20.0			
4-Bromophenyl phenyl ether	0.2081	0.1874 0.2158	0.1873 0.2259	0.1905 0.2156	0.1936	Ave		0.2030			0.1000	7.5		20.0			
Atrazine	0.3182 0.2162	0.2496 0.2127	0.2133 0.2030	0.2055 0.1972	0.1963	Ave		0.2235			0.0100	17.4		20.0			
Hexachlorobenzene	0.1601 0.2031	0.1909 0.2130	0.1769 0.2208	0.1685 0.2203	0.1823	Ave		0.1929			0.1000	11.7		20.0			
n-Octadecane	0.8327	0.8244 0.8216	0.8282 0.8020	0.8281 0.7478	0.8034	Ave		0.8110				3.5		20.0			
Pentachlorophenol	0.1263	0.1087 0.1401	0.1051 0.1531	0.1116 0.1561	0.1162	Ave		0.1272			0.0500	15.9		20.0			
Phenanthrene	1.2162 1.1238	1.1512 1.1394	1.1433 1.1643	1.1331 1.1417	1.1167	Ave		1.1477			0.7000	2.5		20.0			
Anthracene	0.9392 1.1701	1.1358 1.1725	1.1730 1.2081	1.1491 1.1991	1.1470	Ave		1.1438			0.7000	7.0		20.0			
Carbazole	1.0453	1.0787 1.0674	1.0949 1.0468	1.0168 1.0017	0.9639	Ave		1.0394			0.0100	4.2		20.0			
Di-n-butyl phthalate	1.4643	1.3719 1.4300	1.3731 1.4271	1.3435 1.4022	1.3588	Ave		1.3964			0.0100	3.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Fluoranthene	1.1380 1.2361	1.2269 1.2026	1.1583 1.1968	1.1155 1.1942	1.1269	Ave		1.1772			0.6000	3.7		20.0			
Benzidine	 0.6027	0.1706 0.5909	0.2460 0.5678	0.2948 0.6221	0.5226	Lin1	-63.82	0.6100							0.9950		0.9900
Pyrene	1.2818 1.2970	1.3391 1.2123	1.2978 1.2499	1.2346 1.2591	1.2223	Ave		1.2660			0.6000	3.3		20.0			
Butyl benzyl phthalate	 0.6768	0.6160 0.6759	0.5882 0.7039	0.6218 0.6971	0.6488	Ave		0.6536			0.0100	6.4		20.0			
Bis(2-ethylhexyl) phthalate	 0.9332	0.7202 0.9301	0.7561 0.9645	0.8254 0.9688	0.8742	Ave		0.8715			0.0100	10.9		20.0			
3,3'-Dichlorobenzidine	 0.4165	0.3341 0.4076	0.3429 0.4274	0.3833 0.4306	0.4100	Ave		0.3940			0.0100	9.5		20.0			
Benzo[a]anthracene	1.1414 1.1857	1.0873 1.1913	1.1019 1.2319	1.1098 1.2360	1.1443	Ave		1.1588			0.8000	4.8		20.0			
Chrysene	1.1377 1.1506	1.1496 1.1444	1.1830 1.1878	1.1268 1.1742	1.1334	Ave		1.1542			0.7000	1.9		20.0			
Di-n-octyl phthalate	 1.6522	1.1882 1.7055	1.3178 1.7768	1.5197 1.7499	1.6003	Ave		1.5638			0.0100	13.5		20.0			
Benzo[b]fluoranthene	0.9490 1.1808	1.1548 1.2226	1.1266 1.2994	1.1390 1.2801	1.1878	Ave		1.1711			0.7000	8.7		20.0			
Benzo[k]fluoranthene	1.1035 1.2585	1.2053 1.2772	1.2265 1.2695	1.2261 1.2723	1.2314	Ave		1.2300			0.7000	4.4		20.0			
Benzo[a]pyrene	0.9699 1.1525	1.0059 1.1884	1.0440 1.2241	1.1031 1.2217	1.1227	Ave		1.1147			0.7000	8.3		20.0			
Indeno[1,2,3-cd]pyrene	0.9519 1.2599	1.1016 1.2729	1.1401 1.3180	1.2030 1.3013	1.2373	Ave		1.1984			0.5000	9.8		20.0			
Dibenz(a,h)anthracene	0.8695 1.0667	0.9434 1.0859	0.9847 1.1125	1.0044 1.1193	1.0317	Ave		1.0242			0.4000	8.1		20.0			
Benzo[g,h,i]perylene	0.9643 1.0449	0.9594 1.0452	0.9827 1.0723	0.9884 1.0827	1.0129	Ave		1.0170			0.5000	4.5		20.0			
2-Fluorophenol (Surr)	 0.9186	0.7723 0.7721	0.8503 0.7939	0.8132 0.8285	0.8506	Ave		0.8249				5.9		20.0			
Phenol-d5 (Surr)	 1.1239	1.5216 1.2313	1.4912 1.2062	1.7014 1.4389	1.3508	Ave		1.3832				13.9		20.0			
Nitrobenzene-d5 (Surr)	0.3845 0.3831	0.3806 0.3893	0.3954 0.3915	0.3907 0.3979	0.3860	Ave		0.3888				1.5		20.0			
2-Fluorobiphenyl (Surr)	1.4058 1.3767	1.4152 1.4132	1.3655 1.4053	1.3538 1.4239	1.3569	Ave		1.3907				2.0		20.0			
2,4,6-Tribromophenol (Surr)	 0.1435	0.1267 0.1527	0.1296 0.1510	0.1230 0.1606	0.1339	Ave		0.1401				9.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Terphenyl-d14 (Surr)	0.8100 0.7702	0.7307 0.7935	0.7614 0.8442	0.8244 0.8498	0.7740	Ave		0.7954				5.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-322037/10	80411010.D
Level 2	STD2 240-322037/9	80411009.D
Level 3	STD3 240-322037/8	80411008.D
Level 4	STD4 240-322037/7	80411007.D
Level 5	STD5 240-322037/6	80411006.D
Level 6	STD6 240-322037/5	80411005.D
Level 7	STD7 240-322037/4	80411004.D
Level 8	STD8 240-322037/3	80411003.D
Level 9	STD9 240-322037/2	80411002.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCBd 4	Ave	89717	5312 112640	7980 176178	15834 220428	42045	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodimethylamine	DCBd 4	Ave	296457	11354 362138	20336 576465	48488 747679	123969	1000	50.0 1500	100 2000	200 2500	500
Pyridine	DCBd 4	Ave	5371 541231	20688 653256	40737 1040875	88595 1322435	235577	20.0 2000	100 3000	200 4000	400 5000	1000
Benzaldehyde	DCBd 4	Qua	+++++ 577155	35305 736183	63900 1004776	151029 1098932	306999	+++++ 2000	100 3000	200 4000	400 5000	1000
Phenol	DCBd 4	Ave	444064	25809 660266	45486 921988	125623 1455738	239209	1000	50.0 1500	100 2000	200 2500	500
Aniline	DCBd 4	Ave	858101	35966 1293653	72024 1857932	190481 2383962	411927	1000	50.0 1500	100 2000	200 2500	500
Bis(2-chloroethyl)ether	DCBd 4	Ave	569490	28046 894689	54153 1313206	122113 1702603	267919	1000	50.0 1500	100 2000	200 2500	500
n-Decane	DCBd 4	Ave	780338	37202 980107	63381 1444489	139251 1731096	372003	1000	50.0 1500	100 2000	200 2500	500
2-Chlorophenol	DCBd 4	Ave	471029	22222 637058	41064 925200	104459 1252082	220933	1000	50.0 1500	100 2000	200 2500	500
1,3-Dichlorobenzene	DCBd 4	Ave	574719	24564 743177	43665 1080834	102526 1425019	250223	1000	50.0 1500	100 2000	200 2500	500
1,4-Dichlorobenzene	DCBd 4	Ave	575854	27288 760523	45133 1120846	109250 1473308	261284	1000	50.0 1500	100 2000	200 2500	500
Benzyl alcohol	DCBd 4	Ave	321121	16568 556745	28714 786271	64105 987819	148459	1000	50.0 1500	100 2000	200 2500	500
1,2-Dichlorobenzene	DCBd 4	Ave	548360	26194 745369	45904 1068363	112215 1411396	253819	1000	50.0 1500	100 2000	200 2500	500
2-Methylphenol	DCBd 4	Ave	382300	21498 663783	40210 965283	100894 1295424	195300	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCBd 4	Ave	1380458	72155 2071641	129723 2851395	305455 3483703	671606	1000	50.0 1500	100 2000	200 2500	500
Indene	DCBd 4	Ave	1898387	97272 2699572	168618 3914376	399545 4956544	886330	2000	100 3000	200 4000	400 5000	1000
3 & 4 Methylphenol	DCBd 4	Ave	398403	22505 724604	40971 1010764	90668 1308272	189391	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodi-n-propylamine	DCBd 4	Ave	471635	22277 744574	42073 1002814	93089 1256755	230286	1000	50.0 1500	100 2000	200 2500	500
Acetophenone	DCBd 4	Ave	823951	39316 1303884	71776 1794016	166145 2202995	381237	1000	50.0 1500	100 2000	200 2500	500
Hexachloroethane	DCBd 4	Ave	241822	10343 323016	18805 467256	45520 623162	109193	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene	NPT	Ave	680288	32087 1078937	55975 1487059	143618 1887243	310782	1000	50.0 1500	100 2000	200 2500	500
Isophorone	NPT	Ave	1143004	51458 1832760	100448 2470400	212705 3117993	590408	1000	50.0 1500	100 2000	200 2500	500
2,4-Dimethylphenol	NPT	Ave	534677	24340 912581	48289 1253683	88240 1590387	250834	1000	50.0 1500	100 2000	200 2500	500
2-Nitrophenol	NPT	Ave	344198	13577 540830	27326 742478	65866 932023	152356	1000	50.0 1500	100 2000	200 2500	500
Benzoic acid	NPT	Lin1	523152	+++++ 957797	30196 1255933	52439 1745811	218607	2000	+++++ 3000	200 4000	400 5000	1000
Bis(2-chloroethoxy)methane	NPT	Ave	722168	34530 1123572	64116 1511901	143876 1872310	356608	1000	50.0 1500	100 2000	200 2500	500
2,4-Dichlorophenol	NPT	Ave	377175	16910 662538	35088 935577	69085 1183614	181892	1000	50.0 1500	100 2000	200 2500	500
1,2,4-Trichlorobenzene	NPT	Ave	483140	23609 755975	42650 1102645	102543 1410534	224922	1000	50.0 1500	100 2000	200 2500	500
Naphthalene	NPT	Ave	14761 1812296	84437 2850004	159535 3946346	374698 4868218	835384	10.0 1000	50.0 1500	100 2000	200 2500	500
4-Chloroaniline	NPT	Ave	930615	33036 1461483	80099 1774373	167868 2178795	448995	1000	50.0 1500	100 2000	200 2500	500
2,6-Dichlorophenol	NPT	Ave	449116	19710 736152	39338 1018708	80604 1256104	203276	1000	50.0 1500	100 2000	200 2500	500
Hexachlorobutadiene	NPT	Ave	269254	13212 422930	24683 625642	55865 790611	126336	1000	50.0 1500	100 2000	200 2500	500
Caprolactam	NPT	Ave	2768 367881	16917 500764	35348 633971	73887 815845	187179	20.0 2000	100 3000	200 4000	400 5000	1000
4-Chloro-3-methylphenol	NPT	Ave	461878	17678 756987	34905 1033670	64906 1353725	233656	1000	50.0 1500	100 2000	200 2500	500
2-Methylnaphthalene	NPT	Ave	8853 1253577	59458 2004676	110643 2729682	247527 3391792	625974	10.0 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1-Methylnaphthalene	NPT	Ave	8815 1160597	55127 1878457	104592 2568494	234591 3171103	588517	10.0 1000	50.0 1500	100 2000	200 2500	500
Hexachlorocyclopentadiene	ANT	Ave	 307531	12158 502954	22800 723989	55098 918081	138785	 1000	50.0 1500	100 2000	200 2500	500
1,2,4,5-Tetrachlorobenzene	ANT	Ave	 448814	20831 734277	40423 1020942	79480 1278069	216530	 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Trichlorophenol	ANT	Ave	 318191	11004 519219	23907 712528	49593 903532	156004	 1000	50.0 1500	100 2000	200 2500	500
2,4,5-Trichlorophenol	ANT	Ave	 317042	11362 513471	24266 728459	46746 939501	157833	 1000	50.0 1500	100 2000	200 2500	500
1,1'-Biphenyl	ANT	Ave	9868 1422569	66578 2275630	125782 3083431	291880 3870012	740811	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Chloronaphthalene	ANT	Ave	7646 1092632	49336 1784883	96139 2382817	209770 2987193	563635	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Nitroaniline	ANT	Ave	 448917	17091 710511	36135 979379	82371 1247056	221533	 1000	50.0 1500	100 2000	200 2500	500
Dimethyl phthalate	ANT	Ave	 1332138	67084 2111287	134913 2841784	261446 3565631	672055	 1000	50.0 1500	100 2000	200 2500	500
1,3-Dinitrobenzene	ANT	Ave	 220772	7836 355296	16445 481380	35979 615844	108095	 1000	50.0 1500	100 2000	200 2500	500
2,6-Dinitrotoluene	ANT	Ave	 304214	12649 489705	28169 668849	57093 844496	152010	 1000	50.0 1500	100 2000	200 2500	500
Acenaphthylene	ANT	Ave	10437 1605629	69073 2533601	141882 3480900	318598 4407257	817501	10.0 1000	50.0 1500	100 2000	200 2500	500
3-Nitroaniline	ANT	Ave	 297781	9214 417590	23848 531398	57917 678096	157195	 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrophenol	ANT	Lin1	 359290	6672 559467	19164 786438	50345 1047510	162097	 2000	100 3000	200 4000	400 5000	1000
4-Nitrophenol	ANT	Ave	 404792	11434 678357	31836 939047	66577 1172073	205367	 2000	100 3000	200 4000	400 5000	1000
Acenaphthene	ANT	Ave	8976 1080056	52873 1667497	104950 2259999	226266 2901147	561202	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrotoluene	ANT	Ave	 403605	15322 630562	34807 844874	76975 1095550	202346	 1000	50.0 1500	100 2000	200 2500	500
Dibenzofuran	ANT	Ave	10582 1538059	74325 2442344	152016 3350992	320329 4296105	788186	10.0 1000	50.0 1500	100 2000	200 2500	500
2,3,4,6-Tetrachlorophenol	ANT	Ave	 271826	9561 437010	20996 565557	45259 750074	129259	 1000	50.0 1500	100 2000	200 2500	500
Hexadecane	ANT	Ave	 1208160	68327 1807681	133441 2347353	272097 2826797	657840	 1000	50.0 1500	100 2000	200 2500	500
Diethyl phthalate	ANT	Ave	 1307069	70071 2049248	135418 2767755	275602 3490095	679736	 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chlorophenyl phenyl ether	ANT	Ave	591567	31286 957560	59332 1303272	119801 1680540	299412	1000	50.0 1500	100 2000	200 2500	500
4-Nitroaniline	ANT	Ave	254160	13835 385860	28949 463294	65358 550547	143344	1000	50.0 1500	100 2000	200 2500	500
Fluorene	ANT	Ave	10489 1272713	66943 2055841	131810 2791824	261722 3527821	646106	10.0 1000	50.0 1500	100 2000	200 2500	500
4,6-Dinitro-2-methylphenol	PHN	Lin1	399007	10409 657653	27197 912492	67951 1182428	192154	2000	100 3000	200 4000	400 5000	1000
Diphenylamine	PHN	Ave	974224	46346 1516830	93964 1997237	193815 2557326	491996	850	42.5 1275	85.0 1700	170 2125	425
N-Nitrosodiphenylamine	PHN	Ave	974224	46346 1516830	93964 1997237	193815 2557326	491996	1000	50.0 1500	100 2000	200 2500	500
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	1455435	71792 2280402	143618 3097425	285953 3939729	733489	1000	50.0 1500	100 2000	200 2500	500
Azobenzene	PHN	Ave	1455647	72250 2280402	143165 3097251	285959 3939729	733780	1000	50.0 1500	100 2000	200 2500	500
4-Bromophenyl phenyl ether	PHN	Ave	323267	14985 523642	30117 730759	62950 908524	162937	1000	50.0 1500	100 2000	200 2500	500
Atrazine	PHN	Ave	9001 671638	39902 1032183	68603 1313562	135833 1661826	330308	20.0 2000	100 3000	200 4000	400 5000	1000
Hexachlorobenzene	PHN	Ave	2264 315565	15262 516986	28448 714196	55666 928441	153377	10.0 1000	50.0 1500	100 2000	200 2500	500
n-Octadecane	PHN	Ave	1293636	65910 1993913	133183 2594525	273636 3150943	676066	1000	50.0 1500	100 2000	200 2500	500
Pentachlorophenol	PHN	Ave	392369	17374 679817	33804 990657	73780 1315564	195633	2000	100 3000	200 4000	400 5000	1000
Phenanthrene	PHN	Ave	17202 1745837	92033 2765118	183845 3766548	374426 4810627	939689	10.0 1000	50.0 1500	100 2000	200 2500	500
Anthracene	PHN	Ave	13284 1817749	90802 2845540	188622 3908372	379743 5052534	965246	10.0 1000	50.0 1500	100 2000	200 2500	500
Carbazole	PHN	Ave	1623879	86234 2590381	176067 3386369	336018 4220650	811152	1000	50.0 1500	100 2000	200 2500	500
Di-n-butyl phthalate	PHN	Ave	2274748	109675 3470434	220806 4616678	443972 5908439	1143427	1000	50.0 1500	100 2000	200 2500	500
Fluoranthene	PHN	Ave	16096 1920279	98085 2918561	186265 3871725	368622 5031957	948265	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzidine	CRY	Lin1	1820649	25796 2801730	72316 3596196	177407 5083387	821053	2000	100 3000	200 4000	400 5000	1000
Pyrene	CRY	Ave	16243 1958965	101253 2873941	190734 3958381	371530 5144190	960169	10.0 1000	50.0 1500	100 2000	200 2500	500
Butyl benzyl phthalate	CRY	Ave	1022246	46580 1602207	86445 2229303	187122 2847993	509683	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 11:32 Calibration End Date: 04/11/2018 14:49 Calibration ID: 44613

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bis(2-ethylhexyl) phthalate	CRY	Ave	1409441	54454 2204896	111113 3054556	248380 3958046	686679	1000	50.0 1500	100 2000	200 2500	500
3,3'-Dichlorobenzidine	CRY	Ave	1258123	50529 1932253	100791 2706805	230690 3518336	644075	2000	100 3000	200 4000	400 5000	1000
Benzo[a]anthracene	CRY	Ave	14464 1790787	82217 2823957	161940 3901328	333960 5049705	898920	10.0 1000	50.0 1500	100 2000	200 2500	500
Chrysene	CRY	Ave	14417 1737880	86927 2712911	173859 3761692	339095 4797112	890307	10.0 1000	50.0 1500	100 2000	200 2500	500
Di-n-octyl phthalate	PRY	Ave	2398386	81640 3810123	174301 5350981	407845 6917707	1173239	1000	50.0 1500	100 2000	200 2500	500
Benzo[b]fluoranthene	PRY	Ave	11280 1714081	79348 2731318	149003 3913159	305667 5060556	870801	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[k]fluoranthene	PRY	Ave	13116 1826846	82814 2853210	162220 3823192	329034 5029492	902804	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[a]pyrene	PRY	Ave	11528 1672991	69112 2654764	138078 3686644	296041 4829479	823110	10.0 1000	50.0 1500	100 2000	200 2500	500
Indeno[1,2,3-cd]pyrene	PRY	Ave	11314 1828846	75689 2843541	150789 3969415	322831 5144357	907164	10.0 1000	50.0 1500	100 2000	200 2500	500
Dibenz(a,h)anthracene	PRY	Ave	10335 1548396	64821 2425912	130233 3350404	269552 4424620	756365	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[g,h,i]perylene	PRY	Ave	11461 1516805	65920 2335005	129980 3229285	265253 4280269	742616	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorophenol (Surr)	DCBd 4	Ave	331742	12257 371565	23028 543418	53570 740902	137391	1000	50.0 1500	100 2000	200 2500	500
Phenol-d5 (Surr)	DCBd 4	Ave	405866	24148 592577	40386 825643	112086 1286816	218195	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene-d5 (Surr)	NPT	Ave	5253 681626	32143 1090870	58627 1515876	142743 1920525	316492	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorobiphenyl (Surr)	ANT	Ave	9222 1228383	57345 1964512	111474 2658244	248013 3348562	629956	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Tribromophenol (Surr)	ANT	Ave	128051	5134 212240	10581 285603	22536 377716	62181	1000	50.0 1500	100 2000	200 2500	500
Terphenyl-d14 (Surr)	CRY	Ave	10265 1163301	55254 1881058	111892 2673578	248090 3471840	607996	10.0 1000	50.0 1500	100 2000	200 2500	500

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D
Lims ID: std9 l1lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 11-Apr-2018 11:32:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-002
Misc. Info.: STD9 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:03 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 11-Apr-2018 12:12:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	143090	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	772184	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	376279	400.0	400.0	
* 4 Phenanthrene-d10	188	10.711	10.711	0.000	98	674174	400.0	400.0	
* 5 Chrysene-d12	240	13.693	13.693	0.000	99	653687	400.0	400.0	
* 6 Perylene-d12	264	16.081	16.081	0.000	98	632511	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	740902	2500.0	2510.7	
$ 8 Phenol-d5	99	6.493	6.493	0.000	0	1286816	2500.0	2600.7	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	1920525	2500.0	2559.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	100	3348562	2500.0	2559.6	
$ 11 2,4,6-Tribromophenol	330	10.099	10.099	0.000	82	377716	2500.0	2865.3	
$ 12 Terphenyl-d14	244	12.217	12.217	0.000	99	3471840	2500.0	2671.1	
26 1,4-Dioxane	88	4.388	4.388	0.000	86	220428	2500.0	2329.2	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	75	747679	2500.0	2687.6	
28 Pyridine	79	4.699	4.699	0.000	72	1322435	5000.0	5020.4	
42 Benzaldehyde	77	6.488	6.488	0.000	90	1098932	5000.0	4766.9	
43 Phenol	94	6.505	6.505	0.000	92	1455738	2500.0	2653.3	
44 Aniline	93	6.570	6.570	0.000	93	2383962	2500.0	2561.7	
45 Bis(2-chloroethyl)ether	93	6.593	6.593	0.000	89	1702603	2500.0	2619.2	
244 n-Decane	57	6.682	6.682	0.000	91	1731096	2500.0	2232.0	
47 2-Chlorophenol	128	6.682	6.682	0.000	95	1252082	2500.0	2489.0	
48 1,3-Dichlorobenzene	146	6.817	6.817	0.000	95	1425019	2500.0	2534.5	
49 1,4-Dichlorobenzene	146	6.870	6.870	0.000	90	1473308	2500.0	2511.0	
50 Benzyl alcohol	108	6.935	6.935	0.000	87	987819	2500.0	2663.0	
51 1,2-Dichlorobenzene	146	7.005	7.005	0.000	93	1411396	2500.0	2460.8	
52 2-Methylphenol	108	7.005	7.005	0.000	96	1295424	2500.0	2663.5	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	3483703	2500.0	2270.1	
53 Indene	115	7.076	7.076	0.000	90	4956544	5000.0	4815.8	
55 3 & 4 Methylphenol	108	7.123	7.123	0.000	0	1308272	2500.0	2653.0	
57 N-Nitrosodi-n-propylamine	70	7.146	7.146	0.000	95	1256755	2500.0	2439.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.164	7.164	0.000	92	2202995	2500.0	2452.9	
61 Hexachloroethane	117	7.293	7.293	0.000	95	623162	2500.0	2564.9	
62 Nitrobenzene	77	7.317	7.317	0.000	97	1887243	2500.0	2545.9	
64 Isophorone	82	7.505	7.505	0.000	95	3117993	2500.0	2499.6	
66 2,4-Dimethylphenol	107	7.576	7.576	0.000	97	1590387	2500.0	2700.3	
65 2-Nitrophenol	139	7.588	7.588	0.000	93	932023	2500.0	2605.4	
70 Benzoic acid	122	7.652	7.652	0.000	17	1745811	5000.0	5327.4	a
69 Bis(2-chloroethoxy)methane	93	7.652	7.652	0.000	96	1872310	2500.0	2383.6	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	96	1183614	2500.0	2750.9	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	1410534	2500.0	2609.0	
74 Naphthalene	128	7.940	7.940	0.000	98	4868218	2500.0	2449.9	a
75 4-Chloroaniline	127	7.958	7.958	0.000	94	2178795	2500.0	2319.6	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	94	1256104	2500.0	2595.4	
78 Hexachlorobutadiene	225	8.035	8.035	0.000	96	790611	2500.0	2605.4	
83 Caprolactam	113	8.252	8.252	0.000	70	815845	5000.0	4249.7	
85 4-Chloro-3-methylphenol	107	8.335	8.335	0.000	96	1353725	2500.0	2826.9	
86 2-Methylnaphthalene	142	8.523	8.523	0.000	92	3391792	2500.0	2483.7	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	92	3171103	2500.0	2461.5	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	96	918081	2500.0	2936.7	
90 1,2,4,5-Tetrachlorobenzene	216	8.670	8.670	0.000	99	1278069	2500.0	2701.1	
93 2,4,6-Trichlorophenol	196	8.746	8.746	0.000	94	903532	2500.0	2886.3	
94 2,4,5-Trichlorophenol	196	8.782	8.782	0.000	91	939501	2500.0	2979.0	
99 1,1'-Biphenyl	154	8.905	8.905	0.000	96	3870012	2500.0	2574.1	
100 2-Chloronaphthalene	162	8.946	8.946	0.000	98	2987193	2500.0	2608.0	
101 2-Nitroaniline	65	9.005	9.005	0.000	79	1247056	2500.0	2752.1	
104 Dimethyl phthalate	163	9.129	9.129	0.000	98	3565631	2500.0	2482.8	
103 1,3-Dinitrobenzene	168	9.170	9.170	0.000	84	615844	2500.0	2841.1	
106 2,6-Dinitrotoluene	165	9.187	9.187	0.000	90	844496	2500.0	2657.8	
108 Acenaphthylene	152	9.305	9.305	0.000	98	4407257	2500.0	2656.9	
109 3-Nitroaniline	138	9.358	9.358	0.000	88	678096	2500.0	2425.4	
110 2,4-Dinitrophenol	184	9.440	9.440	0.000	88	1047510	5000.0	5287.8	
112 4-Nitrophenol	109	9.458	9.458	0.000	95	1172073	5000.0	5838.6	
111 Acenaphthene	153	9.452	9.452	0.000	95	2901147	2500.0	2469.2	
113 2,4-Dinitrotoluene	165	9.546	9.546	0.000	89	1095550	2500.0	2678.1	
115 Dibenzofuran	168	9.599	9.599	0.000	95	4296105	2500.0	2595.7	
118 2,3,4,6-Tetrachlorophenol	232	9.693	9.693	0.000	77	750074	2500.0	2828.0	
248 Hexadecane	57	9.705	9.705	0.000	92	2826797	2500.0	2123.6	
120 Diethyl phthalate	149	9.717	9.717	0.000	97	3490095	2500.0	2424.3	
122 4-Chlorophenyl phenyl ethe	204	9.858	9.858	0.000	97	1680540	2500.0	2573.6	
125 4-Nitroaniline	138	9.887	9.887	0.000	80	550547	2500.0	1948.4	
124 Fluorene	166	9.893	9.893	0.000	95	3527821	2500.0	2487.7	
127 4,6-Dinitro-2-methylphenol	198	9.905	9.905	0.000	75	1182428	5000.0	5102.8	
128 N-Nitrosodiphenylamine	169	9.952	9.952	0.000	99	2557326	2500.0	2522.7	
129 Diphenylamine	169	9.952	9.952	0.000	94	2557326	2125.0	2144.3	
130 1,2-Diphenylhydrazine	77	9.999	9.999	0.000	23	3939729	2500.0	2561.5	a
131 Azobenzene	77	9.999	9.999	0.000	97	3939729	2500.0	2561.5	
138 4-Bromophenyl phenyl ether	248	10.287	10.287	0.000	74	908524	2500.0	2655.1	
141 Atrazine	200	10.376	10.376	0.000	92	1661826	5000.0	4410.8	
140 Hexachlorobenzene	284	10.381	10.381	0.000	91	928441	2500.0	2856.1	
245 n-Octadecane	57	10.493	10.493	0.000	91	3150943	2500.0	2305.1	
143 Pentachlorophenol	266	10.534	10.534	0.000	89	1315564	5000.0	6138.8	
148 Phenanthrene	178	10.734	10.734	0.000	98	4810627	2500.0	2486.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.781	10.781	0.000	97	5052534	2500.0	2620.9	
150 Carbazole	167	10.893	10.893	0.000	97	4220650	2500.0	2409.2	
154 Di-n-butyl phthalate	149	11.117	11.117	0.000	100	5908439	2500.0	2510.5	
159 Fluoranthene	202	11.864	11.864	0.000	97	5031957	2500.0	2536.0	
160 Benzidine	184	11.946	11.946	0.000	99	5083387	5000.0	5203.8	
161 Pyrene	202	12.123	12.123	0.000	98	5144190	2500.0	2486.4	
169 Butyl benzyl phthalate	149	12.758	12.758	0.000	99	2847993	2500.0	2666.4	
174 Bis(2-ethylhexyl) phthalat	149	13.528	13.528	0.000	95	3958046	2500.0	2779.0	
177 3,3'-Dichlorobenzidine	252	13.575	13.575	0.000	75	3518336	5000.0	5463.8	
178 Benzo[a]anthracene	228	13.675	13.675	0.000	98	5049705	2500.0	2666.4	
179 Chrysene	228	13.734	13.734	0.000	97	4797112	2500.0	2543.3	
181 Di-n-octyl phthalate	149	14.558	14.558	0.000	99	6917707	2500.0	2797.5	
183 Benzo[b]fluoranthene	252	15.422	15.422	0.000	97	5060556	2500.0	2732.7	
184 Benzo[k]fluoranthene	252	15.469	15.469	0.000	99	5029492	2500.0	2585.8	
185 Benzo[a]pyrene	252	15.993	15.993	0.000	78	4829479	2500.0	2739.9	
190 Indeno[1,2,3-cd]pyrene	276	18.287	18.287	0.000	98	5144357	2500.0	2714.6	
189 Dibenz(a,h)anthracene	278	18.299	18.299	0.000	91	4424620	2500.0	2731.9	
191 Benzo[g,h,i]perylene	276	18.946	18.946	0.000	94	4280269	2500.0	2661.6	a

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L9 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:17:09 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D

Injection Date: 11-Apr-2018 11:32:30 Instrument ID: A4AG2 Operator ID:

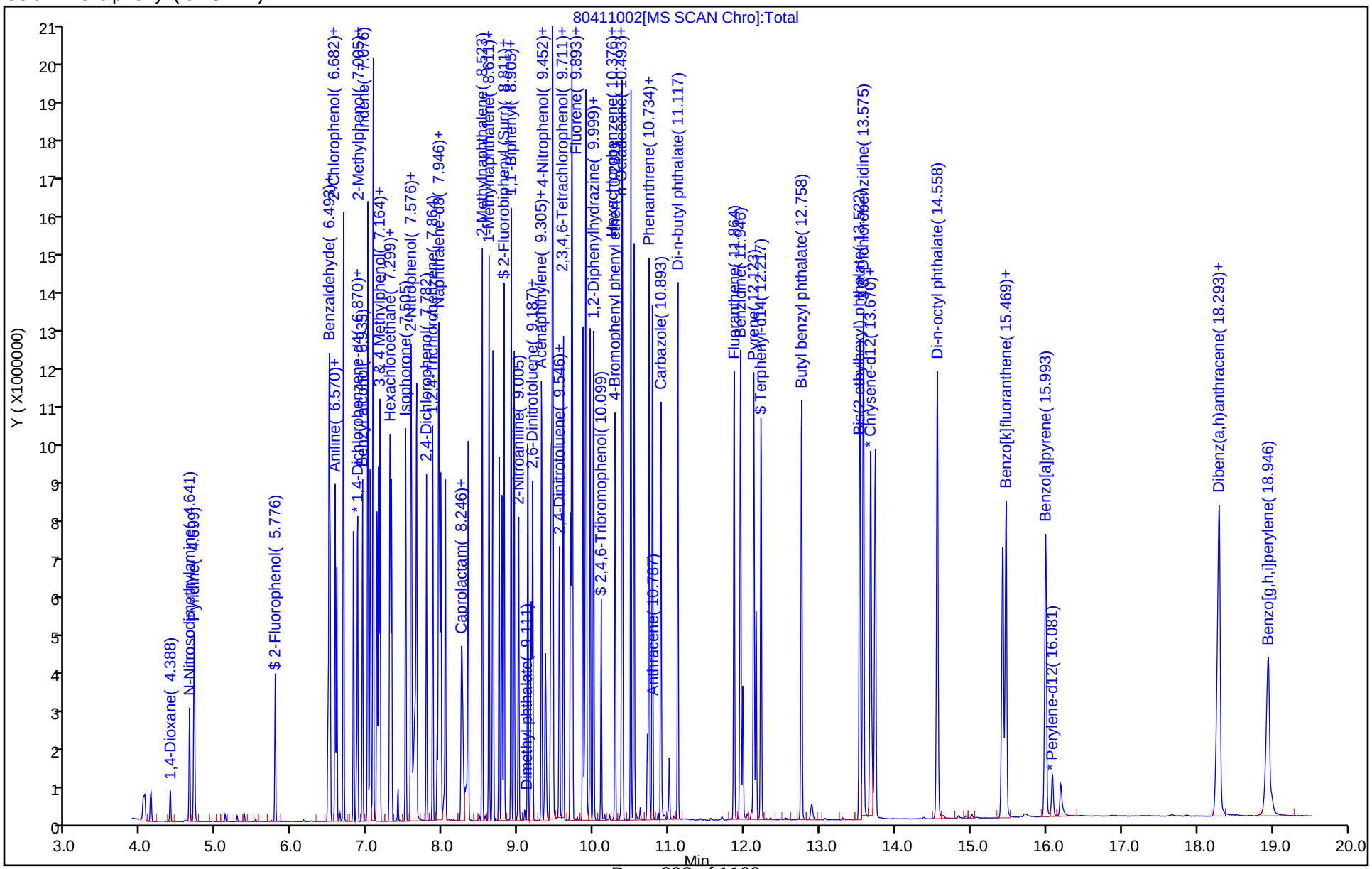
Lims ID: std9 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

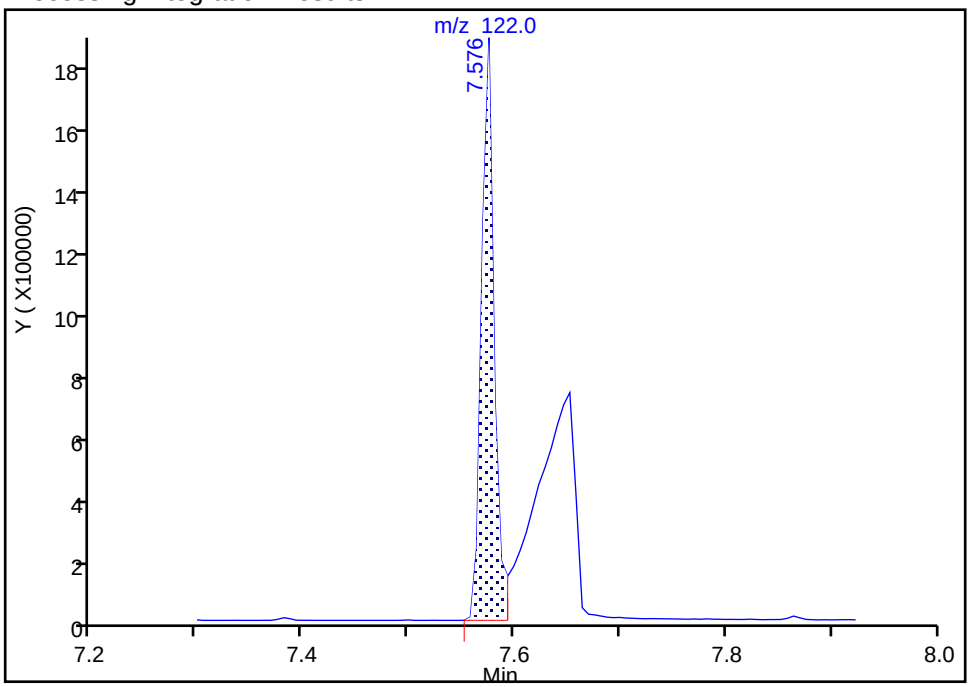
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D
Injection Date: 11-Apr-2018 11:32:30 Instrument ID: A4AG2
Lims ID: std9 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

70 Benzoic acid, CAS: 65-85-0

Signal: 1

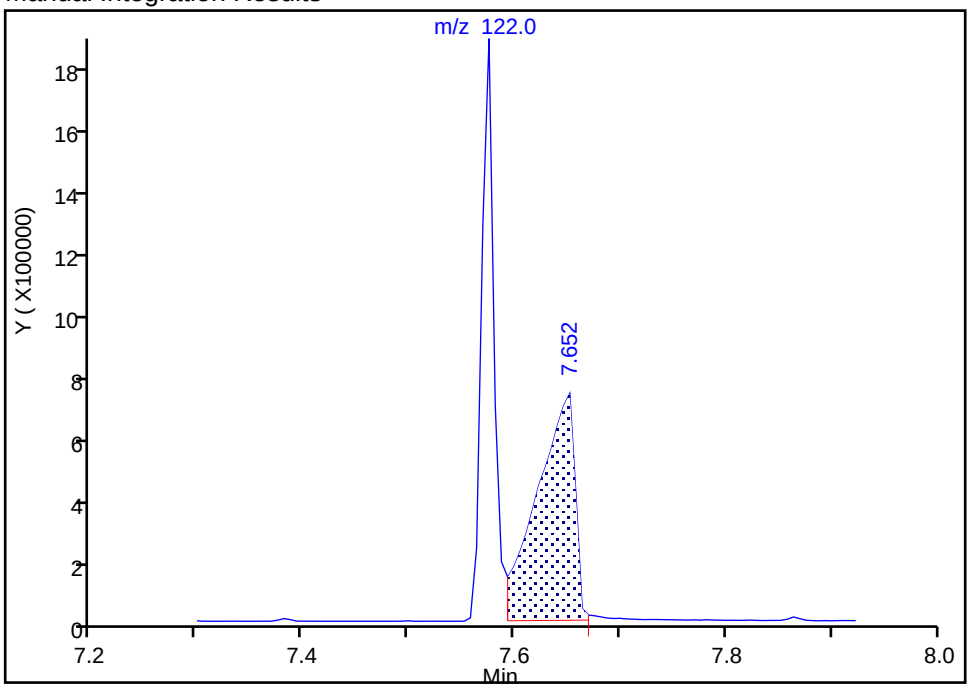
Processing Integration Results

RT: 7.58
Area: 1498977
Amount: 4689.6113
Amount Units: ng/ml



Manual Integration Results

RT: 7.65
Area: 1745811
Amount: 5327.4050
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:11:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

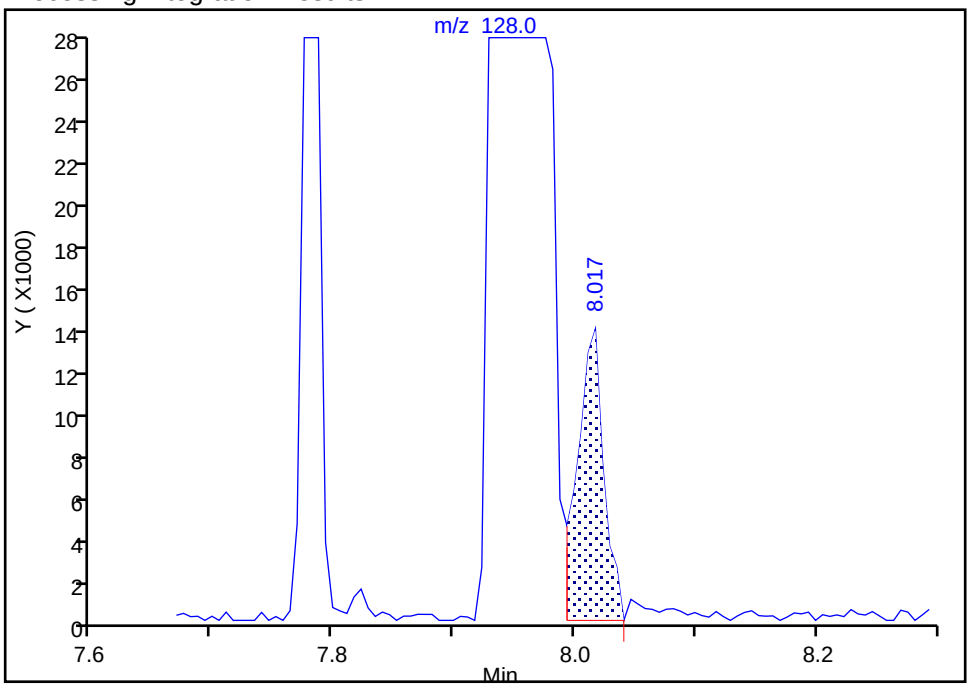
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D
Injection Date: 11-Apr-2018 11:32:30 Instrument ID: A4AG2
Lims ID: std9 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

74 Naphthalene, CAS: 91-20-3

Signal: 1

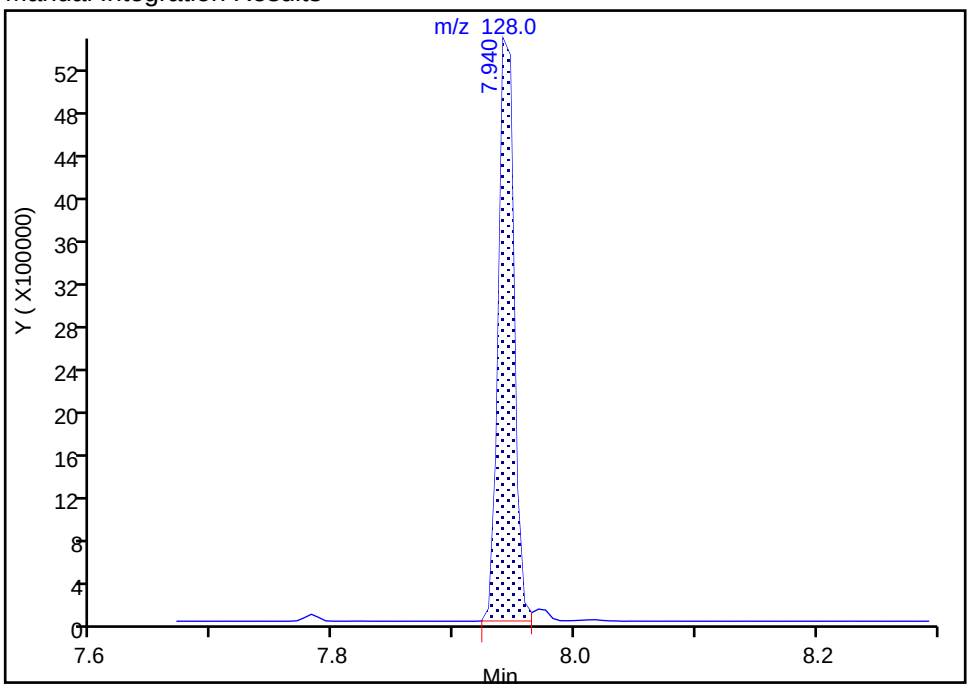
Processing Integration Results

RT: 8.02
Area: 21297
Amount: 21.533720
Amount Units: ng/ml



Manual Integration Results

RT: 7.94
Area: 4868218
Amount: 2449.9357
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:11:59
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

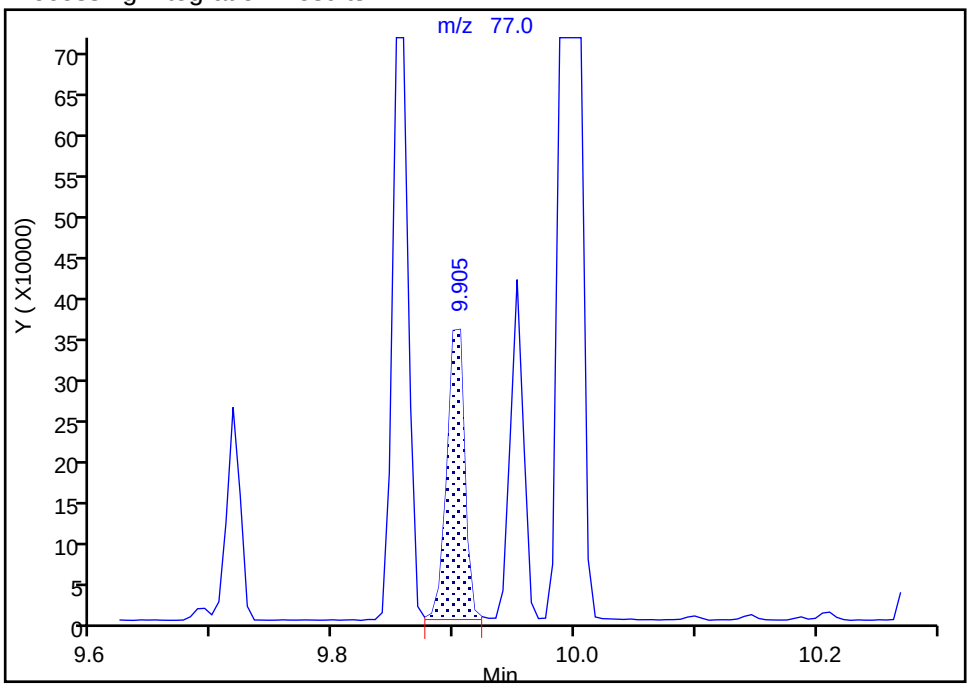
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D
Injection Date: 11-Apr-2018 11:32:30 Instrument ID: A4AG2
Lims ID: std9 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

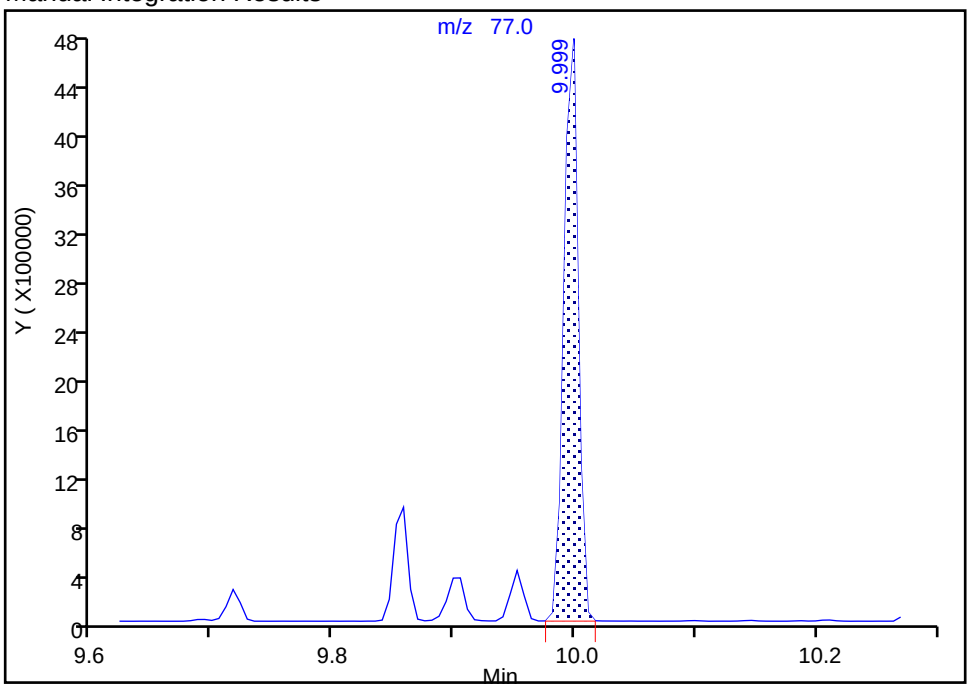
Processing Integration Results

RT: 9.91
Area: 364256
Amount: 227.3344
Amount Units: ng/ml



Manual Integration Results

RT: 10.00
Area: 3939729
Amount: 2561.5215
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:12:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

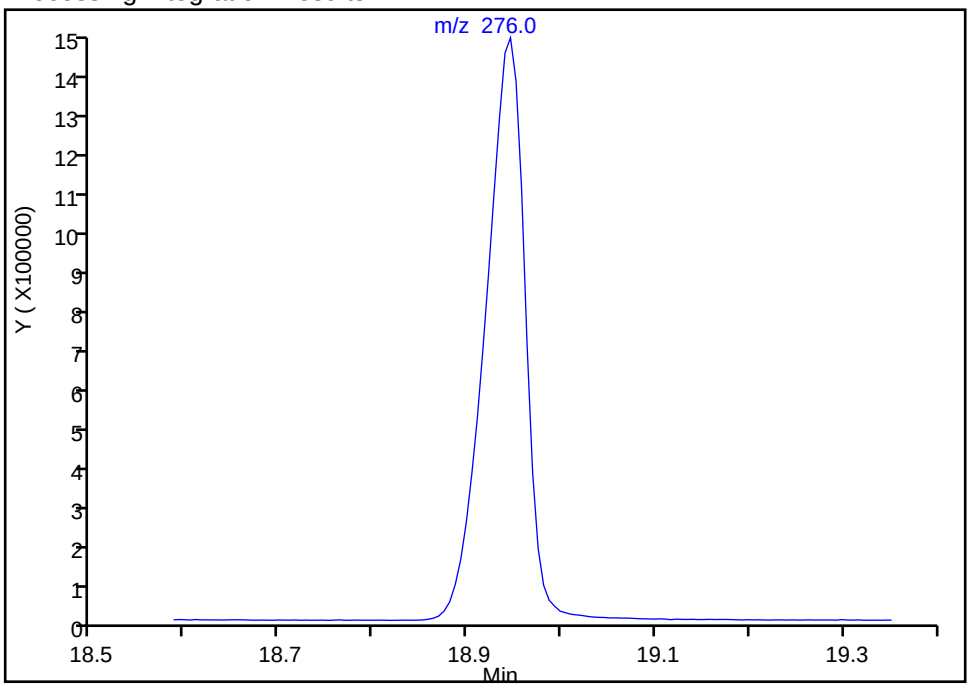
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411002.D				
Injection Date:	11-Apr-2018 11:32:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

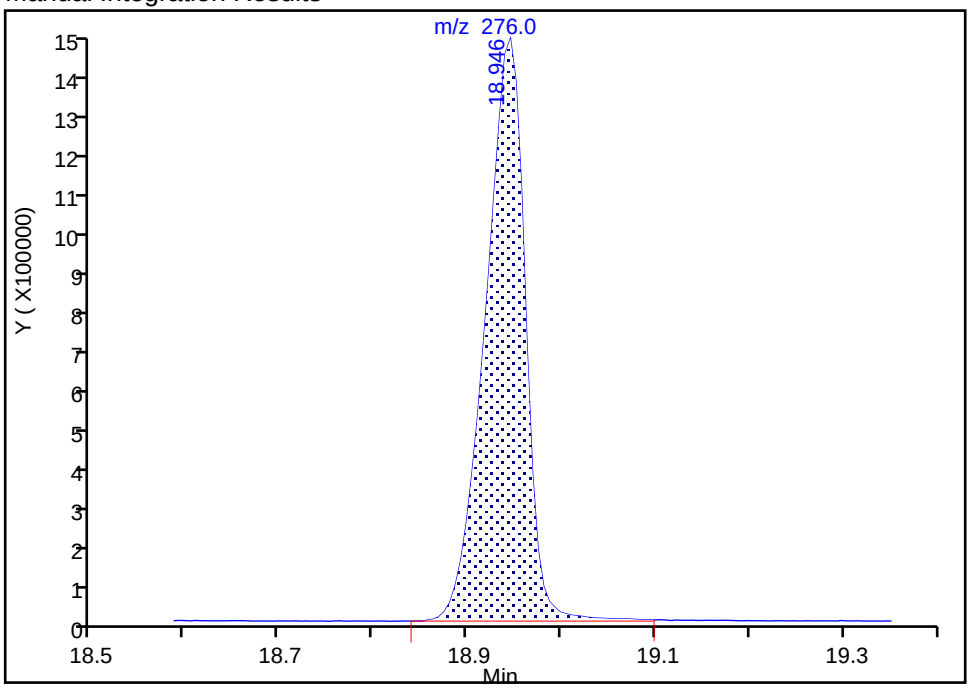
Not Detected
Expected RT: 18.95

Processing Integration Results



Manual Integration Results

RT: 18.95
Area: 4280269
Amount: 2661.6217
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:33:59
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411003.D
Lims ID: std8 l1lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 11-Apr-2018 11:57:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-003
Misc. Info.: STD8 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:16 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 11-Apr-2018 12:33:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	136895	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	774397	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	94	378320	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.711	-0.006	98	647008	400.0	400.0	
* 5 Chrysene-d12	240	13.687	13.693	-0.006	99	633371	400.0	400.0	
* 6 Perylene-d12	264	16.075	16.081	-0.006	97	602324	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	543418	2000.0	1924.8	
$ 8 Phenol-d5	99	6.494	6.493	0.001	0	825643	2000.0	1744.2	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	1515876	2000.0	2014.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	100	2658244	2000.0	2021.0	
$ 11 2,4,6-Tribromophenol	330	10.099	10.099	0.000	90	285603	2000.0	2154.9	
$ 12 Terphenyl-d14	244	12.211	12.217	-0.006	99	2673578	2000.0	2122.9	
26 1,4-Dioxane	88	4.388	4.388	0.000	84	176178	2000.0	1945.9	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	76	576465	2000.0	2165.9	
28 Pyridine	79	4.706	4.699	0.007	72	1040875	4000.0	4130.3	
42 Benzaldehyde	77	6.488	6.488	0.000	88	1004776	4000.0	4360.0	
43 Phenol	94	6.505	6.505	0.000	95	921988	2000.0	1756.5	
44 Aniline	93	6.570	6.570	0.000	93	1857932	2000.0	2086.8	
45 Bis(2-chloroethyl)ether	93	6.594	6.593	0.001	90	1313206	2000.0	2111.6	
244 n-Decane	57	6.682	6.682	0.000	91	1444489	2000.0	1946.8	
47 2-Chlorophenol	128	6.682	6.682	0.000	93	925200	2000.0	1922.5	
48 1,3-Dichlorobenzene	146	6.811	6.817	-0.006	94	1080834	2000.0	2009.4	
49 1,4-Dichlorobenzene	146	6.870	6.870	0.000	90	1120846	2000.0	1996.7	
50 Benzyl alcohol	108	6.935	6.935	0.000	87	786271	2000.0	2215.5	
52 2-Methylphenol	108	7.005	7.005	0.000	97	965283	2000.0	2074.6	
51 1,2-Dichlorobenzene	146	6.999	7.005	-0.006	92	1068363	2000.0	1947.0	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	2851395	2000.0	1942.1	
53 Indene	115	7.076	7.076	0.000	90	3914376	4000.0	3975.3	
55 3 & 4 Methylphenol	108	7.123	7.123	0.000	0	1010764	2000.0	2142.4	
57 N-Nitrosodi-n-propylamine	70	7.147	7.146	0.001	93	1002814	2000.0	2034.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.164	7.164	0.000	91	1794016	2000.0	2087.9	
61 Hexachloroethane	117	7.294	7.293	0.001	93	467256	2000.0	2010.3	
62 Nitrobenzene	77	7.317	7.317	0.000	97	1487059	2000.0	2000.3	
64 Isophorone	82	7.505	7.505	0.000	95	2470400	2000.0	1974.8	
66 2,4-Dimethylphenol	107	7.576	7.576	0.000	94	1253683	2000.0	2122.5	
65 2-Nitrophenol	139	7.582	7.588	-0.006	90	742478	2000.0	2069.6	
70 Benzoic acid	122	7.641	7.652	-0.011	93	1255933	4000.0	3863.7	
69 Bis(2-chloroethoxy)methane	93	7.646	7.652	-0.006	99	1511901	2000.0	1919.3	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	96	935577	2000.0	2168.2	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	1102645	2000.0	2033.7	
74 Naphthalene	128	7.941	7.940	0.001	98	3946346	2000.0	1980.3	
75 4-Chloroaniline	127	7.952	7.958	-0.006	93	1774373	2000.0	1883.6	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	93	1018708	2000.0	2098.9	
78 Hexachlorobutadiene	225	8.035	8.035	0.000	96	625642	2000.0	2055.9	
83 Caprolactam	113	8.246	8.252	-0.006	70	633971	4000.0	3292.9	
85 4-Chloro-3-methylphenol	107	8.329	8.335	-0.006	95	1033670	2000.0	2152.4	
86 2-Methylnaphthalene	142	8.523	8.523	0.000	92	2729682	2000.0	1993.1	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	93	2568494	2000.0	1988.0	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	96	723989	2000.0	2303.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.670	-0.006	98	1020942	2000.0	2146.1	
93 2,4,6-Trichlorophenol	196	8.746	8.746	0.000	95	712528	2000.0	2263.9	
94 2,4,5-Trichlorophenol	196	8.782	8.782	0.000	92	728459	2000.0	2297.3	
99 1,1'-Biphenyl	154	8.905	8.905	0.000	96	3083431	2000.0	2039.8	
100 2-Chloronaphthalene	162	8.941	8.946	-0.005	99	2382817	2000.0	2069.1	
101 2-Nitroaniline	65	8.999	9.005	-0.006	79	979379	2000.0	2149.7	
104 Dimethyl phthalate	163	9.123	9.129	-0.006	97	2841784	2000.0	1968.1	
103 1,3-Dinitrobenzene	168	9.170	9.170	0.000	86	481380	2000.0	2208.8	
106 2,6-Dinitrotoluene	165	9.188	9.187	0.001	91	668849	2000.0	2093.6	
108 Acenaphthylene	152	9.305	9.305	0.000	98	3480900	2000.0	2087.2	
109 3-Nitroaniline	138	9.352	9.358	-0.006	88	531398	2000.0	1890.4	
110 2,4-Dinitrophenol	184	9.435	9.440	-0.005	74	786438	4000.0	3970.5	a
112 4-Nitrophenol	109	9.452	9.458	-0.006	65	939047	4000.0	4652.6	
111 Acenaphthene	153	9.452	9.452	0.000	94	2259999	2000.0	1913.1	
113 2,4-Dinitrotoluene	165	9.540	9.546	-0.006	88	844874	2000.0	2054.1	
115 Dibenzofuran	168	9.593	9.599	-0.006	94	3350992	2000.0	2013.7	
118 2,3,4,6-Tetrachlorophenol	232	9.688	9.693	-0.005	80	565557	2000.0	2120.8	
248 Hexadecane	57	9.705	9.705	0.000	91	2347353	2000.0	1753.9	
120 Diethyl phthalate	149	9.717	9.717	0.000	98	2767755	2000.0	1912.2	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.858	-0.006	97	1303272	2000.0	1985.1	
125 4-Nitroaniline	138	9.882	9.887	-0.005	81	463294	2000.0	1630.8	
124 Fluorene	166	9.893	9.893	0.000	95	2791824	2000.0	1958.1	
127 4,6-Dinitro-2-methylphenol	198	9.899	9.905	-0.006	74	912492	4000.0	4117.7	
129 Diphenylamine	169	9.952	9.952	0.000	94	1997237	1700.0	1745.0	
128 N-Nitrosodiphenylamine	169	9.952	9.952	0.000	99	1997237	2000.0	2053.0	
131 Azobenzene	77	9.993	9.999	-0.006	96	3097251	2000.0	2098.3	
130 1,2-Diphenylhydrazine	77	9.993	9.999	-0.006	22	3097425	2000.0	2098.4	a
138 4-Bromophenyl phenyl ether	248	10.282	10.287	-0.005	75	730759	2000.0	2225.2	
141 Atrazine	200	10.370	10.376	-0.006	91	1313562	4000.0	3632.8	
140 Hexachlorobenzene	284	10.382	10.381	0.001	92	714196	2000.0	2289.3	
245 n-Octadecane	57	10.487	10.493	-0.006	91	2594525	2000.0	1977.8	
143 Pentachlorophenol	266	10.529	10.534	-0.005	88	990657	4000.0	4816.8	
148 Phenanthrene	178	10.729	10.734	-0.005	98	3766548	2000.0	2028.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.776	10.781	-0.005	97	3908372	2000.0	2112.6	
150 Carbazole	167	10.887	10.893	-0.006	97	3386369	2000.0	2014.1	
154 Di-n-butyl phthalate	149	11.111	11.117	-0.006	100	4616678	2000.0	2044.0	
159 Fluoranthene	202	11.858	11.864	-0.006	97	3871725	2000.0	2033.2	
160 Benzidine	184	11.940	11.946	-0.006	99	3596196	4000.0	3827.7	
161 Pyrene	202	12.117	12.123	-0.006	98	3958381	2000.0	1974.6	
169 Butyl benzyl phthalate	149	12.752	12.758	-0.006	99	2229303	2000.0	2154.1	
174 Bis(2-ethylhexyl) phthalat	149	13.523	13.528	-0.005	95	3054556	2000.0	2213.4	
177 3,3'-Dichlorobenzidine	252	13.570	13.575	-0.005	75	2706805	4000.0	4338.3	
178 Benzo[a]anthracene	228	13.664	13.675	-0.011	99	3901328	2000.0	2126.1	
179 Chrysene	228	13.728	13.734	-0.006	97	3761692	2000.0	2058.3	
181 Di-n-octyl phthalate	149	14.552	14.558	-0.006	99	5350981	2000.0	2272.4	
183 Benzo[b]fluoranthene	252	15.417	15.422	-0.005	97	3913159	2000.0	2219.0	
184 Benzo[k]fluoranthene	252	15.464	15.469	-0.005	99	3823192	2000.0	2064.2	
185 Benzo[a]pyrene	252	15.987	15.993	-0.006	77	3686644	2000.0	2196.4	
190 Indeno[1,2,3-cd]pyrene	276	18.275	18.287	-0.012	98	3969415	2000.0	2199.6	
189 Dibenz(a,h)anthracene	278	18.281	18.299	-0.018	90	3350404	2000.0	2172.4	
191 Benzo[g,h,i]perylene	276	18.928	18.946	-0.018	94	3229285	2000.0	2108.7	a
S 193 Methyl Phenols,Total	100				0			4217.0	
S 246 Total Cresols	100				0			4217.0	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L8 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:17:22 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411003.D

Injection Date: 11-Apr-2018 11:57:30 Instrument ID: A4AG2 Operator ID:

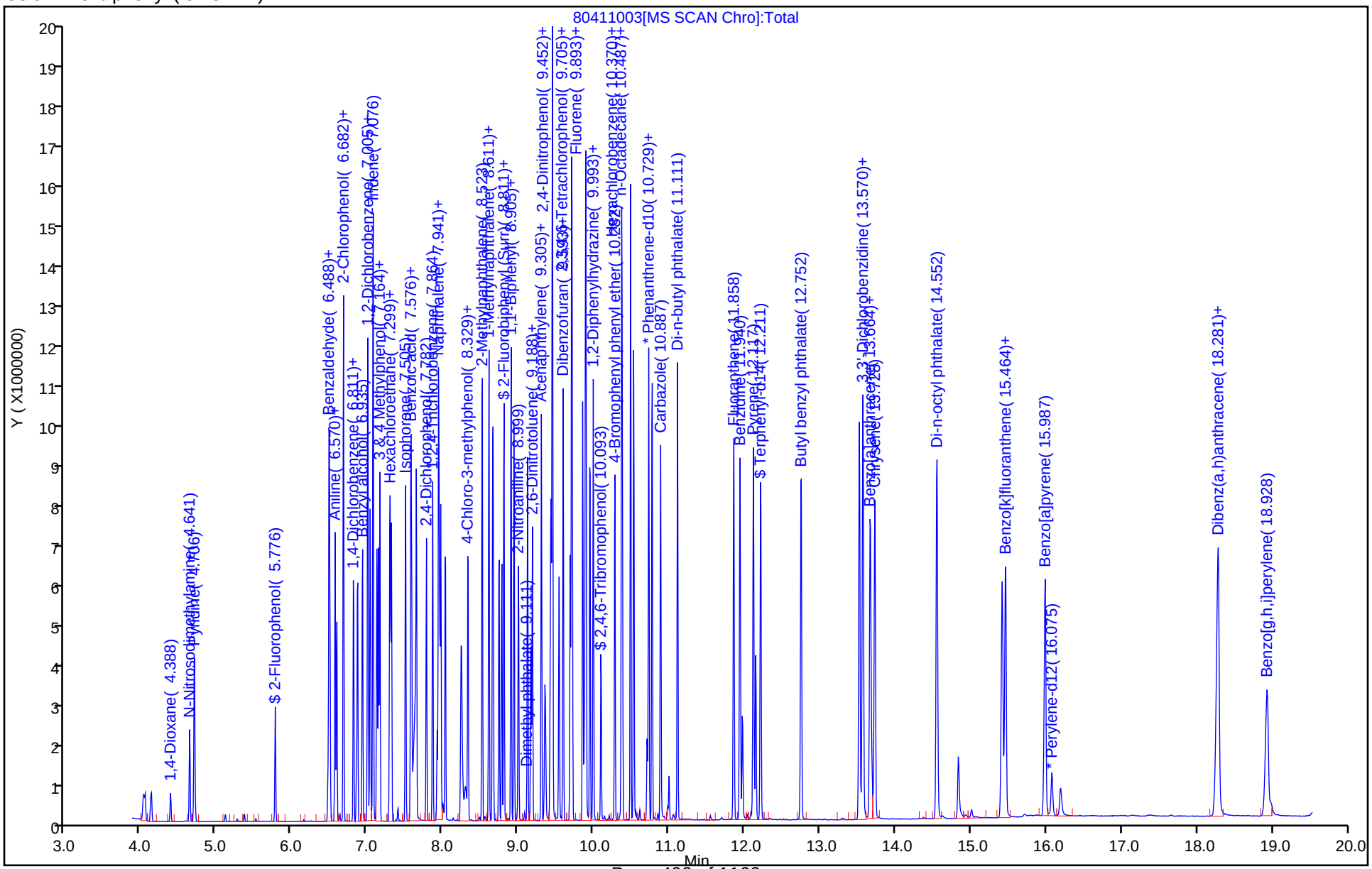
Lims ID: std8 l1lvi Worklist Smp#: 3

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 3

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

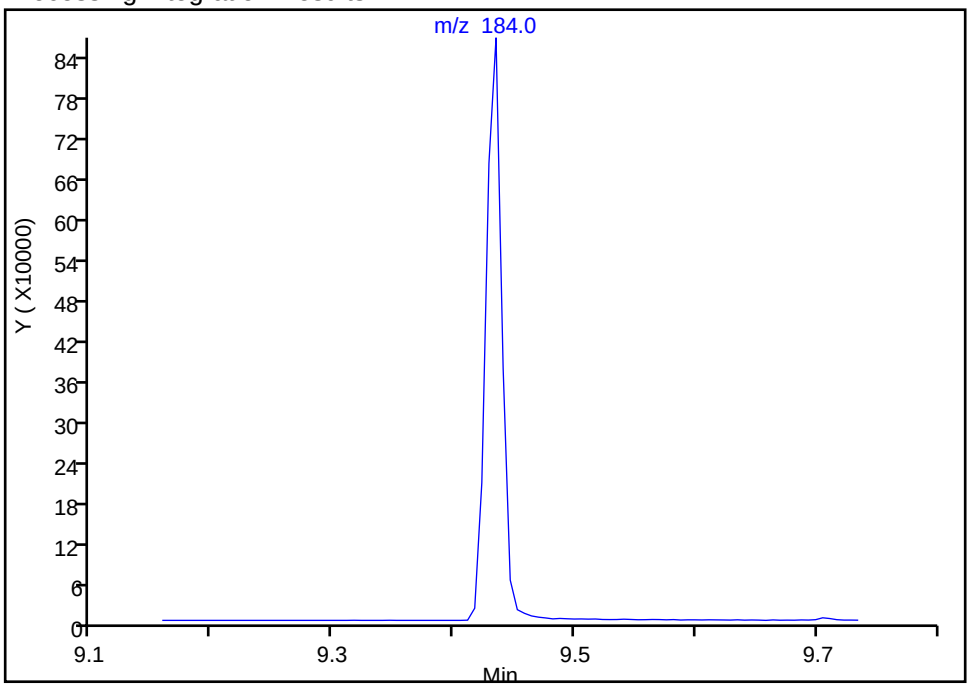
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411003.D
Injection Date: 11-Apr-2018 11:57:30 Instrument ID: A4AG2
Lims ID: std8 l1lvi
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

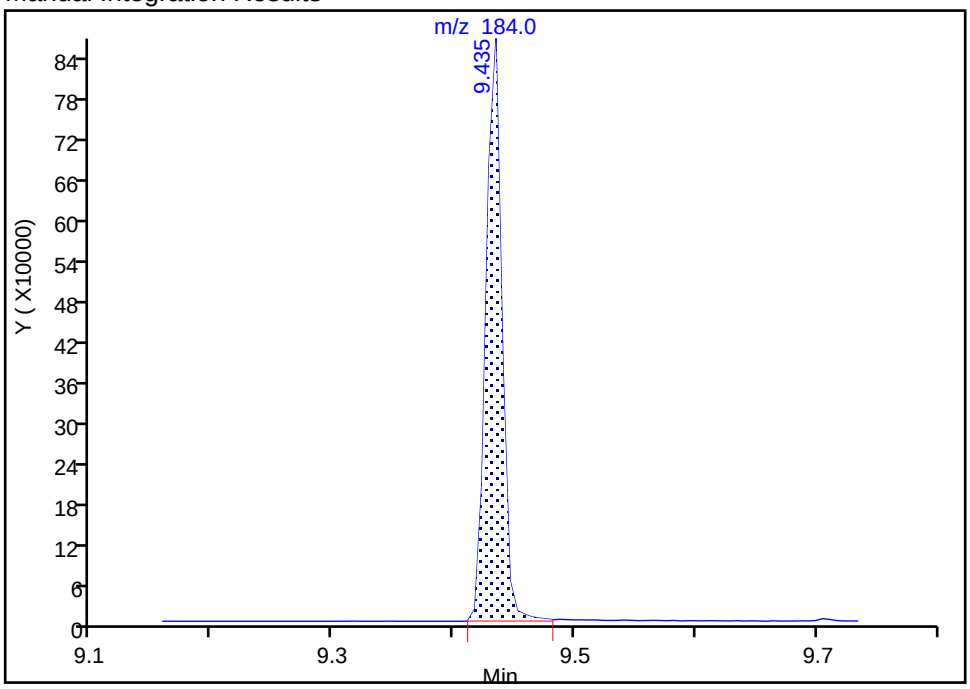
Not Detected
Expected RT: 9.44

Processing Integration Results



Manual Integration Results

RT: 9.43
Area: 786438
Amount: 3970.4836
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:32:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

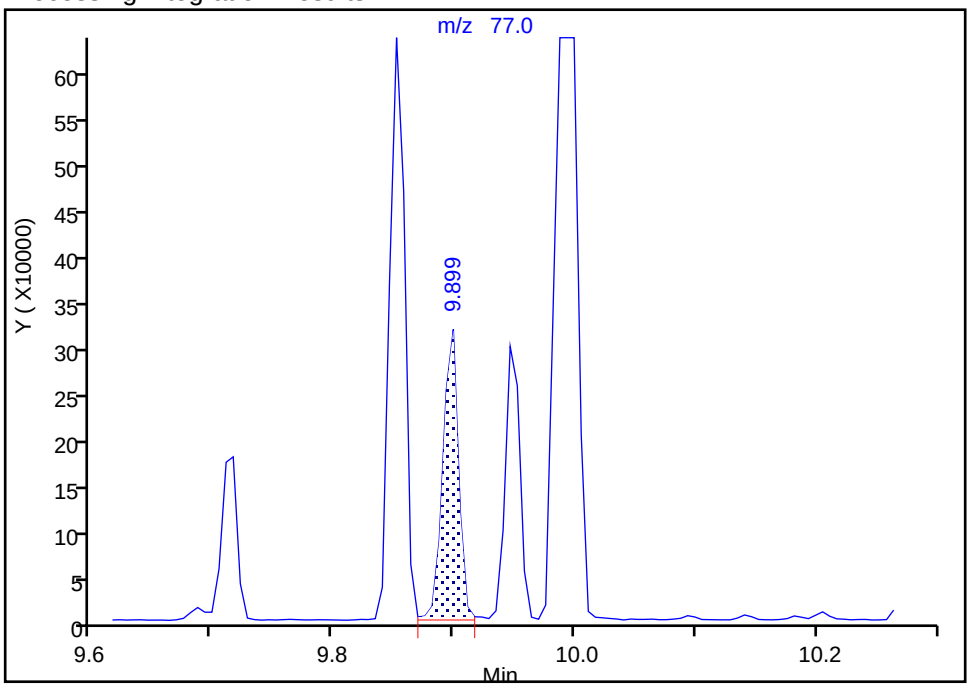
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411003.D
Injection Date: 11-Apr-2018 11:57:30 Instrument ID: A4AG2
Lims ID: std8 l1lvi
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

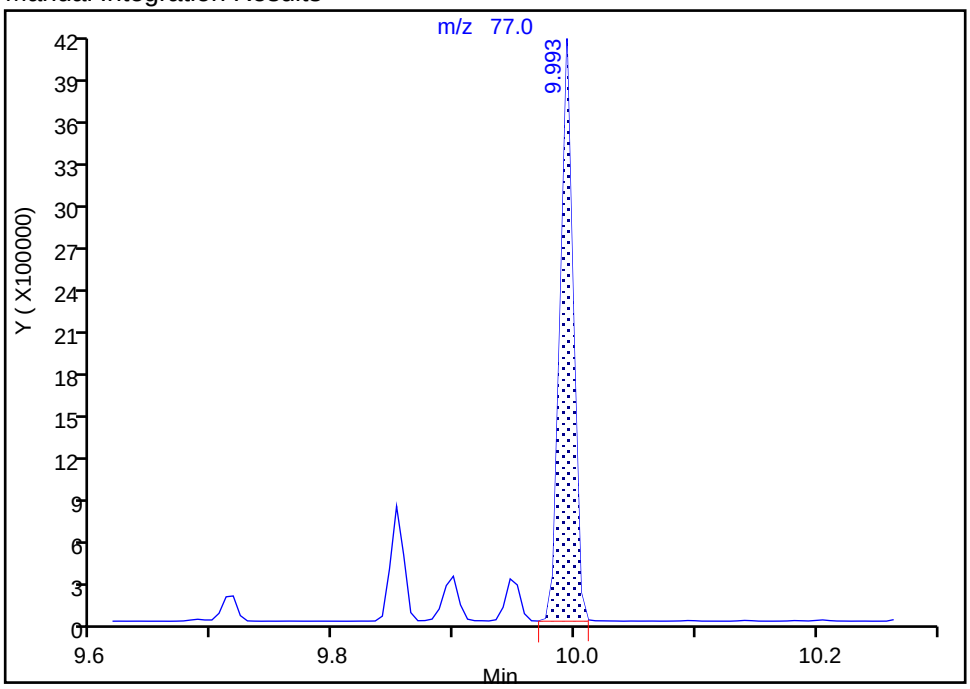
Processing Integration Results

RT: 9.90
Area: 286592
Amount: 187.2528
Amount Units: ng/ml



Manual Integration Results

RT: 9.99
Area: 3097425
Amount: 2098.4315
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:32:59
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

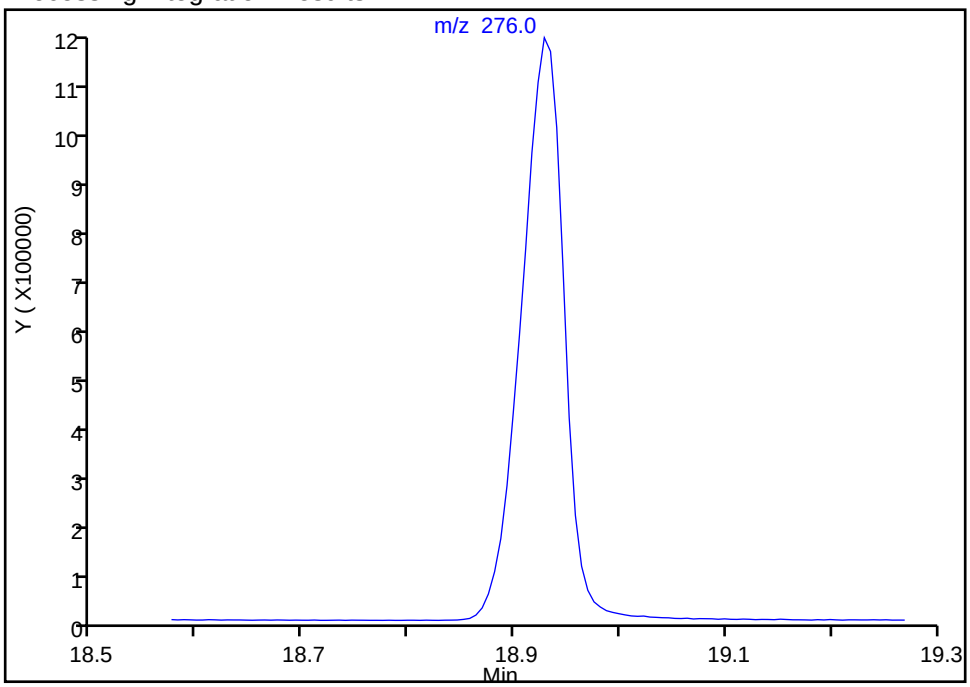
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411003.D				
Injection Date:	11-Apr-2018 11:57:30	Instrument ID:	A4AG2		
Lims ID:	std8 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

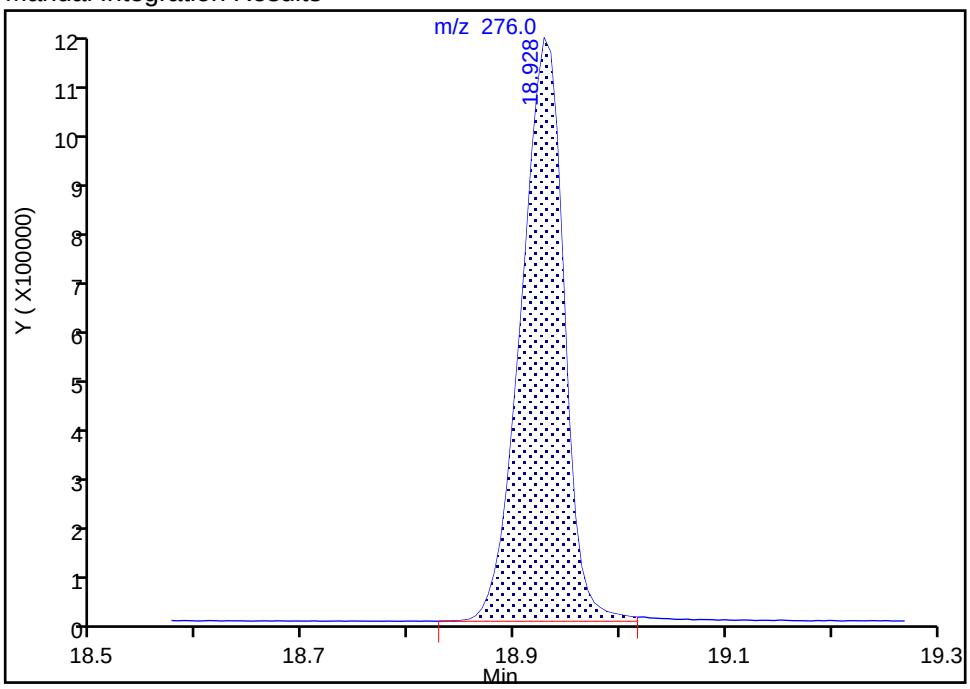
Processing Integration Results

Not Detected
Expected RT: 18.95



Manual Integration Results

RT: 18.93
Area: 3229285
Amount: 2108.7231
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:33:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411004.D
Lims ID: std7 l1lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 11-Apr-2018 12:21:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-004
Misc. Info.: STD7 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:26 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 11-Apr-2018 12:48:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	128332	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	747199	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	370697	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.711	-0.006	98	647178	400.0	400.0	
* 5 Chrysene-d12	240	13.687	13.693	-0.006	99	632151	400.0	400.0	
* 6 Perylene-d12	264	16.075	16.081	-0.006	97	595728	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	371565	1500.0	1403.9	
$ 8 Phenol-d5	99	6.488	6.493	-0.005	0	592577	1500.0	1335.3	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	1090870	1500.0	1502.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	100	1964512	1500.0	1524.3	
$ 11 2,4,6-Tribromophenol	330	10.099	10.099	0.000	90	212240	1500.0	1634.3	
$ 12 Terphenyl-d14	244	12.211	12.217	-0.006	99	1881058	1500.0	1496.5	
26 1,4-Dioxane	88	4.388	4.388	0.000	84	112640	1500.0	1327.1	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	74	362138	1500.0	1451.4	
28 Pyridine	79	4.700	4.699	0.001	71	653256	3000.0	2765.2	
42 Benzaldehyde	77	6.488	6.488	0.000	87	736183	3000.0	2964.0	
43 Phenol	94	6.499	6.505	-0.006	93	660266	1500.0	1341.8	
44 Aniline	93	6.570	6.570	0.000	93	1293653	1500.0	1550.0	
45 Bis(2-chloroethyl)ether	93	6.594	6.593	0.001	88	894689	1500.0	1534.6	
47 2-Chlorophenol	128	6.682	6.682	0.000	83	637058	1500.0	1412.1	
244 n-Decane	57	6.682	6.682	0.000	91	980107	1500.0	1409.0	
48 1,3-Dichlorobenzene	146	6.811	6.817	-0.006	94	743177	1500.0	1473.8	
49 1,4-Dichlorobenzene	146	6.870	6.870	0.000	90	760523	1500.0	1445.2	
50 Benzyl alcohol	108	6.935	6.935	0.000	87	556745	1500.0	1673.5	
51 1,2-Dichlorobenzene	146	6.999	7.005	-0.006	92	745369	1500.0	1449.0	
52 2-Methylphenol	108	7.005	7.005	0.000	97	663783	1500.0	1521.8	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	2071641	1500.0	1505.2	
53 Indene	115	7.070	7.076	-0.006	91	2699572	3000.0	2924.5	
55 3 & 4 Methylphenol	108	7.123	7.123	0.000	0	724604	1500.0	1638.4	
57 N-Nitrosodi-n-propylamine	70	7.141	7.146	-0.005	96	744574	1500.0	1611.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.164	7.164	0.000	91	1303884	1500.0	1618.8	
61 Hexachloroethane	117	7.293	7.293	0.000	93	323016	1500.0	1482.4	
62 Nitrobenzene	77	7.317	7.317	0.000	97	1078937	1500.0	1504.2	
64 Isophorone	82	7.505	7.505	0.000	95	1832760	1500.0	1518.4	
66 2,4-Dimethylphenol	107	7.570	7.576	-0.006	95	912581	1500.0	1601.3	
65 2-Nitrophenol	139	7.582	7.588	-0.006	93	540830	1500.0	1562.4	
70 Benzoic acid	122	7.629	7.652	-0.023	92	957797	3000.0	3085.0	
69 Bis(2-chloroethoxy)methane	93	7.646	7.652	-0.006	94	1123572	1500.0	1478.2	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	96	662538	1500.0	1591.3	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	755975	1500.0	1445.1	
74 Naphthalene	128	7.940	7.940	0.000	98	2850004	1500.0	1482.2	
75 4-Chloroaniline	127	7.952	7.958	-0.006	94	1461483	1500.0	1607.9	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	736152	1500.0	1571.9	
78 Hexachlorobutadiene	225	8.029	8.035	-0.006	95	422930	1500.0	1440.4	
83 Caprolactam	113	8.240	8.252	-0.012	71	500764	3000.0	2695.7	
85 4-Chloro-3-methylphenol	107	8.329	8.335	-0.006	96	756987	1500.0	1633.6	
86 2-Methylnaphthalene	142	8.523	8.523	0.000	92	2004676	1500.0	1517.0	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	93	1878457	1500.0	1506.9	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	96	502954	1500.0	1633.1	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.670	-0.006	98	734277	1500.0	1575.2	
93 2,4,6-Trichlorophenol	196	8.740	8.746	-0.006	96	519219	1500.0	1683.6	
94 2,4,5-Trichlorophenol	196	8.782	8.782	0.000	93	513471	1500.0	1652.6	
99 1,1'-Biphenyl	154	8.905	8.905	0.000	96	2275630	1500.0	1536.4	
100 2-Chloronaphthalene	162	8.940	8.946	-0.006	98	1784883	1500.0	1581.8	
101 2-Nitroaniline	65	8.999	9.005	-0.006	78	710511	1500.0	1591.6	
104 Dimethyl phthalate	163	9.123	9.129	-0.006	97	2111287	1500.0	1492.3	
103 1,3-Dinitrobenzene	168	9.164	9.170	-0.006	86	355296	1500.0	1663.8	
106 2,6-Dinitrotoluene	165	9.187	9.187	0.000	91	489705	1500.0	1564.4	
108 Acenaphthylene	152	9.305	9.305	0.000	98	2533601	1500.0	1550.4	
109 3-Nitroaniline	138	9.352	9.358	-0.006	87	417590	1500.0	1516.1	
110 2,4-Dinitrophenol	184	9.429	9.440	-0.011	75	559467	3000.0	2906.5	
111 Acenaphthene	153	9.452	9.452	0.000	93	1667497	1500.0	1440.6	
112 4-Nitrophenol	109	9.452	9.458	-0.006	64	678357	3000.0	3430.1	
113 2,4-Dinitrotoluene	165	9.540	9.546	-0.006	89	630562	1500.0	1564.6	
115 Dibenzofuran	168	9.593	9.599	-0.006	95	2442344	1500.0	1497.9	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.693	-0.006	80	437010	1500.0	1672.5	
248 Hexadecane	57	9.705	9.705	0.000	91	1807681	1500.0	1378.4	
120 Diethyl phthalate	149	9.711	9.717	-0.006	97	2049248	1500.0	1444.9	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.858	-0.006	97	957560	1500.0	1488.5	
125 4-Nitroaniline	138	9.876	9.887	-0.011	80	385860	1500.0	1386.1	
124 Fluorene	166	9.887	9.893	-0.006	95	2055841	1500.0	1471.6	
127 4,6-Dinitro-2-methylphenol	198	9.899	9.905	-0.006	77	657653	3000.0	2987.6	
128 N-Nitrosodiphenylamine	169	9.946	9.952	-0.006	99	1516830	1500.0	1558.7	
129 Diphenylamine	169	9.946	9.952	-0.006	94	1516830	1275.0	1324.9	
130 1,2-Diphenylhydrazine	77	9.993	9.999	-0.006	40	2280402	1500.0	1544.5	a
131 Azobenzene	77	9.993	9.999	-0.006	96	2280402	1500.0	1544.5	
138 4-Bromophenyl phenyl ether	248	10.281	10.287	-0.006	76	523642	1500.0	1594.1	
141 Atrazine	200	10.370	10.376	-0.006	90	1032183	3000.0	2853.9	
140 Hexachlorobenzene	284	10.381	10.381	0.000	92	516986	1500.0	1656.7	
245 n-Octadecane	57	10.487	10.493	-0.006	90	1993913	1500.0	1519.5	
143 Pentachlorophenol	266	10.529	10.534	-0.005	88	679817	3000.0	3304.5	
148 Phenanthrene	178	10.729	10.734	-0.005	98	2765118	1500.0	1489.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.776	10.781	-0.005	97	2845540	1500.0	1537.7	
150 Carbazole	167	10.887	10.893	-0.006	96	2590381	1500.0	1540.3	
154 Di-n-butyl phthalate	149	11.111	11.117	-0.006	99	3470434	1500.0	1536.1	
159 Fluoranthene	202	11.858	11.864	-0.006	98	2918561	1500.0	1532.3	
160 Benzidine	184	11.940	11.946	-0.006	99	2801730	3000.0	3010.8	
161 Pyrene	202	12.117	12.123	-0.006	97	2873941	1500.0	1436.4	
169 Butyl benzyl phthalate	149	12.752	12.758	-0.006	98	1602207	1500.0	1551.2	
174 Bis(2-ethylhexyl) phthalat	149	13.522	13.528	-0.006	94	2204896	1500.0	1600.8	
177 3,3'-Dichlorobenzidine	252	13.570	13.575	-0.005	76	1932253	3000.0	3102.9	
178 Benzo[a]anthracene	228	13.664	13.675	-0.011	99	2823957	1500.0	1542.0	
179 Chrysene	228	13.728	13.734	-0.006	97	2712911	1500.0	1487.3	
181 Di-n-octyl phthalate	149	14.552	14.558	-0.006	98	3810123	1500.0	1635.9	
183 Benzo[b]fluoranthene	252	15.411	15.422	-0.011	98	2731318	1500.0	1566.0	
184 Benzo[k]fluoranthene	252	15.458	15.469	-0.011	99	2853210	1500.0	1557.5	
185 Benzo[a]pyrene	252	15.981	15.993	-0.012	78	2654764	1500.0	1599.1	
190 Indeno[1,2,3-cd]pyrene	276	18.269	18.287	-0.018	99	2843541	1500.0	1593.1	
189 Dibenz(a,h)anthracene	278	18.275	18.299	-0.024	91	2425912	1500.0	1590.3	
191 Benzo[g,h,i]perylene	276	18.922	18.946	-0.024	97	2335005	1500.0	1541.6	
S 246 Total Cresols	100				0			3160.1	
S 193 Methyl Phenols,Total	100				0			3160.1	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L7 W_00010 Amount Added: 0.10 Units: mL

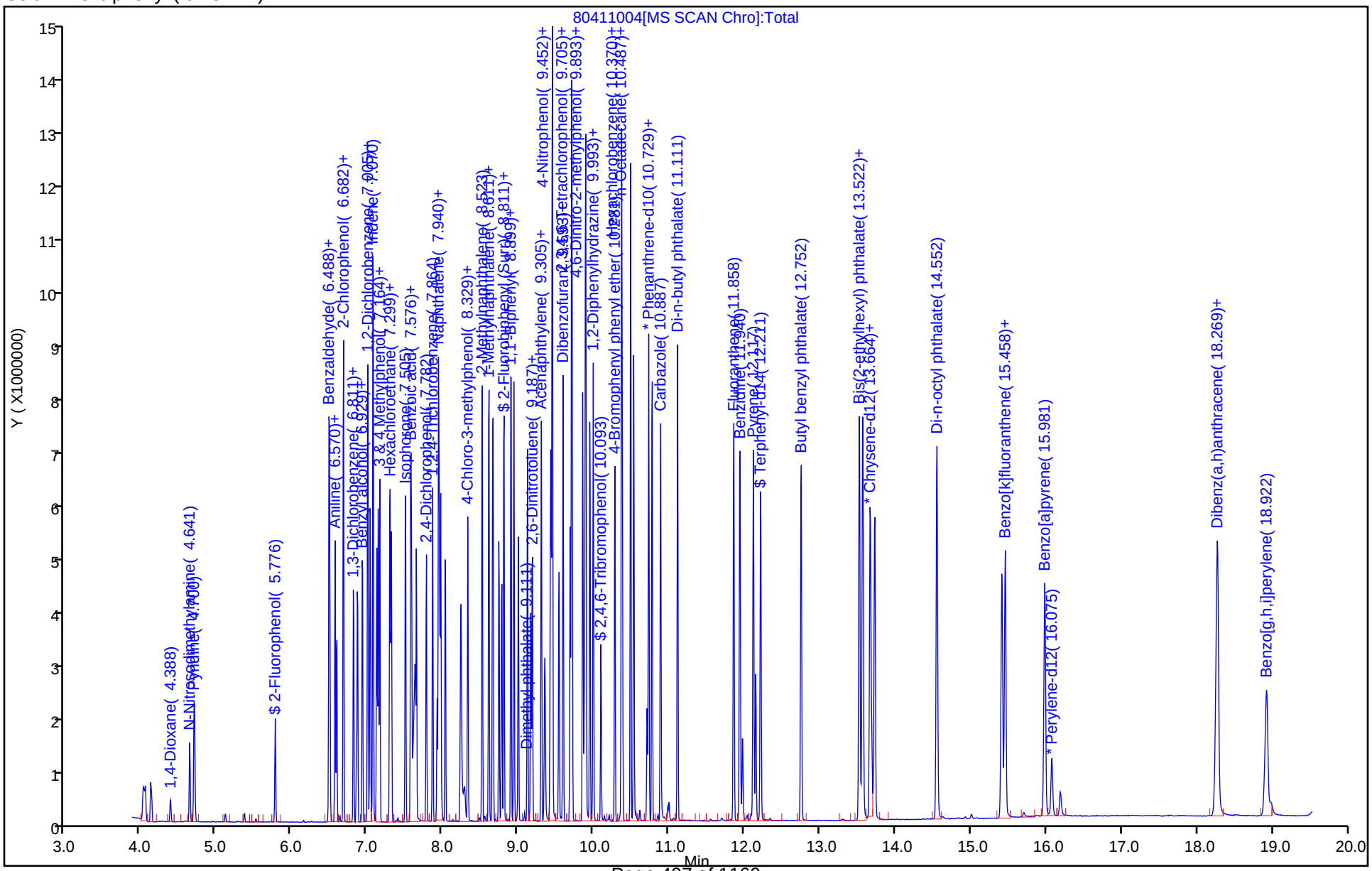
Report Date: 12-Apr-2018 13:17:29 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411004.D

Injection Date:	11-Apr-2018 12:21:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std7 l1lvi			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

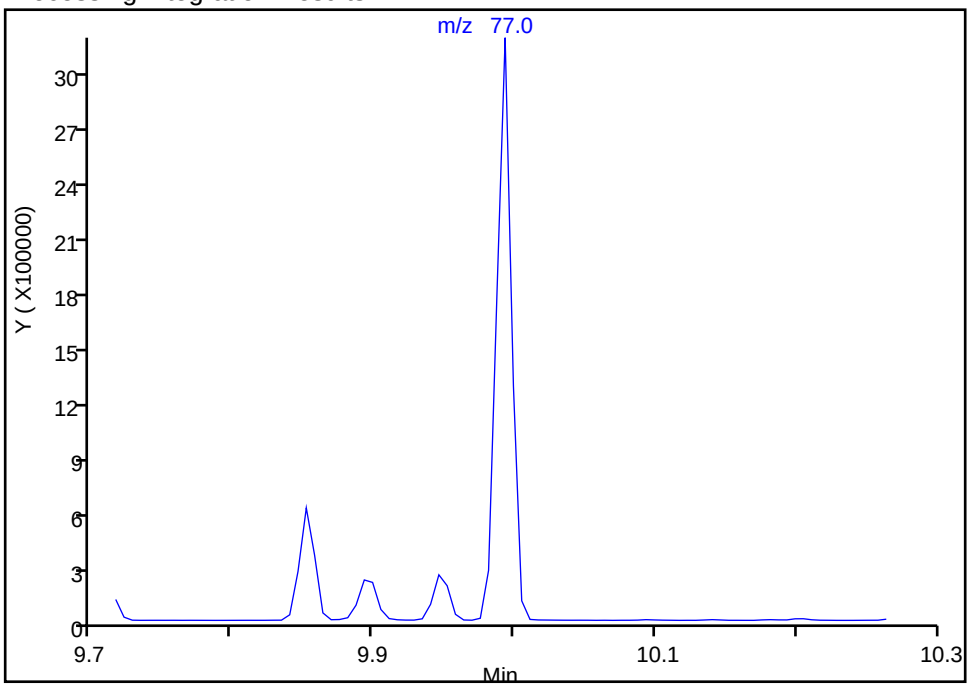
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411004.D
Injection Date: 11-Apr-2018 12:21:30 Instrument ID: A4AG2
Lims ID: std7 l1lvi
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

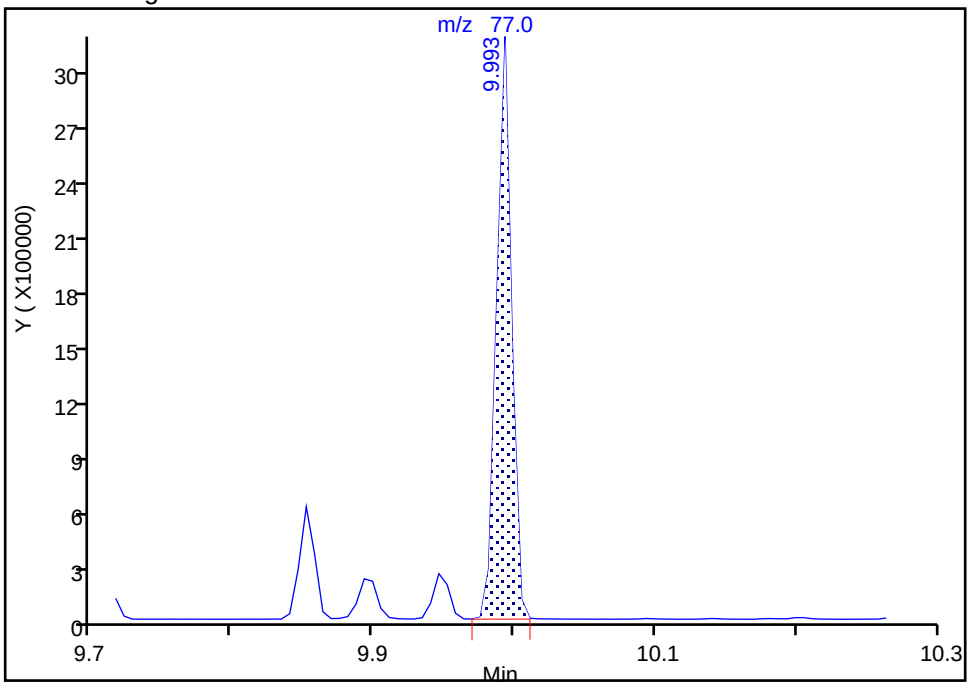
Not Detected
Expected RT: 10.00

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 2280402
Amount: 1544.5121
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 12:48:08
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411005.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 11-Apr-2018 12:46:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-005
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:34 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 11-Apr-2018 13:10:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	144449	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	711760	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	94	356911	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	621408	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.681	0.000	99	604149	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	580641	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	331742	1000.0	1113.6	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	405866	1000.0	812.6	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	681626	1000.0	985.3	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	100	1228383	1000.0	989.9	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	79	128051	1000.0	1024.1	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	1163301	1000.0	968.4	
26 1,4-Dioxane	88	4.382	4.382	0.000	83	89717	1000.0	939.1	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	75	296457	1000.0	1055.6	
28 Pyridine	79	4.700	4.700	0.000	71	541231	2000.0	2035.4	
42 Benzaldehyde	77	6.488	6.488	0.000	89	577155	2000.0	1862.6	
43 Phenol	94	6.499	6.499	0.000	92	444064	1000.0	801.7	
44 Aniline	93	6.570	6.570	0.000	93	858101	1000.0	913.4	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	89	569490	1000.0	867.8	
244 n-Decane	57	6.676	6.676	0.000	92	780338	1000.0	996.7	
47 2-Chlorophenol	128	6.682	6.682	0.000	93	471029	1000.0	927.6	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	94	574719	1000.0	1012.6	
49 1,4-Dichlorobenzene	146	6.864	6.864	0.000	89	575854	1000.0	972.2	
50 Benzyl alcohol	108	6.929	6.929	0.000	88	321121	1000.0	857.5	
52 2-Methylphenol	108	6.999	6.999	0.000	78	382300	1000.0	778.7	
51 1,2-Dichlorobenzene	146	6.999	6.999	0.000	90	548360	1000.0	947.1	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	1380458	1000.0	891.1	
53 Indene	115	7.070	7.070	0.000	91	1898387	2000.0	1827.1	
55 3 & 4 Methylphenol	108	7.123	7.123	0.000	0	398403	1000.0	800.3	a
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	96	471635	1000.0	907.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	91	823951	1000.0	908.8	
61 Hexachloroethane	117	7.294	7.294	0.000	93	241822	1000.0	986.0	
62 Nitrobenzene	77	7.317	7.317	0.000	97	680288	1000.0	995.6	
64 Isophorone	82	7.499	7.499	0.000	95	1143004	1000.0	994.1	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	97	534677	1000.0	984.9	
65 2-Nitrophenol	139	7.582	7.582	0.000	91	344198	1000.0	1043.9	
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	94	722168	1000.0	997.4	
70 Benzoic acid	122	7.617	7.617	0.000	92	523152	2000.0	1832.5	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	97	377175	1000.0	951.0	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	483140	1000.0	969.5	
74 Naphthalene	128	7.941	7.941	0.000	97	1812296	1000.0	989.5	
75 4-Chloroaniline	127	7.952	7.952	0.000	94	930615	1000.0	1074.8	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	449116	1000.0	1006.7	
78 Hexachlorobutadiene	225	8.029	8.029	0.000	95	269254	1000.0	962.6	
83 Caprolactam	113	8.229	8.229	0.000	70	367881	2000.0	2079.0	
85 4-Chloro-3-methylphenol	107	8.329	8.329	0.000	94	461878	1000.0	1046.4	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	1253577	1000.0	995.9	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	92	1160597	1000.0	977.4	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	96	307531	1000.0	1037.1	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	97	448814	1000.0	1000.0	
93 2,4,6-Trichlorophenol	196	8.741	8.741	0.000	96	318191	1000.0	1071.6	
94 2,4,5-Trichlorophenol	196	8.776	8.776	0.000	90	317042	1000.0	1059.8	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	96	1422569	1000.0	997.5	
100 2-Chloronaphthalene	162	8.941	8.941	0.000	98	1092632	1000.0	1005.7	
101 2-Nitroaniline	65	8.999	8.999	0.000	77	448917	1000.0	1044.5	
104 Dimethyl phthalate	163	9.117	9.117	0.000	98	1332138	1000.0	977.9	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	85	220772	1000.0	1073.8	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	88	304214	1000.0	1009.4	
108 Acenaphthylene	152	9.305	9.305	0.000	98	1605629	1000.0	1020.5	
109 3-Nitroaniline	138	9.346	9.346	0.000	88	297781	1000.0	1122.9	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	79	359290	2000.0	1967.6	
111 Acenaphthene	153	9.452	9.452	0.000	95	1080056	1000.0	969.1	
112 4-Nitrophenol	109	9.446	9.446	0.000	92	404792	2000.0	2125.9	
113 2,4-Dinitrotoluene	165	9.535	9.535	0.000	88	403605	1000.0	1040.1	
115 Dibenzofuran	168	9.593	9.593	0.000	95	1538059	1000.0	979.7	
118 2,3,4,6-Tetrachlorophenol	232	9.688	9.688	0.000	78	271826	1000.0	1080.5	
248 Hexadecane	57	9.705	9.705	0.000	90	1208160	1000.0	956.9	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	1307069	1000.0	957.2	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	97	591567	1000.0	955.1	
125 4-Nitroaniline	138	9.876	9.876	0.000	81	254160	1000.0	948.3	
124 Fluorene	166	9.887	9.887	0.000	96	1272713	1000.0	946.2	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	74	399007	2000.0	1915.0	
129 Diphenylamine	169	9.946	9.946	0.000	94	974224	850.0	886.3	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	99	974224	1000.0	1042.7	
131 Azobenzene	77	9.993	9.993	0.000	96	1455647	1000.0	1026.8	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	40	1455435	1000.0	1026.6	a
138 4-Bromophenyl phenyl ether	248	10.282	10.282	0.000	78	323267	1000.0	1024.9	
141 Atrazine	200	10.370	10.370	0.000	89	671638	2000.0	1934.0	
140 Hexachlorobenzene	284	10.382	10.382	0.000	92	315565	1000.0	1053.2	
245 n-Octadecane	57	10.487	10.487	0.000	89	1293636	1000.0	1026.7	
143 Pentachlorophenol	266	10.529	10.529	0.000	87	392369	2000.0	1986.4	
148 Phenanthrene	178	10.729	10.729	0.000	98	1745837	1000.0	979.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	1817749	1000.0	1023.0	
150 Carbazole	167	10.887	10.887	0.000	97	1623879	1000.0	1005.6	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	2274748	1000.0	1048.6	
159 Fluoranthene	202	11.858	11.858	0.000	97	1920279	1000.0	1050.0	
160 Benzidine	184	11.934	11.934	0.000	99	1820649	2000.0	2080.7	
161 Pyrene	202	12.117	12.117	0.000	98	1958965	1000.0	1024.5	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	1022246	1000.0	1035.6	
174 Bis(2-ethylhexyl) phthalat	149	13.523	13.523	0.000	94	1409441	1000.0	1070.7	
177 3,3'-Dichlorobenzidine	252	13.564	13.564	0.000	76	1258123	2000.0	2114.0	
178 Benzo[a]anthracene	228	13.664	13.664	0.000	99	1790787	1000.0	1023.1	
179 Chrysene	228	13.723	13.723	0.000	97	1737880	1000.0	996.9	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	98	2398386	1000.0	1056.5	
183 Benzo[b]fluoranthene	252	15.411	15.411	0.000	97	1714081	1000.0	1008.3	
184 Benzo[k]fluoranthene	252	15.452	15.452	0.000	99	1826846	1000.0	1023.2	
185 Benzo[a]pyrene	252	15.981	15.981	0.000	78	1672991	1000.0	1033.9	
190 Indeno[1,2,3-cd]pyrene	276	18.258	18.258	0.000	98	1828846	1000.0	1051.3	
189 Dibenz(a,h)anthracene	278	18.269	18.269	0.000	90	1548396	1000.0	1041.4	
191 Benzo[g,h,i]perylene	276	18.916	18.916	0.000	97	1516805	1000.0	1027.5	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L6 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:17:39 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411005.D

Injection Date: 11-Apr-2018 12:46:30 Instrument ID: A4AG2 Operator ID:

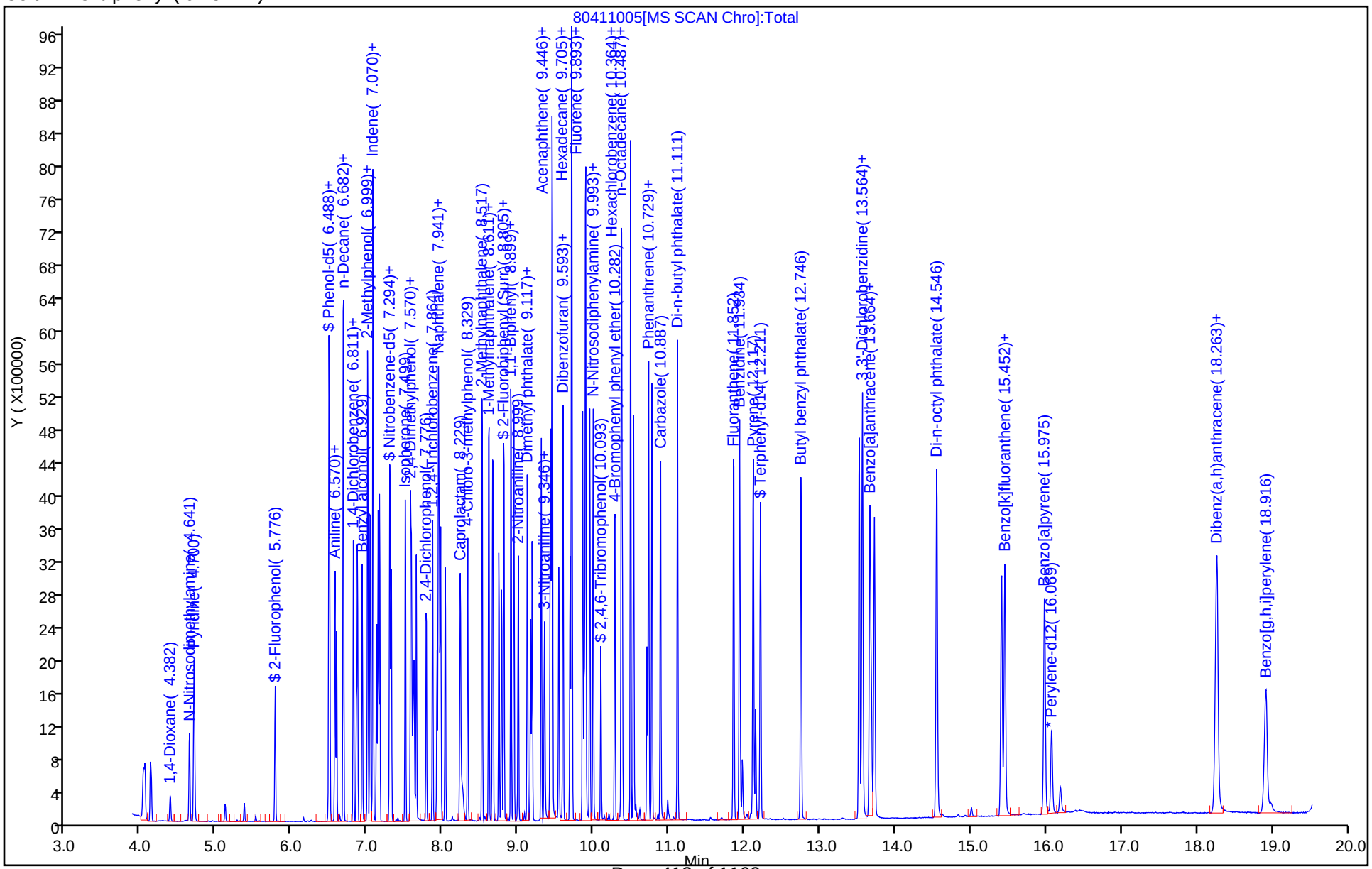
Lims ID: std6 l1lvi Worklist Smp#: 5

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

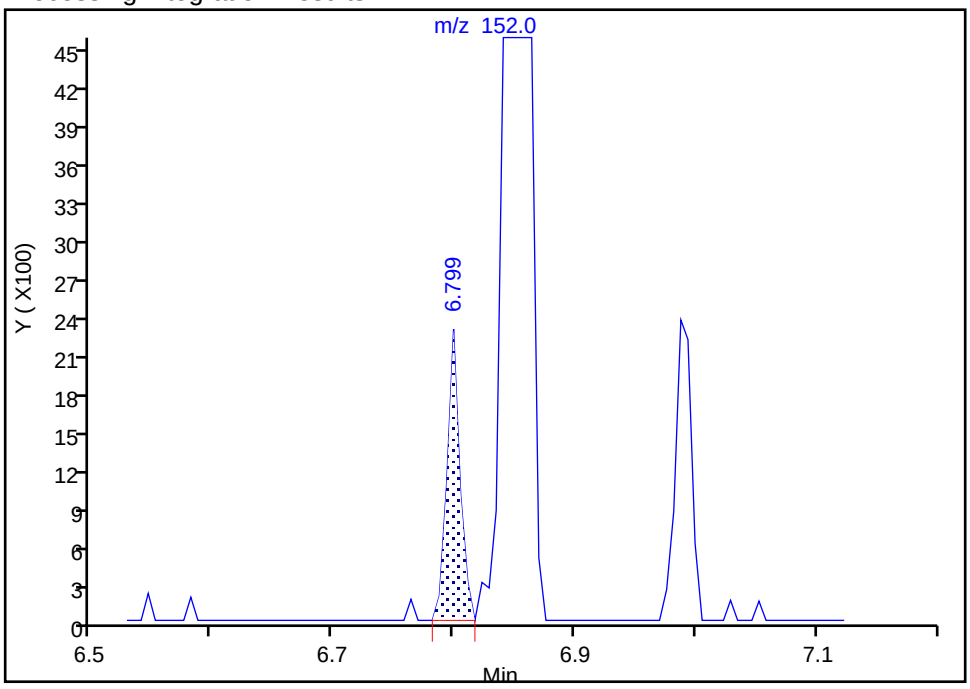
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411005.D
Injection Date: 11-Apr-2018 12:46:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

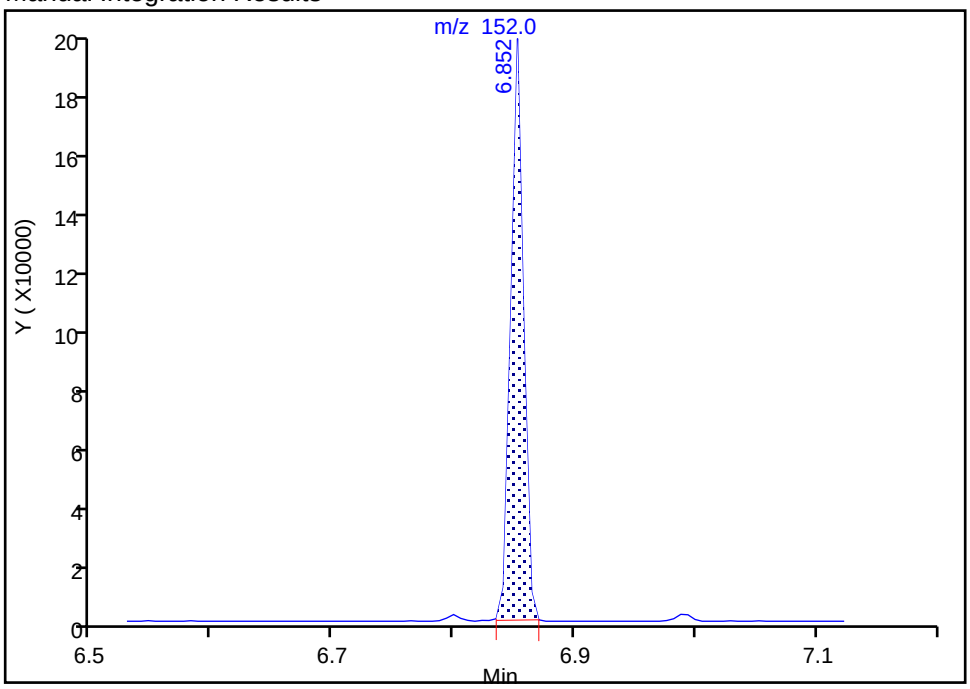
Processing Integration Results

RT: 6.80
Area: 1705
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 144449
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 13:08:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

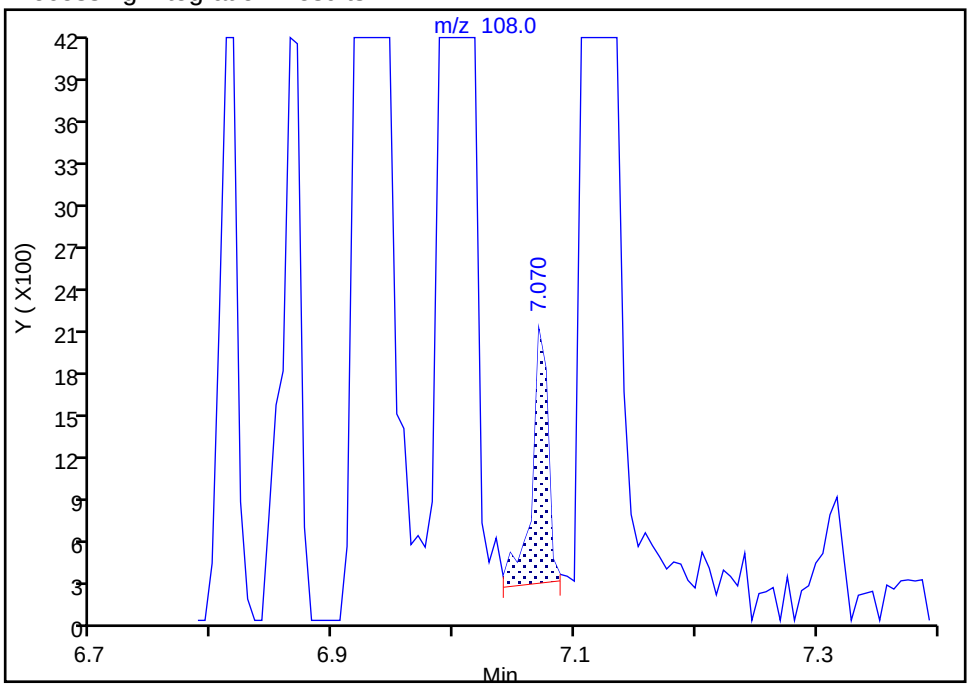
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411005.D
Injection Date: 11-Apr-2018 12:46:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

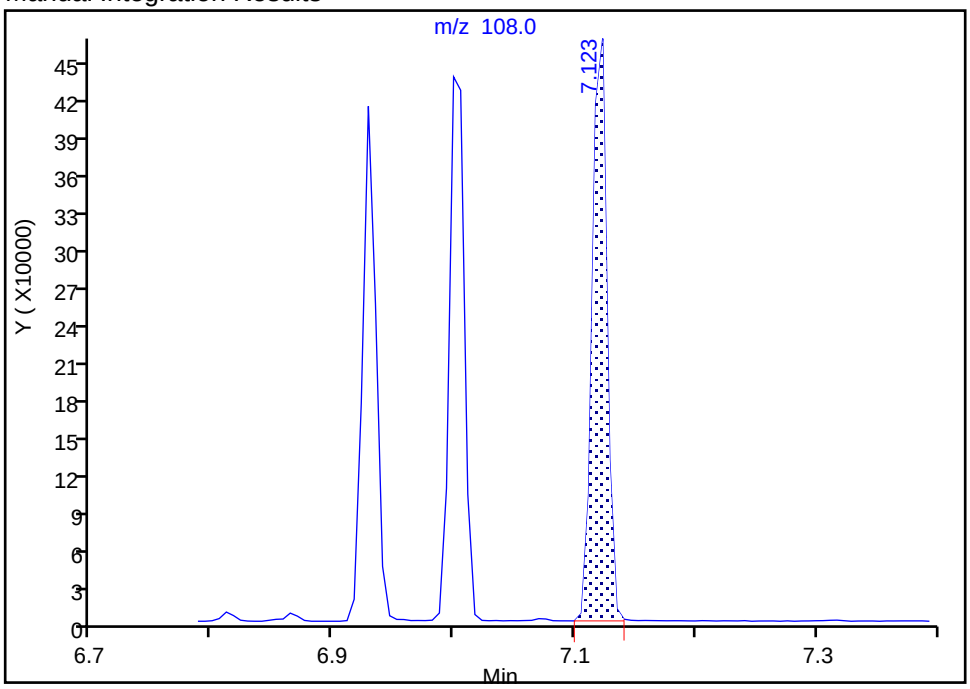
Processing Integration Results

RT: 7.07
Area: 1697
Amount: 4.224066
Amount Units: ng/ml



Manual Integration Results

RT: 7.12
Area: 398403
Amount: 800.3067
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 13:09:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

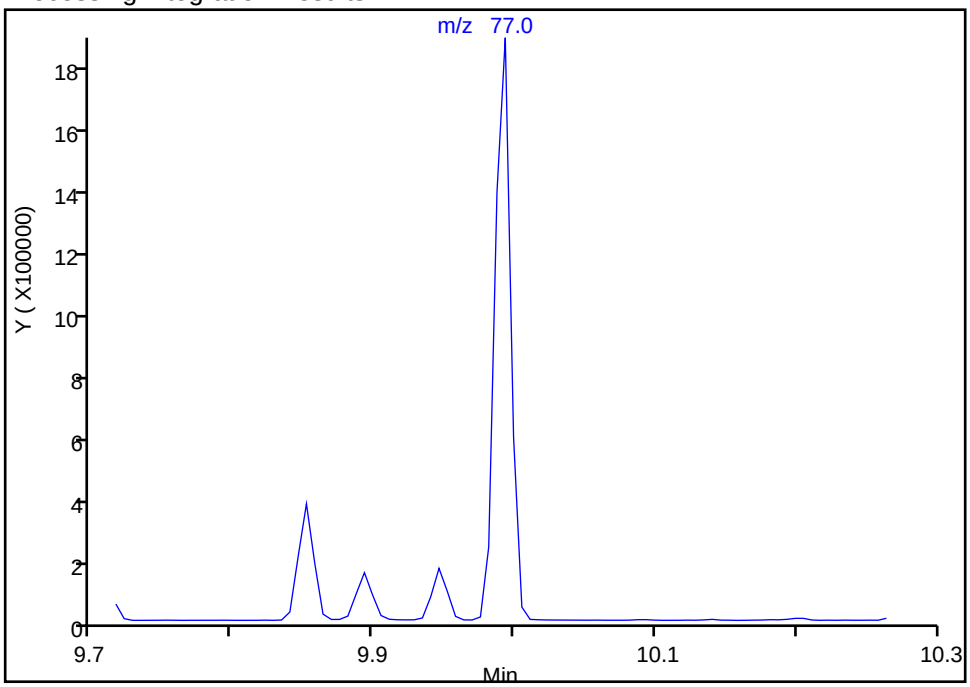
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411005.D
Injection Date: 11-Apr-2018 12:46:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

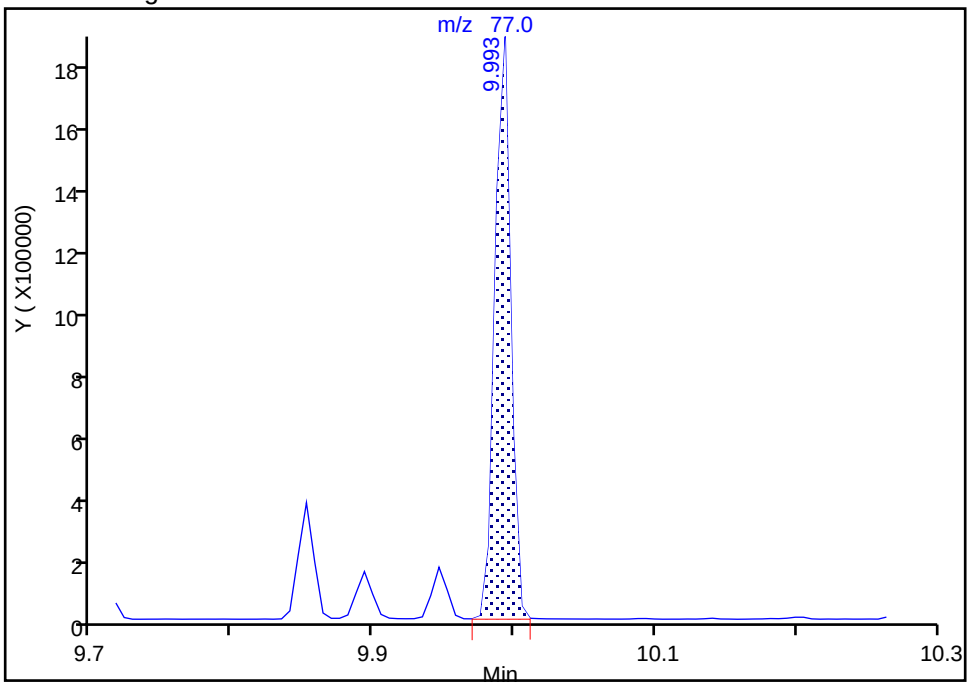
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 1455435
Amount: 1026.6434
Amount Units: ng/ml



Reviewer: hulat, 11-Apr-2018 13:10:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411006.D
Lims ID: std5 l1lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 11-Apr-2018 13:11:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-006
Misc. Info.: STD5 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:45 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 12-Apr-2018 06:57:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	94	129223	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	655987	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	95	371401	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	673208	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.681	0.000	99	628424	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	586521	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	137391	500.0	515.5	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	218195	500.0	488.3	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	316492	500.0	496.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.811	-0.006	100	629956	500.0	487.9	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	78	62181	500.0	477.9	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	607996	500.0	486.6	
26 1,4-Dioxane	88	4.388	4.382	0.006	83	42045	500.0	492.0	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	75	123969	500.0	493.4	
28 Pyridine	79	4.700	4.700	0.000	71	235577	1000.0	990.3	
42 Benzaldehyde	77	6.488	6.488	0.000	88	306999	1000.0	1018.0	
43 Phenol	94	6.499	6.499	0.000	92	239209	500.0	482.8	
44 Aniline	93	6.570	6.570	0.000	92	411927	500.0	490.1	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	89	267919	500.0	456.4	
47 2-Chlorophenol	128	6.682	6.682	0.000	84	220933	500.0	486.3	
244 n-Decane	57	6.676	6.676	0.000	92	372003	500.0	531.1	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	93	250223	500.0	492.8	
49 1,4-Dichlorobenzene	146	6.864	6.864	0.000	90	261284	500.0	493.1	
50 Benzyl alcohol	108	6.929	6.929	0.000	88	148459	500.0	443.2	
51 1,2-Dichlorobenzene	146	6.999	6.999	0.000	89	253819	500.0	490.0	
52 2-Methylphenol	108	6.999	6.999	0.000	85	195300	500.0	444.7	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	671606	500.0	484.6	
53 Indene	115	7.070	7.070	0.000	91	886330	1000.0	953.6	
55 3 & 4 Methylphenol	108	7.117	7.123	-0.006	0	189391	500.0	425.3	
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	95	230286	500.0	495.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	91	381237	500.0	470.0	
61 Hexachloroethane	117	7.293	7.294	-0.001	92	109193	500.0	497.7	
62 Nitrobenzene	77	7.311	7.317	-0.006	97	310782	500.0	493.5	
64 Isophorone	82	7.499	7.499	0.000	94	590408	500.0	557.1	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	94	250834	500.0	501.3	
65 2-Nitrophenol	139	7.582	7.582	0.000	90	152356	500.0	501.3	
70 Benzoic acid	122	7.599	7.617	-0.018	91	218607	1000.0	912.3	
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	94	356608	500.0	534.4	
72 2,4-Dichlorophenol	162	7.776	7.782	-0.006	95	181892	500.0	497.6	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	224922	500.0	489.7	
74 Naphthalene	128	7.940	7.941	-0.001	98	835384	500.0	494.9	
75 4-Chloroaniline	127	7.952	7.952	0.000	93	448995	500.0	562.7	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	203276	500.0	494.4	
78 Hexachlorobutadiene	225	8.029	8.029	0.000	94	126336	500.0	490.1	
83 Caprolactam	113	8.223	8.229	-0.006	70	187179	1000.0	1147.7	
85 4-Chloro-3-methylphenol	107	8.329	8.329	0.000	95	233656	500.0	574.4	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	625974	500.0	539.6	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	93	588517	500.0	537.7	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	95	138785	500.0	449.8	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	97	216530	500.0	463.6	
93 2,4,6-Trichlorophenol	196	8.740	8.741	0.000	94	156004	500.0	504.9	
94 2,4,5-Trichlorophenol	196	8.776	8.776	0.000	92	157833	500.0	507.0	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	96	740811	500.0	499.2	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	98	563635	500.0	498.6	
101 2-Nitroaniline	65	8.999	8.999	0.000	78	221533	500.0	495.3	
104 Dimethyl phthalate	163	9.117	9.117	0.000	97	672055	500.0	474.1	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	86	108095	500.0	505.2	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	88	152010	500.0	484.7	
108 Acenaphthylene	152	9.305	9.305	0.000	98	817501	500.0	499.3	
109 3-Nitroaniline	138	9.346	9.346	0.000	88	157195	500.0	569.6	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	77	162097	1000.0	902.3	
111 Acenaphthene	153	9.452	9.452	0.000	95	561202	500.0	483.9	
112 4-Nitrophenol	109	9.440	9.446	-0.006	96	205367	1000.0	1036.5	
113 2,4-Dinitrotoluene	165	9.534	9.535	-0.001	88	202346	500.0	501.1	
115 Dibenzofuran	168	9.593	9.593	0.000	95	788186	500.0	482.5	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.688	-0.001	81	129259	500.0	493.8	
248 Hexadecane	57	9.705	9.705	0.000	89	657840	500.0	500.7	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	679736	500.0	478.4	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	97	299412	500.0	464.5	
125 4-Nitroaniline	138	9.870	9.876	-0.006	80	143344	500.0	514.0	
124 Fluorene	166	9.887	9.887	0.000	95	646106	500.0	461.6	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	75	192154	1000.0	892.4	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	99	491996	500.0	486.0	
129 Diphenylamine	169	9.946	9.946	0.000	93	491996	425.0	413.1	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	40	733489	500.0	477.6	a
131 Azobenzene	77	9.993	9.993	0.000	96	733780	500.0	477.8	
138 4-Bromophenyl phenyl ether	248	10.282	10.282	0.000	79	162937	500.0	476.8	
141 Atrazine	200	10.364	10.370	-0.006	87	330308	1000.0	878.0	
140 Hexachlorobenzene	284	10.381	10.382	-0.001	91	153377	500.0	472.5	
245 n-Octadecane	57	10.487	10.487	0.000	89	676066	500.0	495.3	
143 Pentachlorophenol	266	10.529	10.529	0.000	87	195633	1000.0	914.2	
148 Phenanthrene	178	10.729	10.729	0.000	98	939689	500.0	486.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	965246	500.0	501.4	
150 Carbazole	167	10.881	10.887	-0.006	97	811152	500.0	463.7	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	1143427	500.0	486.5	
159 Fluoranthene	202	11.852	11.858	-0.006	98	948265	500.0	478.6	
160 Benzidine	184	11.934	11.934	0.000	99	821053	1000.0	961.3	
161 Pyrene	202	12.117	12.117	0.000	97	960169	500.0	482.7	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	509683	500.0	496.4	
174 Bis(2-ethylhexyl) phthalat	149	13.522	13.523	-0.001	94	686679	500.0	501.5	
177 3,3'-Dichlorobenzidine	252	13.564	13.564	0.000	76	644075	1000.0	1040.4	
178 Benzo[a]anthracene	228	13.664	13.664	0.000	99	898920	500.0	493.7	
179 Chrysene	228	13.722	13.723	-0.001	97	890307	500.0	491.0	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	98	1173239	500.0	511.7	
183 Benzo[b]fluoranthene	252	15.405	15.411	-0.006	98	870801	500.0	507.1	
184 Benzo[k]fluoranthene	252	15.452	15.452	0.000	100	902804	500.0	500.6	
185 Benzo[a]pyrene	252	15.975	15.981	-0.006	78	823110	500.0	503.6	
190 Indeno[1,2,3-cd]pyrene	276	18.252	18.258	-0.006	98	907164	500.0	516.2	
189 Dibenz(a,h)anthracene	278	18.263	18.269	-0.006	88	756365	500.0	503.6	
191 Benzo[g,h,i]perylene	276	18.910	18.916	-0.006	96	742616	500.0	498.0	
S 246 Total Cresols	100				0			869.9	
S 193 Methyl Phenols,Total	100				0			869.9	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L5 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:17:51 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411006.D

Injection Date: 11-Apr-2018 13:11:30 Instrument ID: A4AG2 Operator ID:

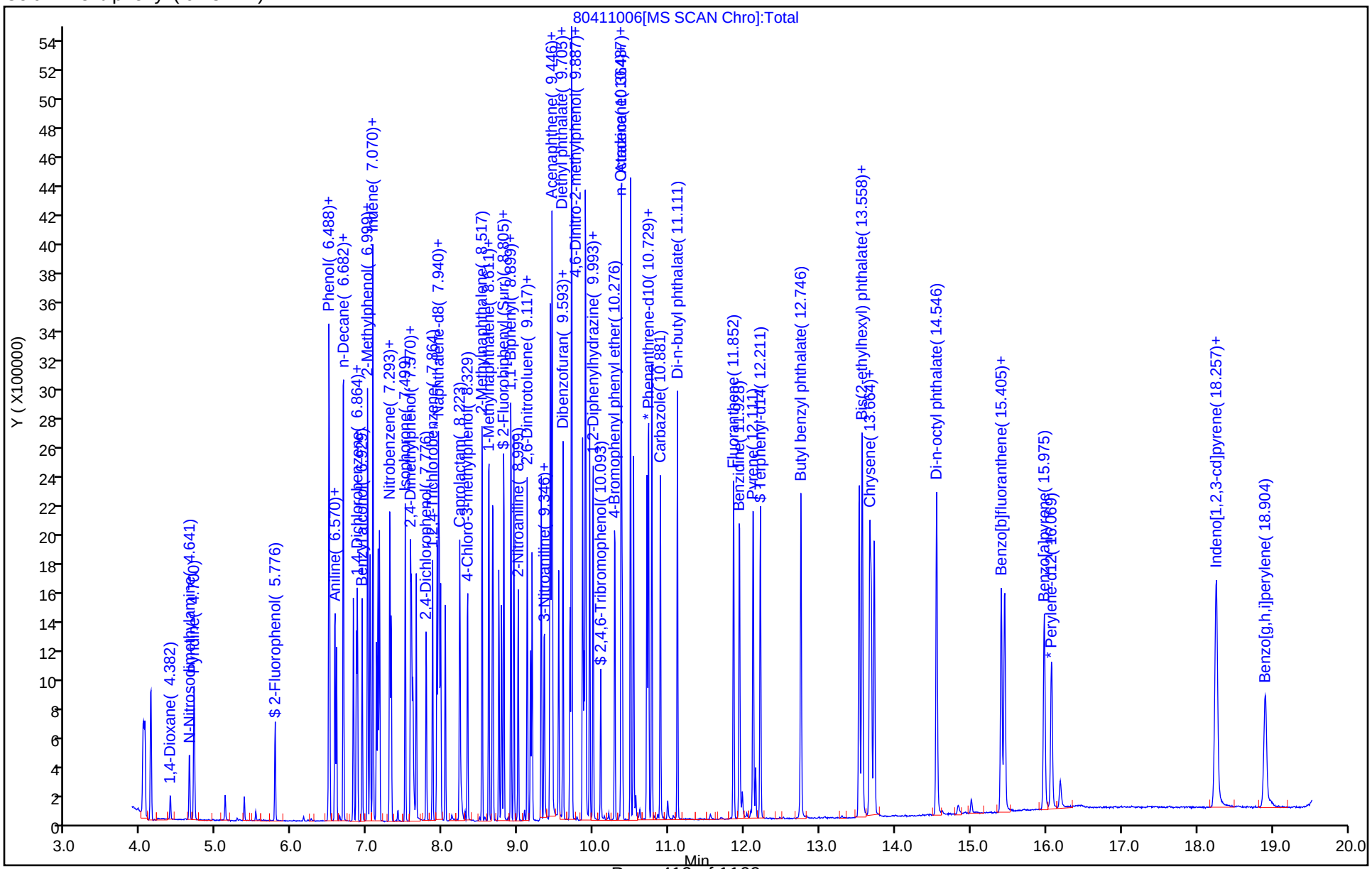
Lims ID: std5 l1lvi Worklist Smp#: 6

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 6

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton

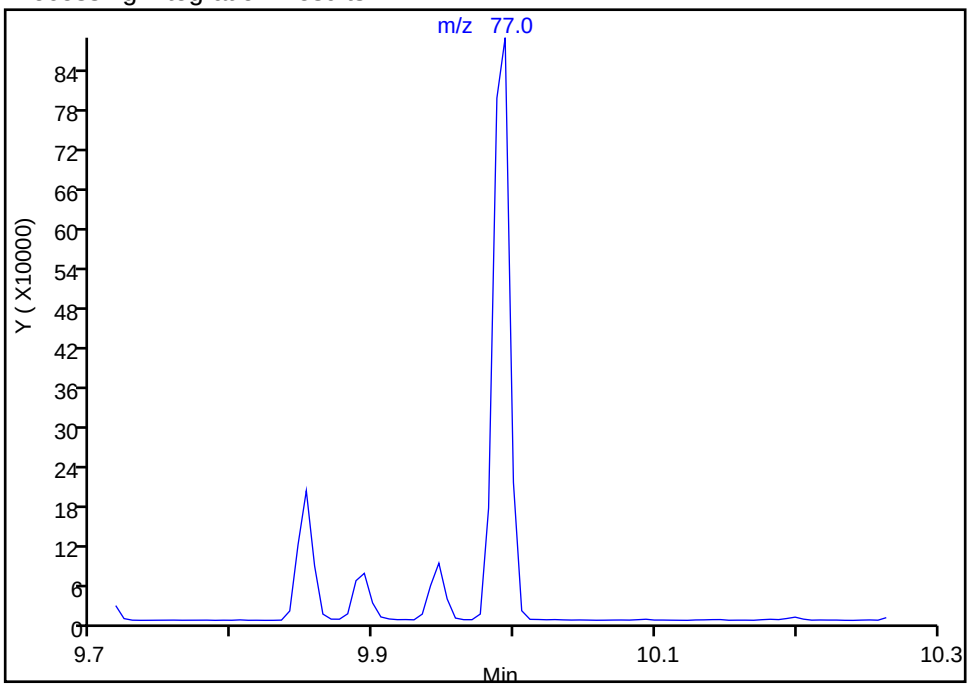
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411006.D
Injection Date: 11-Apr-2018 13:11:30 Instrument ID: A4AG2
Lims ID: std5 l1lvi
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

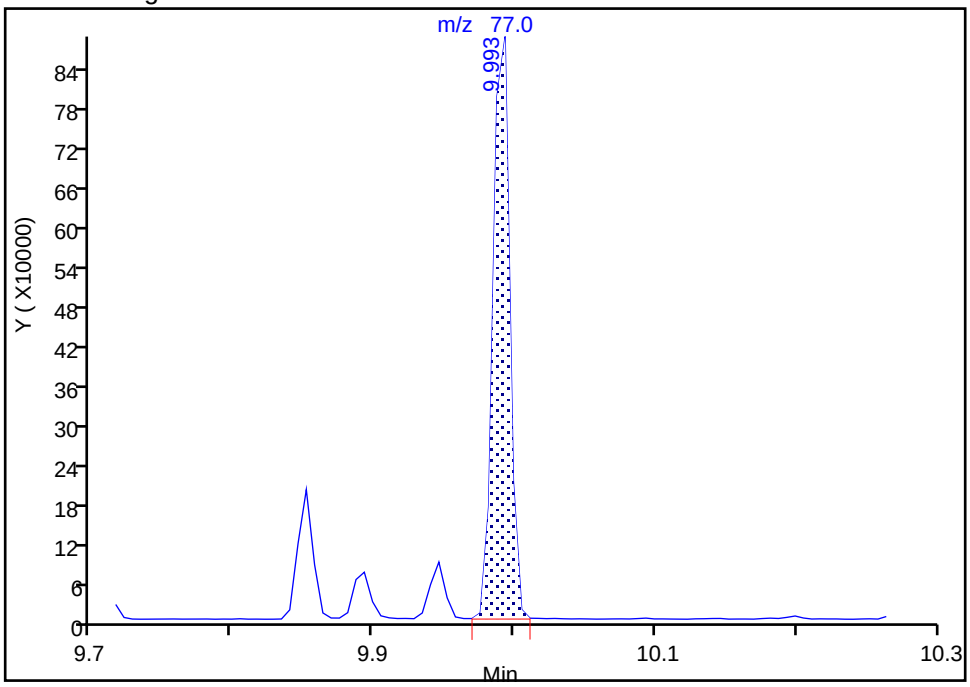
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 733489
Amount: 477.5820
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:42:56
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D
Lims ID: std4 l1lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-Apr-2018 13:35:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-007
Misc. Info.: STD4 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:17:57 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 12-Apr-2018 05:41:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	131754	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	730745	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	366387	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	660914	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.681	-0.006	99	601861	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	536727	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	94	53570	200.0	197.2	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	112086	200.0	246.0	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	142743	200.0	201.0	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.811	-0.006	99	248013	200.0	194.7	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	78	22536	200.0	175.6	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	248090	200.0	207.3	
26 1,4-Dioxane	88	4.382	4.382	0.000	84	15834	200.0	181.7	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	75	48488	200.0	189.3	
28 Pyridine	79	4.705	4.700	0.005	70	88595	400.0	365.3	
42 Benzaldehyde	77	6.488	6.488	0.000	87	151029	400.0	449.4	
43 Phenol	94	6.499	6.499	0.000	92	125623	200.0	248.7	
44 Aniline	93	6.570	6.570	0.000	93	190481	200.0	222.3	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	88	122113	200.0	204.0	
244 n-Decane	57	6.676	6.676	0.000	92	139251	200.0	195.0	
47 2-Chlorophenol	128	6.682	6.682	0.000	92	104459	200.0	225.5	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	92	102526	200.0	198.0	
49 1,4-Dichlorobenzene	146	6.864	6.864	0.000	91	109250	200.0	202.2	
50 Benzyl alcohol	108	6.929	6.929	0.000	87	64105	200.0	187.7	
52 2-Methylphenol	108	6.999	6.999	0.000	90	100894	200.0	225.3	
51 1,2-Dichlorobenzene	146	6.999	6.999	0.000	89	112215	200.0	212.5	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	305455	200.0	216.2	
53 Indene	115	7.070	7.070	0.000	91	399545	400.0	421.6	
55 3 & 4 Methylphenol	108	7.117	7.123	-0.006	0	90668	200.0	199.7	a
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	97	93089	200.0	196.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	91	166145	200.0	200.9	
61 Hexachloroethane	117	7.294	7.294	0.000	92	45520	200.0	203.5	
62 Nitrobenzene	77	7.311	7.317	-0.006	97	143618	200.0	204.7	
64 Isophorone	82	7.499	7.499	0.000	94	212705	200.0	180.2	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	93	88240	200.0	158.3	
65 2-Nitrophenol	139	7.582	7.582	0.000	93	65866	200.0	194.6	
70 Benzoic acid	122	7.588	7.617	-0.029	0	52439	400.0	313.4	M
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	93	143876	200.0	193.6	
72 2,4-Dichlorophenol	162	7.776	7.782	-0.006	95	69085	200.0	169.7	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	102543	200.0	200.4	
74 Naphthalene	128	7.941	7.941	0.000	97	374698	200.0	199.3	
75 4-Chloroaniline	127	7.952	7.952	0.000	93	167868	200.0	188.8	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	93	80604	200.0	176.0	
78 Hexachlorobutadiene	225	8.029	8.029	0.000	93	55865	200.0	194.5	
83 Caprolactam	113	8.217	8.229	-0.012	70	73887	400.0	406.7	
85 4-Chloro-3-methylphenol	107	8.323	8.329	-0.006	93	64906	200.0	143.2	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	247527	200.0	191.5	
87 1-Methylnaphthalene	142	8.605	8.611	-0.006	93	234591	200.0	192.4	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	94	55098	200.0	181.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	97	79480	200.0	172.5	
93 2,4,6-Trichlorophenol	196	8.740	8.741	0.000	94	49593	200.0	162.7	
94 2,4,5-Trichlorophenol	196	8.776	8.776	0.000	90	46746	200.0	152.2	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	97	291880	200.0	199.4	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	97	209770	200.0	188.1	
101 2-Nitroaniline	65	8.999	8.999	0.000	78	82371	200.0	186.7	
104 Dimethyl phthalate	163	9.117	9.117	0.000	97	261446	200.0	187.0	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	85	35979	200.0	170.5	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	86	57093	200.0	184.5	
108 Acenaphthylene	152	9.305	9.305	0.000	98	318598	200.0	197.3	
109 3-Nitroaniline	138	9.340	9.346	-0.006	87	57917	200.0	212.7	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	82	50345	400.0	343.6	
112 4-Nitrophenol	109	9.440	9.446	-0.006	91	66577	400.0	340.6	
111 Acenaphthene	153	9.446	9.452	-0.006	96	226266	200.0	197.8	
113 2,4-Dinitrotoluene	165	9.535	9.535	0.000	87	76975	200.0	193.2	
115 Dibenzofuran	168	9.593	9.593	0.000	95	320329	200.0	198.8	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.688	-0.001	81	45259	200.0	175.2	
248 Hexadecane	57	9.705	9.705	0.000	88	272097	200.0	209.9	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	275602	200.0	196.6	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	97	119801	200.0	188.4	
125 4-Nitroaniline	138	9.870	9.876	-0.006	80	65358	200.0	237.5	
124 Fluorene	166	9.887	9.887	0.000	95	261722	200.0	189.5	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	73	67951	400.0	368.8	
129 Diphenylamine	169	9.946	9.946	0.000	94	193815	170.0	165.8	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	99	193815	200.0	195.0	
131 Azobenzene	77	9.993	9.993	0.000	95	285959	200.0	189.7	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	8	285953	200.0	189.7	a
138 4-Bromophenyl phenyl ether	248	10.282	10.282	0.000	80	62950	200.0	187.7	
141 Atrazine	200	10.364	10.370	-0.006	86	135833	400.0	367.8	
140 Hexachlorobenzene	284	10.376	10.382	-0.006	89	55666	200.0	174.7	
245 n-Octadecane	57	10.487	10.487	0.000	88	273636	200.0	204.2	
143 Pentachlorophenol	266	10.529	10.529	0.000	85	73780	400.0	351.2	
148 Phenanthrene	178	10.729	10.729	0.000	98	374426	200.0	197.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	379743	200.0	200.9	
150 Carbazole	167	10.882	10.887	-0.005	97	336018	200.0	195.7	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	443972	200.0	192.4	
159 Fluoranthene	202	11.852	11.858	-0.006	98	368622	200.0	189.5	
160 Benzidine	184	11.934	11.934	0.000	99	177407	400.0	297.9	
161 Pyrene	202	12.111	12.117	-0.006	97	371530	200.0	195.0	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	187122	200.0	190.3	
174 Bis(2-ethylhexyl) phthalat	149	13.523	13.523	0.000	93	248380	200.0	189.4	
177 3,3'-Dichlorobenzidine	252	13.558	13.564	-0.006	76	230690	400.0	389.1	
178 Benzo[a]anthracene	228	13.658	13.664	-0.006	99	333960	200.0	191.5	
179 Chrysene	228	13.717	13.723	-0.006	97	339095	200.0	195.3	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	98	407845	200.0	194.4	
183 Benzo[b]fluoranthene	252	15.405	15.411	-0.006	98	305667	200.0	194.5	
184 Benzo[k]fluoranthene	252	15.446	15.452	-0.006	99	329034	200.0	199.4	
185 Benzo[a]pyrene	252	15.969	15.981	-0.012	78	296041	200.0	197.9	
190 Indeno[1,2,3-cd]pyrene	276	18.246	18.258	-0.012	97	322831	200.0	200.8	
189 Dibenz(a,h)anthracene	278	18.252	18.269	-0.017	88	269552	200.0	196.1	
191 Benzo[g,h,i]perylene	276	18.905	18.916	-0.011	96	265253	200.0	194.4	
S 193 Methyl Phenols,Total	100				0			425.0	
S 246 Total Cresols	100				0			425.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST1 L4 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:18:01 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D

Injection Date: 11-Apr-2018 13:35:30 Instrument ID: A4AG2 Operator ID:

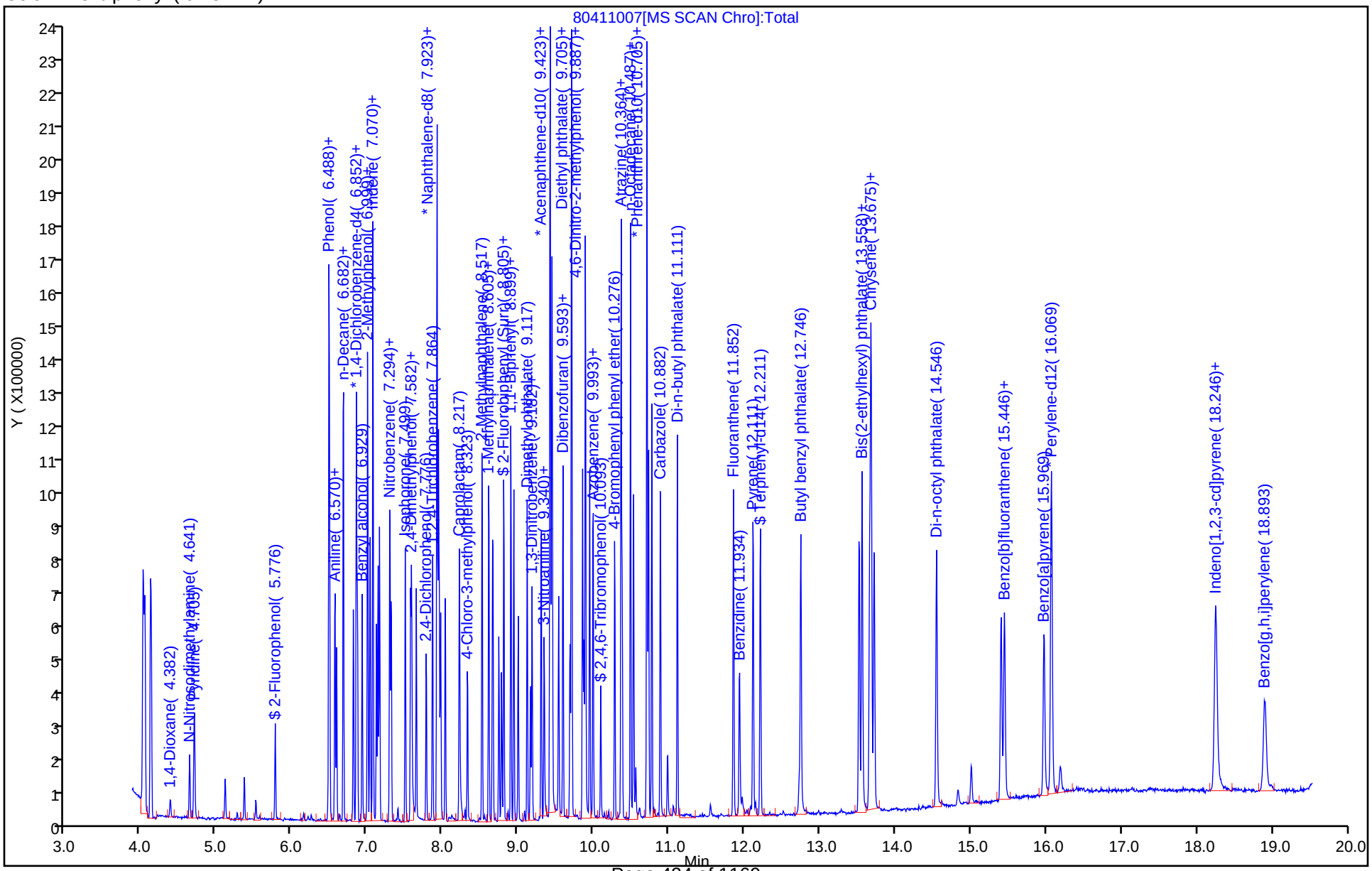
Lims ID: std4 l1lvi Worklist Smp#: 7

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 7

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

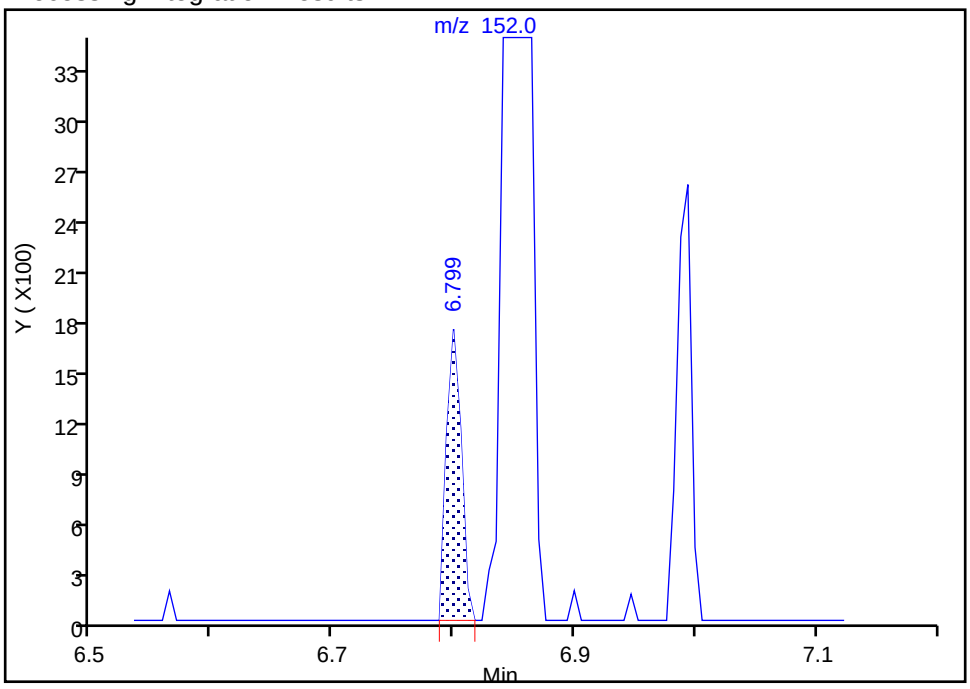
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D
Injection Date: 11-Apr-2018 13:35:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

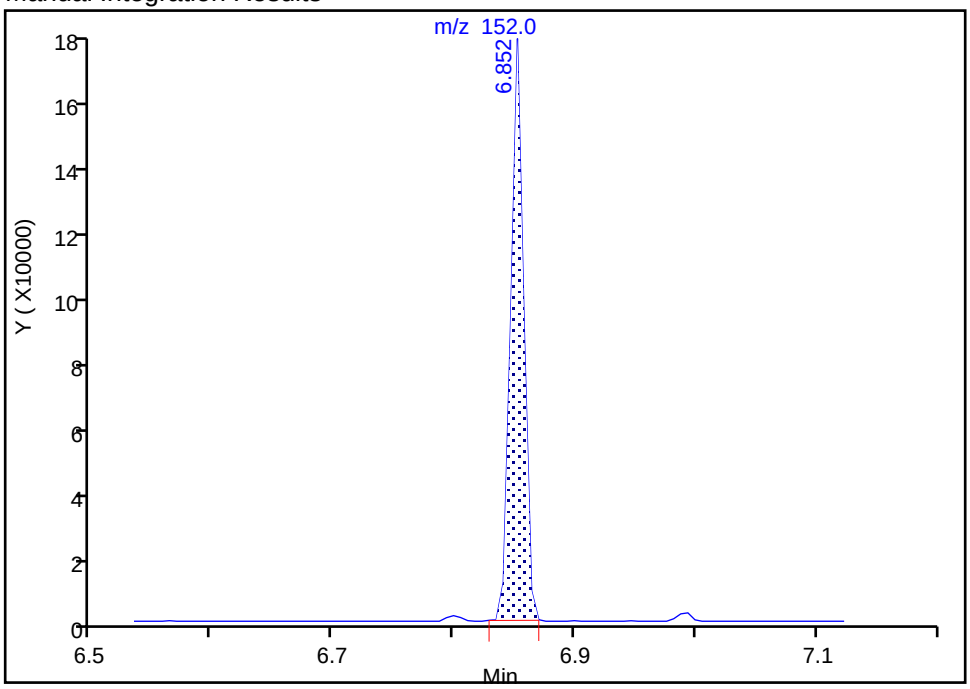
Processing Integration Results

RT: 6.80
Area: 1454
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 131754
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:40:31
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

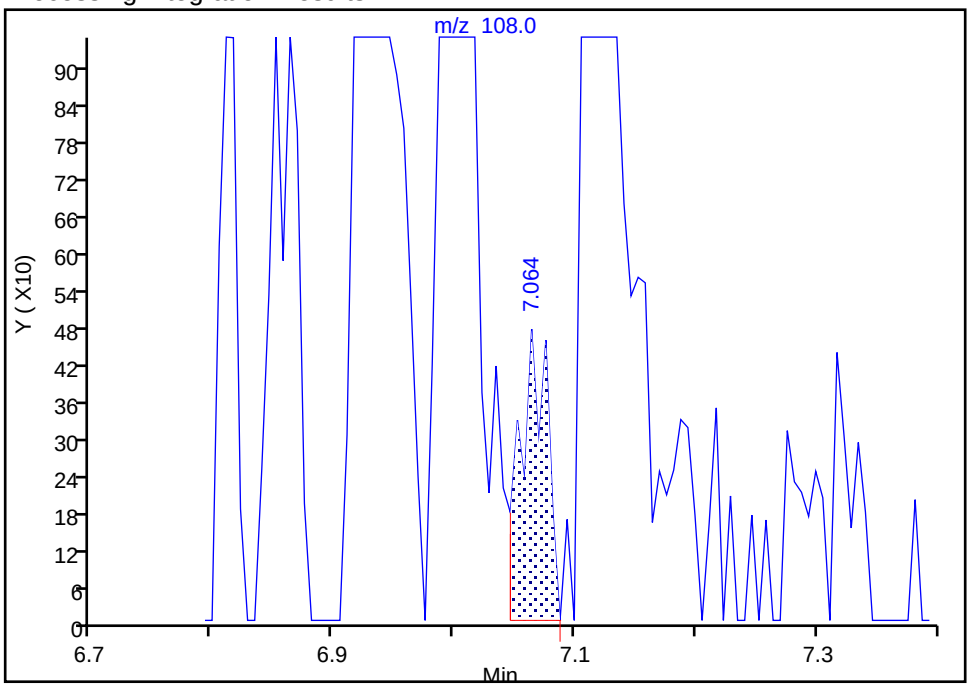
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D
Injection Date: 11-Apr-2018 13:35:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

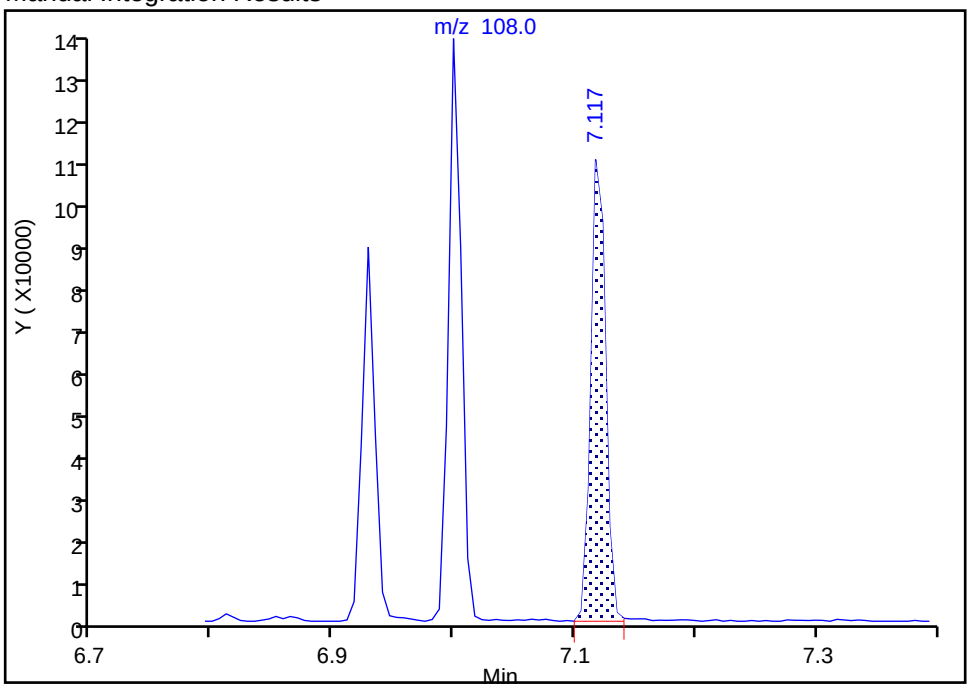
Processing Integration Results

RT: 7.06
Area: 747
Amount: 68.901728
Amount Units: ng/ml



Manual Integration Results

RT: 7.12
Area: 90668
Amount: 199.6819
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:40:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

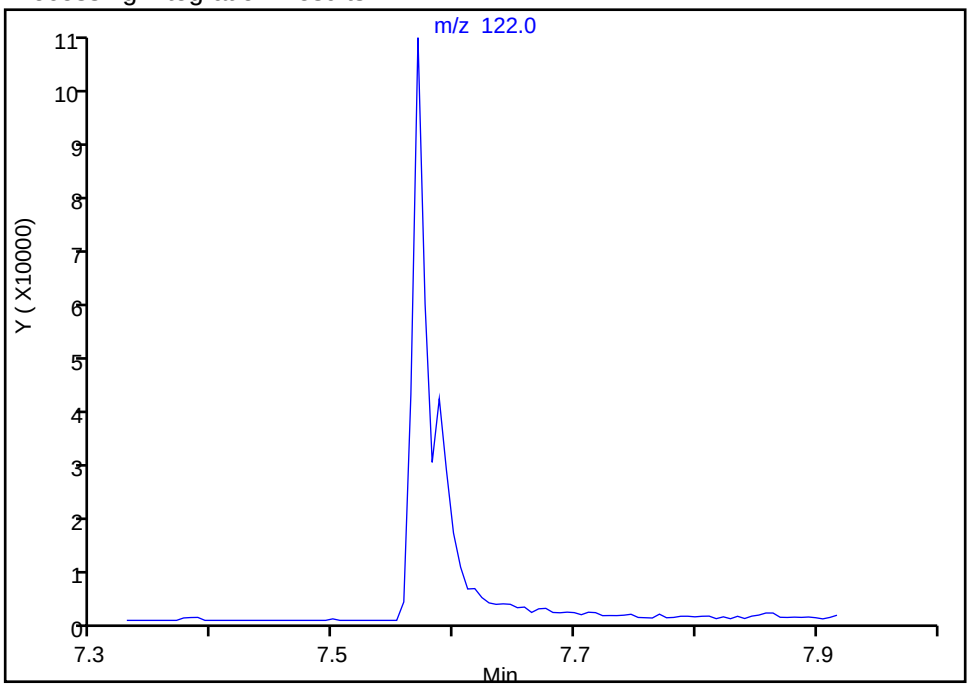
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D				
Injection Date:	11-Apr-2018 13:35:30	Instrument ID:	A4AG2		
Lims ID:	std4 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 Benzoic acid, CAS: 65-85-0

Signal: 1

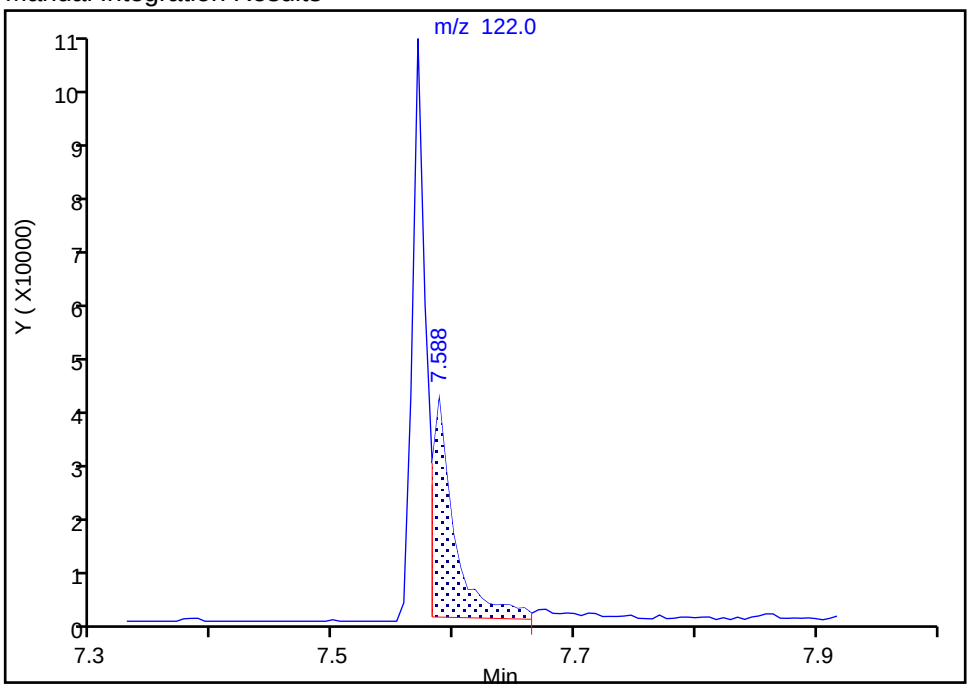
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.59
Area: 52439
Amount: 313.3978
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:40:58
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton

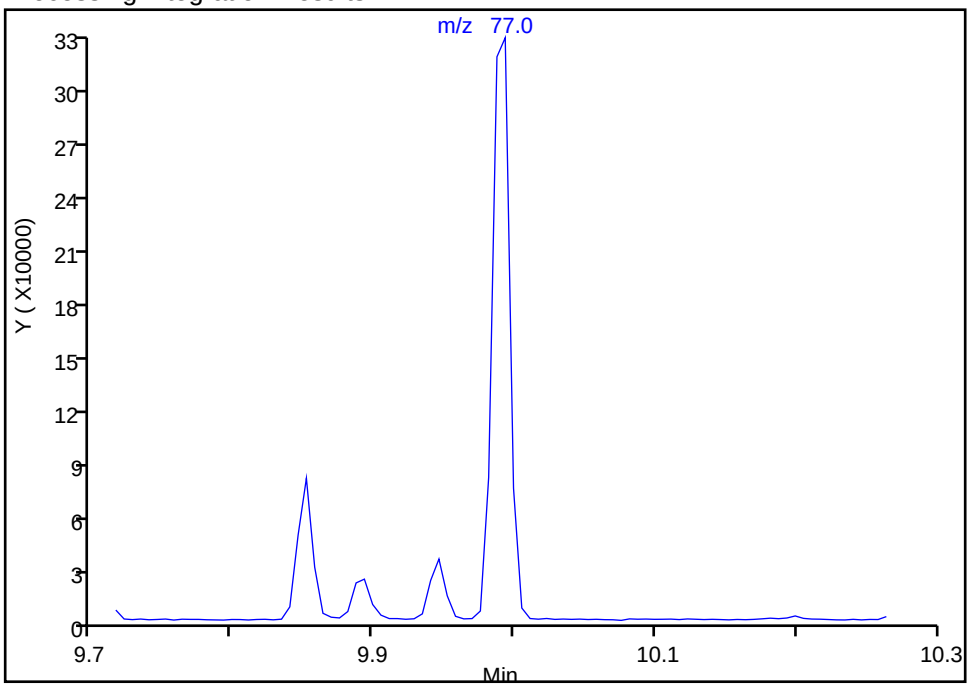
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411007.D
Injection Date: 11-Apr-2018 13:35:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

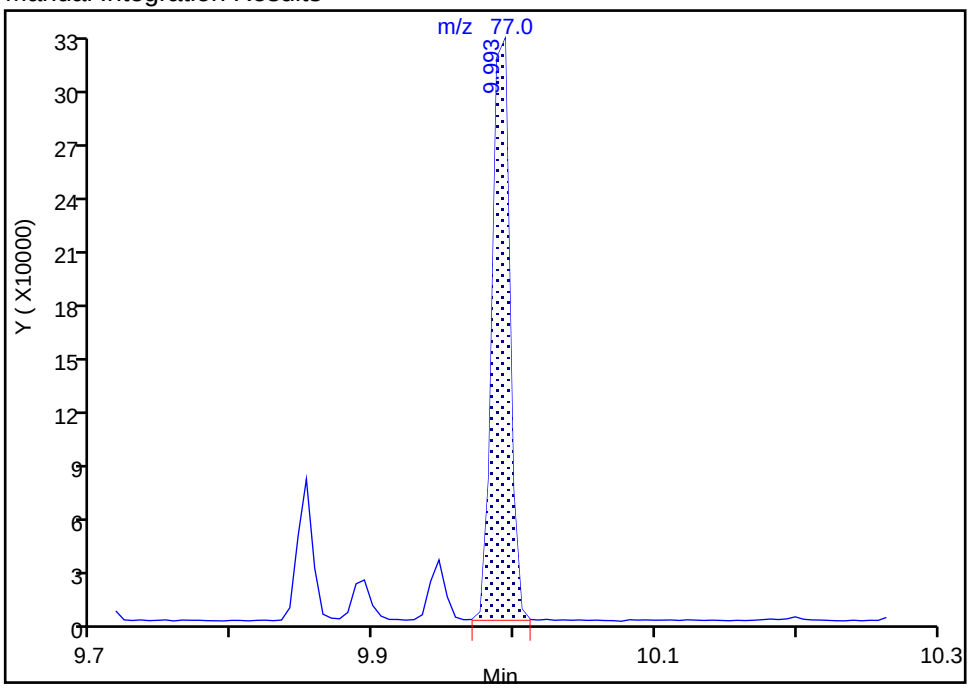
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 285953
Amount: 189.6502
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:42:10
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411008.D
Lims ID: std3 l1lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 11-Apr-2018 14:00:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-008
Misc. Info.: STD3 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:18:09 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 12-Apr-2018 05:40:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	108333	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	593146	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	97	326537	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	643234	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.681	-0.006	99	587857	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	529047	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	93	23028	100.0	103.1	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	40386	100.0	107.8	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	58627	100.0	101.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.811	-0.006	100	111474	100.0	98.2	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	78	10581	100.0	92.5	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	111892	100.0	95.7	
26 1,4-Dioxane	88	4.388	4.382	0.006	81	7980	100.0	111.4	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	70	20336	100.0	96.6	
28 Pyridine	79	4.705	4.700	0.005	71	40737	200.0	204.3	
42 Benzaldehyde	77	6.488	6.488	0.000	85	63900	200.0	207.7	
43 Phenol	94	6.499	6.499	0.000	92	45486	100.0	109.5	
44 Aniline	93	6.570	6.570	0.000	92	72024	100.0	102.2	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	88	54153	100.0	110.0	
244 n-Decane	57	6.682	6.676	0.006	92	63381	100.0	107.9	
47 2-Chlorophenol	128	6.682	6.682	0.000	81	41064	100.0	107.8	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	93	43665	100.0	102.6	
49 1,4-Dichlorobenzene	146	6.870	6.864	0.006	94	45133	100.0	101.6	
50 Benzyl alcohol	108	6.929	6.929	0.000	86	28714	100.0	102.2	
51 1,2-Dichlorobenzene	146	7.005	6.999	0.006	88	45904	100.0	105.7	
52 2-Methylphenol	108	6.999	6.999	0.000	89	40210	100.0	109.2	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	129723	100.0	111.7	
53 Indene	115	7.070	7.070	0.000	90	168618	200.0	216.4	
55 3 & 4 Methylphenol	108	7.117	7.123	-0.006	0	40971	100.0	109.7	
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	95	42073	100.0	107.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	91	71776	100.0	105.6	
61 Hexachloroethane	117	7.294	7.294	0.000	92	18805	100.0	102.2	
62 Nitrobenzene	77	7.317	7.317	0.000	95	55975	100.0	98.3	
64 Isophorone	82	7.499	7.499	0.000	94	100448	100.0	104.8	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	94	48289	100.0	106.7	
65 2-Nitrophenol	139	7.582	7.582	0.000	92	27326	100.0	99.4	
70 Benzoic acid	122	7.588	7.617	-0.029	0	30196	200.0	265.6	M
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	91	64116	100.0	106.3	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	96	35088	100.0	106.2	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	42650	100.0	102.7	
74 Naphthalene	128	7.941	7.941	0.000	97	159535	100.0	104.5	
75 4-Chloroaniline	127	7.952	7.952	0.000	94	80099	100.0	111.0	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	39338	100.0	105.8	
78 Hexachlorobutadiene	225	8.029	8.029	0.000	94	24683	100.0	105.9	
83 Caprolactam	113	8.217	8.229	-0.012	68	35348	200.0	239.7	
85 4-Chloro-3-methylphenol	107	8.323	8.329	-0.006	94	34905	100.0	94.9	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	110643	100.0	105.5	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	91	104592	100.0	105.7	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	92	22800	100.0	84.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	96	40423	100.0	98.4	
93 2,4,6-Trichlorophenol	196	8.740	8.741	0.000	93	23907	100.0	88.0	
94 2,4,5-Trichlorophenol	196	8.776	8.776	0.000	91	24266	100.0	88.7	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	97	125782	100.0	96.4	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	98	96139	100.0	96.7	
101 2-Nitroaniline	65	8.999	8.999	0.000	77	36135	100.0	91.9	
104 Dimethyl phthalate	163	9.117	9.117	0.000	98	134913	100.0	108.3	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	85	16445	100.0	87.4	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	87	28169	100.0	102.2	
108 Acenaphthylene	152	9.305	9.305	0.000	98	141882	100.0	98.6	
109 3-Nitroaniline	138	9.340	9.346	-0.006	87	23848	100.0	98.3	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	75	19164	200.0	196.5	
112 4-Nitrophenol	109	9.440	9.446	-0.006	91	31836	200.0	182.7	
111 Acenaphthene	153	9.446	9.452	-0.006	95	104950	100.0	102.9	
113 2,4-Dinitrotoluene	165	9.535	9.535	0.000	88	34807	100.0	98.0	
115 Dibenzofuran	168	9.593	9.593	0.000	95	152016	100.0	105.8	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.688	-0.001	80	20996	100.0	91.2	
248 Hexadecane	57	9.705	9.705	0.000	89	133441	100.0	115.5	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	135418	100.0	108.4	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	95	59332	100.0	104.7	
125 4-Nitroaniline	138	9.870	9.876	-0.006	80	28949	100.0	118.1	
124 Fluorene	166	9.887	9.887	0.000	96	131810	100.0	107.1	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	79	27197	200.0	195.2	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	99	93964	100.0	97.2	
129 Diphenylamine	169	9.946	9.946	0.000	94	93964	85.0	82.6	
130 1,2-Diphenylhydrazine	77	9.987	9.993	-0.006	10	143618	100.0	97.9	a
131 Azobenzene	77	9.987	9.993	-0.006	95	143165	100.0	97.6	
138 4-Bromophenyl phenyl ether	248	10.276	10.282	-0.006	81	30117	100.0	92.2	
141 Atrazine	200	10.364	10.370	-0.006	85	68603	200.0	190.8	
140 Hexachlorobenzene	284	10.376	10.382	-0.006	90	28448	100.0	91.7	
245 n-Octadecane	57	10.487	10.487	0.000	88	133183	100.0	102.1	
143 Pentachlorophenol	266	10.529	10.529	0.000	86	33804	200.0	165.3	
148 Phenanthrene	178	10.723	10.729	-0.006	98	183845	100.0	99.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	188622	100.0	102.6	
150 Carbazole	167	10.882	10.887	-0.005	96	176067	100.0	105.3	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	220806	100.0	98.3	
159 Fluoranthene	202	11.852	11.858	-0.006	98	186265	100.0	98.4	
160 Benzidine	184	11.934	11.934	0.000	99	72316	200.0	185.3	
161 Pyrene	202	12.111	12.117	-0.006	97	190734	100.0	102.5	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	86445	100.0	90.0	
174 Bis(2-ethylhexyl) phthalat	149	13.517	13.523	-0.006	93	111113	100.0	86.7	
177 3,3'-Dichlorobenzidine	252	13.558	13.564	-0.006	76	100791	200.0	174.1	
178 Benzo[a]anthracene	228	13.658	13.664	-0.006	98	161940	100.0	95.1	
179 Chrysene	228	13.717	13.723	-0.006	98	173859	100.0	102.5	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	98	174301	100.0	84.3	
183 Benzo[b]fluoranthene	252	15.399	15.411	-0.012	97	149003	100.0	96.2	
184 Benzo[k]fluoranthene	252	15.446	15.452	-0.006	99	162220	100.0	99.7	
185 Benzo[a]pyrene	252	15.969	15.981	-0.012	79	138078	100.0	93.7	
190 Indeno[1,2,3-cd]pyrene	276	18.246	18.258	-0.012	93	150789	100.0	95.1	
189 Dibenz(a,h)anthracene	278	18.258	18.269	-0.011	78	130233	100.0	96.1	
191 Benzo[g,h,i]perylene	276	18.899	18.916	-0.017	96	129980	100.0	96.6	
S 246 Total Cresols	100				0			218.9	
S 193 Methyl Phenols,Total	100				0			218.9	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST1 L3 W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 13:18:14 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411008.D

Injection Date: 11-Apr-2018 14:00:30 Instrument ID: A4AG2 Operator ID:

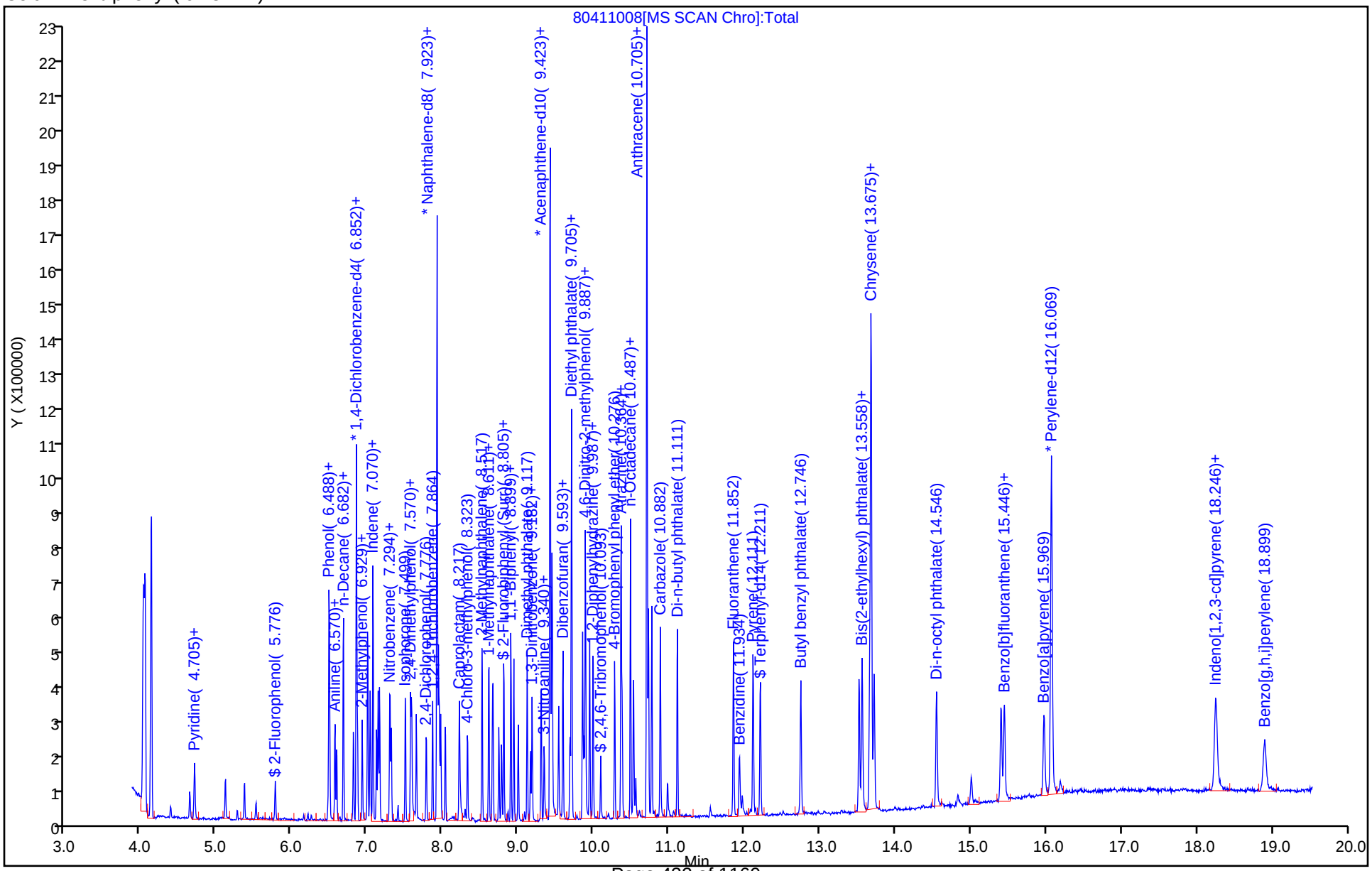
Lims ID: std3 l1lvi Worklist Smp#: 8

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 8

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton

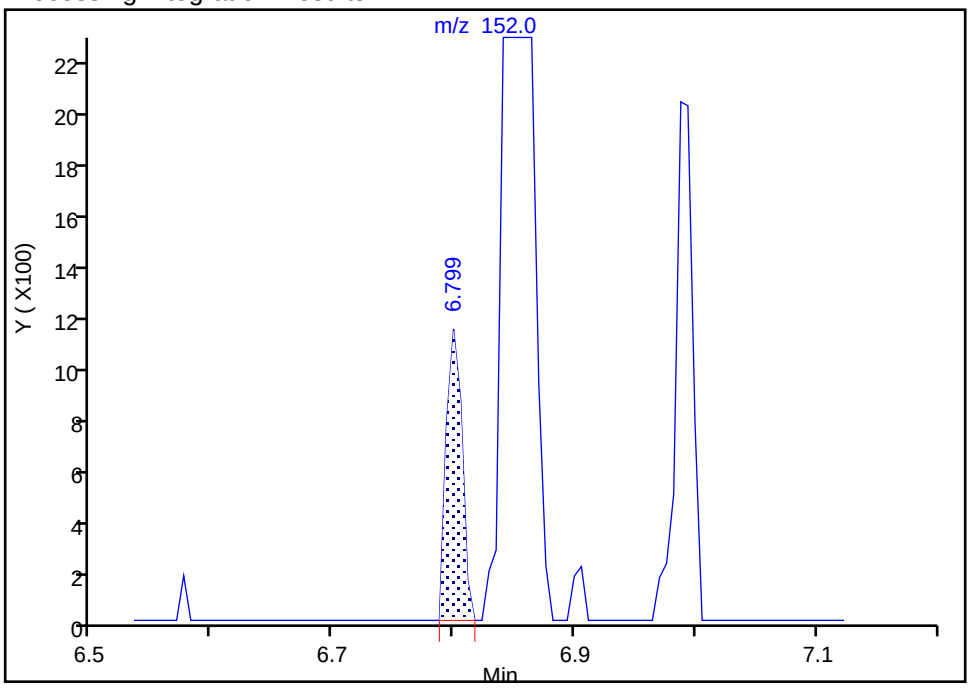
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411008.D
Injection Date: 11-Apr-2018 14:00:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

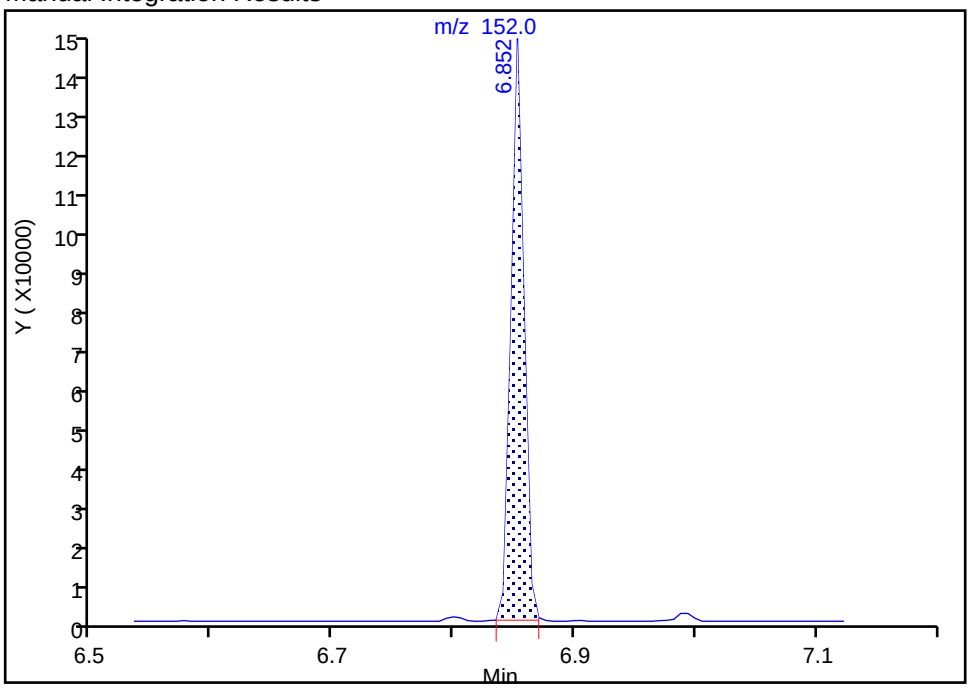
Processing Integration Results

RT: 6.80
Area: 1009
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 108333
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:39:43
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

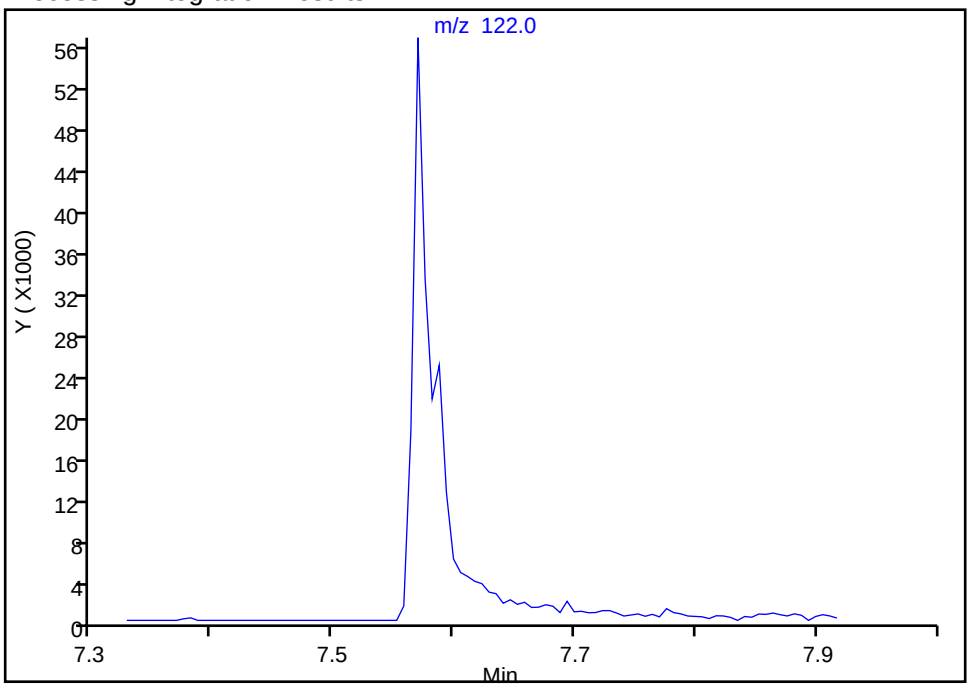
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411008.D				
Injection Date:	11-Apr-2018 14:00:30	Instrument ID:	A4AG2		
Lims ID:	std3 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 Benzoic acid, CAS: 65-85-0

Signal: 1

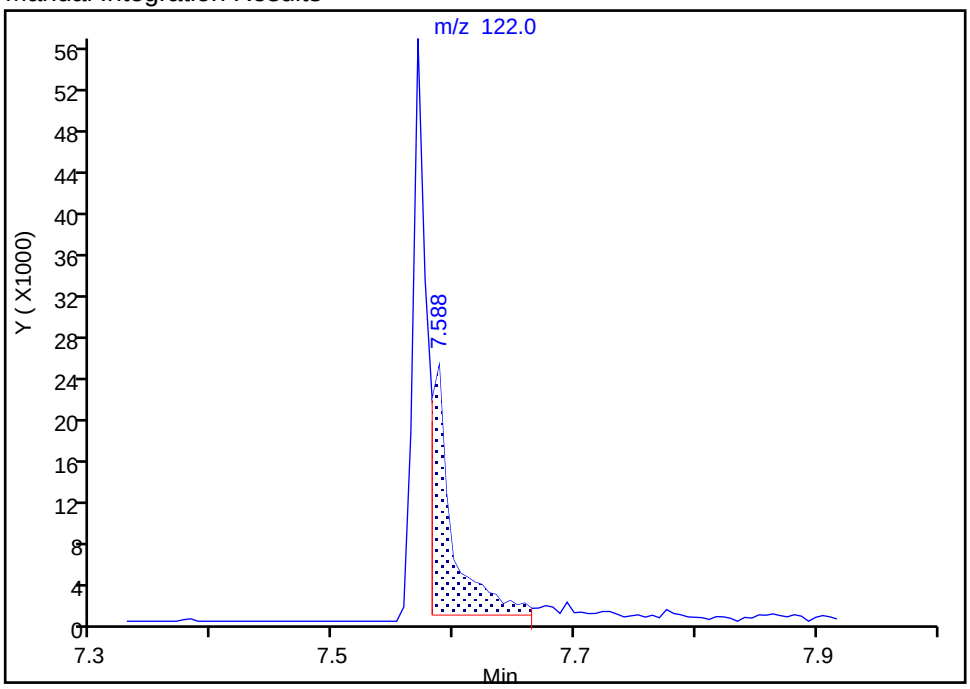
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.59
Area: 30196
Amount: 265.6359
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:41:40
Audit Action: Manually Integrated Audit Reason: Poor chromatography

TestAmerica Canton

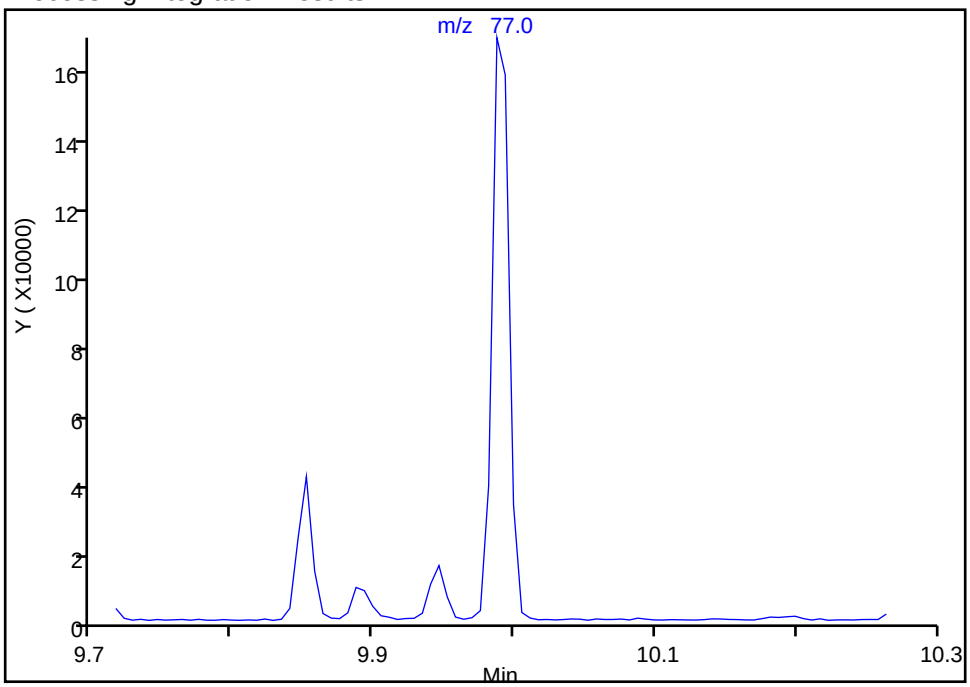
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411008.D
Injection Date: 11-Apr-2018 14:00:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

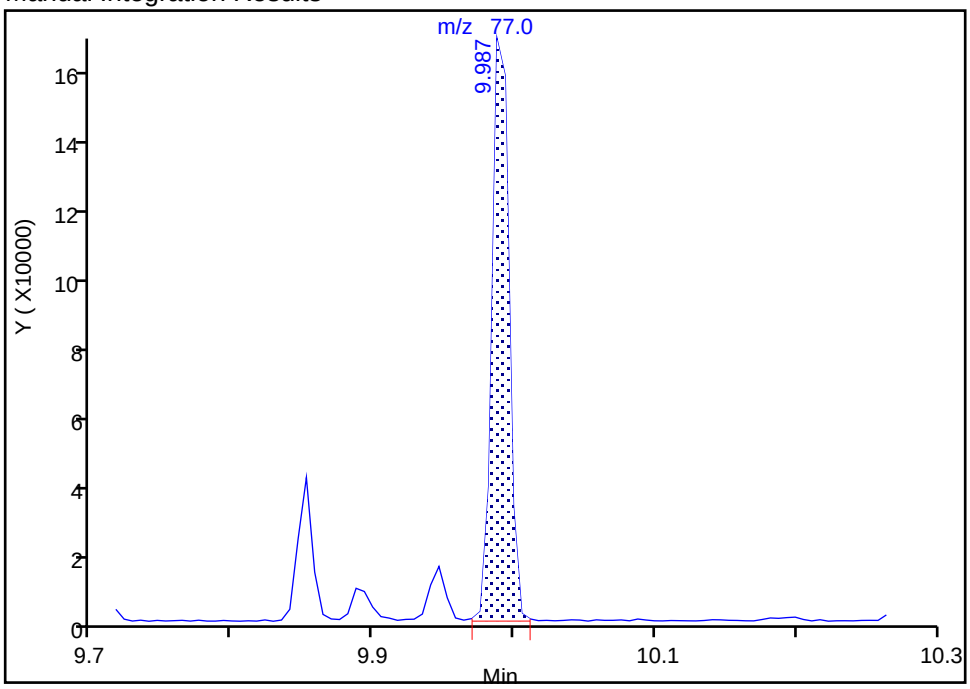
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 143618
Amount: 97.868636
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:40:11
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411009.D
Lims ID: std2 l1lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 11-Apr-2018 14:25:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-009
Misc. Info.: STD2 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:18:19 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 12-Apr-2018 05:39:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	126965	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	675688	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	324159	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	639560	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.681	0.000	99	604917	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	549670	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	93	12257	50.0	46.8	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	24148	50.0	55.0	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	32143	50.0	48.9	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	99	57345	50.0	50.9	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	80	5134	50.0	45.2	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	55254	50.0	45.9	
26 1,4-Dioxane	88	4.382	4.382	0.000	81	5312	50.0	63.3	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	76	11354	50.0	46.0	
28 Pyridine	79	4.705	4.700	0.005	73	20688	100.0	88.5	
42 Benzaldehyde	77	6.488	6.488	0.000	85	35305	100.0	76.0	
43 Phenol	94	6.499	6.499	0.000	89	25809	50.0	53.0	
44 Aniline	93	6.570	6.570	0.000	90	35966	50.0	43.6	
45 Bis(2-chloroethyl)ether	93	6.593	6.588	0.005	88	28046	50.0	48.6	
244 n-Decane	57	6.682	6.676	0.006	93	37202	50.0	54.1	
47 2-Chlorophenol	128	6.682	6.682	0.000	93	22222	50.0	49.8	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	92	24564	50.0	49.2	
49 1,4-Dichlorobenzene	146	6.870	6.864	0.006	95	27288	50.0	52.4	
50 Benzyl alcohol	108	6.929	6.929	0.000	86	16568	50.0	50.3	
52 2-Methylphenol	108	6.999	6.999	0.000	87	21498	50.0	49.8	
51 1,2-Dichlorobenzene	146	7.005	6.999	0.006	88	26194	50.0	51.5	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	72155	50.0	53.0	
53 Indene	115	7.070	7.070	0.000	89	97272	100.0	106.5	
55 3 & 4 Methylphenol	108	7.117	7.123	-0.006	0	22505	50.0	51.4	
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	95	22277	50.0	48.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	91	39316	50.0	49.3	
61 Hexachloroethane	117	7.293	7.294	-0.001	89	10343	50.0	48.0	
62 Nitrobenzene	77	7.317	7.317	0.000	97	32087	50.0	49.5	
64 Isophorone	82	7.505	7.499	0.006	95	51458	50.0	47.1	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	89	24340	50.0	47.2	
65 2-Nitrophenol	139	7.582	7.582	0.000	84	13577	50.0	43.4	
70 Benzoic acid	122		7.617				ND	ND	
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	94	34530	50.0	50.2	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	94	16910	50.0	44.9	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	91	23609	50.0	49.9	
74 Naphthalene	128	7.940	7.941	-0.001	95	84437	50.0	48.6	
75 4-Chloroaniline	127	7.952	7.952	0.000	94	33036	50.0	40.2	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	19710	50.0	46.5	
78 Hexachlorobutadiene	225	8.035	8.029	0.006	91	13212	50.0	49.8	
83 Caprolactam	113	8.223	8.229	-0.006	68	16917	100.0	100.7	
85 4-Chloro-3-methylphenol	107	8.329	8.329	0.000	93	17678	50.0	42.2	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	59458	50.0	49.8	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	93	55127	50.0	48.9	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	95	12158	50.0	45.1	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	96	20831	50.0	51.1	
93 2,4,6-Trichlorophenol	196	8.740	8.741	0.000	92	11004	50.0	40.8	
94 2,4,5-Trichlorophenol	196	8.782	8.776	0.006	92	11362	50.0	41.8	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	97	66578	50.0	51.4	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	98	49336	50.0	50.0	
101 2-Nitroaniline	65	8.999	8.999	0.000	76	17091	50.0	43.8	
104 Dimethyl phthalate	163	9.117	9.117	0.000	97	67084	50.0	54.2	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	86	7836	50.0	42.0	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	84	12649	50.0	46.2	
108 Acenaphthylene	152	9.305	9.305	0.000	98	69073	50.0	48.3	
109 3-Nitroaniline	138	9.346	9.346	0.000	87	9214	50.0	38.3	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	59	6672	100.0	125.3	
112 4-Nitrophenol	109	9.446	9.446	0.000	88	11434	100.0	66.1	
111 Acenaphthene	153	9.446	9.452	-0.006	96	52873	50.0	52.2	
113 2,4-Dinitrotoluene	165	9.534	9.535	-0.001	86	15322	50.0	43.5	
115 Dibenzofuran	168	9.593	9.593	0.000	95	74325	50.0	52.1	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.688	-0.001	82	9561	50.0	41.8	
248 Hexadecane	57	9.705	9.705	0.000	90	68327	50.0	59.6	
120 Diethyl phthalate	149	9.711	9.711	0.000	96	70071	50.0	56.5	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	96	31286	50.0	55.6	
125 4-Nitroaniline	138	9.870	9.876	-0.006	80	13835	50.0	56.8	
124 Fluorene	166	9.887	9.887	0.000	97	66943	50.0	54.8	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	77	10409	100.0	120.6	
129 Diphenylamine	169	9.946	9.946	0.000	92	46346	42.5	41.0	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	98	46346	50.0	48.2	
131 Azobenzene	77	9.993	9.993	0.000	96	72250	50.0	49.5	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	5	71792	50.0	49.2	a
138 4-Bromophenyl phenyl ether	248	10.281	10.282	-0.001	80	14985	50.0	46.2	
141 Atrazine	200	10.364	10.370	-0.006	86	39902	100.0	111.6	
140 Hexachlorobenzene	284	10.381	10.382	-0.001	90	15262	50.0	49.5	
245 n-Octadecane	57	10.487	10.487	0.000	89	65910	50.0	50.8	
143 Pentachlorophenol	266	10.529	10.529	0.000	85	17374	100.0	85.5	
148 Phenanthrene	178	10.729	10.729	0.000	98	92033	50.0	50.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	90802	50.0	49.7	
150 Carbazole	167	10.887	10.887	0.000	96	86234	50.0	51.9	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	109675	50.0	49.1	
159 Fluoranthene	202	11.852	11.858	-0.006	98	98085	50.0	52.1	
160 Benzidine	184	11.934	11.934	0.000	99	25796	100.0	132.6	
161 Pyrene	202	12.111	12.117	-0.006	97	101253	50.0	52.9	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	46580	50.0	47.1	
174 Bis(2-ethylhexyl) phthalat	149	13.522	13.523	-0.001	92	54454	50.0	41.3	
177 3,3'-Dichlorobenzidine	252	13.558	13.564	-0.006	76	50529	100.0	84.8	
178 Benzo[a]anthracene	228	13.664	13.664	0.000	99	82217	50.0	46.9	
179 Chrysene	228	13.717	13.723	-0.006	98	86927	50.0	49.8	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	97	81640	50.0	38.0	
183 Benzo[b]fluoranthene	252	15.399	15.411	-0.012	97	79348	50.0	49.3	
184 Benzo[k]fluoranthene	252	15.446	15.452	-0.006	99	82814	50.0	49.0	
185 Benzo[a]pyrene	252	15.969	15.981	-0.012	79	69112	50.0	45.1	
190 Indeno[1,2,3-cd]pyrene	276	18.240	18.258	-0.018	92	75689	50.0	46.0	
189 Dibenz(a,h)anthracene	278	18.257	18.269	-0.012	90	64821	50.0	46.1	
191 Benzo[g,h,i]perylene	276	18.904	18.916	-0.012	87	65920	50.0	47.2	a
S 193 Methyl Phenols,Total	100				0			101.2	
S 246 Total Cresols	100				0			101.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L2 W_00010 Amount Added: 0.10 Units: mL

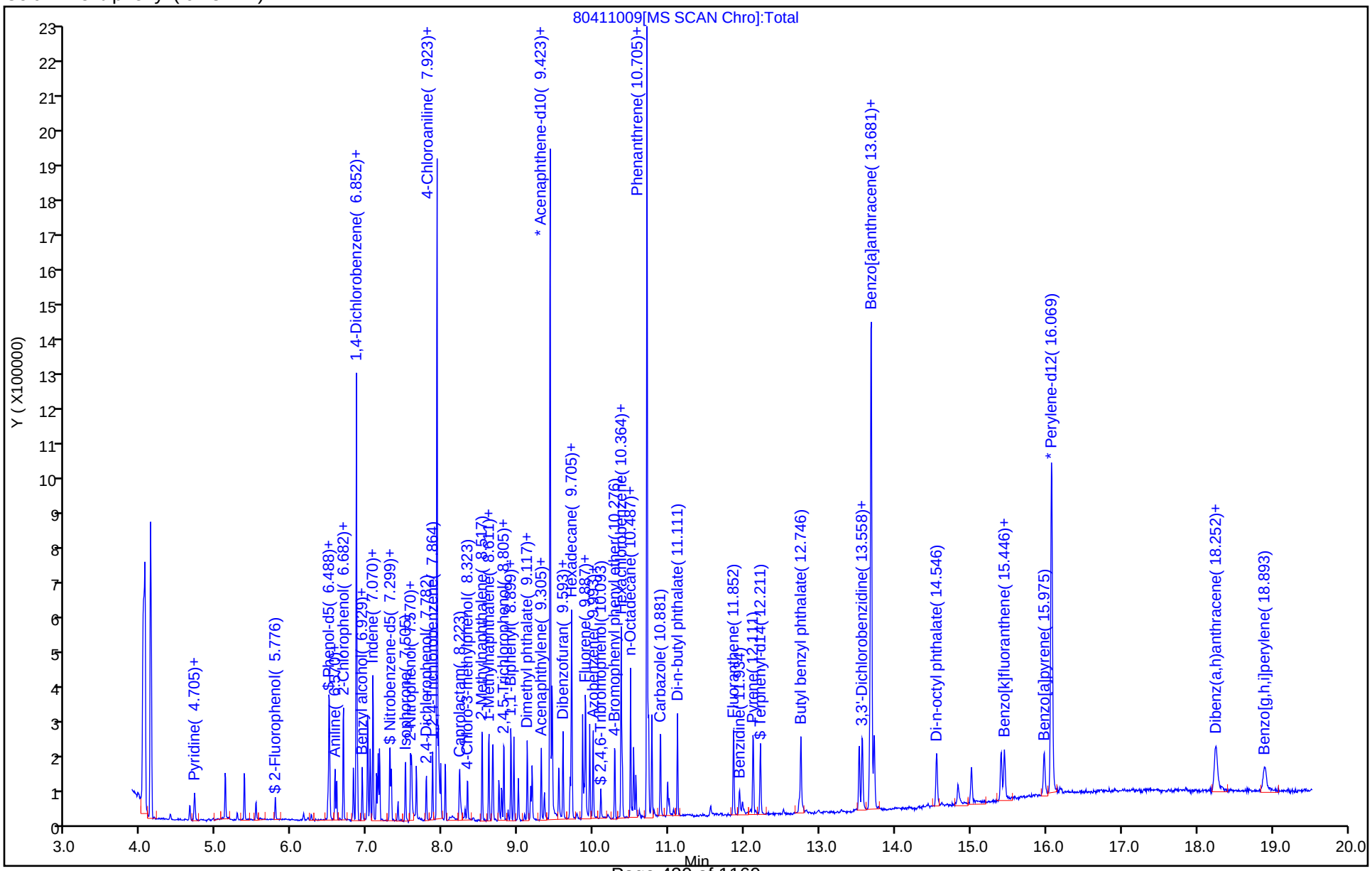
Report Date: 12-Apr-2018 13:18:22 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411009.D

Injection Date:	11-Apr-2018 14:25:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std2 l1lvi			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

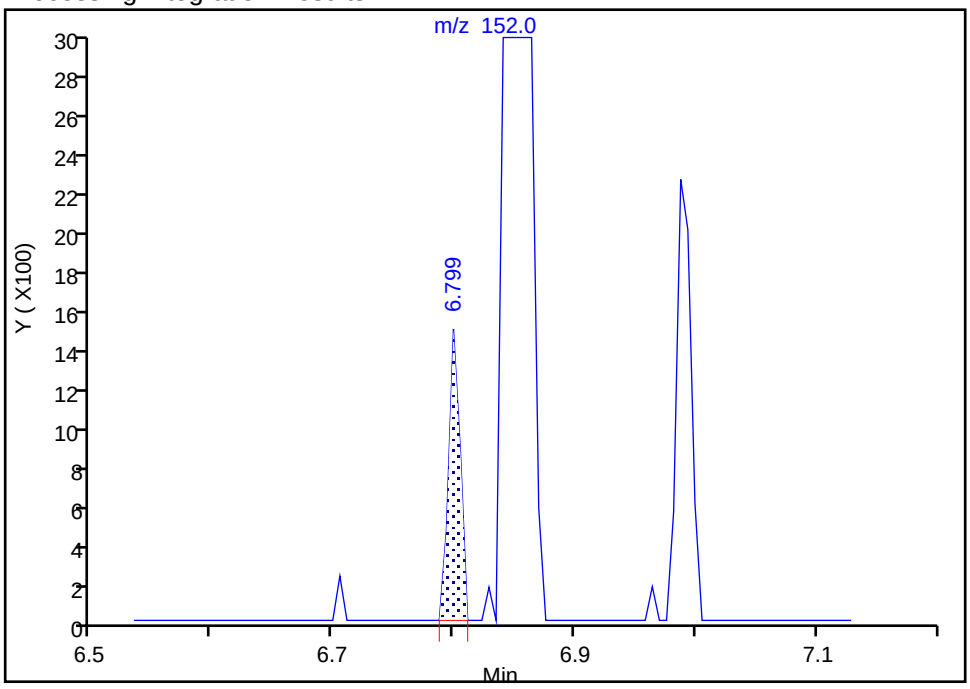
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411009.D
Injection Date: 11-Apr-2018 14:25:30 Instrument ID: A4AG2
Lims ID: std2 l1lvi
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

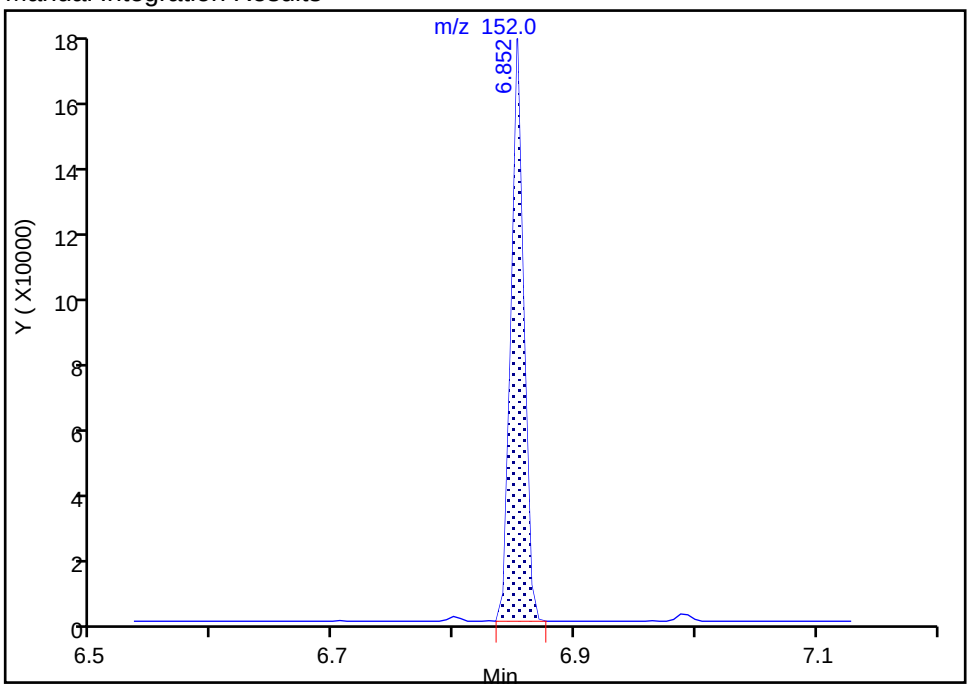
Processing Integration Results

RT: 6.80
Area: 962
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 126965
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:38:52
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

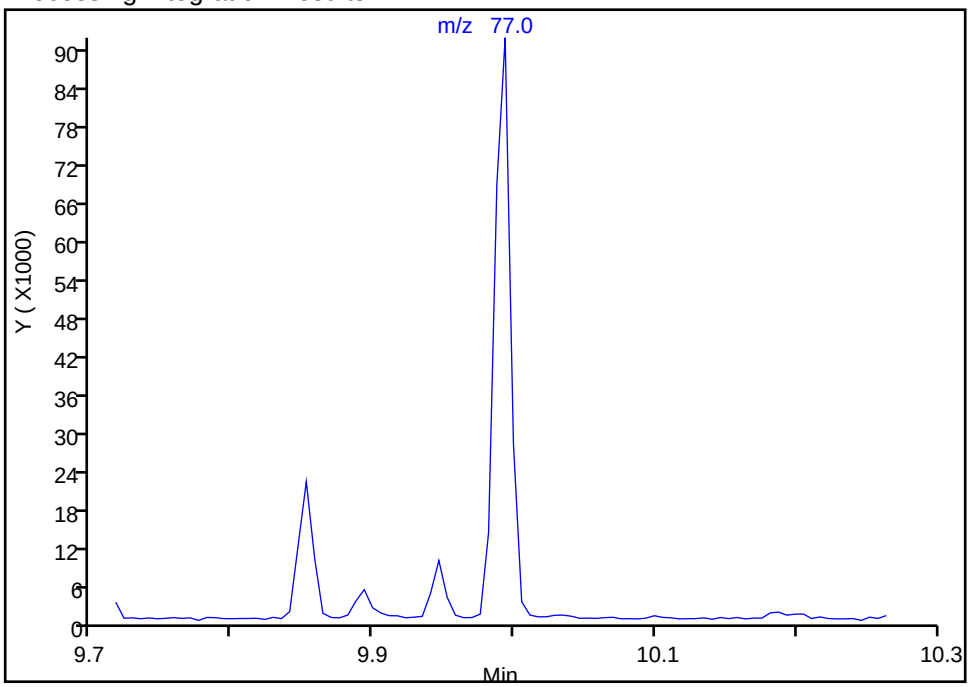
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411009.D				
Injection Date:	11-Apr-2018 14:25:30	Instrument ID:	A4AG2		
Lims ID:	std2 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

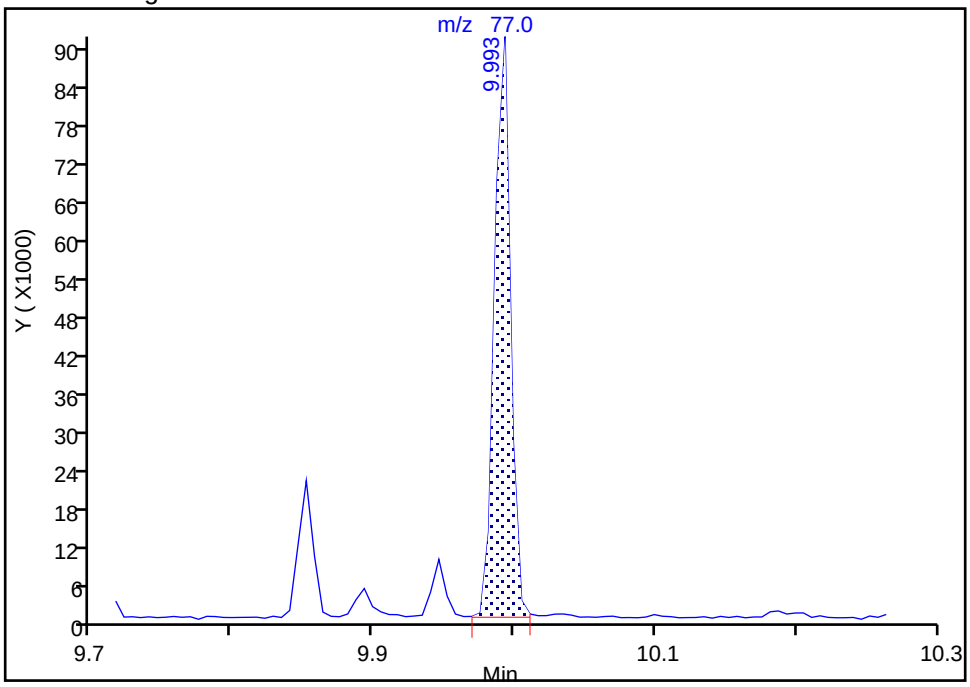
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 71792
Amount: 49.203774
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:39:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

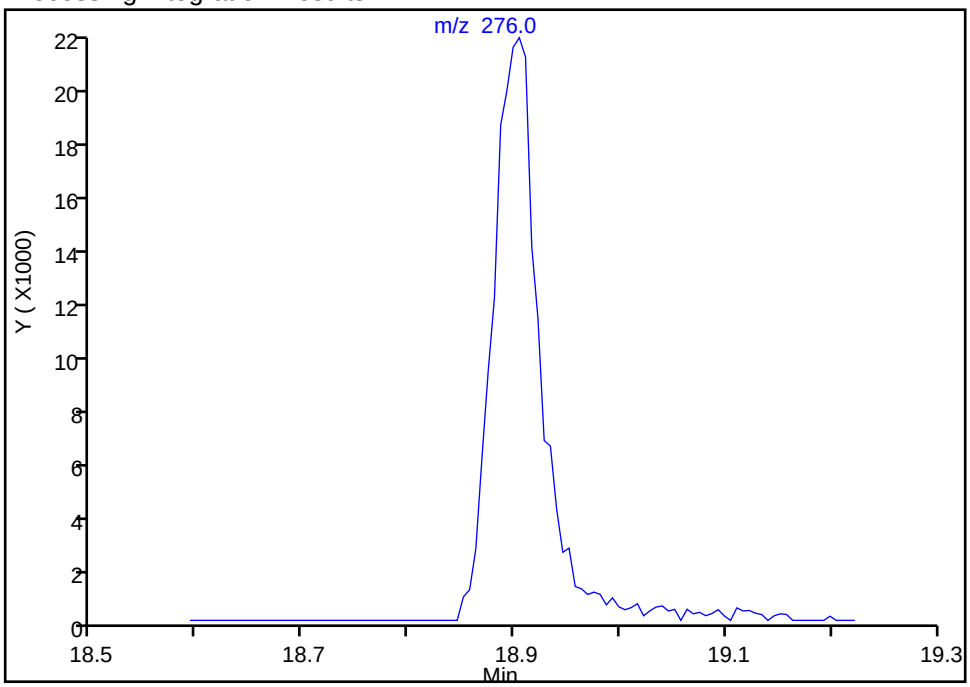
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411009.D				
Injection Date:	11-Apr-2018 14:25:30	Instrument ID:	A4AG2		
Lims ID:	std2 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

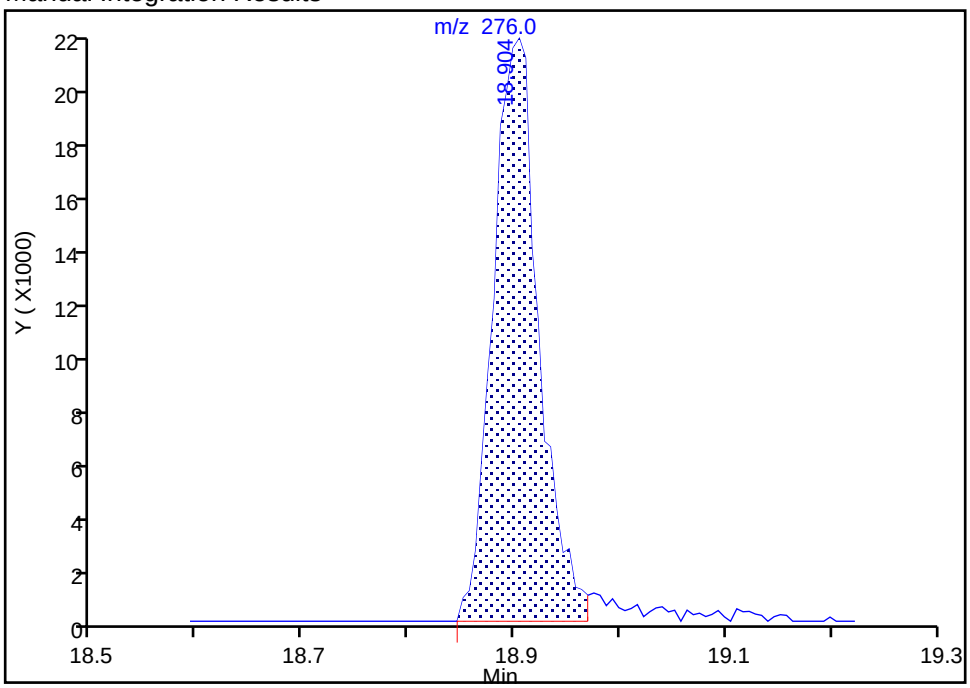
Not Detected
Expected RT: 18.92

Processing Integration Results



Manual Integration Results

RT: 18.90
Area: 65920
Amount: 47.169201
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:38:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 12-Apr-2018 13:18:35 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D
Lims ID: std1 l1lvi
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 11-Apr-2018 14:49:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-010
Misc. Info.: STD1 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 13:18:29 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK040

First Level Reviewer: hulat Date: 12-Apr-2018 05:33:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	120166	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	546426	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	95	262390	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	565781	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.681	-0.006	98	506887	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	475423	400.0	400.0	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	95	5253	10.0	9.89	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	98	9222	10.0	10.1	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	98	10265	10.0	10.2	
28 Pyridine	79	4.711	4.700	0.011	82	5371	20.0	24.3	
42 Benzaldehyde	77		6.488				ND	ND	U
74 Naphthalene	128	7.940	7.941	-0.001	96	14761	10.0	10.5	
83 Caprolactam	113	8.235	8.229	0.006	64	2768	20.0	20.4	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	88	8853	10.0	9.16	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	88	8815	10.0	9.67	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	97	9868	10.0	9.41	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	94	7646	10.0	9.57	
108 Acenaphthylene	152	9.305	9.305	0.000	98	10437	10.0	9.02	
111 Acenaphthene	153	9.446	9.452	-0.006	96	8976	10.0	11.0	
115 Dibenzofuran	168	9.593	9.593	0.000	96	10582	10.0	9.17	
124 Fluorene	166	9.887	9.887	0.000	94	10489	10.0	10.6	
141 Atrazine	200	10.364	10.370	-0.006	86	9001	20.0	28.5	
140 Hexachlorobenzene	284	10.381	10.382	-0.001	80	2264	10.0	8.30	
148 Phenanthrene	178	10.729	10.729	-0.001	95	17202	10.0	10.6	
149 Anthracene	178	10.770	10.770	0.000	98	13284	10.0	8.21	
159 Fluoranthene	202	11.852	11.858	-0.006	98	16096	10.0	9.67	
161 Pyrene	202	12.117	12.117	0.000	96	16243	10.0	10.1	
178 Benzo[a]anthracene	228	13.664	13.664	0.000	47	14464	10.0	9.85	a
179 Chrysene	228	13.717	13.723	-0.006	97	14417	10.0	9.86	
183 Benzo[b]fluoranthene	252	15.405	15.411	-0.006	96	11280	10.0	8.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
184 Benzo[k]fluoranthene	252	15.446	15.452	-0.006	97	13116	10.0	8.97	
185 Benzo[a]pyrene	252	15.969	15.981	-0.012	83	11528	10.0	8.70	
190 Indeno[1,2,3-cd]pyrene	276	18.246	18.258	-0.012	93	11314	10.0	7.94	
189 Dibenz(a,h)anthracene	278	18.263	18.269	-0.006	0	10335	10.0	8.49	M
191 Benzo[g,h,i]perylene	276	18.904	18.916	-0.012	93	11461	10.0	9.48	

QC Flag Legend

Processing Flags
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Reagents:

SMLIST1 L1+ W_00004 Amount Added: 0.10 Units: mL

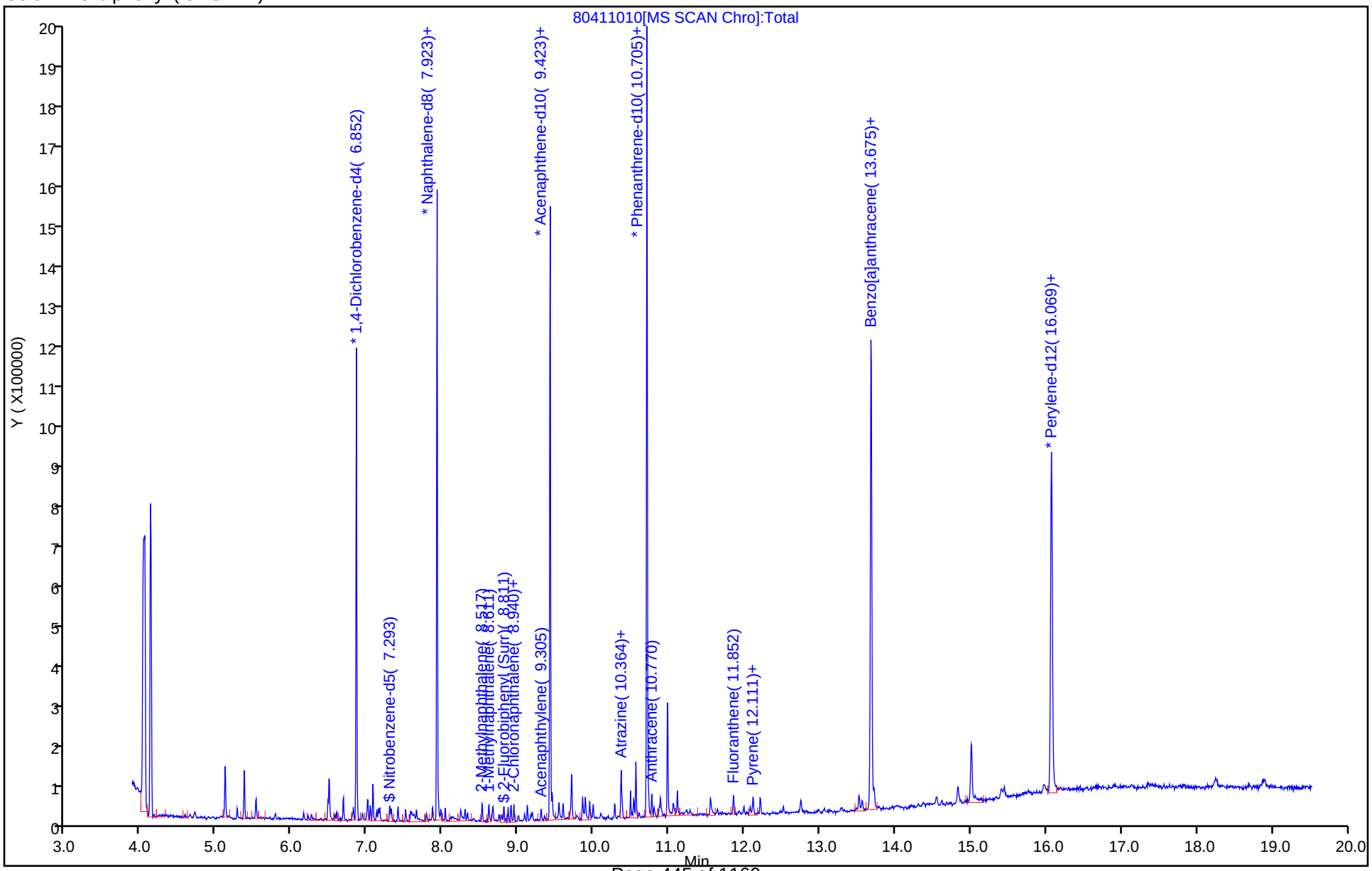
Report Date: 12-Apr-2018 13:18:36 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D

Injection Date:	11-Apr-2018 14:49:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std1 l1lvi			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

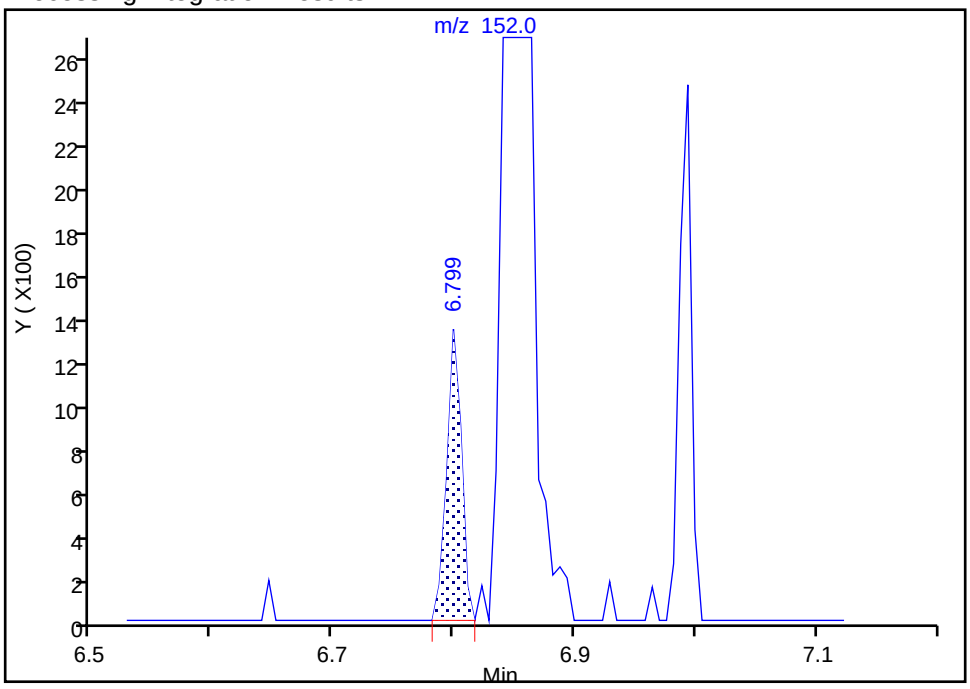
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D
Injection Date: 11-Apr-2018 14:49:30 Instrument ID: A4AG2
Lims ID: std1 l1lvi
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

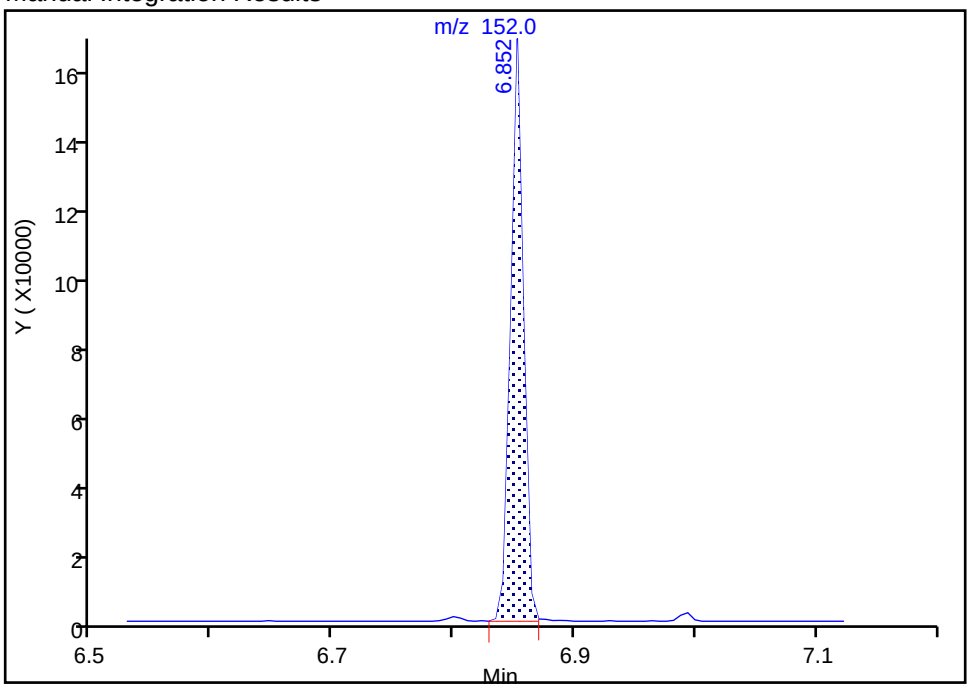
Processing Integration Results

RT: 6.80
Area: 1104
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 120166
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:31:51
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

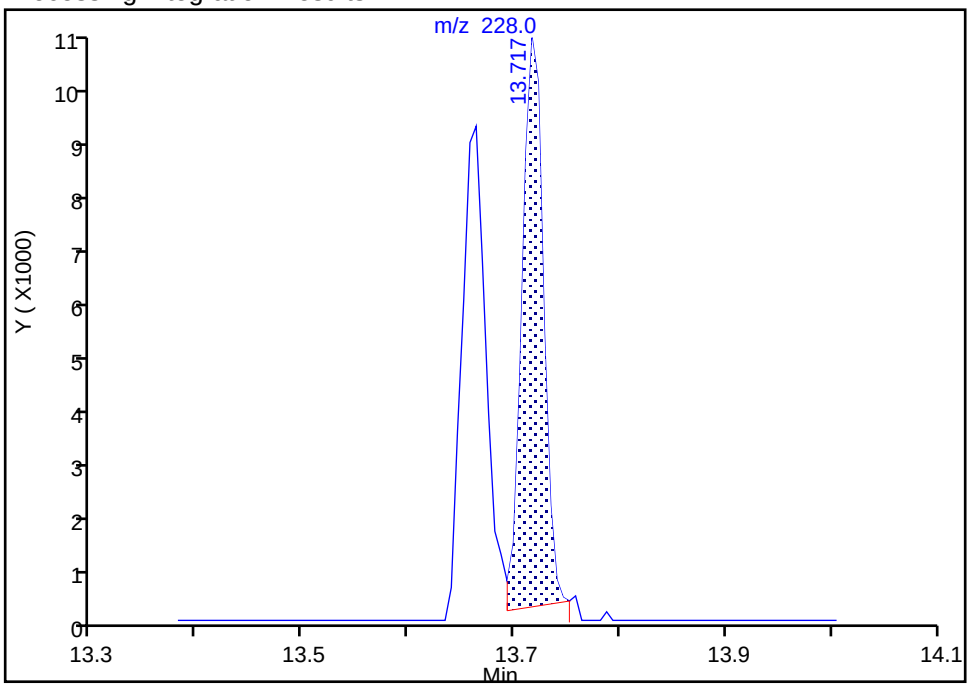
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D				
Injection Date:	11-Apr-2018 14:49:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

178 Benzo[a]anthracene, CAS: 56-55-3

Signal: 1

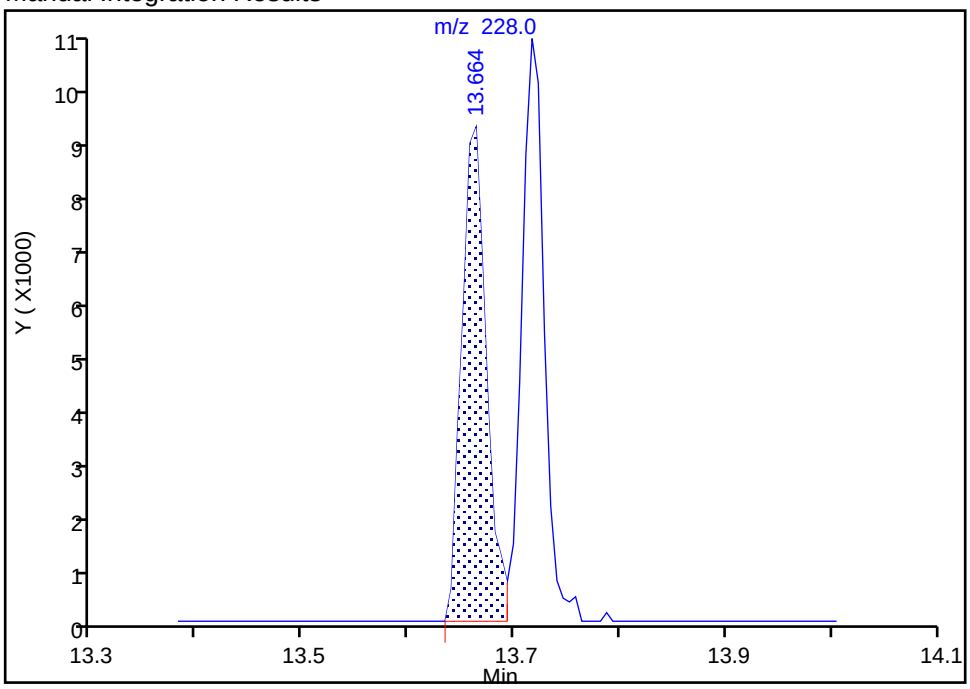
Processing Integration Results

RT: 13.72
Area: 14417
Amount: 9.820980
Amount Units: ng/ml



Manual Integration Results

RT: 13.66
Area: 14464
Amount: 9.849493
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:32:30

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

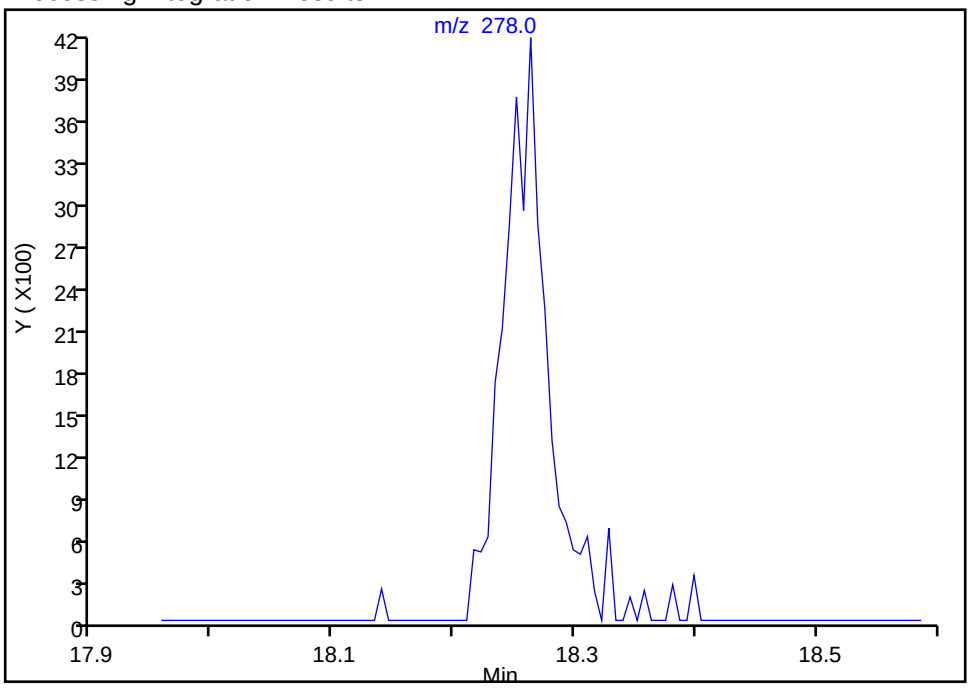
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D				
Injection Date:	11-Apr-2018 14:49:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

189 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

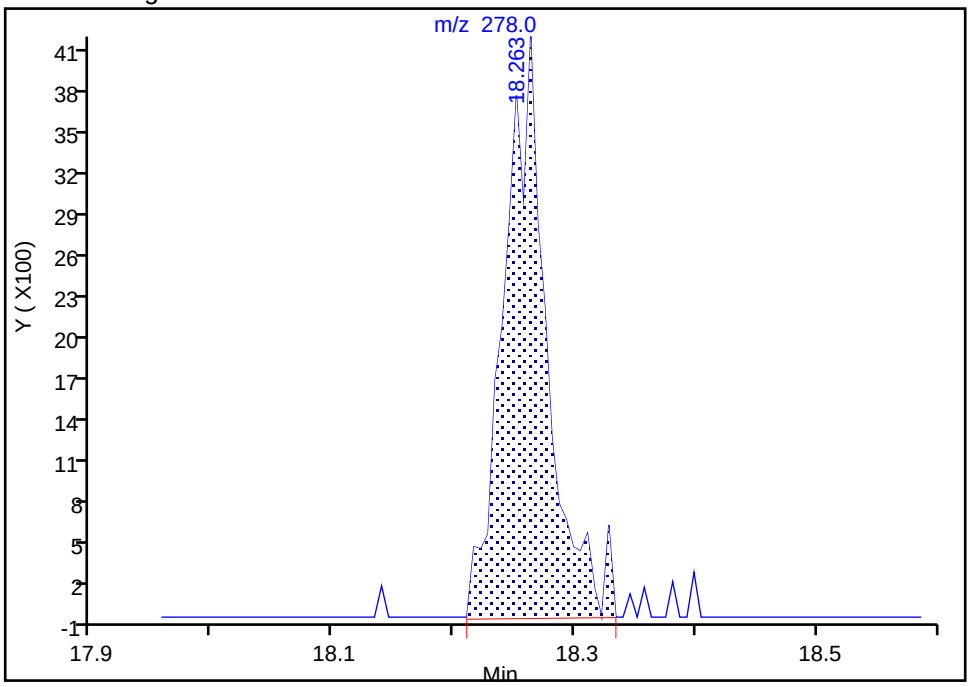
Not Detected
Expected RT: 18.27

Processing Integration Results



Manual Integration Results

RT: 18.26
Area: 10335
Amount: 8.489727
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:32:55
Audit Action: Manually Integrated Audit Reason: Poor chromatography

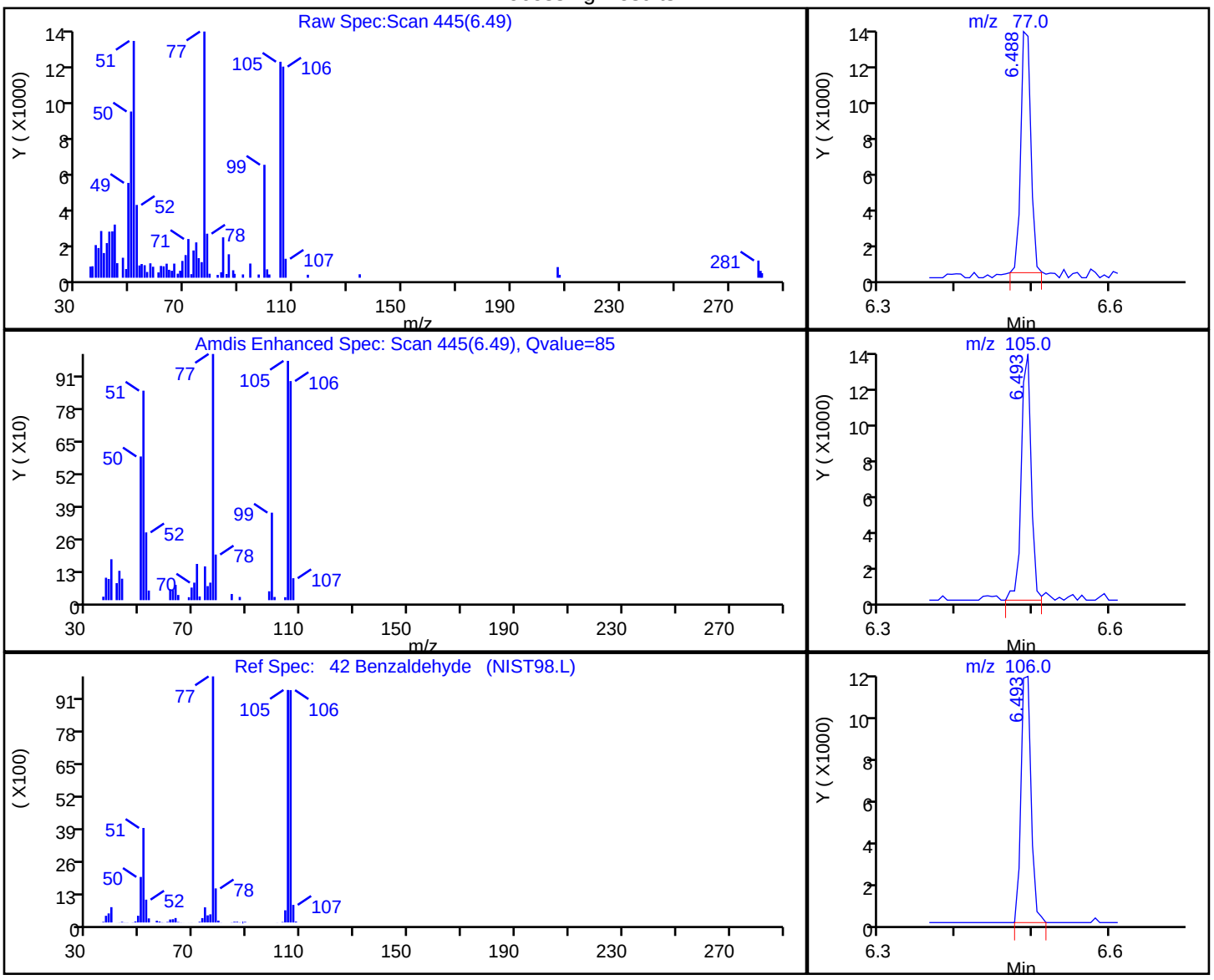
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411010.D				
Injection Date:	11-Apr-2018 14:49:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

42 Benzaldehyde, CAS: 100-52-7

Processing Results



RT	Mass	Response	Amount
6.49	77.00	11794	6.832388
6.49	105.00	11749	
6.49	106.00	10441	

Reviewer: hulat, 12-Apr-2018 06:13:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

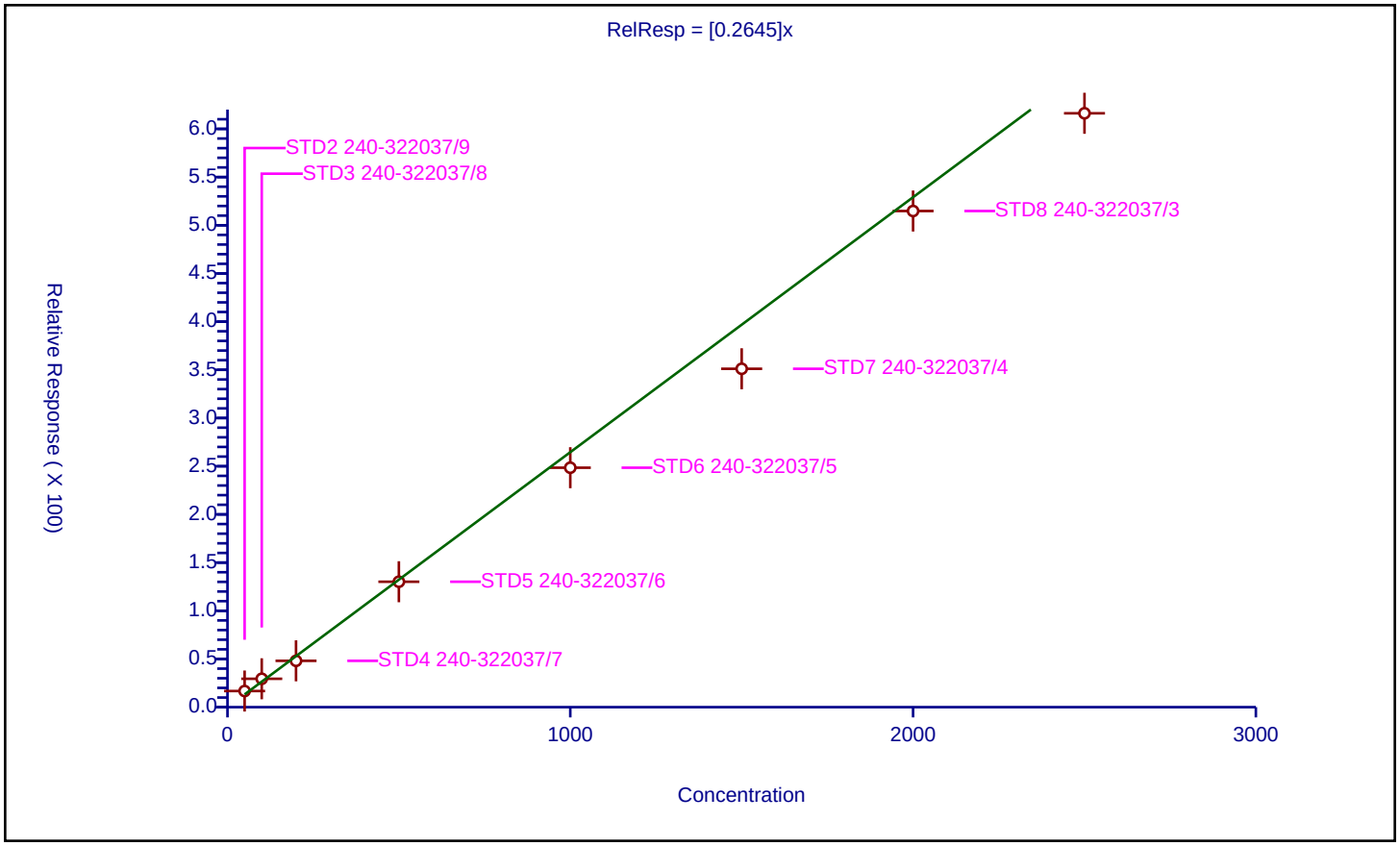
Curve Coefficients

Intercept:	0
Slope:	0.2645

Error Coefficients

Standard Error:	121000
Relative Standard Error:	12.8
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	16.735321	400.0	126965.0	0.334706	Y
2	STD3 240-322037/8	100.0	29.464706	400.0	108333.0	0.294647	Y
3	STD4 240-322037/7	200.0	48.071406	400.0	131754.0	0.240357	Y
4	STD5 240-322037/6	500.0	130.14711	400.0	129223.0	0.260294	Y
5	STD6 240-322037/5	1000.0	248.439242	400.0	144449.0	0.248439	Y
6	STD7 240-322037/4	1500.0	351.089362	400.0	128332.0	0.23406	Y
7	STD8 240-322037/3	2000.0	514.782863	400.0	136895.0	0.257391	Y
8	STD9 240-322037/2	2500.0	616.194004	400.0	143090.0	0.246478	Y



Calibration / N-Nitrosodimethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

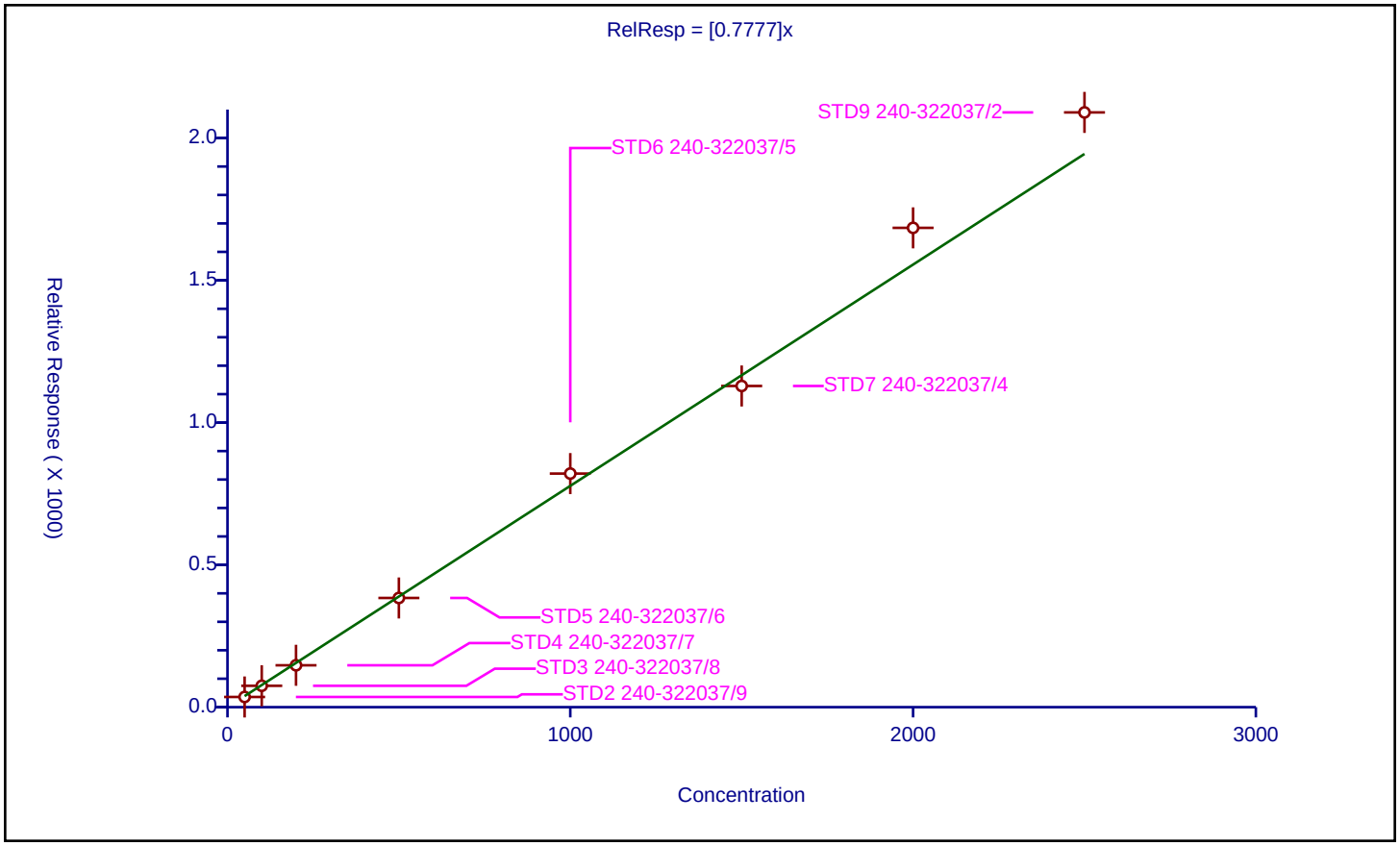
Curve Coefficients

Intercept:	0
Slope:	0.7777

Error Coefficients

Standard Error:	400000
Relative Standard Error:	6.2
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	35.770488	400.0	126965.0	0.71541	Y
2	STD3 240-322037/8	100.0	75.087	400.0	108333.0	0.75087	Y
3	STD4 240-322037/7	200.0	147.207675	400.0	131754.0	0.736038	Y
4	STD5 240-322037/6	500.0	383.736641	400.0	129223.0	0.767473	Y
5	STD6 240-322037/5	1000.0	820.931955	400.0	144449.0	0.820932	Y
6	STD7 240-322037/4	1500.0	1128.753545	400.0	128332.0	0.752502	Y
7	STD8 240-322037/3	2000.0	1684.400453	400.0	136895.0	0.8422	Y
8	STD9 240-322037/2	2500.0	2090.094346	400.0	143090.0	0.836038	Y



Calibration / Pyridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

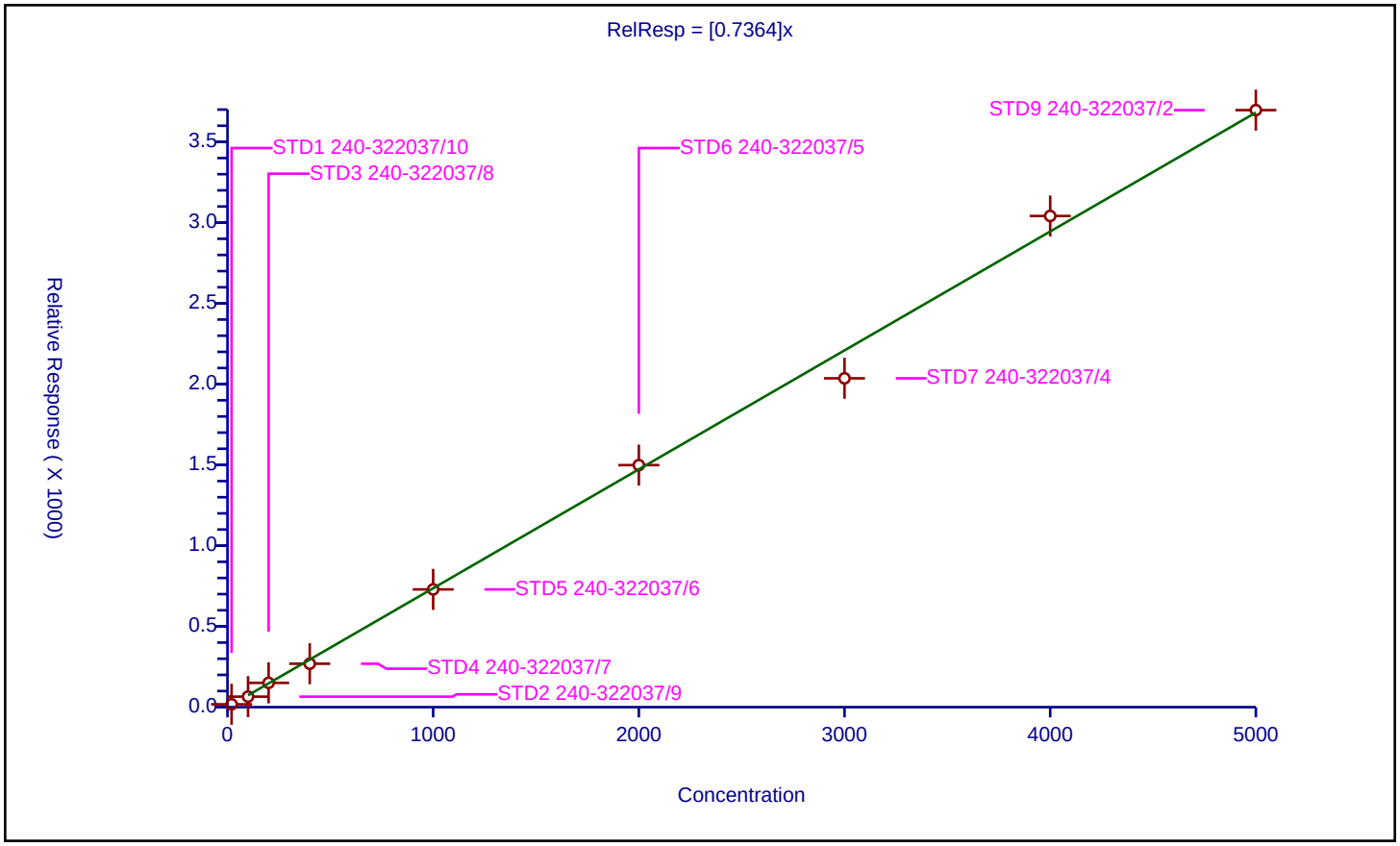
Curve Coefficients

Intercept:	0
Slope:	0.7364

Error Coefficients

Standard Error:	671000
Relative Standard Error:	9.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	20.0	17.878601	400.0	120166.0	0.89393	Y
2	STD2 240-322037/9	100.0	65.177017	400.0	126965.0	0.65177	Y
3	STD3 240-322037/8	200.0	150.414001	400.0	108333.0	0.75207	Y
4	STD4 240-322037/7	400.0	268.970961	400.0	131754.0	0.672427	Y
5	STD5 240-322037/6	1000.0	729.210744	400.0	129223.0	0.729211	Y
6	STD6 240-322037/5	2000.0	1498.74627	400.0	144449.0	0.749373	Y
7	STD7 240-322037/4	3000.0	2036.143752	400.0	128332.0	0.678715	Y
8	STD8 240-322037/3	4000.0	3041.382081	400.0	136895.0	0.760346	Y
9	STD9 240-322037/2	5000.0	3696.792229	400.0	143090.0	0.739358	Y



Calibration / 2-Fluorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

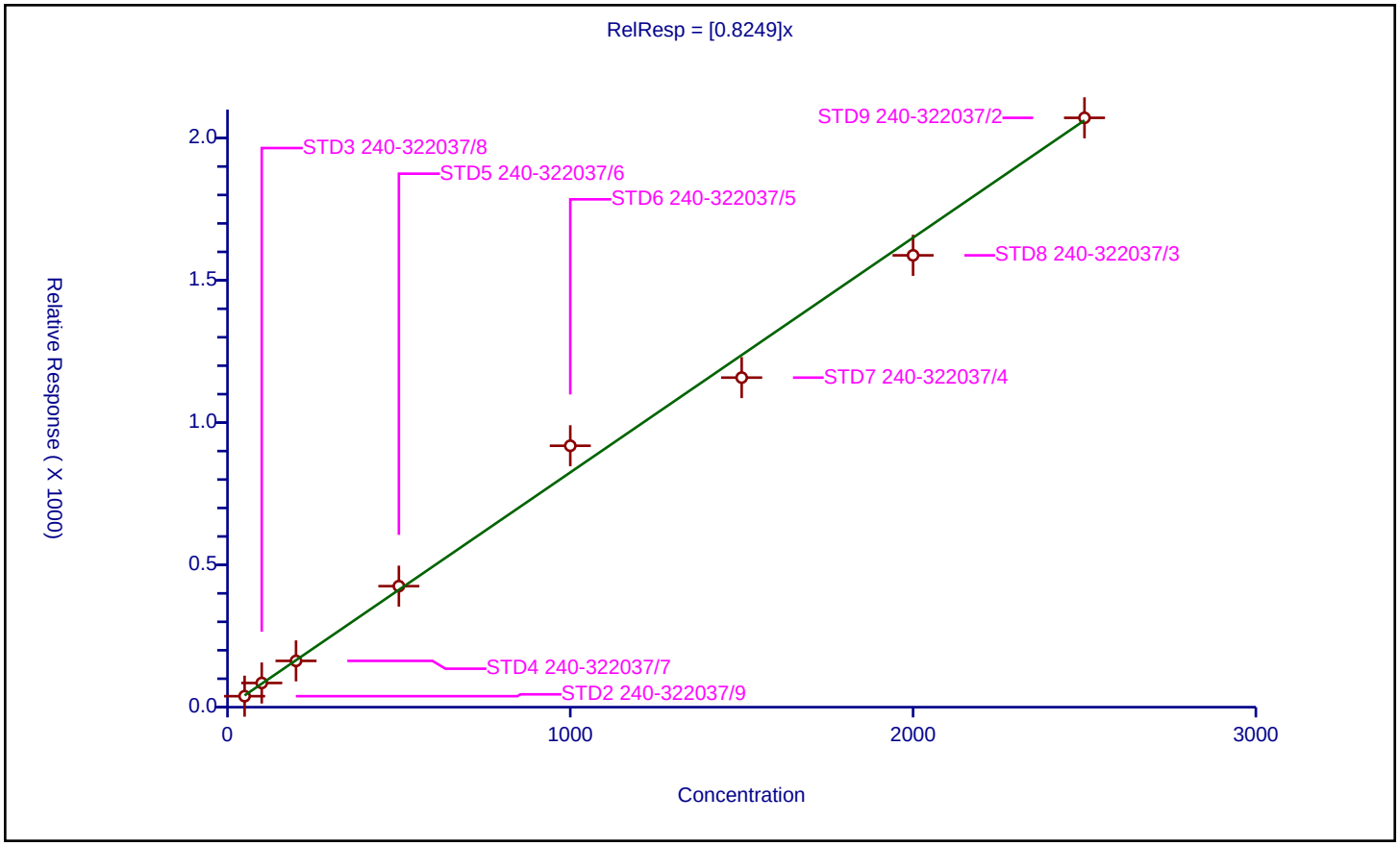
Curve Coefficients

Intercept:	0
Slope:	0.8249

Error Coefficients

Standard Error:	398000
Relative Standard Error:	5.9
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	38.615366	400.0	126965.0	0.772307	Y
2	STD3 240-322037/8	100.0	85.026723	400.0	108333.0	0.850267	Y
3	STD4 240-322037/7	200.0	162.636428	400.0	131754.0	0.813182	Y
4	STD5 240-322037/6	500.0	425.283425	400.0	129223.0	0.850567	Y
5	STD6 240-322037/5	1000.0	918.641181	400.0	144449.0	0.918641	Y
6	STD7 240-322037/4	1500.0	1158.136708	400.0	128332.0	0.772091	Y
7	STD8 240-322037/3	2000.0	1587.838855	400.0	136895.0	0.793919	Y
8	STD9 240-322037/2	2500.0	2071.149626	400.0	143090.0	0.82846	Y



Calibration / Phenol-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

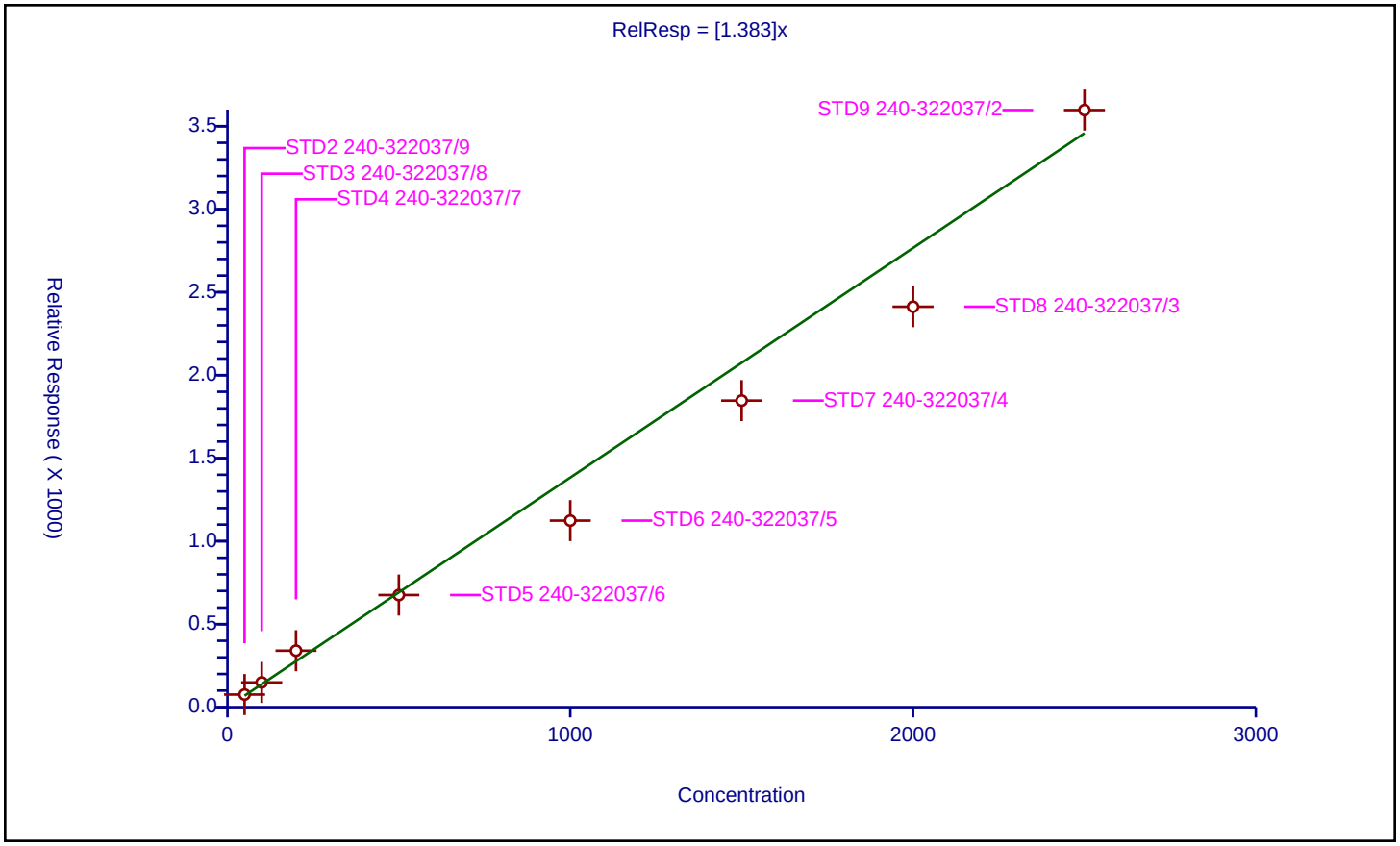
Curve Coefficients

Intercept:	0
Slope:	1.383

Error Coefficients

Standard Error:	643000
Relative Standard Error:	13.9
Correlation Coefficient:	0.972
Coefficient of Determination (Adjusted):	0.971

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	76.077659	400.0	126965.0	1.521553	Y
2	STD3 240-322037/8	100.0	149.117997	400.0	108333.0	1.49118	Y
3	STD4 240-322037/7	200.0	340.28872	400.0	131754.0	1.701444	Y
4	STD5 240-322037/6	500.0	675.406081	400.0	129223.0	1.350812	Y
5	STD6 240-322037/5	1000.0	1123.901169	400.0	144449.0	1.123901	Y
6	STD7 240-322037/4	1500.0	1847.012436	400.0	128332.0	1.231342	Y
7	STD8 240-322037/3	2000.0	2412.485482	400.0	136895.0	1.206243	Y
8	STD9 240-322037/2	2500.0	3597.221329	400.0	143090.0	1.438889	Y



Calibration / Benzaldehyde

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

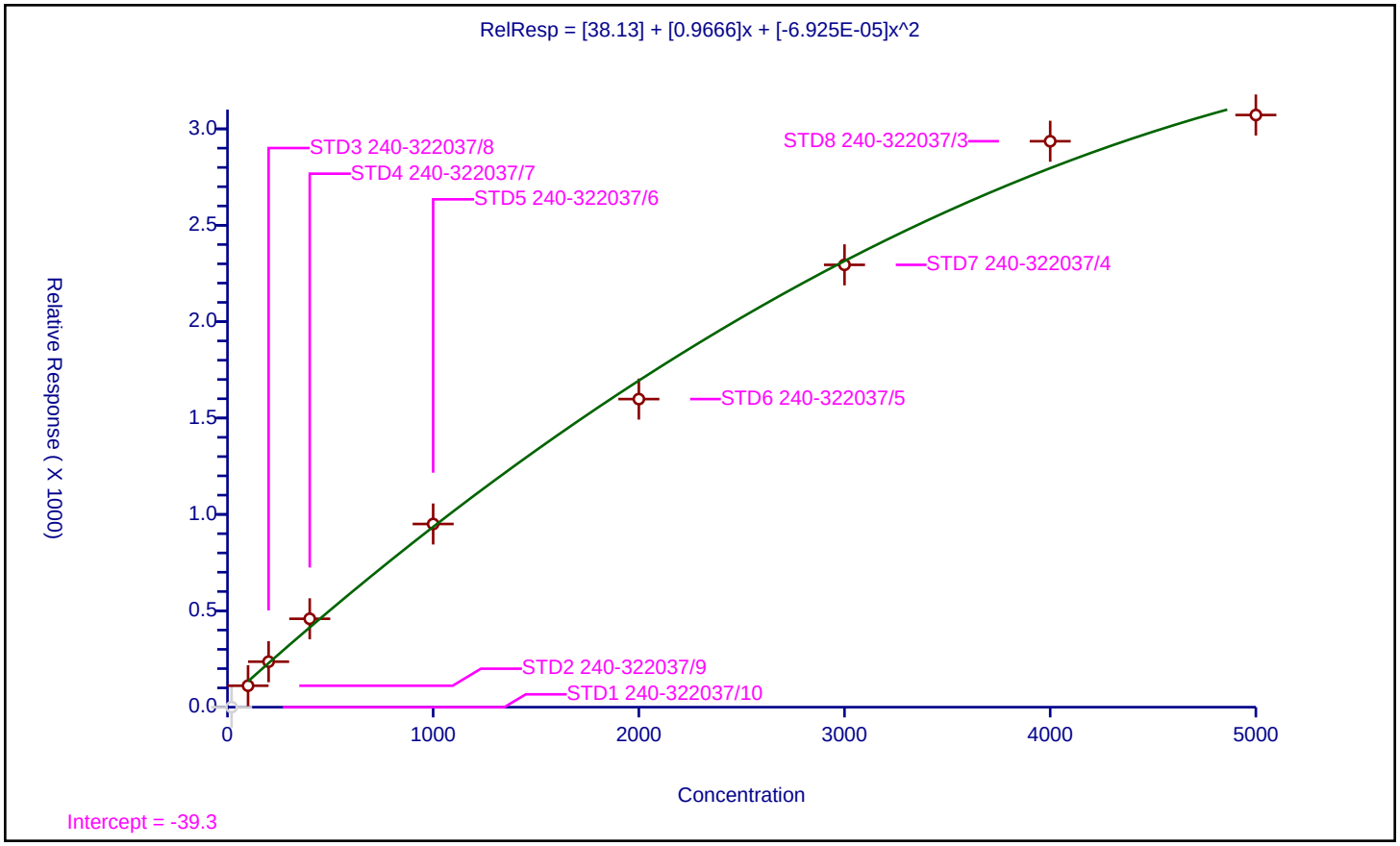
Curve Coefficients

Intercept:	38.13
Slope:	0.9666
Second Order:	-6.925E-05

Error Coefficients

Standard Error:	800000
Relative Standard Error:	13.4
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	20.0	0.0	400.0	120166.0	0.0	N
2	STD2 240-322037/9	100.0	111.227504	400.0	126965.0	1.112275	Y
3	STD3 240-322037/8	200.0	235.939188	400.0	108333.0	1.179696	Y
4	STD4 240-322037/7	400.0	458.518147	400.0	131754.0	1.146295	Y
5	STD5 240-322037/6	1000.0	950.292131	400.0	129223.0	0.950292	Y
6	STD6 240-322037/5	2000.0	1598.224979	400.0	144449.0	0.799112	Y
7	STD7 240-322037/4	3000.0	2294.620204	400.0	128332.0	0.764873	Y
8	STD8 240-322037/3	4000.0	2935.902699	400.0	136895.0	0.733976	Y
9	STD9 240-322037/2	5000.0	3072.002236	400.0	143090.0	0.6144	Y



Calibration / Phenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

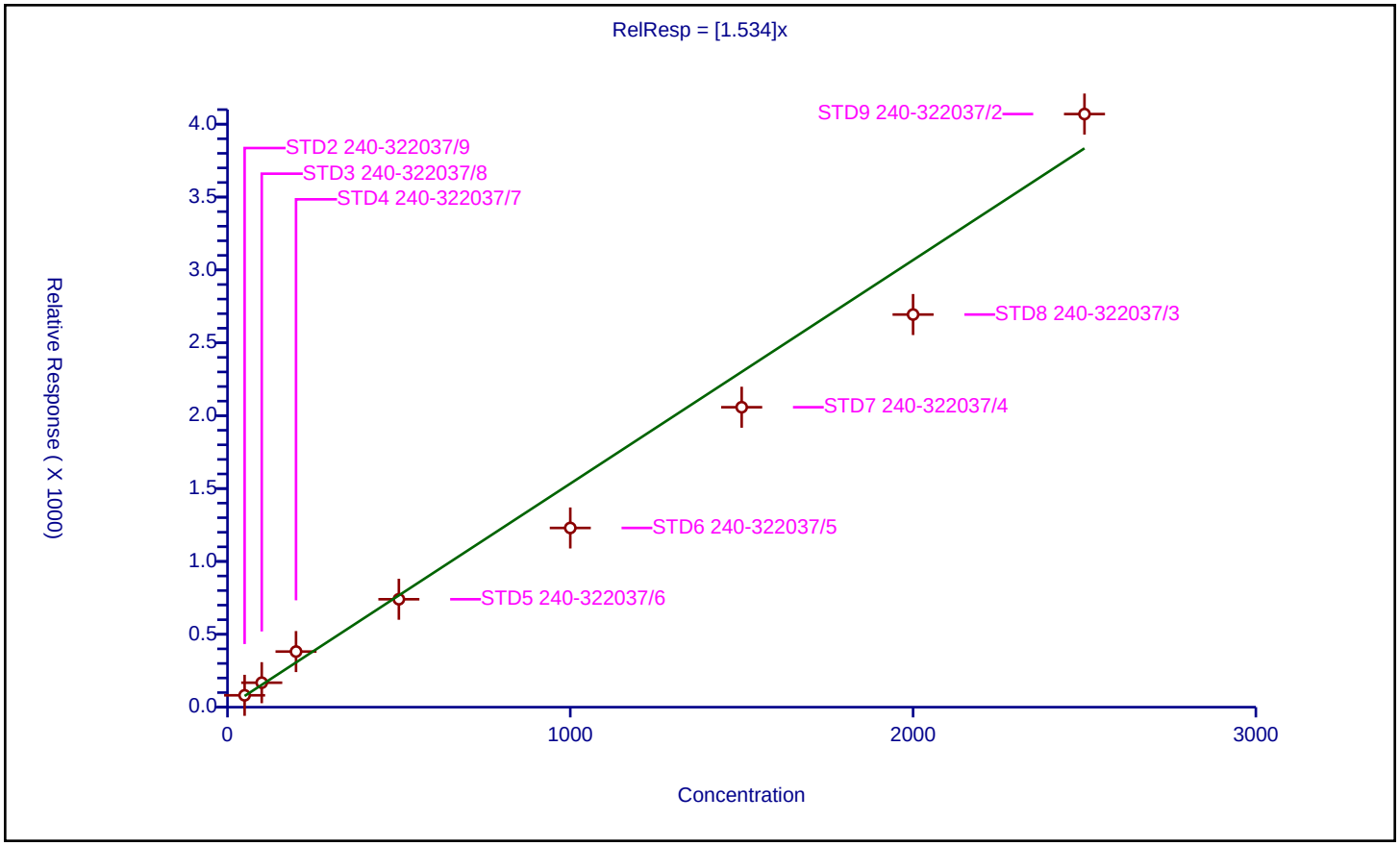
Curve Coefficients

Intercept:	0
Slope:	1.534

Error Coefficients

Standard Error:	723000
Relative Standard Error:	14.2
Correlation Coefficient:	0.968
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	81.310597	400.0	126965.0	1.626212	Y
2	STD3 240-322037/8	100.0	167.948824	400.0	108333.0	1.679488	Y
3	STD4 240-322037/7	200.0	381.386523	400.0	131754.0	1.906933	Y
4	STD5 240-322037/6	500.0	740.453325	400.0	129223.0	1.480907	Y
5	STD6 240-322037/5	1000.0	1229.67691	400.0	144449.0	1.229677	Y
6	STD7 240-322037/4	1500.0	2057.99333	400.0	128332.0	1.371996	Y
7	STD8 240-322037/3	2000.0	2694.000511	400.0	136895.0	1.347	Y
8	STD9 240-322037/2	2500.0	4069.433224	400.0	143090.0	1.627773	Y



Calibration / Aniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

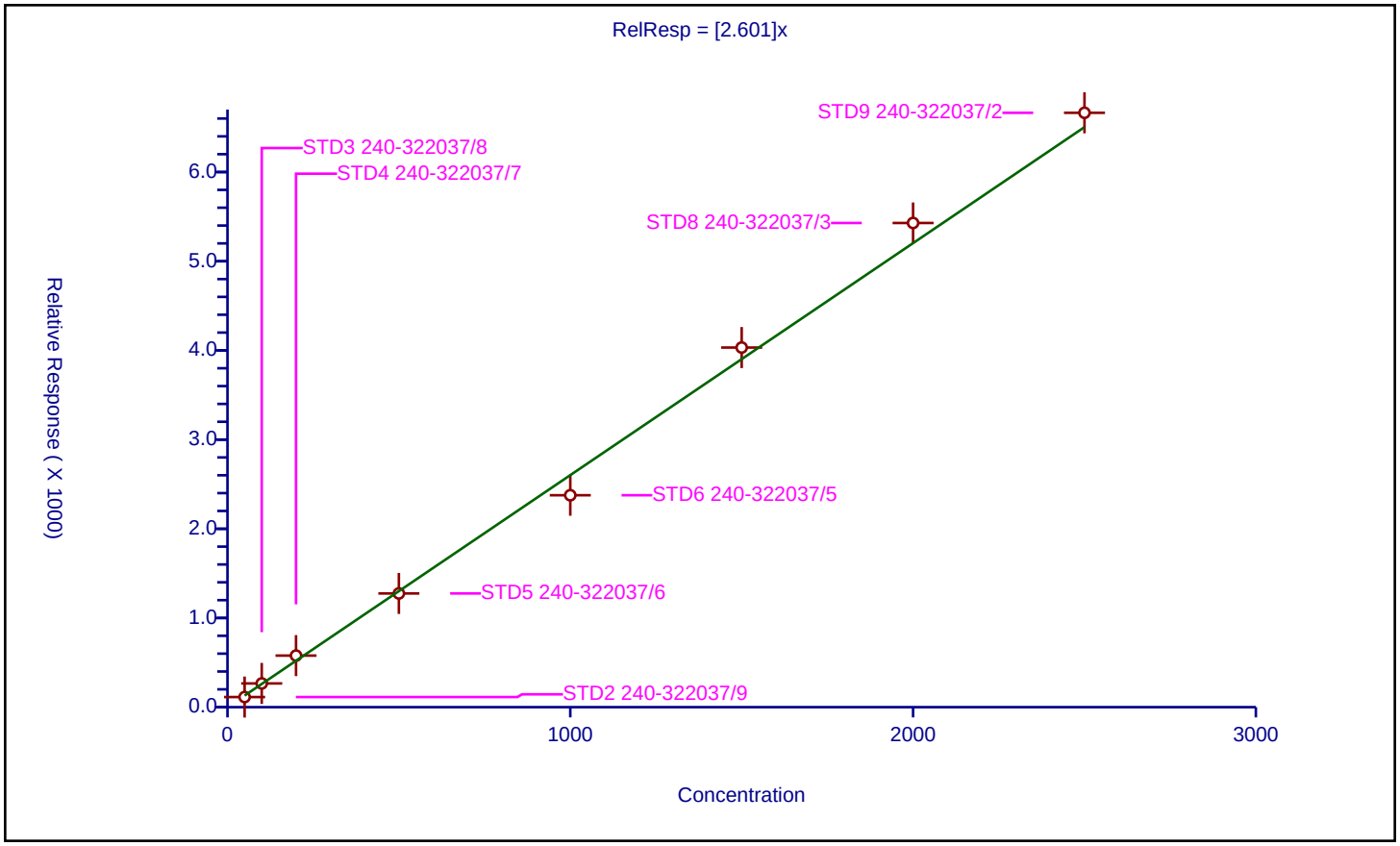
Curve Coefficients

Intercept:	0
Slope:	2.601

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	7.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	113.309967	400.0	126965.0	2.266199	Y
2	STD3 240-322037/8	100.0	265.935587	400.0	108333.0	2.659356	Y
3	STD4 240-322037/7	200.0	578.292879	400.0	131754.0	2.891464	Y
4	STD5 240-322037/6	500.0	1275.0888	400.0	129223.0	2.550178	Y
5	STD6 240-322037/5	1000.0	2376.20475	400.0	144449.0	2.376205	Y
6	STD7 240-322037/4	1500.0	4032.207088	400.0	128332.0	2.688138	Y
7	STD8 240-322037/3	2000.0	5428.779722	400.0	136895.0	2.71439	Y
8	STD9 240-322037/2	2500.0	6664.230904	400.0	143090.0	2.665692	Y



Calibration / Bis(2-chloroethyl)ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

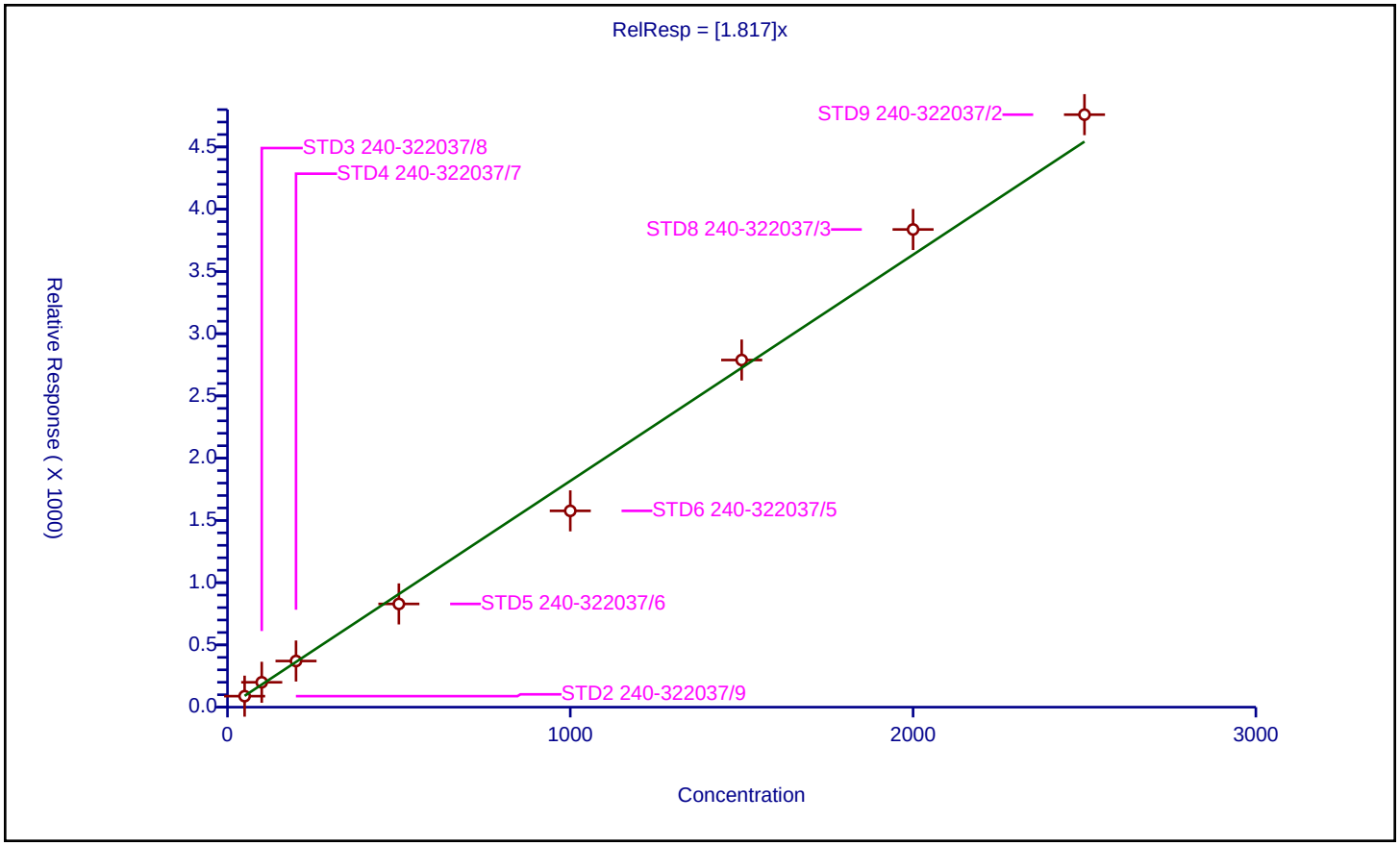
Curve Coefficients

Intercept:	0
Slope:	1.817

Error Coefficients

Standard Error:	911000
Relative Standard Error:	7.8
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	88.358209	400.0	126965.0	1.767164	Y
2	STD3 240-322037/8	100.0	199.950154	400.0	108333.0	1.999502	Y
3	STD4 240-322037/7	200.0	370.7303	400.0	131754.0	1.853652	Y
4	STD5 240-322037/6	500.0	829.322953	400.0	129223.0	1.658646	Y
5	STD6 240-322037/5	1000.0	1576.999495	400.0	144449.0	1.576999	Y
6	STD7 240-322037/4	1500.0	2788.670012	400.0	128332.0	1.859113	Y
7	STD8 240-322037/3	2000.0	3837.11896	400.0	136895.0	1.918559	Y
8	STD9 240-322037/2	2500.0	4759.530366	400.0	143090.0	1.903812	Y



Calibration / n-Decane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

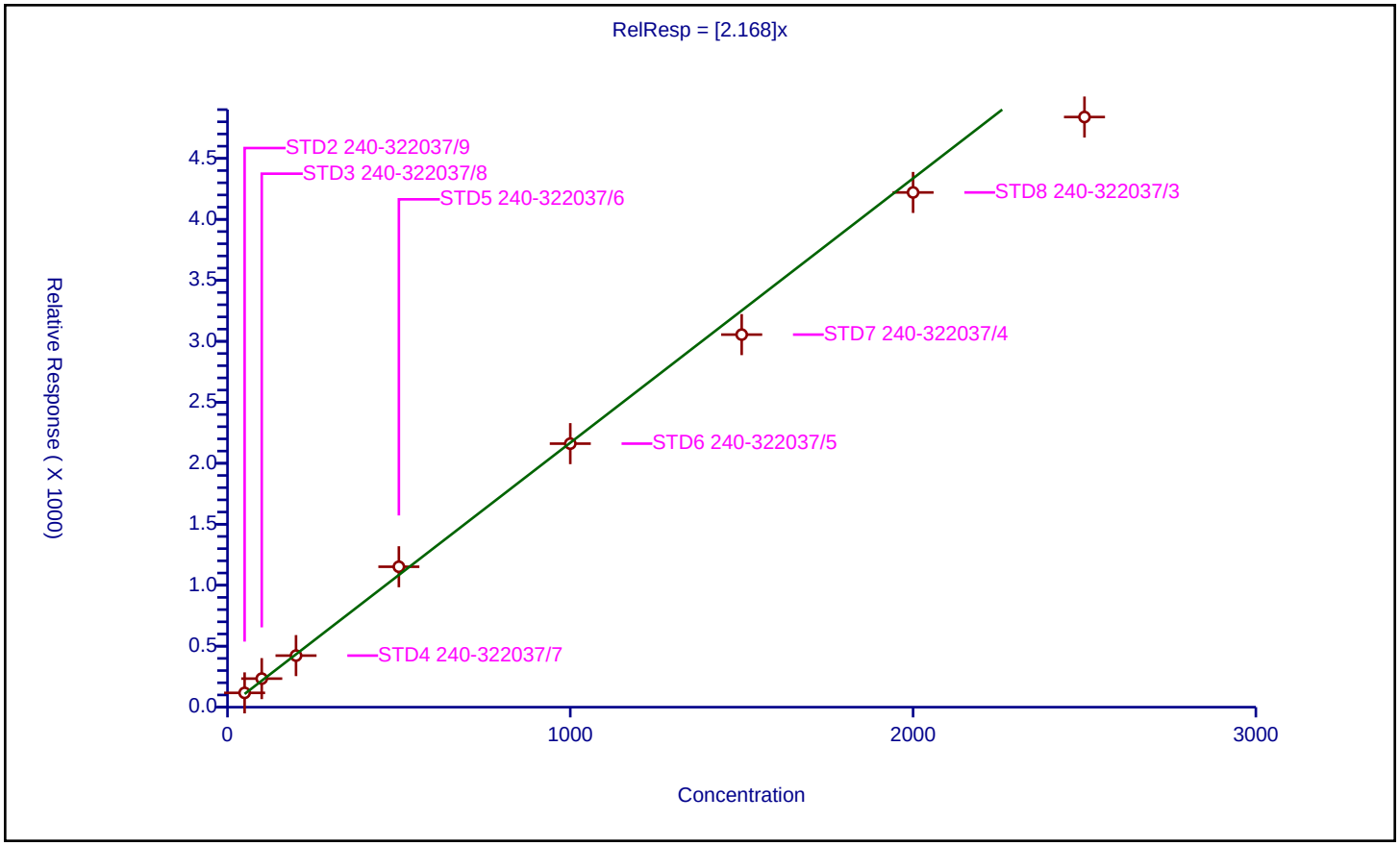
Curve Coefficients

Intercept:	0
Slope:	2.168

Error Coefficients

Standard Error:	984000
Relative Standard Error:	6.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	117.203954	400.0	126965.0	2.344079	Y
2	STD3 240-322037/8	100.0	234.022874	400.0	108333.0	2.340229	Y
3	STD4 240-322037/7	200.0	422.760599	400.0	131754.0	2.113803	Y
4	STD5 240-322037/6	500.0	1151.507085	400.0	129223.0	2.303014	Y
5	STD6 240-322037/5	1000.0	2160.86785	400.0	144449.0	2.160868	Y
6	STD7 240-322037/4	1500.0	3054.9107	400.0	128332.0	2.036607	Y
7	STD8 240-322037/3	2000.0	4220.720991	400.0	136895.0	2.11036	Y
8	STD9 240-322037/2	2500.0	4839.180935	400.0	143090.0	1.935672	Y



Calibration / 2-Chlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

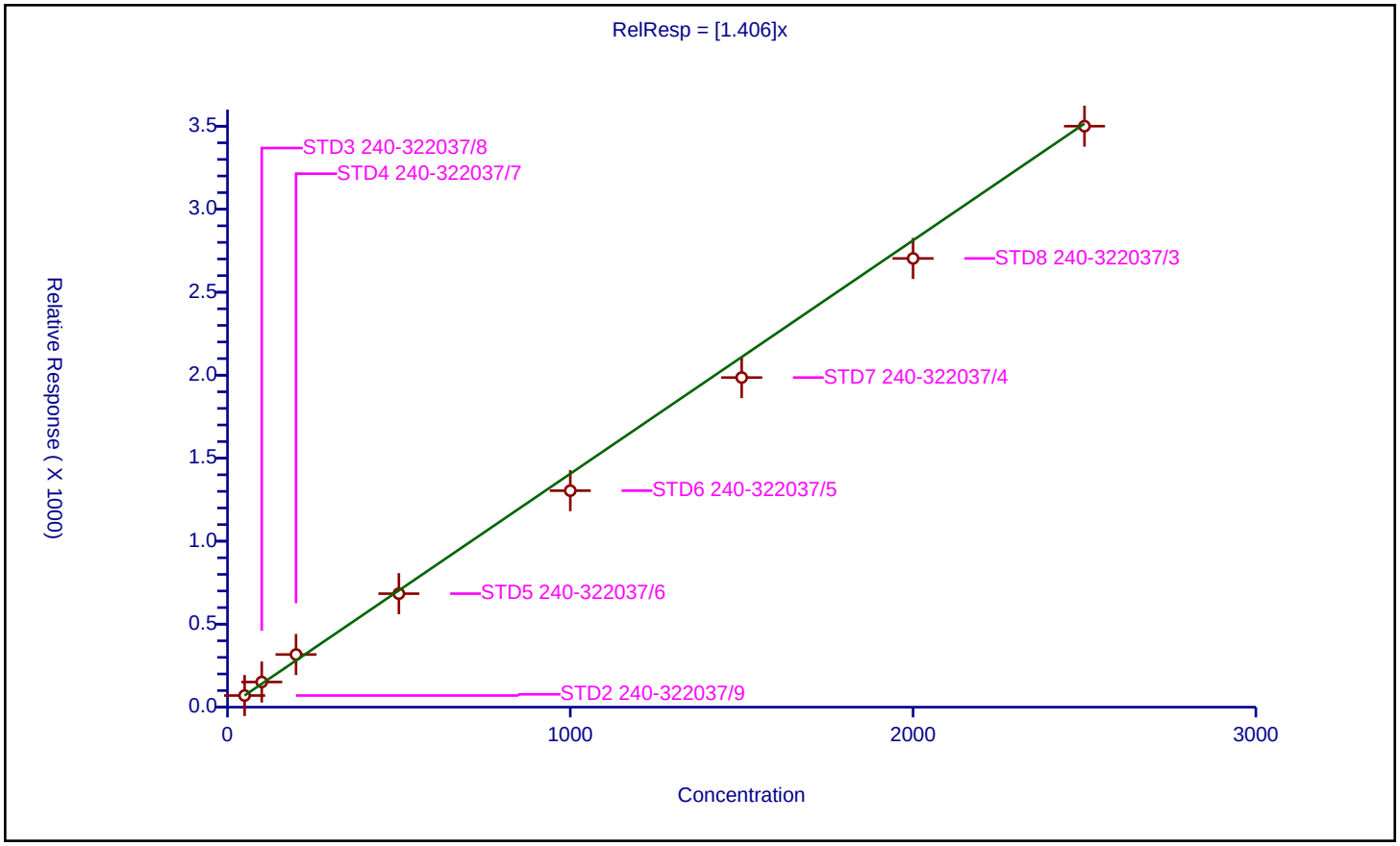
Curve Coefficients

Intercept:	0
Slope:	1.406

Error Coefficients

Standard Error:	665000
Relative Standard Error:	6.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	70.009845	400.0	126965.0	1.400197	Y
2	STD3 240-322037/8	100.0	151.62139	400.0	108333.0	1.516214	Y
3	STD4 240-322037/7	200.0	317.133446	400.0	131754.0	1.585667	Y
4	STD5 240-322037/6	500.0	683.881352	400.0	129223.0	1.367763	Y
5	STD6 240-322037/5	1000.0	1304.346863	400.0	144449.0	1.304347	Y
6	STD7 240-322037/4	1500.0	1985.655955	400.0	128332.0	1.323771	Y
7	STD8 240-322037/3	2000.0	2703.385807	400.0	136895.0	1.351693	Y
8	STD9 240-322037/2	2500.0	3500.124397	400.0	143090.0	1.40005	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

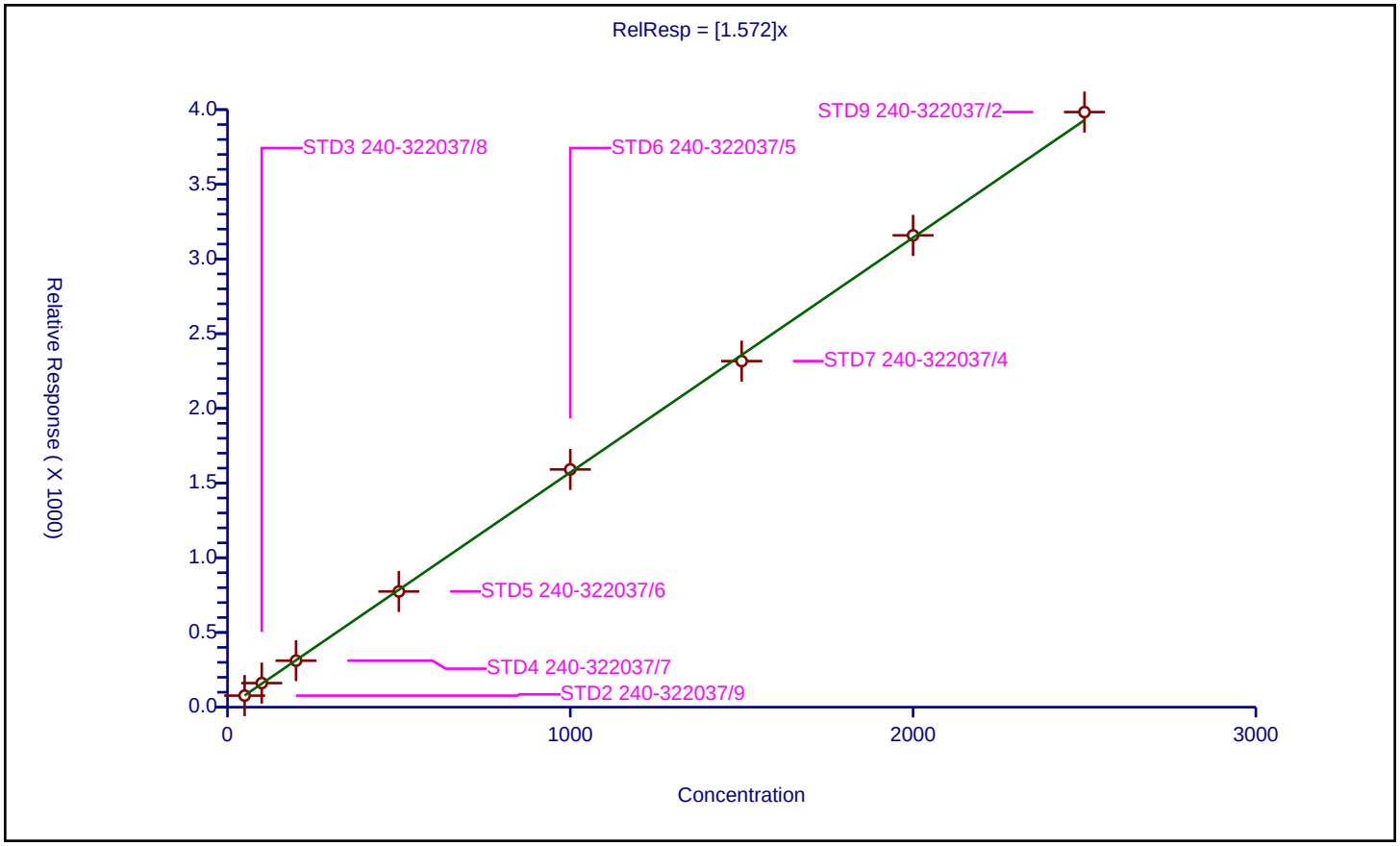
Curve Coefficients

Intercept:	0
Slope:	1.572

Error Coefficients

Standard Error:	768000
Relative Standard Error:	1.6
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	77.388257	400.0	126965.0	1.547765	Y
2	STD3 240-322037/8	100.0	161.225111	400.0	108333.0	1.612251	Y
3	STD4 240-322037/7	200.0	311.264933	400.0	131754.0	1.556325	Y
4	STD5 240-322037/6	500.0	774.546327	400.0	129223.0	1.549093	Y
5	STD6 240-322037/5	1000.0	1591.479346	400.0	144449.0	1.591479	Y
6	STD7 240-322037/4	1500.0	2316.419911	400.0	128332.0	1.54428	Y
7	STD8 240-322037/3	2000.0	3158.14018	400.0	136895.0	1.57907	Y
8	STD9 240-322037/2	2500.0	3983.559997	400.0	143090.0	1.593424	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

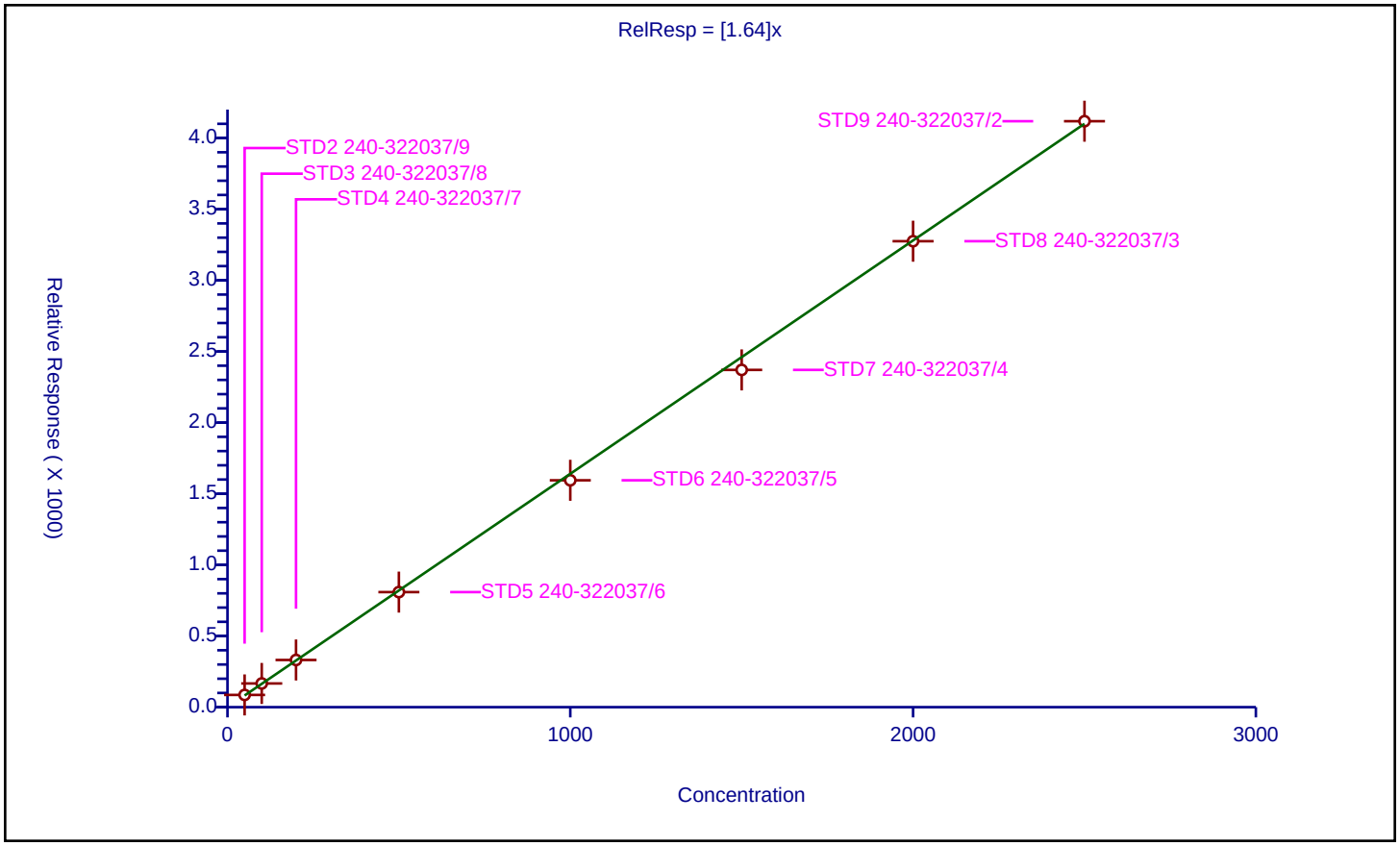
Curve Coefficients

Intercept:	0
Slope:	1.64

Error Coefficients

Standard Error:	792000
Relative Standard Error:	2.7
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	85.970149	400.0	126965.0	1.719403	Y
2	STD3 240-322037/8	100.0	166.645436	400.0	108333.0	1.666454	Y
3	STD4 240-322037/7	200.0	331.678735	400.0	131754.0	1.658394	Y
4	STD5 240-322037/6	500.0	808.784814	400.0	129223.0	1.61757	Y
5	STD6 240-322037/5	1000.0	1594.622323	400.0	144449.0	1.594622	Y
6	STD7 240-322037/4	1500.0	2370.485927	400.0	128332.0	1.580324	Y
7	STD8 240-322037/3	2000.0	3275.053143	400.0	136895.0	1.637527	Y
8	STD9 240-322037/2	2500.0	4118.549165	400.0	143090.0	1.64742	Y



Calibration / Benzyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

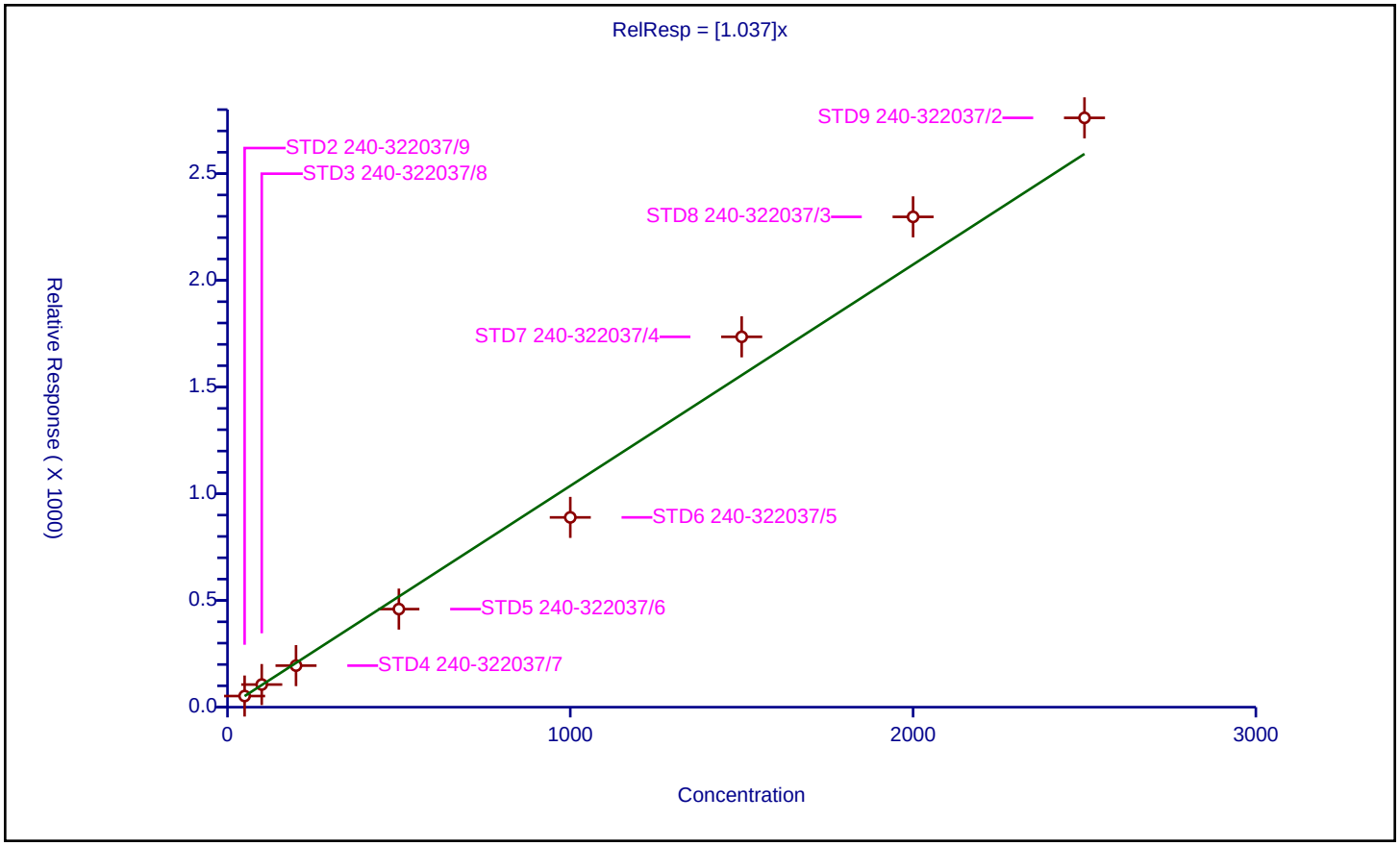
Curve Coefficients

Intercept:	0
Slope:	1.037

Error Coefficients

Standard Error:	538000
Relative Standard Error:	9.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	52.197062	400.0	126965.0	1.043941	Y
2	STD3 240-322037/8	100.0	106.021249	400.0	108333.0	1.060212	Y
3	STD4 240-322037/7	200.0	194.620277	400.0	131754.0	0.973101	Y
4	STD5 240-322037/6	500.0	459.54358	400.0	129223.0	0.919087	Y
5	STD6 240-322037/5	1000.0	889.230109	400.0	144449.0	0.88923	Y
6	STD7 240-322037/4	1500.0	1735.32712	400.0	128332.0	1.156885	Y
7	STD8 240-322037/3	2000.0	2297.442565	400.0	136895.0	1.148721	Y
8	STD9 240-322037/2	2500.0	2761.392131	400.0	143090.0	1.104557	Y



Calibration / 2-Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

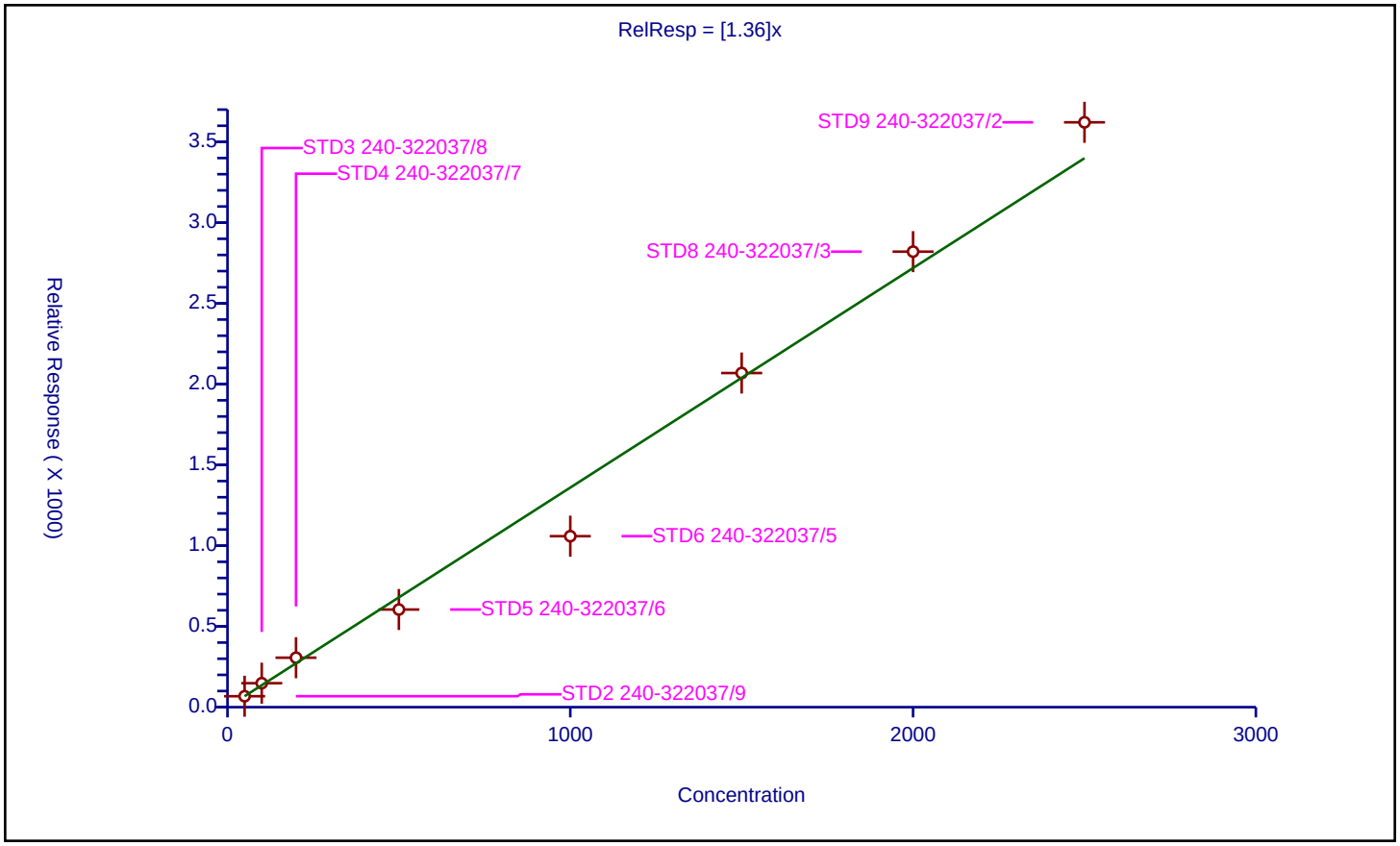
Curve Coefficients

Intercept:	0
Slope:	1.36

Error Coefficients

Standard Error:	679000
Relative Standard Error:	11.4
Correlation Coefficient:	0.988
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	67.728902	400.0	126965.0	1.354578	Y
2	STD3 240-322037/8	100.0	148.468149	400.0	108333.0	1.484681	Y
3	STD4 240-322037/7	200.0	306.310245	400.0	131754.0	1.531551	Y
4	STD5 240-322037/6	500.0	604.536344	400.0	129223.0	1.209073	Y
5	STD6 240-322037/5	1000.0	1058.643535	400.0	144449.0	1.058644	Y
6	STD7 240-322037/4	1500.0	2068.955522	400.0	128332.0	1.379304	Y
7	STD8 240-322037/3	2000.0	2820.506227	400.0	136895.0	1.410253	Y
8	STD9 240-322037/2	2500.0	3621.284506	400.0	143090.0	1.448514	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

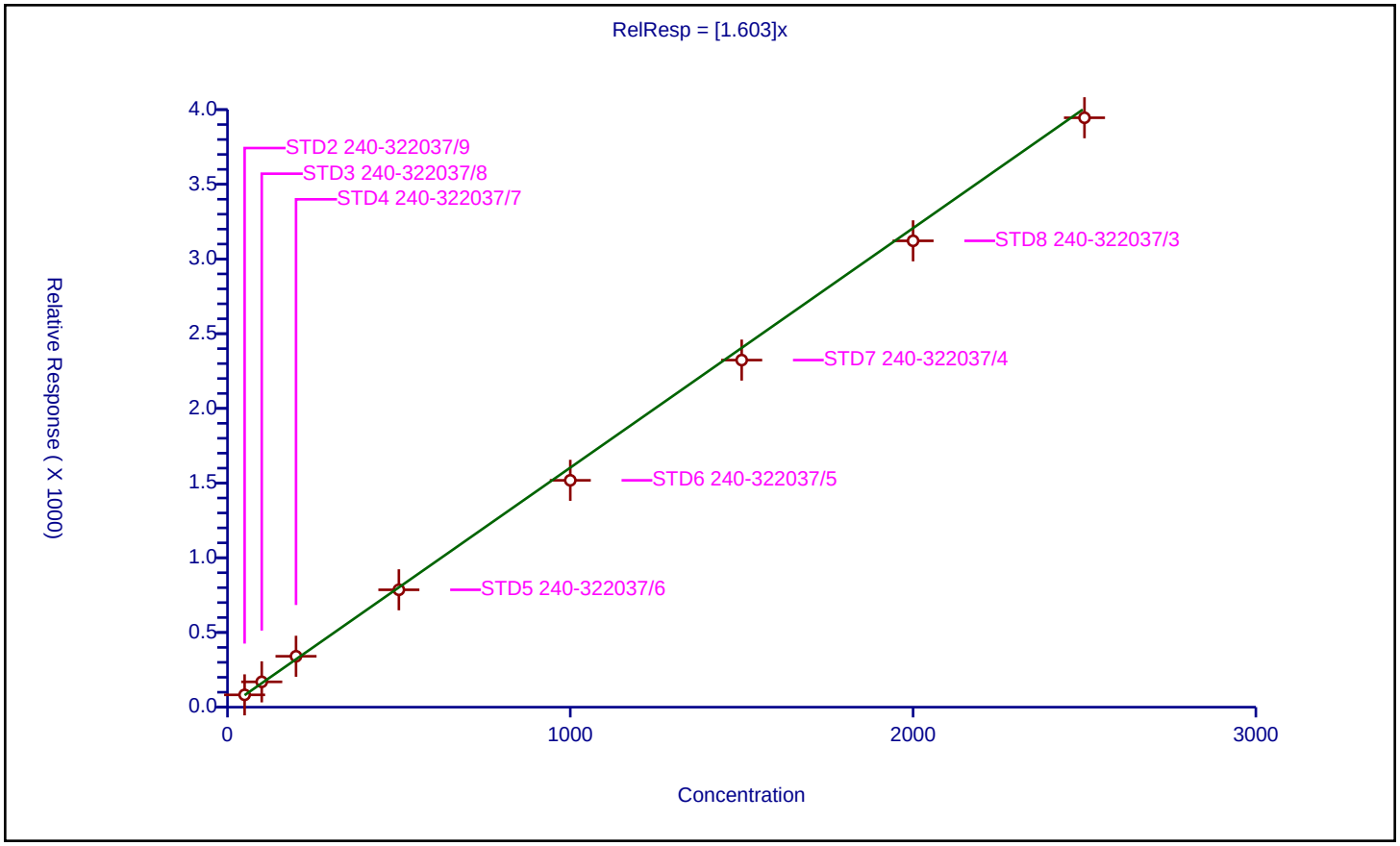
Curve Coefficients

Intercept:	0
Slope:	1.603

Error Coefficients

Standard Error:	760000
Relative Standard Error:	4.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	82.52353	400.0	126965.0	1.650471	Y
2	STD3 240-322037/8	100.0	169.492214	400.0	108333.0	1.694922	Y
3	STD4 240-322037/7	200.0	340.680359	400.0	131754.0	1.703402	Y
4	STD5 240-322037/6	500.0	785.677472	400.0	129223.0	1.571355	Y
5	STD6 240-322037/5	1000.0	1518.487494	400.0	144449.0	1.518487	Y
6	STD7 240-322037/4	1500.0	2323.25219	400.0	128332.0	1.548835	Y
7	STD8 240-322037/3	2000.0	3121.700573	400.0	136895.0	1.56085	Y
8	STD9 240-322037/2	2500.0	3945.477671	400.0	143090.0	1.578191	Y



Calibration / 2,2'-oxybis[1-chloropropane]

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

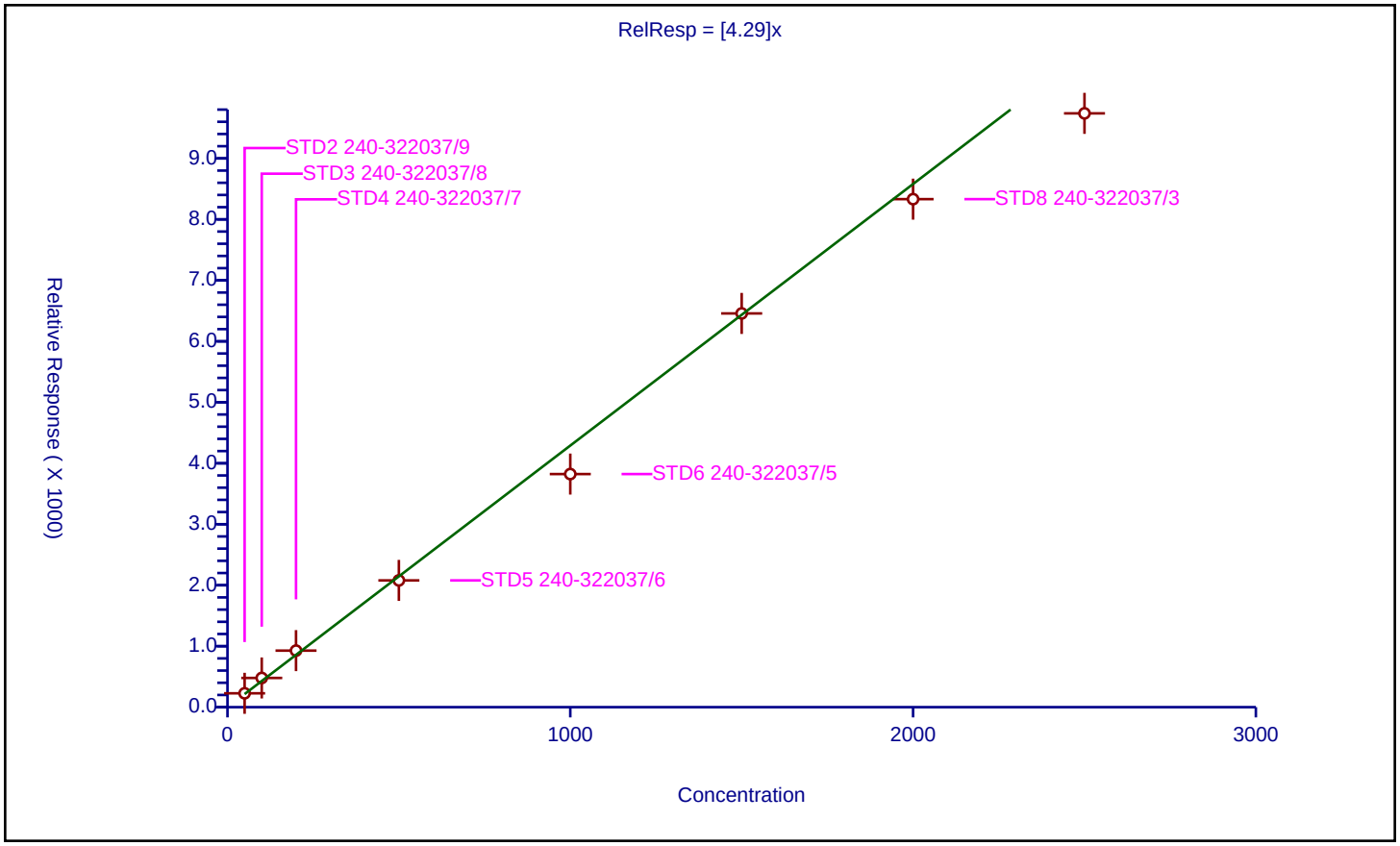
Curve Coefficients

Intercept:	0
Slope:	4.29

Error Coefficients

Standard Error:	1960000
Relative Standard Error:	8.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	227.32249	400.0	126965.0	4.54645	Y
2	STD3 240-322037/8	100.0	478.978705	400.0	108333.0	4.789787	Y
3	STD4 240-322037/7	200.0	927.349454	400.0	131754.0	4.636747	Y
4	STD5 240-322037/6	500.0	2078.905458	400.0	129223.0	4.157811	Y
5	STD6 240-322037/5	1000.0	3822.686208	400.0	144449.0	3.822686	Y
6	STD7 240-322037/4	1500.0	6457.129944	400.0	128332.0	4.304753	Y
7	STD8 240-322037/3	2000.0	8331.626429	400.0	136895.0	4.165813	Y
8	STD9 240-322037/2	2500.0	9738.494654	400.0	143090.0	3.895398	Y



Calibration / Indene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

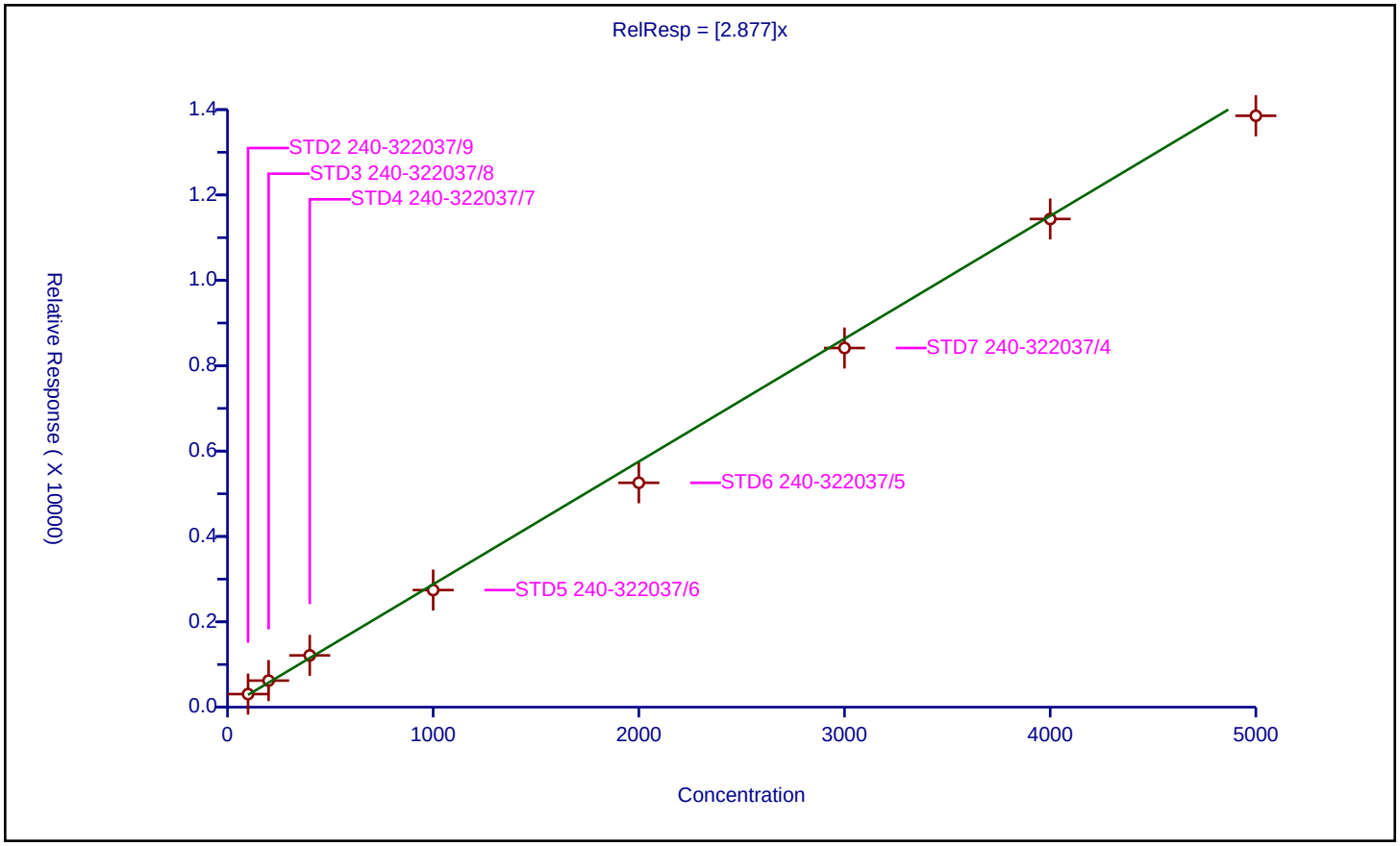
Curve Coefficients

Intercept:	0
Slope:	2.877

Error Coefficients

Standard Error:	2710000
Relative Standard Error:	6.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	306.452959	400.0	126965.0	3.06453	Y
2	STD3 240-322037/8	200.0	622.591454	400.0	108333.0	3.112957	Y
3	STD4 240-322037/7	400.0	1213.003021	400.0	131754.0	3.032508	Y
4	STD5 240-322037/6	1000.0	2743.567322	400.0	129223.0	2.743567	Y
5	STD6 240-322037/5	2000.0	5256.905898	400.0	144449.0	2.628453	Y
6	STD7 240-322037/4	3000.0	8414.337811	400.0	128332.0	2.804779	Y
7	STD8 240-322037/3	4000.0	11437.601081	400.0	136895.0	2.8594	Y
8	STD9 240-322037/2	5000.0	13855.738346	400.0	143090.0	2.771148	Y



Calibration

/ 3 & 4 Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

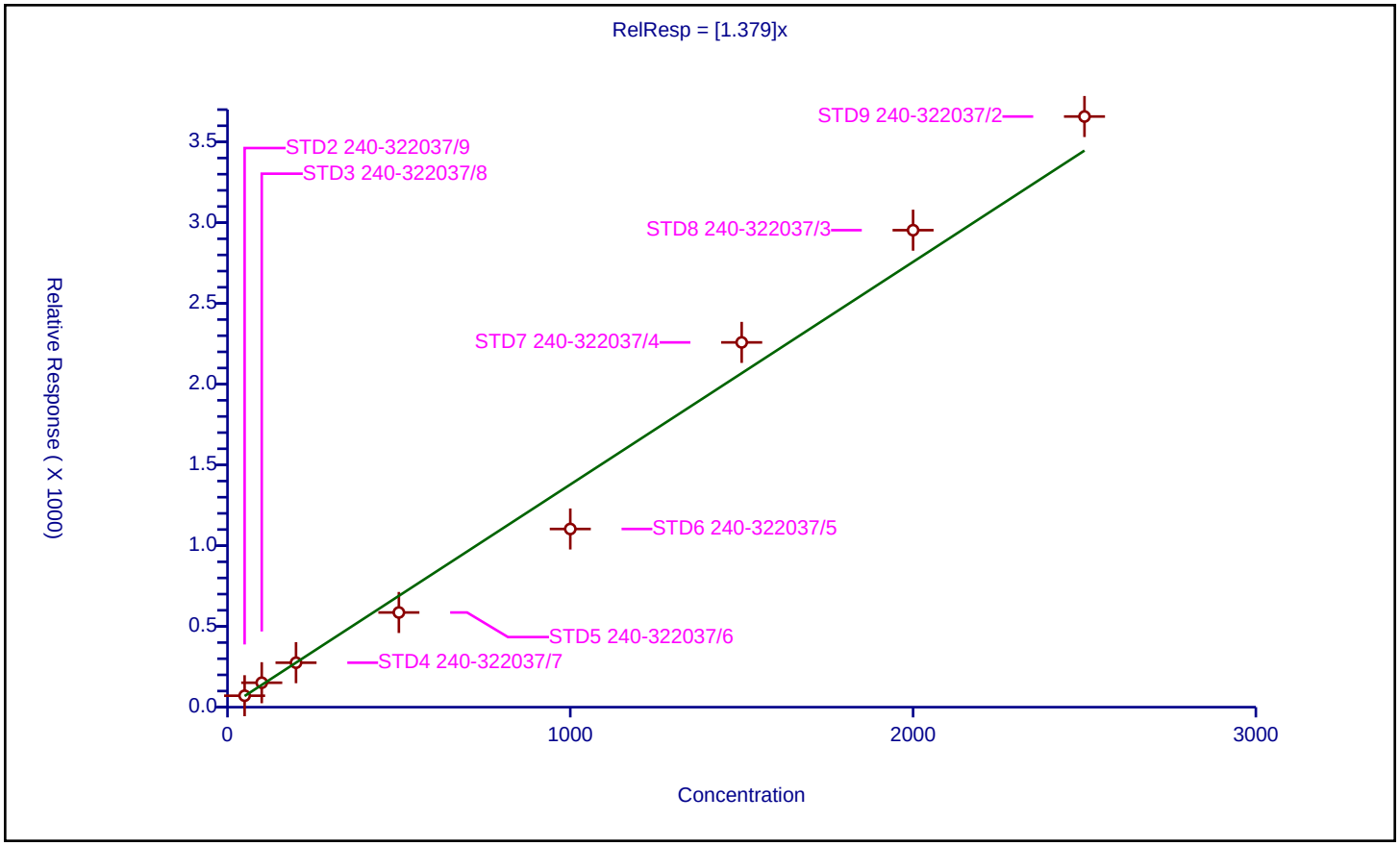
Curve Coefficients

Intercept:	0
Slope:	1.379

Error Coefficients

Standard Error:	701000
Relative Standard Error:	11.3
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	70.90143	400.0	126965.0	1.418029	Y
2	STD3 240-322037/8	100.0	151.278004	400.0	108333.0	1.51278	Y
3	STD4 240-322037/7	200.0	275.264508	400.0	131754.0	1.376323	Y
4	STD5 240-322037/6	500.0	586.245483	400.0	129223.0	1.172491	Y
5	STD6 240-322037/5	1000.0	1103.235052	400.0	144449.0	1.103235	Y
6	STD7 240-322037/4	1500.0	2258.529439	400.0	128332.0	1.505686	Y
7	STD8 240-322037/3	2000.0	2953.399321	400.0	136895.0	1.4767	Y
8	STD9 240-322037/2	2500.0	3657.200363	400.0	143090.0	1.46288	Y



Calibration / N-Nitrosodi-n-propylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

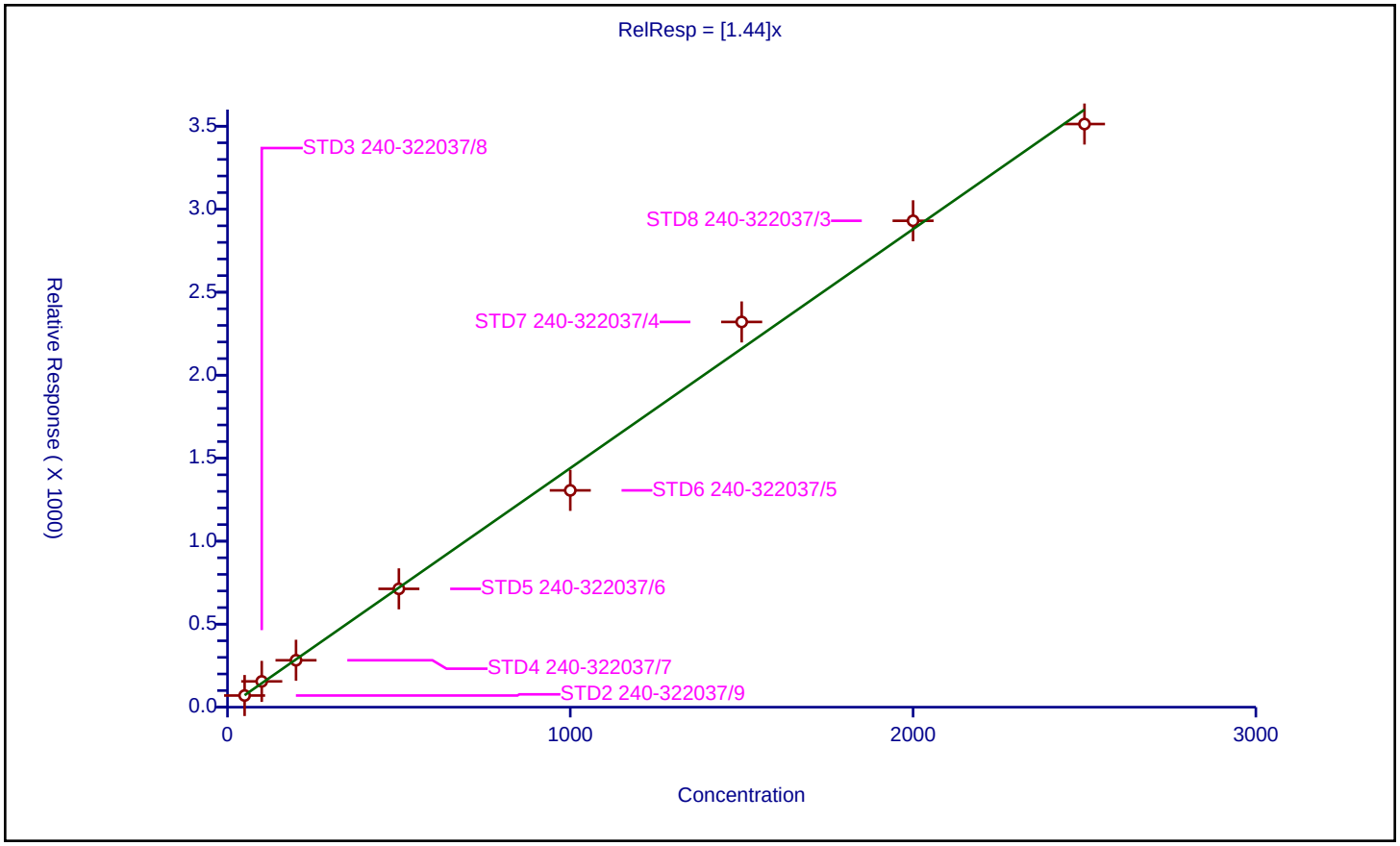
Curve Coefficients

Intercept:	0
Slope:	1.44

Error Coefficients

Standard Error:	698000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	70.183121	400.0	126965.0	1.403662	Y
2	STD3 240-322037/8	100.0	155.34694	400.0	108333.0	1.553469	Y
3	STD4 240-322037/7	200.0	282.61457	400.0	131754.0	1.413073	Y
4	STD5 240-322037/6	500.0	712.832855	400.0	129223.0	1.425666	Y
5	STD6 240-322037/5	1000.0	1306.024964	400.0	144449.0	1.306025	Y
6	STD7 240-322037/4	1500.0	2320.774242	400.0	128332.0	1.547183	Y
7	STD8 240-322037/3	2000.0	2930.169838	400.0	136895.0	1.465085	Y
8	STD9 240-322037/2	2500.0	3513.187504	400.0	143090.0	1.405275	Y



Calibration / Acetophenone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

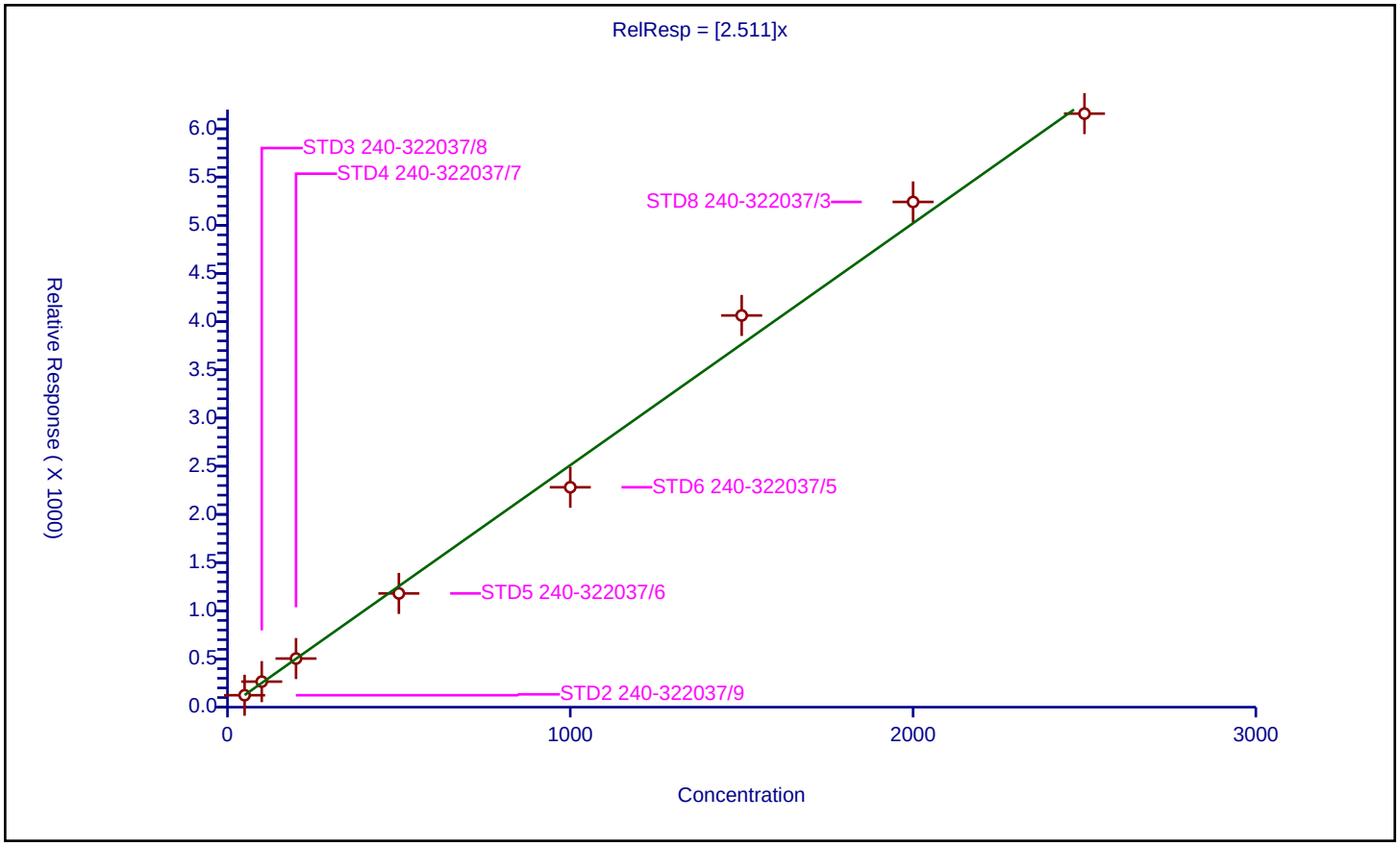
Curve Coefficients

Intercept:	0
Slope:	2.511

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	123.864057	400.0	126965.0	2.477281	Y
2	STD3 240-322037/8	100.0	265.019892	400.0	108333.0	2.650199	Y
3	STD4 240-322037/7	200.0	504.409733	400.0	131754.0	2.522049	Y
4	STD5 240-322037/6	500.0	1180.090232	400.0	129223.0	2.36018	Y
5	STD6 240-322037/5	1000.0	2281.638502	400.0	144449.0	2.281639	Y
6	STD7 240-322037/4	1500.0	4064.09625	400.0	128332.0	2.709398	Y
7	STD8 240-322037/3	2000.0	5242.020527	400.0	136895.0	2.62101	Y
8	STD9 240-322037/2	2500.0	6158.347893	400.0	143090.0	2.463339	Y



Calibration / Hexachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

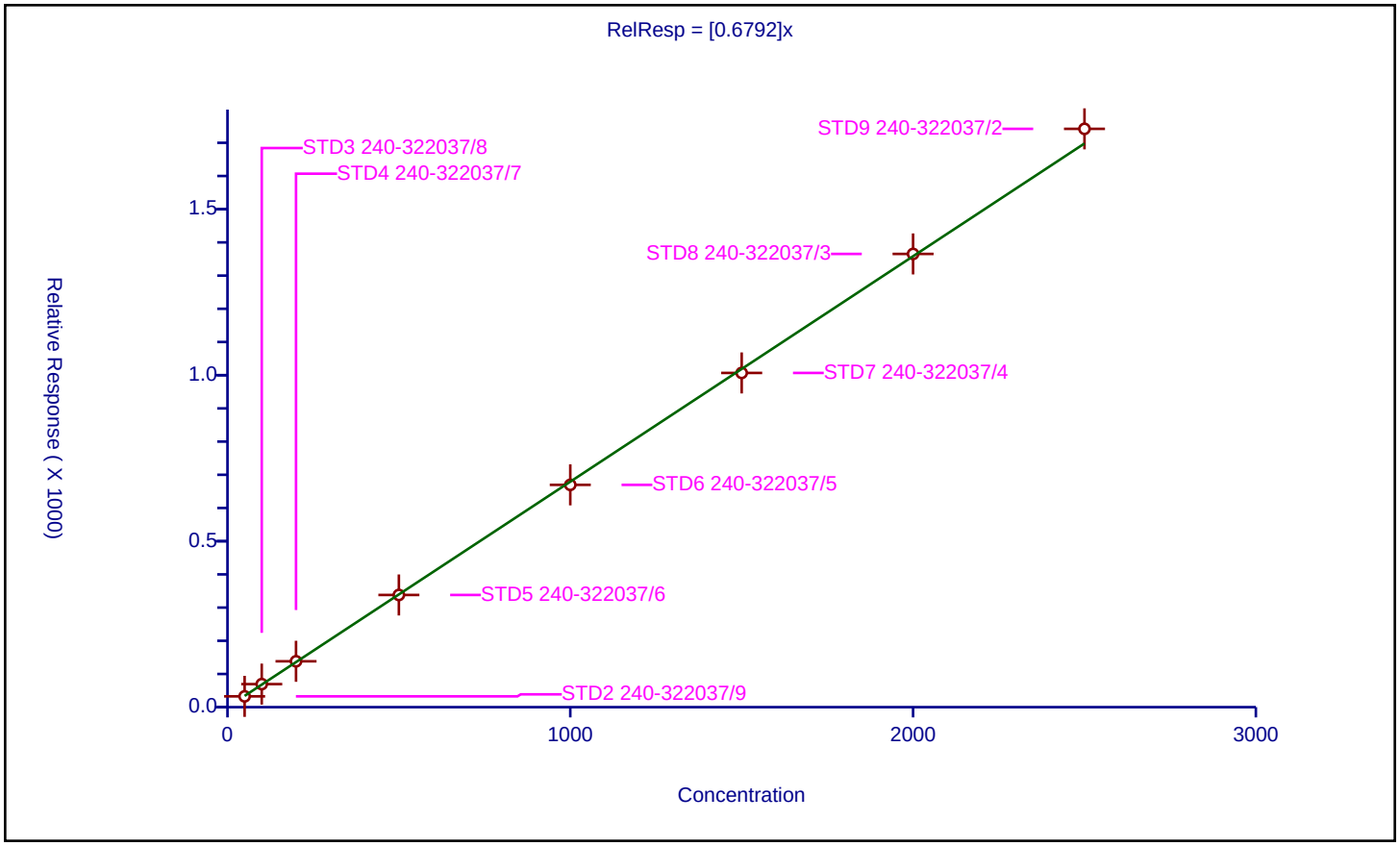
Curve Coefficients

Intercept:	0
Slope:	0.6792

Error Coefficients

Standard Error:	334000
Relative Standard Error:	2.2
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	32.585358	400.0	126965.0	0.651707	Y
2	STD3 240-322037/8	100.0	69.43406	400.0	108333.0	0.694341	Y
3	STD4 240-322037/7	200.0	138.196943	400.0	131754.0	0.690985	Y
4	STD5 240-322037/6	500.0	337.998653	400.0	129223.0	0.675997	Y
5	STD6 240-322037/5	1000.0	669.639804	400.0	144449.0	0.66964	Y
6	STD7 240-322037/4	1500.0	1006.813577	400.0	128332.0	0.671209	Y
7	STD8 240-322037/3	2000.0	1365.297491	400.0	136895.0	0.682649	Y
8	STD9 240-322037/2	2500.0	1742.014117	400.0	143090.0	0.696806	Y



Calibration / Nitrobenzene-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

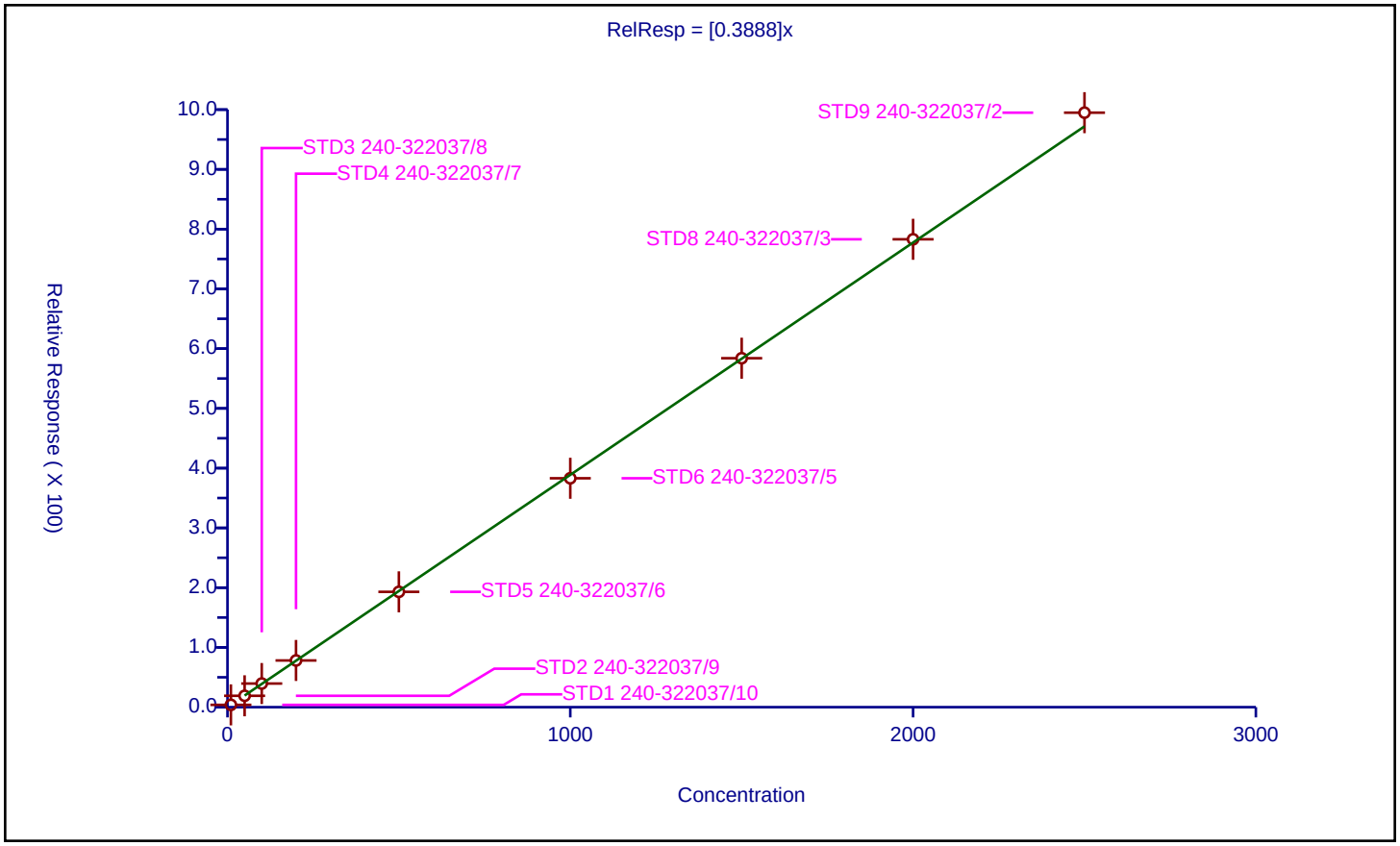
Curve Coefficients

Intercept:	0
Slope:	0.3888

Error Coefficients

Standard Error:	985000
Relative Standard Error:	1.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	3.845351	400.0	546426.0	0.384535	Y
2	STD2 240-322037/9	50.0	19.028309	400.0	675688.0	0.380566	Y
3	STD3 240-322037/8	100.0	39.536303	400.0	593146.0	0.395363	Y
4	STD4 240-322037/7	200.0	78.135601	400.0	730745.0	0.390678	Y
5	STD5 240-322037/6	500.0	192.986751	400.0	655987.0	0.385974	Y
6	STD6 240-322037/5	1000.0	383.065078	400.0	711760.0	0.383065	Y
7	STD7 240-322037/4	1500.0	583.978298	400.0	747199.0	0.389319	Y
8	STD8 240-322037/3	2000.0	782.996835	400.0	774397.0	0.391498	Y
9	STD9 240-322037/2	2500.0	994.853558	400.0	772184.0	0.397941	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

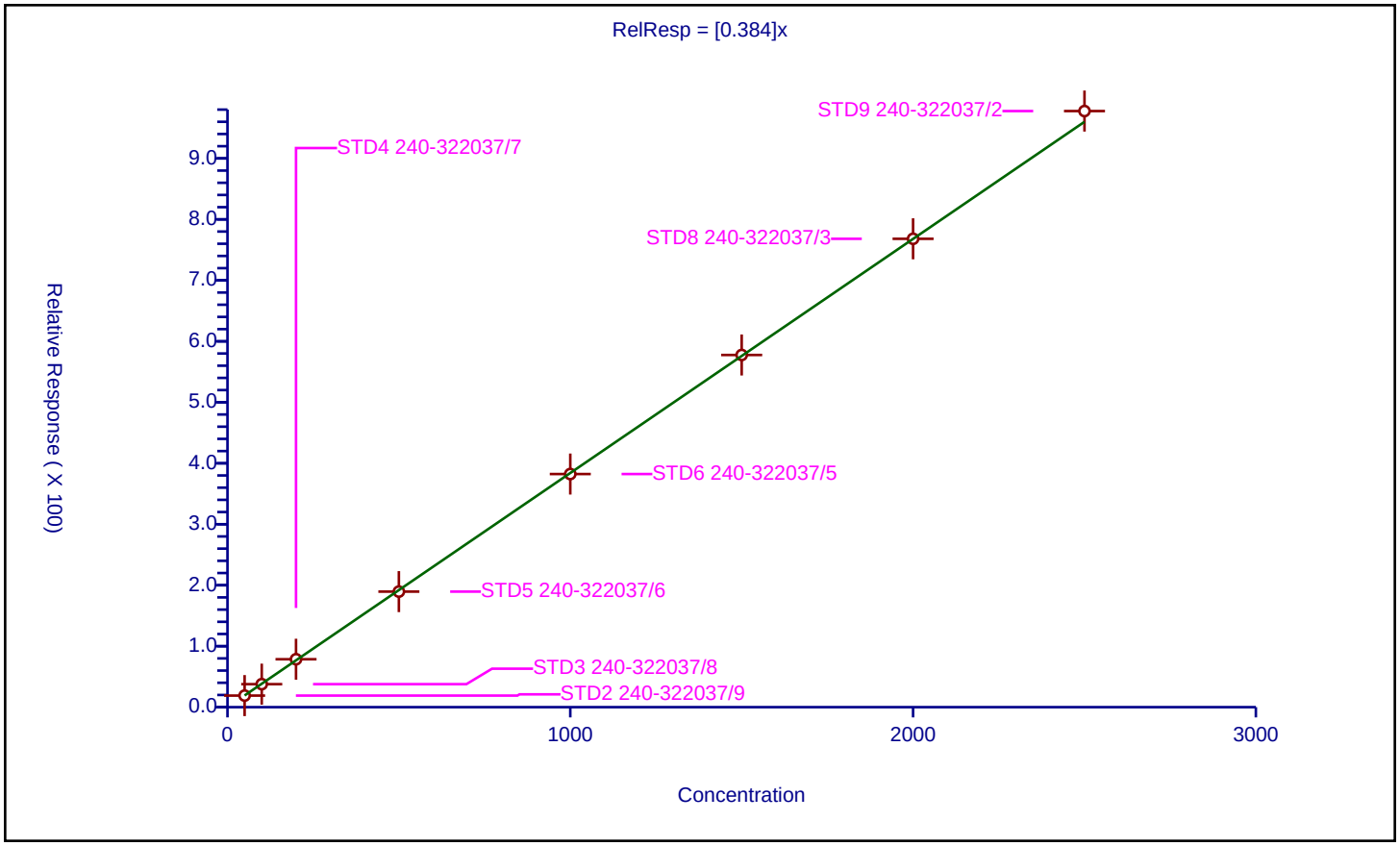
Curve Coefficients

Intercept:	0
Slope:	0.384

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	1.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	18.995158	400.0	675688.0	0.379903	Y
2	STD3 240-322037/8	100.0	37.747873	400.0	593146.0	0.377479	Y
3	STD4 240-322037/7	200.0	78.614565	400.0	730745.0	0.393073	Y
4	STD5 240-322037/6	500.0	189.504975	400.0	655987.0	0.37901	Y
5	STD6 240-322037/5	1000.0	382.313139	400.0	711760.0	0.382313	Y
6	STD7 240-322037/4	1500.0	577.590173	400.0	747199.0	0.38506	Y
7	STD8 240-322037/3	2000.0	768.111963	400.0	774397.0	0.384056	Y
8	STD9 240-322037/2	2500.0	977.613108	400.0	772184.0	0.391045	Y



Calibration / Isophorone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

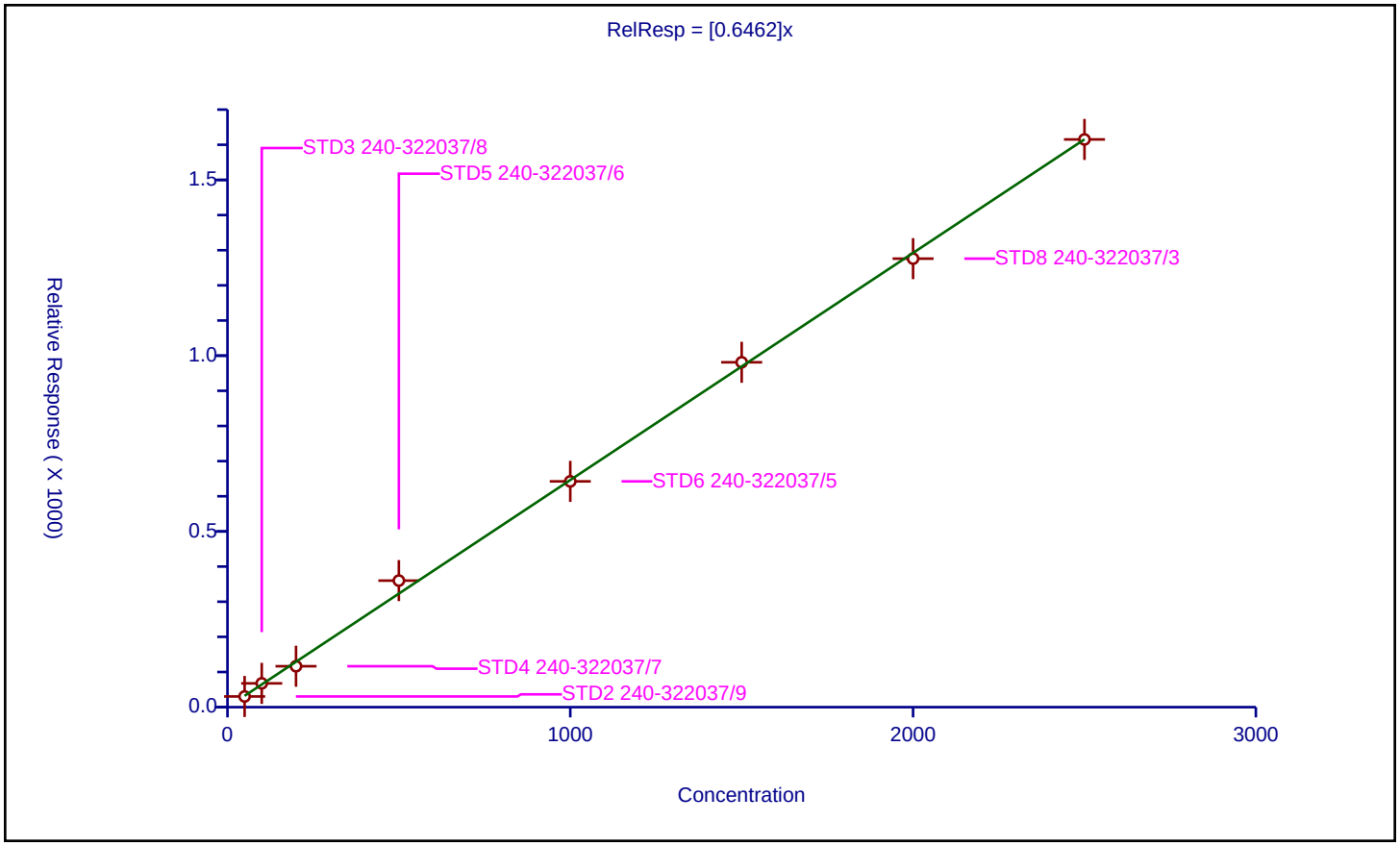
Curve Coefficients

Intercept:	0
Slope:	0.6462

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	30.46258	400.0	675688.0	0.609252	Y
2	STD3 240-322037/8	100.0	67.73914	400.0	593146.0	0.677391	Y
3	STD4 240-322037/7	200.0	116.431861	400.0	730745.0	0.582159	Y
4	STD5 240-322037/6	500.0	360.012012	400.0	655987.0	0.720024	Y
5	STD6 240-322037/5	1000.0	642.353602	400.0	711760.0	0.642354	Y
6	STD7 240-322037/4	1500.0	981.136217	400.0	747199.0	0.654091	Y
7	STD8 240-322037/3	2000.0	1276.038001	400.0	774397.0	0.638019	Y
8	STD9 240-322037/2	2500.0	1615.155455	400.0	772184.0	0.646062	Y



Calibration / 2,4-Dimethylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

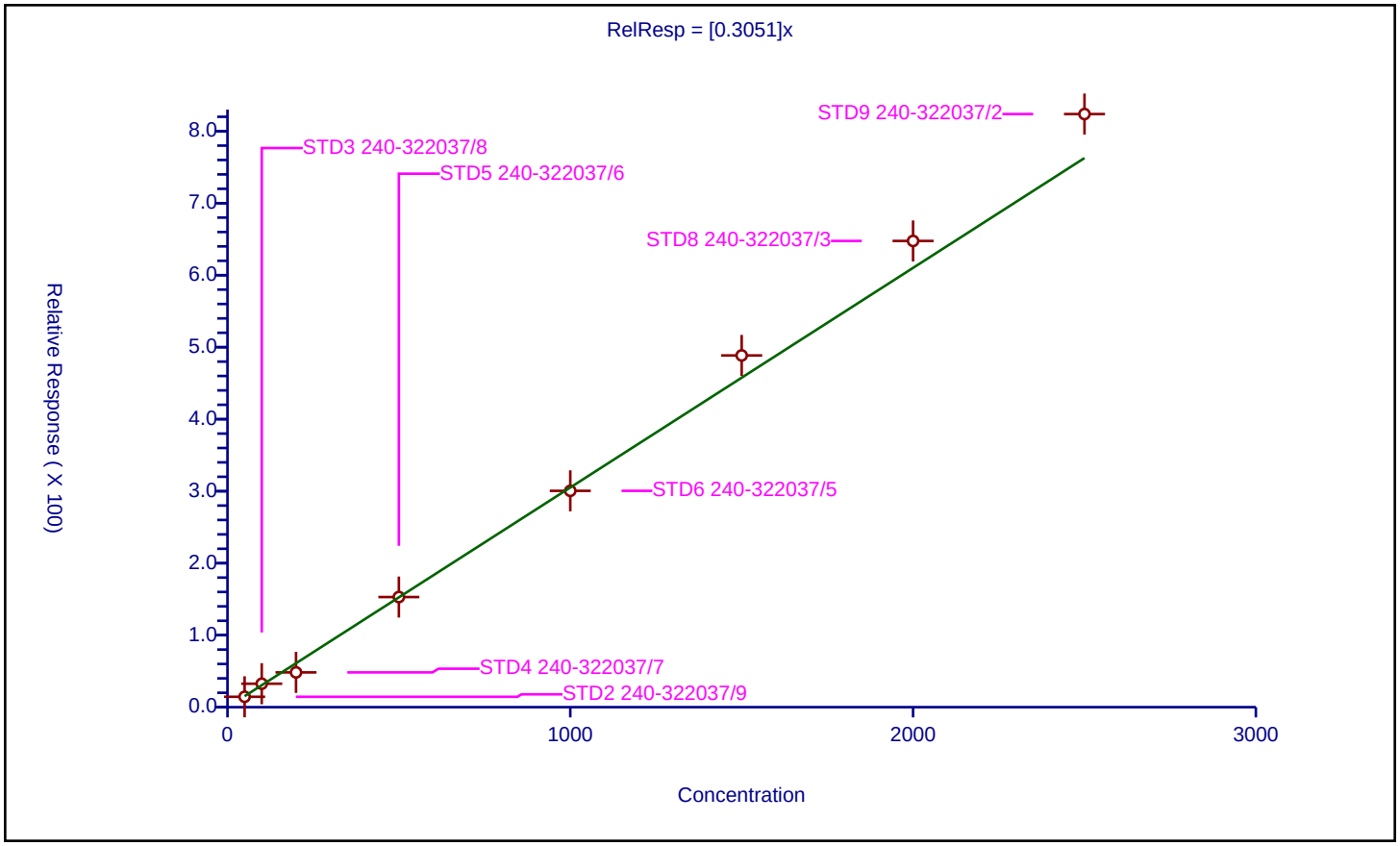
Curve Coefficients

Intercept:	0
Slope:	0.3051

Error Coefficients

Standard Error:	869000
Relative Standard Error:	9.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	14.409017	400.0	675688.0	0.28818	Y
2	STD3 240-322037/8	100.0	32.564664	400.0	593146.0	0.325647	Y
3	STD4 240-322037/7	200.0	48.301391	400.0	730745.0	0.241507	Y
4	STD5 240-322037/6	500.0	152.950592	400.0	655987.0	0.305901	Y
5	STD6 240-322037/5	1000.0	300.481623	400.0	711760.0	0.300482	Y
6	STD7 240-322037/4	1500.0	488.53438	400.0	747199.0	0.32569	Y
7	STD8 240-322037/3	2000.0	647.566042	400.0	774397.0	0.323783	Y
8	STD9 240-322037/2	2500.0	823.83836	400.0	772184.0	0.329535	Y



Calibration / 2-Nitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

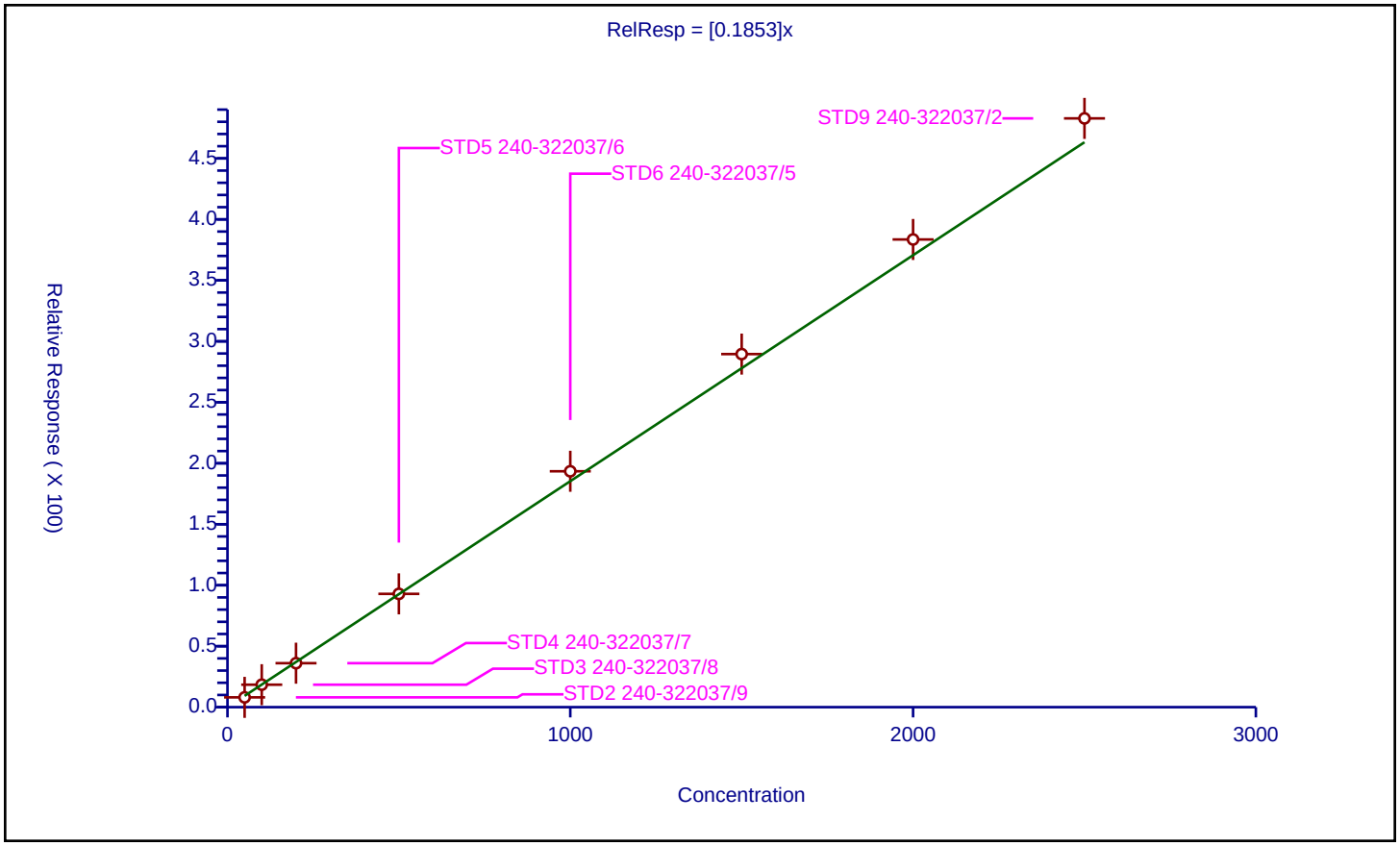
Curve Coefficients

Intercept:	0
Slope:	0.1853

Error Coefficients

Standard Error:	515000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	8.037437	400.0	675688.0	0.160749	Y
2	STD3 240-322037/8	100.0	18.427841	400.0	593146.0	0.184278	Y
3	STD4 240-322037/7	200.0	36.054164	400.0	730745.0	0.180271	Y
4	STD5 240-322037/6	500.0	92.901841	400.0	655987.0	0.185804	Y
5	STD6 240-322037/5	1000.0	193.434866	400.0	711760.0	0.193435	Y
6	STD7 240-322037/4	1500.0	289.523942	400.0	747199.0	0.193016	Y
7	STD8 240-322037/3	2000.0	383.512849	400.0	774397.0	0.191756	Y
8	STD9 240-322037/2	2500.0	482.7984	400.0	772184.0	0.193119	Y



Calibration / Benzoic acid

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

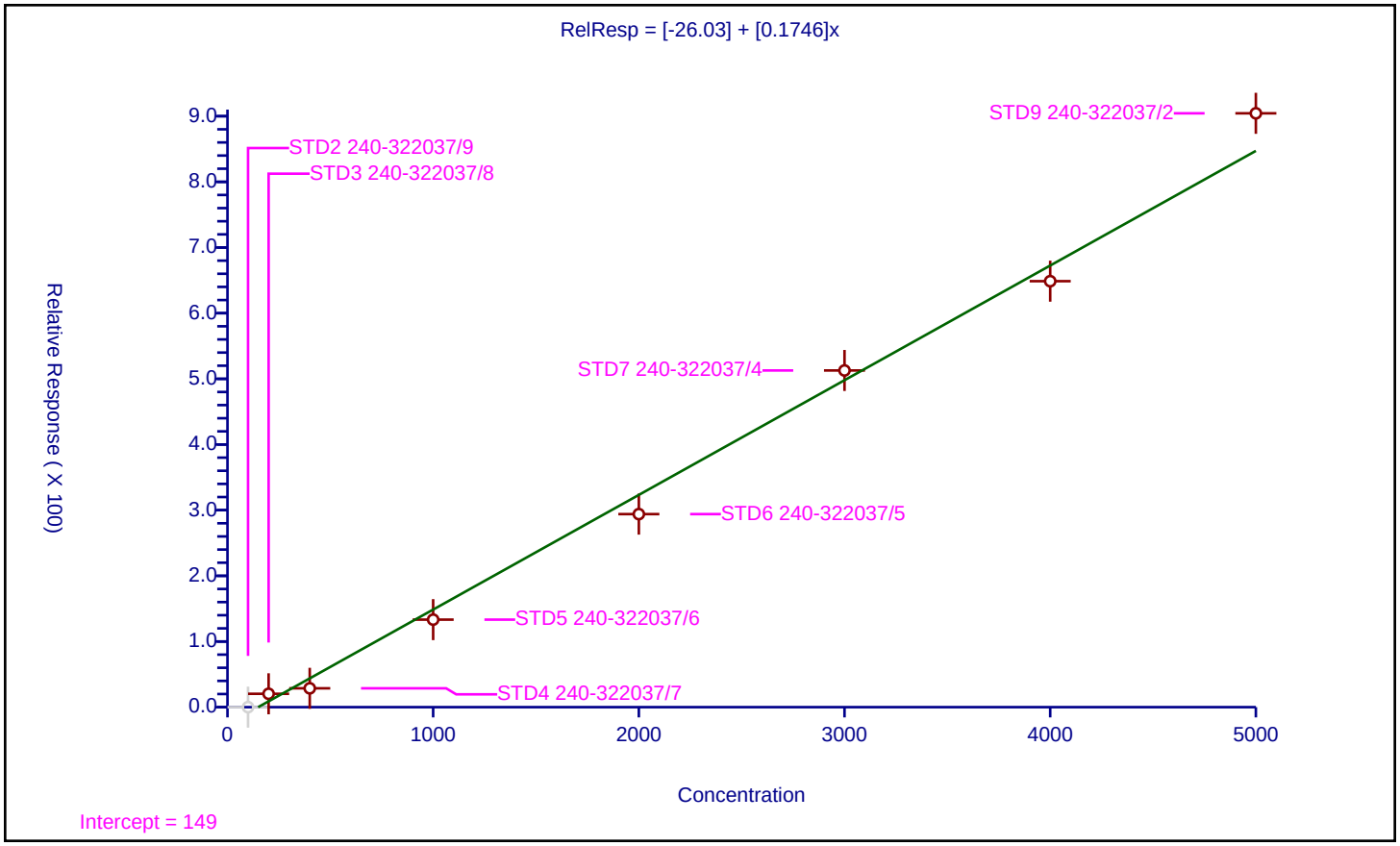
Curve Coefficients

Intercept:	-26.03
Slope:	0.1746

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	18.7
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	0.0	400.0	675688.0	0.0	N
2	STD3 240-322037/8	200.0	20.363283	400.0	593146.0	0.101816	Y
3	STD4 240-322037/7	400.0	28.704404	400.0	730745.0	0.071761	Y
4	STD5 240-322037/6	1000.0	133.299593	400.0	655987.0	0.1333	Y
5	STD6 240-322037/5	2000.0	294.004721	400.0	711760.0	0.147002	Y
6	STD7 240-322037/4	3000.0	512.73998	400.0	747199.0	0.170913	Y
7	STD8 240-322037/3	4000.0	648.728236	400.0	774397.0	0.162182	Y
8	STD9 240-322037/2	5000.0	904.34974	400.0	772184.0	0.18087	Y



Calibration / Bis(2-chloroethoxy)methane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

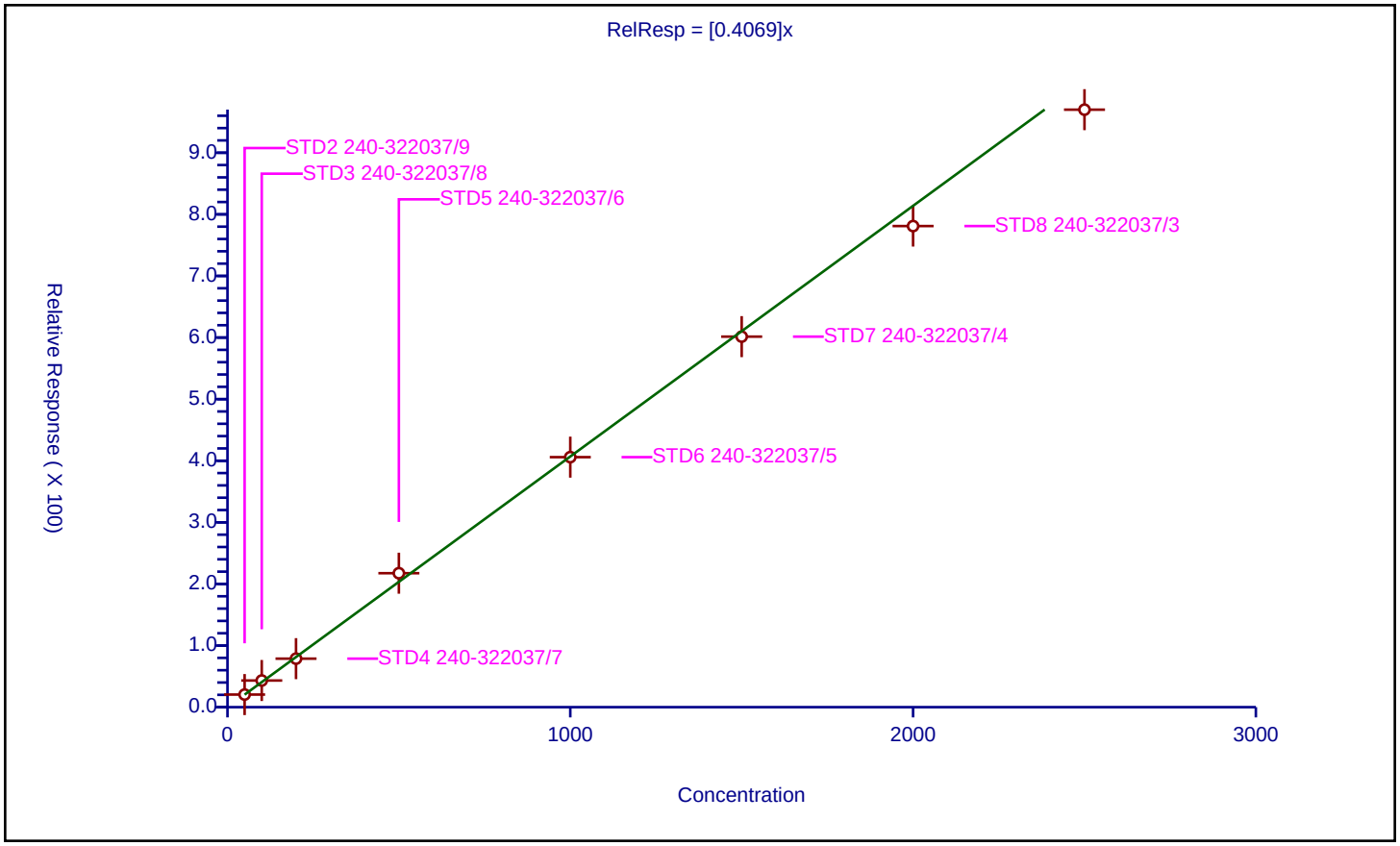
Curve Coefficients

Intercept:	0
Slope:	0.4069

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	20.441387	400.0	675688.0	0.408828	Y
2	STD3 240-322037/8	100.0	43.237921	400.0	593146.0	0.432379	Y
3	STD4 240-322037/7	200.0	78.75579	400.0	730745.0	0.393779	Y
4	STD5 240-322037/6	500.0	217.448212	400.0	655987.0	0.434896	Y
5	STD6 240-322037/5	1000.0	405.849163	400.0	711760.0	0.405849	Y
6	STD7 240-322037/4	1500.0	601.484745	400.0	747199.0	0.40099	Y
7	STD8 240-322037/3	2000.0	780.943625	400.0	774397.0	0.390472	Y
8	STD9 240-322037/2	2500.0	969.877646	400.0	772184.0	0.387951	Y



Calibration / 2,4-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

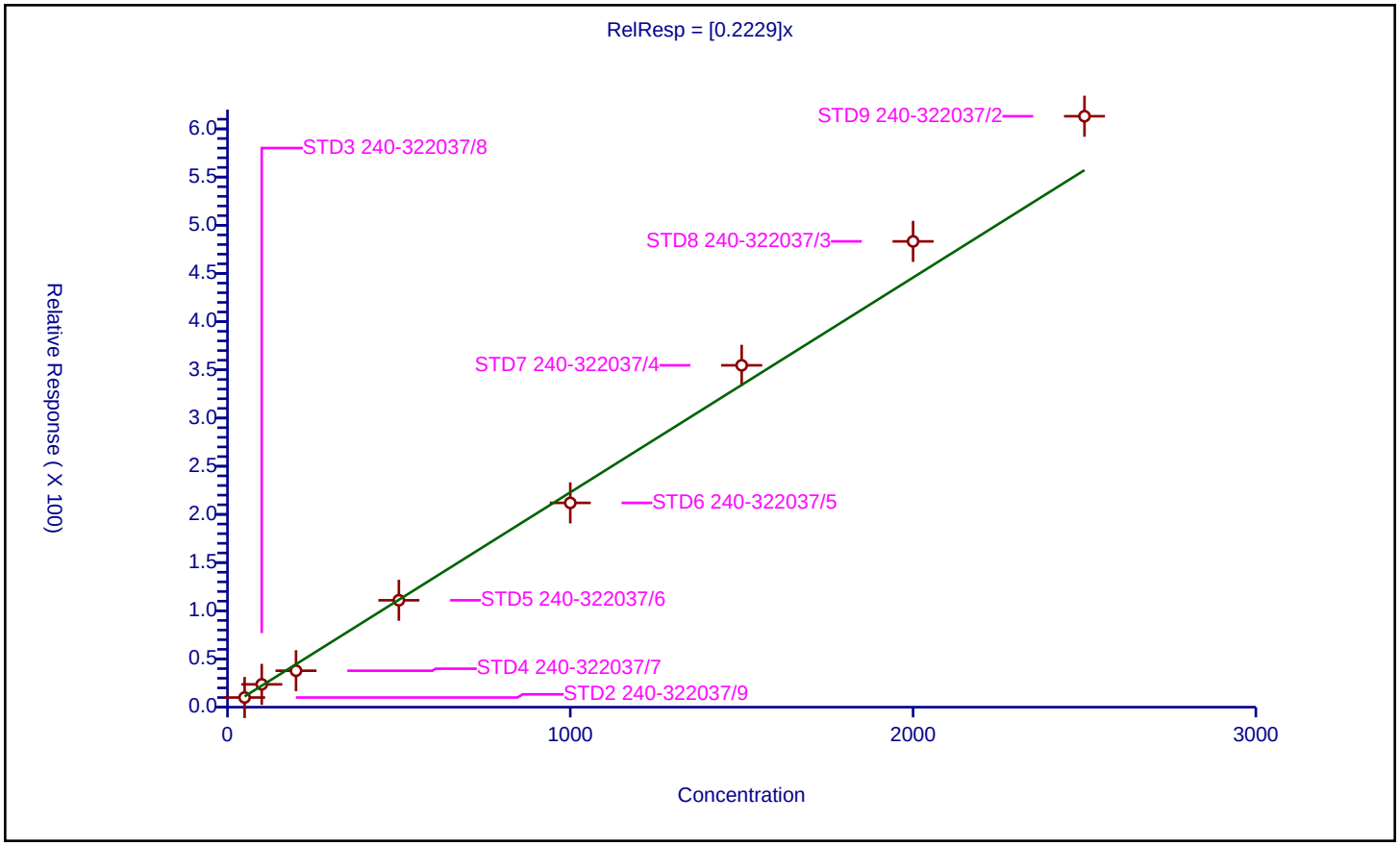
Curve Coefficients

Intercept:	0
Slope:	0.2229

Error Coefficients

Standard Error:	643000
Relative Standard Error:	9.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	10.010537	400.0	675688.0	0.200211	Y
2	STD3 240-322037/8	100.0	23.662302	400.0	593146.0	0.236623	Y
3	STD4 240-322037/7	200.0	37.816201	400.0	730745.0	0.189081	Y
4	STD5 240-322037/6	500.0	110.911954	400.0	655987.0	0.221824	Y
5	STD6 240-322037/5	1000.0	211.967517	400.0	711760.0	0.211968	Y
6	STD7 240-322037/4	1500.0	354.678205	400.0	747199.0	0.236452	Y
7	STD8 240-322037/3	2000.0	483.254455	400.0	774397.0	0.241627	Y
8	STD9 240-322037/2	2500.0	613.125369	400.0	772184.0	0.24525	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

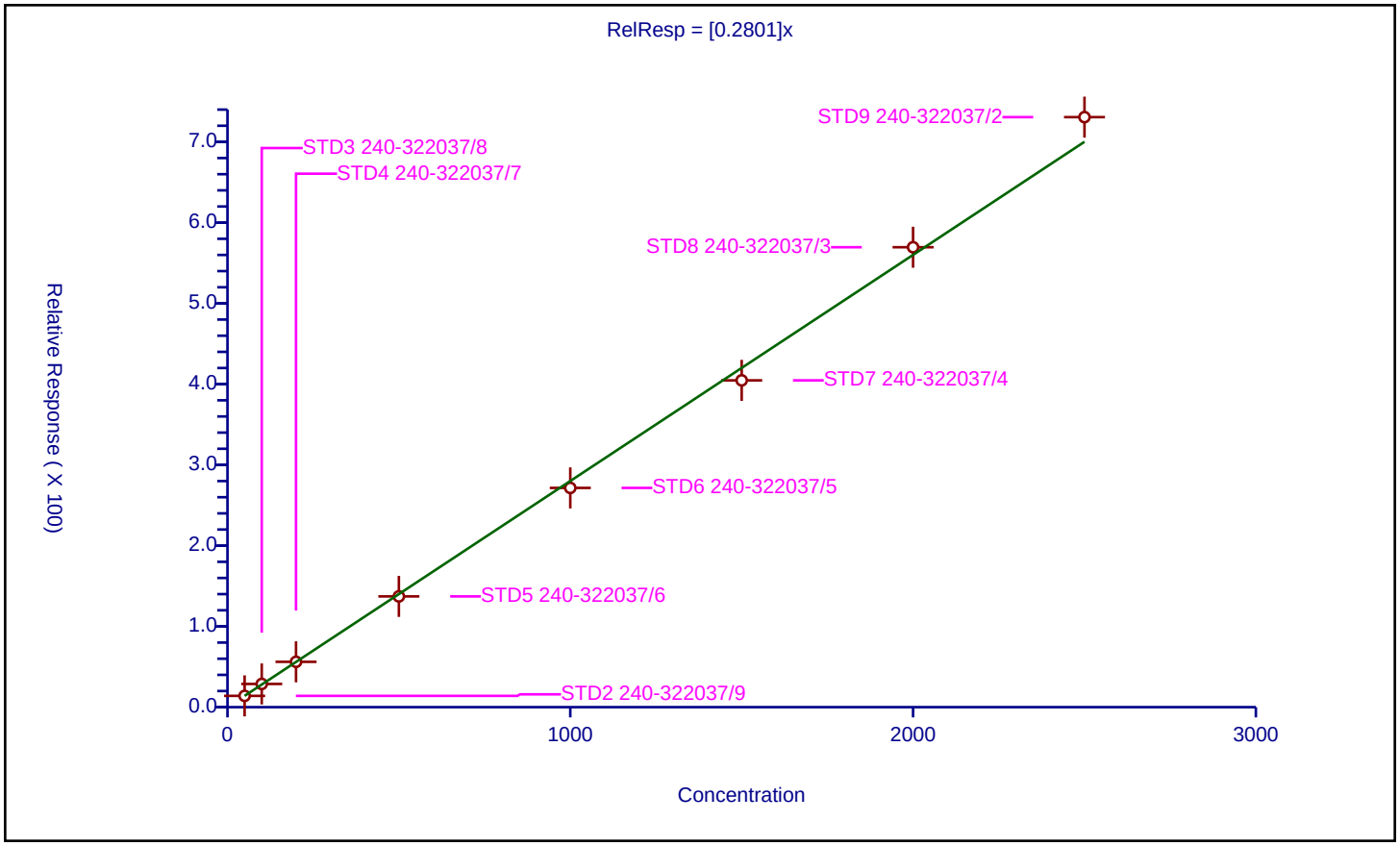
Curve Coefficients

Intercept:	0
Slope:	0.2801

Error Coefficients

Standard Error:	762000
Relative Standard Error:	2.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	13.976273	400.0	675688.0	0.279525	Y
2	STD3 240-322037/8	100.0	28.76189	400.0	593146.0	0.287619	Y
3	STD4 240-322037/7	200.0	56.130661	400.0	730745.0	0.280653	Y
4	STD5 240-322037/6	500.0	137.150279	400.0	655987.0	0.274301	Y
5	STD6 240-322037/5	1000.0	271.518489	400.0	711760.0	0.271518	Y
6	STD7 240-322037/4	1500.0	404.698079	400.0	747199.0	0.269799	Y
7	STD8 240-322037/3	2000.0	569.550244	400.0	774397.0	0.284775	Y
8	STD9 240-322037/2	2500.0	730.672482	400.0	772184.0	0.292269	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

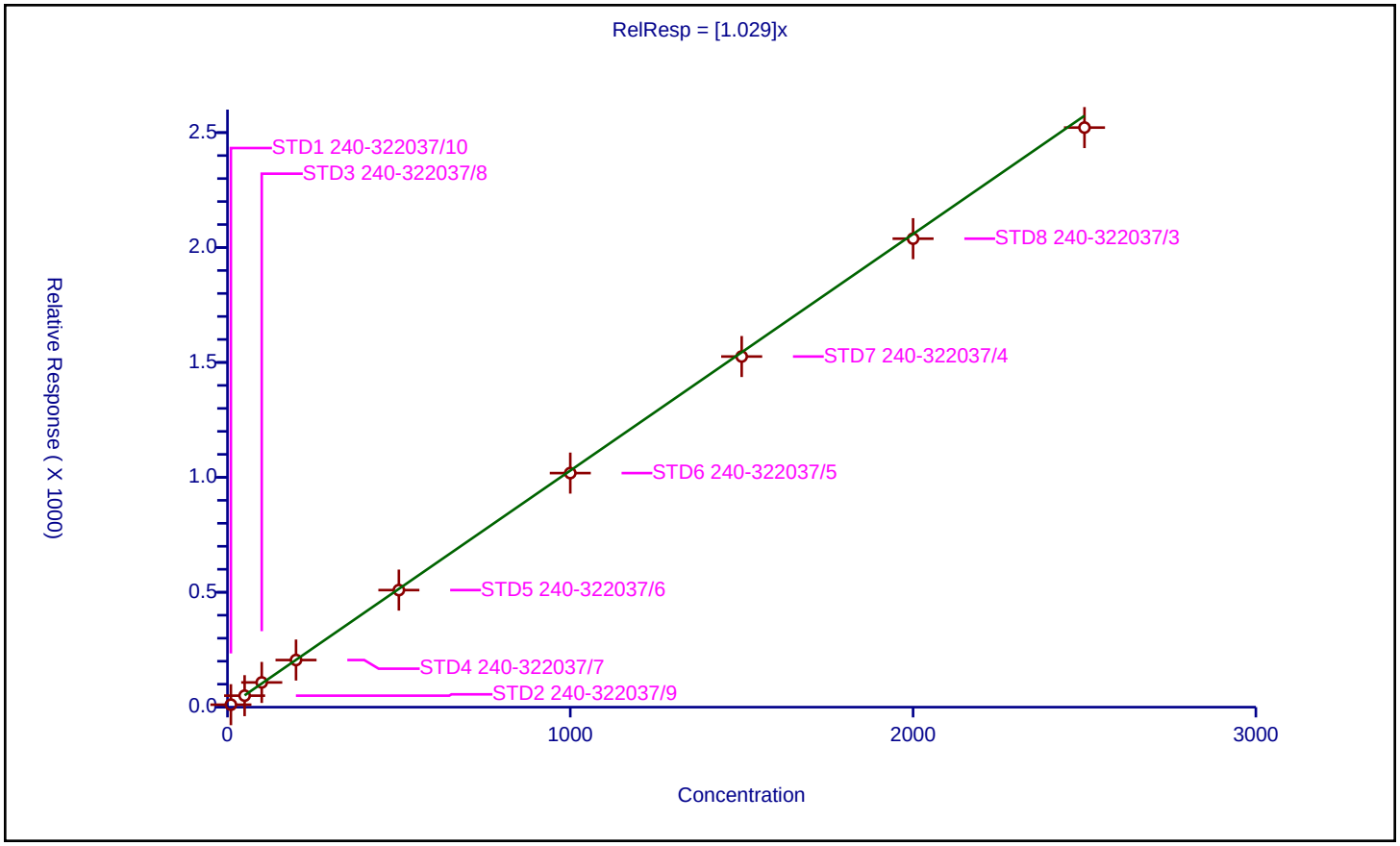
Curve Coefficients

Intercept:	0
Slope:	1.029

Error Coefficients

Standard Error:	2540000
Relative Standard Error:	2.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	10.805489	400.0	546426.0	1.080549	Y
2	STD2 240-322037/9	50.0	49.985792	400.0	675688.0	0.999716	Y
3	STD3 240-322037/8	100.0	107.585653	400.0	593146.0	1.075857	Y
4	STD4 240-322037/7	200.0	205.104653	400.0	730745.0	1.025523	Y
5	STD5 240-322037/6	500.0	509.390582	400.0	655987.0	1.018781	Y
6	STD6 240-322037/5	1000.0	1018.48713	400.0	711760.0	1.018487	Y
7	STD7 240-322037/4	1500.0	1525.700115	400.0	747199.0	1.017133	Y
8	STD8 240-322037/3	2000.0	2038.409756	400.0	774397.0	1.019205	Y
9	STD9 240-322037/2	2500.0	2521.791697	400.0	772184.0	1.008717	Y



Calibration / 4-Chloroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

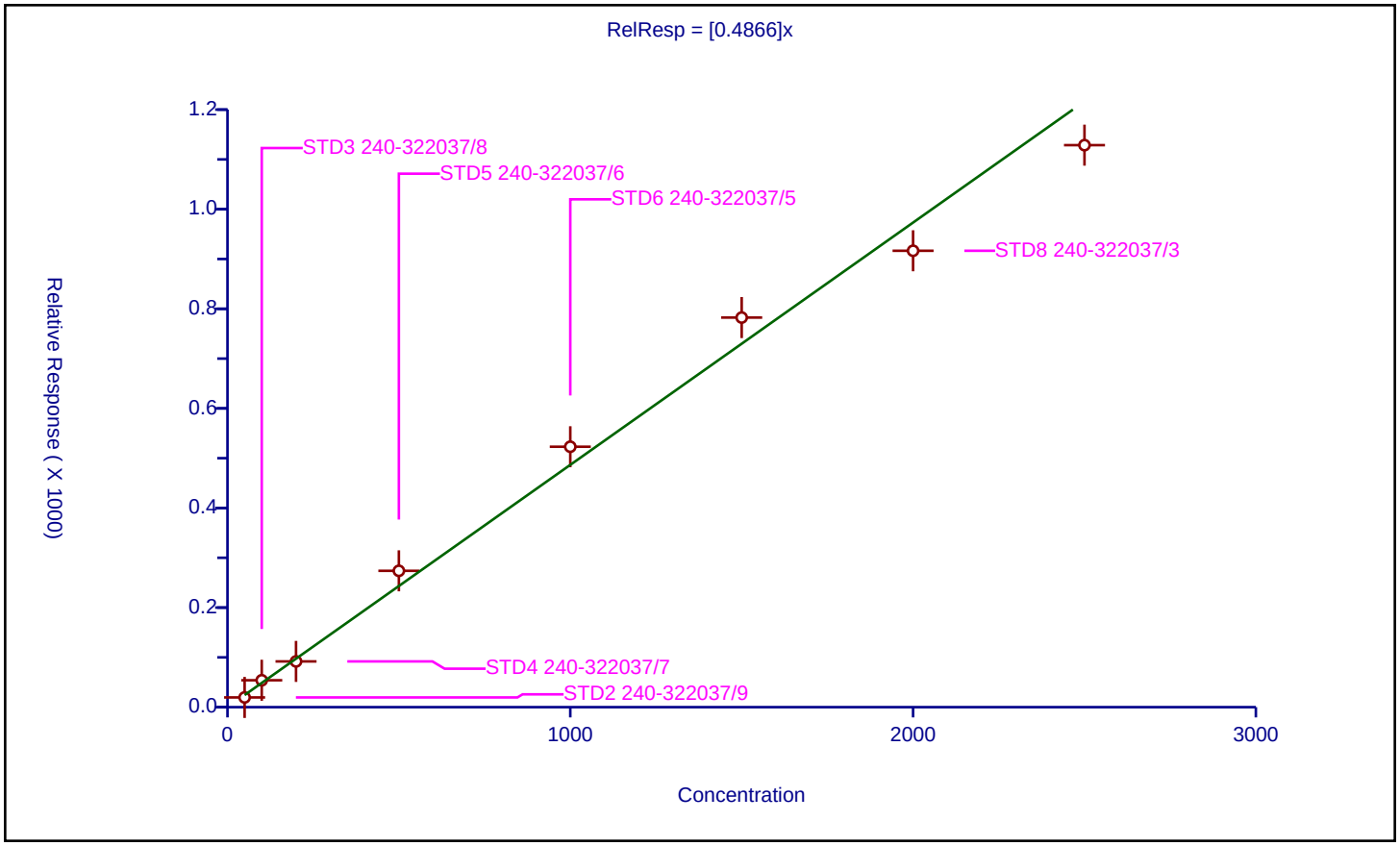
Curve Coefficients

Intercept:	0
Slope:	0.4866

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	11.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	19.556955	400.0	675688.0	0.391139	Y
2	STD3 240-322037/8	100.0	54.01638	400.0	593146.0	0.540164	Y
3	STD4 240-322037/7	200.0	91.888689	400.0	730745.0	0.459443	Y
4	STD5 240-322037/6	500.0	273.782865	400.0	655987.0	0.547566	Y
5	STD6 240-322037/5	1000.0	522.993706	400.0	711760.0	0.522994	Y
6	STD7 240-322037/4	1500.0	782.379527	400.0	747199.0	0.521586	Y
7	STD8 240-322037/3	2000.0	916.51853	400.0	774397.0	0.458259	Y
8	STD9 240-322037/2	2500.0	1128.640324	400.0	772184.0	0.451456	Y



Calibration / 2,6-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

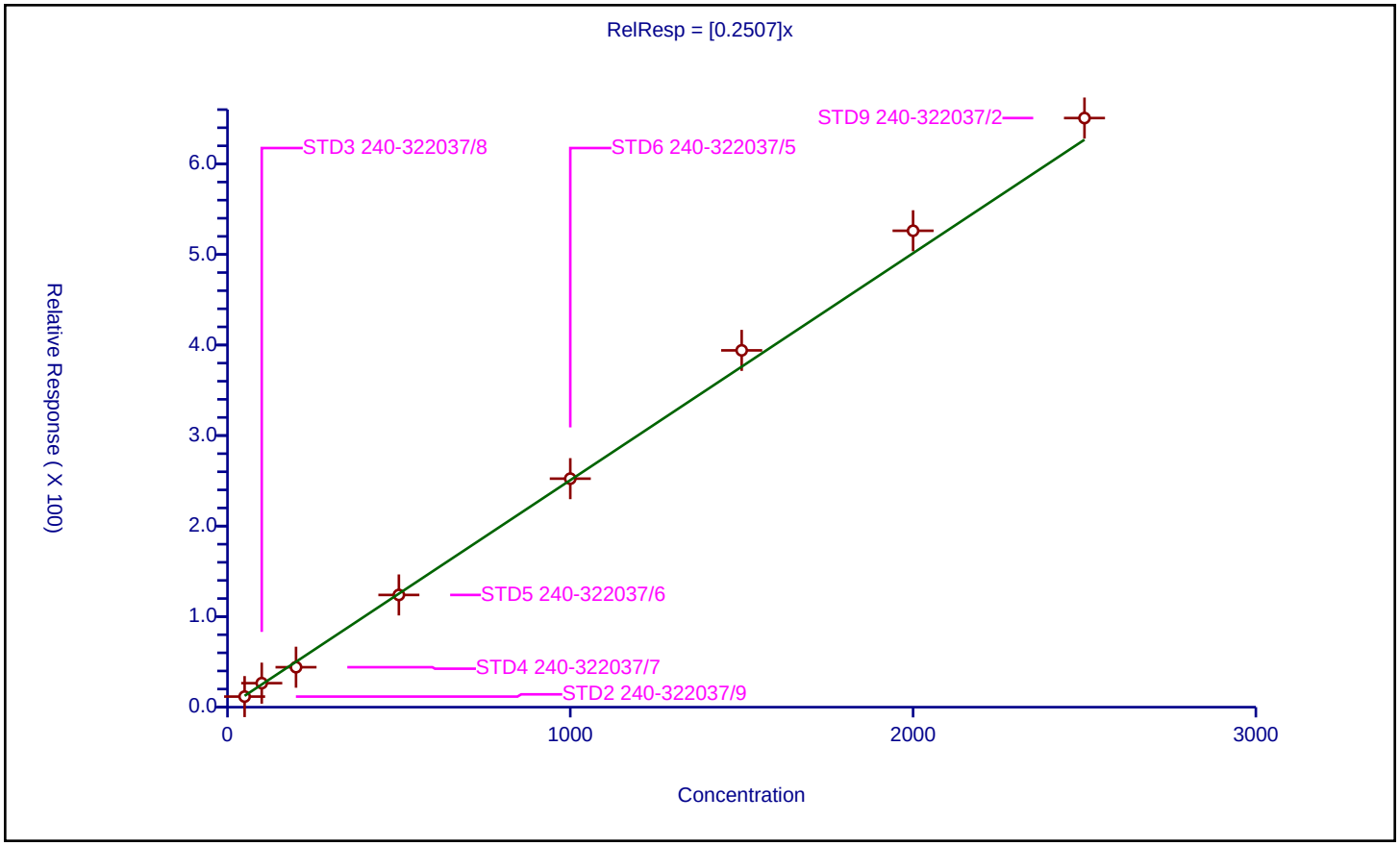
Curve Coefficients

Intercept:	0
Slope:	0.2507

Error Coefficients

Standard Error:	697000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	11.668107	400.0	675688.0	0.233362	Y
2	STD3 240-322037/8	100.0	26.528376	400.0	593146.0	0.265284	Y
3	STD4 240-322037/7	200.0	44.121547	400.0	730745.0	0.220608	Y
4	STD5 240-322037/6	500.0	123.951237	400.0	655987.0	0.247902	Y
5	STD6 240-322037/5	1000.0	252.397437	400.0	711760.0	0.252397	Y
6	STD7 240-322037/4	1500.0	394.086181	400.0	747199.0	0.262724	Y
7	STD8 240-322037/3	2000.0	526.194187	400.0	774397.0	0.263097	Y
8	STD9 240-322037/2	2500.0	650.676005	400.0	772184.0	0.26027	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

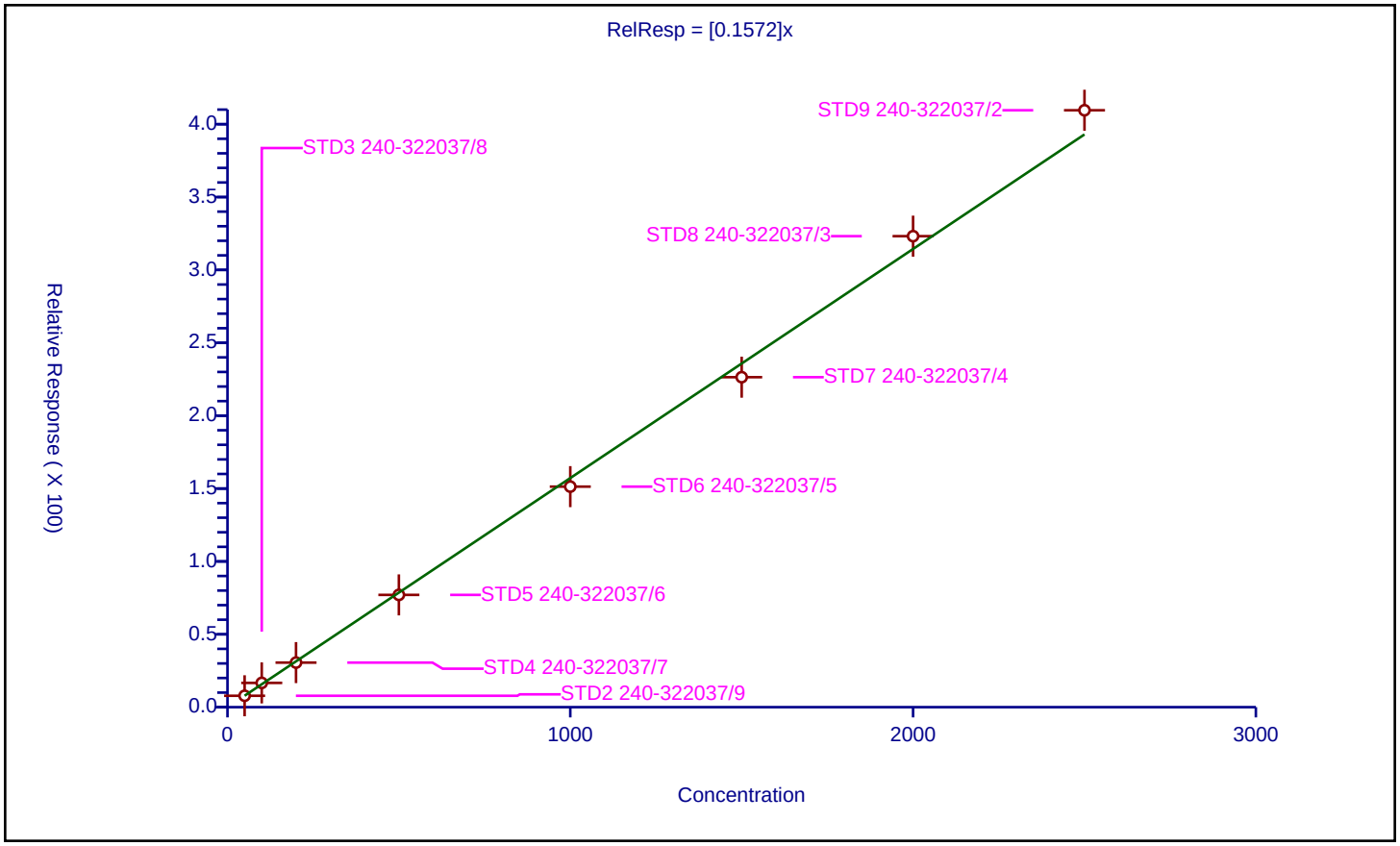
Curve Coefficients

Intercept:	0
Slope:	0.1572

Error Coefficients

Standard Error:	429000
Relative Standard Error:	3.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	7.821361	400.0	675688.0	0.156427	Y
2	STD3 240-322037/8	100.0	16.64548	400.0	593146.0	0.166455	Y
3	STD4 240-322037/7	200.0	30.579751	400.0	730745.0	0.152899	Y
4	STD5 240-322037/6	500.0	77.035673	400.0	655987.0	0.154071	Y
5	STD6 240-322037/5	1000.0	151.317298	400.0	711760.0	0.151317	Y
6	STD7 240-322037/4	1500.0	226.408226	400.0	747199.0	0.150939	Y
7	STD8 240-322037/3	2000.0	323.163442	400.0	774397.0	0.161582	Y
8	STD9 240-322037/2	2500.0	409.545393	400.0	772184.0	0.163818	Y



Calibration / Caprolactam

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

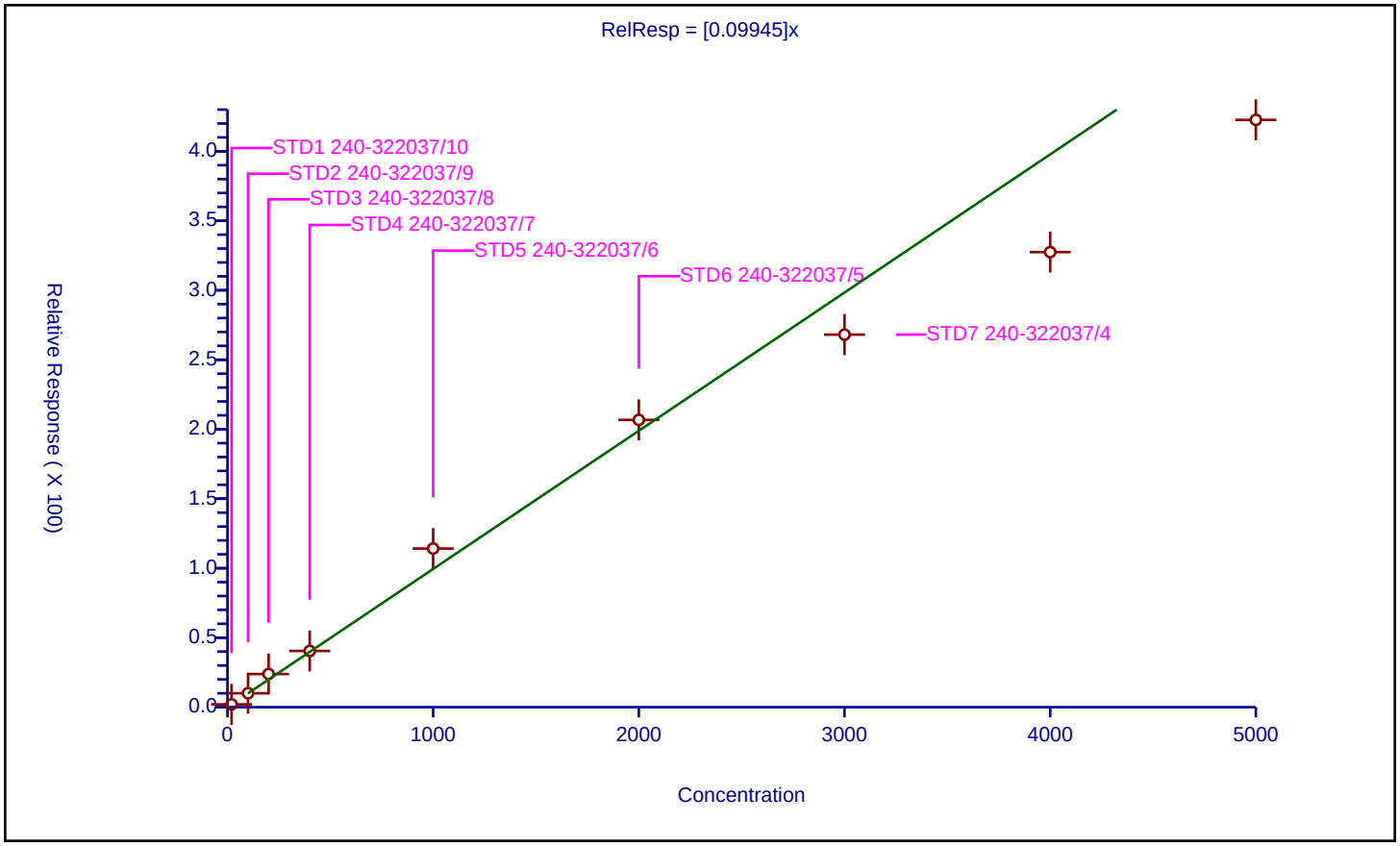
Curve Coefficients

Intercept:	0
Slope:	0.09945

Error Coefficients

Standard Error:	432000
Relative Standard Error:	12.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	20.0	2.026258	400.0	546426.0	0.101313	Y
2	STD2 240-322037/9	100.0	10.014681	400.0	675688.0	0.100147	Y
3	STD3 240-322037/8	200.0	23.837639	400.0	593146.0	0.119188	Y
4	STD4 240-322037/7	400.0	40.444752	400.0	730745.0	0.101112	Y
5	STD5 240-322037/6	1000.0	114.135798	400.0	655987.0	0.114136	Y
6	STD6 240-322037/5	2000.0	206.744408	400.0	711760.0	0.103372	Y
7	STD7 240-322037/4	3000.0	268.075305	400.0	747199.0	0.089358	Y
8	STD8 240-322037/3	4000.0	327.465628	400.0	774397.0	0.081866	Y
9	STD9 240-322037/2	5000.0	422.616889	400.0	772184.0	0.084523	Y



Calibration / 4-Chloro-3-methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

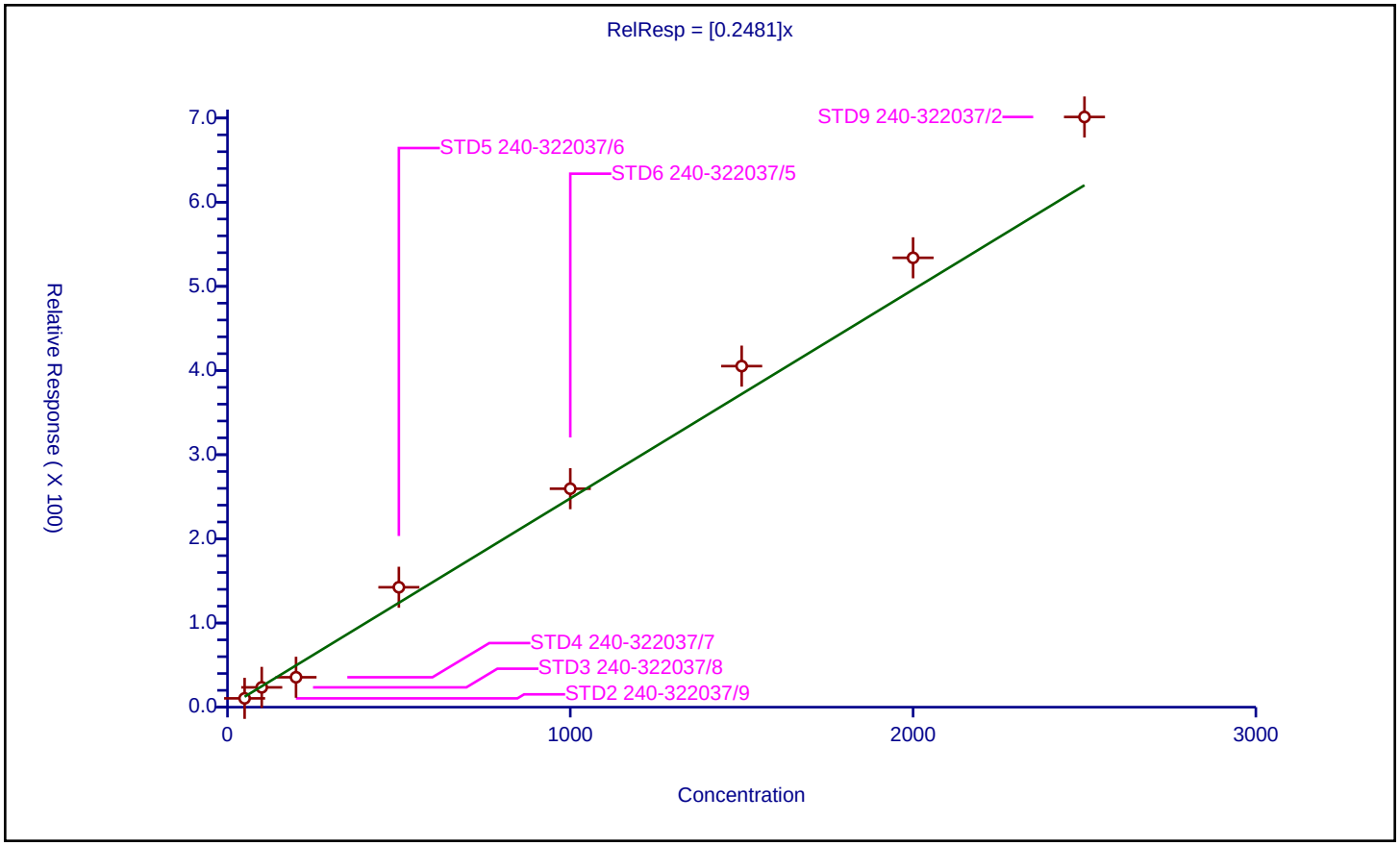
Curve Coefficients

Intercept:	0
Slope:	0.2481

Error Coefficients

Standard Error:	731000
Relative Standard Error:	15.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	10.465185	400.0	675688.0	0.209304	Y
2	STD3 240-322037/8	100.0	23.538893	400.0	593146.0	0.235389	Y
3	STD4 240-322037/7	200.0	35.528673	400.0	730745.0	0.177643	Y
4	STD5 240-322037/6	500.0	142.475994	400.0	655987.0	0.284952	Y
5	STD6 240-322037/5	1000.0	259.569518	400.0	711760.0	0.25957	Y
6	STD7 240-322037/4	1500.0	405.239836	400.0	747199.0	0.27016	Y
7	STD8 240-322037/3	2000.0	533.922523	400.0	774397.0	0.266961	Y
8	STD9 240-322037/2	2500.0	701.244781	400.0	772184.0	0.280498	Y



Calibration / 2-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

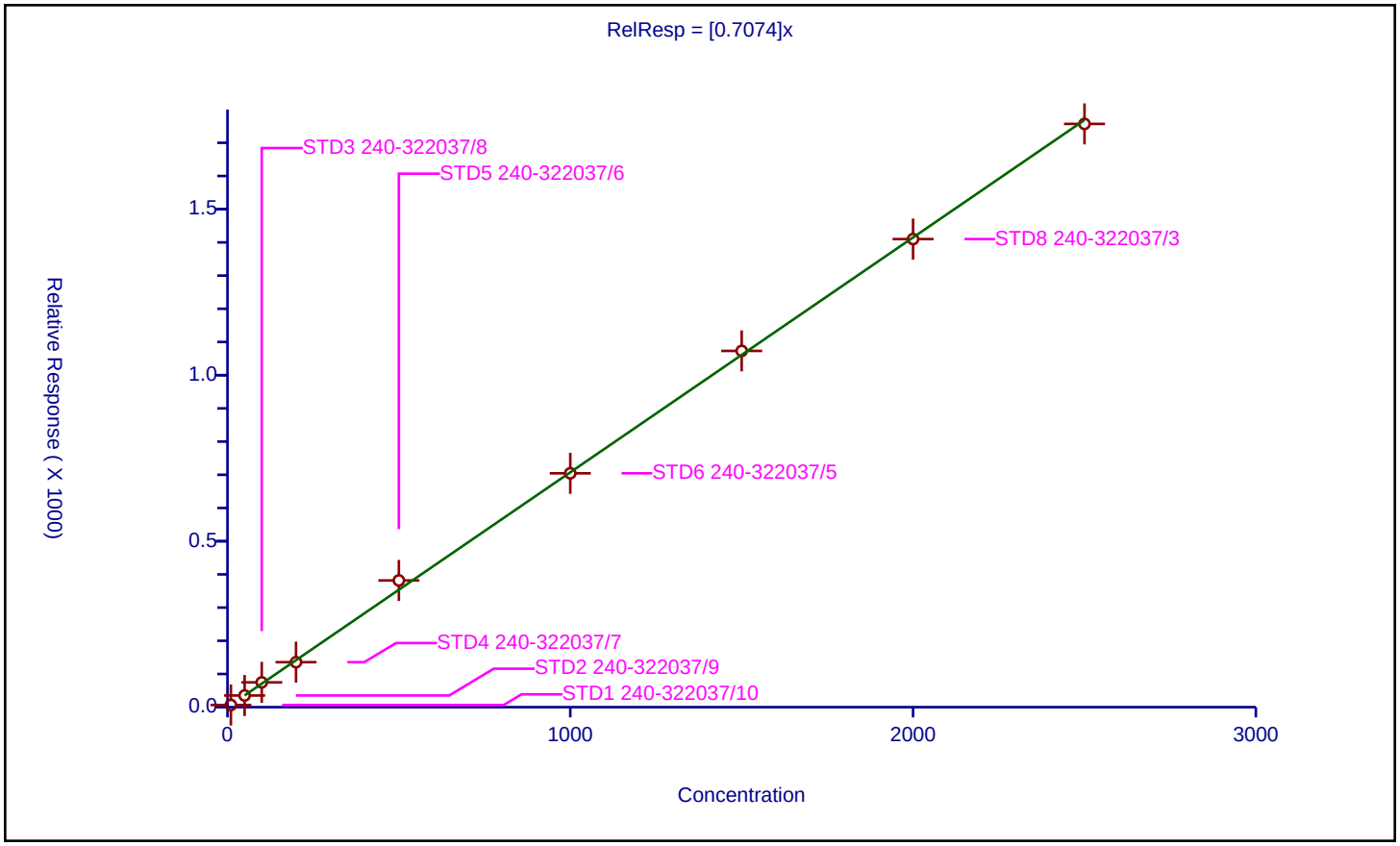
Curve Coefficients

Intercept:	0
Slope:	0.7074

Error Coefficients

Standard Error:	1770000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	6.480658	400.0	546426.0	0.648066	Y
2	STD2 240-322037/9	50.0	35.198494	400.0	675688.0	0.70397	Y
3	STD3 240-322037/8	100.0	74.614345	400.0	593146.0	0.746143	Y
4	STD4 240-322037/7	200.0	135.492956	400.0	730745.0	0.677465	Y
5	STD5 240-322037/6	500.0	381.699028	400.0	655987.0	0.763398	Y
6	STD6 240-322037/5	1000.0	704.494212	400.0	711760.0	0.704494	Y
7	STD7 240-322037/4	1500.0	1073.16846	400.0	747199.0	0.715446	Y
8	STD8 240-322037/3	2000.0	1409.965173	400.0	774397.0	0.704983	Y
9	STD9 240-322037/2	2500.0	1756.986418	400.0	772184.0	0.702795	Y



Calibration / 1-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

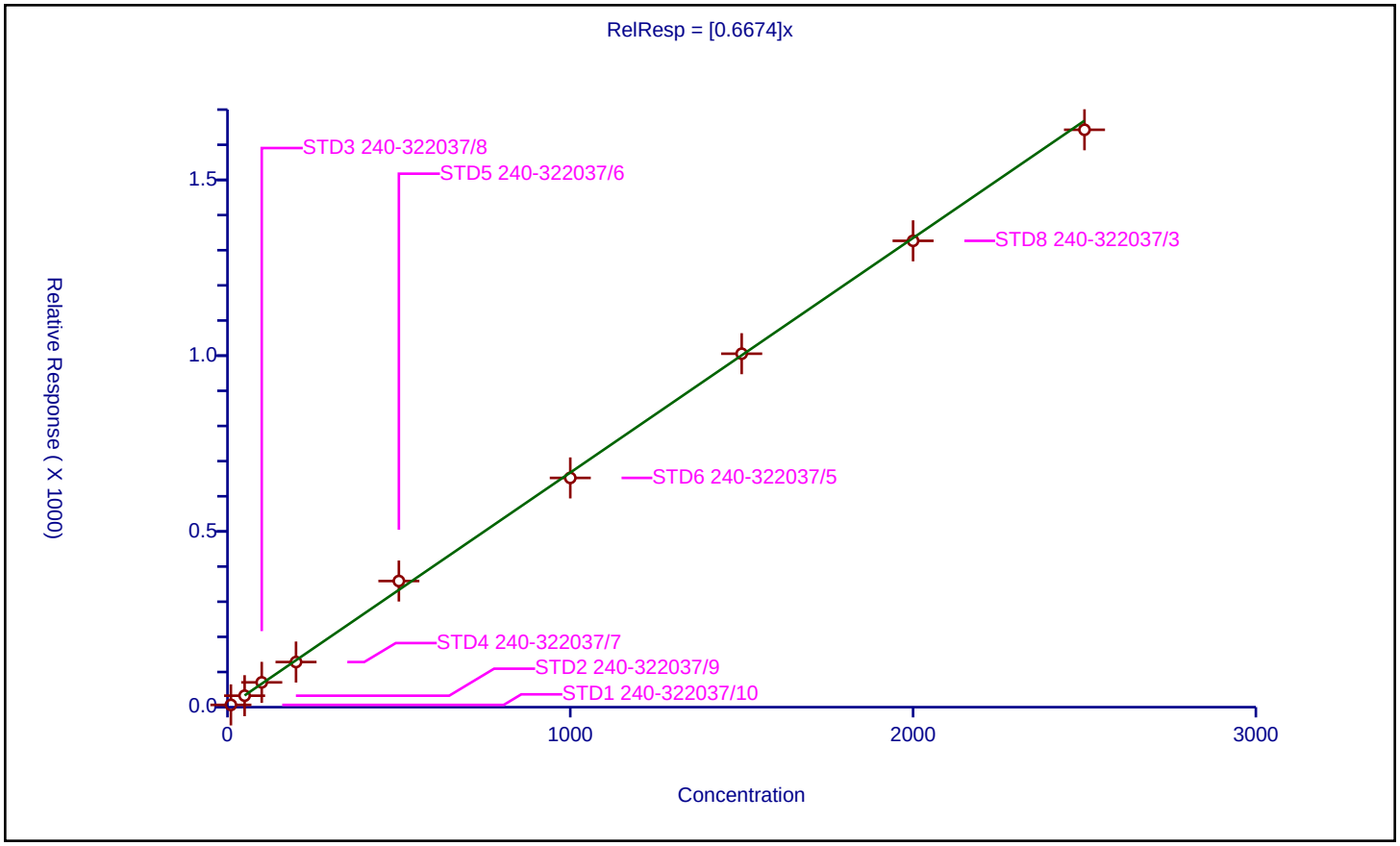
Curve Coefficients

Intercept:	0
Slope:	0.6674

Error Coefficients

Standard Error:	1660000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	6.452841	400.0	546426.0	0.645284	Y
2	STD2 240-322037/9	50.0	32.634589	400.0	675688.0	0.652692	Y
3	STD3 240-322037/8	100.0	70.53373	400.0	593146.0	0.705337	Y
4	STD4 240-322037/7	200.0	128.411963	400.0	730745.0	0.64206	Y
5	STD5 240-322037/6	500.0	358.858941	400.0	655987.0	0.717718	Y
6	STD6 240-322037/5	1000.0	652.240643	400.0	711760.0	0.652241	Y
7	STD7 240-322037/4	1500.0	1005.599312	400.0	747199.0	0.6704	Y
8	STD8 240-322037/3	2000.0	1326.706586	400.0	774397.0	0.663353	Y
9	STD9 240-322037/2	2500.0	1642.667033	400.0	772184.0	0.657067	Y



Calibration / Hexachlorocyclopentadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

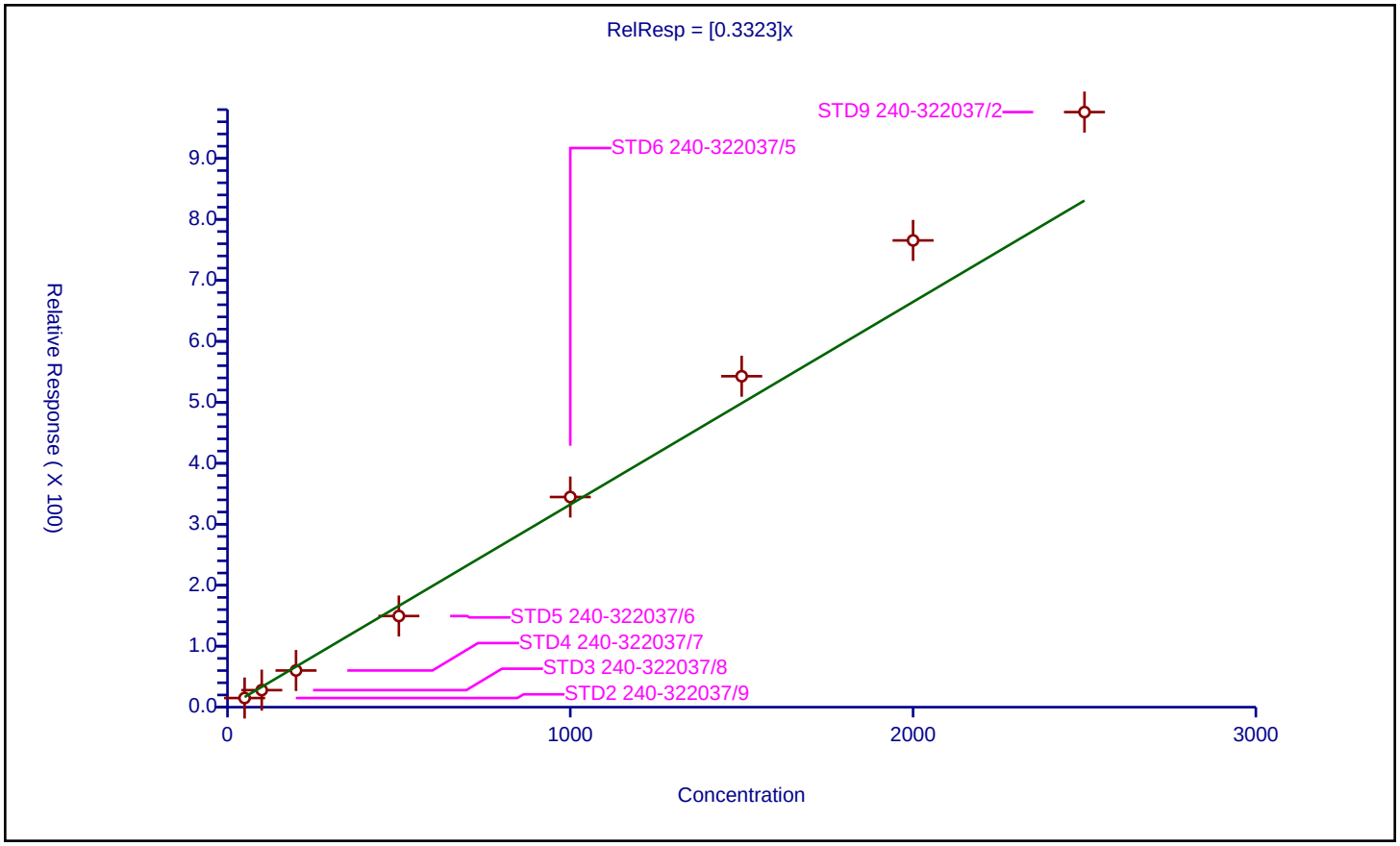
Curve Coefficients

Intercept:	0
Slope:	0.3323

Error Coefficients

Standard Error:	498000
Relative Standard Error:	12.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	15.002514	400.0	324159.0	0.30005	Y
2	STD3 240-322037/8	100.0	27.929454	400.0	326537.0	0.279295	Y
3	STD4 240-322037/7	200.0	60.152789	400.0	366387.0	0.300764	Y
4	STD5 240-322037/6	500.0	149.471865	400.0	371401.0	0.298944	Y
5	STD6 240-322037/5	1000.0	344.658472	400.0	356911.0	0.344658	Y
6	STD7 240-322037/4	1500.0	542.711703	400.0	370697.0	0.361808	Y
7	STD8 240-322037/3	2000.0	765.477902	400.0	378320.0	0.382739	Y
8	STD9 240-322037/2	2500.0	975.957733	400.0	376279.0	0.390383	Y



Calibration / 1,2,4,5-Tetrachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

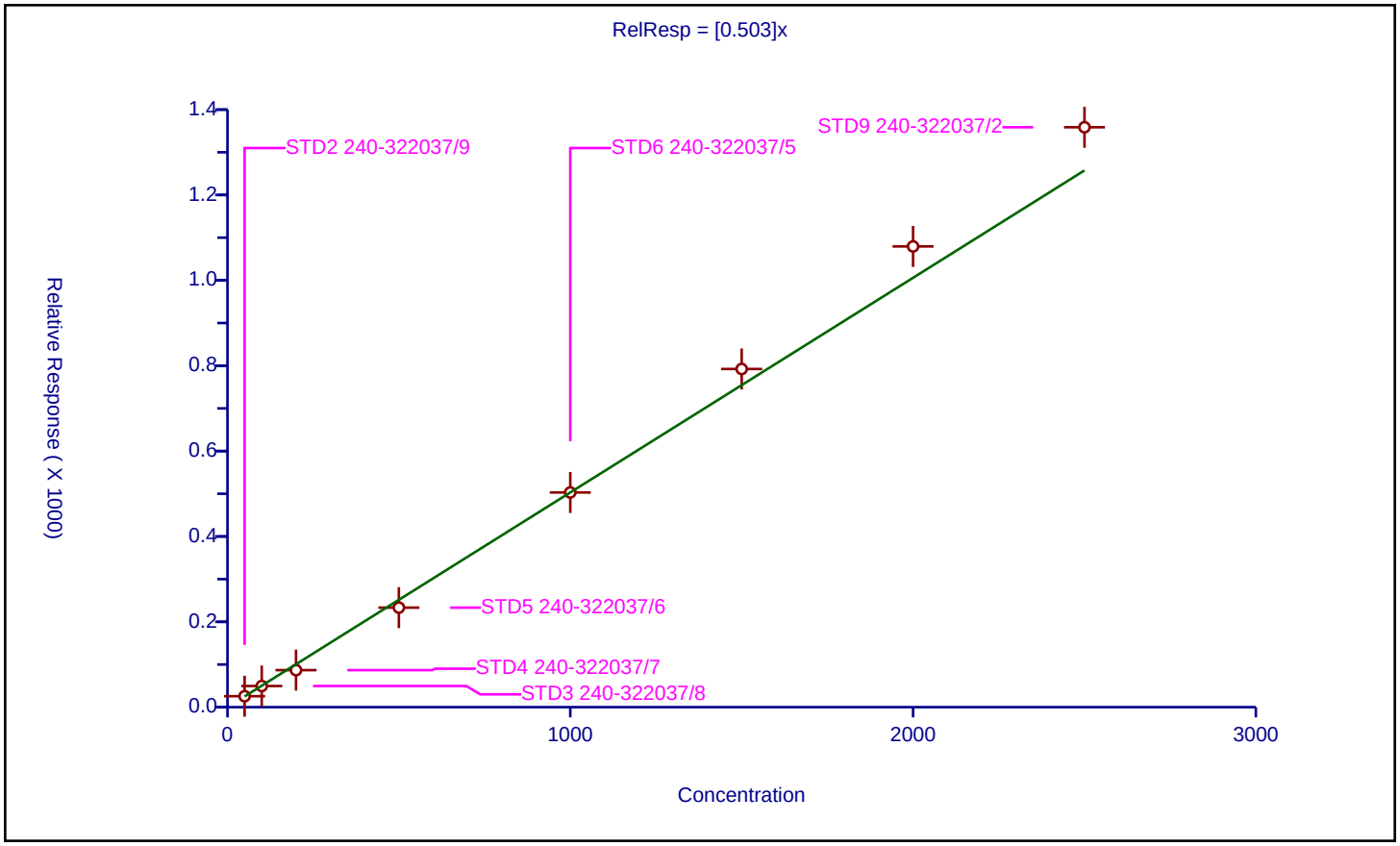
Curve Coefficients

Intercept:	0
Slope:	0.503

Error Coefficients

Standard Error:	704000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	25.70467	400.0	324159.0	0.514093	Y
2	STD3 240-322037/8	100.0	49.517206	400.0	326537.0	0.495172	Y
3	STD4 240-322037/7	200.0	86.771638	400.0	366387.0	0.433858	Y
4	STD5 240-322037/6	500.0	233.203465	400.0	371401.0	0.466407	Y
5	STD6 240-322037/5	1000.0	502.998226	400.0	356911.0	0.502998	Y
6	STD7 240-322037/4	1500.0	792.320413	400.0	370697.0	0.528214	Y
7	STD8 240-322037/3	2000.0	1079.448086	400.0	378320.0	0.539724	Y
8	STD9 240-322037/2	2500.0	1358.639733	400.0	376279.0	0.543456	Y



Calibration / 2,4,6-Trichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

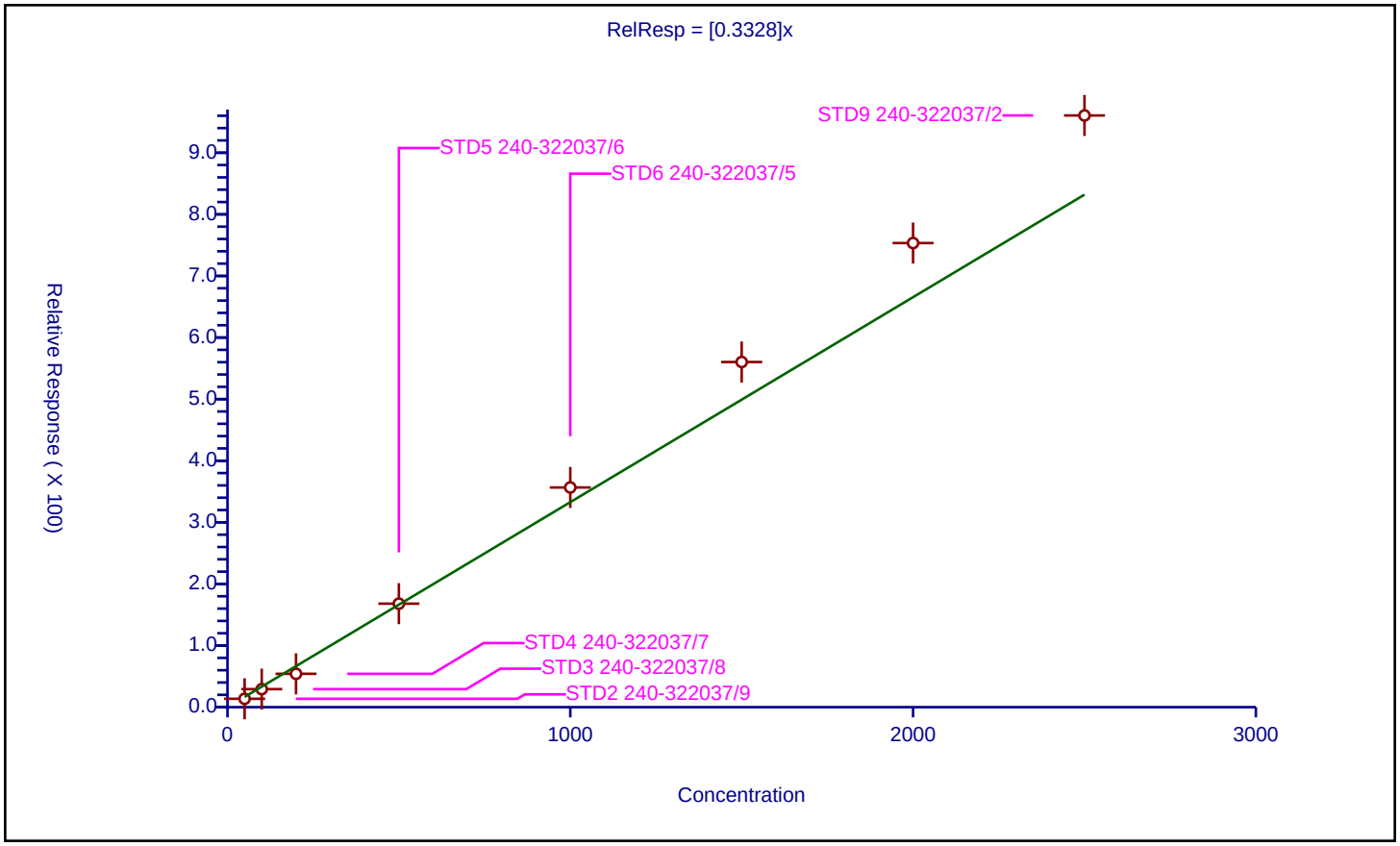
Curve Coefficients

Intercept:	0
Slope:	0.3328

Error Coefficients

Standard Error:	496000
Relative Standard Error:	14.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	13.578522	400.0	324159.0	0.27157	Y
2	STD3 240-322037/8	100.0	29.285502	400.0	326537.0	0.292855	Y
3	STD4 240-322037/7	200.0	54.142751	400.0	366387.0	0.270714	Y
4	STD5 240-322037/6	500.0	168.01678	400.0	371401.0	0.336034	Y
5	STD6 240-322037/5	1000.0	356.605428	400.0	356911.0	0.356605	Y
6	STD7 240-322037/4	1500.0	560.262425	400.0	370697.0	0.373508	Y
7	STD8 240-322037/3	2000.0	753.360118	400.0	378320.0	0.37668	Y
8	STD9 240-322037/2	2500.0	960.49155	400.0	376279.0	0.384197	Y



Calibration / 2,4,5-Trichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

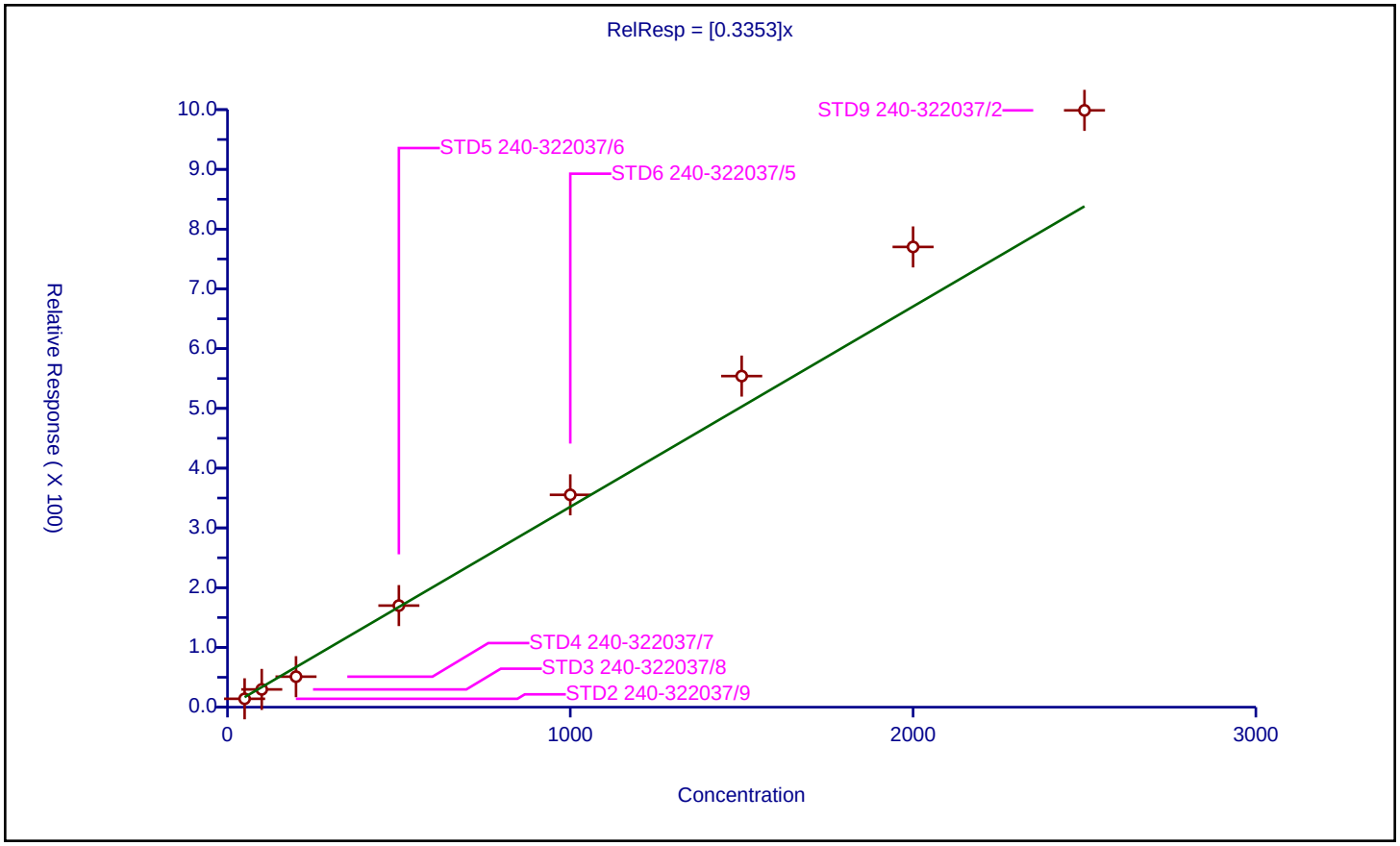
Curve Coefficients

Intercept:	0
Slope:	0.3353

Error Coefficients

Standard Error:	507000
Relative Standard Error:	15.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	14.02028	400.0	324159.0	0.280406	Y
2	STD3 240-322037/8	100.0	29.725268	400.0	326537.0	0.297253	Y
3	STD4 240-322037/7	200.0	51.034562	400.0	366387.0	0.255173	Y
4	STD5 240-322037/6	500.0	169.986618	400.0	371401.0	0.339973	Y
5	STD6 240-322037/5	1000.0	355.317712	400.0	356911.0	0.355318	Y
6	STD7 240-322037/4	1500.0	554.060054	400.0	370697.0	0.369373	Y
7	STD8 240-322037/3	2000.0	770.20406	400.0	378320.0	0.385102	Y
8	STD9 240-322037/2	2500.0	998.728071	400.0	376279.0	0.399491	Y



Calibration / 2-Fluorobiphenyl (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

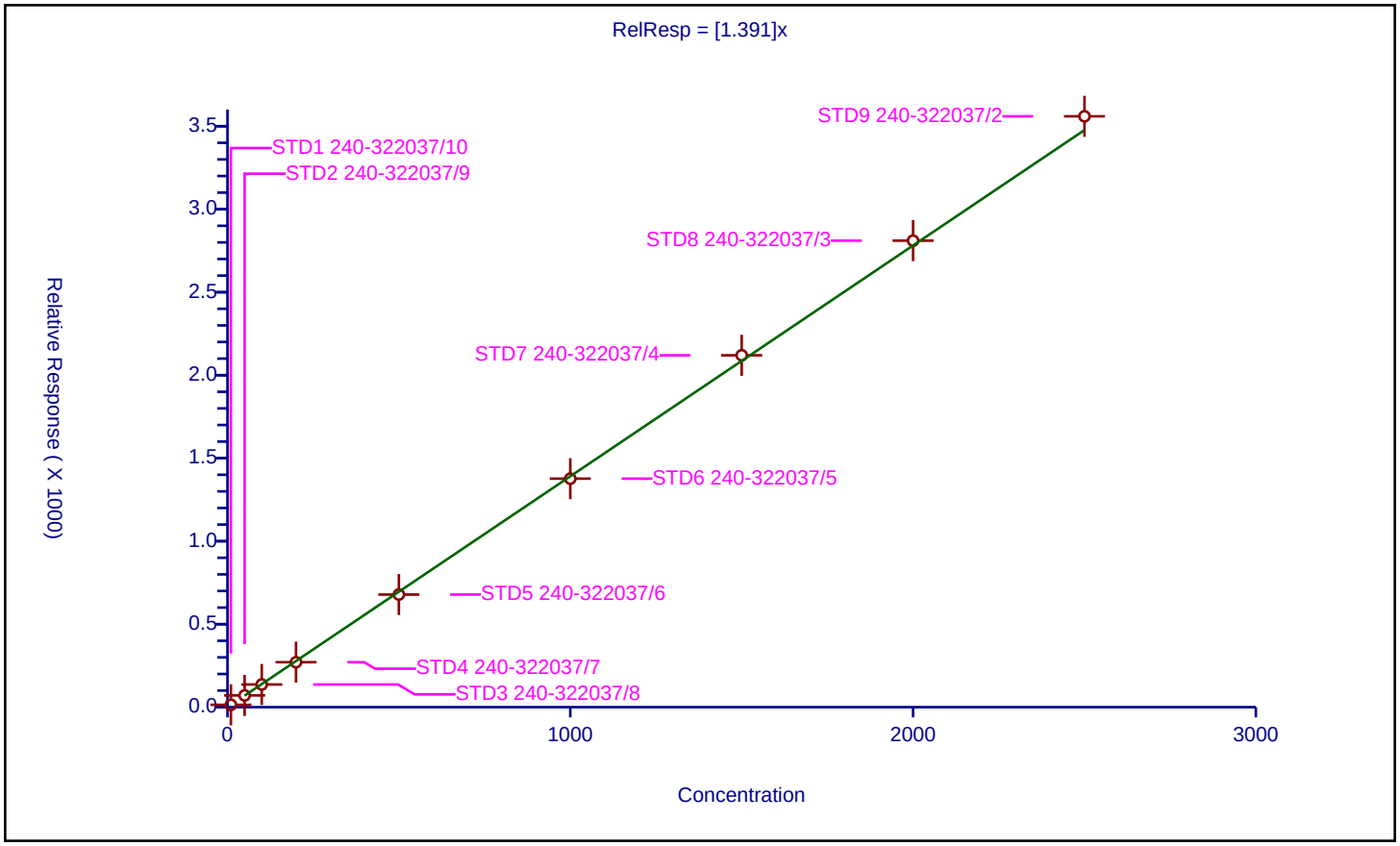
Curve Coefficients

Intercept:	0
Slope:	1.391

Error Coefficients

Standard Error:	1730000
Relative Standard Error:	2.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	14.058463	400.0	262390.0	1.405846	Y
2	STD2 240-322037/9	50.0	70.761571	400.0	324159.0	1.415231	Y
3	STD3 240-322037/8	100.0	136.552979	400.0	326537.0	1.36553	Y
4	STD4 240-322037/7	200.0	270.766157	400.0	366387.0	1.353831	Y
5	STD5 240-322037/6	500.0	678.464517	400.0	371401.0	1.356929	Y
6	STD6 240-322037/5	1000.0	1376.682702	400.0	356911.0	1.376683	Y
7	STD7 240-322037/4	1500.0	2119.803505	400.0	370697.0	1.413202	Y
8	STD8 240-322037/3	2000.0	2810.577289	400.0	378320.0	1.405289	Y
9	STD9 240-322037/2	2500.0	3559.658658	400.0	376279.0	1.423863	Y



Calibration / 1,1'-Biphenyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

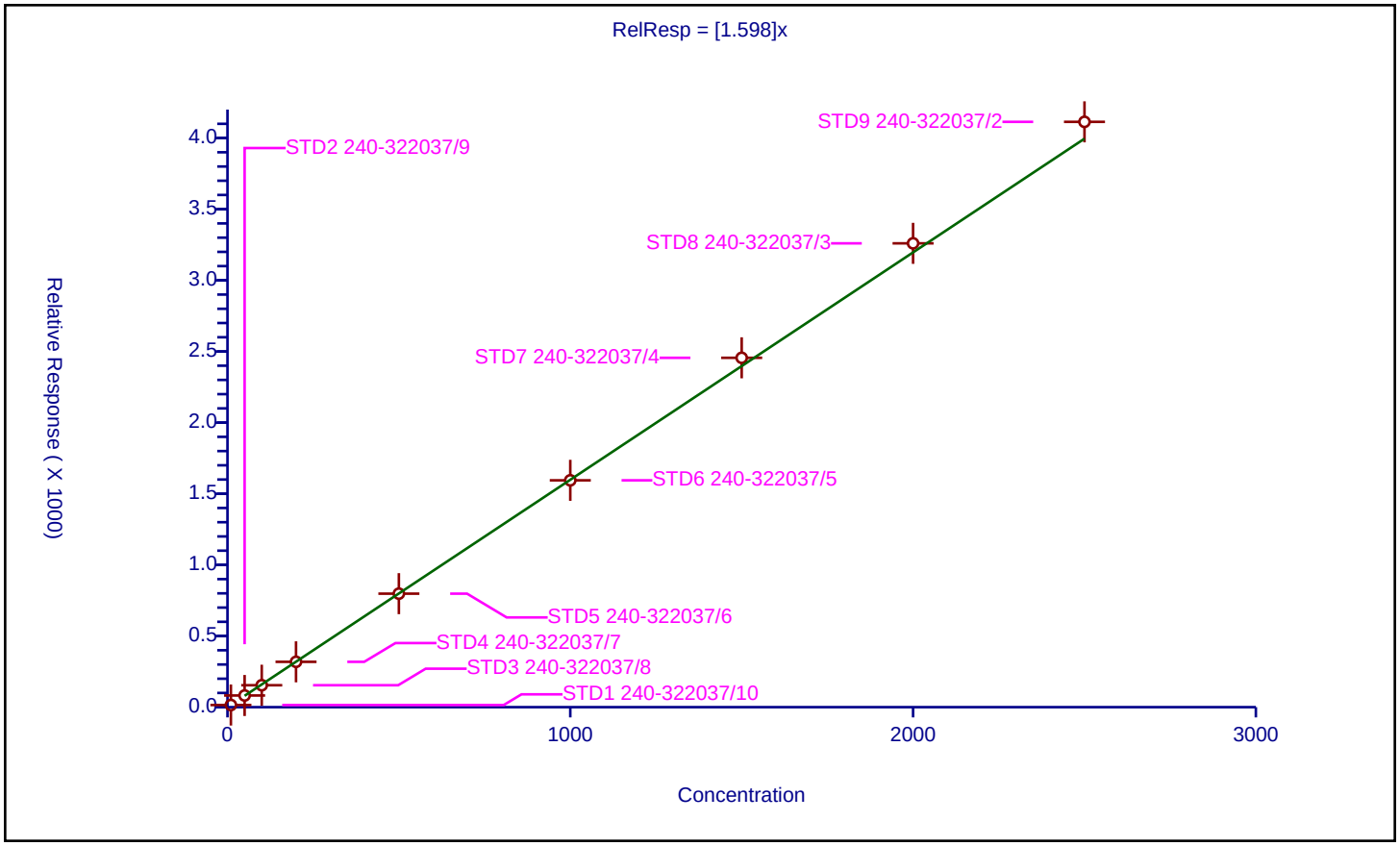
Curve Coefficients

Intercept:	0
Slope:	1.598

Error Coefficients

Standard Error:	2010000
Relative Standard Error:	3.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	15.043256	400.0	262390.0	1.504326	Y
2	STD2 240-322037/9	50.0	82.154745	400.0	324159.0	1.643095	Y
3	STD3 240-322037/8	100.0	154.079936	400.0	326537.0	1.540799	Y
4	STD4 240-322037/7	200.0	318.657594	400.0	366387.0	1.593288	Y
5	STD5 240-322037/6	500.0	797.855687	400.0	371401.0	1.595711	Y
6	STD6 240-322037/5	1000.0	1594.312308	400.0	356911.0	1.594312	Y
7	STD7 240-322037/4	1500.0	2455.514881	400.0	370697.0	1.63701	Y
8	STD8 240-322037/3	2000.0	3260.130049	400.0	378320.0	1.630065	Y
9	STD9 240-322037/2	2500.0	4113.981381	400.0	376279.0	1.645593	Y



Calibration / 2-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

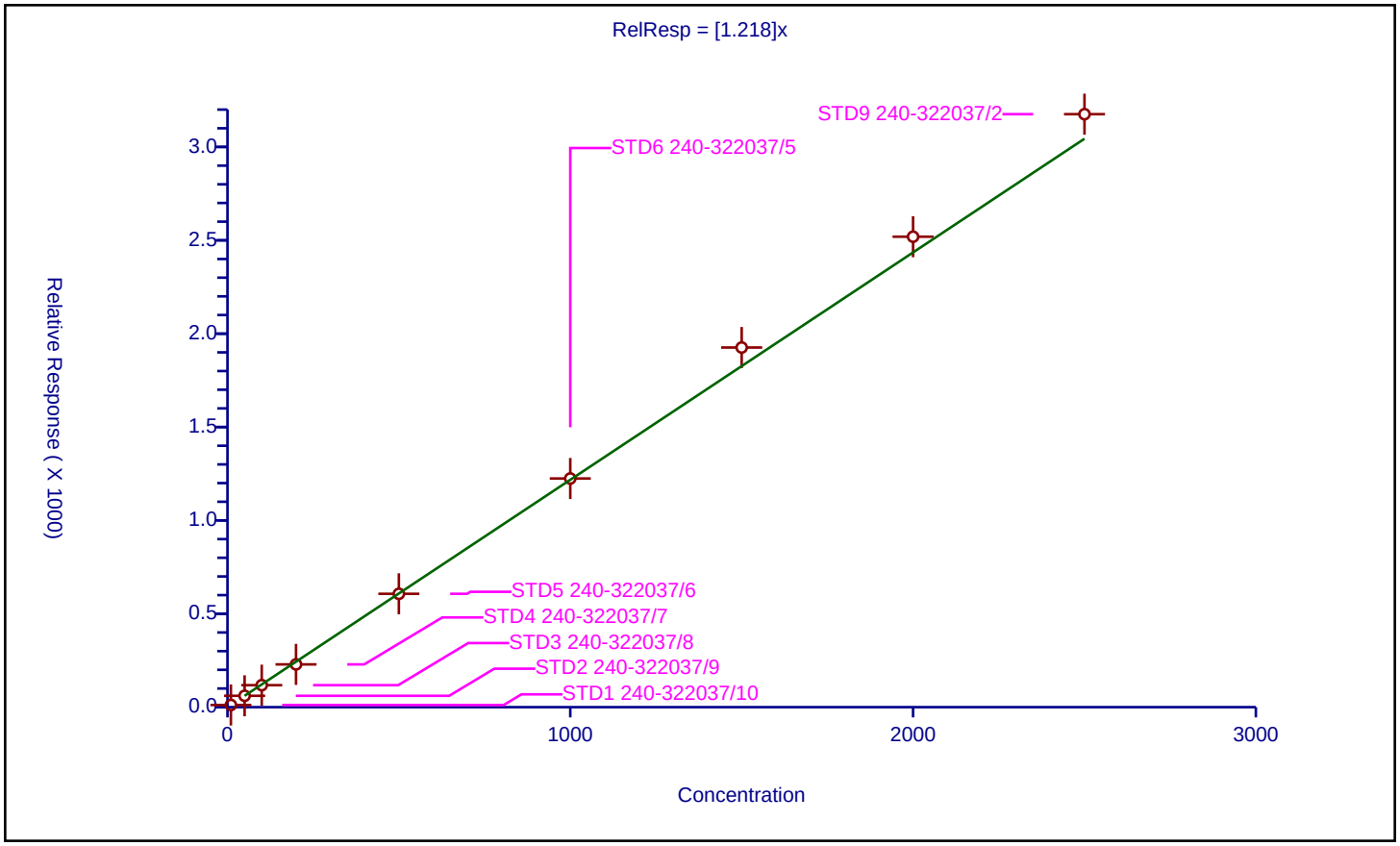
Curve Coefficients

Intercept:	0
Slope:	1.218

Error Coefficients

Standard Error:	1550000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	11.655932	400.0	262390.0	1.165593	Y
2	STD2 240-322037/9	50.0	60.878766	400.0	324159.0	1.217575	Y
3	STD3 240-322037/8	100.0	117.767971	400.0	326537.0	1.17768	Y
4	STD4 240-322037/7	200.0	229.014676	400.0	366387.0	1.145073	Y
5	STD5 240-322037/6	500.0	607.036599	400.0	371401.0	1.214073	Y
6	STD6 240-322037/5	1000.0	1224.542813	400.0	356911.0	1.224543	Y
7	STD7 240-322037/4	1500.0	1925.975123	400.0	370697.0	1.283983	Y
8	STD8 240-322037/3	2000.0	2519.366674	400.0	378320.0	1.259683	Y
9	STD9 240-322037/2	2500.0	3175.508599	400.0	376279.0	1.270203	Y



Calibration / 2-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

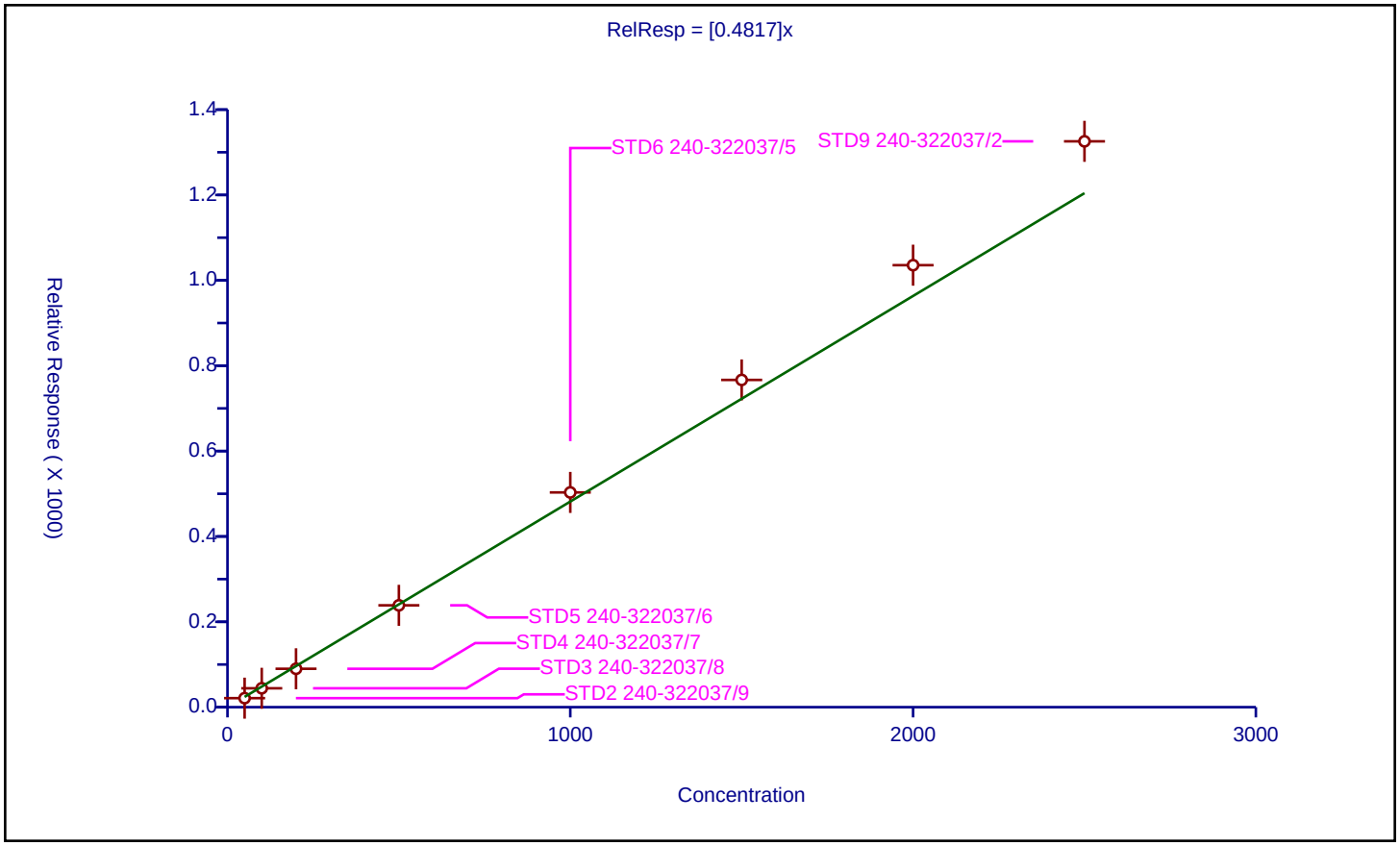
Curve Coefficients

Intercept:	0
Slope:	0.4817

Error Coefficients

Standard Error:	684000
Relative Standard Error:	8.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	21.08965	400.0	324159.0	0.421793	Y
2	STD3 240-322037/8	100.0	44.264509	400.0	326537.0	0.442645	Y
3	STD4 240-322037/7	200.0	89.927863	400.0	366387.0	0.449639	Y
4	STD5 240-322037/6	500.0	238.591711	400.0	371401.0	0.477183	Y
5	STD6 240-322037/5	1000.0	503.113661	400.0	356911.0	0.503114	Y
6	STD7 240-322037/4	1500.0	766.675749	400.0	370697.0	0.511117	Y
7	STD8 240-322037/3	2000.0	1035.503278	400.0	378320.0	0.517752	Y
8	STD9 240-322037/2	2500.0	1325.671643	400.0	376279.0	0.530269	Y



Calibration / Dimethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

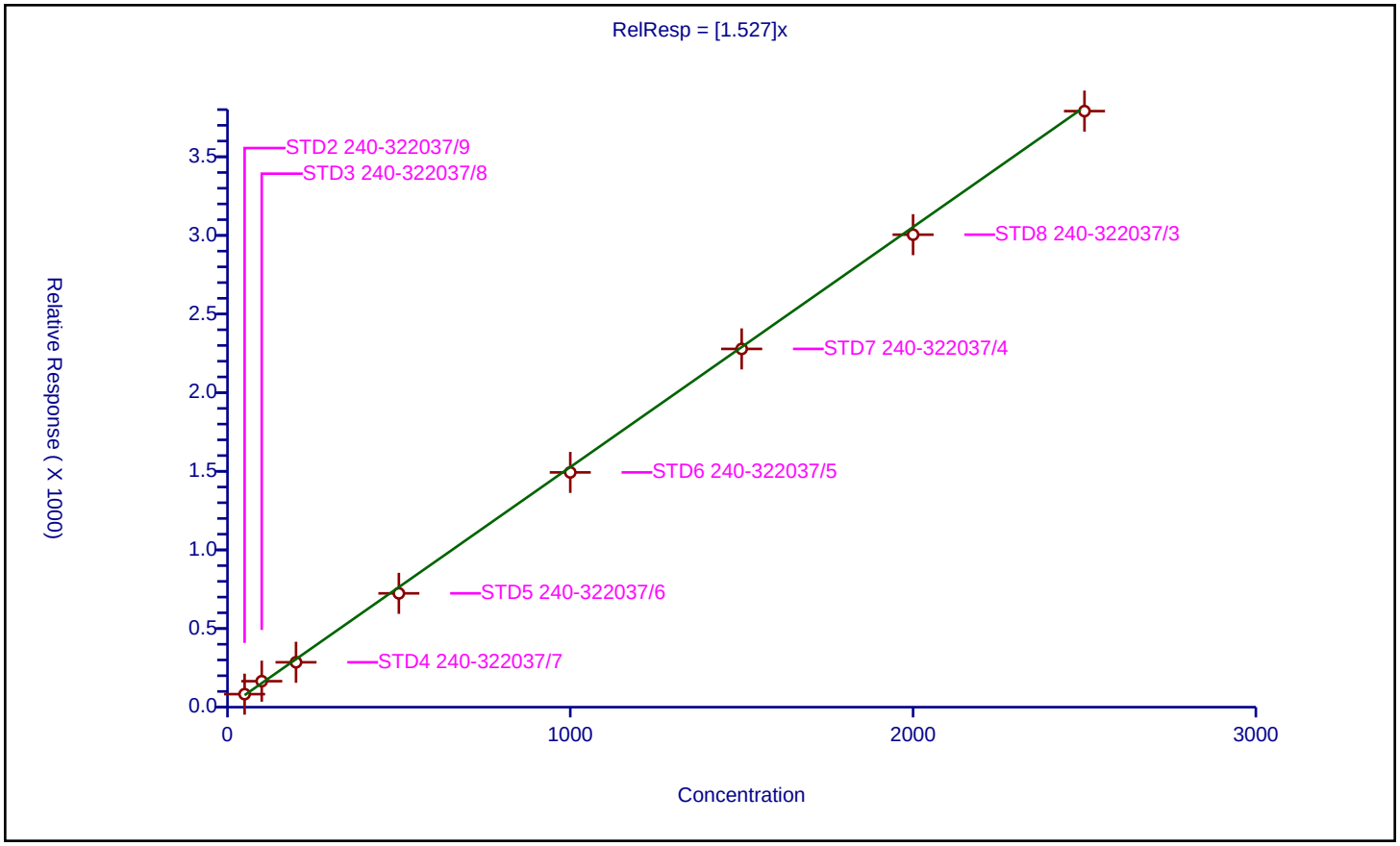
Curve Coefficients

Intercept:	0
Slope:	1.527

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	82.77913	400.0	324159.0	1.655583	Y
2	STD3 240-322037/8	100.0	165.265192	400.0	326537.0	1.652652	Y
3	STD4 240-322037/7	200.0	285.431525	400.0	366387.0	1.427158	Y
4	STD5 240-322037/6	500.0	723.805267	400.0	371401.0	1.447611	Y
5	STD6 240-322037/5	1000.0	1492.963792	400.0	356911.0	1.492964	Y
6	STD7 240-322037/4	1500.0	2278.180832	400.0	370697.0	1.518787	Y
7	STD8 240-322037/3	2000.0	3004.635229	400.0	378320.0	1.502318	Y
8	STD9 240-322037/2	2500.0	3790.411902	400.0	376279.0	1.516165	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

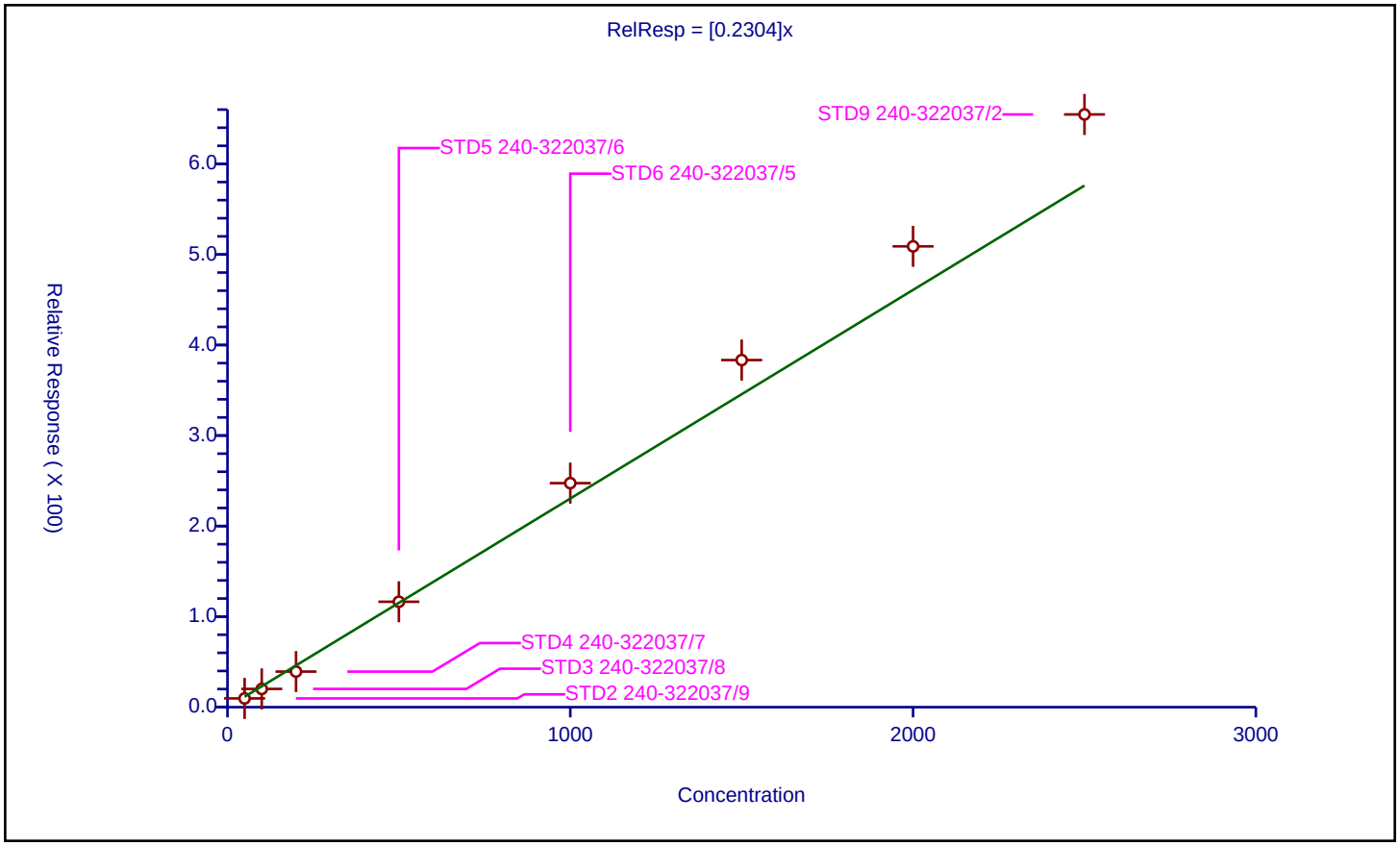
Curve Coefficients

Intercept:	0
Slope:	0.2304

Error Coefficients

Standard Error:	338000
Relative Standard Error:	12.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	9.669329	400.0	324159.0	0.193387	Y
2	STD3 240-322037/8	100.0	20.144731	400.0	326537.0	0.201447	Y
3	STD4 240-322037/7	200.0	39.279778	400.0	366387.0	0.196399	Y
4	STD5 240-322037/6	500.0	116.418642	400.0	371401.0	0.232837	Y
5	STD6 240-322037/5	1000.0	247.425268	400.0	356911.0	0.247425	Y
6	STD7 240-322037/4	1500.0	383.381576	400.0	370697.0	0.255588	Y
7	STD8 240-322037/3	2000.0	508.965955	400.0	378320.0	0.254483	Y
8	STD9 240-322037/2	2500.0	654.667414	400.0	376279.0	0.261867	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

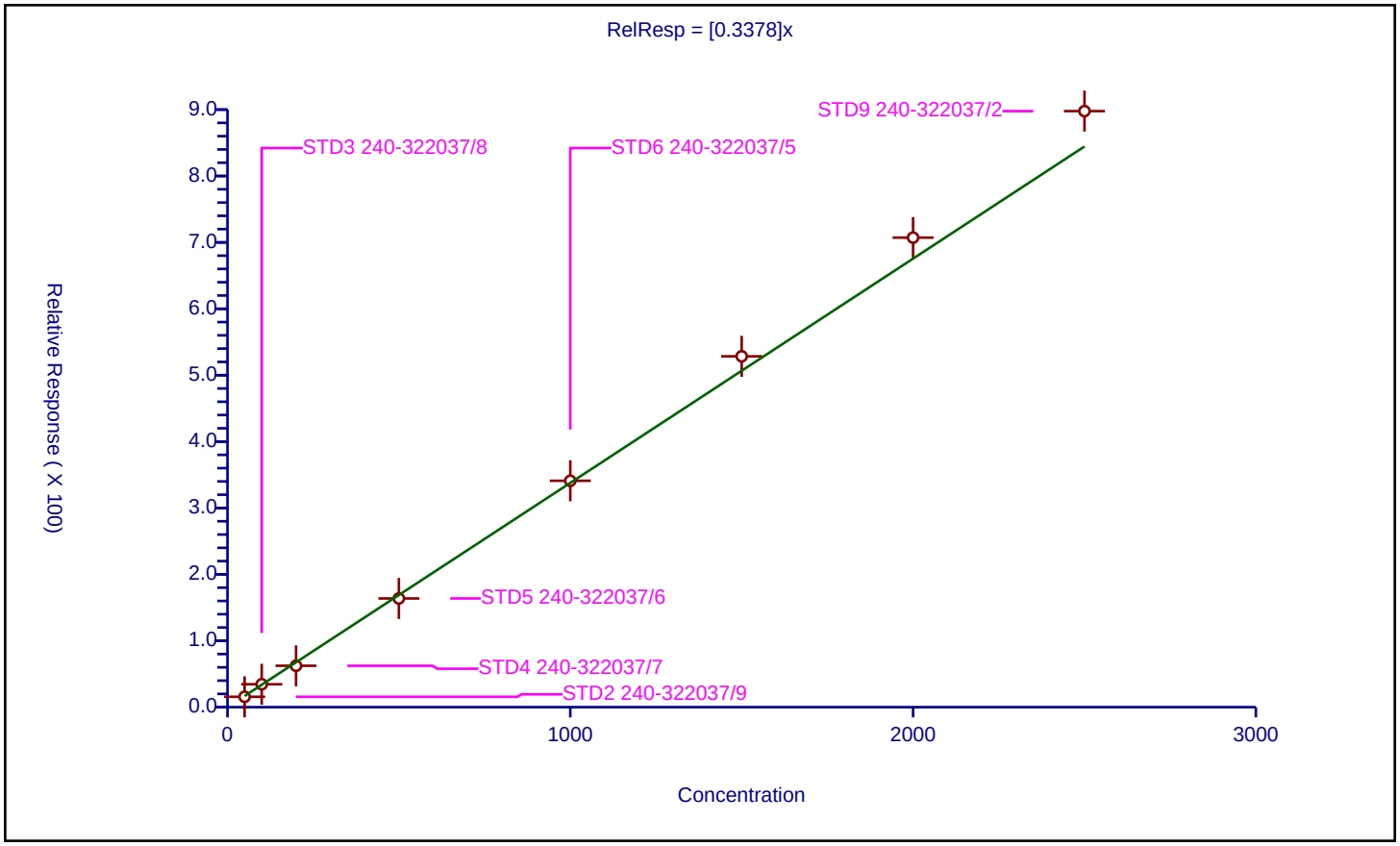
Curve Coefficients

Intercept:	0
Slope:	0.3378

Error Coefficients

Standard Error:	466000
Relative Standard Error:	5.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	15.60839	400.0	324159.0	0.312168	Y
2	STD3 240-322037/8	100.0	34.50635	400.0	326537.0	0.345063	Y
3	STD4 240-322037/7	200.0	62.330814	400.0	366387.0	0.311654	Y
4	STD5 240-322037/6	500.0	163.71523	400.0	371401.0	0.32743	Y
5	STD6 240-322037/5	1000.0	340.941019	400.0	356911.0	0.340941	Y
6	STD7 240-322037/4	1500.0	528.41539	400.0	370697.0	0.352277	Y
7	STD8 240-322037/3	2000.0	707.17805	400.0	378320.0	0.353589	Y
8	STD9 240-322037/2	2500.0	897.733862	400.0	376279.0	0.359094	Y



Calibration / Acenaphthylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

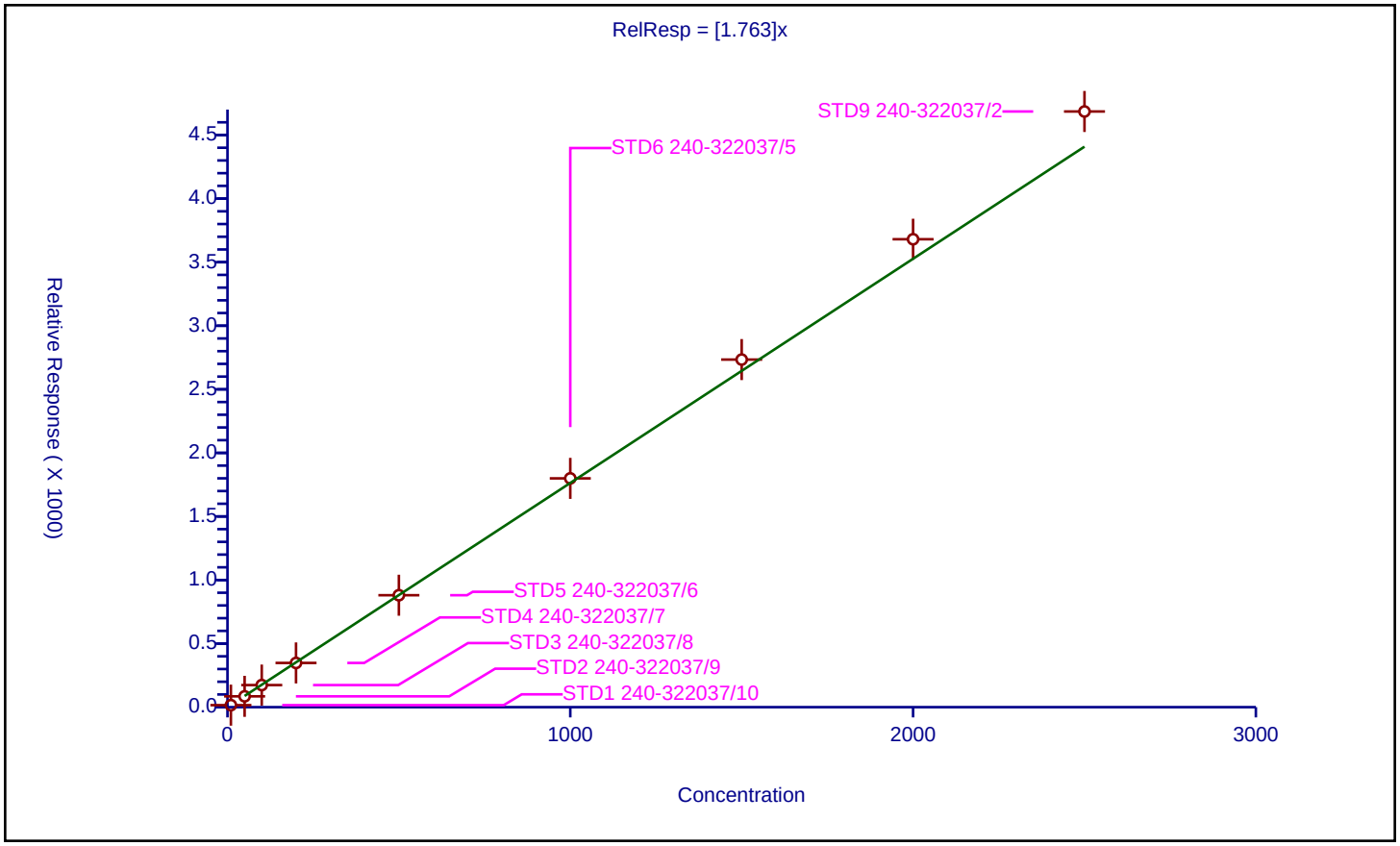
Curve Coefficients

Intercept:	0
Slope:	1.763

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	15.910667	400.0	262390.0	1.591067	Y
2	STD2 240-322037/9	50.0	85.233481	400.0	324159.0	1.70467	Y
3	STD3 240-322037/8	100.0	173.80205	400.0	326537.0	1.73802	Y
4	STD4 240-322037/7	200.0	347.826751	400.0	366387.0	1.739134	Y
5	STD5 240-322037/6	500.0	880.451049	400.0	371401.0	1.760902	Y
6	STD6 240-322037/5	1000.0	1799.472698	400.0	356911.0	1.799473	Y
7	STD7 240-322037/4	1500.0	2733.878073	400.0	370697.0	1.822585	Y
8	STD8 240-322037/3	2000.0	3680.376401	400.0	378320.0	1.840188	Y
9	STD9 240-322037/2	2500.0	4685.094837	400.0	376279.0	1.874038	Y



Calibration / 3-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

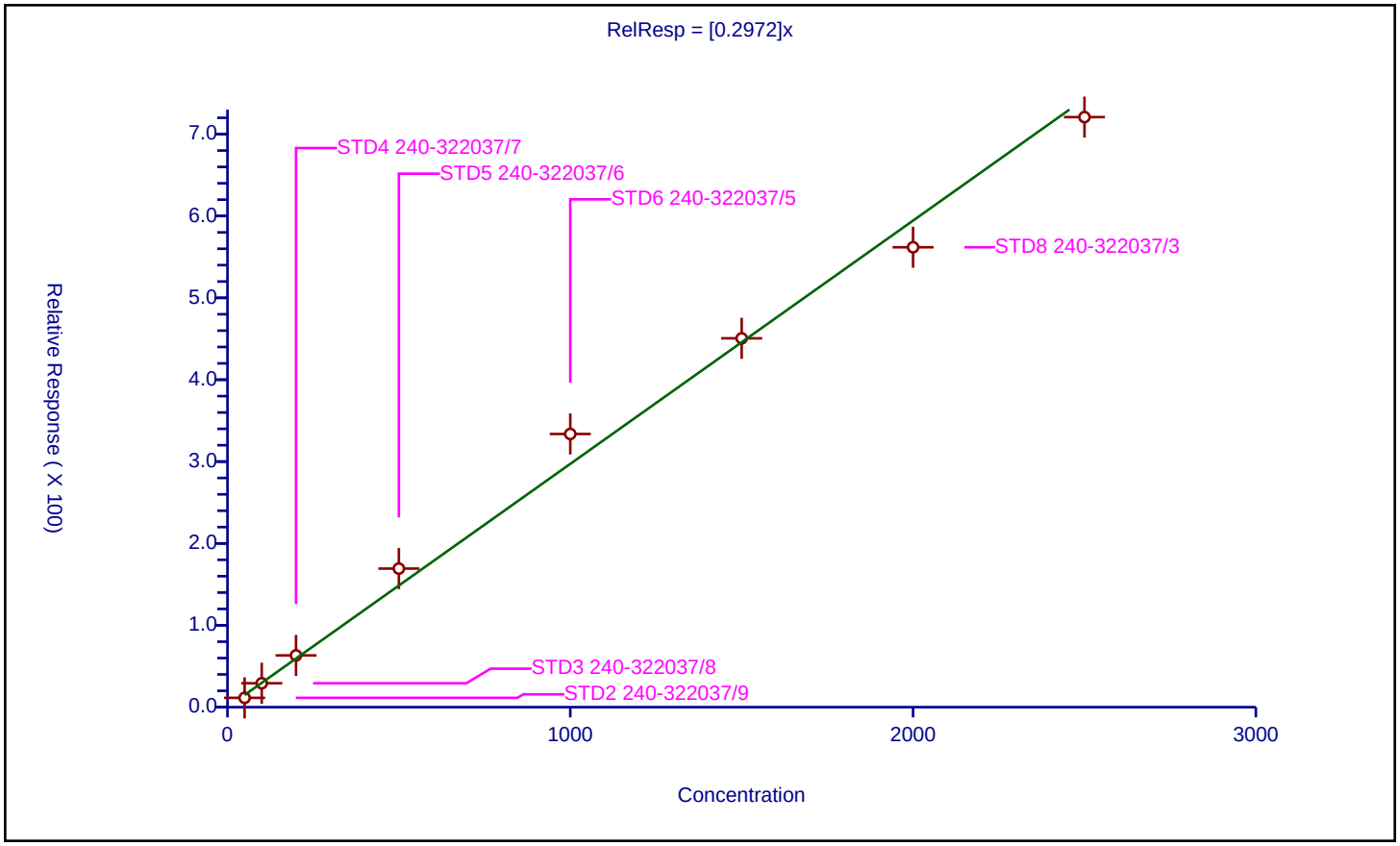
Curve Coefficients

Intercept:	0
Slope:	0.2972

Error Coefficients

Standard Error:	384000
Relative Standard Error:	11.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	11.369729	400.0	324159.0	0.227395	Y
2	STD3 240-322037/8	100.0	29.213229	400.0	326537.0	0.292132	Y
3	STD4 240-322037/7	200.0	63.230409	400.0	366387.0	0.316152	Y
4	STD5 240-322037/6	500.0	169.29949	400.0	371401.0	0.338599	Y
5	STD6 240-322037/5	1000.0	333.731378	400.0	356911.0	0.333731	Y
6	STD7 240-322037/4	1500.0	450.599816	400.0	370697.0	0.3004	Y
7	STD8 240-322037/3	2000.0	561.850285	400.0	378320.0	0.280925	Y
8	STD9 240-322037/2	2500.0	720.843842	400.0	376279.0	0.288338	Y



Calibration / 2,4-Dinitrophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

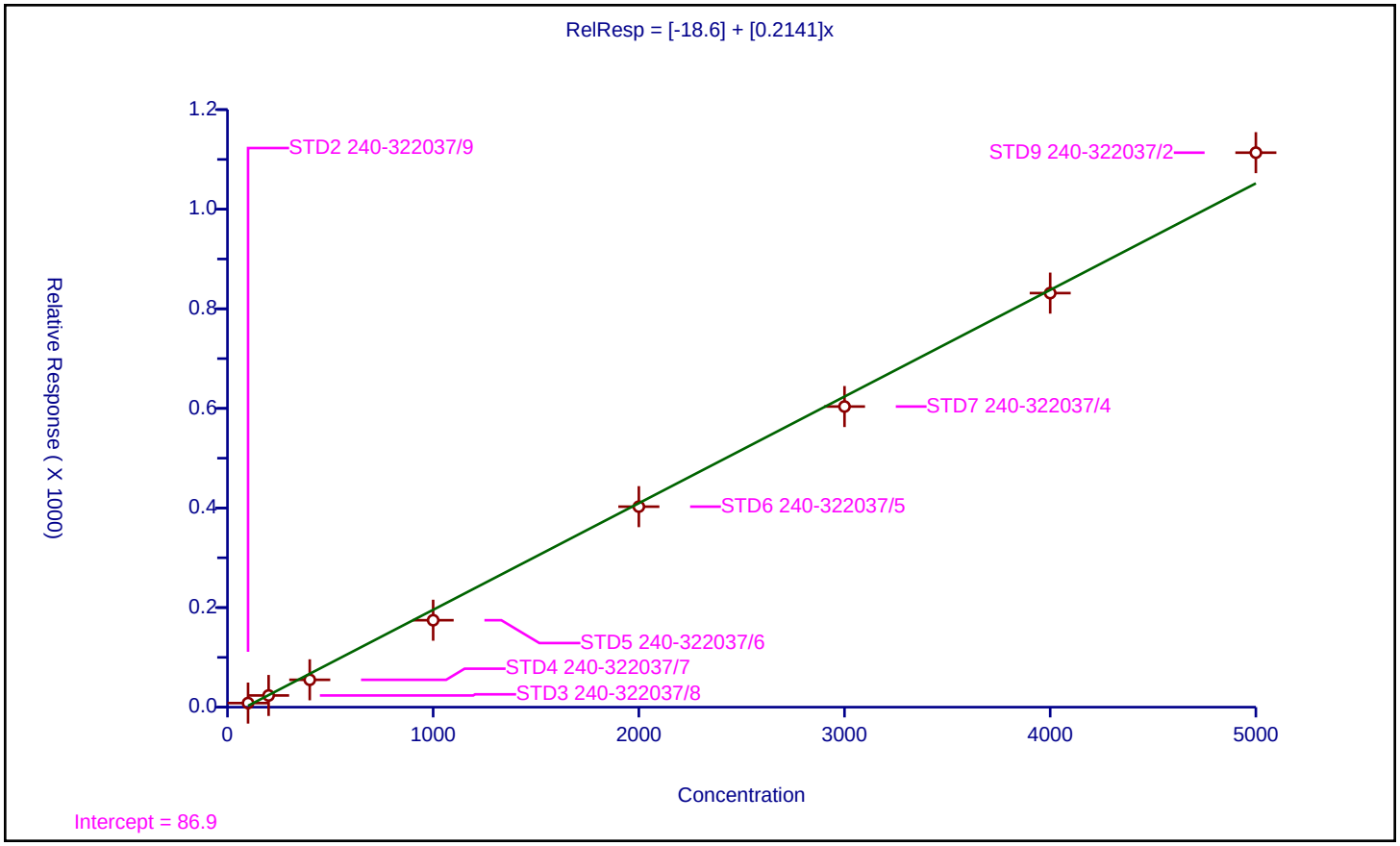
Curve Coefficients

Intercept:	-18.6
Slope:	0.2141

Error Coefficients

Standard Error:	603000
Relative Standard Error:	12.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	8.232997	400.0	324159.0	0.08233	Y
2	STD3 240-322037/8	200.0	23.475441	400.0	326537.0	0.117377	Y
3	STD4 240-322037/7	400.0	54.963741	400.0	366387.0	0.137409	Y
4	STD5 240-322037/6	1000.0	174.578959	400.0	371401.0	0.174579	Y
5	STD6 240-322037/5	2000.0	402.666211	400.0	356911.0	0.201333	Y
6	STD7 240-322037/4	3000.0	603.691964	400.0	370697.0	0.201231	Y
7	STD8 240-322037/3	4000.0	831.505604	400.0	378320.0	0.207876	Y
8	STD9 240-322037/2	5000.0	1113.546066	400.0	376279.0	0.222709	Y



Calibration / 4-Nitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

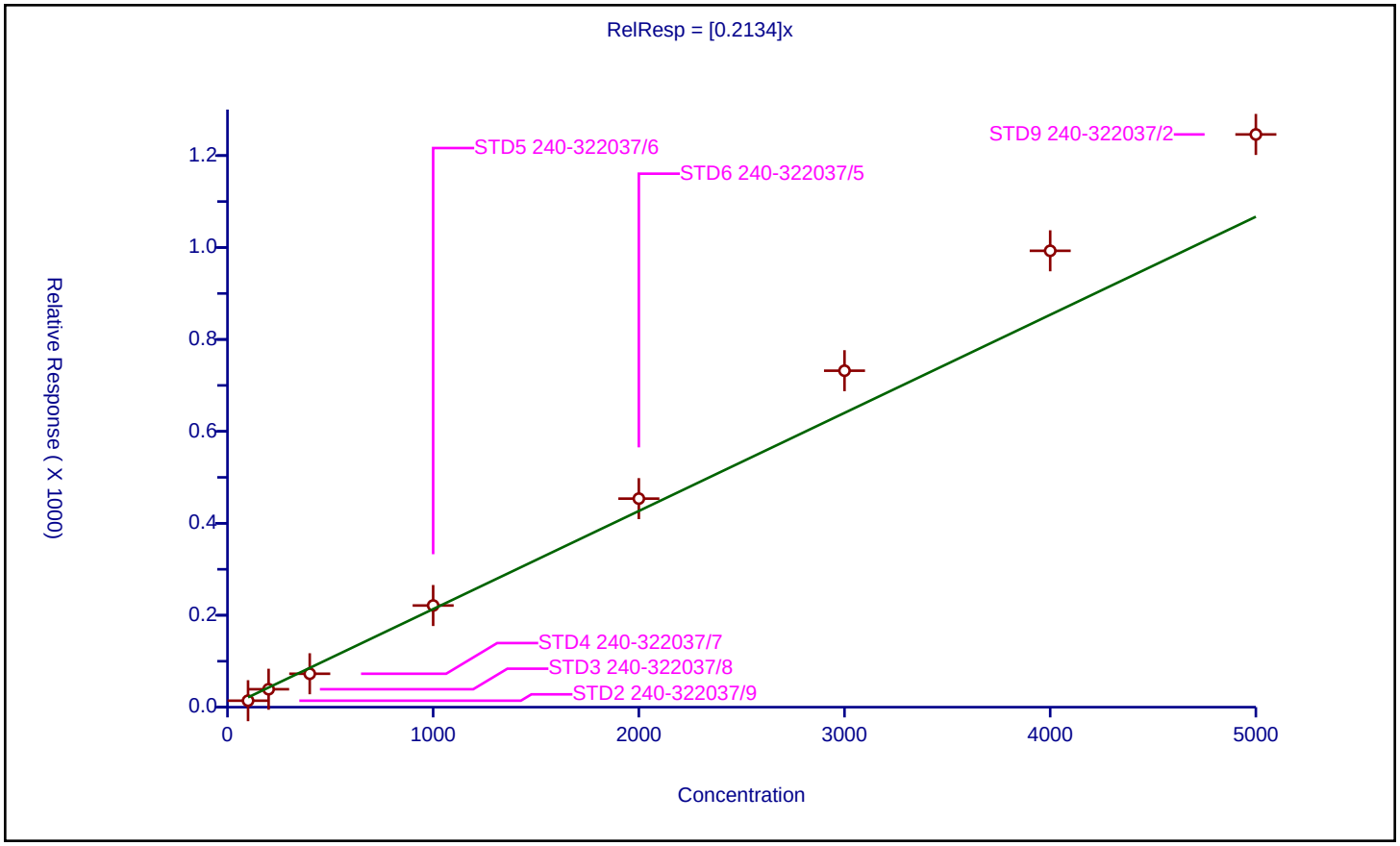
Curve Coefficients

Intercept:	0
Slope:	0.2134

Error Coefficients

Standard Error:	646000
Relative Standard Error:	17.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.965

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	14.109125	400.0	324159.0	0.141091	Y
2	STD3 240-322037/8	200.0	38.998337	400.0	326537.0	0.194992	Y
3	STD4 240-322037/7	400.0	72.684893	400.0	366387.0	0.181712	Y
4	STD5 240-322037/6	1000.0	221.18088	400.0	371401.0	0.221181	Y
5	STD6 240-322037/5	2000.0	453.661557	400.0	356911.0	0.226831	Y
6	STD7 240-322037/4	3000.0	731.980027	400.0	370697.0	0.243993	Y
7	STD8 240-322037/3	4000.0	992.860013	400.0	378320.0	0.248215	Y
8	STD9 240-322037/2	5000.0	1245.96164	400.0	376279.0	0.249192	Y



Calibration / Acenaphthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

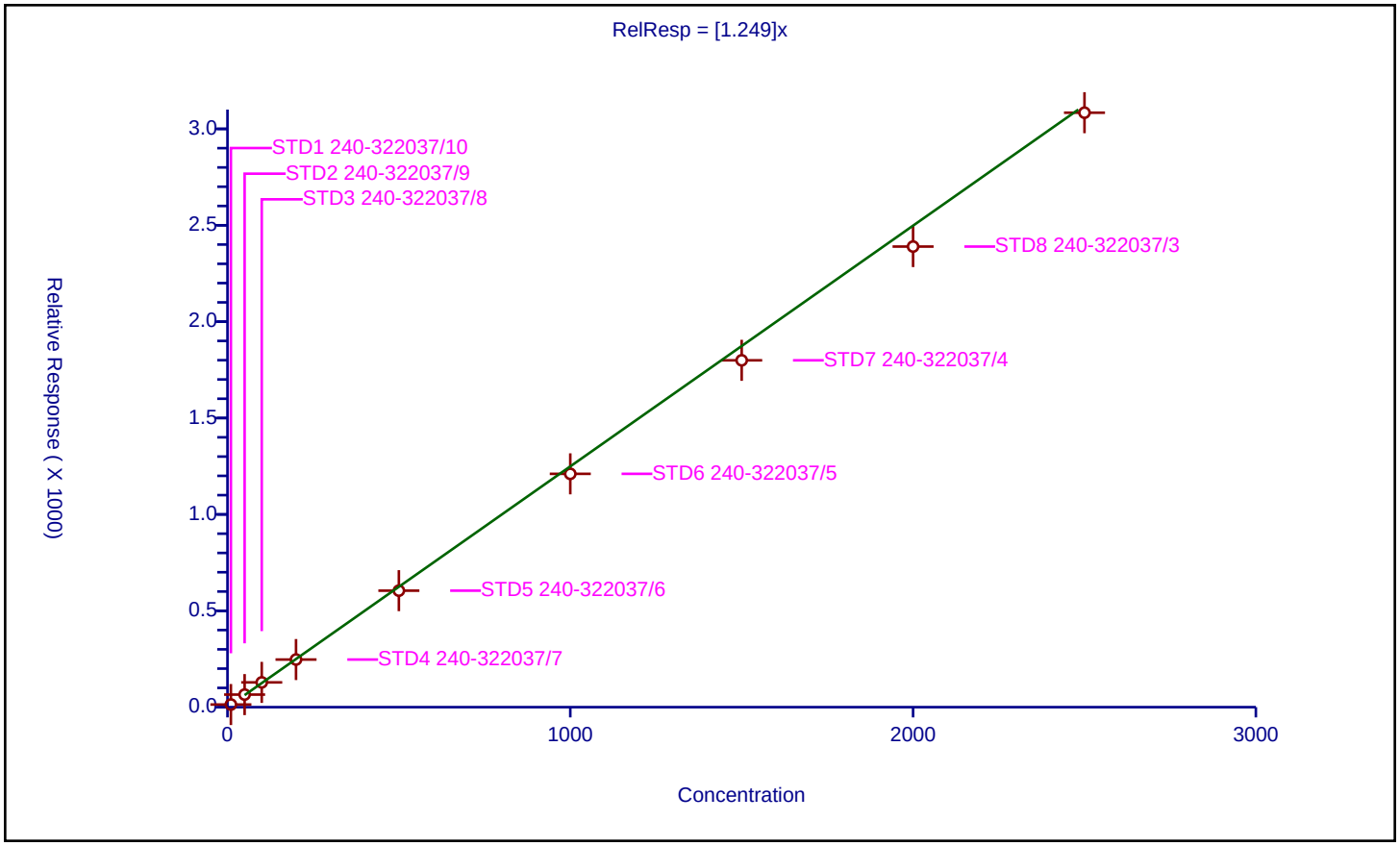
Curve Coefficients

Intercept:	0
Slope:	1.249

Error Coefficients

Standard Error:	1490000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	13.683448	400.0	262390.0	1.368345	Y
2	STD2 240-322037/9	50.0	65.243291	400.0	324159.0	1.304866	Y
3	STD3 240-322037/8	100.0	128.561235	400.0	326537.0	1.285612	Y
4	STD4 240-322037/7	200.0	247.024048	400.0	366387.0	1.23512	Y
5	STD5 240-322037/6	500.0	604.416251	400.0	371401.0	1.208833	Y
6	STD6 240-322037/5	1000.0	1210.448543	400.0	356911.0	1.210449	Y
7	STD7 240-322037/4	1500.0	1799.309949	400.0	370697.0	1.19954	Y
8	STD8 240-322037/3	2000.0	2389.510467	400.0	378320.0	1.194755	Y
9	STD9 240-322037/2	2500.0	3084.038174	400.0	376279.0	1.233615	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

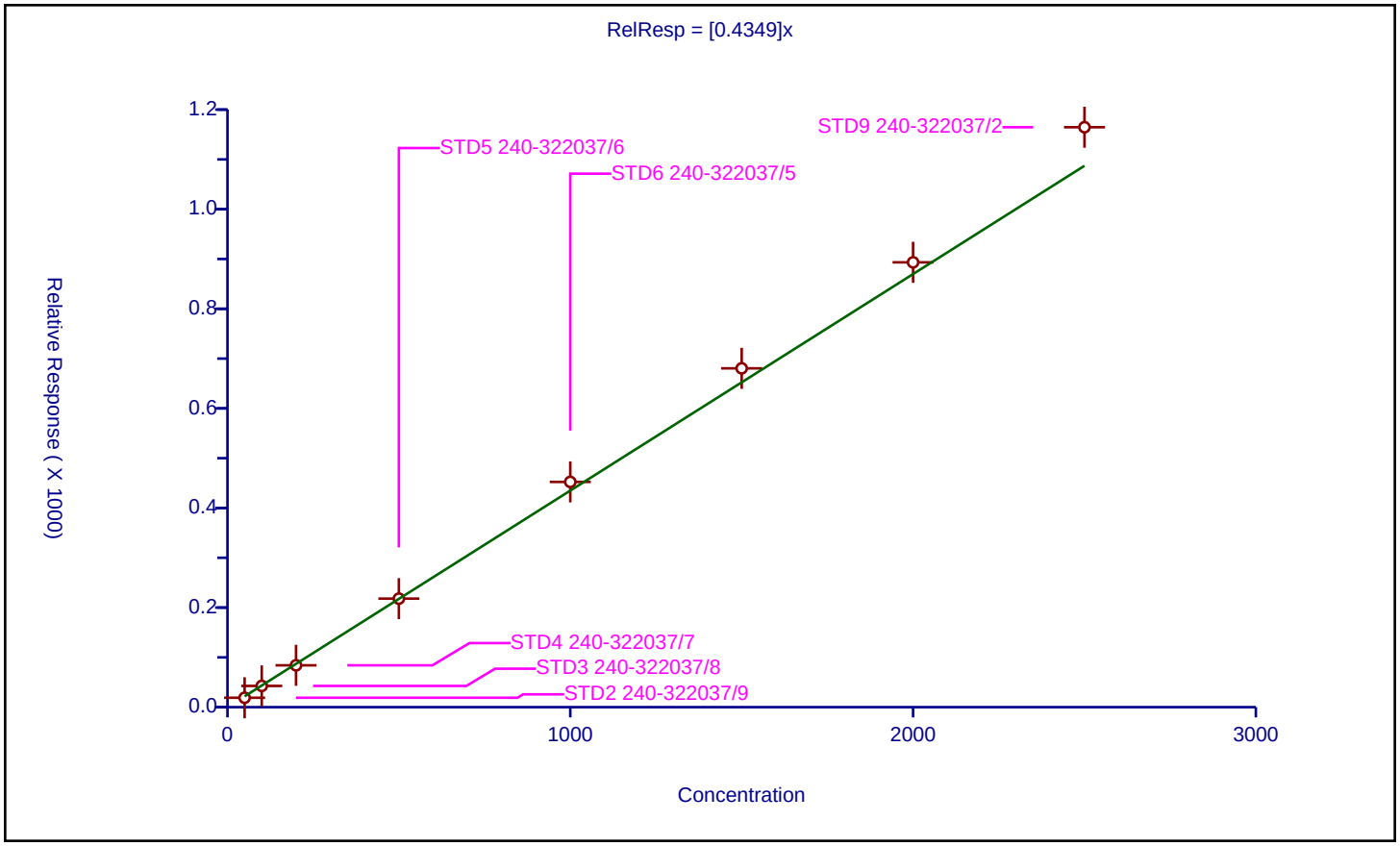
Curve Coefficients

Intercept:	0
Slope:	0.4349

Error Coefficients

Standard Error:	600000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	18.906771	400.0	324159.0	0.378135	Y
2	STD3 240-322037/8	100.0	42.637741	400.0	326537.0	0.426377	Y
3	STD4 240-322037/7	200.0	84.036824	400.0	366387.0	0.420184	Y
4	STD5 240-322037/6	500.0	217.927254	400.0	371401.0	0.435855	Y
5	STD6 240-322037/5	1000.0	452.331253	400.0	356911.0	0.452331	Y
6	STD7 240-322037/4	1500.0	680.406909	400.0	370697.0	0.453605	Y
7	STD8 240-322037/3	2000.0	893.290336	400.0	378320.0	0.446645	Y
8	STD9 240-322037/2	2500.0	1164.614555	400.0	376279.0	0.465846	Y



Calibration / Dibenzofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

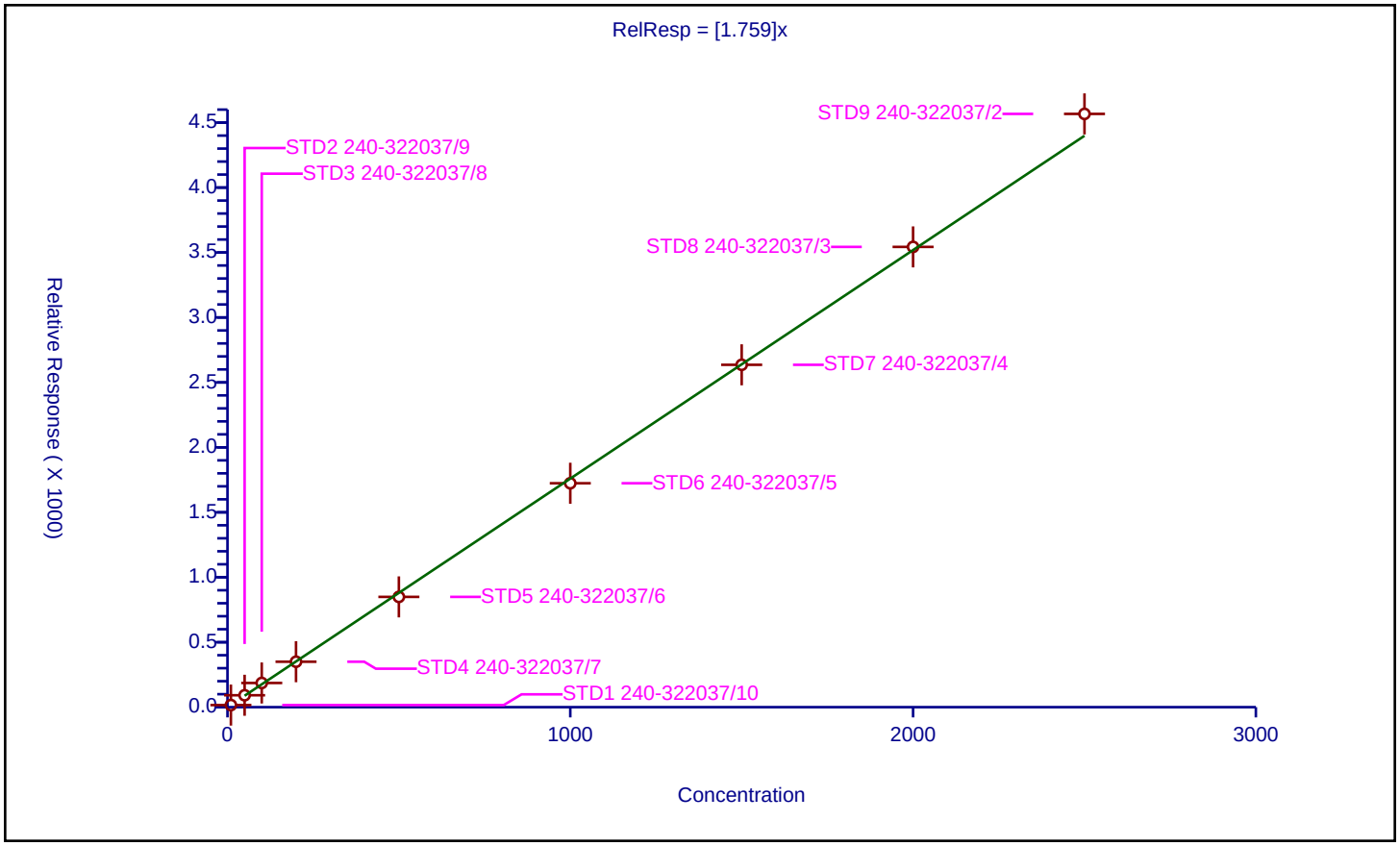
Curve Coefficients

Intercept:	0
Slope:	1.759

Error Coefficients

Standard Error:	2200000
Relative Standard Error:	4.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	16.131712	400.0	262390.0	1.613171	Y
2	STD2 240-322037/9	50.0	91.714251	400.0	324159.0	1.834285	Y
3	STD3 240-322037/8	100.0	186.215957	400.0	326537.0	1.86216	Y
4	STD4 240-322037/7	200.0	349.716557	400.0	366387.0	1.748583	Y
5	STD5 240-322037/6	500.0	848.878705	400.0	371401.0	1.697757	Y
6	STD6 240-322037/5	1000.0	1723.745135	400.0	356911.0	1.723745	Y
7	STD7 240-322037/4	1500.0	2635.407354	400.0	370697.0	1.756938	Y
8	STD8 240-322037/3	2000.0	3543.023895	400.0	378320.0	1.771512	Y
9	STD9 240-322037/2	2500.0	4566.935705	400.0	376279.0	1.826774	Y



Calibration / 2,3,4,6-Tetrachlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

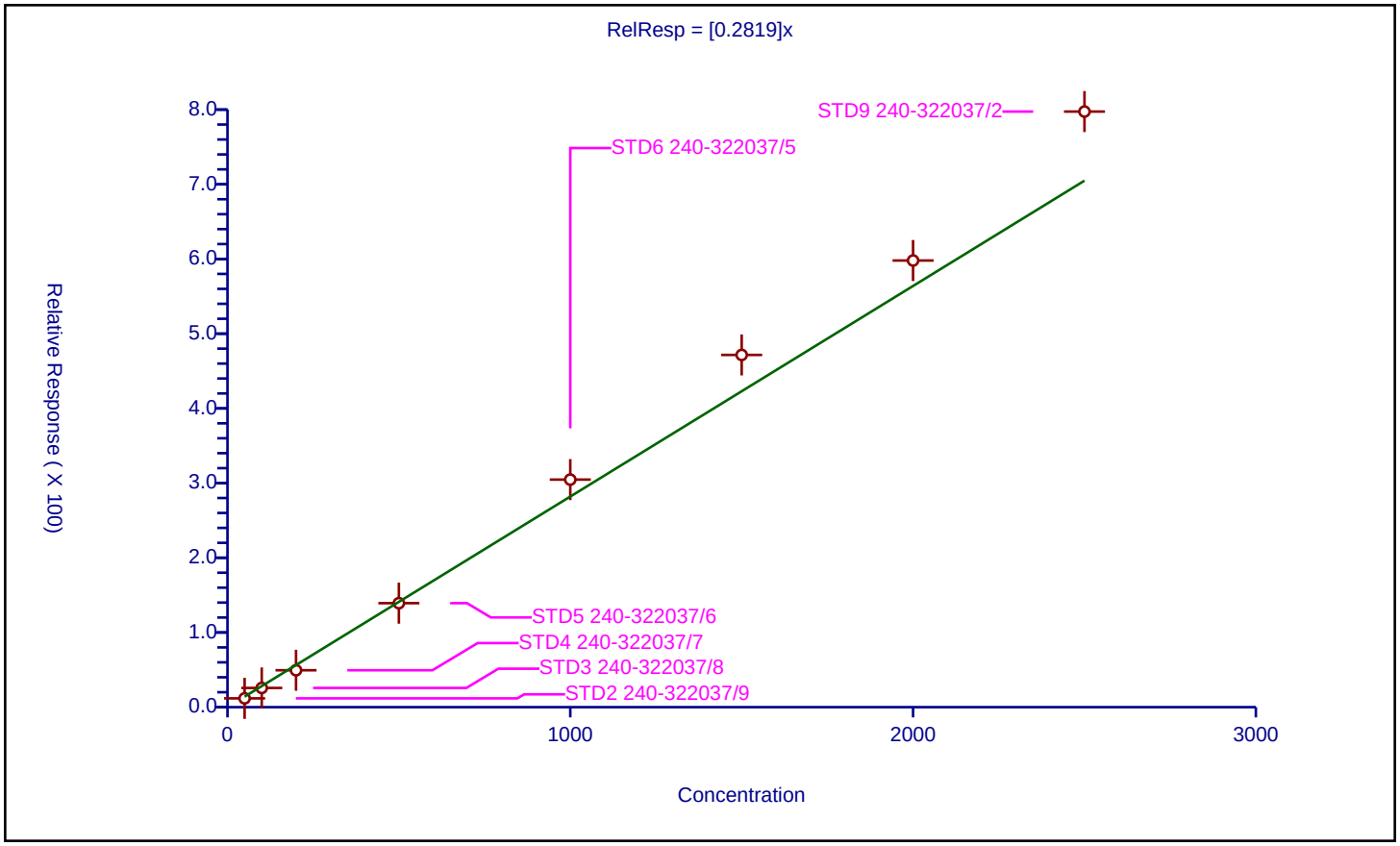
Curve Coefficients

Intercept:	0
Slope:	0.2819

Error Coefficients

Standard Error:	408000
Relative Standard Error:	11.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	11.797914	400.0	324159.0	0.235958	Y
2	STD3 240-322037/8	100.0	25.719597	400.0	326537.0	0.257196	Y
3	STD4 240-322037/7	200.0	49.411142	400.0	366387.0	0.247056	Y
4	STD5 240-322037/6	500.0	139.212334	400.0	371401.0	0.278425	Y
5	STD6 240-322037/5	1000.0	304.642894	400.0	356911.0	0.304643	Y
6	STD7 240-322037/4	1500.0	471.554936	400.0	370697.0	0.31437	Y
7	STD8 240-322037/3	2000.0	597.966801	400.0	378320.0	0.298983	Y
8	STD9 240-322037/2	2500.0	797.359406	400.0	376279.0	0.318944	Y



Calibration / Hexadecane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

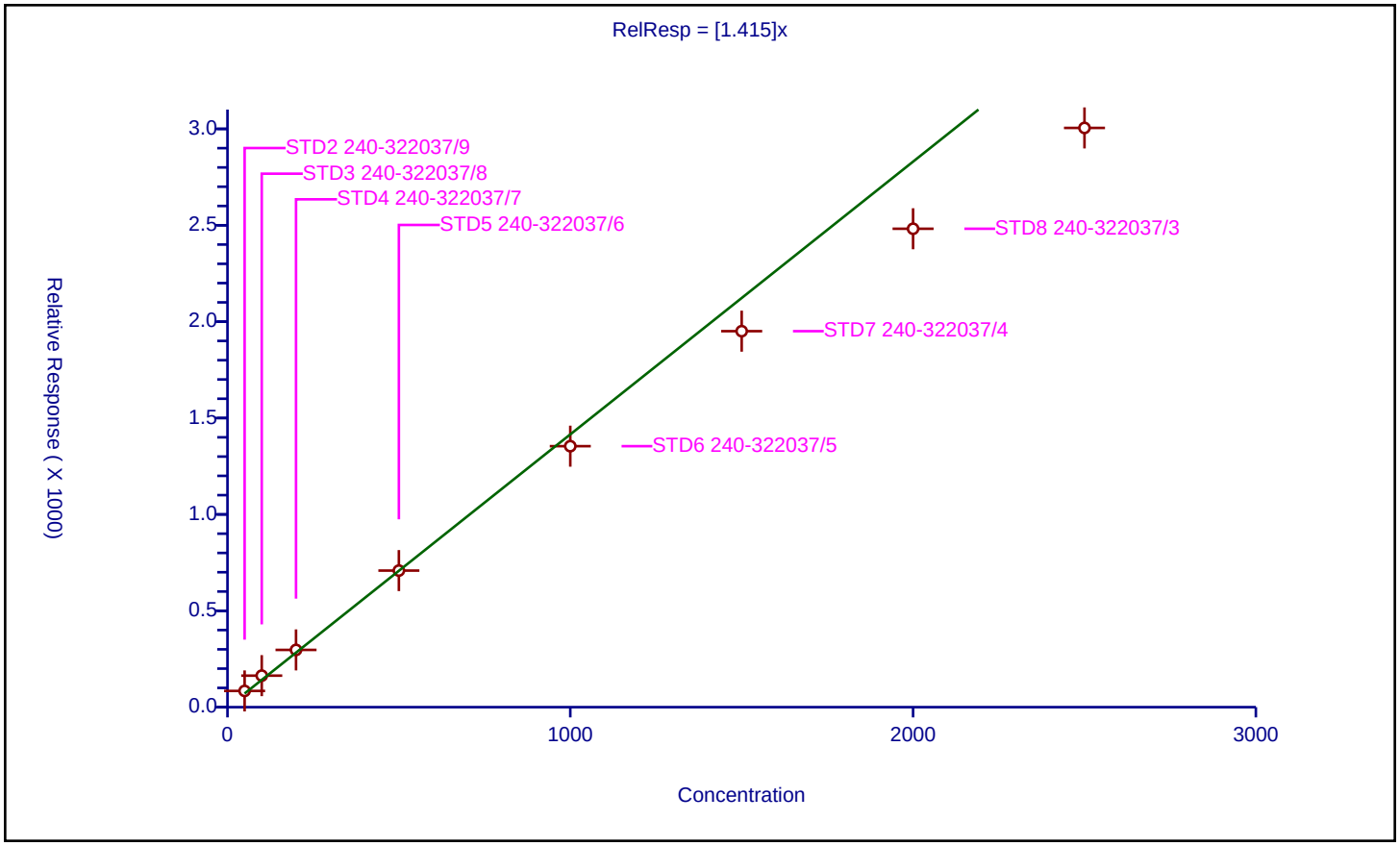
Curve Coefficients

Intercept:	0
Slope:	1.415

Error Coefficients

Standard Error:	1630000
Relative Standard Error:	12.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	84.312945	400.0	324159.0	1.686259	Y
2	STD3 240-322037/8	100.0	163.462027	400.0	326537.0	1.63462	Y
3	STD4 240-322037/7	200.0	297.059666	400.0	366387.0	1.485298	Y
4	STD5 240-322037/6	500.0	708.495669	400.0	371401.0	1.416991	Y
5	STD6 240-322037/5	1000.0	1354.018229	400.0	356911.0	1.354018	Y
6	STD7 240-322037/4	1500.0	1950.575268	400.0	370697.0	1.300384	Y
7	STD8 240-322037/3	2000.0	2481.870374	400.0	378320.0	1.240935	Y
8	STD9 240-322037/2	2500.0	3005.001076	400.0	376279.0	1.202	Y



Calibration / Diethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

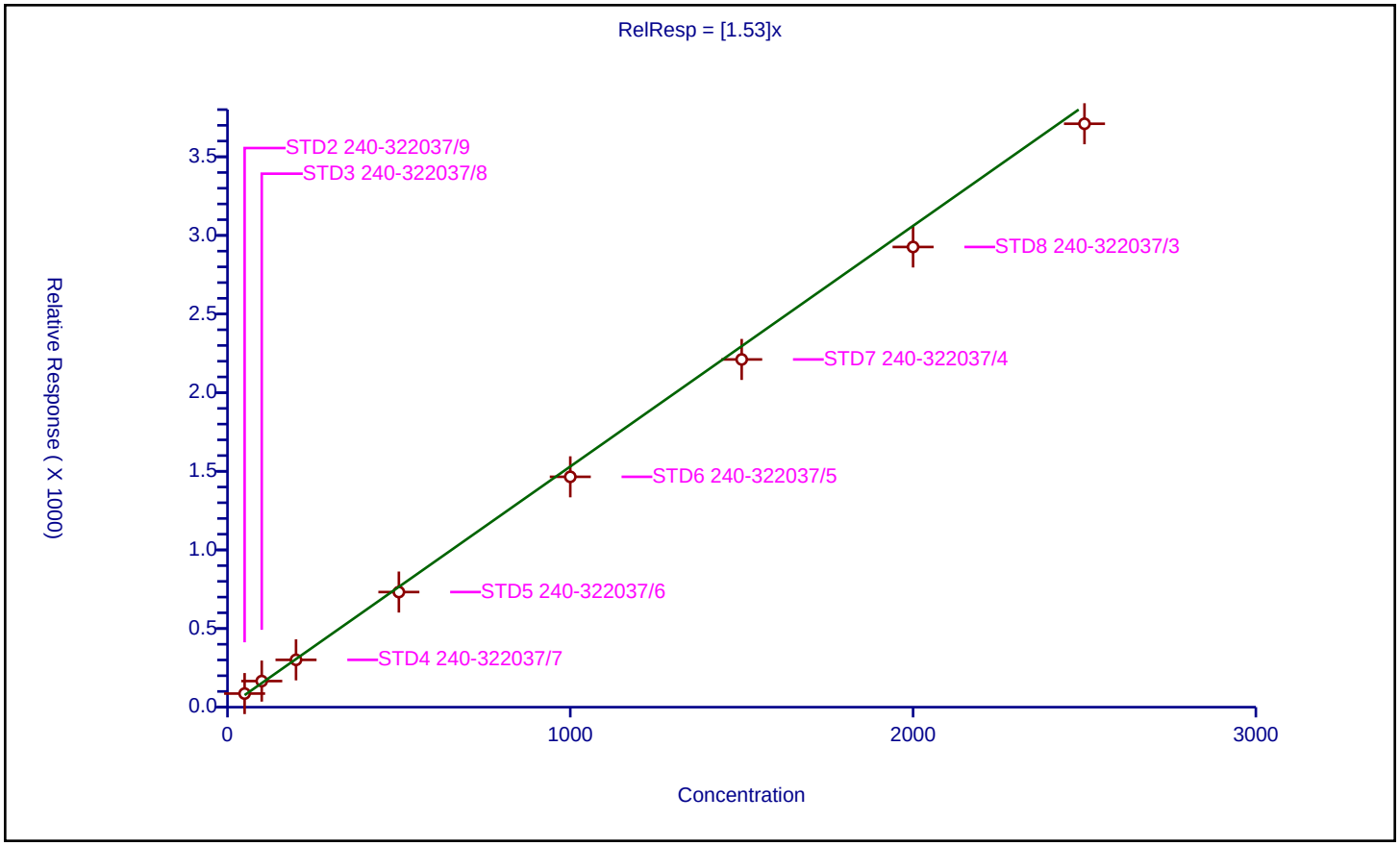
Curve Coefficients

Intercept:	0
Slope:	1.53

Error Coefficients

Standard Error:	1940000
Relative Standard Error:	6.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	86.464976	400.0	324159.0	1.7293	Y
2	STD3 240-322037/8	100.0	165.883805	400.0	326537.0	1.658838	Y
3	STD4 240-322037/7	200.0	300.886221	400.0	366387.0	1.504431	Y
4	STD5 240-322037/6	500.0	732.077727	400.0	371401.0	1.464155	Y
5	STD6 240-322037/5	1000.0	1464.868272	400.0	356911.0	1.464868	Y
6	STD7 240-322037/4	1500.0	2211.237749	400.0	370697.0	1.474158	Y
7	STD8 240-322037/3	2000.0	2926.363925	400.0	378320.0	1.463182	Y
8	STD9 240-322037/2	2500.0	3710.114038	400.0	376279.0	1.484046	Y



Calibration / 4-Chlorophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

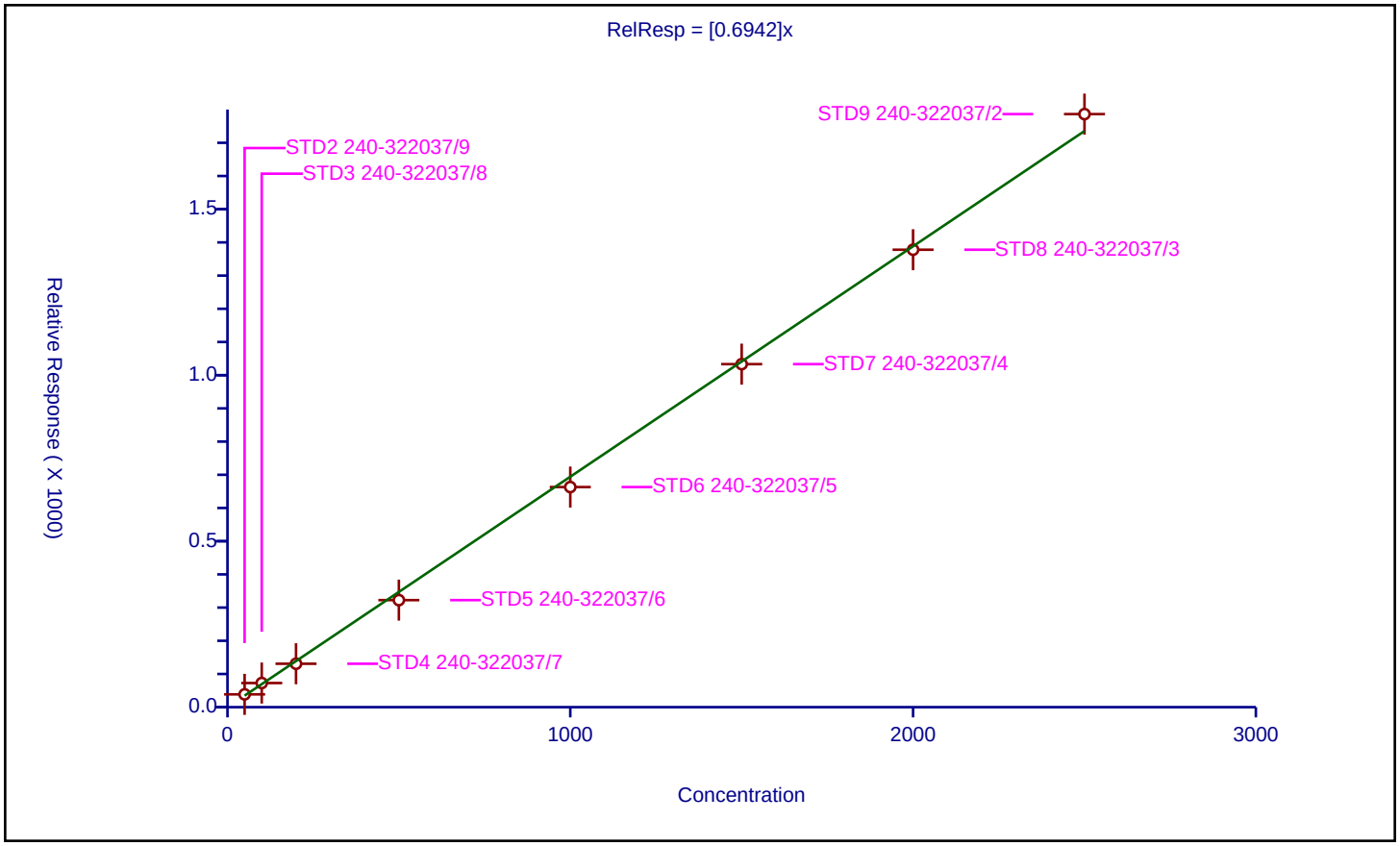
Curve Coefficients

Intercept:	0
Slope:	0.6942

Error Coefficients

Standard Error:	917000
Relative Standard Error:	6.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	38.605746	400.0	324159.0	0.772115	Y
2	STD3 240-322037/8	100.0	72.680278	400.0	326537.0	0.726803	Y
3	STD4 240-322037/7	200.0	130.791758	400.0	366387.0	0.653959	Y
4	STD5 240-322037/6	500.0	322.467629	400.0	371401.0	0.644935	Y
5	STD6 240-322037/5	1000.0	662.98545	400.0	356911.0	0.662985	Y
6	STD7 240-322037/4	1500.0	1033.253574	400.0	370697.0	0.688836	Y
7	STD8 240-322037/3	2000.0	1377.957285	400.0	378320.0	0.688979	Y
8	STD9 240-322037/2	2500.0	1786.482902	400.0	376279.0	0.714593	Y



Calibration / 4-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

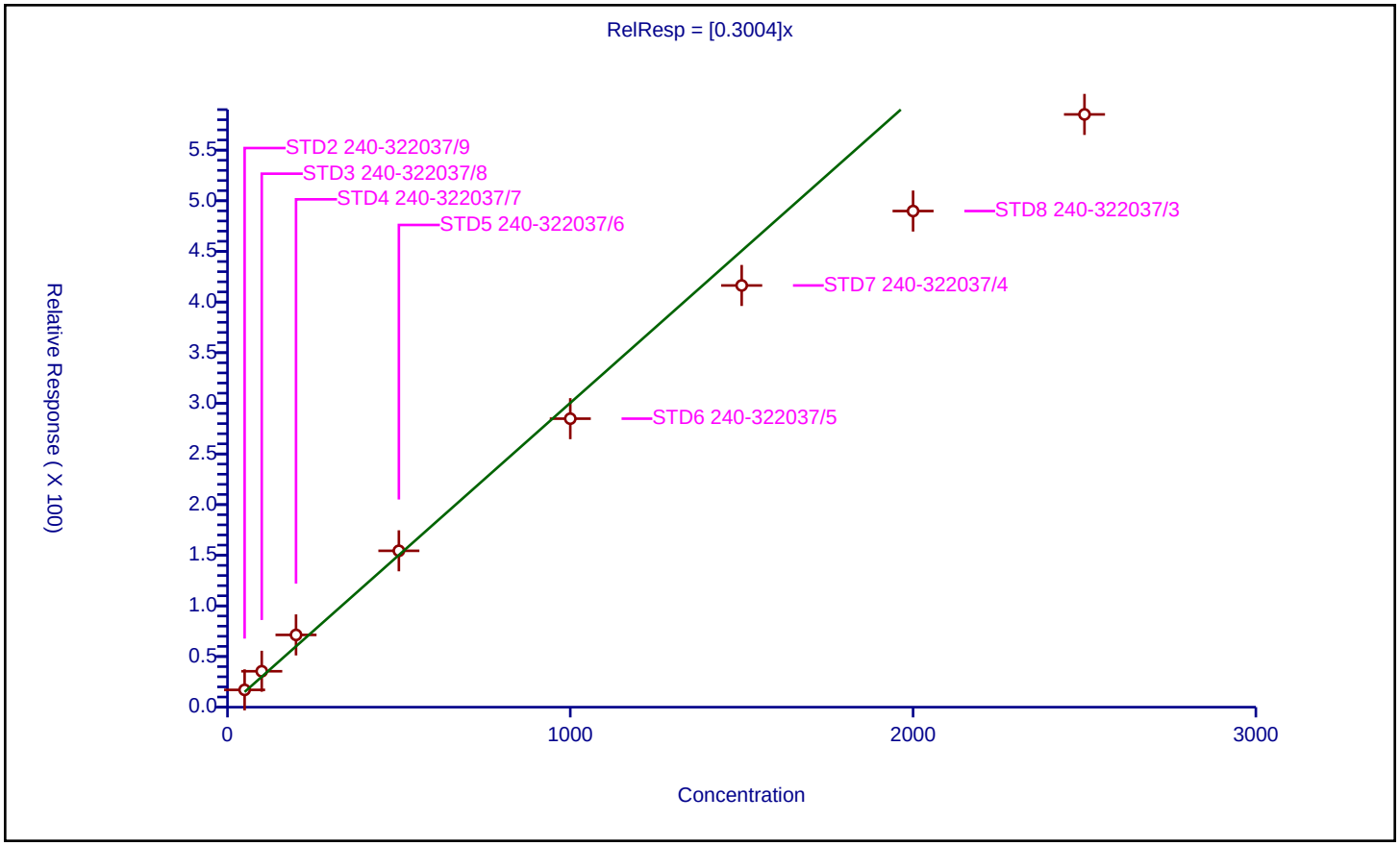
Curve Coefficients

Intercept:	0
Slope:	0.3004

Error Coefficients

Standard Error:	328000
Relative Standard Error:	16.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.959

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	17.071869	400.0	324159.0	0.341437	Y
2	STD3 240-322037/8	100.0	35.461831	400.0	326537.0	0.354618	Y
3	STD4 240-322037/7	200.0	71.35406	400.0	366387.0	0.35677	Y
4	STD5 240-322037/6	500.0	154.381921	400.0	371401.0	0.308764	Y
5	STD6 240-322037/5	1000.0	284.844121	400.0	356911.0	0.284844	Y
6	STD7 240-322037/4	1500.0	416.361611	400.0	370697.0	0.277574	Y
7	STD8 240-322037/3	2000.0	489.843519	400.0	378320.0	0.244922	Y
8	STD9 240-322037/2	2500.0	585.254027	400.0	376279.0	0.234102	Y



Calibration / Fluorene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

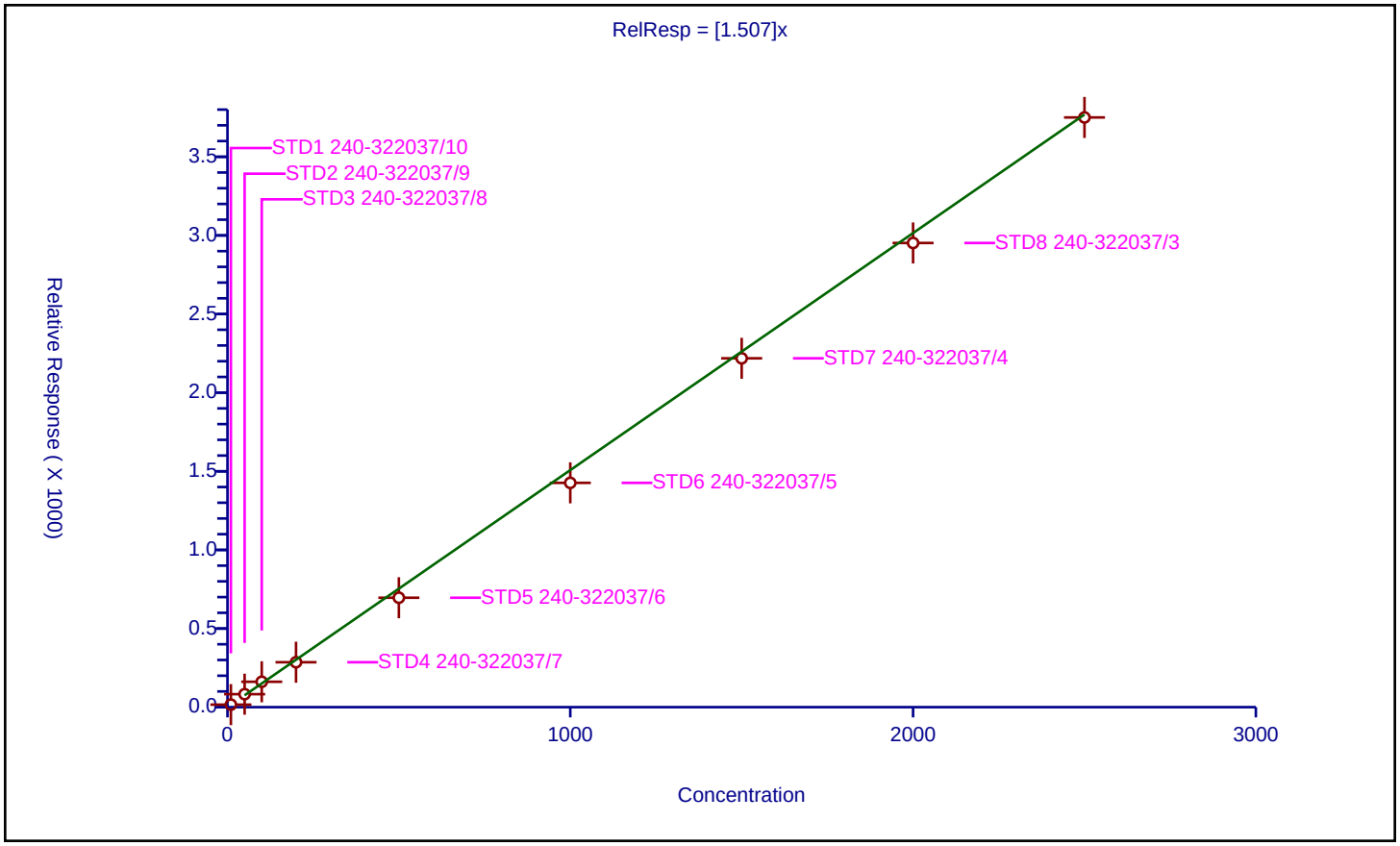
Curve Coefficients

Intercept:	0
Slope:	1.507

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	15.989939	400.0	262390.0	1.598994	Y
2	STD2 240-322037/9	50.0	82.605141	400.0	324159.0	1.652103	Y
3	STD3 240-322037/8	100.0	161.464091	400.0	326537.0	1.614641	Y
4	STD4 240-322037/7	200.0	285.732845	400.0	366387.0	1.428664	Y
5	STD5 240-322037/6	500.0	695.858116	400.0	371401.0	1.391716	Y
6	STD6 240-322037/5	1000.0	1426.364556	400.0	356911.0	1.426365	Y
7	STD7 240-322037/4	1500.0	2218.351915	400.0	370697.0	1.478901	Y
8	STD8 240-322037/3	2000.0	2951.812222	400.0	378320.0	1.475906	Y
9	STD9 240-322037/2	2500.0	3750.218322	400.0	376279.0	1.500087	Y



Calibration / 4,6-Dinitro-2-methylphenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

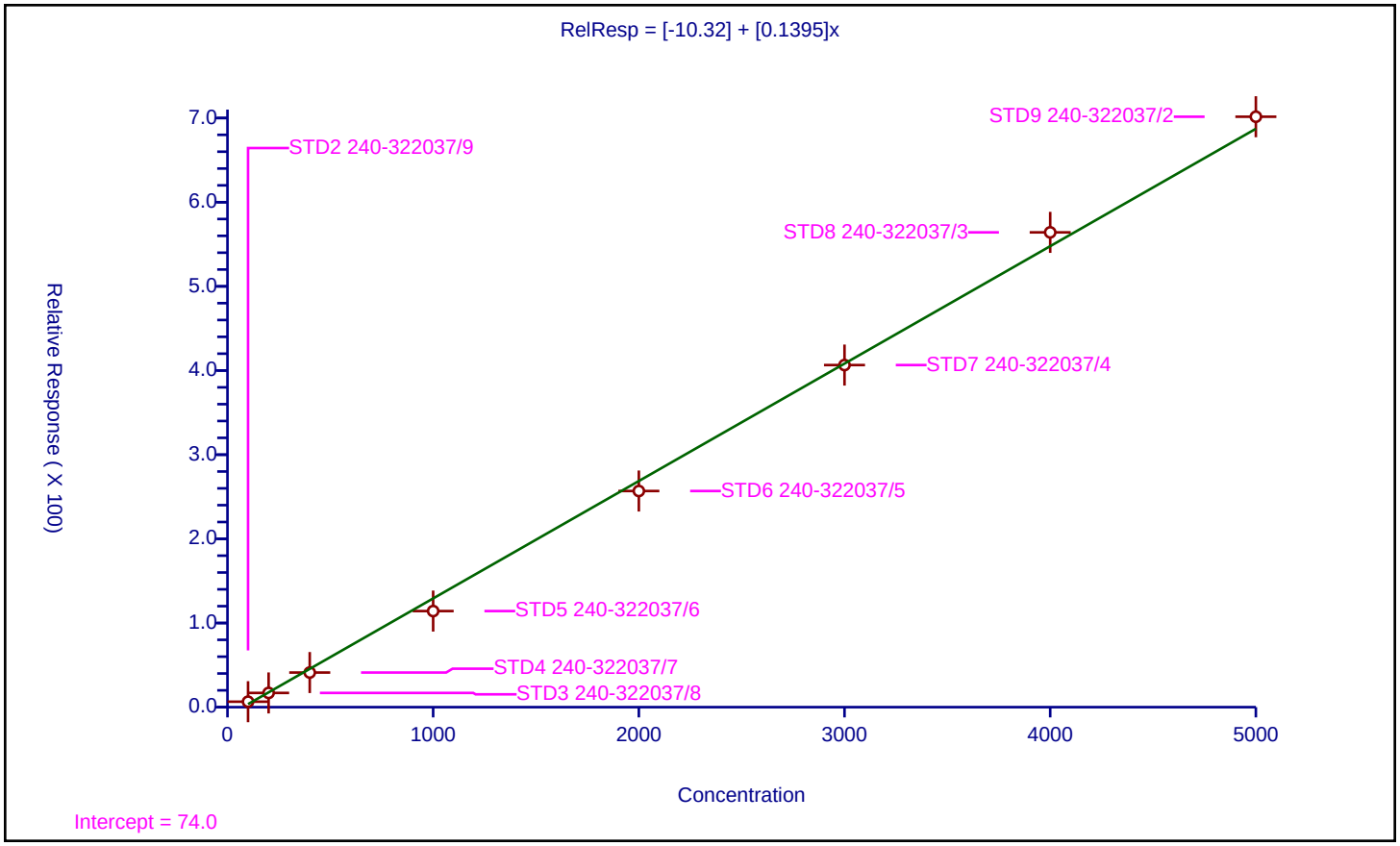
Curve Coefficients

Intercept:	-10.32
Slope:	0.1395

Error Coefficients

Standard Error:	691000
Relative Standard Error:	10.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	6.510101	400.0	639560.0	0.065101	Y
2	STD3 240-322037/8	200.0	16.912663	400.0	643234.0	0.084563	Y
3	STD4 240-322037/7	400.0	41.125472	400.0	660914.0	0.102814	Y
4	STD5 240-322037/6	1000.0	114.172143	400.0	673208.0	0.114172	Y
5	STD6 240-322037/5	2000.0	256.840594	400.0	621408.0	0.12842	Y
6	STD7 240-322037/4	3000.0	406.474262	400.0	647178.0	0.135491	Y
7	STD8 240-322037/3	4000.0	564.130274	400.0	647008.0	0.141033	Y
8	STD9 240-322037/2	5000.0	701.556571	400.0	674174.0	0.140311	Y



Calibration / Diphenylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

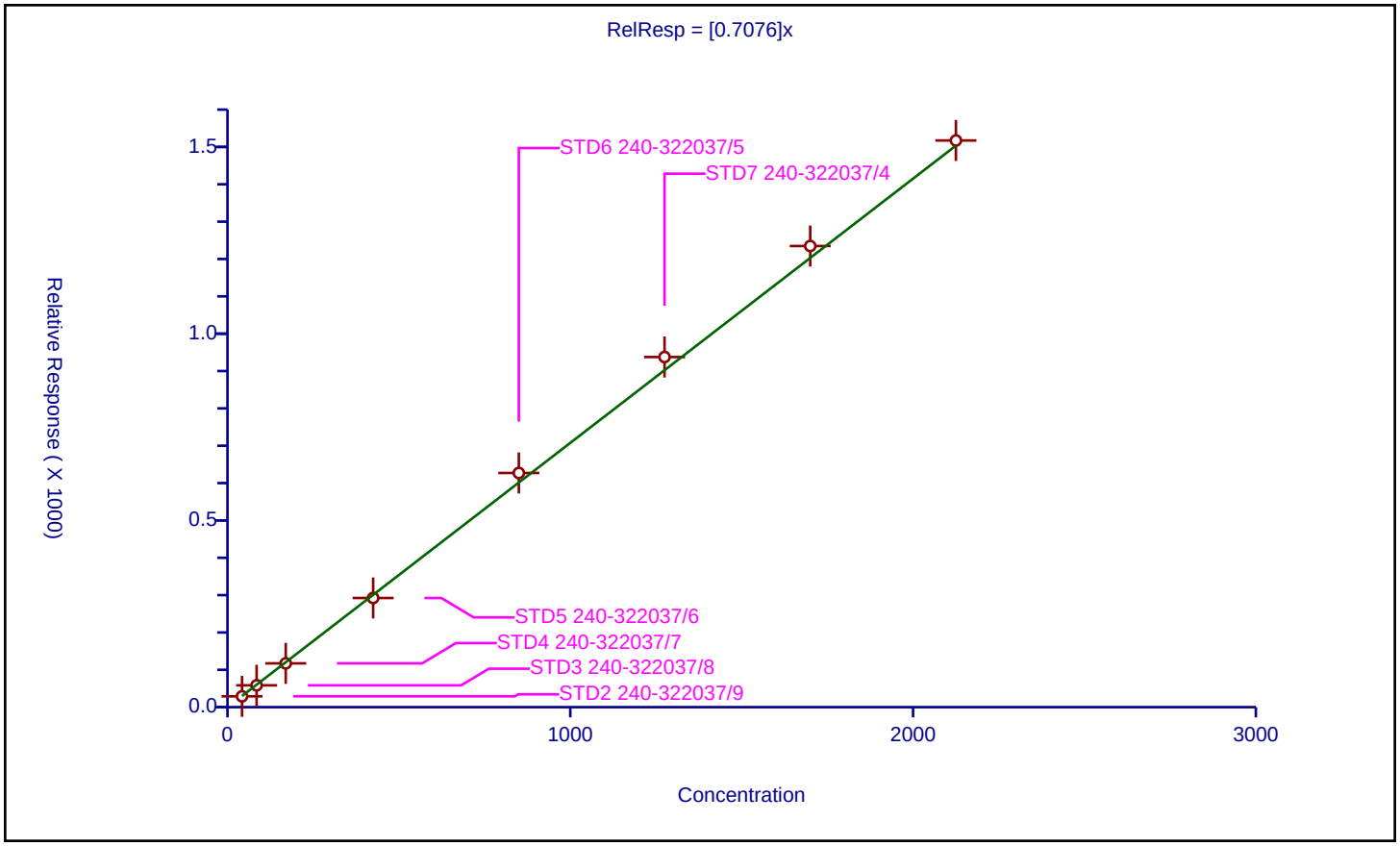
Curve Coefficients

Intercept:	0
Slope:	0.7076

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	42.5	28.986178	400.0	639560.0	0.682028	Y
2	STD3 240-322037/8	85.0	58.432235	400.0	643234.0	0.687438	Y
3	STD4 240-322037/7	170.0	117.301192	400.0	660914.0	0.690007	Y
4	STD5 240-322037/6	425.0	292.329265	400.0	673208.0	0.687834	Y
5	STD6 240-322037/5	850.0	627.107472	400.0	621408.0	0.737773	Y
6	STD7 240-322037/4	1275.0	937.504056	400.0	647178.0	0.735297	Y
7	STD8 240-322037/3	1700.0	1234.752584	400.0	647008.0	0.726325	Y
8	STD9 240-322037/2	2125.0	1517.309181	400.0	674174.0	0.714028	Y



Calibration / N-Nitrosodiphenylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

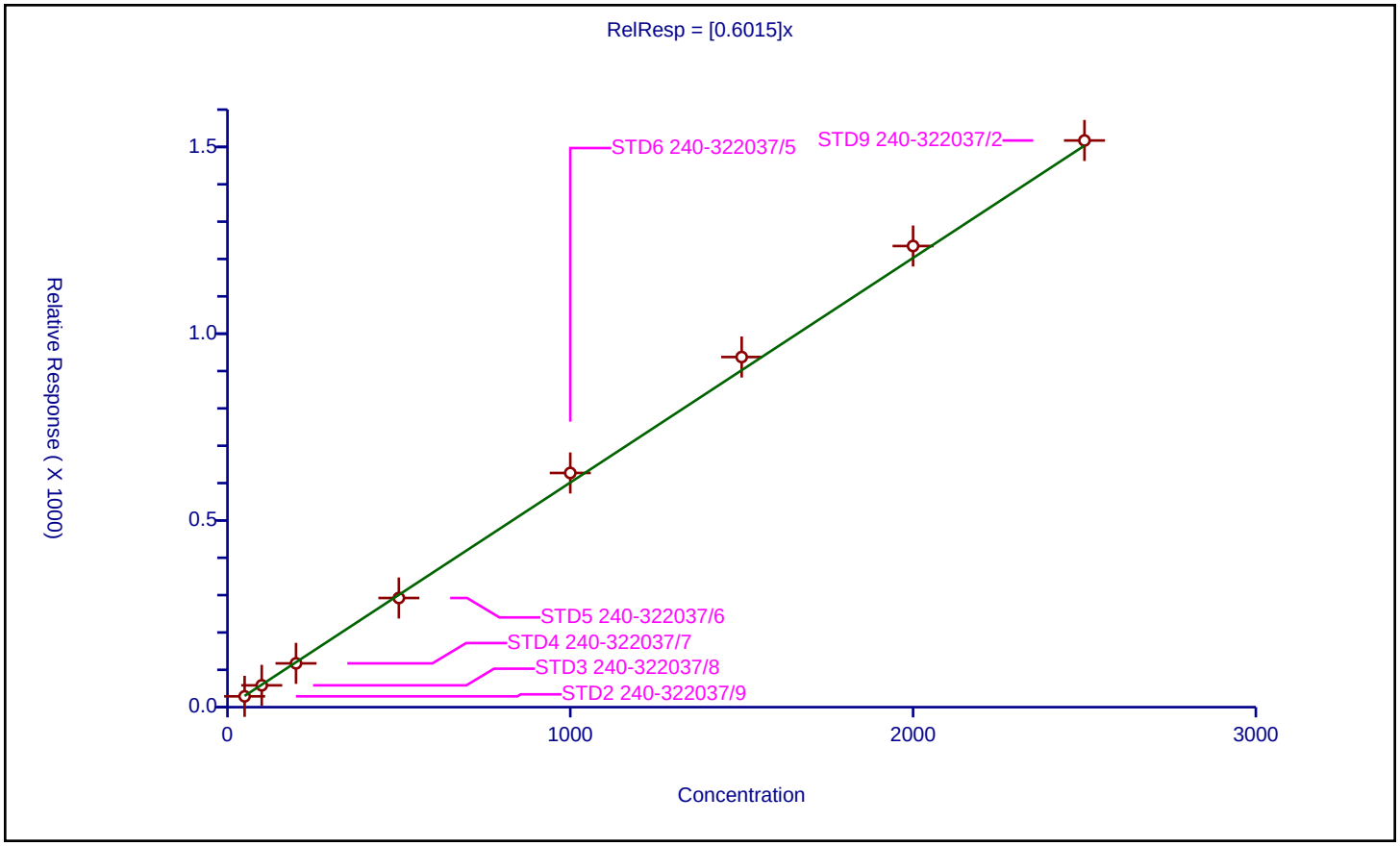
Curve Coefficients

Intercept:	0
Slope:	0.6015

Error Coefficients

Standard Error:	1420000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	28.986178	400.0	639560.0	0.579724	Y
2	STD3 240-322037/8	100.0	58.432235	400.0	643234.0	0.584322	Y
3	STD4 240-322037/7	200.0	117.301192	400.0	660914.0	0.586506	Y
4	STD5 240-322037/6	500.0	292.329265	400.0	673208.0	0.584659	Y
5	STD6 240-322037/5	1000.0	627.107472	400.0	621408.0	0.627107	Y
6	STD7 240-322037/4	1500.0	937.504056	400.0	647178.0	0.625003	Y
7	STD8 240-322037/3	2000.0	1234.752584	400.0	647008.0	0.617376	Y
8	STD9 240-322037/2	2500.0	1517.309181	400.0	674174.0	0.606924	Y



Calibration / 1,2-Diphenylhydrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

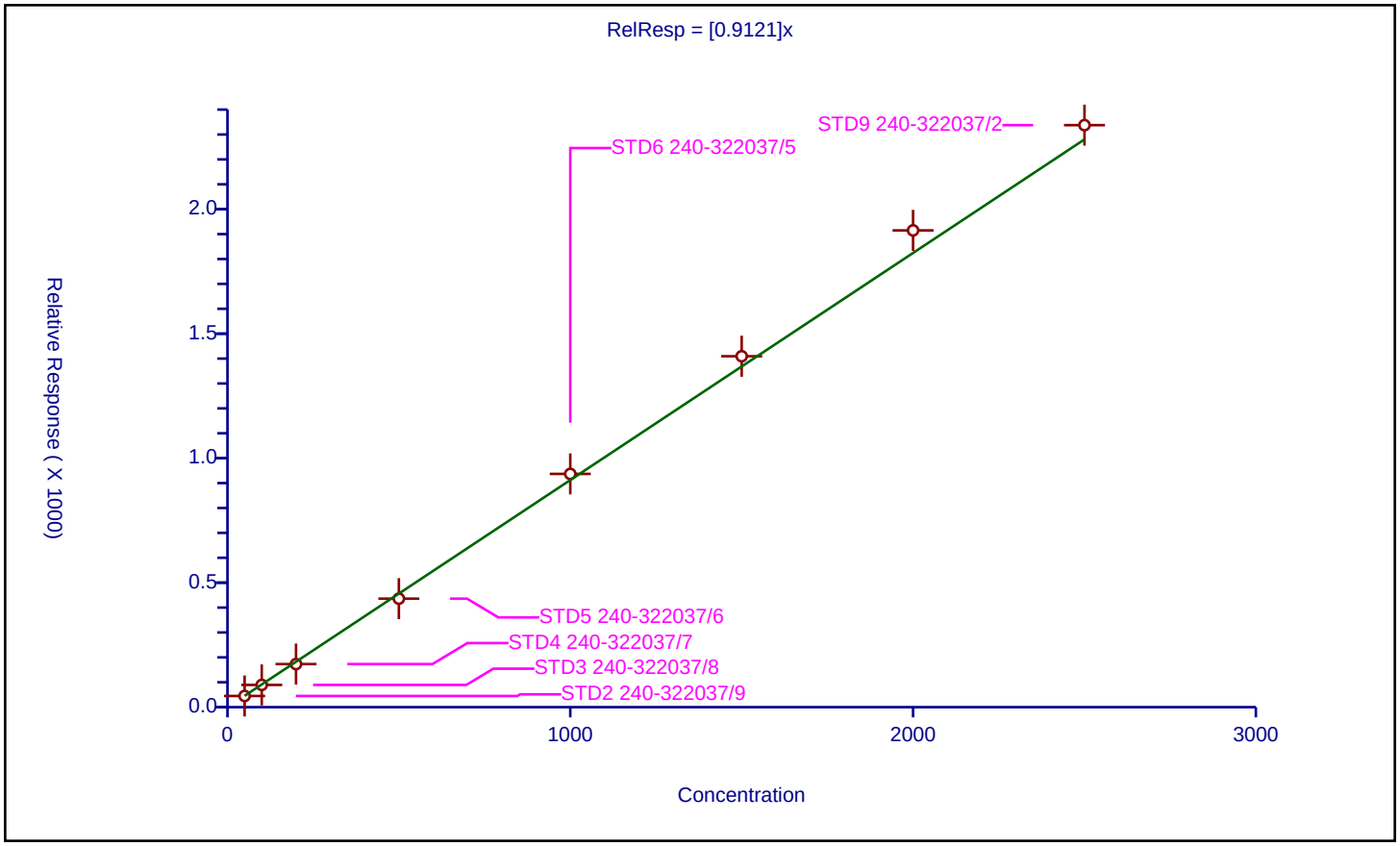
Curve Coefficients

Intercept:	0
Slope:	0.9121

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	3.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	44.900869	400.0	639560.0	0.898017	Y
2	STD3 240-322037/8	100.0	89.309956	400.0	643234.0	0.8931	Y
3	STD4 240-322037/7	200.0	173.065179	400.0	660914.0	0.865326	Y
4	STD5 240-322037/6	500.0	435.817162	400.0	673208.0	0.871634	Y
5	STD6 240-322037/5	1000.0	936.862738	400.0	621408.0	0.936863	Y
6	STD7 240-322037/4	1500.0	1409.443461	400.0	647178.0	0.939629	Y
7	STD8 240-322037/3	2000.0	1914.922227	400.0	647008.0	0.957461	Y
8	STD9 240-322037/2	2500.0	2337.514648	400.0	674174.0	0.935006	Y



Calibration / Azobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

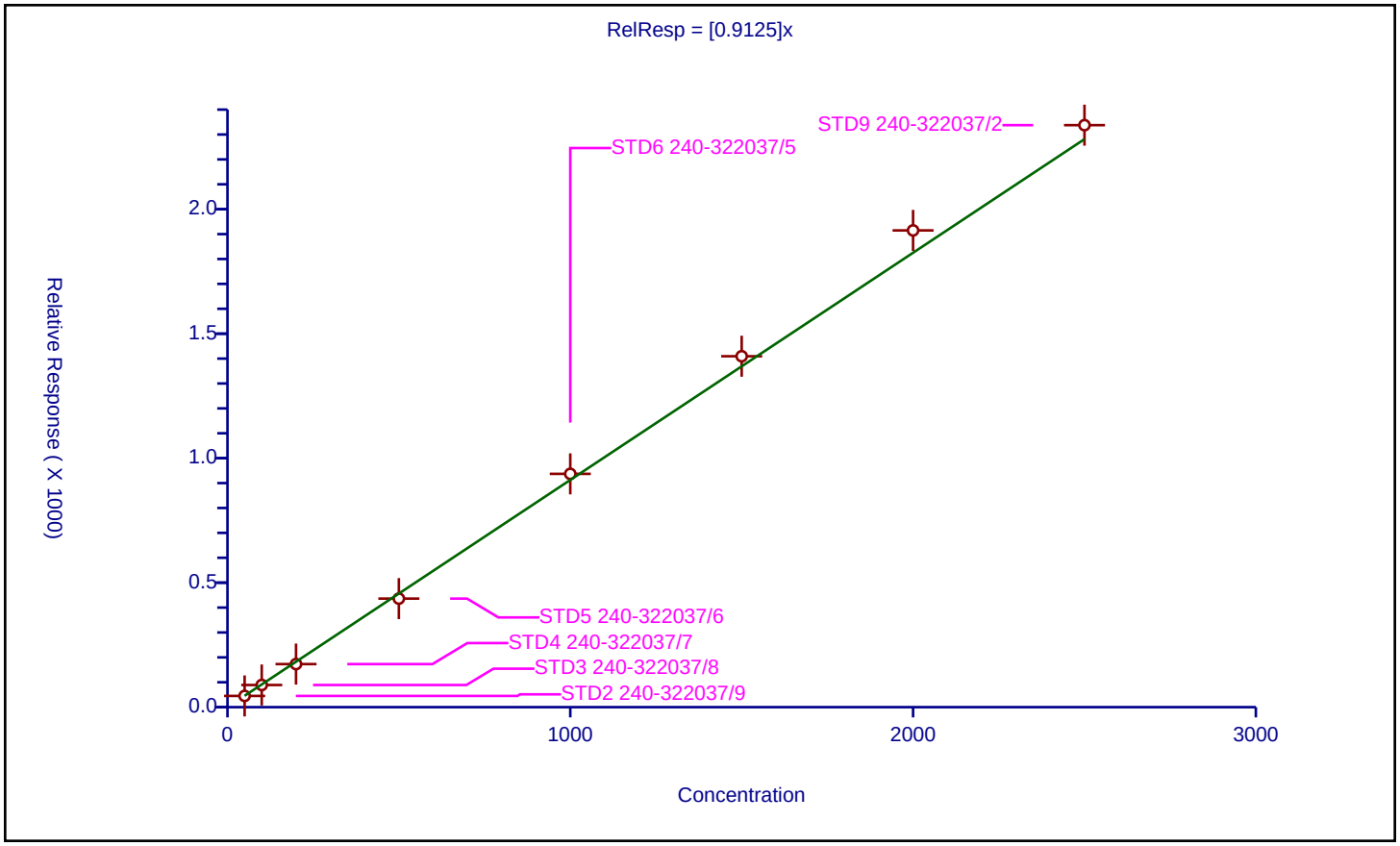
Curve Coefficients

Intercept:	0
Slope:	0.9125

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	3.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	45.187316	400.0	639560.0	0.903746	Y
2	STD3 240-322037/8	100.0	89.028254	400.0	643234.0	0.890283	Y
3	STD4 240-322037/7	200.0	173.068811	400.0	660914.0	0.865344	Y
4	STD5 240-322037/6	500.0	435.990065	400.0	673208.0	0.87198	Y
5	STD6 240-322037/5	1000.0	936.999202	400.0	621408.0	0.936999	Y
6	STD7 240-322037/4	1500.0	1409.443461	400.0	647178.0	0.939629	Y
7	STD8 240-322037/3	2000.0	1914.814655	400.0	647008.0	0.957407	Y
8	STD9 240-322037/2	2500.0	2337.514648	400.0	674174.0	0.935006	Y



Calibration / 2,4,6-Tribromophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

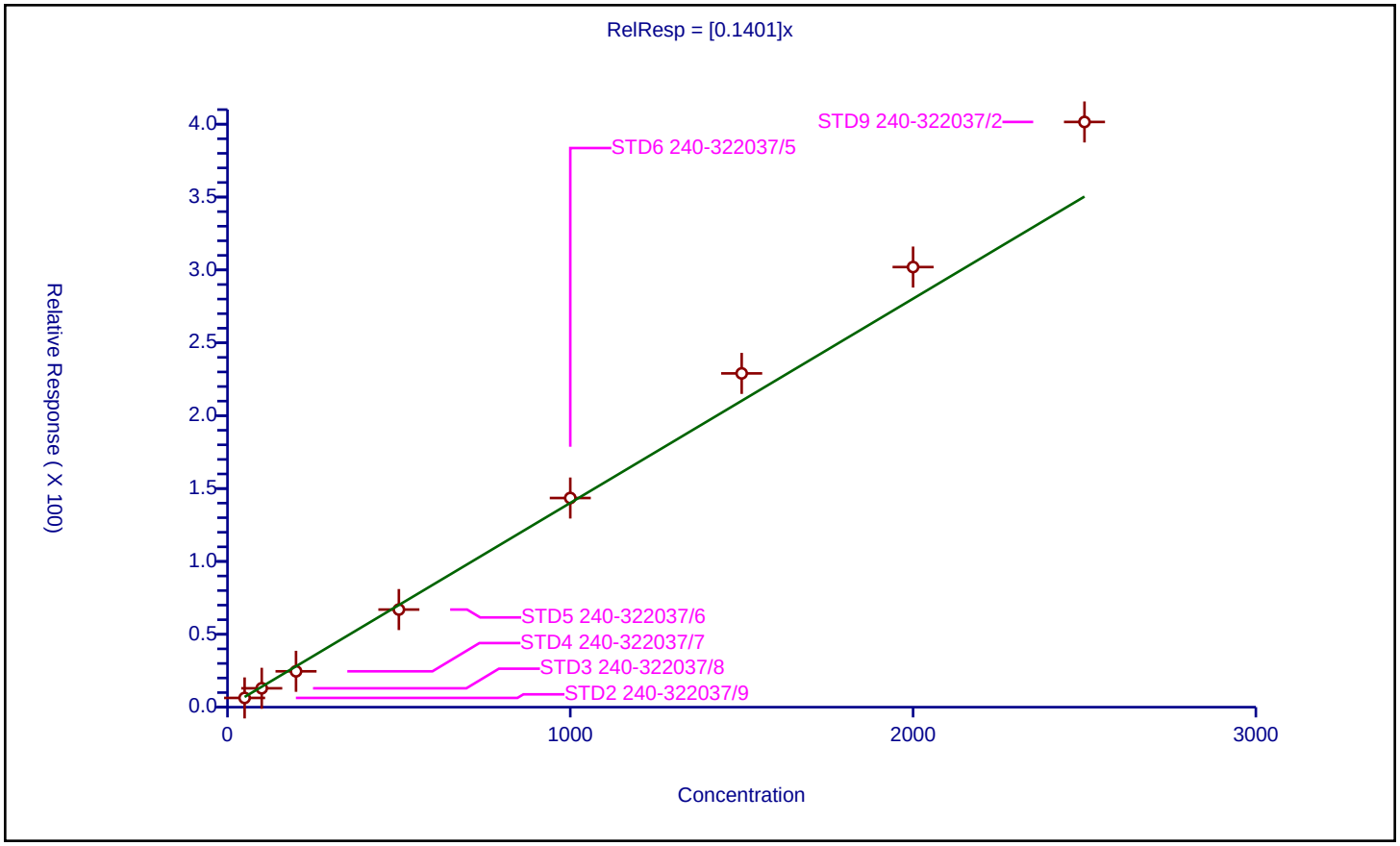
Curve Coefficients

Intercept:	0
Slope:	0.1401

Error Coefficients

Standard Error:	203000
Relative Standard Error:	9.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	6.335163	400.0	324159.0	0.126703	Y
2	STD3 240-322037/8	100.0	12.961471	400.0	326537.0	0.129615	Y
3	STD4 240-322037/7	200.0	24.603493	400.0	366387.0	0.123017	Y
4	STD5 240-322037/6	500.0	66.969125	400.0	371401.0	0.133938	Y
5	STD6 240-322037/5	1000.0	143.510287	400.0	356911.0	0.14351	Y
6	STD7 240-322037/4	1500.0	229.01723	400.0	370697.0	0.152678	Y
7	STD8 240-322037/3	2000.0	301.969761	400.0	378320.0	0.150985	Y
8	STD9 240-322037/2	2500.0	401.52759	400.0	376279.0	0.160611	Y



Calibration / 4-Bromophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

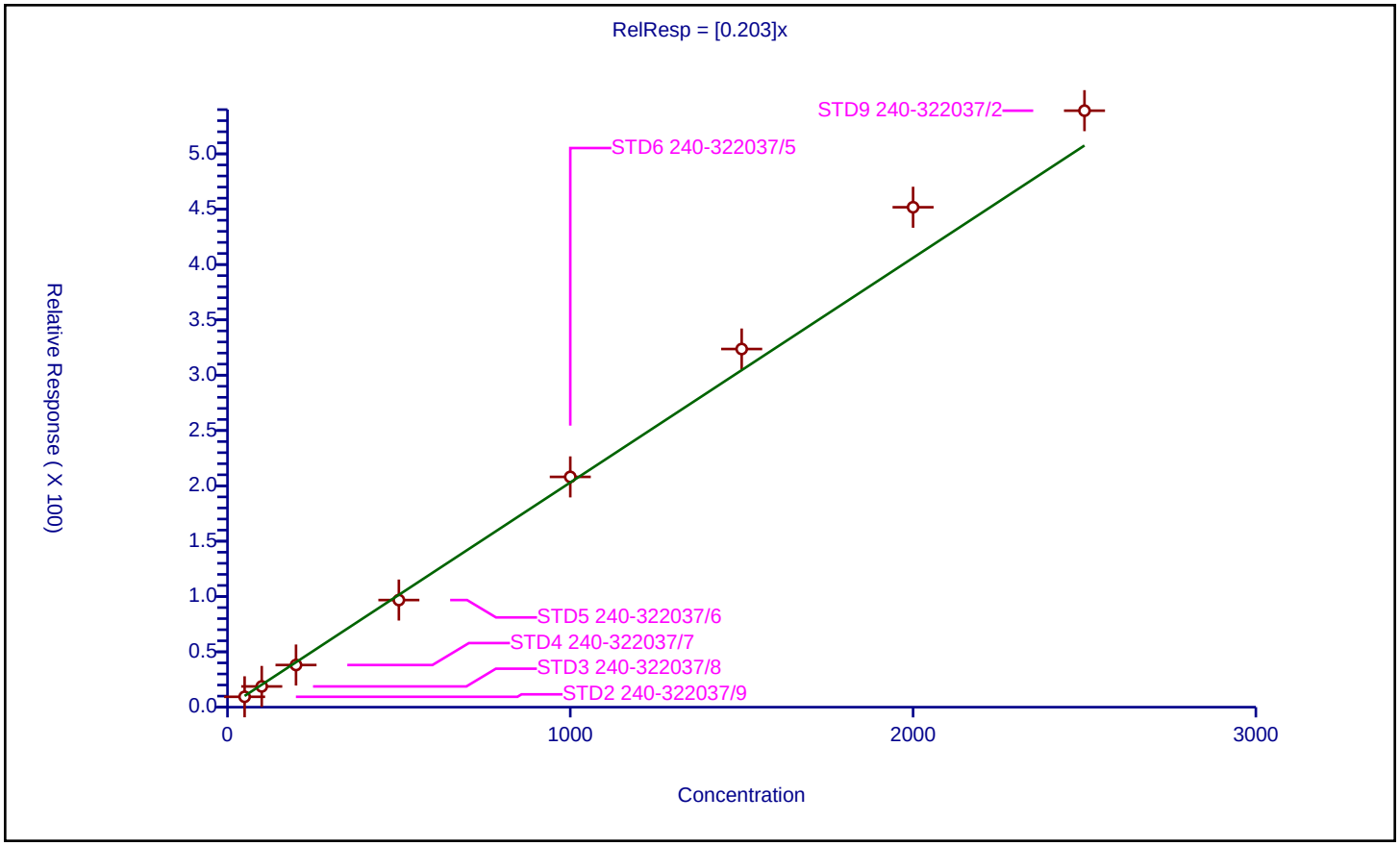
Curve Coefficients

Intercept:	0
Slope:	0.203

Error Coefficients

Standard Error:	503000
Relative Standard Error:	7.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	9.372068	400.0	639560.0	0.187441	Y
2	STD3 240-322037/8	100.0	18.728488	400.0	643234.0	0.187285	Y
3	STD4 240-322037/7	200.0	38.098754	400.0	660914.0	0.190494	Y
4	STD5 240-322037/6	500.0	96.812278	400.0	673208.0	0.193625	Y
5	STD6 240-322037/5	1000.0	208.086796	400.0	621408.0	0.208087	Y
6	STD7 240-322037/4	1500.0	323.646354	400.0	647178.0	0.215764	Y
7	STD8 240-322037/3	2000.0	451.777412	400.0	647008.0	0.225889	Y
8	STD9 240-322037/2	2500.0	539.044223	400.0	674174.0	0.215618	Y



Calibration / Atrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

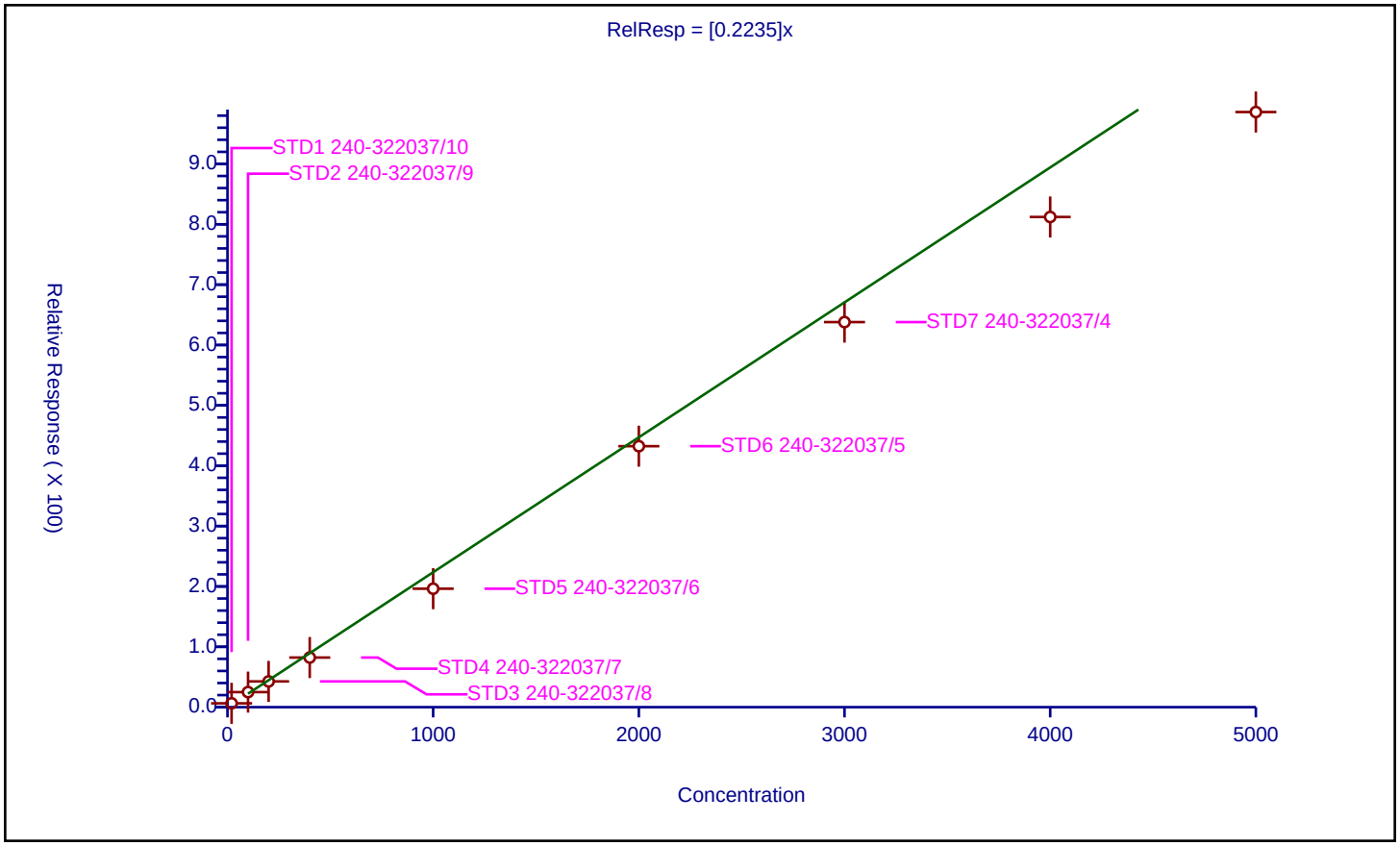
Curve Coefficients

Intercept:	0
Slope:	0.2235

Error Coefficients

Standard Error:	875000
Relative Standard Error:	17.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	20.0	6.363593	400.0	565781.0	0.31818	Y
2	STD2 240-322037/9	100.0	24.955907	400.0	639560.0	0.249559	Y
3	STD3 240-322037/8	200.0	42.661302	400.0	643234.0	0.213307	Y
4	STD4 240-322037/7	400.0	82.209183	400.0	660914.0	0.205523	Y
5	STD5 240-322037/6	1000.0	196.259106	400.0	673208.0	0.196259	Y
6	STD6 240-322037/5	2000.0	432.333024	400.0	621408.0	0.216167	Y
7	STD7 240-322037/4	3000.0	637.959263	400.0	647178.0	0.212653	Y
8	STD8 240-322037/3	4000.0	812.083931	400.0	647008.0	0.203021	Y
9	STD9 240-322037/2	5000.0	985.99234	400.0	674174.0	0.197198	Y



Calibration / Hexachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

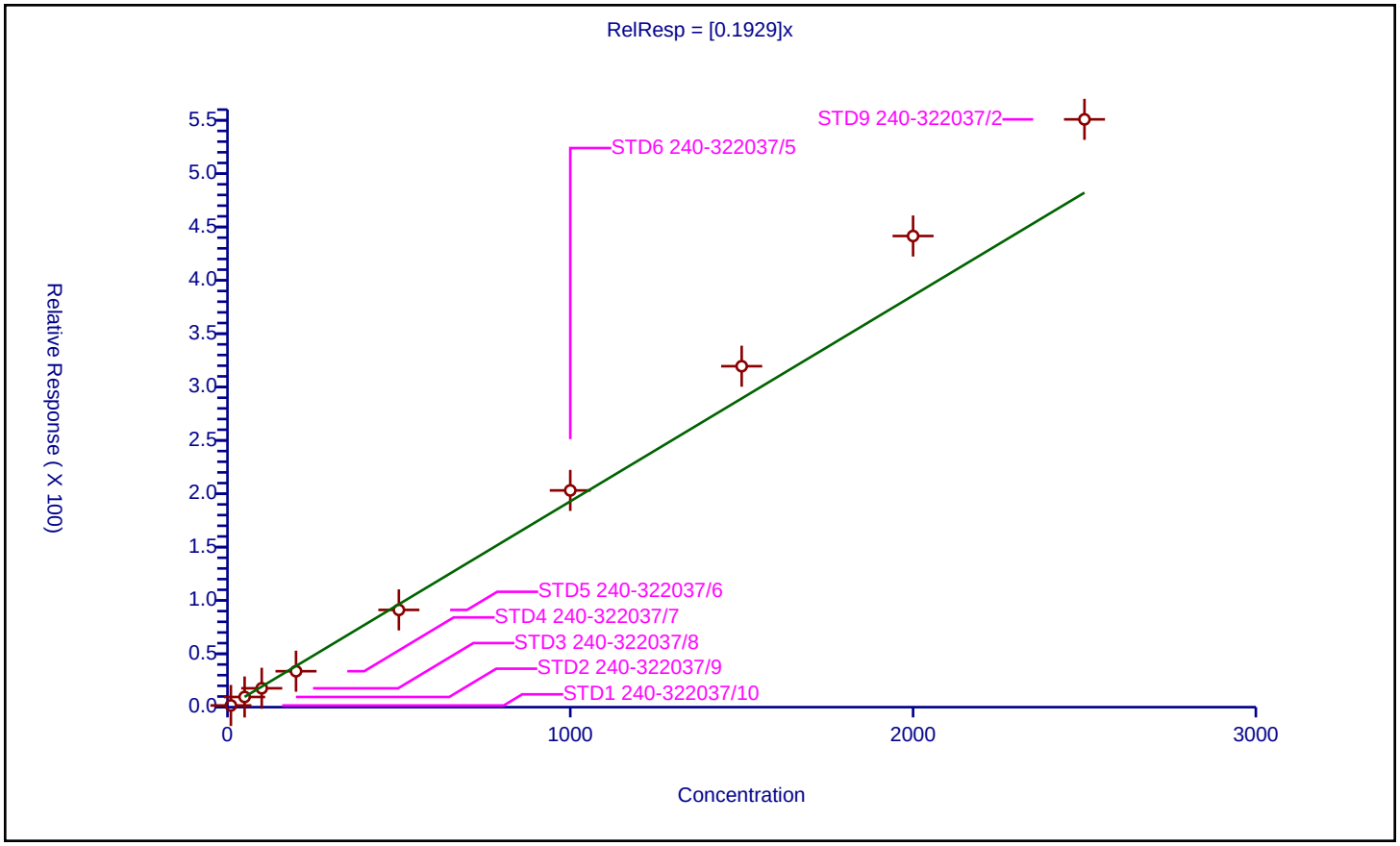
Curve Coefficients

Intercept:	0
Slope:	0.1929

Error Coefficients

Standard Error:	470000
Relative Standard Error:	11.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	1.600619	400.0	565781.0	0.160062	Y
2	STD2 240-322037/9	50.0	9.545312	400.0	639560.0	0.190906	Y
3	STD3 240-322037/8	100.0	17.690607	400.0	643234.0	0.176906	Y
4	STD4 240-322037/7	200.0	33.690314	400.0	660914.0	0.168452	Y
5	STD5 240-322037/6	500.0	91.132013	400.0	673208.0	0.182264	Y
6	STD6 240-322037/5	1000.0	203.129023	400.0	621408.0	0.203129	Y
7	STD7 240-322037/4	1500.0	319.532493	400.0	647178.0	0.213022	Y
8	STD8 240-322037/3	2000.0	441.537663	400.0	647008.0	0.220769	Y
9	STD9 240-322037/2	2500.0	550.86135	400.0	674174.0	0.220345	Y



Calibration / n-Octadecane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

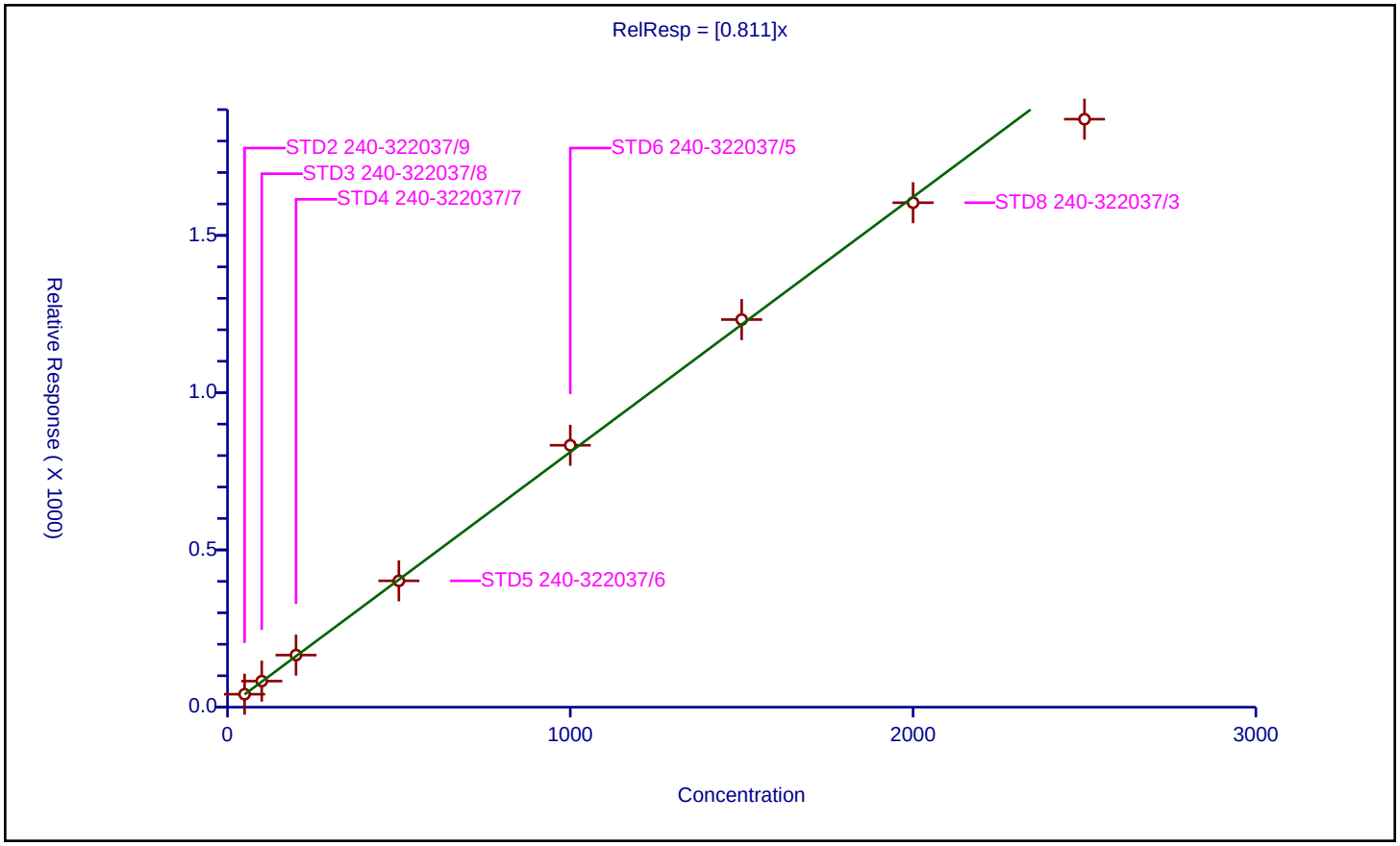
Curve Coefficients

Intercept:	0
Slope:	0.811

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	41.22209	400.0	639560.0	0.824442	Y
2	STD3 240-322037/8	100.0	82.820871	400.0	643234.0	0.828209	Y
3	STD4 240-322037/7	200.0	165.610654	400.0	660914.0	0.828053	Y
4	STD5 240-322037/6	500.0	401.698138	400.0	673208.0	0.803396	Y
5	STD6 240-322037/5	1000.0	832.712807	400.0	621408.0	0.832713	Y
6	STD7 240-322037/4	1500.0	1232.373783	400.0	647178.0	0.821583	Y
7	STD8 240-322037/3	2000.0	1604.01417	400.0	647008.0	0.802007	Y
8	STD9 240-322037/2	2500.0	1869.513212	400.0	674174.0	0.747805	Y



Calibration / Pentachlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

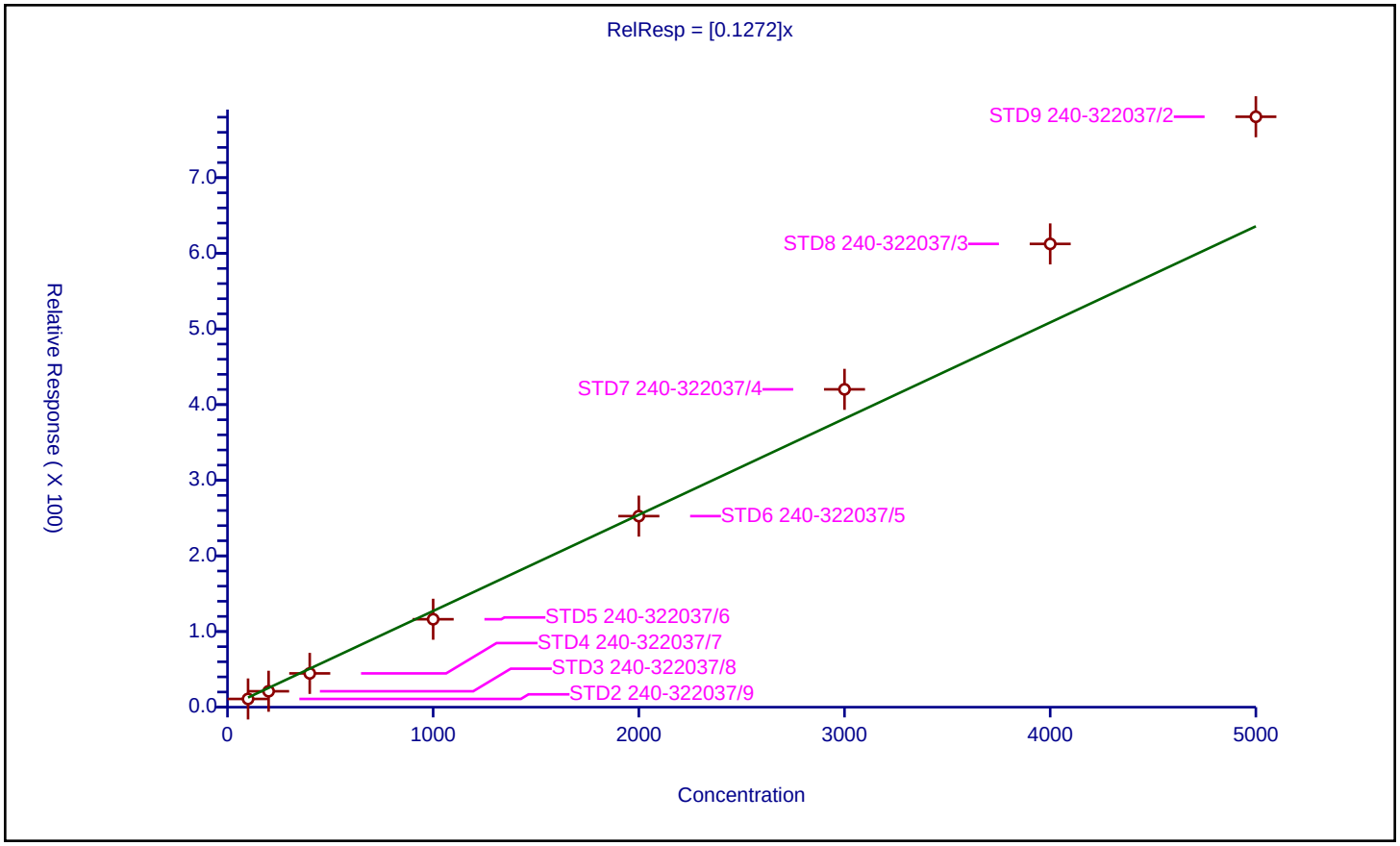
Curve Coefficients

Intercept:	0
Slope:	0.1272

Error Coefficients

Standard Error:	694000
Relative Standard Error:	15.9
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	10.866221	400.0	639560.0	0.108662	Y
2	STD3 240-322037/8	200.0	21.021277	400.0	643234.0	0.105106	Y
3	STD4 240-322037/7	400.0	44.653313	400.0	660914.0	0.111633	Y
4	STD5 240-322037/6	1000.0	116.23926	400.0	673208.0	0.116239	Y
5	STD6 240-322037/5	2000.0	252.567717	400.0	621408.0	0.126284	Y
6	STD7 240-322037/4	3000.0	420.173121	400.0	647178.0	0.140058	Y
7	STD8 240-322037/3	4000.0	612.454251	400.0	647008.0	0.153114	Y
8	STD9 240-322037/2	5000.0	780.548642	400.0	674174.0	0.15611	Y



Calibration / Phenanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

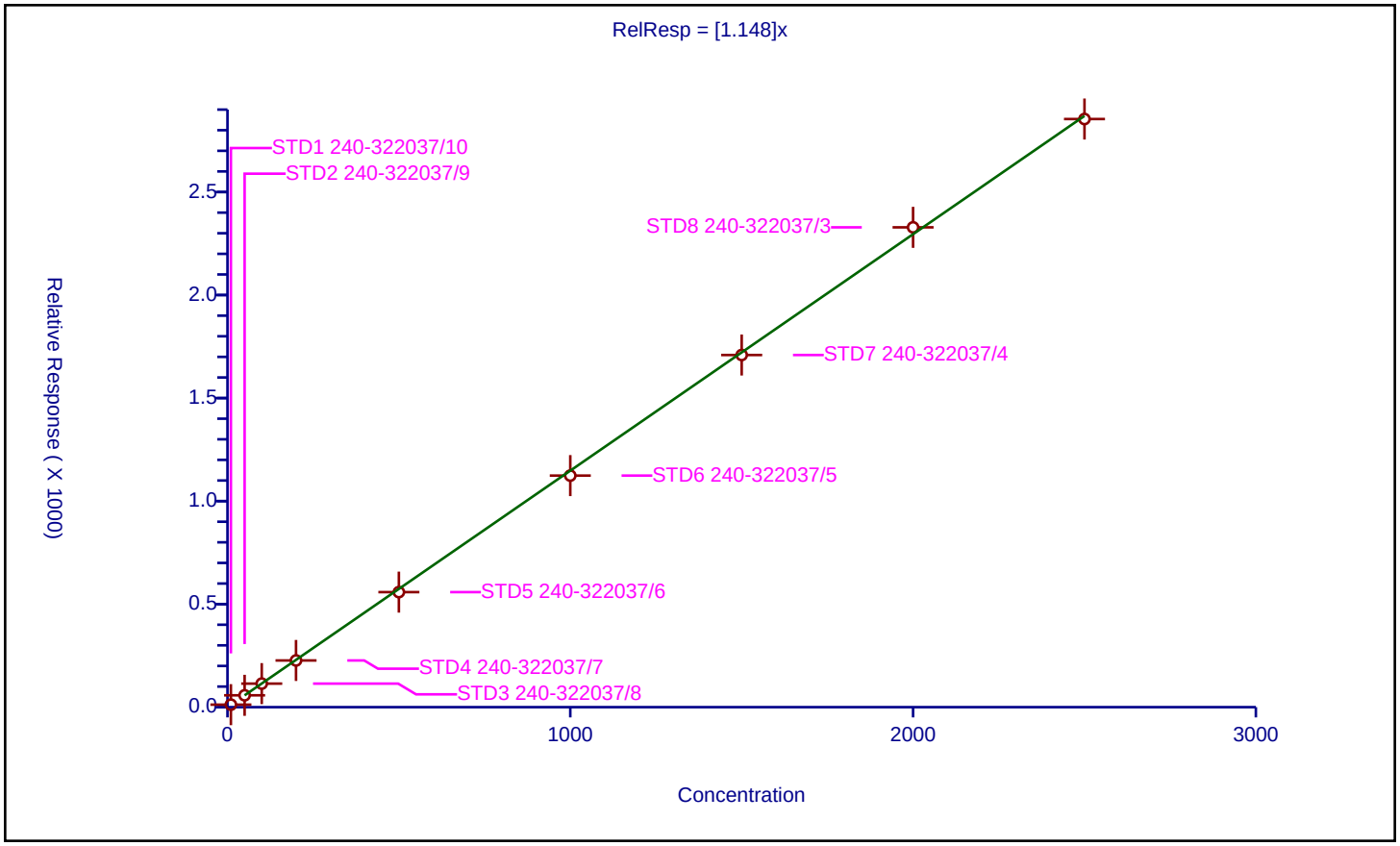
Curve Coefficients

Intercept:	0
Slope:	1.148

Error Coefficients

Standard Error:	2480000
Relative Standard Error:	2.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	12.161596	400.0	565781.0	1.21616	Y
2	STD2 240-322037/9	50.0	57.560198	400.0	639560.0	1.151204	Y
3	STD3 240-322037/8	100.0	114.325424	400.0	643234.0	1.143254	Y
4	STD4 240-322037/7	200.0	226.611027	400.0	660914.0	1.133055	Y
5	STD5 240-322037/6	500.0	558.335017	400.0	673208.0	1.11667	Y
6	STD6 240-322037/5	1000.0	1123.794351	400.0	621408.0	1.123794	Y
7	STD7 240-322037/4	1500.0	1709.0309	400.0	647178.0	1.139354	Y
8	STD8 240-322037/3	2000.0	2328.594391	400.0	647008.0	1.164297	Y
9	STD9 240-322037/2	2500.0	2854.234663	400.0	674174.0	1.141694	Y



Calibration / Anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

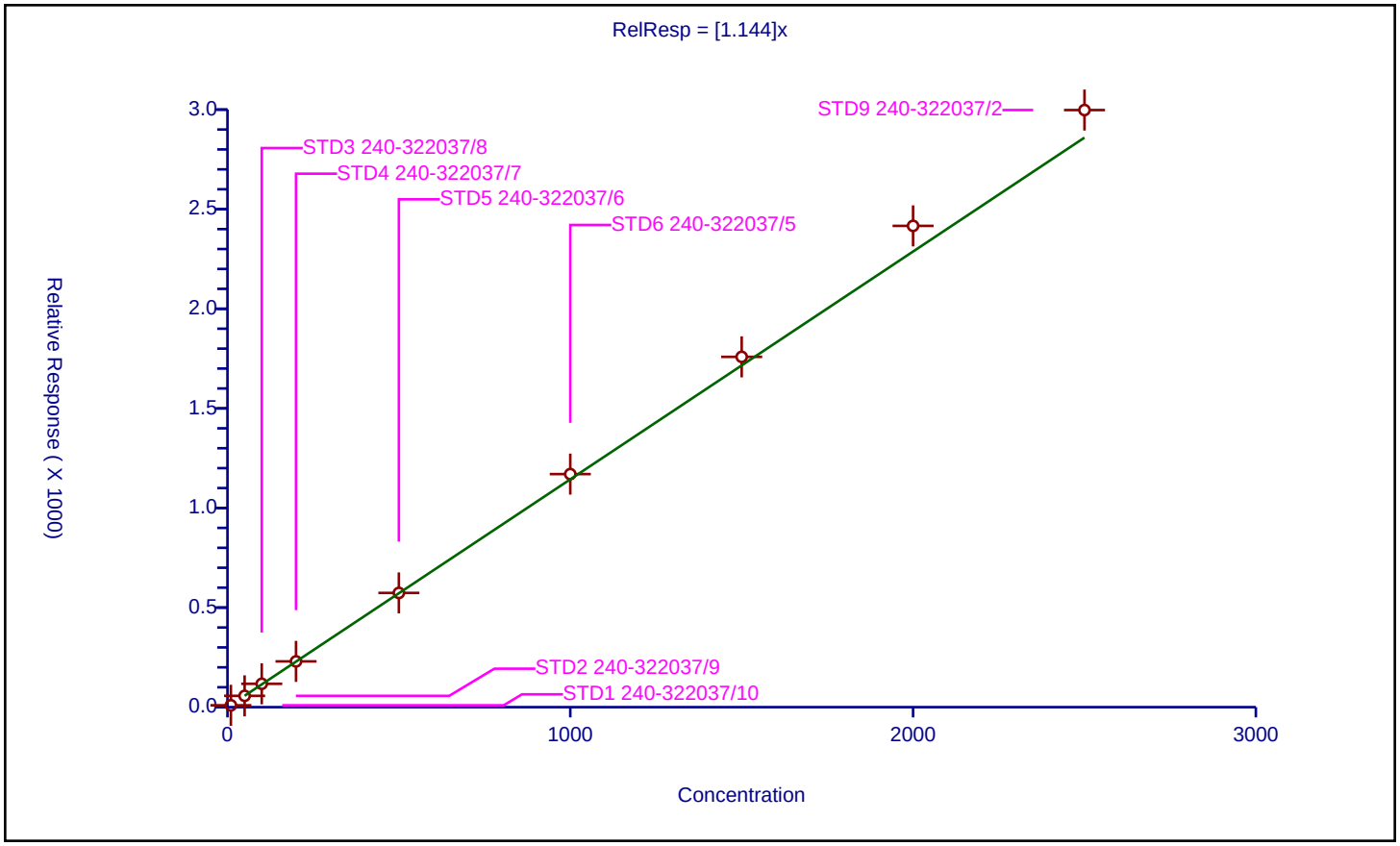
Curve Coefficients

Intercept:	0
Slope:	1.144

Error Coefficients

Standard Error:	2580000
Relative Standard Error:	7.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	9.39162	400.0	565781.0	0.939162	Y
2	STD2 240-322037/9	50.0	56.790293	400.0	639560.0	1.135806	Y
3	STD3 240-322037/8	100.0	117.296038	400.0	643234.0	1.17296	Y
4	STD4 240-322037/7	200.0	229.828994	400.0	660914.0	1.149145	Y
5	STD5 240-322037/6	500.0	573.52022	400.0	673208.0	1.14704	Y
6	STD6 240-322037/5	1000.0	1170.084067	400.0	621408.0	1.170084	Y
7	STD7 240-322037/4	1500.0	1758.737164	400.0	647178.0	1.172491	Y
8	STD8 240-322037/3	2000.0	2416.274296	400.0	647008.0	1.208137	Y
9	STD9 240-322037/2	2500.0	2997.762595	400.0	674174.0	1.199105	Y



Calibration / Carbazole

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

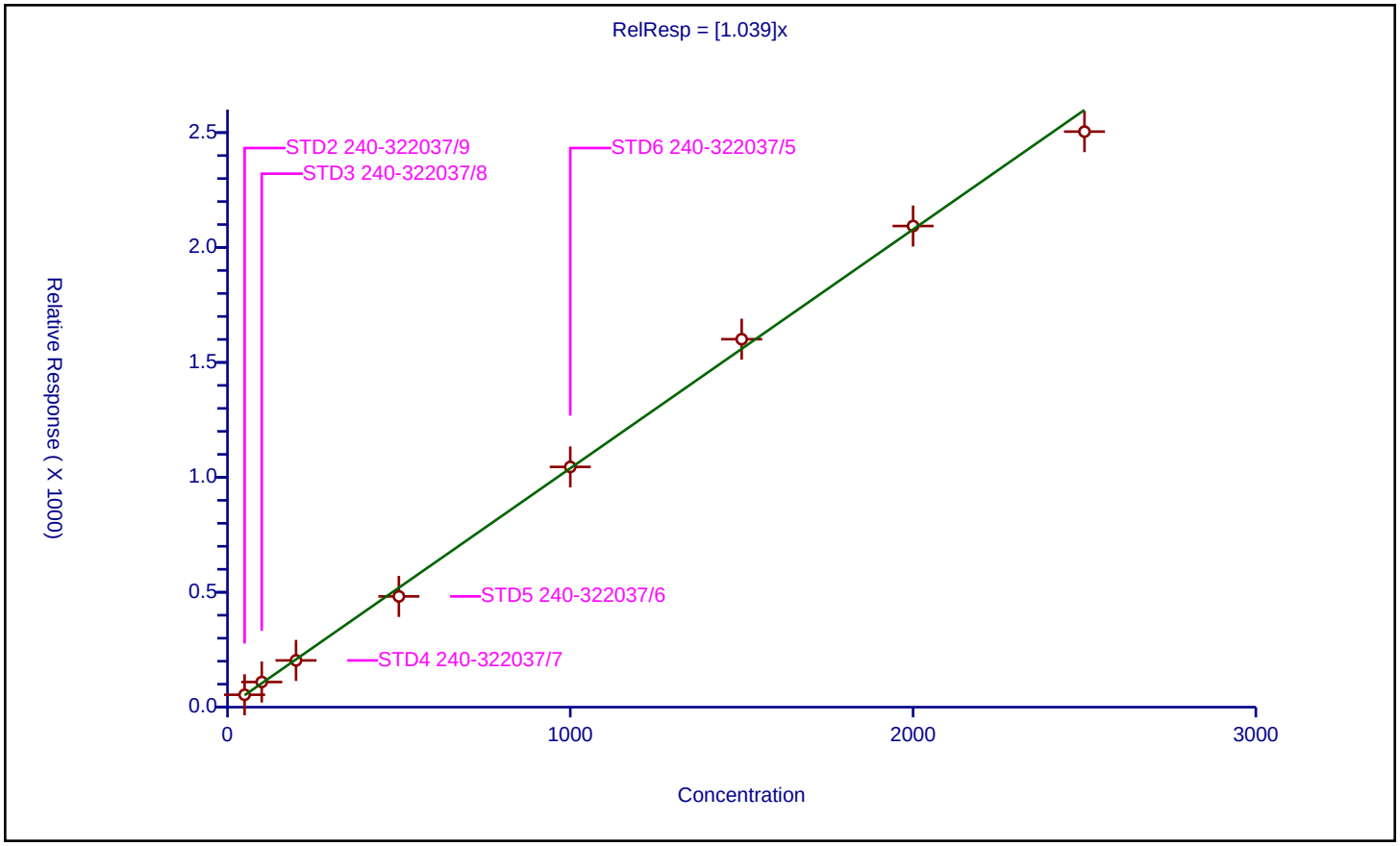
Curve Coefficients

Intercept:	0
Slope:	1.039

Error Coefficients

Standard Error:	2370000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	53.933329	400.0	639560.0	1.078667	Y
2	STD3 240-322037/8	100.0	109.488615	400.0	643234.0	1.094886	Y
3	STD4 240-322037/7	200.0	203.365642	400.0	660914.0	1.016828	Y
4	STD5 240-322037/6	500.0	481.962187	400.0	673208.0	0.963924	Y
5	STD6 240-322037/5	1000.0	1045.290051	400.0	621408.0	1.04529	Y
6	STD7 240-322037/4	1500.0	1601.031555	400.0	647178.0	1.067354	Y
7	STD8 240-322037/3	2000.0	2093.556185	400.0	647008.0	1.046778	Y
8	STD9 240-322037/2	2500.0	2504.190313	400.0	674174.0	1.001676	Y



Calibration / Di-n-butyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

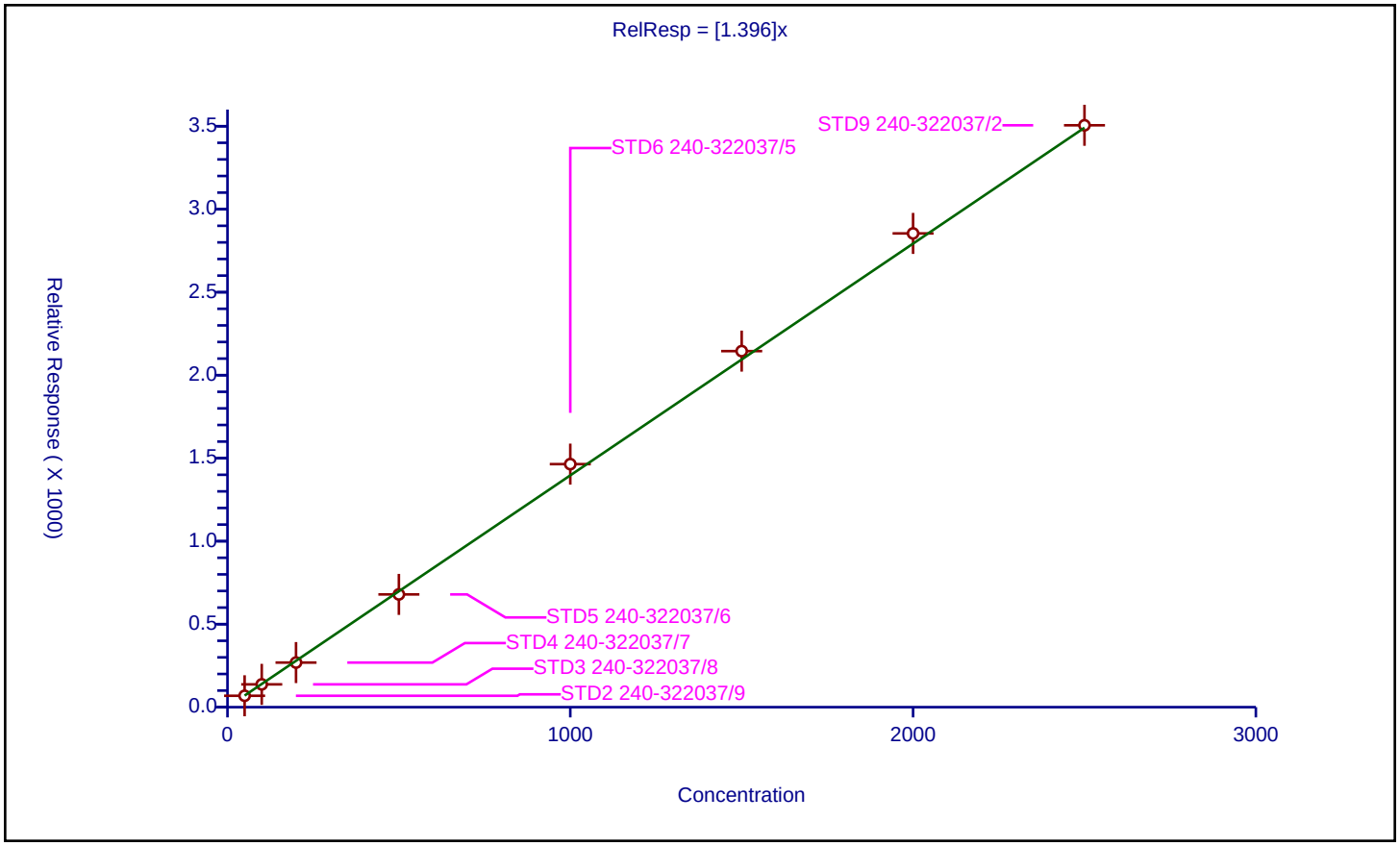
Curve Coefficients

Intercept:	0
Slope:	1.396

Error Coefficients

Standard Error:	3270000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	68.594033	400.0	639560.0	1.371881	Y
2	STD3 240-322037/8	100.0	137.309906	400.0	643234.0	1.373099	Y
3	STD4 240-322037/7	200.0	268.701828	400.0	660914.0	1.343509	Y
4	STD5 240-322037/6	500.0	679.390025	400.0	673208.0	1.35878	Y
5	STD6 240-322037/5	1000.0	1464.254081	400.0	621408.0	1.464254	Y
6	STD7 240-322037/4	1500.0	2144.964137	400.0	647178.0	1.429976	Y
7	STD8 240-322037/3	2000.0	2854.170582	400.0	647008.0	1.427085	Y
8	STD9 240-322037/2	2500.0	3505.586985	400.0	674174.0	1.402235	Y



Calibration / Fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

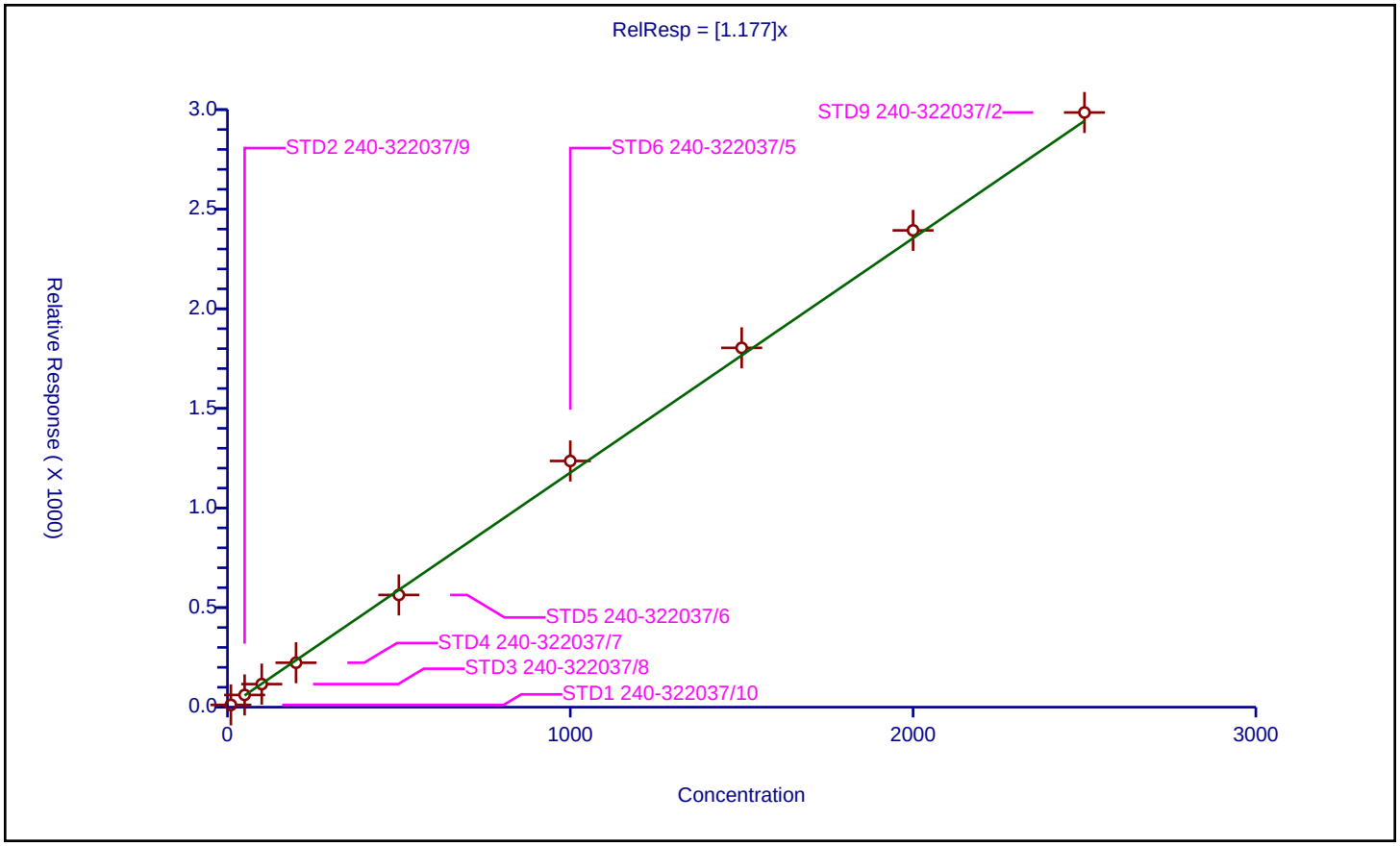
Curve Coefficients

Intercept:	0
Slope:	1.177

Error Coefficients

Standard Error:	2590000
Relative Standard Error:	3.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	11.379668	400.0	565781.0	1.137967	Y
2	STD2 240-322037/9	50.0	61.3453	400.0	639560.0	1.226906	Y
3	STD3 240-322037/8	100.0	115.83032	400.0	643234.0	1.158303	Y
4	STD4 240-322037/7	200.0	223.098315	400.0	660914.0	1.115492	Y
5	STD5 240-322037/6	500.0	563.430619	400.0	673208.0	1.126861	Y
6	STD6 240-322037/5	1000.0	1236.082574	400.0	621408.0	1.236083	Y
7	STD7 240-322037/4	1500.0	1803.869106	400.0	647178.0	1.202579	Y
8	STD8 240-322037/3	2000.0	2393.618008	400.0	647008.0	1.196809	Y
9	STD9 240-322037/2	2500.0	2985.553878	400.0	674174.0	1.194222	Y



Calibration / Benzidine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

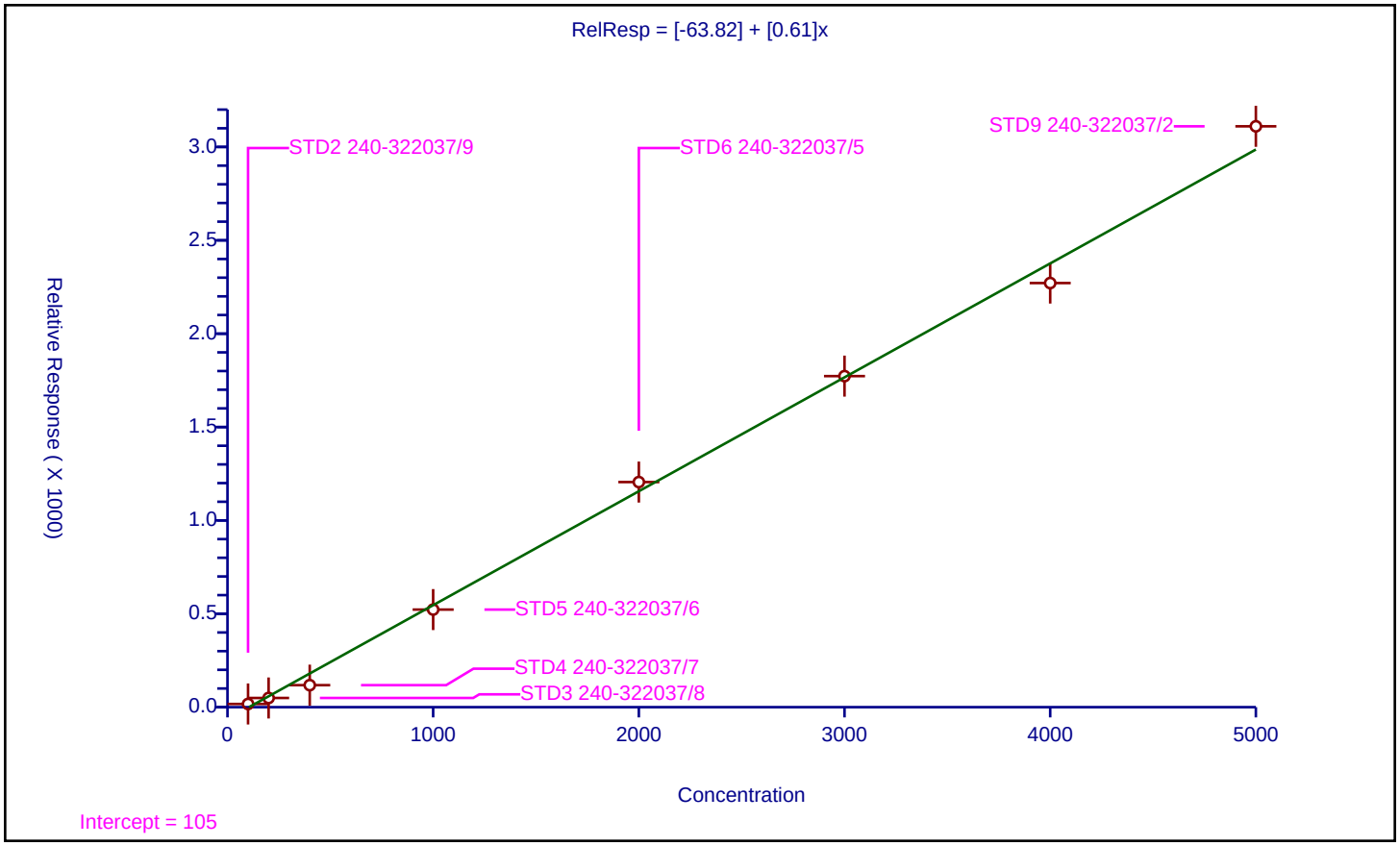
Curve Coefficients

Intercept:	-63.82
Slope:	0.61

Error Coefficients

Standard Error:	2900000
Relative Standard Error:	17.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	17.057547	400.0	604917.0	0.170575	Y
2	STD3 240-322037/8	200.0	49.206525	400.0	587857.0	0.246033	Y
3	STD4 240-322037/7	400.0	117.905629	400.0	601861.0	0.294764	Y
4	STD5 240-322037/6	1000.0	522.610849	400.0	628424.0	0.522611	Y
5	STD6 240-322037/5	2000.0	1205.430448	400.0	604149.0	0.602715	Y
6	STD7 240-322037/4	3000.0	1772.823265	400.0	632151.0	0.590941	Y
7	STD8 240-322037/3	4000.0	2271.146611	400.0	633371.0	0.567787	Y
8	STD9 240-322037/2	5000.0	3110.593908	400.0	653687.0	0.622119	Y



Calibration / Pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

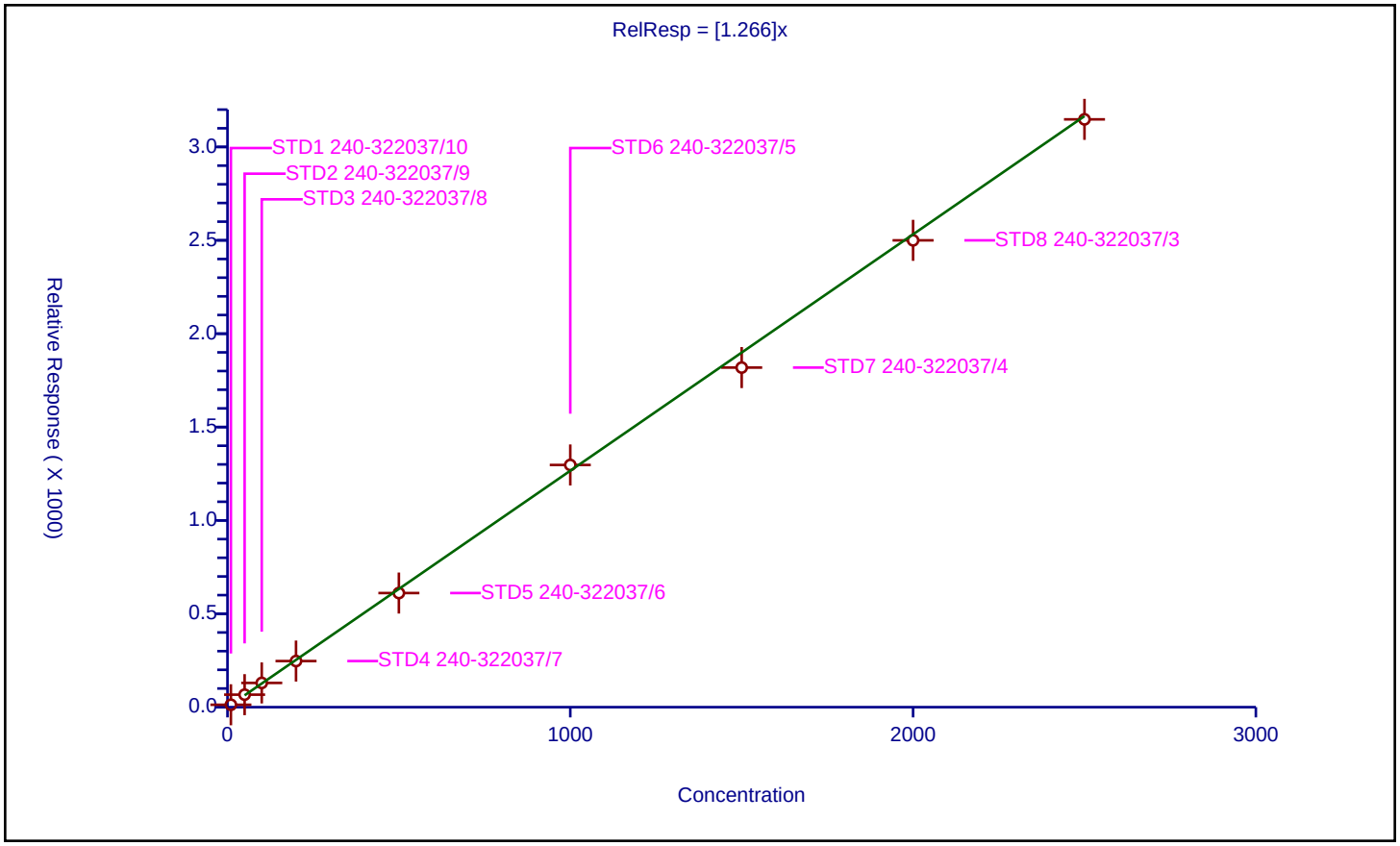
Curve Coefficients

Intercept:	0
Slope:	1.266

Error Coefficients

Standard Error:	2630000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	12.817847	400.0	506887.0	1.281785	Y
2	STD2 240-322037/9	50.0	66.953318	400.0	604917.0	1.339066	Y
3	STD3 240-322037/8	100.0	129.782583	400.0	587857.0	1.297826	Y
4	STD4 240-322037/7	200.0	246.920801	400.0	601861.0	1.234604	Y
5	STD5 240-322037/6	500.0	611.159981	400.0	628424.0	1.22232	Y
6	STD6 240-322037/5	1000.0	1297.007857	400.0	604149.0	1.297008	Y
7	STD7 240-322037/4	1500.0	1818.515513	400.0	632151.0	1.212344	Y
8	STD8 240-322037/3	2000.0	2499.881428	400.0	633371.0	1.249941	Y
9	STD9 240-322037/2	2500.0	3147.800094	400.0	653687.0	1.25912	Y



Calibration / Terphenyl-d14

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

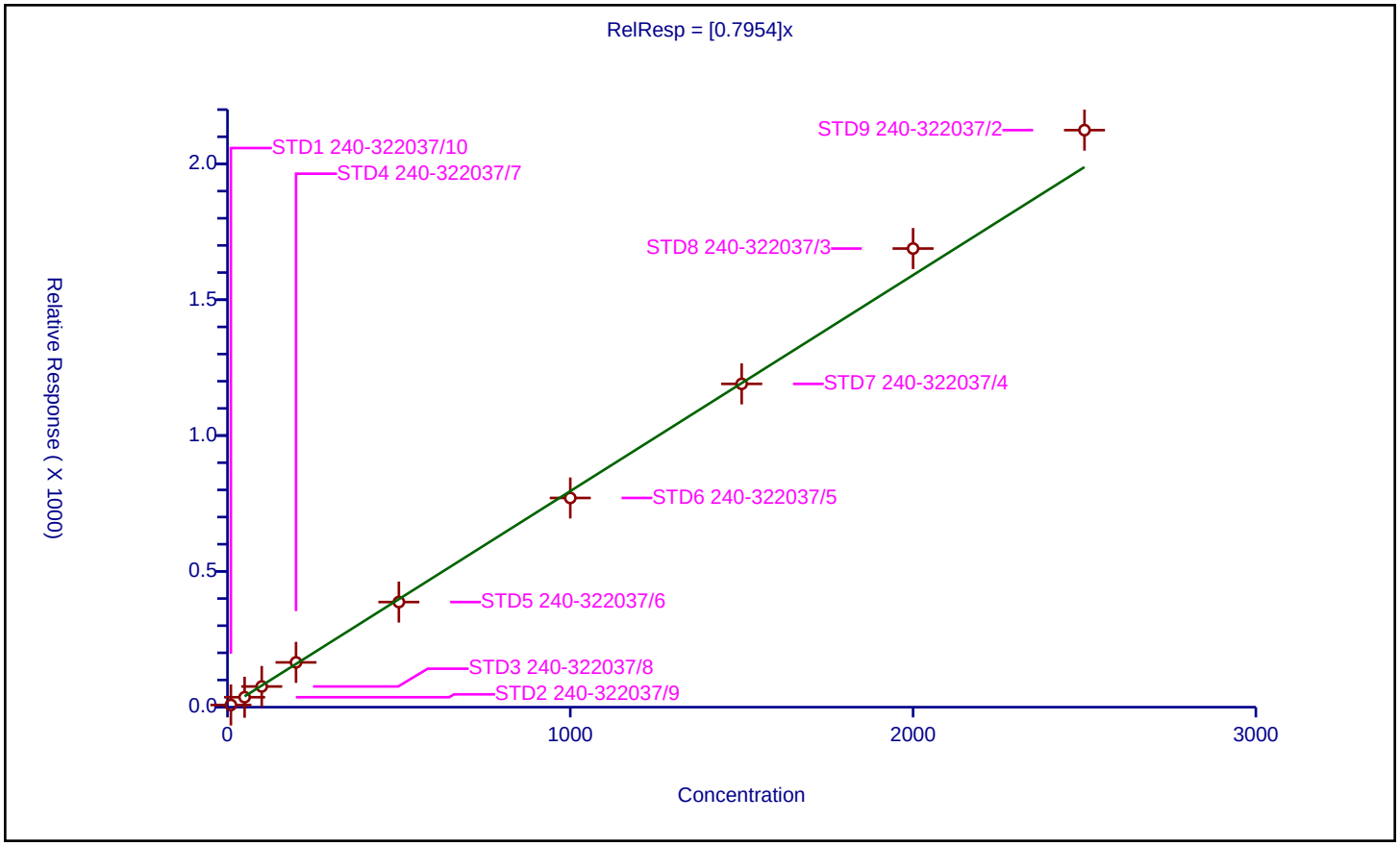
Curve Coefficients

Intercept:	0
Slope:	0.7954

Error Coefficients

Standard Error:	1750000
Relative Standard Error:	5.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	8.100425	400.0	506887.0	0.810042	Y
2	STD2 240-322037/9	50.0	36.536583	400.0	604917.0	0.730732	Y
3	STD3 240-322037/8	100.0	76.135523	400.0	587857.0	0.761355	Y
4	STD4 240-322037/7	200.0	164.881925	400.0	601861.0	0.82441	Y
5	STD5 240-322037/6	500.0	386.997314	400.0	628424.0	0.773995	Y
6	STD6 240-322037/5	1000.0	770.208012	400.0	604149.0	0.770208	Y
7	STD7 240-322037/4	1500.0	1190.258657	400.0	632151.0	0.793506	Y
8	STD8 240-322037/3	2000.0	1688.475159	400.0	633371.0	0.844238	Y
9	STD9 240-322037/2	2500.0	2124.466297	400.0	653687.0	0.849787	Y



Calibration / Butyl benzyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

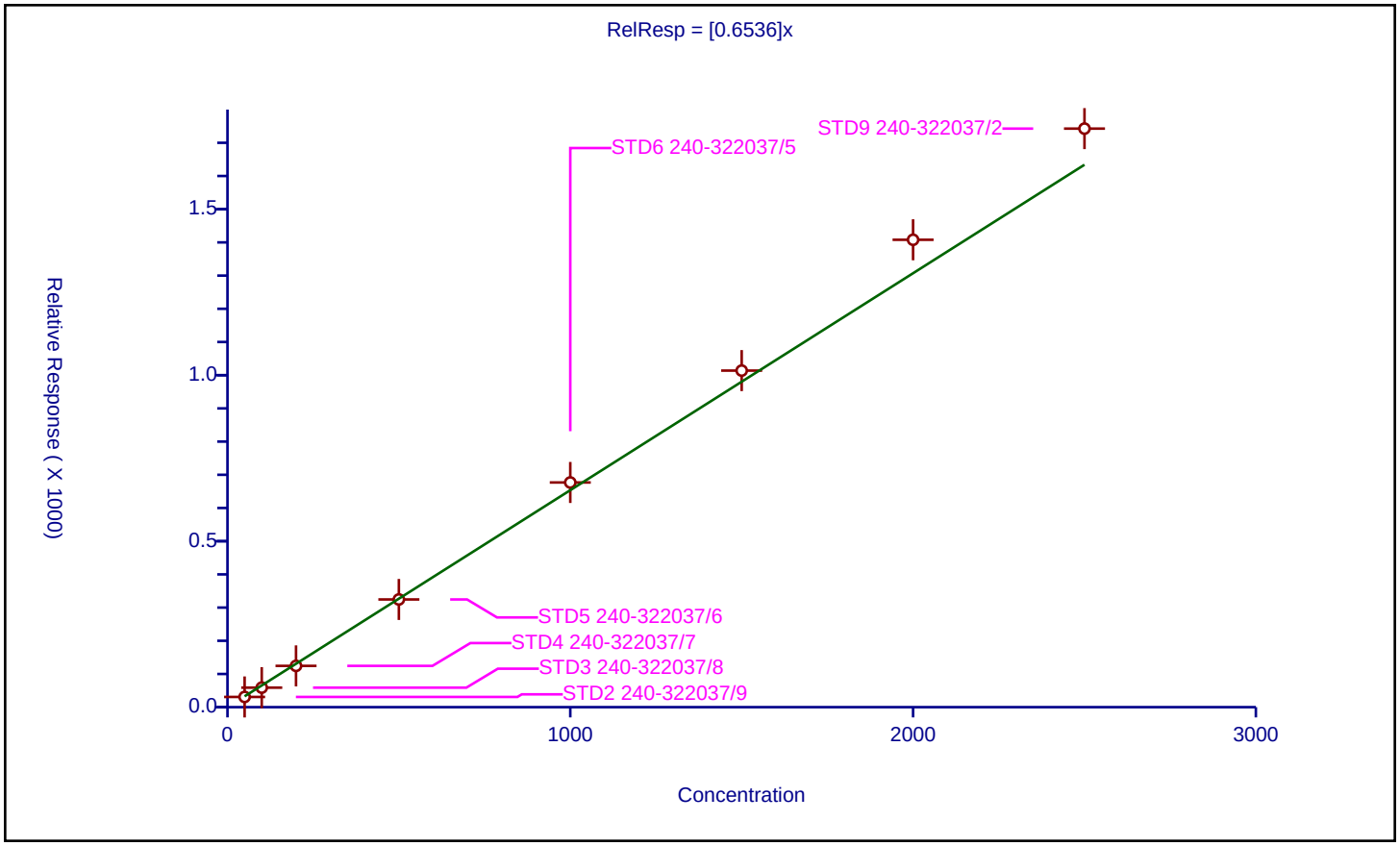
Curve Coefficients

Intercept:	0
Slope:	0.6536

Error Coefficients

Standard Error:	1560000
Relative Standard Error:	6.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	30.80092	400.0	604917.0	0.616018	Y
2	STD3 240-322037/8	100.0	58.820427	400.0	587857.0	0.588204	Y
3	STD4 240-322037/7	200.0	124.36227	400.0	601861.0	0.621811	Y
4	STD5 240-322037/6	500.0	324.419818	400.0	628424.0	0.64884	Y
5	STD6 240-322037/5	1000.0	676.817143	400.0	604149.0	0.676817	Y
6	STD7 240-322037/4	1500.0	1013.812839	400.0	632151.0	0.675875	Y
7	STD8 240-322037/3	2000.0	1407.897109	400.0	633371.0	0.703949	Y
8	STD9 240-322037/2	2500.0	1742.7258	400.0	653687.0	0.69709	Y



Calibration / Bis(2-ethylhexyl) phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

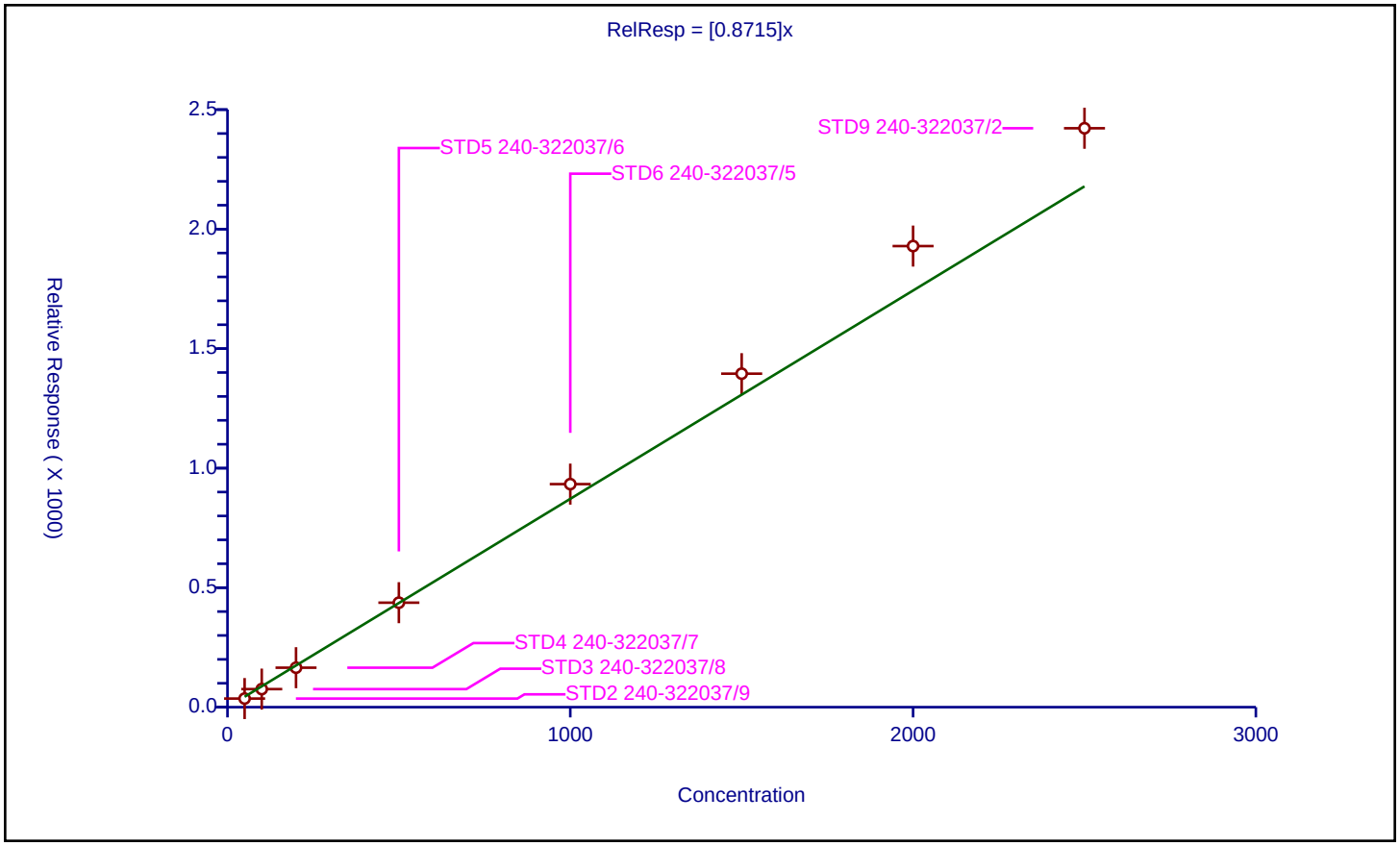
Curve Coefficients

Intercept:	0
Slope:	0.8715

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	10.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	36.007585	400.0	604917.0	0.720152	Y
2	STD3 240-322037/8	100.0	75.605462	400.0	587857.0	0.756055	Y
3	STD4 240-322037/7	200.0	165.07466	400.0	601861.0	0.825373	Y
4	STD5 240-322037/6	500.0	437.080061	400.0	628424.0	0.87416	Y
5	STD6 240-322037/5	1000.0	933.174432	400.0	604149.0	0.933174	Y
6	STD7 240-322037/4	1500.0	1395.170458	400.0	632151.0	0.930114	Y
7	STD8 240-322037/3	2000.0	1929.078534	400.0	633371.0	0.964539	Y
8	STD9 240-322037/2	2500.0	2421.982386	400.0	653687.0	0.968793	Y



Calibration / 3,3'-Dichlorobenzidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

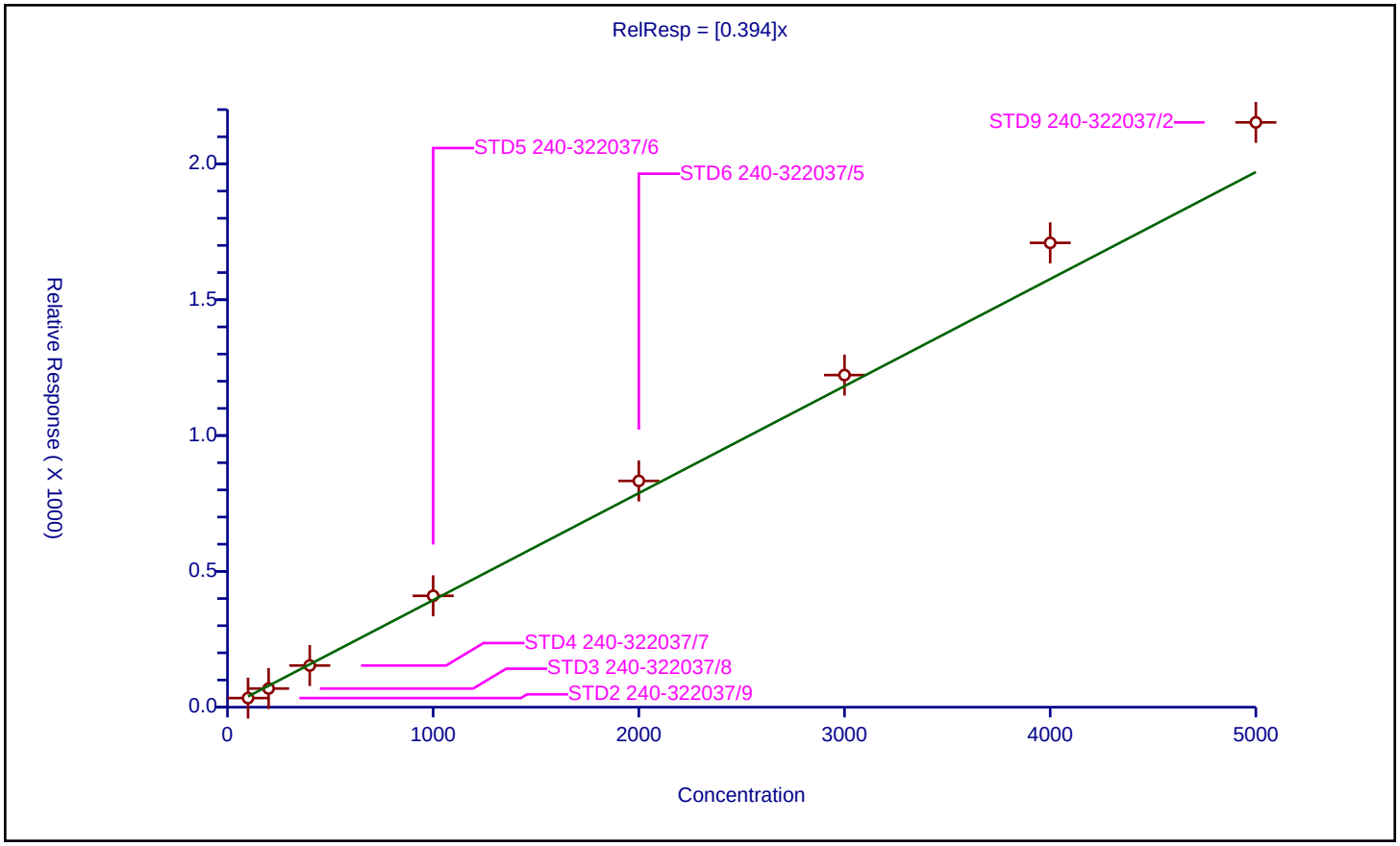
Curve Coefficients

Intercept:	0
Slope:	0.394

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	9.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	100.0	33.412187	400.0	604917.0	0.334122	Y
2	STD3 240-322037/8	200.0	68.581985	400.0	587857.0	0.34291	Y
3	STD4 240-322037/7	400.0	153.317793	400.0	601861.0	0.383294	Y
4	STD5 240-322037/6	1000.0	409.962064	400.0	628424.0	0.409962	Y
5	STD6 240-322037/5	2000.0	832.988551	400.0	604149.0	0.416494	Y
6	STD7 240-322037/4	3000.0	1222.652816	400.0	632151.0	0.407551	Y
7	STD8 240-322037/3	4000.0	1709.459385	400.0	633371.0	0.427365	Y
8	STD9 240-322037/2	5000.0	2152.917834	400.0	653687.0	0.430584	Y



Calibration / Benzo[a]anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

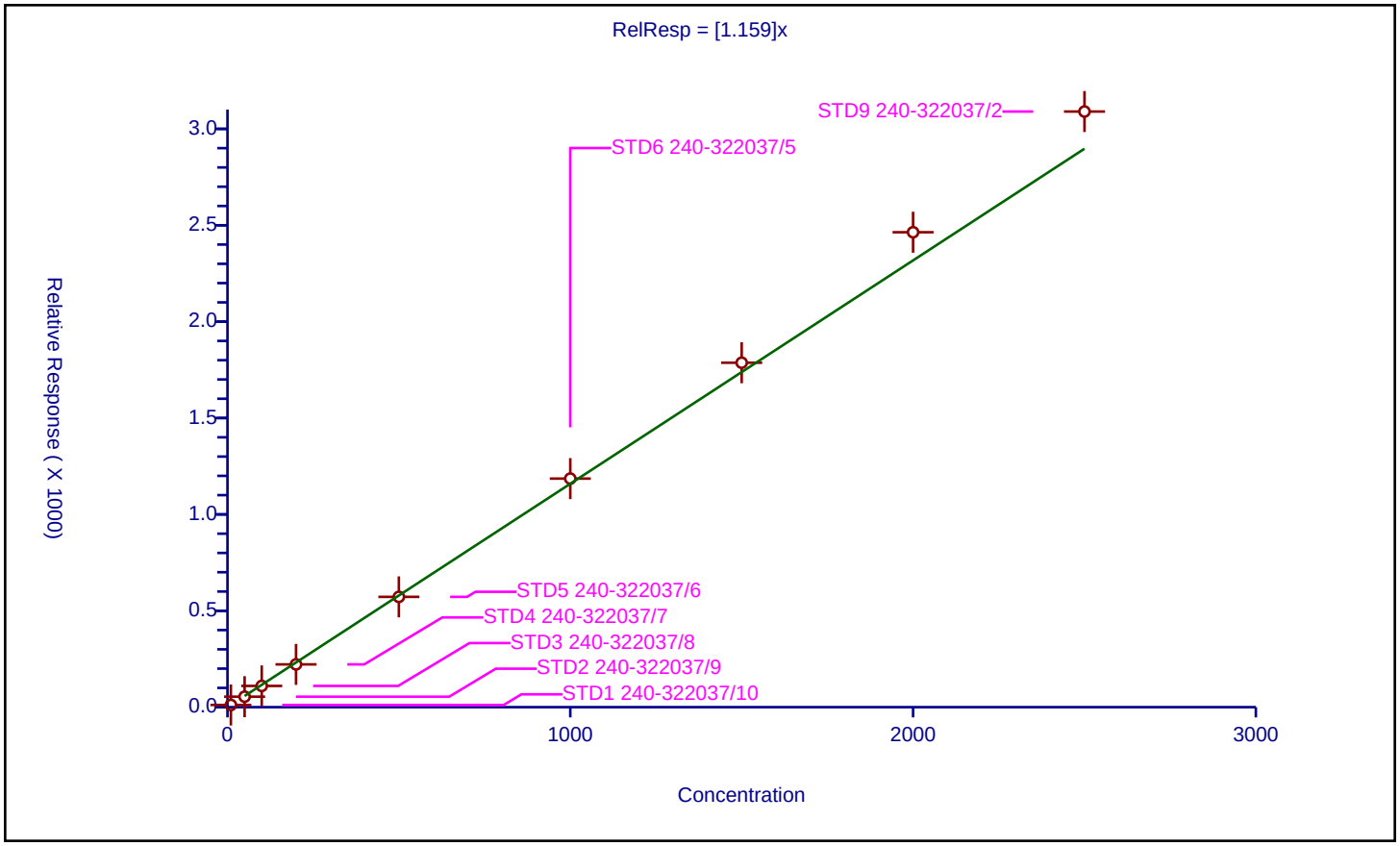
Curve Coefficients

Intercept:	0
Slope:	1.159

Error Coefficients

Standard Error:	2570000
Relative Standard Error:	4.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	11.413984	400.0	506887.0	1.141398	Y
2	STD2 240-322037/9	50.0	54.365806	400.0	604917.0	1.087316	Y
3	STD3 240-322037/8	100.0	110.190063	400.0	587857.0	1.101901	Y
4	STD4 240-322037/7	200.0	221.95158	400.0	601861.0	1.109758	Y
5	STD5 240-322037/6	500.0	572.174201	400.0	628424.0	1.144348	Y
6	STD6 240-322037/5	1000.0	1185.659167	400.0	604149.0	1.185659	Y
7	STD7 240-322037/4	1500.0	1786.887627	400.0	632151.0	1.191258	Y
8	STD8 240-322037/3	2000.0	2463.850097	400.0	633371.0	1.231925	Y
9	STD9 240-322037/2	2500.0	3089.983432	400.0	653687.0	1.235993	Y



Calibration / Chrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

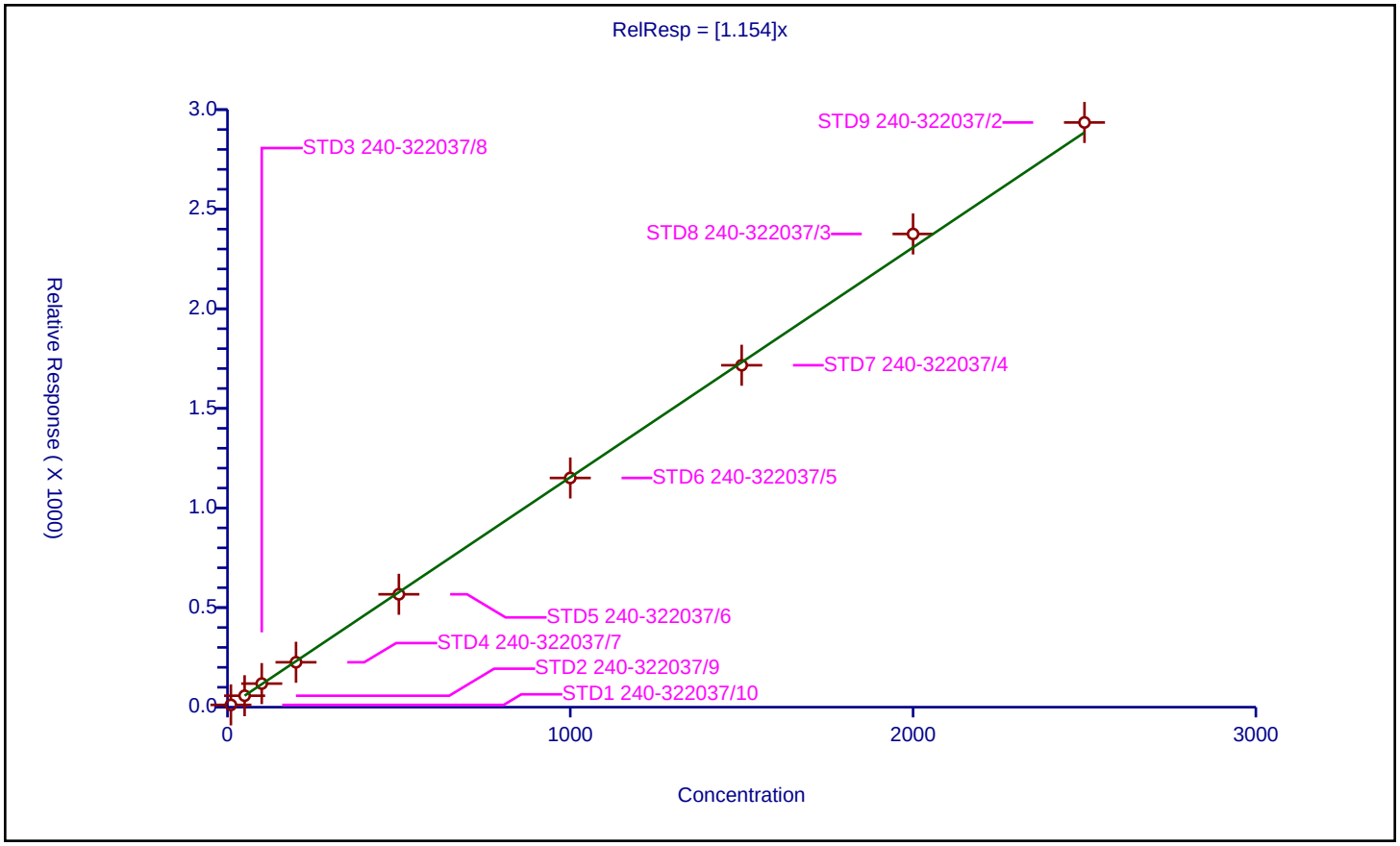
Curve Coefficients

Intercept:	0
Slope:	1.154

Error Coefficients

Standard Error:	2460000
Relative Standard Error:	1.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	11.376895	400.0	506887.0	1.137689	Y
2	STD2 240-322037/9	50.0	57.480282	400.0	604917.0	1.149606	Y
3	STD3 240-322037/8	100.0	118.300199	400.0	587857.0	1.183002	Y
4	STD4 240-322037/7	200.0	225.364328	400.0	601861.0	1.126822	Y
5	STD5 240-322037/6	500.0	566.691915	400.0	628424.0	1.133384	Y
6	STD6 240-322037/5	1000.0	1150.63006	400.0	604149.0	1.15063	Y
7	STD7 240-322037/4	1500.0	1716.622136	400.0	632151.0	1.144415	Y
8	STD8 240-322037/3	2000.0	2375.664184	400.0	633371.0	1.187832	Y
9	STD9 240-322037/2	2500.0	2935.418327	400.0	653687.0	1.174167	Y



Calibration / Di-n-octyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

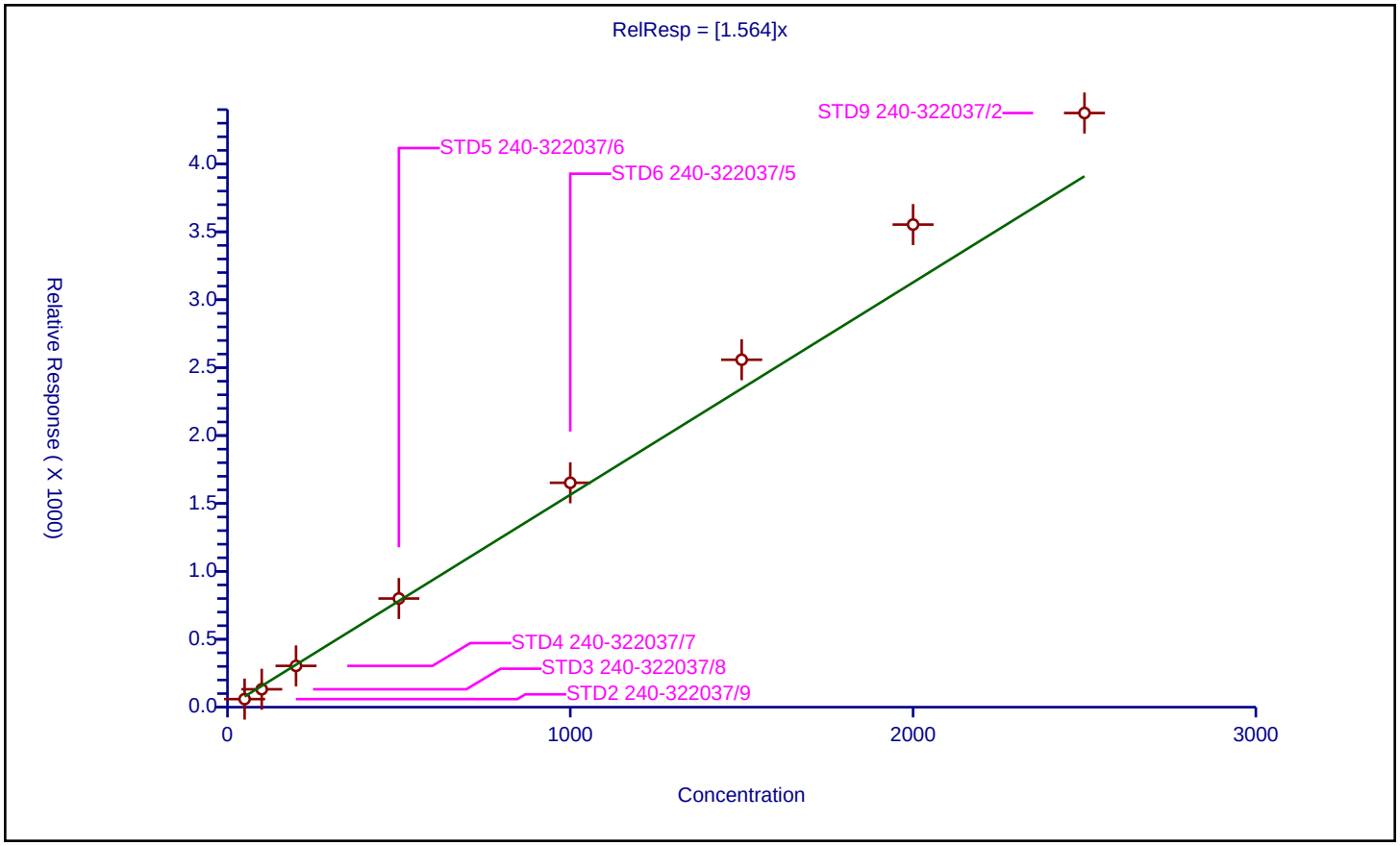
Curve Coefficients

Intercept:	0
Slope:	1.564

Error Coefficients

Standard Error:	3750000
Relative Standard Error:	13.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/9	50.0	59.410192	400.0	549670.0	1.188204	Y
2	STD3 240-322037/8	100.0	131.784889	400.0	529047.0	1.317849	Y
3	STD4 240-322037/7	200.0	303.94968	400.0	536727.0	1.519748	Y
4	STD5 240-322037/6	500.0	800.134352	400.0	586521.0	1.600269	Y
5	STD6 240-322037/5	1000.0	1652.233308	400.0	580641.0	1.652233	Y
6	STD7 240-322037/4	1500.0	2558.297075	400.0	595728.0	1.705531	Y
7	STD8 240-322037/3	2000.0	3553.556558	400.0	602324.0	1.776778	Y
8	STD9 240-322037/2	2500.0	4374.758384	400.0	632511.0	1.749903	Y



Calibration / Benzo[b]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

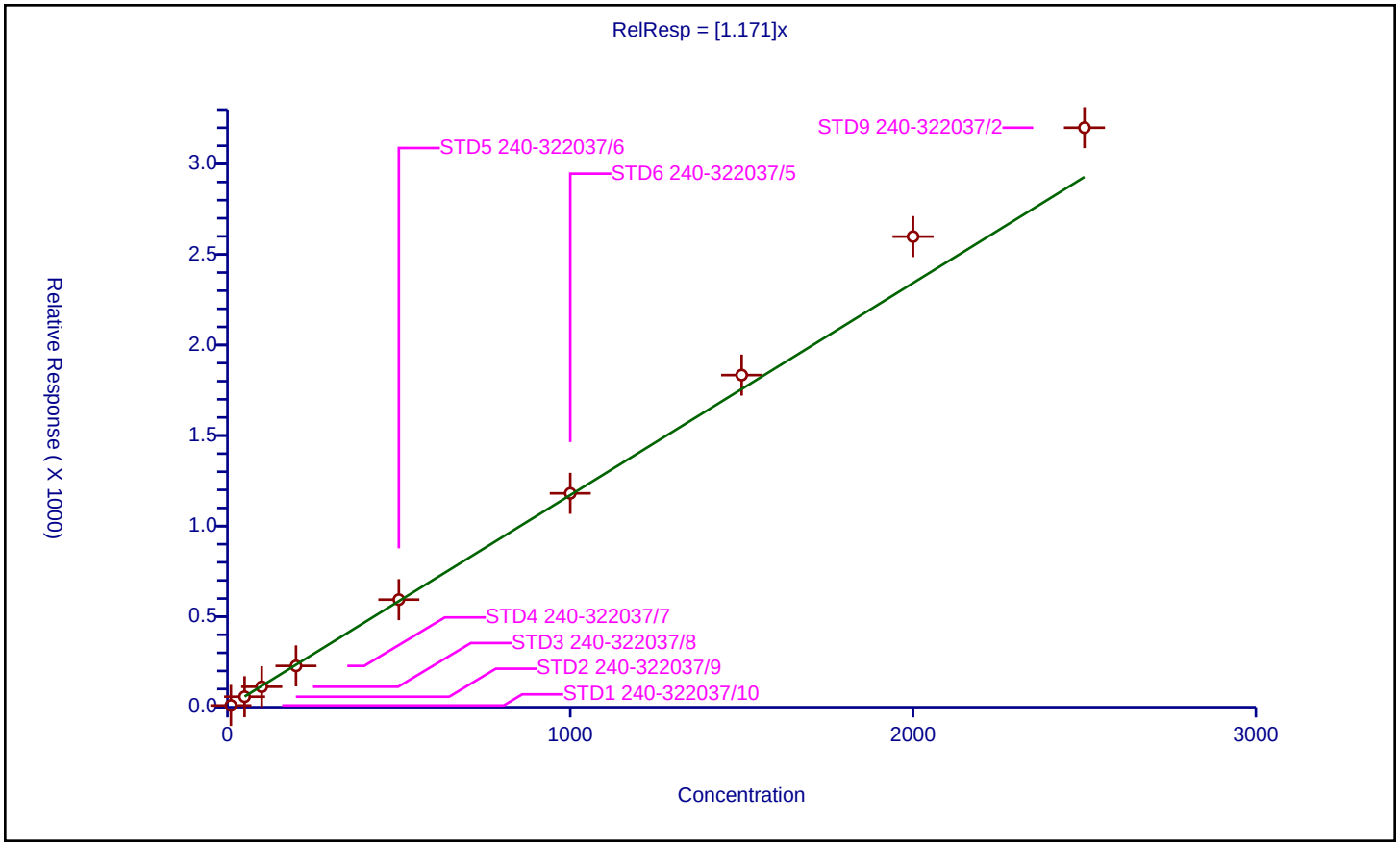
Curve Coefficients

Intercept:	0
Slope:	1.171

Error Coefficients

Standard Error:	2550000
Relative Standard Error:	8.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	9.490496	400.0	475423.0	0.94905	Y
2	STD2 240-322037/9	50.0	57.742282	400.0	549670.0	1.154846	Y
3	STD3 240-322037/8	100.0	112.657666	400.0	529047.0	1.126577	Y
4	STD4 240-322037/7	200.0	227.800726	400.0	536727.0	1.139004	Y
5	STD5 240-322037/6	500.0	593.875411	400.0	586521.0	1.187751	Y
6	STD6 240-322037/5	1000.0	1180.819818	400.0	580641.0	1.18082	Y
7	STD7 240-322037/4	1500.0	1833.936293	400.0	595728.0	1.222624	Y
8	STD8 240-322037/3	2000.0	2598.707008	400.0	602324.0	1.299354	Y
9	STD9 240-322037/2	2500.0	3200.295963	400.0	632511.0	1.280118	Y



Calibration / Benzo[k]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

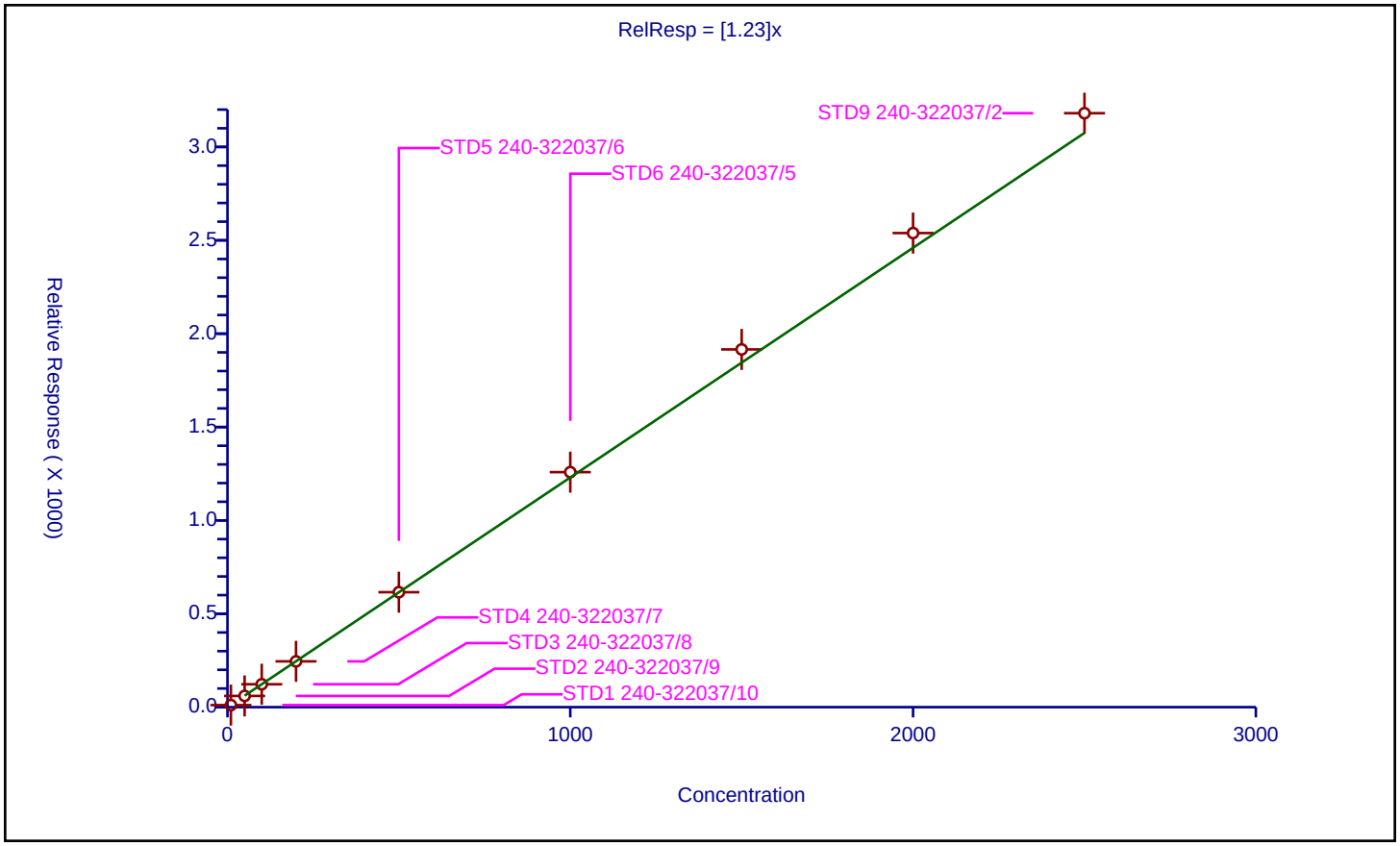
Curve Coefficients

Intercept:	0
Slope:	1.23

Error Coefficients

Standard Error:	2560000
Relative Standard Error:	4.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	11.035225	400.0	475423.0	1.103523	Y
2	STD2 240-322037/9	50.0	60.264522	400.0	549670.0	1.20529	Y
3	STD3 240-322037/8	100.0	122.650729	400.0	529047.0	1.226507	Y
4	STD4 240-322037/7	200.0	245.215165	400.0	536727.0	1.226076	Y
5	STD5 240-322037/6	500.0	615.701058	400.0	586521.0	1.231402	Y
6	STD6 240-322037/5	1000.0	1258.50293	400.0	580641.0	1.258503	Y
7	STD7 240-322037/4	1500.0	1915.780356	400.0	595728.0	1.277187	Y
8	STD8 240-322037/3	2000.0	2538.960427	400.0	602324.0	1.26948	Y
9	STD9 240-322037/2	2500.0	3180.651087	400.0	632511.0	1.27226	Y



Calibration / Benzo[a]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

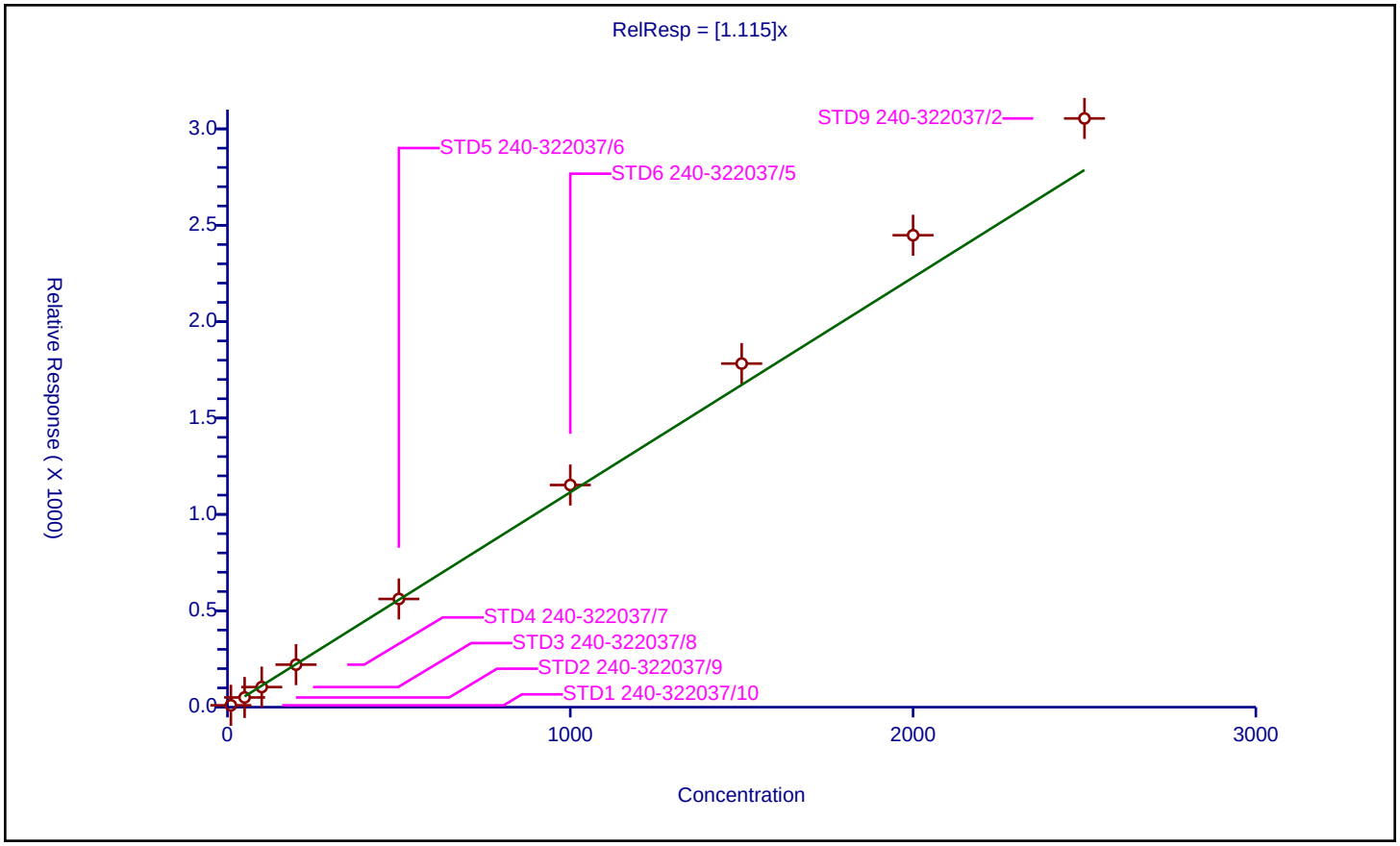
Curve Coefficients

Intercept:	0
Slope:	1.115

Error Coefficients

Standard Error:	2440000
Relative Standard Error:	8.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	9.699152	400.0	475423.0	0.969915	Y
2	STD2 240-322037/9	50.0	50.293449	400.0	549670.0	1.005869	Y
3	STD3 240-322037/8	100.0	104.39753	400.0	529047.0	1.043975	Y
4	STD4 240-322037/7	200.0	220.626874	400.0	536727.0	1.103134	Y
5	STD5 240-322037/6	500.0	561.350744	400.0	586521.0	1.122701	Y
6	STD6 240-322037/5	1000.0	1152.513171	400.0	580641.0	1.152513	Y
7	STD7 240-322037/4	1500.0	1782.534311	400.0	595728.0	1.188356	Y
8	STD8 240-322037/3	2000.0	2448.279663	400.0	602324.0	1.22414	Y
9	STD9 240-322037/2	2500.0	3054.162853	400.0	632511.0	1.221665	Y



Calibration / Indeno[1,2,3-cd]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

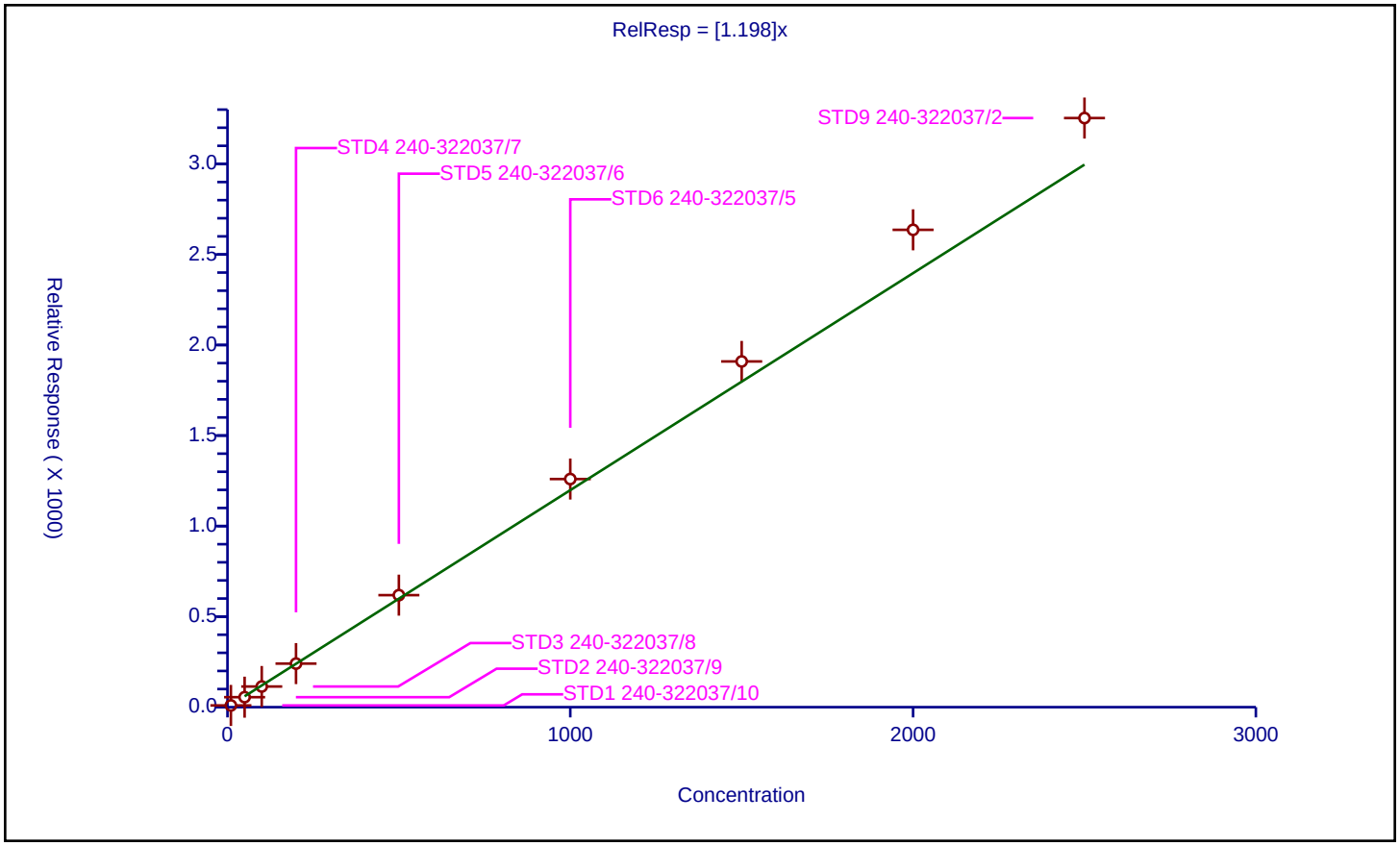
Curve Coefficients

Intercept:	0
Slope:	1.198

Error Coefficients

Standard Error:	2610000
Relative Standard Error:	9.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	9.519102	400.0	475423.0	0.95191	Y
2	STD2 240-322037/9	50.0	55.079593	400.0	549670.0	1.101592	Y
3	STD3 240-322037/8	100.0	114.008018	400.0	529047.0	1.14008	Y
4	STD4 240-322037/7	200.0	240.592331	400.0	536727.0	1.202962	Y
5	STD5 240-322037/6	500.0	618.674523	400.0	586521.0	1.237349	Y
6	STD6 240-322037/5	1000.0	1259.880718	400.0	580641.0	1.259881	Y
7	STD7 240-322037/4	1500.0	1909.288131	400.0	595728.0	1.272859	Y
8	STD8 240-322037/3	2000.0	2636.066303	400.0	602324.0	1.318033	Y
9	STD9 240-322037/2	2500.0	3253.291721	400.0	632511.0	1.301317	Y



Calibration / Dibenz(a,h)anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

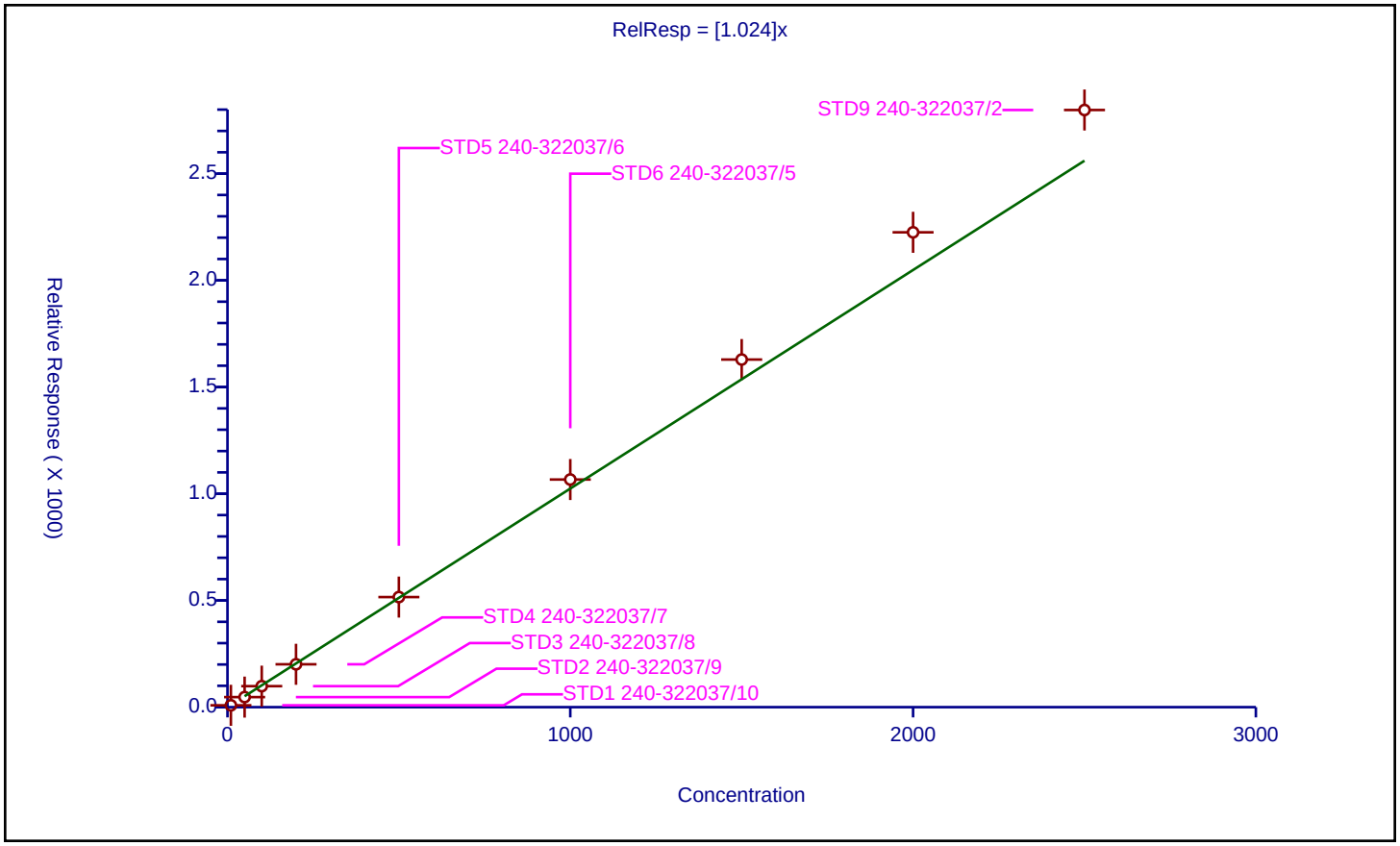
Curve Coefficients

Intercept:	0
Slope:	1.024

Error Coefficients

Standard Error:	2230000
Relative Standard Error:	8.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	8.695414	400.0	475423.0	0.869541	Y
2	STD2 240-322037/9	50.0	47.170848	400.0	549670.0	0.943417	Y
3	STD3 240-322037/8	100.0	98.46611	400.0	529047.0	0.984661	Y
4	STD4 240-322037/7	200.0	200.885739	400.0	536727.0	1.004429	Y
5	STD5 240-322037/6	500.0	515.831488	400.0	586521.0	1.031663	Y
6	STD6 240-322037/5	1000.0	1066.680445	400.0	580641.0	1.06668	Y
7	STD7 240-322037/4	1500.0	1628.872237	400.0	595728.0	1.085915	Y
8	STD8 240-322037/3	2000.0	2224.98456	400.0	602324.0	1.112492	Y
9	STD9 240-322037/2	2500.0	2798.129993	400.0	632511.0	1.119252	Y



Calibration / Benzo[g,h,i]perylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

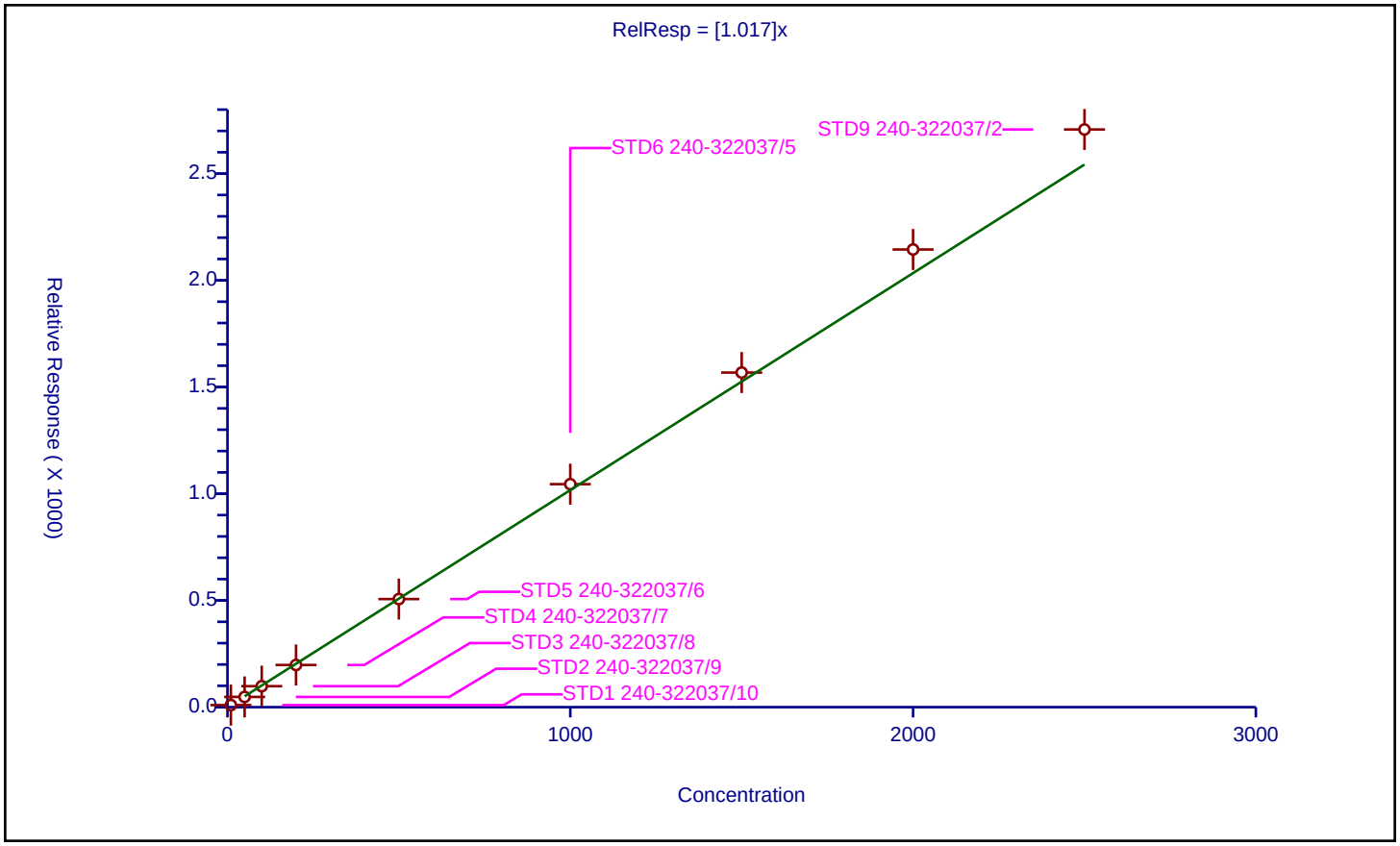
Curve Coefficients

Intercept:	0
Slope:	1.017

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	4.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-322037/10	10.0	9.642781	400.0	475423.0	0.964278	Y
2	STD2 240-322037/9	50.0	47.970601	400.0	549670.0	0.959412	Y
3	STD3 240-322037/8	100.0	98.274822	400.0	529047.0	0.982748	Y
4	STD4 240-322037/7	200.0	197.681876	400.0	536727.0	0.988409	Y
5	STD5 240-322037/6	500.0	506.454841	400.0	586521.0	1.01291	Y
6	STD6 240-322037/5	1000.0	1044.9176	400.0	580641.0	1.044918	Y
7	STD7 240-322037/4	1500.0	1567.832971	400.0	595728.0	1.045222	Y
8	STD8 240-322037/3	2000.0	2144.550109	400.0	602324.0	1.072275	Y
9	STD9 240-322037/2	2500.0	2706.842411	400.0	632511.0	1.082737	Y



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-322037/19	80411019.D
Level 2	STD3 240-322037/18	80411018.D
Level 3	STD4 240-322037/17	80411017.D
Level 4	STD5 240-322037/16	80411016.D
Level 5	STD6 240-322037/15	80411015.D
Level 6	STD7 240-322037/14	80411014.D
Level 7	STD8 240-322037/13	80411013.D
Level 8	STD9 240-322037/12	80411012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
2-Picoline	1.2209 1.2984	1.1785 1.0511	1.1585 1.2752	1.2817	1.0715	Ave		1.1920				7.9		20.0			
N-Nitrosomethylethylamine	+++++ 0.6876	0.6720 0.7522	0.7291 0.7869	0.7052	0.7321	Ave		0.7236				5.4		20.0			
Acrylamide	+++++ 0.2142	+++++ 0.2099	+++++ 0.2746	0.2552	0.2315	Ave		0.2371				11.6		20.0			
Methyl methanesulfonate	1.0319 0.8849	1.0997 1.0120	1.0221 1.0624	1.0069	1.0542	Ave		1.0218				6.2		20.0			
N-Nitrosodiethylamine	0.7257 0.7520	0.8447 0.8433	0.7788 0.8469	0.7916	0.8507	Ave		0.8042				6.1		20.0			
Ethyl methanesulfonate	1.2245 1.2276	1.3512 1.2768	1.2917 1.3383	1.3903	1.2020	Ave		1.2878				5.3		20.0			
Pentachloroethane	0.4553 0.4797	0.5033 0.4903	0.4836 0.5105	0.4840	0.4766	Ave		0.4854				3.5		20.0			
N-Nitrosopyrrolidine	0.6145 0.8982	0.7775 0.8887	0.7974 0.9342	0.9277	0.8479	Ave		0.8358				12.7		20.0			
N-Nitrosomorpholine	1.4258 1.7532	1.6846 1.7128	1.7292 1.7985	1.9595	1.6868	Ave		1.7188				8.6		20.0			
2-Toluidine	2.3302 2.3719	2.6229 2.4932	2.5385 2.6015	2.7566	2.2888	Ave		2.5004				6.5		20.0			
N-Nitrosopiperidine	0.1373 0.1850	0.1647 0.1790	0.1757 0.1805	0.1850	0.1782	Ave		0.1732				9.1		20.0			
o,o',o''-Triethylphosphorothioate	0.1555 0.1737	0.1669 0.1665	0.1662 0.1701	0.1805	0.1763	Ave		0.1695				4.5		20.0			
alpha,alpha-Dimethyl phenethylamine	+++++ 0.8522	0.7888 0.8540	0.7635 0.8904	0.6682	0.7410	Ave		0.7940				9.7		20.0			
Hexachloropropene	0.1605 0.1805	0.1759 0.2047	0.1806 0.2041	0.1674	0.2081	Ave		0.1852			0.0100	9.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-butylamine	0.1899 0.2577	0.2152 0.2378	0.2573 0.2395	0.2650	0.2632	Ave		0.2407				11.0		20.0			
Quinoline	0.4855 0.6511	0.5452 0.6267	0.6434 0.6340	0.6493	0.6497	Ave		0.6106				10.1		20.0			
p-Phenylene diamine	0.0347 0.2616	0.0745 0.2520	0.1395 0.2516	0.2255	0.2431	Lin1	-15.04	0.2597							0.9980		0.9900
Safrole, Total	0.2300 0.2886	0.2363 0.2786	0.2690 0.2794	0.2875	0.2820	Ave		0.2689				8.5		20.0			
Isosafrole Peak 1	0.1244 0.1118	0.1043 0.1183	0.1140 0.1194	0.1056	0.1096	Ave		0.1134				6.2		20.0			
Isosafrole Peak 2	2.9977 3.3398	3.2350 3.3895	3.2506 3.5077	3.2719	3.2909	Ave		3.2854				4.5		20.0			
1-Chloronaphthalene	1.2166 1.1225	1.2613 1.1751	1.2023 1.1966	1.0710	1.0881	Ave		1.1667				5.7		20.0			
1,4-Naphthoquinone	0.1980 0.4011	0.3230 0.4188	0.3110 0.4118	0.3793	0.3970	Lin1	-12.10	0.4149							0.9990		0.9900
1,4-Dinitrobenzene	0.1094 0.2185	0.1684 0.2295	0.1816 0.2356	0.1941	0.2071	Lin1	-7.245	0.2289							0.9980		0.9900
Pentachlorobenzene	0.3690 0.4092	0.3892 0.4287	0.3402 0.4388	0.3893	0.4053	Ave		0.3962				8.0		20.0			
2,3,5,6-Tetrachlorophenol	0.1295 0.2597	0.1892 0.2657	0.2133 0.2738	0.2430	0.2501	Lin1	-8.272	0.2689							0.9990		0.9900
1-Naphthylamine	1.0188 1.1758	1.2075 1.2053	1.1878 1.2441	1.1679	1.1942	Ave		1.1752				5.7		20.0			
2-Naphthylamine	1.0236 1.2527	1.3118 1.2325	1.3070 1.2494	1.2944	1.2937	Ave		1.2456				7.6		20.0			
Thionazin	0.3637 0.3345	0.3810 0.3409	0.3478 0.3418	0.3474	0.3382	Ave		0.3494				4.4		20.0			
N-Nitro-o-toluidine	0.2845 0.3808	0.3536 0.3952	0.3599 0.4125	0.3895	0.3938	Ave		0.3712				10.8		20.0			
Sulfotepp	0.0831 0.1044	0.0969 0.1111	0.0957 0.1145	0.1020	0.1021	Ave		0.1012				9.6		20.0			
1,3,5-Trinitrobenzene	+++++ 0.0748	+++++ 0.0804	0.0451 0.0839	0.0565	0.0649	Lin1	-10.26	0.0840							0.9930		0.9900
Phenacetin	0.2793 0.3970	0.3238 0.4163	0.3451 0.4357	0.3964	0.3872	Ave		0.3726				14.0		20.0			
Diallate Peak 1	0.3669 0.3767	0.3962 0.3879	0.3810 0.3872	0.3896	0.3762	Ave		0.3827				2.4		20.0			
Phorate	0.1626 0.1768	0.1746 0.1826	0.1733 0.1805	0.1771	0.1728	Ave		0.1750				3.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Diallate Peak 2	0.4575 0.4002	0.4168 0.4160	0.3835 0.4182	0.3886	0.3774	Ave		0.4073				6.3		20.0			
Dimethoate	0.2362 0.2808	0.2738 0.2900	0.2772 0.2935	0.2985	0.2932	Ave		0.2804				7.1		20.0			
4-Aminobiphenyl	0.6302 0.8680	0.7227 0.8901	0.7599 0.9149	0.8402	0.8181	Ave		0.8055				11.9		20.0			
Pronamide	0.2970 0.3555	0.3264 0.3754	0.3376 0.3834	0.3454	0.3497	Ave		0.3463				7.9		20.0			
Pentachloronitrobenzene	0.0742 0.0936	0.0863 0.0983	0.0825 0.1005	0.0915	0.0903	Ave		0.0896				9.5		20.0			
Disulfoton	0.3809 0.4164	0.4035 0.4232	0.4060 0.4325	0.4169	0.4106	Ave		0.4112				3.7		20.0			
Dinoseb	0.0759 0.1777	0.1048 0.1961	0.1135 0.1992	0.1440	0.1625	Lin1	-8.969	0.1911							0.9920		0.9900
Methyl parathion	0.1862 0.2721	0.2438 0.2710	0.2595 0.2727	0.2724	0.2741	Ave		0.2565				11.8		20.0			
Ethyl Parathion	0.1127 0.1734	0.1284 0.1828	0.1437 0.1870	0.1636	0.1694	Ave		0.1576				16.9		20.0			
4-Nitroquinoline-1-oxide	+++++ 0.0778	0.0276 0.0948	0.0315 0.1013	0.0459	0.0625	Qua	-4.317	0.0469	0.0000231						0.9980		0.9900
Methapyrilene	0.5724 0.8059	0.6439 0.8258	0.6478 0.8334	0.7616	0.7909	Ave		0.7352				13.5		20.0			
Isodrin	0.1599 0.1485	0.1599 0.1537	0.1557 0.1570	0.1576	0.1513	Ave		0.1554				2.6		20.0			
Aramite Peak 1	0.1185 0.1593	0.1399 0.1607	0.1488 0.1684	0.1462	0.1510	Ave		0.1491				10.3		20.0			
Aramite Peak 2	0.1556 0.1980	0.1764 0.2035	0.1801 0.2132	0.1826	0.1927	Ave		0.1878				9.6		20.0			
p-Dimethylamino azobenzene	0.1757 0.2638	0.2267 0.2736	0.2343 0.2826	0.2406	0.2584	Ave		0.2445				13.9		20.0			
Ethyl 4,4'-Dichlorobenzilate	0.4540 0.5153	0.5394 0.5317	0.5207 0.5486	0.5005	0.5129	Ave		0.5154				5.7		20.0			
Famphur	0.3288 +++++	0.4207 +++++	0.4242 +++++	0.3411	0.1917	Ave		0.3413				27.7	*	20.0			
3,3'-Dimethylbenzidine	0.2413 0.7269	0.3946 0.7675	0.5523 0.7969	0.6779	0.7037	Lin1	-34.14	0.7765							0.9980		0.9900
2-Acetylaminofluorene	0.2426 0.5788	0.3844 0.6102	0.4479 0.6309	0.5112	0.5578	Lin1	-23.68	0.6126							0.9970		0.9900
4,4'-Methylene bis(2-chloroaniline)	0.1301 0.2432	0.1838 0.2533	0.2153 0.2676	0.2259	0.2356	Lin1	-7.624	0.2571							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
6-Methylchrysene	0.7545 0.8956	0.8715 0.9185	0.8836 0.9499	0.8785	0.8840	Ave		0.8795				6.4		20.0			
7,12-Dimethylbenz(a)anthracene	0.3463 0.4877	0.4217 0.5062	0.4671 0.5608	0.4780	0.4834	Ave		0.4689				13.4		20.0			
3-Methylcholanthrene	0.5012 0.6501	0.5514 0.6796	0.5769 0.7143	0.6194	0.6436	Ave		0.6171				11.4		20.0			
Dibenz[a,h]acridine	0.6483 0.9438	0.7685 0.9690	0.8135 1.0415	0.8691	0.9187	Ave		0.8715				14.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-322037/19	80411019.D
Level 2	STD3 240-322037/18	80411018.D
Level 3	STD4 240-322037/17	80411017.D
Level 4	STD5 240-322037/16	80411016.D
Level 5	STD6 240-322037/15	80411015.D
Level 6	STD7 240-322037/14	80411014.D
Level 7	STD8 240-322037/13	80411013.D
Level 8	STD9 240-322037/12	80411012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Picoline	DCBd 4	Ave	20048 619437	38517 706265	68170 996696	174249	323177	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomethylethylamine	DCBd 4	Ave	+++++ 328030	21961 505377	42903 615037	95874	220800	+++++ 1500	100 2000	200 2500	500	1000
Acrylamide	DCBd 4	Ave	+++++ 102189	+++++ 141039	+++++ 214662	34698	69824	+++++ 1500	+++++ 2000	+++++ 2500	500	1000
Methyl methanesulfonate	DCBd 4	Ave	16945 422189	35940 679961	60145 830401	136885	317977	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodiethylamine	DCBd 4	Ave	11917 358778	27607 566584	45826 661964	107623	256590	50.0 1500	100 2000	200 2500	500	1000
Ethyl methanesulfonate	DCBd 4	Ave	20107 585670	44160 857860	76004 1046042	189014	362529	50.0 1500	100 2000	200 2500	500	1000
Pentachloroethane	DCBd 4	Ave	7477 228868	16450 329461	28457 399021	65798	143747	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopyrrolidine	DCBd 4	Ave	10091 428524	25409 597150	46923 730186	126116	255738	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomorpholine	DCBd 4	Ave	23413 836443	55055 1150808	101752 1405720	266397	508778	50.0 1500	100 2000	200 2500	500	1000
2-Toluidine	DCBd 4	Ave	38264 1131575	85722 1675189	149368 2033305	374757	690328	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopiperidine	NPT	Ave	11080 441096	28981 615157	53400 746074	137934	265069	50.0 1500	100 2000	200 2500	500	1000
o,o',o''-Triethylphosphorothioate	NPT	Ave	12548 414295	29366 572348	50497 703187	134574	262275	50.0 1500	100 2000	200 2500	500	1000
alpha,alpha-Dimethyl phenethylamine	NPT	Ave	+++++ 2032135	138773 2935522	232015 3680913	498255	1102375	+++++ 1500	100 2000	200 2500	500	1000
Hexachloropropene	NPT	Ave	12950 430488	30947 703725	54881 843589	124836	309571	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodi-n-butylamine	NPT	Ave	15318 614372	37867 817543	78201 990158	197611	391579	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Quinoline	NPT	Ave	39172 1552473	95910 2154300	195536 2621010	484193	966586	50.0 1500	100 2000	200 2500	500	1000
p-Phenylene diamine	NPT	Lin1	2799 623823	13100 866380	42394 1040004	168138	361621	50.0 1500	100 2000	200 2500	500	1000
Safrole, Total	NPT	Ave	18557 688271	41580 957638	81748 1155188	214415	419449	50.0 1500	100 2000	200 2500	500	1000
Isosafrole Peak 1	ANT	Ave	3521 122360	6689 172840	15065 209454	36787	76496	42.0 1260	84.0 1680	168 2100	420	840
Isosafrole Peak 2	ANT	Ave	16163 696172	39523 943203	81837 1172523	217076	437376	8.00 240	16.0 320	32.0 400	80.0	160
1-Chloronaphthalene	ANT	Ave	40997 1462375	96309 2043776	189185 2499913	444109	903790	50.0 1500	100 2000	200 2500	500	1000
1,4-Naphthoquinone	ANT	Lin1	6674 522572	24663 728344	48938 860402	157292	329751	50.0 1500	100 2000	200 2500	500	1000
1,4-Dinitrobenzene	ANT	Lin1	3687 284691	12855 399208	28570 492138	80492	172023	50.0 1500	100 2000	200 2500	500	1000
Pentachlorobenzene	ANT	Ave	12436 533160	29715 745631	53533 916803	161418	336697	50.0 1500	100 2000	200 2500	500	1000
2,3,5,6-Tetrachlorophenol	ANT	Lin1	4364 338314	14444 462170	33568 571932	100752	207753	50.0 1500	100 2000	200 2500	500	1000
1-Naphthylamine	ANT	Ave	34333 1531825	92202 2096251	186906 2599145	484280	991935	50.0 1500	100 2000	200 2500	500	1000
2-Naphthylamine	ANT	Ave	34494 1631963	100166 2143554	205659 2610303	536754	1074564	50.0 1500	100 2000	200 2500	500	1000
Thionazin	ANT	Ave	12255 435814	29090 592909	54729 714172	144069	280950	50.0 1500	100 2000	200 2500	500	1000
N-Nitro-o-toluidine	ANT	Ave	9587 496080	27003 687387	56637 861775	161504	327147	50.0 1500	100 2000	200 2500	500	1000
Sulfotepp	PHN	Ave	5608 235324	15491 325513	28846 402500	75501	151433	50.0 1500	100 2000	200 2500	500	1000
1,3,5-Trinitrobenzene	PHN	Lin1	+++++ 168561	+++++ 235496	13603 295002	41814	96266	+++++ 1500	+++++ 2000	200 2500	500	1000
Phenacetin	PHN	Ave	18847 894901	51775 1219519	104074 1531252	293292	574182	50.0 1500	100 2000	200 2500	500	1000
Diallate Peak 1	PHN	Ave	21294 730309	54474 977378	98804 1170174	247936	479854	43.0 1290	86.0 1720	172 2150	430	860
Phorate	PHN	Ave	10975 398467	27919 534936	52262 634308	131071	256322	50.0 1500	100 2000	200 2500	500	1000
Diallate Peak 2	PHN	Ave	4323 126298	9330 170641	16191 205774	40256	78365	7.00 210	14.0 280	28.0 350	70.0	140
Dimethoate	PHN	Ave	15941 633131	43780 849649	83595 1031465	220850	434852	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
4-Aminobiphenyl	PHN	Ave	42534 1956808	115553 2607576	229181 3215304	621710	1213256	50.0 1500	100 2000	200 2500	500	1000
Pronamide	PHN	Ave	20043 801498	52194 1099657	101814 1347518	255570	518600	50.0 1500	100 2000	200 2500	500	1000
Pentachloronitrobenzene	PHN	Ave	5005 211015	13800 287851	24882 353070	67668	133877	50.0 1500	100 2000	200 2500	500	1000
Disulfoton	PHN	Ave	25706 938606	64512 1239936	122432 1519835	308443	608957	50.0 1500	100 2000	200 2500	500	1000
Dinoseb	PHN	Lin1	5122 400637	16758 574481	34242 699941	106528	240967	50.0 1500	100 2000	200 2500	500	1000
Methyl parathion	PHN	Ave	12568 613460	38979 793945	78257 958498	201523	406519	50.0 1500	100 2000	200 2500	500	1000
Ethyl Parathion	PHN	Ave	7608 390828	20524 535570	43324 657263	121056	251175	50.0 1500	100 2000	200 2500	500	1000
4-Nitroquinoline-1-oxide	PHN	Qua	+++++ 175442	4410 277667	9489 355866	33974	92672	+++++ 1500	100 2000	200 2500	500	1000
Methapyrilene	PHN	Ave	77266 3633544	205893 4838754	390754 5857999	1127045	2345911	100 3000	200 4000	400 5000	1000	2000
Isodrin	PHN	Ave	10791 334774	25567 450254	46958 551583	116637	224367	50.0 1500	100 2000	200 2500	500	1000
Aramite Peak 1	CRY	Ave	3538 164212	9347 224077	18647 281294	48091	99089	25.5 765	51.0 1020	102 1275	255	510
Aramite Peak 2	CRY	Ave	4465 196062	11325 272652	21693 342206	57709	121524	24.5 735	49.0 980	98.0 1225	245	490
p-Dimethylamino azobenzene	CRY	Ave	10289 533038	29704 747939	57592 925625	155219	332541	50.0 1500	100 2000	200 2500	500	1000
Ethyl 4,4'-Dichlorobenzilate	CRY	Ave	26582 1041338	70679 1453423	127968 1797131	322845	660090	50.0 1500	100 2000	200 2500	500	1000
Famphur	CRY	Ave	19254 +++++	55131 +++++	104262 +++++	219991	246769	50.0 +++++	100 +++++	200 +++++	500	1000
3,3'-Dimethylbenzidine	CRY	Lin1	14127 1468960	51713 2098213	135735 2610704	437282	905722	50.0 1500	100 2000	200 2500	500	1000
2-Acetylaminofluorene	CRY	Lin1	14207 1169710	50372 1667986	110088 2066717	329767	717983	50.0 1500	100 2000	200 2500	500	1000
4,4'-Methylene bis(2-chloroaniline)	CRY	Lin1	7620 491550	24079 692382	52926 876747	145729	303301	50.0 1500	100 2000	200 2500	500	1000
6-Methylchrysene	CRY	Ave	88365 3619722	228417 5021976	434314 6223788	1133296	2275464	100 3000	200 4000	400 5000	1000	2000
7,12-Dimethylbenz(a)anthracene	PRY	Ave	19103 916718	53739 1286191	109190 1679128	279852	567052	50.0 1500	100 2000	200 2500	500	1000
3-Methylcholanthrene	PRY	Ave	55295 2444073	140551 3453363	269668 4277315	725358	1509959	100 3000	200 4000	400 5000	1000	2000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 322037

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2018 15:39 Calibration End Date: 04/11/2018 18:32 Calibration ID: 44616

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dibenz[a,h]acridine	PRY	Ave	35763 1774072	97930 2462094	190143 3118317	508842	1077616	50.0 1500	100 2000	200 2500	500	1000

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411012.D
Lims ID: std9 l2lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 11-Apr-2018 15:39:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-012
Misc. Info.: STD9 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:26 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 05:25:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	97	125055	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	661452	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	334272	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	99	562300	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.681	0.000	99	524152	400.0	400.0	
* 6 Perylene-d12	264	16.075	16.075	0.000	97	479031	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	94	996696	2500.0	2674.5	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	88	615037	2500.0	2718.8	
14 Acrylamide	71	5.564	5.564	0.000	58	214662	2500.0	2895.9	
34 Methyl methanesulfonate	80	5.623	5.623	0.000	92	830401	2500.0	2599.5	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	87	661964	2500.0	2632.8	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	1046042	2500.0	2598.1	
46 Pentachloroethane	167	6.629	6.629	0.000	89	399021	2500.0	2629.2	
56 N-Nitrosopyrrolidine	100	7.135	7.135	0.000	74	730186	2500.0	2794.5	
59 N-Nitrosomorpholine	56	7.158	7.158	0.000	93	1405720	2500.0	2615.9	
60 2-Toluidine	106	7.193	7.193	0.000	97	2033305	2500.0	2601.0	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	76	746074	2500.0	2605.4	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	90	703187	2500.0	2509.3	
71 alpha,alpha-Dimethyl phene	58	7.740	7.740	0.000	97	3680913	2500.0	2803.5	M
77 Hexachloropropene	213	8.017	8.017	0.000	91	843589	2500.0	2754.1	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	86	990158	2500.0	2487.6	
81 Quinoline	129	8.211	8.211	0.000	96	2621010	2500.0	2595.7	
84 p-Phenylene diamine	108	8.246	8.246	0.000	92	1040004	2500.0	2479.6	
92 Safrole, Total	162	8.411	8.411	0.000	84	1155188	2500.0	2597.5	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	89	209454	2100.0	2209.8	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	87	1172523	400.0	427.1	
247 1-Chloronaphthalene	162	8.970	8.970	0.000	96	2499913	2500.0	2564.1	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	79	860402	2500.0	2510.9	
105 1,4-Dinitrobenzene	168	9.093	9.093	0.000	90	492138	2500.0	2605.0	
114 Pentachlorobenzene	250	9.564	9.564	0.000	95	916803	2500.0	2768.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.652	9.652	0.000	98	2599145	2500.0	2646.6	
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	86	571932	2500.0	2575.5	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	2610303	2500.0	2507.6	
121 Thionazin	97	9.787	9.787	0.000	79	714172	2500.0	2445.7	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	91	861775	2500.0	2777.8	
132 Sulfotepp	202	10.034	10.034	0.000	76	402500	2500.0	2828.6	
133 1,3,5-Trinitrobenzene	213	10.129	10.129	0.000	83	295002	2500.0	2621.5	
135 Phenacetin	108	10.181	10.181	0.000	90	1531252	2500.0	2923.6	
134 Diallate Peak 1	86	10.181	10.181	0.000	89	1170174	2150.0	2175.1	
136 Phorate	121	10.193	10.193	0.000	93	634308	2500.0	2577.8	
137 Diallate Peak 2	86	10.264	10.264	0.000	88	205774	350.0	359.4	
139 Dimethoate	87	10.346	10.346	0.000	89	1031465	2500.0	2616.7	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	90	3215304	2500.0	2839.5	
144 Pronamide	173	10.517	10.517	0.000	92	1347518	2500.0	2768.0	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	83	353070	2500.0	2802.3	
146 Disulfoton	88	10.634	10.634	0.000	97	1519835	2500.0	2629.1	
147 Dinoseb	211	10.646	10.646	0.000	92	699941	2500.0	2652.9	
152 Methyl parathion	109	10.970	10.970	0.000	92	958498	2500.0	2658.5	
155 Ethyl Parathion	97	11.311	11.311	0.000	82	657263	2500.0	2966.4	
156 4-Nitroquinoline-1-oxide	190	11.399	11.399	0.000	95	355866	2500.0	2475.4	
157 Methapyrilene	58	11.434	11.434	0.000	95	5857999	5000.0	5667.9	
158 Isodrin	66	11.705	11.705	0.000	90	551583	2500.0	2524.2	
162 Aramite Peak 1	185	12.122	12.122	0.000	0	281294	1275.0	1439.9	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	342206	1225.0	1390.8	
164 p-Dimethylamino azobenzene	225	12.370	12.370	0.000	95	925625	2500.0	2889.6	
165 Chlorobenzilate	139	12.399	12.399	0.000	92	1797131	2500.0	2661.2	
168 Famphur	218		12.699				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.787	12.787	0.000	99	2610704	2500.0	2609.8	
172 2-Acetylaminofluorene	181	13.146	13.146	0.000	95	2066717	2500.0	2613.3	
175 4,4'-Methylene bis(2-chlor	231	13.552	13.552	0.000	95	876747	2500.0	2632.3	
180 6-Methylchrysene	242	14.434	14.434	0.000	98	6223788	5000.0	5400.3	
182 7,12-Dimethylbenz(a)anthra	256	15.381	15.381	0.000	93	1679128	2500.0	2990.2	
186 3-Methylcholanthrene	268	16.610	16.610	0.000	92	4277315	5000.0	5788.0	
188 Dibenz[a,h]acridine	279	17.710	17.710	0.000	92	3118317	2500.0	2987.6	
S 194 Isosafrole	162				0		2500.0	2636.9	
S 195 Diallate	86				0		2500.0	2534.5	
S 196 Aramite, Total	185				0		2500.0	2830.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L9 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:28 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411012.D

Injection Date: 11-Apr-2018 15:39:30 Instrument ID: A4AG2 Operator ID:

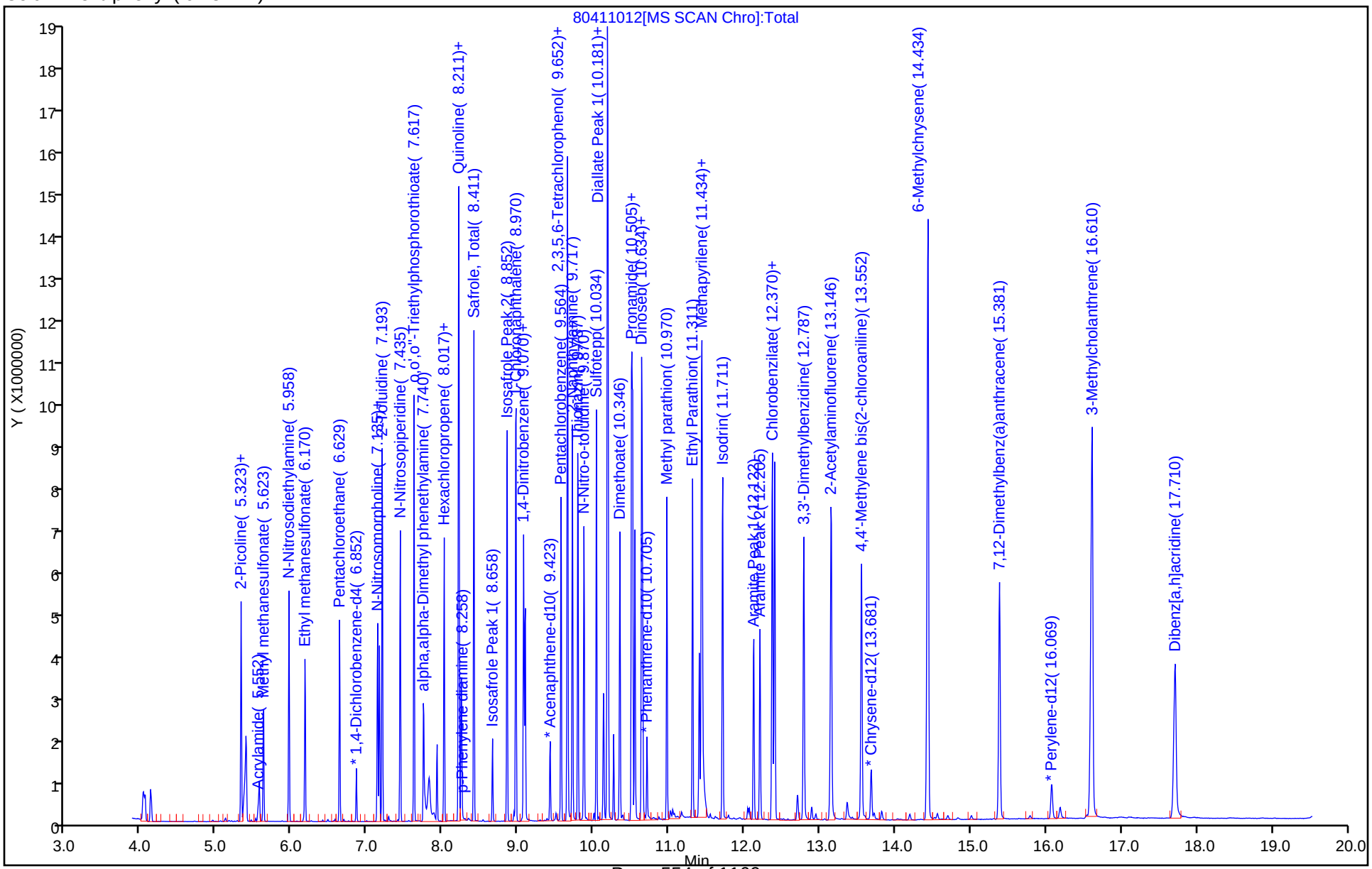
Lims ID: std9 l2lvi Worklist Smp#: 12

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 12

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

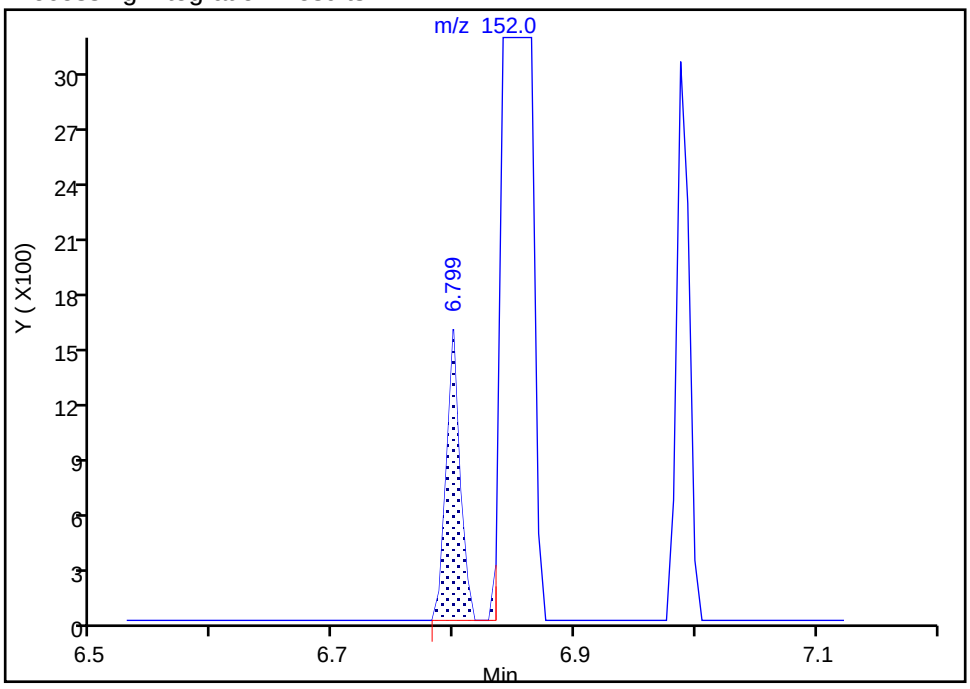
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411012.D
Injection Date: 11-Apr-2018 15:39:30 Instrument ID: A4AG2
Lims ID: std9 l2lvi
Client ID:
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

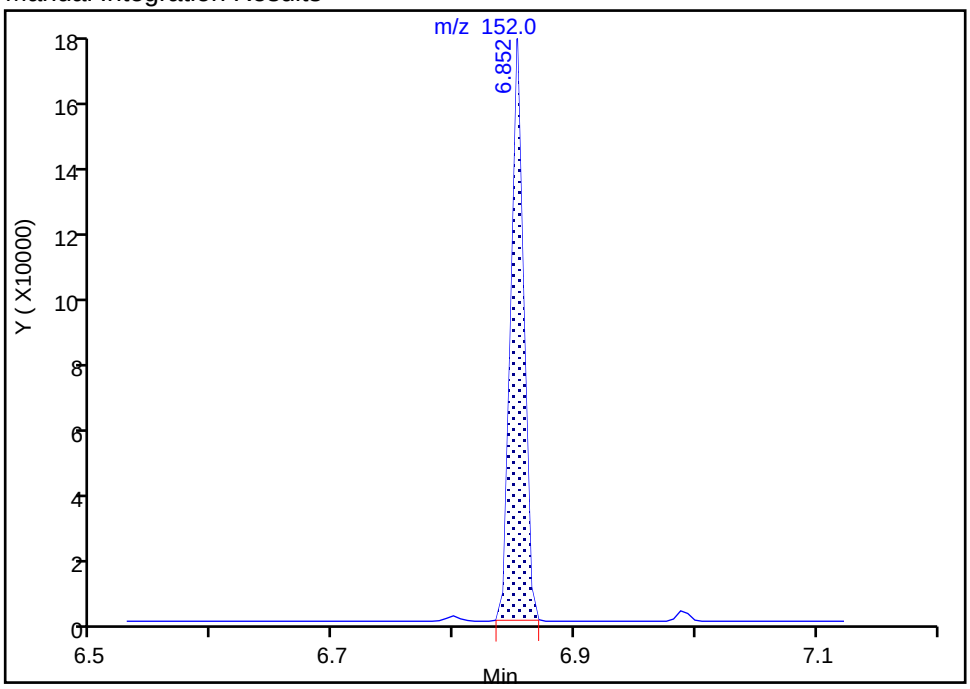
Processing Integration Results

RT: 6.80
Area: 1341
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 125055
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:51:42
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

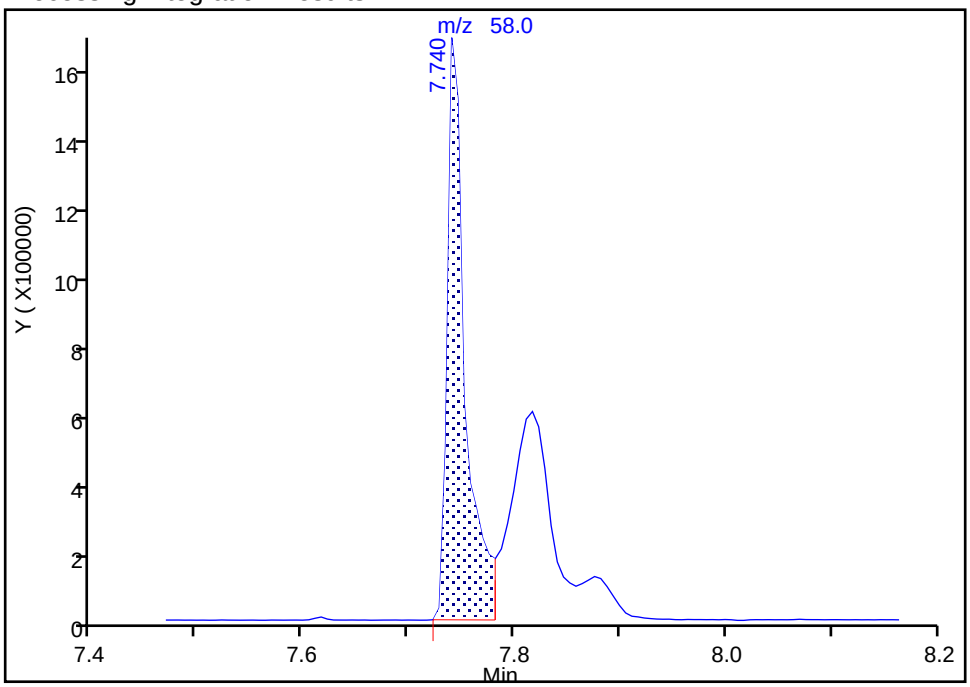
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411012.D
Injection Date: 11-Apr-2018 15:39:30 Instrument ID: A4AG2
Lims ID: std9 l2lvi
Client ID:
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

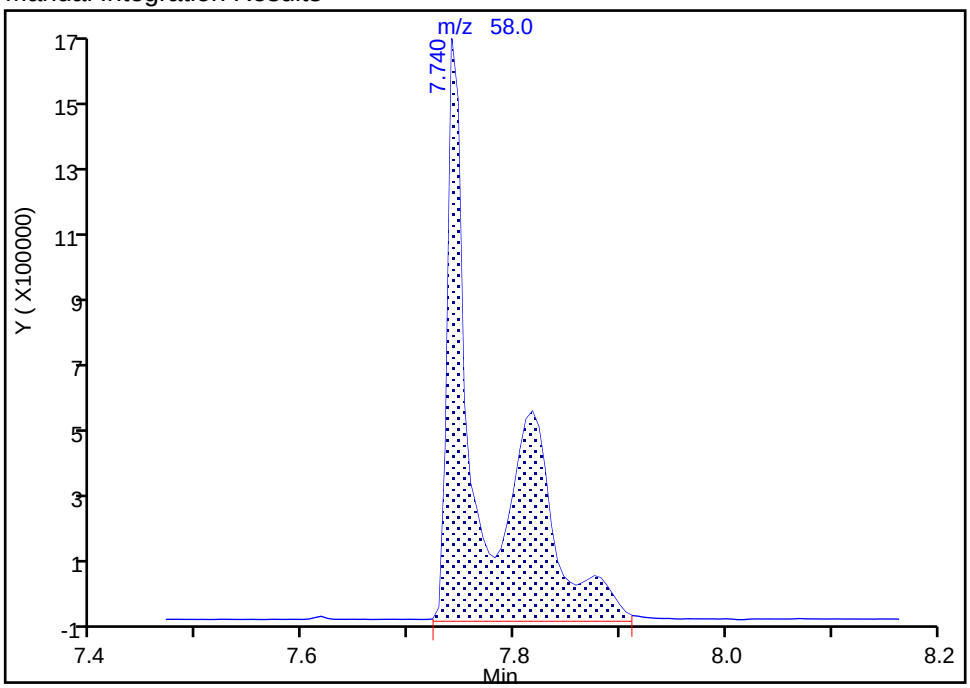
Processing Integration Results

RT: 7.74
Area: 1920653
Amount: 2525.8478
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 3680913
Amount: 2803.4660
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:52:03
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Report Date: 12-Apr-2018 06:28:28 Chrom Revision: 2.2 10-Apr-2018 12:17:46

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411012.D

Injection Date: 11-Apr-2018 15:39:30 Instrument ID: A4AG2

Lims ID: std9 l2lvi

Client ID:

Operator ID: ALS Bottle#: 12 Worklist Smp#: 12

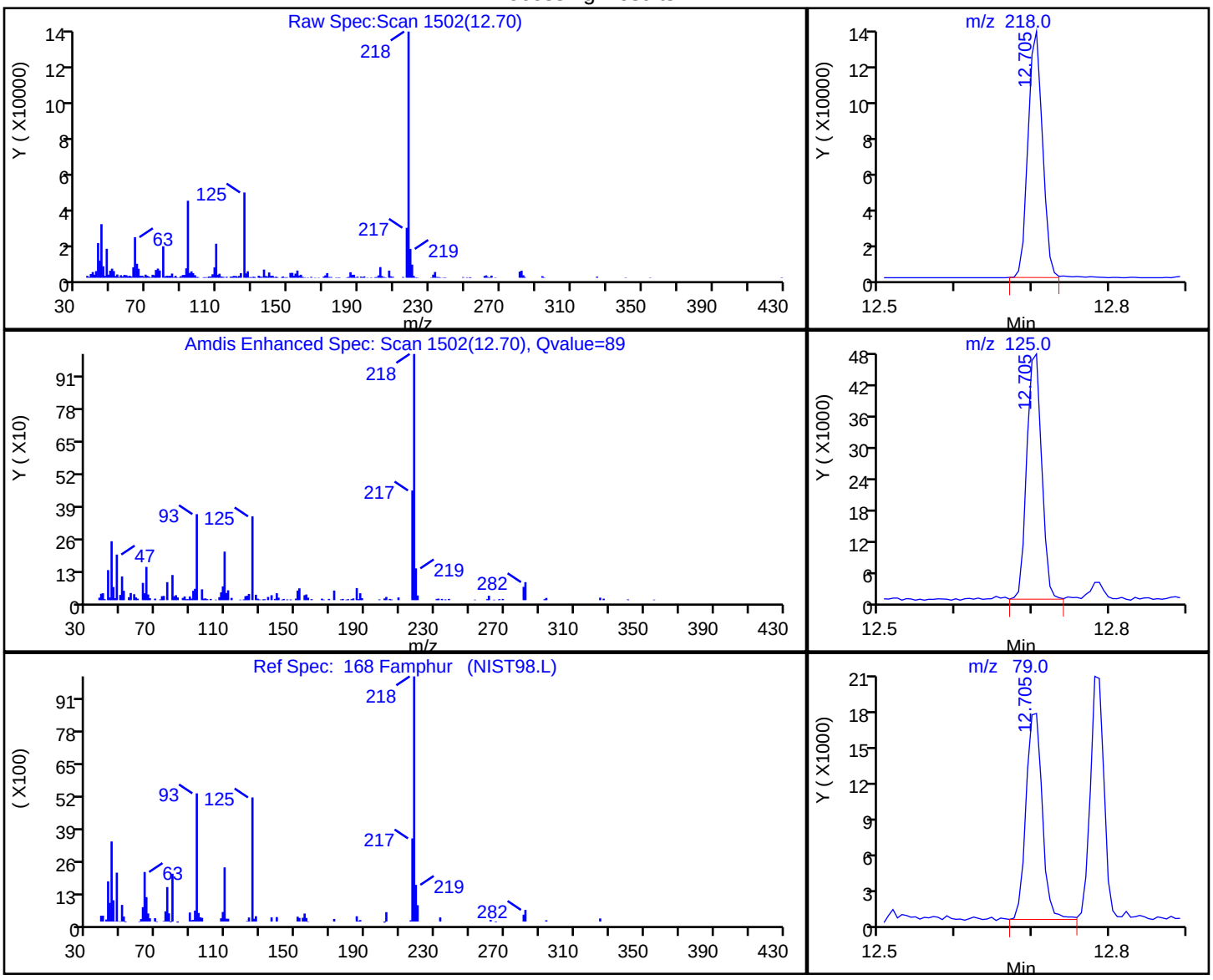
Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm) Detector MS SCAN

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.70	218.00	181426	567.8725
12.70	125.00	64523	
12.70	79.00	25782	

Reviewer: hulat, 12-Apr-2018 06:04:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411013.D
Lims ID: std8 l2lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 11-Apr-2018 16:03:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-013
Misc. Info.: STD8 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:29 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 05:53:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	97	134380	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	687503	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	347839	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	585932	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.681	-0.006	99	546739	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.075	-0.006	97	508156	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	93	706265	2000.0	1763.7	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	87	505377	2000.0	2079.0	
14 Acrylamide	71	5.558	5.564	-0.006	58	141039	2000.0	1770.7	
34 Methyl methanesulfonate	80	5.617	5.623	-0.006	93	679961	2000.0	1980.8	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	86	566584	2000.0	2097.1	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	857860	2000.0	1982.9	
46 Pentachloroethane	167	6.629	6.629	0.000	89	329461	2000.0	2020.2	
56 N-Nitrosopyrrolidine	100	7.135	7.135	0.000	73	597150	2000.0	2126.8	
59 N-Nitrosomorpholine	56	7.158	7.158	0.000	93	1150808	2000.0	1993.0	
60 2-Toluidine	106	7.193	7.193	0.000	97	1675189	2000.0	1994.2	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	76	615157	2000.0	2066.8	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	90	572348	2000.0	1965.0	
71 alpha,alpha-Dimethyl phene	58	7.740	7.740	0.000	97	2935522	2000.0	2151.0	M
77 Hexachloropropene	213	8.017	8.017	0.000	91	703725	2000.0	2210.5	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	88	817543	2000.0	1976.1	
81 Quinoline	129	8.211	8.211	0.000	97	2154300	2000.0	2052.7	
84 p-Phenylene diamine	108	8.240	8.246	-0.006	92	866380	2000.0	1998.9	
92 Safrole, Total	162	8.411	8.411	0.000	83	957638	2000.0	2071.7	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	85	172840	1680.0	1752.4	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	87	943203	320.0	330.1	
247 1-Chloronaphthalene	162	8.964	8.970	-0.006	96	2043776	2000.0	2014.5	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	81	728344	2000.0	2048.1	
105 1,4-Dinitrobenzene	168	9.093	9.093	0.000	92	399208	2000.0	2037.6	
114 Pentachlorobenzene	250	9.564	9.564	0.000	95	745631	2000.0	2164.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	59	462170	2000.0	2006.9	
117 1-Naphthylamine	143	9.652	9.652	0.000	98	2096251	2000.0	2051.3	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	2143554	2000.0	1978.9	
121 Thionazin	97	9.787	9.787	0.000	78	592909	2000.0	1951.3	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	91	687387	2000.0	2129.3	
132 Sulfotepp	202	10.034	10.034	0.000	76	325513	2000.0	2195.3	
133 1,3,5-Trinitrobenzene	213	10.129	10.129	0.001	84	235496	2000.0	2036.9	
135 Phenacetin	108	10.182	10.181	0.001	81	1219519	2000.0	2234.5	
134 Diallate Peak 1	86	10.182	10.181	0.001	85	977378	1720.0	1743.5	
136 Phorate	121	10.187	10.193	-0.006	94	534936	2000.0	2086.3	
137 Diallate Peak 2	86	10.264	10.264	0.000	87	170641	280.0	286.0	
139 Dimethoate	87	10.346	10.346	0.000	88	849649	2000.0	2068.5	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	90	2607576	2000.0	2209.9	
144 Pronamide	173	10.511	10.517	-0.006	92	1099657	2000.0	2167.8	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	83	287851	2000.0	2192.5	
146 Disulfoton	88	10.634	10.634	0.000	97	1239936	2000.0	2058.4	
147 Dinoseb	211	10.646	10.646	0.000	94	574481	2000.0	2099.5	
152 Methyl parathion	109	10.970	10.970	0.000	92	793945	2000.0	2113.3	
155 Ethyl Parathion	97	11.311	11.311	0.000	82	535570	2000.0	2319.7	
156 4-Nitroquinoline-1-oxide	190	11.399	11.399	0.000	95	277667	2000.0	2055.5	
157 Methapyrilene	58	11.428	11.434	-0.006	95	4838754	4000.0	4492.9	
158 Isodrin	66	11.705	11.705	0.000	90	450254	2000.0	1977.4	
162 Aramite Peak 1	185	12.123	12.122	0.001	0	224077	1020.0	1099.6	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	272652	980.0	1062.4	
164 p-Dimethylamino azobenzene	225	12.370	12.370	0.000	94	747939	2000.0	2238.5	
165 Chlorobenzilate	139	12.399	12.399	0.000	83	1453423	2000.0	2063.3	
168 Famphur	218		12.699				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.781	12.787	-0.006	99	2098213	2000.0	2020.9	
172 2-Acetylaminofluorene	181	13.146	13.146	0.000	96	1667986	2000.0	2030.8	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.552	-0.006	95	692382	2000.0	2000.1	
180 6-Methylchrysene	242	14.428	14.434	-0.006	99	5021976	4000.0	4177.5	
182 7,12-Dimethylbenz(a)anthra	256	15.381	15.381	0.000	94	1286191	2000.0	2159.1	
186 3-Methylcholanthrene	268	16.605	16.610	-0.005	93	3453363	4000.0	4405.2	
188 Dibenz[a,h]acridine	279	17.705	17.710	-0.005	92	2462094	2000.0	2223.7	
S 194 Isosafrole	162				0		2000.0	2082.5	
S 195 Diallate	86				0		2000.0	2029.5	
S 196 Aramite, Total	185				0		2000.0	2162.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L8 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:31 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411013.D

Injection Date: 11-Apr-2018 16:03:30 Instrument ID: A4AG2 Operator ID:

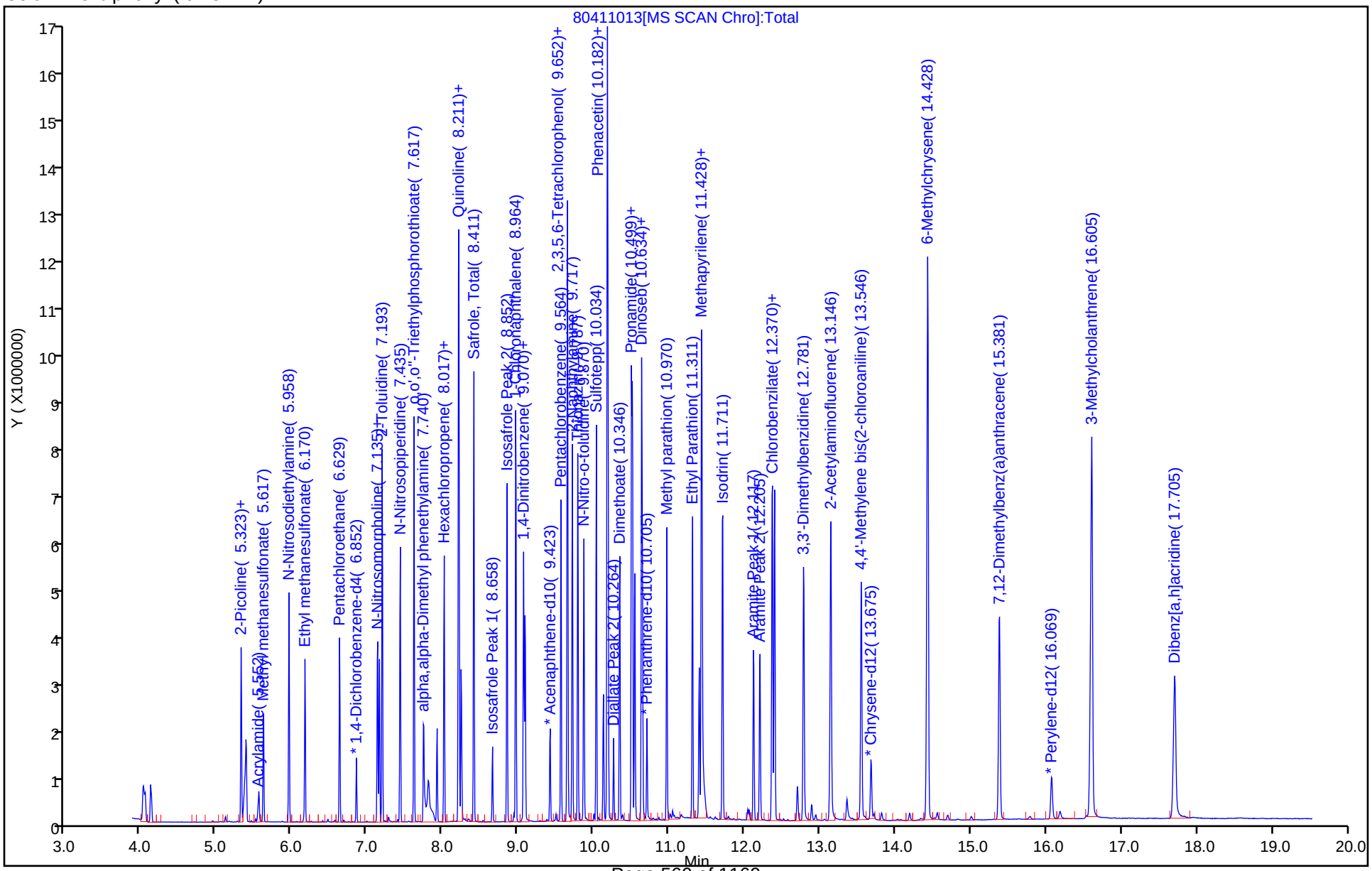
Lims ID: std8 l2lvi Worklist Smp#: 13

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 13

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

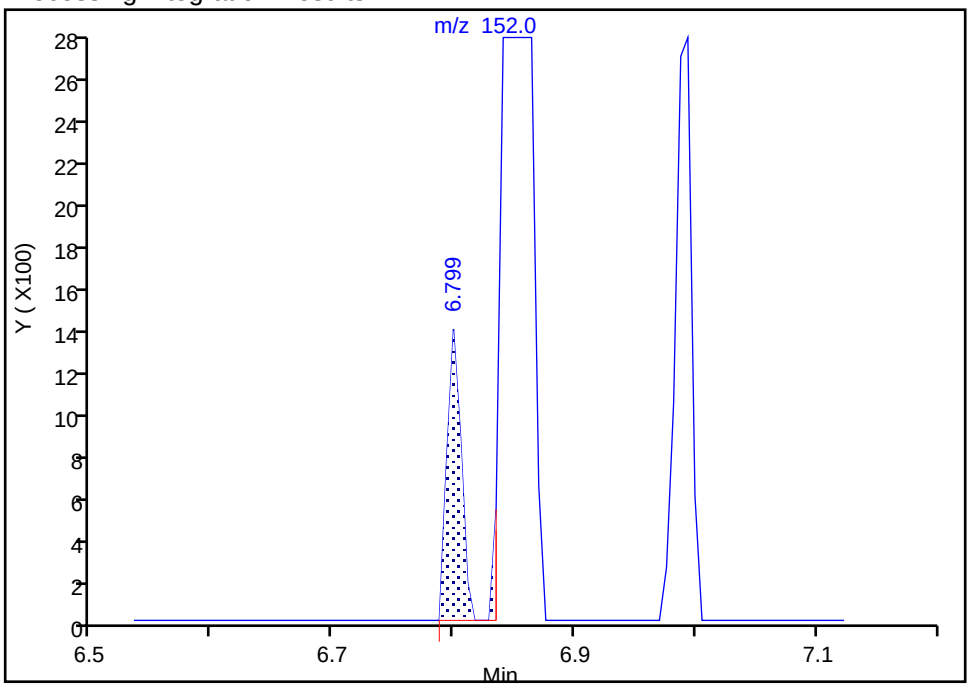
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411013.D
Injection Date: 11-Apr-2018 16:03:30 Instrument ID: A4AG2
Lims ID: std8 l2lvi
Client ID:
Operator ID: ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

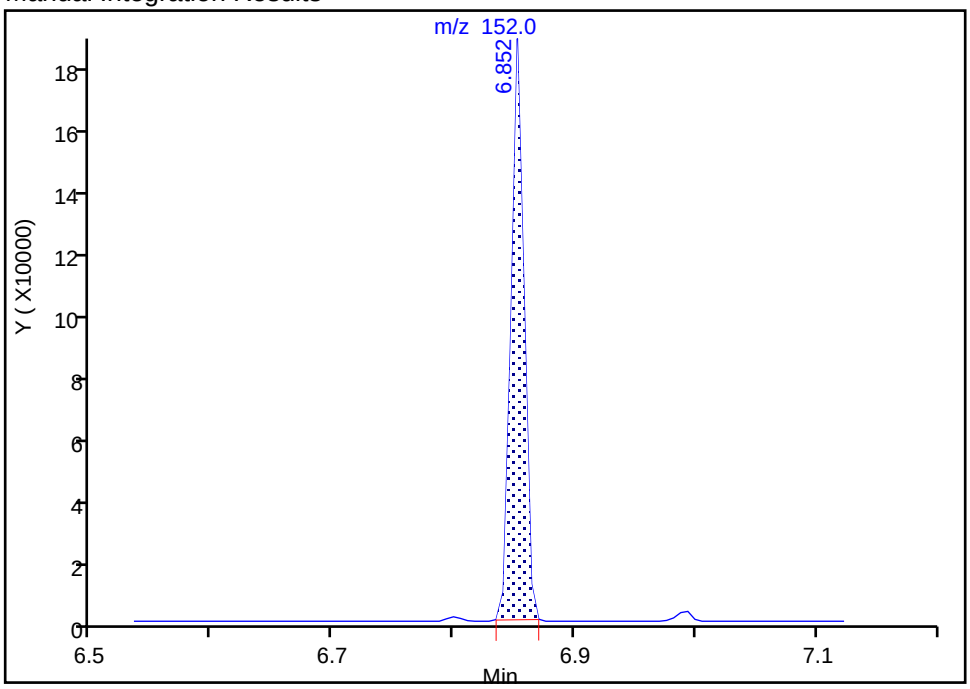
Processing Integration Results

RT: 6.80
Area: 1309
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 134380
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:52:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

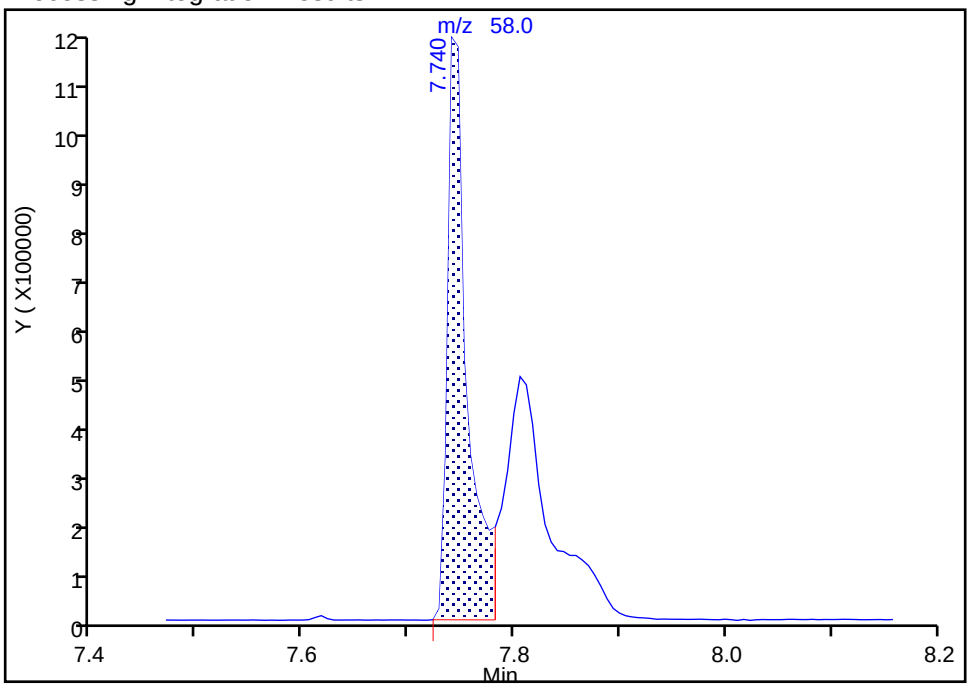
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411013.D
Injection Date: 11-Apr-2018 16:03:30 Instrument ID: A4AG2
Lims ID: std8 l2lvi
Client ID:
Operator ID: ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

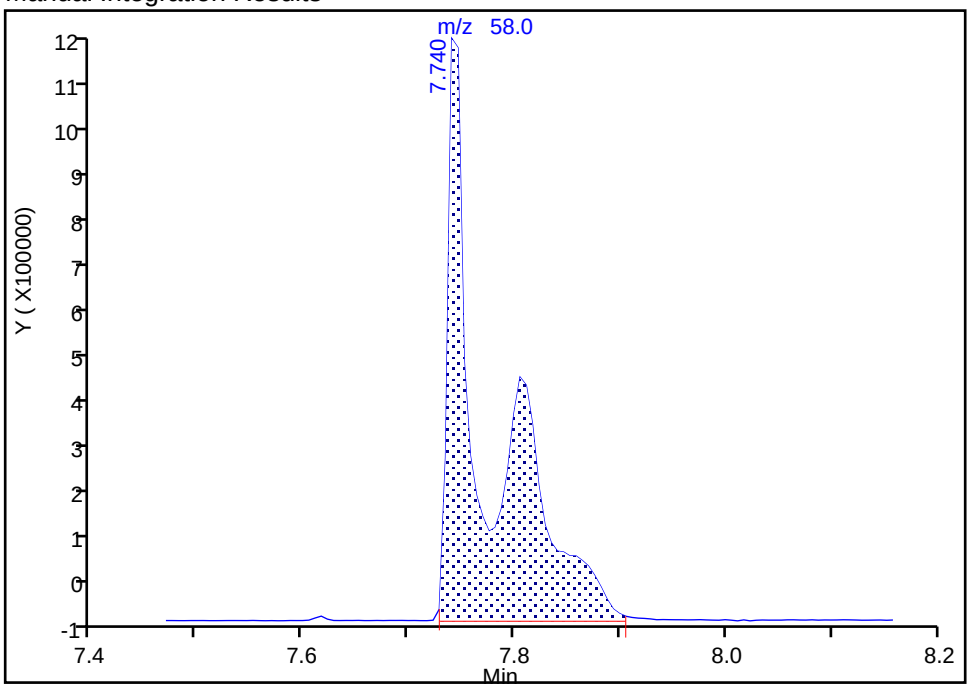
Processing Integration Results

RT: 7.74
Area: 1533152
Amount: 1320.4872
Amount Units: ng/ml



Manual Integration Results

RT: 7.74
Area: 2935522
Amount: 2151.0416
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:53:04
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Report Date: 12-Apr-2018 06:28:31 Chrom Revision: 2.2 10-Apr-2018 12:17:46

User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411013.D

Injection Date: 11-Apr-2018 16:03:30 Instrument ID: A4AG2

Lims ID: std8 l2lvi

Client ID:

Operator ID: ALS Bottle#: 13 Worklist Smp#: 13

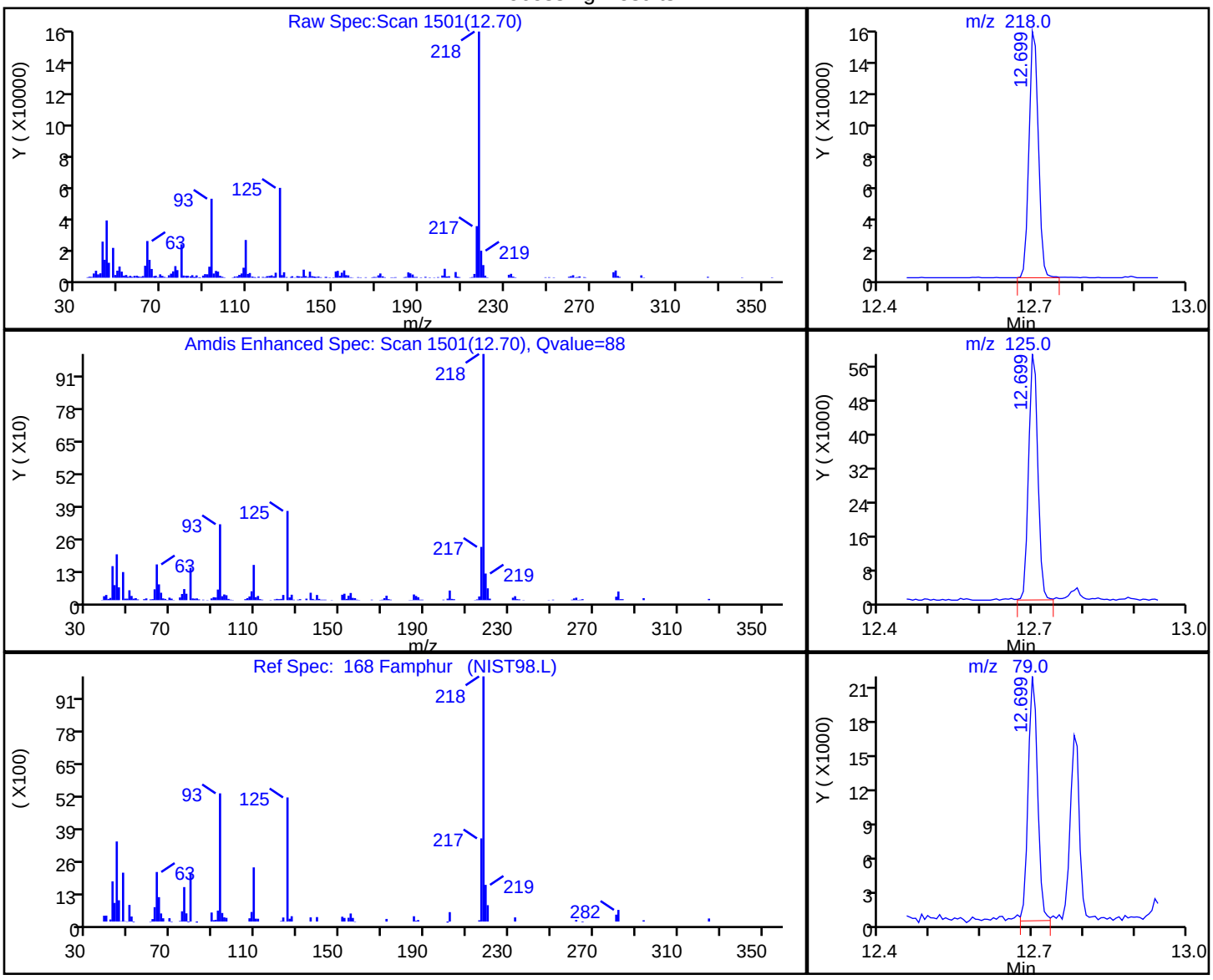
Injection Vol: 5.0 ul Dil. Factor: 1.0000

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm) Detector MS SCAN

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.70	218.00	203241	549.2341
12.70	125.00	72920	
12.70	79.00	27591	

Reviewer: hulat, 12-Apr-2018 06:05:02

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 12-Apr-2018 06:28:34 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411014.D
Lims ID: std7 l2lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 11-Apr-2018 16:28:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-014
Misc. Info.: STD7 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:32 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 05:54:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	127222	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	635853	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	347410	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	601164	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.681	-0.006	99	538913	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.075	-0.006	97	501267	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	93	619437	1500.0	1633.9	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	88	328030	1500.0	1425.4	
14 Acrylamide	71	5.552	5.564	-0.012	58	102189	1500.0	1355.1	
34 Methyl methanesulfonate	80	5.617	5.623	-0.006	92	422189	1500.0	1299.1	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	86	358778	1500.0	1402.6	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	585670	1500.0	1429.9	
46 Pentachloroethane	167	6.629	6.629	0.000	89	228868	1500.0	1482.4	
56 N-Nitrosopyrrolidine	100	7.129	7.135	-0.006	74	428524	1500.0	1612.1	
59 N-Nitrosomorpholine	56	7.152	7.158	-0.006	93	836443	1500.0	1530.0	
60 2-Toluidine	106	7.193	7.193	0.000	97	1131575	1500.0	1422.9	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	441096	1500.0	1602.4	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	91	414295	1500.0	1537.9	
71 alpha,alpha-Dimethyl phene	58	7.746	7.740	0.006	97	2032135	1500.0	1610.0	M
77 Hexachloropropene	213	8.017	8.017	0.000	91	430488	1500.0	1462.0	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	84	614372	1500.0	1605.6	
81 Quinoline	129	8.211	8.211	0.000	94	1552473	1500.0	1599.4	
84 p-Phenylene diamine	108	8.240	8.246	-0.006	92	623823	1500.0	1569.0	
92 Safrole, Total	162	8.411	8.411	0.000	84	688271	1500.0	1609.9	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	84	122360	1260.0	1242.1	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	87	696172	240.0	244.0	
247 1-Chloronaphthalene	162	8.964	8.970	-0.006	96	1462375	1500.0	1443.2	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	79	522572	1500.0	1479.5	
105 1,4-Dinitrobenzene	168	9.087	9.093	-0.006	88	284691	1500.0	1464.0	
114 Pentachlorobenzene	250	9.564	9.564	0.000	95	533160	1500.0	1549.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.652	9.652	0.000	98	1531825	1500.0	1500.8	
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	61	338314	1500.0	1479.1	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	1631963	1500.0	1508.5	
121 Thionazin	97	9.787	9.787	0.000	78	435814	1500.0	1436.0	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	92	496080	1500.0	1538.6	
132 Sulfotepp	202	10.034	10.034	0.000	76	235324	1500.0	1546.8	
133 1,3,5-Trinitrobenzene	213	10.129	10.129	0.001	84	168561	1500.0	1458.0	
134 Diallate Peak 1	86	10.181	10.181	0.000	90	730309	1290.0	1269.7	
135 Phenacetin	108	10.176	10.181	-0.005	93	894901	1500.0	1598.2	
136 Phorate	121	10.187	10.193	-0.006	94	398467	1500.0	1514.7	
137 Diallate Peak 2	86	10.264	10.264	0.000	87	126298	210.0	206.3	
139 Dimethoate	87	10.340	10.346	-0.006	88	633131	1500.0	1502.3	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	1956808	1500.0	1616.4	
144 Pronamide	173	10.511	10.517	-0.006	91	801498	1500.0	1540.0	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	82	211015	1500.0	1566.5	
146 Disulfoton	88	10.634	10.634	0.000	97	938606	1500.0	1518.7	
147 Dinoseb	211	10.646	10.646	0.000	95	400637	1500.0	1442.1	
152 Methyl parathion	109	10.970	10.970	0.000	92	613460	1500.0	1591.5	
155 Ethyl Parathion	97	11.305	11.311	-0.006	82	390828	1500.0	1649.9	
156 4-Nitroquinoline-1-oxide	190	11.399	11.399	0.000	95	175442	1500.0	1489.7	
157 Methapyrilene	58	11.428	11.434	-0.006	94	3633544	3000.0	3288.3	
158 Isodrin	66	11.705	11.705	0.000	89	334774	1500.0	1433.0	
162 Aramite Peak 1	185	12.117	12.122	-0.005	0	164212	765.0	817.6	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	196062	735.0	775.0	
164 p-Dimethylamino azobenzene	225	12.364	12.370	-0.006	93	533038	1500.0	1618.5	
165 Chlorobenzilate	139	12.399	12.399	0.000	83	1041338	1500.0	1499.8	
168 Famphur	218		12.699				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.781	12.787	-0.006	99	1468960	1500.0	1448.1	
172 2-Acetylaminofluorene	181	13.140	13.146	-0.006	95	1169710	1500.0	1455.9	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.552	-0.006	95	491550	1500.0	1448.9	
180 6-Methylchrysene	242	14.428	14.434	-0.006	99	3619722	3000.0	3054.7	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.381	-0.006	94	916718	1500.0	1560.1	
186 3-Methylcholanthrene	268	16.599	16.610	-0.011	93	2444073	3000.0	3160.6	
188 Dibenz[a,h]acridine	279	17.699	17.710	-0.011	92	1774072	1500.0	1624.3	
S 194 Isosafrole	162				0		1500.0	1486.1	
S 195 Diallate	86				0		1500.0	1476.1	
S 196 Aramite, Total	185				0		1500.0	1592.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L7 W_00015 Amount Added: 0.10 Units: mL

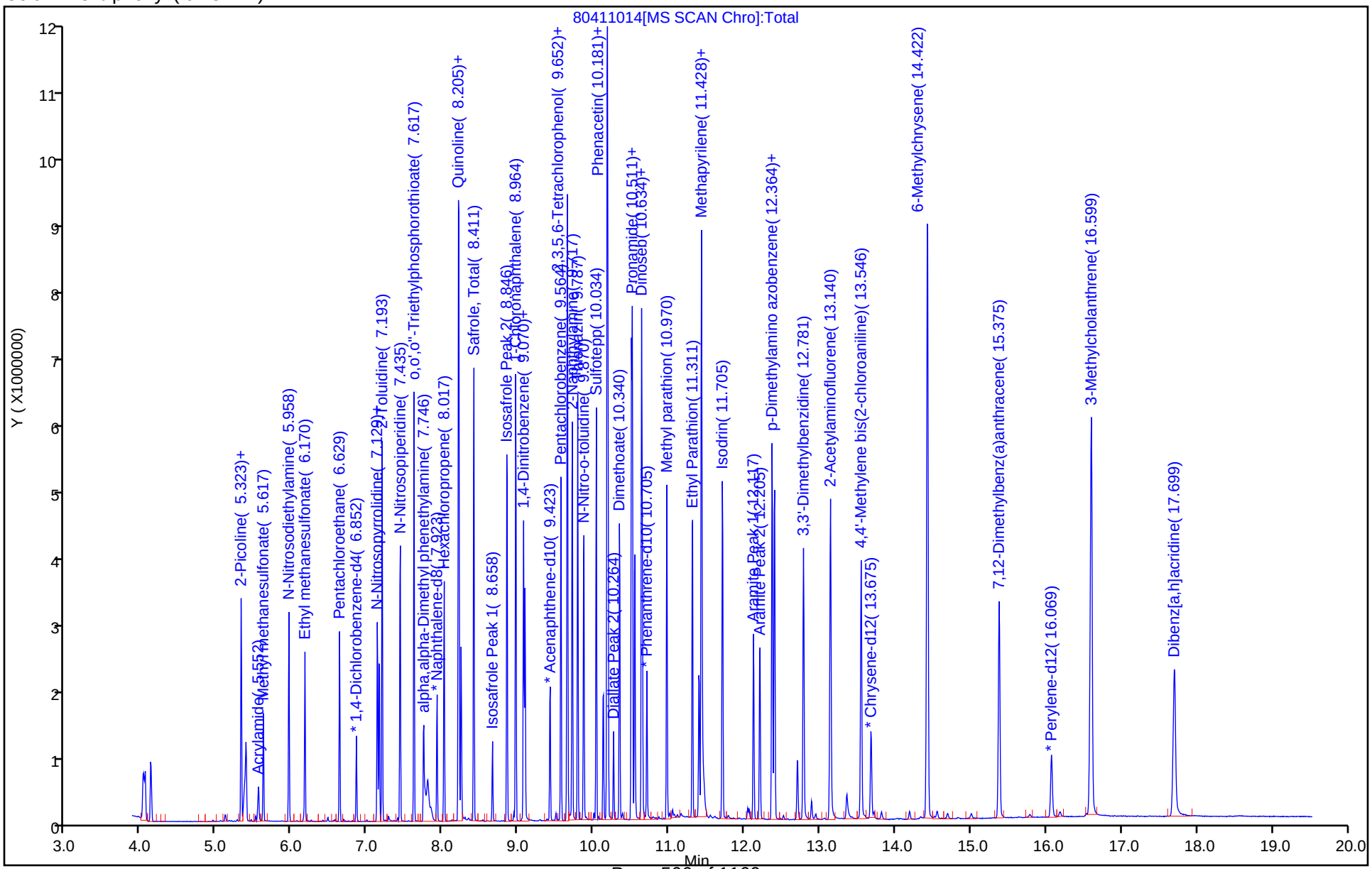
Report Date: 12-Apr-2018 06:28:34 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411014.D

Injection Date:	11-Apr-2018 16:28:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std7 l2lvi			Worklist Smp#:	14
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

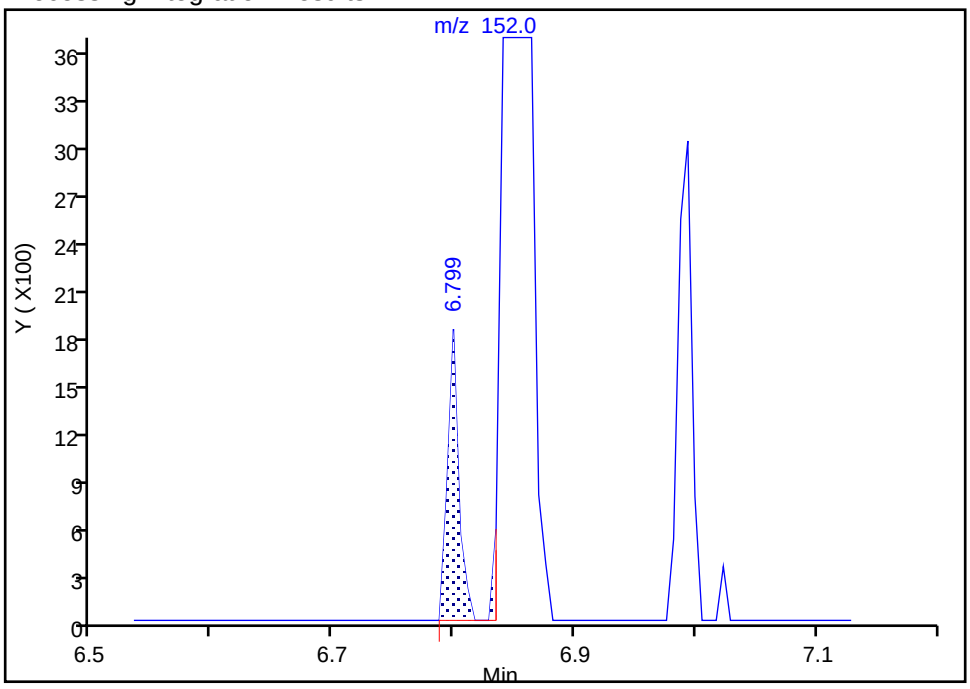
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411014.D
Injection Date: 11-Apr-2018 16:28:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

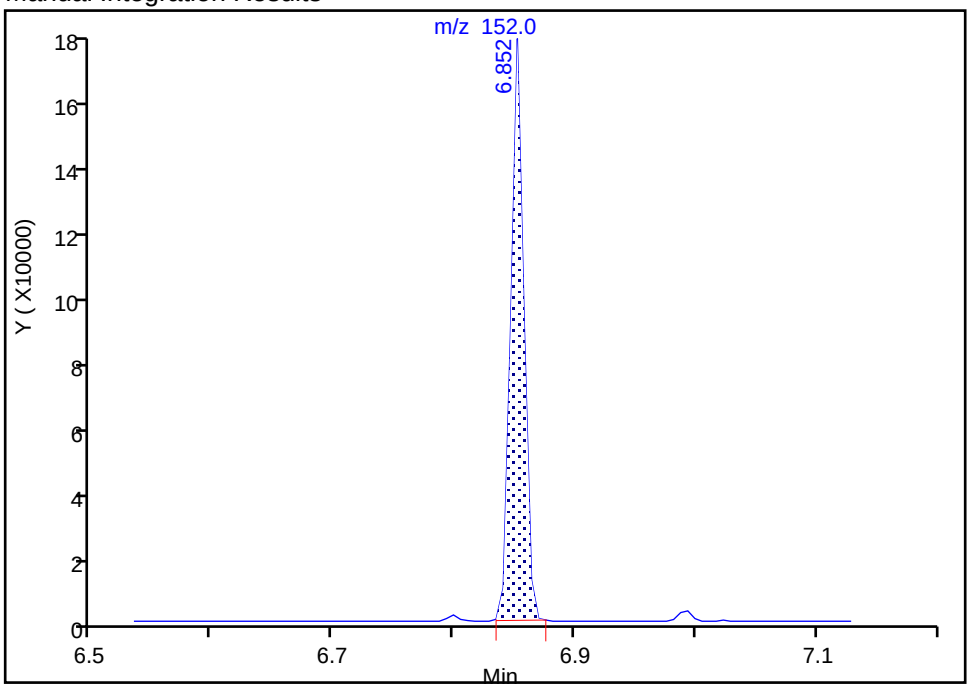
Processing Integration Results

RT: 6.80
Area: 1393
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 127222
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:53:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

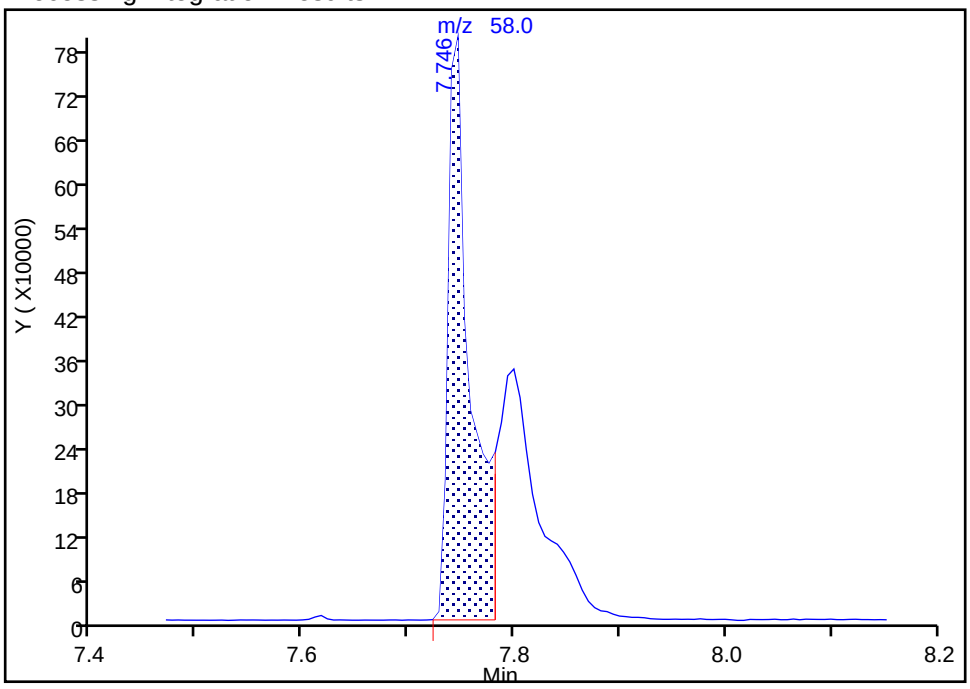
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411014.D
Injection Date: 11-Apr-2018 16:28:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

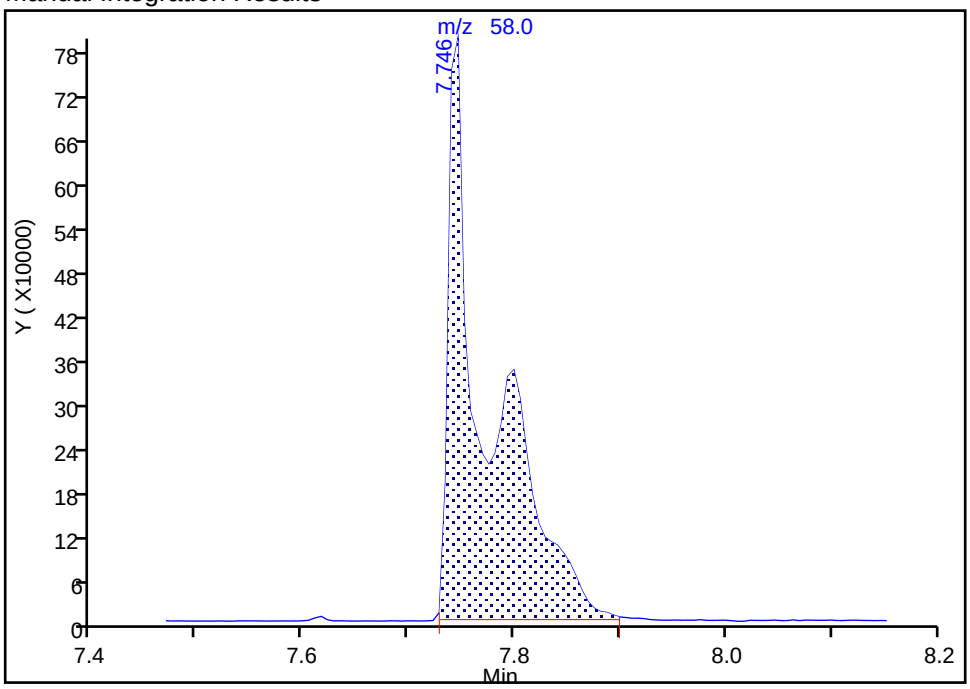
Processing Integration Results

RT: 7.75
Area: 1183428
Amount: 1001.2855
Amount Units: ng/ml



Manual Integration Results

RT: 7.75
Area: 2032135
Amount: 1610.0297
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:54:04
Audit Action: Manually Integrated Audit Reason: Poor chromatography

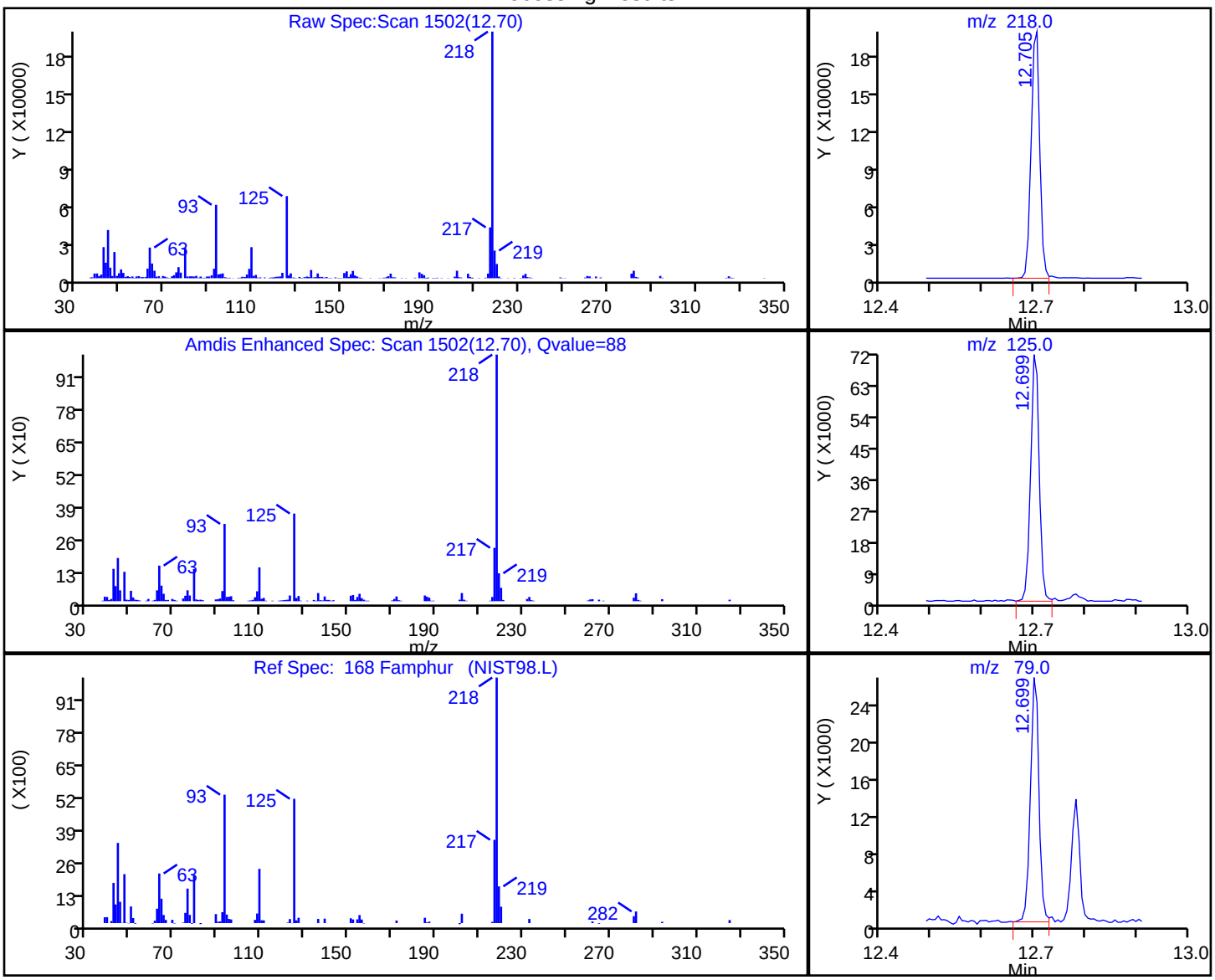
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411014.D				
Injection Date:	11-Apr-2018 16:28:30	Instrument ID:	A4AG2		
Lims ID:	std7 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.70	218.00	230835	564.6034
12.70	125.00	83441	
12.70	79.00	31030	

Reviewer: hulat, 12-Apr-2018 06:05:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 12-Apr-2018 06:28:36 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411015.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 11-Apr-2018 16:53:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-015
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:35 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:00:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	120646	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	595058	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	97	332258	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	593219	400.0	400.0	
* 5 Chrysene-d12	240	13.676	13.676	0.000	99	514835	400.0	400.0	
* 6 Perylene-d12	264	16.070	16.070	0.000	97	469201	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	92	323177	1000.0	898.9	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	88	220800	1000.0	1011.7	
14 Acrylamide	71	5.553	5.553	0.000	58	69824	1000.0	976.4	
34 Methyl methanesulfonate	80	5.617	5.617	0.000	92	317977	1000.0	1031.8	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	86	256590	1000.0	1057.8	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	362529	1000.0	933.3	
46 Pentachloroethane	167	6.629	6.629	0.000	89	143747	1000.0	981.8	
56 N-Nitrosopyrrolidine	100	7.129	7.129	0.000	73	255738	1000.0	1014.5	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	92	508778	1000.0	981.4	
60 2-Toluidine	106	7.194	7.194	0.000	97	690328	1000.0	915.3	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	265069	1000.0	1028.9	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	91	262275	1000.0	1040.3	
71 alpha,alpha-Dimethyl phene	58	7.747	7.747	0.000	0	1102375	1000.0	933.3	M
77 Hexachloropropene	213	8.017	8.017	0.000	91	309571	1000.0	1123.5	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	83	391579	1000.0	1093.5	
81 Quinoline	129	8.211	8.211	0.000	94	966586	1000.0	1064.1	
84 p-Phenylene diamine	108	8.241	8.241	0.000	92	361621	1000.0	993.9	
92 Safrole, Total	162	8.411	8.411	0.000	83	419449	1000.0	1048.4	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	84	76496	840.0	811.9	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	87	437376	160.0	160.3	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	96	903790	1000.0	932.6	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	79	329751	1000.0	986.1	
105 1,4-Dinitrobenzene	168	9.088	9.088	0.000	86	172023	1000.0	936.6	
114 Pentachlorobenzene	250	9.564	9.564	0.000	94	336697	1000.0	1023.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	88	207753	1000.0	960.7	
117 1-Naphthylamine	143	9.652	9.652	0.000	98	991935	1000.0	1016.2	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	1074564	1000.0	1038.5	
121 Thionazin	97	9.788	9.788	0.000	78	280950	1000.0	968.0	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	93	327147	1000.0	1060.9	
132 Sulfotepp	202	10.035	10.035	0.000	76	151433	1000.0	1008.7	
133 1,3,5-Trinitrobenzene	213	10.123	10.123	0.000	84	96266	1000.0	895.3	
135 Phenacetin	108	10.176	10.176	0.000	93	574182	1000.0	1039.1	
134 Diallate Peak 1	86	10.182	10.182	0.000	88	479854	860.0	845.5	
136 Phorate	121	10.188	10.188	0.000	93	256322	1000.0	987.4	
137 Diallate Peak 2	86	10.264	10.264	0.000	87	78365	140.0	129.7	
139 Dimethoate	87	10.340	10.340	0.000	88	434852	1000.0	1045.7	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	1213256	1000.0	1015.6	
144 Pronamide	173	10.511	10.511	0.000	91	518600	1000.0	1009.8	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	81	133877	1000.0	1007.2	
146 Disulfoton	88	10.635	10.635	0.000	97	608957	1000.0	998.5	
147 Dinoseb	211	10.640	10.640	0.000	91	240967	1000.0	897.3	
152 Methyl parathion	109	10.970	10.970	0.000	92	406519	1000.0	1068.7	
155 Ethyl Parathion	97	11.305	11.305	0.000	81	251175	1000.0	1074.5	
156 4-Nitroquinoline-1-oxide	190	11.393	11.393	0.000	86	92672	1000.0	965.8	
157 Methapyrilene	58	11.429	11.429	0.000	94	2345911	2000.0	2151.5	
158 Isodrin	66	11.705	11.705	0.000	88	224367	1000.0	973.3	
162 Aramite Peak 1	185	12.117	12.117	0.000	0	99089	510.0	516.4	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	121524	490.0	502.9	
164 p-Dimethylamino azobenzene	225	12.364	12.364	0.000	93	332541	1000.0	1056.9	
165 Chlorobenzilate	139	12.393	12.393	0.000	83	660090	1000.0	995.1	
168 Famphur	218	12.699	12.699	0.000	88	246769	1000.0	561.7	
170 3,3'-Dimethylbenzidine	212	12.781	12.781	0.000	99	905722	1000.0	950.2	
172 2-Acetylaminofluorene	181	13.134	13.134	0.000	95	717983	1000.0	949.3	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.546	0.000	94	303301	1000.0	946.3	
180 6-Methylchrysene	242	14.423	14.423	0.000	98	2275464	2000.0	2010.1	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.375	0.000	93	567052	1000.0	1030.9	
186 3-Methylcholanthrene	268	16.593	16.593	0.000	93	1509959	2000.0	2086.1	
188 Dibenz[a,h]acridine	279	17.693	17.693	0.000	92	1077616	1000.0	1054.1	
S 194 Isosafrole	162				0		1000.0	972.2	
S 195 Diallate	86				0		1000.0	975.2	
S 196 Aramite, Total	185				0		1000.0	1019.3	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST2 L6 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:36 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411015.D

Injection Date: 11-Apr-2018 16:53:30 Instrument ID: A4AG2 Operator ID:

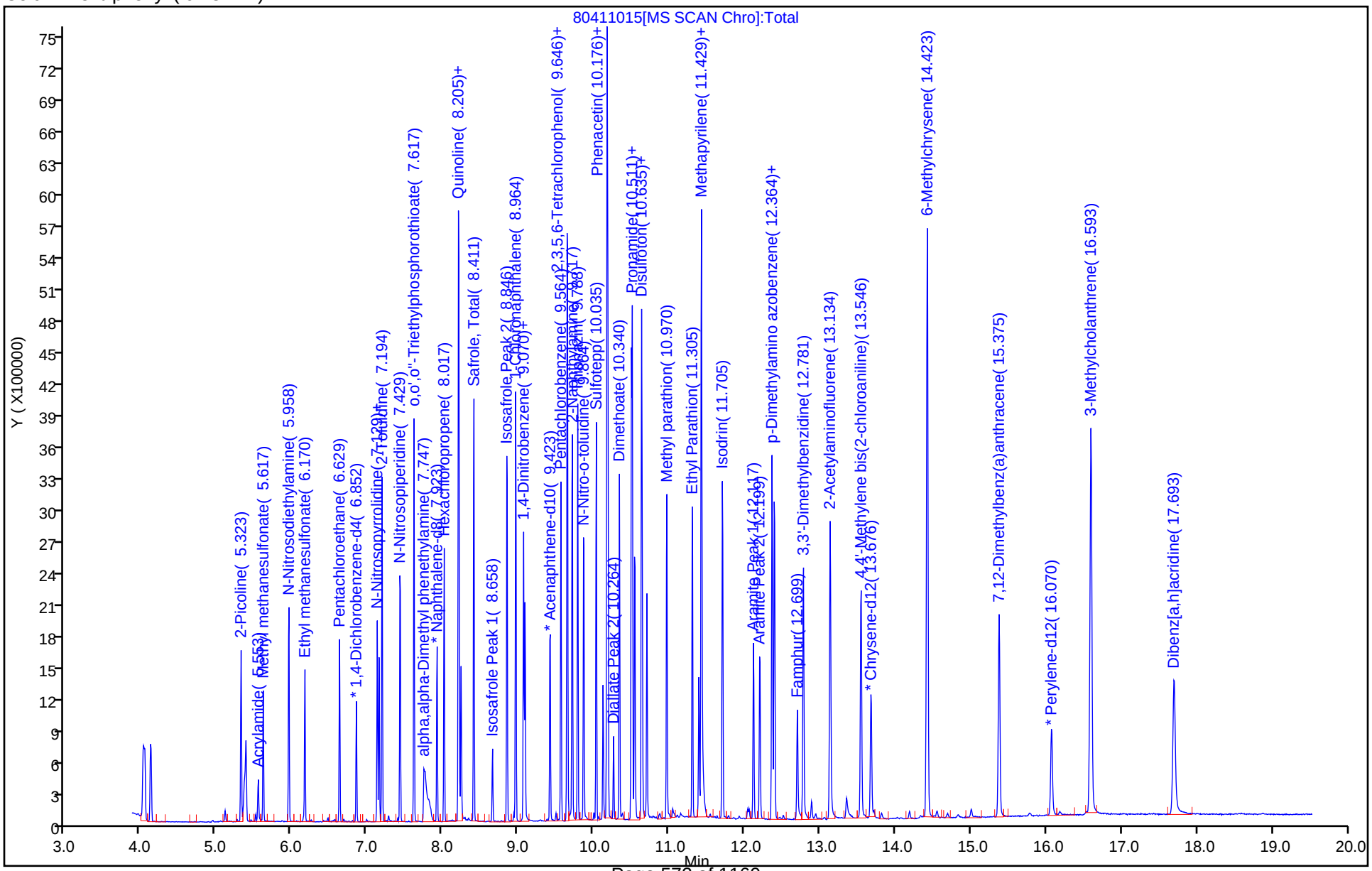
Lims ID: std6 l2lvi Worklist Smp#: 15

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 15

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

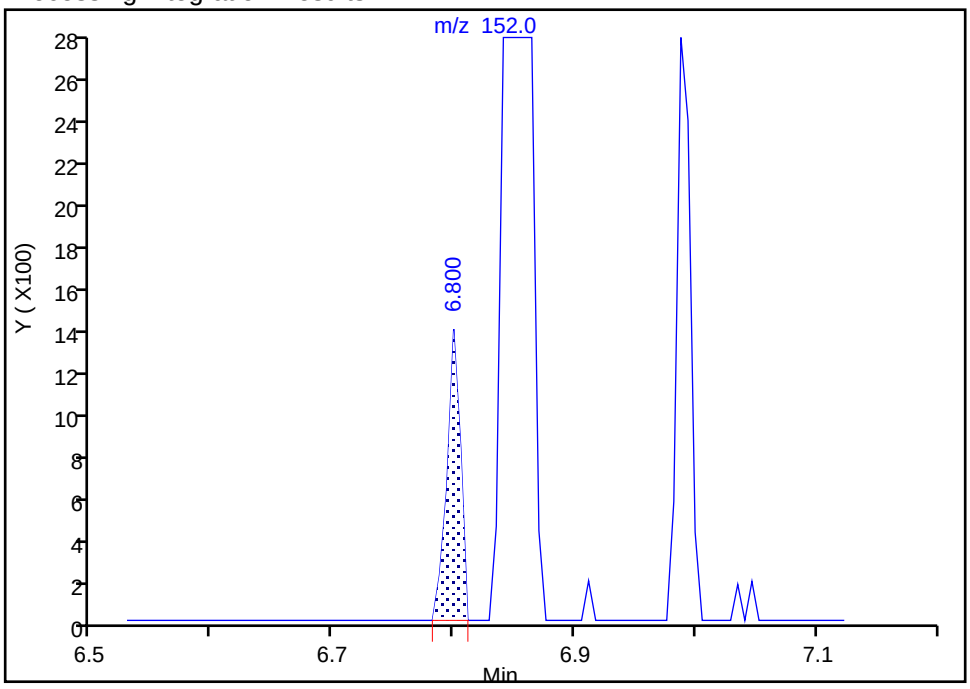
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411015.D
Injection Date: 11-Apr-2018 16:53:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

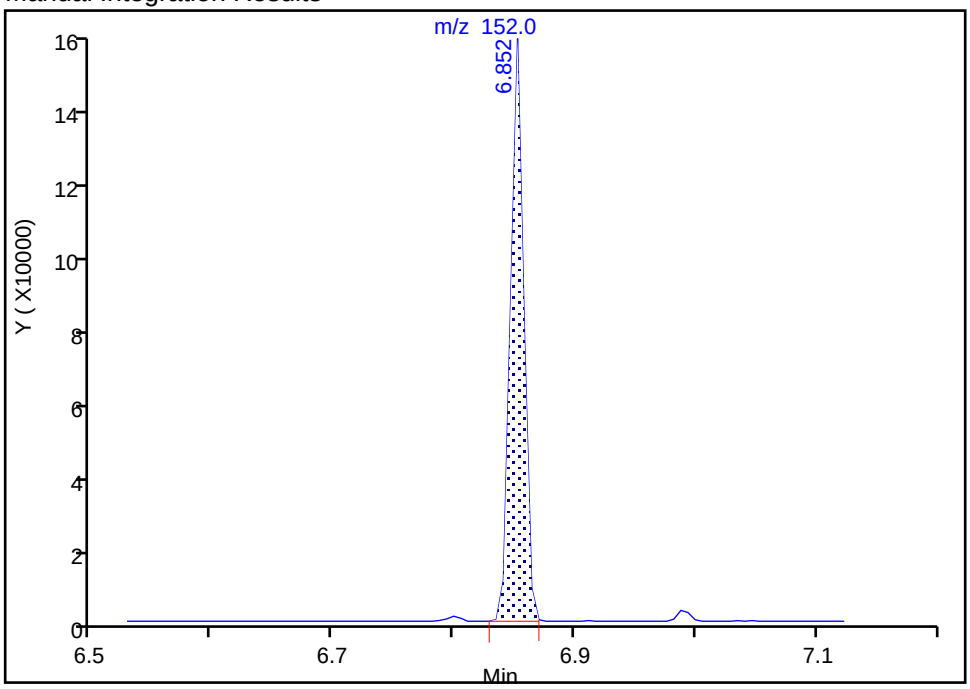
Processing Integration Results

RT: 6.80
Area: 1067
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 120646
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:59:29
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

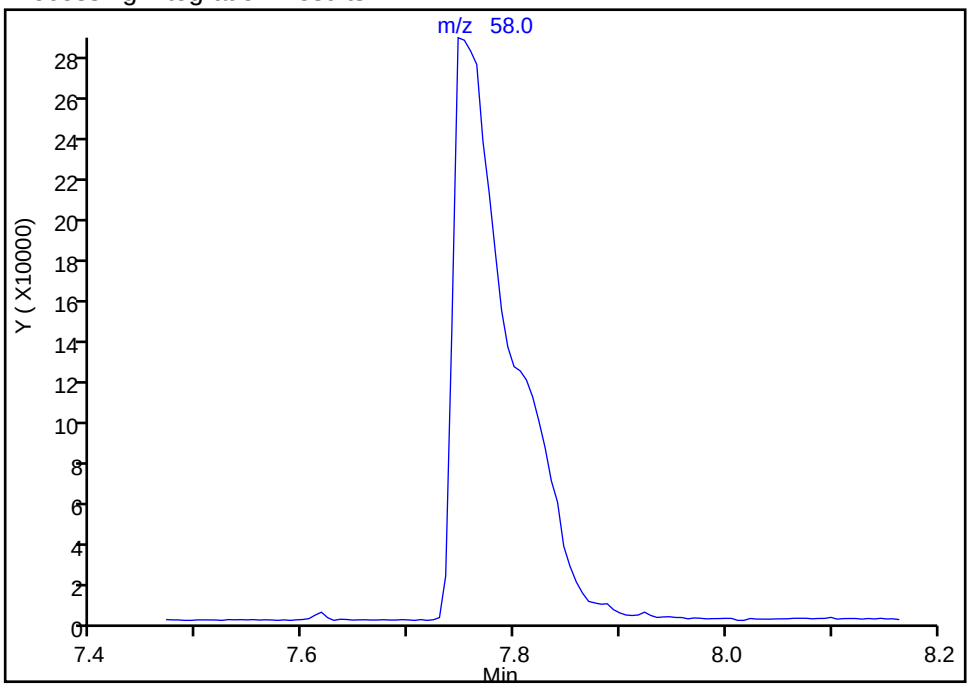
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411015.D
Injection Date: 11-Apr-2018 16:53:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

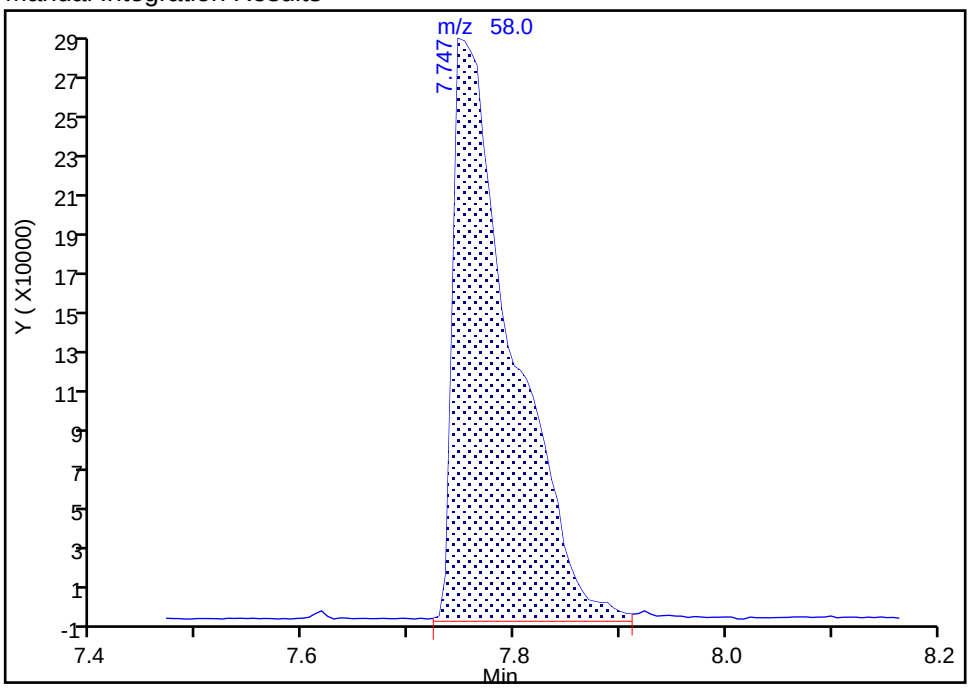
Not Detected
Expected RT: 7.75

Processing Integration Results



Manual Integration Results

RT: 7.75
Area: 1102375
Amount: 933.2718
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:59:53
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Report Date: 12-Apr-2018 06:28:39 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411016.D
Lims ID: std5 l2lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 11-Apr-2018 17:17:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-016
Misc. Info.: STD5 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:38 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:00:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	108761	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	596577	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	97	331730	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	591929	400.0	400.0	
* 5 Chrysene-d12	240	13.676	13.676	0.000	99	516022	400.0	400.0	
* 6 Perylene-d12	264	16.070	16.070	0.000	97	468392	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	93	174249	500.0	537.6	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	87	95874	500.0	487.3	
14 Acrylamide	71	5.547	5.553	-0.006	58	34698	500.0	538.2	
34 Methyl methanesulfonate	80	5.617	5.617	0.000	92	136885	500.0	492.7	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	85	107623	500.0	492.2	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	189014	500.0	539.8	
46 Pentachloroethane	167	6.629	6.629	0.000	89	65798	500.0	498.5	
56 N-Nitrosopyrrolidine	100	7.129	7.129	0.000	72	126116	500.0	555.0	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	92	266397	500.0	570.0	
60 2-Toluidine	106	7.194	7.194	0.000	96	374757	500.0	551.2	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	137934	500.0	534.1	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	92	134574	500.0	532.4	
71 alpha,alpha-Dimethyl phene	58	7.752	7.747	0.005	97	498255	500.0	420.7	
77 Hexachloropropene	213	8.017	8.017	0.000	91	124836	500.0	451.9	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	82	197611	500.0	550.5	
81 Quinoline	129	8.211	8.211	0.000	96	484193	500.0	531.7	
84 p-Phenylene diamine	108	8.241	8.241	0.000	92	168138	500.0	492.0	
92 Safrole, Total	162	8.411	8.411	0.000	84	214415	500.0	534.6	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	82	36787	420.0	391.1	
91 Isosafrole Peak 2	162	8.846	8.852	-0.006	86	217076	80.0	79.7	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	96	444109	500.0	459.0	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	81	157292	500.0	486.3	
105 1,4-Dinitrobenzene	168	9.088	9.088	0.000	86	80492	500.0	455.8	
114 Pentachlorobenzene	250	9.564	9.564	0.000	94	161418	500.0	491.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.652	9.652	0.000	99	484280	500.0	496.9	
116 2,3,5,6-Tetrachlorophenol	232	9.646	9.652	-0.006	88	100752	500.0	482.5	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	536754	500.0	519.6	
121 Thionazin	97	9.788	9.788	0.000	78	144069	500.0	497.2	
123 N-Nitro-o-toluidine	152	9.864	9.870	-0.006	90	161504	500.0	524.6	
132 Sulfotepp	202	10.035	10.035	0.000	78	75501	500.0	504.0	
133 1,3,5-Trinitrobenzene	213	10.123	10.123	0.000	85	41814	500.0	458.7	
134 Diallate Peak 1	86	10.176	10.182	-0.006	92	247936	430.0	437.8	
135 Phenacetin	108	10.170	10.176	-0.006	87	293292	500.0	531.9	
136 Phorate	121	10.188	10.188	0.000	93	131071	500.0	506.0	
137 Diallate Peak 2	86	10.264	10.264	0.000	88	40256	70.0	66.8	
139 Dimethoate	87	10.340	10.340	0.000	88	220850	500.0	532.2	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	621710	500.0	521.6	
144 Pronamide	173	10.511	10.511	0.000	91	255570	500.0	498.7	
145 Pentachloronitrobenzene	237	10.540	10.546	-0.006	81	67668	500.0	510.2	
146 Disulfoton	88	10.635	10.635	0.000	96	308443	500.0	506.8	
147 Dinoseb	211	10.646	10.640	0.006	94	106528	500.0	423.7	
152 Methyl parathion	109	10.970	10.970	0.000	92	201523	500.0	531.0	
155 Ethyl Parathion	97	11.305	11.305	0.000	82	121056	500.0	519.0	
156 4-Nitroquinoline-1-oxide	190	11.399	11.393	0.006	80	33974	500.0	472.1	
157 Methapyrilene	58	11.429	11.429	0.000	94	1127045	1000.0	1035.9	
158 Isodrin	66	11.705	11.705	0.000	87	116637	500.0	507.0	
162 Aramite Peak 1	185	12.117	12.117	0.000	0	48091	255.0	250.1	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	57709	245.0	238.2	
164 p-Dimethylamino azobenzene	225	12.364	12.364	0.000	93	155219	500.0	492.2	
165 Chlorobenzilate	139	12.393	12.393	0.000	82	322845	500.0	485.6	
168 Famphur	218	12.699	12.699	0.000	88	219991	500.0	499.6	
170 3,3'-Dimethylbenzidine	212	12.782	12.781	0.001	99	437282	500.0	480.5	
172 2-Acetylaminofluorene	181	13.134	13.134	0.000	96	329767	500.0	455.9	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.546	0.000	94	145729	500.0	469.1	
180 6-Methylchrysene	242	14.423	14.423	0.000	97	1133296	1000.0	998.8	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.375	0.000	92	279852	500.0	509.7	
186 3-Methylcholanthrene	268	16.587	16.593	-0.006	93	725358	1000.0	1003.8	
188 Dibenz[a,h]acridine	279	17.693	17.693	0.000	92	508842	500.0	498.6	
S 194 Isosafrole	162				0		500.0	470.8	
S 195 Diallate	86				0		500.0	504.6	
S 196 Aramite, Total	185				0		500.0	488.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 L5 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:39 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411016.D

Injection Date: 11-Apr-2018 17:17:30 Instrument ID: A4AG2 Operator ID:

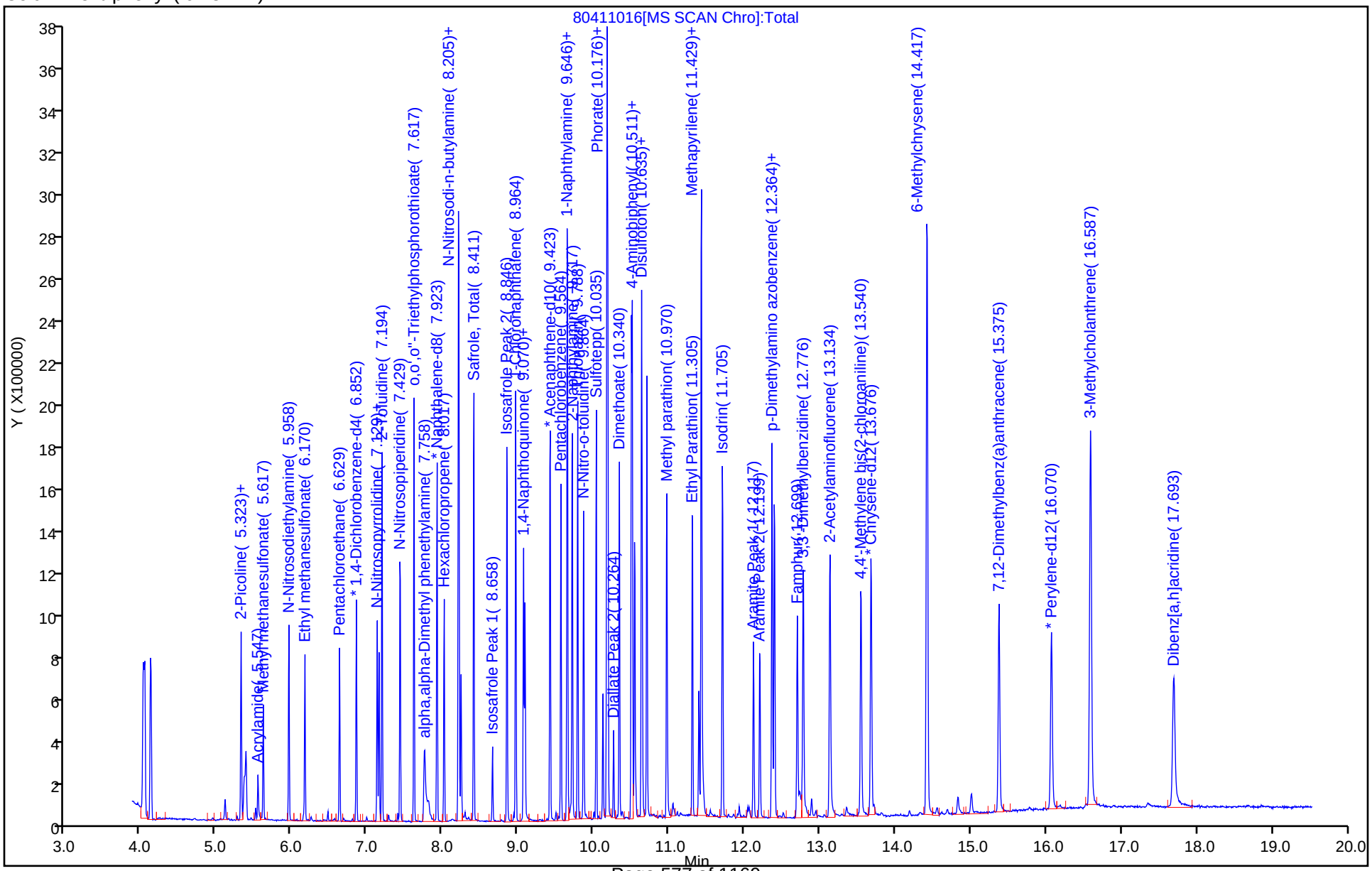
Lims ID: std5 l2lvi Worklist Smp#: 16

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 16

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

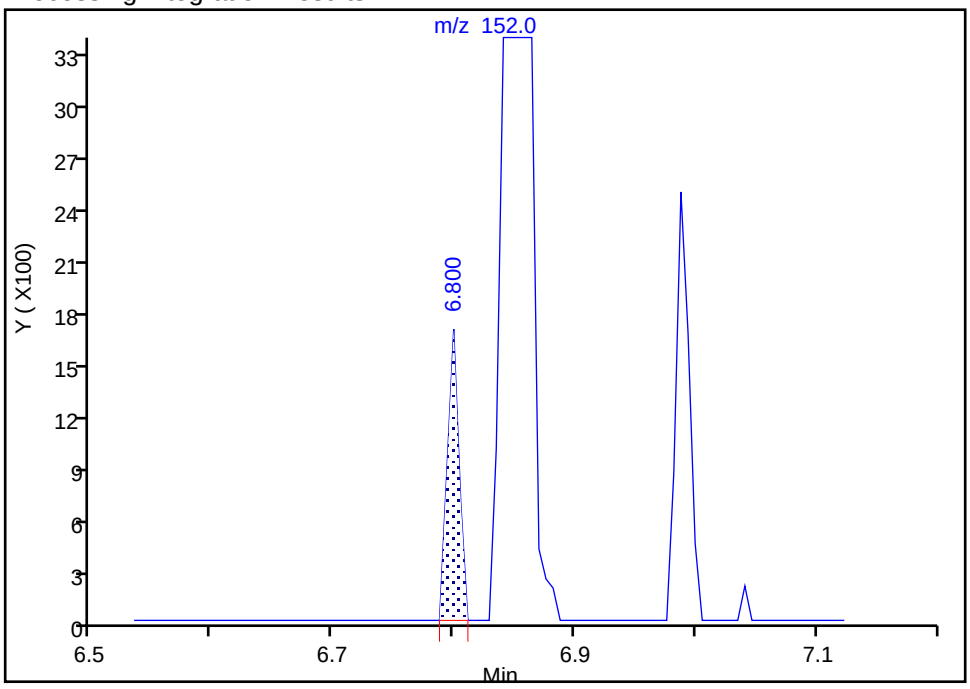
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411016.D
Injection Date: 11-Apr-2018 17:17:30 Instrument ID: A4AG2
Lims ID: std5 l2lvi
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

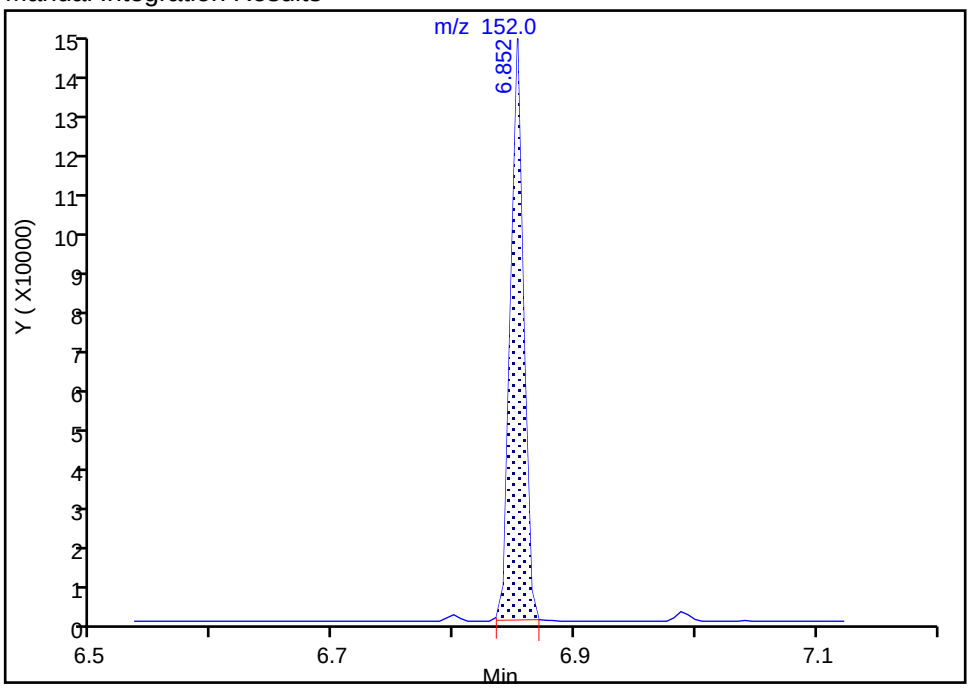
Processing Integration Results

RT: 6.80
Area: 1109
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 108761
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 06:00:18
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 12-Apr-2018 06:28:42 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411017.D
Lims ID: std4 l2lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-Apr-2018 17:42:30 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-017
Misc. Info.: STD4 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:41 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:01:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	117684	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	607797	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	314699	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	603156	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.676	-0.001	99	491542	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.070	-0.001	97	467473	400.0	400.0	
31 2-Picoline	93	5.329	5.323	0.006	92	68170	200.0	194.4	
32 N-Nitrosomethylethylamine	88	5.394	5.388	0.006	88	42903	200.0	201.5	
14 Acrylamide	71		5.553				ND	ND	U
34 Methyl methanesulfonate	80	5.617	5.617	0.000	91	60145	200.0	200.1	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	85	45826	200.0	193.7	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	96	76004	200.0	200.6	
46 Pentachloroethane	167	6.629	6.629	0.000	89	28457	200.0	199.3	
56 N-Nitrosopyrrolidine	100	7.129	7.129	0.000	72	46923	200.0	190.8	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	92	101752	200.0	201.2	
60 2-Toluidine	106	7.193	7.194	-0.001	96	149368	200.0	203.0	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	53400	200.0	202.9	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	90	50497	200.0	196.1	
71 alpha,alpha-Dimethyl phene	58	7.758	7.747	0.011	97	232015	200.0	192.3	
77 Hexachloropropene	213	8.017	8.017	0.000	91	54881	200.0	195.0	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	82	78201	200.0	213.8	
81 Quinoline	129	8.211	8.211	0.000	95	195536	200.0	210.7	
84 p-Phenylene diamine	108	8.240	8.241	-0.001	91	42394	200.0	165.4	
92 Safrole, Total	162	8.411	8.411	0.000	83	81748	200.0	200.0	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	83	15065	168.0	168.8	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	88	81837	32.0	31.7	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	96	189185	200.0	206.1	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	78	48938	200.0	179.1	
105 1,4-Dinitrobenzene	168	9.087	9.088	-0.001	86	28570	200.0	190.3	
114 Pentachlorobenzene	250	9.564	9.564	0.000	93	53533	200.0	171.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	62	33568	200.0	189.4	
117 1-Naphthylamine	143	9.652	9.652	0.000	98	186906	200.0	202.2	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	205659	200.0	209.9	
121 Thionazin	97	9.787	9.788	-0.001	79	54729	200.0	199.1	
123 N-Nitro-o-toluidine	152	9.864	9.870	-0.006	91	56637	200.0	193.9	
132 Sulfotepp	202	10.034	10.035	-0.001	77	28846	200.0	189.0	
133 1,3,5-Trinitrobenzene	213	10.123	10.123	0.000	85	13603	200.0	229.6	
135 Phenacetin	108	10.170	10.176	-0.006	86	104074	200.0	185.2	
134 Diallate Peak 1	86	10.176	10.182	-0.006	86	98804	172.0	171.2	
136 Phorate	121	10.187	10.188	-0.001	93	52262	200.0	198.0	
137 Diallate Peak 2	86	10.264	10.264	0.000	86	16191	28.0	26.4	
139 Dimethoate	87	10.340	10.340	0.000	87	83595	200.0	197.7	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	229181	200.0	188.7	
144 Pronamide	173	10.511	10.511	0.000	92	101814	200.0	195.0	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	80	24882	200.0	184.1	
146 Disulfoton	88	10.634	10.635	-0.001	97	122432	200.0	197.4	
147 Dinoseb	211	10.640	10.640	0.000	91	34242	200.0	165.8	
152 Methyl parathion	109	10.970	10.970	0.000	92	78257	200.0	202.3	
155 Ethyl Parathion	97	11.305	11.305	0.000	82	43324	200.0	182.3	
156 4-Nitroquinoline-1-oxide	190	11.393	11.393	0.000	72	9489	200.0	205.5	
157 Methapyrilene	58	11.428	11.429	-0.001	94	390754	400.0	352.5	
158 Isodrin	66	11.705	11.705	0.000	87	46958	200.0	200.3	
162 Aramite Peak 1	185	12.117	12.117	0.000	0	18647	102.0	101.8	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	21693	98.0	94.0	
164 p-Dimethylamino azobenzene	225	12.364	12.364	0.000	92	57592	200.0	191.7	
165 Chlorobenzilate	139	12.393	12.393	0.000	84	127968	200.0	202.1	
168 Famphur	218	12.699	12.699	0.000	88	104262	200.0	248.6	
170 3,3'-Dimethylbenzidine	212	12.775	12.781	-0.006	99	135735	200.0	186.2	
172 2-Acetylaminofluorene	181	13.128	13.134	-0.006	95	110088	200.0	184.9	
175 4,4'-Methylene bis(2-chlor	231	13.540	13.546	-0.006	93	52926	200.0	197.2	
180 6-Methylchrysene	242	14.417	14.423	-0.006	99	434314	400.0	401.8	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.375	0.000	94	109190	200.0	199.3	
186 3-Methylcholanthrene	268	16.587	16.593	-0.006	93	269668	400.0	373.9	
188 Dibenz[a,h]acridine	279	17.693	17.693	0.000	92	190143	200.0	186.7	
S 194 Isosafrole	162				0		200.0	200.5	
S 195 Diallate	86				0		200.0	197.6	
S 196 Aramite, Total	185				0		200.0	195.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L4 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:42 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411017.D

Injection Date: 11-Apr-2018 17:42:30 Instrument ID: A4AG2 Operator ID:

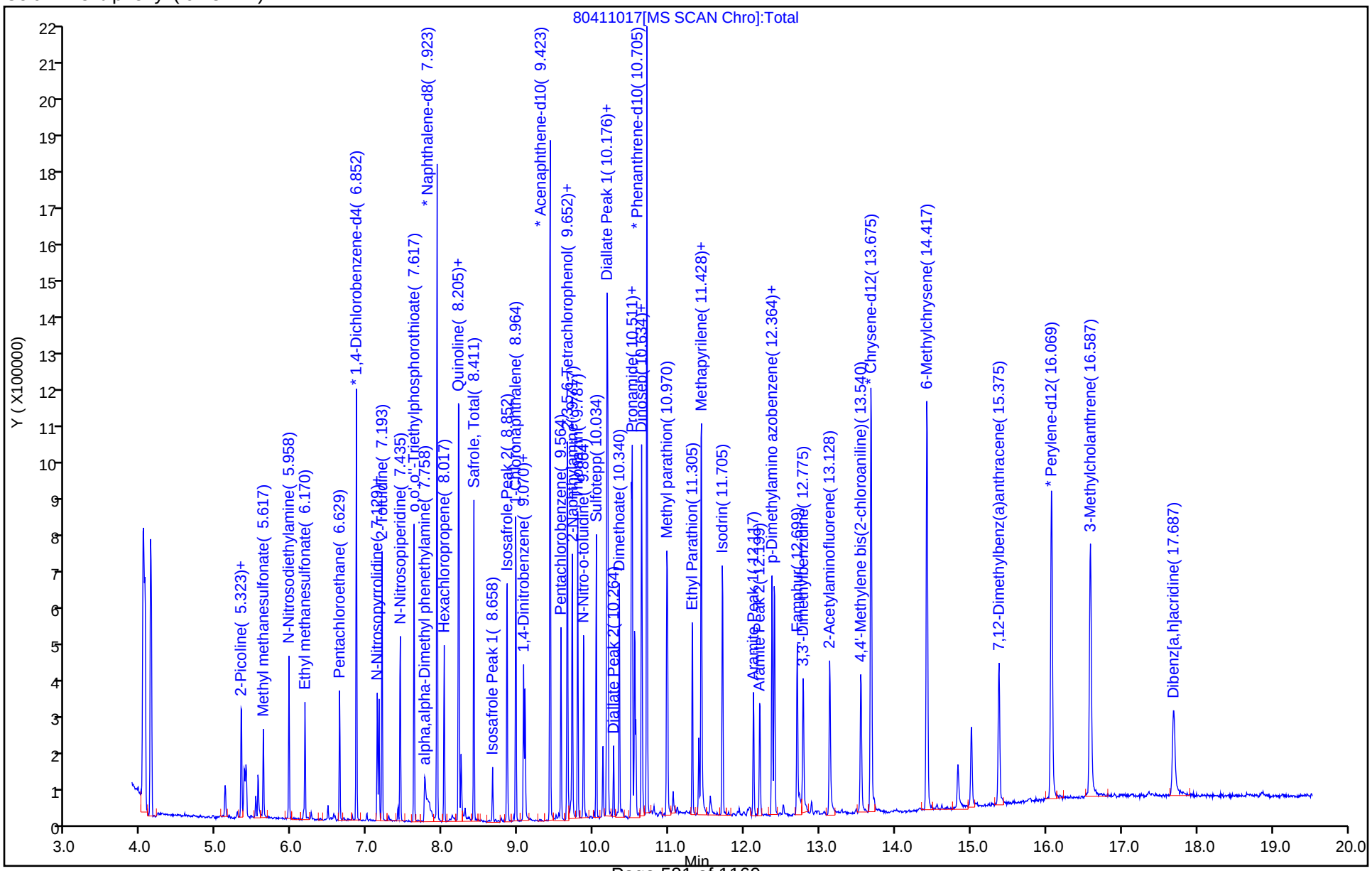
Lims ID: std4 l2lvi Worklist Smp#: 17

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 17

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

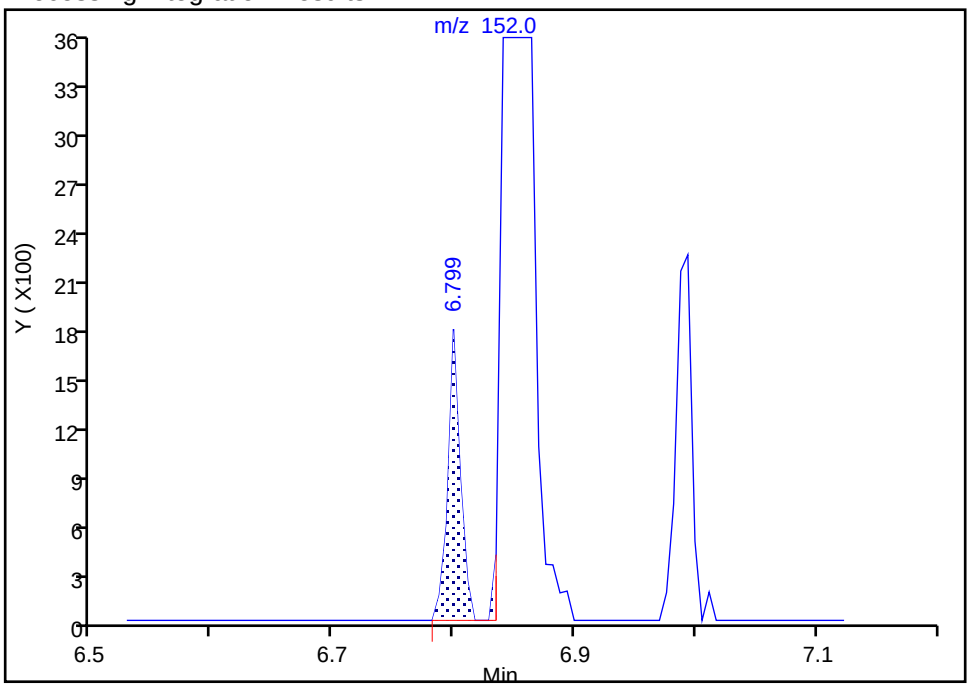
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411017.D
Injection Date: 11-Apr-2018 17:42:30 Instrument ID: A4AG2
Lims ID: std4 l2lvi
Client ID:
Operator ID: ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

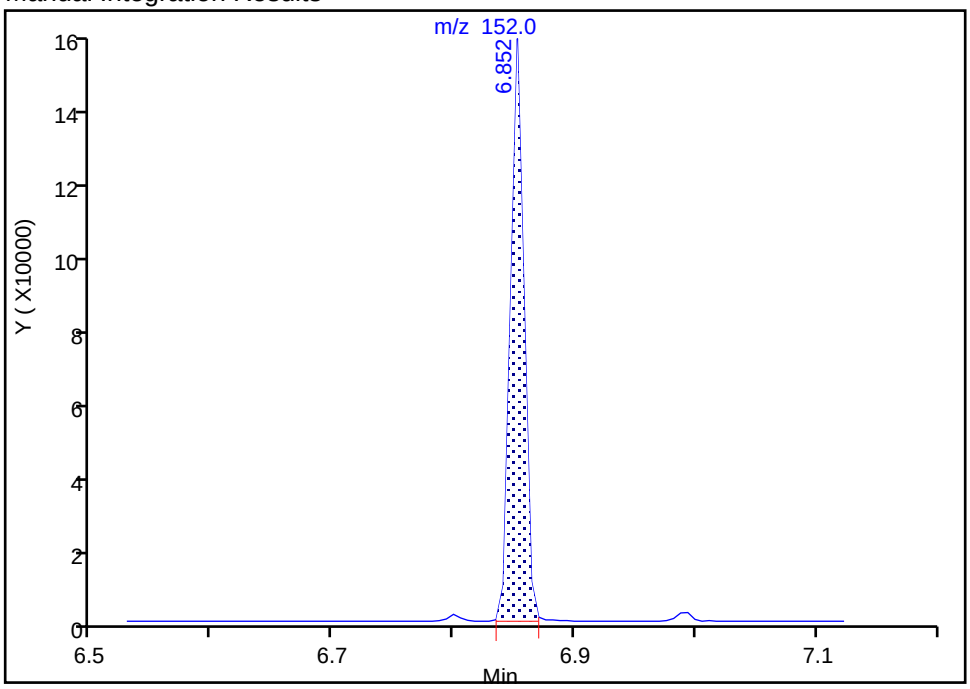
Processing Integration Results

RT: 6.80
Area: 1430
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 117684
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 06:00:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

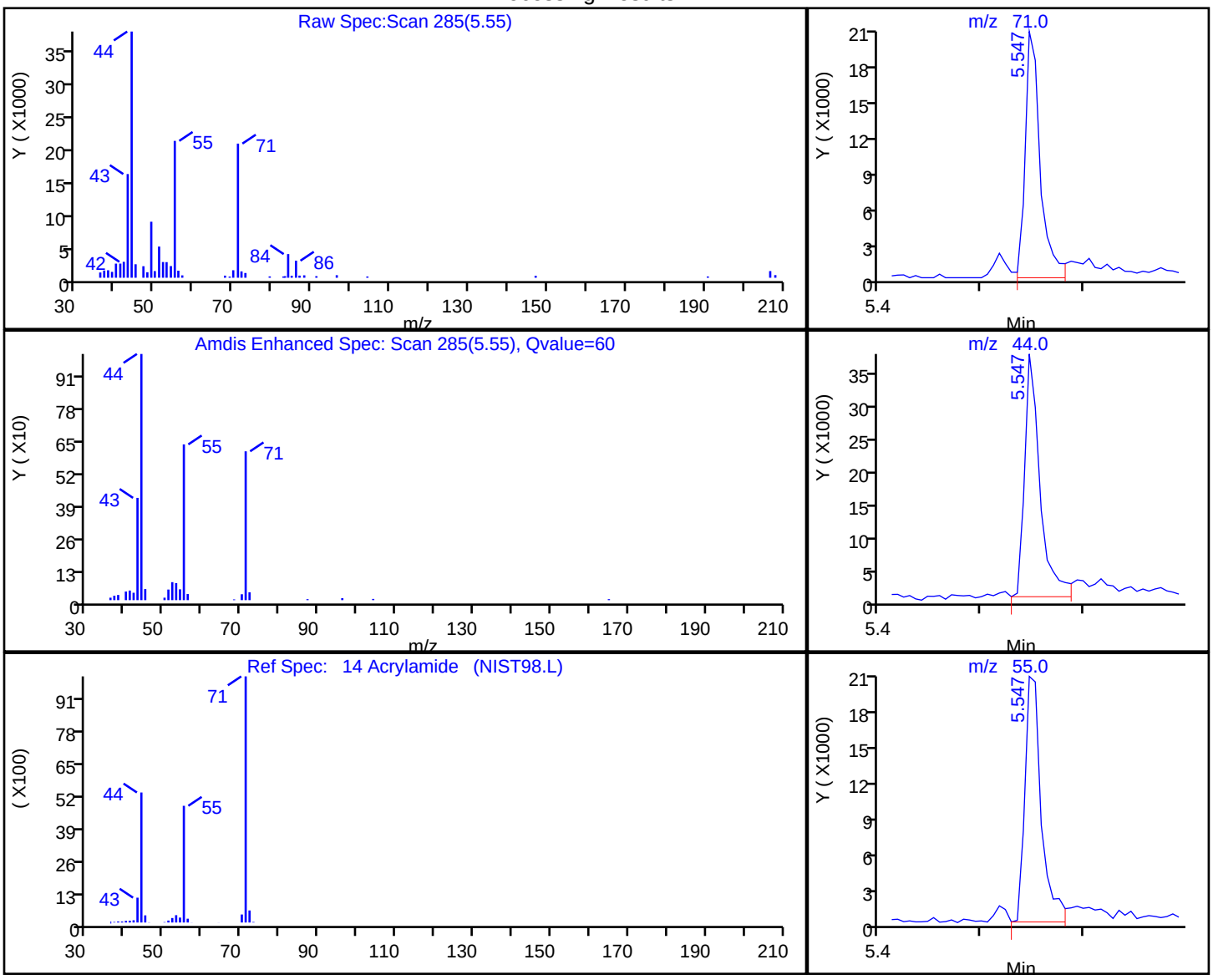
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411017.D
Injection Date: 11-Apr-2018 17:42:30 Instrument ID: A4AG2
Lims ID: std4 l2lvi
Client ID:
Operator ID: ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

14 Acrylamide, CAS: 79-06-1

Processing Results



RT	Mass	Response	Amount
5.55	71.00	21063	278.3079
5.55	44.00	37890	
5.55	55.00	23110	

Reviewer: hulat, 12-Apr-2018 06:12:32
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411018.D
Lims ID: std3 l2lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 11-Apr-2018 18:07:30 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-018
Misc. Info.: STD3 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:44 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:02:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	130728	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	703727	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	305430	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	639564	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.676	-0.001	99	524167	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.070	-0.001	97	509753	400.0	400.0	
31 2-Picoline	93	5.329	5.323	0.006	90	38517	100.0	98.9	
32 N-Nitrosomethylethylamine	88	5.394	5.388	0.006	88	21961	100.0	92.9	
14 Acrylamide	71		5.553				ND	ND	U
34 Methyl methanesulfonate	80	5.617	5.617	0.000	93	35940	100.0	107.6	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	86	27607	100.0	105.0	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	96	44160	100.0	104.9	
46 Pentachloroethane	167	6.629	6.629	0.000	89	16450	100.0	103.7	
56 N-Nitrosopyrrolidine	100	7.129	7.129	0.000	74	25409	100.0	93.0	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	93	55055	100.0	98.0	
60 2-Toluidine	106	7.193	7.194	-0.001	96	85722	100.0	104.9	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	28981	100.0	95.1	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	90	29366	100.0	98.5	
71 alpha,alpha-Dimethyl phene	58	7.764	7.747	0.017	96	138773	100.0	99.3	
77 Hexachloropropene	213	8.017	8.017	0.000	92	30947	100.0	95.0	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	82	37867	100.0	89.4	
81 Quinoline	129	8.217	8.211	0.006	93	95910	100.0	89.3	
84 p-Phenylene diamine	108	8.240	8.241	-0.001	90	13100	100.0	86.6	
92 Safrole, Total	162	8.411	8.411	0.000	82	41580	100.0	87.9	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	78	6689	84.0	77.2	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	89	39523	16.0	15.8	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	96	96309	100.0	108.1	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	79	24663	100.0	107.0	
105 1,4-Dinitrobenzene	168	9.093	9.088	0.005	90	12855	100.0	105.2	
114 Pentachlorobenzene	250	9.564	9.564	0.000	94	29715	100.0	98.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.652	9.652	0.000	97	92202	100.0	102.8	
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	81	14444	100.0	101.1	
119 2-Naphthylamine	143	9.717	9.717	0.000	95	100166	100.0	105.3	
121 Thionazin	97	9.787	9.788	-0.001	78	29090	100.0	109.0	
123 N-Nitro-o-toluidine	152	9.864	9.870	-0.006	86	27003	100.0	95.3	
132 Sulfotepp	202	10.034	10.035	-0.001	76	15491	100.0	95.7	
133 1,3,5-Trinitrobenzene	213		10.123				ND	ND	U
135 Phenacetin	108	10.170	10.176	-0.006	91	51775	100.0	86.9	
134 Diallate Peak 1	86	10.181	10.182	-0.001	86	54474	86.0	89.0	
136 Phorate	121	10.187	10.188	-0.001	93	27919	100.0	99.8	
137 Diallate Peak 2	86	10.264	10.264	0.000	86	9330	14.0	14.3	
139 Dimethoate	87	10.340	10.340	0.000	86	43780	100.0	97.6	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	115553	100.0	89.7	
144 Pronamide	173	10.511	10.511	0.000	92	52194	100.0	94.3	
145 Pentachloronitrobenzene	237	10.540	10.546	-0.006	81	13800	100.0	96.3	
146 Disulfoton	88	10.634	10.635	-0.001	96	64512	100.0	98.1	
147 Dinoseb	211	10.640	10.640	0.000	90	16758	100.0	101.8	
152 Methyl parathion	109	10.970	10.970	0.000	91	38979	100.0	95.1	
155 Ethyl Parathion	97	11.305	11.305	0.000	82	20524	100.0	81.4	
156 4-Nitroquinoline-1-oxide	190	11.393	11.393	0.000	71	4410	100.0	141.1	
157 Methapyrilene	58	11.428	11.429	-0.001	94	205893	200.0	175.1	
158 Isodrin	66	11.705	11.705	0.000	88	25567	100.0	102.9	
162 Aramite Peak 1	185	12.117	12.117	0.000	0	9347	51.0	47.8	
163 Aramite Peak 2	185	12.199	12.205	-0.006	0	11325	49.0	46.0	
164 p-Dimethylamino azobenzene	225	12.364	12.364	0.000	92	29704	100.0	92.7	
165 Chlorobenzilate	139	12.393	12.393	0.000	83	70679	100.0	104.7	
168 Famphur	218	12.699	12.699	0.000	89	55131	100.0	123.3	
170 3,3'-Dimethylbenzidine	212	12.781	12.781	0.000	99	51713	100.0	94.8	
172 2-Acetylaminofluorene	181	13.128	13.134	-0.006	96	50372	100.0	101.4	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.546	0.000	94	24079	100.0	101.1	
180 6-Methylchrysene	242	14.416	14.423	-0.007	98	228417	200.0	198.2	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.375	0.000	94	53739	100.0	89.9	
186 3-Methylcholanthrene	268	16.587	16.593	-0.006	94	140551	200.0	178.7	
188 Dibenz[a,h]acridine	279	17.687	17.693	-0.006	91	97930	100.0	88.2	
S 194 Isosafrole	162				0		100.0	93.0	
S 195 Diallate	86				0		100.0	103.3	
S 196 Aramite, Total	185				0		100.0	93.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L3 W_00015 Amount Added: 0.10 Units: mL

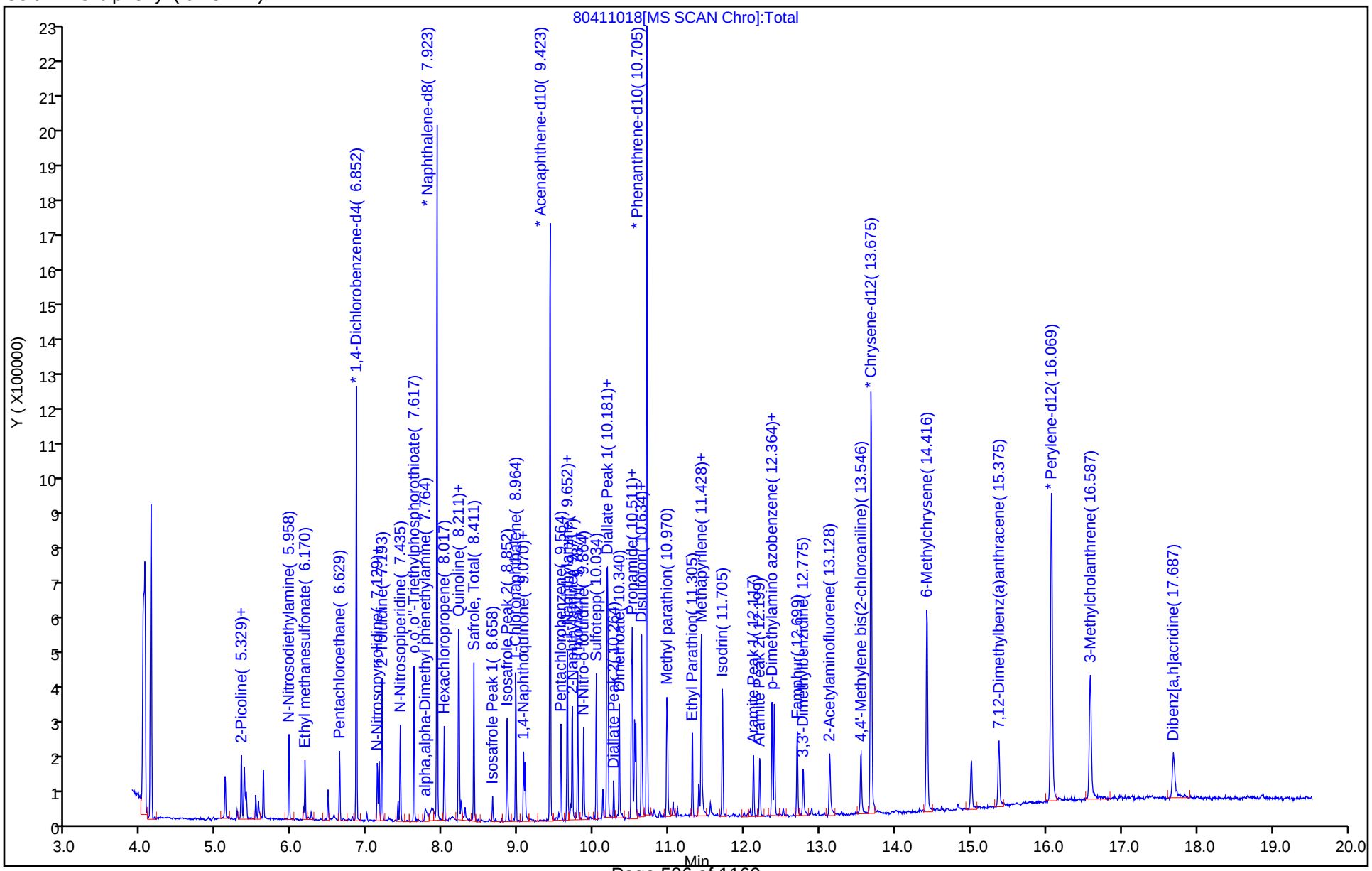
Report Date: 12-Apr-2018 06:28:46 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411018.D

Injection Date:	11-Apr-2018 18:07:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std3 l2lvi			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

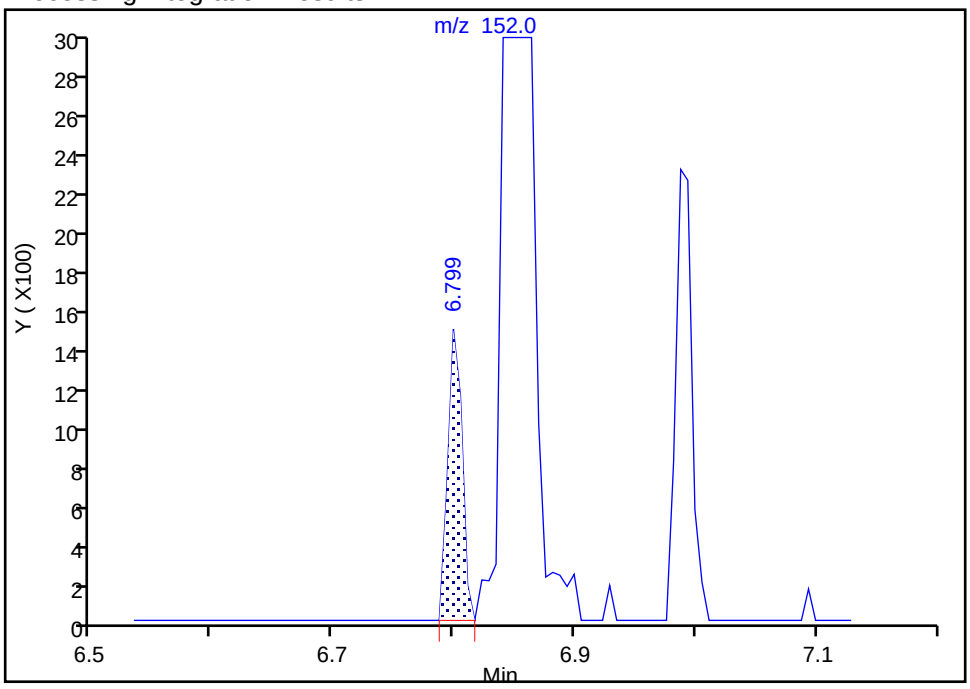
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411018.D
Injection Date: 11-Apr-2018 18:07:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

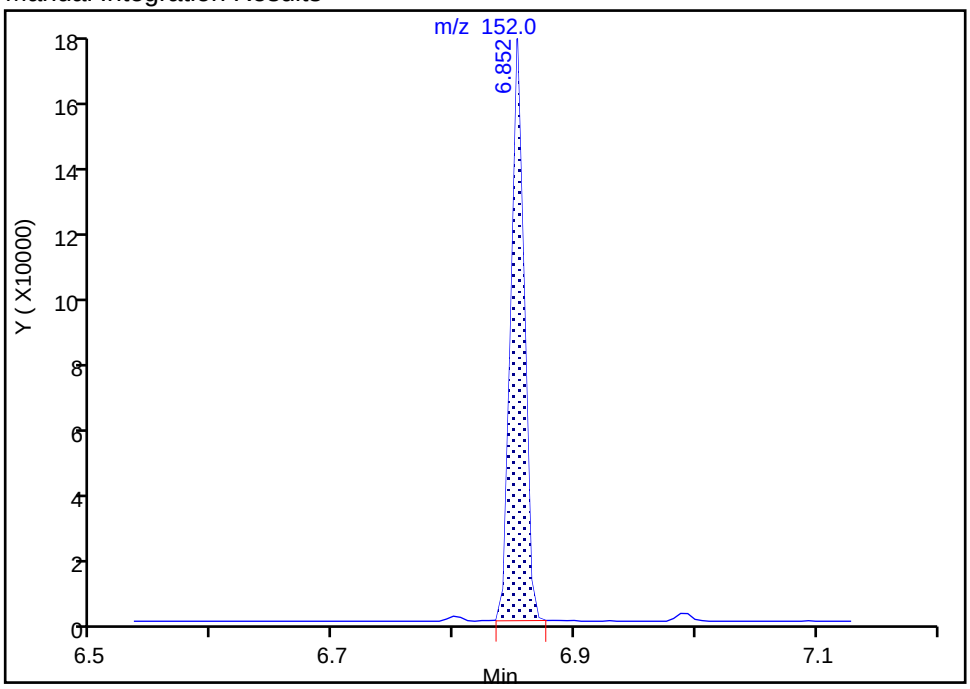
Processing Integration Results

RT: 6.80
Area: 1216
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 130728
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 06:02:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

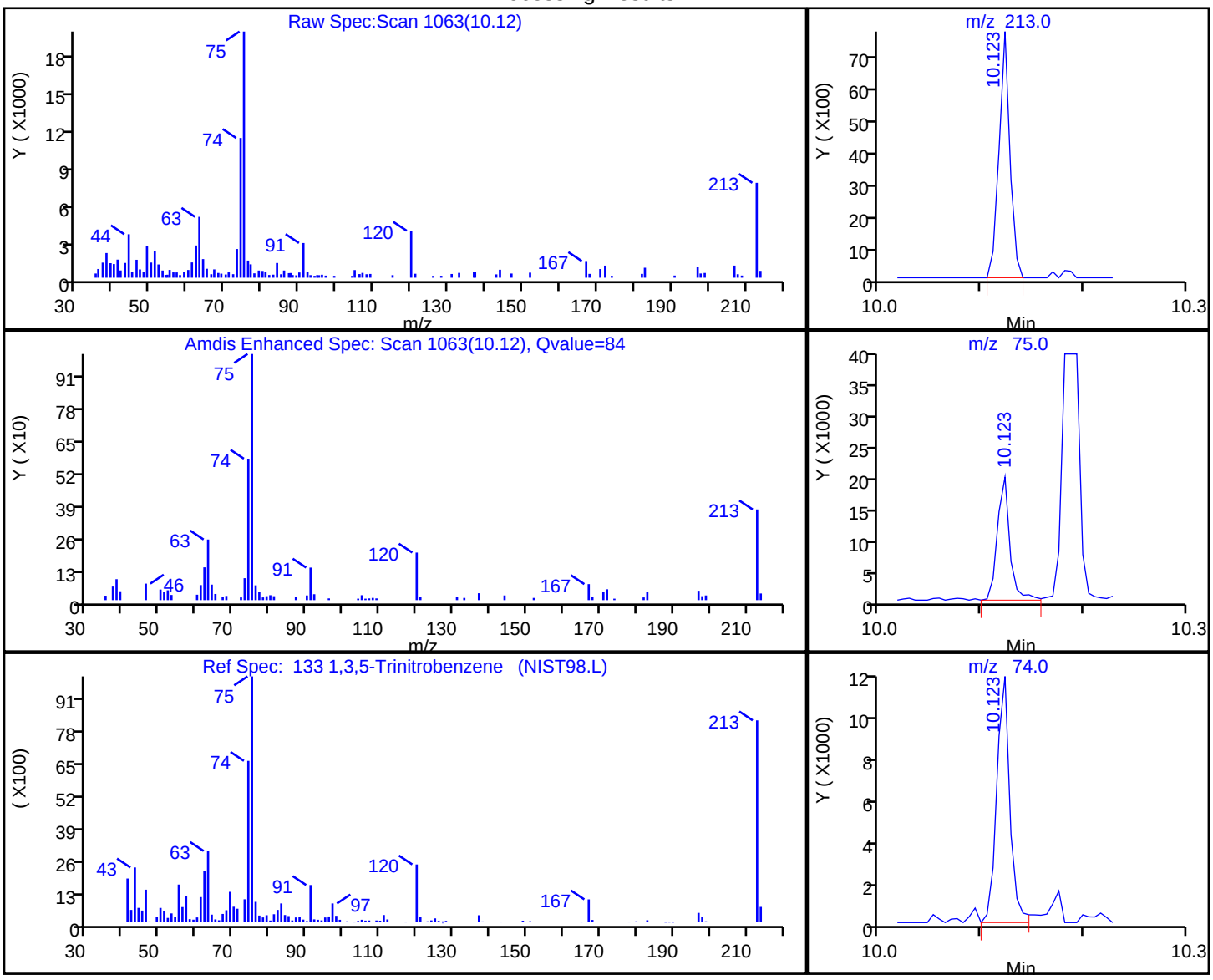
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411018.D				
Injection Date:	11-Apr-2018 18:07:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

133 1,3,5-Trinitrobenzene, CAS: 99-35-4

Processing Results



RT	Mass	Response	Amount
10.12	213.00	5711	152.6627
10.12	75.00	17104	
10.12	74.00	10170	

Reviewer: hulat, 12-Apr-2018 06:13:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

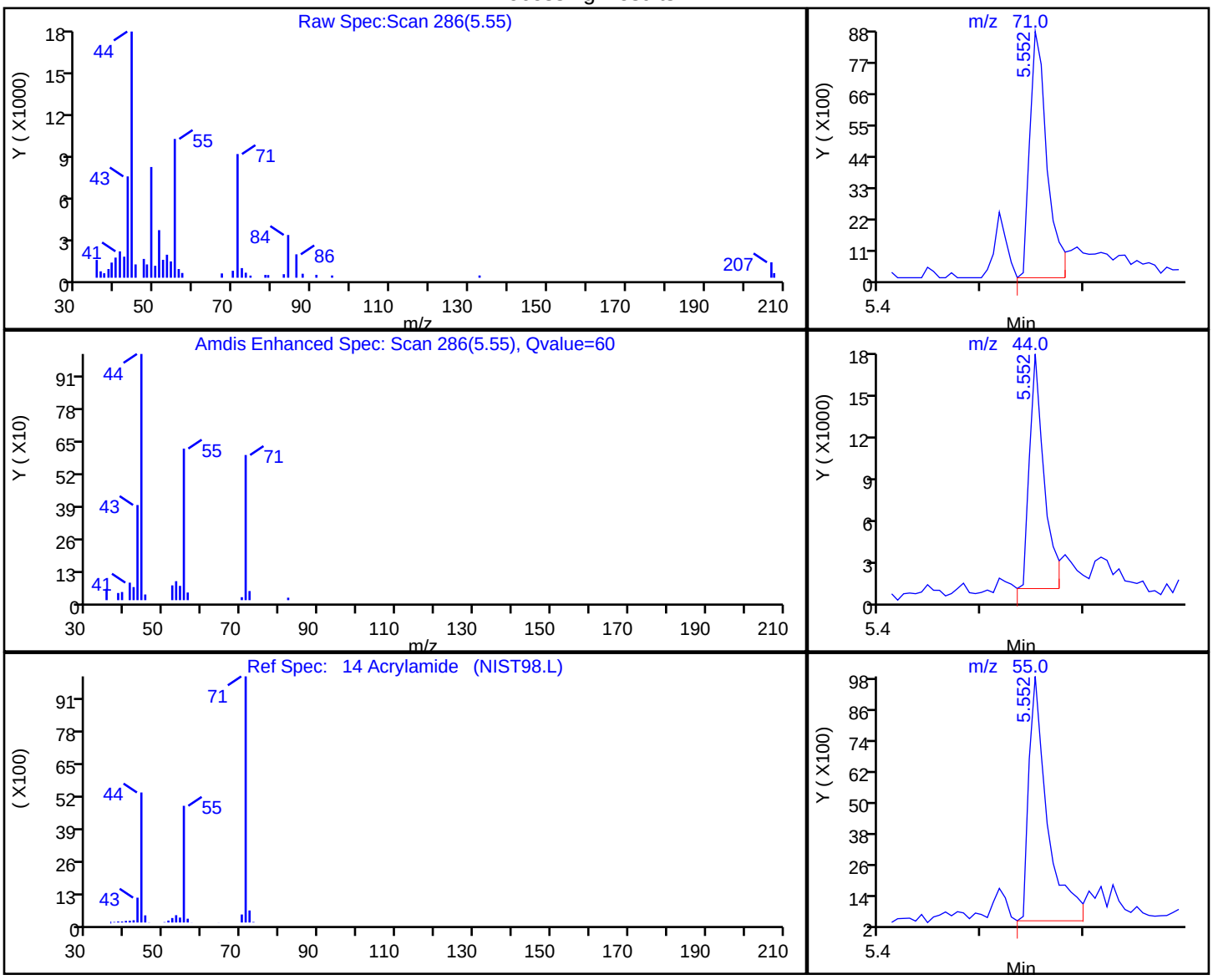
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411018.D				
Injection Date:	11-Apr-2018 18:07:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

14 Acrylamide, CAS: 79-06-1

Processing Results



RT	Mass	Response	Amount
5.55	71.00	10351	119.1853
5.55	44.00	15625	
5.55	55.00	12014	

Reviewer: hulat, 12-Apr-2018 06:12:14

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D
Lims ID: std2 l2lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 11-Apr-2018 18:32:30 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-019
Misc. Info.: STD2 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:47 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:03:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	97	131366	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	645425	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	269593	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	539917	400.0	400.0	
* 5 Chrysene-d12	240	13.675	13.676	-0.001	99	468455	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.070	-0.001	96	441331	400.0	400.0	
31 2-Picoline	93	5.329	5.323	0.006	91	20048	50.0	51.2	
32 N-Nitrosomethylethylamine	88		5.388				ND	ND	
14 Acrylamide	71		5.553				ND	ND	U
34 Methyl methanesulfonate	80	5.623	5.617	0.006	91	16945	50.0	50.5	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	84	11917	50.0	45.1	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	95	20107	50.0	47.5	
46 Pentachloroethane	167	6.629	6.629	0.000	88	7477	50.0	46.9	
56 N-Nitrosopyrrolidine	100	7.135	7.129	0.006	72	10091	50.0	36.8	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	93	23413	50.0	41.5	
60 2-Toluidine	106	7.194	7.194	0.000	95	38264	50.0	46.6	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	76	11080	50.0	39.7	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	89	12548	50.0	45.9	
71 alpha,alpha-Dimethyl phene	58		7.747				ND	ND	
77 Hexachloropropene	213	8.017	8.017	0.000	92	12950	50.0	43.3	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	83	15318	50.0	39.4	
81 Quinoline	129	8.217	8.211	0.006	94	39172	50.0	39.8	
84 p-Phenylene diamine	108	8.246	8.241	0.005	74	2799	50.0	64.6	
92 Safrole, Total	162	8.411	8.411	0.000	83	18557	50.0	42.8	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	82	3521	42.0	46.1	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	88	16163	8.00	7.30	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	95	40997	50.0	52.1	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	89	6674	50.0	53.0	
105 1,4-Dinitrobenzene	168	9.088	9.088	0.000	89	3687	50.0	55.6	
114 Pentachlorobenzene	250	9.564	9.564	0.000	93	12436	50.0	46.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	54	4364	50.0	54.8	
117 1-Naphthylamine	143	9.652	9.652	0.000	98	34333	50.0	43.3	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	34494	50.0	41.1	
121 Thionazin	97	9.787	9.788	-0.001	75	12255	50.0	52.0	
123 N-Nitro-o-toluidine	152	9.864	9.870	-0.006	89	9587	50.0	38.3	
132 Sulfotepp	202	10.035	10.035	0.000	76	5608	50.0	41.0	
133 1,3,5-Trinitrobenzene	213		10.123				ND	ND	U
135 Phenacetin	108	10.170	10.176	-0.006	94	18847	50.0	37.5	
134 Diallate Peak 1	86	10.176	10.182	-0.006	86	21294	43.0	41.2	
136 Phorate	121	10.187	10.188	-0.001	92	10975	50.0	46.5	
137 Diallate Peak 2	86	10.264	10.264	0.000	87	4323	7.00	7.86	
139 Dimethoate	87	10.340	10.340	0.000	85	15941	50.0	42.1	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	90	42534	50.0	39.1	
144 Pronamide	173	10.511	10.511	0.000	91	20043	50.0	42.9	
145 Pentachloronitrobenzene	237	10.540	10.546	-0.006	83	5005	50.0	41.4	
146 Disulfoton	88	10.634	10.635	-0.001	96	25706	50.0	46.3	
147 Dinoseb	211	10.640	10.640	0.000	90	5122	50.0	66.8	
152 Methyl parathion	109	10.964	10.970	-0.006	91	12568	50.0	36.3	
155 Ethyl Parathion	97	11.305	11.305	0.000	82	7608	50.0	35.8	
156 4-Nitroquinoline-1-oxide	190		11.393				ND	ND	U
157 Methapyrilene	58	11.423	11.429	-0.006	94	77266	100.0	77.9	
158 Isodrin	66	11.705	11.705	0.000	88	10791	50.0	51.4	
162 Aramite Peak 1	185	12.117	12.117	0.000	0	3538	25.5	20.3	
163 Aramite Peak 2	185	12.199	12.205	-0.006	0	4465	24.5	20.3	
164 p-Dimethylamino azobenzene	225	12.364	12.364	0.000	92	10289	50.0	35.9	
165 Chlorobenzilate	139	12.393	12.393	0.000	82	26582	50.0	44.0	
168 Famphur	218	12.699	12.699	0.000	91	19254	50.0	48.2	
170 3,3'-Dimethylbenzidine	212	12.776	12.781	-0.005	99	14127	50.0	59.5	
172 2-Acetylaminofluorene	181	13.128	13.134	-0.006	96	14207	50.0	58.5	
175 4,4'-Methylene bis(2-chlor	231	13.540	13.546	-0.006	92	7620	50.0	55.0	
180 6-Methylchrysene	242	14.417	14.423	-0.006	99	88365	100.0	85.8	
182 7,12-Dimethylbenz(a)anthra	256	15.369	15.375	-0.006	93	19103	50.0	36.9	
186 3-Methylcholanthrene	268	16.581	16.593	-0.012	94	55295	100.0	81.2	
188 Dibenz[a,h]acridine	279	17.693	17.693	0.000	92	35763	50.0	37.2	
S 194 Isosafrole	162				0		50.0	53.4	
S 195 Diallate	86				0		50.0	49.1	
S 196 Aramite, Total	185				0		50.0	40.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L2 W_00015 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:49 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Injection Date: 11-Apr-2018 18:32:30 Instrument ID: A4AG2 Operator ID:

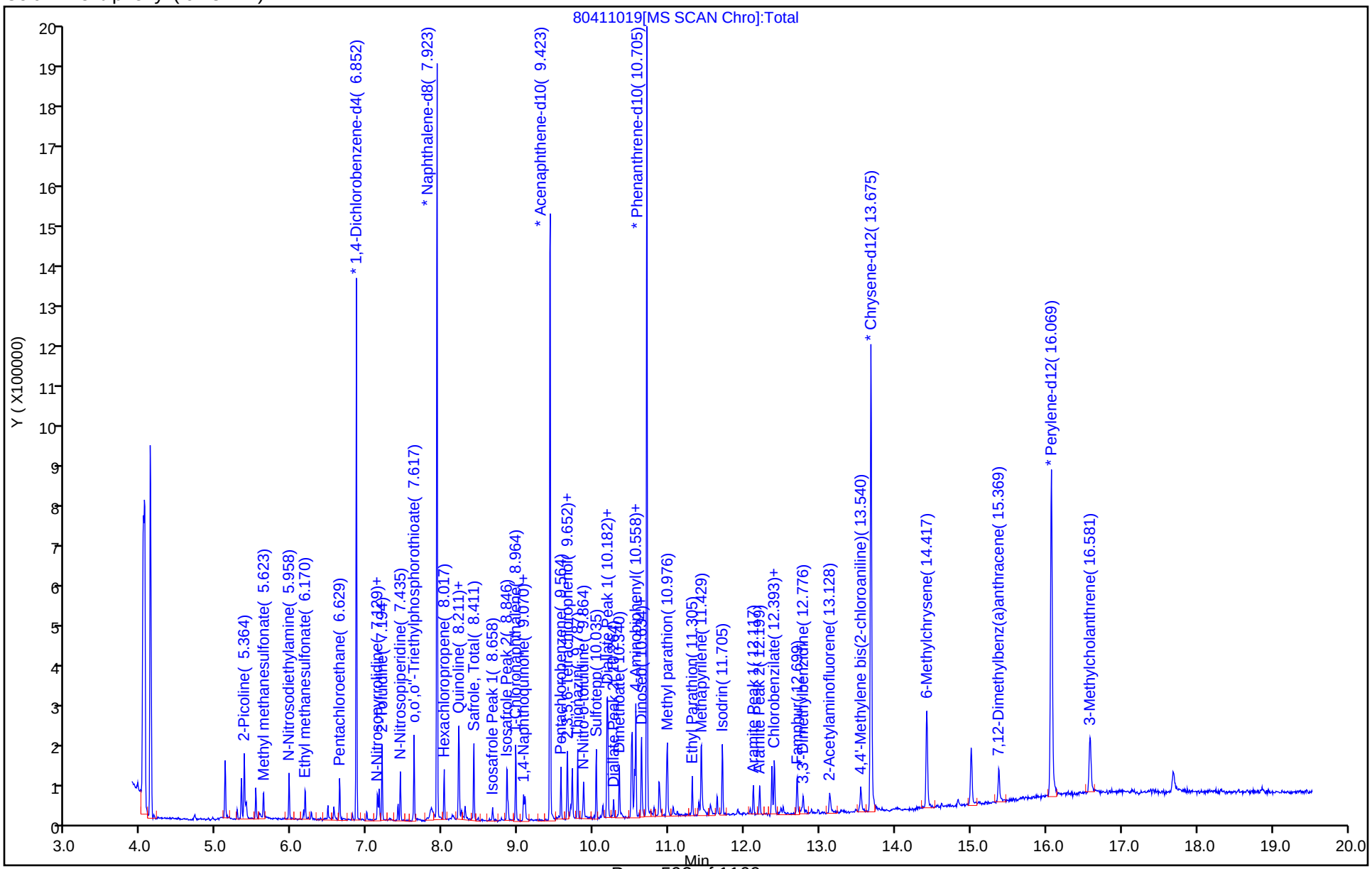
Lims ID: std2 l2lvi Worklist Smp#: 19

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 19

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

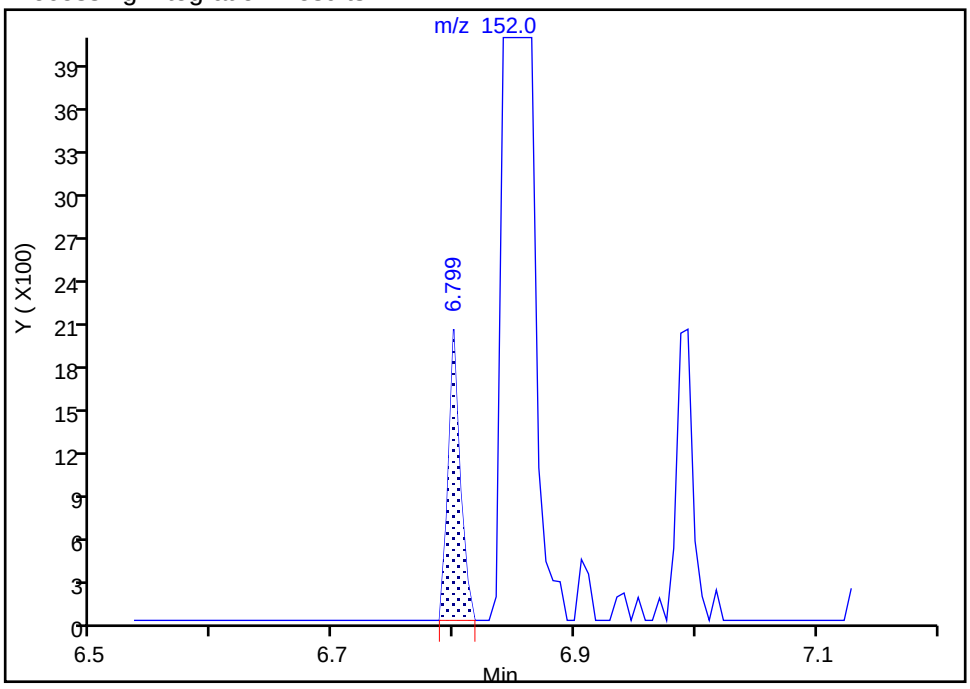
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D
Injection Date: 11-Apr-2018 18:32:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

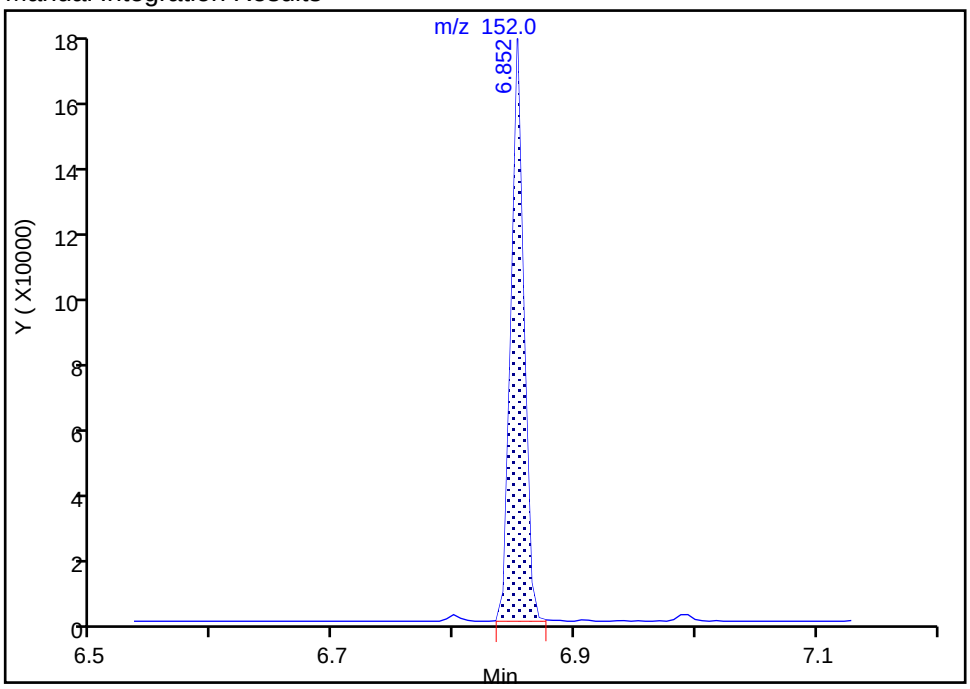
Processing Integration Results

RT: 6.80
Area: 1395
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 131366
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 06:02:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

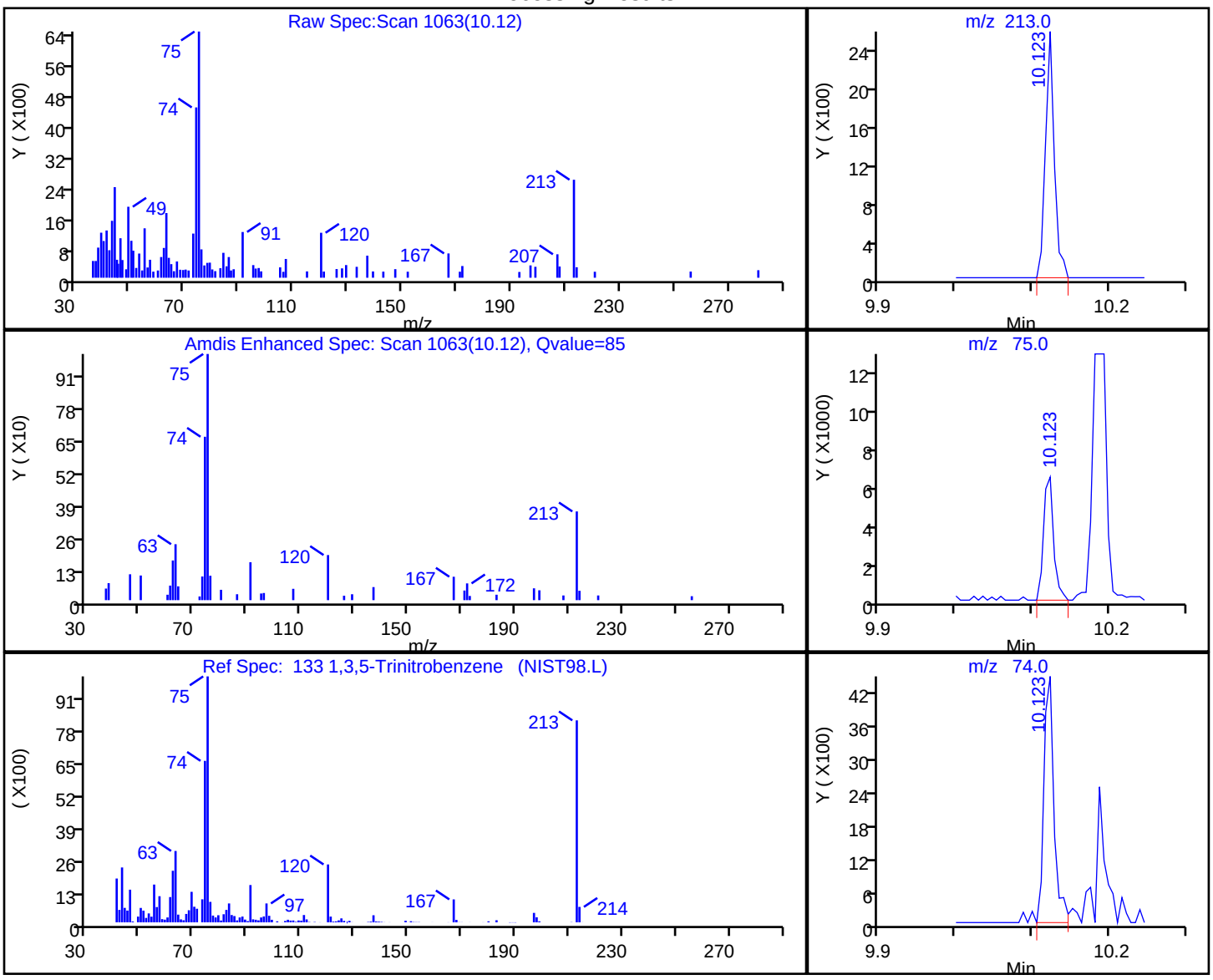
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D
Injection Date: 11-Apr-2018 18:32:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

133 1,3,5-Trinitrobenzene, CAS: 99-35-4

Processing Results



RT	Mass	Response	Amount
10.12	213.00	2061	145.8271
10.12	75.00	5917	
10.12	74.00	4076	

Reviewer: hulat, 12-Apr-2018 06:13:39
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

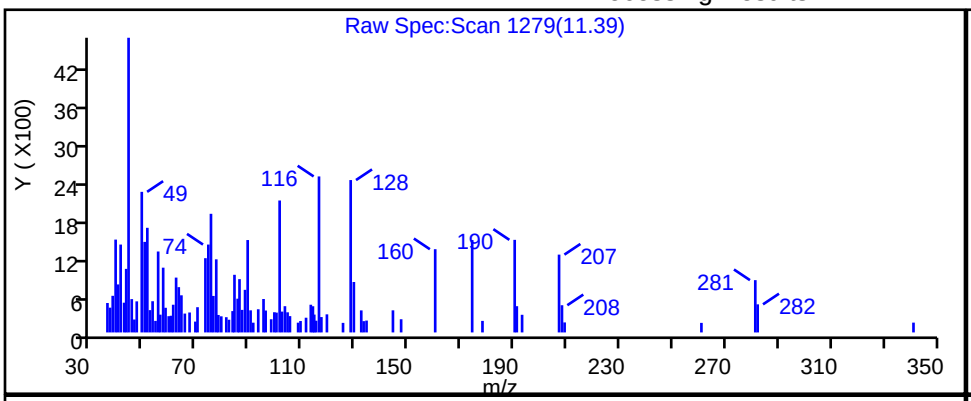
User Disabled Compound Report

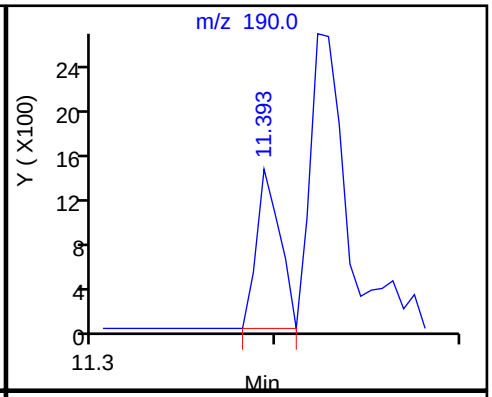
TestAmerica Canton

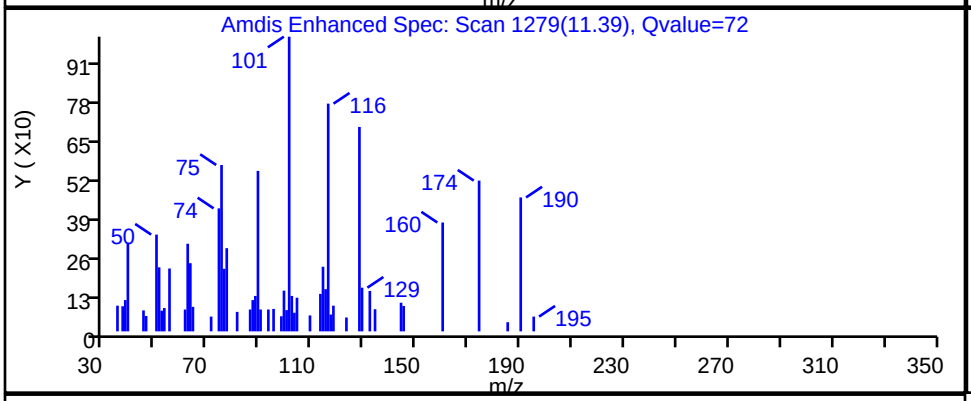
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D
Injection Date: 11-Apr-2018 18:32:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

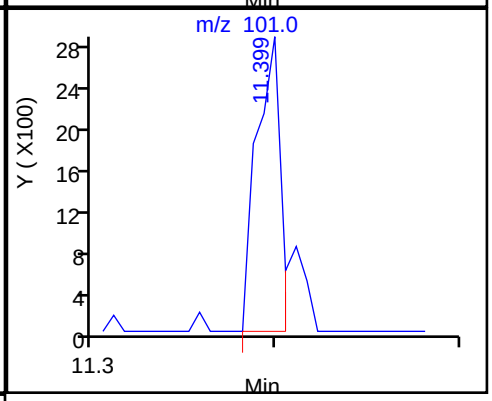
156 4-Nitroquinoline-1-oxide, CAS: 56-57-5

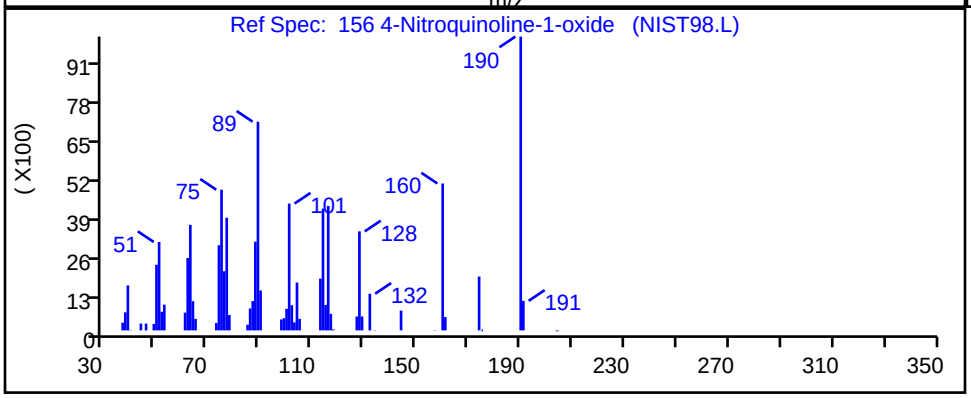
Processing Results











RT	Mass	Response	Amount
11.39	190.00	1291	87.466387
11.40	101.00	2555	

Reviewer: hulat, 12-Apr-2018 06:03:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

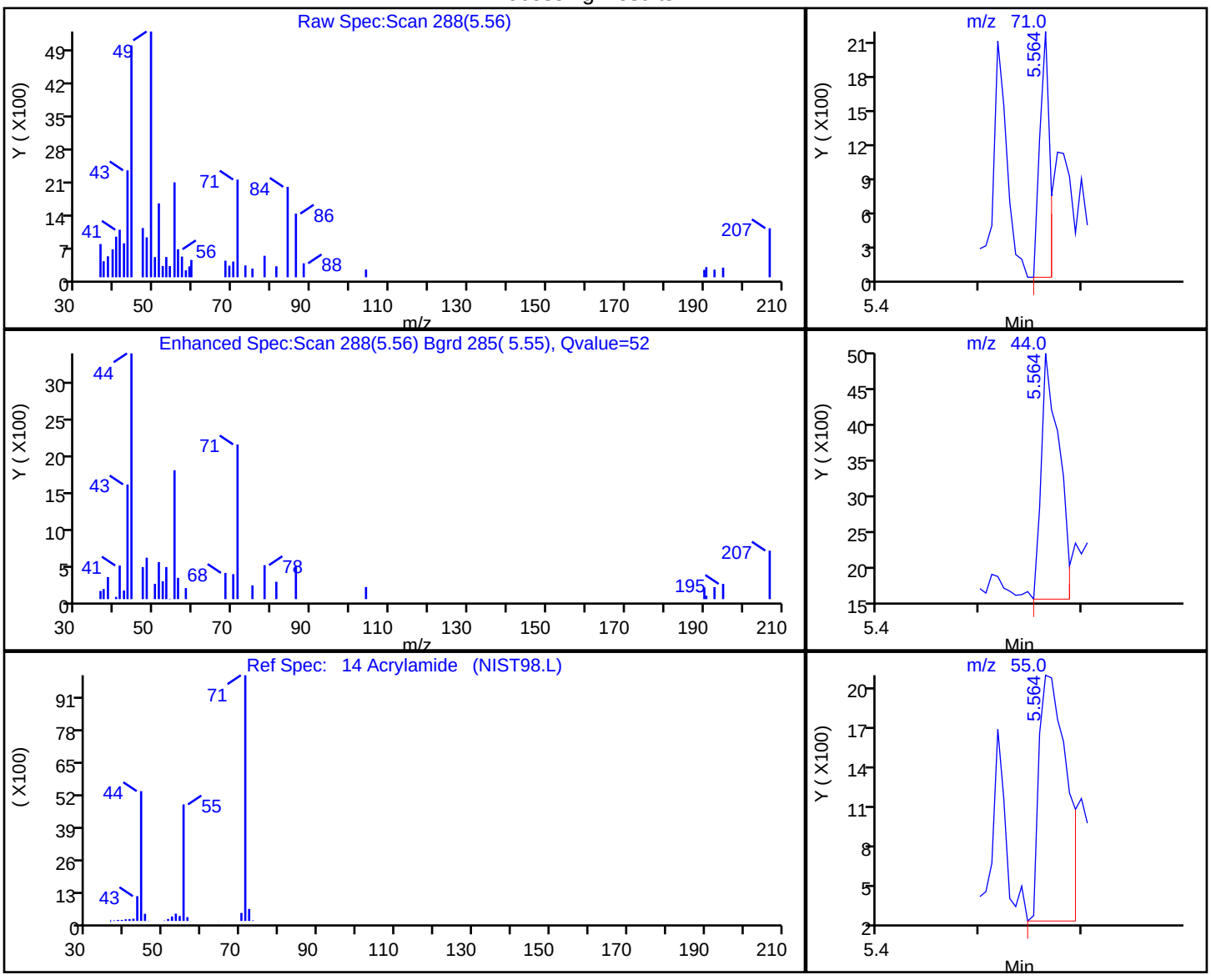
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D
Injection Date: 11-Apr-2018 18:32:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

14 Acrylamide, CAS: 79-06-1

Processing Results



RT	Mass	Response	Amount
5.56	71.00	1406	17.601881
5.56	44.00	4207	
5.56	55.00	3277	

Reviewer: hulat, 12-Apr-2018 06:03:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Calibration / 2-Picoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

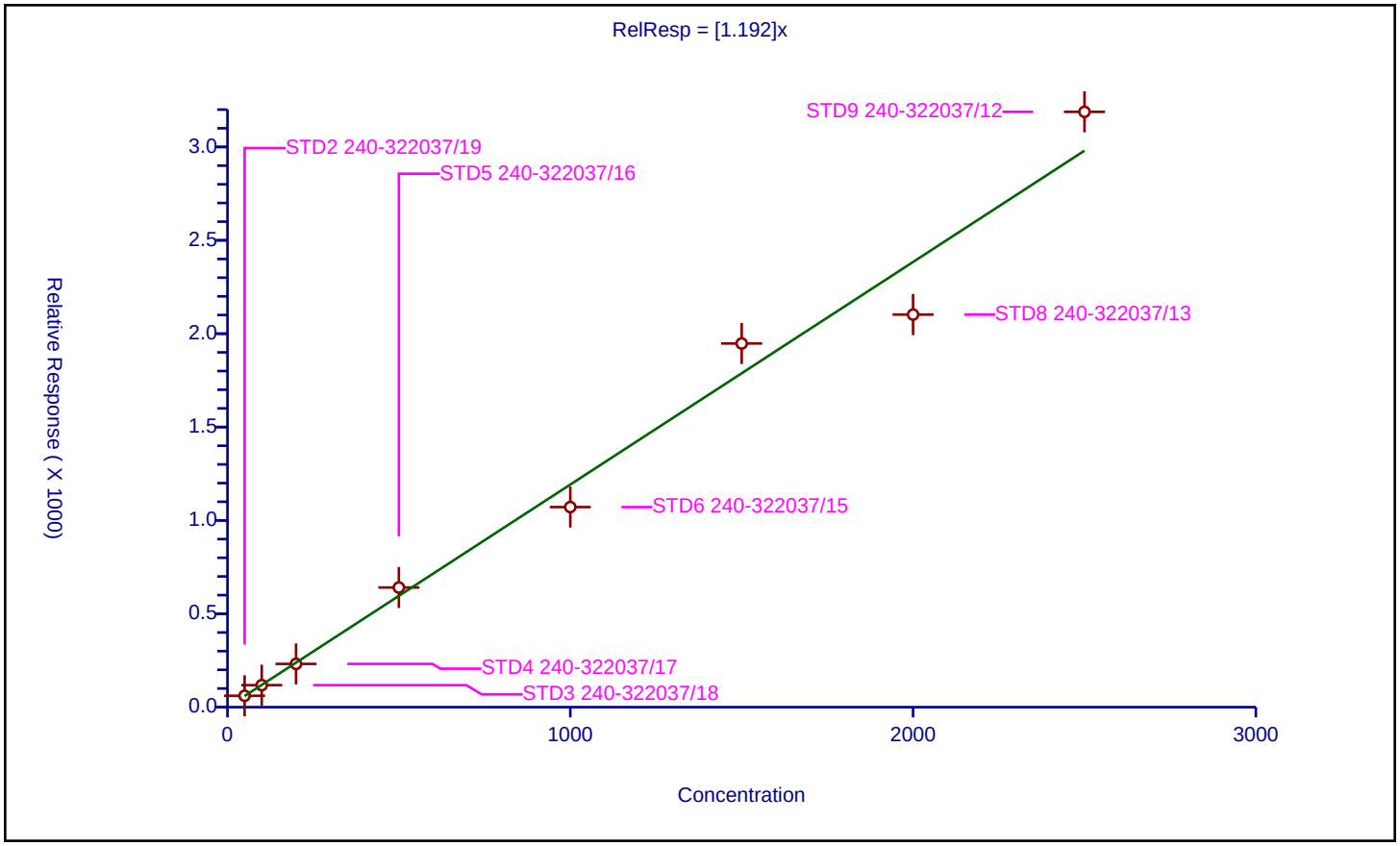
Curve Coefficients

Intercept:	0
Slope:	1.192

Error Coefficients

Standard Error:	535000
Relative Standard Error:	7.9
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	61.044715	400.0	131366.0	1.220894	Y
2	STD3 240-322037/18	100.0	117.853865	400.0	130728.0	1.178539	Y
3	STD4 240-322037/17	200.0	231.705245	400.0	117684.0	1.158526	Y
4	STD5 240-322037/16	500.0	640.85104	400.0	108761.0	1.281702	Y
5	STD6 240-322037/15	1000.0	1071.488487	400.0	120646.0	1.071488	Y
6	STD7 240-322037/14	1500.0	1947.578249	400.0	127222.0	1.298385	Y
7	STD8 240-322037/13	2000.0	2102.292008	400.0	134380.0	1.051146	Y
8	STD9 240-322037/12	2500.0	3188.024469	400.0	125055.0	1.27521	Y



Calibration / N-Nitrosomethylethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

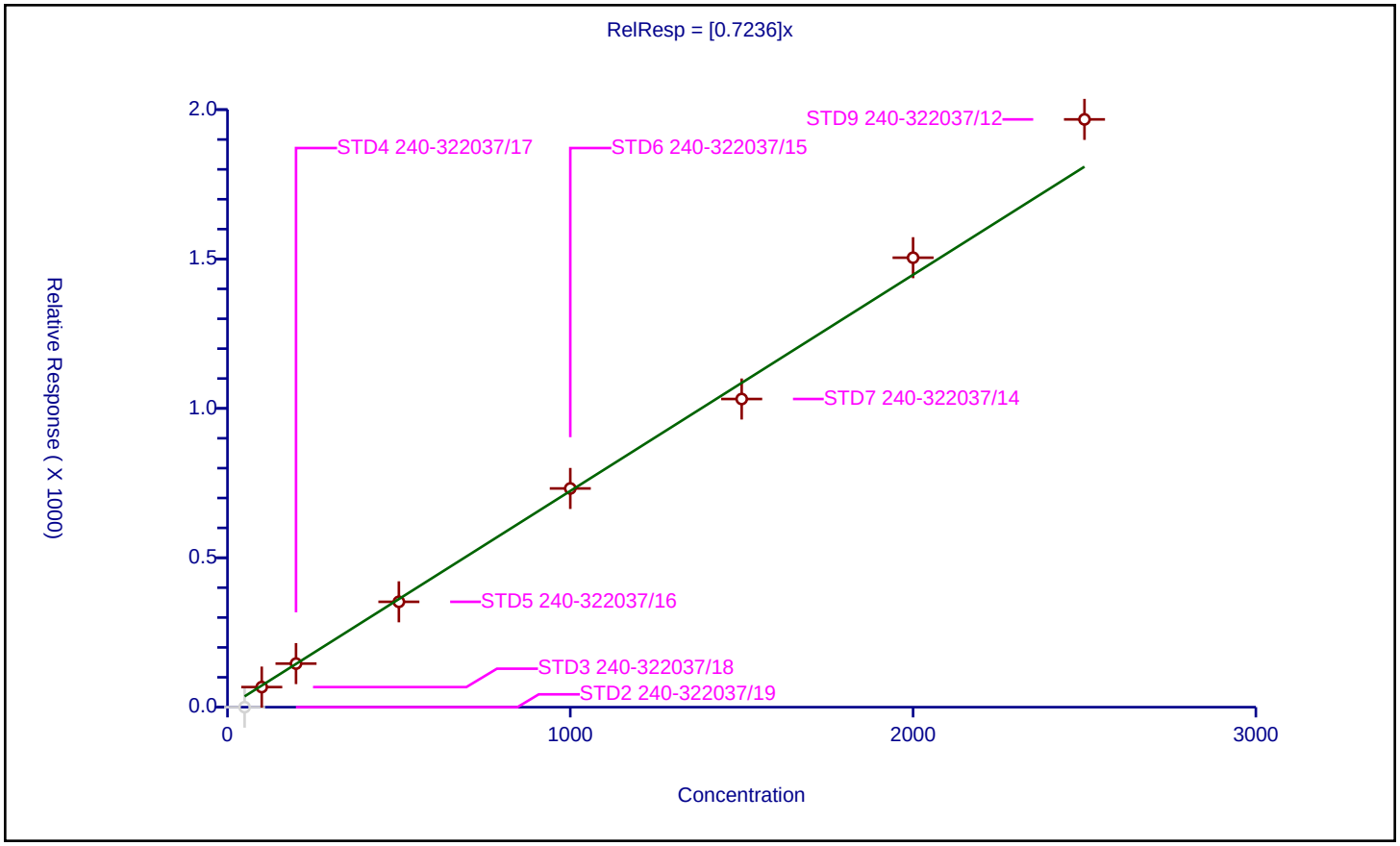
Curve Coefficients

Intercept:	0
Slope:	0.7236

Error Coefficients

Standard Error:	364000
Relative Standard Error:	5.4
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	0.0	400.0	131366.0	0.0	N
2	STD3 240-322037/18	100.0	67.19601	400.0	130728.0	0.67196	Y
3	STD4 240-322037/17	200.0	145.824411	400.0	117684.0	0.729122	Y
4	STD5 240-322037/16	500.0	352.604334	400.0	108761.0	0.705209	Y
5	STD6 240-322037/15	1000.0	732.059082	400.0	120646.0	0.732059	Y
6	STD7 240-322037/14	1500.0	1031.3625	400.0	127222.0	0.687575	Y
7	STD8 240-322037/13	2000.0	1504.322072	400.0	134380.0	0.752161	Y
8	STD9 240-322037/12	2500.0	1967.252809	400.0	125055.0	0.786901	Y



Calibration / Acrylamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

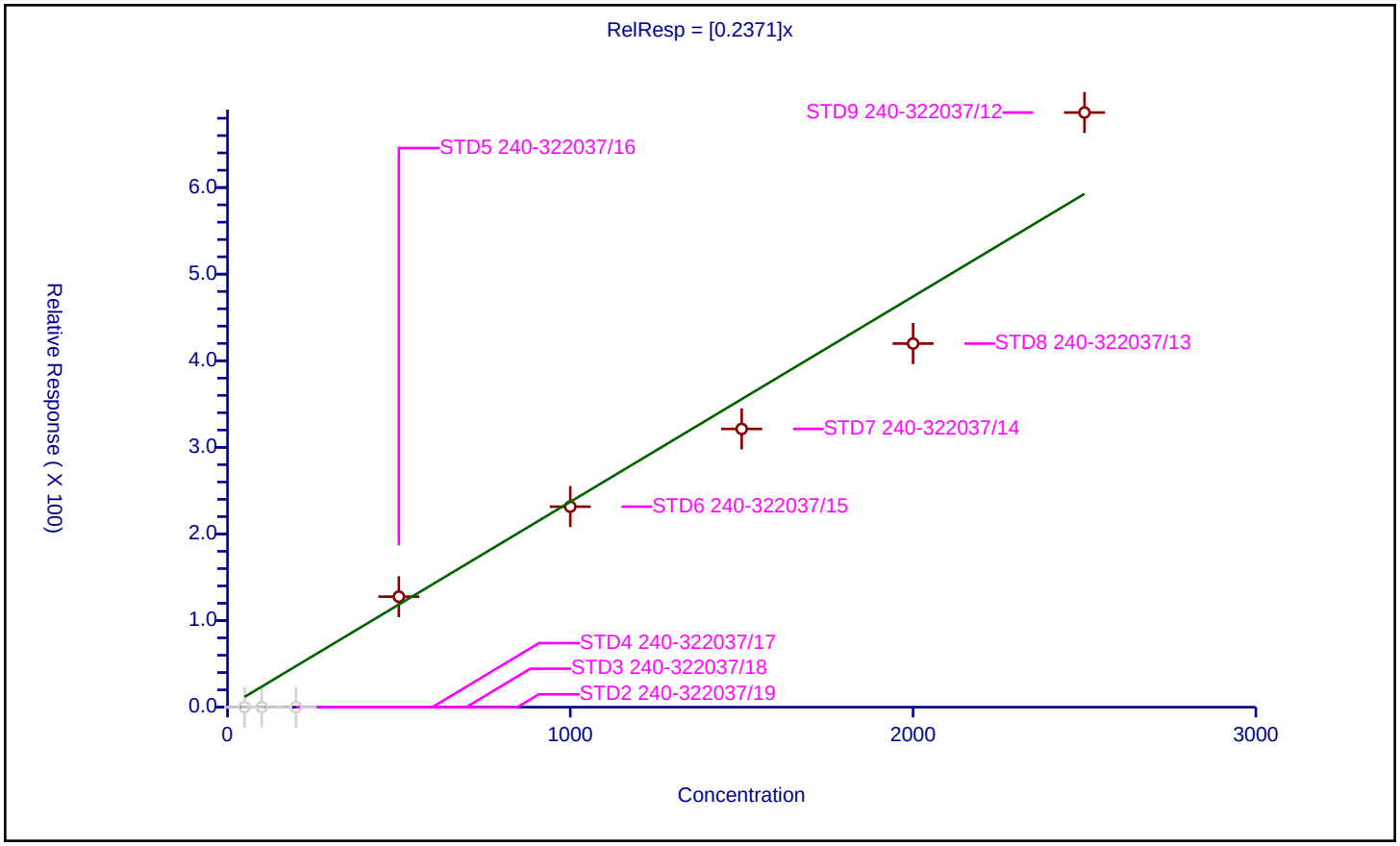
Curve Coefficients

Intercept:	0
Slope:	0.2371

Error Coefficients

Standard Error:	143000
Relative Standard Error:	11.6
Correlation Coefficient:	0.967
Coefficient of Determination (Adjusted):	0.961

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	0.0	400.0	131366.0	0.0	N
2	STD3 240-322037/18	100.0	0.0	400.0	130728.0	0.0	N
3	STD4 240-322037/17	200.0	0.0	400.0	117684.0	0.0	N
4	STD5 240-322037/16	500.0	127.61192	400.0	108761.0	0.255224	Y
5	STD6 240-322037/15	1000.0	231.500423	400.0	120646.0	0.2315	Y
6	STD7 240-322037/14	1500.0	321.293487	400.0	127222.0	0.214196	Y
7	STD8 240-322037/13	2000.0	419.821402	400.0	134380.0	0.209911	Y
8	STD9 240-322037/12	2500.0	686.616289	400.0	125055.0	0.274647	Y



Calibration / Methyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

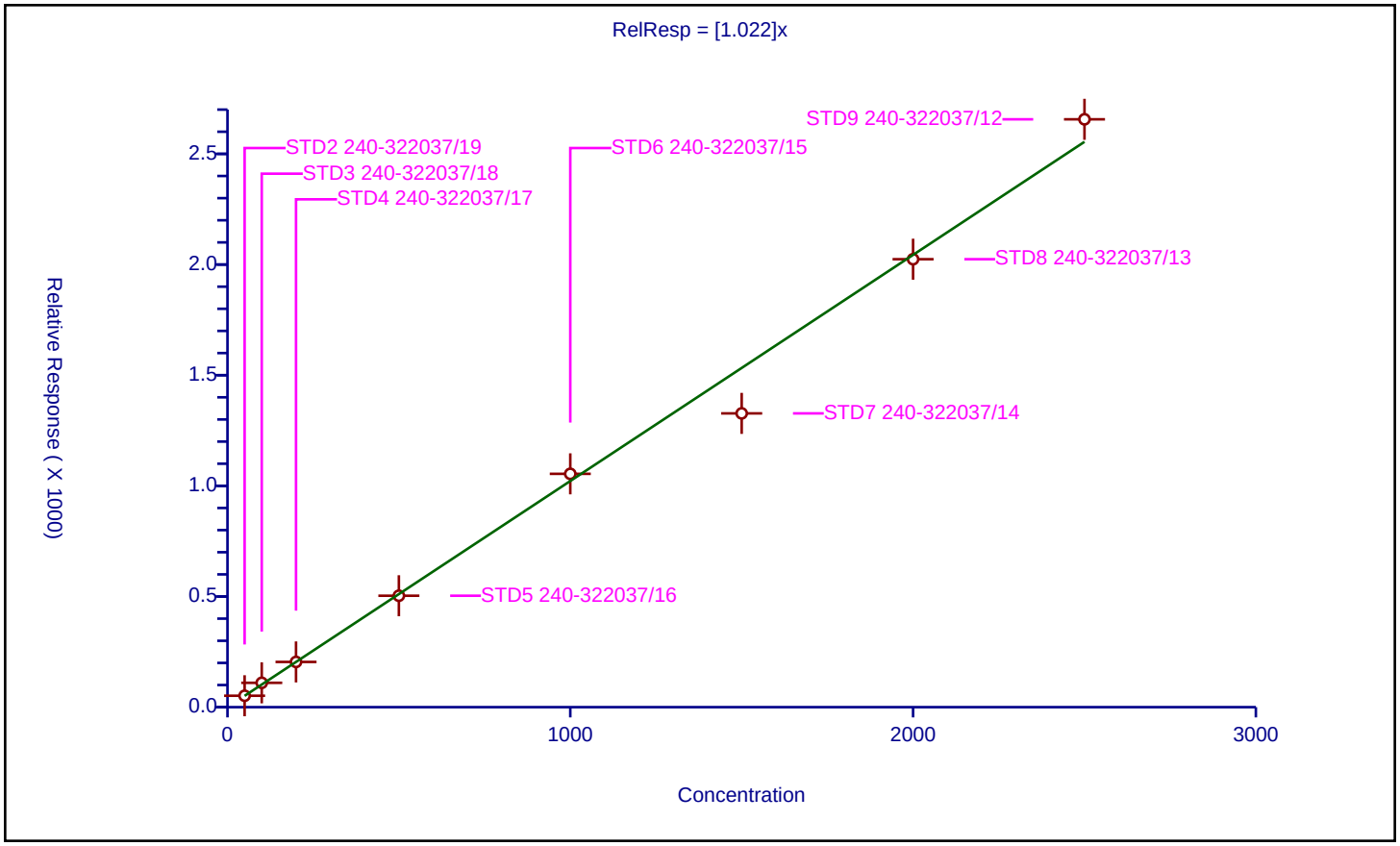
Curve Coefficients

Intercept:	0
Slope:	1.022

Error Coefficients

Standard Error:	455000
Relative Standard Error:	6.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	51.596303	400.0	131366.0	1.031926	Y
2	STD3 240-322037/18	100.0	109.96879	400.0	130728.0	1.099688	Y
3	STD4 240-322037/17	200.0	204.428809	400.0	117684.0	1.022144	Y
4	STD5 240-322037/16	500.0	503.434135	400.0	108761.0	1.006868	Y
5	STD6 240-322037/15	1000.0	1054.247965	400.0	120646.0	1.054248	Y
6	STD7 240-322037/14	1500.0	1327.408782	400.0	127222.0	0.884939	Y
7	STD8 240-322037/13	2000.0	2023.994642	400.0	134380.0	1.011997	Y
8	STD9 240-322037/12	2500.0	2656.11451	400.0	125055.0	1.062446	Y



Calibration / N-Nitrosodiethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

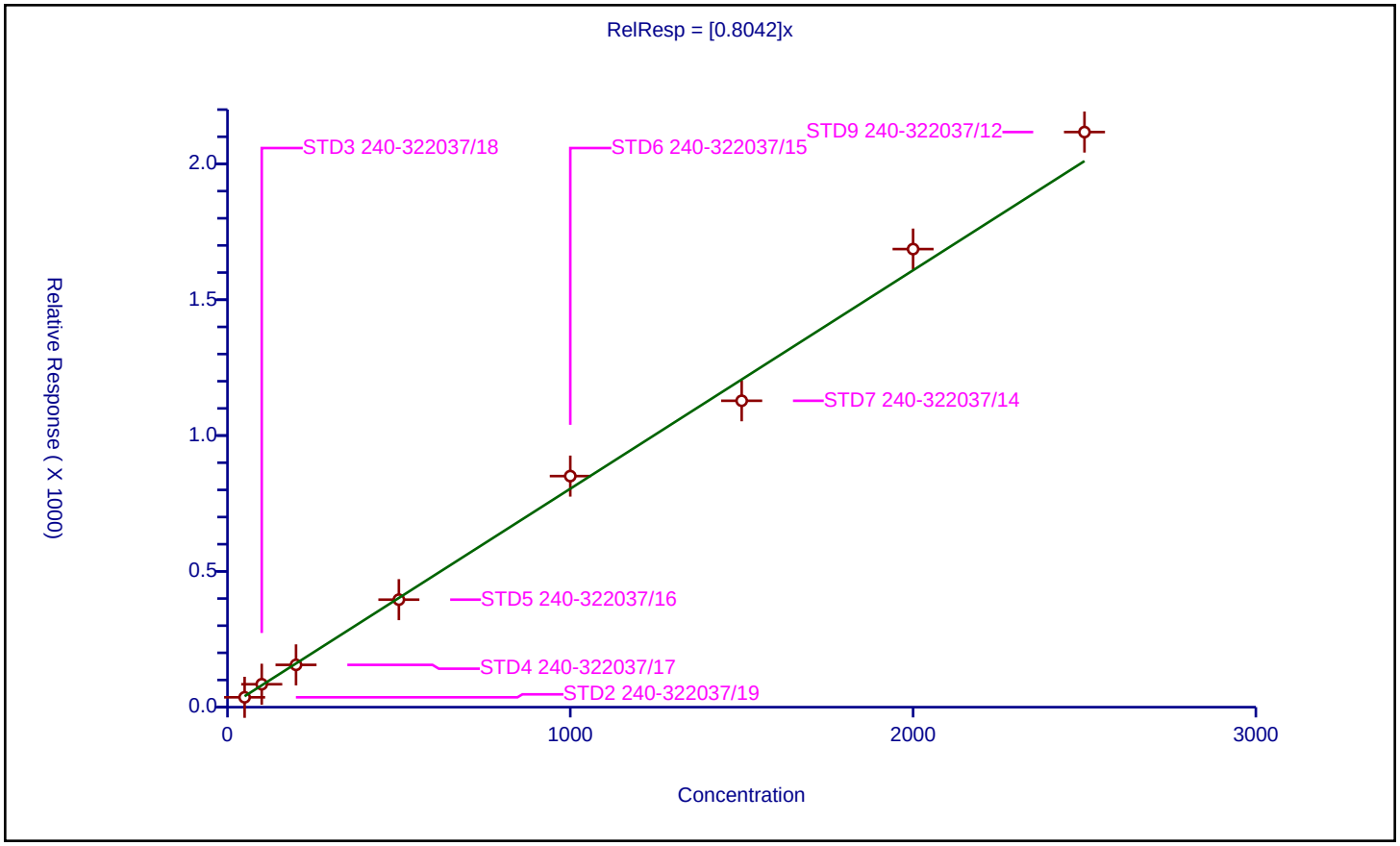
Curve Coefficients

Intercept:	0
Slope:	0.8042

Error Coefficients

Standard Error:	371000
Relative Standard Error:	6.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	36.286406	400.0	131366.0	0.725728	Y
2	STD3 240-322037/18	100.0	84.471575	400.0	130728.0	0.844716	Y
3	STD4 240-322037/17	200.0	155.759492	400.0	117684.0	0.778797	Y
4	STD5 240-322037/16	500.0	395.814676	400.0	108761.0	0.791629	Y
5	STD6 240-322037/15	1000.0	850.720289	400.0	120646.0	0.85072	Y
6	STD7 240-322037/14	1500.0	1128.037604	400.0	127222.0	0.752025	Y
7	STD8 240-322037/13	2000.0	1686.512874	400.0	134380.0	0.843256	Y
8	STD9 240-322037/12	2500.0	2117.353165	400.0	125055.0	0.846941	Y



Calibration / Ethyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

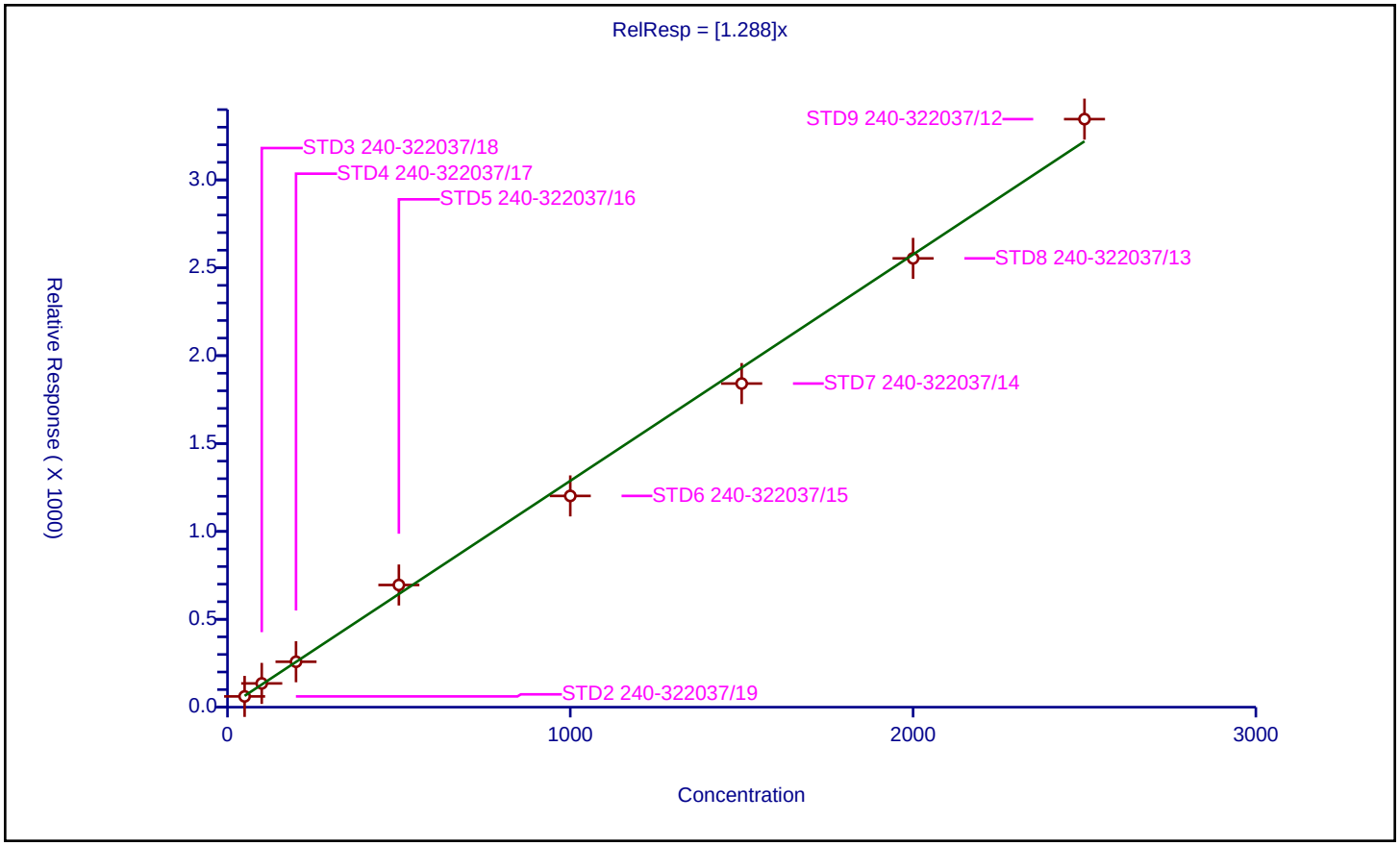
Curve Coefficients

Intercept:	0
Slope:	1.288

Error Coefficients

Standard Error:	577000
Relative Standard Error:	5.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	61.224366	400.0	131366.0	1.224487	Y
2	STD3 240-322037/18	100.0	135.12025	400.0	130728.0	1.351202	Y
3	STD4 240-322037/17	200.0	258.332484	400.0	117684.0	1.291662	Y
4	STD5 240-322037/16	500.0	695.153594	400.0	108761.0	1.390307	Y
5	STD6 240-322037/15	1000.0	1201.959452	400.0	120646.0	1.201959	Y
6	STD7 240-322037/14	1500.0	1841.411077	400.0	127222.0	1.227607	Y
7	STD8 240-322037/13	2000.0	2553.534752	400.0	134380.0	1.276767	Y
8	STD9 240-322037/12	2500.0	3345.862221	400.0	125055.0	1.338345	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

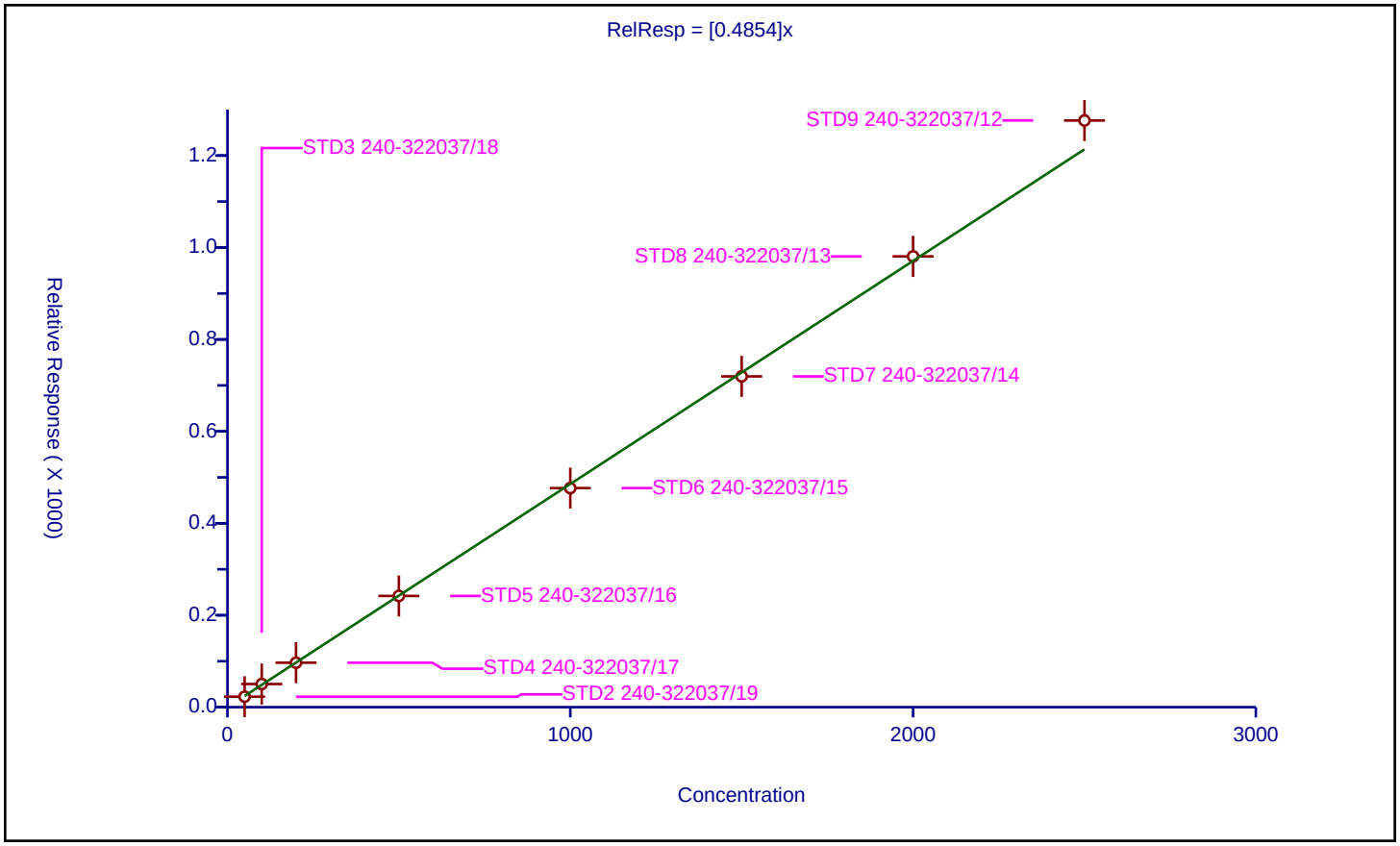
Curve Coefficients

Intercept:	0
Slope:	0.4854

Error Coefficients

Standard Error:	222000
Relative Standard Error:	3.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	22.766926	400.0	131366.0	0.455339	Y
2	STD3 240-322037/18	100.0	50.333517	400.0	130728.0	0.503335	Y
3	STD4 240-322037/17	200.0	96.723429	400.0	117684.0	0.483617	Y
4	STD5 240-322037/16	500.0	241.991155	400.0	108761.0	0.483982	Y
5	STD6 240-322037/15	1000.0	476.591018	400.0	120646.0	0.476591	Y
6	STD7 240-322037/14	1500.0	719.586235	400.0	127222.0	0.479724	Y
7	STD8 240-322037/13	2000.0	980.684626	400.0	134380.0	0.490342	Y
8	STD9 240-322037/12	2500.0	1276.305626	400.0	125055.0	0.510522	Y



Calibration / N-Nitrosopyrrolidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

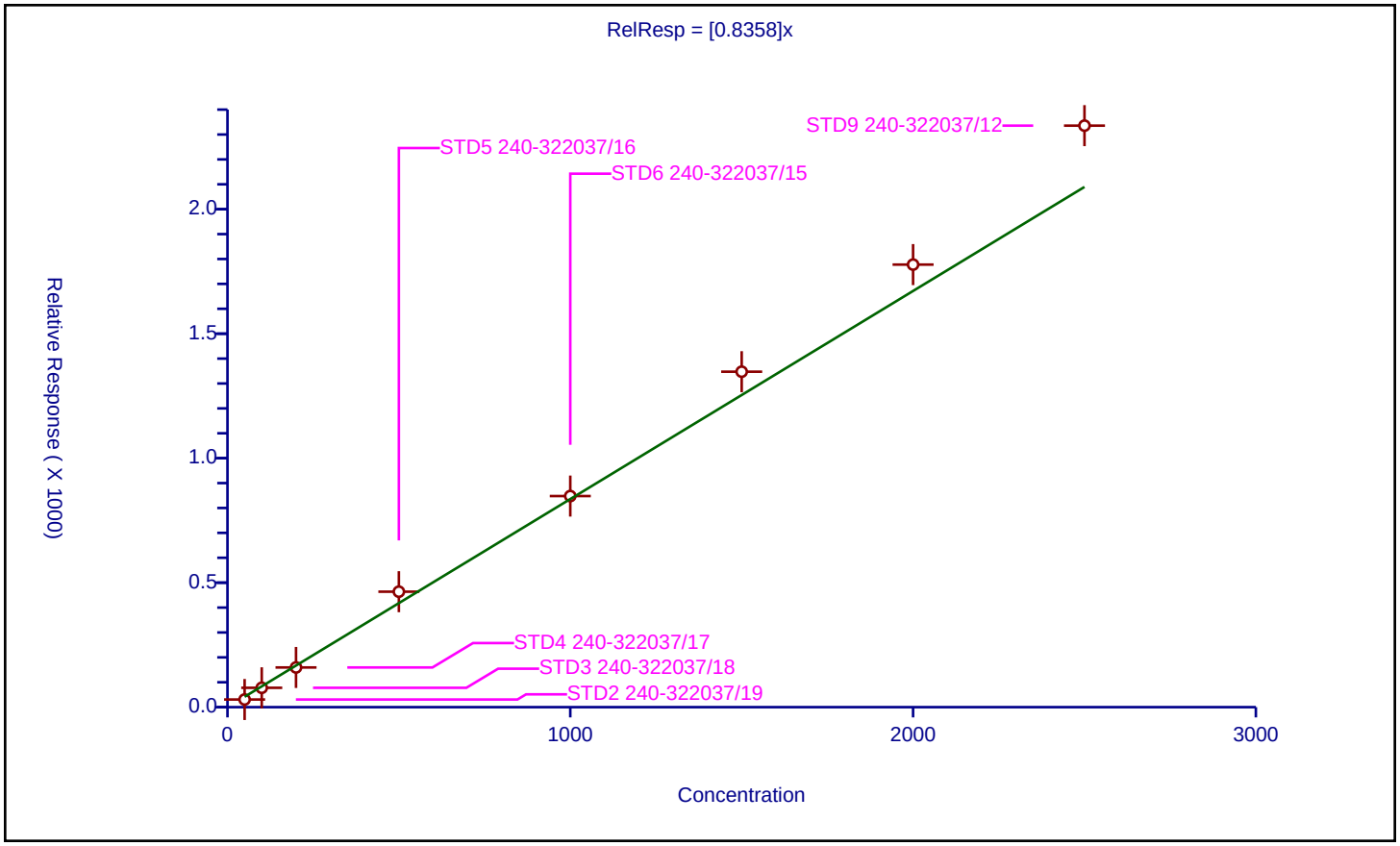
Curve Coefficients

Intercept:	0
Slope:	0.8358

Error Coefficients

Standard Error:	405000
Relative Standard Error:	12.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	30.726368	400.0	131366.0	0.614527	Y
2	STD3 240-322037/18	100.0	77.74616	400.0	130728.0	0.777462	Y
3	STD4 240-322037/17	200.0	159.488121	400.0	117684.0	0.797441	Y
4	STD5 240-322037/16	500.0	463.828027	400.0	108761.0	0.927656	Y
5	STD6 240-322037/15	1000.0	847.895496	400.0	120646.0	0.847895	Y
6	STD7 240-322037/14	1500.0	1347.32672	400.0	127222.0	0.898218	Y
7	STD8 240-322037/13	2000.0	1777.496651	400.0	134380.0	0.888748	Y
8	STD9 240-322037/12	2500.0	2335.56755	400.0	125055.0	0.934227	Y



Calibration / N-Nitrosomorpholine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

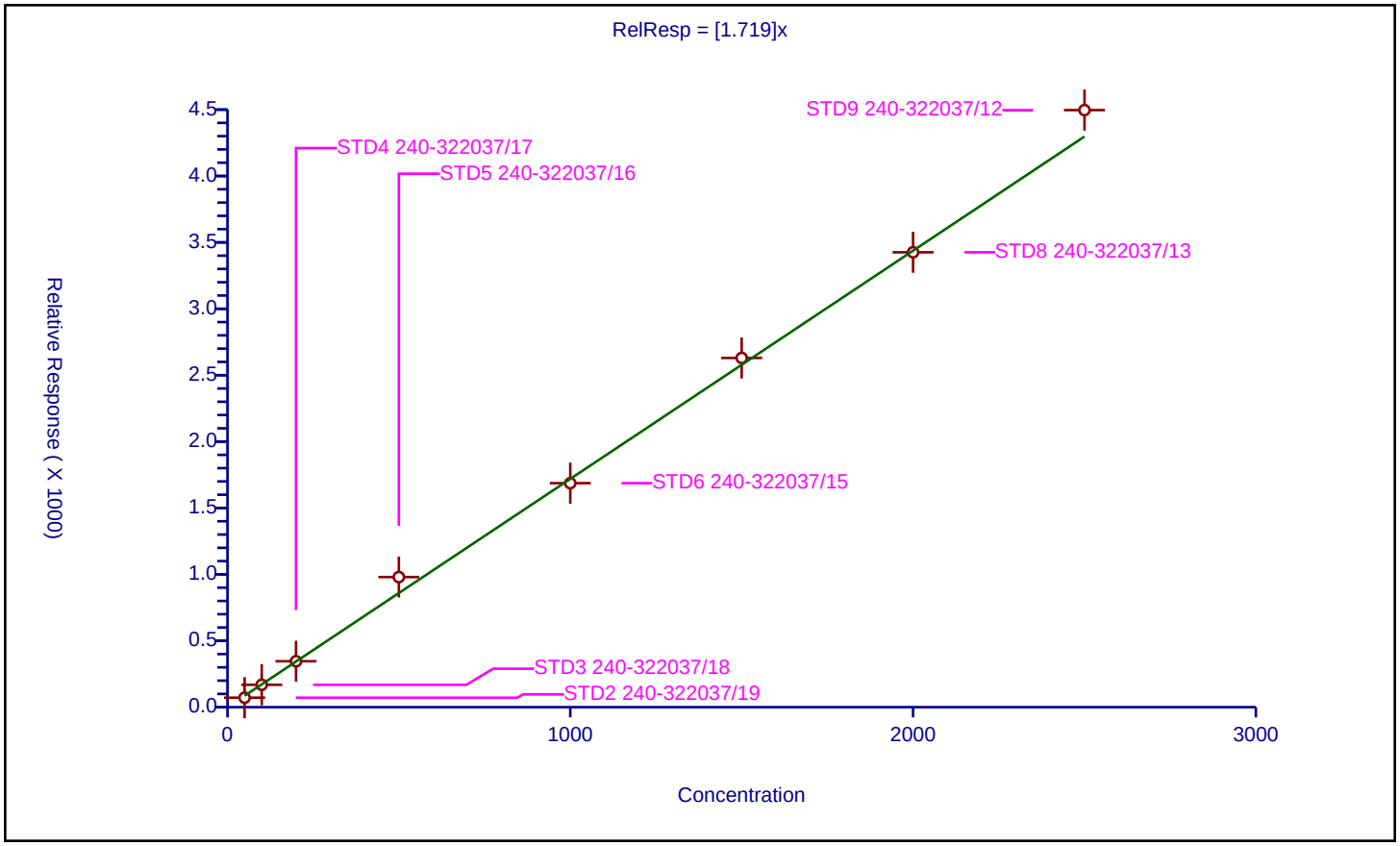
Curve Coefficients

Intercept:	0
Slope:	1.719

Error Coefficients

Standard Error:	785000
Relative Standard Error:	8.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	71.290897	400.0	131366.0	1.425818	Y
2	STD3 240-322037/18	100.0	168.456643	400.0	130728.0	1.684566	Y
3	STD4 240-322037/17	200.0	345.848204	400.0	117684.0	1.729241	Y
4	STD5 240-322037/16	500.0	979.751933	400.0	108761.0	1.959504	Y
5	STD6 240-322037/15	1000.0	1686.845813	400.0	120646.0	1.686846	Y
6	STD7 240-322037/14	1500.0	2629.869048	400.0	127222.0	1.753246	Y
7	STD8 240-322037/13	2000.0	3425.533562	400.0	134380.0	1.712767	Y
8	STD9 240-322037/12	2500.0	4496.325617	400.0	125055.0	1.79853	Y



Calibration / 2-Toluidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

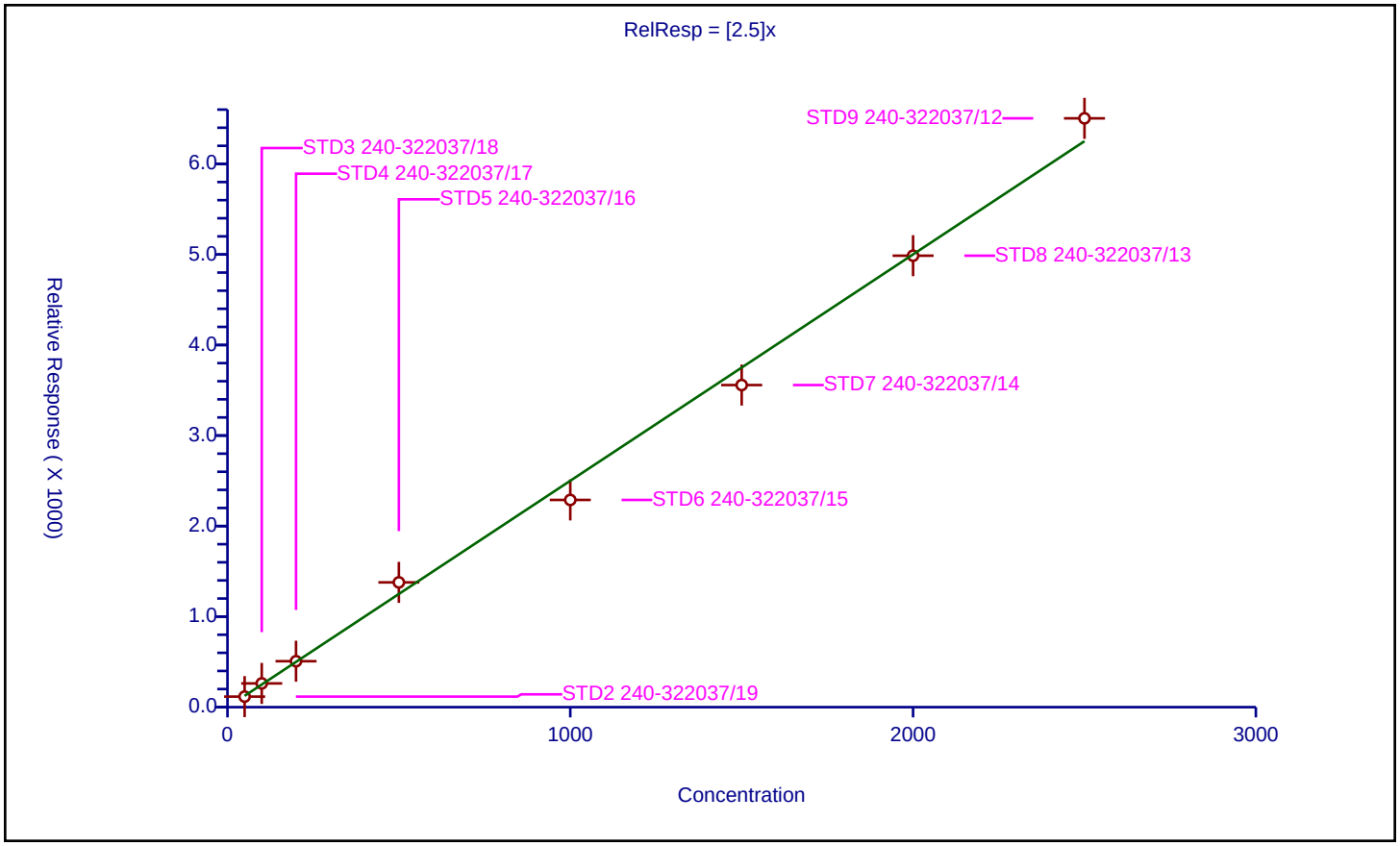
Curve Coefficients

Intercept:	0
Slope:	2.5

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	6.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	116.511122	400.0	131366.0	2.330222	Y
2	STD3 240-322037/18	100.0	262.291169	400.0	130728.0	2.622912	Y
3	STD4 240-322037/17	200.0	507.691785	400.0	117684.0	2.538459	Y
4	STD5 240-322037/16	500.0	1378.27714	400.0	108761.0	2.756554	Y
5	STD6 240-322037/15	1000.0	2288.77211	400.0	120646.0	2.288772	Y
6	STD7 240-322037/14	1500.0	3557.796608	400.0	127222.0	2.371864	Y
7	STD8 240-322037/13	2000.0	4986.423575	400.0	134380.0	2.493212	Y
8	STD9 240-322037/12	2500.0	6503.714366	400.0	125055.0	2.601486	Y



Calibration / N-Nitrosopiperidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

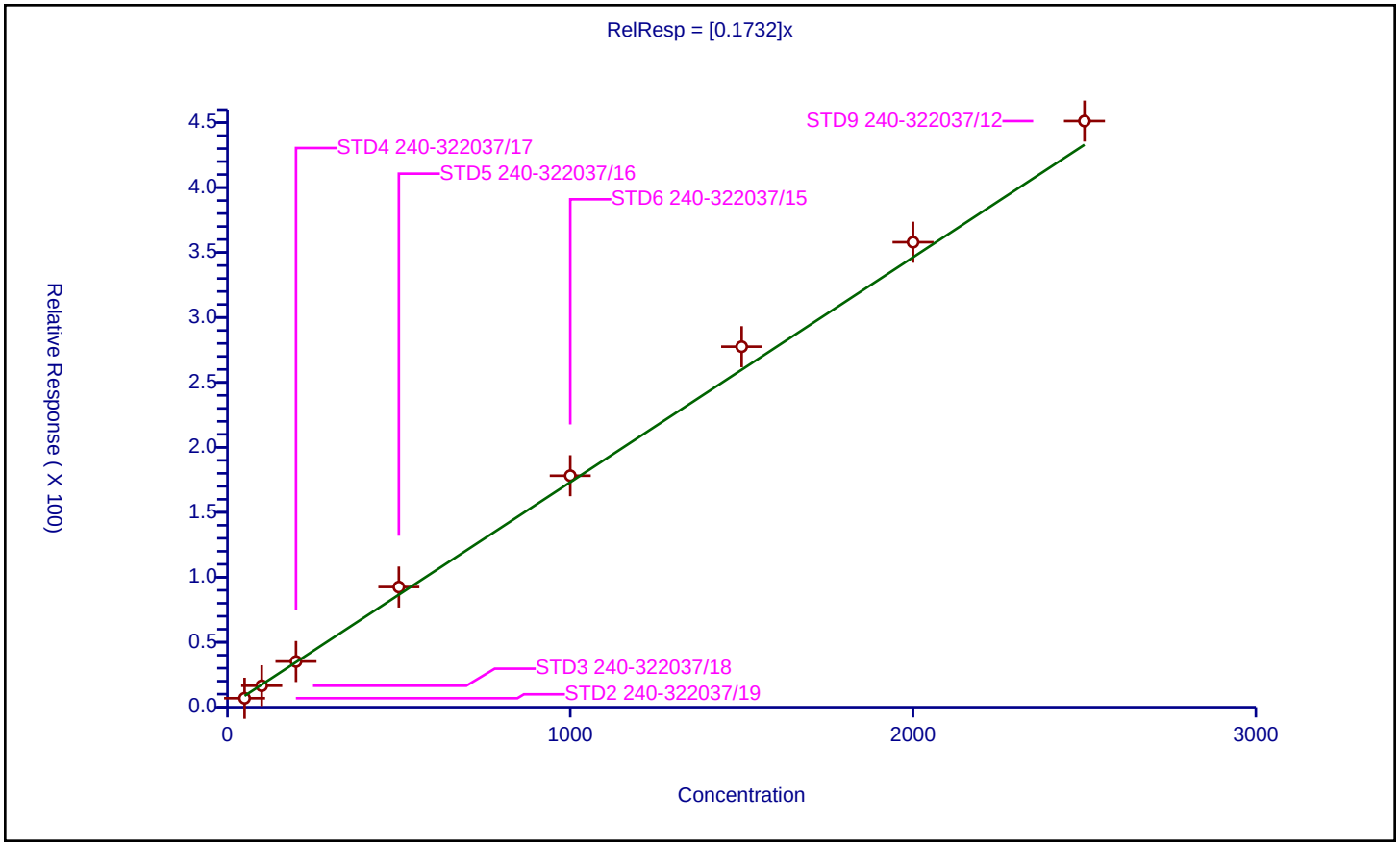
Curve Coefficients

Intercept:	0
Slope:	0.1732

Error Coefficients

Standard Error:	418000
Relative Standard Error:	9.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	6.866793	400.0	645425.0	0.137336	Y
2	STD3 240-322037/18	100.0	16.472865	400.0	703727.0	0.164729	Y
3	STD4 240-322037/17	200.0	35.143313	400.0	607797.0	0.175717	Y
4	STD5 240-322037/16	500.0	92.483619	400.0	596577.0	0.184967	Y
5	STD6 240-322037/15	1000.0	178.180278	400.0	595058.0	0.17818	Y
6	STD7 240-322037/14	1500.0	277.483003	400.0	635853.0	0.184989	Y
7	STD8 240-322037/13	2000.0	357.907965	400.0	687503.0	0.178954	Y
8	STD9 240-322037/12	2500.0	451.173479	400.0	661452.0	0.180469	Y



Calibration / o,o',o''-Triethylphosphorothioate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

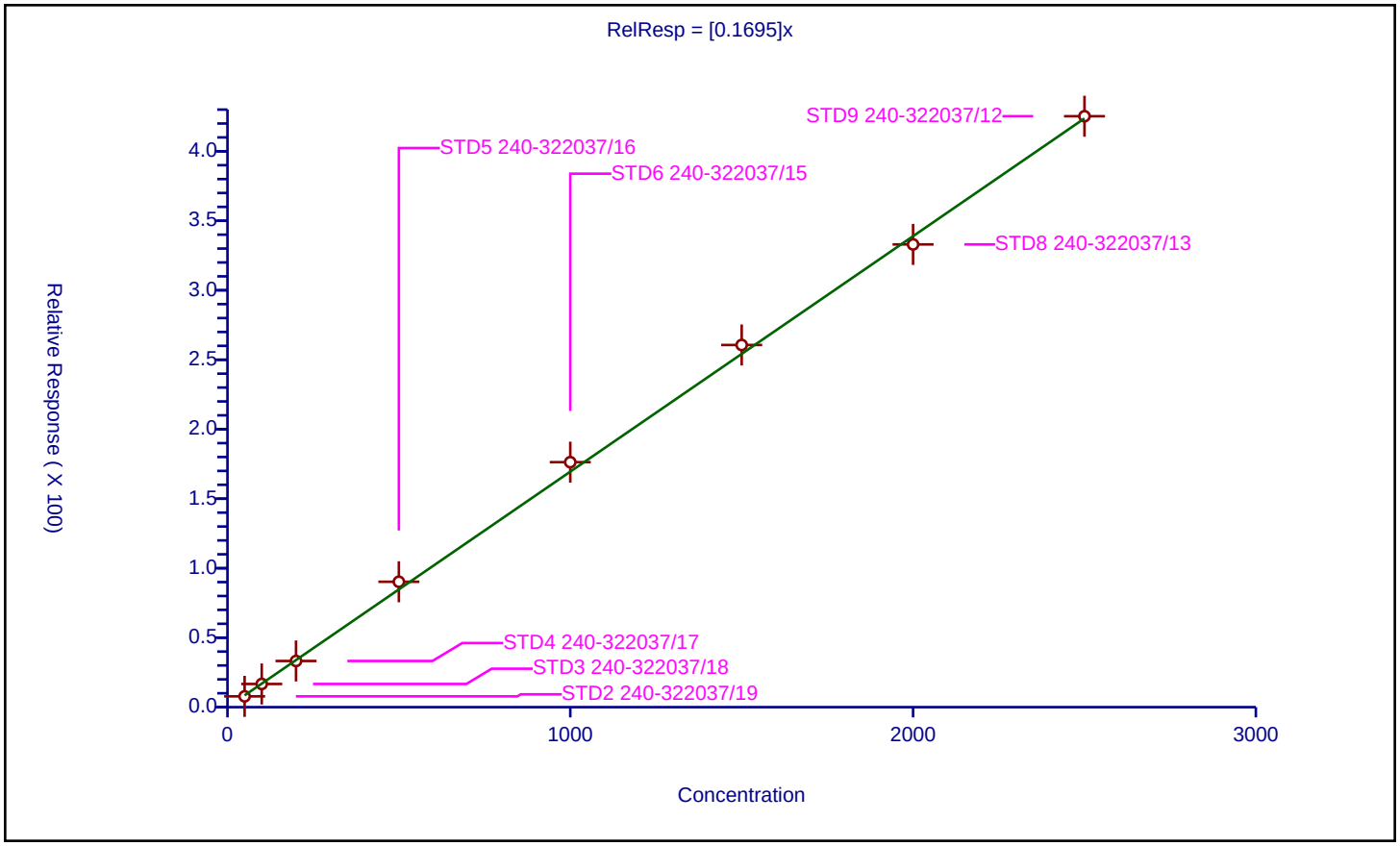
Curve Coefficients

Intercept:	0
Slope:	0.1695

Error Coefficients

Standard Error:	393000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	7.776581	400.0	645425.0	0.155532	Y
2	STD3 240-322037/18	100.0	16.6917	400.0	703727.0	0.166917	Y
3	STD4 240-322037/17	200.0	33.232806	400.0	607797.0	0.166164	Y
4	STD5 240-322037/16	500.0	90.230767	400.0	596577.0	0.180462	Y
5	STD6 240-322037/15	1000.0	176.302142	400.0	595058.0	0.176302	Y
6	STD7 240-322037/14	1500.0	260.623131	400.0	635853.0	0.173749	Y
7	STD8 240-322037/13	2000.0	333.00102	400.0	687503.0	0.166501	Y
8	STD9 240-322037/12	2500.0	425.238415	400.0	661452.0	0.170095	Y



Calibration / alpha,alpha-Dimethyl phenethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

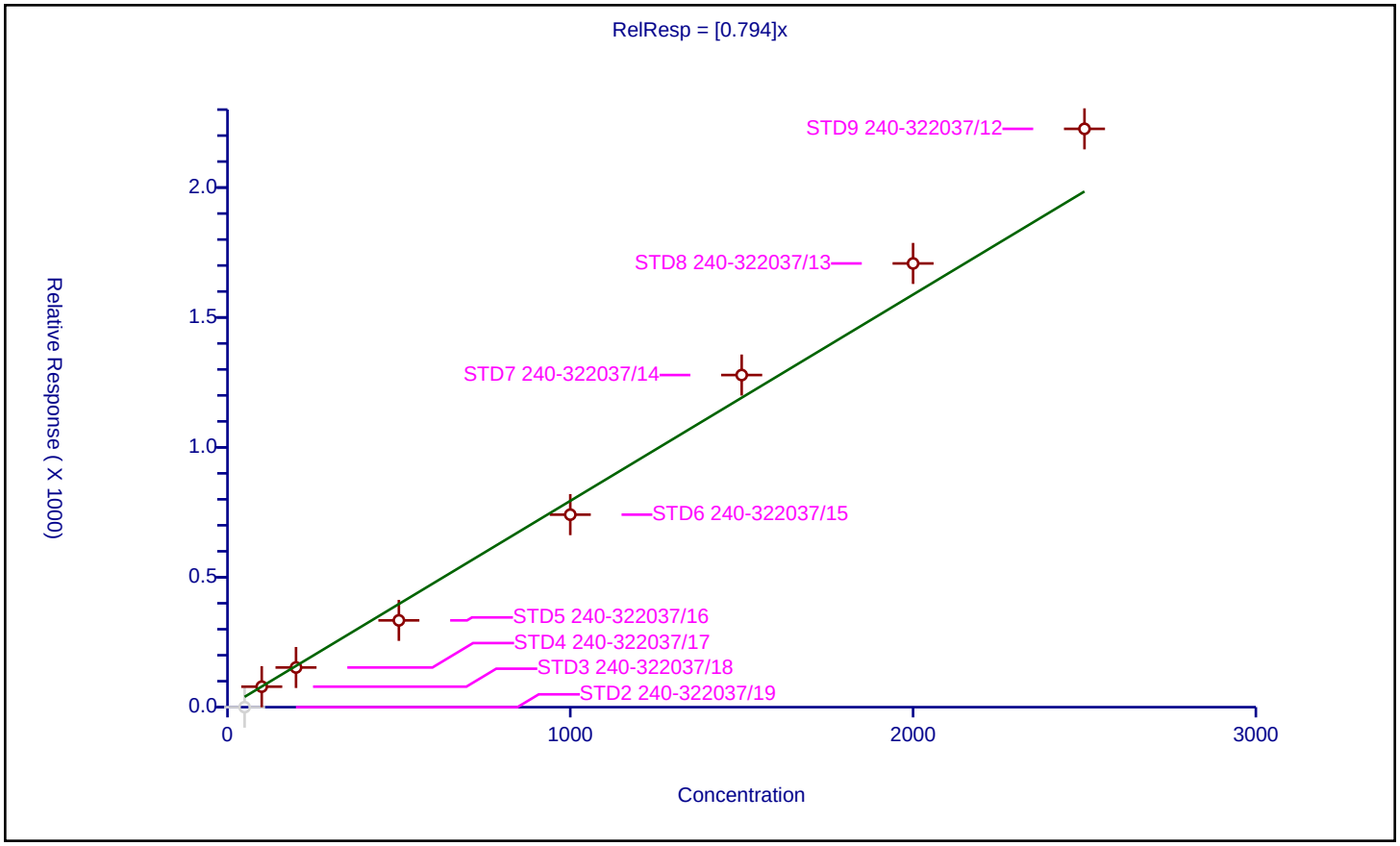
Curve Coefficients

Intercept:	0
Slope:	0.794

Error Coefficients

Standard Error:	2150000
Relative Standard Error:	9.7
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	0.0	400.0	645425.0	0.0	N
2	STD3 240-322037/18	100.0	78.878883	400.0	703727.0	0.788789	Y
3	STD4 240-322037/17	200.0	152.692429	400.0	607797.0	0.763462	Y
4	STD5 240-322037/16	500.0	334.075903	400.0	596577.0	0.668152	Y
5	STD6 240-322037/15	1000.0	741.020203	400.0	595058.0	0.74102	Y
6	STD7 240-322037/14	1500.0	1278.367799	400.0	635853.0	0.852245	Y
7	STD8 240-322037/13	2000.0	1707.93262	400.0	687503.0	0.853966	Y
8	STD9 240-322037/12	2500.0	2225.959253	400.0	661452.0	0.890384	Y



Calibration / Hexachloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

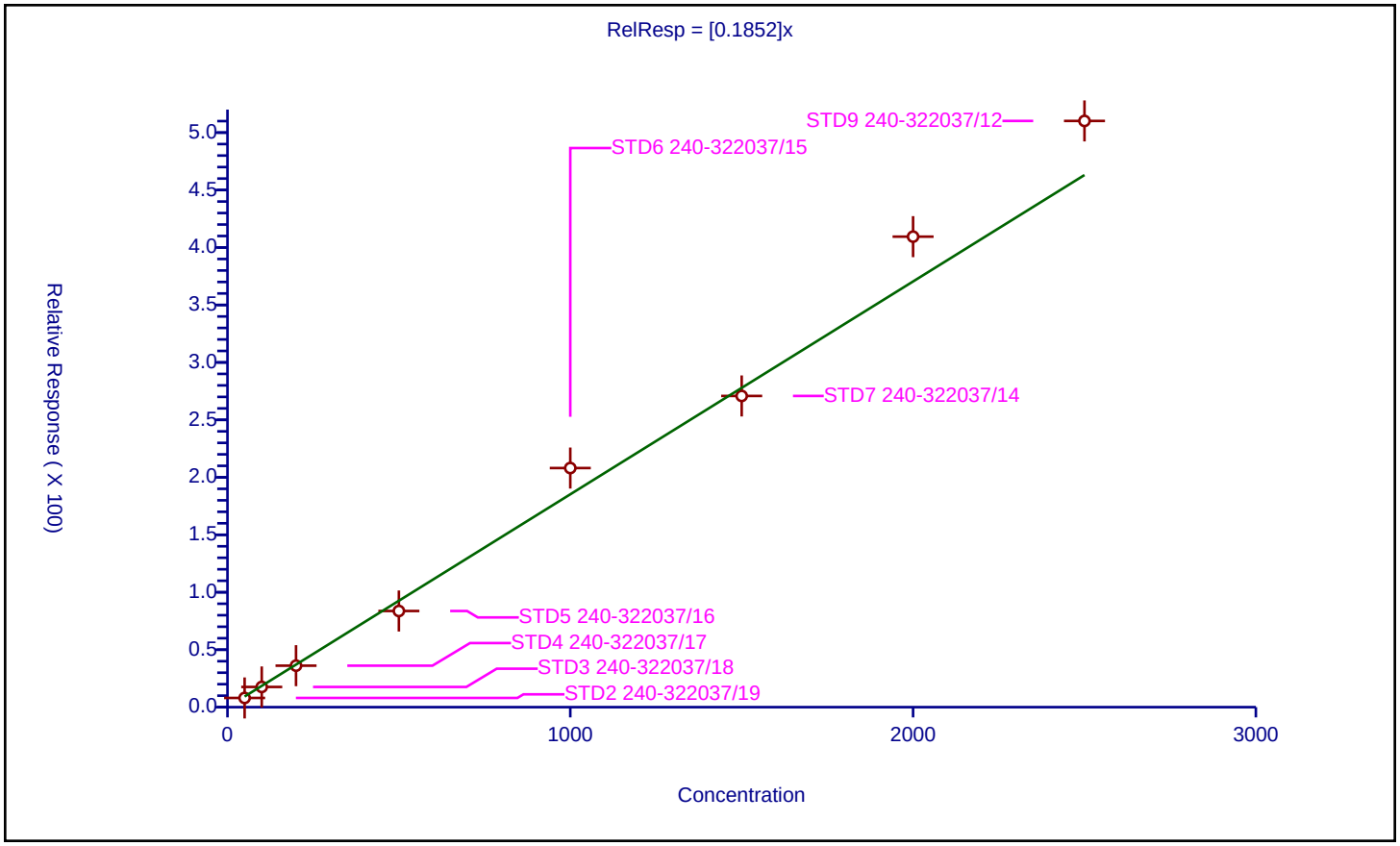
Curve Coefficients

Intercept:	0
Slope:	0.1852

Error Coefficients

Standard Error:	464000
Relative Standard Error:	9.8
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	8.025719	400.0	645425.0	0.160514	Y
2	STD3 240-322037/18	100.0	17.590344	400.0	703727.0	0.175903	Y
3	STD4 240-322037/17	200.0	36.11798	400.0	607797.0	0.18059	Y
4	STD5 240-322037/16	500.0	83.701517	400.0	596577.0	0.167403	Y
5	STD6 240-322037/15	1000.0	208.094673	400.0	595058.0	0.208095	Y
6	STD7 240-322037/14	1500.0	270.809763	400.0	635853.0	0.18054	Y
7	STD8 240-322037/13	2000.0	409.438213	400.0	687503.0	0.204719	Y
8	STD9 240-322037/12	2500.0	510.143744	400.0	661452.0	0.204057	Y



Calibration / N-Nitrosodi-n-butylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

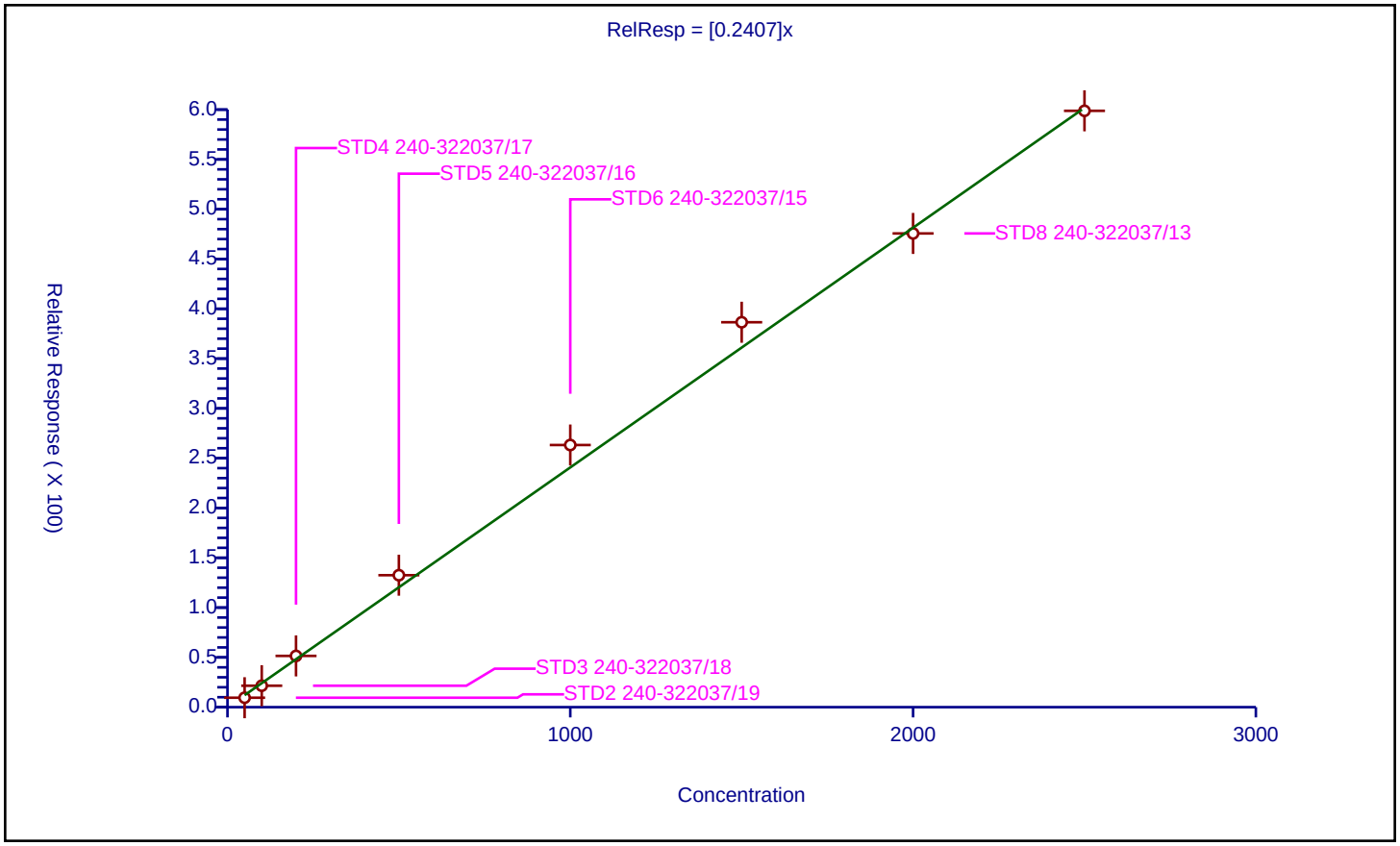
Curve Coefficients

Intercept:	0
Slope:	0.2407

Error Coefficients

Standard Error:	564000
Relative Standard Error:	11.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	9.49328	400.0	645425.0	0.189866	Y
2	STD3 240-322037/18	100.0	21.523687	400.0	703727.0	0.215237	Y
3	STD4 240-322037/17	200.0	51.46521	400.0	607797.0	0.257326	Y
4	STD5 240-322037/16	500.0	132.49656	400.0	596577.0	0.264993	Y
5	STD6 240-322037/15	1000.0	263.220728	400.0	595058.0	0.263221	Y
6	STD7 240-322037/14	1500.0	386.486814	400.0	635853.0	0.257658	Y
7	STD8 240-322037/13	2000.0	475.659306	400.0	687503.0	0.23783	Y
8	STD9 240-322037/12	2500.0	598.778445	400.0	661452.0	0.239511	Y



Calibration / Quinoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

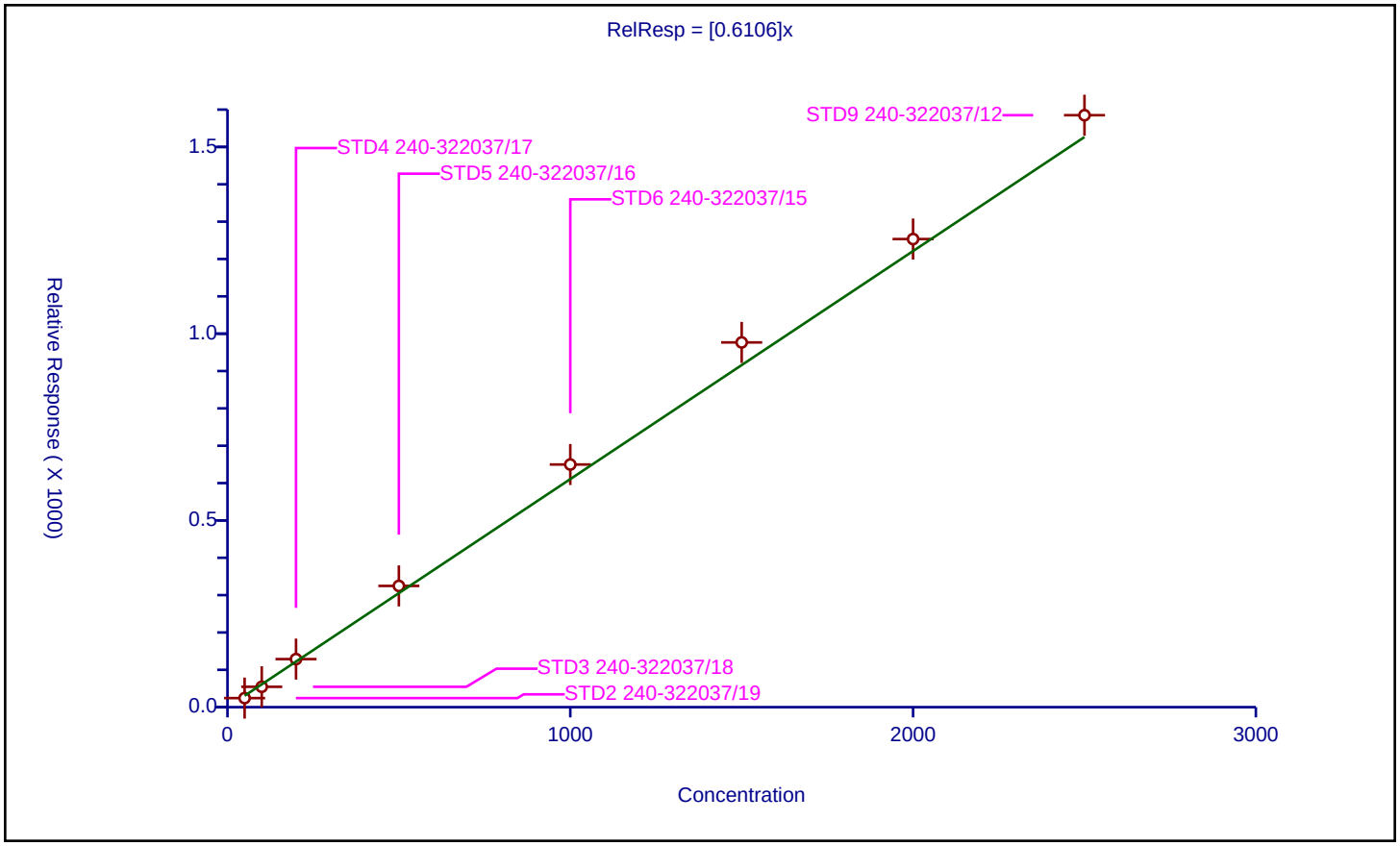
Curve Coefficients

Intercept:	0
Slope:	0.6106

Error Coefficients

Standard Error:	1470000
Relative Standard Error:	10.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	24.276717	400.0	645425.0	0.485534	Y
2	STD3 240-322037/18	100.0	54.515458	400.0	703727.0	0.545155	Y
3	STD4 240-322037/17	200.0	128.685071	400.0	607797.0	0.643425	Y
4	STD5 240-322037/16	500.0	324.647447	400.0	596577.0	0.649295	Y
5	STD6 240-322037/15	1000.0	649.742378	400.0	595058.0	0.649742	Y
6	STD7 240-322037/14	1500.0	976.623842	400.0	635853.0	0.651083	Y
7	STD8 240-322037/13	2000.0	1253.40544	400.0	687503.0	0.626703	Y
8	STD9 240-322037/12	2500.0	1585.003901	400.0	661452.0	0.634002	Y



Calibration / p-Phenylene diamine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

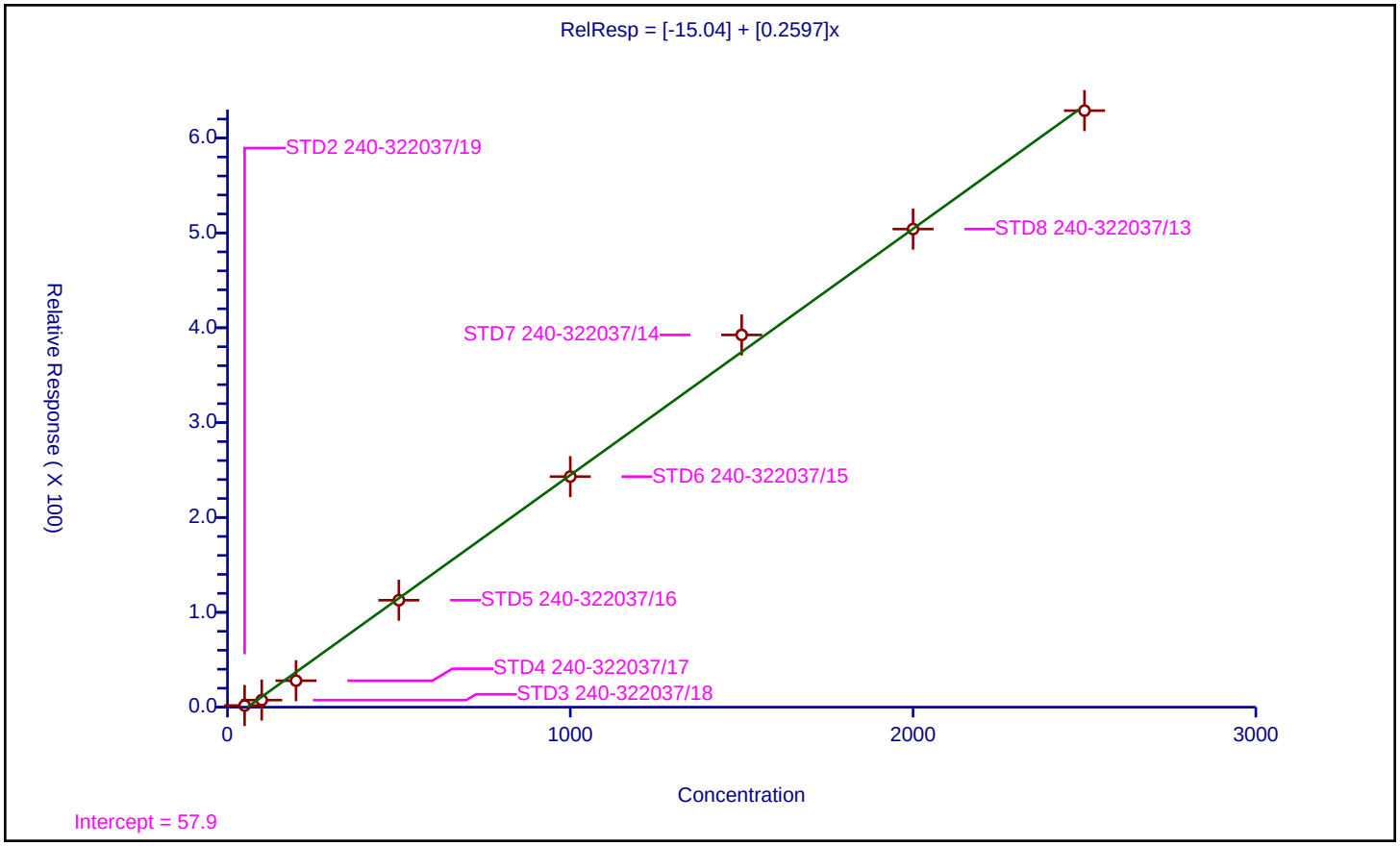
Curve Coefficients

Intercept:	-15.04
Slope:	0.2597

Error Coefficients

Standard Error:	630000
Relative Standard Error:	15.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	1.734671	400.0	645425.0	0.034693	Y
2	STD3 240-322037/18	100.0	7.446069	400.0	703727.0	0.074461	Y
3	STD4 240-322037/17	200.0	27.900105	400.0	607797.0	0.139501	Y
4	STD5 240-322037/16	500.0	112.735154	400.0	596577.0	0.22547	Y
5	STD6 240-322037/15	1000.0	243.082859	400.0	595058.0	0.243083	Y
6	STD7 240-322037/14	1500.0	392.432213	400.0	635853.0	0.261621	Y
7	STD8 240-322037/13	2000.0	504.073437	400.0	687503.0	0.252037	Y
8	STD9 240-322037/12	2500.0	628.921827	400.0	661452.0	0.251569	Y



Calibration / Safrole, Total

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

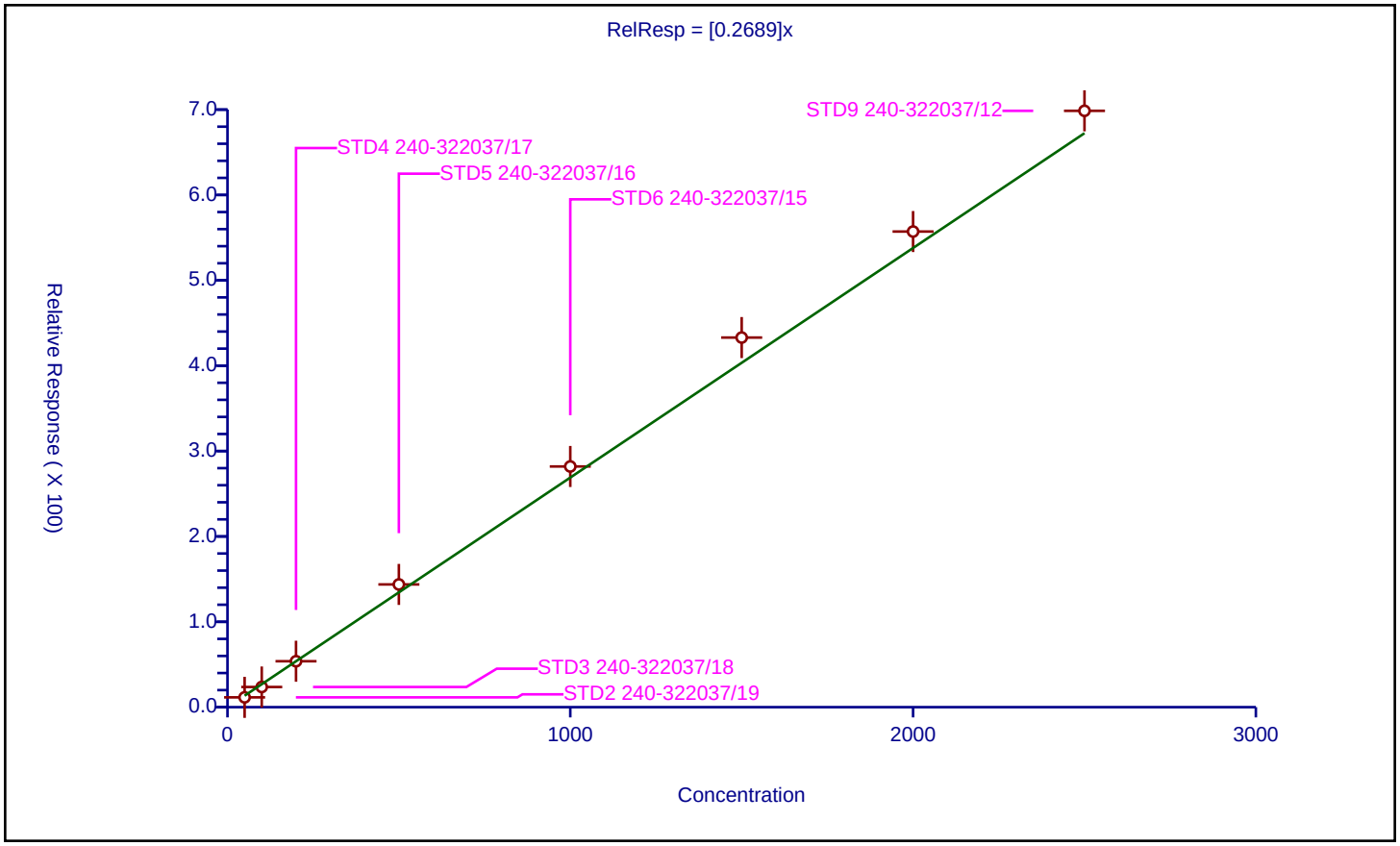
Curve Coefficients

Intercept:	0
Slope:	0.2689

Error Coefficients

Standard Error:	649000
Relative Standard Error:	8.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	11.500639	400.0	645425.0	0.230013	Y
2	STD3 240-322037/18	100.0	23.634165	400.0	703727.0	0.236342	Y
3	STD4 240-322037/17	200.0	53.799542	400.0	607797.0	0.268998	Y
4	STD5 240-322037/16	500.0	143.763504	400.0	596577.0	0.287527	Y
5	STD6 240-322037/15	1000.0	281.955036	400.0	595058.0	0.281955	Y
6	STD7 240-322037/14	1500.0	432.974917	400.0	635853.0	0.28865	Y
7	STD8 240-322037/13	2000.0	557.168769	400.0	687503.0	0.278584	Y
8	STD9 240-322037/12	2500.0	698.57707	400.0	661452.0	0.279431	Y



Calibration / Isosafrole Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

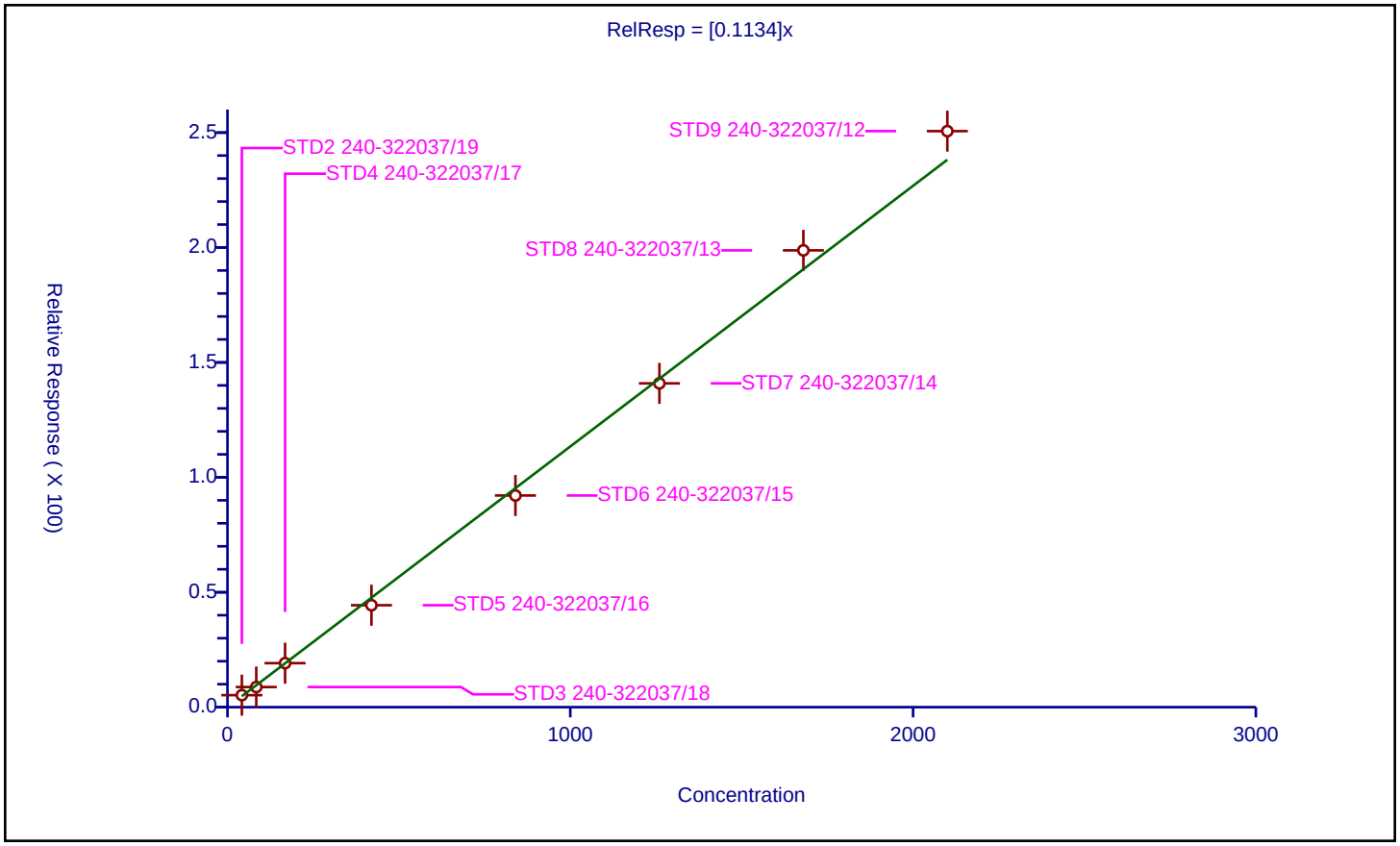
Curve Coefficients

Intercept:	0
Slope:	0.1134

Error Coefficients

Standard Error:	117000
Relative Standard Error:	6.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	42.0	5.224171	400.0	269593.0	0.124385	Y
2	STD3 240-322037/18	84.0	8.760109	400.0	305430.0	0.104287	Y
3	STD4 240-322037/17	168.0	19.148456	400.0	314699.0	0.113979	Y
4	STD5 240-322037/16	420.0	44.357761	400.0	331730.0	0.105614	Y
5	STD6 240-322037/15	840.0	92.09229	400.0	332258.0	0.109634	Y
6	STD7 240-322037/14	1260.0	140.882531	400.0	347410.0	0.111812	Y
7	STD8 240-322037/13	1680.0	198.758621	400.0	347839.0	0.118309	Y
8	STD9 240-322037/12	2100.0	250.639001	400.0	334272.0	0.119352	Y



Calibration / Isosafrole Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

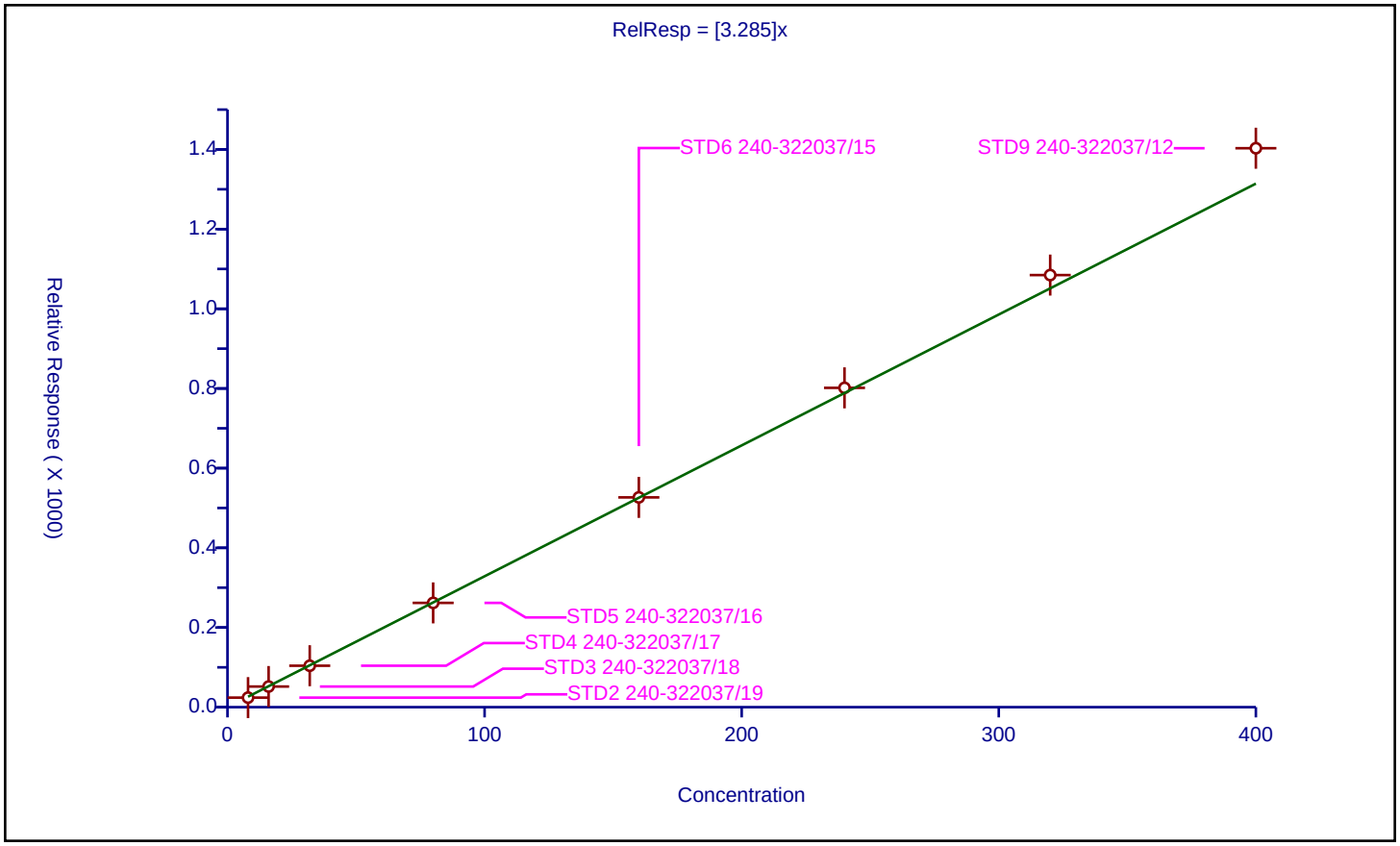
Curve Coefficients

Intercept:	0
Slope:	3.285

Error Coefficients

Standard Error:	653000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	8.0	23.981335	400.0	269593.0	2.997667	Y
2	STD3 240-322037/18	16.0	51.760469	400.0	305430.0	3.235029	Y
3	STD4 240-322037/17	32.0	104.019396	400.0	314699.0	3.250606	Y
4	STD5 240-322037/16	80.0	261.750219	400.0	331730.0	3.271878	Y
5	STD6 240-322037/15	160.0	526.54985	400.0	332258.0	3.290937	Y
6	STD7 240-322037/14	240.0	801.556662	400.0	347410.0	3.339819	Y
7	STD8 240-322037/13	320.0	1084.643183	400.0	347839.0	3.38951	Y
8	STD9 240-322037/12	400.0	1403.076536	400.0	334272.0	3.507691	Y



Calibration / 1-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

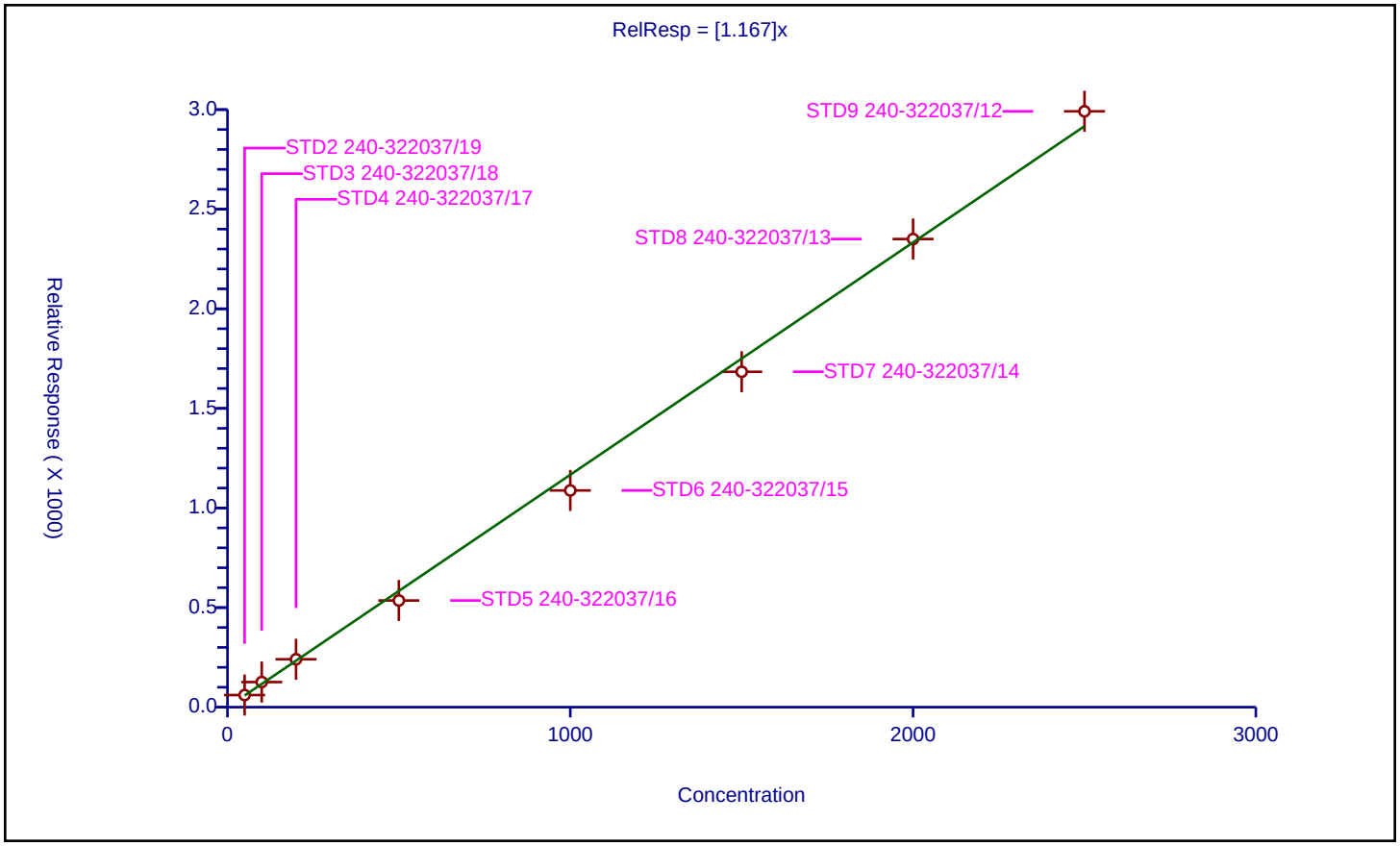
Curve Coefficients

Intercept:	0
Slope:	1.167

Error Coefficients

Standard Error:	1390000
Relative Standard Error:	5.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	60.827989	400.0	269593.0	1.21656	Y
2	STD3 240-322037/18	100.0	126.129064	400.0	305430.0	1.261291	Y
3	STD4 240-322037/17	200.0	240.464698	400.0	314699.0	1.202323	Y
4	STD5 240-322037/16	500.0	535.506587	400.0	331730.0	1.071013	Y
5	STD6 240-322037/15	1000.0	1088.058075	400.0	332258.0	1.088058	Y
6	STD7 240-322037/14	1500.0	1683.74543	400.0	347410.0	1.122497	Y
7	STD8 240-322037/13	2000.0	2350.255147	400.0	347839.0	1.175128	Y
8	STD9 240-322037/12	2500.0	2991.471616	400.0	334272.0	1.196589	Y



Calibration / 1,4-Naphthoquinone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

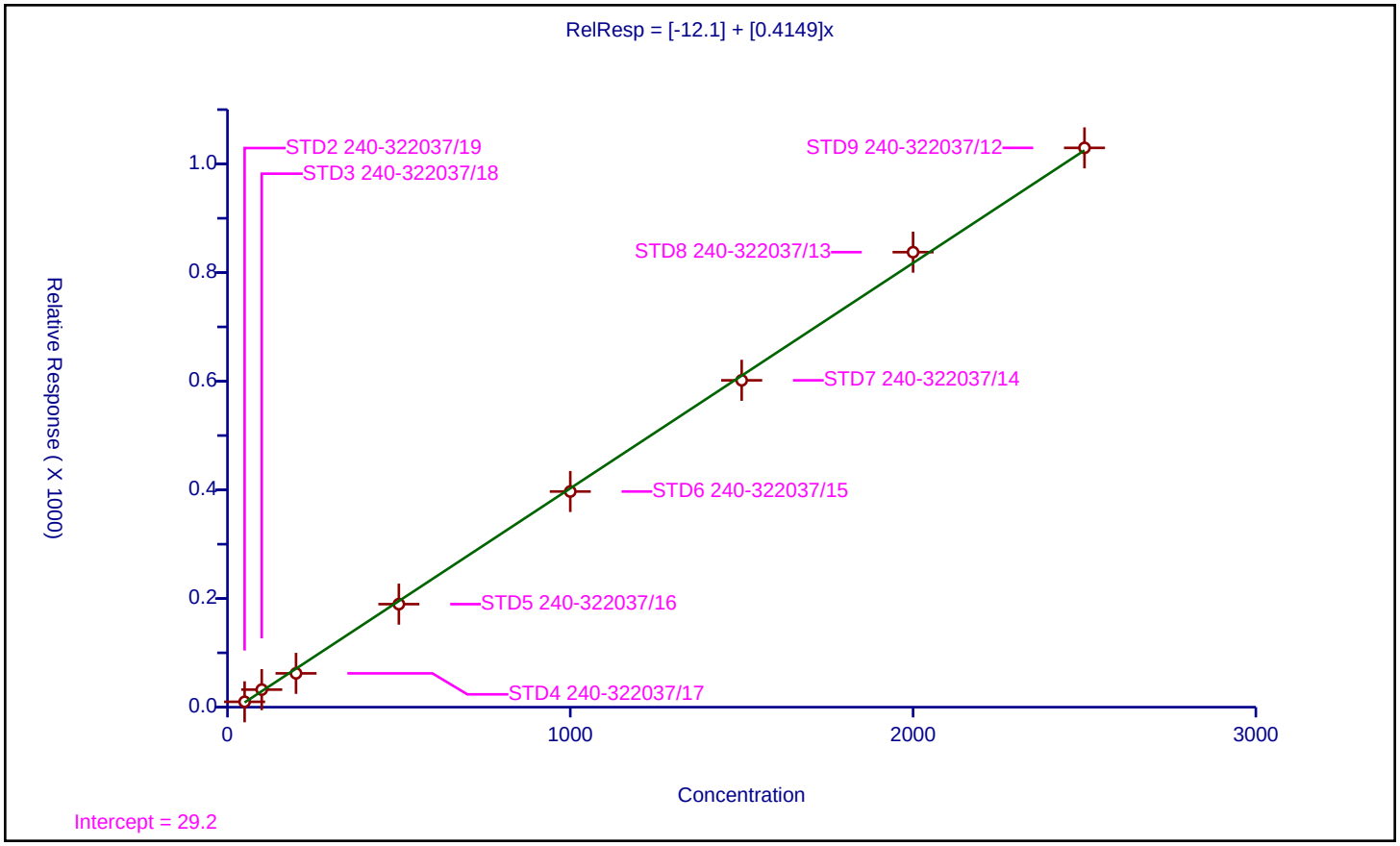
Curve Coefficients

Intercept:	-12.1
Slope:	0.4149

Error Coefficients

Standard Error:	529000
Relative Standard Error:	6.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	9.902334	400.0	269593.0	0.198047	Y
2	STD3 240-322037/18	100.0	32.299381	400.0	305430.0	0.322994	Y
3	STD4 240-322037/17	200.0	62.20293	400.0	314699.0	0.311015	Y
4	STD5 240-322037/16	500.0	189.662677	400.0	331730.0	0.379325	Y
5	STD6 240-322037/15	1000.0	396.981863	400.0	332258.0	0.396982	Y
6	STD7 240-322037/14	1500.0	601.677557	400.0	347410.0	0.401118	Y
7	STD8 240-322037/13	2000.0	837.564505	400.0	347839.0	0.418782	Y
8	STD9 240-322037/12	2500.0	1029.583094	400.0	334272.0	0.411833	Y



Calibration / 1,4-Dinitrobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

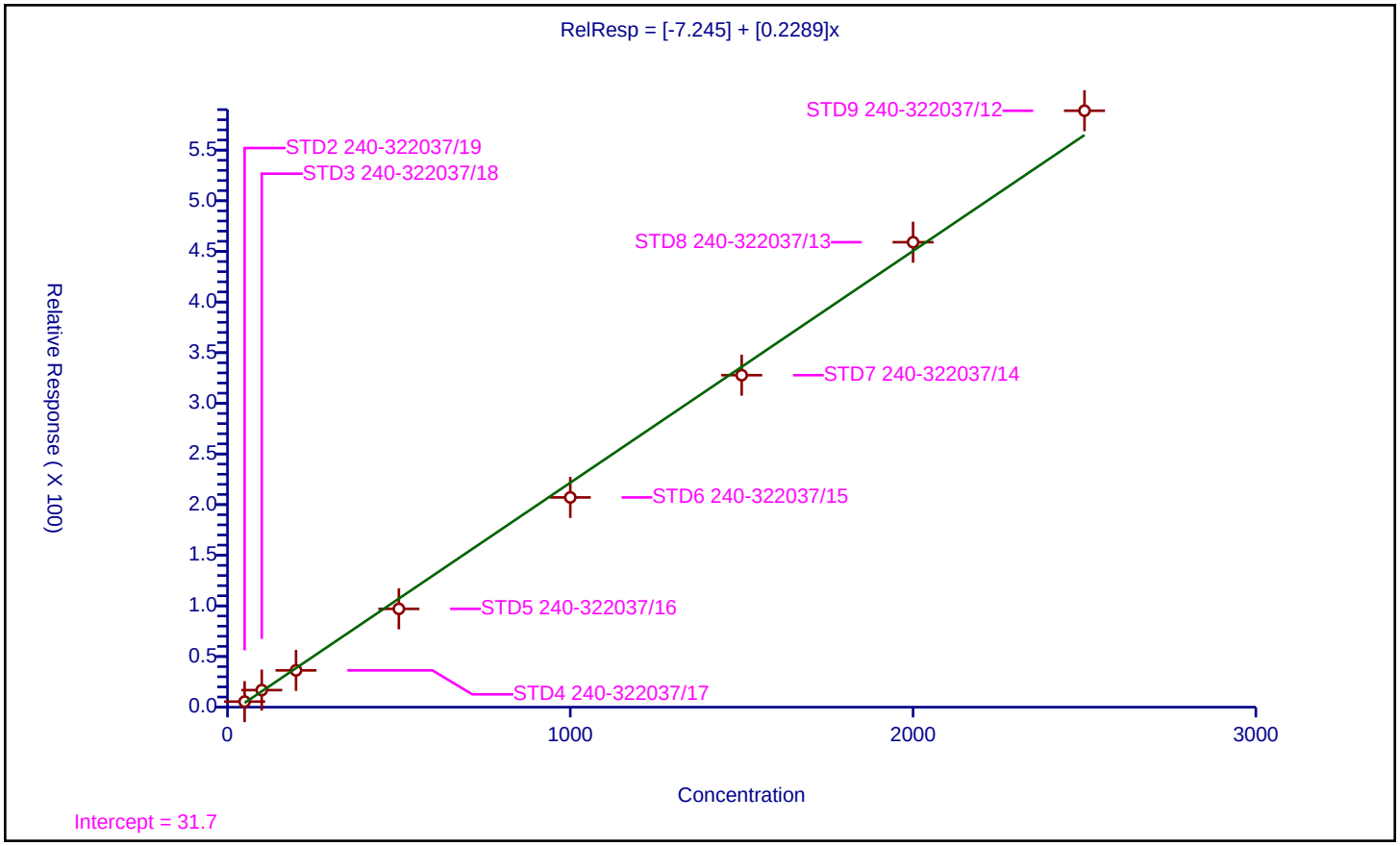
Curve Coefficients

Intercept:	-7.245
Slope:	0.2289

Error Coefficients

Standard Error:	294000
Relative Standard Error:	7.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	5.470468	400.0	269593.0	0.109409	Y
2	STD3 240-322037/18	100.0	16.835281	400.0	305430.0	0.168353	Y
3	STD4 240-322037/17	200.0	36.314065	400.0	314699.0	0.18157	Y
4	STD5 240-322037/16	500.0	97.057245	400.0	331730.0	0.194114	Y
5	STD6 240-322037/15	1000.0	207.095691	400.0	332258.0	0.207096	Y
6	STD7 240-322037/14	1500.0	327.786765	400.0	347410.0	0.218525	Y
7	STD8 240-322037/13	2000.0	459.072157	400.0	347839.0	0.229536	Y
8	STD9 240-322037/12	2500.0	588.907237	400.0	334272.0	0.235563	Y



Calibration / Pentachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

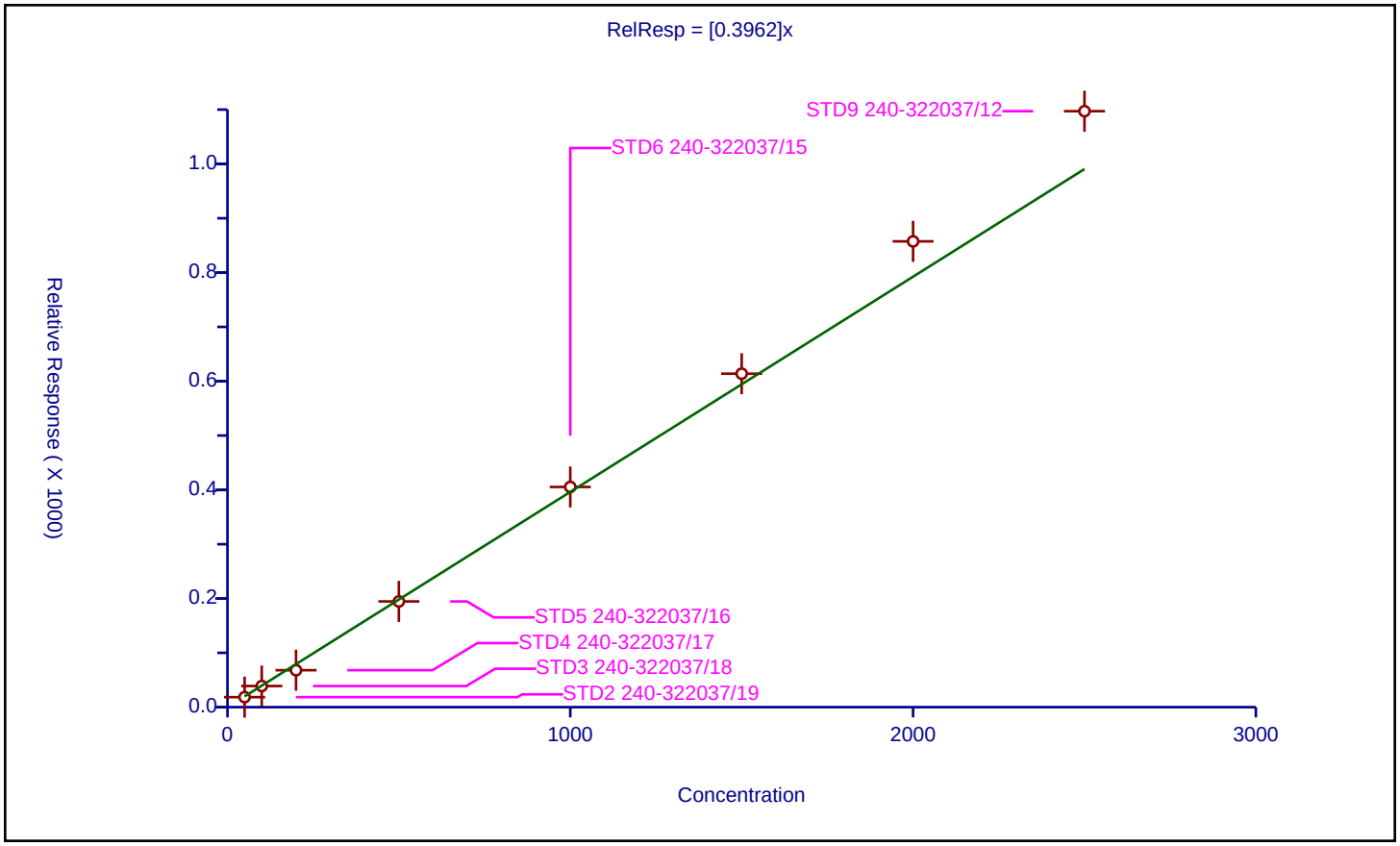
Curve Coefficients

Intercept:	0
Slope:	0.3962

Error Coefficients

Standard Error:	510000
Relative Standard Error:	8.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	18.451518	400.0	269593.0	0.36903	Y
2	STD3 240-322037/18	100.0	38.915627	400.0	305430.0	0.389156	Y
3	STD4 240-322037/17	200.0	68.043432	400.0	314699.0	0.340217	Y
4	STD5 240-322037/16	500.0	194.637808	400.0	331730.0	0.389276	Y
5	STD6 240-322037/15	1000.0	405.34404	400.0	332258.0	0.405344	Y
6	STD7 240-322037/14	1500.0	613.86834	400.0	347410.0	0.409246	Y
7	STD8 240-322037/13	2000.0	857.443817	400.0	347839.0	0.428722	Y
8	STD9 240-322037/12	2500.0	1097.074239	400.0	334272.0	0.43883	Y



Calibration / 2,3,5,6-Tetrachlorophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

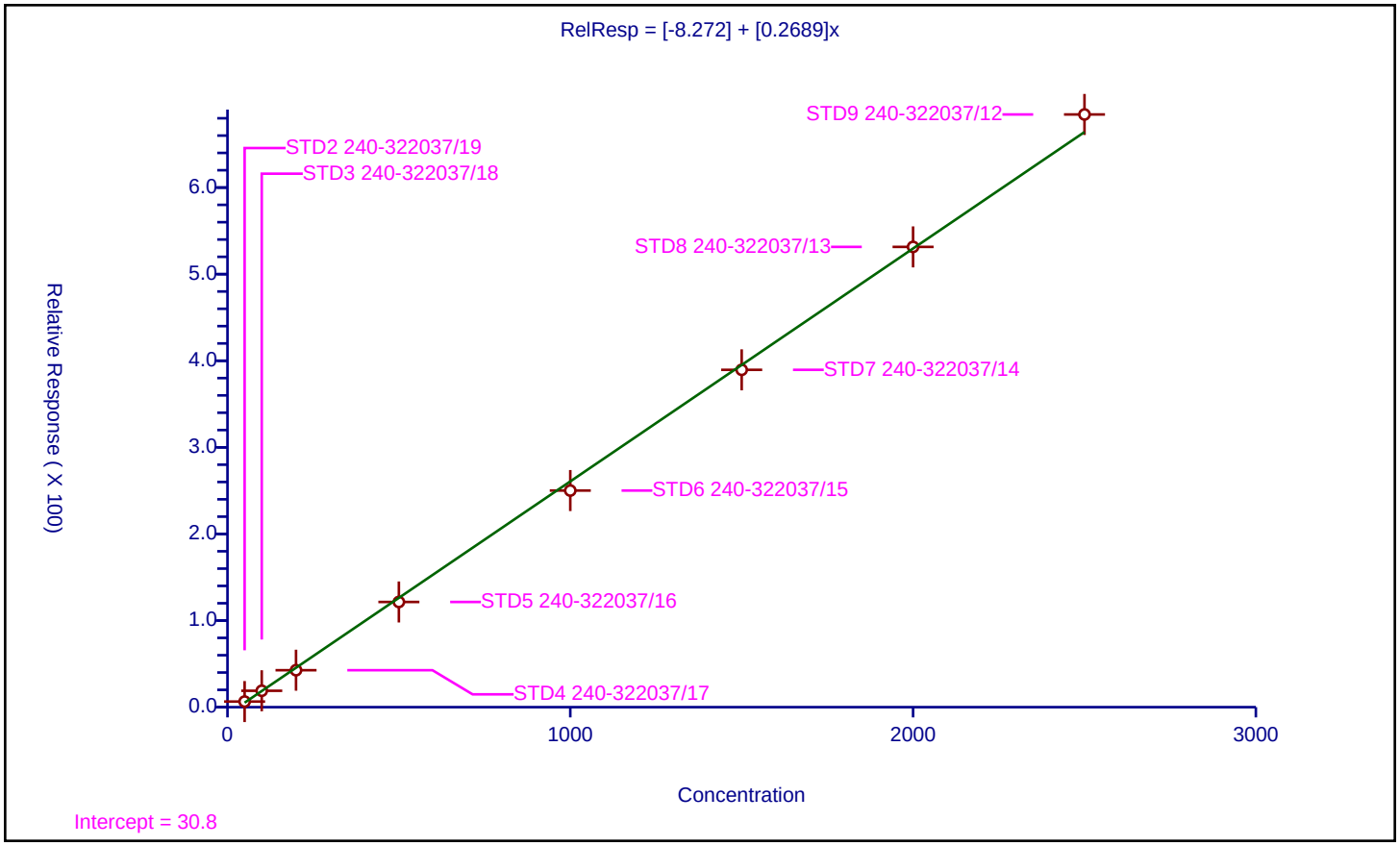
Curve Coefficients

Intercept:	-8.272
Slope:	0.2689

Error Coefficients

Standard Error:	344000
Relative Standard Error:	5.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	6.474946	400.0	269593.0	0.129499	Y
2	STD3 240-322037/18	100.0	18.916282	400.0	305430.0	0.189163	Y
3	STD4 240-322037/17	200.0	42.666802	400.0	314699.0	0.213334	Y
4	STD5 240-322037/16	500.0	121.486751	400.0	331730.0	0.242974	Y
5	STD6 240-322037/15	1000.0	250.110456	400.0	332258.0	0.25011	Y
6	STD7 240-322037/14	1500.0	389.527072	400.0	347410.0	0.259685	Y
7	STD8 240-322037/13	2000.0	531.475769	400.0	347839.0	0.265738	Y
8	STD9 240-322037/12	2500.0	684.391155	400.0	334272.0	0.273756	Y



Calibration / 1-Naphthylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

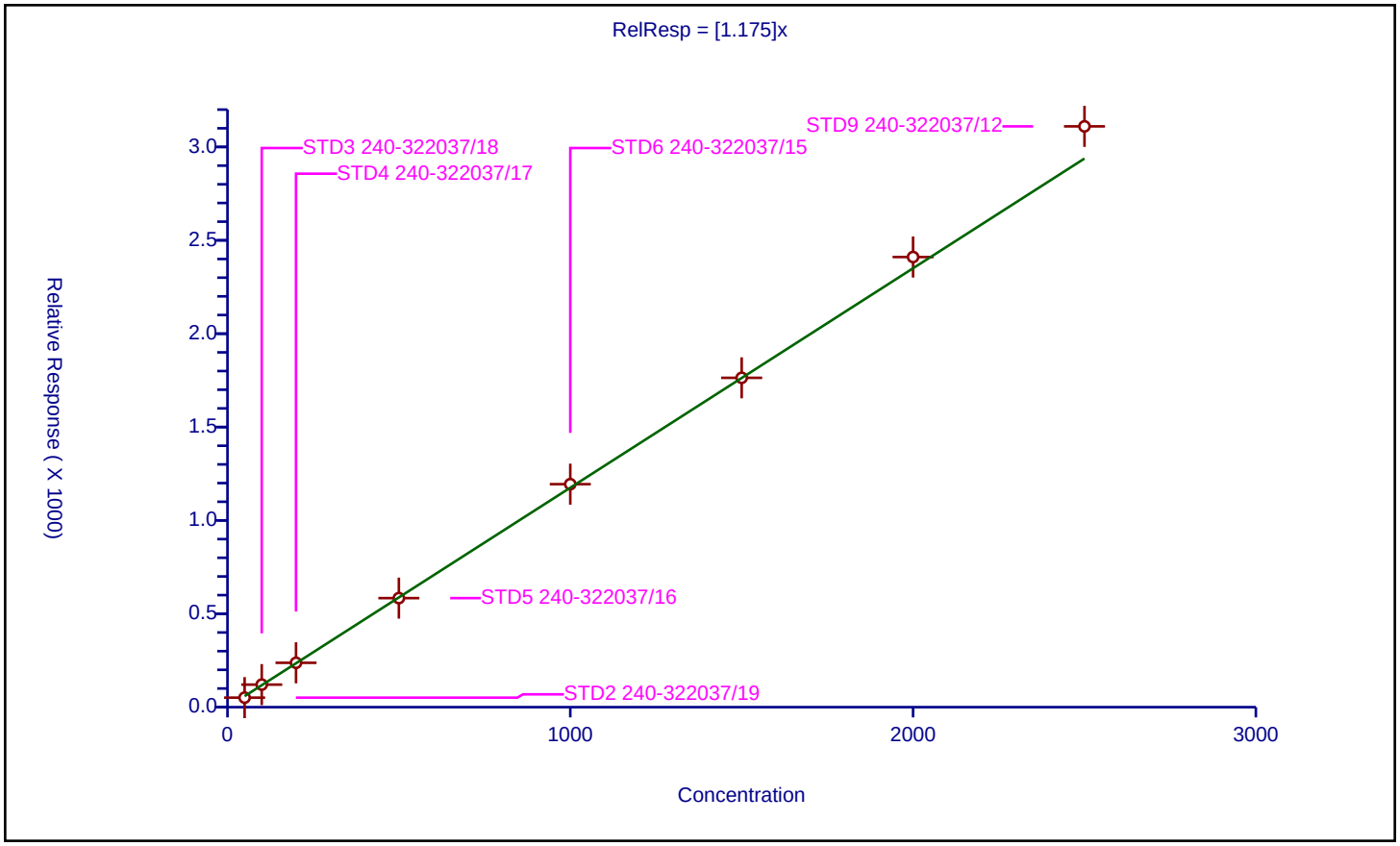
Curve Coefficients

Intercept:	0
Slope:	1.175

Error Coefficients

Standard Error:	1450000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	50.940492	400.0	269593.0	1.01881	Y
2	STD3 240-322037/18	100.0	120.750417	400.0	305430.0	1.207504	Y
3	STD4 240-322037/17	200.0	237.567962	400.0	314699.0	1.18784	Y
4	STD5 240-322037/16	500.0	583.944774	400.0	331730.0	1.16789	Y
5	STD6 240-322037/15	1000.0	1194.174407	400.0	332258.0	1.194174	Y
6	STD7 240-322037/14	1500.0	1763.708586	400.0	347410.0	1.175806	Y
7	STD8 240-322037/13	2000.0	2410.599157	400.0	347839.0	1.2053	Y
8	STD9 240-322037/12	2500.0	3110.215633	400.0	334272.0	1.244086	Y



Calibration / 2-Naphthylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

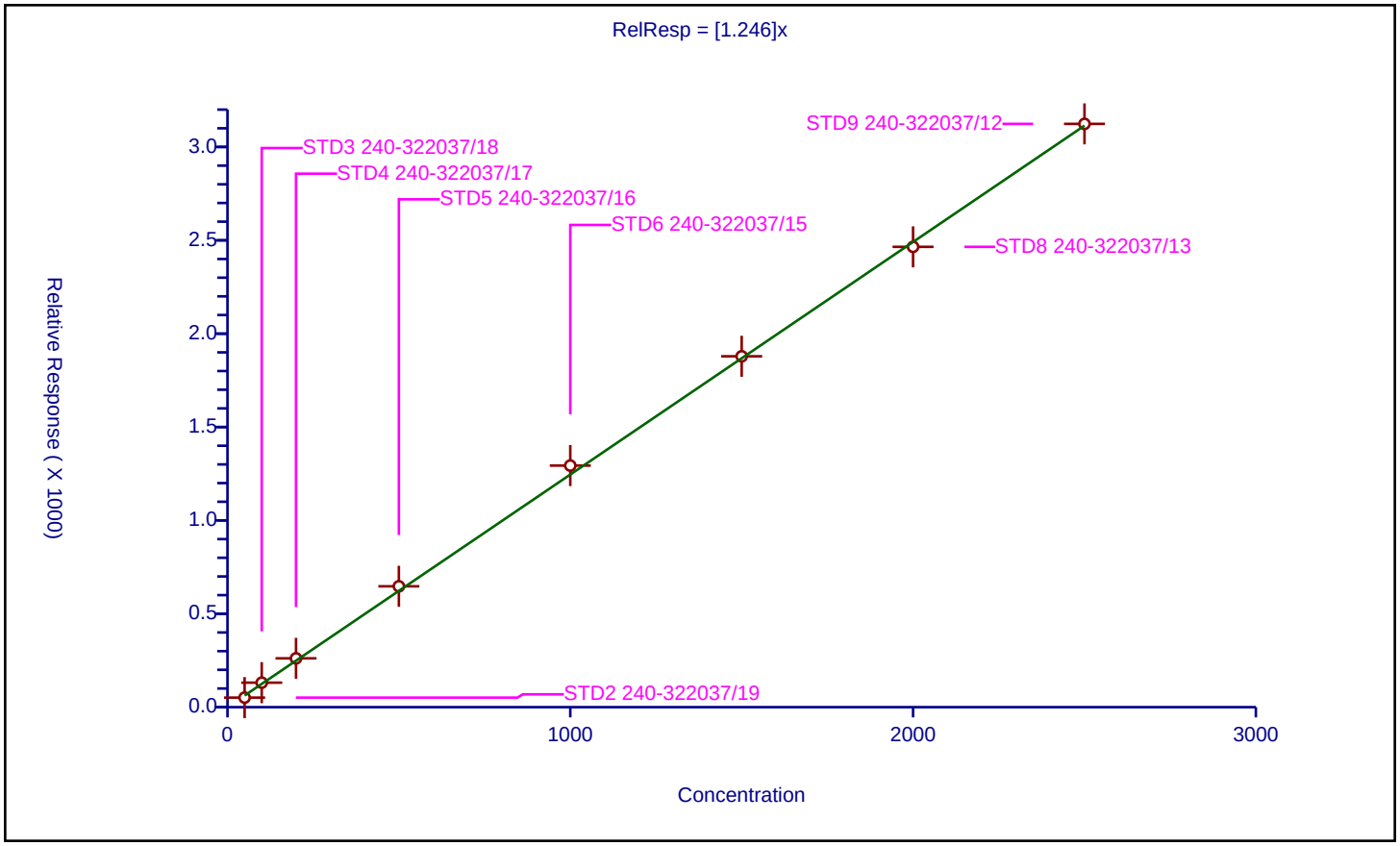
Curve Coefficients

Intercept:	0
Slope:	1.246

Error Coefficients

Standard Error:	1490000
Relative Standard Error:	7.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	51.17937	400.0	269593.0	1.023587	Y
2	STD3 240-322037/18	100.0	131.180303	400.0	305430.0	1.311803	Y
3	STD4 240-322037/17	200.0	261.404072	400.0	314699.0	1.30702	Y
4	STD5 240-322037/16	500.0	647.217918	400.0	331730.0	1.294436	Y
5	STD6 240-322037/15	1000.0	1293.650115	400.0	332258.0	1.29365	Y
6	STD7 240-322037/14	1500.0	1879.00521	400.0	347410.0	1.25267	Y
7	STD8 240-322037/13	2000.0	2464.995587	400.0	347839.0	1.232498	Y
8	STD9 240-322037/12	2500.0	3123.567634	400.0	334272.0	1.249427	Y



Calibration / Thionazin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

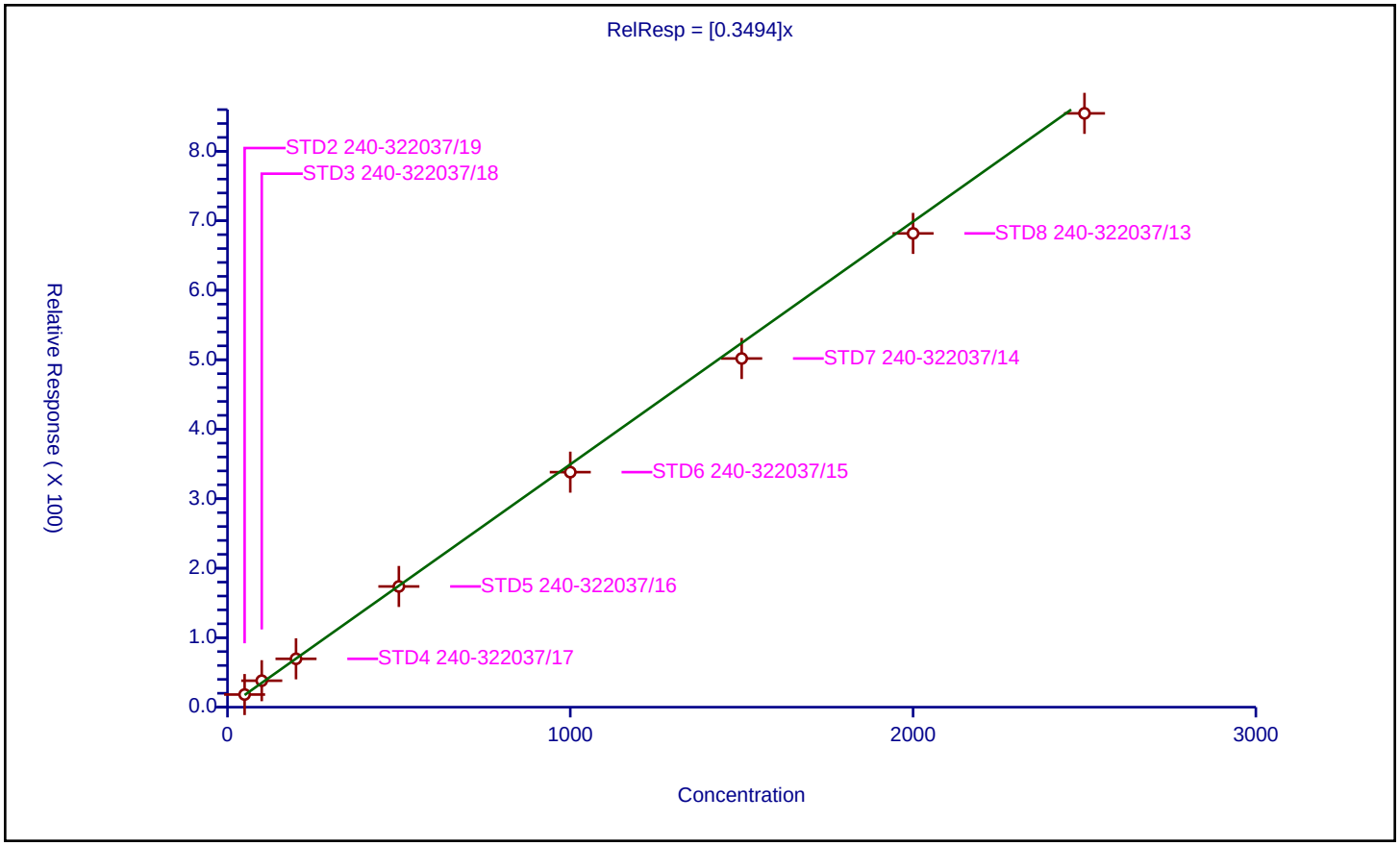
Curve Coefficients

Intercept:	0
Slope:	0.3494

Error Coefficients

Standard Error:	406000
Relative Standard Error:	4.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	18.182965	400.0	269593.0	0.363659	Y
2	STD3 240-322037/18	100.0	38.097109	400.0	305430.0	0.380971	Y
3	STD4 240-322037/17	200.0	69.563615	400.0	314699.0	0.347818	Y
4	STD5 240-322037/16	500.0	173.718385	400.0	331730.0	0.347437	Y
5	STD6 240-322037/15	1000.0	338.231134	400.0	332258.0	0.338231	Y
6	STD7 240-322037/14	1500.0	501.786362	400.0	347410.0	0.334524	Y
7	STD8 240-322037/13	2000.0	681.820037	400.0	347839.0	0.34091	Y
8	STD9 240-322037/12	2500.0	854.599847	400.0	334272.0	0.34184	Y



Calibration / N-Nitro-o-toluidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

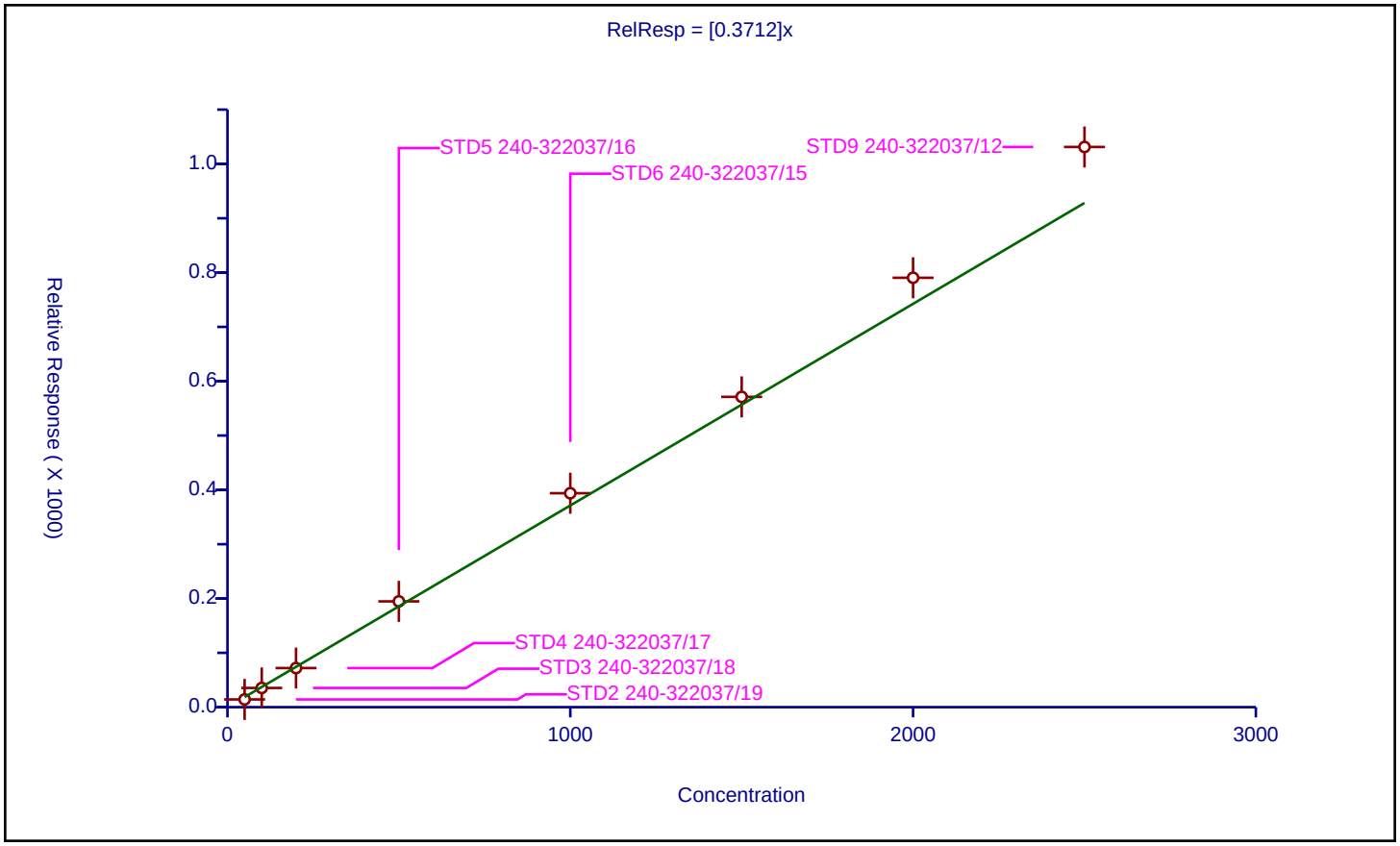
Curve Coefficients

Intercept:	0
Slope:	0.3712

Error Coefficients

Standard Error:	477000
Relative Standard Error:	10.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	14.224405	400.0	269593.0	0.284488	Y
2	STD3 240-322037/18	100.0	35.363913	400.0	305430.0	0.353639	Y
3	STD4 240-322037/17	200.0	71.988789	400.0	314699.0	0.359944	Y
4	STD5 240-322037/16	500.0	194.741507	400.0	331730.0	0.389483	Y
5	STD6 240-322037/15	1000.0	393.84695	400.0	332258.0	0.393847	Y
6	STD7 240-322037/14	1500.0	571.175268	400.0	347410.0	0.380784	Y
7	STD8 240-322037/13	2000.0	790.465704	400.0	347839.0	0.395233	Y
8	STD9 240-322037/12	2500.0	1031.226067	400.0	334272.0	0.41249	Y



Calibration / Sulfotepp

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

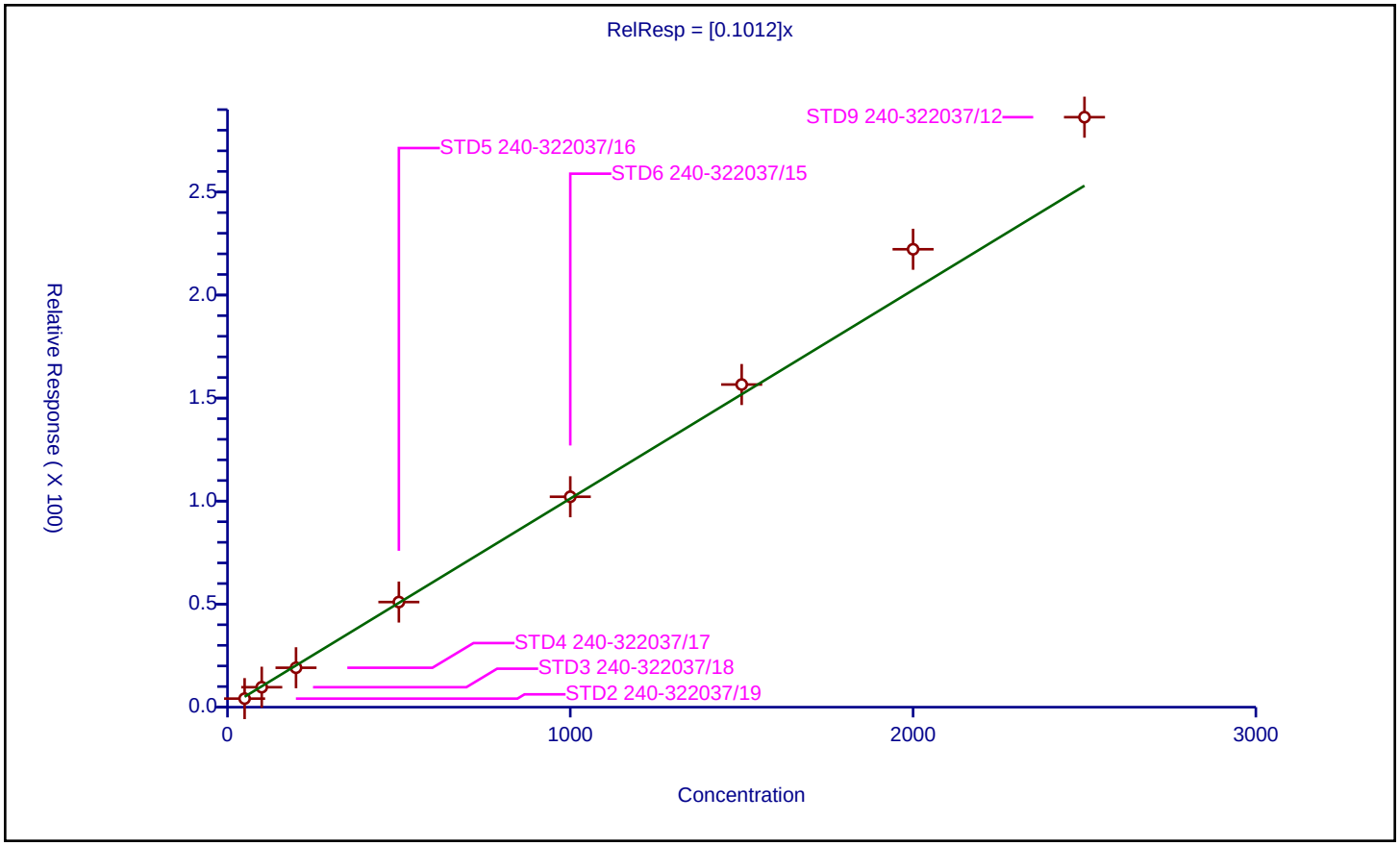
Curve Coefficients

Intercept:	0
Slope:	0.1012

Error Coefficients

Standard Error:	224000
Relative Standard Error:	9.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	4.154713	400.0	539917.0	0.083094	Y
2	STD3 240-322037/18	100.0	9.688475	400.0	639564.0	0.096885	Y
3	STD4 240-322037/17	200.0	19.130043	400.0	603156.0	0.09565	Y
4	STD5 240-322037/16	500.0	51.020308	400.0	591929.0	0.102041	Y
5	STD6 240-322037/15	1000.0	102.109339	400.0	593219.0	0.102109	Y
6	STD7 240-322037/14	1500.0	156.578904	400.0	601164.0	0.104386	Y
7	STD8 240-322037/13	2000.0	222.218961	400.0	585932.0	0.111109	Y
8	STD9 240-322037/12	2500.0	286.324026	400.0	562300.0	0.11453	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

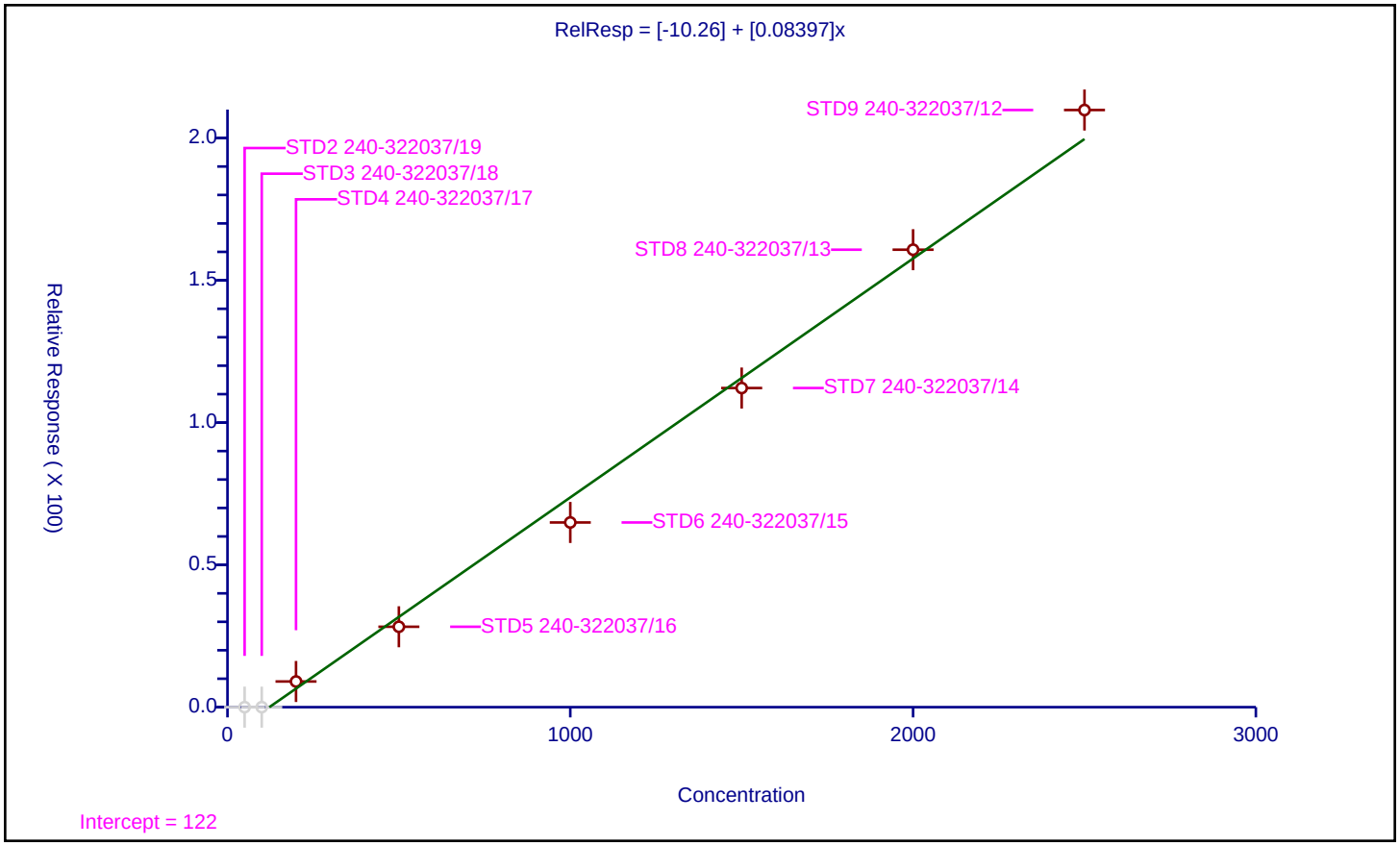
Curve Coefficients

Intercept:	-10.26
Slope:	0.08397

Error Coefficients

Standard Error:	213000
Relative Standard Error:	10.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	0.0	400.0	539917.0	0.0	N
2	STD3 240-322037/18	100.0	0.0	400.0	639564.0	0.0	N
3	STD4 240-322037/17	200.0	9.021215	400.0	603156.0	0.045106	Y
4	STD5 240-322037/16	500.0	28.256092	400.0	591929.0	0.056512	Y
5	STD6 240-322037/15	1000.0	64.910935	400.0	593219.0	0.064911	Y
6	STD7 240-322037/14	1500.0	112.156417	400.0	601164.0	0.074771	Y
7	STD8 240-322037/13	2000.0	160.766778	400.0	585932.0	0.080383	Y
8	STD9 240-322037/12	2500.0	209.853815	400.0	562300.0	0.083942	Y



Calibration / Phenacetin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

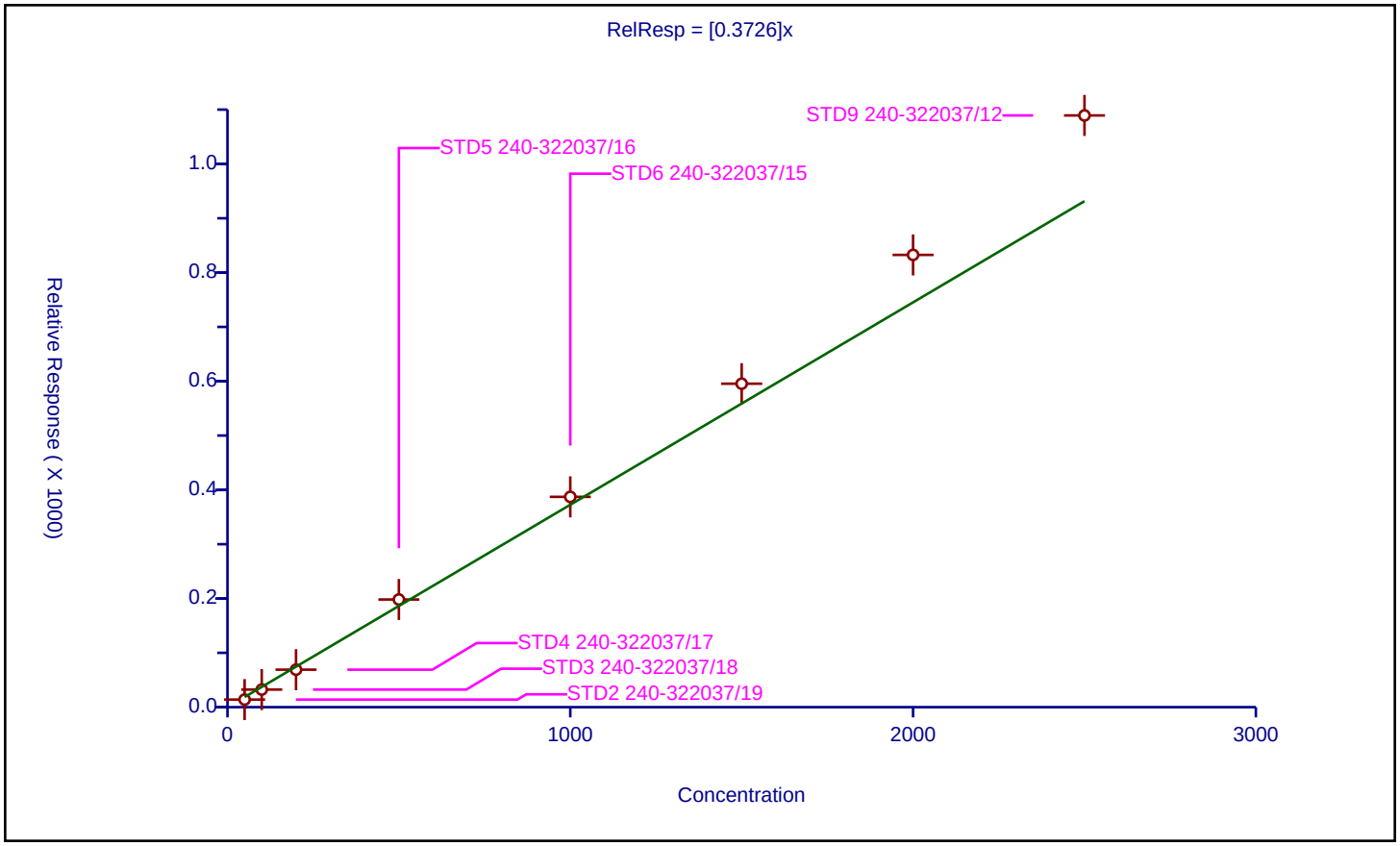
Curve Coefficients

Intercept:	0
Slope:	0.3726

Error Coefficients

Standard Error:	850000
Relative Standard Error:	14.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	13.962887	400.0	539917.0	0.279258	Y
2	STD3 240-322037/18	100.0	32.381435	400.0	639564.0	0.323814	Y
3	STD4 240-322037/17	200.0	69.019623	400.0	603156.0	0.345098	Y
4	STD5 240-322037/16	500.0	198.19404	400.0	591929.0	0.396388	Y
5	STD6 240-322037/15	1000.0	387.163594	400.0	593219.0	0.387164	Y
6	STD7 240-322037/14	1500.0	595.445502	400.0	601164.0	0.396964	Y
7	STD8 240-322037/13	2000.0	832.532785	400.0	585932.0	0.416266	Y
8	STD9 240-322037/12	2500.0	1089.27761	400.0	562300.0	0.435711	Y



Calibration / Diallate Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

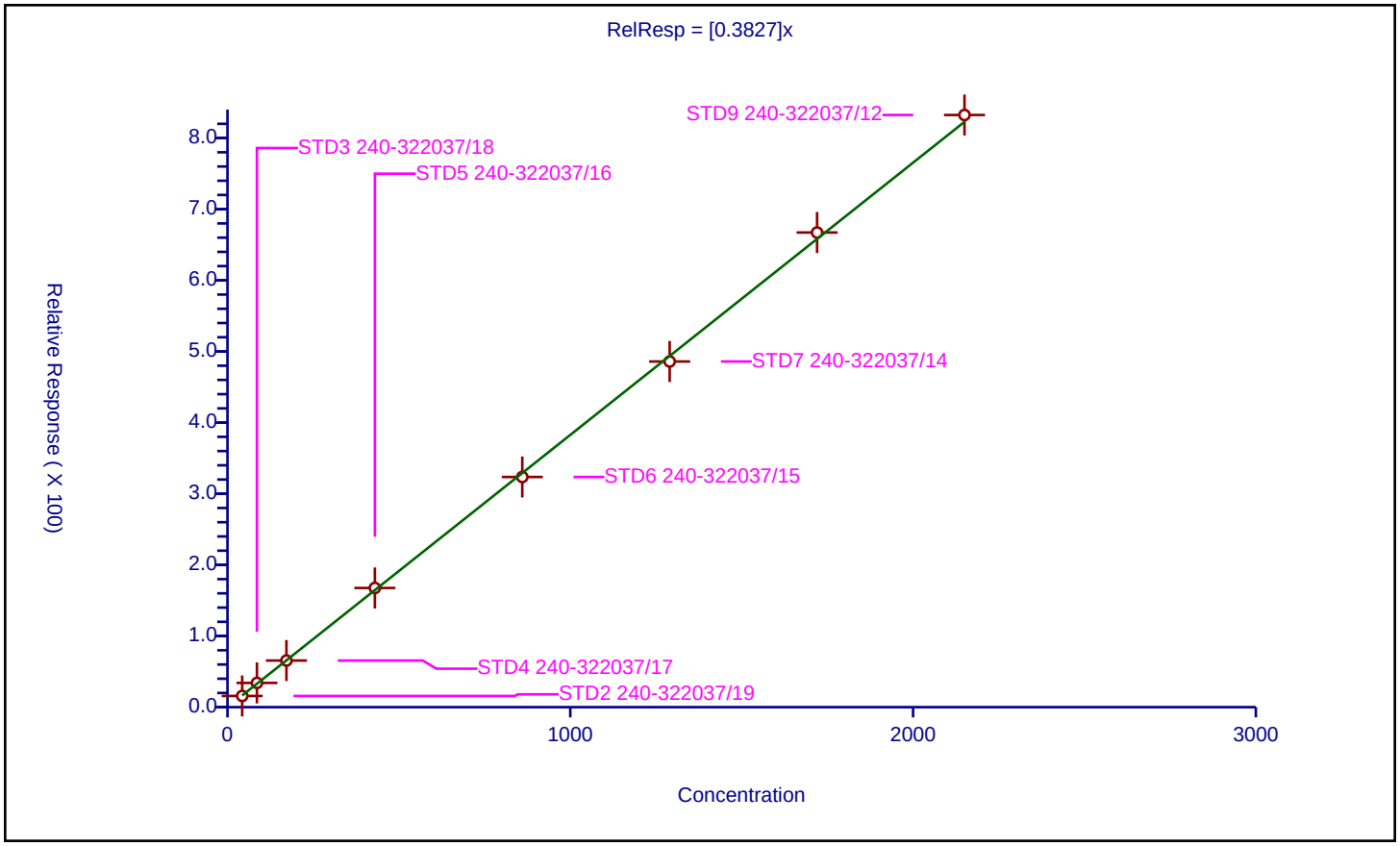
Curve Coefficients

Intercept:	0
Slope:	0.3827

Error Coefficients

Standard Error:	672000
Relative Standard Error:	2.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	43.0	15.775758	400.0	539917.0	0.366878	Y
2	STD3 240-322037/18	86.0	34.06946	400.0	639564.0	0.396157	Y
3	STD4 240-322037/17	172.0	65.524674	400.0	603156.0	0.380957	Y
4	STD5 240-322037/16	430.0	167.544418	400.0	591929.0	0.389638	Y
5	STD6 240-322037/15	860.0	323.559427	400.0	593219.0	0.376232	Y
6	STD7 240-322037/14	1290.0	485.929963	400.0	601164.0	0.37669	Y
7	STD8 240-322037/13	1720.0	667.229644	400.0	585932.0	0.387924	Y
8	STD9 240-322037/12	2150.0	832.419705	400.0	562300.0	0.387172	Y



Calibration / Phorate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

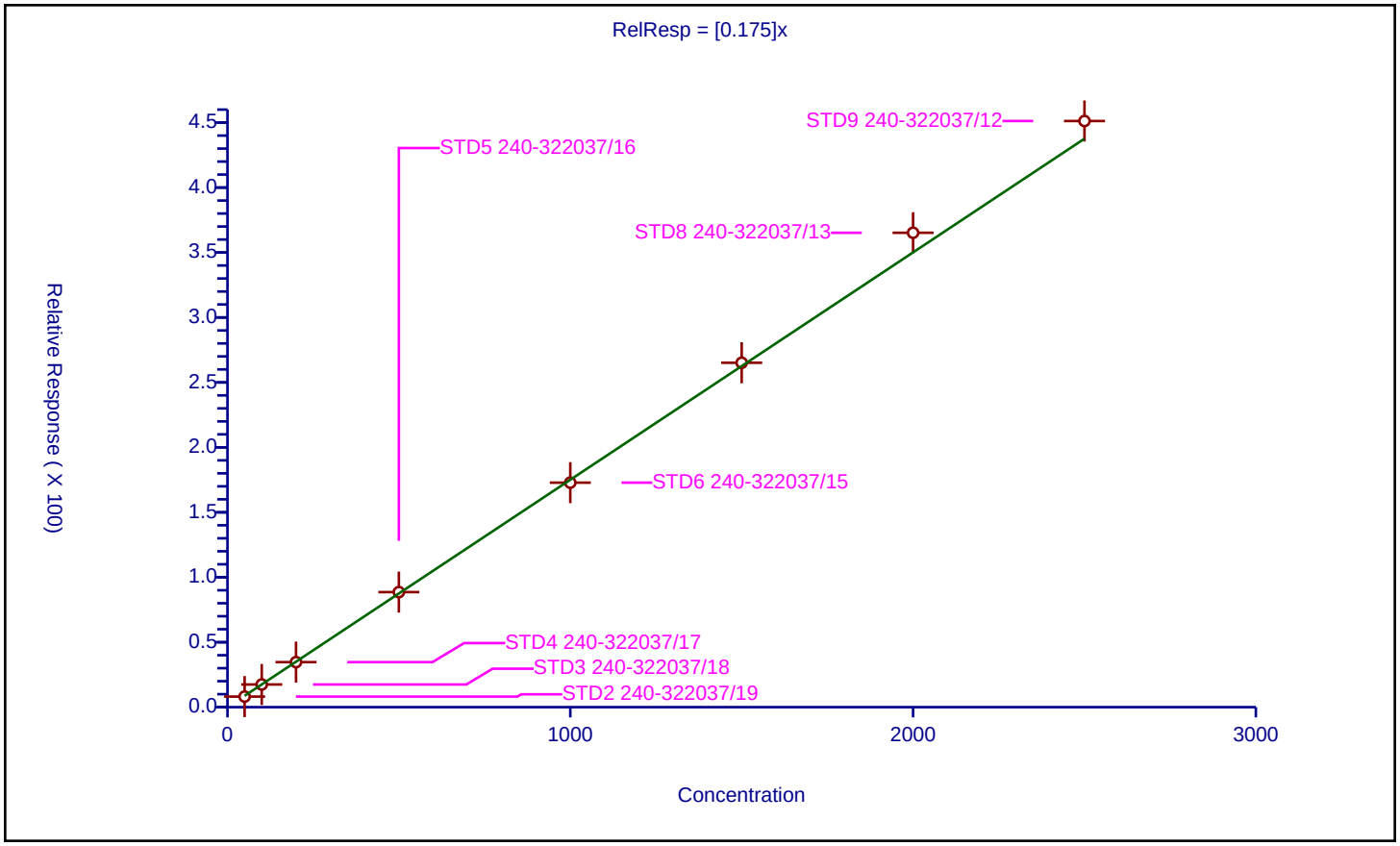
Curve Coefficients

Intercept:	0
Slope:	0.175

Error Coefficients

Standard Error:	365000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	8.130879	400.0	539917.0	0.162618	Y
2	STD3 240-322037/18	100.0	17.46127	400.0	639564.0	0.174613	Y
3	STD4 240-322037/17	200.0	34.659027	400.0	603156.0	0.173295	Y
4	STD5 240-322037/16	500.0	88.572109	400.0	591929.0	0.177144	Y
5	STD6 240-322037/15	1000.0	172.834653	400.0	593219.0	0.172835	Y
6	STD7 240-322037/14	1500.0	265.130314	400.0	601164.0	0.176754	Y
7	STD8 240-322037/13	2000.0	365.186404	400.0	585932.0	0.182593	Y
8	STD9 240-322037/12	2500.0	451.223902	400.0	562300.0	0.18049	Y



Calibration / Diallate Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

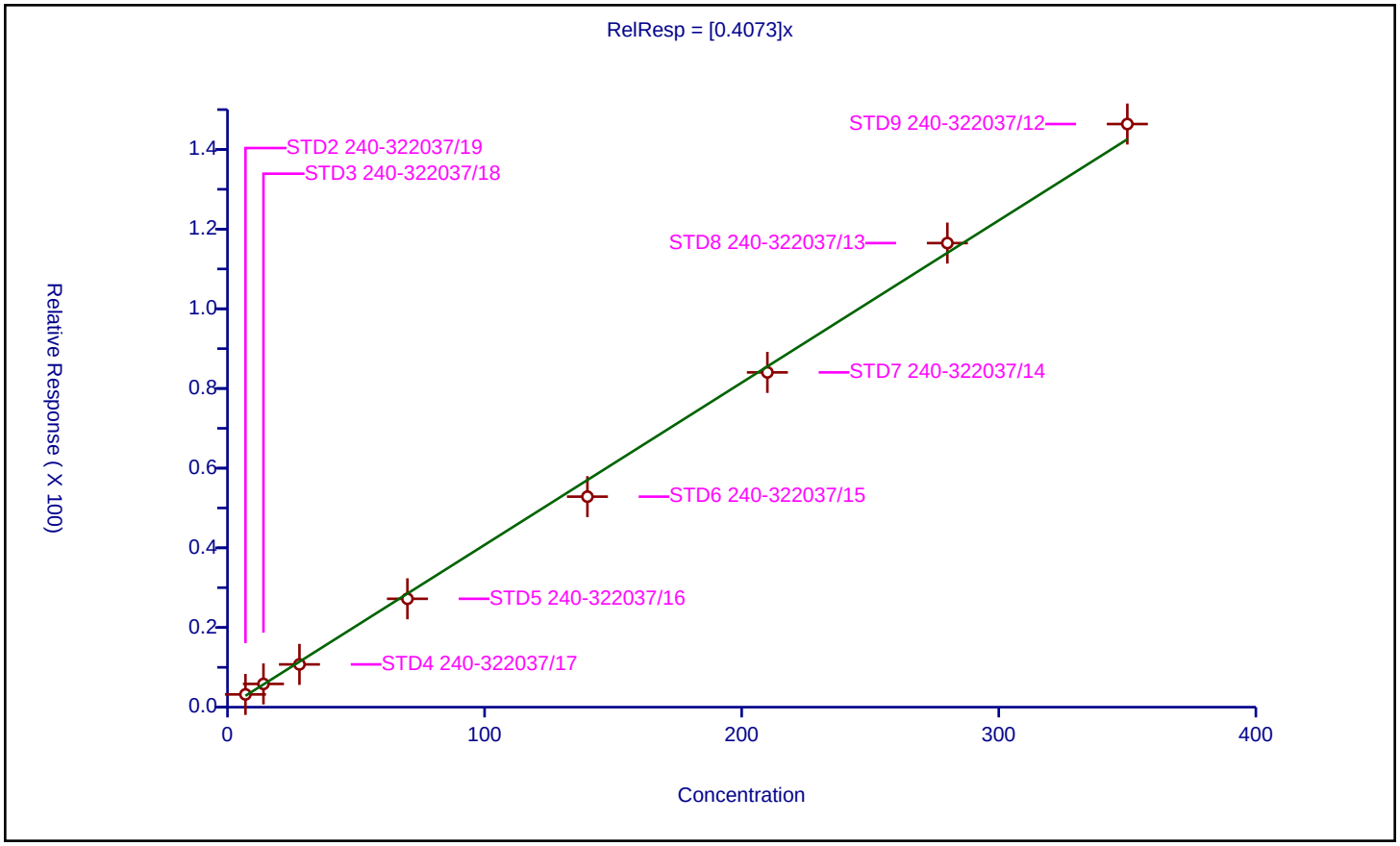
Curve Coefficients

Intercept:	0
Slope:	0.4073

Error Coefficients

Standard Error:	117000
Relative Standard Error:	6.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	7.0	3.202714	400.0	539917.0	0.457531	Y
2	STD3 240-322037/18	14.0	5.835225	400.0	639564.0	0.416802	Y
3	STD4 240-322037/17	28.0	10.737521	400.0	603156.0	0.383483	Y
4	STD5 240-322037/16	70.0	27.203263	400.0	591929.0	0.388618	Y
5	STD6 240-322037/15	140.0	52.840519	400.0	593219.0	0.377432	Y
6	STD7 240-322037/14	210.0	84.035638	400.0	601164.0	0.40017	Y
7	STD8 240-322037/13	280.0	116.492016	400.0	585932.0	0.416043	Y
8	STD9 240-322037/12	350.0	146.380224	400.0	562300.0	0.418229	Y



Calibration / Dimethoate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

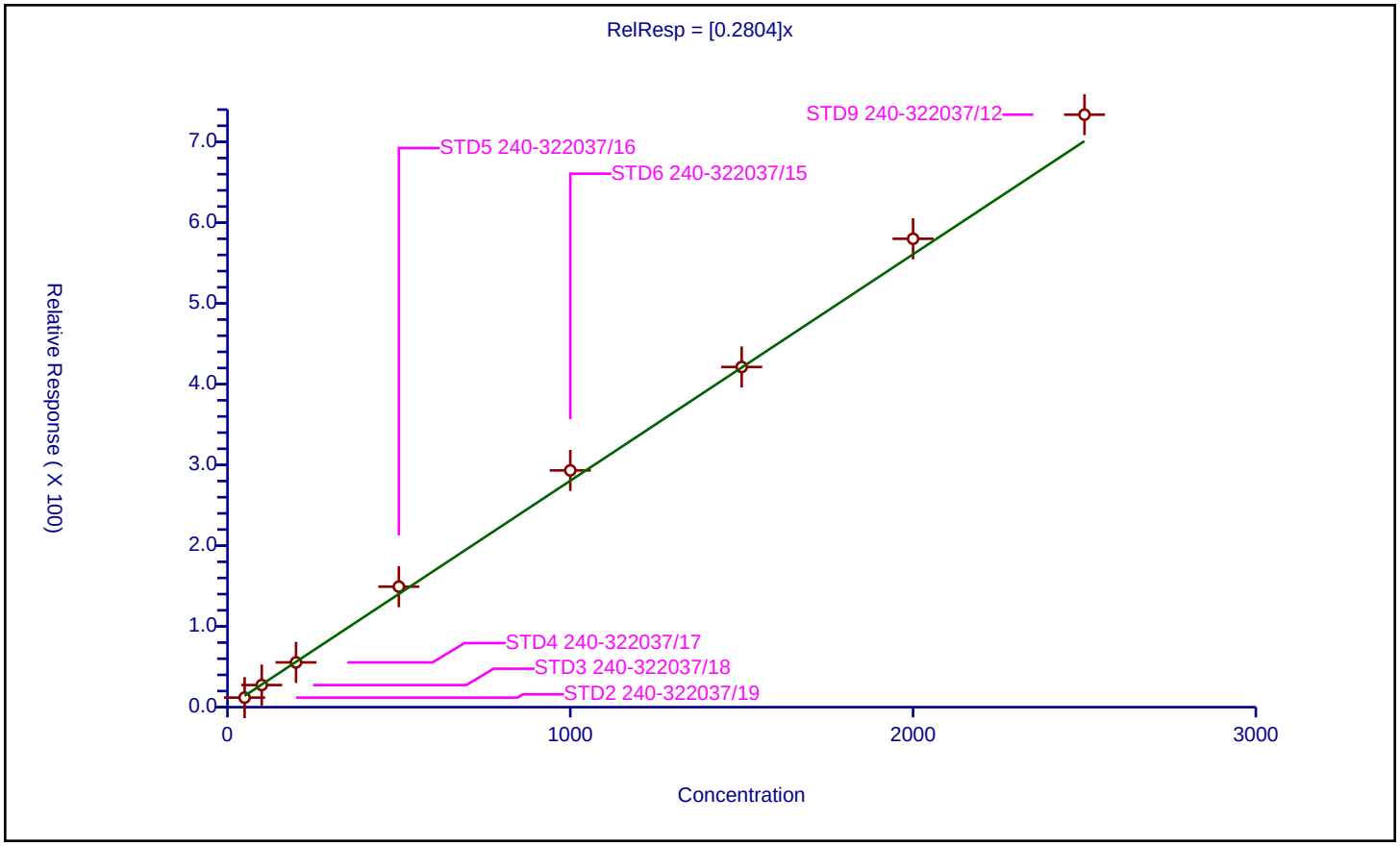
Curve Coefficients

Intercept:	0
Slope:	0.2804

Error Coefficients

Standard Error:	589000
Relative Standard Error:	7.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	11.809963	400.0	539917.0	0.236199	Y
2	STD3 240-322037/18	100.0	27.381153	400.0	639564.0	0.273812	Y
3	STD4 240-322037/17	200.0	55.438394	400.0	603156.0	0.277192	Y
4	STD5 240-322037/16	500.0	149.240872	400.0	591929.0	0.298482	Y
5	STD6 240-322037/15	1000.0	293.215153	400.0	593219.0	0.293215	Y
6	STD7 240-322037/14	1500.0	421.270069	400.0	601164.0	0.280847	Y
7	STD8 240-322037/13	2000.0	580.032495	400.0	585932.0	0.290016	Y
8	STD9 240-322037/12	2500.0	733.74711	400.0	562300.0	0.293499	Y



Calibration / 4-Aminobiphenyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

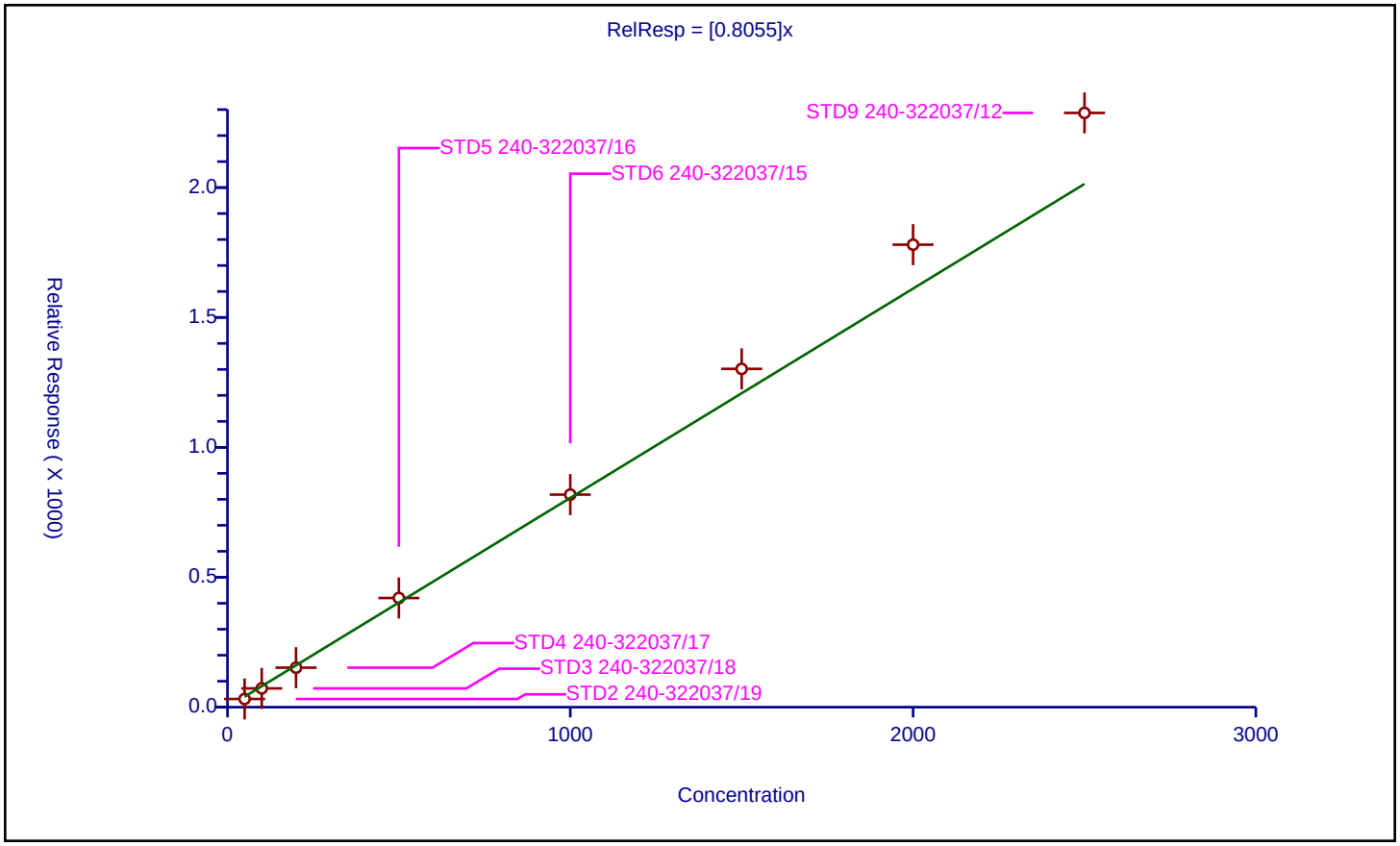
Curve Coefficients

Intercept:	0
Slope:	0.8055

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	11.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	31.51151	400.0	539917.0	0.63023	Y
2	STD3 240-322037/18	100.0	72.269859	400.0	639564.0	0.722699	Y
3	STD4 240-322037/17	200.0	151.987877	400.0	603156.0	0.759939	Y
4	STD5 240-322037/16	500.0	420.124711	400.0	591929.0	0.840249	Y
5	STD6 240-322037/15	1000.0	818.083035	400.0	593219.0	0.818083	Y
6	STD7 240-322037/14	1500.0	1302.012762	400.0	601164.0	0.868009	Y
7	STD8 240-322037/13	2000.0	1780.121925	400.0	585932.0	0.890061	Y
8	STD9 240-322037/12	2500.0	2287.251645	400.0	562300.0	0.914901	Y



Calibration / Pronamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

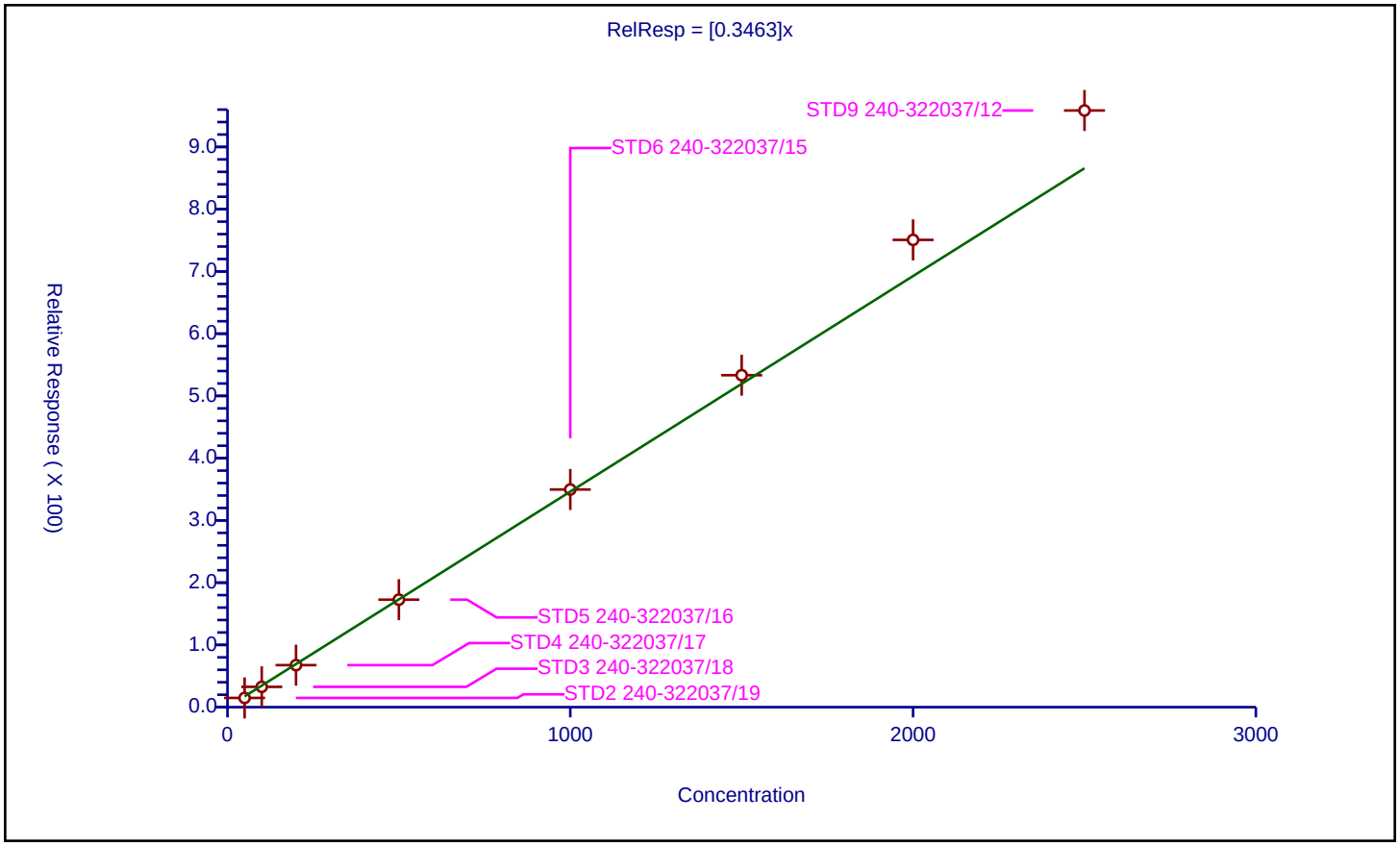
Curve Coefficients

Intercept:	0
Slope:	0.3463

Error Coefficients

Standard Error:	757000
Relative Standard Error:	7.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	14.848949	400.0	539917.0	0.296979	Y
2	STD3 240-322037/18	100.0	32.643488	400.0	639564.0	0.326435	Y
3	STD4 240-322037/17	200.0	67.52084	400.0	603156.0	0.337604	Y
4	STD5 240-322037/16	500.0	172.703145	400.0	591929.0	0.345406	Y
5	STD6 240-322037/15	1000.0	349.685361	400.0	593219.0	0.349685	Y
6	STD7 240-322037/14	1500.0	533.297403	400.0	601164.0	0.355532	Y
7	STD8 240-322037/13	2000.0	750.706225	400.0	585932.0	0.375353	Y
8	STD9 240-322037/12	2500.0	958.575849	400.0	562300.0	0.38343	Y



Calibration / Pentachloronitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

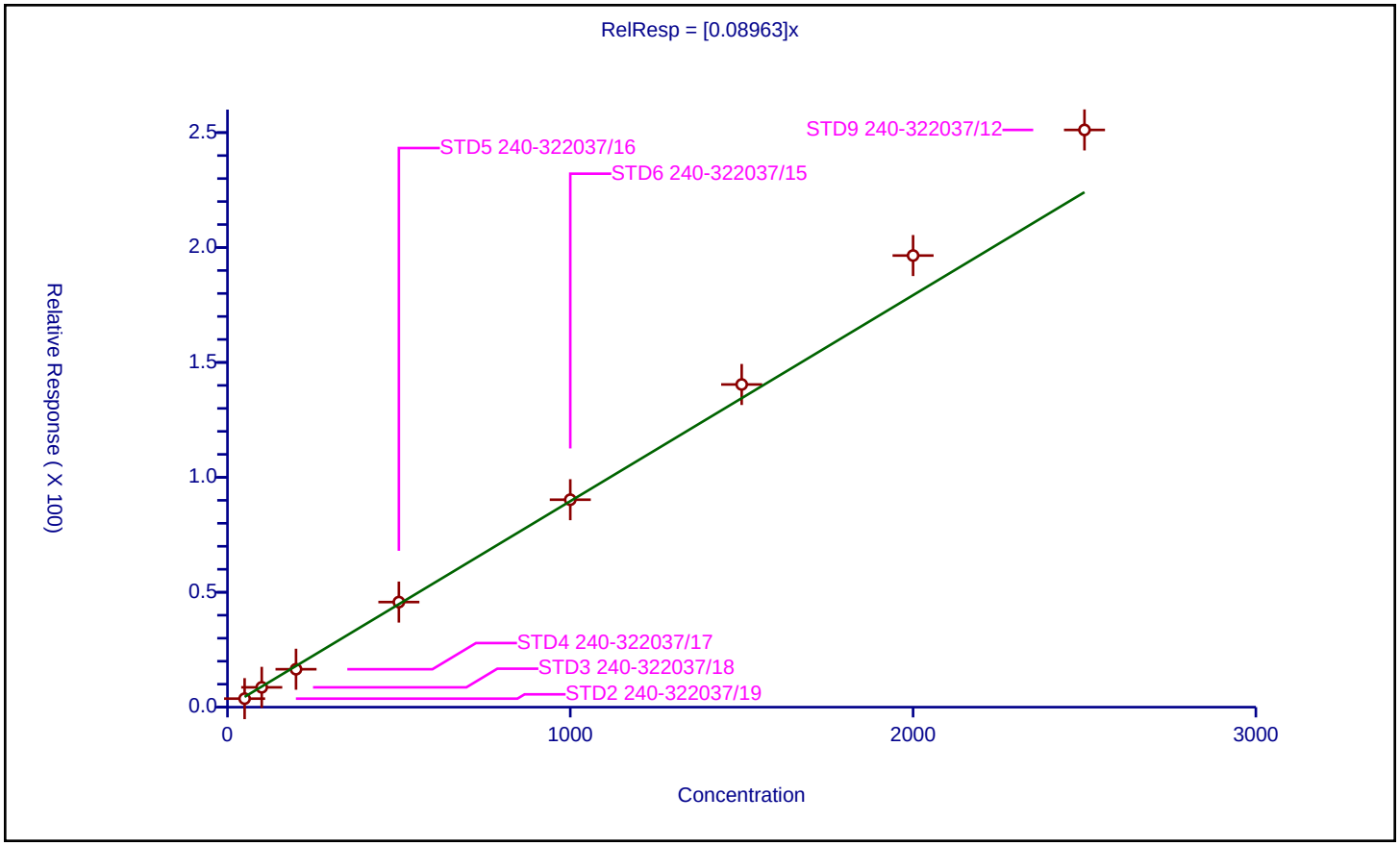
Curve Coefficients

Intercept:	0
Slope:	0.08963

Error Coefficients

Standard Error:	198000
Relative Standard Error:	9.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	3.707977	400.0	539917.0	0.07416	Y
2	STD3 240-322037/18	100.0	8.63088	400.0	639564.0	0.086309	Y
3	STD4 240-322037/17	200.0	16.501204	400.0	603156.0	0.082506	Y
4	STD5 240-322037/16	500.0	45.727106	400.0	591929.0	0.091454	Y
5	STD6 240-322037/15	1000.0	90.271552	400.0	593219.0	0.090272	Y
6	STD7 240-322037/14	1500.0	140.404282	400.0	601164.0	0.093603	Y
7	STD8 240-322037/13	2000.0	196.508127	400.0	585932.0	0.098254	Y
8	STD9 240-322037/12	2500.0	251.161302	400.0	562300.0	0.100465	Y



Calibration / Disulfoton

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

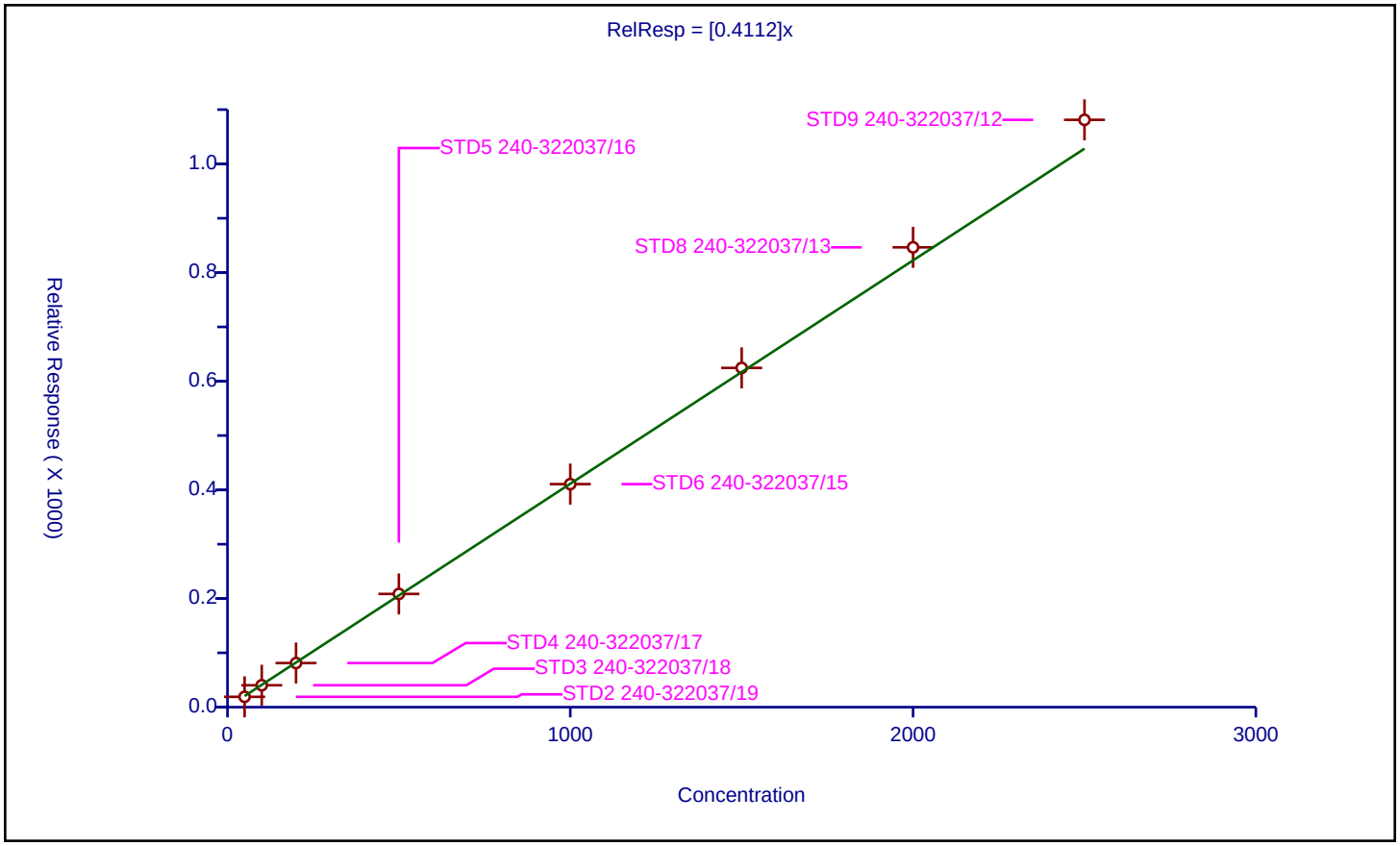
Curve Coefficients

Intercept:	0
Slope:	0.4112

Error Coefficients

Standard Error:	862000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	19.044409	400.0	539917.0	0.380888	Y
2	STD3 240-322037/18	100.0	40.347487	400.0	639564.0	0.403475	Y
3	STD4 240-322037/17	200.0	81.194252	400.0	603156.0	0.405971	Y
4	STD5 240-322037/16	500.0	208.43243	400.0	591929.0	0.416865	Y
5	STD6 240-322037/15	1000.0	410.611933	400.0	593219.0	0.410612	Y
6	STD7 240-322037/14	1500.0	624.525753	400.0	601164.0	0.416351	Y
7	STD8 240-322037/13	2000.0	846.470922	400.0	585932.0	0.423235	Y
8	STD9 240-322037/12	2500.0	1081.155967	400.0	562300.0	0.432462	Y



Calibration / Dinoseb

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

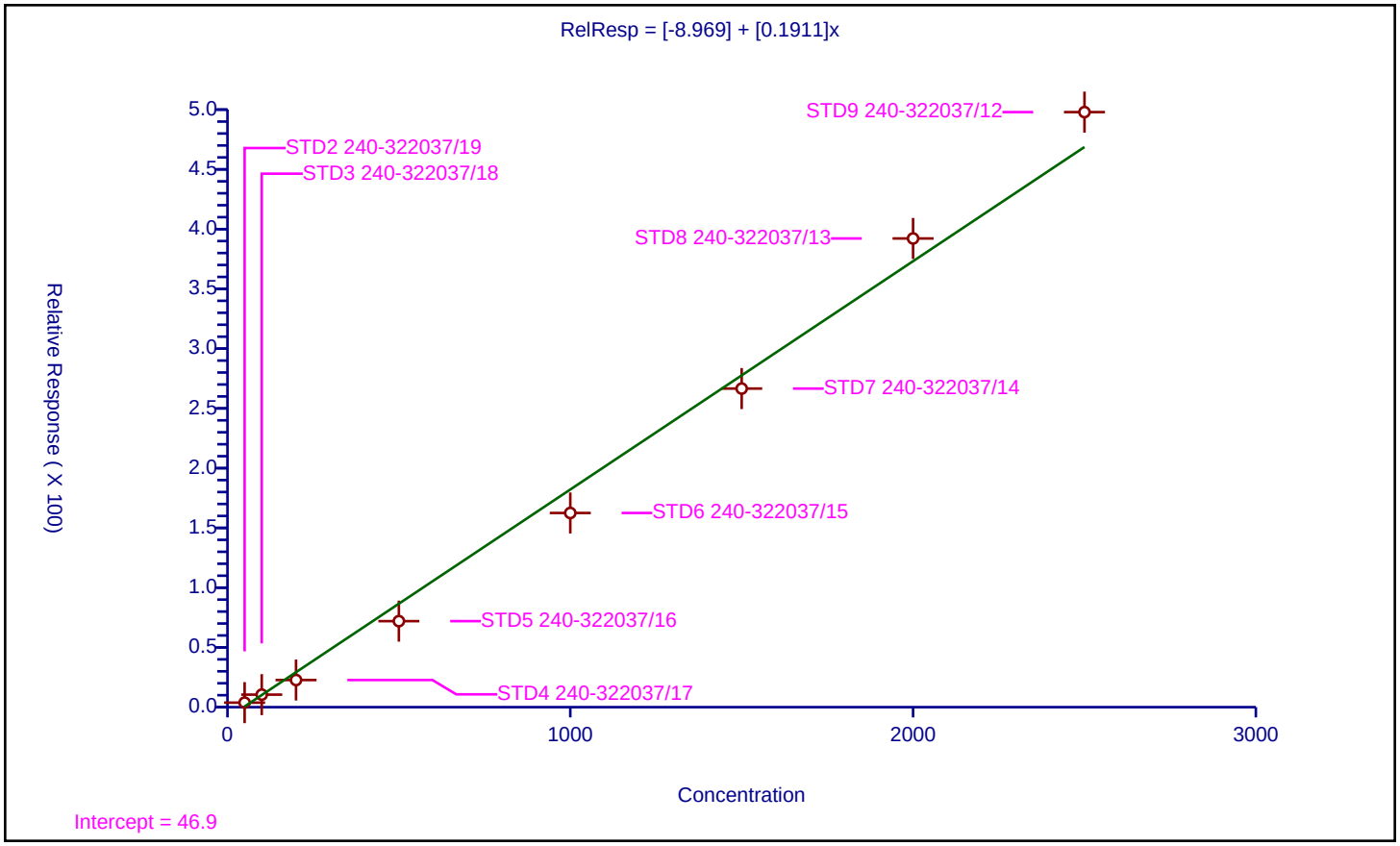
Curve Coefficients

Intercept:	-8.969
Slope:	0.1911

Error Coefficients

Standard Error:	418000
Relative Standard Error:	17.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	3.794657	400.0	539917.0	0.075893	Y
2	STD3 240-322037/18	100.0	10.48089	400.0	639564.0	0.104809	Y
3	STD4 240-322037/17	200.0	22.708553	400.0	603156.0	0.113543	Y
4	STD5 240-322037/16	500.0	71.987012	400.0	591929.0	0.143974	Y
5	STD6 240-322037/15	1000.0	162.480972	400.0	593219.0	0.162481	Y
6	STD7 240-322037/14	1500.0	266.574179	400.0	601164.0	0.177716	Y
7	STD8 240-322037/13	2000.0	392.182711	400.0	585932.0	0.196091	Y
8	STD9 240-322037/12	2500.0	497.912858	400.0	562300.0	0.199165	Y



Calibration / Methyl parathion

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

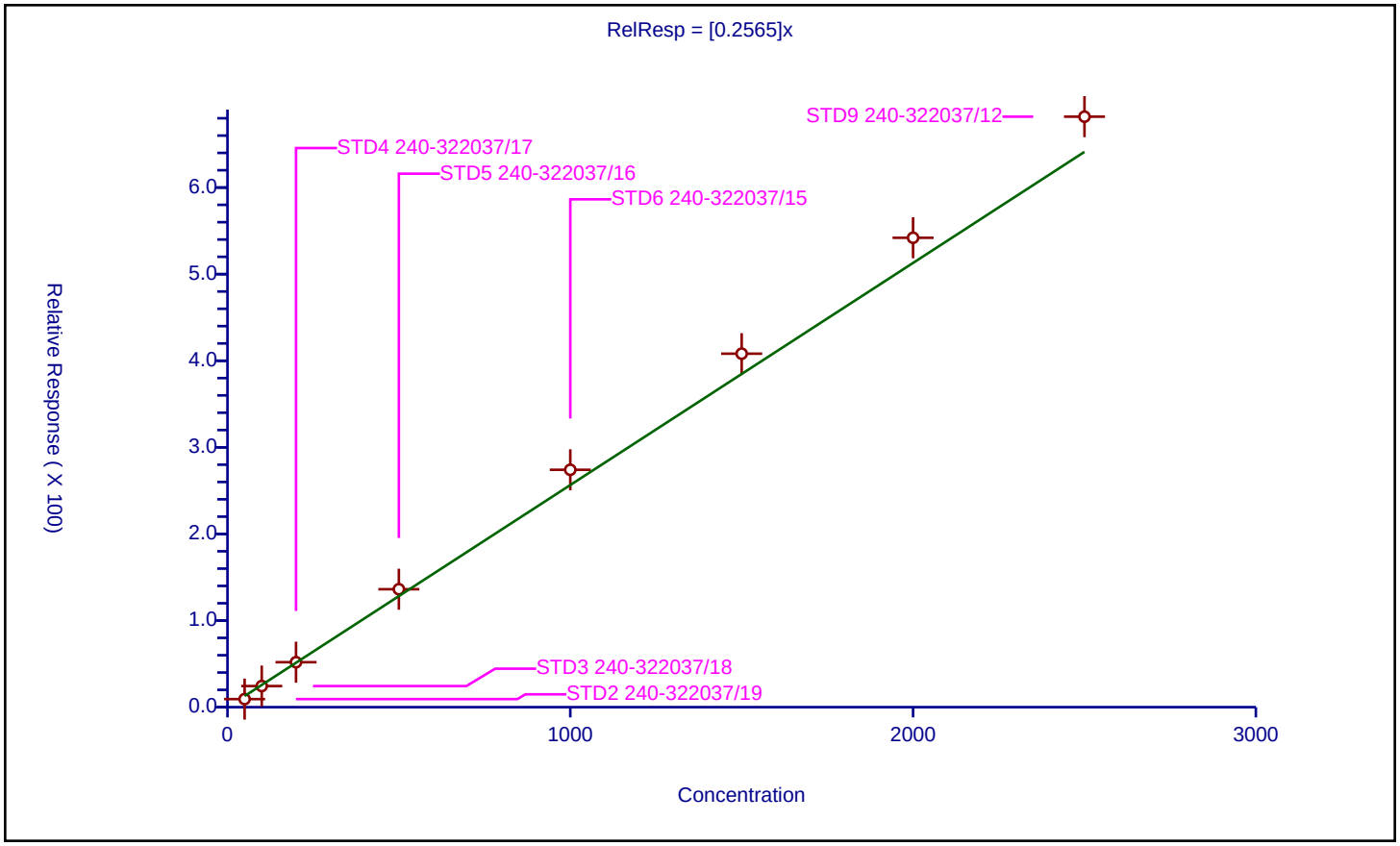
Curve Coefficients

Intercept:	0
Slope:	0.2565

Error Coefficients

Standard Error:	552000
Relative Standard Error:	11.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	9.311061	400.0	539917.0	0.186221	Y
2	STD3 240-322037/18	100.0	24.378483	400.0	639564.0	0.243785	Y
3	STD4 240-322037/17	200.0	51.898348	400.0	603156.0	0.259492	Y
4	STD5 240-322037/16	500.0	136.180522	400.0	591929.0	0.272361	Y
5	STD6 240-322037/15	1000.0	274.110573	400.0	593219.0	0.274111	Y
6	STD7 240-322037/14	1500.0	408.181461	400.0	601164.0	0.272121	Y
7	STD8 240-322037/13	2000.0	542.004874	400.0	585932.0	0.271002	Y
8	STD9 240-322037/12	2500.0	681.84101	400.0	562300.0	0.272736	Y



Calibration / Ethyl Parathion

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

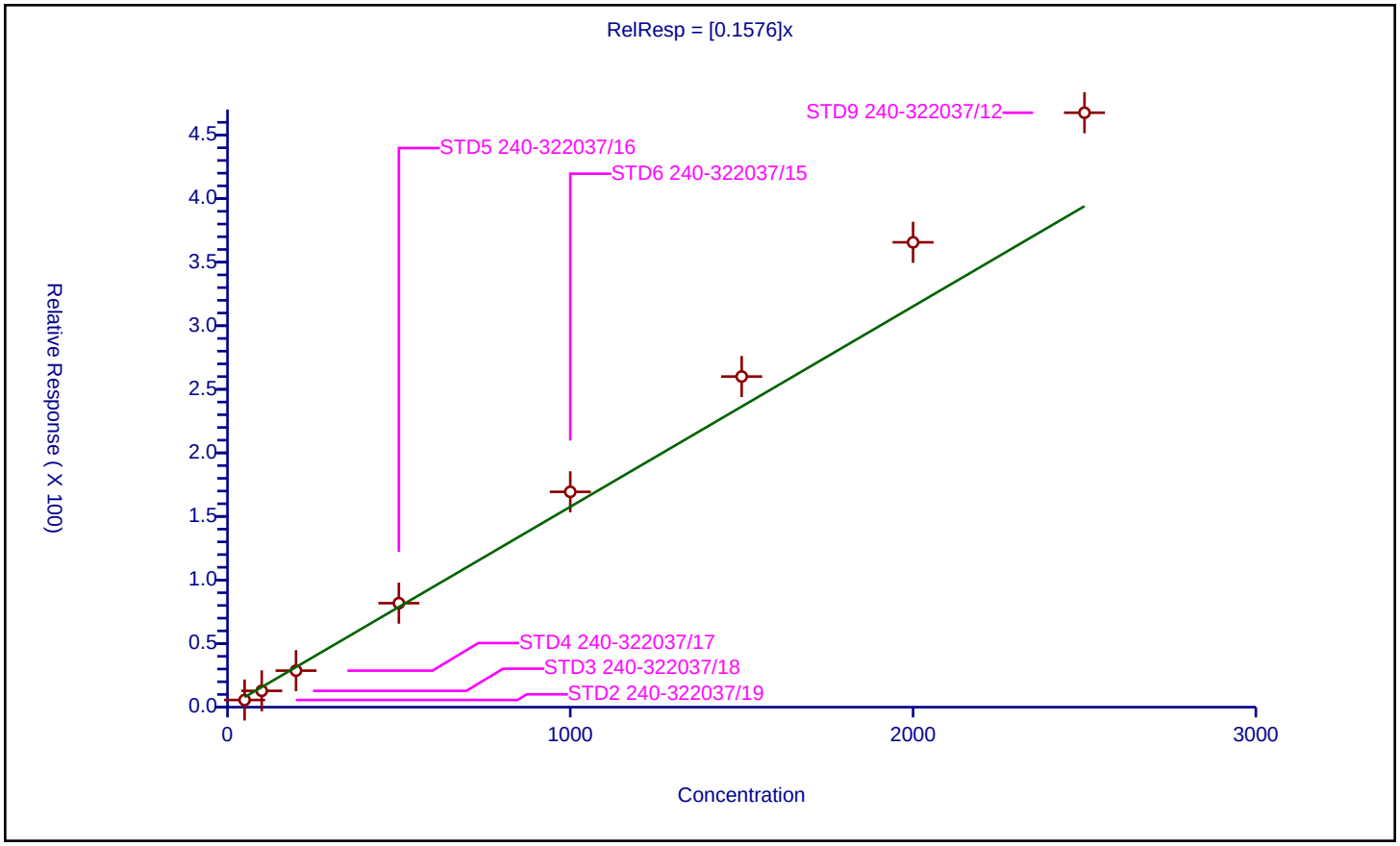
Curve Coefficients

Intercept:	0
Slope:	0.1576

Error Coefficients

Standard Error:	368000
Relative Standard Error:	16.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	5.636422	400.0	539917.0	0.112728	Y
2	STD3 240-322037/18	100.0	12.836245	400.0	639564.0	0.128362	Y
3	STD4 240-322037/17	200.0	28.731539	400.0	603156.0	0.143658	Y
4	STD5 240-322037/16	500.0	81.804406	400.0	591929.0	0.163609	Y
5	STD6 240-322037/15	1000.0	169.364097	400.0	593219.0	0.169364	Y
6	STD7 240-322037/14	1500.0	260.047508	400.0	601164.0	0.173365	Y
7	STD8 240-322037/13	2000.0	365.619219	400.0	585932.0	0.18281	Y
8	STD9 240-322037/12	2500.0	467.553263	400.0	562300.0	0.187021	Y



Calibration / 4-Nitroquinoline-1-oxide

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

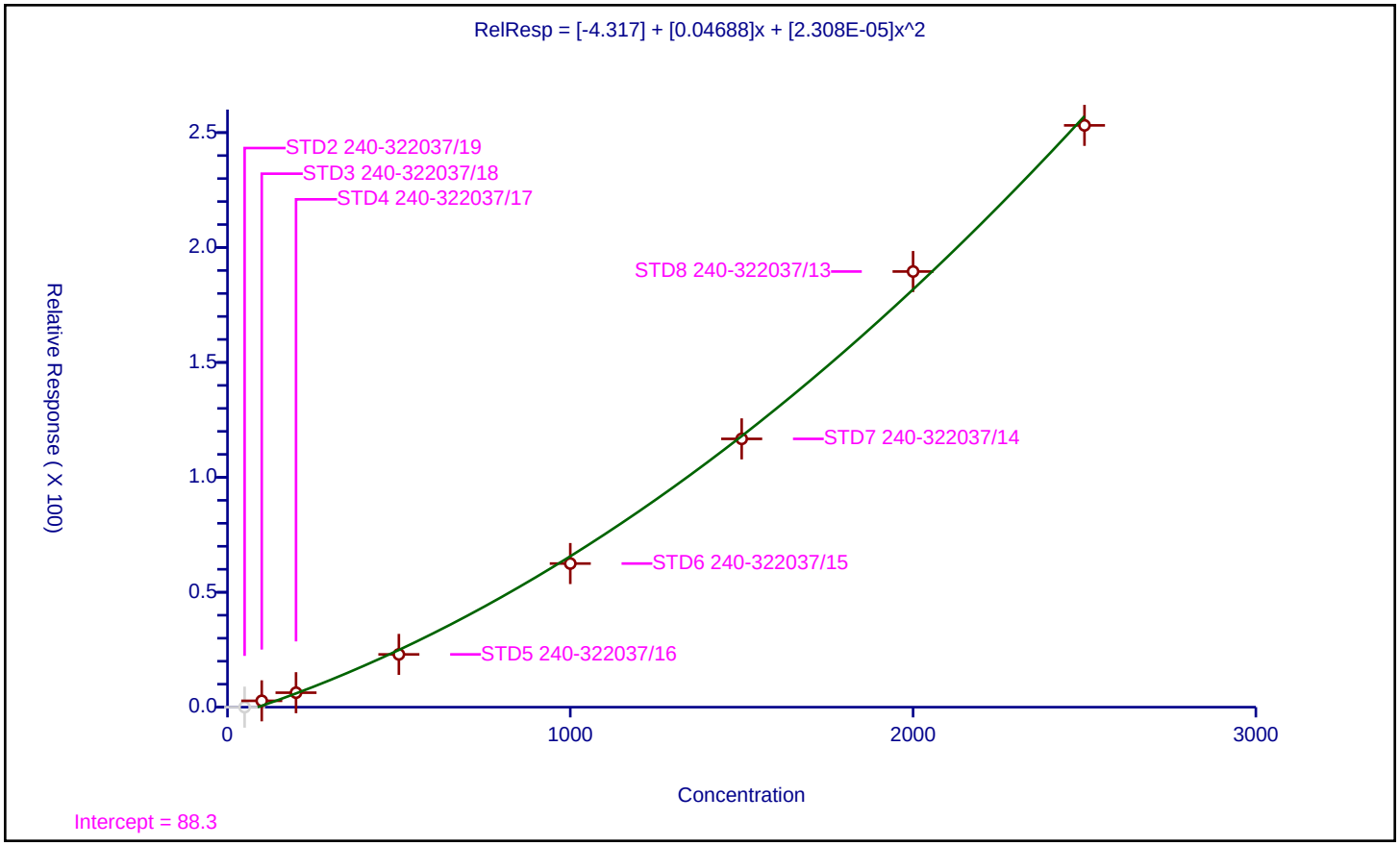
Curve Coefficients

Intercept:	-4.317
Slope:	0.04688
Second Order:	2.308E-05

Error Coefficients

Standard Error:	247000
Relative Standard Error:	20.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	0.0	400.0	539917.0	0.0	N
2	STD3 240-322037/18	100.0	2.758129	400.0	639564.0	0.027581	Y
3	STD4 240-322037/17	200.0	6.292899	400.0	603156.0	0.031464	Y
4	STD5 240-322037/16	500.0	22.958159	400.0	591929.0	0.045916	Y
5	STD6 240-322037/15	1000.0	62.487547	400.0	593219.0	0.062488	Y
6	STD7 240-322037/14	1500.0	116.734868	400.0	601164.0	0.077823	Y
7	STD8 240-322037/13	2000.0	189.555785	400.0	585932.0	0.094778	Y
8	STD9 240-322037/12	2500.0	253.150276	400.0	562300.0	0.10126	Y



Calibration / Methapyrilene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

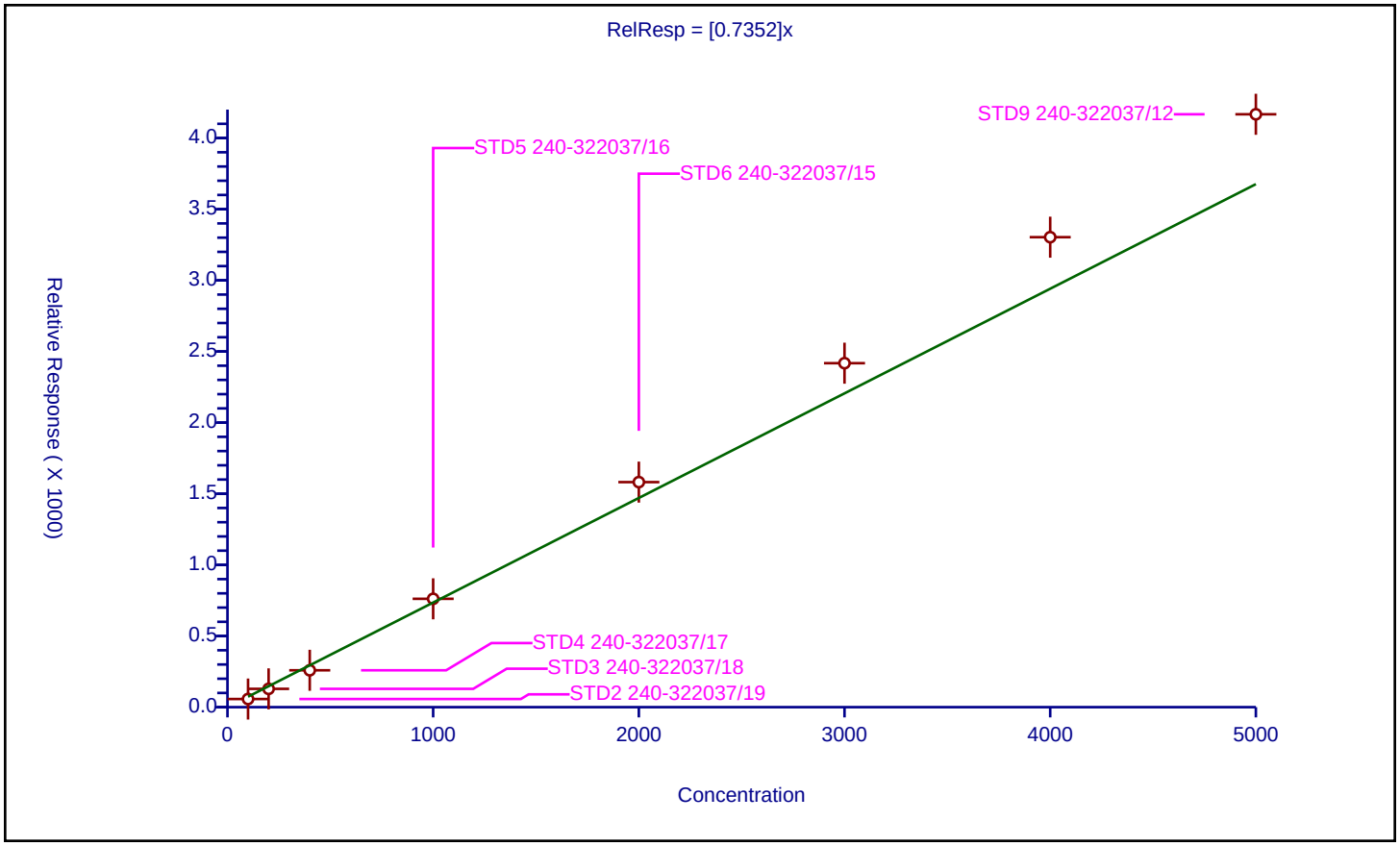
Curve Coefficients

Intercept:	0
Slope:	0.7352

Error Coefficients

Standard Error:	3330000
Relative Standard Error:	13.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	100.0	57.242873	400.0	539917.0	0.572429	Y
2	STD3 240-322037/18	200.0	128.77085	400.0	639564.0	0.643854	Y
3	STD4 240-322037/17	400.0	259.139592	400.0	603156.0	0.647849	Y
4	STD5 240-322037/16	1000.0	761.608233	400.0	591929.0	0.761608	Y
5	STD6 240-322037/15	2000.0	1581.817845	400.0	593219.0	0.790909	Y
6	STD7 240-322037/14	3000.0	2417.672382	400.0	601164.0	0.805891	Y
7	STD8 240-322037/13	4000.0	3303.287071	400.0	585932.0	0.825822	Y
8	STD9 240-322037/12	5000.0	4167.169838	400.0	562300.0	0.833434	Y



Calibration / Isodrin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

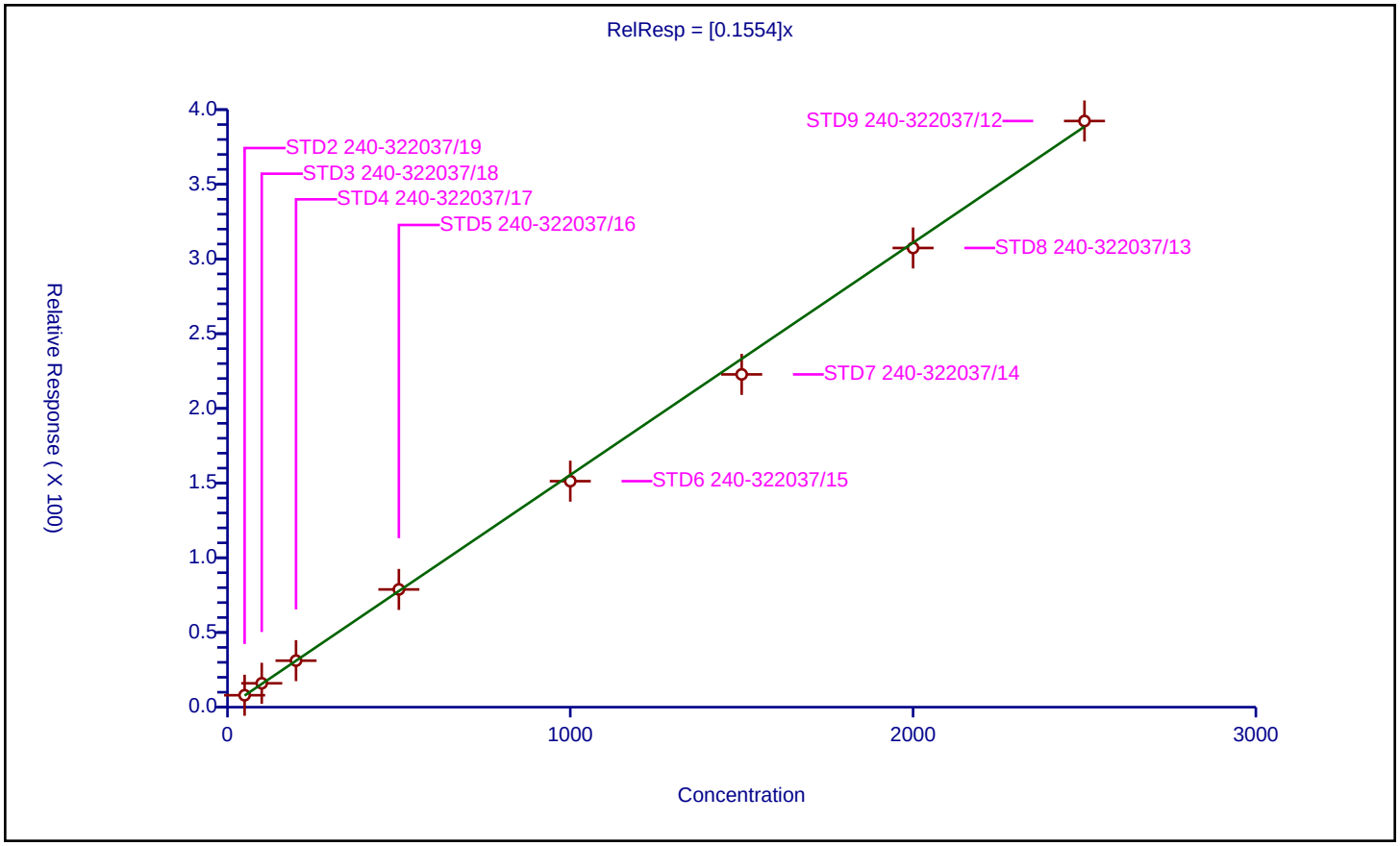
Curve Coefficients

Intercept:	0
Slope:	0.1554

Error Coefficients

Standard Error:	313000
Relative Standard Error:	2.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	7.994562	400.0	539917.0	0.159891	Y
2	STD3 240-322037/18	100.0	15.990268	400.0	639564.0	0.159903	Y
3	STD4 240-322037/17	200.0	31.141529	400.0	603156.0	0.155708	Y
4	STD5 240-322037/16	500.0	78.818237	400.0	591929.0	0.157636	Y
5	STD6 240-322037/15	1000.0	151.287804	400.0	593219.0	0.151288	Y
6	STD7 240-322037/14	1500.0	222.750531	400.0	601164.0	0.1485	Y
7	STD8 240-322037/13	2000.0	307.376283	400.0	585932.0	0.153688	Y
8	STD9 240-322037/12	2500.0	392.376312	400.0	562300.0	0.156951	Y



Calibration / Aramite Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

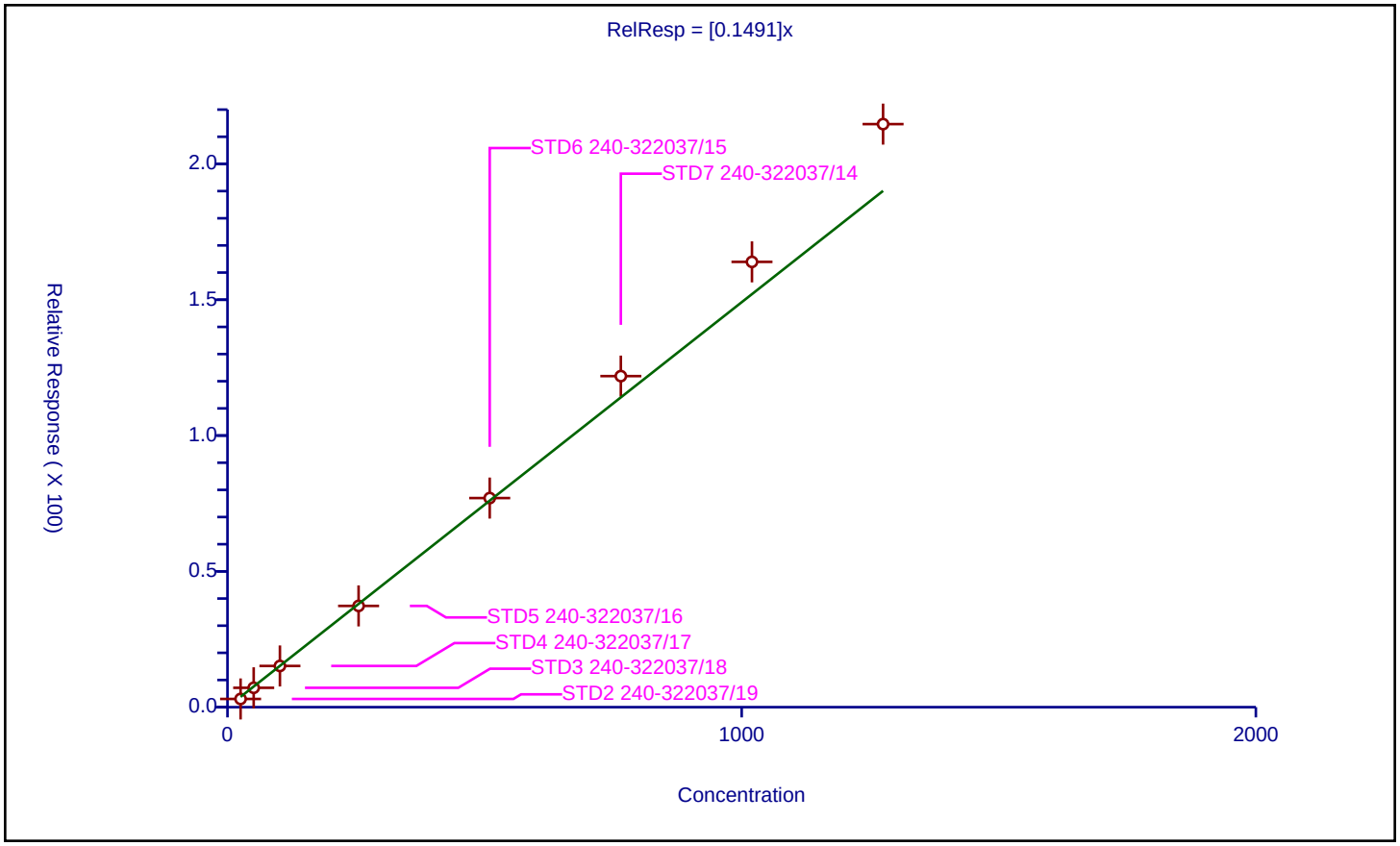
Curve Coefficients

Intercept:	0
Slope:	0.1491

Error Coefficients

Standard Error:	155000
Relative Standard Error:	10.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	25.5	3.020995	400.0	468455.0	0.11847	Y
2	STD3 240-322037/18	51.0	7.132841	400.0	524167.0	0.13986	Y
3	STD4 240-322037/17	102.0	15.174288	400.0	491542.0	0.148768	Y
4	STD5 240-322037/16	255.0	37.278256	400.0	516022.0	0.146189	Y
5	STD6 240-322037/15	510.0	76.986996	400.0	514835.0	0.150955	Y
6	STD7 240-322037/14	765.0	121.883866	400.0	538913.0	0.159325	Y
7	STD8 240-322037/13	1020.0	163.937089	400.0	546739.0	0.160723	Y
8	STD9 240-322037/12	1275.0	214.665975	400.0	524152.0	0.168365	Y



Calibration / Aramite Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

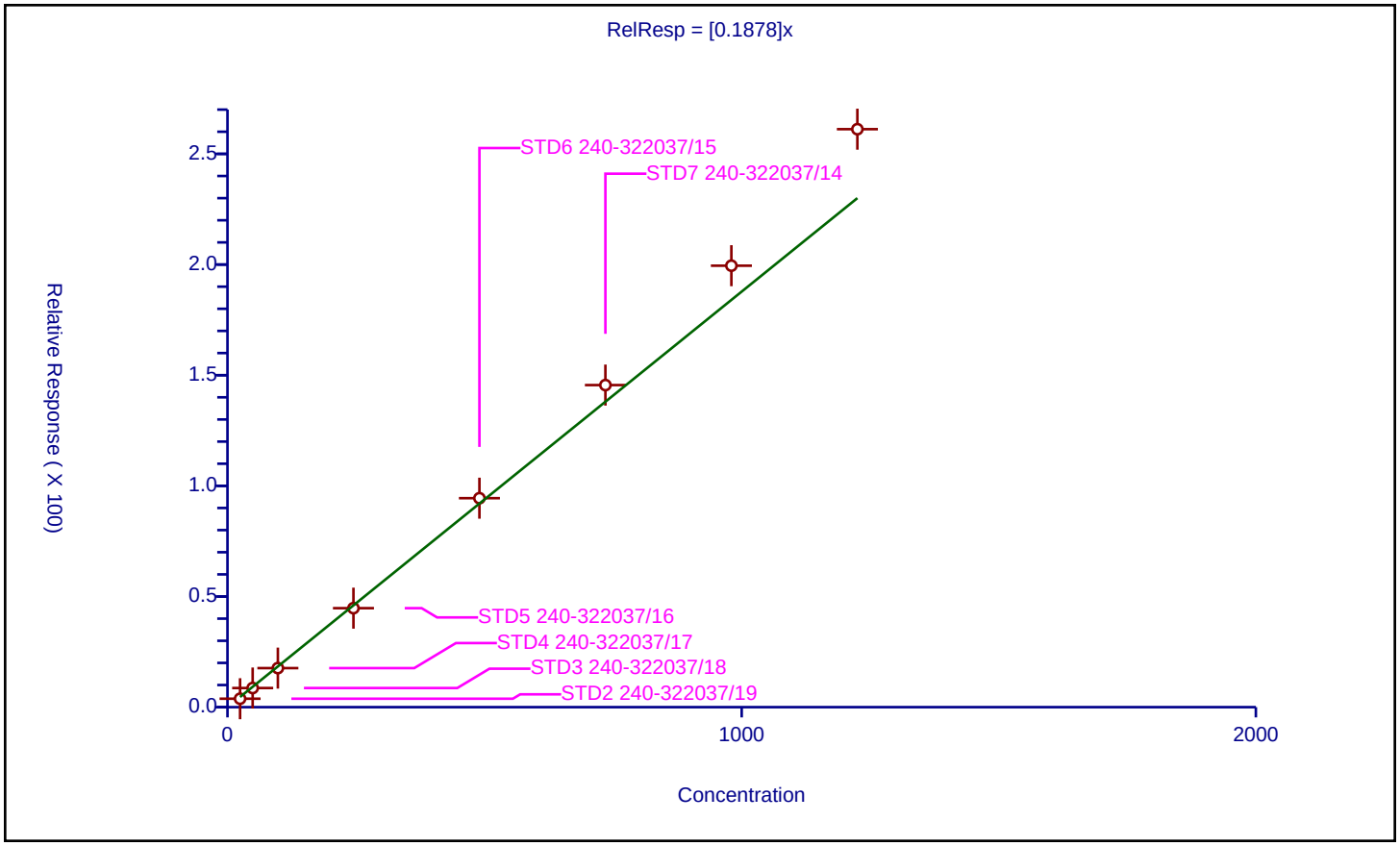
Curve Coefficients

Intercept:	0
Slope:	0.1878

Error Coefficients

Standard Error:	188000
Relative Standard Error:	9.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	24.5	3.812533	400.0	468455.0	0.155614	Y
2	STD3 240-322037/18	49.0	8.642284	400.0	524167.0	0.176373	Y
3	STD4 240-322037/17	98.0	17.653018	400.0	491542.0	0.180133	Y
4	STD5 240-322037/16	245.0	44.733752	400.0	516022.0	0.182587	Y
5	STD6 240-322037/15	490.0	94.417823	400.0	514835.0	0.192689	Y
6	STD7 240-322037/14	735.0	145.524046	400.0	538913.0	0.197992	Y
7	STD8 240-322037/13	980.0	199.475069	400.0	546739.0	0.203546	Y
8	STD9 240-322037/12	1225.0	261.150201	400.0	524152.0	0.213184	Y



Calibration / p-Dimethylamino azobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

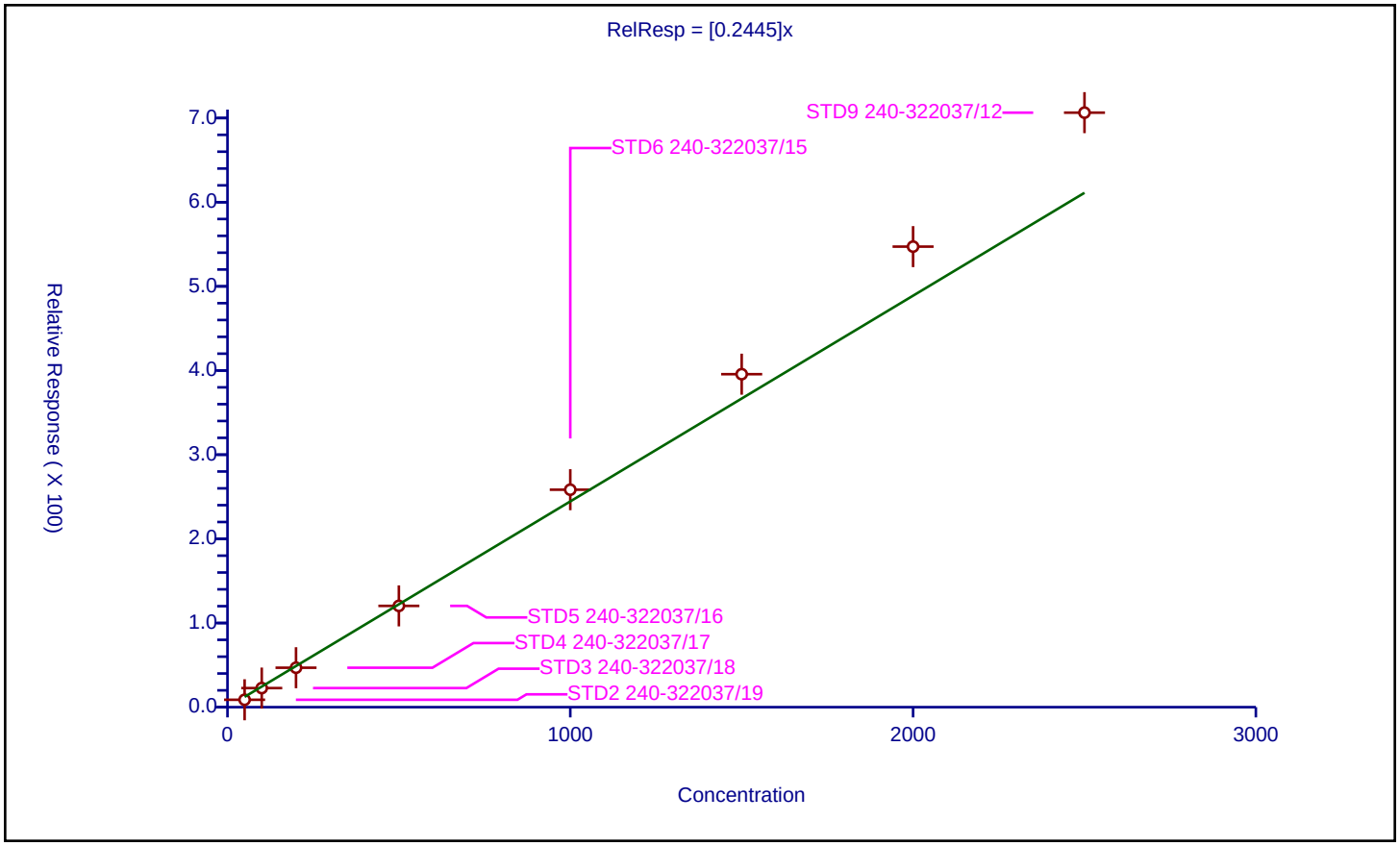
Curve Coefficients

Intercept:	0
Slope:	0.2445

Error Coefficients

Standard Error:	512000
Relative Standard Error:	13.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	8.785476	400.0	468455.0	0.17571	Y
2	STD3 240-322037/18	100.0	22.667585	400.0	524167.0	0.226676	Y
3	STD4 240-322037/17	200.0	46.866392	400.0	491542.0	0.234332	Y
4	STD5 240-322037/16	500.0	120.319676	400.0	516022.0	0.240639	Y
5	STD6 240-322037/15	1000.0	258.36705	400.0	514835.0	0.258367	Y
6	STD7 240-322037/14	1500.0	395.63937	400.0	538913.0	0.26376	Y
7	STD8 240-322037/13	2000.0	547.200035	400.0	546739.0	0.2736	Y
8	STD9 240-322037/12	2500.0	706.379066	400.0	524152.0	0.282552	Y



Calibration / Chlorobenzilate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

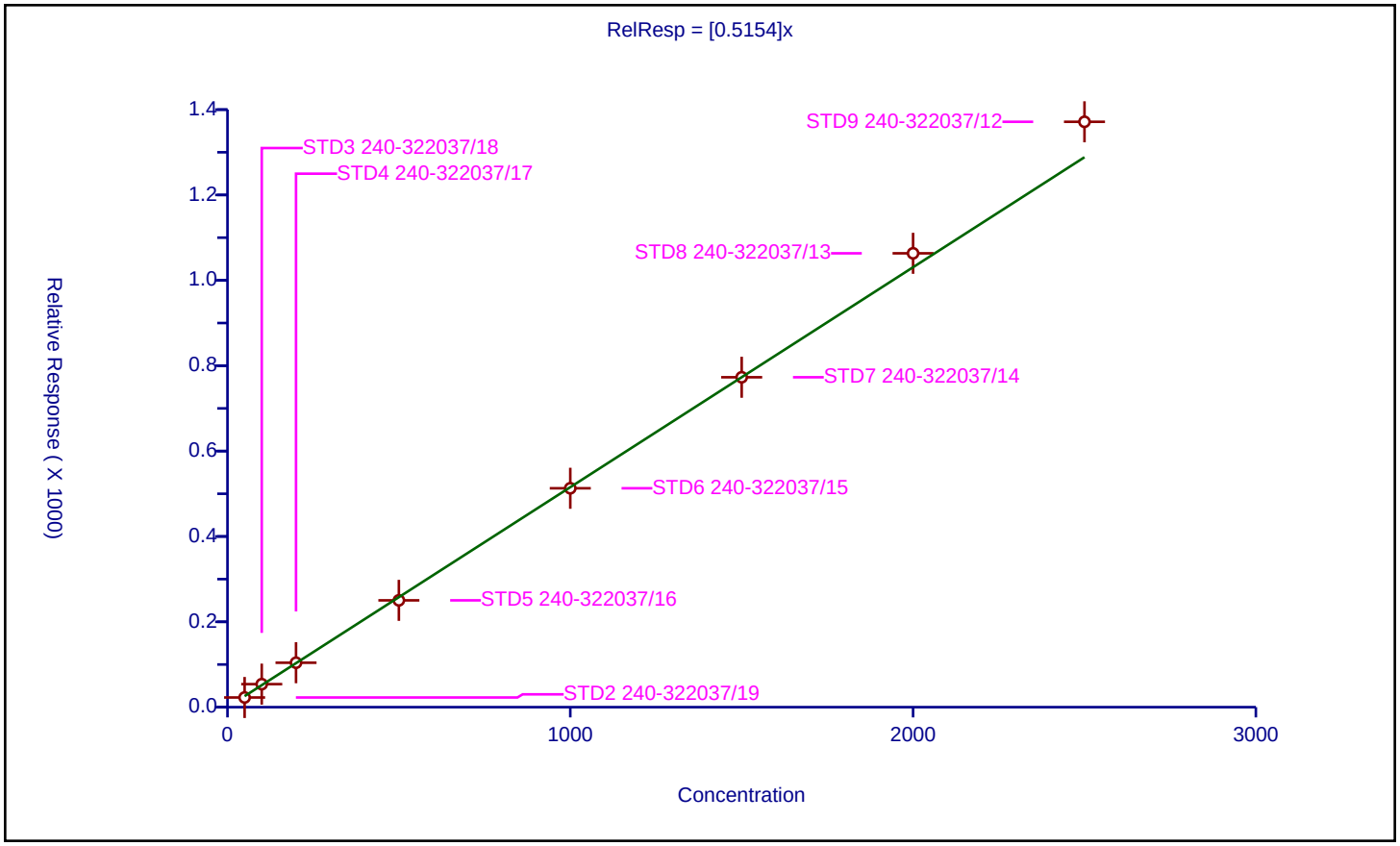
Curve Coefficients

Intercept:	0
Slope:	0.5154

Error Coefficients

Standard Error:	998000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	22.697591	400.0	468455.0	0.453952	Y
2	STD3 240-322037/18	100.0	53.936246	400.0	524167.0	0.539362	Y
3	STD4 240-322037/17	200.0	104.135964	400.0	491542.0	0.52068	Y
4	STD5 240-322037/16	500.0	250.256772	400.0	516022.0	0.500514	Y
5	STD6 240-322037/15	1000.0	512.855575	400.0	514835.0	0.512856	Y
6	STD7 240-322037/14	1500.0	772.917335	400.0	538913.0	0.515278	Y
7	STD8 240-322037/13	2000.0	1063.339546	400.0	546739.0	0.53167	Y
8	STD9 240-322037/12	2500.0	1371.457898	400.0	524152.0	0.548583	Y



Calibration / Famphur

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

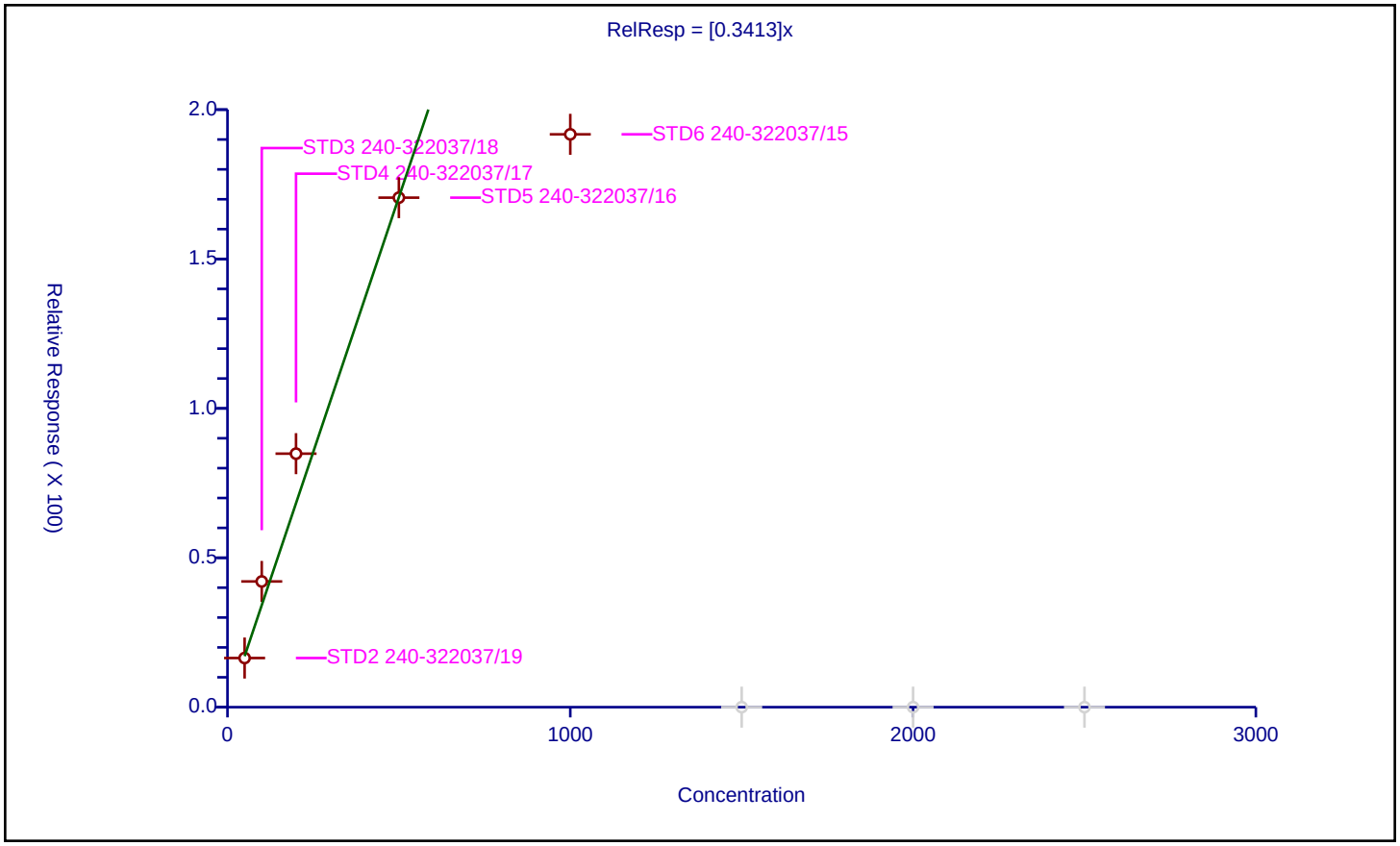
Curve Coefficients

Intercept:	0
Slope:	0.3413

Error Coefficients

Standard Error:	176000
Relative Standard Error:	27.7
Correlation Coefficient:	0.848
Coefficient of Determination (Adjusted):	0.863

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	16.440427	400.0	468455.0	0.328809	Y
2	STD3 240-322037/18	100.0	42.071325	400.0	524167.0	0.420713	Y
3	STD4 240-322037/17	200.0	84.844835	400.0	491542.0	0.424224	Y
4	STD5 240-322037/16	500.0	170.528388	400.0	516022.0	0.341057	Y
5	STD6 240-322037/15	1000.0	191.72667	400.0	514835.0	0.191727	Y
6	STD7 240-322037/14	1500.0	0.0	400.0	538913.0	0.0	N
7	STD8 240-322037/13	2000.0	0.0	400.0	546739.0	0.0	N
8	STD9 240-322037/12	2500.0	0.0	400.0	524152.0	0.0	N



Calibration / 3,3'-Dimethylbenzidine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

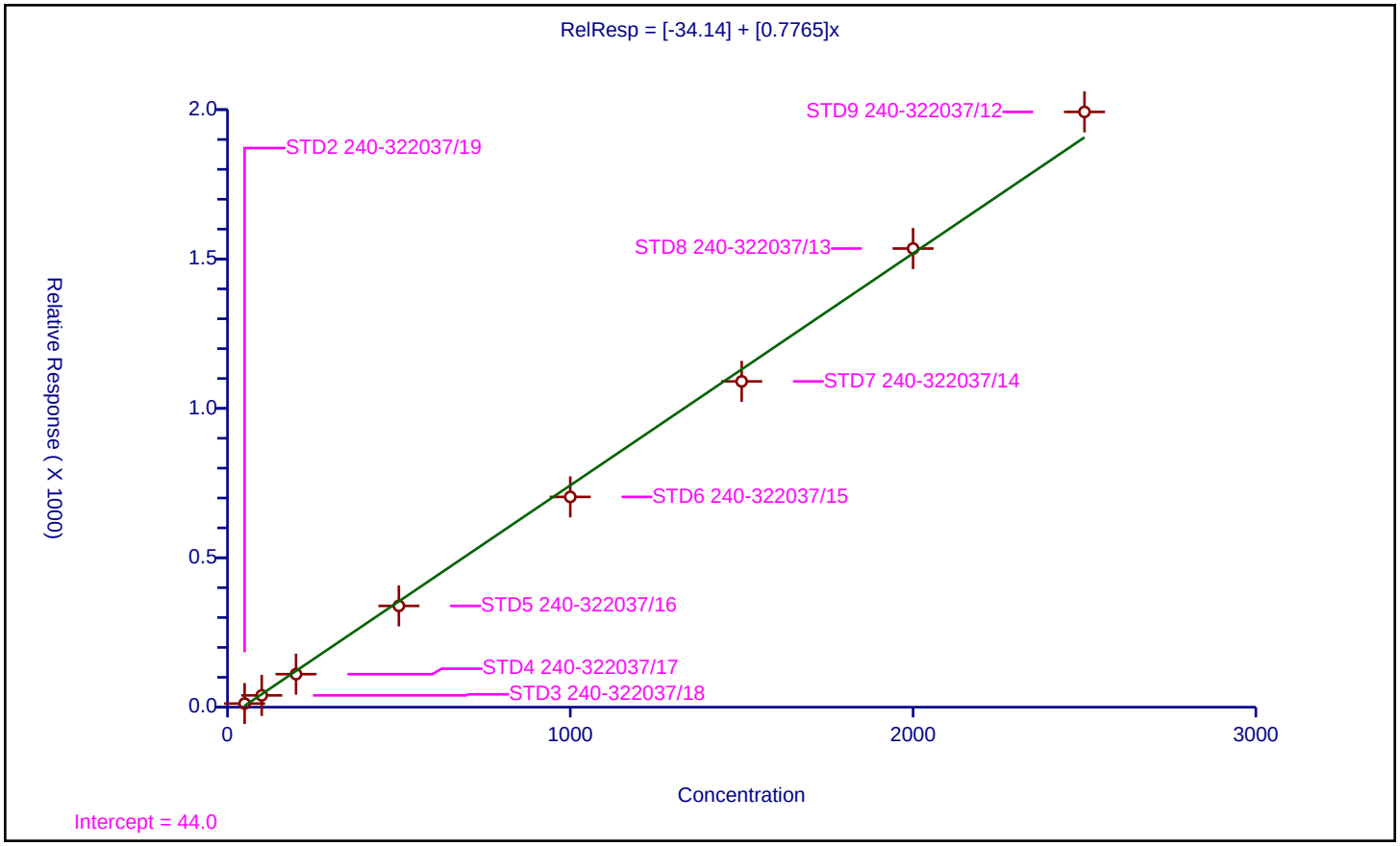
Curve Coefficients

Intercept:	-34.14
Slope:	0.7765

Error Coefficients

Standard Error:	1550000
Relative Standard Error:	9.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	12.062631	400.0	468455.0	0.241253	Y
2	STD3 240-322037/18	100.0	39.462996	400.0	524167.0	0.39463	Y
3	STD4 240-322037/17	200.0	110.456482	400.0	491542.0	0.552282	Y
4	STD5 240-322037/16	500.0	338.963843	400.0	516022.0	0.677928	Y
5	STD6 240-322037/15	1000.0	703.698855	400.0	514835.0	0.703699	Y
6	STD7 240-322037/14	1500.0	1090.313279	400.0	538913.0	0.726876	Y
7	STD8 240-322037/13	2000.0	1535.074688	400.0	546739.0	0.767537	Y
8	STD9 240-322037/12	2500.0	1992.32589	400.0	524152.0	0.79693	Y



Calibration / 2-Acetylaminofluorene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

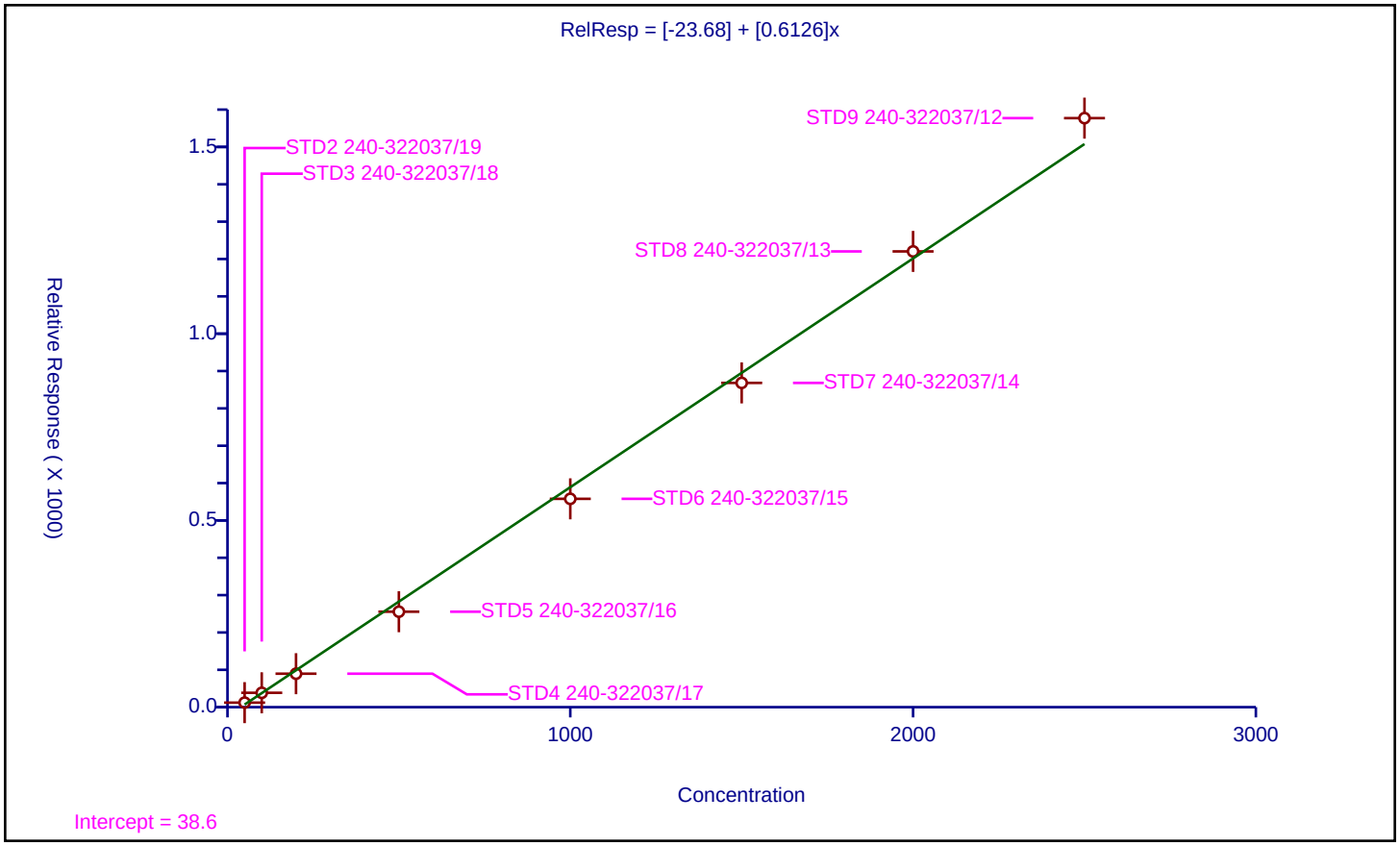
Curve Coefficients

Intercept:	-23.68
Slope:	0.6126

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	8.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	12.130941	400.0	468455.0	0.242619	Y
2	STD3 240-322037/18	100.0	38.439658	400.0	524167.0	0.384397	Y
3	STD4 240-322037/17	200.0	89.585834	400.0	491542.0	0.447929	Y
4	STD5 240-322037/16	500.0	255.622435	400.0	516022.0	0.511245	Y
5	STD6 240-322037/15	1000.0	557.835423	400.0	514835.0	0.557835	Y
6	STD7 240-322037/14	1500.0	868.199505	400.0	538913.0	0.5788	Y
7	STD8 240-322037/13	2000.0	1220.316092	400.0	546739.0	0.610158	Y
8	STD9 240-322037/12	2500.0	1577.18906	400.0	524152.0	0.630876	Y



Calibration / 4,4'-Methylene bis(2-chloroaniline)

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

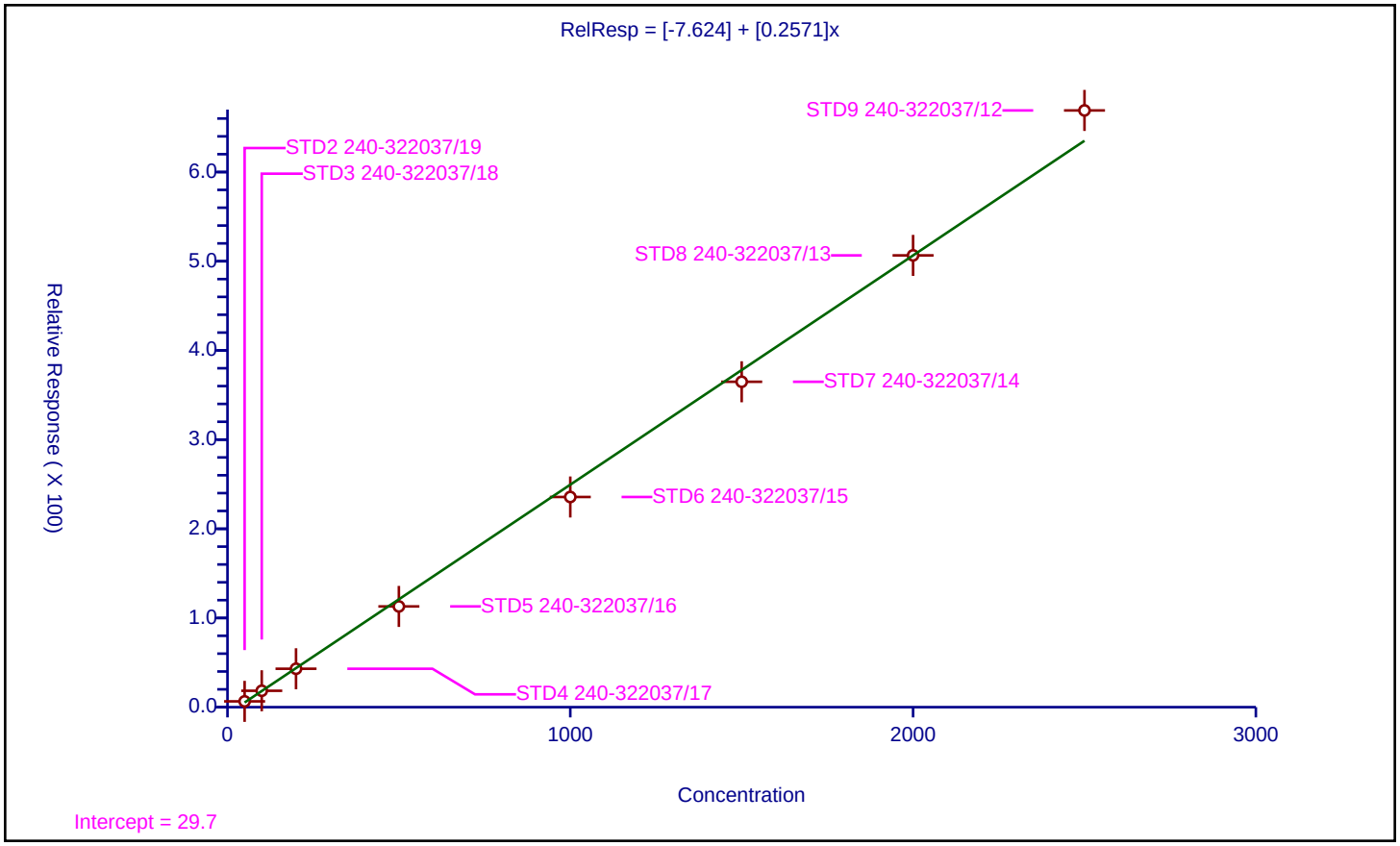
Curve Coefficients

Intercept:	-7.624
Slope:	0.2571

Error Coefficients

Standard Error:	517000
Relative Standard Error:	5.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	6.506495	400.0	468455.0	0.13013	Y
2	STD3 240-322037/18	100.0	18.37506	400.0	524167.0	0.183751	Y
3	STD4 240-322037/17	200.0	43.069361	400.0	491542.0	0.215347	Y
4	STD5 240-322037/16	500.0	112.963401	400.0	516022.0	0.225927	Y
5	STD6 240-322037/15	1000.0	235.649091	400.0	514835.0	0.235649	Y
6	STD7 240-322037/14	1500.0	364.845532	400.0	538913.0	0.24323	Y
7	STD8 240-322037/13	2000.0	506.55395	400.0	546739.0	0.253277	Y
8	STD9 240-322037/12	2500.0	669.078435	400.0	524152.0	0.267631	Y



Calibration / 6-Methylchrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

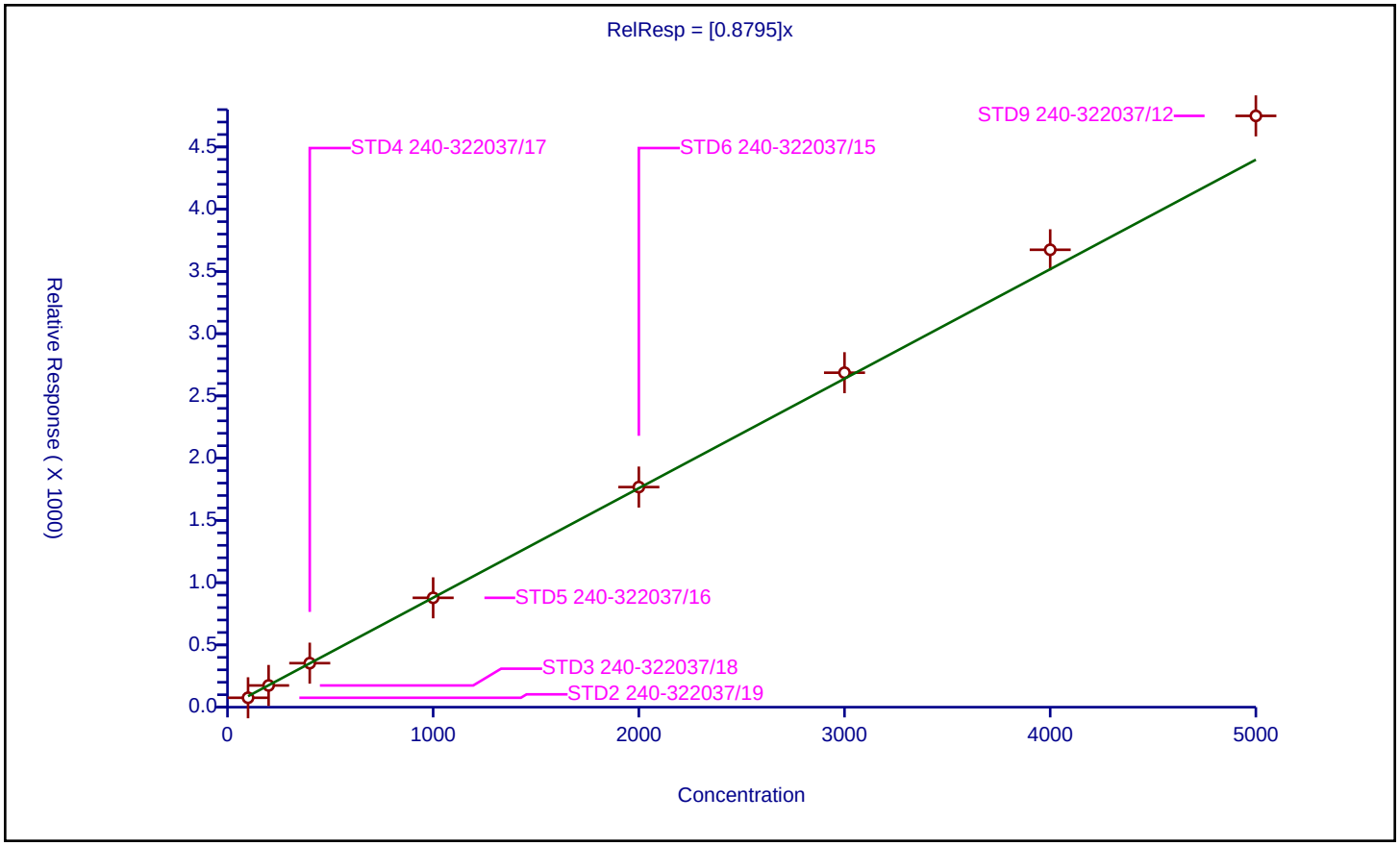
Curve Coefficients

Intercept:	0
Slope:	0.8795

Error Coefficients

Standard Error:	3460000
Relative Standard Error:	6.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	100.0	75.452285	400.0	468455.0	0.754523	Y
2	STD3 240-322037/18	200.0	174.30857	400.0	524167.0	0.871543	Y
3	STD4 240-322037/17	400.0	353.429819	400.0	491542.0	0.883575	Y
4	STD5 240-322037/16	1000.0	878.486576	400.0	516022.0	0.878487	Y
5	STD6 240-322037/15	2000.0	1767.9171	400.0	514835.0	0.883959	Y
6	STD7 240-322037/14	3000.0	2686.68375	400.0	538913.0	0.895561	Y
7	STD8 240-322037/13	4000.0	3674.130435	400.0	546739.0	0.918533	Y
8	STD9 240-322037/12	5000.0	4749.605458	400.0	524152.0	0.949921	Y



Calibration / 7,12-Dimethylbenz(a)anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

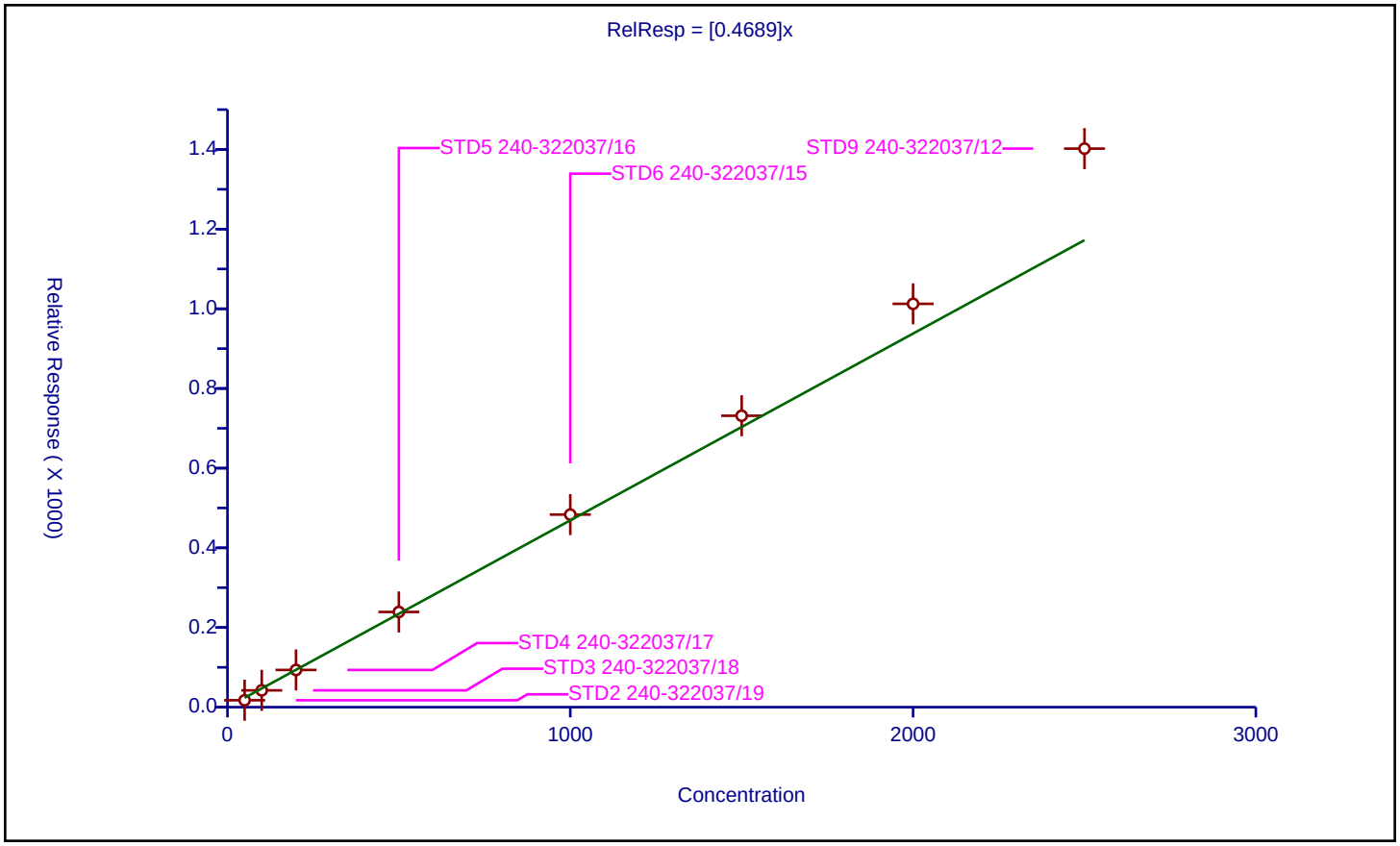
Curve Coefficients

Intercept:	0
Slope:	0.4689

Error Coefficients

Standard Error:	904000
Relative Standard Error:	13.4
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	17.313989	400.0	441331.0	0.34628	Y
2	STD3 240-322037/18	100.0	42.168658	400.0	509753.0	0.421687	Y
3	STD4 240-322037/17	200.0	93.429995	400.0	467473.0	0.46715	Y
4	STD5 240-322037/16	500.0	238.989564	400.0	468392.0	0.477979	Y
5	STD6 240-322037/15	1000.0	483.41926	400.0	469201.0	0.483419	Y
6	STD7 240-322037/14	1500.0	731.520726	400.0	501267.0	0.48768	Y
7	STD8 240-322037/13	2000.0	1012.437913	400.0	508156.0	0.506219	Y
8	STD9 240-322037/12	2500.0	1402.10383	400.0	479031.0	0.560842	Y



Calibration / 3-Methylcholanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

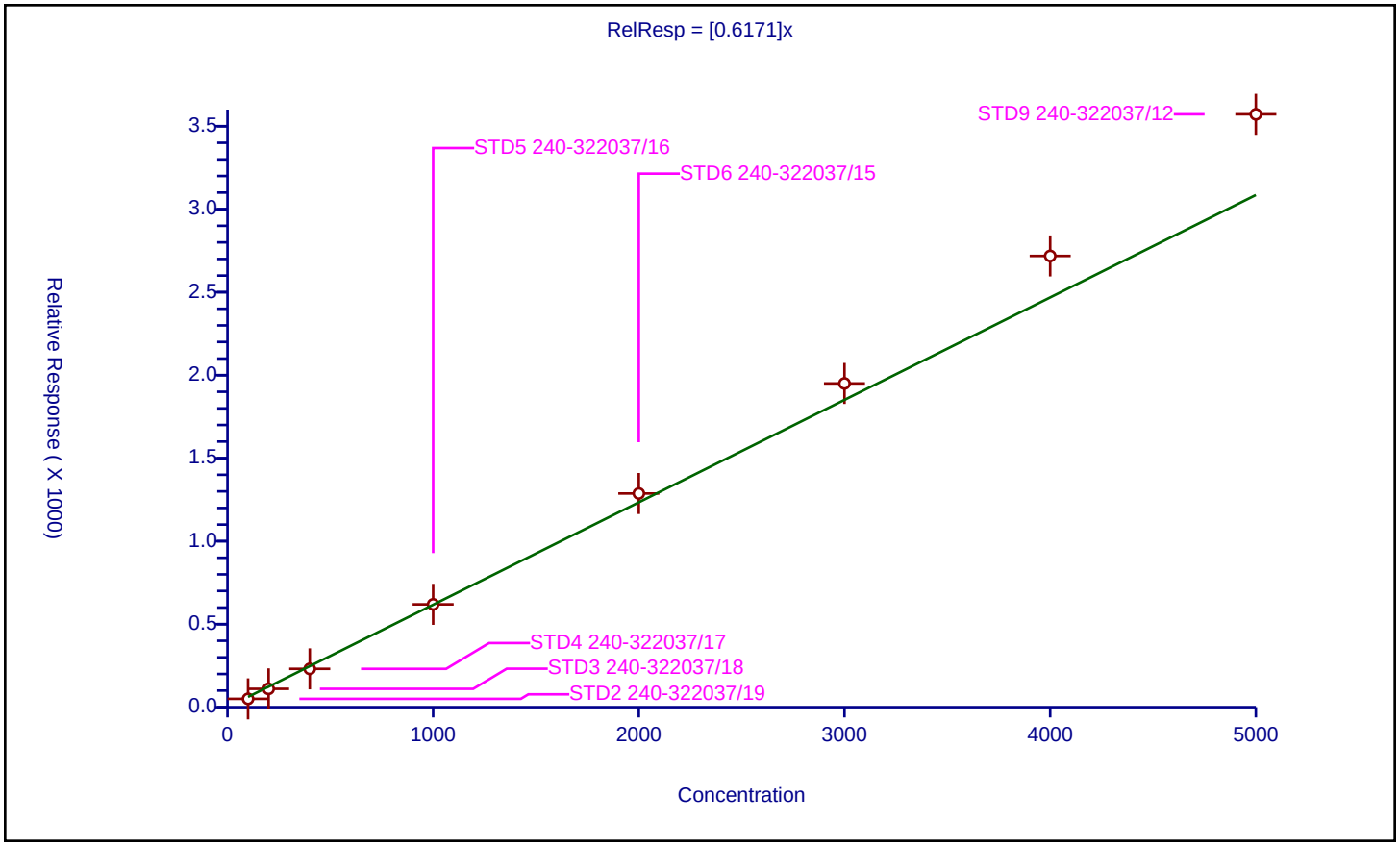
Curve Coefficients

Intercept:	0
Slope:	0.6171

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	11.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	100.0	50.116579	400.0	441331.0	0.501166	Y
2	STD3 240-322037/18	200.0	110.289493	400.0	509753.0	0.551447	Y
3	STD4 240-322037/17	400.0	230.745305	400.0	467473.0	0.576863	Y
4	STD5 240-322037/16	1000.0	619.445251	400.0	468392.0	0.619445	Y
5	STD6 240-322037/15	2000.0	1287.259831	400.0	469201.0	0.64363	Y
6	STD7 240-322037/14	3000.0	1950.316298	400.0	501267.0	0.650105	Y
7	STD8 240-322037/13	4000.0	2718.348696	400.0	508156.0	0.679587	Y
8	STD9 240-322037/12	5000.0	3571.639414	400.0	479031.0	0.714328	Y



Calibration / Dibenz[a,h]acridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

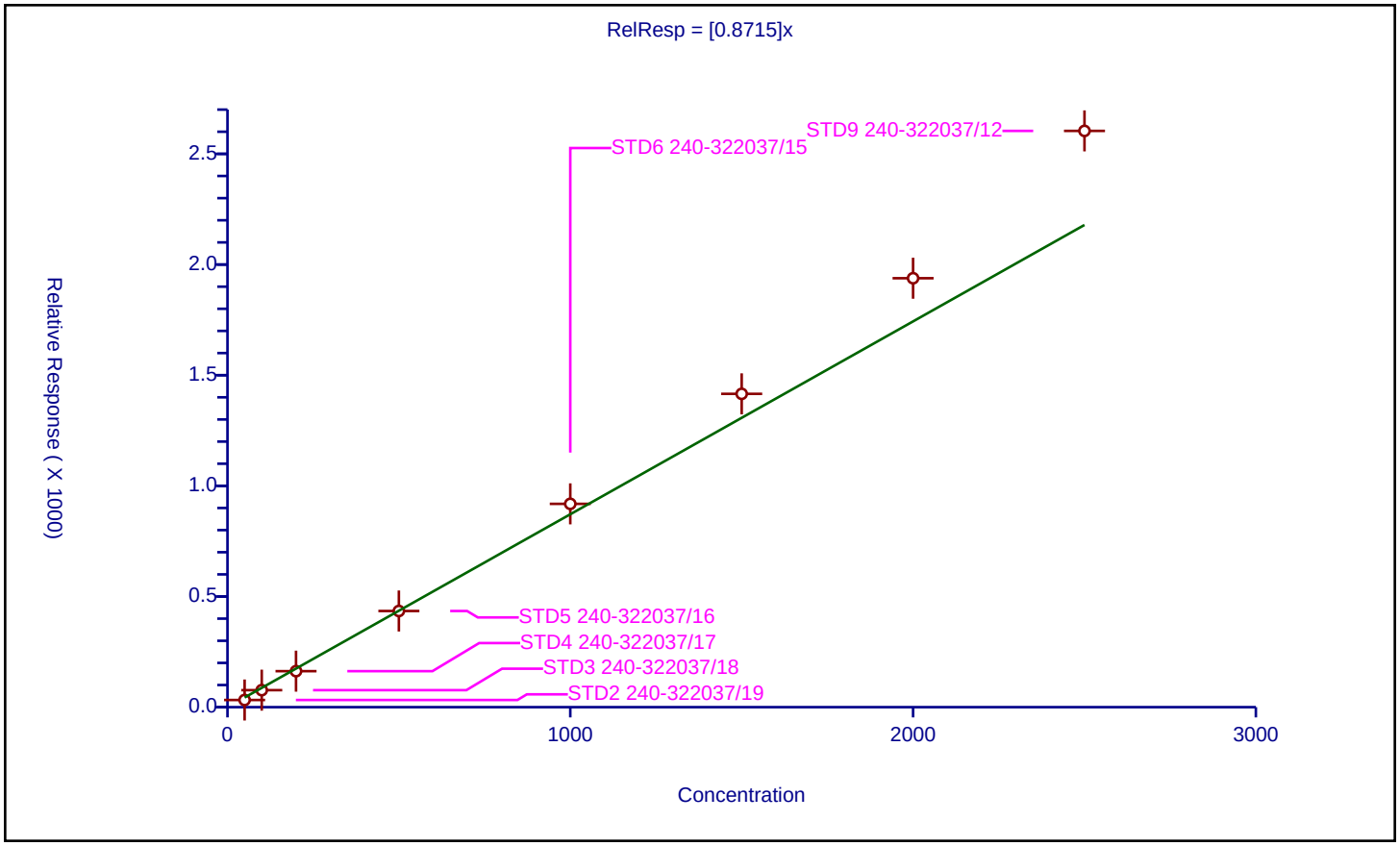
Curve Coefficients

Intercept:	0
Slope:	0.8715

Error Coefficients

Standard Error:	1710000
Relative Standard Error:	14.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-322037/19	50.0	32.413767	400.0	441331.0	0.648275	Y
2	STD3 240-322037/18	100.0	76.84506	400.0	509753.0	0.768451	Y
3	STD4 240-322037/17	200.0	162.698594	400.0	467473.0	0.813493	Y
4	STD5 240-322037/16	500.0	434.543716	400.0	468392.0	0.869087	Y
5	STD6 240-322037/15	1000.0	918.681759	400.0	469201.0	0.918682	Y
6	STD7 240-322037/14	1500.0	1415.670291	400.0	501267.0	0.94378	Y
7	STD8 240-322037/13	2000.0	1938.06154	400.0	508156.0	0.969031	Y
8	STD9 240-322037/12	2500.0	2603.85403	400.0	479031.0	1.041542	Y



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-323501/10	80423010.D
Level 2	STD2 240-323501/9	80423009.D
Level 3	STD3 240-323501/8	80423008.D
Level 4	STD4 240-323501/7	80423007.D
Level 5	STD5 240-323501/6	80423006.D
Level 6	STD6 240-323501/5	80423005.D
Level 7	STD7 240-323501/4	80423004.D
Level 8	STD8 240-323501/3	80423003.D
Level 9	STD9 240-323501/2	80423002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.2504	0.2438 0.2592	0.2361 0.2435	0.2290 0.2799	0.2190	Ave		0.2451				7.7		20.0			
N-Nitrosodimethylamine	0.8985	0.8599 0.9352	0.8789 0.9471	0.8563 0.9319	0.8700	Ave		0.8972				4.1		20.0			
Pyridine	0.5714 0.7109	0.6389 0.7870	0.6532 0.7797	0.6352 0.8902	0.6298	Ave		0.6996				14.5		20.0			
Benzaldehyde	+++++ 0.7925	1.1922 0.6594	1.1559 0.5721	1.0245 +++++	0.8969	Qua	37.422	0.9606	-0.000100		0.0100				0.9990		0.9900
Phenol	1.4881	1.6396 1.4224	1.5747 1.6106	1.4323 1.4981	1.3342	Ave		1.5000			0.8000	6.9		20.0			
Aniline	2.3844	2.3954 2.3085	2.3602 2.3593	2.3244 2.4418	2.3029	Ave		2.3596				2.0		20.0			
Bis(2-chloroethyl)ether	1.5770	1.8239 1.5622	1.7329 1.7124	1.6100 1.4536	1.5673	Ave		1.6299			0.7000	7.3		20.0			
2-Chlorophenol	1.3477	1.3958 1.2853	1.3727 1.3443	1.3575 1.2475	1.3007	Ave		1.3314			0.8000	3.7		20.0			
n-Decane	1.8242	1.9796 1.7207	2.0371 1.5814	1.9173 1.4756	1.9029	Ave		1.8049				10.9		20.0			
1,3-Dichlorobenzene	1.5975	1.6560 1.6322	1.6946 1.6249	1.5681 1.6097	1.6011	Ave		1.6230				2.4		20.0			
1,4-Dichlorobenzene	1.6573	1.6628 1.6673	1.7199 1.6710	1.6255 1.6353	1.6275	Ave		1.6583				1.9		20.0			
Benzyl alcohol	1.0082	0.9531 1.0004	0.8646 1.0603	0.8247 0.9999	0.9292	Ave		0.9550				8.3		20.0			
1,2-Dichlorobenzene	1.5611	1.6755 1.5340	1.6442 1.5386	1.5859 1.4770	1.5759	Ave		1.5740				4.0		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylphenol	1.3020	1.3548 1.2838	1.2394 1.3220	1.1841 1.2187	1.2369	Ave		1.2677			0.7000	4.5		20.0			
bis (2-chloroisopropyl) ether	2.9367	3.3637 2.7620	3.3152 2.7783	3.0812 2.5957	3.0057	Ave		2.9798				9.0		20.0			
Indene	2.5711	2.9865 2.3872	2.8744 2.3122	2.6891 2.1346	2.6165	Ave		2.5715				11.1		20.0			
3 & 4 Methylphenol	1.3372	1.2943 1.3683	1.0654 1.4335	1.0670 1.3513	1.2202	Ave		1.2672				10.9		20.0			
N-Nitrosodi-n-propylamine	1.1930	1.2198 1.1611	1.1943 1.1693	1.1857 1.1149	1.1797	Ave		1.1772			0.5000	2.6		20.0			
Acetophenone	2.1485	2.2860 2.0858	2.0757 2.1341	2.0574 1.9933	2.0859	Ave		2.1083			0.0100	4.1		20.0			
Hexachloroethane	0.6205	0.6718 0.6035	0.6198 0.6248	0.6100 0.6044	0.6110	Ave		0.6207			0.3000	3.6		20.0			
Nitrobenzene	0.3675	0.3297 0.3688	0.3550 0.3687	0.3575 0.3638	0.3687	Ave		0.3600			0.2000	3.7		20.0			
Isophorone	0.6846	0.6507 0.6753	0.6702 0.6756	0.6838 0.6568	0.6727	Ave		0.6712			0.4000	1.8		20.0			
2,4-Dimethylphenol	0.3146	0.2992 0.3173	0.2675 0.3322	0.2838 0.3224	0.3171	Ave		0.3068			0.2000	7.1		20.0			
2-Nitrophenol	0.1700	0.1182 0.1760	0.1271 0.1794	0.1434 0.1721	0.1624	Ave		0.1561			0.1000	15.0		20.0			
Benzoic acid	0.1319	+++++ 0.1589	0.0304 0.1386	0.0330 0.1503	0.0989	Lin1	-34.53	0.1543							0.9900		0.9900
Bis(2-chloroethoxy)methane	0.4137	0.4061 0.4091	0.4175 0.3942	0.4180 0.3790	0.4127	Ave		0.4063			0.3000	3.3		20.0			
2,4-Dichlorophenol	0.2377	0.1914 0.2414	0.1747 0.2626	0.1914 0.2608	0.2237	Ave		0.2229			0.2000	15.1		20.0			
1,2,4-Trichlorobenzene	0.2770	0.2789 0.2836	0.2780 0.2910	0.2703 0.2908	0.2712	Ave		0.2801				2.8		20.0			
Naphthalene	1.0923 1.0633	1.1147 1.0561	1.1172 1.0414	1.0707 0.9981	1.0621	Ave		1.0684			0.7000	3.5		20.0			
4-Chloroaniline	0.5524	0.4516 0.5356	0.5045 0.5083	0.5288 0.5055	0.5399	Ave		0.5158			0.0100	6.1		20.0			
2,6-Dichlorophenol	0.2573	0.2100 0.2630	0.2126 0.2725	0.2234 0.2719	0.2463	Ave		0.2446				10.6		20.0			
Hexachlorobutadiene	0.1411	0.1366 0.1478	0.1425 0.1518	0.1367 0.1525	0.1385	Ave		0.1435			0.0100	4.5		20.0			
Caprolactam	0.1111 0.0905	0.0985 0.0894	0.0996 0.0875	0.1034 0.0869	0.1002	Ave		0.0963			0.0100	8.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chloro-3-methylphenol	0.2840	0.1707 0.2958	0.2235 0.2974	0.2474 0.2909	0.2717	Ave		0.2602			0.2000	17.1		20.0			
2-Methylnaphthalene	0.6112 0.7118	0.6841 0.7193	0.7055 0.6918	0.6876 0.6741	0.7041	Ave		0.6877			0.4000	4.7		20.0			
1-Methylnaphthalene	0.6514 0.6657	0.6562 0.6650	0.6750 0.6647	0.6639 0.6420	0.6661	Ave		0.6611				1.5		20.0			
Hexachlorocyclopentadiene	0.3004	0.2052 0.3338	0.2193 0.3419	0.2407 0.3494	0.2745	Lin1	-11.46	0.3398			0.0500				0.9960		0.9900
1,2,4,5-Tetrachlorobenzene	0.5156	0.4816 0.5443	0.4586 0.5444	0.4750 0.5393	0.4880	Ave		0.5058			0.0100	6.8		20.0			
2,4,6-Trichlorophenol	0.3534	0.2104 0.3674	0.2594 0.3764	0.2918 0.3787	0.3269	Ave		0.3205			0.2000	19.2		20.0			
2,4,5-Trichlorophenol	0.3641	0.0915 0.3790	0.1553 0.3680	0.2371 0.3876	0.3369	Lin1	-19.39	0.3858			0.2000				0.9980		0.9900
1,1'-Biphenyl	1.5998 1.6350	1.6356 1.6454	1.6160 1.6298	1.5987 1.5571	1.6098	Ave		1.6141			0.0100	1.7		20.0			
2-Chloronaphthalene	1.1263 1.2327	1.1758 1.2575	1.1926 1.2435	1.1913 1.2017	1.2225	Ave		1.2049			0.8000	3.3		20.0			
2-Nitroaniline	0.4374	0.2762 0.4426	0.3232 0.4304	0.3752 0.4164	0.4186	Ave		0.3900			0.0100	15.6		20.0			
Dimethyl phthalate	1.3894	1.4047 1.4117	1.3637 1.3819	1.3603 1.3603	1.3635	Ave		1.3794			0.0100	1.5		20.0			
1,3-Dinitrobenzene	0.2152	0.1136 0.2231	0.1277 0.2221	0.1652 0.2223	0.1970	Lin1	-7.836	0.2245							0.9990		0.9900
2,6-Dinitrotoluene	0.3224	0.2090 0.3233	0.2628 0.3223	0.2787 0.3205	0.3054	Ave		0.2931				14.0		20.0			
Acenaphthylene	1.6133 1.8762	1.7734 1.9003	1.8224 1.8955	1.8204 1.8382	1.8484	Ave		1.8209			0.9000	4.8		20.0			
3-Nitroaniline	0.2930	0.1565 0.2924	0.2163 0.2636	0.2575 0.2759	0.2922	Ave		0.2559			0.0100	18.6		20.0			
2,4-Dinitrophenol	0.1126	+++++ 0.1358	+++++ 0.1459	0.0525 0.1558	0.0826	Lin1	-54.21	0.1574			0.0100				0.9900		0.9900
Acenaphthene	1.3494 1.2843	1.3160 1.2638	1.2931 1.2318	1.2637 1.1758	1.2608	Ave		1.2710			0.9000	3.9		20.0			
4-Nitrophenol	0.1707	+++++ 0.1860	0.0901 0.1857	0.1106 0.1791	0.1440	Lin1	-24.85	0.1870							0.9980		0.9900
2,4-Dinitrotoluene	0.3979	0.2350 0.4112	0.2921 0.4077	0.3419 0.4095	0.3714	Ave		0.3583			0.2000	18.1		20.0			
Dibenzofuran	1.5846 1.6936	1.7655 1.7459	1.7355 1.7397	1.7033 1.6947	1.6836	Ave		1.7052			0.8000	3.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3,4,6-Tetrachlorophenol	0.2388	0.1531 0.2568	0.1531 0.2712	0.1808 0.2725	0.2180	Lin1	-9.870	0.2669			0.0100				0.9960		0.9900
Hexadecane	1.1353	1.3051 1.0465	1.3121 0.9594	1.2805 0.8653	1.1968	Ave		1.1376				14.7		20.0			
Diethyl phthalate	1.3815	1.4516 1.3841	1.4483 1.3261	1.4437 1.2741	1.3999	Ave		1.3887			0.0100	4.5		20.0			
4-Chlorophenyl phenyl ether	0.6352	0.6159 0.6629	0.6263 0.6540	0.6114 0.6456	0.6094	Ave		0.6326			0.4000	3.2		20.0			
4-Nitroaniline	0.2756	0.2242 0.2530	0.2478 0.2163	0.2820 0.2050	0.2798	Ave		0.2480			0.0100	12.2		20.0			
Fluorene	1.2963 1.4358	1.3996 1.4332	1.4283 1.3752	1.3846 1.3385	1.3917	Ave		1.3870			0.9000	3.3		20.0			
4,6-Dinitro-2-methylphenol	0.0969	+++++ 0.1072	0.0357 0.1108	0.0470 0.1199	0.0711	Lin1	-23.20	0.1165			0.0100				0.9910		0.9900
Diphenylamine	0.7408	0.6305 0.7249	0.6902 0.7379	0.6687 0.7337	0.7227	Ave		0.7062				5.6		20.0			
N-Nitrosodiphenylamine	0.6297	0.5360 0.6162	0.5866 0.6272	0.5684 0.6236	0.6143	Ave		0.6002			0.0100	5.6		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.9809	0.8652 0.9441	0.9245 0.9282	0.8986 0.9105	0.9623	Ave		0.9271				4.0		20.0			
Azobenzene	0.9837	0.8639 0.9441	0.9254 0.9282	0.8986 0.9105	0.9625	Ave		0.9271				4.0		20.0			
4-Bromophenyl phenyl ether	0.2048	0.1637 0.2111	0.1871 0.2122	0.1728 0.2185	0.1888	Ave		0.1949			0.1000	10.2		20.0			
Atrazine	0.2133 0.2016	0.1949 0.1950	0.1806 0.1769	0.1775 0.1742	0.1883	Ave		0.1892			0.0100	7.0		20.0			
Hexachlorobenzene	0.1557 0.2098	0.1735 0.2149	0.1782 0.2146	0.1724 0.2192	0.1918	Ave		0.1922			0.1000	12.1		20.0			
n-Octadecane	0.7671	0.7226 0.7216	0.7517 0.6746	0.7250 0.6379	0.7762	Ave		0.7221				6.4		20.0			
Pentachlorophenol	0.1118	+++++ 0.1256	+++++ 0.1319	0.0650 0.1376	0.0861	Lin1	-38.15	0.1401			0.0500				0.9950		0.9900
Phenanthrene	1.0934 1.1189	1.1287 1.1344	1.1220 1.1119	1.0685 1.1224	1.0796	Ave		1.1089			0.7000	2.1		20.0			
Anthracene	0.9413 1.1600	1.0579 1.1772	1.1064 1.1499	1.0926 1.1579	1.1032	Ave		1.1052			0.7000	6.6		20.0			
Carbazole	0.9939	0.9731 0.9951	1.0093 0.9153	0.9038 0.9716	0.9368	Ave		0.9623			0.0100	4.1		20.0			
Di-n-butyl phthalate	1.4576	1.2191 1.4037	1.2777 1.3679	1.2447 1.3341	1.3775	Ave		1.3353			0.0100	6.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Fluoranthene	0.9956 1.1505	1.0049 1.1151	1.0197 1.0935	0.9291 1.1478	1.0431	Ave		1.0555			0.6000	7.2		20.0			
Benzidine	0.5215	0.1271 0.5860	0.2112 0.5911	0.2605 0.5908	0.3893	Lin1	-72.53	0.5890							0.9910		0.9900
Pyrene	1.2819 1.2878	1.2874 1.2046	1.2891 1.2457	1.2038 1.2600	1.2199	Ave		1.2534			0.6000	2.9		20.0			
Butyl benzyl phthalate	0.6947	0.5453 0.7167	0.5876 0.7282	0.5894 0.7197	0.6396	Ave		0.6526			0.0100	11.0		20.0			
Bis(2-ethylhexyl) phthalate	0.9407	0.6968 0.9728	0.8051 0.9942	0.8226 0.9867	0.8967	Ave		0.8894			0.0100	11.9		20.0			
3,3'-Dichlorobenzidine	0.3873	0.2582 0.4028	0.3239 0.4105	0.3481 0.4227	0.3744	Ave		0.3660			0.0100	14.9		20.0			
Benzo[a]anthracene	1.0732 1.1764	1.0242 1.2133	1.0699 1.2367	1.0361 1.2467	1.0892	Ave		1.1295			0.8000	7.8		20.0			
Chrysene	1.1222 1.1362	1.1160 1.1552	1.1460 1.1874	1.1057 1.1871	1.1085	Ave		1.1405			0.7000	2.7		20.0			
Di-n-octyl phthalate	1.9166	1.1614 1.9806	1.3736 1.9894	1.5812 1.9727	1.8016	Ave		1.7222			0.0100	18.4		20.0			
Benzo[b]fluoranthene	1.0050 1.2722	1.0514 1.3031	1.1530 1.3488	1.1306 1.3743	1.1994	Ave		1.2042			0.7000	10.8		20.0			
Benzo[k]fluoranthene	0.9516 1.2930	1.1421 1.3804	1.2296 1.3741	1.1990 1.3603	1.2840	Ave		1.2460			0.7000	11.0		20.0			
Benzo[a]pyrene	0.8048 1.1883	0.9860 1.2482	1.0539 1.2543	1.0635 1.2901	1.1113	Ave		1.1112			0.7000	14.0		20.0			
Indeno[1,2,3-cd]pyrene	0.8984 1.1943	0.9955 1.2668	1.0397 1.2810	1.0758 1.3449	1.1314	Ave		1.1364			0.5000	13.0		20.0			
Dibenz(a,h)anthracene	0.6302 1.0288	0.8039 1.0987	0.8771 1.1243	0.9068 1.1813	0.9592	Ave		0.9567			0.4000	18.2		20.0			
Benzo[g,h,i]perylene	0.8023 0.9560	0.8544 0.9891	0.8727 0.9839	0.8733 1.0233	0.9029	Ave		0.9175			0.5000	8.0		20.0			
2-Fluorophenol (Surr)	0.8362	0.8162 0.8230	0.8479 0.8231	0.8466 0.9584	0.8043	Ave		0.8445				5.7		20.0			
Phenol-d5 (Surr)	1.3139	1.5383 1.2690	1.3663 1.4364	1.2705 1.3310	1.2064	Ave		1.3415				7.9		20.0			
Nitrobenzene-d5 (Surr)	0.3378 0.3852	0.3520 0.3860	0.3644 0.3855	0.3736 0.3767	0.3819	Ave		0.3715				4.6		20.0			
2-Fluorobiphenyl (Surr)	1.2921 1.3782	1.3458 1.3865	1.3473 1.3923	1.3507 1.3504	1.3667	Ave		1.3567				2.2		20.0			
2,4,6-Tribromophenol (Surr)	0.1256	0.0849 0.1417	0.0965 0.1420	0.1099 0.1484	0.1199	Ave		0.1211				18.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Terphenyl-d14 (Surr)	0.7726 0.7911	0.7204 0.8415	0.7949 0.8926	0.8177 0.8980	0.8211	Ave		0.8167				6.9		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-323501/10	80423010.D
Level 2	STD2 240-323501/9	80423009.D
Level 3	STD3 240-323501/8	80423008.D
Level 4	STD4 240-323501/7	80423007.D
Level 5	STD5 240-323501/6	80423006.D
Level 6	STD6 240-323501/5	80423005.D
Level 7	STD7 240-323501/4	80423004.D
Level 8	STD8 240-323501/3	80423003.D
Level 9	STD9 240-323501/2	80423002.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCBd 4	Ave	130555	6300 224794	12273 275150	24287 406427	58609	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodimethylamine	DCBd 4	Ave	468552	22219 811113	45693 1070427	90818 1353037	232856	1000	50.0 1500	100 2000	200 2500	500
Pyridine	DCBd 4	Ave	5470 741486	33018 1365295	67915 1762532	134737 2584822	337124	20.0 2000	100 3000	200 4000	400 5000	1000
Benzaldehyde	DCBd 4	Qua	+++++ 826507	61612 1143781	120180 1293188	217308 +++++	480129	+++++ 2000	100 3000	200 4000	400 +++++	1000
Phenol	DCBd 4	Ave	776023	42367 1233717	81864 1820269	151901 2175004	357109	1000	50.0 1500	100 2000	200 2500	500
Aniline	DCBd 4	Ave	1243400	61897 2002242	122701 2666501	246513 3545220	616393	1000	50.0 1500	100 2000	200 2500	500
Bis(2-chloroethyl)ether	DCBd 4	Ave	822350	47131 1354975	90088 1935409	170746 2110407	419488	1000	50.0 1500	100 2000	200 2500	500
2-Chlorophenol	DCBd 4	Ave	702821	36068 1114765	71365 1519337	143968 1811285	348152	1000	50.0 1500	100 2000	200 2500	500
n-Decane	DCBd 4	Ave	951299	51154 1492425	105905 1787297	203337 2142389	509328	1000	50.0 1500	100 2000	200 2500	500
1,3-Dichlorobenzene	DCBd 4	Ave	833085	42791 1415697	88097 1836443	166303 2337147	428546	1000	50.0 1500	100 2000	200 2500	500
1,4-Dichlorobenzene	DCBd 4	Ave	864257	42968 1446124	89412 1888635	172398 2374260	435619	1000	50.0 1500	100 2000	200 2500	500
Benzyl alcohol	DCBd 4	Ave	525744	24628 867658	44950 1198380	87461 1451771	248697	1000	50.0 1500	100 2000	200 2500	500
1,2-Dichlorobenzene	DCBd 4	Ave	814090	43295 1330530	85478 1738943	168193 2144357	421796	1000	50.0 1500	100 2000	200 2500	500
2-Methylphenol	DCBd 4	Ave	678962	35008 1113482	64435 1494159	125576 1769439	331060	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCBd 4	Ave	1531439	86919 2395601	172351 3140055	326779 3768620	804485	1000	50.0 1500	100 2000	200 2500	500
Indene	DCBd 4	Ave	2681538	154345 4141168	298865 5226513	570395 6198494	1400653	2000	100 3000	200 4000	400 5000	1000
3 & 4 Methylphenol	DCBd 4	Ave	697313	33446 1186839	55389 1620194	113161 1961942	326604	1000	50.0 1500	100 2000	200 2500	500
N-Nitrosodi-n-propylamine	DCBd 4	Ave	622107	31519 1007068	62087 1321585	125754 1618694	315742	1000	50.0 1500	100 2000	200 2500	500
Acetophenone	DCBd 4	Ave	1120415	59070 1809095	107911 2412017	218204 2893977	558300	1000	50.0 1500	100 2000	200 2500	500
Hexachloroethane	DCBd 4	Ave	323579	17360 523425	32223 706160	64694 877586	163550	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene	NPT	Ave	872003	39443 1412756	82271 1883506	166550 2331877	437975	1000	50.0 1500	100 2000	200 2500	500
Isophorone	NPT	Ave	1624504	77850 2586837	155322 3451055	318568 4209609	799191	1000	50.0 1500	100 2000	200 2500	500
2,4-Dimethylphenol	NPT	Ave	746557	35801 1215336	61990 1697055	132219 2066195	376751	1000	50.0 1500	100 2000	200 2500	500
2-Nitrophenol	NPT	Ave	403328	14148 674128	29451 916145	66789 1103153	192954	1000	50.0 1500	100 2000	200 2500	500
Benzoic acid	NPT	Lin1	625820	+++++ 1217642	14094 1416336	30729 1927211	235026	2000	+++++ 3000	200 4000	400 5000	1000
Bis(2-chloroethoxy)methane	NPT	Ave	981649	48593 1567142	96760 2013394	194736 2429210	490316	1000	50.0 1500	100 2000	200 2500	500
2,4-Dichlorophenol	NPT	Ave	563996	22899 924656	40482 1341200	89157 1671766	265747	1000	50.0 1500	100 2000	200 2500	500
1,2,4-Trichlorobenzene	NPT	Ave	657277	33368 1086331	64427 1486529	125928 1864092	322253	1000	50.0 1500	100 2000	200 2500	500
Naphthalene	NPT	Ave	22915 2523078	133376 4045581	258907 5319463	498804 6397424	1261815	10.0 1000	50.0 1500	100 2000	200 2500	500
4-Chloroaniline	NPT	Ave	1310748	54032 2051638	116916 2596164	246352 3239995	641415	1000	50.0 1500	100 2000	200 2500	500
2,6-Dichlorophenol	NPT	Ave	610498	25122 1007497	49277 1392084	104082 1742765	292668	1000	50.0 1500	100 2000	200 2500	500
Hexachlorobutadiene	NPT	Ave	334894	16346 566387	33032 775471	63696 977789	164518	1000	50.0 1500	100 2000	200 2500	500
Caprolactam	NPT	Ave	4663 429320	23575 684893	46158 893743	96358 1114330	238039	20.0 2000	100 3000	200 4000	400 5000	1000
4-Chloro-3-methylphenol	NPT	Ave	673949	20429 1132984	51796 1518882	115252 1864368	322819	1000	50.0 1500	100 2000	200 2500	500
2-Methylnaphthalene	NPT	Ave	12823 1688940	81845 2755501	163485 3533499	320320 4320666	836470	10.0 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1-Methylnaphthalene	NPT	Ave	13666 1579616	78509 2547519	156427 3395479	309292 4115350	791298	10.0 1000	50.0 1500	100 2000	200 2500	500
Hexachlorocyclopentadiene	ANT	Lin1	 352554	12040 627367	25561 869084	56054 1114694	162204	 1000	50.0 1500	100 2000	200 2500	500
1,2,4,5-Tetrachlorobenzene	ANT	Ave	 605074	28257 1023049	53459 1383799	110596 1720779	288360	 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Trichlorophenol	ANT	Ave	 414760	12342 690663	30240 956792	67934 1208322	193172	 1000	50.0 1500	100 2000	200 2500	500
2,4,5-Trichlorophenol	ANT	Lin1	 427309	5370 712455	18106 935430	55204 1236714	199111	 1000	50.0 1500	100 2000	200 2500	500
1,1'-Biphenyl	ANT	Ave	15495 1918856	95968 3092930	188379 4142726	372255 4968133	951283	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Chloronaphthalene	ANT	Ave	10909 1446755	68990 2363691	139025 3160940	277396 3834375	722413	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Nitroaniline	ANT	Ave	 513326	16207 831875	37681 1094078	87367 1328717	247396	 1000	50.0 1500	100 2000	200 2500	500
Dimethyl phthalate	ANT	Ave	 1630674	82417 2653694	158966 3512540	316741 4340118	805749	 1000	50.0 1500	100 2000	200 2500	500
1,3-Dinitrobenzene	ANT	Lin1	 252536	6664 419307	14888 564669	38467 709390	116431	 1000	50.0 1500	100 2000	200 2500	500
2,6-Dinitrotoluene	ANT	Ave	 378420	12265 607788	30636 819167	64894 1022671	180499	 1000	50.0 1500	100 2000	200 2500	500
Acenaphthylene	ANT	Ave	15625 2202043	104049 3572062	212438 4818085	423879 5865142	1092291	10.0 1000	50.0 1500	100 2000	200 2500	500
3-Nitroaniline	ANT	Ave	 343886	9183 549653	25210 670170	59958 880165	172651	 1000	50.0 1500	100 2000	200 2500	500
2,4-Dinitrophenol	ANT	Lin1	 264262	+++++ 510576	+++++ 741968	24455 994300	97584	 2000	+++++ 3000	+++++ 4000	400 5000	1000
Acenaphthene	ANT	Ave	13069 1507350	77213 2375664	150740 3131004	294262 3751640	745068	10.0 1000	50.0 1500	100 2000	200 2500	500
4-Nitrophenol	ANT	Lin1	 400642	+++++ 699344	21014 943940	51514 1142954	170142	 2000	+++++ 3000	200 4000	400 5000	1000
2,4-Dinitrotoluene	ANT	Ave	 466979	13786 772852	34048 1036316	79611 1306464	219476	 1000	50.0 1500	100 2000	200 2500	500
Dibenzofuran	ANT	Ave	15347 1987710	103589 3281875	202315 4422039	396622 5407058	994917	10.0 1000	50.0 1500	100 2000	200 2500	500
2,3,4,6-Tetrachlorophenol	ANT	Lin1	 280245	8983 482746	17852 689453	42098 869551	128812	 1000	50.0 1500	100 2000	200 2500	500
Hexadecane	ANT	Ave	 1332424	76573 1967200	152954 2438686	298154 2760783	707233	 1000	50.0 1500	100 2000	200 2500	500
Diethyl phthalate	ANT	Ave	 1621377	85173 2601792	168828 3370915	336164 4065348	827293	 1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chlorophenyl phenyl ether	ANT	Ave	745454	36135 1246072	73004 1662278	142371 2060026	360127	1000	50.0 1500	100 2000	200 2500	500
4-Nitroaniline	ANT	Ave	323512	13154 475530	28891 549892	65672 654212	165343	1000	50.0 1500	100 2000	200 2500	500
Fluorene	ANT	Ave	12555 1685067	82119 2693936	166502 3495643	322411 4270545	822389	10.0 1000	50.0 1500	100 2000	200 2500	500
4,6-Dinitro-2-methylphenol	PHN	Lin1	372096	+++++ 674897	14604 932257	39542 1232257	140019	2000	+++++ 3000	200 4000	400 5000	1000
Diphenylamine	PHN	Ave	1208529	56337 1939442	119941 2637666	239072 3205017	605162	850	42.5 1275	85.0 1700	170 2125	425
N-Nitrosodiphenylamine	PHN	Ave	1208529	56337 1939442	119941 2637666	239072 3205017	605162	1000	50.0 1500	100 2000	200 2500	500
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	1882685	90947 2971634	189022 3903614	377956 4679356	947949	1000	50.0 1500	100 2000	200 2500	500
Azobenzene	PHN	Ave	1888027	90806 2971634	189196 3903614	377939 4679356	948109	1000	50.0 1500	100 2000	200 2500	500
4-Bromophenyl phenyl ether	PHN	Ave	393101	17204 664589	38247 892495	72661 1122939	185944	1000	50.0 1500	100 2000	200 2500	500
Atrazine	PHN	Ave	7772 773974	40967 1227781	73868 1488136	149333 1790685	371022	20.0 2000	100 3000	200 4000	400 5000	1000
Hexachlorobenzene	PHN	Ave	2837 402652	18241 676554	36431 902624	72494 1126572	188911	10.0 1000	50.0 1500	100 2000	200 2500	500
n-Octadecane	PHN	Ave	1472317	75951 2271282	153696 2837258	304945 3278566	764638	1000	50.0 1500	100 2000	200 2500	500
Pentachlorophenol	PHN	Lin1	429302	+++++ 790868	+++++ 1109595	54662 1414836	169550	2000	+++++ 3000	+++++ 4000	400 5000	1000
Phenanthrene	PHN	Ave	19918 2147472	118642 3570664	229403 4676053	449386 5768417	1063484	10.0 1000	50.0 1500	100 2000	200 2500	500
Anthracene	PHN	Ave	17146 2226441	111201 3705293	226209 4836073	459557 5950913	1086744	10.0 1000	50.0 1500	100 2000	200 2500	500
Carbazole	PHN	Ave	1907567	102284 3132157	206356 3849152	380126 4993366	922835	1000	50.0 1500	100 2000	200 2500	500
Di-n-butyl phthalate	PHN	Ave	2797576	128147 4418151	261228 5752726	523520 6856631	1357000	1000	50.0 1500	100 2000	200 2500	500
Fluoranthene	PHN	Ave	18136 2208079	105626 3509878	208478 4598800	390795 5898829	1027599	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzidine	CRY	Lin1	1806851	21175 3314438	68349 4447799	173712 5633076	667054	2000	100 3000	200 4000	400 5000	1000
Pyrene	CRY	Ave	17057 2231151	107247 3406573	208570 4686918	401423 6006981	1045161	10.0 1000	50.0 1500	100 2000	200 2500	500
Butyl benzyl phthalate	CRY	Ave	1203583	45430 2026827	95069 2739550	196538 3431323	547977	1000	50.0 1500	100 2000	200 2500	500

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 06:35 Calibration End Date: 04/23/2018 09:53 Calibration ID: 44863

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bis(2-ethylhexyl) phthalate	CRY	Ave	1629685	58051 2750988	130258 3740346	274317 4704015	768278	1000	50.0 1500	100 2000	200 2500	500
3,3'-Dichlorobenzidine	CRY	Ave	1342019	43021 2278322	104817 3089027	232152 4030788	641483	2000	100 3000	200 4000	400 5000	1000
Benzo[a]anthracene	CRY	Ave	14279 2038073	85319 3430967	173109 4652736	345505 5943711	933187	10.0 1000	50.0 1500	100 2000	200 2500	500
Chrysene	CRY	Ave	14932 1968473	92969 3266774	185411 4467359	368695 5659410	949710	10.0 1000	50.0 1500	100 2000	200 2500	500
Di-n-octyl phthalate	PRY	Ave	2684751	80454 4584601	184089 6294532	429440 8020037	1227236	1000	50.0 1500	100 2000	200 2500	500
Benzo[b]fluoranthene	PRY	Ave	11956 1782058	72829 3016286	154526 4267523	307048 5587118	817040	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[k]fluoranthene	PRY	Ave	11321 1811177	79114 3195165	164792 4347552	325630 5530207	874679	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[a]pyrene	PRY	Ave	9574 1664554	68299 2889318	141240 3968730	288837 5244997	757022	10.0 1000	50.0 1500	100 2000	200 2500	500
Indeno[1,2,3-cd]pyrene	PRY	Ave	10687 1672944	68958 2932345	139343 4053086	292166 5467925	770706	10.0 1000	50.0 1500	100 2000	200 2500	500
Dibenz(a,h)anthracene	PRY	Ave	7497 1441117	55690 2543141	117552 3557277	246285 4802827	653393	10.0 1000	50.0 1500	100 2000	200 2500	500
Benzo[g,h,i]perylene	PRY	Ave	9544 1339146	59186 2289425	116950 3112955	237175 4160261	615020	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorophenol (Surr)	DCBd 4	Ave	436085	21091 713832	44080 930220	89782 1391537	215264	1000	50.0 1500	100 2000	200 2500	500
Phenol-d5 (Surr)	DCBd 4	Ave	685182	39751 1100699	71029 1623393	134745 1932457	322896	1000	50.0 1500	100 2000	200 2500	500
Nitrobenzene-d5 (Surr)	NPT	Ave	7086 914159	42116 1478649	84438 1969042	174050 2414725	453768	10.0 1000	50.0 1500	100 2000	200 2500	500
2-Fluorobiphenyl (Surr)	ANT	Ave	12514 1617519	78965 2606279	157057 3539179	314519 4308632	807616	10.0 1000	50.0 1500	100 2000	200 2500	500
2,4,6-Tribromophenol (Surr)	ANT	Ave	147467	4979 266349	11251 361043	25589 473448	70831	1000	50.0 1500	100 2000	200 2500	500
Terphenyl-d14 (Surr)	CRY	Ave	10280 1370643	60012 2379666	128617 3358103	272676 4281440	703535	10.0 1000	50.0 1500	100 2000	200 2500	500

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D
Lims ID: std9 l1lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-Apr-2018 06:35:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-002
Misc. Info.: STD9 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 06:59:57 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 07:02:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	232301	400.0	400.0	
* 2 Naphthalene-d8	136	7.847	7.847	0.000	100	1025559	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	510506	400.0	400.0	
* 4 Phenanthrene-d10	188	10.635	10.635	0.000	98	822298	400.0	400.0	a
* 5 Chrysene-d12	240	13.576	13.576	0.000	98	762820	400.0	400.0	
* 6 Perylene-d12	264	15.934	15.934	0.000	96	650487	400.0	400.0	
$ 7 2-Fluorophenol	112	5.700	5.700	0.000	94	1391537	2500.0	2837.4	
$ 8 Phenol-d5	99	6.423	6.423	0.000	0	1932457	2500.0	2480.5	
$ 9 Nitrobenzene-d5	82	7.229	7.229	0.000	92	2414725	2500.0	2535.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.741	8.741	0.000	100	4308632	2500.0	2488.4	
$ 11 2,4,6-Tribromophenol	330	10.029	10.029	0.000	94	473448	2500.0	3063.0	
$ 12 Terphenyl-d14	244	12.129	12.129	0.000	100	4281440	2500.0	2749.1	
26 1,4-Dioxane	88	4.294	4.294	0.000	95	406427	2500.0	2855.3	
27 N-Nitrosodimethylamine	74	4.553	4.553	0.000	83	1353037	2500.0	2596.7	
28 Pyridine	79	4.611	4.611	0.000	83	2584822	5000.0	6361.9	
42 Benzaldehyde	77		6.411				ND	ND	U
43 Phenol	94	6.435	6.435	0.000	98	2175004	2500.0	2496.8	
44 Aniline	93	6.494	6.494	0.000	96	3545220	2500.0	2587.1	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	93	2110407	2500.0	2229.5	
244 n-Decane	57	6.611	6.611	0.000	89	2142389	2500.0	2043.9	
47 2-Chlorophenol	128	6.605	6.605	0.000	96	1811285	2500.0	2342.5	
48 1,3-Dichlorobenzene	146	6.741	6.741	0.000	98	2337147	2500.0	2479.6	
49 1,4-Dichlorobenzene	146	6.794	6.794	0.000	93	2374260	2500.0	2465.3	
50 Benzyl alcohol	108	6.864	6.864	0.000	92	1451771	2500.0	2617.5	
51 1,2-Dichlorobenzene	146	6.929	6.929	0.000	98	2144357	2500.0	2345.8	
52 2-Methylphenol	108	6.935	6.935	0.000	97	1769439	2500.0	2403.4	
54 2,2'-oxybis[1-chloropropan	45	6.964	6.964	0.000	92	3768620	2500.0	2177.7	
53 Indene	115	7.000	7.000	0.000	90	6198494	5000.0	4150.6	
55 3 & 4 Methylphenol	108	7.052	7.052	0.000	0	1961942	2500.0	2666.0	
57 N-Nitrosodi-n-propylamine	70	7.076	7.076	0.000	89	1618694	2500.0	2367.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.088	7.088	0.000	94	2893977	2500.0	2363.5	
61 Hexachloroethane	117	7.217	7.217	0.000	95	877586	2500.0	2434.4	
62 Nitrobenzene	77	7.247	7.247	0.000	92	2331877	2500.0	2526.7	
64 Isophorone	82	7.435	7.435	0.000	97	4209609	2500.0	2446.2	
66 2,4-Dimethylphenol	107	7.505	7.505	0.000	94	2066195	2500.0	2627.0	
65 2-Nitrophenol	139	7.511	7.511	0.000	96	1103153	2500.0	2756.9	
70 Benzoic acid	122	7.588	7.588	0.000	92	1927211	5000.0	5096.2	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	99	2429210	2500.0	2332.0	
72 2,4-Dichlorophenol	162	7.711	7.711	0.000	96	1671766	2500.0	2924.6	
73 1,2,4-Trichlorobenzene	180	7.794	7.794	0.000	95	1864092	2500.0	2595.6	
74 Naphthalene	128	7.870	7.870	0.000	98	6397424	2500.0	2335.4	
75 4-Chloroaniline	127	7.882	7.882	0.000	96	3239995	2500.0	2449.9	
76 2,6-Dichlorophenol	162	7.899	7.899	0.000	96	1742765	2500.0	2778.6	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	98	977789	2500.0	2658.3	
83 Caprolactam	113	8.176	8.176	0.000	74	1114330	5000.0	4511.1	
85 4-Chloro-3-methylphenol	107	8.264	8.264	0.000	97	1864368	2500.0	2794.9	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	92	4320666	2500.0	2450.5	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	94	4115350	2500.0	2427.9	
89 Hexachlorocyclopentadiene	237	8.588	8.588	0.000	96	1114694	2500.0	2604.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.594	8.594	0.000	98	1720779	2500.0	2665.5	
93 2,4,6-Trichlorophenol	196	8.676	8.676	0.000	94	1208322	2500.0	2953.6	
94 2,4,5-Trichlorophenol	196	8.711	8.711	0.000	94	1236714	2500.0	2561.8	
99 1,1'-Biphenyl	154	8.835	8.835	0.000	95	4968133	2500.0	2411.7	
100 2-Chloronaphthalene	162	8.870	8.870	0.000	98	3834375	2500.0	2493.5	
101 2-Nitroaniline	65	8.929	8.929	0.000	83	1328717	2500.0	2669.4	
104 Dimethyl phthalate	163	9.052	9.052	0.000	98	4340118	2500.0	2465.3	
103 1,3-Dinitrobenzene	168	9.099	9.099	0.000	85	709390	2500.0	2510.4	
106 2,6-Dinitrotoluene	165	9.117	9.117	0.000	93	1022671	2500.0	2734.2	
108 Acenaphthylene	152	9.235	9.235	0.000	98	5865142	2500.0	2523.8	
109 3-Nitroaniline	138	9.288	9.288	0.000	92	880165	2500.0	2694.8	
110 2,4-Dinitrophenol	184	9.364	9.364	0.000	79	994300	5000.0	5293.3	a
112 4-Nitrophenol	109	9.388	9.388	0.000	96	1142954	5000.0	4920.8	
111 Acenaphthene	153	9.382	9.382	0.000	94	3751640	2500.0	2312.8	
113 2,4-Dinitrotoluene	165	9.470	9.470	0.000	91	1306464	2500.0	2856.9	
115 Dibenzofuran	168	9.523	9.523	0.000	95	5407058	2500.0	2484.6	
118 2,3,4,6-Tetrachlorophenol	232	9.617	9.617	0.000	77	869551	2500.0	2590.1	
248 Hexadecane	57	9.641	9.641	0.000	95	2760783	2500.0	1901.5	
120 Diethyl phthalate	149	9.646	9.646	0.000	98	4065348	2500.0	2293.8	
122 4-Chlorophenyl phenyl ethe	204	9.788	9.788	0.000	95	2060026	2500.0	2551.6	
125 4-Nitroaniline	138	9.811	9.811	0.000	85	654212	2500.0	2067.1	
124 Fluorene	166	9.817	9.817	0.000	95	4270545	2500.0	2412.5	
127 4,6-Dinitro-2-methylphenol	198	9.835	9.835	0.000	84	1232257	5000.0	5343.6	
129 Diphenylamine	169	9.882	9.882	0.000	95	3205017	2125.0	2207.7	
128 N-Nitrosodiphenylamine	169	9.882	9.882	0.000	99	3205017	2500.0	2597.3	a
131 Azobenzene	77	9.923	9.923	0.000	97	4679356	2500.0	2455.2	
130 1,2-Diphenylhydrazine	77	9.923	9.923	0.000	24	4679356	2500.0	2455.2	a
138 4-Bromophenyl phenyl ether	248	10.211	10.211	0.000	71	1122939	2500.0	2803.2	
141 Atrazine	200	10.305	10.305	0.000	95	1790685	5000.0	4604.8	
140 Hexachlorobenzene	284	10.311	10.311	0.000	95	1126572	2500.0	2850.7	
245 n-Octadecane	57	10.423	10.423	0.000	93	3278566	2500.0	2208.6	
143 Pentachlorophenol	266	10.464	10.464	0.000	92	1414836	5000.0	5185.0	
148 Phenanthrene	178	10.658	10.658	0.000	98	5768417	2500.0	2530.5	a

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.705	10.705	0.000	97	5950913	2500.0	2619.3	a
150 Carbazole	167	10.817	10.817	0.000	96	4993366	2500.0	2524.0	
154 Di-n-butyl phthalate	149	11.046	11.046	0.000	100	6856631	2500.0	2497.8	e
159 Fluoranthene	202	11.776	11.776	0.000	98	5898829	2500.0	2718.6	
160 Benzidine	184	11.858	11.858	0.000	99	5633076	5000.0	5137.8	
161 Pyrene	202	12.034	12.034	0.000	97	6006981	2500.0	2513.1	
169 Butyl benzyl phthalate	149	12.664	12.664	0.000	99	3431323	2500.0	2756.9	
174 Bis(2-ethylhexyl) phthalat	149	13.429	13.429	0.000	97	4704015	2500.0	2773.2	
177 3,3'-Dichlorobenzidine	252	13.470	13.470	0.000	74	4030788	5000.0	5775.0	
178 Benzo[a]anthracene	228	13.558	13.558	0.000	99	5943711	2500.0	2759.4	
179 Chrysene	228	13.617	13.617	0.000	97	5659410	2500.0	2602.1	
181 Di-n-octyl phthalate	149	14.446	14.446	0.000	99	8020037	2500.0	2863.7	
183 Benzo[b]fluoranthene	252	15.287	15.287	0.000	98	5587118	2500.0	2853.1	
184 Benzo[k]fluoranthene	252	15.334	15.334	0.000	99	5530207	2500.0	2729.2	
185 Benzo[a]pyrene	252	15.852	15.852	0.000	79	5244997	2500.0	2902.6	
190 Indeno[1,2,3-cd]pyrene	276	18.069	18.069	0.000	97	5467925	2500.0	2958.7	
189 Dibenz(a,h)anthracene	278	18.081	18.081	0.000	92	4802827	2500.0	3087.0	
191 Benzo[g,h,i]perylene	276	18.705	18.705	0.000	94	4160261	2500.0	2788.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

e - Potential Peak Saturated

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST1 L9 W_00010 Amount Added: 0.10 Units: mL

Report Date: 24-Apr-2018 06:59:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D

Injection Date: 23-Apr-2018 06:35:30 Instrument ID: A4AG2 Operator ID:

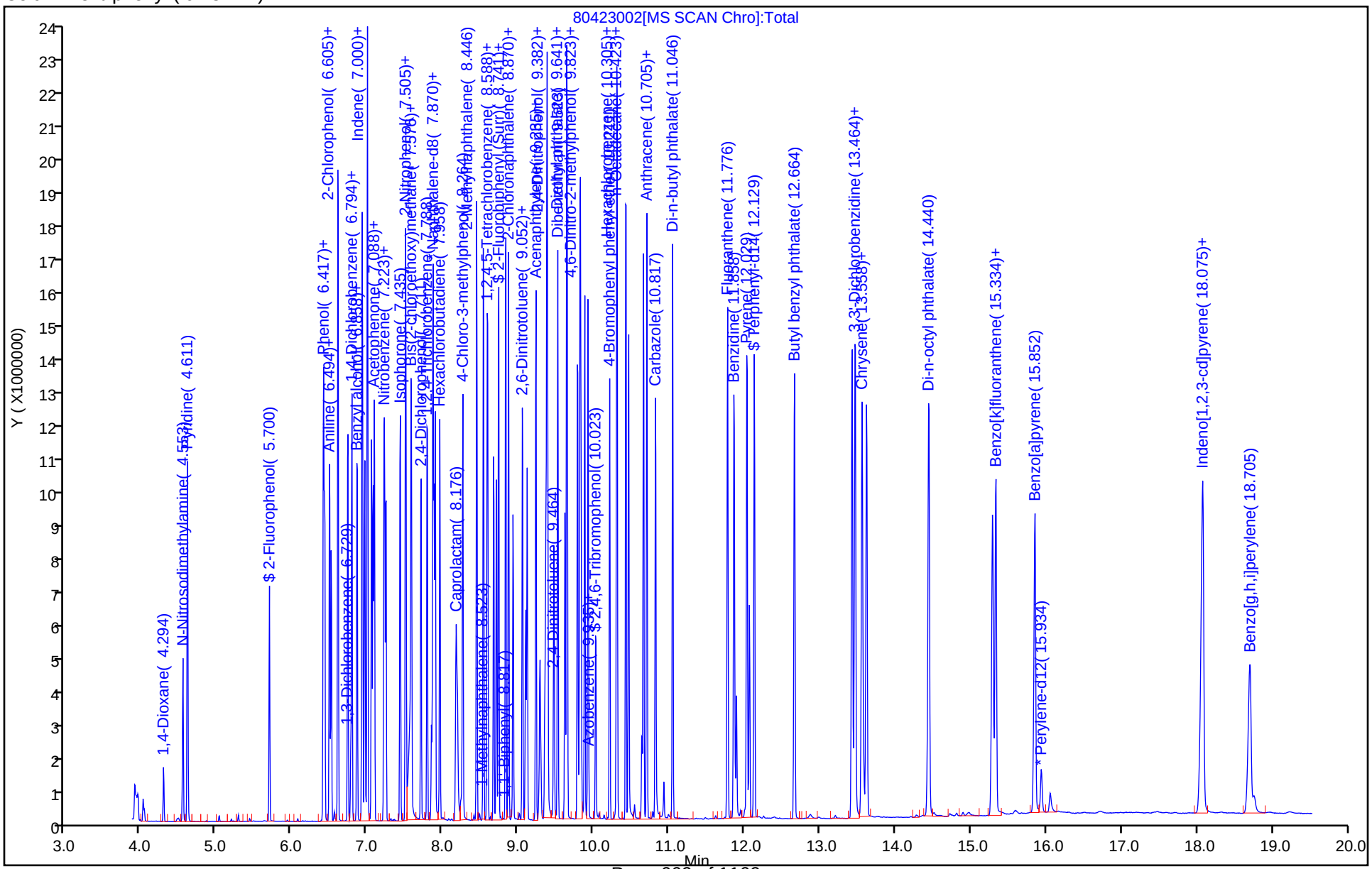
Lims ID: std9 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

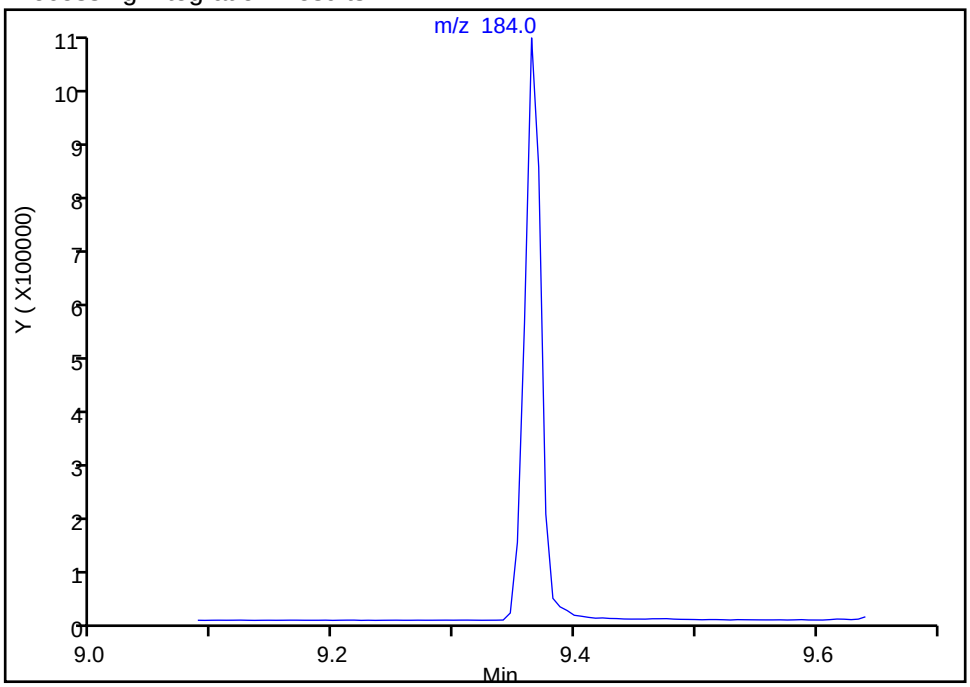
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D				
Injection Date:	23-Apr-2018 06:35:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

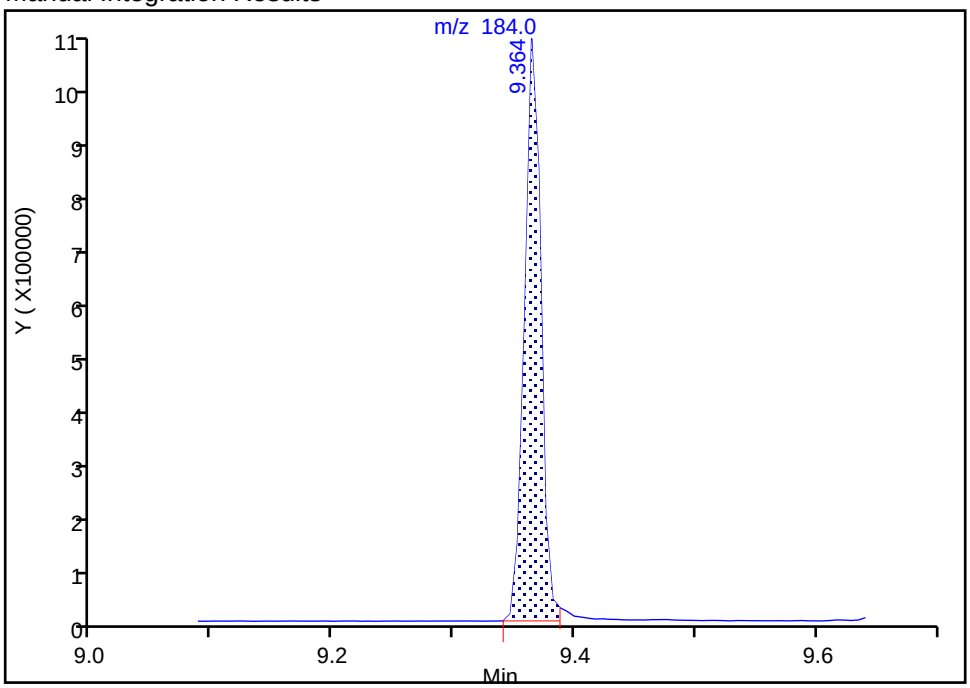
Not Detected
Expected RT: 9.36

Processing Integration Results



Manual Integration Results

RT: 9.36
Area: 994300
Amount: 5293.3354
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 06:59:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

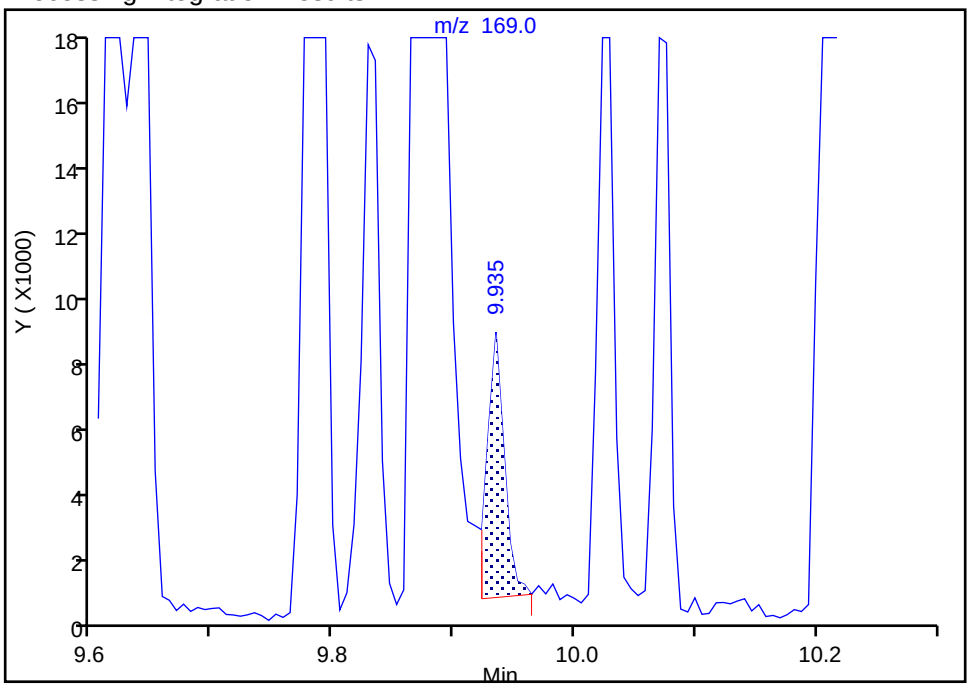
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D				
Injection Date:	23-Apr-2018 06:35:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

128 N-Nitrosodiphenylamine, CAS: 86-30-6

Signal: 1

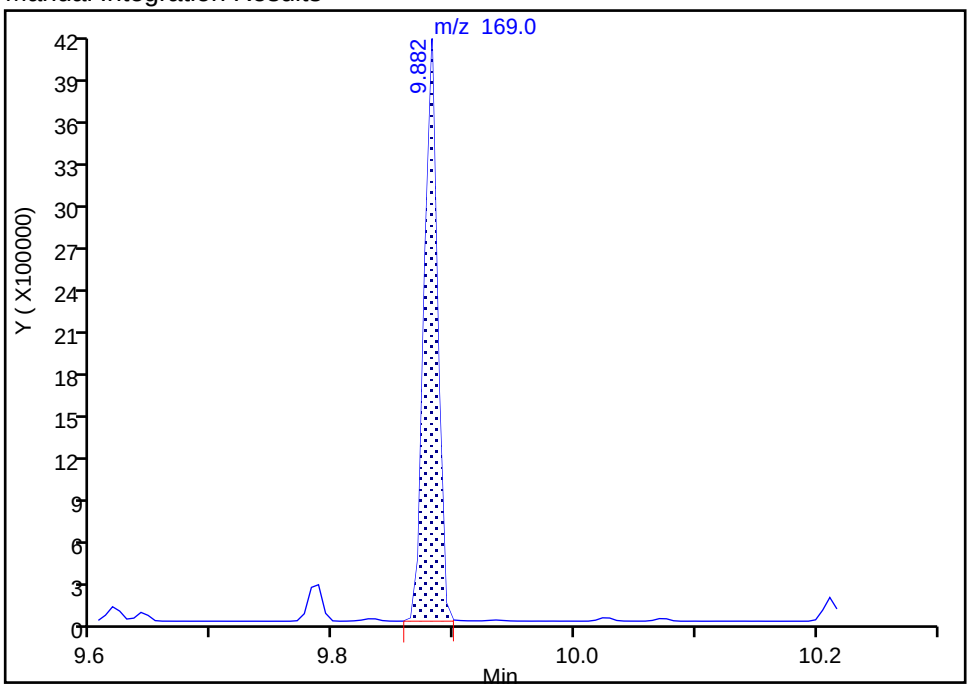
Processing Integration Results

RT: 9.93
Area: 8019
Amount: 7.418996
Amount Units: ng/ml



Manual Integration Results

RT: 9.88
Area: 3205017
Amount: 2597.3484
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:02:18

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

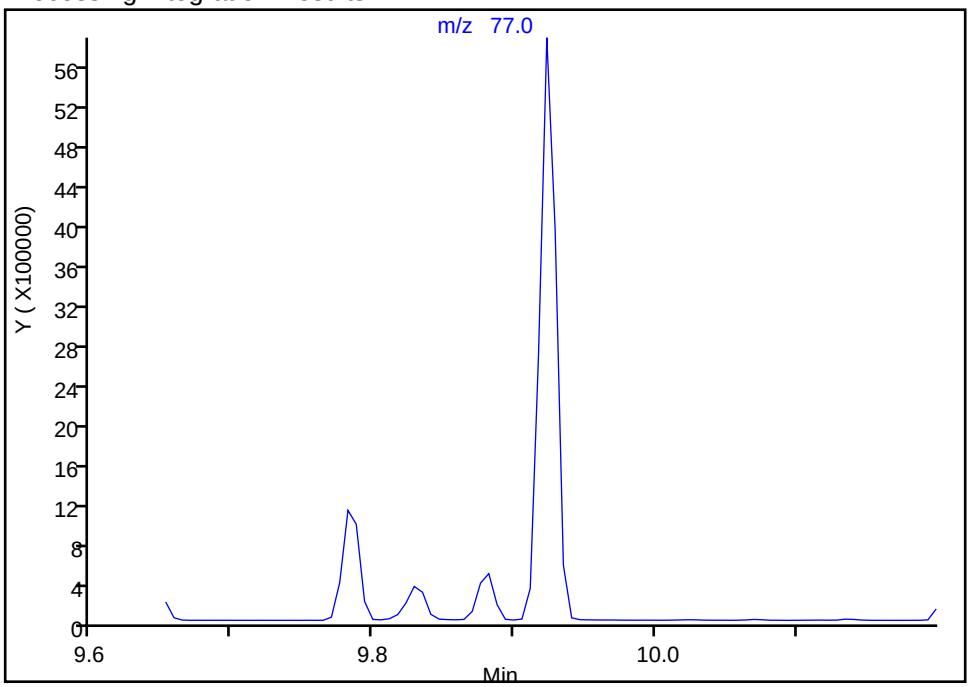
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D				
Injection Date:	23-Apr-2018 06:35:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

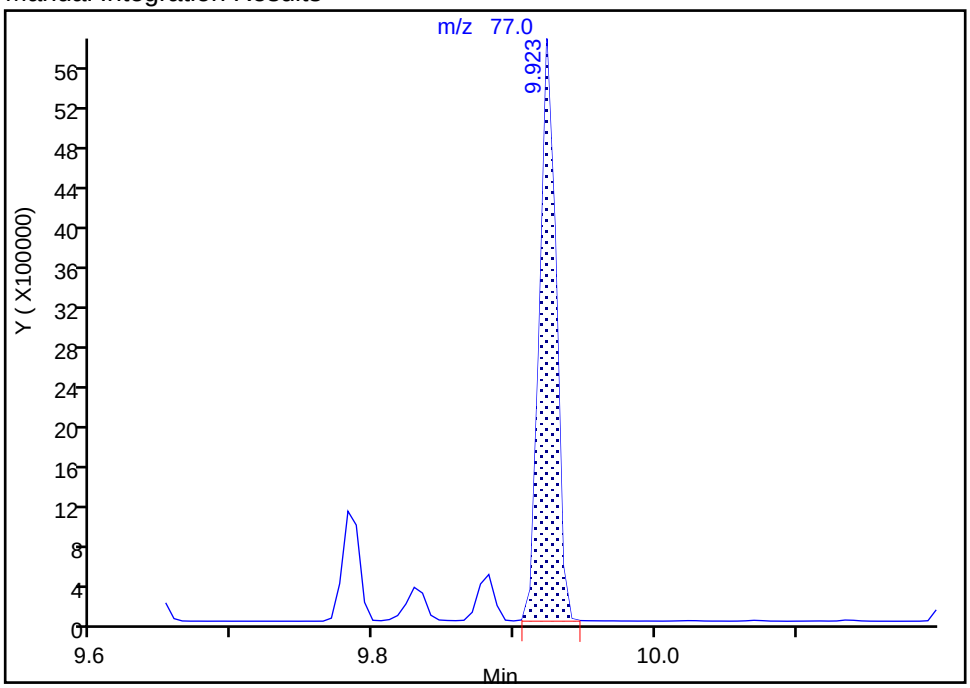
Not Detected
Expected RT: 9.92

Processing Integration Results



Manual Integration Results

RT: 9.92
Area: 4679356
Amount: 2455.2193
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 06:59:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

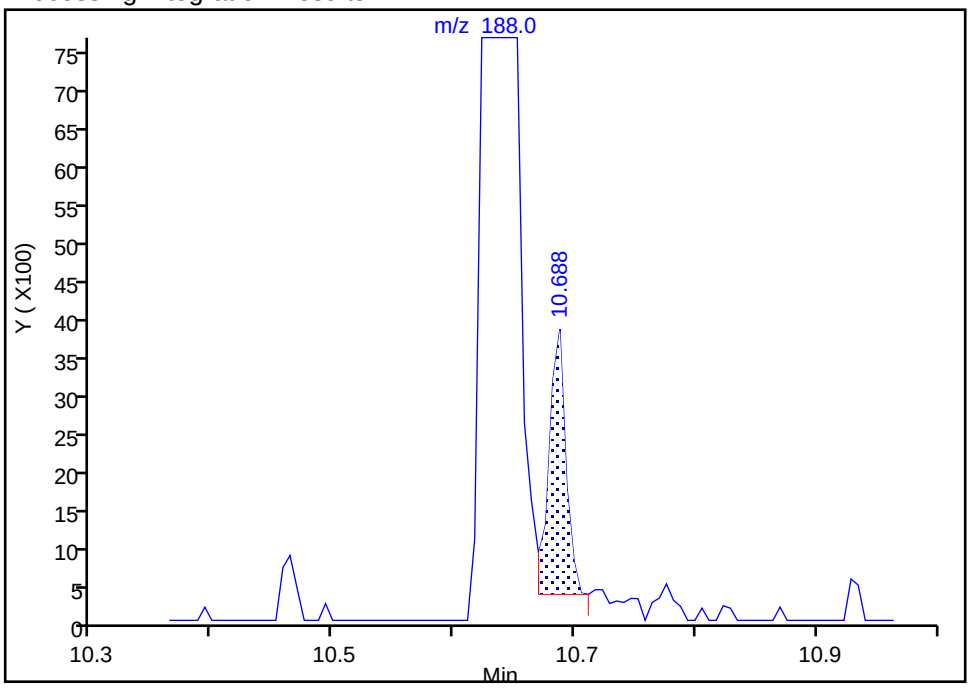
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D
Injection Date: 23-Apr-2018 06:35:30 Instrument ID: A4AG2
Lims ID: std9 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 4 Phenanthrene-d10, CAS: 1517-22-2

Signal: 1

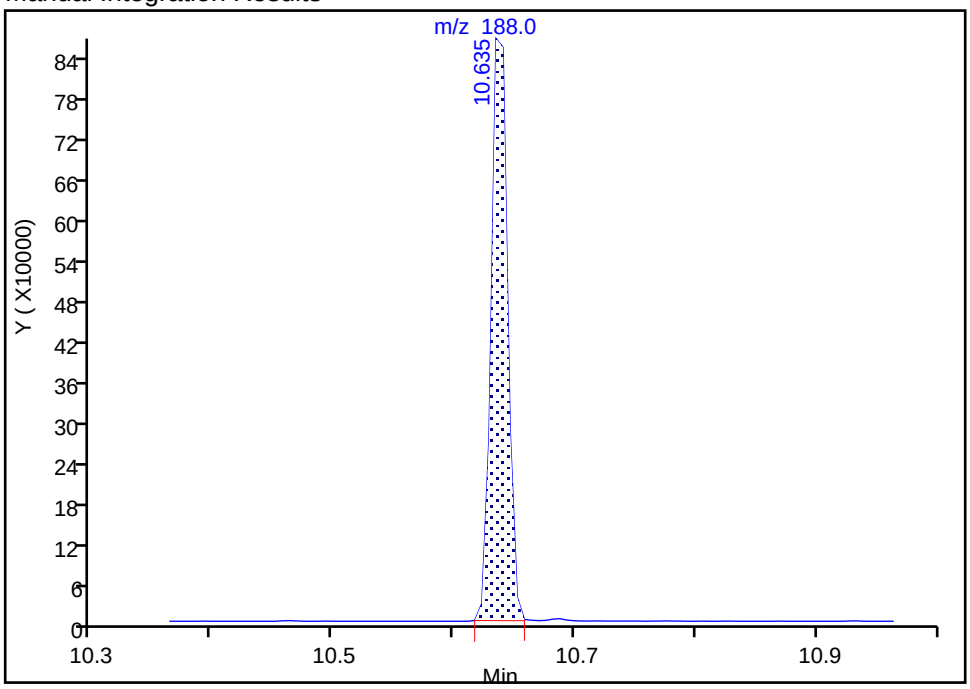
Processing Integration Results

RT: 10.69
Area: 3383
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 10.63
Area: 822298
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:01:36
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

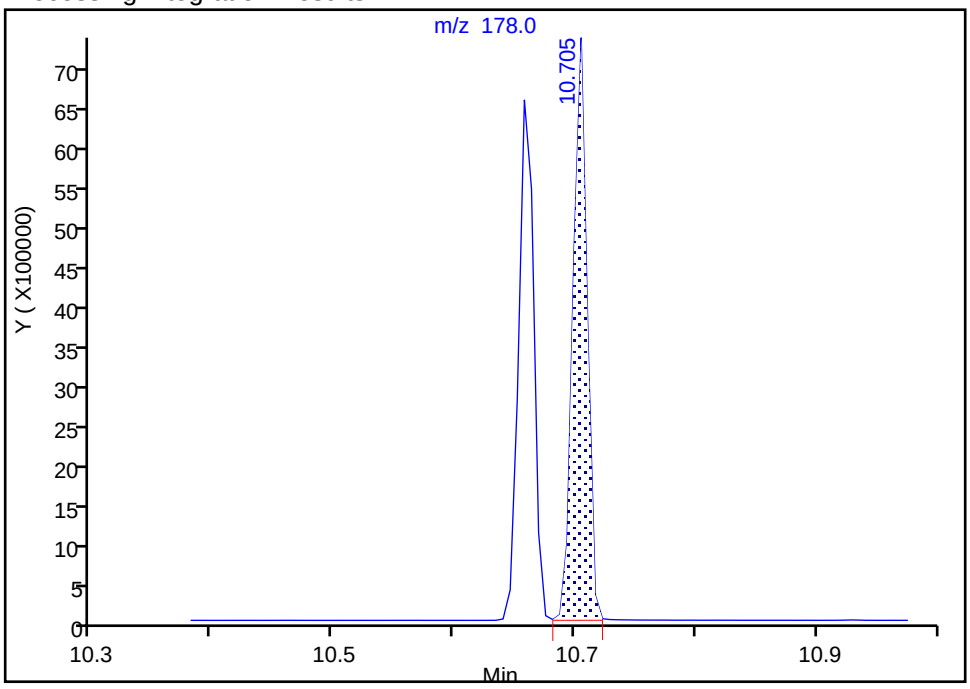
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D				
Injection Date:	23-Apr-2018 06:35:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

148 Phenanthrene, CAS: 85-01-8

Signal: 1

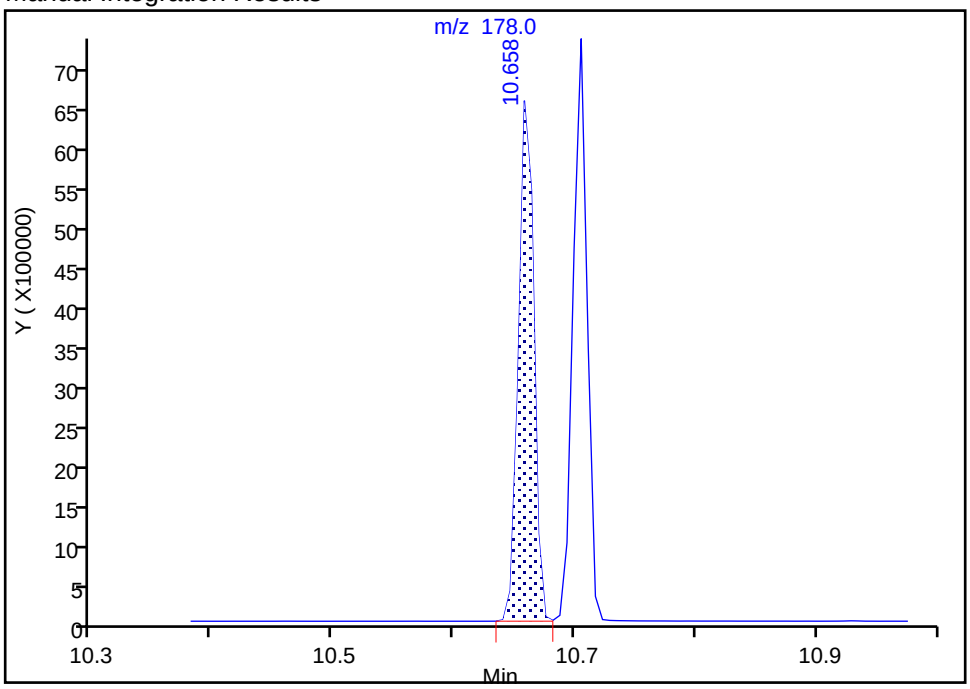
Processing Integration Results

RT: 10.71
Area: 5950913
Amount: 21789
Amount Units: ng/ml



Manual Integration Results

RT: 10.66
Area: 5768417
Amount: 2530.5187
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 06:59:59

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

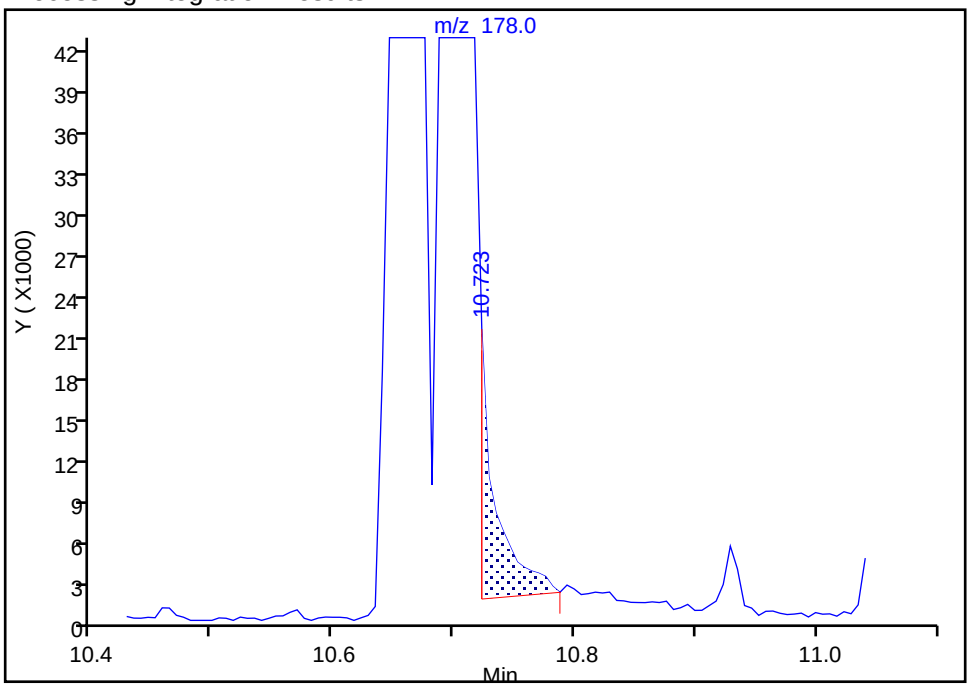
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D
Injection Date: 23-Apr-2018 06:35:30 Instrument ID: A4AG2
Lims ID: std9 l1lvi
Client ID:
Operator ID: ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

149 Anthracene, CAS: 120-12-7

Signal: 1

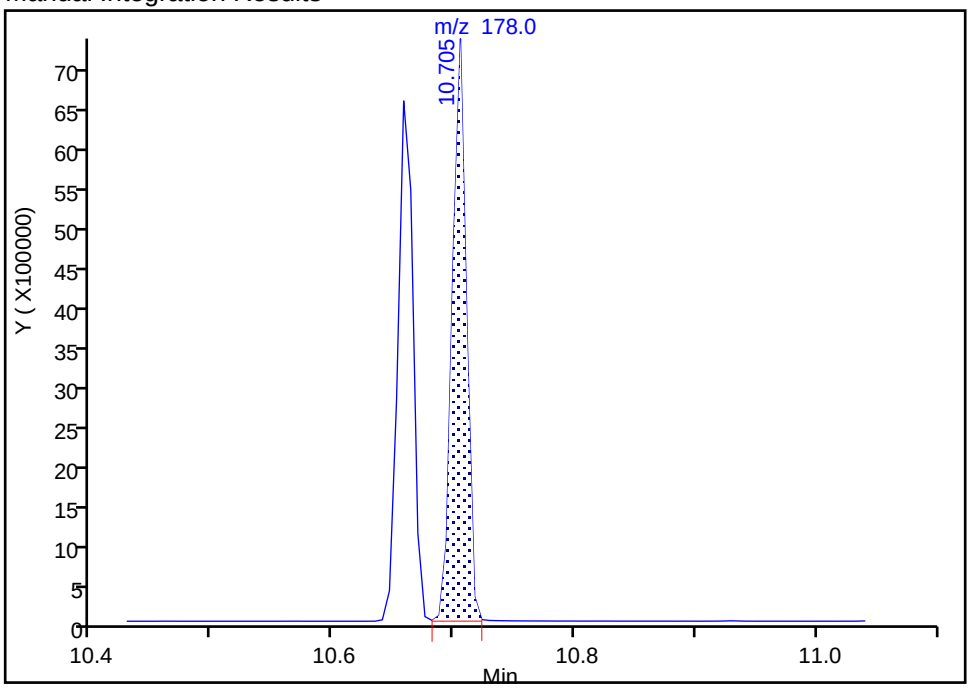
Processing Integration Results

RT: 10.72
Area: 18721
Amount: 1996.1285
Amount Units: ng/ml



Manual Integration Results

RT: 10.71
Area: 5950913
Amount: 2619.3210
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:00:06
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

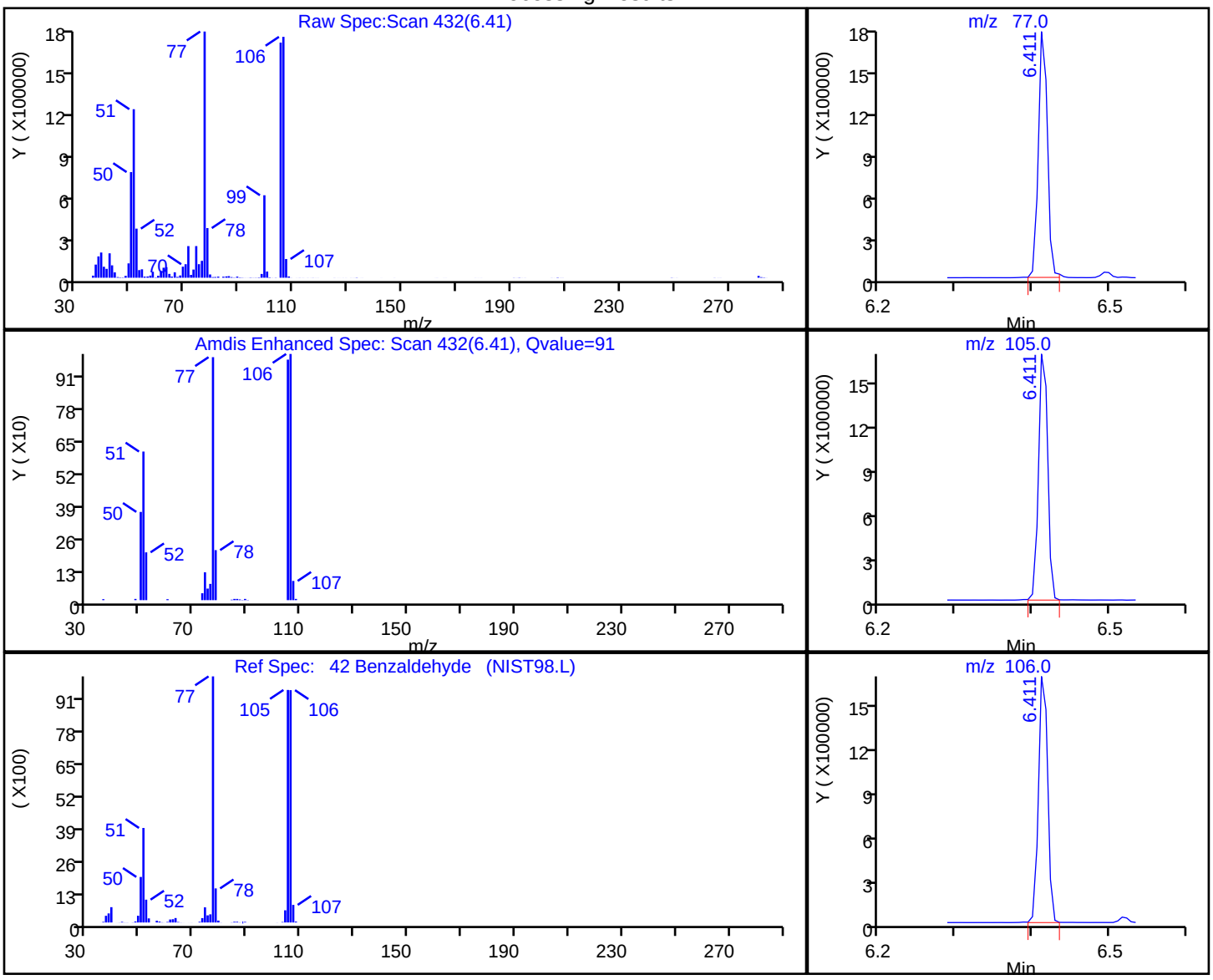
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423002.D				
Injection Date:	23-Apr-2018 06:35:30	Instrument ID:	A4AG2		
Lims ID:	std9 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

42 Benzaldehyde, CAS: 100-52-7

Processing Results



RT	Mass	Response	Amount
6.41	77.00	1408518	NaN
6.41	105.00	1367999	
6.41	106.00	1407972	

Reviewer: hulat, 23-Apr-2018 09:49:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423003.D
Lims ID: std8 l1lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Apr-2018 07:02:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-003
Misc. Info.: STD8 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:00:12 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 07:30:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	226042	400.0	400.0	
* 2 Naphthalene-d8	136	7.846	7.847	-0.001	100	1021609	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	508379	400.0	400.0	
* 4 Phenanthrene-d10	188	10.634	10.635	-0.001	98	841107	400.0	400.0	
* 5 Chrysene-d12	240	13.569	13.576	-0.007	98	752468	400.0	400.0	
* 6 Perylene-d12	264	15.934	15.934	0.000	96	632807	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.700	-0.001	95	930220	2000.0	1949.3	
$ 8 Phenol-d5	99	6.417	6.423	-0.006	0	1623393	2000.0	2141.5	
$ 9 Nitrobenzene-d5	82	7.229	7.229	0.000	93	1969042	2000.0	2075.5	
$ 10 2-Fluorobiphenyl (Surr)	172	8.740	8.741	-0.001	100	3539179	2000.0	2052.6	
$ 11 2,4,6-Tribromophenol	330	10.023	10.029	-0.006	86	361043	2000.0	2345.5	
$ 12 Terphenyl-d14	244	12.122	12.129	-0.007	100	3358103	2000.0	2185.9	
26 1,4-Dioxane	88	4.294	4.294	0.000	95	275150	2000.0	1986.6	
27 N-Nitrosodimethylamine	74	4.552	4.553	-0.001	83	1070427	2000.0	2111.2	
28 Pyridine	79	4.611	4.611	0.000	83	1762532	4000.0	4458.2	
42 Benzaldehyde	77	6.411	6.411	0.000	91	1293188	4000.0	4097.3	
43 Phenol	94	6.429	6.435	-0.006	97	1820269	2000.0	2147.4	
44 Aniline	93	6.493	6.494	-0.001	95	2666501	2000.0	1999.7	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	92	1935409	2000.0	2101.3	
47 2-Chlorophenol	128	6.605	6.605	0.000	97	1519337	2000.0	2019.3	
244 n-Decane	57	6.611	6.611	0.000	90	1787297	2000.0	1752.4	
48 1,3-Dichlorobenzene	146	6.740	6.741	-0.001	97	1836443	2000.0	2002.3	
49 1,4-Dichlorobenzene	146	6.793	6.794	-0.001	93	1888635	2000.0	2015.3	
50 Benzyl alcohol	108	6.858	6.864	-0.006	92	1198380	2000.0	2220.5	
51 1,2-Dichlorobenzene	146	6.929	6.929	0.000	95	1738943	2000.0	1955.0	
52 2-Methylphenol	108	6.935	6.935	0.000	97	1494159	2000.0	2085.7	
54 2,2'-oxybis[1-chloropropan	45	6.964	6.964	0.000	92	3140055	2000.0	1864.7	
53 Indene	115	6.999	7.000	-0.001	90	5226513	4000.0	3596.7	
55 3 & 4 Methylphenol	108	7.052	7.052	0.000	0	1620194	2000.0	2262.6	
57 N-Nitrosodi-n-propylamine	70	7.070	7.076	-0.006	94	1321585	2000.0	1986.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.087	7.088	-0.001	95	2412017	2000.0	2024.5	
61 Hexachloroethane	117	7.217	7.217	0.000	95	706160	2000.0	2013.1	
62 Nitrobenzene	77	7.240	7.247	-0.007	93	1883506	2000.0	2048.8	
64 Isophorone	82	7.429	7.435	-0.006	97	3451055	2000.0	2013.1	
66 2,4-Dimethylphenol	107	7.499	7.505	-0.006	94	1697055	2000.0	2166.0	
65 2-Nitrophenol	139	7.511	7.511	0.000	96	916145	2000.0	2298.4	
70 Benzoic acid	122	7.576	7.588	-0.012	94	1416336	4000.0	3818.5	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	98	2013394	2000.0	1940.3	
72 2,4-Dichlorophenol	162	7.705	7.711	-0.006	97	1341200	2000.0	2355.4	
73 1,2,4-Trichlorobenzene	180	7.793	7.794	-0.001	95	1486529	2000.0	2077.9	
74 Naphthalene	128	7.870	7.870	0.000	98	5319463	2000.0	1949.4	
75 4-Chloroaniline	127	7.882	7.882	0.000	96	2596164	2000.0	1970.7	
76 2,6-Dichlorophenol	162	7.899	7.899	0.000	96	1392084	2000.0	2228.0	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	98	775471	2000.0	2116.4	
83 Caprolactam	113	8.170	8.176	-0.006	74	893743	4000.0	3632.1	
85 4-Chloro-3-methylphenol	107	8.264	8.264	0.000	97	1518882	2000.0	2285.8	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	92	3533499	2000.0	2011.8	
87 1-Methylnaphthalene	142	8.534	8.535	-0.001	93	3395479	2000.0	2010.9	
89 Hexachlorocyclopentadiene	237	8.587	8.588	-0.001	97	869084	2000.0	2046.1	
90 1,2,4,5-Tetrachlorobenzene	216	8.593	8.594	-0.001	99	1383799	2000.0	2152.5	
93 2,4,6-Trichlorophenol	196	8.670	8.676	-0.006	94	956792	2000.0	2348.6	
94 2,4,5-Trichlorophenol	196	8.711	8.711	0.000	93	935430	2000.0	1957.9	
99 1,1'-Biphenyl	154	8.829	8.835	-0.006	95	4142726	2000.0	2019.4	
100 2-Chloronaphthalene	162	8.870	8.870	0.000	98	3160940	2000.0	2064.2	
101 2-Nitroaniline	65	8.929	8.929	0.000	82	1094078	2000.0	2207.2	
104 Dimethyl phthalate	163	9.052	9.052	0.000	98	3512540	2000.0	2003.5	
103 1,3-Dinitrobenzene	168	9.093	9.099	-0.006	84	564669	2000.0	2013.6	
106 2,6-Dinitrotoluene	165	9.117	9.117	0.000	93	819167	2000.0	2199.3	
108 Acenaphthylene	152	9.234	9.235	-0.001	98	4818085	2000.0	2081.9	
109 3-Nitroaniline	138	9.281	9.288	-0.007	92	670170	2000.0	2060.4	
110 2,4-Dinitrophenol	184	9.364	9.364	0.000	84	741968	4000.0	4052.8	
111 Acenaphthene	153	9.376	9.382	-0.006	94	3131004	2000.0	1938.3	
112 4-Nitrophenol	109	9.387	9.388	-0.001	95	943940	4000.0	4103.6	
113 2,4-Dinitrotoluene	165	9.470	9.470	0.000	91	1036316	2000.0	2275.6	
115 Dibenzofuran	168	9.523	9.523	0.000	95	4422039	2000.0	2040.5	
118 2,3,4,6-Tetrachlorophenol	232	9.617	9.617	0.000	75	689453	2000.0	2069.8	
248 Hexadecane	57	9.640	9.641	-0.001	95	2438686	2000.0	1686.7	
120 Diethyl phthalate	149	9.646	9.646	0.000	98	3370915	2000.0	1909.9	
122 4-Chlorophenyl phenyl ethe	204	9.781	9.788	-0.007	98	1662278	2000.0	2067.6	
125 4-Nitroaniline	138	9.805	9.811	-0.006	82	549892	2000.0	1744.7	
124 Fluorene	166	9.817	9.817	0.000	94	3495643	2000.0	1983.0	
127 4,6-Dinitro-2-methylphenol	198	9.828	9.835	-0.007	81	932257	4000.0	4004.1	
128 N-Nitrosodiphenylamine	169	9.881	9.882	-0.001	99	2637666	2000.0	2089.8	
129 Diphenylamine	169	9.881	9.882	-0.001	95	2637666	1700.0	1776.3	
130 1,2-Diphenylhydrazine	77	9.923	9.923	0.000	17	3903614	2000.0	2002.4	a
131 Azobenzene	77	9.923	9.923	0.000	98	3903614	2000.0	2002.4	
138 4-Bromophenyl phenyl ether	248	10.211	10.211	0.000	72	892495	2000.0	2178.1	
141 Atrazine	200	10.305	10.305	0.000	94	1488136	4000.0	3741.2	
140 Hexachlorobenzene	284	10.311	10.311	0.000	95	902624	2000.0	2232.9	
245 n-Octadecane	57	10.423	10.423	0.000	93	2837258	2000.0	1868.6	
143 Pentachlorophenol	266	10.458	10.464	-0.006	91	1109595	4000.0	4039.0	
148 Phenanthrene	178	10.658	10.658	0.000	98	4676053	2000.0	2005.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.699	10.705	-0.006	98	4836073	2000.0	2081.0	
150 Carbazole	167	10.817	10.817	0.000	96	3849152	2000.0	1902.1	
154 Di-n-butyl phthalate	149	11.040	11.046	-0.006	100	5752726	2000.0	2048.8	
159 Fluoranthene	202	11.770	11.776	-0.006	98	4598800	2000.0	2072.1	
160 Benzidine	184	11.858	11.858	0.000	99	4447799	4000.0	4137.1	
161 Pyrene	202	12.028	12.034	-0.006	97	4686918	2000.0	1987.8	
169 Butyl benzyl phthalate	149	12.658	12.664	-0.006	99	2739550	2000.0	2231.4	
174 Bis(2-ethylhexyl) phthalat	149	13.422	13.429	-0.006	97	3740346	2000.0	2235.5	
177 3,3'-Dichlorobenzidine	252	13.464	13.470	-0.006	75	3089027	4000.0	4486.6	
178 Benzo[a]anthracene	228	13.552	13.558	-0.006	99	4652736	2000.0	2189.7	
179 Chrysene	228	13.611	13.617	-0.006	98	4467359	2000.0	2082.3	
181 Di-n-octyl phthalate	149	14.440	14.446	-0.006	99	6294532	2000.0	2310.4	
183 Benzo[b]fluoranthene	252	15.281	15.287	-0.006	99	4267523	2000.0	2240.1	
184 Benzo[k]fluoranthene	252	15.328	15.334	-0.006	99	4347552	2000.0	2205.5	
185 Benzo[a]pyrene	252	15.846	15.852	-0.006	80	3968730	2000.0	2257.7	
190 Indeno[1,2,3-cd]pyrene	276	18.057	18.069	-0.012	97	4053086	2000.0	2254.4	
189 Dibenz(a,h)anthracene	278	18.063	18.081	-0.018	91	3557277	2000.0	2350.3	
191 Benzo[g,h,i]perylene	276	18.693	18.705	-0.012	94	3112955	2000.0	2144.6	
S 193 Methyl Phenols,Total	100				0			4348.3	
S 246 Total Cresols	100				0			4348.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L8 W_00010 Amount Added: 0.10 Units: mL

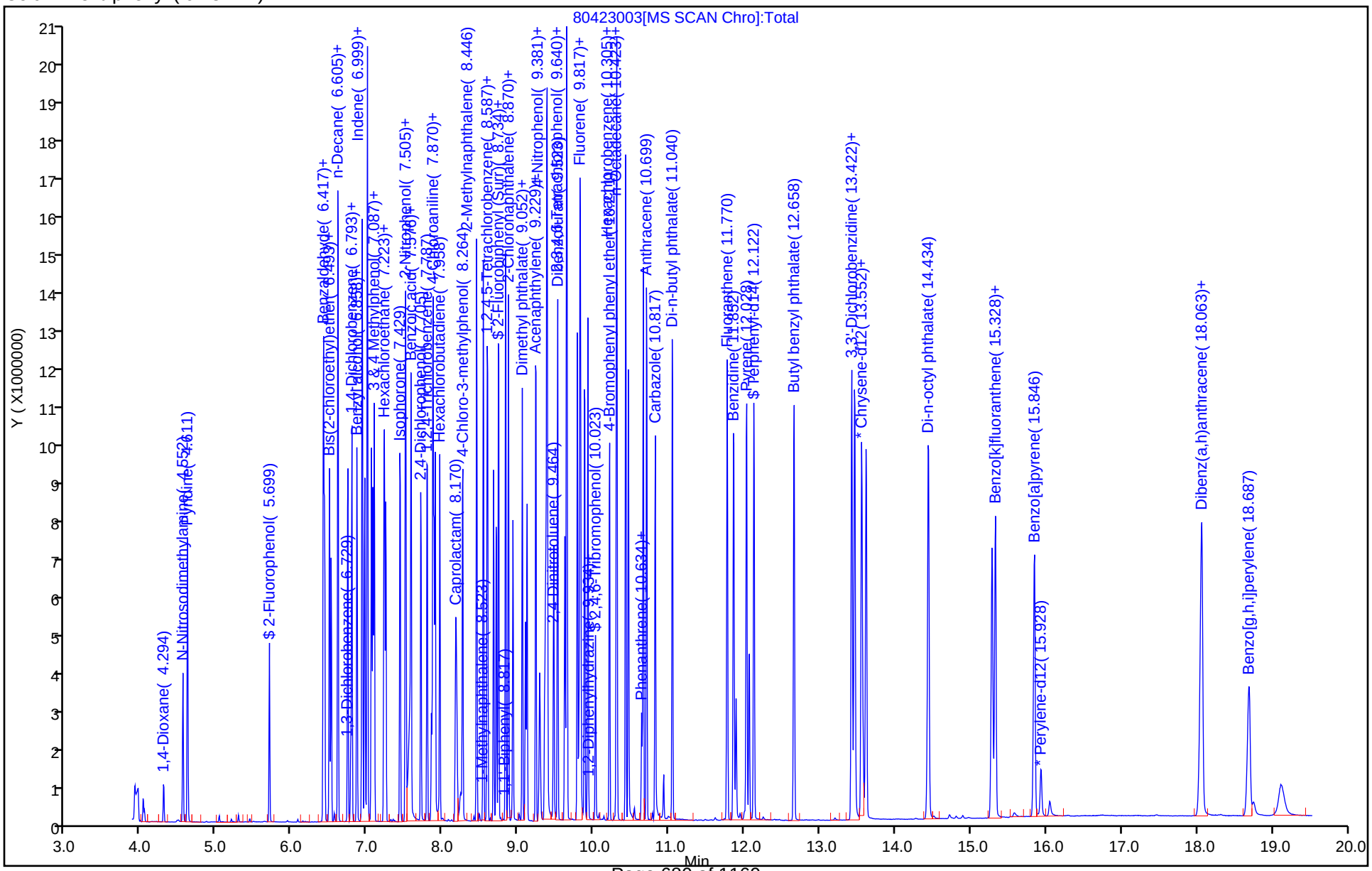
Report Date: 24-Apr-2018 07:00:14 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423003.D

Injection Date:	23-Apr-2018 07:02:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std8 l1lvi			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

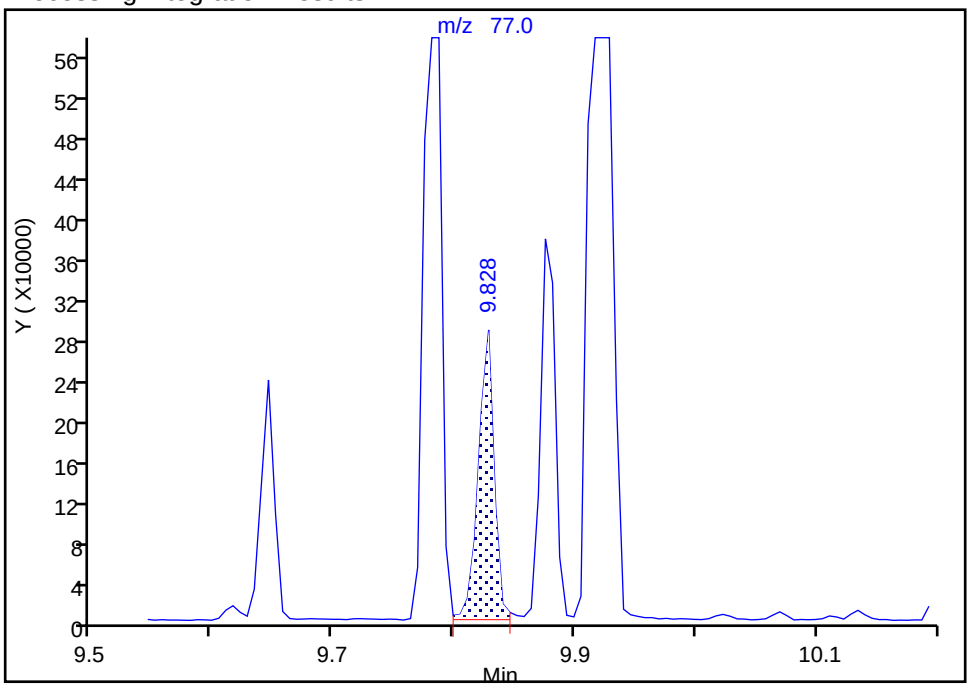
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423003.D				
Injection Date:	23-Apr-2018 07:02:30	Instrument ID:	A4AG2		
Lims ID:	std8 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

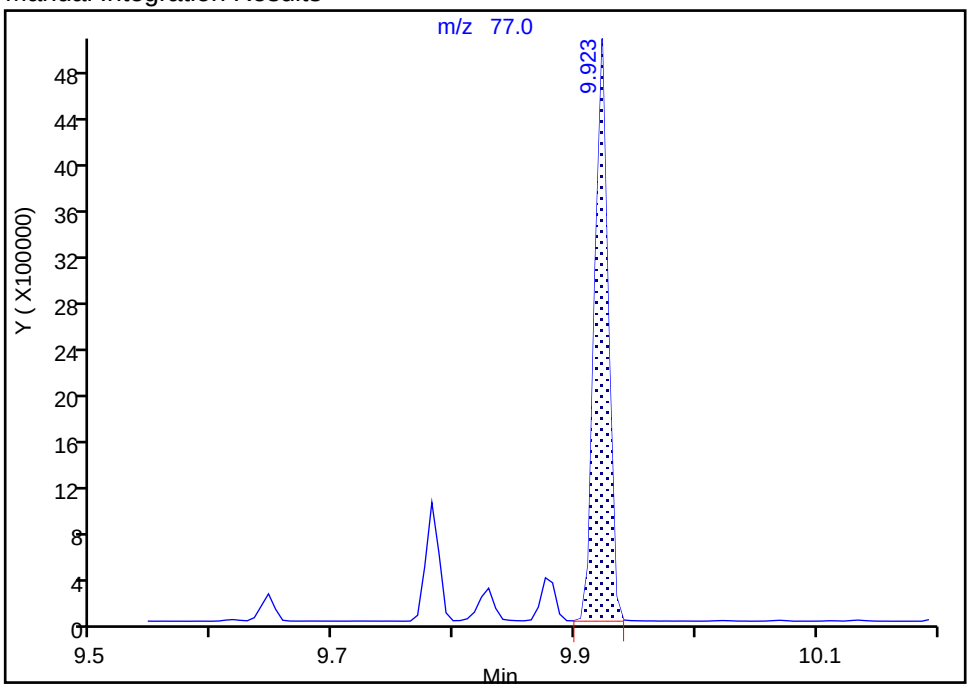
Processing Integration Results

RT: 9.83
Area: 258387
Amount: 135.6532
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 3903614
Amount: 2002.3918
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:30:40

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D
Lims ID: std7 l1lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Apr-2018 07:26:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-004
Misc. Info.: STD7 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:00:19 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 07:50:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	231294	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.847	-0.001	100	1021556	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	501261	400.0	400.0	
* 4 Phenanthrene-d10	188	10.635	10.635	0.000	98	839363	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.576	-0.012	98	754109	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.934	-0.012	96	617261	400.0	400.0	
$ 7 2-Fluorophenol	112	5.700	5.700	0.000	95	713832	1500.0	1461.9	
$ 8 Phenol-d5	99	6.417	6.423	-0.006	0	1100699	1500.0	1419.0	a
$ 9 Nitrobenzene-d5	82	7.223	7.229	-0.006	93	1478649	1500.0	1558.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.741	-0.006	100	2606279	1500.0	1533.0	
$ 11 2,4,6-Tribromophenol	330	10.023	10.029	-0.006	92	266349	1500.0	1754.9	
$ 12 Terphenyl-d14	244	12.117	12.129	-0.012	99	2379666	1500.0	1545.6	
26 1,4-Dioxane	88	4.294	4.294	0.000	94	224794	1500.0	1586.2	
27 N-Nitrosodimethylamine	74	4.553	4.553	0.000	83	811113	1500.0	1563.4	
28 Pyridine	79	4.611	4.611	0.000	82	1365295	3000.0	3375.0	a
42 Benzaldehyde	77	6.411	6.411	0.000	92	1143781	3000.0	2897.2	
43 Phenol	94	6.429	6.435	-0.006	98	1233717	1500.0	1422.4	
44 Aniline	93	6.494	6.494	0.000	96	2002242	1500.0	1467.5	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	94	1354975	1500.0	1437.7	a
47 2-Chlorophenol	128	6.605	6.605	0.000	97	1114765	1500.0	1448.0	
244 n-Decane	57	6.605	6.611	-0.006	91	1492425	1500.0	1430.0	a
48 1,3-Dichlorobenzene	146	6.735	6.741	-0.006	97	1415697	1500.0	1508.5	
49 1,4-Dichlorobenzene	146	6.794	6.794	0.000	93	1446124	1500.0	1508.1	
50 Benzyl alcohol	108	6.858	6.864	-0.006	91	867658	1500.0	1571.2	
51 1,2-Dichlorobenzene	146	6.923	6.929	-0.006	95	1330530	1500.0	1461.9	
52 2-Methylphenol	108	6.929	6.935	-0.006	95	1113482	1500.0	1519.0	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.964	-0.006	92	2395601	1500.0	1390.3	
53 Indene	115	6.999	7.000	-0.001	90	4141168	3000.0	2785.1	
55 3 & 4 Methylphenol	108	7.052	7.052	0.000	0	1186839	1500.0	1619.8	a
57 N-Nitrosodi-n-propylamine	70	7.070	7.076	-0.006	93	1007068	1500.0	1479.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.088	7.088	0.000	94	1809095	1500.0	1483.9	
61 Hexachloroethane	117	7.217	7.217	0.000	96	523425	1500.0	1458.3	
62 Nitrobenzene	77	7.241	7.247	-0.006	93	1412756	1500.0	1536.8	
64 Isophorone	82	7.429	7.435	-0.006	97	2586837	1500.0	1509.1	
66 2,4-Dimethylphenol	107	7.499	7.505	-0.006	92	1215336	1500.0	1551.3	
65 2-Nitrophenol	139	7.511	7.511	0.000	96	674128	1500.0	1691.4	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	98	1567142	1500.0	1510.3	
70 Benzoic acid	122	7.564	7.588	-0.024	92	1217642	3000.0	3314.3	
72 2,4-Dichlorophenol	162	7.705	7.711	-0.006	97	924656	1500.0	1624.0	
73 1,2,4-Trichlorobenzene	180	7.788	7.794	-0.006	94	1086331	1500.0	1518.6	
74 Naphthalene	128	7.864	7.870	-0.006	98	4045581	1500.0	1482.6	a
75 4-Chloroaniline	127	7.882	7.882	0.000	84	2051638	1500.0	1557.4	a
76 2,6-Dichlorophenol	162	7.899	7.899	0.000	96	1007497	1500.0	1612.6	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	98	566387	1500.0	1545.9	
83 Caprolactam	113	8.164	8.176	-0.012	74	684893	3000.0	2783.5	
85 4-Chloro-3-methylphenol	107	8.258	8.264	-0.006	97	1132984	1500.0	1705.2	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	93	2755501	1500.0	1568.9	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	93	2547519	1500.0	1508.8	
89 Hexachlorocyclopentadiene	237	8.582	8.588	-0.006	96	627367	1500.0	1507.0	
90 1,2,4,5-Tetrachlorobenzene	216	8.593	8.594	-0.001	99	1023049	1500.0	1613.9	
93 2,4,6-Trichlorophenol	196	8.670	8.676	-0.006	95	690663	1500.0	1719.4	
94 2,4,5-Trichlorophenol	196	8.705	8.711	-0.006	93	712455	1500.0	1523.8	
99 1,1'-Biphenyl	154	8.829	8.835	-0.006	95	3092930	1500.0	1529.1	
100 2-Chloronaphthalene	162	8.864	8.870	-0.006	99	2363691	1500.0	1565.5	
101 2-Nitroaniline	65	8.929	8.929	0.000	82	831875	1500.0	1702.1	
104 Dimethyl phthalate	163	9.052	9.052	0.000	99	2653694	1500.0	1535.1	
103 1,3-Dinitrobenzene	168	9.093	9.099	-0.006	85	419307	1500.0	1525.1	
106 2,6-Dinitrotoluene	165	9.111	9.117	-0.006	91	607788	1500.0	1654.9	
108 Acenaphthylene	152	9.229	9.235	-0.006	98	3572062	1500.0	1565.4	
109 3-Nitroaniline	138	9.276	9.288	-0.012	92	549653	1500.0	1713.9	
110 2,4-Dinitrophenol	184	9.358	9.364	-0.006	81	510576	3000.0	2932.5	a
111 Acenaphthene	153	9.376	9.382	-0.006	94	2375664	1500.0	1491.6	
112 4-Nitrophenol	109	9.382	9.388	-0.006	96	699344	3000.0	3116.5	
113 2,4-Dinitrotoluene	165	9.464	9.470	-0.006	90	772852	1500.0	1721.2	
115 Dibenzofuran	168	9.517	9.523	-0.006	95	3281875	1500.0	1535.9	
118 2,3,4,6-Tetrachlorophenol	232	9.617	9.617	0.000	78	482746	1500.0	1480.5	
248 Hexadecane	57	9.635	9.641	-0.006	94	1967200	1500.0	1379.9	
120 Diethyl phthalate	149	9.646	9.646	0.000	98	2601792	1500.0	1495.1	
122 4-Chlorophenyl phenyl ethe	204	9.782	9.788	-0.006	96	1246072	1500.0	1571.9	
125 4-Nitroaniline	138	9.805	9.811	-0.006	86	475530	1500.0	1530.2	
124 Fluorene	166	9.817	9.817	0.000	95	2693936	1500.0	1549.9	
127 4,6-Dinitro-2-methylphenol	198	9.823	9.835	-0.012	80	674897	3000.0	2959.4	
129 Diphenylamine	169	9.876	9.882	-0.006	95	1939442	1275.0	1308.8	
128 N-Nitrosodiphenylamine	169	9.876	9.882	-0.006	99	1939442	1500.0	1539.8	
131 Azobenzene	77	9.917	9.923	-0.006	98	2971634	1500.0	1527.5	
130 1,2-Diphenylhydrazine	77	9.917	9.923	-0.006	18	2971634	1500.0	1527.5	a
138 4-Bromophenyl phenyl ether	248	10.205	10.211	-0.006	73	664589	1500.0	1625.3	
141 Atrazine	200	10.299	10.305	-0.006	93	1227781	3000.0	3093.1	
140 Hexachlorobenzene	284	10.305	10.311	-0.006	92	676554	1500.0	1677.1	
245 n-Octadecane	57	10.423	10.423	0.000	92	2271282	1500.0	1498.9	
143 Pentachlorophenol	266	10.458	10.464	-0.006	91	790868	3000.0	2962.6	
148 Phenanthrene	178	10.652	10.658	-0.006	98	3570664	1500.0	1534.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.699	10.705	-0.006	97	3705293	1500.0	1597.7	
150 Carbazole	167	10.811	10.817	-0.006	96	3132157	1500.0	1551.0	
154 Di-n-butyl phthalate	149	11.040	11.046	-0.006	100	4418151	1500.0	1576.8	
159 Fluoranthene	202	11.764	11.776	-0.012	99	3509878	1500.0	1584.7	
160 Benzidine	184	11.846	11.858	-0.012	99	3314438	3000.0	3107.8	
161 Pyrene	202	12.023	12.034	-0.011	97	3406573	1500.0	1441.7	
169 Butyl benzyl phthalate	149	12.652	12.664	-0.012	98	2026827	1500.0	1647.3	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.429	-0.011	97	2750988	1500.0	1640.6	
177 3,3'-Dichlorobenzidine	252	13.452	13.470	-0.018	75	2278322	3000.0	3301.9	
178 Benzo[a]anthracene	228	13.546	13.558	-0.012	99	3430967	1500.0	1611.2	
179 Chrysene	228	13.605	13.617	-0.012	98	3266774	1500.0	1519.4	
181 Di-n-octyl phthalate	149	14.434	14.446	-0.012	99	4584601	1500.0	1725.1	
183 Benzo[b]fluoranthene	252	15.275	15.287	-0.012	99	3016286	1500.0	1623.2	
184 Benzo[k]fluoranthene	252	15.317	15.334	-0.017	99	3195165	1500.0	1661.7	
185 Benzo[a]pyrene	252	15.834	15.852	-0.018	80	2889318	1500.0	1685.0	
190 Indeno[1,2,3-cd]pyrene	276	18.046	18.069	-0.023	98	2932345	1500.0	1672.1	
189 Dibenz(a,h)anthracene	278	18.052	18.081	-0.029	95	2543141	1500.0	1722.6	
191 Benzo[g,h,i]perylene	276	18.675	18.705	-0.030	94	2289425	1500.0	1617.0	
S 246 Total Cresols	100				0			3138.8	
S 193 Methyl Phenols,Total	100				0			3138.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L7 W_00010 Amount Added: 0.10 Units: mL

Report Date: 24-Apr-2018 07:00:22 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D

Injection Date: 23-Apr-2018 07:26:30 Instrument ID: A4AG2 Operator ID:

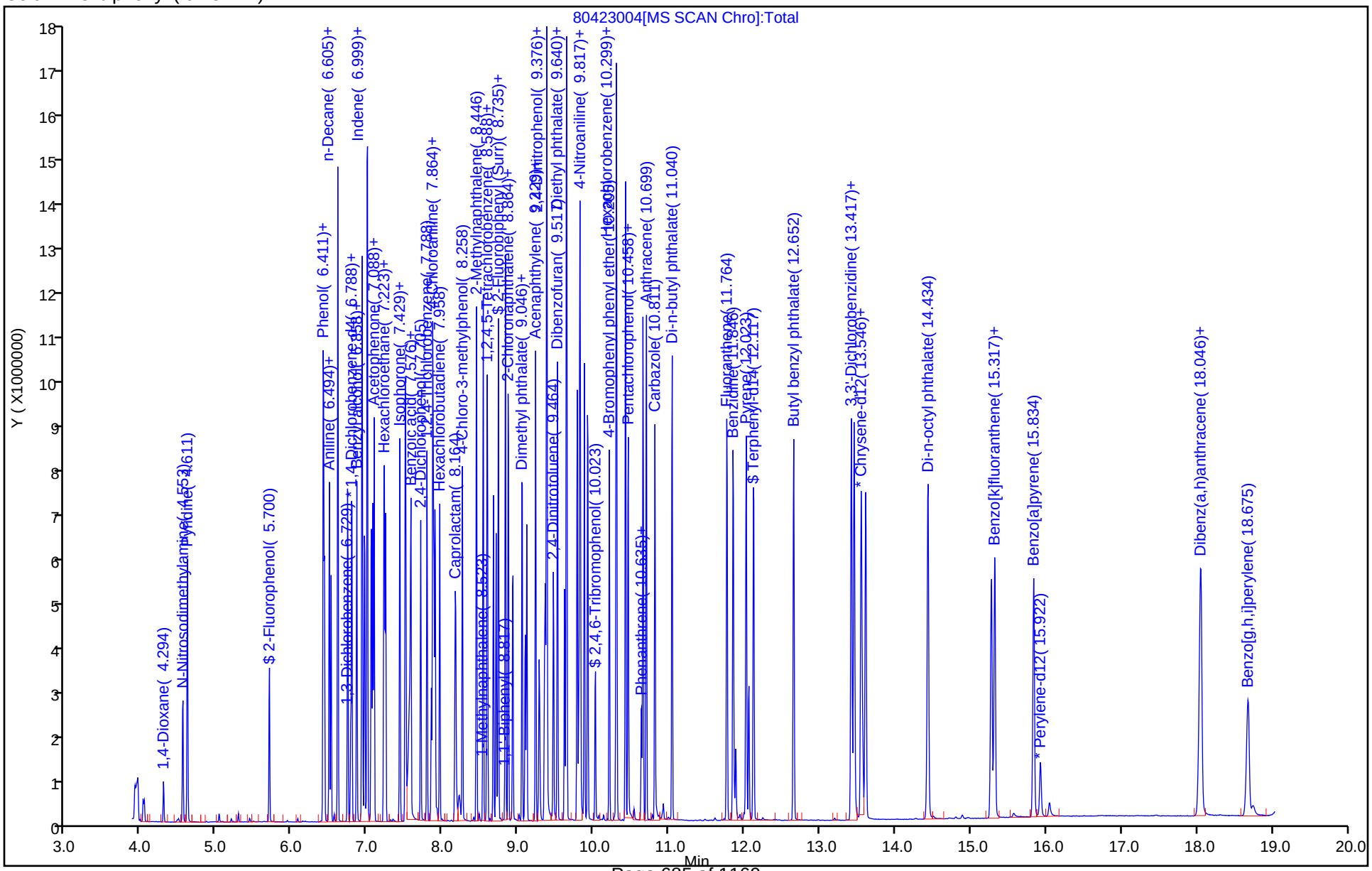
Lims ID: std7 l1lvi Worklist Smp#: 4

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 4

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

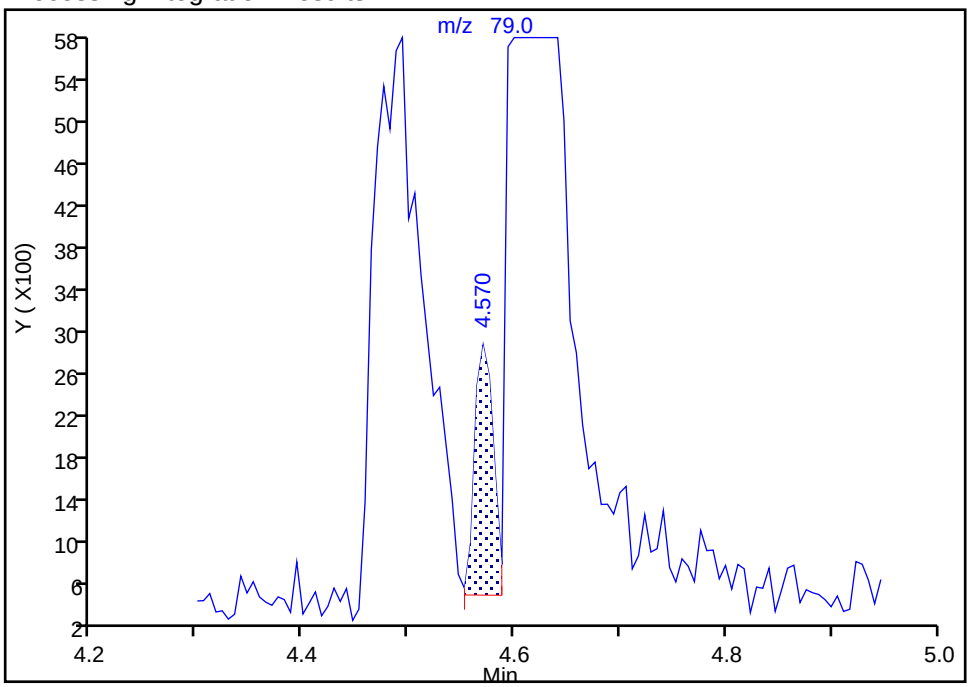
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

28 Pyridine, CAS: 110-86-1

Signal: 1

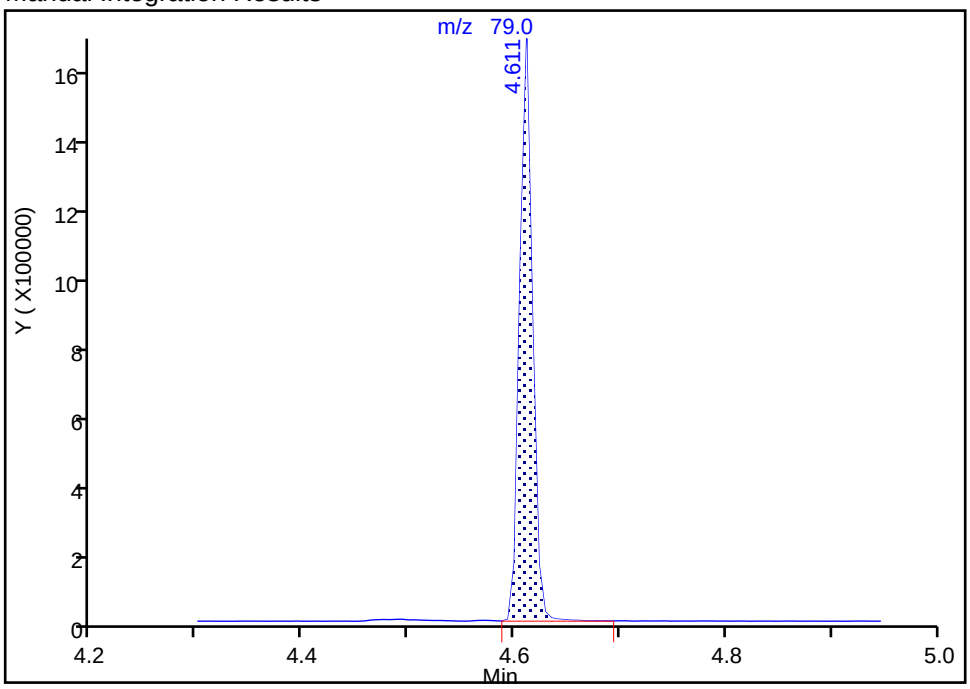
Processing Integration Results

RT: 4.57
Area: 2902
Amount: 9.007185
Amount Units: ng/ml



Manual Integration Results

RT: 4.61
Area: 1365295
Amount: 3374.9920
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:51:59

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

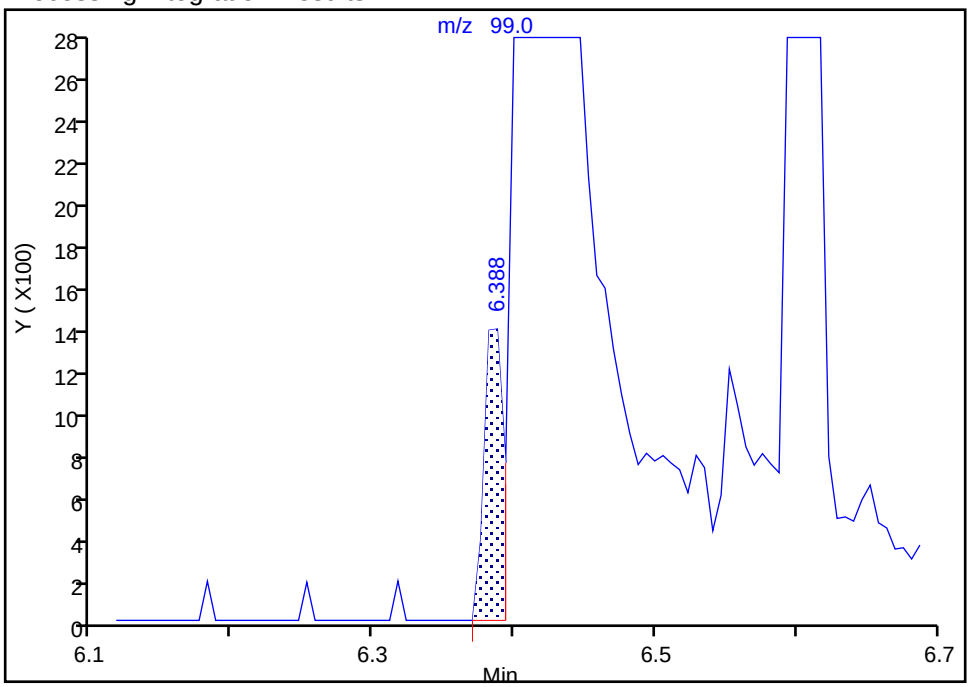
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D
Injection Date: 23-Apr-2018 07:26:30 Instrument ID: A4AG2
Lims ID: std7 l1lvi
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

$ 8 Phenol-d5, CAS: 4165-62-2

Signal: 1

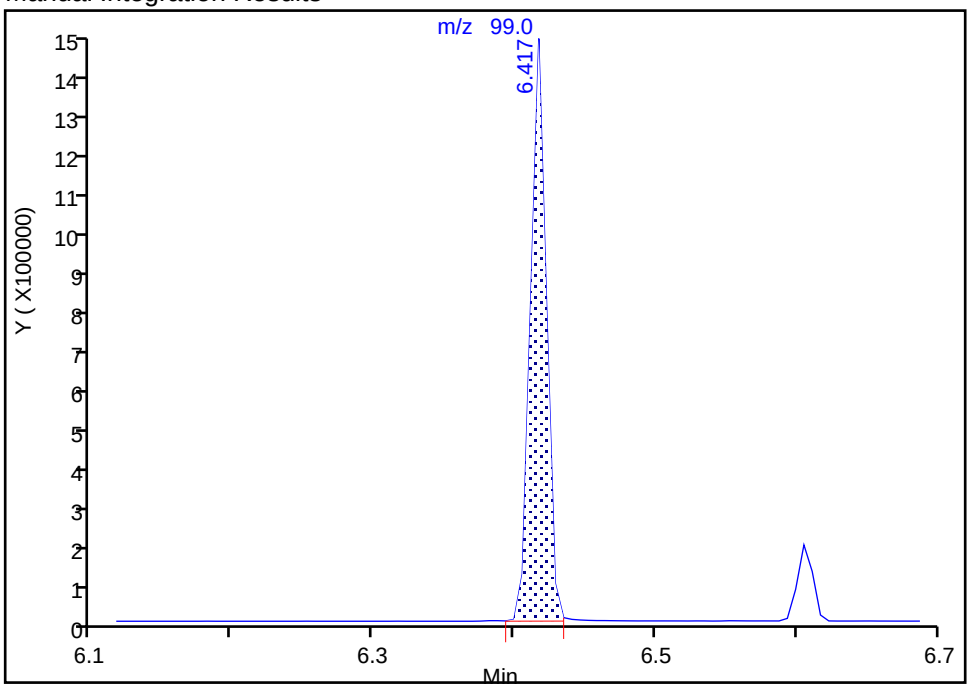
Processing Integration Results

RT: 6.39
Area: 1392
Amount: 1.934010
Amount Units: ng/ml



Manual Integration Results

RT: 6.42
Area: 1100699
Amount: 1418.9946
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:48:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

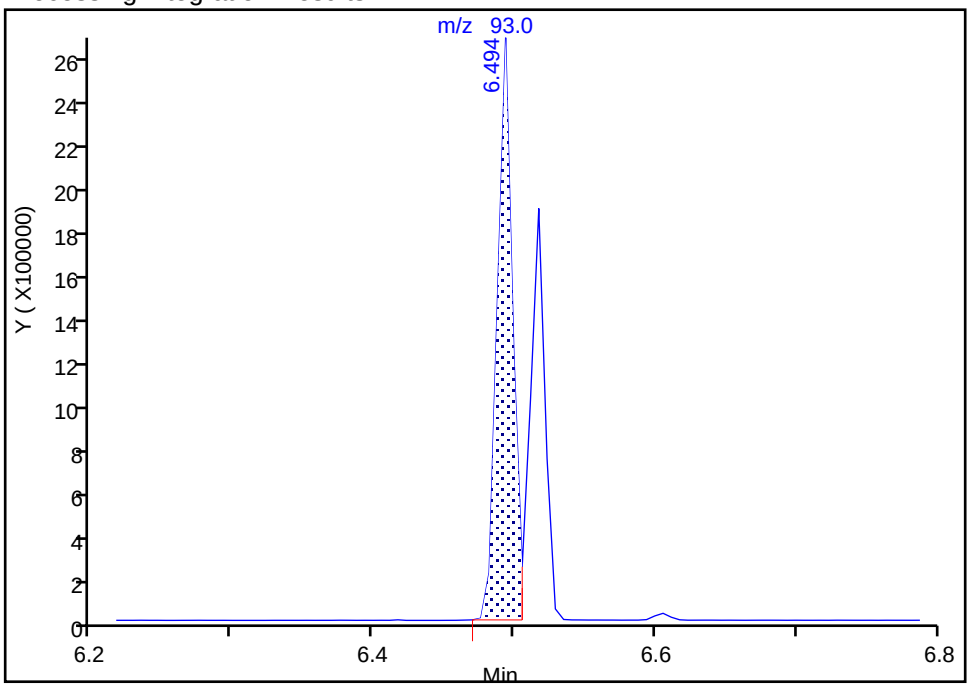
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

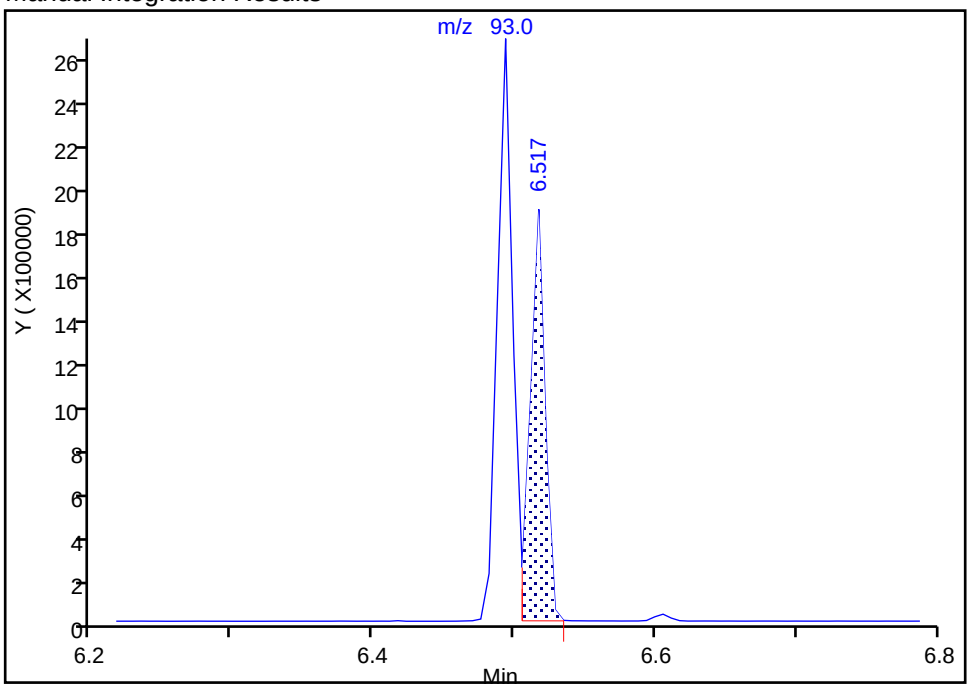
Processing Integration Results

RT: 6.49
Area: 2002242
Amount: 1933.0514
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 1354975
Amount: 1437.6925
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:49:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

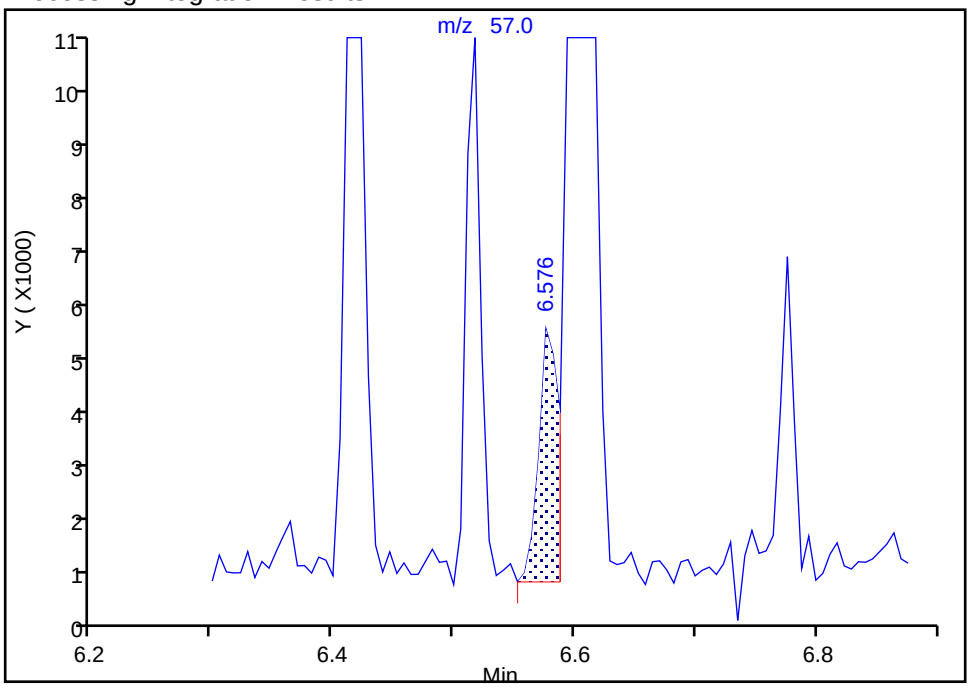
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D
Injection Date: 23-Apr-2018 07:26:30 Instrument ID: A4AG2
Lims ID: std7 l1lvi
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

244 n-Decane, CAS: 124-18-5

Signal: 1

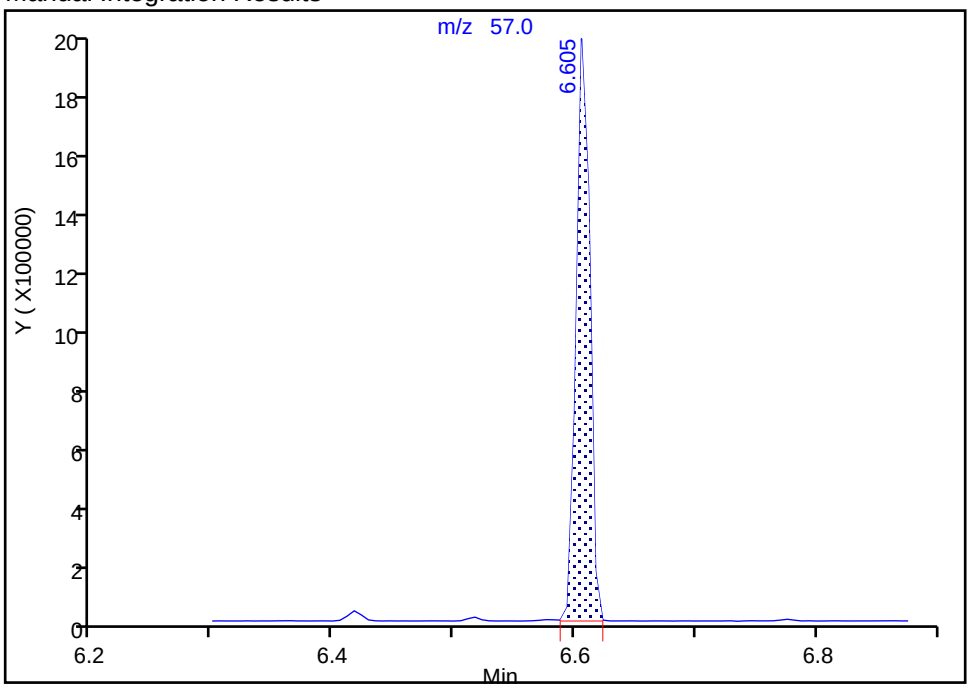
Processing Integration Results

RT: 6.58
Area: 5251
Amount: 5.071450
Amount Units: ng/ml



Manual Integration Results

RT: 6.61
Area: 1492425
Amount: 1430.0348
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:49:14
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

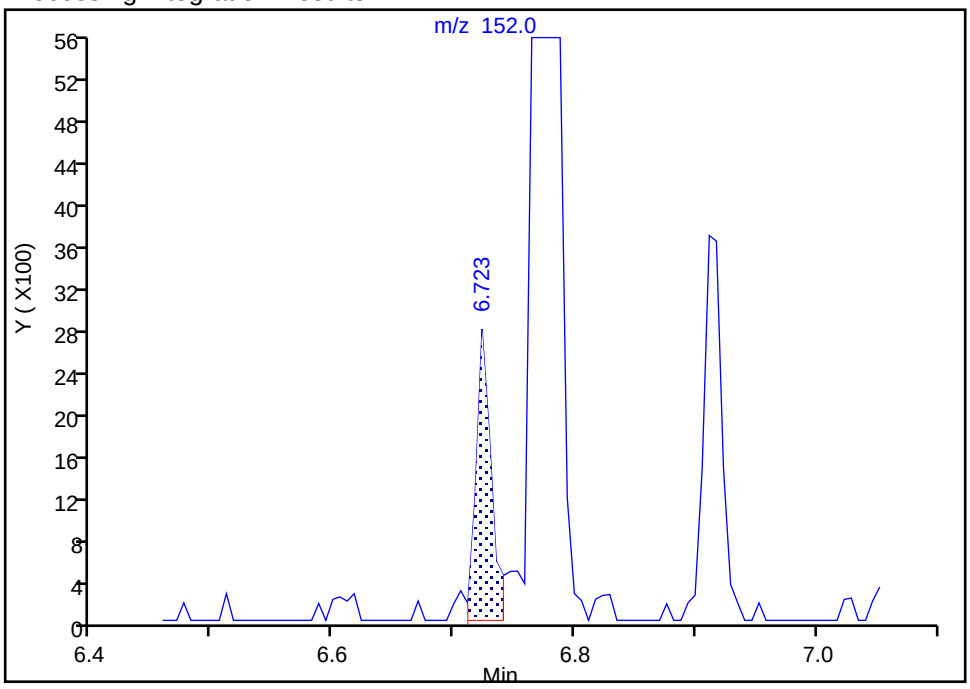
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

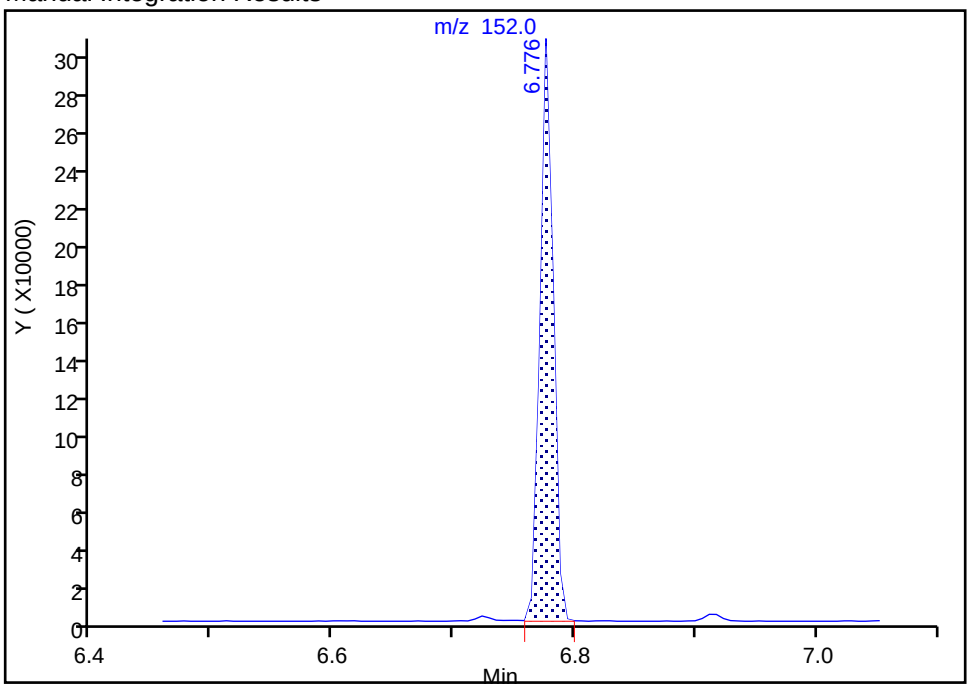
Processing Integration Results

RT: 6.72
Area: 2421
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 231294
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:48:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

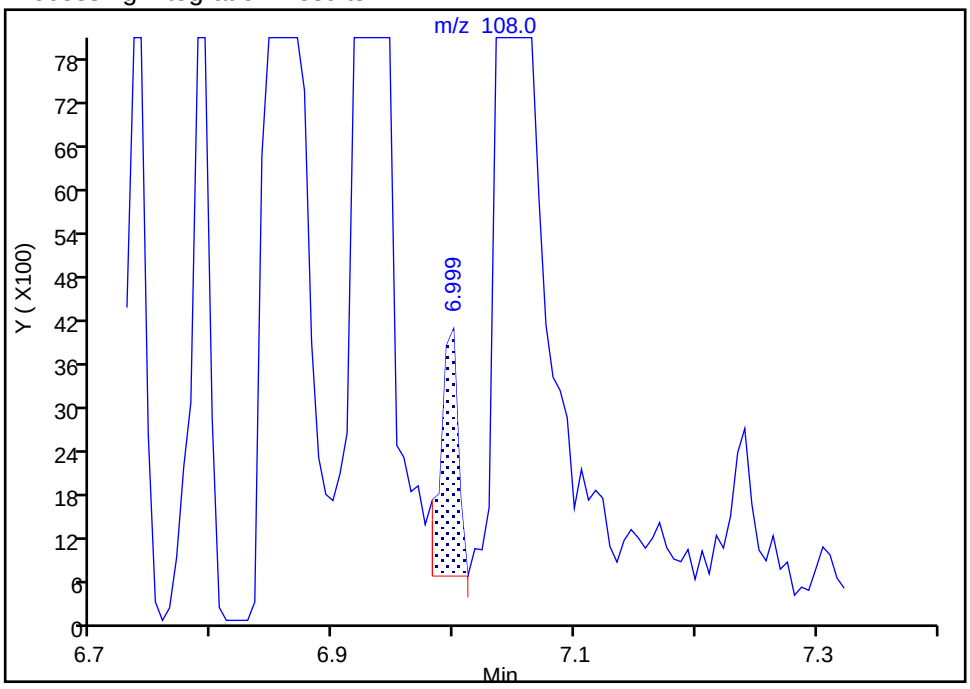
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D
Injection Date: 23-Apr-2018 07:26:30 Instrument ID: A4AG2
Lims ID: std7 l1lvi
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

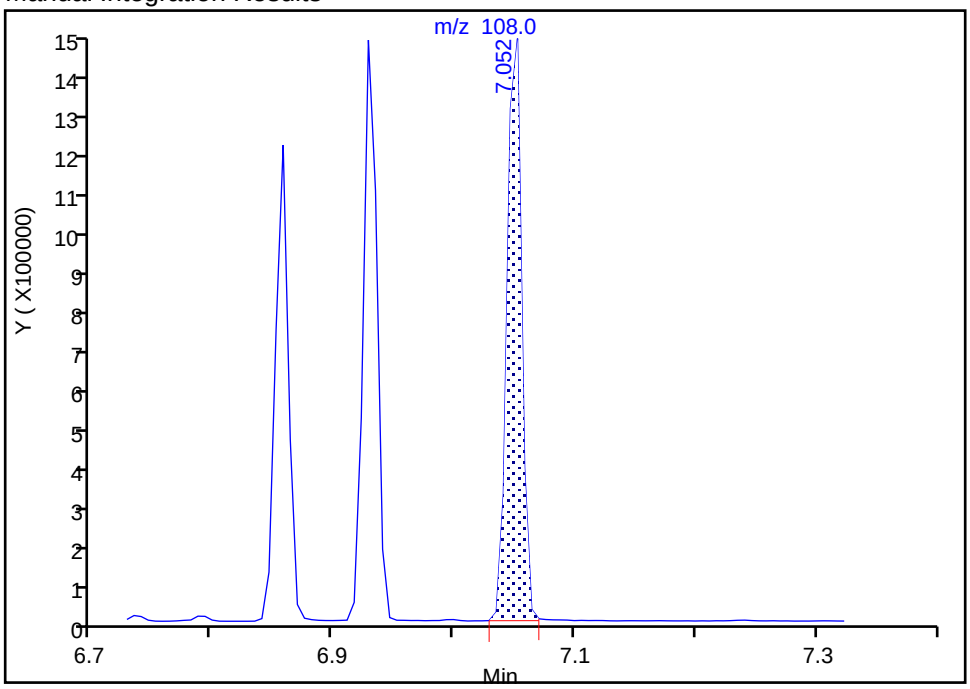
Processing Integration Results

RT: 7.00
Area: 3482
Amount: 5.140381
Amount Units: ng/ml



Manual Integration Results

RT: 7.05
Area: 1186839
Amount: 1619.7649
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:49:26
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

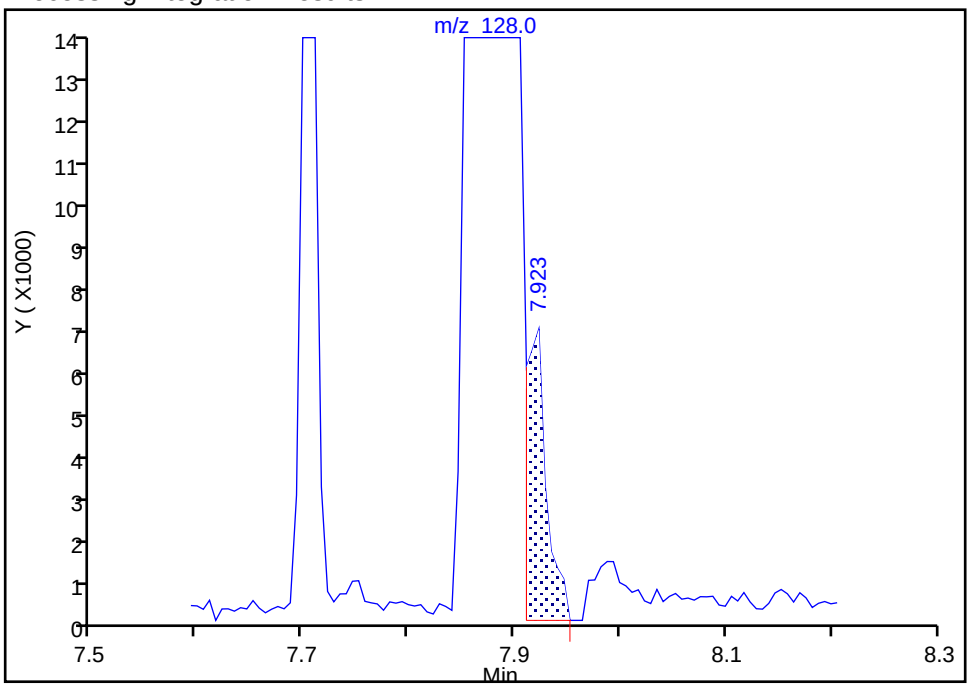
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

74 Naphthalene, CAS: 91-20-3

Signal: 1

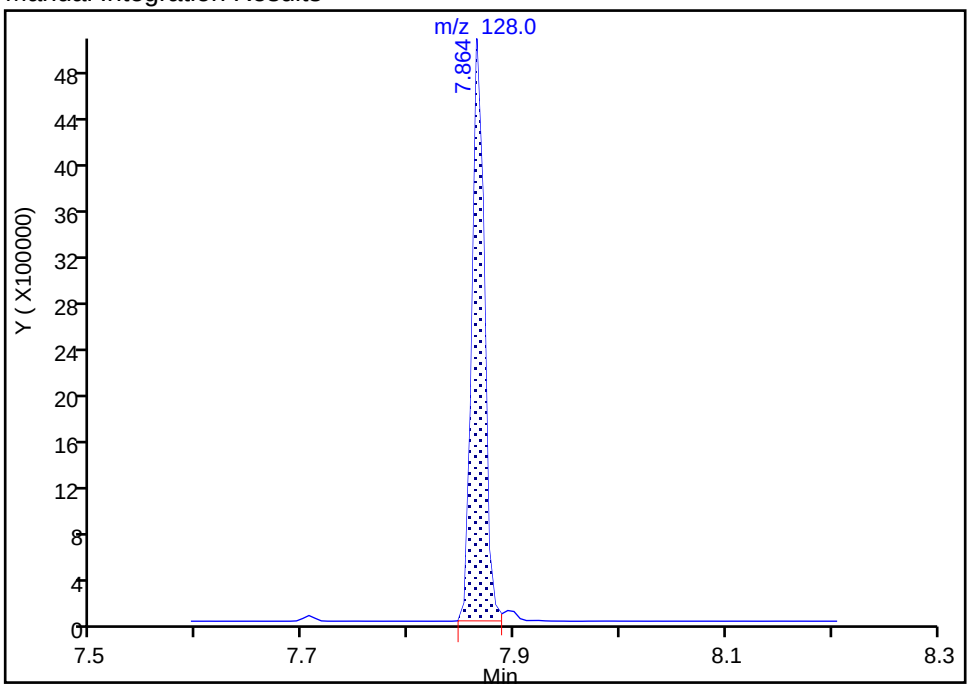
Processing Integration Results

RT: 7.92
Area: 9304
Amount: 3.969058
Amount Units: ng/ml



Manual Integration Results

RT: 7.86
Area: 4045581
Amount: 1482.6232
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:49:38

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

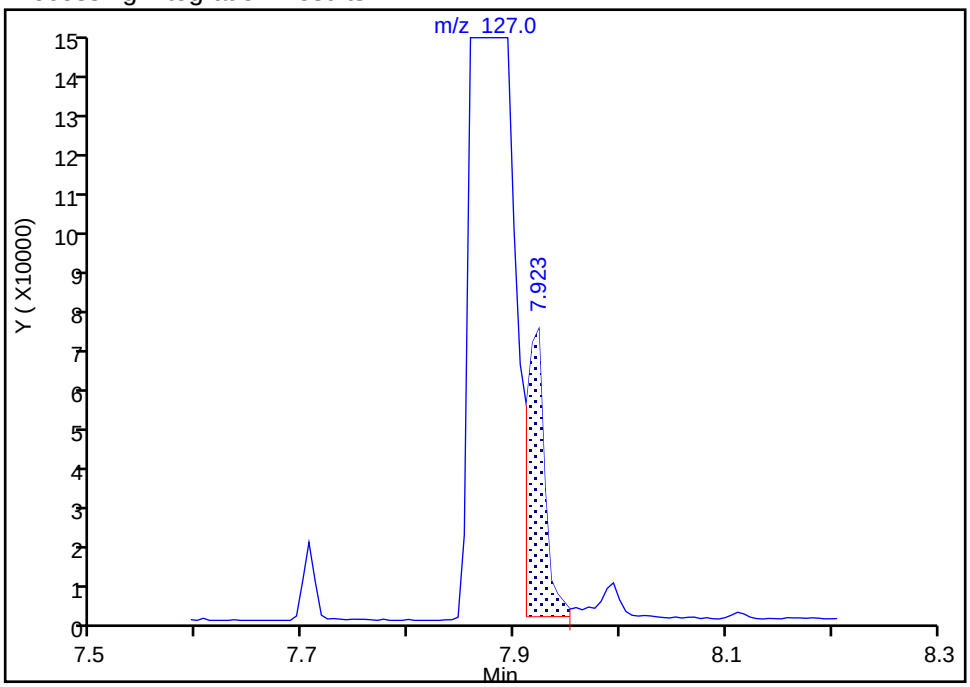
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

75 4-Chloroaniline, CAS: 106-47-8

Signal: 1

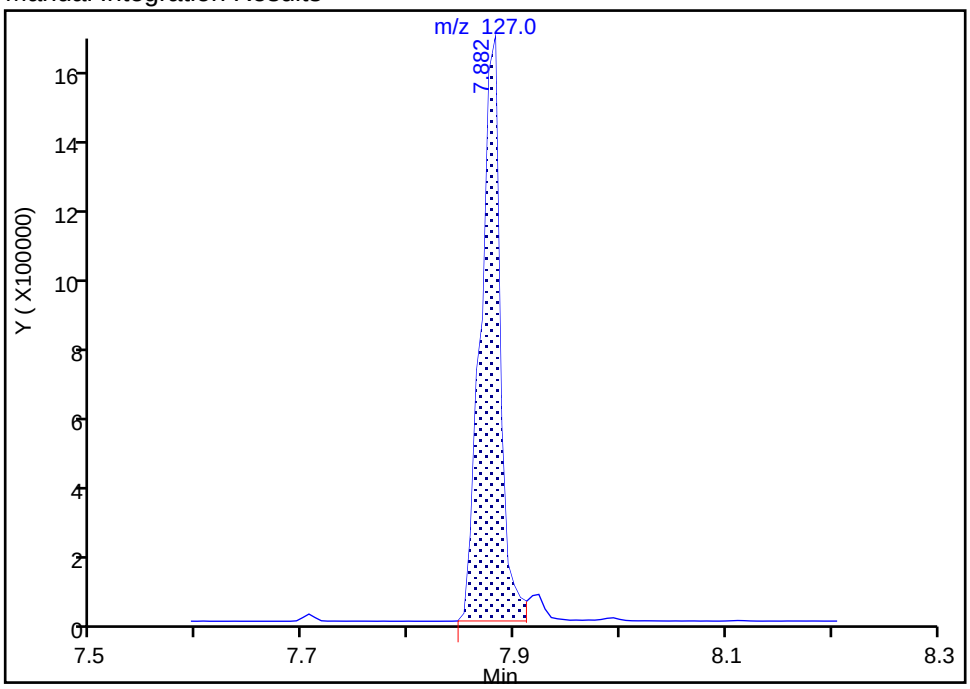
Processing Integration Results

RT: 7.92
Area: 88193
Amount: 78.975974
Amount Units: ng/ml



Manual Integration Results

RT: 7.88
Area: 2051638
Amount: 1557.4273
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:49:46

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

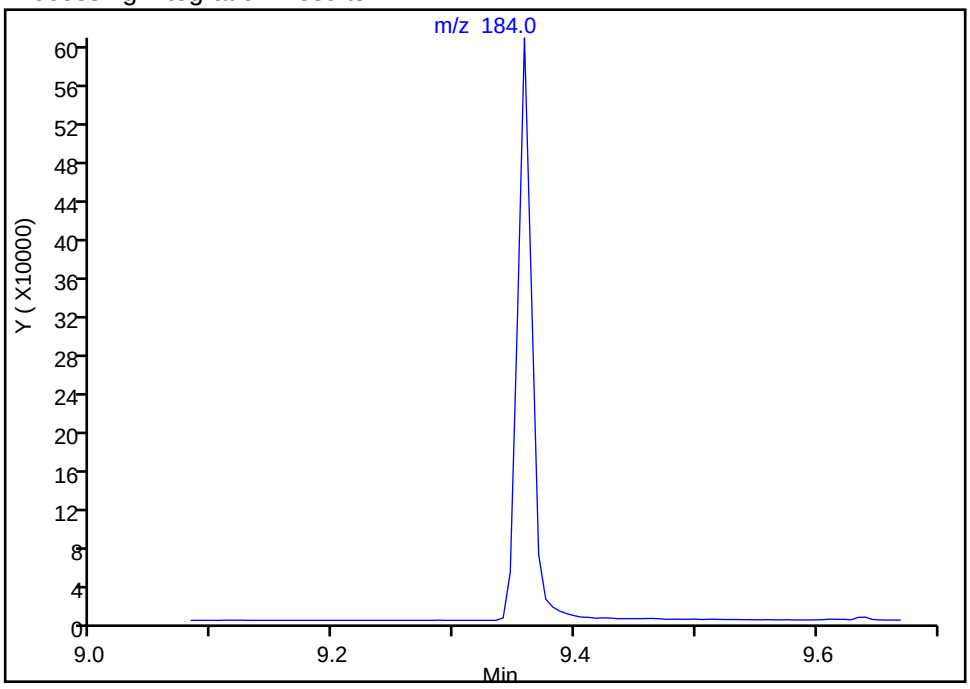
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D
Injection Date: 23-Apr-2018 07:26:30 Instrument ID: A4AG2
Lims ID: std7 l1lvi
Client ID:
Operator ID: ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

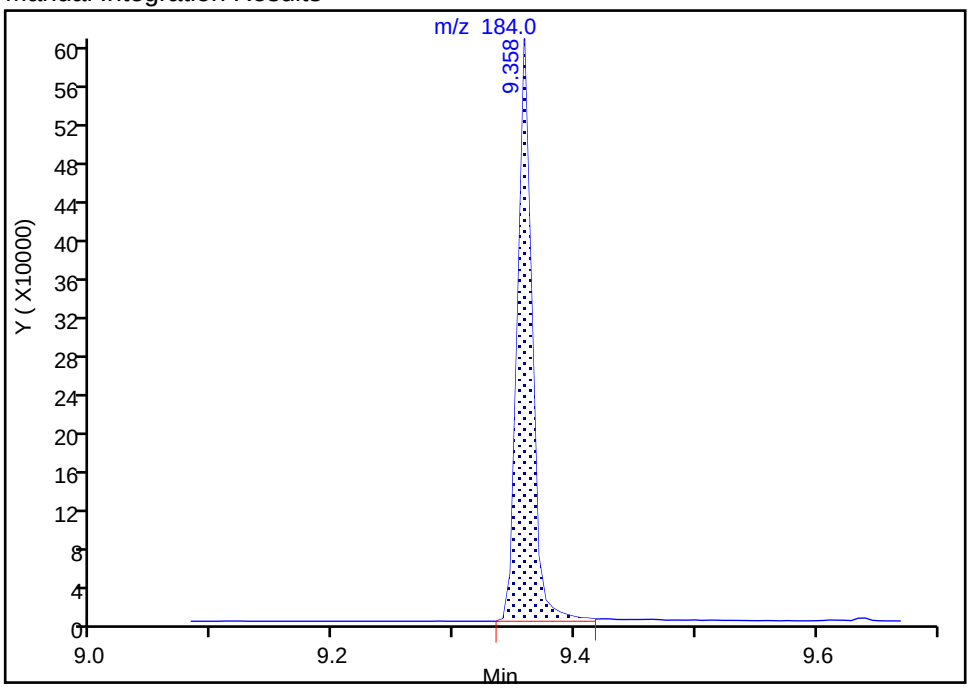
Not Detected
Expected RT: 9.36

Processing Integration Results



Manual Integration Results

RT: 9.36
Area: 510576
Amount: 2932.5351
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:50:00
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

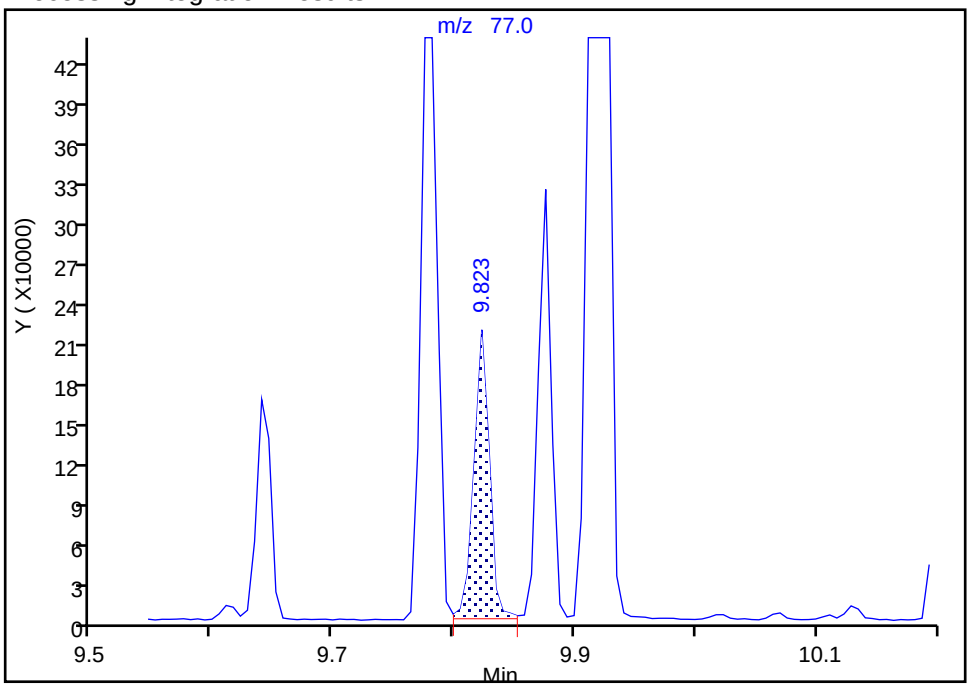
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423004.D				
Injection Date:	23-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std7 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

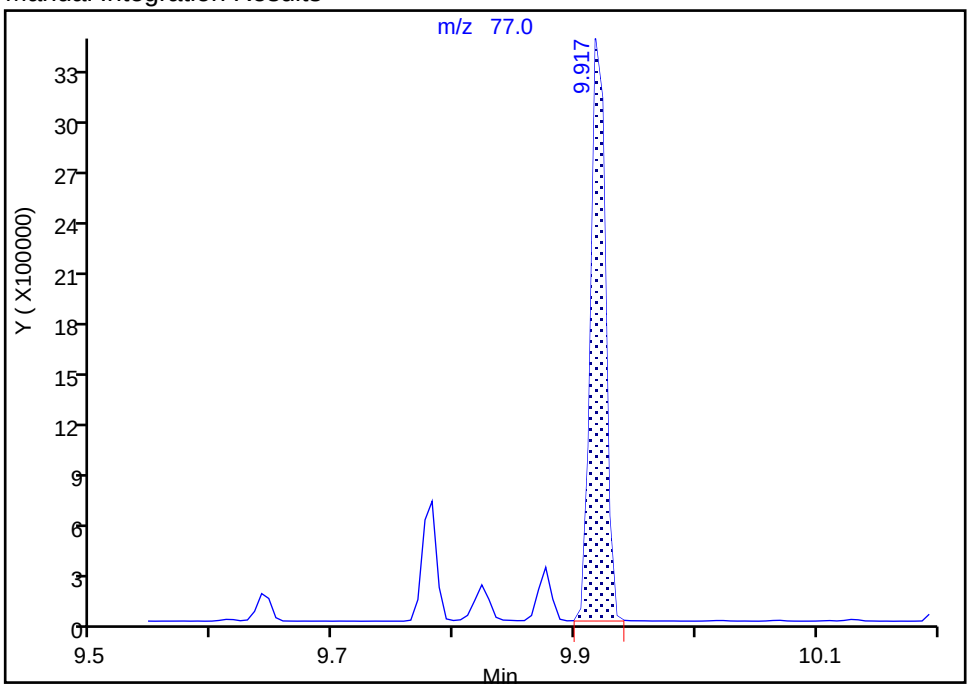
Processing Integration Results

RT: 9.82
Area: 194068
Amount: 102.0346
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 2971634
Amount: 1527.4920
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 07:50:16

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 23-Apr-2018 07:50:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-005
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:00:29 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 09:10:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	208592	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	949160	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	469457	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.000	98	767707	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	692992	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	96	560310	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	95	436085	1000.0	990.3	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	685182	1000.0	979.5	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	93	914159	1000.0	1037.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.000	100	1617519	1000.0	1015.9	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	92	147467	1000.0	1037.5	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	99	1370643	1000.0	968.7	
26 1,4-Dioxane	88	4.294	4.294	0.000	94	130555	1000.0	1021.5	
27 N-Nitrosodimethylamine	74	4.547	4.547	0.000	84	468552	1000.0	1001.4	
28 Pyridine	79	4.611	4.611	0.000	81	741486	2000.0	2032.4	
42 Benzaldehyde	77	6.411	6.411	0.000	91	826507	2000.0	2050.0	
43 Phenol	94	6.429	6.429	0.000	98	776023	1000.0	992.1	
44 Aniline	93	6.493	6.493	0.000	96	1243400	1000.0	1010.5	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	94	822350	1000.0	967.5	a
47 2-Chlorophenol	128	6.605	6.605	0.000	97	702821	1000.0	1012.2	
244 n-Decane	57	6.605	6.605	0.000	92	951299	1000.0	1010.7	a
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	97	833085	1000.0	984.3	
49 1,4-Dichlorobenzene	146	6.788	6.788	0.000	93	864257	1000.0	999.4	
50 Benzyl alcohol	108	6.858	6.858	0.000	91	525744	1000.0	1055.6	
51 1,2-Dichlorobenzene	146	6.923	6.923	0.000	97	814090	1000.0	991.8	
52 2-Methylphenol	108	6.929	6.929	0.000	95	678962	1000.0	1027.0	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.958	0.000	92	1531439	1000.0	985.5	
53 Indene	115	6.993	6.993	0.000	90	2681538	2000.0	1999.7	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	697313	1000.0	1055.2	a
57 N-Nitrosodi-n-propylamine	70	7.064	7.064	0.000	93	622107	1000.0	1013.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.088	7.088	0.000	94	1120415	1000.0	1019.1	
61 Hexachloroethane	117	7.217	7.217	0.000	94	323579	1000.0	999.6	
62 Nitrobenzene	77	7.240	7.240	0.000	93	872003	1000.0	1020.9	
64 Isophorone	82	7.429	7.429	0.000	98	1624504	1000.0	1020.0	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	93	746557	1000.0	1025.6	
65 2-Nitrophenol	139	7.505	7.505	0.000	92	403328	1000.0	1089.1	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	97	981649	1000.0	1018.2	
70 Benzoic acid	122	7.546	7.546	0.000	91	625820	2000.0	1933.4	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	97	563996	1000.0	1066.1	
73 1,2,4-Trichlorobenzene	180	7.788	7.788	0.000	94	657277	1000.0	988.9	
74 Naphthalene	128	7.864	7.864	0.000	96	2523078	1000.0	995.2	
75 4-Chloroaniline	127	7.876	7.876	0.000	95	1310748	1000.0	1070.9	
76 2,6-Dichlorophenol	162	7.893	7.893	0.000	95	610498	1000.0	1051.7	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	97	334894	1000.0	983.8	
83 Caprolactam	113	8.158	8.158	0.000	74	429320	2000.0	1877.9	a
85 4-Chloro-3-methylphenol	107	8.258	8.258	0.000	96	673949	1000.0	1091.7	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	93	1688940	1000.0	1035.0	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	93	1579616	1000.0	1006.9	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	97	352554	1000.0	917.7	
90 1,2,4,5-Tetrachlorobenzene	216	8.587	8.587	0.000	98	605074	1000.0	1019.2	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	95	414760	1000.0	1102.5	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	92	427309	1000.0	993.9	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	95	1918856	1000.0	1012.9	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	98	1446755	1000.0	1023.1	
101 2-Nitroaniline	65	8.923	8.923	0.000	81	513326	1000.0	1121.4	
104 Dimethyl phthalate	163	9.046	9.046	0.000	98	1630674	1000.0	1007.2	
103 1,3-Dinitrobenzene	168	9.087	9.087	0.000	84	252536	1000.0	993.2	
106 2,6-Dinitrotoluene	165	9.111	9.111	0.000	92	378420	1000.0	1100.2	
108 Acenaphthylene	152	9.229	9.229	0.000	98	2202043	1000.0	1030.4	
109 3-Nitroaniline	138	9.276	9.276	0.000	93	343886	1000.0	1144.9	
110 2,4-Dinitrophenol	184	9.358	9.358	0.000	82	264262	2000.0	1774.7	a
111 Acenaphthene	153	9.376	9.376	0.000	94	1507350	1000.0	1010.5	
112 4-Nitrophenol	109	9.376	9.376	0.000	54	400642	2000.0	1957.9	
113 2,4-Dinitrotoluene	165	9.464	9.464	0.000	90	466979	1000.0	1110.4	
115 Dibenzofuran	168	9.517	9.517	0.000	95	1987710	1000.0	993.2	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	79	280245	1000.0	931.8	
248 Hexadecane	57	9.634	9.634	0.000	92	1332424	1000.0	998.0	
120 Diethyl phthalate	149	9.640	9.640	0.000	98	1621377	1000.0	994.8	
122 4-Chlorophenyl phenyl ethe	204	9.782	9.782	0.000	96	745454	1000.0	1004.1	
125 4-Nitroaniline	138	9.799	9.799	0.000	83	323512	1000.0	1111.6	
124 Fluorene	166	9.811	9.811	0.000	95	1685067	1000.0	1035.2	
127 4,6-Dinitro-2-methylphenol	198	9.823	9.823	0.000	78	372096	2000.0	1863.0	
128 N-Nitrosodiphenylamine	169	9.876	9.876	0.000	99	1208529	1000.0	1049.0	
129 Diphenylamine	169	9.876	9.876	0.000	95	1208529	850.0	891.7	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	15	1882685	1000.0	1058.1	a
131 Azobenzene	77	9.917	9.917	0.000	98	1888027	1000.0	1061.1	
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	76	393101	1000.0	1051.1	
141 Atrazine	200	10.299	10.299	0.000	91	773974	2000.0	2131.8	
140 Hexachlorobenzene	284	10.305	10.305	0.000	94	402652	1000.0	1091.3	
245 n-Octadecane	57	10.423	10.423	0.000	92	1472317	1000.0	1062.3	
143 Pentachlorophenol	266	10.458	10.458	0.000	90	429302	2000.0	1869.0	
148 Phenanthrene	178	10.652	10.652	0.000	98	2147472	1000.0	1009.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.699	10.699	0.000	98	2226441	1000.0	1049.7	
150 Carbazole	167	10.811	10.811	0.000	96	1907567	1000.0	1032.8	
154 Di-n-butyl phthalate	149	11.040	11.040	0.000	100	2797576	1000.0	1091.6	
159 Fluoranthene	202	11.764	11.764	0.000	99	2208079	1000.0	1090.0	
160 Benzidine	184	11.846	11.846	0.000	99	1806851	2000.0	1893.7	
161 Pyrene	202	12.023	12.023	0.000	97	2231151	1000.0	1027.5	
169 Butyl benzyl phthalate	149	12.652	12.652	0.000	98	1203583	1000.0	1064.5	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.417	0.000	96	1629685	1000.0	1057.6	
177 3,3'-Dichlorobenzidine	252	13.452	13.452	0.000	76	1342019	2000.0	2116.5	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	99	2038073	1000.0	1041.5	
179 Chrysene	228	13.605	13.605	0.000	98	1968473	1000.0	996.3	
181 Di-n-octyl phthalate	149	14.434	14.434	0.000	99	2684751	1000.0	1112.9	
183 Benzo[b]fluoranthene	252	15.269	15.269	0.000	99	1782058	1000.0	1056.5	
184 Benzo[k]fluoranthene	252	15.316	15.316	0.000	98	1811177	1000.0	1037.7	
185 Benzo[a]pyrene	252	15.834	15.834	0.000	80	1664554	1000.0	1069.4	
190 Indeno[1,2,3-cd]pyrene	276	18.034	18.034	0.000	96	1672944	1000.0	1050.9	
189 Dibenz(a,h)anthracene	278	18.046	18.046	0.000	92	1441117	1000.0	1075.3	
191 Benzo[g,h,i]perylene	276	18.669	18.669	0.000	94	1339146	1000.0	1041.9	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L6 W_00010 Amount Added: 0.10 Units: mL

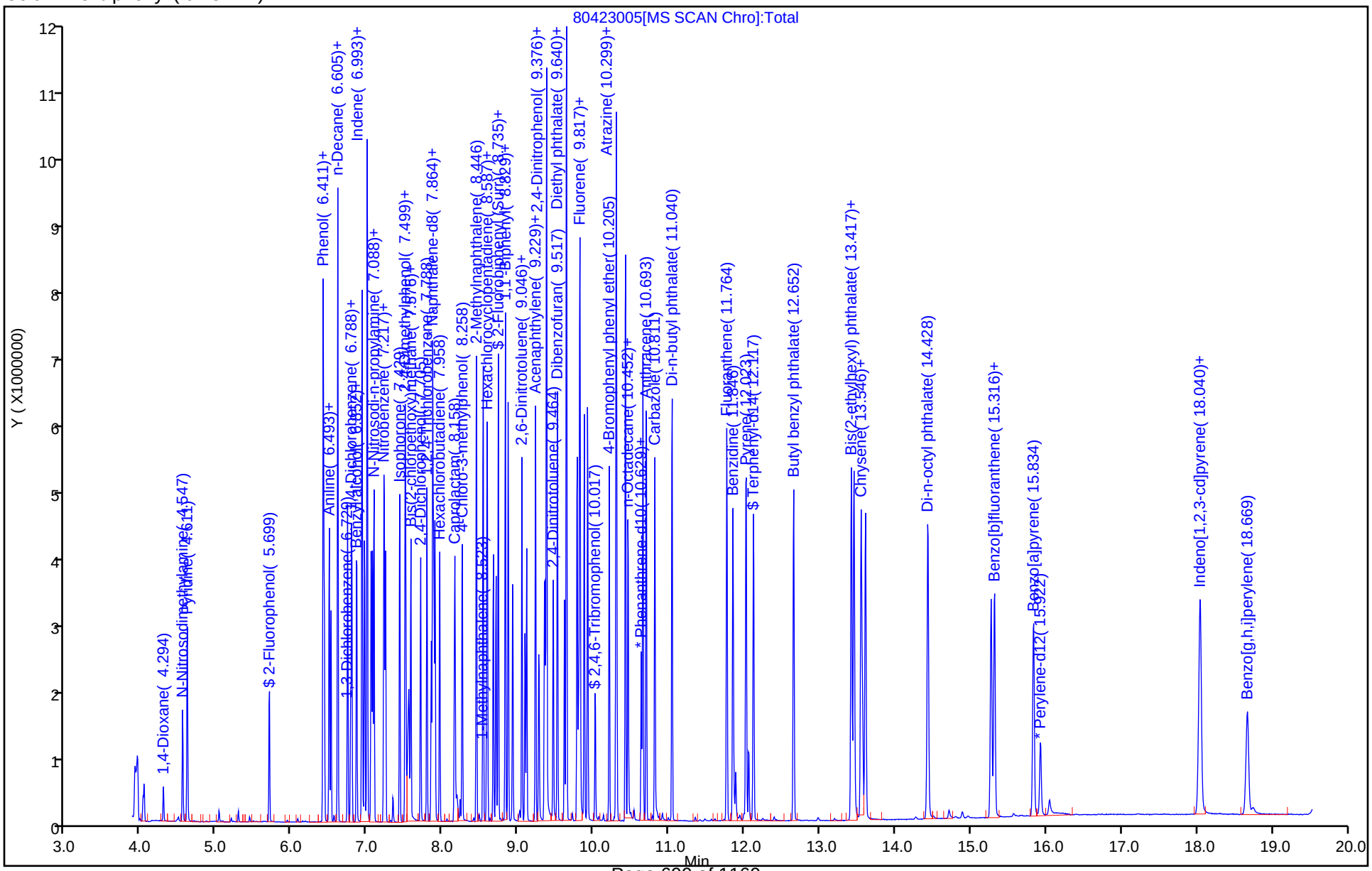
Report Date: 24-Apr-2018 07:00:33 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D

Injection Date:	23-Apr-2018 07:50:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l1lvi			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

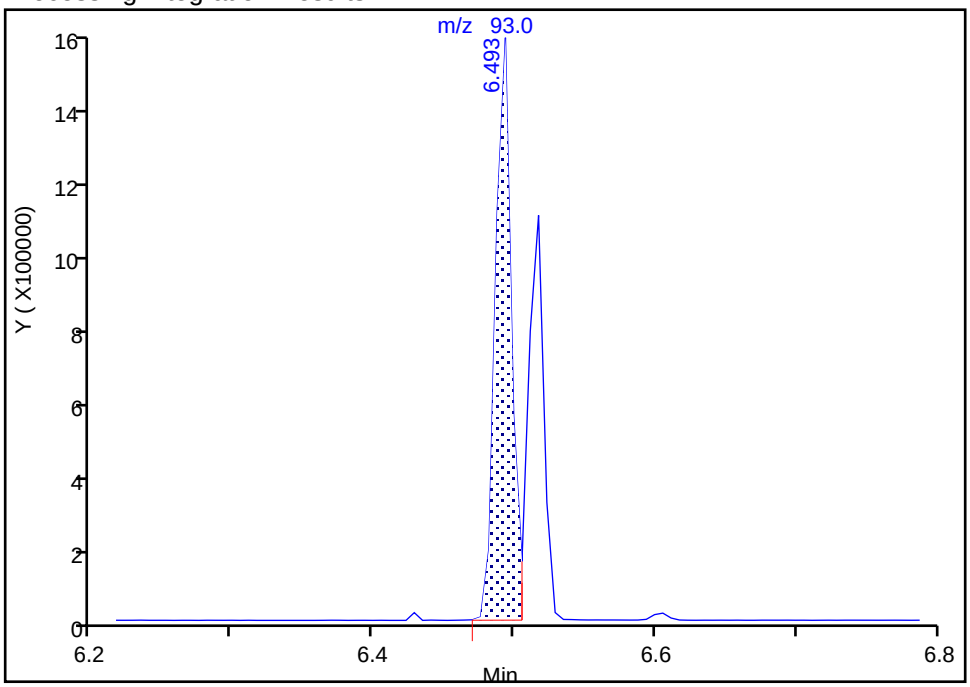
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D				
Injection Date:	23-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

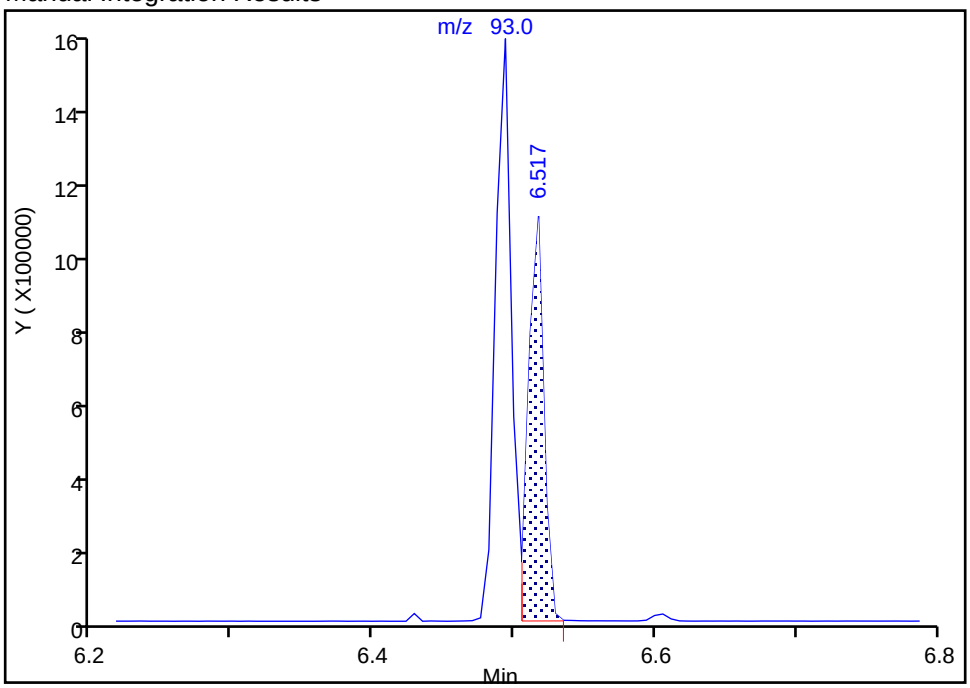
Processing Integration Results

RT: 6.49
Area: 1243400
Amount: 28.724025
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 822350
Amount: 967.5159
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:09:59

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

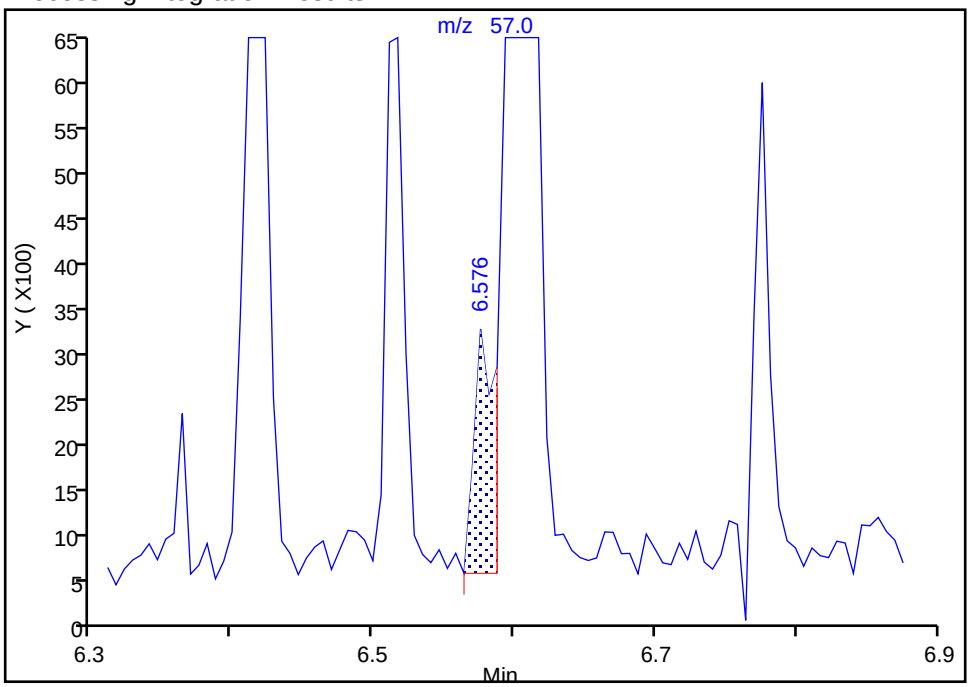
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D
Injection Date: 23-Apr-2018 07:50:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

244 n-Decane, CAS: 124-18-5

Signal: 1

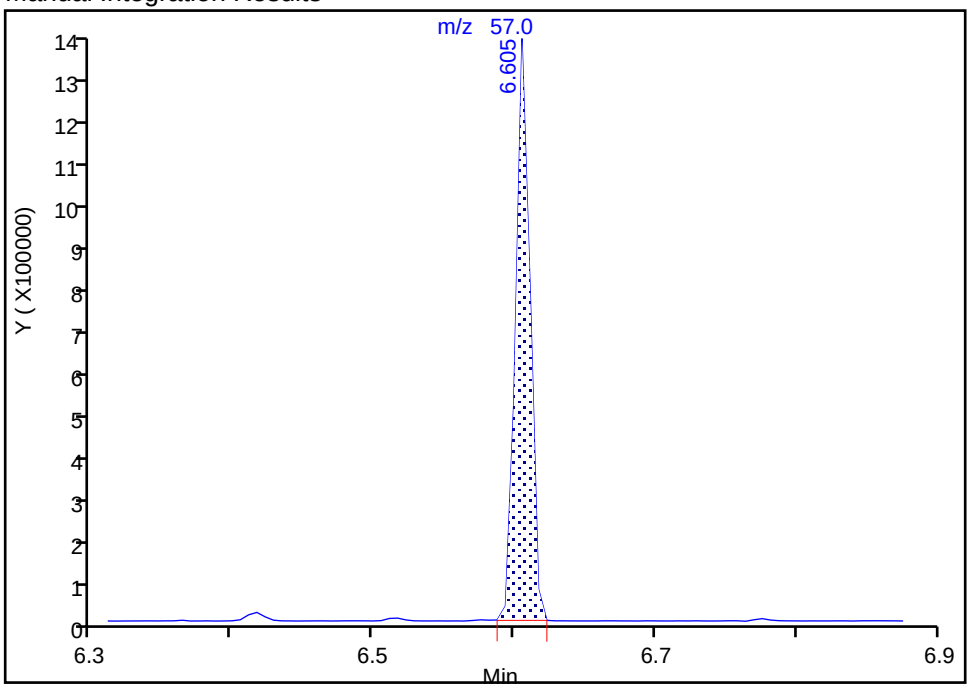
Processing Integration Results

RT: 6.58
Area: 2877
Amount: 3.847563
Amount Units: ng/ml



Manual Integration Results

RT: 6.61
Area: 951299
Amount: 1010.7363
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:14:39
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

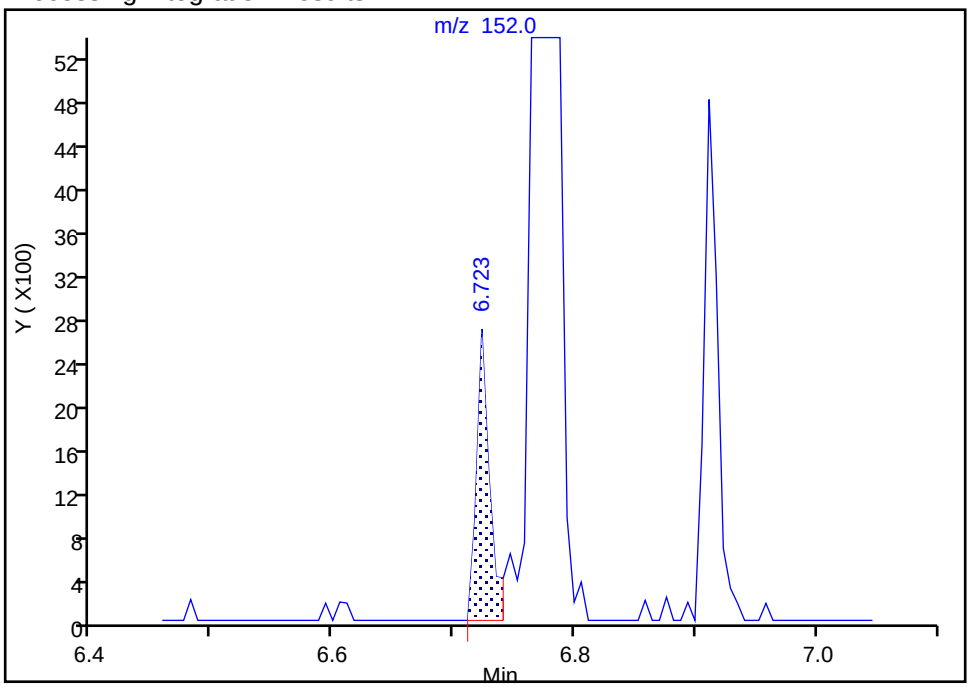
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D				
Injection Date:	23-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

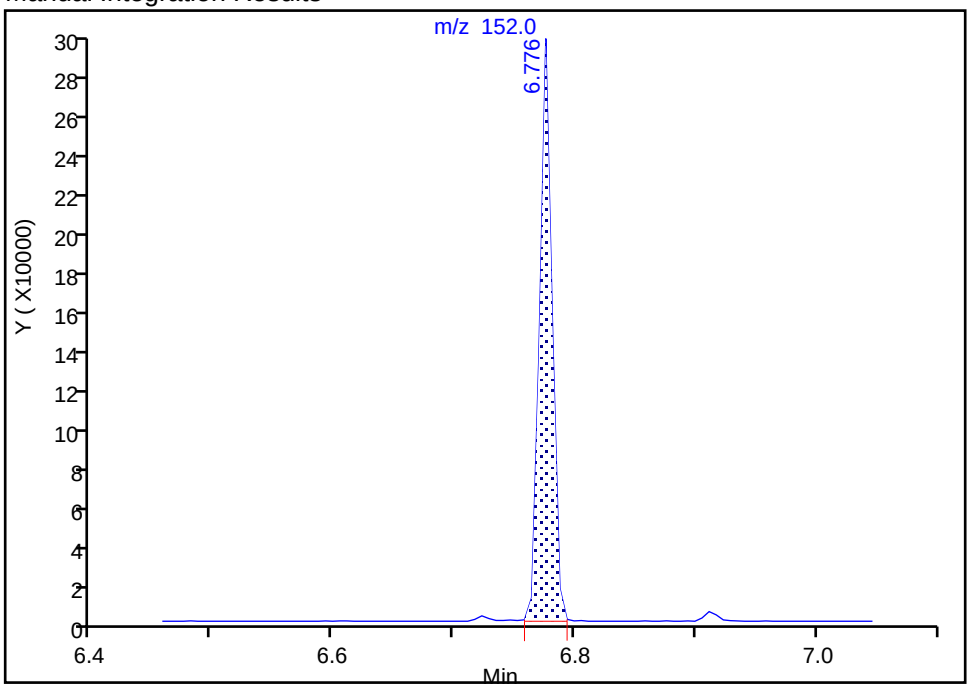
Processing Integration Results

RT: 6.72
Area: 2033
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 208592
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:09:44

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

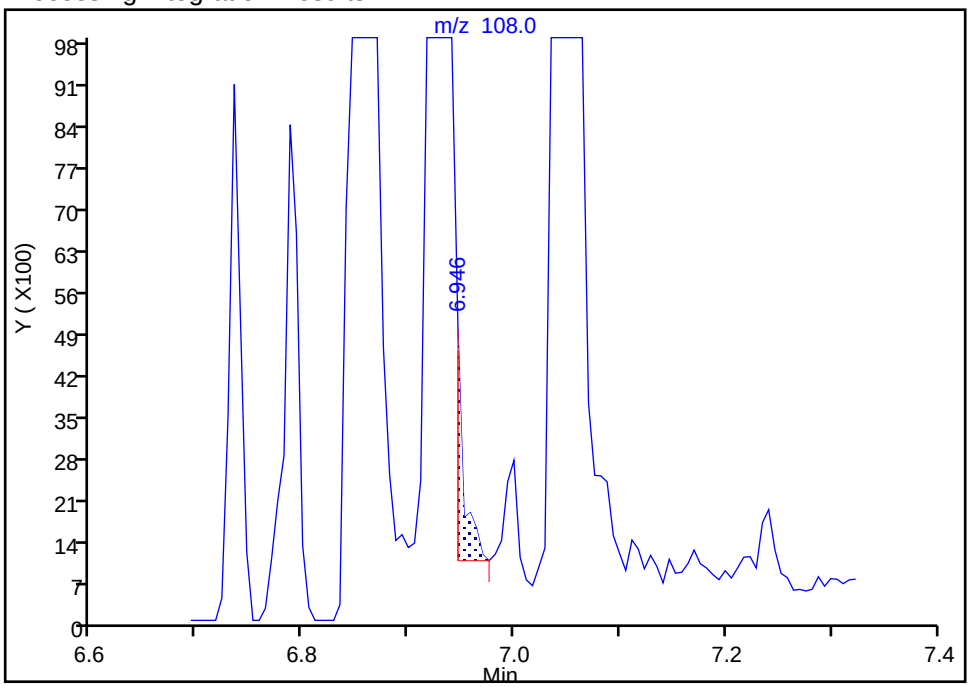
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D				
Injection Date:	23-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

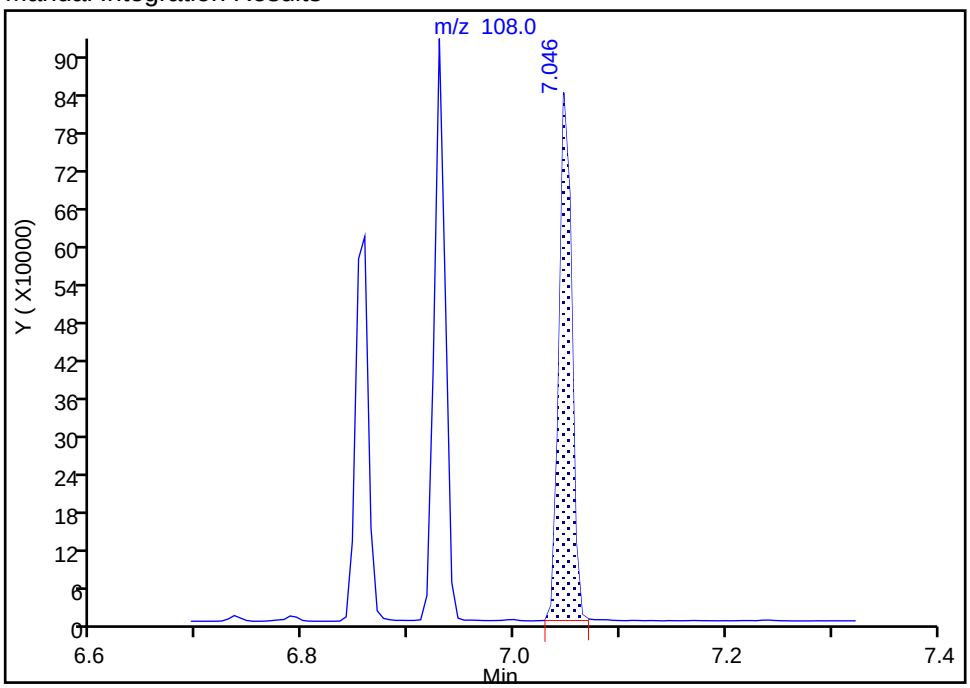
Processing Integration Results

RT: 6.95
Area: 2150
Amount: 0.188007
Amount Units: ng/ml



Manual Integration Results

RT: 7.05
Area: 697313
Amount: 1055.2483
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:10:09

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

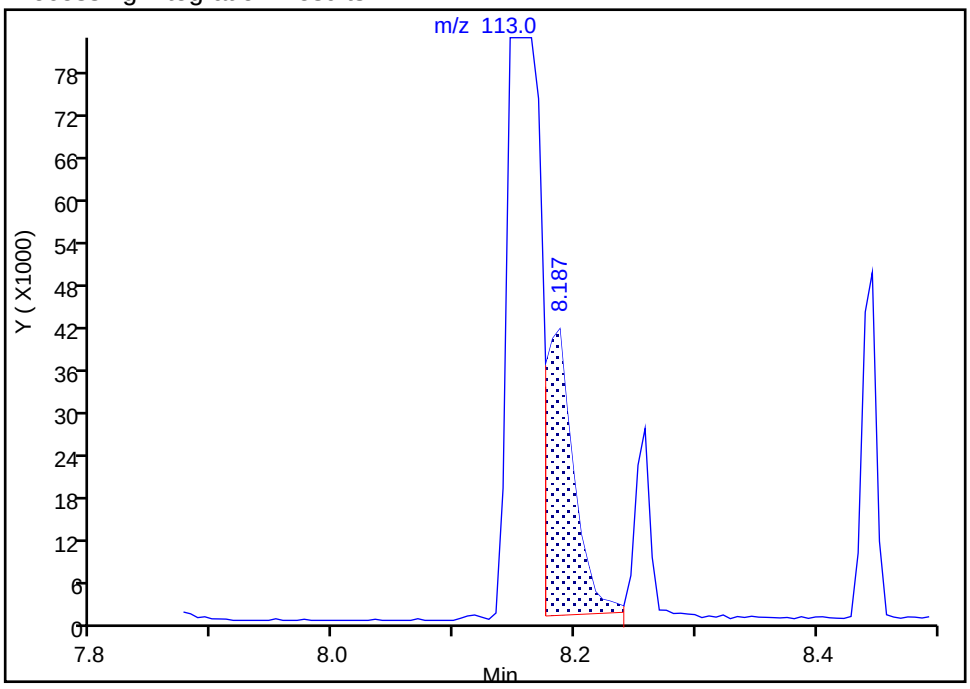
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D
Injection Date: 23-Apr-2018 07:50:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

83 Caprolactam, CAS: 105-60-2

Signal: 1

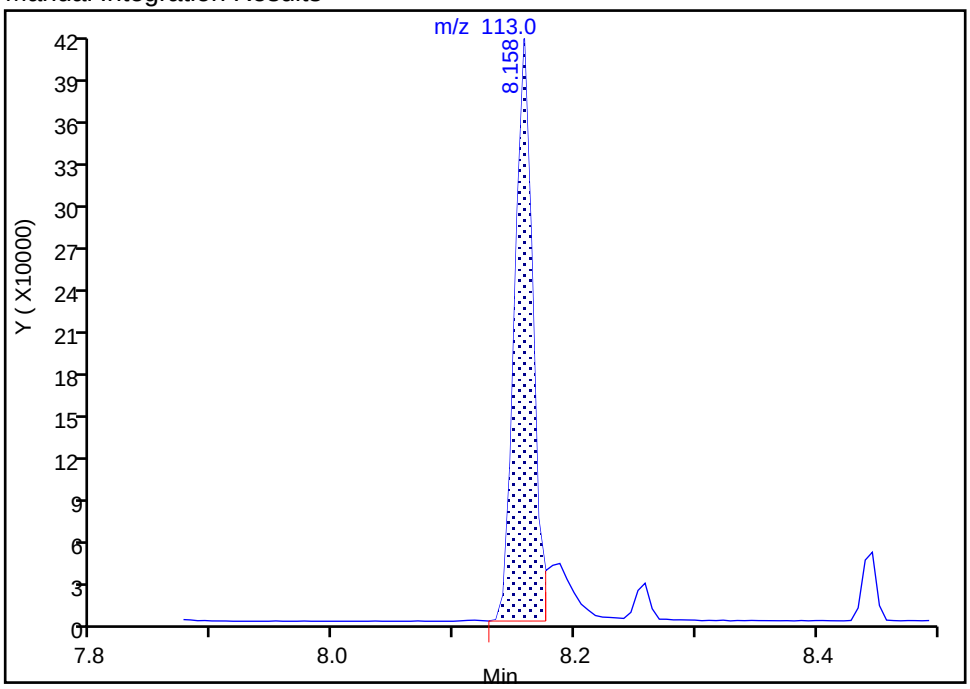
Processing Integration Results

RT: 8.19
Area: 67188
Amount: 445.8238
Amount Units: ng/ml



Manual Integration Results

RT: 8.16
Area: 429320
Amount: 1877.8866
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:10:24
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

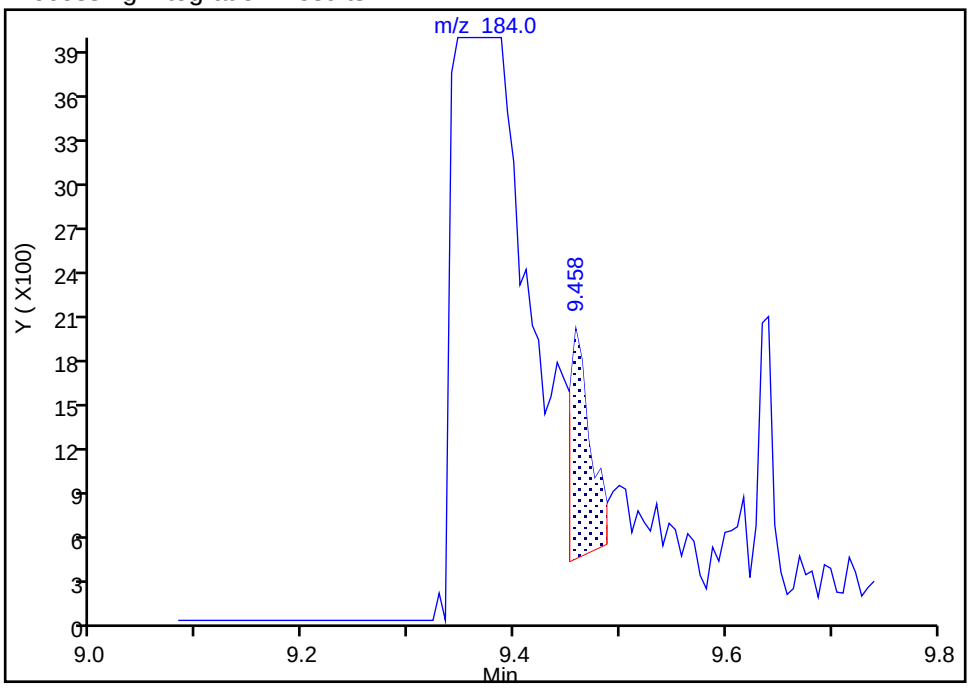
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D
Injection Date: 23-Apr-2018 07:50:30 Instrument ID: A4AG2
Lims ID: std6 l1lvi
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

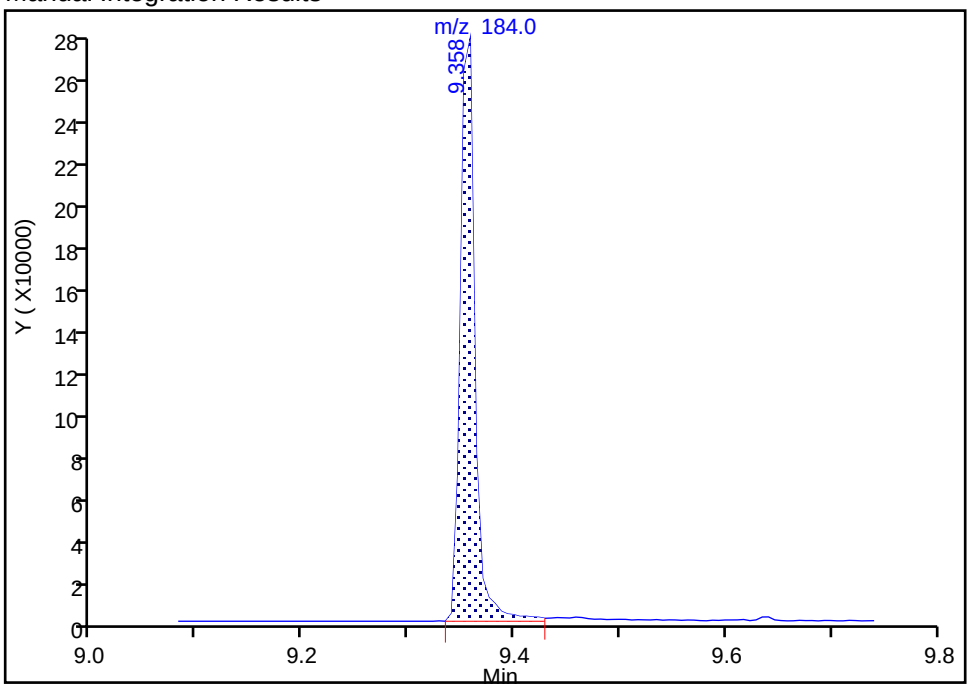
Processing Integration Results

RT: 9.46
Area: 2142
Amount: 16.649010
Amount Units: ng/ml



Manual Integration Results

RT: 9.36
Area: 264262
Amount: 1774.6809
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:10:33
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

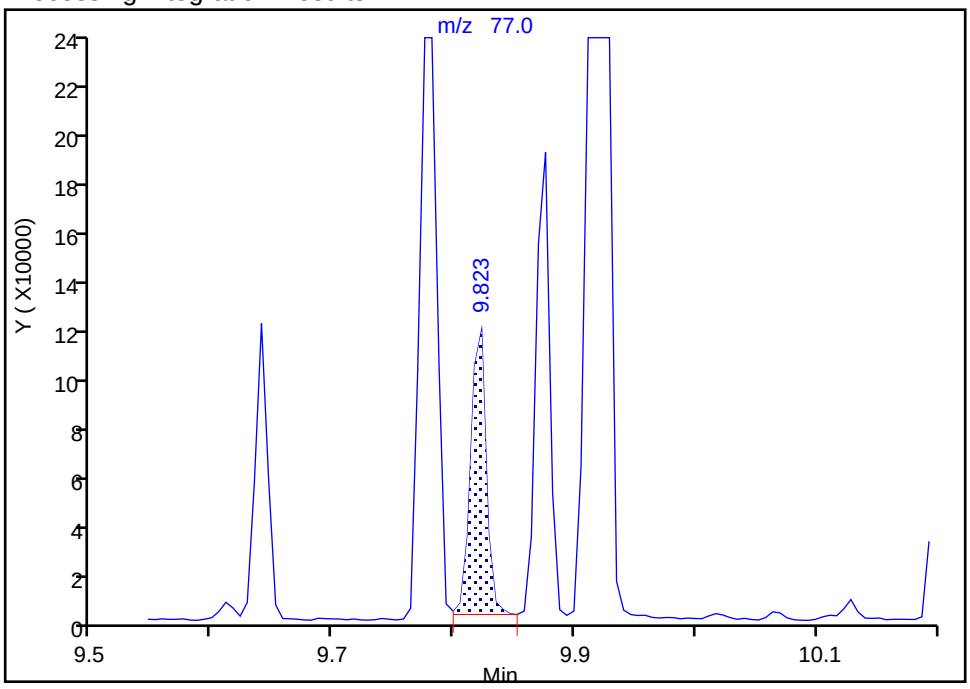
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423005.D				
Injection Date:	23-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

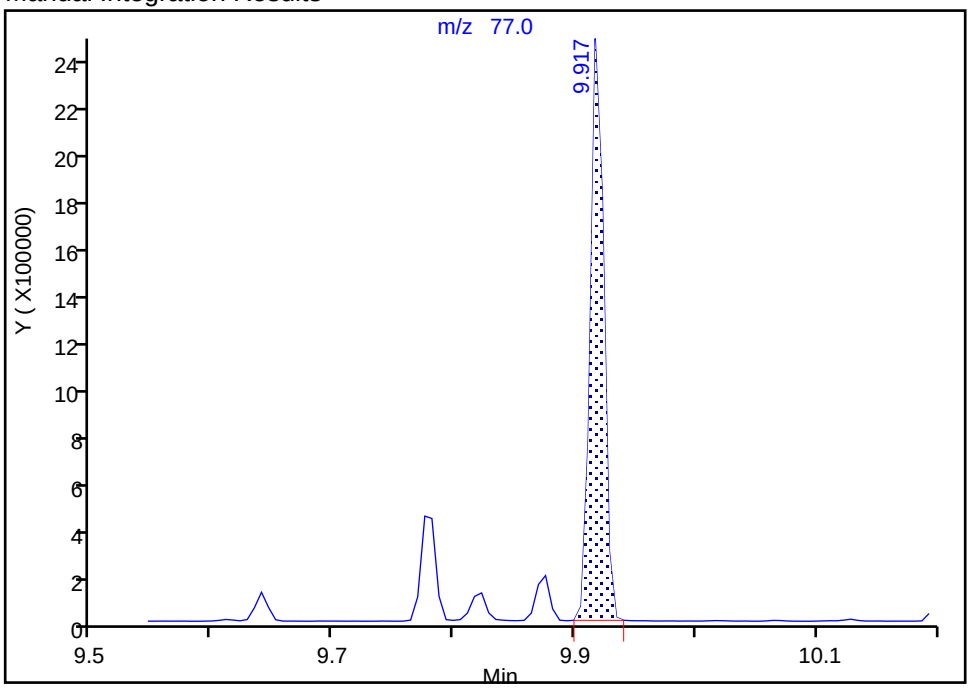
Processing Integration Results

RT: 9.82
Area: 104353
Amount: 57.969729
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 1882685
Amount: 1058.0729
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:10:46

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D
Lims ID: std5 l1lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Apr-2018 08:15:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-006
Misc. Info.: STD5 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:00:41 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 09:12:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	214124	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	950435	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	472756	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	788076	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	685423	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	544951	400.0	400.0	
$ 7 2-Fluorophenol	112	5.700	5.699	0.001	94	215264	500.0	476.2	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	322896	500.0	449.6	a
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	93	453768	500.0	514.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	807616	500.0	503.7	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	93	70831	500.0	494.8	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	99	703535	500.0	502.7	
26 1,4-Dioxane	88	4.294	4.294	0.000	95	58609	500.0	446.7	
27 N-Nitrosodimethylamine	74	4.553	4.547	0.006	83	232856	500.0	484.8	
28 Pyridine	79	4.611	4.611	0.000	81	337124	1000.0	900.2	
42 Benzaldehyde	77	6.411	6.411	0.000	91	480129	1000.0	999.0	
43 Phenol	94	6.423	6.429	-0.006	98	357109	500.0	444.7	
44 Aniline	93	6.494	6.493	0.001	96	616393	500.0	488.0	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	94	419488	500.0	480.8	a
47 2-Chlorophenol	128	6.605	6.605	0.000	97	348152	500.0	488.5	
244 n-Decane	57	6.605	6.605	0.000	92	509328	500.0	527.2	
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	97	428546	500.0	493.3	
49 1,4-Dichlorobenzene	146	6.788	6.788	0.000	92	435619	500.0	490.7	
50 Benzyl alcohol	108	6.852	6.858	-0.006	91	248697	500.0	486.5	
51 1,2-Dichlorobenzene	146	6.923	6.923	0.000	94	421796	500.0	500.6	
52 2-Methylphenol	108	6.929	6.929	0.000	97	331060	500.0	487.8	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.958	0.000	92	804485	500.0	504.3	
53 Indene	115	6.994	6.993	0.001	90	1400653	1000.0	1017.5	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	326604	500.0	481.5	
57 N-Nitrosodi-n-propylamine	70	7.064	7.064	0.000	94	315742	500.0	501.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.082	7.088	-0.006	94	558300	500.0	494.7	
61 Hexachloroethane	117	7.217	7.217	0.000	94	163550	500.0	492.2	
62 Nitrobenzene	77	7.241	7.240	0.001	94	437975	500.0	512.1	
64 Isophorone	82	7.423	7.429	-0.006	97	799191	500.0	501.1	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	95	376751	500.0	516.9	
65 2-Nitrophenol	139	7.505	7.505	0.000	93	192954	500.0	520.3	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	97	490316	500.0	507.9	
70 Benzoic acid	122	7.529	7.546	-0.017	92	235026	1000.0	865.0	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	97	265747	500.0	501.7	
73 1,2,4-Trichlorobenzene	180	7.788	7.788	0.000	94	322253	500.0	484.2	
74 Naphthalene	128	7.864	7.864	0.000	96	1261815	500.0	497.0	
75 4-Chloroaniline	127	7.876	7.876	0.000	95	641415	500.0	523.3	
76 2,6-Dichlorophenol	162	7.893	7.893	0.000	95	292668	500.0	503.5	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	96	164518	500.0	482.6	
83 Caprolactam	113	8.146	8.158	-0.012	74	238039	1000.0	1039.8	
85 4-Chloro-3-methylphenol	107	8.252	8.258	-0.006	97	322819	500.0	522.2	
86 2-Methylnaphthalene	142	8.441	8.446	-0.005	93	836470	500.0	511.9	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	93	791298	500.0	503.7	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	95	162204	500.0	437.6	
90 1,2,4,5-Tetrachlorobenzene	216	8.588	8.587	0.001	98	288360	500.0	482.3	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	96	193172	500.0	509.9	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	93	199111	500.0	486.9	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	95	951283	500.0	498.6	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	98	722413	500.0	507.3	
101 2-Nitroaniline	65	8.923	8.923	0.000	81	247396	500.0	536.7	
104 Dimethyl phthalate	163	9.046	9.046	0.000	98	805749	500.0	494.2	
103 1,3-Dinitrobenzene	168	9.088	9.087	0.001	85	116431	500.0	473.6	
106 2,6-Dinitrotoluene	165	9.111	9.111	0.000	90	180499	500.0	521.1	
108 Acenaphthylene	152	9.229	9.229	0.000	98	1092291	500.0	507.5	
109 3-Nitroaniline	138	9.270	9.276	-0.006	91	172651	500.0	570.8	
110 2,4-Dinitrophenol	184	9.352	9.358	-0.006	73	97584	1000.0	868.8	a
111 Acenaphthene	153	9.376	9.376	0.000	95	745068	500.0	496.0	
112 4-Nitrophenol	109	9.370	9.376	-0.006	95	170142	1000.0	902.5	
113 2,4-Dinitrotoluene	165	9.464	9.464	0.000	89	219476	500.0	518.3	
115 Dibenzofuran	168	9.517	9.517	0.000	96	994917	500.0	493.7	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	78	128812	500.0	445.4	
248 Hexadecane	57	9.635	9.634	0.001	92	707233	500.0	526.0	
120 Diethyl phthalate	149	9.640	9.640	0.000	97	827293	500.0	504.1	
122 4-Chlorophenyl phenyl ethe	204	9.782	9.782	0.000	97	360127	500.0	481.7	
125 4-Nitroaniline	138	9.799	9.799	0.000	83	165343	500.0	564.1	
124 Fluorene	166	9.811	9.811	0.000	95	822389	500.0	501.7	
127 4,6-Dinitro-2-methylphenol	198	9.817	9.823	-0.006	75	140019	1000.0	809.0	
129 Diphenylamine	169	9.876	9.876	0.000	94	605162	425.0	435.0	
128 N-Nitrosodiphenylamine	169	9.876	9.876	0.000	99	605162	500.0	511.7	
131 Azobenzene	77	9.917	9.917	0.000	98	948109	500.0	519.1	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	12	947949	500.0	519.0	a
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	78	185944	500.0	484.3	
141 Atrazine	200	10.293	10.299	-0.006	89	371022	1000.0	995.5	
140 Hexachlorobenzene	284	10.305	10.305	0.000	91	188911	500.0	498.8	
245 n-Octadecane	57	10.423	10.423	0.000	92	764638	500.0	537.5	
143 Pentachlorophenol	266	10.452	10.458	-0.006	90	169550	1000.0	886.6	
148 Phenanthrene	178	10.652	10.652	0.000	98	1063484	500.0	486.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.693	10.699	-0.006	98	1086744	500.0	499.1	
150 Carbazole	167	10.811	10.811	0.000	96	922835	500.0	486.7	
154 Di-n-butyl phthalate	149	11.040	11.040	0.000	99	1357000	500.0	515.8	
159 Fluoranthene	202	11.764	11.764	0.000	99	1027599	500.0	494.2	
160 Benzidine	184	11.846	11.846	0.000	99	667054	1000.0	784.0	
161 Pyrene	202	12.017	12.023	-0.006	96	1045161	500.0	486.6	
169 Butyl benzyl phthalate	149	12.652	12.652	0.000	97	547977	500.0	490.0	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.417	0.000	96	768278	500.0	504.1	
177 3,3'-Dichlorobenzidine	252	13.446	13.452	-0.006	76	641483	1000.0	1022.8	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	99	933187	500.0	482.1	
179 Chrysene	228	13.599	13.605	-0.006	98	949710	500.0	486.0	
181 Di-n-octyl phthalate	149	14.428	14.434	-0.006	98	1227236	500.0	523.1	
183 Benzo[b]fluoranthene	252	15.264	15.269	-0.005	98	817040	500.0	498.0	
184 Benzo[k]fluoranthene	252	15.311	15.316	-0.005	98	874679	500.0	515.3	
185 Benzo[a]pyrene	252	15.828	15.834	-0.006	81	757022	500.0	500.1	
190 Indeno[1,2,3-cd]pyrene	276	18.028	18.034	-0.006	95	770706	500.0	497.8	
189 Dibenz(a,h)anthracene	278	18.040	18.046	-0.006	90	653393	500.0	501.3	
191 Benzo[g,h,i]perylene	276	18.657	18.669	-0.012	93	615020	500.0	492.0	
S 246 Total Cresols	100				0			969.3	
S 193 Methyl Phenols,Total	100				0			969.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L5 W_00010 Amount Added: 0.10 Units: mL

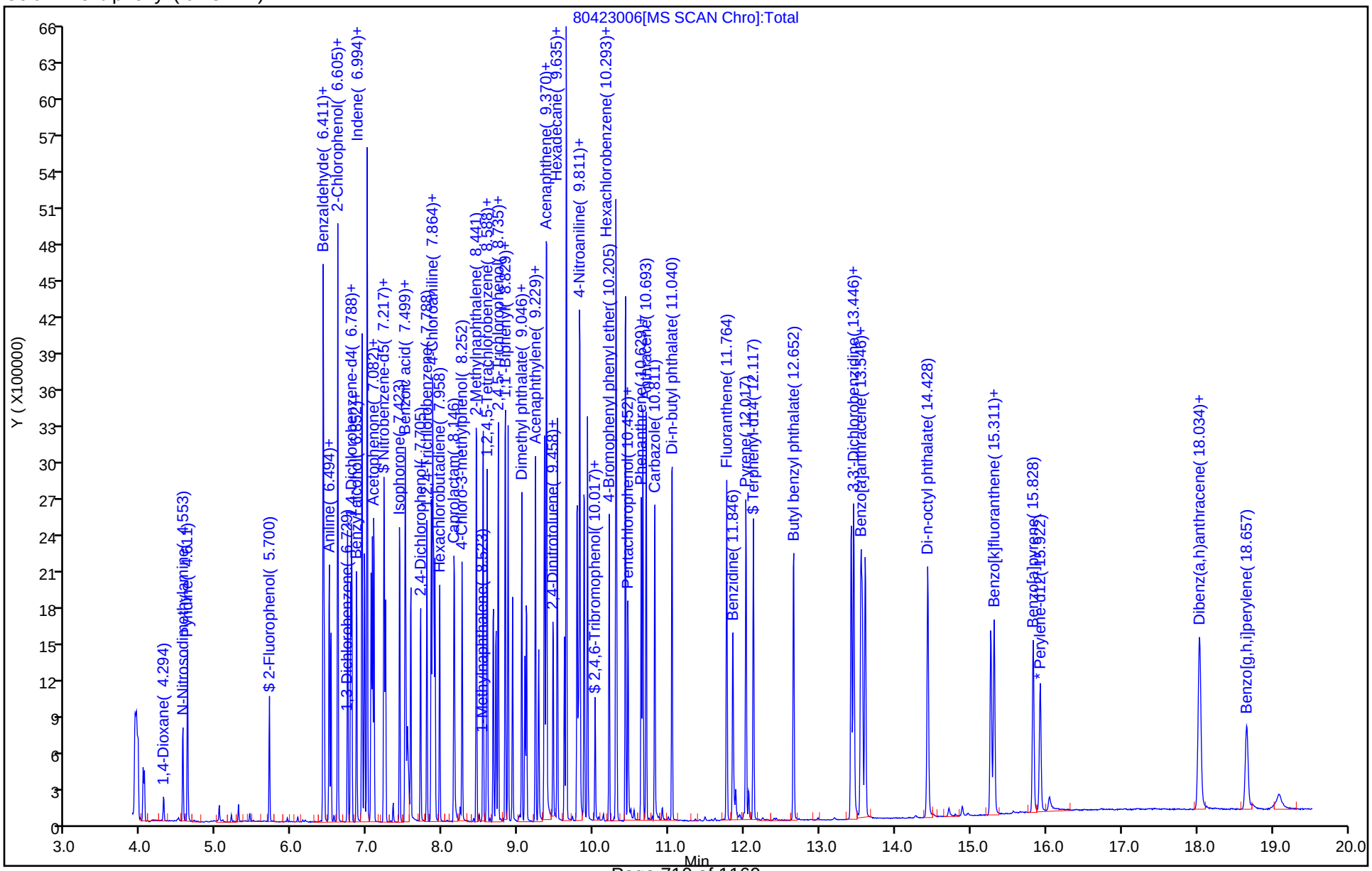
Report Date: 24-Apr-2018 07:00:49 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D

Injection Date:	23-Apr-2018 08:15:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std5 l1lvi			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

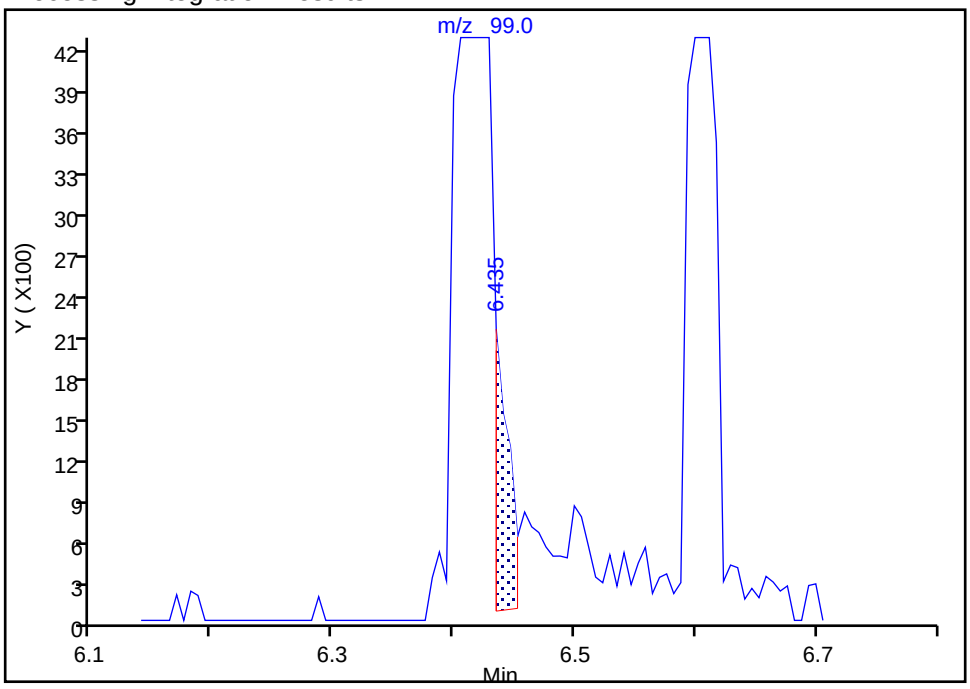
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D
Injection Date: 23-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: std5 l1lvi
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

$ 8 Phenol-d5, CAS: 4165-62-2

Signal: 1

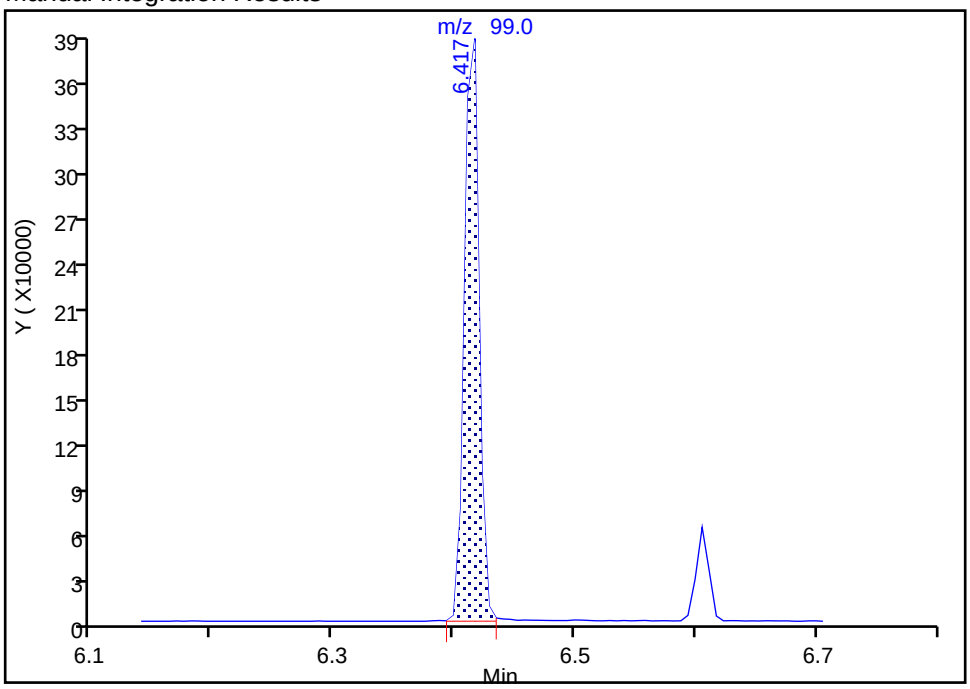
Processing Integration Results

RT: 6.43
Area: 1818
Amount: 0.142504
Amount Units: ng/ml



Manual Integration Results

RT: 6.42
Area: 322896
Amount: 449.6492
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:11:21
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

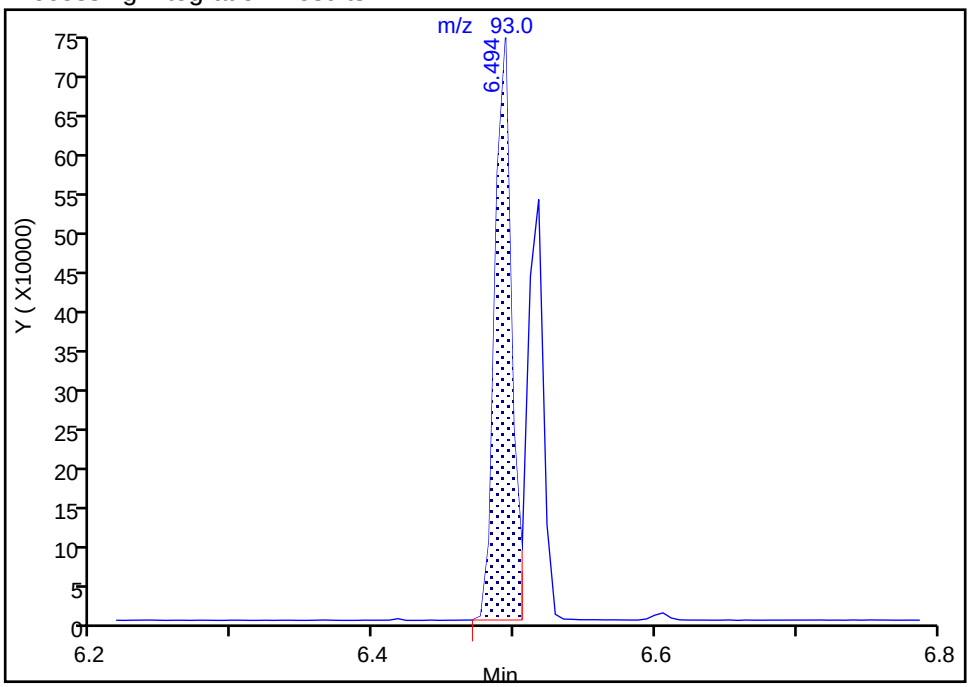
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D				
Injection Date:	23-Apr-2018 08:15:30	Instrument ID:	A4AG2		
Lims ID:	std5 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	6	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

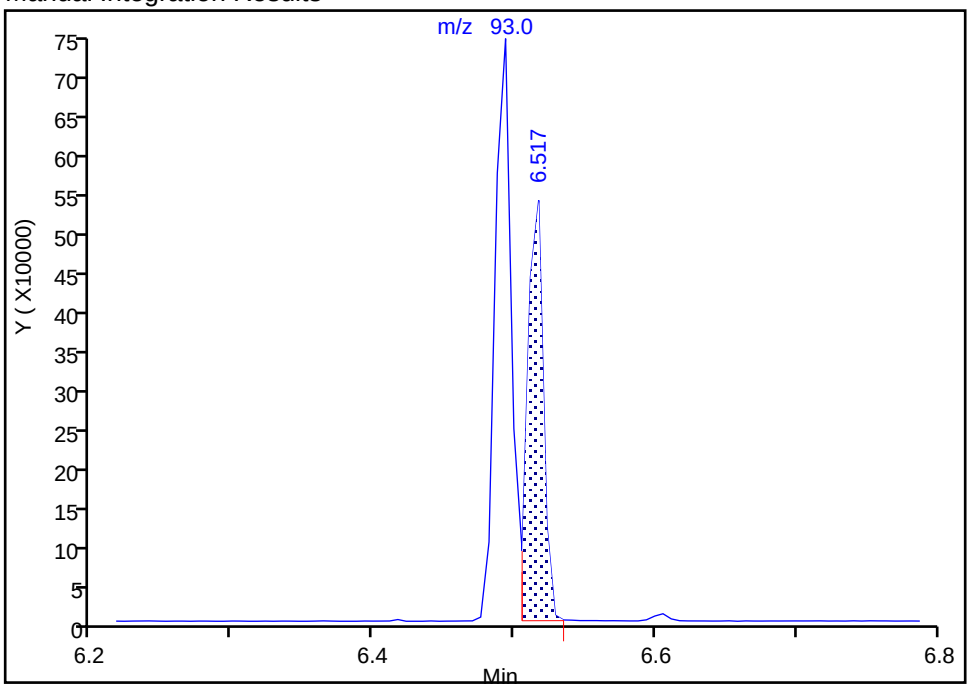
Processing Integration Results

RT: 6.49
Area: 616393
Amount: 26.530642
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 419488
Amount: 480.7876
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:11:30

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

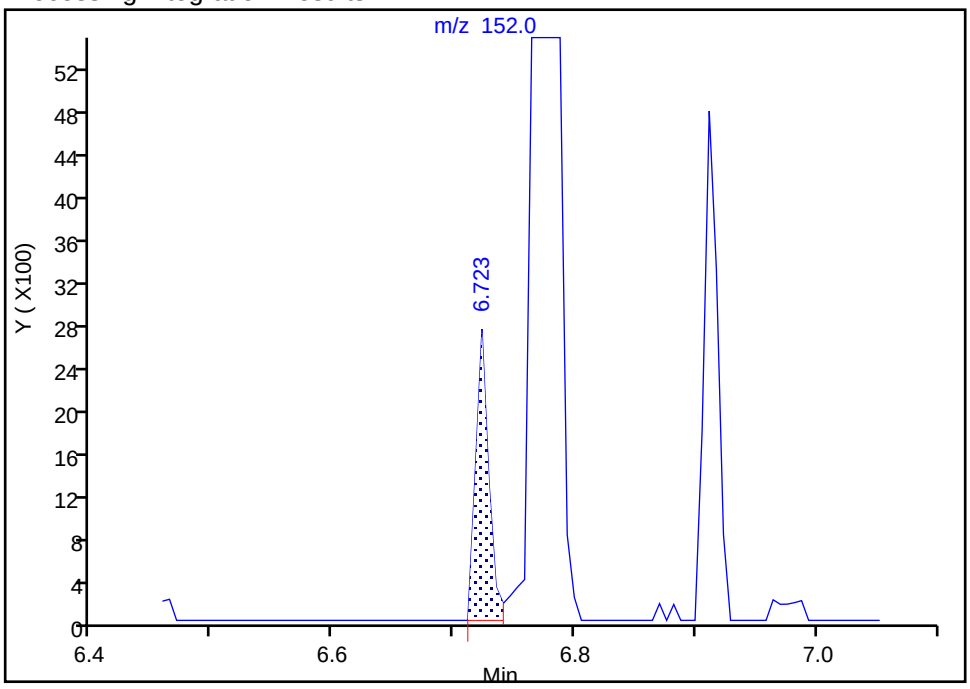
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D
Injection Date: 23-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: std5 l1lvi
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

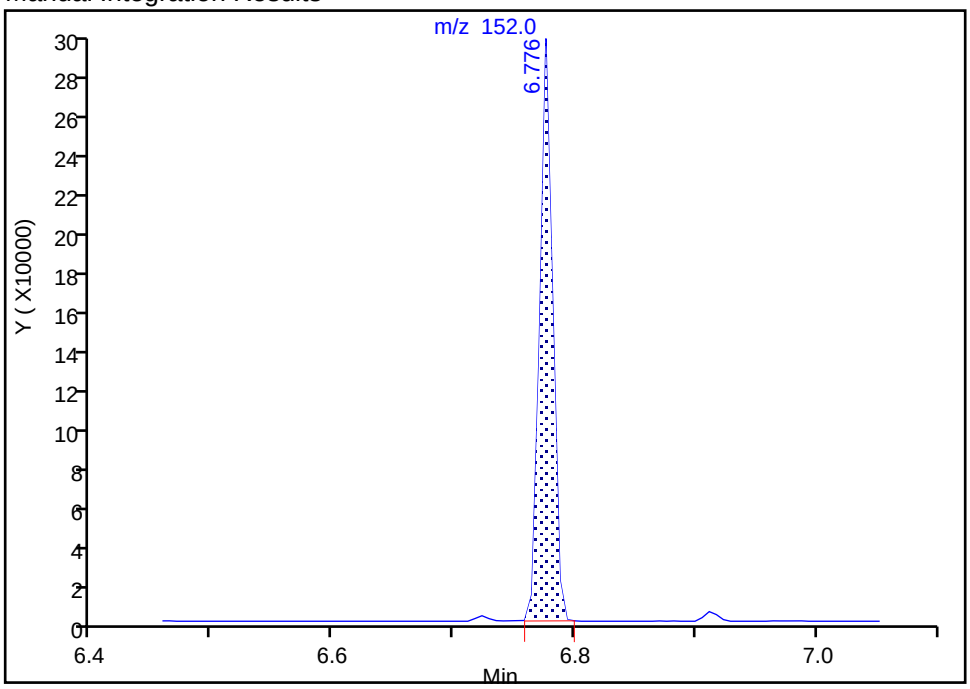
Processing Integration Results

RT: 6.72
Area: 2062
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 214124
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:11:11
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

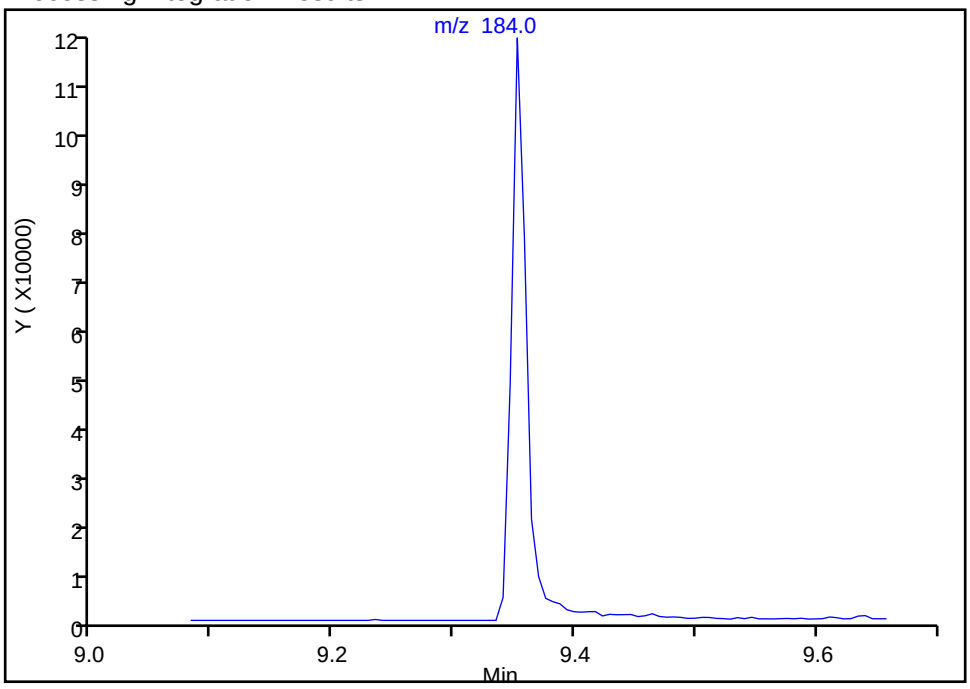
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D
Injection Date: 23-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: std5 l1lvi
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

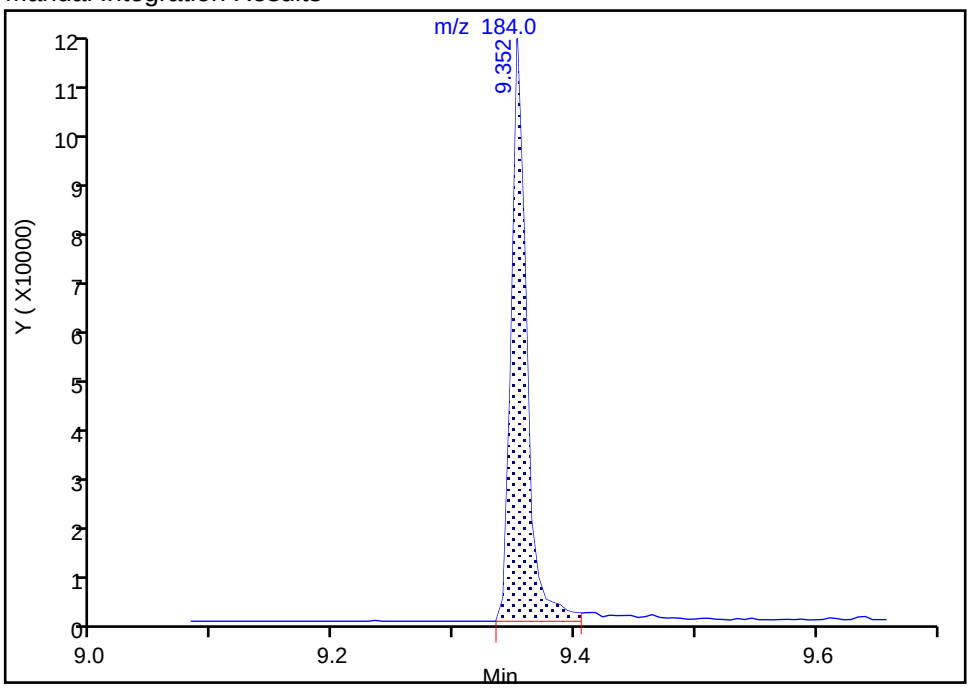
Not Detected
Expected RT: 9.36

Processing Integration Results



Manual Integration Results

RT: 9.35
Area: 97584
Amount: 868.8367
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:11:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

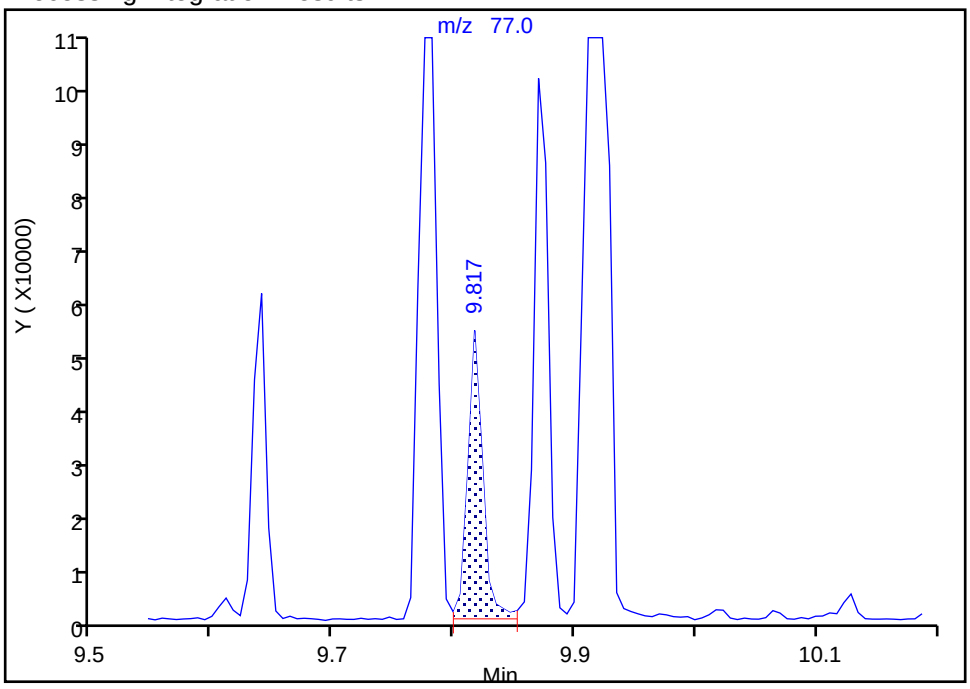
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423006.D
Injection Date: 23-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: std5 l1lvi
Client ID:
Operator ID: ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

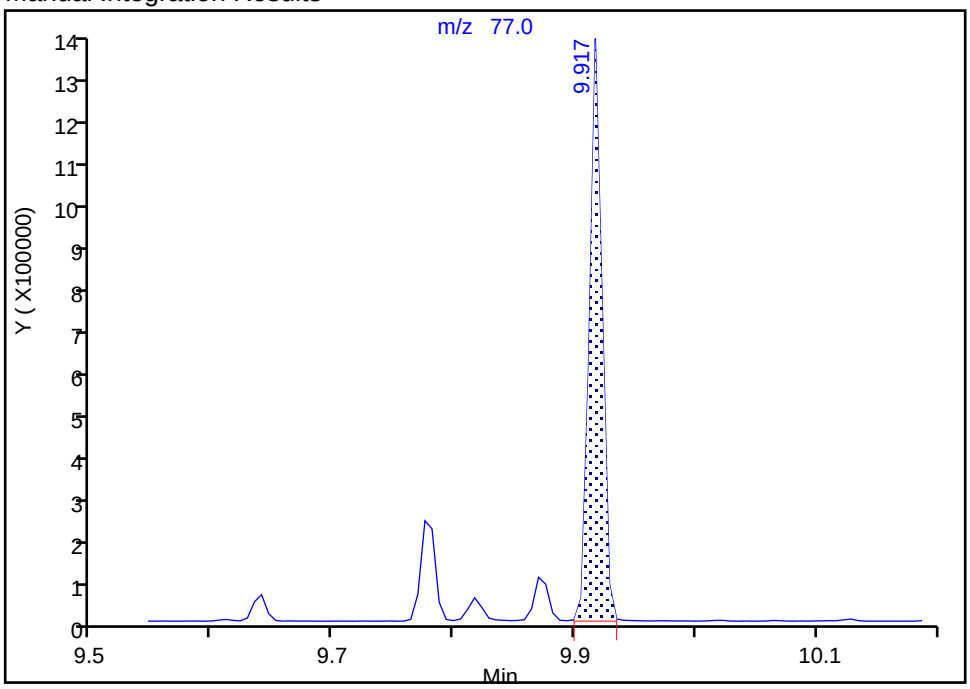
Processing Integration Results

RT: 9.82
Area: 45481
Amount: 24.612387
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 947949
Amount: 518.9796
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:12:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Lims ID: std4 l1lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Apr-2018 08:39:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-007
Misc. Info.: STD4 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:00:57 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 09:13:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	212112	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	931691	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	465699	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	841192	400.0	400.0	
* 5 Chrysene-d12	240	13.558	13.564	-0.006	97	666924	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	543178	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	95	89782	200.0	200.5	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	134745	200.0	189.4	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	94	174050	200.0	201.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	314519	200.0	199.1	
$ 11 2,4,6-Tribromophenol	330	10.017	10.023	-0.006	82	25589	200.0	181.5	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	99	272676	200.0	200.3	
26 1,4-Dioxane	88	4.300	4.294	0.006	92	24287	200.0	186.9	
27 N-Nitrosodimethylamine	74	4.553	4.547	0.005	84	90818	200.0	190.9	
28 Pyridine	79	4.611	4.611	0.000	81	134737	400.0	363.2	
42 Benzaldehyde	77	6.411	6.411	0.000	93	217308	400.0	404.8	
43 Phenol	94	6.423	6.429	-0.006	98	151901	200.0	191.0	
44 Aniline	93	6.494	6.493	0.001	96	246513	200.0	197.0	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	93	170746	200.0	197.6	a
244 n-Decane	57	6.605	6.605	0.000	93	203337	200.0	212.5	
47 2-Chlorophenol	128	6.605	6.605	0.000	98	143968	200.0	203.9	
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	96	166303	200.0	193.2	
49 1,4-Dichlorobenzene	146	6.788	6.788	0.000	93	172398	200.0	196.0	
50 Benzyl alcohol	108	6.852	6.858	-0.006	91	87461	200.0	172.7	
51 1,2-Dichlorobenzene	146	6.923	6.923	0.000	95	168193	200.0	201.5	
52 2-Methylphenol	108	6.929	6.929	0.000	97	125576	200.0	186.8	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.958	0.000	92	326779	200.0	206.8	
53 Indene	115	6.994	6.993	0.001	91	570395	400.0	418.3	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	113161	200.0	168.4	a
57 N-Nitrosodi-n-propylamine	70	7.064	7.064	0.000	94	125754	200.0	201.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.082	7.088	-0.006	93	218204	200.0	195.2	
61 Hexachloroethane	117	7.217	7.217	0.000	92	64694	200.0	196.5	
62 Nitrobenzene	77	7.241	7.240	0.001	94	166550	200.0	198.6	
64 Isophorone	82	7.423	7.429	-0.006	98	318568	200.0	203.8	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	95	132219	200.0	185.0	
65 2-Nitrophenol	139	7.505	7.505	0.000	92	66789	200.0	183.7	
70 Benzoic acid	122	7.529	7.546	-0.017	93	30729	400.0	309.4	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	97	194736	200.0	205.8	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	97	89157	200.0	171.7	
73 1,2,4-Trichlorobenzene	180	7.788	7.788	0.000	94	125928	200.0	193.0	
74 Naphthalene	128	7.864	7.864	0.000	96	498804	200.0	200.4	
75 4-Chloroaniline	127	7.876	7.876	0.000	95	246352	200.0	205.0	
76 2,6-Dichlorophenol	162	7.893	7.893	0.000	95	104082	200.0	182.7	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	96	63696	200.0	190.6	
83 Caprolactam	113	8.141	8.158	-0.018	74	96358	400.0	429.4	a
85 4-Chloro-3-methylphenol	107	8.252	8.258	-0.006	96	115252	200.0	190.2	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	93	320320	200.0	200.0	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	94	309292	200.0	200.9	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	95	56054	200.0	175.4	
90 1,2,4,5-Tetrachlorobenzene	216	8.588	8.587	0.001	98	110596	200.0	187.8	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	96	67934	200.0	182.0	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	92	55204	200.0	173.1	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	96	372255	200.0	198.1	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	98	277396	200.0	197.7	
101 2-Nitroaniline	65	8.923	8.923	0.000	81	87367	200.0	192.4	
104 Dimethyl phthalate	163	9.046	9.046	0.000	97	316741	200.0	197.2	
103 1,3-Dinitrobenzene	168	9.088	9.087	0.001	84	38467	200.0	182.0	
106 2,6-Dinitrotoluene	165	9.105	9.111	-0.006	89	64894	200.0	190.2	
108 Acenaphthylene	152	9.229	9.229	0.000	98	423879	200.0	199.9	
109 3-Nitroaniline	138	9.270	9.276	-0.006	91	59958	200.0	201.2	
110 2,4-Dinitrophenol	184	9.352	9.358	-0.006	50	24455	400.0	477.8	a
112 4-Nitrophenol	109	9.370	9.376	-0.006	26	51514	400.0	369.4	a
111 Acenaphthene	153	9.376	9.376	0.000	95	294262	200.0	198.9	
113 2,4-Dinitrotoluene	165	9.458	9.464	-0.006	87	79611	200.0	190.8	
115 Dibenzofuran	168	9.517	9.517	0.000	96	396622	200.0	199.8	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	77	42098	200.0	172.5	
248 Hexadecane	57	9.635	9.634	0.001	91	298154	200.0	225.1	
120 Diethyl phthalate	149	9.640	9.640	0.000	97	336164	200.0	207.9	
122 4-Chlorophenyl phenyl ethe	204	9.782	9.782	0.000	97	142371	200.0	193.3	
125 4-Nitroaniline	138	9.799	9.799	0.000	82	65672	200.0	227.5	
124 Fluorene	166	9.811	9.811	0.000	94	322411	200.0	199.7	
127 4,6-Dinitro-2-methylphenol	198	9.817	9.823	-0.006	81	39542	400.0	360.5	
128 N-Nitrosodiphenylamine	169	9.870	9.876	-0.006	99	239072	200.0	189.4	
129 Diphenylamine	169	9.870	9.876	-0.006	94	239072	170.0	161.0	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	14	377956	200.0	193.9	a
131 Azobenzene	77	9.917	9.917	0.000	98	377939	200.0	193.8	
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	80	72661	200.0	177.3	
141 Atrazine	200	10.293	10.299	-0.006	86	149333	400.0	375.4	
140 Hexachlorobenzene	284	10.305	10.305	0.000	90	72494	200.0	179.3	
245 n-Octadecane	57	10.417	10.423	-0.006	91	304945	200.0	200.8	
143 Pentachlorophenol	266	10.452	10.458	-0.006	89	54662	400.0	457.9	
148 Phenanthrene	178	10.652	10.652	0.000	98	449386	200.0	192.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.693	10.699	-0.006	98	459557	200.0	197.7	
150 Carbazole	167	10.811	10.811	0.000	96	380126	200.0	187.8	
154 Di-n-butyl phthalate	149	11.034	11.040	-0.006	99	523520	200.0	186.4	
159 Fluoranthene	202	11.764	11.764	0.000	99	390795	200.0	176.1	
160 Benzidine	184	11.846	11.846	0.000	99	173712	400.0	300.0	
161 Pyrene	202	12.017	12.023	-0.006	96	401423	200.0	192.1	
169 Butyl benzyl phthalate	149	12.646	12.652	-0.006	97	196538	200.0	180.6	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.417	0.000	96	274317	200.0	185.0	
177 3,3'-Dichlorobenzidine	252	13.446	13.452	-0.006	76	232152	400.0	380.4	
178 Benzo[a]anthracene	228	13.540	13.546	-0.006	99	345505	200.0	183.5	
179 Chrysene	228	13.599	13.605	-0.006	98	368695	200.0	193.9	
181 Di-n-octyl phthalate	149	14.428	14.434	-0.006	98	429440	200.0	183.6	
183 Benzo[b]fluoranthene	252	15.264	15.269	-0.005	98	307048	200.0	187.8	
184 Benzo[k]fluoranthene	252	15.311	15.316	-0.005	97	325630	200.0	192.5	
185 Benzo[a]pyrene	252	15.828	15.834	-0.006	81	288837	200.0	191.4	
190 Indeno[1,2,3-cd]pyrene	276	18.028	18.034	-0.006	96	292166	200.0	189.3	
189 Dibenz(a,h)anthracene	278	18.040	18.046	-0.006	90	246285	200.0	189.6	
191 Benzo[g,h,i]perylene	276	18.663	18.669	-0.006	95	237175	200.0	190.4	
S 193 Methyl Phenols,Total	100				0			355.2	
S 246 Total Cresols	100				0			355.2	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L4 W_00010 Amount Added: 0.10 Units: mL

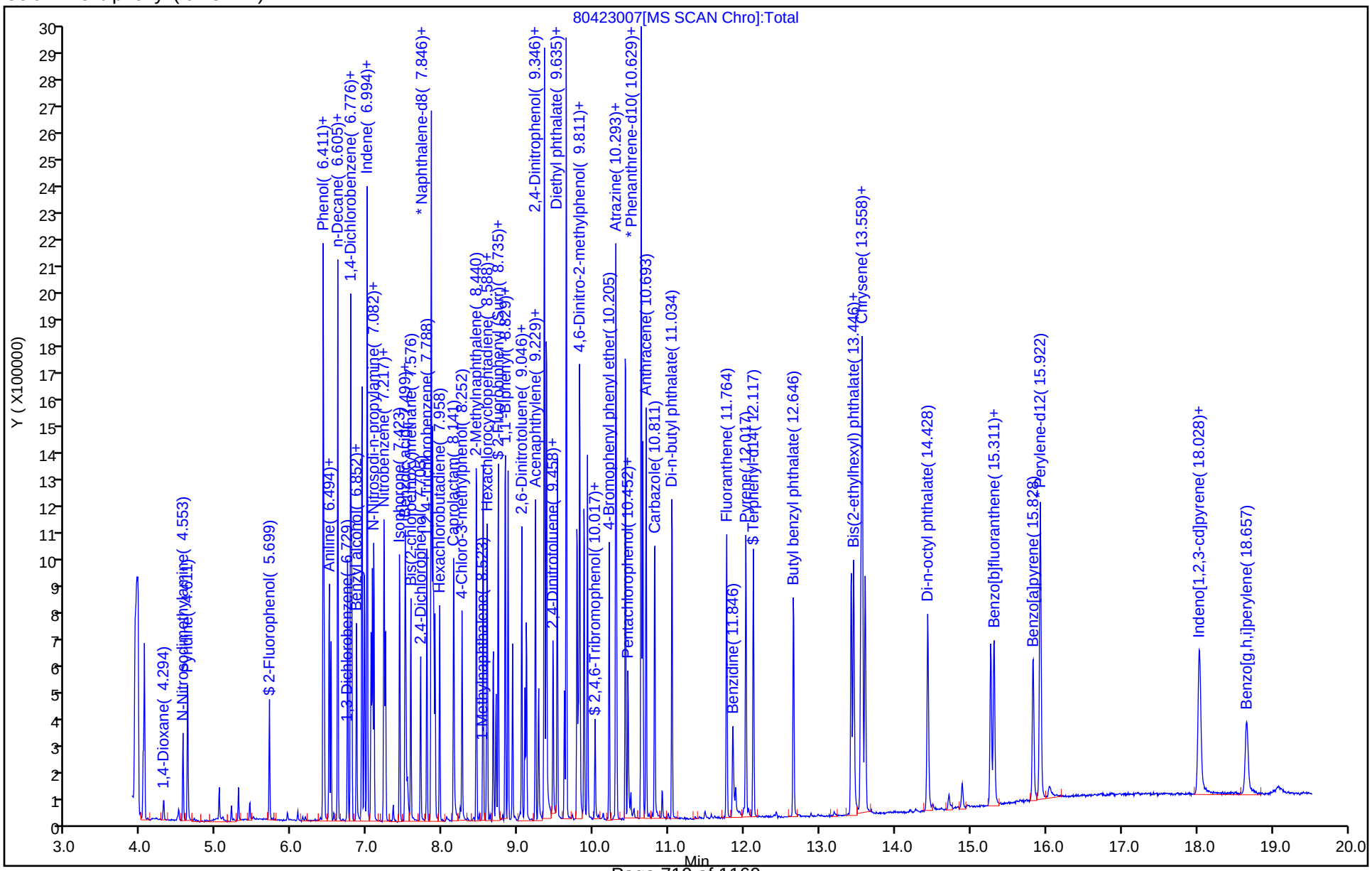
Report Date: 24-Apr-2018 07:01:02 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D

Injection Date:	23-Apr-2018 08:39:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std4 l1lvi			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

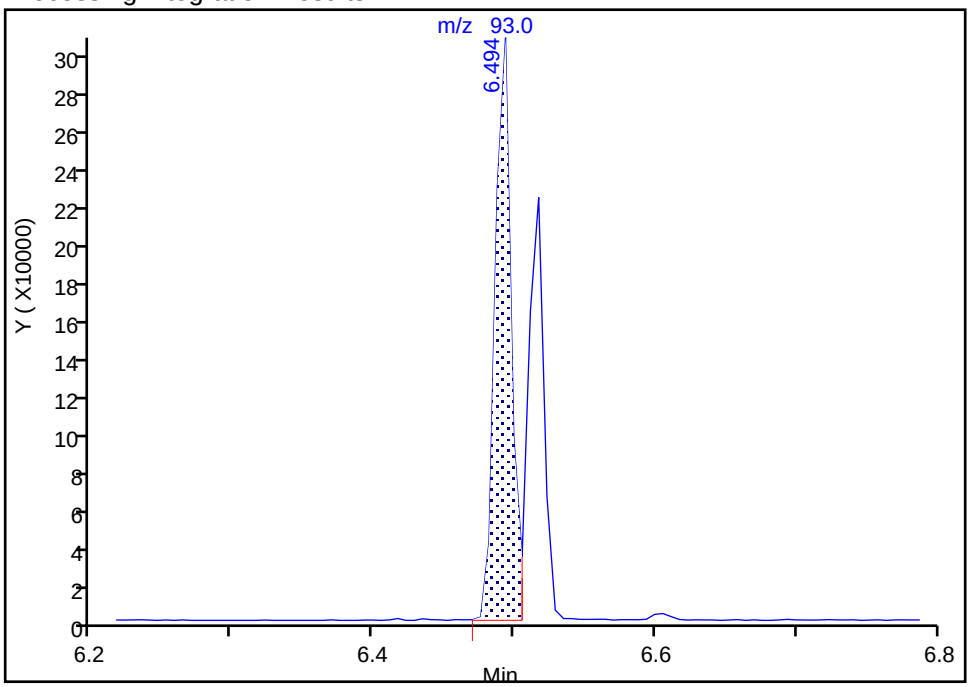
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D				
Injection Date:	23-Apr-2018 08:39:30	Instrument ID:	A4AG2		
Lims ID:	std4 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

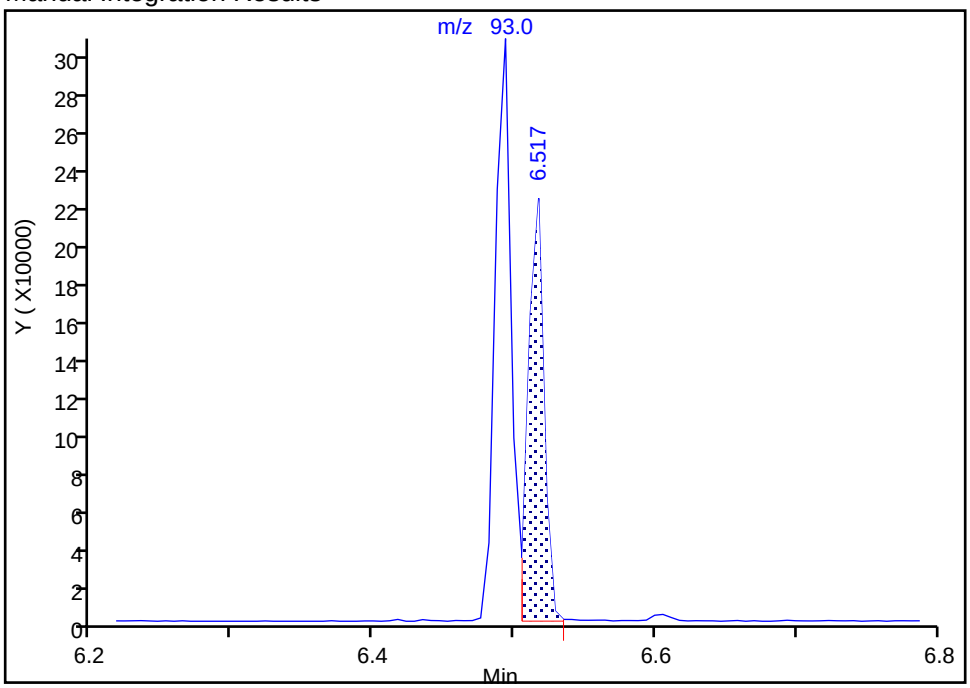
Processing Integration Results

RT: 6.49
Area: 246513
Amount: 273.5410
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 170746
Amount: 197.5533
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:12:33

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

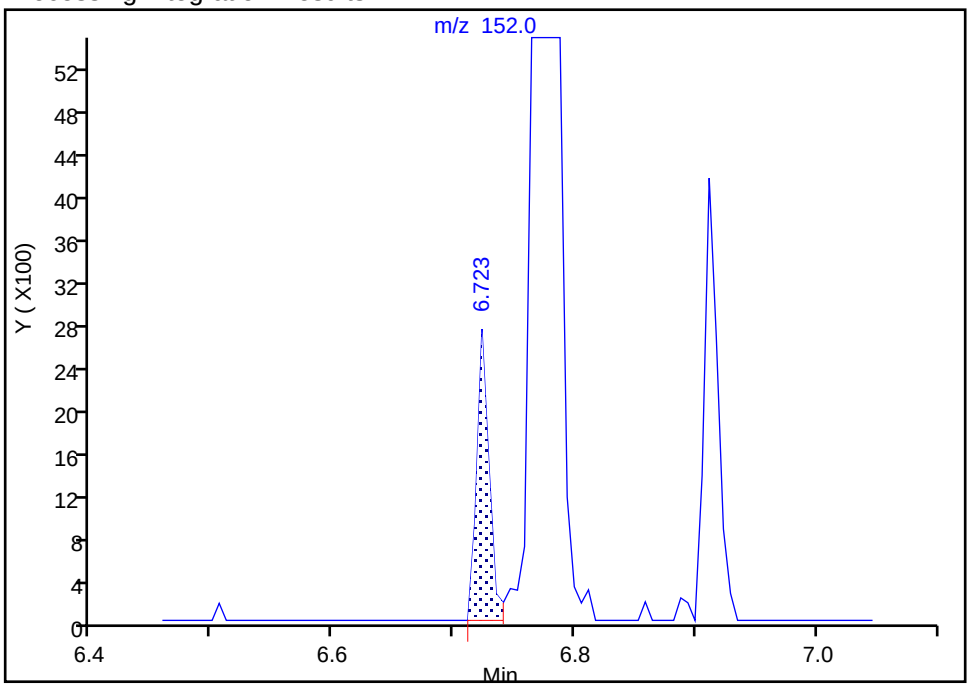
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Injection Date: 23-Apr-2018 08:39:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

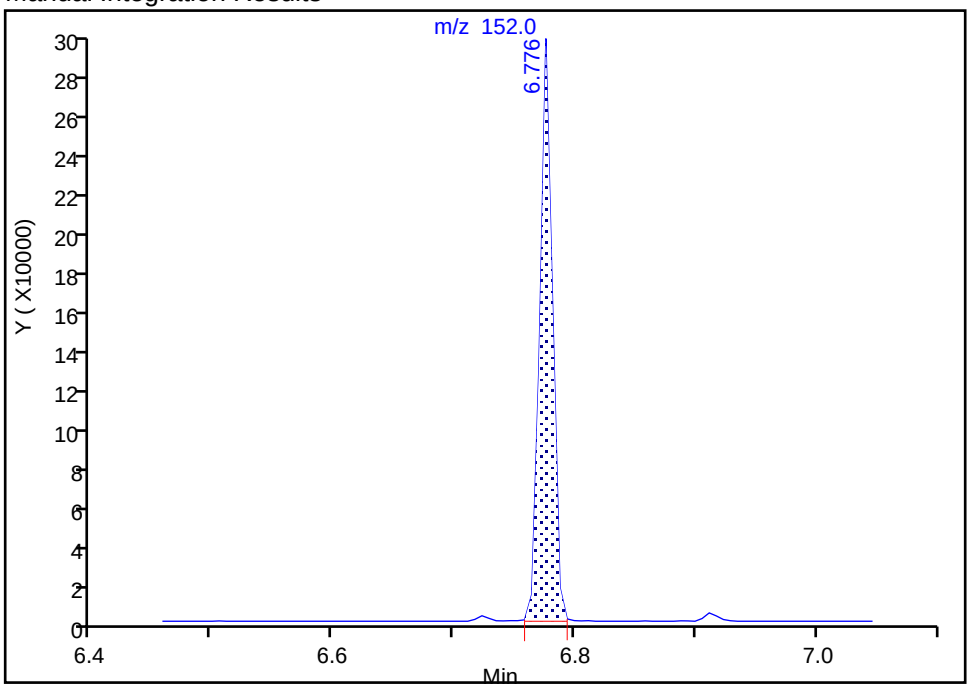
Processing Integration Results

RT: 6.72
Area: 1958
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 212112
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:12:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

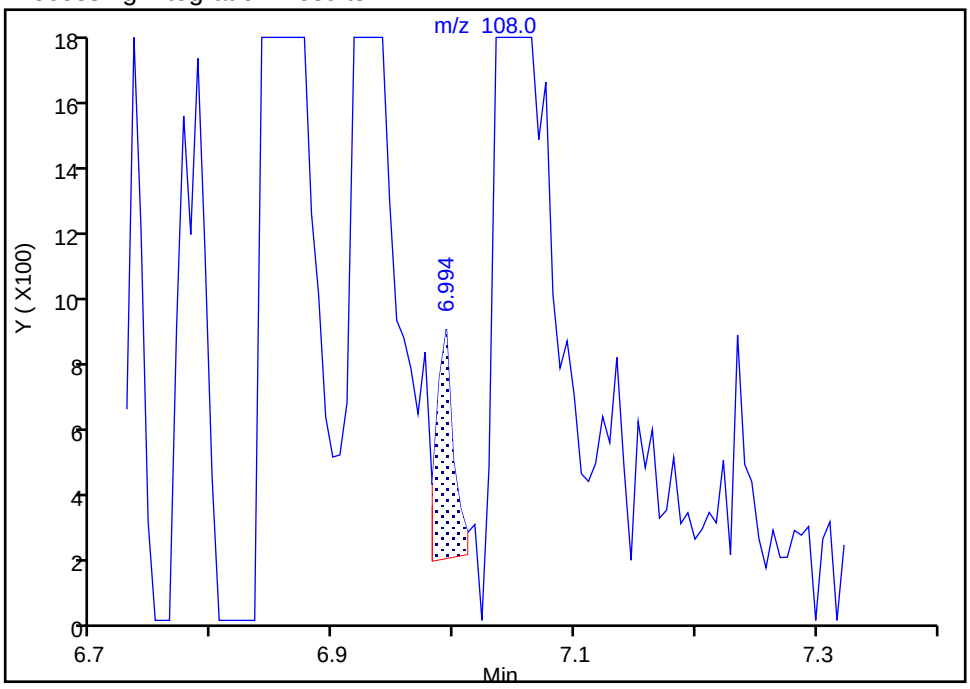
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D				
Injection Date:	23-Apr-2018 08:39:30	Instrument ID:	A4AG2		
Lims ID:	std4 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	7	Worklist Smp#:	7
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

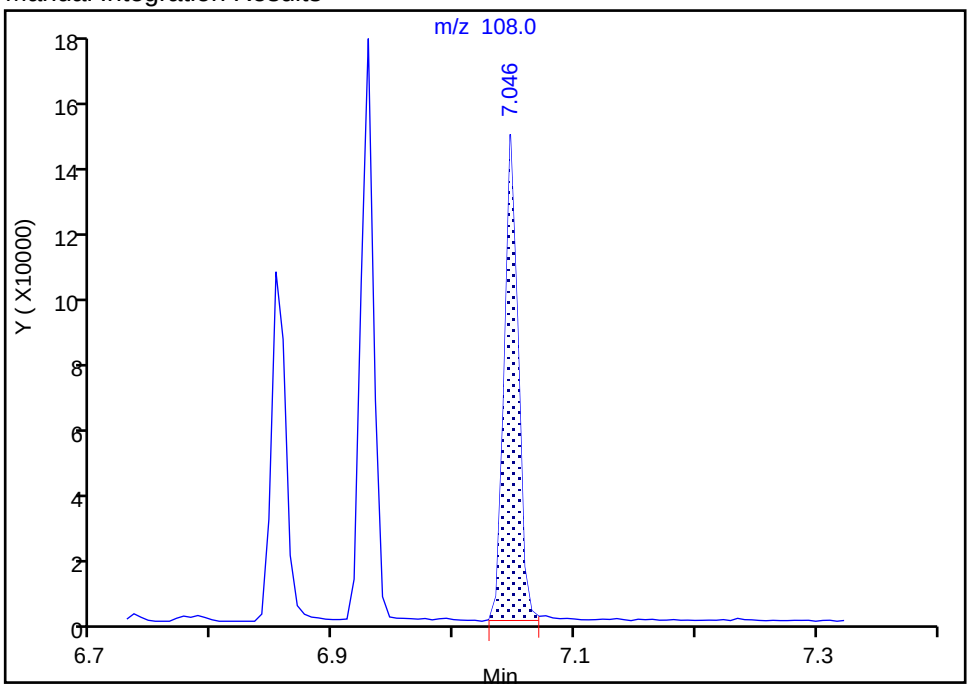
Processing Integration Results

RT: 6.99
Area: 691
Amount: 169.8838
Amount Units: ng/ml



Manual Integration Results

RT: 7.05
Area: 113161
Amount: 168.4054
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:12:42

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

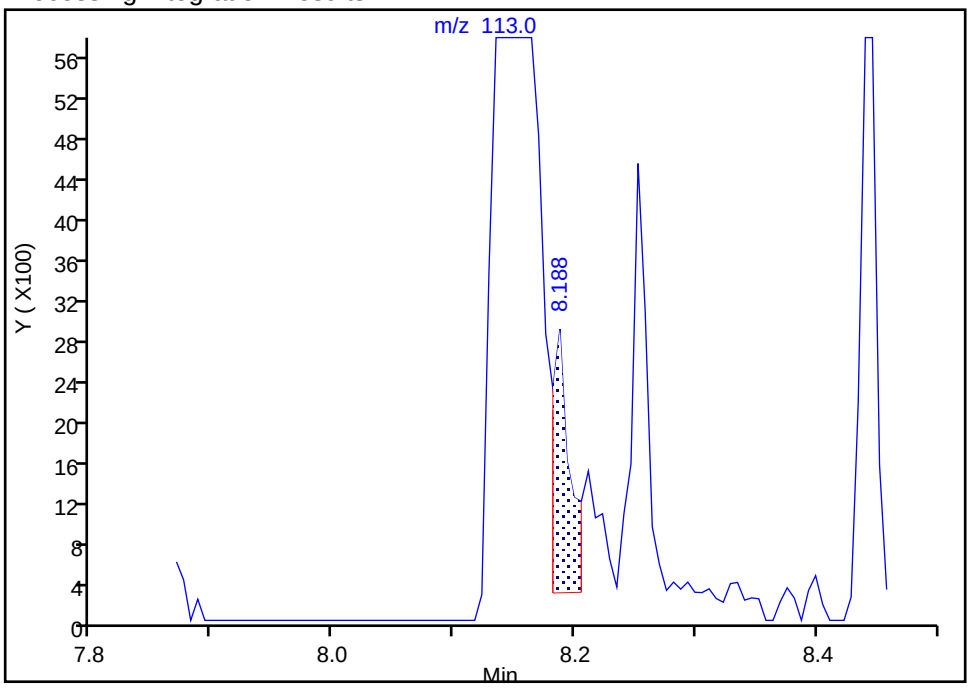
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Injection Date: 23-Apr-2018 08:39:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

83 Caprolactam, CAS: 105-60-2

Signal: 1

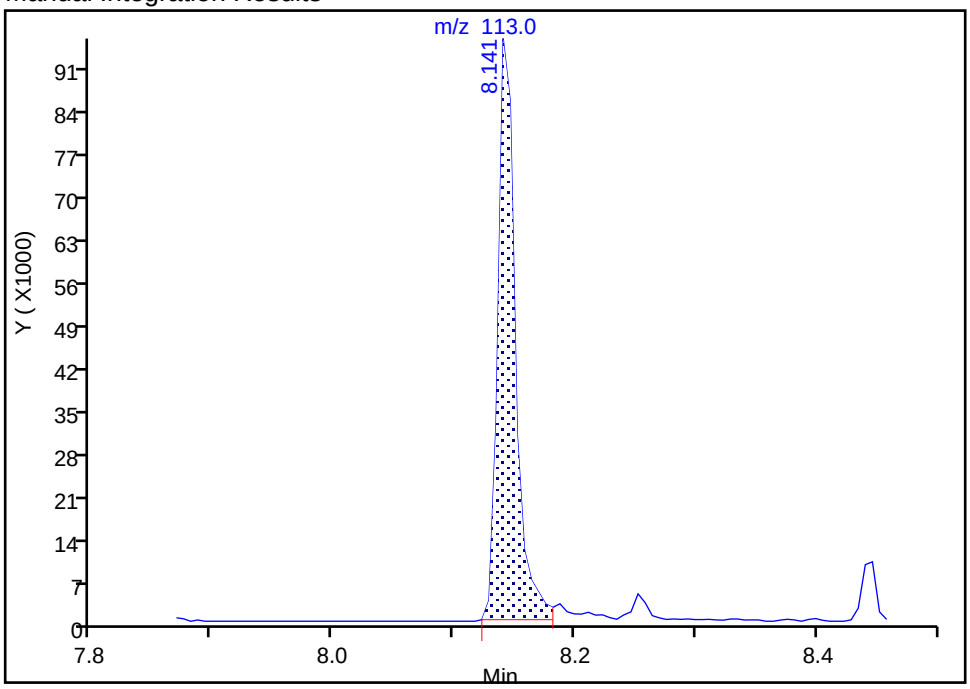
Processing Integration Results

RT: 8.19
Area: 2727
Amount: 118.4871
Amount Units: ng/ml



Manual Integration Results

RT: 8.14
Area: 96358
Amount: 429.3817
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:12:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

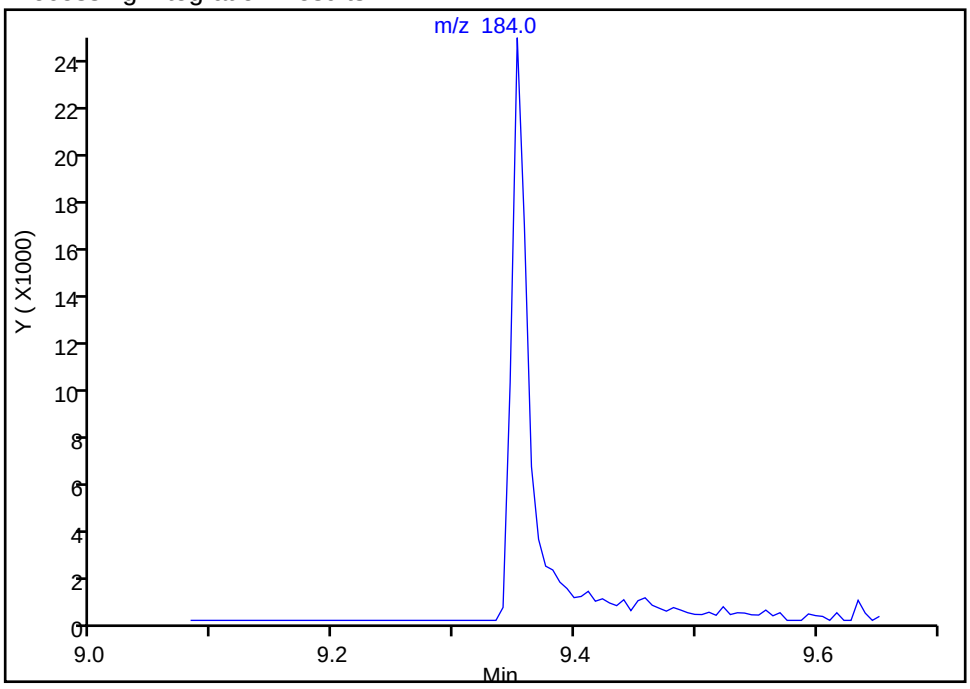
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Injection Date: 23-Apr-2018 08:39:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

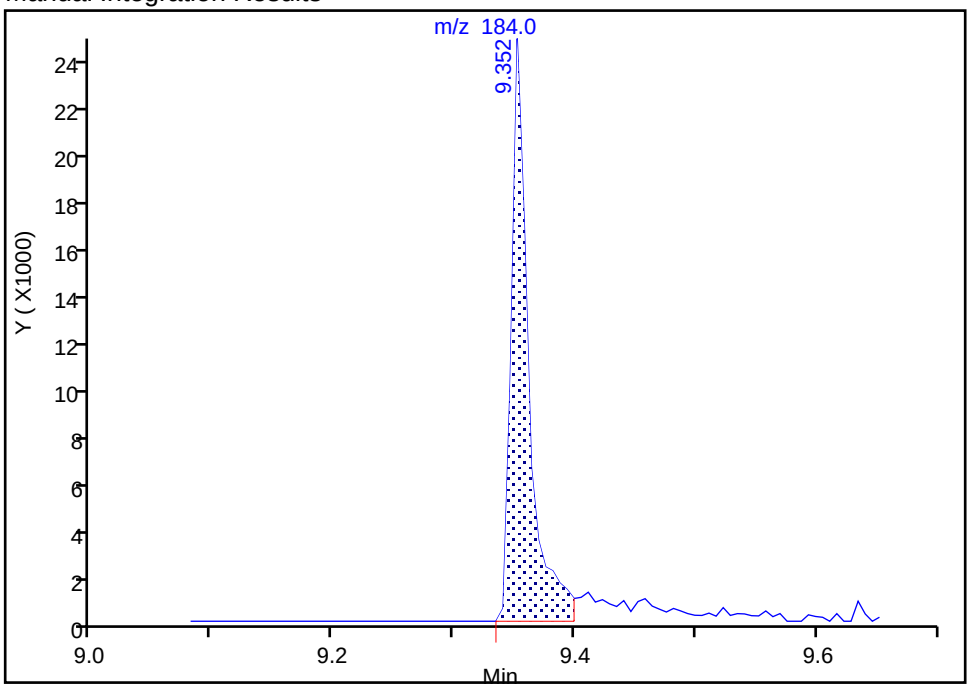
Not Detected
Expected RT: 9.36

Processing Integration Results



Manual Integration Results

RT: 9.35
Area: 24455
Amount: 477.7738
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:13:01
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

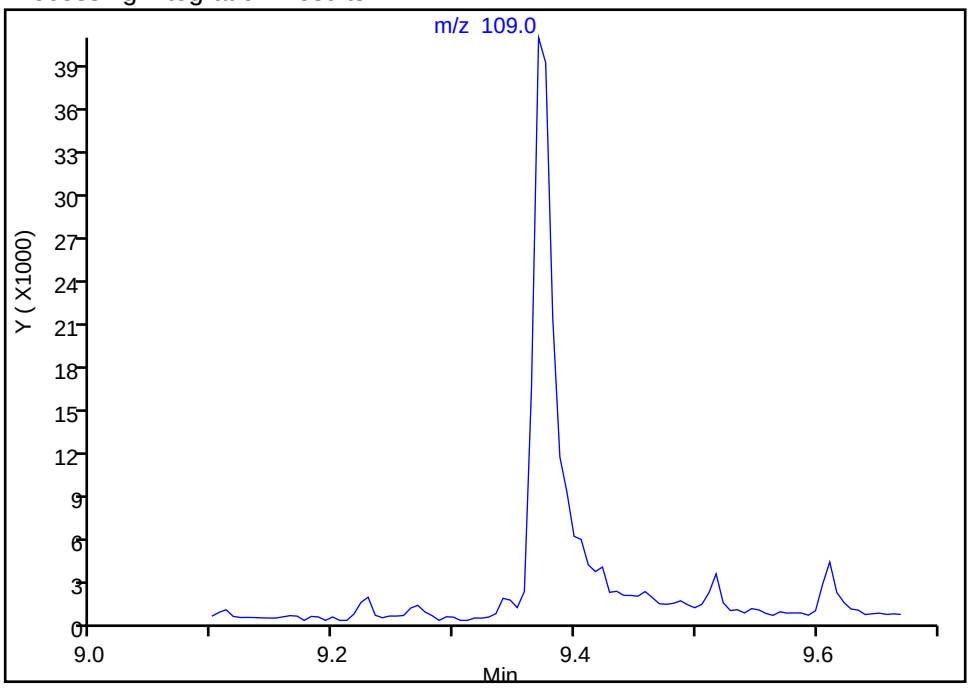
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Injection Date: 23-Apr-2018 08:39:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

112 4-Nitrophenol, CAS: 100-02-7

Signal: 1

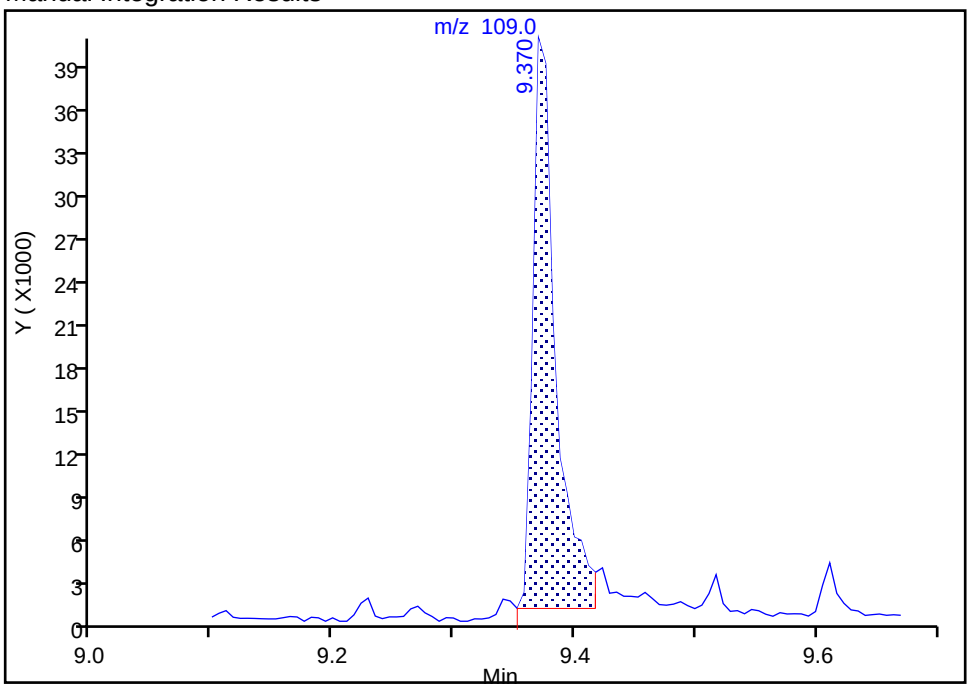
Not Detected
Expected RT: 9.38

Processing Integration Results



Manual Integration Results

RT: 9.37
Area: 51514
Amount: 369.4065
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:13:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

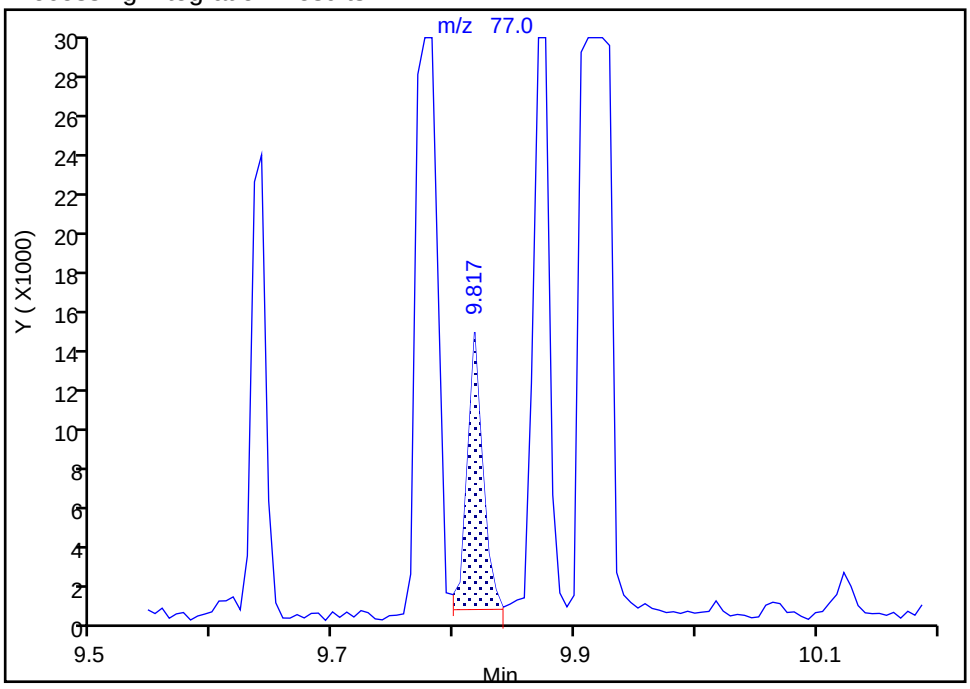
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423007.D
Injection Date: 23-Apr-2018 08:39:30 Instrument ID: A4AG2
Lims ID: std4 l1lvi
Client ID:
Operator ID: ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

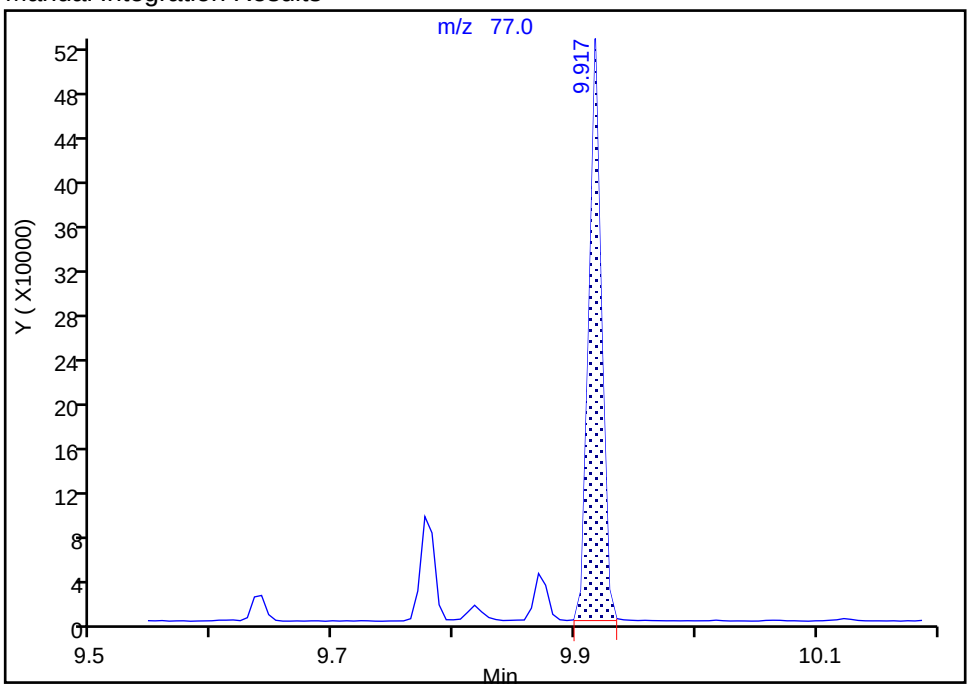
Processing Integration Results

RT: 9.82
Area: 12416
Amount: 6.294749
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 377956
Amount: 193.8561
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:13:15
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Report Date: 24-Apr-2018 07:01:17 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D
Lims ID: std3 l1lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Apr-2018 09:04:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-008
Misc. Info.: STD3 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:12 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 09:34:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	207950	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	926976	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	466293	400.0	400.0	
* 4 Phenanthrene-d10	188	10.628	10.629	0.000	98	817827	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	647183	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	98	536066	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	94	44080	100.0	100.4	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	71029	100.0	101.8	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	94	84438	100.0	98.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.734	8.735	0.000	100	157057	100.0	99.3	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	86	11251	100.0	79.7	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	98	128617	100.0	97.3	
26 1,4-Dioxane	88	4.299	4.294	0.005	91	12273	100.0	96.3	
27 N-Nitrosodimethylamine	74	4.552	4.547	0.005	84	45693	100.0	98.0	
28 Pyridine	79	4.617	4.611	0.006	85	67915	200.0	186.7	
42 Benzaldehyde	77	6.411	6.411	0.000	93	120180	200.0	206.1	
43 Phenol	94	6.423	6.429	-0.006	98	81864	100.0	105.0	
44 Aniline	93	6.493	6.493	0.000	95	122701	100.0	100.0	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	93	90088	100.0	106.3	a
47 2-Chlorophenol	128	6.605	6.605	0.000	98	71365	100.0	103.1	
244 n-Decane	57	6.605	6.605	0.000	94	105905	100.0	112.9	
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	96	88097	100.0	104.4	
49 1,4-Dichlorobenzene	146	6.793	6.788	0.005	95	89412	100.0	103.7	
50 Benzyl alcohol	108	6.858	6.858	0.000	91	44950	100.0	90.5	
51 1,2-Dichlorobenzene	146	6.923	6.923	0.000	94	85478	100.0	104.5	
52 2-Methylphenol	108	6.929	6.929	0.000	97	64435	100.0	97.8	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.958	0.000	92	172351	100.0	111.3	
53 Indene	115	6.993	6.993	0.000	90	298865	200.0	223.6	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	55389	100.0	84.1	
57 N-Nitrosodi-n-propylamine	70	7.064	7.064	0.000	95	62087	100.0	101.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.088	7.088	0.000	92	107911	100.0	98.5	
61 Hexachloroethane	117	7.217	7.217	0.000	93	32223	100.0	99.9	
62 Nitrobenzene	77	7.240	7.240	0.000	94	82271	100.0	98.6	
64 Isophorone	82	7.429	7.429	0.000	97	155322	100.0	99.9	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	94	61990	100.0	87.2	
65 2-Nitrophenol	139	7.505	7.505	0.000	94	29451	100.0	81.4	
70 Benzoic acid	122	7.517	7.546	-0.029	80	14094	200.0	263.3	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	96	96760	100.0	102.8	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	97	40482	100.0	78.4	
73 1,2,4-Trichlorobenzene	180	7.787	7.788	-0.001	94	64427	100.0	99.3	
74 Naphthalene	128	7.864	7.864	0.000	75	258907	100.0	104.6	a
75 4-Chloroaniline	127	7.882	7.876	0.006	94	116916	100.0	97.8	
76 2,6-Dichlorophenol	162	7.899	7.893	0.006	96	49277	100.0	86.9	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	95	33032	100.0	99.4	
83 Caprolactam	113	8.140	8.158	-0.018	74	46158	200.0	206.7	
85 4-Chloro-3-methylphenol	107	8.252	8.258	-0.006	97	51796	100.0	85.9	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	92	163485	100.0	102.6	
87 1-Methylnaphthalene	142	8.534	8.535	-0.001	94	156427	100.0	102.1	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	94	25561	100.0	98.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.587	8.587	0.000	96	53459	100.0	90.7	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	96	30240	100.0	80.9	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	91	18106	100.0	90.5	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	97	188379	100.0	100.1	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	98	139025	100.0	99.0	
101 2-Nitroaniline	65	8.923	8.923	0.000	78	37681	100.0	82.9	
104 Dimethyl phthalate	163	9.046	9.046	0.000	97	158966	100.0	98.9	
103 1,3-Dinitrobenzene	168	9.087	9.087	0.000	81	14888	100.0	91.8	
106 2,6-Dinitrotoluene	165	9.111	9.111	0.000	89	30636	100.0	89.7	
108 Acenaphthylene	152	9.229	9.229	0.000	98	212438	100.0	100.1	
109 3-Nitroaniline	138	9.270	9.276	-0.006	91	25210	100.0	84.5	
110 2,4-Dinitrophenol	184		9.358				ND	ND	Ua
111 Acenaphthene	153	9.376	9.376	0.000	96	150740	100.0	101.7	
112 4-Nitrophenol	109	9.376	9.376	0.000	93	21014	200.0	229.2	
113 2,4-Dinitrotoluene	165	9.464	9.464	0.000	87	34048	100.0	81.5	
115 Dibenzofuran	168	9.517	9.517	0.000	96	202315	100.0	101.8	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	77	17852	100.0	94.4	
248 Hexadecane	57	9.634	9.634	0.000	91	152954	100.0	115.3	
120 Diethyl phthalate	149	9.640	9.640	0.000	98	168828	100.0	104.3	
122 4-Chlorophenyl phenyl ethe	204	9.781	9.782	-0.001	97	73004	100.0	99.0	
125 4-Nitroaniline	138	9.799	9.799	0.000	82	28891	100.0	99.9	
124 Fluorene	166	9.811	9.811	0.000	95	166502	100.0	103.0	
127 4,6-Dinitro-2-methylphenol	198	9.823	9.823	0.000	78	14604	200.0	260.4	
129 Diphenylamine	169	9.876	9.876	0.000	94	119941	85.0	83.1	
128 N-Nitrosodiphenylamine	169	9.876	9.876	0.000	99	119941	100.0	97.7	
131 Azobenzene	77	9.917	9.917	0.000	98	189196	100.0	99.8	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	7	189022	100.0	99.7	a
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	80	38247	100.0	96.0	
141 Atrazine	200	10.293	10.299	-0.006	86	73868	200.0	191.0	
140 Hexachlorobenzene	284	10.305	10.305	0.000	90	36431	100.0	92.7	
245 n-Octadecane	57	10.423	10.423	0.000	91	153696	100.0	104.1	
143 Pentachlorophenol	266		10.458				ND	ND	U
148 Phenanthrene	178	10.652	10.652	0.000	98	229403	100.0	101.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.693	10.699	-0.006	98	226209	100.0	100.1	
150 Carbazole	167	10.811	10.811	0.000	96	206356	100.0	104.9	
154 Di-n-butyl phthalate	149	11.040	11.040	0.000	99	261228	100.0	95.7	
159 Fluoranthene	202	11.764	11.764	0.000	99	208478	100.0	96.6	
160 Benzidine	184	11.846	11.846	0.000	99	68349	200.0	194.8	
161 Pyrene	202	12.017	12.023	-0.006	96	208570	100.0	102.9	
169 Butyl benzyl phthalate	149	12.652	12.652	0.000	97	95069	100.0	90.0	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.417	-0.001	96	130258	100.0	90.5	
177 3,3'-Dichlorobenzidine	252	13.452	13.452	0.000	77	104817	200.0	177.0	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	99	173109	100.0	94.7	
179 Chrysene	228	13.599	13.605	-0.006	99	185411	100.0	100.5	
181 Di-n-octyl phthalate	149	14.434	14.434	0.000	98	184089	100.0	79.8	
183 Benzo[b]fluoranthene	252	15.263	15.269	-0.006	98	154526	100.0	95.8	
184 Benzo[k]fluoranthene	252	15.311	15.316	-0.006	98	164792	100.0	98.7	
185 Benzo[a]pyrene	252	15.828	15.834	-0.006	82	141240	100.0	94.8	
190 Indeno[1,2,3-cd]pyrene	276	18.028	18.034	-0.006	93	139343	100.0	91.5	
189 Dibenz(a,h)anthracene	278	18.034	18.046	-0.012	90	117552	100.0	91.7	
191 Benzo[g,h,i]perylene	276	18.657	18.669	-0.012	92	116950	100.0	95.1	
S 246 Total Cresols	100				0			181.8	
S 193 Methyl Phenols,Total	100				0			181.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST1 L3 W_00010 Amount Added: 0.10 Units: mL

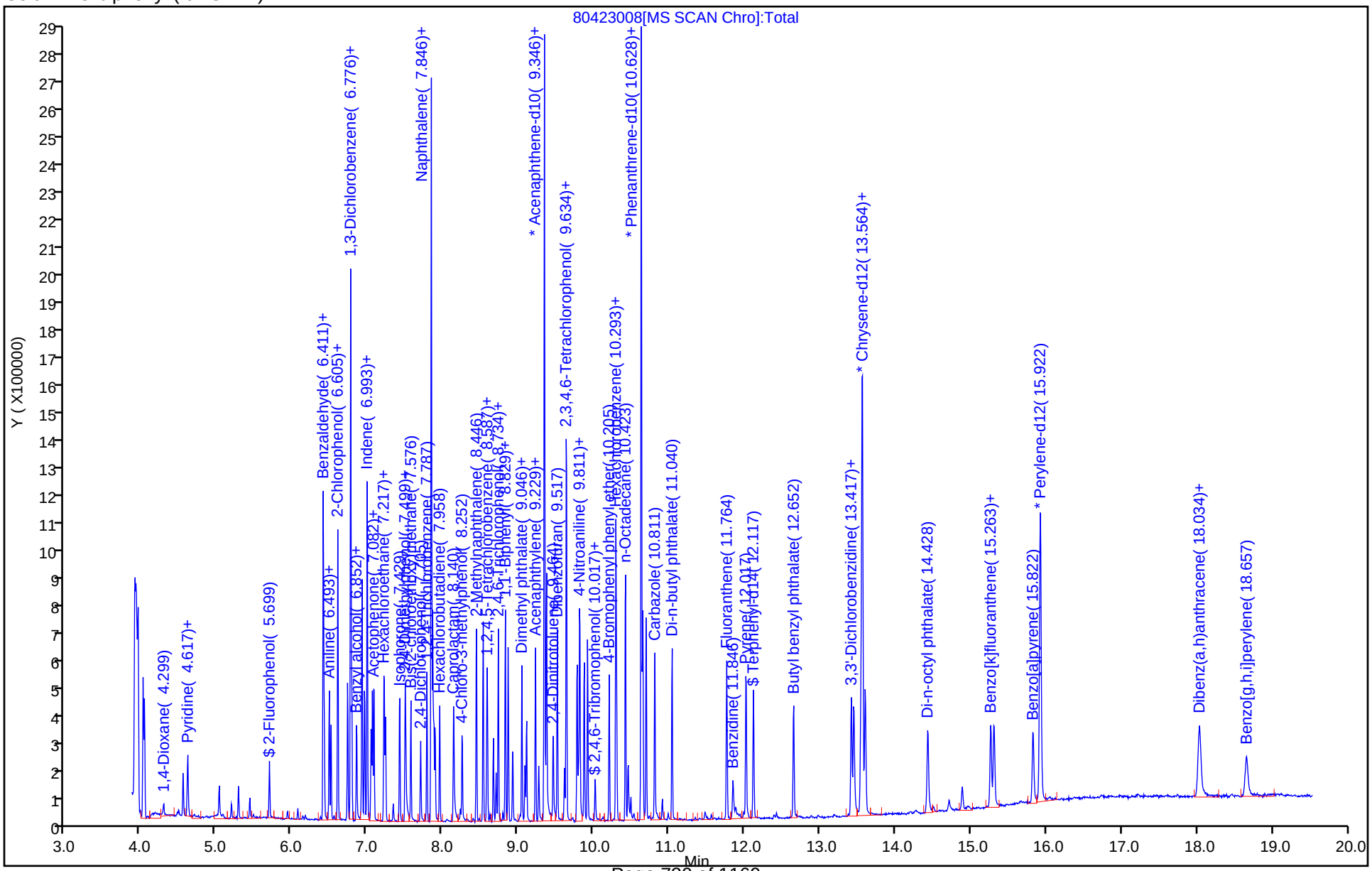
Report Date: 24-Apr-2018 07:01:17 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D

Injection Date:	23-Apr-2018 09:04:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std3 l1lvi			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

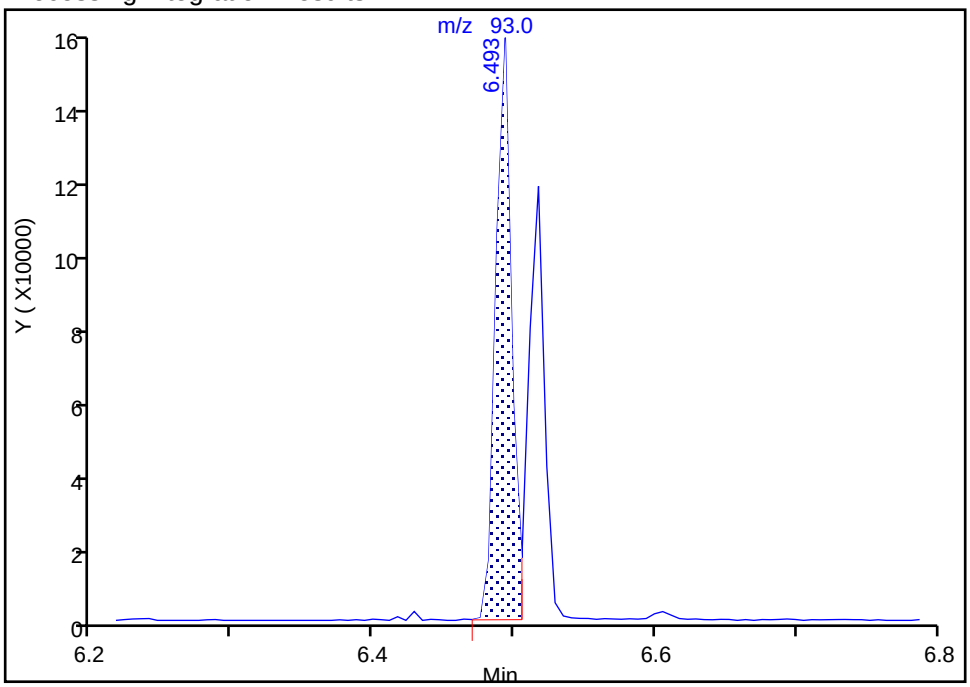
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D				
Injection Date:	23-Apr-2018 09:04:30	Instrument ID:	A4AG2		
Lims ID:	std3 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

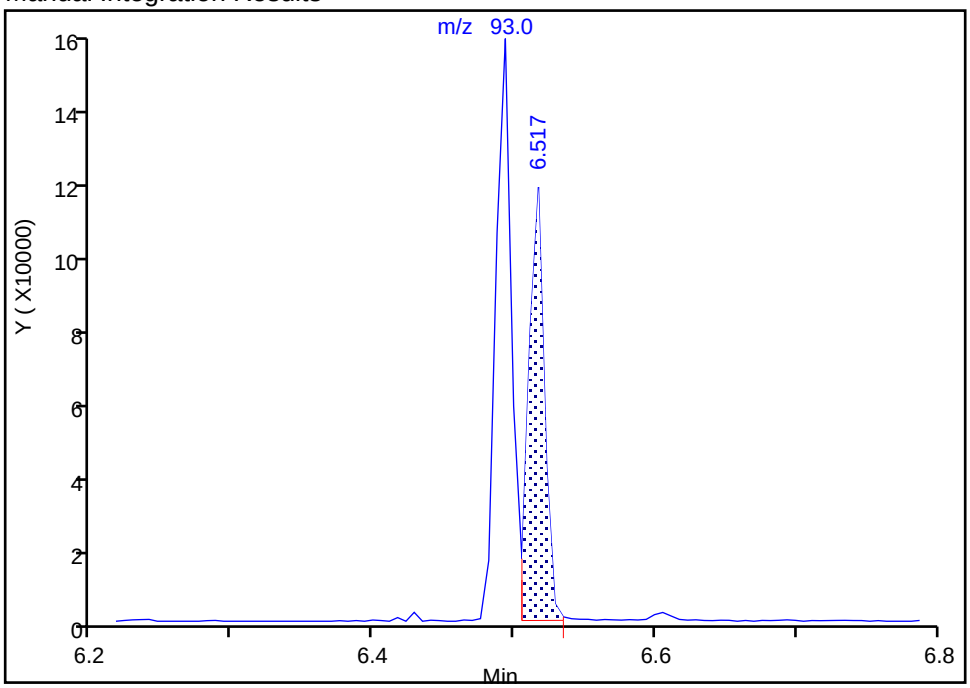
Processing Integration Results

RT: 6.49
Area: 122701
Amount: 115.8769
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 90088
Amount: 106.3181
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:32:34

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

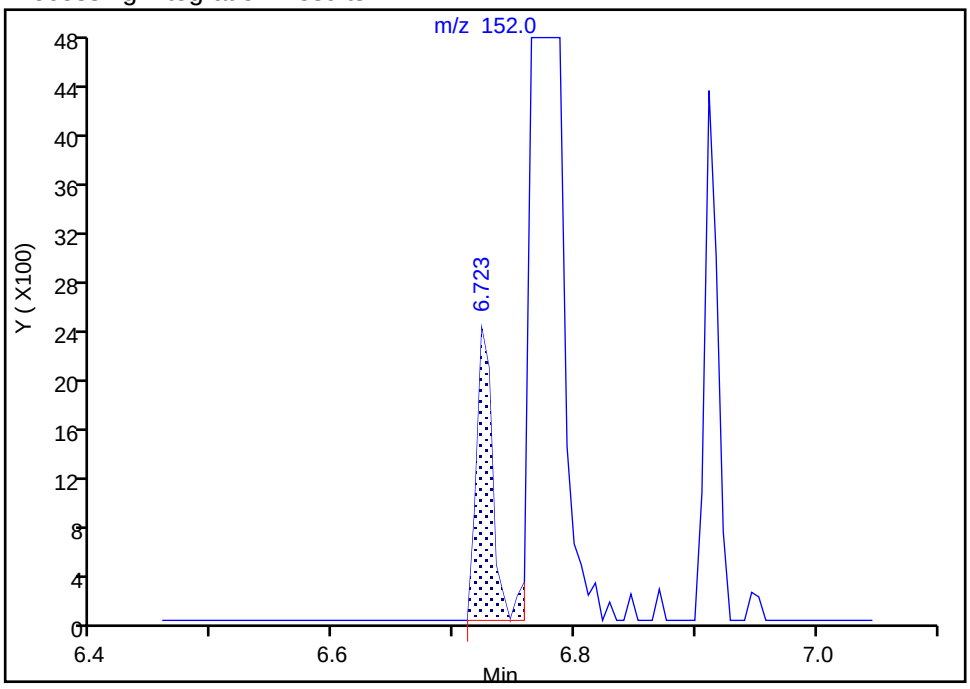
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D
Injection Date: 23-Apr-2018 09:04:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

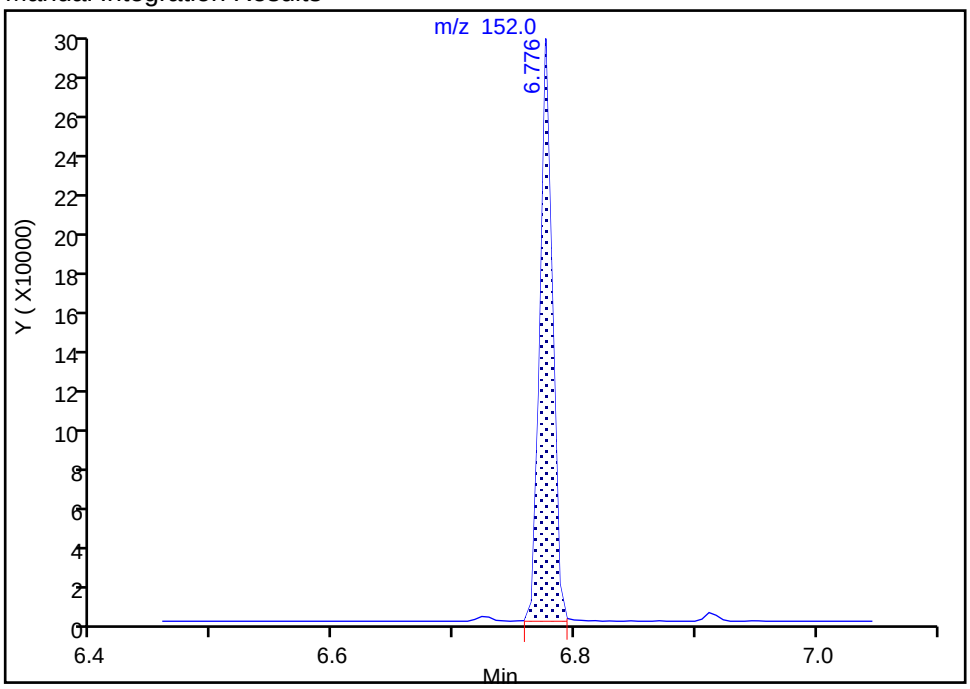
Processing Integration Results

RT: 6.72
Area: 2311
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 207950
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:31:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

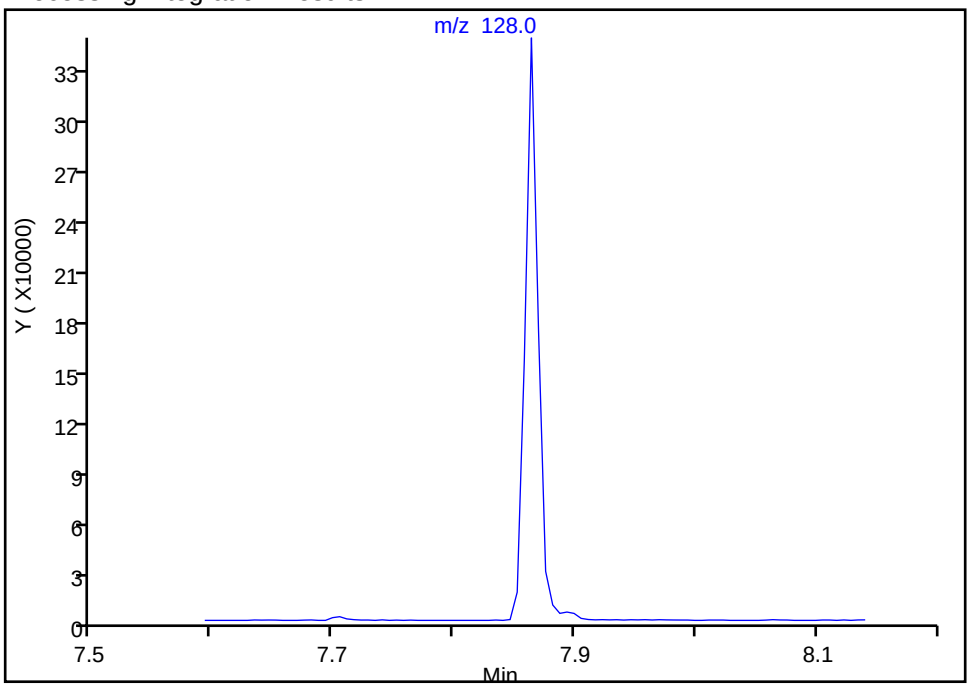
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D
Injection Date: 23-Apr-2018 09:04:30 Instrument ID: A4AG2
Lims ID: std3 l1lvi
Client ID:
Operator ID: ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

74 Naphthalene, CAS: 91-20-3

Signal: 1

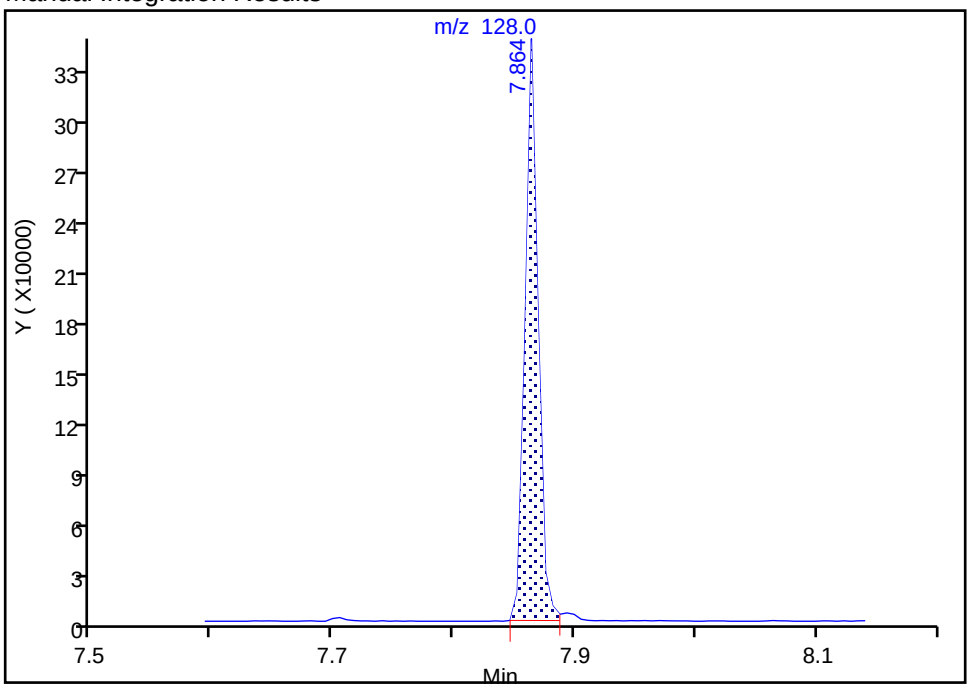
Not Detected
Expected RT: 7.86

Processing Integration Results



Manual Integration Results

RT: 7.86
Area: 258907
Amount: 104.5652
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:32:51
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

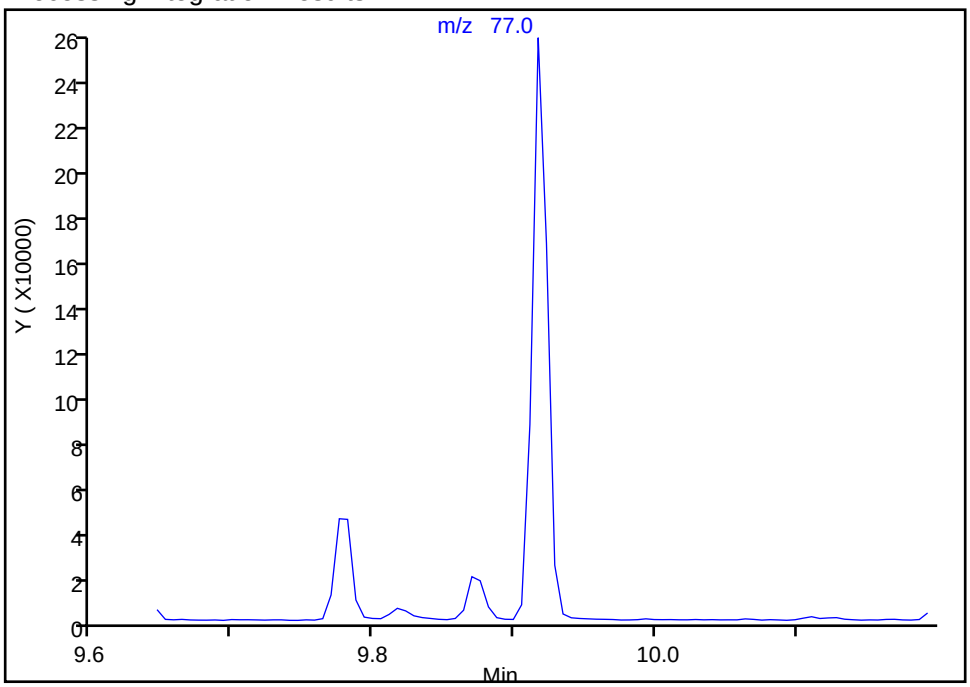
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D				
Injection Date:	23-Apr-2018 09:04:30	Instrument ID:	A4AG2		
Lims ID:	std3 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

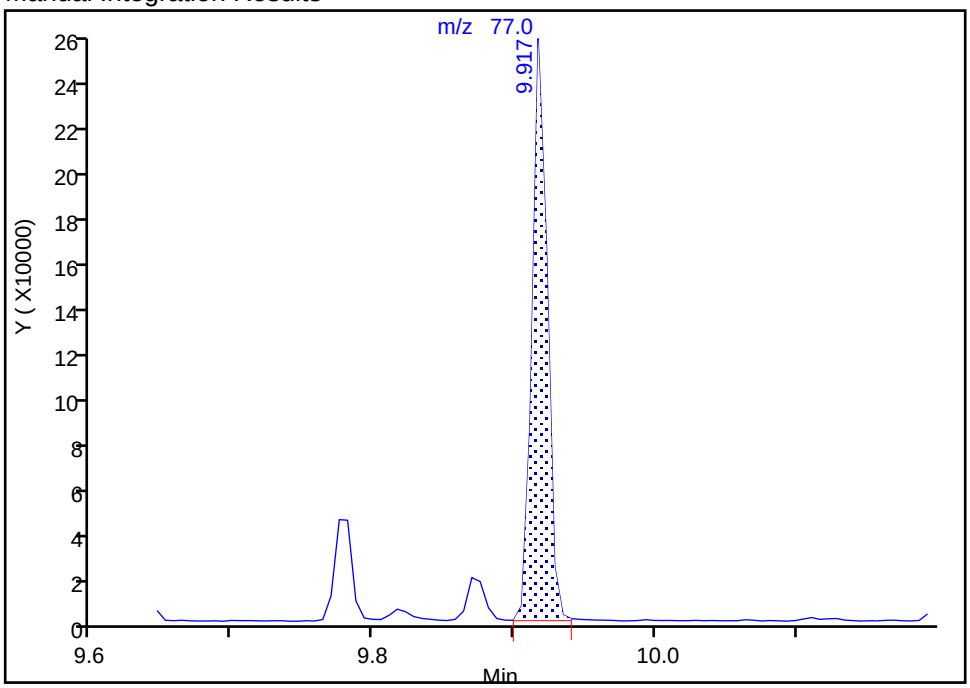
Not Detected
Expected RT: 9.92

Processing Integration Results



Manual Integration Results

RT: 9.92
Area: 189022
Amount: 99.720477
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:34:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

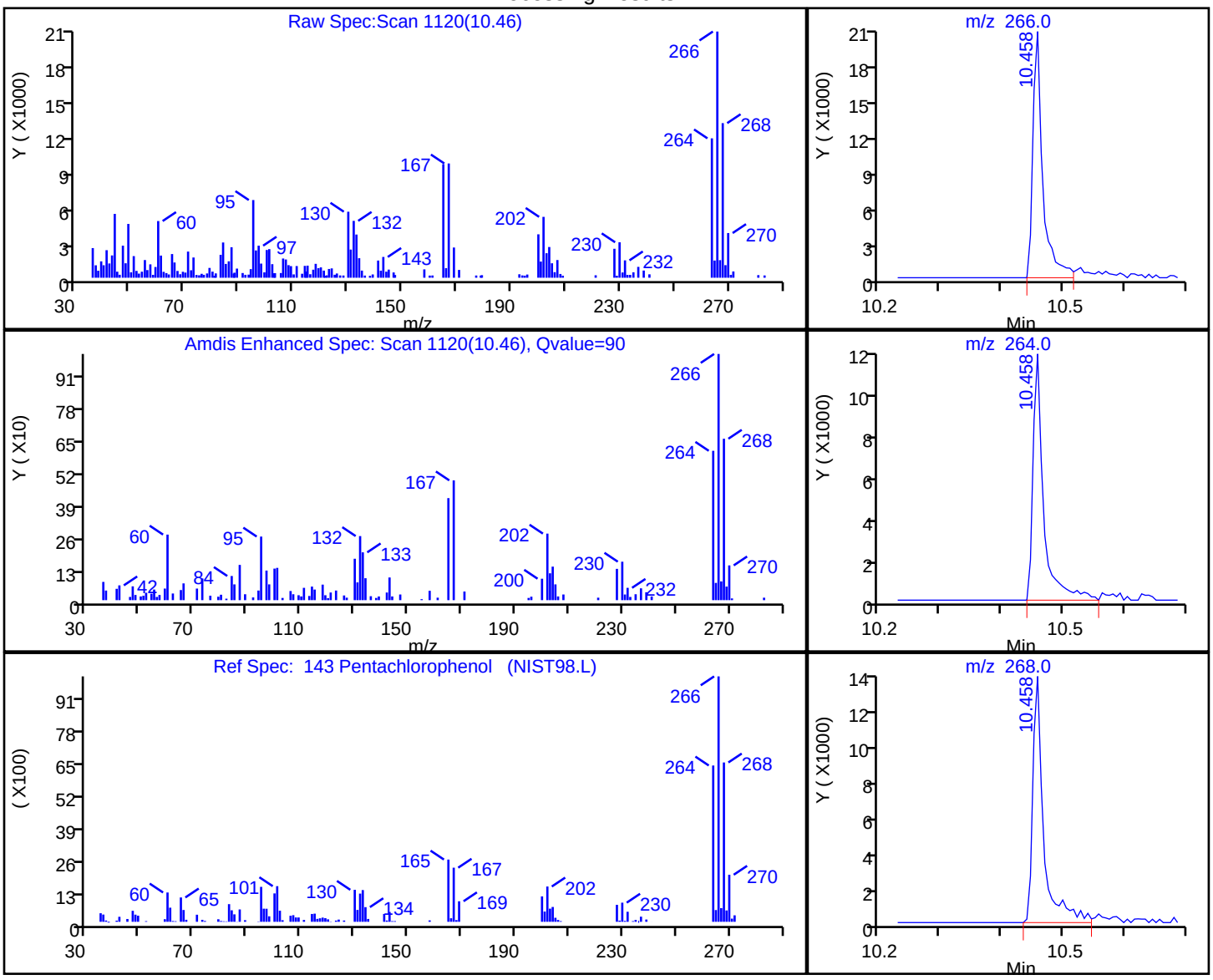
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423008.D				
Injection Date:	23-Apr-2018 09:04:30	Instrument ID:	A4AG2		
Lims ID:	std3 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

143 Pentachlorophenol, CAS: 87-86-5

Processing Results



RT	Mass	Response	Amount
10.46	266.00	23611	112.9298
10.46	264.00	14345	
10.46	268.00	16368	

Reviewer: hulat, 23-Apr-2018 09:43:28

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D
Lims ID: std2 l1lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Apr-2018 09:28:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-009
Misc. Info.: STD2 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:24 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 09:58:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	206722	400.0	400.0	
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	957178	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	469389	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	840904	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	97	666441	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	554165	400.0	400.0	
$ 7 2-Fluorophenol	112	5.700	5.699	0.001	95	21091	50.0	48.3	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	39751	50.0	57.3	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	95	42116	50.0	47.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	78965	50.0	49.6	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	82	4979	50.0	35.0	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	98	60012	50.0	44.1	
26 1,4-Dioxane	88	4.294	4.294	0.000	94	6300	50.0	49.7	
27 N-Nitrosodimethylamine	74	4.558	4.547	0.011	81	22219	50.0	47.9	
28 Pyridine	79	4.617	4.611	0.006	79	33018	100.0	91.3	
42 Benzaldehyde	77	6.411	6.411	0.000	92	61612	100.0	85.9	
43 Phenol	94	6.429	6.429	0.000	97	42367	50.0	54.7	
44 Aniline	93	6.494	6.493	0.001	98	61897	50.0	50.8	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	94	47131	50.0	56.0	
244 n-Decane	57	6.605	6.605	0.000	95	51154	50.0	54.8	
47 2-Chlorophenol	128	6.605	6.605	0.000	96	36068	50.0	52.4	
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	95	42791	50.0	51.0	
49 1,4-Dichlorobenzene	146	6.794	6.788	0.006	92	42968	50.0	50.1	
50 Benzyl alcohol	108	6.858	6.858	0.000	90	24628	50.0	49.9	
51 1,2-Dichlorobenzene	146	6.929	6.923	0.006	93	43295	50.0	53.2	
52 2-Methylphenol	108	6.929	6.929	0.000	97	35008	50.0	53.4	
54 2,2'-oxybis[1-chloropropan	45	6.958	6.958	0.000	92	86919	50.0	56.4	
53 Indene	115	6.994	6.993	0.001	90	154345	100.0	116.1	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	33446	50.0	51.1	
57 N-Nitrosodi-n-propylamine	70	7.064	7.064	0.000	95	31519	50.0	51.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.088	7.088	0.000	93	59070	50.0	54.2	
61 Hexachloroethane	117	7.217	7.217	0.000	91	17360	50.0	54.1	
62 Nitrobenzene	77	7.241	7.240	0.001	97	39443	50.0	45.8	
64 Isophorone	82	7.429	7.429	0.000	97	77850	50.0	48.5	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	95	35801	50.0	48.8	
65 2-Nitrophenol	139	7.511	7.505	0.006	95	14148	50.0	37.9	
70 Benzoic acid	122		7.546				ND	ND	U
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	96	48593	50.0	50.0	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	96	22899	50.0	42.9	
73 1,2,4-Trichlorobenzene	180	7.788	7.788	0.000	93	33368	50.0	49.8	
74 Naphthalene	128	7.864	7.864	0.000	68	133376	50.0	52.2	a
75 4-Chloroaniline	127	7.882	7.876	0.006	95	54032	50.0	43.8	
76 2,6-Dichlorophenol	162	7.899	7.893	0.006	94	25122	50.0	42.9	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	95	16346	50.0	47.6	
83 Caprolactam	113	8.146	8.158	-0.012	74	23575	100.0	102.3	
85 4-Chloro-3-methylphenol	107	8.252	8.258	-0.006	93	20429	50.0	32.8	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	92	81845	50.0	49.7	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	94	78509	50.0	49.6	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	94	12040	50.0	63.9	
90 1,2,4,5-Tetrachlorobenzene	216	8.588	8.587	0.001	96	28257	50.0	47.6	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	95	12342	50.0	32.8	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	90	5370	50.0	62.1	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	95	95968	50.0	50.7	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	99	68990	50.0	48.8	
101 2-Nitroaniline	65	8.923	8.923	0.000	78	16207	50.0	35.4	
104 Dimethyl phthalate	163	9.046	9.046	0.000	98	82417	50.0	50.9	
103 1,3-Dinitrobenzene	168	9.088	9.087	0.001	83	6664	50.0	60.2	
106 2,6-Dinitrotoluene	165	9.111	9.111	0.000	86	12265	50.0	35.7	
108 Acenaphthylene	152	9.229	9.229	0.000	98	104049	50.0	48.7	
109 3-Nitroaniline	138	9.270	9.276	-0.006	93	9183	50.0	30.6	
110 2,4-Dinitrophenol	184		9.358				ND	ND	
112 4-Nitrophenol	109		9.376				ND	ND	U
111 Acenaphthene	153	9.376	9.376	0.000	95	77213	50.0	51.8	
113 2,4-Dinitrotoluene	165	9.464	9.464	0.000	86	13786	50.0	32.8	
115 Dibenzofuran	168	9.517	9.517	0.000	96	103589	50.0	51.8	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	81	8983	50.0	65.7	
248 Hexadecane	57	9.635	9.634	0.001	91	76573	50.0	57.4	
120 Diethyl phthalate	149	9.640	9.640	0.000	98	85173	50.0	52.3	
122 4-Chlorophenyl phenyl ethe	204	9.782	9.782	0.000	98	36135	50.0	48.7	
125 4-Nitroaniline	138	9.799	9.799	0.000	84	13154	50.0	45.2	
124 Fluorene	166	9.811	9.811	0.000	94	82119	50.0	50.5	
127 4,6-Dinitro-2-methylphenol	198		9.823				ND	ND	U
128 N-Nitrosodiphenylamine	169	9.876	9.876	0.000	98	56337	50.0	44.6	
129 Diphenylamine	169	9.876	9.876	0.000	93	56337	42.5	37.9	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	1	90947	50.0	46.7	a
131 Azobenzene	77	9.917	9.917	0.000	98	90806	50.0	46.6	
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	81	17204	50.0	42.0	
141 Atrazine	200	10.293	10.299	-0.006	85	40967	100.0	103.0	
140 Hexachlorobenzene	284	10.305	10.305	0.000	90	18241	50.0	45.1	
245 n-Octadecane	57	10.417	10.423	-0.006	91	75951	50.0	50.0	
143 Pentachlorophenol	266		10.458				ND	ND	U
148 Phenanthrene	178	10.652	10.652	0.000	98	118642	50.0	50.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.693	10.699	-0.006	99	111201	50.0	47.9	
150 Carbazole	167	10.811	10.811	0.000	96	102284	50.0	50.6	
154 Di-n-butyl phthalate	149	11.040	11.040	0.000	99	128147	50.0	45.7	
159 Fluoranthene	202	11.764	11.764	0.000	99	105626	50.0	47.6	
160 Benzidine	184	11.846	11.846	0.000	99	21175	100.0	144.7	
161 Pyrene	202	12.017	12.023	-0.006	96	107247	50.0	51.4	
169 Butyl benzyl phthalate	149	12.652	12.652	0.000	97	45430	50.0	41.8	
174 Bis(2-ethylhexyl) phthalat	149	13.417	13.417	0.000	95	58051	50.0	39.2	
177 3,3'-Dichlorobenzidine	252	13.452	13.452	0.000	77	43021	100.0	70.6	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	99	85319	50.0	45.3	
179 Chrysene	228	13.599	13.605	-0.006	97	92969	50.0	48.9	
181 Di-n-octyl phthalate	149	14.434	14.434	0.000	98	80454	50.0	33.7	
183 Benzo[b]fluoranthene	252	15.264	15.269	-0.005	98	72829	50.0	43.7	
184 Benzo[k]fluoranthene	252	15.311	15.316	-0.005	96	79114	50.0	45.8	
185 Benzo[a]pyrene	252	15.828	15.834	-0.006	81	68299	50.0	44.4	
190 Indeno[1,2,3-cd]pyrene	276	18.028	18.034	-0.006	89	68958	50.0	43.8	
189 Dibenz(a,h)anthracene	278	18.046	18.046	0.000	89	55690	50.0	42.0	
191 Benzo[g,h,i]perylene	276	18.657	18.669	-0.012	93	59186	50.0	46.6	
S 193 Methyl Phenols,Total	100				0			104.5	
S 246 Total Cresols	100				0			104.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST1 L2 W_00010 Amount Added: 0.10 Units: mL

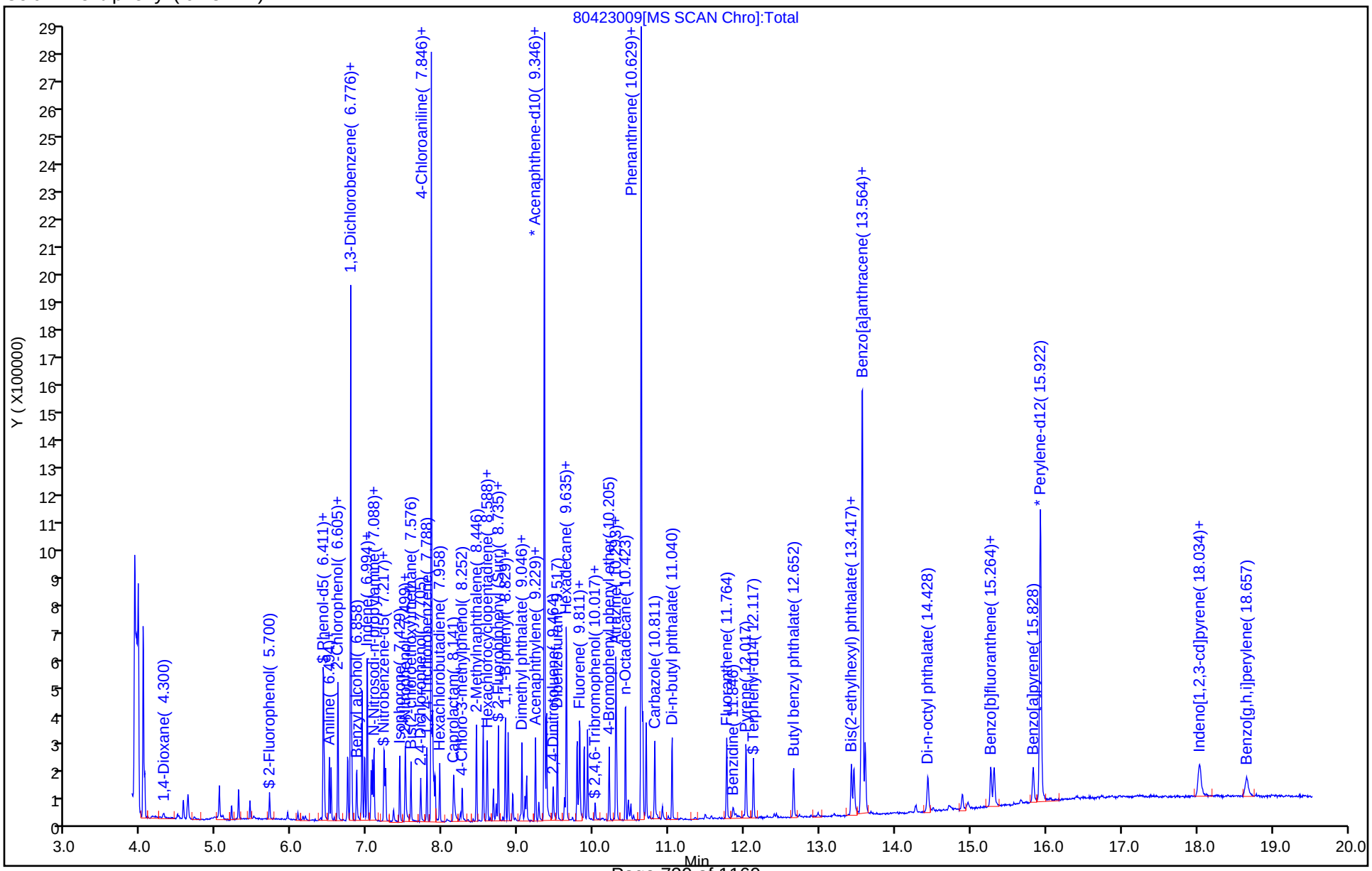
Report Date: 24-Apr-2018 07:01:28 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D

Injection Date:	23-Apr-2018 09:28:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std2 l1lvi			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

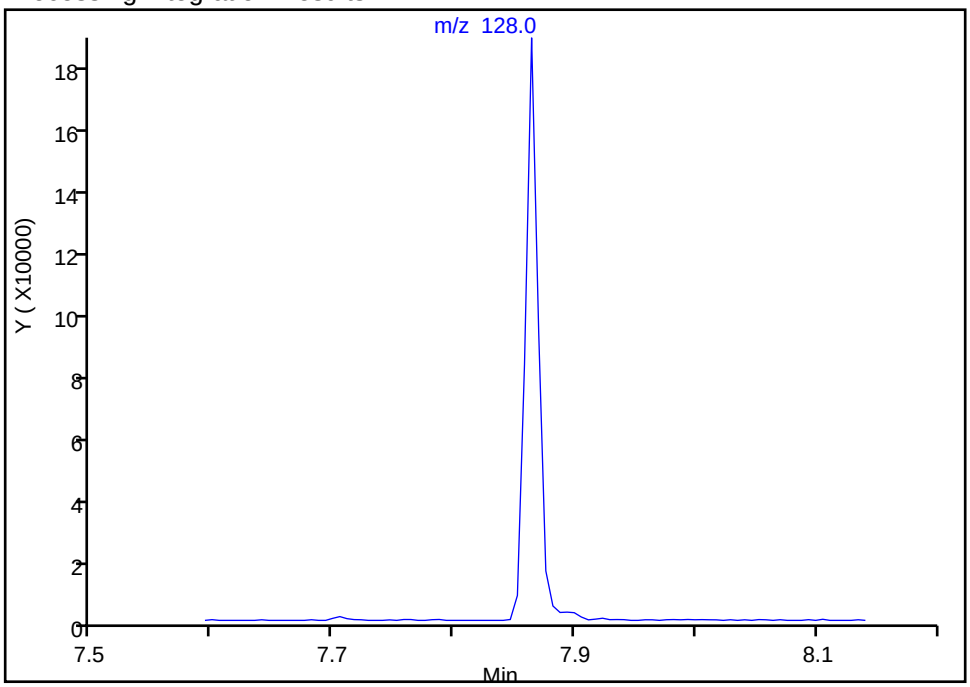
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D
Injection Date: 23-Apr-2018 09:28:30 Instrument ID: A4AG2
Lims ID: std2 l1lvi
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

74 Naphthalene, CAS: 91-20-3

Signal: 1

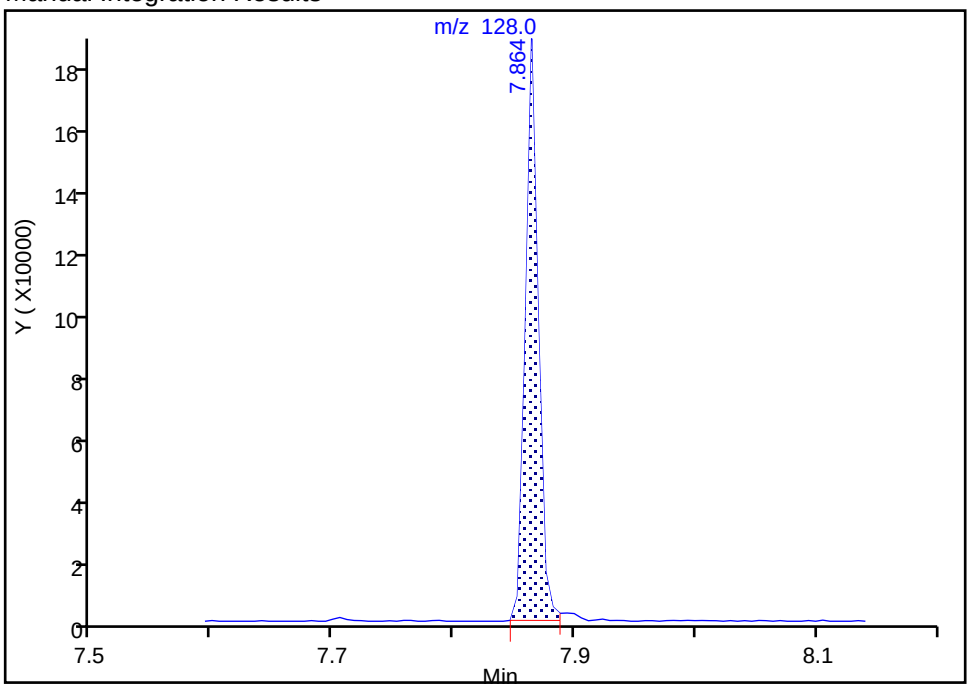
Not Detected
Expected RT: 7.86

Processing Integration Results



Manual Integration Results

RT: 7.86
Area: 133376
Amount: 52.167142
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:57:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

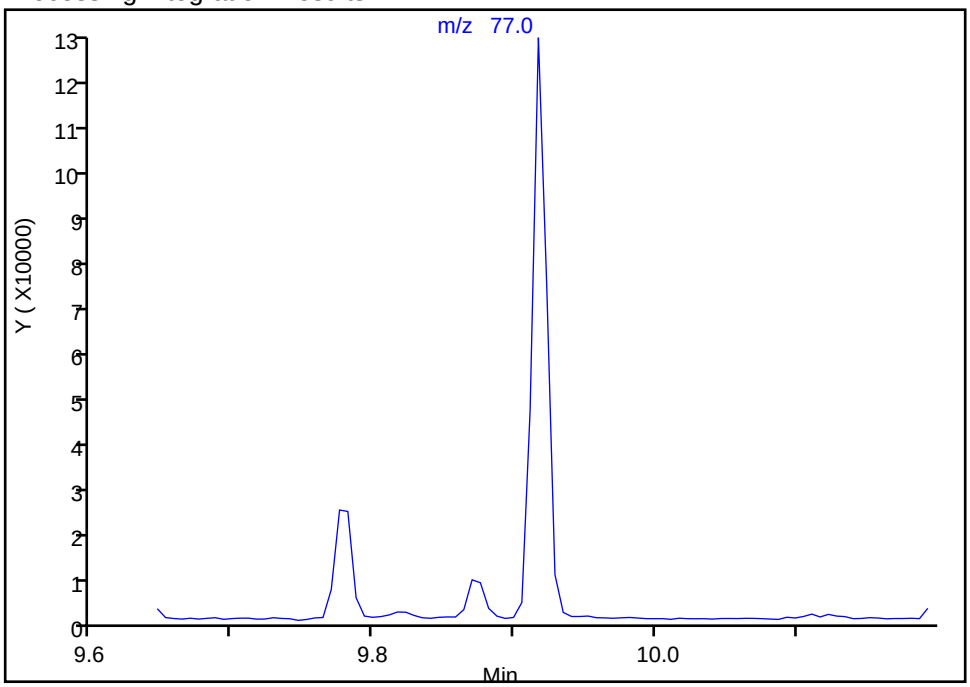
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D				
Injection Date:	23-Apr-2018 09:28:30	Instrument ID:	A4AG2		
Lims ID:	std2 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

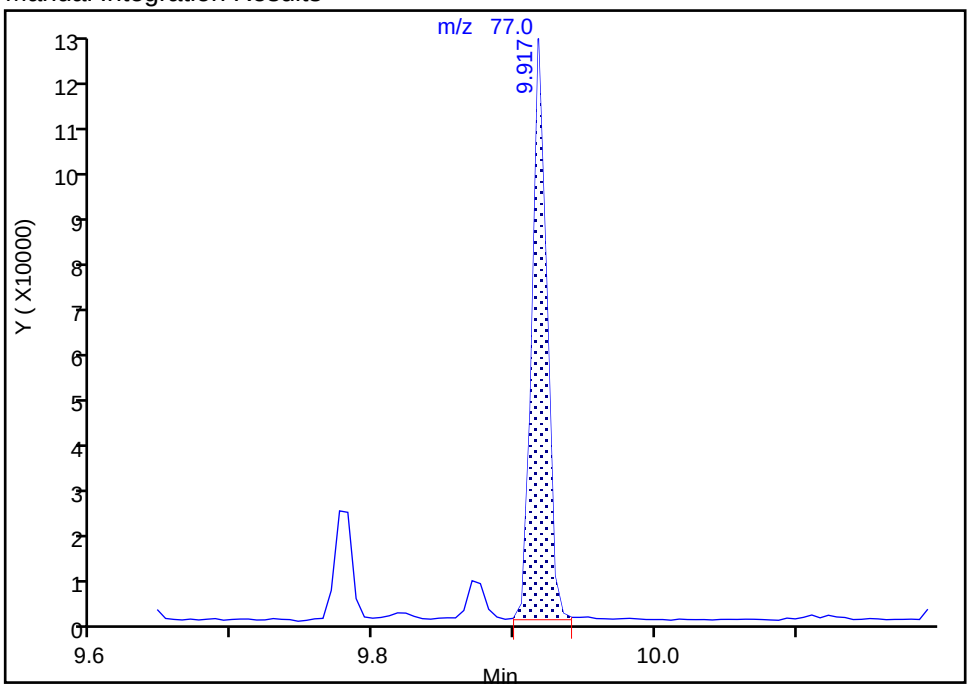
Not Detected
Expected RT: 9.92

Processing Integration Results



Manual Integration Results

RT: 9.92
Area: 90947
Amount: 46.663295
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 09:57:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

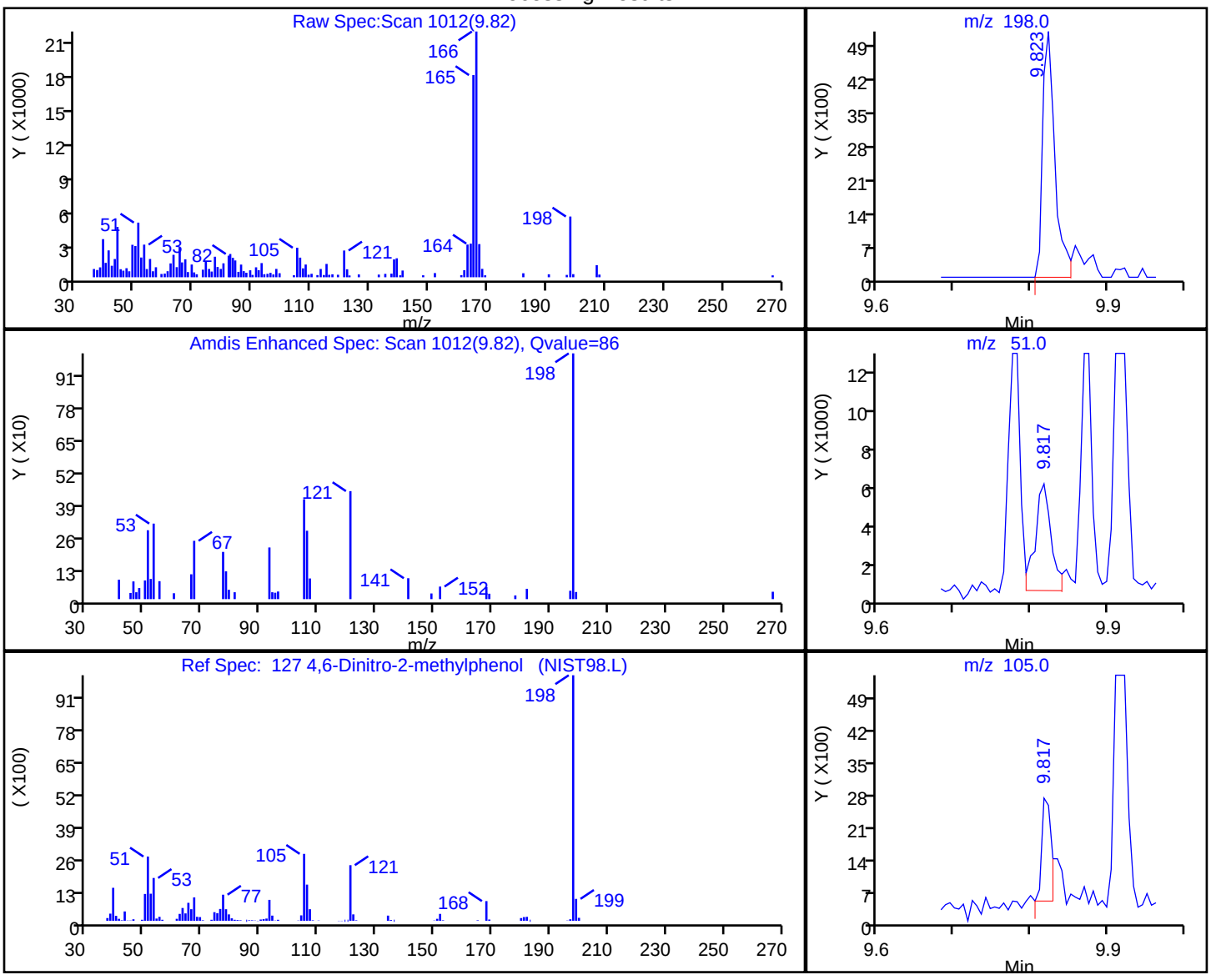
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D		
Injection Date:	23-Apr-2018 09:28:30	Instrument ID:	A4AG2
Lims ID:	std2 l1lvi		
Client ID:			
Operator ID:		ALS Bottle#:	9 Worklist Smp#: 9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN

127 4,6-Dinitro-2-methylphenol, CAS: 534-52-1

Processing Results



RT	Mass	Response	Amount
9.82	198.00	5818	270.9317
9.82	51.00	7249	
9.82	105.00	1944	

Reviewer: hulat, 23-Apr-2018 09:58:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

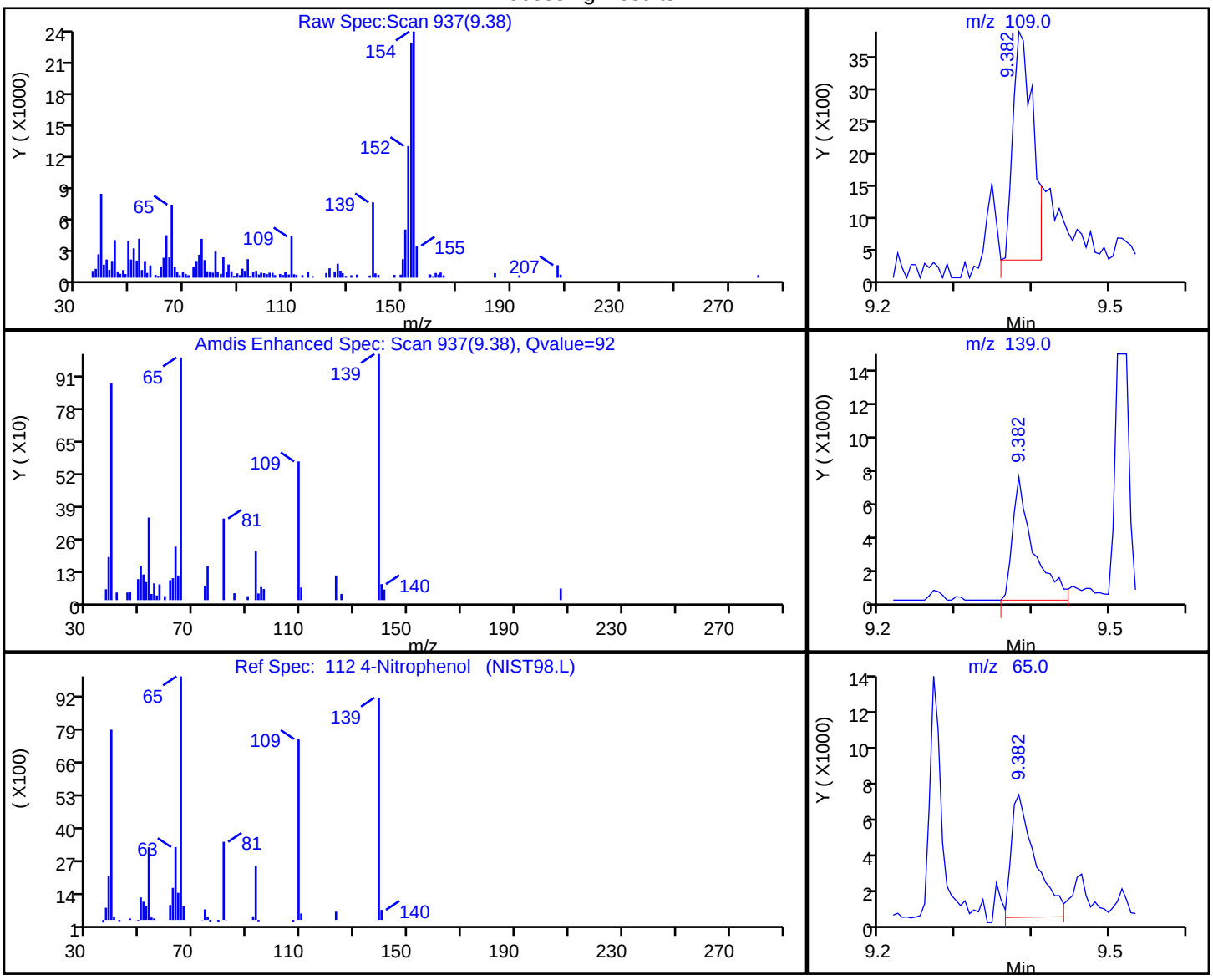
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D
Injection Date: 23-Apr-2018 09:28:30 Instrument ID: A4AG2
Lims ID: std2 l1lvi
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

112 4-Nitrophenol, CAS: 100-02-7

Processing Results



RT	Mass	Response	Amount
9.38	109.00	6493	126.6385
9.38	139.00	13415	
9.38	65.00	14408	

Reviewer: hulat, 23-Apr-2018 09:58:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

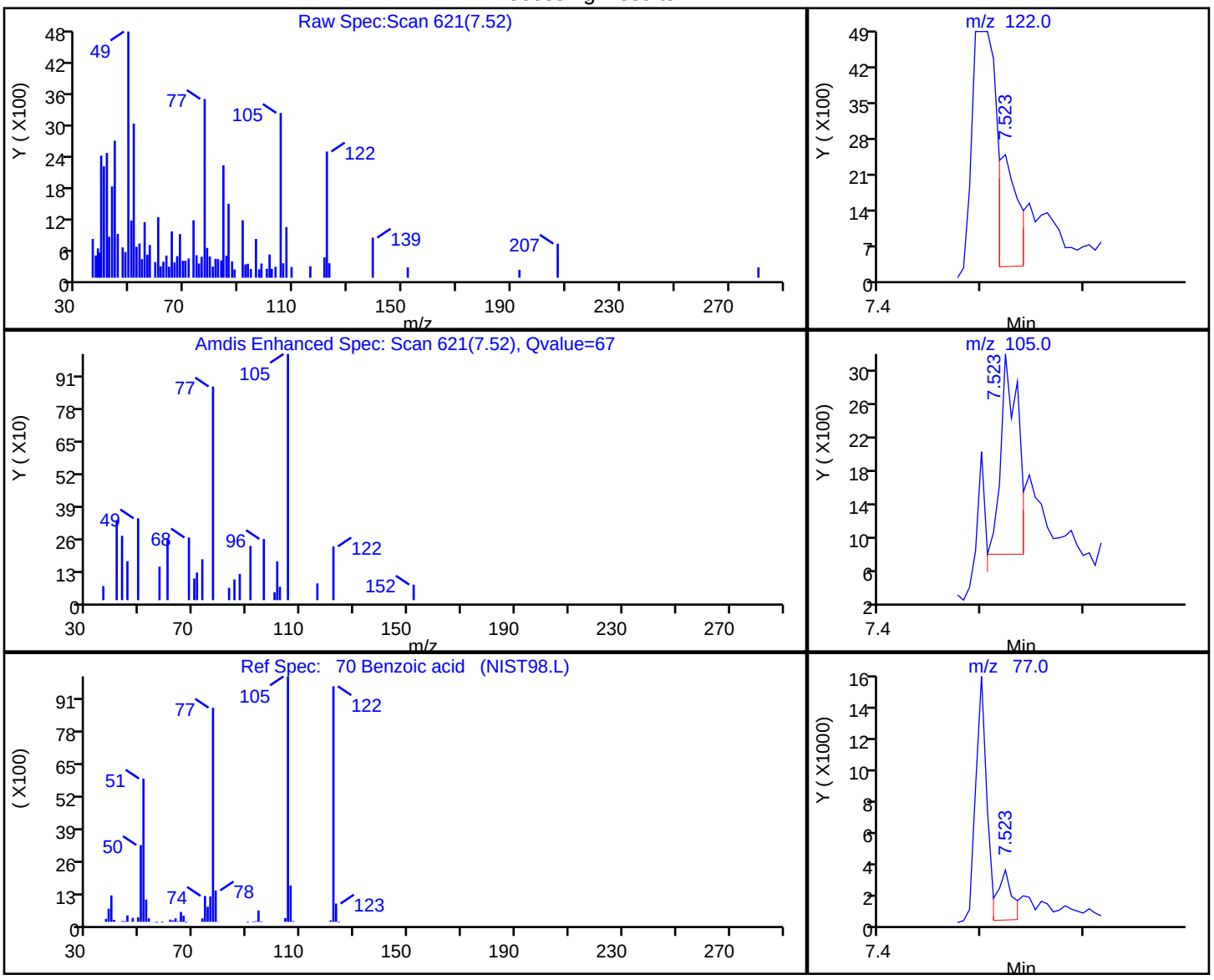
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D				
Injection Date:	23-Apr-2018 09:28:30	Instrument ID:	A4AG2		
Lims ID:	std2 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

70 Benzoic acid, CAS: 65-85-0

Processing Results



RT	Mass	Response	Amount
7.52	122.00	2985	226.8392
7.52	105.00	2800	
7.52	77.00	3240	

Reviewer: hulat, 23-Apr-2018 09:58:30

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

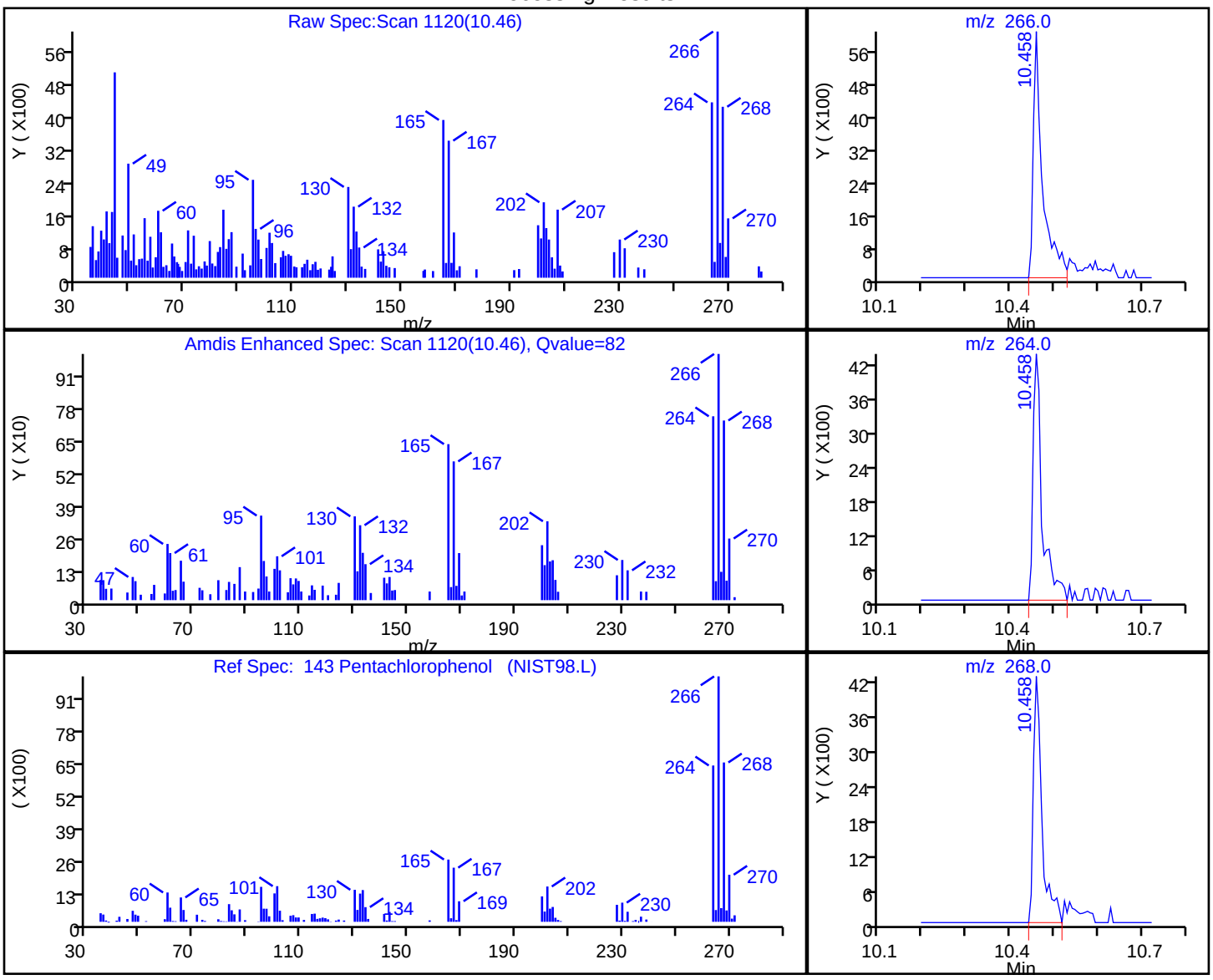
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423009.D
Injection Date: 23-Apr-2018 09:28:30 Instrument ID: A4AG2
Lims ID: std2 l1lvi
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

143 Pentachlorophenol, CAS: 87-86-5

Processing Results



RT	Mass	Response	Amount
10.46	266.00	8981	42.672061
10.46	264.00	6278	
10.46	268.00	5791	

Reviewer: hulat, 23-Apr-2018 09:58:30
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 24-Apr-2018 07:01:35 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D
Lims ID: std1 l1lvi
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Apr-2018 09:53:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-010
Misc. Info.: STD1 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:33 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 10:22:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	98	191446	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	839148	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	95	387413	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	728641	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	532221	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	475848	400.0	400.0	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	95	7086	10.0	9.09	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	98	12514	10.0	9.52	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	98	10280	10.0	9.46	
28 Pyridine	79	4.623	4.611	0.012	83	5470	20.0	16.3	
42 Benzaldehyde	77		6.411				ND	ND	U
74 Naphthalene	128	7.864	7.864	0.000	96	22915	10.0	10.2	
83 Caprolactam	113	8.152	8.158	-0.006	73	4663	20.0	23.1	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	92	12823	10.0	8.89	
87 1-Methylnaphthalene	142	8.535	8.535	0.000	97	13666	10.0	9.85	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	95	15495	10.0	9.91	
100 2-Chloronaphthalene	162	8.870	8.864	0.006	98	10909	10.0	9.35	
108 Acenaphthylene	152	9.229	9.229	0.000	98	15625	10.0	8.86	
111 Acenaphthene	153	9.376	9.376	0.000	95	13069	10.0	10.6	
115 Dibenzofuran	168	9.517	9.517	0.000	96	15347	10.0	9.29	
124 Fluorene	166	9.817	9.811	0.006	94	12555	10.0	9.35	
141 Atrazine	200	10.293	10.299	-0.006	83	7772	20.0	22.6	
140 Hexachlorobenzene	284	10.305	10.305	0.000	88	2837	10.0	8.10	
148 Phenanthrene	178	10.652	10.652	0.000	94	19918	10.0	9.86	
149 Anthracene	178	10.693	10.699	-0.006	97	17146	10.0	8.52	
159 Fluoranthene	202	11.764	11.764	0.000	98	18136	10.0	9.43	
161 Pyrene	202	12.023	12.023	0.000	96	17057	10.0	10.2	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	97	14279	10.0	9.50	
179 Chrysene	228	13.599	13.605	-0.006	97	14932	10.0	9.84	
183 Benzo[b]fluoranthene	252	15.269	15.269	0.000	98	11956	10.0	8.35	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
184 Benzo[k]fluoranthene	252	15.311	15.316	-0.005	95	11321	10.0	7.64	
185 Benzo[a]pyrene	252	15.828	15.834	-0.006	82	9574	10.0	7.24	
190 Indeno[1,2,3-cd]pyrene	276	18.022	18.034	-0.012	0	10687	10.0	7.91	M
189 Dibenz(a,h)anthracene	278	18.040	18.046	-0.006	72	7497	10.0	6.59	
191 Benzo[g,h,i]perylene	276	18.669	18.669	0.000	0	9544	10.0	8.74	M

QC Flag Legend

Processing Flags
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

Reagents:

SMLIST1 L1+ W_00004 Amount Added: 0.10 Units: mL

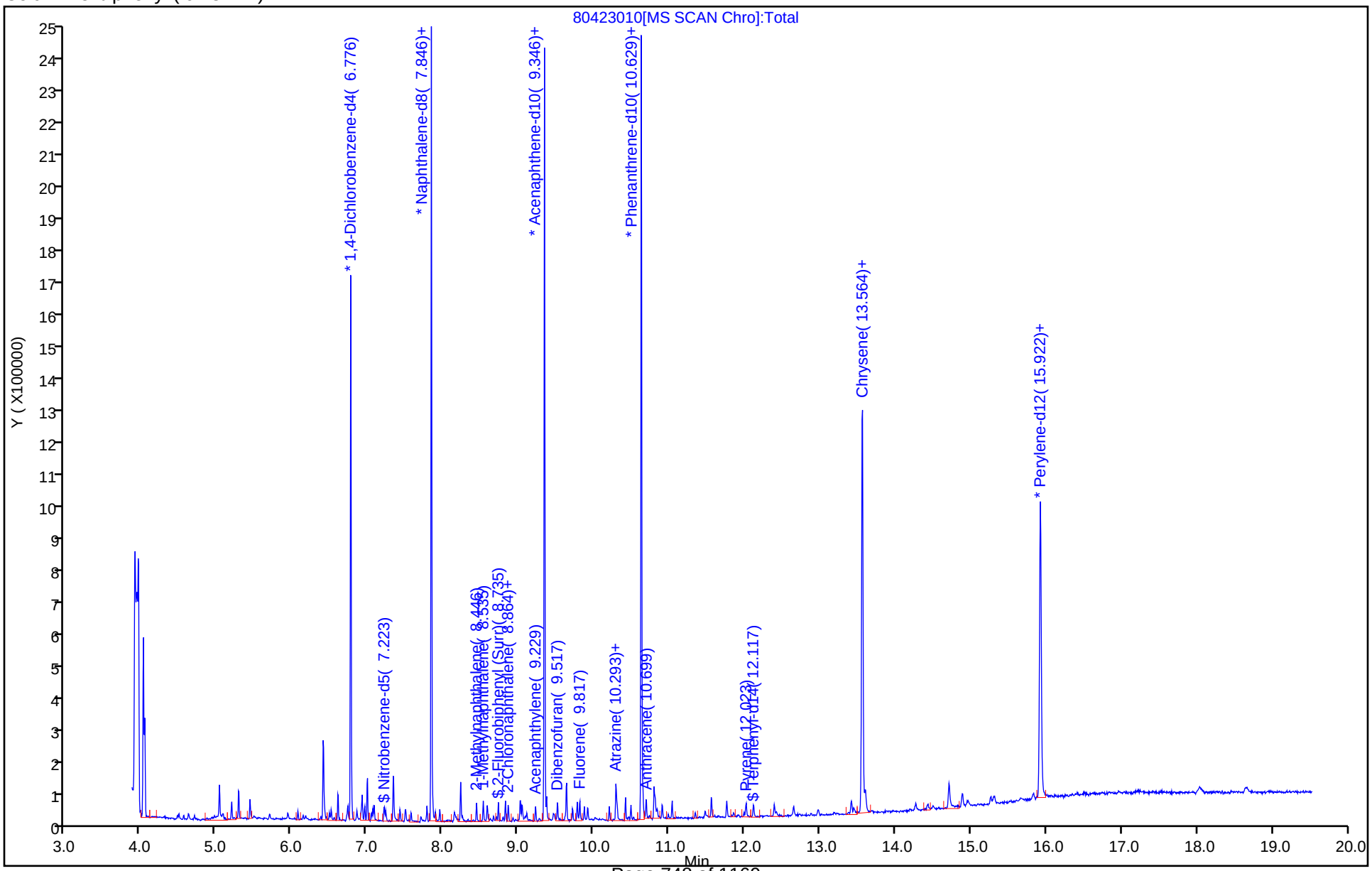
Report Date: 24-Apr-2018 07:01:36 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D

Injection Date:	23-Apr-2018 09:53:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std1 l1lvi			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

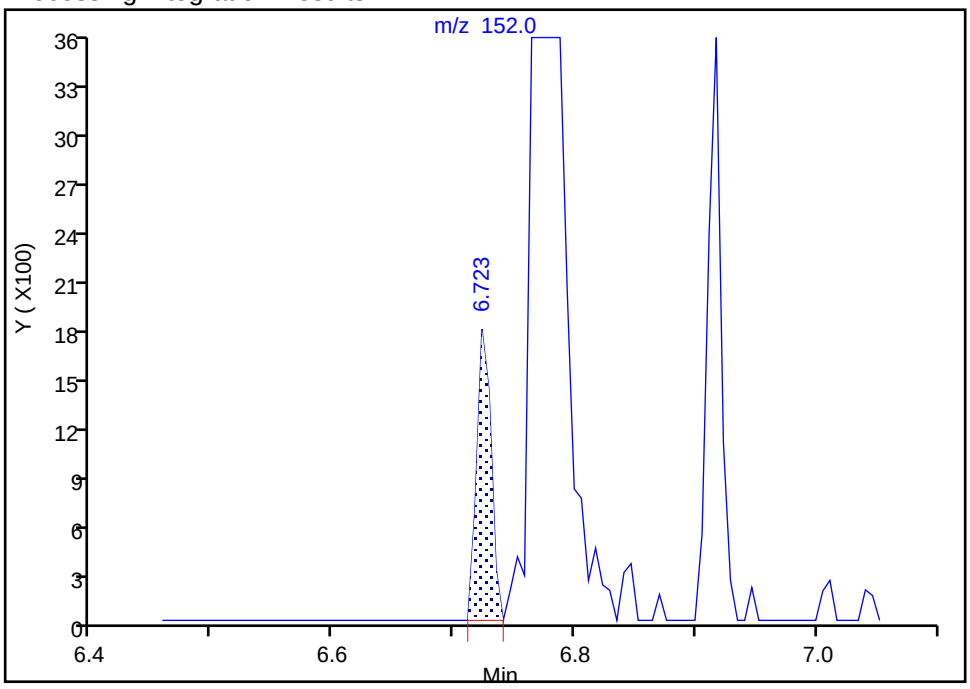
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D
Injection Date: 23-Apr-2018 09:53:30 Instrument ID: A4AG2
Lims ID: std1 l1lvi
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

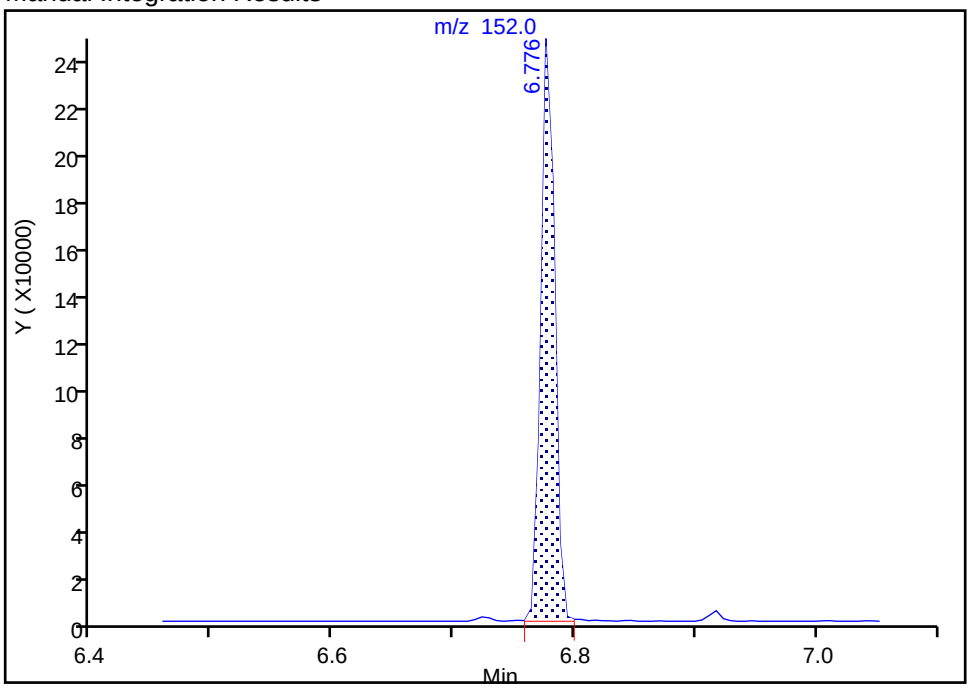
Processing Integration Results

RT: 6.72
Area: 1484
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 191446
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:26:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

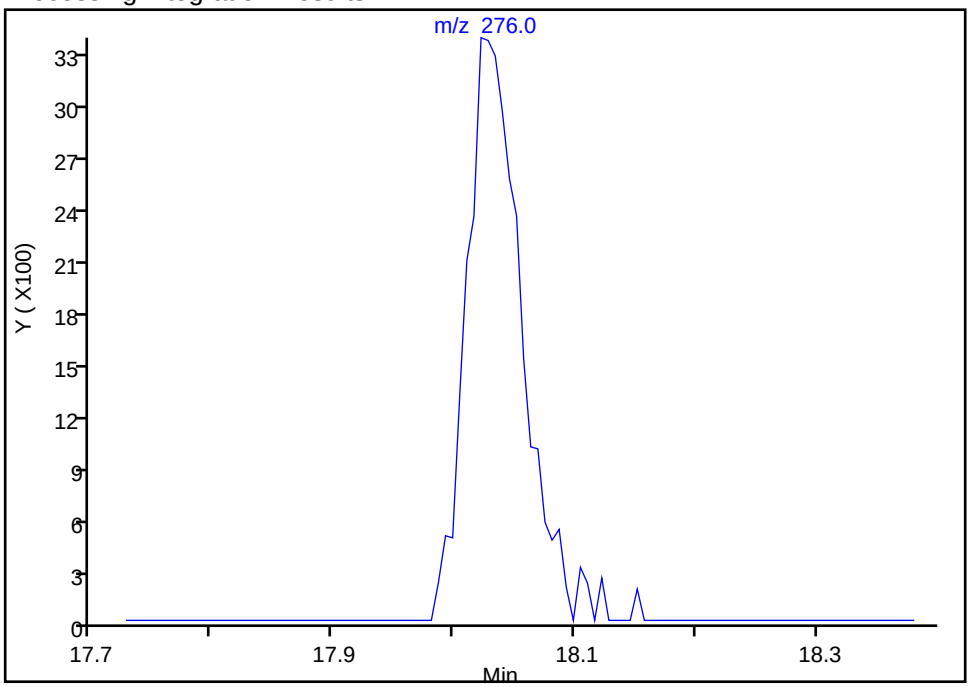
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D				
Injection Date:	23-Apr-2018 09:53:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

190 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

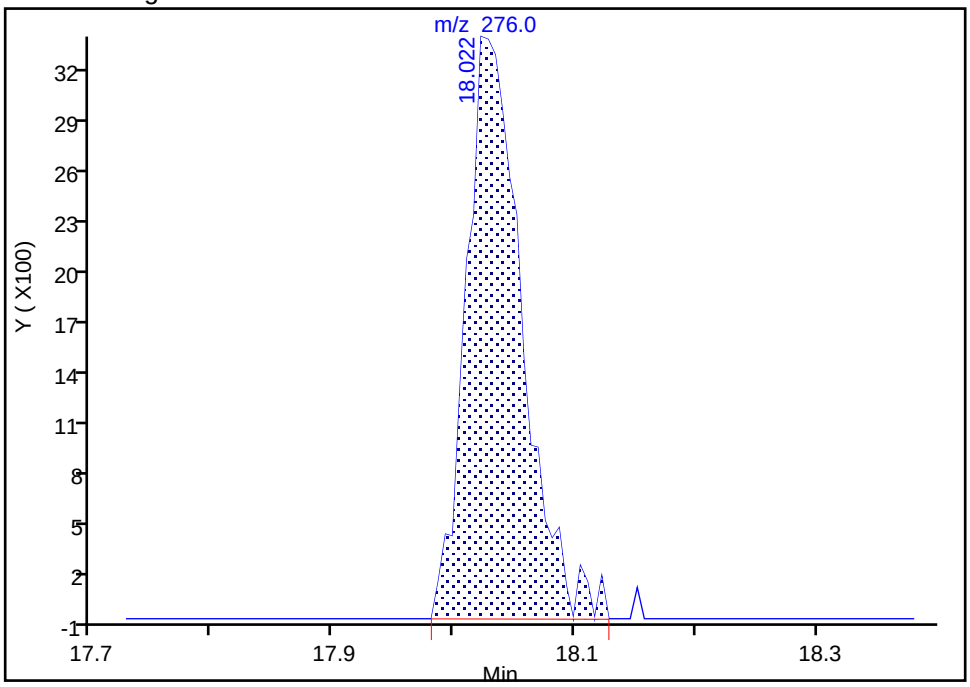
Not Detected
Expected RT: 18.03

Processing Integration Results



Manual Integration Results

RT: 18.02
Area: 10687
Amount: 7.905098
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:26:41
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

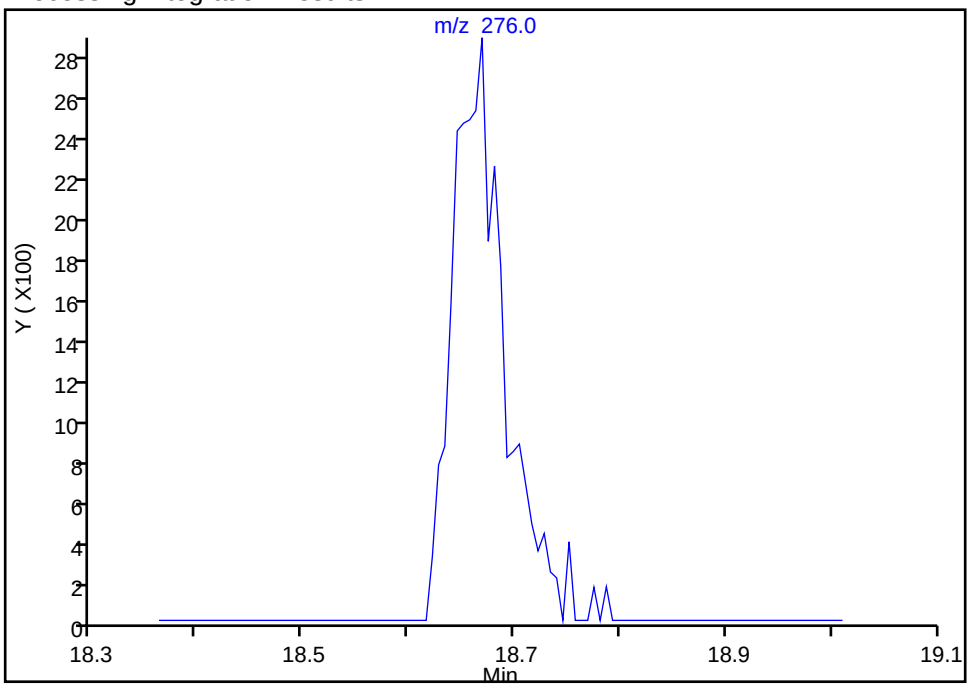
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D				
Injection Date:	23-Apr-2018 09:53:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

191 Benzo[g,h,i]perylene, CAS: 191-24-2

Signal: 1

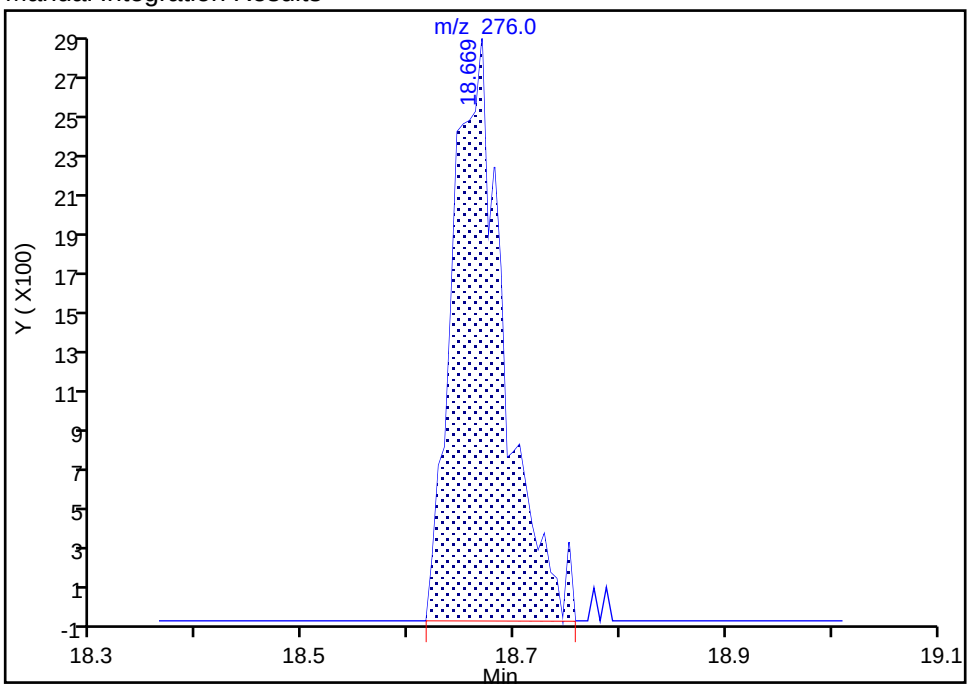
Not Detected
Expected RT: 18.67

Processing Integration Results



Manual Integration Results

RT: 18.67
Area: 9544
Amount: 8.743888
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:26:59
Audit Action: Manually Integrated Audit Reason: Poor chromatography

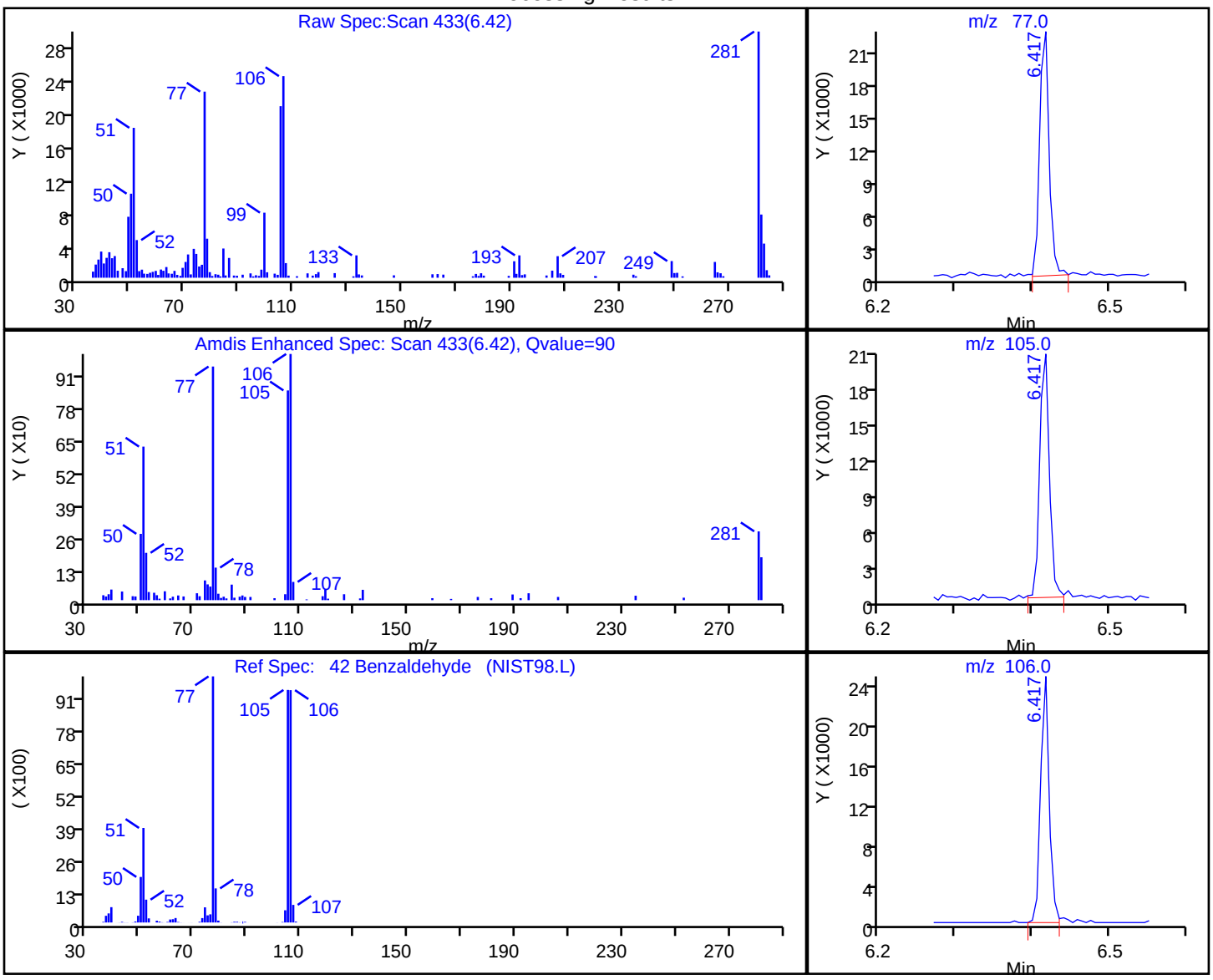
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423010.D				
Injection Date:	23-Apr-2018 09:53:30	Instrument ID:	A4AG2		
Lims ID:	std1 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

42 Benzaldehyde, CAS: 100-52-7

Processing Results



RT	Mass	Response	Amount
6.42	77.00	19134	8.347567
6.42	105.00	17865	
6.42	106.00	18872	

Reviewer: hulat, 23-Apr-2018 10:27:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

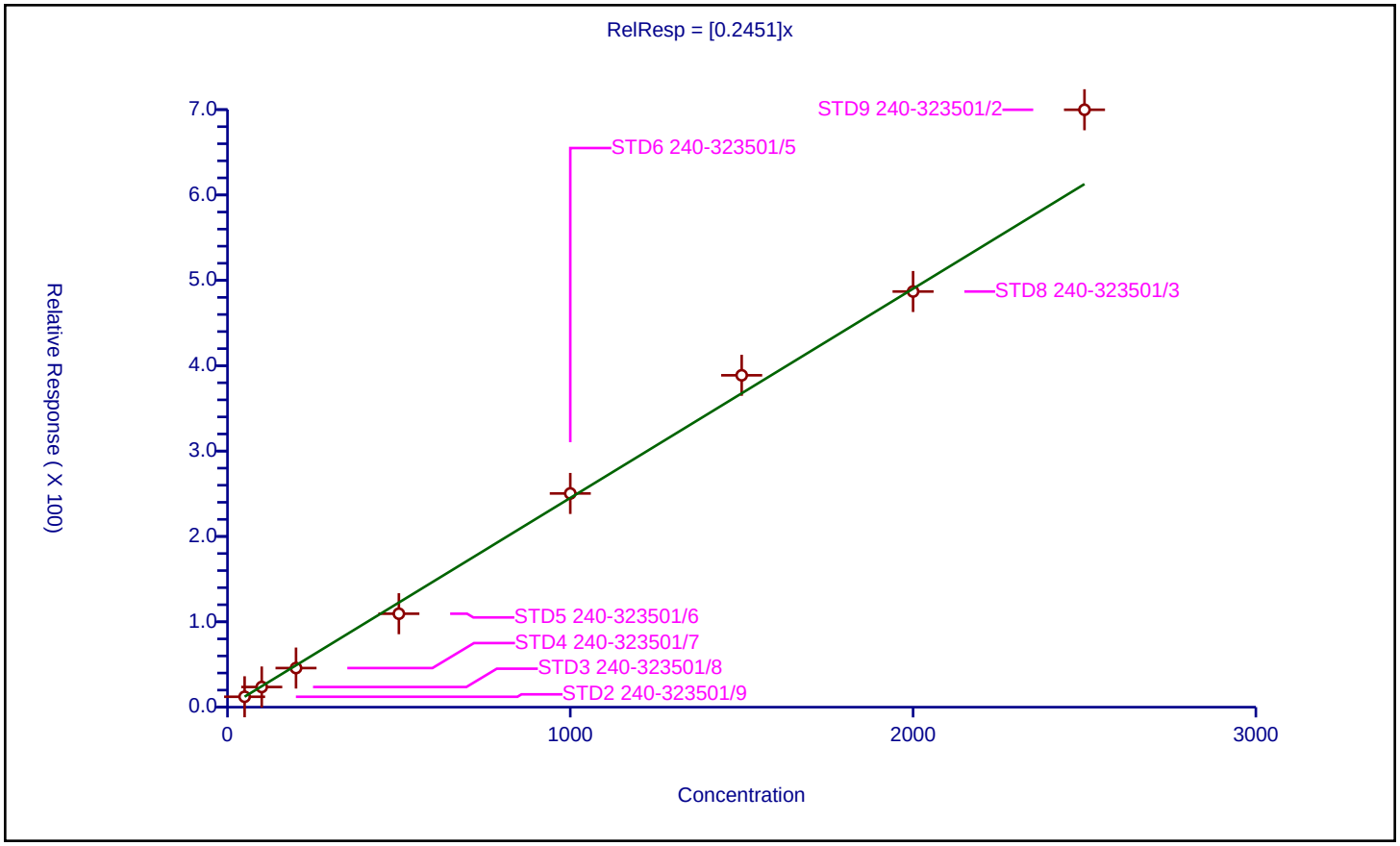
Curve Coefficients

Intercept:	0
Slope:	0.2451

Error Coefficients

Standard Error:	211000
Relative Standard Error:	7.7
Correlation Coefficient:	0.988
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	12.190285	400.0	206722.0	0.243806	Y
2	STD3 240-323501/8	100.0	23.607598	400.0	207950.0	0.236076	Y
3	STD4 240-323501/7	200.0	45.800332	400.0	212112.0	0.229002	Y
4	STD5 240-323501/6	500.0	109.486092	400.0	214124.0	0.218972	Y
5	STD6 240-323501/5	1000.0	250.35476	400.0	208592.0	0.250355	Y
6	STD7 240-323501/4	1500.0	388.758896	400.0	231294.0	0.259173	Y
7	STD8 240-323501/3	2000.0	486.900664	400.0	226042.0	0.24345	Y
8	STD9 240-323501/2	2500.0	699.82824	400.0	232301.0	0.279931	Y



Calibration / N-Nitrosodimethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

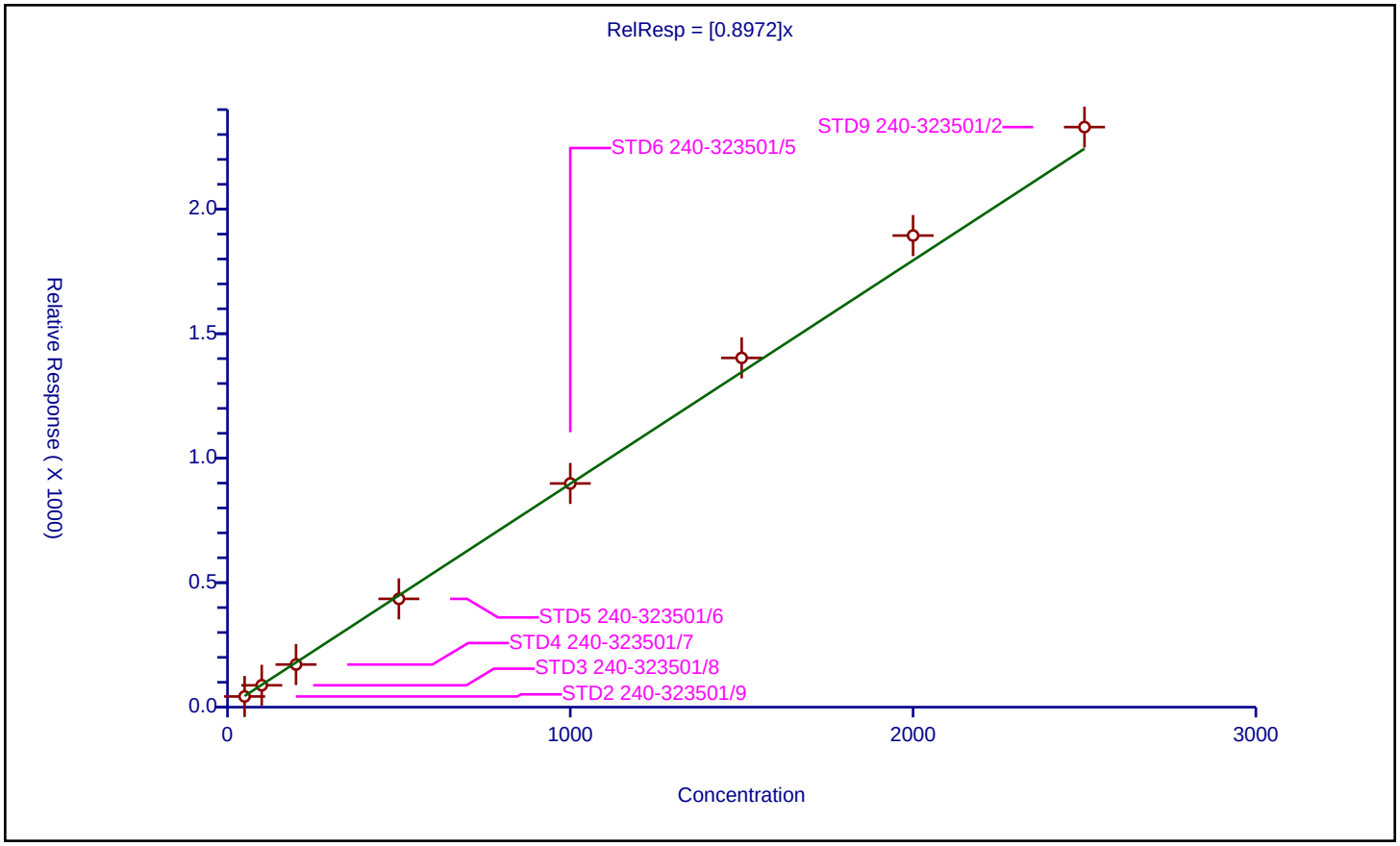
Curve Coefficients

Intercept:	0
Slope:	0.8972

Error Coefficients

Standard Error:	747000
Relative Standard Error:	4.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	42.993005	400.0	206722.0	0.85986	Y
2	STD3 240-323501/8	100.0	87.892282	400.0	207950.0	0.878923	Y
3	STD4 240-323501/7	200.0	171.264238	400.0	212112.0	0.856321	Y
4	STD5 240-323501/6	500.0	434.992808	400.0	214124.0	0.869986	Y
5	STD6 240-323501/5	1000.0	898.504257	400.0	208592.0	0.898504	Y
6	STD7 240-323501/4	1500.0	1402.739371	400.0	231294.0	0.93516	Y
7	STD8 240-323501/3	2000.0	1894.209041	400.0	226042.0	0.947105	Y
8	STD9 240-323501/2	2500.0	2329.7997	400.0	232301.0	0.93192	Y



Calibration / Pyridine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

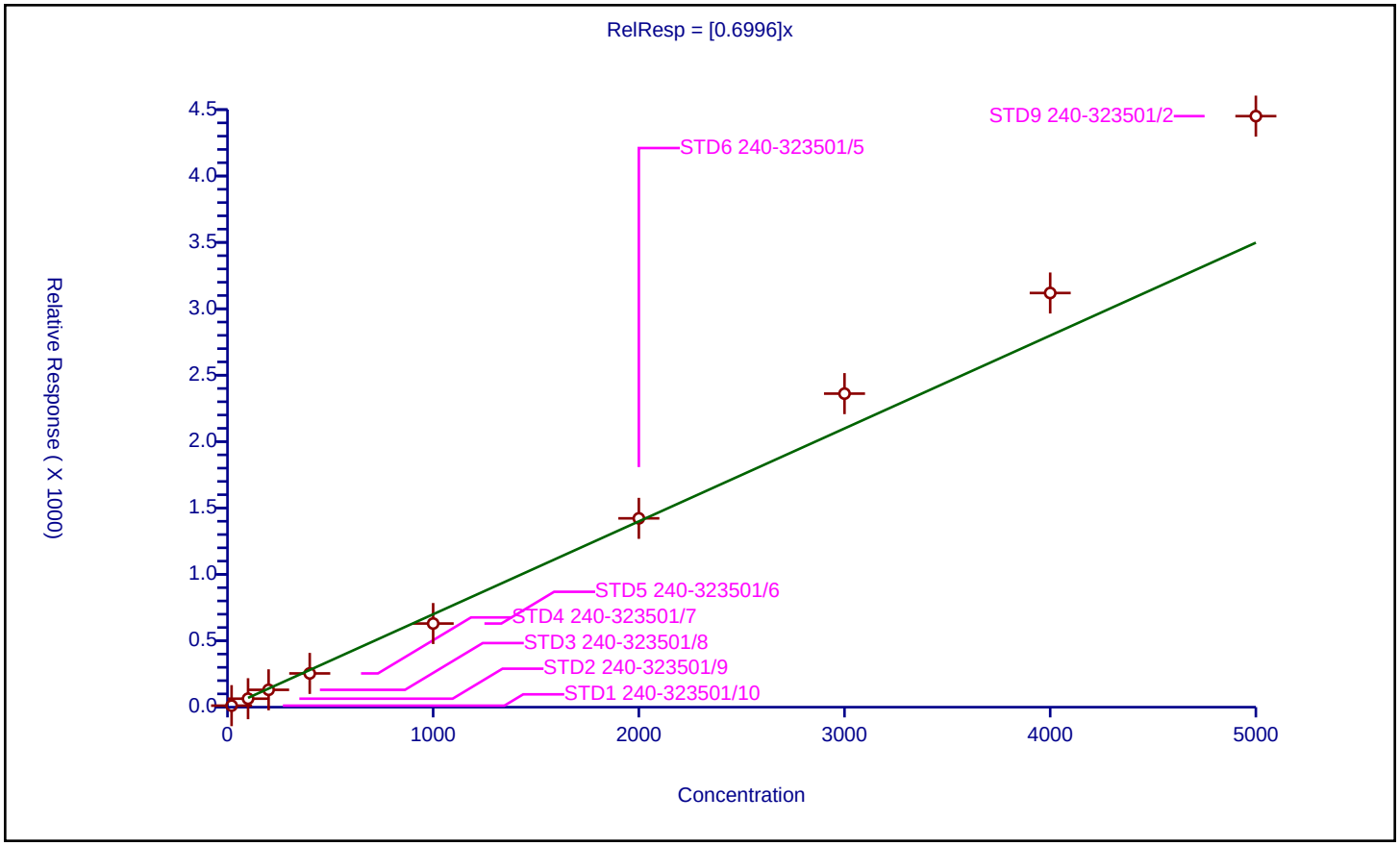
Curve Coefficients

Intercept:	0
Slope:	0.6996

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	14.5
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	20.0	11.42881	400.0	191446.0	0.571441	Y
2	STD2 240-323501/9	100.0	63.888701	400.0	206722.0	0.638887	Y
3	STD3 240-323501/8	200.0	130.637172	400.0	207950.0	0.653186	Y
4	STD4 240-323501/7	400.0	254.08652	400.0	212112.0	0.635216	Y
5	STD5 240-323501/6	1000.0	629.773402	400.0	214124.0	0.629773	Y
6	STD6 240-323501/5	2000.0	1421.887704	400.0	208592.0	0.710944	Y
7	STD7 240-323501/4	3000.0	2361.142096	400.0	231294.0	0.787047	Y
8	STD8 240-323501/3	4000.0	3118.946037	400.0	226042.0	0.779737	Y
9	STD9 240-323501/2	5000.0	4450.815106	400.0	232301.0	0.890163	Y



Calibration / 2-Fluorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

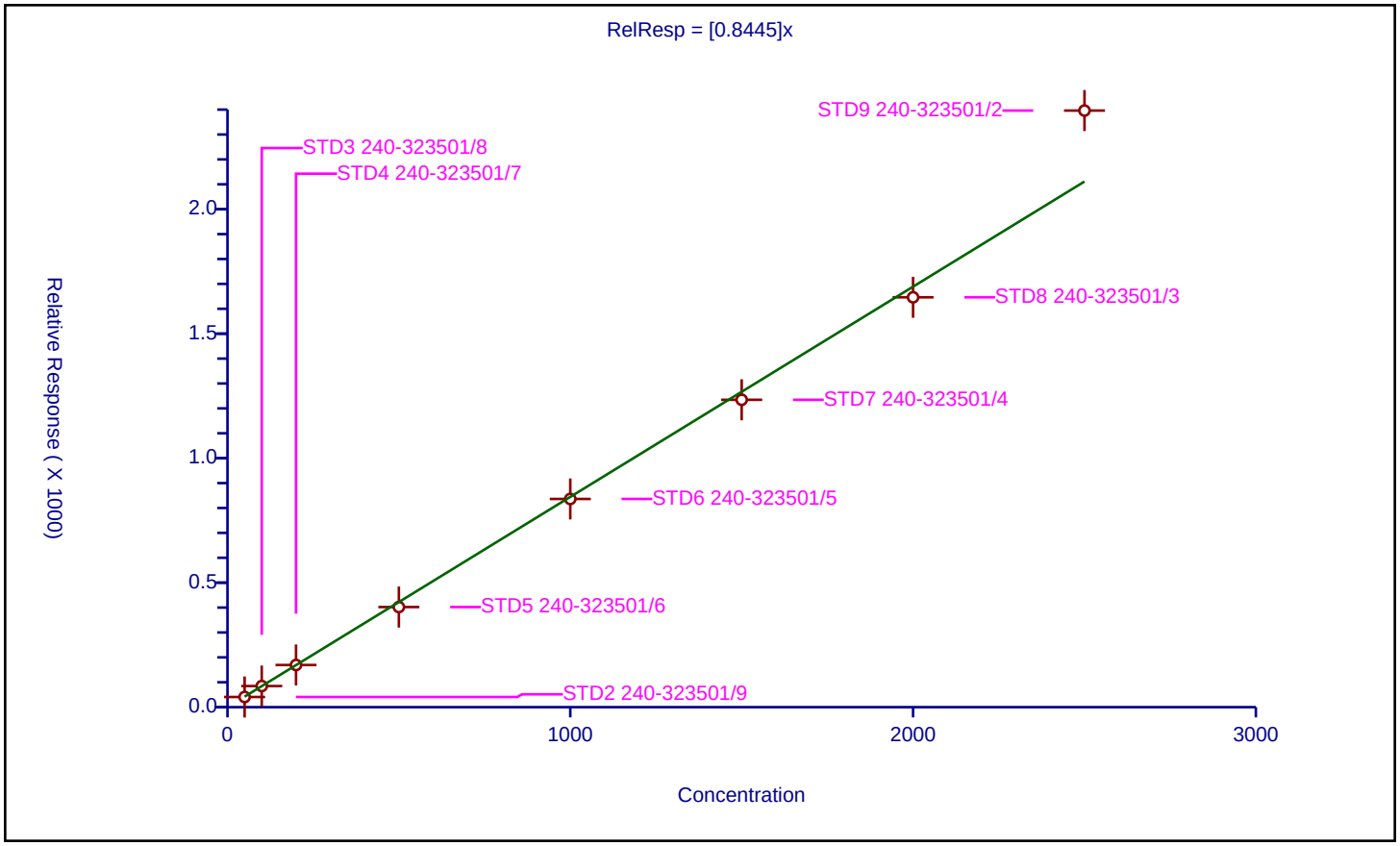
Curve Coefficients

Intercept:	0
Slope:	0.8445

Error Coefficients

Standard Error:	712000
Relative Standard Error:	5.7
Correlation Coefficient:	0.984
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	40.810364	400.0	206722.0	0.816207	Y
2	STD3 240-323501/8	100.0	84.789613	400.0	207950.0	0.847896	Y
3	STD4 240-323501/7	200.0	169.310553	400.0	212112.0	0.846553	Y
4	STD5 240-323501/6	500.0	402.129607	400.0	214124.0	0.804259	Y
5	STD6 240-323501/5	1000.0	836.244918	400.0	208592.0	0.836245	Y
6	STD7 240-323501/4	1500.0	1234.501543	400.0	231294.0	0.823001	Y
7	STD8 240-323501/3	2000.0	1646.101167	400.0	226042.0	0.823051	Y
8	STD9 240-323501/2	2500.0	2396.093	400.0	232301.0	0.958437	Y



Calibration / Benzaldehyde

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

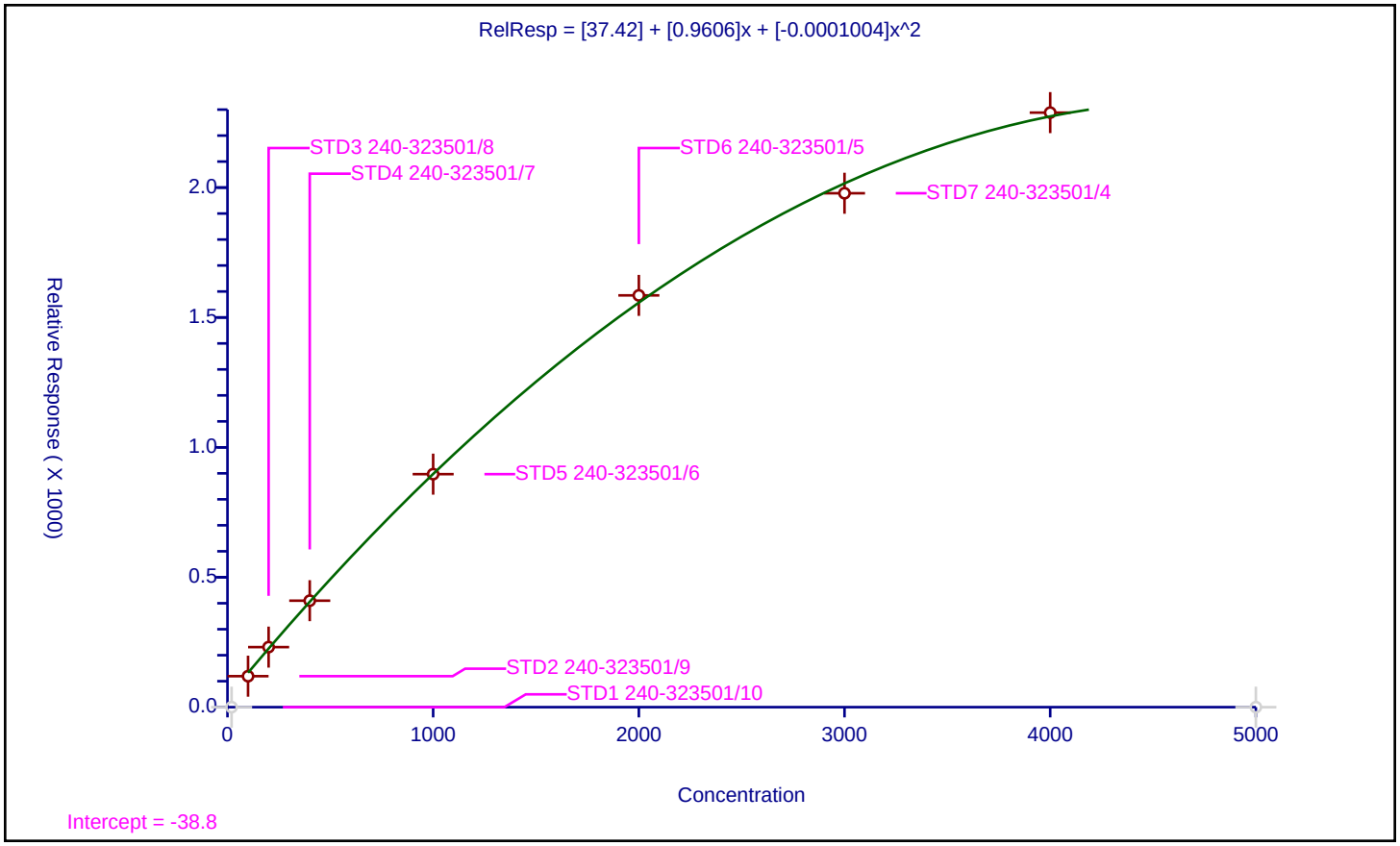
Curve Coefficients

Intercept:	37.42
Slope:	0.9606
Second Order:	-0.0001004

Error Coefficients

Standard Error:	993000
Relative Standard Error:	7.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	20.0	0.0	400.0	191446.0	0.0	N
2	STD2 240-323501/9	100.0	119.217113	400.0	206722.0	1.192171	Y
3	STD3 240-323501/8	200.0	231.170955	400.0	207950.0	1.155855	Y
4	STD4 240-323501/7	400.0	409.798597	400.0	212112.0	1.024496	Y
5	STD5 240-323501/6	1000.0	896.917674	400.0	214124.0	0.896918	Y
6	STD6 240-323501/5	2000.0	1584.925596	400.0	208592.0	0.792463	Y
7	STD7 240-323501/4	3000.0	1978.055635	400.0	231294.0	0.659352	Y
8	STD8 240-323501/3	4000.0	2288.40304	400.0	226042.0	0.572101	Y
9	STD9 240-323501/2	5000.0	0.0	400.0	232301.0	0.0	N



Calibration / Phenol-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

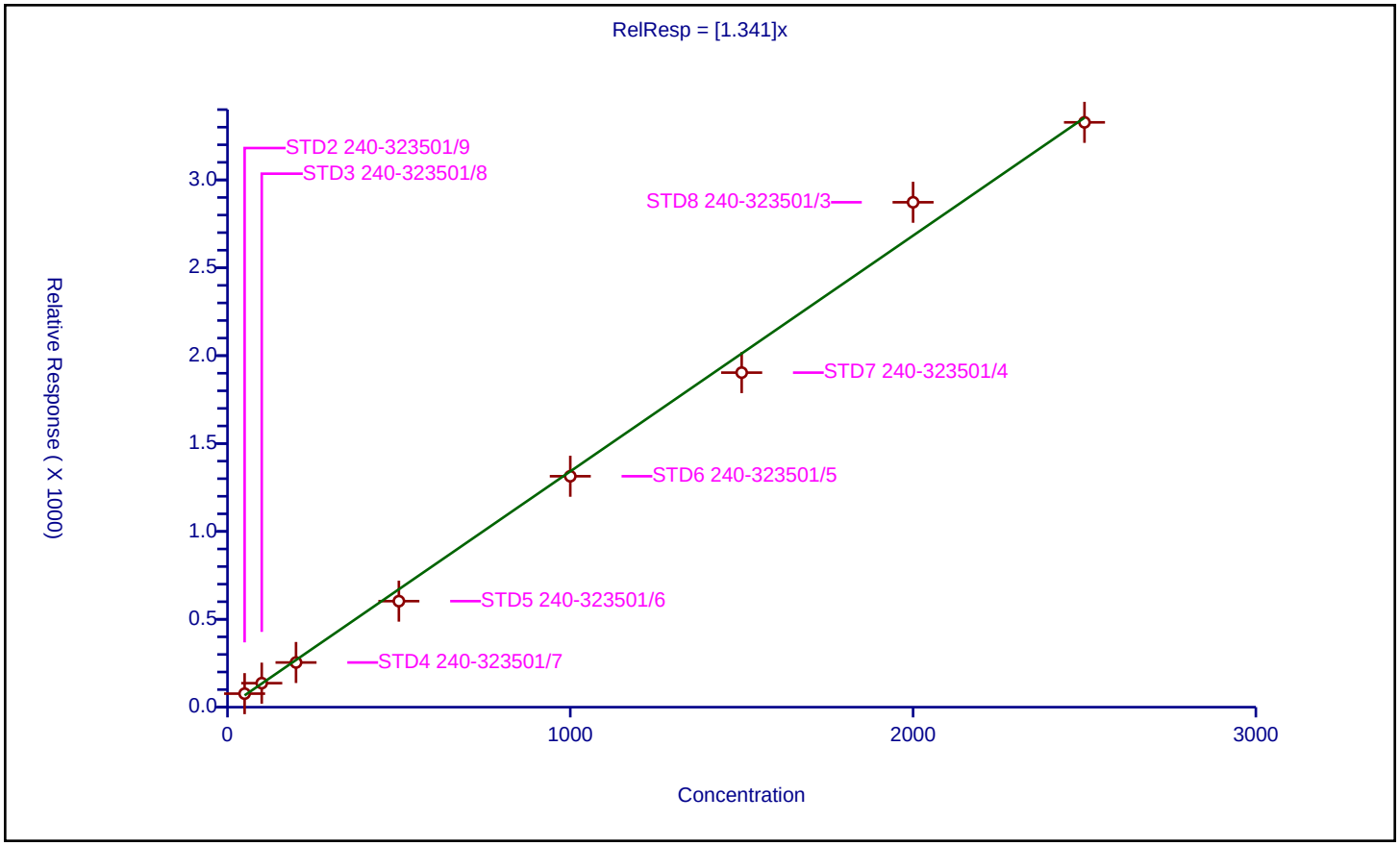
Curve Coefficients

Intercept:	0
Slope:	1.341

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	7.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	76.916825	400.0	206722.0	1.538337	Y
2	STD3 240-323501/8	100.0	136.627074	400.0	207950.0	1.366271	Y
3	STD4 240-323501/7	200.0	254.101607	400.0	212112.0	1.270508	Y
4	STD5 240-323501/6	500.0	603.194411	400.0	214124.0	1.206389	Y
5	STD6 240-323501/5	1000.0	1313.918079	400.0	208592.0	1.313918	Y
6	STD7 240-323501/4	1500.0	1903.549595	400.0	231294.0	1.269033	Y
7	STD8 240-323501/3	2000.0	2872.728077	400.0	226042.0	1.436364	Y
8	STD9 240-323501/2	2500.0	3327.505263	400.0	232301.0	1.331002	Y



Calibration / Phenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

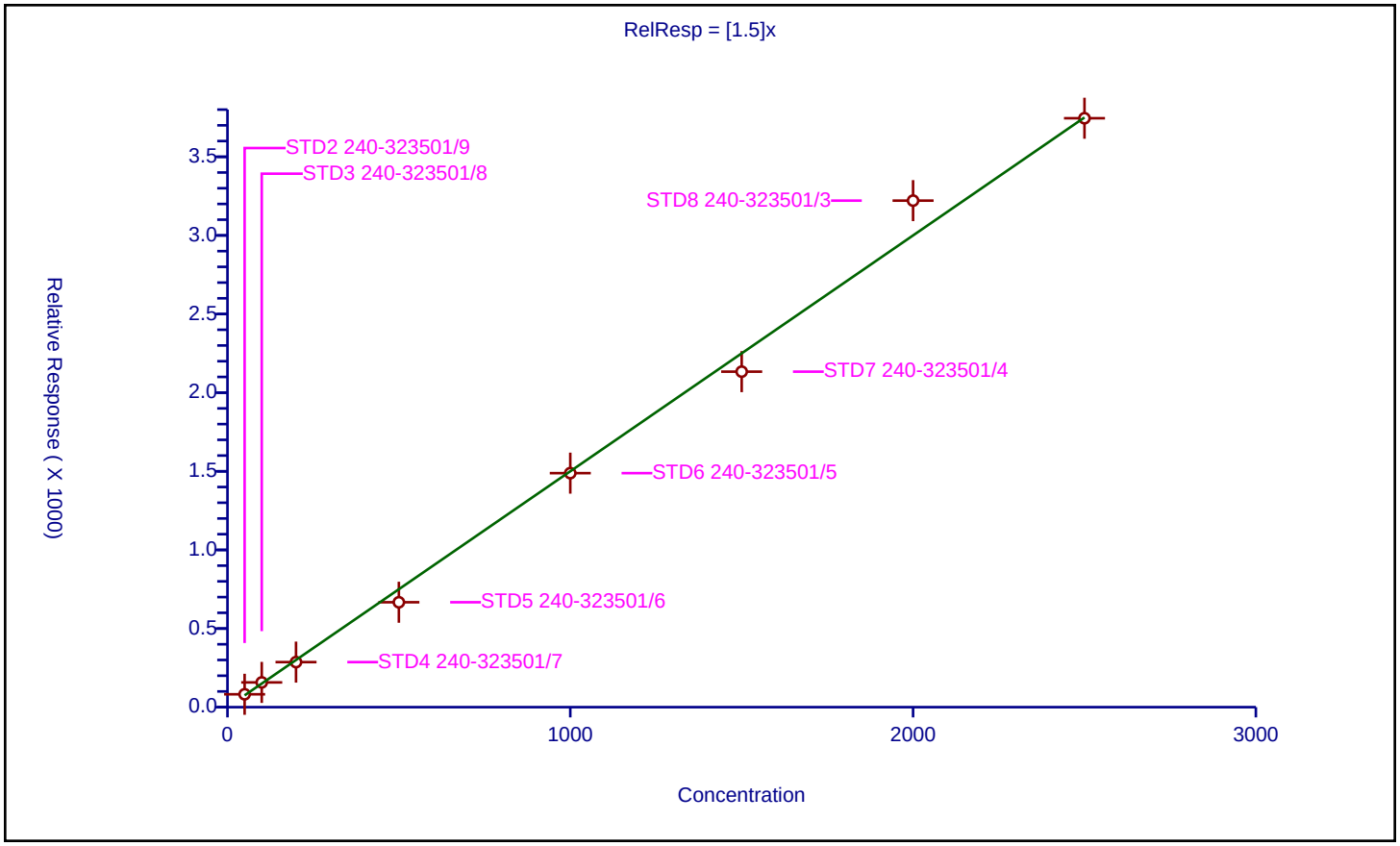
Curve Coefficients

Intercept:	0
Slope:	1.5

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	6.9
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	81.978696	400.0	206722.0	1.639574	Y
2	STD3 240-323501/8	100.0	157.468622	400.0	207950.0	1.574686	Y
3	STD4 240-323501/7	200.0	286.454326	400.0	212112.0	1.432272	Y
4	STD5 240-323501/6	500.0	667.10691	400.0	214124.0	1.334214	Y
5	STD6 240-323501/5	1000.0	1488.116515	400.0	208592.0	1.488117	Y
6	STD7 240-323501/4	1500.0	2133.591014	400.0	231294.0	1.422394	Y
7	STD8 240-323501/3	2000.0	3221.11643	400.0	226042.0	1.610558	Y
8	STD9 240-323501/2	2500.0	3745.14789	400.0	232301.0	1.498059	Y



Calibration / Aniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

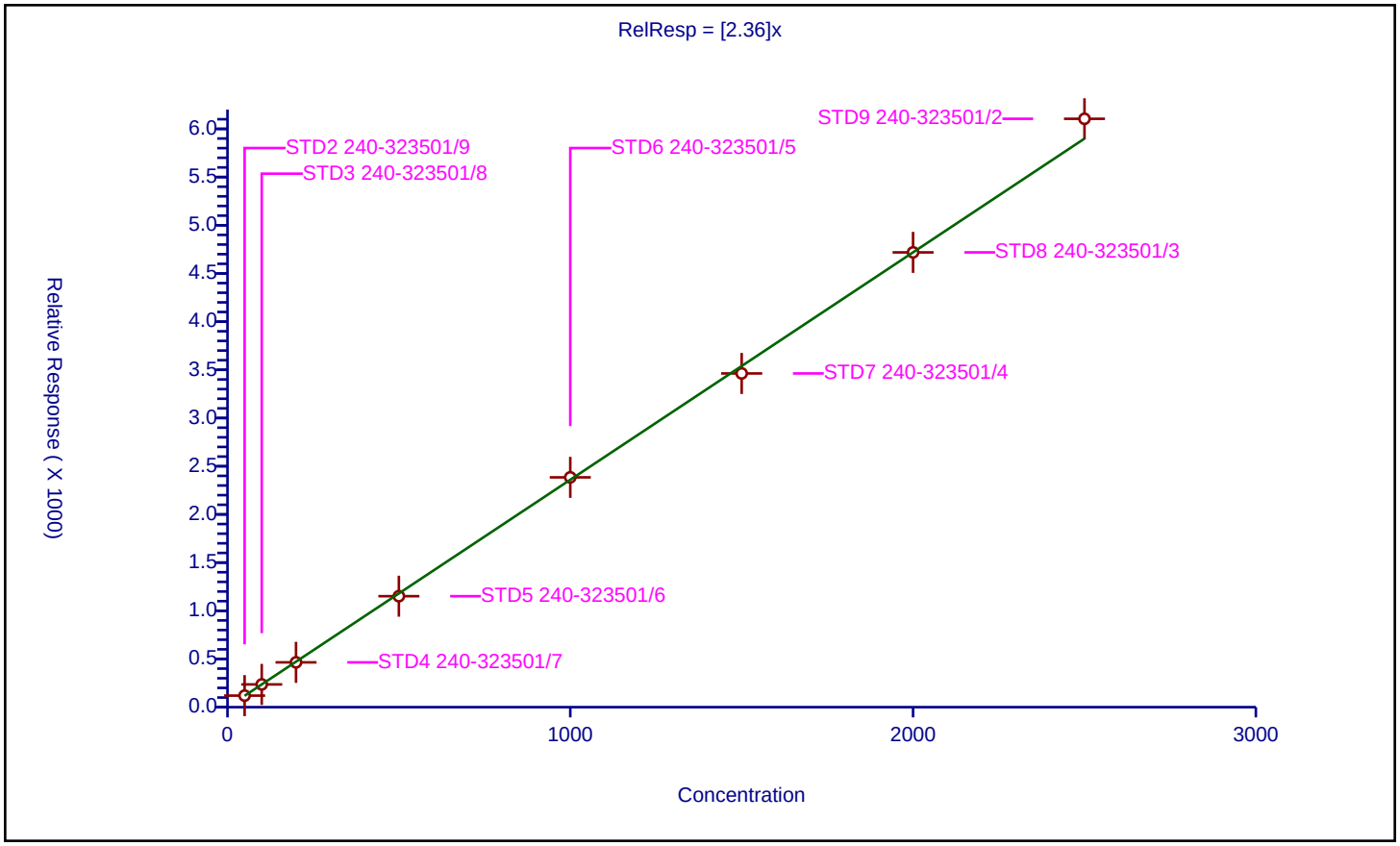
Curve Coefficients

Intercept:	0
Slope:	2.36

Error Coefficients

Standard Error:	1910000
Relative Standard Error:	2.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	119.768578	400.0	206722.0	2.395372	Y
2	STD3 240-323501/8	100.0	236.020197	400.0	207950.0	2.360202	Y
3	STD4 240-323501/7	200.0	464.873274	400.0	212112.0	2.324366	Y
4	STD5 240-323501/6	500.0	1151.469242	400.0	214124.0	2.302938	Y
5	STD6 240-323501/5	1000.0	2384.367569	400.0	208592.0	2.384368	Y
6	STD7 240-323501/4	1500.0	3462.678669	400.0	231294.0	2.308452	Y
7	STD8 240-323501/3	2000.0	4718.59389	400.0	226042.0	2.359297	Y
8	STD9 240-323501/2	2500.0	6104.528177	400.0	232301.0	2.441811	Y



Calibration / Bis(2-chloroethyl)ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

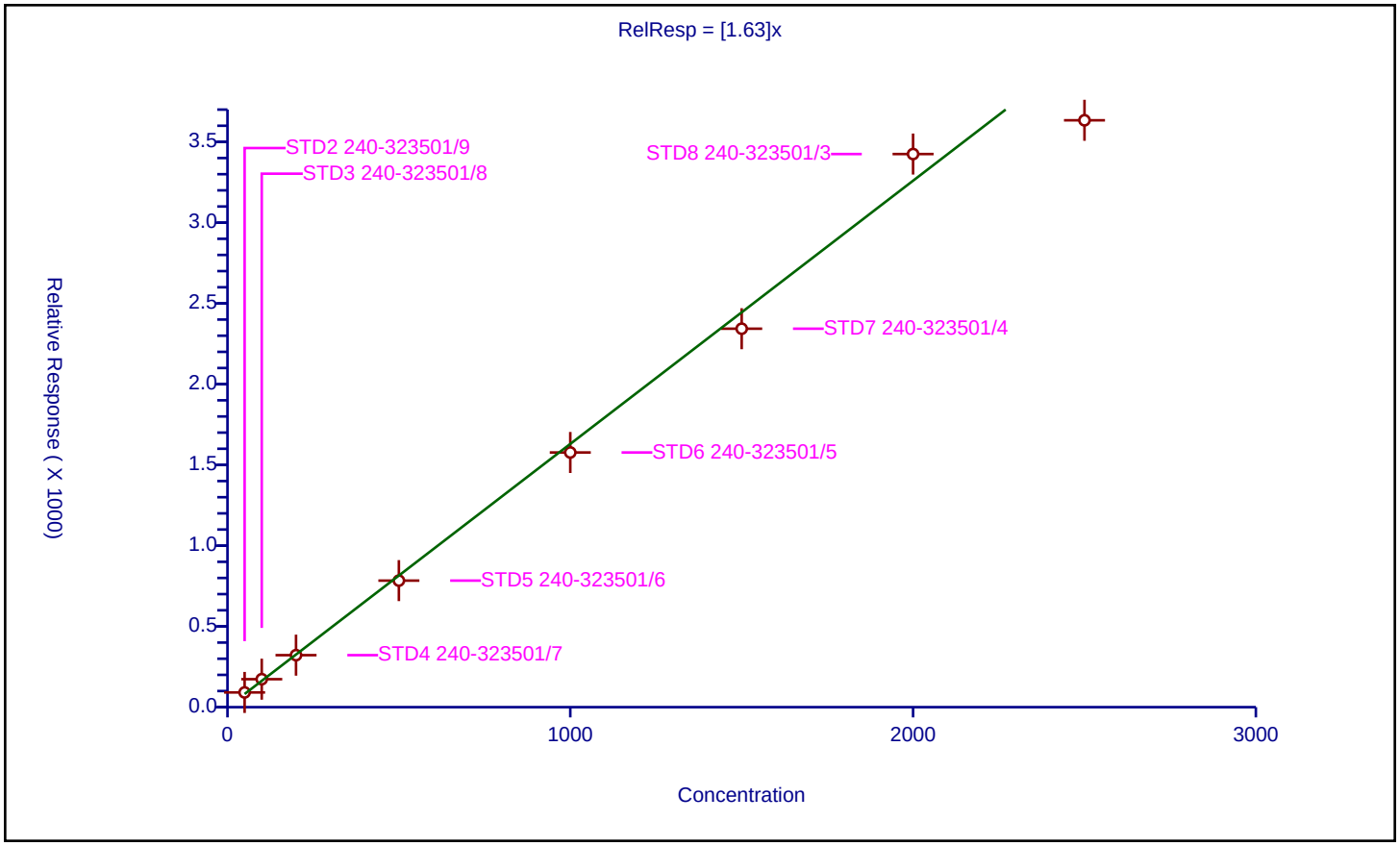
Curve Coefficients

Intercept:	0
Slope:	1.63

Error Coefficients

Standard Error:	1250000
Relative Standard Error:	7.3
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	91.196873	400.0	206722.0	1.823937	Y
2	STD3 240-323501/8	100.0	173.28781	400.0	207950.0	1.732878	Y
3	STD4 240-323501/7	200.0	321.992155	400.0	212112.0	1.609961	Y
4	STD5 240-323501/6	500.0	783.63565	400.0	214124.0	1.567271	Y
5	STD6 240-323501/5	1000.0	1576.954054	400.0	208592.0	1.576954	Y
6	STD7 240-323501/4	1500.0	2343.294681	400.0	231294.0	1.562196	Y
7	STD8 240-323501/3	2000.0	3424.866175	400.0	226042.0	1.712433	Y
8	STD9 240-323501/2	2500.0	3633.918063	400.0	232301.0	1.453567	Y



Calibration / n-Decane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

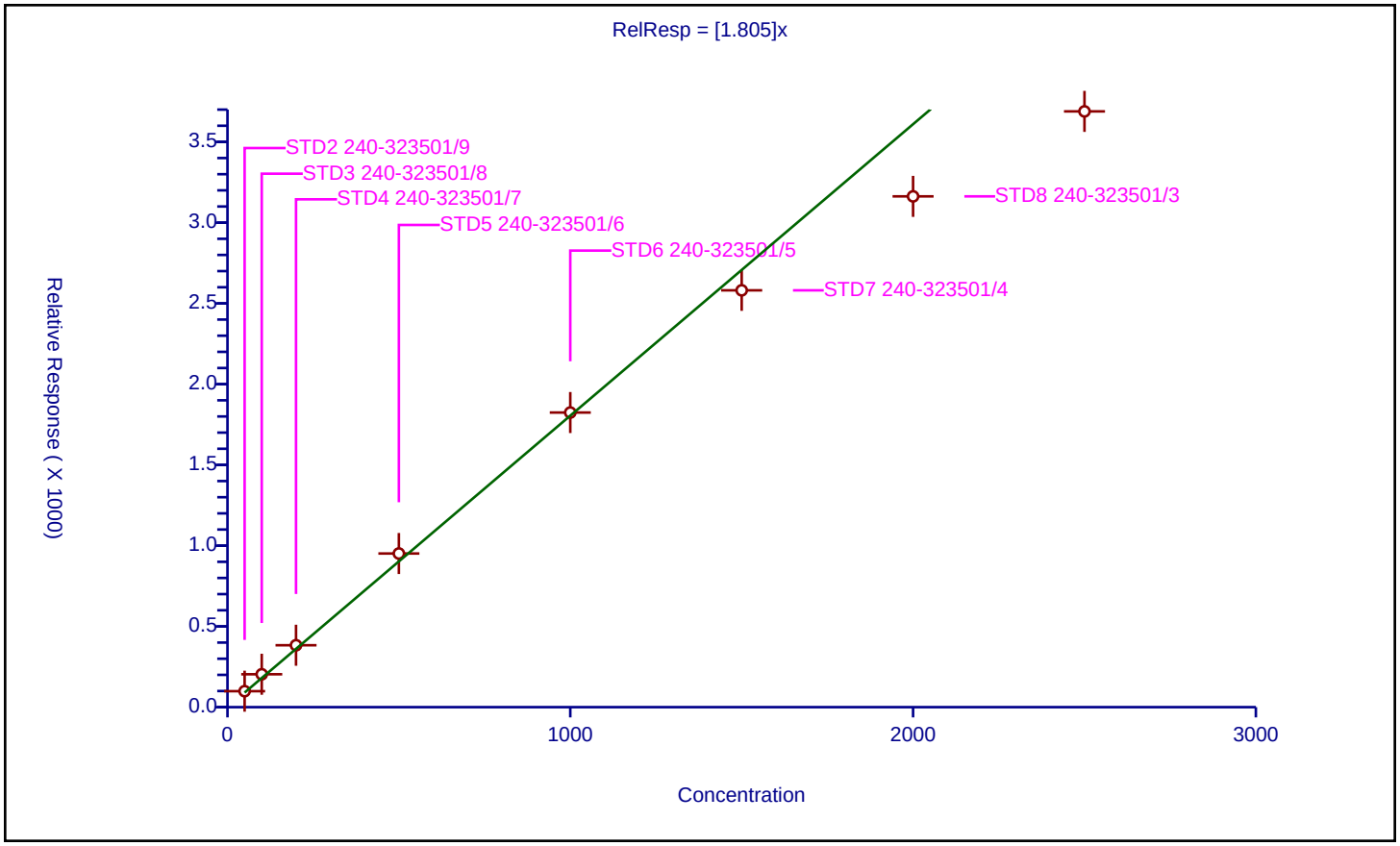
Curve Coefficients

Intercept:	0
Slope:	1.805

Error Coefficients

Standard Error:	1260000
Relative Standard Error:	10.9
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.982

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	98.981241	400.0	206722.0	1.979625	Y
2	STD3 240-323501/8	100.0	203.712431	400.0	207950.0	2.037124	Y
3	STD4 240-323501/7	200.0	383.452138	400.0	212112.0	1.917261	Y
4	STD5 240-323501/6	500.0	951.463638	400.0	214124.0	1.902927	Y
5	STD6 240-323501/5	1000.0	1824.229117	400.0	208592.0	1.824229	Y
6	STD7 240-323501/4	1500.0	2581.000804	400.0	231294.0	1.720667	Y
7	STD8 240-323501/3	2000.0	3162.769751	400.0	226042.0	1.581385	Y
8	STD9 240-323501/2	2500.0	3688.987994	400.0	232301.0	1.475595	Y



Calibration / 2-Chlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

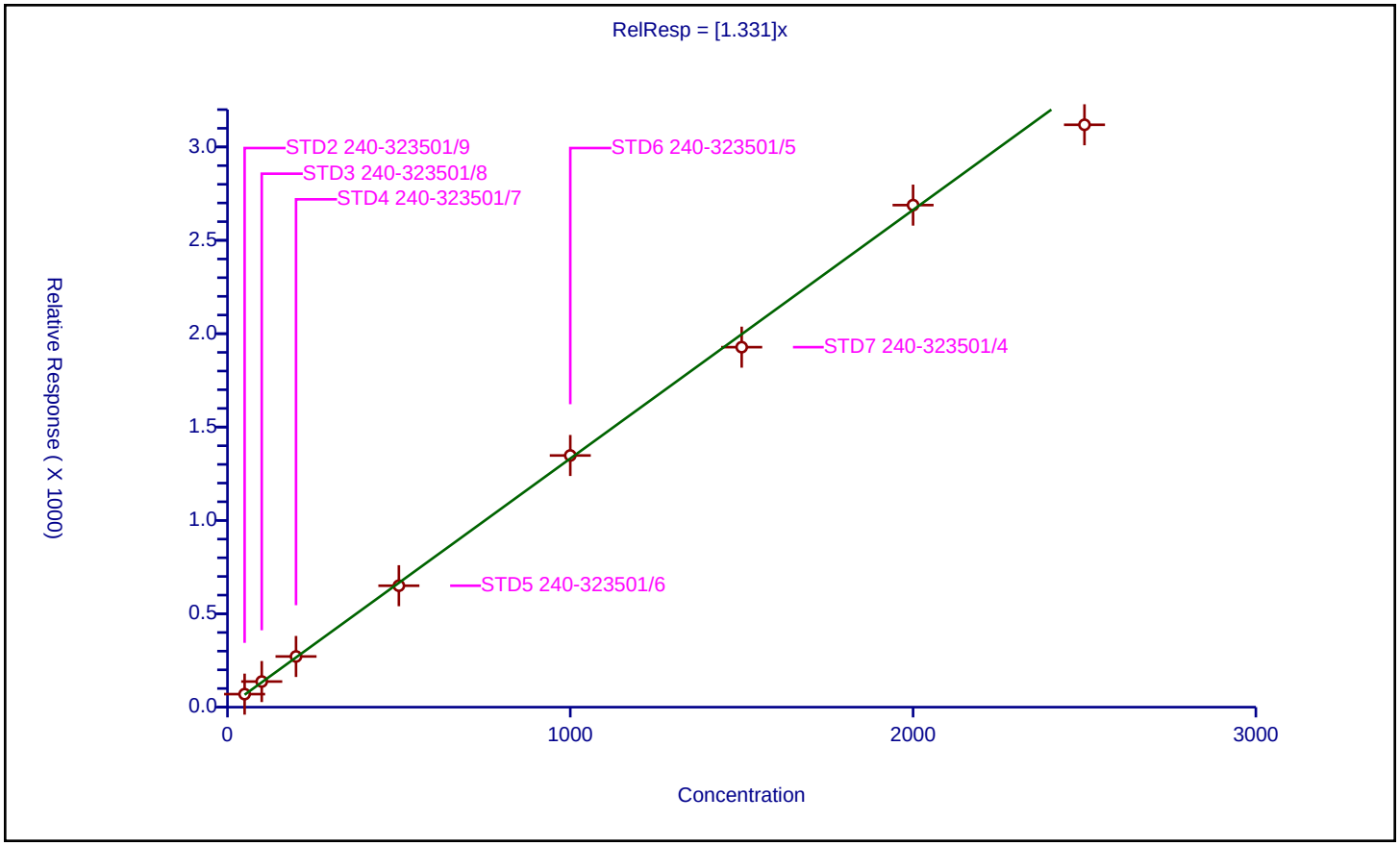
Curve Coefficients

Intercept:	0
Slope:	1.331

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	3.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	69.790346	400.0	206722.0	1.395807	Y
2	STD3 240-323501/8	100.0	137.273383	400.0	207950.0	1.372734	Y
3	STD4 240-323501/7	200.0	271.494305	400.0	212112.0	1.357472	Y
4	STD5 240-323501/6	500.0	650.374549	400.0	214124.0	1.300749	Y
5	STD6 240-323501/5	1000.0	1347.742962	400.0	208592.0	1.347743	Y
6	STD7 240-323501/4	1500.0	1927.875345	400.0	231294.0	1.28525	Y
7	STD8 240-323501/3	2000.0	2688.592385	400.0	226042.0	1.344296	Y
8	STD9 240-323501/2	2500.0	3118.858722	400.0	232301.0	1.247543	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

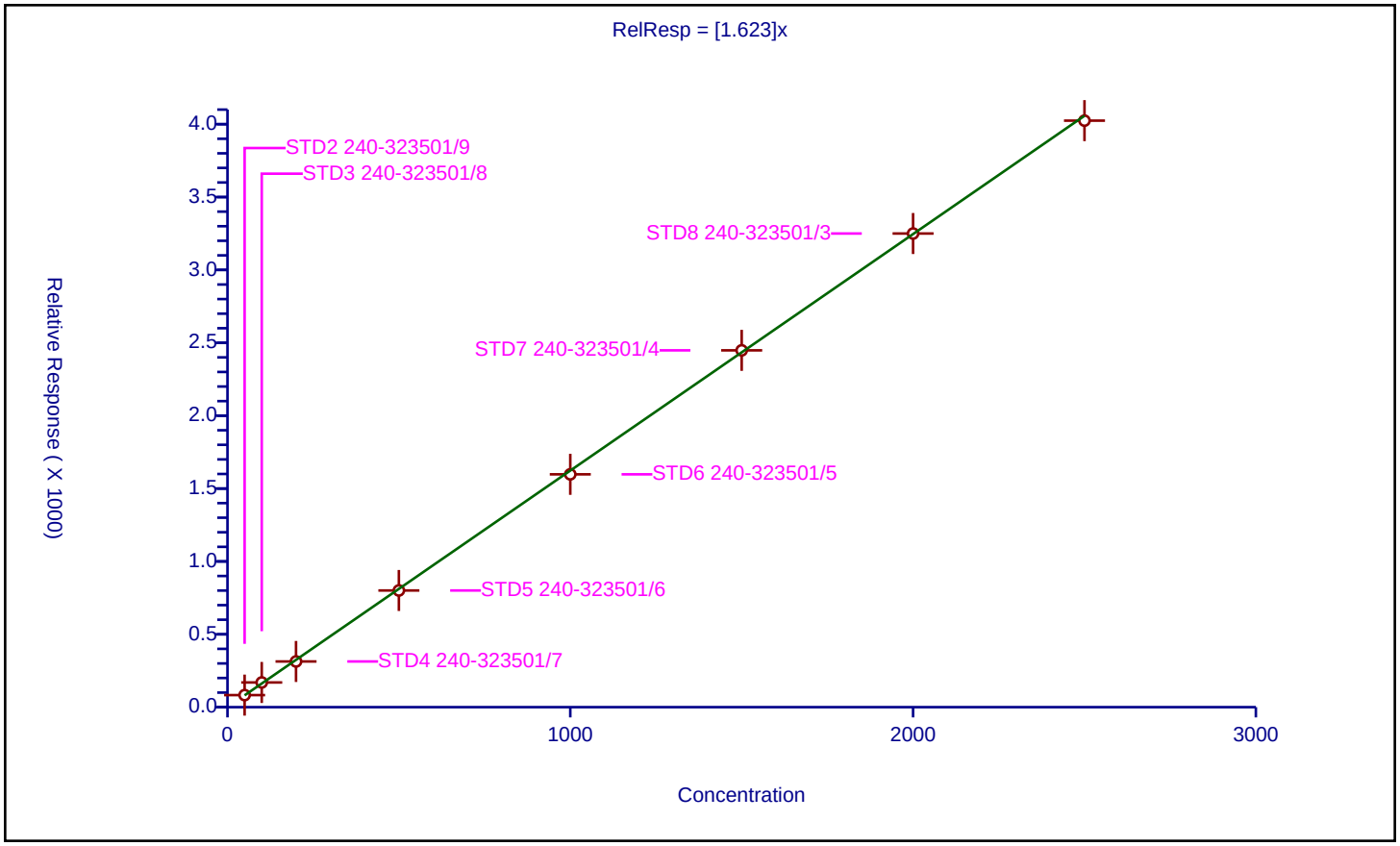
Curve Coefficients

Intercept:	0
Slope:	1.623

Error Coefficients

Standard Error:	1290000
Relative Standard Error:	2.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	82.799122	400.0	206722.0	1.655982	Y
2	STD3 240-323501/8	100.0	169.458043	400.0	207950.0	1.69458	Y
3	STD4 240-323501/7	200.0	313.613563	400.0	212112.0	1.568068	Y
4	STD5 240-323501/6	500.0	800.556687	400.0	214124.0	1.601113	Y
5	STD6 240-323501/5	1000.0	1597.539695	400.0	208592.0	1.59754	Y
6	STD7 240-323501/4	1500.0	2448.307349	400.0	231294.0	1.632205	Y
7	STD8 240-323501/3	2000.0	3249.737659	400.0	226042.0	1.624869	Y
8	STD9 240-323501/2	2500.0	4024.342556	400.0	232301.0	1.609737	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

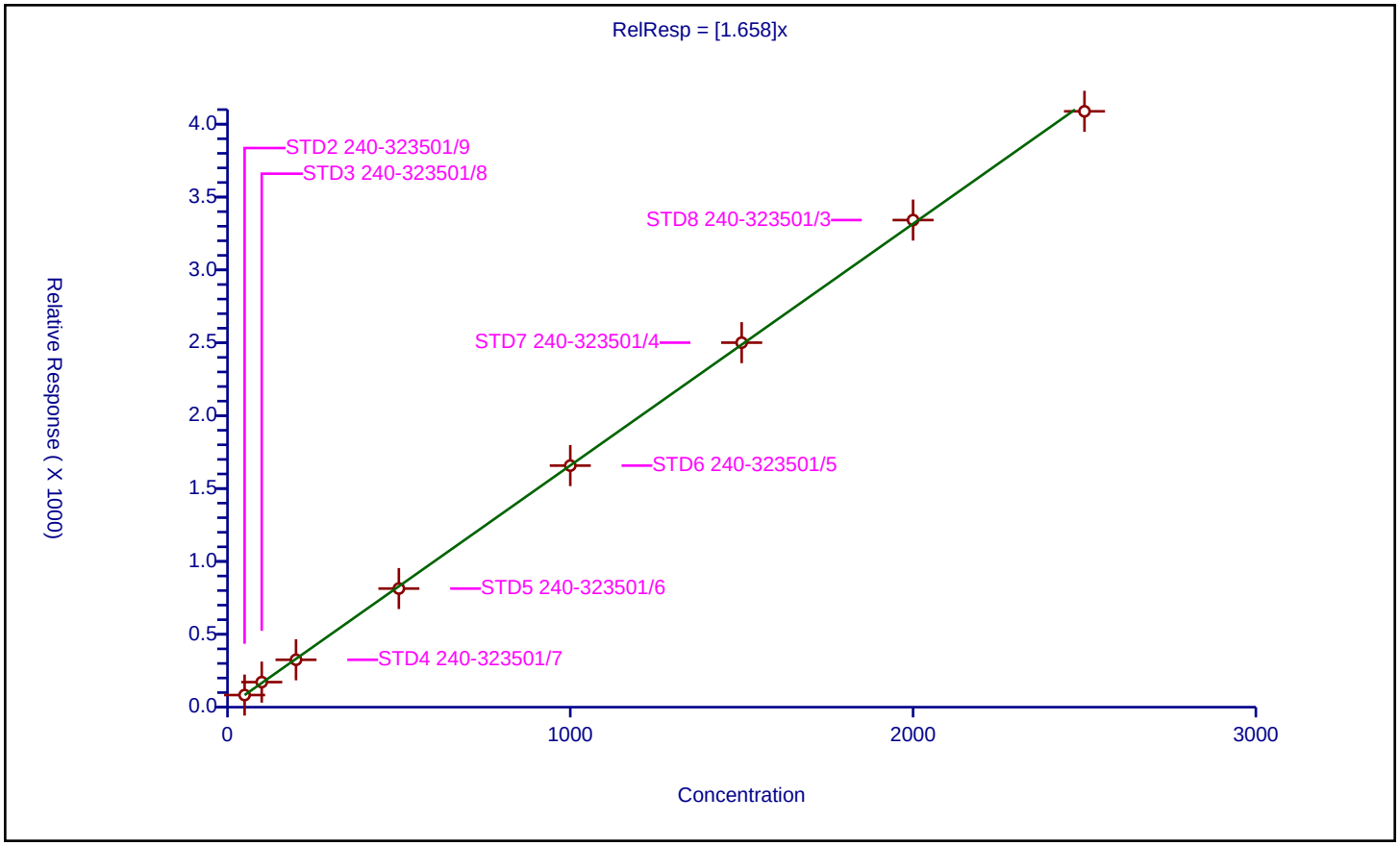
Curve Coefficients

Intercept:	0
Slope:	1.658

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	1.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	83.14161	400.0	206722.0	1.662832	Y
2	STD3 240-323501/8	100.0	171.987497	400.0	207950.0	1.719875	Y
3	STD4 240-323501/7	200.0	325.10749	400.0	212112.0	1.625537	Y
4	STD5 240-323501/6	500.0	813.769591	400.0	214124.0	1.627539	Y
5	STD6 240-323501/5	1000.0	1657.315717	400.0	208592.0	1.657316	Y
6	STD7 240-323501/4	1500.0	2500.927823	400.0	231294.0	1.667285	Y
7	STD8 240-323501/3	2000.0	3342.095717	400.0	226042.0	1.671048	Y
8	STD9 240-323501/2	2500.0	4088.247575	400.0	232301.0	1.635299	Y



Calibration / Benzyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

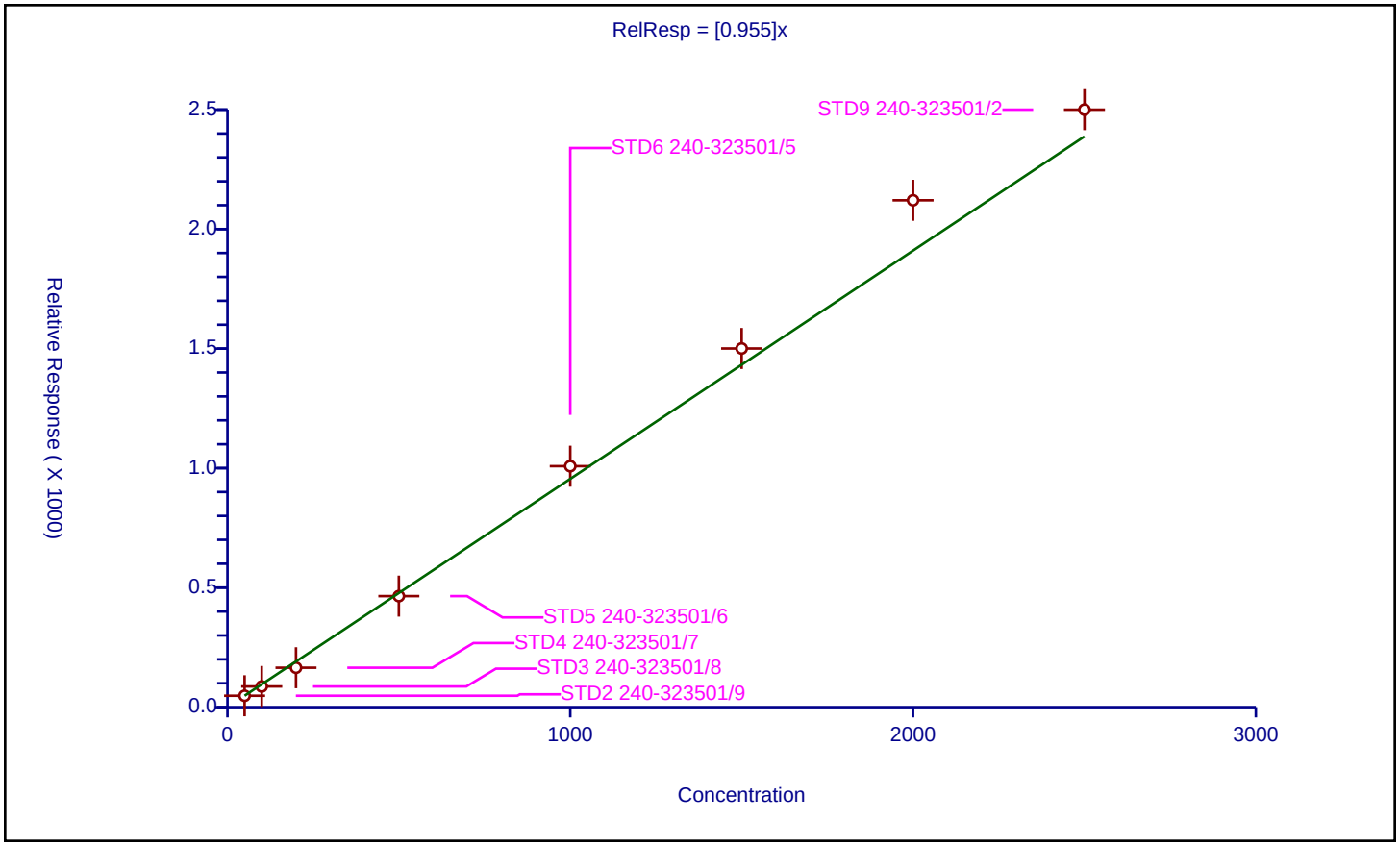
Curve Coefficients

Intercept:	0
Slope:	0.955

Error Coefficients

Standard Error:	813000
Relative Standard Error:	8.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	47.654338	400.0	206722.0	0.953087	Y
2	STD3 240-323501/8	100.0	86.463092	400.0	207950.0	0.864631	Y
3	STD4 240-323501/7	200.0	164.93362	400.0	212112.0	0.824668	Y
4	STD5 240-323501/6	500.0	464.585007	400.0	214124.0	0.92917	Y
5	STD6 240-323501/5	1000.0	1008.176728	400.0	208592.0	1.008177	Y
6	STD7 240-323501/4	1500.0	1500.528332	400.0	231294.0	1.000352	Y
7	STD8 240-323501/3	2000.0	2120.632449	400.0	226042.0	1.060316	Y
8	STD9 240-323501/2	2500.0	2499.81016	400.0	232301.0	0.999924	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

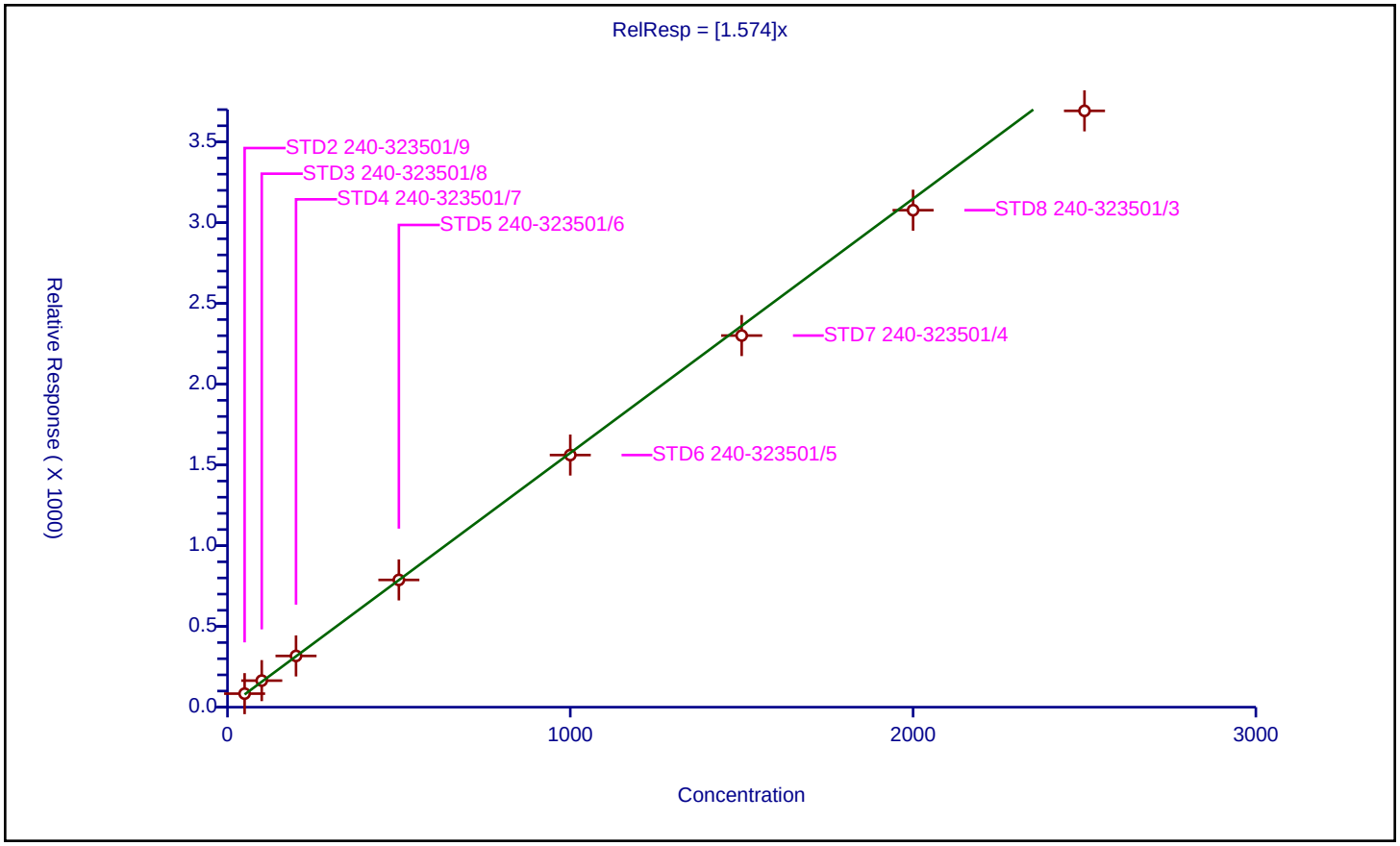
Curve Coefficients

Intercept:	0
Slope:	1.574

Error Coefficients

Standard Error:	1210000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	83.774344	400.0	206722.0	1.675487	Y
2	STD3 240-323501/8	100.0	164.420293	400.0	207950.0	1.644203	Y
3	STD4 240-323501/7	200.0	317.177717	400.0	212112.0	1.585889	Y
4	STD5 240-323501/6	500.0	787.947171	400.0	214124.0	1.575894	Y
5	STD6 240-323501/5	1000.0	1561.11452	400.0	208592.0	1.561115	Y
6	STD7 240-323501/4	1500.0	2301.019482	400.0	231294.0	1.534013	Y
7	STD8 240-323501/3	2000.0	3077.203352	400.0	226042.0	1.538602	Y
8	STD9 240-323501/2	2500.0	3692.376701	400.0	232301.0	1.476951	Y



Calibration / 2-Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

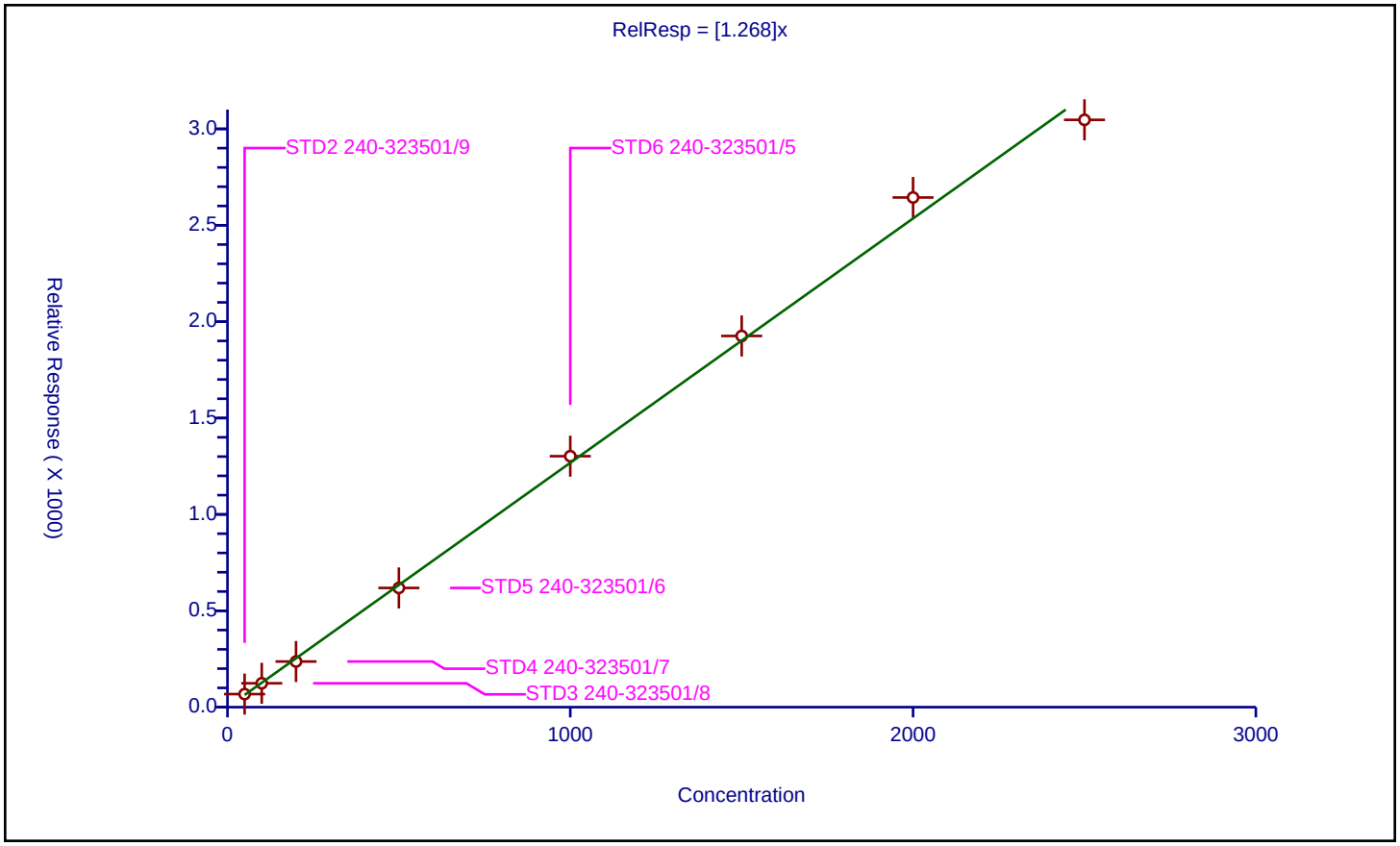
Curve Coefficients

Intercept:	0
Slope:	1.268

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	4.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	67.739283	400.0	206722.0	1.354786	Y
2	STD3 240-323501/8	100.0	123.943256	400.0	207950.0	1.239433	Y
3	STD4 240-323501/7	200.0	236.810741	400.0	212112.0	1.184054	Y
4	STD5 240-323501/6	500.0	618.445387	400.0	214124.0	1.236891	Y
5	STD6 240-323501/5	1000.0	1301.990489	400.0	208592.0	1.30199	Y
6	STD7 240-323501/4	1500.0	1925.656524	400.0	231294.0	1.283771	Y
7	STD8 240-323501/3	2000.0	2644.037834	400.0	226042.0	1.322019	Y
8	STD9 240-323501/2	2500.0	3046.803931	400.0	232301.0	1.218722	Y



Calibration / 2,2'-oxybis[1-chloropropane]

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

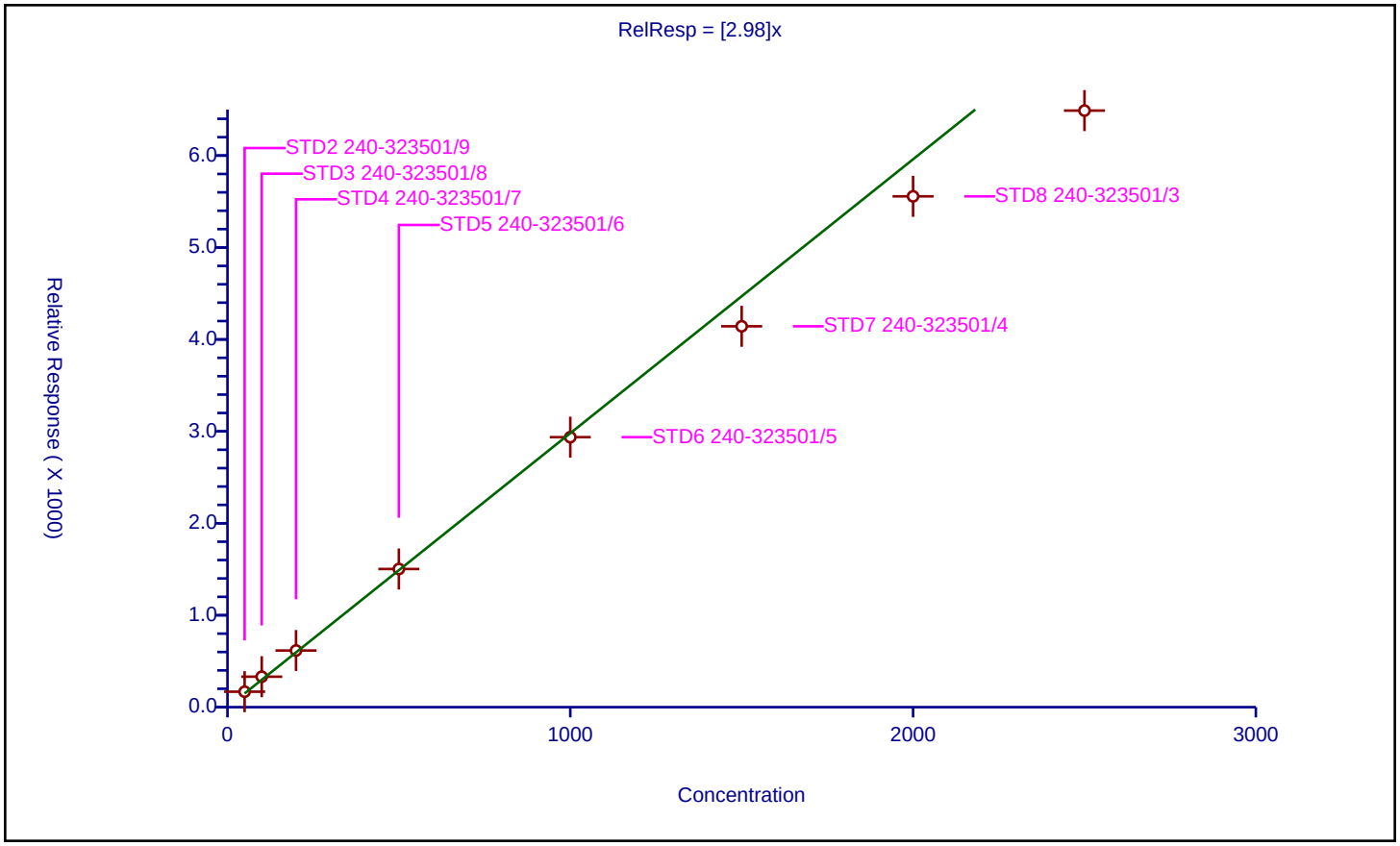
Curve Coefficients

Intercept:	0
Slope:	2.98

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	9.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	168.185292	400.0	206722.0	3.363706	Y
2	STD3 240-323501/8	100.0	331.523924	400.0	207950.0	3.315239	Y
3	STD4 240-323501/7	200.0	616.238591	400.0	212112.0	3.081193	Y
4	STD5 240-323501/6	500.0	1502.839476	400.0	214124.0	3.005679	Y
5	STD6 240-323501/5	1000.0	2936.716653	400.0	208592.0	2.936717	Y
6	STD7 240-323501/4	1500.0	4142.953989	400.0	231294.0	2.761969	Y
7	STD8 240-323501/3	2000.0	5556.586829	400.0	226042.0	2.778293	Y
8	STD9 240-323501/2	2500.0	6489.20151	400.0	232301.0	2.595681	Y



Calibration / Indene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

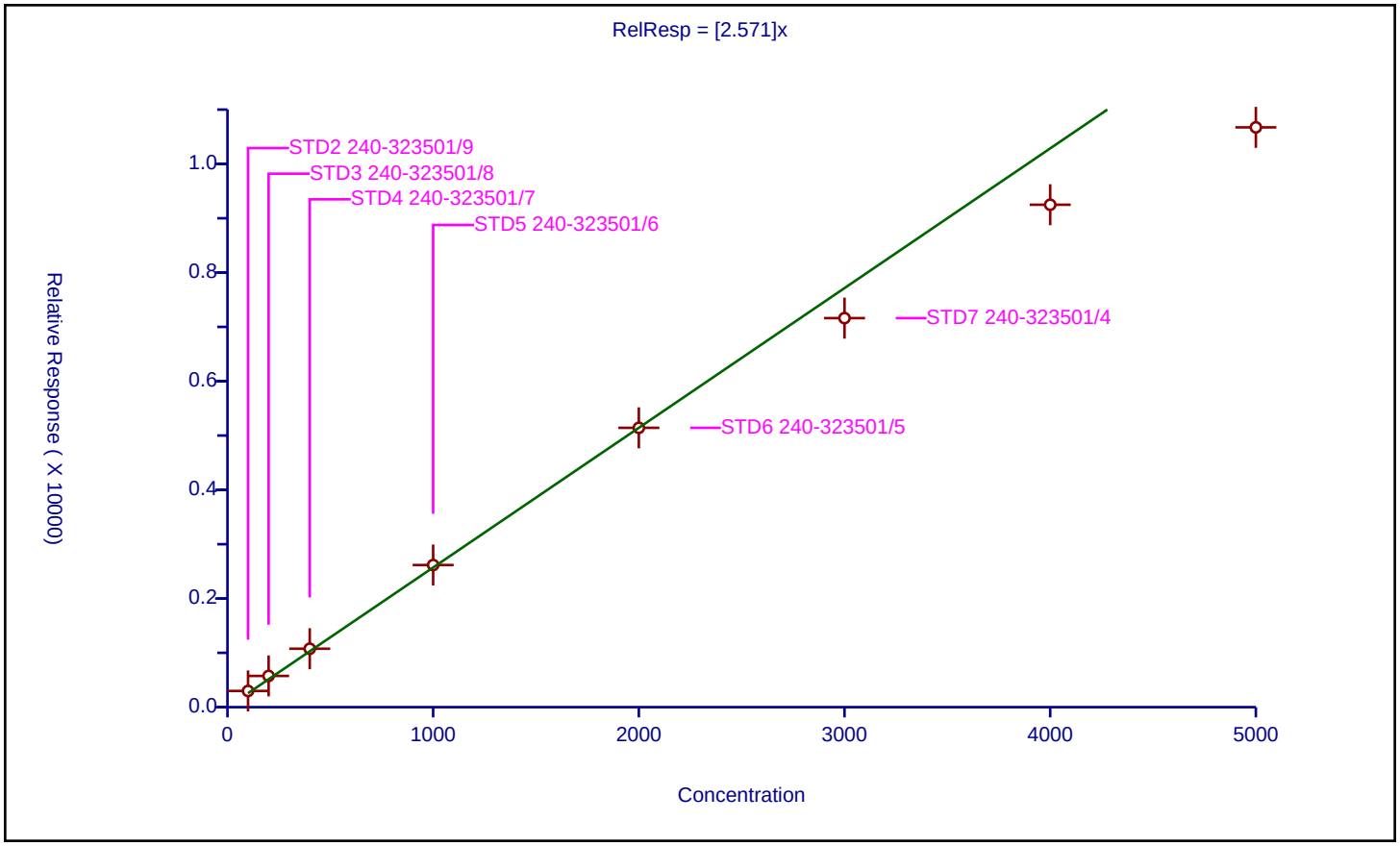
Curve Coefficients

Intercept:	0
Slope:	2.571

Error Coefficients

Standard Error:	3630000
Relative Standard Error:	11.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	298.652296	400.0	206722.0	2.986523	Y
2	STD3 240-323501/8	200.0	574.878577	400.0	207950.0	2.874393	Y
3	STD4 240-323501/7	400.0	1075.648714	400.0	212112.0	2.689122	Y
4	STD5 240-323501/6	1000.0	2616.526872	400.0	214124.0	2.616527	Y
5	STD6 240-323501/5	2000.0	5142.168444	400.0	208592.0	2.571084	Y
6	STD7 240-323501/4	3000.0	7161.738739	400.0	231294.0	2.387246	Y
7	STD8 240-323501/3	4000.0	9248.746693	400.0	226042.0	2.312187	Y
8	STD9 240-323501/2	5000.0	10673.211049	400.0	232301.0	2.134642	Y



Calibration

/ 3 & 4 Methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

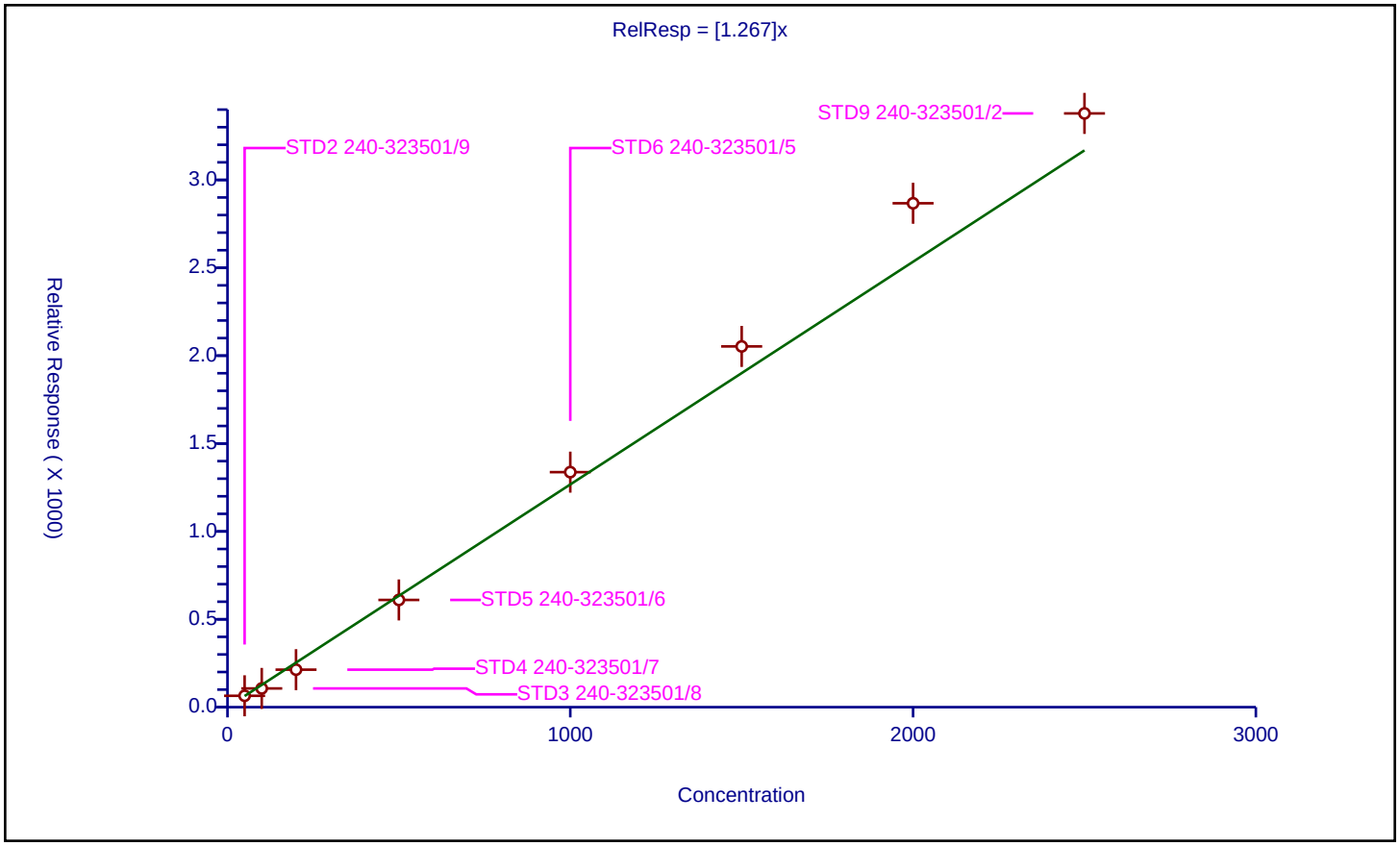
Curve Coefficients

Intercept:	0
Slope:	1.267

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	10.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	64.716866	400.0	206722.0	1.294337	Y
2	STD3 240-323501/8	100.0	106.542919	400.0	207950.0	1.065429	Y
3	STD4 240-323501/7	200.0	213.398582	400.0	212112.0	1.066993	Y
4	STD5 240-323501/6	500.0	610.121238	400.0	214124.0	1.220242	Y
5	STD6 240-323501/5	1000.0	1337.180716	400.0	208592.0	1.337181	Y
6	STD7 240-323501/4	1500.0	2052.520169	400.0	231294.0	1.368347	Y
7	STD8 240-323501/3	2000.0	2867.067182	400.0	226042.0	1.433534	Y
8	STD9 240-323501/2	2500.0	3378.275599	400.0	232301.0	1.35131	Y



Calibration / N-Nitrosodi-n-propylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

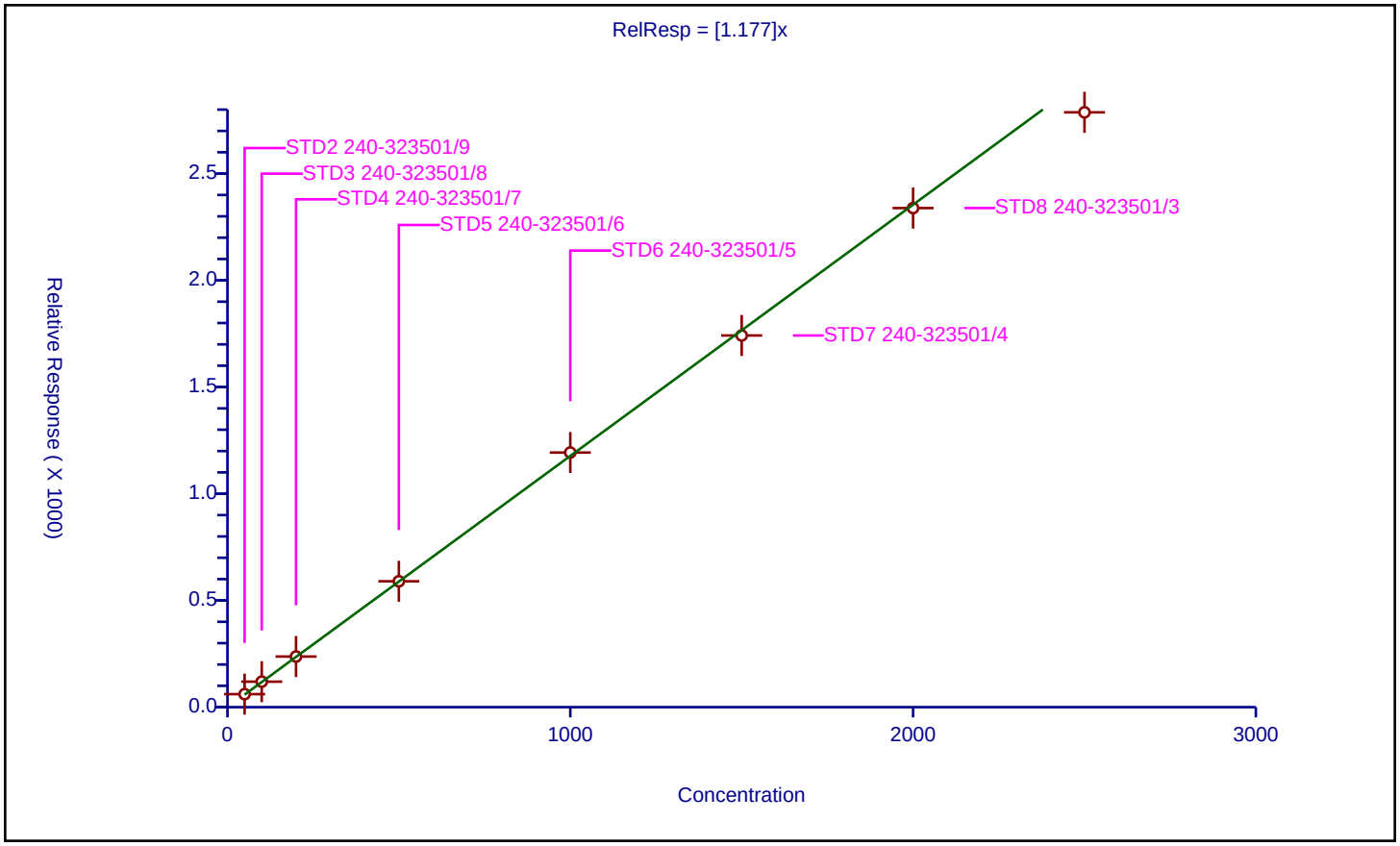
Curve Coefficients

Intercept:	0
Slope:	1.177

Error Coefficients

Standard Error:	916000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	60.988187	400.0	206722.0	1.219764	Y
2	STD3 240-323501/8	100.0	119.426785	400.0	207950.0	1.194268	Y
3	STD4 240-323501/7	200.0	237.146413	400.0	212112.0	1.185732	Y
4	STD5 240-323501/6	500.0	589.830192	400.0	214124.0	1.17966	Y
5	STD6 240-323501/5	1000.0	1192.964256	400.0	208592.0	1.192964	Y
6	STD7 240-323501/4	1500.0	1741.62408	400.0	231294.0	1.161083	Y
7	STD8 240-323501/3	2000.0	2338.653878	400.0	226042.0	1.169327	Y
8	STD9 240-323501/2	2500.0	2787.235526	400.0	232301.0	1.114894	Y



Calibration / Acetophenone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

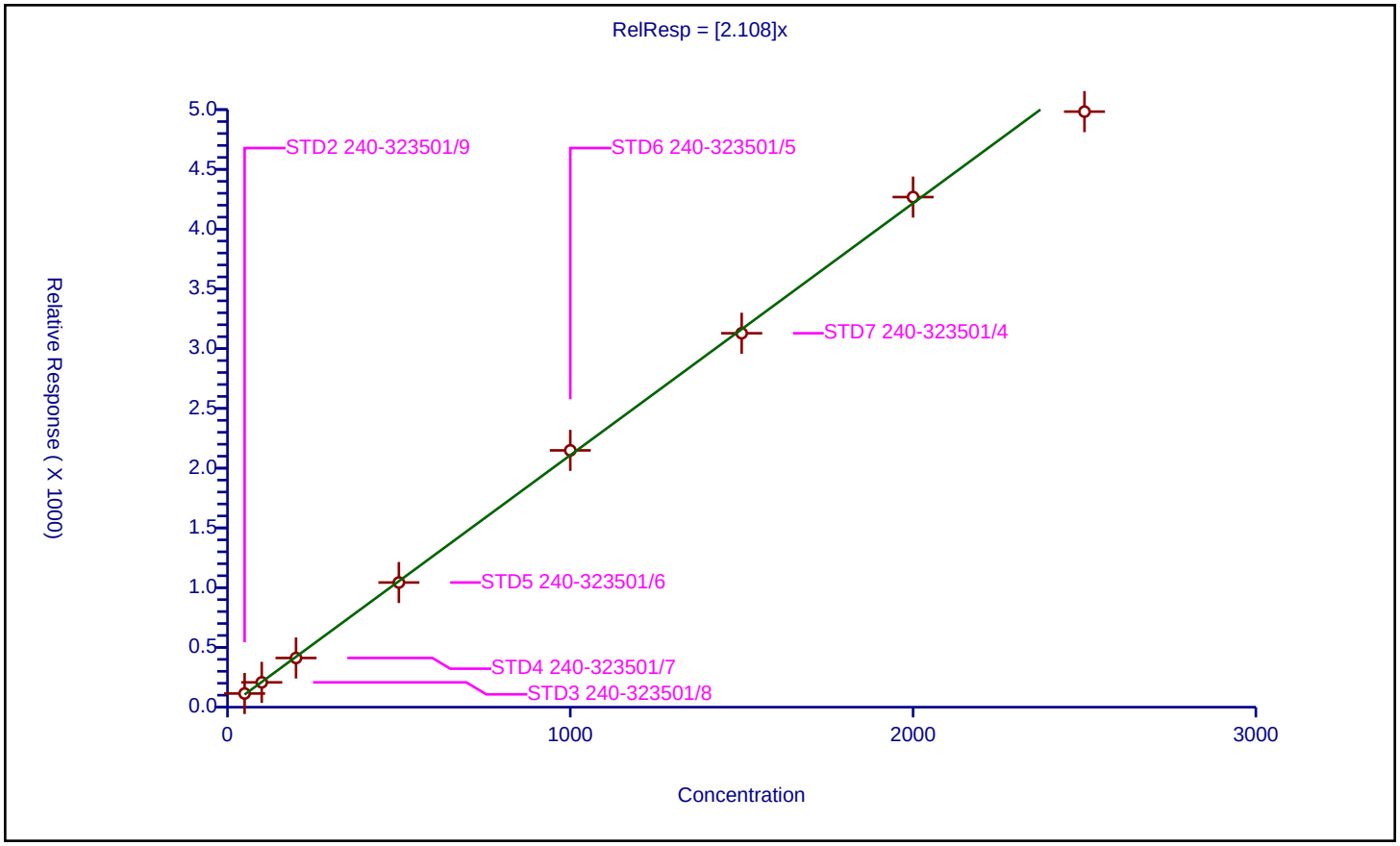
Curve Coefficients

Intercept:	0
Slope:	2.108

Error Coefficients

Standard Error:	1650000
Relative Standard Error:	4.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	114.29843	400.0	206722.0	2.285969	Y
2	STD3 240-323501/8	100.0	207.571051	400.0	207950.0	2.075711	Y
3	STD4 240-323501/7	200.0	411.48827	400.0	212112.0	2.057441	Y
4	STD5 240-323501/6	500.0	1042.947077	400.0	214124.0	2.085894	Y
5	STD6 240-323501/5	1000.0	2148.529186	400.0	208592.0	2.148529	Y
6	STD7 240-323501/4	1500.0	3128.650116	400.0	231294.0	2.085767	Y
7	STD8 240-323501/3	2000.0	4268.26342	400.0	226042.0	2.134132	Y
8	STD9 240-323501/2	2500.0	4983.150309	400.0	232301.0	1.99326	Y



Calibration / Hexachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

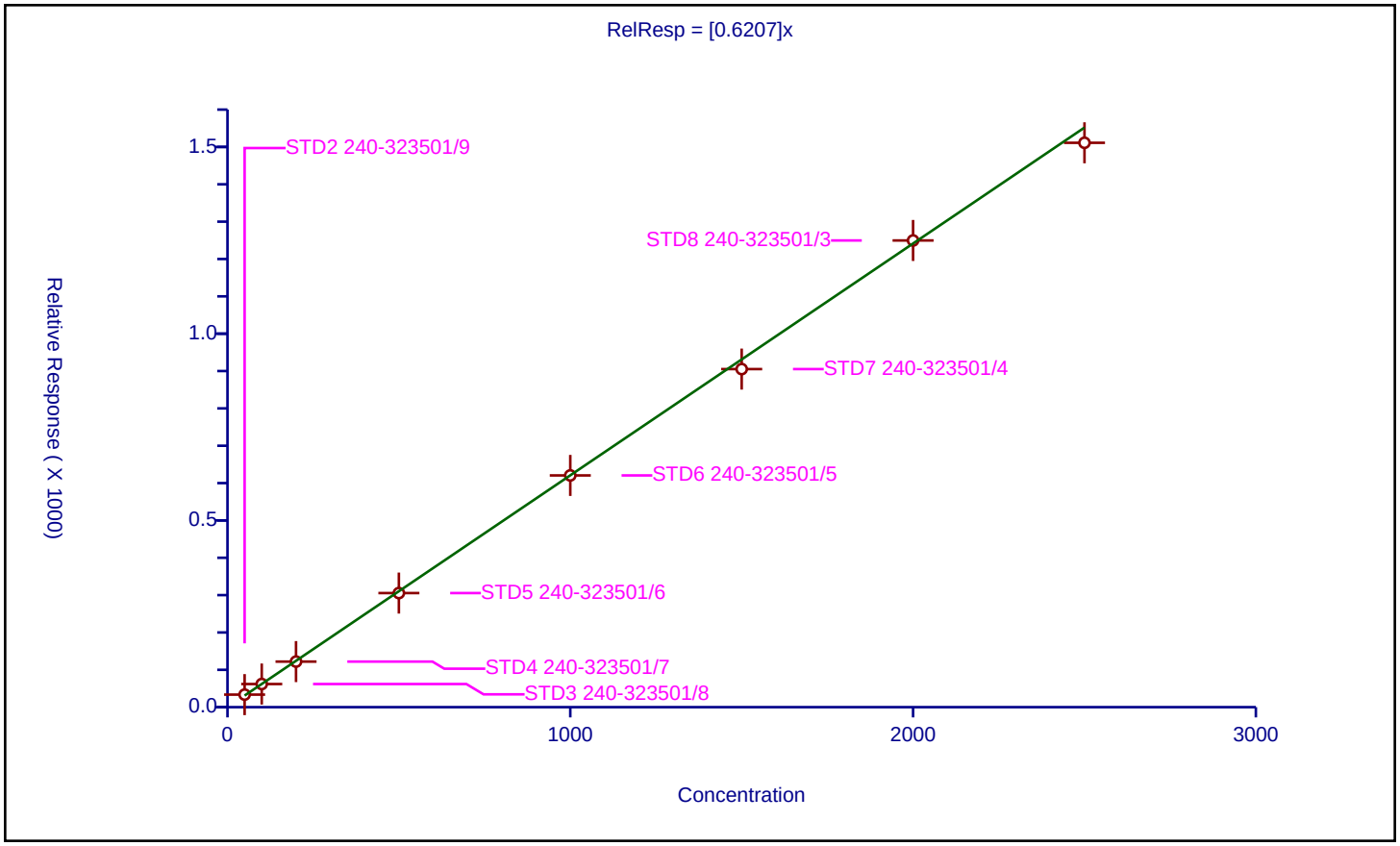
Curve Coefficients

Intercept:	0
Slope:	0.6207

Error Coefficients

Standard Error:	489000
Relative Standard Error:	3.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	33.591006	400.0	206722.0	0.67182	Y
2	STD3 240-323501/8	100.0	61.982207	400.0	207950.0	0.619822	Y
3	STD4 240-323501/7	200.0	121.999698	400.0	212112.0	0.609998	Y
4	STD5 240-323501/6	500.0	305.523902	400.0	214124.0	0.611048	Y
5	STD6 240-323501/5	1000.0	620.501266	400.0	208592.0	0.620501	Y
6	STD7 240-323501/4	1500.0	905.211549	400.0	231294.0	0.603474	Y
7	STD8 240-323501/3	2000.0	1249.60848	400.0	226042.0	0.624804	Y
8	STD9 240-323501/2	2500.0	1511.118764	400.0	232301.0	0.604448	Y



Calibration / Nitrobenzene-d5

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

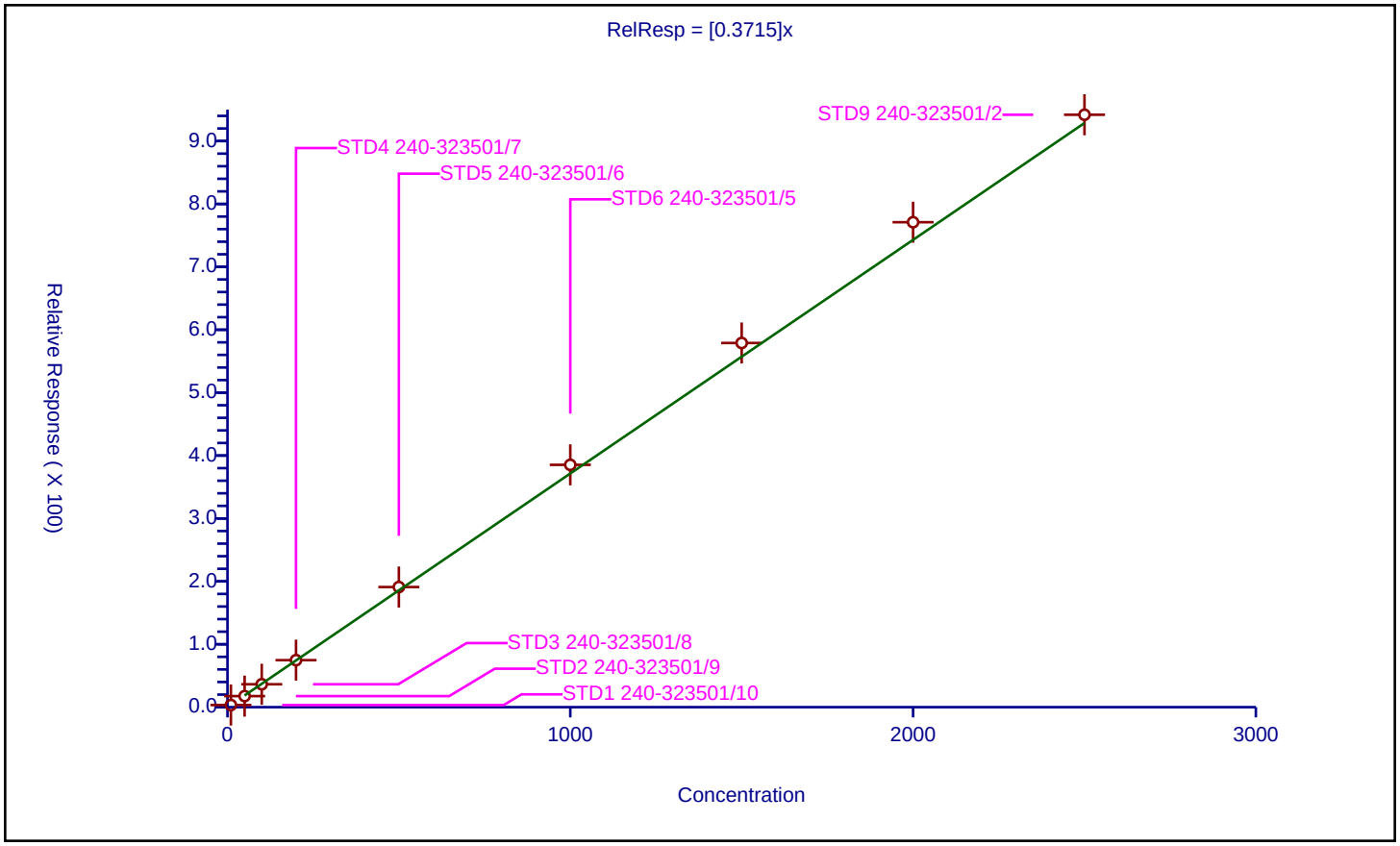
Curve Coefficients

Intercept:	0
Slope:	0.3715

Error Coefficients

Standard Error:	1270000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	3.377712	400.0	839148.0	0.337771	Y
2	STD2 240-323501/9	50.0	17.60007	400.0	957178.0	0.352001	Y
3	STD3 240-323501/8	100.0	36.435895	400.0	926976.0	0.364359	Y
4	STD4 240-323501/7	200.0	74.724345	400.0	931691.0	0.373622	Y
5	STD5 240-323501/6	500.0	190.972765	400.0	950435.0	0.381946	Y
6	STD6 240-323501/5	1000.0	385.249694	400.0	949160.0	0.38525	Y
7	STD7 240-323501/4	1500.0	578.979126	400.0	1021556.0	0.385986	Y
8	STD8 240-323501/3	2000.0	770.957186	400.0	1021609.0	0.385479	Y
9	STD9 240-323501/2	2500.0	941.818072	400.0	1025559.0	0.376727	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

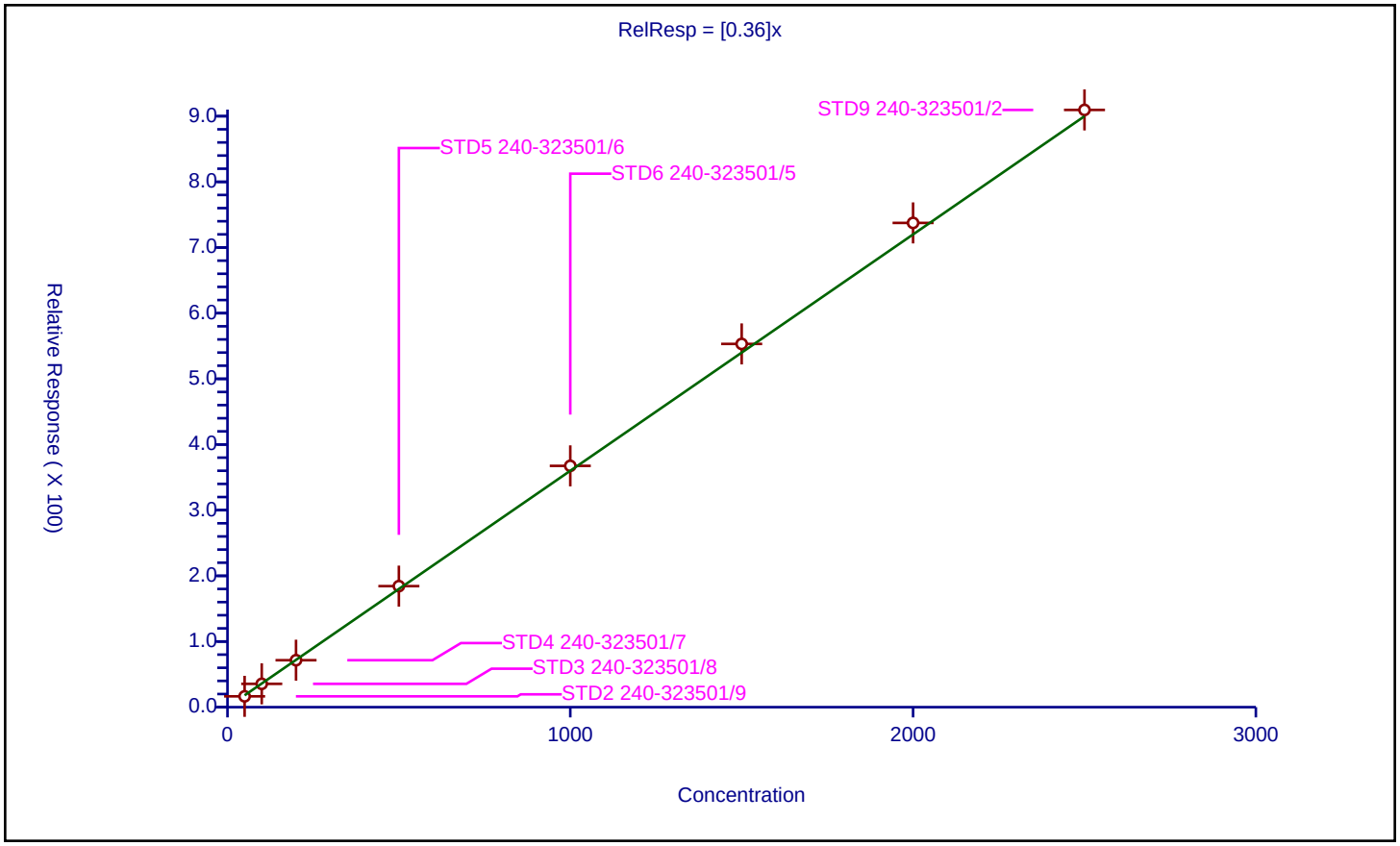
Curve Coefficients

Intercept:	0
Slope:	0.36

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	3.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	16.483037	400.0	957178.0	0.329661	Y
2	STD3 240-323501/8	100.0	35.500811	400.0	926976.0	0.355008	Y
3	STD4 240-323501/7	200.0	71.504394	400.0	931691.0	0.357522	Y
4	STD5 240-323501/6	500.0	184.326124	400.0	950435.0	0.368652	Y
5	STD6 240-323501/5	1000.0	367.484091	400.0	949160.0	0.367484	Y
6	STD7 240-323501/4	1500.0	553.178093	400.0	1021556.0	0.368785	Y
7	STD8 240-323501/3	2000.0	737.466487	400.0	1021609.0	0.368733	Y
8	STD9 240-323501/2	2500.0	909.504768	400.0	1025559.0	0.363802	Y



Calibration / Isophorone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

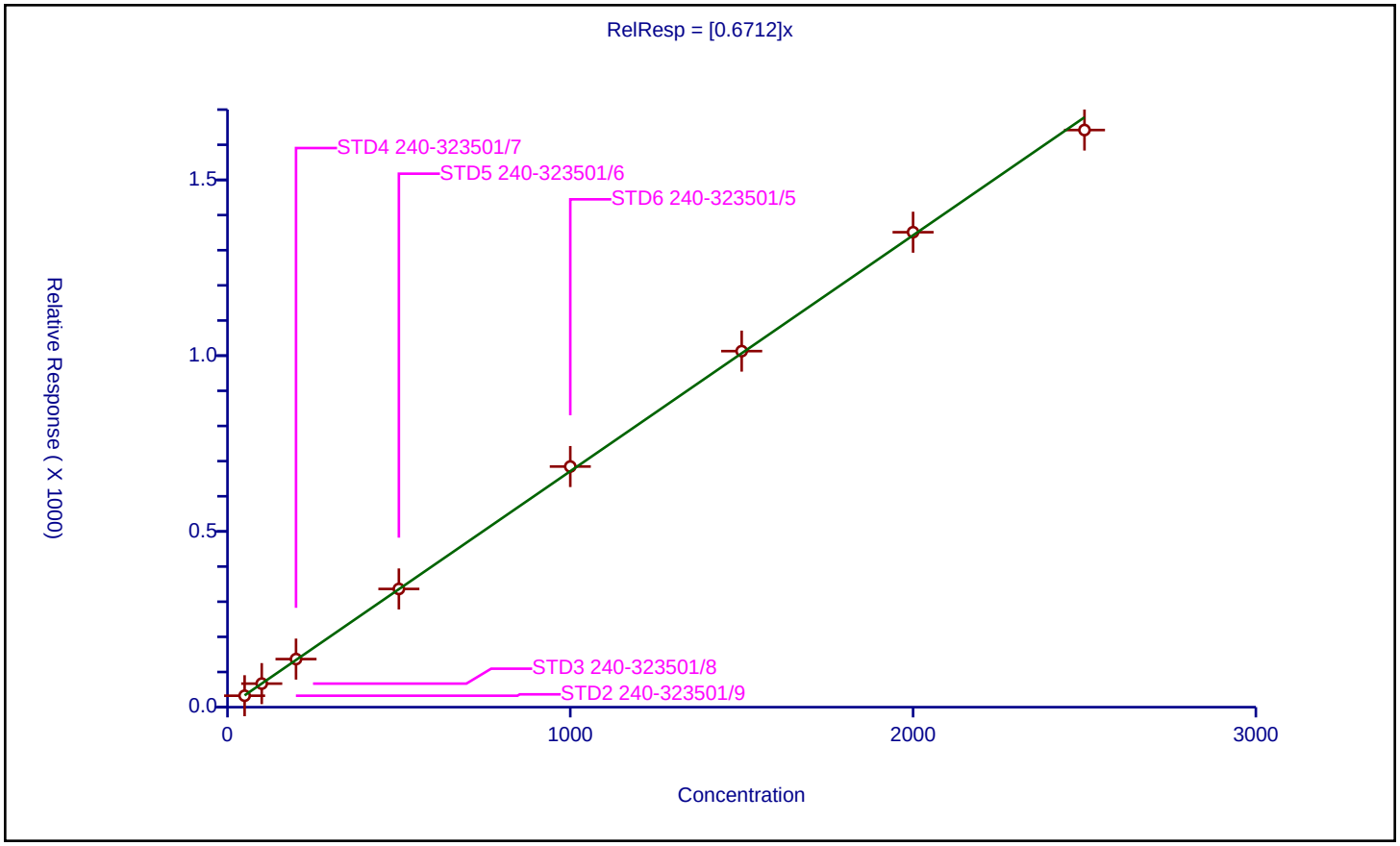
Curve Coefficients

Intercept:	0
Slope:	0.6712

Error Coefficients

Standard Error:	2380000
Relative Standard Error:	1.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	32.533134	400.0	957178.0	0.650663	Y
2	STD3 240-323501/8	100.0	67.023094	400.0	926976.0	0.670231	Y
3	STD4 240-323501/7	200.0	136.769809	400.0	931691.0	0.683849	Y
4	STD5 240-323501/6	500.0	336.347462	400.0	950435.0	0.672695	Y
5	STD6 240-323501/5	1000.0	684.607021	400.0	949160.0	0.684607	Y
6	STD7 240-323501/4	1500.0	1012.900712	400.0	1021556.0	0.675267	Y
7	STD8 240-323501/3	2000.0	1351.223413	400.0	1021609.0	0.675612	Y
8	STD9 240-323501/2	2500.0	1641.878819	400.0	1025559.0	0.656752	Y



Calibration / 2,4-Dimethylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

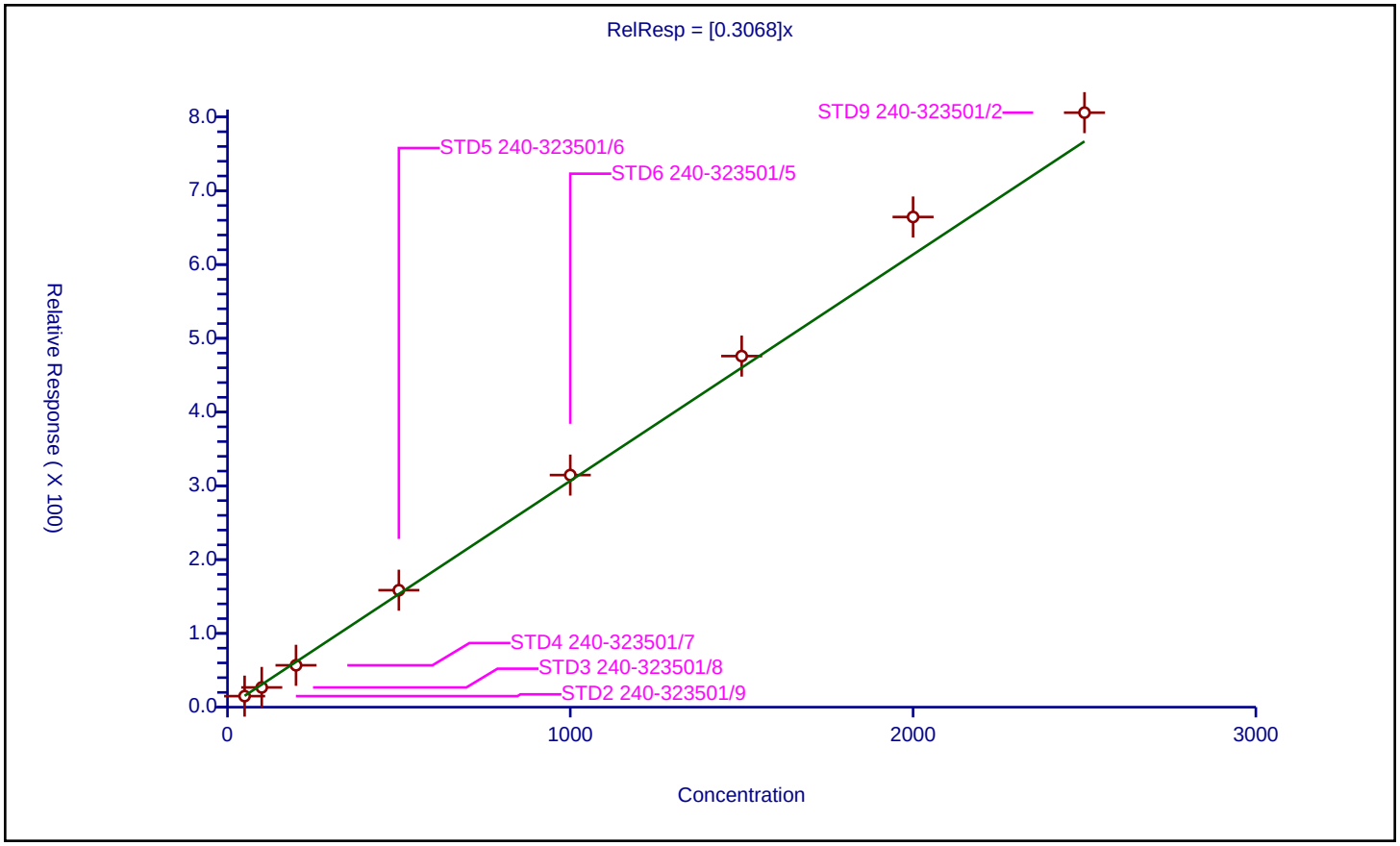
Curve Coefficients

Intercept:	0
Slope:	0.3068

Error Coefficients

Standard Error:	1160000
Relative Standard Error:	7.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	14.961063	400.0	957178.0	0.299221	Y
2	STD3 240-323501/8	100.0	26.749344	400.0	926976.0	0.267493	Y
3	STD4 240-323501/7	200.0	56.765172	400.0	931691.0	0.283826	Y
4	STD5 240-323501/6	500.0	158.559396	400.0	950435.0	0.317119	Y
5	STD6 240-323501/5	1000.0	314.617978	400.0	949160.0	0.314618	Y
6	STD7 240-323501/4	1500.0	475.876408	400.0	1021556.0	0.317251	Y
7	STD8 240-323501/3	2000.0	664.463606	400.0	1021609.0	0.332232	Y
8	STD9 240-323501/2	2500.0	805.8805	400.0	1025559.0	0.322352	Y



Calibration / 2-Nitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

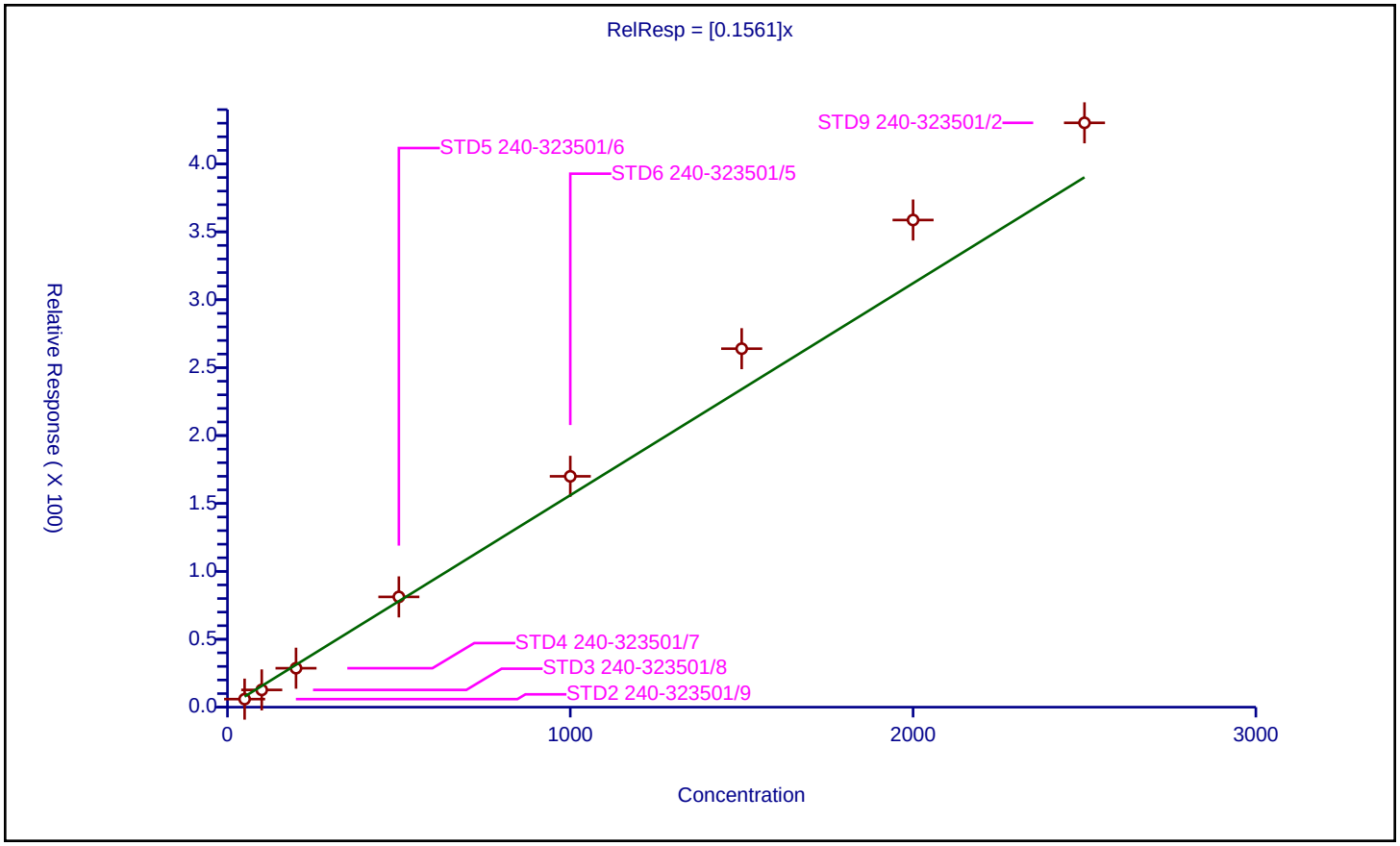
Curve Coefficients

Intercept:	0
Slope:	0.1561

Error Coefficients

Standard Error:	623000
Relative Standard Error:	15.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	5.91238	400.0	957178.0	0.118248	Y
2	STD3 240-323501/8	100.0	12.70842	400.0	926976.0	0.127084	Y
3	STD4 240-323501/7	200.0	28.674314	400.0	931691.0	0.143372	Y
4	STD5 240-323501/6	500.0	81.206605	400.0	950435.0	0.162413	Y
5	STD6 240-323501/5	1000.0	169.972607	400.0	949160.0	0.169973	Y
6	STD7 240-323501/4	1500.0	263.961251	400.0	1021556.0	0.175974	Y
7	STD8 240-323501/3	2000.0	358.706707	400.0	1021609.0	0.179353	Y
8	STD9 240-323501/2	2500.0	430.26408	400.0	1025559.0	0.172106	Y



Calibration / Benzoic acid

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

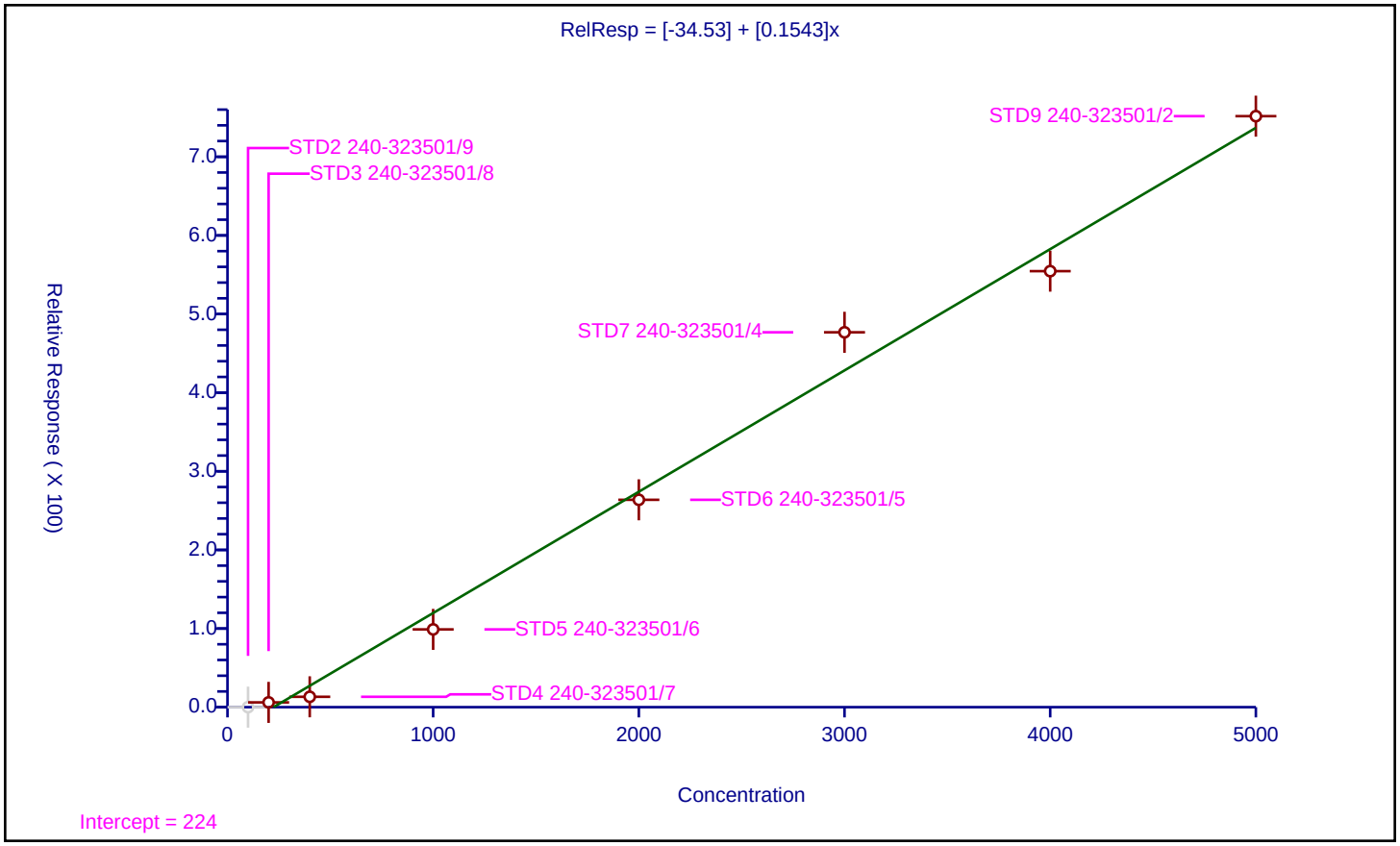
Curve Coefficients

Intercept:	-34.53
Slope:	0.1543

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	19.2
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	0.0	400.0	957178.0	0.0	N
2	STD3 240-323501/8	200.0	6.081711	400.0	926976.0	0.030409	Y
3	STD4 240-323501/7	400.0	13.192786	400.0	931691.0	0.032982	Y
4	STD5 240-323501/6	1000.0	98.913024	400.0	950435.0	0.098913	Y
5	STD6 240-323501/5	2000.0	263.736356	400.0	949160.0	0.131868	Y
6	STD7 240-323501/4	3000.0	476.779344	400.0	1021556.0	0.158926	Y
7	STD8 240-323501/3	4000.0	554.551105	400.0	1021609.0	0.138638	Y
8	STD9 240-323501/2	5000.0	751.672405	400.0	1025559.0	0.150334	Y



Calibration / Bis(2-chloroethoxy)methane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

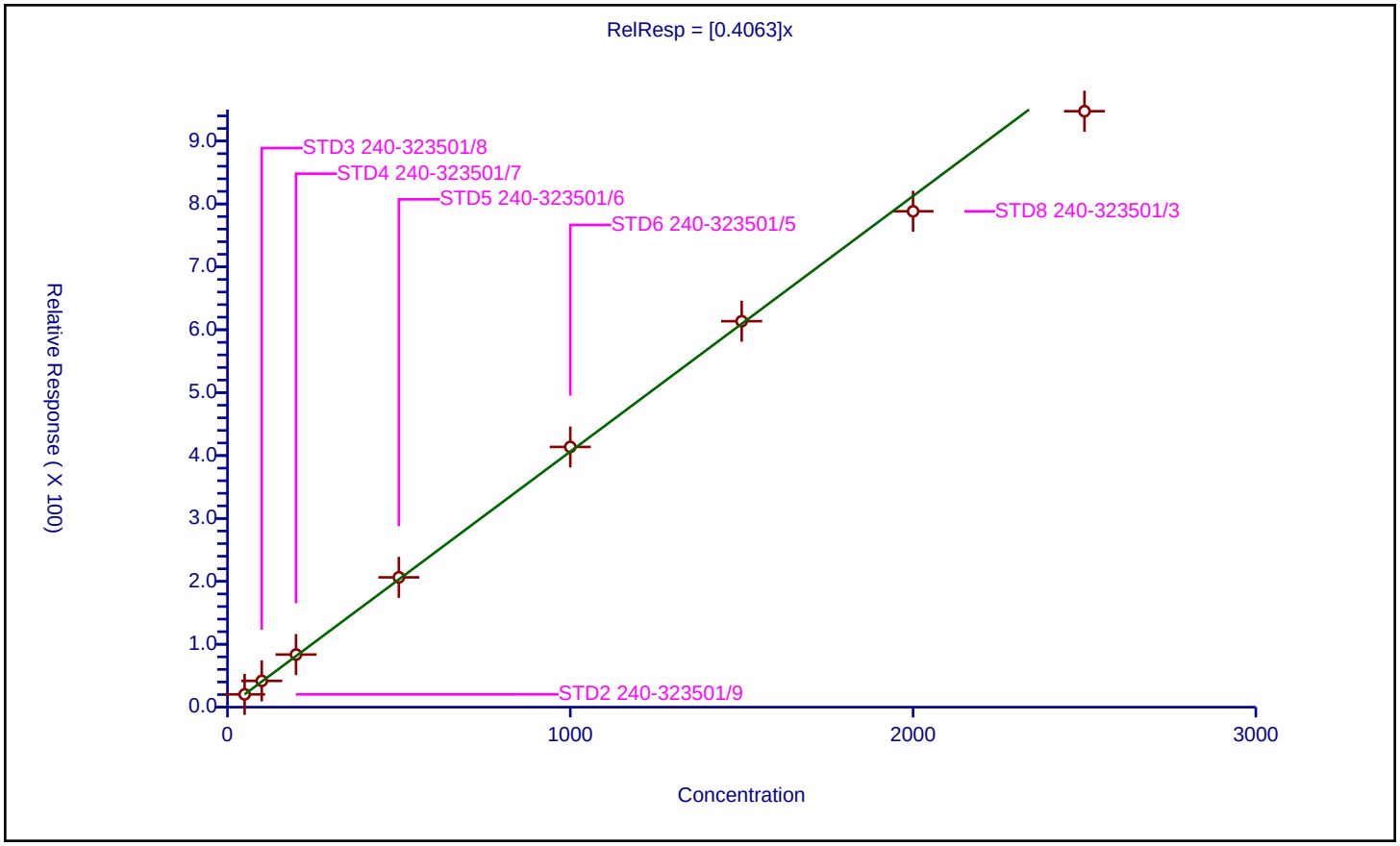
Curve Coefficients

Intercept:	0
Slope:	0.4063

Error Coefficients

Standard Error:	1400000
Relative Standard Error:	3.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	20.306777	400.0	957178.0	0.406136	Y
2	STD3 240-323501/8	100.0	41.752969	400.0	926976.0	0.41753	Y
3	STD4 240-323501/7	200.0	83.605401	400.0	931691.0	0.418027	Y
4	STD5 240-323501/6	500.0	206.354354	400.0	950435.0	0.412709	Y
5	STD6 240-323501/5	1000.0	413.691685	400.0	949160.0	0.413692	Y
6	STD7 240-323501/4	1500.0	613.629405	400.0	1021556.0	0.409086	Y
7	STD8 240-323501/3	2000.0	788.322734	400.0	1021609.0	0.394161	Y
8	STD9 240-323501/2	2500.0	947.467674	400.0	1025559.0	0.378987	Y



Calibration / 2,4-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

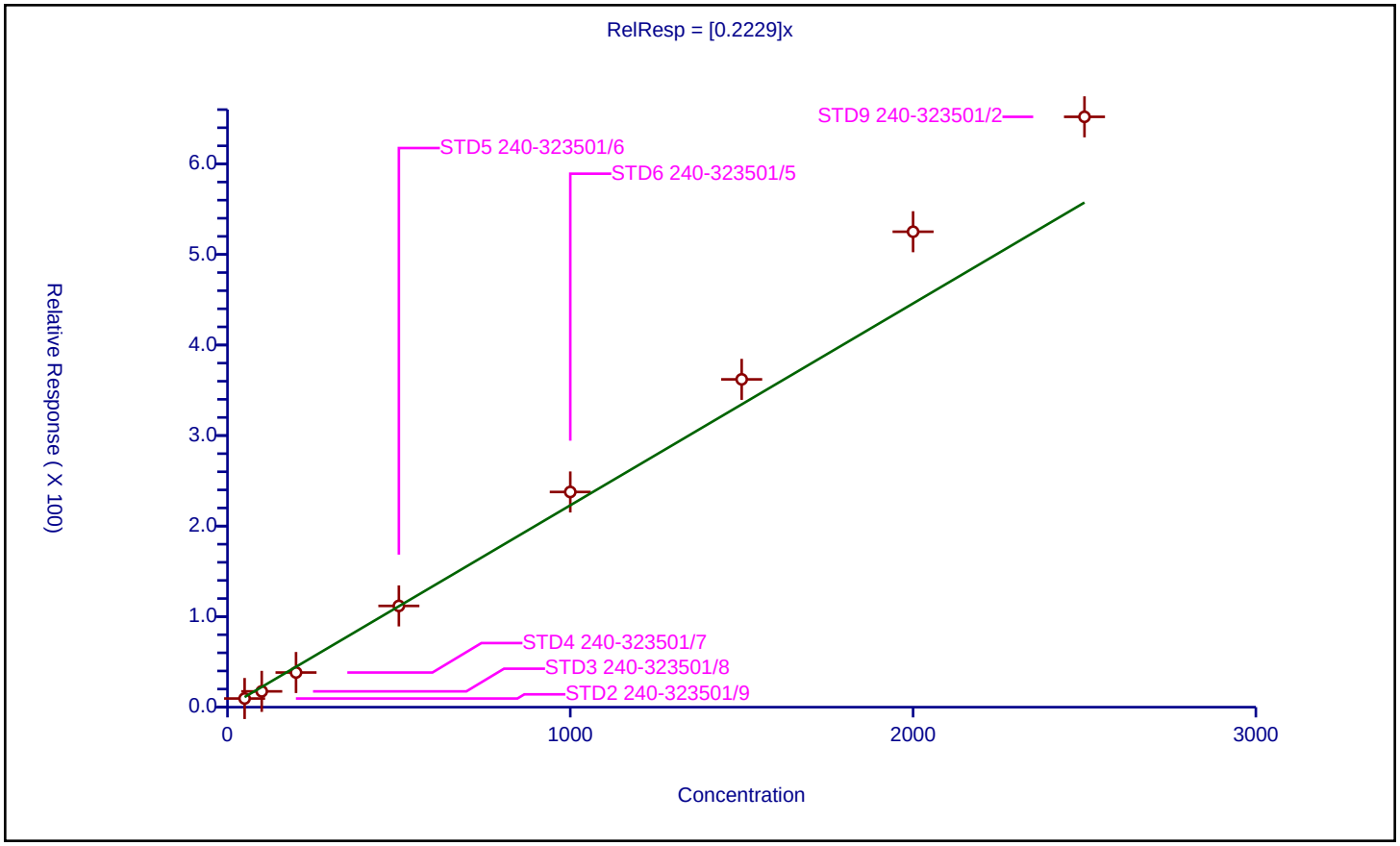
Curve Coefficients

Intercept:	0
Slope:	0.2229

Error Coefficients

Standard Error:	914000
Relative Standard Error:	15.1
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	9.56938	400.0	957178.0	0.191388	Y
2	STD3 240-323501/8	100.0	17.468413	400.0	926976.0	0.174684	Y
3	STD4 240-323501/7	200.0	38.277498	400.0	931691.0	0.191387	Y
4	STD5 240-323501/6	500.0	111.842262	400.0	950435.0	0.223685	Y
5	STD6 240-323501/5	1000.0	237.682161	400.0	949160.0	0.237682	Y
6	STD7 240-323501/4	1500.0	362.05788	400.0	1021556.0	0.241372	Y
7	STD8 240-323501/3	2000.0	525.132414	400.0	1021609.0	0.262566	Y
8	STD9 240-323501/2	2500.0	652.040887	400.0	1025559.0	0.260816	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

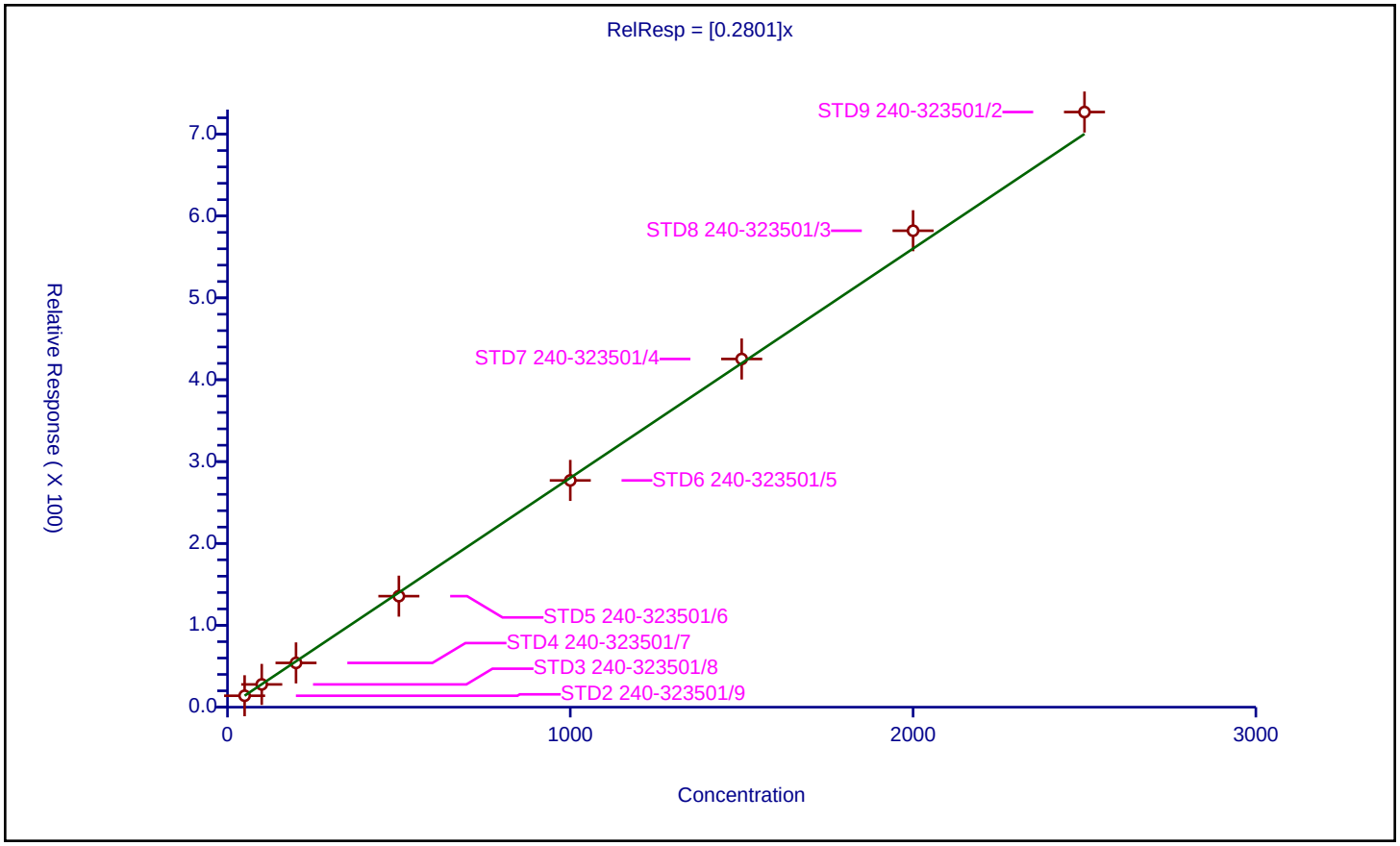
Curve Coefficients

Intercept:	0
Slope:	0.2801

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	2.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	13.944324	400.0	957178.0	0.278886	Y
2	STD3 240-323501/8	100.0	27.800936	400.0	926976.0	0.278009	Y
3	STD4 240-323501/7	200.0	54.064277	400.0	931691.0	0.270321	Y
4	STD5 240-323501/6	500.0	135.623372	400.0	950435.0	0.271247	Y
5	STD6 240-323501/5	1000.0	276.993131	400.0	949160.0	0.276993	Y
6	STD7 240-323501/4	1500.0	425.363269	400.0	1021556.0	0.283576	Y
7	STD8 240-323501/3	2000.0	582.034418	400.0	1021609.0	0.291017	Y
8	STD9 240-323501/2	2500.0	727.054026	400.0	1025559.0	0.290822	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

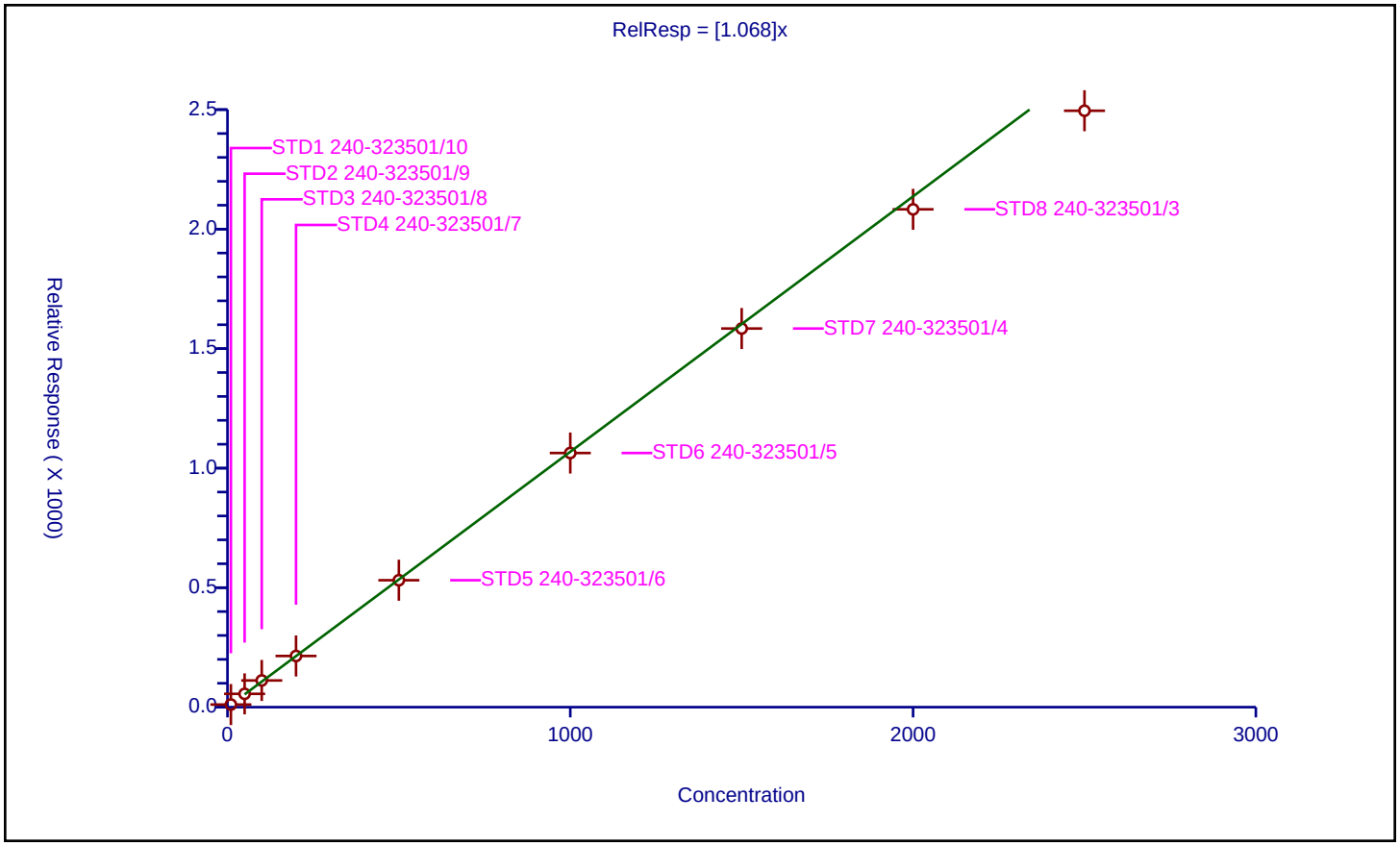
Curve Coefficients

Intercept:	0
Slope:	1.068

Error Coefficients

Standard Error:	3420000
Relative Standard Error:	3.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	10.922984	400.0	839148.0	1.092298	Y
2	STD2 240-323501/9	50.0	55.737177	400.0	957178.0	1.114744	Y
3	STD3 240-323501/8	100.0	111.721123	400.0	926976.0	1.117211	Y
4	STD4 240-323501/7	200.0	214.14997	400.0	931691.0	1.07075	Y
5	STD5 240-323501/6	500.0	531.047363	400.0	950435.0	1.062095	Y
6	STD6 240-323501/5	1000.0	1063.288803	400.0	949160.0	1.063289	Y
7	STD7 240-323501/4	1500.0	1584.085846	400.0	1021556.0	1.056057	Y
8	STD8 240-323501/3	2000.0	2082.778441	400.0	1021609.0	1.041389	Y
9	STD9 240-323501/2	2500.0	2495.194913	400.0	1025559.0	0.998078	Y



Calibration / 4-Chloroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

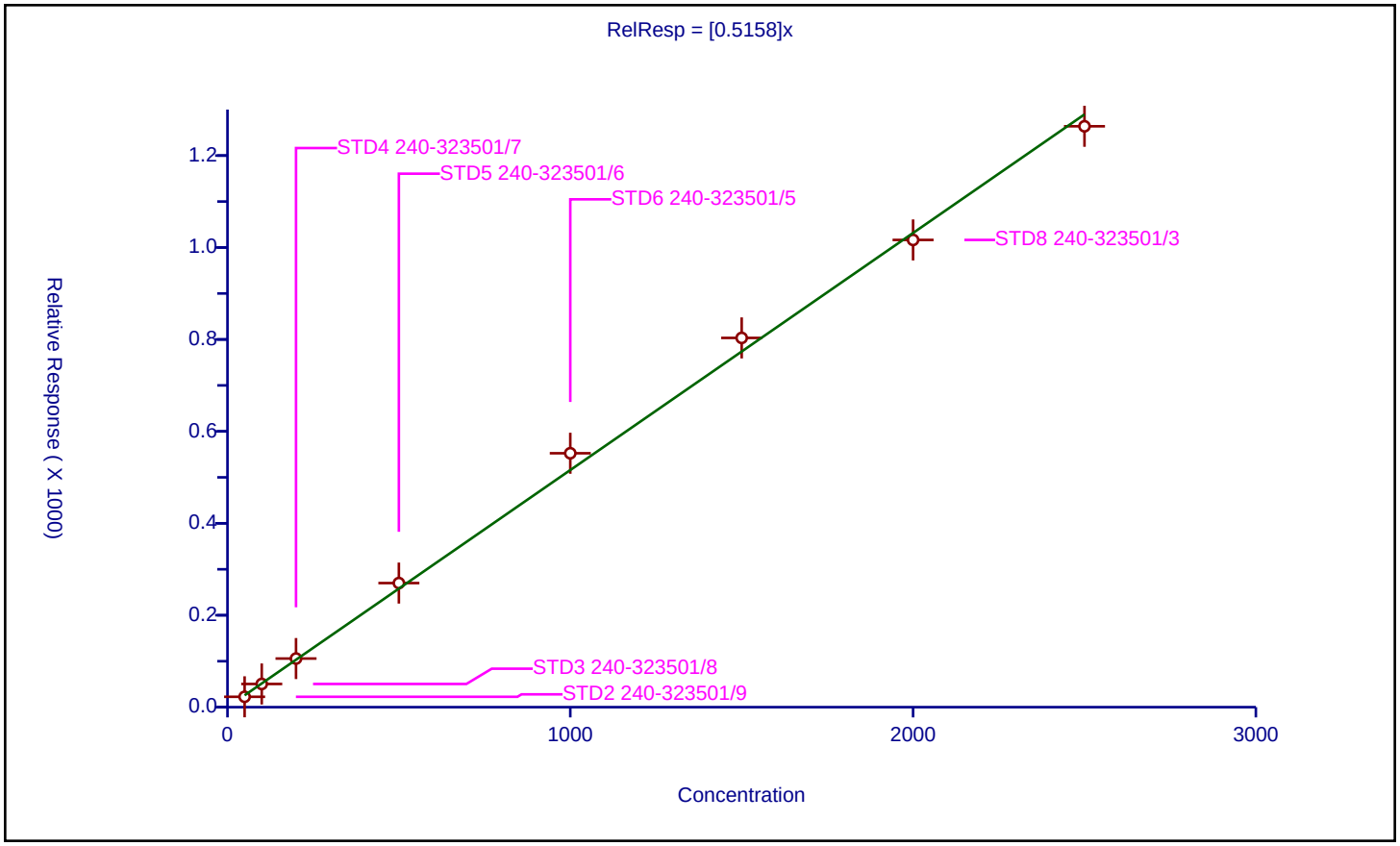
Curve Coefficients

Intercept:	0
Slope:	0.5158

Error Coefficients

Standard Error:	1840000
Relative Standard Error:	6.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	22.579708	400.0	957178.0	0.451594	Y
2	STD3 240-323501/8	100.0	50.450497	400.0	926976.0	0.504505	Y
3	STD4 240-323501/7	200.0	105.765538	400.0	931691.0	0.528828	Y
4	STD5 240-323501/6	500.0	269.945867	400.0	950435.0	0.539892	Y
5	STD6 240-323501/5	1000.0	552.382317	400.0	949160.0	0.552382	Y
6	STD7 240-323501/4	1500.0	803.338437	400.0	1021556.0	0.535559	Y
7	STD8 240-323501/3	2000.0	1016.50005	400.0	1021609.0	0.50825	Y
8	STD9 240-323501/2	2500.0	1263.699114	400.0	1025559.0	0.50548	Y



Calibration / 2,6-Dichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

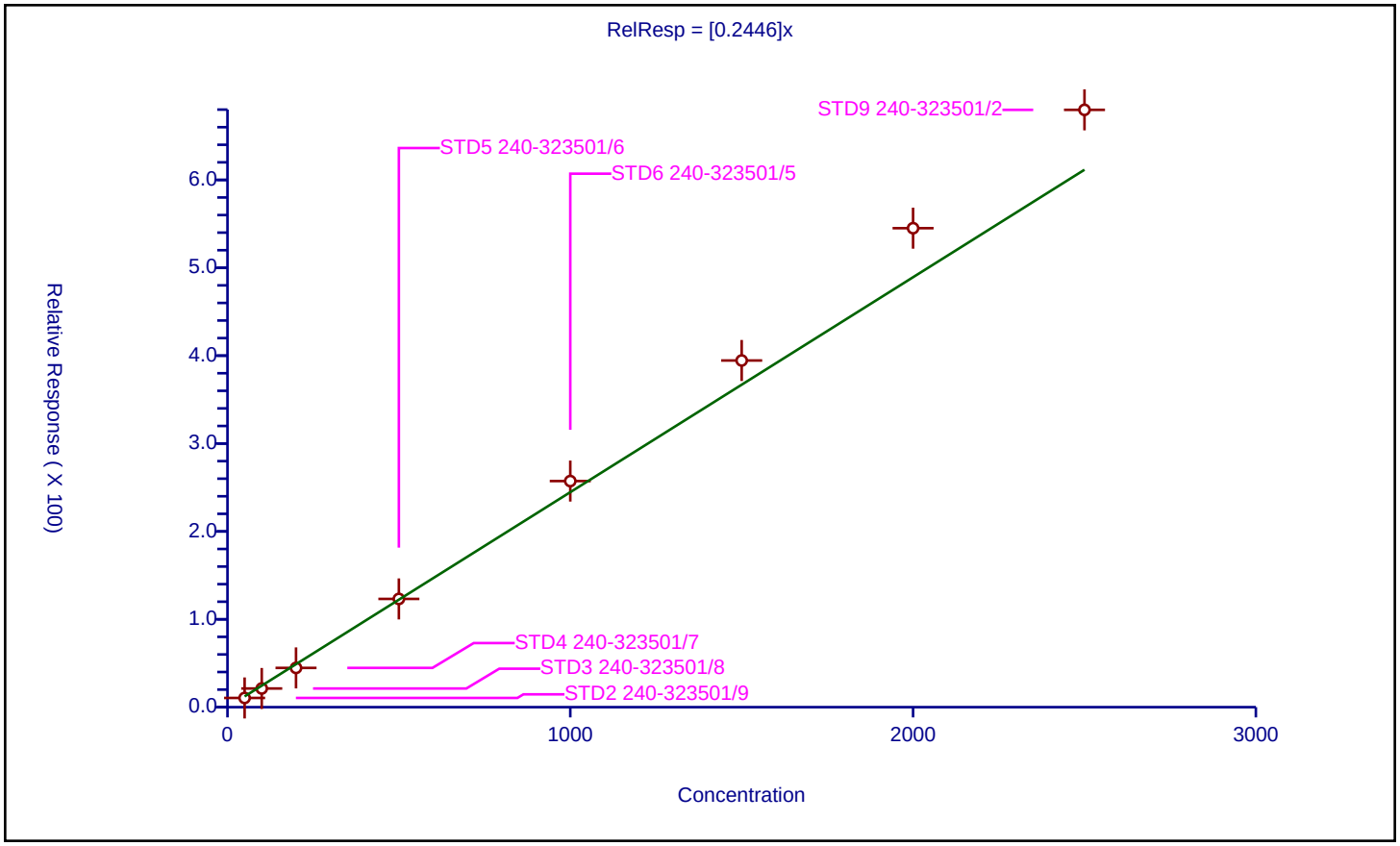
Curve Coefficients

Intercept:	0
Slope:	0.2446

Error Coefficients

Standard Error:	960000
Relative Standard Error:	10.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	10.498361	400.0	957178.0	0.209967	Y
2	STD3 240-323501/8	100.0	21.263549	400.0	926976.0	0.212635	Y
3	STD4 240-323501/7	200.0	44.685201	400.0	931691.0	0.223426	Y
4	STD5 240-323501/6	500.0	123.172232	400.0	950435.0	0.246344	Y
5	STD6 240-323501/5	1000.0	257.279279	400.0	949160.0	0.257279	Y
6	STD7 240-323501/4	1500.0	394.495064	400.0	1021556.0	0.262997	Y
7	STD8 240-323501/3	2000.0	545.055496	400.0	1021609.0	0.272528	Y
8	STD9 240-323501/2	2500.0	679.732712	400.0	1025559.0	0.271893	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

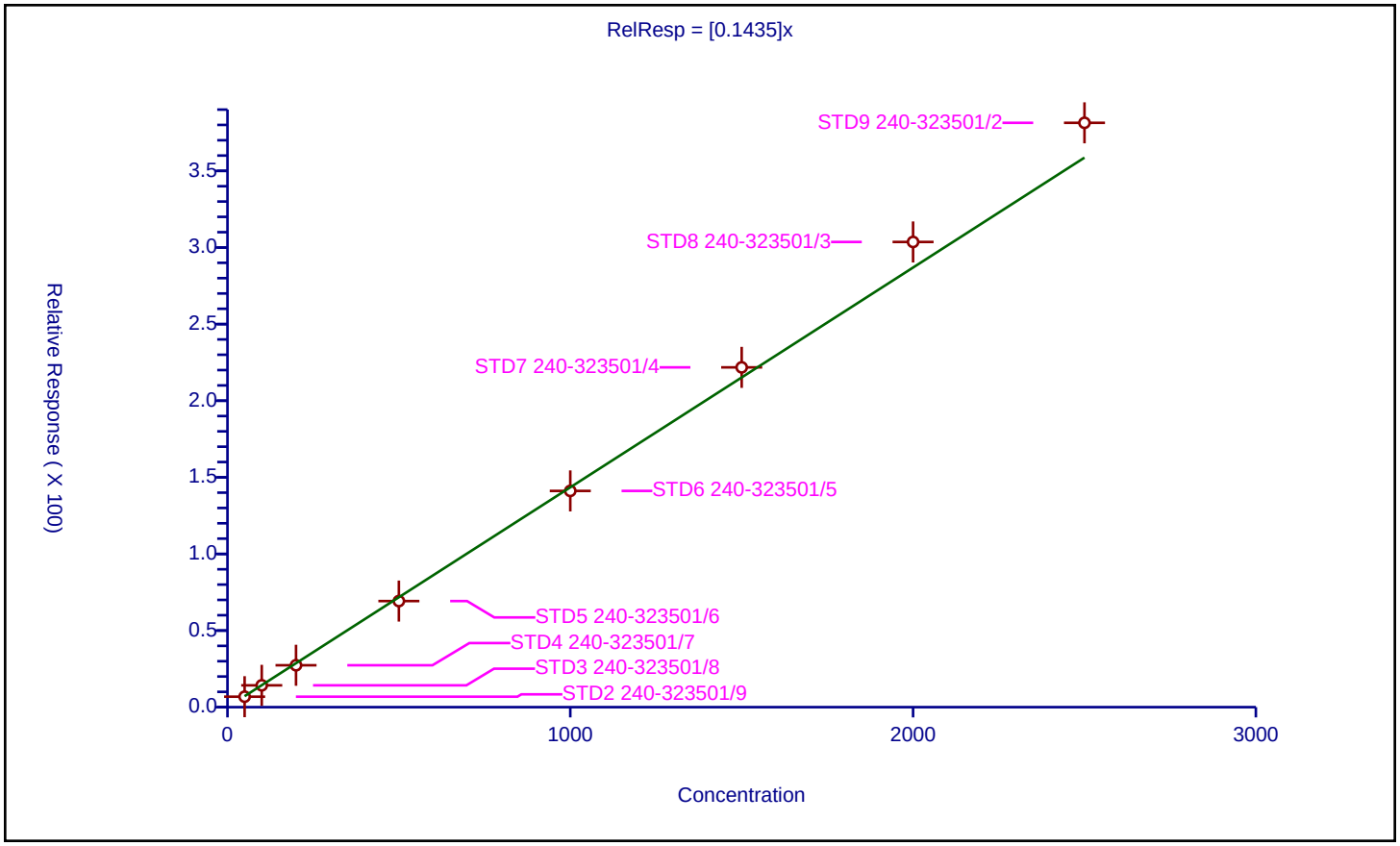
Curve Coefficients

Intercept:	0
Slope:	0.1435

Error Coefficients

Standard Error:	537000
Relative Standard Error:	4.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	6.830913	400.0	957178.0	0.136618	Y
2	STD3 240-323501/8	100.0	14.253659	400.0	926976.0	0.142537	Y
3	STD4 240-323501/7	200.0	27.346406	400.0	931691.0	0.136732	Y
4	STD5 240-323501/6	500.0	69.239033	400.0	950435.0	0.138478	Y
5	STD6 240-323501/5	1000.0	141.132791	400.0	949160.0	0.141133	Y
6	STD7 240-323501/4	1500.0	221.774235	400.0	1021556.0	0.147849	Y
7	STD8 240-323501/3	2000.0	303.627317	400.0	1021609.0	0.151814	Y
8	STD9 240-323501/2	2500.0	381.36821	400.0	1025559.0	0.152547	Y



Calibration / Caprolactam

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

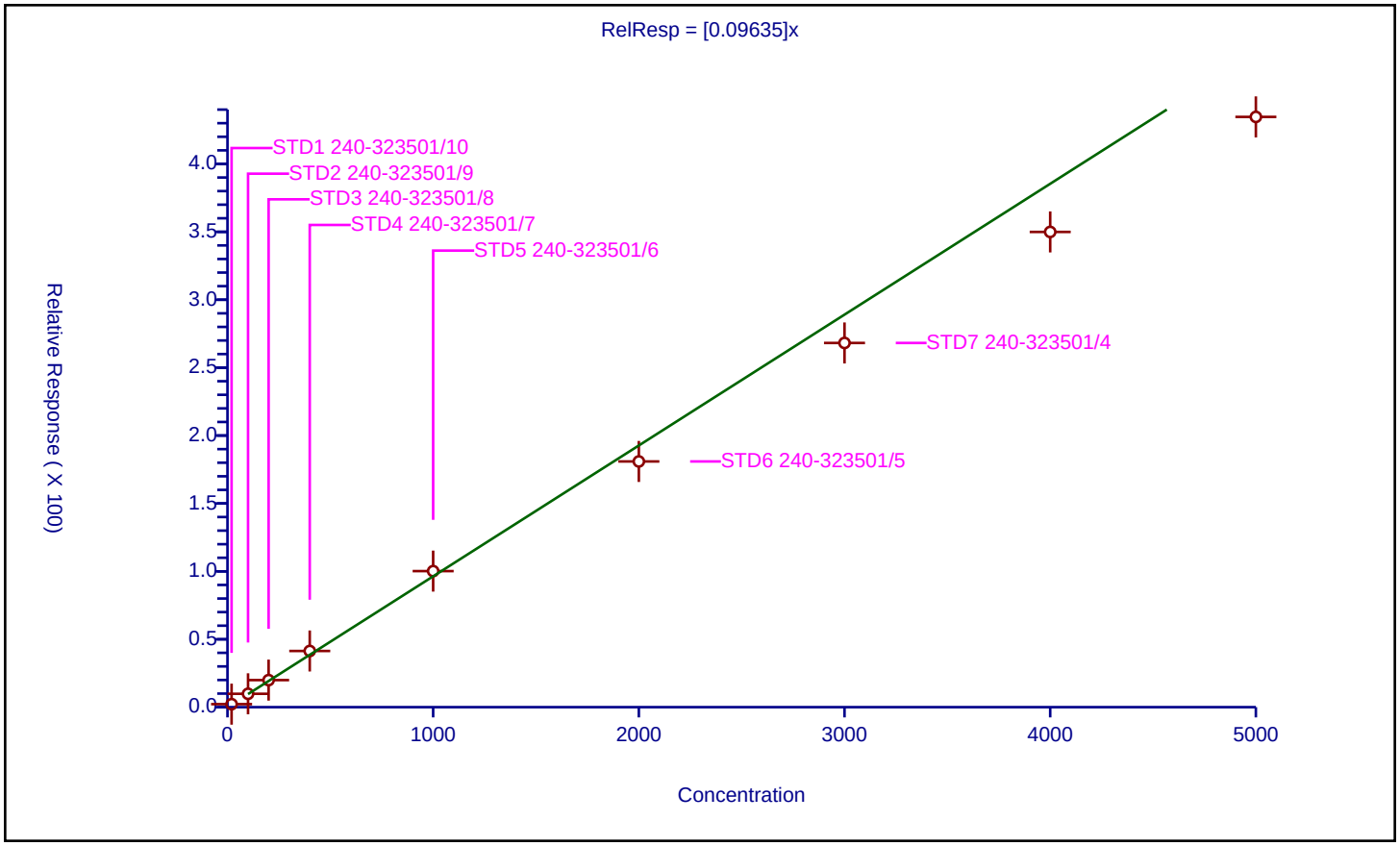
Curve Coefficients

Intercept:	0
Slope:	0.09635

Error Coefficients

Standard Error:	587000
Relative Standard Error:	8.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	20.0	2.222731	400.0	839148.0	0.111137	Y
2	STD2 240-323501/9	100.0	9.851877	400.0	957178.0	0.098519	Y
3	STD3 240-323501/8	200.0	19.917668	400.0	926976.0	0.099588	Y
4	STD4 240-323501/7	400.0	41.369081	400.0	931691.0	0.103423	Y
5	STD5 240-323501/6	1000.0	100.181075	400.0	950435.0	0.100181	Y
6	STD6 240-323501/5	2000.0	180.926293	400.0	949160.0	0.090463	Y
7	STD7 240-323501/4	3000.0	268.17639	400.0	1021556.0	0.089392	Y
8	STD8 240-323501/3	4000.0	349.935445	400.0	1021609.0	0.087484	Y
9	STD9 240-323501/2	5000.0	434.623459	400.0	1025559.0	0.086925	Y



Calibration / 4-Chloro-3-methylphenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

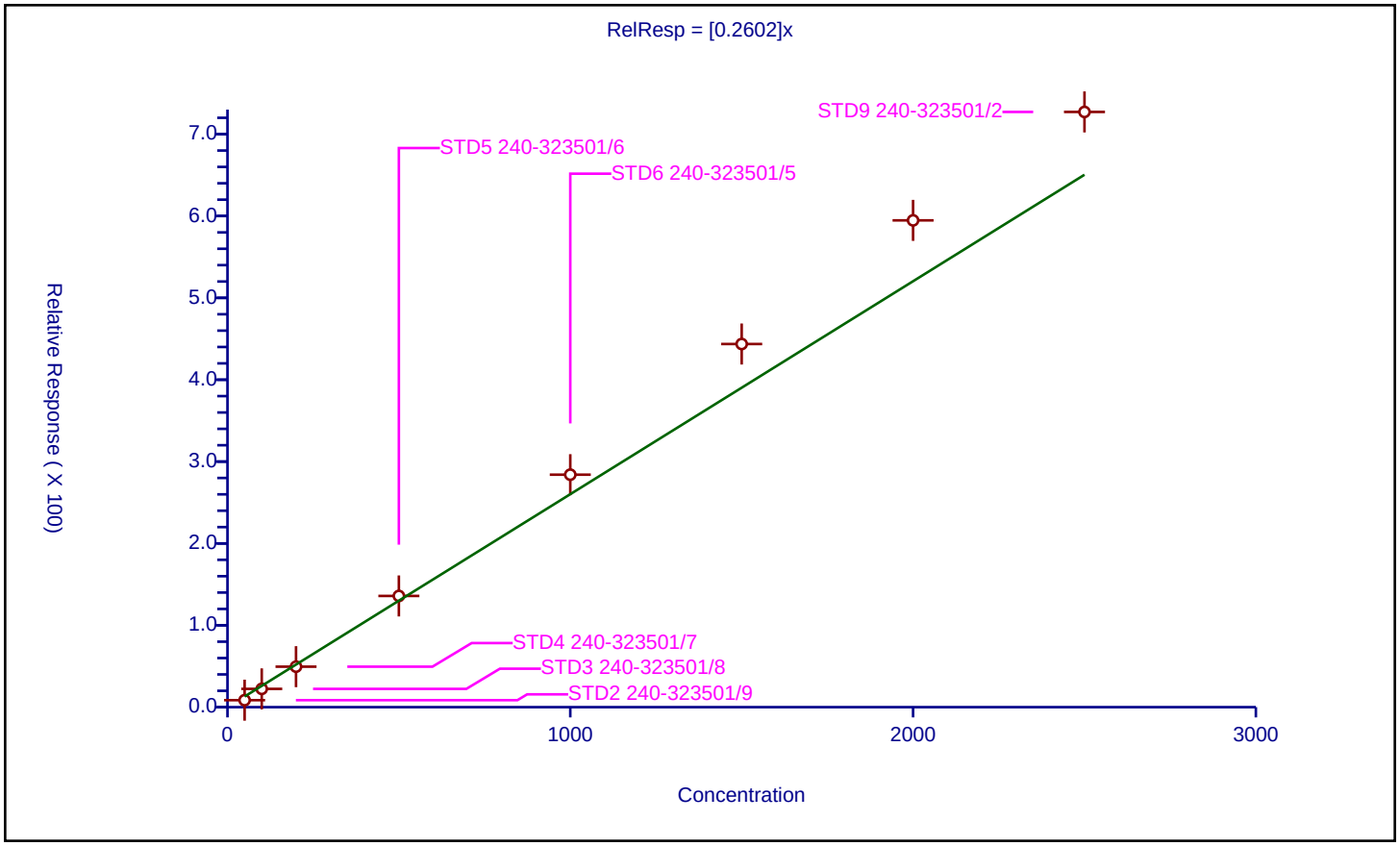
Curve Coefficients

Intercept:	0
Slope:	0.2602

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	17.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	8.537179	400.0	957178.0	0.170744	Y
2	STD3 240-323501/8	100.0	22.350525	400.0	926976.0	0.223505	Y
3	STD4 240-323501/7	200.0	49.480783	400.0	931691.0	0.247404	Y
4	STD5 240-323501/6	500.0	135.861579	400.0	950435.0	0.271723	Y
5	STD6 240-323501/5	1000.0	284.019133	400.0	949160.0	0.284019	Y
6	STD7 240-323501/4	1500.0	443.630697	400.0	1021556.0	0.295754	Y
7	STD8 240-323501/3	2000.0	594.701887	400.0	1021609.0	0.297351	Y
8	STD9 240-323501/2	2500.0	727.161675	400.0	1025559.0	0.290865	Y



Calibration / 2-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

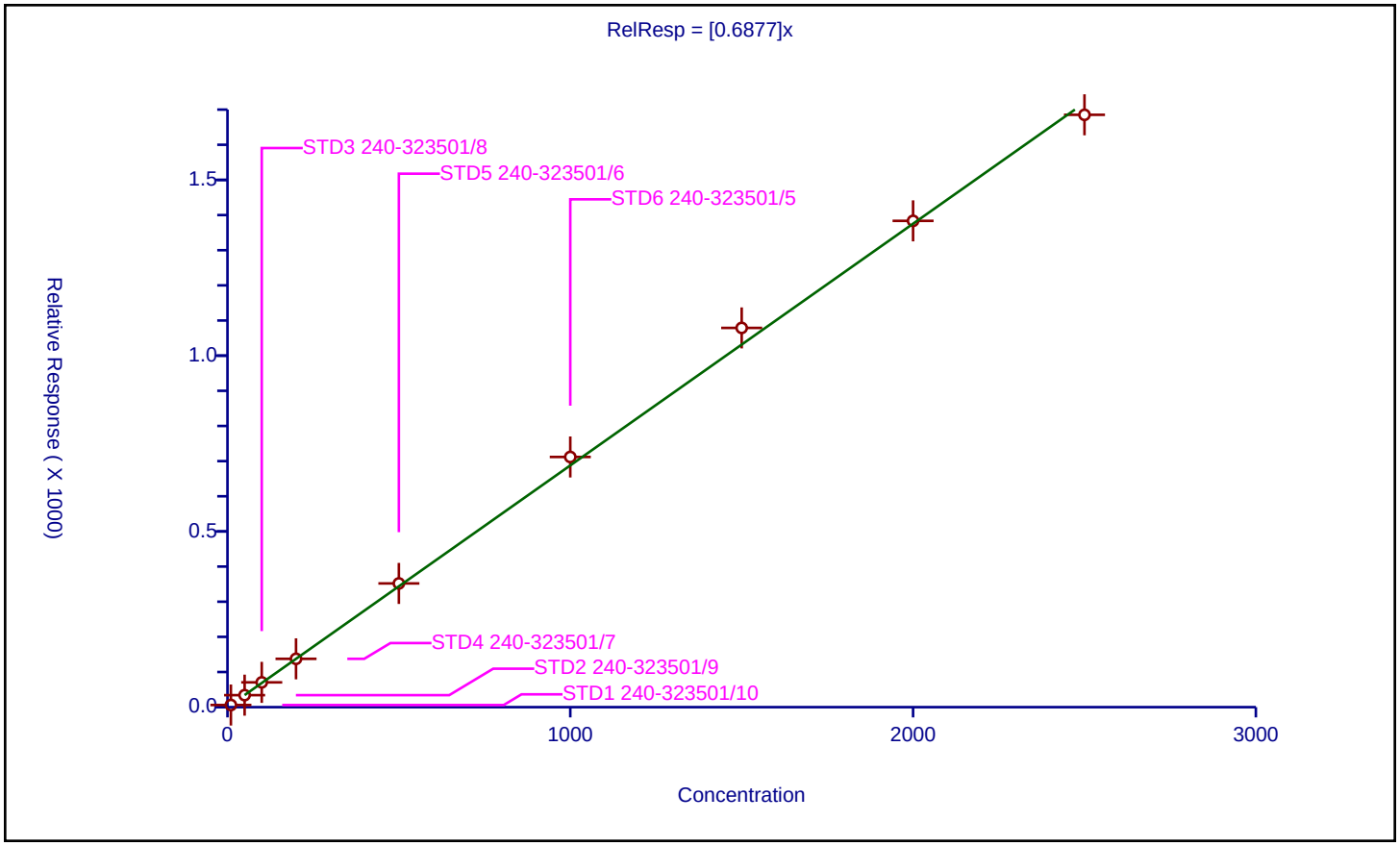
Curve Coefficients

Intercept:	0
Slope:	0.6877

Error Coefficients

Standard Error:	2300000
Relative Standard Error:	4.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	6.11239	400.0	839148.0	0.611239	Y
2	STD2 240-323501/9	50.0	34.202625	400.0	957178.0	0.684052	Y
3	STD3 240-323501/8	100.0	70.545516	400.0	926976.0	0.705455	Y
4	STD4 240-323501/7	200.0	137.52199	400.0	931691.0	0.68761	Y
5	STD5 240-323501/6	500.0	352.036699	400.0	950435.0	0.704073	Y
6	STD6 240-323501/5	1000.0	711.761979	400.0	949160.0	0.711762	Y
7	STD7 240-323501/4	1500.0	1078.942711	400.0	1021556.0	0.719295	Y
8	STD8 240-323501/3	2000.0	1383.503473	400.0	1021609.0	0.691752	Y
9	STD9 240-323501/2	2500.0	1685.194513	400.0	1025559.0	0.674078	Y



Calibration / 1-Methylnaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

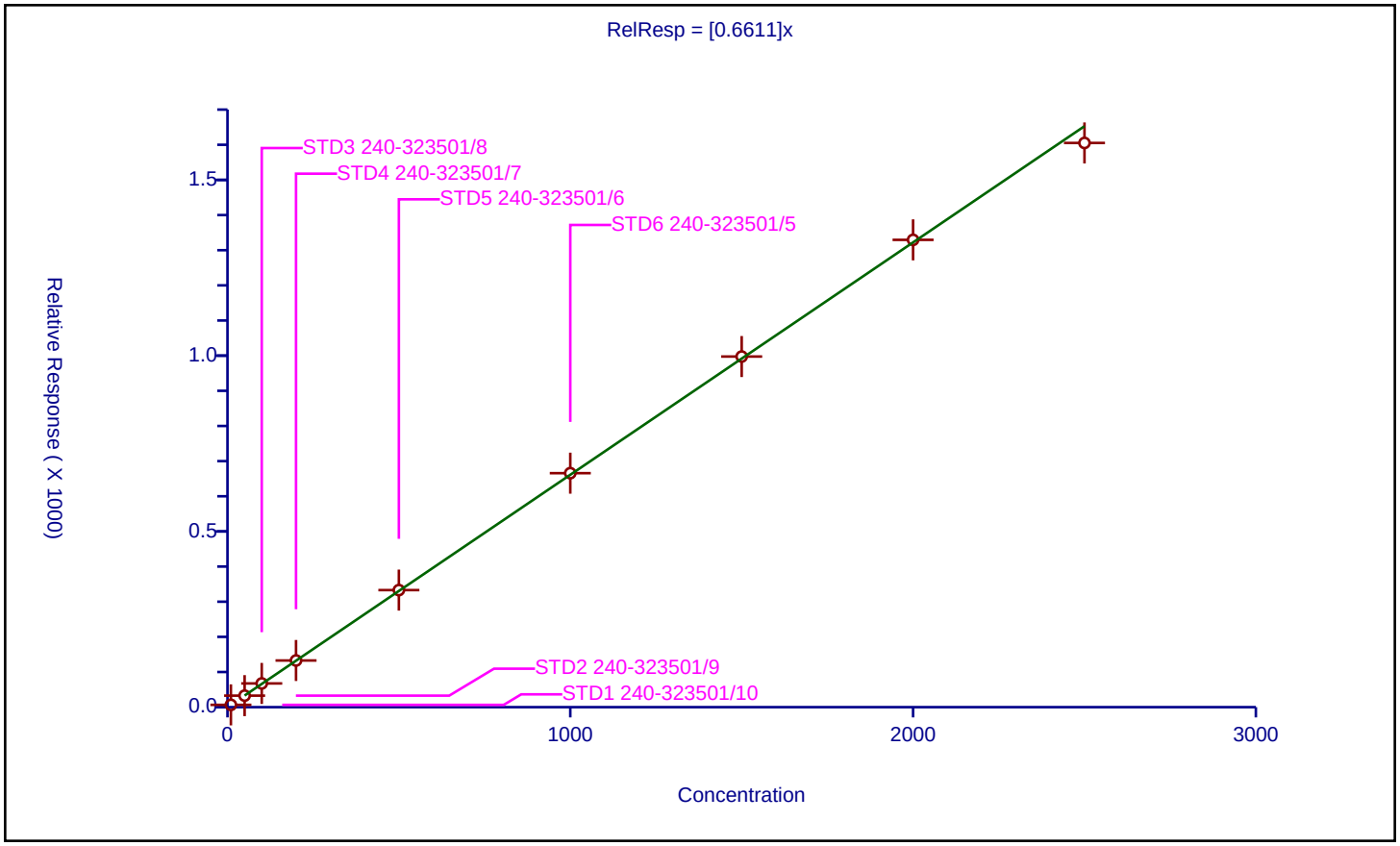
Curve Coefficients

Intercept:	0
Slope:	0.6611

Error Coefficients

Standard Error:	2180000
Relative Standard Error:	1.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	6.514226	400.0	839148.0	0.651423	Y
2	STD2 240-323501/9	50.0	32.808527	400.0	957178.0	0.656171	Y
3	STD3 240-323501/8	100.0	67.499914	400.0	926976.0	0.674999	Y
4	STD4 240-323501/7	200.0	132.787373	400.0	931691.0	0.663937	Y
5	STD5 240-323501/6	500.0	333.025615	400.0	950435.0	0.666051	Y
6	STD6 240-323501/5	1000.0	665.690084	400.0	949160.0	0.66569	Y
7	STD7 240-323501/4	1500.0	997.505374	400.0	1021556.0	0.665004	Y
8	STD8 240-323501/3	2000.0	1329.463229	400.0	1021609.0	0.664732	Y
9	STD9 240-323501/2	2500.0	1605.114869	400.0	1025559.0	0.642046	Y



Calibration / Hexachlorocyclopentadiene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

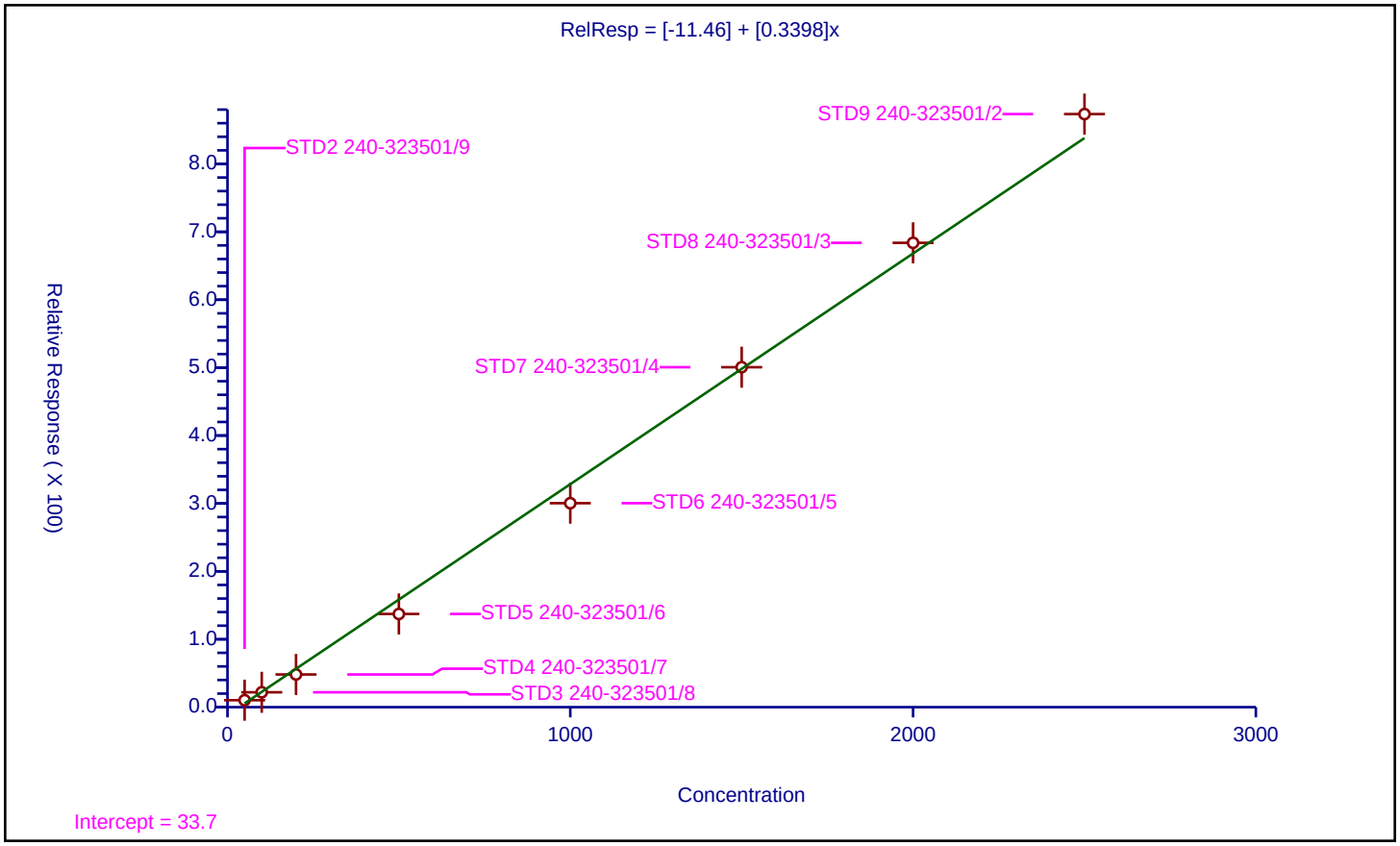
Curve Coefficients

Intercept:	-11.46
Slope:	0.3398

Error Coefficients

Standard Error:	651000
Relative Standard Error:	14.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	10.260147	400.0	469389.0	0.205203	Y
2	STD3 240-323501/8	100.0	21.926986	400.0	466293.0	0.21927	Y
3	STD4 240-323501/7	200.0	48.14612	400.0	465699.0	0.240731	Y
4	STD5 240-323501/6	500.0	137.241198	400.0	472756.0	0.274482	Y
5	STD6 240-323501/5	1000.0	300.393007	400.0	469457.0	0.300393	Y
6	STD7 240-323501/4	1500.0	500.631009	400.0	501261.0	0.333754	Y
7	STD8 240-323501/3	2000.0	683.807946	400.0	508379.0	0.341904	Y
8	STD9 240-323501/2	2500.0	873.403251	400.0	510506.0	0.349361	Y



Calibration / 1,2,4,5-Tetrachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

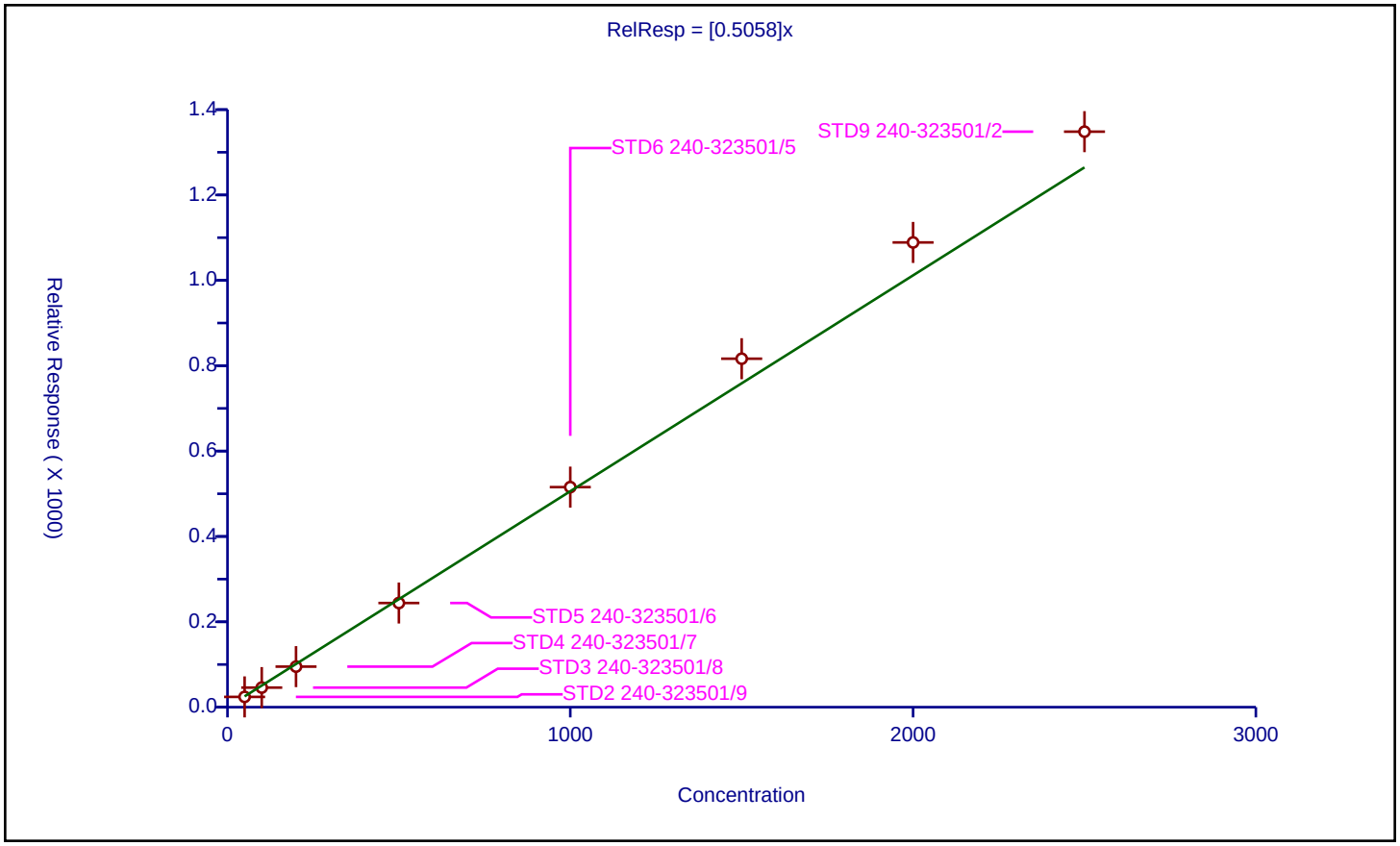
Curve Coefficients

Intercept:	0
Slope:	0.5058

Error Coefficients

Standard Error:	955000
Relative Standard Error:	6.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	24.079814	400.0	469389.0	0.481596	Y
2	STD3 240-323501/8	100.0	45.85872	400.0	466293.0	0.458587	Y
3	STD4 240-323501/7	200.0	94.993547	400.0	465699.0	0.474968	Y
4	STD5 240-323501/6	500.0	243.982096	400.0	472756.0	0.487964	Y
5	STD6 240-323501/5	1000.0	515.552223	400.0	469457.0	0.515552	Y
6	STD7 240-323501/4	1500.0	816.380289	400.0	501261.0	0.544254	Y
7	STD8 240-323501/3	2000.0	1088.793203	400.0	508379.0	0.544397	Y
8	STD9 240-323501/2	2500.0	1348.29287	400.0	510506.0	0.539317	Y



Calibration / 2,4,6-Trichlorophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

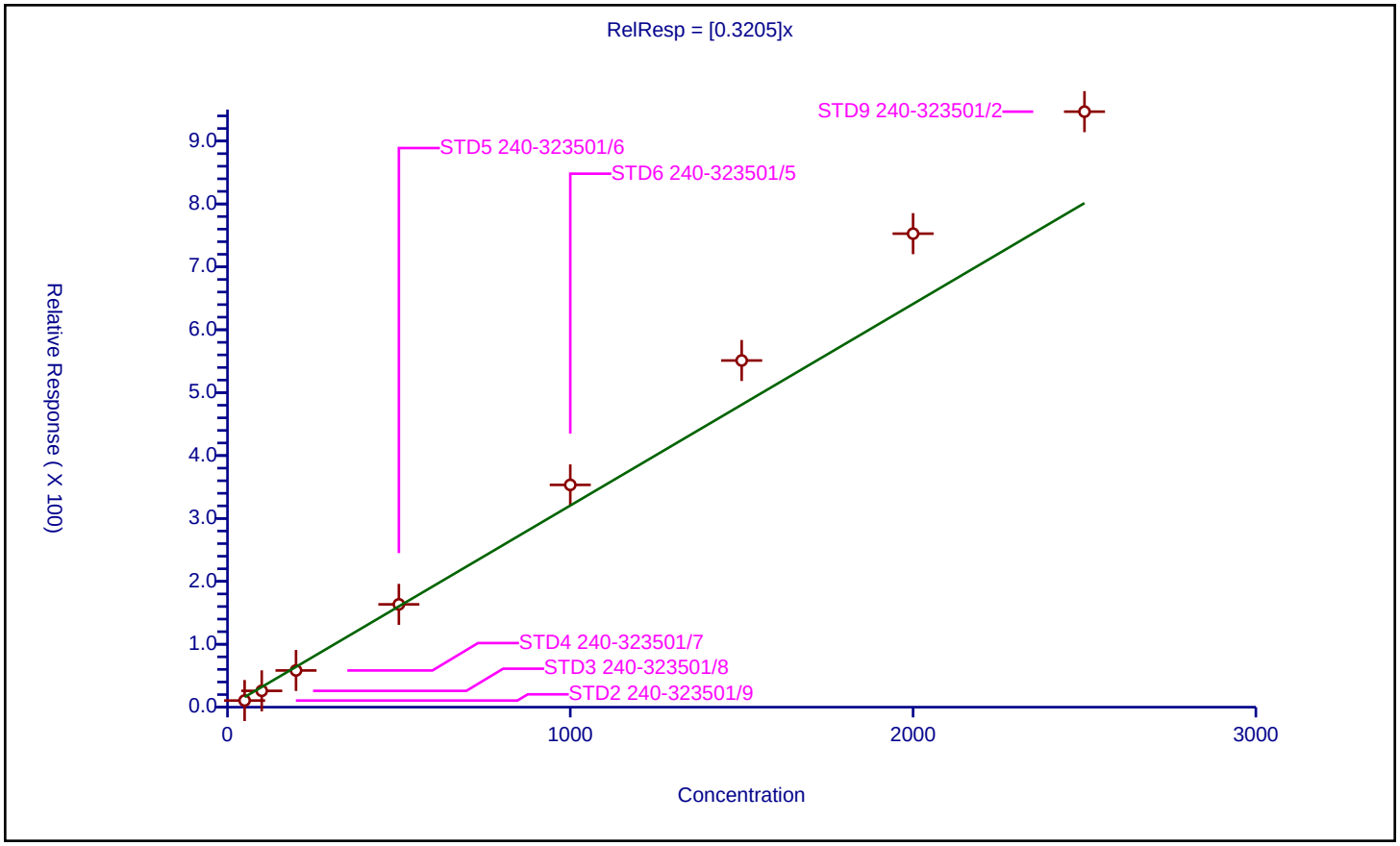
Curve Coefficients

Intercept:	0
Slope:	0.3205

Error Coefficients

Standard Error:	662000
Relative Standard Error:	19.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	10.517503	400.0	469389.0	0.21035	Y
2	STD3 240-323501/8	100.0	25.940771	400.0	466293.0	0.259408	Y
3	STD4 240-323501/7	200.0	58.350136	400.0	465699.0	0.291751	Y
4	STD5 240-323501/6	500.0	163.443298	400.0	472756.0	0.326887	Y
5	STD6 240-323501/5	1000.0	353.395519	400.0	469457.0	0.353396	Y
6	STD7 240-323501/4	1500.0	551.140424	400.0	501261.0	0.367427	Y
7	STD8 240-323501/3	2000.0	752.817878	400.0	508379.0	0.376409	Y
8	STD9 240-323501/2	2500.0	946.764191	400.0	510506.0	0.378706	Y



Calibration / 2,4,5-Trichlorophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

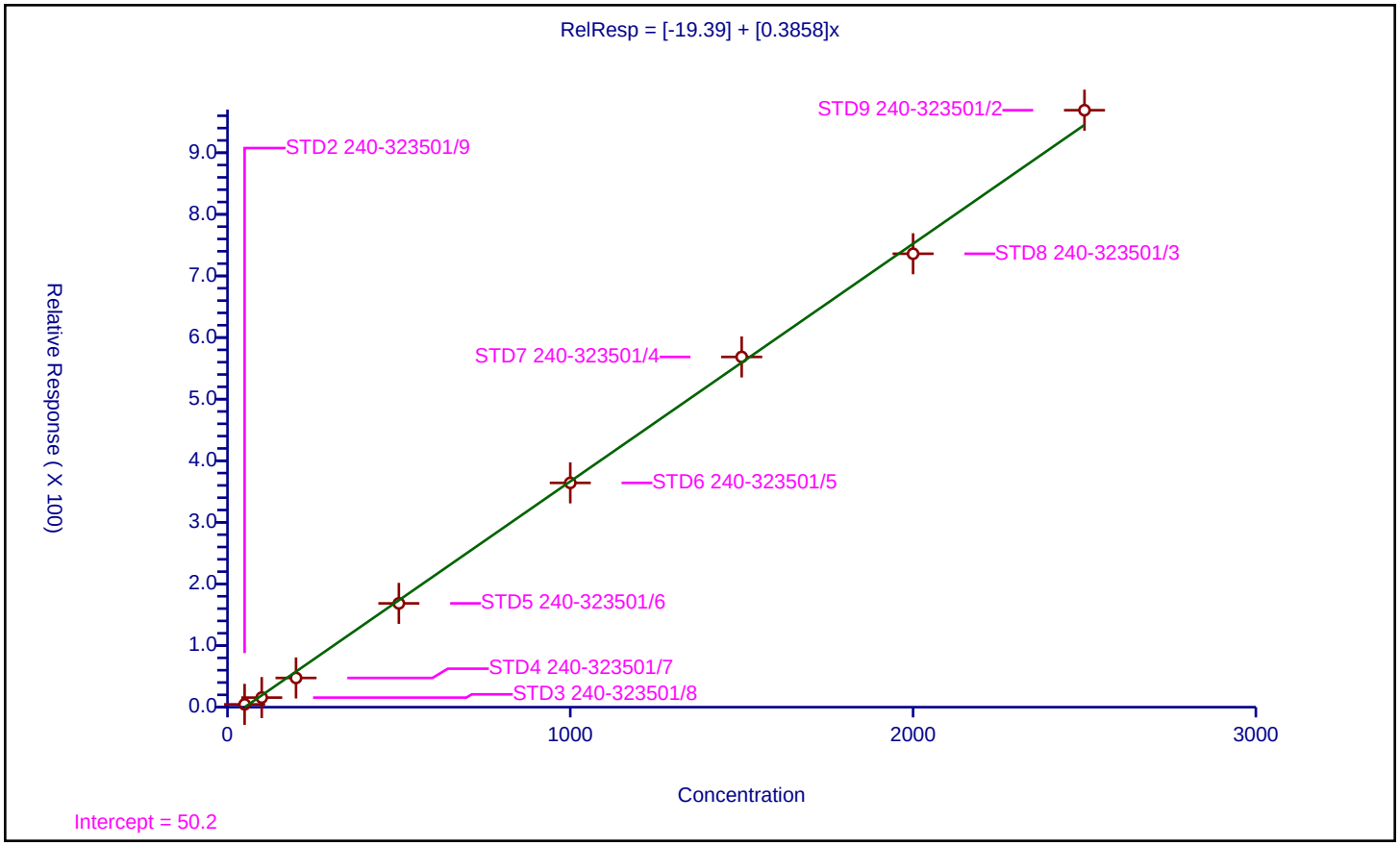
Curve Coefficients

Intercept:	-19.39
Slope:	0.3858

Error Coefficients

Standard Error:	723000
Relative Standard Error:	12.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	4.576162	400.0	469389.0	0.091523	Y
2	STD3 240-323501/8	100.0	15.531865	400.0	466293.0	0.155319	Y
3	STD4 240-323501/7	200.0	47.416035	400.0	465699.0	0.23708	Y
4	STD5 240-323501/6	500.0	168.468301	400.0	472756.0	0.336937	Y
5	STD6 240-323501/5	1000.0	364.087872	400.0	469457.0	0.364088	Y
6	STD7 240-323501/4	1500.0	568.530167	400.0	501261.0	0.37902	Y
7	STD8 240-323501/3	2000.0	736.009945	400.0	508379.0	0.368005	Y
8	STD9 240-323501/2	2500.0	969.010354	400.0	510506.0	0.387604	Y



Calibration / 2-Fluorobiphenyl (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

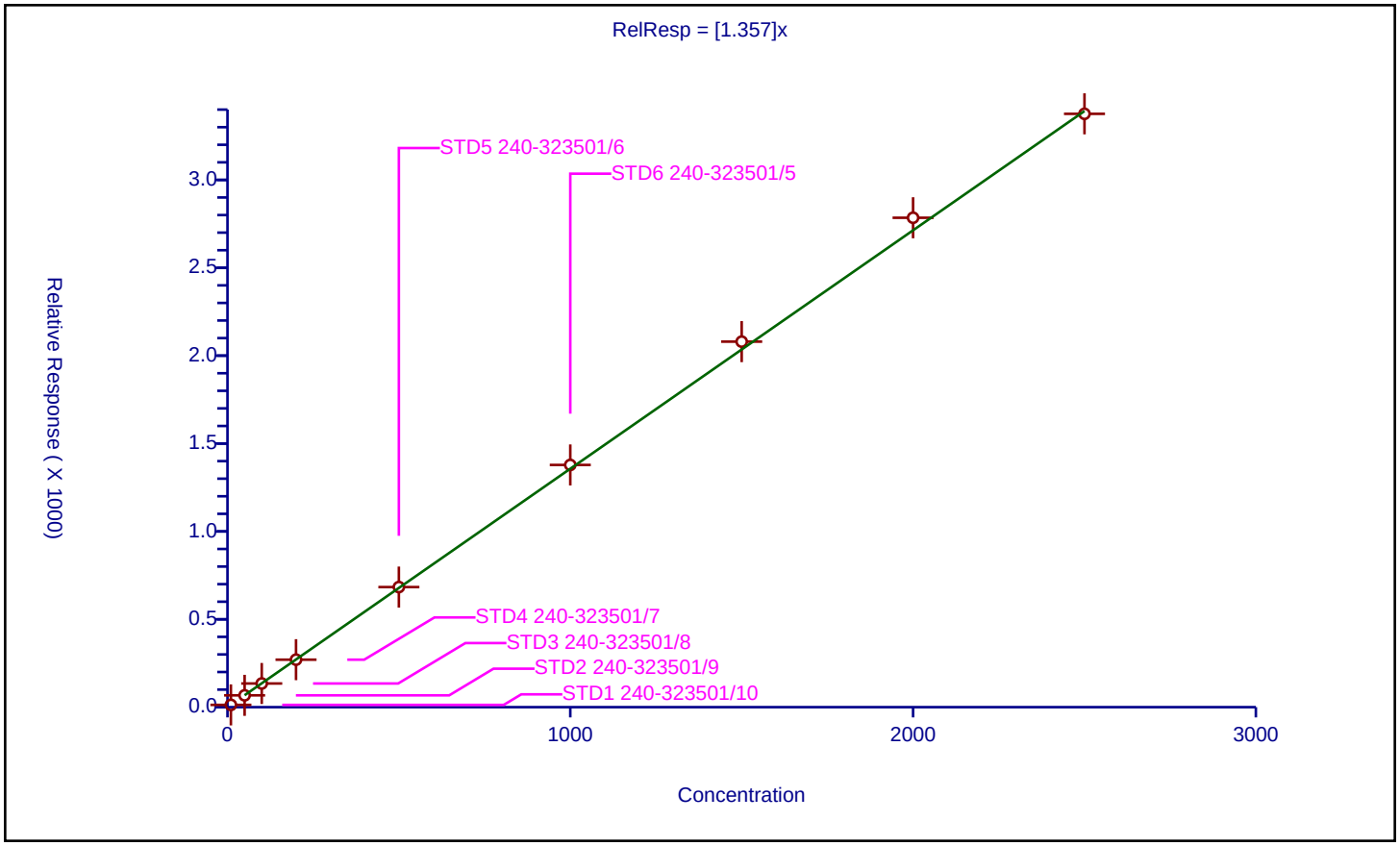
Curve Coefficients

Intercept:	0
Slope:	1.357

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	2.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	12.920578	400.0	387413.0	1.292058	Y
2	STD2 240-323501/9	50.0	67.291735	400.0	469389.0	1.345835	Y
3	STD3 240-323501/8	100.0	134.728164	400.0	466293.0	1.347282	Y
4	STD4 240-323501/7	200.0	270.147885	400.0	465699.0	1.350739	Y
5	STD5 240-323501/6	500.0	683.325859	400.0	472756.0	1.366652	Y
6	STD6 240-323501/5	1000.0	1378.204181	400.0	469457.0	1.378204	Y
7	STD7 240-323501/4	1500.0	2079.778	400.0	501261.0	1.386519	Y
8	STD8 240-323501/3	2000.0	2784.677573	400.0	508379.0	1.392339	Y
9	STD9 240-323501/2	2500.0	3375.969724	400.0	510506.0	1.350388	Y



Calibration / 1,1'-Biphenyl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

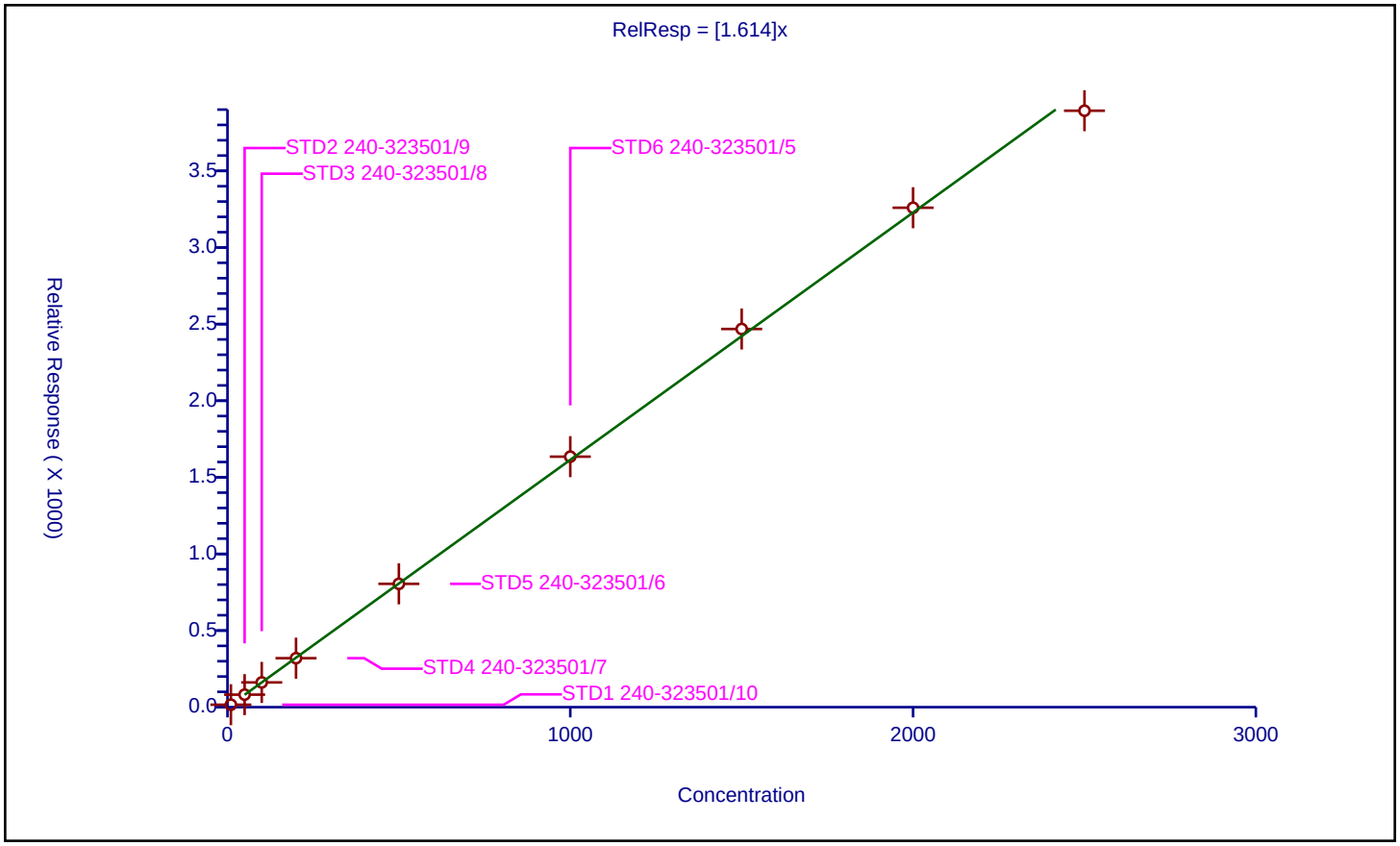
Curve Coefficients

Intercept:	0
Slope:	1.614

Error Coefficients

Standard Error:	2650000
Relative Standard Error:	1.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	15.998431	400.0	387413.0	1.599843	Y
2	STD2 240-323501/9	50.0	81.781209	400.0	469389.0	1.635624	Y
3	STD3 240-323501/8	100.0	161.597107	400.0	466293.0	1.615971	Y
4	STD4 240-323501/7	200.0	319.738715	400.0	465699.0	1.598694	Y
5	STD5 240-323501/6	500.0	804.882857	400.0	472756.0	1.609766	Y
6	STD6 240-323501/5	1000.0	1634.957834	400.0	469457.0	1.634958	Y
7	STD7 240-323501/4	1500.0	2468.119403	400.0	501261.0	1.645413	Y
8	STD8 240-323501/3	2000.0	3259.557141	400.0	508379.0	1.629779	Y
9	STD9 240-323501/2	2500.0	3892.71272	400.0	510506.0	1.557085	Y



Calibration / 2-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

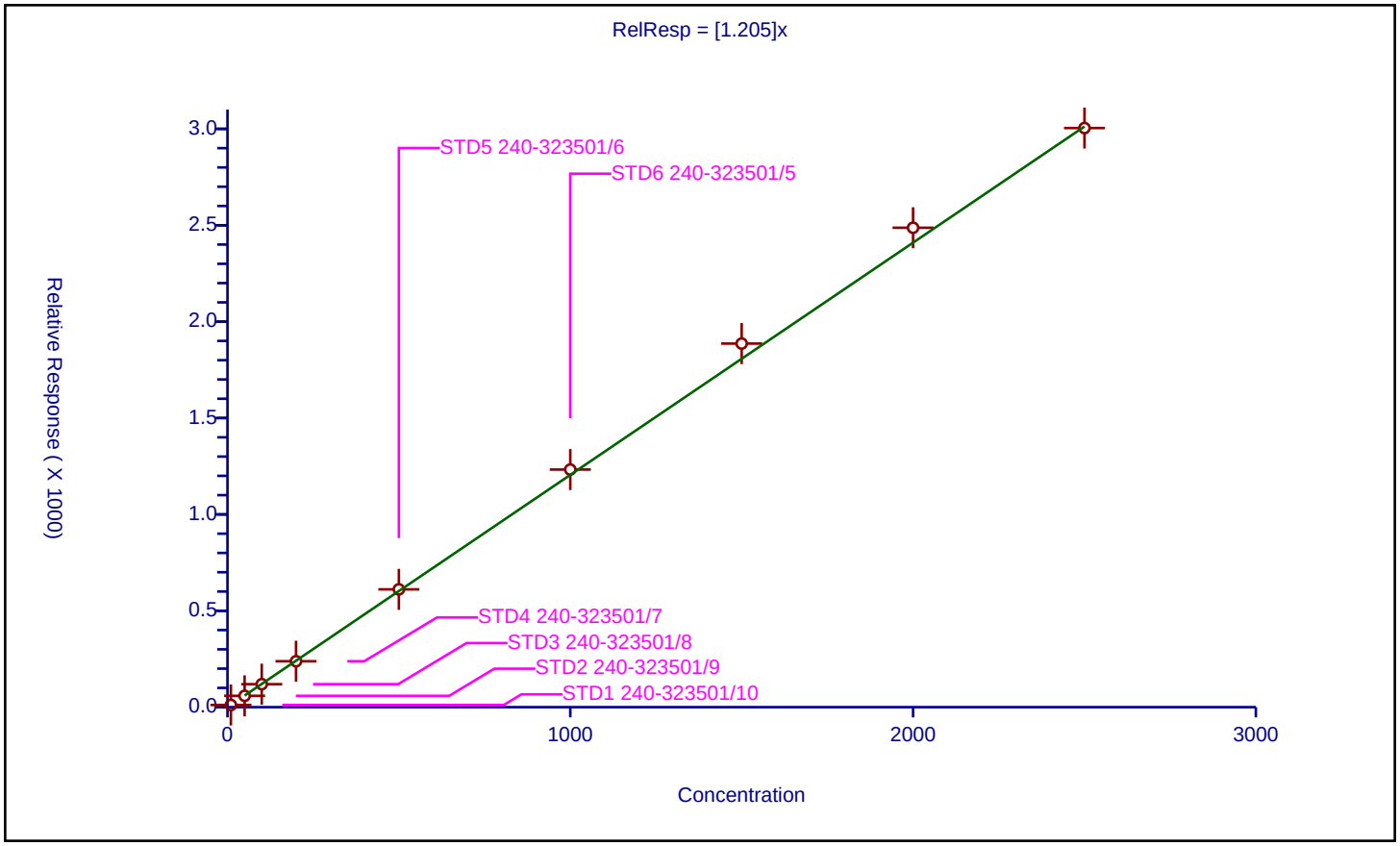
Curve Coefficients

Intercept:	0
Slope:	1.205

Error Coefficients

Standard Error:	2030000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	11.263432	400.0	387413.0	1.126343	Y
2	STD2 240-323501/9	50.0	58.791322	400.0	469389.0	1.175826	Y
3	STD3 240-323501/8	100.0	119.259779	400.0	466293.0	1.192598	Y
4	STD4 240-323501/7	200.0	238.262053	400.0	465699.0	1.19131	Y
5	STD5 240-323501/6	500.0	611.235394	400.0	472756.0	1.222471	Y
6	STD6 240-323501/5	1000.0	1232.705019	400.0	469457.0	1.232705	Y
7	STD7 240-323501/4	1500.0	1886.195814	400.0	501261.0	1.257464	Y
8	STD8 240-323501/3	2000.0	2487.07362	400.0	508379.0	1.243537	Y
9	STD9 240-323501/2	2500.0	3004.372133	400.0	510506.0	1.201749	Y



Calibration / 2-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

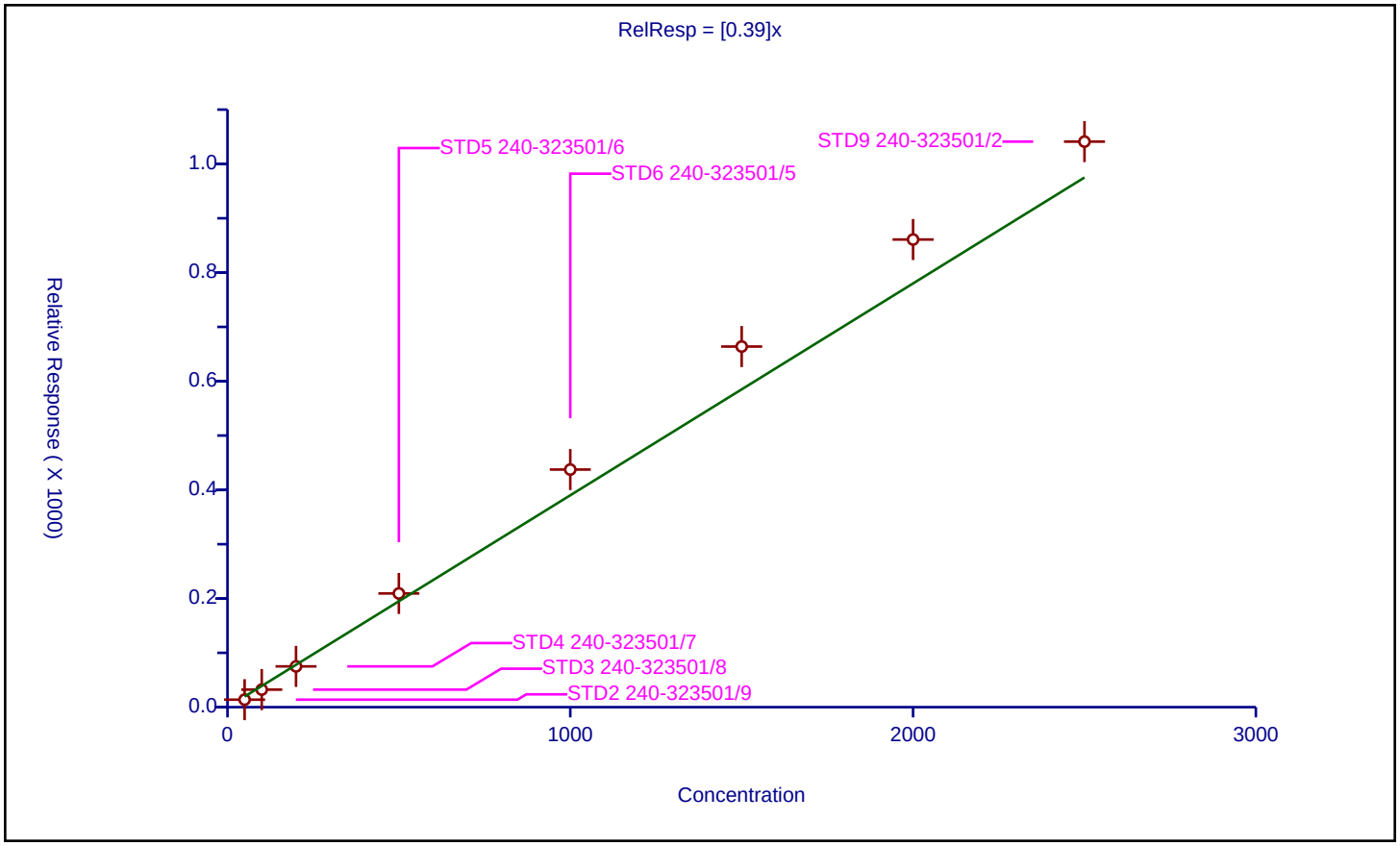
Curve Coefficients

Intercept:	0
Slope:	0.39

Error Coefficients

Standard Error:	754000
Relative Standard Error:	15.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	13.811146	400.0	469389.0	0.276223	Y
2	STD3 240-323501/8	100.0	32.323882	400.0	466293.0	0.323239	Y
3	STD4 240-323501/7	200.0	75.041604	400.0	465699.0	0.375208	Y
4	STD5 240-323501/6	500.0	209.322357	400.0	472756.0	0.418645	Y
5	STD6 240-323501/5	1000.0	437.378503	400.0	469457.0	0.437379	Y
6	STD7 240-323501/4	1500.0	663.825831	400.0	501261.0	0.442551	Y
7	STD8 240-323501/3	2000.0	860.836502	400.0	508379.0	0.430418	Y
8	STD9 240-323501/2	2500.0	1041.098048	400.0	510506.0	0.416439	Y



Calibration / Dimethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

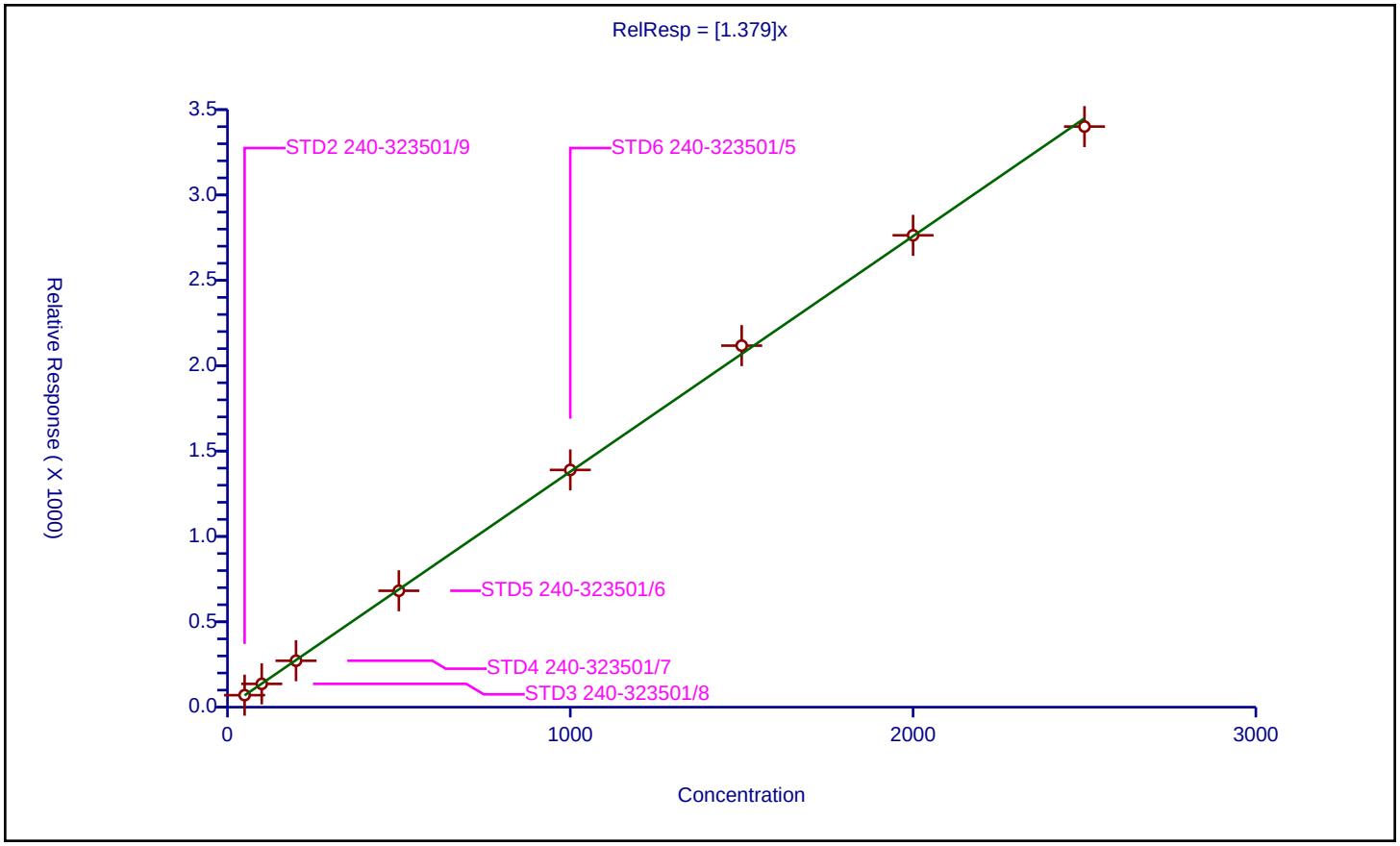
Curve Coefficients

Intercept:	0
Slope:	1.379

Error Coefficients

Standard Error:	2440000
Relative Standard Error:	1.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	70.233431	400.0	469389.0	1.404669	Y
2	STD3 240-323501/8	100.0	136.365761	400.0	466293.0	1.363658	Y
3	STD4 240-323501/7	200.0	272.056414	400.0	465699.0	1.360282	Y
4	STD5 240-323501/6	500.0	681.746186	400.0	472756.0	1.363492	Y
5	STD6 240-323501/5	1000.0	1389.412875	400.0	469457.0	1.389413	Y
6	STD7 240-323501/4	1500.0	2117.614576	400.0	501261.0	1.411743	Y
7	STD8 240-323501/3	2000.0	2763.71762	400.0	508379.0	1.381859	Y
8	STD9 240-323501/2	2500.0	3400.640149	400.0	510506.0	1.360256	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

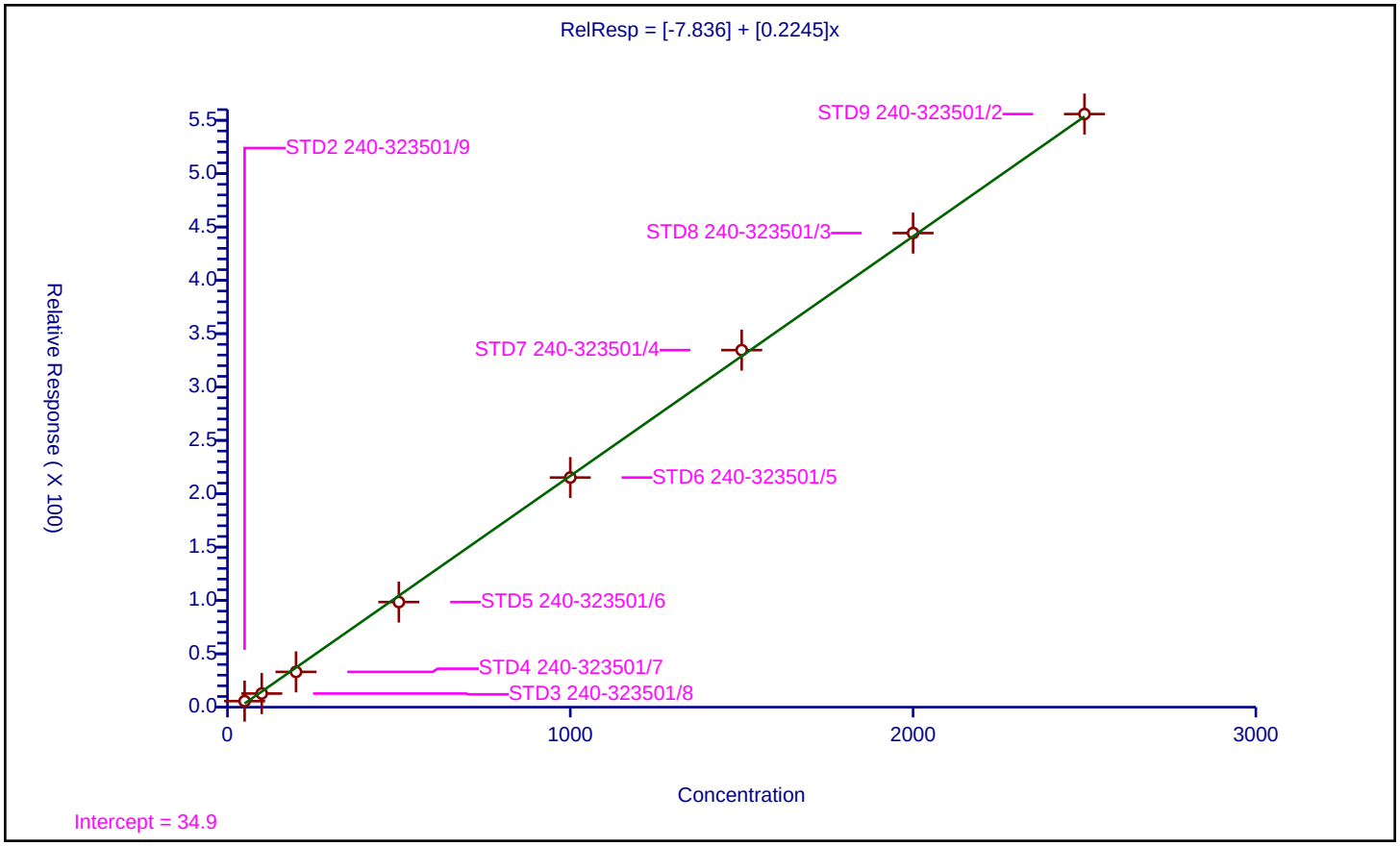
Curve Coefficients

Intercept:	-7.836
Slope:	0.2245

Error Coefficients

Standard Error:	423000
Relative Standard Error:	10.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	5.678872	400.0	469389.0	0.113577	Y
2	STD3 240-323501/8	100.0	12.771369	400.0	466293.0	0.127714	Y
3	STD4 240-323501/7	200.0	33.040226	400.0	465699.0	0.165201	Y
4	STD5 240-323501/6	500.0	98.512552	400.0	472756.0	0.197025	Y
5	STD6 240-323501/5	1000.0	215.172849	400.0	469457.0	0.215173	Y
6	STD7 240-323501/4	1500.0	334.601734	400.0	501261.0	0.223068	Y
7	STD8 240-323501/3	2000.0	444.289792	400.0	508379.0	0.222145	Y
8	STD9 240-323501/2	2500.0	555.83284	400.0	510506.0	0.222333	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

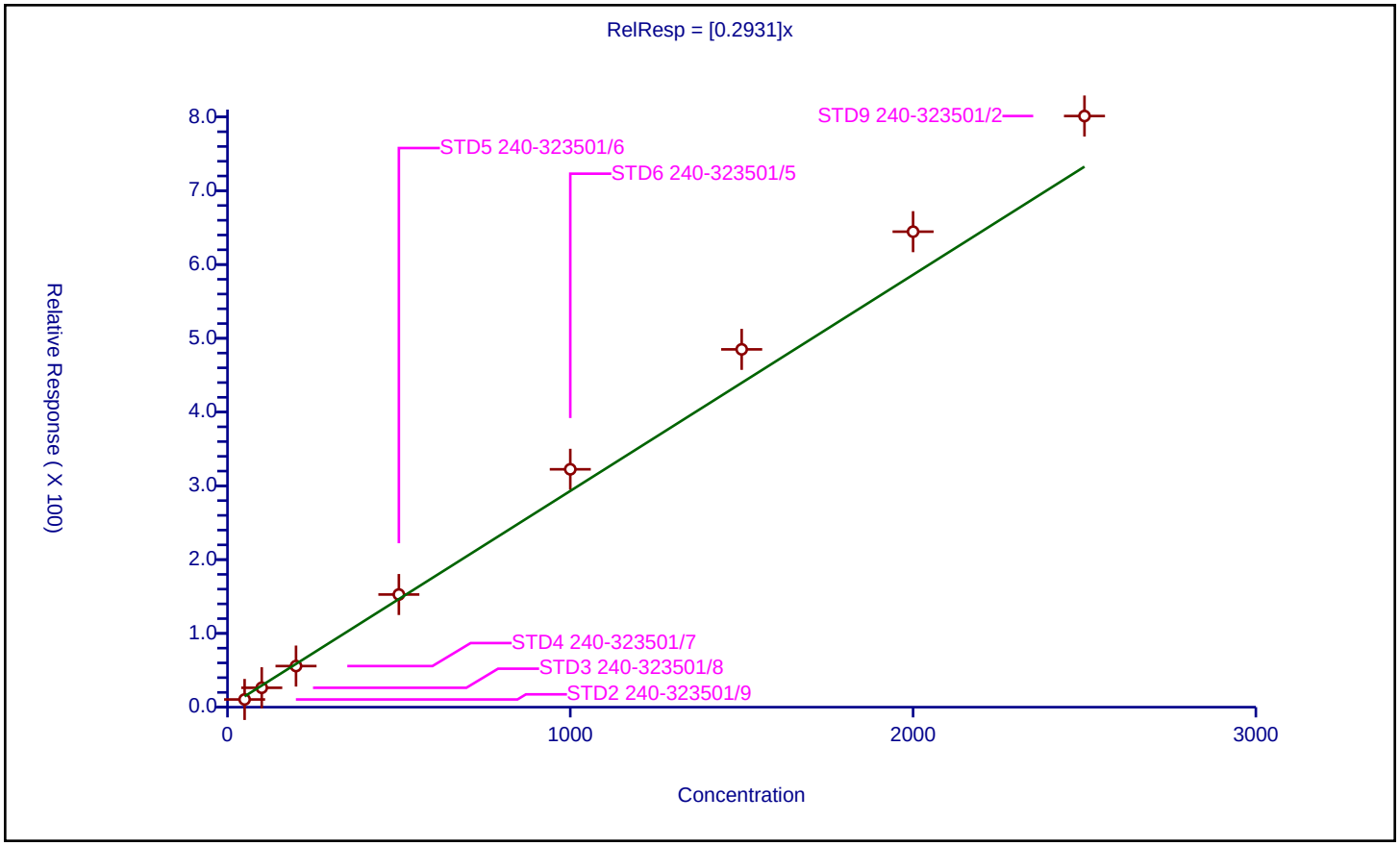
Curve Coefficients

Intercept:	0
Slope:	0.2931

Error Coefficients

Standard Error:	569000
Relative Standard Error:	14.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.978

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	10.451885	400.0	469389.0	0.209038	Y
2	STD3 240-323501/8	100.0	26.280472	400.0	466293.0	0.262805	Y
3	STD4 240-323501/7	200.0	55.739007	400.0	465699.0	0.278695	Y
4	STD5 240-323501/6	500.0	152.720642	400.0	472756.0	0.305441	Y
5	STD6 240-323501/5	1000.0	322.432086	400.0	469457.0	0.322432	Y
6	STD7 240-323501/4	1500.0	485.007212	400.0	501261.0	0.323338	Y
7	STD8 240-323501/3	2000.0	644.532524	400.0	508379.0	0.322266	Y
8	STD9 240-323501/2	2500.0	801.299887	400.0	510506.0	0.32052	Y



Calibration / Acenaphthylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

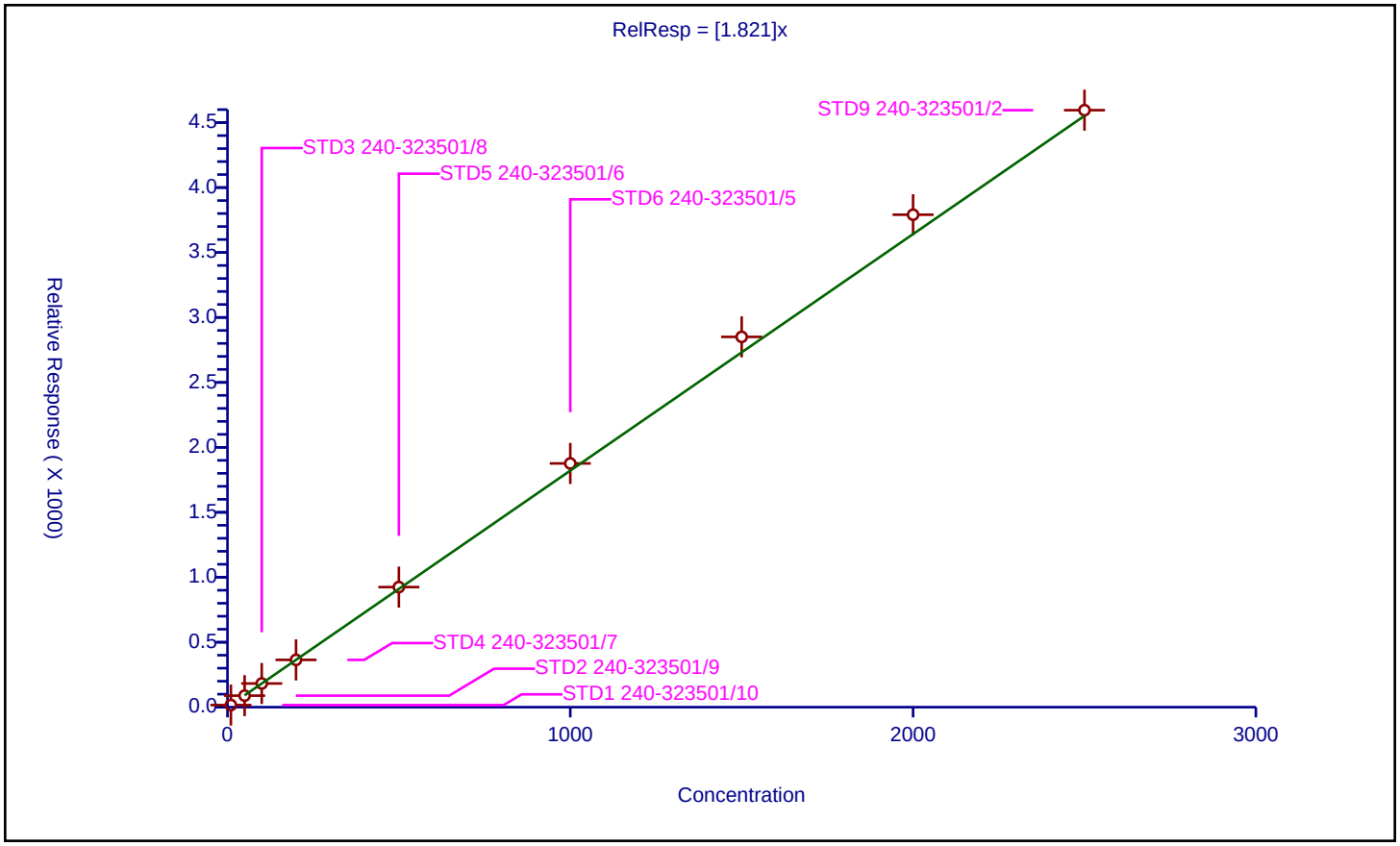
Curve Coefficients

Intercept:	0
Slope:	1.821

Error Coefficients

Standard Error:	3090000
Relative Standard Error:	4.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	16.132654	400.0	387413.0	1.613265	Y
2	STD2 240-323501/9	50.0	88.667608	400.0	469389.0	1.773352	Y
3	STD3 240-323501/8	100.0	182.235633	400.0	466293.0	1.822356	Y
4	STD4 240-323501/7	200.0	364.079803	400.0	465699.0	1.820399	Y
5	STD5 240-323501/6	500.0	924.190068	400.0	472756.0	1.84838	Y
6	STD6 240-323501/5	1000.0	1876.246813	400.0	469457.0	1.876247	Y
7	STD7 240-323501/4	1500.0	2850.460738	400.0	501261.0	1.900307	Y
8	STD8 240-323501/3	2000.0	3790.939437	400.0	508379.0	1.89547	Y
9	STD9 240-323501/2	2500.0	4595.551864	400.0	510506.0	1.838221	Y



Calibration / 3-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

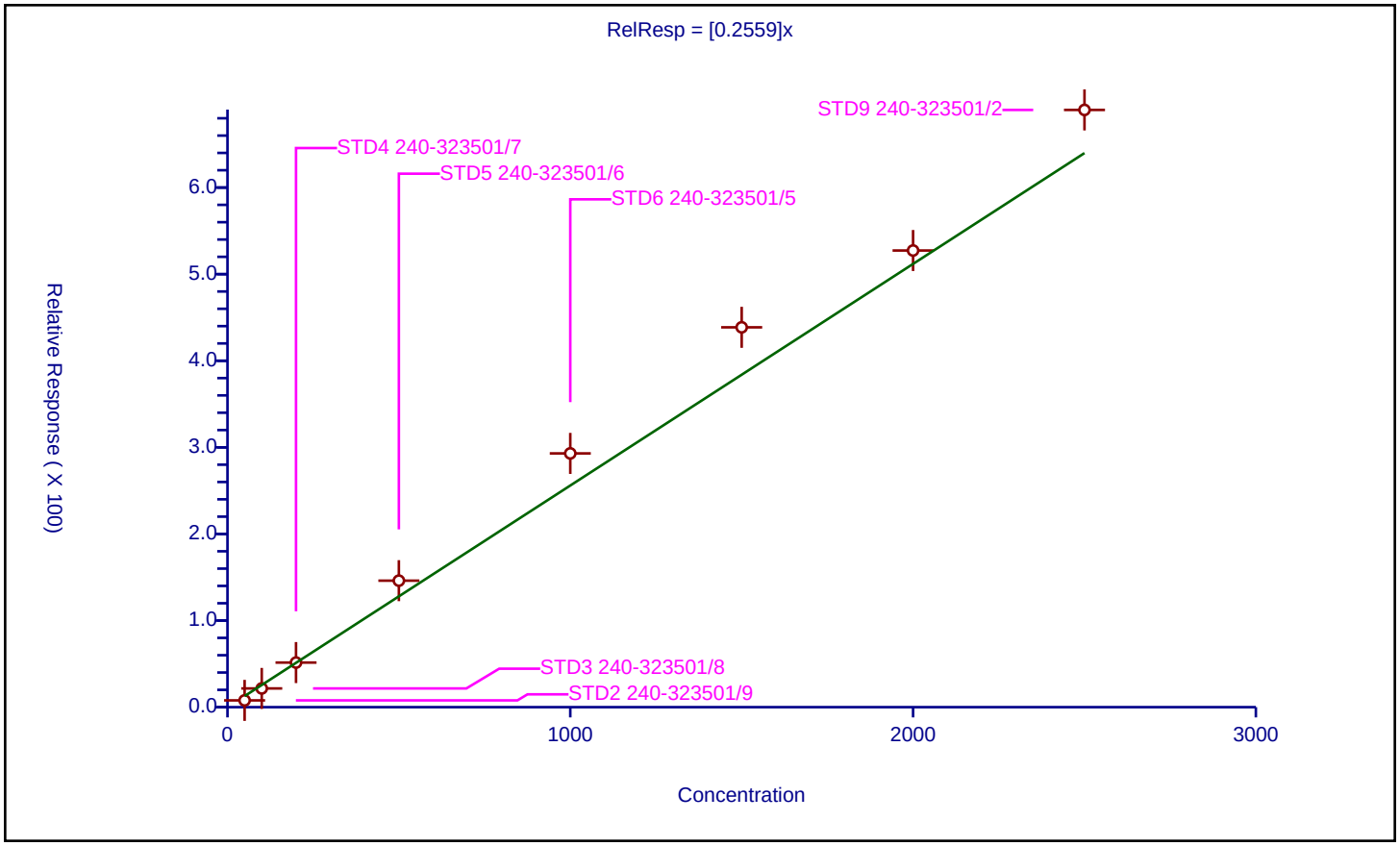
Curve Coefficients

Intercept:	0
Slope:	0.2559

Error Coefficients

Standard Error:	489000
Relative Standard Error:	18.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.962

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	7.825492	400.0	469389.0	0.15651	Y
2	STD3 240-323501/8	100.0	21.625888	400.0	466293.0	0.216259	Y
3	STD4 240-323501/7	200.0	51.499359	400.0	465699.0	0.257497	Y
4	STD5 240-323501/6	500.0	146.08043	400.0	472756.0	0.292161	Y
5	STD6 240-323501/5	1000.0	293.007453	400.0	469457.0	0.293007	Y
6	STD7 240-323501/4	1500.0	438.61621	400.0	501261.0	0.292411	Y
7	STD8 240-323501/3	2000.0	527.299515	400.0	508379.0	0.26365	Y
8	STD9 240-323501/2	2500.0	689.641258	400.0	510506.0	0.275857	Y



Calibration / 2,4-Dinitrophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

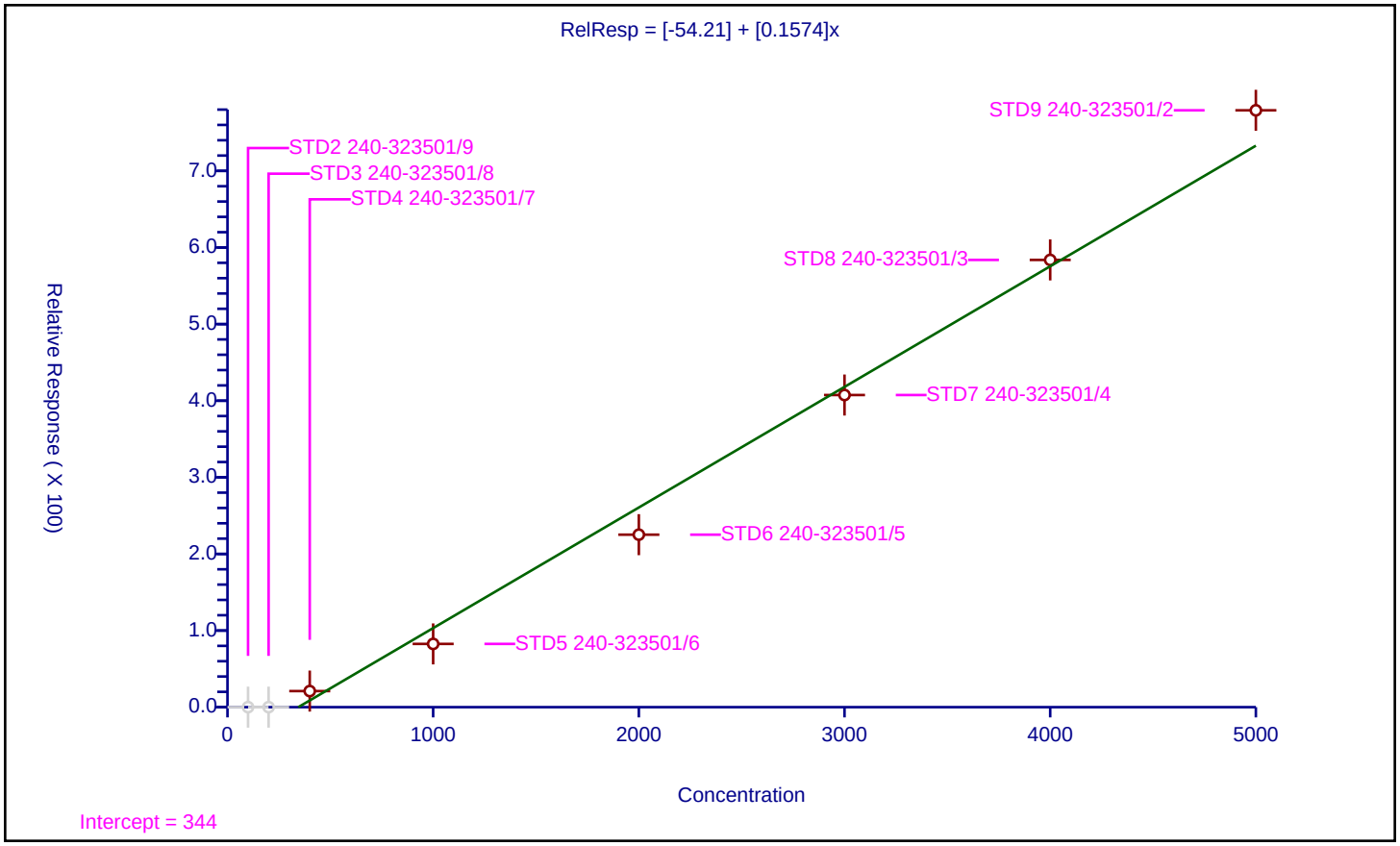
Curve Coefficients

Intercept:	-54.21
Slope:	0.1574

Error Coefficients

Standard Error:	685000
Relative Standard Error:	13.4
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	0.0	400.0	469389.0	0.0	N
2	STD3 240-323501/8	200.0	0.0	400.0	466293.0	0.0	N
3	STD4 240-323501/7	400.0	21.004984	400.0	465699.0	0.052512	Y
4	STD5 240-323501/6	1000.0	82.566059	400.0	472756.0	0.082566	Y
5	STD6 240-323501/5	2000.0	225.163966	400.0	469457.0	0.112582	Y
6	STD7 240-323501/4	3000.0	407.433253	400.0	501261.0	0.135811	Y
7	STD8 240-323501/3	4000.0	583.791227	400.0	508379.0	0.145948	Y
8	STD9 240-323501/2	5000.0	779.070177	400.0	510506.0	0.155814	Y



Calibration / 4-Nitrophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

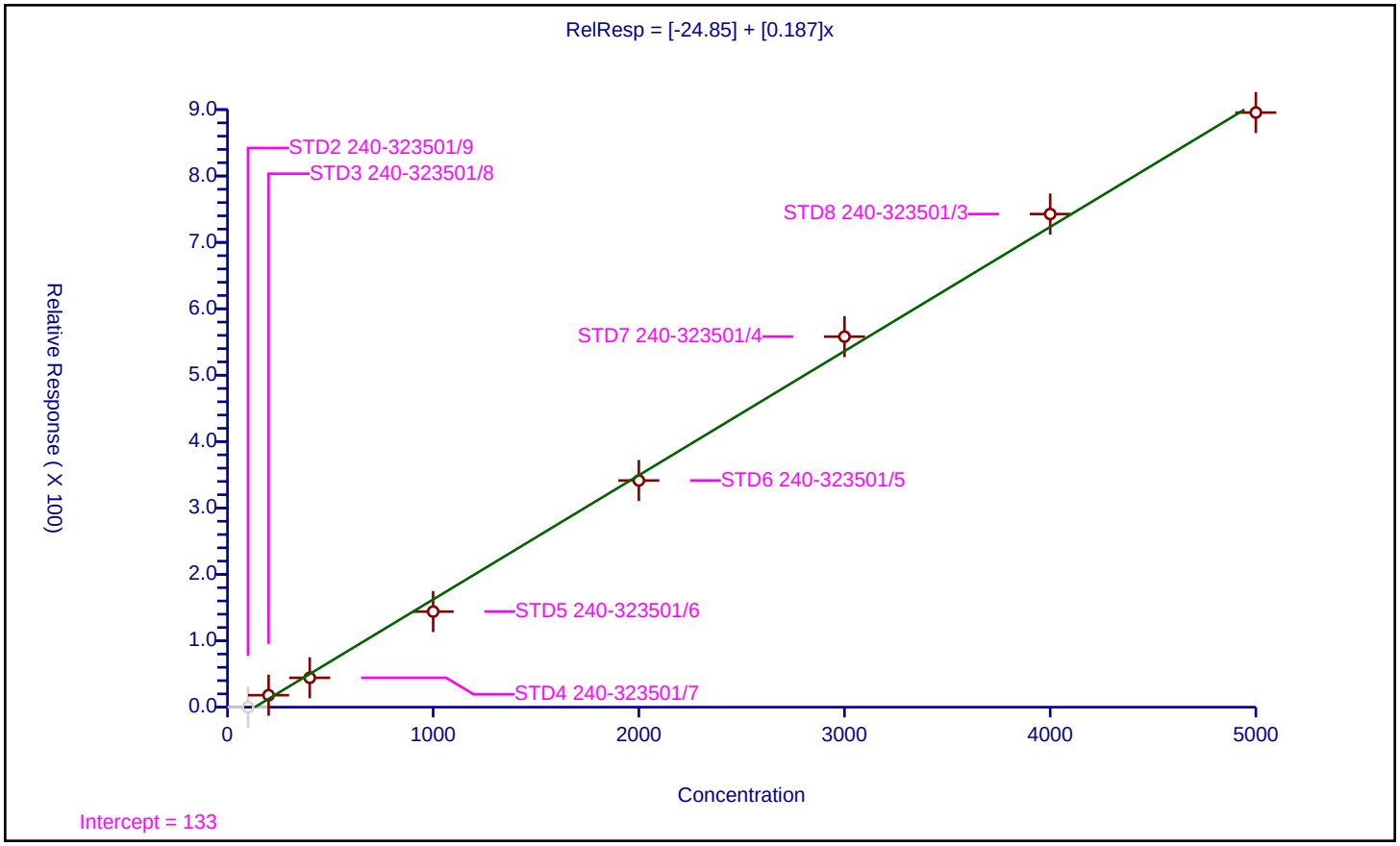
Curve Coefficients

Intercept:	-24.85
Slope:	0.187

Error Coefficients

Standard Error:	758000
Relative Standard Error:	8.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	0.0	400.0	469389.0	0.0	N
2	STD3 240-323501/8	200.0	18.026434	400.0	466293.0	0.090132	Y
3	STD4 240-323501/7	400.0	44.246606	400.0	465699.0	0.110617	Y
4	STD5 240-323501/6	1000.0	143.95756	400.0	472756.0	0.143958	Y
5	STD6 240-323501/5	2000.0	341.366302	400.0	469457.0	0.170683	Y
6	STD7 240-323501/4	3000.0	558.067753	400.0	501261.0	0.186023	Y
7	STD8 240-323501/3	4000.0	742.705737	400.0	508379.0	0.185676	Y
8	STD9 240-323501/2	5000.0	895.545988	400.0	510506.0	0.179109	Y



Calibration / Acenaphthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

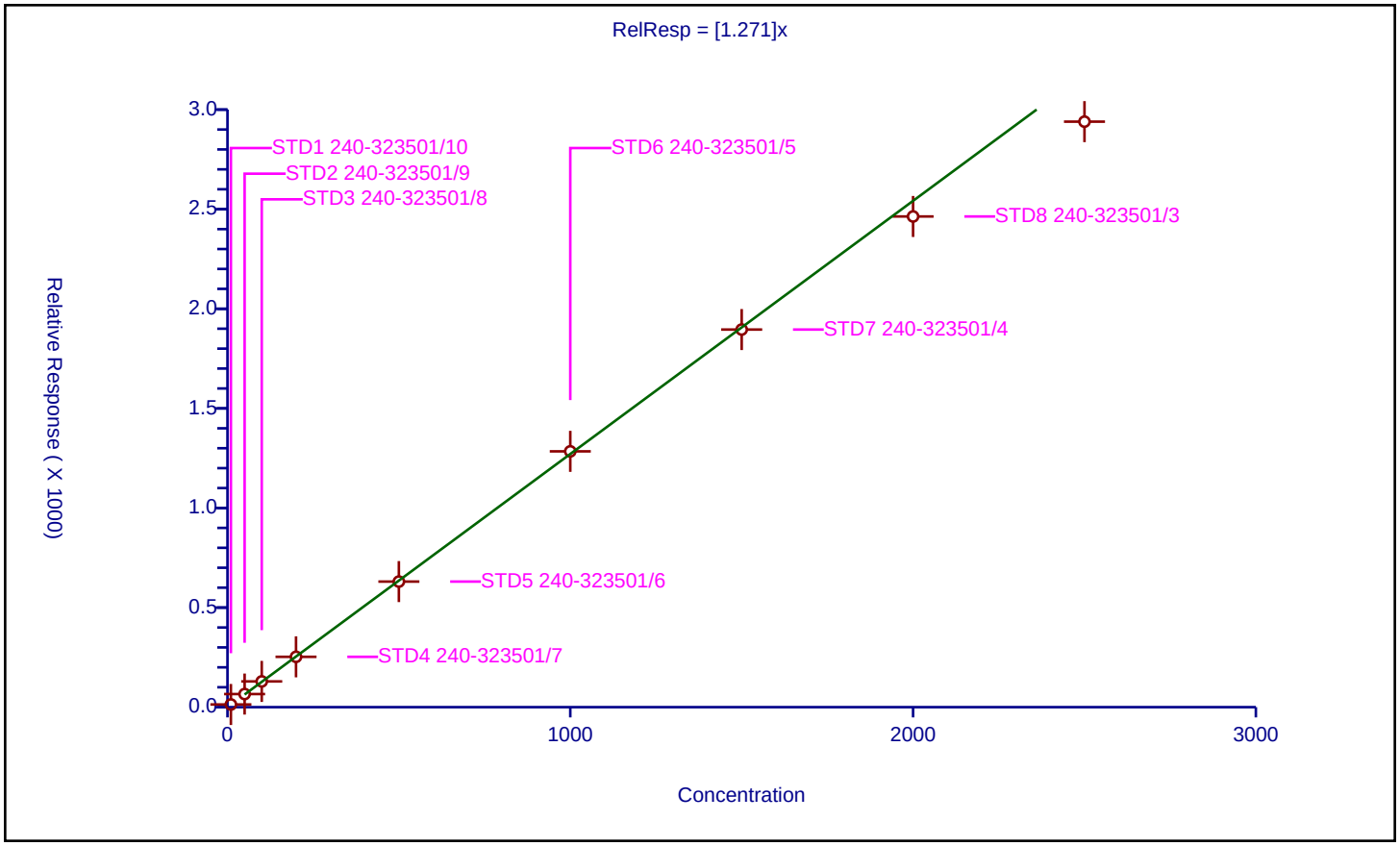
Curve Coefficients

Intercept:	0
Slope:	1.271

Error Coefficients

Standard Error:	2010000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	13.49361	400.0	387413.0	1.349361	Y
2	STD2 240-323501/9	50.0	65.79873	400.0	469389.0	1.315975	Y
3	STD3 240-323501/8	100.0	129.309254	400.0	466293.0	1.293093	Y
4	STD4 240-323501/7	200.0	252.748664	400.0	465699.0	1.263743	Y
5	STD5 240-323501/6	500.0	630.403845	400.0	472756.0	1.260808	Y
6	STD6 240-323501/5	1000.0	1284.334881	400.0	469457.0	1.284335	Y
7	STD7 240-323501/4	1500.0	1895.750118	400.0	501261.0	1.263833	Y
8	STD8 240-323501/3	2000.0	2463.51954	400.0	508379.0	1.23176	Y
9	STD9 240-323501/2	2500.0	2939.546254	400.0	510506.0	1.175819	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

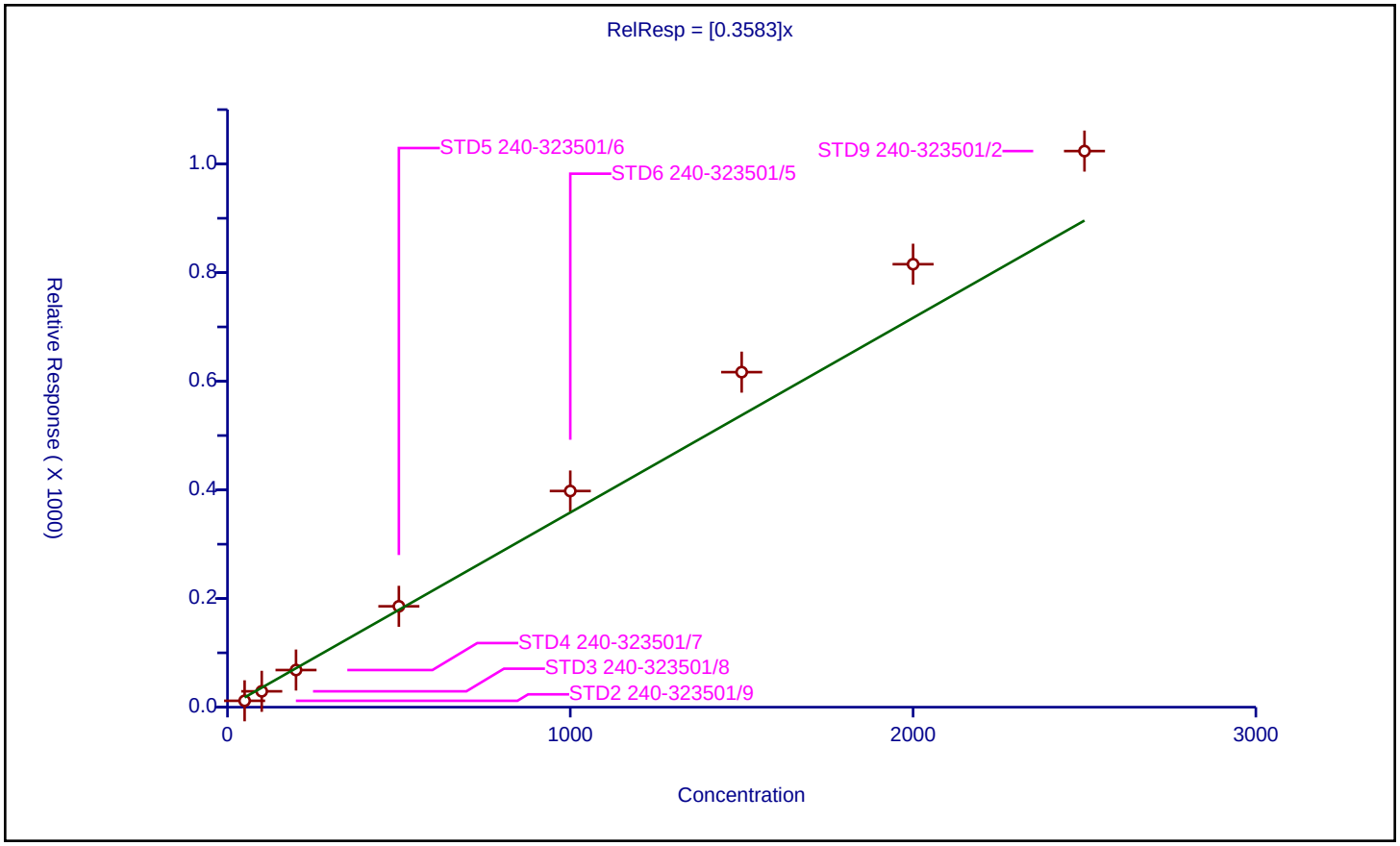
Curve Coefficients

Intercept:	0
Slope:	0.3583

Error Coefficients

Standard Error:	722000
Relative Standard Error:	18.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.964

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	11.748038	400.0	469389.0	0.234961	Y
2	STD3 240-323501/8	100.0	29.207387	400.0	466293.0	0.292074	Y
3	STD4 240-323501/7	200.0	68.37979	400.0	465699.0	0.341899	Y
4	STD5 240-323501/6	500.0	185.699177	400.0	472756.0	0.371398	Y
5	STD6 240-323501/5	1000.0	397.888625	400.0	469457.0	0.397889	Y
6	STD7 240-323501/4	1500.0	616.726216	400.0	501261.0	0.411151	Y
7	STD8 240-323501/3	2000.0	815.388519	400.0	508379.0	0.407694	Y
8	STD9 240-323501/2	2500.0	1023.662014	400.0	510506.0	0.409465	Y



Calibration / Dibenzofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

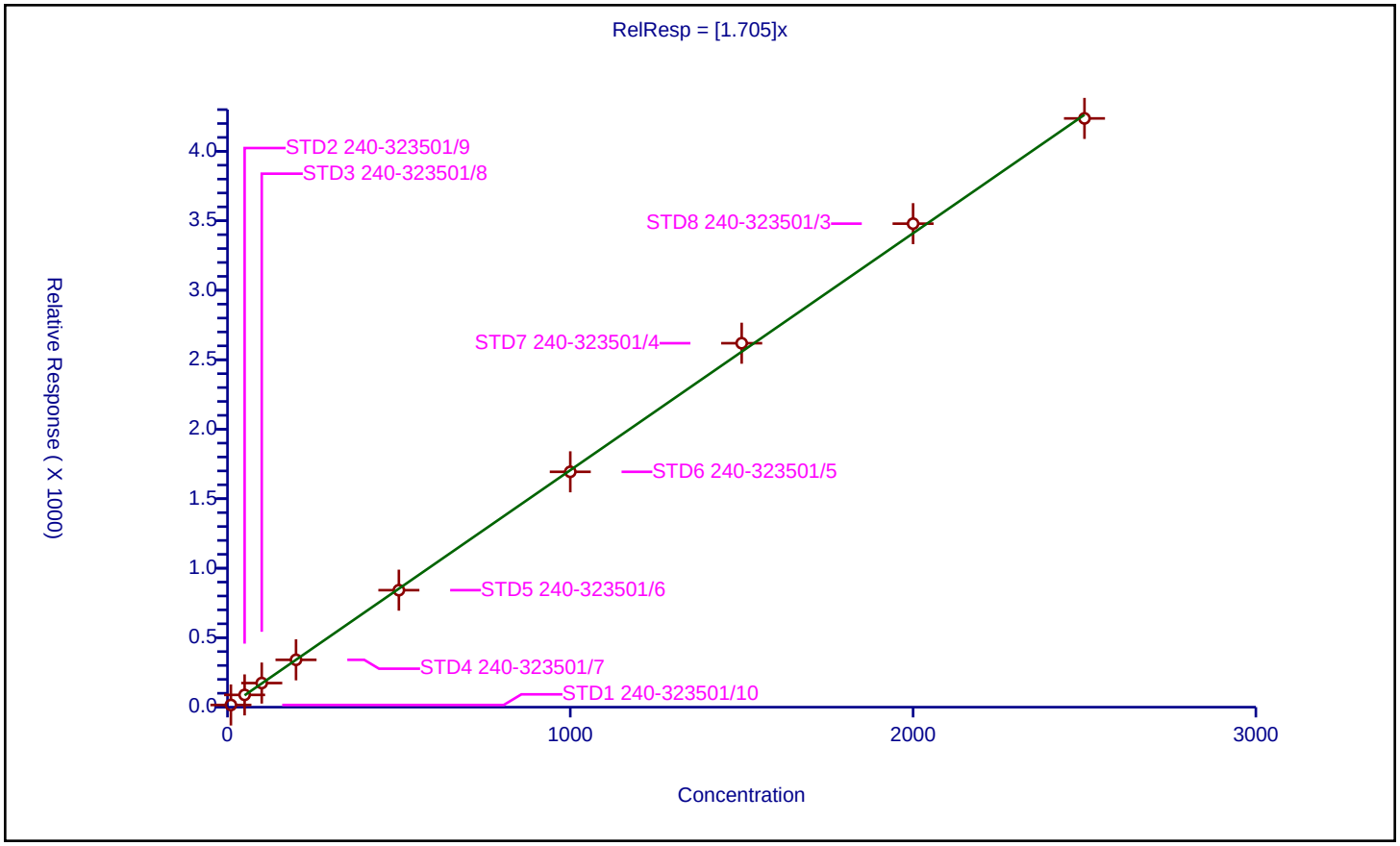
Curve Coefficients

Intercept:	0
Slope:	1.705

Error Coefficients

Standard Error:	2840000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	15.845622	400.0	387413.0	1.584562	Y
2	STD2 240-323501/9	50.0	88.275609	400.0	469389.0	1.765512	Y
3	STD3 240-323501/8	100.0	173.551823	400.0	466293.0	1.735518	Y
4	STD4 240-323501/7	200.0	340.668114	400.0	465699.0	1.703341	Y
5	STD5 240-323501/6	500.0	841.801691	400.0	472756.0	1.683603	Y
6	STD6 240-323501/5	1000.0	1693.624762	400.0	469457.0	1.693625	Y
7	STD7 240-323501/4	1500.0	2618.895146	400.0	501261.0	1.74593	Y
8	STD8 240-323501/3	2000.0	3479.324677	400.0	508379.0	1.739662	Y
9	STD9 240-323501/2	2500.0	4236.626406	400.0	510506.0	1.694651	Y



Calibration / 2,3,4,6-Tetrachlorophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

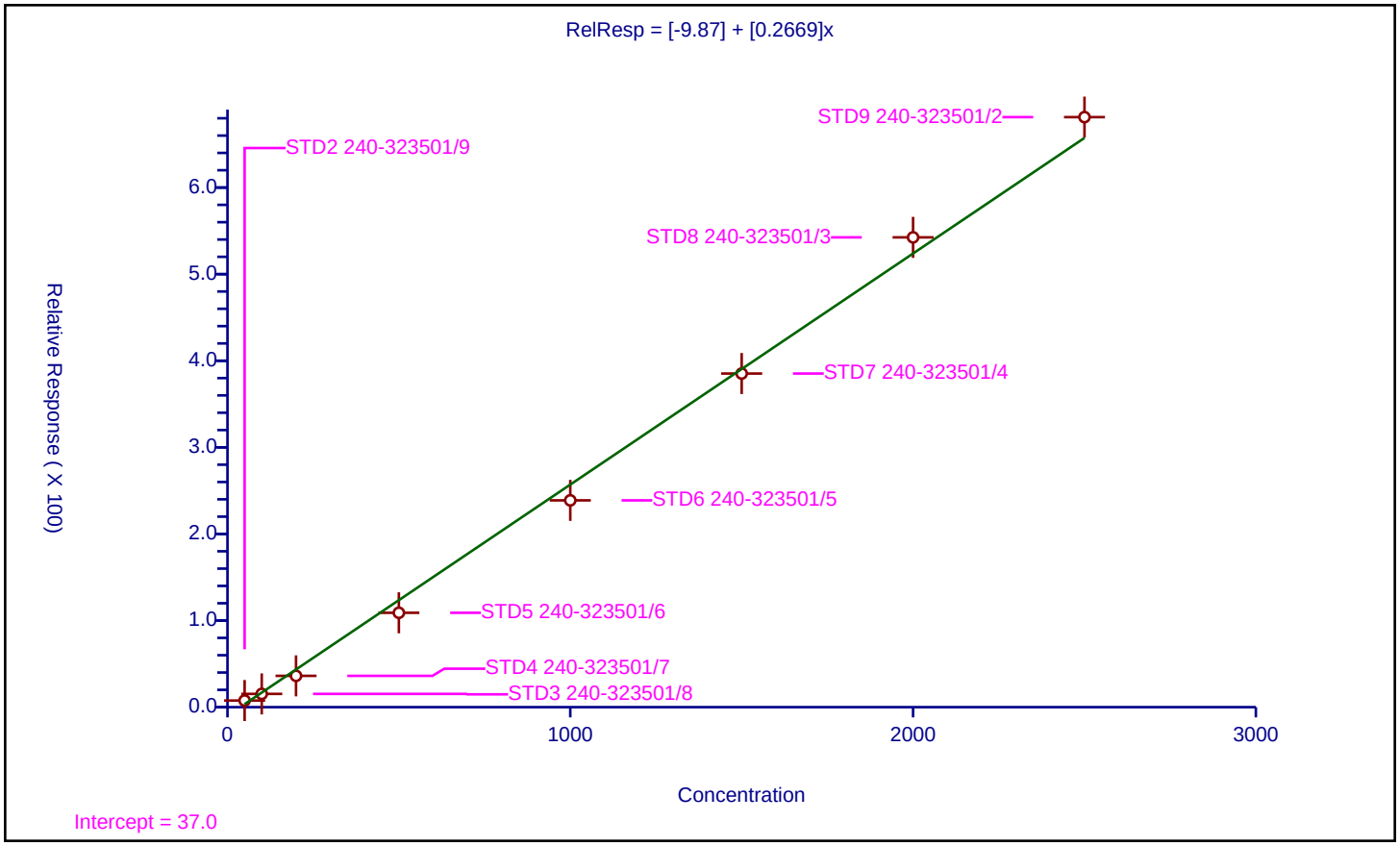
Curve Coefficients

Intercept:	-9.87
Slope:	0.2669

Error Coefficients

Standard Error:	510000
Relative Standard Error:	15.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	7.655058	400.0	469389.0	0.153101	Y
2	STD3 240-323501/8	100.0	15.313976	400.0	466293.0	0.15314	Y
3	STD4 240-323501/7	200.0	36.158978	400.0	465699.0	0.180795	Y
4	STD5 240-323501/6	500.0	108.988146	400.0	472756.0	0.217976	Y
5	STD6 240-323501/5	1000.0	238.782253	400.0	469457.0	0.238782	Y
6	STD7 240-323501/4	1500.0	385.225262	400.0	501261.0	0.256817	Y
7	STD8 240-323501/3	2000.0	542.47166	400.0	508379.0	0.271236	Y
8	STD9 240-323501/2	2500.0	681.324803	400.0	510506.0	0.27253	Y



Calibration / Hexadecane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

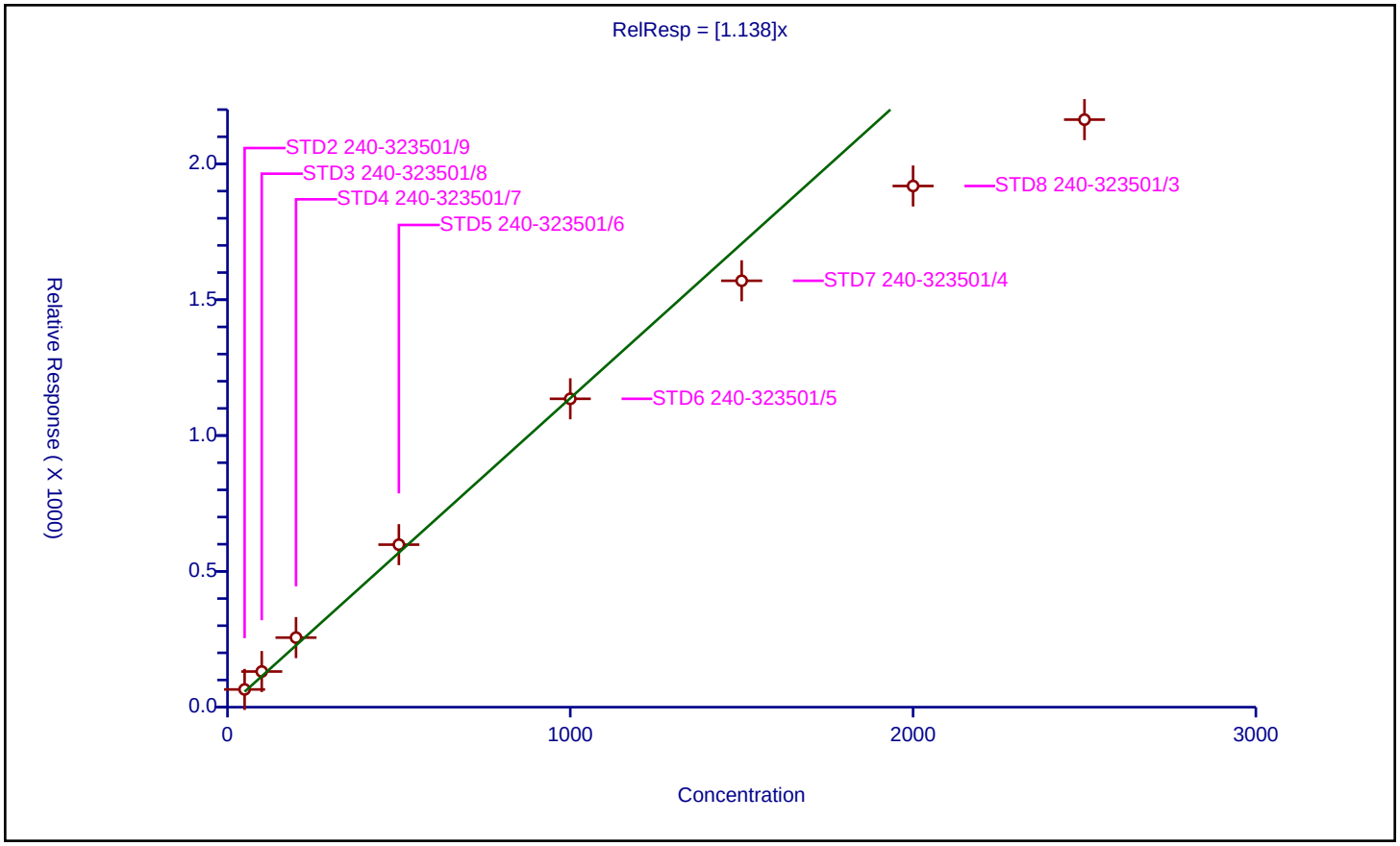
Curve Coefficients

Intercept:	0
Slope:	1.138

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	14.7
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.966

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	65.25334	400.0	469389.0	1.305067	Y
2	STD3 240-323501/8	100.0	131.208489	400.0	466293.0	1.312085	Y
3	STD4 240-323501/7	200.0	256.091596	400.0	465699.0	1.280458	Y
4	STD5 240-323501/6	500.0	598.391559	400.0	472756.0	1.196783	Y
5	STD6 240-323501/5	1000.0	1135.289494	400.0	469457.0	1.135289	Y
6	STD7 240-323501/4	1500.0	1569.800962	400.0	501261.0	1.046534	Y
7	STD8 240-323501/3	2000.0	1918.793656	400.0	508379.0	0.959397	Y
8	STD9 240-323501/2	2500.0	2163.173792	400.0	510506.0	0.86527	Y



Calibration / Diethyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

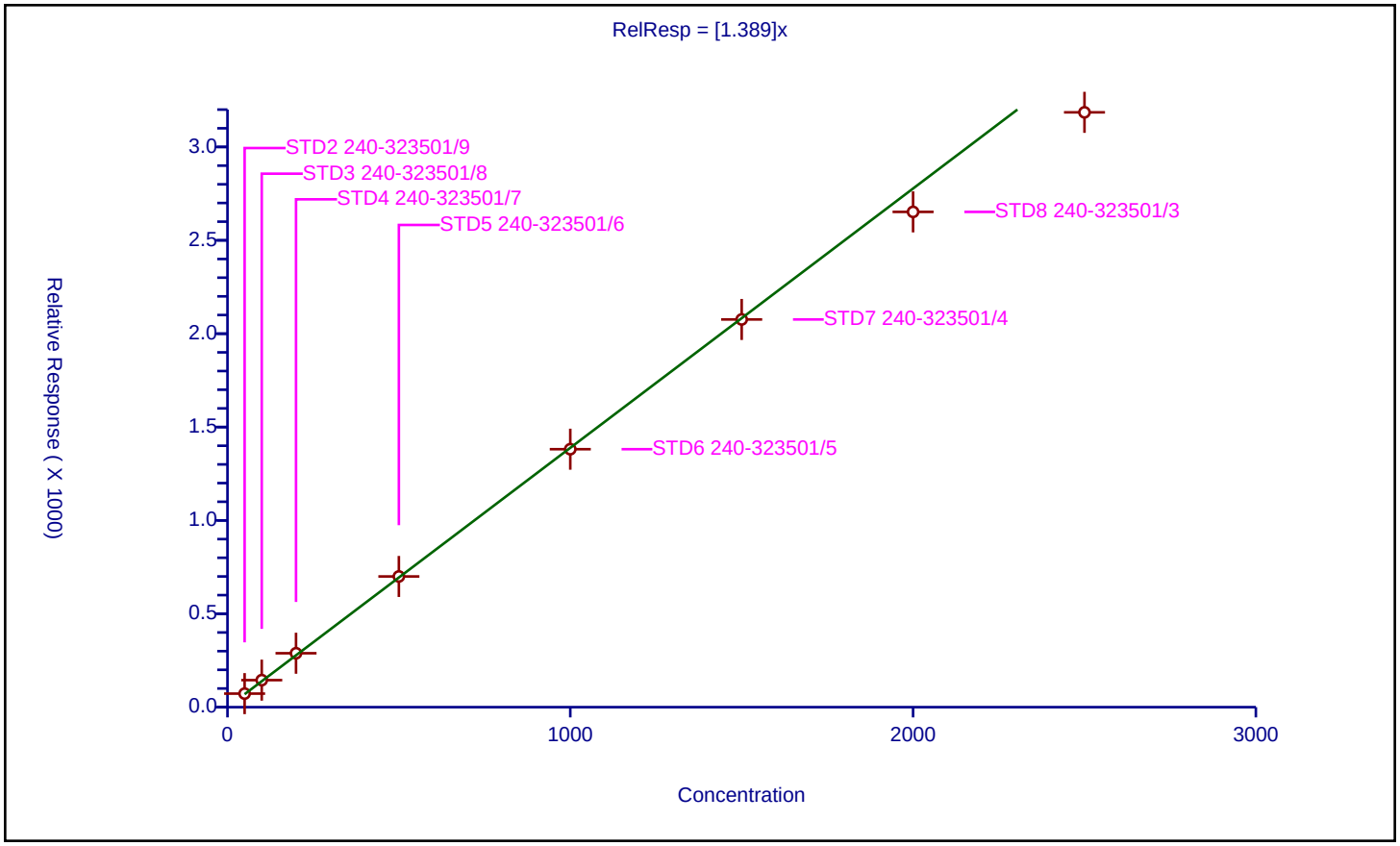
Curve Coefficients

Intercept:	0
Slope:	1.389

Error Coefficients

Standard Error:	2330000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	72.582016	400.0	469389.0	1.45164	Y
2	STD3 240-323501/8	100.0	144.825678	400.0	466293.0	1.448257	Y
3	STD4 240-323501/7	200.0	288.739293	400.0	465699.0	1.443696	Y
4	STD5 240-323501/6	500.0	699.974617	400.0	472756.0	1.399949	Y
5	STD6 240-323501/5	1000.0	1381.491383	400.0	469457.0	1.381491	Y
6	STD7 240-323501/4	1500.0	2076.19743	400.0	501261.0	1.384132	Y
7	STD8 240-323501/3	2000.0	2652.285008	400.0	508379.0	1.326143	Y
8	STD9 240-323501/2	2500.0	3185.347871	400.0	510506.0	1.274139	Y



Calibration / 4-Chlorophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

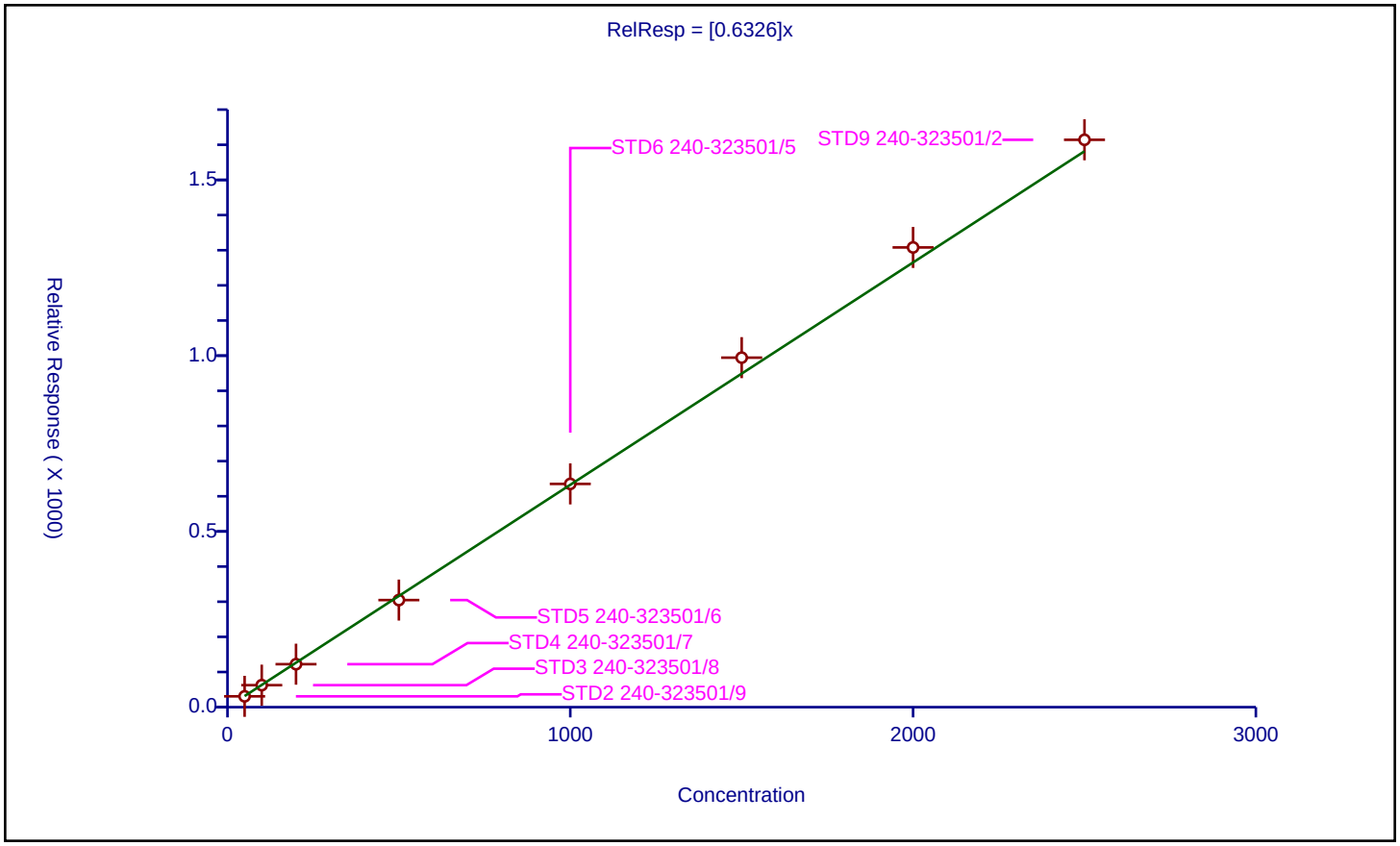
Curve Coefficients

Intercept:	0
Slope:	0.6326

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	30.793223	400.0	469389.0	0.615864	Y
2	STD3 240-323501/8	100.0	62.625002	400.0	466293.0	0.62625	Y
3	STD4 240-323501/7	200.0	122.285854	400.0	465699.0	0.611429	Y
4	STD5 240-323501/6	500.0	304.70433	400.0	472756.0	0.609409	Y
5	STD6 240-323501/5	1000.0	635.162752	400.0	469457.0	0.635163	Y
6	STD7 240-323501/4	1500.0	994.34985	400.0	501261.0	0.6629	Y
7	STD8 240-323501/3	2000.0	1307.904536	400.0	508379.0	0.653952	Y
8	STD9 240-323501/2	2500.0	1614.105221	400.0	510506.0	0.645642	Y



Calibration / 4-Nitroaniline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

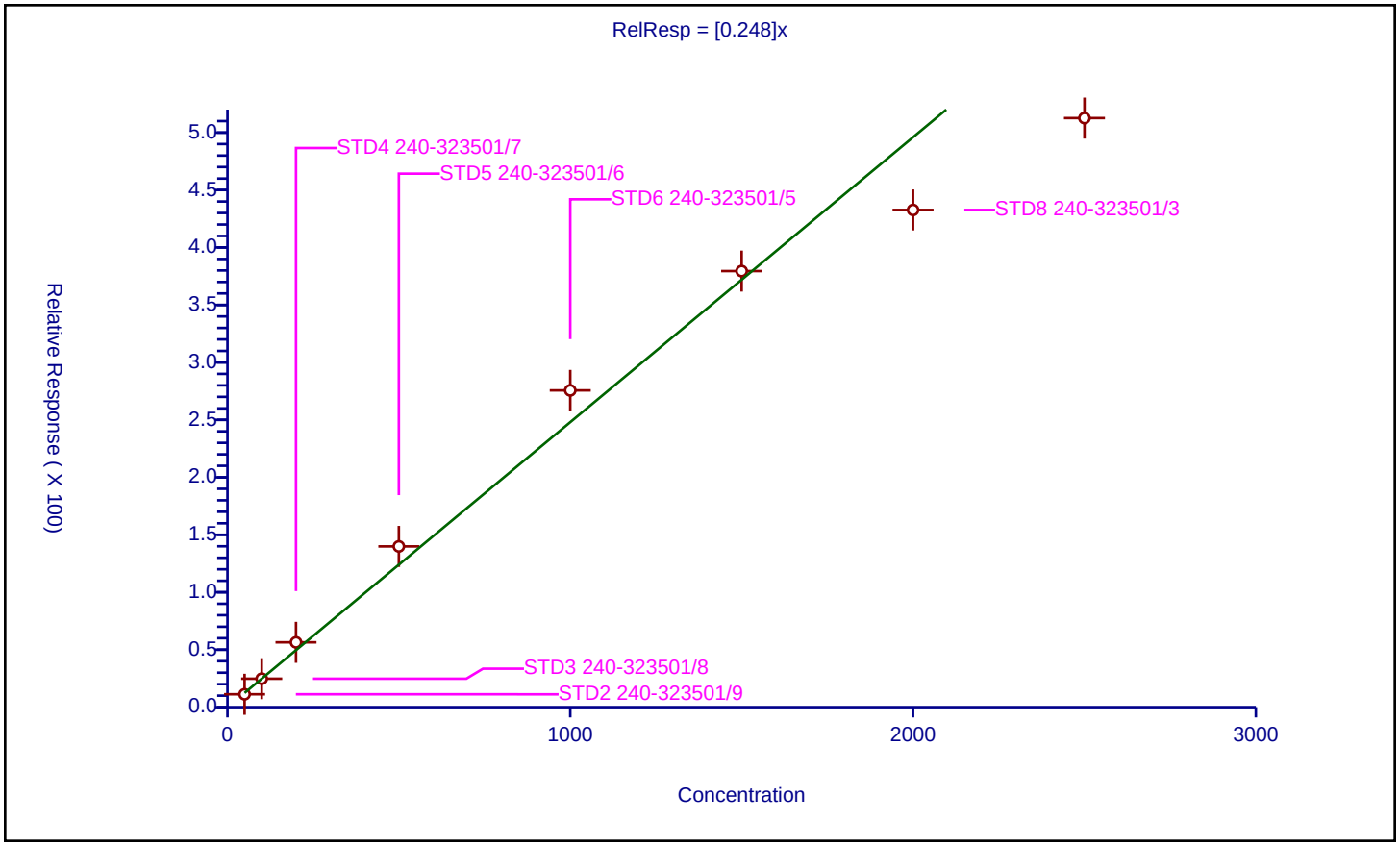
Curve Coefficients

Intercept:	0
Slope:	0.248

Error Coefficients

Standard Error:	395000
Relative Standard Error:	12.2
Correlation Coefficient:	0.986
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	11.209466	400.0	469389.0	0.224189	Y
2	STD3 240-323501/8	100.0	24.783559	400.0	466293.0	0.247836	Y
3	STD4 240-323501/7	200.0	56.40725	400.0	465699.0	0.282036	Y
4	STD5 240-323501/6	500.0	139.897114	400.0	472756.0	0.279794	Y
5	STD6 240-323501/5	1000.0	275.647823	400.0	469457.0	0.275648	Y
6	STD7 240-323501/4	1500.0	379.466984	400.0	501261.0	0.252978	Y
7	STD8 240-323501/3	2000.0	432.663033	400.0	508379.0	0.216332	Y
8	STD9 240-323501/2	2500.0	512.598872	400.0	510506.0	0.20504	Y



Calibration / Fluorene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

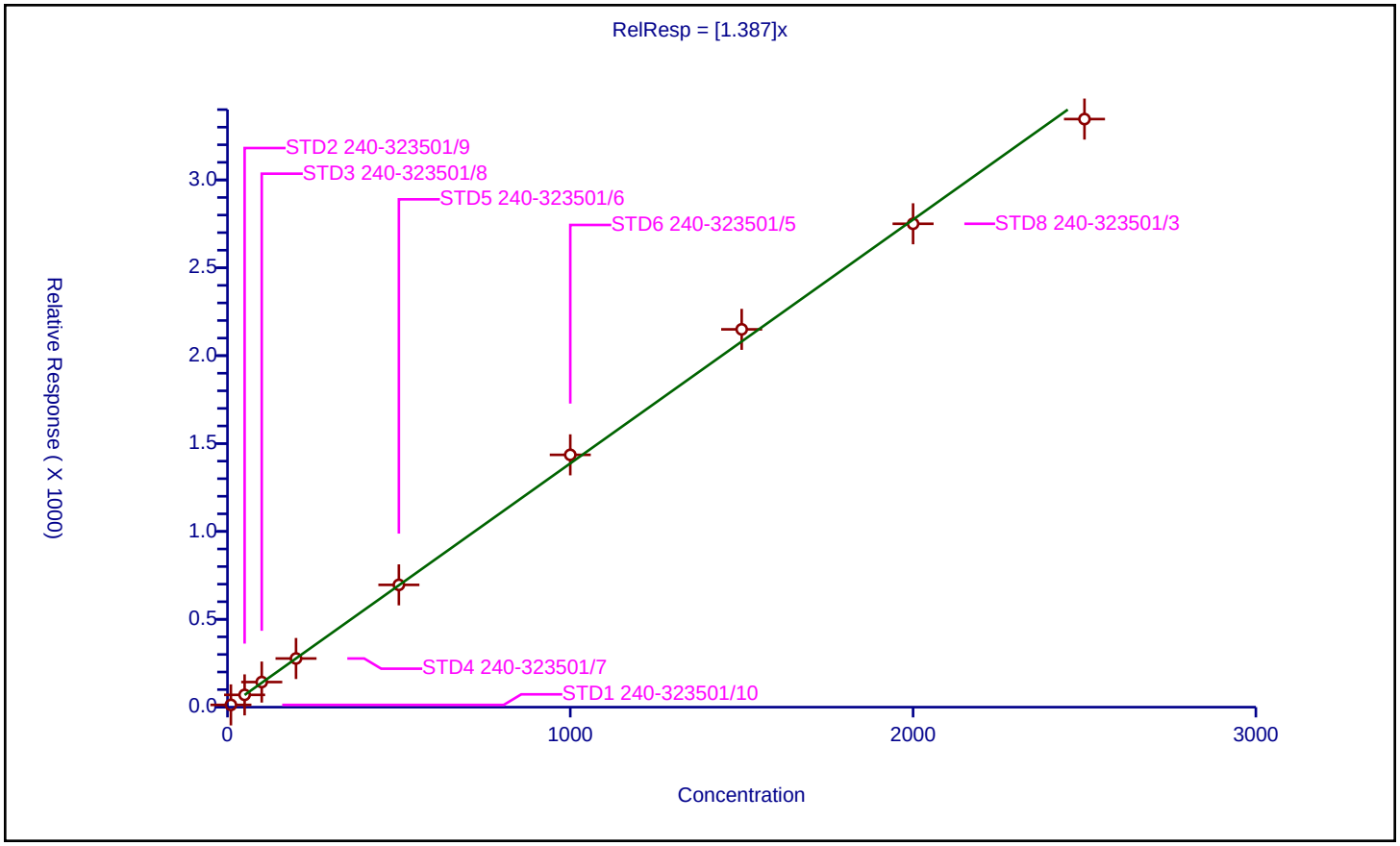
Curve Coefficients

Intercept:	0
Slope:	1.387

Error Coefficients

Standard Error:	2270000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	12.96291	400.0	387413.0	1.296291	Y
2	STD2 240-323501/9	50.0	69.979484	400.0	469389.0	1.39959	Y
3	STD3 240-323501/8	100.0	142.830366	400.0	466293.0	1.428304	Y
4	STD4 240-323501/7	200.0	276.926513	400.0	465699.0	1.384633	Y
5	STD5 240-323501/6	500.0	695.825331	400.0	472756.0	1.391651	Y
6	STD6 240-323501/5	1000.0	1435.758334	400.0	469457.0	1.435758	Y
7	STD7 240-323501/4	1500.0	2149.727188	400.0	501261.0	1.433151	Y
8	STD8 240-323501/3	2000.0	2750.422814	400.0	508379.0	1.375211	Y
9	STD9 240-323501/2	2500.0	3346.127176	400.0	510506.0	1.338451	Y



Calibration / 4,6-Dinitro-2-methylphenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

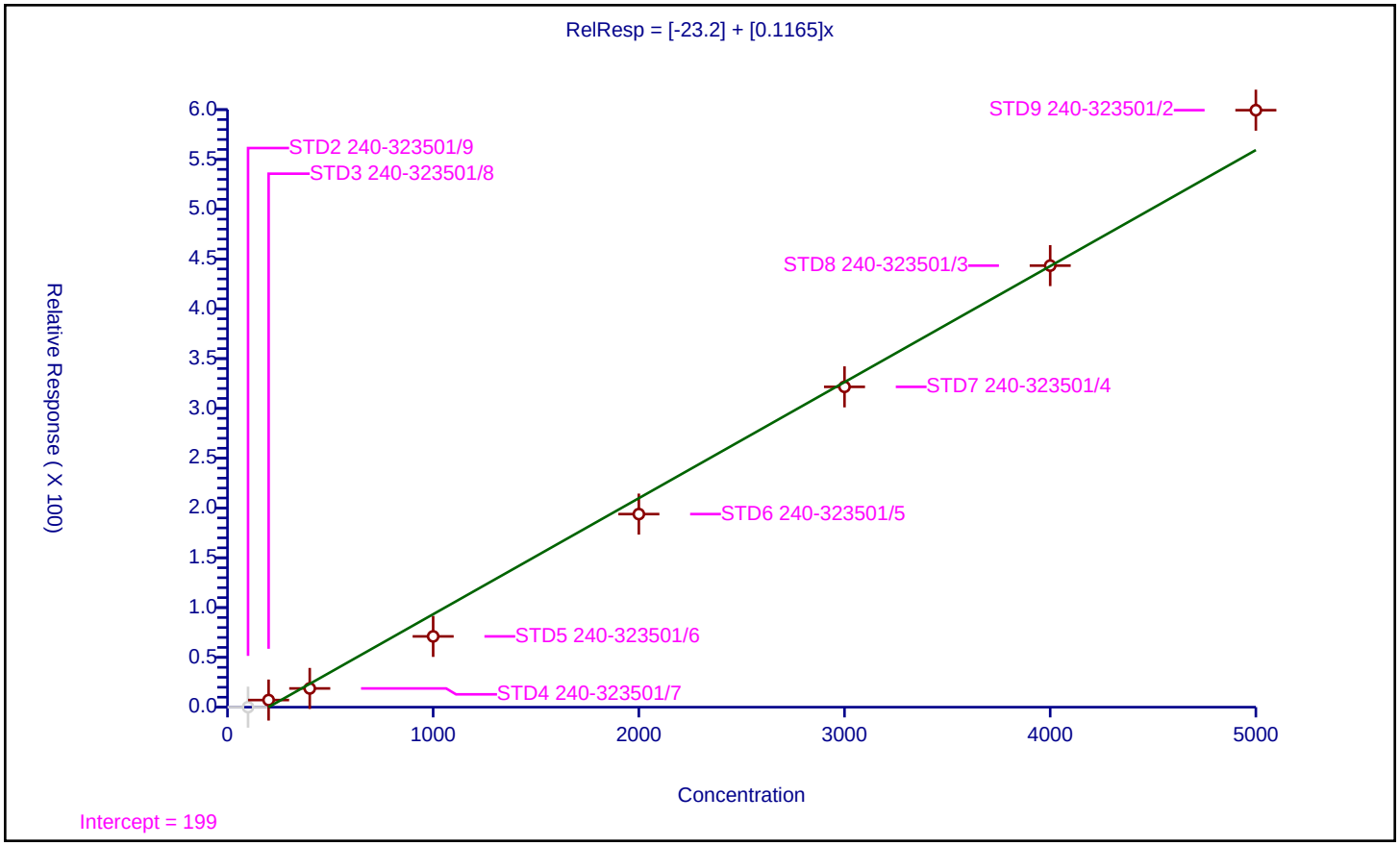
Curve Coefficients

Intercept:	-23.2
Slope:	0.1165

Error Coefficients

Standard Error:	775000
Relative Standard Error:	17.1
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	0.0	400.0	840904.0	0.0	N
2	STD3 240-323501/8	200.0	7.142831	400.0	817827.0	0.035714	Y
3	STD4 240-323501/7	400.0	18.802842	400.0	841192.0	0.047007	Y
4	STD5 240-323501/6	1000.0	71.06878	400.0	788076.0	0.071069	Y
5	STD6 240-323501/5	2000.0	193.873965	400.0	767707.0	0.096937	Y
6	STD7 240-323501/4	3000.0	321.623422	400.0	839363.0	0.107208	Y
7	STD8 240-323501/3	4000.0	443.347636	400.0	841107.0	0.110837	Y
8	STD9 240-323501/2	5000.0	599.421134	400.0	822298.0	0.119884	Y



Calibration / Diphenylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

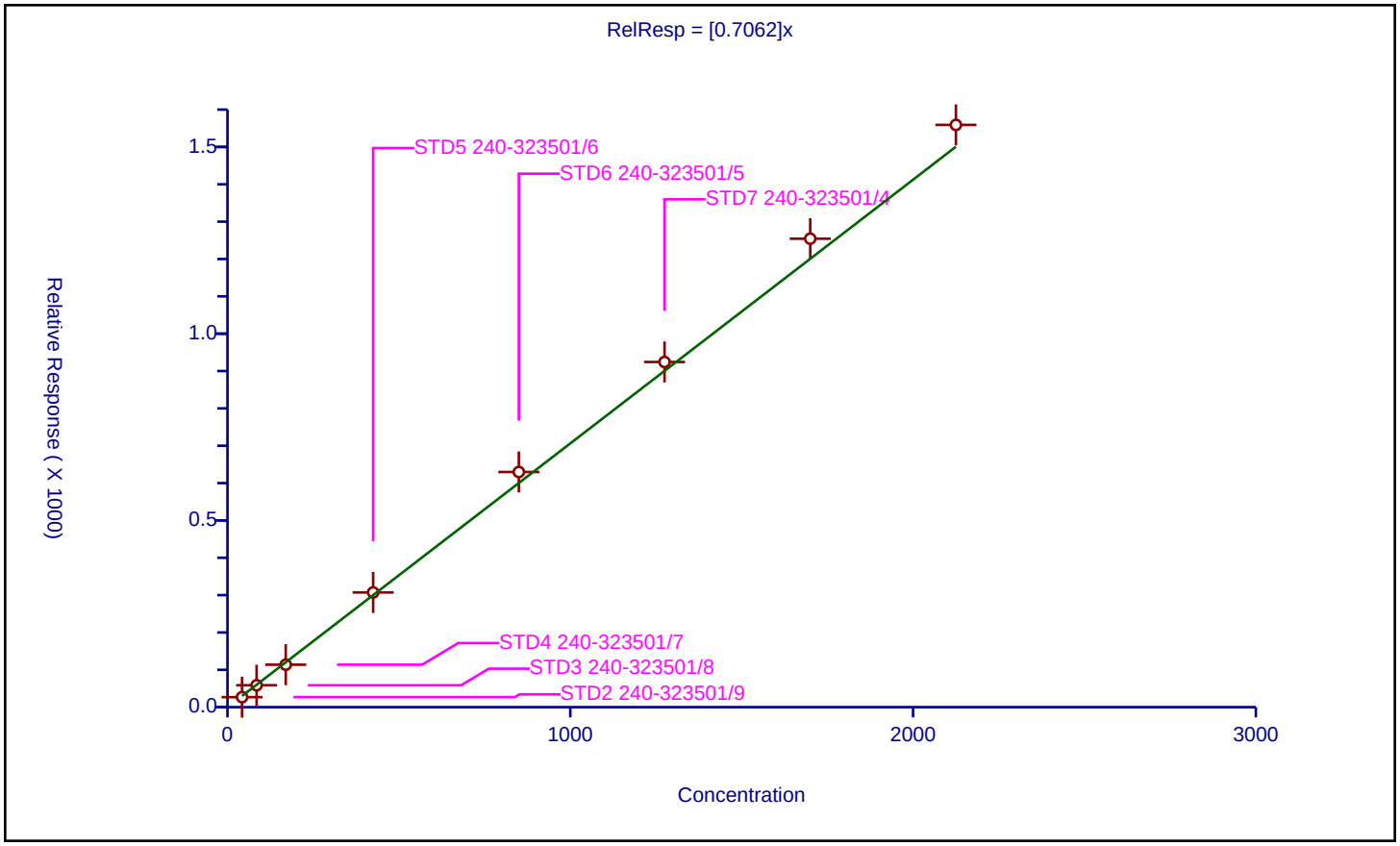
Curve Coefficients

Intercept:	0
Slope:	0.7062

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	42.5	26.798303	400.0	840904.0	0.630548	Y
2	STD3 240-323501/8	85.0	58.663263	400.0	817827.0	0.690156	Y
3	STD4 240-323501/7	170.0	113.682489	400.0	841192.0	0.668721	Y
4	STD5 240-323501/6	425.0	307.159208	400.0	788076.0	0.722728	Y
5	STD6 240-323501/5	850.0	629.682418	400.0	767707.0	0.740803	Y
6	STD7 240-323501/4	1275.0	924.244695	400.0	839363.0	0.724898	Y
7	STD8 240-323501/3	1700.0	1254.378337	400.0	841107.0	0.73787	Y
8	STD9 240-323501/2	2125.0	1559.053774	400.0	822298.0	0.733672	Y



Calibration / N-Nitrosodiphenylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

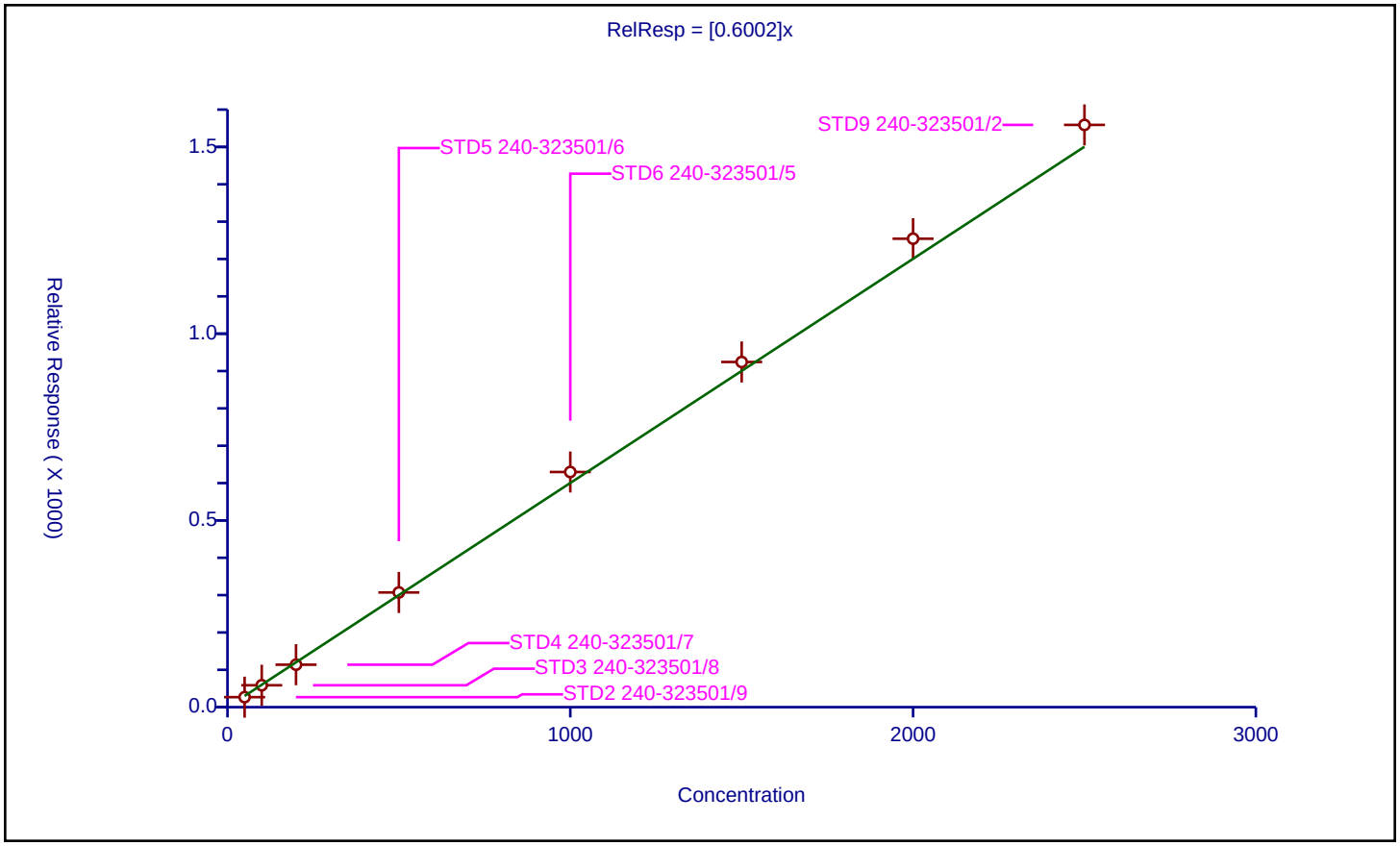
Curve Coefficients

Intercept:	0
Slope:	0.6002

Error Coefficients

Standard Error:	1810000
Relative Standard Error:	5.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	26.798303	400.0	840904.0	0.535966	Y
2	STD3 240-323501/8	100.0	58.663263	400.0	817827.0	0.586633	Y
3	STD4 240-323501/7	200.0	113.682489	400.0	841192.0	0.568412	Y
4	STD5 240-323501/6	500.0	307.159208	400.0	788076.0	0.614318	Y
5	STD6 240-323501/5	1000.0	629.682418	400.0	767707.0	0.629682	Y
6	STD7 240-323501/4	1500.0	924.244695	400.0	839363.0	0.616163	Y
7	STD8 240-323501/3	2000.0	1254.378337	400.0	841107.0	0.627189	Y
8	STD9 240-323501/2	2500.0	1559.053774	400.0	822298.0	0.623622	Y



Calibration / 1,2-Diphenylhydrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

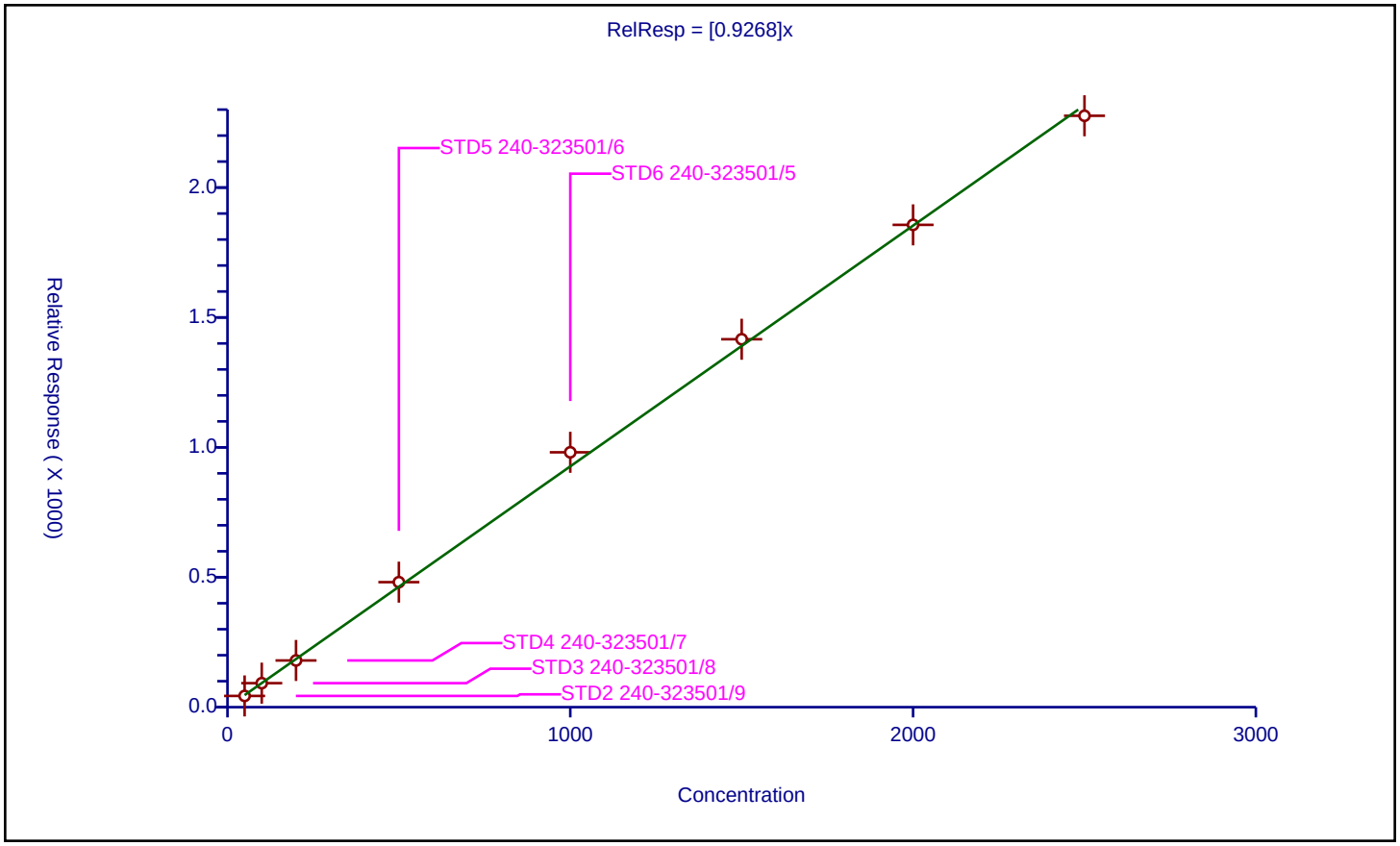
Curve Coefficients

Intercept:	0
Slope:	0.9268

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	43.261538	400.0	840904.0	0.865231	Y
2	STD3 240-323501/8	100.0	92.450848	400.0	817827.0	0.924508	Y
3	STD4 240-323501/7	200.0	179.724011	400.0	841192.0	0.89862	Y
4	STD5 240-323501/6	500.0	481.145981	400.0	788076.0	0.962292	Y
5	STD6 240-323501/5	1000.0	980.939343	400.0	767707.0	0.980939	Y
6	STD7 240-323501/4	1500.0	1416.137714	400.0	839363.0	0.944092	Y
7	STD8 240-323501/3	2000.0	1856.417317	400.0	841107.0	0.928209	Y
8	STD9 240-323501/2	2500.0	2276.233677	400.0	822298.0	0.910493	Y



Calibration / Azobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

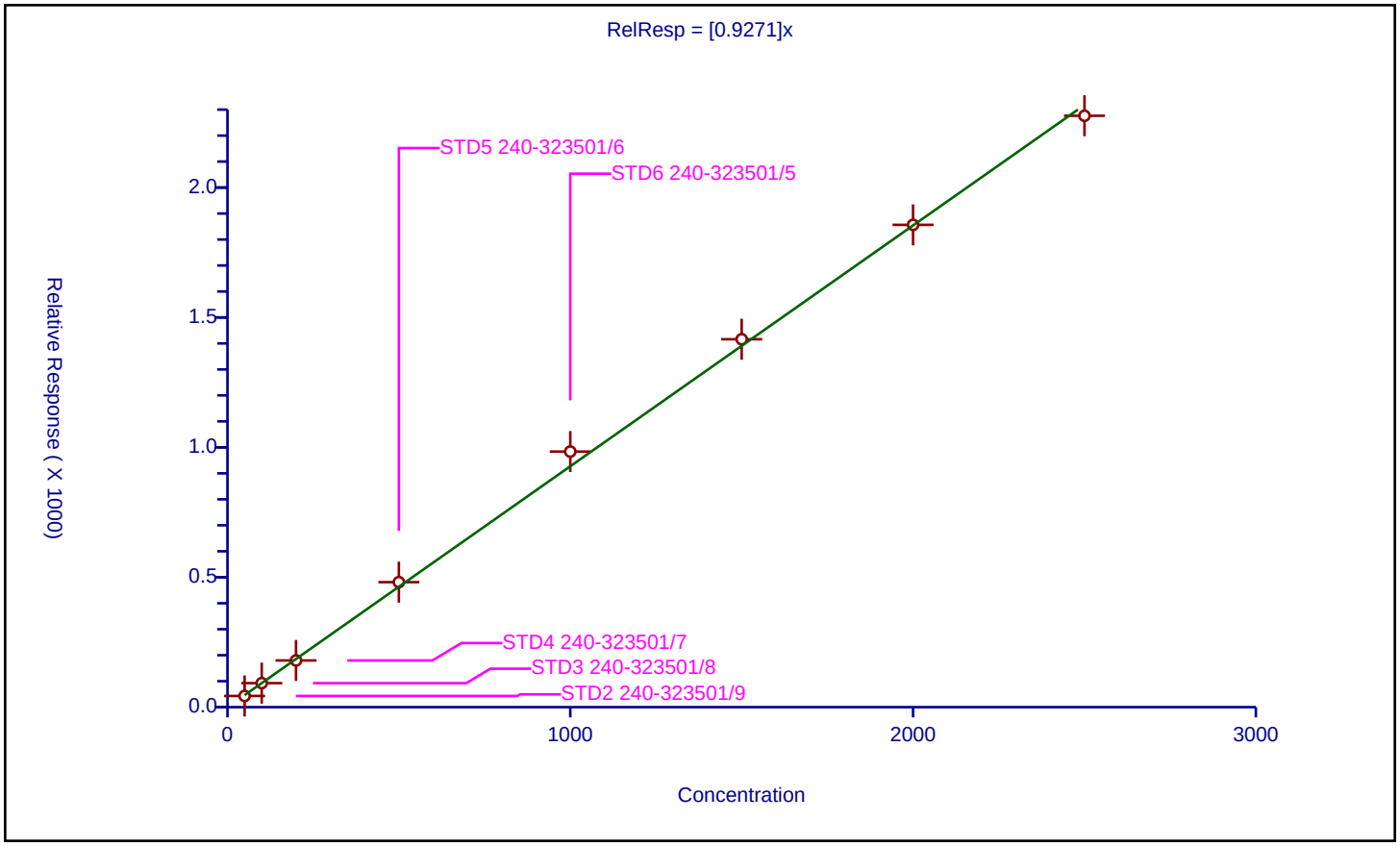
Curve Coefficients

Intercept:	0
Slope:	0.9271

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	4.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	43.194467	400.0	840904.0	0.863889	Y
2	STD3 240-323501/8	100.0	92.535952	400.0	817827.0	0.92536	Y
3	STD4 240-323501/7	200.0	179.715927	400.0	841192.0	0.89858	Y
4	STD5 240-323501/6	500.0	481.227191	400.0	788076.0	0.962454	Y
5	STD6 240-323501/5	1000.0	983.722696	400.0	767707.0	0.983723	Y
6	STD7 240-323501/4	1500.0	1416.137714	400.0	839363.0	0.944092	Y
7	STD8 240-323501/3	2000.0	1856.417317	400.0	841107.0	0.928209	Y
8	STD9 240-323501/2	2500.0	2276.233677	400.0	822298.0	0.910493	Y



Calibration / 2,4,6-Tribromophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

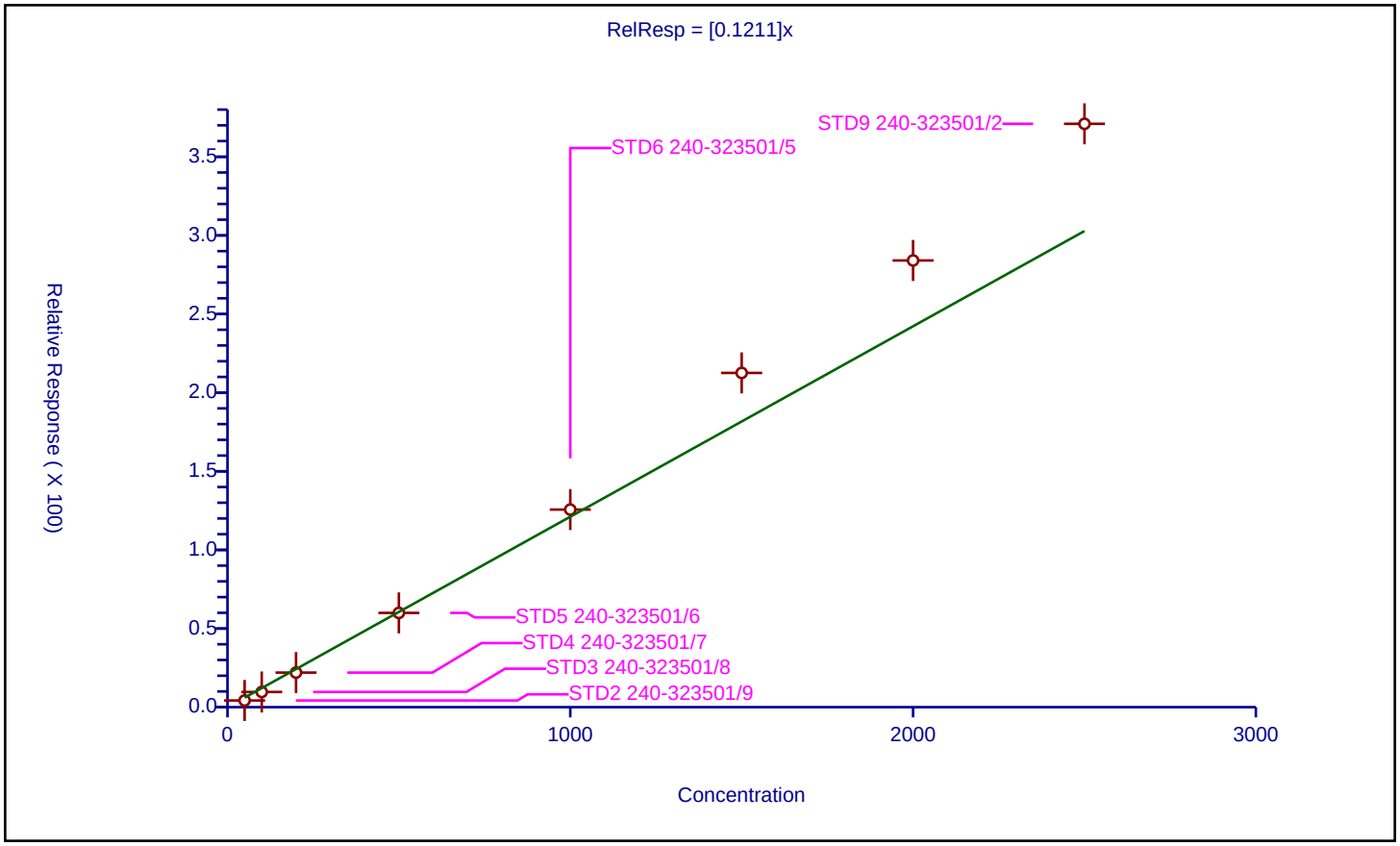
Curve Coefficients

Intercept:	0
Slope:	0.1211

Error Coefficients

Standard Error:	254000
Relative Standard Error:	18.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.961

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	4.242963	400.0	469389.0	0.084859	Y
2	STD3 240-323501/8	100.0	9.651442	400.0	466293.0	0.096514	Y
3	STD4 240-323501/7	200.0	21.979004	400.0	465699.0	0.109895	Y
4	STD5 240-323501/6	500.0	59.930281	400.0	472756.0	0.119861	Y
5	STD6 240-323501/5	1000.0	125.648994	400.0	469457.0	0.125649	Y
6	STD7 240-323501/4	1500.0	212.543166	400.0	501261.0	0.141695	Y
7	STD8 240-323501/3	2000.0	284.07389	400.0	508379.0	0.142037	Y
8	STD9 240-323501/2	2500.0	370.963711	400.0	510506.0	0.148385	Y



Calibration / 4-Bromophenyl phenyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

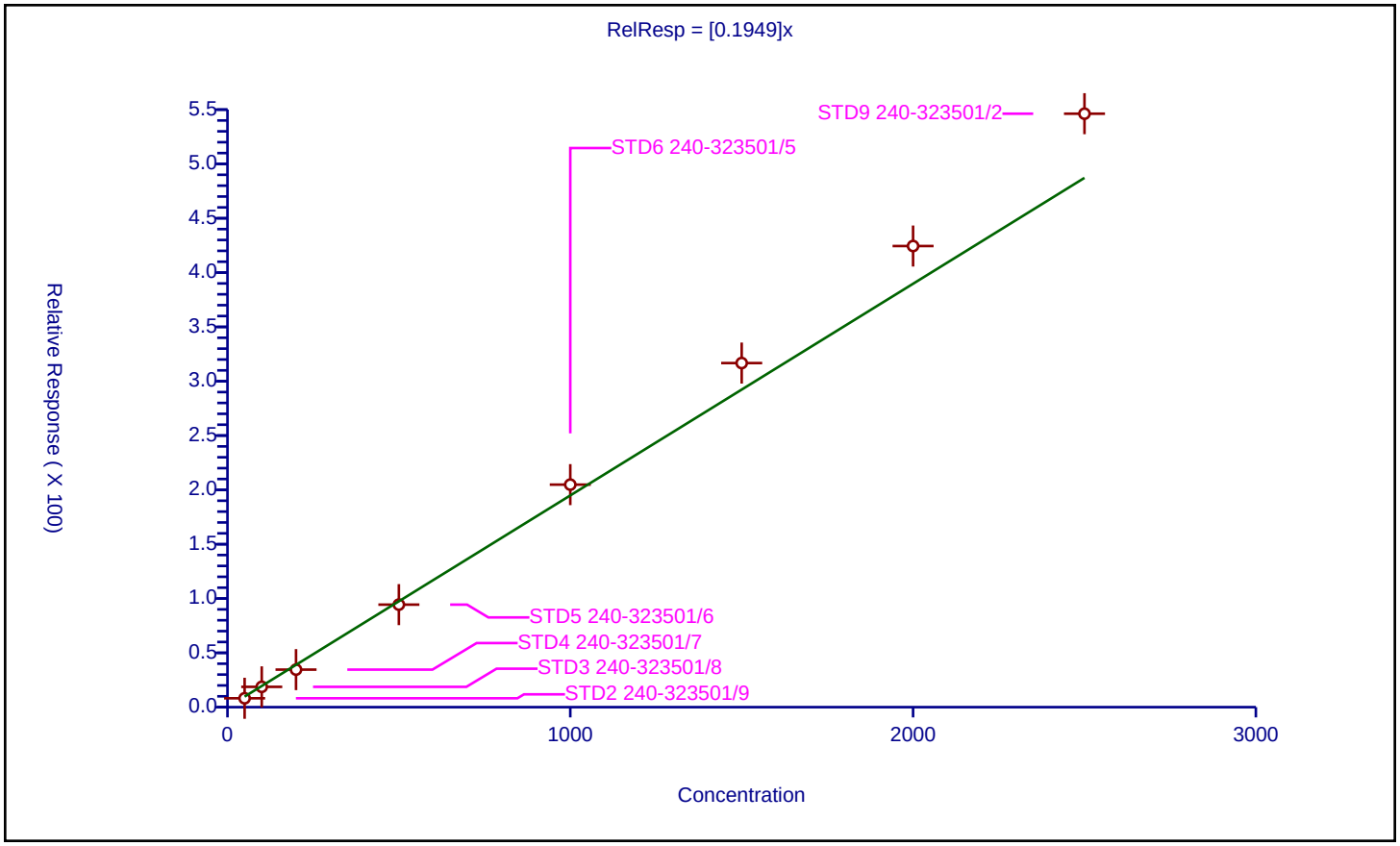
Curve Coefficients

Intercept:	0
Slope:	0.1949

Error Coefficients

Standard Error:	620000
Relative Standard Error:	10.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	8.183574	400.0	840904.0	0.163671	Y
2	STD3 240-323501/8	100.0	18.706646	400.0	817827.0	0.187066	Y
3	STD4 240-323501/7	200.0	34.551446	400.0	841192.0	0.172757	Y
4	STD5 240-323501/6	500.0	94.378715	400.0	788076.0	0.188757	Y
5	STD6 240-323501/5	1000.0	204.818244	400.0	767707.0	0.204818	Y
6	STD7 240-323501/4	1500.0	316.711125	400.0	839363.0	0.211141	Y
7	STD8 240-323501/3	2000.0	424.43827	400.0	841107.0	0.212219	Y
8	STD9 240-323501/2	2500.0	546.244306	400.0	822298.0	0.218498	Y



Calibration / Atrazine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

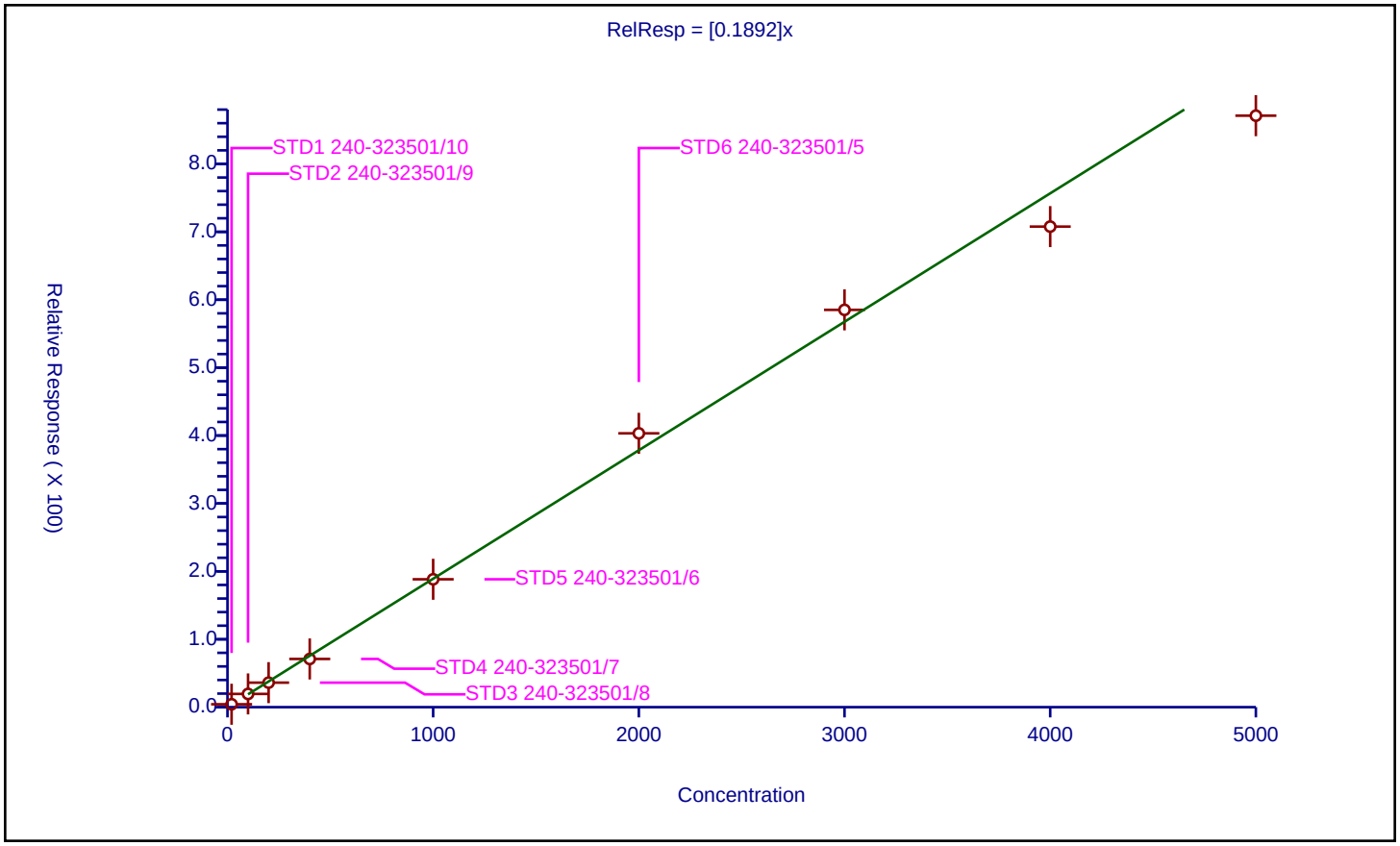
Curve Coefficients

Intercept:	0
Slope:	0.1892

Error Coefficients

Standard Error:	980000
Relative Standard Error:	7.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	20.0	4.266573	400.0	728641.0	0.213329	Y
2	STD2 240-323501/9	100.0	19.487123	400.0	840904.0	0.194871	Y
3	STD3 240-323501/8	200.0	36.128912	400.0	817827.0	0.180645	Y
4	STD4 240-323501/7	400.0	71.010186	400.0	841192.0	0.177525	Y
5	STD5 240-323501/6	1000.0	188.317878	400.0	788076.0	0.188318	Y
6	STD6 240-323501/5	2000.0	403.265308	400.0	767707.0	0.201633	Y
7	STD7 240-323501/4	3000.0	585.101321	400.0	839363.0	0.195034	Y
8	STD8 240-323501/3	4000.0	707.703538	400.0	841107.0	0.176926	Y
9	STD9 240-323501/2	5000.0	871.063775	400.0	822298.0	0.174213	Y



Calibration / Hexachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

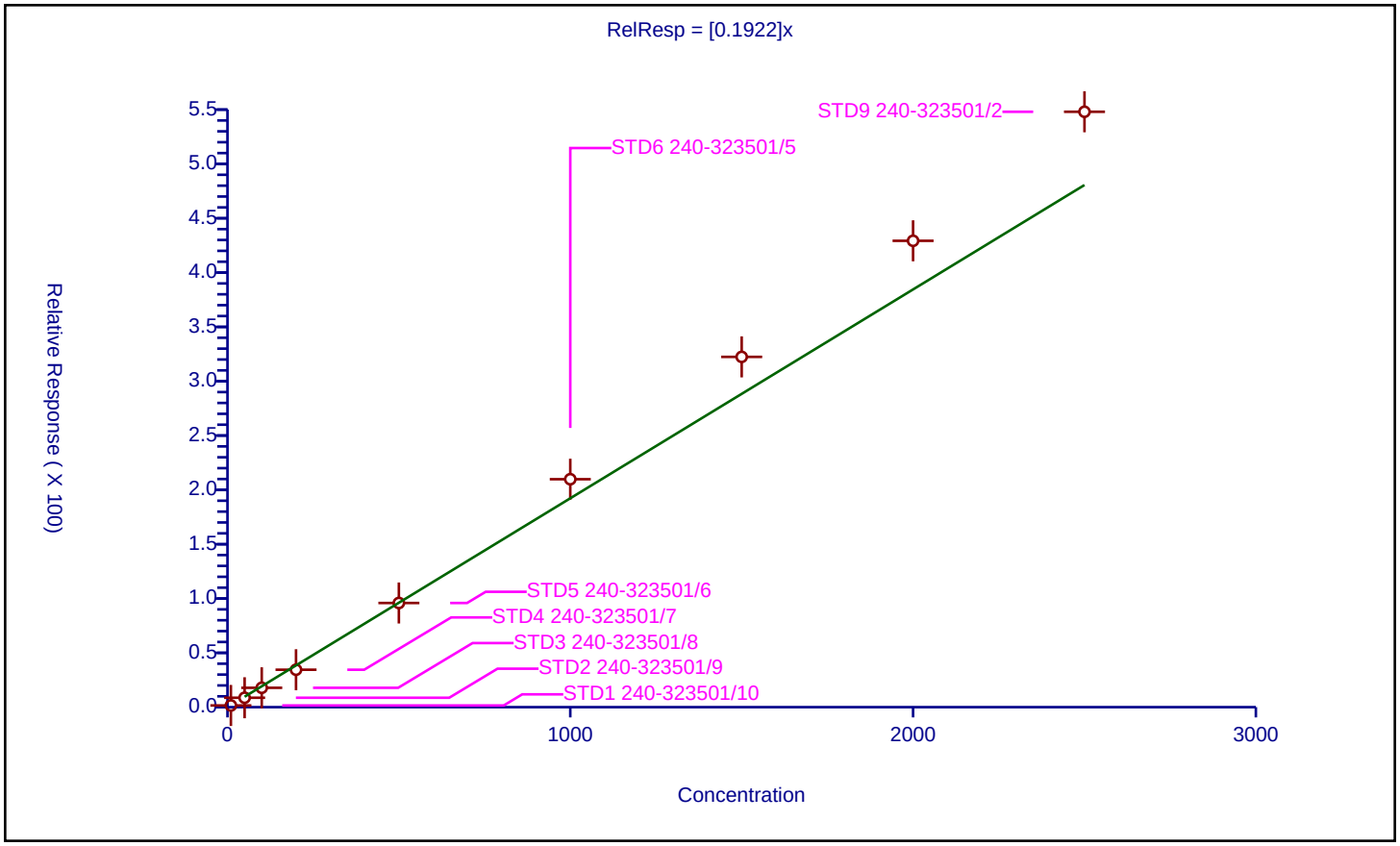
Curve Coefficients

Intercept:	0
Slope:	0.1922

Error Coefficients

Standard Error:	586000
Relative Standard Error:	12.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	1.55742	400.0	728641.0	0.155742	Y
2	STD2 240-323501/9	50.0	8.676853	400.0	840904.0	0.173537	Y
3	STD3 240-323501/8	100.0	17.818438	400.0	817827.0	0.178184	Y
4	STD4 240-323501/7	200.0	34.472035	400.0	841192.0	0.17236	Y
5	STD5 240-323501/6	500.0	95.884661	400.0	788076.0	0.191769	Y
6	STD6 240-323501/5	1000.0	209.794622	400.0	767707.0	0.209795	Y
7	STD7 240-323501/4	1500.0	322.413068	400.0	839363.0	0.214942	Y
8	STD8 240-323501/3	2000.0	429.255255	400.0	841107.0	0.214628	Y
9	STD9 240-323501/2	2500.0	548.011548	400.0	822298.0	0.219205	Y



Calibration / n-Octadecane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

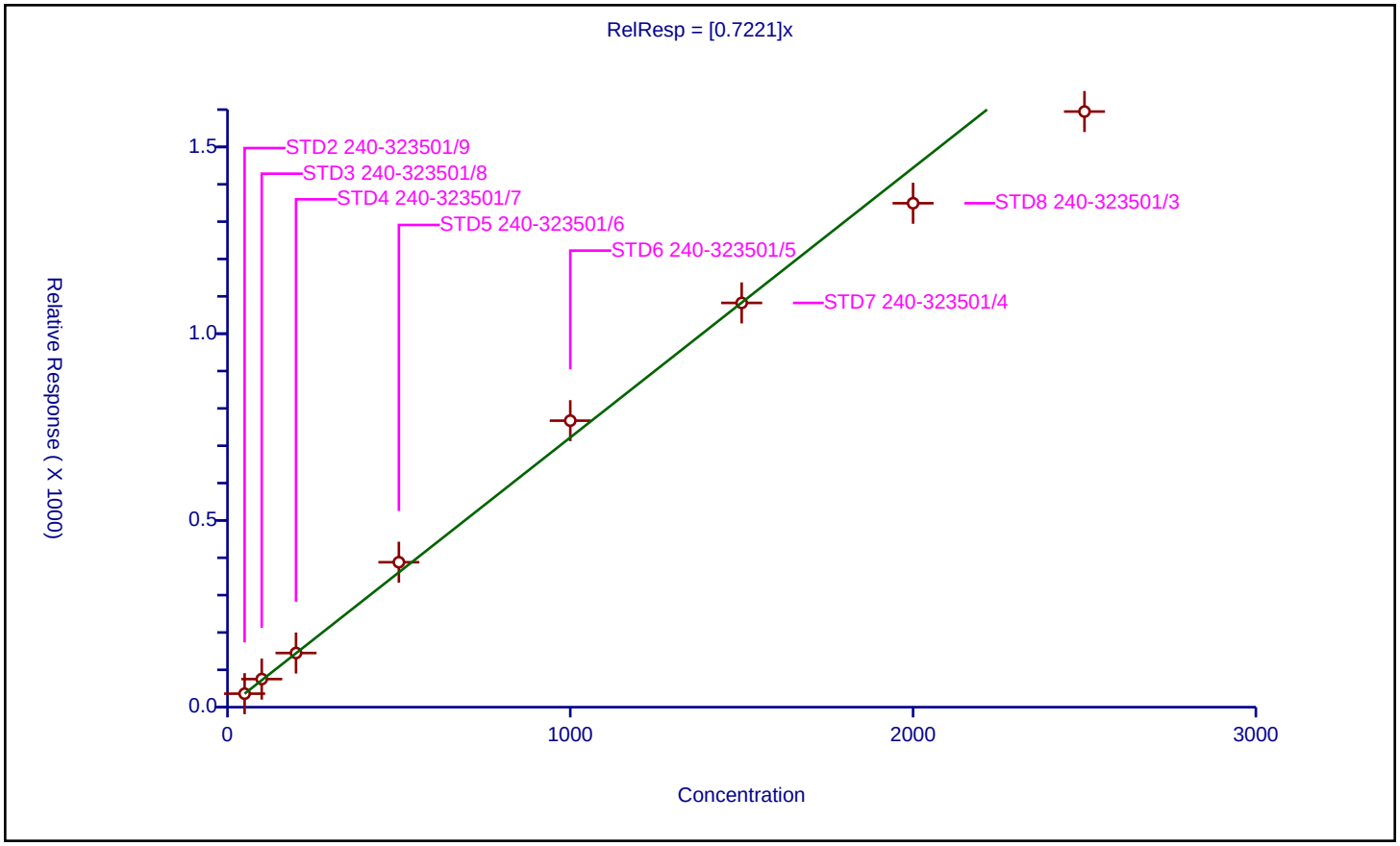
Curve Coefficients

Intercept:	0
Slope:	0.7221

Error Coefficients

Standard Error:	1960000
Relative Standard Error:	6.4
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	36.128262	400.0	840904.0	0.722565	Y
2	STD3 240-323501/8	100.0	75.172867	400.0	817827.0	0.751729	Y
3	STD4 240-323501/7	200.0	145.006134	400.0	841192.0	0.725031	Y
4	STD5 240-323501/6	500.0	388.103685	400.0	788076.0	0.776207	Y
5	STD6 240-323501/5	1000.0	767.124437	400.0	767707.0	0.767124	Y
6	STD7 240-323501/4	1500.0	1082.383665	400.0	839363.0	0.721589	Y
7	STD8 240-323501/3	2000.0	1349.297057	400.0	841107.0	0.674649	Y
8	STD9 240-323501/2	2500.0	1594.831071	400.0	822298.0	0.637932	Y



Calibration / Pentachlorophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

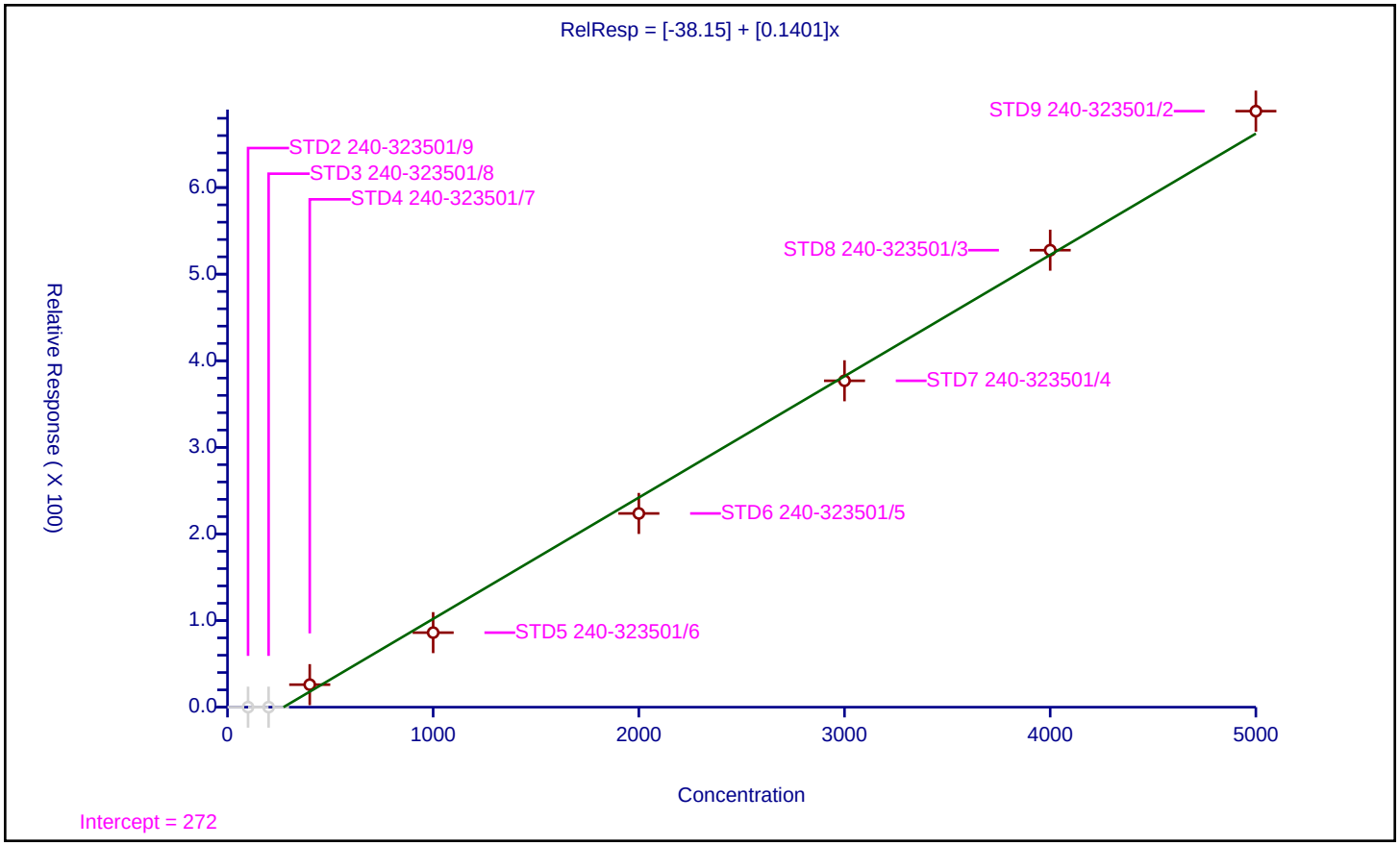
Curve Coefficients

Intercept:	-38.15
Slope:	0.1401

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	10.0
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	0.0	400.0	840904.0	0.0	N
2	STD3 240-323501/8	200.0	0.0	400.0	817827.0	0.0	N
3	STD4 240-323501/7	400.0	25.992639	400.0	841192.0	0.064982	Y
4	STD5 240-323501/6	1000.0	86.05769	400.0	788076.0	0.086058	Y
5	STD6 240-323501/5	2000.0	223.680128	400.0	767707.0	0.11184	Y
6	STD7 240-323501/4	3000.0	376.889617	400.0	839363.0	0.12563	Y
7	STD8 240-323501/3	4000.0	527.68316	400.0	841107.0	0.131921	Y
8	STD9 240-323501/2	5000.0	688.235165	400.0	822298.0	0.137647	Y



Calibration / Phenanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

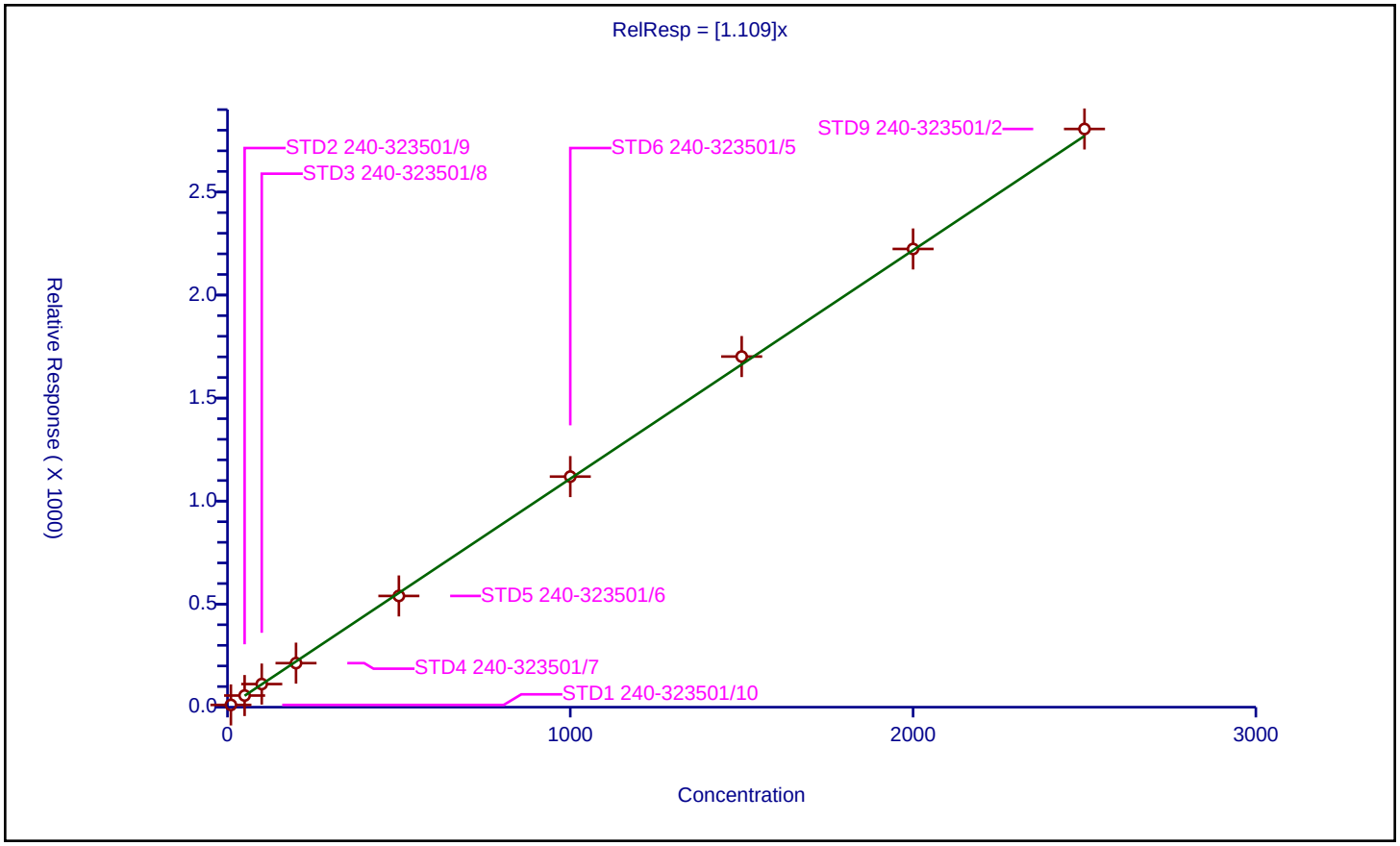
Curve Coefficients

Intercept:	0
Slope:	1.109

Error Coefficients

Standard Error:	3040000
Relative Standard Error:	2.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	10.934328	400.0	728641.0	1.093433	Y
2	STD2 240-323501/9	50.0	56.435455	400.0	840904.0	1.128709	Y
3	STD3 240-323501/8	100.0	112.201236	400.0	817827.0	1.122012	Y
4	STD4 240-323501/7	200.0	213.690097	400.0	841192.0	1.06845	Y
5	STD5 240-323501/6	500.0	539.787533	400.0	788076.0	1.079575	Y
6	STD6 240-323501/5	1000.0	1118.901873	400.0	767707.0	1.118902	Y
7	STD7 240-323501/4	1500.0	1701.606575	400.0	839363.0	1.134404	Y
8	STD8 240-323501/3	2000.0	2223.761305	400.0	841107.0	1.111881	Y
9	STD9 240-323501/2	2500.0	2805.998312	400.0	822298.0	1.122399	Y



Calibration / Anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

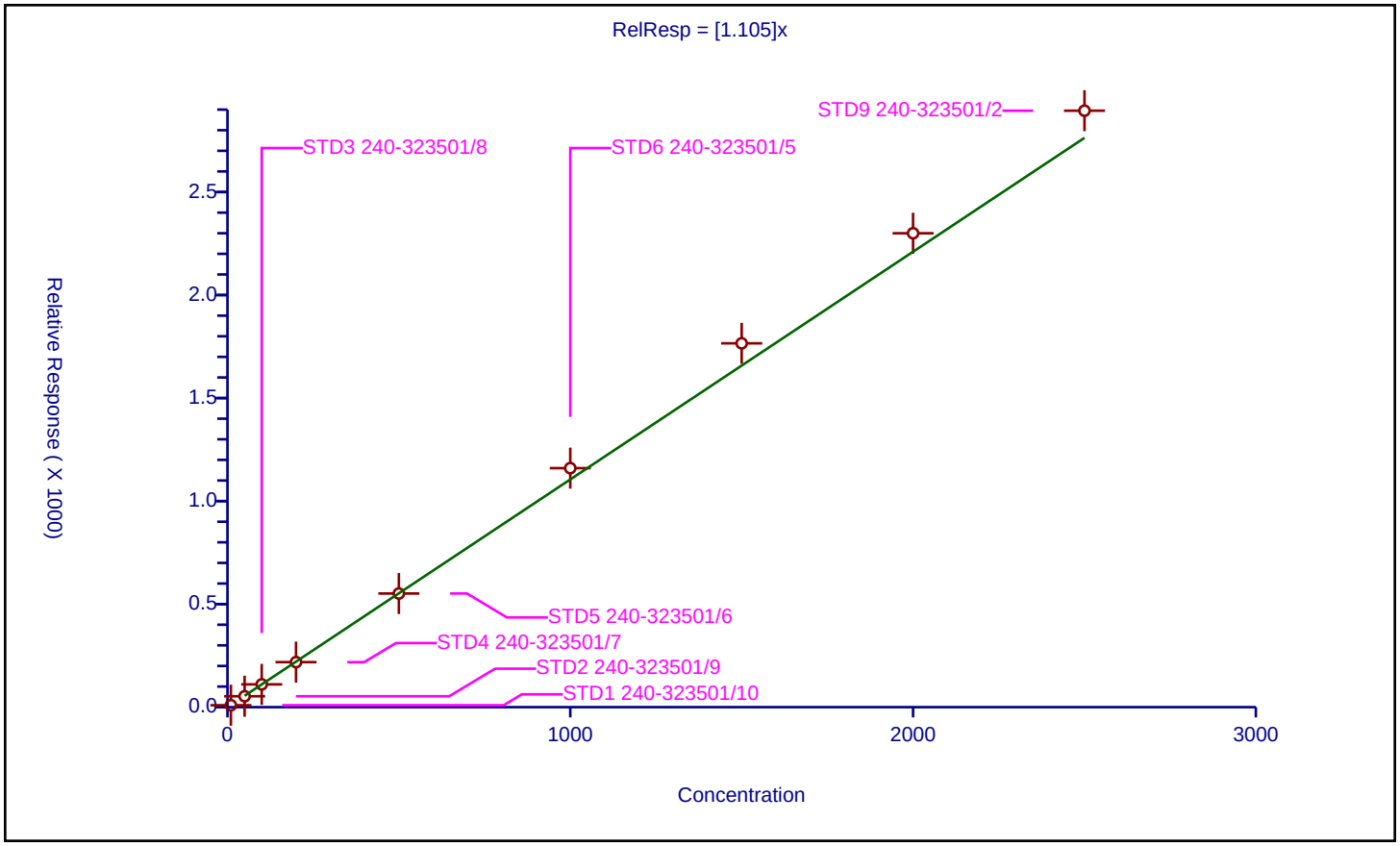
Curve Coefficients

Intercept:	0
Slope:	1.105

Error Coefficients

Standard Error:	3140000
Relative Standard Error:	6.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	9.412591	400.0	728641.0	0.941259	Y
2	STD2 240-323501/9	50.0	52.895931	400.0	840904.0	1.057919	Y
3	STD3 240-323501/8	100.0	110.639047	400.0	817827.0	1.10639	Y
4	STD4 240-323501/7	200.0	218.526567	400.0	841192.0	1.092633	Y
5	STD5 240-323501/6	500.0	551.593501	400.0	788076.0	1.103187	Y
6	STD6 240-323501/5	1000.0	1160.047258	400.0	767707.0	1.160047	Y
7	STD7 240-323501/4	1500.0	1765.764276	400.0	839363.0	1.177176	Y
8	STD8 240-323501/3	2000.0	2299.861016	400.0	841107.0	1.149931	Y
9	STD9 240-323501/2	2500.0	2894.771968	400.0	822298.0	1.157909	Y



Calibration / Carbazole

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

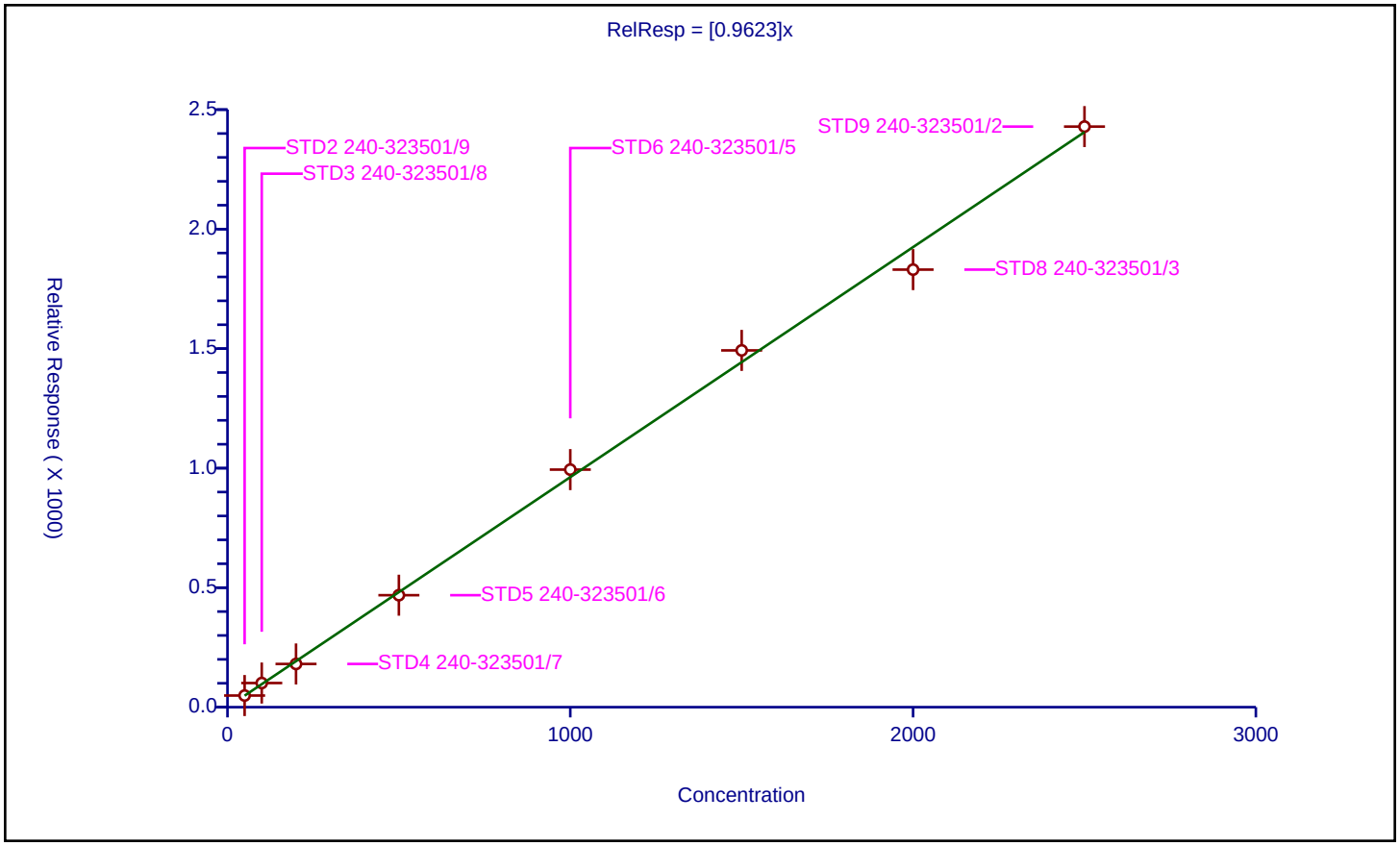
Curve Coefficients

Intercept:	0
Slope:	0.9623

Error Coefficients

Standard Error:	2780000
Relative Standard Error:	4.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	48.654305	400.0	840904.0	0.973086	Y
2	STD3 240-323501/8	100.0	100.928925	400.0	817827.0	1.009289	Y
3	STD4 240-323501/7	200.0	180.75588	400.0	841192.0	0.903779	Y
4	STD5 240-323501/6	500.0	468.398987	400.0	788076.0	0.936798	Y
5	STD6 240-323501/5	1000.0	993.903664	400.0	767707.0	0.993904	Y
6	STD7 240-323501/4	1500.0	1492.635248	400.0	839363.0	0.99509	Y
7	STD8 240-323501/3	2000.0	1830.517164	400.0	841107.0	0.915259	Y
8	STD9 240-323501/2	2500.0	2428.981221	400.0	822298.0	0.971592	Y



Calibration / Di-n-butyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

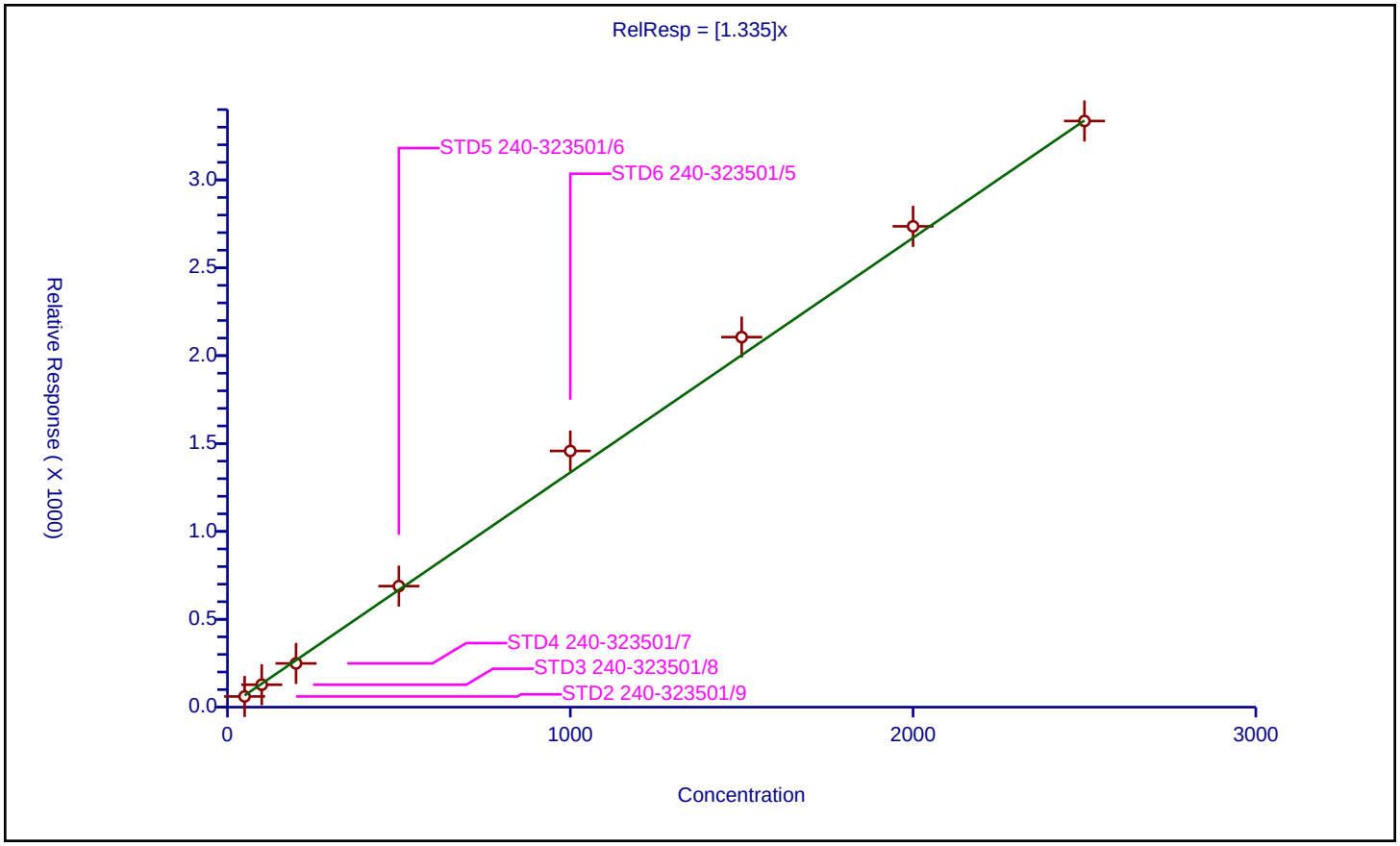
Curve Coefficients

Intercept:	0
Slope:	1.335

Error Coefficients

Standard Error:	3960000
Relative Standard Error:	6.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	60.95678	400.0	840904.0	1.219136	Y
2	STD3 240-323501/8	100.0	127.766875	400.0	817827.0	1.277669	Y
3	STD4 240-323501/7	200.0	248.941978	400.0	841192.0	1.24471	Y
4	STD5 240-323501/6	500.0	688.766058	400.0	788076.0	1.377532	Y
5	STD6 240-323501/5	1000.0	1457.626933	400.0	767707.0	1.457627	Y
6	STD7 240-323501/4	1500.0	2105.478083	400.0	839363.0	1.403652	Y
7	STD8 240-323501/3	2000.0	2735.787956	400.0	841107.0	1.367894	Y
8	STD9 240-323501/2	2500.0	3335.350931	400.0	822298.0	1.33414	Y



Calibration / Fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

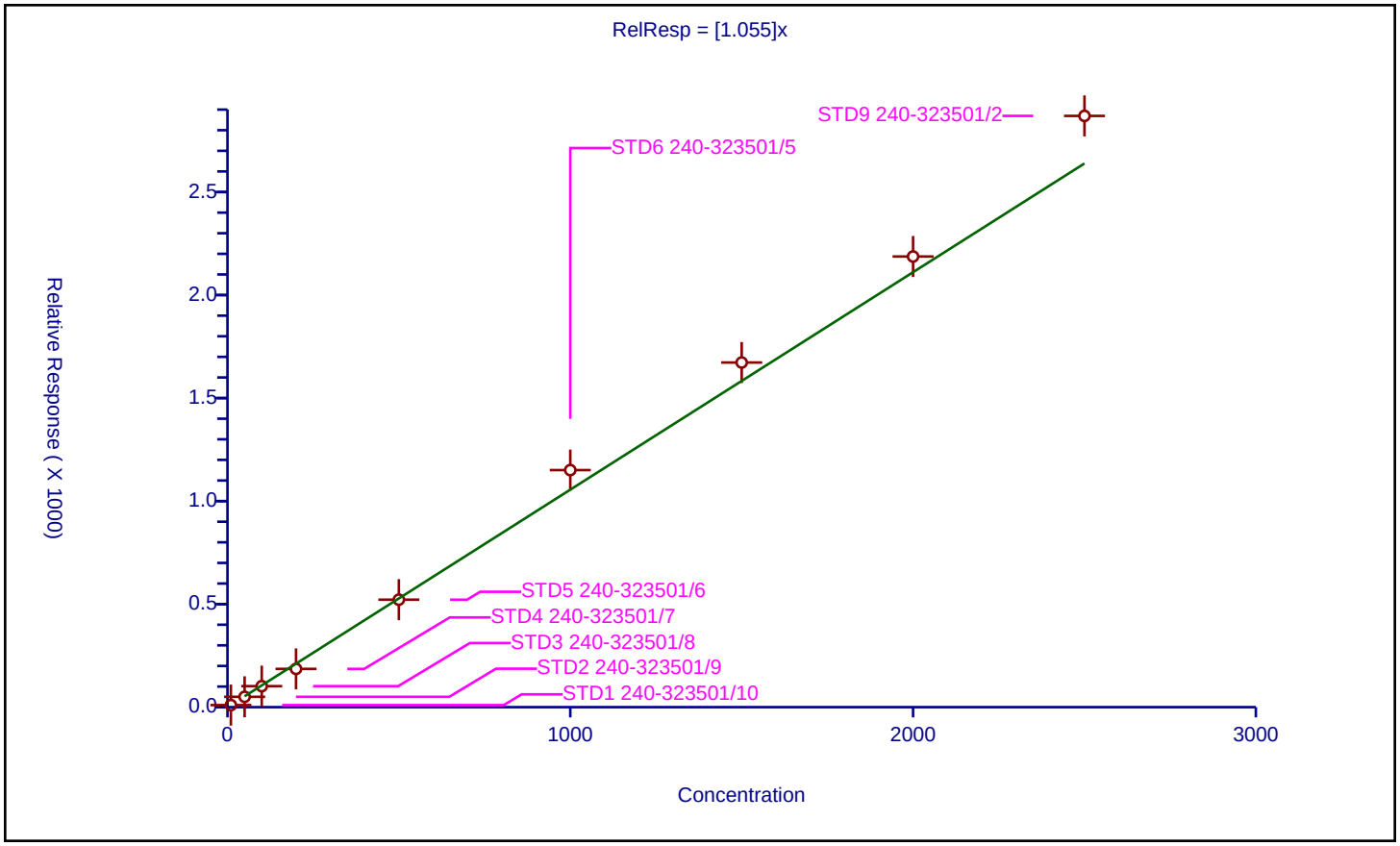
Curve Coefficients

Intercept:	0
Slope:	1.055

Error Coefficients

Standard Error:	3050000
Relative Standard Error:	7.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	9.956069	400.0	728641.0	0.995607	Y
2	STD2 240-323501/9	50.0	50.244023	400.0	840904.0	1.00488	Y
3	STD3 240-323501/8	100.0	101.966797	400.0	817827.0	1.019668	Y
4	STD4 240-323501/7	200.0	185.829157	400.0	841192.0	0.929146	Y
5	STD5 240-323501/6	500.0	521.573554	400.0	788076.0	1.043147	Y
6	STD6 240-323501/5	1000.0	1150.480066	400.0	767707.0	1.15048	Y
7	STD7 240-323501/4	1500.0	1672.638894	400.0	839363.0	1.115093	Y
8	STD8 240-323501/3	2000.0	2187.022579	400.0	841107.0	1.093511	Y
9	STD9 240-323501/2	2500.0	2869.436141	400.0	822298.0	1.147774	Y



Calibration / Benzidine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

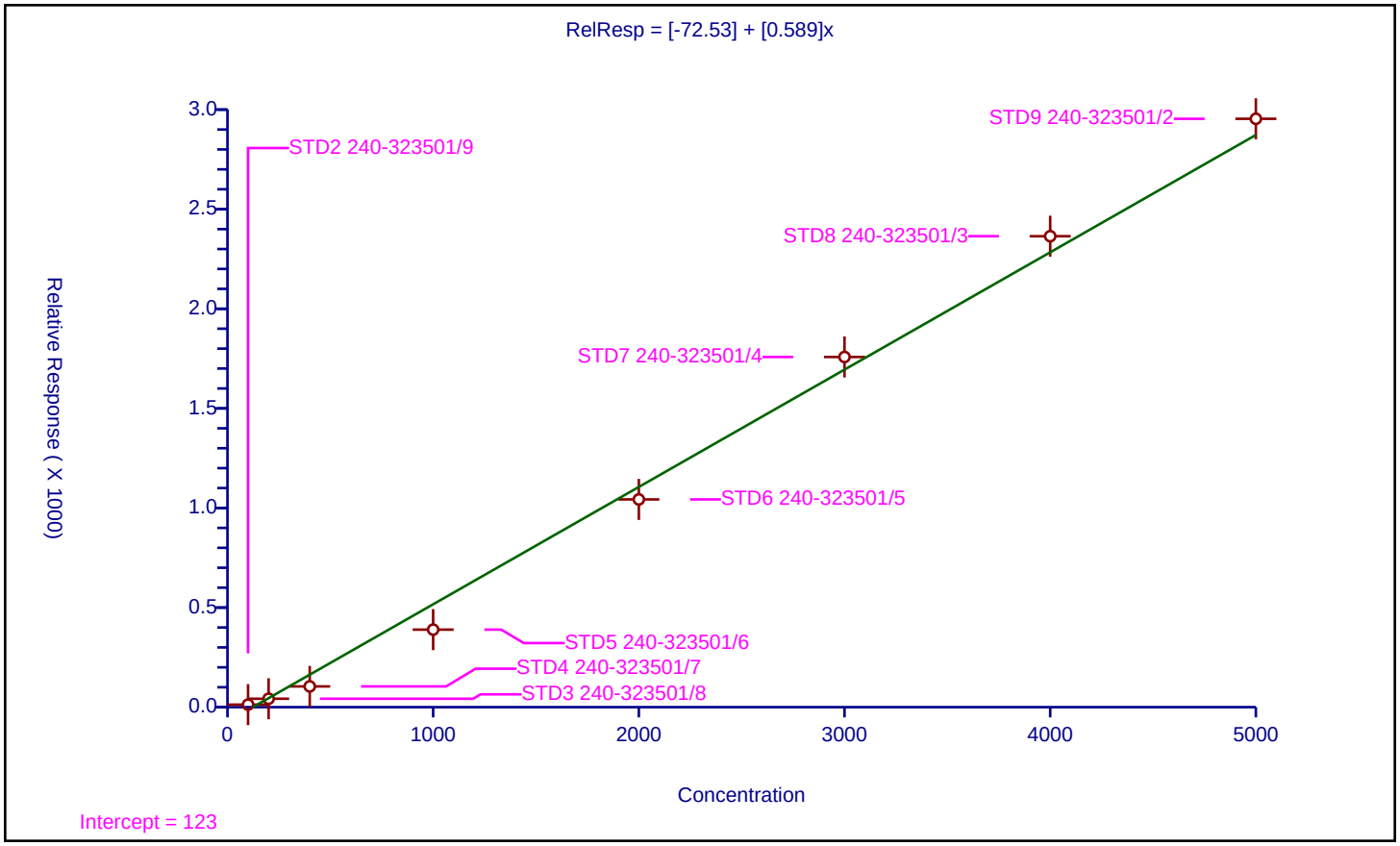
Curve Coefficients

Intercept:	-72.53
Slope:	0.589

Error Coefficients

Standard Error:	3320000
Relative Standard Error:	22.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	12.709302	400.0	666441.0	0.127093	Y
2	STD3 240-323501/8	200.0	42.244002	400.0	647183.0	0.21122	Y
3	STD4 240-323501/7	400.0	104.186984	400.0	666924.0	0.260467	Y
4	STD5 240-323501/6	1000.0	389.280196	400.0	685423.0	0.38928	Y
5	STD6 240-323501/5	2000.0	1042.92748	400.0	692992.0	0.521464	Y
6	STD7 240-323501/4	3000.0	1758.068396	400.0	754109.0	0.586023	Y
7	STD8 240-323501/3	4000.0	2364.379083	400.0	752468.0	0.591095	Y
8	STD9 240-323501/2	5000.0	2953.816628	400.0	762820.0	0.590763	Y



Calibration / Pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

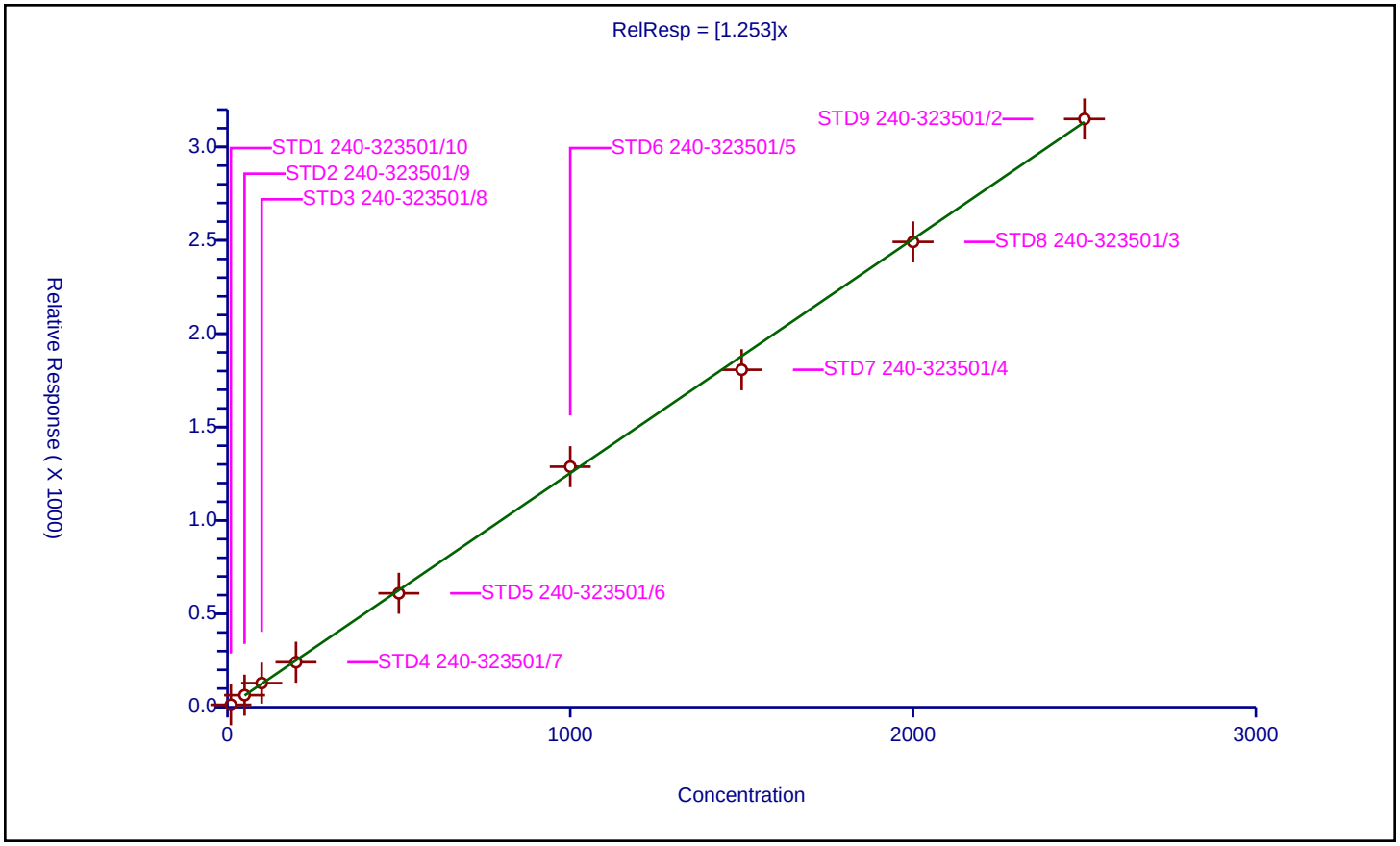
Curve Coefficients

Intercept:	0
Slope:	1.253

Error Coefficients

Standard Error:	3080000
Relative Standard Error:	2.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	12.819487	400.0	532221.0	1.281949	Y
2	STD2 240-323501/9	50.0	64.369989	400.0	666441.0	1.2874	Y
3	STD3 240-323501/8	100.0	128.909443	400.0	647183.0	1.289094	Y
4	STD4 240-323501/7	200.0	240.760866	400.0	666924.0	1.203804	Y
5	STD5 240-323501/6	500.0	609.936346	400.0	685423.0	1.219873	Y
6	STD6 240-323501/5	1000.0	1287.836512	400.0	692992.0	1.287837	Y
7	STD7 240-323501/4	1500.0	1806.939315	400.0	754109.0	1.204626	Y
8	STD8 240-323501/3	2000.0	2491.490934	400.0	752468.0	1.245745	Y
9	STD9 240-323501/2	2500.0	3149.88123	400.0	762820.0	1.259952	Y



Calibration / Terphenyl-d14

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

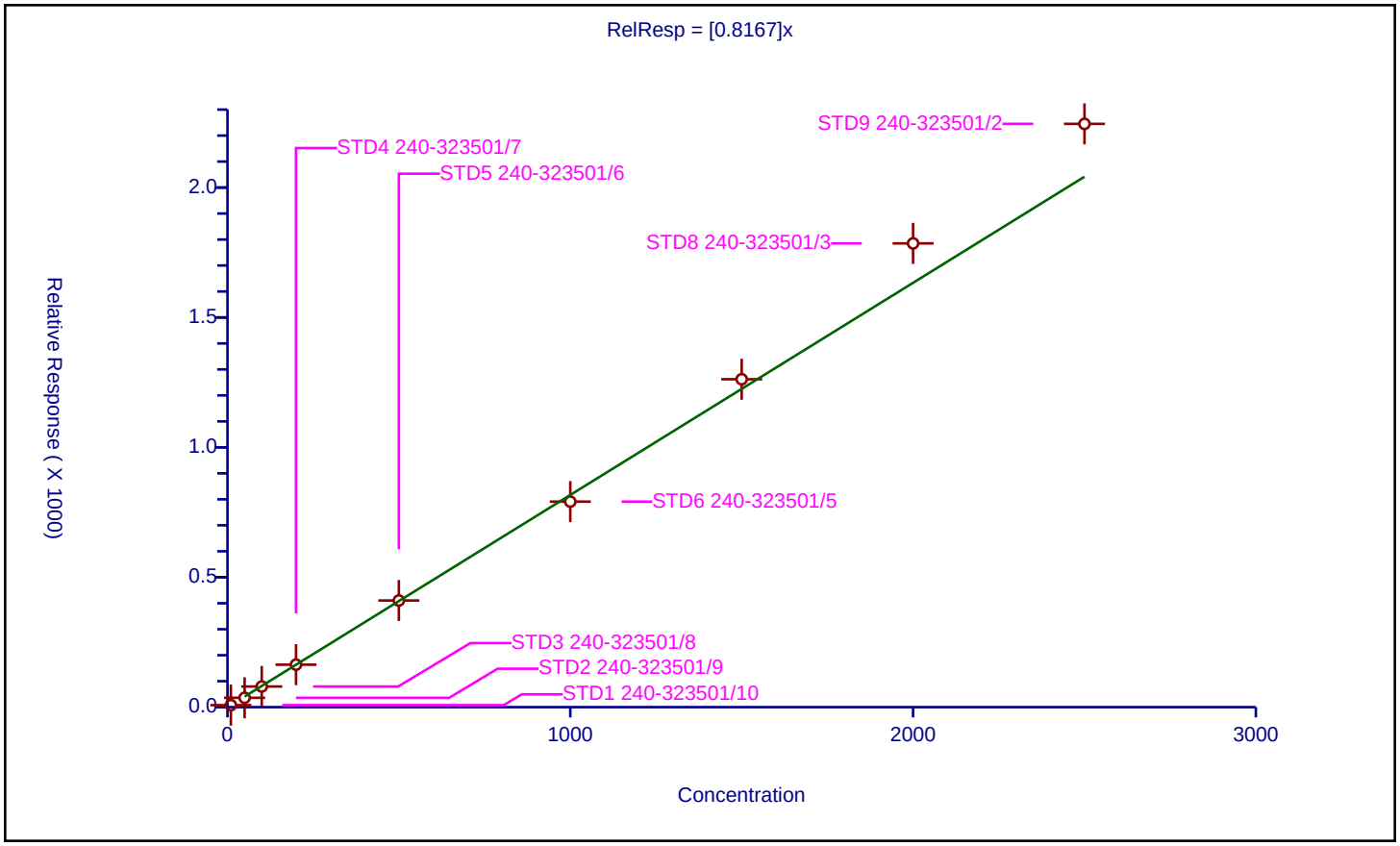
Curve Coefficients

Intercept:	0
Slope:	0.8167

Error Coefficients

Standard Error:	2170000
Relative Standard Error:	6.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	7.726114	400.0	532221.0	0.772611	Y
2	STD2 240-323501/9	50.0	36.019393	400.0	666441.0	0.720388	Y
3	STD3 240-323501/8	100.0	79.493435	400.0	647183.0	0.794934	Y
4	STD4 240-323501/7	200.0	163.542473	400.0	666924.0	0.817712	Y
5	STD5 240-323501/6	500.0	410.569823	400.0	685423.0	0.82114	Y
6	STD6 240-323501/5	1000.0	791.145064	400.0	692992.0	0.791145	Y
7	STD7 240-323501/4	1500.0	1262.239809	400.0	754109.0	0.841493	Y
8	STD8 240-323501/3	2000.0	1785.114051	400.0	752468.0	0.892557	Y
9	STD9 240-323501/2	2500.0	2245.059123	400.0	762820.0	0.898024	Y



Calibration / Butyl benzyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

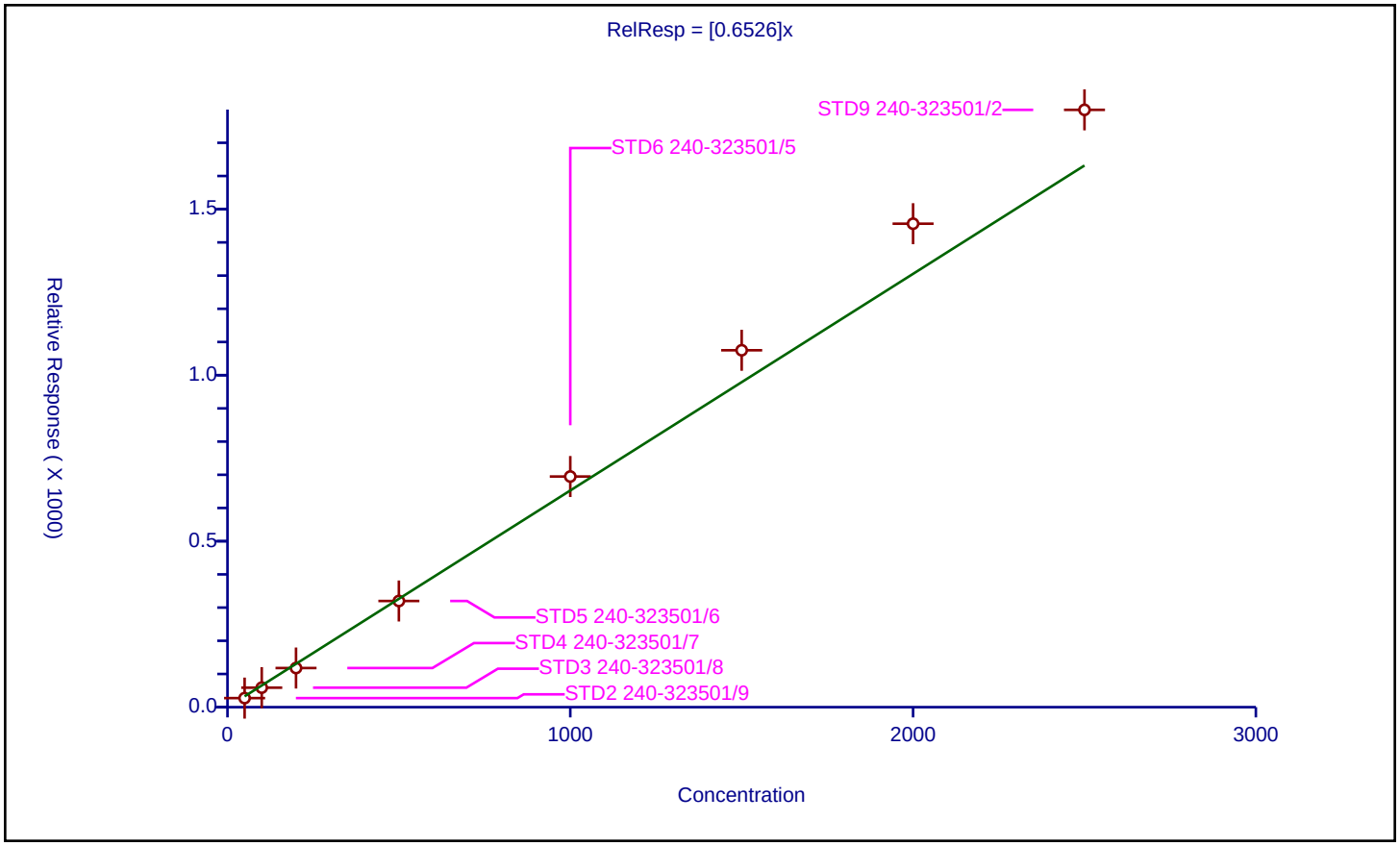
Curve Coefficients

Intercept:	0
Slope:	0.6526

Error Coefficients

Standard Error:	1900000
Relative Standard Error:	11.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	27.26723	400.0	666441.0	0.545345	Y
2	STD3 240-323501/8	100.0	58.758651	400.0	647183.0	0.587587	Y
3	STD4 240-323501/7	200.0	117.877299	400.0	666924.0	0.589386	Y
4	STD5 240-323501/6	500.0	319.789094	400.0	685423.0	0.639578	Y
5	STD6 240-323501/5	1000.0	694.716822	400.0	692992.0	0.694717	Y
6	STD7 240-323501/4	1500.0	1075.084371	400.0	754109.0	0.716723	Y
7	STD8 240-323501/3	2000.0	1456.301132	400.0	752468.0	0.728151	Y
8	STD9 240-323501/2	2500.0	1799.283186	400.0	762820.0	0.719713	Y



Calibration / Bis(2-ethylhexyl) phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

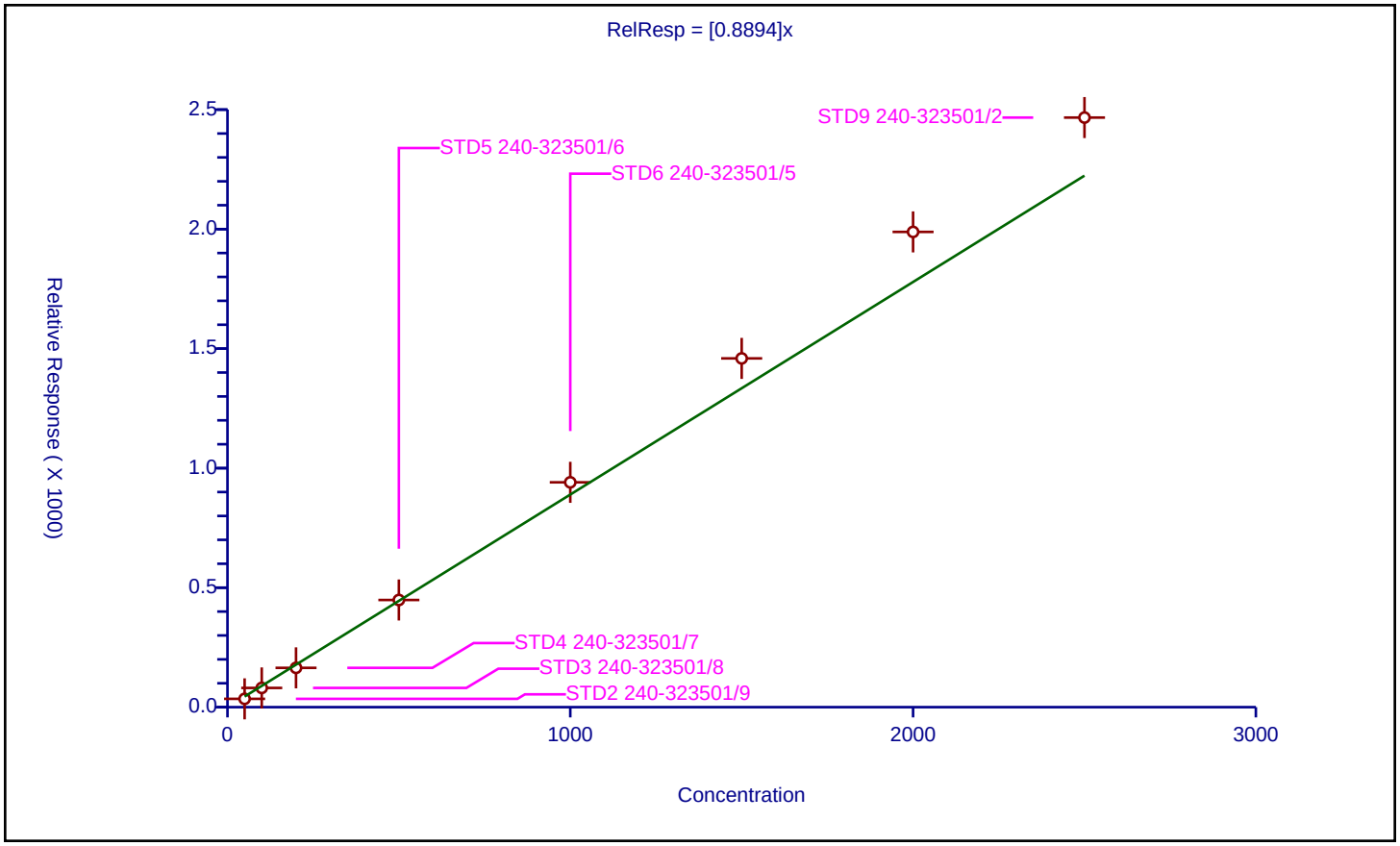
Curve Coefficients

Intercept:	0
Slope:	0.8894

Error Coefficients

Standard Error:	2590000
Relative Standard Error:	11.9
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	34.842394	400.0	666441.0	0.696848	Y
2	STD3 240-323501/8	100.0	80.507677	400.0	647183.0	0.805077	Y
3	STD4 240-323501/7	200.0	164.526693	400.0	666924.0	0.822633	Y
4	STD5 240-323501/6	500.0	448.352623	400.0	685423.0	0.896705	Y
5	STD6 240-323501/5	1000.0	940.665982	400.0	692992.0	0.940666	Y
6	STD7 240-323501/4	1500.0	1459.199134	400.0	754109.0	0.972799	Y
7	STD8 240-323501/3	2000.0	1988.30834	400.0	752468.0	0.994154	Y
8	STD9 240-323501/2	2500.0	2466.644818	400.0	762820.0	0.986658	Y



Calibration / 3,3'-Dichlorobenzidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

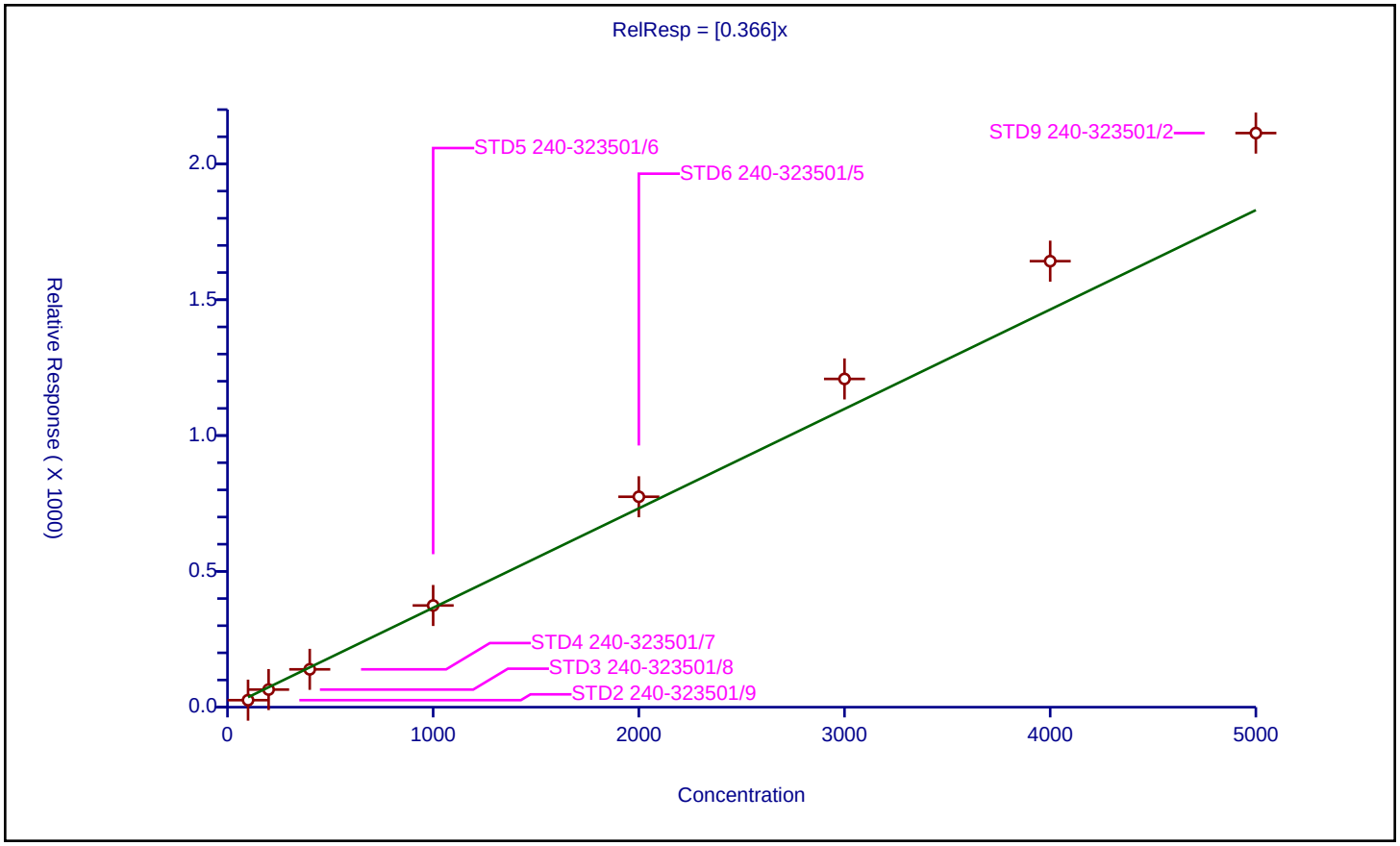
Curve Coefficients

Intercept:	0
Slope:	0.366

Error Coefficients

Standard Error:	2180000
Relative Standard Error:	14.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.975

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	100.0	25.821341	400.0	666441.0	0.258213	Y
2	STD3 240-323501/8	200.0	64.783531	400.0	647183.0	0.323918	Y
3	STD4 240-323501/7	400.0	139.237454	400.0	666924.0	0.348094	Y
4	STD5 240-323501/6	1000.0	374.357441	400.0	685423.0	0.374357	Y
5	STD6 240-323501/5	2000.0	774.623084	400.0	692992.0	0.387312	Y
6	STD7 240-323501/4	3000.0	1208.484185	400.0	754109.0	0.402828	Y
7	STD8 240-323501/3	4000.0	1642.077537	400.0	752468.0	0.410519	Y
8	STD9 240-323501/2	5000.0	2113.624708	400.0	762820.0	0.422725	Y



Calibration / Benzo[a]anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

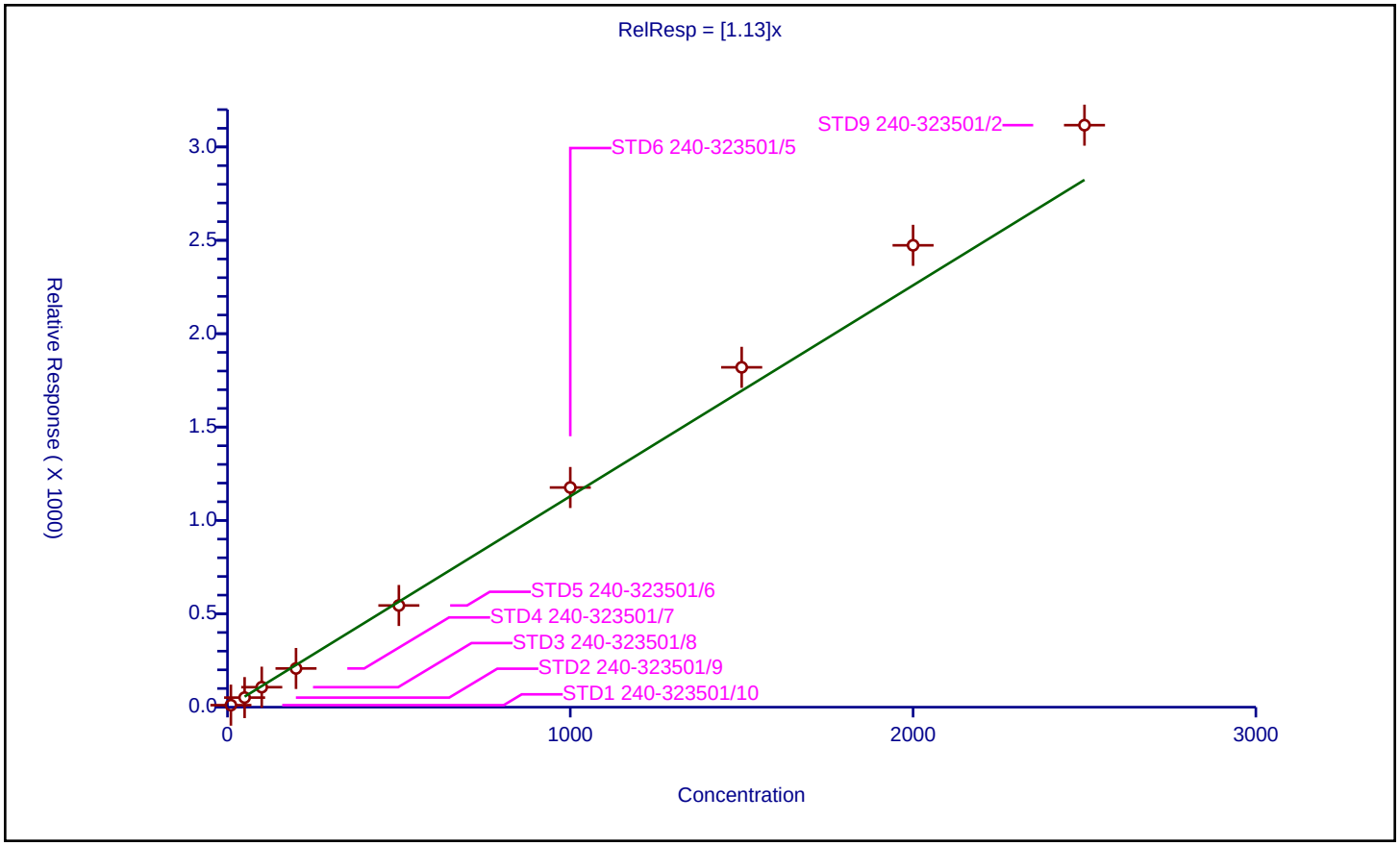
Curve Coefficients

Intercept:	0
Slope:	1.13

Error Coefficients

Standard Error:	3040000
Relative Standard Error:	7.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	10.731632	400.0	532221.0	1.073163	Y
2	STD2 240-323501/9	50.0	51.208734	400.0	666441.0	1.024175	Y
3	STD3 240-323501/8	100.0	106.992304	400.0	647183.0	1.069923	Y
4	STD4 240-323501/7	200.0	207.223012	400.0	666924.0	1.036115	Y
5	STD5 240-323501/6	500.0	544.590421	400.0	685423.0	1.089181	Y
6	STD6 240-323501/5	1000.0	1176.390492	400.0	692992.0	1.17639	Y
7	STD7 240-323501/4	1500.0	1819.878559	400.0	754109.0	1.213252	Y
8	STD8 240-323501/3	2000.0	2473.320327	400.0	752468.0	1.23666	Y
9	STD9 240-323501/2	2500.0	3116.704334	400.0	762820.0	1.246682	Y



Calibration / Chrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

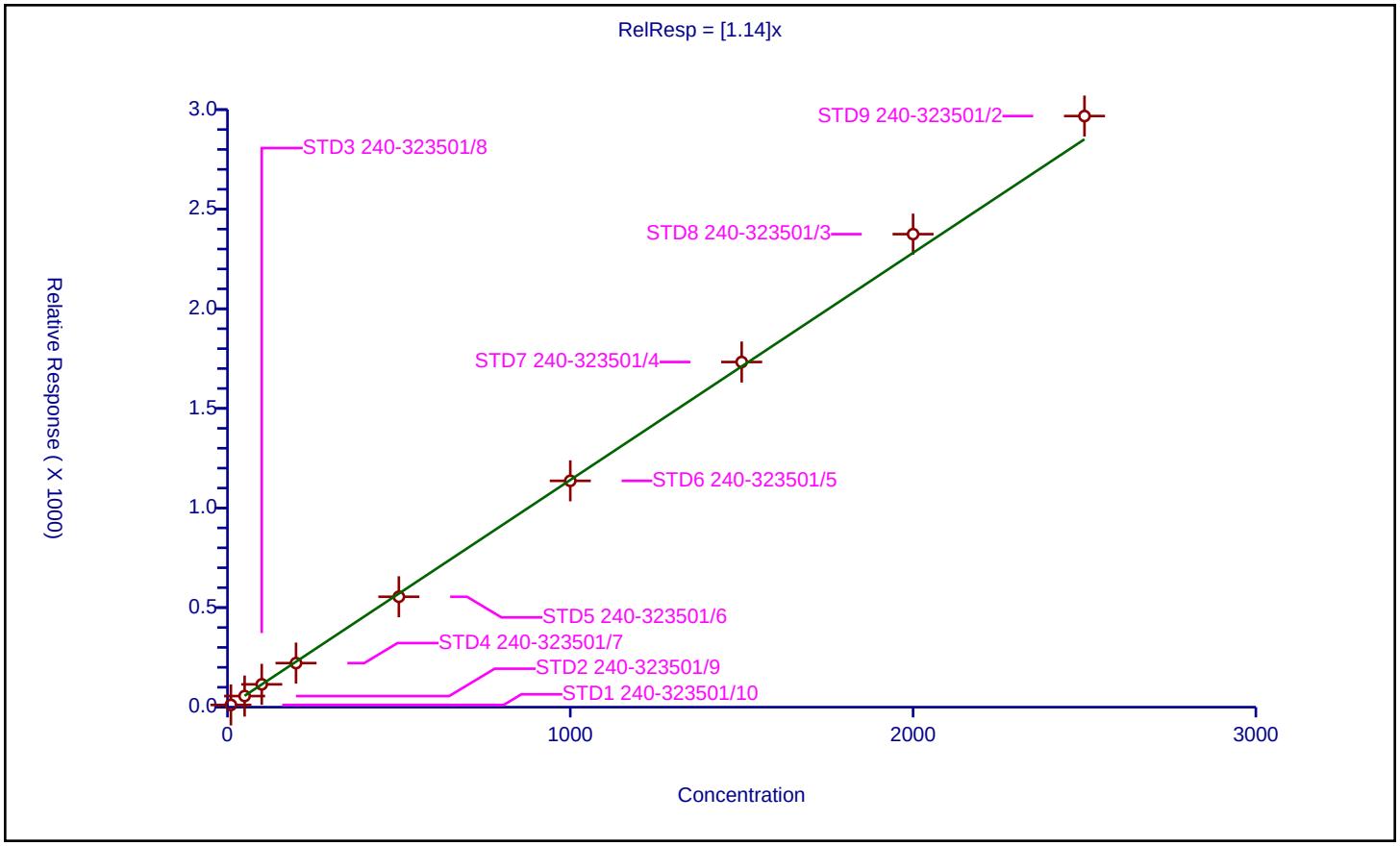
Curve Coefficients

Intercept:	0
Slope:	1.14

Error Coefficients

Standard Error:	2910000
Relative Standard Error:	2.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	11.222406	400.0	532221.0	1.122241	Y
2	STD2 240-323501/9	50.0	55.800288	400.0	666441.0	1.116006	Y
3	STD3 240-323501/8	100.0	114.595717	400.0	647183.0	1.145957	Y
4	STD4 240-323501/7	200.0	221.131643	400.0	666924.0	1.105658	Y
5	STD5 240-323501/6	500.0	554.232934	400.0	685423.0	1.108466	Y
6	STD6 240-323501/5	1000.0	1136.216868	400.0	692992.0	1.136217	Y
7	STD7 240-323501/4	1500.0	1732.786109	400.0	754109.0	1.155191	Y
8	STD8 240-323501/3	2000.0	2374.776868	400.0	752468.0	1.187388	Y
9	STD9 240-323501/2	2500.0	2967.62539	400.0	762820.0	1.18705	Y



Calibration / Di-n-octyl phthalate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

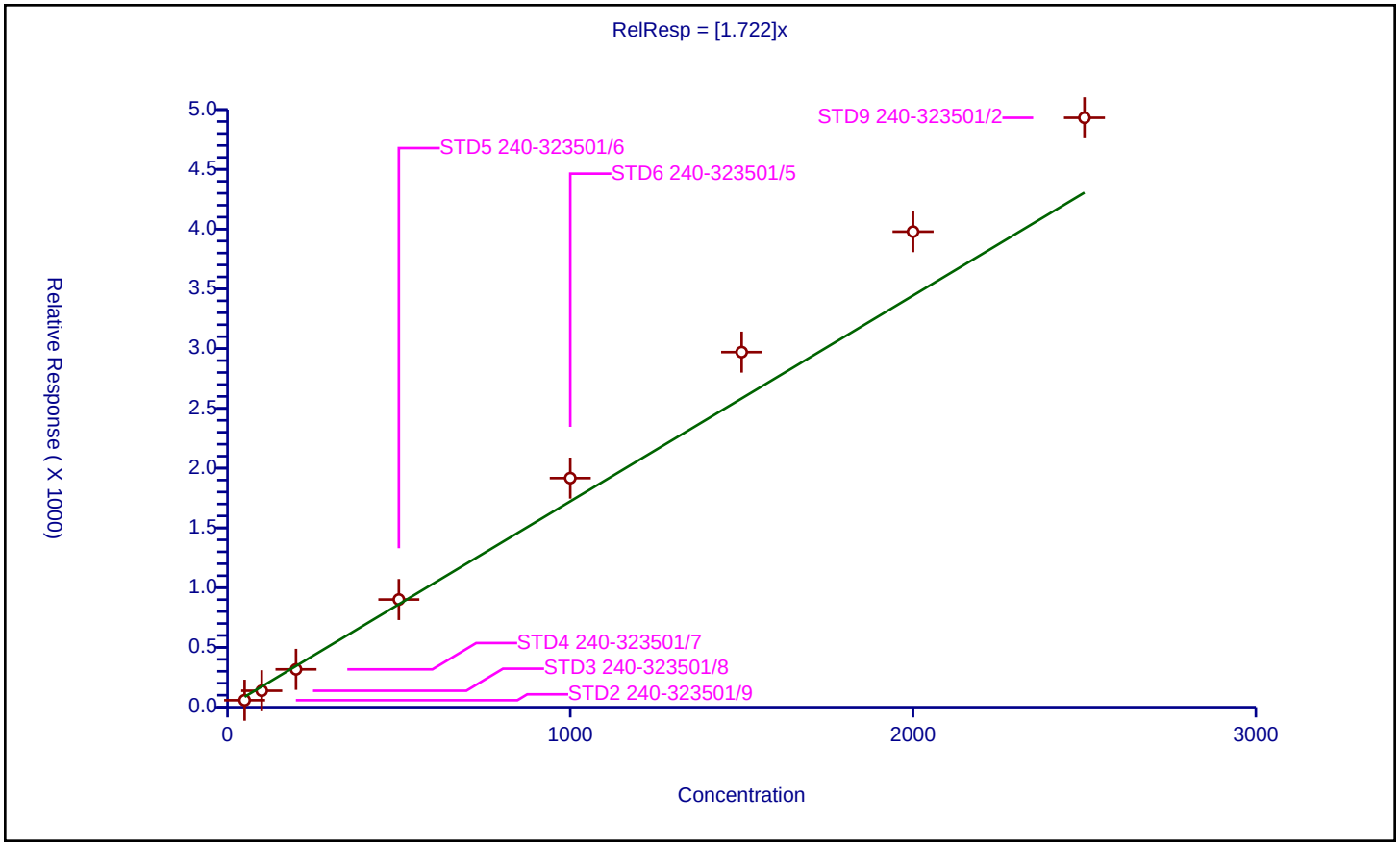
Curve Coefficients

Intercept:	0
Slope:	1.722

Error Coefficients

Standard Error:	4370000
Relative Standard Error:	18.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.963

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/9	50.0	58.072235	400.0	554165.0	1.161445	Y
2	STD3 240-323501/8	100.0	137.362937	400.0	536066.0	1.373629	Y
3	STD4 240-323501/7	200.0	316.242558	400.0	543178.0	1.581213	Y
4	STD5 240-323501/6	500.0	900.80466	400.0	544951.0	1.801609	Y
5	STD6 240-323501/5	1000.0	1916.618301	400.0	560310.0	1.916618	Y
6	STD7 240-323501/4	1500.0	2970.931907	400.0	617261.0	1.980621	Y
7	STD8 240-323501/3	2000.0	3978.800487	400.0	632807.0	1.9894	Y
8	STD9 240-323501/2	2500.0	4931.712394	400.0	650487.0	1.972685	Y



Calibration / Benzo[b]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

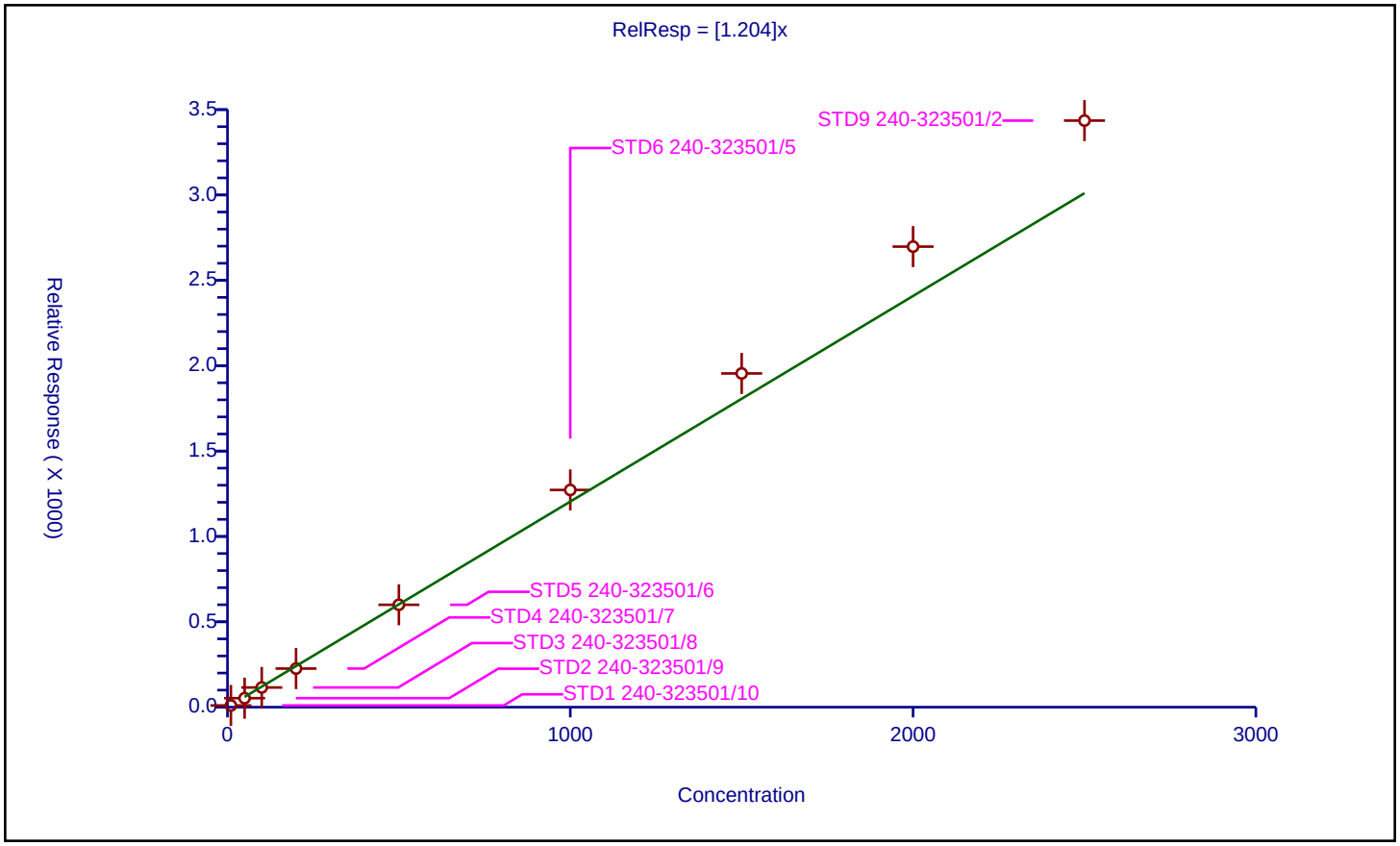
Curve Coefficients

Intercept:	0
Slope:	1.204

Error Coefficients

Standard Error:	2790000
Relative Standard Error:	10.8
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	10.050268	400.0	475848.0	1.005027	Y
2	STD2 240-323501/9	50.0	52.568459	400.0	554165.0	1.051369	Y
3	STD3 240-323501/8	100.0	115.303713	400.0	536066.0	1.153037	Y
4	STD4 240-323501/7	200.0	226.11225	400.0	543178.0	1.130561	Y
5	STD5 240-323501/6	500.0	599.716305	400.0	544951.0	1.199433	Y
6	STD6 240-323501/5	1000.0	1272.194321	400.0	560310.0	1.272194	Y
7	STD7 240-323501/4	1500.0	1954.626001	400.0	617261.0	1.303084	Y
8	STD8 240-323501/3	2000.0	2697.519465	400.0	632807.0	1.34876	Y
9	STD9 240-323501/2	2500.0	3435.652365	400.0	650487.0	1.374261	Y



Calibration / Benzo[k]fluoranthene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

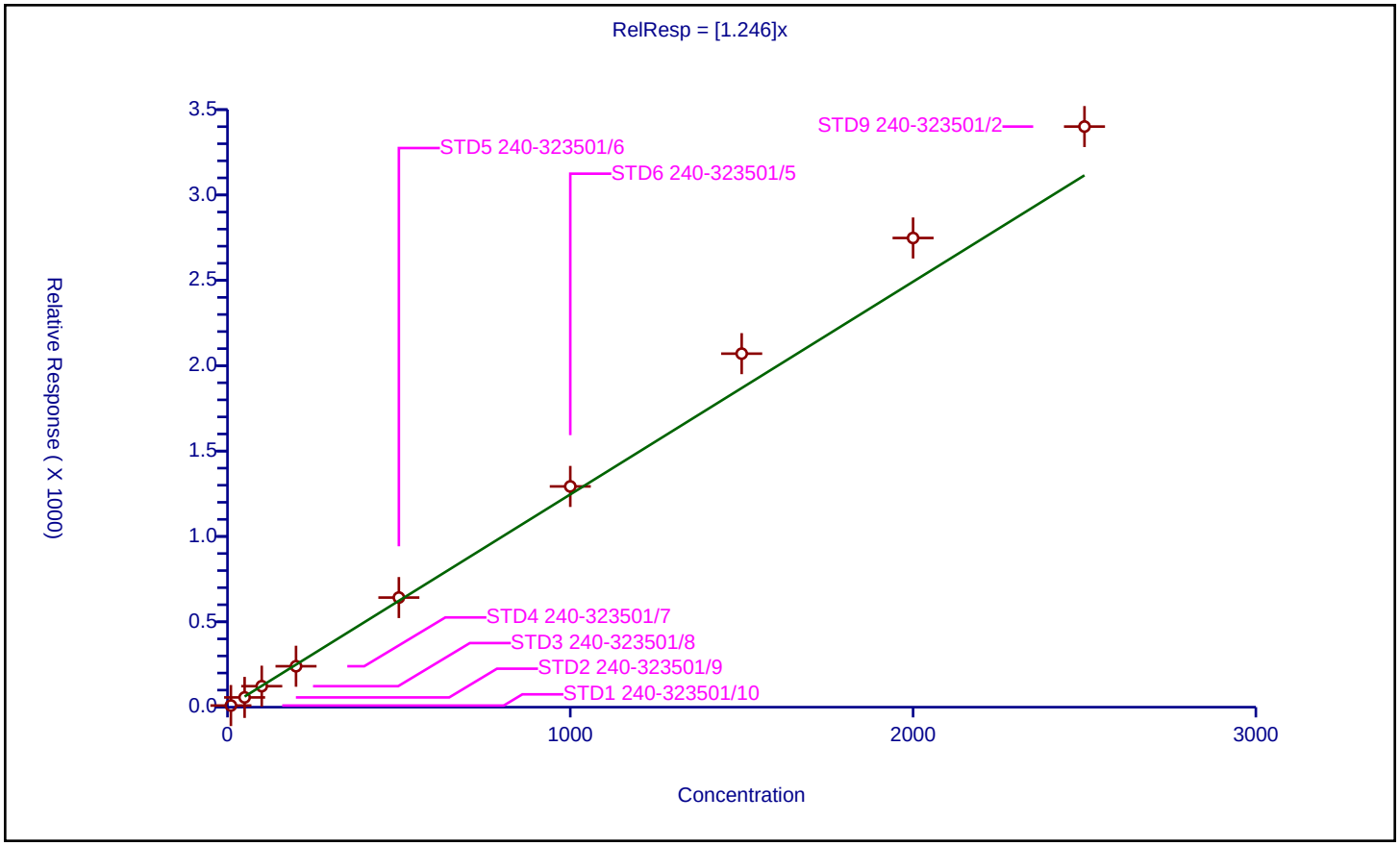
Curve Coefficients

Intercept:	0
Slope:	1.246

Error Coefficients

Standard Error:	2820000
Relative Standard Error:	11.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	9.516484	400.0	475848.0	0.951648	Y
2	STD2 240-323501/9	50.0	57.105014	400.0	554165.0	1.1421	Y
3	STD3 240-323501/8	100.0	122.963963	400.0	536066.0	1.22964	Y
4	STD4 240-323501/7	200.0	239.796163	400.0	543178.0	1.198981	Y
5	STD5 240-323501/6	500.0	642.023962	400.0	544951.0	1.284048	Y
6	STD6 240-323501/5	1000.0	1292.982099	400.0	560310.0	1.292982	Y
7	STD7 240-323501/4	1500.0	2070.543903	400.0	617261.0	1.380363	Y
8	STD8 240-323501/3	2000.0	2748.106137	400.0	632807.0	1.374053	Y
9	STD9 240-323501/2	2500.0	3400.656431	400.0	650487.0	1.360263	Y



Calibration / Benzo[a]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

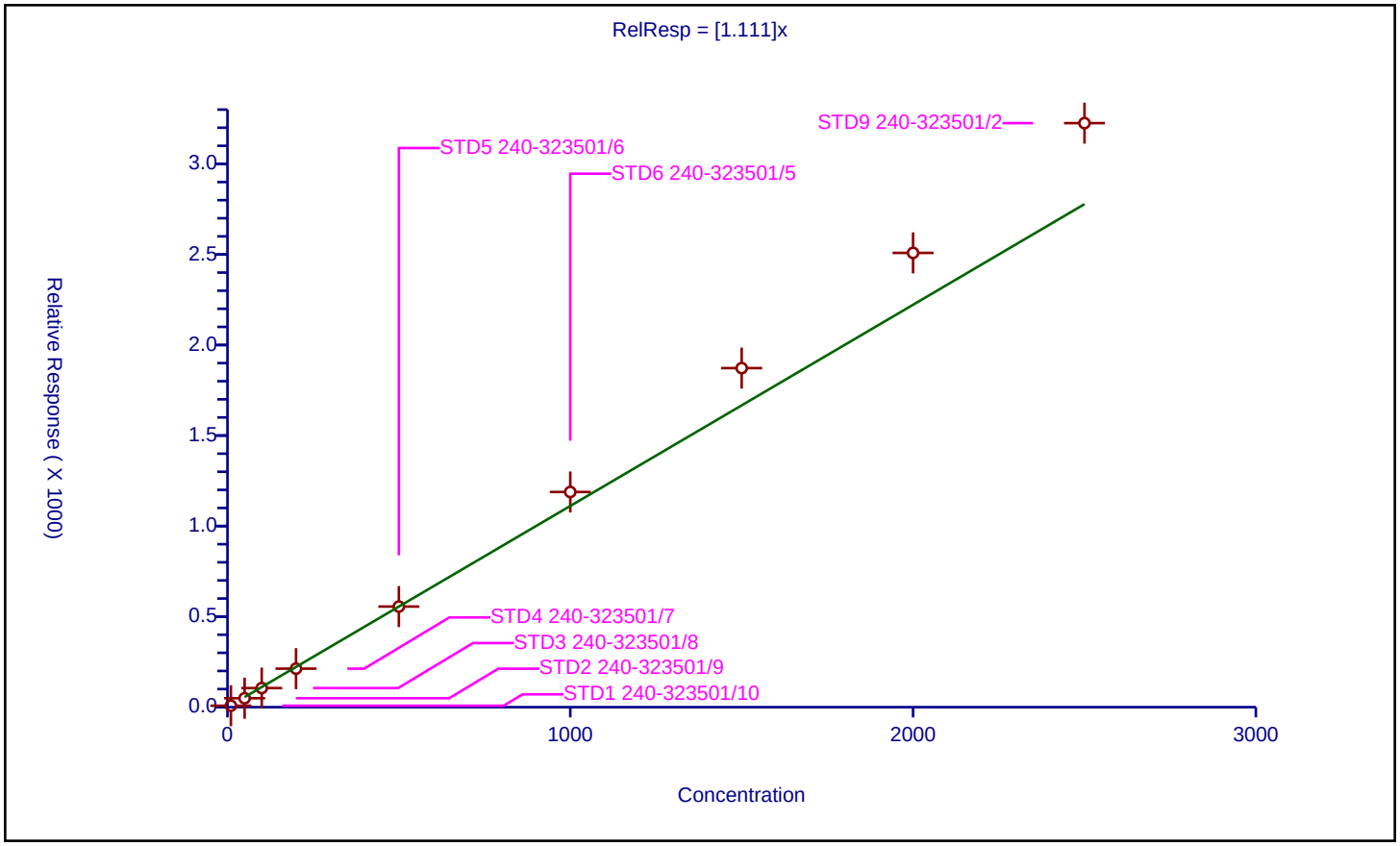
Curve Coefficients

Intercept:	0
Slope:	1.111

Error Coefficients

Standard Error:	2620000
Relative Standard Error:	14.0
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.981

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	8.047948	400.0	475848.0	0.804795	Y
2	STD2 240-323501/9	50.0	49.298675	400.0	554165.0	0.985973	Y
3	STD3 240-323501/8	100.0	105.390008	400.0	536066.0	1.0539	Y
4	STD4 240-323501/7	200.0	212.701545	400.0	543178.0	1.063508	Y
5	STD5 240-323501/6	500.0	555.662436	400.0	544951.0	1.111325	Y
6	STD6 240-323501/5	1000.0	1188.309329	400.0	560310.0	1.188309	Y
7	STD7 240-323501/4	1500.0	1872.347678	400.0	617261.0	1.248232	Y
8	STD8 240-323501/3	2000.0	2508.651137	400.0	632807.0	1.254326	Y
9	STD9 240-323501/2	2500.0	3225.273987	400.0	650487.0	1.29011	Y



Calibration / Indeno[1,2,3-cd]pyrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

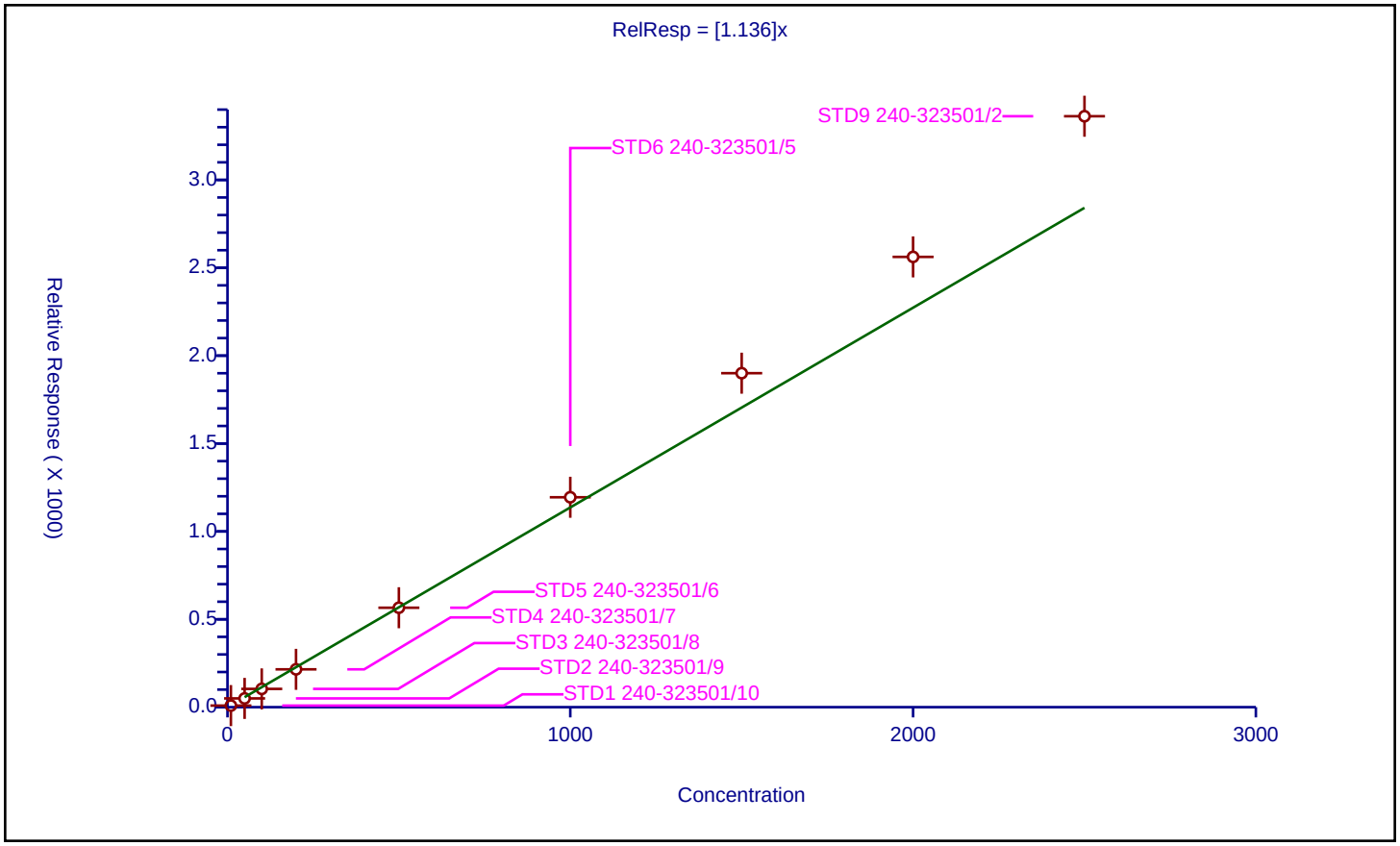
Curve Coefficients

Intercept:	0
Slope:	1.136

Error Coefficients

Standard Error:	2700000
Relative Standard Error:	13.0
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	8.983541	400.0	475848.0	0.898354	Y
2	STD2 240-323501/9	50.0	49.774345	400.0	554165.0	0.995487	Y
3	STD3 240-323501/8	100.0	103.974511	400.0	536066.0	1.039745	Y
4	STD4 240-323501/7	200.0	215.153044	400.0	543178.0	1.075765	Y
5	STD5 240-323501/6	500.0	565.706642	400.0	544951.0	1.131413	Y
6	STD6 240-323501/5	1000.0	1194.29887	400.0	560310.0	1.194299	Y
7	STD7 240-323501/4	1500.0	1900.230211	400.0	617261.0	1.26682	Y
8	STD8 240-323501/3	2000.0	2561.972924	400.0	632807.0	1.280986	Y
9	STD9 240-323501/2	2500.0	3362.357741	400.0	650487.0	1.344943	Y



Calibration / Dibenz(a,h)anthracene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

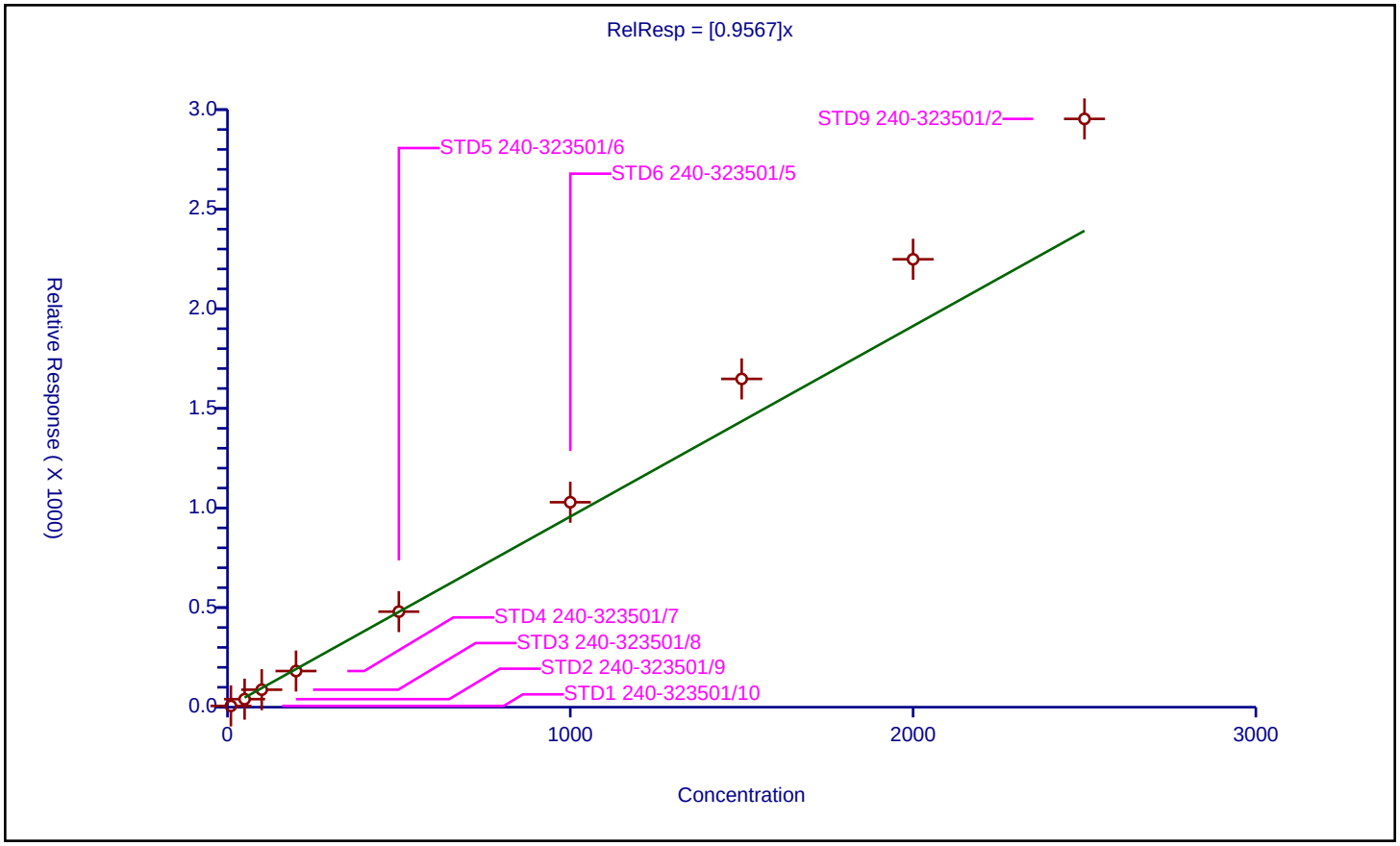
Curve Coefficients

Intercept:	0
Slope:	0.9567

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	18.2
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	6.302012	400.0	475848.0	0.630201	Y
2	STD2 240-323501/9	50.0	40.197414	400.0	554165.0	0.803948	Y
3	STD3 240-323501/8	100.0	87.714572	400.0	536066.0	0.877146	Y
4	STD4 240-323501/7	200.0	181.365961	400.0	543178.0	0.90683	Y
5	STD5 240-323501/6	500.0	479.597615	400.0	544951.0	0.959195	Y
6	STD6 240-323501/5	1000.0	1028.799772	400.0	560310.0	1.0288	Y
7	STD7 240-323501/4	1500.0	1648.016641	400.0	617261.0	1.098678	Y
8	STD8 240-323501/3	2000.0	2248.569943	400.0	632807.0	1.124285	Y
9	STD9 240-323501/2	2500.0	2953.373088	400.0	650487.0	1.181349	Y



Calibration / Benzo[g,h,i]perylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

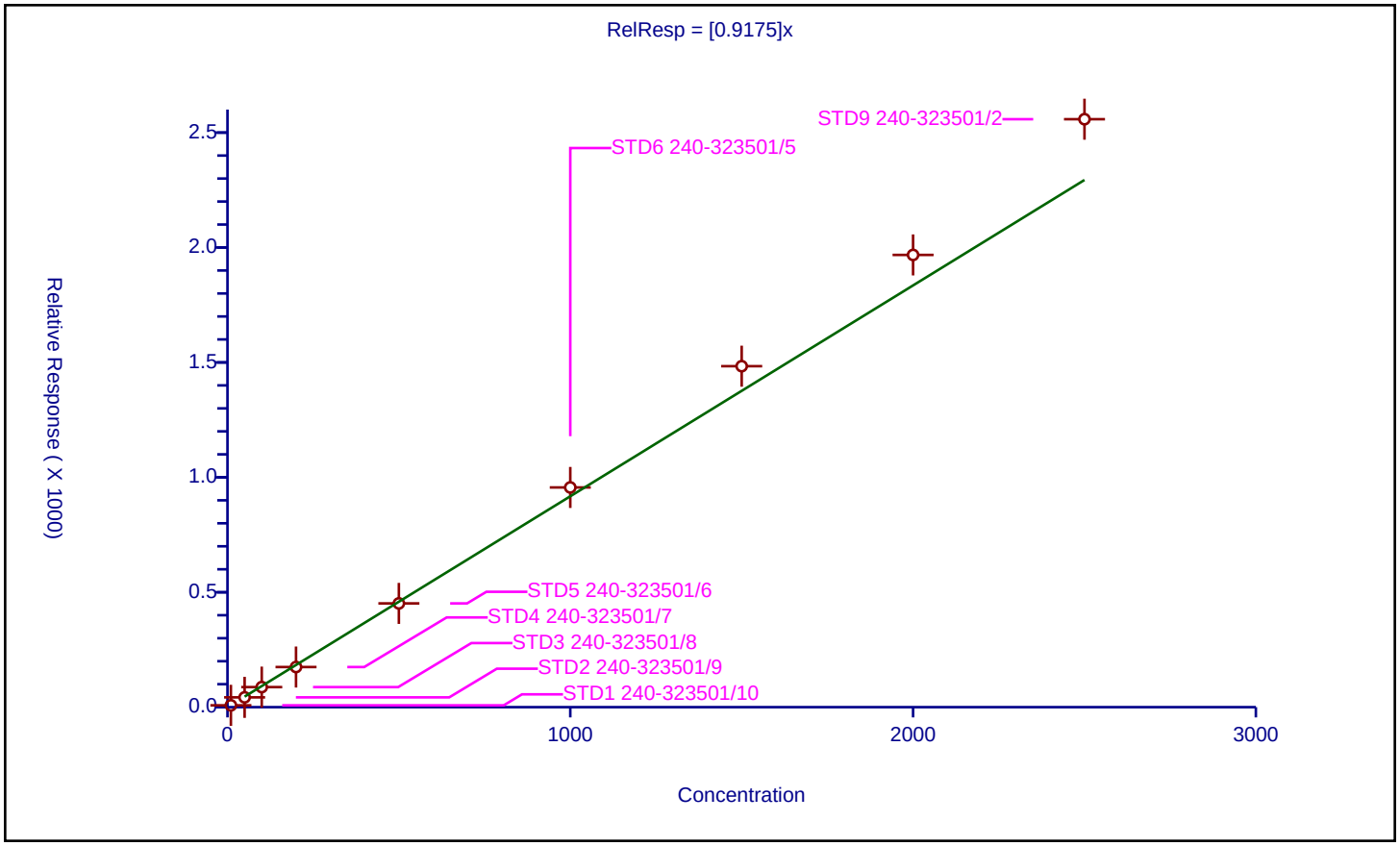
Curve Coefficients

Intercept:	0
Slope:	0.9175

Error Coefficients

Standard Error:	2070000
Relative Standard Error:	8.0
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD1 240-323501/10	10.0	8.02273	400.0	475848.0	0.802273	Y
2	STD2 240-323501/9	50.0	42.72085	400.0	554165.0	0.854417	Y
3	STD3 240-323501/8	100.0	87.265374	400.0	536066.0	0.872654	Y
4	STD4 240-323501/7	200.0	174.657295	400.0	543178.0	0.873286	Y
5	STD5 240-323501/6	500.0	451.431413	400.0	544951.0	0.902863	Y
6	STD6 240-323501/5	1000.0	956.003641	400.0	560310.0	0.956004	Y
7	STD7 240-323501/4	1500.0	1483.60256	400.0	617261.0	0.989068	Y
8	STD8 240-323501/3	2000.0	1967.712114	400.0	632807.0	0.983856	Y
9	STD9 240-323501/2	2500.0	2558.2439	400.0	650487.0	1.023298	Y



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-323501/19	80423019.D
Level 2	STD3 240-323501/18	80423018.D
Level 3	STD4 240-323501/17	80423017.D
Level 4	STD5 240-323501/16	80423016.D
Level 5	STD6 240-323501/15	80423015.D
Level 6	STD7 240-323501/14	80423014.D
Level 7	STD8 240-323501/13	80423013.D
Level 8	STD9 240-323501/12	80423012.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
2-Picoline	1.1604 1.2672	1.1516 1.3231	1.2020 1.3528	1.3104	1.2058	Ave		1.2467				6.2		20.0			
N-Nitrosomethylethylamine	0.7858 0.7237	0.6949 0.7461	0.7473 0.7863	0.7072	0.7272	Ave		0.7398				4.5		20.0			
Acrylamide	+++++ 0.1136	+++++ 0.1811	0.2037 0.1462	0.1407	0.1473	Ave		0.1555				20.6	*	20.0			
Methyl methanesulfonate	0.8974 0.8826	0.9502 0.9773	0.9648 0.9714	0.8956	0.9095	Ave		0.9311				4.2		20.0			
N-Nitrosodiethylamine	0.6648 0.7399	0.7433 0.8058	0.7753 0.8076	0.7562	0.7694	Ave		0.7578				6.0		20.0			
Ethyl methanesulfonate	1.0938 1.0926	1.1866 1.2216	1.1992 1.2001	1.1414	1.1491	Ave		1.1605				4.2		20.0			
Pentachloroethane	0.4163 0.4545	0.4269 0.4611	0.4184 0.4825	0.4478	0.4372	Ave		0.4431				5.2		20.0			
N-Nitrosopyrrolidine	0.5477 0.7749	0.6405 0.8692	0.7164 0.8560	0.7686	0.7955	Ave		0.7461				14.5		20.0			
N-Nitrosomorpholine	0.9063 1.1627	1.1196 1.2780	1.2583 1.2613	1.2163	1.2307	Ave		1.1791				10.4		20.0			
2-Toluidine	2.1356 2.2815	2.3559 2.6009	2.4929 2.5369	2.4026	2.4142	Ave		2.4026				6.2		20.0			
N-Nitrosopiperidine	0.1370 0.1734	0.1510 0.1743	0.1664 0.1795	0.1717	0.1745	Ave		0.1660				8.8		20.0			
o,o',o''-Triethylphosphorothioate	0.1521 0.1543	0.1567 0.1611	0.1509 0.1608	0.1567	0.1564	Ave		0.1561				2.3		20.0			
alpha,alpha-Dimethyl phenethylamine	0.7188 0.7125	0.5787 0.8103	0.5714 0.7664	0.5695	0.6110	Ave		0.6673				14.4		20.0			
Hexachloropropene	0.1073 0.1567	0.1166 0.1605	0.1197 0.1699	0.1287	0.1440	Ave		0.1379			0.0100	16.7		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-butylamine	0.1722 0.2200	0.2167 0.2139	0.2277 0.2134	0.2352	0.2291	Ave		0.2160				9.0		20.0			
Quinoline	0.4879 0.6203	0.6034 0.6098	0.6197 0.6083	0.6458	0.6354	Ave		0.6038				8.1		20.0			
p-Phenylene diamine	+++++ 0.2381	0.0490 0.2472	0.1060 0.2605	0.1647	0.1702	Qua	-18.40	0.1818	0.0000357						0.9960		0.9900
Safrole, Total	0.2014 0.2555	0.2286 0.2619	0.2428 0.2671	0.2544	0.2559	Ave		0.2460				8.8		20.0			
Isosafrole Peak 1	0.0941 0.1117	0.0969 0.1167	0.0969 0.1227	0.1072	0.1143	Ave		0.1076				9.8		20.0			
Isosafrole Peak 2	2.5918 3.3458	2.7827 3.4665	2.9888 3.5983	3.2815	3.2902	Ave		3.1682				11.0		20.0			
1-Chloronaphthalene	1.0457 1.1507	1.0935 1.1729	1.1222 1.2072	1.1564	1.1550	Ave		1.1380				4.4		20.0			
1,4-Naphthoquinone	0.2147 0.4283	0.2382 0.4396	0.2935 0.4586	0.3715	0.4183	Lin1	-18.05	0.4471							0.9970		0.9900
1,4-Dinitrobenzene	0.0591 0.1782	0.0775 0.1898	0.0969 0.1987	0.1317	0.1631	Lin1	-10.65	0.1895							0.9910		0.9900
Pentachlorobenzene	0.3240 0.4209	0.3286 0.4380	0.3551 0.4626	0.3849	0.4044	Ave		0.3898				13.0		20.0			
1-Naphthylamine	0.6612 1.1253	0.9293 1.1047	1.0313 1.1428	1.1816	1.1259	Ave		1.0378				16.5		20.0			
2,3,5,6-Tetrachlorophenol	+++++ 0.2068	+++++ 0.2200	0.1120 0.2383	0.1525	0.1877	Lin1	-31.61	0.2366							0.9940		0.9900
2-Naphthylamine	0.5241 1.1135	0.8448 1.1147	0.9883 1.1513	1.1698	1.1381	Lin1	-29.70	1.1525							0.9990		0.9900
Thionazin	0.2407 0.3117	0.2926 0.3163	0.3064 0.3286	0.3168	0.3150	Ave		0.3035				9.0		20.0			
N-Nitro-o-toluidine	0.1340 0.3635	0.1802 0.3768	0.2327 0.4086	0.3132	0.3501	Lin1	-18.93	0.3885							0.9950		0.9900
Sulfotepp	0.0711 0.1009	0.0783 0.1065	0.0845 0.1108	0.0883	0.0937	Ave		0.0918				15.1		20.0			
1,3,5-Trinitrobenzene	+++++ 0.0578	+++++ 0.0645	0.0232 0.0676	0.0281	0.0422	Qua	-8.248	0.0447	0.0000109						0.9960		0.9900
Phenacetin	+++++ 0.3777	0.1902 0.3863	0.2549 0.3903	0.3262	0.3702	Lin1	-24.32	0.3960							0.9990		0.9900
Diallate Peak 1	0.3765 0.4034	0.4066 0.3916	0.4420 0.3848	0.4224	0.4166	Ave		0.4055				5.3		20.0			
Phorate	0.1591 0.1884	0.1736 0.1869	0.1800 0.1847	0.1853	0.1893	Ave		0.1809				5.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Diallate Peak 2	0.3902 0.4458	0.3933 0.4509	0.3805 0.4642	0.4063	0.4324	Ave		0.4204				7.6		20.0			
Dimethoate	0.1606 0.2863	0.2065 0.2864	0.2485 0.2826	0.2858	0.3028	Ave		0.2574				19.3		20.0			
4-Aminobiphenyl	0.3760 0.8732	0.4410 0.8919	0.5467 0.9107	0.7075	0.7820	Lin1	-40.65	0.8922							0.9950		0.9900
Pronamide	0.2282 0.3584	0.2831 0.3648	0.2874 0.3676	0.3097	0.3373	Ave		0.3171				15.5		20.0			
Pentachloronitrobenzene	0.0441 0.0783	0.0559 0.0816	0.0608 0.0867	0.0670	0.0717	Lin1	-2.814	0.0822							0.9950		0.9900
Disulfoton	0.3449 0.4550	0.4048 0.4611	0.4407 0.4617	0.4540	0.4504	Ave		0.4341				9.3		20.0			
Dinoseb	+++++ 0.1196	+++++ 0.1348	0.0465 0.1398	0.0551	0.0870	Qua	-18.67	0.0948	0.0000221						0.9950		0.9900
Methyl parathion	0.1101 0.2534	0.1306 0.2490	0.1628 0.2453	0.2116	0.2498	Lin1	-10.24	0.2522							0.9980		0.9900
Ethyl Parathion	0.0567 0.1675	0.0744 0.1720	0.0967 0.1743	0.1323	0.1570	Lin1	-8.833	0.1725							0.9960		0.9900
4-Nitroquinoline-1-oxide	+++++ 0.0526	+++++ 0.0636	0.0153 0.0718	0.0189	0.0312	Qua	-4.845	0.0207	0.0000217						0.9960		0.9900
Methapyrilene	0.2531 0.6581	0.2974 0.6680	0.4041 0.6589	0.5304	0.6127	Lin1	-62.64	0.6652							0.9970		0.9900
Isodrin	0.1424 0.1404	0.1465 0.1441	0.1403 0.1440	0.1393	0.1359	Ave		0.1416				2.4		20.0			
Aramite Peak 1	0.0906 0.1509	0.1030 0.1643	0.1214 0.1740	0.1313	0.1480	Lin1	-2.970	0.1642							0.9940		0.9900
Aramite Peak 2	0.1086 0.1986	0.1330 0.2084	0.1581 0.2182	0.1679	0.1894	Lin1	-3.618	0.2093							0.9960		0.9900
p-Dimethylamino azobenzene	0.1387 0.2769	0.1926 0.2906	0.2317 0.3089	0.2446	0.2588	Lin1	-10.26	0.2936							0.9960		0.9900
Ethyl 4,4'-Dichlorobenzilate	0.3036 0.4864	0.4138 0.5047	0.4682 0.5214	0.4589	0.4920	Ave		0.4561				15.3		20.0			
Famphur	0.1741 +++++	0.2617 +++++	0.3133 +++++	0.2598	0.1832	Ave		0.2384				24.6	*	20.0			
3,3'-Dimethylbenzidine	+++++ 0.7051	+++++ 0.7504	0.3706 0.8031	0.4905	0.5756	Lin1	-114.5	0.7984							0.9900		0.9900
2-Acetylaminofluorene	+++++ 0.5319	+++++ 0.5741	0.2752 0.6240	0.3657	0.4761	Lin1	-90.23	0.6184							0.9910		0.9900
4,4'-Methylene bis(2-chloroaniline)	0.0685 0.2297	0.1128 0.2434	0.1574 0.2593	0.1858	0.2075	Lin1	-12.62	0.2455							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
6-Methylchrysene	0.5980 0.9557	0.7712 0.9906	0.8722 1.0225	0.9007	0.9065	Ave		0.8772				15.6		20.0			
7,12-Dimethylbenz(a)anthracene	0.2862 0.5362	0.3878 0.5694	0.4091 0.6345	0.4752	0.4922	Lin1	-21.88	0.5821							0.9910		0.9900
3-Methylcholanthrene	0.4568 0.7234	0.5094 0.7636	0.5611 0.8127	0.6183	0.6524	Ave		0.6372				19.6		20.0			
Dibenz[a,h]acridine	0.5193 0.9067	0.6454 0.9587	0.7169 1.0236	0.7791	0.8392	Lin1	-33.42	0.9639							0.9940		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 240-323501/19	80423019.D
Level 2	STD3 240-323501/18	80423018.D
Level 3	STD4 240-323501/17	80423017.D
Level 4	STD5 240-323501/16	80423016.D
Level 5	STD6 240-323501/15	80423015.D
Level 6	STD7 240-323501/14	80423014.D
Level 7	STD8 240-323501/13	80423013.D
Level 8	STD9 240-323501/12	80423012.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2-Picoline	DCBd 4	Ave	25310 988724	46683 1228481	102772 1542721	298068	548346	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomethylethylamine	DCBd 4	Ave	17140 564671	28168 692754	63895 896743	160850	330729	50.0 1500	100 2000	200 2500	500	1000
Acrylamide	DCBd 4	Ave	+++++ 88601	+++++ 168169	17419 166781	32012	66997	+++++ 1500	+++++ 2000	200 2500	500	1000
Methyl methanesulfonate	DCBd 4	Ave	19574 688596	38518 907364	82489 1107758	203709	413611	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodiethylamine	DCBd 4	Ave	14500 577296	30132 748180	66287 921045	171992	349900	50.0 1500	100 2000	200 2500	500	1000
Ethyl methanesulfonate	DCBd 4	Ave	23857 852517	48100 1134195	102528 1368584	259626	522586	50.0 1500	100 2000	200 2500	500	1000
Pentachloroethane	DCBd 4	Ave	9080 354616	17307 428123	35774 550245	101847	198817	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopyrrolidine	DCBd 4	Ave	11946 604601	25965 807078	61253 976182	174829	361772	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosomorpholine	DCBd 4	Ave	19768 907170	45385 1186590	107582 1438398	276656	559685	50.0 1500	100 2000	200 2500	500	1000
2-Toluidine	DCBd 4	Ave	46580 1780092	95498 2414917	213141 2893080	546492	1097920	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosopiperidine	NPT	Ave	13512 599582	28258 789783	68659 955737	177350	363223	50.0 1500	100 2000	200 2500	500	1000
o,o',o''-Triethylphosphorothioate	NPT	Ave	15010 533615	29327 730069	62270 856250	161894	325373	50.0 1500	100 2000	200 2500	500	1000
alpha,alpha-Dimethyl phenethylamine	NPT	Ave	70913 2463172	108274 3672192	235765 4081291	588327	1271476	50.0 1500	100 2000	200 2500	500	1000
Hexachloropropene	NPT	Ave	10583 541699	21825 727510	49398 904735	132915	299644	50.0 1500	100 2000	200 2500	500	1000
N-Nitrosodi-n-butylamine	NPT	Ave	16984 760536	40538 969180	93939 1136240	242932	476734	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Quinoline	NPT	Ave	48135 2144471	112891 2763749	255683 3239383	667136	1322185	50.0 1500	100 2000	200 2500	500	1000
p-Phenylene diamine	NPT	Qua	+++++ 823233	9167 1120409	43714 1387528	170141	354177	+++++ 1500	100 2000	200 2500	500	1000
Safrole, Total	NPT	Ave	19867 883464	42775 1186998	100192 1422209	262817	532614	50.0 1500	100 2000	200 2500	500	1000
Isosafrole Peak 1	ANT	Ave	3659 158678	7610 216390	16839 263797	45413	97451	42.0 1260	84.0 1680	168 2100	420	840
Isosafrole Peak 2	ANT	Ave	19206 905641	41633 1224513	98896 1473588	264708	534424	8.00 240	16.0 320	32.0 400	80.0	160
1-Chloronaphthalene	ANT	Ave	48432 1946787	102255 2589445	232073 3089889	582995	1172548	50.0 1500	100 2000	200 2500	500	1000
1,4-Naphthoquinone	ANT	Lin1	9944 724526	22277 970473	60690 1173910	187284	424702	50.0 1500	100 2000	200 2500	500	1000
1,4-Dinitrobenzene	ANT	Lin1	2735 301530	7244 418930	20035 508567	66410	165590	50.0 1500	100 2000	200 2500	500	1000
Pentachlorobenzene	ANT	Ave	15005 712092	30731 967024	73443 1184123	194038	410577	50.0 1500	100 2000	200 2500	500	1000
1-Naphthylamine	ANT	Ave	30624 1903739	86901 2438875	213270 2925143	595716	1143050	50.0 1500	100 2000	200 2500	500	1000
2,3,5,6-Tetrachlorophenol	ANT	Lin1	+++++ 349809	+++++ 485683	23158 609903	76895	190505	+++++ 1500	+++++ 2000	200 2500	500	1000
2-Naphthylamine	ANT	Lin1	24274 1883696	79000 2461046	204380 2946801	589754	1155409	50.0 1500	100 2000	200 2500	500	1000
Thionazin	ANT	Ave	11150 527266	27358 698344	63364 841080	159718	319829	50.0 1500	100 2000	200 2500	500	1000
N-Nitro-o-toluidine	ANT	Lin1	6207 614939	16849 831975	48120 1045850	157890	355406	50.0 1500	100 2000	200 2500	500	1000
Sulfotepp	PHN	Ave	6149 273830	13132 373944	30454 461317	77050	156992	50.0 1500	100 2000	200 2500	500	1000
1,3,5-Trinitrobenzene	PHN	Qua	+++++ 156905	+++++ 226356	8364 281373	24563	70646	+++++ 1500	+++++ 2000	200 2500	500	1000
Phenacetin	PHN	Lin1	+++++ 1025224	31910 1356502	91842 1625285	284745	620227	+++++ 1500	100 2000	200 2500	500	1000
Diallate Peak 1	PHN	Ave	28005 941644	58665 1182572	136936 1377951	317162	600325	43.0 1290	86.0 1720	172 2150	430	860
Phorate	PHN	Ave	13761 511296	29125 656427	64833 769251	161792	317205	50.0 1500	100 2000	200 2500	500	1000
Diallate Peak 2	PHN	Ave	4725 169398	9238 221667	19188 270612	49655	101423	7.00 210	14.0 280	28.0 350	70.0	140
Dimethoate	PHN	Ave	13889 777109	34643 1005644	89521 1176788	249528	507290	50.0 1500	100 2000	200 2500	500	1000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
4-Aminobiphenyl	PHN	Lin1	32518 2370002	73983 3132214	196934 3792114	617627	1310222	50.0 1500	100 2000	200 2500	500	1000
Pronamide	PHN	Ave	19741 972796	47486 1281015	103552 1530828	270410	565162	50.0 1500	100 2000	200 2500	500	1000
Pentachloronitrobenzene	PHN	Lin1	3814 212477	9382 286698	21897 361089	58497	120147	50.0 1500	100 2000	200 2500	500	1000
Disulfoton	PHN	Ave	29829 1234857	67916 1619146	158758 1922696	396393	754672	50.0 1500	100 2000	200 2500	500	1000
Dinoseb	PHN	Qua	+++++ 324630	+++++ 473298	16762 581959	48092	145735	+++++ 1500	+++++ 2000	200 2500	500	1000
Methyl parathion	PHN	Lin1	9520 687747	21916 874284	58648 1021377	184752	418525	50.0 1500	100 2000	200 2500	500	1000
Ethyl Parathion	PHN	Lin1	4906 454520	12473 603893	34827 725991	115465	262996	50.0 1500	100 2000	200 2500	500	1000
4-Nitroquinoline-1-oxide	PHN	Qua	+++++ 142643	+++++ 223174	5528 299073	16458	52228	+++++ 1500	+++++ 2000	200 2500	500	1000
Methapyrilene	PHN	Lin1	43777 3572486	99772 4691680	291122 5487265	926147	2052984	100 3000	200 4000	400 5000	1000	2000
Isodrin	PHN	Ave	12317 381094	24576 506092	50555 599619	121606	227620	50.0 1500	100 2000	200 2500	500	1000
Aramite Peak 1	CRY	Lin1	2826 173643	5894 246327	14619 305666	40528	92152	25.5 765	51.0 1020	102 1275	255	510
Aramite Peak 2	CRY	Lin1	3254 219564	7313 300078	18296 368416	49801	113290	24.5 735	49.0 980	98.0 1225	245	490
p-Dimethylamino azobenzene	CRY	Lin1	8484 624993	21612 854231	54721 1064482	148083	315904	50.0 1500	100 2000	200 2500	500	1000
Ethyl 4,4'-Dichlorobenzilate	CRY	Ave	18567 1097669	46440 1483243	110563 1796455	277826	600603	50.0 1500	100 2000	200 2500	500	1000
Famphur	CRY	Ave	10647 +++++	29369 +++++	73976 +++++	157283	223652	50.0 +++++	100 +++++	200 +++++	500	1000
3,3'-Dimethylbenzidine	CRY	Lin1	+++++ 1591279	+++++ 2205352	87516 2766969	296923	702656	+++++ 1500	+++++ 2000	200 2500	500	1000
2-Acetylaminofluorene	CRY	Lin1	+++++ 1200476	+++++ 1687354	64991 2150163	221402	581203	+++++ 1500	+++++ 2000	200 2500	500	1000
4,4'-Methylene bis(2-chloroaniline)	CRY	Lin1	4189 518312	12664 715280	37173 893460	112488	253366	50.0 1500	100 2000	200 2500	500	1000
6-Methylchrysene	CRY	Ave	73135 4313548	173117 5822786	411905 7046131	1090488	2213352	100 3000	200 4000	400 5000	1000	2000
7,12-Dimethylbenz(a)anthracene	PRY	Lin1	13801 985370	36816 1365960	84396 1786288	234436	496122	50.0 1500	100 2000	200 2500	500	1000
3-Methylcholanthrene	PRY	Ave	44055 2658819	96716 3663818	231513 4575379	610053	1315234	100 3000	200 4000	400 5000	1000	2000

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-94103-1 Analy Batch No.: 323501

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS/ ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/23/2018 10:42 Calibration End Date: 04/23/2018 13:33 Calibration ID: 44866

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dibenz[a,h]acridine	PRY	Lin1	25038 1666366	61273 2300001	147885 2881602	384349	845960	50.0 1500	100 2000	200 2500	500	1000

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D
Lims ID: std9 l2lvi
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-Apr-2018 10:42:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-012
Misc. Info.: STD9 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 12:17:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	182467	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	852069	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	409528	400.0	400.0	
* 4 Phenanthrene-d10	188	10.628	10.628	0.000	98	666242	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	551280	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	450413	400.0	400.0	
31 2-Picoline	93	5.241	5.241	0.000	96	1542721	2500.0	2712.8	a
32 N-Nitrosomethylethylamine	88	5.305	5.305	0.000	92	896743	2500.0	2657.1	
14 Acrylamide	71	5.488	5.488	0.000	66	166781	2500.0	2351.9	a
34 Methyl methanesulfonate	80	5.541	5.541	0.000	90	1107758	2500.0	2608.1	
36 N-Nitrosodiethylamine	102	5.882	5.882	0.000	91	921045	2500.0	2664.5	
37 Ethyl methanesulfonate	79	6.099	6.099	0.000	97	1368584	2500.0	2585.1	
46 Pentachloroethane	167	6.552	6.552	0.000	91	550245	2500.0	2722.3	a
56 N-Nitrosopyrrolidine	100	7.058	7.058	0.000	81	976182	2500.0	2868.2	
59 N-Nitrosomorpholine	56	7.082	7.082	0.000	94	1438398	2500.0	2674.2	
60 2-Toluidine	106	7.123	7.123	0.000	97	2893080	2500.0	2639.7	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	955737	2500.0	2703.3	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	87	856250	2500.0	2574.4	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	4081291	2500.0	2871.1	M
77 Hexachloropropene	213	7.940	7.940	0.000	91	904735	2500.0	3079.4	
81 Quinoline	129	8.140	8.140	0.000	96	3239383	2500.0	2518.5	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	91	1136240	2500.0	2469.5	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	1387528	2500.0	2478.5	
92 Safrole, Total	162	8.340	8.340	0.000	88	1422209	2500.0	2714.5	
95 Isosafrole Peak 1	162	8.587	8.587	0.000	89	263797	2100.0	2395.7	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	91	1473588	400.0	454.3	
247 1-Chloronaphthalene	162	8.893	8.893	0.000	97	3089889	2500.0	2652.1	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	89	1173910	2500.0	2604.8	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	95	508567	2500.0	2677.0	
114 Pentachlorobenzene	250	9.493	9.493	0.000	98	1184123	2500.0	2966.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	65	609903	2500.0	2651.4	
117 1-Naphthylamine	143	9.576	9.576	0.000	99	2925143	2500.0	2753.1	
119 2-Naphthylamine	143	9.640	9.640	0.000	96	2946801	2500.0	2523.2	a
121 Thionazin	97	9.717	9.717	0.000	80	841080	2500.0	2706.6	
123 N-Nitro-o-toluidine	152	9.799	9.799	0.000	97	1045850	2500.0	2678.0	
132 Sulfotepp	202	9.964	9.964	0.000	77	461317	2500.0	3018.6	
133 1,3,5-Trinitrobenzene	213	10.058	10.058	0.000	83	281373	2500.0	2471.1	
135 Phenacetin	108	10.111	10.111	0.000	91	1625285	2500.0	2525.8	
134 Diallate Peak 1	86	10.105	10.105	0.000	92	1377951	2150.0	2040.2	
136 Phorate	121	10.117	10.117	0.000	94	769251	2500.0	2552.7	
137 Diallate Peak 2	86	10.193	10.193	0.000	91	270612	350.0	386.4	
139 Dimethoate	87	10.276	10.276	0.000	92	1176788	2500.0	2744.5	
142 4-Aminobiphenyl	169	10.428	10.428	0.000	89	3792114	2500.0	2597.5	
144 Pronamide	173	10.446	10.446	0.000	91	1530828	2500.0	2898.6	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	84	361089	2500.0	2672.0	
146 Disulfoton	88	10.564	10.564	0.000	99	1922696	2500.0	2659.3	
147 Dinoseb	211	10.576	10.576	0.000	94	581959	2500.0	2466.4	
152 Methyl parathion	109	10.893	10.893	0.000	93	1021377	2500.0	2471.9	
155 Ethyl Parathion	97	11.234	11.234	0.000	83	725991	2500.0	2577.6	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	94	299073	2500.0	2478.2	
157 Methapyrilene	58	11.352	11.352	0.000	98	5487265	5000.0	5046.5	
158 Isodrin	66	11.617	11.617	0.000	91	599619	2500.0	2542.1	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	305666	1275.0	1368.6	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	368416	1225.0	1294.6	
164 p-Dimethylamino azobenzene	225	12.275	12.275	0.000	95	1064482	2500.0	2665.6	
165 Chlorobenzilate	139	12.305	12.305	0.000	86	1796455	2500.0	2857.8	
168 Famphur	218		12.605				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.687	12.687	0.000	99	2766969	2500.0	2657.9	
172 2-Acetylaminofluorene	181	13.040	13.040	0.000	96	2150163	2500.0	2668.8	
175 4,4'-Methylene bis(2-chlor	231	13.440	13.440	0.000	96	893460	2500.0	2692.1	
180 6-Methylchrysene	242	14.305	14.305	0.000	98	7046131	5000.0	5828.5	
182 7,12-Dimethylbenz(a)anthra	256	15.246	15.246	0.000	95	1786288	2500.0	2763.1	
186 3-Methylcholanthrene	268	16.446	16.446	0.000	93	4575379	5000.0	6376.7	
188 Dibenz[a,h]acridine	279	17.510	17.510	0.000	92	2881602	2500.0	2689.6	
S 194 Isosafrole	162				0		2500.0	2850.0	
S 195 Diallate	86				0		2500.0	2426.6	
S 196 Aramite, Total	185				0		2500.0	2663.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L9 W_00015 Amount Added: 0.10 Units: mL

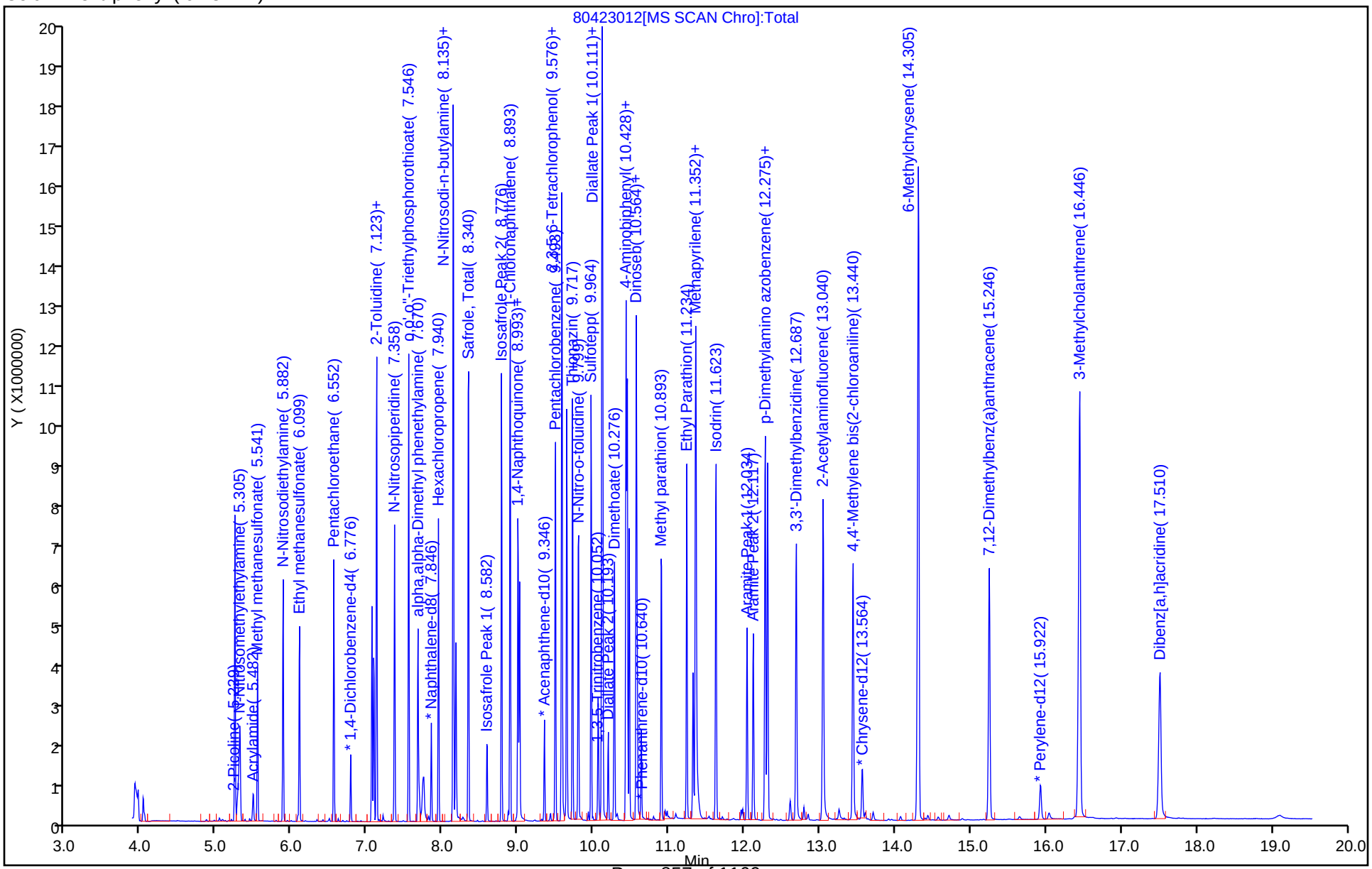
Report Date: 24-Apr-2018 07:01:46 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D

Injection Date:	23-Apr-2018 10:42:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std9 l2lvi			Worklist Smp#:	12
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

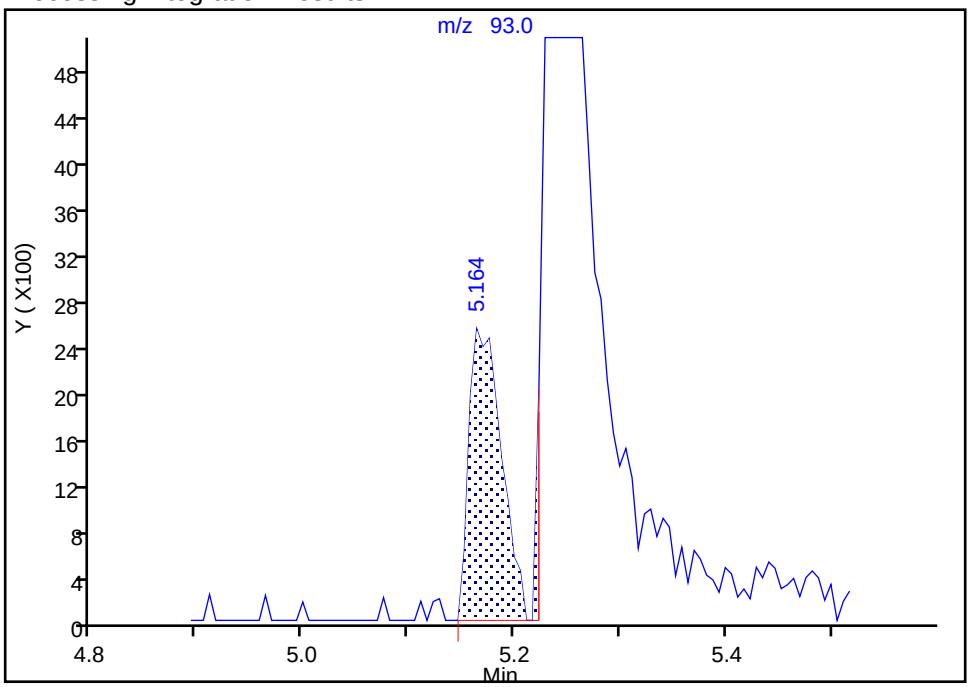
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D				
Injection Date:	23-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	std9 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

31 2-Picoline, CAS: 109-06-8

Signal: 1

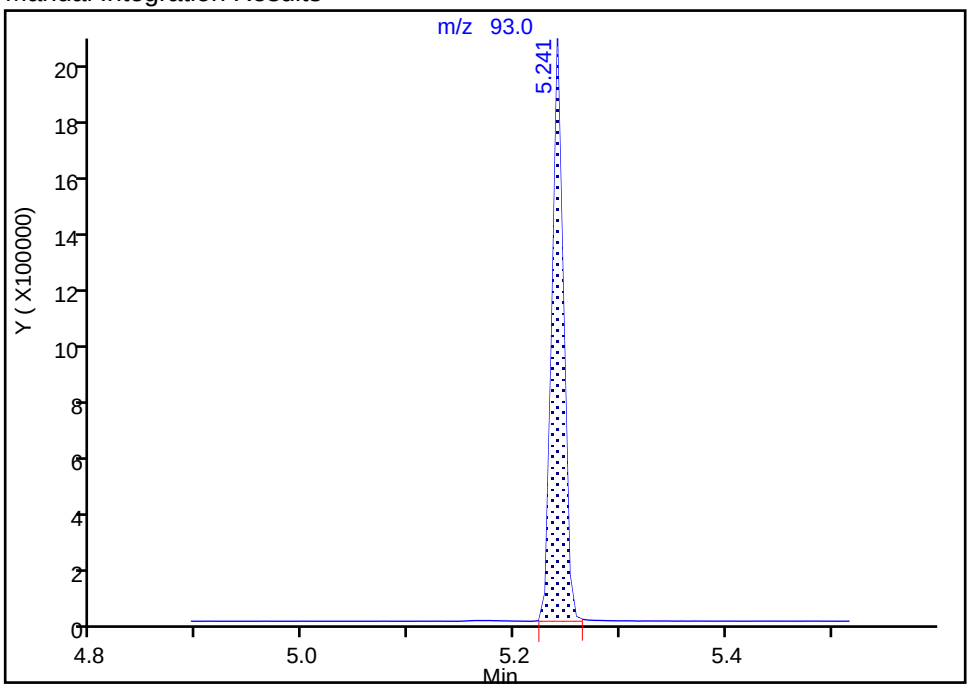
Processing Integration Results

RT: 5.16
Area: 6044
Amount: 12.590921
Amount Units: ng/ml



Manual Integration Results

RT: 5.24
Area: 1542721
Amount: 2712.7672
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 13:09:55

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

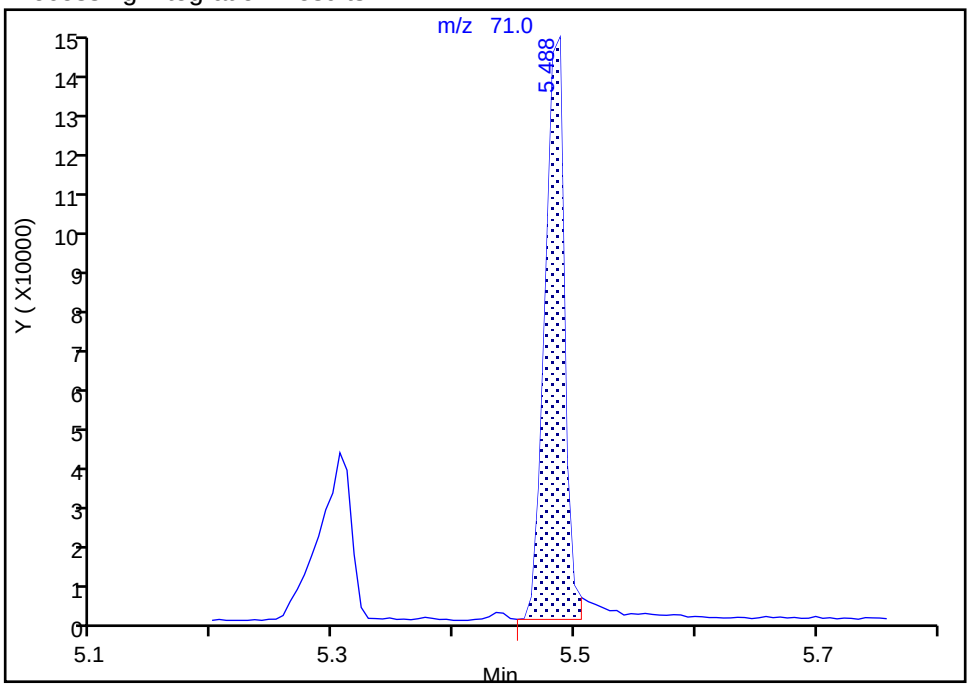
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D				
Injection Date:	23-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	std9 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

14 Acrylamide, CAS: 79-06-1

Signal: 1

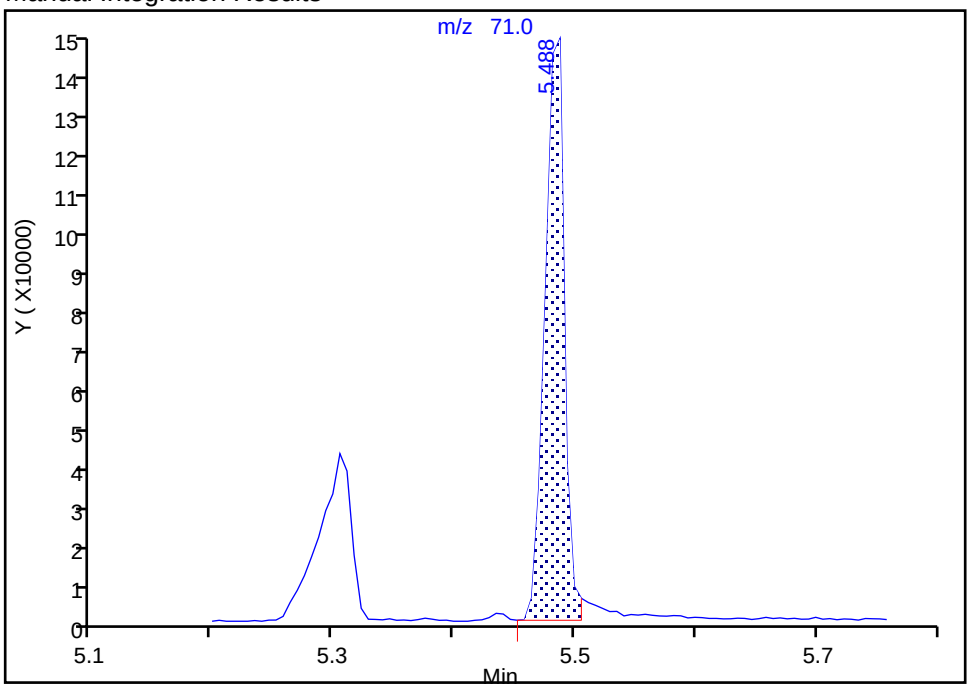
Processing Integration Results

RT: 5.49
Area: 166781
Amount: 2351.9269
Amount Units: ng/ml



Manual Integration Results

RT: 5.49
Area: 166781
Amount: 2351.9269
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 13:10:39

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

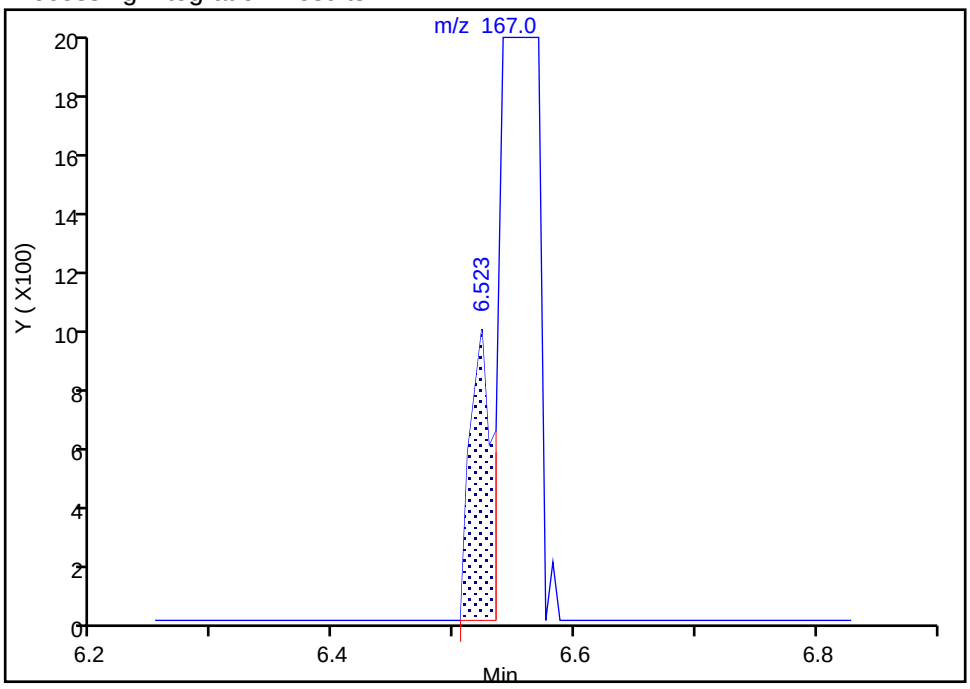
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D				
Injection Date:	23-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	std9 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

46 Pentachloroethane, CAS: 76-01-7

Signal: 1

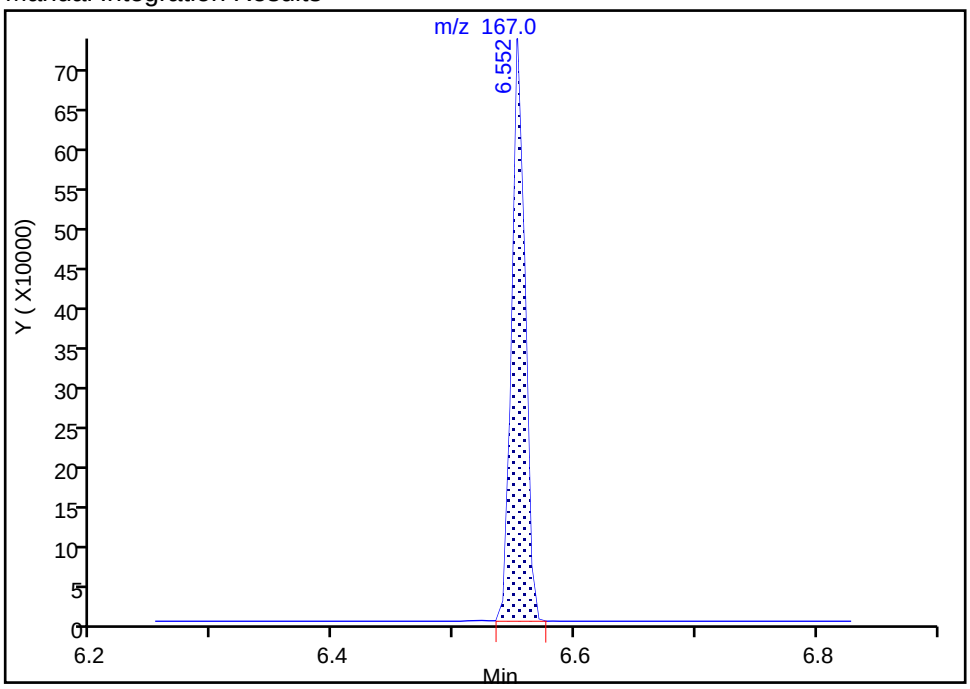
Processing Integration Results

RT: 6.52
Area: 1261
Amount: 0.093466
Amount Units: ng/ml



Manual Integration Results

RT: 6.55
Area: 550245
Amount: 2722.3441
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:46:19

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

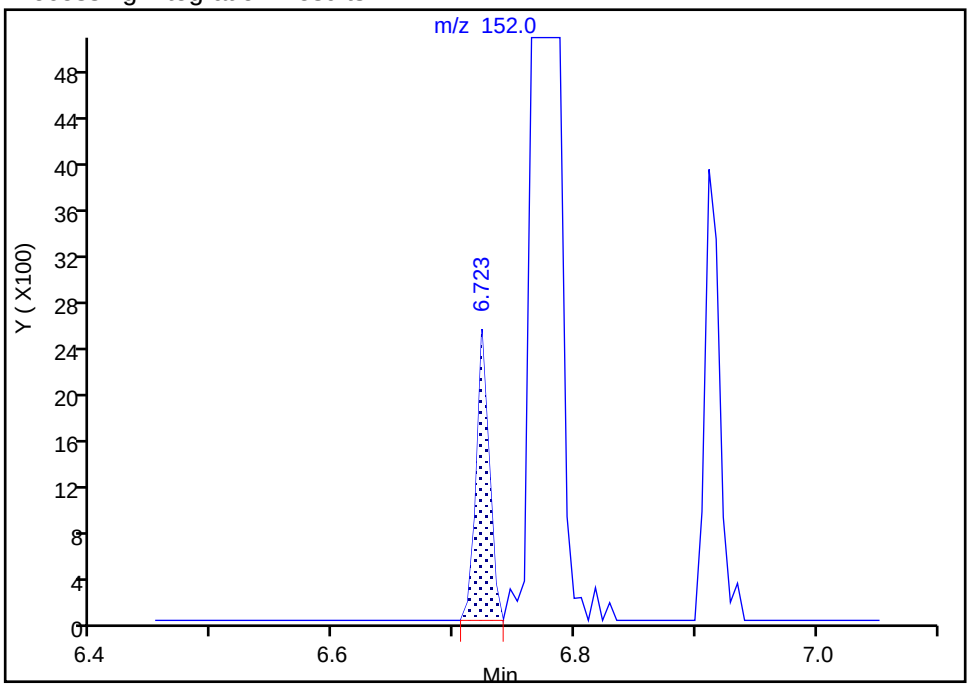
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D
Injection Date: 23-Apr-2018 10:42:30 Instrument ID: A4AG2
Lims ID: std9 l2lvi
Client ID:
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

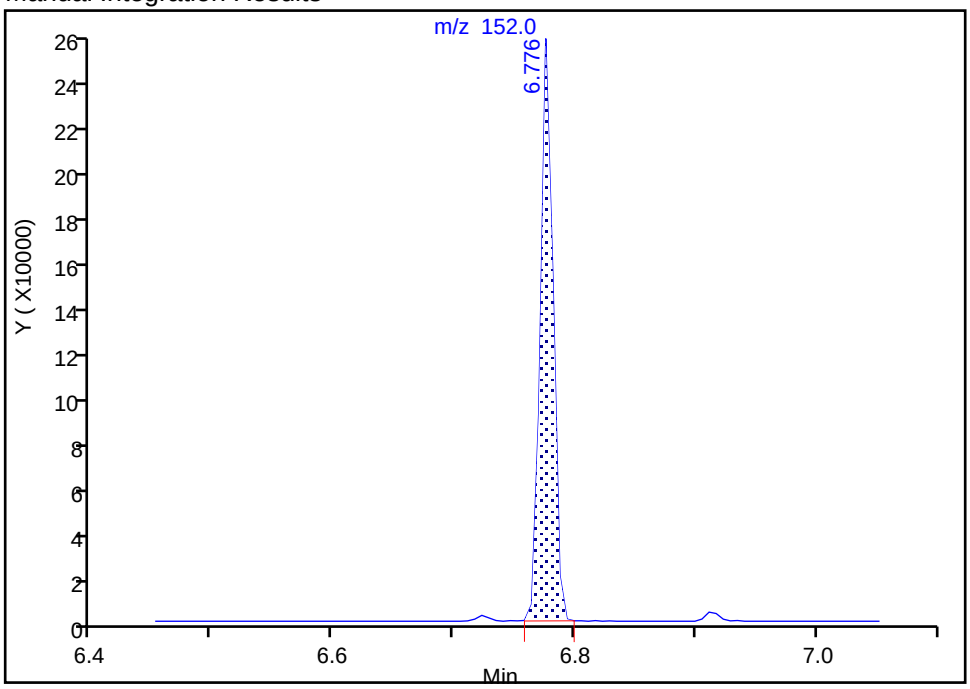
Processing Integration Results

RT: 6.72
Area: 1890
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 182467
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:45:56
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

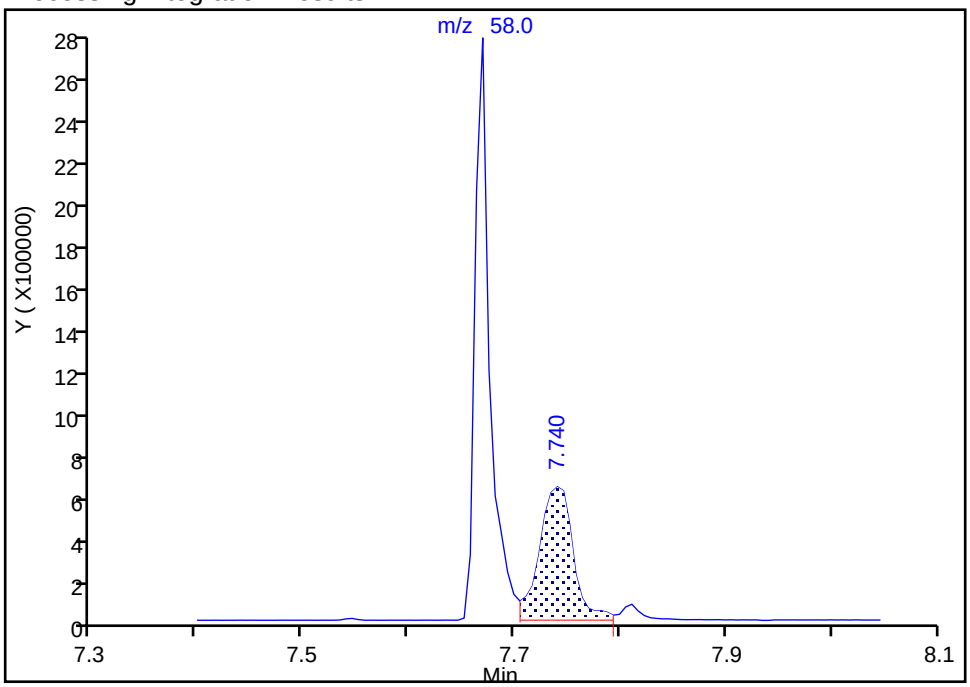
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D
Injection Date: 23-Apr-2018 10:42:30 Instrument ID: A4AG2
Lims ID: std9 l2lvi
Client ID:
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

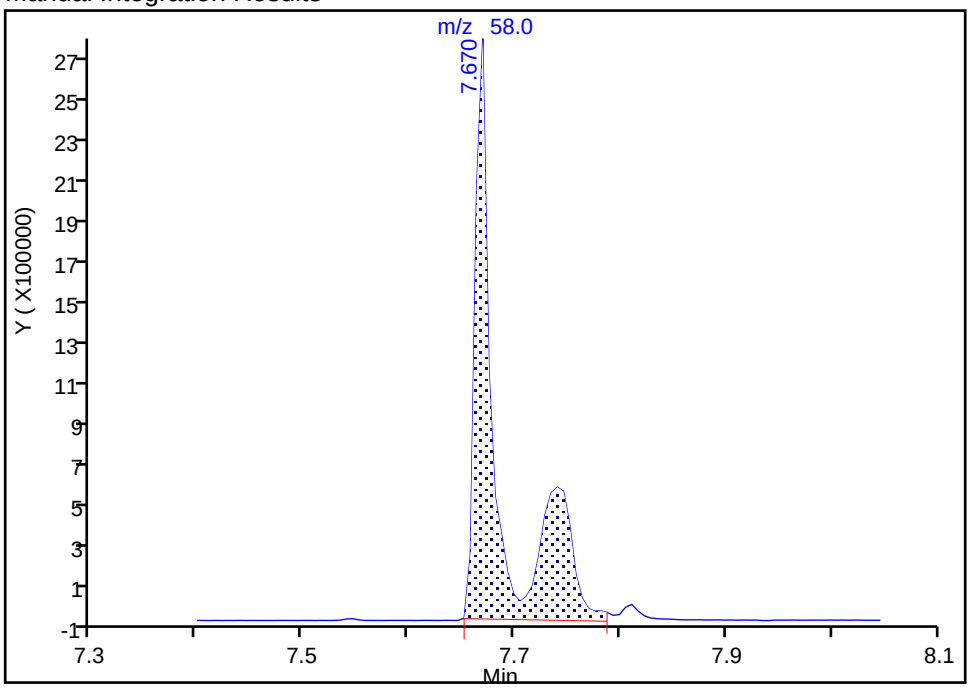
Processing Integration Results

RT: 7.74
Area: 1408834
Amount: 2779.8145
Amount Units: ng/ml



Manual Integration Results

RT: 7.67
Area: 4081291
Amount: 2871.1270
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:46:38
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

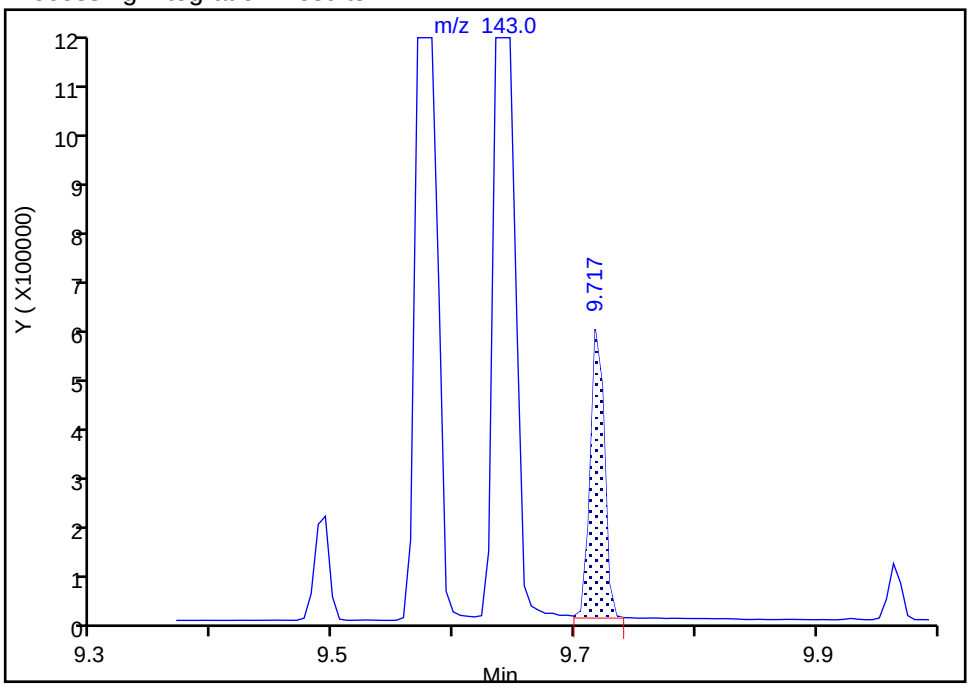
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D				
Injection Date:	23-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	std9 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

119 2-Naphthylamine, CAS: 91-59-8

Signal: 1

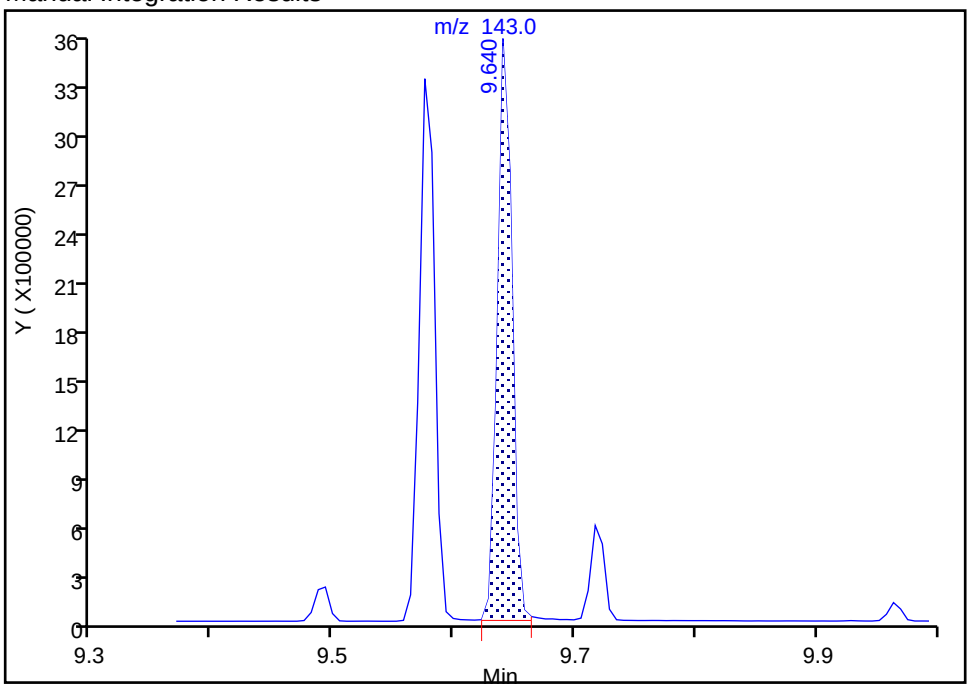
Processing Integration Results

RT: 9.72
Area: 462291
Amount: 2589.1416
Amount Units: ng/ml



Manual Integration Results

RT: 9.64
Area: 2946801
Amount: 2523.2471
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:47:09
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

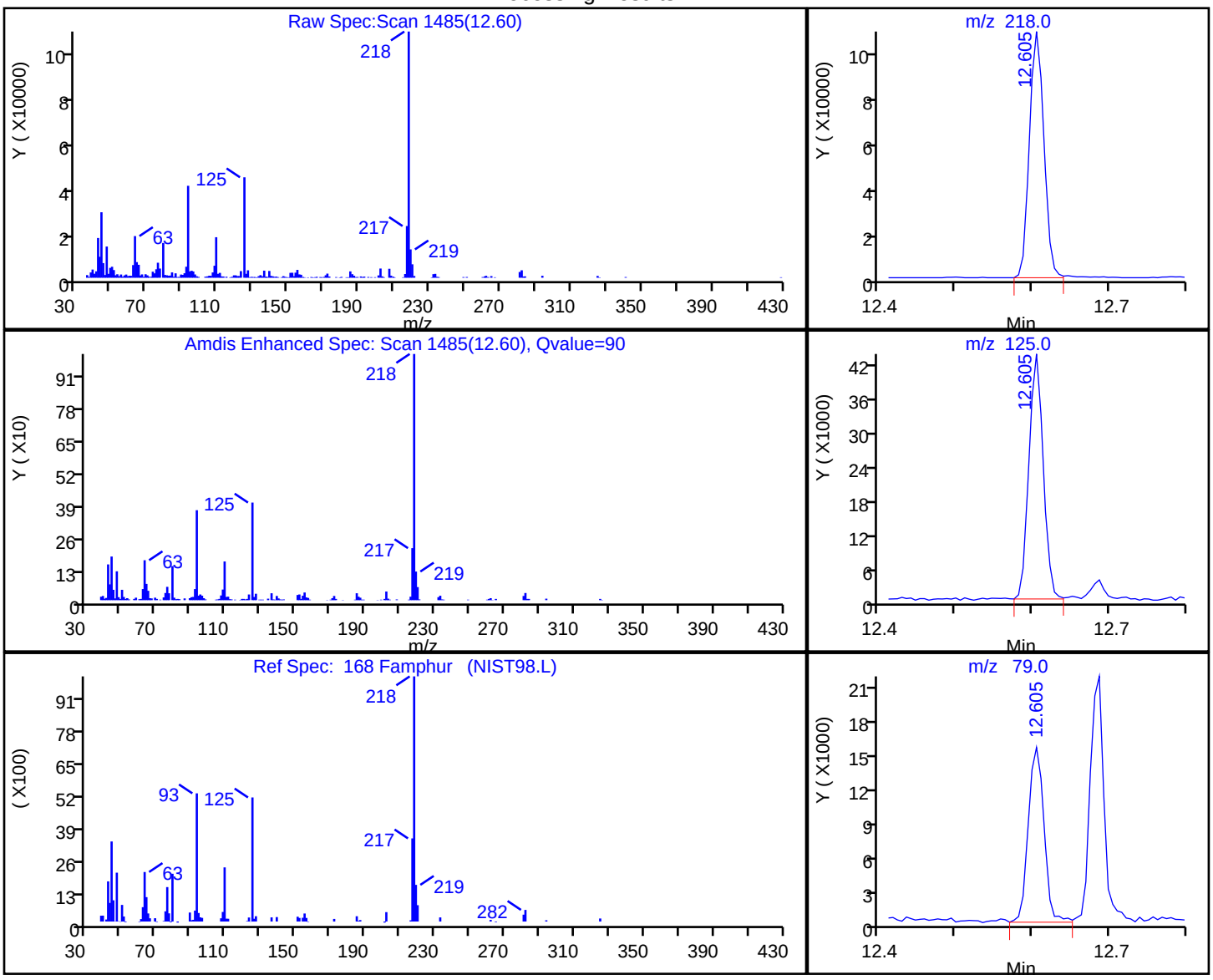
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423012.D
Injection Date: 23-Apr-2018 10:42:30 Instrument ID: A4AG2
Lims ID: std9 l2lvi
Client ID:
Operator ID: ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.60	218.00	140722	598.8618
12.60	125.00	56360	
12.60	79.00	21184	

Reviewer: hulat, 24-Apr-2018 05:27:55
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D
Lims ID: std8 l2lvi
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Apr-2018 11:06:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-013
Misc. Info.: STD8 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:50 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 12:49:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	185697	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	906410	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	441553	400.0	400.0	
* 4 Phenanthrene-d10	188	10.634	10.628	0.006	98	702345	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	587810	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	479807	400.0	400.0	
31 2-Picoline	93	5.241	5.241	0.000	96	1228481	2000.0	2122.6	a
32 N-Nitrosomethylethylamine	88	5.305	5.305	0.000	92	692754	2000.0	2017.0	
14 Acrylamide	71	5.482	5.488	-0.006	64	168169	2000.0	2330.3	
34 Methyl methanesulfonate	80	5.541	5.541	0.000	90	907364	2000.0	2099.2	
36 N-Nitrosodiethylamine	102	5.882	5.882	0.000	91	748180	2000.0	2126.7	
37 Ethyl methanesulfonate	79	6.093	6.099	-0.006	97	1134195	2000.0	2105.1	
46 Pentachloroethane	167	6.552	6.552	0.000	92	428123	2000.0	2081.3	
56 N-Nitrosopyrrolidine	100	7.058	7.058	0.000	81	807078	2000.0	2330.1	
59 N-Nitrosomorpholine	56	7.082	7.082	0.000	93	1186590	2000.0	2167.6	
60 2-Toluidine	106	7.123	7.123	0.000	97	2414917	2000.0	2165.1	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	789783	2000.0	2099.9	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	87	730069	2000.0	2063.4	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	3672192	2000.0	2428.5	M
77 Hexachloropropene	213	7.940	7.940	0.000	91	727510	2000.0	2327.7	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	-0.001	91	969180	2000.0	1980.2	
81 Quinoline	129	8.140	8.140	0.000	96	2763749	2000.0	2019.9	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	1120409	2000.0	2020.0	
92 Safrole, Total	162	8.340	8.340	0.000	90	1186998	2000.0	2129.7	
95 Isosafrole Peak 1	162	8.587	8.587	0.000	89	216390	1680.0	1822.6	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	91	1224513	320.0	350.1	
247 1-Chloronaphthalene	162	8.893	8.893	0.000	97	2589445	2000.0	2061.4	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	86	970473	2000.0	2006.6	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	95	418930	2000.0	2058.5	
114 Pentachlorobenzene	250	9.493	9.493	0.000	97	967024	2000.0	2247.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.576	9.576	0.000	99	2438875	2000.0	2128.9	
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	78	485683	2000.0	1993.2	
119 2-Naphthylamine	143	9.640	9.640	0.000	96	2461046	2000.0	1960.3	a
121 Thionazin	97	9.717	9.717	0.000	81	698344	2000.0	2084.3	
123 N-Nitro-o-toluidine	152	9.793	9.799	-0.006	95	831975	2000.0	1988.7	
132 Sulfotepp	202	9.964	9.964	0.000	77	373944	2000.0	2321.1	
133 1,3,5-Trinitrobenzene	213	10.058	10.058	0.000	84	226356	2000.0	2045.5	
134 Diallate Peak 1	86	10.111	10.105	0.006	87	1182572	1720.0	1660.9	
135 Phenacetin	108	10.111	10.111	0.000	74	1356502	2000.0	2012.5	
136 Phorate	121	10.117	10.117	0.000	94	656427	2000.0	2066.4	
137 Diallate Peak 2	86	10.193	10.193	0.000	91	221667	280.0	300.3	
139 Dimethoate	87	10.276	10.276	0.000	93	1005644	2000.0	2224.8	
142 4-Aminobiphenyl	169	10.428	10.428	0.000	89	3132214	2000.0	2045.0	
144 Pronamide	173	10.446	10.446	0.000	91	1281015	2000.0	2300.9	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	84	286698	2000.0	2020.9	
146 Disulfoton	88	10.564	10.564	0.000	98	1619146	2000.0	2124.3	
147 Dinoseb	211	10.576	10.576	0.000	94	473298	2000.0	2056.2	
152 Methyl parathion	109	10.899	10.893	0.006	94	874284	2000.0	2014.8	
155 Ethyl Parathion	97	11.234	11.234	0.000	83	603893	2000.0	2044.6	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	91	223174	2000.0	2035.7	
157 Methapyrilene	58	11.352	11.352	0.000	97	4691680	4000.0	4110.9	
158 Isodrin	66	11.617	11.617	0.000	91	506092	2000.0	2035.3	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	246327	1020.0	1038.8	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	300078	980.0	993.0	
164 p-Dimethylamino azobenzene	225	12.275	12.275	0.000	95	854231	2000.0	2014.8	
165 Chlorobenzilate	139	12.305	12.305	0.000	86	1483243	2000.0	2212.9	
168 Famphur	218		12.605				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.687	12.687	0.000	99	2205352	2000.0	2023.0	
172 2-Acetylaminofluorene	181	13.040	13.040	0.000	96	1687354	2000.0	2002.7	
175 4,4'-Methylene bis(2-chlor	231	13.440	13.440	0.000	96	715280	2000.0	2034.1	
180 6-Methylchrysene	242	14.305	14.305	0.000	99	5822786	4000.0	4517.2	
182 7,12-Dimethylbenz(a)anthra	256	15.246	15.246	0.000	94	1365960	2000.0	1994.1	
186 3-Methylcholanthrene	268	16.440	16.446	-0.006	93	3663818	4000.0	4793.4	
188 Dibenz[a,h]acridine	279	17.504	17.510	-0.006	92	2300001	2000.0	2023.9	
S 194 Isosafrole	162				0		2000.0	2172.7	
S 195 Diallate	86				0		2000.0	1961.2	
S 196 Aramite, Total	185				0		2000.0	2031.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L8 W_00015 Amount Added: 0.10 Units: mL

Report Date: 24-Apr-2018 07:01:53 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D

Injection Date: 23-Apr-2018 11:06:30 Instrument ID: A4AG2 Operator ID:

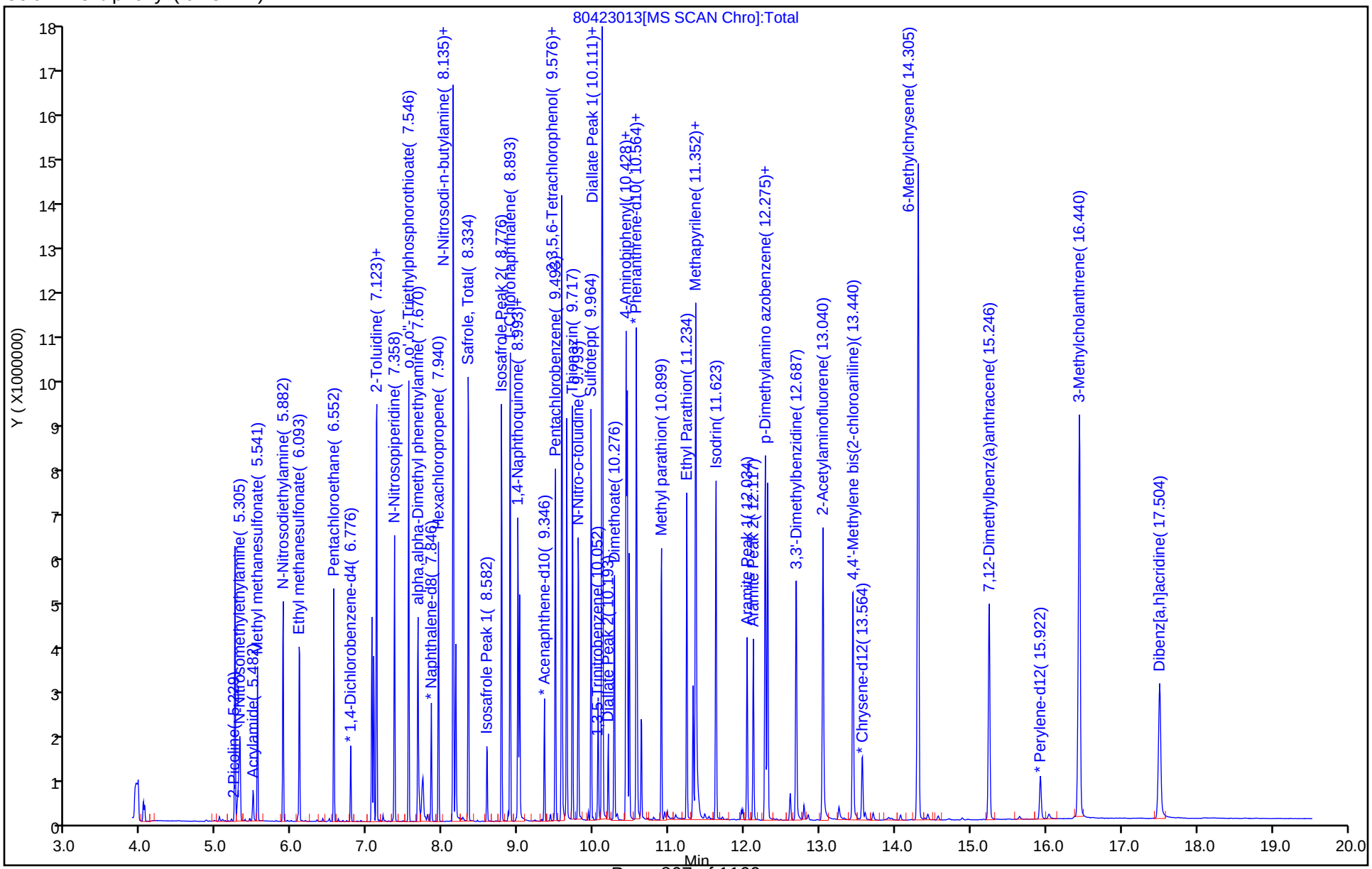
Lims ID: std8 l2lvi Worklist Smp#: 13

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 13

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

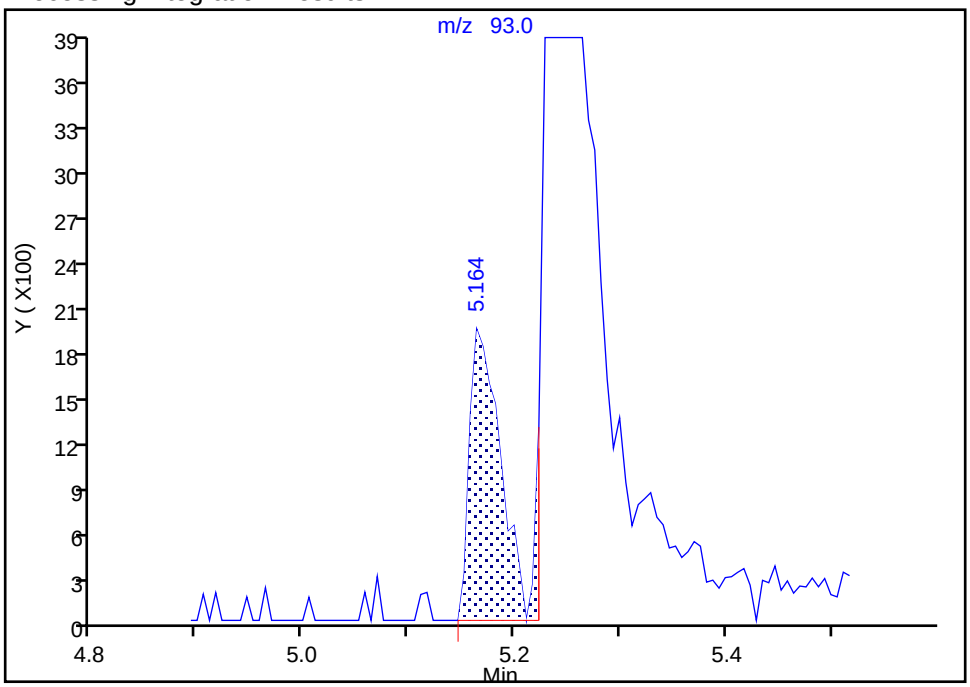
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D				
Injection Date:	23-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	std8 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

31 2-Picoline, CAS: 109-06-8

Signal: 1

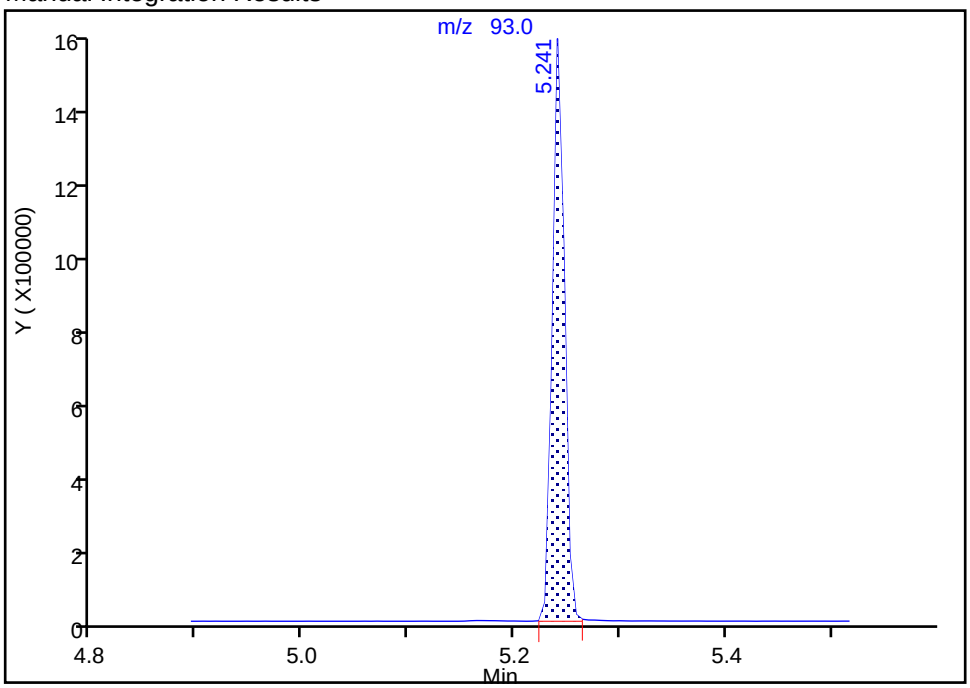
Processing Integration Results

RT: 5.16
Area: 4423
Amount: 75.822566
Amount Units: ng/ml



Manual Integration Results

RT: 5.24
Area: 1228481
Amount: 2122.6237
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:48:35
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

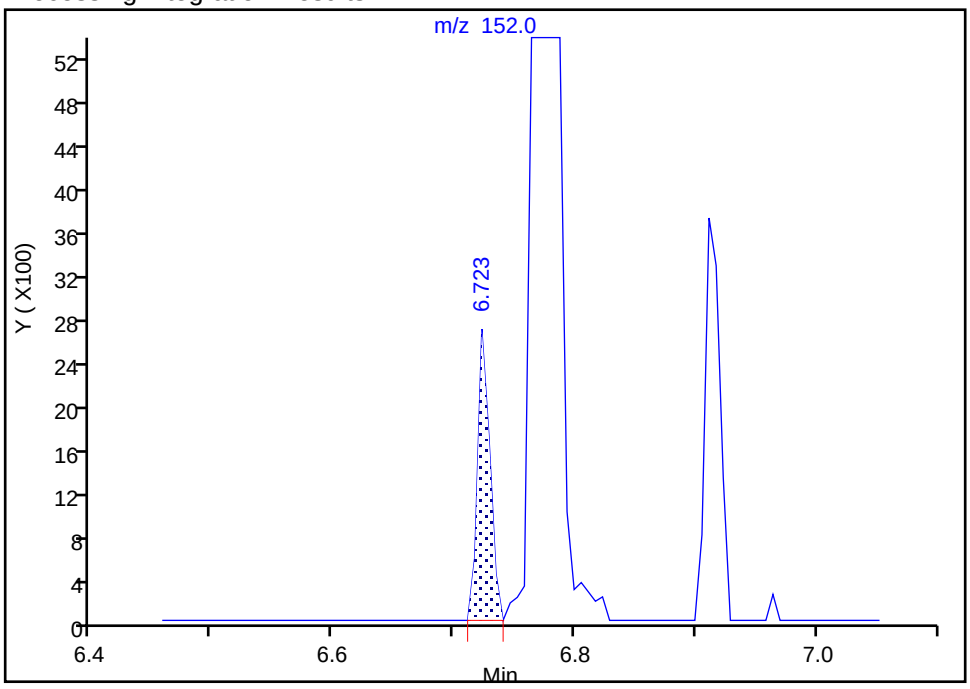
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D				
Injection Date:	23-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	std8 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

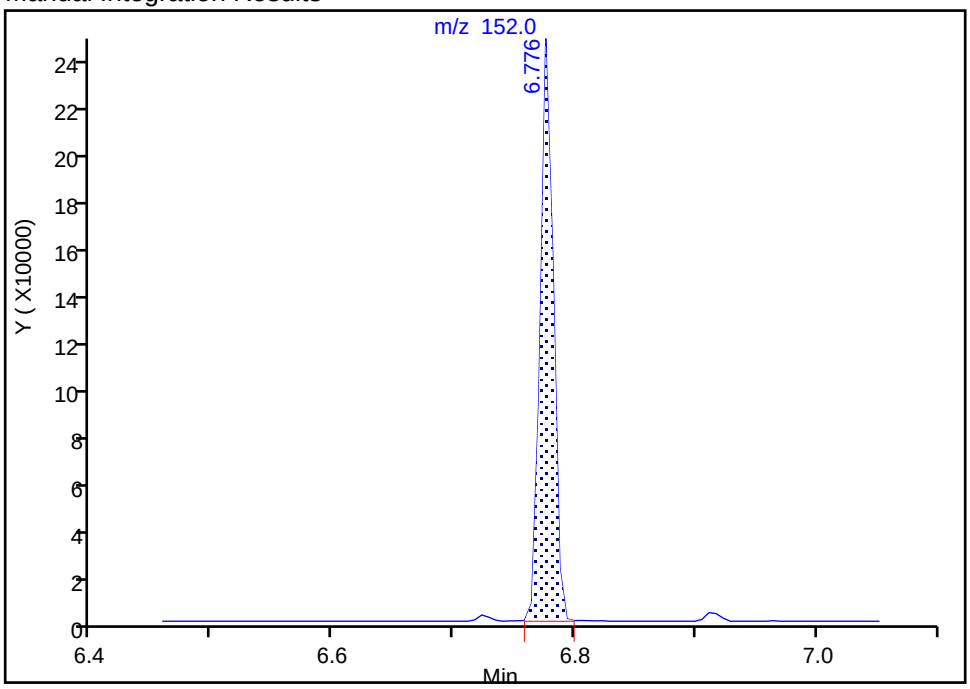
Processing Integration Results

RT: 6.72
Area: 1889
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 185697
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:48:24
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

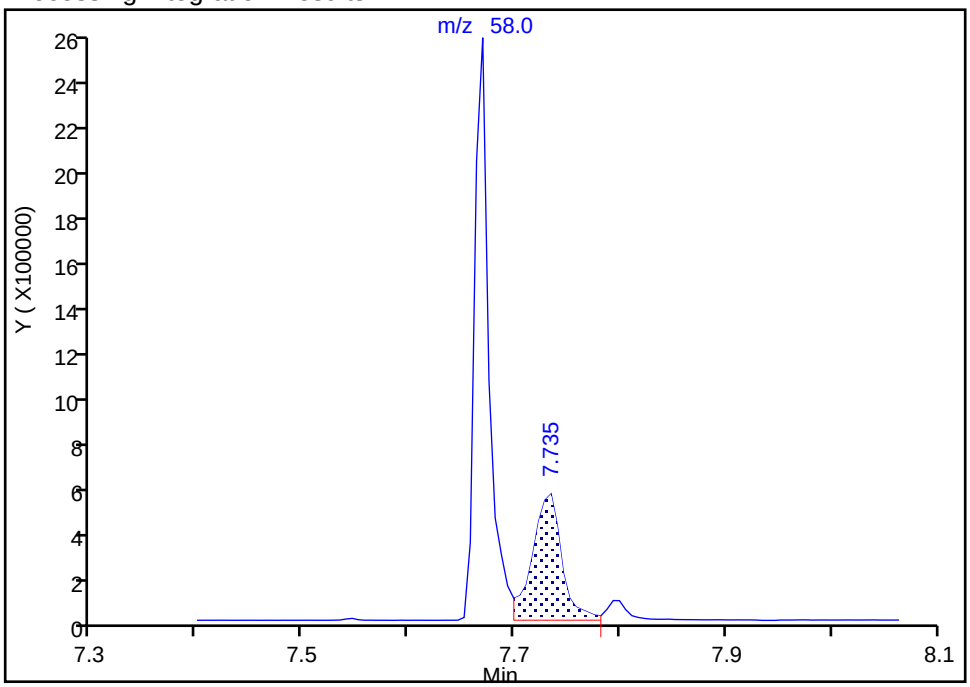
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D				
Injection Date:	23-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	std8 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

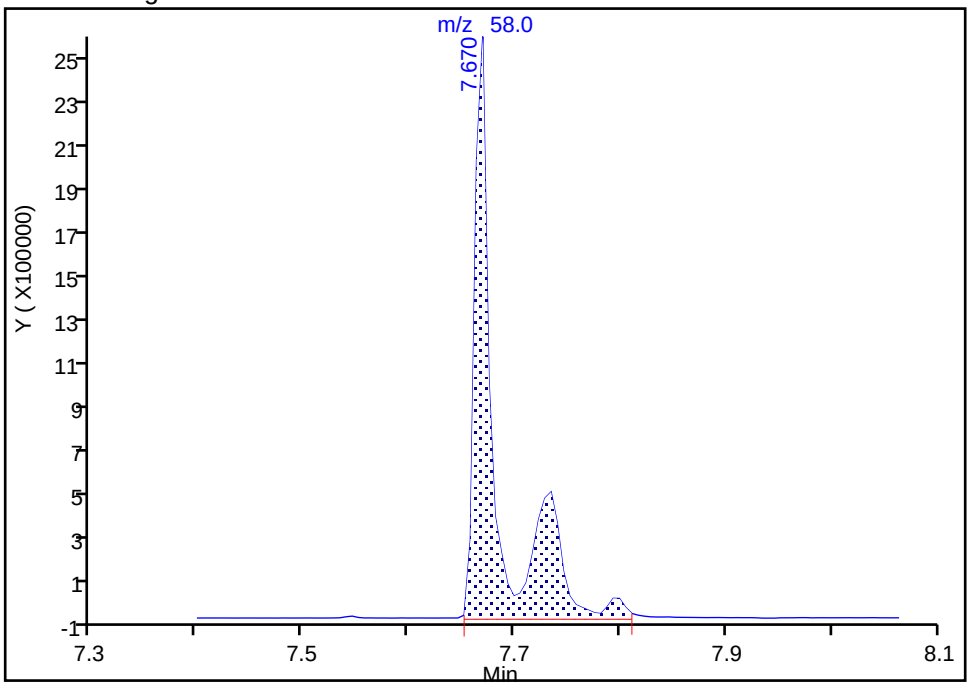
Processing Integration Results

RT: 7.73
Area: 1080858
Amount: 1177.1705
Amount Units: ng/ml



Manual Integration Results

RT: 7.67
Area: 3672192
Amount: 2428.4563
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:48:56

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

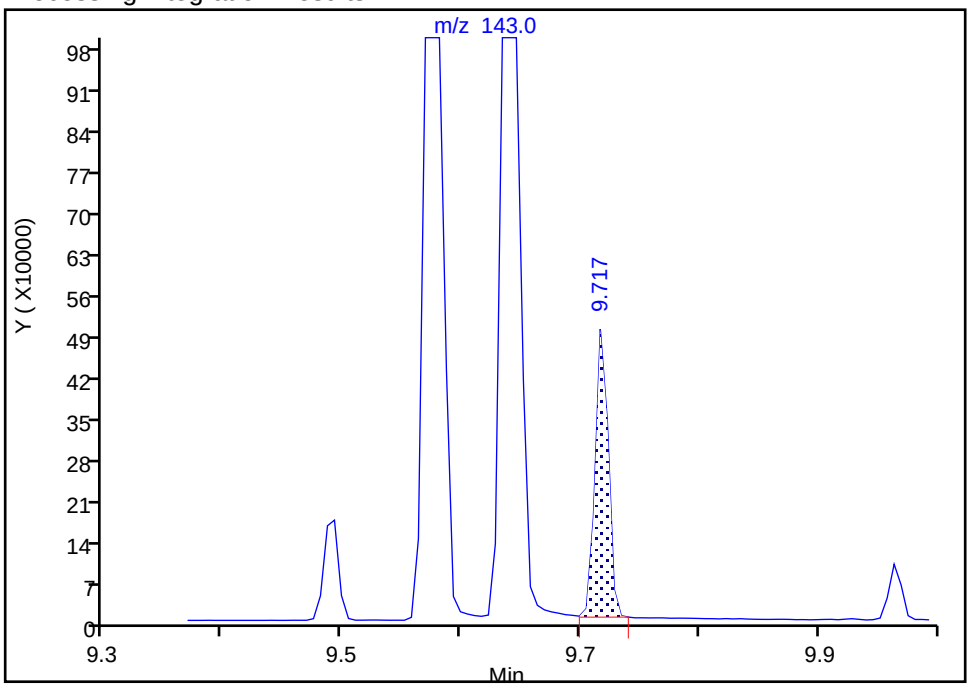
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D				
Injection Date:	23-Apr-2018 11:06:30	Instrument ID:	A4AG2		
Lims ID:	std8 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

119 2-Naphthylamine, CAS: 91-59-8

Signal: 1

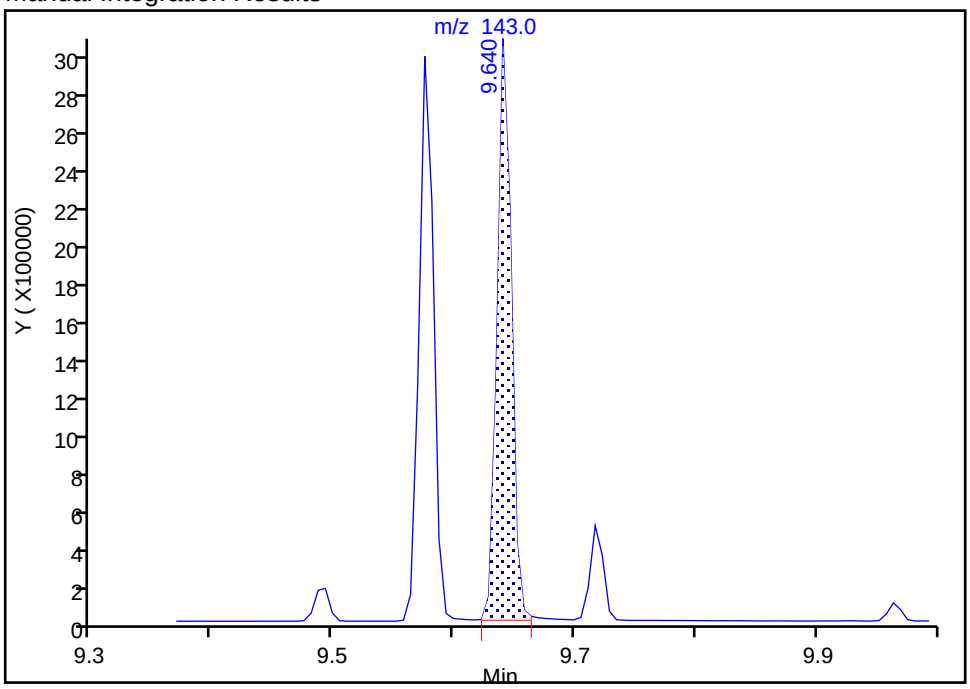
Processing Integration Results

RT: 9.72
Area: 373411
Amount: 679.3175
Amount Units: ng/ml



Manual Integration Results

RT: 9.64
Area: 2461046
Amount: 1960.2809
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:49:13
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

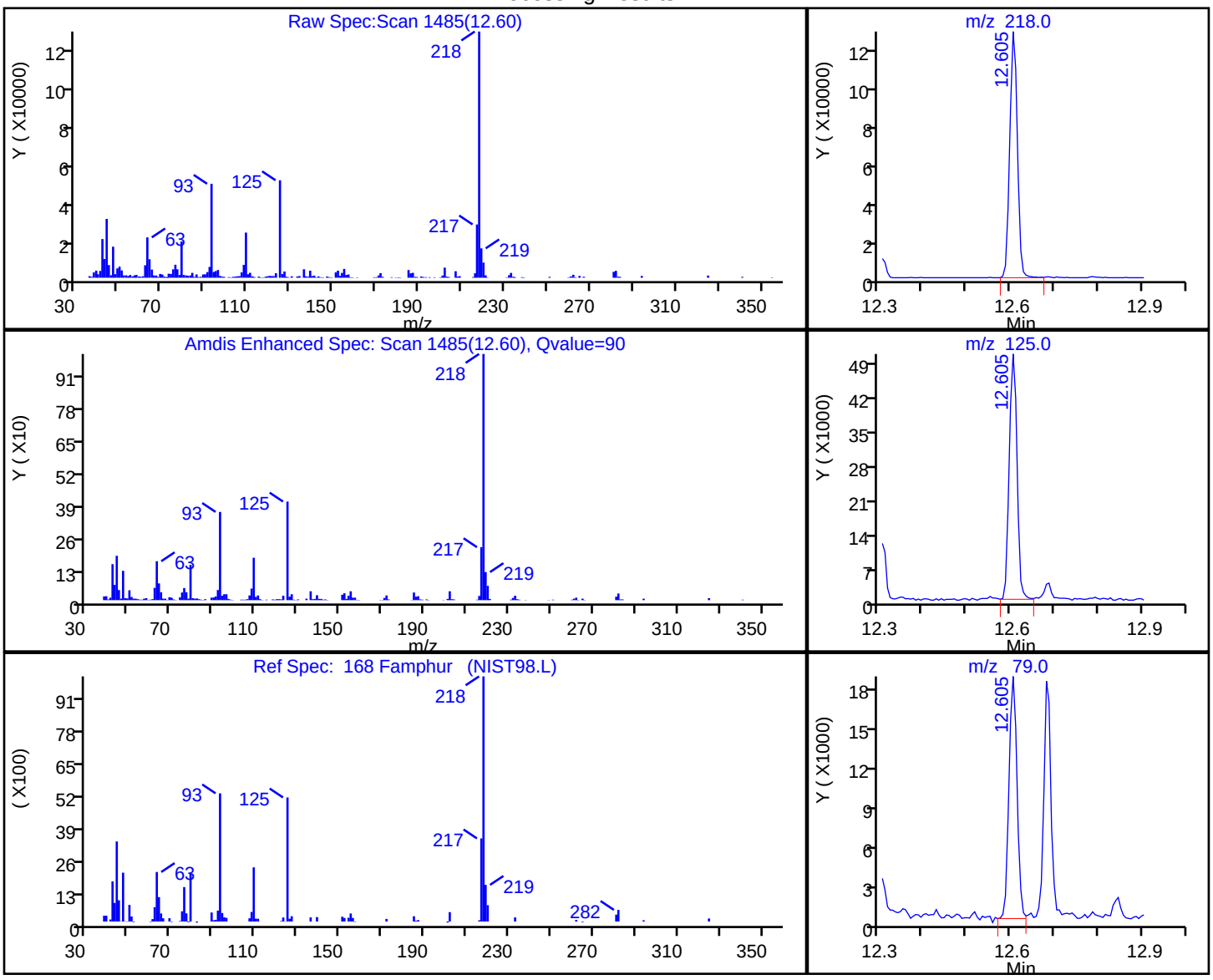
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423013.D
Injection Date: 23-Apr-2018 11:06:30 Instrument ID: A4AG2
Lims ID: std8 l2lvi
Client ID:
Operator ID: ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.60	218.00	154325	555.5805
12.60	125.00	62314	
12.60	79.00	23647	

Reviewer: hulat, 24-Apr-2018 05:28:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Report Date: 24-Apr-2018 07:01:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D
Lims ID: std7 l2lvi
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Apr-2018 11:31:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-014
Misc. Info.: STD7 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:56 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 12:51:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	208062	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	921944	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	95	451137	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.628	0.001	98	723793	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	601801	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	490093	400.0	400.0	
31 2-Picoline	93	5.241	5.241	0.000	97	988724	1500.0	1524.7	a
32 N-Nitrosomethylethylamine	88	5.311	5.305	0.006	92	564671	1500.0	1467.4	
14 Acrylamide	71	5.482	5.488	-0.006	65	88601	1500.0	1095.7	
34 Methyl methanesulfonate	80	5.541	5.541	0.000	89	688596	1500.0	1421.8	
36 N-Nitrosodiethylamine	102	5.882	5.882	0.000	91	577296	1500.0	1464.6	
37 Ethyl methanesulfonate	79	6.094	6.099	-0.005	97	852517	1500.0	1412.2	
46 Pentachloroethane	167	6.552	6.552	0.000	91	354616	1500.0	1538.6	
56 N-Nitrosopyrrolidine	100	7.058	7.058	0.000	80	604601	1500.0	1557.9	
59 N-Nitrosomorpholine	56	7.082	7.082	0.000	94	907170	1500.0	1479.1	
60 2-Toluidine	106	7.117	7.123	-0.006	97	1780092	1500.0	1424.4	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	599582	1500.0	1567.4	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	88	533615	1500.0	1482.8	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	2463172	1500.0	1601.5	M
77 Hexachloropropene	213	7.940	7.940	0.000	92	541699	1500.0	1704.0	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	91	760536	1500.0	1527.7	
81 Quinoline	129	8.135	8.140	-0.005	96	2144471	1500.0	1540.9	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	823233	1500.0	1577.5	
92 Safrole, Total	162	8.335	8.340	-0.005	88	883464	1500.0	1558.4	
95 Isosafrole Peak 1	162	8.588	8.587	0.001	89	158678	1260.0	1308.1	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	90	905641	240.0	253.5	
247 1-Chloronaphthalene	162	8.893	8.893	0.000	97	1946787	1500.0	1516.9	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	85	724526	1500.0	1477.1	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	94	301530	1500.0	1466.8	
114 Pentachlorobenzene	250	9.493	9.493	0.000	97	712092	1500.0	1619.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	89	349809	1500.0	1444.5	
117 1-Naphthylamine	143	9.576	9.576	0.000	99	1903739	1500.0	1626.5	
119 2-Naphthylamine	143	9.640	9.640	0.000	96	1883696	1500.0	1475.0	a
121 Thionazin	97	9.717	9.717	0.000	81	527266	1500.0	1540.3	
123 N-Nitro-o-toluidine	152	9.793	9.799	-0.006	94	614939	1500.0	1452.1	
132 Sulfotepp	202	9.964	9.964	0.000	78	273830	1500.0	1649.3	
133 1,3,5-Trinitrobenzene	213	10.058	10.058	0.000	84	156905	1500.0	1542.5	
134 Diallate Peak 1	86	10.111	10.105	0.006	88	941644	1290.0	1283.4	
135 Phenacetin	108	10.105	10.111	-0.006	80	1025224	1500.0	1492.4	
136 Phorate	121	10.117	10.117	0.000	94	511296	1500.0	1561.8	
137 Diallate Peak 2	86	10.193	10.193	0.000	91	169398	210.0	222.7	
139 Dimethoate	87	10.270	10.276	-0.006	93	777109	1500.0	1668.2	
142 4-Aminobiphenyl	169	10.429	10.428	0.001	89	2370002	1500.0	1513.6	
144 Pronamide	173	10.440	10.446	-0.006	92	972796	1500.0	1695.5	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	83	212477	1500.0	1463.0	
146 Disulfoton	88	10.564	10.564	0.000	99	1234857	1500.0	1572.1	
147 Dinoseb	211	10.576	10.576	0.000	94	324630	1500.0	1538.6	
152 Methyl parathion	109	10.893	10.893	0.000	93	687747	1500.0	1547.6	
155 Ethyl Parathion	97	11.234	11.234	0.000	83	454520	1500.0	1507.1	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	88	142643	1500.0	1544.7	
157 Methapyrilene	58	11.352	11.352	0.000	97	3572486	3000.0	3062.0	
158 Isodrin	66	11.617	11.617	0.000	89	381094	1500.0	1487.2	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	173643	765.0	720.9	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	219564	735.0	714.6	
164 p-Dimethylamino azobenzene	225	12.276	12.275	0.001	95	624993	1500.0	1449.8	
165 Chlorobenzilate	139	12.305	12.305	0.000	85	1097669	1500.0	1599.6	
168 Famphur	218		12.605				ND	ND	U
170 3,3'-Dimethylbenzidine	212	12.681	12.687	-0.006	99	1591279	1500.0	1468.1	
172 2-Acetylaminofluorene	181	13.034	13.040	-0.006	97	1200476	1500.0	1436.2	
175 4,4'-Methylene bis(2-chlor	231	13.434	13.440	-0.006	96	518312	1500.0	1454.7	
180 6-Methylchrysene	242	14.305	14.305	0.000	99	4313548	3000.0	3268.6	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.246	-0.006	94	985370	1500.0	1419.3	
186 3-Methylcholanthrene	268	16.440	16.446	-0.006	94	2658819	3000.0	3405.6	
188 Dibenz[a,h]acridine	279	17.499	17.510	-0.011	92	1666366	1500.0	1445.7	
S 194 Isosafrole	162				0		1500.0	1561.6	
S 195 Diallate	86				0		1500.0	1506.0	
S 196 Aramite, Total	185				0		1500.0	1435.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L7 W_00015 Amount Added: 0.10 Units: mL

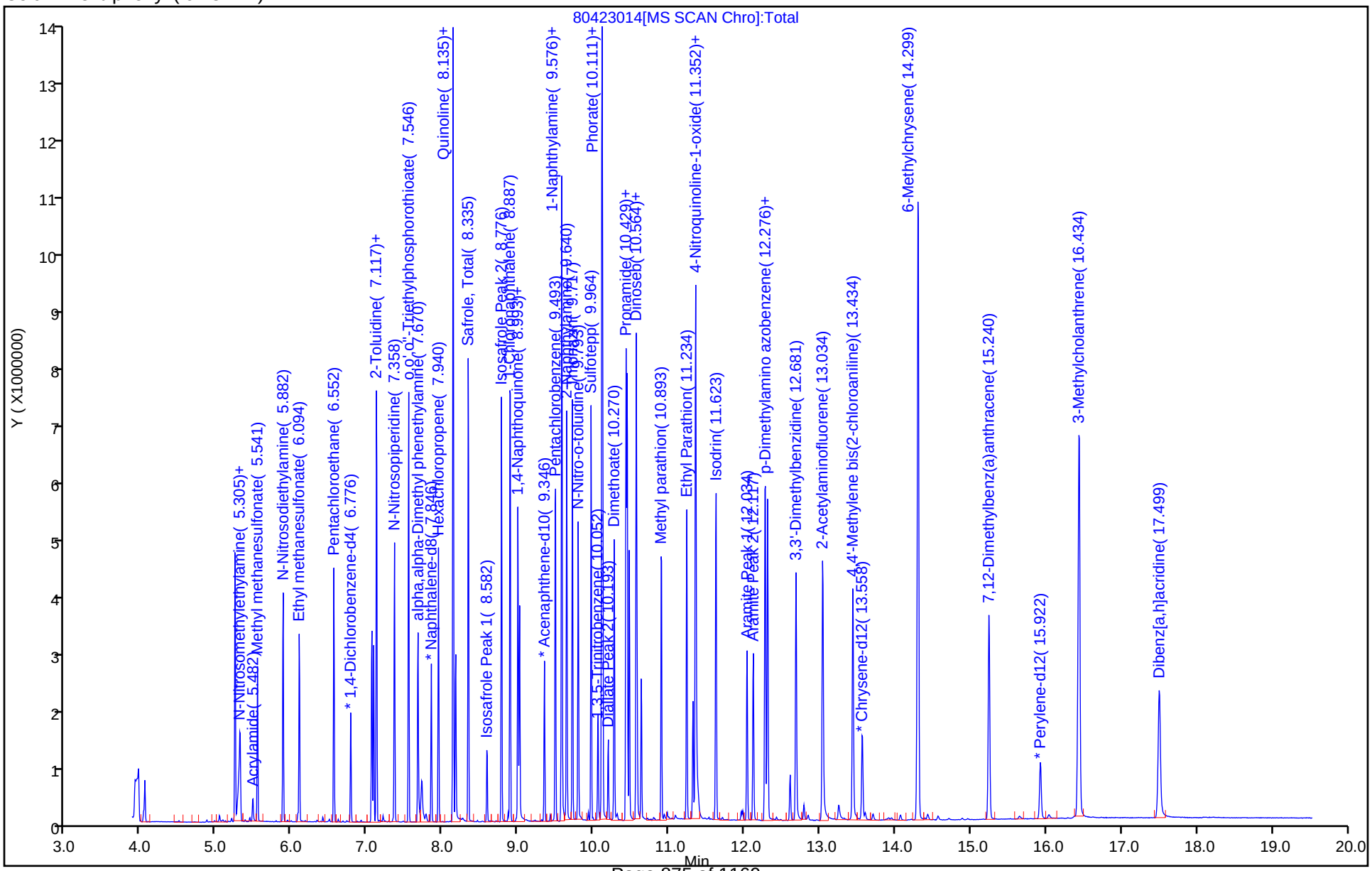
Report Date: 24-Apr-2018 07:01:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D

Injection Date:	23-Apr-2018 11:31:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std7 l2lvi			Worklist Smp#:	14
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

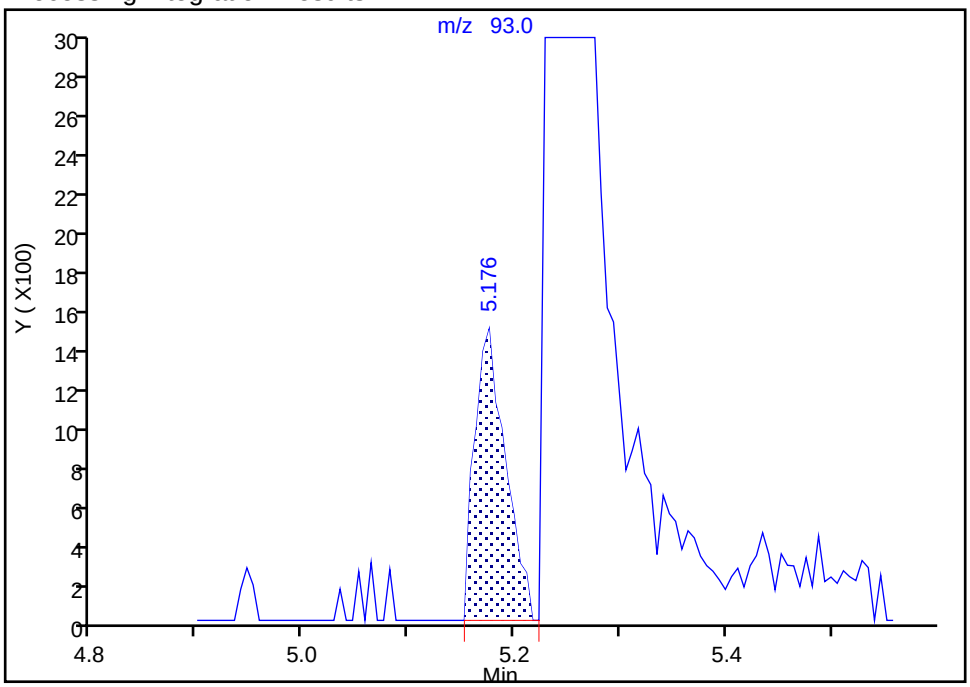
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D
Injection Date: 23-Apr-2018 11:31:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

31 2-Picoline, CAS: 109-06-8

Signal: 1

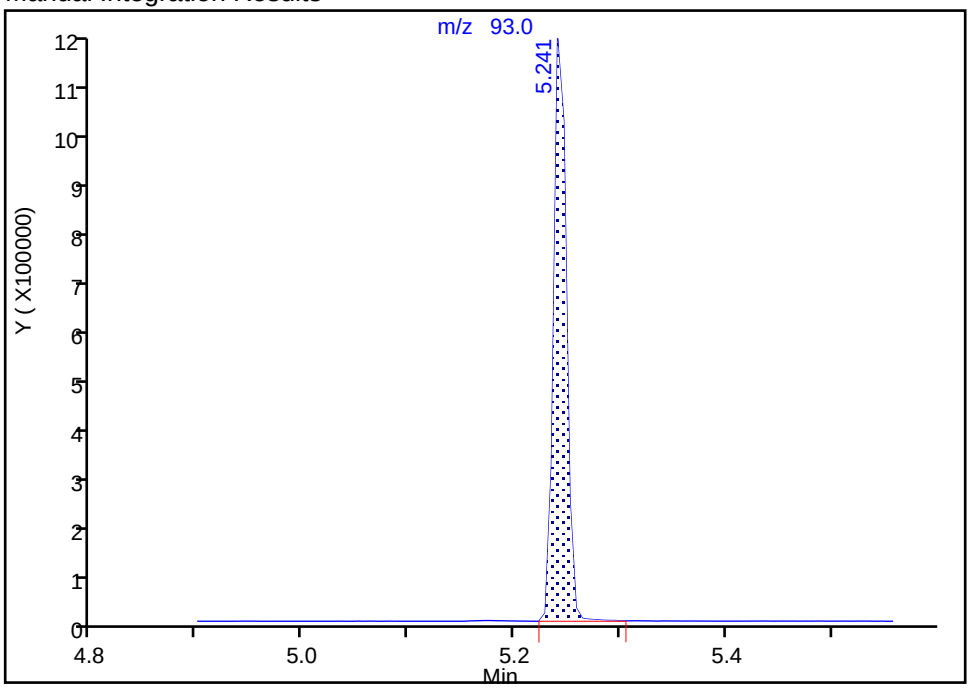
Processing Integration Results

RT: 5.18
Area: 2998
Amount: 12.978844
Amount Units: ng/ml



Manual Integration Results

RT: 5.24
Area: 988724
Amount: 1524.7259
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:50:30
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

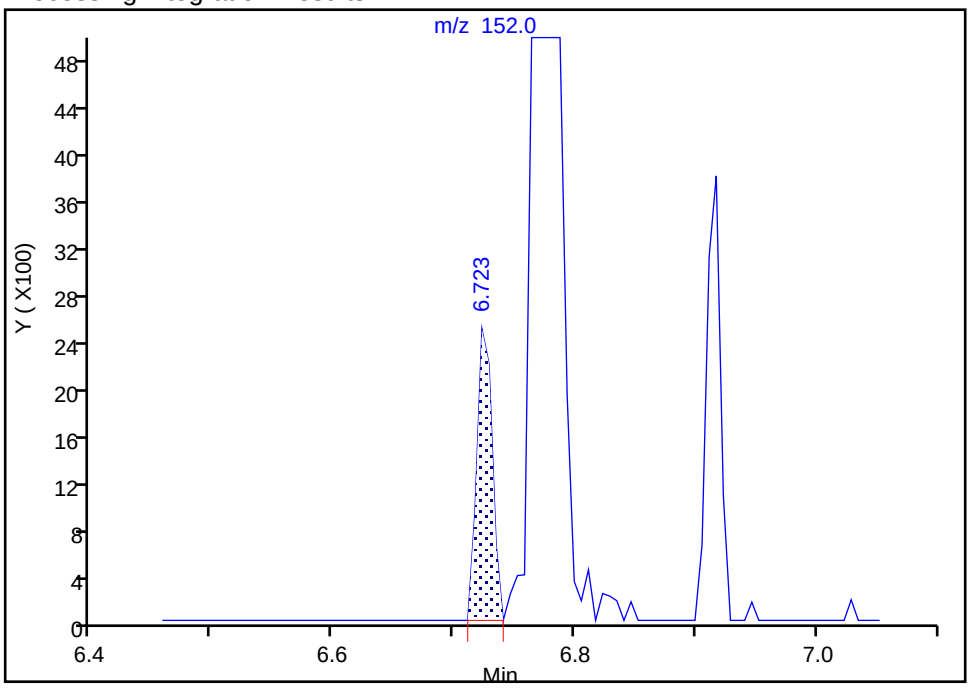
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D				
Injection Date:	23-Apr-2018 11:31:30	Instrument ID:	A4AG2		
Lims ID:	std7 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

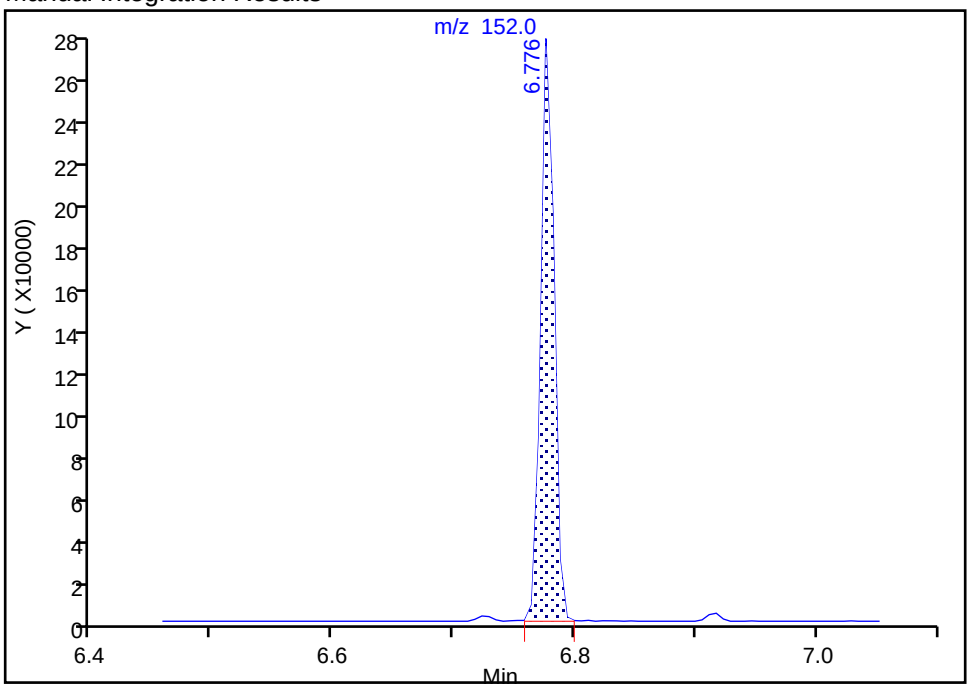
Processing Integration Results

RT: 6.72
Area: 2179
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 208062
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:50:20

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

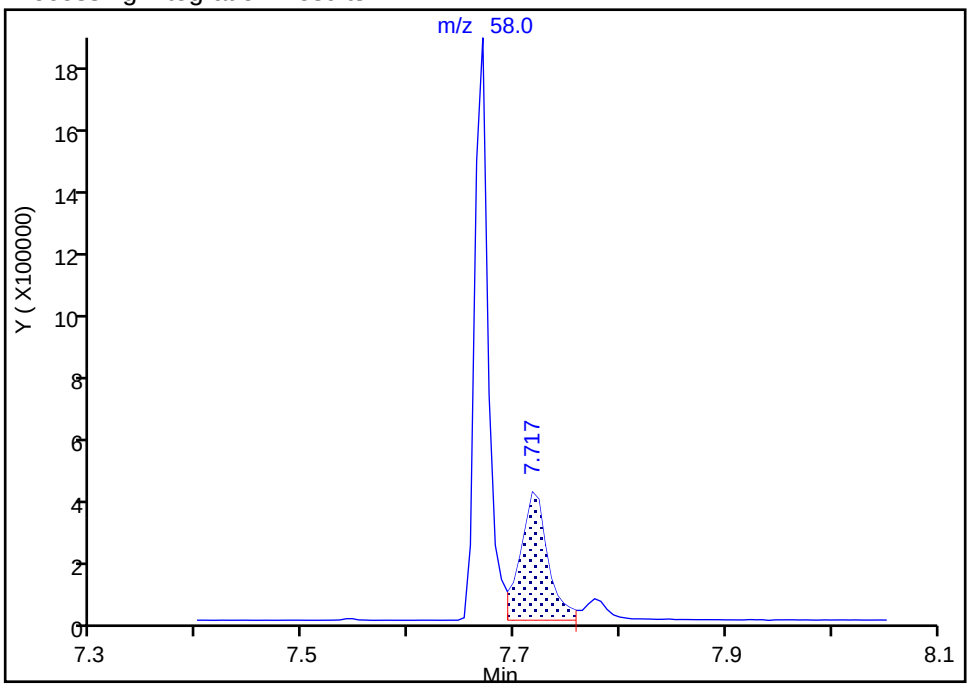
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D
Injection Date: 23-Apr-2018 11:31:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

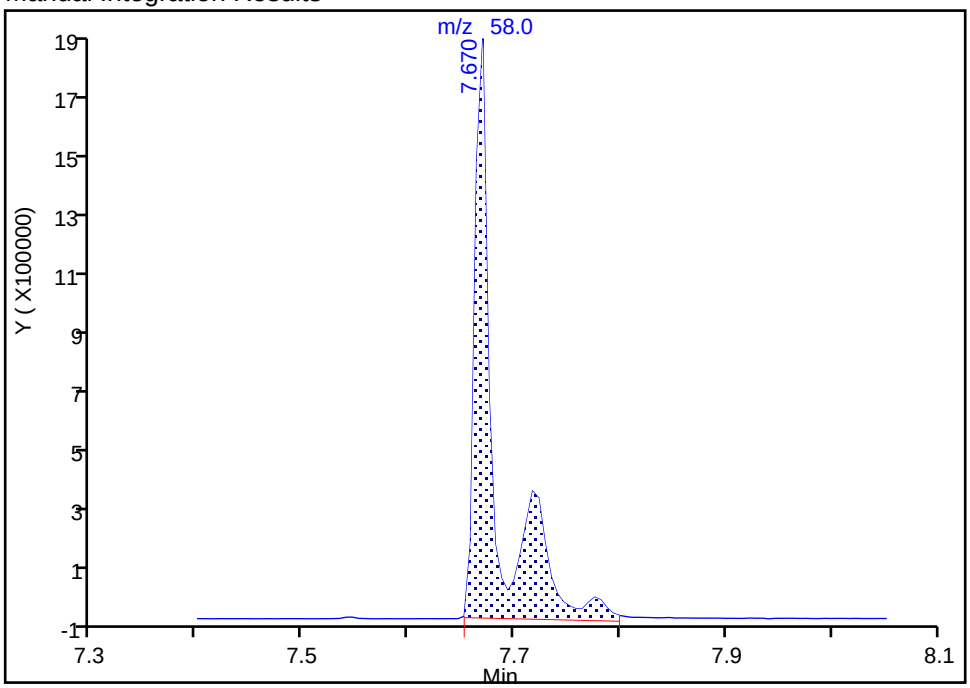
Processing Integration Results

RT: 7.72
Area: 728509
Amount: 530.5155
Amount Units: ng/ml



Manual Integration Results

RT: 7.67
Area: 2463172
Amount: 1601.4737
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:51:03
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

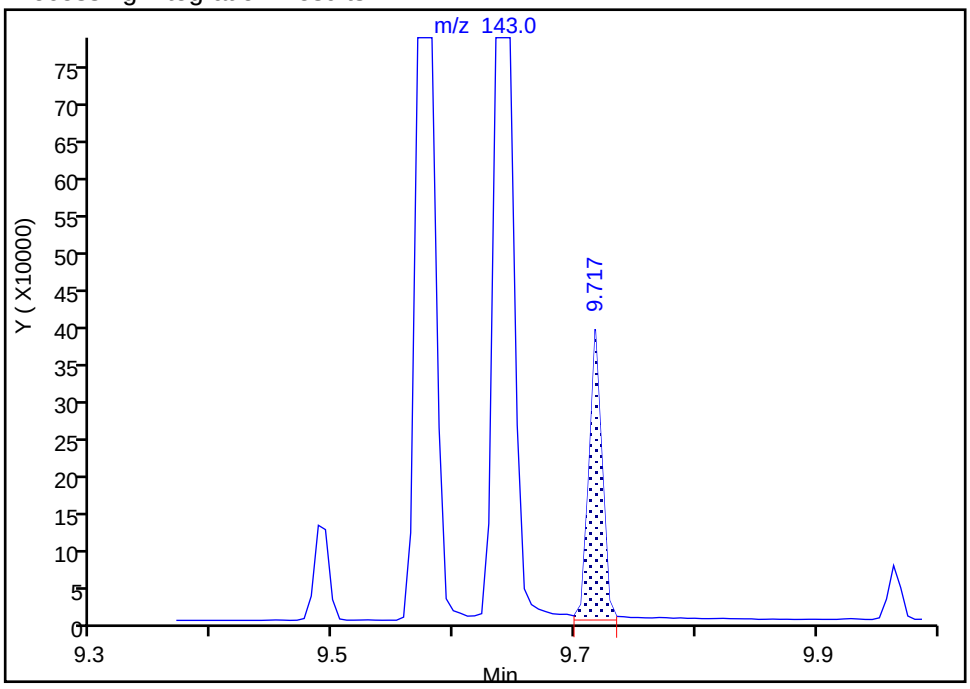
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D
Injection Date: 23-Apr-2018 11:31:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

119 2-Naphthylamine, CAS: 91-59-8

Signal: 1

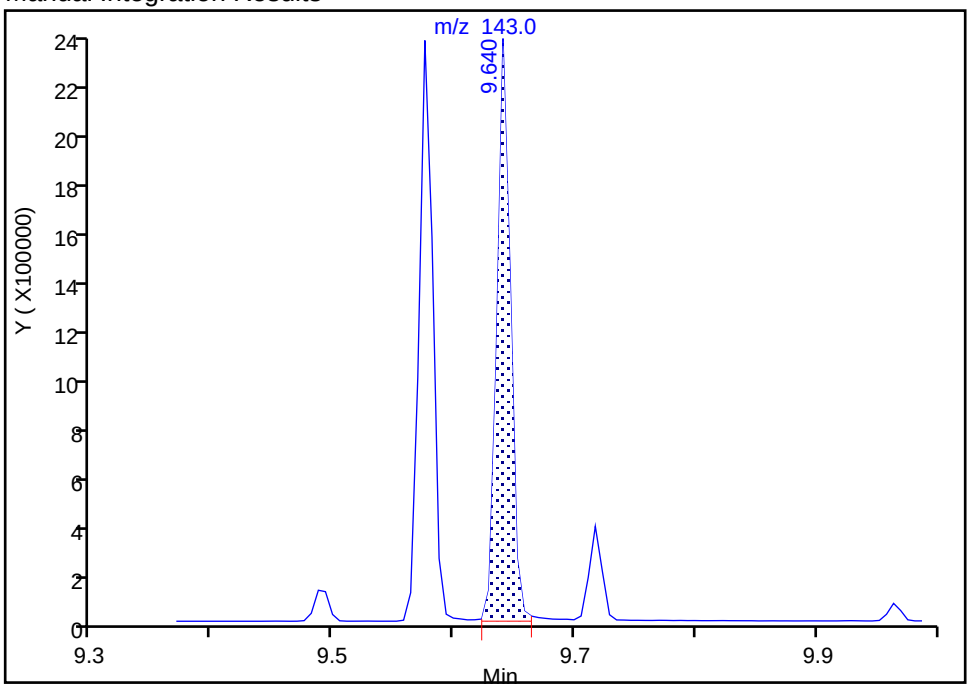
Processing Integration Results

RT: 9.72
Area: 293416
Amount: 319.9362
Amount Units: ng/ml



Manual Integration Results

RT: 9.64
Area: 1883696
Amount: 1474.9977
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:51:23
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

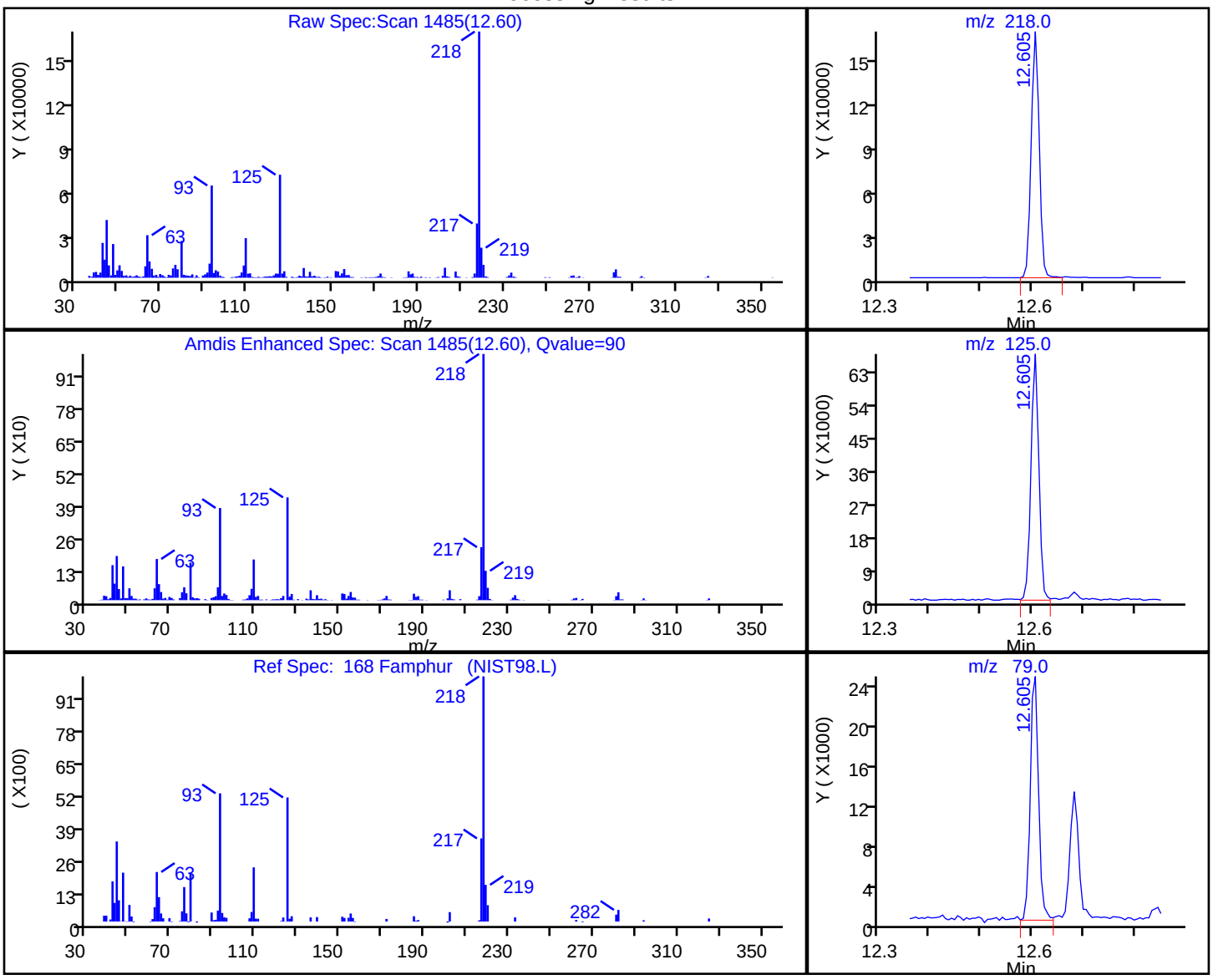
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423014.D
Injection Date: 23-Apr-2018 11:31:30 Instrument ID: A4AG2
Lims ID: std7 l2lvi
Client ID:
Operator ID: ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

168 Famphur, CAS: 52-85-7

Processing Results



RT	Mass	Response	Amount
12.60	218.00	177337	414.9132
12.60	125.00	73167	
12.60	79.00	27247	

Reviewer: hulat, 24-Apr-2018 05:28:18
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423015.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-Apr-2018 11:55:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-015
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:01 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 12:53:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	181907	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	832413	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	406075	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.000	98	670182	400.0	400.0	
* 5 Chrysene-d12	240	13.558	13.558	0.000	98	488333	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	403204	400.0	400.0	
31 2-Picoline	93	5.235	5.235	0.000	96	548346	1000.0	967.2	
32 N-Nitrosomethylethylamine	88	5.305	5.305	0.000	92	330729	1000.0	983.0	
14 Acrylamide	71	5.470	5.470	0.000	66	66997	1000.0	947.7	
34 Methyl methanesulfonate	80	5.535	5.535	0.000	90	413611	1000.0	976.8	
36 N-Nitrosodiethylamine	102	5.876	5.876	0.000	90	349900	1000.0	1015.3	
37 Ethyl methanesulfonate	79	6.094	6.094	0.000	97	522586	1000.0	990.2	
46 Pentachloroethane	167	6.552	6.552	0.000	92	198817	1000.0	986.7	
56 N-Nitrosopyrrolidine	100	7.052	7.052	0.000	80	361772	1000.0	1066.2	
59 N-Nitrosomorpholine	56	7.076	7.076	0.000	94	559685	1000.0	1043.7	
60 2-Toluidine	106	7.117	7.117	0.000	97	1097920	1000.0	1004.9	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	363223	1000.0	1051.6	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	87	325373	1000.0	1001.4	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	1271476	1000.0	915.6	M
77 Hexachloropropene	213	7.940	7.940	0.000	92	299644	1000.0	1044.0	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	88	476734	1000.0	1060.6	
81 Quinoline	129	8.135	8.135	0.000	96	1322185	1000.0	1052.2	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	354177	1000.0	884.0	
92 Safrole, Total	162	8.335	8.335	0.000	87	532614	1000.0	1040.6	
95 Isosafrole Peak 1	162	8.587	8.587	0.000	89	97451	840.0	892.5	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	89	534424	160.0	166.2	
247 1-Chloronaphthalene	162	8.887	8.887	0.000	97	1172548	1000.0	1015.0	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	84	424702	1000.0	976.0	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	94	165590	1000.0	916.8	
114 Pentachlorobenzene	250	9.493	9.493	0.000	97	410577	1000.0	1037.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.576	9.576	0.000	98	1143050	1000.0	1085.0	
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	55	190505	1000.0	926.7	
119 2-Naphthylamine	143	9.640	9.640	0.000	96	1155409	1000.0	1013.3	a
121 Thionazin	97	9.717	9.717	0.000	81	319829	1000.0	1038.0	
123 N-Nitro-o-toluidine	152	9.793	9.793	0.000	93	355406	1000.0	949.8	
132 Sulfotepp	202	9.964	9.964	0.000	78	156992	1000.0	1021.2	
133 1,3,5-Trinitrobenzene	213	10.052	10.052	0.000	84	70646	1000.0	920.4	
134 Diallate Peak 1	86	10.105	10.105	0.000	92	600325	860.0	883.6	
135 Phenacetin	108	10.105	10.105	0.000	93	620227	1000.0	996.3	
136 Phorate	121	10.117	10.117	0.000	94	317205	1000.0	1046.4	
137 Diallate Peak 2	86	10.193	10.193	0.000	91	101423	140.0	144.0	
139 Dimethoate	87	10.270	10.270	0.000	93	507290	1000.0	1176.1	
142 4-Aminobiphenyl	169	10.429	10.429	0.000	89	1310222	1000.0	922.1	
144 Pronamide	173	10.440	10.440	0.000	92	565162	1000.0	1063.8	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	82	120147	1000.0	906.8	
146 Disulfoton	88	10.564	10.564	0.000	99	754672	1000.0	1037.7	
147 Dinoseb	211	10.576	10.576	0.000	93	145735	1000.0	918.4	
152 Methyl parathion	109	10.893	10.893	0.000	92	418525	1000.0	1031.0	
155 Ethyl Parathion	97	11.228	11.228	0.000	83	262996	1000.0	961.0	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	81	52228	1000.0	897.4	
157 Methapyrilene	58	11.346	11.346	0.000	97	2052984	2000.0	1936.1	
158 Isodrin	66	11.617	11.617	0.000	87	227620	1000.0	959.3	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	92152	510.0	477.7	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	113290	490.0	460.7	
164 p-Dimethylamino azobenzene	225	12.270	12.270	0.000	94	315904	1000.0	916.3	
165 Chlorobenzilate	139	12.305	12.305	0.000	83	600603	1000.0	1078.6	
168 Famphur	218	12.605	12.605	0.000	89	223652	1000.0	768.4	
170 3,3'-Dimethylbenzidine	212	12.681	12.681	0.000	99	702656	1000.0	864.3	
172 2-Acetylaminofluorene	181	13.028	13.028	0.000	96	581203	1000.0	915.8	
175 4,4'-Methylene bis(2-chlor	231	13.434	13.434	0.000	94	253366	1000.0	896.8	
180 6-Methylchrysene	242	14.299	14.299	0.000	99	2213352	2000.0	2066.9	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	93	496122	1000.0	883.2	
186 3-Methylcholanthrene	268	16.428	16.428	0.000	95	1315234	2000.0	2047.7	
188 Dibenz[a,h]acridine	279	17.499	17.499	0.000	93	845960	1000.0	905.3	
S 194 Isosafrole	162				0		1000.0	1058.7	
S 195 Diallate	86				0		1000.0	1027.6	
S 196 Aramite, Total	185				0		1000.0	938.4	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST2 L6 W_00015 Amount Added: 0.10 Units: mL

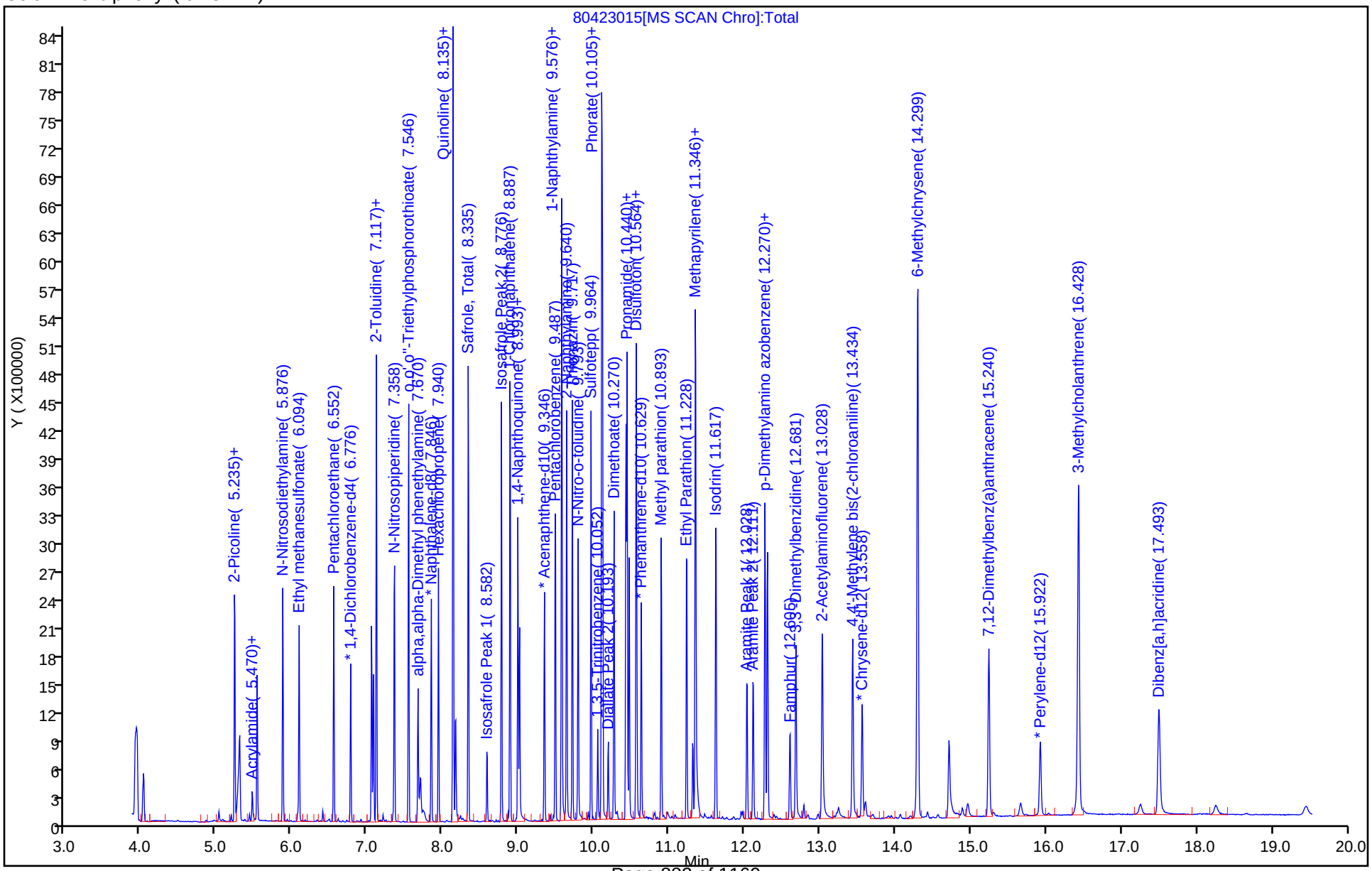
Report Date: 24-Apr-2018 07:02:04 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423015.D

Injection Date:	23-Apr-2018 11:55:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l2lvi			Worklist Smp#:	15
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

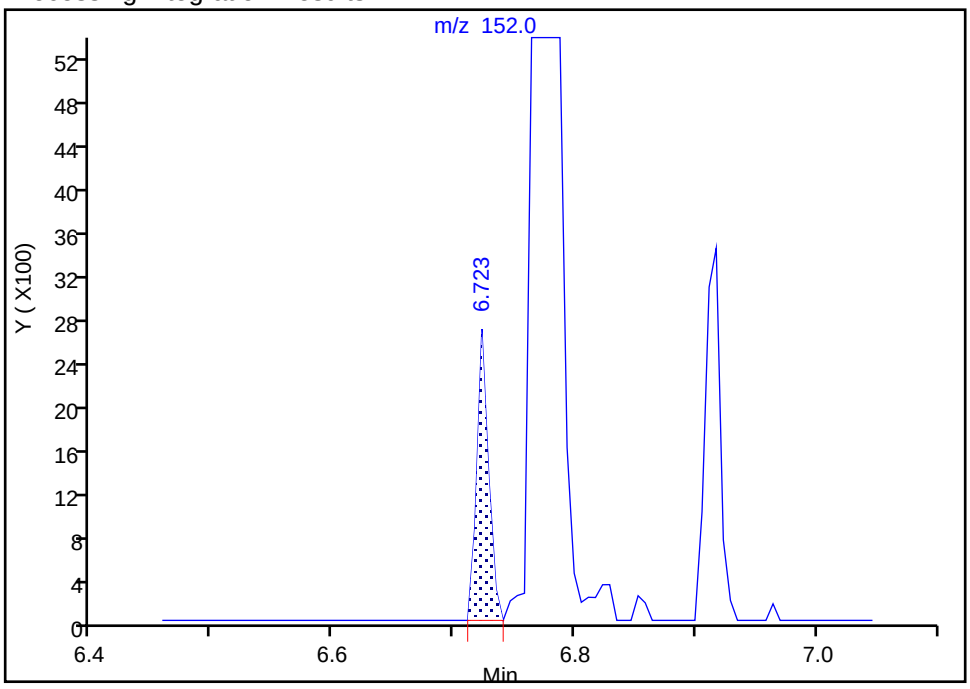
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423015.D
Injection Date: 23-Apr-2018 11:55:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

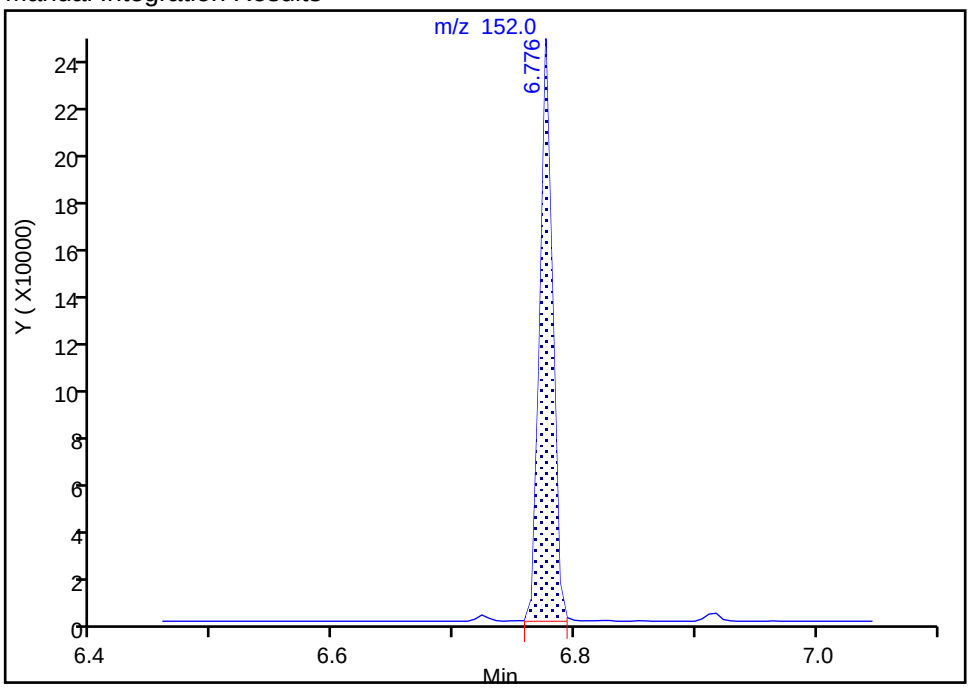
Processing Integration Results

RT: 6.72
Area: 1802
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 181907
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:52:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton

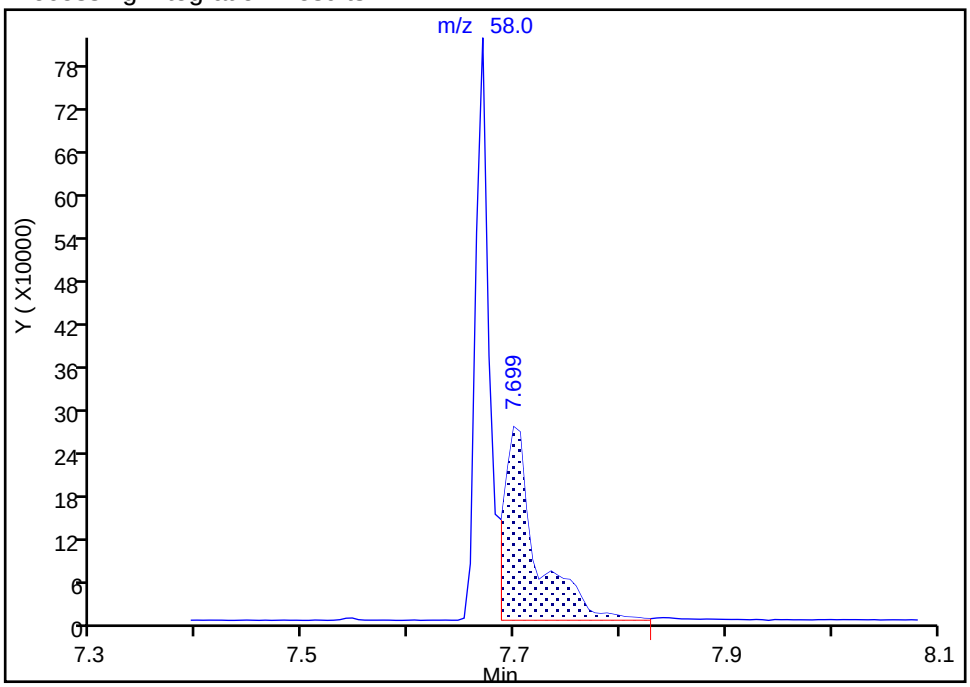
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423015.D
Injection Date: 23-Apr-2018 11:55:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

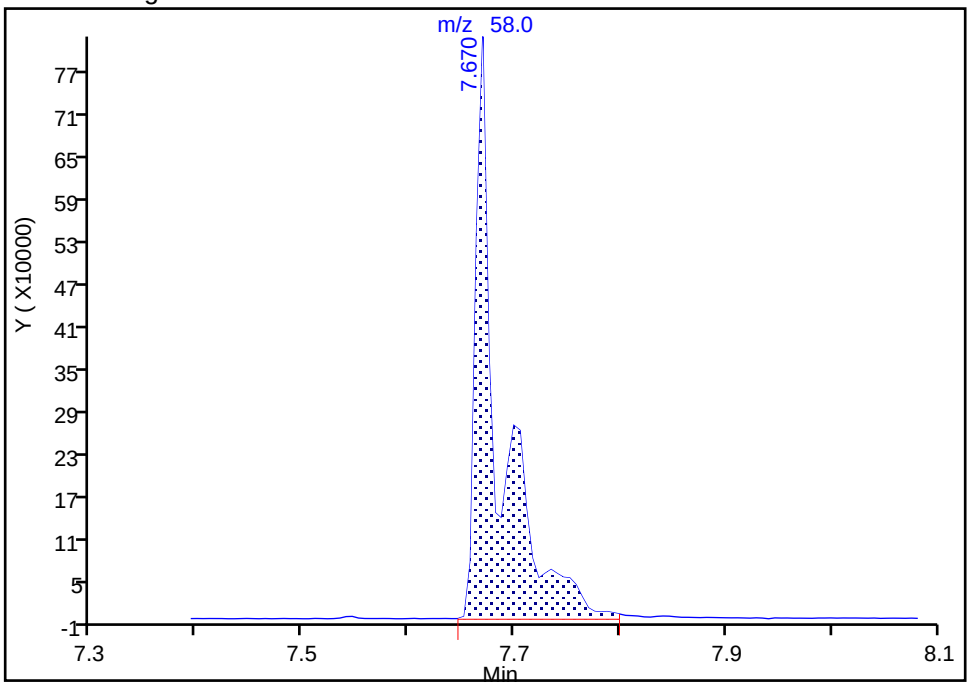
Processing Integration Results

RT: 7.70
Area: 579684
Amount: 433.9448
Amount Units: ng/ml



Manual Integration Results

RT: 7.67
Area: 1271476
Amount: 915.5855
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:52:32
Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

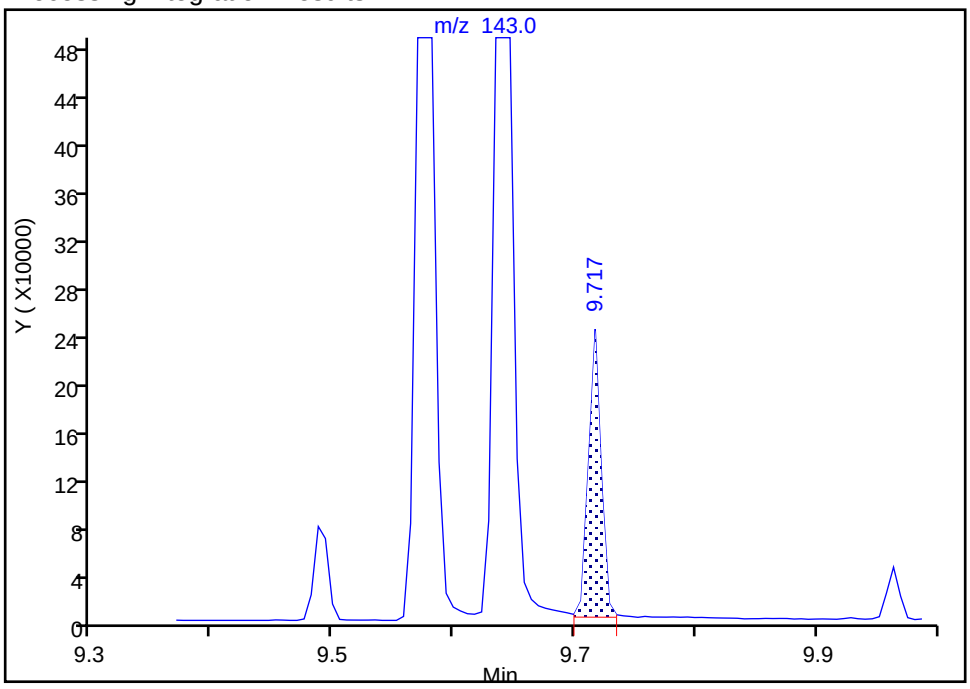
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423015.D
Injection Date: 23-Apr-2018 11:55:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

119 2-Naphthylamine, CAS: 91-59-8

Signal: 1

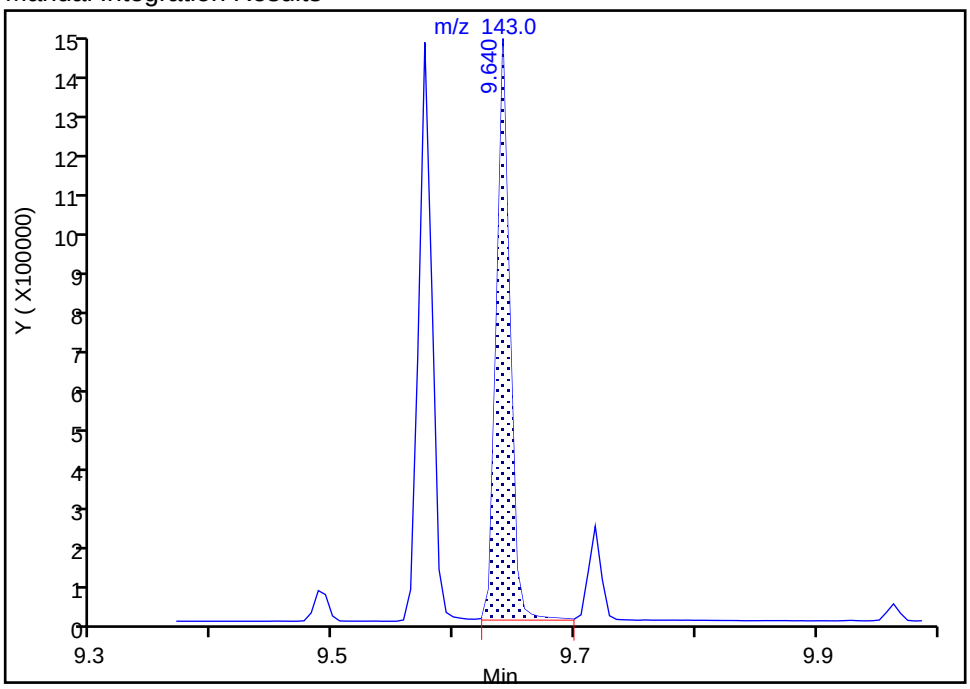
Processing Integration Results

RT: 9.72
Area: 176129
Amount: 195.3232
Amount Units: ng/ml



Manual Integration Results

RT: 9.64
Area: 1155409
Amount: 1013.3305
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:52:48
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423016.D
Lims ID: std5 l2lvi
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Apr-2018 12:20:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-016
Misc. Info.: STD5 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:09 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 12:54:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	98	181966	400.0	400.0	a
* 2 Naphthalene-d8	136	7.847	7.846	0.001	99	826455	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	403331	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	698420	400.0	400.0	
* 5 Chrysene-d12	240	13.558	13.558	0.000	98	484286	400.0	400.0	
* 6 Perylene-d12	264	15.917	15.922	-0.005	96	394671	400.0	400.0	
31 2-Picoline	93	5.247	5.235	0.012	96	298068	500.0	525.6	
32 N-Nitrosomethylethylamine	88	5.311	5.305	0.006	92	160850	500.0	477.9	
14 Acrylamide	71	5.470	5.470	0.000	66	32012	500.0	452.7	
34 Methyl methanesulfonate	80	5.541	5.535	0.006	90	203709	500.0	480.9	
36 N-Nitrosodiethylamine	102	5.882	5.876	0.006	90	171992	500.0	498.9	
37 Ethyl methanesulfonate	79	6.094	6.094	0.000	97	259626	500.0	491.8	
46 Pentachloroethane	167	6.553	6.552	0.000	91	101847	500.0	505.3	
56 N-Nitrosopyrrolidine	100	7.052	7.052	0.000	80	174829	500.0	515.1	
59 N-Nitrosomorpholine	56	7.076	7.076	0.000	94	276656	500.0	515.8	
60 2-Toluidine	106	7.117	7.117	0.000	97	546492	500.0	500.0	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	177350	500.0	517.2	
68 o,o',o''-Triethylphosphoro	198	7.547	7.546	0.001	89	161894	500.0	501.8	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	588327	500.0	426.7	
77 Hexachloropropene	213	7.941	7.940	0.001	92	132915	500.0	466.4	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	88	242932	500.0	544.4	
81 Quinoline	129	8.135	8.135	0.000	96	667136	500.0	534.8	
84 p-Phenylene diamine	108	8.164	8.170	-0.006	94	170141	500.0	504.3	
92 Safrole, Total	162	8.335	8.335	0.000	87	262817	500.0	517.2	
95 Isosafrole Peak 1	162	8.588	8.587	0.001	87	45413	420.0	418.8	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	89	264708	80.0	82.9	
247 1-Chloronaphthalene	162	8.894	8.887	0.007	97	582995	500.0	508.1	
102 1,4-Naphthoquinone	158	8.994	8.993	0.001	84	187284	500.0	455.8	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	95	66410	500.0	403.7	
114 Pentachlorobenzene	250	9.488	9.493	-0.005	97	194038	500.0	493.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	59	76895	500.0	455.9	
117 1-Naphthylamine	143	9.576	9.576	0.000	99	595716	500.0	569.3	
119 2-Naphthylamine	143	9.641	9.640	0.001	96	589754	500.0	533.3	a
121 Thionazin	97	9.717	9.717	0.000	80	159718	500.0	521.9	
123 N-Nitro-o-toluidine	152	9.793	9.793	0.000	93	157890	500.0	451.8	
132 Sulfotepp	202	9.964	9.964	0.000	77	77050	500.0	480.9	
133 1,3,5-Trinitrobenzene	213	10.052	10.052	0.000	84	24563	500.0	449.6	
134 Diallate Peak 1	86	10.105	10.105	0.000	90	317162	430.0	448.0	
135 Phenacetin	108	10.099	10.105	-0.006	92	284745	500.0	473.3	
136 Phorate	121	10.117	10.117	0.000	95	161792	500.0	512.2	
137 Diallate Peak 2	86	10.193	10.193	0.000	90	49655	70.0	67.6	
139 Dimethoate	87	10.264	10.270	-0.006	93	249528	500.0	555.1	
142 4-Aminobiphenyl	169	10.429	10.429	0.000	89	617627	500.0	442.0	
144 Pronamide	173	10.440	10.440	0.000	91	270410	500.0	488.4	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	82	58497	500.0	441.9	
146 Disulfoton	88	10.564	10.564	0.000	99	396393	500.0	523.0	
147 Dinoseb	211	10.570	10.576	-0.006	93	48092	500.0	442.2	
152 Methyl parathion	109	10.893	10.893	0.000	92	184752	500.0	460.1	
155 Ethyl Parathion	97	11.229	11.228	0.001	83	115465	500.0	434.5	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	78	16458	500.0	464.2	
157 Methapyrilene	58	11.346	11.346	0.000	96	926147	1000.0	891.5	
158 Isodrin	66	11.617	11.617	0.000	86	121606	500.0	491.8	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	40528	255.0	221.9	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	49801	245.0	213.8	
164 p-Dimethylamino azobenzene	225	12.270	12.270	0.000	93	148083	500.0	451.5	
165 Chlorobenzilate	139	12.305	12.305	0.000	82	277826	500.0	503.1	
168 Famphur	218	12.605	12.605	0.000	90	157283	500.0	544.9	
170 3,3'-Dimethylbenzidine	212	12.682	12.681	0.001	99	296923	500.0	450.6	
172 2-Acetylaminofluorene	181	13.029	13.028	0.001	95	221402	500.0	441.6	
175 4,4'-Methylene bis(2-chlor	231	13.434	13.434	0.000	94	112488	500.0	429.9	
180 6-Methylchrysene	242	14.293	14.299	-0.006	97	1090488	1000.0	1026.8	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	93	234436	500.0	445.8	
186 3-Methylcholanthrene	268	16.428	16.428	0.000	95	610053	1000.0	970.3	
188 Dibenz[a,h]acridine	279	17.493	17.499	-0.006	93	384349	500.0	438.8	
S 194 Isosafrole	162				0		500.0	501.6	
S 195 Diallate	86				0		500.0	515.6	
S 196 Aramite, Total	185				0		500.0	435.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 L5 W_00015 Amount Added: 0.10 Units: mL

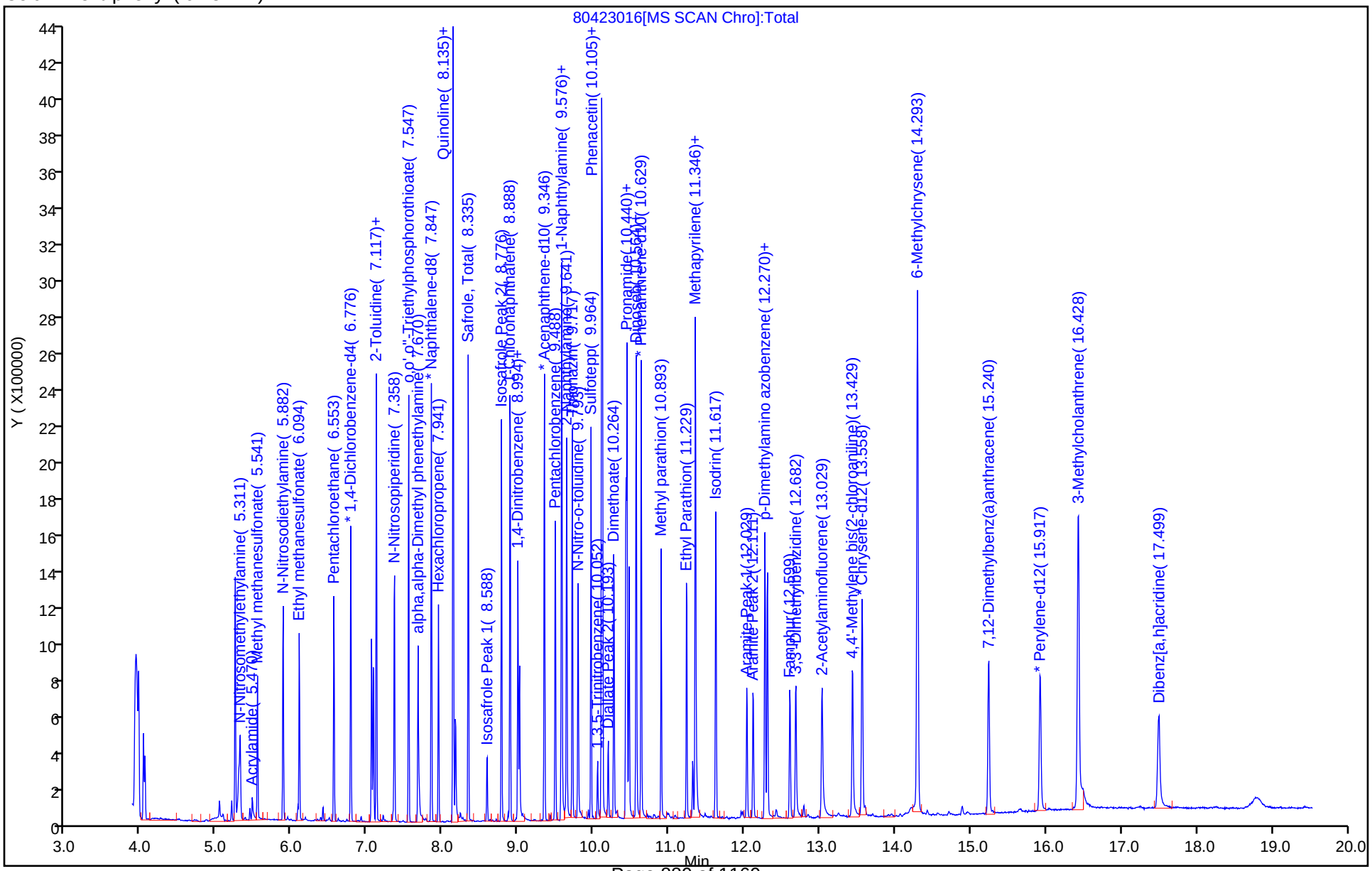
Report Date: 24-Apr-2018 07:02:11 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423016.D

Injection Date:	23-Apr-2018 12:20:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std5 l2lvi			Worklist Smp#:	16
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

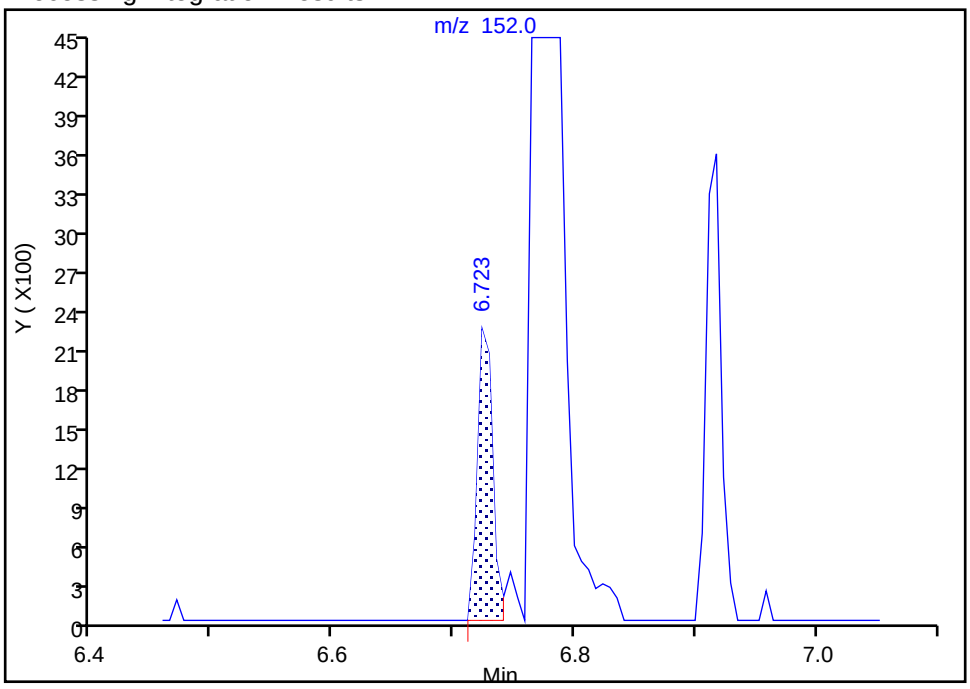
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423016.D
Injection Date: 23-Apr-2018 12:20:30 Instrument ID: A4AG2
Lims ID: std5 l2lvi
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

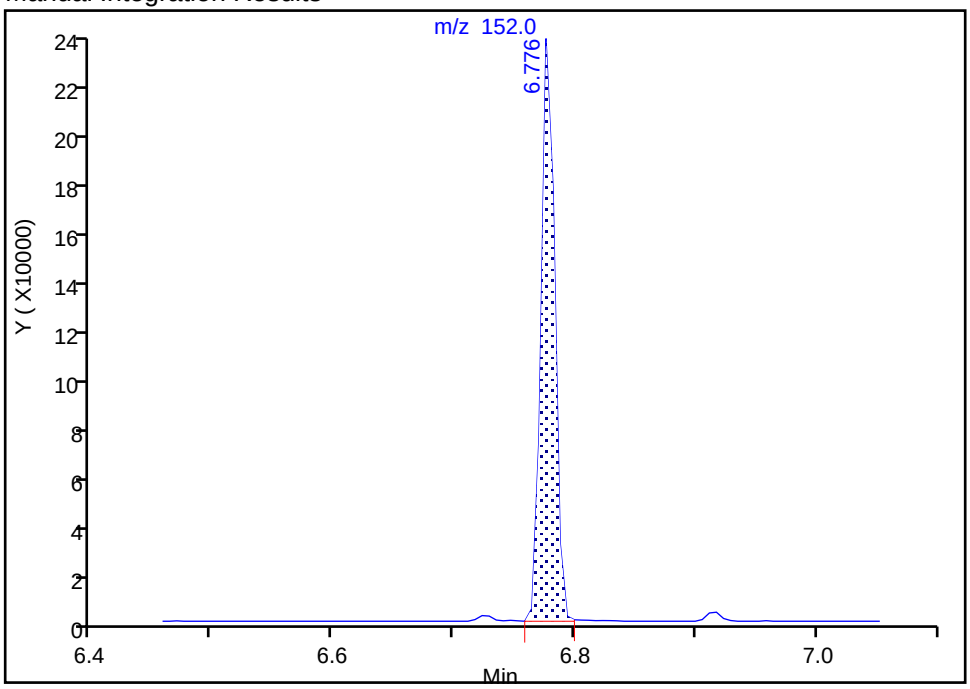
Processing Integration Results

RT: 6.72
Area: 1987
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 181966
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:53:24
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

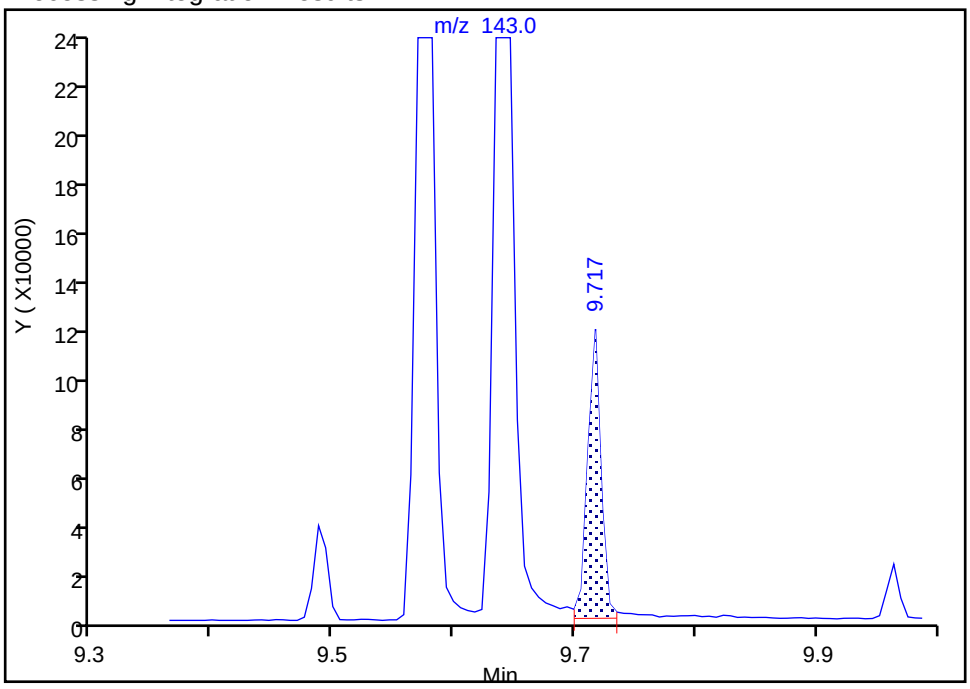
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423016.D				
Injection Date:	23-Apr-2018 12:20:30	Instrument ID:	A4AG2		
Lims ID:	std5 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

119 2-Naphthylamine, CAS: 91-59-8

Signal: 1

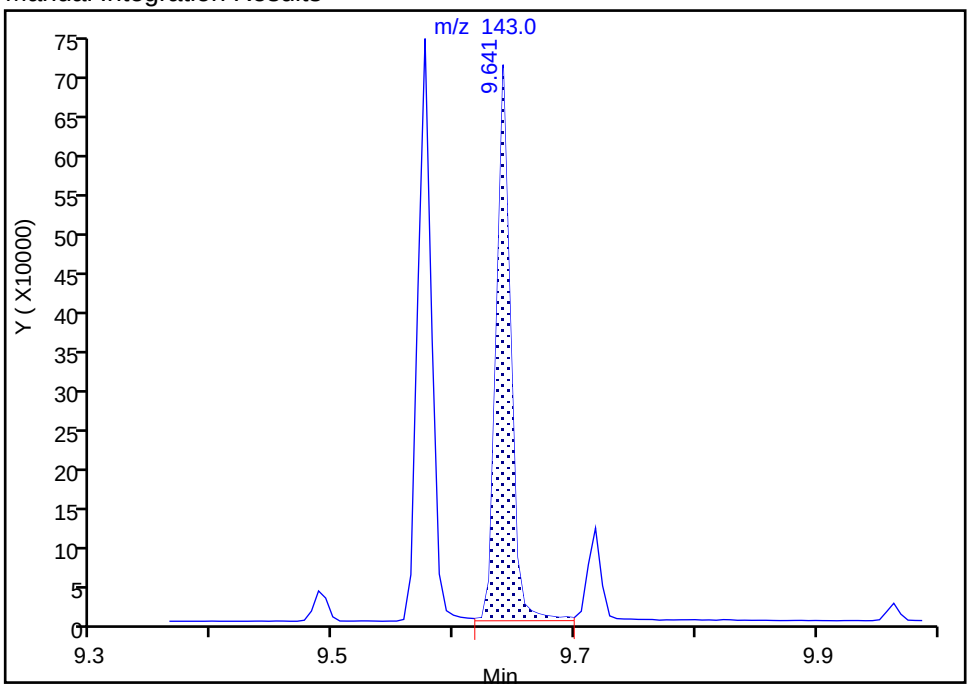
Processing Integration Results

RT: 9.72
Area: 91473
Amount: 96.527971
Amount Units: ng/ml



Manual Integration Results

RT: 9.64
Area: 589754
Amount: 533.2786
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 12:53:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423017.D
Lims ID: std4 l2lvi
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Apr-2018 12:44:30 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-017
Misc. Info.: STD4 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:13 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 13:09:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	170999	400.0	400.0	a
* 2 Naphthalene-d8	136	7.847	7.846	0.000	100	825148	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	96	413604	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	720494	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	472265	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	412572	400.0	400.0	
31 2-Picoline	93	5.241	5.235	0.006	96	102772	200.0	192.8	
32 N-Nitrosomethylethylamine	88	5.306	5.305	0.001	91	63895	200.0	202.0	
14 Acrylamide	71	5.470	5.470	0.000	62	17419	200.0	262.1	
34 Methyl methanesulfonate	80	5.541	5.535	0.006	90	82489	200.0	207.2	
36 N-Nitrosodiethylamine	102	5.882	5.876	0.006	90	66287	200.0	204.6	
37 Ethyl methanesulfonate	79	6.094	6.094	0.000	98	102528	200.0	206.7	
46 Pentachloroethane	167	6.552	6.552	0.000	92	35774	200.0	188.9	
56 N-Nitrosopyrrolidine	100	7.052	7.052	0.000	78	61253	200.0	192.0	
59 N-Nitrosomorpholine	56	7.076	7.076	0.000	94	107582	200.0	213.4	
60 2-Toluidine	106	7.117	7.117	0.000	98	213141	200.0	207.5	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	79	68659	200.0	200.5	
68 o,o',o''-Triethylphosphoro	198	7.547	7.546	0.001	89	62270	200.0	193.3	
71 alpha,alpha-Dimethyl phene	58	7.676	7.670	0.006	97	235765	200.0	171.3	
77 Hexachloropropene	213	7.941	7.940	0.001	92	49398	200.0	173.6	
81 Quinoline	129	8.141	8.135	0.006	95	255683	200.0	205.3	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	87	93939	200.0	210.8	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	43714	200.0	209.2	
92 Safrole, Total	162	8.335	8.335	0.000	88	100192	200.0	197.5	
95 Isosafrole Peak 1	162	8.588	8.587	0.001	86	16839	168.0	151.4	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	88	98896	32.0	30.2	
247 1-Chloronaphthalene	162	8.894	8.887	0.007	97	232073	200.0	197.2	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	86	60690	200.0	171.6	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	93	20035	200.0	158.4	
114 Pentachlorobenzene	250	9.493	9.493	0.000	95	73443	200.0	182.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.576	9.576	0.000	98	213270	200.0	198.7	
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	51	23158	200.0	228.3	
119 2-Naphthylamine	143	9.641	9.640	0.000	96	204380	200.0	197.3	
121 Thionazin	97	9.717	9.717	0.000	81	63364	200.0	201.9	
123 N-Nitro-o-toluidine	152	9.793	9.793	0.000	91	48120	200.0	168.5	
132 Sulfotepp	202	9.964	9.964	0.000	78	30454	200.0	184.3	
133 1,3,5-Trinitrobenzene	213	10.052	10.052	0.000	85	8364	200.0	270.4	
135 Phenacetin	108	10.105	10.105	0.000	89	91842	200.0	190.2	
134 Diallate Peak 1	86	10.105	10.105	0.000	91	136936	172.0	187.5	
136 Phorate	121	10.117	10.117	0.000	94	64833	200.0	198.9	
137 Diallate Peak 2	86	10.193	10.193	0.000	89	19188	28.0	25.3	
139 Dimethoate	87	10.270	10.270	0.000	93	89521	200.0	193.1	
142 4-Aminobiphenyl	169	10.429	10.429	0.000	89	196934	200.0	168.1	
144 Pronamide	173	10.440	10.440	0.000	92	103552	200.0	181.3	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	82	21897	200.0	182.2	
146 Disulfoton	88	10.564	10.564	0.000	99	158758	200.0	203.0	
147 Dinoseb	211	10.570	10.576	-0.006	93	16762	200.0	277.3	
152 Methyl parathion	109	10.893	10.893	0.000	91	58648	200.0	169.7	
155 Ethyl Parathion	97	11.235	11.228	0.007	82	34827	200.0	163.3	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	75	5528	200.0	292.8	
157 Methapyrilene	58	11.346	11.346	0.000	96	291122	400.0	337.1	
158 Isodrin	66	11.617	11.617	0.000	86	50555	200.0	198.2	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	14619	102.0	93.5	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	18296	98.0	91.3	
164 p-Dimethylamino azobenzene	225	12.270	12.270	0.000	93	54721	200.0	192.8	
165 Chlorobenzilate	139	12.305	12.305	0.000	83	110563	200.0	205.3	
168 Famphur	218	12.605	12.605	0.000	90	73976	200.0	262.8	
170 3,3'-Dimethylbenzidine	212	12.681	12.681	0.000	99	87516	200.0	236.3	
172 2-Acetylaminofluorene	181	13.029	13.028	0.001	96	64991	200.0	234.9	
175 4,4'-Methylene bis(2-chlor	231	13.434	13.434	0.000	94	37173	200.0	179.7	
180 6-Methylchrysene	242	14.293	14.299	-0.006	99	411905	400.0	397.7	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	92	84396	200.0	178.2	
186 3-Methylcholanthrene	268	16.428	16.428	0.000	96	231513	400.0	352.3	
188 Dibenz[a,h]acridine	279	17.493	17.499	-0.006	92	147885	200.0	183.4	
S 194 Isosafrole	162				0		200.0	181.6	
S 195 Diallate	86				0		200.0	212.8	
S 196 Aramite, Total	185				0		200.0	184.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 L4 W_00015 Amount Added: 0.10 Units: mL

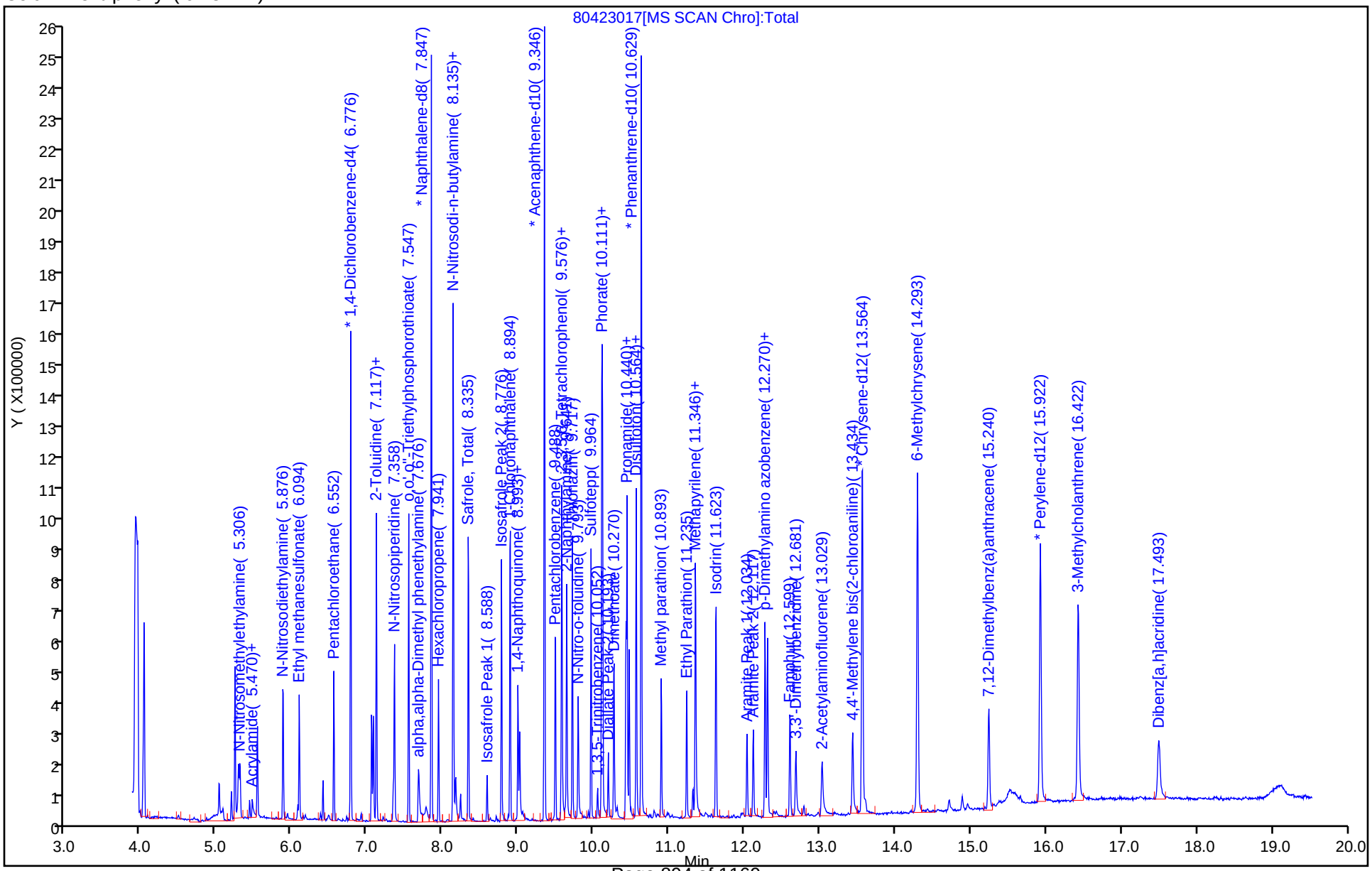
Report Date: 24-Apr-2018 07:02:15 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423017.D

Injection Date:	23-Apr-2018 12:44:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std4 l2lvi			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

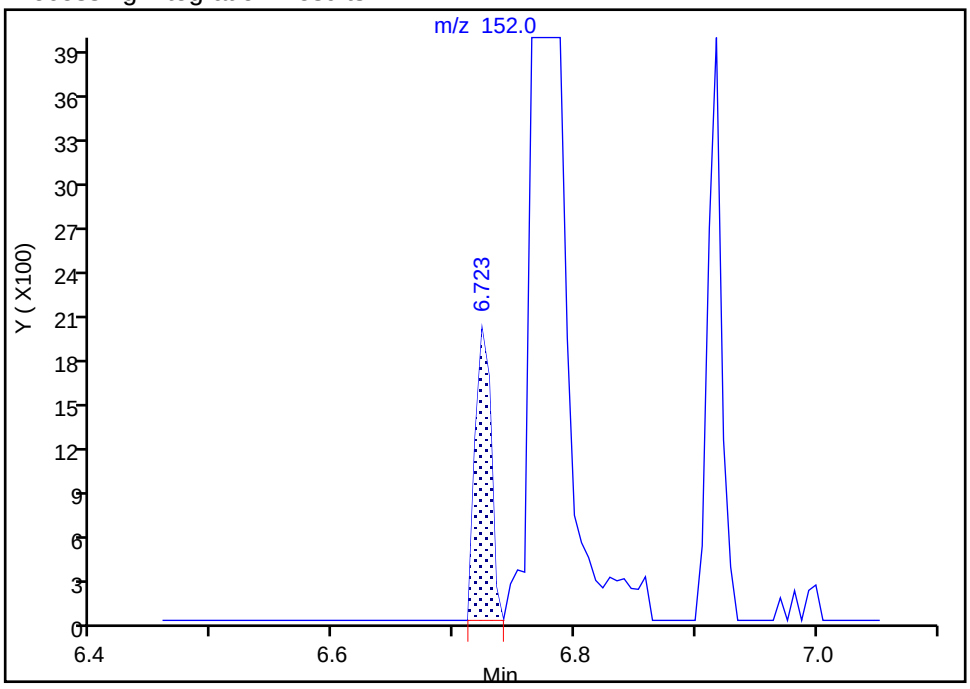
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423017.D
Injection Date: 23-Apr-2018 12:44:30 Instrument ID: A4AG2
Lims ID: std4 l2lvi
Client ID:
Operator ID: ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

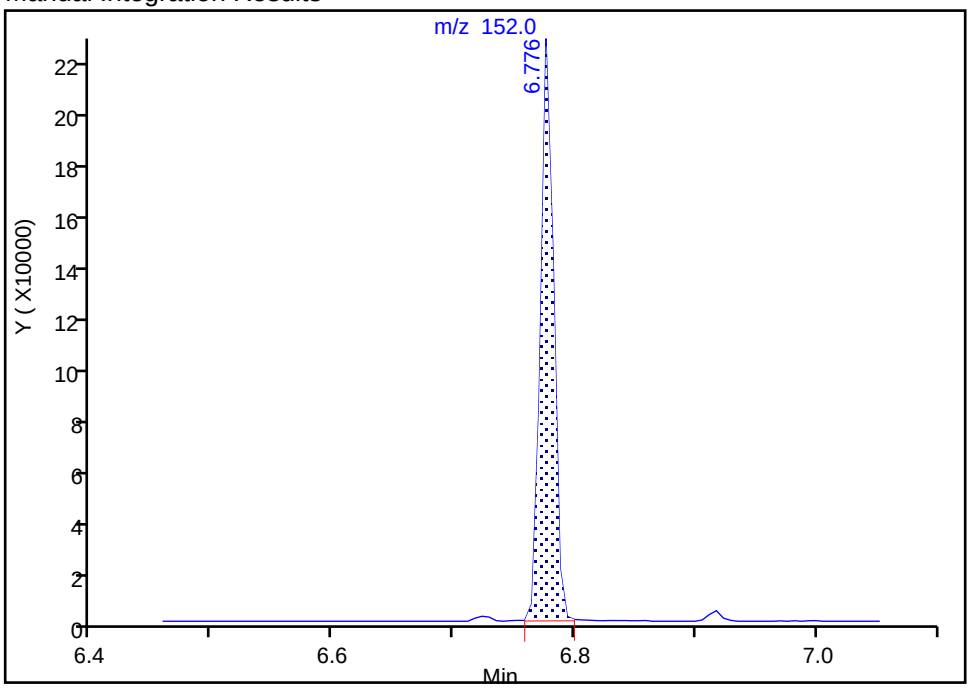
Processing Integration Results

RT: 6.72
Area: 1773
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 170999
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 13:08:14
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Lims ID: std3 l2lvi
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Apr-2018 13:09:30 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-018
Misc. Info.: STD3 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:17 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 13:36:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	162146	400.0	400.0	a
* 2 Naphthalene-d8	136	7.847	7.846	0.001	100	748422	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	374033	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	671030	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	448953	400.0	400.0	
* 6 Perylene-d12	264	15.928	15.922	0.006	95	379729	400.0	400.0	
31 2-Picoline	93	5.247	5.235	0.012	97	46683	100.0	92.4	
32 N-Nitrosomethylethylamine	88	5.311	5.305	0.006	91	28168	100.0	93.9	
14 Acrylamide	71		5.470				ND	ND	U
34 Methyl methanesulfonate	80	5.541	5.535	0.006	89	38518	100.0	102.1	
36 N-Nitrosodiethylamine	102	5.882	5.876	0.006	89	30132	100.0	98.1	
37 Ethyl methanesulfonate	79	6.100	6.094	0.006	97	48100	100.0	102.2	
46 Pentachloroethane	167	6.553	6.552	0.001	92	17307	100.0	96.4	
56 N-Nitrosopyrrolidine	100	7.058	7.052	0.006	81	25965	100.0	85.8	
59 N-Nitrosomorpholine	56	7.076	7.076	0.000	93	45385	100.0	95.0	
60 2-Toluidine	106	7.117	7.117	0.000	97	95498	100.0	98.1	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	78	28258	100.0	91.0	
68 o,o',o''-Triethylphosphoro	198	7.547	7.546	0.001	90	29327	100.0	100.4	
71 alpha,alpha-Dimethyl phene	58	7.682	7.670	0.012	97	108274	100.0	86.7	M
77 Hexachloropropene	213	7.941	7.940	0.001	92	21825	100.0	84.6	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	89	40538	100.0	100.3	
81 Quinoline	129	8.141	8.135	0.006	95	112891	100.0	99.9	
84 p-Phenylene diamine	108	8.170	8.170	0.000	93	9167	100.0	125.1	
92 Safrole, Total	162	8.341	8.335	0.006	85	42775	100.0	92.9	
95 Isosafrole Peak 1	162	8.588	8.587	0.001	87	7610	84.0	75.7	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	89	41633	16.0	14.1	
247 1-Chloronaphthalene	162	8.894	8.887	0.007	97	102255	100.0	96.1	
102 1,4-Naphthoquinone	158	8.994	8.993	0.001	84	22277	100.0	93.7	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	89	7244	100.0	97.1	
114 Pentachlorobenzene	250	9.494	9.493	0.001	94	30731	100.0	84.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232		9.576				ND	ND	U
117 1-Naphthylamine	143	9.576	9.576	0.000	98	86901	100.0	89.6	
119 2-Naphthylamine	143	9.641	9.640	0.001	97	79000	100.0	99.1	
121 Thionazin	97	9.717	9.717	0.000	80	27358	100.0	96.4	
123 N-Nitro-o-toluidine	152	9.799	9.793	0.006	92	16849	100.0	95.1	
132 Sulfotepp	202	9.964	9.964	0.000	79	13132	100.0	85.3	
133 1,3,5-Trinitrobenzene	213		10.052				ND	ND	U
134 Diallate Peak 1	86	10.111	10.105	0.006	88	58665	86.0	86.2	
135 Phenacetin	108	10.105	10.105	0.000	89	31910	100.0	109.5	
136 Phorate	121	10.117	10.117	0.000	95	29125	100.0	96.0	
137 Diallate Peak 2	86	10.193	10.193	0.000	90	9238	14.0	13.1	
139 Dimethoate	87	10.270	10.270	0.000	92	34643	100.0	80.2	
142 4-Aminobiphenyl	169	10.429	10.429	0.000	90	73983	100.0	95.0	
144 Pronamide	173	10.441	10.440	0.000	92	47486	100.0	89.3	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	82	9382	100.0	102.3	
146 Disulfoton	88	10.564	10.564	0.000	99	67916	100.0	93.3	
147 Dinoseb	211		10.576				ND	ND	U
152 Methyl parathion	109	10.899	10.893	0.006	91	21916	100.0	92.4	
155 Ethyl Parathion	97	11.235	11.228	0.007	83	12473	100.0	94.3	
156 4-Nitroquinoline-1-oxide	190		11.317				ND	ND	U
157 Methapyrilene	58	11.352	11.346	0.006	96	99772	200.0	183.6	
158 Isodrin	66	11.623	11.617	0.006	84	24576	100.0	103.4	
162 Aramite Peak 1	185	12.035	12.034	0.000	0	5894	51.0	50.1	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	7313	49.0	48.4	
164 p-Dimethylamino azobenzene	225	12.276	12.270	0.006	93	21612	100.0	100.5	
165 Chlorobenzilate	139	12.305	12.305	0.000	83	46440	100.0	90.7	
168 Famphur	218	12.605	12.605	0.000	91	29369	100.0	109.8	
170 3,3'-Dimethylbenzidine	212		12.681				ND	ND	U
172 2-Acetylaminofluorene	181		13.028				ND	ND	U
175 4,4'-Methylene bis(2-chlor	231	13.440	13.434	0.006	94	12664	100.0	97.4	
180 6-Methylchrysene	242	14.293	14.299	-0.006	99	173117	200.0	175.8	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	93	36816	100.0	104.2	
186 3-Methylcholanthrene	268	16.428	16.428	0.000	96	96716	200.0	159.9	
188 Dibenz[a,h]acridine	279	17.499	17.499	0.000	92	61273	100.0	101.6	
S 194 Isosafrole	162				0		100.0	89.7	
S 195 Diallate	86				0		100.0	99.3	
S 196 Aramite, Total	185				0		100.0	98.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L3 W_00015 Amount Added: 0.10 Units: mL

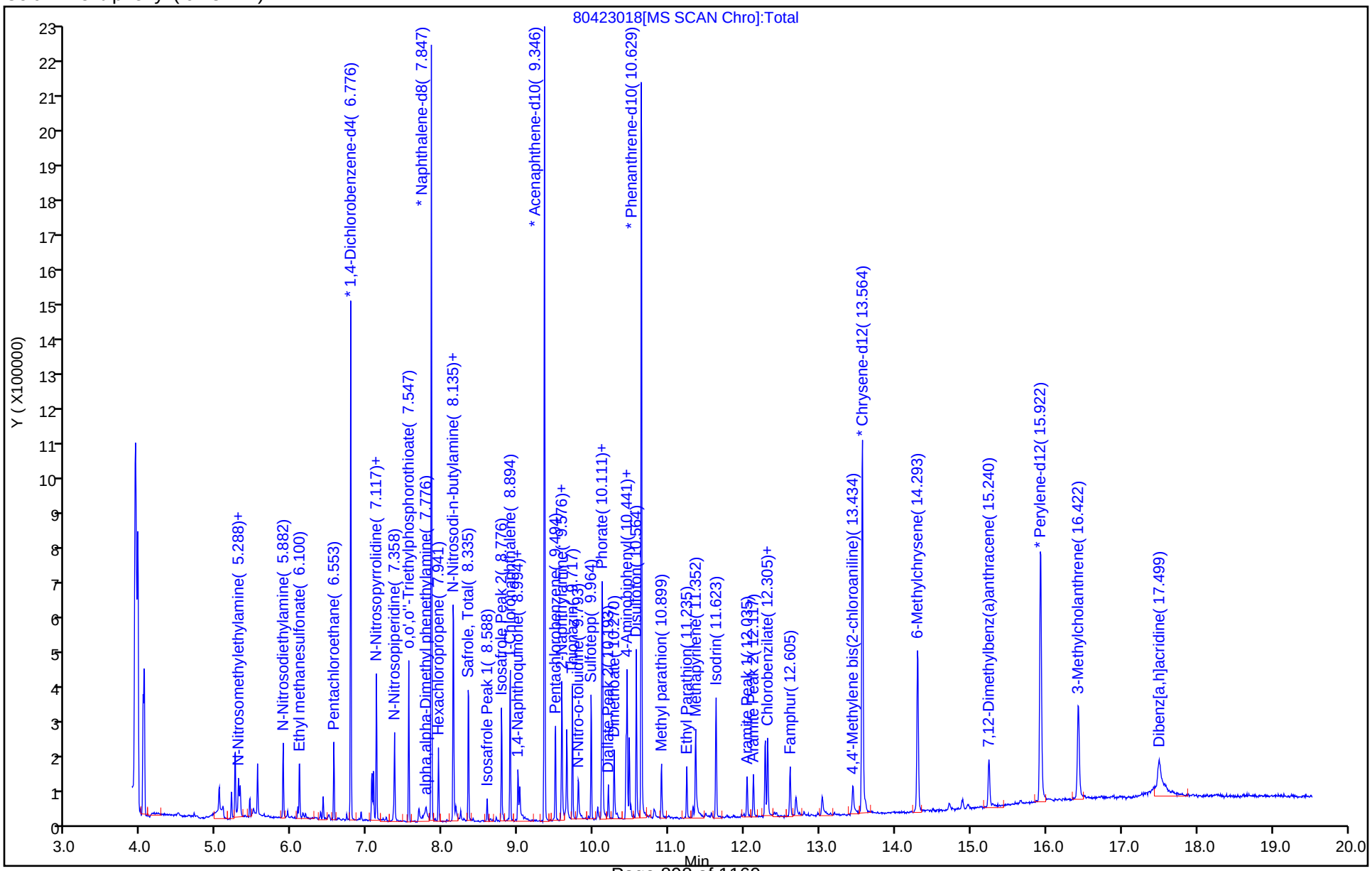
Report Date: 24-Apr-2018 07:02:20 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D

Injection Date:	23-Apr-2018 13:09:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std3 l2lvi			Worklist Smp#:	18
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

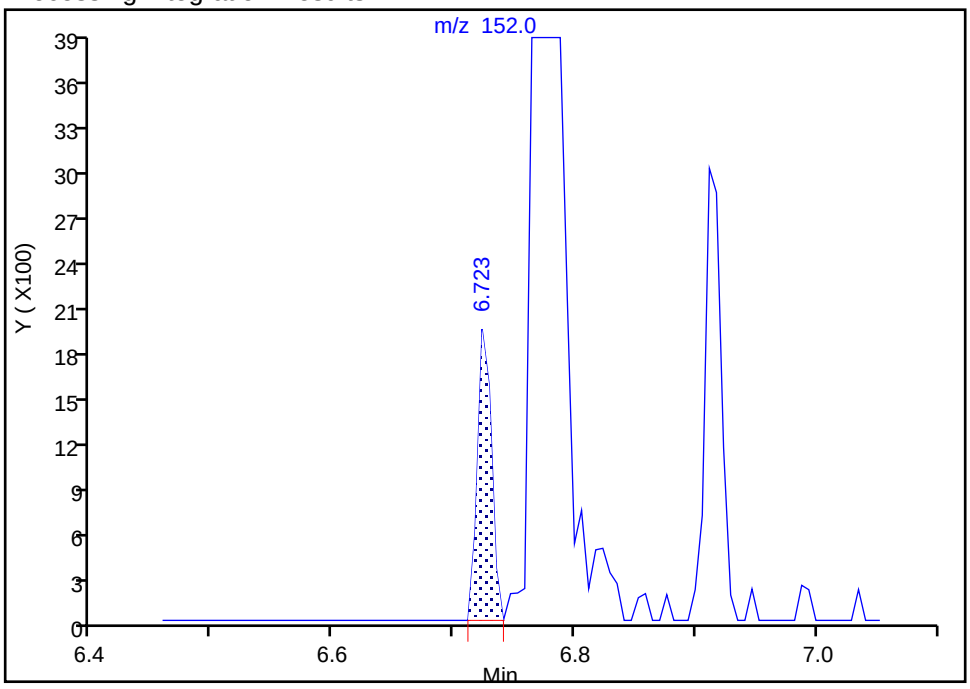
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Injection Date: 23-Apr-2018 13:09:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

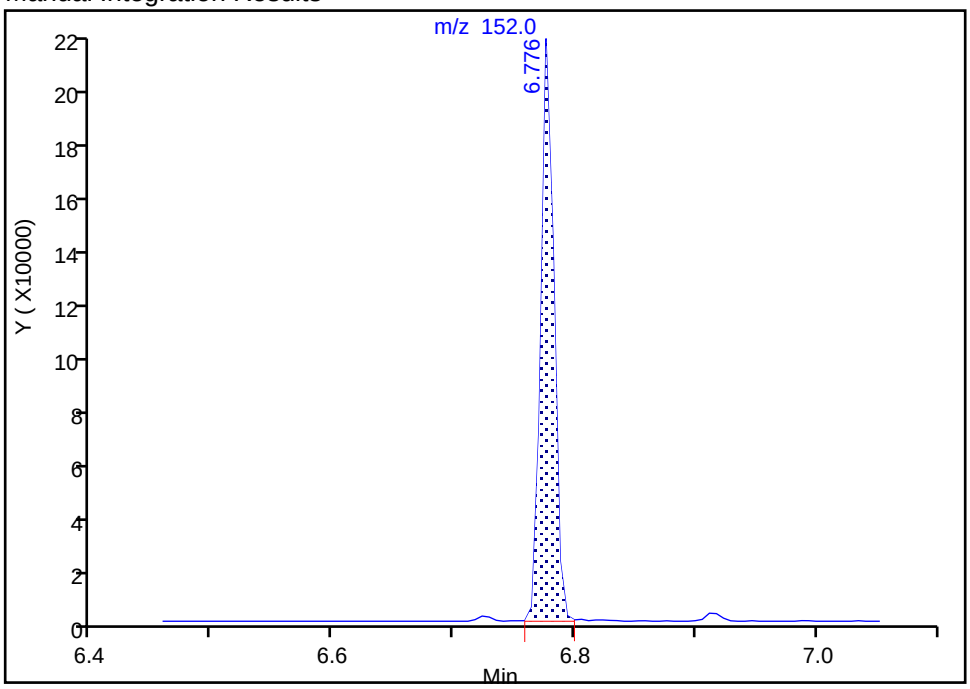
Processing Integration Results

RT: 6.72
Area: 1560
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 162146
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 13:35:27
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

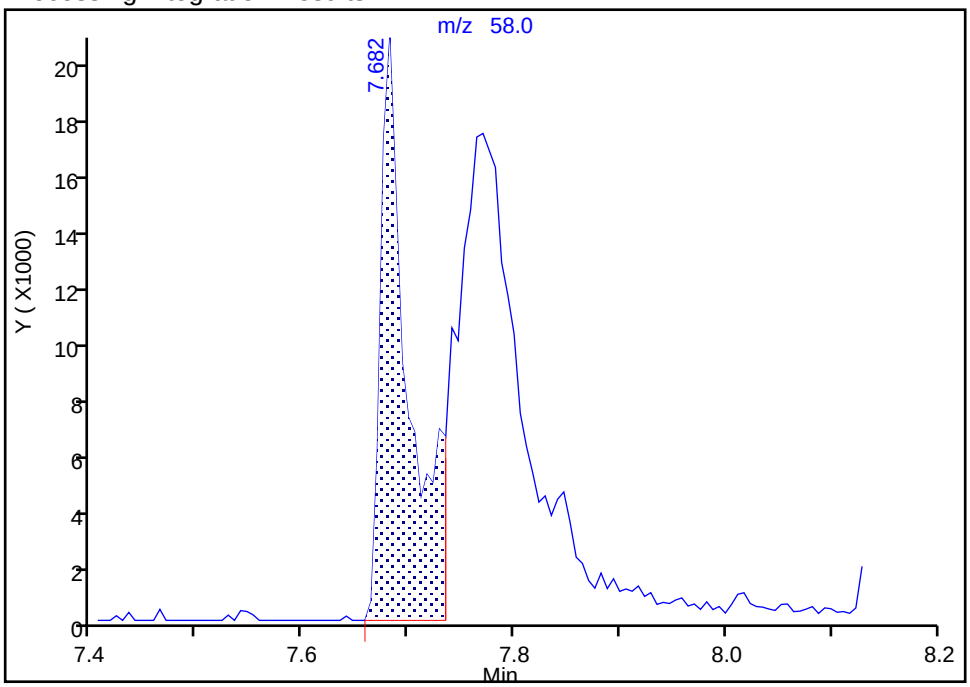
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D				
Injection Date:	23-Apr-2018 13:09:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

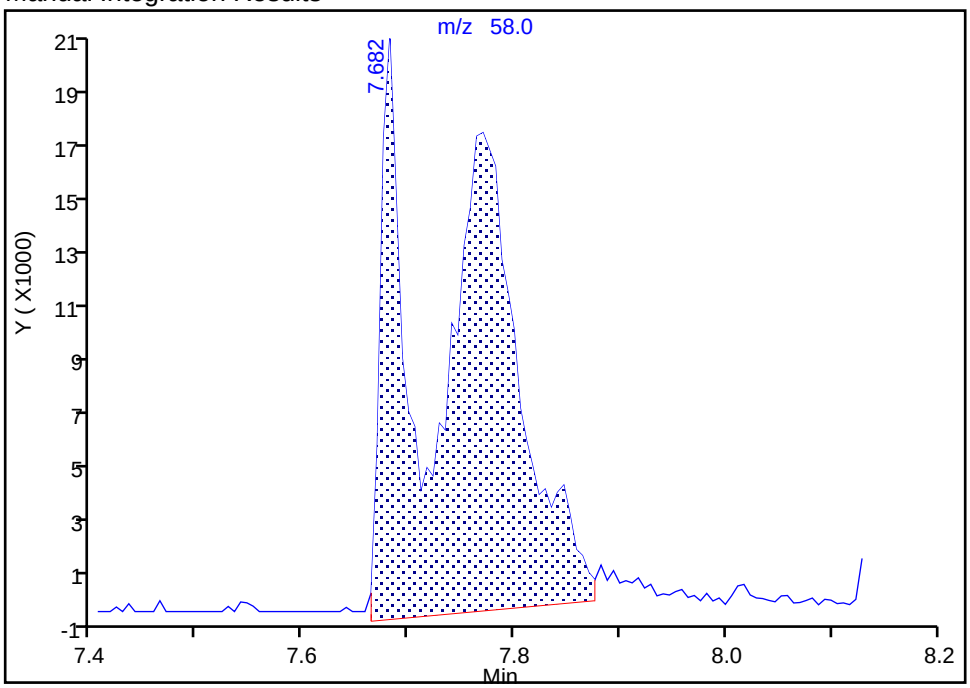
Processing Integration Results

RT: 7.68
Area: 38573
Amount: 105.0210
Amount Units: ng/ml



Manual Integration Results

RT: 7.68
Area: 108274
Amount: 86.717598
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 13:35:48

Audit Action: Manually Integrated Audit Reason: Poor chromatography

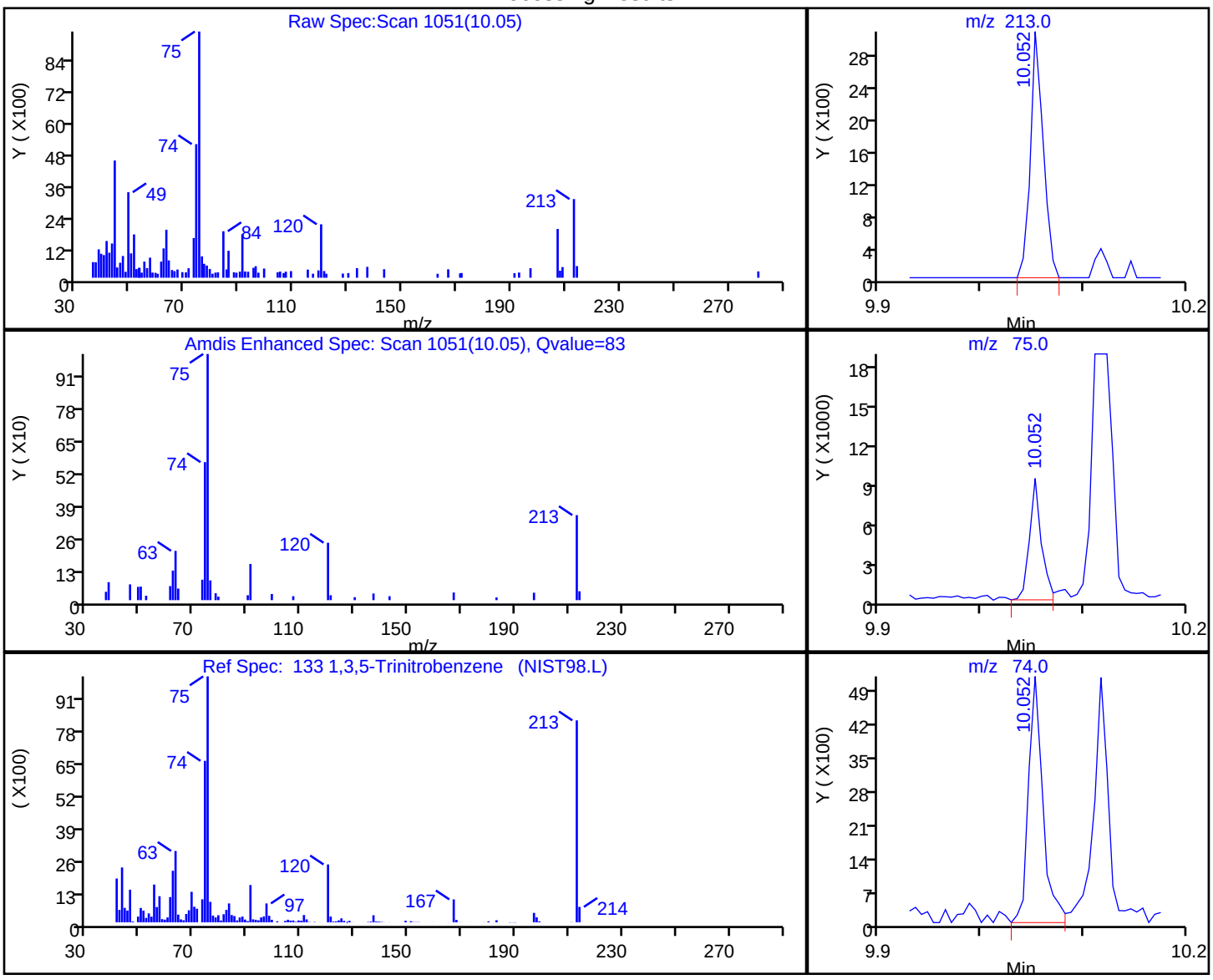
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Injection Date: 23-Apr-2018 13:09:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

133 1,3,5-Trinitrobenzene, CAS: 99-35-4

Processing Results



RT	Mass	Response	Amount
10.05	213.00	2668	160.8676
10.05	75.00	7541	
10.05	74.00	5064	

Reviewer: hulat, 24-Apr-2018 05:37:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

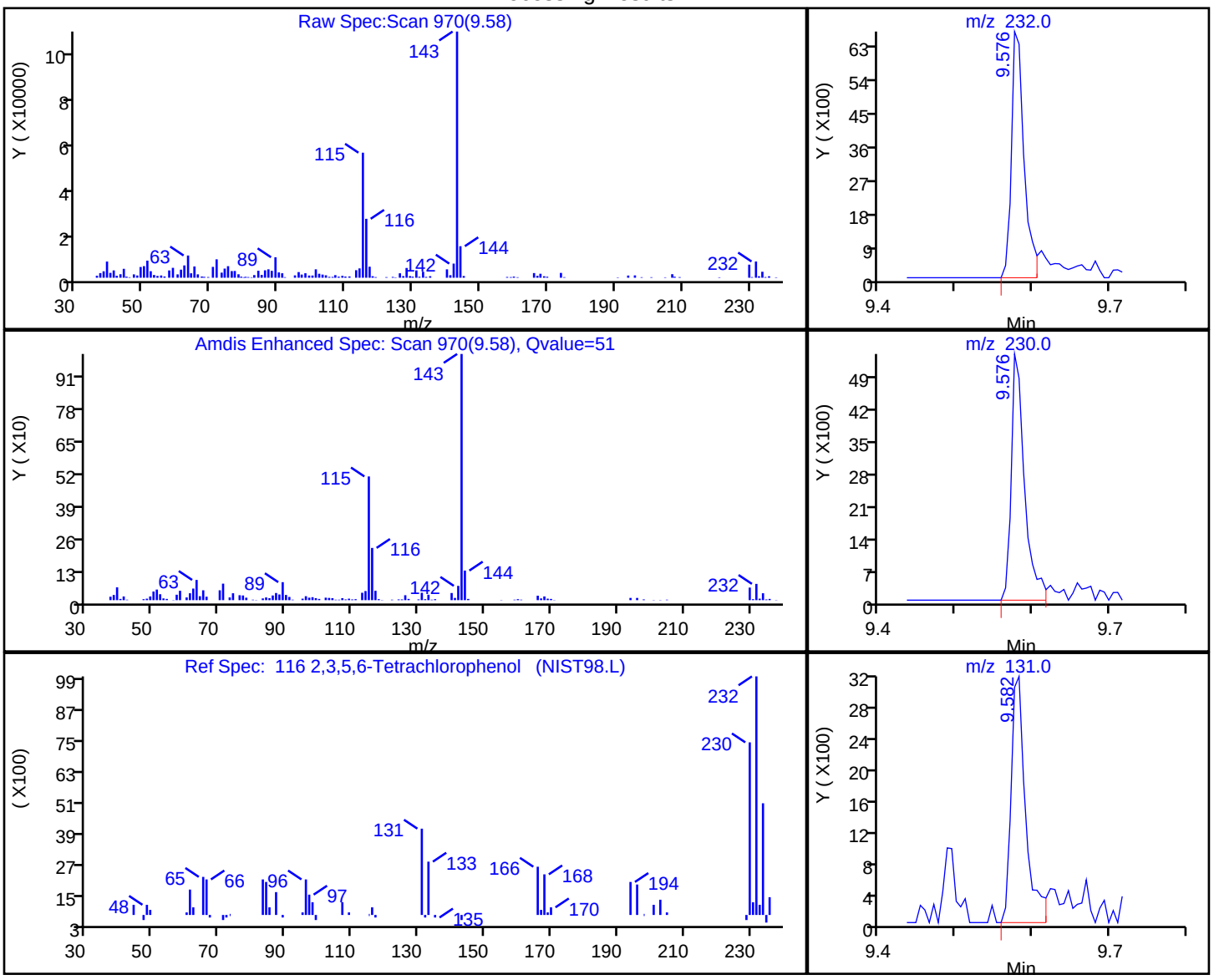
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D				
Injection Date:	23-Apr-2018 13:09:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

116 2,3,5,6-Tetrachlorophenol, CAS: 935-95-5

Processing Results



RT	Mass	Response	Amount
9.58	232.00	7721	125.7553
9.58	230.00	6513	
9.58	131.00	4208	

Reviewer: hulat, 24-Apr-2018 05:37:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

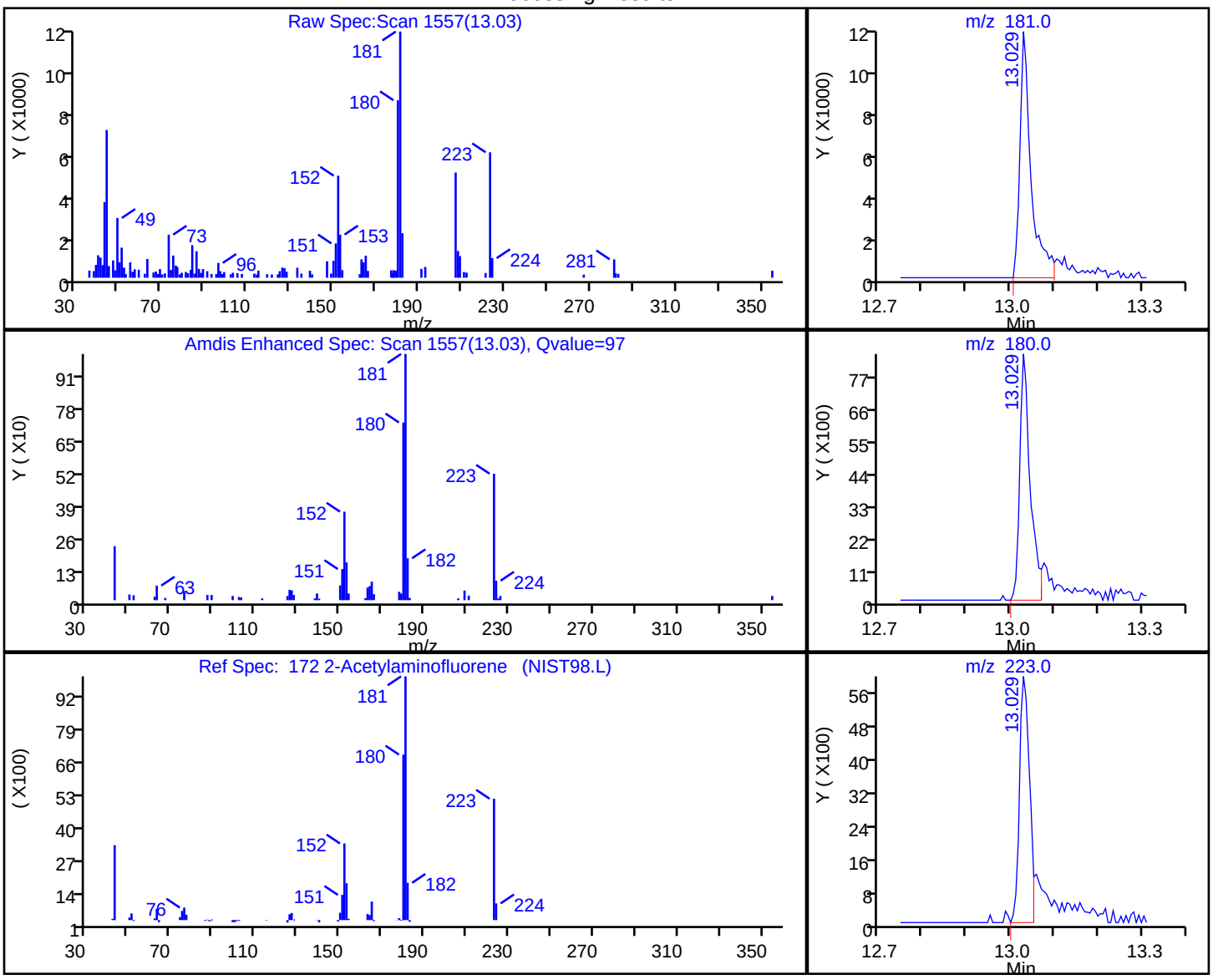
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Injection Date: 23-Apr-2018 13:09:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

172 2-Acetylaminofluorene, CAS: 53-96-3

Processing Results



RT	Mass	Response	Amount
13.03	181.00	20796	191.8048
13.03	180.00	14117	
13.03	223.00	9519	

Reviewer: hulat, 24-Apr-2018 05:37:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

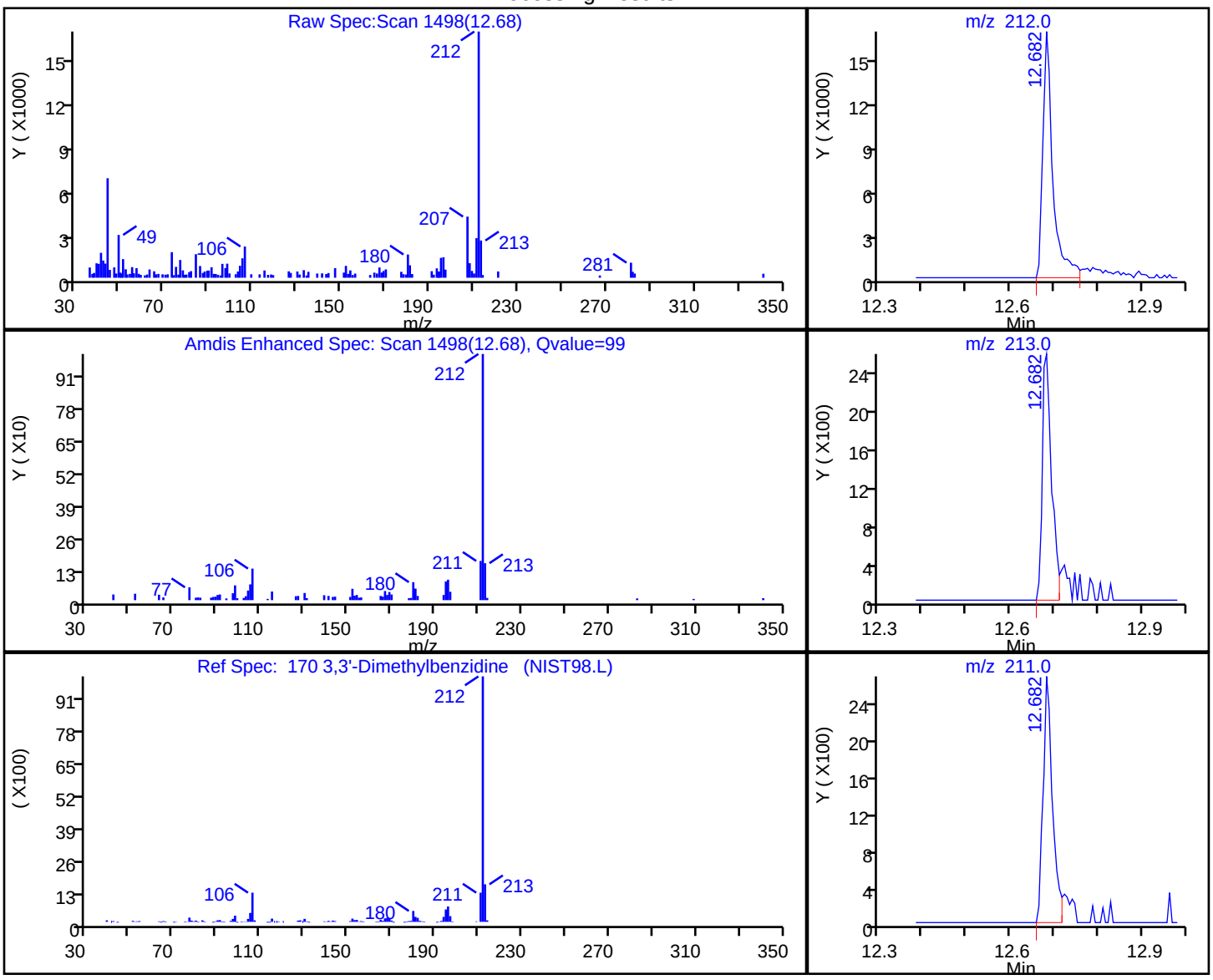
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Injection Date: 23-Apr-2018 13:09:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

170 3,3'-Dimethylbenzidine, CAS: 119-93-7

Processing Results



RT	Mass	Response	Amount
12.68	212.00	26787	192.6349
12.68	213.00	3754	
12.68	211.00	4042	

Reviewer: hulat, 24-Apr-2018 05:37:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

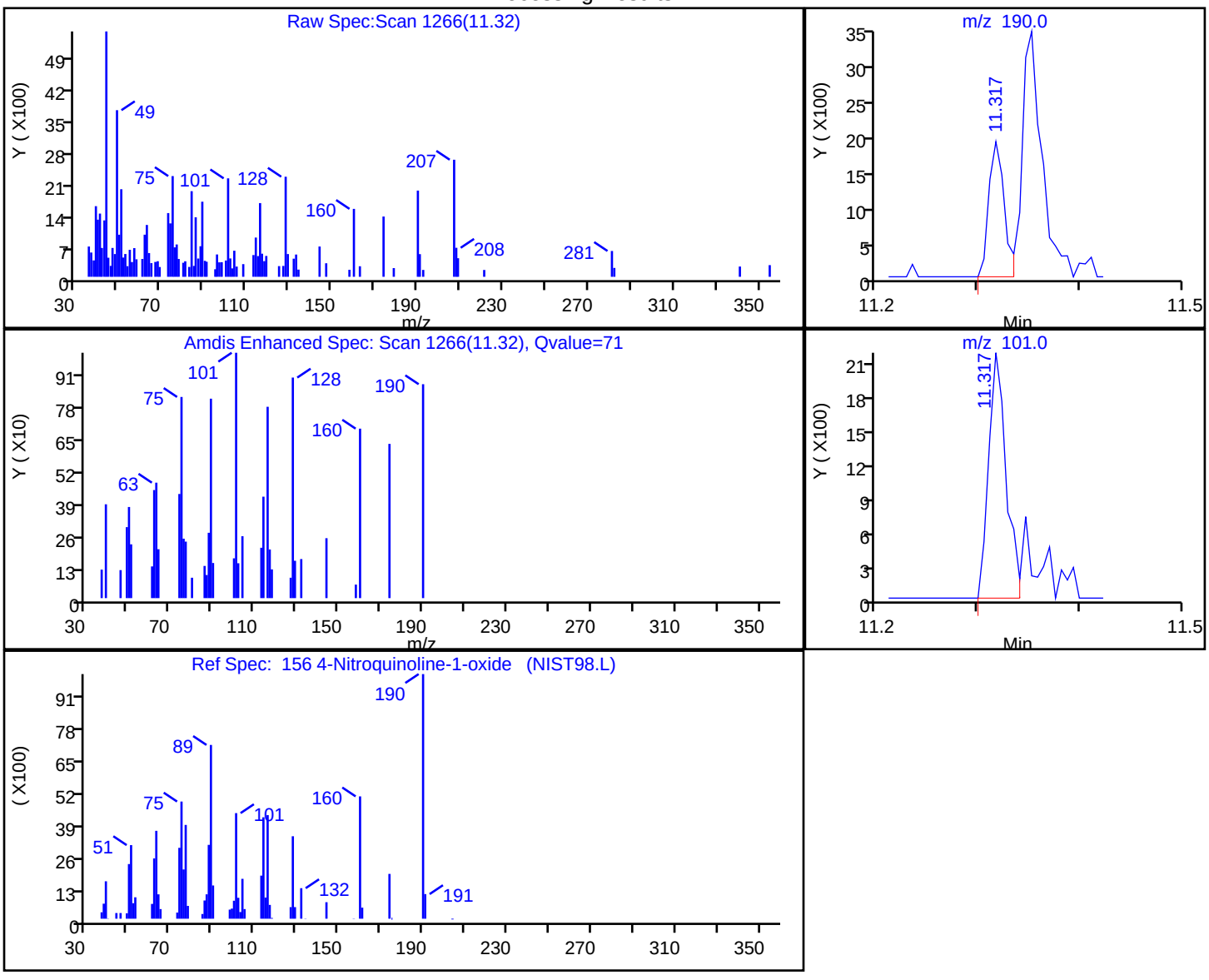
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D
Injection Date: 23-Apr-2018 13:09:30 Instrument ID: A4AG2
Lims ID: std3 l2lvi
Client ID:
Operator ID: ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

156 4-Nitroquinoline-1-oxide, CAS: 56-57-5

Processing Results



RT	Mass	Response	Amount
11.32	190.00	2035	179.7999
11.32	101.00	2616	

Reviewer: hulat, 24-Apr-2018 05:37:23
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

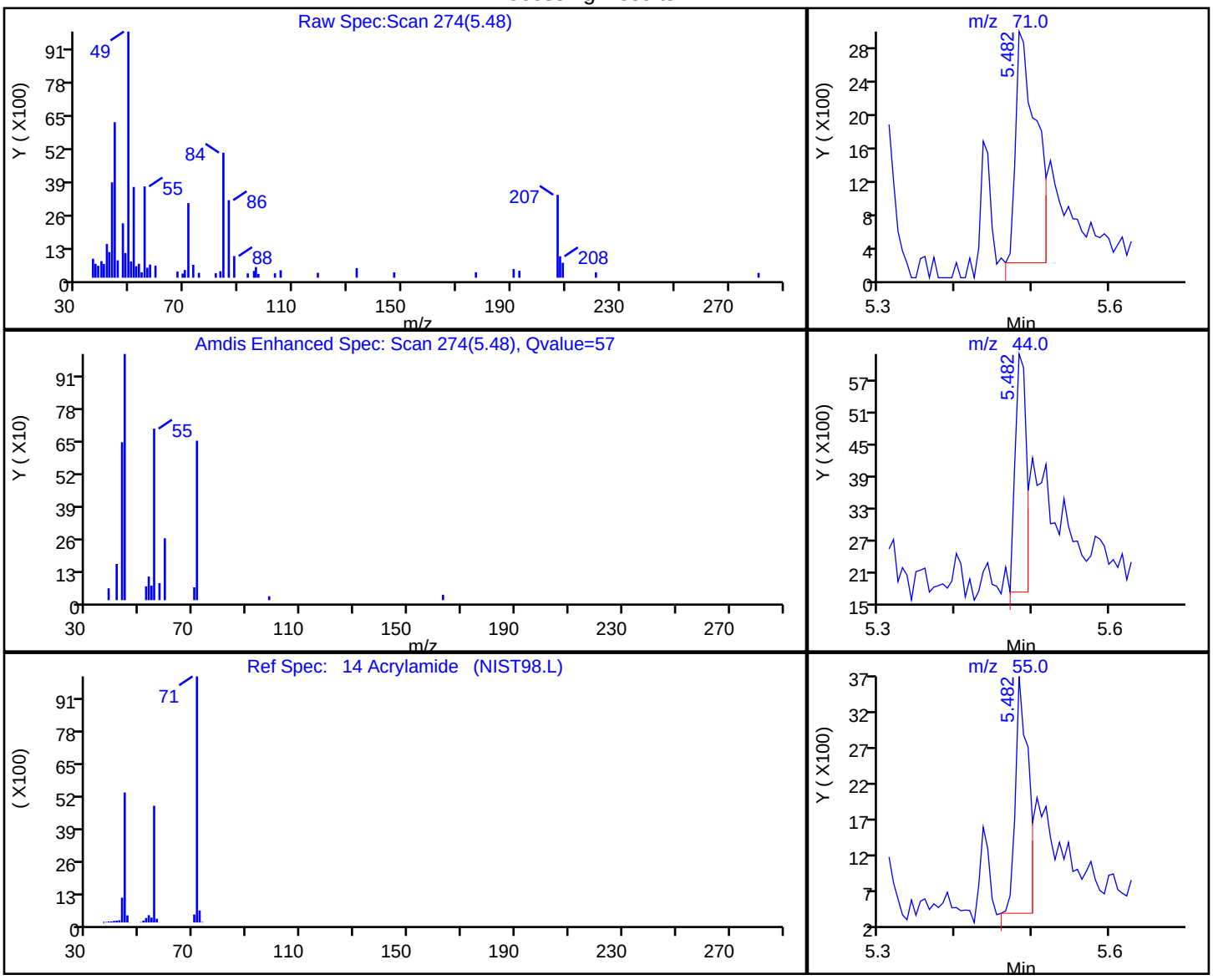
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D				
Injection Date:	23-Apr-2018 13:09:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

14 Acrylamide, CAS: 79-06-1

Processing Results



RT	Mass	Response	Amount
5.48	71.00	5176	654.0356
5.48	44.00	4575	
5.48	55.00	3841	

Reviewer: hulat, 23-Apr-2018 13:36:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

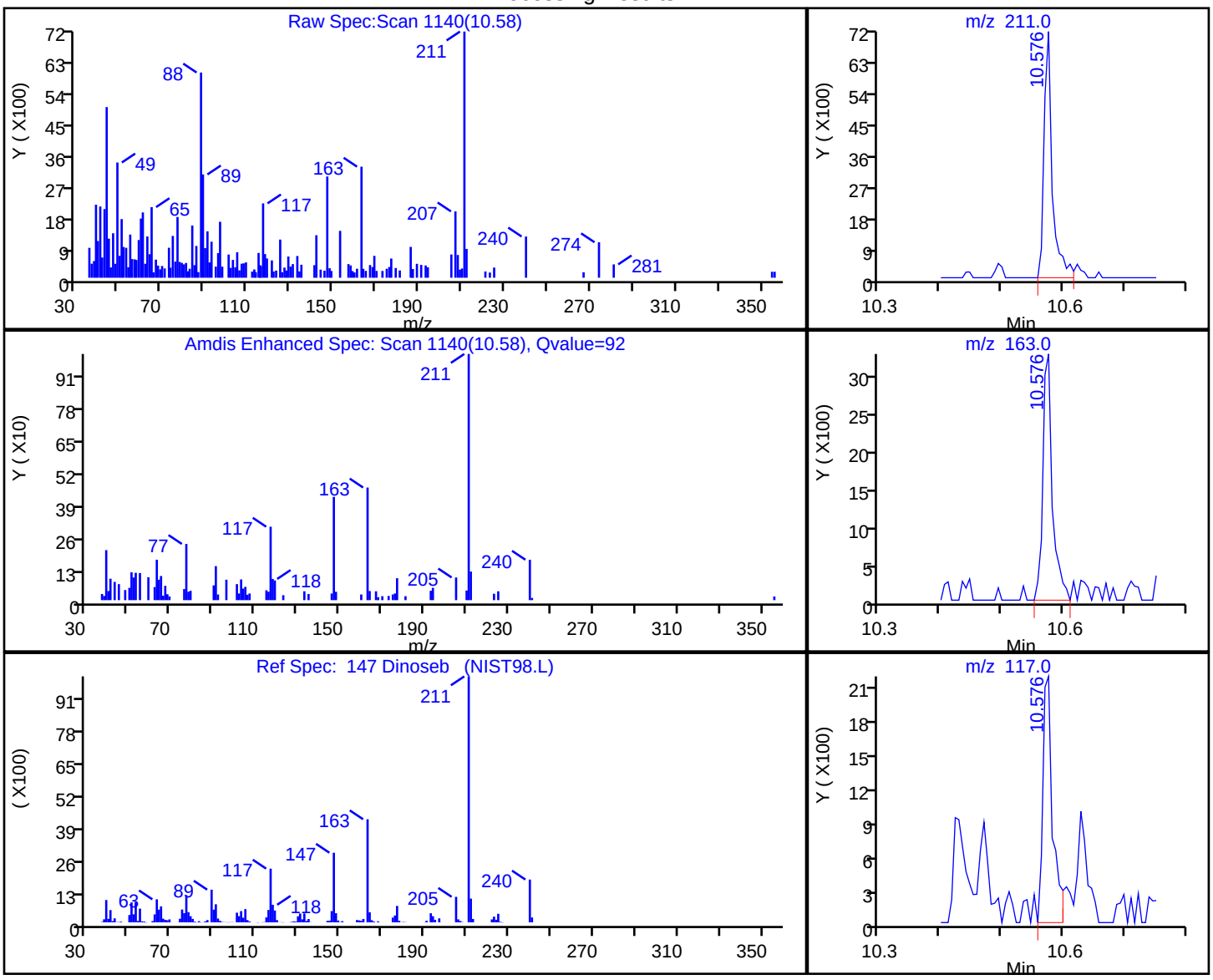
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423018.D				
Injection Date:	23-Apr-2018 13:09:30	Instrument ID:	A4AG2		
Lims ID:	std3 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

147 Dinoseb, CAS: 88-85-7

Processing Results



RT	Mass	Response	Amount
10.58	211.00	6752	172.2285
10.58	163.00	3510	
10.58	117.00	2406	

Reviewer: hulat, 24-Apr-2018 05:37:23

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Lims ID: std2 l2lvi
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Apr-2018 13:33:30 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-019
Misc. Info.: STD2 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 05:26:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	98	174492	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	789236	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	370518	400.0	400.0	
* 4 Phenanthrene-d10	188	10.628	10.629	0.000	98	691912	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	489231	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	385741	400.0	400.0	
31 2-Picoline	93	5.246	5.235	0.011	96	25310	50.0	46.5	
32 N-Nitrosomethylethylamine	88	5.305	5.305	0.000	93	17140	50.0	53.1	
14 Acrylamide	71		5.470				ND	ND	U
34 Methyl methanesulfonate	80	5.541	5.535	0.006	87	19574	50.0	48.2	
36 N-Nitrosodiethylamine	102	5.882	5.876	0.006	90	14500	50.0	43.9	
37 Ethyl methanesulfonate	79	6.099	6.094	0.005	97	23857	50.0	47.1	
46 Pentachloroethane	167	6.552	6.552	0.000	93	9080	50.0	47.0	
56 N-Nitrosopyrrolidine	100	7.058	7.052	0.006	82	11946	50.0	36.7	
59 N-Nitrosomorpholine	56	7.082	7.076	0.006	93	19768	50.0	38.4	
60 2-Toluidine	106	7.117	7.117	0.000	97	46580	50.0	44.4	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	80	13512	50.0	41.3	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	90	15010	50.0	48.7	
71 alpha,alpha-Dimethyl phene	58	7.776	7.670	0.106	0	70913	50.0	53.9	M
77 Hexachloropropene	213	7.940	7.940	0.000	92	10583	50.0	38.9	
81 Quinoline	129	8.140	8.135	0.005	96	48135	50.0	40.4	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	-0.001	89	16984	50.0	39.9	
84 p-Phenylene diamine	108		8.170				ND	ND	
92 Safrole, Total	162	8.340	8.335	0.005	87	19867	50.0	40.9	
95 Isosafrole Peak 1	162	8.587	8.587	0.000	83	3659	42.0	36.7	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	87	19206	8.00	6.54	
247 1-Chloronaphthalene	162	8.893	8.887	0.006	97	48432	50.0	45.9	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	87	9944	50.0	64.4	
105 1,4-Dinitrobenzene	168	9.023	9.017	0.006	92	2735	50.0	71.8	
114 Pentachlorobenzene	250	9.493	9.493	0.000	94	15005	50.0	41.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.576	9.576	0.000	99	30624	50.0	31.9	
116 2,3,5,6-Tetrachlorophenol	232		9.576				ND	ND	U
119 2-Naphthylamine	143	9.646	9.640	0.006	98	24274	50.0	48.5	
121 Thionazin	97	9.717	9.717	0.000	81	11150	50.0	39.7	
123 N-Nitro-o-toluidine	152	9.799	9.793	0.006	90	6207	50.0	66.0	
132 Sulfotepp	202	9.964	9.964	0.000	78	6149	50.0	38.7	
133 1,3,5-Trinitrobenzene	213		10.052				ND	ND	U
135 Phenacetin	108		10.105				ND	ND	
134 Diallate Peak 1	86	10.111	10.105	0.006	89	28005	43.0	39.9	
136 Phorate	121	10.117	10.117	0.000	94	13761	50.0	44.0	
137 Diallate Peak 2	86	10.193	10.193	0.000	89	4725	7.00	6.50	
139 Dimethoate	87	10.270	10.270	0.000	94	13889	50.0	31.2	
142 4-Aminobiphenyl	169	10.428	10.429	-0.001	88	32518	50.0	66.6	
144 Pronamide	173	10.440	10.440	0.000	92	19741	50.0	36.0	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	81	3814	50.0	61.1	
146 Disulfoton	88	10.564	10.564	0.000	99	29829	50.0	39.7	
147 Dinoseb	211		10.576				ND	ND	U
152 Methyl parathion	109	10.899	10.893	0.006	92	9520	50.0	62.4	
155 Ethyl Parathion	97	11.228	11.228	0.000	83	4906	50.0	67.6	
156 4-Nitroquinoline-1-oxide	190		11.317				ND	ND	
157 Methapyrilene	58	11.352	11.346	0.006	97	43777	100.0	132.2	
158 Isodrin	66	11.617	11.617	0.000	83	12317	50.0	50.3	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	2826	25.5	32.2	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	3254	24.5	30.0	
164 p-Dimethylamino azobenzene	225	12.270	12.270	0.000	93	8484	50.0	58.6	
165 Chlorobenzilate	139	12.305	12.305	0.000	82	18567	50.0	33.3	
168 Famphur	218	12.605	12.605	0.000	91	10647	50.0	36.5	
170 3,3'-Dimethylbenzidine	212		12.681				ND	ND	U
172 2-Acetylaminofluorene	181		13.028				ND	ND	U
175 4,4'-Methylene bis(2-chlor	231	13.434	13.434	0.000	93	4189	50.0	65.4	
180 6-Methylchrysene	242	14.293	14.299	-0.006	100	73135	100.0	68.2	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	92	13801	50.0	62.2	
186 3-Methylcholanthrene	268	16.422	16.428	-0.006	96	44055	100.0	71.7	
188 Dibenz[a,h]acridine	279	17.493	17.499	-0.006	91	25038	50.0	61.6	
S 194 Isosafrole	162				0		50.0	43.3	
S 195 Diallate	86				0		50.0	46.4	
S 196 Aramite, Total	185				0		50.0	62.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

SMLIST2 L2 W_00015 Amount Added: 0.10 Units: mL

Report Date: 24-Apr-2018 07:02:25 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2 Operator ID:

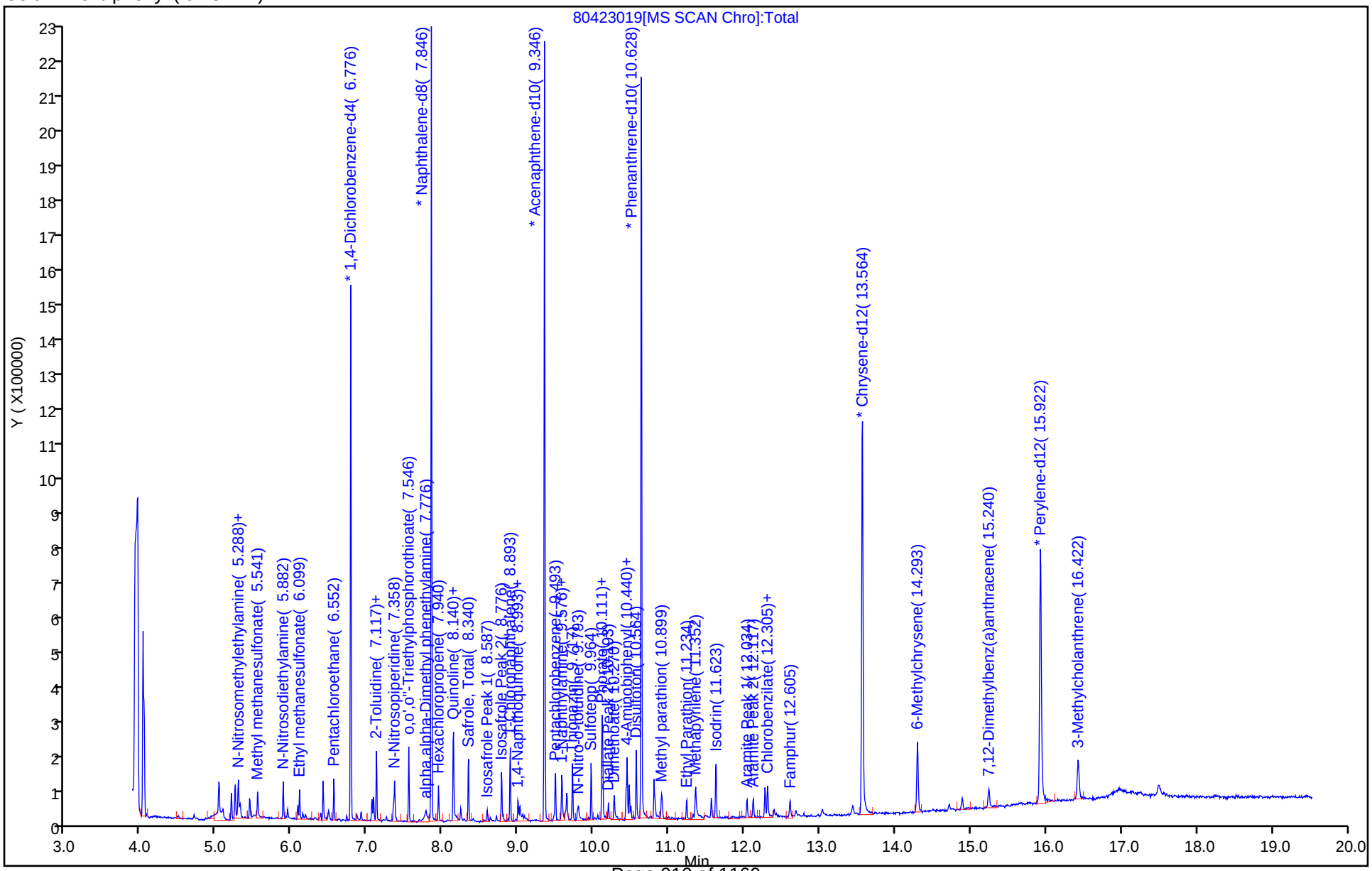
Lims ID: std2 l2lvi Worklist Smp#: 19

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 19

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

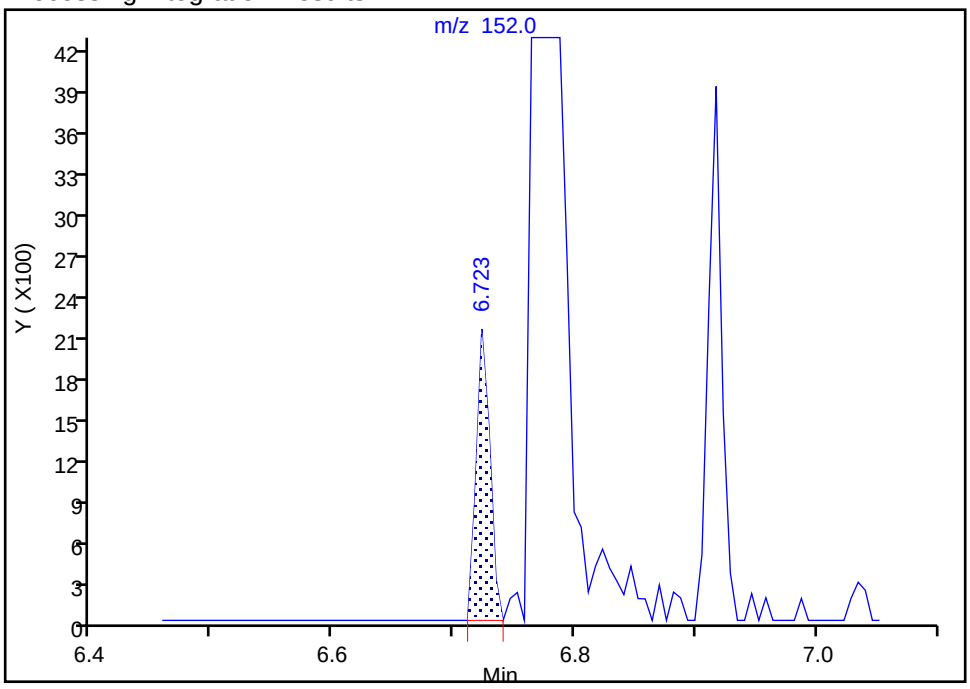
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

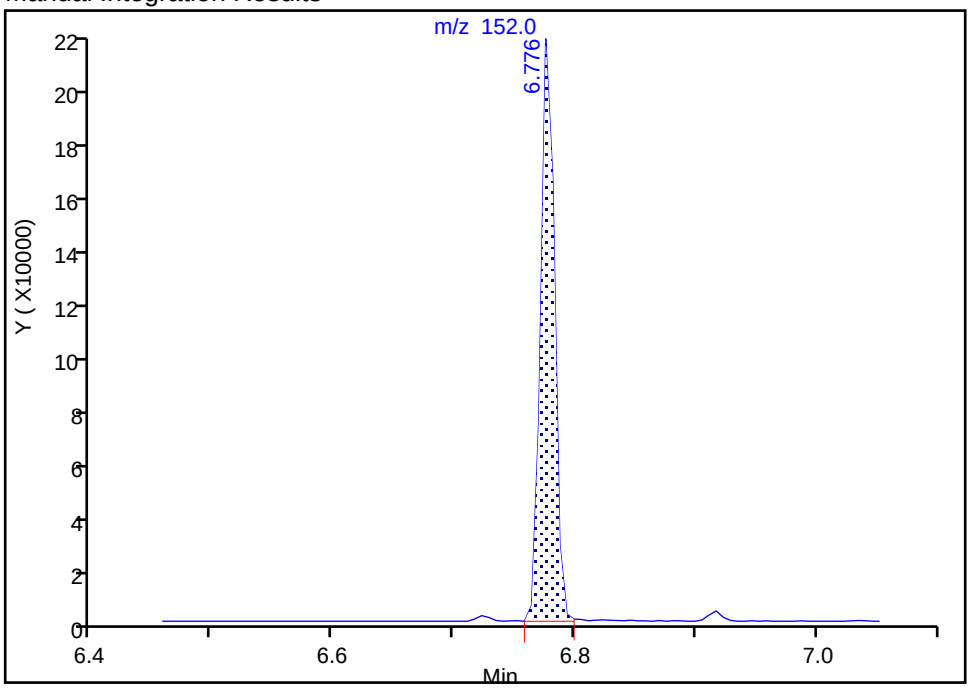
Processing Integration Results

RT: 6.72
Area: 1648
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 174492
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 05:24:56
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

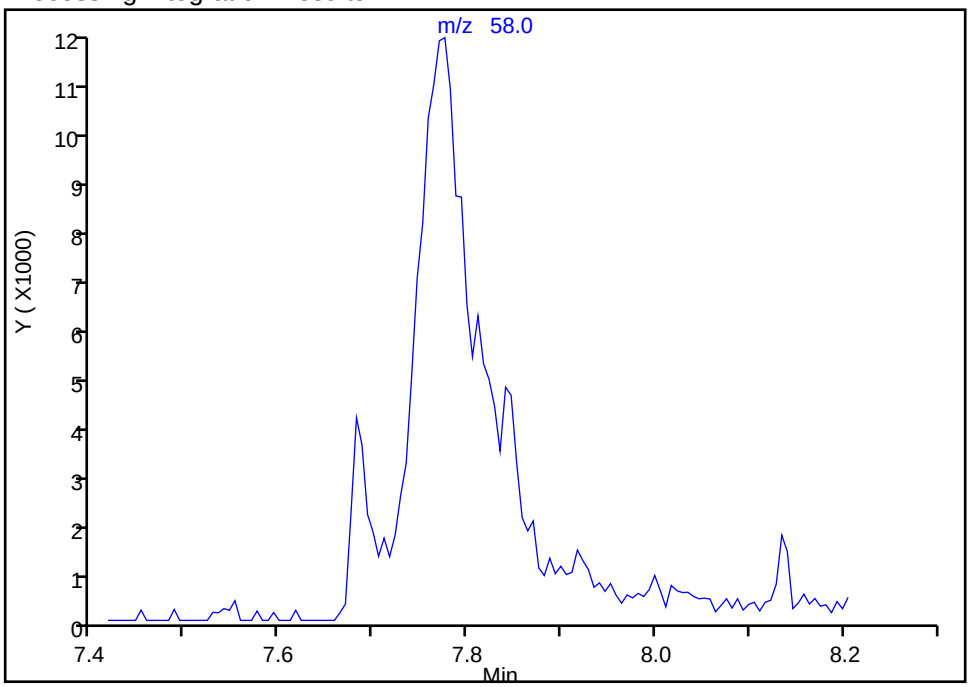
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

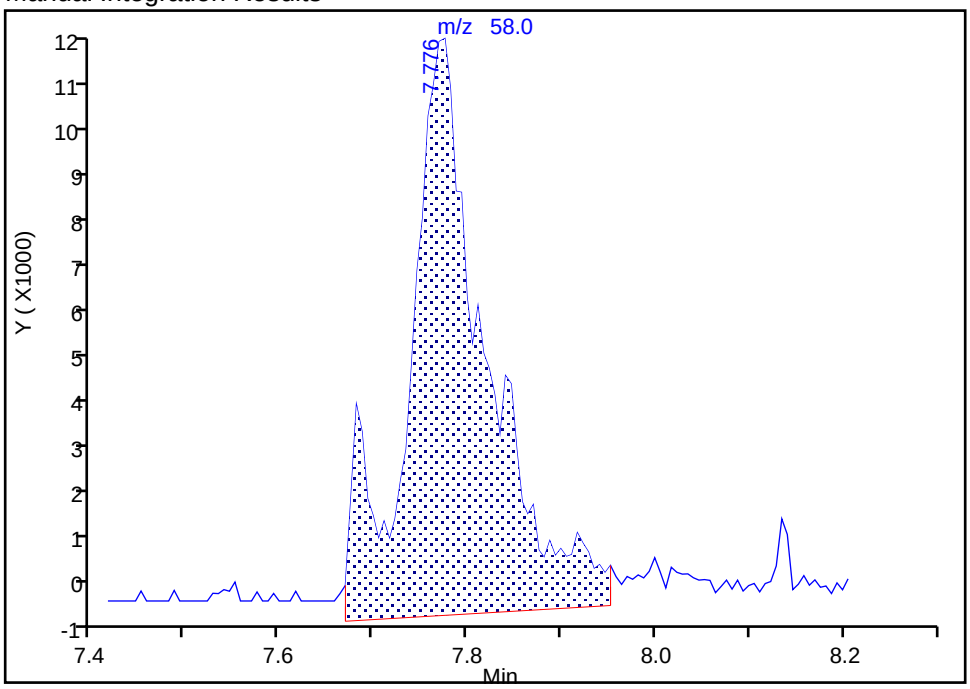
Not Detected
Expected RT: 7.67

Processing Integration Results



Manual Integration Results

RT: 7.78
Area: 70913
Amount: 53.857796
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 05:24:48
Audit Action: Manually Integrated Audit Reason: Poor chromatography

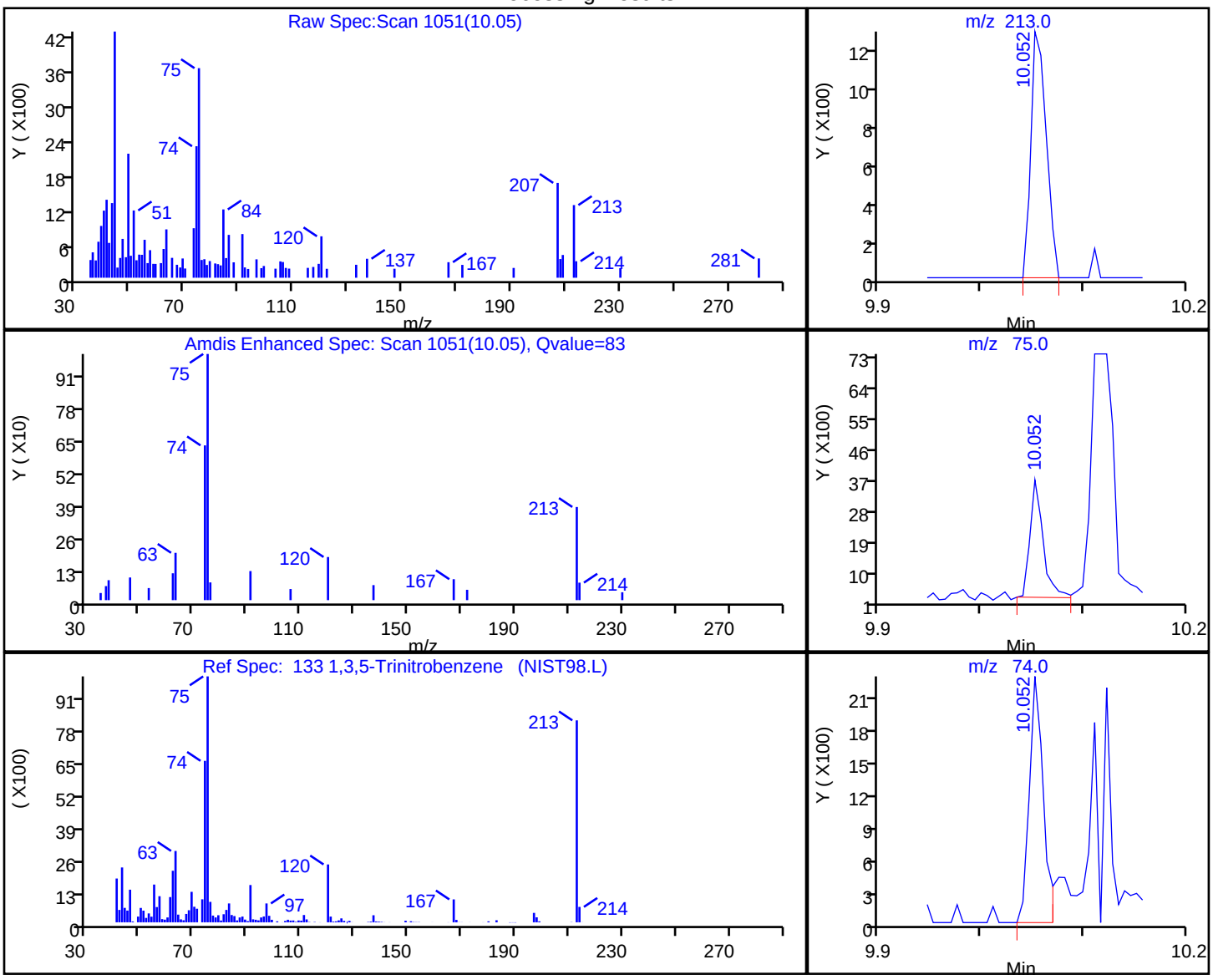
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

133 1,3,5-Trinitrobenzene, CAS: 99-35-4

Processing Results



RT	Mass	Response	Amount
10.05	213.00	1329	112.0536
10.05	75.00	3052	
10.05	74.00	2189	

Reviewer: hulat, 24-Apr-2018 05:26:10
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

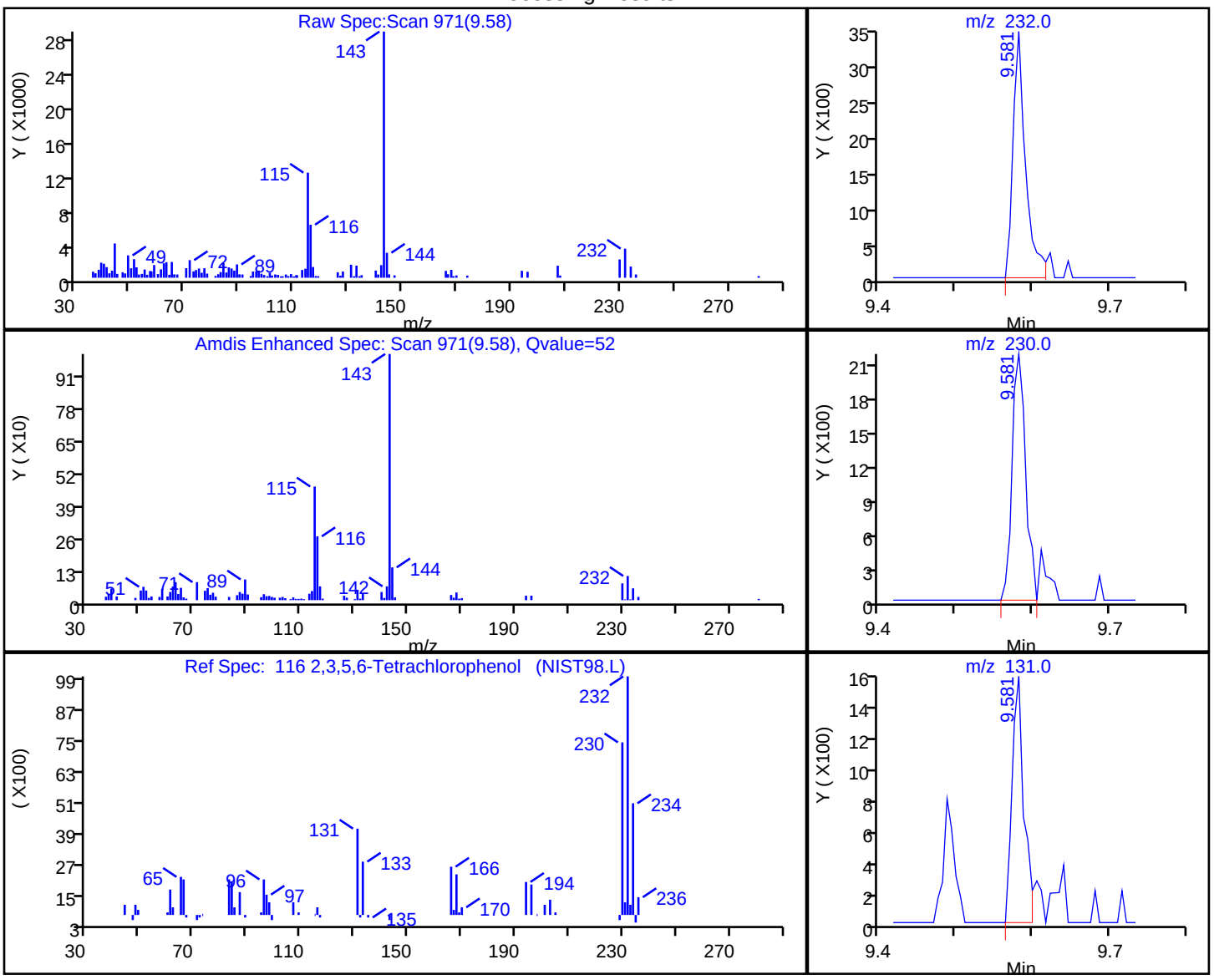
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

116 2,3,5,6-Tetrachlorophenol, CAS: 935-95-5

Processing Results



RT	Mass	Response	Amount
9.58	232.00	3898	135.3099
9.58	230.00	2643	
9.58	131.00	1638	

Reviewer: hulat, 24-Apr-2018 05:36:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

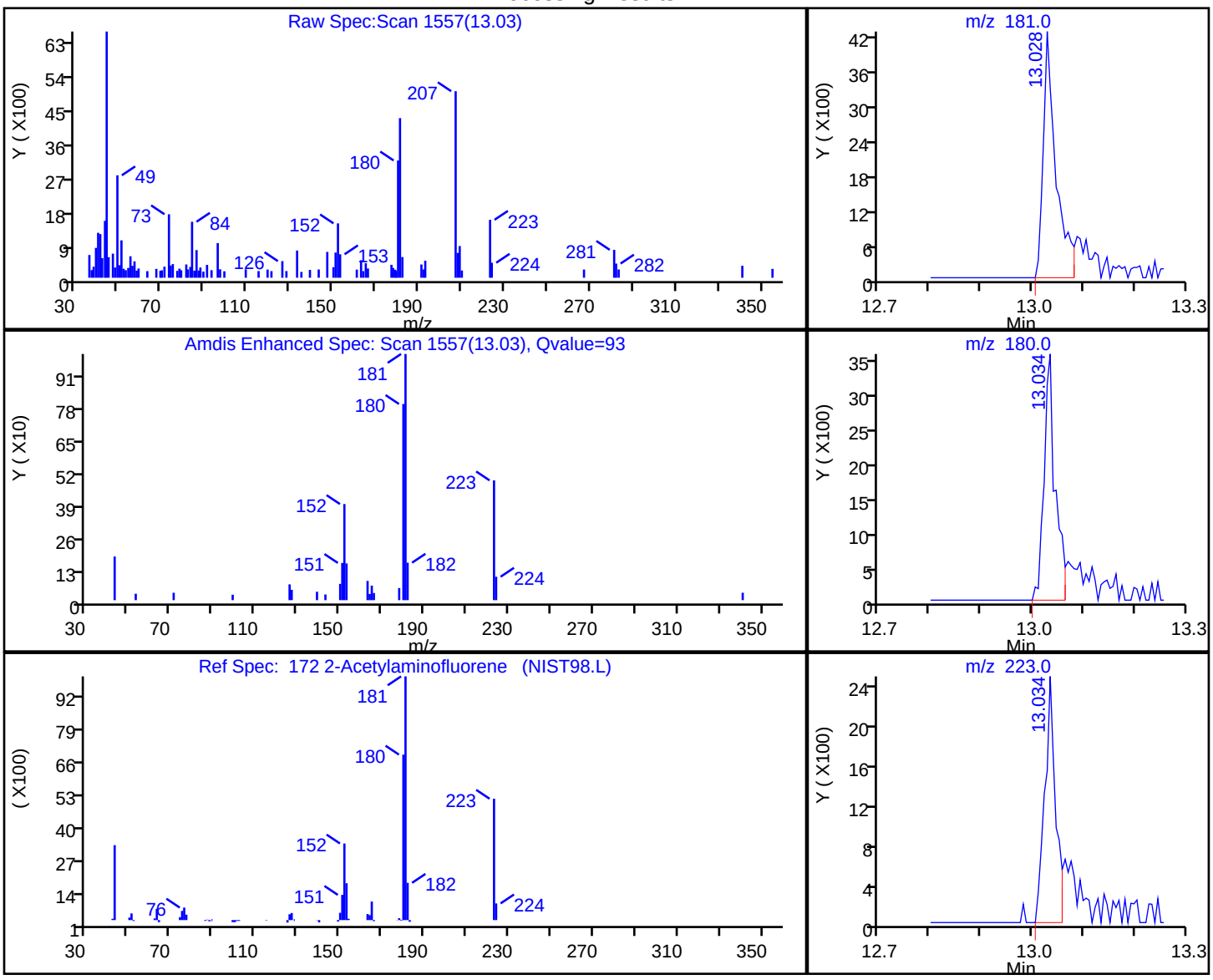
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

172 2-Acetylaminofluorene, CAS: 53-96-3

Processing Results



RT	Mass	Response	Amount
13.03	181.00	7375	141.2258
13.03	180.00	5436	
13.03	223.00	3681	

Reviewer: hulat, 24-Apr-2018 05:36:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

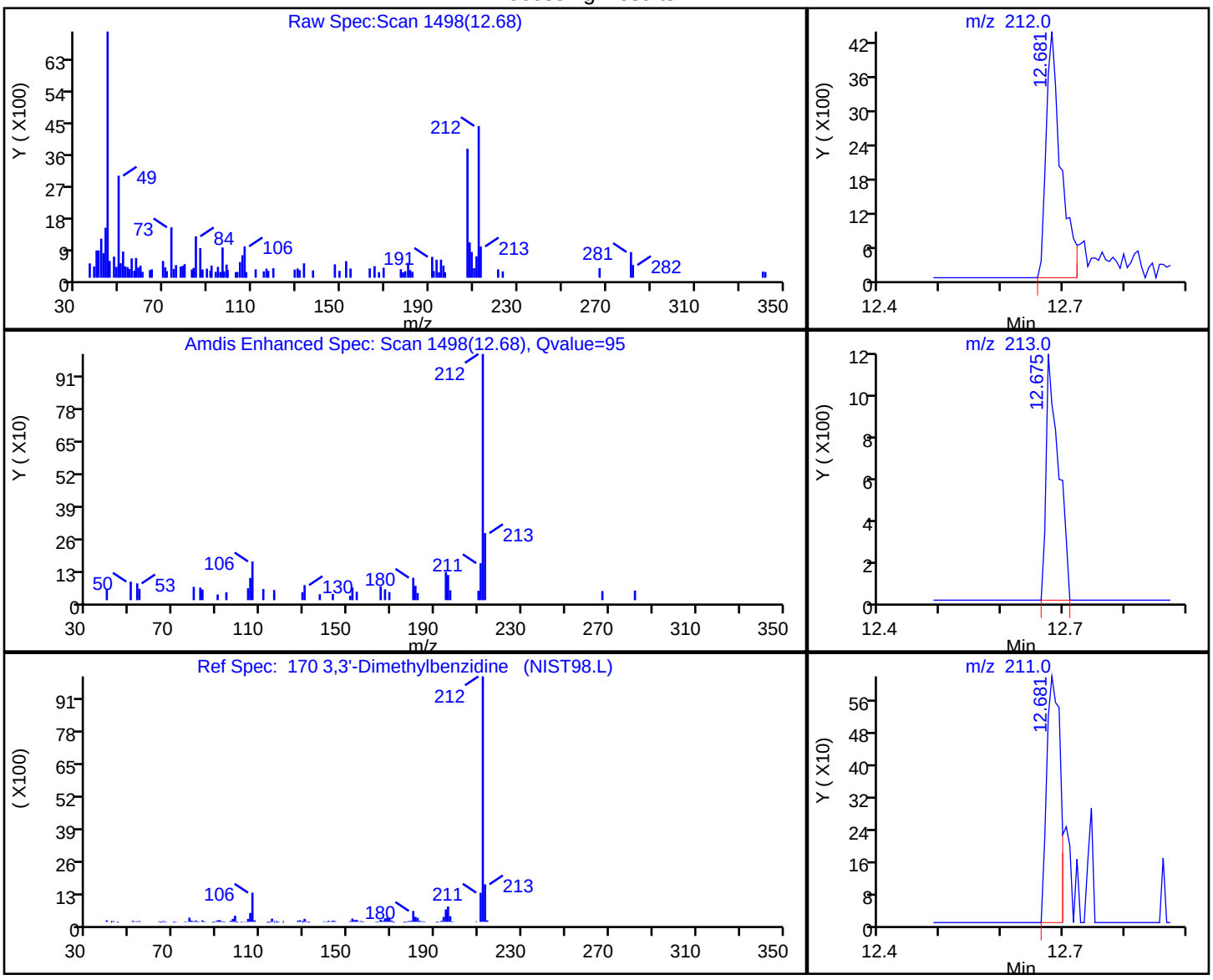
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D				
Injection Date:	23-Apr-2018 13:33:30	Instrument ID:	A4AG2		
Lims ID:	std2 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

170 3,3'-Dimethylbenzidine, CAS: 119-93-7

Processing Results



RT	Mass	Response	Amount
12.68	212.00	7294	140.2764
12.68	213.00	1585	
12.68	211.00	933	

Reviewer: hulat, 24-Apr-2018 05:36:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

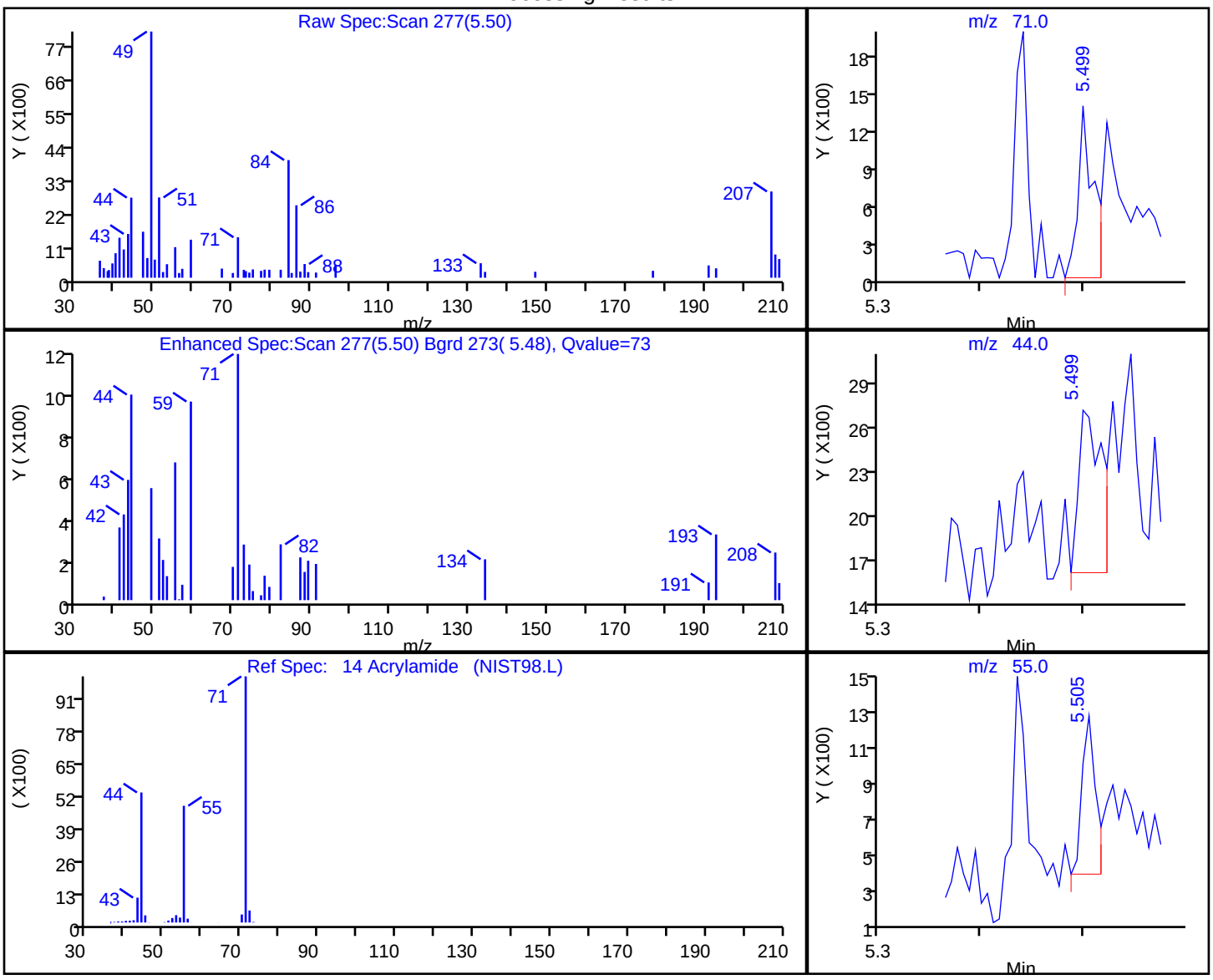
User Disabled Compound Report

TestAmerica Canton

Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D				
Injection Date:	23-Apr-2018 13:33:30	Instrument ID:	A4AG2		
Lims ID:	std2 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

14 Acrylamide, CAS: 79-06-1

Processing Results



RT	Mass	Response	Amount
5.50	71.00	1415	22.760753
5.50	44.00	1643	
5.51	55.00	788	

Reviewer: hulat, 24-Apr-2018 05:26:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

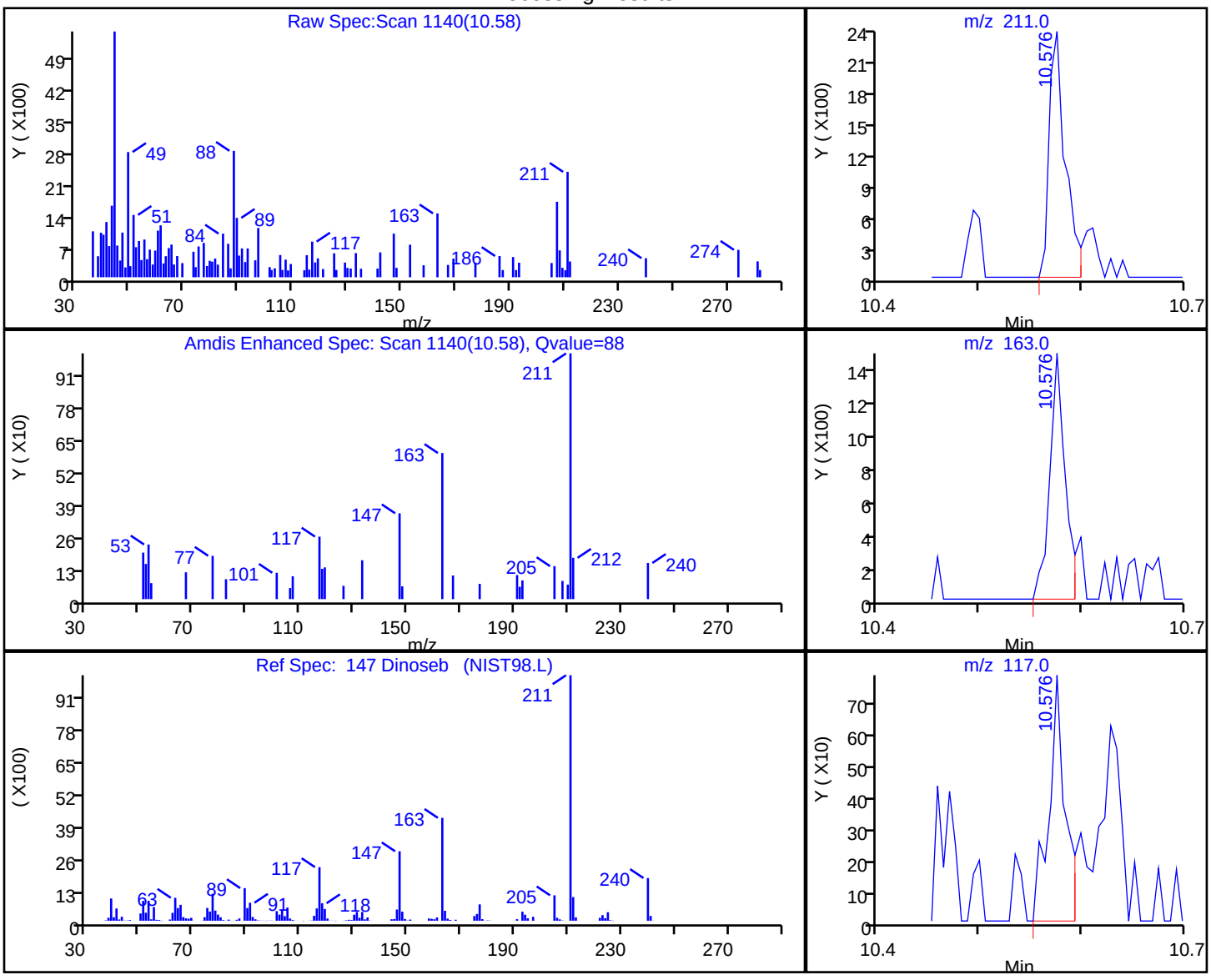
User Disabled Compound Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D
Injection Date: 23-Apr-2018 13:33:30 Instrument ID: A4AG2
Lims ID: std2 l2lvi
Client ID:
Operator ID: ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

147 Dinoseb, CAS: 88-85-7

Processing Results



RT	Mass	Response	Amount
10.58	211.00	2566	113.7297
10.58	163.00	1484	
10.58	117.00	876	

Reviewer: hulat, 24-Apr-2018 05:26:10
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Calibration / 2-Picoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

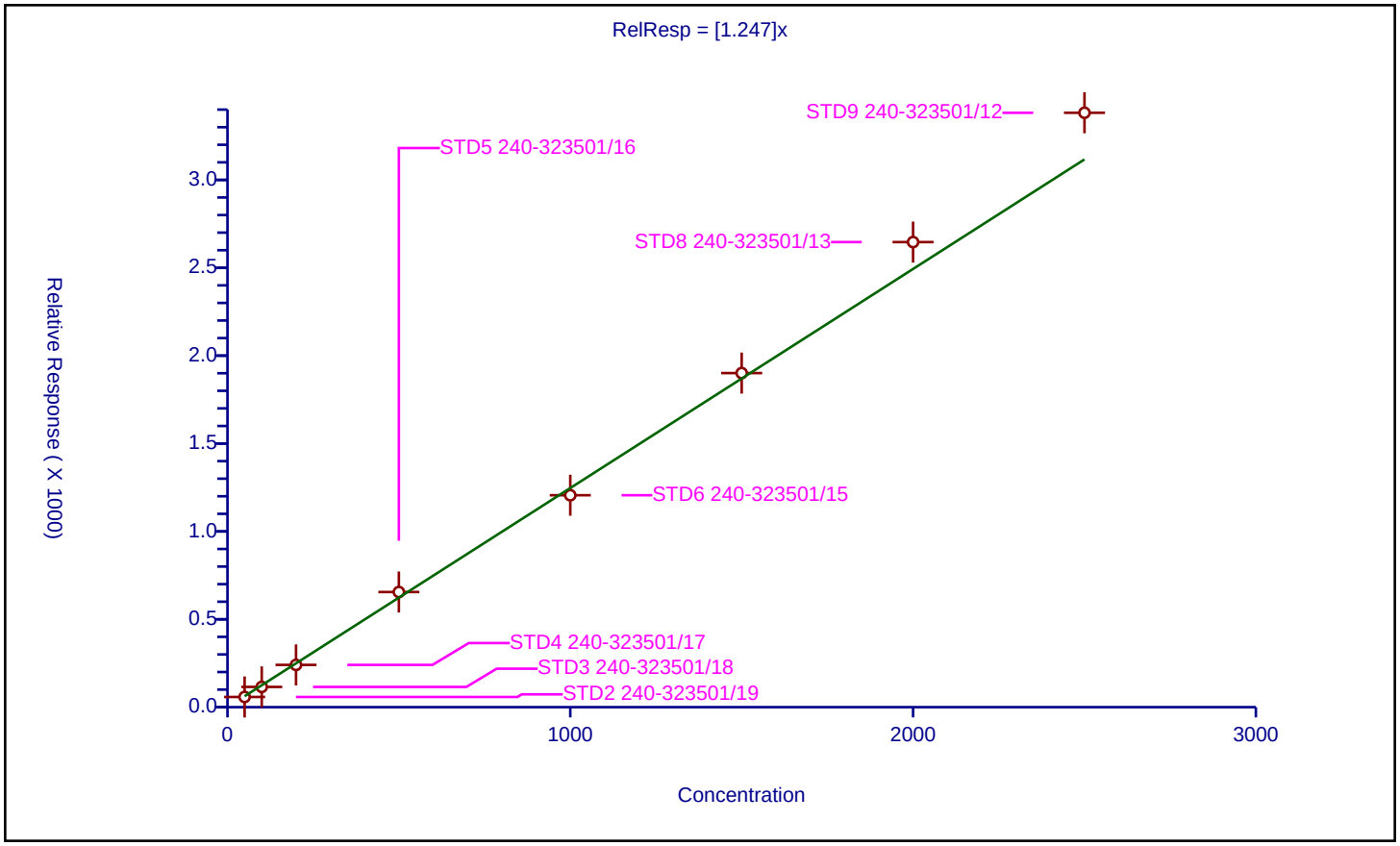
Curve Coefficients

Intercept:	0
Slope:	1.247

Error Coefficients

Standard Error:	866000
Relative Standard Error:	6.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	58.019852	400.0	174492.0	1.160397	Y
2	STD3 240-323501/18	100.0	115.162878	400.0	162146.0	1.151629	Y
3	STD4 240-323501/17	200.0	240.403745	400.0	170999.0	1.202019	Y
4	STD5 240-323501/16	500.0	655.216909	400.0	181966.0	1.310434	Y
5	STD6 240-323501/15	1000.0	1205.77218	400.0	181907.0	1.205772	Y
6	STD7 240-323501/14	1500.0	1900.825715	400.0	208062.0	1.267217	Y
7	STD8 240-323501/13	2000.0	2646.205378	400.0	185697.0	1.323103	Y
8	STD9 240-323501/12	2500.0	3381.917826	400.0	182467.0	1.352767	Y



Calibration / N-Nitrosomethylethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

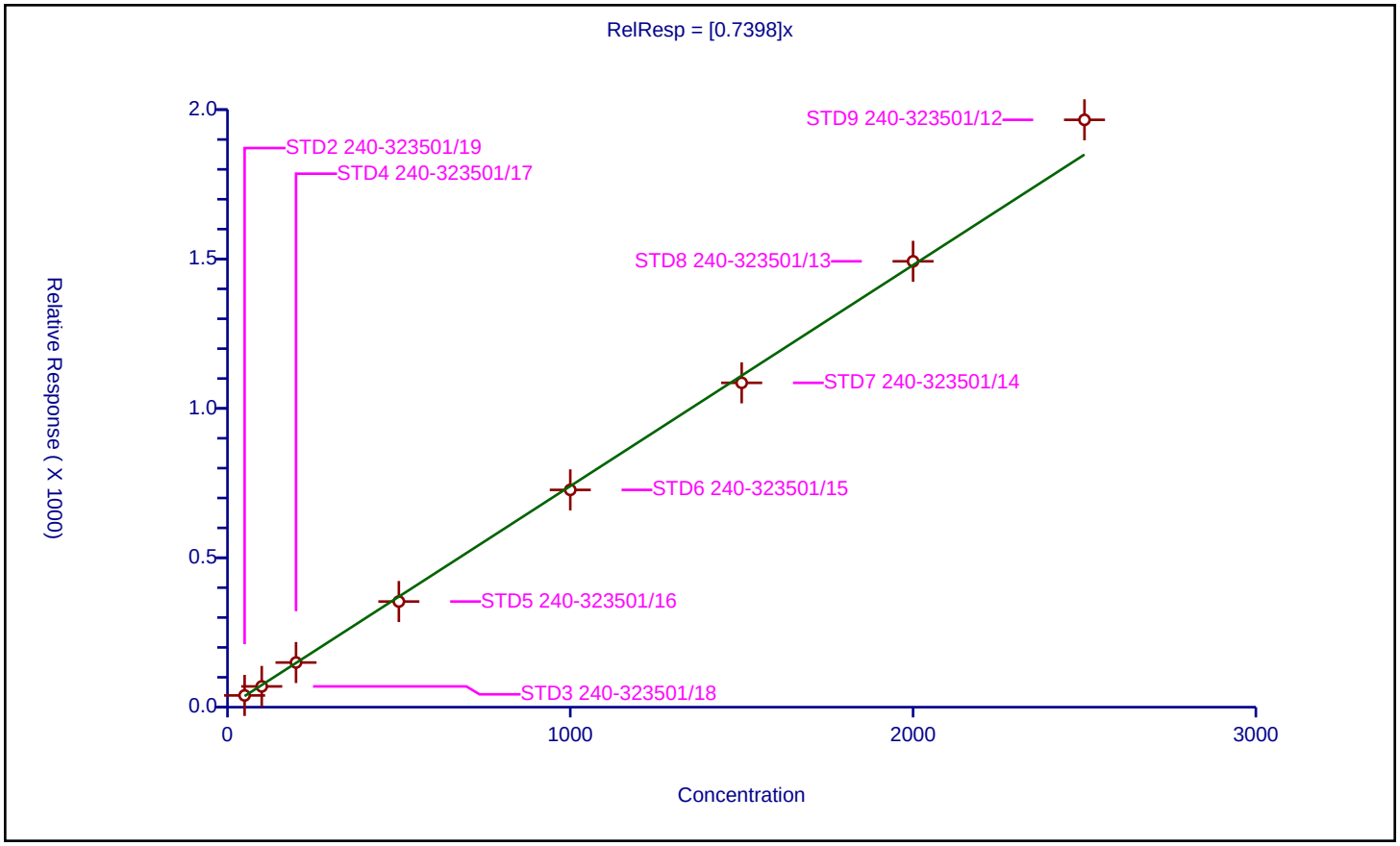
Curve Coefficients

Intercept:	0
Slope:	0.7398

Error Coefficients

Standard Error:	498000
Relative Standard Error:	4.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	39.2912	400.0	174492.0	0.785824	Y
2	STD3 240-323501/18	100.0	69.487992	400.0	162146.0	0.69488	Y
3	STD4 240-323501/17	200.0	149.462862	400.0	170999.0	0.747314	Y
4	STD5 240-323501/16	500.0	353.582537	400.0	181966.0	0.707165	Y
5	STD6 240-323501/15	1000.0	727.248539	400.0	181907.0	0.727249	Y
6	STD7 240-323501/14	1500.0	1085.582182	400.0	208062.0	0.723721	Y
7	STD8 240-323501/13	2000.0	1492.22443	400.0	185697.0	0.746112	Y
8	STD9 240-323501/12	2500.0	1965.819573	400.0	182467.0	0.786328	Y



Calibration / Acrylamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

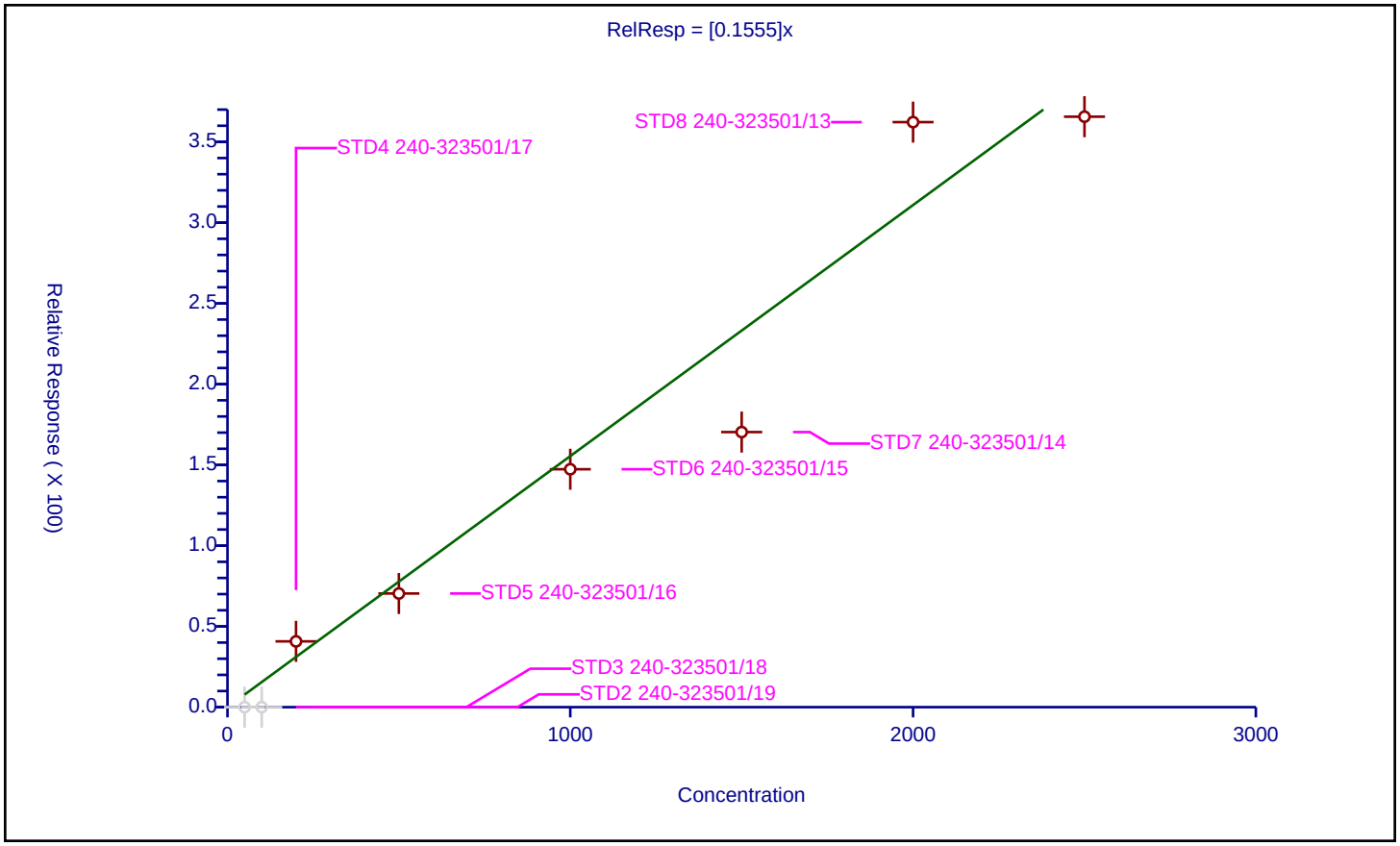
Curve Coefficients

Intercept:	0
Slope:	0.1555

Error Coefficients

Standard Error:	118000
Relative Standard Error:	20.6
Correlation Coefficient:	0.946
Coefficient of Determination (Adjusted):	0.914

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	174492.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	162146.0	0.0	N
3	STD4 240-323501/17	200.0	40.746437	400.0	170999.0	0.203732	Y
4	STD5 240-323501/16	500.0	70.36919	400.0	181966.0	0.140738	Y
5	STD6 240-323501/15	1000.0	147.321433	400.0	181907.0	0.147321	Y
6	STD7 240-323501/14	1500.0	170.335765	400.0	208062.0	0.113557	Y
7	STD8 240-323501/13	2000.0	362.24387	400.0	185697.0	0.181122	Y
8	STD9 240-323501/12	2500.0	365.613508	400.0	182467.0	0.146245	Y



Calibration / Methyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

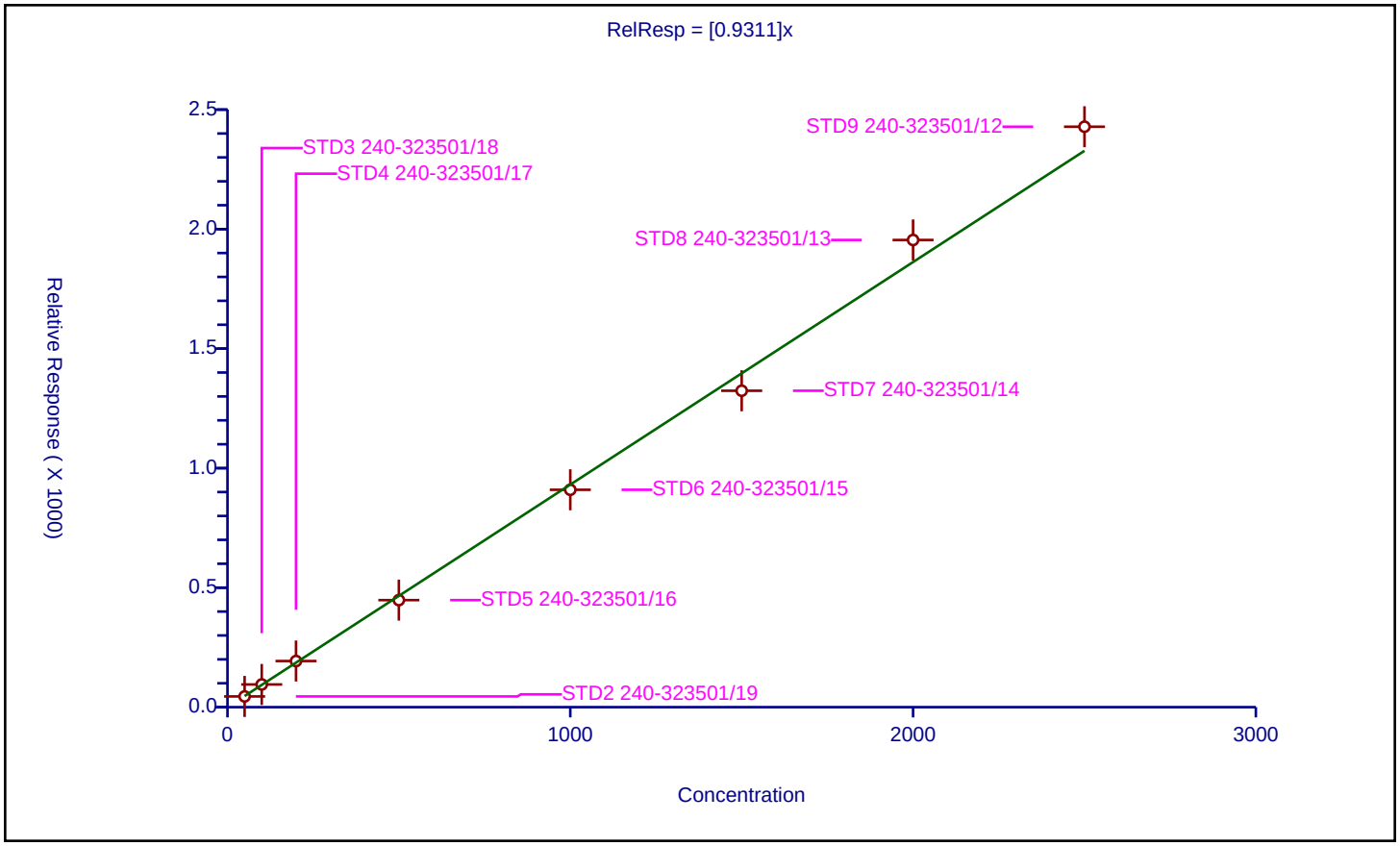
Curve Coefficients

Intercept:	0
Slope:	0.9311

Error Coefficients

Standard Error:	625000
Relative Standard Error:	4.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	44.870825	400.0	174492.0	0.897417	Y
2	STD3 240-323501/18	100.0	95.020537	400.0	162146.0	0.950205	Y
3	STD4 240-323501/17	200.0	192.957854	400.0	170999.0	0.964789	Y
4	STD5 240-323501/16	500.0	447.795742	400.0	181966.0	0.895591	Y
5	STD6 240-323501/15	1000.0	909.499909	400.0	181907.0	0.9095	Y
6	STD7 240-323501/14	1500.0	1323.828474	400.0	208062.0	0.882552	Y
7	STD8 240-323501/13	2000.0	1954.504381	400.0	185697.0	0.977252	Y
8	STD9 240-323501/12	2500.0	2428.401848	400.0	182467.0	0.971361	Y



Calibration / N-Nitrosodiethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

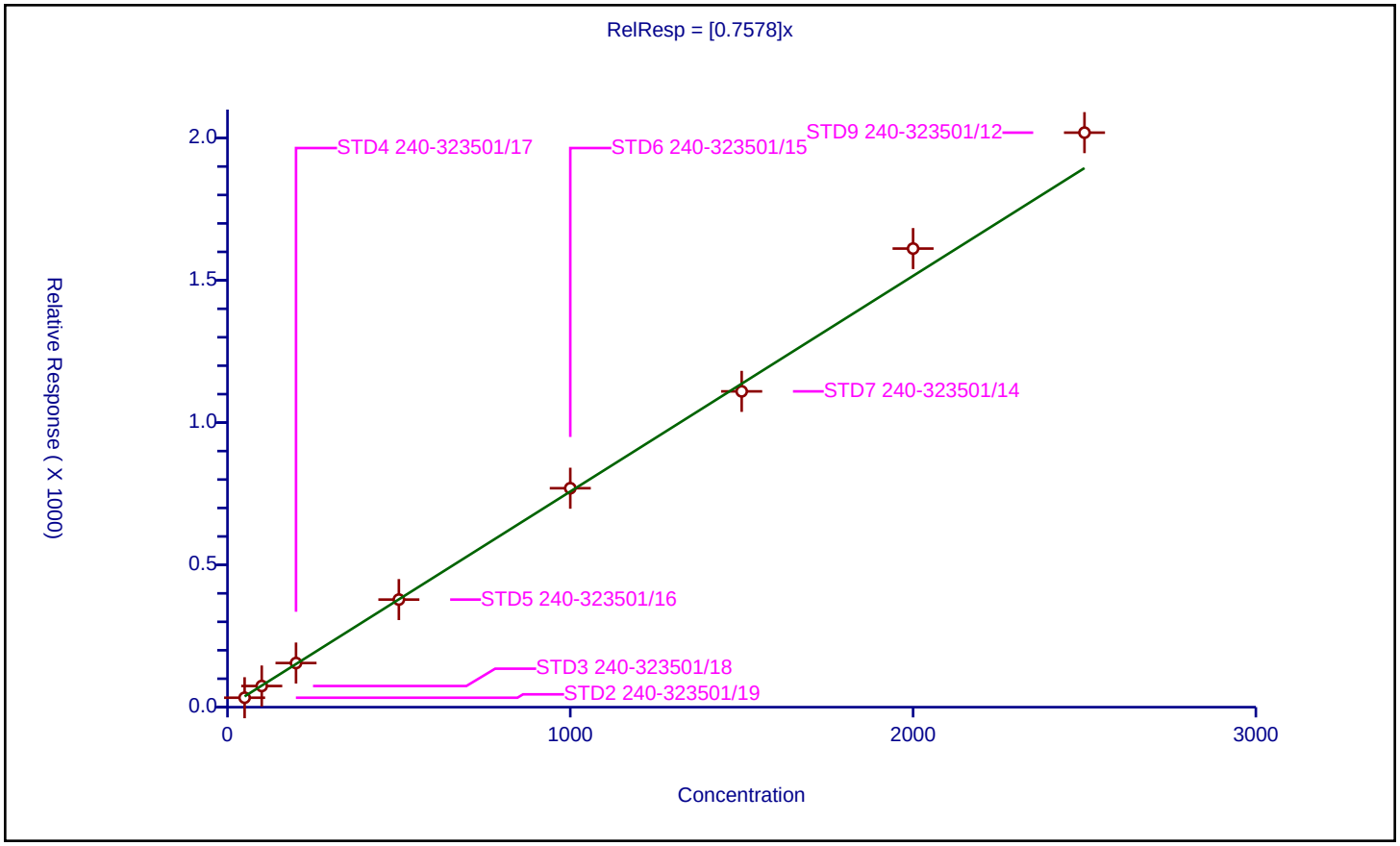
Curve Coefficients

Intercept:	0
Slope:	0.7578

Error Coefficients

Standard Error:	520000
Relative Standard Error:	6.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	33.239346	400.0	174492.0	0.664787	Y
2	STD3 240-323501/18	100.0	74.333009	400.0	162146.0	0.74333	Y
3	STD4 240-323501/17	200.0	155.058217	400.0	170999.0	0.775291	Y
4	STD5 240-323501/16	500.0	378.075025	400.0	181966.0	0.75615	Y
5	STD6 240-323501/15	1000.0	769.404146	400.0	181907.0	0.769404	Y
6	STD7 240-323501/14	1500.0	1109.853794	400.0	208062.0	0.739903	Y
7	STD8 240-323501/13	2000.0	1611.61462	400.0	185697.0	0.805807	Y
8	STD9 240-323501/12	2500.0	2019.093864	400.0	182467.0	0.807638	Y



Calibration / Ethyl methanesulfonate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

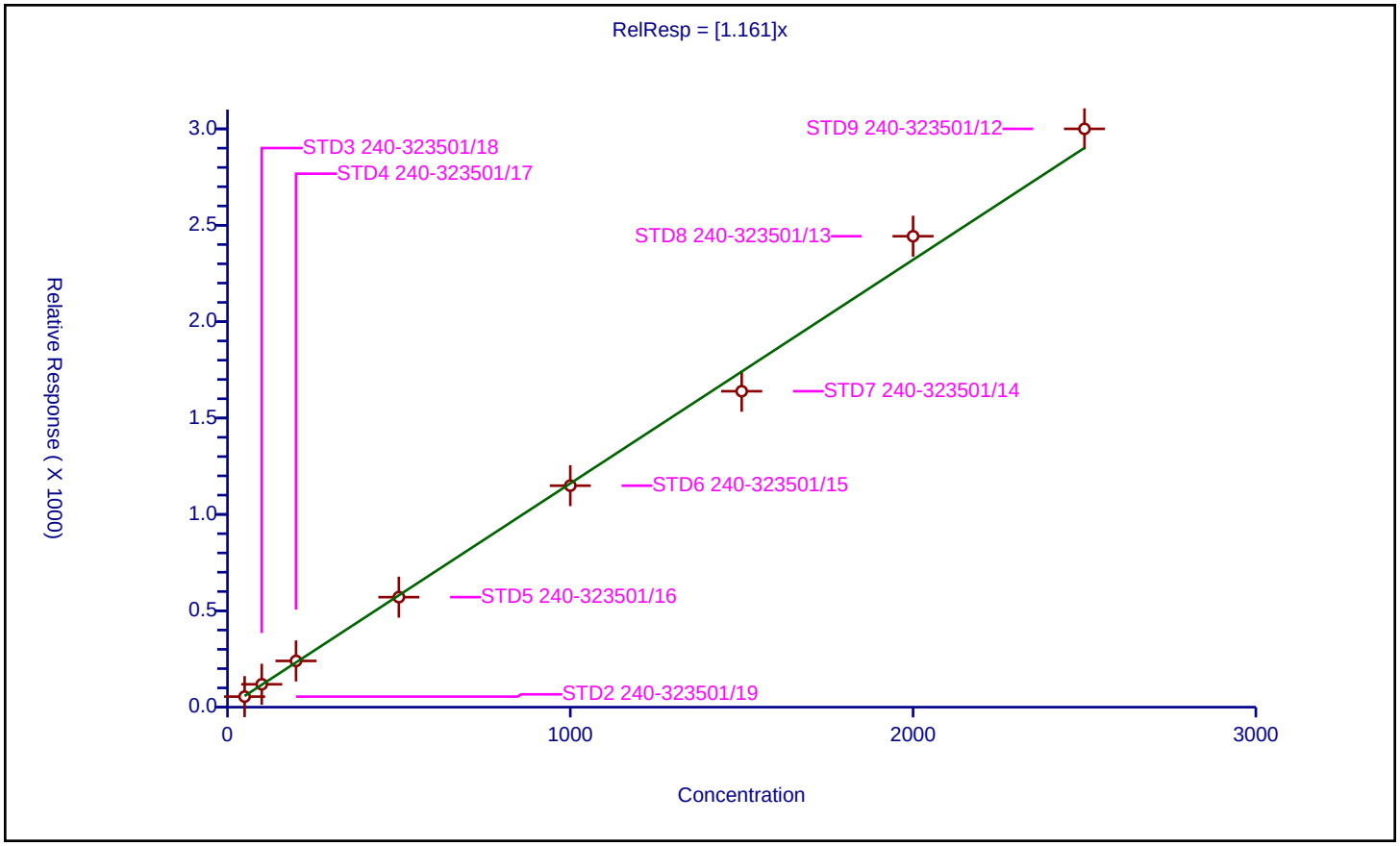
Curve Coefficients

Intercept:	0
Slope:	1.161

Error Coefficients

Standard Error:	777000
Relative Standard Error:	4.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	54.68904	400.0	174492.0	1.093781	Y
2	STD3 240-323501/18	100.0	118.658493	400.0	162146.0	1.186585	Y
3	STD4 240-323501/17	200.0	239.832981	400.0	170999.0	1.199165	Y
4	STD5 240-323501/16	500.0	570.71321	400.0	181966.0	1.141426	Y
5	STD6 240-323501/15	1000.0	1149.127851	400.0	181907.0	1.149128	Y
6	STD7 240-323501/14	1500.0	1638.967231	400.0	208062.0	1.092645	Y
7	STD8 240-323501/13	2000.0	2443.108936	400.0	185697.0	1.221554	Y
8	STD9 240-323501/12	2500.0	3000.178662	400.0	182467.0	1.200071	Y



Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

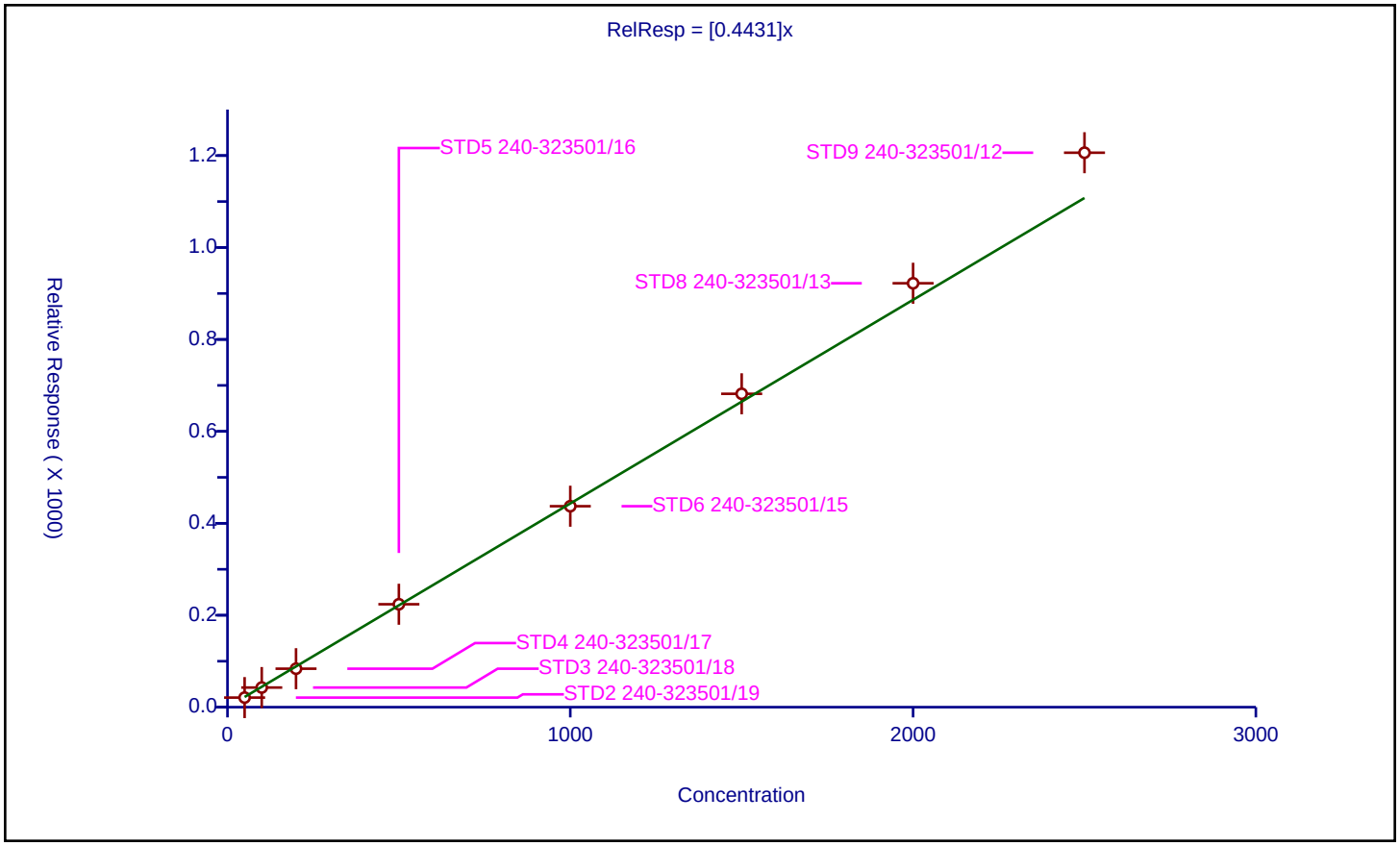
Curve Coefficients

Intercept:	0
Slope:	0.4431

Error Coefficients

Standard Error:	307000
Relative Standard Error:	5.2
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	20.814708	400.0	174492.0	0.416294	Y
2	STD3 240-323501/18	100.0	42.694855	400.0	162146.0	0.426949	Y
3	STD4 240-323501/17	200.0	83.682361	400.0	170999.0	0.418412	Y
4	STD5 240-323501/16	500.0	223.881384	400.0	181966.0	0.447763	Y
5	STD6 240-323501/15	1000.0	437.183836	400.0	181907.0	0.437184	Y
6	STD7 240-323501/14	1500.0	681.750632	400.0	208062.0	0.4545	Y
7	STD8 240-323501/13	2000.0	922.196912	400.0	185697.0	0.461098	Y
8	STD9 240-323501/12	2500.0	1206.234552	400.0	182467.0	0.482494	Y



Calibration / N-Nitrosopyrrolidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

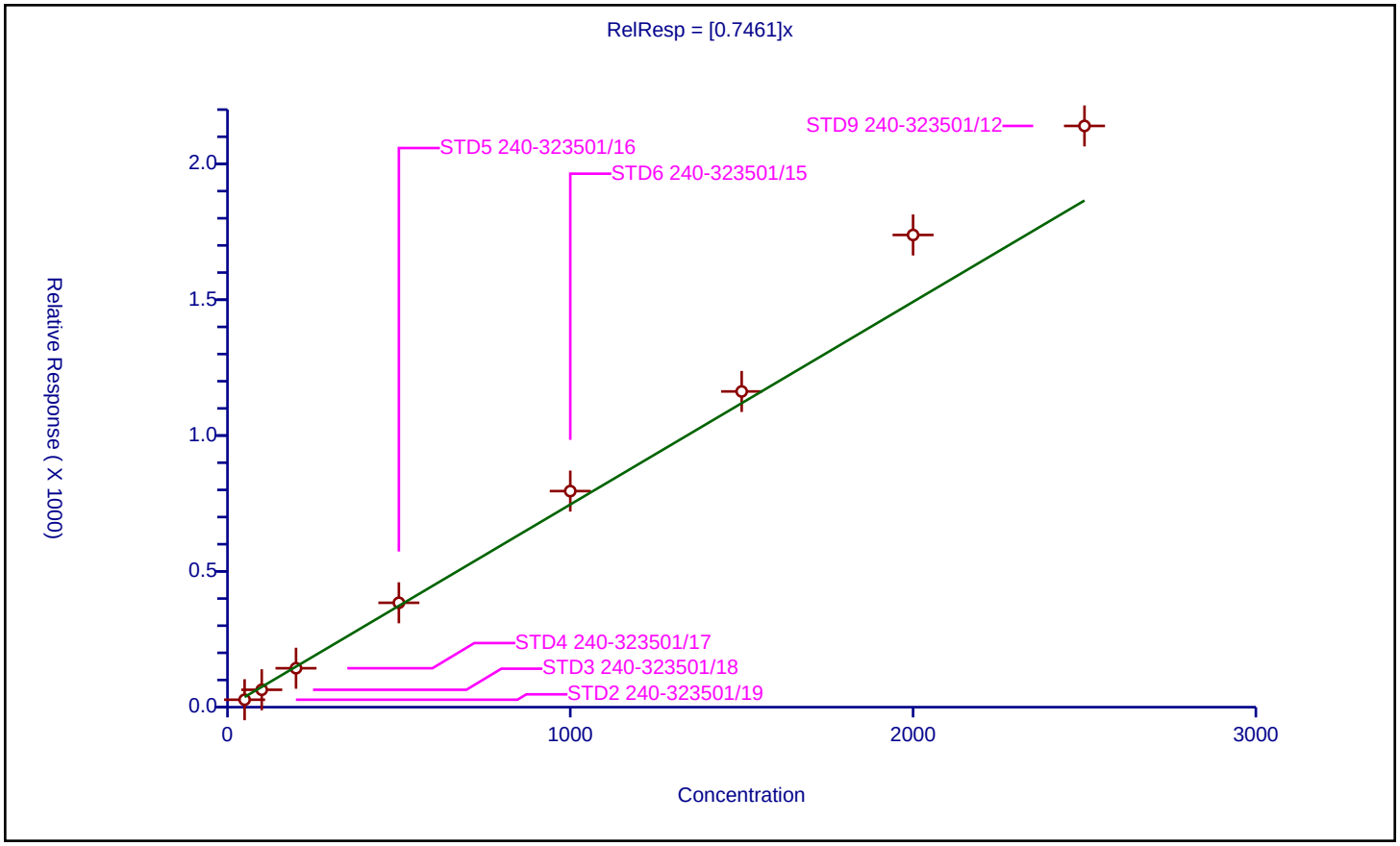
Curve Coefficients

Intercept:	0
Slope:	0.7461

Error Coefficients

Standard Error:	551000
Relative Standard Error:	14.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.976

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	27.384637	400.0	174492.0	0.547693	Y
2	STD3 240-323501/18	100.0	64.053384	400.0	162146.0	0.640534	Y
3	STD4 240-323501/17	200.0	143.282709	400.0	170999.0	0.716414	Y
4	STD5 240-323501/16	500.0	384.311355	400.0	181966.0	0.768623	Y
5	STD6 240-323501/15	1000.0	795.509793	400.0	181907.0	0.79551	Y
6	STD7 240-323501/14	1500.0	1162.347762	400.0	208062.0	0.774899	Y
7	STD8 240-323501/13	2000.0	1738.483659	400.0	185697.0	0.869242	Y
8	STD9 240-323501/12	2500.0	2139.963939	400.0	182467.0	0.855986	Y



Calibration / N-Nitrosomorpholine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

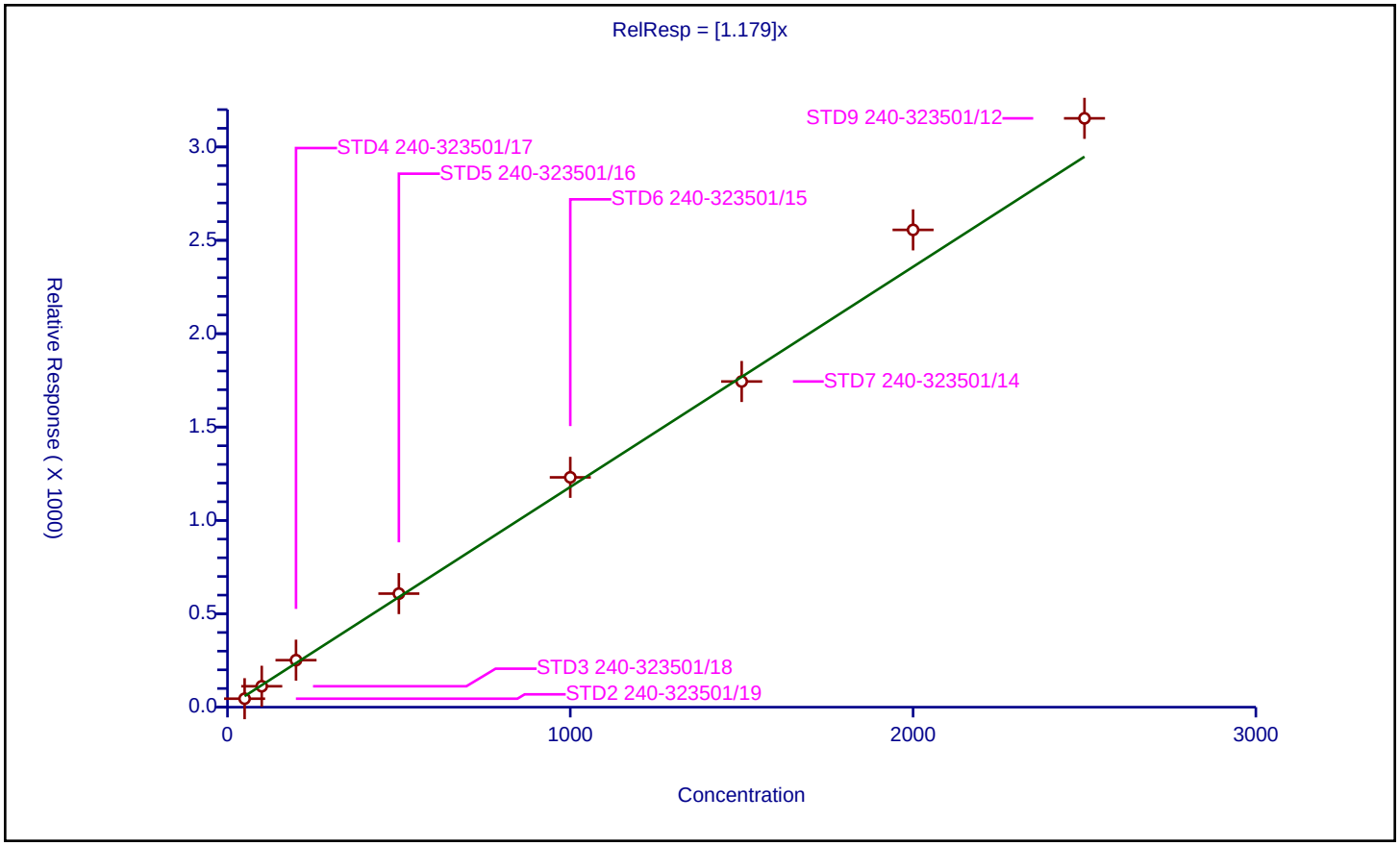
Curve Coefficients

Intercept:	0
Slope:	1.179

Error Coefficients

Standard Error:	818000
Relative Standard Error:	10.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	45.315545	400.0	174492.0	0.906311	Y
2	STD3 240-323501/18	100.0	111.960825	400.0	162146.0	1.119608	Y
3	STD4 240-323501/17	200.0	251.655273	400.0	170999.0	1.258276	Y
4	STD5 240-323501/16	500.0	608.148775	400.0	181966.0	1.216298	Y
5	STD6 240-323501/15	1000.0	1230.7058	400.0	181907.0	1.230706	Y
6	STD7 240-323501/14	1500.0	1744.037835	400.0	208062.0	1.162692	Y
7	STD8 240-323501/13	2000.0	2555.97021	400.0	185697.0	1.277985	Y
8	STD9 240-323501/12	2500.0	3153.223323	400.0	182467.0	1.261289	Y



Calibration / 2-Toluidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

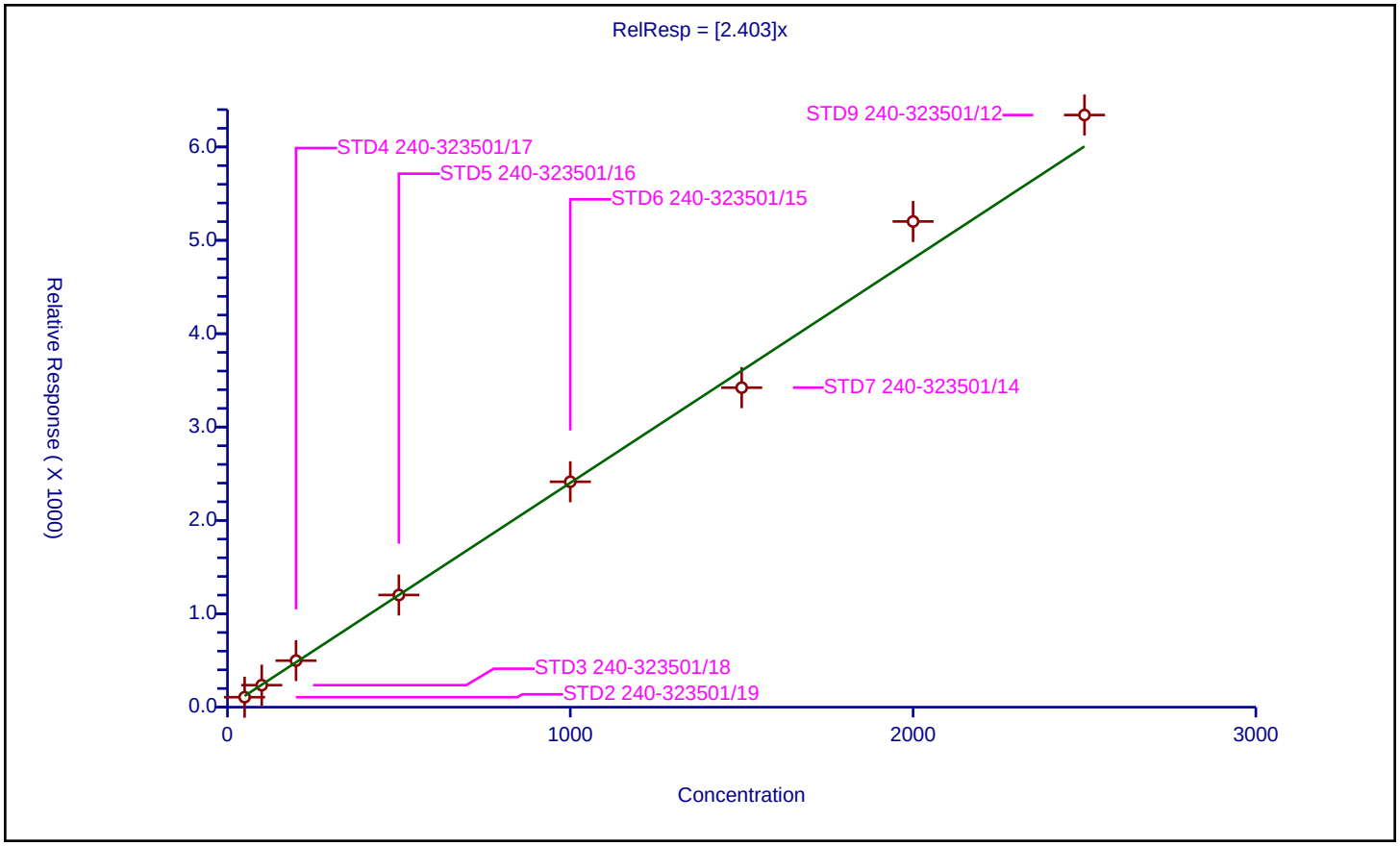
Curve Coefficients

Intercept:	0
Slope:	2.403

Error Coefficients

Standard Error:	1640000
Relative Standard Error:	6.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	106.778534	400.0	174492.0	2.135571	Y
2	STD3 240-323501/18	100.0	235.585213	400.0	162146.0	2.355852	Y
3	STD4 240-323501/17	200.0	498.578354	400.0	170999.0	2.492892	Y
4	STD5 240-323501/16	500.0	1201.305738	400.0	181966.0	2.402611	Y
5	STD6 240-323501/15	1000.0	2414.244641	400.0	181907.0	2.414245	Y
6	STD7 240-323501/14	1500.0	3422.233757	400.0	208062.0	2.281489	Y
7	STD8 240-323501/13	2000.0	5201.843864	400.0	185697.0	2.600922	Y
8	STD9 240-323501/12	2500.0	6342.144059	400.0	182467.0	2.536858	Y



Calibration / N-Nitrosopiperidine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

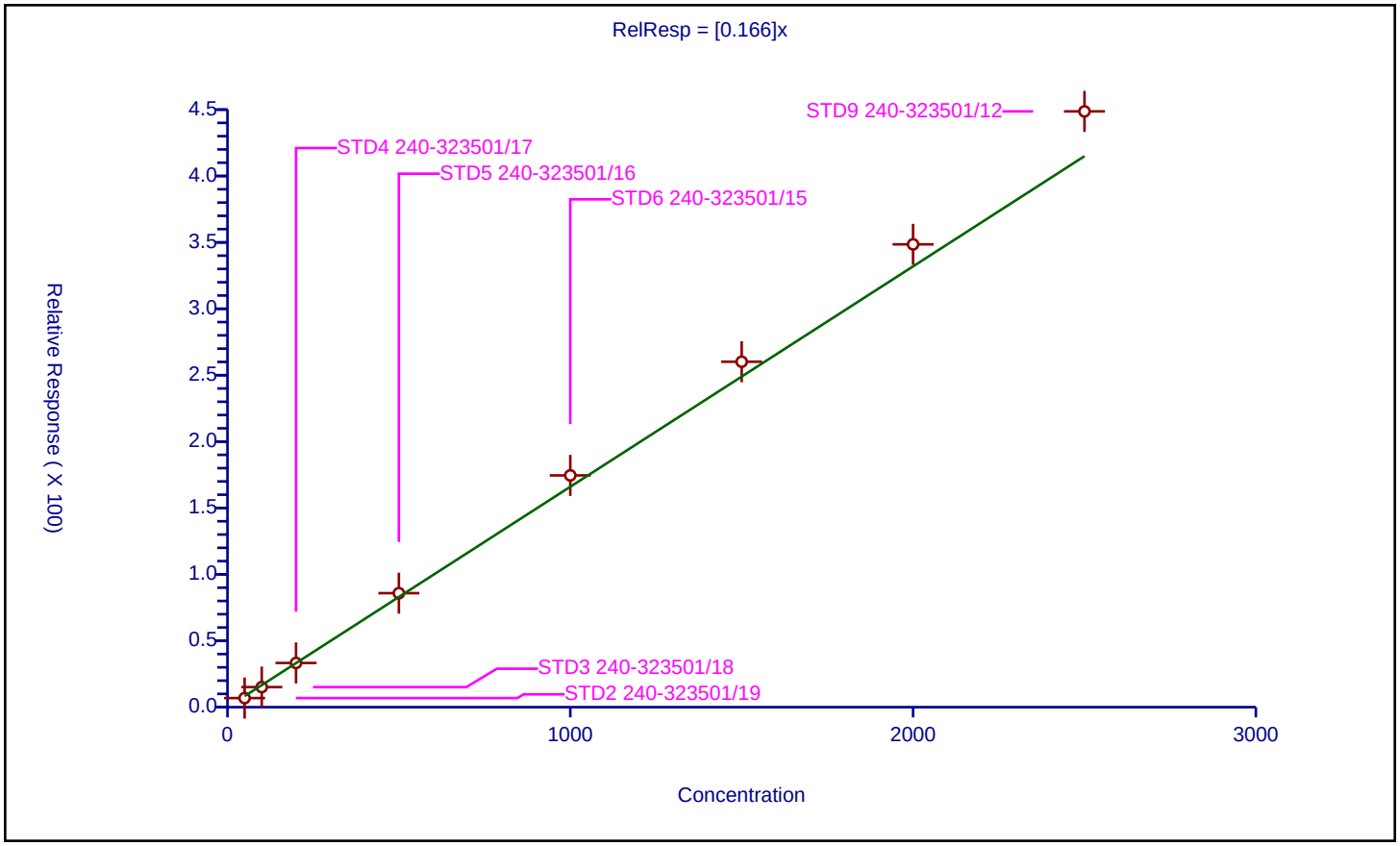
Curve Coefficients

Intercept:	0
Slope:	0.166

Error Coefficients

Standard Error:	543000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	6.848142	400.0	789236.0	0.136963	Y
2	STD3 240-323501/18	100.0	15.102709	400.0	748422.0	0.151027	Y
3	STD4 240-323501/17	200.0	33.283241	400.0	825148.0	0.166416	Y
4	STD5 240-323501/16	500.0	85.836494	400.0	826455.0	0.171673	Y
5	STD6 240-323501/15	1000.0	174.539802	400.0	832413.0	0.17454	Y
6	STD7 240-323501/14	1500.0	260.138143	400.0	921944.0	0.173425	Y
7	STD8 240-323501/13	2000.0	348.532342	400.0	906410.0	0.174266	Y
8	STD9 240-323501/12	2500.0	448.666481	400.0	852069.0	0.179467	Y



Calibration / o,o',o''-Triethylphosphorothioate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

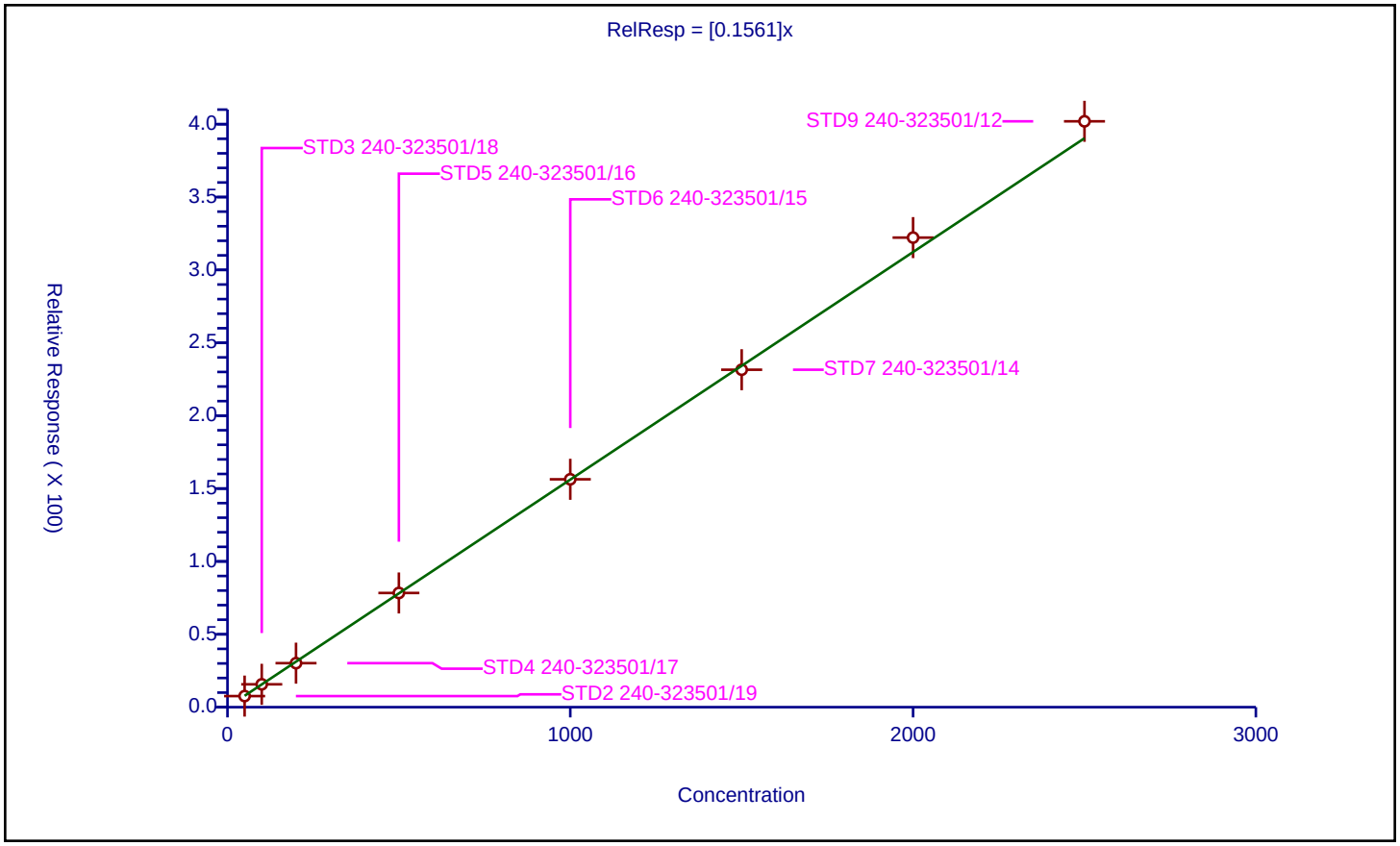
Curve Coefficients

Intercept:	0
Slope:	0.1561

Error Coefficients

Standard Error:	491000
Relative Standard Error:	2.3
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	7.607357	400.0	789236.0	0.152147	Y
2	STD3 240-323501/18	100.0	15.674045	400.0	748422.0	0.15674	Y
3	STD4 240-323501/17	200.0	30.1861	400.0	825148.0	0.15093	Y
4	STD5 240-323501/16	500.0	78.355869	400.0	826455.0	0.156712	Y
5	STD6 240-323501/15	1000.0	156.351715	400.0	832413.0	0.156352	Y
6	STD7 240-323501/14	1500.0	231.517316	400.0	921944.0	0.154345	Y
7	STD8 240-323501/13	2000.0	322.18047	400.0	906410.0	0.16109	Y
8	STD9 240-323501/12	2500.0	401.962752	400.0	852069.0	0.160785	Y



Calibration / alpha,alpha-Dimethyl phenethylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

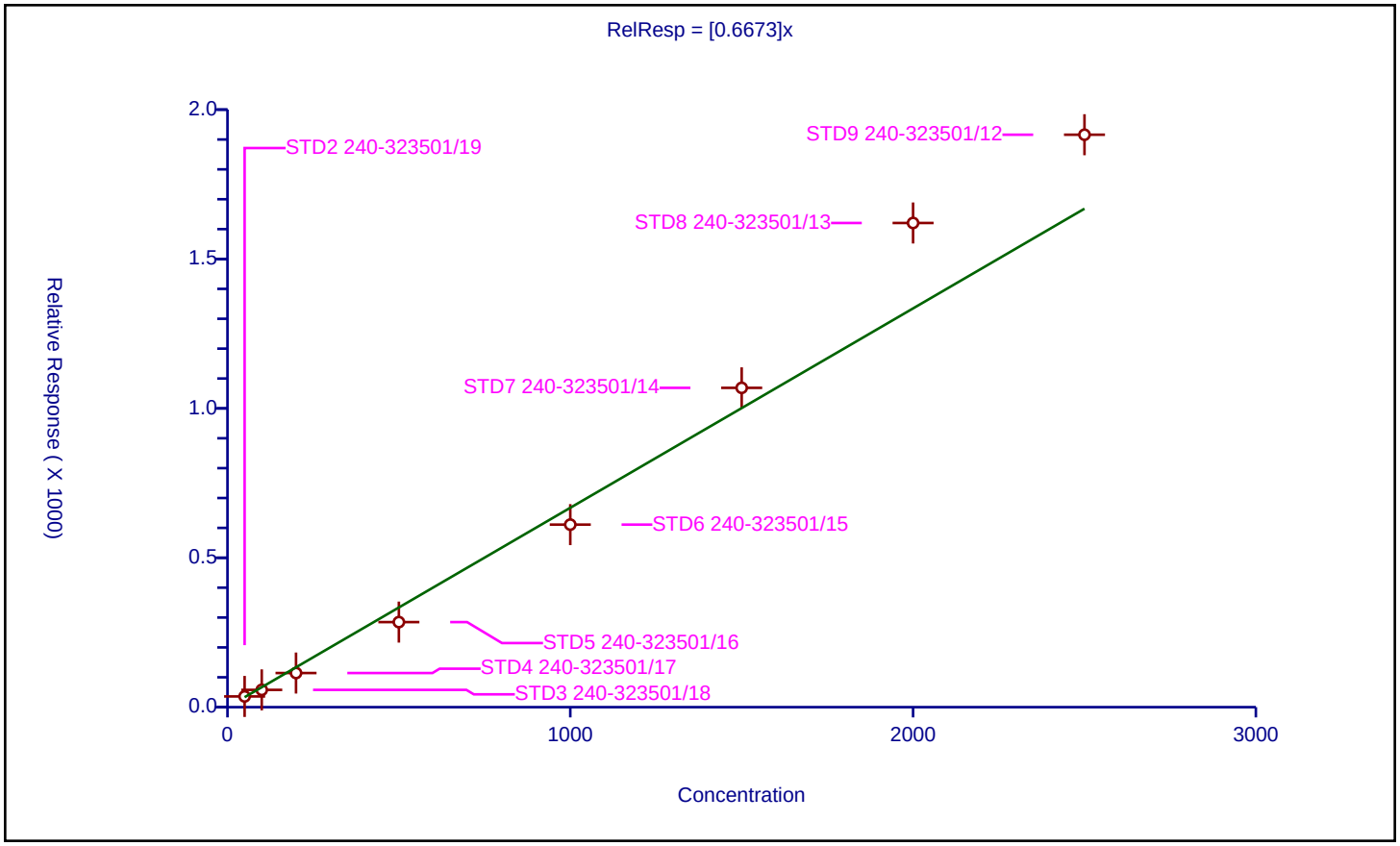
Curve Coefficients

Intercept:	0
Slope:	0.6673

Error Coefficients

Standard Error:	2340000
Relative Standard Error:	14.4
Correlation Coefficient:	0.985
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	35.940074	400.0	789236.0	0.718801	Y
2	STD3 240-323501/18	100.0	57.867887	400.0	748422.0	0.578679	Y
3	STD4 240-323501/17	200.0	114.2898	400.0	825148.0	0.571449	Y
4	STD5 240-323501/16	500.0	284.747264	400.0	826455.0	0.569495	Y
5	STD6 240-323501/15	1000.0	610.98325	400.0	832413.0	0.610983	Y
6	STD7 240-323501/14	1500.0	1068.686167	400.0	921944.0	0.712457	Y
7	STD8 240-323501/13	2000.0	1620.543463	400.0	906410.0	0.810272	Y
8	STD9 240-323501/12	2500.0	1915.943897	400.0	852069.0	0.766378	Y



Calibration / Hexachloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

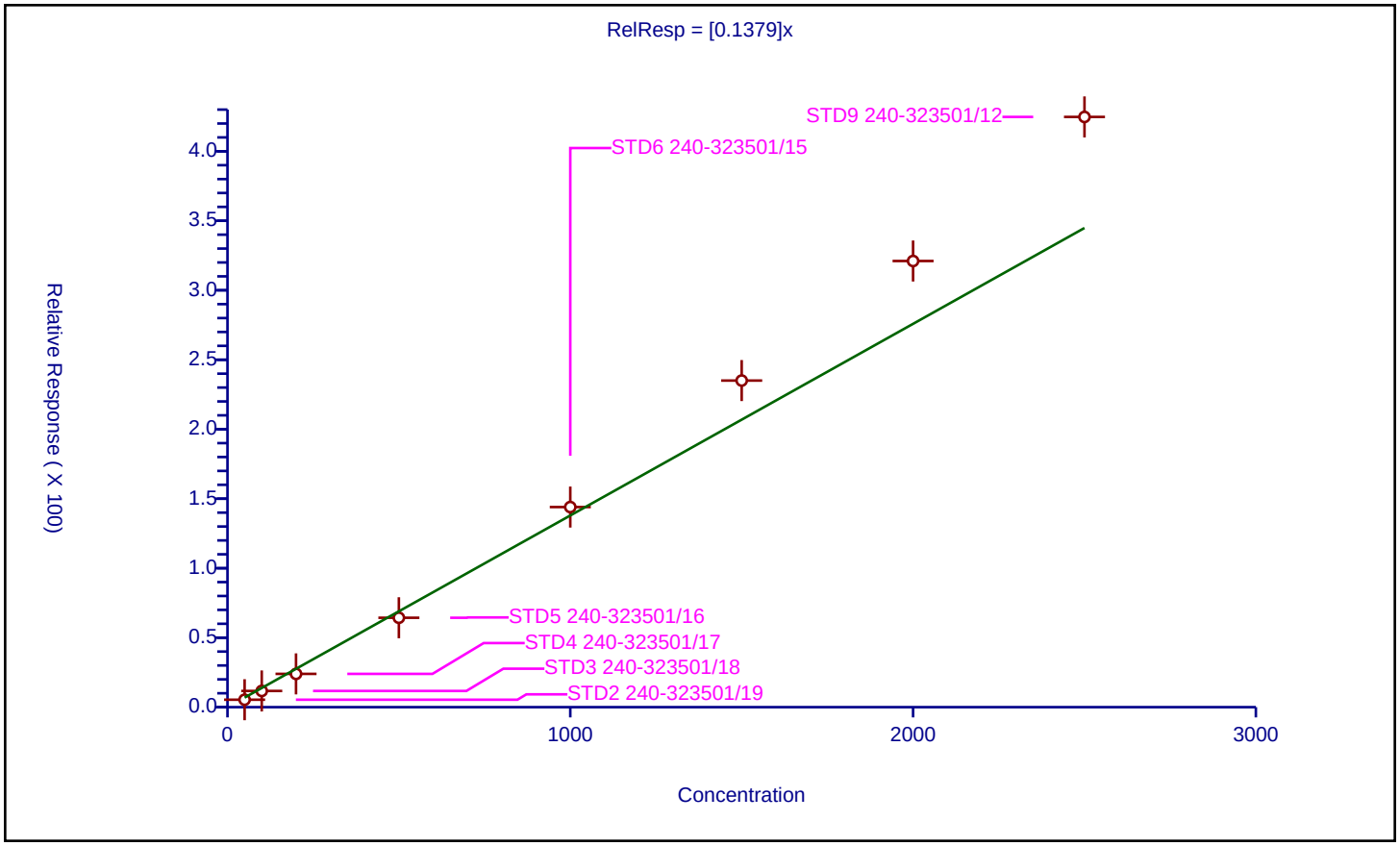
Curve Coefficients

Intercept:	0
Slope:	0.1379

Error Coefficients

Standard Error:	500000
Relative Standard Error:	16.7
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.968

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	5.363668	400.0	789236.0	0.107273	Y
2	STD3 240-323501/18	100.0	11.664542	400.0	748422.0	0.116645	Y
3	STD4 240-323501/17	200.0	23.94625	400.0	825148.0	0.119731	Y
4	STD5 240-323501/16	500.0	64.330181	400.0	826455.0	0.12866	Y
5	STD6 240-323501/15	1000.0	143.988141	400.0	832413.0	0.143988	Y
6	STD7 240-323501/14	1500.0	235.024687	400.0	921944.0	0.156683	Y
7	STD8 240-323501/13	2000.0	321.05118	400.0	906410.0	0.160526	Y
8	STD9 240-323501/12	2500.0	424.723819	400.0	852069.0	0.16989	Y



Calibration / N-Nitrosodi-n-butylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

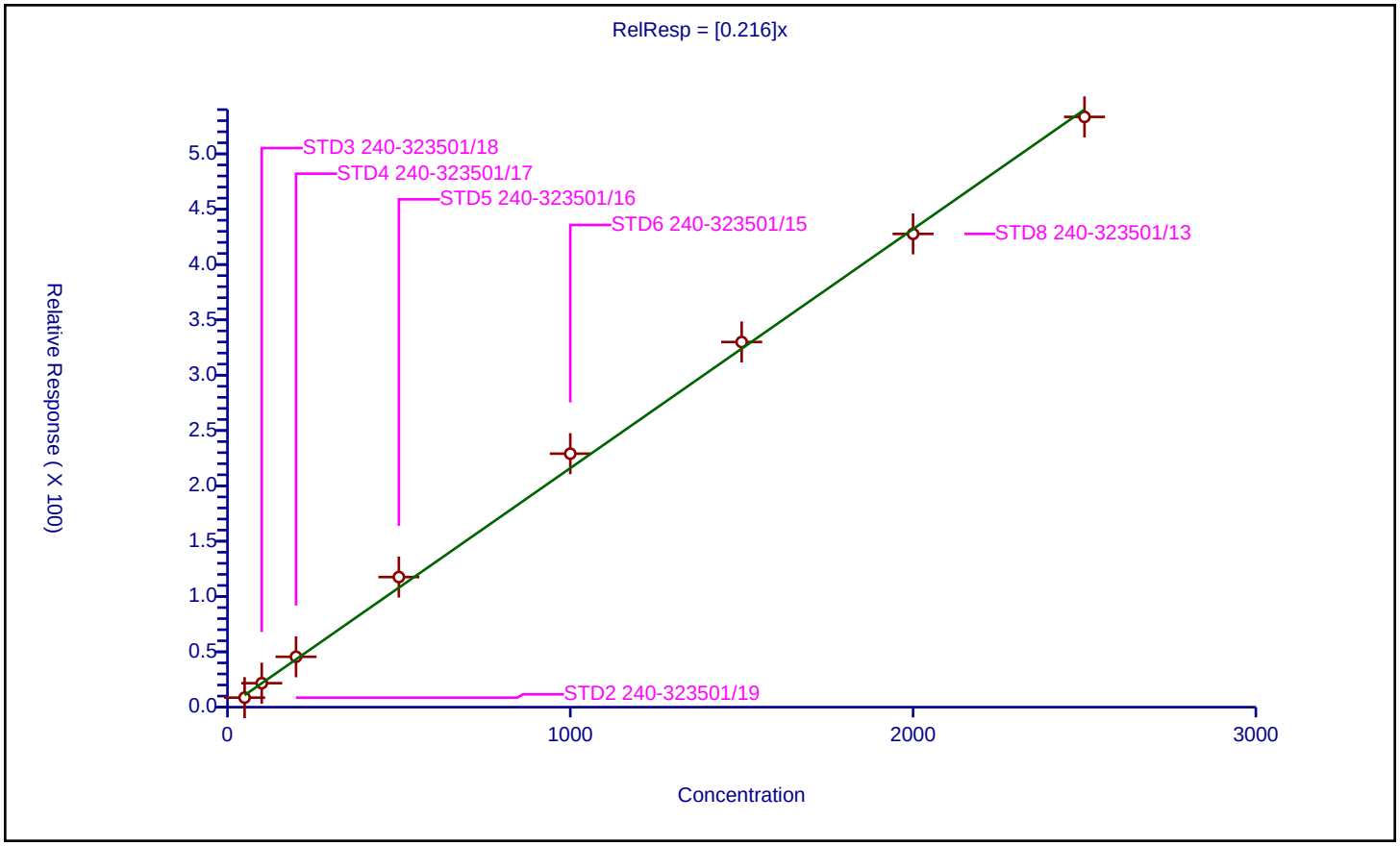
Curve Coefficients

Intercept:	0
Slope:	0.216

Error Coefficients

Standard Error:	666000
Relative Standard Error:	9.0
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	8.607818	400.0	789236.0	0.172156	Y
2	STD3 240-323501/18	100.0	21.665852	400.0	748422.0	0.216659	Y
3	STD4 240-323501/17	200.0	45.538013	400.0	825148.0	0.22769	Y
4	STD5 240-323501/16	500.0	117.577848	400.0	826455.0	0.235156	Y
5	STD6 240-323501/15	1000.0	229.085322	400.0	832413.0	0.229085	Y
6	STD7 240-323501/14	1500.0	329.970584	400.0	921944.0	0.21998	Y
7	STD8 240-323501/13	2000.0	427.700489	400.0	906410.0	0.21385	Y
8	STD9 240-323501/12	2500.0	533.402811	400.0	852069.0	0.213361	Y



Calibration / Quinoline

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

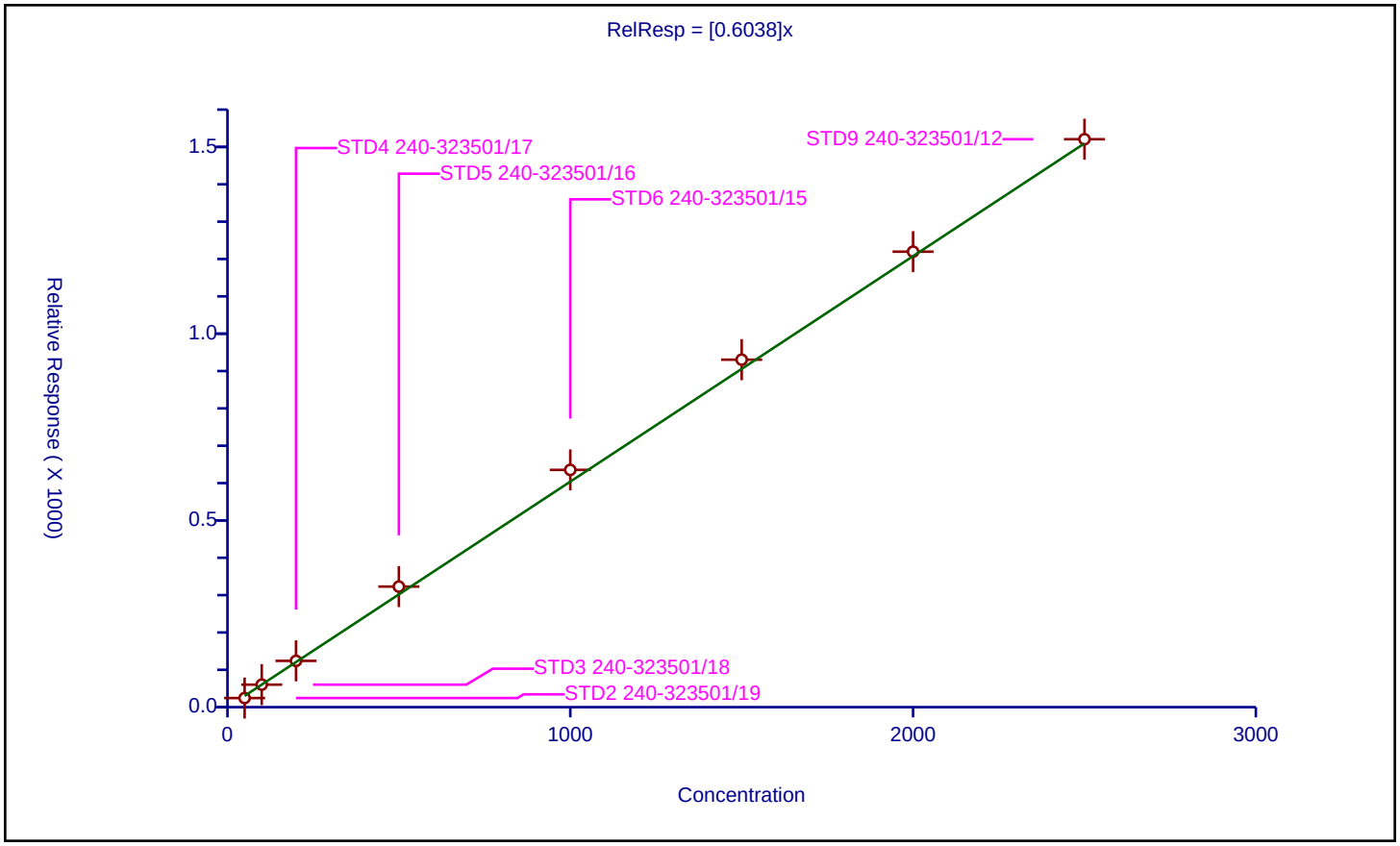
Curve Coefficients

Intercept:	0
Slope:	0.6038

Error Coefficients

Standard Error:	1890000
Relative Standard Error:	8.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	24.395745	400.0	789236.0	0.487915	Y
2	STD3 240-323501/18	100.0	60.335479	400.0	748422.0	0.603355	Y
3	STD4 240-323501/17	200.0	123.94528	400.0	825148.0	0.619726	Y
4	STD5 240-323501/16	500.0	322.890418	400.0	826455.0	0.645781	Y
5	STD6 240-323501/15	1000.0	635.350481	400.0	832413.0	0.63535	Y
6	STD7 240-323501/14	1500.0	930.412693	400.0	921944.0	0.620275	Y
7	STD8 240-323501/13	2000.0	1219.646297	400.0	906410.0	0.609823	Y
8	STD9 240-323501/12	2500.0	1520.713933	400.0	852069.0	0.608286	Y



Calibration / p-Phenylene diamine

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

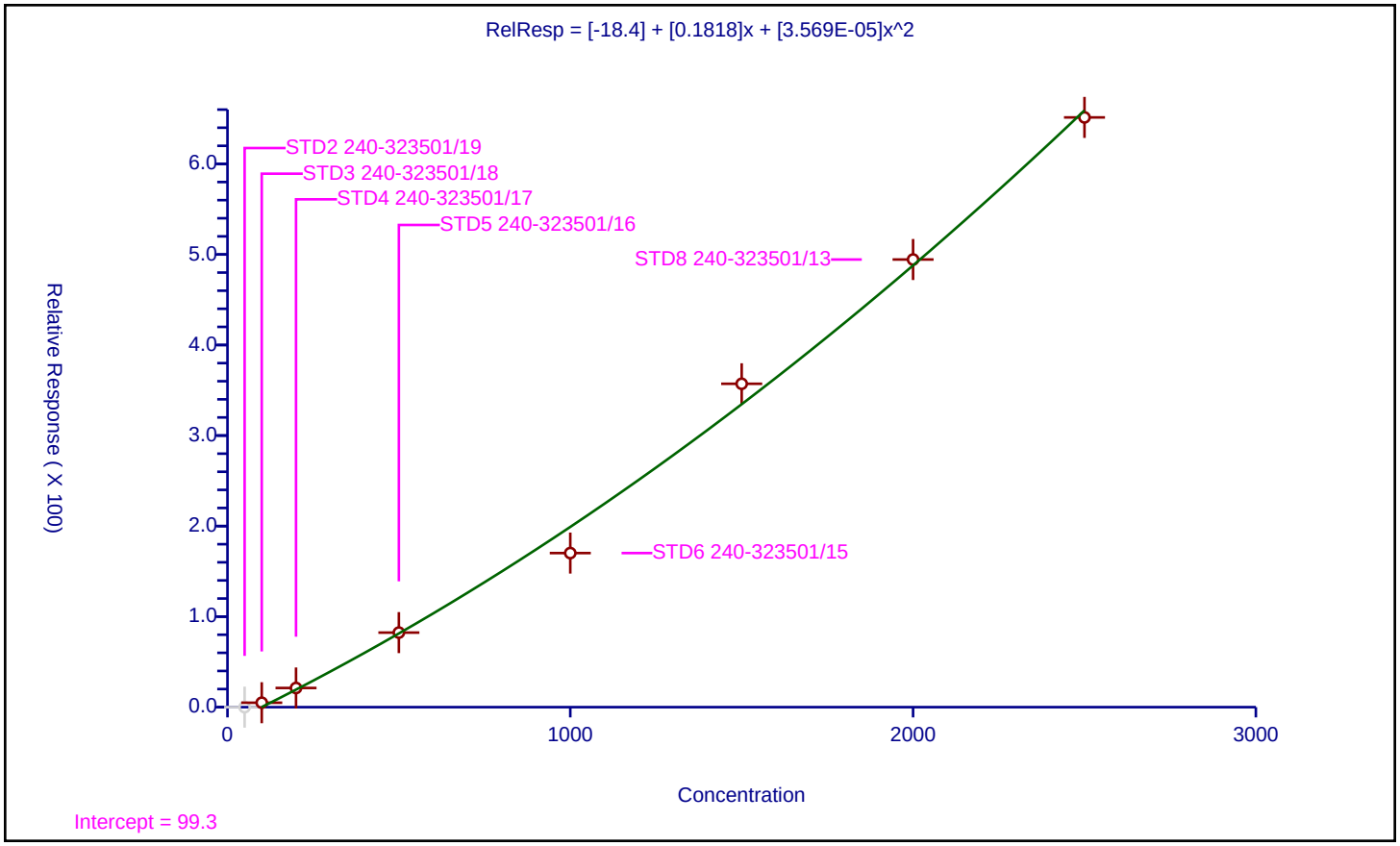
Curve Coefficients

Intercept:	-18.4
Slope:	0.1818
Second Order:	3.569E-05

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	14.3
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	789236.0	0.0	N
2	STD3 240-323501/18	100.0	4.899375	400.0	748422.0	0.048994	Y
3	STD4 240-323501/17	200.0	21.190865	400.0	825148.0	0.105954	Y
4	STD5 240-323501/16	500.0	82.347375	400.0	826455.0	0.164695	Y
5	STD6 240-323501/15	1000.0	170.192921	400.0	832413.0	0.170193	Y
6	STD7 240-323501/14	1500.0	357.17267	400.0	921944.0	0.238115	Y
7	STD8 240-323501/13	2000.0	494.438058	400.0	906410.0	0.247219	Y
8	STD9 240-323501/12	2500.0	651.368845	400.0	852069.0	0.260548	Y



Calibration / Safrole, Total

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

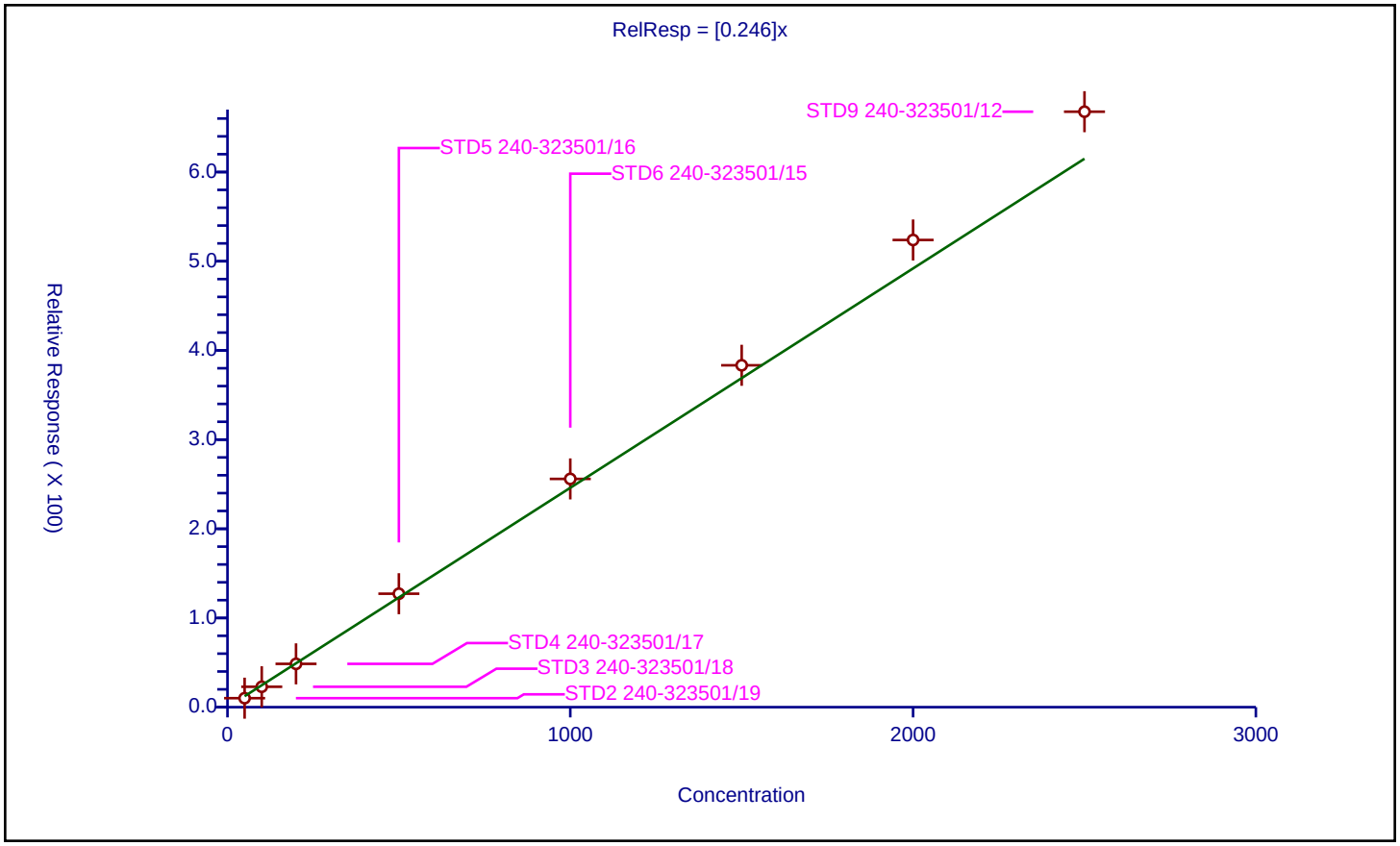
Curve Coefficients

Intercept:	0
Slope:	0.246

Error Coefficients

Standard Error:	808000
Relative Standard Error:	8.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	10.068978	400.0	789236.0	0.20138	Y
2	STD3 240-323501/18	100.0	22.861434	400.0	748422.0	0.228614	Y
3	STD4 240-323501/17	200.0	48.569226	400.0	825148.0	0.242846	Y
4	STD5 240-323501/16	500.0	127.202086	400.0	826455.0	0.254404	Y
5	STD6 240-323501/15	1000.0	255.937377	400.0	832413.0	0.255937	Y
6	STD7 240-323501/14	1500.0	383.304843	400.0	921944.0	0.255537	Y
7	STD8 240-323501/13	2000.0	523.823877	400.0	906410.0	0.261912	Y
8	STD9 240-323501/12	2500.0	667.649686	400.0	852069.0	0.26706	Y



Calibration / Isosafrole Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

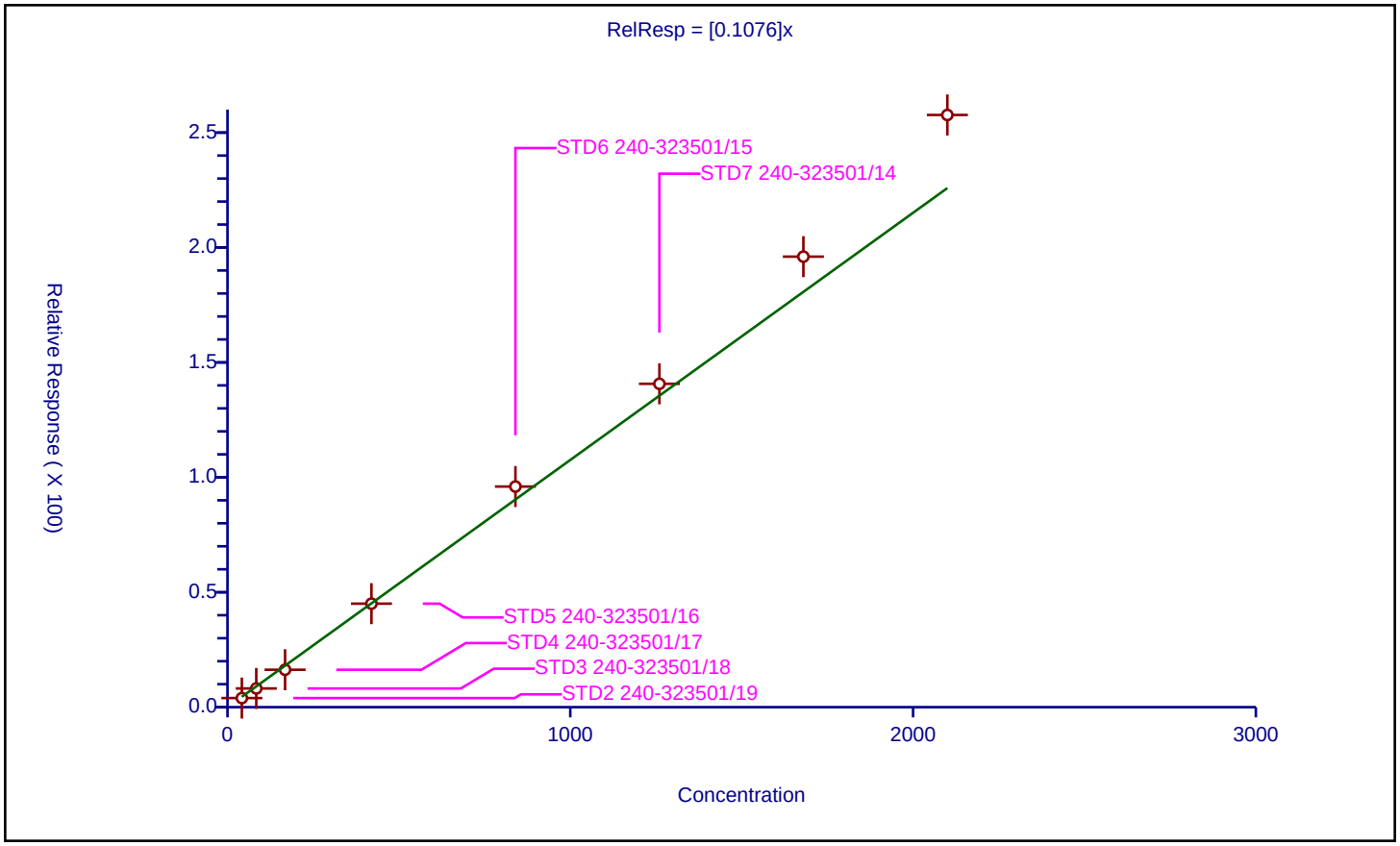
Curve Coefficients

Intercept:	0
Slope:	0.1076

Error Coefficients

Standard Error:	148000
Relative Standard Error:	9.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	42.0	3.950145	400.0	370518.0	0.094051	Y
2	STD3 240-323501/18	84.0	8.138319	400.0	374033.0	0.096885	Y
3	STD4 240-323501/17	168.0	16.285142	400.0	413604.0	0.096935	Y
4	STD5 240-323501/16	420.0	45.037947	400.0	403331.0	0.107233	Y
5	STD6 240-323501/15	840.0	95.993105	400.0	406075.0	0.114278	Y
6	STD7 240-323501/14	1260.0	140.69163	400.0	451137.0	0.11166	Y
7	STD8 240-323501/13	1680.0	196.026298	400.0	441553.0	0.116682	Y
8	STD9 240-323501/12	2100.0	257.65955	400.0	409528.0	0.122695	Y



Calibration / Isosafrole Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

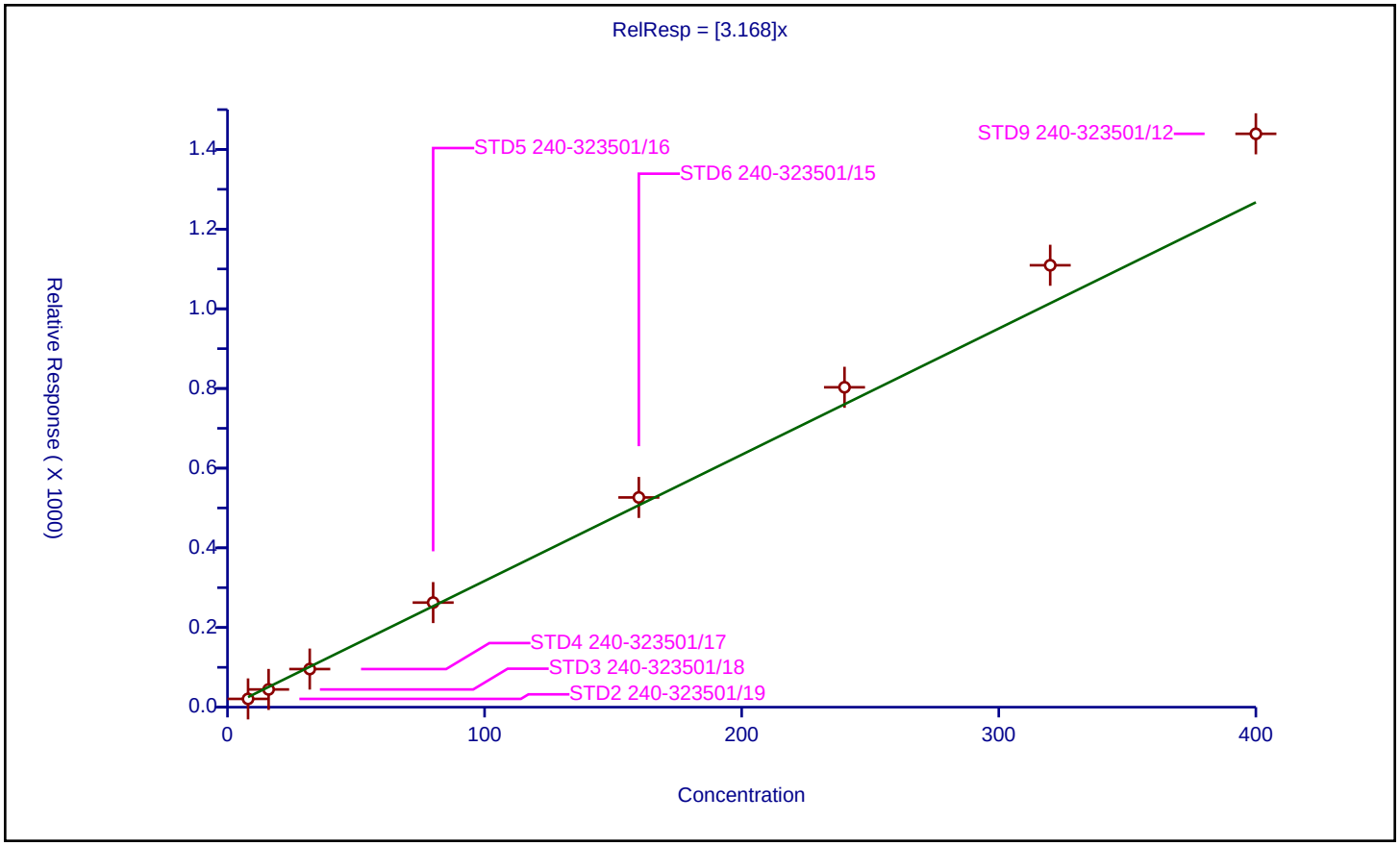
Curve Coefficients

Intercept:	0
Slope:	3.168

Error Coefficients

Standard Error:	832000
Relative Standard Error:	11.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	8.0	20.734215	400.0	370518.0	2.591777	Y
2	STD3 240-323501/18	16.0	44.523344	400.0	374033.0	2.782709	Y
3	STD4 240-323501/17	32.0	95.643176	400.0	413604.0	2.988849	Y
4	STD5 240-323501/16	80.0	262.521849	400.0	403331.0	3.281523	Y
5	STD6 240-323501/15	160.0	526.428862	400.0	406075.0	3.29018	Y
6	STD7 240-323501/14	240.0	802.985346	400.0	451137.0	3.345772	Y
7	STD8 240-323501/13	320.0	1109.278388	400.0	441553.0	3.466495	Y
8	STD9 240-323501/12	400.0	1439.303784	400.0	409528.0	3.598259	Y



Calibration / 1-Chloronaphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

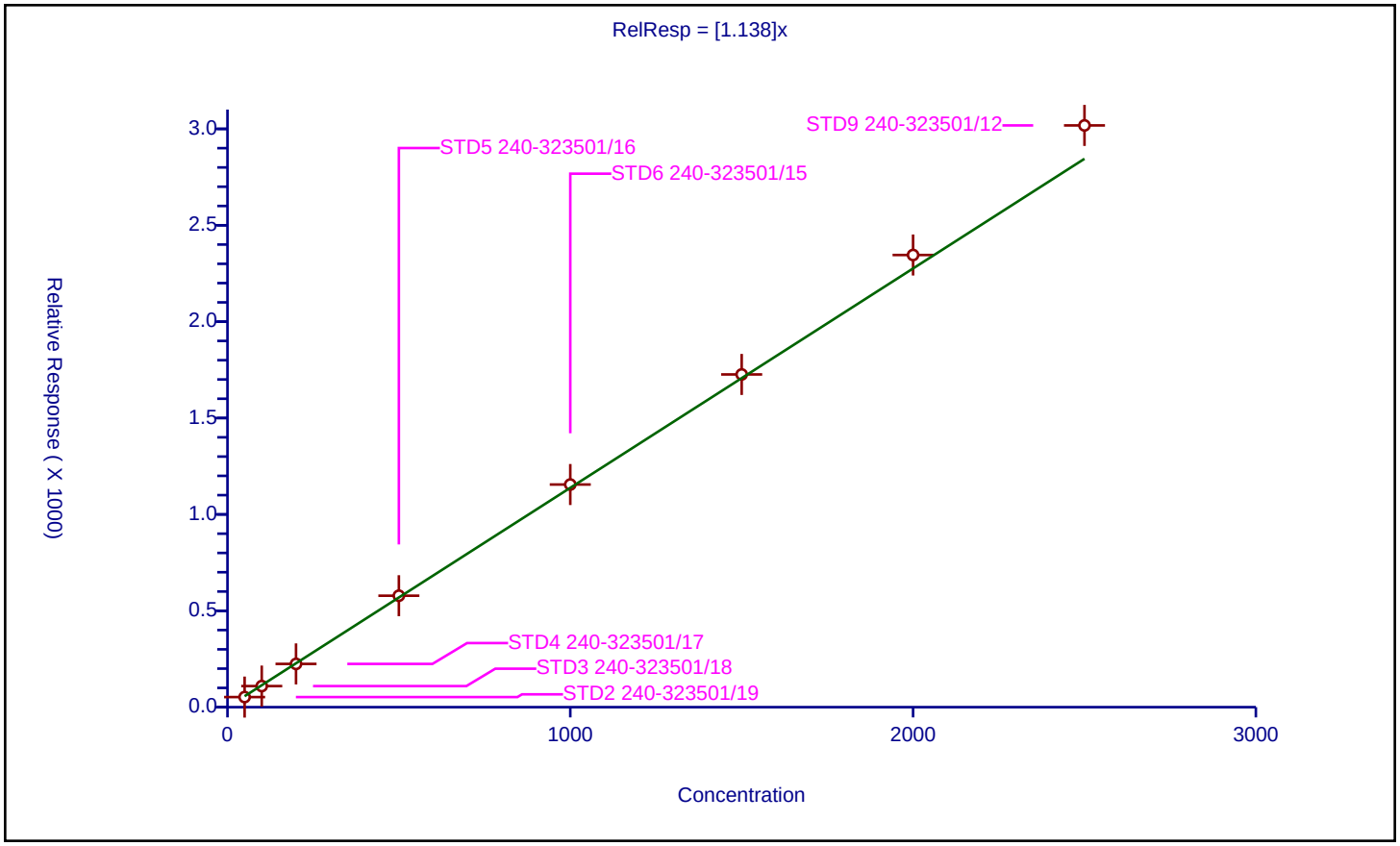
Curve Coefficients

Intercept:	0
Slope:	1.138

Error Coefficients

Standard Error:	1760000
Relative Standard Error:	4.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	52.285719	400.0	370518.0	1.045714	Y
2	STD3 240-323501/18	100.0	109.353987	400.0	374033.0	1.09354	Y
3	STD4 240-323501/17	200.0	224.439802	400.0	413604.0	1.122199	Y
4	STD5 240-323501/16	500.0	578.180204	400.0	403331.0	1.15636	Y
5	STD6 240-323501/15	1000.0	1155.006341	400.0	406075.0	1.155006	Y
6	STD7 240-323501/14	1500.0	1726.116014	400.0	451137.0	1.150744	Y
7	STD8 240-323501/13	2000.0	2345.761437	400.0	441553.0	1.172881	Y
8	STD9 240-323501/12	2500.0	3018.000234	400.0	409528.0	1.2072	Y



Calibration / 1,4-Naphthoquinone

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

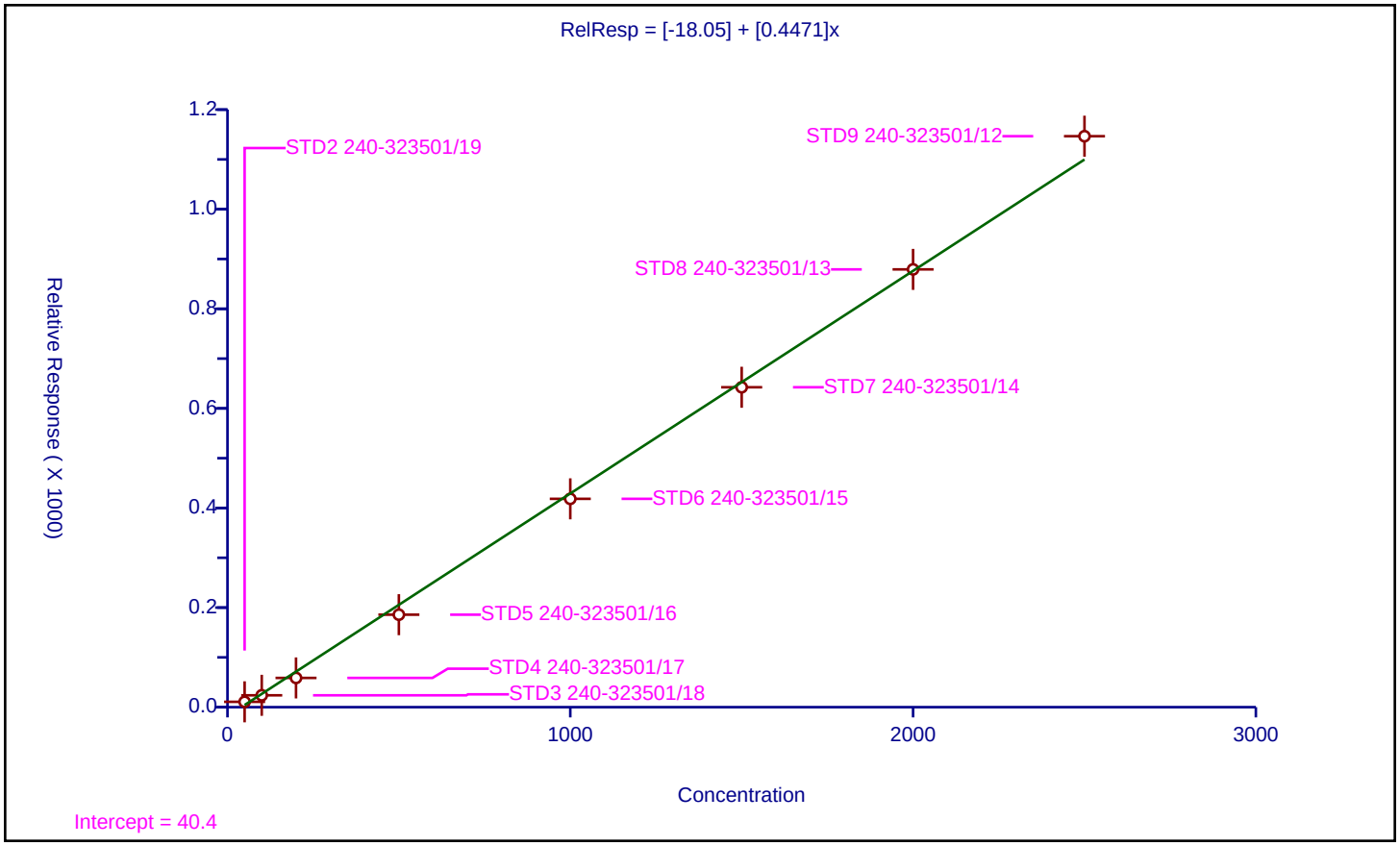
Curve Coefficients

Intercept:	-18.05
Slope:	0.4471

Error Coefficients

Standard Error:	714000
Relative Standard Error:	14.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	10.735241	400.0	370518.0	0.214705	Y
2	STD3 240-323501/18	100.0	23.823566	400.0	374033.0	0.238236	Y
3	STD4 240-323501/17	200.0	58.693823	400.0	413604.0	0.293469	Y
4	STD5 240-323501/16	500.0	185.737273	400.0	403331.0	0.371475	Y
5	STD6 240-323501/15	1000.0	418.348335	400.0	406075.0	0.418348	Y
6	STD7 240-323501/14	1500.0	642.39998	400.0	451137.0	0.428267	Y
7	STD8 240-323501/13	2000.0	879.145199	400.0	441553.0	0.439573	Y
8	STD9 240-323501/12	2500.0	1146.598035	400.0	409528.0	0.458639	Y



Calibration / 1,4-Dinitrobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

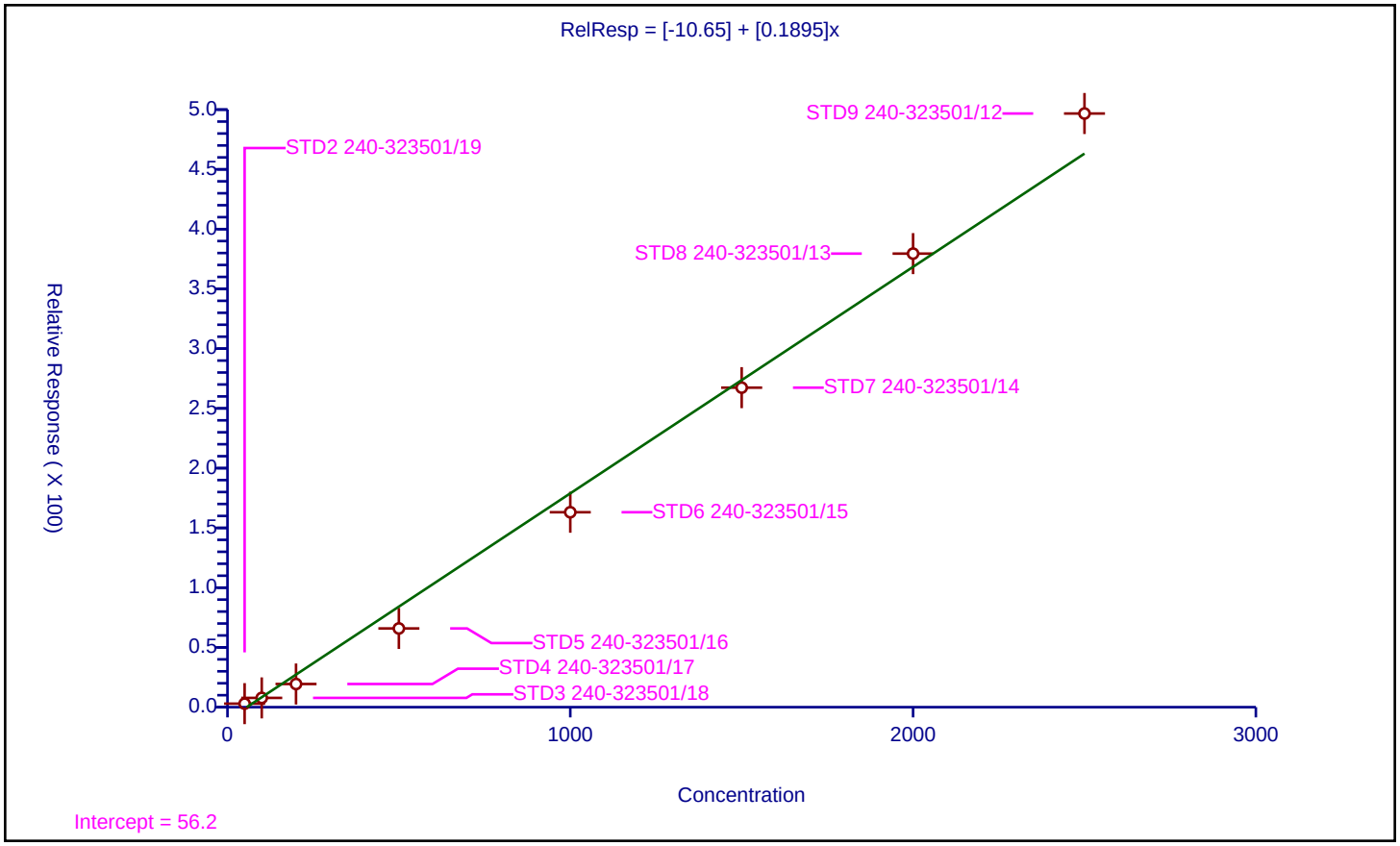
Curve Coefficients

Intercept:	-10.65
Slope:	0.1895

Error Coefficients

Standard Error:	305000
Relative Standard Error:	21.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	2.952623	400.0	370518.0	0.059052	Y
2	STD3 240-323501/18	100.0	7.74691	400.0	374033.0	0.077469	Y
3	STD4 240-323501/17	200.0	19.376022	400.0	413604.0	0.09688	Y
4	STD5 240-323501/16	500.0	65.861538	400.0	403331.0	0.131723	Y
5	STD6 240-323501/15	1000.0	163.112725	400.0	406075.0	0.163113	Y
6	STD7 240-323501/14	1500.0	267.351159	400.0	451137.0	0.178234	Y
7	STD8 240-323501/13	2000.0	379.505971	400.0	441553.0	0.189753	Y
8	STD9 240-323501/12	2500.0	496.734778	400.0	409528.0	0.198694	Y



Calibration / Pentachlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

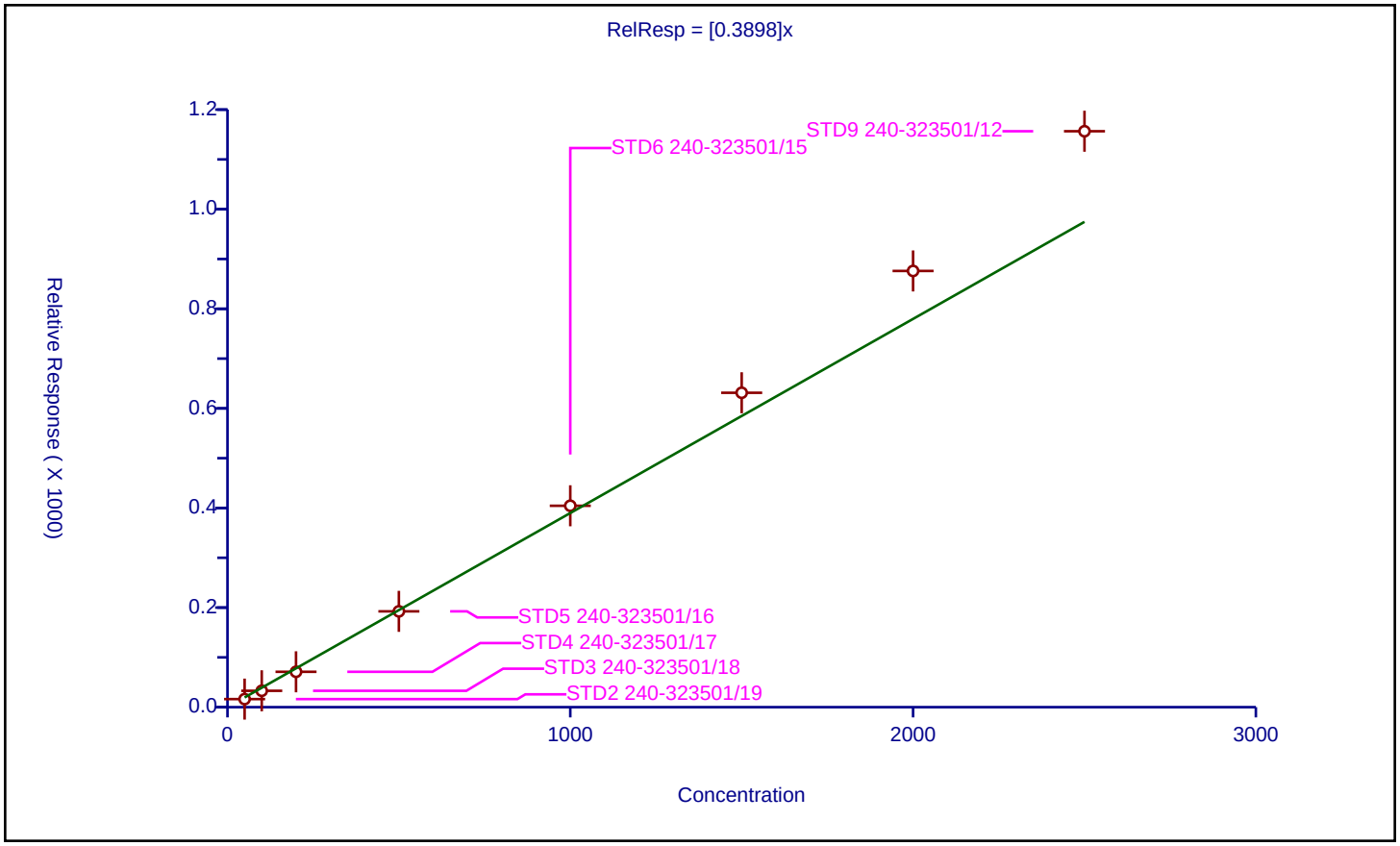
Curve Coefficients

Intercept:	0
Slope:	0.3898

Error Coefficients

Standard Error:	660000
Relative Standard Error:	13.0
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.980

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	16.198943	400.0	370518.0	0.323979	Y
2	STD3 240-323501/18	100.0	32.86448	400.0	374033.0	0.328645	Y
3	STD4 240-323501/17	200.0	71.02736	400.0	413604.0	0.355137	Y
4	STD5 240-323501/16	500.0	192.435493	400.0	403331.0	0.384871	Y
5	STD6 240-323501/15	1000.0	404.434649	400.0	406075.0	0.404435	Y
6	STD7 240-323501/14	1500.0	631.375392	400.0	451137.0	0.420917	Y
7	STD8 240-323501/13	2000.0	876.020772	400.0	441553.0	0.43801	Y
8	STD9 240-323501/12	2500.0	1156.573421	400.0	409528.0	0.462629	Y



Calibration / 1-Naphthylamine

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

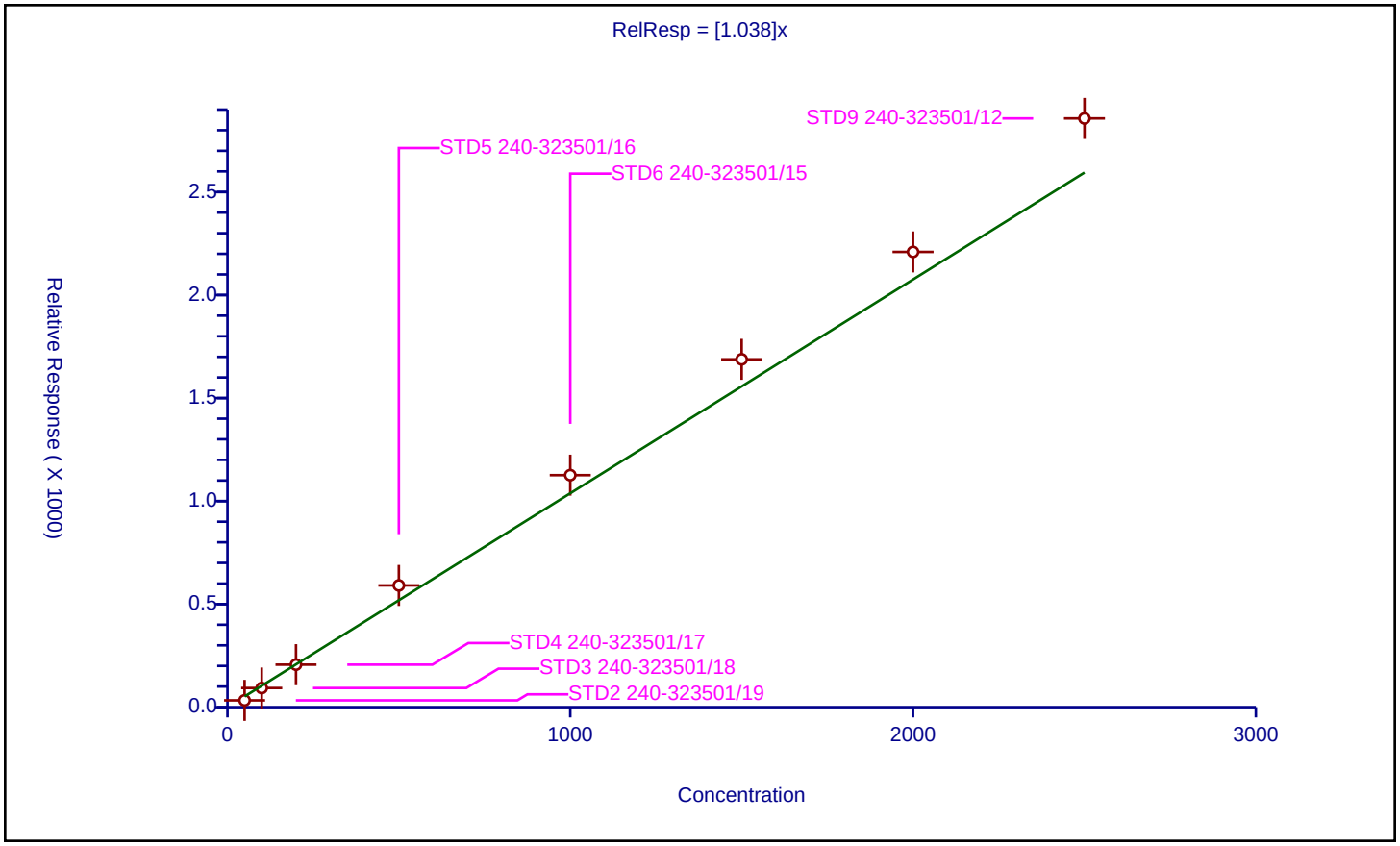
Curve Coefficients

Intercept:	0
Slope:	1.038

Error Coefficients

Standard Error:	1680000
Relative Standard Error:	16.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.970

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	33.060742	400.0	370518.0	0.661215	Y
2	STD3 240-323501/18	100.0	92.934046	400.0	374033.0	0.92934	Y
3	STD4 240-323501/17	200.0	206.255259	400.0	413604.0	1.031276	Y
4	STD5 240-323501/16	500.0	590.796145	400.0	403331.0	1.181592	Y
5	STD6 240-323501/15	1000.0	1125.94964	400.0	406075.0	1.12595	Y
6	STD7 240-323501/14	1500.0	1687.947564	400.0	451137.0	1.125298	Y
7	STD8 240-323501/13	2000.0	2209.361051	400.0	441553.0	1.104681	Y
8	STD9 240-323501/12	2500.0	2857.087183	400.0	409528.0	1.142835	Y



Calibration / 2,3,5,6-Tetrachlorophenol

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

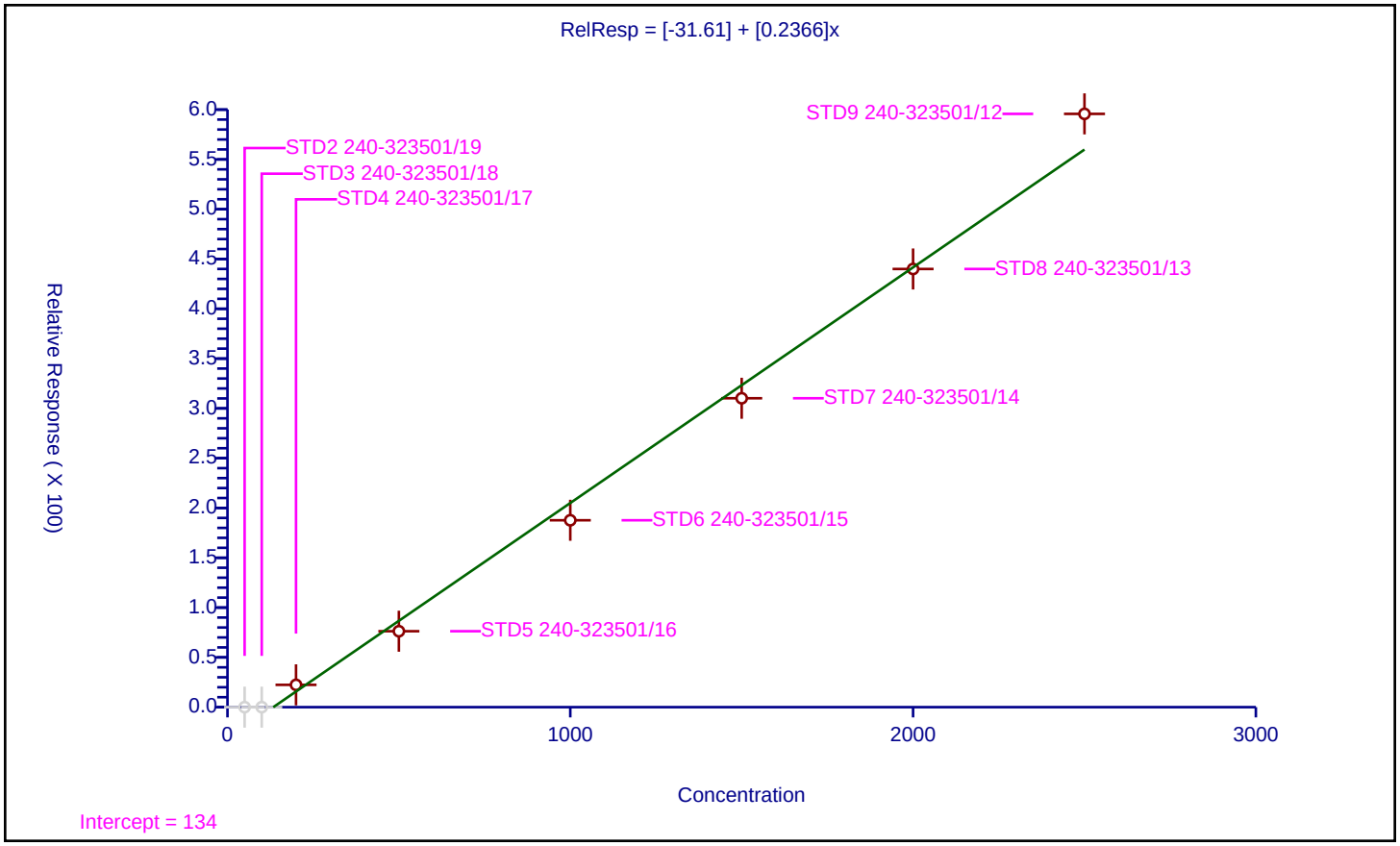
Curve Coefficients

Intercept:	-31.61
Slope:	0.2366

Error Coefficients

Standard Error:	439000
Relative Standard Error:	9.8
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	370518.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	374033.0	0.0	N
3	STD4 240-323501/17	200.0	22.396302	400.0	413604.0	0.111982	Y
4	STD5 240-323501/16	500.0	76.259945	400.0	403331.0	0.15252	Y
5	STD6 240-323501/15	1000.0	187.65499	400.0	406075.0	0.187655	Y
6	STD7 240-323501/14	1500.0	310.157668	400.0	451137.0	0.206772	Y
7	STD8 240-323501/13	2000.0	439.977081	400.0	441553.0	0.219989	Y
8	STD9 240-323501/12	2500.0	595.713114	400.0	409528.0	0.238285	Y



Calibration / 2-Naphthylamine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

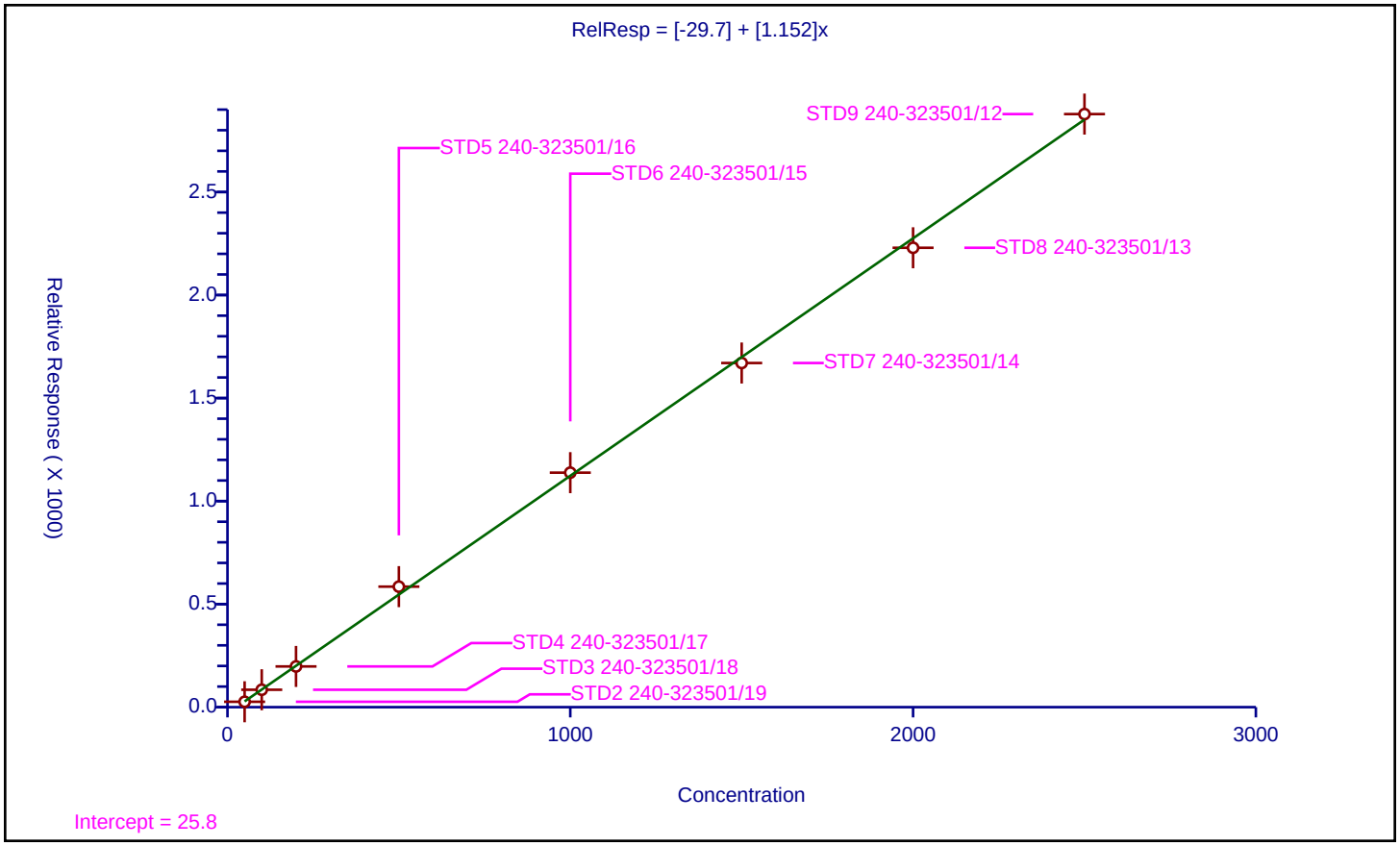
Curve Coefficients

Intercept:	-29.7
Slope:	1.152

Error Coefficients

Standard Error:	1820000
Relative Standard Error:	3.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	26.205474	400.0	370518.0	0.524109	Y
2	STD3 240-323501/18	100.0	84.484524	400.0	374033.0	0.844845	Y
3	STD4 240-323501/17	200.0	197.657663	400.0	413604.0	0.988288	Y
4	STD5 240-323501/16	500.0	584.883384	400.0	403331.0	1.169767	Y
5	STD6 240-323501/15	1000.0	1138.123746	400.0	406075.0	1.138124	Y
6	STD7 240-323501/14	1500.0	1670.176465	400.0	451137.0	1.113451	Y
7	STD8 240-323501/13	2000.0	2229.445616	400.0	441553.0	1.114723	Y
8	STD9 240-323501/12	2500.0	2878.241292	400.0	409528.0	1.151297	Y



Calibration / Thionazin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

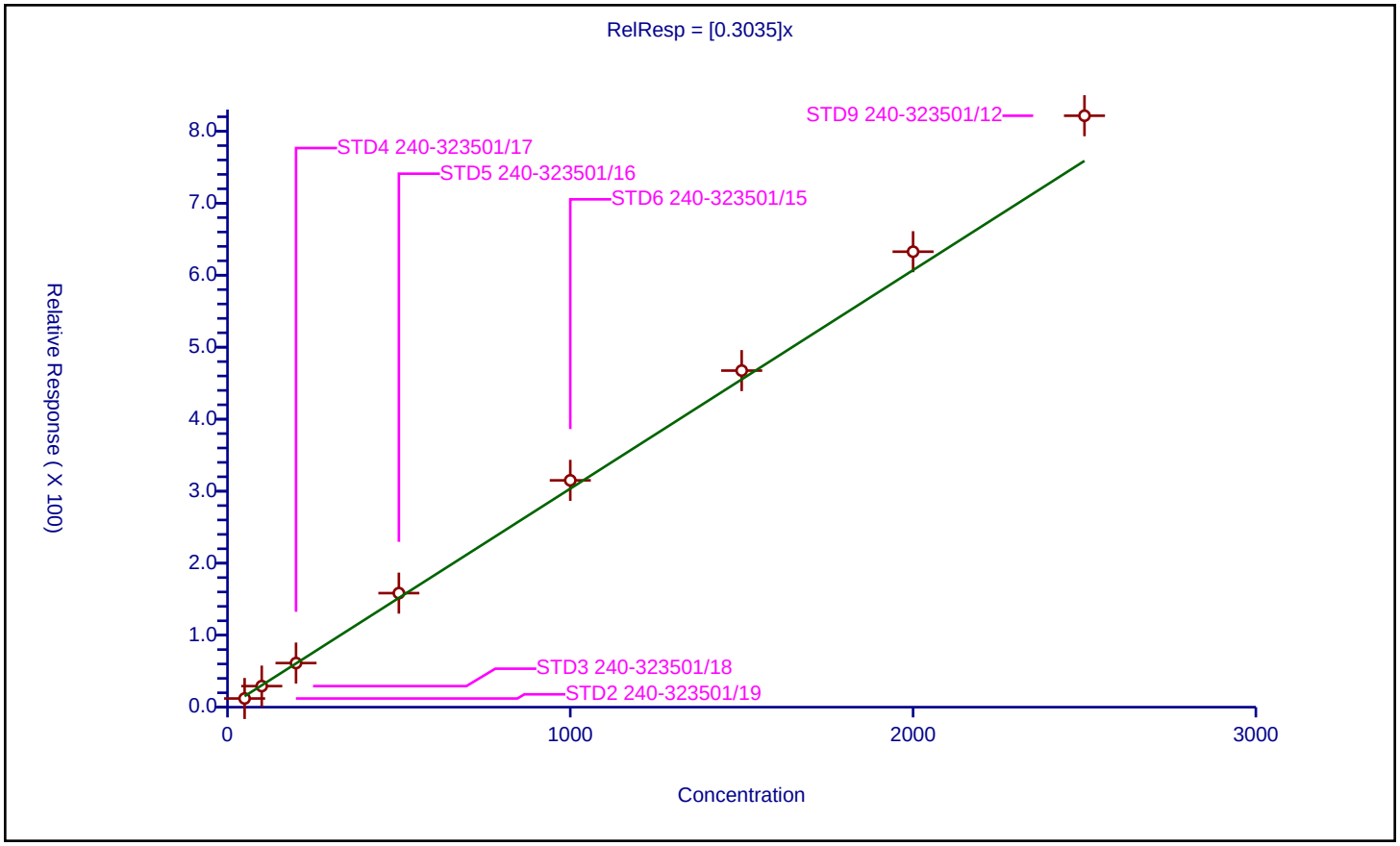
Curve Coefficients

Intercept:	0
Slope:	0.3035

Error Coefficients

Standard Error:	479000
Relative Standard Error:	9.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	12.037202	400.0	370518.0	0.240744	Y
2	STD3 240-323501/18	100.0	29.257312	400.0	374033.0	0.292573	Y
3	STD4 240-323501/17	200.0	61.279872	400.0	413604.0	0.306399	Y
4	STD5 240-323501/16	500.0	158.398933	400.0	403331.0	0.316798	Y
5	STD6 240-323501/15	1000.0	315.044265	400.0	406075.0	0.315044	Y
6	STD7 240-323501/14	1500.0	467.499673	400.0	451137.0	0.311666	Y
7	STD8 240-323501/13	2000.0	632.625302	400.0	441553.0	0.316313	Y
8	STD9 240-323501/12	2500.0	821.511594	400.0	409528.0	0.328605	Y



Calibration / N-Nitro-o-toluidine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

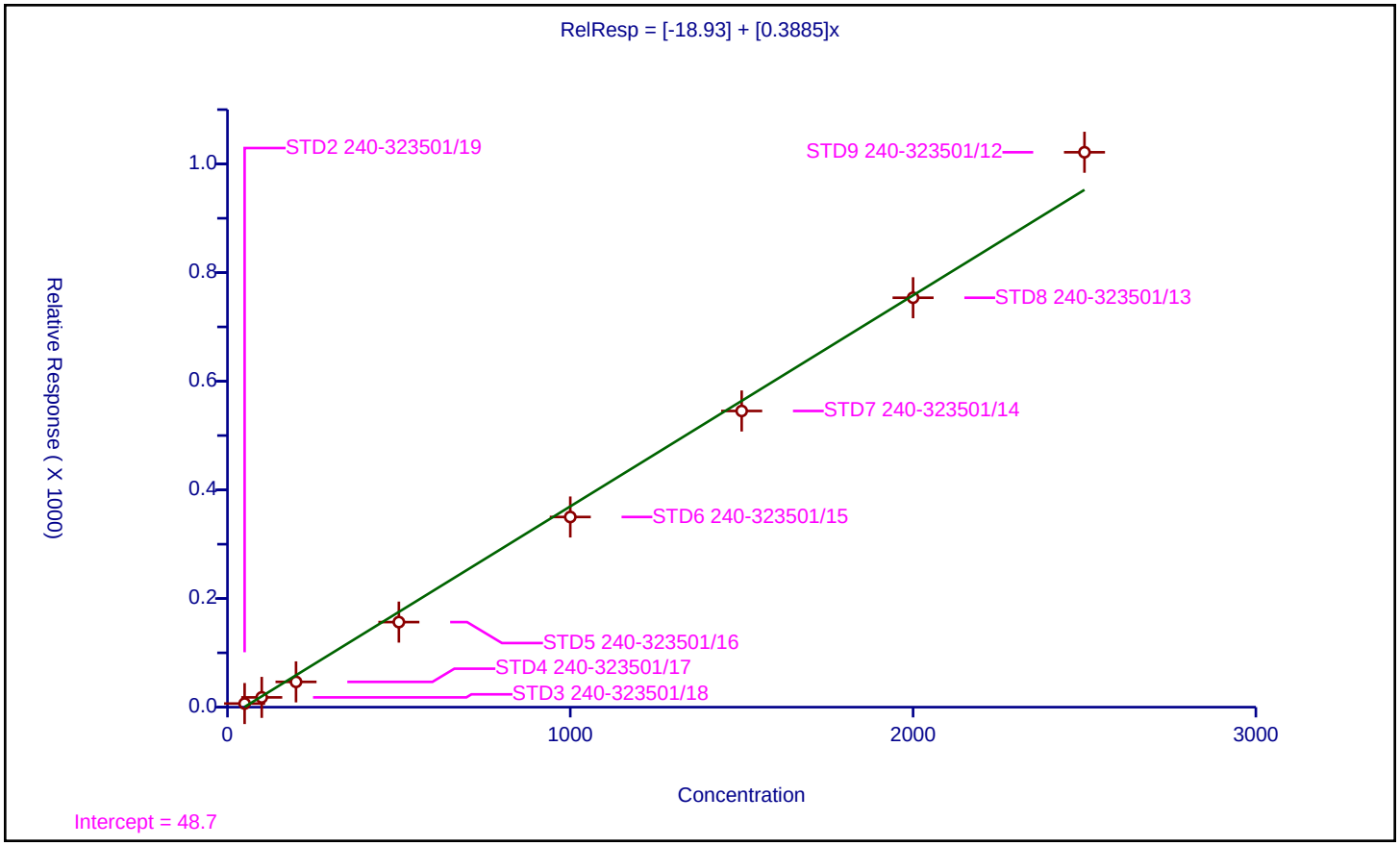
Curve Coefficients

Intercept:	-18.93
Slope:	0.3885

Error Coefficients

Standard Error:	621000
Relative Standard Error:	15.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	6.700889	400.0	370518.0	0.134018	Y
2	STD3 240-323501/18	100.0	18.018731	400.0	374033.0	0.180187	Y
3	STD4 240-323501/17	200.0	46.537268	400.0	413604.0	0.232686	Y
4	STD5 240-323501/16	500.0	156.58603	400.0	403331.0	0.313172	Y
5	STD6 240-323501/15	1000.0	350.089023	400.0	406075.0	0.350089	Y
6	STD7 240-323501/14	1500.0	545.234818	400.0	451137.0	0.36349	Y
7	STD8 240-323501/13	2000.0	753.680759	400.0	441553.0	0.37684	Y
8	STD9 240-323501/12	2500.0	1021.517454	400.0	409528.0	0.408607	Y



Calibration / Sulfotepp

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

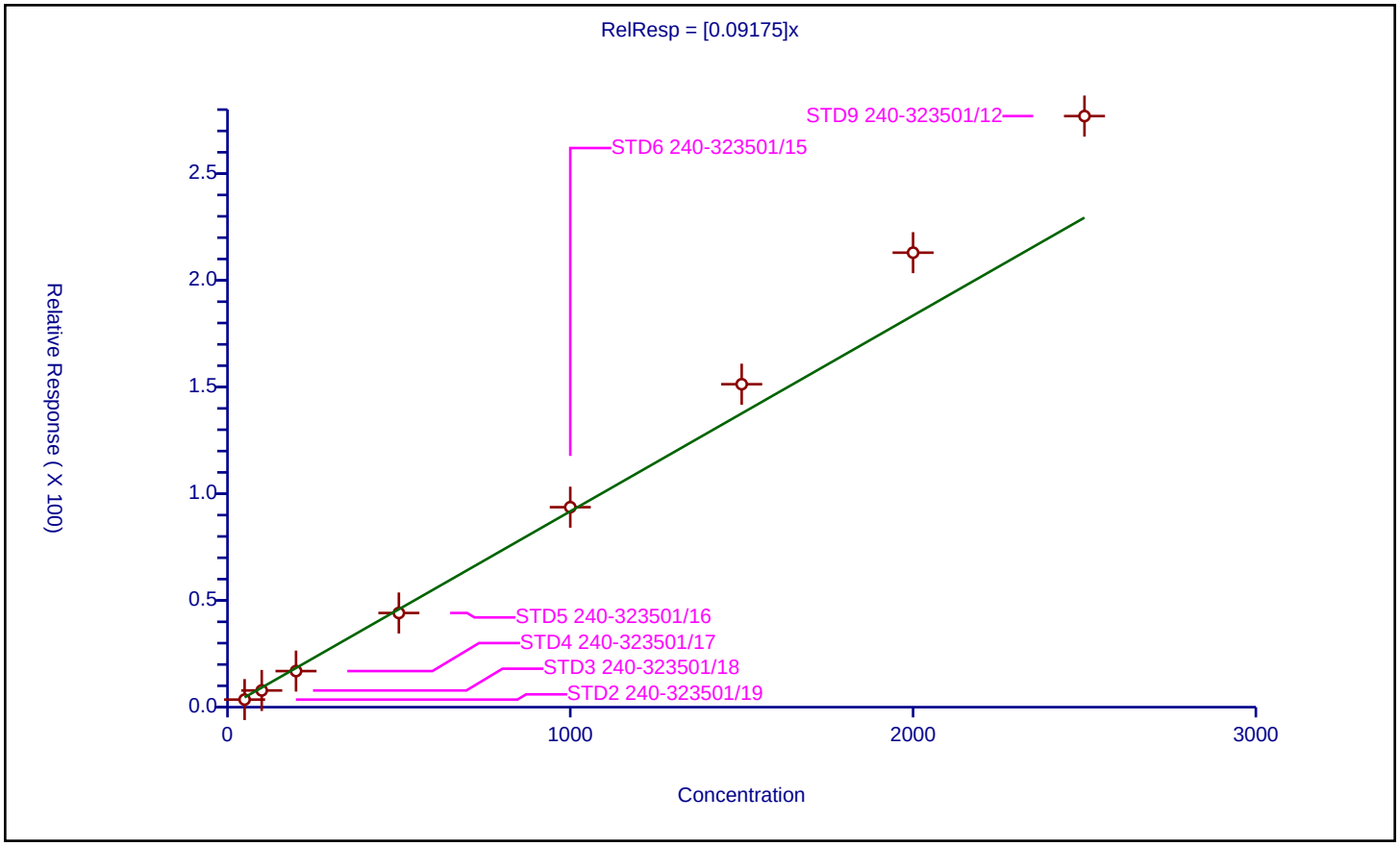
Curve Coefficients

Intercept:	0
Slope:	0.09175

Error Coefficients

Standard Error:	256000
Relative Standard Error:	15.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	3.554787	400.0	691912.0	0.071096	Y
2	STD3 240-323501/18	100.0	7.827966	400.0	671030.0	0.07828	Y
3	STD4 240-323501/17	200.0	16.907289	400.0	720494.0	0.084536	Y
4	STD5 240-323501/16	500.0	44.128175	400.0	698420.0	0.088256	Y
5	STD6 240-323501/15	1000.0	93.701114	400.0	670182.0	0.093701	Y
6	STD7 240-323501/14	1500.0	151.33056	400.0	723793.0	0.100887	Y
7	STD8 240-323501/13	2000.0	212.96884	400.0	702345.0	0.106484	Y
8	STD9 240-323501/12	2500.0	276.966628	400.0	666242.0	0.110787	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

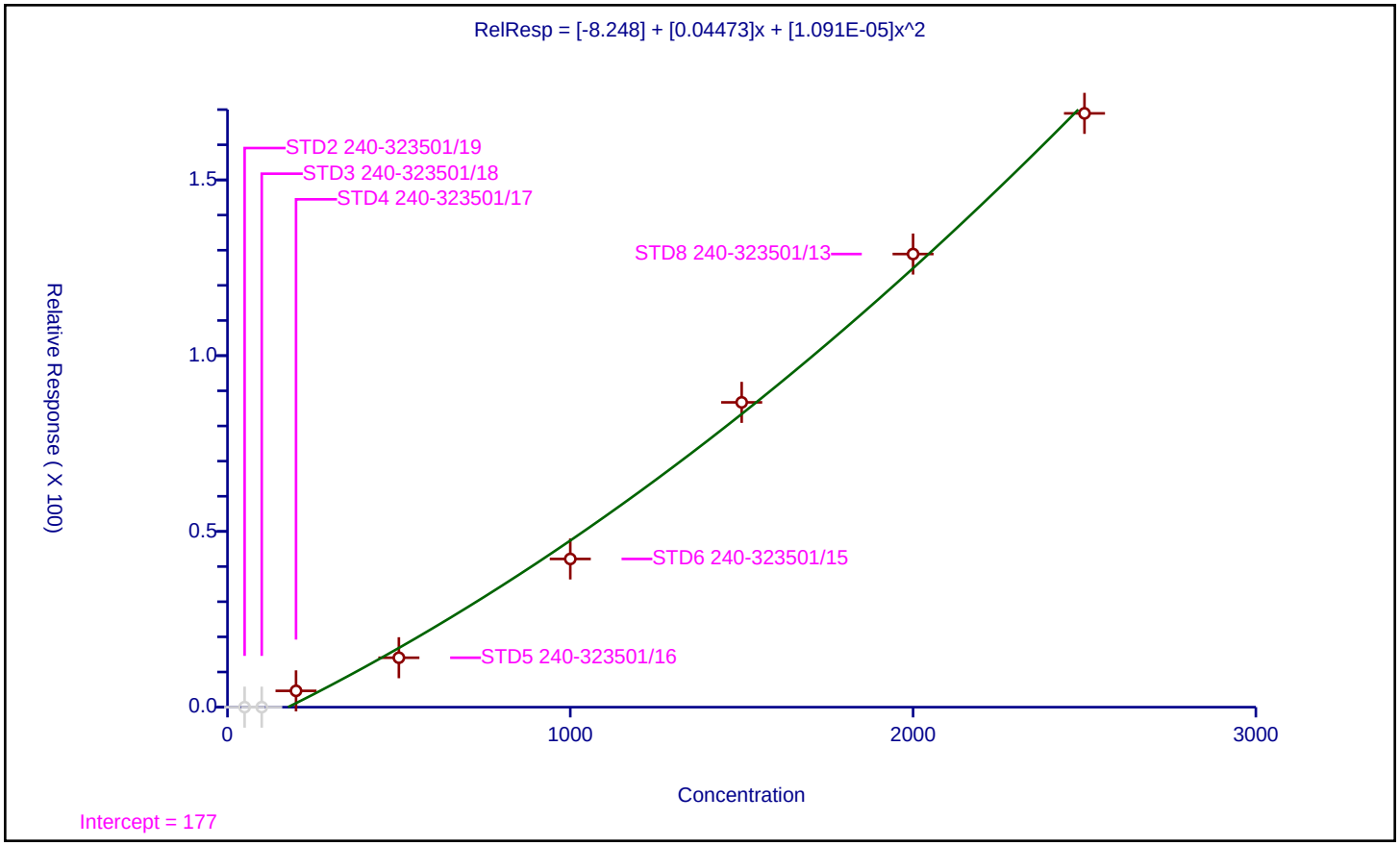
Curve Coefficients

Intercept:	-8.248
Slope:	0.04473
Second Order:	1.091E-05

Error Coefficients

Standard Error:	231000
Relative Standard Error:	21.7
Correlation Coefficient:	0.989
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	691912.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	671030.0	0.0	N
3	STD4 240-323501/17	200.0	4.643481	400.0	720494.0	0.023217	Y
4	STD5 240-323501/16	500.0	14.067753	400.0	698420.0	0.028136	Y
5	STD6 240-323501/15	1000.0	42.165263	400.0	670182.0	0.042165	Y
6	STD7 240-323501/14	1500.0	86.712637	400.0	723793.0	0.057808	Y
7	STD8 240-323501/13	2000.0	128.914422	400.0	702345.0	0.064457	Y
8	STD9 240-323501/12	2500.0	168.931409	400.0	666242.0	0.067573	Y



Calibration / Phenacetin

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

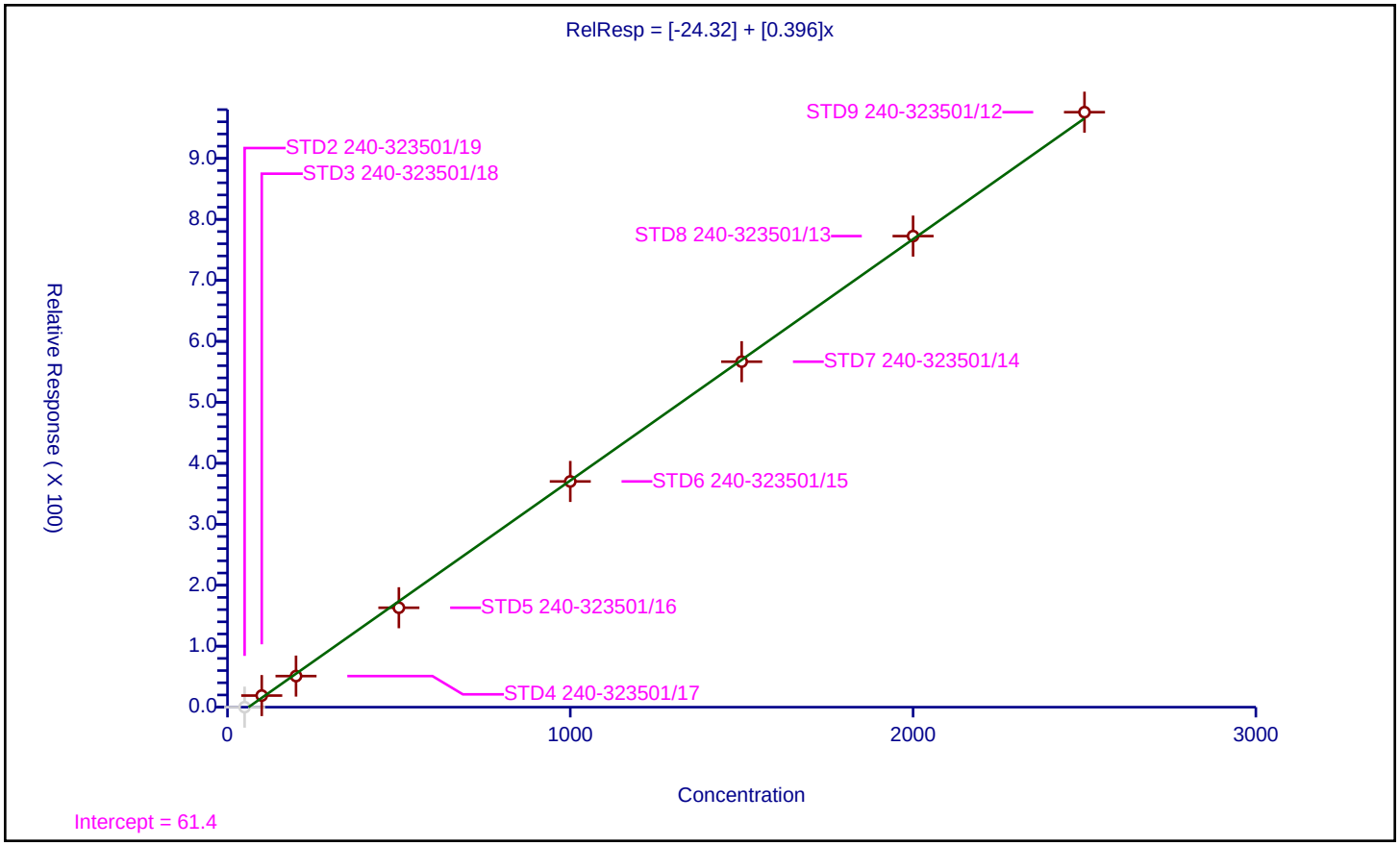
Curve Coefficients

Intercept:	-24.32
Slope:	0.396

Error Coefficients

Standard Error:	1100000
Relative Standard Error:	5.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	691912.0	0.0	N
2	STD3 240-323501/18	100.0	19.021504	400.0	671030.0	0.190215	Y
3	STD4 240-323501/17	200.0	50.98835	400.0	720494.0	0.254942	Y
4	STD5 240-323501/16	500.0	163.079522	400.0	698420.0	0.326159	Y
5	STD6 240-323501/15	1000.0	370.184219	400.0	670182.0	0.370184	Y
6	STD7 240-323501/14	1500.0	566.584092	400.0	723793.0	0.377723	Y
7	STD8 240-323501/13	2000.0	772.555938	400.0	702345.0	0.386278	Y
8	STD9 240-323501/12	2500.0	975.79258	400.0	666242.0	0.390317	Y



Calibration / Diallate Peak 1

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

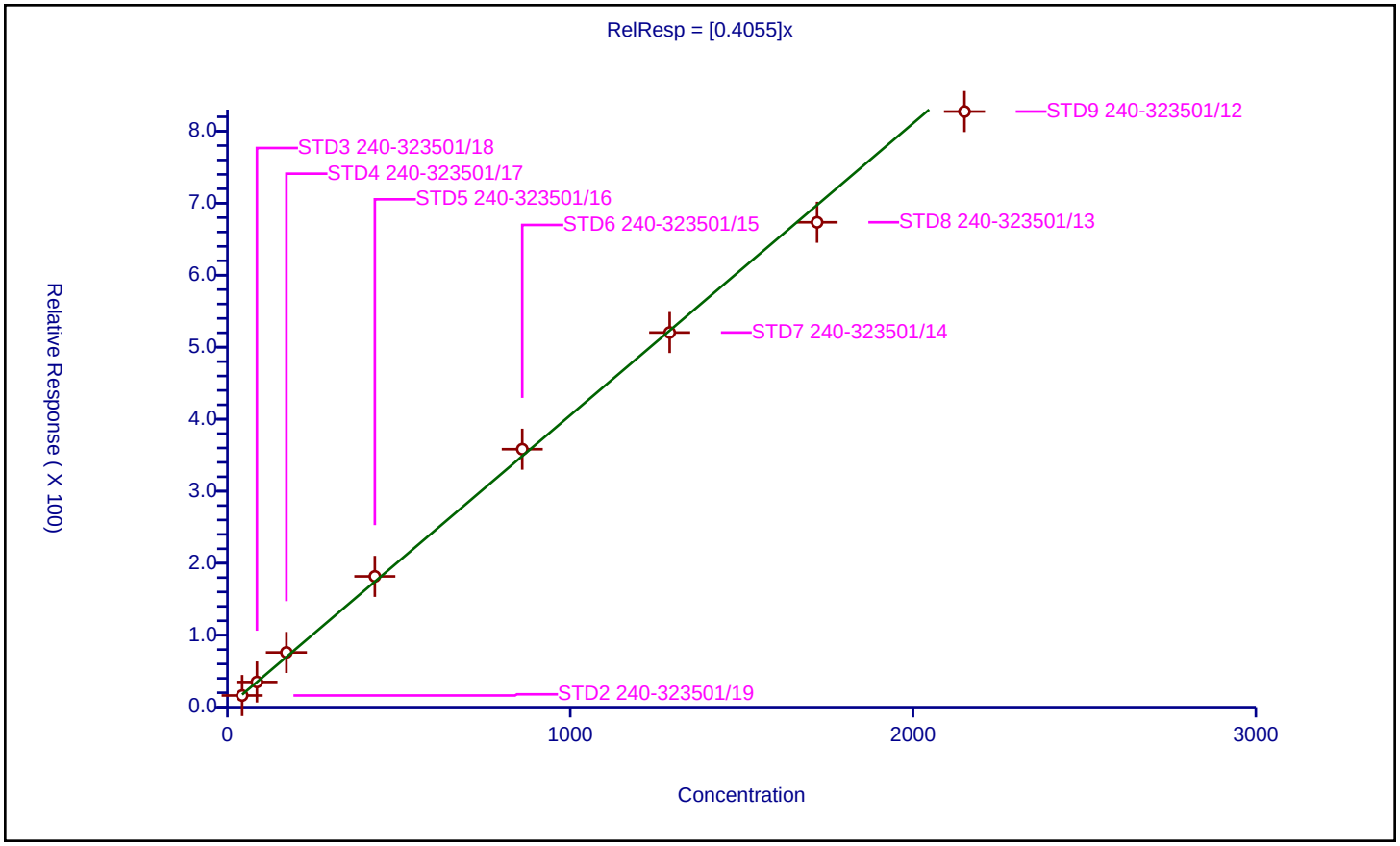
Curve Coefficients

Intercept:	0
Slope:	0.4055

Error Coefficients

Standard Error:	816000
Relative Standard Error:	5.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	43.0	16.18992	400.0	691912.0	0.37651	Y
2	STD3 240-323501/18	86.0	34.970121	400.0	671030.0	0.406629	Y
3	STD4 240-323501/17	172.0	76.023395	400.0	720494.0	0.441996	Y
4	STD5 240-323501/16	430.0	181.645428	400.0	698420.0	0.422431	Y
5	STD6 240-323501/15	860.0	358.305654	400.0	670182.0	0.416634	Y
6	STD7 240-323501/14	1290.0	520.394091	400.0	723793.0	0.403406	Y
7	STD8 240-323501/13	1720.0	673.499206	400.0	702345.0	0.391569	Y
8	STD9 240-323501/12	2150.0	827.297589	400.0	666242.0	0.38479	Y



Calibration / Phorate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

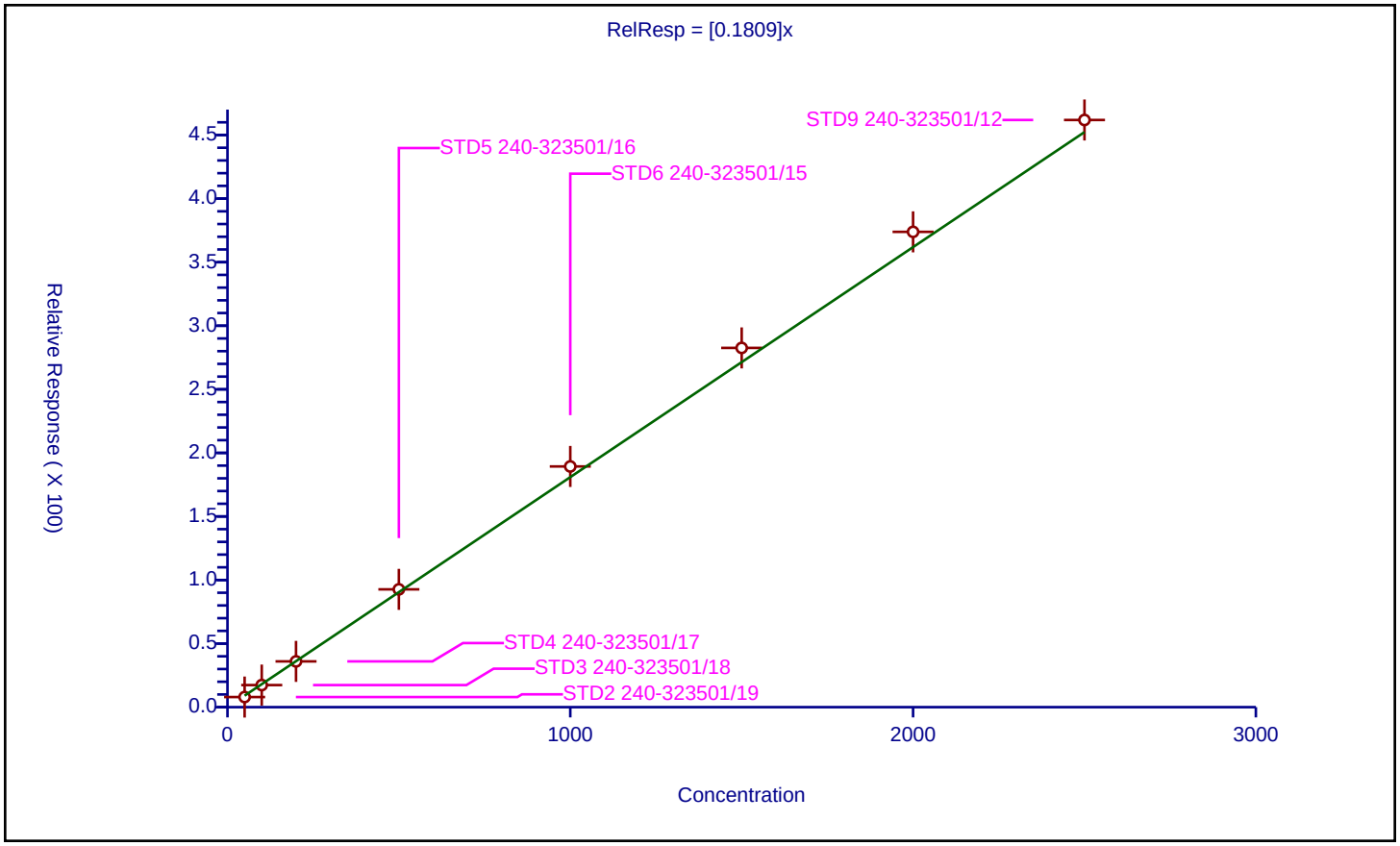
Curve Coefficients

Intercept:	0
Slope:	0.1809

Error Coefficients

Standard Error:	450000
Relative Standard Error:	5.6
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	7.955347	400.0	691912.0	0.159107	Y
2	STD3 240-323501/18	100.0	17.36137	400.0	671030.0	0.173614	Y
3	STD4 240-323501/17	200.0	35.993638	400.0	720494.0	0.179968	Y
4	STD5 240-323501/16	500.0	92.661722	400.0	698420.0	0.185323	Y
5	STD6 240-323501/15	1000.0	189.324691	400.0	670182.0	0.189325	Y
6	STD7 240-323501/14	1500.0	282.564766	400.0	723793.0	0.188377	Y
7	STD8 240-323501/13	2000.0	373.84875	400.0	702345.0	0.186924	Y
8	STD9 240-323501/12	2500.0	461.844795	400.0	666242.0	0.184738	Y



Calibration / Diallate Peak 2

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

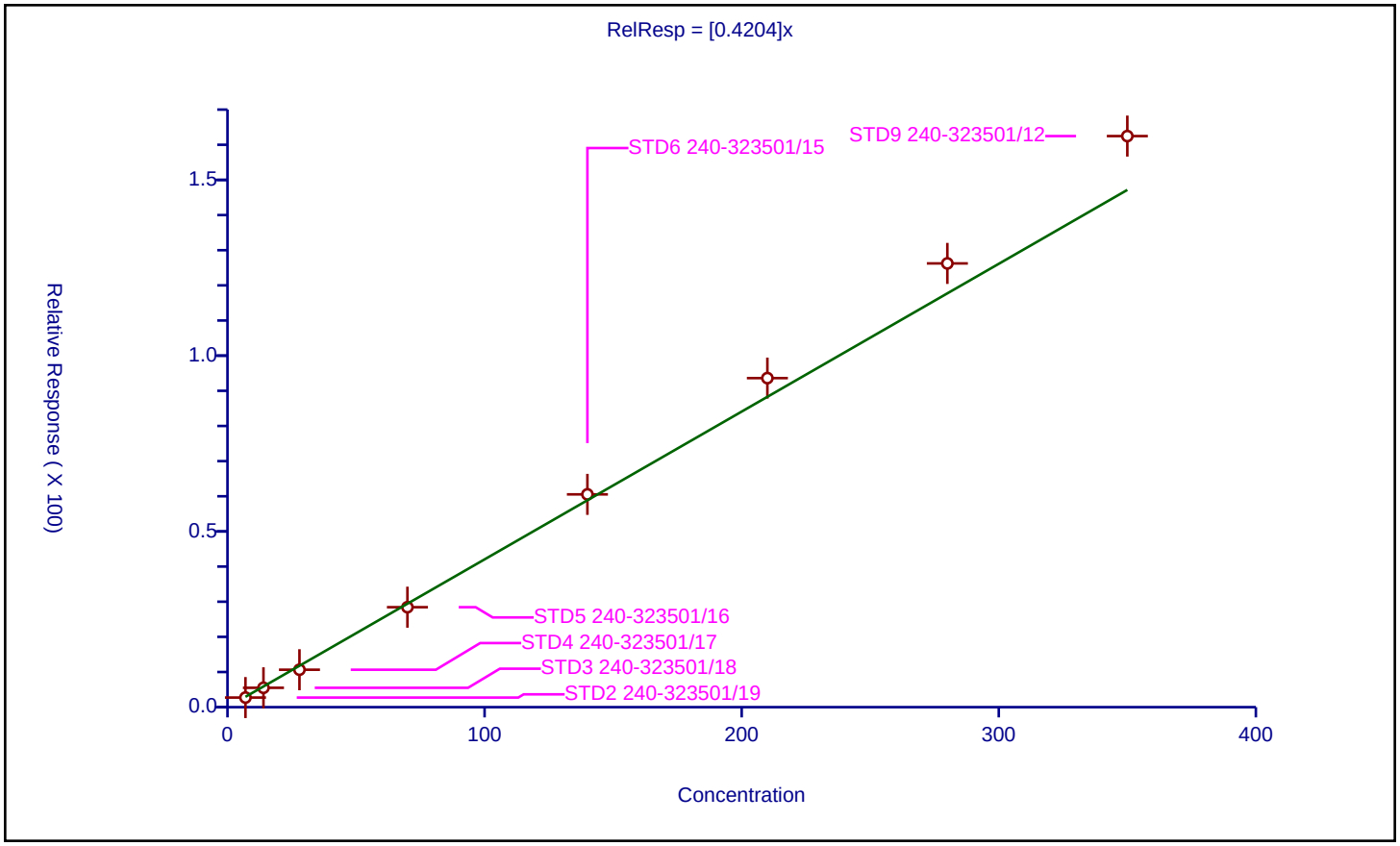
Curve Coefficients

Intercept:	0
Slope:	0.4204

Error Coefficients

Standard Error:	153000
Relative Standard Error:	7.6
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	7.0	2.731561	400.0	691912.0	0.390223	Y
2	STD3 240-323501/18	14.0	5.506758	400.0	671030.0	0.39334	Y
3	STD4 240-323501/17	28.0	10.652691	400.0	720494.0	0.380453	Y
4	STD5 240-323501/16	70.0	28.438475	400.0	698420.0	0.406264	Y
5	STD6 240-323501/15	140.0	60.534601	400.0	670182.0	0.43239	Y
6	STD7 240-323501/14	210.0	93.616821	400.0	723793.0	0.445794	Y
7	STD8 240-323501/13	280.0	126.24394	400.0	702345.0	0.450871	Y
8	STD9 240-323501/12	350.0	162.470694	400.0	666242.0	0.464202	Y



Calibration / Dimethoate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

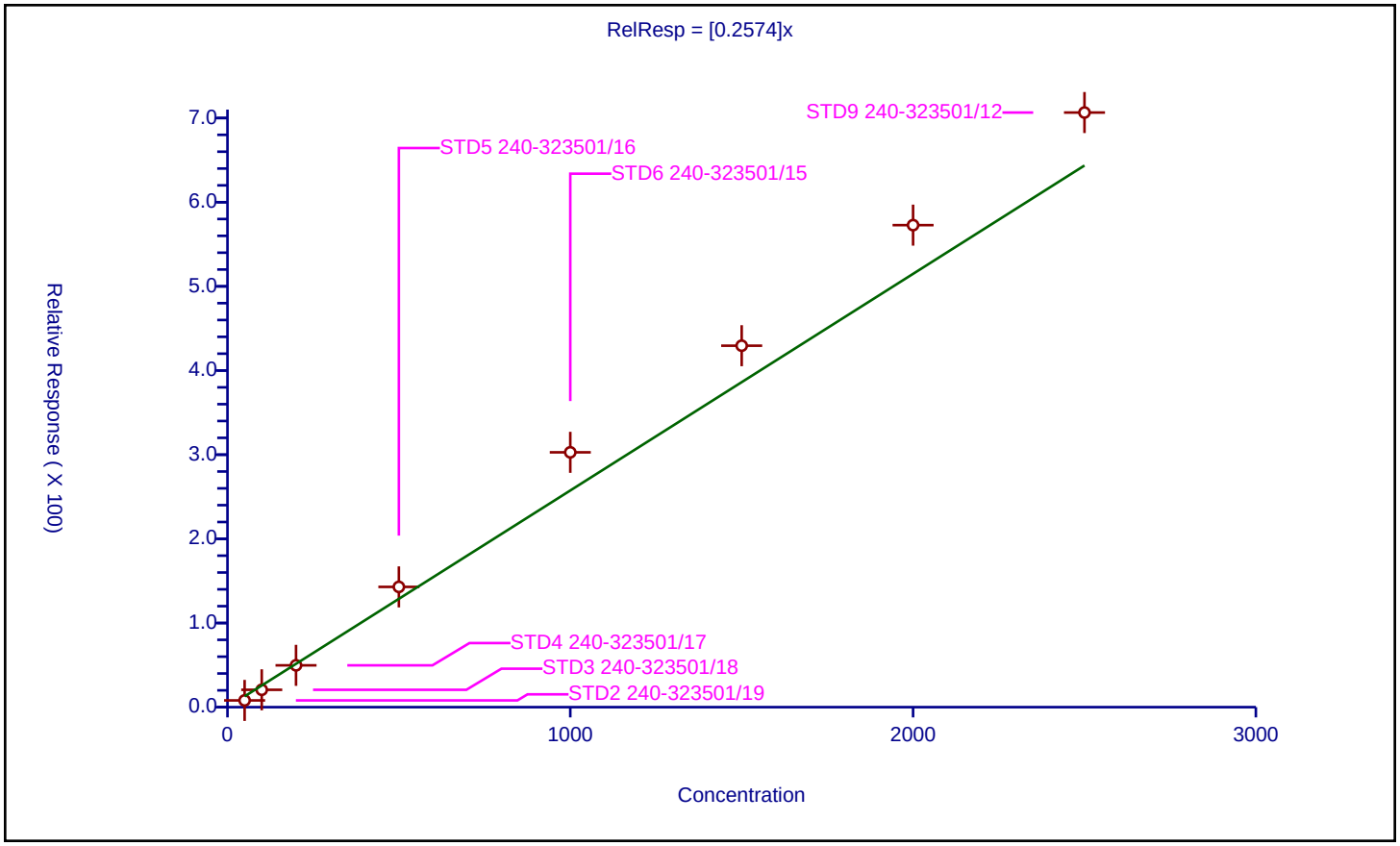
Curve Coefficients

Intercept:	0
Slope:	0.2574

Error Coefficients

Standard Error:	689000
Relative Standard Error:	19.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	8.029345	400.0	691912.0	0.160587	Y
2	STD3 240-323501/18	100.0	20.650642	400.0	671030.0	0.206506	Y
3	STD4 240-323501/17	200.0	49.699789	400.0	720494.0	0.248499	Y
4	STD5 240-323501/16	500.0	142.909997	400.0	698420.0	0.28582	Y
5	STD6 240-323501/15	1000.0	302.777454	400.0	670182.0	0.302777	Y
6	STD7 240-323501/14	1500.0	429.464778	400.0	723793.0	0.28631	Y
7	STD8 240-323501/13	2000.0	572.735052	400.0	702345.0	0.286368	Y
8	STD9 240-323501/12	2500.0	706.522855	400.0	666242.0	0.282609	Y



Calibration / 4-Aminobiphenyl

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

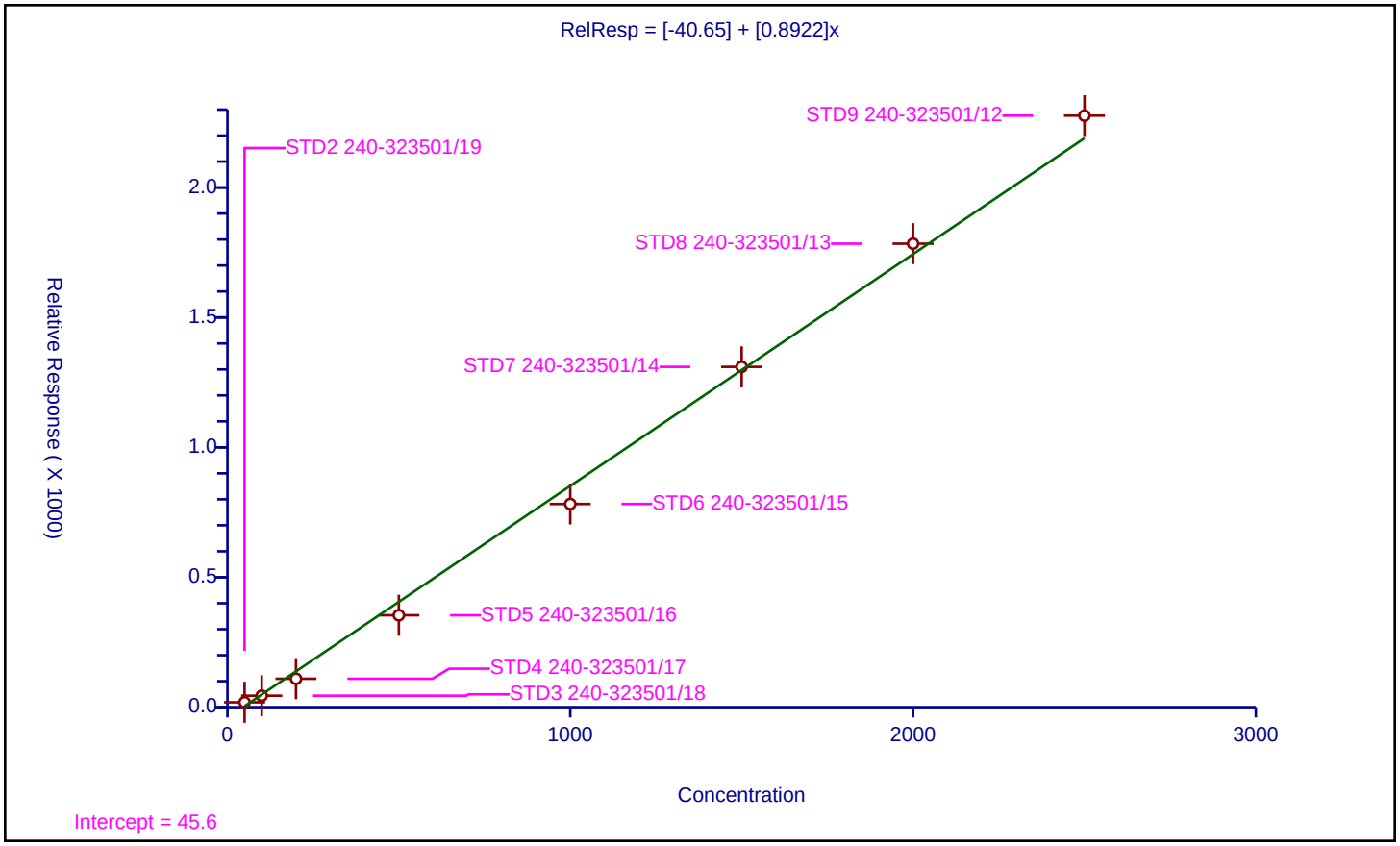
Curve Coefficients

Intercept:	-40.65
Slope:	0.8922

Error Coefficients

Standard Error:	2310000
Relative Standard Error:	16.3
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	18.798922	400.0	691912.0	0.375978	Y
2	STD3 240-323501/18	100.0	44.101158	400.0	671030.0	0.441012	Y
3	STD4 240-323501/17	200.0	109.332763	400.0	720494.0	0.546664	Y
4	STD5 240-323501/16	500.0	353.728129	400.0	698420.0	0.707456	Y
5	STD6 240-323501/15	1000.0	782.009663	400.0	670182.0	0.78201	Y
6	STD7 240-323501/14	1500.0	1309.767848	400.0	723793.0	0.873179	Y
7	STD8 240-323501/13	2000.0	1783.860638	400.0	702345.0	0.89193	Y
8	STD9 240-323501/12	2500.0	2276.71867	400.0	666242.0	0.910687	Y



Calibration / Pronamide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

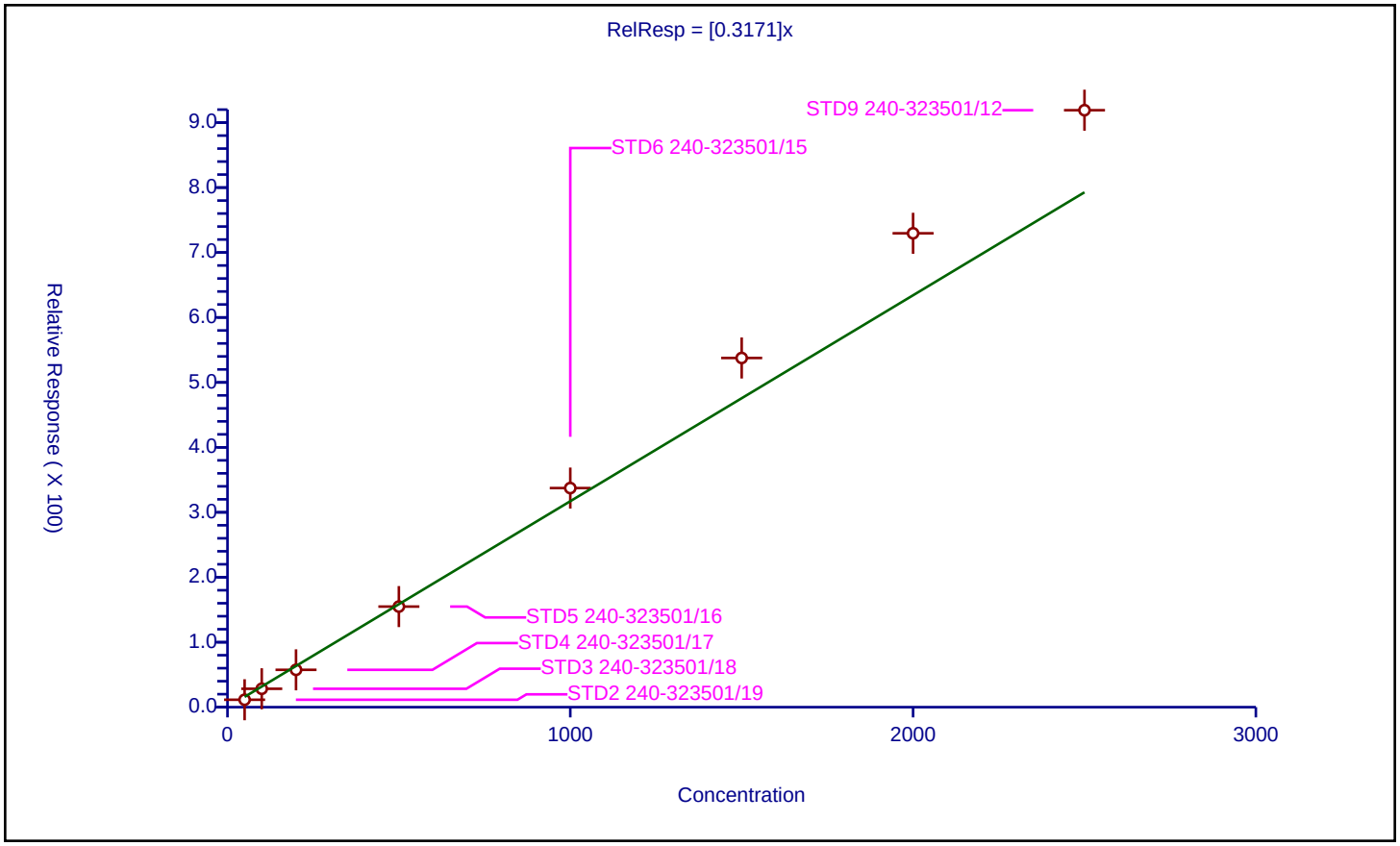
Curve Coefficients

Intercept:	0
Slope:	0.3171

Error Coefficients

Standard Error:	873000
Relative Standard Error:	15.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	11.412434	400.0	691912.0	0.228249	Y
2	STD3 240-323501/18	100.0	28.306335	400.0	671030.0	0.283063	Y
3	STD4 240-323501/17	200.0	57.489445	400.0	720494.0	0.287447	Y
4	STD5 240-323501/16	500.0	154.869563	400.0	698420.0	0.309739	Y
5	STD6 240-323501/15	1000.0	337.318519	400.0	670182.0	0.337319	Y
6	STD7 240-323501/14	1500.0	537.610063	400.0	723793.0	0.358407	Y
7	STD8 240-323501/13	2000.0	729.56453	400.0	702345.0	0.364782	Y
8	STD9 240-323501/12	2500.0	919.082255	400.0	666242.0	0.367633	Y



Calibration / Pentachloronitrobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

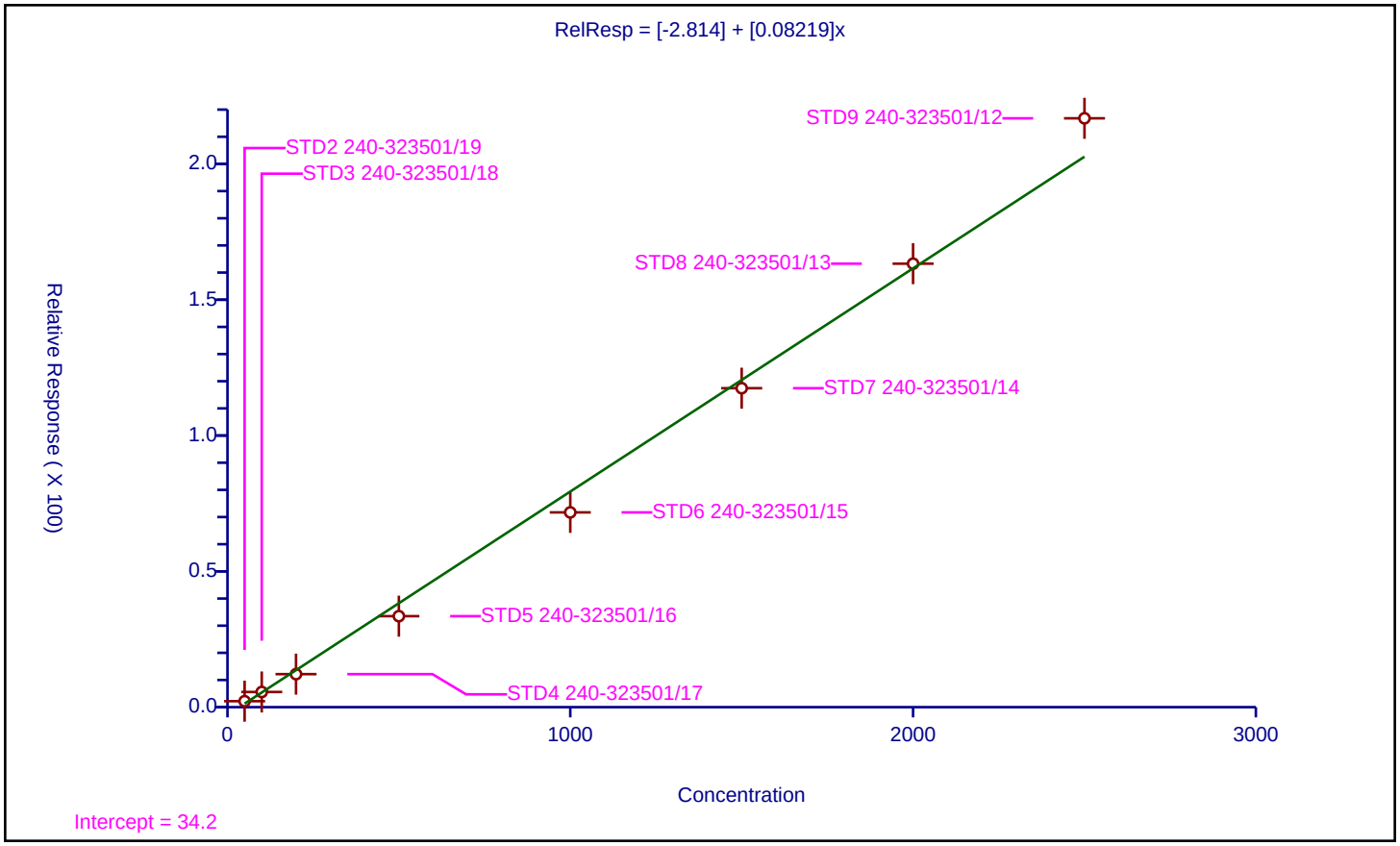
Curve Coefficients

Intercept:	-2.814
Slope:	0.08219

Error Coefficients

Standard Error:	214000
Relative Standard Error:	11.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	2.204905	400.0	691912.0	0.044098	Y
2	STD3 240-323501/18	100.0	5.592596	400.0	671030.0	0.055926	Y
3	STD4 240-323501/17	200.0	12.156659	400.0	720494.0	0.060783	Y
4	STD5 240-323501/16	500.0	33.502477	400.0	698420.0	0.067005	Y
5	STD6 240-323501/15	1000.0	71.710073	400.0	670182.0	0.07171	Y
6	STD7 240-323501/14	1500.0	117.424181	400.0	723793.0	0.078283	Y
7	STD8 240-323501/13	2000.0	163.280439	400.0	702345.0	0.08164	Y
8	STD9 240-323501/12	2500.0	216.791496	400.0	666242.0	0.086717	Y



Calibration / Disulfoton

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

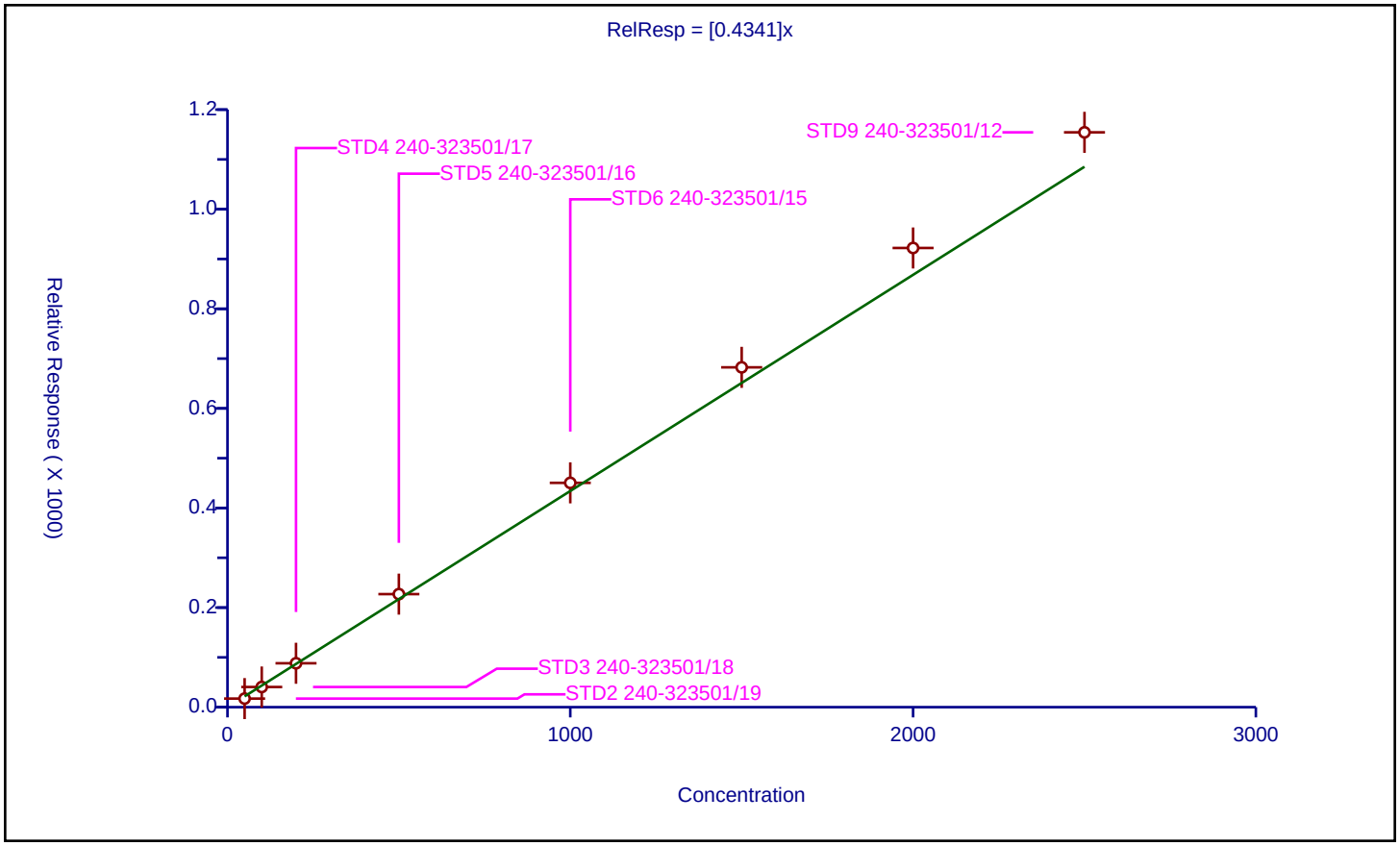
Curve Coefficients

Intercept:	0
Slope:	0.4341

Error Coefficients

Standard Error:	1110000
Relative Standard Error:	9.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	17.244389	400.0	691912.0	0.344888	Y
2	STD3 240-323501/18	100.0	40.484628	400.0	671030.0	0.404846	Y
3	STD4 240-323501/17	200.0	88.138416	400.0	720494.0	0.440692	Y
4	STD5 240-323501/16	500.0	227.022708	400.0	698420.0	0.454045	Y
5	STD6 240-323501/15	1000.0	450.428093	400.0	670182.0	0.450428	Y
6	STD7 240-323501/14	1500.0	682.436553	400.0	723793.0	0.454958	Y
7	STD8 240-323501/13	2000.0	922.137126	400.0	702345.0	0.461069	Y
8	STD9 240-323501/12	2500.0	1154.352923	400.0	666242.0	0.461741	Y



Calibration / Dinoseb

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

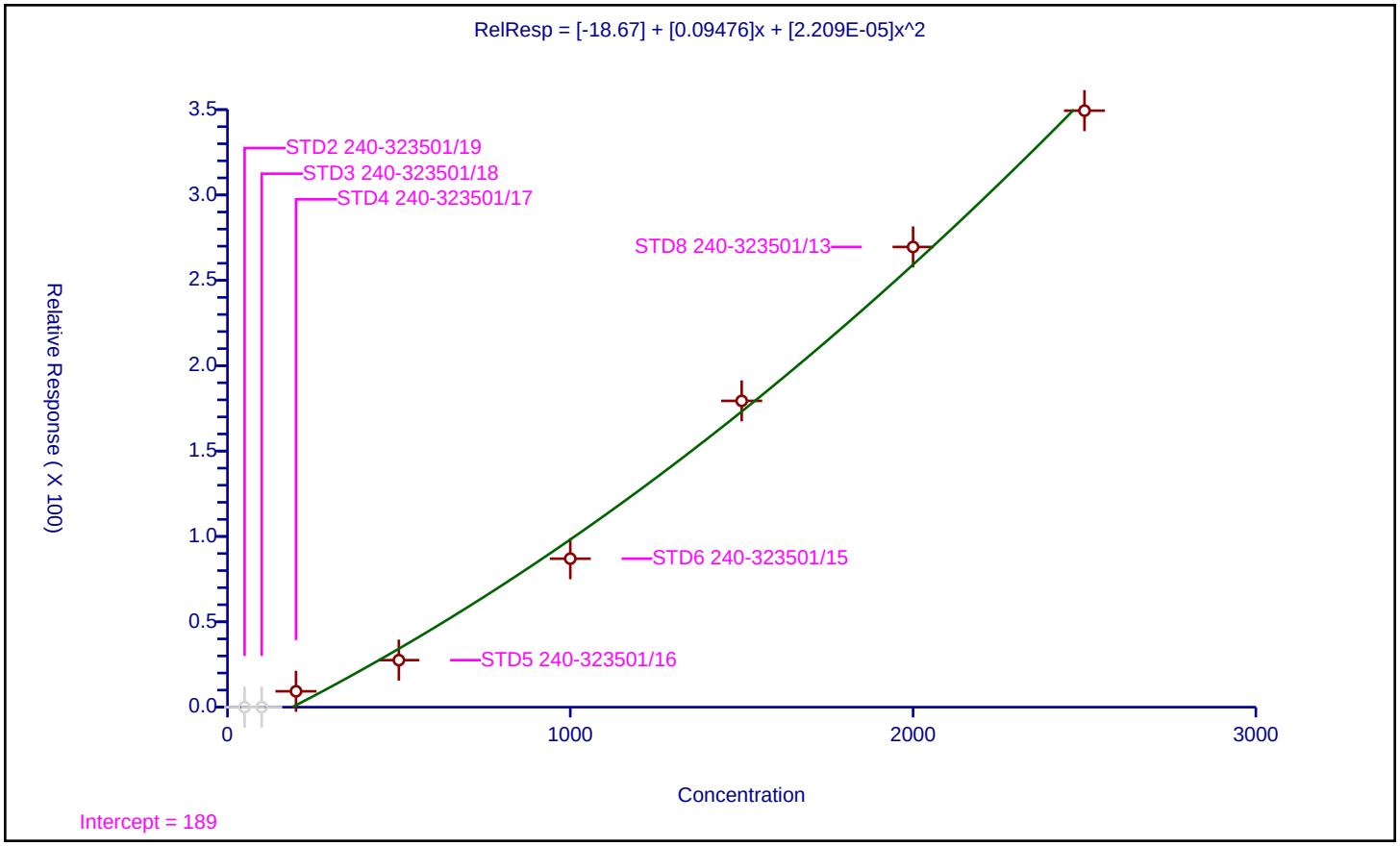
Curve Coefficients

Intercept:	-18.67
Slope:	0.09476
Second Order:	2.209E-05

Error Coefficients

Standard Error:	480000
Relative Standard Error:	23.9
Correlation Coefficient:	0.988
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	691912.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	671030.0	0.0	N
3	STD4 240-323501/17	200.0	9.305837	400.0	720494.0	0.046529	Y
4	STD5 240-323501/16	500.0	27.543312	400.0	698420.0	0.055087	Y
5	STD6 240-323501/15	1000.0	86.982342	400.0	670182.0	0.086982	Y
6	STD7 240-323501/14	1500.0	179.404885	400.0	723793.0	0.119603	Y
7	STD8 240-323501/13	2000.0	269.552997	400.0	702345.0	0.134776	Y
8	STD9 240-323501/12	2500.0	349.397967	400.0	666242.0	0.139759	Y



Calibration / Methyl parathion

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

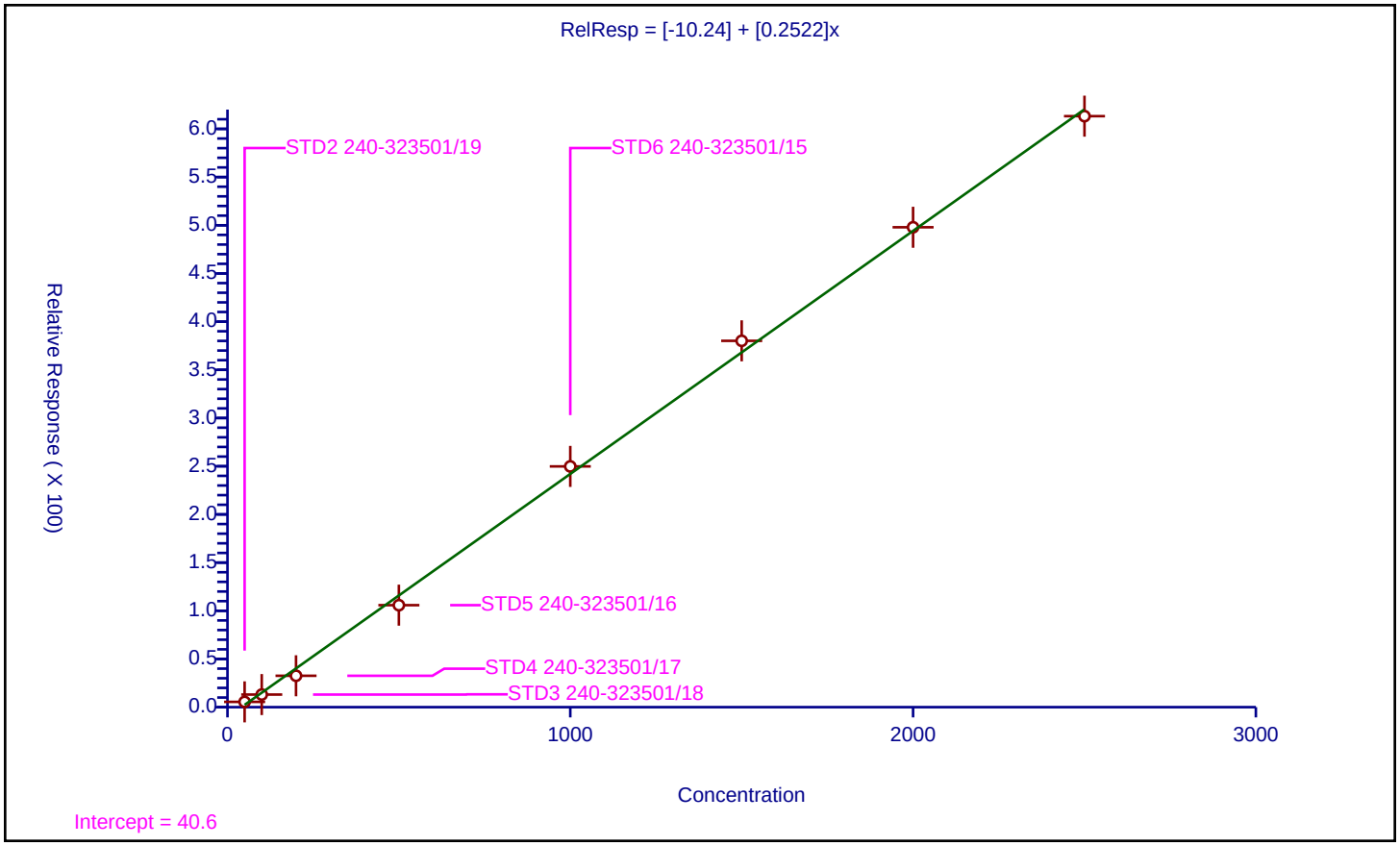
Curve Coefficients

Intercept:	-10.24
Slope:	0.2522

Error Coefficients

Standard Error:	644000
Relative Standard Error:	12.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	5.50359	400.0	691912.0	0.110072	Y
2	STD3 240-323501/18	100.0	13.064095	400.0	671030.0	0.130641	Y
3	STD4 240-323501/17	200.0	32.559883	400.0	720494.0	0.162799	Y
4	STD5 240-323501/16	500.0	105.811403	400.0	698420.0	0.211623	Y
5	STD6 240-323501/15	1000.0	249.797816	400.0	670182.0	0.249798	Y
6	STD7 240-323501/14	1500.0	380.079387	400.0	723793.0	0.253386	Y
7	STD8 240-323501/13	2000.0	497.922816	400.0	702345.0	0.248961	Y
8	STD9 240-323501/12	2500.0	613.216819	400.0	666242.0	0.245287	Y



Calibration / Ethyl Parathion

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

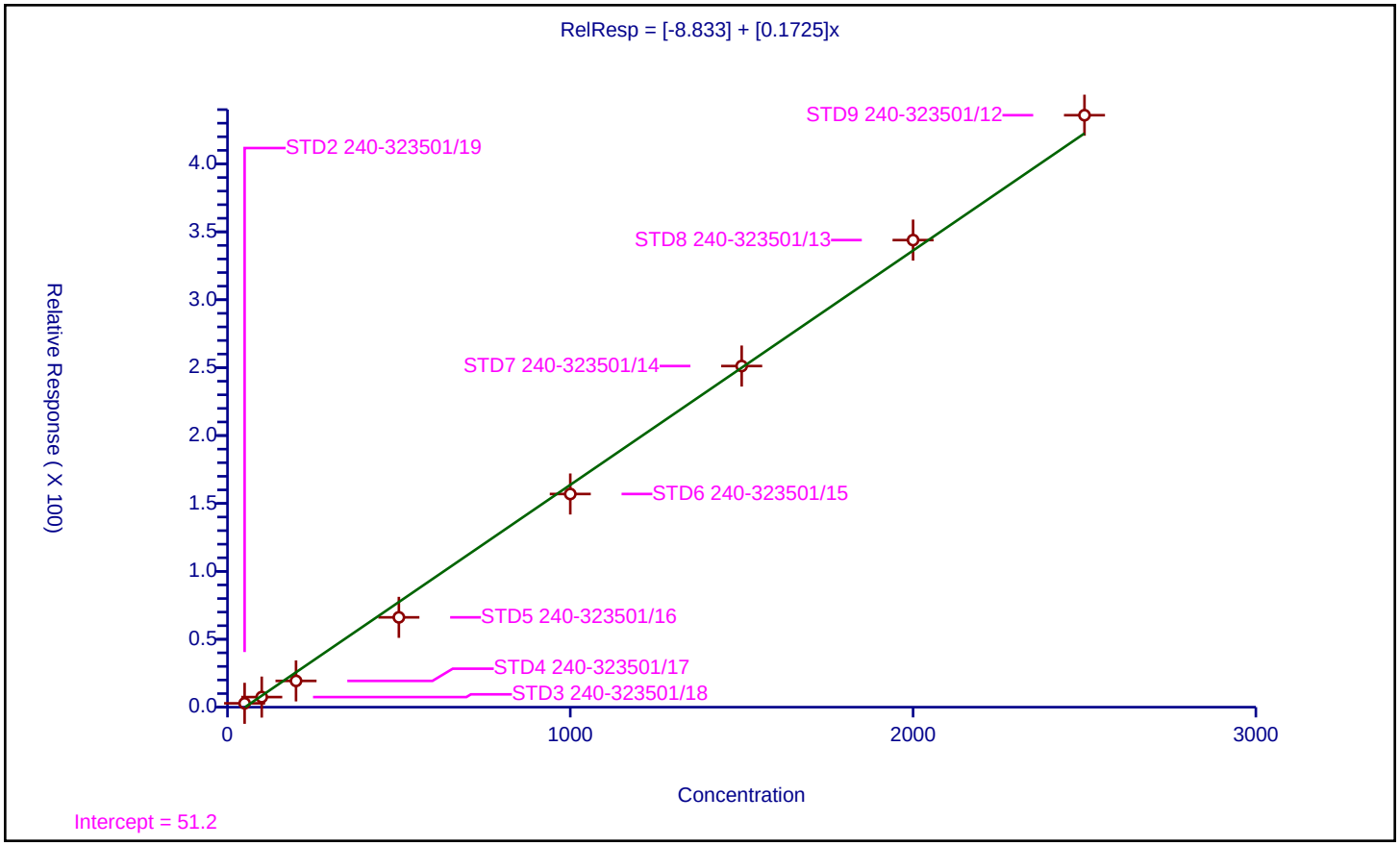
Curve Coefficients

Intercept:	-8.833
Slope:	0.1725

Error Coefficients

Standard Error:	444000
Relative Standard Error:	17.4
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	2.836199	400.0	691912.0	0.056724	Y
2	STD3 240-323501/18	100.0	7.435137	400.0	671030.0	0.074351	Y
3	STD4 240-323501/17	200.0	19.335067	400.0	720494.0	0.096675	Y
4	STD5 240-323501/16	500.0	66.129263	400.0	698420.0	0.132259	Y
5	STD6 240-323501/15	1000.0	156.969898	400.0	670182.0	0.15697	Y
6	STD7 240-323501/14	1500.0	251.18784	400.0	723793.0	0.167459	Y
7	STD8 240-323501/13	2000.0	343.92955	400.0	702345.0	0.171965	Y
8	STD9 240-323501/12	2500.0	435.872251	400.0	666242.0	0.174349	Y



Calibration / 4-Nitroquinoline-1-oxide

Curve Type:	Quadratic
Weighting:	None
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

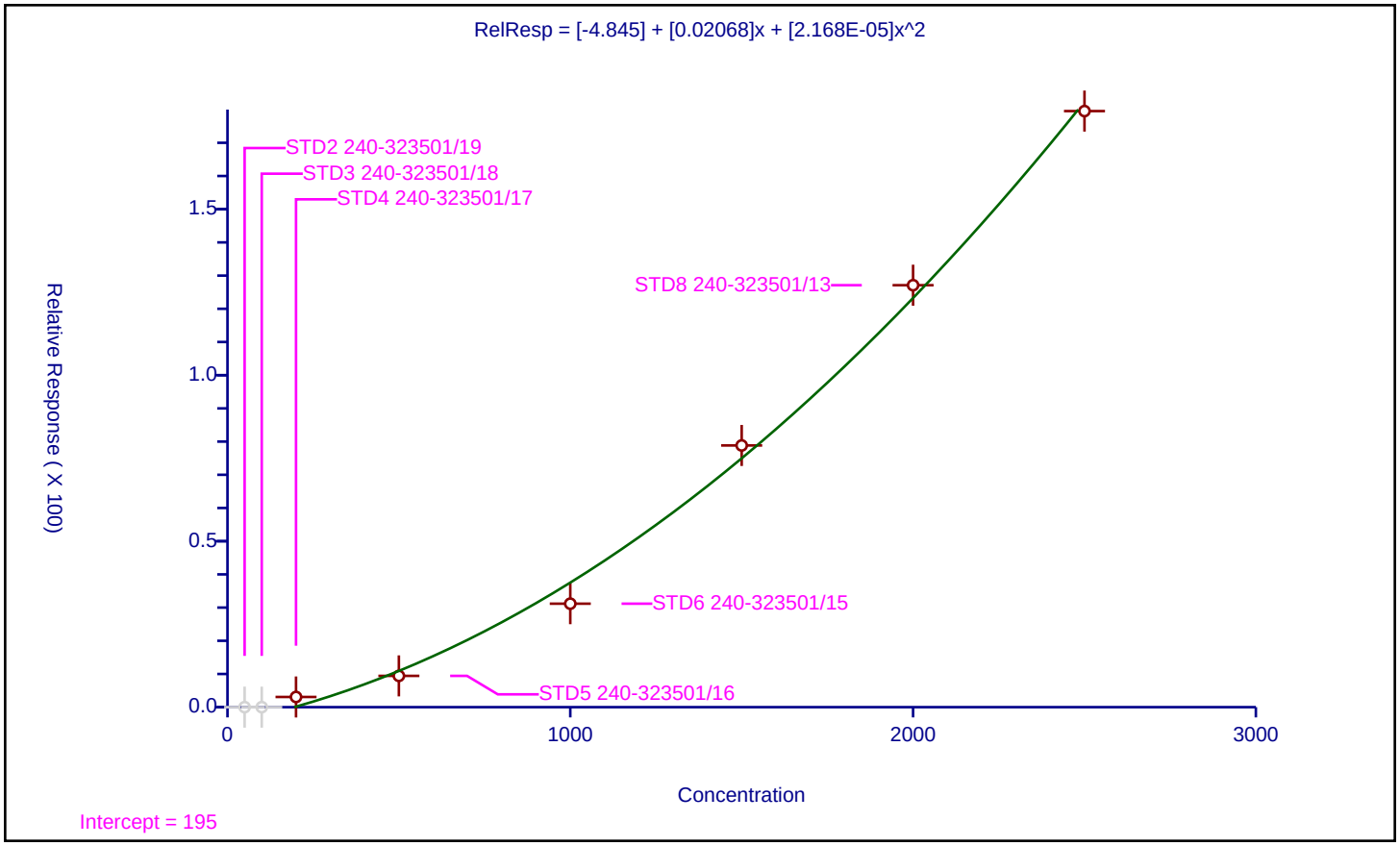
Curve Coefficients

Intercept:	-4.845
Slope:	0.02068
Second Order:	2.168E-05

Error Coefficients

Standard Error:	233000
Relative Standard Error:	27.8
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	691912.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	671030.0	0.0	N
3	STD4 240-323501/17	200.0	3.069005	400.0	720494.0	0.015345	Y
4	STD5 240-323501/16	500.0	9.425847	400.0	698420.0	0.018852	Y
5	STD6 240-323501/15	1000.0	31.172428	400.0	670182.0	0.031172	Y
6	STD7 240-323501/14	1500.0	78.830826	400.0	723793.0	0.052554	Y
7	STD8 240-323501/13	2000.0	127.102208	400.0	702345.0	0.063551	Y
8	STD9 240-323501/12	2500.0	179.558179	400.0	666242.0	0.071823	Y



Calibration / Methapyrilene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

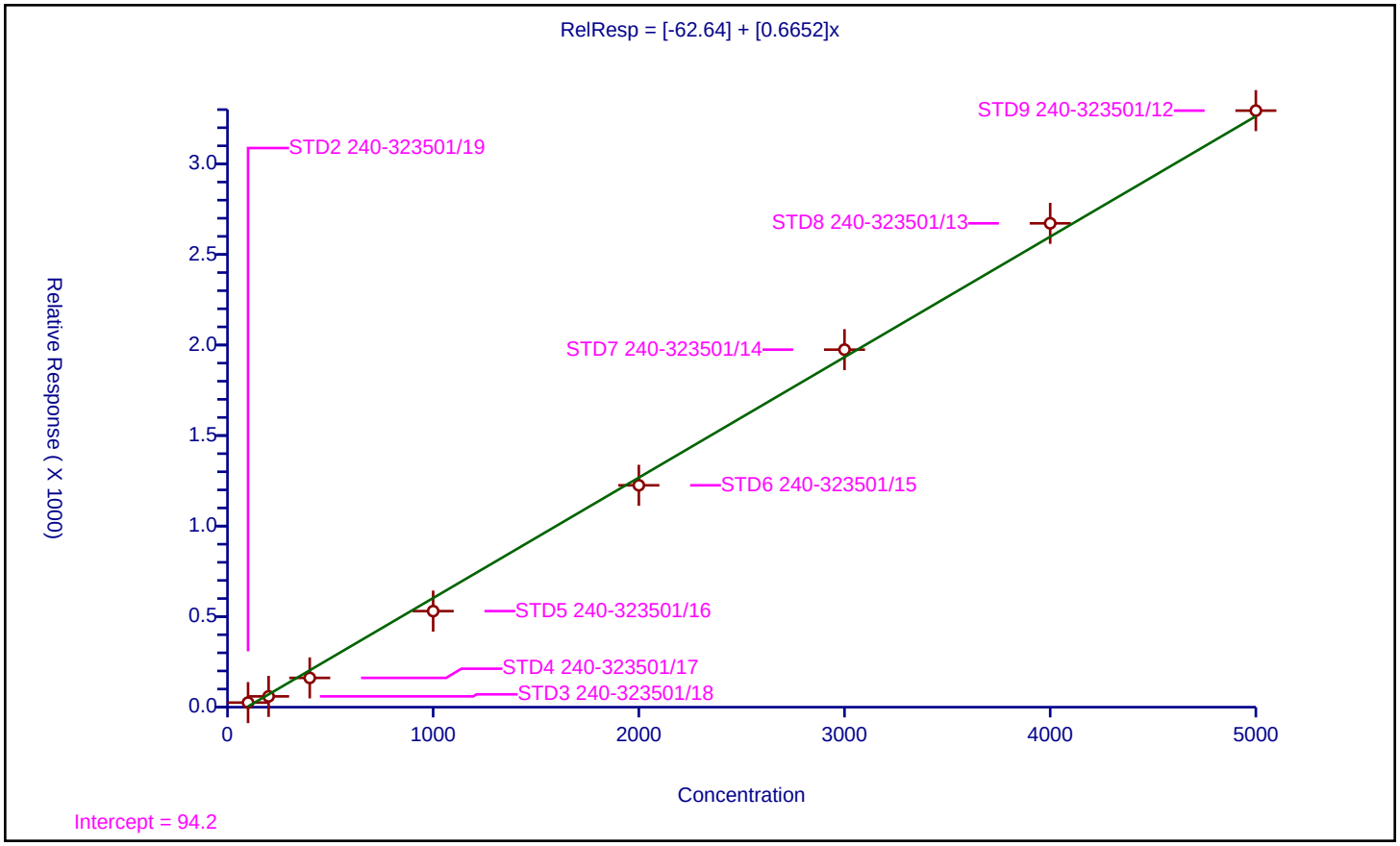
Curve Coefficients

Intercept:	-62.64
Slope:	0.6652

Error Coefficients

Standard Error:	3410000
Relative Standard Error:	15.8
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	100.0	25.307843	400.0	691912.0	0.253078	Y
2	STD3 240-323501/18	200.0	59.473943	400.0	671030.0	0.29737	Y
3	STD4 240-323501/17	400.0	161.623553	400.0	720494.0	0.404059	Y
4	STD5 240-323501/16	1000.0	530.4241	400.0	698420.0	0.530424	Y
5	STD6 240-323501/15	2000.0	1225.329239	400.0	670182.0	0.612665	Y
6	STD7 240-323501/14	3000.0	1974.31365	400.0	723793.0	0.658105	Y
7	STD8 240-323501/13	4000.0	2672.008771	400.0	702345.0	0.668002	Y
8	STD9 240-323501/12	5000.0	3294.457569	400.0	666242.0	0.658892	Y



Calibration / Isodrin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

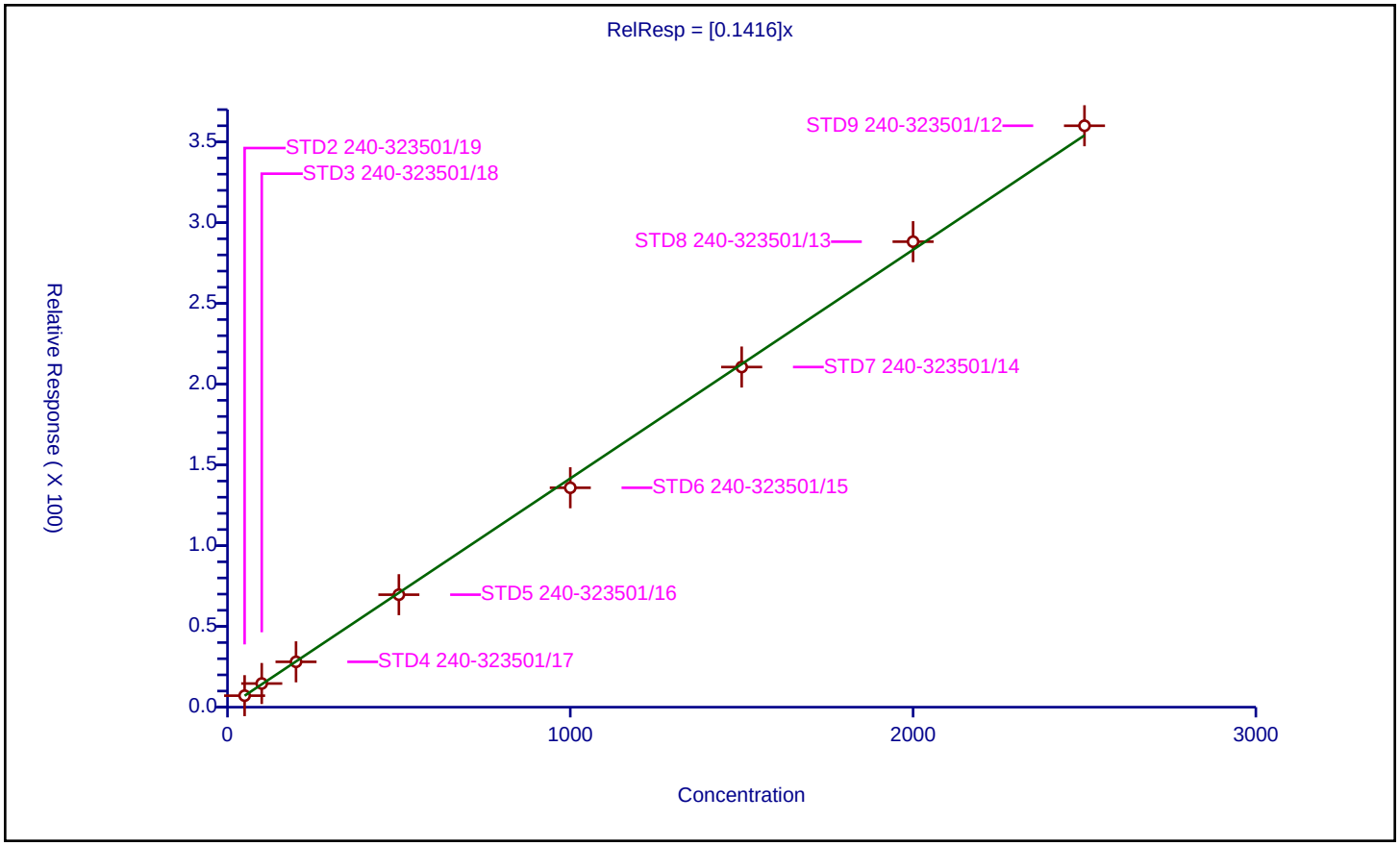
Curve Coefficients

Intercept:	0
Slope:	0.1416

Error Coefficients

Standard Error:	344000
Relative Standard Error:	2.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	7.120559	400.0	691912.0	0.142411	Y
2	STD3 240-323501/18	100.0	14.649718	400.0	671030.0	0.146497	Y
3	STD4 240-323501/17	200.0	28.066854	400.0	720494.0	0.140334	Y
4	STD5 240-323501/16	500.0	69.646345	400.0	698420.0	0.139293	Y
5	STD6 240-323501/15	1000.0	135.855633	400.0	670182.0	0.135856	Y
6	STD7 240-323501/14	1500.0	210.609387	400.0	723793.0	0.140406	Y
7	STD8 240-323501/13	2000.0	288.229859	400.0	702345.0	0.144115	Y
8	STD9 240-323501/12	2500.0	360.00072	400.0	666242.0	0.144	Y



Calibration / Aramite Peak 1

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

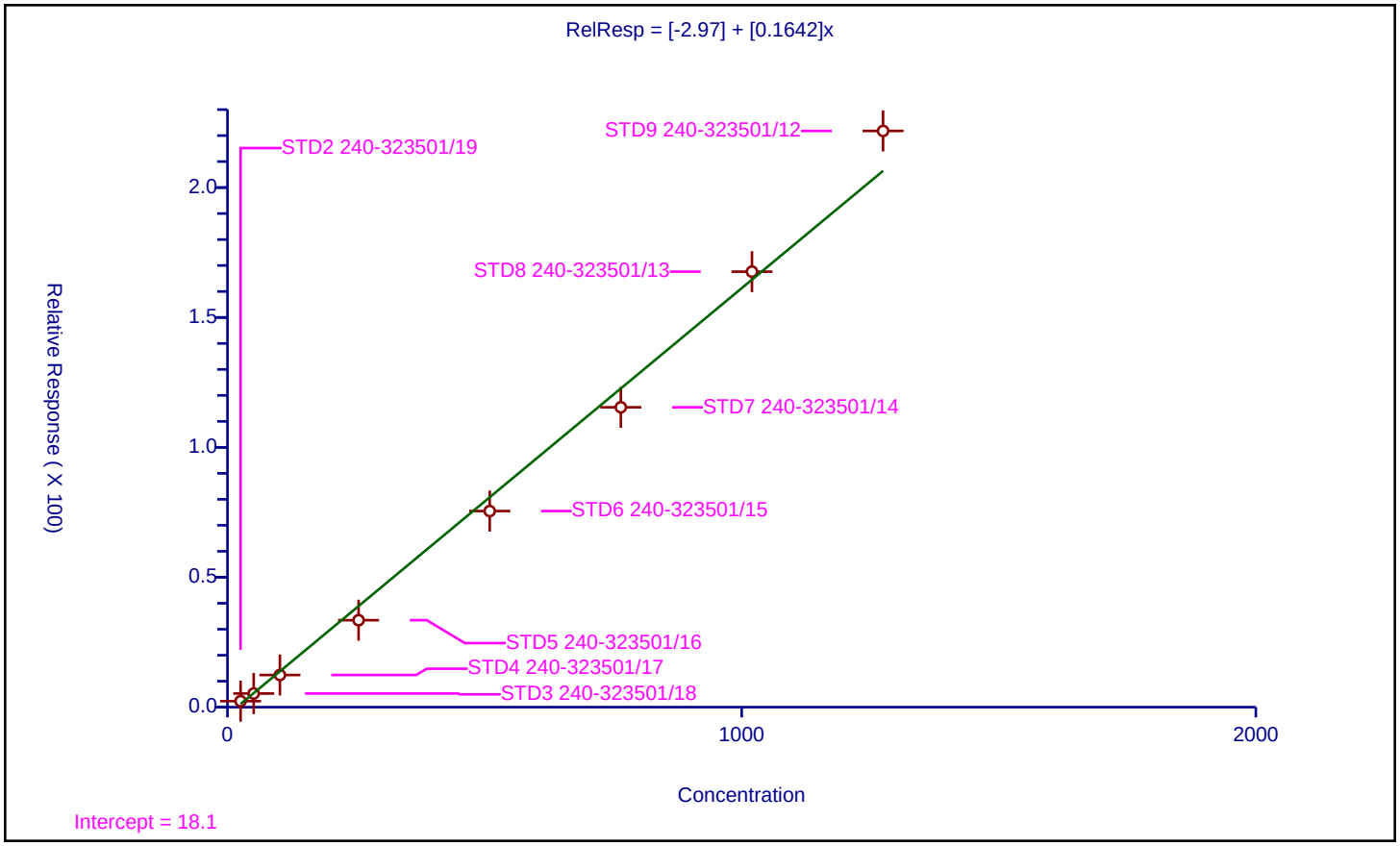
Curve Coefficients

Intercept:	-2.97
Slope:	0.1642

Error Coefficients

Standard Error:	180000
Relative Standard Error:	13.2
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	25.5	2.310565	400.0	489231.0	0.09061	Y
2	STD3 240-323501/18	51.0	5.251329	400.0	448953.0	0.102967	Y
3	STD4 240-323501/17	102.0	12.382031	400.0	472265.0	0.121392	Y
4	STD5 240-323501/16	255.0	33.474435	400.0	484286.0	0.131272	Y
5	STD6 240-323501/15	510.0	75.482918	400.0	488333.0	0.148006	Y
6	STD7 240-323501/14	765.0	115.415561	400.0	601801.0	0.15087	Y
7	STD8 240-323501/13	1020.0	167.623552	400.0	587810.0	0.164337	Y
8	STD9 240-323501/12	1275.0	221.786388	400.0	551280.0	0.17395	Y



Calibration / Aramite Peak 2

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

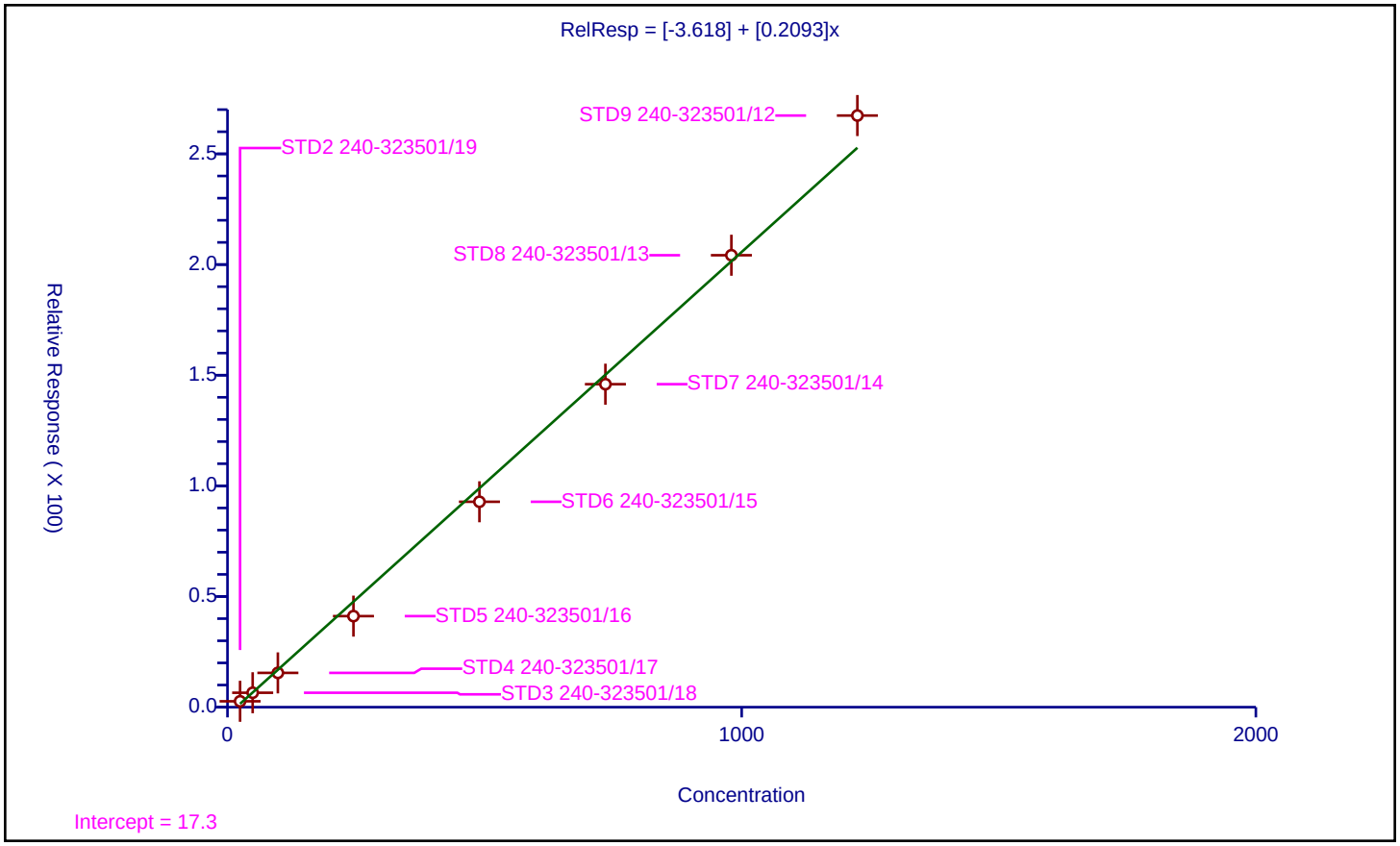
Curve Coefficients

Intercept:	-3.618
Slope:	0.2093

Error Coefficients

Standard Error:	220000
Relative Standard Error:	11.5
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	24.5	2.660502	400.0	489231.0	0.108592	Y
2	STD3 240-323501/18	49.0	6.515604	400.0	448953.0	0.132972	Y
3	STD4 240-323501/17	98.0	15.496384	400.0	472265.0	0.158126	Y
4	STD5 240-323501/16	245.0	41.133545	400.0	484286.0	0.167892	Y
5	STD6 240-323501/15	490.0	92.797333	400.0	488333.0	0.189382	Y
6	STD7 240-323501/14	735.0	145.937943	400.0	601801.0	0.198555	Y
7	STD8 240-323501/13	980.0	204.200677	400.0	587810.0	0.208368	Y
8	STD9 240-323501/12	1225.0	267.31679	400.0	551280.0	0.218218	Y



Calibration / p-Dimethylamino azobenzene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

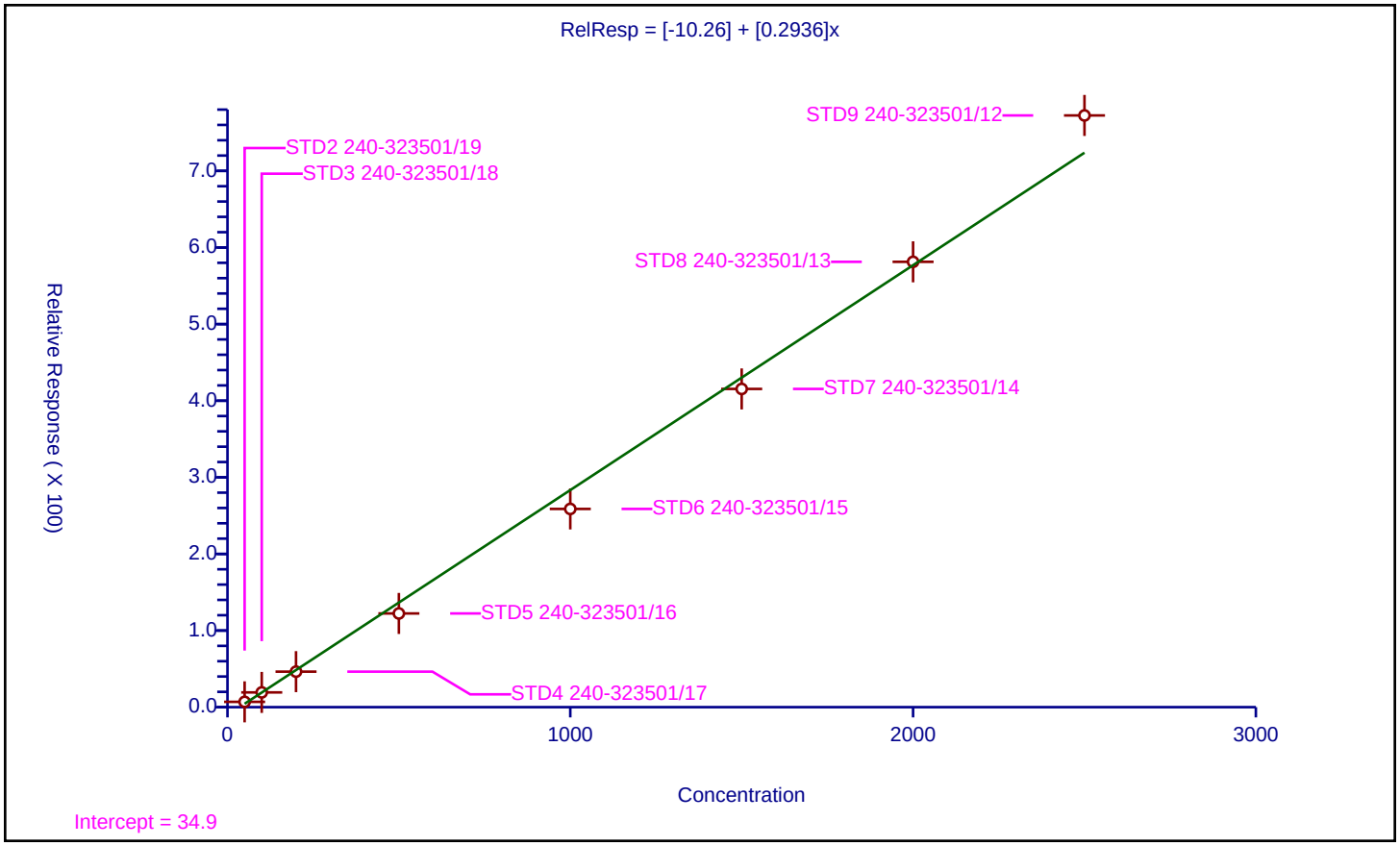
Curve Coefficients

Intercept:	-10.26
Slope:	0.2936

Error Coefficients

Standard Error:	629000
Relative Standard Error:	9.4
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	6.936601	400.0	489231.0	0.138732	Y
2	STD3 240-323501/18	100.0	19.255468	400.0	448953.0	0.192555	Y
3	STD4 240-323501/17	200.0	46.347707	400.0	472265.0	0.231739	Y
4	STD5 240-323501/16	500.0	122.31037	400.0	484286.0	0.244621	Y
5	STD6 240-323501/15	1000.0	258.761132	400.0	488333.0	0.258761	Y
6	STD7 240-323501/14	1500.0	415.415062	400.0	601801.0	0.276943	Y
7	STD8 240-323501/13	2000.0	581.297358	400.0	587810.0	0.290649	Y
8	STD9 240-323501/12	2500.0	772.371209	400.0	551280.0	0.308948	Y



Calibration / Chlorobenzilate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

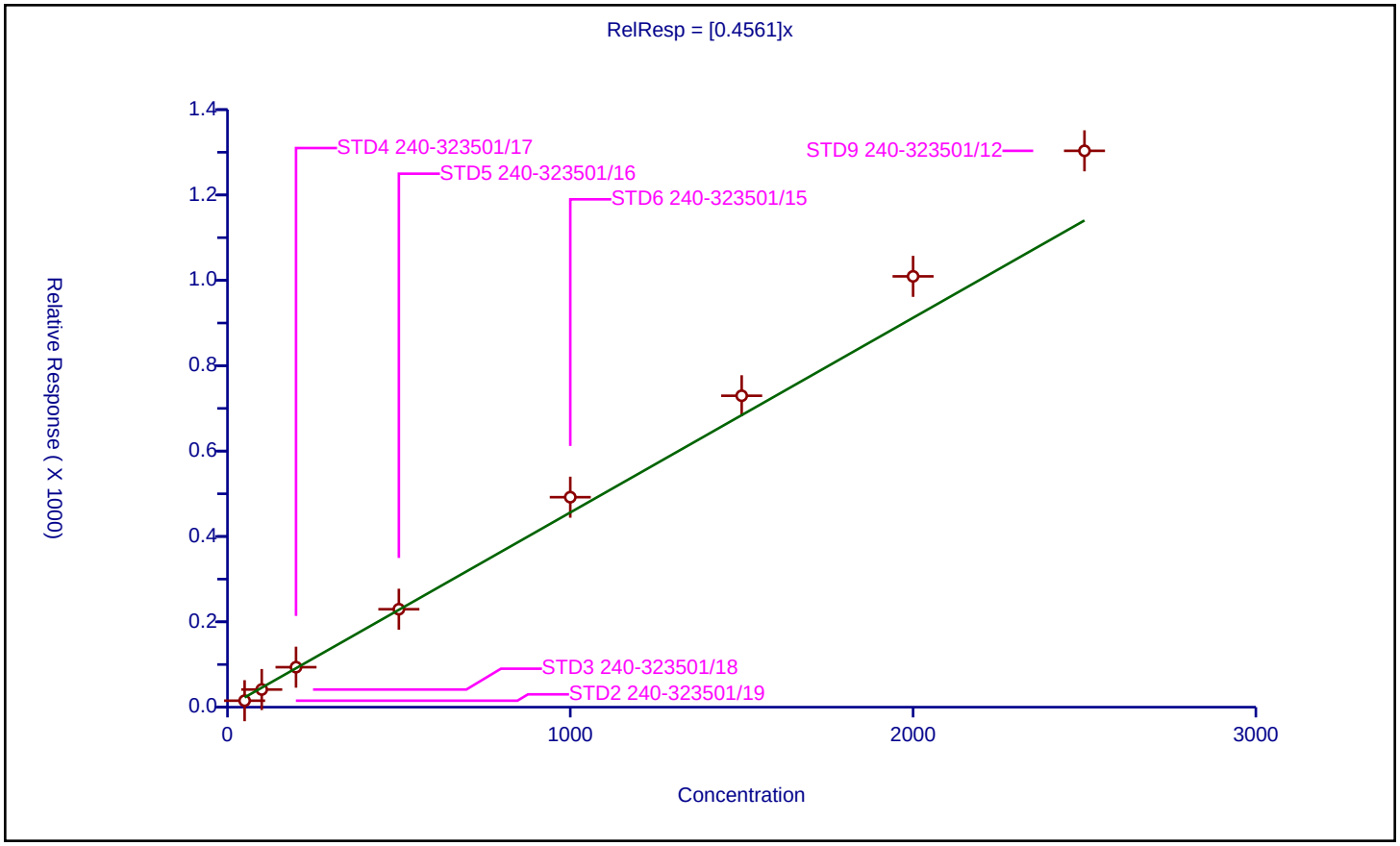
Curve Coefficients

Intercept:	0
Slope:	0.4561

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	15.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.974

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	15.180559	400.0	489231.0	0.303611	Y
2	STD3 240-323501/18	100.0	41.376269	400.0	448953.0	0.413763	Y
3	STD4 240-323501/17	200.0	93.644882	400.0	472265.0	0.468224	Y
4	STD5 240-323501/16	500.0	229.472667	400.0	484286.0	0.458945	Y
5	STD6 240-323501/15	1000.0	491.961838	400.0	488333.0	0.491962	Y
6	STD7 240-323501/14	1500.0	729.589349	400.0	601801.0	0.486393	Y
7	STD8 240-323501/13	2000.0	1009.334989	400.0	587810.0	0.504667	Y
8	STD9 240-323501/12	2500.0	1303.479176	400.0	551280.0	0.521392	Y



Calibration / Famphur

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

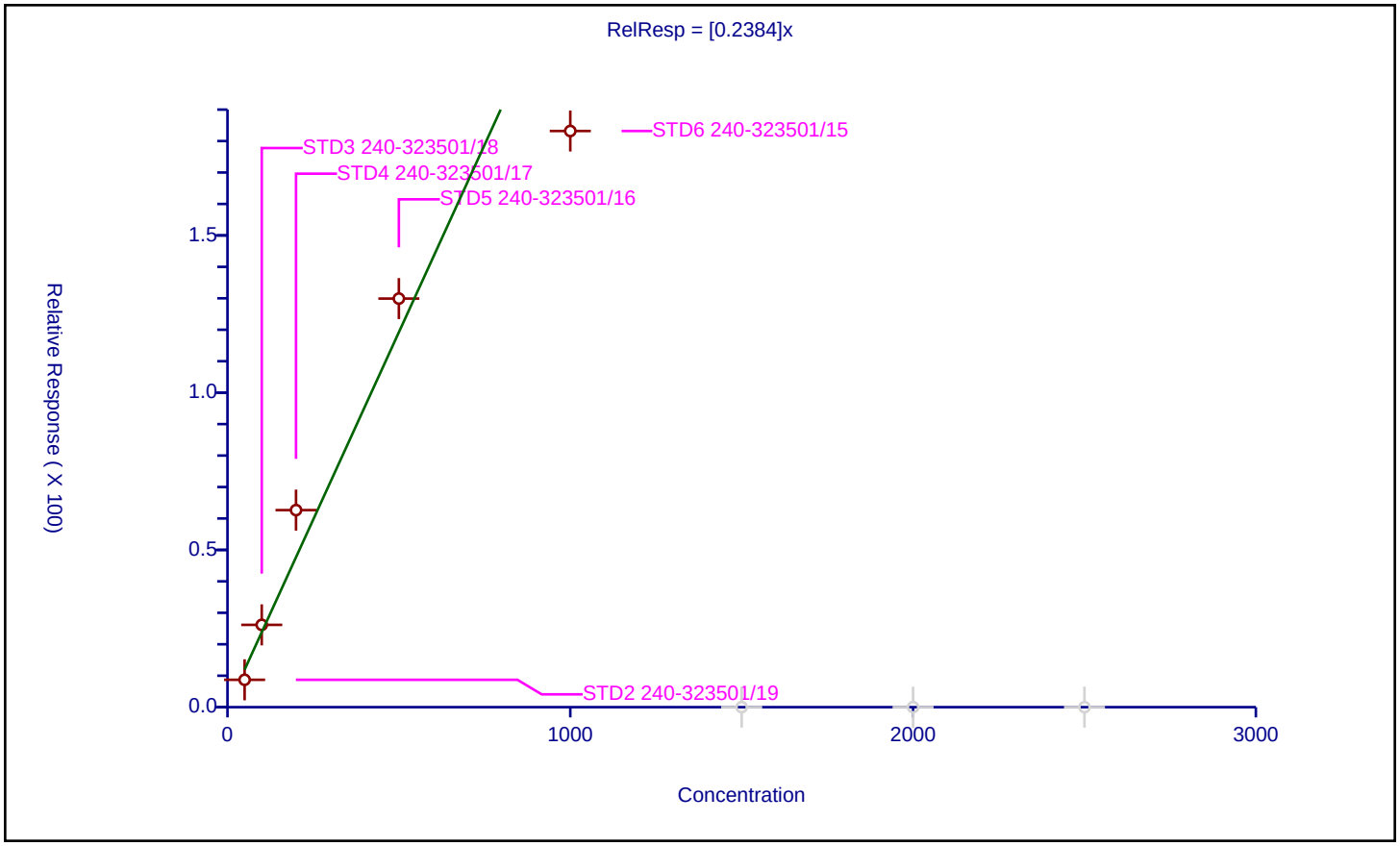
Curve Coefficients

Intercept:	0
Slope:	0.2384

Error Coefficients

Standard Error:	142000
Relative Standard Error:	24.6
Correlation Coefficient:	0.949
Coefficient of Determination (Adjusted):	0.917

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	8.70509	400.0	489231.0	0.174102	Y
2	STD3 240-323501/18	100.0	26.166659	400.0	448953.0	0.261667	Y
3	STD4 240-323501/17	200.0	62.656348	400.0	472265.0	0.313282	Y
4	STD5 240-323501/16	500.0	129.909186	400.0	484286.0	0.259818	Y
5	STD6 240-323501/15	1000.0	183.196303	400.0	488333.0	0.183196	Y
6	STD7 240-323501/14	1500.0	0.0	400.0	601801.0	0.0	N
7	STD8 240-323501/13	2000.0	0.0	400.0	587810.0	0.0	N
8	STD9 240-323501/12	2500.0	0.0	400.0	551280.0	0.0	N



Calibration / 3,3'-Dimethylbenzidine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

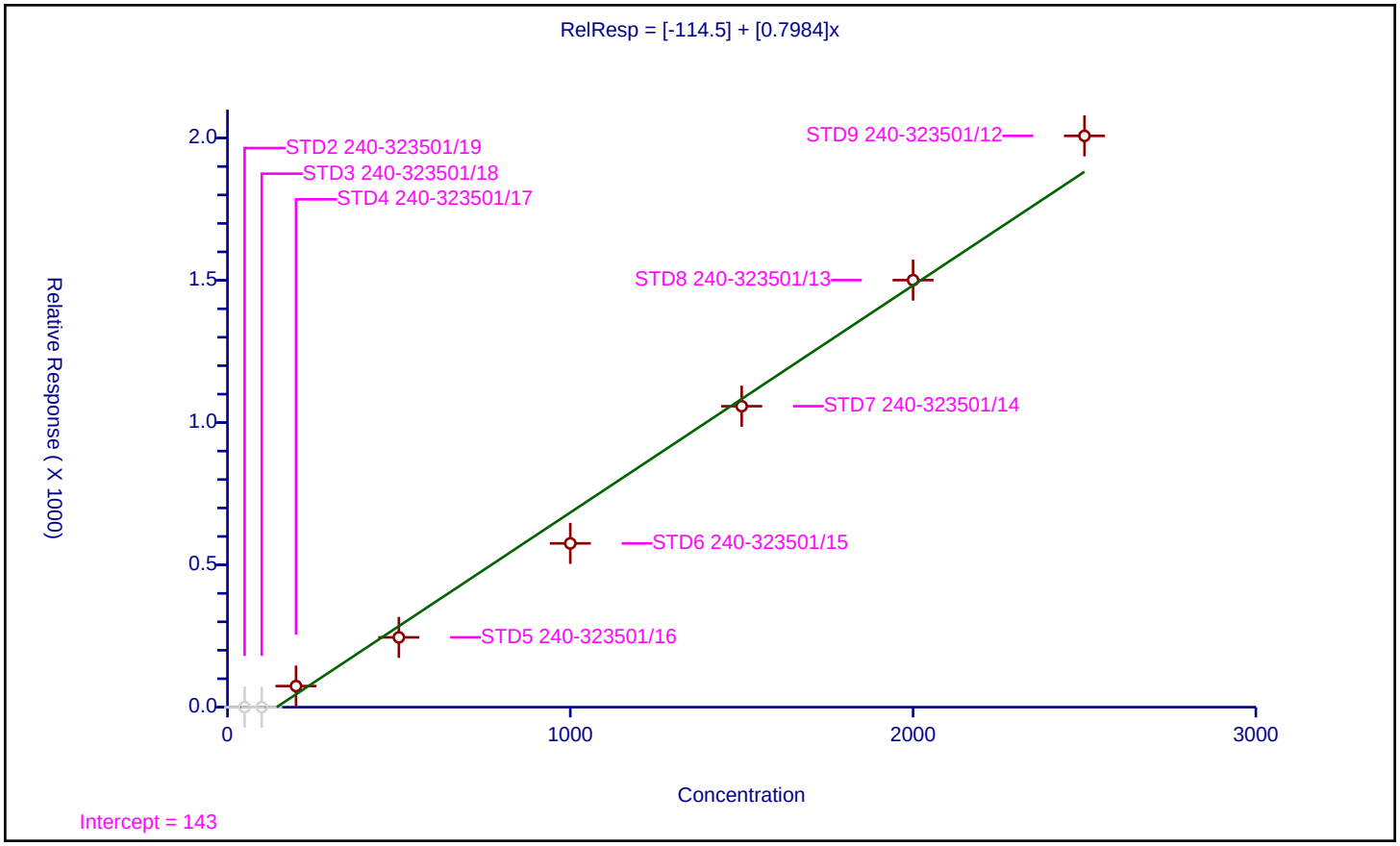
Curve Coefficients

Intercept:	-114.5
Slope:	0.7984

Error Coefficients

Standard Error:	1980000
Relative Standard Error:	12.8
Correlation Coefficient:	0.987
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	489231.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	448953.0	0.0	N
3	STD4 240-323501/17	200.0	74.124485	400.0	472265.0	0.370622	Y
4	STD5 240-323501/16	500.0	245.245991	400.0	484286.0	0.490492	Y
5	STD6 240-323501/15	1000.0	575.554796	400.0	488333.0	0.575555	Y
6	STD7 240-323501/14	1500.0	1057.67787	400.0	601801.0	0.705119	Y
7	STD8 240-323501/13	2000.0	1500.724384	400.0	587810.0	0.750362	Y
8	STD9 240-323501/12	2500.0	2007.668698	400.0	551280.0	0.803067	Y



Calibration / 2-Acetylaminofluorene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

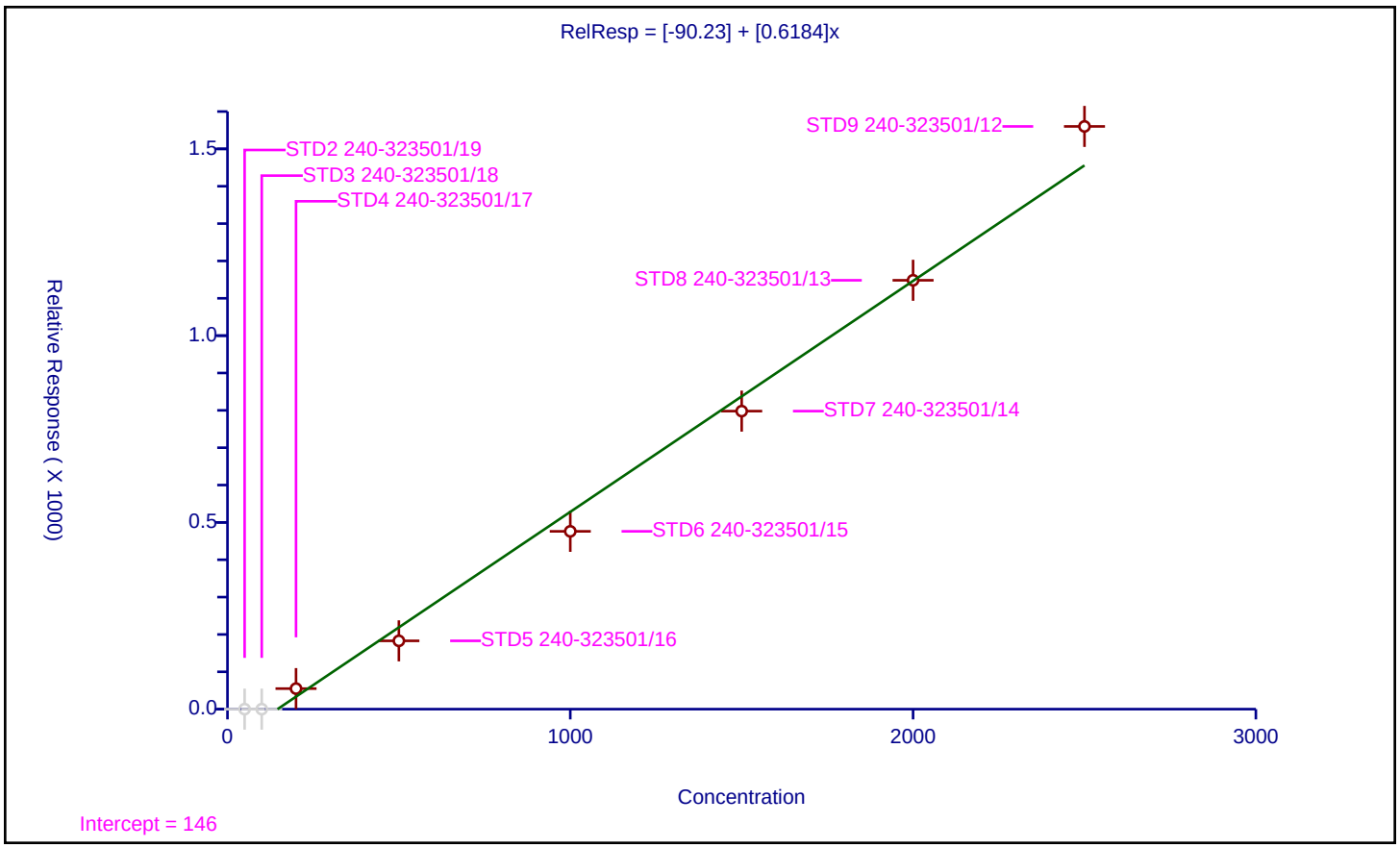
Curve Coefficients

Intercept:	-90.23
Slope:	0.6184

Error Coefficients

Standard Error:	1520000
Relative Standard Error:	12.0
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	0.0	400.0	489231.0	0.0	N
2	STD3 240-323501/18	100.0	0.0	400.0	448953.0	0.0	N
3	STD4 240-323501/17	200.0	55.046213	400.0	472265.0	0.275231	Y
4	STD5 240-323501/16	500.0	182.868801	400.0	484286.0	0.365738	Y
5	STD6 240-323501/15	1000.0	476.071042	400.0	488333.0	0.476071	Y
6	STD7 240-323501/14	1500.0	797.922237	400.0	601801.0	0.531948	Y
7	STD8 240-323501/13	2000.0	1148.230891	400.0	587810.0	0.574115	Y
8	STD9 240-323501/12	2500.0	1560.124075	400.0	551280.0	0.62405	Y



Calibration / 4,4'-Methylene bis(2-chloroaniline)

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

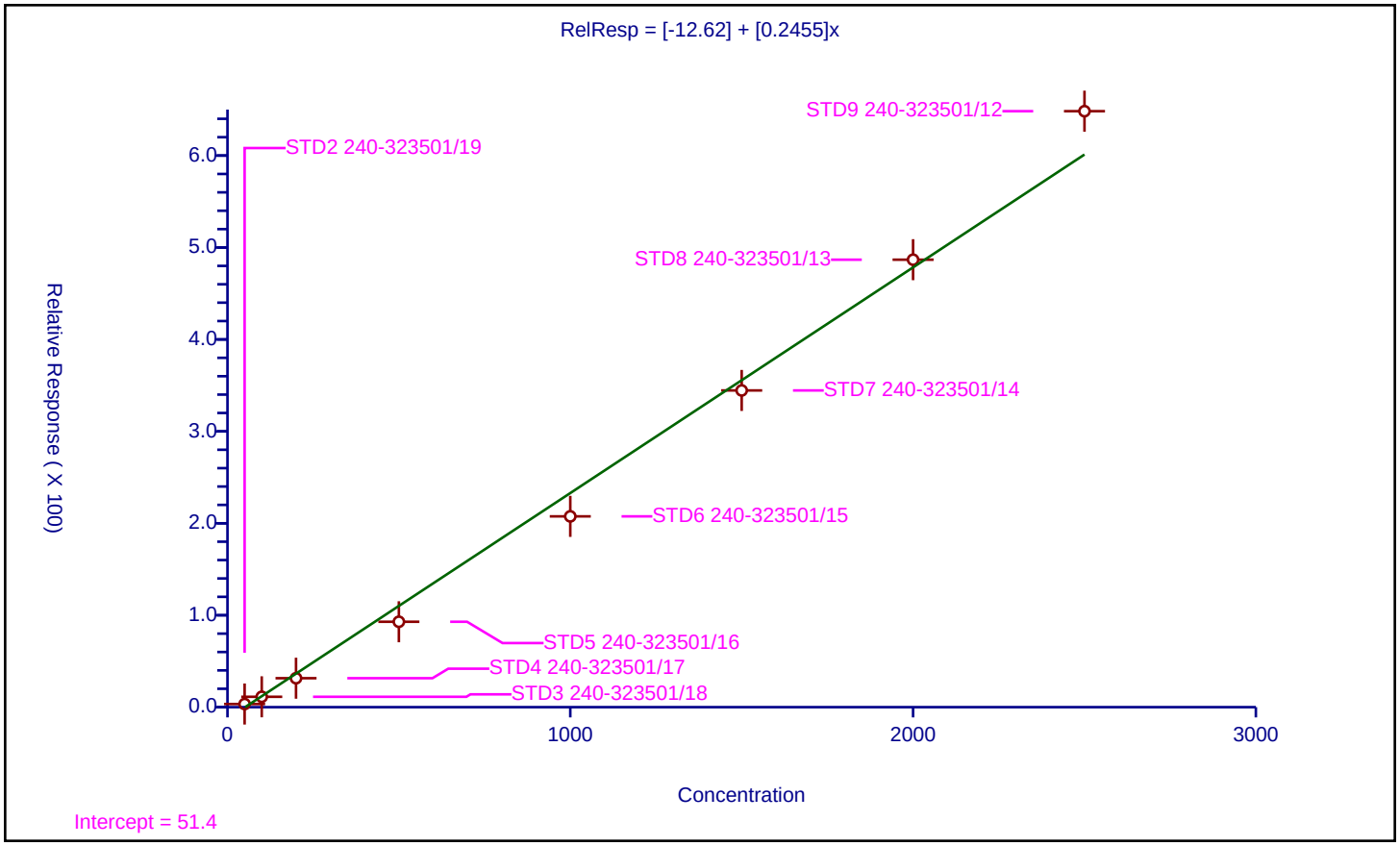
Curve Coefficients

Intercept:	-12.62
Slope:	0.2455

Error Coefficients

Standard Error:	525000
Relative Standard Error:	15.4
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	3.424967	400.0	489231.0	0.068499	Y
2	STD3 240-323501/18	100.0	11.283141	400.0	448953.0	0.112831	Y
3	STD4 240-323501/17	200.0	31.484865	400.0	472265.0	0.157424	Y
4	STD5 240-323501/16	500.0	92.910388	400.0	484286.0	0.185821	Y
5	STD6 240-323501/15	1000.0	207.535432	400.0	488333.0	0.207535	Y
6	STD7 240-323501/14	1500.0	344.507237	400.0	601801.0	0.229671	Y
7	STD8 240-323501/13	2000.0	486.742315	400.0	587810.0	0.243371	Y
8	STD9 240-323501/12	2500.0	648.280366	400.0	551280.0	0.259312	Y



Calibration / 6-Methylchrysene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

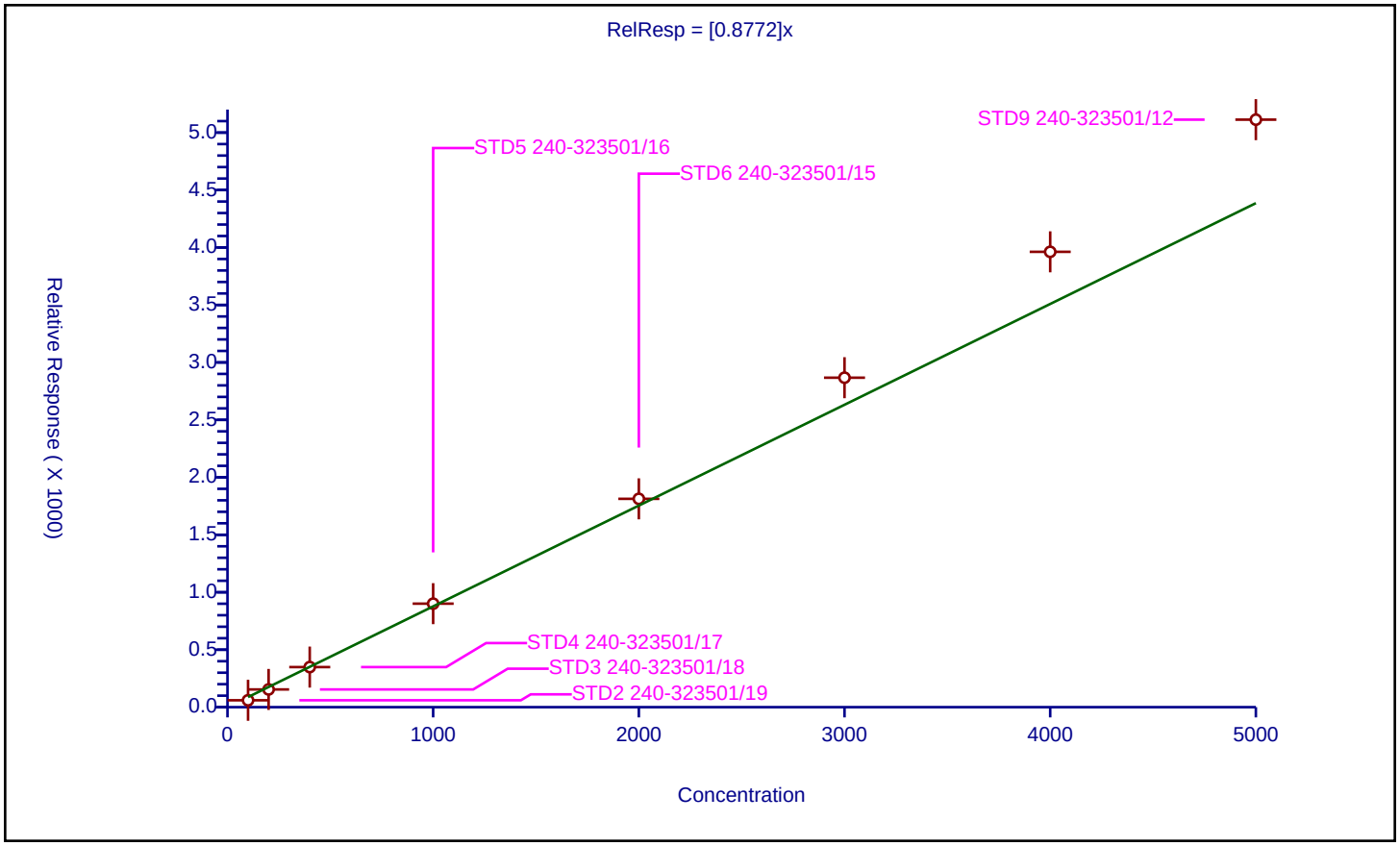
Curve Coefficients

Intercept:	0
Slope:	0.8772

Error Coefficients

Standard Error:	3930000
Relative Standard Error:	15.6
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	100.0	59.795884	400.0	489231.0	0.597959	Y
2	STD3 240-323501/18	200.0	154.240644	400.0	448953.0	0.771203	Y
3	STD4 240-323501/17	400.0	348.876161	400.0	472265.0	0.87219	Y
4	STD5 240-323501/16	1000.0	900.697522	400.0	484286.0	0.900698	Y
5	STD6 240-323501/15	2000.0	1812.985811	400.0	488333.0	0.906493	Y
6	STD7 240-323501/14	3000.0	2867.09261	400.0	601801.0	0.955698	Y
7	STD8 240-323501/13	4000.0	3962.359266	400.0	587810.0	0.99059	Y
8	STD9 240-323501/12	5000.0	5112.560586	400.0	551280.0	1.022512	Y



Calibration / 7,12-Dimethylbenz(a)anthracene

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

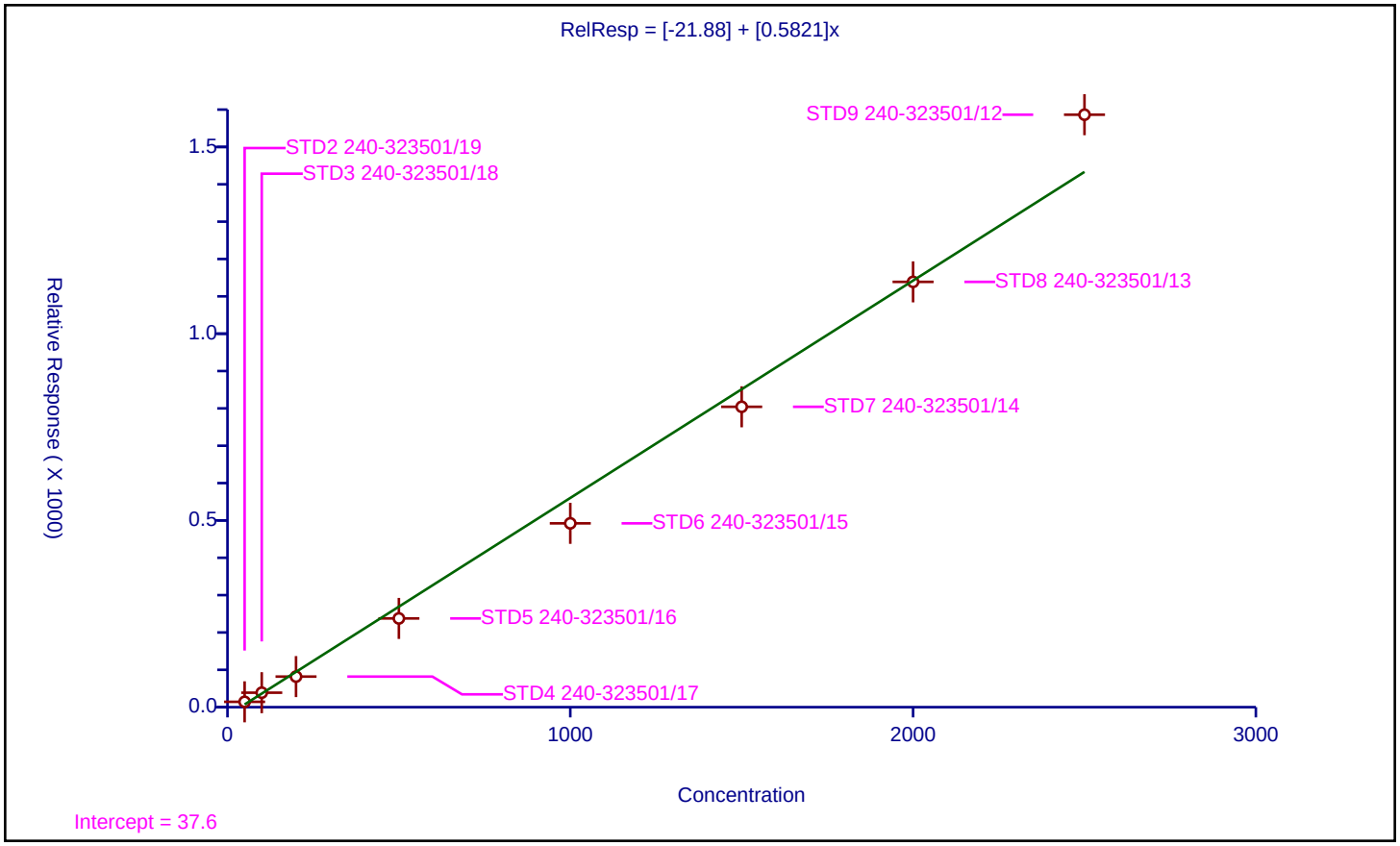
Curve Coefficients

Intercept:	-21.88
Slope:	0.5821

Error Coefficients

Standard Error:	1030000
Relative Standard Error:	13.7
Correlation Coefficient:	0.990
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	14.311157	400.0	385741.0	0.286223	Y
2	STD3 240-323501/18	100.0	38.781341	400.0	379729.0	0.387813	Y
3	STD4 240-323501/17	200.0	81.824263	400.0	412572.0	0.409121	Y
4	STD5 240-323501/16	500.0	237.601445	400.0	394671.0	0.475203	Y
5	STD6 240-323501/15	1000.0	492.179641	400.0	403204.0	0.49218	Y
6	STD7 240-323501/14	1500.0	804.231034	400.0	490093.0	0.536154	Y
7	STD8 240-323501/13	2000.0	1138.757876	400.0	479807.0	0.569379	Y
8	STD9 240-323501/12	2500.0	1586.355634	400.0	450413.0	0.634542	Y



Calibration / 3-Methylcholanthrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

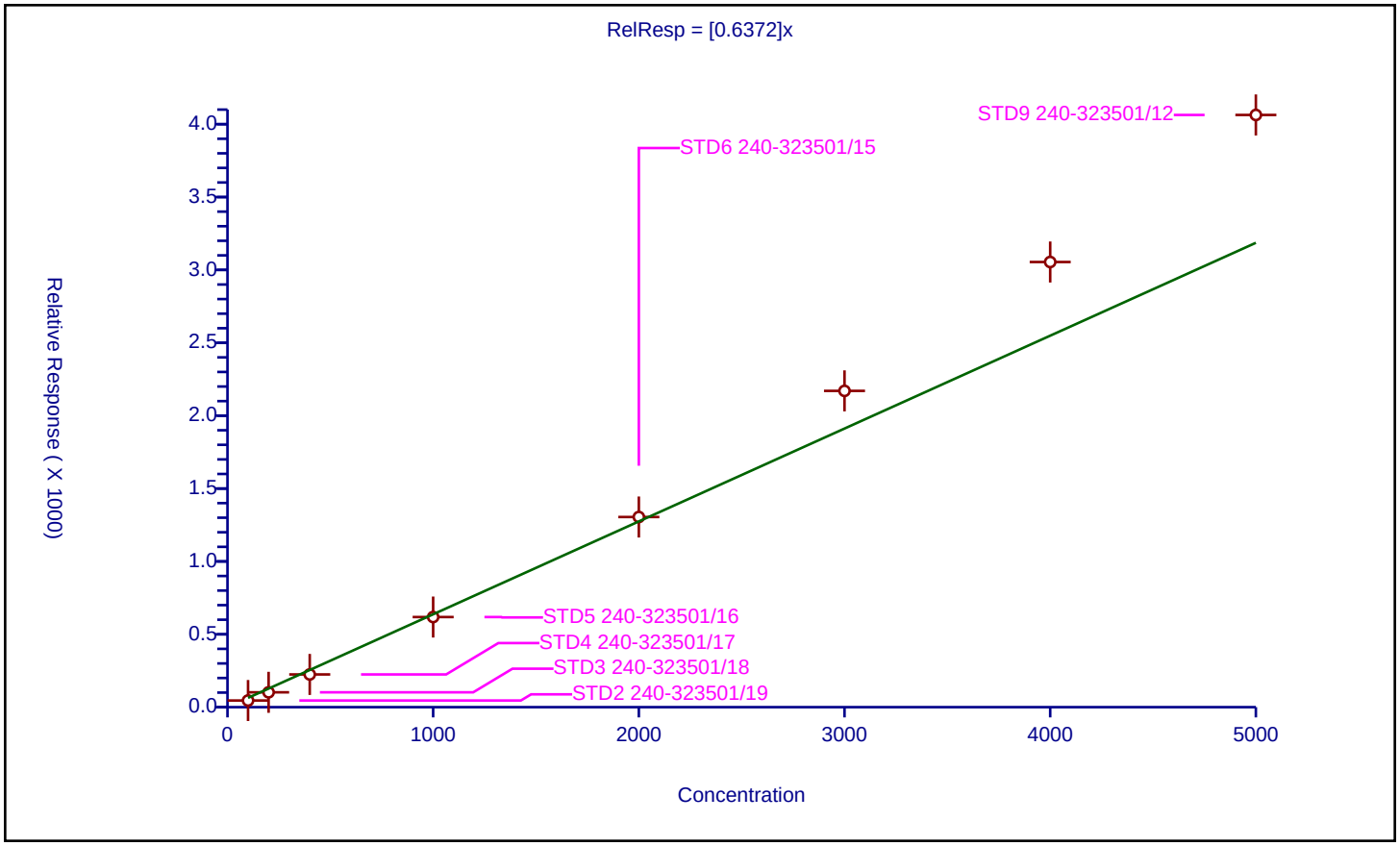
Curve Coefficients

Intercept:	0
Slope:	0.6372

Error Coefficients

Standard Error:	2490000
Relative Standard Error:	19.6
Correlation Coefficient:	0.991
Coefficient of Determination (Adjusted):	0.958

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	100.0	45.683503	400.0	385741.0	0.456835	Y
2	STD3 240-323501/18	200.0	101.878972	400.0	379729.0	0.509395	Y
3	STD4 240-323501/17	400.0	224.458276	400.0	412572.0	0.561146	Y
4	STD5 240-323501/16	1000.0	618.290171	400.0	394671.0	0.61829	Y
5	STD6 240-323501/15	2000.0	1304.782691	400.0	403204.0	0.652391	Y
6	STD7 240-323501/14	3000.0	2170.052623	400.0	490093.0	0.723351	Y
7	STD8 240-323501/13	4000.0	3054.409794	400.0	479807.0	0.763602	Y
8	STD9 240-323501/12	5000.0	4063.274373	400.0	450413.0	0.812655	Y



Calibration / Dibenz[a,h]acridine

Curve Type:	Linear
Weighting:	Conc
Origin:	None
Dependency:	Response
Calib Mode:	ISTD
Response Base:	
RF Rounding:	0

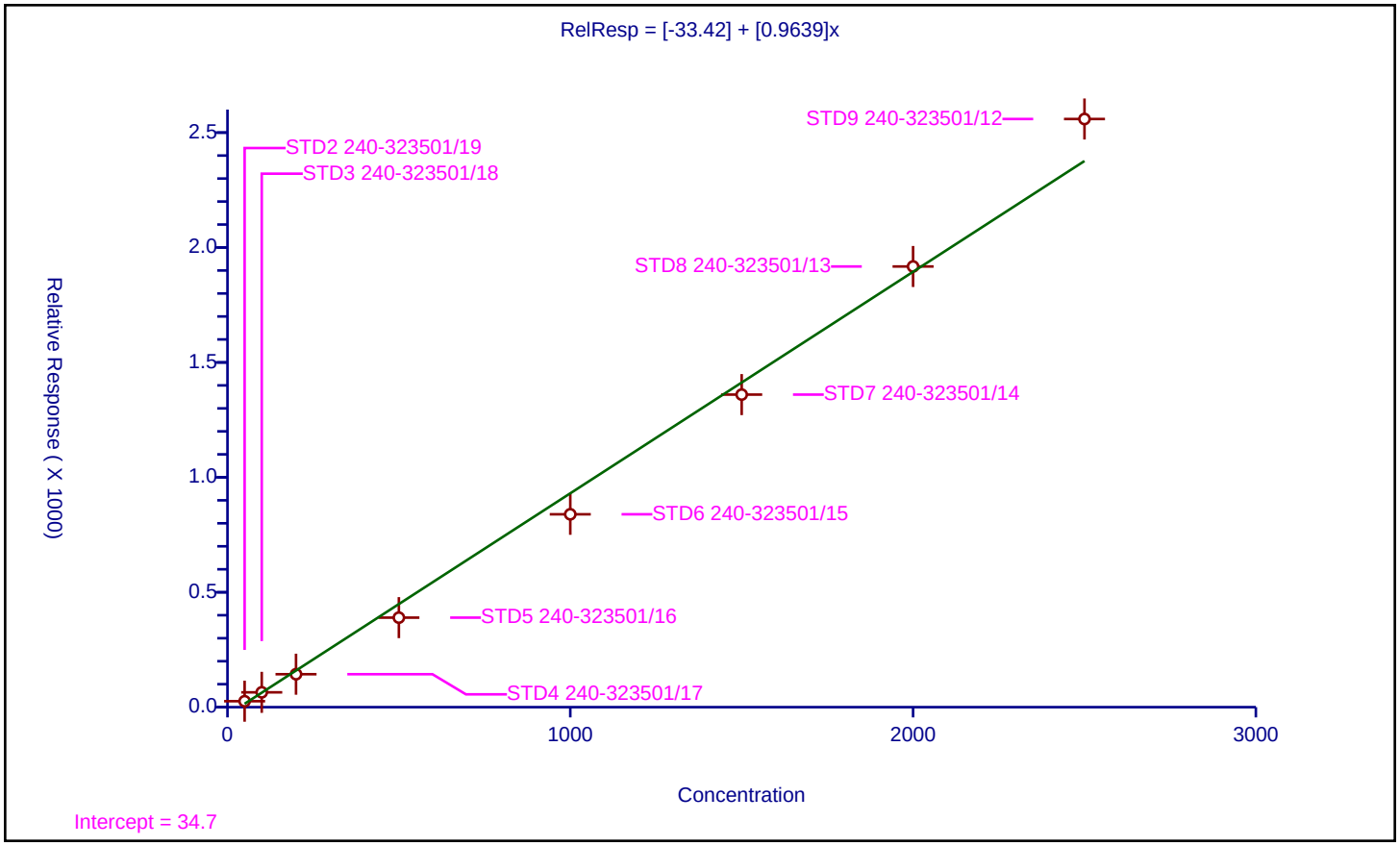
Curve Coefficients

Intercept:	-33.42
Slope:	0.9639

Error Coefficients

Standard Error:	1690000
Relative Standard Error:	12.4
Correlation Coefficient:	0.992
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	STD2 240-323501/19	50.0	25.963535	400.0	385741.0	0.519271	Y
2	STD3 240-323501/18	100.0	64.543925	400.0	379729.0	0.645439	Y
3	STD4 240-323501/17	200.0	143.37861	400.0	412572.0	0.716893	Y
4	STD5 240-323501/16	500.0	389.538628	400.0	394671.0	0.779077	Y
5	STD6 240-323501/15	1000.0	839.237706	400.0	403204.0	0.839238	Y
6	STD7 240-323501/14	1500.0	1360.040645	400.0	490093.0	0.906694	Y
7	STD8 240-323501/13	2000.0	1917.43847	400.0	479807.0	0.958719	Y
8	STD9 240-323501/12	2500.0	2559.075338	400.0	450413.0	1.02363	Y



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-322037/11 Calibration Date: 04/11/2018 15:14

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.2645	0.2580		0.975	1.00	-2.5	30.0
N-Nitrosodimethylamine	Ave	0.7777	0.8134		1.05	1.00	4.6	30.0
Pyridine	Ave	0.7364	0.7230		1.96	2.00	-1.8	30.0
Benzaldehyde	Qua		0.8765	0.0100	2.09	2.00	4.3	30.0
Phenol	Ave	1.534	1.252	0.8000	0.816	1.00	-18.4	30.0
Aniline	Ave	2.601	2.404		0.924	1.00	-7.6	30.0
Bis(2-chloroethyl)ether	Ave	1.817	1.626	0.7000	0.895	1.00	-10.5	30.0
2-Chlorophenol	Ave	1.406	1.212	0.8000	0.862	1.00	-13.8	30.0
n-Decane	Ave	2.168	2.257		1.04	1.00	4.1	30.0
1,3-Dichlorobenzene	Ave	1.572	1.573		1.00	1.00	0.0	30.0
1,4-Dichlorobenzene	Ave	1.640	1.621		0.988	1.00	-1.2	30.0
Benzyl alcohol	Ave	1.037	1.016		0.980	1.00	-2.0	30.0
1,2-Dichlorobenzene	Ave	1.603	1.561		0.974	1.00	-2.6	30.0
2-Methylphenol	Ave	1.360	1.222	0.7000	0.899	1.00	-10.1	30.0
bis (2-chloroisopropyl) ether	Ave	4.290	3.937		0.918	1.00	-8.2	30.0
Indene	Ave	2.877	2.681		1.86	2.00	-6.8	30.0
3 & 4 Methylphenol	Ave	1.379	1.304		0.946	1.00	-5.4	30.0
N-Nitrosodi-n-propylamine	Ave	1.440	1.450	0.5000	1.01	1.00	0.7	30.0
Acetophenone	Ave	2.511	2.501	0.0100	0.996	1.00	-0.4	30.0
Hexachloroethane	Ave	0.6792	0.6683	0.3000	0.984	1.00	-1.6	30.0
Nitrobenzene	Ave	0.3840	0.3833	0.2000	0.998	1.00	-0.2	30.0
Isophorone	Ave	0.6462	0.6930	0.4000	1.07	1.00	7.3	30.0
2,4-Dimethylphenol	Ave	0.3051	0.3180	0.2000	1.04	1.00	4.2	30.0
2-Nitrophenol	Ave	0.1853	0.1944	0.1000	1.05	1.00	4.9	30.0
Benzoic acid	Lin1		0.1483		1.85	2.00	-7.6	30.0
Bis(2-chloroethoxy)methane	Ave	0.4069	0.4207	0.3000	1.03	1.00	3.4	30.0
2,4-Dichlorophenol	Ave	0.2229	0.2346	0.2000	1.05	1.00	5.3	30.0
1,2,4-Trichlorobenzene	Ave	0.2801	0.2597		0.927	1.00	-7.3	30.0
Naphthalene	Ave	1.029	1.040	0.7000	1.01	1.00	1.0	30.0
4-Chloroaniline	Ave	0.4866	0.5438	0.0100	1.12	1.00	11.8	30.0
2,6-Dichlorophenol	Ave	0.2507	0.2658		1.06	1.00	6.0	30.0
Hexachlorobutadiene	Ave	0.1572	0.1499	0.0100	0.954	1.00	-4.6	30.0
Caprolactam	Ave	0.0994	0.1029	0.0100	2.07	2.00	3.5	30.0
4-Chloro-3-methylphenol	Ave	0.2481	0.2727	0.2000	1.10	1.00	9.9	30.0
2-Methylnaphthalene	Ave	0.7074	0.7251	0.4000	1.02	1.00	2.5	30.0
1-Methylnaphthalene	Ave	0.6674	0.6864		1.03	1.00	2.9	30.0
Hexachlorocyclopentadiene	Ave	0.3323	0.3850	0.0500	1.16	1.00	15.9	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5030	0.5295	0.0100	1.05	1.00	5.3	30.0
2,4,6-Trichlorophenol	Ave	0.3328	0.3731	0.2000	1.12	1.00	12.1	30.0
2,4,5-Trichlorophenol	Ave	0.3353	0.3680	0.2000	1.10	1.00	9.8	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-322037/11 Calibration Date: 04/11/2018 15:14

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.598	1.691	0.0100	1.06	1.00	5.8	30.0
2-Chloronaphthalene	Ave	1.218	1.284	0.8000	1.05	1.00	5.5	30.0
2-Nitroaniline	Ave	0.4817	0.5230	0.0100	1.09	1.00	8.6	30.0
Dimethyl phthalate	Ave	1.527	1.559	0.0100	1.02	1.00	2.1	30.0
1,3-Dinitrobenzene	Ave	0.2304	0.2494		1.08	1.00	8.2	30.0
2,6-Dinitrotoluene	Ave	0.3378	0.3566		1.06	1.00	5.6	30.0
Acenaphthylene	Ave	1.763	2.035	0.9000	1.15	1.00	15.4	30.0
3-Nitroaniline	Ave	0.2972	0.3408	0.0100	1.15	1.00	14.7	30.0
2,4-Dinitrophenol	Lin1		0.1943	0.0100	1.90	2.00	-4.9	30.0
4-Nitrophenol	Ave	0.2134	0.2374		2.22	2.00	11.2	30.0
Acenaphthene	Ave	1.249	1.269	0.9000	1.02	1.00	1.6	30.0
2,4-Dinitrotoluene	Ave	0.4349	0.4683	0.2000	1.08	1.00	7.7	30.0
Dibenzofuran	Ave	1.759	1.787	0.8000	1.02	1.00	1.6	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2819	0.3074	0.0100	1.09	1.00	9.0	30.0
Hexadecane	Ave	1.415	1.440		1.02	1.00	1.8	30.0
Diethyl phthalate	Ave	1.530	1.533	0.0100	1.00	1.00	0.2	30.0
4-Chlorophenyl phenyl ether	Ave	0.6942	0.6851	0.4000	0.987	1.00	-1.3	30.0
4-Nitroaniline	Ave	0.3004	0.2848	0.0100	0.948	1.00	-5.2	30.0
Fluorene	Ave	1.507	1.534	0.9000	1.02	1.00	1.7	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1376	0.0100	2.05	2.00	2.3	30.0
Diphenylamine	Ave	0.7076	0.7473		0.898	0.850	5.6	30.0
N-Nitrosodiphenylamine	Ave	0.6015	0.6352	0.0100	1.06	1.00	5.6	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9121	0.9770		1.07	1.00	7.1	30.0
Azobenzene	Ave	0.9125	0.9777		1.07	1.00	7.1	30.0
4-Bromophenyl phenyl ether	Ave	0.2030	0.2090	0.1000	1.03	1.00	2.9	30.0
Atrazine	Ave	0.2235	0.2298	0.0100	2.06	2.00	2.8	30.0
Hexachlorobenzene	Ave	0.1929	0.2071	0.1000	1.07	1.00	7.4	30.0
n-Octadecane	Ave	0.8110	0.8699		1.07	1.00	7.3	30.0
Pentachlorophenol	Ave	0.1272	0.1350	0.0500	2.12	2.00	6.2	30.0
Phenanthrene	Ave	1.148	1.140	0.7000	0.994	1.00	-0.6	30.0
Anthracene	Ave	1.144	1.163	0.7000	1.02	1.00	1.7	30.0
Carbazole	Ave	1.039	1.043	0.0100	1.00	1.00	0.3	30.0
Di-n-butyl phthalate	Ave	1.396	1.491	0.0100	1.07	1.00	6.8	30.0
Fluoranthene	Ave	1.177	1.250	0.6000	1.06	1.00	6.2	30.0
Benzidine	Lin1		0.5473		1.90	2.00	-5.1	30.0
Pyrene	Ave	1.266	1.325	0.6000	1.05	1.00	4.7	30.0
Butyl benzyl phthalate	Ave	0.6536	0.6890	0.0100	1.05	1.00	5.4	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.8715	0.9303	0.0100	1.07	1.00	6.7	30.0
3,3'-Dichlorobenzidine	Ave	0.3940	0.4176	0.0100	2.12	2.00	6.0	30.0
Benzo[a]anthracene	Ave	1.159	1.196	0.8000	1.03	1.00	3.2	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-322037/11 Calibration Date: 04/11/2018 15:14

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	1.154	1.182	0.7000	1.02	1.00	2.4	30.0
Di-n-octyl phthalate	Ave	1.564	1.680	0.0100	1.07	1.00	7.4	30.0
Benzo[b]fluoranthene	Ave	1.171	1.199	0.7000	1.02	1.00	2.4	30.0
Benzo[k]fluoranthene	Ave	1.230	1.304	0.7000	1.06	1.00	6.0	30.0
Benzo[a]pyrene	Ave	1.115	1.175	0.7000	1.05	1.00	5.4	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.198	1.230	0.5000	1.03	1.00	2.6	30.0
Dibenz(a,h)anthracene	Ave	1.024	1.076	0.4000	1.05	1.00	5.1	30.0
Benzo[g,h,i]perylene	Ave	1.017	1.023	0.5000	1.01	1.00	0.6	30.0
2-Fluorophenol (Surr)	Ave	0.8249	0.8740		1.06	1.00	5.9	30.0
Phenol-d5 (Surr)	Ave	1.383	1.216		0.879	1.00	-12.1	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3888	0.4205		1.08	1.00	8.2	30.0
2-Fluorobiphenyl (Surr)	Ave	1.391	1.563		1.12	1.00	12.4	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1401	0.1588		1.13	1.00	13.3	30.0
Terphenyl-d14 (Surr)	Ave	0.7954	0.8557		1.08	1.00	7.6	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411011.D
Lims ID: icv l1lvi
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2018 15:14:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-011
Misc. Info.: ICV L1LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:18 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 05:31:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	138717	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	722407	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	360689	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	643236	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.681	0.000	98	622459	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.069	0.000	97	580069	400.0	400.0	
$ 7 2-Fluorophenol	112	5.776	5.776	0.000	95	303091	1000.0	1059.5	
$ 8 Phenol-d5	99	6.488	6.488	0.000	0	421729	1000.0	879.2	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	97	759458	1000.0	1081.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.811	-0.006	100	1409720	1000.0	1124.1	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	79	143156	1000.0	1132.9	
$ 12 Terphenyl-d14	244	12.211	12.211	0.000	99	1331608	1000.0	1075.9	
26 1,4-Dioxane	88	4.388	4.382	0.006	84	89464	1000.0	975.2	
27 N-Nitrosodimethylamine	74	4.641	4.641	0.000	73	282086	1000.0	1045.9	
28 Pyridine	79	4.699	4.700	-0.001	71	501487	2000.0	1963.8	
42 Benzaldehyde	77	6.488	6.488	0.000	88	607920	2000.0	2085.9	
43 Phenol	94	6.499	6.499	0.000	91	434272	1000.0	816.5	
44 Aniline	93	6.570	6.570	0.000	93	833830	1000.0	924.3	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	88	563731	1000.0	894.5	
244 n-Decane	57	6.682	6.676	0.006	91	782749	1000.0	1041.1	
47 2-Chlorophenol	128	6.682	6.682	0.000	79	420261	1000.0	861.8	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	94	545376	1000.0	1000.6	
49 1,4-Dichlorobenzene	146	6.864	6.864	0.000	89	561987	1000.0	988.0	
50 Benzyl alcohol	108	6.929	6.929	0.000	87	352299	1000.0	979.7	
52 2-Methylphenol	108	7.005	6.999	0.006	85	423727	1000.0	898.7	
51 1,2-Dichlorobenzene	146	6.999	6.999	0.000	89	541511	1000.0	973.9	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	90	1365326	1000.0	917.7	
53 Indene	115	7.070	7.070	0.000	90	1859762	2000.0	1863.9	
55 3 & 4 Methylphenol	108	7.123	7.123	0.000	0	452127	1000.0	945.8	
57 N-Nitrosodi-n-propylamine	70	7.140	7.141	-0.001	96	502978	1000.0	1007.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.158	7.158	0.000	90	867422	1000.0	996.3	
61 Hexachloroethane	117	7.293	7.294	-0.001	92	231758	1000.0	984.0	
62 Nitrobenzene	77	7.317	7.317	0.000	97	692161	1000.0	998.1	
64 Isophorone	82	7.499	7.499	0.000	95	1251616	1000.0	1072.5	
66 2,4-Dimethylphenol	107	7.570	7.570	0.000	96	574361	1000.0	1042.4	
65 2-Nitrophenol	139	7.582	7.582	0.000	93	351020	1000.0	1048.9	
70 Benzoic acid	122	7.617	7.617	0.000	92	535673	2000.0	1847.4	
69 Bis(2-chloroethoxy)methane	93	7.646	7.646	0.000	94	759754	1000.0	1033.9	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	97	423703	1000.0	1052.6	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	469035	1000.0	927.3	
74 Naphthalene	128	7.940	7.941	-0.001	97	1877415	1000.0	1009.9	
75 4-Chloroaniline	127	7.952	7.952	0.000	93	982047	1000.0	1117.5	
76 2,6-Dichlorophenol	162	7.970	7.970	0.000	92	480049	1000.0	1060.2	
78 Hexachlorobutadiene	225	8.029	8.029	0.000	94	270742	1000.0	953.7	
83 Caprolactam	113	8.235	8.229	0.006	70	371692	2000.0	2069.5	
85 4-Chloro-3-methylphenol	107	8.329	8.329	0.000	95	492508	1000.0	1099.3	
86 2-Methylnaphthalene	142	8.517	8.517	0.000	92	1309460	1000.0	1024.9	
87 1-Methylnaphthalene	142	8.605	8.611	-0.006	93	1239601	1000.0	1028.5	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	95	347179	1000.0	1158.5	
90 1,2,4,5-Tetrachlorobenzene	216	8.664	8.664	0.000	97	477493	1000.0	1052.8	
93 2,4,6-Trichlorophenol	196	8.740	8.741	0.000	95	336467	1000.0	1121.3	
94 2,4,5-Trichlorophenol	196	8.776	8.776	0.000	90	331835	1000.0	1097.7	
99 1,1'-Biphenyl	154	8.899	8.899	0.000	96	1524851	1000.0	1058.1	
100 2-Chloronaphthalene	162	8.940	8.941	0.000	98	1158212	1000.0	1054.9	
101 2-Nitroaniline	65	8.999	8.999	0.000	78	471613	1000.0	1085.8	
104 Dimethyl phthalate	163	9.117	9.117	0.000	97	1405439	1000.0	1020.9	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	86	224849	1000.0	1082.1	
106 2,6-Dinitrotoluene	165	9.182	9.182	0.000	87	321521	1000.0	1055.6	
108 Acenaphthylene	152	9.305	9.305	0.000	98	1834890	1000.0	1154.0	
109 3-Nitroaniline	138	9.346	9.346	0.000	87	307336	1000.0	1146.8	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	78	350340	2000.0	1901.5	
112 4-Nitrophenol	109	9.446	9.446	0.000	92	428146	2000.0	2225.0	
111 Acenaphthene	153	9.446	9.452	-0.006	95	1144637	1000.0	1016.3	
113 2,4-Dinitrotoluene	165	9.534	9.535	-0.001	89	422277	1000.0	1076.9	
115 Dibenzofuran	168	9.593	9.593	0.000	94	1611763	1000.0	1015.9	
118 2,3,4,6-Tetrachlorophenol	232	9.687	9.688	-0.001	79	277205	1000.0	1090.3	
248 Hexadecane	57	9.705	9.705	0.000	90	1298536	1000.0	1017.7	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	1382370	1000.0	1001.7	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	97	617734	1000.0	986.9	
125 4-Nitroaniline	138	9.876	9.876	0.000	81	256789	1000.0	948.1	
124 Fluorene	166	9.887	9.887	0.000	97	1382841	1000.0	1017.3	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	75	442547	2000.0	2046.6	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	98	1021403	1000.0	1056.1	
129 Diphenylamine	169	9.946	9.946	0.000	93	1021403	850.0	897.6	
131 Azobenzene	77	9.993	9.993	0.000	96	1572158	1000.0	1071.3	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	40	1571166	1000.0	1070.7	a
138 4-Bromophenyl phenyl ether	248	10.281	10.282	-0.001	78	336070	1000.0	1029.4	
141 Atrazine	200	10.364	10.370	-0.006	88	738939	2000.0	2055.6	
140 Hexachlorobenzene	284	10.376	10.382	-0.006	91	333078	1000.0	1073.9	
245 n-Octadecane	57	10.487	10.487	0.000	89	1398906	1000.0	1072.6	
143 Pentachlorophenol	266	10.529	10.529	-0.001	87	434163	2000.0	2123.4	
148 Phenanthrene	178	10.728	10.729	-0.001	98	1833660	1000.0	993.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	98	1870289	1000.0	1016.9	
150 Carbazole	167	10.881	10.887	-0.006	96	1676705	1000.0	1003.1	
154 Di-n-butyl phthalate	149	11.111	11.111	0.000	99	2398290	1000.0	1068.1	
159 Fluoranthene	202	11.852	11.858	-0.006	98	2010450	1000.0	1062.0	
160 Benzidine	184	11.934	11.934	0.000	99	1703297	2000.0	1898.9	
161 Pyrene	202	12.117	12.117	0.000	98	2062635	1000.0	1047.0	
169 Butyl benzyl phthalate	149	12.746	12.746	0.000	98	1072143	1000.0	1054.2	
174 Bis(2-ethylhexyl) phthalat	149	13.517	13.523	-0.006	94	1447686	1000.0	1067.4	
177 3,3'-Dichlorobenzidine	252	13.564	13.564	0.000	76	1299658	2000.0	2119.5	
178 Benzo[a]anthracene	228	13.664	13.664	0.000	99	1861852	1000.0	1032.5	
179 Chrysene	228	13.722	13.723	-0.001	97	1839504	1000.0	1024.2	
181 Di-n-octyl phthalate	149	14.546	14.546	0.000	98	2436265	1000.0	1074.3	
183 Benzo[b]fluoranthene	252	15.411	15.411	0.000	98	1739021	1000.0	1024.0	
184 Benzo[k]fluoranthene	252	15.452	15.452	0.000	99	1891506	1000.0	1060.4	
185 Benzo[a]pyrene	252	15.975	15.981	-0.006	78	1703851	1000.0	1054.0	
190 Indeno[1,2,3-cd]pyrene	276	18.257	18.258	-0.001	98	1783934	1000.0	1026.5	
189 Dibenz(a,h)anthracene	278	18.263	18.269	-0.006	90	1560870	1000.0	1050.9	
191 Benzo[g,h,i]perylene	276	18.910	18.916	-0.006	97	1483867	1000.0	1006.1	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 SS W_00010 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:25 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411011.D

Injection Date: 11-Apr-2018 15:14:30 Instrument ID: A4AG2 Operator ID:

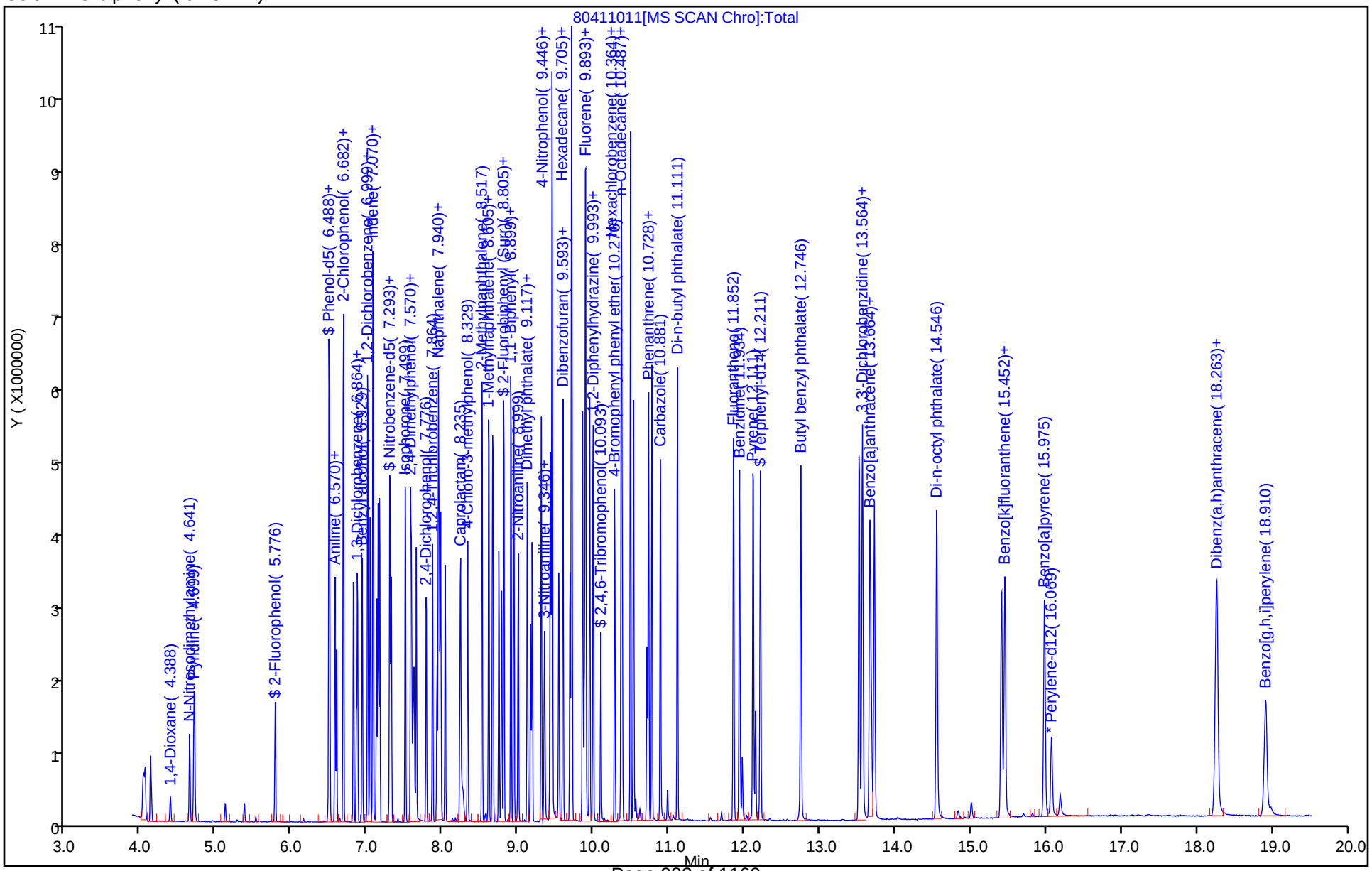
Lims ID: icv l1lvi Worklist Smp#: 11

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 11

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

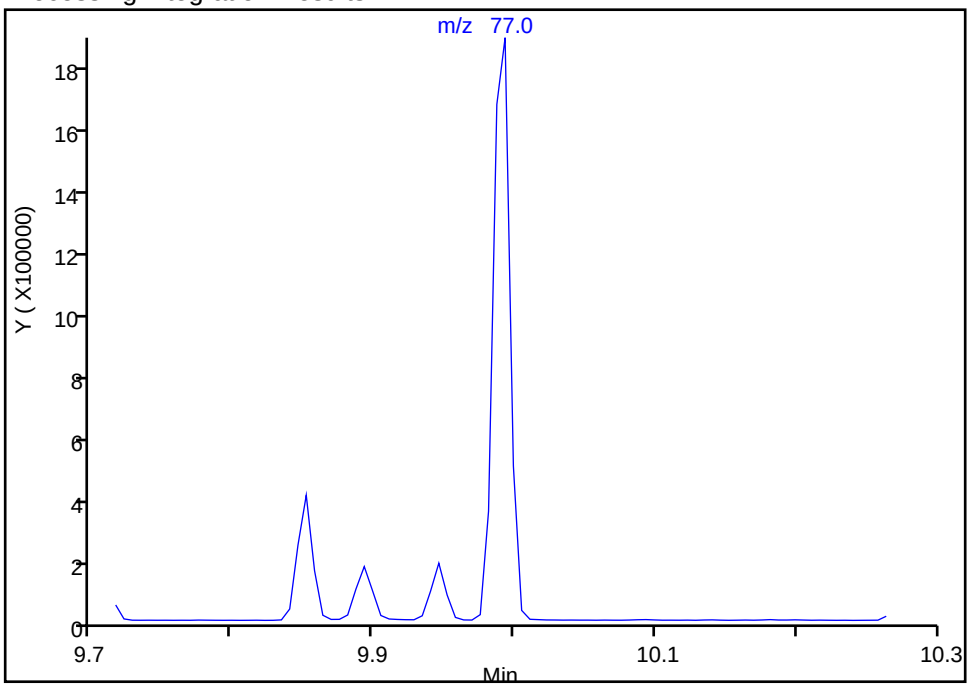
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411011.D				
Injection Date:	11-Apr-2018 15:14:30	Instrument ID:	A4AG2		
Lims ID:	icv l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

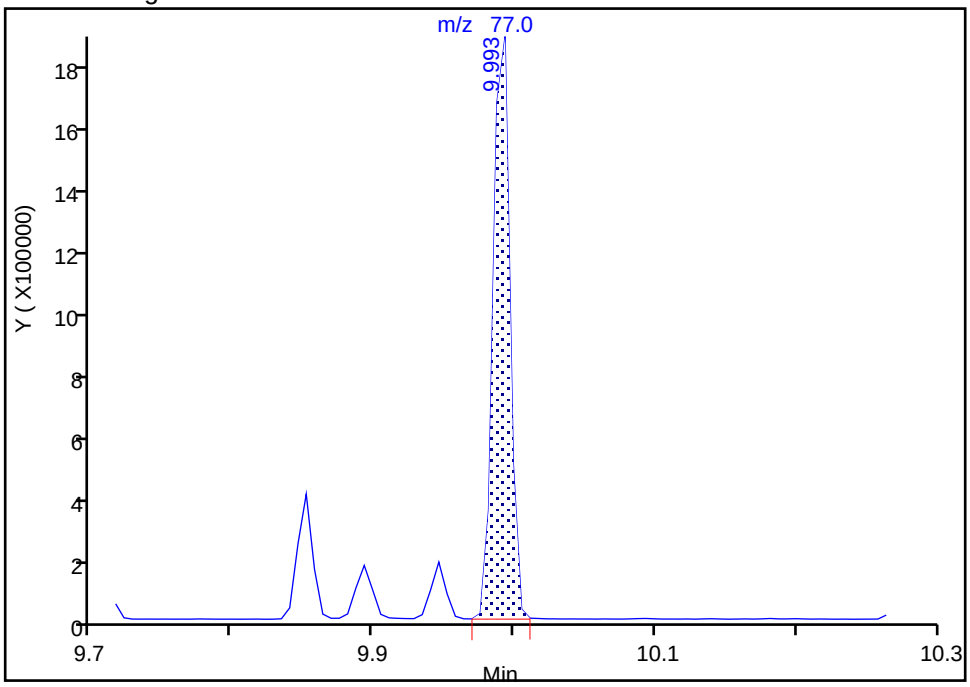
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 1571166
Amount: 1070.6694
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 05:44:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-322037/20 Calibration Date: 04/11/2018 18:56

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 18:32

Lab File ID: 80411020.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.192	1.158		0.971	1.00	-2.9	30.0
N-Nitrosomethylethylamine	Ave	0.7236	0.7333		1.01	1.00	1.3	30.0
Acrylamide	Ave	0.2371	0.2073		0.875	1.00	-12.5	30.0
Methyl methanesulfonate	Ave	1.022	1.100		1.08	1.00	7.7	30.0
N-Nitrosodiethylamine	Ave	0.8042	0.8484		1.05	1.00	5.5	30.0
Ethyl methanesulfonate	Ave	1.288	1.463		1.14	1.00	13.6	30.0
Pentachloroethane	Ave	0.4854	0.4960		1.02	1.00	2.2	30.0
N-Nitrosopyrrolidine	Ave	0.8358	0.9703		1.16	1.00	16.1	30.0
N-Nitrosomorpholine	Ave	1.719	1.963		1.14	1.00	14.2	30.0
2-Toluidine	Ave	2.500	2.818		1.13	1.00	12.7	30.0
N-Nitrosopiperidine	Ave	0.1732	0.1773		1.02	1.00	2.4	30.0
o,o',o''-Triethylphosphorothioate	Ave	0.1695	0.1748		1.03	1.00	3.2	30.0
alpha,alpha-Dimethylphenethylamine	Ave	0.7940	0.7231		0.911	1.00	-8.9	30.0
Hexachloropropene	Ave	0.1852	0.1915	0.0100	1.03	1.00	3.4	30.0
N-Nitrosodi-n-butylamine	Ave	0.2407	0.2552		1.06	1.00	6.0	30.0
Quinoline	Ave	0.6106	0.6527		1.07	1.00	6.9	30.0
p-Phenylene diamine	Lin1		0.2376		0.973	1.00	-2.7	30.0
Safrole, Total	Ave	0.2689	0.2737		1.02	1.00	1.8	30.0
Isosafrole Peak 1	Ave	0.1134	0.0835		0.648	0.880	-26.4	30.0
Isosafrole Peak 2	Ave	3.285	4.780		0.175	0.120	45.5*	30.0
1-Chloronaphthalene	Ave	1.167	1.176		1.01	1.00	0.8	30.0
1,4-Naphthoquinone	Lin1		0.4034		1.00	1.00	0.1	30.0
1,4-Dinitrobenzene	Lin1		0.2079		0.940	1.00	-6.0	30.0
Pentachlorobenzene	Ave	0.3962	0.4391		1.11	1.00	10.8	30.0
1-Naphthylamine	Ave	1.175	1.114		0.948	1.00	-5.2	30.0
2,3,5,6-Tetrachlorophenol	Lin1		0.2541		0.976	1.00	-2.4	30.0
2-Naphthylamine	Ave	1.246	1.303		1.05	1.00	4.6	30.0
Thionazin	Ave	0.3494	0.3538		1.01	1.00	1.2	30.0
N-Nitro-o-toluidine	Ave	0.3712	0.3927		1.06	1.00	5.8	30.0
Sulfotepp	Ave	0.1012	0.1058		1.05	1.00	4.6	30.0
1,3,5-Trinitrobenzene	Lin1		0.0678		0.929	1.00	-7.1	30.0
Phenacetin	Ave	0.3726	0.3987		1.07	1.00	7.0	30.0
Diallate Peak 1	Ave	0.3827	0.4069		0.797	0.750	6.3	30.0
Phorate	Ave	0.1750	0.1878		1.07	1.00	7.3	30.0
Diallate Peak 2	Ave	0.4073	0.3937		0.242	0.250	-3.3	30.0
Dimethoate	Ave	0.2804	0.3025		1.08	1.00	7.9	30.0
4-Aminobiphenyl	Ave	0.8055	0.8059		1.00	1.00	0.0	30.0
Pronamide	Ave	0.3463	0.3649		1.05	1.00	5.4	30.0
Pentachloronitrobenzene	Ave	0.0896	0.0974		1.09	1.00	8.7	30.0
Disulfoton	Ave	0.4112	0.4202		1.02	1.00	2.2	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-322037/20 Calibration Date: 04/11/2018 18:56

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 18:32

Lab File ID: 80411020.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Lin1		0.1654		0.913	1.00	-8.7	30.0
Methyl parathion	Ave	0.2565	0.2837		1.11	1.00	10.6	30.0
Ethyl Parathion	Ave	0.1576	0.1765		1.12	1.00	12.0	30.0
4-Nitroquinoline-1-oxide	Qua		0.0667		1.01	1.00	1.1	30.0
Methapyrilene	Ave	0.7352	0.8330		2.27	2.00	13.3	30.0
Isodrin	Ave	0.1554	0.1572		1.01	1.00	1.1	30.0
Aramite Peak 1	Ave	0.1491	0.1569		0.537	0.510	5.3	30.0
Aramite Peak 2	Ave	0.1878	0.2029		0.529	0.490	8.0	30.0
p-Dimethylamino azobenzene	Ave	0.2445	0.2873		1.18	1.00	17.5	30.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.5154	0.5631		1.09	1.00	9.3	30.0
Famphur	Ave	0.3413	0.2002		0.586	1.00	-41.4*	30.0
3,3'-Dimethylbenzidine	Lin1		0.6968		0.941	1.00	-5.9	30.0
2-Acetylaminofluorene	Lin1		0.5803		0.986	1.00	-1.4	30.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2451		0.983	1.00	-1.7	30.0
6-Methylchrysene	Ave	0.8795	0.9392		2.14	2.00	6.8	30.0
7,12-Dimethylbenz(a)anthracene	Ave	0.4689	0.5090		1.09	1.00	8.5	30.0
3-Methylcholanthrene	Ave	0.6171	0.6799		2.20	2.00	10.2	30.0
Dibenz[a,h]acridine	Ave	0.8715	0.9730		1.12	1.00	11.6	30.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411020.D
Lims ID: icv l2lvi
Client ID:
Sample Type: ICV
Inject. Date: 11-Apr-2018 18:56:30 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0074825-020
Misc. Info.: ICV L2LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:28:47 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 12-Apr-2018 06:04:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	96	115453	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	643986	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	95	340807	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	590252	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.676	0.005	99	518058	400.0	400.0	
* 6 Perylene-d12	264	16.070	16.070	0.000	97	471139	400.0	400.0	
31 2-Picoline	93	5.323	5.323	0.000	92	334153	1000.0	971.2	
32 N-Nitrosomethylethylamine	88	5.388	5.388	0.000	87	211641	1000.0	1013.4	
14 Acrylamide	71	5.547	5.553	-0.006	57	59846	1000.0	874.5	
34 Methyl methanesulfonate	80	5.617	5.617	0.000	92	317636	1000.0	1077.0	
36 N-Nitrosodiethylamine	102	5.958	5.958	0.000	85	244866	1000.0	1054.9	
37 Ethyl methanesulfonate	79	6.170	6.170	0.000	97	422323	1000.0	1136.2	
46 Pentachloroethane	167	6.629	6.629	0.000	90	143158	1000.0	1021.7	
56 N-Nitrosopyrrolidine	100	7.129	7.129	0.000	72	280055	1000.0	1160.9	
59 N-Nitrosomorpholine	56	7.152	7.152	0.000	93	566602	1000.0	1142.1	
60 2-Toluidine	106	7.194	7.194	0.000	96	813358	1000.0	1127.0	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	75	285480	1000.0	1024.0	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	91	281437	1000.0	1031.5	
71 alpha,alpha-Dimethyl phene	58	7.747	7.747	0.000	97	1164083	1000.0	910.6	
77 Hexachloropropene	213	8.017	8.017	0.000	91	308325	1000.0	1033.9	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	88	410869	1000.0	1060.2	
81 Quinoline	129	8.211	8.211	0.000	94	1050778	1000.0	1068.9	
84 p-Phenylene diamine	108	8.241	8.241	0.000	91	382476	1000.0	972.7	
92 Safrole, Total	162	8.411	8.411	0.000	82	440627	1000.0	1017.7	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	84	62615	880.0	647.9	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	88	488678	120.0	174.6	
247 1-Chloronaphthalene	162	8.964	8.964	0.000	96	1001648	1000.0	1007.7	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	83	343666	1000.0	1001.4	
105 1,4-Dinitrobenzene	168	9.088	9.088	0.000	86	177098	1000.0	939.9	
114 Pentachlorobenzene	250	9.564	9.564	0.000	94	374134	1000.0	1108.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.652	9.652	0.000	98	949277	1000.0	948.1	
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	88	216527	1000.0	975.7	
119 2-Naphthylamine	143	9.717	9.717	0.000	96	1109914	1000.0	1045.8	
121 Thionazin	97	9.788	9.788	0.000	78	301403	1000.0	1012.4	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	92	334584	1000.0	1057.8	
132 Sulfotepp	202	10.035	10.035	0.000	76	156184	1000.0	1045.6	
133 1,3,5-Trinitrobenzene	213	10.123	10.123	0.000	84	99998	1000.0	929.3	
135 Phenacetin	108	10.176	10.176	0.000	87	588331	1000.0	1070.1	
134 Diallate Peak 1	86	10.182	10.182	0.000	88	450265	750.0	797.3	
136 Phorate	121	10.188	10.188	0.000	93	277107	1000.0	1072.8	
137 Diallate Peak 2	86	10.264	10.264	0.000	87	145232	250.0	241.6	
139 Dimethoate	87	10.340	10.340	0.000	88	446304	1000.0	1078.6	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	1189238	1000.0	1000.5	
144 Pronamide	173	10.511	10.511	0.000	91	538462	1000.0	1053.7	
145 Pentachloronitrobenzene	237	10.546	10.546	0.000	82	143726	1000.0	1086.7	
146 Disulfoton	88	10.635	10.635	0.000	97	620025	1000.0	1021.7	
147 Dinoseb	211	10.646	10.640	0.006	93	244039	1000.0	912.5	
152 Methyl parathion	109	10.970	10.970	0.000	92	418638	1000.0	1106.1	
155 Ethyl Parathion	97	11.311	11.305	0.006	82	260401	1000.0	1119.6	
156 4-Nitroquinoline-1-oxide	190	11.399	11.393	0.006	90	98354	1000.0	1010.8	
157 Methapyrilene	58	11.429	11.429	0.000	94	2458289	2000.0	2265.9	
158 Isodrin	66	11.705	11.705	0.000	88	231933	1000.0	1011.1	
162 Aramite Peak 1	185	12.123	12.117	0.006	0	103651	510.0	536.8	
163 Aramite Peak 2	185	12.205	12.205	0.000	0	128734	490.0	529.4	
164 p-Dimethylamino azobenzene	225	12.370	12.364	0.006	94	372133	1000.0	1175.4	
165 Chlorobenzilate	139	12.399	12.393	0.006	83	729237	1000.0	1092.5	
168 Famphur	218	12.705	12.699	0.006	89	259221	1000.0	586.4	
170 3,3'-Dimethylbenzidine	212	12.781	12.781	0.000	99	902487	1000.0	941.4	
172 2-Acetylaminofluorene	181	13.140	13.134	0.006	96	751615	1000.0	986.0	
175 4,4'-Methylene bis(2-chlor	231	13.546	13.546	0.000	94	317476	1000.0	983.2	
180 6-Methylchrysene	242	14.428	14.423	0.005	99	2432791	2000.0	2135.7	
182 7,12-Dimethylbenz(a)anthra	256	15.375	15.375	0.000	93	599486	1000.0	1085.4	
186 3-Methylcholanthrene	268	16.593	16.593	0.000	93	1601588	2000.0	2203.6	
188 Dibenz[a,h]acridine	279	17.699	17.693	0.006	92	1146033	1000.0	1116.4	
S 194 Isosafrole	162				0		1000.0	822.5	
S 195 Diallate	86				0		1000.0	1039.0	
S 196 Aramite, Total	185				0		1000.0	1066.2	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 SS W_00014 Amount Added: 0.10 Units: mL

Report Date: 12-Apr-2018 06:28:51 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411020.D

Injection Date: 11-Apr-2018 18:56:30 Instrument ID: A4AG2 Operator ID:

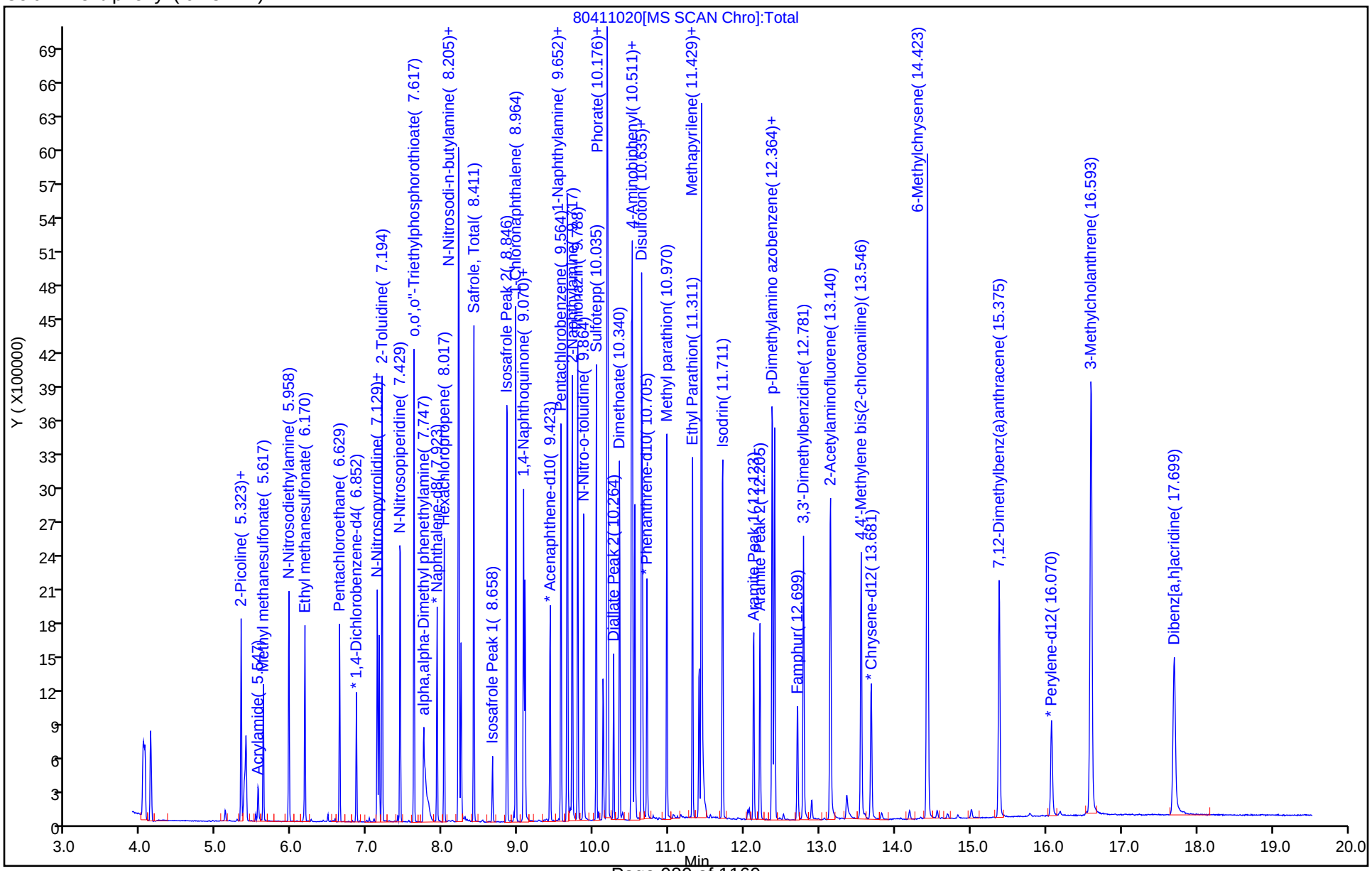
Lims ID: icv l2lvi Worklist Smp#: 20

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 20

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

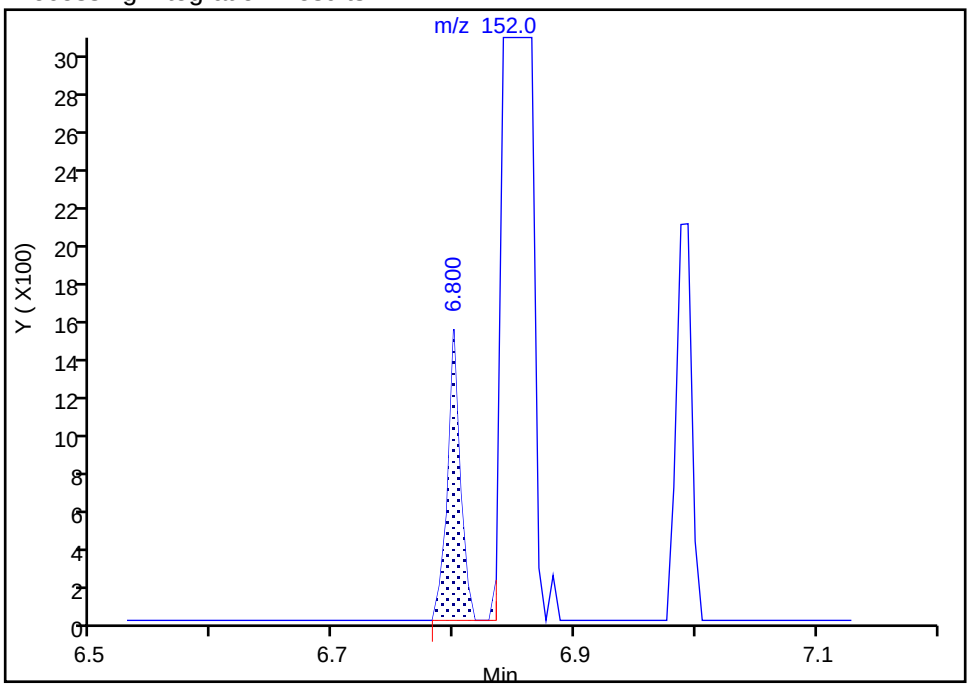
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411020.D
Injection Date: 11-Apr-2018 18:56:30 Instrument ID: A4AG2
Lims ID: icv l2lvi
Client ID:
Operator ID: ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

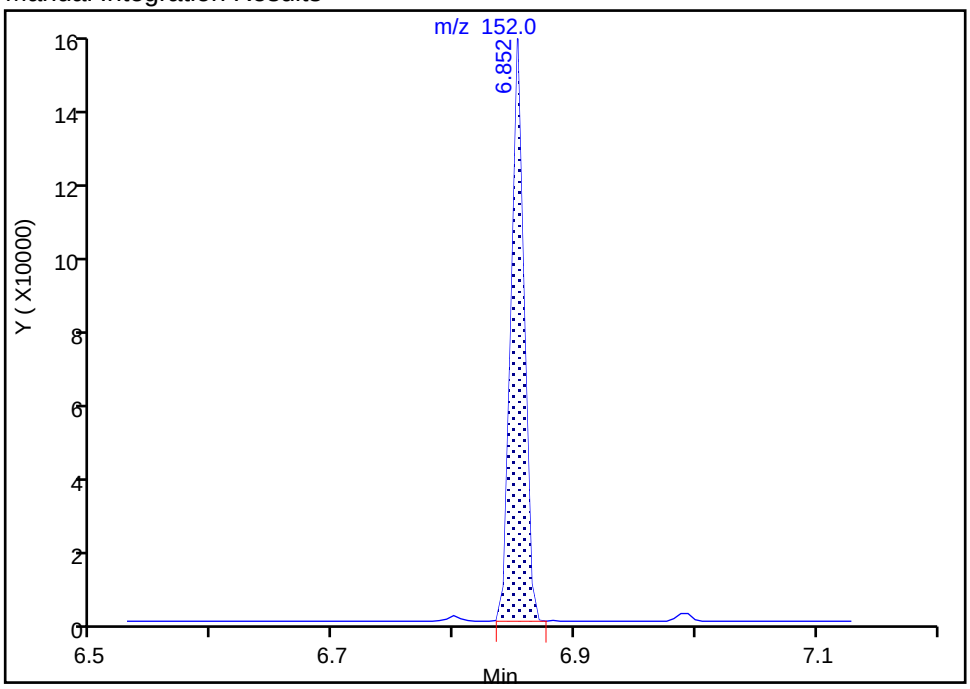
Processing Integration Results

RT: 6.80
Area: 1161
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 115453
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 12-Apr-2018 06:03:23
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323078/2 Calibration Date: 04/19/2018 07:17

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80419002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.2645	0.2313		0.874	1.00	-12.6	20.0
N-Nitrosodimethylamine	Ave	0.7777	0.8059		1.04	1.00	3.6	20.0
Pyridine	Ave	0.7364	0.6491		1.76	2.00	-11.9	20.0
Benzaldehyde	Qua		0.8752	0.0100	2.08	2.00	4.1	20.0
Phenol	Ave	1.534	1.248	0.8000	0.813	1.00	-18.7	20.0
Aniline	Ave	2.601	2.317		0.891	1.00	-10.9	20.0
Bis(2-chloroethyl)ether	Ave	1.817	1.961	0.7000	1.08	1.00	7.9	20.0
n-Decane	Ave	2.168	2.022		0.933	1.00	-6.7	20.0
2-Chlorophenol	Ave	1.406	1.483	0.8000	1.05	1.00	5.5	20.0
1,3-Dichlorobenzene	Ave	1.572	1.616		1.03	1.00	2.8	20.0
1,4-Dichlorobenzene	Ave	1.640	1.680		1.02	1.00	2.4	20.0
Benzyl alcohol	Ave	1.037	0.997		0.961	1.00	-3.9	20.0
1,2-Dichlorobenzene	Ave	1.603	1.676		1.05	1.00	4.5	20.0
2-Methylphenol	Ave	1.360	1.174	0.7000	0.863	1.00	-13.7	20.0
bis (2-chloroisopropyl) ether	Ave	4.290	3.956		0.922	1.00	-7.8	20.0
Indene	Ave	2.877	2.941		2.04	2.00	2.2	20.0
3 & 4 Methylphenol	Ave	1.379	1.198		0.869	1.00	-13.1	20.0
N-Nitrosodi-n-propylamine	Ave	1.440	1.437	0.5000	0.998	1.00	-0.2	20.0
Acetophenone	Ave	2.511	2.497	0.0100	0.995	1.00	-0.5	20.0
Hexachloroethane	Ave	0.6792	0.7150	0.3000	1.05	1.00	5.3	20.0
Nitrobenzene	Ave	0.3840	0.3992	0.2000	1.04	1.00	4.0	20.0
Isophorone	Ave	0.6462	0.7000	0.4000	1.08	1.00	8.3	20.0
2,4-Dimethylphenol	Ave	0.3051	0.3437	0.2000	1.13	1.00	12.6	20.0
2-Nitrophenol	Ave	0.1853	0.1971	0.1000	1.06	1.00	6.4	20.0
Benzoic acid	Lin1		0.1935		2.37	2.00	18.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.4069	0.4123	0.3000	1.01	1.00	1.3	20.0
2,4-Dichlorophenol	Ave	0.2229	0.2294	0.2000	1.03	1.00	2.9	20.0
1,2,4-Trichlorobenzene	Ave	0.2801	0.2815		1.01	1.00	0.5	20.0
Naphthalene	Ave	1.029	1.046	0.7000	1.02	1.00	1.7	20.0
4-Chloroaniline	Ave	0.4866	0.5706	0.0100	1.17	1.00	17.3	20.0
2,6-Dichlorophenol	Ave	0.2507	0.2781		1.11	1.00	10.9	20.0
Hexachlorobutadiene	Ave	0.1572	0.1637	0.0100	1.04	1.00	4.2	20.0
Caprolactam	Ave	0.0994	0.1085	0.0100	2.18	2.00	9.1	20.0
4-Chloro-3-methylphenol	Ave	0.2481	0.3286	0.2000	1.32	1.00	32.5*	20.0
2-Methylnaphthalene	Ave	0.7074	0.7424	0.4000	1.05	1.00	5.0	20.0
1-Methylnaphthalene	Ave	0.6674	0.7015		1.05	1.00	5.1	20.0
Hexachlorocyclopentadiene	Ave	0.3323	0.3666	0.0500	1.10	1.00	10.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5030	0.5382	0.0100	1.07	1.00	7.0	20.0
2,4,6-Trichlorophenol	Ave	0.3328	0.4050	0.2000	1.22	1.00	21.7*	20.0
2,4,5-Trichlorophenol	Ave	0.3353	0.4078	0.2000	1.22	1.00	21.6*	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323078/2 Calibration Date: 04/19/2018 07:17

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80419002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.598	1.627	0.0100	1.02	1.00	1.8	20.0
2-Chloronaphthalene	Ave	1.218	1.281	0.8000	1.05	1.00	5.2	20.0
2-Nitroaniline	Ave	0.4817	0.5533	0.0100	1.15	1.00	14.9	20.0
Dimethyl phthalate	Ave	1.527	1.520	0.0100	0.996	1.00	-0.4	20.0
1,3-Dinitrobenzene	Ave	0.2304	0.2550		1.11	1.00	10.6	20.0
2,6-Dinitrotoluene	Ave	0.3378	0.3420		1.01	1.00	1.2	20.0
Acenaphthylene	Ave	1.763	1.851	0.9000	1.05	1.00	5.0	20.0
3-Nitroaniline	Ave	0.2972	0.3712	0.0100	1.25	1.00	24.9*	20.0
2,4-Dinitrophenol	Lin1		0.2152	0.0100	2.10	2.00	4.8	20.0
4-Nitrophenol	Ave	0.2134	0.2679		2.51	2.00	25.5*	20.0
Acenaphthene	Ave	1.249	1.272	0.9000	1.02	1.00	1.8	20.0
2,4-Dinitrotoluene	Ave	0.4349	0.4520	0.2000	1.04	1.00	3.9	20.0
Dibenzofuran	Ave	1.759	1.790	0.8000	1.02	1.00	1.7	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2819	0.3132	0.0100	1.11	1.00	11.1	20.0
Hexadecane	Ave	1.415	1.351		0.954	1.00	-4.6	20.0
Diethyl phthalate	Ave	1.530	1.531	0.0100	1.00	1.00	0.0	20.0
4-Chlorophenyl phenyl ether	Ave	0.6942	0.6763	0.4000	0.974	1.00	-2.6	20.0
4-Nitroaniline	Ave	0.3004	0.3379	0.0100	1.12	1.00	12.5	20.0
Fluorene	Ave	1.507	1.477	0.9000	0.980	1.00	-2.0	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1421	0.0100	2.11	2.00	5.5	20.0
Diphenylamine	Ave	0.7076	0.7601		0.913	0.850	7.4	20.0
N-Nitrosodiphenylamine	Ave	0.6015	0.6461	0.0100	1.07	1.00	7.4	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9121	0.9935		1.09	1.00	8.9	20.0
Azobenzene	Ave	0.9125	0.9934		1.09	1.00	8.9	20.0
4-Bromophenyl phenyl ether	Ave	0.2030	0.2186	0.1000	1.08	1.00	7.7	20.0
Atrazine	Ave	0.2235	0.2243	0.0100	2.01	2.00	0.3	20.0
Hexachlorobenzene	Ave	0.1929	0.2129	0.1000	1.10	1.00	10.4	20.0
n-Octadecane	Ave	0.8110	0.8694		1.07	1.00	7.2	20.0
Pentachlorophenol	Ave	0.1272	0.1388	0.0500	2.18	2.00	9.2	20.0
Phenanthrene	Ave	1.148	1.164	0.7000	1.01	1.00	1.4	20.0
Anthracene	Ave	1.144	1.207	0.7000	1.06	1.00	5.5	20.0
Carbazole	Ave	1.039	1.076	0.0100	1.03	1.00	3.5	20.0
Di-n-butyl phthalate	Ave	1.396	1.542	0.0100	1.10	1.00	10.4	20.0
Fluoranthene	Ave	1.177	1.241	0.6000	1.05	1.00	5.4	20.0
Benzidine	Lin1		0.5426		1.88	2.00	-5.8	20.0
Pyrene	Ave	1.266	1.332	0.6000	1.05	1.00	5.2	20.0
Butyl benzyl phthalate	Ave	0.6536	0.7521	0.0100	1.15	1.00	15.1	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8715	1.030	0.0100	1.18	1.00	18.2	20.0
3,3'-Dichlorobenzidine	Ave	0.3940	0.4073	0.0100	2.07	2.00	3.4	20.0
Benzo[a]anthracene	Ave	1.159	1.239	0.8000	1.07	1.00	6.9	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323078/2 Calibration Date: 04/19/2018 07:17

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80419002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	1.154	1.176	0.7000	1.02	1.00	1.9	20.0
Di-n-octyl phthalate	Ave	1.564	1.796	0.0100	1.15	1.00	14.9	20.0
Benzo[b]fluoranthene	Ave	1.171	1.180	0.7000	1.01	1.00	0.8	20.0
Benzo[k]fluoranthene	Ave	1.230	1.228	0.7000	0.998	1.00	-0.2	20.0
Benzo[a]pyrene	Ave	1.115	1.159	0.7000	1.04	1.00	4.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.198	1.335	0.5000	1.11	1.00	11.4	20.0
Dibenz(a,h)anthracene	Ave	1.024	1.115	0.4000	1.09	1.00	8.9	20.0
Benzo[g,h,i]perylene	Ave	1.017	1.094	0.5000	1.08	1.00	7.5	20.0
2-Fluorophenol (Surr)	Ave	0.8249	0.7869		0.954	1.00	-4.6	20.0
Phenol-d5 (Surr)	Ave	1.383	1.145		0.828	1.00	-17.2	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3888	0.4220		1.09	1.00	8.5	20.0
2-Fluorobiphenyl (Surr)	Ave	1.391	1.384		0.995	1.00	-0.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1401	0.1485		1.06	1.00	6.0	20.0
Terphenyl-d14 (Surr)	Ave	0.7954	0.8076		1.02	1.00	1.5	20.0

Report Date: 19-Apr-2018 10:58:45 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419002.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Apr-2018 07:17:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-002
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:43 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 07:43:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.863	6.863	0.000	96	100291	400.0	400.0	
* 2 Naphthalene-d8	136	7.934	7.934	0.000	99	515106	400.0	400.0	
* 3 Acenaphthene-d10	164	9.434	9.434	0.000	95	268731	400.0	400.0	
* 4 Phenanthrene-d10	188	10.716	10.716	0.000	98	452152	400.0	400.0	
* 5 Chrysene-d12	240	13.692	13.692	0.000	99	421780	400.0	400.0	
* 6 Perylene-d12	264	16.074	16.074	0.000	98	417842	400.0	400.0	
$ 7 2-Fluorophenol	112	5.781	5.781	0.000	94	197299	1000.0	953.9	
$ 8 Phenol-d5	99	6.499	6.499	0.000	0	286986	1000.0	827.5	
$ 9 Nitrobenzene-d5	82	7.310	7.310	0.000	98	543422	1000.0	1085.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.822	8.822	0.000	99	929994	1000.0	995.4	
$ 11 2,4,6-Tribromophenol	330	10.104	10.104	0.000	77	99796	1000.0	1060.0	
$ 12 Terphenyl-d14	244	12.222	12.222	0.000	99	851554	1000.0	1015.4	
26 1,4-Dioxane	88	4.363	4.363	0.000	83	57981	1000.0	874.1	
27 N-Nitrosodimethylamine	74	4.622	4.622	0.000	72	202056	1000.0	1036.3	
28 Pyridine	79	4.687	4.687	0.000	70	325487	2000.0	1763.0	
42 Benzaldehyde	77	6.499	6.499	0.000	86	438866	2000.0	2082.1	
43 Phenol	94	6.510	6.510	0.000	91	312799	1000.0	813.4	
44 Aniline	93	6.581	6.581	0.000	92	580980	1000.0	890.7	
45 Bis(2-chloroethyl)ether	93	6.598	6.598	0.000	85	491784	1000.0	1079.4	
244 n-Decane	57	6.687	6.687	0.000	91	507041	1000.0	932.8	
47 2-Chlorophenol	128	6.693	6.693	0.000	89	371930	1000.0	1054.9	
48 1,3-Dichlorobenzene	146	6.822	6.822	0.000	93	405267	1000.0	1028.4	
49 1,4-Dichlorobenzene	146	6.875	6.875	0.000	88	421311	1000.0	1024.5	
50 Benzyl alcohol	108	6.940	6.940	0.000	86	249855	1000.0	961.0	
51 1,2-Dichlorobenzene	146	7.010	7.010	0.000	91	420145	1000.0	1045.1	
52 2-Methylphenol	108	7.016	7.016	0.000	93	294341	1000.0	863.5	
54 2,2'-oxybis[1-chloropropan	45	7.046	7.046	0.000	89	991851	1000.0	922.1	
53 Indene	115	7.081	7.081	0.000	90	1474719	2000.0	2044.3	
55 3 & 4 Methylphenol	108	7.134	7.134	0.000	0	300340	1000.0	869.0	
57 N-Nitrosodi-n-propylamine	70	7.151	7.151	0.000	96	360172	1000.0	997.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.175	7.175	0.000	91	626092	1000.0	994.6	
61 Hexachloroethane	117	7.304	7.304	0.000	92	179278	1000.0	1052.8	
62 Nitrobenzene	77	7.328	7.328	0.000	97	514123	1000.0	1039.7	
64 Isophorone	82	7.516	7.516	0.000	94	901414	1000.0	1083.3	
66 2,4-Dimethylphenol	107	7.587	7.587	0.000	97	442576	1000.0	1126.5	
65 2-Nitrophenol	139	7.593	7.593	0.000	92	253875	1000.0	1063.9	
70 Benzoic acid	122	7.634	7.634	0.000	92	498365	2000.0	2365.0	
69 Bis(2-chloroethoxy)methane	93	7.657	7.657	0.000	93	530986	1000.0	1013.4	
72 2,4-Dichlorophenol	162	7.793	7.793	0.000	94	295348	1000.0	1029.0	
73 1,2,4-Trichlorobenzene	180	7.875	7.875	0.000	93	362495	1000.0	1005.1	
74 Naphthalene	128	7.951	7.951	0.000	98	1347609	1000.0	1016.7	
75 4-Chloroaniline	127	7.963	7.963	0.000	93	734729	1000.0	1172.6	
76 2,6-Dichlorophenol	162	7.981	7.981	0.000	92	358158	1000.0	1109.4	
78 Hexachlorobutadiene	225	8.045	8.045	0.000	94	210844	1000.0	1041.6	
83 Caprolactam	113	8.245	8.245	0.000	69	279401	2000.0	2181.7	
85 4-Chloro-3-methylphenol	107	8.340	8.340	0.000	94	423211	1000.0	1324.8	
86 2-Methylnaphthalene	142	8.534	8.534	0.000	91	956090	1000.0	1049.5	
87 1-Methylnaphthalene	142	8.622	8.622	0.000	92	903315	1000.0	1051.1	
89 Hexachlorocyclopentadiene	237	8.669	8.669	0.000	94	246303	1000.0	1103.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.681	8.681	0.000	99	361587	1000.0	1070.0	
93 2,4,6-Trichlorophenol	196	8.757	8.757	0.000	94	272067	1000.0	1217.0	
94 2,4,5-Trichlorophenol	196	8.792	8.792	0.000	89	273950	1000.0	1216.3	
99 1,1'-Biphenyl	154	8.916	8.916	0.000	96	1093223	1000.0	1018.1	
100 2-Chloronaphthalene	162	8.951	8.951	0.000	99	860721	1000.0	1052.2	
101 2-Nitroaniline	65	9.010	9.010	0.000	77	371729	1000.0	1148.7	
104 Dimethyl phthalate	163	9.134	9.134	0.000	97	1021216	1000.0	995.7	
103 1,3-Dinitrobenzene	168	9.175	9.175	0.000	84	171283	1000.0	1106.4	
106 2,6-Dinitrotoluene	165	9.198	9.198	0.000	85	229729	1000.0	1012.3	
108 Acenaphthylene	152	9.316	9.316	0.000	98	1243766	1000.0	1049.9	
109 3-Nitroaniline	138	9.357	9.357	0.000	87	249356	1000.0	1248.8	
110 2,4-Dinitrophenol	184	9.439	9.439	0.000	78	289135	2000.0	2097.0	
112 4-Nitrophenol	109	9.457	9.457	0.000	90	359943	2000.0	2510.6	
111 Acenaphthene	153	9.463	9.463	0.000	96	854492	1000.0	1018.3	
113 2,4-Dinitrotoluene	165	9.551	9.551	0.000	86	303679	1000.0	1039.4	
115 Dibenzofuran	168	9.604	9.604	0.000	94	1202703	1000.0	1017.5	
118 2,3,4,6-Tetrachlorophenol	232	9.698	9.698	0.000	82	210412	1000.0	1110.8	
248 Hexadecane	57	9.716	9.716	0.000	91	907395	1000.0	954.5	
120 Diethyl phthalate	149	9.722	9.722	0.000	97	1028544	1000.0	1000.4	
122 4-Chlorophenyl phenyl ethe	204	9.863	9.863	0.000	96	454378	1000.0	974.3	
125 4-Nitroaniline	138	9.881	9.881	0.000	78	227001	1000.0	1124.9	
124 Fluorene	166	9.898	9.898	0.000	94	992306	1000.0	979.8	
127 4,6-Dinitro-2-methylphenol	198	9.904	9.904	0.000	79	321229	2000.0	2111.0	
128 N-Nitrosodiphenylamine	169	9.957	9.957	0.000	98	730288	1000.0	1074.2	
129 Diphenylamine	169	9.957	9.957	0.000	93	730288	850.0	913.0	
131 Azobenzene	77	10.004	10.004	0.000	95	1122970	1000.0	1088.6	
130 1,2-Diphenylhydrazine	77	10.004	10.004	0.000	40	1123053	1000.0	1088.7	a
138 4-Bromophenyl phenyl ether	248	10.292	10.292	0.000	79	247081	1000.0	1076.6	
141 Atrazine	200	10.375	10.375	0.000	87	507072	2000.0	2006.7	
140 Hexachlorobenzene	284	10.392	10.392	0.000	90	240626	1000.0	1103.7	
245 n-Octadecane	57	10.498	10.498	0.000	89	982772	1000.0	1072.0	
143 Pentachlorophenol	266	10.539	10.539	0.000	86	313886	2000.0	2183.9	
148 Phenanthrene	178	10.739	10.739	0.000	98	1315360	1000.0	1013.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.781	10.781	0.000	98	1364308	1000.0	1055.2	
150 Carbazole	167	10.898	10.898	0.000	97	1215812	1000.0	1034.8	
154 Di-n-butyl phthalate	149	11.122	11.122	0.000	99	1742822	1000.0	1104.2	
159 Fluoranthene	202	11.869	11.869	0.000	98	1402619	1000.0	1054.0	
160 Benzidine	184	11.945	11.945	0.000	99	1144336	2000.0	1883.6	
161 Pyrene	202	12.128	12.128	0.000	98	1404760	1000.0	1052.3	
169 Butyl benzyl phthalate	149	12.757	12.757	0.000	98	793093	1000.0	1150.8	
174 Bis(2-ethylhexyl) phthalat	149	13.527	13.527	0.000	94	1086297	1000.0	1182.0	
177 3,3'-Dichlorobenzidine	252	13.575	13.575	0.000	77	858907	2000.0	2067.2	
178 Benzo[a]anthracene	228	13.675	13.675	0.000	98	1306264	1000.0	1069.0	
179 Chrysene	228	13.733	13.733	0.000	97	1240403	1000.0	1019.2	
181 Di-n-octyl phthalate	149	14.551	14.551	0.000	99	1876500	1000.0	1148.7	
183 Benzo[b]fluoranthene	252	15.416	15.416	0.000	97	1232899	1000.0	1007.8	
184 Benzo[k]fluoranthene	252	15.457	15.457	0.000	99	1282354	1000.0	998.0	
185 Benzo[a]pyrene	252	15.980	15.980	0.000	78	1210607	1000.0	1039.7	
190 Indeno[1,2,3-cd]pyrene	276	18.262	18.262	0.000	98	1394256	1000.0	1113.7	
189 Dibenz(a,h)anthracene	278	18.268	18.268	0.000	91	1164881	1000.0	1088.8	
191 Benzo[g,h,i]perylene	276	18.921	18.921	0.000	97	1142343	1000.0	1075.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L6 W_00010 Amount Added: 0.10 Units: mL

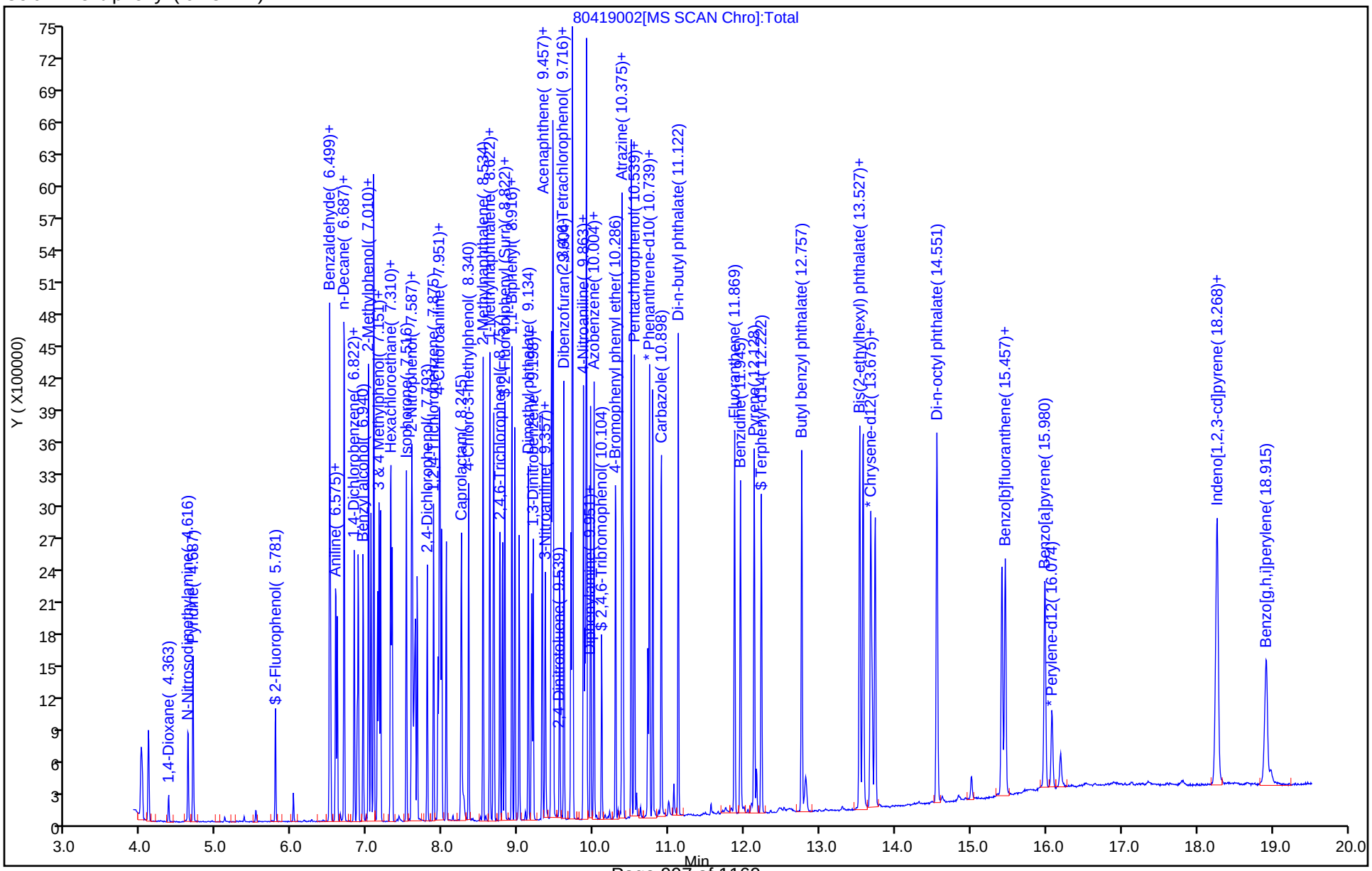
Report Date: 19-Apr-2018 10:58:45 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419002.D

Injection Date:	19-Apr-2018 07:17:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l1lvi			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

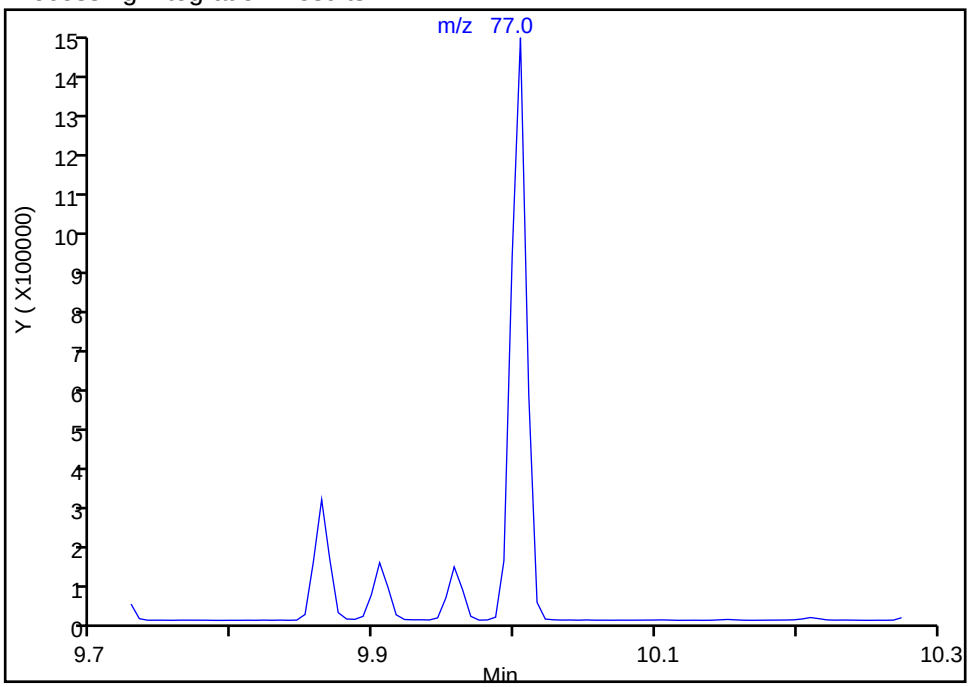
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419002.D				
Injection Date:	19-Apr-2018 07:17:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

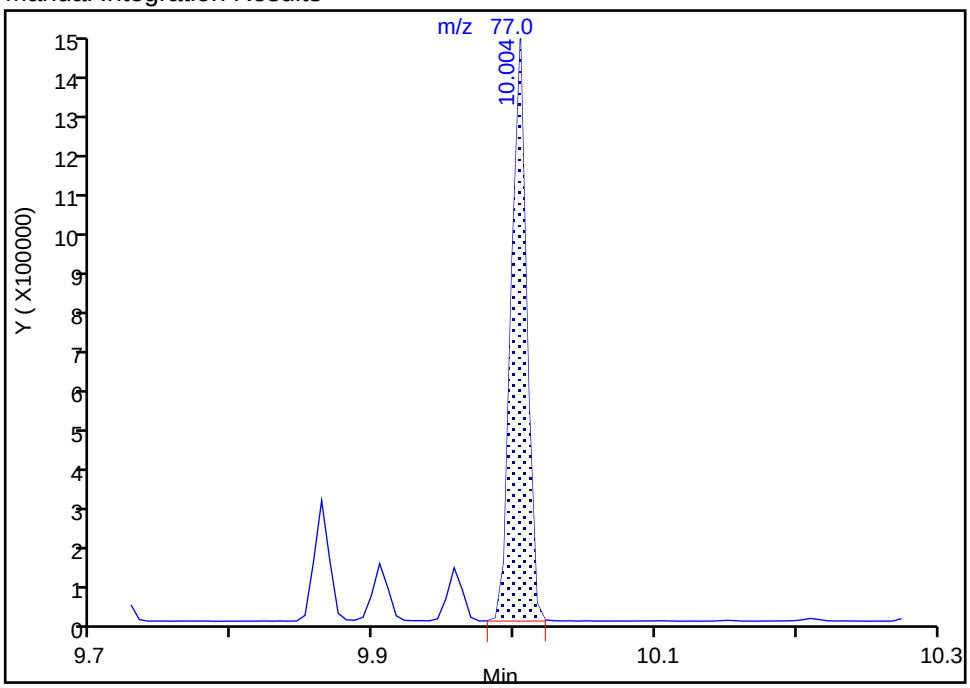
Not Detected
Expected RT: 10.00

Processing Integration Results



Manual Integration Results

RT: 10.00
Area: 1123053
Amount: 1088.7281
Amount Units: ng/ml



Reviewer: hulat, 19-Apr-2018 07:43:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323078/3 Calibration Date: 04/19/2018 07:42

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 18:32

Lab File ID: 80419003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.192	0.9707		0.814	1.00	-18.6	20.0
N-Nitrosomethylethylamine	Ave	0.7236	0.7957		1.10	1.00	10.0	20.0
Acrylamide	Ave	0.2371	0.2308		0.973	1.00	-2.7	20.0
Methyl methanesulfonate	Ave	1.022	1.316		1.29	1.00	28.8*	20.0
N-Nitrosodiethylamine	Ave	0.8042	0.9569		1.19	1.00	19.0	20.0
Ethyl methanesulfonate	Ave	1.288	1.479		1.15	1.00	14.9	20.0
Pentachloroethane	Ave	0.4854	0.4693		0.967	1.00	-3.3	20.0
N-Nitrosopyrrolidine	Ave	0.8358	1.049		1.25	1.00	25.5*	20.0
N-Nitrosomorpholine	Ave	1.719	2.172		1.26	1.00	26.3*	20.0
2-Toluidine	Ave	2.500	2.943		1.18	1.00	17.7	20.0
N-Nitrosopiperidine	Ave	0.1732	0.1779		1.03	1.00	2.7	20.0
o,o',o''-Triethylphosphorothioate	Ave	0.1695	0.1745		1.03	1.00	3.0	20.0
alpha,alpha-Dimethyl phenethylamine	Ave	0.7940	0.5564		0.701	1.00	-29.9*	20.0
Hexachloropropene	Ave	0.1852	0.2164	0.0100	1.17	1.00	16.8	20.0
N-Nitrosodi-n-butylamine	Ave	0.2407	0.2521		1.05	1.00	4.7	20.0
Quinoline	Ave	0.6106	0.6674		1.09	1.00	9.3	20.0
p-Phenylene diamine	Lin1		0.2635		1.07	1.00	7.3	20.0
Safrole, Total	Ave	0.2689	0.2865		1.07	1.00	6.5	20.0
Isosafrole Peak 1	Ave	0.1134	0.1154		0.855	0.840	1.7	20.0
Isosafrole Peak 2	Ave	3.285	3.397		0.165	0.160	3.4	20.0
1-Chloronaphthalene	Ave	1.167	1.170		1.00	1.00	0.3	20.0
1,4-Naphthoquinone	Lin1		0.4073		1.01	1.00	1.1	20.0
1,4-Dinitrobenzene	Lin1		0.2178		0.983	1.00	-1.7	20.0
Pentachlorobenzene	Ave	0.3962	0.4315		1.09	1.00	8.9	20.0
2,3,5,6-Tetrachlorophenol	Lin1		0.2697		1.03	1.00	3.4	20.0
1-Naphthylamine	Ave	1.175	1.311		1.12	1.00	11.5	20.0
2-Naphthylamine	Ave	1.246	1.294		1.04	1.00	3.9	20.0
Thionazin	Ave	0.3494	0.3465		0.992	1.00	-0.8	20.0
N-Nitro-o-toluidine	Ave	0.3712	0.3938		1.06	1.00	6.1	20.0
Sulfotepp	Ave	0.1012	0.1114		1.10	1.00	10.1	20.0
1,3,5-Trinitrobenzene	Lin1		0.0737		0.999	1.00	-0.0	20.0
Diallate Peak 1	Ave	0.3827	0.3781		0.850	0.860	-1.2	20.0
Phenacetin	Ave	0.3726	0.4324		1.16	1.00	16.1	20.0
Phorate	Ave	0.1750	0.1791		1.02	1.00	2.3	20.0
Diallate Peak 2	Ave	0.4073	0.3862		0.133	0.140	-5.2	20.0
Dimethoate	Ave	0.2804	0.2942		1.05	1.00	4.9	20.0
4-Aminobiphenyl	Ave	0.8055	0.8444		1.05	1.00	4.8	20.0
Pronamide	Ave	0.3463	0.3706		1.07	1.00	7.0	20.0
Pentachloronitrobenzene	Ave	0.0896	0.1064		1.19	1.00	18.8	20.0
Disulfoton	Ave	0.4112	0.4121		1.00	1.00	0.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323078/3 Calibration Date: 04/19/2018 07:42

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 18:32

Lab File ID: 80419003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Lin1		0.1843		1.01	1.00	1.1	20.0
Methyl parathion	Ave	0.2565	0.2907		1.13	1.00	13.3	20.0
Ethyl Parathion	Ave	0.1576	0.1844		1.17	1.00	17.0	20.0
4-Nitroquinoline-1-oxide	Qua		0.1137		1.46	1.00	46.3*	20.0
Methapyrilene	Ave	0.7352	0.8477		2.31	2.00	15.3	20.0
Isodrin	Ave	0.1554	0.1563		1.01	1.00	0.6	20.0
Aramite Peak 1	Ave	0.1491	0.1628		0.557	0.510	9.2	20.0
Aramite Peak 2	Ave	0.1878	0.2074		0.541	0.490	10.4	20.0
p-Dimethylamino azobenzene	Ave	0.2445	0.2533		1.04	1.00	3.6	20.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.5154	0.5535		1.07	1.00	7.4	20.0
Famphur	Ave	0.3413	0.2140		0.627	1.00	-37.3*	20.0
3,3'-Dimethylbenzidine	Lin1		0.7060		0.953	1.00	-4.7	20.0
2-Acetylaminofluorene	Lin1		0.6243		1.06	1.00	5.8	20.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2532		1.01	1.00	1.5	20.0
6-Methylchrysene	Ave	0.8795	0.8741		1.99	2.00	-0.6	20.0
7,12-Dimethylbenz(a)anthracene	Ave	0.4689	0.5587		1.19	1.00	19.1	20.0
3-Methylcholanthrene	Ave	0.6171	0.6539		2.12	2.00	6.0	20.0
Dibenz[a,h]acridine	Ave	0.8715	0.9403		1.08	1.00	7.9	20.0

Report Date: 19-Apr-2018 10:58:49 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419003.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: CCV
Inject. Date: 19-Apr-2018 07:42:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-003
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:48 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 09:32:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.863	6.863	0.000	95	78752	400.0	400.0	
* 2 Naphthalene-d8	136	7.934	7.934	0.000	99	480934	400.0	400.0	
* 3 Acenaphthene-d10	164	9.433	9.433	0.000	96	259320	400.0	400.0	
* 4 Phenanthrene-d10	188	10.716	10.716	0.000	97	447762	400.0	400.0	
* 5 Chrysene-d12	240	13.686	13.686	0.000	99	407529	400.0	400.0	
* 6 Perylene-d12	264	16.074	16.074	0.000	97	387119	400.0	400.0	
31 2-Picoline	93	5.322	5.322	0.000	91	191117	1000.0	814.4	
32 N-Nitrosomethylethylamine	88	5.387	5.387	0.000	86	156656	1000.0	1099.7	
14 Acrylamide	71	5.557	5.557	0.000	57	45442	1000.0	973.5	
34 Methyl methanesulfonate	80	5.616	5.616	0.000	93	259101	1000.0	1288.0	
36 N-Nitrosodiethylamine	102	5.957	5.957	0.000	86	188398	1000.0	1189.9	
37 Ethyl methanesulfonate	79	6.175	6.175	0.000	96	291226	1000.0	1148.6	
46 Pentachloroethane	167	6.640	6.640	0.000	87	92402	1000.0	966.8	
56 N-Nitrosopyrrolidine	100	7.140	7.140	0.000	73	206441	1000.0	1254.6	
59 N-Nitrosomorpholine	56	7.163	7.163	0.000	93	427557	1000.0	1263.5	
60 2-Toluidine	106	7.204	7.204	0.000	96	579361	1000.0	1176.9	
63 N-Nitrosopiperidine	114	7.445	7.445	0.000	75	213878	1000.0	1027.2	
68 o,o',o''-Triethylphosphoro	198	7.628	7.628	0.000	91	209856	1000.0	1029.9	
71 alpha,alpha-Dimethyl phene	58	7.757	7.757	0.000	96	668947	1000.0	700.7	M
77 Hexachloropropene	213	8.028	8.028	0.000	91	260213	1000.0	1168.4	
82 N-Nitrosodi-n-butylamine	84	8.216	8.216	0.000	83	303049	1000.0	1047.1	
81 Quinoline	129	8.222	8.222	0.000	94	802431	1000.0	1093.0	
84 p-Phenylene diamine	108	8.251	8.251	0.000	90	316840	1000.0	1072.6	
92 Safrole, Total	162	8.422	8.422	0.000	81	344433	1000.0	1065.2	
95 Isosafrole Peak 1	162	8.669	8.669	0.000	81	62840	840.0	854.6	
91 Isosafrole Peak 2	162	8.863	8.863	0.000	85	352379	160.0	165.4	
247 1-Chloronaphthalene	162	8.981	8.981	0.000	95	758711	1000.0	1003.1	a
102 1,4-Naphthoquinone	158	9.081	9.081	0.000	76	264066	1000.0	1011.0	
105 1,4-Dinitrobenzene	168	9.098	9.098	0.000	88	141203	1000.0	983.4	
114 Pentachlorobenzene	250	9.575	9.575	0.000	94	279739	1000.0	1089.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.657	9.657	0.000	88	174840	1000.0	1033.5	
117 1-Naphthylamine	143	9.663	9.663	0.000	97	849827	1000.0	1115.5	
119 2-Naphthylamine	143	9.728	9.728	0.000	95	838786	1000.0	1038.7	
121 Thionazin	97	9.798	9.798	0.000	77	224609	1000.0	991.5	
123 N-Nitro-o-toluidine	152	9.875	9.875	0.000	89	255299	1000.0	1060.8	
132 Sulfotepp	202	10.045	10.045	0.000	78	124747	1000.0	1100.9	
133 1,3,5-Trinitrobenzene	213	10.133	10.133	0.000	83	82443	1000.0	999.3	
135 Phenacetin	108	10.186	10.186	0.000	87	484031	1000.0	1160.5	
134 Diallate Peak 1	86	10.186	10.186	0.000	90	363999	860.0	849.7	
136 Phorate	121	10.198	10.198	0.000	93	200505	1000.0	1023.3	
137 Diallate Peak 2	86	10.275	10.275	0.000	88	60521	140.0	132.7	
139 Dimethoate	87	10.351	10.351	0.000	85	329379	1000.0	1049.3	
142 4-Aminobiphenyl	169	10.510	10.510	0.000	89	945231	1000.0	1048.3	
144 Pronamide	173	10.522	10.522	0.000	91	414882	1000.0	1070.2	
145 Pentachloronitrobenzene	237	10.551	10.551	0.000	81	119143	1000.0	1187.5	
146 Disulfoton	88	10.639	10.639	0.000	94	461346	1000.0	1002.2	
147 Dinoseb	211	10.651	10.651	0.000	89	206254	1000.0	1011.3	
152 Methyl parathion	109	10.975	10.975	0.000	91	325423	1000.0	1133.5	
155 Ethyl Parathion	97	11.316	11.316	0.000	81	206385	1000.0	1169.8	
156 4-Nitroquinoline-1-oxide	190	11.404	11.404	0.000	91	127254	1000.0	1463.1	
157 Methapyrilene	58	11.433	11.433	0.000	95	1897738	2000.0	2305.8	
158 Isodrin	66	11.716	11.716	0.000	88	174964	1000.0	1005.5	
162 Aramite Peak 1	185	12.127	12.127	0.000	0	84576	510.0	556.8	
163 Aramite Peak 2	185	12.210	12.210	0.000	0	103514	490.0	541.1	
164 p-Dimethylamino azobenzene	225	12.374	12.374	0.000	92	258100	1000.0	1036.3	
165 Chlorobenzilate	139	12.404	12.404	0.000	82	563870	1000.0	1073.9	
168 Famphur	218	12.710	12.710	0.000	88	218057	1000.0	627.1	
170 3,3'-Dimethylbenzidine	212	12.786	12.786	0.000	99	719269	1000.0	953.2	
172 2-Acetylaminofluorene	181	13.145	13.145	0.000	95	636055	1000.0	1057.8	
175 4,4'-Methylene bis(2-chlor	231	13.551	13.551	0.000	94	257965	1000.0	1014.6	
180 6-Methylchrysene	242	14.427	14.427	0.000	99	1781197	2000.0	1987.8	
182 7,12-Dimethylbenz(a)anthra	256	15.380	15.380	0.000	93	540681	1000.0	1191.4	
186 3-Methylcholanthrene	268	16.598	16.598	0.000	92	1265743	2000.0	2119.5	
188 Dibenz[a,h]acridine	279	17.698	17.698	0.000	92	910013	1000.0	1078.9	
S 194 Isosafrole	162				0		1000.0	1020.0	
S 195 Diallate	86				0		1000.0	982.4	
S 196 Aramite, Total	185				0		1000.0	1097.9	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST2 L6 W_00015 Amount Added: 0.10 Units: mL

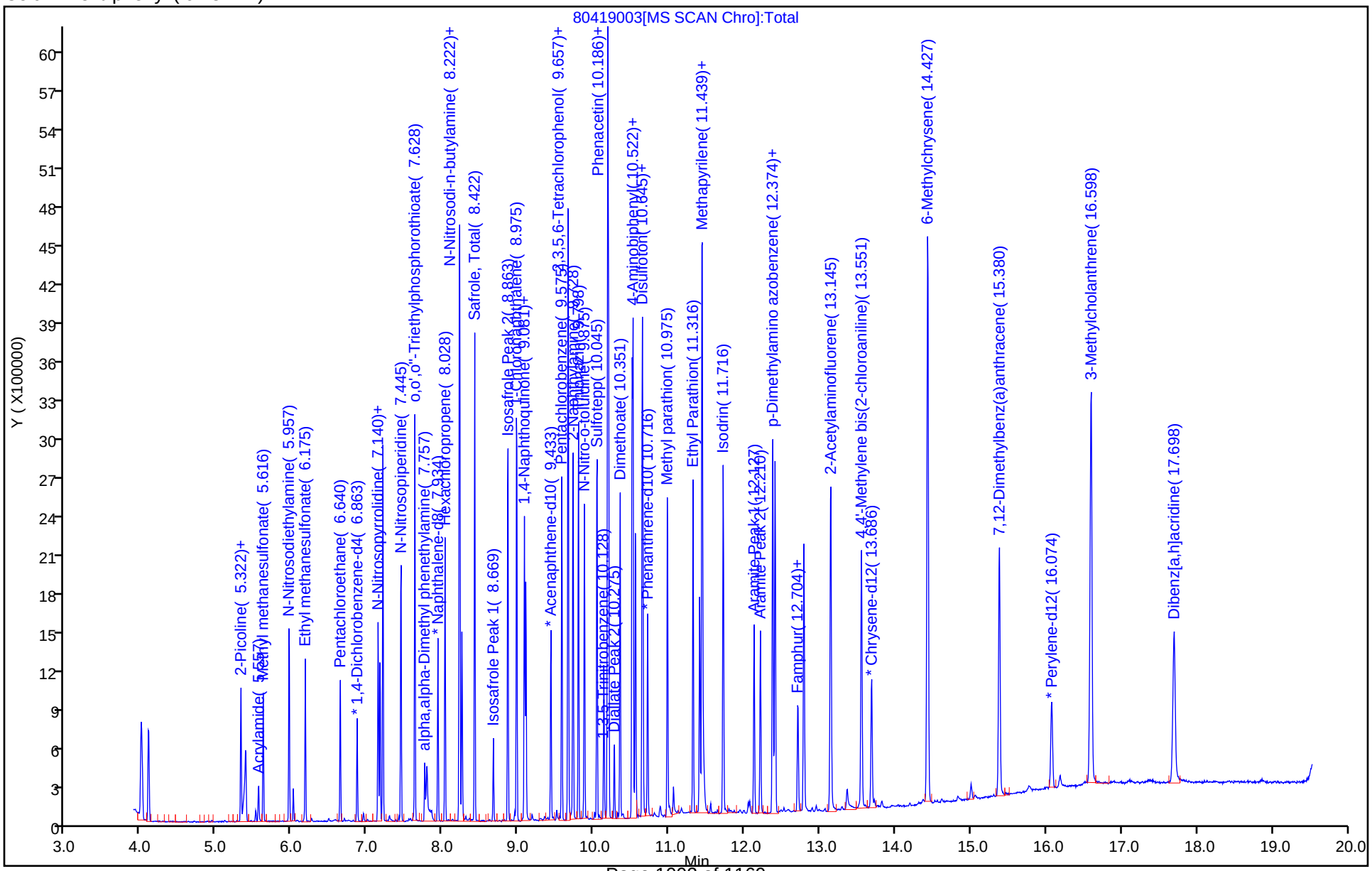
Report Date: 19-Apr-2018 10:58:49 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419003.D

Injection Date:	19-Apr-2018 07:42:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l2lvi			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

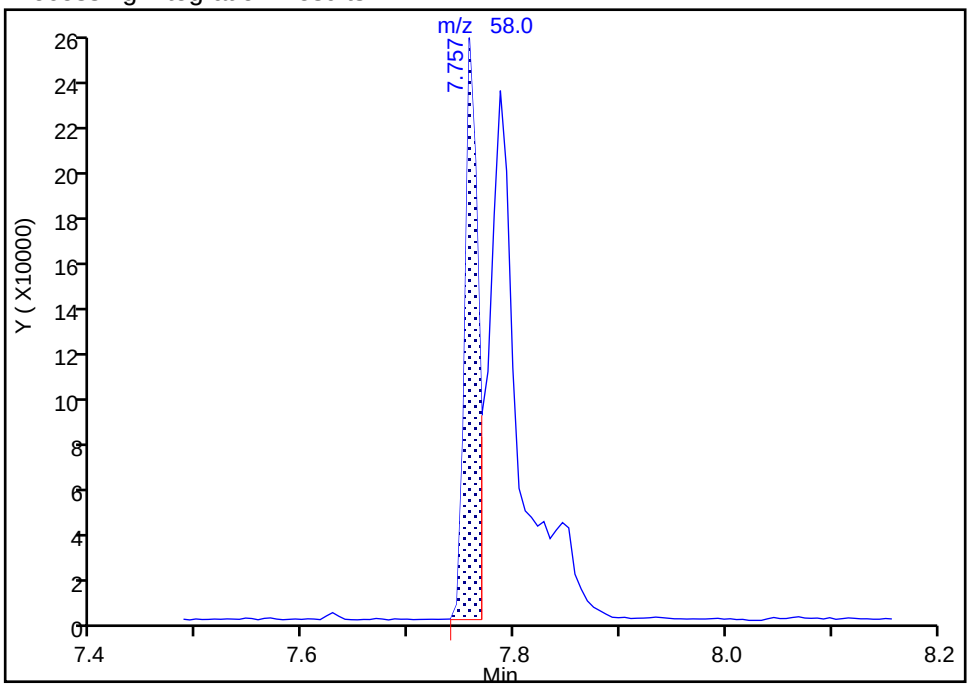
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419003.D				
Injection Date:	19-Apr-2018 07:42:30	Instrument ID:	A4AG2		
Lims ID:	std6 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

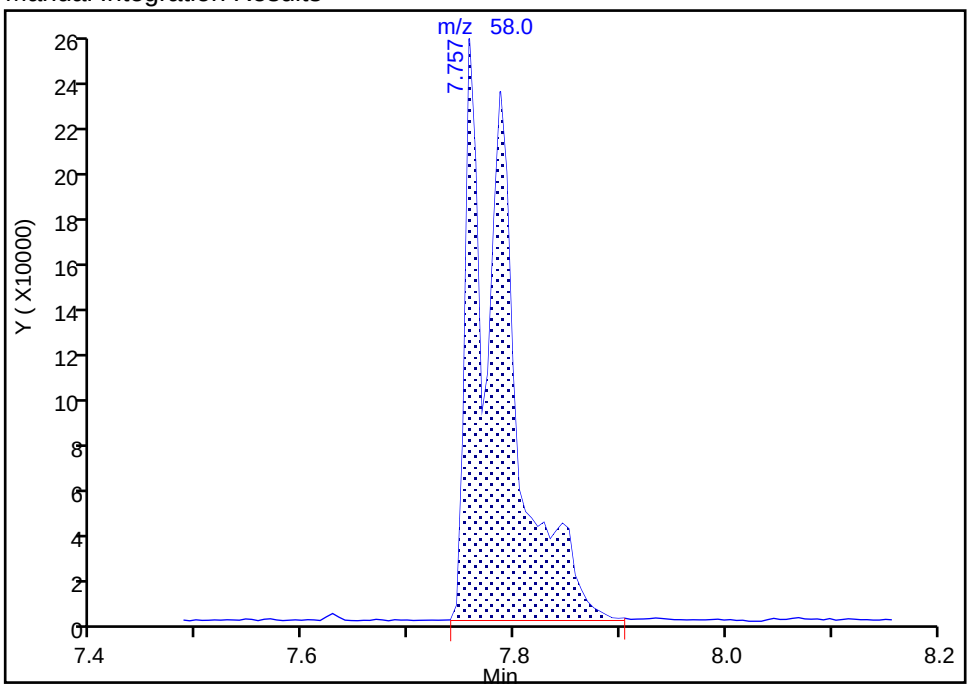
Processing Integration Results

RT: 7.76
Area: 223017
Amount: 233.6095
Amount Units: ng/ml



Manual Integration Results

RT: 7.76
Area: 668947
Amount: 700.7197
Amount Units: ng/ml



Reviewer: hulat, 19-Apr-2018 08:10:42

Audit Action: Manually Integrated Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

TestAmerica Canton

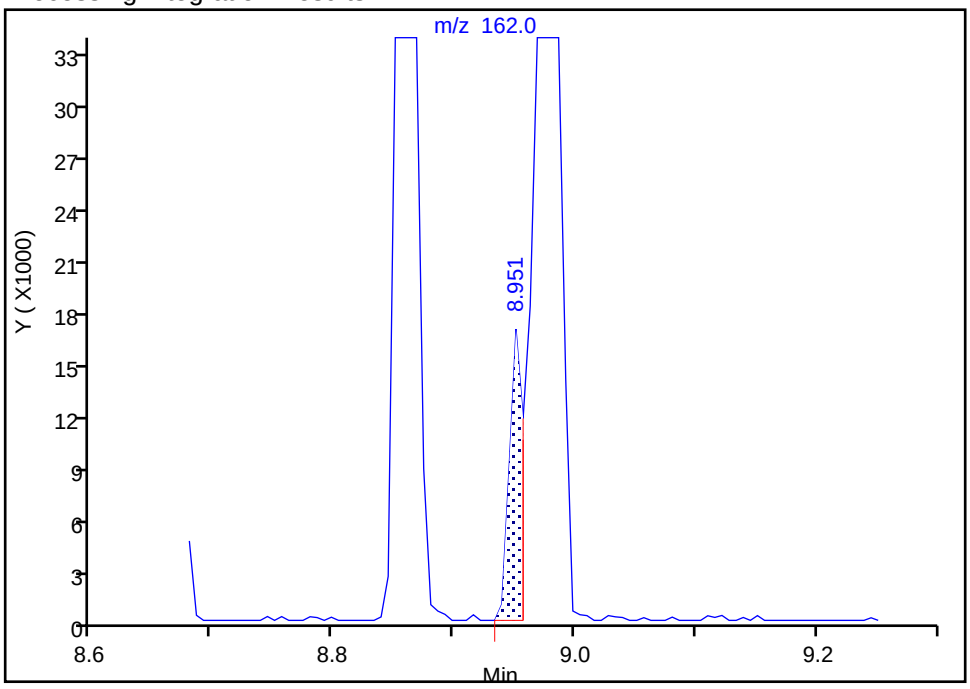
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419003.D
Injection Date: 19-Apr-2018 07:42:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

247 1-Chloronaphthalene, CAS: 90-13-1

Signal: 1

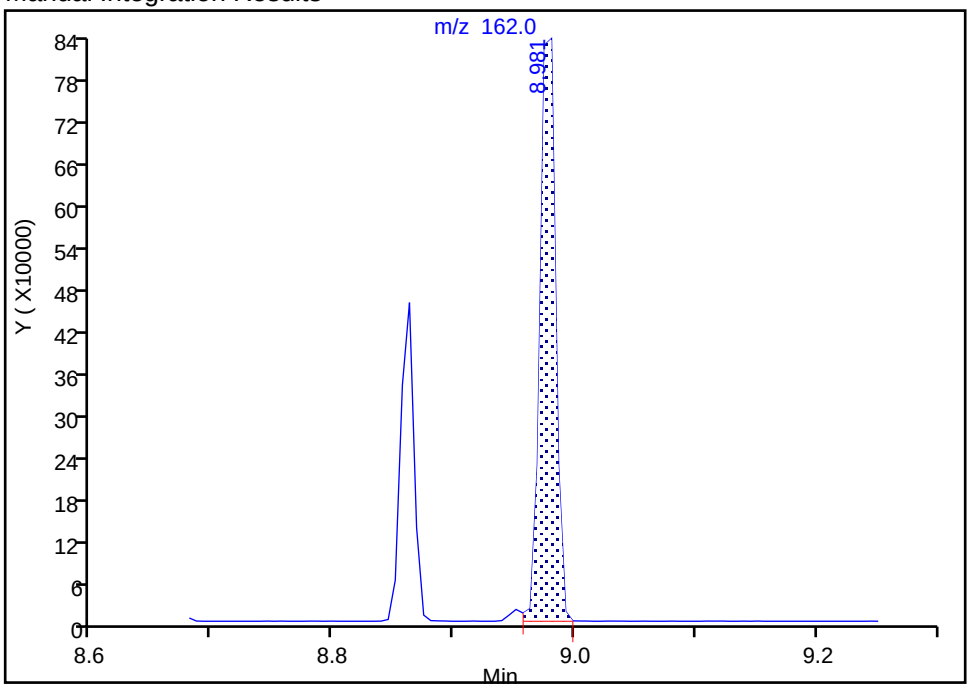
Processing Integration Results

RT: 8.95
Area: 13484
Amount: 17.827487
Amount Units: ng/ml



Manual Integration Results

RT: 8.98
Area: 758711
Amount: 1003.1081
Amount Units: ng/ml



Reviewer: hulat, 19-Apr-2018 08:10:55
Audit Action: Assigned Compound ID Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323282/2 Calibration Date: 04/20/2018 07:10

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80420002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.2645	0.2054		0.776	1.00	-22.4*	20.0
N-Nitrosodimethylamine	Ave	0.7777	0.8050		1.04	1.00	3.5	20.0
Pyridine	Ave	0.7364	0.5264		1.43	2.00	-28.5*	20.0
Benzaldehyde	Qua		0.8632	0.0100	2.05	2.00	2.3	20.0
Phenol	Ave	1.534	1.735	0.8000	1.13	1.00	13.1	20.0
Aniline	Ave	2.601	2.785		1.07	1.00	7.1	20.0
Bis(2-chloroethyl)ether	Ave	1.817	1.793	0.7000	0.987	1.00	-1.3	20.0
2-Chlorophenol	Ave	1.406	1.517	0.8000	1.08	1.00	7.9	20.0
n-Decane	Ave	2.168	1.965		0.906	1.00	-9.4	20.0
1,3-Dichlorobenzene	Ave	1.572	1.578		1.00	1.00	0.4	20.0
1,4-Dichlorobenzene	Ave	1.640	1.646		1.00	1.00	0.3	20.0
Benzyl alcohol	Ave	1.037	1.055		1.02	1.00	1.8	20.0
1,2-Dichlorobenzene	Ave	1.603	1.746		1.09	1.00	8.9	20.0
2-Methylphenol	Ave	1.360	1.403	0.7000	1.03	1.00	3.2	20.0
bis (2-chloroisopropyl) ether	Ave	4.290	4.100		0.956	1.00	-4.4	20.0
Indene	Ave	2.877	3.023		2.10	2.00	5.1	20.0
3 & 4 Methylphenol	Ave	1.379	1.221		0.886	1.00	-11.4	20.0
N-Nitrosodi-n-propylamine	Ave	1.440	1.394	0.5000	0.968	1.00	-3.2	20.0
Acetophenone	Ave	2.511	2.478	0.0100	0.987	1.00	-1.3	20.0
Hexachloroethane	Ave	0.6792	0.7327	0.3000	1.08	1.00	7.9	20.0
Nitrobenzene	Ave	0.3840	0.3964	0.2000	1.03	1.00	3.2	20.0
Isophorone	Ave	0.6462	0.7108	0.4000	1.10	1.00	10.0	20.0
2,4-Dimethylphenol	Ave	0.3051	0.3261	0.2000	1.07	1.00	6.9	20.0
2-Nitrophenol	Ave	0.1853	0.2082	0.1000	1.12	1.00	12.4	20.0
Benzoic acid	Lin1		0.1821		2.23	2.00	11.7	20.0
Bis(2-chloroethoxy)methane	Ave	0.4069	0.4051	0.3000	0.996	1.00	-0.4	20.0
2,4-Dichlorophenol	Ave	0.2229	0.2148	0.2000	0.964	1.00	-3.6	20.0
1,2,4-Trichlorobenzene	Ave	0.2801	0.3010		1.07	1.00	7.5	20.0
Naphthalene	Ave	1.029	1.027	0.7000	0.997	1.00	-0.3	20.0
4-Chloroaniline	Ave	0.4866	0.5335	0.0100	1.10	1.00	9.6	20.0
2,6-Dichlorophenol	Ave	0.2507	0.2639		1.05	1.00	5.3	20.0
Hexachlorobutadiene	Ave	0.1572	0.1822	0.0100	1.16	1.00	15.9	20.0
Caprolactam	Ave	0.0994	0.1028	0.0100	2.07	2.00	3.4	20.0
4-Chloro-3-methylphenol	Ave	0.2481	0.3238	0.2000	1.31	1.00	30.5*	20.0
2-Methylnaphthalene	Ave	0.7074	0.7385	0.4000	1.04	1.00	4.4	20.0
1-Methylnaphthalene	Ave	0.6674	0.6759		1.01	1.00	1.3	20.0
Hexachlorocyclopentadiene	Ave	0.3323	0.3902	0.0500	1.17	1.00	17.4	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5030	0.5879	0.0100	1.17	1.00	16.9	20.0
2,4,6-Trichlorophenol	Ave	0.3328	0.4189	0.2000	1.26	1.00	25.9*	20.0
2,4,5-Trichlorophenol	Ave	0.3353	0.4313	0.2000	1.29	1.00	28.6*	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323282/2 Calibration Date: 04/20/2018 07:10

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80420002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.598	1.713	0.0100	1.07	1.00	7.2	20.0
2-Chloronaphthalene	Ave	1.218	1.349	0.8000	1.11	1.00	10.8	20.0
2-Nitroaniline	Ave	0.4817	0.5640	0.0100	1.17	1.00	17.1	20.0
Dimethyl phthalate	Ave	1.527	1.572	0.0100	1.03	1.00	3.0	20.0
1,3-Dinitrobenzene	Ave	0.2304	0.2543		1.10	1.00	10.3	20.0
2,6-Dinitrotoluene	Ave	0.3378	0.3697		1.09	1.00	9.5	20.0
Acenaphthylene	Ave	1.763	1.807	0.9000	1.02	1.00	2.5	20.0
3-Nitroaniline	Ave	0.2972	0.2701	0.0100	0.909	1.00	-9.1	20.0
2,4-Dinitrophenol	Lin1		0.1937	0.0100	1.90	2.00	-5.2	20.0
4-Nitrophenol	Ave	0.2134	0.2657		2.49	2.00	24.5*	20.0
Acenaphthene	Ave	1.249	1.232	0.9000	0.987	1.00	-1.3	20.0
2,4-Dinitrotoluene	Ave	0.4349	0.4697	0.2000	1.08	1.00	8.0	20.0
Dibenzofuran	Ave	1.759	1.898	0.8000	1.08	1.00	7.9	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2819	0.3039	0.0100	1.08	1.00	7.8	20.0
Hexadecane	Ave	1.415	1.364		0.964	1.00	-3.6	20.0
Diethyl phthalate	Ave	1.530	1.701	0.0100	1.11	1.00	11.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.6942	0.6589	0.4000	0.949	1.00	-5.1	20.0
4-Nitroaniline	Ave	0.3004	0.2477	0.0100	0.824	1.00	-17.6	20.0
Fluorene	Ave	1.507	1.536	0.9000	1.02	1.00	1.9	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1207	0.0100	1.80	2.00	-9.8	20.0
Diphenylamine	Ave	0.7076	0.6992		0.840	0.850	-1.2	20.0
N-Nitrosodiphenylamine	Ave	0.6015	0.5943	0.0100	0.988	1.00	-1.2	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9121	1.008		1.10	1.00	10.5	20.0
Azobenzene	Ave	0.9125	1.008		1.11	1.00	10.5	20.0
4-Bromophenyl phenyl ether	Ave	0.2030	0.2326	0.1000	1.15	1.00	14.6	20.0
Atrazine	Ave	0.2235	0.2264	0.0100	2.03	2.00	1.3	20.0
Hexachlorobenzene	Ave	0.1929	0.2293	0.1000	1.19	1.00	18.9	20.0
n-Octadecane	Ave	0.8110	0.8586		1.06	1.00	5.9	20.0
Pentachlorophenol	Ave	0.1272	0.1509	0.0500	2.37	2.00	18.7	20.0
Phenanthrene	Ave	1.148	1.153	0.7000	1.00	1.00	0.5	20.0
Anthracene	Ave	1.144	1.196	0.7000	1.05	1.00	4.5	20.0
Carbazole	Ave	1.039	1.087	0.0100	1.05	1.00	4.5	20.0
Di-n-butyl phthalate	Ave	1.396	1.512	0.0100	1.08	1.00	8.2	20.0
Fluoranthene	Ave	1.177	1.001	0.6000	0.851	1.00	-14.9	20.0
Benzidine	Lin1		0.3506		1.25	2.00	-37.3*	20.0
Pyrene	Ave	1.266	1.208	0.6000	0.955	1.00	-4.5	20.0
Butyl benzyl phthalate	Ave	0.6536	0.6845	0.0100	1.05	1.00	4.7	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8715	0.9465	0.0100	1.09	1.00	8.6	20.0
3,3'-Dichlorobenzidine	Ave	0.3940	0.4142	0.0100	2.10	2.00	5.1	20.0
Benzo[a]anthracene	Ave	1.159	1.198	0.8000	1.03	1.00	3.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323282/2 Calibration Date: 04/20/2018 07:10

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 11:32

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 14:49

Lab File ID: 80420002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	1.154	1.122	0.7000	0.972	1.00	-2.8	20.0
Di-n-octyl phthalate	Ave	1.564	2.066	0.0100	1.32	1.00	32.1*	20.0
Benzo[b]fluoranthene	Ave	1.171	1.350	0.7000	1.15	1.00	15.3	20.0
Benzo[k]fluoranthene	Ave	1.230	1.342	0.7000	1.09	1.00	9.1	20.0
Benzo[a]pyrene	Ave	1.115	1.178	0.7000	1.06	1.00	5.7	20.0
Dibenz(a,h)anthracene	Ave	1.024	1.166	0.4000	1.14	1.00	13.8	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.198	1.352	0.5000	1.13	1.00	12.8	20.0
Benzo[g,h,i]perylene	Ave	1.017	1.119	0.5000	1.10	1.00	10.0	20.0
2-Fluorophenol (Surr)	Ave	0.8249	0.6421		0.778	1.00	-22.2*	20.0
Phenol-d5 (Surr)	Ave	1.383	1.577		1.14	1.00	14.0	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3888	0.4063		1.05	1.00	4.5	20.0
2-Fluorobiphenyl (Surr)	Ave	1.391	1.491		1.07	1.00	7.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1401	0.1488		1.06	1.00	6.2	20.0
Terphenyl-d14 (Surr)	Ave	0.7954	0.7823		0.984	1.00	-1.6	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420002.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: CCVIS
Inject. Date: 20-Apr-2018 07:10:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-002
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 20-Apr-2018 11:17:02 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 20-Apr-2018 07:34:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	93	81323	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	438275	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	226653	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	97	393610	400.0	400.0	
* 5 Chrysene-d12	240	13.670	13.670	0.000	99	324150	400.0	400.0	
* 6 Perylene-d12	264	16.052	16.052	0.000	98	314700	400.0	400.0	
$ 7 2-Fluorophenol	112	5.770	5.770	0.000	93	130541	1000.0	778.4	
$ 8 Phenol-d5	99	6.494	6.494	0.000	0	320689	1000.0	1140.4	
$ 9 Nitrobenzene-d5	82	7.299	7.299	0.000	98	445162	1000.0	1045.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.811	8.811	0.000	99	844620	1000.0	1071.8	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	78	84313	1000.0	1061.8	
$ 12 Terphenyl-d14	244	12.205	12.205	0.000	99	633939	1000.0	983.5	
26 1,4-Dioxane	88	4.341	4.341	0.000	84	41761	1000.0	776.5	
27 N-Nitrosodimethylamine	74	4.600	4.600	0.000	74	163671	1000.0	1035.2	
28 Pyridine	79	4.664	4.664	0.000	69	214042	2000.0	1429.7	
42 Benzaldehyde	77	6.488	6.488	0.000	87	350979	2000.0	2046.8	
43 Phenol	94	6.505	6.505	0.000	90	352723	1000.0	1131.2	
44 Aniline	93	6.570	6.570	0.000	92	566218	1000.0	1070.6	
45 Bis(2-chloroethyl)ether	93	6.588	6.588	0.000	86	364534	1000.0	986.7	
244 n-Decane	57	6.682	6.682	0.000	91	399512	1000.0	906.4	
47 2-Chlorophenol	128	6.682	6.682	0.000	92	308410	1000.0	1078.8	
48 1,3-Dichlorobenzene	146	6.811	6.811	0.000	91	320856	1000.0	1004.1	
49 1,4-Dichlorobenzene	146	6.870	6.870	0.000	88	334626	1000.0	1003.5	
50 Benzyl alcohol	108	6.935	6.935	0.000	85	214516	1000.0	1017.5	
52 2-Methylphenol	108	7.005	7.005	0.000	94	285314	1000.0	1032.2	
51 1,2-Dichlorobenzene	146	7.005	7.005	0.000	89	355015	1000.0	1089.1	
54 2,2'-oxybis[1-chloropropan	45	7.035	7.035	0.000	89	833634	1000.0	955.8	
53 Indene	115	7.076	7.076	0.000	90	1229062	2000.0	2101.1	
55 3 & 4 Methylphenol	108	7.129	7.129	0.000	0	248174	1000.0	885.5	
57 N-Nitrosodi-n-propylamine	70	7.141	7.141	0.000	96	283501	1000.0	968.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.164	7.164	0.000	88	503744	1000.0	986.9	
61 Hexachloroethane	117	7.294	7.294	0.000	91	148962	1000.0	1078.8	
62 Nitrobenzene	77	7.317	7.317	0.000	96	434325	1000.0	1032.3	
64 Isophorone	82	7.505	7.505	0.000	94	778778	1000.0	1100.0	
66 2,4-Dimethylphenol	107	7.576	7.576	0.000	97	357316	1000.0	1068.9	
65 2-Nitrophenol	139	7.588	7.588	0.000	91	228111	1000.0	1123.5	
70 Benzoic acid	122	7.629	7.629	0.000	91	399139	2000.0	2234.9	
69 Bis(2-chloroethoxy)methane	93	7.652	7.652	0.000	94	443830	1000.0	995.5	
72 2,4-Dichlorophenol	162	7.782	7.782	0.000	94	235299	1000.0	963.5	
73 1,2,4-Trichlorobenzene	180	7.864	7.864	0.000	93	329779	1000.0	1074.7	
74 Naphthalene	128	7.946	7.946	0.000	99	1124949	1000.0	997.5	
75 4-Chloroaniline	127	7.958	7.958	0.000	93	584502	1000.0	1096.3	
76 2,6-Dichlorophenol	162	7.976	7.976	0.000	90	289140	1000.0	1052.6	
78 Hexachlorobutadiene	225	8.035	8.035	0.000	94	199592	1000.0	1158.9	
83 Caprolactam	113	8.235	8.235	0.000	68	225370	2000.0	2068.3	
85 4-Chloro-3-methylphenol	107	8.335	8.335	0.000	94	354729	1000.0	1305.1	
86 2-Methylnaphthalene	142	8.523	8.523	0.000	91	809209	1000.0	1044.0	
87 1-Methylnaphthalene	142	8.611	8.611	0.000	92	740590	1000.0	1012.8	
89 Hexachlorocyclopentadiene	237	8.658	8.658	0.000	96	221119	1000.0	1174.2	
90 1,2,4,5-Tetrachlorobenzene	216	8.670	8.670	0.000	98	333113	1000.0	1168.8	
93 2,4,6-Trichlorophenol	196	8.746	8.746	0.000	93	237358	1000.0	1258.8	
94 2,4,5-Trichlorophenol	196	8.782	8.782	0.000	89	244384	1000.0	1286.4	
99 1,1'-Biphenyl	154	8.905	8.905	0.000	96	970841	1000.0	1072.0	
100 2-Chloronaphthalene	162	8.940	8.940	0.000	99	764633	1000.0	1108.3	
101 2-Nitroaniline	65	8.999	8.999	0.000	77	319569	1000.0	1170.8	
104 Dimethyl phthalate	163	9.123	9.123	0.000	97	890892	1000.0	1029.9	
103 1,3-Dinitrobenzene	168	9.164	9.164	0.000	84	144080	1000.0	1103.5	
106 2,6-Dinitrotoluene	165	9.188	9.188	0.000	87	209489	1000.0	1094.5	
108 Acenaphthylene	152	9.305	9.305	0.000	98	1024022	1000.0	1024.9	
109 3-Nitroaniline	138	9.346	9.346	0.000	86	153024	1000.0	908.6	
110 2,4-Dinitrophenol	184	9.429	9.429	0.000	74	219497	2000.0	1896.1	
112 4-Nitrophenol	109	9.452	9.452	0.000	57	301089	2000.0	2490.0	
111 Acenaphthene	153	9.452	9.452	0.000	95	698182	1000.0	986.5	
113 2,4-Dinitrotoluene	165	9.540	9.540	0.000	87	266156	1000.0	1080.1	
115 Dibenzofuran	168	9.593	9.593	0.000	94	1075311	1000.0	1078.6	
118 2,3,4,6-Tetrachlorophenol	232	9.688	9.688	0.000	81	172186	1000.0	1077.8	
248 Hexadecane	57	9.705	9.705	0.000	91	772790	1000.0	963.8	
120 Diethyl phthalate	149	9.711	9.711	0.000	97	963832	1000.0	1111.5	
122 4-Chlorophenyl phenyl ethe	204	9.852	9.852	0.000	96	373372	1000.0	949.3	
125 4-Nitroaniline	138	9.876	9.876	0.000	77	140324	1000.0	824.4	
124 Fluorene	166	9.887	9.887	0.000	95	870302	1000.0	1018.9	
127 4,6-Dinitro-2-methylphenol	198	9.893	9.893	0.000	78	237565	2000.0	1804.5	
128 N-Nitrosodiphenylamine	169	9.946	9.946	0.000	98	584799	1000.0	988.1	
129 Diphenylamine	169	9.946	9.946	0.000	93	584799	850.0	839.9	
130 1,2-Diphenylhydrazine	77	9.993	9.993	0.000	40	991920	1000.0	1104.6	a
131 Azobenzene	77	9.993	9.993	0.000	95	992259	1000.0	1105.0	
138 4-Bromophenyl phenyl ether	248	10.276	10.276	0.000	78	228875	1000.0	1145.6	
141 Atrazine	200	10.364	10.364	0.000	88	445537	2000.0	2025.4	
140 Hexachlorobenzene	284	10.376	10.376	0.000	90	225679	1000.0	1189.1	
245 n-Octadecane	57	10.487	10.487	0.000	88	844871	1000.0	1058.6	
143 Pentachlorophenol	266	10.529	10.529	0.000	85	297046	2000.0	2374.1	
148 Phenanthrene	178	10.723	10.723	0.000	98	1134750	1000.0	1004.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.770	10.770	0.000	97	1176540	1000.0	1045.4	
150 Carbazole	167	10.882	10.882	0.000	97	1069285	1000.0	1045.4	
154 Di-n-butyl phthalate	149	11.105	11.105	0.000	99	1487352	1000.0	1082.5	
159 Fluoranthene	202	11.852	11.852	0.000	97	985320	1000.0	850.6	
160 Benzidine	184	11.929	11.929	0.000	98	568267	2000.0	1254.2	
161 Pyrene	202	12.111	12.111	0.000	98	979281	1000.0	954.5	
169 Butyl benzyl phthalate	149	12.740	12.740	0.000	98	554672	1000.0	1047.3	
174 Bis(2-ethylhexyl) phthalat	149	13.505	13.505	0.000	94	767023	1000.0	1086.0	
177 3,3'-Dichlorobenzidine	252	13.552	13.552	0.000	76	671361	2000.0	2102.5	
178 Benzo[a]anthracene	228	13.652	13.652	0.000	98	970828	1000.0	1033.8	
179 Chrysene	228	13.711	13.711	0.000	96	908862	1000.0	971.7	
181 Di-n-octyl phthalate	149	14.528	14.528	0.000	98	1625484	1000.0	1321.2	
183 Benzo[b]fluoranthene	252	15.387	15.387	0.000	97	1061918	1000.0	1152.5	
184 Benzo[k]fluoranthene	252	15.434	15.434	0.000	99	1055805	1000.0	1091.0	
185 Benzo[a]pyrene	252	15.958	15.958	0.000	77	927163	1000.0	1057.2	
190 Indeno[1,2,3-cd]pyrene	276	18.228	18.228	0.000	98	1063386	1000.0	1127.8	
189 Dibenz(a,h)anthracene	278	18.228	18.228	0.000	87	917360	1000.0	1138.4	
191 Benzo[g,h,i]perylene	276	18.875	18.875	0.000	98	880208	1000.0	1100.1	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L6 W_00010 Amount Added: 0.10 Units: mL

Report Date: 20-Apr-2018 11:17:05 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420002.D

Injection Date: 20-Apr-2018 07:10:30 Instrument ID: A4AG2 Operator ID:

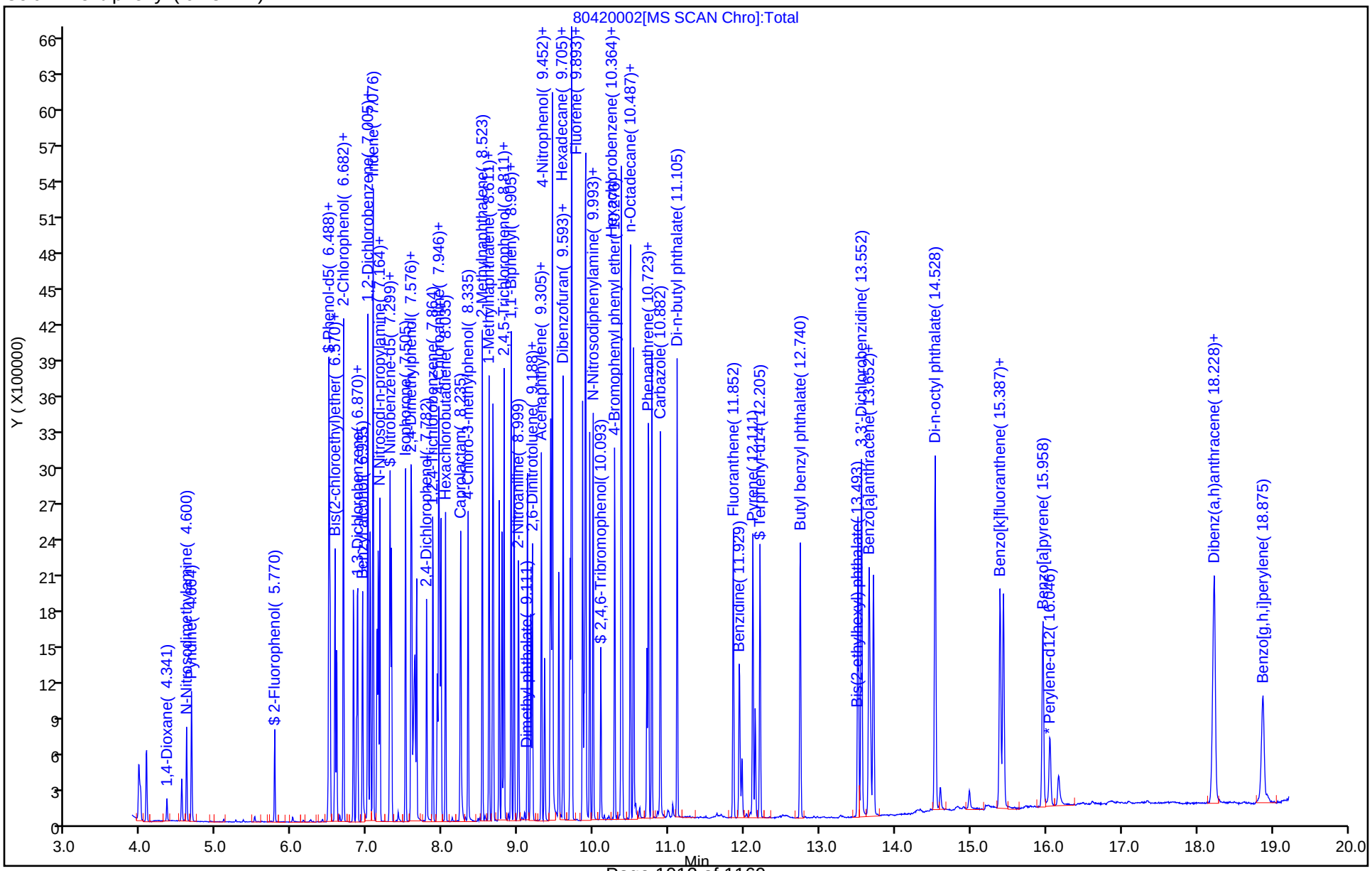
Lims ID: std6 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

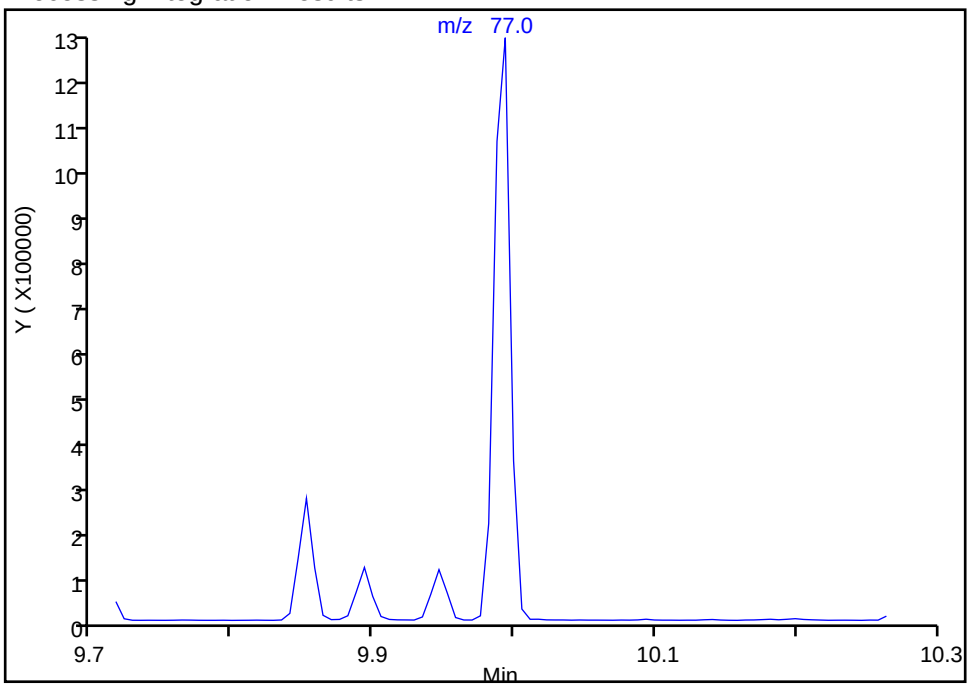
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420002.D				
Injection Date:	20-Apr-2018 07:10:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

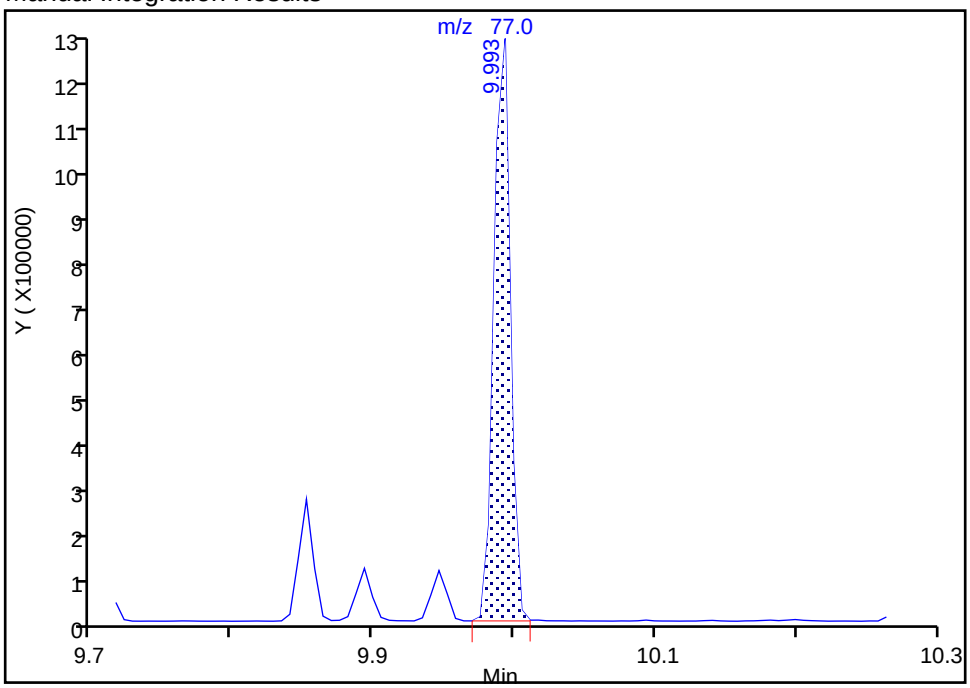
Not Detected
Expected RT: 9.99

Processing Integration Results



Manual Integration Results

RT: 9.99
Area: 991920
Amount: 1104.6232
Amount Units: ng/ml



Reviewer: hulat, 20-Apr-2018 07:34:15
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323282/3 | Calibration Date: 04/20/2018 08:14

Instrument ID: A4AG2 | Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) | Calib End Date: 04/11/2018 18:32

Lab File ID: 80420003.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.192	1.043		0.875	1.00	-12.5	20.0
N-Nitrosomethylethylamine	Ave	0.7236	0.6756		0.934	1.00	-6.6	20.0
Acrylamide	Ave	0.2371	0.1757		0.741	1.00	-25.9*	20.0
Methyl methanesulfonate	Ave	1.022	1.084		1.06	1.00	6.0	20.0
N-Nitrosodiethylamine	Ave	0.8042	0.8047		1.00	1.00	0.0	20.0
Ethyl methanesulfonate	Ave	1.288	1.215		0.943	1.00	-5.7	20.0
Pentachloroethane	Ave	0.4854	0.4870		1.00	1.00	0.3	20.0
N-Nitrosopyrrolidine	Ave	0.8358	0.8961		1.07	1.00	7.2	20.0
N-Nitrosomorpholine	Ave	1.719	1.824		1.06	1.00	6.1	20.0
2-Toluidine	Ave	2.500	2.582		1.03	1.00	3.3	20.0
N-Nitrosopiperidine	Ave	0.1732	0.1738		1.00	1.00	0.4	20.0
o,o',o''-Triethylphosphorothioate	Ave	0.1695	0.1847		1.09	1.00	9.0	20.0
alpha,alpha-Dimethylphenethylamine	Ave	0.7940	0.7383		0.930	1.00	-7.0	20.0
Hexachloropropene	Ave	0.1852	0.2118	0.0100	1.14	1.00	14.3	20.0
N-Nitrosodi-n-butylamine	Ave	0.2407	0.2447		1.02	1.00	1.6	20.0
Quinoline	Ave	0.6106	0.6602		1.08	1.00	8.1	20.0
p-Phenylene diamine	Lin1		0.2340		0.959	1.00	-4.1	20.0
Safrole, Total	Ave	0.2689	0.2788		1.04	1.00	3.7	20.0
Isosafrole Peak 1	Ave	0.1134	0.1190		0.881	0.840	4.9	20.0
Isosafrole Peak 2	Ave	3.285	3.459		0.168	0.160	5.3	20.0
1-Chloronaphthalene	Ave	1.167	1.288		1.10	1.00	10.4	20.0
1,4-Naphthoquinone	Lin1		0.4054		1.01	1.00	0.6	20.0
1,4-Dinitrobenzene	Lin1		0.2400		1.08	1.00	8.1	20.0
Pentachlorobenzene	Ave	0.3962	0.4737		1.20	1.00	19.5	20.0
1-Naphthylamine	Ave	1.175	1.349		1.15	1.00	14.8	20.0
2,3,5,6-Tetrachlorophenol	Lin1		0.2546		0.977	1.00	-2.3	20.0
2-Naphthylamine	Ave	1.246	1.307		1.05	1.00	5.0	20.0
Thionazin	Ave	0.3494	0.3253		0.931	1.00	-6.9	20.0
N-Nitro-o-toluidine	Ave	0.3712	0.3594		0.968	1.00	-3.2	20.0
Sulfotepp	Ave	0.1012	0.1104		1.09	1.00	9.0	20.0
1,3,5-Trinitrobenzene	Lin1		0.0753		1.02	1.00	1.9	20.0
Phenacetin	Ave	0.3726	0.4059		1.09	1.00	8.9	20.0
Diallate Peak 1	Ave	0.3827	0.3678		0.826	0.860	-3.9	20.0
Phorate	Ave	0.1750	0.1758		1.00	1.00	0.5	20.0
Diallate Peak 2	Ave	0.4073	0.3694		0.127	0.140	-9.3	20.0
Dimethoate	Ave	0.2804	0.2615		0.932	1.00	-6.8	20.0
4-Aminobiphenyl	Ave	0.8055	0.8399		1.04	1.00	4.3	20.0
Pronamide	Ave	0.3463	0.3621		1.05	1.00	4.6	20.0
Pentachloronitrobenzene	Ave	0.0896	0.1009		1.13	1.00	12.5	20.0
Disulfoton	Ave	0.4112	0.3840		0.934	1.00	-6.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323282/3 Calibration Date: 04/20/2018 08:14

Instrument ID: A4AG2 Calib Start Date: 04/11/2018 15:39

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/11/2018 18:32

Lab File ID: 80420003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Lin1		0.1334		0.745	1.00	-25.5*	20.0
Methyl parathion	Ave	0.2565	0.2274		0.887	1.00	-11.3	20.0
Ethyl Parathion	Ave	0.1576	0.1425		0.904	1.00	-9.6	20.0
4-Nitroquinoline-1-oxide	Qua		0.0627		0.969	1.00	-3.1	20.0
Methapyrilene	Ave	0.7352	0.6703		1.82	2.00	-8.8	20.0
Isodrin	Ave	0.1554	0.1264		0.813	1.00	-18.7	20.0
Aramite Peak 1	Ave	0.1491	0.1571		0.537	0.510	5.4	20.0
Aramite Peak 2	Ave	0.1878	0.2062		0.538	0.490	9.8	20.0
p-Dimethylamino azobenzene	Ave	0.2445	0.2918		1.19	1.00	19.4	20.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.5154	0.5894		1.14	1.00	14.4	20.0
Famphur	Ave	0.3413	0.2410		0.706	1.00	-29.4*	20.0
3,3'-Dimethylbenzidine	Lin1		0.6825		0.923	1.00	-7.7	20.0
2-Acetylaminofluorene	Lin1		0.6663		1.13	1.00	12.6	20.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2505		1.00	1.00	0.4	20.0
6-Methylchrysene	Ave	0.8795	0.8294		1.89	2.00	-5.7	20.0
7,12-Dimethylbenz(a)anthracene	Ave	0.4689	0.6184		1.32	1.00	31.9*	20.0
3-Methylcholanthrene	Ave	0.6171	0.5983		1.94	2.00	-3.0	20.0
Dibenz[a,h]acridine	Ave	0.8715	1.044		1.20	1.00	19.8	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420003.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: CCV
Inject. Date: 20-Apr-2018 08:14:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-003
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 20-Apr-2018 11:17:10 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 20-Apr-2018 08:36:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	90731	400.0	400.0	a
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	445785	400.0	400.0	
* 3 Acenaphthene-d10	164	9.423	9.423	0.000	96	233685	400.0	400.0	
* 4 Phenanthrene-d10	188	10.705	10.705	0.000	98	447015	400.0	400.0	
* 5 Chrysene-d12	240	13.664	13.664	0.000	99	362766	400.0	400.0	
* 6 Perylene-d12	264	16.046	16.046	0.000	98	374966	400.0	400.0	
31 2-Picoline	93	5.306	5.306	0.000	92	236626	1000.0	875.2	
32 N-Nitrosomethylethylamine	88	5.376	5.376	0.000	86	153239	1000.0	933.7	
14 Acrylamide	71	5.547	5.547	0.000	58	39849	1000.0	741.0	
34 Methyl methanesulfonate	80	5.606	5.606	0.000	94	245776	1000.0	1060.4	
36 N-Nitrosodiethylamine	102	5.953	5.953	0.000	86	182528	1000.0	1000.6	
37 Ethyl methanesulfonate	79	6.164	6.164	0.000	95	275573	1000.0	943.4	
46 Pentachloroethane	167	6.629	6.629	0.000	87	110462	1000.0	1003.2	
56 N-Nitrosopyrrolidine	100	7.135	7.135	0.000	72	203269	1000.0	1072.2	
59 N-Nitrosomorpholine	56	7.158	7.158	0.000	93	413660	1000.0	1061.0	
60 2-Toluidine	106	7.194	7.194	0.000	96	585603	1000.0	1032.5	
63 N-Nitrosopiperidine	114	7.435	7.435	0.000	74	193741	1000.0	1003.9	
68 o,o',o''-Triethylphosphoro	198	7.617	7.617	0.000	92	205796	1000.0	1089.7	
71 alpha,alpha-Dimethyl phene	58	7.747	7.747	0.000	97	822820	1000.0	929.9	
77 Hexachloropropene	213	8.017	8.017	0.000	91	236022	1000.0	1143.4	
82 N-Nitrosodi-n-butylamine	84	8.205	8.205	0.000	82	272674	1000.0	1016.5	
81 Quinoline	129	8.217	8.217	0.000	94	735779	1000.0	1081.2	
84 p-Phenylene diamine	108	8.247	8.247	0.000	89	260804	1000.0	959.0	
92 Safrole, Total	162	8.411	8.411	0.000	80	310737	1000.0	1036.8	
95 Isosafrole Peak 1	162	8.658	8.658	0.000	80	58398	840.0	881.3	
91 Isosafrole Peak 2	162	8.852	8.852	0.000	83	323281	160.0	168.4	
247 1-Chloronaphthalene	162	8.970	8.970	0.000	96	752606	1000.0	1104.2	
102 1,4-Naphthoquinone	158	9.070	9.070	0.000	75	236838	1000.0	1006.3	
105 1,4-Dinitrobenzene	168	9.094	9.094	0.000	89	140231	1000.0	1080.5	
114 Pentachlorobenzene	250	9.564	9.564	0.000	94	276728	1000.0	1195.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.652	9.652	0.000	60	148751	1000.0	977.5	
117 1-Naphthylamine	143	9.652	9.652	0.000	98	787873	1000.0	1147.6	
119 2-Naphthylamine	143	9.717	9.717	0.000	95	763849	1000.0	1049.7	
121 Thionazin	97	9.788	9.788	0.000	77	190056	1000.0	931.0	
123 N-Nitro-o-toluidine	152	9.870	9.870	0.000	90	209969	1000.0	968.1	
132 Sulfotepp	202	10.035	10.035	0.000	76	123357	1000.0	1090.5	
133 1,3,5-Trinitrobenzene	213	10.129	10.129	0.000	84	84184	1000.0	1019.4	
135 Phenacetin	108	10.170	10.170	0.000	79	453583	1000.0	1089.4	
134 Diallate Peak 1	86	10.176	10.176	0.000	89	353452	860.0	826.4	
136 Phorate	121	10.188	10.188	0.000	92	196509	1000.0	1004.6	
137 Diallate Peak 2	86	10.264	10.264	0.000	89	57797	140.0	127.0	
139 Dimethoate	87	10.340	10.340	0.000	85	292206	1000.0	932.5	
142 4-Aminobiphenyl	169	10.499	10.499	0.000	89	938644	1000.0	1042.7	
144 Pronamide	173	10.511	10.511	0.000	91	404705	1000.0	1045.7	
145 Pentachloronitrobenzene	237	10.540	10.540	0.000	80	112731	1000.0	1125.5	
146 Disulfoton	88	10.629	10.629	0.000	94	429132	1000.0	933.8	
147 Dinoseb	211	10.640	10.640	0.000	91	149088	1000.0	745.2	
152 Methyl parathion	109	10.964	10.964	0.000	91	254136	1000.0	886.7	
155 Ethyl Parathion	97	11.305	11.305	0.000	82	159193	1000.0	903.8	
156 4-Nitroquinoline-1-oxide	190	11.393	11.393	0.000	89	70112	1000.0	968.6	
157 Methapyrilene	58	11.423	11.423	0.000	95	1498244	2000.0	1823.5	
158 Isodrin	66	11.699	11.699	0.000	87	141207	1000.0	812.9	
162 Aramite Peak 1	185	12.111	12.111	0.000	0	72647	510.0	537.3	
163 Aramite Peak 2	185	12.193	12.193	0.000	0	91627	490.0	538.1	
164 p-Dimethylamino azobenzene	225	12.358	12.358	0.000	93	264675	1000.0	1193.8	
165 Chlorobenzilate	139	12.387	12.387	0.000	82	534500	1000.0	1143.6	
168 Famphur	218	12.693	12.693	0.000	88	218589	1000.0	706.2	
170 3,3'-Dimethylbenzidine	212	12.770	12.770	0.000	99	618948	1000.0	922.9	
172 2-Acetylaminofluorene	181	13.129	13.129	0.000	95	604269	1000.0	1126.3	
175 4,4'-Methylene bis(2-chlor	231	13.534	13.534	0.000	94	227165	1000.0	1004.0	
180 6-Methylchrysene	242	14.411	14.411	0.000	98	1504336	2000.0	1886.0	
182 7,12-Dimethylbenz(a)anthra	256	15.358	15.358	0.000	91	579689	1000.0	1318.8	
186 3-Methylcholanthrene	268	16.569	16.569	0.000	92	1121714	2000.0	1939.2	
188 Dibenz[a,h]acridine	279	17.664	17.664	0.000	91	979022	1000.0	1198.3	
S 194 Isosafrole	162				0		1000.0	1049.7	
S 195 Diallate	86				0		1000.0	953.4	
S 196 Aramite, Total	185				0		1000.0	1075.4	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 L6 W_00015 Amount Added: 0.10 Units: mL

Report Date: 20-Apr-2018 11:17:13 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420003.D

Injection Date: 20-Apr-2018 08:14:30 Instrument ID: A4AG2 Operator ID:

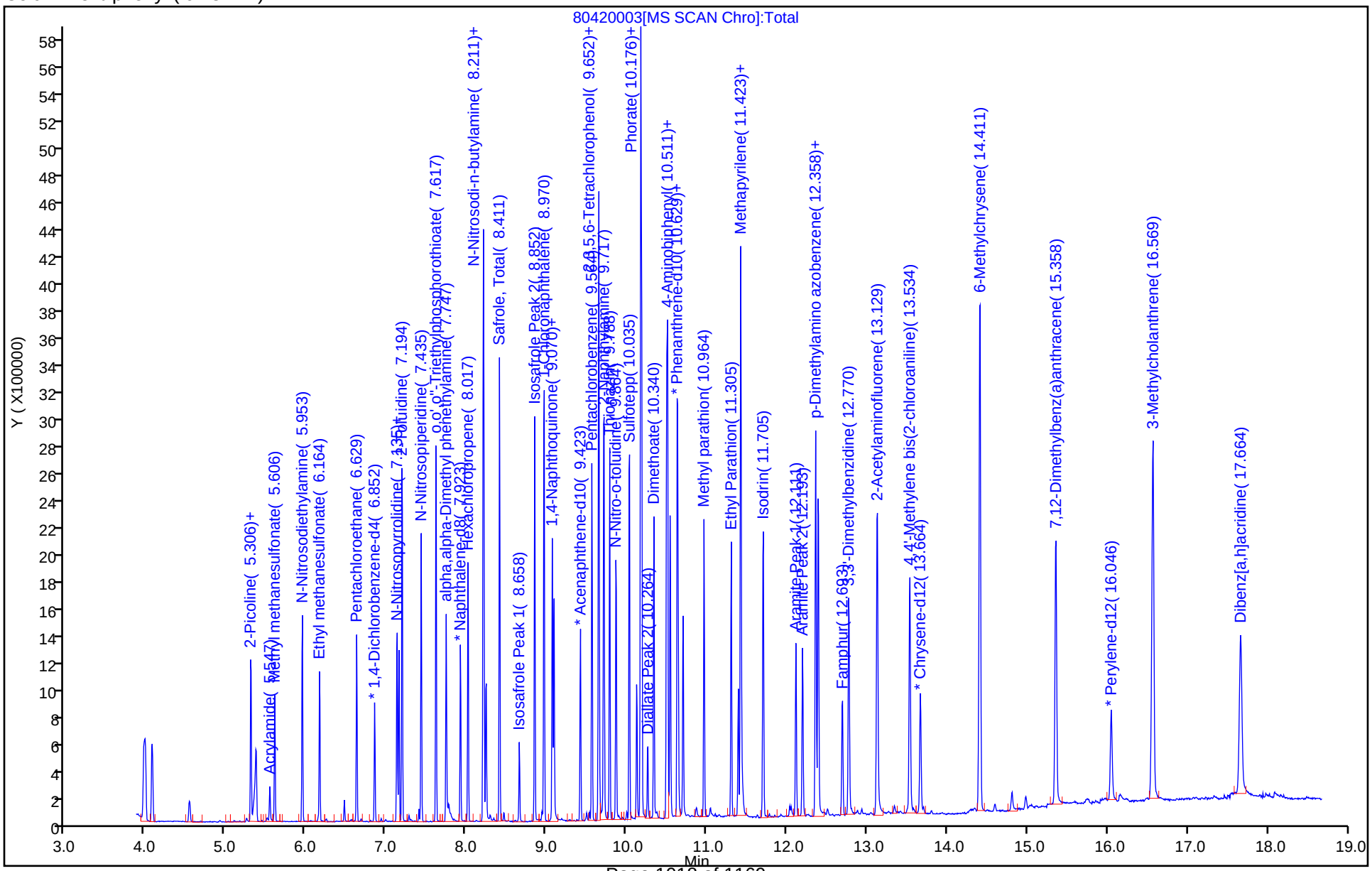
Lims ID: std6 l2lvi Worklist Smp#: 3

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 3

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

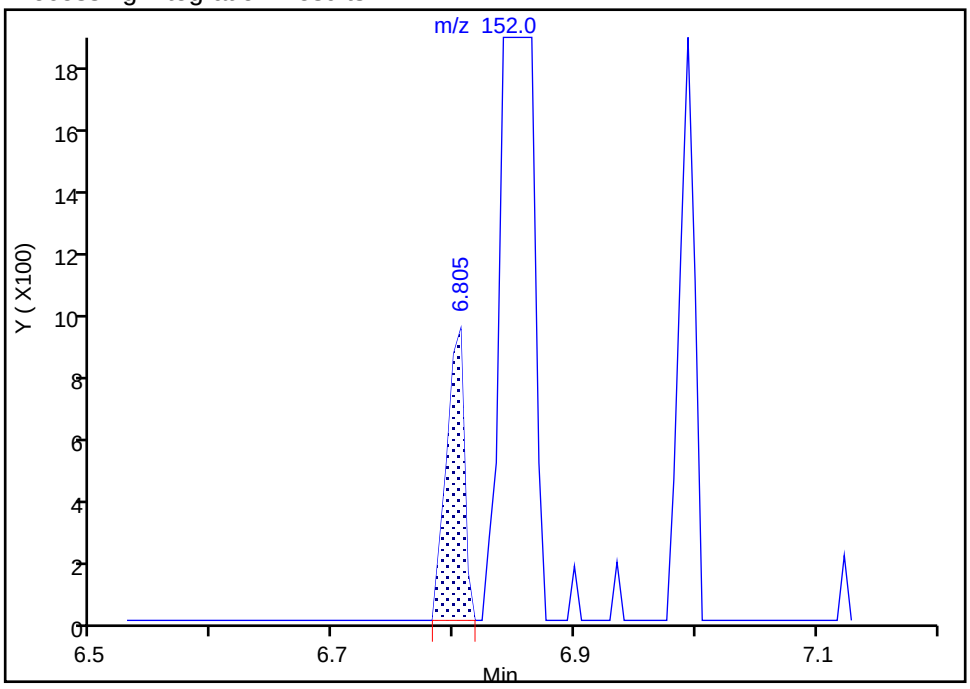
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420003.D
Injection Date: 20-Apr-2018 08:14:30 Instrument ID: A4AG2
Lims ID: std6 l2lvi
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

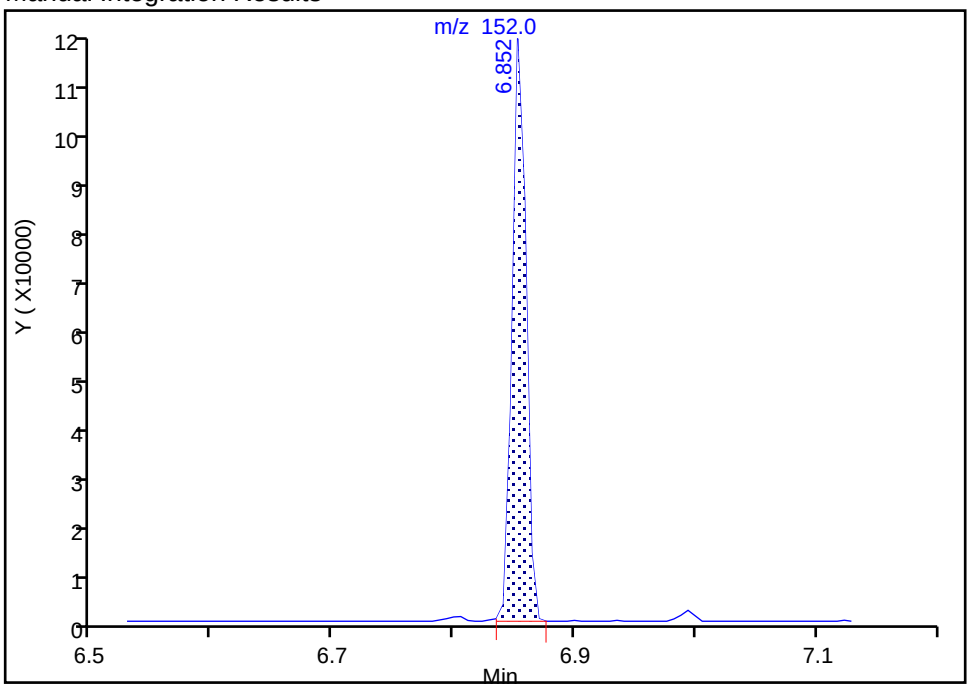
Processing Integration Results

RT: 6.81
Area: 944
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.85
Area: 90731
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 20-Apr-2018 08:35:47
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-323501/11 Calibration Date: 04/23/2018 10:17

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 09:53

Lab File ID: 80423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.2451	0.2479		1.01	1.00	1.1	30.0
N-Nitrosodimethylamine	Ave	0.8972	0.9635		1.07	1.00	7.4	30.0
Pyridine	Ave	0.6996	0.7540		2.16	2.00	7.8	30.0
Benzaldehyde	Qua		0.8807	0.0100	2.39	2.00	19.6	30.0
Phenol	Ave	1.500	1.564	0.8000	1.04	1.00	4.2	30.0
Aniline	Ave	2.360	2.470		1.05	1.00	4.7	30.0
Bis(2-chloroethyl)ether	Ave	1.630	1.674	0.7000	1.03	1.00	2.7	30.0
2-Chlorophenol	Ave	1.331	1.393	0.8000	1.05	1.00	4.6	30.0
n-Decane	Ave	1.805	1.879		1.04	1.00	4.1	30.0
1,3-Dichlorobenzene	Ave	1.623	1.697		1.05	1.00	4.5	30.0
1,4-Dichlorobenzene	Ave	1.658	1.747		1.05	1.00	5.4	30.0
Benzyl alcohol	Ave	0.9550	1.003		1.05	1.00	5.0	30.0
1,2-Dichlorobenzene	Ave	1.574	1.647		1.05	1.00	4.6	30.0
2-Methylphenol	Ave	1.268	1.307	0.7000	1.03	1.00	3.1	30.0
bis (2-chloroisopropyl) ether	Ave	2.980	2.926		0.982	1.00	-1.8	30.0
Indene	Ave	2.571	2.681		2.09	2.00	4.3	30.0
3 & 4 Methylphenol	Ave	1.267	1.320		1.04	1.00	4.2	30.0
N-Nitrosodi-n-propylamine	Ave	1.177	1.226	0.5000	1.04	1.00	4.1	30.0
Acetophenone	Ave	2.108	2.222	0.0100	1.05	1.00	5.4	30.0
Hexachloroethane	Ave	0.6207	0.6408	0.3000	1.03	1.00	3.2	30.0
Nitrobenzene	Ave	0.3600	0.3868	0.2000	1.07	1.00	7.5	30.0
Isophorone	Ave	0.6712	0.7334	0.4000	1.09	1.00	9.3	30.0
2,4-Dimethylphenol	Ave	0.3068	0.3183	0.2000	1.04	1.00	3.8	30.0
2-Nitrophenol	Ave	0.1561	0.1730	0.1000	1.11	1.00	10.8	30.0
Benzoic acid	Lin1		0.1398		2.04	2.00	1.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.4063	0.4299	0.3000	1.06	1.00	5.8	30.0
2,4-Dichlorophenol	Ave	0.2229	0.2314	0.2000	1.04	1.00	3.8	30.0
1,2,4-Trichlorobenzene	Ave	0.2801	0.2933		1.05	1.00	4.7	30.0
Naphthalene	Ave	1.068	1.108	0.7000	1.04	1.00	3.7	30.0
4-Chloroaniline	Ave	0.5158	0.5734	0.0100	1.11	1.00	11.2	30.0
2,6-Dichlorophenol	Ave	0.2446	0.2720		1.11	1.00	11.2	30.0
Hexachlorobutadiene	Ave	0.1435	0.1528	0.0100	1.07	1.00	6.5	30.0
Caprolactam	Ave	0.0963	0.1006	0.0100	2.09	2.00	4.4	30.0
4-Chloro-3-methylphenol	Ave	0.2602	0.3042	0.2000	1.17	1.00	16.9	30.0
2-Methylnaphthalene	Ave	0.6877	0.7374	0.4000	1.07	1.00	7.2	30.0
1-Methylnaphthalene	Ave	0.6611	0.6930		1.05	1.00	4.8	30.0
Hexachlorocyclopentadiene	Lin1		0.3350	0.0500	1.02	1.00	2.0	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5058	0.5396	0.0100	1.07	1.00	6.7	30.0
2,4,6-Trichlorophenol	Ave	0.3205	0.3628	0.2000	1.13	1.00	13.2	30.0
2,4,5-Trichlorophenol	Lin1		0.3768	0.2000	1.03	1.00	2.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-323501/11 Calibration Date: 04/23/2018 10:17

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 09:53

Lab File ID: 80423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.614	1.698	0.0100	1.05	1.00	5.2	30.0
2-Chloronaphthalene	Ave	1.205	1.282	0.8000	1.06	1.00	6.4	30.0
2-Nitroaniline	Ave	0.3900	0.4503	0.0100	1.15	1.00	15.4	30.0
Dimethyl phthalate	Ave	1.379	1.450	0.0100	1.05	1.00	5.1	30.0
1,3-Dinitrobenzene	Lin1		0.2177		1.00	1.00	0.4	30.0
2,6-Dinitrotoluene	Ave	0.2931	0.3330		1.14	1.00	13.6	30.0
Acenaphthylene	Ave	1.821	2.119	0.9000	1.16	1.00	16.4	30.0
3-Nitroaniline	Ave	0.2559	0.2725	0.0100	1.06	1.00	6.5	30.0
2,4-Dinitrophenol	Lin1		0.1134	0.0100	1.78	2.00	-10.8	30.0
4-Nitrophenol	Lin1		0.1844		2.10	2.00	5.2	30.0
Acenaphthene	Ave	1.271	1.331	0.9000	1.05	1.00	4.7	30.0
2,4-Dinitrotoluene	Ave	0.3583	0.4069	0.2000	1.14	1.00	13.6	30.0
Dibenzofuran	Ave	1.705	1.803	0.8000	1.06	1.00	5.8	30.0
2,3,4,6-Tetrachlorophenol	Lin1		0.2463	0.0100	0.960	1.00	-4.0	30.0
Hexadecane	Ave	1.138	1.182		1.04	1.00	3.9	30.0
Diethyl phthalate	Ave	1.389	1.462	0.0100	1.05	1.00	5.3	30.0
4-Chlorophenyl phenyl ether	Ave	0.6326	0.6571	0.4000	1.04	1.00	3.9	30.0
4-Nitroaniline	Ave	0.2480	0.2600	0.0100	1.05	1.00	4.8	30.0
Fluorene	Ave	1.387	1.505	0.9000	1.09	1.00	8.5	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1084	0.0100	2.06	2.00	3.0	30.0
Diphenylamine	Ave	0.7062	0.7483		0.901	0.850	6.0	30.0
N-Nitrosodiphenylamine	Ave	0.6002	0.6361	0.0100	1.06	1.00	6.0	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9268	1.031		1.11	1.00	11.3	30.0
Azobenzene	Ave	0.9271	1.031		1.11	1.00	11.3	30.0
4-Bromophenyl phenyl ether	Ave	0.1949	0.2100	0.1000	1.08	1.00	7.7	30.0
Atrazine	Ave	0.1892	0.2247	0.0100	2.38	2.00	18.8	30.0
Hexachlorobenzene	Ave	0.1922	0.2212	0.1000	1.15	1.00	15.1	30.0
n-Octadecane	Ave	0.7221	0.7852		1.09	1.00	8.7	30.0
Pentachlorophenol	Lin1		0.1230	0.0500	2.03	2.00	1.4	30.0
Phenanthrene	Ave	1.109	1.174	0.7000	1.06	1.00	5.8	30.0
Anthracene	Ave	1.105	1.189	0.7000	1.08	1.00	7.6	30.0
Carbazole	Ave	0.9623	0.9849	0.0100	1.02	1.00	2.3	30.0
Di-n-butyl phthalate	Ave	1.335	1.506	0.0100	1.13	1.00	12.8	30.0
Fluoranthene	Ave	1.055	1.194	0.6000	1.13	1.00	13.1	30.0
Benzidine	Lin1		0.5359		1.94	2.00	-2.9	30.0
Pyrene	Ave	1.253	1.344	0.6000	1.07	1.00	7.2	30.0
Butyl benzyl phthalate	Ave	0.6526	0.7287	0.0100	1.12	1.00	11.6	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.8894	0.9803	0.0100	1.10	1.00	10.2	30.0
3,3'-Dichlorobenzidine	Ave	0.3660	0.4055	0.0100	2.22	2.00	10.8	30.0
Benzo[a]anthracene	Ave	1.130	1.228	0.8000	1.09	1.00	8.8	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-323501/11 Calibration Date: 04/23/2018 10:17

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 09:53

Lab File ID: 80423011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	1.140	1.209	0.7000	1.06	1.00	6.0	30.0
Di-n-octyl phthalate	Ave	1.722	1.977	0.0100	1.15	1.00	14.8	30.0
Benzo[b]fluoranthene	Ave	1.204	1.299	0.7000	1.08	1.00	7.9	30.0
Benzo[k]fluoranthene	Ave	1.246	1.443	0.7000	1.16	1.00	15.8	30.0
Benzo[a]pyrene	Ave	1.111	1.238	0.7000	1.11	1.00	11.4	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.136	1.195	0.5000	1.05	1.00	5.2	30.0
Dibenz(a,h)anthracene	Ave	0.9567	1.049	0.4000	1.10	1.00	9.7	30.0
Benzo[g,h,i]perylene	Ave	0.9175	0.9361	0.5000	1.02	1.00	2.0	30.0
2-Fluorophenol (Surr)	Ave	0.8445	0.8459		1.00	1.00	0.2	30.0
Phenol-d5 (Surr)	Ave	1.341	1.474		1.10	1.00	9.8	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3715	0.4259		1.15	1.00	14.6	30.0
2-Fluorobiphenyl (Surr)	Ave	1.357	1.539		1.13	1.00	13.5	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1211	0.1405		1.16	1.00	16.0	30.0
Terphenyl-d14 (Surr)	Ave	0.8167	0.9016		1.10	1.00	10.4	30.0

Report Date: 24-Apr-2018 07:01:41 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Lims ID: icv l1lvi
Client ID:
Sample Type: ICV
Inject. Date: 23-Apr-2018 10:17:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-011
Misc. Info.: ICV L1LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:01:33 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:59:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	221435	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	985586	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	495033	400.0	400.0	
* 4 Phenanthrene-d10	188	10.634	10.629	0.006	98	818447	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.564	0.000	98	737990	400.0	400.0	
* 6 Perylene-d12	264	15.928	15.922	0.006	96	594388	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	94	468295	1000.0	1001.7	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	815764	1000.0	1098.5	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	94	1049321	1000.0	1146.5	
$ 10 2-Fluorobiphenyl (Surr)	172	8.734	8.735	0.000	100	1905067	1000.0	1134.7	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	90	173843	1000.0	1159.8	
$ 12 Terphenyl-d14	244	12.122	12.117	0.005	99	1663455	1000.0	1104.0	
26 1,4-Dioxane	88	4.299	4.294	0.005	93	137217	1000.0	1011.3	
27 N-Nitrosodimethylamine	74	4.552	4.547	0.005	83	533399	1000.0	1073.9	
28 Pyridine	79	4.617	4.611	0.006	81	834753	2000.0	2155.4	
42 Benzaldehyde	77	6.411	6.411	0.000	92	975090	2000.0	2392.9	
43 Phenol	94	6.429	6.429	0.000	98	865558	1000.0	1042.4	
44 Aniline	93	6.493	6.493	0.000	96	1367407	1000.0	1046.8	
45 Bis(2-chloroethyl)ether	93	6.517	6.517	0.000	93	926540	1000.0	1026.9	a
244 n-Decane	57	6.605	6.605	0.000	91	1040258	1000.0	1041.1	a
47 2-Chlorophenol	128	6.605	6.605	0.000	97	771058	1000.0	1046.1	
48 1,3-Dichlorobenzene	146	6.735	6.735	0.000	97	939274	1000.0	1045.4	a
49 1,4-Dichlorobenzene	146	6.793	6.788	0.005	92	967334	1000.0	1053.7	a
50 Benzyl alcohol	108	6.858	6.858	0.000	91	555223	1000.0	1050.2	
51 1,2-Dichlorobenzene	146	6.923	6.923	0.000	95	911613	1000.0	1046.2	
52 2-Methylphenol	108	6.929	6.929	0.000	95	723448	1000.0	1030.9	
54 2,2'-oxybis[1-chloropropan	45	6.964	6.958	0.006	92	1619787	1000.0	981.9	
53 Indene	115	6.999	6.993	0.006	91	2968834	2000.0	2085.5	
55 3 & 4 Methylphenol	108	7.046	7.046	0.000	0	730631	1000.0	1041.5	a
57 N-Nitrosodi-n-propylamine	70	7.070	7.064	0.006	93	678460	1000.0	1041.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.087	7.088	-0.001	94	1230211	1000.0	1054.0	
61 Hexachloroethane	117	7.217	7.217	0.000	95	354750	1000.0	1032.3	
62 Nitrobenzene	77	7.240	7.240	0.000	94	953119	1000.0	1074.6	
64 Isophorone	82	7.429	7.429	0.000	97	1807018	1000.0	1092.6	
66 2,4-Dimethylphenol	107	7.499	7.499	0.000	92	784203	1000.0	1037.5	
65 2-Nitrophenol	139	7.511	7.505	0.006	95	426167	1000.0	1108.3	
70 Benzoic acid	122	7.552	7.546	0.006	93	688858	2000.0	2036.0	
69 Bis(2-chloroethoxy)methane	93	7.576	7.576	0.000	97	1059327	1000.0	1058.2	
72 2,4-Dichlorophenol	162	7.705	7.705	0.000	97	570118	1000.0	1037.8	
73 1,2,4-Trichlorobenzene	180	7.787	7.788	-0.001	95	722551	1000.0	1046.9	
74 Naphthalene	128	7.864	7.864	0.000	98	2729828	1000.0	1036.9	
75 4-Chloroaniline	127	7.876	7.876	0.000	95	1412784	1000.0	1111.6	
76 2,6-Dichlorophenol	162	7.893	7.893	0.000	95	670090	1000.0	1111.7	
78 Hexachlorobutadiene	225	7.958	7.958	0.000	97	376484	1000.0	1065.1	
83 Caprolactam	113	8.158	8.158	0.000	74	495752	2000.0	2088.3	
85 4-Chloro-3-methylphenol	107	8.258	8.258	0.000	97	749512	1000.0	1169.2	
86 2-Methylnaphthalene	142	8.446	8.446	0.000	93	1817010	1000.0	1072.3	
87 1-Methylnaphthalene	142	8.534	8.535	-0.001	93	1707542	1000.0	1048.2	
89 Hexachlorocyclopentadiene	237	8.582	8.582	0.000	96	414641	1000.0	1019.7	
90 1,2,4,5-Tetrachlorobenzene	216	8.593	8.587	0.006	98	667768	1000.0	1066.7	
93 2,4,6-Trichlorophenol	196	8.670	8.670	0.000	95	449025	1000.0	1131.9	
94 2,4,5-Trichlorophenol	196	8.705	8.705	0.000	92	466337	1000.0	1026.9	
99 1,1'-Biphenyl	154	8.829	8.829	0.000	96	2101251	1000.0	1051.9	
100 2-Chloronaphthalene	162	8.864	8.864	0.000	98	1586528	1000.0	1064.0	
101 2-Nitroaniline	65	8.923	8.923	0.000	80	557226	1000.0	1154.5	
104 Dimethyl phthalate	163	9.046	9.046	0.000	98	1794315	1000.0	1051.1	
103 1,3-Dinitrobenzene	168	9.093	9.087	0.006	84	269382	1000.0	1004.3	
106 2,6-Dinitrotoluene	165	9.111	9.111	0.000	90	412120	1000.0	1136.3	
108 Acenaphthylene	152	9.229	9.229	0.000	98	2622957	1000.0	1163.9	
109 3-Nitroaniline	138	9.276	9.276	0.000	91	337242	1000.0	1064.8	
110 2,4-Dinitrophenol	184	9.358	9.358	0.000	81	280648	2000.0	1784.9	a
112 4-Nitrophenol	109	9.376	9.376	0.000	55	456399	2000.0	2104.5	
111 Acenaphthene	153	9.376	9.376	0.000	94	1647052	1000.0	1047.1	
113 2,4-Dinitrotoluene	165	9.464	9.464	0.000	89	503617	1000.0	1135.7	
115 Dibenzofuran	168	9.517	9.517	0.000	95	2231849	1000.0	1057.6	
118 2,3,4,6-Tetrachlorophenol	232	9.611	9.611	0.000	80	304785	1000.0	959.8	
248 Hexadecane	57	9.634	9.634	0.000	93	1463163	1000.0	1039.3	
120 Diethyl phthalate	149	9.640	9.640	0.000	98	1808889	1000.0	1052.5	
122 4-Chlorophenyl phenyl ethe	204	9.781	9.782	-0.001	96	813181	1000.0	1038.7	
125 4-Nitroaniline	138	9.799	9.799	0.000	82	321732	1000.0	1048.3	
124 Fluorene	166	9.817	9.811	0.006	95	1863122	1000.0	1085.4	
127 4,6-Dinitro-2-methylphenol	198	9.823	9.823	0.000	78	443496	2000.0	2059.3	
128 N-Nitrosodiphenylamine	169	9.876	9.876	0.000	99	1301427	1000.0	1059.6	
129 Diphenylamine	169	9.876	9.876	0.000	94	1301427	850.0	900.7	
130 1,2-Diphenylhydrazine	77	9.917	9.917	0.000	19	2110534	1000.0	1112.6	a
131 Azobenzene	77	9.917	9.917	0.000	98	2110534	1000.0	1112.6	
138 4-Bromophenyl phenyl ether	248	10.205	10.205	0.000	76	429604	1000.0	1077.5	
141 Atrazine	200	10.299	10.299	0.000	93	919338	2000.0	2375.2	
140 Hexachlorobenzene	284	10.305	10.305	0.000	93	452687	1000.0	1150.9	
245 n-Octadecane	57	10.423	10.423	0.000	92	1606657	1000.0	1087.4	
143 Pentachlorophenol	266	10.458	10.458	0.000	90	503528	2000.0	2028.9	
148 Phenanthrene	178	10.652	10.652	0.000	98	2401264	1000.0	1058.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.699	10.699	0.000	98	2432761	1000.0	1075.8	
150 Carbazole	167	10.811	10.811	0.000	96	2015312	1000.0	1023.5	
154 Di-n-butyl phthalate	149	11.040	11.040	0.000	99	3080580	1000.0	1127.5	
159 Fluoranthene	202	11.764	11.764	0.000	99	2443046	1000.0	1131.2	
160 Benzidine	184	11.846	11.846	0.000	99	1977403	2000.0	1942.7	
161 Pyrene	202	12.022	12.023	-0.001	96	2480033	1000.0	1072.5	
169 Butyl benzyl phthalate	149	12.652	12.652	0.000	98	1344344	1000.0	1116.5	
174 Bis(2-ethylhexyl) phthalat	149	13.416	13.417	-0.001	96	1808569	1000.0	1102.1	
177 3,3'-Dichlorobenzidine	252	13.452	13.452	0.000	75	1496204	2000.0	2215.8	
178 Benzo[a]anthracene	228	13.546	13.546	0.000	99	2266411	1000.0	1087.6	
179 Chrysene	228	13.605	13.605	0.000	98	2230293	1000.0	1060.0	
181 Di-n-octyl phthalate	149	14.434	14.434	0.000	99	2938029	1000.0	1148.1	
183 Benzo[b]fluoranthene	252	15.275	15.269	0.006	98	1930610	1000.0	1078.9	
184 Benzo[k]fluoranthene	252	15.316	15.316	0.000	99	2144577	1000.0	1158.3	
185 Benzo[a]pyrene	252	15.834	15.834	0.000	81	1839217	1000.0	1113.9	
190 Indeno[1,2,3-cd]pyrene	276	18.040	18.034	0.006	96	1776338	1000.0	1051.9	
189 Dibenz(a,h)anthracene	278	18.051	18.046	0.005	90	1558954	1000.0	1096.6	
191 Benzo[g,h,i]perylene	276	18.675	18.669	0.006	95	1391078	1000.0	1020.3	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 SS W_00010 Amount Added: 0.10 Units: mL

Report Date: 24-Apr-2018 07:01:41 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D

Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2 Operator ID:

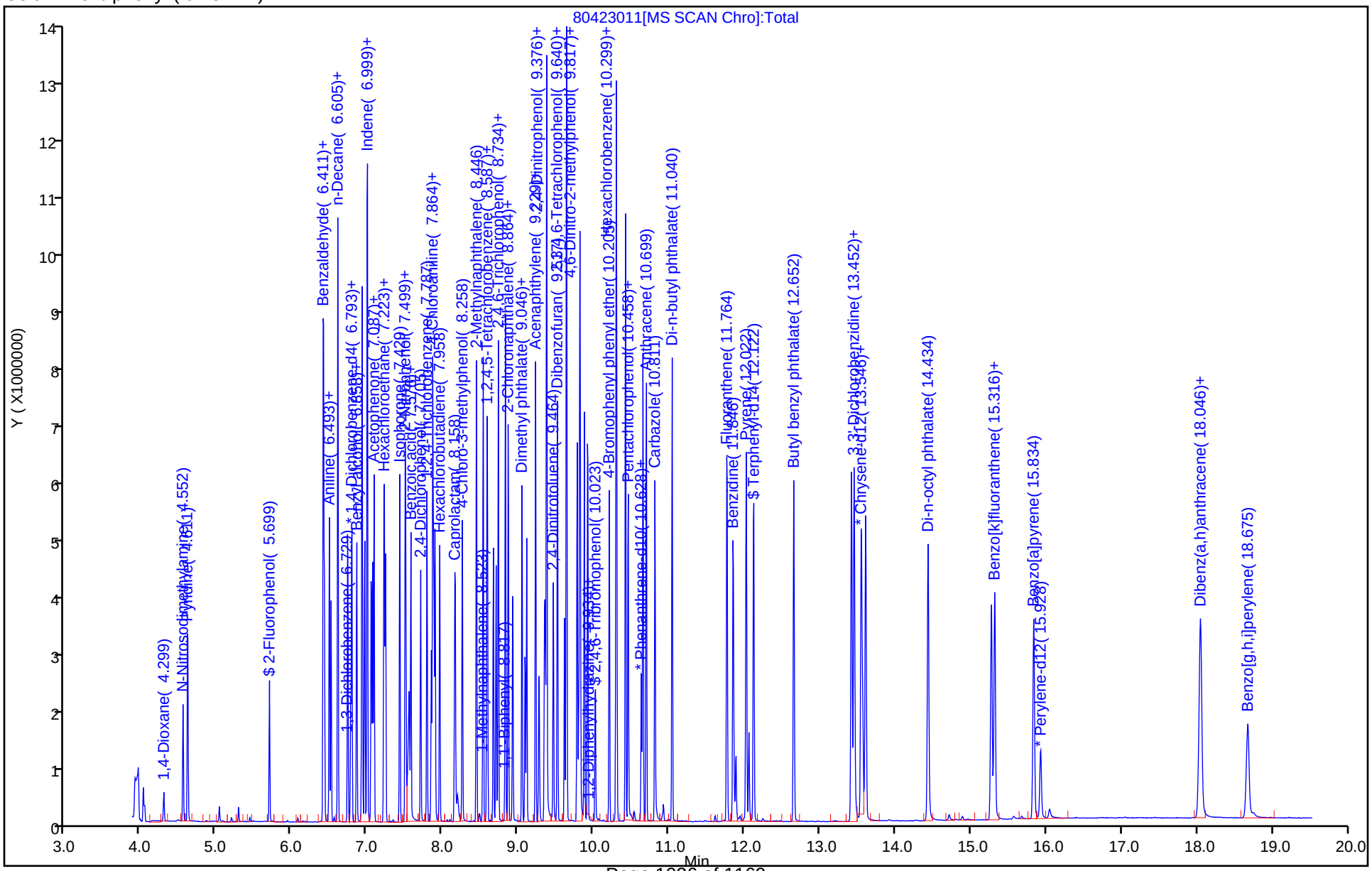
Lims ID: icv l1lvi Worklist Smp#: 11

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 11

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

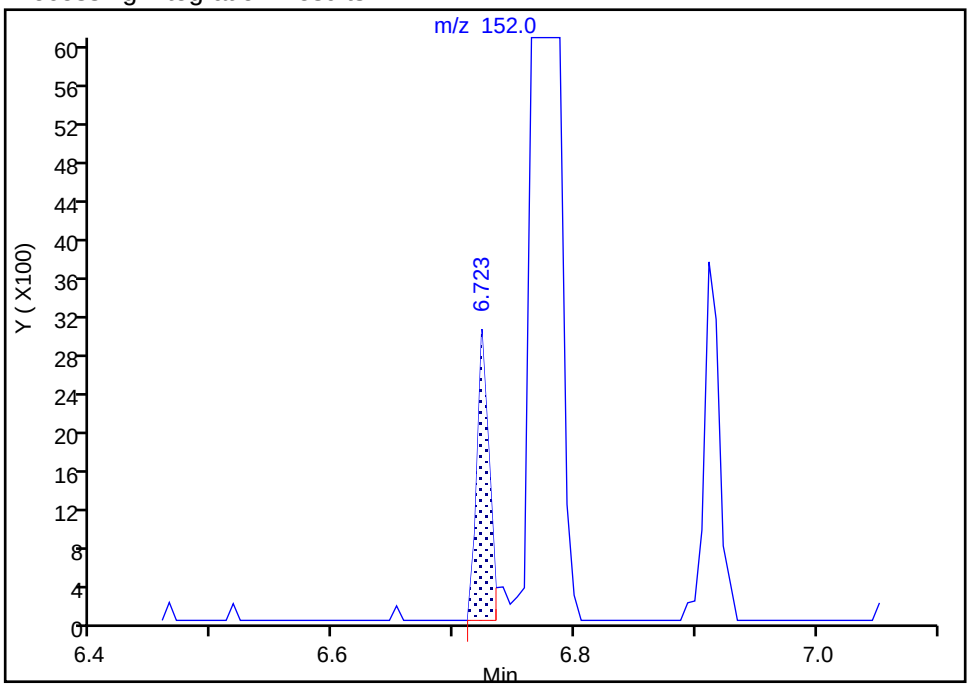
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D				
Injection Date:	23-Apr-2018 10:17:30	Instrument ID:	A4AG2		
Lims ID:	icv l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

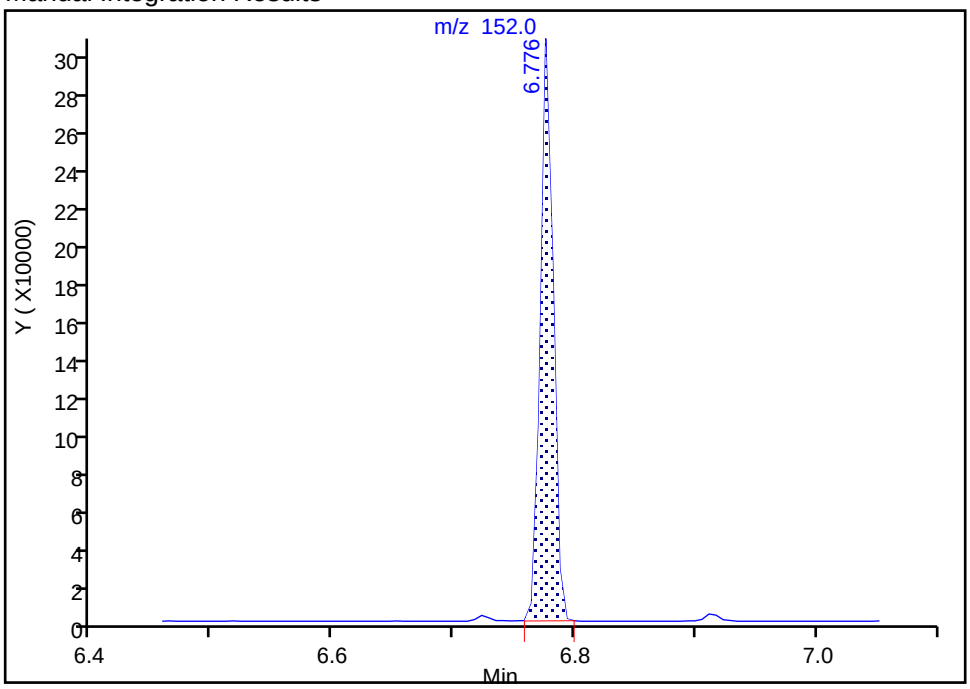
Processing Integration Results

RT: 6.72
Area: 2141
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 221435
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:41:17

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

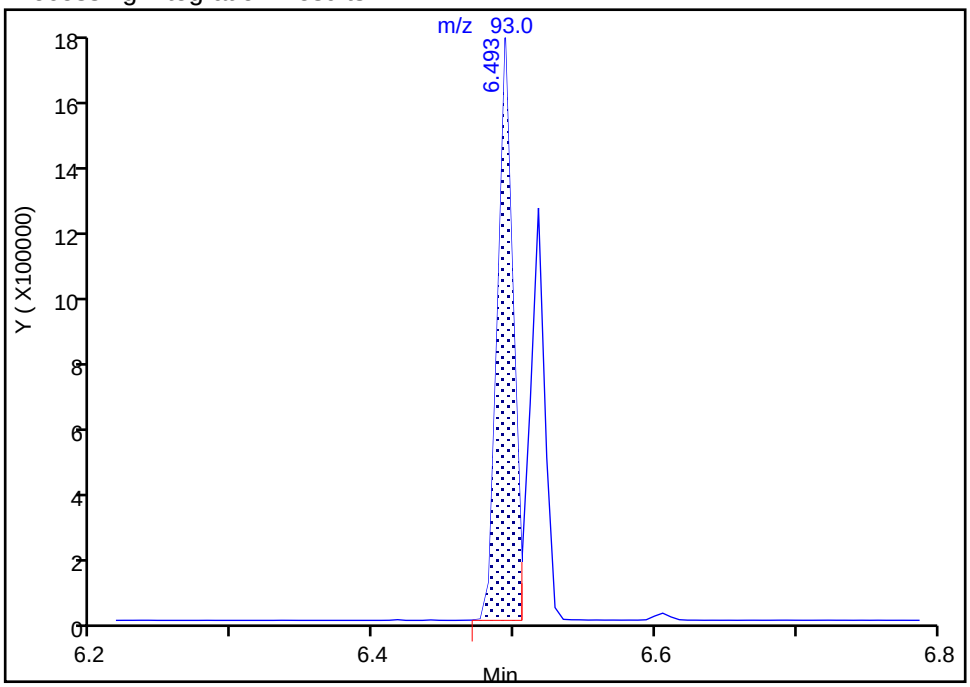
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2
Lims ID: icv l1lvi
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

45 Bis(2-chloroethyl)ether, CAS: 111-44-4

Signal: 1

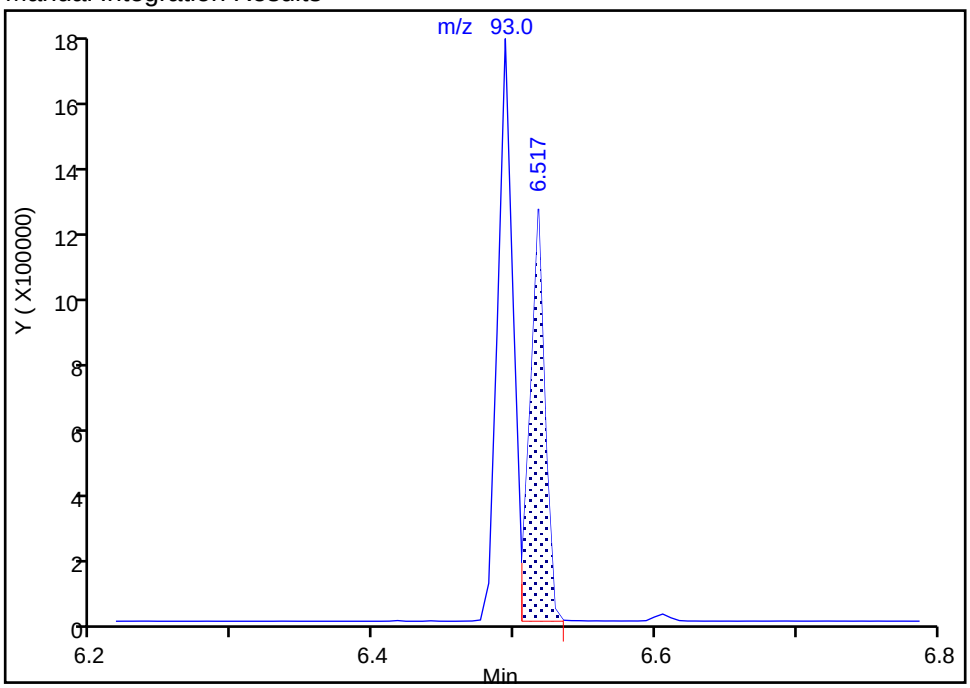
Processing Integration Results

RT: 6.49
Area: 1367407
Amount: 1515.4814
Amount Units: ng/ml



Manual Integration Results

RT: 6.52
Area: 926540
Amount: 1026.8736
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:48:13
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

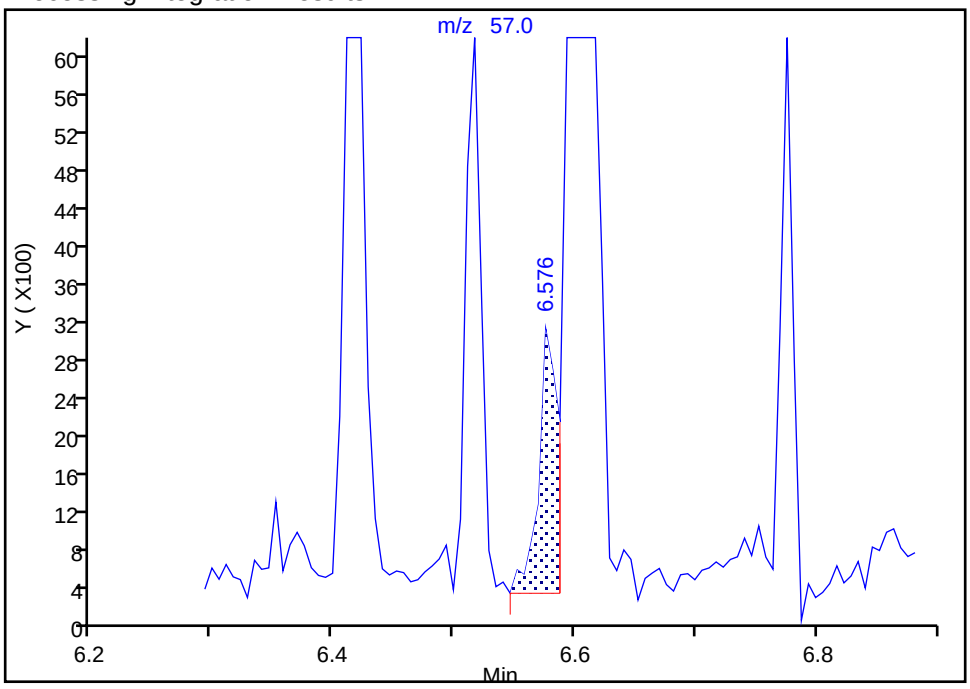
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2
Lims ID: icv l1lvi
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

244 n-Decane, CAS: 124-18-5

Signal: 1

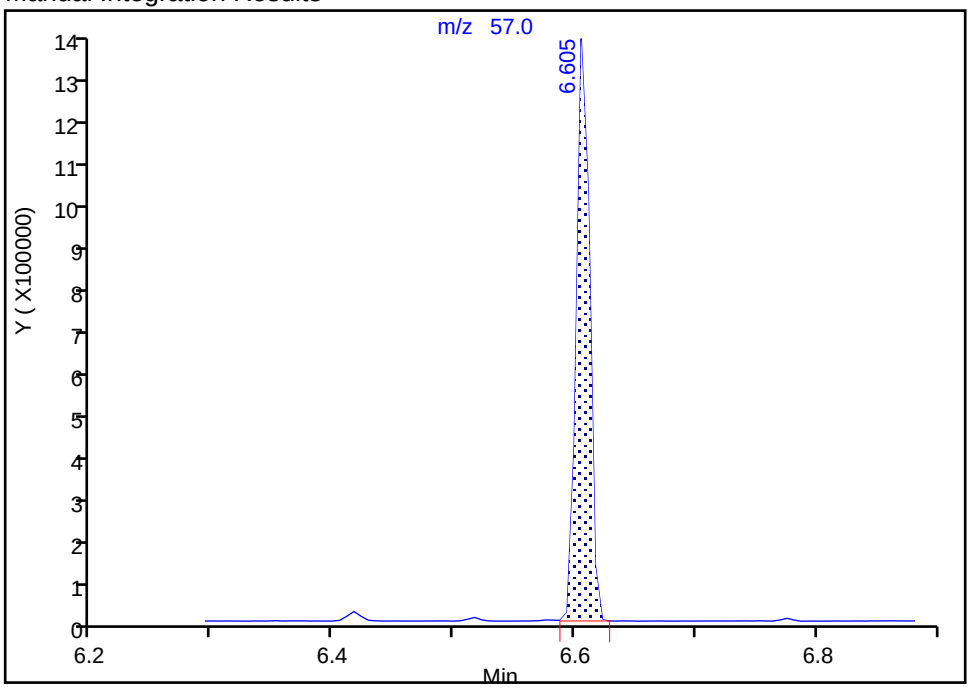
Processing Integration Results

RT: 6.58
Area: 3111
Amount: 3.113667
Amount Units: ng/ml



Manual Integration Results

RT: 6.61
Area: 1040258
Amount: 1041.1499
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:53:16
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

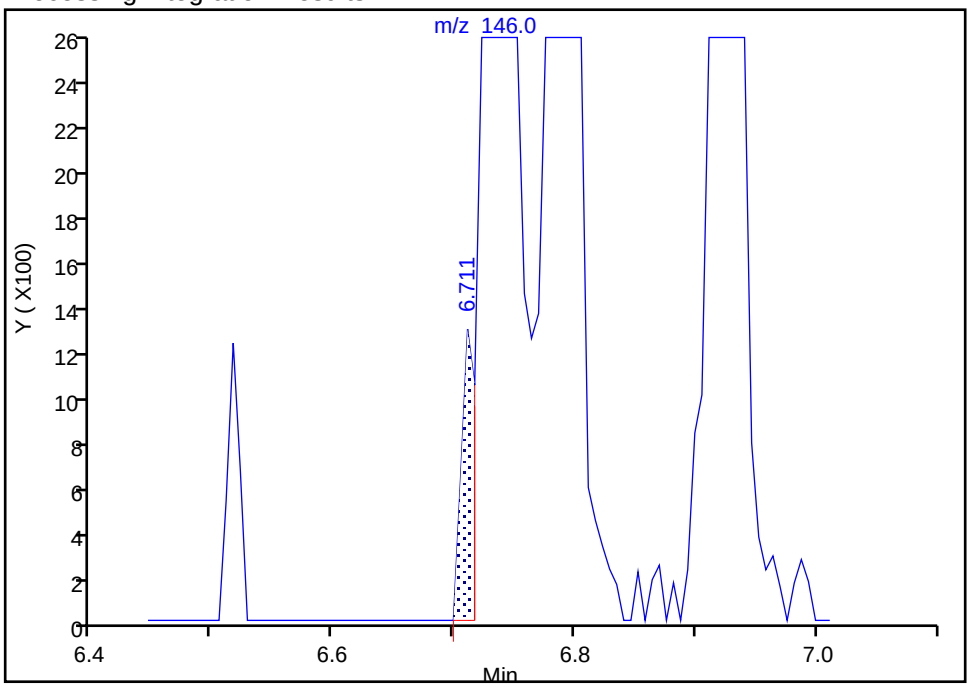
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D				
Injection Date:	23-Apr-2018 10:17:30	Instrument ID:	A4AG2		
Lims ID:	icv l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

48 1,3-Dichlorobenzene, CAS: 541-73-1

Signal: 1

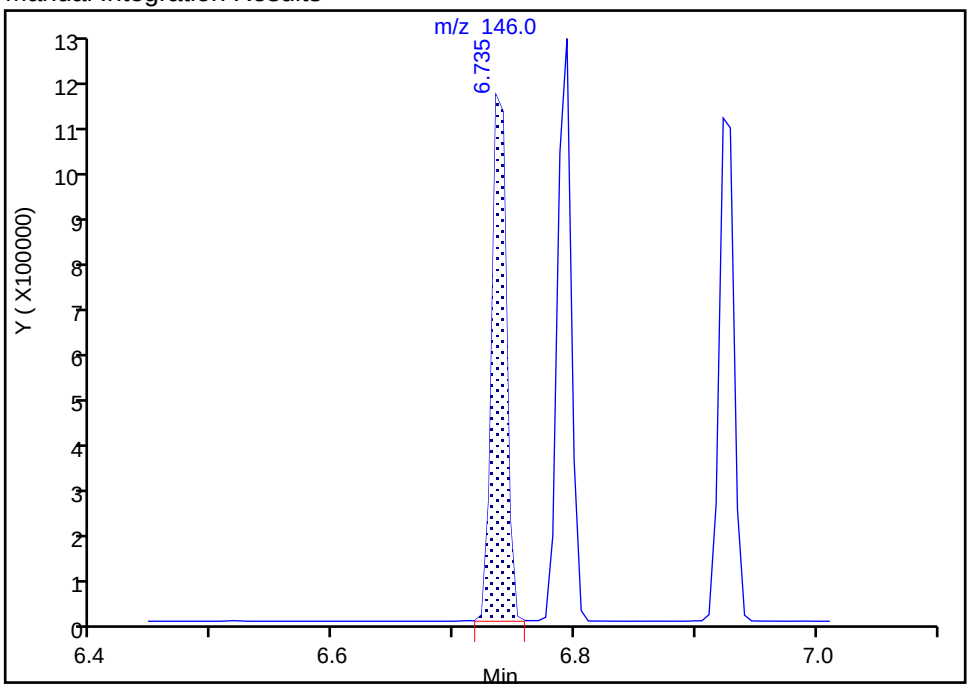
Processing Integration Results

RT: 6.71
Area: 1042
Amount: 1.159738
Amount Units: ng/ml



Manual Integration Results

RT: 6.73
Area: 939274
Amount: 1045.4045
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:53:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

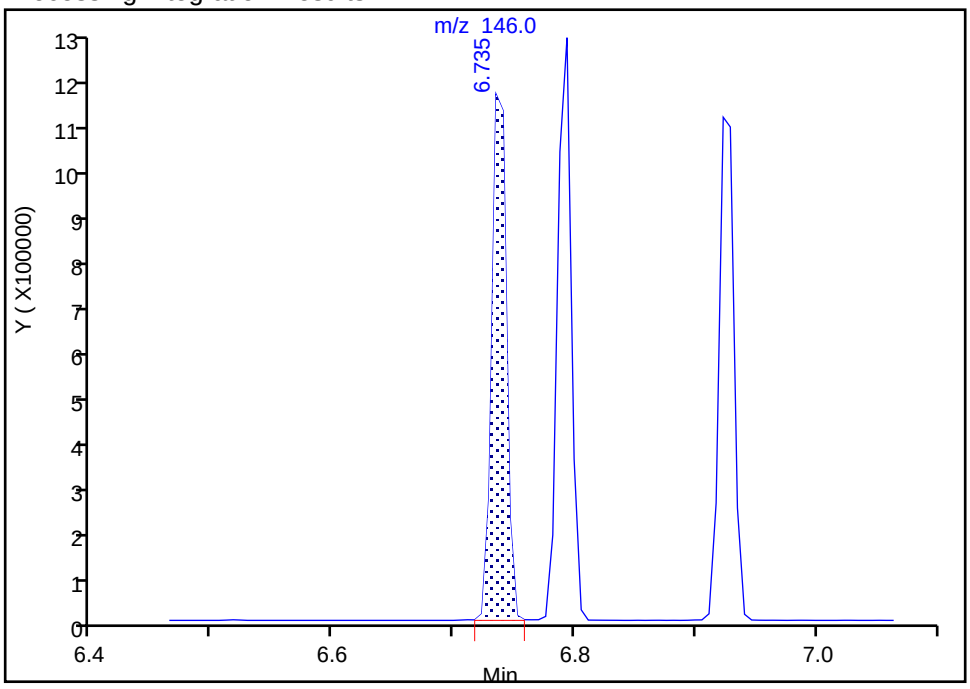
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D				
Injection Date:	23-Apr-2018 10:17:30	Instrument ID:	A4AG2		
Lims ID:	icv l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

49 1,4-Dichlorobenzene, CAS: 106-46-7

Signal: 1

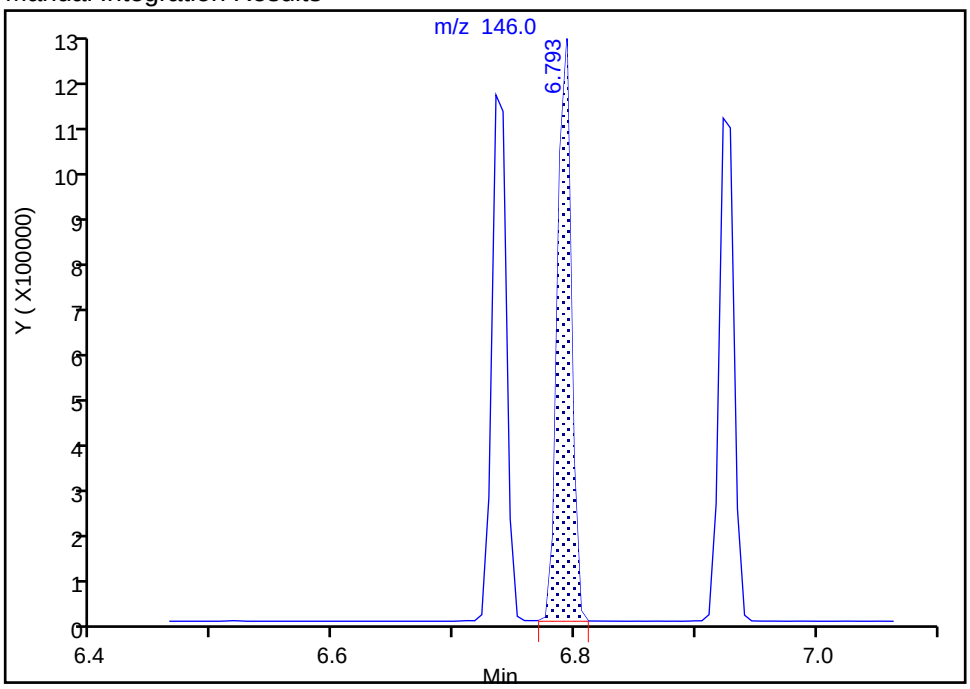
Processing Integration Results

RT: 6.73
Area: 939274
Amount: 1023.1329
Amount Units: ng/ml



Manual Integration Results

RT: 6.79
Area: 967334
Amount: 1053.6982
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 06:58:55

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

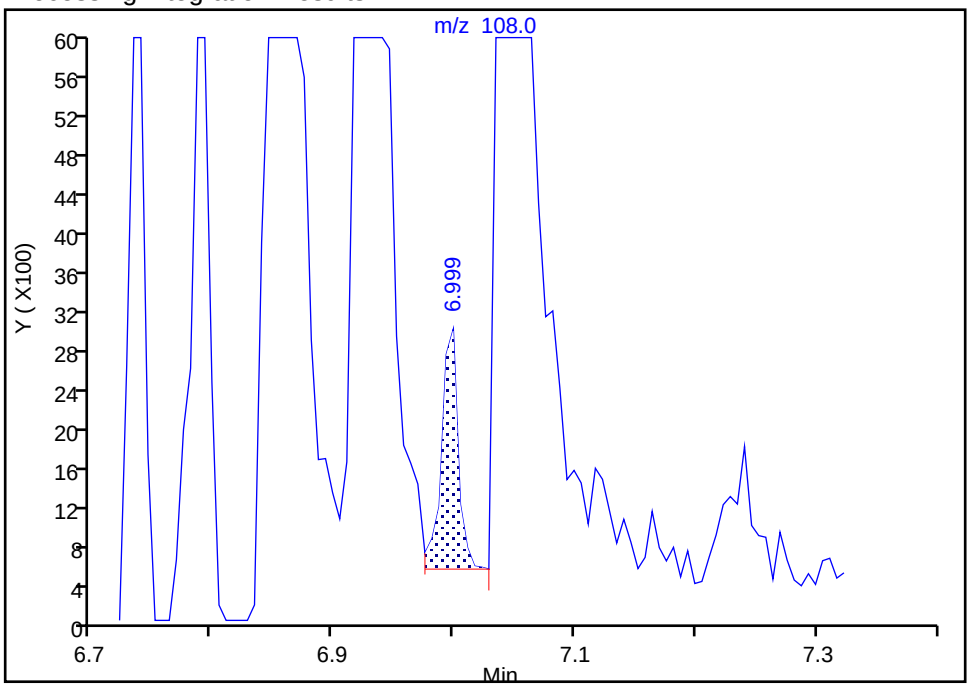
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2
Lims ID: icv l1lvi
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

55 3 & 4 Methylphenol, CAS: 15831-10-4

Signal: 1

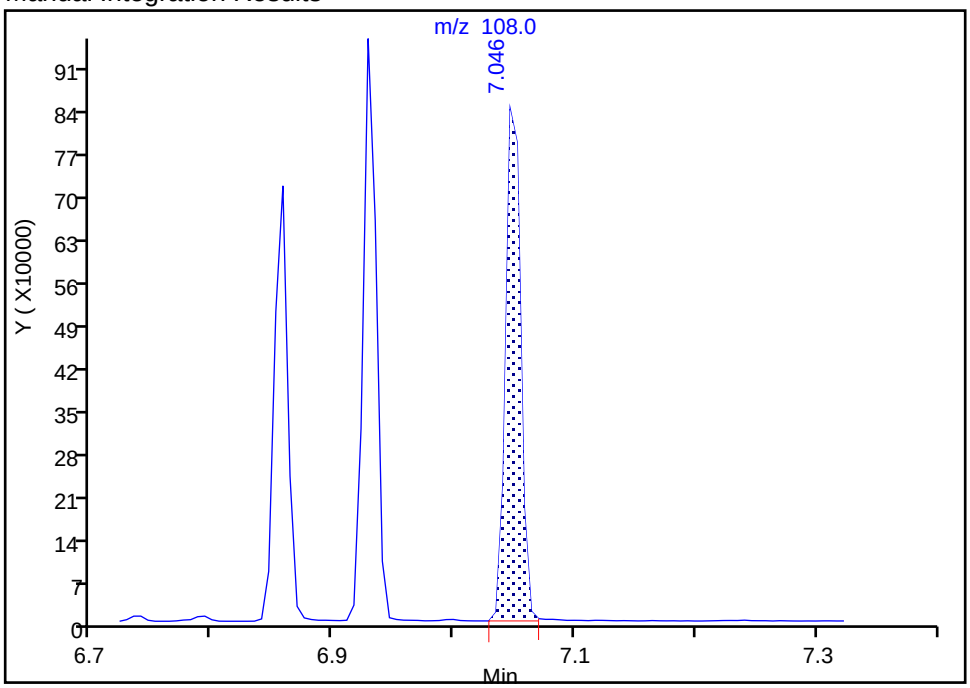
Processing Integration Results

RT: 7.00
Area: 2342
Amount: 3.338606
Amount Units: ng/ml



Manual Integration Results

RT: 7.05
Area: 730631
Amount: 1041.5410
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:48:41
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

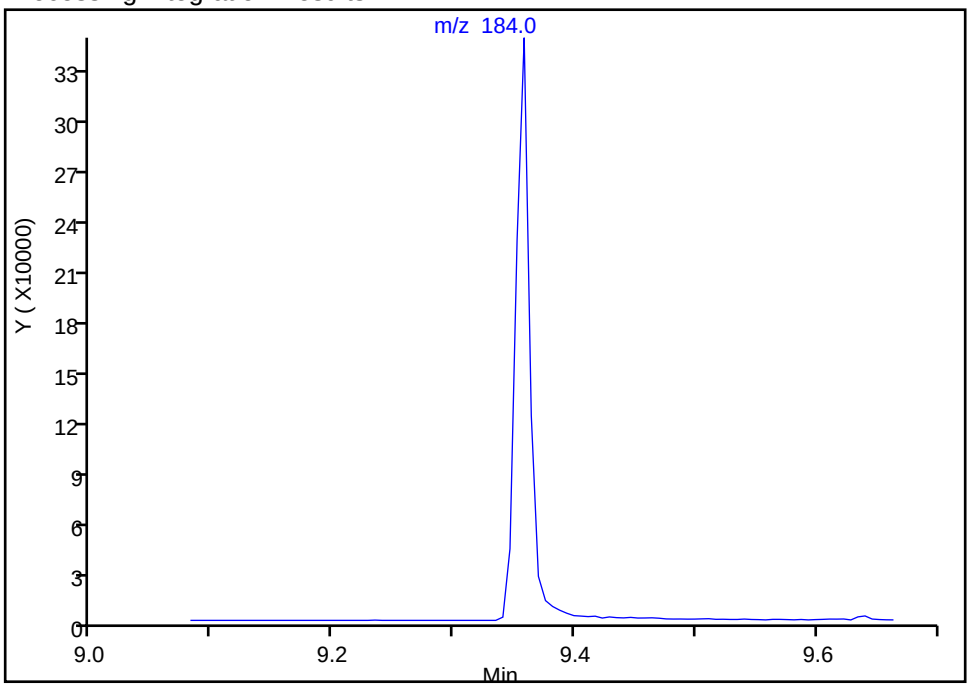
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2
Lims ID: icv l1lvi
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

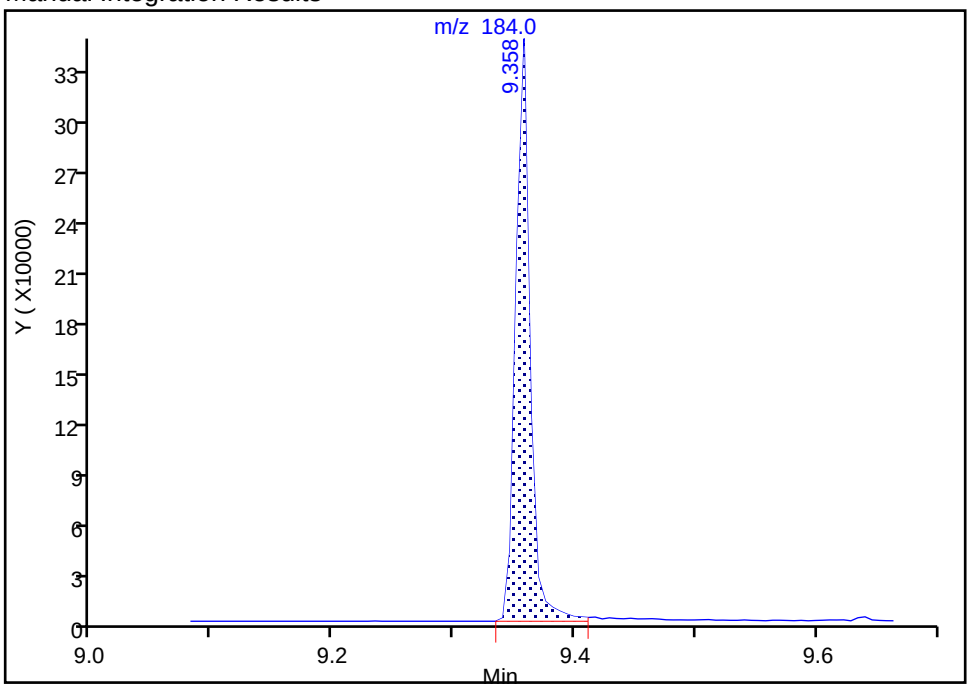
Not Detected
Expected RT: 9.36

Processing Integration Results



Manual Integration Results

RT: 9.36
Area: 280648
Amount: 1784.8904
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:52:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

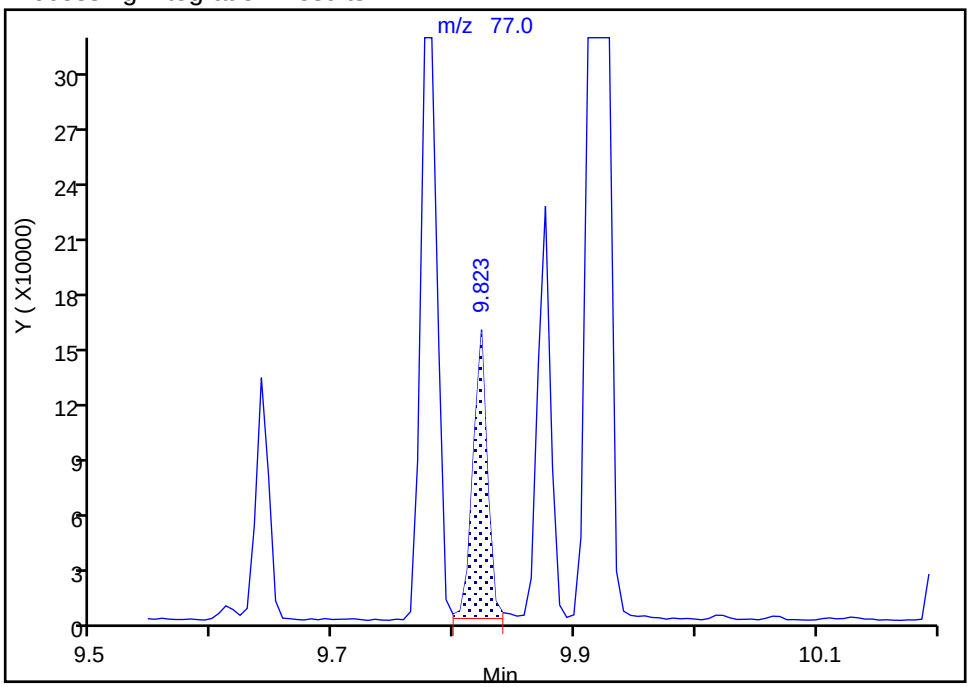
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423011.D
Injection Date: 23-Apr-2018 10:17:30 Instrument ID: A4AG2
Lims ID: icv l1lvi
Client ID:
Operator ID: ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

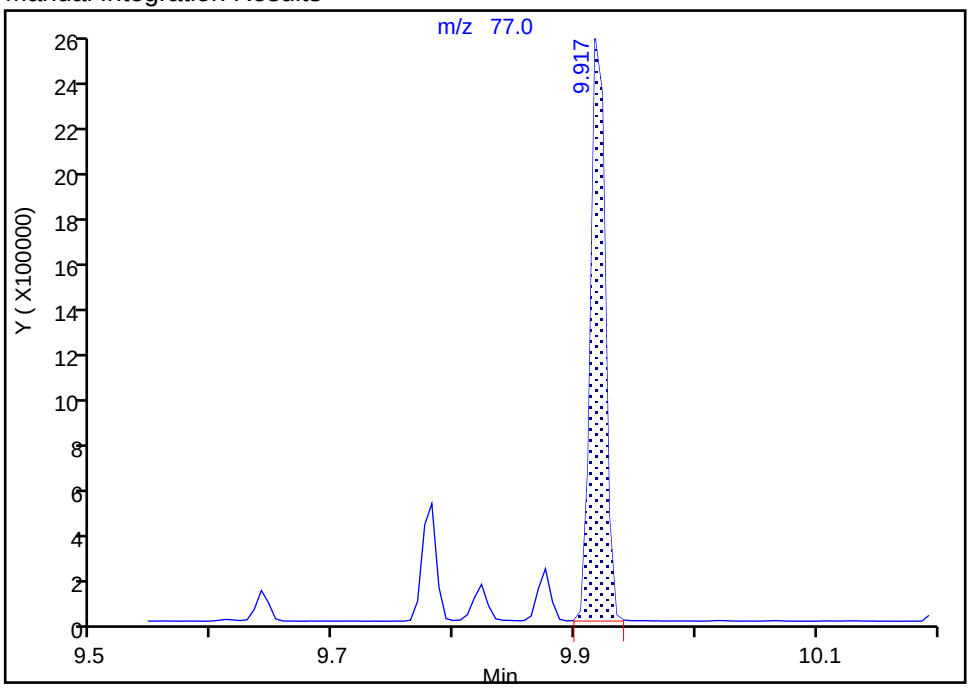
Processing Integration Results

RT: 9.82
Area: 130075
Amount: 68.570405
Amount Units: ng/ml



Manual Integration Results

RT: 9.92
Area: 2110534
Amount: 1112.5902
Amount Units: ng/ml



Reviewer: hulat, 23-Apr-2018 10:52:38
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-323501/20 Calibration Date: 04/23/2018 13:58

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 10:42

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 13:33

Lab File ID: 80423020.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.247	1.324		1.06	1.00	6.2	30.0
N-Nitrosomethylethylamine	Ave	0.7398	0.7986		1.08	1.00	7.9	30.0
Acrylamide	Ave	0.1555	0.1867		1.20	1.00	20.1	30.0
Methyl methanesulfonate	Ave	0.9311	1.059		1.14	1.00	13.7	30.0
N-Nitrosodiethylamine	Ave	0.7578	0.8598		1.13	1.00	13.5	30.0
Ethyl methanesulfonate	Ave	1.161	1.309		1.13	1.00	12.8	30.0
Pentachloroethane	Ave	0.4431	0.4859		1.10	1.00	9.7	30.0
N-Nitrosopyrrolidine	Ave	0.7461	0.9083		1.22	1.00	21.7	30.0
N-Nitrosomorpholine	Ave	1.179	1.407		1.19	1.00	19.3	30.0
2-Toluidine	Ave	2.403	2.788		1.16	1.00	16.0	30.0
N-Nitrosopiperidine	Ave	0.1660	0.1774		1.07	1.00	6.9	30.0
o,o',o''-Triethylphosphorothioate	Ave	0.1561	0.1633		1.05	1.00	4.6	30.0
alpha,alpha-Dimethylphenethylamine	Ave	0.6673	0.6730		1.01	1.00	0.8	30.0
Hexachloropropene	Ave	0.1379	0.1561	0.0100	1.13	1.00	13.1	30.0
N-Nitrosodi-n-butylamine	Ave	0.2160	0.2405		1.11	1.00	11.3	30.0
Quinoline	Ave	0.6038	0.6847		1.13	1.00	13.4	30.0
p-Phenylene diamine	Qua		0.2134		1.06	1.00	5.6	30.0
Safrole, Total	Ave	0.2460	0.2708		1.10	1.00	10.1	30.0
Isosafrole Peak 1	Ave	0.1076	0.0881		0.721	0.880	-18.1	30.0
Isosafrole Peak 2	Ave	3.168	4.952		0.188	0.120	56.3*	30.0
1-Chloronaphthalene	Ave	1.138	1.279		1.12	1.00	12.4	30.0
1,4-Naphthoquinone	Lin1		0.4560		1.06	1.00	6.0	30.0
1,4-Dinitrobenzene	Lin1		0.1697		0.952	1.00	-4.8	30.0
Pentachlorobenzene	Ave	0.3898	0.4618		1.18	1.00	18.5	30.0
1-Naphthylamine	Ave	1.038	1.081		1.04	1.00	4.2	30.0
2,3,5,6-Tetrachlorophenol	Lin1		0.1943		0.955	1.00	-4.5	30.0
2-Naphthylamine	Lin1		1.209		1.08	1.00	7.5	30.0
Thionazin	Ave	0.3035	0.3499		1.15	1.00	15.3	30.0
N-Nitro-o-toluidine	Lin1		0.3804		1.03	1.00	2.8	30.0
Sulfotepp	Ave	0.0918	0.1054		1.15	1.00	14.9	30.0
1,3,5-Trinitrobenzene	Qua		0.0488		1.02	1.00	2.0	30.0
Diallate Peak 1	Ave	0.4055	0.4655		0.861	0.750	14.8	30.0
Phenacetin	Lin1		0.3899		1.05	1.00	4.6	30.0
Phorate	Ave	0.1809	0.2063		1.14	1.00	14.0	30.0
Diallate Peak 2	Ave	0.4204	0.4430		0.263	0.250	5.4	30.0
Dimethoate	Ave	0.2574	0.3189		1.24	1.00	23.9	30.0
4-Aminobiphenyl	Lin1		0.8594		1.01	1.00	0.9	30.0
Pronamide	Ave	0.3171	0.3743		1.18	1.00	18.0	30.0
Pentachloronitrobenzene	Lin1		0.0811		1.02	1.00	2.1	30.0
Disulfoton	Ave	0.4341	0.4899		1.13	1.00	12.9	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: ICV 240-323501/20 Calibration Date: 04/23/2018 13:58

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 10:42

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 13:33

Lab File ID: 80423020.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Qua		0.1019		1.03	1.00	2.7	30.0
Methyl parathion	Lin1		0.2748		1.13	1.00	13.0	30.0
Ethyl Parathion	Lin1		0.1709		1.04	1.00	4.2	30.0
4-Nitroquinoline-1-oxide	Qua		0.0372		0.995	1.00	-0.5	30.0
Methapyrilene	Lin1		0.7042		2.21	2.00	10.6	30.0
Isodrin	Ave	0.1416	0.1549		1.09	1.00	9.4	30.0
Aramite Peak 1	Lin1		0.1469		0.474	0.510	-7.0	30.0
Aramite Peak 2	Lin1		0.1906		0.464	0.490	-5.4	30.0
p-Dimethylamino azobenzene	Lin1		0.2988		1.05	1.00	5.3	30.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.4561	0.5302		1.16	1.00	16.3	30.0
Famphur	Ave	0.2384	0.1456		0.611	1.00	-38.9*	30.0
3,3'-Dimethylbenzidine	Lin1		0.5724		0.860	1.00	-14.0	30.0
2-Acetylaminofluorene	Lin1		0.4775		0.918	1.00	-8.2	30.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2133		0.920	1.00	-8.0	30.0
6-Methylchrysene	Ave	0.8772	1.009		2.30	2.00	15.1	30.0
7,12-Dimethylbenz(a)anthracene	Lin1		0.4985		0.894	1.00	-10.6	30.0
3-Methylcholanthrene	Ave	0.6372	0.7434		2.33	2.00	16.7	30.0
Dibenz[a,h]acridine	Lin1		0.9266		0.996	1.00	-0.4	30.0

Report Date: 24-Apr-2018 07:02:30 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423020.D
Lims ID: icv l2lvi
Client ID:
Sample Type: ICV
Inject. Date: 23-Apr-2018 13:58:30 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-020
Misc. Info.: ICV L2LVI
Operator ID: Instrument ID: A4AG2
Sublist:

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 05:21:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	97	187834	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	100	924904	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	446855	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	720832	400.0	400.0	
* 5 Chrysene-d12	240	13.558	13.558	0.000	98	586241	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	95	451803	400.0	400.0	
31 2-Picoline	93	5.241	5.235	0.006	96	621599	1000.0	1061.8	
32 N-Nitrosomethylethylamine	88	5.305	5.305	0.000	92	375021	1000.0	1079.5	
14 Acrylamide	71	5.476	5.470	0.006	63	87654	1000.0	1200.8	
34 Methyl methanesulfonate	80	5.541	5.535	0.006	90	497259	1000.0	1137.3	
36 N-Nitrosodiethylamine	102	5.876	5.876	0.000	90	403743	1000.0	1134.6	
37 Ethyl methanesulfonate	79	6.094	6.094	0.000	97	614537	1000.0	1127.6	
46 Pentachloroethane	167	6.552	6.552	0.000	92	228182	1000.0	1096.7	
56 N-Nitrosopyrrolidine	100	7.058	7.052	0.006	80	426519	1000.0	1217.4	
59 N-Nitrosomorpholine	56	7.082	7.076	0.006	94	660636	1000.0	1193.1	
60 2-Toluidine	106	7.117	7.117	0.000	97	1309140	1000.0	1160.4	
63 N-Nitrosopiperidine	114	7.358	7.358	0.000	78	410254	1000.0	1069.0	
68 o,o',o''-Triethylphosphoro	198	7.546	7.546	0.000	88	377694	1000.0	1046.2	
71 alpha,alpha-Dimethyl phene	58	7.670	7.670	0.000	97	1556030	1000.0	1008.4	M
77 Hexachloropropene	213	7.940	7.940	0.000	92	360838	1000.0	1131.4	
82 N-Nitrosodi-n-butylamine	84	8.135	8.135	0.000	90	555972	1000.0	1113.2	
81 Quinoline	129	8.135	8.135	0.000	96	1583295	1000.0	1134.0	
84 p-Phenylene diamine	108	8.170	8.170	0.000	95	493434	1000.0	1056.1	
92 Safrole, Total	162	8.335	8.335	0.000	87	626185	1000.0	1101.0	
95 Isosafrole Peak 1	162	8.587	8.587	0.000	88	86575	880.0	720.6	
91 Isosafrole Peak 2	162	8.776	8.776	0.000	89	663840	120.0	187.6	
247 1-Chloronaphthalene	162	8.893	8.887	0.006	97	1429363	1000.0	1124.4	
102 1,4-Naphthoquinone	158	8.993	8.993	0.000	85	509452	1000.0	1060.3	
105 1,4-Dinitrobenzene	168	9.017	9.017	0.000	94	189610	1000.0	951.7	
114 Pentachlorobenzene	250	9.493	9.493	0.000	97	515926	1000.0	1184.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
116 2,3,5,6-Tetrachlorophenol	232	9.576	9.576	0.000	84	217006	1000.0	954.6	
117 1-Naphthylamine	143	9.576	9.576	0.000	99	1207869	1000.0	1041.9	
119 2-Naphthylamine	143	9.640	9.640	0.000	96	1351031	1000.0	1075.2	
121 Thionazin	97	9.717	9.717	0.000	81	390910	1000.0	1152.9	
123 N-Nitro-o-toluidine	152	9.793	9.793	0.000	93	424924	1000.0	1027.8	
132 Sulfotepp	202	9.964	9.964	0.000	78	189948	1000.0	1148.8	
133 1,3,5-Trinitrobenzene	213	10.052	10.052	0.000	84	87879	1000.0	1020.5	
134 Diallate Peak 1	86	10.105	10.105	0.000	93	629139	750.0	861.0	
135 Phenacetin	108	10.105	10.105	0.000	93	702685	1000.0	1046.2	
136 Phorate	121	10.117	10.117	0.000	94	371702	1000.0	1140.1	
137 Diallate Peak 2	86	10.193	10.193	0.000	91	199572	250.0	263.4	
139 Dimethoate	87	10.270	10.270	0.000	93	574607	1000.0	1238.6	
142 4-Aminobiphenyl	169	10.429	10.429	0.000	89	1548673	1000.0	1008.8	
144 Pronamide	173	10.440	10.440	0.000	91	674481	1000.0	1180.4	
145 Pentachloronitrobenzene	237	10.470	10.470	0.000	83	146160	1000.0	1021.1	
146 Disulfoton	88	10.564	10.564	0.000	99	882887	1000.0	1128.6	
147 Dinoseb	211	10.576	10.576	0.000	94	183638	1000.0	1026.7	
152 Methyl parathion	109	10.893	10.893	0.000	92	495225	1000.0	1130.2	
155 Ethyl Parathion	97	11.228	11.228	0.000	83	307949	1000.0	1041.7	
156 4-Nitroquinoline-1-oxide	190	11.317	11.317	0.000	82	66978	1000.0	994.5	
157 Methapyrilene	58	11.346	11.346	0.000	97	2537999	2000.0	2211.3	
158 Isodrin	66	11.617	11.617	0.000	87	279139	1000.0	1093.8	
162 Aramite Peak 1	185	12.034	12.034	0.000	0	109776	510.0	474.2	
163 Aramite Peak 2	185	12.117	12.117	0.000	0	136880	490.0	463.6	
164 p-Dimethylamino azobenzene	225	12.275	12.270	0.005	95	437973	1000.0	1052.8	
165 Chlorobenzilate	139	12.305	12.305	0.000	84	777127	1000.0	1162.5	
168 Famphur	218	12.605	12.605	0.000	90	213399	1000.0	610.7	
170 3,3'-Dimethylbenzidine	212	12.681	12.681	0.000	99	838938	1000.0	860.3	
172 2-Acetylaminofluorene	181	13.034	13.028	0.006	96	699828	1000.0	918.1	
175 4,4'-Methylene bis(2-chlor	231	13.434	13.434	0.000	95	312540	1000.0	920.1	
180 6-Methylchrysene	242	14.299	14.299	0.000	99	2958608	2000.0	2301.4	
182 7,12-Dimethylbenz(a)anthra	256	15.240	15.240	0.000	94	563066	1000.0	894.1	
186 3-Methylcholanthrene	268	16.434	16.428	0.006	94	1679309	2000.0	2333.2	
188 Dibenz[a,h]acridine	279	17.499	17.499	0.000	93	1046588	1000.0	996.0	
S 194 Isosafrole	162				0		1000.0	908.1	
S 195 Diallate	86				0		1000.0	1124.4	
S 196 Aramite, Total	185				0		1000.0	937.7	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

SMLIST2 SS W_00014 Amount Added: 0.10 Units: mL

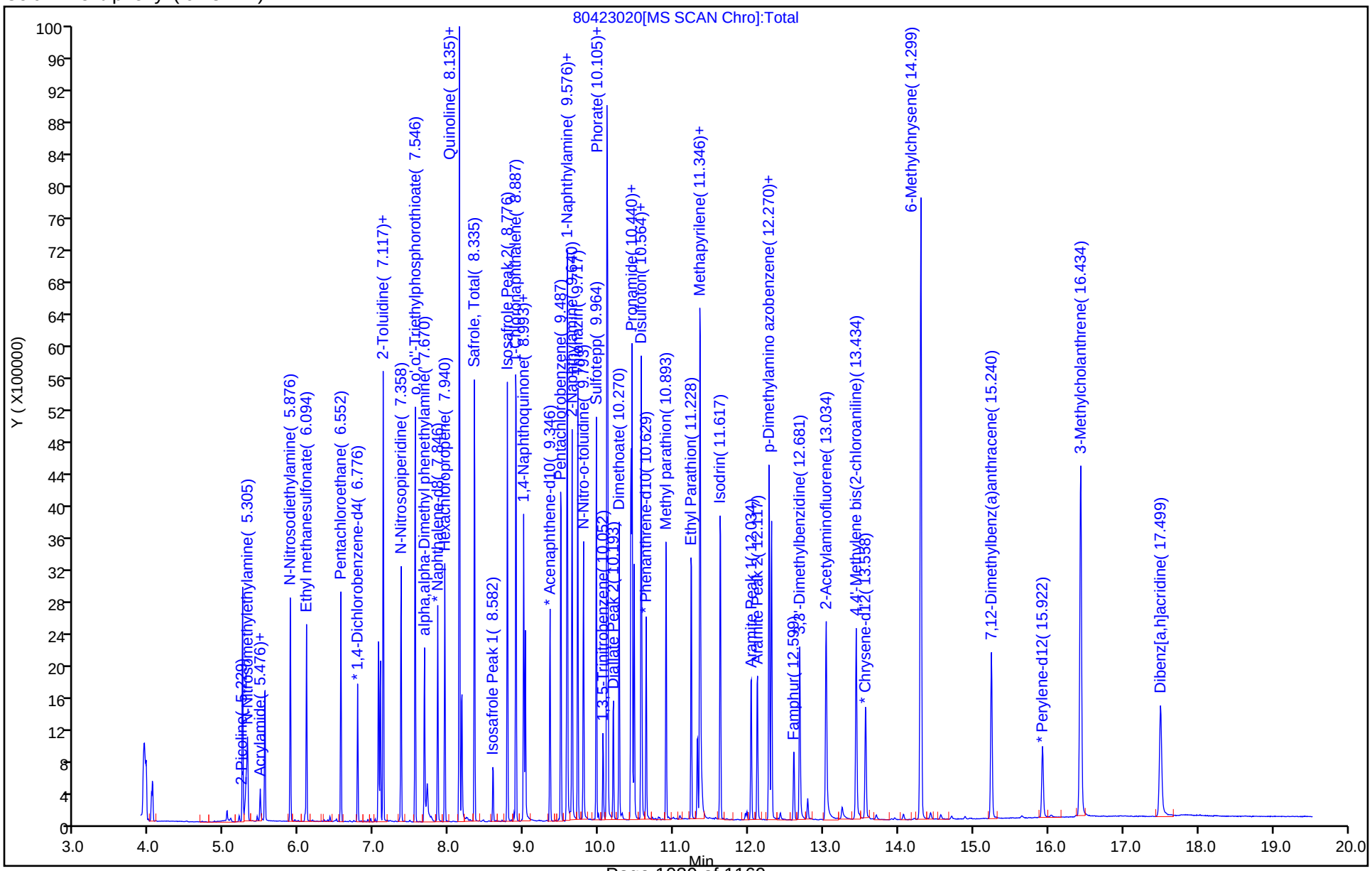
Report Date: 24-Apr-2018 07:02:30 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423020.D

Injection Date:	23-Apr-2018 13:58:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	icv l2lvi			Worklist Smp#:	20
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

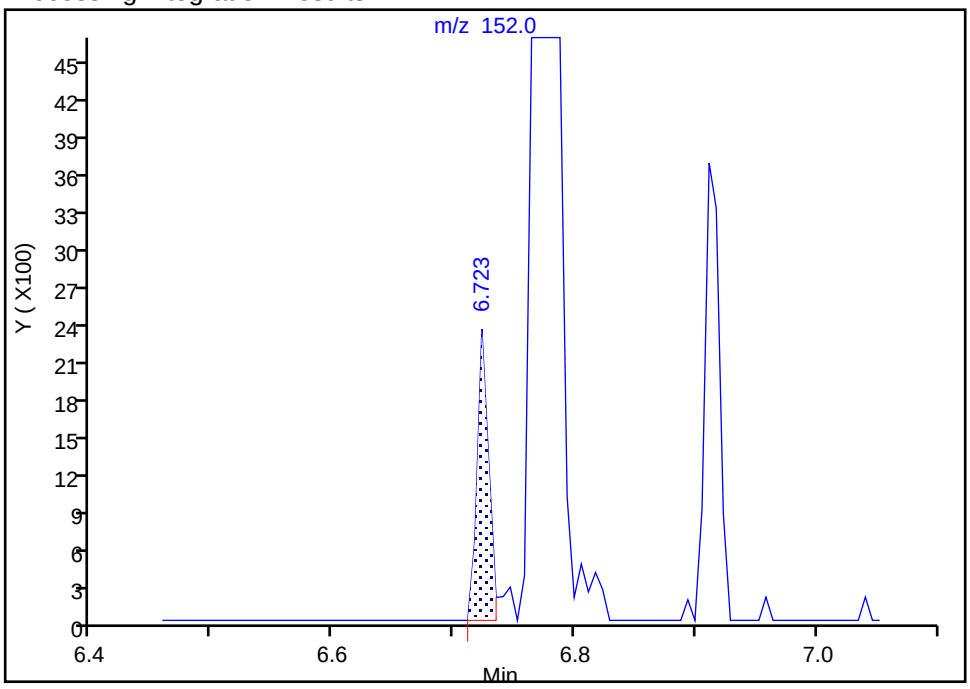
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423020.D				
Injection Date:	23-Apr-2018 13:58:30	Instrument ID:	A4AG2		
Lims ID:	icv l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

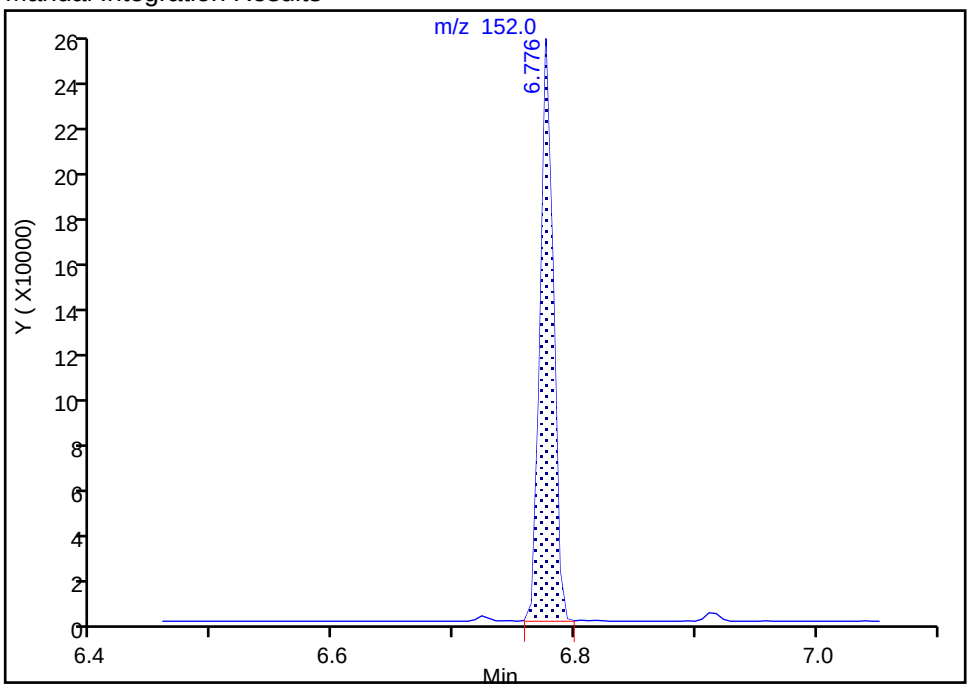
Processing Integration Results

RT: 6.72
Area: 1551
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 187834
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 05:17:41

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

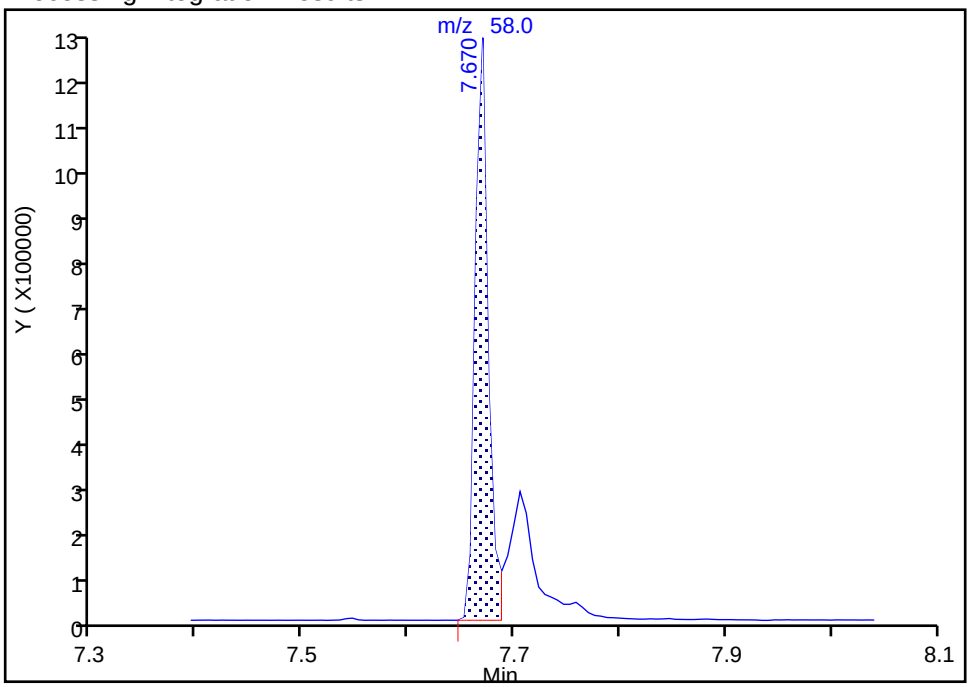
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423020.D
Injection Date: 23-Apr-2018 13:58:30 Instrument ID: A4AG2
Lims ID: icv l2lvi
Client ID:
Operator ID: ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

71 alpha,alpha-Dimethyl phenethylamine, CAS: 122-09-8

Signal: 1

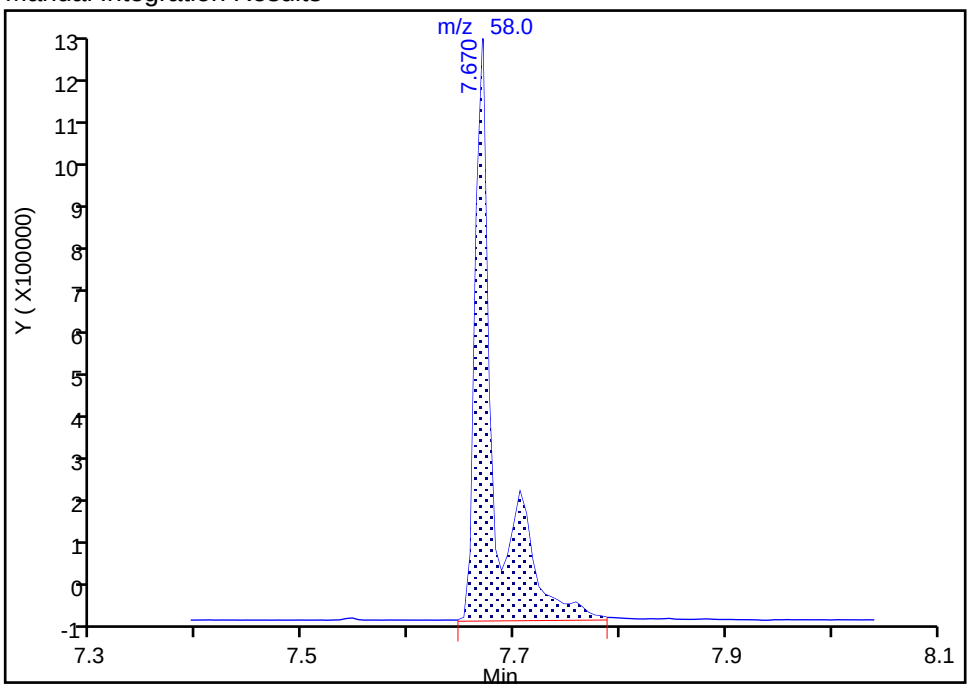
Processing Integration Results

RT: 7.67
Area: 1064972
Amount: 690.1939
Amount Units: ng/ml



Manual Integration Results

RT: 7.67
Area: 1556030
Amount: 1008.4420
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 05:26:44
Audit Action: Manually Integrated Audit Reason: Poor chromatography

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323952/2 | Calibration Date: 04/25/2018 07:00

Instrument ID: A4AG2 | Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) | Calib End Date: 04/23/2018 09:53

Lab File ID: 80425002.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.2451	0.2234		0.912	1.00	-8.8	20.0
N-Nitrosodimethylamine	Ave	0.8972	0.8469		0.944	1.00	-5.6	20.0
Pyridine	Ave	0.6996	0.6176		1.77	2.00	-11.7	20.0
Benzaldehyde	Qua		0.8949	0.0100	2.45	2.00	22.6*	20.0
Phenol	Ave	1.500	1.761	0.8000	1.17	1.00	17.4	20.0
Aniline	Ave	2.360	2.726		1.16	1.00	15.5	20.0
Bis(2-chloroethyl)ether	Ave	1.630	1.791	0.7000	1.10	1.00	9.9	20.0
2-Chlorophenol	Ave	1.331	1.404	0.8000	1.05	1.00	5.5	20.0
n-Decane	Ave	1.805	1.742		0.965	1.00	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.623	1.612		0.993	1.00	-0.7	20.0
1,4-Dichlorobenzene	Ave	1.658	1.691		1.02	1.00	2.0	20.0
Benzyl alcohol	Ave	0.9550	1.076		1.13	1.00	12.7	20.0
1,2-Dichlorobenzene	Ave	1.574	1.661		1.06	1.00	5.5	20.0
2-Methylphenol	Ave	1.268	1.545	0.7000	1.22	1.00	21.8*	20.0
bis (2-chloroisopropyl) ether	Ave	2.980	3.203		1.07	1.00	7.5	20.0
Indene	Ave	2.571	2.795		2.17	2.00	8.7	20.0
3 & 4 Methylphenol	Ave	1.267	1.603		1.26	1.00	26.5*	20.0
N-Nitrosodi-n-propylamine	Ave	1.177	1.331	0.5000	1.13	1.00	13.1	20.0
Acetophenone	Ave	2.108	2.401	0.0100	1.14	1.00	13.9	20.0
Hexachloroethane	Ave	0.6207	0.6402	0.3000	1.03	1.00	3.1	20.0
Nitrobenzene	Ave	0.3600	0.3694	0.2000	1.03	1.00	2.6	20.0
Isophorone	Ave	0.6712	0.6730	0.4000	1.00	1.00	0.3	20.0
2,4-Dimethylphenol	Ave	0.3068	0.3378	0.2000	1.10	1.00	10.1	20.0
2-Nitrophenol	Ave	0.1561	0.1806	0.1000	1.16	1.00	15.7	20.0
Benzoic acid	Lin1		0.1462		2.12	2.00	6.0	20.0
Bis(2-chloroethoxy)methane	Ave	0.4063	0.4041	0.3000	0.995	1.00	-0.5	20.0
2,4-Dichlorophenol	Ave	0.2229	0.2570	0.2000	1.15	1.00	15.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2801	0.2916		1.04	1.00	4.1	20.0
Naphthalene	Ave	1.068	1.074	0.7000	1.01	1.00	0.5	20.0
4-Chloroaniline	Ave	0.5158	0.5650	0.0100	1.10	1.00	9.5	20.0
2,6-Dichlorophenol	Ave	0.2446	0.2692		1.10	1.00	10.1	20.0
Hexachlorobutadiene	Ave	0.1435	0.1477	0.0100	1.03	1.00	3.0	20.0
Caprolactam	Ave	0.0963	0.1053	0.0100	2.19	2.00	9.3	20.0
4-Chloro-3-methylphenol	Ave	0.2602	0.2951	0.2000	1.13	1.00	13.4	20.0
2-Methylnaphthalene	Ave	0.6877	0.7077	0.4000	1.03	1.00	2.9	20.0
1-Methylnaphthalene	Ave	0.6611	0.6655		1.01	1.00	0.7	20.0
Hexachlorocyclopentadiene	Lin1		0.3271	0.0500	0.996	1.00	-0.4	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5058	0.5372	0.0100	1.06	1.00	6.2	20.0
2,4,6-Trichlorophenol	Ave	0.3205	0.3746	0.2000	1.17	1.00	16.9	20.0
2,4,5-Trichlorophenol	Lin1		0.3838	0.2000	1.04	1.00	4.5	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323952/2 | Calibration Date: 04/25/2018 07:00

Instrument ID: A4AG2 | Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) | Calib End Date: 04/23/2018 09:53

Lab File ID: 80425002.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1'-Biphenyl	Ave	1.614	1.642	0.0100	1.02	1.00	1.7	20.0
2-Chloronaphthalene	Ave	1.205	1.247	0.8000	1.04	1.00	3.5	20.0
2-Nitroaniline	Ave	0.3900	0.4511	0.0100	1.16	1.00	15.7	20.0
Dimethyl phthalate	Ave	1.379	1.419	0.0100	1.03	1.00	2.8	20.0
1,3-Dinitrobenzene	Lin1		0.2251		1.04	1.00	3.8	20.0
2,6-Dinitrotoluene	Ave	0.2931	0.3265		1.11	1.00	11.4	20.0
Acenaphthylene	Ave	1.821	1.890	0.9000	1.04	1.00	3.8	20.0
3-Nitroaniline	Ave	0.2559	0.3377	0.0100	1.32	1.00	32.0*	20.0
2,4-Dinitrophenol	Lin1		0.1359	0.0100	2.07	2.00	3.5	20.0
Acenaphthene	Ave	1.271	1.288	0.9000	1.01	1.00	1.3	20.0
4-Nitrophenol	Lin1		0.1748		2.00	2.00	0.0	20.0
2,4-Dinitrotoluene	Ave	0.3583	0.4109	0.2000	1.15	1.00	14.7	20.0
Dibenzofuran	Ave	1.705	1.734	0.8000	1.02	1.00	1.7	20.0
2,3,4,6-Tetrachlorophenol	Lin1		0.2728	0.0100	1.06	1.00	5.9	20.0
Hexadecane	Ave	1.138	1.103		0.969	1.00	-3.1	20.0
Diethyl phthalate	Ave	1.389	1.404	0.0100	1.01	1.00	1.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.6326	0.6507	0.4000	1.03	1.00	2.9	20.0
4-Nitroaniline	Ave	0.2480	0.3343	0.0100	1.35	1.00	34.8*	20.0
Fluorene	Ave	1.387	1.455	0.9000	1.05	1.00	4.9	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1079	0.0100	2.05	2.00	2.6	20.0
Diphenylamine	Ave	0.7062	0.7325		0.882	0.850	3.7	20.0
N-Nitrosodiphenylamine	Ave	0.6002	0.6226	0.0100	1.04	1.00	3.7	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9268	0.9258		0.999	1.00	-0.1	20.0
Azobenzene	Ave	0.9271	0.9258		0.999	1.00	-0.1	20.0
4-Bromophenyl phenyl ether	Ave	0.1949	0.2109	0.1000	1.08	1.00	8.2	20.0
Atrazine	Ave	0.1892	0.2077	0.0100	2.20	2.00	9.8	20.0
Hexachlorobenzene	Ave	0.1922	0.2149	0.1000	1.12	1.00	11.8	20.0
n-Octadecane	Ave	0.7221	0.7232		1.00	1.00	0.2	20.0
Pentachlorophenol	Lin1		0.1048	0.0500	1.77	2.00	-11.6	20.0
Phenanthrene	Ave	1.109	1.110	0.7000	1.00	1.00	0.1	20.0
Anthracene	Ave	1.105	1.157	0.7000	1.05	1.00	4.7	20.0
Carbazole	Ave	0.9623	1.046	0.0100	1.09	1.00	8.6	20.0
Di-n-butyl phthalate	Ave	1.335	1.435	0.0100	1.07	1.00	7.4	20.0
Fluoranthene	Ave	1.055	1.161	0.6000	1.10	1.00	10.0	20.0
Benzidine	Lin1		0.4688		1.71	2.00	-14.3	20.0
Pyrene	Ave	1.253	1.249	0.6000	0.996	1.00	-0.4	20.0
Butyl benzyl phthalate	Ave	0.6526	0.6761	0.0100	1.04	1.00	3.6	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.8894	0.9666	0.0100	1.09	1.00	8.7	20.0
3,3'-Dichlorobenzidine	Ave	0.3660	0.4164	0.0100	2.28	2.00	13.8	20.0
Benzo[a]anthracene	Ave	1.130	1.181	0.8000	1.05	1.00	4.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323952/2 Calibration Date: 04/25/2018 07:00

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 06:35

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 09:53

Lab File ID: 80425002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chrysene	Ave	1.140	1.146	0.7000	1.01	1.00	0.5	20.0
Di-n-octyl phthalate	Ave	1.722	1.760	0.0100	1.02	1.00	2.2	20.0
Benzo[b]fluoranthene	Ave	1.204	1.227	0.7000	1.02	1.00	1.9	20.0
Benzo[k]fluoranthene	Ave	1.246	1.265	0.7000	1.02	1.00	1.5	20.0
Benzo[a]pyrene	Ave	1.111	1.178	0.7000	1.06	1.00	6.0	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.136	1.286	0.5000	1.13	1.00	13.2	20.0
Dibenz(a,h)anthracene	Ave	0.9567	1.094	0.4000	1.14	1.00	14.3	20.0
Benzo[g,h,i]perylene	Ave	0.9175	1.055	0.5000	1.15	1.00	15.0	20.0
2-Fluorophenol (Surr)	Ave	0.8445	0.5777		0.684	1.00	-31.6*	20.0
Phenol-d5 (Surr)	Ave	1.341	1.572		1.17	1.00	17.2	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3715	0.3866		1.04	1.00	4.1	20.0
2-Fluorobiphenyl (Surr)	Ave	1.357	1.414		1.04	1.00	4.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1211	0.1470		1.21	1.00	21.4*	20.0
Terphenyl-d14 (Surr)	Ave	0.8167	0.7926		0.971	1.00	-2.9	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425002.D
Lims ID: std6 l1lvi
Client ID:
Sample Type: CCVIS
Inject. Date: 25-Apr-2018 07:00:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-002
Misc. Info.: STD6 L1LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub20

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:14 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 07:24:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	169679	400.0	400.0	
* 2 Naphthalene-d8	136	7.833	7.833	0.000	100	858867	400.0	400.0	
* 3 Acenaphthene-d10	164	9.333	9.333	0.000	97	422917	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	722401	400.0	400.0	
* 5 Chrysene-d12	240	13.538	13.538	0.000	98	681101	400.0	400.0	
* 6 Perylene-d12	264	15.891	15.891	0.000	97	623334	400.0	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	245045	1000.0	684.1	
$ 8 Phenol-d5	99	6.403	6.403	0.000	0	666939	1000.0	1172.0	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	94	830157	1000.0	1040.8	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1494781	1000.0	1042.1	
$ 11 2,4,6-Tribromophenol	330	10.009	10.009	0.000	95	155399	1000.0	1213.6	
$ 12 Terphenyl-d14	244	12.103	12.103	0.000	99	1349653	1000.0	970.6	
26 1,4-Dioxane	88	4.239	4.239	0.000	93	94781	1000.0	911.6	
27 N-Nitrosodimethylamine	74	4.503	4.503	0.000	83	359264	1000.0	943.9	
28 Pyridine	79	4.562	4.562	0.000	81	523937	2000.0	1765.5	
42 Benzaldehyde	77	6.392	6.392	0.000	90	759222	2000.0	2452.8	
43 Phenol	94	6.415	6.415	0.000	98	747187	1000.0	1174.3	
44 Aniline	93	6.474	6.474	0.000	96	1156316	1000.0	1155.2	
45 Bis(2-chloroethyl)ether	93	6.497	6.497	0.000	94	759928	1000.0	1099.1	
244 n-Decane	57	6.586	6.586	0.000	91	738879	1000.0	965.1	
47 2-Chlorophenol	128	6.586	6.586	0.000	97	595602	1000.0	1054.5	
48 1,3-Dichlorobenzene	146	6.721	6.721	0.000	97	683934	1000.0	993.4	
49 1,4-Dichlorobenzene	146	6.774	6.774	0.000	93	717408	1000.0	1019.8	
50 Benzyl alcohol	108	6.839	6.839	0.000	91	456604	1000.0	1127.1	
51 1,2-Dichlorobenzene	146	6.909	6.909	0.000	95	704707	1000.0	1055.4	
52 2-Methylphenol	108	6.915	6.915	0.000	97	655225	1000.0	1218.4	
54 2,2'-oxybis[1-chloropropan	45	6.944	6.944	0.000	92	1358517	1000.0	1074.8	
53 Indene	115	6.980	6.980	0.000	90	2371620	2000.0	2174.2	
55 3 & 4 Methylphenol	108	7.033	7.033	0.000	0	679863	1000.0	1264.8	
57 N-Nitrosodi-n-propylamine	70	7.050	7.050	0.000	95	564812	1000.0	1131.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
58 Acetophenone	105	7.068	7.068	0.000	94	1018650	1000.0	1139.0	
61 Hexachloroethane	117	7.197	7.197	0.000	95	271559	1000.0	1031.3	
62 Nitrobenzene	77	7.221	7.221	0.000	93	793104	1000.0	1026.2	
64 Isophorone	82	7.409	7.409	0.000	97	1445046	1000.0	1002.7	
66 2,4-Dimethylphenol	107	7.486	7.486	0.000	91	725236	1000.0	1101.1	
65 2-Nitrophenol	139	7.491	7.491	0.000	92	387834	1000.0	1157.4	
70 Benzoic acid	122	7.533	7.533	0.000	92	627895	2000.0	2119.4	
69 Bis(2-chloroethoxy)methane	93	7.562	7.562	0.000	97	867677	1000.0	994.6	
72 2,4-Dichlorophenol	162	7.691	7.691	0.000	97	551805	1000.0	1152.7	
73 1,2,4-Trichlorobenzene	180	7.774	7.774	0.000	94	626083	1000.0	1041.0	
74 Naphthalene	128	7.850	7.850	0.000	98	2306723	1000.0	1005.5	
75 4-Chloroaniline	127	7.862	7.862	0.000	95	1213180	1000.0	1095.4	
76 2,6-Dichlorophenol	162	7.880	7.880	0.000	95	578070	1000.0	1100.5	
78 Hexachlorobutadiene	225	7.938	7.938	0.000	97	317211	1000.0	1029.8	
83 Caprolactam	113	8.144	8.144	0.000	74	452312	2000.0	2186.5	
85 4-Chloro-3-methylphenol	107	8.244	8.244	0.000	96	633595	1000.0	1134.2	
86 2-Methylnaphthalene	142	8.427	8.427	0.000	93	1519486	1000.0	1029.0	
87 1-Methylnaphthalene	142	8.515	8.515	0.000	93	1429010	1000.0	1006.7	
89 Hexachlorocyclopentadiene	237	8.568	8.568	0.000	96	345820	1000.0	996.3	
90 1,2,4,5-Tetrachlorobenzene	216	8.574	8.574	0.000	98	567936	1000.0	1061.9	
93 2,4,6-Trichlorophenol	196	8.656	8.656	0.000	95	396069	1000.0	1168.7	
94 2,4,5-Trichlorophenol	196	8.691	8.691	0.000	92	405766	1000.0	1044.9	
99 1,1'-Biphenyl	154	8.815	8.815	0.000	96	1736127	1000.0	1017.3	
100 2-Chloronaphthalene	162	8.850	8.850	0.000	98	1318672	1000.0	1035.1	
101 2-Nitroaniline	65	8.909	8.909	0.000	82	476966	1000.0	1156.7	
104 Dimethyl phthalate	163	9.033	9.033	0.000	98	1499868	1000.0	1028.4	
103 1,3-Dinitrobenzene	168	9.074	9.074	0.000	85	238030	1000.0	1037.6	
106 2,6-Dinitrotoluene	165	9.097	9.097	0.000	92	345253	1000.0	1114.2	
108 Acenaphthylene	152	9.215	9.215	0.000	98	1997949	1000.0	1037.8	
109 3-Nitroaniline	138	9.256	9.256	0.000	92	357073	1000.0	1319.7	
110 2,4-Dinitrophenol	184	9.344	9.344	0.000	84	287365	2000.0	2070.9	a
111 Acenaphthene	153	9.362	9.362	0.000	95	1361907	1000.0	1013.5	
112 4-Nitrophenol	109	9.368	9.368	0.000	96	369569	2000.0	2001.6	
113 2,4-Dinitrotoluene	165	9.450	9.450	0.000	89	434488	1000.0	1146.9	
115 Dibenzofuran	168	9.503	9.503	0.000	95	1833286	1000.0	1016.9	
118 2,3,4,6-Tetrachlorophenol	232	9.597	9.597	0.000	77	288464	1000.0	1059.4	
248 Hexadecane	57	9.621	9.621	0.000	93	1166024	1000.0	969.4	
120 Diethyl phthalate	149	9.627	9.627	0.000	98	1484058	1000.0	1010.8	
122 4-Chlorophenyl phenyl ethe	204	9.768	9.768	0.000	96	687933	1000.0	1028.6	
125 4-Nitroaniline	138	9.785	9.785	0.000	83	353431	1000.0	1348.0	
124 Fluorene	166	9.797	9.797	0.000	95	1538792	1000.0	1049.3	
127 4,6-Dinitro-2-methylphenol	198	9.809	9.809	0.000	83	389885	2000.0	2051.9	
128 N-Nitrosodiphenylamine	169	9.862	9.862	0.000	99	1124390	1000.0	1037.2	
129 Diphenylamine	169	9.862	9.862	0.000	95	1124390	850.0	881.6	
131 Azobenzene	77	9.903	9.903	0.000	98	1671943	1000.0	998.6	
130 1,2-Diphenylhydrazine	77	9.903	9.903	0.000	27	1671943	1000.0	998.6	a
138 4-Bromophenyl phenyl ether	248	10.191	10.191	0.000	74	380918	1000.0	1082.4	
141 Atrazine	200	10.285	10.285	0.000	92	750142	2000.0	2195.7	
140 Hexachlorobenzene	284	10.291	10.291	0.000	94	388083	1000.0	1117.8	
245 n-Octadecane	57	10.403	10.403	0.000	92	1306149	1000.0	1001.6	
143 Pentachlorophenol	266	10.444	10.444	0.000	90	378666	2000.0	1769.0	
148 Phenanthrene	178	10.638	10.638	0.000	98	2004596	1000.0	1001.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178	10.679	10.679	0.000	98	2088947	1000.0	1046.6	
150 Carbazole	167	10.797	10.797	0.000	96	1888201	1000.0	1086.4	
154 Di-n-butyl phthalate	149	11.027	11.027	0.000	100	2591044	1000.0	1074.4	
159 Fluoranthene	202	11.750	11.750	0.000	98	2096215	1000.0	1099.7	
160 Benzidine	184	11.832	11.832	0.000	99	1596424	2000.0	1714.8	
161 Pyrene	202	12.003	12.003	0.000	97	2125985	1000.0	996.2	
169 Butyl benzyl phthalate	149	12.632	12.632	0.000	98	1151219	1000.0	1035.9	
174 Bis(2-ethylhexyl) phthalat	149	13.391	13.391	0.000	97	1645888	1000.0	1086.8	
177 3,3'-Dichlorobenzidine	252	13.426	13.426	0.000	75	1418142	2000.0	2275.6	
178 Benzo[a]anthracene	228	13.520	13.520	0.000	99	2011260	1000.0	1045.8	
179 Chrysene	228	13.579	13.579	0.000	98	1951705	1000.0	1005.0	
181 Di-n-octyl phthalate	149	14.403	14.403	0.000	99	2742784	1000.0	1022.0	
183 Benzo[b]fluoranthene	252	15.238	15.238	0.000	98	1911473	1000.0	1018.6	
184 Benzo[k]fluoranthene	252	15.285	15.285	0.000	99	1971553	1000.0	1015.4	
185 Benzo[a]pyrene	252	15.797	15.797	0.000	79	1835437	1000.0	1060.0	
190 Indeno[1,2,3-cd]pyrene	276	17.991	17.991	0.000	97	2004598	1000.0	1131.9	
189 Dibenz(a,h)anthracene	278	17.997	17.997	0.000	94	1704071	1000.0	1143.0	
191 Benzo[g,h,i]perylene	276	18.614	18.614	0.000	95	1643838	1000.0	1149.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST1 L6 W_00010 Amount Added: 0.10 Units: mL

Report Date: 25-Apr-2018 10:03:18 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425002.D

Injection Date: 25-Apr-2018 07:00:30 Instrument ID: A4AG2 Operator ID:

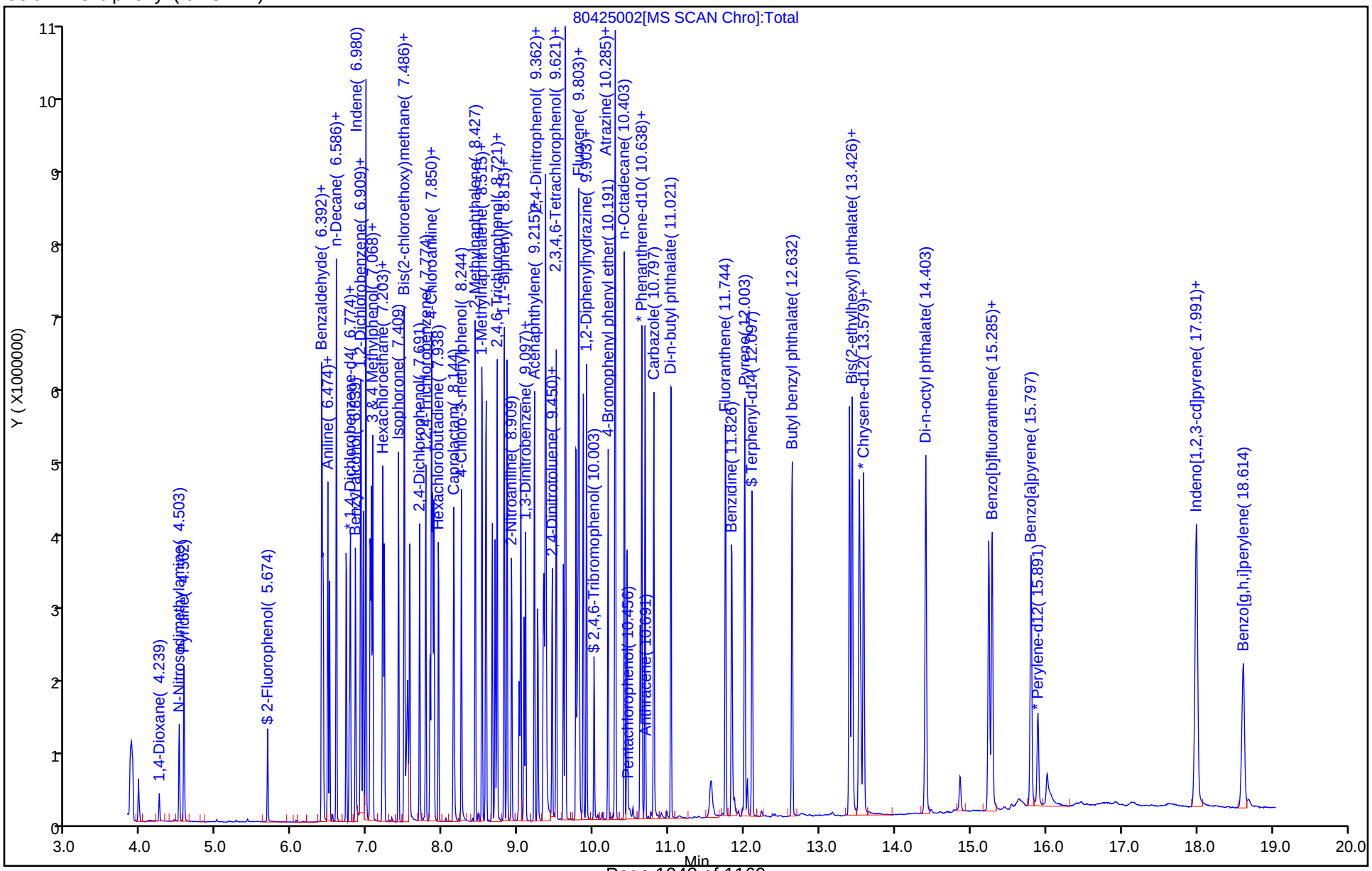
Lims ID: std6 l1lvi Worklist Smp#: 2

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 2

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

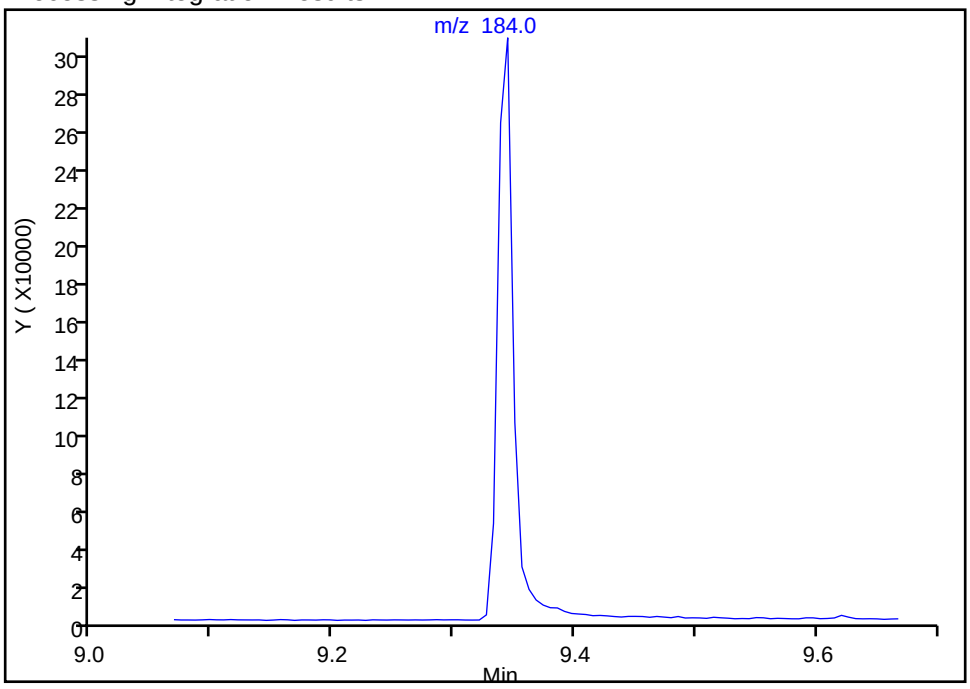
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425002.D				
Injection Date:	25-Apr-2018 07:00:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

110 2,4-Dinitrophenol, CAS: 51-28-5

Signal: 1

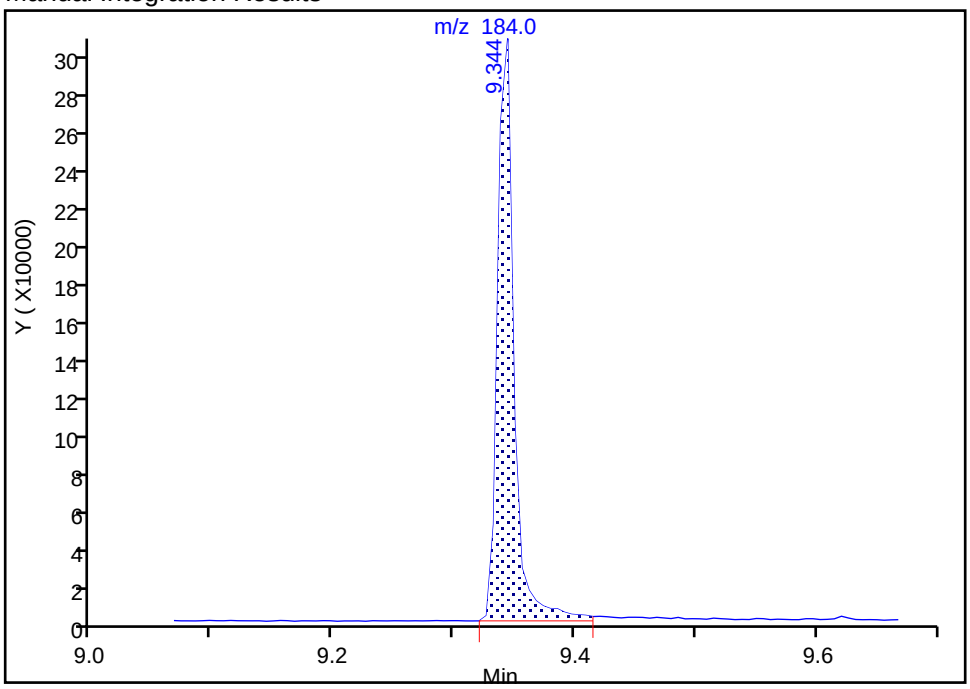
Not Detected
Expected RT: 9.34

Processing Integration Results



Manual Integration Results

RT: 9.34
Area: 287365
Amount: 2070.8907
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 07:23:34
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

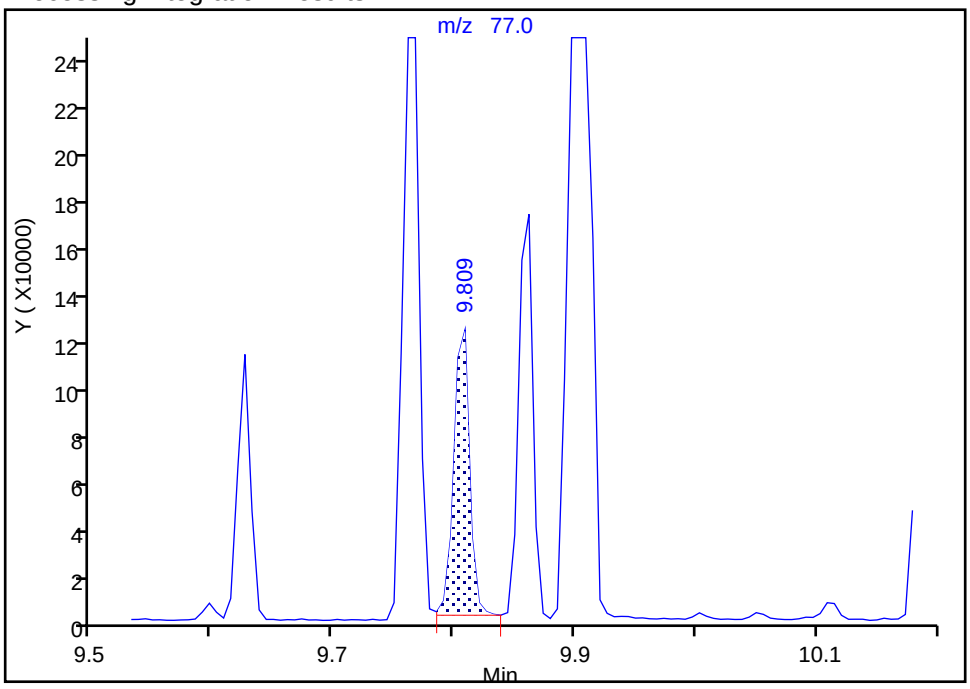
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425002.D				
Injection Date:	25-Apr-2018 07:00:30	Instrument ID:	A4AG2		
Lims ID:	std6 l1lvi				
Client ID:					
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

130 1,2-Diphenylhydrazine, CAS: 122-66-7

Signal: 1

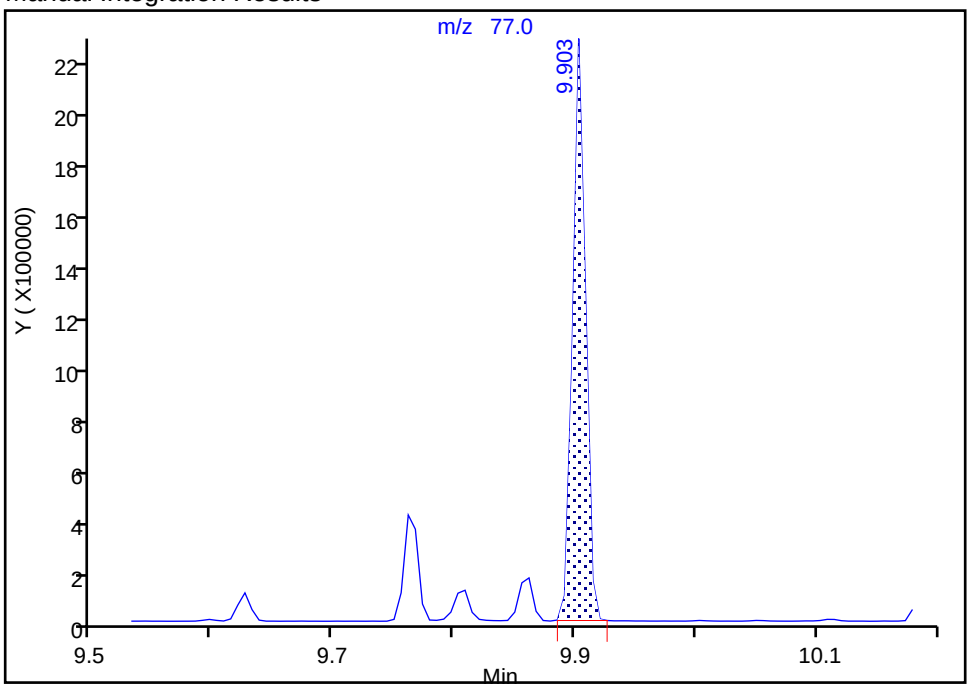
Processing Integration Results

RT: 9.81
Area: 108156
Amount: 64.596014
Amount Units: ng/ml



Manual Integration Results

RT: 9.90
Area: 1671943
Amount: 998.5655
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 07:23:44

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323952/3 | Calibration Date: 04/25/2018 07:26

Instrument ID: A4AG2 | Calib Start Date: 04/23/2018 10:42

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) | Calib End Date: 04/23/2018 13:33

Lab File ID: 80425003.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Picoline	Ave	1.247	1.132		0.908	1.00	-9.2	20.0
N-Nitrosomethylethylamine	Ave	0.7398	0.7894		1.07	1.00	6.7	20.0
Acrylamide	Ave	0.1555	0.1923		1.24	1.00	23.7*	20.0
Methyl methanesulfonate	Ave	0.9311	1.028		1.10	1.00	10.4	20.0
N-Nitrosodiethylamine	Ave	0.7578	0.8865		1.17	1.00	17.0	20.0
Ethyl methanesulfonate	Ave	1.161	1.355		1.17	1.00	16.8	20.0
Pentachloroethane	Ave	0.4431	0.4375		0.987	1.00	-1.3	20.0
N-Nitrosopyrrolidine	Ave	0.7461	0.999		1.34	1.00	33.9*	20.0
N-Nitrosomorpholine	Ave	1.179	1.495		1.27	1.00	26.7*	20.0
2-Toluidine	Ave	2.403	2.834		1.18	1.00	17.9	20.0
N-Nitrosopiperidine	Ave	0.1660	0.1794		1.08	1.00	8.1	20.0
o,o',o''-Triethylphosphorothioate	Ave	0.1561	0.1640		1.05	1.00	5.0	20.0
alpha,alpha-Dimethylphenethylamine	Ave	0.6673	0.6477		0.971	1.00	-2.9	20.0
Hexachloropropene	Ave	0.1379	0.1628	0.0100	1.18	1.00	18.1	20.0
N-Nitrosodi-n-butylamine	Ave	0.2160	0.2310		1.07	1.00	7.0	20.0
Quinoline	Ave	0.6038	0.6617		1.10	1.00	9.6	20.0
p-Phenylene diamine	Qua		0.2899		1.34	1.00	34.2*	20.0
Safrole, Total	Ave	0.2460	0.2689		1.09	1.00	9.3	20.0
Isosafrole Peak 1	Ave	0.1076	0.1119		0.874	0.840	4.0	20.0
Isosafrole Peak 2	Ave	3.168	3.404		0.172	0.160	7.4	20.0
1-Chloronaphthalene	Ave	1.138	1.189		1.04	1.00	4.5	20.0
1,4-Naphthoquinone	Lin1		0.4065		0.950	1.00	-5.0	20.0
1,4-Dinitrobenzene	Lin1		0.1945		1.08	1.00	8.2	20.0
Pentachlorobenzene	Ave	0.3898	0.4456		1.14	1.00	14.3	20.0
1-Naphthylamine	Ave	1.038	1.320		1.27	1.00	27.2*	20.0
2,3,5,6-Tetrachlorophenol	Lin1		0.2216		1.07	1.00	7.0	20.0
2-Naphthylamine	Lin1		1.337		1.19	1.00	18.6	20.0
Thionazin	Ave	0.3035	0.3215		1.06	1.00	5.9	20.0
N-Nitro-o-toluidine	Lin1		0.3867		1.04	1.00	4.4	20.0
Sulfotepp	Ave	0.0918	0.0955		1.04	1.00	4.1	20.0
1,3,5-Trinitrobenzene	Qua		0.0549		1.11	1.00	11.1	20.0
Diallate Peak 1	Ave	0.4055	0.3802		0.806	0.860	-6.2	20.0
Phenacetin	Lin1		0.3614		0.974	1.00	-2.6	20.0
Phorate	Ave	0.1809	0.1806		0.998	1.00	-0.2	20.0
Diallate Peak 2	Ave	0.4204	0.4001		0.133	0.140	-4.8	20.0
Dimethoate	Ave	0.2574	0.2912		1.13	1.00	13.1	20.0
4-Aminobiphenyl	Lin1		0.7713		0.910	1.00	-9.0	20.0
Pronamide	Ave	0.3171	0.3329		1.05	1.00	5.0	20.0
Pentachloronitrobenzene	Lin1		0.0785		0.989	1.00	-1.1	20.0
Disulfoton	Ave	0.4341	0.4322		0.996	1.00	-0.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Lab Sample ID: STD6 240-323952/3 Calibration Date: 04/25/2018 07:26

Instrument ID: A4AG2 Calib Start Date: 04/23/2018 10:42

GC Column: RXI-5SILMS/IIG ID: 0.25(mm) Calib End Date: 04/23/2018 13:33

Lab File ID: 80425003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dinoseb	Qua		0.1300		1.22	1.00	22.1*	20.0
Methyl parathion	Lin1		0.2573		1.06	1.00	6.1	20.0
Ethyl Parathion	Lin1		0.1567		0.959	1.00	-4.1	20.0
4-Nitroquinoline-1-oxide	Qua		0.0619		1.34	1.00	34.2*	20.0
Methapyrilene	Lin1		0.6870		2.16	2.00	8.0	20.0
Isodrin	Ave	0.1416	0.1319		0.931	1.00	-6.9	20.0
Aramite Peak 1	Lin1		0.1442		0.466	0.510	-8.6	20.0
Aramite Peak 2	Lin1		0.1830		0.446	0.490	-9.1	20.0
p-Dimethylamino azobenzene	Lin1		0.2526		0.895	1.00	-10.5	20.0
Ethyl 4,4'-Dichlorobenzilate	Ave	0.4561	0.4447		0.975	1.00	-2.5	20.0
Famphur	Ave	0.2384	0.1320		0.554	1.00	-44.6*	20.0
3,3'-Dimethylbenzidine	Lin1		0.6536		0.962	1.00	-3.8	20.0
2-Acetylaminofluorene	Lin1		0.5413		1.02	1.00	2.1	20.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2233		0.961	1.00	-3.9	20.0
6-Methylchrysene	Ave	0.8772	0.9085		2.07	2.00	3.6	20.0
7,12-Dimethylbenz(a)anthracene	Lin1		0.5866		1.05	1.00	4.5	20.0
3-Methylcholanthrene	Ave	0.6372	0.6853		2.15	2.00	7.5	20.0
Dibenz[a,h]acridine	Lin1		0.9073		0.976	1.00	-2.4	20.0

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425003.D
Lims ID: std6 l2lvi
Client ID:
Sample Type: CCV
Inject. Date: 25-Apr-2018 07:26:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-003
Misc. Info.: STD6 L2LVI
Operator ID: Instrument ID: A4AG2
Sublist: chrom-LVI AG2 8270*sub21

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 07:51:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	153650	400.0	400.0	a
* 2 Naphthalene-d8	136	7.833	7.833	0.000	100	847402	400.0	400.0	
* 3 Acenaphthene-d10	164	9.333	9.333	0.000	97	422387	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	747422	400.0	400.0	
* 5 Chrysene-d12	240	13.538	13.538	0.000	99	631760	400.0	400.0	
* 6 Perylene-d12	264	15.885	15.885	0.000	96	579597	400.0	400.0	
31 2-Picoline	93	5.209	5.209	0.000	96	434857	1000.0	908.1	
32 N-Nitrosomethylethylamine	88	5.274	5.274	0.000	92	303208	1000.0	1066.9	
14 Acrylamide	71	5.450	5.450	0.000	65	73868	1000.0	1237.0	
34 Methyl methanesulfonate	80	5.509	5.509	0.000	90	394865	1000.0	1104.0	
36 N-Nitrosodiethylamine	102	5.856	5.856	0.000	91	340516	1000.0	1169.8	
37 Ethyl methanesulfonate	79	6.074	6.074	0.000	97	520659	1000.0	1167.9	
46 Pentachloroethane	167	6.533	6.533	0.000	91	168059	1000.0	987.4	
56 N-Nitrosopyrrolidine	100	7.039	7.039	0.000	80	383663	1000.0	1338.7	
59 N-Nitrosomorpholine	56	7.062	7.062	0.000	93	574083	1000.0	1267.5	
60 2-Toluidine	106	7.103	7.103	0.000	97	1088477	1000.0	1179.4	
63 N-Nitrosopiperidine	114	7.339	7.339	0.000	79	380065	1000.0	1080.9	
68 o,o',o''-Triethylphosphoro	198	7.533	7.533	0.000	88	347431	1000.0	1050.3	
71 alpha,alpha-Dimethyl phene	58	7.650	7.650	0.000	97	1372189	1000.0	970.6	
77 Hexachloropropene	213	7.927	7.927	0.000	91	344960	1000.0	1180.6	
82 N-Nitrosodi-n-butylamine	84	8.121	8.121	0.000	90	489384	1000.0	1069.5	
81 Quinoline	129	8.121	8.121	0.000	96	1401844	1000.0	1095.9	
84 p-Phenylene diamine	108	8.150	8.150	0.000	95	614083	1000.0	1342.1	
92 Safrole, Total	162	8.321	8.321	0.000	88	569685	1000.0	1093.3	
95 Isosafrole Peak 1	162	8.568	8.568	0.000	87	99224	840.0	873.7	
91 Isosafrole Peak 2	162	8.762	8.762	0.000	89	575135	160.0	171.9	a
247 1-Chloronaphthalene	162	8.874	8.874	0.000	97	1255319	1000.0	1044.7	
102 1,4-Naphthoquinone	158	8.980	8.980	0.000	85	429260	1000.0	949.5	
105 1,4-Dinitrobenzene	168	9.003	9.003	0.000	95	205390	1000.0	1082.4	
114 Pentachlorobenzene	250	9.474	9.474	0.000	96	470494	1000.0	1143.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
117 1-Naphthylamine	143	9.562	9.562	0.000	99	1393949	1000.0	1272.0	
116 2,3,5,6-Tetrachlorophenol	232	9.568	9.568	0.000	92	233991	1000.0	1070.2	
119 2-Naphthylamine	143	9.627	9.627	0.000	96	1411966	1000.0	1186.0	
121 Thionazin	97	9.703	9.703	0.000	81	339436	1000.0	1059.1	
123 N-Nitro-o-toluidine	152	9.780	9.780	0.000	95	408359	1000.0	1044.1	
132 Sulfotepp	202	9.950	9.950	0.000	78	178462	1000.0	1040.9	
133 1,3,5-Trinitrobenzene	213	10.044	10.044	0.000	84	102619	1000.0	1111.0	
135 Phenacetin	108	10.091	10.091	0.000	93	675261	1000.0	974.1	
134 Diallate Peak 1	86	10.091	10.091	0.000	94	611010	860.0	806.4	
136 Phorate	121	10.103	10.103	0.000	94	337372	1000.0	998.0	
137 Diallate Peak 2	86	10.180	10.180	0.000	93	104665	140.0	133.2	
139 Dimethoate	87	10.256	10.256	0.000	92	544126	1000.0	1131.2	a
142 4-Aminobiphenyl	169	10.415	10.415	0.000	89	1441163	1000.0	910.1	
144 Pronamide	173	10.427	10.427	0.000	91	622031	1000.0	1049.9	
145 Pentachloronitrobenzene	237	10.456	10.456	0.000	84	146633	1000.0	989.1	
146 Disulfoton	88	10.550	10.550	0.000	99	807492	1000.0	995.5	
147 Dinoseb	211	10.562	10.562	0.000	95	242827	1000.0	1221.0	
152 Methyl parathion	109	10.880	10.880	0.000	93	480808	1000.0	1060.8	
155 Ethyl Parathion	97	11.215	11.215	0.000	83	292717	1000.0	959.2	
156 4-Nitroquinoline-1-oxide	190	11.297	11.297	0.000	89	115717	1000.0	1341.7	
157 Methapyrilene	58	11.332	11.332	0.000	97	2567261	2000.0	2159.5	
158 Isodrin	66	11.603	11.603	0.000	90	246382	1000.0	931.1	
162 Aramite Peak 1	185	12.015	12.015	0.000	0	116187	510.0	466.0	
163 Aramite Peak 2	185	12.097	12.097	0.000	0	141584	490.0	445.6	
164 p-Dimethylamino azobenzene	225	12.256	12.256	0.000	96	398927	1000.0	895.2	
165 Chlorobenzilate	139	12.285	12.285	0.000	86	702430	1000.0	975.1	
168 Famphur	218	12.579	12.579	0.000	89	208461	1000.0	553.6	
170 3,3'-Dimethylbenzidine	212	12.662	12.662	0.000	99	1032277	1000.0	962.0	
172 2-Acetylaminofluorene	181	13.009	13.009	0.000	96	854912	1000.0	1021.2	
175 4,4'-Methylene bis(2-chlor	231	13.409	13.409	0.000	96	352621	1000.0	960.8	
180 6-Methylchrysene	242	14.268	14.268	0.000	99	2869749	2000.0	2071.4	
182 7,12-Dimethylbenz(a)anthra	256	15.209	15.209	0.000	95	849907	1000.0	1045.3	
186 3-Methylcholanthrene	268	16.397	16.397	0.000	93	1985845	2000.0	2150.8	
188 Dibenz[a,h]acridine	279	17.450	17.450	0.000	92	1314678	1000.0	976.0	
S 194 Isosafrole	162				0		1000.0	1045.6	
S 195 Diallate	86				0		1000.0	939.6	
S 196 Aramite, Total	185				0		1000.0	911.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

SMLIST2 L6 W_00015 Amount Added: 0.10 Units: mL

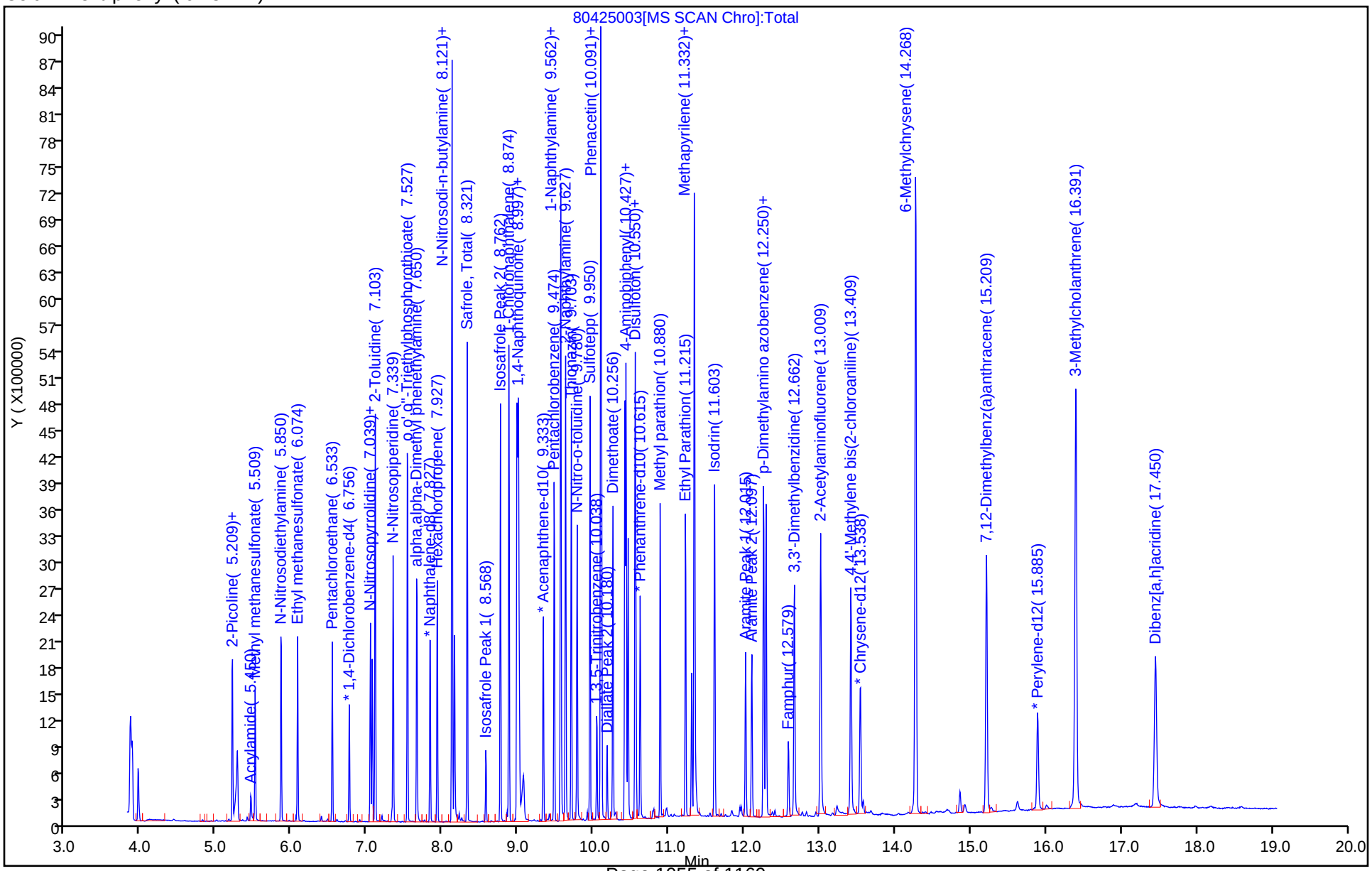
Report Date: 25-Apr-2018 10:03:29 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425003.D

Injection Date:	25-Apr-2018 07:26:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	std6 l2lvi			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Manual Integration/User Assign Peak Report

TestAmerica Canton

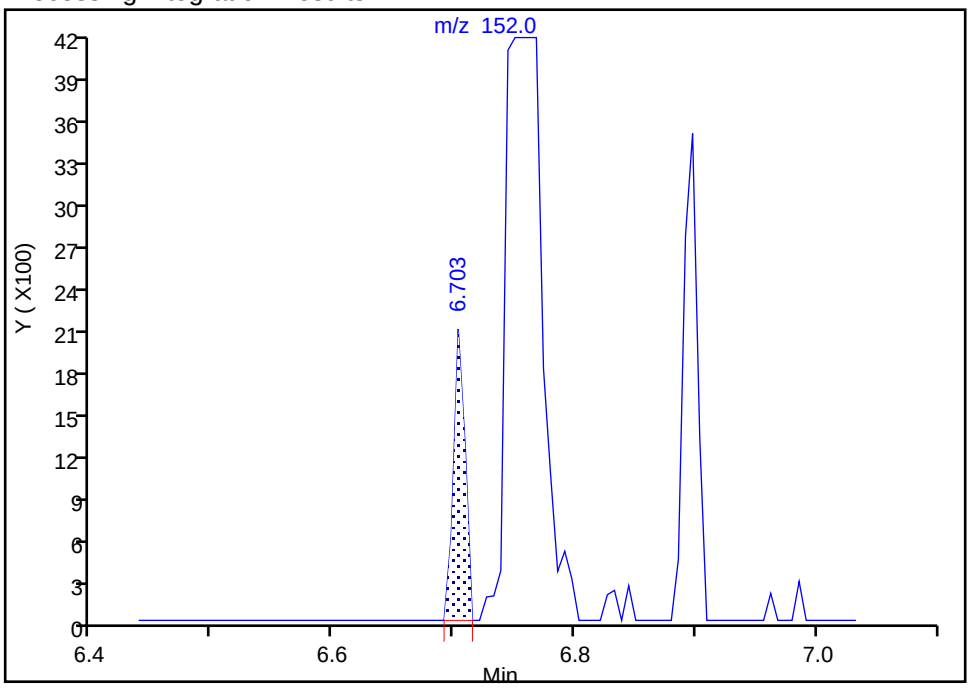
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425003.D				
Injection Date:	25-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std6 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

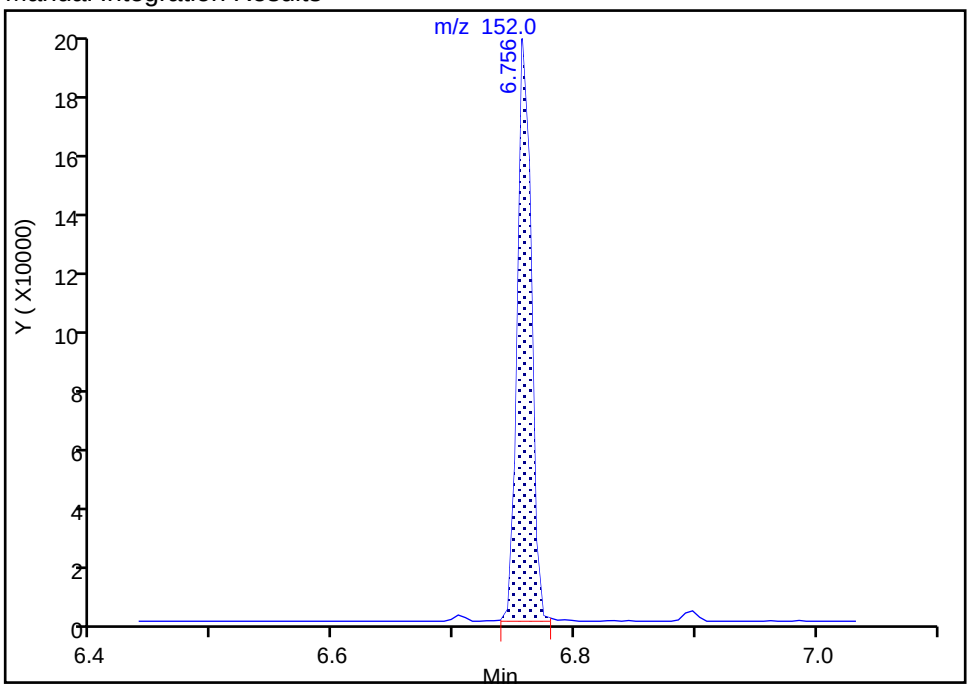
Processing Integration Results

RT: 6.70
Area: 1374
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 153650
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 07:48:36

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

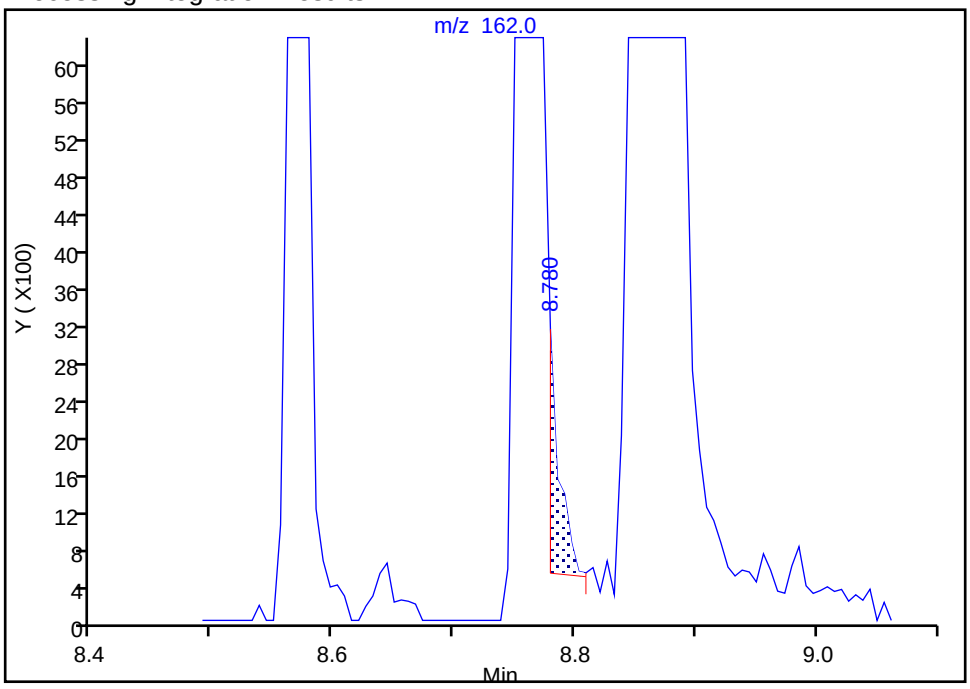
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425003.D				
Injection Date:	25-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std6 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

91 Isosafrole Peak 2, CAS: 120-58-1

Signal: 1

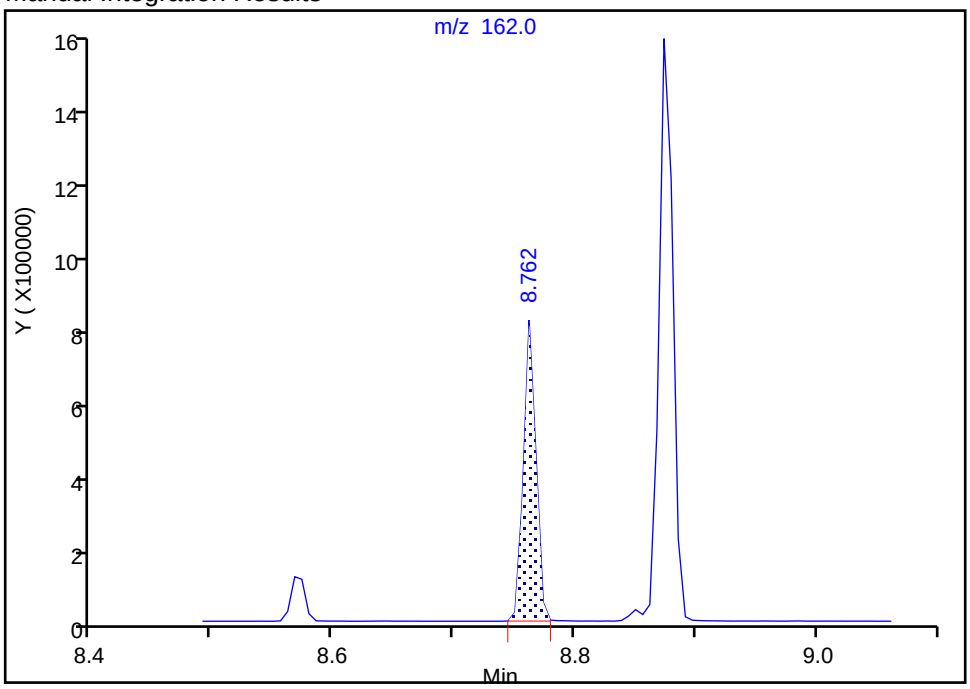
Processing Integration Results

RT: 8.78
Area: 1750
Amount: 0.523089
Amount Units: ng/ml



Manual Integration Results

RT: 8.76
Area: 575135
Amount: 171.9124
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 07:50:23

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

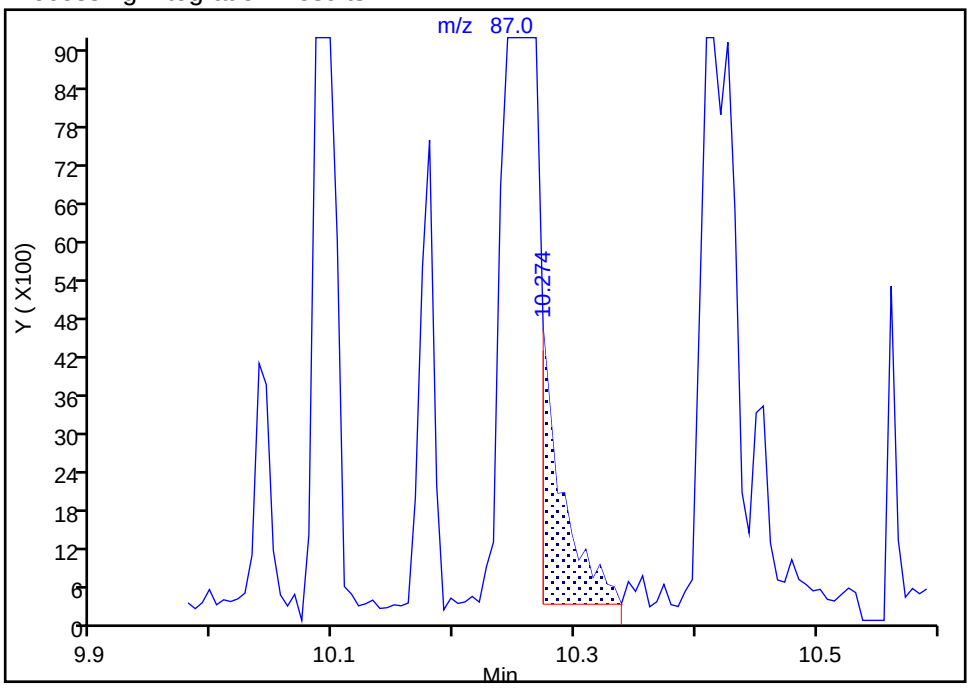
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425003.D				
Injection Date:	25-Apr-2018 07:26:30	Instrument ID:	A4AG2		
Lims ID:	std6 l2lvi				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

139 Dimethoate, CAS: 60-51-5

Signal: 1

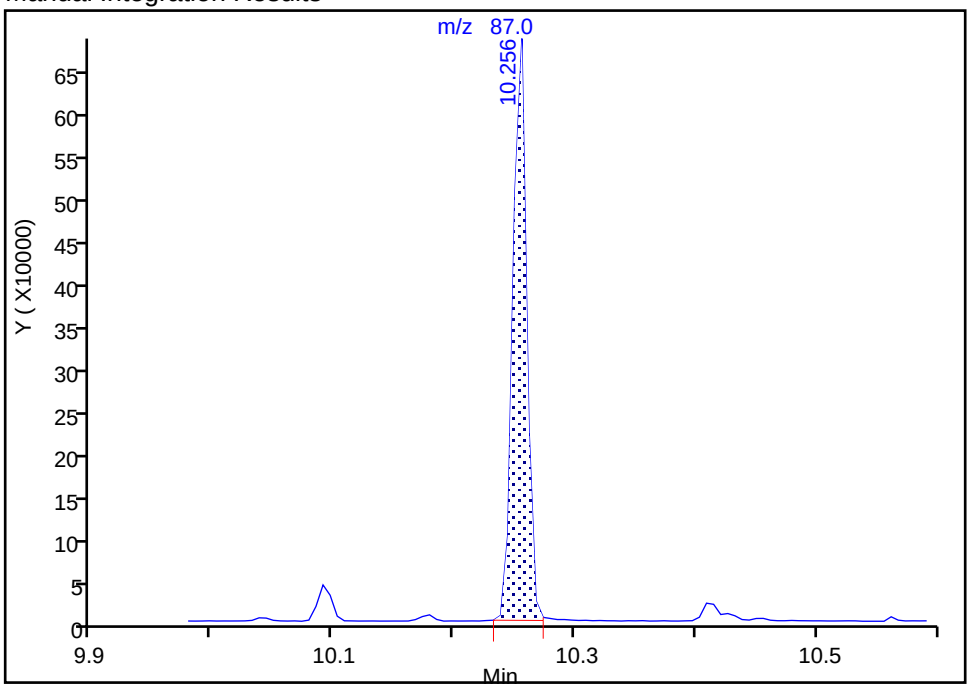
Processing Integration Results

RT: 10.27
Area: 5297
Amount: 33.317783
Amount Units: ng/ml



Manual Integration Results

RT: 10.26
Area: 544126
Amount: 1131.1672
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 07:50:41

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 11-Apr-2018 11:14:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: primer
Misc. Info.: PRIMER
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 12-Apr-2018 06:27:29 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK010

First Level Reviewer: hulat Date: 11-Apr-2018 11:34:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.535	10.535	0.000	87	922286	NR	NR	
160 Benzidine	184	11.940	11.940	0.000	99	5526772	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.146	12.146	0.000	86	3798		NR	
166 4,4'-DDD	235	12.546	12.546	0.000	94	34299		NR	
171 4,4'-DDT	235	12.946	12.946	0.000	96	2736186	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

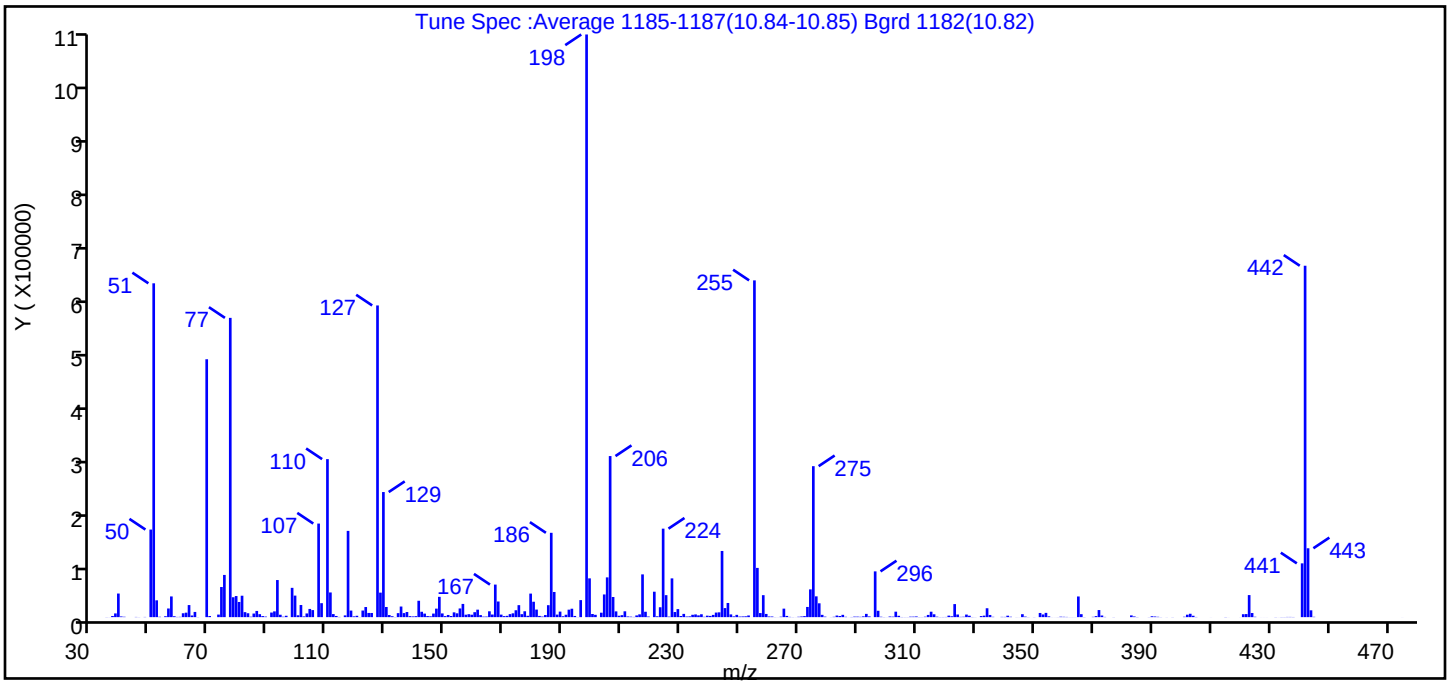
SMDFTPPW_00013 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D
Injection Date: 11-Apr-2018 11:14:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	57.3
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	44.3
70	Less than 2.0 percent of mass 69	0.2 (0.4)
127	25.0 - 75.0 percent of mass 198	53.5
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.7
275	10.0 - 30.0 percent of mass 198	25.9
365	Greater than 0.75 percent of mass 198	3.5
441	Present but less than mass 443	9.2 (78.1)
442	40.0 - 110.0 percent of mass 198	60.3
443	15.0 - 24.0 percent of mass 442	11.8 (19.6)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 11-Apr-2018 11:14:30
Spectrum: Tune Spec :Average 1185-1187(10.84-10.85) Bgrd 1182(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 351

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	189	139.00	1330	230.00	2113	321.00	2761
36.00	107	140.00	1778	231.00	5976	322.00	1523
37.00	2123	141.00	30072	232.00	1138	323.00	23960
38.00	6828	142.00	9872	233.00	1442	324.00	4830
39.00	43344	143.00	6483	234.00	4335	325.00	534
40.00	1259	144.00	1994	235.00	5010	326.00	766
41.00	708	145.00	1516	236.00	3259	327.00	4731
45.00	379	146.00	6548	237.00	5286	328.00	2610
46.00	152	147.00	15635	238.00	639	329.00	287
48.00	363	148.00	37280	239.00	2688	330.00	135
50.00	160768	149.00	6830	240.00	2236	332.00	1982
51.00	612800	150.00	1904	241.00	4119	333.00	2746
52.00	30888	151.00	3997	242.00	8390	334.00	16340
53.00	694	152.00	2113	243.00	8806	335.00	4005
54.00	47	153.00	8794	244.00	121472	336.00	585
55.00	1679	154.00	7027	245.00	16600	339.00	489
56.00	15886	155.00	15955	246.00	25992	340.00	429
57.00	38008	156.00	24272	247.00	5018	341.00	2661
58.00	1637	157.00	4497	248.00	1374	342.00	729
59.00	402	158.00	5421	249.00	4204	344.00	126
60.00	557	159.00	4427	250.00	1090	345.00	89
61.00	7122	160.00	9071	251.00	1308	346.00	5414
62.00	8201	161.00	13728	252.00	1548	347.00	991
63.00	22160	162.00	3749	253.00	3037	348.00	202
64.00	3024	163.00	925	255.00	618176	350.00	183
65.00	9564	164.00	1042	256.00	90376	352.00	7661
66.00	237	165.00	10745	257.00	7477	353.00	4918
69.00	473408	166.00	4808	258.00	40344	354.00	7844
70.00	2058	167.00	59768	259.00	5882	355.00	1423
73.00	4700	168.00	28728	260.00	1224	356.00	98
74.00	55280	169.00	4618	261.00	1141	357.00	67
75.00	77480	170.00	1906	262.00	171	358.00	143
77.00	549376	171.00	2391	263.00	102	359.00	808

Report Date: 12-Apr-2018 06:27:30 Chrom Revision: 2.2 10-Apr-2018 12:17:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 11-Apr-2018 11:14:30
Spectrum: Tune Spec :Average 1185-1187(10.84-10.85) Bgrd 1182(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 351

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	36536	172.00	5546	264.00	826	360.00	601
79.00	38736	173.00	7018	265.00	15615	361.00	405
80.00	27824	174.00	12654	266.00	2245	362.00	141
81.00	39328	175.00	22000	267.00	461	363.00	137
82.00	9173	176.00	5444	268.00	180	364.00	125
83.00	7138	177.00	10775	269.00	99	365.00	37944
84.00	770	178.00	2493	270.00	675	366.00	5446
85.00	6596	179.00	43224	271.00	1234	367.00	247
86.00	11375	180.00	28272	272.00	1891	370.00	553
87.00	5452	181.00	13885	273.00	18712	371.00	1901
88.00	1947	182.00	2274	274.00	50968	372.00	12999
89.00	1060	183.00	1059	275.00	277120	373.00	2992
91.00	8429	184.00	3828	276.00	38176	374.00	405
92.00	10605	185.00	21936	277.00	25408	377.00	175
93.00	68112	186.00	154816	278.00	4217	383.00	3191
94.00	4418	187.00	46208	279.00	911	384.00	1239
95.00	758	188.00	4681	281.00	149	385.00	273
96.00	2555	189.00	10165	282.00	641	389.00	184
98.00	53792	190.00	1643	283.00	2944	390.00	1630
99.00	39528	191.00	4419	284.00	2097	391.00	1161
100.00	3403	192.00	13735	285.00	4250	392.00	631
101.00	22256	193.00	15464	286.00	644	393.00	172
102.00	1342	194.00	2182	287.00	69	395.00	108
103.00	6797	195.00	163	288.00	312	397.00	172
104.00	15055	196.00	31264	289.00	961	401.00	754
105.00	12928	198.00	1069568	290.00	944	402.00	4510
107.00	171776	199.00	71192	291.00	598	403.00	6193
108.00	25640	200.00	5766	292.00	1408	404.00	2539
110.00	290048	201.00	4283	293.00	5998	405.00	332
111.00	45304	203.00	8159	294.00	1349	410.00	61
112.00	5607	204.00	41648	296.00	84008	415.00	268
113.00	2155	205.00	72992	297.00	11688	416.00	58
114.00	389	206.00	295680	298.00	746	420.00	86
116.00	3208	207.00	36968	299.00	233	421.00	5363

Report Date: 12-Apr-2018 06:27:30 Chrom Revision: 2.2 10-Apr-2018 12:17:46
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 11-Apr-2018 11:14:30
Spectrum: Tune Spec :Average 1185-1187(10.84-10.85) Bgrd 1182(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 351

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	158336	208.00	10584	300.00	105	422.00	5637
118.00	12049	209.00	2581	301.00	1171	423.00	40488
119.00	1420	210.00	3597	302.00	897	424.00	7558
120.00	2497	211.00	10713	303.00	10038	425.00	702
121.00	169	212.00	1235	304.00	2457	427.00	52
122.00	12133	213.00	881	305.00	291	428.00	50
123.00	18560	214.00	399	306.00	189	429.00	54
124.00	7728	215.00	3144	307.00	189	432.00	206
125.00	7643	216.00	5112	308.00	892	433.00	65
127.00	572160	217.00	78496	309.00	937	434.00	229
128.00	44984	218.00	9896	310.00	1272	435.00	226
129.00	229632	219.00	1152	311.00	244	436.00	382
130.00	18648	221.00	46688	312.00	195	437.00	390
131.00	3843	222.00	1532	313.00	829	438.00	293
132.00	1680	223.00	18160	314.00	4063	441.00	98736
133.00	248	224.00	162432	315.00	9994	442.00	645056
134.00	7328	225.00	40368	316.00	5227	443.00	126440
135.00	19480	226.00	967	317.00	856	444.00	12527
136.00	7417	227.00	71168	318.00	245	445.00	591
137.00	9398	228.00	9378	319.00	279	475.00	56
138.00	1832	229.00	14757	320.00	365		

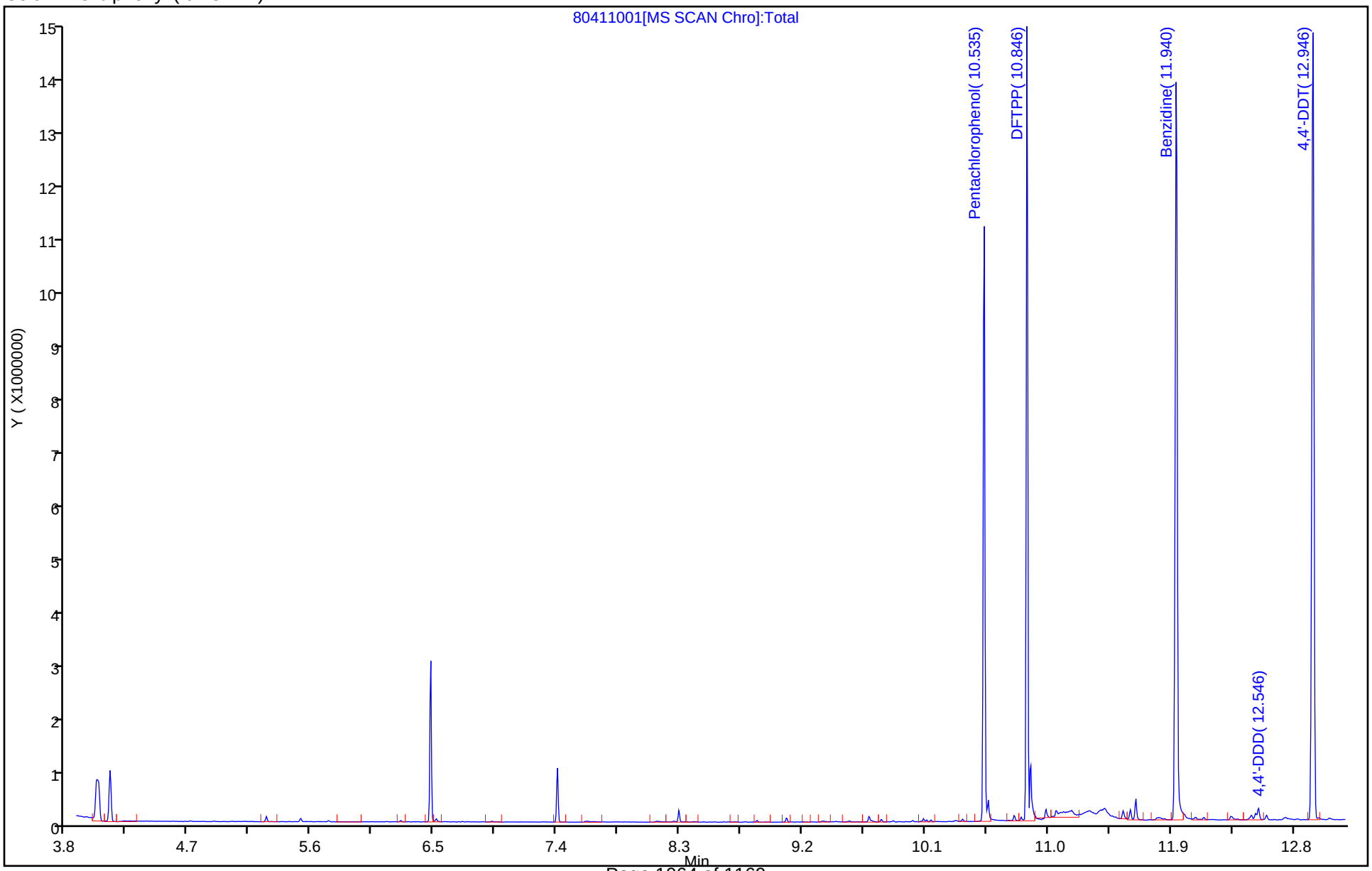
Report Date: 12-Apr-2018 06:27:30 Chrom Revision: 2.2 10-Apr-2018 12:17:46

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D

Injection Date:	11-Apr-2018 11:14:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

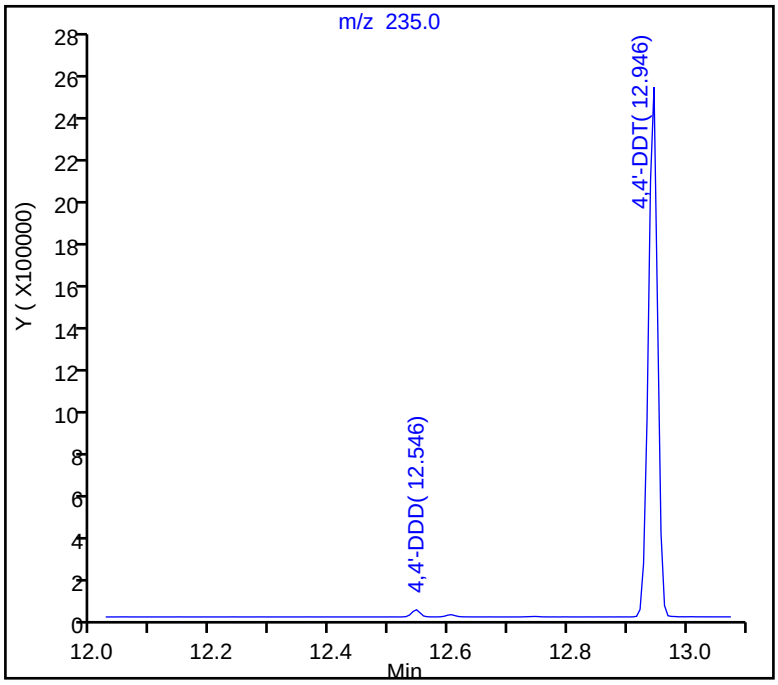


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D
Injection Date: 11-Apr-2018 11:14:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 2736186
166 4,4'-DDD, Area = 34299
167 4,4'-DDE, Area = 3798

%Breakdown: 1.37%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

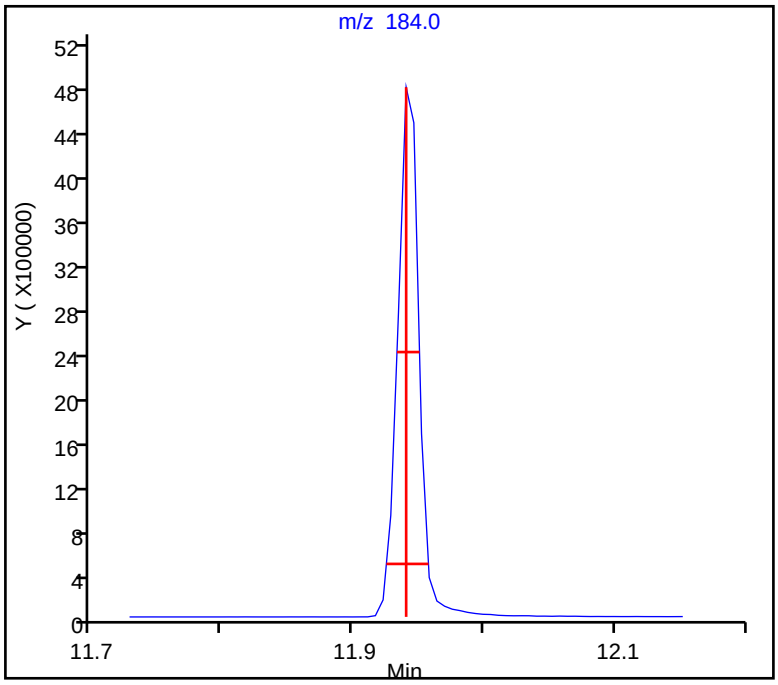
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D
Injection Date: 11-Apr-2018 11:14:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

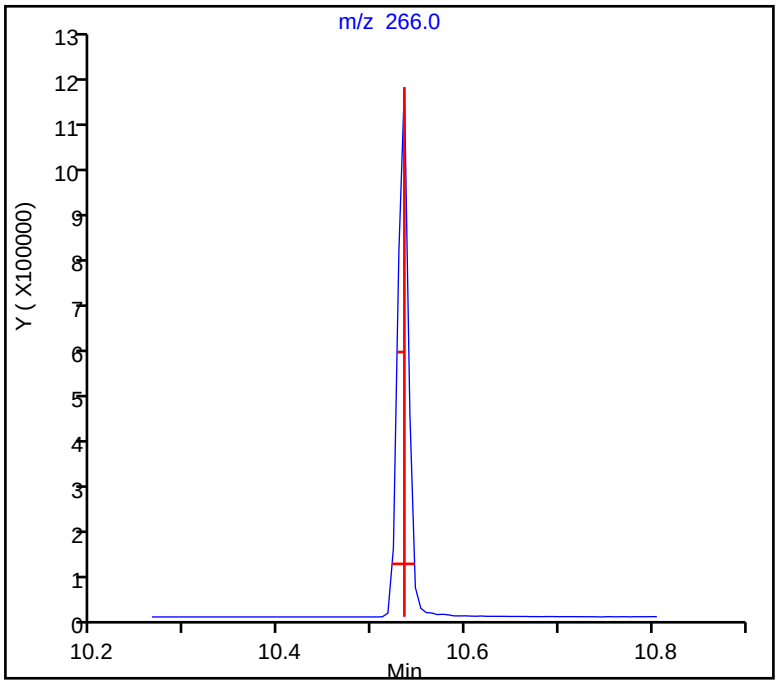
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411001.D
Injection Date: 11-Apr-2018 11:14:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.013 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 19-Apr-2018 06:58:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: primer
Misc. Info.: PRIMER
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:40 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 07:40:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.539	10.539	0.000	91	633982	NR	NR	
160 Benzidine	184	11.939	11.939	0.000	99	3010227	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.145	12.145	0.000	76	2291		NR	
166 4,4'-DDD	235	12.545	12.545	0.000	86	8237		NR	
171 4,4'-DDT	235	12.945	12.945	0.000	96	1761351	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

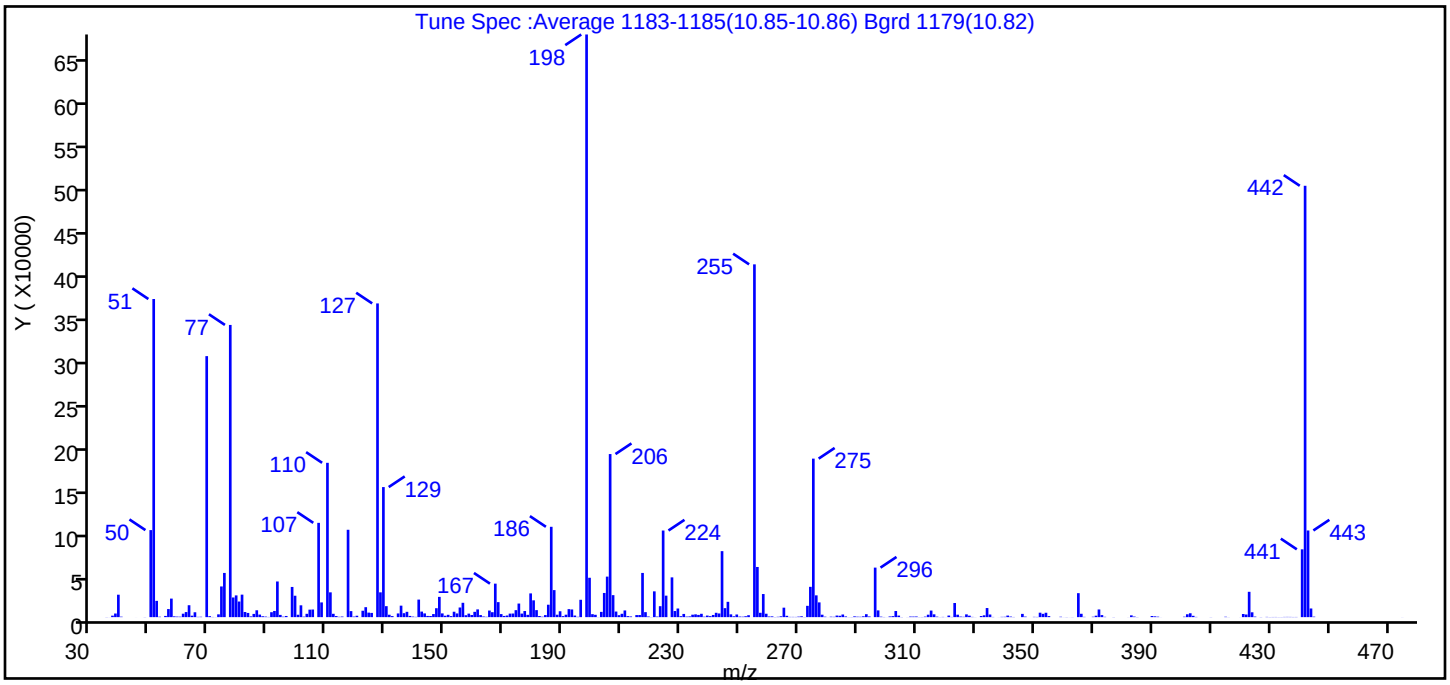
SMDFTPPW_00013 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D
Injection Date: 19-Apr-2018 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	54.6
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	44.8
70	Less than 2.0 percent of mass 69	0.2 (0.4)
127	25.0 - 75.0 percent of mass 198	53.8
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.8
275	10.0 - 30.0 percent of mass 198	27.2
365	Greater than 0.75 percent of mass 198	4.1
441	Present but less than mass 443	11.6 (78.2)
442	40.0 - 110.0 percent of mass 198	74.0
443	15.0 - 24.0 percent of mass 442	14.9 (20.1)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 19-Apr-2018 06:58:30
Spectrum: Tune Spec :Average 1183-1185(10.85-10.86) Bgrd 1179(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 348

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	127	137.00	6187	227.00	46264	317.00	590
36.00	57	138.00	1415	228.00	7100	318.00	112
37.00	1719	139.00	637	229.00	10048	319.00	263
38.00	4212	140.00	304	230.00	1104	320.00	67
39.00	26104	141.00	20416	231.00	3725	321.00	1836
40.00	540	142.00	6460	232.00	634	322.00	235
45.00	28	143.00	4342	233.00	859	323.00	16432
48.00	120	144.00	1409	234.00	2861	324.00	2845
50.00	101240	145.00	1325	235.00	3260	325.00	668
51.00	370048	146.00	3585	236.00	2609	326.00	414
52.00	18928	147.00	10393	237.00	3902	327.00	3230
53.00	500	148.00	23584	238.00	538	328.00	1718
55.00	1410	149.00	4355	239.00	1834	329.00	286
56.00	9396	150.00	1640	240.00	1157	330.00	79
57.00	21576	151.00	2732	241.00	2536	332.00	1302
58.00	905	152.00	1192	242.00	5066	333.00	2130
59.00	631	153.00	6303	243.00	4285	334.00	10600
60.00	522	154.00	4300	244.00	76768	335.00	3046
61.00	4001	155.00	11227	245.00	10458	336.00	230
62.00	5894	156.00	16688	246.00	17832	338.00	50
63.00	13864	157.00	2235	247.00	3245	339.00	336
64.00	1703	158.00	4096	248.00	992	340.00	407
65.00	5670	159.00	2472	249.00	3077	341.00	1818
66.00	327	160.00	6170	250.00	681	342.00	660
67.00	443	161.00	9012	251.00	542	343.00	203
69.00	303616	162.00	2410	252.00	1055	346.00	3792
70.00	1119	163.00	743	253.00	2236	347.00	618
71.00	221	164.00	400	255.00	410368	350.00	333
72.00	87	165.00	7662	256.00	58360	351.00	244
73.00	3246	166.00	5753	257.00	5065	352.00	5172
74.00	35696	167.00	38968	258.00	26872	353.00	3849
75.00	51424	168.00	17464	259.00	3964	354.00	5116
77.00	339904	169.00	3551	260.00	768	355.00	1214

Report Date: 19-Apr-2018 10:58:41 Chrom Revision: 2.2 16-Apr-2018 07:57:50
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 19-Apr-2018 06:58:30
Spectrum: Tune Spec :Average 1183-1185(10.85-10.86) Bgrd 1179(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 348

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	22880	170.00	1397	261.00	882	359.00	460
79.00	25304	171.00	1892	262.00	164	360.00	59
80.00	18160	172.00	4095	263.00	400	361.00	134
81.00	26176	173.00	4204	264.00	957	362.00	50
82.00	5989	174.00	8126	265.00	11022	363.00	107
83.00	4888	175.00	15814	266.00	1557	365.00	27896
84.00	856	176.00	4130	267.00	296	366.00	3916
85.00	3762	177.00	7096	268.00	297	367.00	318
86.00	7984	178.00	2684	269.00	259	370.00	476
87.00	2990	179.00	27624	270.00	594	371.00	1680
88.00	1034	180.00	19552	271.00	996	372.00	8927
89.00	657	181.00	8149	272.00	163	373.00	2383
90.00	249	182.00	1318	273.00	13160	374.00	366
91.00	5743	183.00	491	274.00	35248	377.00	140
92.00	7179	184.00	2377	275.00	184384	382.00	61
93.00	41488	185.00	14454	276.00	25352	383.00	2076
94.00	2618	186.00	105088	277.00	17160	384.00	665
95.00	521	187.00	31440	278.00	2838	385.00	149
96.00	1361	188.00	2821	279.00	527	390.00	1329
98.00	35120	189.00	6835	280.00	52	391.00	921
99.00	24896	190.00	1185	281.00	533	392.00	557
100.00	2784	191.00	2849	282.00	384	393.00	53
101.00	13755	192.00	9321	283.00	1848	401.00	527
102.00	591	193.00	8928	284.00	1588	402.00	3328
103.00	3871	194.00	1853	285.00	3084	403.00	4510
104.00	8723	195.00	388	286.00	827	404.00	1541
105.00	8869	196.00	20192	287.00	115	405.00	264
107.00	109688	198.00	677760	288.00	158	410.00	121
108.00	17136	199.00	45808	289.00	901	415.00	458
110.00	179520	200.00	3456	290.00	540	416.00	87
111.00	28848	201.00	2741	291.00	432	420.00	57
112.00	3904	202.00	118	292.00	958	421.00	3657
113.00	1255	203.00	6119	293.00	3434	422.00	3071
114.00	405	204.00	28128	294.00	798	423.00	29472

Report Date: 19-Apr-2018 10:58:41 Chrom Revision: 2.2 16-Apr-2018 07:57:50
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 19-Apr-2018 06:58:30
Spectrum: Tune Spec :Average 1183-1185(10.85-10.86) Bgrd 1179(10.82)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 348

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	701	205.00	47144	296.00	57608	424.00	5638
117.00	101624	206.00	189696	297.00	7855	425.00	628
118.00	7001	207.00	25584	298.00	570	427.00	148
119.00	633	208.00	6509	299.00	192	429.00	285
120.00	1623	209.00	2275	300.00	54	430.00	154
121.00	45	210.00	3912	301.00	807	431.00	197
122.00	7441	211.00	7794	302.00	1167	432.00	215
123.00	11583	212.00	1185	303.00	7118	433.00	138
124.00	5252	213.00	791	304.00	1803	434.00	153
125.00	4926	215.00	2395	305.00	163	435.00	255
127.00	364928	216.00	2458	307.00	83	436.00	294
128.00	28848	217.00	51416	308.00	696	437.00	269
129.00	151296	218.00	5811	309.00	662	438.00	203
130.00	12779	219.00	764	310.00	749	439.00	221
131.00	2803	220.00	147	311.00	127	441.00	78880
132.00	1220	221.00	30000	312.00	174	442.00	501760
133.00	13	222.00	645	313.00	619	443.00	100808
134.00	4296	223.00	12758	314.00	2835	444.00	10076
135.00	13360	224.00	100768	315.00	7648	445.00	563
136.00	4595	225.00	24992	316.00	3274	475.00	56

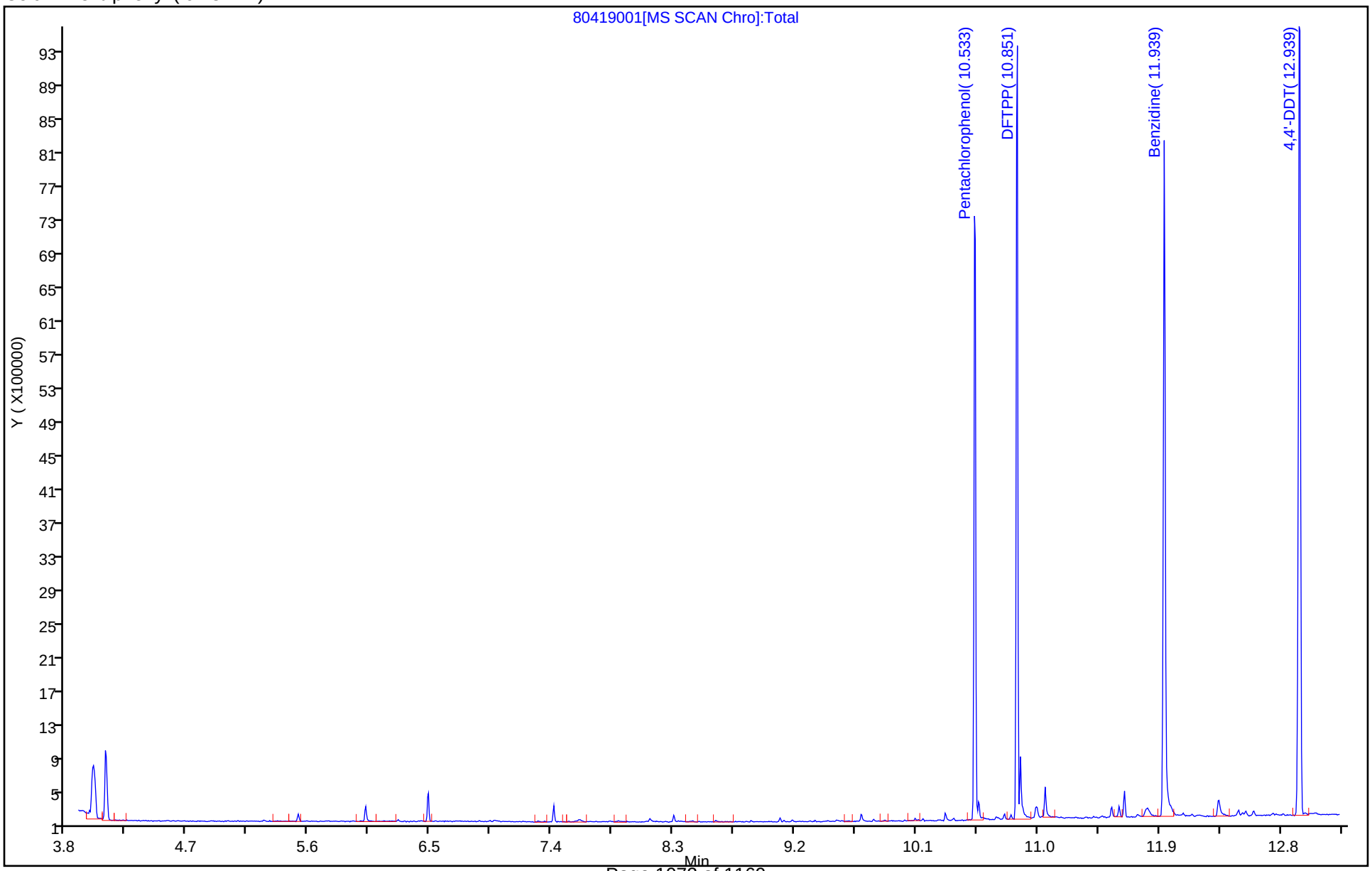
Report Date: 19-Apr-2018 10:58:41 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D

Injection Date:	19-Apr-2018 06:58:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

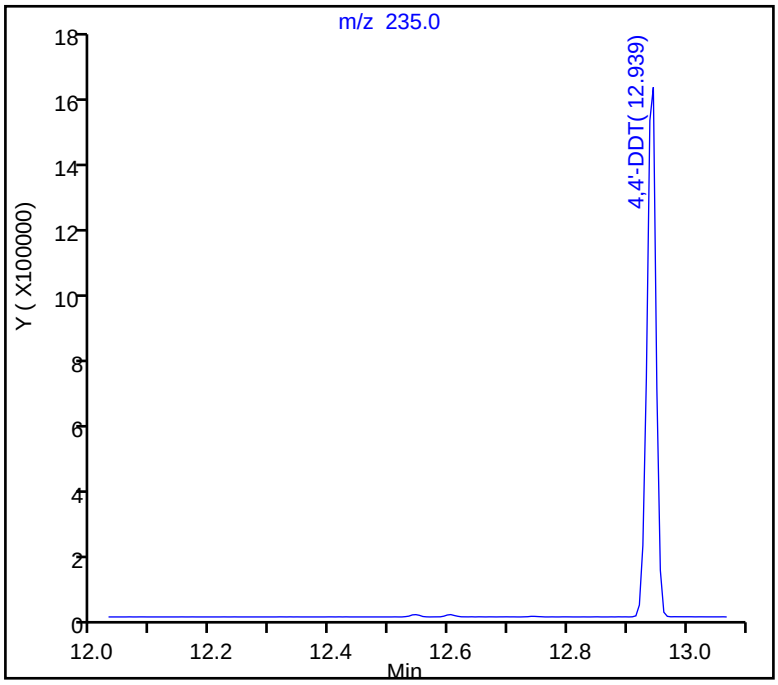


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D
Injection Date: 19-Apr-2018 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 1761351
166 4,4'-DDD, Area = 8237
167 4,4'-DDE, Area = 2291

%Breakdown: 0.59%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

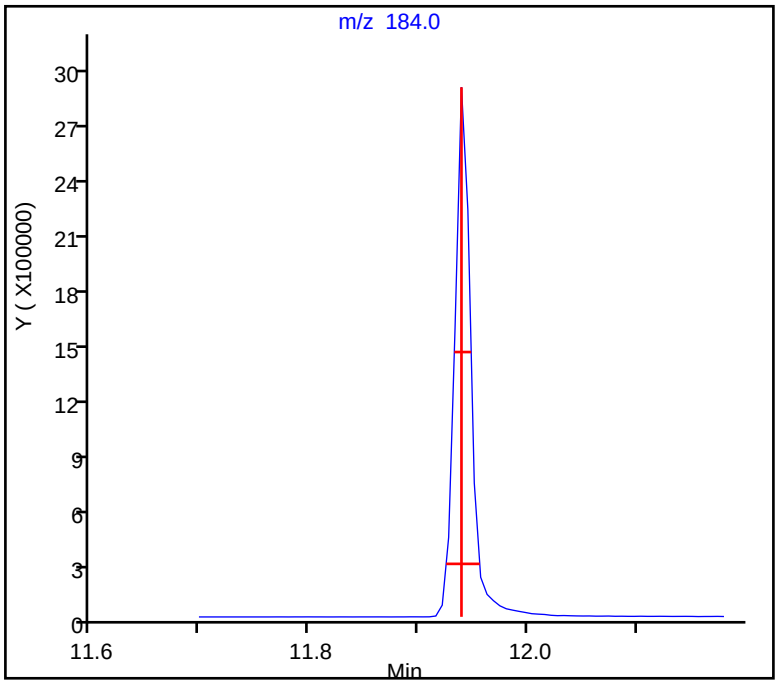
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D
Injection Date: 19-Apr-2018 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.014 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

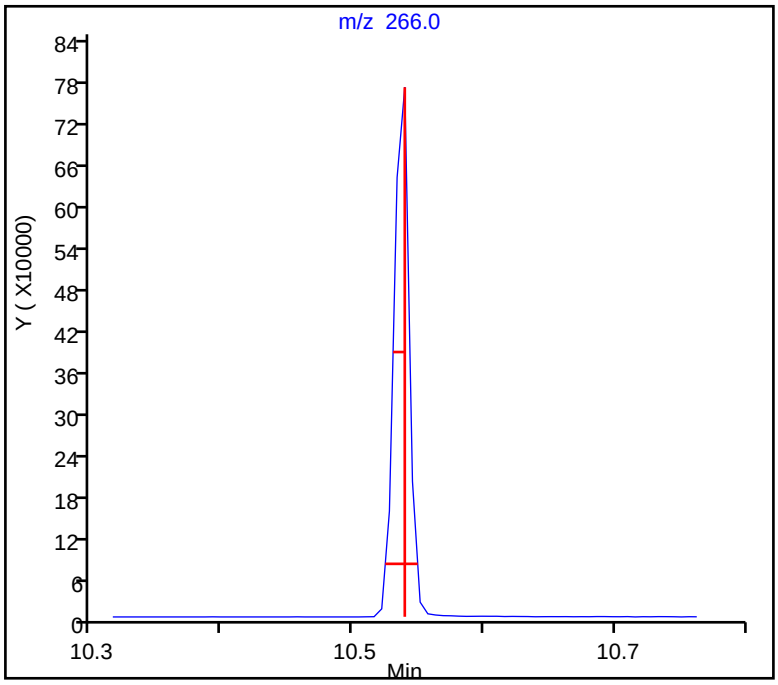
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419001.D
Injection Date: 19-Apr-2018 06:58:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 0.7, Max. Tailing < 2.00
Passed



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 20-Apr-2018 06:25:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 20-Apr-2018 11:16:57 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 20-Apr-2018 06:50:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.529	10.529	0.000	86	555059	NR	NR	
160 Benzidine	184	11.929	11.929	0.000	99	2399652	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.129	12.129	0.000	86	2526		NR	
166 4,4'-DDD	235	12.529	12.529	0.000	93	14832		NR	
171 4,4'-DDT	235	12.923	12.923	0.000	94	1618873	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

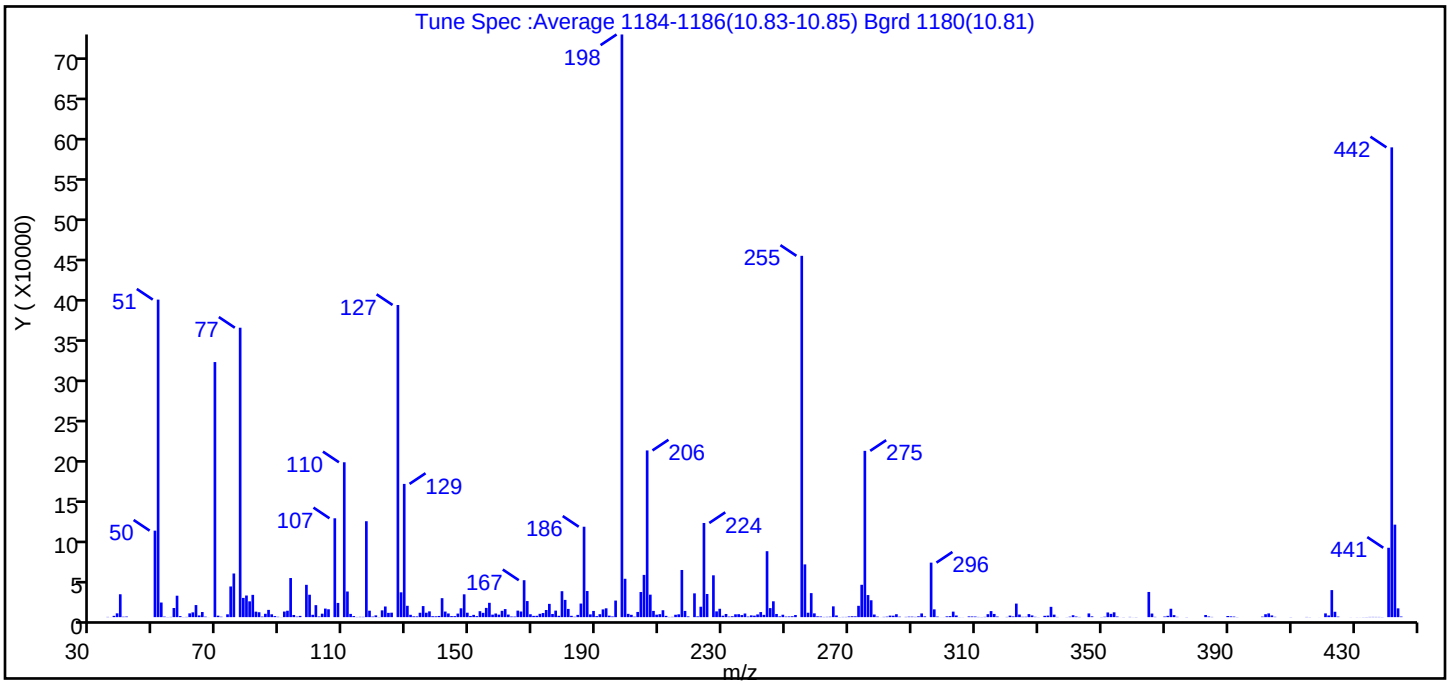
SMDFTPPW_00013 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D
Injection Date: 20-Apr-2018 06:25:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	54.5
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	43.8
70	Less than 2.0 percent of mass 69	0.3 (0.6)
127	25.0 - 75.0 percent of mass 198	53.6
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.6
275	10.0 - 30.0 percent of mass 198	28.5
365	Greater than 0.75 percent of mass 198	4.3
441	Present but less than mass 443	11.9 (75.0)
442	40.0 - 110.0 percent of mass 198	80.6
443	15.0 - 24.0 percent of mass 442	15.9 (19.7)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 20-Apr-2018 06:25:30
Spectrum: Tune Spec :Average 1184-1186(10.83-10.85) Bgrd 1180(10.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	286	135.00	13821	222.00	934	312.00	196
36.00	70	136.00	5517	223.00	12994	313.00	339
37.00	1628	137.00	7224	224.00	117544	314.00	3690
38.00	4759	138.00	1154	225.00	28920	315.00	7559
39.00	28560	139.00	1006	227.00	52232	316.00	3994
40.00	533	140.00	1487	228.00	7215	317.00	774
41.00	746	141.00	23688	229.00	10448	320.00	270
50.00	107984	142.00	6974	230.00	1777	321.00	1896
51.00	396416	143.00	4565	231.00	3955	322.00	877
52.00	18248	144.00	1309	232.00	712	323.00	16928
53.00	667	145.00	1263	233.00	1132	324.00	3253
54.00	185	146.00	4457	234.00	3540	325.00	439
55.00	297	147.00	11053	235.00	3681	326.00	493
56.00	11417	148.00	28496	236.00	2571	327.00	3827
57.00	26760	149.00	5540	237.00	4535	328.00	2123
58.00	1283	150.00	1502	238.00	732	329.00	432
59.00	142	151.00	2843	239.00	2219	330.00	125
60.00	300	152.00	1262	240.00	1845	332.00	1653
61.00	4707	153.00	7413	241.00	3379	333.00	1934
62.00	5993	154.00	5356	242.00	6340	334.00	12863
63.00	15076	155.00	11546	243.00	2850	335.00	3120
64.00	2117	156.00	17896	244.00	82336	336.00	266
65.00	6405	157.00	3113	245.00	11285	339.00	119
66.00	615	158.00	4521	246.00	19792	340.00	540
67.00	59	159.00	3123	247.00	3973	341.00	2405
69.00	318464	160.00	7913	248.00	926	342.00	749
70.00	1840	161.00	10041	249.00	3014	343.00	241
71.00	529	162.00	3217	250.00	691	346.00	4625
73.00	3528	163.00	808	251.00	891	347.00	980
74.00	38304	164.00	697	252.00	1085	350.00	171
75.00	54496	165.00	8144	253.00	2652	351.00	515
77.00	361344	166.00	7034	255.00	451072	352.00	5849
78.00	24016	167.00	46112	256.00	65856	353.00	4099

Report Date: 20-Apr-2018 11:16:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 20-Apr-2018 06:25:30
Spectrum: Tune Spec :Average 1184-1186(10.83-10.85) Bgrd 1180(10.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	27024	168.00	20096	257.00	5511	354.00	6003
80.00	19744	169.00	3617	258.00	29992	355.00	764
81.00	27816	170.00	1588	259.00	4726	356.00	32
82.00	6845	171.00	1683	260.00	1015	357.00	155
83.00	6111	172.00	4148	261.00	789	359.00	299
84.00	699	173.00	5131	262.00	263	360.00	87
85.00	4185	174.00	8912	263.00	391	361.00	166
86.00	9071	175.00	16568	264.00	551	365.00	31440
87.00	3551	176.00	3956	265.00	13476	366.00	4500
88.00	1322	177.00	8145	266.00	2085	367.00	341
89.00	454	178.00	1685	267.00	165	370.00	752
90.00	112	179.00	32392	268.00	279	371.00	1635
91.00	6986	180.00	21528	269.00	291	372.00	10487
92.00	7997	181.00	10284	270.00	826	373.00	2484
93.00	48840	182.00	1648	271.00	1107	374.00	381
94.00	2712	183.00	463	272.00	1011	377.00	178
95.00	665	184.00	2829	273.00	14145	383.00	2678
96.00	1568	185.00	16968	274.00	40400	384.00	833
98.00	40336	186.00	112880	275.00	207616	385.00	294
99.00	27968	187.00	32608	276.00	27584	390.00	1419
100.00	2927	188.00	3454	277.00	21072	391.00	958
101.00	14973	189.00	7751	278.00	3274	392.00	704
102.00	805	190.00	1247	279.00	736	393.00	164
103.00	4317	191.00	3670	280.00	50	401.00	649
104.00	10682	192.00	9675	281.00	345	402.00	3642
105.00	9839	193.00	11019	282.00	622	403.00	4682
107.00	123424	194.00	1863	283.00	1930	404.00	2130
108.00	17744	195.00	857	284.00	1797	405.00	418
110.00	193344	196.00	20696	285.00	3651	410.00	170
111.00	32008	198.00	727424	286.00	607	415.00	251
112.00	4057	199.00	47904	288.00	335	416.00	135
113.00	1319	200.00	4104	289.00	647	419.00	50
114.00	249	201.00	2895	290.00	624	421.00	4667
115.00	406	202.00	600	291.00	345	422.00	2090

Report Date: 20-Apr-2018 11:16:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 20-Apr-2018 06:25:30
Spectrum: Tune Spec :Average 1184-1186(10.83-10.85) Bgrd 1180(10.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	366	203.00	6500	292.00	1066	423.00	33776
117.00	119760	204.00	31360	293.00	4630	424.00	6702
118.00	8054	205.00	52744	294.00	947	425.00	664
119.00	700	206.00	208128	296.00	68056	429.00	85
120.00	2192	207.00	28072	297.00	9719	431.00	91
121.00	214	208.00	7787	298.00	729	432.00	56
122.00	8466	209.00	3091	299.00	58	433.00	130
123.00	13295	210.00	3718	300.00	68	434.00	180
124.00	5347	211.00	8620	301.00	964	435.00	274
125.00	5558	212.00	1588	302.00	1239	436.00	303
127.00	389696	213.00	254	303.00	6886	437.00	274
128.00	31000	214.00	366	304.00	2045	438.00	264
129.00	166336	215.00	2988	305.00	127	439.00	163
130.00	14160	216.00	3541	306.00	84	441.00	86616
131.00	2930	217.00	58880	308.00	920	442.00	586496
132.00	984	218.00	7769	309.00	836	443.00	115488
133.00	917	219.00	930	310.00	757	444.00	10987
134.00	5473	221.00	29688	311.00	276	445.00	747

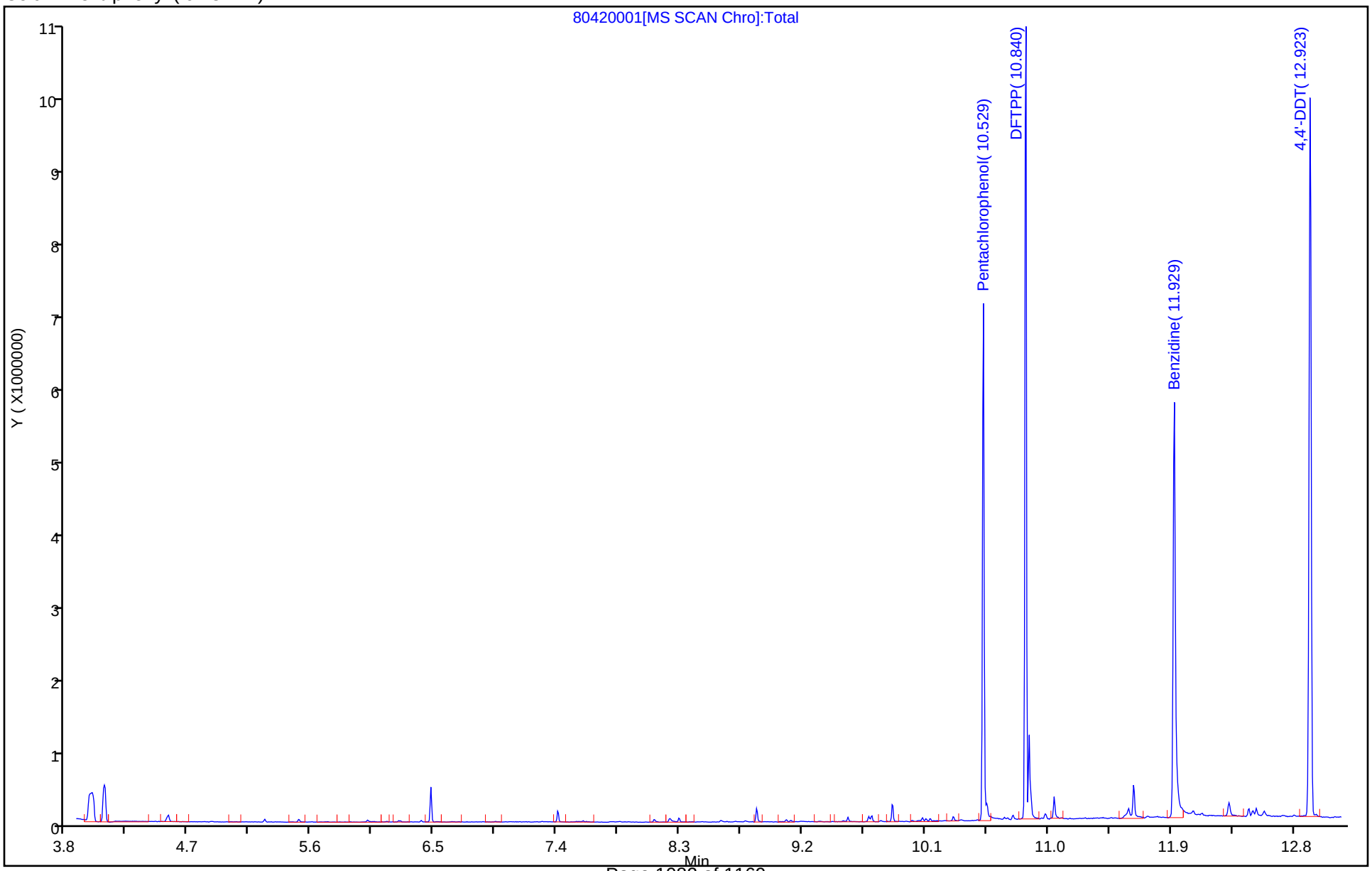
Report Date: 20-Apr-2018 11:16:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D

Injection Date:	20-Apr-2018 06:25:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

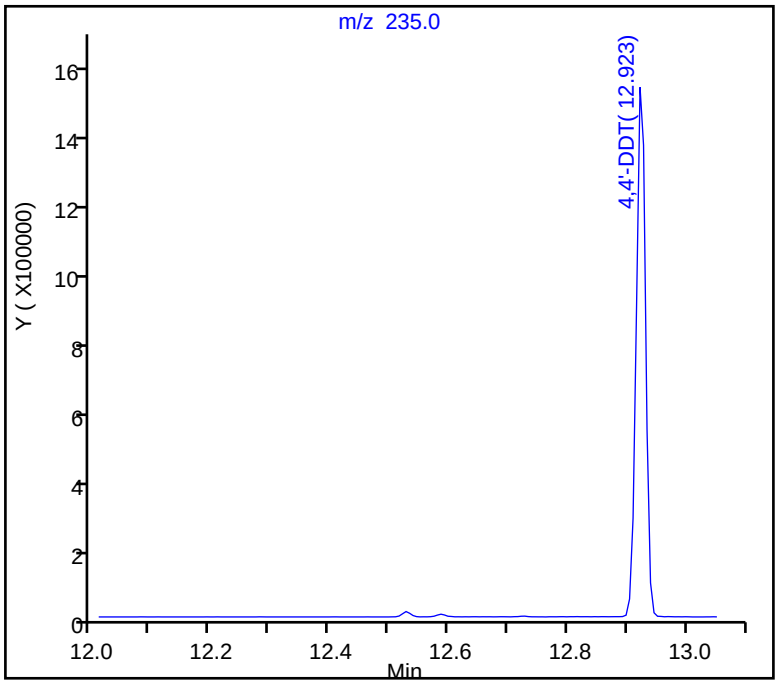


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D
Injection Date: 20-Apr-2018 06:25:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 1618873
166 4,4'-DDD, Area = 14832
167 4,4'-DDE, Area = 2526

%Breakdown: 1.06%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

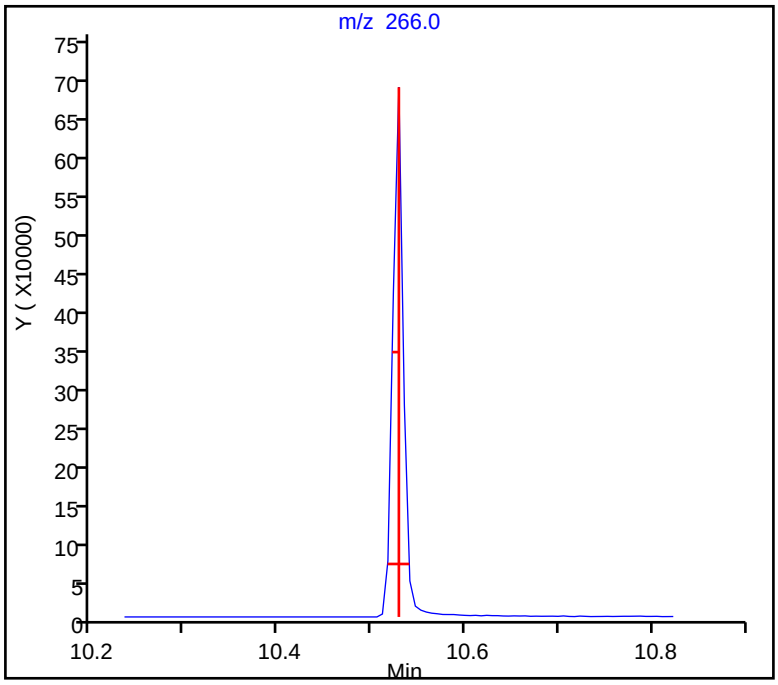
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D
Injection Date: 20-Apr-2018 06:25:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 0.9, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

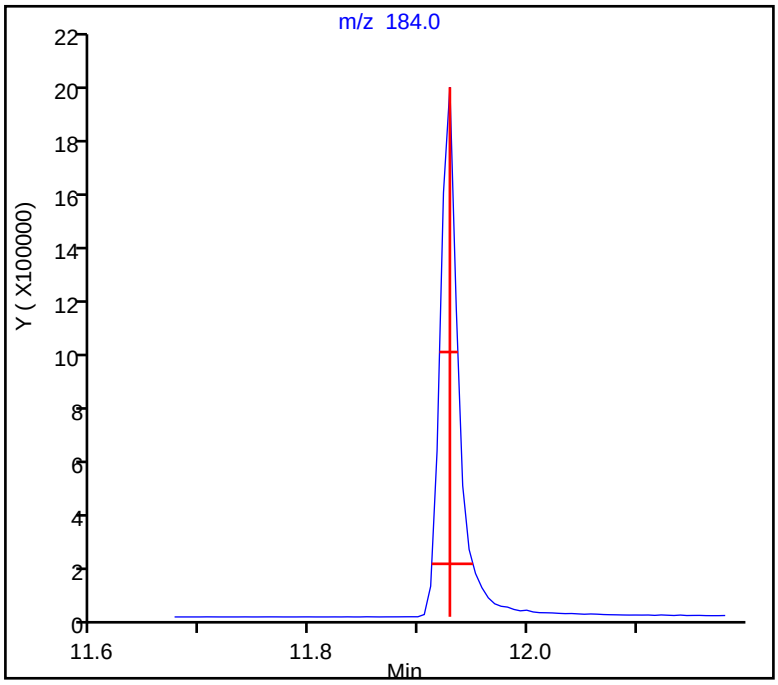
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420001.D
Injection Date: 20-Apr-2018 06:25:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.021 (min.)
Front Width = 0.017 (min.)

Tailing Factor = 1.3, Max. Tailing < 2.00
Passed



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 23-Apr-2018 06:16:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: primer
Misc. Info.: PRIMER
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 06:59:54 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 23-Apr-2018 06:58:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.464	10.464	0.000	91	670972	NR	NR	
160 Benzidine	184	11.858	11.858	0.000	99	4691558	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.064	12.064	0.000	85	3110		NR	
166 4,4'-DDD	235	12.511	12.511	0.000	92	8861		NR	
171 4,4'-DDT	235	12.846	12.846	0.000	98	2132362	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

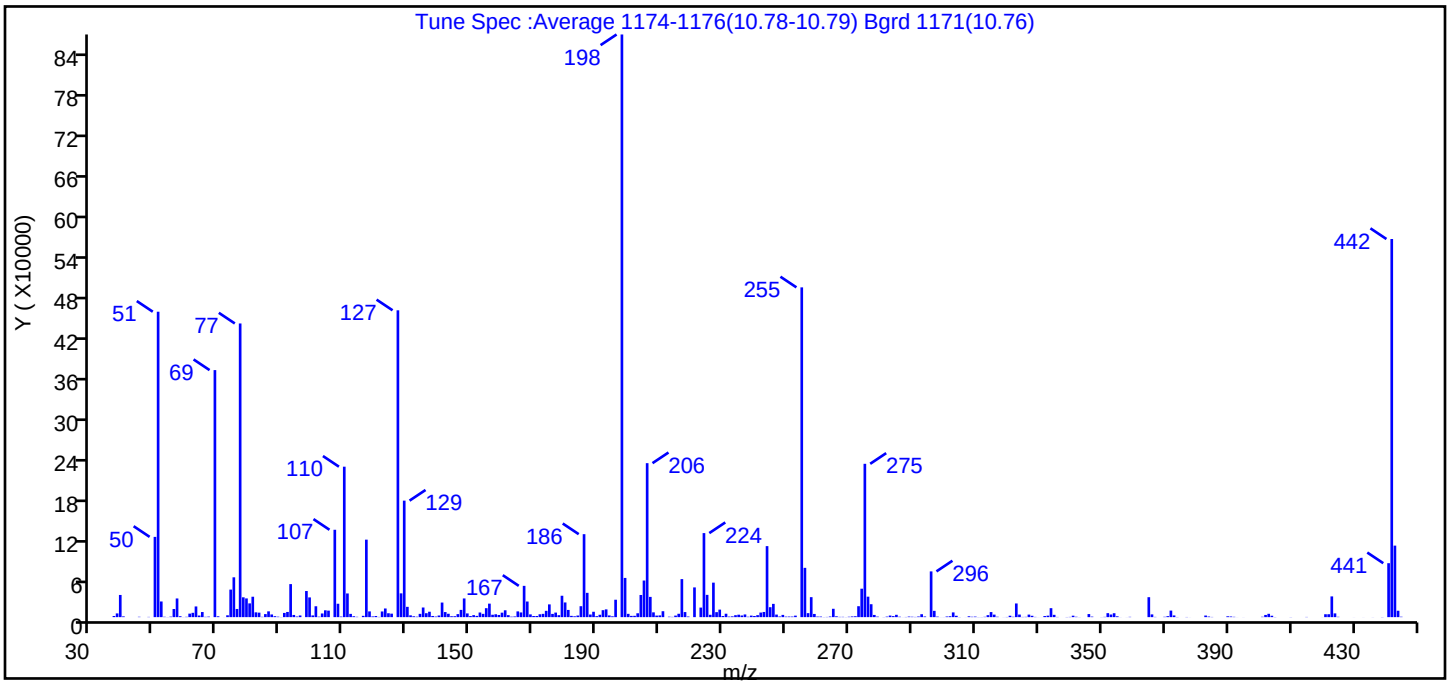
SMDFTPPW_00013 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D
Injection Date: 23-Apr-2018 06:16:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	52.4
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	42.4
70	Less than 2.0 percent of mass 69	0.1 (0.3)
127	25.0 - 75.0 percent of mass 198	52.7
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.7
275	10.0 - 30.0 percent of mass 198	26.3
365	Greater than 0.75 percent of mass 198	3.4
441	Present but less than mass 443	9.3 (75.4)
442	40.0 - 110.0 percent of mass 198	64.9
443	15.0 - 24.0 percent of mass 442	12.3 (18.9)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 23-Apr-2018 06:16:30
Spectrum: Tune Spec :Average 1174-1176(10.78-10.79) Bgrd 1171(10.76)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1717	133.00	684	219.00	925	309.00	578
38.00	5551	134.00	4885	221.00	44232	310.00	797
39.00	33000	135.00	14336	223.00	14209	311.00	172
40.00	1124	136.00	5849	224.00	125016	312.00	178
45.00	526	137.00	8055	225.00	33144	313.00	489
48.00	360	138.00	1746	226.00	3488	314.00	2948
50.00	119392	139.00	866	227.00	51320	315.00	7534
51.00	454336	140.00	2423	228.00	7419	316.00	3732
52.00	23304	141.00	21704	229.00	11202	317.00	607
53.00	554	142.00	7559	230.00	1676	319.00	82
54.00	151	143.00	5022	231.00	5076	320.00	265
55.00	758	144.00	1350	232.00	844	321.00	2087
56.00	12125	145.00	1385	233.00	1173	322.00	548
57.00	27792	146.00	4482	234.00	2889	323.00	20352
58.00	1364	147.00	10792	235.00	3629	324.00	3838
59.00	114	148.00	27800	236.00	2473	325.00	310
60.00	491	149.00	5528	237.00	4011	326.00	442
61.00	5215	150.00	1634	238.00	604	327.00	3793
62.00	6439	151.00	2995	239.00	2273	328.00	2014
63.00	15917	152.00	1876	240.00	1710	329.00	350
64.00	2395	153.00	6879	241.00	2957	330.00	67
65.00	7599	154.00	4891	242.00	6813	331.00	51
66.00	450	155.00	13330	243.00	7689	332.00	1623
67.00	785	156.00	20088	244.00	105648	333.00	2196
69.00	367488	157.00	3565	245.00	14792	334.00	13354
70.00	1250	158.00	4268	246.00	19752	335.00	3434
72.00	66	159.00	3228	247.00	3809	336.00	312
73.00	2759	160.00	6652	248.00	972	339.00	227
74.00	40976	161.00	10194	249.00	3346	340.00	350
75.00	59248	162.00	2960	250.00	762	341.00	2158
76.00	12154	163.00	719	251.00	883	342.00	579
77.00	436864	164.00	1008	252.00	847	343.00	133
78.00	29504	165.00	8571	253.00	2233	346.00	4578

Report Date: 24-Apr-2018 06:59:55 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 23-Apr-2018 06:16:30
Spectrum: Tune Spec :Average 1174-1176(10.78-10.79) Bgrd 1171(10.76)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	27856	166.00	6978	255.00	490560	347.00	785
80.00	20472	167.00	46544	256.00	73328	350.00	125
81.00	30368	168.00	23248	257.00	5945	351.00	397
82.00	7147	169.00	4090	258.00	29736	352.00	5926
83.00	6682	170.00	1698	259.00	4758	353.00	3910
84.00	470	171.00	1710	260.00	846	354.00	5821
85.00	4528	172.00	4283	261.00	844	355.00	1229
86.00	8624	173.00	4885	262.00	176	356.00	86
87.00	3984	174.00	9374	263.00	314	358.00	65
88.00	1421	175.00	18976	264.00	928	359.00	438
89.00	697	176.00	4828	265.00	12438	365.00	29672
90.00	181	177.00	6787	266.00	1241	366.00	4081
91.00	6276	178.00	2899	267.00	392	367.00	348
92.00	7711	179.00	31832	268.00	439	370.00	522
93.00	49152	180.00	21848	269.00	140	371.00	1473
94.00	3251	181.00	10735	270.00	592	372.00	9734
95.00	924	182.00	1909	271.00	1049	373.00	2527
96.00	2475	183.00	1265	272.00	1326	374.00	238
98.00	38856	184.00	2385	273.00	16269	377.00	255
99.00	29352	185.00	16283	274.00	42312	378.00	57
100.00	2543	186.00	123416	275.00	228096	383.00	2376
101.00	16194	187.00	36152	276.00	30448	384.00	917
102.00	691	188.00	3908	277.00	19232	385.00	304
103.00	5464	189.00	8001	278.00	3275	390.00	1265
104.00	10165	190.00	1448	279.00	799	391.00	950
105.00	9679	191.00	3543	281.00	169	392.00	471
107.00	129968	192.00	10359	282.00	774	393.00	57
108.00	19928	193.00	11552	283.00	2370	395.00	63
109.00	842	194.00	2526	284.00	1539	401.00	562
110.00	223808	195.00	1238	285.00	3471	402.00	3265
111.00	35240	196.00	25904	286.00	650	403.00	4960
112.00	4853	198.00	866752	287.00	73	404.00	2080
113.00	1330	199.00	58336	288.00	271	405.00	233
114.00	506	200.00	4899	289.00	864	410.00	175

Report Date: 24-Apr-2018 06:59:55 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 23-Apr-2018 06:16:30
Spectrum: Tune Spec :Average 1174-1176(10.78-10.79) Bgrd 1171(10.76)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 335

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	25	201.00	1888	290.00	597	415.00	304
116.00	1940	202.00	1977	291.00	333	420.00	63
117.00	115280	203.00	5766	292.00	959	421.00	4317
118.00	8540	204.00	32968	293.00	4353	422.00	4334
119.00	1059	205.00	54464	294.00	966	423.00	30856
120.00	1673	206.00	229056	296.00	68056	424.00	5571
121.00	353	207.00	30128	297.00	9362	425.00	499
122.00	8443	208.00	7141	298.00	820	430.00	52
123.00	12879	209.00	2329	299.00	77	433.00	52
124.00	5792	210.00	2591	300.00	104	436.00	88
125.00	5186	211.00	8815	301.00	933	439.00	199
127.00	456448	213.00	680	302.00	1336	441.00	80248
128.00	35384	214.00	391	303.00	7048	442.00	562496
129.00	173312	215.00	2296	304.00	2023	443.00	106384
130.00	15326	216.00	5022	305.00	194	444.00	9534
131.00	2687	217.00	56576	307.00	61	445.00	621
132.00	1273	218.00	7546	308.00	1266		

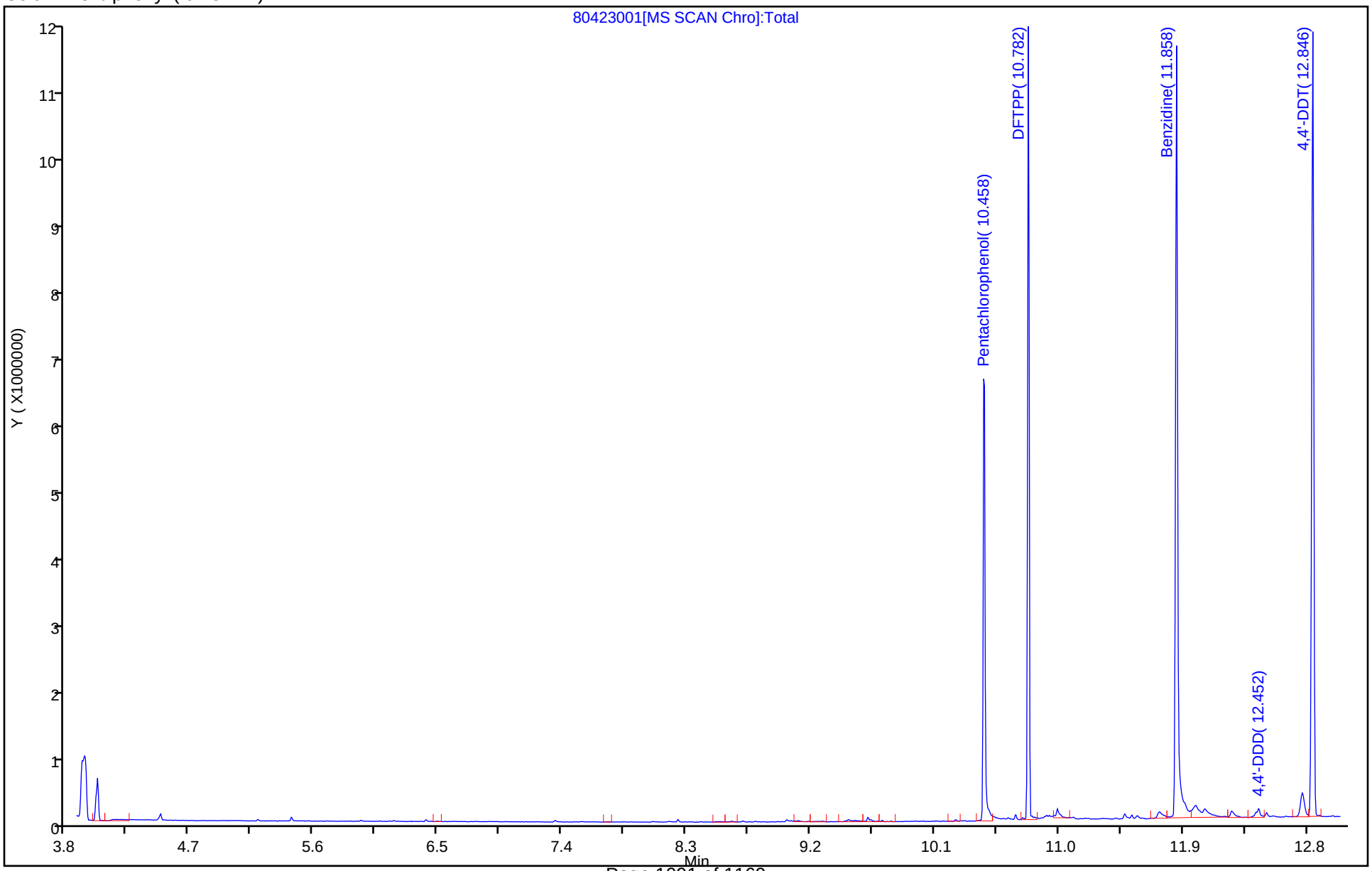
Report Date: 24-Apr-2018 06:59:55 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D

Injection Date:	23-Apr-2018 06:16:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

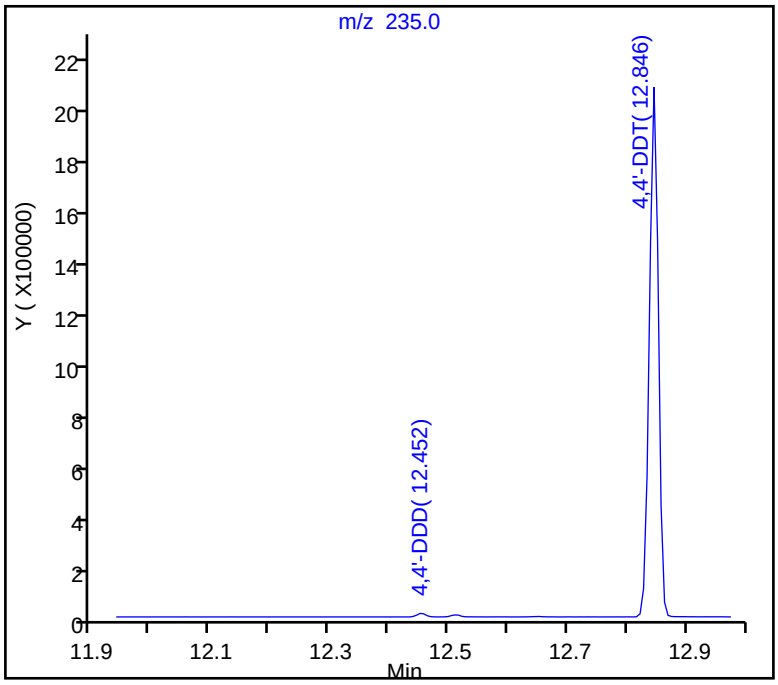


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D
Injection Date: 23-Apr-2018 06:16:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 2132362
166 4,4'-DDD, Area = 8861
167 4,4'-DDE, Area = 3110

%Breakdown: 0.56%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

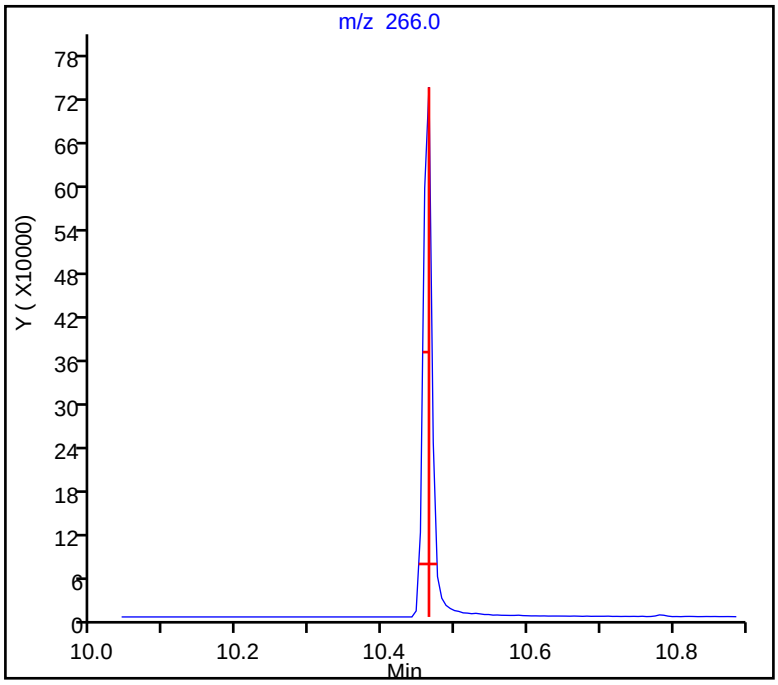
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D
Injection Date: 23-Apr-2018 06:16:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.014 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

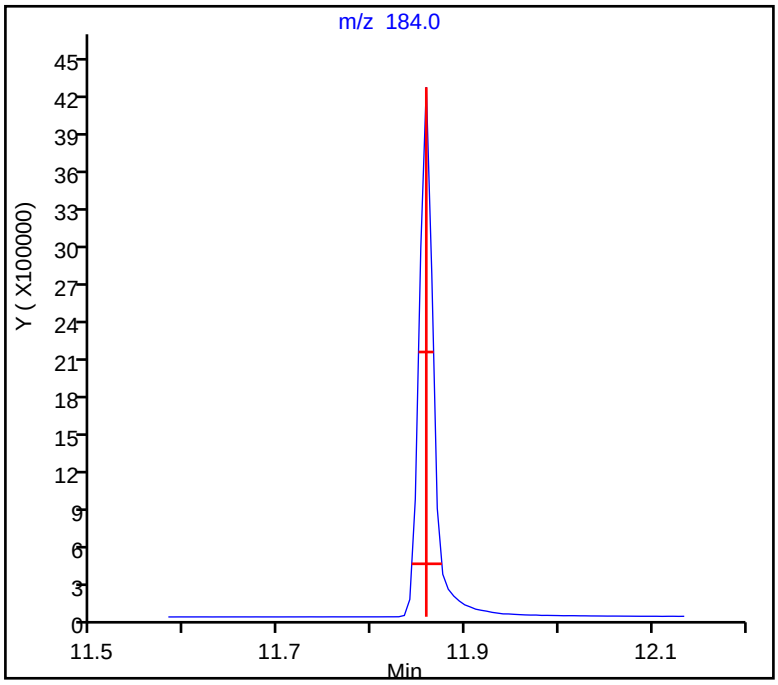
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423001.D
Injection Date: 23-Apr-2018 06:16:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.017 (min.)
Front Width = 0.016 (min.)

Tailing Factor = 1.1, Max. Tailing < 2.00
Passed



TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D
Lims ID: dftpp
Client ID:
Sample Type: DFTPP
Inject. Date: 25-Apr-2018 06:41:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-001
Misc. Info.: DFTPP
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:04 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 06:59:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
143 Pentachlorophenol	266	10.438	10.438	0.000	91	996723	NR	NR	
160 Benzidine	184	11.826	11.826	0.000	99	6302894	NR	NR	
151 DFTPP									
167 4,4'-DDE	246	12.026	12.026	0.000	86	4575		NR	
166 4,4'-DDD	235	12.473	12.473	0.000	94	15129		NR	
171 4,4'-DDT	235	12.809	12.809	0.000	98	3199536	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

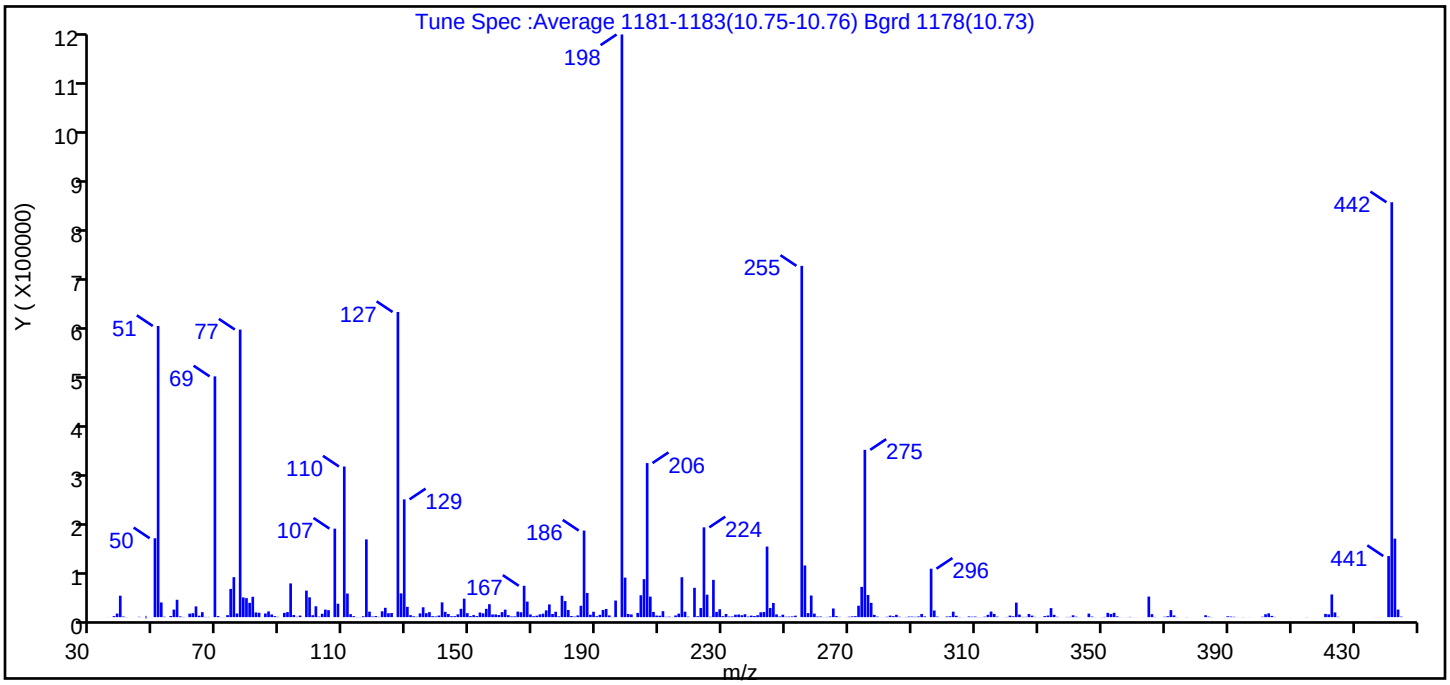
SMDFTPPW_00013 Amount Added: 0.10 Units: mL

MS Tune Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D
Injection Date: 25-Apr-2018 06:41:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Tune Method: DFTPP Method CLP OLM4.2

151 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100 percent relative abundance	100
51	30.0 - 80.0 percent of mass 198	50.0
68	Less than 2.0 percent of mass 69	0.0 (0.0)
69	Present	41.3
70	Less than 2.0 percent of mass 69	0.2 (0.4)
127	25.0 - 75.0 percent of mass 198	52.4
197	Less than 1.0 percent of mass 198	0.0
199	5.0 - 9.0 percent of mass 198	6.8
275	10.0 - 30.0 percent of mass 198	28.7
365	Greater than 0.75 percent of mass 198	3.5
441	Present but less than mass 443	10.5 (77.9)
442	40.0 - 110.0 percent of mass 198	71.2
443	15.0 - 24.0 percent of mass 442	13.5 (18.9)

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 25-Apr-2018 06:41:30
Spectrum: Tune Spec :Average 1181-1183(10.75-10.76) Bgrd 1178(10.73)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	151	134.00	7452	223.00	18216	312.00	262
37.00	2055	135.00	19608	224.00	178944	313.00	916
38.00	7144	136.00	7912	225.00	44744	314.00	4605
39.00	42728	137.00	10006	226.00	697	315.00	11172
40.00	1280	138.00	1875	227.00	74328	316.00	6461
41.00	252	139.00	1379	228.00	10422	317.00	1014
45.00	675	140.00	3202	229.00	15765	319.00	141
46.00	99	141.00	29512	230.00	1948	320.00	443
47.00	4	142.00	10545	231.00	6321	321.00	3019
48.00	158	143.00	6286	232.00	1234	322.00	1682
50.00	157248	144.00	1834	233.00	1394	323.00	29000
51.00	580224	145.00	1921	234.00	4826	324.00	5133
52.00	29264	146.00	5534	235.00	5206	325.00	494
53.00	807	147.00	16576	236.00	3800	326.00	630
55.00	2274	148.00	36856	237.00	5889	327.00	6365
56.00	15023	149.00	7902	238.00	1105	328.00	3022
57.00	34608	150.00	2106	239.00	3065	329.00	505
58.00	1524	151.00	4090	240.00	2180	330.00	156
59.00	407	152.00	2051	241.00	3827	331.00	162
60.00	138	153.00	9236	242.00	9701	332.00	2099
61.00	7004	154.00	7594	243.00	10197	333.00	3174
62.00	7847	155.00	16520	244.00	140736	334.00	18032
63.00	21448	156.00	25776	245.00	18200	335.00	4546
64.00	2878	157.00	5279	246.00	28264	336.00	682
65.00	9974	158.00	5400	247.00	5455	337.00	70
66.00	479	159.00	4218	248.00	1290	339.00	460
67.00	496	160.00	9963	249.00	4899	340.00	542
69.00	479872	161.00	14952	250.00	903	341.00	3750
70.00	2078	162.00	4017	251.00	1143	342.00	885
71.00	190	163.00	1441	252.00	1387	343.00	220
72.00	168	164.00	1562	253.00	2962	346.00	7010
73.00	3943	165.00	11071	255.00	700096	347.00	1148
74.00	56248	166.00	9726	256.00	102976	348.00	173

Report Date: 25-Apr-2018 10:03:05 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 25-Apr-2018 06:41:30
Spectrum: Tune Spec :Average 1181-1183(10.75-10.76) Bgrd 1178(10.73)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	79648	167.00	62480	257.00	8022	350.00	219
76.00	7330	168.00	31048	258.00	43096	351.00	469
77.00	573184	169.00	5381	259.00	7022	352.00	8596
78.00	39296	170.00	1910	260.00	1195	353.00	6280
79.00	37912	171.00	2936	261.00	1205	354.00	8662
80.00	28472	172.00	5584	262.00	181	355.00	1530
81.00	40600	173.00	6910	263.00	445	356.00	218
82.00	9279	174.00	13553	264.00	1243	357.00	68
83.00	8748	175.00	25368	265.00	17280	358.00	184
85.00	7287	176.00	6215	266.00	2071	359.00	515
86.00	11416	177.00	10725	267.00	517	360.00	151
87.00	5349	178.00	1516	269.00	186	361.00	172
88.00	2024	179.00	42656	270.00	876	363.00	65
89.00	639	180.00	32024	271.00	1552	365.00	41056
91.00	8516	181.00	14180	272.00	1916	366.00	5913
92.00	10018	182.00	2183	273.00	22760	367.00	377
93.00	67248	183.00	1079	274.00	60328	370.00	801
94.00	4162	184.00	3498	275.00	333440	371.00	1887
95.00	687	185.00	22680	276.00	44152	372.00	13995
96.00	3185	186.00	172544	277.00	28480	373.00	3435
98.00	52912	187.00	48224	278.00	4540	374.00	220
99.00	39560	188.00	4780	279.00	1093	377.00	301
100.00	3768	189.00	10817	280.00	178	383.00	3815
101.00	21664	190.00	1792	281.00	154	384.00	1101
102.00	999	191.00	4597	282.00	753	385.00	332
103.00	6754	192.00	14335	283.00	3108	389.00	102
104.00	15010	193.00	16345	284.00	2012	390.00	1706
105.00	13984	194.00	3424	285.00	4723	391.00	1175
107.00	176384	195.00	396	286.00	842	392.00	739
108.00	26760	196.00	33128	287.00	140	393.00	158
110.00	300224	198.00	1161216	288.00	416	395.00	260
111.00	47104	199.00	78808	289.00	1164	397.00	150
112.00	5911	200.00	6296	290.00	1063	401.00	797
113.00	1974	201.00	5411	291.00	693	402.00	5697

Report Date: 25-Apr-2018 10:03:05 Chrom Revision: 2.2 17-Apr-2018 19:19:24
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D\LVI AG2 8270.rslt\spectra.d
Injection Date: 25-Apr-2018 06:41:30
Spectrum: Tune Spec :Average 1181-1183(10.75-10.76) Bgrd 1178(10.73)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 343

m/z	Y	m/z	Y	m/z	Y	m/z	Y
114.00	303	203.00	8459	292.00	1389	403.00	7587
115.00	303	204.00	43680	293.00	6219	404.00	2524
116.00	1738	205.00	75728	294.00	1529	405.00	470
117.00	154944	206.00	307072	296.00	96544	410.00	80
118.00	10931	207.00	40976	297.00	13295	415.00	311
119.00	1254	208.00	10407	298.00	1144	421.00	6442
120.00	2180	209.00	3179	299.00	142	422.00	5594
121.00	524	210.00	2848	300.00	50	423.00	45232
122.00	11617	211.00	11903	301.00	1277	424.00	9297
123.00	18592	212.00	709	302.00	1723	425.00	725
124.00	7816	213.00	998	303.00	10921	436.00	82
125.00	8168	214.00	330	304.00	2670	437.00	119
127.00	608128	215.00	3308	305.00	427	438.00	190
128.00	47384	216.00	6962	306.00	133	441.00	121792
129.00	234752	217.00	79520	307.00	120	442.00	826880
130.00	20568	218.00	10837	308.00	1414	443.00	156416
131.00	3971	219.00	1036	309.00	861	444.00	15055
132.00	1674	221.00	58464	310.00	1149	445.00	1021
133.00	751	222.00	1803	311.00	271		

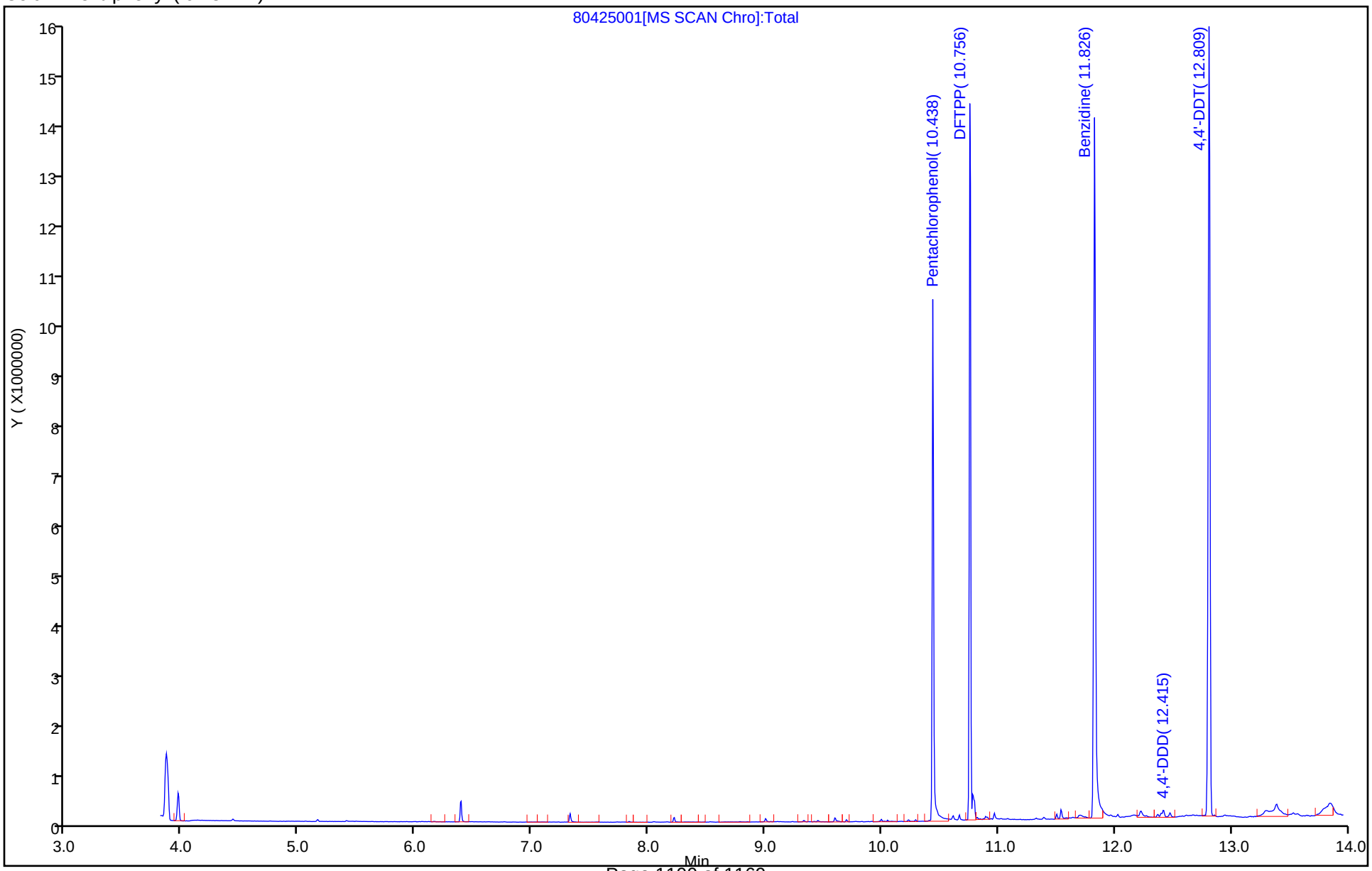
Report Date: 25-Apr-2018 10:03:05 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D

Injection Date:	25-Apr-2018 06:41:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	dftpp			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)

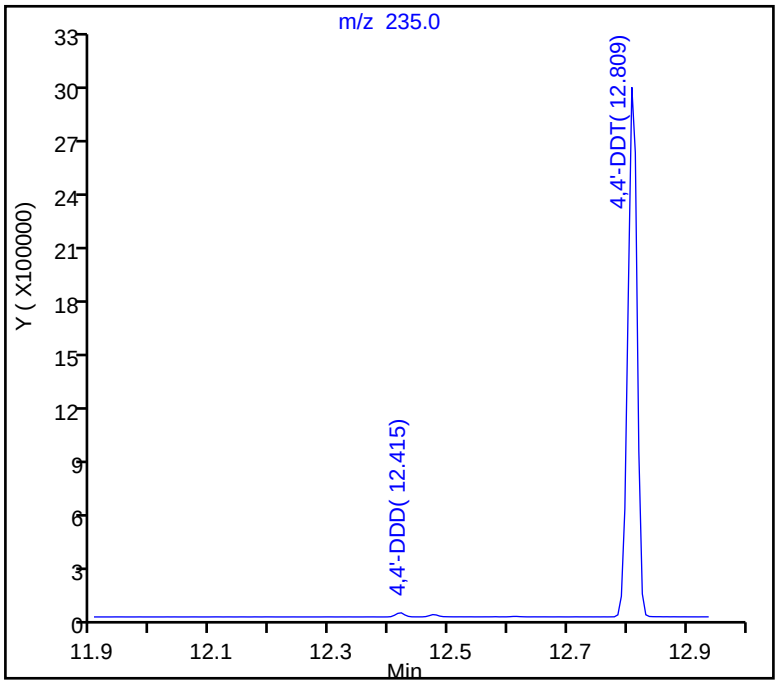


Breakdown Report

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D
Injection Date: 25-Apr-2018 06:41:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

171 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

171 4,4'-DDT, Area = 3199536
166 4,4'-DDD, Area = 15129
167 4,4'-DDE, Area = 4575

%Breakdown: 0.61%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Canton

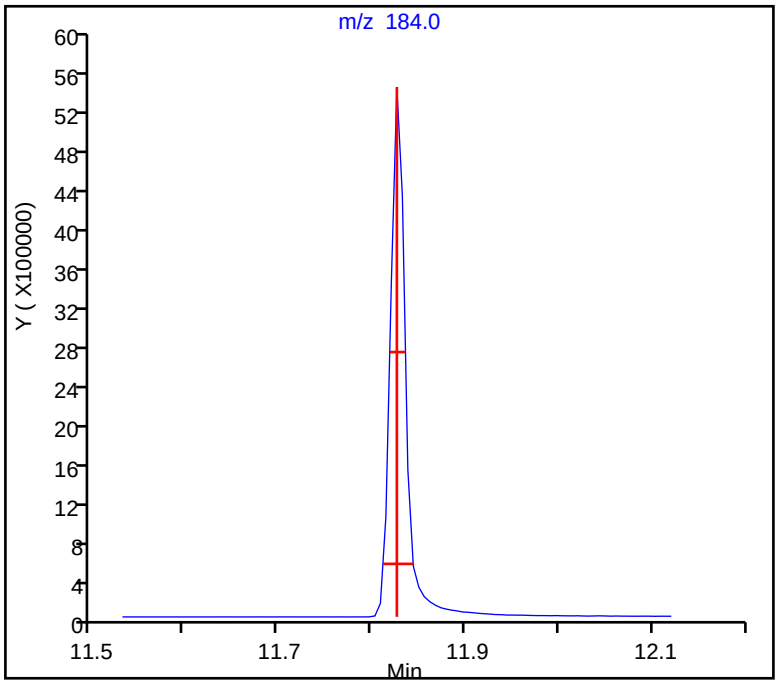
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D
Injection Date: 25-Apr-2018 06:41:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

160 Benzidine, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.018 (min.)
Front Width = 0.015 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Canton

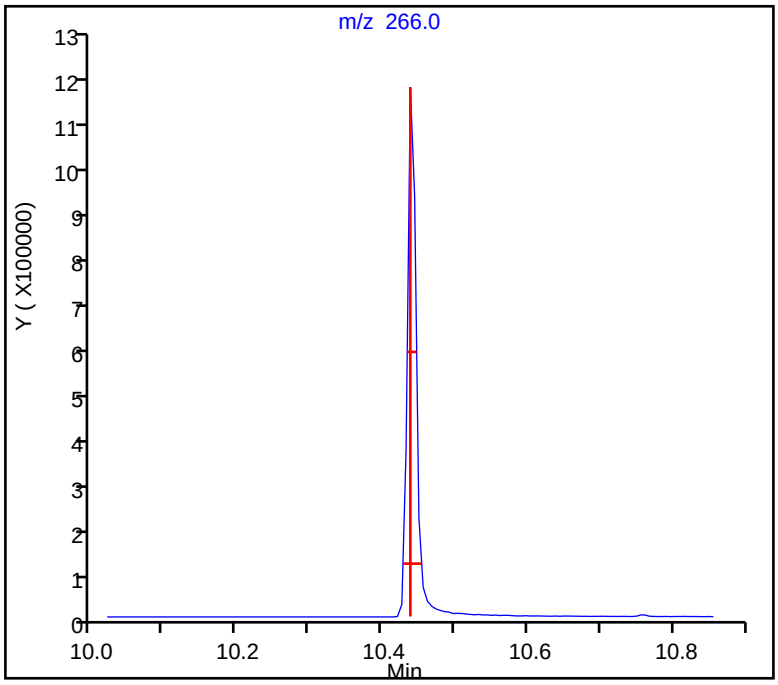
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425001.D
Injection Date: 25-Apr-2018 06:41:30 Instrument ID: A4AG2
Lims ID: dftpp
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

143 Pentachlorophenol, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.016 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.5, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-322624/18-A

Matrix: Water | Lab File ID: 80419008.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 250(mL) | Date Analyzed: 04/19/2018 09:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323078 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	86		28-128
4165-62-2	Phenol-d5 (Surr)	50		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	67		35-120
367-12-4	2-Fluorophenol (Surr)	54		17-120
321-60-8	2-Fluorobiphenyl (Surr)	65		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	72		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-322624/18-A

Matrix: Water | Lab File ID: 80419008.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 250(mL) | Date Analyzed: 04/19/2018 09:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323078 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		100	U	

Report Date: 19-Apr-2018 10:59:12 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419008.D
Lims ID: MB 240-322624/18-A
Client ID:
Sample Type: MB
Inject. Date: 19-Apr-2018 09:45:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-008
Misc. Info.: MB 240-322624/18-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:48 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 10:39:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.863	6.863	0.000	95	89696	400.0	400.0	a
* 2 Naphthalene-d8	136	7.934	7.934	0.000	99	519017	400.0	400.0	
* 3 Acenaphthene-d10	164	9.428	9.434	-0.006	95	281356	400.0	400.0	
* 4 Phenanthrene-d10	188	10.710	10.716	-0.006	98	531221	400.0	400.0	
* 5 Chrysene-d12	240	13.681	13.692	-0.011	99	452075	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.074	-0.005	98	469366	400.0	400.0	
$ 7 2-Fluorophenol	112	5.775	5.781	-0.006	93	160209	1600.0	866.1	
$ 8 Phenol-d5	99	6.499	6.499	0.001	0	250058	1600.0	806.2	
$ 9 Nitrobenzene-d5	82	7.310	7.310	0.000	95	538868	1600.0	1068.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.816	8.822	-0.006	99	1019105	1600.0	1041.8	
$ 11 2,4,6-Tribromophenol	330	10.104	10.104	0.000	81	114306	1600.0	1159.7	
$ 12 Terphenyl-d14	244	12.216	12.222	-0.006	98	1237839	1600.0	1377.0	
26 1,4-Dioxane	88		4.363					ND	
27 N-Nitrosodimethylamine	74		4.622					ND	U
28 Pyridine	79		4.687					ND	
22 Dimethylformamide	73	4.875	4.791	0.047	59	6227		NC	
29 Ethyl methacrylate	69		4.904					ND	
31 2-Picoline	93		5.322					ND	
32 N-Nitrosomethylethylamine	88		5.387					ND	
14 Acrylamide	71		5.557					ND	
233 n,n'-Dimethylacetamide	44	5.516	5.532	-0.059	21	1622		NC	
34 Methyl methanesulfonate	80		5.616					ND	
36 N-Nitrosodiethylamine	102		5.957					ND	
37 Ethyl methanesulfonate	79		6.175					ND	
286 4-Methyl-1-cyclohexanemeth	55		6.490					ND	
42 Benzaldehyde	77		6.499					ND	
43 Phenol	94		6.510					ND	
41 Phenylmercaptan	110		6.552					ND	
44 Aniline	93		6.581					ND	
45 Bis(2-chloroethyl)ether	93		6.598					ND	
287 4-Methyl-1-cyclohexanemeth	55		6.624					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
46 Pentachloroethane	167		6.640					ND	
244 n-Decane	57		6.687					ND	
47 2-Chlorophenol	128		6.693					ND	
48 1,3-Dichlorobenzene	146		6.822					ND	
232 1-Methyl-2-pyrrilidinone	99	6.810	6.787	-0.030	23	469		NC	
49 1,4-Dichlorobenzene	146		6.875					ND	
50 Benzyl alcohol	108		6.940					ND	U
51 1,2-Dichlorobenzene	146		7.010					ND	
54 2,2'-oxybis[1-chloropropan	45		7.046					ND	
53 Indene	115		7.081					ND	
55 3 & 4 Methylphenol	108		7.134					ND	
56 N-Nitrosopyrrolidine	100		7.140					ND	
57 N-Nitrosodi-n-propylamine	70		7.151					ND	
59 N-Nitrosomorpholine	56		7.163					ND	
60 2-Toluidine	106		7.204					ND	
61 Hexachloroethane	117		7.304					ND	
62 Nitrobenzene	77		7.328					ND	
63 N-Nitrosopiperidine	114		7.445					ND	
67 1,3,5-Trichlorobenzene	180		7.510					ND	
66 2,4-Dimethylphenol	107		7.587					ND	
65 2-Nitrophenol	139		7.593					ND	
68 o,o',o''-Triethylphosphoro	198		7.628					ND	
70 Benzoic acid	122		7.634					ND	
69 Bis(2-chloroethoxy)methane	93		7.657					ND	
71 alpha,alpha-Dimethyl phene	58		7.757					ND	
308 3 & 4 Chlorophenol	128		7.757					ND	
72 2,4-Dichlorophenol	162		7.793					ND	
73 1,2,4-Trichlorobenzene	180		7.875					ND	
74 Naphthalene	128		7.951					ND	
75 4-Chloroaniline	127		7.963					ND	
79 1,2,3-Trichlorobenzene	180		7.969					ND	
76 2,6-Dichlorophenol	162		7.981					ND	
77 Hexachloropropene	213		8.028					ND	
78 Hexachlorobutadiene	225		8.045					ND	
80 Benzothiazole	135	8.157	8.057	0.100	82	2260		NC	
81 Quinoline	129		8.222					ND	
84 p-Phenylene diamine	108		8.251					ND	
252 4-tert-Butylphenol	135		8.275					ND	
85 4-Chloro-3-methylphenol	107		8.340					ND	
92 Safrole, Total	162		8.422					ND	
86 2-Methylnaphthalene	142		8.534					ND	
88 1,2,3,5-Tetrachlorobenzene	216		8.563					ND	
87 1-Methylnaphthalene	142		8.622					ND	
95 Isosafrole Peak 1	162		8.669					ND	
89 Hexachlorocyclopentadiene	237		8.669					ND	
90 1,2,4,5-Tetrachlorobenzene	216		8.681					ND	
93 2,4,6-Trichlorophenol	196		8.757					ND	
97 2,4-Toluene diamine	121		8.792					ND	
94 2,4,5-Trichlorophenol	196		8.792					ND	
98 1,2,3,4 -Tetrachlorobenzen	216		8.822					ND	
96 3,4-Dichloronitrobenzene	109		8.839					ND	
91 Isosafrole Peak 2	162		8.863					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
192 Phenyl ether	170	8.816	8.887	-0.076	52	236493		NC	
100 2-Chloronaphthalene	162		8.951					ND	
247 1-Chloronaphthalene	162		8.981					ND	
101 2-Nitroaniline	65		9.010					ND	
102 1,4-Naphthoquinone	158		9.081					ND	
105 1,4-Dinitrobenzene	168		9.098					ND	
104 Dimethyl phthalate	163		9.134					ND	
103 1,3-Dinitrobenzene	168		9.175					ND	
108 Acenaphthylene	152		9.316					ND	
109 3-Nitroaniline	138		9.357					ND	
260 o-Phenylphenol	170		9.428					ND	
110 2,4-Dinitrophenol	184		9.439					ND	
112 4-Nitrophenol	109		9.457					ND	
111 Acenaphthene	153		9.463					ND	
113 2,4-Dinitrotoluene	165		9.551					ND	
114 Pentachlorobenzene	250		9.575					ND	
115 Dibenzofuran	168		9.604					ND	
116 2,3,5,6-Tetrachlorophenol	232		9.657					ND	
117 1-Naphthylamine	143		9.663					ND	
118 2,3,4,6-Tetrachlorophenol	232		9.698					ND	
248 Hexadecane	57		9.716					ND	U
120 Diethyl phthalate	149	9.716	9.722	-0.006	96	109234		101.5	
119 2-Naphthylamine	143		9.728					ND	
126 Tributyl phosphate	99		9.775					ND	
121 Thionazin	97		9.798					ND	
122 4-Chlorophenyl phenyl ethe	204		9.863					ND	
123 N-Nitro-o-toluidine	152		9.875					ND	
125 4-Nitroaniline	138		9.881					ND	
124 Fluorene	166		9.898					ND	
127 4,6-Dinitro-2-methylphenol	198		9.904					ND	
128 N-Nitrosodiphenylamine	169		9.957					ND	
129 Diphenylamine	169		9.957					ND	
130 1,2-Diphenylhydrazine	77		10.004					ND	
132 Sulfotepp	202		10.045					ND	
133 1,3,5-Trinitrobenzene	213		10.133					ND	
135 Phenacetin	108		10.186					ND	
134 Diallate Peak 1	86		10.186					ND	
136 Phorate	121		10.198					ND	
274 3 & 4 Phenoxyphenol	186		10.257					ND	
137 Diallate Peak 2	86		10.275					ND	
138 4-Bromophenyl phenyl ether	248		10.292					ND	
139 Dimethoate	87		10.351					ND	
141 Atrazine	200		10.375					ND	
140 Hexachlorobenzene	284		10.392					ND	
245 n-Octadecane	57		10.498					ND	U
142 4-Aminobiphenyl	169		10.510					ND	
144 Pronamide	173		10.522					ND	
143 Pentachlorophenol	266		10.539					ND	
145 Pentachloronitrobenzene	237		10.551					ND	
146 Disulfoton	88		10.639					ND	
147 Dinoseb	211		10.651					ND	
148 Phenanthrene	178		10.739					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
149 Anthracene	178		10.781					ND	
150 Carbazole	167		10.898					ND	
152 Methyl parathion	109		10.975					ND	
153 Diphenylsulfone	125		11.075					ND	
280 Chlorpyrifos	97		11.157					ND	
155 Ethyl Parathion	97		11.316					ND	
156 4-Nitroquinoline-1-oxide	190		11.404					ND	
157 Methapyrilene	58		11.433					ND	
158 Isodrin	66		11.716					ND	
159 Fluoranthene	202		11.869					ND	
160 Benzidine	184		11.939					ND	
162 Aramite Peak 1	185		12.127					ND	U
161 Pyrene	202		12.128					ND	
164 p-Dimethylamino azobenzene	225		12.374					ND	
165 Chlorobenzilate	139		12.404					ND	
168 Famphur	218		12.710					ND	
169 Butyl benzyl phthalate	149		12.757					ND	
170 3,3'-Dimethylbenzidine	212		12.786					ND	
172 2-Acetylaminofluorene	181		13.145					ND	
173 3,3'-Dimethoxybenzidine	244		13.339					ND	
175 4,4'-Methylene bis(2-chlor	231		13.551					ND	
177 3,3'-Dichlorobenzidine	252		13.575					ND	
178 Benzo[a]anthracene	228		13.675					ND	
179 Chrysene	228		13.733					ND	
180 6-Methylchrysene	242		14.427					ND	
182 7,12-Dimethylbenz(a)anthra	256		15.380					ND	
183 Benzo[b]fluoranthene	252		15.416					ND	
184 Benzo[k]fluoranthene	252		15.457					ND	
185 Benzo[a]pyrene	252		15.980					ND	
186 3-Methylcholanthrene	268		16.598					ND	
187 Dibenz[a,j]acridine	279		17.539					ND	
188 Dibenz[a,h]acridine	279		17.698					ND	
190 Indeno[1,2,3-cd]pyrene	276		18.262					ND	
189 Dibenz(a,h)anthracene	278		18.268					ND	
191 Benzo[g,h,i]perylene	276		18.921					ND	
294 1-Dodecanol	1		0.000					ND	
306 2-Methylcyclohexanone	1		0.000					ND	
300 2-Chloroaniline TIC	1		0.000					ND	
304 Hexabromobenzene	1		0.000					ND	
282 Kepone	272		0.000					ND	
292 Benzophenone	1		0.000					ND	
290 1-Phenoxy-2-propanol	1		0.000					ND	
303 Diisobutyl phthalate TIC	1		0.000					ND	
307 3-Methylcyclohexanone	1		0.000					ND	
305 4-Methylcyclohexanone	1		0.000					ND	
272 Dibenzo[a,e]pyrene	1		0.000					ND	
255 2-Chloroaniline	1		0.000					ND	
284 2,3,7,8-TCDD TIC	1		0.000					ND	
302 3,3'-Dimethoxybenzidine TI	1		0.000					ND	
285 Chlorobenzene TIC	1		0.000					ND	
S 194 Isosafrole	162		5.181					ND	
S 195 Diallate	86		6.385					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
S 196 Aramite, Total	185		7.898					ND	
S 288 4-Methyl-1-cyclohexanemeth	1		0.000					ND	
S 246 Total Cresols	100		0.000					ND	
S 193 Methyl Phenols,Total	100		0.000					ND	
T 299 Alpha-Terpineol TIC	59		7.900					ND	U
T 201 Kepone TIC	272		8.281					ND	
T 21 2,3,7,8-TCDD	322		8.500					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	
T 301 Perylene TIC	252		15.803					ND	U
T 200 Hexamethylphosphoramide TI	44		0.000					ND	
T 243 3-(1,1-Dimethylethyl Pheno	1		0.000					ND	
T 238 Trimethyl phosphate TIC	1		0.000					ND	
T 237 Tris(2,3-dibromopropyl)pho	1		0.000					ND	
T 241 Tricresyl phosphate TIC	1		0.000					ND	
T 242 Triphenyl Phosphate TIC	1		0.000					ND	
T 240 3-isopropylphenol TIC	1		0.000					ND	
T 289 1-Phenoxy-2-propanol TIC	1		0.000					ND	
T 249 4-Chlorophenol TIC	1		0.000					ND	
T 236 4-isopropylphenol TIC	1		0.000					ND	
T 198 Octadecane (TIC)	57		0.000					ND	
T 199 Decane TIC	57		0.000					ND	
T 239 2,3,7,8 TCDF TIC	1		0.000					ND	
T 197 Hydroquinone TIC	110		0.000					ND	
T 234 2-Isopropylphenol TIC	1		0.000					ND	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
U - Marked Undetected
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

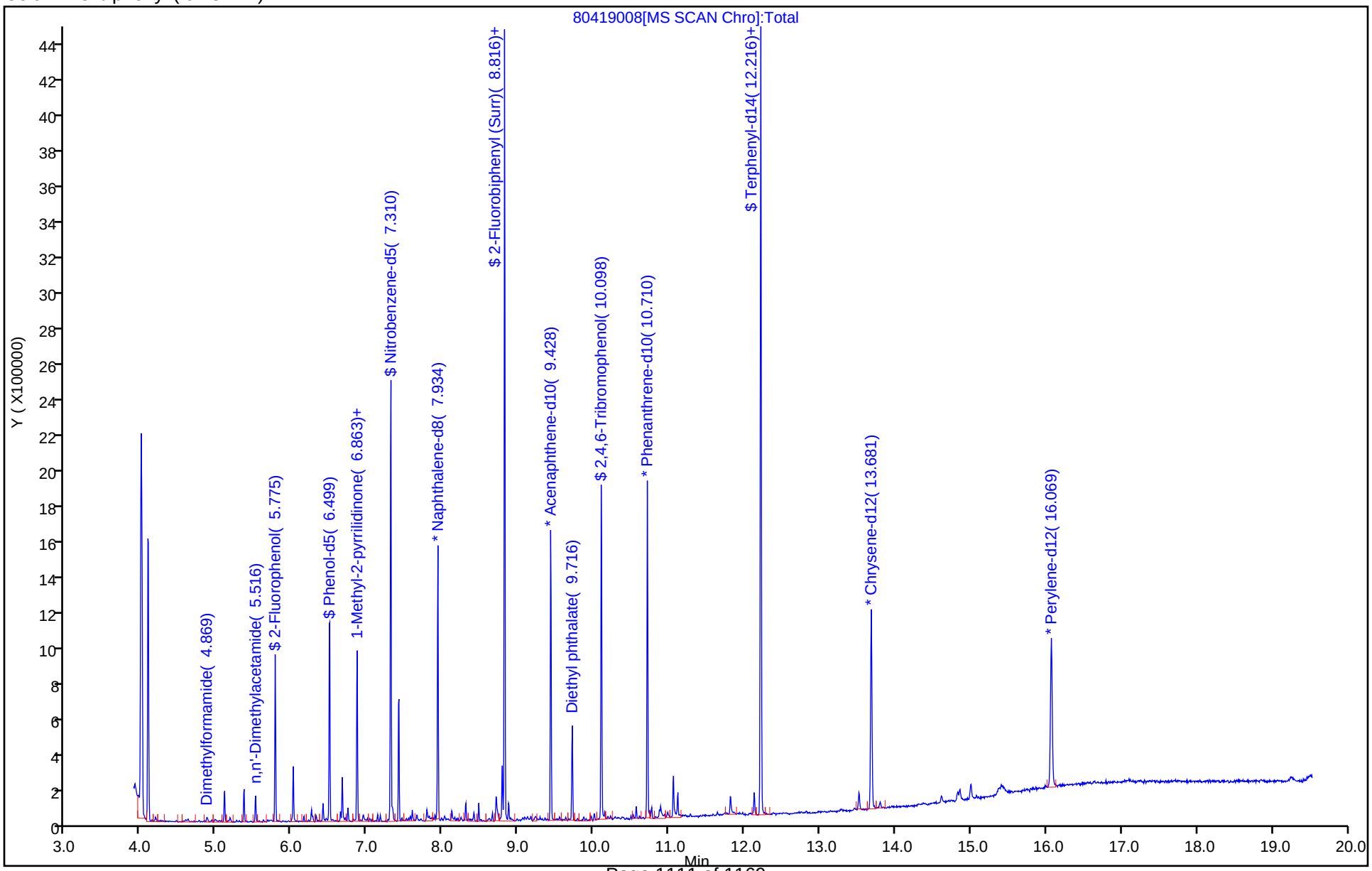
Report Date: 19-Apr-2018 10:59:12 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419008.D

Injection Date:	19-Apr-2018 09:45:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	MB 240-322624/18-A			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



Report Date: 19-Apr-2018 10:59:12 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419008.D
Lims ID: MB 240-322624/18-A
Client ID:
Sample Type: MB
Inject. Date: 19-Apr-2018 09:45:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-008
Misc. Info.: MB 240-322624/18-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:48 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 10:39:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	866.1	54.13
$ 8 Phenol-d5	1600.0	806.2	50.39
$ 9 Nitrobenzene-d5	1600.0	1068.2	66.76
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1041.8	65.11
$ 11 2,4,6-Tribromophenol	1600.0	1159.7	72.48
$ 12 Terphenyl-d14	1600.0	1377.0	86.07

Manual Integration/User Assign Peak Report

TestAmerica Canton

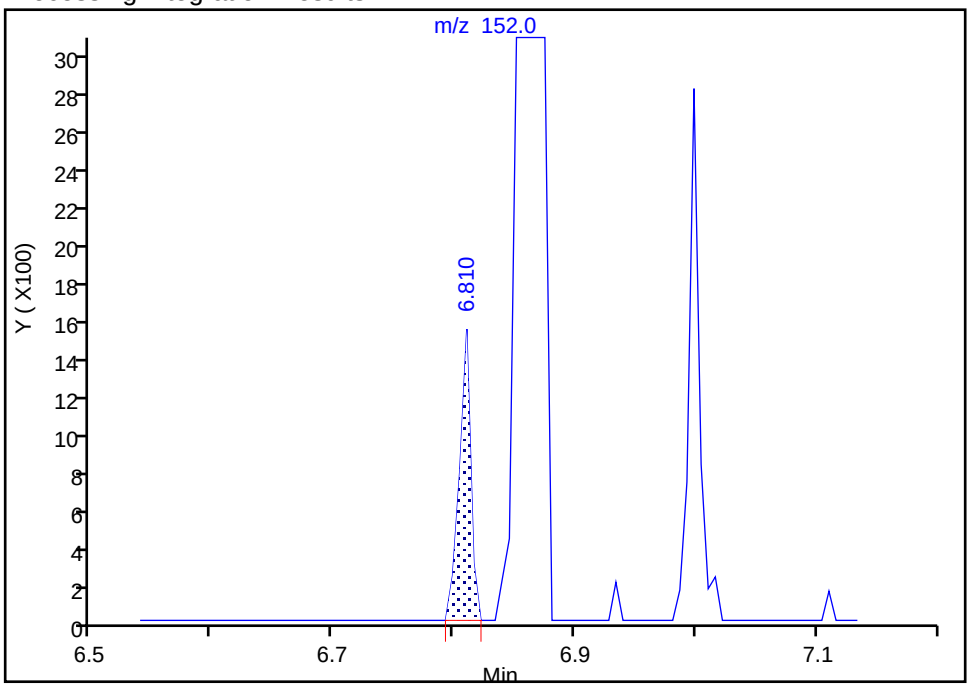
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419008.D				
Injection Date:	19-Apr-2018 09:45:30	Instrument ID:	A4AG2		
Lims ID:	MB 240-322624/18-A				
Client ID:					
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

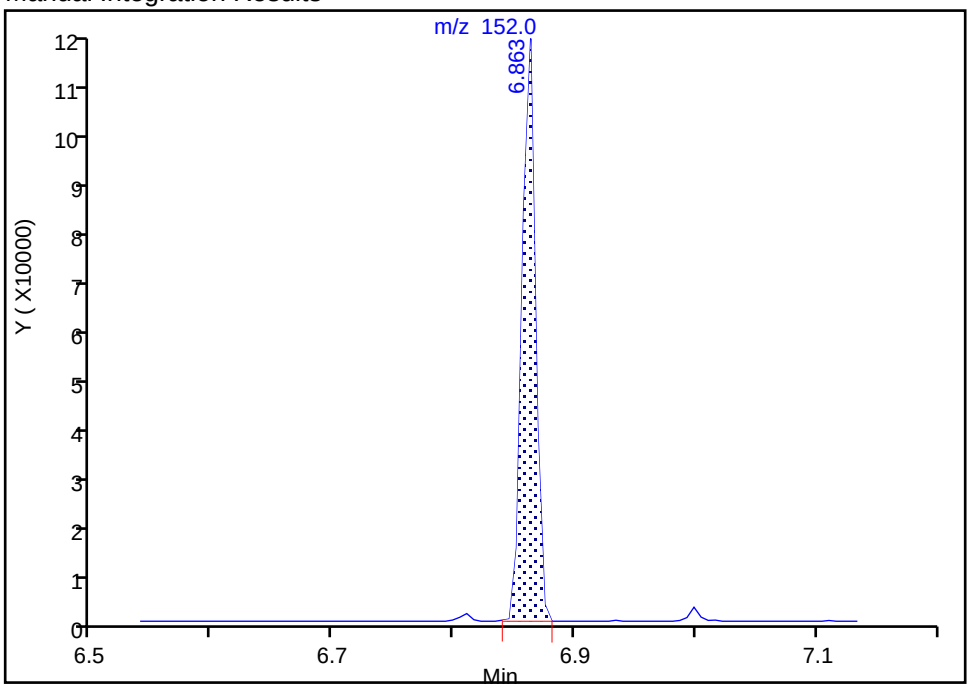
Processing Integration Results

RT: 6.81
Area: 1003
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.86
Area: 89696
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 19-Apr-2018 10:22:52

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-323647/9-A

Matrix: Water | Lab File ID: 80425004.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 07:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	93		28-128
4165-62-2	Phenol-d5 (Surr)	50		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	69		35-120
367-12-4	2-Fluorophenol (Surr)	50		17-120
321-60-8	2-Fluorobiphenyl (Surr)	68		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	63		33-120

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-323647/9-A

Matrix: Water | Lab File ID: 80425004.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 07:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
70-30-4	Hexachlorophene TIC		100	U	

Report Date: 25-Apr-2018 10:03:34 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425004.D
Lims ID: MB 240-323647/9-A
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2018 07:50:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-004
Misc. Info.: MB 240-323647/9-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:43:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	159533	400.0	400.0	a
* 2 Naphthalene-d8	136	7.833	7.833	0.000	100	930448	400.0	400.0	
* 3 Acenaphthene-d10	164	9.333	9.333	0.000	97	463121	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	846609	400.0	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	668778	400.0	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	656375	400.0	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	266985	1600.0	792.7	a
$ 8 Phenol-d5	99	6.398	6.403	-0.005	0	425384	1600.0	795.1	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	95	948038	1600.0	1097.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1715742	1600.0	1092.3	
$ 11 2,4,6-Tribromophenol	330	10.009	10.009	0.000	93	140576	1600.0	1002.5	
$ 12 Terphenyl-d14	244	12.097	12.103	-0.006	98	2027932	1600.0	1485.2	
26 1,4-Dioxane	88		4.239					ND	
27 N-Nitrosodimethylamine	74		4.503					ND	
28 Pyridine	79		4.562					ND	
22 Dimethylformamide	73	4.756	4.790	-0.072	58	80002			NC
29 Ethyl methacrylate	69		4.904					ND	
31 2-Picoline	93		5.209					ND	
32 N-Nitrosomethylethylamine	88		5.274					ND	
14 Acrylamide	71		5.450					ND	
34 Methyl methanesulfonate	80		5.509					ND	
233 n,n'-Dimethylacetamide	44	5.568	5.531	-0.007	52	887			NC
36 N-Nitrosodiethylamine	102		5.856					ND	
37 Ethyl methanesulfonate	79		6.074					ND	
42 Benzaldehyde	77		6.392					ND	
43 Phenol	94		6.415					ND	
44 Aniline	93		6.474					ND	
286 4-Methyl-1-cyclohexanemeth	55	6.398	6.439	-0.092	0	3805			NC
45 Bis(2-chloroethyl)ether	93		6.497					ND	
46 Pentachloroethane	167		6.533					ND	
41 Phenylmercaptan	110		6.552					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
244 n-Decane	57		6.586					ND	U
47 2-Chlorophenol	128		6.586					ND	
287 4-Methyl-1-cyclohexanemeth	55		6.624					ND	
48 1,3-Dichlorobenzene	146		6.721					ND	
49 1,4-Dichlorobenzene	146		6.774					ND	
50 Benzyl alcohol	108		6.839					ND	
232 1-Methyl-2-pyrrilidinone	99	6.856	6.786	0.016	69	1601		NC	
51 1,2-Dichlorobenzene	146		6.909					ND	
52 2-Methylphenol	108		6.915					ND	
54 2,2'-oxybis[1-chloropropan	45		6.944					ND	
53 Indene	115		6.980					ND	
55 3 & 4 Methylphenol	108		7.033					ND	
56 N-Nitrosopyrrolidine	100		7.039					ND	
57 N-Nitrosodi-n-propylamine	70		7.050					ND	
59 N-Nitrosomorpholine	56		7.062					ND	
58 Acetophenone	105		7.068					ND	
60 2-Toluidine	106		7.103					ND	
61 Hexachloroethane	117		7.197					ND	
62 Nitrobenzene	77		7.221					ND	
63 N-Nitrosopiperidine	114		7.339					ND	
64 Isophorone	82		7.409					ND	
66 2,4-Dimethylphenol	107		7.486					ND	
65 2-Nitrophenol	139		7.491					ND	
67 1,3,5-Trichlorobenzene	180		7.510					ND	
70 Benzoic acid	122		7.533					ND	
68 o,o',o''-Triethylphosphoro	198		7.533					ND	
69 Bis(2-chloroethoxy)methane	93		7.562					ND	
71 alpha,alpha-Dimethyl phene	58		7.650					ND	
72 2,4-Dichlorophenol	162		7.691					ND	
308 3 & 4 Chlorophenol	128	7.715	7.696	-0.042	0	220		NC	
73 1,2,4-Trichlorobenzene	180		7.774					ND	
74 Naphthalene	128		7.850					ND	
75 4-Chloroaniline	127		7.862					ND	
76 2,6-Dichlorophenol	162		7.880					ND	
77 Hexachloropropene	213		7.927					ND	
78 Hexachlorobutadiene	225		7.938					ND	
79 1,2,3-Trichlorobenzene	180		7.969					ND	
80 Benzothiazole	135	8.062	8.051	0.005	79	1920		NC	
82 N-Nitrosodi-n-butylamine	84		8.121					ND	
81 Quinoline	129		8.121					ND	
83 Caprolactam	113		8.144					ND	
84 p-Phenylene diamine	108		8.150					ND	
85 4-Chloro-3-methylphenol	107		8.244					ND	
252 4-tert-Butylphenol	135		8.275					ND	
92 Safrole, Total	162		8.321					ND	
86 2-Methylnaphthalene	142		8.427					ND	
87 1-Methylnaphthalene	142		8.515					ND	
88 1,2,3,5-Tetrachlorobenzene	216		8.563					ND	
89 Hexachlorocyclopentadiene	237		8.568					ND	
95 Isosafrole Peak 1	162		8.568					ND	
90 1,2,4,5-Tetrachlorobenzene	216		8.574					ND	
93 2,4,6-Trichlorophenol	196		8.656					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
94 2,4,5-Trichlorophenol	196		8.691					ND	
91 Isosafrole Peak 2	162		8.762					ND	
97 2,4-Toluene diamine	121		8.792					ND	
99 1,1'-Biphenyl	154		8.815					ND	
98 1,2,3,4 -Tetrachlorobenzen	216		8.822					ND	
96 3,4-Dichloronitrobenzene	109	8.780	8.834	-0.059	53	13339		NC	
100 2-Chloronaphthalene	162		8.850					ND	
247 1-Chloronaphthalene	162		8.874					ND	
192 Phenyl ether	170		8.892					ND	
101 2-Nitroaniline	65		8.909					ND	
102 1,4-Naphthoquinone	158		8.980					ND	
105 1,4-Dinitrobenzene	168		9.003					ND	
104 Dimethyl phthalate	163		9.033					ND	
103 1,3-Dinitrobenzene	168		9.074					ND	
106 2,6-Dinitrotoluene	165		9.097					ND	
108 Acenaphthylene	152		9.215					ND	
109 3-Nitroaniline	138		9.256					ND	
110 2,4-Dinitrophenol	184		9.344					ND	
111 Acenaphthene	153		9.362					ND	
112 4-Nitrophenol	109		9.368					ND	
260 o-Phenylphenol	170	9.427	9.422	-0.001	7	255		NC	
113 2,4-Dinitrotoluene	165		9.450					ND	
114 Pentachlorobenzene	250		9.474					ND	
115 Dibenzofuran	168		9.503					ND	
117 1-Naphthylamine	143		9.562					ND	
116 2,3,5,6-Tetrachlorophenol	232		9.568					ND	
118 2,3,4,6-Tetrachlorophenol	232		9.597					ND	
248 Hexadecane	57		9.621					ND	U
120 Diethyl phthalate	149	9.627	9.627	0.000	97	283372		176.2	
119 2-Naphthylamine	143		9.627					ND	
121 Thionazin	97		9.703					ND	
122 4-Chlorophenyl phenyl ethe	204		9.768					ND	
126 Tributyl phosphate	99	9.780	9.769	0.005	97	72548		NC	
123 N-Nitro-o-toluidine	152		9.780					ND	
125 4-Nitroaniline	138		9.785					ND	
124 Fluorene	166		9.797					ND	
127 4,6-Dinitro-2-methylphenol	198		9.809					ND	
128 N-Nitrosodiphenylamine	169		9.862					ND	
129 Diphenylamine	169		9.862					ND	
131 Azobenzene	77		9.903					ND	
130 1,2-Diphenylhydrazine	77		9.903					ND	
132 Sulfotepp	202		9.950					ND	
133 1,3,5-Trinitrobenzene	213		10.044					ND	
135 Phenacetin	108		10.091					ND	
134 Diallate Peak 1	86		10.091					ND	
136 Phorate	121		10.103					ND	
137 Diallate Peak 2	86		10.180					ND	
138 4-Bromophenyl phenyl ether	248		10.191					ND	
139 Dimethoate	87		10.256					ND	
274 3 & 4 Phenoxyphenol	186		10.257					ND	
141 Atrazine	200		10.285					ND	
140 Hexachlorobenzene	284		10.291					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
245 n-Octadecane	57		10.403					ND	U
142 4-Aminobiphenyl	169		10.415					ND	
144 Pronamide	173		10.427					ND	
143 Pentachlorophenol	266		10.438					ND	
145 Pentachloronitrobenzene	237		10.456					ND	
146 Disulfoton	88		10.550					ND	
147 Dinoseb	211		10.562					ND	
148 Phenanthrene	178		10.638					ND	
149 Anthracene	178		10.679					ND	
150 Carbazole	167		10.797					ND	
152 Methyl parathion	109		10.880					ND	
154 Di-n-butyl phthalate	149		11.027					ND	
153 Diphenylsulfone	125		11.075					ND	
280 Chlorpyrifos	97		11.157					ND	
155 Ethyl Parathion	97		11.215					ND	U
156 4-Nitroquinoline-1-oxide	190		11.297					ND	
157 Methapyrilene	58		11.332					ND	U
158 Isodrin	66		11.603					ND	
159 Fluoranthene	202		11.750					ND	
160 Benzidine	184		11.826					ND	
161 Pyrene	202		12.003					ND	
162 Aramite Peak 1	185		12.015					ND	U
163 Aramite Peak 2	185		12.097					ND	U
164 p-Dimethylamino azobenzene	225		12.256					ND	
165 Chlorobenzilate	139		12.285					ND	
168 Famphur	218		12.579					ND	
169 Butyl benzyl phthalate	149		12.632					ND	
170 3,3'-Dimethylbenzidine	212		12.662					ND	
172 2-Acetylaminofluorene	181		13.009					ND	
173 3,3'-Dimethoxybenzidine	244		13.339					ND	
174 Bis(2-ethylhexyl) phthalat	149		13.391					ND	
175 4,4'-Methylene bis(2-chlor	231		13.409					ND	
177 3,3'-Dichlorobenzidine	252		13.426					ND	
178 Benzo[a]anthracene	228		13.520					ND	
179 Chrysene	228		13.579					ND	
180 6-Methylchrysene	242		14.268					ND	
181 Di-n-octyl phthalate	149		14.403					ND	
182 7,12-Dimethylbenz(a)anthra	256		15.209					ND	
183 Benzo[b]fluoranthene	252		15.238					ND	
184 Benzo[k]fluoranthene	252		15.285					ND	
185 Benzo[a]pyrene	252		15.797					ND	
186 3-Methylcholanthrene	268		16.397					ND	
188 Dibenz[a,h]acridine	279		17.450					ND	
187 Dibenz[a,j]acridine	279		17.539					ND	
190 Indeno[1,2,3-cd]pyrene	276		17.991					ND	
189 Dibenz(a,h)anthracene	278		17.997					ND	
191 Benzo[g,h,i]perylene	276		18.614					ND	
306 2-Methylcyclohexanone	1		0.000					ND	
303 Diisobutyl phthalate TIC	1		0.000					ND	
255 2-Chloroaniline	1		0.000					ND	
284 2,3,7,8-TCDD TIC	1		0.000					ND	
292 Benzophenone	1		0.000					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
294 1-Dodecanol	1		0.000					ND	
290 1-Phenoxy-2-propanol	1		0.000					ND	
285 Chlorobenzene TIC	1		0.000					ND	
300 2-Chloroaniline TIC	1		0.000					ND	
304 Hexabromobenzene	1		0.000					ND	
272 Dibenzo[a,e]pyrene	1		0.000					ND	
307 3-Methylcyclohexanone	1		0.000					ND	
282 Kepone	272		0.000					ND	
305 4-Methylcyclohexanone	1		0.000					ND	
302 3,3'-Dimethoxybenzidine TI	1		0.000					ND	
S 194 Isosafrole	162		5.181					ND	
S 195 Diallate	86		6.385					ND	
S 196 Aramite, Total	185		7.898					ND	
S 193 Methyl Phenols,Total	100		0.000					ND	
S 288 4-Methyl-1-cyclohexanemeth	1		0.000					ND	
S 246 Total Cresols	100		0.000					ND	
T 299 Alpha-Terpineol TIC	59		7.900					ND	U
T 201 Kepone TIC	272		8.281					ND	
T 21 2,3,7,8-TCDD	322		8.500					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	
T 301 Perylene TIC	252		15.803					ND	U
T 241 Tricresyl phosphate TIC	1		0.000					ND	
T 199 Decane TIC	57		0.000					ND	U
T 289 1-Phenoxy-2-propanol TIC	1		0.000					ND	
T 234 2-Isopropylphenol TIC	1		0.000					ND	
T 243 3-(1,1-Dimethylethyl Pheno	1		0.000					ND	
T 200 Hexamethylphosphoramide TI	44		0.000					ND	
T 242 Triphenyl Phosphate TIC	1		0.000					ND	
T 197 Hydroquinone TIC	110		0.000					ND	
T 239 2,3,7,8 TCDF TIC	1		0.000					ND	
T 240 3-isopropylphenol TIC	1		0.000					ND	
T 198 Octadecane (TIC)	57		0.000					ND	
T 237 Tris(2,3-dibromopropyl)pho	1		0.000					ND	
T 236 4-isopropylphenol TIC	1		0.000					ND	
T 238 Trimethyl phosphate TIC	1		0.000					ND	
T 249 4-Chlorophenol TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

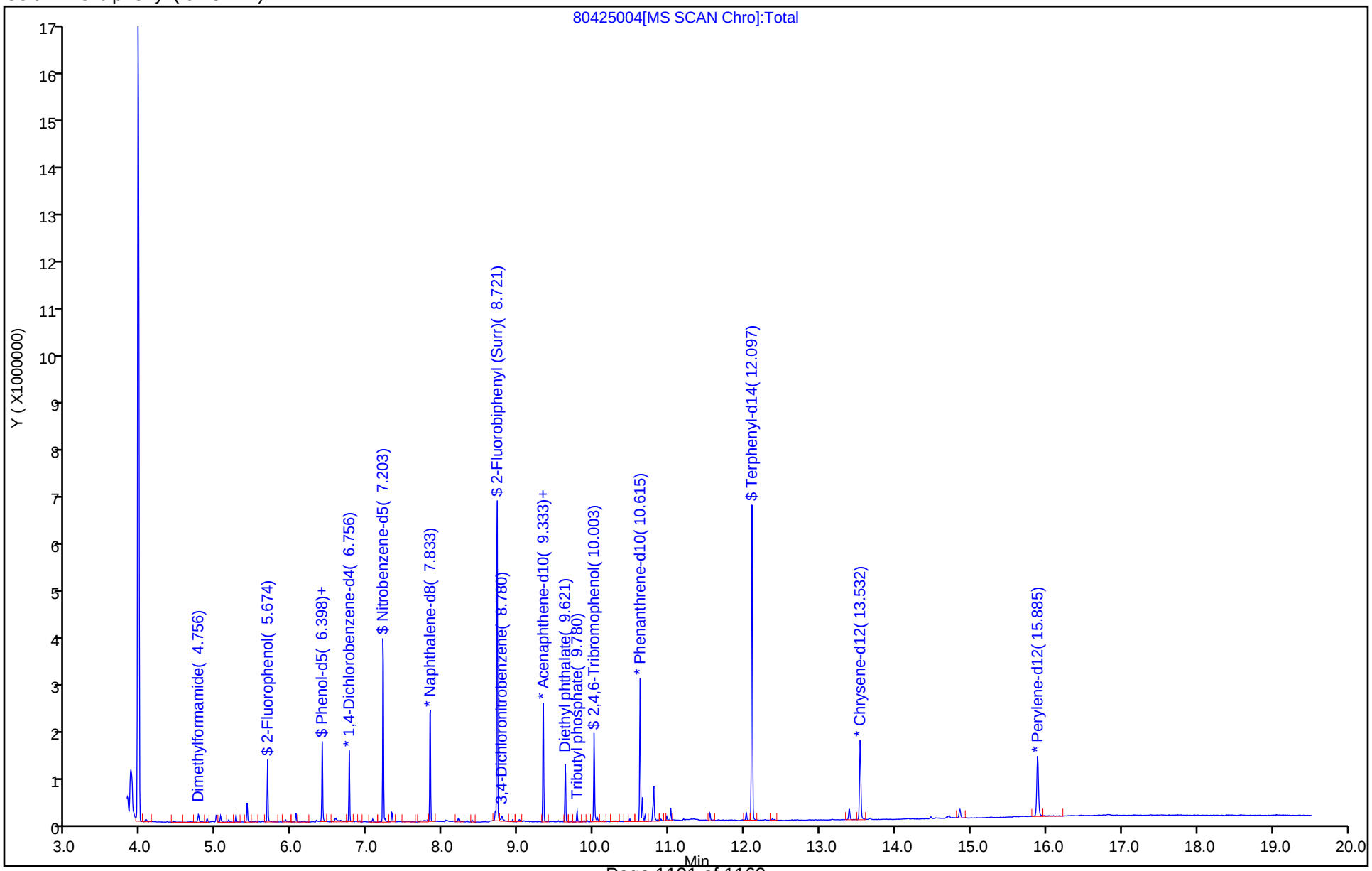
Report Date: 25-Apr-2018 10:03:34 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425004.D

Injection Date:	25-Apr-2018 07:50:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	MB 240-323647/9-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425004.D
Lims ID: MB 240-323647/9-A
Client ID:
Sample Type: MB
Inject. Date: 25-Apr-2018 07:50:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-004
Misc. Info.: MB 240-323647/9-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:43:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	792.7	49.54
$ 8 Phenol-d5	1600.0	795.1	49.69
$ 9 Nitrobenzene-d5	1600.0	1097.2	68.57
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1092.3	68.27
$ 11 2,4,6-Tribromophenol	1600.0	1002.5	62.66
$ 12 Terphenyl-d14	1600.0	1485.2	92.83

Manual Integration/User Assign Peak Report

TestAmerica Canton

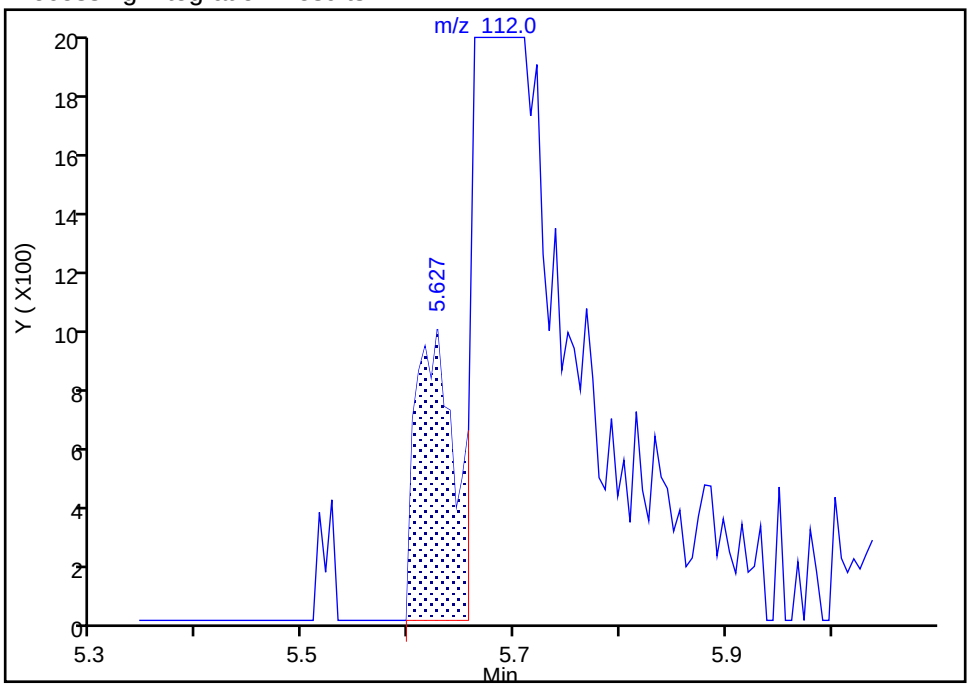
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425004.D				
Injection Date:	25-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	MB 240-323647/9-A				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

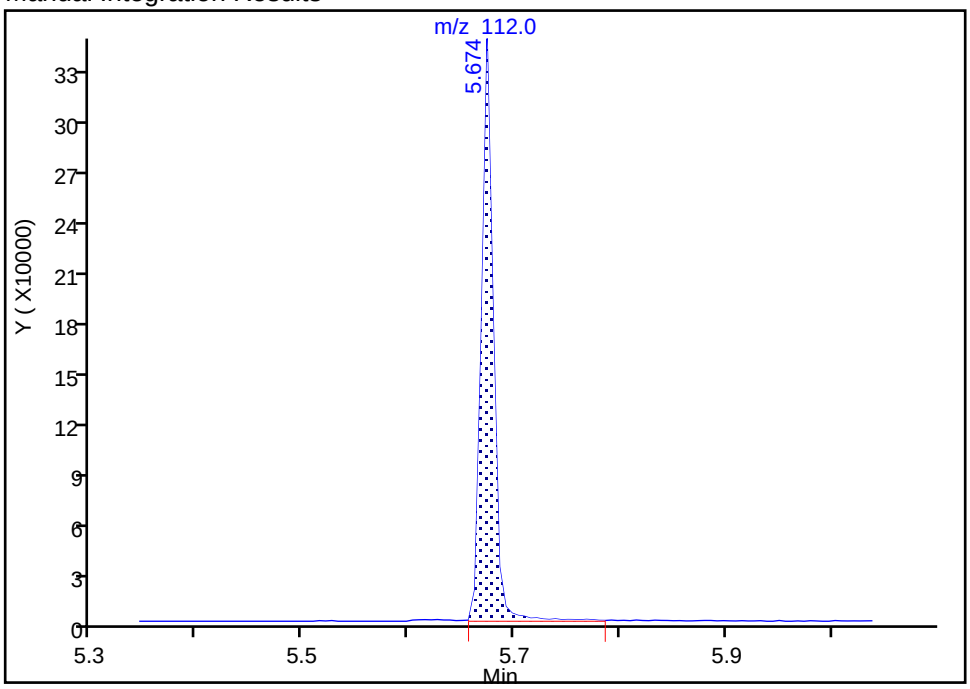
Processing Integration Results

RT: 5.63
Area: 2564
Amount: 7.612905
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 266985
Amount: 792.7189
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:42:28

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

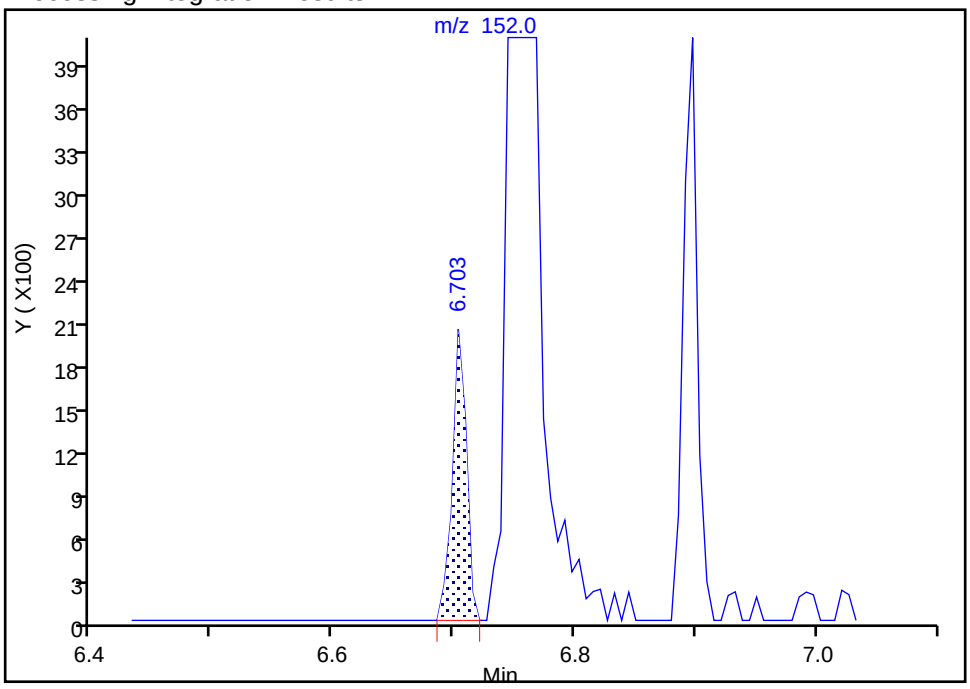
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425004.D				
Injection Date:	25-Apr-2018 07:50:30	Instrument ID:	A4AG2		
Lims ID:	MB 240-323647/9-A				
Client ID:					
Operator ID:		ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

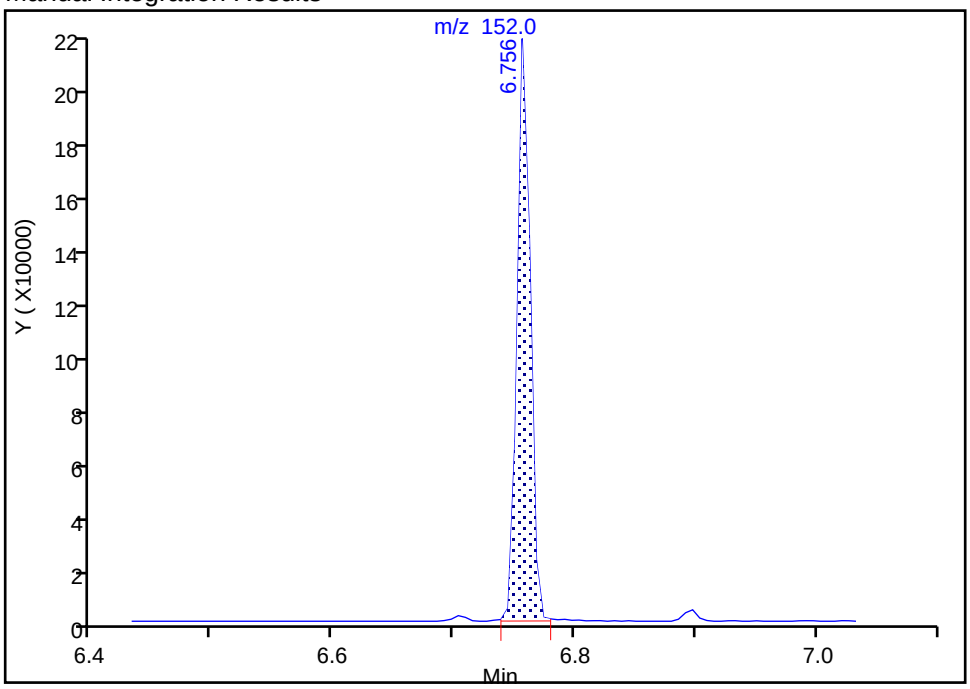
Processing Integration Results

RT: 6.70
Area: 1644
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 159533
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:42:08

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-322624/19-A

Matrix: Water | Lab File ID: 80419009.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 250(mL) | Date Analyzed: 04/19/2018 10:10

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323078 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	84		28-128
4165-62-2	Phenol-d5 (Surr)	46		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	83		35-120
367-12-4	2-Fluorophenol (Surr)	60		17-120
321-60-8	2-Fluorobiphenyl (Surr)	77		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	85		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419009.D
Lims ID: LCS 240-322624/19-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Apr-2018 10:10:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-009
Misc. Info.: LCS 240-322624/19-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:48 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 10:57:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.863	6.863	0.000	94	79377	400.0	400.0	
* 2 Naphthalene-d8	136	7.934	7.934	0.000	99	434758	400.0	400.0	
* 3 Acenaphthene-d10	164	9.428	9.434	-0.006	95	227156	400.0	400.0	
* 4 Phenanthrene-d10	188	10.710	10.716	-0.006	98	399386	400.0	400.0	
* 5 Chrysene-d12	240	13.686	13.692	-0.006	99	405414	400.0	400.0	
* 6 Perylene-d12	264	16.069	16.074	-0.005	98	385168	400.0	400.0	
$ 7 2-Fluorophenol	112	5.775	5.781	-0.006	94	157444	1600.0	961.8	
$ 8 Phenol-d5	99	6.499	6.499	0.001	0	204063	1600.0	743.5	
$ 9 Nitrobenzene-d5	82	7.310	7.310	0.000	97	559497	1600.0	1324.1	
$ 10 2-Fluorobiphenyl (Surr)	172	8.816	8.822	-0.006	99	978860	1600.0	1239.4	
$ 11 2,4,6-Tribromophenol	330	10.104	10.104	0.000	82	108819	1600.0	1367.4	
$ 12 Terphenyl-d14	244	12.216	12.222	-0.006	98	1079245	1600.0	1338.8	
26 1,4-Dioxane	88	4.363	4.363	0.000	80	27725	1600.0	528.1	
27 N-Nitrosodimethylamine	74	4.616	4.622	-0.006	70	101972	1600.0	660.8	
28 Pyridine	79		4.687				ND	ND	U
42 Benzaldehyde	77	6.499	6.499	0.001	85	375702	1600.0	2297.5	
43 Phenol	94	6.510	6.510	0.000	94	228591	1600.0	751.1	
44 Aniline	93	6.575	6.581	-0.006	90	33258	1600.0	64.4	
45 Bis(2-chloroethyl)ether	93	6.599	6.598	0.001	90	425125	1600.0	1178.9	
244 n-Decane	57	6.687	6.687	0.000	90	447452	1600.0	1040.0	
47 2-Chlorophenol	128	6.687	6.693	-0.006	91	358420	1600.0	1284.4	
48 1,3-Dichlorobenzene	146	6.822	6.822	0.000	91	360905	1600.0	1157.1	
49 1,4-Dichlorobenzene	146	6.875	6.875	0.000	86	367717	1600.0	1129.7	
50 Benzyl alcohol	108	6.940	6.940	0.000	85	209749	1600.0	1019.3	
51 1,2-Dichlorobenzene	146	7.010	7.010	0.000	90	374498	1600.0	1177.1	
52 2-Methylphenol	108	7.010	7.016	-0.006	94	318537	1600.0	1180.7	
54 2,2'-oxybis[1-chloropropan	45	7.046	7.046	0.000	88	1009034	1600.0	1185.3	
53 Indene	115	7.081	7.081	0.000	90	1473215	3200.0	2580.3	
55 3 & 4 Methylphenol	108	7.134	7.134	0.000	0	303580	1600.0	1109.8	
57 N-Nitrosodi-n-propylamine	70	7.151	7.151	0.000	96	357149	1600.0	1249.9	
58 Acetophenone	105	7.169	7.175	-0.006	89	649996	1600.0	1304.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
61 Hexachloroethane	117	7.304	7.304	0.000	90	161261	1600.0	1196.5	
62 Nitrobenzene	77	7.328	7.328	0.000	95	525771	1600.0	1259.8	
64 Isophorone	82	7.510	7.516	-0.006	93	899286	1600.0	1280.5	
66 2,4-Dimethylphenol	107	7.581	7.587	-0.006	96	458443	1600.0	1382.5	
65 2-Nitrophenol	139	7.593	7.593	0.000	85	256077	1600.0	1271.4	
70 Benzoic acid	122		7.634				ND	ND	U
69 Bis(2-chloroethoxy)methane	93	7.657	7.657	0.000	93	521033	1600.0	1178.1	
72 2,4-Dichlorophenol	162	7.793	7.793	0.000	94	322235	1600.0	1330.2	
73 1,2,4-Trichlorobenzene	180	7.875	7.875	0.000	92	361008	1600.0	1186.0	
74 Naphthalene	128	7.951	7.951	0.000	98	1327854	1600.0	1186.9	
75 4-Chloroaniline	127	7.963	7.963	0.000	92	488318	1600.0	923.3	
76 2,6-Dichlorophenol	162	7.981	7.981	0.000	90	365283	1600.0	1340.5	
78 Hexachlorobutadiene	225	8.040	8.045	-0.005	92	206923	1600.0	1211.2	
83 Caprolactam	113	8.246	8.245	0.001	68	28517	1600.0	263.8	
85 4-Chloro-3-methylphenol	107	8.334	8.340	-0.006	93	429852	1600.0	1594.3	
86 2-Methylnaphthalene	142	8.528	8.534	-0.006	92	953607	1600.0	1240.2	
87 1-Methylnaphthalene	142	8.616	8.622	-0.006	92	895549	1600.0	1234.7	
89 Hexachlorocyclopentadiene	237	8.669	8.669	0.000	94	219356	1600.0	1162.3	
90 1,2,4,5-Tetrachlorobenzene	216	8.675	8.681	-0.006	95	362094	1600.0	1267.6	
93 2,4,6-Trichlorophenol	196	8.751	8.757	-0.006	93	276916	1600.0	1465.3	
94 2,4,5-Trichlorophenol	196	8.787	8.792	-0.005	88	285905	1600.0	1501.7	
99 1,1'-Biphenyl	154	8.910	8.916	-0.006	96	1106579	1600.0	1219.2	
100 2-Chloronaphthalene	162	8.951	8.951	0.000	99	863184	1600.0	1248.3	
101 2-Nitroaniline	65	9.010	9.010	0.000	76	393648	1600.0	1439.1	
104 Dimethyl phthalate	163	9.128	9.134	-0.006	96	1119609	1600.0	1291.4	
103 1,3-Dinitrobenzene	168	9.175	9.175	0.000	85	181519	1600.0	1387.1	
106 2,6-Dinitrotoluene	165	9.193	9.198	-0.005	83	250191	1600.0	1304.3	
108 Acenaphthylene	152	9.316	9.316	0.000	98	1259473	1600.0	1257.7	
109 3-Nitroaniline	138	9.351	9.357	-0.006	85	244982	1600.0	1451.5	
110 2,4-Dinitrophenol	184	9.440	9.439	0.001	74	244420	3200.0	2097.1	
112 4-Nitrophenol	109	9.451	9.457	-0.006	91	238962	3200.0	1971.8	
111 Acenaphthene	153	9.457	9.463	-0.006	94	888946	1600.0	1253.3	
113 2,4-Dinitrotoluene	165	9.545	9.551	-0.006	84	327092	1600.0	1324.5	
115 Dibenzofuran	168	9.604	9.604	0.000	93	1252339	1600.0	1253.4	
118 2,3,4,6-Tetrachlorophenol	232	9.692	9.698	-0.006	83	224037	1600.0	1399.2	
248 Hexadecane	57	9.710	9.716	-0.006	91	942883	1600.0	1173.3	
120 Diethyl phthalate	149	9.722	9.722	0.000	97	1251533	1600.0	1440.1	
122 4-Chlorophenyl phenyl ethe	204	9.863	9.863	0.000	96	474480	1600.0	1203.6	
125 4-Nitroaniline	138	9.881	9.881	0.000	77	262434	1600.0	1538.5	
124 Fluorene	166	9.898	9.898	0.000	94	1058927	1600.0	1236.9	
127 4,6-Dinitro-2-methylphenol	198	9.904	9.904	0.000	77	348169	3200.0	2573.5	
128 N-Nitrosodiphenylamine	169	9.957	9.957	0.000	98	755493	1600.0	1258.0	
129 Diphenylamine	169	9.957	9.957	0.000	92	755493	1368.0	1069.3	
131 Azobenzene	77	9.998	10.004	-0.006	94	1232810	1600.0	1353.0	
130 1,2-Diphenylhydrazine	77	9.998	10.004	-0.006	26	1232810	1600.0	1353.0	a
138 4-Bromophenyl phenyl ether	248	10.287	10.292	-0.005	80	273416	1600.0	1348.8	
141 Atrazine	200	10.369	10.375	-0.006	87	330475	1600.0	1480.6	
140 Hexachlorobenzene	284	10.387	10.392	-0.005	90	260335	1600.0	1351.9	
245 n-Octadecane	57	10.492	10.498	-0.006	88	1063980	1600.0	1313.9	
143 Pentachlorophenol	266	10.534	10.539	-0.005	85	335466	3200.0	2642.4	
148 Phenanthrene	178	10.734	10.739	-0.005	98	1429506	1600.0	1247.4	
149 Anthracene	178	10.781	10.781	0.000	98	1464283	1600.0	1282.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
150 Carbazole	167	10.892	10.898	-0.006	97	1397558	1600.0	1346.6	
154 Di-n-butyl phthalate	149	11.116	11.122	-0.006	99	2050464	1600.0	1470.7	
159 Fluoranthene	202	11.863	11.869	-0.006	97	1587393	1600.0	1350.5	
160 Benzidine	184	11.939	11.939	0.000	95	3851	3200.0	110.9	
161 Pyrene	202	12.122	12.128	-0.006	98	1523543	1600.0	1187.4	
169 Butyl benzyl phthalate	149	12.751	12.757	-0.006	97	922991	1600.0	1393.4	
174 Bis(2-ethylhexyl) phthalat	149	13.522	13.527	-0.005	94	1281065	1600.0	1450.2	
177 3,3'-Dichlorobenzidine	252	13.563	13.575	-0.011	76	1058275	3200.0	2649.9	
178 Benzo[a]anthracene	228	13.663	13.675	-0.011	98	1514871	1600.0	1289.8	
179 Chrysene	228	13.728	13.733	-0.005	97	1450155	1600.0	1239.7	
181 Di-n-octyl phthalate	149	14.545	14.551	-0.006	99	2140655	1600.0	1421.6	
183 Benzo[b]fluoranthene	252	15.410	15.416	-0.006	97	1446324	1600.0	1282.5	
184 Benzo[k]fluoranthene	252	15.451	15.457	-0.006	99	1525319	1600.0	1287.8	
185 Benzo[a]pyrene	252	15.974	15.980	-0.006	77	1399715	1600.0	1304.0	
190 Indeno[1,2,3-cd]pyrene	276	18.257	18.262	-0.005	99	1501419	1600.0	1301.1	
189 Dibenz(a,h)anthracene	278	18.263	18.268	-0.005	91	1273802	1600.0	1291.6	
191 Benzo[g,h,i]perylene	276	18.910	18.921	-0.011	98	1223267	1600.0	1249.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

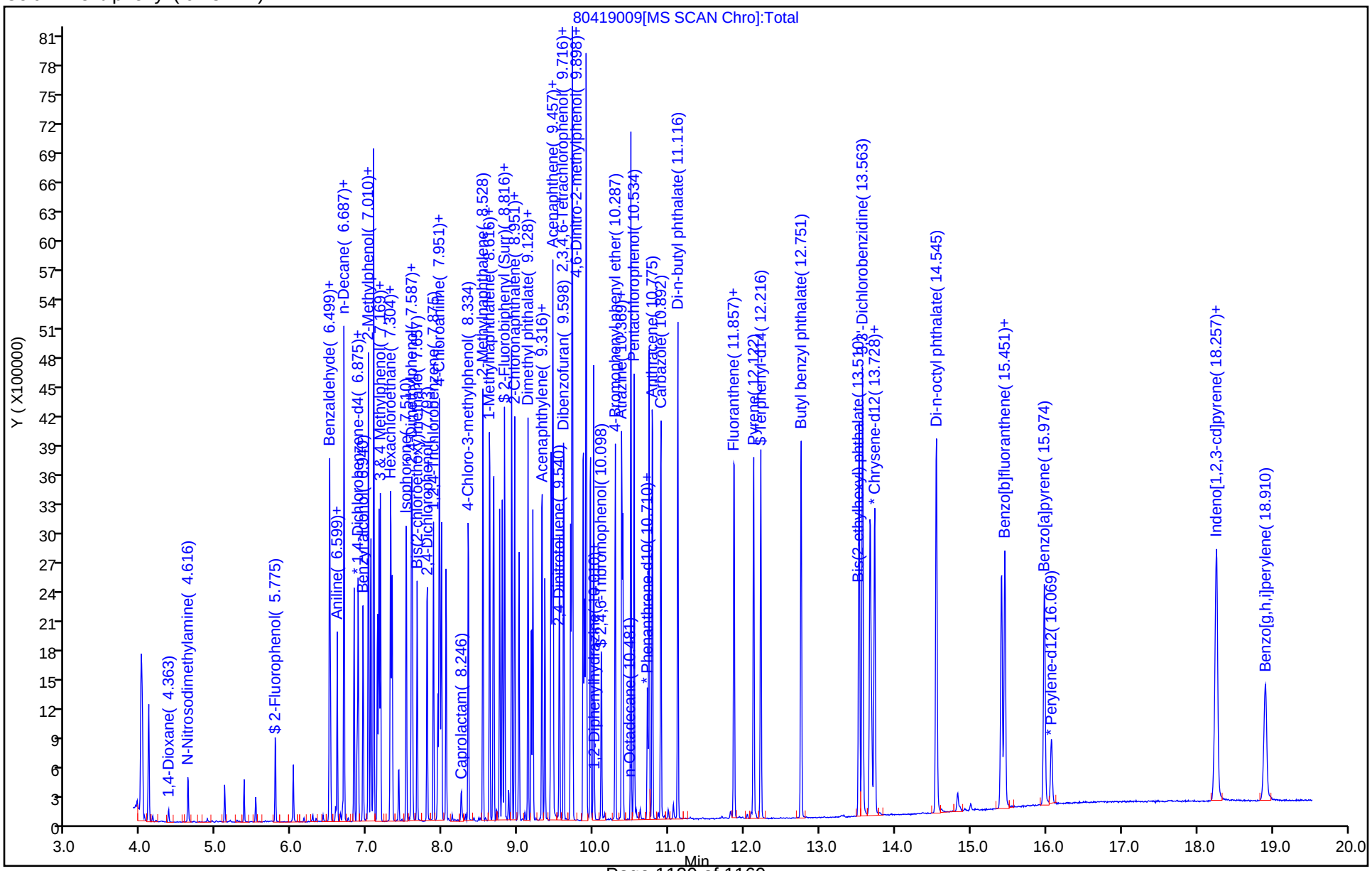
Report Date: 19-Apr-2018 10:59:18 Chrom Revision: 2.2 16-Apr-2018 07:57:50

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419009.D

Injection Date:	19-Apr-2018 10:10:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	LCS 240-322624/19-A			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\80419009.D
Lims ID: LCS 240-322624/19-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Apr-2018 10:10:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075050-009
Misc. Info.: LCS 240-322624/19-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180419-75050.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 19-Apr-2018 10:58:48 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK032

First Level Reviewer: hulat Date: 19-Apr-2018 10:57:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	961.8	60.11
$ 8 Phenol-d5	1600.0	743.5	46.47
$ 9 Nitrobenzene-d5	1600.0	1324.1	82.76
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1239.4	77.46
$ 11 2,4,6-Tribromophenol	1600.0	1367.4	85.46
$ 12 Terphenyl-d14	1600.0	1338.8	83.67

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 240-323647/10-A

Matrix: Water | Lab File ID: 80425005.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 08:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	24.7		10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	84		28-128
4165-62-2	Phenol-d5 (Surr)	21		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	70		35-120
367-12-4	2-Fluorophenol (Surr)	39		17-120
321-60-8	2-Fluorobiphenyl (Surr)	74		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	89		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425005.D
Lims ID: LCS 240-323647/10-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2018 08:15:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-005
Misc. Info.: LCS 240-323647/10-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:41:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	143206	400.0	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	823660	400.0	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	408084	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	738339	400.0	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	614914	400.0	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	549029	400.0	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	190847	1600.0	631.3	a
$ 8 Phenol-d5	99	6.403	6.403	0.000	0	160049	1600.0	333.2	
$ 9 Nitrobenzene-d5	82	7.203	7.203	0.000	94	850713	1600.0	1112.2	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.721	0.000	100	1641098	1600.0	1185.7	
$ 11 2,4,6-Tribromophenol	330	10.003	10.009	-0.006	86	176641	1600.0	1429.6	
$ 12 Terphenyl-d14	244	12.097	12.103	-0.006	98	1689594	1600.0	1345.8	
31 2-Picoline	93		5.209				ND	ND	
32 N-Nitrosomethylethylamine	88	5.274	5.274	0.000	92	281205	1600.0	1061.7	
14 Acrylamide	71		5.450				ND	ND	
34 Methyl methanesulfonate	80	5.509	5.509	0.000	90	131826	1600.0	395.5	
36 N-Nitrosodiethylamine	102	5.850	5.856	-0.006	91	377828	1600.0	1392.7	
37 Ethyl methanesulfonate	79	6.068	6.074	-0.006	97	427408	1600.0	1028.7	
46 Pentachloroethane	167	6.533	6.533	0.000	92	161132	1600.0	1015.8	
56 N-Nitrosopyrrolidine	100	7.039	7.039	0.000	80	344369	1600.0	1289.2	
59 N-Nitrosomorpholine	56	7.062	7.062	0.000	93	479614	1600.0	1136.1	
60 2-Toluidine	106	7.103	7.103	0.000	98	79310	1600.0	92.2	
63 N-Nitrosopiperidine	114	7.339	7.339	0.000	78	415908	1600.0	1217.0	
68 o,o',o''-Triethylphosphoro	198	7.533	7.533	0.000	88	386815	1600.0	1203.1	
71 alpha,alpha-Dimethyl phene	58		7.650				ND	ND	
77 Hexachloropropene	213	7.927	7.927	0.000	91	112511	1600.0	396.2	
82 N-Nitrosodi-n-butylamine	84	8.115	8.121	-0.006	89	597889	1600.0	1344.3	
81 Quinoline	129	8.121	8.121	0.000	96	117649	1600.0	94.6	
84 p-Phenylene diamine	108		8.150				ND	ND	
92 Safrole, Total	162	8.321	8.321	0.000	88	616698	1600.0	1217.6	
95 Isosafrole Peak 1	162	8.568	8.568	0.000	88	112643	1328.0	1026.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
91 Isosafrole Peak 2	162	8.762	8.762	0.000	90	617358	272.0	191.0	
247 1-Chloronaphthalene	162	8.874	8.874	0.000	97	1350168	1600.0	1163.0	
102 1,4-Naphthoquinone	158	8.980	8.980	0.000	85	422671	1600.0	967.0	
105 1,4-Dinitrobenzene	168	9.003	9.003	0.000	96	229204	1600.0	1241.5	
114 Pentachlorobenzene	250	9.474	9.474	0.000	96	486300	1600.0	1222.8	
117 1-Naphthylamine	143	9.562	9.562	0.000	97	262755	1600.0	248.2	
116 2,3,5,6-Tetrachlorophenol	232	9.562	9.568	-0.006	90	257499	1600.0	1200.4	
119 2-Naphthylamine	143	9.627	9.627	0.000	96	414583	1600.0	378.4	
121 Thionazin	97	9.703	9.703	0.000	81	391232	1600.0	1263.5	
123 N-Nitro-o-toluidine	152	9.780	9.780	0.000	95	463084	1600.0	1217.1	
132 Sulfotepp	202	9.950	9.950	0.000	79	208946	1600.0	1233.7	
133 1,3,5-Trinitrobenzene	213	10.038	10.044	-0.006	83	134801	1600.0	1363.5	
135 Phenacetin	108	10.091	10.091	0.000	89	774607	1600.0	1121.3	
134 Diallate Peak 1	86	10.091	10.091	0.000	95	686501	1376.0	917.2	
136 Phorate	121	10.103	10.103	0.000	94	362053	1600.0	1084.1	
137 Diallate Peak 2	86	10.174	10.180	-0.006	92	119470	224.0	153.9	
139 Dimethoate	87	10.250	10.256	-0.006	92	640585	1600.0	1348.1	
142 4-Aminobiphenyl	169	10.409	10.415	-0.006	88	945060	1600.0	619.4	
144 Pronamide	173	10.427	10.427	0.000	91	749060	1600.0	1279.8	
145 Pentachloronitrobenzene	237	10.456	10.456	0.000	86	163640	1600.0	1112.9	
146 Disulfoton	88	10.544	10.550	-0.006	99	720589	1600.0	899.3	
147 Dinoseb	211	10.556	10.562	-0.006	93	285148	1600.0	1382.1	
152 Methyl parathion	109	10.880	10.880	0.000	93	574453	1600.0	1274.5	
155 Ethyl Parathion	97	11.215	11.215	0.000	83	339336	1600.0	1116.7	
156 4-Nitroquinoline-1-oxide	190	11.297	11.297	0.000	88	127653	1600.0	1431.1	
157 Methapyrilene	58		11.332				ND	ND	
158 Isodrin	66	11.597	11.603	-0.006	92	251045	1600.0	960.4	
162 Aramite Peak 1	185	12.015	12.015	0.000	0	160687	816.0	654.6	
163 Aramite Peak 2	185	12.097	12.097	0.000	0	170025	784.0	545.8	
164 p-Dimethylamino azobenzene	225	12.250	12.256	-0.006	95	422116	1600.0	970.2	
165 Chlorobenzilate	139	12.285	12.285	0.000	85	808705	1600.0	1153.3	
168 Famphur	218	12.579	12.579	0.000	87	819103	1600.0	2234.9	E
170 3,3'-Dimethylbenzidine	212	12.656	12.662	-0.006	98	8017	1600.0	149.9	
172 2-Acetylaminofluorene	181	13.009	13.009	0.000	96	979379	1600.0	1176.1	
175 4,4'-Methylene bis(2-chlor	231	13.409	13.409	0.000	96	350803	1600.0	980.9	
180 6-Methylchrysene	242	14.268	14.268	0.000	99	2966647	3200.0	2200.0	
182 7,12-Dimethylbenz(a)anthra	256	15.209	15.209	0.000	93	641549	1600.0	840.6	
186 3-Methylcholanthrene	268	16.391	16.397	-0.006	93	1910901	3200.0	2184.8	
188 Dibenz[a,h]acridine	279	17.450	17.450	0.000	92	1391336	1600.0	1086.3	
S 194 Isosafrole	162				0		1600.0	1217.6	
S 195 Diallate	86				0		1600.0	1071.1	
S 196 Aramite, Total	185				0		1600.0	1200.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

E - Exceeded Maximum Amount

Review Flags

a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 25-Apr-2018 10:03:39 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425005.D

Injection Date: 25-Apr-2018 08:15:30 Instrument ID: A4AG2 Operator ID:

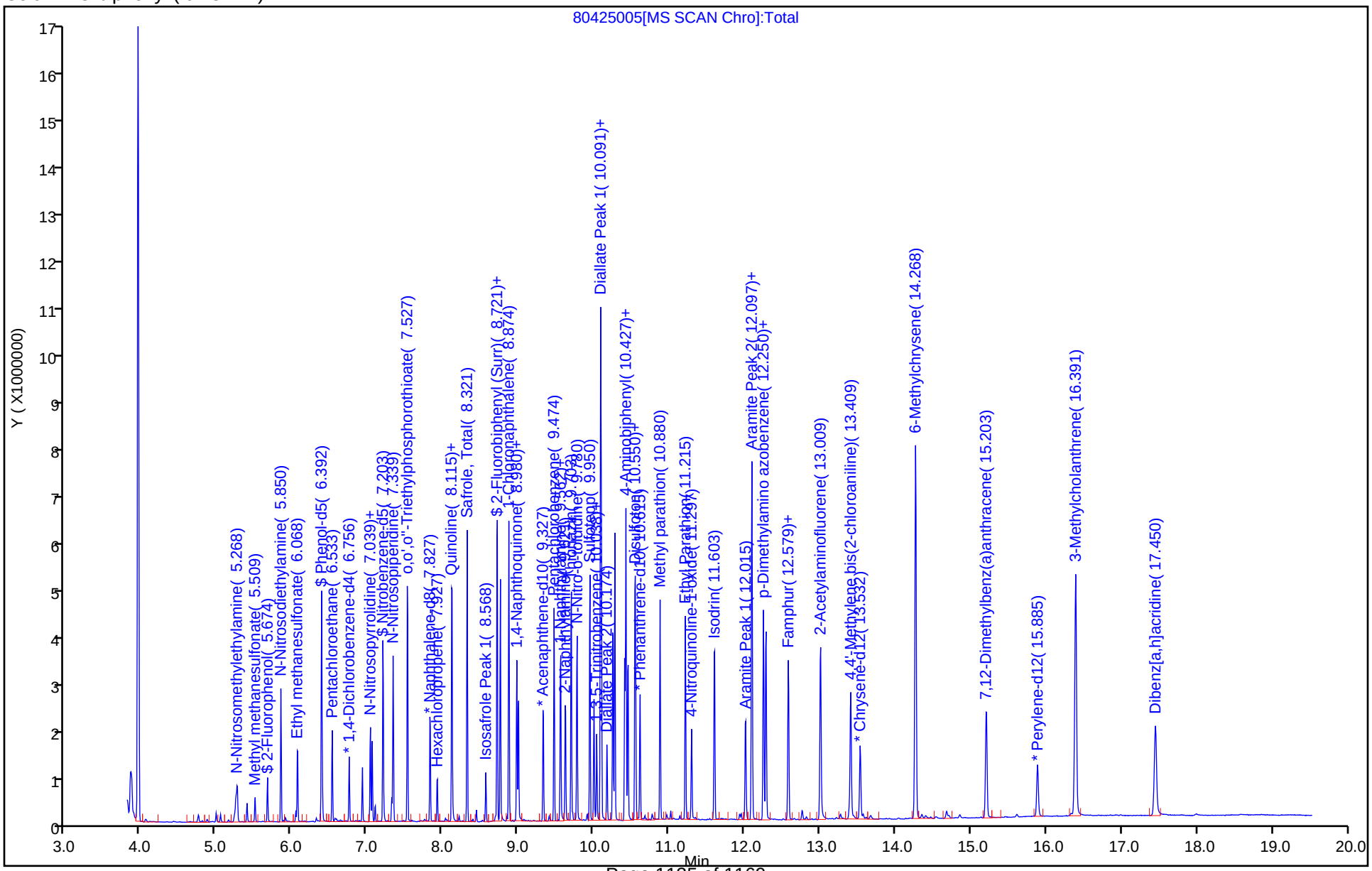
Lims ID: LCS 240-323647/10-A Worklist Smp#: 5

Client ID:

Injection Vol: 5.0 ul Dil. Factor: 1.0000 ALS Bottle#: 5

Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425005.D
Lims ID: LCS 240-323647/10-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Apr-2018 08:15:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-005
Misc. Info.: LCS 240-323647/10-A
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 10:03:27 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 09:41:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	631.3	39.45
$ 8 Phenol-d5	1600.0	333.2	20.83
$ 9 Nitrobenzene-d5	1600.0	1112.2	69.51
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1185.7	74.11
$ 11 2,4,6-Tribromophenol	1600.0	1429.6	89.35
$ 12 Terphenyl-d14	1600.0	1345.8	84.11

Manual Integration/User Assign Peak Report

TestAmerica Canton

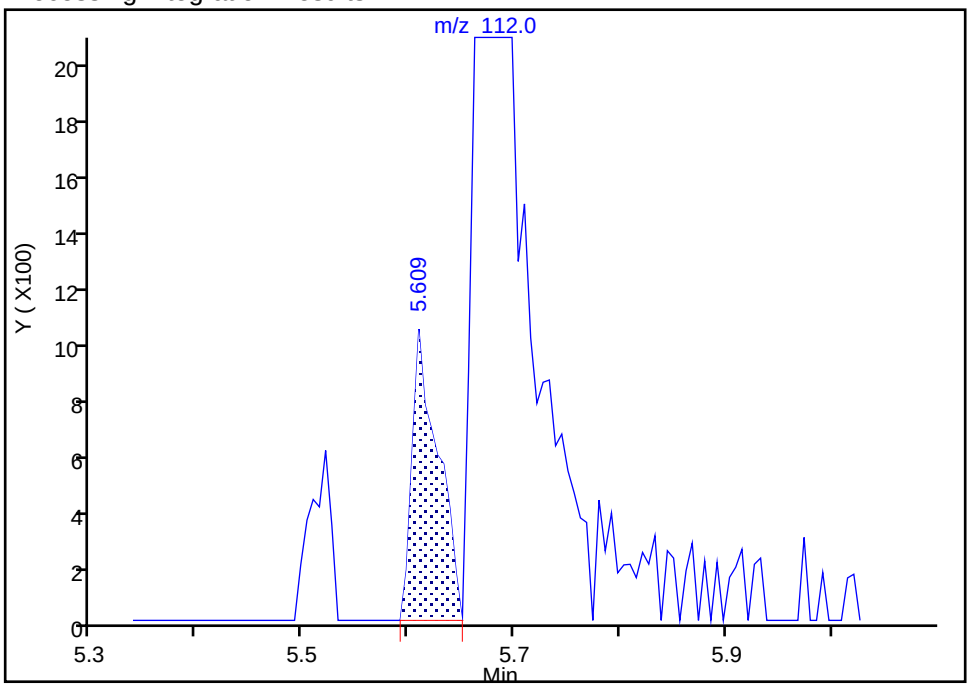
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425005.D
Injection Date: 25-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: LCS 240-323647/10-A
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

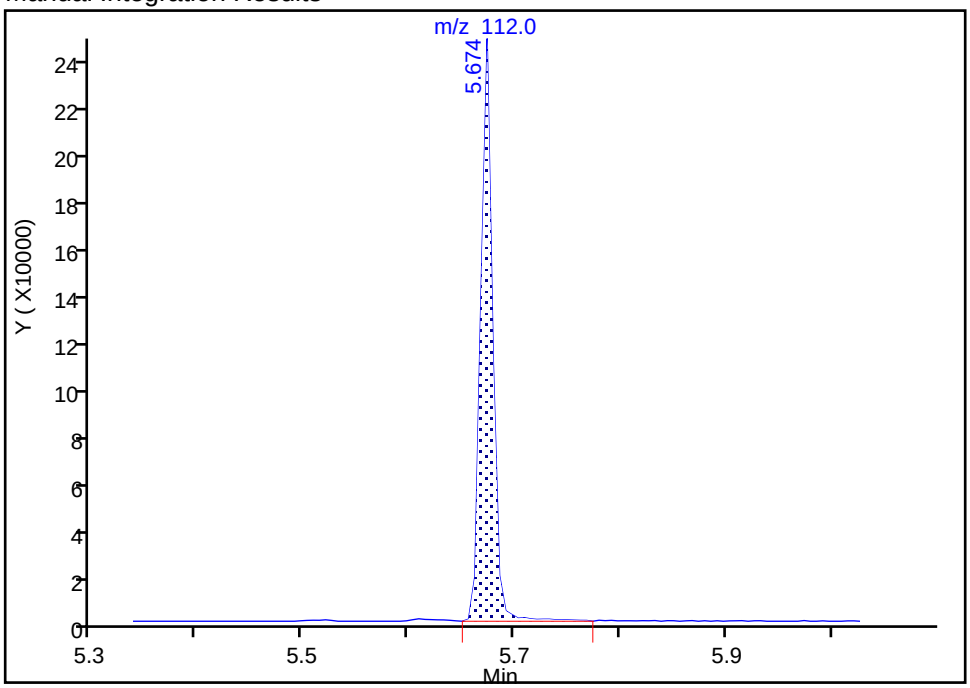
Processing Integration Results

RT: 5.61
Area: 1758
Amount: 5.814877
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 190847
Amount: 631.2582
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:41:03
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

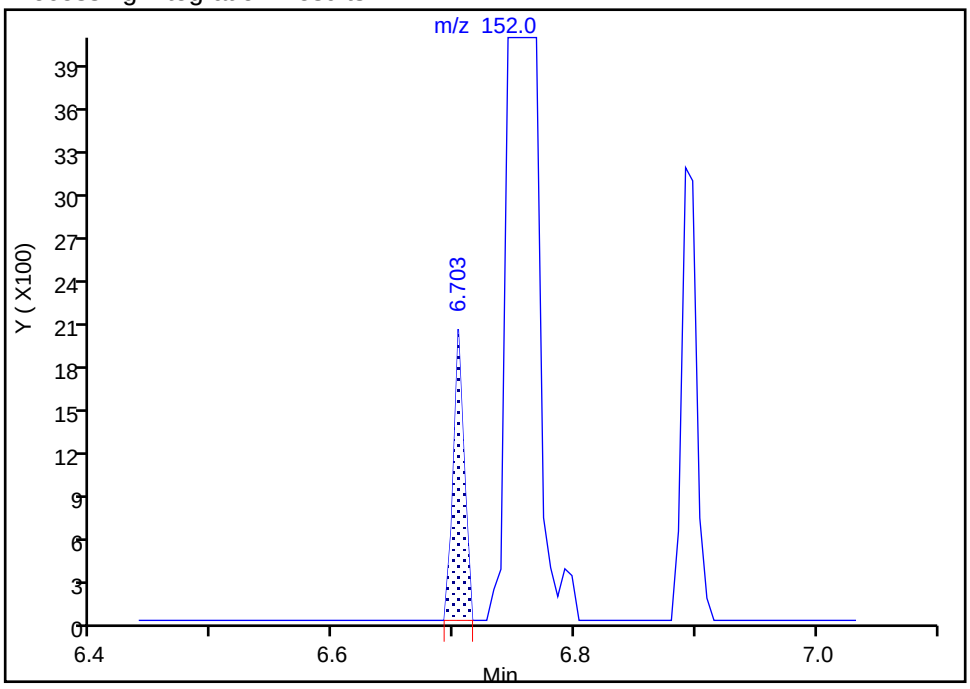
Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425005.D
Injection Date: 25-Apr-2018 08:15:30 Instrument ID: A4AG2
Lims ID: LCS 240-323647/10-A
Client ID:
Operator ID: ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: LVI AG2 8270 Limit Group: MSS 8270D ICAL
Column: 5% phenyl (0.18 mm) Detector MS SCAN

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

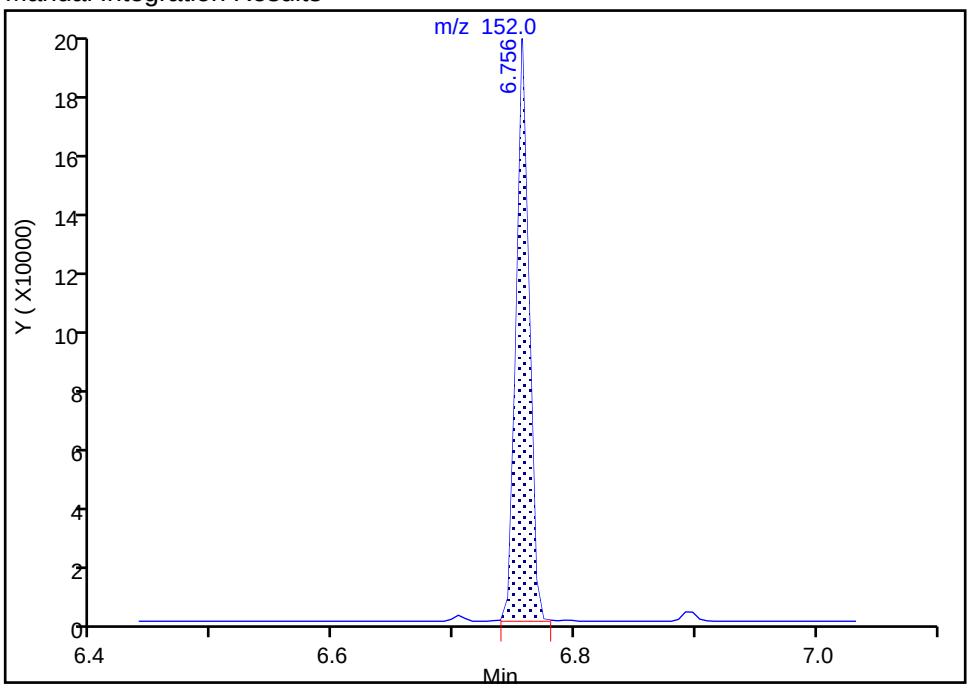
Processing Integration Results

RT: 6.70
Area: 1252
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 143206
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 09:40:20
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A MS | Lab Sample ID: 240-94103-4 MS

Matrix: Water | Lab File ID: 80420025.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 240(mL) | Date Analyzed: 04/20/2018 18:05

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323282 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	87		28-128
4165-62-2	Phenol-d5 (Surr)	61		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	78		35-120
367-12-4	2-Fluorophenol (Surr)	63		17-120
321-60-8	2-Fluorobiphenyl (Surr)	72		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	79		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420025.D
Lims ID: 240-94103-E-4-A MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 20-Apr-2018 18:05:30 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-025
Misc. Info.: 240-94103-E-4-A MS
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:07:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.852	6.852	0.000	95	103977	400.0	400.0	
* 2 Naphthalene-d8	136	7.923	7.923	0.000	99	561566	400.0	400.0	
* 3 Acenaphthene-d10	164	9.417	9.423	-0.006	96	294431	400.0	400.0	
* 4 Phenanthrene-d10	188	10.699	10.705	-0.006	98	502190	400.0	400.0	
* 5 Chrysene-d12	240	13.664	13.670	-0.006	99	489607	400.0	400.0	
* 6 Perylene-d12	264	16.046	16.052	-0.006	98	448446	400.0	400.0	
$ 7 2-Fluorophenol	112	5.770	5.770	0.000	94	217369	1600.0	1013.7	
$ 8 Phenol-d5	99	6.493	6.444	-0.001	0	349010	1600.0	970.7	
$ 9 Nitrobenzene-d5	82	7.299	7.300	0.000	97	679336	1600.0	1244.7	
$ 10 2-Fluorobiphenyl (Surr)	172	8.805	8.806	-0.006	99	1175649	1600.0	1148.5	
$ 11 2,4,6-Tribromophenol	330	10.093	10.093	0.000	84	130283	1600.0	1263.1	
$ 12 Terphenyl-d14	244	12.199	12.195	-0.006	98	1357315	1600.0	1394.2	
132 Sulfotepp	202		10.035					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

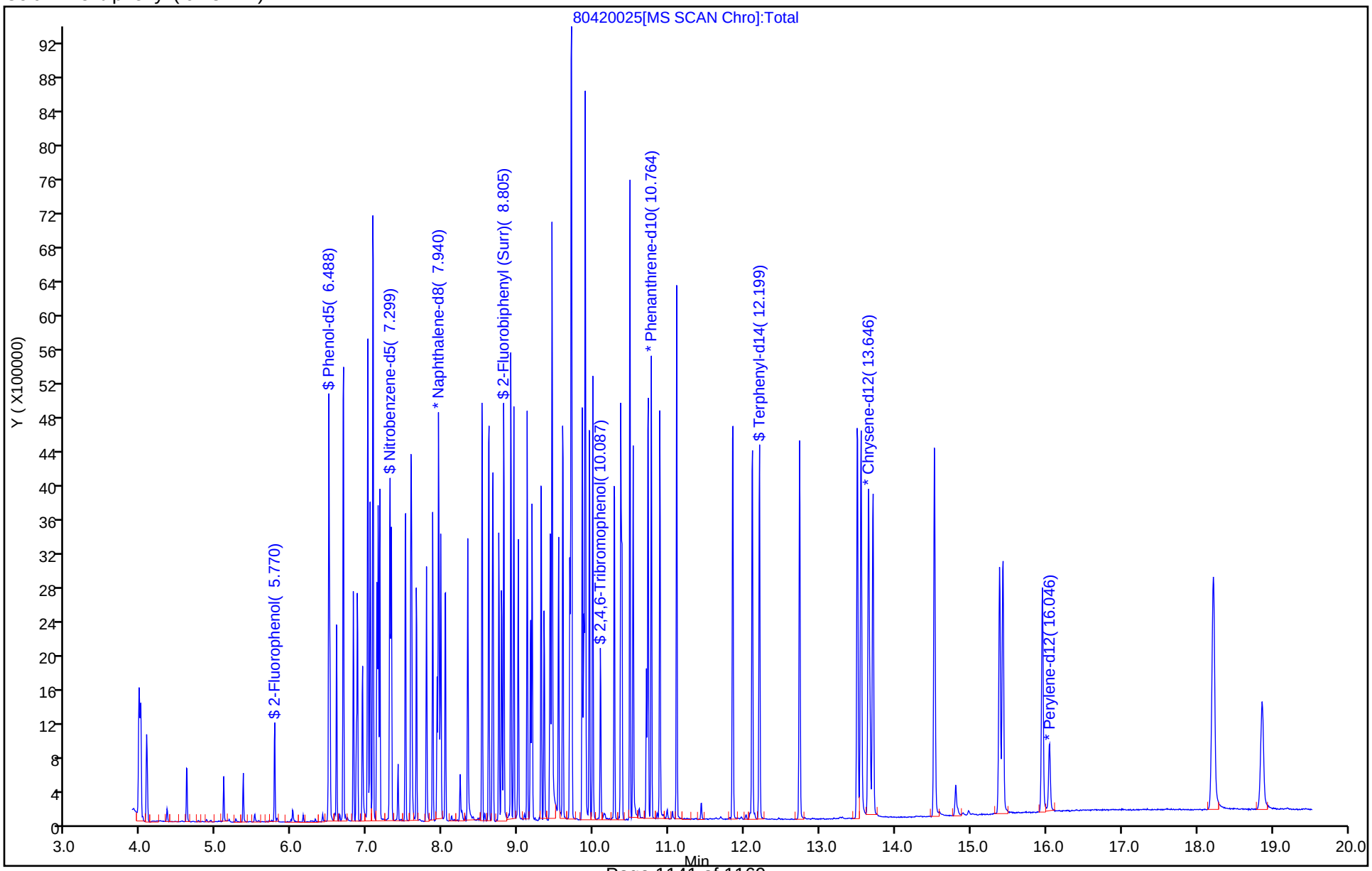
Report Date: 21-Apr-2018 07:35:20 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420025.D

Injection Date:	20-Apr-2018 18:05:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-E-4-A MS			Worklist Smp#:	25
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\80420025.D
Lims ID: 240-94103-E-4-A MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 20-Apr-2018 18:05:30 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075096-025
Misc. Info.: 240-94103-E-4-A MS
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180420-75096.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 21-Apr-2018 07:28:37 Calib Date: 11-Apr-2018 18:32:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180411-74825.b\80411019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: hulat Date: 21-Apr-2018 07:07:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	1013.7	63.36
$ 8 Phenol-d5	1600.0	970.7	60.67
$ 9 Nitrobenzene-d5	1600.0	1244.7	77.79
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1148.5	71.78
$ 11 2,4,6-Tribromophenol	1600.0	1263.1	78.94
$ 12 Terphenyl-d14	1600.0	1394.2	87.14

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A MS RE | Lab Sample ID: 240-94103-4 MS RE

Matrix: Water | Lab File ID: 80425010.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 10:17

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*26.5*		*10*	*1.0*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	88		28-128
4165-62-2	Phenol-d5 (Surr)	44		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	81		35-120
367-12-4	2-Fluorophenol (Surr)	54		17-120
321-60-8	2-Fluorobiphenyl (Surr)	83		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	98		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425010.D
Lims ID: 240-94103-C-4-A MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 25-Apr-2018 10:17:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-010
Misc. Info.: 240-94103-C-4-A MS
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:45:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	130828	400.0	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	773382	400.0	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	392964	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	715347	400.0	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	618098	400.0	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	524456	400.0	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	94	238981	1600.0	865.3	
$ 8 Phenol-d5	99	6.403	6.353	0.000	0	306238	1600.0	698.0	
$ 9 Nitrobenzene-d5	82	7.203	7.198	0.000	95	925491	1600.0	1288.6	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.715	0.000	100	1775825	1600.0	1332.4	
$ 11 2,4,6-Tribromophenol	330	10.003	10.003	-0.006	86	187387	1600.0	1574.9	
$ 12 Terphenyl-d14	244	12.097	12.098	-0.006	99	1777981	1600.0	1408.9	
132 Sulfotepp	202	9.950	9.950	0.000	82	217620	1600.0	1326.2	
T 202 Hexachlorophene TIC	198		14.400					ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

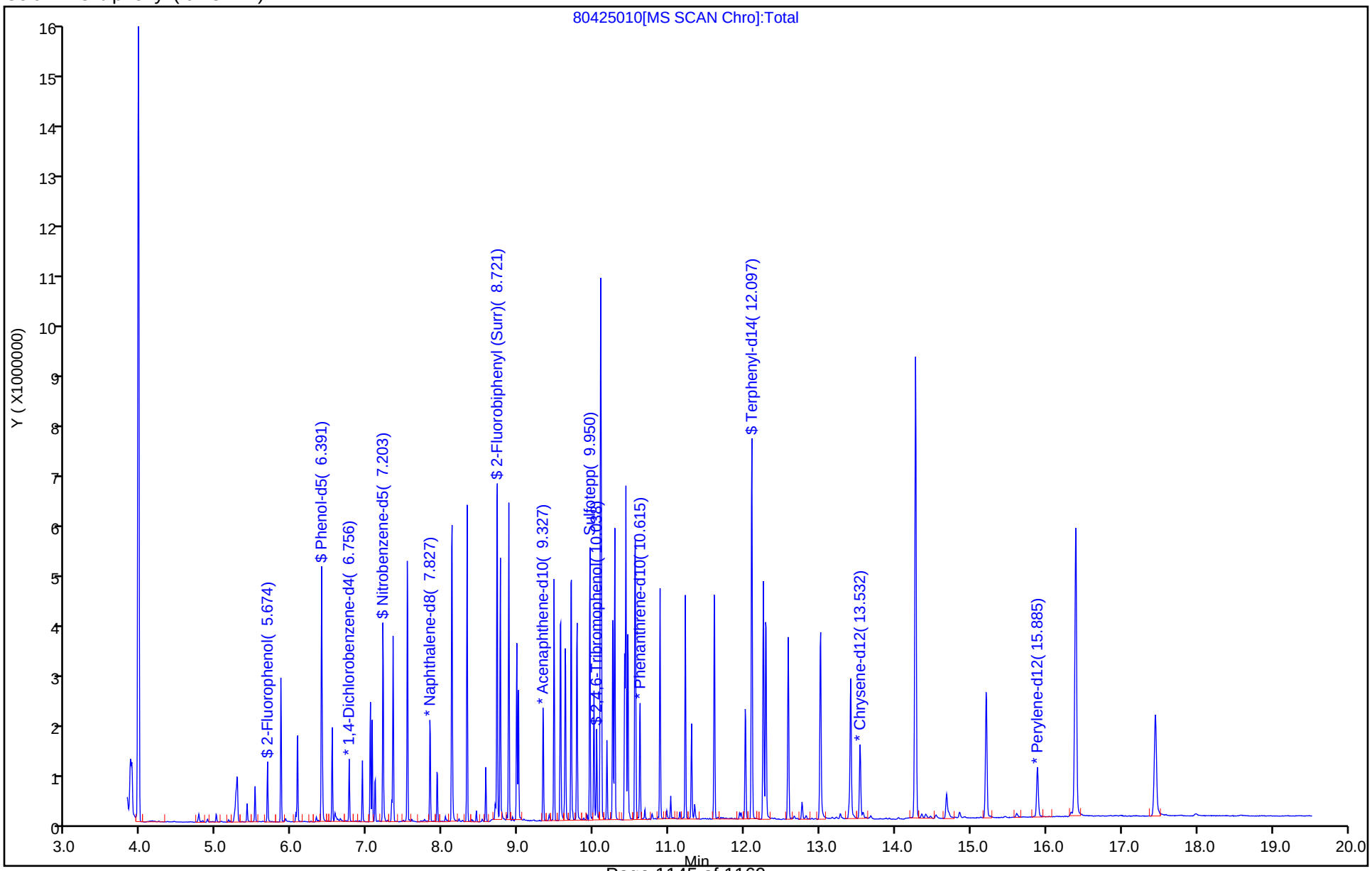
Report Date: 25-Apr-2018 11:46:55 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425010.D

Injection Date:	25-Apr-2018 10:17:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-C-4-A MS			Worklist Smp#:	10
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425010.D
Lims ID: 240-94103-C-4-A MS
Client ID: 16WC1A
Sample Type: MS
Inject. Date: 25-Apr-2018 10:17:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-010
Misc. Info.: 240-94103-C-4-A MS
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:45:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	865.3	54.08
$ 8 Phenol-d5	1600.0	698.0	43.62
$ 9 Nitrobenzene-d5	1600.0	1288.6	80.54
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1332.4	83.27
$ 11 2,4,6-Tribromophenol	1600.0	1574.9	98.43
$ 12 Terphenyl-d14	1600.0	1408.9	88.06

Manual Integration/User Assign Peak Report

TestAmerica Canton

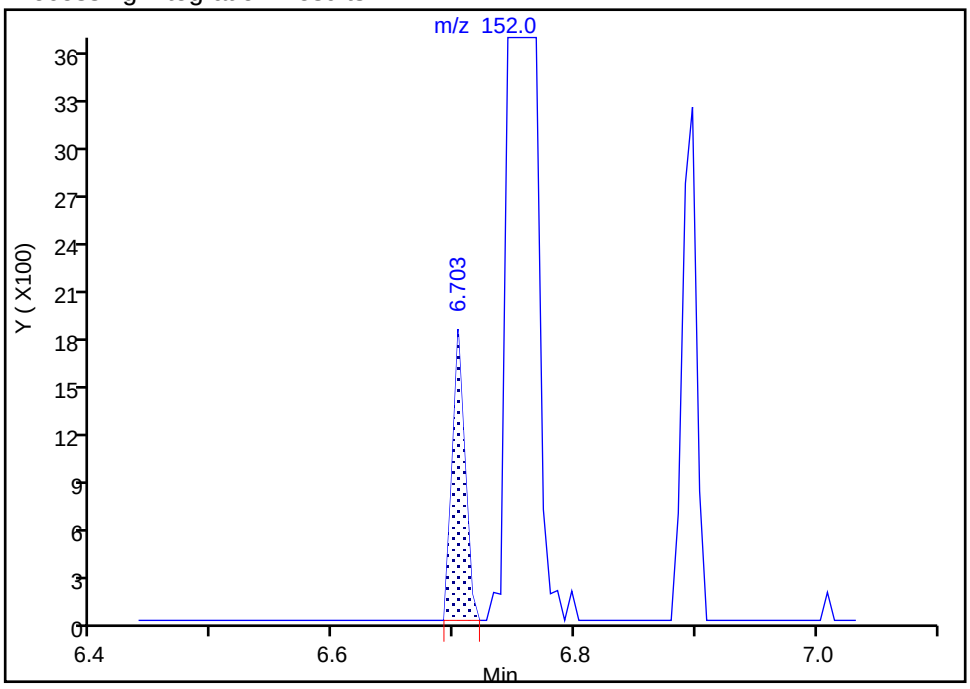
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425010.D				
Injection Date:	25-Apr-2018 10:17:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-C-4-A MS				
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

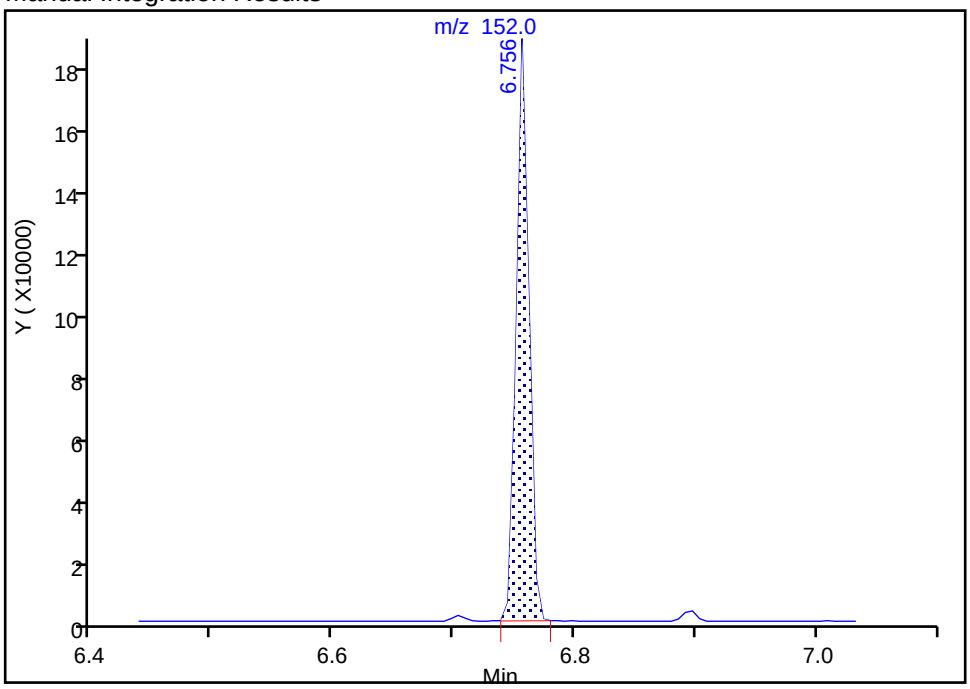
Processing Integration Results

RT: 6.70
Area: 1332
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 130828
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 10:47:52

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A MSD | Lab Sample ID: 240-94103-4 MSD

Matrix: Water | Lab File ID: 80423027.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/16/2018 10:31

Sample wt/vol: 240(mL) | Date Analyzed: 04/23/2018 16:50

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	Sulfotepp	10	U	10	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	80		28-128
4165-62-2	Phenol-d5 (Surr)	58		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	78		35-120
367-12-4	2-Fluorophenol (Surr)	73		17-120
321-60-8	2-Fluorobiphenyl (Surr)	75		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	83		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423027.D
Lims ID: 240-94103-A-4-A MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 23-Apr-2018 16:50:30 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-027
Misc. Info.: 240-94103-A-4-A MSD
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:41:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.776	6.776	0.000	96	195066	400.0	400.0	a
* 2 Naphthalene-d8	136	7.846	7.846	0.000	99	901953	400.0	400.0	
* 3 Acenaphthene-d10	164	9.346	9.346	0.000	97	446439	400.0	400.0	
* 4 Phenanthrene-d10	188	10.629	10.629	0.001	98	729797	400.0	400.0	
* 5 Chrysene-d12	240	13.564	13.558	0.006	98	650117	400.0	400.0	
* 6 Perylene-d12	264	15.922	15.922	0.000	96	502952	400.0	400.0	
$ 7 2-Fluorophenol	112	5.699	5.699	0.000	95	483169	1600.0	1173.3	
$ 8 Phenol-d5	99	6.417	6.417	0.000	0	602962	1600.0	921.7	
$ 9 Nitrobenzene-d5	82	7.223	7.223	0.000	95	1042292	1600.0	1244.4	
$ 10 2-Fluorobiphenyl (Surr)	172	8.735	8.735	0.001	100	1808216	1600.0	1194.2	
$ 11 2,4,6-Tribromophenol	330	10.023	10.023	0.000	93	178688	1600.0	1321.9	
$ 12 Terphenyl-d14	244	12.117	12.117	0.000	98	1708136	1600.0	1286.9	
132 Sulfotepp	202		9.964					ND	
T 202 Hexachlorophene TIC	198		14.400					ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

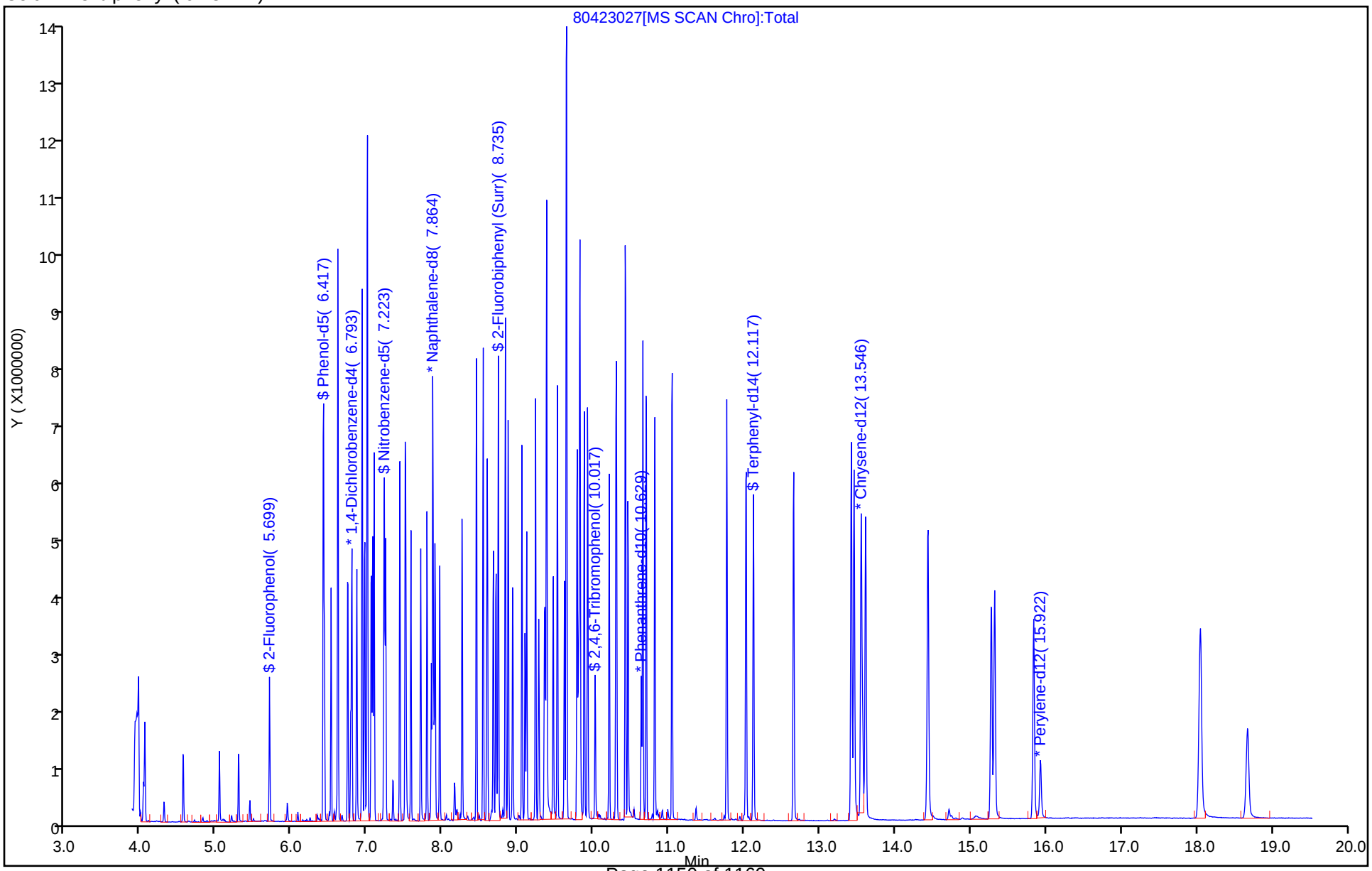
Report Date: 24-Apr-2018 07:02:57 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423027.D

Injection Date:	23-Apr-2018 16:50:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-A-4-A MSD			Worklist Smp#:	27
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423027.D
Lims ID: 240-94103-A-4-A MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 23-Apr-2018 16:50:30 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075139-027
Misc. Info.: 240-94103-A-4-A MSD
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 24-Apr-2018 07:02:23 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: hulat Date: 24-Apr-2018 06:41:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	1173.3	73.33
$ 8 Phenol-d5	1600.0	921.7	57.61
$ 9 Nitrobenzene-d5	1600.0	1244.4	77.77
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1194.2	74.64
$ 11 2,4,6-Tribromophenol	1600.0	1321.9	82.62
$ 12 Terphenyl-d14	1600.0	1286.9	80.43

Manual Integration/User Assign Peak Report

TestAmerica Canton

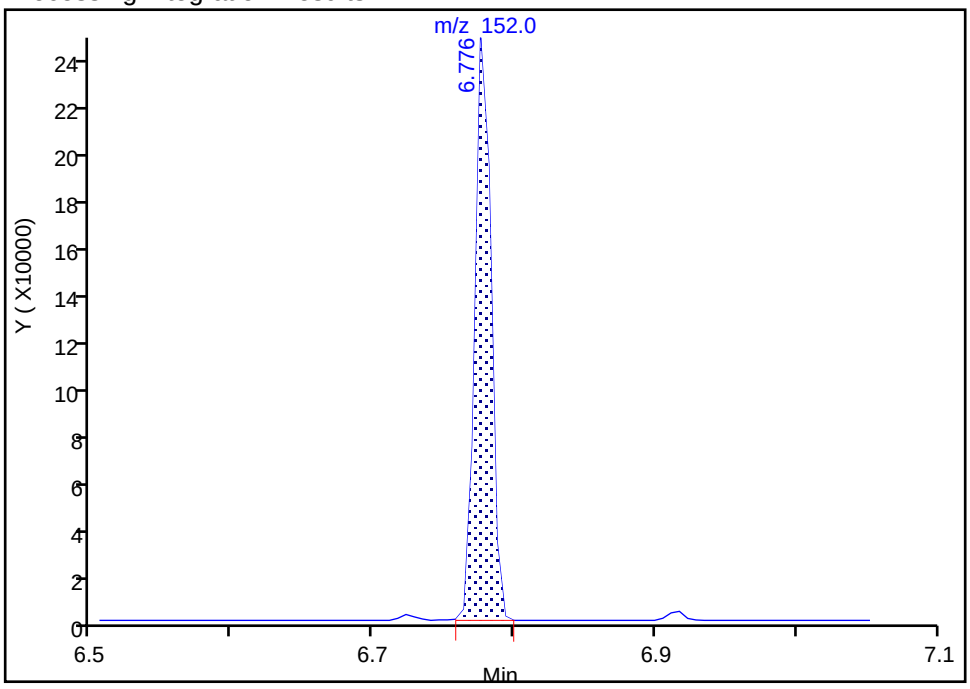
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423027.D				
Injection Date:	23-Apr-2018 16:50:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-A-4-A MSD				
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	27	Worklist Smp#:	27
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

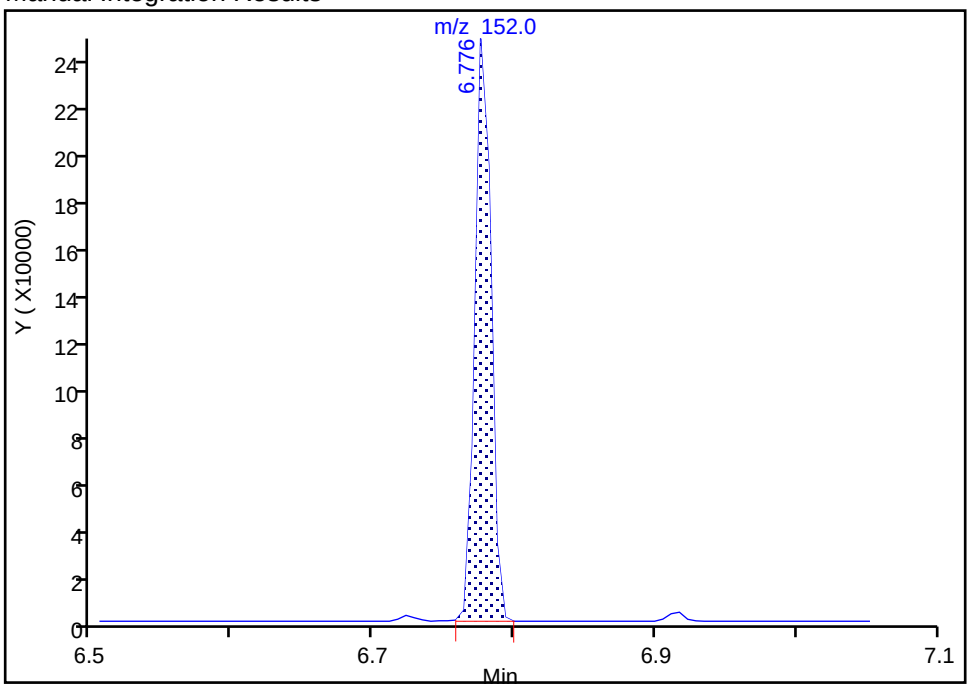
Processing Integration Results

RT: 6.78
Area: 195066
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.78
Area: 195066
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 24-Apr-2018 06:40:28

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-94103-1

SDG No.:

Client Sample ID: 16WC1A MSD RE | Lab Sample ID: 240-94103-4 MSD RE

Matrix: Water | Lab File ID: 80425011.D

Analysis Method: 8270D | Date Collected: 04/12/2018 15:15

Extract. Method: 3510C | Date Extracted: 04/23/2018 12:07

Sample wt/vol: 250(mL) | Date Analyzed: 04/25/2018 10:42

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 323952 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
3689-24-5	*Sulfotepp*	*24.9*		*10*	*1.0*

CAS NO.	SURROGATE	%REC	Q	LIMITS
1718-51-0	Terphenyl-d14 (Surr)	81		28-128
4165-62-2	Phenol-d5 (Surr)	33		15-120
4165-60-0	Nitrobenzene-d5 (Surr)	72		35-120
367-12-4	2-Fluorophenol (Surr)	49		17-120
321-60-8	2-Fluorobiphenyl (Surr)	76		32-120
118-79-6	2,4,6-Tribromophenol (Surr)	88		33-120

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425011.D
Lims ID: 240-94103-F-4-A MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 25-Apr-2018 10:42:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-011
Misc. Info.: 240-94103-F-4-A MSD
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:46:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.756	6.756	0.000	97	145896	400.0	400.0	a
* 2 Naphthalene-d8	136	7.827	7.833	-0.006	100	828653	400.0	400.0	
* 3 Acenaphthene-d10	164	9.327	9.333	-0.006	97	413155	400.0	400.0	
* 4 Phenanthrene-d10	188	10.615	10.615	0.000	98	746387	400.0	400.0	
* 5 Chrysene-d12	240	13.532	13.538	-0.006	98	633302	400.0	400.0	
* 6 Perylene-d12	264	15.885	15.891	-0.006	96	534057	400.0	400.0	
$ 7 2-Fluorophenol	112	5.674	5.674	0.000	95	243792	1600.0	791.5	a
$ 8 Phenol-d5	99	6.403	6.353	0.000	0	259554	1600.0	530.5	
$ 9 Nitrobenzene-d5	82	7.203	7.198	0.000	95	889192	1600.0	1155.5	
$ 10 2-Fluorobiphenyl (Surr)	172	8.721	8.715	0.000	100	1694148	1600.0	1209.0	
$ 11 2,4,6-Tribromophenol	330	10.003	10.003	-0.006	87	176696	1600.0	1412.5	
$ 12 Terphenyl-d14	244	12.097	12.098	-0.006	99	1669223	1600.0	1291.0	
132 Sulfotepp	202	9.950	9.950	0.000	84	213476	1600.0	1246.9	
T 202 Hexachlorophene TIC	198		14.400					ND	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SMIS80PPMW_00017 Amount Added: 5.00 Units: uL Run Reagent

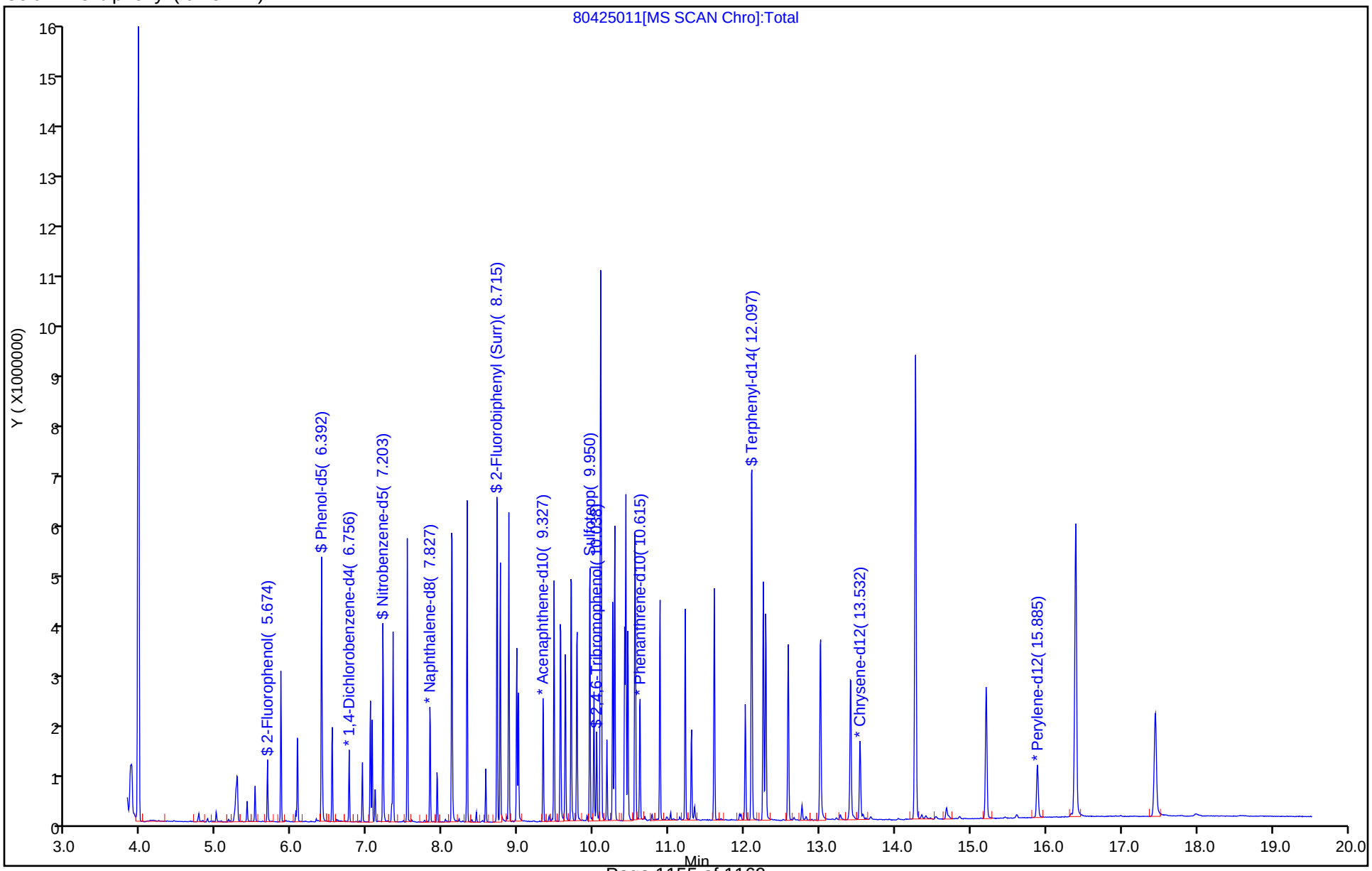
Report Date: 25-Apr-2018 11:46:59 Chrom Revision: 2.2 17-Apr-2018 19:19:24

TestAmerica Canton

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425011.D

Injection Date:	25-Apr-2018 10:42:30	Instrument ID:	A4AG2	Operator ID:	
Lims ID:	240-94103-F-4-A MSD			Worklist Smp#:	11
Client ID:	16WC1A				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		

Column: 5% phenyl (0.18 mm)



TestAmerica Canton
Recovery Report

Data File: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425011.D
Lims ID: 240-94103-F-4-A MSD
Client ID: 16WC1A
Sample Type: MSD
Inject. Date: 25-Apr-2018 10:42:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 240-0075243-011
Misc. Info.: 240-94103-F-4-A MSD
Operator ID: Instrument ID: A4AG2

Method: \\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\LVI AG2 8270.m
Limit Group: MSS 8270D ICAL
Last Update: 25-Apr-2018 11:46:44 Calib Date: 23-Apr-2018 13:33:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Canton\ChromData\A4AG2\20180422-75139.b\80423019.D

Column 1 : 5% phenyl (0.18 mm) Det: MS SCAN
Process Host: XAWRK021

First Level Reviewer: hulat Date: 25-Apr-2018 11:46:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	1600.0	791.5	49.47
$ 8 Phenol-d5	1600.0	530.5	33.15
$ 9 Nitrobenzene-d5	1600.0	1155.5	72.22
$ 10 2-Fluorobiphenyl (Surr)	1600.0	1209.0	75.56
$ 11 2,4,6-Tribromophenol	1600.0	1412.5	88.28
$ 12 Terphenyl-d14	1600.0	1291.0	80.69

Manual Integration/User Assign Peak Report

TestAmerica Canton

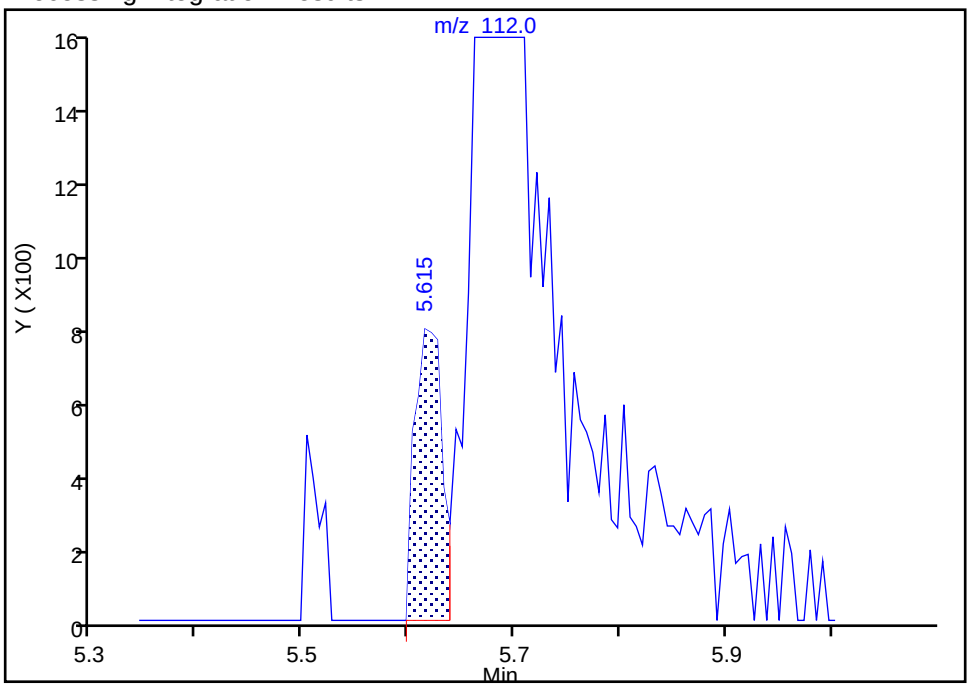
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425011.D				
Injection Date:	25-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-F-4-A MSD				
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

$ 7 2-Fluorophenol, CAS: 367-12-4

Signal: 1

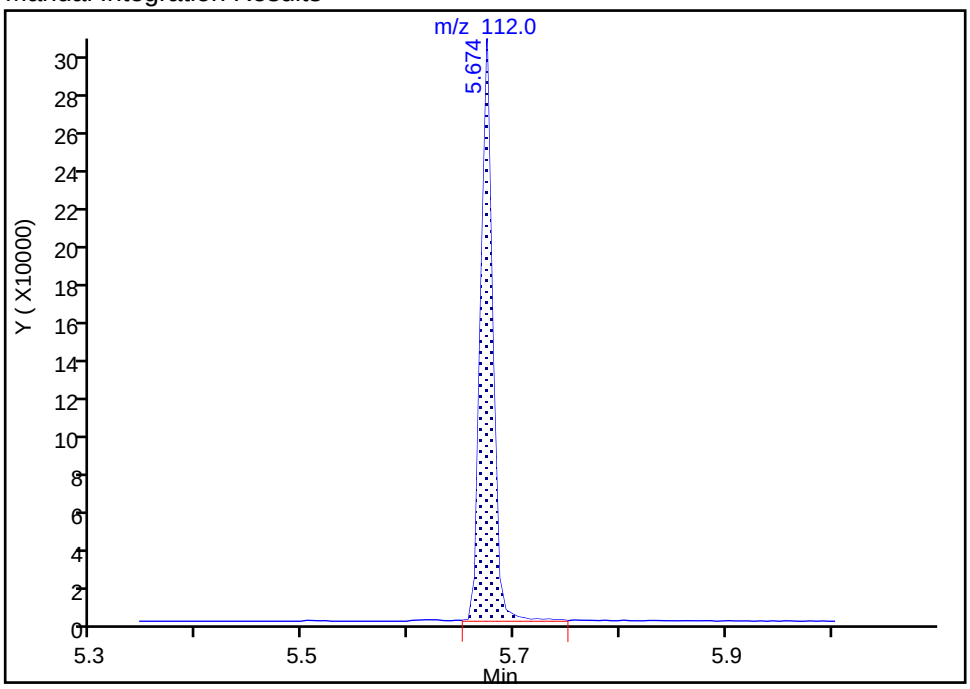
Processing Integration Results

RT: 5.62
Area: 1421
Amount: 4.613533
Amount Units: ng/ml



Manual Integration Results

RT: 5.67
Area: 243792
Amount: 791.5147
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:46:02

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Canton

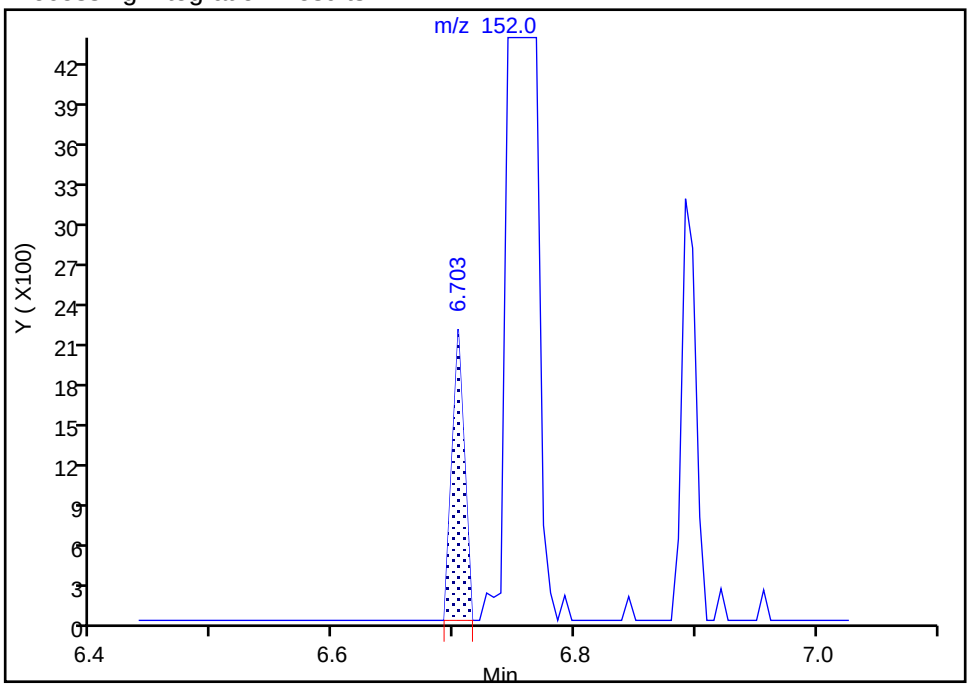
Data File:	\\ChromNA\Canton\ChromData\A4AG2\20180425-75243.b\80425011.D				
Injection Date:	25-Apr-2018 10:42:30	Instrument ID:	A4AG2		
Lims ID:	240-94103-F-4-A MSD				
Client ID:	16WC1A				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	LVI AG2 8270	Limit Group:	MSS 8270D ICAL		
Column:	5% phenyl (0.18 mm)	Detector	MS SCAN		

* 1 1,4-Dichlorobenzene-d4, CAS: 3855-82-1

Signal: 1

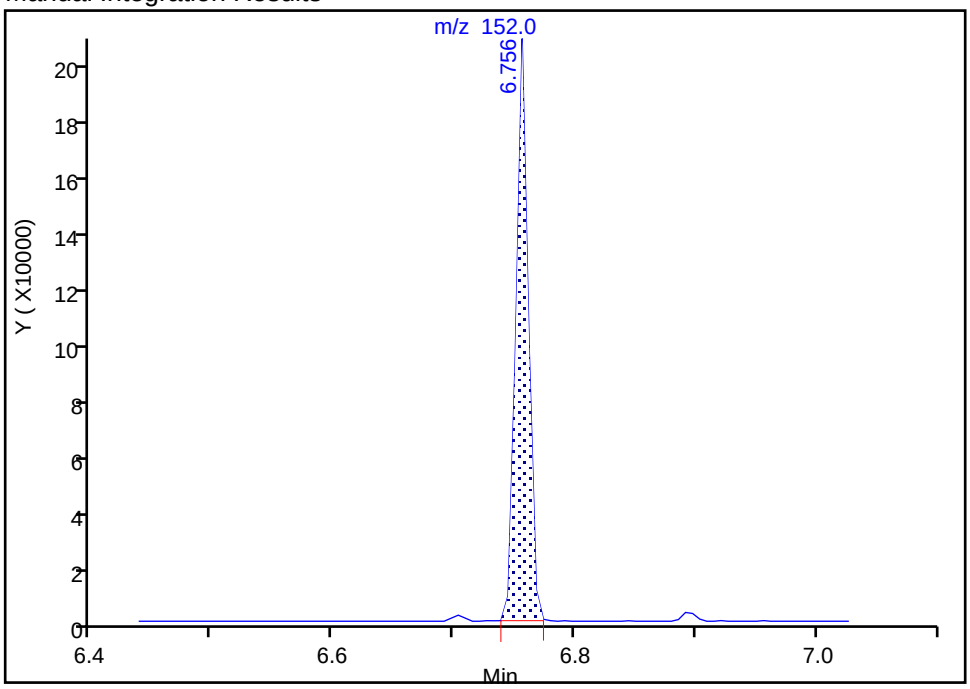
Processing Integration Results

RT: 6.70
Area: 1525
Amount: 400.0000
Amount Units: ng/ml



Manual Integration Results

RT: 6.76
Area: 145896
Amount: 400.0000
Amount Units: ng/ml



Reviewer: hulat, 25-Apr-2018 11:45:29

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/11/2018 11:14

Analysis Batch Number: 322037 End Date: 04/11/2018 18:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-322037/1		04/11/2018 11:14	1	80411001.D	RXI-5SILMS/IIG 0.25(mm)
STD9 240-322037/2 IC		04/11/2018 11:32	1	80411002.D	RXI-5SILMS/IIG 0.25(mm)
STD8 240-322037/3 IC		04/11/2018 11:57	1	80411003.D	RXI-5SILMS/IIG 0.25(mm)
STD7 240-322037/4 IC		04/11/2018 12:21	1	80411004.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-322037/5 ICIS		04/11/2018 12:46	1	80411005.D	RXI-5SILMS/IIG 0.25(mm)
STD5 240-322037/6 IC		04/11/2018 13:11	1	80411006.D	RXI-5SILMS/IIG 0.25(mm)
STD4 240-322037/7 IC		04/11/2018 13:35	1	80411007.D	RXI-5SILMS/IIG 0.25(mm)
STD3 240-322037/8 IC		04/11/2018 14:00	1	80411008.D	RXI-5SILMS/IIG 0.25(mm)
STD2 240-322037/9 IC		04/11/2018 14:25	1	80411009.D	RXI-5SILMS/IIG 0.25(mm)
STD1 240-322037/10 IC		04/11/2018 14:49	1	80411010.D	RXI-5SILMS/IIG 0.25(mm)
ICV 240-322037/11		04/11/2018 15:14	1	80411011.D	RXI-5SILMS/IIG 0.25(mm)
STD9 240-322037/12 IC		04/11/2018 15:39	1	80411012.D	RXI-5SILMS/IIG 0.25(mm)
STD8 240-322037/13 IC		04/11/2018 16:03	1	80411013.D	RXI-5SILMS/IIG 0.25(mm)
STD7 240-322037/14 IC		04/11/2018 16:28	1	80411014.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-322037/15 IC		04/11/2018 16:53	1	80411015.D	RXI-5SILMS/IIG 0.25(mm)
STD5 240-322037/16 IC		04/11/2018 17:17	1	80411016.D	RXI-5SILMS/IIG 0.25(mm)
STD4 240-322037/17 IC		04/11/2018 17:42	1	80411017.D	RXI-5SILMS/IIG 0.25(mm)
STD3 240-322037/18 IC		04/11/2018 18:07	1	80411018.D	RXI-5SILMS/IIG 0.25(mm)
STD2 240-322037/19 IC		04/11/2018 18:32	1	80411019.D	RXI-5SILMS/IIG 0.25(mm)
ICV 240-322037/20		04/11/2018 18:56	1	80411020.D	RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/19/2018 06:58

Analysis Batch Number: 323078 End Date: 04/19/2018 10:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-323078/1		04/19/2018 06:58	1	80419001.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323078/2 CCVIS		04/19/2018 07:17	1	80419002.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323078/3 CCV		04/19/2018 07:42	1	80419003.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/19/2018 08:07	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/19/2018 08:31	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/19/2018 08:56	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/19/2018 09:21	1		RXI-5SILMS/IIG 0.25(mm)
MB 240-322624/18-A		04/19/2018 09:45	1	80419008.D	RXI-5SILMS/IIG 0.25(mm)
LCS 240-322624/19-A		04/19/2018 10:10	1	80419009.D	RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/20/2018 06:25

Analysis Batch Number: 323282 End Date: 04/20/2018 18:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-323282/1		04/20/2018 06:25	1	80420001.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323282/2 CCVIS		04/20/2018 07:10	1	80420002.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323282/3 CCV		04/20/2018 08:14	1	80420003.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 08:37	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 09:26	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 09:50	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 11:10	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 11:58	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 12:23	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 12:47	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 13:12	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 13:36	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 14:01	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 14:25	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 14:49	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 15:14	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 15:38	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/20/2018 16:03	1		RXI-5SILMS/IIG 0.25(mm)
240-94103-1		04/20/2018 16:27	1	80420021.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-2		04/20/2018 16:52	1	80420022.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-3		04/20/2018 17:16	1	80420023.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4		04/20/2018 17:41	1	80420024.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4 MS		04/20/2018 18:05	1	80420025.D	RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/23/2018 06:16

Analysis Batch Number: 323501 End Date: 04/23/2018 16:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-323501/1		04/23/2018 06:16	1	80423001.D	RXI-5SILMS/IIG 0.25(mm)
STD9 240-323501/2 IC		04/23/2018 06:35	1	80423002.D	RXI-5SILMS/IIG 0.25(mm)
STD8 240-323501/3 IC		04/23/2018 07:02	1	80423003.D	RXI-5SILMS/IIG 0.25(mm)
STD7 240-323501/4 IC		04/23/2018 07:26	1	80423004.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323501/5 ICIS		04/23/2018 07:50	1	80423005.D	RXI-5SILMS/IIG 0.25(mm)
STD5 240-323501/6 IC		04/23/2018 08:15	1	80423006.D	RXI-5SILMS/IIG 0.25(mm)
STD4 240-323501/7 IC		04/23/2018 08:39	1	80423007.D	RXI-5SILMS/IIG 0.25(mm)
STD3 240-323501/8 IC		04/23/2018 09:04	1	80423008.D	RXI-5SILMS/IIG 0.25(mm)
STD2 240-323501/9 IC		04/23/2018 09:28	1	80423009.D	RXI-5SILMS/IIG 0.25(mm)
STD1 240-323501/10 IC		04/23/2018 09:53	1	80423010.D	RXI-5SILMS/IIG 0.25(mm)
ICV 240-323501/11		04/23/2018 10:17	1	80423011.D	RXI-5SILMS/IIG 0.25(mm)
STD9 240-323501/12 IC		04/23/2018 10:42	1	80423012.D	RXI-5SILMS/IIG 0.25(mm)
STD8 240-323501/13 IC		04/23/2018 11:06	1	80423013.D	RXI-5SILMS/IIG 0.25(mm)
STD7 240-323501/14 IC		04/23/2018 11:31	1	80423014.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323501/15 IC		04/23/2018 11:55	1	80423015.D	RXI-5SILMS/IIG 0.25(mm)
STD5 240-323501/16 IC		04/23/2018 12:20	1	80423016.D	RXI-5SILMS/IIG 0.25(mm)
STD4 240-323501/17 IC		04/23/2018 12:44	1	80423017.D	RXI-5SILMS/IIG 0.25(mm)
STD3 240-323501/18 IC		04/23/2018 13:09	1	80423018.D	RXI-5SILMS/IIG 0.25(mm)
STD2 240-323501/19 IC		04/23/2018 13:33	1	80423019.D	RXI-5SILMS/IIG 0.25(mm)
ICV 240-323501/20		04/23/2018 13:58	1	80423020.D	RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2018 14:22	1		RXI-5SILMS/IIG 0.25(mm)
ZZZZZ		04/23/2018 14:47	1		RXI-5SILMS/IIG 0.25(mm)
240-94103-5		04/23/2018 16:01	1	80423025.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-6		04/23/2018 16:25	1	80423026.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4 MSD		04/23/2018 16:50	1	80423027.D	RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/25/2018 06:41

Analysis Batch Number: 323952 End Date: 04/25/2018 11:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-323952/1		04/25/2018 06:41	1	80425001.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323952/2 CCVIS		04/25/2018 07:00	1	80425002.D	RXI-5SILMS/IIG 0.25(mm)
STD6 240-323952/3 CCV		04/25/2018 07:26	1	80425003.D	RXI-5SILMS/IIG 0.25(mm)
MB 240-323647/9-A		04/25/2018 07:50	1	80425004.D	RXI-5SILMS/IIG 0.25(mm)
LCS 240-323647/10-A		04/25/2018 08:15	1	80425005.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-1 RE		04/25/2018 08:39	1	80425006.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-2 RE		04/25/2018 09:04	1	80425007.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-3 RE		04/25/2018 09:28	1	80425008.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4 RE		04/25/2018 09:53	1	80425009.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4 MS RE		04/25/2018 10:17	1	80425010.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-4 MSD RE		04/25/2018 10:42	1	80425011.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-5 RE		04/25/2018 11:06	1	80425012.D	RXI-5SILMS/IIG 0.25(mm)
240-94103-6 RE		04/25/2018 11:31	1	80425013.D	RXI-5SILMS/IIG 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Batch Number: 322624 Batch Start Date: 04/16/18 10:31 Batch Analyst: Earle, Steve

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	exBENZALDEHYD 00054	exBNASPIKE 00086
240-94103-B-1	16C1	3510C, 8270D	T	280 mL	5 mL	7 SU	2 SU		
240-94103-A-2	16MW8	3510C, 8270D	T	250 mL	5 mL	5 SU	2 SU		
240-94103-B-3	16MW9	3510C, 8270D	T	270 mL	5 mL	7 SU	2 SU		
240-94103-B-4	16WC1A	3510C, 8270D	T	270 mL	5 mL	7 SU	2 SU		
240-94103-E-4 MS	16WC1A	3510C, 8270D	T	240 mL	5 mL	7 SU	2 SU	0.2 mL	0.4 mL
240-94103-A-4 MSD	16WC1A	3510C, 8270D	T	240 mL	5 mL	7 SU	2 SU	0.2 mL	0.4 mL
240-94103-B-5	16WDUP	3510C, 8270D	T	280 mL	5 mL	7 SU	2 SU		
240-94103-A-6	16WC1B	3510C, 8270D	T	280 mL	5 mL	7 SU	2 SU		
MB 240-322624/18		3510C, 8270D		250 mL	5 mL	7 SU	2 SU		
LCS 240-322624/19		3510C, 8270D		250 mL	5 mL	7 SU	2 SU	0.2 mL	0.4 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	exBNASURR W 00058					
240-94103-B-1	16C1	3510C, 8270D	T	0.4 mL					
240-94103-A-2	16MW8	3510C, 8270D	T	0.4 mL					
240-94103-B-3	16MW9	3510C, 8270D	T	0.4 mL					
240-94103-B-4	16WC1A	3510C, 8270D	T	0.4 mL					
240-94103-E-4 MS	16WC1A	3510C, 8270D	T	0.4 mL					
240-94103-A-4 MSD	16WC1A	3510C, 8270D	T	0.4 mL					
240-94103-B-5	16WDUP	3510C, 8270D	T	0.4 mL					
240-94103-A-6	16WC1B	3510C, 8270D	T	0.4 mL					
MB 240-322624/18		3510C, 8270D		0.4 mL					
LCS 240-322624/19		3510C, 8270D		0.4 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Batch Number: 322624 Batch Start Date: 04/16/18 10:31 Batch Analyst: Earle, Steve

Batch Method: 3510C Batch End Date:

Batch Notes	
Acid Used for pH Adjustment ID	3462161
Base Used to Adjust pH ID	3479417
Analyst ID - Concentration	ELIZABETHBORDER JESSICATRUSHEL
Analyst ID - Extraction	STEVEEARLE
Na2SO4 ID	2548156
pH Indicator ID	2644944 2794736
Pipette/Syringe/Dispenser ID	9
Prep Solvent ID	3519573
Analyst ID - Spike Analyst	STEVEEARLE

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-94103-1

SDG No.:

Batch Number: 323647 Batch Start Date: 04/23/18 12:07 Batch Analyst: Dillon, William K

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	exBNASURR W 00058	EXLIST2spike 00016
240-94103-A-1	16C1	3510C, 8270D	T	270 mL	5 mL	7 SU	2 SU	0.4 mL	
240-94103-B-2	16MW8	3510C, 8270D	T	250 mL	5 mL	7 SU	2 SU	0.4 mL	
240-94103-A-3	16MW9	3510C, 8270D	T	280 mL	5 mL	7 SU	2 SU	0.4 mL	
240-94103-D-4	16WC1A	3510C, 8270D	T	270 mL	5 mL	7 SU	2 SU	0.4 mL	
240-94103-C-4 MS	16WC1A	3510C, 8270D	T	250 mL	5 mL	7 SU	2 SU	0.4 mL	0.4 mL
240-94103-F-4 MSD	16WC1A	3510C, 8270D	T	250 mL	5 mL	7 SU	2 SU	0.4 mL	0.4 mL
240-94103-A-5	16WDUP	3510C, 8270D	T	280 mL	5 mL	7 SU	2 SU	0.4 mL	
240-94103-B-6	16WC1B	3510C, 8270D	T	270 mL	5 mL	7 SU	2 SU	0.4 mL	
MB 240-323647/9		3510C, 8270D		250 mL	5 mL	7 SU	2 SU	0.4 mL	
LCS 240-323647/10		3510C, 8270D		250 mL	5 mL	7 SU	2 SU	0.4 mL	0.4 mL

Batch Notes	
Acid Used for pH Adjustment ID	3462161
Analyst ID - Extraction	KYLEDILLON
Na2SO4 ID	2548156
Pipette/Syringe/Dispenser ID	9
Prep Solvent ID	3546470
Analyst ID - Spike Analyst	KYLEDILLON

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

4/6/2017

CHAIN OF CUSTODY RECORD

okdlw 4/3/18

Laboratory: Test America, 4101 Shuffel Drive NW, North Canton, OH, 44720 / Opal Johnson, Manager/1-800-966-9279

Client: 0 **Attn:** 0 **Addres** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event** 2Q 2018 Annual Groundwater Monitoring Event **DAA JN:** B03204-18A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** *YES* UPS: **Carrier:** 1Z-237-301-44-9920-3585 **Tracking Number:**		

Box 1: Matrix	Box 2: Preservative	Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water T Trip Blank GW Groundwater E Equipment Blank L Leachate P Product S Soil O Other	A HCL E NaOH B HNO_3 F ZnAc C H_2SO_4 G Other (Specify) D $Na_2S_2O_3$ H None	F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic V VOA AG Amber Glass CG Clear Glass	G Grab C Composite	**Copy to Consultant:** *YES* **Bill:** *CLIENT* *OTHER* _____ **Preserved and shipped on Ice:** *YES*

Box 4 - Sample Type					G								
Box 3 - Filtered/Unfiltered					U								
Required pH of Sample													
Box 2 - Preservative					H								
Box 5 - Sample Container Type					2-250mL AG								
Sample ID	**Date: 2018**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8270D/3510C (Semivolatiles)**								
16C1	04/13	1005	GW	2	X								
16MW8	04/10	1420	GW	2	X								
16MW9	04/13	0910	GW	2	X								
16WC1A	04/12	1515	GW	6	X								
16WDUP	04/12	1530	GW	2	X								
16WC1B	04/12	1420	GW	2	X								
16-2	———	———	GW										
16-3	———	———	GW										
16-5	~~04/10~~	———	GW										
16WC2B	same	———	GW										
16SPRING	———	———	GW										

not required JLW 4/3/18

GENERAL NOTES:

1. **Report results to detection limit, with J flags, for italicized wells.**
2. **VELAP accreditation required.**
3. **Full Deliverable with EDD.**
4. **8270 -Analyze for Hexachlorophene and Sulfotepp Only.**

QL/DL 100/10 ug/L

QL/DL 10/1 ug/L.

JLW 4/3/18

USE FOR QC

240-94103 Chain of Custody

Clients Special Instructions:

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 04/10/18	#1 Relinquished by (Signature): Ken Coddington	Date: 4/13/18	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature: Ken Coddington	Time: 0800	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KY-Tran Vo	Date: 4/10/18	#1 Received by (Signature): Ken Brown	Date: 4/14/18	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: KT Vo	Time: 0800	Company Name: TAL	Time: 800	Company Name:	Time:	

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 94103**

Canton Facility

Client Draper Aden Assc. Site Name _____ Cooler unpacked by: SC

Cooler Received on 4/14/18 Opened on 4/14/18

FedEx: 1st Grd Exp (UPS) FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. 4.6 °C Corrected Cooler Temp. 4.7 °C

IR GUN #36 (CF +0.3°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

~~IR GUN # 627 (CF -1.3°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels be reconciled with the COC?	(Yes)	No
9. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
10. Sufficient quantity received to perform indicated analyses?	(Yes)	No
11. Are these work share samples?	Yes	(No)
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	(NA) pH Strip Lot# **HC732776**
13. Were VOAs on the COC?	Yes	(No)
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	(No) NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: JV

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater Samples
Collected on 04/10/18-04/13/18

SDG# RAF07-V.3

GROUP	SAMPLE NUMBERS
1931897	9558712-9558725

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman

Dana M. Kauffman
Manager

Date: 07/19/2018

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF07
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9558712	16C1	04/13/2018 10:05	04/14/2018 11:50
9558713	16MW8	04/10/2018 14:20	04/14/2018 11:50
9558714	16MW9	04/13/2018 09:10	04/14/2018 11:50
9558715	16WC1A	04/12/2018 15:15	04/14/2018 11:50
9558716	16WC1A MS	04/12/2018 15:15	04/14/2018 11:50
9558717	16WC1A MSD	04/12/2018 15:15	04/14/2018 11:50
9558718	16WC1A DUP	04/12/2018 15:15	04/14/2018 11:50
9558719	16WDUP	04/12/2018 15:30	04/14/2018 11:50
9558720	16WC1B	04/12/2018 14:20	04/14/2018 11:50
9558721	16-2	04/10/2018 13:35	04/14/2018 11:50
9558722	16-3	04/12/2018 13:30	04/14/2018 11:50
9558723	16-5	04/10/2018 11:40	04/14/2018 11:50
9558724	16WC2B	04/10/2018 12:50	04/14/2018 11:50
9558725	16SPRING	04/10/2018 11:45	04/14/2018 11:50

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Sample pH Log

SDG: RAF07

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9558712	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:37:49AM	12644
9558713	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:34:45AM	12644
9558714	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:32:19AM	12644
9558715	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:17:53AM	12644
9558716	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 10:06:19AM	12644
9558717	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 10:14:23AM	12644
9558719	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:59:24AM	12644
9558720	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 10:02:35AM	12644
9558721	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:57:37AM	12644
9558722	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:06:09AM	12644
9558723	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:48:36AM	12644
9558724	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:04:27AM	12644
9558725	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/16/2018 9:43:02AM	12644

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

06024 Antimony
06025 Arsenic
06026 Barium
06027 Beryllium
06028 Cadmium
06031 Chromium
06032 Cobalt
06033 Copper
06035 Lead
06039 Nickel
06041 Selenium
06042 Silver
06045 Thallium
06048 Vanadium
06049 Zinc

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: June 15, 2018 10:46

Project: RAAP - Radford, VA - HWMU16

Account #: 11200
Group Number: 1931897
SDG: RAF07
State of Sample Origin: VA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
16C1 Grab Groundwater	04/13/2018 10:05	9558712
16MW8 Grab Groundwater	04/10/2018 14:20	9558713
16MW9 Grab Groundwater	04/13/2018 09:10	9558714
16WC1A Grab Groundwater	04/12/2018 15:15	9558715
16WC1A MS Grab Groundwater	04/12/2018 15:15	9558716
16WC1A MSD Grab Groundwater	04/12/2018 15:15	9558717
16WC1A DUP Grab Groundwater	04/12/2018 15:15	9558718
16WDUP Grab Groundwater	04/12/2018 15:30	9558719
16WC1B Grab Groundwater	04/12/2018 14:20	9558720
16-2 Grab Groundwater	04/10/2018 13:35	9558721
16-3 Grab Groundwater	04/12/2018 13:30	9558722
16-5 Grab Groundwater	04/10/2018 11:40	9558723
16WC2B Grab Groundwater	04/10/2018 12:50	9558724
16SPRING Grab Groundwater	04/10/2018 11:45	9558725

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU16
ELLE Group #: 1931897

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 6020A, Metals

Batch #: 181061063907A (Sample number(s): 9558712-9558725 UNSPK: 9558715 BKG: 9558715)

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: Arsenic

SW-846 7470A, Metals

Batch #: 181060571304 (Sample number(s): 9558721-9558725 UNSPK: 9558715 BKG: 9558715)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Mercury

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Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF07-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558712
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	197	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D.	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	N.D.	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:20	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 13:32	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:20	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:20	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 13:32	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 13:32	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:52	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16C1 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 10:05
SDG#: RAF07-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558712
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF07-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558713
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	125	1.0	10.0	1
06027	Beryllium	7440-41-7	0.27 J	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	1.0 J	1.0	5.0	1
06033	Copper	7440-50-8	4.3 J	1.0	5.0	1
06035	Lead	7439-92-1	0.22 J	0.20	2.0	1
06039	Nickel	7440-02-0	2.9 J	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	26.8 J	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:23	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 13:35	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:23	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:23	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 13:35	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 13:35	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:54	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16MW8 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 14:20
SDG#: RAF07-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558713
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF07-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558714
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	575	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D. K4	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	6.3	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	14.8	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:31	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:55	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:31	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:31	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:55	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:55	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:56	Damary Valentin	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16MW9 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 09:10
SDG#: RAF07-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558714
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

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Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558715
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	269	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D. K4	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	11.6	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	10.7	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	12.2 J	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:03	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:30	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:03	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:03	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:30	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:30	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:44	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558715
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558716
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	5.6	0.40	2.0	1
06025	Arsenic	7440-38-2	12.9	2.0	10.0	1
06026	Barium	7440-39-3	316	1.0	10.0	1
06027	Beryllium	7440-41-7	4.2	0.20	1.0	1
06028	Cadmium	7440-43-9	4.6	0.20	1.0	1
06031	Chromium	7440-47-3	49.2	1.0	5.0	1
06032	Cobalt	7440-48-4	279	1.0	5.0	1
06033	Copper	7440-50-8	48.7	1.0	5.0	1
06035	Lead	7439-92-1	14.9	0.20	2.0	1
06039	Nickel	7440-02-0	61.5	2.0	10.0	1
06041	Selenium	7782-49-2	9.8 J	3.0	10.0	1
06042	Silver	7440-22-4	49.8	0.20	2.0	1
06045	Thallium	7440-28-0	2.1	0.20	1.0	1
06048	Vanadium	7440-62-2	51.6	1.0	10.0	1
06049	Zinc	7440-66-6	487	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91 J	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:12	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:39	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	181061063907A	04/26/2018 06:13	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:12	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06035	Lead	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:39	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:39	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:48	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A MS Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558716
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558717
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	5.9	0.40	2.0	1
06025	Arsenic	7440-38-2	11.8	2.0	10.0	1
06026	Barium	7440-39-3	317	1.0	10.0	1
06027	Beryllium	7440-41-7	4.3	0.20	1.0	1
06028	Cadmium	7440-43-9	4.7	0.20	1.0	1
06031	Chromium	7440-47-3	50.8	1.0	5.0	1
06032	Cobalt	7440-48-4	260	1.0	5.0	1
06033	Copper	7440-50-8	49.0	1.0	5.0	1
06035	Lead	7439-92-1	14.8	0.20	2.0	1
06039	Nickel	7440-02-0	61.5	2.0	10.0	1
06041	Selenium	7782-49-2	9.5 J	3.0	10.0	1
06042	Silver	7440-22-4	48.8	0.20	2.0	1
06045	Thallium	7440-28-0	2.1	0.20	1.0	1
06048	Vanadium	7440-62-2	49.5	1.0	10.0	1
06049	Zinc	7440-66-6	487	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91 J	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:14	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:42	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	181061063907A	04/26/2018 06:16	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:14	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06035	Lead	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:42	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:42	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:50	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A MSD Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558717
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A DUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558718
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	255	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D. K4	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	11.8	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	11.1	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	11.5 J	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:09	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:36	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:09	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:09	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:36	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:36	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:46	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1A DUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:15
SDG#: RAF07-04DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558718
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF07-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558719
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	267	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D. K4	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	12.0	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	11.1	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	11.0 J	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:34	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 12:58	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:34	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:34	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 12:58	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 12:58	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 06:58	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WDUP Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: RAF07-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558719
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF07-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558720
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.40	2.0	1
06025	Arsenic	7440-38-2	N.D.	2.0	10.0	1
06026	Barium	7440-39-3	140	1.0	10.0	1
06027	Beryllium	7440-41-7	N.D. K4	0.20	1.0	1
06028	Cadmium	7440-43-9	N.D.	0.20	1.0	1
06031	Chromium	7440-47-3	N.D.	1.0	5.0	1
06032	Cobalt	7440-48-4	4.4 J	1.0	5.0	1
06033	Copper	7440-50-8	N.D.	1.0	5.0	1
06035	Lead	7439-92-1	N.D.	0.20	2.0	1
06039	Nickel	7440-02-0	2.3 J	2.0	10.0	1
06041	Selenium	7782-49-2	N.D.	3.0	10.0	1
06042	Silver	7440-22-4	N.D.	0.20	2.0	1
06045	Thallium	7440-28-0	N.D.	0.20	1.0	1
06048	Vanadium	7440-62-2	N.D.	1.0	10.0	1
06049	Zinc	7440-66-6	N.D.	7.3	30.0	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.26 J	0.20	2.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06024	Antimony	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	3	181061063907A	04/24/2018 04:36	Choon Y Tian	1
06026	Barium	SW-846 6020A	4	181061063907D	04/18/2018 13:01	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06031	Chromium	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	3	181061063907A	04/24/2018 04:36	Choon Y Tian	1
06033	Copper	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06035	Lead	SW-846 6020A	3	181061063907A	04/24/2018 04:36	Choon Y Tian	1
06039	Nickel	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06041	Selenium	SW-846 6020A	4	181061063907B	04/18/2018 13:01	Choon Y Tian	1
06042	Silver	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06045	Thallium	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
06049	Zinc	SW-846 6020A	4	181061063907A	04/18/2018 13:01	Choon Y Tian	1
00259	Mercury	SW-846 7470A	2	181240571301	05/07/2018 07:04	Damary Valentin	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC1B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:20
SDG#: RAF07-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558720
ELLE Group #: 1931897
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	2	181241063901	05/04/2018 17:15	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	181240571301	05/04/2018 18:15	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16-2 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 13:35
SDG#: RAF07-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558721
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	< 10.0	10.0	2.0	1
06026	Barium	7440-39-3	214	10.0	1.0	1
06027	Beryllium	7440-41-7	< 1.0 K4	1.0	0.20	1
06028	Cadmium	7440-43-9	< 1.0	1.0	0.20	1
06031	Chromium	7440-47-3	< 5.0	5.0	1.0	1
06032	Cobalt	7440-48-4	< 5.0	5.0	1.0	1
06033	Copper	7440-50-8	< 5.0	5.0	1.0	1
06035	Lead	7439-92-1	< 2.0	2.0	0.20	1
06039	Nickel	7440-02-0	< 10.0	10.0	2.0	1
06048	Vanadium	7440-62-2	< 10.0	10.0	1.0	1
06049	Zinc	7440-66-6	< 30.0	30.0	7.3	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	< 2.0	2.0	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	2	181061063907A	04/24/2018 04:39	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181061063907D	04/18/2018 13:04	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	2	181061063907A	04/24/2018 04:39	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181061063907A	04/24/2018 04:39	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181061063907A	04/18/2018 13:04	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	181060571304	04/17/2018 12:26	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16-3 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:30
SDG#: RAF07-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558722
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	< 10.0	10.0	2.0	1
06026	Barium	7440-39-3	768	10.0	1.0	1
06027	Beryllium	7440-41-7	< 1.0 K4	1.0	0.20	1
06028	Cadmium	7440-43-9	< 1.0	1.0	0.20	1
06031	Chromium	7440-47-3	< 5.0	5.0	1.0	1
06032	Cobalt	7440-48-4	< 5.0	5.0	1.0	1
06033	Copper	7440-50-8	< 5.0	5.0	1.0	1
06035	Lead	7439-92-1	< 2.0	2.0	0.20	1
06039	Nickel	7440-02-0	< 10.0	10.0	2.0	1
06048	Vanadium	7440-62-2	< 10.0	10.0	1.0	1
06049	Zinc	7440-66-6	< 30.0	30.0	7.3	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	< 2.0	2.0	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	2	181061063907A	04/24/2018 04:42	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181061063907D	04/18/2018 13:07	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	2	181061063907A	04/24/2018 04:42	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181061063907A	04/24/2018 04:42	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181061063907A	04/18/2018 13:07	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	181060571304	04/17/2018 12:28	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16-5 Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 11:40
SDG#: RAF07-09

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558723
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	< 10.0	10.0	2.0	1
06026	Barium	7440-39-3	165	10.0	1.0	1
06027	Beryllium	7440-41-7	< 1.0 K4	1.0	0.20	1
06028	Cadmium	7440-43-9	< 1.0	1.0	0.20	1
06031	Chromium	7440-47-3	< 5.0	5.0	1.0	1
06032	Cobalt	7440-48-4	< 5.0	5.0	1.0	1
06033	Copper	7440-50-8	< 5.0	5.0	1.0	1
06035	Lead	7439-92-1	< 2.0	2.0	0.20	1
06039	Nickel	7440-02-0	< 10.0	10.0	2.0	1
06048	Vanadium	7440-62-2	< 10.0	10.0	1.0	1
06049	Zinc	7440-66-6	< 30.0	30.0	7.3	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	< 2.0	2.0	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	2	181061063907A	04/24/2018 04:44	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181061063907D	04/18/2018 13:10	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	2	181061063907A	04/24/2018 04:44	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181061063907A	04/24/2018 04:44	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181061063907A	04/18/2018 13:10	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	181060571304	04/17/2018 12:30	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16WC2B Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 12:50
SDG#: RAF07-10

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558724
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**		**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	< 10.0		10.0	2.0	1
06026	Barium	7440-39-3	116		10.0	1.0	1
06027	Beryllium	7440-41-7	< 1.0	K4	1.0	0.20	1
06028	Cadmium	7440-43-9	< 1.0		1.0	0.20	1
06031	Chromium	7440-47-3	< 5.0		5.0	1.0	1
06032	Cobalt	7440-48-4	< 5.0		5.0	1.0	1
06033	Copper	7440-50-8	< 5.0		5.0	1.0	1
06035	Lead	7439-92-1	< 2.0		2.0	0.20	1
06039	Nickel	7440-02-0	< 10.0		10.0	2.0	1
06048	Vanadium	7440-62-2	< 10.0		10.0	1.0	1
06049	Zinc	7440-66-6	< 30.0		30.0	7.3	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	< 2.0		2.0	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	2	181061063907A	04/24/2018 04:47	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181061063907D	04/18/2018 13:13	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	2	181061063907A	04/24/2018 04:47	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181061063907A	04/24/2018 04:47	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181061063907A	04/18/2018 13:13	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	181060571304	04/17/2018 12:32	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **16SPRING Grab Groundwater**
2Q 2018 Annual Groundwater Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/10/2018 11:45
SDG#: RAF07-11

Draper Aden Associates, Inc.
ELLE Sample #: WW 9558725
ELLE Group #: 1931897
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation*	Method Detection Limit	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**		**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	< 10.0		10.0	2.0	1
06026	Barium	7440-39-3	233		10.0	1.0	1
06027	Beryllium	7440-41-7	< 1.0	K4	1.0	0.20	1
06028	Cadmium	7440-43-9	< 1.0		1.0	0.20	1
06031	Chromium	7440-47-3	< 5.0		5.0	1.0	1
06032	Cobalt	7440-48-4	< 5.0		5.0	1.0	1
06033	Copper	7440-50-8	< 5.0		5.0	1.0	1
06035	Lead	7439-92-1	< 2.0		2.0	0.20	1
06039	Nickel	7440-02-0	< 10.0		10.0	2.0	1
06048	Vanadium	7440-62-2	< 10.0		10.0	1.0	1
06049	Zinc	7440-66-6	< 30.0		30.0	7.3	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	< 2.0		2.0	0.20	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	2	181061063907A	04/24/2018 04:50	Choon Y Tian	1
06026	Barium	SW-846 6020A	3	181061063907D	04/18/2018 13:16	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06031	Chromium	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	2	181061063907A	04/24/2018 04:50	Choon Y Tian	1
06033	Copper	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06035	Lead	SW-846 6020A	2	181061063907A	04/24/2018 04:50	Choon Y Tian	1
06039	Nickel	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
06049	Zinc	SW-846 6020A	3	181061063907A	04/18/2018 13:16	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	181060571304	04/17/2018 12:34	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	181061063907	04/17/2018 16:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181060571304	04/17/2018 07:45	Nicholas W Shroyer	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931897
Reported: 06/15/2018 10:46

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ**	MDL
	ug/l	ug/l	ug/l
Batch number: 181060571304	Sample number(s): 9558721-9558725		
Mercury	< 2.0	2.0	0.20

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 181061063907A	Sample number(s): 9558712-9558725		
Antimony	N.D.	0.40	2.0
Arsenic	N.D.	2.0	10.0
Beryllium	N.D.	0.20	1.0
Cadmium	N.D.	0.20	1.0
Chromium	N.D.	1.0	5.0
Cobalt	N.D.	1.0	5.0
Copper	N.D.	1.0	5.0
Lead	N.D.	0.20	2.0
Nickel	N.D.	2.0	10.0
Silver	N.D.	0.20	2.0
Thallium	N.D.	0.20	1.0
Vanadium	N.D.	1.0	10.0
Zinc	N.D.	7.3	30.0
Batch number: 181061063907B	Sample number(s): 9558712-9558720		
Selenium	N.D.	3.0	10.0
Batch number: 181061063907D	Sample number(s): 9558712-9558725		
Barium	N.D.	1.0	10.0
Batch number: 181240571301	Sample number(s): 9558712-9558720		
Mercury	N.D.	0.20	2.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 181060571304	Sample number(s): 9558721-9558725								
Mercury	1.00	0.828			83		80-114		
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931897
Reported: 06/15/2018 10:46

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 181061063907A	Sample number(s): 9558712-9558725								
Antimony	6.00	5.98			100		80-120		
Arsenic	10	10.47			105		80-120		
Beryllium	4.00	4.11			103		90-112		
Cadmium	5.00	4.78			96		84-120		
Chromium	50	51.39			103		90-112		
Cobalt	250	251.81			101		86-113		
Copper	50	52.27			105		89-120		
Lead	15	14.68			98		90-110		
Nickel	50	50.89			102		90-114		
Silver	50	50.56			101		88-113		
Thallium	2.00	1.98			99		80-120		
Vanadium	50	50.46			101		90-112		
Zinc	500	505.3			101		90-113		
Batch number: 181061063907B	Sample number(s): 9558712-9558720								
Selenium	10	9.86			99		90-113		
Batch number: 181061063907D	Sample number(s): 9558712-9558725								
Barium	50	50.7			101		80-120		
Batch number: 181240571301	Sample number(s): 9558712-9558720								
Mercury	1.00	0.921			92		80-114		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 181060571304	Sample number(s): 9558721-9558725 UNSPK: P558715									
Mercury	< 2.0	1.00	0.807	1.00	0.792	81	79*	80-120	2	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 181061063907A	Sample number(s): 9558712-9558725 UNSPK: 9558715									
Antimony	N.D.	6.00	5.63	6.00	5.91	94	99	75-125	5	20
Arsenic	N.D.	10	12.95	10	11.8	129*	118	75-125	9	20
Beryllium	N.D.	4.00	4.16	4.00	4.34	104	109	75-125	4	20
Cadmium	N.D.	5.00	4.64	5.00	4.73	93	95	75-125	2	20
Chromium	N.D.	50	49.2	50	50.84	98	102	75-125	3	20
Cobalt	11.56	250	278.5	250	259.77	107	99	75-125	7	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931897
Reported: 06/15/2018 10:46

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	48.68	50	48.99	97	98	75-125	1	20
Lead	N.D.	15	14.85	15	14.78	99	99	75-125	0	20
Nickel	10.65	50	61.46	50	61.54	102	102	75-125	0	20
Silver	N.D.	50	49.78	50	48.84	100	98	75-125	2	20
Thallium	N.D.	2.00	2.13	2.00	2.10	107	105	75-125	1	20
Vanadium	N.D.	50	51.63	50	49.49	103	99	75-125	4	20
Zinc	12.16	500	486.7	500	486.7	95	95	75-125	0	20
Batch number: 181061063907B	Sample number(s): 9558712-9558720 UNSPK: 9558715									
Selenium	N.D.	10	9.79	10	9.54	98	95	75-125	3	20
Batch number: 181061063907D	Sample number(s): 9558712-9558725 UNSPK: 9558715									
Barium	269.1	50	316.4	50	317.2	95 (2)	96 (2)	75-125	0	20
Batch number: 181240571301	Sample number(s): 9558712-9558720 UNSPK: 9558715									
Mercury	N.D.	1.00	0.911	1.00	0.907	91	91	80-120	0	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 181060571304	Sample number(s): 9558721-9558725 BKG: P558715			
Mercury	< 2.0	< 2.0	0 (1)	20
	ug/l	**ug/l**		
Batch number: 181061063907A	Sample number(s): 9558712-9558725 BKG: 9558715			
Antimony	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Cobalt	11.56	11.8	2 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Nickel	10.65	11.05	4 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Vanadium	N.D.	N.D.	0 (1)	20
Zinc	12.16	11.53	5 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1931897
Reported: 06/15/2018 10:46

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 181061063907B	Sample number(s): 9558712-9558720 BKG: 9558715			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 181061063907D	Sample number(s): 9558712-9558725 BKG: 9558715			
Barium	269.1	255.4	5	20
Batch number: 181240571301	Sample number(s): 9558712-9558720 BKG: 9558715			
Mercury	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

11200/1931897/9558712-25

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 x1576

Client: 0 Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RFAAP, Radford, Virginia Location: HWMU18 Event: 2Q 2018 Annual Groundwater Monitoring Event DAA JN: 803204-18A Lab JN:	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES WPS: 12.754-02X-Y2-5756-8970 Carrier: 5713-5160 Tracking Number: 5658-9155

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G				
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U				
Required pH of Sample	<2	<2		<2	<2	>12				
Box 2 - Preservative	A	A	H	B	B	E				
Box 5 - Sample Container Type	3-40mL V	3-40mL V	2-250mL AG	1-500 mL P		1-500 mL P				

Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	8260C/5030C 25 ml purge volume	8260C/5030C 5 ml purge volume for 2-propanol ONLY	8270D/3510C (Semivolatiles)	ICP/MS 6020A/3005A (Metals-Total)	7470A (Mercury-Total)	9012B(Cyanide)				
16C1	04/13	1005	GW	10	X	X	X	X	X	X				
16MW8	04/10	1426	GW	10	X	X	X	X	X	X				
16MW9	4/13	0710	GW	10	X	X	X	X	X	X				
16WC1A	04/12	1515	GW	30	X	X	X	X	X	X				
16WDUP	04/12	1530	GW	10	X	X	X	X	X	X				
16WC1B	04/12	1420	GW	10	X	X	X	X	X	X				
16-2	04/10	1555	GW	6	X		X	X	X					
16-3	04/12	1330	GW	6	X		X	X	X					
16-5	04/10	1140	GW	6	X		X	X	X					
16WC2B	04/10	1250	GW	6	X		X	X	X					
16SPRING	04/10	1115	GW	6	X		X	X	X					
Trip Blank 1	04/10	—	T	2	X									
Trip Blank 2	04/11	—	T	2	X									
Trip Blank 3	04/10	—	T	2	X									

GENERAL NOTES:
1. Report results to detection limit, with J flags, for italicized wells.
2. Report results at or greater than QL for non-italicized wells.
3. VELAP accreditation required.
4. Level 1 Deliverable with EDD.

USE FOR QC

one trip blank required per day

Delete if not required

Clients Special Instructions: level 1 with edd. See attached target analyte list.

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any.

Sampler Name (Print): Ken Coddington	Date: 04/10/18	#1 Relinquished by (Signature):	Date: 4/13/18	#2 Relinquished by (Signature)	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0500	Company Name: DAA	Time: 1700	Company Name	Time	
Sampler Name (Print): Ki-Tran Vo	Date: 4/10/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 4/14/18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0800	Company Name:	Time:	Company Name: ELLE	Time: 1150	

1931897

INORGANICS

THIS APPLIES TO WELLS 16C1, 16MW8, 16MW9,16WC1A, 16WDUP, 16WC1B & QC *

report to permit MDL. w/ 'J' flag

JW 4/3/18

HWMU 16

Analyte	Method Ref	LOQ	LOD	CAS#	Units
ANTIMONY	6020A	2	0.4	7440-36-0	UG/L
ARSENIC	6020A	10	2	7440-38-2	UG/L
BARIUM	6020A	10	1	7440-39-3	UG/L
BERYLLIUM	6020A	1	0.2	7440-41-7	UG/L
CADMIUM	6020A	1	0.2	7440-43-9	UG/L
CHROMIUM	6020A	5	1	7440-47-3	UG/L
COBALT	6020A	5	1	7440-48-4	UG/L
COPPER	6020A	5	1	7440-50-8	UG/L
LEAD	6020A	2	0.2	7439-92-1	UG/L
NICKEL	6020A	10	2	7440-02-0	UG/L
SELENIUM	6020A	10	3	7782-49-2	UG/L
SILVER	6020A	2	0.2	7440-22-4	UG/L
THALLIUM	6020A	1	0.2	7440-28-0	UG/L
VANADIUM	6020A	10	1	7440-62-2	UG/L
ZINC	6020A	30	7.3	7440-66-6	UG/L

15 analytes

These are Appendix IX wells. Report estimated results.

Rev 12/2016 per class 1 permit mod

t:\environmental\bbg\databases\raap\sample event set up\semi-annual events\hwmu-16\2q 2016 annual list - jul 2014 permit mod\hwmu16-target analtye list-annual rev 10 - 2014.doc

1931897

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020A/3005A (ICP/MS)

THIS APPLIES TO WELLS 16-2, 16-3,16-5, 16WC2B, 16SPRING (*)

No.	PARAMETER	CAS RN	Required QL/ LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7.	Copper	7440-50-8	5
8.	Lead	7440-92-1	2
9.	Nickel	7440-02-0	10
10.	Vanadium	7440-62-2	10
11.	Zinc	7440-66-6	30

(*) report at or above QL only.
JW 4/17/18

Report to at or above the QL.

Updated 4/8/2013 jcf
Zinc QL updated 10 2016 - JCF

1931897

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

THIS APPLIES TO ALL WELLS AND QC

	Method SW 7470A/CVAA	**CAS#**	**Required QL/DL**
12.	Mercury	7439-97-6	2 / 0.2 ug/l

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Sample Administration Receipt Documentation Log

Doc Log ID: 213780

Group Number(s): 1931897

Client: Draper Aden

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/14/2018 11:50
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	6
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Zane Hollinger (10251) at 14:04 on 04/14/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	3.5	DT	Wet	Y	Bagged	N
2	DT42-01	1.2	DT	Wet	Y	Bagged	N
3	DT42-01	1.5	DT	Wet	Y	Bagged	N

General Comments: Trip Blank 3 containers do not have client labels on them like the other two Trip Blank samples

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF07

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9558712	16C1	X		1	
9558713	16MW8	X		1	
9558714	16MW9	X		1	
9558715	16WC1A	X		1	Background/Unspiked
9558716	16WC1A MS	X		1	Matrix Spike
9558717	16WC1A MSD	X		1	Matrix Spike Duplicate
9558718	16WC1A DUP	X		1	Duplicate
9558719	16WDUP	X		1	Field Duplicate Sample
9558720	16WC1B	X		1	
9558721	16-2	X		1	
9558722	16-3	X		1	
9558723	16-5	X		1	
9558724	16WC2B	X		1	
9558725	16SPRING	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF07

ICP Metals

Fraction: Metals in Liquid

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Method defined actions are taken for any failed matrix QC.

Batch#: 181061063907A (Sample number(s): 9558712-9558725, UNSPK: 9558715, BKG: 9558715)
The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: Arsenic

Batch#: 181060571304 (Sample number(s): 9558712-9558725, UNSPK: 9558715, BKG: 9558715)
The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: Mercury

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558712 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	197			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558713 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	125			MS
7440-41-7	Beryllium	0.27	B		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	B		MS
7440-50-8	Copper	4.3	B		MS
7439-92-1	Lead	0.22	B		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.9	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	26.8	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558714 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	575			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	6.3			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	14.8			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558715BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	269			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	11.6			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	10.7			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	12.2	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558716MS % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	5.6			MS
7440-38-2	Arsenic	12.9			MS
7440-39-3	Barium	316			MS
7440-41-7	Beryllium	4.2			MS
7440-43-9	Cadmium	4.6			MS
7440-47-3	Chromium	49.2			MS
7440-48-4	Cobalt	279			MS
7440-50-8	Copper	48.7			MS
7439-92-1	Lead	14.9			MS
7439-97-6	Mercury	0.91			CV
7440-02-0	Nickel	61.5			MS
7782-49-2	Selenium	9.8	B		MS
7440-22-4	Silver	49.8			MS
7440-28-0	Thallium	2.1			MS
7440-62-2	Vanadium	51.6			MS
7440-66-6	Zinc	487			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558717MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	5.9			MS
7440-38-2	Arsenic	11.8			MS
7440-39-3	Barium	317			MS
7440-41-7	Beryllium	4.3			MS
7440-43-9	Cadmium	4.7			MS
7440-47-3	Chromium	50.8			MS
7440-48-4	Cobalt	260			MS
7440-50-8	Copper	49.0			MS
7439-92-1	Lead	14.8			MS
7439-97-6	Mercury	0.91			CV
7440-02-0	Nickel	61.5			MS
7782-49-2	Selenium	9.5	B		MS
7440-22-4	Silver	48.8			MS
7440-28-0	Thallium	2.1			MS
7440-62-2	Vanadium	49.5			MS
7440-66-6	Zinc	487			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558718DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	255			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	11.8			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	11.1			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	11.5	B		MS

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558719 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	267			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	12.0			MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	11.1			MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	11.0	B		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558720 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.40	U		MS
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	140			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	4.4	B		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.26			CV
7440-02-0	Nickel	2.3	B		MS
7782-49-2	Selenium	3.0	U		MS
7440-22-4	Silver	0.20	U		MS
7440-28-0	Thallium	0.20	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558721 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	214			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558722 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	768			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	2.2	B		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.65	B		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558723 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	165			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558724 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	116			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9558725 % Solids: 0.0
Concentration Units: UG/L Date Received: 04/14/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.0	U		MS
7440-39-3	Barium	233			MS
7440-41-7	Beryllium	0.20	U		MS
7440-43-9	Cadmium	0.20	U		MS
7440-47-3	Chromium	1.0	U		MS
7440-48-4	Cobalt	1.0	U		MS
7440-50-8	Copper	1.0	U		MS
7439-92-1	Lead	0.20	U		MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	2.0	U		MS
7440-62-2	Vanadium	1.0	U		MS
7440-66-6	Zinc	7.3	U		MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAF07
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Antimony	181061063907	9558712
Arsenic		9558713
Barium		9558714
Beryllium		9558715BKG
Cadmium		9558716MS
Chromium		9558717MSD
Cobalt		9558718DUP
Copper		9558719
Lead		9558720
Nickel		9558721
Selenium		9558722
Silver		9558723
Thallium		9558724
Vanadium		9558725
Zinc		P10663GB
		P10663GQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: RAF07
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Mercury	181060571304	9558716MS
		9558717MSD
		9558718DUP
		9558721
		9558722
		9558723
		9558724
		9558725
		P10671DB
		P10671DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY CONTROL REFERENCE LIST

SDG No.: RAF07
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Mercury	181240571301	9558712
		9558713
		9558714
		9558715BKG
		9558716MS
		9558717MSD
		9558718DUP
		9558719
		9558720
		P12471AB
		P12471AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: MS
Run Name: 1810805E03
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	51.93	103.9	25.0	23.44	93.8	25.0	23.81	95.2
Arsenic										
Barium	137	500.0	521.40	104.3	250.0	241.00	96.4	250.0	247.80	99.1
Beryllium	9	50.0	50.77	101.5	25.0	25.38	101.5	25.0	27.64	110.6*
Cadmium	111	50.0	51.63	103.3	25.0	25.20	100.8	25.0	24.96	99.8
Chromium	52	500.0	532.80	106.6	250.0	248.40	99.4	250.0	249.00	99.6
Cobalt										
Copper	63	500.0	528.20	105.6	250.0	249.10	99.6	250.0	250.90	100.4
Lead	208	50.0	51.61	103.2	25.0	24.59	98.4	25.0	25.35	101.4
Nickel	60	500.0	529.10	105.8	250.0	246.90	98.8	250.0	245.70	98.3
Selenium	78	50.0	51.08	102.2	25.0	24.15	96.6	25.0	24.97	99.9
Silver	107	50.0	52.50	105.0	25.0	24.03	96.1	25.0	24.90	99.6
Thallium	203	50.0	50.38	100.8	25.0	24.65	98.6	25.0	25.58	102.3
Vanadium	51	500.0	530.90	106.2	250.0	251.80	100.7	250.0	250.60	100.2
Zinc	66	500.0	524.50	104.9	250.0	248.80	99.5	250.0	251.00	100.4

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: MS
Run Name: 1810805E03
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	24.25	97.0	25.0	24.26	97.0
Arsenic										
Barium	137				250.0	243.60	97.4	250.0	250.00	100.0
Beryllium	9				25.0	27.17	108.7	25.0	26.34	105.4
Cadmium	111				25.0	25.85	103.4	25.0	25.42	101.7
Chromium	52				250.0	246.10	98.4	250.0	250.40	100.2
Cobalt										
Copper	63				250.0	249.50	99.8	250.0	243.00	97.2
Lead	208				25.0	24.54	98.2	25.0	25.40	101.6
Nickel	60				250.0	252.80	101.1	250.0	239.90	96.0
Selenium	78				25.0	25.59	102.4	25.0	24.83	99.3
Silver	107				25.0	24.63	98.5	25.0	25.04	100.2
Thallium	203				25.0	24.36	97.4	25.0	25.06	100.2
Vanadium	51				250.0	245.40	98.2	250.0	249.00	99.6
Zinc	66				250.0	251.90	100.8	250.0	240.70	96.3

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: MS
Run Name: 1811401E05
Calibration Date(s): 04/24/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony										
Arsenic	75	500.0	534.98	107.0	250.0	268.20	107.3	250.0	250.69	100.3
Barium										
Beryllium										
Cadmium										
Chromium										
Cobalt	59	500.0	521.74	104.3	250.0	271.02	108.4	250.0	255.60	102.2
Copper										
Lead	208	50.0	51.91	103.8	25.0	25.26	101.0	25.0	25.25	101.0
Nickel										
Selenium										
Silver										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1811401E05
Calibration Date(s): 04/24/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony										
Arsenic	75				250.0	262.40	105.0	250.0	263.50	105.4
Barium										
Beryllium										
Cadmium										
Chromium										
Cobalt	59				250.0	265.58	106.2	250.0	262.26	104.9
Copper										
Lead	208				25.0	25.73	102.9	25.0	25.98	103.9
Nickel										
Selenium										
Silver										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony										
Arsenic										
Barium										
Beryllium	9	50.0	49.30	98.6	25.0	24.80	99.2	25.0	25.30	101.2
Cadmium										
Chromium										
Cobalt										
Copper										
Lead										
Nickel										
Selenium										
Silver										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony										
Arsenic										
Barium										
Beryllium	9				25.0	24.40	97.6	25.0	24.12	96.5
Cadmium										
Chromium										
Cobalt										
Copper										
Lead										
Nickel										
Selenium										
Silver										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810702M07
Calibration Date(s): 04/17/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.30	92.0	1.0	0.99	99.0	1.0	1.00	100.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF07

Method: CV
Run Name: 1810702M07
Calibration Date(s): 04/17/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.02	102.0	1.0	1.00	100.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1812701M09
Calibration Date(s): 05/07/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.40	96.0	1.0	0.96	96.0	1.0	0.94	94.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1812701M09
Calibration Date(s): 05/07/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0			

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF07

Method: MS
Run Name: 1810805E03
Calibration Date(s): 04/18/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	2.0	1.96	98.0	2.01	100.5
Arsenic						
Barium	137	4.0	3.80	95.0	3.83	95.8
Beryllium	9	1.0	1.08	108.0	1.18	118.0
Cadmium	111	1.0	0.94	94.0	1.11	111.0
Chromium	52	4.0	4.07	101.8	4.31	107.8
Cobalt						
Copper	63	4.0	3.97	99.3	4.29	107.3
Lead	208	2.0	1.81	90.5	1.84	92.0
Nickel	60	4.0	3.60	90.0	3.92	98.0
Selenium	78	4.0	4.23	105.8	3.92	98.0
Silver	107	1.0	1.01	101.0	1.03	103.0
Thallium	203	1.0	0.94	94.0	0.99	99.0
Vanadium	51	1.0	1.19	119.0	0.99	99.0
Zinc	66	30.0	32.36	107.9	30.93	103.1

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF07

Method: MS
Run Name: 1811401E05
Calibration Date(s): 04/24/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony						
Arsenic	75	4.0	4.02	100.5	3.88	97.0
Barium						
Beryllium						
Cadmium						
Chromium						
Cobalt	59	1.0	1.14	114.0	1.19	119.0
Copper						
Lead	208	2.0	1.98	99.0	1.99	99.5
Nickel						
Selenium						
Silver						
Thallium						
Vanadium						
Zinc						

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony						
Arsenic						
Barium						
Beryllium	9	1.0	1.04	104.0	1.06	106.0
Cadmium						
Chromium						
Cobalt						
Copper						
Lead						
Nickel						
Selenium						
Silver						
Thallium						
Vanadium						
Zinc						

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF07

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony						
Arsenic						
Barium						
Beryllium	9	1.0			0.98	98.0
Cadmium						
Chromium						
Cobalt						
Copper						
Lead						
Nickel						
Selenium						
Silver						
Thallium						
Vanadium						
Zinc						

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1810702M07
Calibration Date(s): 04/17/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.18	90.0	0.18	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Run Name: 1812701M09
Calibration Date(s): 05/07/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.17	85.0		

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1810805E03
Calibration Date(s): 04/18/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony	121	0.34	U	0.34	U	0.34	U	0.34	U	121	0.400	U	181061063907A
Arsenic													
Barium	137	0.51	U	0.51	U	0.51	U	0.51	U	137	1.000	U	181061063907A
Beryllium	9	0.055	B	0.050	U	0.050	U	0.050	U				
Cadmium	111	0.10	U	0.10	U	0.10	U	0.10	U	111	0.200	U	181061063907A
Chromium	52	0.50	U	0.50	U	0.50	U	0.50	U	52	1.000	U	181061063907A
Cobalt													
Copper	63	0.40	U	0.40	U	0.40	U	0.40	U	63	1.000	U	181061063907A
Lead	208	0.092	U	0.092	U	0.092	U	0.092	U				
Nickel	60	0.26	U	0.26	U	0.26	U	0.26	U	60	2.000	U	181061063907A
Selenium	78	0.66	U	0.66	U	0.66	U	0.66	U	78	3.000	U	181061063907A
Silver	107	0.088	U	0.088	U	0.088	U	0.088	U	107	0.200	U	181061063907A
Thallium	203	0.098	U	0.098	U	0.098	U	0.098	U	203	0.200	U	181061063907A
Vanadium	51	0.17	B	0.15	U	0.15	U	0.15	U	51	1.000	U	181061063907A
Zinc	66	1.7	U	1.7	U	1.7	U	1.7	U	66	7.300	U	181061063907A

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF07

Method: MS
Run Name: 1810805E03
Calibration Date(s): 04/18/2018

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Batch Number
Antimony	121			0.34	U								
Arsenic													
Barium	137			0.51	U								
Beryllium	9			0.050	U								
Cadmium	111			0.10	U								
Chromium	52			0.50	U								
Cobalt													
Copper	63			0.40	U								
Lead	208			-0.11	B								
Nickel	60			0.26	U								
Selenium	78			0.66	U								
Silver	107			0.088	U								
Thallium	203			0.098	U								
Vanadium	51			0.15	U								
Zinc	66			1.7	U								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

Method: MS
Run Name: 1811401E05
Calibration Date(s): 04/24/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony													
Arsenic	75	0.63	U	0.63	U	0.63	U	0.63	U	75	2.000	U	181061063907A
Barium													
Beryllium													
Cadmium													
Chromium													
Cobalt	59	0.16	U	0.16	U	0.16	U	0.16	U	59	1.000	U	181061063907A
Copper													
Lead	208	0.092	U	0.092	U	0.092	U	0.092	U	208	0.200	U	181061063907A
Nickel													
Selenium													
Silver													
Thallium													
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF07

Method: MS
Run Name: 1811401E05
Calibration Date(s): 04/24/2018

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Batch Number
Antimony													
Arsenic	75			0.63	U								
Barium													
Beryllium													
Cadmium													
Chromium													
Cobalt	59			0.16	U								
Copper													
Lead	208			0.092	U								
Nickel													
Selenium													
Silver													
Thallium													
Vanadium													
Zinc													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony													
Arsenic													
Barium													
Beryllium	9	0.050	U	0.050	U	0.050	U	0.050	U	9	0.200	U	181061063907A
Cadmium													
Chromium													
Cobalt													
Copper													
Lead													
Nickel													
Selenium													
Silver													
Thallium													
Vanadium													
Zinc													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF07

Method: MS
Run Name: 1811601E05
Calibration Date(s): 04/26/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Antimony													
Arsenic													
Barium													
Beryllium	9			0.050	U								
Cadmium													
Chromium													
Cobalt													
Copper													
Lead													
Nickel													
Selenium													
Silver													
Thallium													
Vanadium													
Zinc													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

Method: CV
Run Name: 1810702M07
Calibration Date(s): 04/17/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury		0.050	U	0.050	U	0.050	U	0.050	U		0.050	U	181060571304

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF07

Method: CV
Run Name: 1810702M07
Calibration Date(s): 04/17/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury				0.050	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

Method: CV
Run Name: 1812701M09
Calibration Date(s): 05/07/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Mercury		0.050	U	0.050	U	0.050	U	0.050	U		0.050	U	181240571301

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF07

Instrument ID: 11332
Run Name: 1810805E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	99950	100.0	98610.0	98.6
Antimony	121	0	0	1		1.2	
Arsenic							
Barium	137	0	0	1		0.8	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		90.8	90.8
Calcium	44	300000	300000	308600	102.9	304800.0	101.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	1		222.6	111.3
Cobalt							
Copper	63	0	200	1		193.6	96.8
Iron	57	250000	250000	259400	103.8	259000.0	103.6
Lead	208	0	0	0		-0.2	
Magnesium	24	100000	100000	106400	106.4	106300.0	106.3
Molybdenum	98	2000	2000	2120	106.0	2107.0	105.4
Nickel	60	0	200	1		194.0	97.0
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	107600	107.6	108200.0	108.2
Selenium	78	0	100	0		87.1	87.1
Silver	107	0	50	0		47.8	95.6
Sodium	23	250000	250000	260000	104.0	256700.0	102.7
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.1	
Titanium	47	2000	2000	2223	111.2	2263.0	113.2
Vanadium	51	0	200	0		226.6	113.3
Zinc	66	0	100	3		88.5	88.5

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF07

Instrument ID: 11332
Run Name: 1810805E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	103000	103.0	99480.0	99.5
Antimony	121	0	0	1		1.2	
Arsenic							
Barium	137	0	0	1		1.3	
Beryllium	9	0	0	0		0.0	
Cadmium	111	0	100	0		93.5	93.5
Calcium	44	300000	300000	320100	106.7	305400.0	101.8
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium	52	0	200	1		223.4	111.7
Cobalt							
Copper	63	0	200	1		190.5	95.3
Iron	57	250000	250000	270400	108.2	263000.0	105.2
Lead	208	0	0	0		-0.2	
Magnesium	24	100000	100000	108500	108.5	104900.0	104.9
Molybdenum	98	2000	2000	2071	103.6	2107.0	105.4
Nickel	60	0	200	1		191.1	95.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	113100	113.1	107700.0	107.7
Selenium	78	0	100	0		89.5	89.5
Silver	107	0	50	0		48.1	96.2
Sodium	23	250000	250000	262500	105.0	254400.0	101.8
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.1	
Titanium	47	2000	2000	2308	115.4	2251.0	112.6
Vanadium	51	0	200	0		230.7	115.4
Zinc	66	0	100	3		83.4	83.4

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF07

Instrument ID: 19204
Run Name: 1811401E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	102744	102.7	101496.6	101.5
Antimony							
Arsenic	75	0	100	0		108.4	108.4
Barium							
Beryllium							
Cadmium							
Calcium	44	300000	300000	267389	89.1	264277.4	88.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt	59	0	205	1		205.8	100.4
Copper							
Iron	57	250000	250000	256979	102.8	254321.5	101.7
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	102390	102.4	103576.6	103.6
Molybdenum	98	2000	2000	2125	106.3	2130.5	106.5
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	108070	108.1	107817.8	107.8
Selenium							
Silver							
Sodium	23	250000	250000	256758	102.7	254947.5	102.0
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2104	105.2	2054.6	102.7
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF07

Instrument ID: 19204
Run Name: 1811401E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	102137	102.1	105361.1	105.4
Antimony							
Arsenic	75	0	100	0		109.1	109.1
Barium							
Beryllium							
Cadmium							
Calcium	44	300000	300000	260532	86.8	270556.0	90.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt	59	0	205	1		211.6	103.2
Copper							
Iron	57	250000	250000	250838	100.3	259316.0	103.7
Lead	208	0	0	0		0.2	
Magnesium	24	100000	100000	102216	102.2	104823.3	104.8
Molybdenum	98	2000	2000	2132	106.6	2144.3	107.2
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	106521	106.5	110165.6	110.2
Selenium							
Silver							
Sodium	23	250000	250000	252075	100.8	263814.8	105.5
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2032	101.6	2086.4	104.3
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%

Instrument ID: 19204
Run Name: 1811601E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	100184	100.2	98230.2	98.2
Antimony							
Arsenic							
Barium							
Beryllium	9	0	0	0		0.0	
Cadmium							
Calcium	44	300000	300000	271315	90.4	267583.0	89.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt							
Copper							
Iron	57	250000	250000	245595	98.2	238938.9	95.6
Lead							
Magnesium	24	100000	100000	98566	98.6	96197.1	96.2
Molybdenum	98	2000	2000	2220	111.0	2234.9	111.7
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	103246	103.2	101195.3	101.2
Selenium							
Silver							
Sodium	23	250000	250000	245303	98.1	241337.1	96.5
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2042	102.1	1950.4	97.5
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF07

Instrument ID: 19204
Run Name: 1811601E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	97934	97.9	96150.8	96.2
Antimony							
Arsenic							
Barium							
Beryllium	9	0	0	0		0.0	
Cadmium							
Calcium	44	300000	300000	265062	88.4	265151.8	88.4
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt							
Copper							
Iron	57	250000	250000	238844	95.5	235827.5	94.3
Lead							
Magnesium	24	100000	100000	95513	95.5	94475.3	94.5
Molybdenum	98	2000	2000	2283	114.2	2138.3	106.9
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	100441	100.4	100051.2	100.1
Selenium							
Silver							
Sodium	23	250000	250000	241187	96.5	238320.3	95.3
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	2014	100.7	2048.3	102.4
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%

Instrument ID: 19204
Run Name: 1811601E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	98674	98.7	96485.7	96.5
Antimony							
Arsenic							
Barium							
Beryllium	9	0	0	0		0.0	
Cadmium							
Calcium	44	300000	300000	270543	90.2	265933.5	88.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Chromium							
Cobalt							
Copper							
Iron	57	250000	250000	242224	96.9	239942.1	96.0
Lead							
Magnesium	24	100000	100000	96749	96.7	95836.8	95.8
Molybdenum	98	2000	2000	2278	113.9	2194.2	109.7
Nickel							
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	101544	101.5	101760.1	101.8
Selenium							
Silver							
Sodium	23	250000	250000	243019	97.2	238482.1	95.4
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	2000	2000	1989	99.5	2003.0	100.2
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9558715BKG Matrix Spike Lab Sample ID: 9558716MS Matrix Spike Duplicate Lab Sample ID: 9558717MSD
Batch Number(s): 181061063907, 181060571304, 181240571301

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Antimony	121	0.4000	U	5.6320		5.9140		6.0000	6.0000	UG/L	94		99		5		75 - 125	20	MS
Arsenic	75	2.0000	U	12.9470		11.7960		10.0000	10.0000	UG/L	129	N	118		9		75 - 125	20	MS
Barium	137	269.1000		316.4000		317.2000		50.0000	50.0000	UG/L	95		96		0			20	MS
Beryllium	9	0.2000	U	4.1620		4.3420		4.0000	4.0000	UG/L	104		109		4		75 - 125	20	MS
Cadmium	111	0.2000	U	4.6440		4.7340		5.0000	5.0000	UG/L	93		95		2		75 - 125	20	MS
Chromium	52	1.0000	U	49.2000		50.8400		50.0000	50.0000	UG/L	98		102		3		75 - 125	20	MS
Cobalt	59	11.5580		278.5000		259.7730		250.0000	250.0000	UG/L	107		99		7		75 - 125	20	MS
Copper	63	1.0000	U	48.6800		48.9900		50.0000	50.0000	UG/L	97		98		1		75 - 125	20	MS
Lead	208	0.2000	U	14.8500		14.7800		15.0000	15.0000	UG/L	99		99		0		75 - 125	20	MS
Mercury		0.0500	U	0.9107		0.9072		1.0000	1.0000	UG/L	91		91		0		80 - 120	20	CV
Nickel	60	10.6500		61.4600		61.5400		50.0000	50.0000	UG/L	102		102		0		75 - 125	20	MS
Selenium	78	3.0000	U	9.7870	B	9.5430	B	10.0000	10.0000	UG/L	98		95		3		75 - 125	20	MS
Silver	107	0.2000	U	49.7800		48.8400		50.0000	50.0000	UG/L	100		98		2		75 - 125	20	MS
Thallium	203	0.2000	U	2.1330		2.1030		2.0000	2.0000	UG/L	107		105		1		75 - 125	20	MS
Vanadium	51	1.0000	U	51.6300		49.4900		50.0000	50.0000	UG/L	103		99		4		75 - 125	20	MS
Zinc	66	12.1600	B	486.7000		486.7000		500.0000	500.0000	UG/L	95		95		0		75 - 125	20	MS

Note: Results shown are reported on an as-received basis.
If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 5B
POST DIGEST SPIKE SAMPLE RECOVERY
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9558715BKG

Analyte	Mass	Sample Result(SR)	C	Spike Added(SA)	Spiked Sample Result(SSR)	C	SRR %R	Spiked Sample Duplicate(SSD)	C	SSD %R	M
Arsenic	75	2.0000	U	4.0000	4.8210	B	121	NA	U	NA	MS

Comments:

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9558715BKG Duplicate Lab Sample ID: 9558718DUP
Batch Number(s): 181061063907, 181060571304, 181240571301
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony	121		0.4000	U	0.4000	U			MS
Arsenic	75		2.0000	U	2.0000	U			MS
Barium	137		269.1000		255.4000		5		MS
Beryllium	9		0.2000	U	0.2000	U			MS
Cadmium	111		0.2000	U	0.2000	U			MS
Chromium	52		1.0000	U	1.0000	U			MS
Cobalt	59	5.0	11.5580		11.8000		2		MS
Copper	63		1.0000	U	1.0000	U			MS
Lead	208		0.2000	U	0.2000	U			MS
Mercury			0.0500	U	0.0500	U			CV
Nickel	60	10.0	10.6500		11.0500		4		MS
Selenium	78		3.0000	U	3.0000	U			MS
Silver	107		0.2000	U	0.2000	U			MS
Thallium	203		0.2000	U	0.2000	U			MS
Vanadium	51		1.0000	U	1.0000	U			MS
Zinc	66		12.1600	B	11.5300	B	5		MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAF07
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Antimony	121	181061063907	UG/L	6.000	5.981		80 - 120	100	MS	Yes
Arsenic	75	181061063907	UG/L	10.000	10.469		80 - 120	105	MS	Yes
Barium	137	181061063907	UG/L	50.000	50.700		80 - 120	101	MS	Yes
Beryllium	9	181061063907	UG/L	4.000	4.108		90 - 112	103	MS	Yes
Cadmium	111	181061063907	UG/L	5.000	4.782		84 - 120	96	MS	Yes
Chromium	52	181061063907	UG/L	50.000	51.390		90 - 112	103	MS	Yes
Cobalt	59	181061063907	UG/L	250.000	251.806		86 - 113	101	MS	Yes
Copper	63	181061063907	UG/L	50.000	52.270		89 - 120	105	MS	Yes
Lead	208	181061063907	UG/L	15.000	14.680		90 - 110	98	MS	Yes
Mercury		181060571304	UG/L	1.000	0.828		80 - 114	83	CV	Yes
Nickel	60	181061063907	UG/L	50.000	50.890		90 - 114	102	MS	Yes
Selenium	78	181061063907	UG/L	10.000	9.860	B	90 - 113	99	MS	Yes
Silver	107	181061063907	UG/L	50.000	50.560		88 - 113	101	MS	Yes
Thallium	203	181061063907	UG/L	2.000	1.980		80 - 120	99	MS	Yes
Vanadium	51	181061063907	UG/L	50.000	50.460		90 - 112	101	MS	Yes
Zinc	66	181061063907	UG/L	500.000	505.300		90 - 113	101	MS	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAF07
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Mercury		181240571301	UG/L	1.000	0.921		80 - 114	92	CV	Yes

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAF07
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9558715BKG Serial Dilution Lab Sample ID: 9558715L
Batch Number(s): 181061063907
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Antimony	121	0.4000	U	2.0000	U			MS
Arsenic	75	2.0000	U	10.0000	U			MS
Barium	137	269.1000		254.6000		5		MS
Beryllium	9	0.2000	U	1.0000	U			MS
Cadmium	111	0.2000	U	1.0000	U			MS
Chromium	52	1.0000	U	5.0000	U			MS
Cobalt	59	11.5580		11.5500	B	0		MS
Copper	63	1.0000	U	6.4700	B	100		MS
Lead	208	0.2000	U	1.0000	U			MS
Nickel	60	10.6500		10.3400	B	3		MS
Selenium	78	3.0000	U	15.0000	U			MS
Silver	107	0.2000	U	1.0000	U			MS
Thallium	203	0.2000	U	1.0000	U			MS
Vanadium	51	1.0000	U	5.0000	U			MS
Zinc	66	12.1600	B	36.5000	U	100		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: RAF07

Method: MS
Instrument ID: 11332
Date: 04/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.34
Arsenic			
Barium	137		0.51
Beryllium	9		0.034
Cadmium	111		0.10
Chromium	52		0.50
Cobalt			
Copper	63		0.40
Lead	208		0.021
Nickel	60		0.26
Selenium	78		0.66
Silver	107		0.088
Thallium	203		0.098
Vanadium	51		0.15
Zinc	66		1.7

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Instrument ID: 19204
Date: 04/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony			
Arsenic	75		0.63
Barium			
Beryllium	9		0.050
Cadmium			
Chromium			
Cobalt	59		0.16
Copper			
Lead	208		0.092
Nickel			
Selenium			
Silver			
Thallium			
Vanadium			
Zinc			

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Instrument ID: 17384
Date: 04/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.050

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Instrument ID: 23283
Date: 04/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury			0.050

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: MS
Date: 04/2016

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		2.0	0.40
Arsenic				
Barium	137		10.0	1.0
Beryllium	9		1.0	0.20
Cadmium	111		1.0	0.20
Chromium	52		5.0	1.0
Cobalt	59		5.0	1.0
Copper	63		5.0	1.0
Lead	208		2.0	0.20
Nickel	60		10.0	2.0
Selenium	78		10.0	3.0
Silver	107		2.0	0.20
Thallium	203		1.0	0.20
Vanadium	51		10.0	1.0
Zinc				

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: MS
Date: 05/2017

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony				
Arsenic	75		10.0	2.0
Barium				
Beryllium				
Cadmium				
Chromium				
Cobalt				
Copper				
Lead				
Nickel				
Selenium				
Silver				
Thallium				
Vanadium				
Zinc	66		30.0	7.3

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: CV
Date: 04/2017

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury			0.20	0.070

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: CV
Date: 04/2017

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.070

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: CV
Date: 06/2017

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury			0.20	0.050

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF07
Matrix: WATER

Method: CV
Date: 06/2017

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.050

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 181061063907

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9558712	04/17/2018	50.00	50
9558713	04/17/2018	50.00	50
9558714	04/17/2018	50.00	50
9558719	04/17/2018	50.00	50
9558720	04/17/2018	50.00	50
9558721	04/17/2018	50.00	50
9558722	04/17/2018	50.00	50
9558723	04/17/2018	50.00	50
9558724	04/17/2018	50.00	50
9558725	04/17/2018	50.00	50
9558715BKG	04/17/2018	50.00	50
9558718DUP	04/17/2018	50.00	50
9558717MSD	04/17/2018	50.00	50
9558716MS	04/17/2018	50.00	50
P10663GB	04/17/2018	50.00	50
P10663GQ	04/17/2018	1.00	1

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

Method: CV
Batch Number: 181060571304

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9558721	04/17/2018	40.00	40
9558722	04/17/2018	40.00	40
9558723	04/17/2018	40.00	40
9558724	04/17/2018	40.00	40
9558725	04/17/2018	40.00	40
9558715BKG	04/17/2018	40.00	40
9558718DUP	04/17/2018	40.00	40
9558717MSD	04/17/2018	40.00	40
9558716MS	04/17/2018	40.00	40
P10671DB	04/17/2018	40.00	40
P10671DQ	04/17/2018	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

Method: CV
Batch Number: 181240571301

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9558712	05/04/2018	40.00	40
9558713	05/04/2018	40.00	40
9558714	05/04/2018	40.00	40
9558719	05/04/2018	40.00	40
9558720	05/04/2018	20.00	20
9558715BKG	05/04/2018	40.00	40
9558718DUP	05/04/2018	40.00	40
9558717MSD	05/04/2018	40.00	40
9558716MS	05/04/2018	40.00	40
P12471AB	05/04/2018	40.00	40
P12471AQ	05/04/2018	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 11332
Run Name: 1810805E03

Run Start Date: 04/18/2018
Run End Date: 04/18/2018

| Lab Sample ID | D/F | Time | Analytes | | |

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 11332
Run Name: 1810805E03

Run Start Date: 04/18/2018
Run End Date: 04/18/2018

Lab Sample ID	D/F	Time	Analytes																															
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																
ICSA	1.00	13:44	X		X	X	X	X		X	X		X	X	X	X	X	X																
ICSAB	1.00	13:47	X		X	X	X	X		X	X		X	X	X	X	X	X																
ZZZZZZ	1.00	13:50																																
CCV	1.00	13:54	X		X	X	X	X		X	X		X	X	X	X	X	X																
CCB	1.00	13:57	X		X	X	X	X		X	X		X	X	X	X	X	X																

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 19204
Run Name: 1811401E05

Run Start Date: 04/24/2018
Run End Date: 04/24/2018

Lab Sample ID	D/F	Time	Analytes																																					
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																						
S0	1.00	03:25		X					X		X																													
S	1.00	03:27		X					X		X																													
CCS	1.00	03:30		X					X		X																													
CCS	1.00	03:33		X					X		X																													
ICV	1.00	03:36		X					X		X																													
ICB	1.00	03:38		X					X		X																													
LLC	1.00	03:41		X					X		X																													
ICSA	1.00	03:44		X					X		X																													
ICSAB	1.00	03:47		X					X		X																													
ZZZZZZ	1.00	03:49																																						
CCV	1.00	03:52		X					X		X																													
CCB	1.00	03:55		X					X		X																													
P10663GB	1.00	03:58		X					X		X																													
P10663GQ	1.00	04:01		X					X																															
9558715BKG	1.00	04:03		X					X		X																													
9558715A	1.00	04:06		X																																			
9558718DUP	1.00	04:09		X					X		X																													
9558716MS	1.00	04:12		X					X																															
9558717MSD	1.00	04:14		X					X																															
9558715L	5.00	04:17		X					X		X																													
9558712	1.00	04:20		X					X		X																													
9558713	1.00	04:23		X					X		X																													
CCV	1.00	04:25		X					X		X																													
CCB	1.00	04:28		X					X		X																													
9558714	1.00	04:31		X					X		X																													
9558719	1.00	04:34		X					X		X																													
9558720	1.00	04:36		X					X		X																													
9558721	1.00	04:39		X					X		X																													
9558722	1.00	04:42		X					X		X																													
9558723	1.00	04:44		X					X		X																													
9558724	1.00	04:47		X					X		X																													
9558725	1.00	04:50		X					X		X																													
9558725	20.00	04:53																																						
CCV	1.00	04:55		X					X		X																													
CCB	1.00	04:58		X					X		X																													
LLC	1.00	05:01		X					X		X																													
ICSA	1.00	05:04		X					X		X																													
ICSAB	1.00	05:06		X					X		X																													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 19204
Run Name: 1811401E05

Run Start Date: 04/24/2018
Run End Date: 04/24/2018

Lab Sample ID	D/F	Time	Analytes																																			
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																				
ZZZZZZ	1.00	05:09																																				
CCV	1.00	05:12		X					X		X																											
CCB	1.00	05:14		X					X		X																											

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 19204
Run Name: 1811601E05

Run Start Date: 04/26/2018
Run End Date: 04/26/2018

Lab Sample ID	D/F	Time	Analytes																																					
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																							
S0	1.00	04:18				X																																			
S	1.00	04:21				X																																			
CCS	1.00	04:24				X																																			
CCS	1.00	04:27				X																																			
ICV	1.00	04:30				X																																			
ICB	1.00	04:33				X																																			
LLC	1.00	04:36				X																																			
ICSA	1.00	04:39				X																																			
ICSAB	1.00	04:42				X																																			
ZZZZZZ	1.00	04:45																																							
CCV	1.00	04:48				X																																			
CCB	1.00	04:51				X																																			
ZZZZZZ	1.00	04:54																																							
ZZZZZZ	1.00	04:57																																							
ZZZZZZ	1.00	04:59																																							
ZZZZZZ	1.00	05:02																																							
ZZZZZZ	1.00	05:05																																							
ZZZZZZ	1.00	05:08																																							
ZZZZZZ	1.00	05:11																																							
ZZZZZZ	5.00	05:14																																							
ZZZZZZ	1.00	05:17																																							
ZZZZZZ	1.00	05:20																																							
CCV	1.00	05:23				X																																			
CCB	1.00	05:26				X																																			
ZZZZZZ	1.00	05:29																																							
ZZZZZZ	1.00	05:32																																							
ZZZZZZ	1.00	05:35																																							
ZZZZZZ	1.00	05:38																																							
ZZZZZZ	1.00	05:41																																							
ZZZZZZ	10.00	05:44																																							
LLC	1.00	05:47				X																																			
ICSA	1.00	05:50				X																																			
ICSAB	1.00	05:52				X																																			
ZZZZZZ	1.00	05:55																																							
CCV	1.00	05:58				X																																			
CCB	1.00	06:01				X																																			
P10663GB	1.00	06:04				X																																			
P10663GQ	1.00	06:07				X																																			

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: MS
Instrument ID: 19204
Run Name: 1811601E05

Run Start Date: 04/26/2018
Run End Date: 04/26/2018

Lab Sample ID	D/F	Time	Analytes																																					
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																							
9558715A	1.00	06:10																																							
9558716MS	1.00	06:13				X																																			
9558717MSD	1.00	06:16				X																																			
ZZZZZZ	5.00	06:19																																							
LLC	1.00	06:22				X																																			
ICSA	1.00	06:25				X																																			
ICSAB	1.00	06:28				X																																			
ZZZZZZ	1.00	06:31																																							
CCV	1.00	06:34				X																																			
CCB	1.00	06:37				X																																			

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: CV
Instrument ID: 17384
Run Name: 1810702M07

Run Start Date: 04/17/2018
Run End Date: 04/17/2018

Lab Sample ID	D/F	Time	Analytes																																					
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																							
S0	1.00	05:55										X																													
S0.2	1.00	05:57										X																													
S0.5	1.00	05:59										X																													
S1.0	1.00	06:01										X																													
S2.5	1.00	06:28										X																													
S5.0	1.00	06:30										X																													
ICV	1.00	06:32										X																													
ICB	1.00	06:36										X																													
CRA	1.00	06:38										X																													
CCV	1.00	06:40										X																													
CCB	1.00	06:42										X																													
CCV	1.00	11:55										X																													
CCB	1.00	11:57										X																													
P10671DB	1.00	11:59										X																													
P10671DQ	1.00	12:01										X																													
9558715BKG	1.00	12:03										X																													
9558718DUP	1.00	12:05										X																													
9558716MS	1.00	12:07										X																													
9558717MSD	1.00	12:09										X																													
ZZZZZZ	1.00	12:11																																							
ZZZZZZ	1.00	12:13																																							
ZZZZZZ	1.00	12:15																																							
ZZZZZZ	1.00	12:17																																							
CCV	1.00	12:20										X																													
CCB	1.00	12:22										X																													
ZZZZZZ	1.00	12:24																																							
9558721	1.00	12:26										X																													
9558722	1.00	12:28										X																													
9558723	1.00	12:30										X																													
9558724	1.00	12:32										X																													
9558725	1.00	12:34										X																													
CRA	1.00	12:36										X																													
CCV	1.00	12:38										X																													
CCB	1.00	12:40										X																													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF07

Method: CV
Instrument ID: 23283
Run Name: 1812701M09

Run Start Date: 05/07/2018
Run End Date: 05/07/2018

Lab Sample ID	D/F	Time	Analytes																																					
			SB	AS	BA	BE	CD	CR	CO	CU	PB	HG	NI	SE	AG	TL	V	ZN																							
S0	1.00	06:04										X																													
S0.2	1.00	06:06										X																													
S0.5	1.00	06:08										X																													
S1.0	1.00	06:10										X																													
S2.5	1.00	06:12										X																													
S5.0	1.00	06:14										X																													
ICV	1.00	06:16										X																													
ICB	1.00	06:18										X																													
CRA	1.00	06:20										X																													
CCV	1.00	06:22										X																													
CCB	1.00	06:24										X																													
P12471AB	1.00	06:40										X																													
P12471AQ	1.00	06:42										X																													
9558715BKG	1.00	06:44										X																													
9558718DUP	1.00	06:46										X																													
9558716MS	1.00	06:48										X																													
9558717MSD	1.00	06:50										X																													
9558712	1.00	06:52										X																													
9558713	1.00	06:54										X																													
9558714	1.00	06:56										X																													
9558719	1.00	06:58										X																													
CCV	1.00	07:00										X																													
CCB	1.00	07:02										X																													
9558720	1.00	07:04										X																													
ZZZZZZ	1.00	07:06																																							
ZZZZZZ	1.00	07:08																																							
ZZZZZZ	1.00	07:10																																							
ZZZZZZ	1.00	07:12																																							
ZZZZZZ	1.00	07:14																																							
ZZZZZZ	1.00	07:16																																							
ZZZZZZ	1.00	07:19																																							
ZZZZZZ	1.00	07:21																																							
ZZZZZZ	1.00	07:23																																							
CCV	1.00	07:25										X																													
CCB	1.00	07:27										X																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 15
ICP-MS TUNE
SDG No.: RAF07
Matrix: WATER

Instrument ID: 11332
Date: 04/18/2018

Analyte	Mass	Avg. Measured Mass (amu)	Avg. Peak Width at 5% Peak Height (amu)	%RSD
Lithium	6.000	6.05	0.65	2.5
Magnesium	24.000	24.00	0.65	1.5
Rhodium	103.000	103.00	0.65	2.0
Indium	115.000	115.00	0.65	1.1
Cerium	140.000	140.05	0.65	1.4
Lead	208.000	208.05	0.60	1.9
Uranium	238.000	238.00	0.60	1.9

Comments:

_____
_____
_____
_____

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 11332
Run Name: 1810805E03

Start Date: 04/18/2018
End Date: 04/18/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,BA,CD,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element BI-2-209	Q	Element	Q	Element	Q
S0	11:47	100		100		100		100		100					
S	11:50	101		107		98		98		100					
CCS	11:53	102		100		97		100		101					
CCS	11:56	104		99		101		104		103					
ICV	11:59	96		105		102		96		98					
ICB	12:02	100		100		93		98		100					
LLC	12:06	100		99		98		101		104					
ICSA	12:09	91		94		96		96		94					
ICSAB	12:12	88		97		93		94		91					
ZZZZZZ	12:15														
CCV	12:18	104		110		103		105		106					
CCB	12:21	97		102		96		98		99					
P10663GB	12:24	104		105		101		103		105					
P10663GQ	12:27	105		106		105		102		104					
9558715BKG	12:30	103		105		98		100		99					
9558715A	12:33	103				99		97		100					
9558718DUP	12:36	104		109		103		102		103					
9558716MS	12:39	103				100		101		100					
9558717MSD	12:42	102				101		102		102					
9558715L	12:45	107		107		104		103		104					
CCV	12:49	106		105		106		104		106					
CCB	12:52	104		106		102		105		104					
9558714	12:55	109		111		104		105		104					
9558719	12:58	112		115		108		107		109					
9558720	13:01	109		114		107		105		109					
9558721	13:04	112		111				108							
9558722	13:07	112		111				106							
9558723	13:10	113		110				110							
9558724	13:13	104		107				106							
9558725	13:16	111		109				105							
9558725	13:20														

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 11332
Run Name: 1810805E03

Start Date: 04/18/2018
End Date: 04/18/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-2-209	PB,TL	IN-1-115	SE
IN-2-115	AG,BA,CD,CU,NI,SB,ZN	SC-2-45	CR,V
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-2-45	Q	Element SC-3-45	Q	Element IN-1-115	Q	Element IN-2-115	Q	Element BI-2-209	Q	Element	Q	Element	Q
CCV	13:23	105		106		103		103		105					
CCB	13:26	104		99		101		101		103					
ZZZZZZ	13:29														
9558712	13:32	106		104		103		104		104					
9558713	13:35	93		93		97		100		103					
9558713	13:38														
LLC	13:41	92		89		96		95		103					
ICSA	13:44	80		87		90		92		92					
ICSAB	13:47	82		88		91		90		92					
ZZZZZZ	13:50														
CCV	13:54	97		101		102		103		106					
CCB	13:57	93		96		101		99		104					

LEGEND:
BKG = Background
DUP = Duplicate
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MS = Matrix Spike
MSD = Matrix Spike Duplicate
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FLAG:
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INTERNAL STANDARD ELEMENTS:
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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 19204
Run Name: 1811401E05

Start Date: 04/24/2018
End Date: 04/24/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-1-209	PB	IN-1-115	AS,CO

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	03:25	100		100											
S	03:27	101		102											
CCS	03:30	98		101											
CCS	03:33	102		101											
ICV	03:36	100		100											
ICB	03:38	101		99											
LLC	03:41	100		103											
ICSA	03:44	95		92											
ICSAB	03:47	93		91											
ZZZZZZ	03:49														
CCV	03:52	95		102											
CCB	03:55	100		101											
P10663GB	03:58	94		95											
P10663GQ	04:01	109		106											
9558715BKG	04:03	103		101											
9558715A	04:06	100		103											
9558718DUP	04:09	101		103											
9558716MS	04:12	97													
9558717MSD	04:14	104													
9558715L	04:17	103		105											
9558712	04:20	99		104											
9558713	04:23	105		107											
CCV	04:25	104		106											
CCB	04:28	97		103											
9558714	04:31	95		103											
9558719	04:34	100		105											
9558720	04:36	100		107											
9558721	04:39	100		104											
9558722	04:42	102		104											
9558723	04:44	100		105											
9558724	04:47	99		104											

LEGEND:
BKG = Background
DUP = Duplicate
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MSD = Matrix Spike Duplicate
A = Post Digest Spike
FLAG:
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INTERNAL STANDARD ELEMENTS:
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GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 19204
Run Name: 1811401E05

Start Date: 04/24/2018
End Date: 04/24/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-1-209	PB	IN-1-115	AS,CO

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
9558725	04:50	96		105											
9558725	04:53														
CCV	04:55	97		105											
CCB	04:58	95		102											
LLC	05:01	103		105											
ICSA	05:04	91		94											
ICSAB	05:06	90		94											
ZZZZZZ	05:09														
CCV	05:12	97		103											
CCB	05:14	99		101											

LEGEND:
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DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
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INTERNAL STANDARD ELEMENTS:
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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 19204 Start Date: 04/26/2018
Run Name: 1811601E05 End Date: 04/26/2018

Standard	Elements Applies to	Standard	Elements Applies to
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-3-45	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	04:18	100													
S	04:21	98													
CCS	04:24	99													
CCS	04:27	99													
ICV	04:30	101													
ICB	04:33	99													
LLC	04:36	100													
ICSA	04:39	94													
ICSAB	04:42	95													
ZZZZZZ	04:45														
CCV	04:48	97													
CCB	04:51	97													
ZZZZZZ	04:54														
ZZZZZZ	04:57														
ZZZZZZ	04:59														
ZZZZZZ	05:02														
ZZZZZZ	05:05														
ZZZZZZ	05:08														
ZZZZZZ	05:11														
ZZZZZZ	05:14														
ZZZZZZ	05:17														
ZZZZZZ	05:20														
CCV	05:23	99													
CCB	05:26	99													
ZZZZZZ	05:29														
ZZZZZZ	05:32														
ZZZZZZ	05:35														
ZZZZZZ	05:38														
ZZZZZZ	05:41														
ZZZZZZ	05:44														
LLC	05:47	102													

LEGEND:
BKG = Background MS = Matrix Spike
DUP = Duplicate MSD = Matrix Spike Duplicate
L = Serial Dilution A = Post Digest Spike
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium LI = Lithium
BI = Bismuth SC = Scandium
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HO = Holmium Y = Yttrium
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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF07

Instrument ID: 19204 Start Date: 04/26/2018
Run Name: 1811601E05 End Date: 04/26/2018

Standard	Elements Applies to	Standard	Elements Applies to
SC-3-45	BE		

Lab Sample ID	Time	Internal Standards %RI For: Element SC-3-45	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
ICSA	05:50	93													
ICSAB	05:52	95													
ZZZZZZ	05:55														
CCV	05:58	99													
CCB	06:01	97													
P10663GB	06:04	99													
P10663GQ	06:07	101													
9558715A	06:10	102													
9558716MS	06:13	103													
9558717MSD	06:16	102													
ZZZZZZ	06:19														
LLC	06:22	102													
ICSA	06:25	94													
ICSAB	06:28	97													
ZZZZZZ	06:31														
CCV	06:34	100													
CCB	06:37	97													

LEGEND:
BKG = Background MS = Matrix Spike
DUP = Duplicate MSD = Matrix Spike Duplicate
L = Serial Dilution A = Post Digest Spike
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium LI = Lithium
BI = Bismuth SC = Scandium
GE = Germanium TB = Terbium
HO = Holmium Y = Yttrium
IN = Indium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18D18E00.E03

Run Name: 1810805E03

Analyst: 1242

Reviewed By:	Reviewed Date
Deborah A Krady	05/09/2018 12:03
Nina C Haller	05/10/2018 13:21
Tara L Snyder	04/20/2018 15:23

Verified By:	Verified Date
Deborah A Krady	05/11/2018 07:47
Nina C Haller	06/15/2018 08:34
Parker D Lindstrom	05/06/2018 12:30

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1810805E03 Date/Time: 04/18/2018 11:47:00
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	46.66710	509068000	0.00621	-0.00603	-0.00018
B	11	0.00000	9176.52000	20539200	0.09807	-0.00257	-0.09544
NA	23	-0.00001	27409.30000	-52999700	-0.06781	3.33716	-3.26935
MG	24	0.00000	26.66810	1486550000	-0.10571	-0.26573	0.37145
AL	27	0.00000	16.66730	-7595670000	0.16394	-0.31619	0.15224
K	39	0.00000	13133.70000	-3258190000	7.15807	0.74434	-7.90540
CA	44	0.00000	40.00150	1154120000	5.13930	0.25522	-5.39470
SC-1	45	98214.90000	0.00000	2.447	95844.30000	98150.60000	100650.00000
SC-2	45	24690.90000	0.00000	1.300	24704.40000	24363.40000	25004.90000
SC-3	45	1059620	0	1.227	1056470	1073900	1048490
TI	47	0.00000	13.33410	-3469660000	-0.25971	-0.24870	0.50841
V	51	0.00000	66.66920	184410000	-0.01417	0.00901	0.00516
CR	52	0.00000	336.68400	460967000	0.02190	0.03018	-0.05208
MN	55	0.00000	196.67800	-2120300000	0.08289	-0.08621	0.00332
FE	57	0.00000	126.67200	279474000	-1.44732	1.30622	0.14111
CO	59	0.00000	2450.34000	-1183430000	-0.23187	-0.07075	0.30260
NI	60	0.00000	36.66910	6585460000	0.07781	0.00861	-0.08642
CU	63	0.00000	100.00400	-705868000	-0.02102	-0.01237	0.03338
ZN	66	0.00000	16.66730	1550920000	-0.06400	0.03213	0.03187
GE-1	72	103546.00000	0.00000	1.041	103435.00000	102528.00000	104675.00000
GE-2	72	55714.90000	0.00000	0.339	55751.90000	55510.30000	55882.60000
GE-3	72	750326.00000	0.00000	2.067	747949.00000	766888.00000	736142.00000
AS	75	0.00000	266.67200	-325868000	0.15578	0.14996	-0.30573
SE	78	0.00000	1.55556	2694890000	0.01245	-0.00527	-0.00718
SR	88	0.00000	30.00120	967936000	-0.03498	-0.00069	0.03566
MO	98	0.00000	43.33530	-2910700000	-0.00487	-0.04660	0.05147
AG	107	0.00000	20.00080	-147204000	0.00036	-0.00017	-0.00019
CD	111	0.00000	44.66710	-1165470000	0.01771	-0.08545	0.06774
IN-1	115	86583.10000	0.00000	2.544	87260.90000	84120.70000	88367.70000
IN-2	115	21869.00000	0.00000	1.786	21418.30000	22079.60000	22109.10000
SN	120	0.00000	123.33900	2104490000	-0.00237	0.15830	-0.15593
SB	121	0.00000	16.66730	5007760000	-0.06714	0.09403	-0.02690
BA	137	0.00000	26.66800	-3239460000	-0.06553	-0.17714	0.24267
TB-2	159	75963.00000	0.00000	2.005	75835.70000	74507.90000	77545.40000
TL	203	0.00000	63.33680	-951466000	0.04283	-0.03527	-0.00756
PB	208	0.00000	1120.06000	447674000	-0.00276	-0.02547	0.02823
BI-2	209	52641.00000	0.00000	3.410	50579.60000	53480.80000	53862.60000
U	238	0.00000	60.00280	-530708000	0.00506	-0.00834	0.00328

Run Name: 1810805E03 Date/Time: 04/18/2018 11:50:00
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	24938.00000	0.00000	1.775	24734.40000	24633.80000	25445.70000
SC-3	45	1134330	0	0.379	1133730	1130360	1138890
AL	27	10000.00000	207329.00000	0.793	9911.92529	10065.79652	10022.24307
B	11	1000.00000	1107220.00000	0.354	996.91471	1003.86393	999.21880
BE	9	100.00000	128610.00000	1.004	100.66021	100.49600	98.84434
CA	44	10000.00000	19552.00000	0.233	9990.87644	10026.41802	9982.69939
CR	52	1000.00000	597009.00000	1.567	997.61409	1016.72397	985.66586
FE	57	10000.00000	117295.00000	0.426	10042.39724	10000.51056	9957.09219
K	39	10000.00000	372931.00000	0.938	9928.86180	10106.32406	9964.73143
MG	24	10000.00000	622047.00000	0.671	9923.56750	10049.50870	10026.85483
MN	55	1000.00000	284431.00000	1.874	998.37881	1019.50535	982.12377
NA	23	10000.00000	1346640.00000	1.516	9862.94067	10162.80124	9974.27311
TI	47	1000.00000	12846.80000	4.220	965.42998	987.55231	1047.01955
V	51	1000.00000	478365.00000	0.206	1000.48415	997.74446	1001.77380
IN-1	115	85257.30000	0.00000	1.404	83875.00000	85945.70000	85951.00000
IN-2	115	21519.70000	0.00000	1.981	21848.60000	21672.20000	21038.20000
AG	107	100.00000	112420.00000	2.881	99.39062	97.47265	103.13707
AS	75	1000.00000	56567.40000	3.586	966.71723	995.30228	1037.98251
BA	137	1000.00000	92726.90000	1.416	984.35935	1003.69295	1011.94847
CD	111	100.00000	12719.10000	2.460	97.90813	99.38216	102.71025
CO	59	1000.00000	1114580.00000	5.530	959.55955	977.42432	1063.02535
CU	63	1000.00000	848267.00000	5.218	939.78504	1031.88945	1028.32662
MO	98	100.00000	49621.40000	3.451	97.60551	98.43870	103.95588
NI	60	1000.00000	307787.00000	2.296	985.62628	987.88566	1026.48502
SB	121	100.00000	24204.40000	0.852	99.05572	100.23154	100.71238
SE	78	100.00000	3403.34000	2.278	102.45864	99.58084	97.96108
SN	120	100.00000	34254.30000	3.946	95.96388	100.18795	103.84901
SR	88	100.00000	26692.20000	2.185	97.93515	99.77752	102.28835
ZN	66	1000.00000	98246.30000	2.133	986.14800	989.28994	1024.56388
BI-2	209	52513.40000	0.00000	0.937	51954.20000	52707.80000	52878.30000
PB	208	100.00000	223183.00000	1.385	100.73588	98.40277	100.86096
TL	203	100.00000	69415.80000	2.148	100.23438	102.02127	97.74451
U	238	100.00000	249362.00000	2.062	101.91711	97.81859	100.26384
SC-1	45	97648.50000	0.00000	1.075	97406.30000	98798.20000	96741.10000
GE-1	72	107014.00000	0.00000	1.347	105360.00000	108005.00000	107678.00000
GE-2	72	54981.80000	0.00000	1.879	54586.90000	54204.90000	56153.70000
GE-3	72	785841.00000	0.00000	1.080	795638.00000	780919.00000	780965.00000
TB-2	159	77402.30000	0.00000	0.748	77033.10000	77104.00000	78069.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 11:53:00
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25188.40000	0.00000	0.894	24934.80000	25365.20000	25265.20000
SC-3	45	1062130	0	0.176	1061140	1064280	1060970
AL	27	0.62020	30.00140	75.137	0.15498	1.08710	0.61847
B	11	30.74000	40788.40000	0.774	30.85778	30.90204	30.46930
BE	9	0.16330	243.33700	15.175	0.14237	0.15676	0.19064
CA	44	2.87700	46.66840	437.956	-10.47747	14.54324	4.56510
CR	52	0.24770	493.36400	46.952	0.11698	0.28656	0.33959
FE	57	-0.77270	120.00500	-338.035	1.87950	-0.85514	-3.34261
K	39	-4.80600	13220.40000	-518.727	15.93231	-32.46124	2.11085
MG	24	1.53700	123.34000	47.918	2.30326	0.83425	1.47405
MN	55	0.12510	236.68000	110.472	-0.02989	0.23546	0.16971
NA	23	-4.30800	27389.30000	-81.662	-0.63663	-4.63854	-7.64850
TI	47	0.49270	20.00100	154.232	-0.26698	1.25274	0.49239
V	51	0.11390	123.33900	146.005	-0.03625	0.08531	0.29259
IN-1	115	84414.50000	0.00000	1.939	83445.90000	83493.50000	86304.20000
IN-2	115	21918.30000	0.00000	2.670	22129.40000	21256.80000	22368.70000
AG	107	0.01155	33.33460	38.996	0.00844	0.00950	0.01672
AS	75	-0.01493	266.67200	-1104.490	0.10461	-0.20303	0.05363
BA	137	0.14270	40.00210	221.023	0.45196	0.15452	-0.17850
CD	111	0.02459	48.00050	71.208	0.03668	0.00451	0.03257
CO	59	0.39540	2900.43000	61.609	0.11677	0.50157	0.56791
CU	63	0.24350	310.01800	23.261	0.28538	0.26606	0.17905
MO	98	0.03946	63.33600	27.192	0.05134	0.03657	0.03048
NI	60	0.12870	76.67010	100.233	0.03991	0.27661	0.06948
SB	121	0.48580	136.67200	27.275	0.61629	0.35138	0.48966
SE	78	0.00816	1.77778	378.829	0.01507	0.03504	-0.02563
SN	120	-0.00030	123.33900	-37150.600	-0.12763	0.05960	0.06714
SR	88	0.00067	30.00140	5876.320	-0.03740	0.04152	-0.00210
ZN	66	0.86170	103.33800	30.834	1.02142	0.55499	1.00872
BI-2	209	53193.30000	0.00000	1.850	53642.00000	53873.20000	52064.80000
PB	208	-0.04074	1040.06000	-57.437	-0.06217	-0.01578	-0.04428
TL	203	0.02689	83.33680	112.607	0.04925	-0.00758	0.03898
U	238	0.01520	100.00400	167.303	0.01910	0.03846	-0.01196
SC-1	45	95529.00000	0.00000	1.767	94646.70000	94464.60000	97475.60000
GE-1	72	101204.00000	0.00000	1.844	101601.00000	102839.00000	99171.20000
GE-2	72	56190.20000	0.00000	1.752	56023.50000	55299.60000	57247.50000
GE-3	72	754664.00000	0.00000	0.875	762091.00000	749446.00000	752455.00000
TB-2	159	76956.70000	0.00000	2.191	75142.00000	78473.70000	77254.50000

Run Name: 1810805E03 Date/Time: 04/18/2018 11:56:00
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25622.60000	0.00000	2.851	24834.40000	25756.00000	26277.30000
SC-3	45	1044530	0	2.077	1027900	1036630	1069060
AL	27	1.23600	43.33490	62.726	2.09645	0.59125	1.02125
B	11	15.85000	25061.40000	3.437	16.46978	15.66230	15.43292
BE	9	0.00272	49.33380	559.838	-0.01314	0.01728	0.00403
CA	44	-4.04000	33.33460	-83.639	-0.14277	-5.84189	-6.13724
CR	52	0.01198	356.68500	694.157	0.06928	-0.08341	0.05007
FE	57	-1.78500	110.00500	-201.120	-3.21102	2.29769	-4.44461
K	39	-2.37500	13540.70000	-547.368	6.03020	-17.35414	4.19807
MG	24	0.87690	83.33690	39.343	1.18416	0.50372	0.94292
MN	55	-0.06820	183.34400	-211.437	0.04346	-0.01712	-0.23095
NA	23	-9.11300	27215.60000	-14.386	-10.62544	-8.41527	-8.29994
TI	47	-0.78570	3.33346	-57.528	-0.26383	-1.04669	-1.04669
V	51	-0.03226	53.33610	-129.882	-0.01483	-0.08007	-0.00190
IN-1	115	87197.20000	0.00000	0.825	86496.70000	87934.60000	87160.20000
IN-2	115	22767.00000	0.00000	1.115	22860.70000	22960.70000	22479.60000
AG	107	0.01345	36.66890	133.383	0.00761	-0.00084	0.03358
AS	75	0.34620	298.67300	235.586	0.18615	1.22992	-0.37750
BA	137	-0.01008	26.66770	-601.984	0.02233	-0.08009	0.02750
CD	111	-0.05315	39.33370	-142.559	-0.02014	-0.13983	0.00050
CO	59	-0.34300	2140.26000	-150.262	-0.79368	-0.45432	0.21890
CU	63	0.02540	126.67300	182.402	-0.02699	0.06099	0.04221
MO	98	0.01561	53.33570	424.087	-0.04794	0.08417	0.01060
NI	60	0.01521	43.33570	238.725	0.03486	-0.02670	0.03746
SB	121	0.10210	43.33530	20.823	0.08853	0.12660	0.09116
SE	78	-0.01300	1.11111	-226.385	0.01295	-0.00699	-0.04499
SN	120	-0.13340	80.00340	-57.061	-0.16249	-0.19077	-0.04708
SR	88	-0.01550	26.66770	-272.452	-0.03973	-0.04004	0.03326
ZN	66	0.76080	96.67090	51.551	0.88763	1.07382	0.32090
BI-2	209	53986.90000	0.00000	2.690	52386.20000	55218.80000	54355.70000
PB	208	-0.08915	946.71900	-64.363	-0.15092	-0.07905	-0.03750
TL	203	-0.03113	43.33540	-25.156	-0.03409	-0.03705	-0.02225
U	238	-0.00334	53.33560	-466.766	-0.01203	-0.01265	0.01466
SC-1	45	95743.00000	0.00000	1.128	96721.20000	94583.40000	95924.30000
GE-1	72	104363.00000	0.00000	0.576	103818.00000	104262.00000	105008.00000
GE-2	72	56364.60000	0.00000	2.574	54808.10000	56605.50000	57680.10000
GE-3	72	736469.00000	0.00000	1.195	729104.00000	746213.00000	734091.00000
TB-2	159	79797.40000	0.00000	2.197	77867.00000	80234.70000	81290.40000

Run Name: 1810805E03 Date/Time: 04/18/2018 11:59:00
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	23685.60000	0.00000	6.350	22139.50000	23772.50000	25144.90000
SC-3	45	1108530	0	1.092	1101670	1101410	1122490
AL	27	5165.00000	101419.00000	7.049	5536.01583	5152.08293	4808.12148
B	11	511.10000	557650.00000	1.382	513.62795	516.51981	503.09623
BE	9	50.77000	63826.30000	2.903	51.91910	51.29074	49.11032
CA	44	5254.00000	9753.96000	5.145	5511.85355	5277.17556	4972.72838
CR	52	532.80000	301477.00000	6.684	570.46846	528.36635	499.66669
FE	57	5195.00000	57796.30000	5.898	5500.13967	5198.89524	4887.29868
K	39	5226.00000	190772.00000	4.688	5496.71787	5160.52666	5019.84775
MG	24	5256.00000	309821.00000	5.809	5599.68508	5154.33365	5015.27800
MN	55	536.40000	144692.00000	5.528	567.45549	533.46796	508.37061
NA	23	4760.00000	621013.00000	6.258	5076.79341	4716.83205	4485.64758
TI	47	538.80000	6558.55000	6.823	580.44019	524.94494	510.93667
V	51	530.90000	240576.00000	6.348	563.80445	532.35378	496.45172
IN-1	115	88029.70000	0.00000	1.089	87909.10000	87137.20000	89042.80000
IN-2	115	20903.00000	0.00000	2.057	20485.40000	20879.10000	21344.40000
AG	107	52.50000	57324.90000	4.383	54.37237	53.20021	49.93179
AS	75	527.60000	29118.80000	1.783	535.33528	530.43351	517.15427
BA	137	521.40000	46980.10000	0.962	526.78279	516.83991	520.63528
CD	111	51.63000	6398.32000	3.171	53.02318	52.03309	49.82514
CO	59	507.60000	550977.00000	2.295	516.70244	511.72020	494.50548
CU	63	528.20000	435369.00000	2.249	540.93233	526.46562	517.38168
MO	98	51.52000	24861.90000	2.486	52.76664	50.20806	51.59636
NI	60	529.10000	158215.00000	2.090	534.43650	536.51703	516.40490
SB	121	51.93000	12216.50000	1.885	52.20176	52.75087	50.84925
SE	78	51.08000	1795.91000	2.199	51.77839	51.68161	49.78639
SN	120	52.03000	17369.30000	2.754	53.11585	52.56151	50.40237
SR	88	52.81000	13704.60000	3.433	52.97578	54.52808	50.91457
ZN	66	524.50000	50068.10000	2.627	539.20352	511.86369	522.53894
BI-2	209	51783.90000	0.00000	3.810	50016.60000	51422.60000	53912.60000
PB	208	51.61000	113996.00000	4.336	53.49171	52.20162	49.13493
TL	203	50.38000	34484.30000	4.061	52.19815	50.78286	48.16562
U	238	51.49000	126524.00000	4.331	54.00857	50.68435	49.77143
SC-1	45	98773.30000	0.00000	1.312	98695.50000	97518.30000	100106.00000
GE-1	72	107592.00000	0.00000	1.626	108960.00000	105622.00000	108196.00000
GE-2	72	53867.60000	0.00000	4.676	51213.20000	54165.20000	56224.30000
GE-3	72	766683.00000	0.00000	1.743	779219.00000	768210.00000	752621.00000
TB-2	159	74186.30000	0.00000	3.839	72747.70000	72344.90000	77466.20000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:02:00
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	24577.30000	0.00000	3.998	23912.80000	24113.20000	25706.00000
SC-3	45	1061910	0	1.333	1076910	1048770	1060050
AL	27	0.65860	30.00110	75.600	0.19618	1.18560	0.59397
B	11	23.01000	32838.10000	1.867	23.21406	23.30450	22.51945
BE	9	0.05530	113.33500	29.837	0.04468	0.04692	0.07431
CA	44	5.05200	50.00240	186.184	-4.69394	5.77354	14.07600
CR	52	0.13790	416.69000	54.851	0.05897	0.20973	0.14515
FE	57	-3.66900	83.33670	-60.071	-1.13369	-4.74566	-5.12857
K	39	9.58800	13397.40000	231.227	33.83228	4.57913	-9.64707
MG	24	0.93890	83.33720	40.803	1.07872	1.23245	0.50554
MN	55	0.27070	273.34800	96.380	0.18211	0.06565	0.56435
NA	23	-3.52200	26814.70000	-232.226	-7.30227	5.86188	-9.12806
TI	47	0.30390	16.66730	408.029	1.39240	0.56586	-1.04669
V	51	0.16850	146.67300	92.344	0.25169	-0.01106	0.26487
IN-1	115	80631.80000	0.00000	0.338	80377.60000	80598.80000	80919.10000
IN-2	115	21538.20000	0.00000	2.592	21077.70000	21377.60000	22159.20000
AG	107	0.01210	33.33460	113.058	0.00065	0.02726	0.00840
AS	75	0.17520	272.67200	461.358	-0.52765	1.05849	-0.00524
BA	137	0.03454	30.00200	1090.620	-0.28227	-0.06511	0.45099
CD	111	-0.08908	32.66700	-31.511	-0.05692	-0.10862	-0.10171
CO	59	0.55760	3040.49000	82.873	0.12965	0.49556	1.04761
CU	63	0.15450	230.01100	30.084	0.10084	0.18085	0.18183
MO	98	0.04855	66.66930	50.175	0.03761	0.07646	0.03158
NI	60	0.18390	93.33740	48.586	0.08096	0.24168	0.22899
SB	121	0.22210	70.00300	3.343	0.22832	0.22417	0.21389
SE	78	0.06549	3.55557	48.267	0.03815	0.10010	0.05823
SN	120	-0.10060	86.67060	-72.485	-0.05647	-0.06066	-0.18482
SR	88	0.02702	36.66860	78.497	0.04281	0.00291	0.03533
ZN	66	0.38020	53.33590	95.476	0.35330	0.75584	0.03142
BI-2	209	52544.30000	0.00000	0.990	52136.40000	52366.20000	53130.30000
PB	208	0.05483	1240.08000	141.984	-0.03130	0.12018	0.07561
TL	203	-0.02457	46.66860	-69.841	-0.00477	-0.03407	-0.03490
U	238	0.00530	73.33640	86.124	0.00823	0.00004	0.00762
SC-1	45	91436.40000	0.00000	1.569	91744.60000	89872.80000	92691.80000
GE-1	72	99430.90000	0.00000	1.518	97701.60000	100109.00000	100482.00000
GE-2	72	54961.90000	0.00000	3.384	52959.90000	55289.80000	56636.00000
GE-3	72	753392.00000	0.00000	2.886	778281.00000	743771.00000	738122.00000
TB-2	159	75896.30000	0.00000	1.521	75805.10000	74790.40000	77093.60000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:06:00
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	24757.50000	0.00000	1.139	24493.70000	24724.20000	25054.60000
SC-3	45	1044660	0	1.823	1045540	1063240	1025200
AL	27	201.90000	4174.14000	6.909	185.84940	210.87723	209.04592
B	11	121.80000	132115.00000	2.231	123.91185	118.73105	122.73974
BE	9	1.08200	1327.41000	2.017	1.10717	1.06652	1.07310
CA	44	409.50000	833.39100	6.332	396.74144	439.37648	392.49925
CR	52	4.07000	2750.39000	8.108	3.88334	3.87564	4.45100
FE	57	198.80000	2440.32000	7.475	189.82130	190.53570	215.91763
K	39	397.10000	27346.00000	7.880	429.15677	366.64143	395.48252
MG	24	202.70000	12543.10000	0.139	202.80437	202.37232	202.90154
MN	55	4.03600	1336.79000	21.757	3.24148	4.97902	3.88857
NA	23	375.20000	76613.50000	1.951	383.55898	372.18390	369.89338
TI	47	28.04000	370.02000	22.989	28.32254	34.33993	21.45690
V	51	1.18700	630.07000	14.195	1.37087	1.04023	1.14954
IN-1	115	84619.00000	0.00000	0.757	85221.10000	83946.20000	84689.50000
IN-2	115	22182.40000	0.00000	2.684	21514.70000	22658.20000	22374.30000
AG	107	1.01100	1190.10000	9.990	1.10348	0.90329	1.02618
AS	75	4.58200	536.01500	14.631	5.35477	4.24235	4.15040
BA	137	3.80300	390.02200	9.093	4.03326	3.40567	3.97119
CD	111	0.93730	168.00200	10.209	0.86807	1.04647	0.89726
CO	59	0.63610	3220.55000	67.537	0.14603	0.81473	0.94758
CU	63	3.96900	3570.65000	7.566	4.05779	3.63446	4.21500
MO	98	1.09400	603.37000	12.569	1.02326	1.00558	1.25215
NI	60	3.59500	1176.76000	7.616	3.91124	3.43023	3.44398
SB	121	1.96400	506.69700	3.860	1.87634	2.01383	2.00049
SE	78	4.23300	144.44600	3.723	4.22826	4.39264	4.07756
SN	120	3.76500	1450.15000	5.543	3.74552	3.56637	3.98235
SR	88	1.87300	543.36800	26.396	2.25257	1.31419	2.05358
ZN	66	32.36000	3290.54000	6.292	34.45056	30.38293	32.23954
BI-2	209	54683.60000	0.00000	2.630	54365.10000	53431.00000	56254.70000
PB	208	1.81000	5344.03000	6.994	1.81999	1.93145	1.67889
TL	203	0.93710	743.38900	1.941	0.92488	0.92849	0.95803
U	238	1.01300	2690.44000	7.089	0.94462	1.08773	1.00571
SC-1	45	95946.00000	0.00000	1.016	96400.10000	94827.00000	96611.00000
GE-1	72	102605.00000	0.00000	1.329	101197.00000	102699.00000	103920.00000
GE-2	72	56598.40000	0.00000	1.541	56343.70000	55881.80000	57569.60000
GE-3	72	752085.00000	0.00000	2.161	770458.00000	746194.00000	739604.00000
TB-2	159	78281.80000	0.00000	2.518	77184.60000	77103.50000	80557.10000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:09:00
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	22516.80000	0.00000	2.404	21969.00000	23051.40000	22530.10000
SC-3	45	998328.00000	0.00000	1.968	976158.00000	1005220	1013610
AL	27	99950.00000	1870350.00000	3.380	100313.75391	96405.47099	103132.27835
B	11	23.73000	31549.70000	3.587	24.70618	23.18061	23.28880
BE	9	0.01659	62.66740	49.156	0.02438	0.01728	0.00811
CA	44	308600.00000	543449.00000	3.037	314749.09778	297798.66213	313203.33751
CR	52	1.26300	986.74400	9.034	1.35116	1.13403	1.30331
FE	57	259400.00000	2743090.00000	2.954	266032.15279	251005.40584	261132.38455
K	39	107600.00000	3505150.00000	1.329	108322.32779	105930.73555	108486.30181
MG	24	106400.00000	5972590.00000	2.528	108718.05991	103443.15538	107000.24784
MN	55	8.86700	2457.00000	4.553	8.40676	9.15913	9.03680
NA	23	260000.00000	30983300.00000	2.503	262980.88046	252564.71700	264534.27444
TI	47	2223.00000	25749.70000	1.396	2257.83045	2199.06808	2211.10071
V	51	0.08261	96.67060	95.061	0.09654	0.15325	-0.00195
IN-1	115	82694.70000	0.00000	0.534	83194.50000	82530.80000	82358.90000
IN-2	115	20953.60000	0.00000	1.883	20616.40000	20856.90000	21387.50000
AG	107	0.44740	510.02900	17.600	0.39099	0.41381	0.53735
AS	75	0.56440	286.67200	42.860	0.56548	0.32204	0.80578
BA	137	1.34300	146.67400	21.541	1.63174	1.05321	1.34566
CD	111	0.29280	78.66760	67.486	0.42705	0.38558	0.06585
CO	59	-0.76420	1513.48000	-33.054	-0.57885	-0.66202	-1.05191
CU	63	0.88950	830.05700	11.838	1.00375	0.79627	0.86851
MO	98	2120.00000	1023920.00000	1.609	2159.68651	2101.79125	2099.46681
NI	60	1.04700	350.01900	23.228	0.96705	0.85399	1.32018
SB	121	1.23200	306.68400	23.442	1.14111	0.99923	1.55513
SE	78	0.14320	6.22224	81.774	0.27628	0.05622	0.09700
SN	120	-0.04393	103.33800	-152.379	-0.01921	0.00713	-0.11973
SR	88	10.28000	2700.41000	5.909	9.59730	10.49137	10.75664
ZN	66	3.35700	336.68500	11.683	3.55207	3.61420	2.90601
BI-2	209	49567.90000	0.00000	0.840	49143.20000	49584.60000	49975.90000
PB	208	-0.18640	663.36700	-15.333	-0.16618	-0.17395	-0.21911
TL	203	0.11160	133.33900	27.088	0.07758	0.12189	0.13537
U	238	0.07633	236.67800	39.159	0.05734	0.06087	0.11078
SC-1	45	86418.50000	0.00000	0.647	86590.00000	86871.70000	85793.80000
GE-1	72	95896.30000	0.00000	1.381	97235.40000	95866.00000	94587.40000
GE-2	72	53254.80000	0.00000	1.904	52106.50000	54025.10000	53632.70000
GE-3	72	756798.00000	0.00000	0.681	759697.00000	759854.00000	750845.00000
TB-2	159	65047.20000	0.00000	0.764	65616.70000	64823.00000	64701.90000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:12:00
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	21825.60000	0.00000	0.140	21819.10000	21858.90000	21798.80000
SC-3	45	1023090	0	0.886	1020450	1033180	1015640
AL	27	98610.00000	1789230.00000	2.621	95919.19296	98851.08762	101072.70614
B	11	19.71000	28366.60000	0.937	19.77935	19.49959	19.84814
BE	9	0.00996	56.66720	63.306	0.01472	0.01235	0.00281
CA	44	304800.00000	520584.00000	2.359	300441.61742	300926.53995	313133.05408
CR	52	222.60000	116537.00000	1.345	220.10331	221.68591	225.89500
FE	57	259000.00000	2655760.00000	1.975	257076.39851	255070.88447	264763.40524
K	39	108200.00000	3417970.00000	2.005	105783.68902	108883.11066	109962.29612
MG	24	106300.00000	5787350.00000	1.673	104706.21975	106003.80366	108222.99930
MN	55	225.30000	56222.40000	1.552	222.10529	224.68172	229.02460
NA	23	256700.00000	29652600.00000	1.579	253212.44996	255639.90310	261123.34295
TI	47	2263.00000	25415.50000	1.518	2263.53024	2228.18928	2296.89827
V	51	226.60000	94925.20000	1.307	229.97327	224.33692	225.58320
IN-1	115	80945.50000	0.00000	1.251	80888.60000	79962.60000	81985.40000
IN-2	115	20563.50000	0.00000	0.711	20727.40000	20516.50000	20446.60000
AG	107	47.83000	51402.70000	1.895	46.78253	48.34090	48.36450
AS	75	97.83000	5515.88000	4.819	94.11319	96.24612	103.13325
BA	137	0.84720	100.00500	23.808	0.72559	0.73596	1.08001
CD	111	90.75000	11036.20000	1.985	89.50257	89.92982	92.81337
CO	59	192.70000	207246.00000	1.560	189.71488	192.70323	195.73069
CU	63	193.60000	157048.00000	3.001	187.03000	195.69923	198.06296
MO	98	2107.00000	998871.00000	2.256	2053.22602	2128.03681	2141.46560
NI	60	194.00000	57113.10000	3.358	189.43029	191.24009	201.50853
SB	121	1.18700	290.01600	9.056	1.26342	1.23373	1.06413
SE	78	87.07000	2813.87000	0.929	86.92887	87.93606	86.33625
SN	120	-0.03915	103.33800	-269.732	0.07020	-0.14044	-0.04724
SR	88	9.32200	2403.65000	3.830	9.03898	9.72311	9.20413
ZN	66	88.45000	8319.67000	3.217	85.55724	91.24539	88.55696
BI-2	209	48122.10000	0.00000	0.743	48048.50000	48510.60000	47807.10000
PB	208	-0.19650	623.36700	-21.969	-0.21757	-0.22516	-0.14687
TL	203	0.11270	130.00800	15.280	0.11297	0.09540	0.12984
U	238	0.04885	166.67400	44.217	0.02413	0.05841	0.06403
SC-1	45	82919.40000	0.00000	0.887	83450.40000	83227.70000	82080.20000
GE-1	72	92384.60000	0.00000	1.589	92995.80000	90709.30000	93448.60000
GE-2	72	52220.40000	0.00000	2.344	51574.50000	51454.50000	53632.20000
GE-3	72	768928.00000	0.00000	1.180	773908.00000	774424.00000	758451.00000
TB-2	159	63908.00000	0.00000	1.501	62802.30000	64511.90000	64410.00000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:15:00
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	24086.20000	0.00000	1.610	23842.70000	23882.60000	24533.50000
SC-3	45	1066250	0	1.067	1077760	1065970	1055010
AL	27	21.29000	443.35800	21.076	20.38153	17.32371	26.15928
B	11	6.99300	16446.80000	1.962	6.83503	7.07373	7.07149
BE	9	-0.00304	43.33370	-163.421	-0.00451	0.00250	-0.00711
CA	44	78.27000	186.67500	8.857	70.40248	80.95547	83.46671
CR	52	-0.05553	296.68200	-128.633	0.00824	-0.13271	-0.04212
FE	57	49.55000	683.38100	27.185	44.42360	64.82945	39.39542
K	39	35.91000	14054.70000	78.613	68.48951	20.38633	18.83477
MG	24	17.98000	1106.76000	21.819	13.69559	21.39509	18.85500
MN	55	-0.27410	116.67200	-41.226	-0.40400	-0.22083	-0.19773
NA	23	54.34000	33657.10000	12.039	61.56316	52.62084	48.82219
TI	47	1.11100	26.66770	44.654	1.39957	1.39548	0.53823
V	51	0.01038	70.00290	538.536	0.03415	-0.05348	0.05048
IN-1	115	86513.00000	0.00000	0.446	86153.90000	86920.40000	86464.90000
IN-2	115	21989.30000	0.00000	0.410	22079.40000	21899.20000	21989.30000
AG	107	0.02019	43.33580	65.181	0.03451	0.01745	0.00861
AS	75	-0.32760	249.33700	-83.455	-0.54210	-0.01977	-0.42099
BA	137	0.03426	30.00120	306.772	0.03311	-0.07029	0.13996
CD	111	0.00832	46.00050	336.140	-0.02395	0.02521	0.02368
CO	59	-0.41940	1983.57000	-87.482	-0.75392	-0.47741	-0.02700
CU	63	0.03431	130.00600	188.750	0.02209	0.10430	-0.02348
MO	98	1.44000	773.38800	15.563	1.48619	1.63781	1.19664
NI	60	0.12590	76.66980	53.399	0.07193	0.20119	0.10450
SB	121	0.12170	46.66880	125.883	0.01345	0.05474	0.29698
SE	78	0.03223	2.66667	59.634	0.01318	0.03189	0.05161
SN	120	-0.10690	86.67030	-41.852	-0.15566	-0.06768	-0.09752
SR	88	0.02418	36.66830	315.715	-0.00069	-0.03663	0.10985
ZN	66	0.89550	106.67200	35.466	1.02412	0.53384	1.12860
BI-2	209	53833.50000	0.00000	3.043	53341.10000	52498.30000	55661.20000
PB	208	-0.15980	783.37500	-55.814	-0.25919	-0.13365	-0.08666
TL	203	-0.01155	56.66930	-583.463	0.06424	-0.03421	-0.06470
U	238	-0.00980	36.66820	-58.329	-0.01620	-0.00804	-0.00517
SC-1	45	94233.70000	0.00000	0.800	93941.20000	93669.90000	95089.90000
GE-1	72	99070.50000	0.00000	0.943	98587.80000	100148.00000	98476.10000
GE-2	72	56197.10000	0.00000	1.156	55842.70000	55802.00000	56946.80000
GE-3	72	776093.00000	0.00000	0.525	780310.00000	772180.00000	775789.00000
TB-2	159	76258.40000	0.00000	1.197	75272.10000	76429.10000	77073.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:18:00
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	25679.30000	0.00000	0.568	25515.80000	25726.00000	25796.20000
SC-3	45	1164720	0	1.669	1183520	1144700	1165930
AL	27	2357.00000	50323.50000	1.534	2378.95348	2314.88654	2375.98696
B	11	250.80000	292661.00000	2.619	251.35454	257.09223	243.98625
BE	9	25.38000	33554.90000	1.165	25.23445	25.72372	25.19083
CA	44	2455.00000	4974.47000	1.277	2424.21398	2453.94767	2486.85967
CR	52	248.40000	152988.00000	1.607	247.60923	244.84071	252.70680
FE	57	2425.00000	29394.20000	1.751	2384.06914	2422.50267	2468.84071
K	39	2376.00000	101663.00000	0.379	2376.06475	2366.97750	2384.98525
MG	24	2402.00000	153890.00000	0.780	2423.61885	2394.82040	2388.45755
MN	55	252.20000	74044.80000	1.343	250.32081	250.22908	256.14190
NA	23	2286.00000	339062.00000	0.362	2292.93765	2277.14696	2289.29546
TI	47	253.70000	3363.90000	10.575	255.76571	279.36798	225.83474
V	51	251.80000	124098.00000	1.751	249.30027	249.25040	256.91334
IN-1	115	89155.60000	0.00000	1.596	87820.60000	88992.70000	90653.40000
IN-2	115	22861.50000	0.00000	0.948	23101.60000	22680.10000	22802.80000
AG	107	24.03000	28730.40000	1.709	24.39444	24.12010	23.58675
AS	75	243.80000	14868.60000	1.899	238.80008	247.91128	244.77469
BA	137	241.00000	23766.80000	2.108	242.19957	235.42525	245.37086
CD	111	25.20000	3440.49000	2.883	24.78297	24.77091	26.03543
CO	59	240.10000	286422.00000	1.529	236.41645	240.10697	243.75948
CU	63	249.10000	224694.00000	0.924	246.49826	250.52462	250.44493
MO	98	24.43000	12920.40000	0.779	24.43578	24.62332	24.24302
NI	60	246.90000	80785.60000	2.242	241.31076	252.37657	247.12673
SB	121	23.44000	6041.70000	2.054	23.69925	22.88476	23.73708
SE	78	24.15000	860.69700	2.895	23.96111	24.92144	23.56108
SN	120	24.93000	9177.08000	4.914	25.67823	23.52065	25.60517
SR	88	24.44000	6955.54000	3.910	23.36815	25.19297	24.77327
ZN	66	248.80000	25993.50000	1.578	253.22895	247.58532	245.67590
BI-2	209	56005.90000	0.00000	0.738	56464.50000	55661.00000	55892.20000
PB	208	24.59000	59430.20000	1.825	24.15548	25.05196	24.56848
TL	203	24.65000	18301.40000	3.391	23.78279	25.44900	24.73278
U	238	24.33000	64760.20000	0.949	24.15505	24.24556	24.59237
SC-1	45	100567.00000	0.00000	3.127	97155.60000	101195.00000	103351.00000
GE-1	72	107479.00000	0.00000	0.837	107296.00000	108456.00000	106684.00000
GE-2	72	57971.50000	0.00000	1.399	57559.40000	58905.80000	57449.20000
GE-3	72	812650.00000	0.00000	1.745	827049.00000	812206.00000	798695.00000
TB-2	159	81015.70000	0.00000	0.706	80365.50000	81239.70000	81441.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:21:00
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	23852.60000	0.00000	1.178	23582.00000	23832.60000	24143.10000
SC-3	45	1079190	0	1.183	1066170	1091700	1079680
AL	27	3.89000	93.33730	39.023	2.25080	5.24721	4.17276
B	11	9.67900	19447.50000	5.226	10.23166	9.23882	9.56789
BE	9	0.02592	79.33420	28.561	0.01738	0.03062	0.02975
CA	44	-1.02400	36.66800	-1856.450	17.21044	-20.72933	0.44669
CR	52	0.01853	336.68500	889.369	-0.07397	-0.07920	0.20876
FE	57	1.52800	140.00600	356.872	-4.60655	3.36459	5.82582
K	39	31.35000	13757.70000	130.622	78.32819	12.47247	3.24940
MG	24	1.75300	130.00600	15.499	1.43995	1.92496	1.89467
MN	55	-0.15950	146.67400	-71.724	-0.28914	-0.07259	-0.11697
NA	23	10.37000	27786.70000	48.496	16.10751	6.73400	8.26268
TI	47	-0.23790	10.00040	-338.504	-1.04669	-0.23092	0.56386
V	51	0.05616	90.00420	141.293	0.03608	0.14362	-0.01122
IN-1	115	83154.50000	0.00000	0.365	83053.70000	82913.90000	83496.00000
IN-2	115	21384.80000	0.00000	0.893	21228.60000	21328.10000	21597.80000
AG	107	0.02425	46.66850	118.845	0.04561	-0.00853	0.03566
AS	75	-0.09808	255.33800	-337.582	-0.26909	0.28362	-0.30876
BA	137	0.11640	36.66810	195.361	0.04575	0.37071	-0.06733
CD	111	0.01306	45.33380	93.721	0.02097	0.01925	-0.00103
CO	59	0.01666	2413.65000	1824.730	-0.30571	0.05738	0.29827
CU	63	0.01482	110.00500	165.047	0.01567	0.03884	-0.01006
MO	98	0.06275	73.33640	178.486	-0.04502	0.17856	0.05472
NI	60	0.24200	110.00600	36.922	0.34300	0.20974	0.17327
SB	121	0.15420	53.33570	60.765	0.10049	0.09971	0.26239
SE	78	0.01529	2.00001	131.982	-0.00476	0.03560	0.01504
SN	120	-0.12990	76.67000	-71.855	-0.23671	-0.08952	-0.06367
SR	88	0.07870	50.00220	209.784	0.00371	0.26801	-0.03560
ZN	66	0.27710	43.33520	41.826	0.14326	0.34720	0.34079
BI-2	209	52125.30000	0.00000	0.820	51642.90000	52275.90000	52457.00000
PB	208	-0.02421	1056.73000	-439.488	-0.14585	0.02172	0.05147
TL	203	0.00009	63.33650	79575.700	-0.01860	0.08191	-0.06304
U	238	0.01087	86.67060	128.979	-0.00370	0.02426	0.01205
SC-1	45	91530.60000	0.00000	0.952	92420.00000	91494.20000	90677.60000
GE-1	72	98697.40000	0.00000	1.066	99201.30000	97488.40000	99402.60000
GE-2	72	54215.90000	0.00000	0.303	54175.60000	54396.50000	54075.60000
GE-3	72	769862.00000	0.00000	0.110	769247.00000	770831.00000	769509.00000
TB-2	159	74746.00000	0.00000	0.227	74708.50000	74931.30000	74598.20000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:24:00
Tube Number: 13 Batch: 181061063907A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25796.20000	0.00000	1.551	25355.50000	26136.50000	25896.50000
SC-3	45	1114830	0	3.467	1138960	1135270	1070250
AL	27	1.20100	43.33520	78.743	0.13897	1.95165	1.51271
B	11	5.88400	15984.20000	11.372	5.38344	5.62515	6.64408
BE	9	0.00917	60.66740	128.532	-0.00326	0.02018	0.01057
CA	44	0.72310	43.33520	360.393	-0.56586	3.72222	-0.98709
CR	52	-0.18150	240.01300	-66.336	-0.15812	-0.07451	-0.31198
FE	57	-1.28400	116.67300	-108.879	-0.01173	-2.78092	-1.06165
K	39	-0.54810	13694.20000	-4033.940	24.87477	-15.29808	-11.22109
MG	24	1.38700	116.67200	36.200	1.94162	1.25714	0.96312
MN	55	-0.33540	106.67100	-6.449	-0.31777	-0.32913	-0.35959
NA	23	-5.33900	27917.00000	-71.306	-9.71548	-2.79258	-3.50795
TI	47	0.20760	16.66730	416.329	-0.27992	-0.30283	1.20556
V	51	-0.01267	63.33570	-401.500	-0.01742	-0.06101	0.04041
IN-1	115	87453.70000	0.00000	0.957	88299.90000	86627.20000	87434.10000
IN-2	115	22593.70000	0.00000	4.085	21538.70000	22990.70000	23251.80000
AG	107	0.00519	26.66800	105.298	0.00915	0.00747	-0.00104
AS	75	-0.22260	262.67200	-161.366	-0.43873	0.19198	-0.42115
BA	137	0.13140	40.00160	90.259	0.25656	0.02061	0.11704
CD	111	-0.00058	46.00040	-5889.020	0.03143	-0.03675	0.00357
CO	59	-1.67000	576.70600	-1.168	-1.67021	-1.65093	-1.68996
CU	63	-0.01104	93.33740	-243.297	-0.00977	-0.03853	0.01515
MO	98	-0.00893	40.00150	-217.742	-0.00532	0.00846	-0.02992
NI	60	0.09743	70.00290	57.334	0.04425	0.15563	0.09242
SB	121	0.10110	43.33530	119.189	0.01547	0.04895	0.23895
SE	78	-0.03231	0.44445	-33.983	-0.02607	-0.04499	-0.02588
SN	120	-0.11290	86.67140	-63.561	-0.09213	-0.05393	-0.19283
SR	88	-0.03973	20.00100	-83.891	-0.07286	-0.04013	-0.00621
ZN	66	0.87700	106.67200	39.236	1.25739	0.78641	0.58731
BI-2	209	55212.60000	0.00000	1.267	54465.80000	55319.50000	55852.30000
PB	208	-0.38180	283.34600	-7.098	-0.39883	-0.39616	-0.35060
TL	203	0.00453	70.00400	1842.300	0.08883	-0.07822	0.00299
U	238	-0.01002	36.66820	-97.485	-0.00089	-0.00886	-0.02032
SC-1	45	96456.60000	0.00000	2.129	95552.10000	95009.90000	98807.70000
GE-1	72	102662.00000	0.00000	1.909	100401.00000	103889.00000	103696.00000
GE-2	72	57024.50000	0.00000	4.014	55220.30000	56253.90000	59599.40000
GE-3	72	784775.00000	0.00000	2.564	797979.00000	794729.00000	761618.00000
TB-2	159	80009.50000	0.00000	2.157	79529.90000	78573.90000	81924.50000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:27:00
Tube Number: 14 Batch: 181061063907A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25983.20000	0.00000	0.540	25826.30000	26026.60000	26096.70000
SC-3	45	1125500	0	2.394	1111850	1156540	1108090
AL	27	1937.00000	41860.40000	0.200	1937.11769	1933.34695	1941.08120
B	11	259.30000	292027.00000	1.723	264.33994	255.86118	257.66201
BE	9	4.20700	5413.13000	4.925	4.42822	4.01748	4.17572
CA	44	4020.00000	8216.16000	4.915	3796.01957	4169.60359	4094.61144
CR	52	51.39000	32307.60000	2.699	52.99242	50.50366	50.68801
FE	57	956.20000	11805.80000	2.350	981.78527	939.75901	947.00012
K	39	9793.00000	380844.00000	1.177	9695.04906	9764.32733	9920.18679
MG	24	1940.00000	125760.00000	0.648	1929.65829	1936.41682	1954.01292
MN	55	50.12000	15052.60000	1.931	49.60113	49.51804	51.23426
NA	23	9575.00000	1344860.00000	0.879	9498.78754	9562.38182	9665.59608
TI	47	244.40000	3280.55000	3.511	254.18443	238.02323	241.10811
V	51	50.46000	25215.30000	1.707	50.09831	49.83167	51.43946
IN-1	115	90618.40000	0.00000	2.655	87907.10000	92498.50000	91449.50000
IN-2	115	22413.10000	0.00000	2.289	21861.30000	22875.70000	22502.10000
AG	107	50.56000	59216.80000	1.789	51.41575	49.61423	50.65992
AS	75	10.01000	861.36900	5.728	9.42516	10.57090	10.04273
BA	137	50.70000	4921.18000	2.795	52.07333	49.24324	50.78806
CD	111	4.78200	676.69000	5.970	5.04135	4.47595	4.82758
CO	59	244.20000	285449.00000	2.098	248.64066	238.57298	245.26542
CU	63	52.27000	46290.70000	1.143	52.88959	52.22003	51.69751
MO	98	49.72000	25723.60000	2.486	51.14973	49.08712	48.93719
NI	60	50.89000	16340.80000	5.471	53.63883	48.07268	50.95761
SB	121	5.98100	1520.15000	15.502	7.01419	5.22211	5.70535
SE	78	9.86000	358.00600	6.163	10.34977	10.05051	9.17988
SN	120	49.13000	17592.90000	4.034	49.80843	46.89418	50.67934
SR	88	39.12000	10891.70000	4.133	40.80416	37.57754	38.99286
ZN	66	505.30000	51728.20000	0.805	509.97646	503.80006	502.29905
BI-2	209	54579.90000	0.00000	1.068	54305.00000	55249.40000	54185.20000
PB	208	14.68000	35038.30000	2.213	15.04357	14.56772	14.42263
TL	203	1.98000	1493.49000	13.909	1.69296	2.00514	2.24197
U	238	-0.00347	53.33560	-174.842	-0.00470	-0.00884	0.00312
SC-1	45	99145.60000	0.00000	2.195	96660.10000	100067.00000	100710.00000
GE-1	72	106775.00000	0.00000	2.350	104040.00000	108970.00000	107315.00000
GE-2	72	57208.20000	0.00000	0.891	57570.30000	56625.30000	57429.00000
GE-3	72	791541.00000	0.00000	1.574	803518.00000	792452.00000	778653.00000
TB-2	159	79545.70000	0.00000	1.429	80415.50000	78259.50000	79962.10000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:30:00
Tube Number: 15 Batch: 181061063907A
Sample Number: **9558715** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25378.80000	0.00000	2.373	24694.10000	25826.40000	25616.00000
SC-3	45	1110740	0	0.185	1112110	1108370	1111730
AL	27	1.88900	56.66980	82.425	3.08741	2.45061	0.12928
B	11	15.85000	26647.80000	1.779	16.13543	15.83315	15.57201
BE	9	0.03579	94.00110	32.411	0.02617	0.04868	0.03254
CA	44	76230.00000	151358.00000	3.373	77438.59516	73273.52766	77967.35993
CR	52	-0.13140	266.68100	-33.851	-0.16402	-0.14946	-0.08074
FE	57	2236.00000	26781.90000	2.861	2276.31350	2162.00050	2268.94926
K	39	2675.00000	111385.00000	3.559	2746.51359	2567.16267	2712.21039
MG	24	29760.00000	1883590.00000	1.994	30272.93052	29112.07934	29906.35220
MN	55	2862.00000	827851.00000	2.984	2947.67466	2776.89721	2861.44738
NA	23	3547.00000	504120.00000	1.598	3611.90507	3510.90522	3516.77063
TI	47	0.74430	23.33420	212.952	1.31523	1.96447	-1.04669
V	51	-0.00381	66.66940	-1630.490	-0.01412	-0.06005	0.06275
IN-1	115	85015.40000	0.00000	1.737	86605.40000	84755.20000	83685.60000
IN-2	115	21782.10000	0.00000	1.723	22159.30000	21408.70000	21778.30000
AG	107	0.03219	56.66890	112.550	0.06023	0.04507	-0.00872
AS	75	1.45900	348.67400	37.903	1.37397	2.04950	0.95326
BA	137	269.10000	25273.40000	1.631	264.16042	270.38868	272.63303
CD	111	-0.00479	44.00050	-1596.320	0.08212	-0.06140	-0.03507
CO	59	9.70900	13377.40000	3.119	9.73574	9.39331	9.99719
CU	63	0.22580	293.34900	7.467	0.21617	0.21596	0.24527
MO	98	0.25850	173.34200	33.934	0.30569	0.15729	0.31255
NI	60	10.65000	3353.88000	8.807	10.07303	11.73692	10.15499
SB	121	0.06927	33.33460	37.303	0.05331	0.09908	0.05541
SE	78	0.06634	3.77779	61.788	0.05146	0.11269	0.03486
SN	120	-0.11430	83.33710	-73.220	-0.07106	-0.06109	-0.21077
SR	88	84.22000	22757.80000	4.054	80.28903	86.01410	86.37274
ZN	66	12.16000	1226.78000	3.242	12.58466	12.11100	11.80198
BI-2	209	52266.10000	0.00000	3.015	50628.80000	52396.60000	53772.90000
PB	208	-0.35360	330.01700	-2.437	-0.35356	-0.34506	-0.36230
TL	203	0.03826	90.00480	229.090	-0.01713	0.13932	-0.00742
U	238	0.37220	983.41300	13.705	0.39612	0.31360	0.40681
SC-1	45	97584.40000	0.00000	1.052	98171.50000	96399.00000	98182.60000
GE-1	72	103783.00000	0.00000	2.480	106603.00000	103185.00000	101559.00000
GE-2	72	55781.70000	0.00000	2.105	54727.50000	55570.40000	57047.20000
GE-3	72	771706.00000	0.00000	0.693	774558.00000	775021.00000	765539.00000
TB-2	159	76647.50000	0.00000	0.865	76731.20000	75946.40000	77264.90000

Run Name: 1810805E03
Tube Number: 16
Sample Number: **9558715**

Date/Time: 04/18/2018 12:33:00
Batch: 181061063907A
Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25535.60000	0.00000	2.637	25475.50000	24894.30000	26237.00000
SC-3	45	1107290	0	1.335	1123520	1094600	1103760
AL	27	180.00000	3834.03000	6.900	182.43516	191.06277	166.56642
B	11	110.50000	128017.00000	0.758	109.61915	111.22584	110.82972
BE	9	0.99310	1294.74000	3.931	0.95066	1.00099	1.02754
CA	44	73950.00000	147710.00000	3.055	73231.03288	76477.84577	72132.83054
CR	52	3.74800	2633.72000	12.097	3.67893	4.23149	3.33259
FE	57	2316.00000	27894.20000	5.017	2386.17857	2379.56963	2181.65535
K	39	2932.00000	121509.00000	3.008	2894.15672	3032.47254	2868.52884
MG	24	29010.00000	1847220.00000	2.565	28696.60460	29863.91161	28480.74810
MN	55	2787.00000	811099.00000	2.942	2729.01379	2880.54089	2750.51358
NA	23	3717.00000	530103.00000	3.266	3682.67996	3851.88330	3616.38978
TI	47	32.66000	443.35800	9.118	33.29634	29.41198	35.26328
V	51	0.99020	553.36600	9.274	0.92353	1.09500	0.95226
IN-1	115	85907.70000	0.00000	0.473	85771.20000	86364.70000	85587.30000
IN-2	115	21318.10000	0.00000	0.684	21174.20000	21314.20000	21465.80000
AG	107	0.90150	1023.41000	4.337	0.92262	0.92542	0.85634
AS	75	5.26400	554.01600	23.575	3.92807	6.38103	5.48437
BA	137	271.00000	24912.70000	1.872	276.68357	269.29647	266.96225
CD	111	1.03900	174.00300	4.328	1.03190	1.08654	0.99736
CO	59	10.33000	13777.80000	0.862	10.23429	10.35288	10.40860
CU	63	4.14200	3577.32000	12.134	4.70005	4.00186	3.72461
MO	98	0.92450	496.69700	13.521	0.87718	0.83013	1.06622
NI	60	15.06000	4627.67000	3.786	15.50099	14.41421	15.25631
SB	121	2.01900	500.03100	8.940	2.11769	1.81114	2.12945
SE	78	3.63600	126.22300	4.945	3.75288	3.72678	3.42925
SN	120	3.87000	1430.15000	10.556	3.63290	3.63621	4.34211
SR	88	86.83000	22968.10000	0.904	87.42558	87.11712	85.93724
ZN	66	38.60000	3774.05000	4.500	36.66321	40.01854	39.12225
BI-2	209	52557.20000	0.00000	1.333	53310.30000	52436.40000	51925.00000
PB	208	1.64600	4777.23000	2.382	1.68405	1.64833	1.60576
TL	203	0.92110	703.37800	3.587	0.95920	0.90451	0.89973
U	238	10.47000	26186.70000	1.535	10.30347	10.48784	10.62374
SC-1	45	96358.50000	0.00000	2.002	95875.60000	94716.30000	98483.50000
GE-1	72	101574.00000	0.00000	1.612	100099.00000	101288.00000	103336.00000
GE-2	72	54202.30000	0.00000	0.912	53763.70000	54738.30000	54104.90000
GE-3	72	748650.00000	0.00000	2.654	771011.00000	741915.00000	733024.00000
TB-2	159	76922.60000	0.00000	2.532	78834.60000	76992.80000	74940.40000

Run Name: 1810805E03
Tube Number: 17
Sample Number: **9558718**

Date/Time: 04/18/2018 12:36:00
Batch: 181061063907A
Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25632.70000	0.00000	4.451	25024.90000	24924.50000	26948.60000
SC-3	45	1150070	0	0.968	1145370	1162770	1142050
AL	27	1.53900	50.00210	31.676	2.07432	1.12068	1.42204
B	11	11.91000	23206.10000	2.429	12.18102	11.60468	11.93599
BE	9	0.03225	92.66780	23.957	0.03660	0.02333	0.03682
CA	44	75460.00000	151284.00000	2.320	75794.13991	77022.54644	73568.30884
CR	52	-0.15170	256.68000	-0.569	-0.15268	-0.15101	-0.15147
FE	57	2217.00000	26821.80000	1.309	2202.60219	2250.04701	2197.34943
K	39	2697.00000	113210.00000	4.286	2725.39122	2795.18673	2569.42439
MG	24	29320.00000	1873110.00000	2.226	29594.78666	29783.81254	28570.74043
MN	55	2866.00000	836599.00000	4.874	2878.64931	2999.18571	2720.61501
NA	23	3530.00000	506501.00000	3.779	3555.71884	3648.32781	3385.28103
TI	47	-0.00770	13.33380	-15488.600	-0.26979	1.29340	-1.04669
V	51	0.06442	100.00400	95.328	0.08839	0.11023	-0.00537
IN-1	115	89124.60000	0.00000	1.527	88370.40000	90695.50000	88308.00000
IN-2	115	22202.40000	0.00000	3.348	21568.30000	22018.70000	23020.40000
AG	107	-0.00309	16.66730	-327.391	-0.00863	0.00857	-0.00919
AS	75	0.55080	303.33900	69.063	0.26398	0.40616	0.98230
BA	137	255.40000	24458.60000	2.308	249.41351	261.20033	255.48262
CD	111	-0.01185	44.00050	-551.814	-0.07925	-0.00764	0.05133
CO	59	9.32500	13187.20000	2.579	9.55020	9.35448	9.07182
CU	63	0.11590	203.34400	39.405	0.11943	0.06855	0.15969
MO	98	0.14930	120.00500	27.093	0.19573	0.13085	0.12142
NI	60	11.05000	3547.29000	1.509	11.19535	10.86859	11.08914
SB	121	0.16170	56.66970	64.873	0.18035	0.25610	0.04880
SE	78	0.02386	2.44445	49.329	0.03063	0.01027	0.03068
SN	120	-0.09837	90.00460	-84.518	-0.00483	-0.12649	-0.16383
SR	88	84.12000	23175.30000	2.303	85.82760	82.01391	84.51503
ZN	66	11.53000	1183.44000	11.318	13.03570	10.77591	10.77566
BI-2	209	54432.40000	0.00000	0.884	54947.40000	53994.20000	54355.50000
PB	208	-0.36090	326.68200	-9.224	-0.39544	-0.35850	-0.32900
TL	203	0.06566	113.33800	30.658	0.08724	0.06236	0.04740
U	238	0.38240	1050.09000	10.424	0.35926	0.42845	0.35956
SC-1	45	100389.00000	0.00000	1.671	98697.30000	102052.00000	100418.00000
GE-1	72	106251.00000	0.00000	1.848	103999.00000	107156.00000	107598.00000
GE-2	72	55999.50000	0.00000	0.135	55922.40000	56073.20000	56002.90000
GE-3	72	774769.00000	0.00000	1.711	790019.00000	768329.00000	765959.00000
TB-2	159	77888.60000	0.00000	0.693	77938.50000	77325.80000	78401.50000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:39:00
Tube Number: 18 Batch: 181061063907A
Sample Number: **9558716** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25545.70000	0.00000	4.079	24974.70000	24914.30000	26748.10000
SC-3	45	1120310	0	1.540	1109450	1140200	1111280
AL	27	1913.00000	40620.10000	3.238	1892.09822	1982.87213	1864.48138
B	11	262.20000	293858.00000	0.701	263.76840	260.17470	262.63472
BE	9	4.25200	5449.15000	0.863	4.25490	4.28773	4.21446
CA	44	82550.00000	164968.00000	1.465	83444.23204	83025.85401	81172.13072
CR	52	49.20000	30433.20000	1.564	49.35117	48.36267	49.87810
FE	57	3233.00000	38902.70000	3.866	3340.78281	3263.26898	3096.24534
K	39	12630.00000	478504.00000	3.124	12657.05488	13007.13299	12219.60175
MG	24	32800.00000	2089100.00000	3.415	32178.32802	34096.47981	32135.23102
MN	55	3066.00000	892519.00000	2.008	3086.01284	3114.62845	2996.58959
NA	23	13210.00000	1812480.00000	2.254	13238.49867	13495.11750	12901.52196
TI	47	249.60000	3287.21000	8.778	244.20036	273.67380	230.84704
V	51	51.63000	25338.70000	3.756	52.31328	53.13231	49.44044
IN-1	115	86843.10000	0.00000	3.050	85913.00000	84784.90000	89831.30000
IN-2	115	22189.00000	0.00000	2.135	22613.70000	22275.30000	21678.10000
AG	107	49.78000	57716.70000	1.930	48.67597	50.45098	50.20073
AS	75	11.74000	952.70900	4.561	11.35556	12.35350	11.51800
BA	137	316.40000	30254.90000	4.839	300.92140	316.77664	331.52411
CD	111	4.64400	652.68900	3.801	4.84707	4.52975	4.55448
CO	59	249.00000	288061.00000	3.417	244.83352	243.29445	258.74112
CU	63	48.68000	42684.80000	2.018	47.59313	48.95730	49.49905
MO	98	49.43000	25312.80000	3.423	47.50327	50.10088	50.68031
NI	60	61.46000	19538.70000	2.130	60.30141	61.18822	62.87712
SB	121	5.63200	1423.47000	10.705	6.30636	5.44459	5.14499
SE	78	9.78700	340.45000	4.451	9.89103	10.16116	9.30888
SN	120	48.23000	17098.90000	5.279	45.29312	49.69763	49.70824
SR	88	123.80000	34046.60000	4.257	118.97526	122.92697	129.41288
ZN	66	486.70000	49304.80000	3.209	472.19776	484.70083	503.23598
BI-2	209	52815.00000	0.00000	2.439	51743.50000	52457.10000	54244.50000
PB	208	14.85000	34277.40000	1.475	15.08573	14.80136	14.65497
TL	203	2.13300	1550.16000	7.323	2.26428	2.17452	1.96018
U	238	0.42900	1136.78000	5.175	0.40335	0.44171	0.44190
SC-1	45	98907.60000	0.00000	2.255	97153.70000	98152.10000	101417.00000
GE-1	72	103774.00000	0.00000	1.393	103666.00000	102385.00000	105271.00000
GE-2	72	57225.30000	0.00000	1.256	56485.50000	57921.50000	57269.10000
GE-3	72	761788.00000	0.00000	1.956	768936.00000	771770.00000	744657.00000
TB-2	159	78851.70000	0.00000	2.034	77002.50000	79861.40000	79691.30000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:42:00
Tube Number: 19 Batch: 181061063907A
Sample Number: **9558717** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25144.90000	0.00000	2.691	25535.40000	25535.80000	24363.50000
SC-3	45	1163500	0	1.838	1183090	1140670	1166740
AL	27	1904.00000	39784.10000	4.048	1853.35130	1865.61266	1992.56381
B	11	265.60000	308990.00000	1.371	263.53132	269.80066	263.45254
BE	9	4.04500	5384.46000	2.989	4.11298	4.11571	3.90486
CA	44	81530.00000	160339.00000	3.494	79894.75705	79872.98437	84818.35318
CR	52	50.84000	30904.40000	6.629	47.56654	50.66543	54.30035
FE	57	3249.00000	38491.50000	3.299	3177.75442	3196.93256	3372.32954
K	39	12530.00000	467382.00000	4.139	12144.45376	12320.79603	13117.81104
MG	24	32130.00000	2013870.00000	4.669	30781.70614	31875.39319	33747.99280
MN	55	3126.00000	895713.00000	4.424	3007.54163	3093.66675	3278.15307
NA	23	13180.00000	1780100.00000	2.657	12857.16702	13131.72158	13552.51684
TI	47	247.30000	3210.53000	5.111	232.72151	254.04115	255.14217
V	51	49.49000	23922.80000	3.500	49.13637	47.96930	51.37780
IN-1	115	87861.30000	0.00000	1.595	88605.10000	86245.10000	88733.80000
IN-2	115	22275.30000	0.00000	2.315	21824.50000	22163.90000	22837.60000
AG	107	48.84000	56845.80000	2.283	49.89903	48.95227	47.67597
AS	75	11.69000	953.37600	0.346	11.65461	11.68057	11.73387
BA	137	317.20000	30478.40000	1.008	314.90064	315.95221	320.88957
CD	111	4.73400	666.02300	11.777	5.37710	4.38578	4.43941
CO	59	243.20000	282580.00000	2.774	250.47309	242.04103	237.13401
CU	63	48.99000	43115.80000	1.771	49.69054	49.24938	48.01633
MO	98	49.19000	25296.10000	0.512	49.38398	49.27358	48.90281
NI	60	61.54000	19638.70000	3.520	63.70501	61.55881	59.37205
SB	121	5.91400	1496.82000	6.422	6.33306	5.59274	5.81543
SE	78	9.54300	336.00500	5.466	9.28748	10.14330	9.19863
SN	120	48.22000	17169.10000	2.204	47.75374	49.43686	47.47051
SR	88	124.50000	34397.40000	1.490	125.57819	122.34073	125.52868
ZN	66	486.70000	49508.80000	1.619	493.81693	488.13096	478.24617
BI-2	209	53504.80000	0.00000	0.825	53270.60000	54013.70000	53230.10000
PB	208	14.78000	34577.90000	4.176	15.02979	14.07990	15.23766
TL	203	2.10300	1550.16000	7.832	2.25361	1.92691	2.12736
U	238	0.39710	1070.09000	5.560	0.41087	0.40879	0.37162
SC-1	45	97137.20000	0.00000	1.570	98503.80000	97415.70000	95492.20000
GE-1	72	104219.00000	0.00000	1.287	105744.00000	103688.00000	103224.00000
GE-2	72	56294.00000	0.00000	1.527	55912.60000	55690.90000	57278.60000
GE-3	72	766513.00000	0.00000	1.270	777394.00000	763506.00000	758639.00000
TB-2	159	79126.30000	0.00000	2.286	78211.20000	77958.00000	81209.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:45:00
Tube Number: 20 Batch: 181061063907A
Sample Number: **9558715** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	26357.60000	0.00000	3.318	25525.90000	26277.30000	27269.50000
SC-3	45	1132000	0	0.342	1136340	1128880	1130790
AL	27	1.32200	46.66870	40.522	1.07516	1.93689	0.95462
B	11	14.58000	25765.40000	0.363	14.57790	14.62699	14.52117
BE	9	0.01152	64.66730	42.778	0.00614	0.01582	0.01261
CA	44	14840.00000	30620.10000	5.173	15700.79084	14607.45404	14220.87628
CR	52	-0.19990	233.34400	-7.804	-0.19362	-0.18849	-0.21770
FE	57	446.40000	5658.10000	4.740	466.95841	447.62289	424.69249
K	39	526.80000	34005.00000	9.806	574.67905	533.68603	472.04104
MG	24	5760.00000	378488.00000	2.944	5949.15473	5710.70322	5621.05175
MN	55	563.30000	169390.00000	1.757	570.26943	567.56609	551.93698
NA	23	671.40000	122777.00000	4.567	696.41463	680.69358	637.22363
TI	47	0.91950	26.66790	185.536	1.99992	-1.04669	1.80518
V	51	0.05659	100.00600	181.658	0.10432	-0.06143	0.12689
IN-1	115	89987.30000	0.00000	1.086	88862.40000	90625.30000	90474.10000
IN-2	115	22607.10000	0.00000	0.445	22500.30000	22620.70000	22700.10000
AG	107	0.02194	46.66880	96.399	-0.00049	0.02480	0.04151
AS	75	-0.25620	260.67100	-147.424	-0.68705	-0.10021	0.01848
BA	137	50.92000	4987.87000	3.926	48.62514	52.26503	51.87734
CD	111	-0.02168	43.33380	-375.092	-0.07525	-0.06169	0.07190
CO	59	1.21700	3954.09000	17.042	1.10208	1.09325	1.45677
CU	63	1.29400	1256.78000	17.944	1.23694	1.09517	1.54906
MO	98	0.09301	93.33750	97.065	-0.00877	0.16345	0.12435
NI	60	2.06800	706.71900	12.660	2.36763	1.95261	1.88376
SB	121	0.03793	26.66770	121.223	0.09102	0.01152	0.01125
SE	78	-0.02641	0.66667	-0.768	-0.02619	-0.02655	-0.02652
SN	120	-0.15110	73.33620	-42.038	-0.18740	-0.18830	-0.07784
SR	88	16.27000	4591.00000	4.444	15.49247	16.40850	16.91959
ZN	66	3.25500	353.35200	37.235	1.97528	4.38453	3.40373
BI-2	209	54787.10000	0.00000	0.467	54847.30000	55007.80000	54506.20000
PB	208	-0.34180	373.35400	-8.066	-0.37368	-0.32676	-0.32515
TL	203	-0.04123	36.66820	-51.031	-0.06430	-0.02308	-0.03634
U	238	0.07583	260.01500	21.561	0.06808	0.09461	0.06479
SC-1	45	100413.00000	0.00000	0.910	100854.00000	99361.80000	101022.00000
GE-1	72	106503.00000	0.00000	1.777	106036.00000	104887.00000	108587.00000
GE-2	72	57911.70000	0.00000	1.330	57208.20000	58735.10000	57791.70000
GE-3	72	798316.00000	0.00000	2.114	815158.00000	781393.00000	798397.00000
TB-2	159	79717.30000	0.00000	1.394	80074.20000	78471.50000	80606.10000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:49:00
Tube Number: 21
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	26076.80000	0.00000	1.560	25996.50000	25716.00000	26517.80000
SC-3	45	1114470	0	4.742	1125390	1057010	1161000
AL	27	2429.00000	52659.20000	1.493	2404.11814	2470.29357	2411.52628
B	11	276.90000	307772.00000	4.644	271.90277	291.50633	267.29751
BE	9	27.64000	34917.10000	4.454	27.38404	28.98404	26.56292
CA	44	2349.00000	4834.39000	2.120	2388.81776	2365.39503	2293.27157
CR	52	249.00000	155697.00000	1.109	246.38621	251.87330	248.59607
FE	57	2361.00000	29053.50000	3.663	2307.77238	2460.80802	2314.47985
K	39	2382.00000	103453.00000	2.543	2342.77792	2451.99829	2351.96041
MG	24	2436.00000	158485.00000	1.039	2407.97483	2443.38080	2457.02862
MN	55	250.30000	74625.10000	2.155	245.24057	249.67411	255.97487
NA	23	2276.00000	342840.00000	1.258	2274.50482	2305.47100	2248.27337
TI	47	250.60000	3373.91000	4.425	241.29288	262.84213	247.52735
V	51	250.60000	125398.00000	1.104	249.10433	253.80795	248.92743
IN-1	115	91593.90000	0.00000	1.287	92781.50000	91575.90000	90424.30000
IN-2	115	22762.60000	0.00000	1.526	22363.50000	22997.00000	22927.40000
AG	107	24.90000	29625.80000	2.573	25.48282	24.21310	24.99814
AS	75	249.10000	15118.20000	0.472	250.32362	248.92101	247.98958
BA	137	247.80000	24324.80000	1.822	252.69765	243.80712	246.88155
CD	111	24.96000	3394.48000	1.865	24.79242	25.48784	24.60363
CO	59	242.20000	287657.00000	2.867	249.67450	235.92097	241.14705
CU	63	250.90000	225311.00000	1.328	253.22128	247.11268	252.47022
MO	98	24.28000	12790.20000	5.329	23.26418	23.84853	25.73949
NI	60	245.70000	80013.70000	3.012	254.12064	240.29596	242.62740
SB	121	23.81000	6108.36000	2.029	23.76692	23.34245	24.30647
SE	78	24.97000	914.03500	5.695	23.43379	26.24216	25.22826
SN	120	24.58000	9006.90000	3.008	25.18405	24.80966	23.75810
SR	88	25.14000	7125.55000	4.881	24.03438	26.45889	24.91955
ZN	66	251.00000	26114.10000	2.566	244.32553	251.61967	257.16884
BI-2	209	55591.20000	0.00000	1.241	54798.50000	55921.90000	56053.40000
PB	208	25.35000	60780.50000	1.680	25.80450	25.30185	24.95774
TL	203	25.58000	18839.00000	4.496	26.88910	25.09953	24.74244
U	238	24.42000	64499.10000	1.462	24.77453	24.06047	24.41197
SC-1	45	105872.00000	0.00000	1.737	103814.00000	107355.00000	106448.00000
GE-1	72	112726.00000	0.00000	1.934	112157.00000	110887.00000	115134.00000
GE-2	72	57851.00000	0.00000	1.805	56645.90000	58453.20000	58454.00000
GE-3	72	764931.00000	0.00000	4.387	782405.00000	726238.00000	786150.00000
TB-2	159	79972.00000	0.00000	0.636	79468.00000	79962.50000	80485.60000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:52:00
Tube Number: 22
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	25699.20000	0.00000	2.544	24964.40000	25916.50000	26216.70000
SC-3	45	1119090	0	3.137	1109540	1089740	1157980
AL	27	1.06300	40.00150	4.535	1.11756	1.04675	1.02549
B	11	13.13000	23885.90000	6.528	13.30949	13.88118	12.19583
BE	9	0.03045	88.00100	48.210	0.01359	0.04046	0.03730
CA	44	0.75450	43.33520	970.179	-5.36982	8.86154	-1.22821
CR	52	0.05048	383.35700	326.268	-0.11819	0.05871	0.21092
FE	57	-0.98790	120.00500	-161.656	-0.69348	-2.71187	0.44153
K	39	14.70000	14201.60000	160.476	41.89084	2.43298	-0.22625
MG	24	1.28200	110.00400	41.825	1.17575	0.80735	1.86370
MN	55	0.06279	223.34500	369.486	0.03960	-0.15675	0.30552
NA	23	-11.80000	26915.10000	-53.136	-4.83049	-16.97286	-13.61547
TI	47	-0.04265	13.33380	-973.505	-0.26791	-0.29652	0.43648
V	51	0.06125	100.00500	80.229	0.00540	0.08050	0.09786
IN-1	115	88608.50000	0.00000	1.845	87373.40000	90463.10000	87988.80000
IN-2	115	22960.90000	0.00000	3.943	22750.30000	22179.50000	23953.00000
AG	107	0.00731	30.00120	100.670	0.00773	-0.00025	0.01445
AS	75	0.12590	286.67200	579.508	-0.15975	0.95507	-0.41763
BA	137	0.21770	50.00200	116.628	0.32989	-0.07296	0.39606
CD	111	0.00035	47.33380	48336.200	0.13066	-0.19376	0.06417
CO	59	0.83950	3570.64000	46.313	0.39460	1.00979	1.11394
CU	63	0.04286	143.34000	27.648	0.04033	0.05578	0.03249
MO	98	-0.00992	40.00180	-207.703	0.00946	-0.00765	-0.03156
NI	60	0.02280	46.66840	296.228	0.06633	-0.05500	0.05707
SB	121	0.13890	53.33570	55.724	0.05018	0.17353	0.19285
SE	78	0.00508	1.77778	553.895	0.01237	0.02888	-0.02600
SN	120	-0.09918	93.33730	-42.559	-0.05075	-0.12815	-0.11867
SR	88	-0.05089	16.66730	-84.614	-0.07486	-0.00118	-0.07664
ZN	66	0.08323	26.66770	223.357	0.02628	-0.06751	0.29093
BI-2	209	54596.40000	0.00000	0.571	54355.80000	54485.20000	54948.40000
PB	208	-0.07158	996.72600	-104.065	-0.10277	-0.12542	0.01342
TL	203	0.00046	66.66970	9583.690	-0.05012	0.03317	0.01834
U	238	0.00033	63.33660	2442.430	0.00303	-0.00863	0.00657
SC-1	45	100961.00000	0.00000	0.554	100400.00000	101519.00000	100964.00000
GE-1	72	107579.00000	0.00000	1.535	107175.00000	106167.00000	109394.00000
GE-2	72	57854.30000	0.00000	1.282	57619.40000	57258.70000	58684.80000
GE-3	72	783648.00000	0.00000	0.367	785739.00000	784833.00000	780372.00000
TB-2	159	79217.00000	0.00000	0.642	79207.10000	79730.40000	78713.70000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:55:00
Tube Number: 23 Batch: 181061063907A
Sample Number: **9558714** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	26972.10000	0.00000	1.293	26718.10000	26828.30000	27369.80000
SC-3	45	1173070	0	1.026	1184850	1173570	1160780
AL	27	1.43000	50.00190	83.776	1.89154	2.32884	0.06910
B	11	14.70000	26845.50000	0.763	14.58833	14.71224	14.81242
BE	9	-0.00682	42.66700	-66.940	-0.00166	-0.01032	-0.00849
CA	44	122400.00000	258455.00000	0.636	122779.27514	123020.89748	121568.14277
CR	52	-0.08937	310.01500	-68.379	-0.06966	-0.04056	-0.15792
FE	57	1665.00000	21231.40000	1.195	1680.06737	1671.55069	1642.14394
K	39	3748.00000	160153.00000	1.217	3706.90827	3797.10637	3739.89031
MG	24	41780.00000	2810430.00000	0.385	41948.76567	41749.10730	41630.92366
MN	55	401.50000	123663.00000	1.484	407.41314	395.49931	401.58012
NA	23	4321.00000	646362.00000	1.289	4337.65763	4367.01892	4259.23828
TI	47	-0.80510	3.33346	-51.969	-1.04669	-0.32201	-1.04669
V	51	0.02051	83.33700	525.110	0.13242	-0.08250	0.01160
IN-1	115	90061.50000	0.00000	0.326	90283.00000	89728.70000	90172.70000
IN-2	115	22924.40000	0.00000	1.057	23011.20000	22650.50000	23111.50000
AG	107	0.02700	53.33590	16.659	0.02408	0.02474	0.03218
AS	75	1.18400	350.67400	15.836	0.98455	1.20939	1.35678
BA	137	575.10000	56811.60000	4.610	548.63316	601.64334	574.90909
CD	111	-0.01655	44.66710	-622.961	0.09574	-0.10702	-0.03837
CO	59	4.38200	7759.26000	5.488	4.22399	4.65890	4.26330
CU	63	0.08329	180.00800	24.829	0.10468	0.06341	0.08178
MO	98	0.00215	46.66870	2187.090	0.04609	-0.04759	0.00796
NI	60	14.75000	4874.43000	4.428	14.01108	15.25491	14.97848
SB	121	0.07667	36.66840	282.379	-0.02847	0.32563	-0.06714
SE	78	-0.00790	1.33334	-234.199	0.01052	-0.00775	-0.02646
SN	120	-0.06255	106.67100	-261.871	-0.21852	-0.07723	0.10809
SR	88	79.24000	22544.20000	2.692	76.99698	79.47382	81.24322
ZN	66	1.04300	126.67200	18.035	0.97591	0.89741	1.25525
BI-2	209	54676.90000	0.00000	1.482	54174.20000	54245.00000	55611.40000
PB	208	-0.34590	363.35300	-4.351	-0.36334	-0.33737	-0.33719
TL	203	0.07908	123.33900	23.230	0.08980	0.08956	0.05787
U	238	1.02700	2730.44000	6.136	0.96358	1.02831	1.08960
SC-1	45	103578.00000	0.00000	0.254	103282.00000	103786.00000	103665.00000
GE-1	72	108074.00000	0.00000	0.523	108113.00000	107490.00000	108618.00000
GE-2	72	57542.90000	0.00000	2.482	55932.60000	58654.60000	58041.40000
GE-3	72	796517.00000	0.00000	3.254	820754.00000	799610.00000	769186.00000
TB-2	159	82090.00000	0.00000	2.060	82560.10000	83495.90000	80214.00000

Run Name: 1810805E03 Date/Time: 04/18/2018 12:58:00
Tube Number: 24 Batch: 181061063907A
Sample Number: **9558719** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	27706.90000	0.00000	3.097	26738.10000	28371.90000	28010.80000
SC-3	45	1216860	0	2.235	1218960	1242950	1188680
AL	27	1.35400	50.00190	27.504	0.98969	1.73407	1.33740
B	11	10.92000	23389.70000	1.507	10.99351	10.73022	11.03296
BE	9	0.01630	76.00080	62.699	0.00599	0.01648	0.02643
CA	44	76020.00000	164788.00000	2.805	76837.85129	73596.69356	77616.52359
CR	52	-0.11680	300.01700	-34.794	-0.07003	-0.14302	-0.13750
FE	57	2274.00000	29741.60000	1.117	2283.34078	2245.19679	2293.34544
K	39	2642.00000	120234.00000	3.597	2739.29700	2549.46455	2636.51607
MG	24	29650.00000	2048540.00000	1.174	29751.12325	29256.96320	29928.98638
MN	55	2974.00000	939461.00000	2.208	2997.37594	2900.25531	3025.36802
NA	23	3530.00000	547788.00000	3.042	3648.00932	3437.68543	3505.08562
TI	47	-0.34450	10.00040	-6.406	-0.31957	-0.36144	-0.35261
V	51	0.07351	113.33900	69.174	0.13221	0.04297	0.04534
IN-1	115	93403.00000	0.00000	0.658	93668.90000	92700.60000	93839.60000
IN-2	115	23428.40000	0.00000	2.074	22870.90000	23652.50000	23761.60000
AG	107	0.00139	23.33420	1855.600	-0.00914	-0.01751	0.03082
AS	75	0.90550	341.34000	25.080	0.85215	1.15454	0.70983
BA	137	267.20000	27000.20000	2.521	263.86159	262.70765	274.91068
CD	111	0.03561	52.66720	204.465	0.11330	-0.03107	0.02462
CO	59	9.60400	14255.00000	3.948	9.93242	9.18903	9.69080
CU	63	0.09336	193.34200	46.155	0.08386	0.05582	0.14042
MO	98	0.16200	133.33900	49.049	0.23660	0.17091	0.07843
NI	60	11.09000	3754.00000	4.407	11.52917	11.17402	10.56297
SB	121	-0.00365	16.66730	-619.243	0.01066	0.00809	-0.02970
SE	78	0.01481	2.22223	282.579	-0.00932	0.06314	-0.00938
SN	120	-0.19400	60.00320	-13.624	-0.19013	-0.22223	-0.16980
SR	88	85.53000	24865.20000	0.576	85.95161	84.98906	85.65135
ZN	66	10.98000	1193.44000	10.319	9.88948	12.15025	10.89529
BI-2	209	57349.40000	0.00000	0.808	57127.90000	57038.70000	57881.70000
PB	208	-0.38200	293.34600	-3.558	-0.36643	-0.39109	-0.38863
TL	203	0.02709	90.00400	177.925	0.08040	0.01430	-0.01342
U	238	0.38960	1126.77000	13.170	0.42206	0.33043	0.41625
SC-1	45	106809.00000	0.00000	0.924	106589.00000	105952.00000	107888.00000
GE-1	72	111294.00000	0.00000	0.634	112098.00000	111009.00000	110776.00000
GE-2	72	58986.50000	0.00000	1.711	57891.80000	59880.60000	59187.10000
GE-3	72	831533.00000	0.00000	2.078	834721.00000	846993.00000	812884.00000
TB-2	159	84139.90000	0.00000	1.047	84653.20000	83123.00000	84643.60000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:01:00
Tube Number: 25 Batch: 181061063907A
Sample Number: **9558720** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	26835.00000	0.00000	1.985	26357.30000	26738.20000	27409.60000
SC-3	45	1205650	0	1.556	1184440	1220090	1212410
AL	27	8.32200	203.34200	15.669	9.68759	8.18823	7.09011
B	11	7.53700	19228.50000	4.726	7.92120	7.47234	7.21770
BE	9	0.00889	65.33400	55.964	0.00580	0.01462	0.00623
CA	44	38860.00000	81635.00000	1.226	39105.80224	39174.46200	38317.19065
CR	52	0.90560	946.74200	17.414	0.92028	1.05538	0.74107
FE	57	714.10000	9140.25000	0.989	719.33386	716.89081	706.05676
K	39	5050.00000	209701.00000	1.222	5035.02692	5117.18086	4996.38404
MG	24	20350.00000	1361980.00000	1.661	20421.47629	20648.91436	19983.67094
MN	55	2136.00000	653645.00000	1.061	2152.14692	2146.39892	2110.31953
NA	23	3402.00000	512584.00000	0.740	3430.52891	3390.93704	3383.82414
TI	47	-0.07963	13.33380	-530.077	-0.30906	0.40755	-0.33738
V	51	0.10570	126.67200	41.665	0.15594	0.07370	0.08747
IN-1	115	92344.90000	0.00000	1.887	93304.10000	90333.10000	93397.40000
IN-2	115	22994.80000	0.00000	2.519	22630.60000	23662.70000	22691.00000
AG	107	0.06879	103.33800	50.691	0.05015	0.04720	0.10902
AS	75	0.09387	286.00500	156.173	0.16789	-0.07498	0.18871
BA	137	139.80000	13871.70000	1.743	142.57135	138.40132	138.29900
CD	111	0.08359	58.00070	163.536	0.16318	-0.07424	0.16182
CO	59	2.34200	5364.66000	13.527	2.16022	2.70736	2.15722
CU	63	0.38320	453.36100	20.308	0.29892	0.45232	0.39841
MO	98	-0.01070	40.00180	-465.981	-0.06673	0.00578	0.02883
NI	60	2.27600	790.05900	21.446	2.04440	2.83641	1.94618
SB	121	-0.00337	16.66730	-1261.140	-0.02782	0.04565	-0.02793
SE	78	0.09957	5.33335	15.868	0.09824	0.08446	0.11599
SN	120	-0.13610	80.00340	-4.002	-0.13268	-0.14240	-0.13327
SR	88	196.30000	55954.60000	1.880	195.81396	192.84558	200.18330
ZN	66	3.51500	386.68800	5.098	3.60827	3.62877	3.30863
BI-2	209	57138.00000	0.00000	2.256	55650.80000	57820.90000	57942.20000
PB	208	-0.40900	226.67700	-6.254	-0.40104	-0.38851	-0.43773
TL	203	0.04189	100.00400	202.220	0.13940	-0.00024	-0.01350
U	238	0.02972	146.67400	60.464	0.00997	0.04512	0.03407
SC-1	45	105839.00000	0.00000	0.566	105823.00000	106445.00000	105248.00000
GE-1	72	111297.00000	0.00000	0.975	110180.00000	111362.00000	112349.00000
GE-2	72	59705.80000	0.00000	0.509	59628.80000	60040.80000	59447.80000
GE-3	72	813724.00000	0.00000	1.419	827045.00000	807623.00000	806504.00000
TB-2	159	83609.50000	0.00000	1.805	84260.50000	81884.60000	84683.20000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:04:00
Tube Number: 26 Batch: 181061063907A
Sample Number: **9558721** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	27670.10000	0.00000	0.986	27419.50000	27630.10000	27960.70000
SC-3	45	1171740	0	0.378	1170960	1167750	1176510
AL	27	3.68700	103.33800	30.187	3.57737	4.85013	2.63196
B	11	13.25000	25169.60000	1.723	13.51079	13.07942	13.16542
BE	9	-0.00176	49.33380	-425.413	-0.00875	-0.00262	0.00611
CA	44	74860.00000	162116.00000	0.248	74734.40276	74772.42873	75073.35950
CR	52	0.63270	796.72300	24.482	0.48149	0.79112	0.62554
FE	57	8.53000	253.34600	89.355	-0.05690	14.49644	11.15113
K	39	3346.00000	148237.00000	0.679	3371.88841	3332.96241	3332.16594
MG	24	22940.00000	1583050.00000	0.687	23029.21696	22754.86597	23026.67614
MN	55	0.49510	376.68900	60.230	0.19749	0.79393	0.49390
NA	23	4766.00000	728305.00000	2.047	4658.19299	4790.92388	4848.47708
TI	47	-0.57570	6.66692	-70.836	-0.33764	-0.34304	-1.04669
V	51	0.22370	193.34200	43.080	0.31559	0.12340	0.23216
IN-1	115	92955.50000	0.00000	2.062	93496.80000	90825.60000	94544.10000
IN-2	115	23632.60000	0.00000	2.034	23151.90000	24113.30000	23632.50000
AG	107	0.01242	36.66810	141.304	0.03209	-0.00163	0.00679
AS	75	-0.34540	266.67200	-102.085	0.05918	-0.50920	-0.58641
BA	137	213.70000	21783.30000	1.945	217.56497	214.18307	209.29851
CD	111	0.02069	51.33390	495.408	-0.09755	0.07551	0.08410
CO	59	-1.71100	553.36800	-5.696	-1.75473	-1.77906	-1.59941
CU	63	0.10920	210.01000	25.302	0.08144	0.13668	0.10962
MO	98	0.06750	83.33710	96.652	0.06402	0.00407	0.13441
NI	60	0.12770	83.33700	49.624	0.09333	0.20087	0.08903
SB	121	0.15850	60.00260	22.637	0.12500	0.15423	0.19637
SE	78	0.03292	2.88890	112.971	-0.00925	0.04698	0.06103
SN	120	-0.15130	76.66970	-53.351	-0.21935	-0.17251	-0.06213
SR	88	41.91000	12299.70000	5.290	44.24463	39.83001	41.66790
ZN	66	0.57160	80.00360	46.029	0.30675	0.83289	0.57517
BI-2	209	57741.20000	0.00000	1.381	57107.30000	58636.60000	57479.60000
PB	208	-0.36520	336.68200	-9.485	-0.39950	-0.36591	-0.33023
TL	203	-0.04819	33.33470	-41.793	-0.06539	-0.05317	-0.02604
U	238	0.31720	936.74300	14.379	0.26730	0.35669	0.32771
SC-1	45	106861.00000	0.00000	1.826	104743.00000	107253.00000	108585.00000
GE-1	72	112434.00000	0.00000	0.764	112673.00000	111481.00000	113147.00000
GE-2	72	60797.60000	0.00000	2.513	59297.20000	60743.90000	62351.60000
GE-3	72	813288.00000	0.00000	0.889	817224.00000	817701.00000	804941.00000
TB-2	159	85095.80000	0.00000	0.721	84482.40000	85095.50000	85709.40000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:07:00
Tube Number: 27 Batch: 181061063907A
Sample Number: **9558722** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	27670.40000	0.00000	2.828	26798.40000	27901.10000	28311.70000
SC-3	45	1172070	0	0.511	1176220	1165200	1174800
AL	27	594.50000	13681.60000	5.149	622.18981	599.70624	561.63720
B	11	5.54900	16442.10000	1.667	5.64205	5.54738	5.45714
BE	9	0.01682	74.00080	24.679	0.01812	0.02017	0.01218
CA	44	18730.00000	40594.10000	1.560	18851.95680	18946.60353	18399.84979
CR	52	2.15200	1800.20000	8.941	2.36177	2.11110	1.98362
FE	57	513.60000	6819.43000	5.253	518.96091	484.28986	537.42807
K	39	1267.00000	65170.30000	10.079	1413.20654	1205.84567	1180.44185
MG	24	18590.00000	1282640.00000	1.240	18790.32667	18636.68978	18337.08513
MN	55	8.95100	3037.13000	12.445	10.20382	8.57773	8.07136
NA	23	414.00000	91300.60000	1.678	419.77571	406.28847	415.91195
TI	47	7.37600	120.01000	36.849	7.65918	4.52782	9.94180
V	51	0.88690	546.69900	17.510	0.71532	1.01788	0.92742
IN-1	115	93586.40000	0.00000	1.326	92207.80000	93938.10000	94613.40000
IN-2	115	23281.40000	0.00000	2.425	23762.30000	22659.70000	23422.10000
AG	107	0.08393	123.34000	40.534	0.05499	0.07541	0.12141
AS	75	-0.43550	257.33800	-74.053	-0.76944	-0.41154	-0.12574
BA	137	767.60000	76983.70000	3.692	739.26723	795.95933	767.74326
CD	111	0.01190	49.33390	545.714	0.03890	-0.06218	0.05899
CO	59	-1.29600	1043.42000	-6.494	-1.38277	-1.29356	-1.21455
CU	63	0.92330	953.40300	7.397	0.94092	0.98115	0.84799
MO	98	0.16980	136.67300	37.485	0.11495	0.23961	0.15491
NI	60	0.64150	253.34500	16.711	0.76455	0.59154	0.56845
SB	121	0.28650	93.33810	71.693	0.38213	0.05065	0.42664
SE	78	0.03268	2.88890	140.851	0.08183	-0.00942	0.02564
SN	120	-0.14060	80.00340	-113.229	0.04236	-0.21640	-0.24783
SR	88	27.24000	7889.41000	2.796	27.09826	28.06569	26.56304
ZN	66	2.78300	313.35000	7.434	2.87546	2.92682	2.54559
BI-2	209	56981.10000	0.00000	2.053	55630.70000	57641.40000	57671.20000
PB	208	0.20990	1716.79000	23.287	0.25365	0.21905	0.15717
TL	203	-0.00809	63.33590	-324.642	-0.03746	0.01318	0.00000
U	238	0.12750	410.02600	2.469	0.13115	0.12573	0.12566
SC-1	45	108588.00000	0.00000	0.975	107454.00000	108756.00000	109553.00000
GE-1	72	115042.00000	0.00000	1.083	116293.00000	113802.00000	115032.00000
GE-2	72	60951.80000	0.00000	1.604	60412.80000	60362.20000	62080.30000
GE-3	72	813447.00000	0.00000	1.338	808985.00000	805510.00000	825847.00000
TB-2	159	84140.20000	0.00000	1.754	82679.50000	85631.40000	84109.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:10:00
Tube Number: 28 Batch: 181061063907A
Sample Number: **9558723** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	27883.80000	0.00000	2.052	27449.60000	27669.80000	28532.10000
SC-3	45	1160670	0	1.994	1139430	1185340	1157250
AL	27	5.37300	143.34000	28.327	4.01079	7.01587	5.09280
B	11	22.01000	34760.90000	2.531	22.30043	21.36984	22.36548
BE	9	-0.00338	46.66710	-126.176	0.00138	-0.00465	-0.00687
CA	44	61080.00000	133292.00000	0.879	61164.08511	61572.34511	60508.22013
CR	52	0.24050	540.03100	54.013	0.38898	0.18500	0.14753
FE	57	15.20000	343.35200	40.039	10.01122	13.69086	21.89896
K	39	1465.00000	73720.20000	2.479	1489.07633	1482.09868	1422.96409
MG	24	28130.00000	1956640.00000	0.310	28086.66097	28233.92990	28079.56122
MN	55	0.42180	356.68600	35.467	0.35629	0.31621	0.59300
NA	23	2310.00000	371547.00000	1.980	2311.32985	2354.79092	2263.36487
TI	47	-0.36520	10.00040	-323.111	-1.04669	-1.04669	0.99752
V	51	0.23370	200.01000	18.430	0.23911	0.27378	0.18814
IN-1	115	92123.40000	0.00000	1.309	93104.70000	92489.20000	90776.30000
IN-2	115	24129.90000	0.00000	2.098	23632.30000	24113.30000	24644.30000
AG	107	0.00348	26.66770	459.351	-0.00131	-0.00957	0.02132
AS	75	-0.76990	246.00400	-77.945	-0.78037	-1.36475	-0.16460
BA	137	165.00000	17169.10000	4.410	170.14596	168.09681	156.64232
CD	111	-0.00916	48.00050	-1200.170	-0.07389	0.11775	-0.07133
CO	59	-1.79400	460.02600	-3.558	-1.73032	-1.79510	-1.85798
CU	63	0.15390	256.68000	33.912	0.17402	0.09461	0.19299
MO	98	1.45700	856.72900	17.975	1.75008	1.24562	1.37540
NI	60	0.51940	220.01000	33.904	0.41443	0.72271	0.42093
SB	121	0.03069	26.66770	131.443	0.00815	0.00665	0.07726
SE	78	0.63120	24.88900	14.509	0.72653	0.62329	0.54389
SN	120	-0.13970	83.33790	-99.570	-0.27545	-0.14638	0.00255
SR	88	55.45000	16614.80000	2.950	55.06739	57.25104	54.04801
ZN	66	1.73700	210.01000	17.588	1.40930	2.01368	1.78897
BI-2	209	57322.90000	0.00000	1.701	58142.60000	57581.40000	56244.60000
PB	208	-0.37510	310.01600	-0.584	-0.37694	-0.37571	-0.37269
TL	203	-0.00827	63.33590	-482.838	0.02530	-0.05246	0.00233
U	238	0.43110	1240.12000	8.940	0.46862	0.43318	0.39162
SC-1	45	105466.00000	0.00000	0.480	104985.00000	105420.00000	105994.00000
GE-1	72	111283.00000	0.00000	1.378	110573.00000	110231.00000	113044.00000
GE-2	72	60188.10000	0.00000	1.831	59468.30000	59638.90000	61457.30000
GE-3	72	781011.00000	0.00000	0.878	785787.00000	784096.00000	773149.00000
TB-2	159	84908.00000	0.00000	1.200	84290.40000	84349.50000	86084.10000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:13:00
Tube Number: 29 Batch: 181061063907A
Sample Number: **9558724** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25679.30000	0.00000	0.939	25565.80000	25956.40000	25515.70000
SC-3	45	1137750	0	1.617	1117820	1154100	1141330
AL	27	2.78600	76.67050	26.666	3.42499	1.97085	2.96181
B	11	7.96100	18608.90000	8.617	8.72482	7.76021	7.39764
BE	9	-0.00579	42.66710	-24.551	-0.00416	-0.00678	-0.00642
CA	44	25320.00000	50906.90000	1.791	25681.03279	24810.18771	25465.46851
CR	52	-0.07041	306.68200	-159.636	0.00195	-0.19987	-0.01331
FE	57	15.63000	320.01600	30.819	19.87949	10.39547	16.60298
K	39	1286.00000	61290.70000	0.991	1292.88808	1271.36243	1293.96074
MG	24	25620.00000	1641000.00000	2.294	25284.44073	25281.44896	26301.05862
MN	55	2.40100	906.73500	28.417	3.17924	1.90408	2.12095
NA	23	551.60000	103417.00000	2.705	545.04716	541.01398	568.63279
TI	47	-0.54730	6.66692	-158.030	-1.04669	0.45135	-1.04669
V	51	0.14400	140.00800	66.132	0.12433	0.06008	0.24748
IN-1	115	90504.10000	0.00000	1.640	88831.50000	91663.50000	91017.30000
IN-2	115	23145.10000	0.00000	2.504	22530.90000	23222.10000	23682.40000
AG	107	-0.00088	20.00080	-983.478	0.00798	-0.00927	-0.00134
AS	75	-0.46230	254.00500	-69.133	-0.14984	-0.44861	-0.78858
BA	137	115.50000	11552.50000	3.959	111.75066	120.61988	114.24876
CD	111	-0.08804	35.33360	-105.486	-0.15095	0.01863	-0.13180
CO	59	-1.66600	596.70500	-5.661	-1.67480	-1.75597	-1.56793
CU	63	0.15440	246.67900	6.535	0.14316	0.15729	0.16269
MO	98	1.88100	1050.09000	4.988	1.80132	1.85726	1.98440
NI	60	0.21050	110.00500	104.941	-0.02496	0.24322	0.41330
SB	121	0.06202	33.33460	100.580	0.13029	0.04779	0.00799
SE	78	-0.02040	0.88889	-51.520	-0.02618	-0.02676	-0.00828
SN	120	-0.21990	50.00360	-20.318	-0.27154	-0.19263	-0.19578
SR	88	47.40000	13624.40000	3.228	48.94451	45.88434	47.37772
ZN	66	1.38600	163.34100	37.763	1.97237	0.96554	1.22099
BI-2	209	55715.10000	0.00000	0.482	55641.50000	56012.90000	55490.80000
PB	208	-0.36580	323.34800	-3.934	-0.37978	-0.35104	-0.36666
TL	203	-0.05123	30.00150	-69.647	-0.07830	-0.01080	-0.06462
U	238	0.39430	1106.76000	2.929	0.40747	0.38581	0.38967
SC-1	45	102808.00000	0.00000	0.732	102555.00000	102214.00000	103654.00000
GE-1	72	108082.00000	0.00000	0.723	107981.00000	107356.00000	108909.00000
GE-2	72	59082.80000	0.00000	2.593	59026.30000	57579.50000	60642.70000
GE-3	72	795478.00000	0.00000	2.216	811599.00000	798186.00000	776649.00000
TB-2	159	82382.30000	0.00000	1.284	81311.00000	82409.10000	83426.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:16:00
Tube Number: 30 Batch: 181061063907A
Sample Number: **9558725** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	27319.50000	0.00000	1.818	26808.30000	27349.80000	27800.40000
SC-3	45	1156790	0	1.983	1180250	1134400	1155720
AL	27	36.30000	847.03500	49.008	24.76848	27.34136	56.78421
B	11	48.54000	64327.30000	2.792	47.49647	50.07456	48.06376
BE	9	0.00731	60.66730	86.915	0.01045	0.00000	0.01150
CA	44	75210.00000	160820.00000	0.421	74851.63313	75446.43386	75339.47505
CR	52	0.59290	760.05500	7.787	0.64577	0.56058	0.57231
FE	57	126.50000	1763.52000	7.665	128.02408	135.39179	116.17379
K	39	2478.00000	112151.00000	0.839	2497.15330	2480.00698	2455.77869
MG	24	27780.00000	1892850.00000	0.810	27941.54548	27876.17810	27523.56327
MN	55	8.86100	2977.13000	2.204	8.98880	8.63644	8.95864
NA	23	6762.00000	1007450.00000	0.288	6780.20777	6765.28731	6741.66101
TI	47	-0.57180	6.66692	-71.948	-0.32147	-1.04669	-0.34735
V	51	0.37900	273.35100	60.449	0.13149	0.58369	0.42188
IN-1	115	90756.80000	0.00000	0.764	91502.50000	90131.40000	90636.60000
IN-2	115	23024.70000	0.00000	1.220	23031.60000	22740.50000	23302.10000
AG	107	0.00186	23.33420	924.234	-0.01751	0.00774	0.01535
AS	75	-0.41970	255.33800	-111.961	-0.48012	0.07738	-0.85655
BA	137	232.50000	23092.40000	1.851	227.89063	233.16409	236.41976
CD	111	-0.07152	37.33370	-43.974	-0.03730	-0.07812	-0.09916
CO	59	-1.80000	433.35800	-2.222	-1.83655	-1.80685	-1.75737
CU	63	0.08635	183.34200	22.363	0.08247	0.10731	0.06928
MO	98	0.33540	223.34500	17.448	0.36622	0.37200	0.26787
NI	60	0.08375	66.66970	162.866	0.21585	-0.05655	0.09197
SB	121	0.06183	33.33460	38.557	0.04874	0.08935	0.04740
SE	78	0.23730	10.22220	12.263	0.21060	0.23302	0.26834
SN	120	-0.07248	103.33700	-26.214	-0.08183	-0.05062	-0.08501
SR	88	68.08000	19455.60000	3.769	70.89203	67.46501	65.87102
ZN	66	1.10100	133.34000	12.262	0.97491	1.08584	1.24363
BI-2	209	55802.30000	0.00000	2.029	54777.90000	55610.70000	57018.10000
PB	208	-0.34610	370.01800	-3.441	-0.33466	-0.35845	-0.34542
TL	203	-0.01069	60.00280	-242.563	-0.00897	-0.03744	0.01433
U	238	0.61670	1696.85000	4.506	0.62579	0.63879	0.58548
SC-1	45	101921.00000	0.00000	2.131	101930.00000	99744.60000	104088.00000
GE-1	72	107357.00000	0.00000	0.737	108144.00000	107366.00000	106561.00000
GE-2	72	58912.80000	0.00000	0.284	59046.50000	58725.40000	58966.50000
GE-3	72	782138.00000	0.00000	0.766	785823.00000	785366.00000	775225.00000
TB-2	159	83213.30000	0.00000	0.411	83041.80000	83606.70000	82991.20000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:20:00
Tube Number: 31 Batch: 181061063907A
Sample Number: **9558725** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	26998.90000	0.00000	2.355	26578.10000	26688.20000	27730.30000
SC-3	45	1116950	0	1.835	1134220	1094290	1122330
AL	27	4.55200	120.00500	27.988	5.97937	4.14842	3.52820
B	11	5.22700	15321.50000	0.417	5.24450	5.20264	5.23446
BE	9	-0.00845	38.66710	-151.006	0.00623	-0.01470	-0.01688
CA	44	8697.00000	18413.70000	2.328	8530.72188	8922.23634	8636.90627
CR	52	-0.07935	316.68400	-136.610	0.04306	-0.16305	-0.11807
FE	57	12.27000	293.34800	51.931	19.50670	9.81095	7.49670
K	39	250.70000	24112.90000	7.591	269.33601	251.34451	231.29608
MG	24	3156.00000	212571.00000	0.454	3160.60472	3168.14505	3140.44523
MN	55	0.47200	360.02000	39.576	0.32487	0.68223	0.40890
NA	23	705.70000	130743.00000	0.553	707.16357	708.66508	701.27399
TI	47	-0.80280	3.33346	-52.603	-0.31519	-1.04669	-1.04669
V	51	0.00754	76.66980	557.840	0.05538	-0.02358	-0.00918
IN-1	115	91070.50000	0.00000	2.455	93649.10000	89891.50000	89670.80000
IN-2	115	24407.10000	0.00000	1.119	24633.80000	24103.90000	24483.60000
AG	107	-0.00451	16.66730	-264.523	-0.00197	-0.01751	0.00594
AS	75	-0.55810	262.00500	-45.852	-0.84506	-0.47589	-0.35352
BA	137	23.26000	2473.68000	10.520	20.82625	25.72056	23.23151
CD	111	-0.08215	38.00030	-64.930	-0.12633	-0.02290	-0.09725
CO	59	-1.10700	1333.46000	-27.471	-1.30836	-1.25746	-0.75812
CU	63	-0.02556	86.67000	-105.164	-0.02309	-0.00001	-0.05359
MO	98	-0.00244	46.66900	-2817.660	-0.05067	0.07610	-0.03274
NI	60	-0.02273	33.33460	-190.409	-0.03290	-0.06003	0.02473
SB	121	0.01762	23.33420	235.187	0.04121	-0.03023	0.04187
SE	78	-0.00209	1.55556	-533.971	-0.00931	0.01077	-0.00773
SN	120	-0.15740	76.66970	-52.713	-0.09963	-0.12015	-0.25249
SR	88	6.92900	2130.26000	5.308	7.22775	6.51849	7.04205
ZN	66	0.04334	23.33450	240.194	0.10047	0.10634	-0.07680
BI-2	209	58113.30000	0.00000	1.938	59359.10000	57169.20000	57811.60000
PB	208	-0.32360	440.02200	-8.826	-0.34766	-0.29207	-0.33123
TL	203	-0.02265	53.33610	-81.457	-0.00261	-0.03893	-0.02642
U	238	0.05837	226.68000	43.430	0.02914	0.07170	0.07428
SC-1	45	101606.00000	0.00000	1.859	103786.00000	100460.00000	100573.00000
GE-1	72	109879.00000	0.00000	1.926	111655.00000	110443.00000	107538.00000
GE-2	72	60409.70000	0.00000	3.905	58374.30000	59859.80000	62995.10000
GE-3	72	788186.00000	0.00000	1.354	799482.00000	778290.00000	786786.00000
TB-2	159	85751.40000	0.00000	0.323	85963.00000	85438.20000	85852.80000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:23:00
Tube Number: 32
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	25916.50000	0.00000	1.008	26167.20000	25936.50000	25645.90000
SC-3	45	1123150	0	2.083	1149640	1114450	1105360
AL	27	2429.00000	52344.90000	3.331	2367.23709	2399.93713	2520.85308
B	11	261.00000	293267.00000	2.757	252.75633	264.66138	265.71543
BE	9	27.17000	34636.40000	0.936	26.91795	27.42626	27.17526
CA	44	2445.00000	4997.83000	7.591	2280.29721	2409.19487	2646.16973
CR	52	246.10000	152954.00000	1.546	245.11057	242.84896	250.27069
FE	57	2371.00000	29003.20000	1.142	2370.06988	2344.37621	2398.51743
K	39	2364.00000	102150.00000	3.497	2281.02565	2366.02557	2446.38054
MG	24	2438.00000	157604.00000	1.888	2410.05223	2412.74249	2491.08197
MN	55	249.90000	74014.90000	3.427	248.32274	242.17202	259.09194
NA	23	2271.00000	340051.00000	1.910	2230.49510	2266.03025	2316.79188
TI	47	254.30000	3403.91000	2.409	261.26374	251.59862	249.91380
V	51	245.40000	122043.00000	1.607	241.64613	245.09342	249.51089
IN-1	115	89513.00000	0.00000	0.566	89412.40000	90062.40000	89064.10000
IN-2	115	22539.50000	0.00000	2.547	21997.40000	22480.30000	23140.80000
AG	107	24.63000	29017.60000	1.097	24.86958	24.67621	24.33596
AS	75	243.30000	14622.30000	3.189	252.09774	240.32186	237.46153
BA	137	243.60000	23693.60000	2.916	235.76288	245.38352	249.62833
CD	111	25.85000	3476.50000	3.670	26.64638	26.09674	24.79908
CO	59	243.40000	286171.00000	1.571	247.06078	243.67594	239.42801
CU	63	249.50000	221786.00000	2.301	255.77045	248.31871	244.48264
MO	98	23.12000	12059.50000	1.917	23.29738	22.62120	23.45589
NI	60	252.80000	81510.00000	2.643	260.43277	248.20217	249.65890
SB	121	24.25000	6151.70000	9.637	26.79341	23.76172	22.19698
SE	78	25.59000	915.59100	3.084	24.97243	25.31128	26.47705
SN	120	24.83000	9003.56000	3.660	25.35102	25.35978	23.78116
SR	88	24.85000	6972.20000	2.156	25.09757	24.23229	25.21221
ZN	66	251.90000	25933.50000	1.333	254.87615	252.52199	248.25018
BI-2	209	55413.60000	0.00000	3.021	56937.50000	55681.20000	53622.20000
PB	208	24.54000	58655.30000	3.109	24.17499	24.02986	25.41803
TL	203	24.36000	17894.10000	1.574	24.29033	24.02319	24.77944
U	238	24.61000	64780.40000	1.896	24.37116	24.30538	25.14422
SC-1	45	101249.00000	0.00000	0.998	100106.00000	101617.00000	102023.00000
GE-1	72	106768.00000	0.00000	1.076	107094.00000	105491.00000	107718.00000
GE-2	72	56826.40000	0.00000	1.737	55801.50000	56906.70000	57770.90000
GE-3	72	765346.00000	0.00000	1.175	775404.00000	762544.00000	758091.00000
TB-2	159	81405.00000	0.00000	2.289	83555.70000	80345.40000	80314.00000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:26:00
Tube Number: 33
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	25632.70000	0.00000	2.896	24804.30000	26237.60000	25856.30000
SC-3	45	1050580	0	1.032	1056300	1057350	1038070
AL	27	0.12260	20.00070	371.615	-0.32496	0.10703	0.58581
B	11	6.14300	15342.80000	5.995	5.92923	6.56816	5.93126
BE	9	0.03390	86.66770	2.485	0.03294	0.03454	0.03421
CA	44	0.89920	43.33520	842.304	-0.11779	-6.11516	8.93044
CR	52	0.09380	406.69400	95.597	0.17117	0.11473	-0.00448
FE	57	-2.57300	100.00500	-96.036	0.23069	-4.43474	-3.51587
K	39	-17.90000	12960.20000	-109.944	2.28670	-37.03149	-18.98305
MG	24	1.34700	113.33800	21.366	1.67106	1.25064	1.12035
MN	55	-0.08257	180.00900	-285.334	-0.16784	-0.26369	0.18380
NA	23	-32.56000	24036.00000	-8.940	-29.55055	-35.36136	-32.78732
TI	47	-0.04411	13.33410	-3935.620	-1.04669	-1.04669	1.96105
V	51	0.01559	76.67060	219.179	0.04839	0.01818	-0.01981
IN-1	115	87084.20000	0.00000	2.961	84381.50000	87352.40000	89518.60000
IN-2	115	22012.80000	0.00000	1.618	21858.70000	21759.60000	22420.20000
AG	107	0.03194	56.66910	80.589	0.01752	0.06166	0.01664
AS	75	-0.23260	255.33800	-190.972	-0.67530	-0.23577	0.21320
BA	137	-0.07134	20.00080	-4.745	-0.06989	-0.06893	-0.07521
CD	111	-0.03427	40.66700	-282.580	-0.09834	-0.08161	0.07712
CO	59	1.20500	3840.75000	58.988	0.41933	1.39106	1.80391
CU	63	0.00724	106.67100	118.064	0.01188	0.01246	-0.00262
MO	98	-0.02011	33.33460	-60.269	-0.02635	-0.00614	-0.02784
NI	60	0.04051	50.00220	73.142	0.00989	0.04260	0.06905
SB	121	0.25800	80.00320	69.612	0.38055	0.34171	0.05190
SE	78	0.03923	2.88890	186.898	0.07380	0.08888	-0.04499
SN	120	-0.13570	76.66970	-25.505	-0.09598	-0.15272	-0.15870
SR	88	-0.02458	23.33420	-231.774	-0.07341	0.03801	-0.03834
ZN	66	0.13260	30.00140	152.036	-0.06606	0.33702	0.12681
BI-2	209	53960.30000	0.00000	1.672	52929.30000	54606.50000	54345.10000
PB	208	-0.07033	986.72500	-37.822	-0.04283	-0.09594	-0.07223
TL	203	0.01076	73.33660	410.874	-0.02038	-0.00871	0.06136
U	238	0.00716	80.00340	163.151	0.00774	-0.00481	0.01854
SC-1	45	96945.90000	0.00000	2.487	94191.60000	97971.30000	98674.80000
GE-1	72	103614.00000	0.00000	0.351	103840.00000	103194.00000	103808.00000
GE-2	72	54948.40000	0.00000	2.806	53372.30000	56454.60000	55018.30000
GE-3	72	739496.00000	0.00000	1.582	747761.00000	744619.00000	726109.00000
TB-2	159	77175.50000	0.00000	1.716	76100.10000	76771.50000	78654.70000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:29:00
Tube Number: 34
Sample Number: **ZLLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	23328.40000	0.00000	8.616	22389.90000	21959.40000	25635.90000
SC-3	45	1106040	0	1.809	1101970	1127770	1088380
AL	27	203.00000	3957.40000	2.350	198.55074	202.45908	208.04317
B	11	110.50000	127747.00000	1.771	111.44827	108.20354	111.72081
BE	9	1.12500	1458.76000	3.752	1.16379	1.13002	1.07990
CA	44	419.90000	800.05600	21.012	356.04380	520.59349	383.12770
CR	52	4.11900	2610.36000	9.456	3.89116	4.56862	3.89688
FE	57	218.30000	2507.00000	9.404	241.96337	206.20459	206.62203
K	39	395.10000	25716.10000	2.445	384.36326	397.87579	403.08454
MG	24	201.60000	11762.40000	0.811	201.11123	200.31171	203.45657
MN	55	3.80000	1193.44000	10.040	4.23861	3.61628	3.54503
NA	23	363.80000	70809.00000	4.338	346.09929	376.39294	368.91424
TI	47	29.84000	370.01900	11.408	26.74037	33.48247	29.28922
V	51	1.19800	596.70700	10.325	1.32640	1.18894	1.07959
IN-1	115	87444.40000	0.00000	2.016	87913.50000	88925.10000	85494.50000
IN-2	115	21430.80000	0.00000	5.077	20762.50000	20843.60000	22686.50000
AG	107	1.07400	1220.10000	4.356	1.10721	1.09365	1.02026
AS	75	4.28400	501.34700	7.600	4.17196	4.65082	4.02917
BA	137	4.17400	413.35700	20.932	3.18340	4.50626	4.83353
CD	111	1.07200	179.33600	3.966	1.05924	1.03747	1.11954
CO	59	0.86220	3367.25000	51.601	0.37872	0.95341	1.25432
CU	63	4.06700	3530.62000	5.240	4.30678	3.99740	3.89817
MO	98	1.11600	593.37300	5.534	1.06347	1.18388	1.09985
NI	60	3.94900	1246.78000	7.063	3.68690	4.24227	3.91885
SB	121	2.35700	583.37100	13.140	2.11816	2.70720	2.24655
SE	78	4.14800	146.22300	8.727	3.75533	4.21933	4.46858
SN	120	3.91400	1453.48000	5.825	3.65122	4.02878	4.06151
SR	88	1.63800	463.36100	10.360	1.83293	1.55435	1.52582
ZN	66	31.70000	3120.50000	3.338	32.01155	30.52027	32.56619
BI-2	209	55236.10000	0.00000	2.131	54295.40000	54857.30000	56555.70000
PB	208	1.77300	5314.00000	2.888	1.81861	1.78191	1.71746
TL	203	1.03600	823.39600	6.192	0.96802	1.09521	1.04617
U	238	0.97420	2617.07000	6.610	0.94974	1.04729	0.92572
SC-1	45	96305.70000	0.00000	2.491	97920.00000	97448.10000	93549.00000
GE-1	72	103868.00000	0.00000	1.207	103616.00000	105230.00000	102759.00000
GE-2	72	53757.20000	0.00000	7.206	50389.80000	52890.00000	57991.90000
GE-3	72	754679.00000	0.00000	1.634	761212.00000	762371.00000	740455.00000
TB-2	159	79408.90000	0.00000	2.573	77788.70000	78734.60000	81703.40000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:32:00
Tube Number: 35 Batch: 181061063907A
Sample Number: **9558712** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	26243.90000	0.00000	4.199	25025.00000	26537.70000	27169.00000
SC-3	45	1102180	0	0.583	1099790	1097300	1109460
AL	27	1.18000	43.33520	59.169	1.11292	1.90990	0.51837
B	11	8.18000	18266.50000	2.702	8.35773	8.24978	7.93259
BE	9	0.00540	55.33380	43.854	0.00764	0.00292	0.00564
CA	44	98320.00000	201834.00000	1.871	100444.48774	97178.33595	97342.01673
CR	52	0.17880	470.02600	61.913	0.16461	0.29595	0.07586
FE	57	3.84100	183.34200	101.093	0.13231	3.51230	7.87719
K	39	3364.00000	141178.00000	3.799	3501.88324	3249.81484	3339.59429
MG	24	34810.00000	2276210.00000	3.982	36410.47920	34044.31385	33976.32808
MN	55	27.73000	8489.70000	6.827	29.91450	26.58164	26.69084
NA	23	4670.00000	676729.00000	3.552	4859.86984	4596.42360	4553.48989
TI	47	-0.80240	3.33346	-52.717	-1.04669	-0.31408	-1.04669
V	51	0.19670	170.00800	24.448	0.17174	0.25216	0.16626
IN-1	115	89507.90000	0.00000	1.407	88086.80000	89951.20000	90485.60000
IN-2	115	22756.90000	0.00000	2.034	23241.20000	22710.30000	22319.20000
AG	107	-0.00080	20.00080	-1013.950	0.00720	-0.00065	-0.00893
AS	75	-0.63850	239.33700	-64.338	-0.78083	-0.95929	-0.17554
BA	137	196.70000	19295.70000	8.734	181.51763	193.34076	215.37750
CD	111	0.06490	55.33400	164.715	0.17900	-0.03292	0.04862
CO	59	-1.48400	800.06100	-4.579	-1.46509	-1.55944	-1.42757
CU	63	0.05207	150.00800	92.049	0.00429	0.05177	0.10016
MO	98	0.00338	46.66850	891.324	-0.02989	0.02873	0.01130
NI	60	1.81700	630.04200	2.678	1.83716	1.85207	1.76132
SB	121	0.06234	33.33460	153.401	0.16253	-0.02796	0.05244
SE	78	0.03550	2.88890	129.465	-0.00706	0.02930	0.08424
SN	120	-0.13490	80.00340	-58.236	-0.05718	-0.13346	-0.21428
SR	88	51.95000	14672.30000	5.538	48.62743	53.53714	53.68042
ZN	66	0.67180	86.67020	56.743	0.49341	0.41239	1.10946
BI-2	209	54984.60000	0.00000	1.602	55208.80000	54013.40000	55731.60000
PB	208	-0.37950	286.68000	-9.014	-0.35311	-0.36730	-0.41816
TL	203	-0.02318	50.00230	-54.875	-0.02333	-0.03583	-0.01039
U	238	0.25070	716.71800	15.325	0.20864	0.28399	0.25937
SC-1	45	100872.00000	0.00000	1.733	98866.70000	101678.00000	102071.00000
GE-1	72	106066.00000	0.00000	1.429	104725.00000	105762.00000	107710.00000
GE-2	72	56736.20000	0.00000	1.344	55882.30000	56977.30000	57349.00000
GE-3	72	745671.00000	0.00000	0.903	753442.00000	741656.00000	741914.00000
TB-2	159	81170.20000	0.00000	1.365	81129.40000	80082.90000	82298.20000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:35:00
Tube Number: 36 Batch: 181061063907A
Sample Number: **9558713** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	23047.80000	0.00000	0.904	23131.40000	22810.70000	23201.30000
SC-3	45	988382.00000	0.00000	1.533	976333.00000	983426.00000	1005390
AL	27	21.81000	433.35800	3.144	22.59373	21.33996	21.48564
B	11	3.80500	12194.90000	6.639	3.95382	3.94703	3.51288
BE	9	0.27230	348.67400	15.134	0.23042	0.31281	0.27354
CA	44	7928.00000	14331.70000	4.671	7525.56321	8254.32215	8004.67028
CR	52	0.06488	350.01800	199.599	0.15250	0.12601	-0.08385
FE	57	45.39000	610.04100	8.070	43.36573	43.19560	49.62275
K	39	3353.00000	123727.00000	1.294	3346.15661	3399.99734	3314.13554
MG	24	4417.00000	253914.00000	2.321	4302.47052	4500.53472	4447.56978
MN	55	403.40000	106166.00000	1.518	399.63791	410.47326	400.11427
NA	23	4281.00000	547469.00000	0.632	4277.51445	4309.96167	4256.20456
TI	47	0.36600	16.66730	354.918	0.63430	1.51025	-1.04669
V	51	0.12360	116.67200	58.034	0.10716	0.20207	0.06146
IN-1	115	83657.40000	0.00000	2.391	83244.90000	81896.10000	85831.30000
IN-2	115	21915.80000	0.00000	3.522	21097.50000	22019.10000	22630.90000
AG	107	-0.00297	16.66730	-336.474	-0.00844	0.00857	-0.00905
AS	75	-1.04200	207.33700	-15.422	-0.85748	-1.12073	-1.14889
BA	137	125.40000	11846.00000	6.069	133.67532	123.63713	118.74665
CD	111	0.17250	66.66740	81.681	0.28069	0.22359	0.01318
CO	59	-0.62410	1743.52000	-12.240	-0.56916	-0.59199	-0.71140
CU	63	4.33800	3847.39000	1.230	4.38084	4.35391	4.27795
MO	98	-0.05923	13.33380	-21.155	-0.04477	-0.06620	-0.06673
NI	60	2.87700	936.73800	17.477	3.39448	2.39017	2.84754
SB	121	-0.02650	10.00040	-5.442	-0.02497	-0.02673	-0.02782
SE	78	0.06109	3.55557	97.365	-0.00485	0.07740	0.11071
SN	120	-0.20350	53.33570	-42.074	-0.29571	-0.12649	-0.18837
SR	88	33.37000	9090.30000	2.475	33.82656	33.87263	32.41952
ZN	66	26.83000	2697.05000	9.676	28.28166	28.38453	23.83755
BI-2	209	54017.20000	0.00000	1.014	54406.10000	53390.80000	54254.60000
PB	208	-0.16270	776.71100	-27.234	-0.19877	-0.11325	-0.17612
TL	203	0.06710	113.33900	34.247	0.06119	0.09247	0.04766
U	238	0.00318	70.00320	116.112	0.00301	-0.00042	0.00697
SC-1	45	88845.70000	0.00000	1.805	90315.00000	87133.90000	89088.10000
GE-1	72	97882.60000	0.00000	1.750	97882.70000	96169.50000	99595.80000
GE-2	72	53250.80000	0.00000	1.847	52728.80000	52638.30000	54385.40000
GE-3	72	692042.00000	0.00000	1.452	703443.00000	688224.00000	684459.00000
TB-2	159	78680.10000	0.00000	1.398	78492.00000	79862.20000	77686.00000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:38:00
Tube Number: 37 Batch: 181061063907A
Sample Number: **9558713** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 20.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	22386.60000	0.00000	2.508	22359.90000	22961.00000	21839.00000
SC-3	45	962482.00000	0.00000	0.657	959836.00000	969703.00000	957907.00000
AL	27	1.86800	50.00190	102.034	-0.27194	3.38143	2.49508
B	11	-0.07813	8261.92000	-123.103	-0.03183	-0.18871	-0.01386
BE	9	0.01365	57.33390	52.872	0.01810	0.01752	0.00532
CA	44	424.30000	780.05700	7.914	390.85039	458.00667	424.08715
CR	52	-0.10980	246.67900	-21.284	-0.08424	-0.11515	-0.13006
FE	57	1.05200	126.67400	396.008	-0.45353	5.76133	-2.15313
K	39	160.30000	17081.80000	5.792	166.74063	149.68195	164.56207
MG	24	257.10000	14378.30000	4.387	245.17522	258.67213	267.57412
MN	55	23.31000	6125.05000	7.036	21.59086	23.49192	24.85534
NA	23	212.70000	50019.20000	4.109	209.77687	205.73207	222.47954
TI	47	-0.46770	6.66692	-107.312	-1.04669	-0.19996	-0.15646
V	51	-0.00877	56.66910	-157.583	-0.02421	-0.00455	0.00245
IN-1	115	83700.90000	0.00000	1.430	84624.20000	84129.60000	82348.90000
IN-2	115	20990.80000	0.00000	2.974	20306.30000	21137.60000	21528.60000
AG	107	0.00986	30.00120	8.337	0.01077	0.00966	0.00916
AS	75	-0.60210	223.33700	-58.711	-1.01032	-0.39477	-0.40126
BA	137	6.50900	613.37600	19.358	6.57632	7.73414	5.21652
CD	111	-0.08693	32.00030	-75.877	-0.01248	-0.13804	-0.11030
CO	59	-0.68280	1610.18000	-19.493	-0.76413	-0.75514	-0.52920
CU	63	0.24620	300.01500	18.457	0.23397	0.20821	0.29658
MO	98	-0.05165	16.66760	-21.607	-0.06453	-0.04485	-0.04559
NI	60	0.20470	96.67090	81.681	0.19180	0.37805	0.04432
SB	121	-0.02530	10.00040	-166.364	-0.06714	0.01704	-0.02581
SE	78	-0.00502	1.33334	-396.418	-0.02525	0.01458	-0.00441
SN	120	-0.18810	56.66890	-77.299	-0.35545	-0.11694	-0.09200
SR	88	1.72000	476.69400	14.105	1.51893	1.98931	1.65130
ZN	66	1.53500	163.34100	13.212	1.45164	1.38802	1.76673
BI-2	209	53883.30000	0.00000	0.696	54315.10000	53692.40000	53642.30000
PB	208	-0.27620	516.69300	-5.655	-0.29404	-0.26960	-0.26497
TL	203	0.01112	73.33660	262.680	0.01962	-0.02139	0.03514
U	238	-0.00319	53.33590	-377.075	-0.01634	0.00729	-0.00053
SC-1	45	89036.60000	0.00000	1.656	90728.80000	88351.50000	88029.40000
GE-1	72	98409.30000	0.00000	1.707	100211.00000	98133.30000	96883.90000
GE-2	72	52220.40000	0.00000	2.443	51644.60000	51333.50000	53683.10000
GE-3	72	676566.00000	0.00000	1.583	673133.00000	688575.00000	667989.00000
TB-2	159	75591.00000	0.00000	0.743	75293.10000	75241.00000	76238.70000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:41:00
Tube Number: 38
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	22837.60000	0.00000	2.953	23111.50000	23331.80000	22069.40000
SC-3	45	938220.00000	0.00000	1.183	928075.00000	950080.00000	936504.00000
AL	27	203.10000	3870.73000	4.770	211.59114	192.56851	205.26250
B	11	109.20000	107259.00000	1.076	110.48417	109.02236	108.15867
BE	9	1.17900	1294.74000	4.483	1.23322	1.12759	1.17653
CA	44	445.30000	830.06300	20.317	465.95768	346.31472	523.68835
CR	52	4.30900	2667.06000	7.067	4.65615	4.08728	4.18322
FE	57	203.50000	2296.95000	9.523	199.98526	186.13616	224.41282
K	39	363.20000	24092.80000	10.526	371.67325	321.50370	396.56128
MG	24	204.60000	11665.60000	5.283	202.11146	195.21064	216.40226
MN	55	3.62900	1126.76000	3.081	3.51506	3.73850	3.63452
NA	23	330.60000	65235.80000	6.521	324.22035	312.90754	354.60991
TI	47	23.28000	286.68200	19.961	27.55551	23.95196	18.33411
V	51	0.98680	493.36200	27.888	0.67140	1.17776	1.11142
IN-1	115	82864.20000	0.00000	2.229	81441.20000	82199.90000	84951.40000
IN-2	115	20724.60000	0.00000	1.545	20774.50000	20382.60000	21016.90000
AG	107	1.02600	1130.10000	4.272	0.97757	1.06244	1.03895
AS	75	2.56800	392.00900	9.805	2.65889	2.76213	2.28362
BA	137	3.82700	366.68700	18.040	4.52219	3.81743	3.14145
CD	111	1.10500	177.33600	16.914	0.91136	1.11875	1.28448
CO	59	0.81550	3197.20000	47.406	0.63790	0.54949	1.25900
CU	63	4.29300	3603.98000	6.382	4.59731	4.06555	4.21700
MO	98	0.98290	510.02900	16.268	1.10456	1.04229	0.80180
NI	60	3.91800	1196.78000	3.458	3.85295	3.82637	4.07327
SB	121	2.01200	483.36400	20.333	1.90277	2.46443	1.66839
SE	78	3.92200	131.11200	9.386	3.74968	4.34465	3.67155
SN	120	4.45100	1580.16000	5.334	4.25567	4.71539	4.38242
SR	88	2.02300	546.69800	22.877	1.98715	2.50254	1.57902
ZN	66	30.93000	2943.78000	4.342	30.41139	29.92437	32.45603
BI-2	209	53990.30000	0.00000	1.125	54505.80000	53321.00000	54144.10000
PB	208	1.83900	5344.04000	8.923	1.64910	1.93647	1.92997
TL	203	0.98820	770.05800	26.270	1.17233	1.10100	0.69128
U	238	0.98500	2587.08000	2.577	1.00010	0.95568	0.99915
SC-1	45	88338.10000	0.00000	0.724	89076.10000	87939.20000	87999.00000
GE-1	72	96495.40000	0.00000	2.389	95856.60000	94577.30000	99052.30000
GE-2	72	52294.10000	0.00000	1.404	51474.00000	52889.50000	52518.80000
GE-3	72	665894.00000	0.00000	0.823	669380.00000	668722.00000	659579.00000
TB-2	159	76815.00000	0.00000	0.787	77053.00000	76127.40000	77264.40000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:44:00
Tube Number: 39
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19748.90000	0.00000	3.356	18994.30000	20016.00000	20236.50000
SC-3	45	920602.00000	0.00000	0.407	918191.00000	924919.00000	918697.00000
AL	27	103000.00000	1689550.00000	4.163	107897.35945	101238.29822	99888.48979
B	11	13.54000	20032.90000	0.669	13.64117	13.51941	13.46424
BE	9	0.00712	48.00050	47.893	0.00531	0.00499	0.01105
CA	44	320100.00000	494484.00000	1.676	325775.17240	319450.48935	315105.48581
CR	52	1.45200	953.40600	15.172	1.69607	1.39247	1.26782
FE	57	270400.00000	2507730.00000	2.353	276863.07585	270128.79848	264147.93015
K	39	113100.00000	3230200.00000	3.671	116964.67452	108710.09942	113623.86895
MG	24	108500.00000	5342560.00000	1.829	110766.05621	107063.82027	107675.35792
MN	55	8.65300	2103.58000	4.834	9.00114	8.76908	8.18905
NA	23	262500.00000	27425900.00000	2.096	268692.14391	258265.64161	260436.42048
TI	47	2308.00000	23448.70000	2.385	2351.13706	2327.41309	2246.19652
V	51	0.02725	63.33600	215.339	0.07880	-0.03661	0.03956
IN-1	115	78268.70000	0.00000	1.361	78009.40000	79439.30000	77357.20000
IN-2	115	20162.70000	0.00000	2.086	20175.80000	19735.80000	20576.60000
AG	107	0.35610	393.35500	15.175	0.29556	0.39952	0.37318
AS	75	0.24070	258.67100	35.646	0.33875	0.17920	0.20425
BA	137	1.17400	126.67200	12.504	1.21333	1.01144	1.29700
CD	111	0.29930	76.66760	18.697	0.29253	0.35838	0.24708
CO	59	-0.93890	1276.78000	-9.707	-1.03304	-0.85106	-0.93291
CU	63	0.82930	753.38400	24.901	0.94020	0.59105	0.95660
MO	98	2071.00000	962142.00000	3.254	1996.87320	2129.11111	2085.61637
NI	60	1.00400	323.34900	10.179	0.95610	1.12173	0.93518
SB	121	1.02000	246.68000	6.865	0.99113	0.96965	1.10023
SE	78	0.06850	3.55557	63.080	0.08350	0.10221	0.01980
SN	120	-0.10460	80.00340	-55.545	-0.07434	-0.06807	-0.17169
SR	88	10.55000	2660.39000	12.275	9.64929	12.03414	9.96896
ZN	66	2.61700	256.68000	12.396	2.65625	2.27525	2.92062
BI-2	209	48222.30000	0.00000	2.814	48580.50000	46722.60000	49363.90000
PB	208	-0.15310	713.37600	-36.238	-0.21582	-0.13354	-0.11020
TL	203	0.13850	146.67300	47.011	0.06396	0.16740	0.18420
U	238	0.05002	170.00900	19.518	0.04528	0.04353	0.06125
SC-1	45	77898.20000	0.00000	1.189	76838.20000	78307.10000	78549.10000
GE-1	72	89072.00000	0.00000	0.297	89230.40000	89219.40000	88766.10000
GE-2	72	49804.30000	0.00000	1.239	49104.60000	50038.10000	50270.10000
GE-3	72	698723.00000	0.00000	0.329	697781.00000	697045.00000	701343.00000
TB-2	159	62477.40000	0.00000	1.980	61274.70000	63747.00000	62410.40000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:47:00
Tube Number: 40
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-2	45	20139.50000	0.00000	3.922	20005.90000	19425.00000	20987.50000
SC-3	45	935140.00000	0.00000	1.121	927681.00000	947117.00000	930621.00000
AL	27	99480.00000	1664220.00000	3.541	97981.71548	103507.84317	96959.51633
B	11	11.83000	18793.90000	4.249	12.30541	11.30311	11.86906
BE	9	-0.00173	39.33370	-615.695	0.01057	-0.00722	-0.00855
CA	44	305400.00000	480951.00000	2.940	301103.47350	315716.32253	299371.55288
CR	52	223.40000	107839.00000	4.328	221.39410	233.95653	214.94515
FE	57	263000.00000	2486980.00000	3.301	260188.40311	272762.03171	256103.03936
K	39	107700.00000	3137150.00000	4.855	104533.96968	113771.31589	104903.68952
MG	24	104900.00000	5264580.00000	3.174	104956.71990	108185.42739	101528.28750
MN	55	228.90000	52700.90000	2.682	222.53271	234.78277	229.37915
NA	23	254400.00000	27096600.00000	3.217	252420.61030	263350.89419	247332.41610
TI	47	2251.00000	23298.20000	5.229	2287.64792	2346.11250	2119.36505
V	51	230.70000	89058.30000	4.251	230.32783	240.65729	221.05217
IN-1	115	78406.30000	0.00000	0.639	78664.20000	78726.00000	77828.80000
IN-2	115	19598.70000	0.00000	1.999	19164.60000	19925.70000	19705.90000
AG	107	48.12000	49280.60000	2.552	49.15451	48.43383	46.76020
AS	75	96.73000	5200.41000	1.625	98.37877	95.24844	96.55668
BA	137	1.34300	136.67300	44.326	2.01894	1.11562	0.89562
CD	111	93.54000	10838.00000	2.486	95.35844	90.91831	94.33323
CO	59	188.50000	193226.00000	1.447	191.13132	185.68391	188.68088
CU	63	190.50000	147287.00000	3.224	194.85005	183.50704	193.26019
MO	98	2107.00000	951810.00000	1.786	2141.00410	2066.73296	2114.38740
NI	60	191.10000	53598.40000	1.687	193.97327	187.61347	191.70142
SB	121	1.22300	283.34600	26.999	1.60401	1.04906	1.01635
SE	78	89.47000	2801.20000	2.452	90.42921	91.01608	86.95641
SN	120	-0.15150	63.33580	-15.017	-0.12527	-0.16569	-0.16357
SR	88	9.78100	2400.32000	7.315	10.54313	9.12363	9.67708
ZN	66	83.39000	7479.10000	1.639	81.91241	84.60671	83.66154
BI-2	209	48412.80000	0.00000	1.570	48861.30000	48841.80000	47535.40000
PB	208	-0.18520	650.03500	-19.735	-0.22716	-0.16894	-0.15976
TL	203	0.07990	110.00500	139.299	-0.01442	0.20266	0.05146
U	238	0.08326	246.67900	13.404	0.09230	0.07078	0.08669
SC-1	45	76118.20000	0.00000	1.729	77542.90000	75863.60000	74948.10000
GE-1	72	87115.20000	0.00000	2.063	88978.00000	86974.80000	85392.70000
GE-2	72	48468.70000	0.00000	0.451	48401.50000	48291.40000	48713.20000
GE-3	72	705605.00000	0.00000	1.436	710456.00000	712397.00000	693962.00000
TB-2	159	64280.10000	0.00000	0.594	63958.40000	64702.00000	64179.90000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:50:00
Tube Number: 41
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	22640.50000	0.00000	0.580	22660.40000	22500.40000	22760.80000
SC-3	45	1045300	0	0.554	1043220	1051850	1040840
AL	27	23.10000	450.02800	7.926	21.48735	22.71527	25.08852
B	11	0.16620	9220.55000	106.859	-0.03882	0.27156	0.26577
BE	9	-0.00060	45.33380	-1357.400	-0.00337	-0.00702	0.00858
CA	44	48.92000	123.33900	13.955	52.59650	53.11735	41.04131
CR	52	0.17440	403.35800	122.706	-0.07224	0.28421	0.31116
FE	57	49.85000	646.70900	15.842	42.61515	48.67187	58.27577
K	39	-20.27000	11382.00000	-148.101	13.81472	-31.88571	-42.75295
MG	24	19.28000	1113.43000	18.340	17.44064	17.03330	23.35170
MN	55	-0.20710	126.67400	-58.378	-0.31121	-0.07451	-0.23584
NA	23	25.95000	28247.70000	26.466	24.54622	19.89961	33.41763
TI	47	0.67610	20.00070	222.009	-0.18872	2.40958	-0.19251
V	51	0.02808	73.33630	46.973	0.04328	0.02141	0.01955
IN-1	115	82257.40000	0.00000	3.223	79920.70000	85137.90000	81713.50000
IN-2	115	21418.30000	0.00000	2.496	21308.30000	20947.10000	21999.30000
AG	107	0.01830	40.00160	51.421	0.00944	0.02818	0.01729
AS	75	-0.66460	224.00400	-2.427	-0.67994	-0.64778	-0.66603
BA	137	-0.17140	10.00120	-111.960	-0.28227	0.05019	-0.28227
CD	111	-0.10310	30.66700	-37.527	-0.09192	-0.07132	-0.14622
CO	59	-0.20880	2170.26000	-153.831	-0.49417	-0.27150	0.13905
CU	63	0.01058	106.67200	234.405	0.03899	-0.00678	-0.00046
MO	98	1.35800	713.38300	27.158	0.93219	1.57118	1.57080
NI	60	0.16650	86.67050	64.024	0.14442	0.28245	0.07263
SB	121	0.02989	23.33420	82.068	0.05812	0.01781	0.01374
SE	78	0.05794	3.33334	159.337	0.16403	0.01388	-0.00410
SN	120	-0.12030	80.00340	-48.088	-0.05970	-0.17494	-0.12629
SR	88	-0.03516	20.00080	-106.854	0.00328	-0.07180	-0.03697
ZN	66	0.74790	90.00470	56.077	0.45046	0.56566	1.22759
BI-2	209	53906.70000	0.00000	2.729	52958.50000	53160.30000	55601.30000
PB	208	-0.22120	643.36800	-13.015	-0.25296	-0.21388	-0.19680
TL	203	-0.06380	20.00080	-1.184	-0.06331	-0.06342	-0.06467
U	238	-0.00460	50.00240	-143.770	-0.00023	-0.01221	-0.00136
SC-1	45	84815.30000	0.00000	1.862	82996.00000	85623.60000	85826.30000
GE-1	72	92660.10000	0.00000	1.324	91253.30000	93509.70000	93217.20000
GE-2	72	53221.00000	0.00000	2.078	52518.00000	52649.10000	54496.00000
GE-3	72	730205.00000	0.00000	1.383	741379.00000	721722.00000	727514.00000
TB-2	159	76872.20000	0.00000	2.806	76590.30000	74869.70000	79156.60000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:54:00
Tube Number: 42
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	23996.20000	0.00000	2.641	24063.10000	23331.50000	24593.90000
SC-3	45	1065120	0	1.046	1073070	1069910	1052380
AL	27	2359.00000	47054.60000	2.072	2363.02021	2405.60399	2308.07012
B	11	254.50000	271451.00000	1.205	252.74445	252.71454	258.04168
BE	9	26.34000	31840.10000	0.799	26.55164	26.13092	26.32639
CA	44	2481.00000	4691.03000	6.663	2465.52972	2653.12652	2323.53506
CR	52	250.40000	143988.00000	4.169	251.01729	260.46450	239.61147
FE	57	2490.00000	28188.10000	3.004	2554.35885	2507.69031	2407.92003
K	39	2304.00000	92485.50000	1.651	2324.97443	2326.83744	2260.02685
MG	24	2353.00000	140841.00000	2.221	2303.86029	2407.97423	2348.12403
MN	55	253.60000	69547.00000	1.188	252.90216	256.88958	250.98309
NA	23	2190.00000	304508.00000	2.520	2190.03307	2245.56374	2135.19955
TI	47	256.50000	3180.51000	5.185	270.46167	243.96764	255.11202
V	51	249.00000	114644.00000	2.780	241.08113	253.93919	251.95333
IN-1	115	88044.40000	0.00000	0.215	87967.80000	87905.00000	88260.30000
IN-2	115	22416.40000	0.00000	5.728	23785.80000	21240.70000	22222.80000
AG	107	25.04000	29305.10000	3.596	24.11121	25.90954	25.09204
AS	75	240.90000	14369.40000	7.235	220.99114	253.53981	248.08217
BA	137	250.00000	24141.10000	5.236	243.82731	265.08362	241.21980
CD	111	25.42000	3395.81000	6.290	23.58896	26.52099	26.15875
CO	59	236.50000	276066.00000	5.653	221.57111	247.44278	240.37233
CU	63	243.00000	214457.00000	5.395	230.05265	256.26357	242.69427
MO	98	24.86000	12863.70000	5.306	23.40191	25.97075	25.21007
NI	60	239.90000	76808.10000	5.852	224.34137	251.57023	243.89930
SB	121	24.26000	6118.40000	5.622	22.75339	25.40394	24.63889
SE	78	24.83000	874.25400	4.708	23.50313	25.68648	25.31793
SN	120	23.87000	8606.62000	3.566	23.02076	24.72312	23.86991
SR	88	23.69000	6588.61000	10.388	21.53863	26.37513	23.17024
ZN	66	240.70000	24601.10000	5.887	228.69209	256.32157	237.08252
BI-2	209	55848.90000	0.00000	1.728	56956.80000	55189.50000	55400.50000
PB	208	25.40000	61155.00000	2.235	24.77888	25.51550	25.89527
TL	203	25.06000	18548.30000	1.730	24.56164	25.26838	25.34987
U	238	25.52000	67710.60000	2.449	24.95042	25.41249	26.18745
SC-1	45	93005.10000	0.00000	0.453	92522.20000	93195.30000	93297.70000
GE-1	72	101908.00000	0.00000	1.102	100782.00000	101912.00000	103029.00000
GE-2	72	54218.40000	0.00000	1.177	54566.30000	53482.00000	54606.80000
GE-3	72	743298.00000	0.00000	1.518	750645.00000	748936.00000	730314.00000
TB-2	159	80327.60000	0.00000	0.514	80566.10000	80566.00000	79850.90000

Run Name: 1810805E03 Date/Time: 04/18/2018 13:57:00
Tube Number: 43
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	22874.00000	0.00000	0.166	22890.50000	22830.70000	22900.80000
SC-3	45	1021430	0	1.349	1036280	1009030	1018990
AL	27	4.79900	106.67200	41.363	3.39437	3.93230	7.06962
B	11	5.75700	14535.20000	1.395	5.76725	5.67252	5.83217
BE	9	0.01761	65.33400	49.035	0.01220	0.02757	0.01306
CA	44	20.25000	73.33630	32.049	23.94028	24.05773	12.75784
CR	52	0.09368	363.35400	50.128	0.05056	0.14372	0.08677
FE	57	11.09000	236.68000	60.568	18.83065	7.72091	6.73438
K	39	-34.56000	11028.40000	-48.553	-15.49882	-47.09487	-41.10729
MG	24	2.96000	193.34200	39.662	2.19706	4.31133	2.37093
MN	55	-0.05907	166.67400	-209.582	-0.20013	0.03172	-0.00882
NA	23	-22.82000	22633.60000	-13.273	-23.07530	-19.68338	-25.72689
TI	47	-0.47970	6.66692	-102.356	-0.19735	-0.19512	-1.04669
V	51	0.07180	93.33810	224.791	0.04142	-0.07229	0.24627
IN-1	115	87437.90000	0.00000	0.259	87244.10000	87686.50000	87383.00000
IN-2	115	21592.00000	0.00000	3.573	20706.60000	22120.00000	21949.40000
AG	107	0.00601	26.66770	160.300	0.00098	0.01710	-0.00007
AS	75	-0.74490	220.67000	-62.331	-0.23219	-1.13688	-0.86583
BA	137	0.07869	33.33490	414.538	0.16612	-0.28227	0.35224
CD	111	-0.05234	37.33370	-83.378	-0.00255	-0.07058	-0.08390
CO	59	0.42550	2897.10000	64.630	0.17078	0.38879	0.71702
CU	63	0.02973	123.33900	124.252	0.05573	-0.01255	0.04602
MO	98	0.06176	73.33640	68.847	0.08173	0.09063	0.01293
NI	60	0.00951	40.00180	869.058	-0.08428	0.07159	0.04121
SB	121	0.23420	73.33670	23.992	0.19065	0.21440	0.29764
SE	78	0.03151	2.66668	161.060	0.08905	-0.00688	0.01237
SN	120	-0.07355	96.67050	-38.545	-0.08155	-0.04207	-0.09705
SR	88	-0.06057	13.33380	-92.339	-0.07136	-0.11032	-0.00004
ZN	66	0.20010	36.66860	122.839	-0.06049	0.42784	0.23289
BI-2	209	54978.40000	0.00000	1.554	55671.80000	55239.40000	54024.10000
PB	208	-0.11020	913.38500	-51.769	-0.15046	-0.04495	-0.13533
TL	203	0.02255	83.33790	146.430	0.05771	0.01775	-0.00781
U	238	-0.00498	50.00290	-128.247	0.00239	-0.00884	-0.00850
SC-1	45	92074.30000	0.00000	0.569	92159.00000	91513.50000	92550.50000
GE-1	72	98802.00000	0.00000	2.239	96280.80000	100421.00000	99704.60000
GE-2	72	53900.70000	0.00000	1.173	54626.90000	53602.80000	53472.40000
GE-3	72	737259.00000	0.00000	1.980	752466.00000	723346.00000	735966.00000
TB-2	159	78559.20000	0.00000	1.168	78764.10000	77556.80000	79356.80000

Instrument Tuning Report (ICPMS #11332)

File Name:	default.tun
File Path:	C:\elandata\Tuning
Sample Date/Time:	4/18/2018 4:47:00AM
Number of Replicates:	6
Method File:	c:\elandata\Method\dailytune.mth

Measured Mass must be within +/- 0.1 amu of the Exact Mass.

Measured Peak Width must be > or = to 0.640 AND < or = to 0.660.

Analyte	EXACT MASS	MEAS. MASS	Mass DAC	RES. DAC	MEAS. PK. WIDTH
Ce	140.000	140.050	0	0	0.650
In	115.000	115.000	0	0	0.650
Li	6.000	6.050	0	0	0.650
Mg	24.000	24.000	0	0	0.650
Pb	208.000	208.050	0	0	0.600
Rh	103.000	103.000	0	0	0.650
U	238.000	238.000	0	0	0.600

Summary: Verify that the RSD is less than 5 for the following masses.

Mass	Meas. Intens. Mean	Meas. Intens. RSD
140.000	35994.000	1.400
115.000	37119.000	1.090
6.000	21312.000	2.480
24.000	20523.000	1.490
208.000	14114.000	1.870
103.000	36526.000	2.000
238.000	26990.000	1.920

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18D24A00.E05

Run Name: 1811401E05

Analyst: 1242

Reviewed By:	Reviewed Date
Choon Y Tian	04/24/2018 06:22
Deborah A Krady	05/09/2018 12:09
Nina C Haller	05/10/2018 13:23

Verified By:	Verified Date
Deborah A Krady	05/11/2018 07:55
Nina C Haller	06/14/2018 12:10
Parker D Lindstrom	04/25/2018 15:36

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-2		45
	BE	9
	B	11
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208
	U	238

Run Name: 1811401E05 Date/Time: 04/24/2018 3:25:04
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	4.00000	0.000	-0.00118	0.00116	0.00002
B	11	0.00000	1410.73000	0.000	0.01901	-0.03441	0.01540
NA	23	0.00000	26826.84000	0.000	3.92231	-7.83233	3.91002
MG	24	0.00000	3.33000	0.000	0.19596	-0.09798	-0.09798
AL	27	0.00000	40.00000	0.000	5.14659	-4.95519	-0.19140
K	39	0.00000	2646.97000	0.000	-22.84406	27.44719	-4.60313
CA	44	0.00000	13.33000	0.000	6.70825	6.37475	-13.08299
SC-1	45	16184.52000	0.00000	0.000	15777.43000	16047.85000	16728.29000
SC-2	45	2519224	0	0.000	2537802	2521661	2498207
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	0.000	-0.01515	0.00805	0.00710
CR	52	0.00000	320.02000	0.000	0.04608	0.01986	-0.06594
MN	55	0.00000	3.33000	0.000	-0.01757	0.03513	-0.01757
FE	57	0.00000	13.33000	0.000	-0.26641	-0.28190	0.54832
CO	59	0.00000	3.33000	0.000	-0.00278	0.00556	-0.00278
NI	60	0.00000	36.67000	0.000	0.09639	-0.07427	-0.02212
CU	63	0.00000	166.68000	0.000	0.00823	0.01226	-0.02049
ZN	66	0.00000	23.33000	0.000	0.08089	-0.14112	0.06022
GE-1	72	47033.41000	0.00000	0.000	45007.66000	47253.77000	48838.79000
GE-2	72	1942280	0	0.000	1918753	1960749	1947338
AS	75	0.00000	2.67000	0.000	-0.01305	0.06948	-0.05643
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	40.00000	0.000	0.00175	0.03114	-0.03289
AG	107	0.00000	3.33000	0.000	-0.00242	0.00485	-0.00242
CD	111	0.00000	1.33000	0.000	-0.01118	0.02235	-0.01118
IN-1	115	15376.67000	0.00000	0.000	14875.79000	15376.93000	15877.29000
SN	120	0.00000	103.34000	0.000	-0.14576	0.16752	-0.02176
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
BA	137	0.00000	20.00000	0.000	-0.29368	0.00630	0.28738
TB-1	159	93375.96000	0.00000	0.000	89400.14000	94145.99000	96581.74000
TL	203	0.00000	6.67000	0.000	-0.00676	0.01352	-0.00676
PB	208	0.00000	36.67000	0.000	0.00453	-0.00525	0.00072
BI-1	209	72308.44000	0.00000	0.000	70889.41000	71862.95000	74172.97000
U	238	0.00000	10.00000	0.000	0.00515	-0.00257	-0.00257

Run Name: 1811401E05 Date/Time: 04/24/2018 3:27:48
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16304.53000	0.00000	0.000	15557.34000	15927.48000	17428.77000
SC-2	45	2607113	0	0.000	2695787	2589518	2536034
AL	27	10000.00000	81715.01000	5.700	10130.88940	10494.67161	9374.43899
B	11	1000.00000	1023793.64000	3.200	984.93281	978.24809	1036.81910
BE	9	100.00000	177784.74000	1.100	98.71901	100.45199	100.82901
CA	44	10000.00000	10456.75000	1.100	10095.91074	9880.63101	10023.45825
CR	52	1000.00000	612469.78000	5.200	1034.43854	1025.24622	940.31524
FE	57	10000.00000	112228.36000	4.700	10226.70148	10312.39139	9460.90713
K	39	10000.00000	160370.40000	4.100	10375.80844	10066.25139	9557.94017
MG	24	10000.00000	350945.67000	4.400	10334.37925	10160.57970	9505.04105
MN	55	1000.00000	192467.14000	4.400	1026.97211	1024.10316	948.92473
NA	23	10000.00000	789263.55000	5.000	10324.93301	10249.12808	9425.93892
TI	47	1000.00000	8985.89000	8.400	1076.72670	1013.05216	910.22114
V	51	1000.00000	437331.76000	4.200	1020.57543	1027.86805	951.55652
IN-1	115	15563.04000	0.00000	0.000	15516.97000	15166.65000	16005.50000
AG	107	100.00000	139102.15000	2.200	98.33246	102.51263	99.15491
AS	75	1000.00000	48209.32000	3.000	985.42154	1034.93544	979.64303
BA	137	1000.00000	67502.36000	1.000	989.06913	1002.44934	1008.48153
CD	111	100.00000	12071.60000	3.400	97.40156	103.81869	98.77974
CO	59	1000.00000	1212335.19000	1.700	988.30827	1019.09159	992.60014
CU	63	1000.00000	1073004.07000	2.800	988.12249	1031.58736	980.29015
MO	98	100.00000	64243.13000	3.000	97.13148	103.06520	99.80333
NI	60	1000.00000	369768.60000	1.500	1000.17514	1015.32333	984.50153
SB	121	100.00000	21911.46000	4.800	99.17389	105.16686	95.65925
SN	120	100.00000	28521.36000	1.600	100.06849	101.59264	98.33887
SR	88	100.00000	14236.34000	1.400	100.48307	101.14477	98.37216
ZN	66	1000.00000	95803.86000	1.700	980.85815	1013.63590	1005.50596
BI-1	209	73469.52000	0.00000	0.000	73640.80000	72424.27000	74343.48000
PB	208	100.00000	320978.84000	1.100	99.01349	101.11635	99.87016
TL	203	100.00000	100795.76000	1.100	99.65835	101.22055	99.12111
U	238	100.00000	402622.91000	1.500	98.67281	101.64824	99.67895
GE-1	72	46672.55000	0.00000	0.000	45389.27000	46842.98000	47785.39000
GE-2	72	2009856	0	0.000	2044815	2005239	1979514
TB-1	159	94472.38000	0.00000	0.000	94046.72000	94298.35000	95072.07000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:30:33
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16207.87000	0.00000	0.000	15377.29000	16347.83000	16898.48000
SC-2	45	2533711	0	0.000	2606689	2513330	2481113
AL	27	6.64800	93.34000	64.200	10.59307	7.23145	2.11853
B	11	51.76000	52873.62000	0.600	52.10377	51.72458	51.45050
BE	9	0.00400	11.33000	65.500	0.00104	0.00584	0.00594
CA	44	-6.92400	6.67000	0.000	-13.08299	-13.08299	5.39529
CR	52	0.40200	560.04000	91.400	0.82160	0.13992	0.24403
FE	57	5.42000	73.33000	65.000	8.24591	1.47584	6.53863
K	39	4.33800	2706.99000	520.100	25.93292	6.16403	-19.08257
MG	24	4.27500	146.67000	132.900	10.76000	1.88784	0.17646
MN	55	0.49300	96.67000	45.700	0.75240	0.34453	0.38278
NA	23	2.84900	27047.25000	600.300	12.81809	12.62749	-16.89869
TI	47	0.35700	3.33000	173.200	0.00000	0.00000	1.07016
V	51	0.35500	156.67000	99.200	0.75945	0.12146	0.18309
IN-1	115	15065.59000	0.00000	0.000	15396.43000	14814.85000	14985.49000
AG	107	0.06400	90.00000	98.000	0.13562	0.02778	0.02743
AS	75	0.52400	27.33000	70.400	0.94958	0.29207	0.33117
BA	137	0.15800	30.00000	413.200	0.90488	-0.13800	-0.29368
CD	111	0.04500	6.67000	129.600	0.10602	0.04102	-0.01118
CO	59	0.36500	436.70000	88.400	0.73087	0.24846	0.11712
CU	63	0.49900	686.73000	72.600	0.91626	0.27318	0.30699
MO	98	0.07600	86.67000	31.200	0.07825	0.05109	0.09830
NI	60	0.26900	133.34000	57.600	0.44503	0.15401	0.20729
SB	121	0.63000	133.34000	63.400	0.36875	0.43112	1.08926
SN	120	0.08500	123.34000	309.100	-0.18879	0.33561	0.10840
SR	88	0.14500	20.00000	86.700	0.21295	0.22131	0.00000
ZN	66	0.36300	56.67000	42.500	0.49194	0.19191	0.40377
BI-1	209	72997.04000	0.00000	0.000	69471.95000	74443.29000	75075.87000
PB	208	0.02900	126.67000	115.200	0.06746	0.00683	0.01277
TL	203	0.06000	66.67000	39.800	0.08767	0.05198	0.04178
U	238	0.02500	110.01000	31.500	0.03420	0.01949	0.02173
GE-1	72	45512.64000	0.00000	0.000	43795.05000	46010.38000	46732.49000
GE-2	72	1980210	0	0.000	2024531	1964740	1951358
TB-1	159	93456.90000	0.00000	0.000	92279.19000	93815.03000	94276.47000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:33:20
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16187.74000	0.00000	0.000	16548.17000	15827.33000	16187.71000
SC-2	45	2504024	0	0.000	2488592	2482779	2540702
AL	27	-0.85100	33.33000	0.000	-0.13955	0.07978	-2.49375
B	11	27.48000	28391.36000	2.800	27.65718	28.13859	26.64467
BE	9	0.00400	10.00000	87.000	0.00474	0.00003	0.00575
CA	44	-3.21900	10.00000	0.000	-13.08299	16.51027	-13.08299
CR	52	-0.06700	280.02000	0.000	-0.04485	-0.10687	-0.05055
FE	57	1.78900	33.33000	73.200	3.19646	1.56336	0.60622
K	39	13.77700	2863.69000	124.300	9.03946	-0.47647	32.76850
MG	24	0.84300	33.33000	133.800	2.14405	0.19504	0.18851
MN	55	0.06900	16.67000	41.700	0.08464	0.03586	0.08692
NA	23	1.15200	26903.52000	1068.600	-12.48085	11.43814	4.49729
TI	47	0.38100	3.33000	173.200	0.00000	1.14258	0.00000
V	51	0.01600	13.33000	171.200	0.02984	0.03189	-0.01515
IN-1	115	15700.69000	0.00000	0.000	15587.55000	16077.28000	15437.25000
AG	107	0.00500	10.00000	150.400	-0.00242	0.01149	0.00482
AS	75	-0.00100	2.67000	0.000	-0.01503	-0.05643	0.06899
BA	137	-0.29400	0.00000	0.000	-0.29368	-0.29368	-0.29368
CD	111	0.00500	2.00000	318.500	0.02190	0.00486	-0.01118
CO	59	0.02100	30.00000	111.400	-0.00278	0.04512	0.02216
CU	63	0.06200	236.68000	127.600	0.00997	0.02290	0.15249
MO	98	-0.02200	26.67000	0.000	-0.01678	-0.03327	-0.01632
NI	60	-0.00300	36.67000	0.000	0.03335	-0.02311	-0.01985
SB	121	0.12100	26.67000	116.100	0.00000	0.08828	0.27583
SN	120	-0.16900	56.67000	0.000	-0.15585	-0.16227	-0.18926
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.27100	50.00000	139.100	0.69135	0.15747	-0.03628
BI-1	209	72987.65000	0.00000	0.000	71118.84000	73439.32000	74404.80000
PB	208	0.00300	46.67000	117.700	0.00125	0.00708	0.00069
TL	203	0.01000	16.67000	156.100	-0.00676	0.02301	0.01283
U	238	0.00200	20.00000	100.200	-0.00001	0.00240	0.00478
GE-1	72	46976.14000	0.00000	0.000	45548.73000	47754.88000	47624.80000
GE-2	72	1958049	0	0.000	1924129	1990087	1959933
TB-1	159	94090.10000	0.00000	0.000	93362.50000	92880.31000	96027.48000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:36:03
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16037.76000	0.00000	0.000	15727.54000	16338.01000	16047.72000
SC-2	45	2552344	0	0.000	2522793	2593397	2540842
AL	27	5268.92300	42446.46000	2.200	5396.41844	5232.45220	5177.89895
B	11	520.51600	522598.48000	0.900	520.48751	515.96322	525.09831
BE	9	52.39800	91201.53000	2.400	53.44775	51.01445	52.73301
CA	44	4938.89300	5087.59000	1.300	4871.85971	4995.25276	4949.56631
CR	52	526.94800	318261.87000	0.300	528.47435	525.10568	527.26371
FE	57	5171.64600	57205.38000	3.700	5039.63500	5081.96488	5393.33814
K	39	5197.77600	83373.77000	1.100	5253.90355	5142.66740	5196.75610
MG	24	5258.91100	181788.99000	3.200	5432.92979	5094.34801	5249.45623
MN	55	515.75300	97808.78000	2.500	512.03331	505.07570	530.15090
NA	23	5040.47300	405178.99000	1.700	5129.31791	4959.15913	5032.94270
TI	47	511.35800	4534.08000	7.000	500.26148	482.67385	551.13933
V	51	535.81800	230860.05000	0.700	538.32399	531.51806	537.61213
IN-1	115	15353.52000	0.00000	0.000	15300.91000	15358.57000	15401.08000
AG	107	53.43800	73359.42000	3.200	52.31568	52.56591	55.43332
AS	75	534.98300	25457.52000	0.400	532.23754	536.42416	536.28745
BA	137	522.67800	34817.05000	4.300	497.18781	531.88124	538.96636
CD	111	52.51800	6257.84000	1.700	51.85212	52.14413	53.55746
CO	59	521.73600	624155.85000	1.000	517.40375	520.31110	527.49356
CU	63	529.81300	561173.69000	0.900	524.75466	533.39964	531.28579
MO	98	52.61600	33376.27000	2.600	51.44545	52.24851	54.15381
NI	60	532.11100	194184.13000	1.700	523.29118	541.70616	531.33688
SB	121	53.29200	11531.05000	6.000	49.83081	53.89790	56.14706
SN	120	48.40700	13679.27000	7.600	46.56361	45.99533	52.66250
SR	88	54.48800	7655.28000	3.800	52.15454	55.23464	56.07560
ZN	66	530.28600	50134.78000	4.300	509.51750	555.03508	526.30477
BI-1	209	72536.22000	0.00000	0.000	72055.14000	72474.67000	73078.86000
PB	208	51.91300	164552.02000	1.700	50.87142	52.51380	52.35400
TL	203	52.26400	52021.81000	1.100	51.88850	52.00151	52.90336
U	238	51.30500	203968.26000	0.700	50.96038	51.67382	51.27976
GE-1	72	46842.69000	0.00000	0.000	46812.44000	46873.07000	46842.56000
GE-2	72	2030348	0	0.000	2007827	2028808	2054410
TB-1	159	92772.40000	0.00000	0.000	91030.52000	93140.54000	94146.13000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:38:48
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16267.88000	0.00000	0.000	15637.31000	15917.62000	17248.72000
SC-2	45	2518511	0	0.000	2553497	2517146	2484890
AL	27	-1.30700	30.00000	0.000	-1.13308	-2.45199	-0.33513
B	11	42.10800	43018.80000	1.200	42.41603	42.37311	41.53529
BE	9	0.00300	10.00000	168.000	0.00341	0.00932	-0.00233
CA	44	-9.75500	3.33000	0.000	-3.09870	-13.08299	-13.08299
CR	52	0.15300	413.36000	80.000	0.27219	0.15792	0.02804
FE	57	2.44500	40.00000	79.400	4.37919	2.45891	0.49600
K	39	5.79100	2750.32000	313.700	-9.65415	25.80949	1.21912
MG	24	2.76700	100.00000	15.300	3.16468	2.81558	2.32187
MN	55	0.13200	30.00000	132.800	-0.01757	0.08869	0.32562
NA	23	-9.89300	26165.93000	0.000	8.35961	-11.44816	-26.58942
TI	47	0.69900	6.67000	173.200	0.00000	0.00000	2.09686
V	51	0.11400	56.67000	27.300	0.12767	0.07839	0.13591
IN-1	115	15583.24000	0.00000	0.000	14685.52000	15666.79000	16397.42000
AG	107	0.02500	36.67000	92.200	0.05089	0.01185	0.01122
AS	75	0.27300	16.00000	43.000	0.16330	0.39670	0.25843
BA	137	-0.18900	6.67000	0.000	0.02043	-0.29368	-0.29368
CD	111	0.01100	2.67000	97.700	0.02393	0.00528	0.00454
CO	59	0.06100	80.00000	90.500	0.01470	0.04637	0.12246
CU	63	0.26500	446.69000	75.300	0.49422	0.13870	0.16088
MO	98	0.04500	70.00000	63.800	0.01909	0.07580	0.04004
NI	60	0.05800	60.00000	125.600	-0.01567	0.05953	0.12934
SB	121	0.39900	86.67000	44.400	0.57989	0.22649	0.38952
SN	120	0.04500	116.67000	328.300	0.15539	-0.12197	0.10086
SR	88	0.02200	3.33000	173.200	0.00000	0.00000	0.06665
ZN	66	0.35400	56.67000	98.800	0.52770	0.58290	-0.04860
BI-1	209	71510.53000	0.00000	0.000	70646.86000	71188.65000	72696.09000
PB	208	0.01700	90.00000	93.700	0.01754	0.03340	0.00098
TL	203	0.01400	20.00000	150.900	-0.00676	0.03419	0.01329
U	238	0.01700	76.67000	44.200	0.01034	0.01537	0.02504
GE-1	72	45673.04000	0.00000	0.000	44897.69000	45449.26000	46672.16000
GE-2	72	1945216	0	0.000	1965173	1952624	1917850
TB-1	159	91515.85000	0.00000	0.000	89591.87000	92196.37000	92759.32000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:41:32
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16207.83000	0.00000	0.000	16888.57000	16448.04000	15286.89000
SC-2	45	2498288	0	0.000	2511740	2495829	2487294
AL	27	207.34700	1726.81000	2.200	209.75910	202.18255	210.09801
B	11	123.65200	122591.80000	1.100	123.32981	125.08944	122.53670
BE	9	1.06200	1813.43000	6.100	0.99704	1.12561	1.06346
CA	44	499.37700	530.03000	18.500	393.69627	565.97681	538.45827
CR	52	4.22800	2890.35000	10.900	3.75450	4.25706	4.67267
FE	57	206.44500	2313.59000	9.500	185.18705	210.45912	223.68888
K	39	434.39500	9439.40000	13.600	383.28384	420.67707	499.22556
MG	24	213.29700	7435.16000	9.100	200.95920	203.24483	235.68843
MN	55	4.43600	853.39000	0.700	4.43916	4.40428	4.46351
NA	23	395.66800	56727.86000	17.200	340.66342	374.49694	471.84279
TI	47	27.26200	243.35000	45.100	14.99208	39.58295	27.20967
V	51	0.95600	423.36000	8.200	1.04280	0.89008	0.93449
IN-1	115	15331.78000	0.00000	0.000	15032.53000	15247.03000	15715.79000
AG	107	1.05500	1450.12000	22.100	0.83100	1.29619	1.03678
AS	75	4.01800	193.33000	14.200	4.66607	3.58376	3.80371
BA	137	3.77200	270.01000	13.100	4.30928	3.33691	3.66889
CD	111	1.07200	128.67000	22.000	0.96622	1.34131	0.90733
CO	59	1.13900	1363.44000	5.500	1.14137	1.20105	1.07528
CU	63	4.59700	5024.22000	5.200	4.86889	4.49376	4.42881
MO	98	1.17000	780.05000	5.300	1.14578	1.24002	1.12404
NI	60	4.20900	1570.14000	1.800	4.29373	4.14909	4.18296
SB	121	2.44600	530.03000	21.400	1.93567	2.42047	2.98052
SN	120	4.15900	1266.76000	7.000	4.07712	4.48146	3.91876
SR	88	2.16000	303.35000	11.300	1.89035	2.36559	2.22542
ZN	66	30.15000	2867.01000	3.300	30.56135	30.87378	29.01495
BI-1	209	74470.96000	0.00000	0.000	73409.01000	72555.45000	77448.41000
PB	208	1.97900	6480.81000	3.200	1.94994	1.93518	2.05165
TL	203	1.01000	1036.75000	8.300	1.07557	1.03809	0.91559
U	238	1.07200	4377.49000	8.000	1.09378	1.14440	0.97767
GE-1	72	46749.01000	0.00000	0.000	45889.73000	47865.58000	46491.73000
GE-2	72	1966379	0	0.000	1954162	1977237	1967737
TB-1	159	93734.78000	0.00000	0.000	91602.62000	94448.53000	95153.20000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:44:18
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15043.42000	0.00000	0.000	14626.53000	14956.65000	15547.07000
SC-2	45	2449103	0	0.000	2443388	2465163	2438758
AL	27	102743.68400	775581.03000	1.700	104080.74433	103391.61019	100758.69847
B	11	28.18800	28455.45000	1.600	28.50445	28.38307	27.67572
BE	9	0.00900	19.33000	77.500	0.00847	0.01670	0.00248
CA	44	267389.07000	257551.69000	2.100	270190.13332	270913.76434	261063.31238
CR	52	1.15500	950.07000	18.500	1.39962	1.00167	1.06331
FE	57	256978.65600	2665295.84000	0.700	256910.45404	258745.00133	255280.51356
K	39	108069.90400	1577043.00000	1.600	109144.00768	108971.94586	106093.75989
MG	24	102390.36700	3319907.87000	2.200	103448.43617	103941.44530	99781.21950
MN	55	4.37400	780.05000	11.700	4.95496	3.99705	4.17094
NA	23	256757.69400	18113297.65000	1.500	258919.38485	259132.26614	252221.43094
TI	47	2104.27600	17492.43000	5.500	2234.10427	2014.15727	2064.56773
V	51	0.09100	43.33000	64.700	0.08664	0.03462	0.15244
IN-1	115	14632.85000	0.00000	0.000	13885.92000	15166.45000	14846.19000
AG	107	0.42700	563.37000	30.000	0.40036	0.56549	0.31403
AS	75	0.31000	16.67000	43.600	0.22243	0.24144	0.46522
BA	137	0.91400	76.67000	4.500	0.86899	0.92290	0.94914
CD	111	0.15800	19.33000	36.200	0.10020	0.15878	0.21454
CO	59	1.03900	1183.42000	18.500	1.21736	1.06356	0.83583
CU	63	0.97100	1140.08000	6.700	0.91814	0.95163	1.04392
MO	98	2125.29600	1282705.24000	4.900	2134.11405	2017.43359	2224.34085
NI	60	0.89000	346.68000	21.200	0.71663	1.09151	0.86212
SB	121	1.13300	233.34000	3.400	1.17552	1.12306	1.09948
SN	120	-0.19400	46.67000	0.000	-0.28774	-0.15000	-0.14532
SR	88	10.92600	1463.46000	11.700	11.09847	12.10756	9.57069
ZN	66	1.91100	193.34000	18.900	2.32757	1.68169	1.72329
BI-1	209	66264.76000	0.00000	0.000	64651.67000	65344.42000	68798.18000
PB	208	0.20500	626.69000	5.900	0.21853	0.19507	0.20133
TL	203	0.14600	140.01000	38.300	0.13981	0.09363	0.20514
U	238	0.05300	203.34000	17.400	0.04258	0.05886	0.05843
GE-1	72	44065.71000	0.00000	0.000	42090.96000	45007.80000	45098.37000
GE-2	72	1896125	0	0.000	1889915	1883483	1914976
TB-1	159	89578.31000	0.00000	0.000	87360.07000	90355.05000	91019.81000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:47:02
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15026.74000	0.00000	0.000	14606.34000	15787.36000	14686.52000
SC-2	45	2531807	0	0.000	2574649	2506373	2514399
AL	27	101496.58900	764979.94000	3.200	101565.61435	98218.96245	104705.19098
B	11	20.50400	21781.96000	0.700	20.35224	20.50980	20.64882
BE	9	0.00500	12.67000	67.900	0.00109	0.00703	0.00700
CA	44	264277.38200	254166.14000	4.200	260912.42792	255330.60722	276589.11041
CR	52	208.62800	118127.78000	4.000	209.26000	200.04034	216.58464
FE	57	254321.54800	2632547.77000	4.400	252302.70342	244340.38929	266321.55089
K	39	107817.82100	1570329.51000	4.300	108563.48639	102848.21083	112041.76721
MG	24	103576.60100	3353000.68000	3.900	103137.38768	99728.85689	107863.55701
MN	55	212.98000	37820.55000	2.900	213.43505	206.54012	218.96487
NA	23	254947.48000	17953493.90000	3.800	255899.36147	244783.46606	264159.61267
TI	47	2054.57100	17052.01000	7.000	1994.31884	1950.56104	2218.83180
V	51	215.27400	86812.22000	4.100	219.27767	205.10154	221.44223
IN-1	115	14265.51000	0.00000	0.000	13915.60000	15065.92000	13815.01000
AG	107	50.98500	64952.65000	3.800	51.18236	48.96518	52.80618
AS	75	108.42800	4790.01000	7.100	103.75063	104.22305	117.31024
BA	137	0.56600	53.33000	88.100	1.03225	0.62484	0.04022
CD	111	100.84400	11152.99000	3.300	100.54887	97.71553	104.26839
CO	59	205.81100	228409.36000	5.300	205.94780	194.92298	216.56312
CU	63	206.59300	203097.42000	5.500	205.06111	195.97432	218.74289
MO	98	2130.53000	1251558.89000	8.300	2081.39264	1983.19067	2327.00734
NI	60	200.47400	67899.74000	5.300	198.46114	191.01056	211.95088
SB	121	1.05400	213.34000	29.400	0.71403	1.31897	1.13018
SN	120	0.00400	96.67000	2215.800	0.10558	-0.00319	-0.08918
SR	88	10.57300	1380.11000	9.000	9.58249	10.66461	11.47188
ZN	66	95.20200	8365.61000	5.600	96.34025	89.39805	99.86736
BI-1	209	65656.26000	0.00000	0.000	63999.75000	65434.84000	67534.19000
PB	208	0.18800	573.36000	21.200	0.14218	0.21577	0.20532
TL	203	0.18200	170.01000	8.000	0.18686	0.19375	0.16593
U	238	0.04600	176.68000	24.300	0.03449	0.04762	0.05687
GE-1	72	44413.36000	0.00000	0.000	42692.50000	44807.30000	45740.29000
GE-2	72	1933716	0	0.000	1929712	1937825	1933612
TB-1	159	88496.35000	0.00000	0.000	85248.22000	88597.18000	91643.66000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:49:47
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16000.97000	0.00000	0.000	15897.53000	15837.65000	16267.72000
SC-2	45	2512601	0	0.000	2552798	2523327	2461678
AL	27	22.83700	223.34000	29.700	15.09700	27.75202	25.66268
B	11	13.60000	14811.21000	1.900	13.32443	13.82427	13.65079
BE	9	0.00000	4.00000	17806.900	-0.00233	0.00232	0.00005
CA	44	68.34700	83.33000	18.100	75.30476	75.63895	54.09865
CR	52	-0.06700	276.68000	0.000	-0.07530	-0.00646	-0.11825
FE	57	57.03900	643.37000	24.600	41.69389	60.17266	69.24980
K	39	20.95000	2940.35000	65.400	36.44681	10.49438	15.90884
MG	24	20.10400	696.71000	8.900	18.86527	22.15865	19.28900
MN	55	0.12300	26.67000	64.500	0.03563	0.14262	0.19037
NA	23	68.86900	31674.51000	16.400	69.40847	79.91813	57.28146
TI	47	1.89000	16.67000	35.700	2.27508	2.28368	1.11165
V	51	0.01600	13.33000	335.300	-0.01515	0.07886	-0.01515
IN-1	115	14762.71000	0.00000	0.000	13754.55000	15137.14000	15396.45000
AG	107	0.03600	50.00000	59.800	0.05450	0.01235	0.04116
AS	75	0.00300	2.67000	981.700	0.03741	-0.01380	-0.01451
BA	137	-0.29400	0.00000	0.000	-0.29368	-0.29368	-0.29368
CD	111	0.02400	4.00000	72.300	0.02631	0.03991	0.00557
CO	59	0.06300	76.67000	38.300	0.04387	0.09049	0.05558
CU	63	0.10600	263.35000	104.300	0.23259	0.04368	0.04030
MO	98	1.48500	946.73000	19.000	1.34623	1.29751	1.80982
NI	60	0.04900	53.33000	225.600	-0.00985	0.17637	-0.01964
SB	121	0.03300	6.67000	86.900	0.05160	0.04688	0.00000
SN	120	-0.19400	46.67000	0.000	-0.20737	-0.25809	-0.11767
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.11700	33.33000	207.700	-0.01052	0.39725	-0.03572
BI-1	209	72544.86000	0.00000	0.000	70897.01000	71480.56000	75257.00000
PB	208	0.00400	50.00000	200.800	0.01098	0.00759	-0.00554
TL	203	-0.00300	3.33000	0.000	0.00352	-0.00676	-0.00676
U	238	-0.00300	0.00000	0.000	-0.00257	-0.00257	-0.00257
GE-1	72	45820.13000	0.00000	0.000	44687.29000	45529.58000	47243.51000
GE-2	72	1973305	0	0.000	1977692	1977137	1965087
TB-1	159	93251.88000	0.00000	0.000	92075.19000	92849.05000	94831.39000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:52:33
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15540.47000	0.00000	0.000	15837.44000	14906.56000	15877.42000
SC-2	45	2573691	0	0.000	2583311	2522017	2615745
AL	27	2555.32700	19938.23000	7.200	2426.73478	2764.59062	2474.65465
B	11	252.82700	256693.88000	0.900	251.30884	255.35073	251.82293
BE	9	25.58800	44916.52000	1.000	25.44909	25.87310	25.44143
CA	44	2401.77600	2403.60000	0.700	2382.72704	2406.61302	2415.98817
CR	52	267.27200	156451.64000	3.500	260.93874	277.86098	263.01514
FE	57	2569.90300	27535.10000	3.300	2475.09794	2639.48494	2595.12472
K	39	2644.39400	42303.43000	5.800	2519.45817	2814.36123	2599.36304
MG	24	2560.37800	85732.21000	4.200	2448.52338	2660.83208	2571.77946
MN	55	258.54200	47477.33000	3.500	252.13393	268.78958	254.70244
NA	23	2615.44100	215903.27000	6.300	2462.15873	2788.66281	2595.50030
TI	47	259.83300	2236.89000	11.200	248.95053	237.79889	292.75068
V	51	268.43900	112001.88000	3.600	259.05785	278.29726	267.96206
IN-1	115	14684.54000	0.00000	0.000	13981.13000	15103.78000	14968.72000
AG	107	26.81400	35170.09000	3.800	27.89187	25.88512	26.66513
AS	75	268.19600	12199.59000	3.100	274.55274	258.80135	271.23404
BA	137	270.29600	17216.12000	2.500	277.98938	264.94353	267.95566
CD	111	25.73100	2934.94000	4.800	24.88065	25.16411	27.14809
CO	59	271.01500	309853.47000	2.900	279.02985	263.46517	270.55061
CU	63	268.74600	272054.67000	3.600	279.77572	262.28982	264.17207
MO	98	27.00000	16381.69000	4.000	28.22253	26.64987	26.12890
NI	60	267.00300	93118.23000	3.700	277.21557	257.66895	266.12450
SB	121	26.28800	5431.07000	5.600	27.97392	25.33062	25.55908
SN	120	25.20800	6854.98000	2.500	25.91597	24.94165	24.76755
SR	88	27.32600	3667.20000	4.400	28.69269	26.84950	26.43450
ZN	66	265.07500	23950.19000	4.700	277.69894	252.83856	264.68697
BI-1	209	73814.51000	0.00000	0.000	73148.73000	74986.00000	73308.79000
PB	208	25.25600	81474.61000	1.000	25.23964	25.01230	25.51614
TL	203	25.34700	25678.26000	0.800	25.35356	25.55030	25.13856
U	238	25.35100	102548.52000	2.300	25.28560	24.80259	25.96389
GE-1	72	46501.75000	0.00000	0.000	45168.75000	46652.01000	47684.49000
GE-2	72	1984842	0	0.000	1999090	1977153	1978283
TB-1	159	91409.10000	0.00000	0.000	89090.22000	89953.76000	95183.32000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:55:17
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16171.19000	0.00000	0.000	15967.66000	16698.50000	15847.40000
SC-2	45	2525155	0	0.000	2452838	2498106	2624521
AL	27	6.06000	90.01000	64.200	3.77981	10.55594	3.84484
B	11	24.13900	25295.65000	5.900	24.83208	25.09399	22.49004
BE	9	0.00300	9.33000	142.800	0.00126	0.00823	-0.00010
CA	44	9.21100	23.33000	151.900	-3.30526	24.31616	6.62086
CR	52	-0.10600	256.68000	0.000	-0.14387	-0.03327	-0.14096
FE	57	2.14300	36.67000	99.400	3.35577	-0.31712	3.39024
K	39	6.28900	2740.30000	148.200	2.57152	-0.59973	16.89662
MG	24	1.73500	63.33000	49.900	2.22556	0.73521	2.24320
MN	55	0.10500	23.33000	77.700	0.19427	0.08372	0.03580
NA	23	-2.27600	26619.80000	0.000	-2.61724	-9.79044	5.58088
TI	47	2.22400	20.00000	86.700	0.00000	3.24892	3.42341
V	51	0.07000	36.67000	127.700	0.00816	0.02943	0.17275
IN-1	115	15436.61000	0.00000	0.000	14075.69000	15866.97000	16367.16000
AG	107	0.00700	13.33000	236.000	-0.00242	-0.00242	0.02491
AS	75	0.13800	9.33000	27.700	0.12697	0.10626	0.18015
BA	137	-0.24500	3.33000	0.000	-0.29368	-0.14832	-0.29368
CD	111	0.00000	1.33000	2915.700	0.00714	0.00507	-0.01118
CO	59	0.05300	66.67000	46.900	0.05193	0.07811	0.02858
CU	63	0.10800	276.68000	94.500	0.21339	0.09840	0.01085
MO	98	0.07700	93.34000	158.000	-0.06342	0.15043	0.14389
NI	60	0.05200	56.67000	64.100	0.01795	0.08402	0.05263
SB	121	0.12600	26.67000	62.800	0.20167	0.13418	0.04336
SN	120	-0.13100	66.67000	0.000	-0.17211	-0.05604	-0.16589
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	-0.03200	20.00000	0.000	0.09952	-0.24678	0.05103
BI-1	209	72954.00000	0.00000	0.000	71199.47000	72384.44000	75278.08000
PB	208	0.00300	46.67000	152.900	0.00445	-0.00213	0.00662
TL	203	0.02600	33.33000	54.300	0.02395	0.01338	0.04165
U	238	0.00600	36.67000	106.000	0.00255	0.00247	0.01439
GE-1	72	47163.46000	0.00000	0.000	43995.22000	48175.98000	49319.18000
GE-2	72	1967552	0	0.000	2002018	1960235	1940402
TB-1	159	95129.67000	0.00000	0.000	91270.88000	96622.06000	97496.07000

Run Name: 1811401E05 Date/Time: 04/24/2018 3:58:02
Tube Number: 13 Batch: 181061063907A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15203.56000	0.00000	0.000	15136.93000	15146.86000	15326.90000
SC-2	45	2478713	0	0.000	2506106	2433301	2496732
AL	27	4.67800	73.34000	114.300	9.52381	5.56713	-1.05567
B	11	15.94500	16889.60000	3.000	15.92427	16.43715	15.47447
BE	9	0.00200	8.00000	129.200	0.00001	0.00128	0.00589
CA	44	0.58000	13.33000	2041.100	-13.08299	7.53216	7.29000
CR	52	0.03900	323.35000	77.300	0.07032	0.03483	0.01089
FE	57	1.04600	23.33000	211.900	3.60501	-0.22815	-0.23939
K	39	28.58100	2907.01000	48.700	12.65283	38.43680	34.65486
MG	24	0.30800	13.33000	114.200	0.51478	-0.09798	0.50719
MN	55	0.09300	20.00000	58.700	0.09417	0.03826	0.14796
NA	23	39.27200	27991.94000	26.800	47.02653	43.51490	27.27428
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02600	16.67000	198.200	0.08321	0.00943	-0.01515
IN-1	115	14442.50000	0.00000	0.000	14045.63000	14305.51000	14976.36000
AG	107	0.04200	56.67000	88.700	0.02943	0.08359	0.01251
AS	75	0.00400	2.67000	766.400	0.03547	-0.01132	-0.01334
BA	137	-0.24200	3.33000	0.000	-0.29368	-0.29368	-0.13968
CD	111	0.00700	2.00000	8.800	0.00718	0.00684	0.00604
CO	59	0.00600	10.00000	251.100	-0.00278	0.02413	-0.00278
CU	63	0.26000	416.69000	19.100	0.23483	0.22770	0.31695
MO	98	-0.01800	26.67000	0.000	0.02285	-0.02954	-0.04724
NI	60	0.00600	36.67000	996.200	0.07813	-0.01338	-0.04544
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SN	120	-0.02500	90.00000	0.000	0.02321	-0.06042	-0.03757
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.09300	30.00000	131.600	0.21594	0.09395	-0.02980
BI-1	209	68989.88000	0.00000	0.000	67884.52000	68417.16000	70667.96000
PB	208	0.03200	130.00000	43.800	0.03222	0.04526	0.01753
TL	203	-0.00700	0.00000	0.000	-0.00676	-0.00676	-0.00676
U	238	0.00200	16.67000	216.400	0.00280	0.00543	-0.00257
GE-1	72	43524.29000	0.00000	0.000	43464.59000	43644.41000	43463.88000
GE-2	72	1914818	0	0.000	1892723	1907661	1944069
TB-1	159	87873.10000	0.00000	0.000	85259.09000	88304.51000	90055.69000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:01:07
Tube Number: 14 Batch: 181061063907A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16895.10000	0.00000	0.000	16778.32000	16738.31000	17168.66000
SC-2	45	2561578	0	0.000	2561523	2600279	2522933
AL	27	2037.39900	17318.73000	1.200	2063.34474	2031.35329	2017.49964
B	11	268.81300	271567.64000	0.400	269.99809	267.58153	268.85805
BE	9	4.38300	7662.27000	0.900	4.36348	4.42701	4.35816
CA	44	3911.55000	4247.34000	4.700	4081.91355	3718.53457	3934.20335
CR	52	52.54900	33732.49000	2.100	52.24333	53.78557	51.61862
FE	57	1054.28500	12291.32000	4.900	1035.62110	1112.65452	1014.57868
K	39	10186.13700	169485.28000	1.600	10056.67531	10370.62943	10131.10530
MG	24	2008.43800	73165.87000	1.500	1988.42834	2042.68109	1994.20583
MN	55	53.51900	10693.61000	3.300	52.92212	55.52458	52.11151
NA	23	10059.45900	824129.60000	0.400	10031.63011	10109.69092	10037.05662
TI	47	242.02700	2263.58000	12.200	217.74278	233.39100	274.94748
V	51	51.77400	23509.36000	1.900	50.64262	52.32195	52.35642
IN-1	115	16764.17000	0.00000	0.000	16026.98000	17036.53000	17228.99000
AG	107	50.82000	76124.73000	2.900	52.32913	49.41910	50.71234
AS	75	10.46900	546.68000	5.200	10.49398	11.00524	9.90775
BA	137	47.30800	3453.83000	7.000	51.08888	45.74152	45.09395
CD	111	5.33100	693.35000	8.900	5.87549	5.08788	5.03092
CO	59	251.80600	328779.33000	1.700	256.52895	248.23653	250.65235
CU	63	51.42700	59633.57000	1.800	51.48575	52.34563	50.44966
MO	98	50.44300	34909.34000	3.200	52.30872	49.53355	49.48708
NI	60	49.63400	19801.66000	4.400	50.62885	51.13390	47.13855
SB	121	5.87200	1386.78000	3.000	5.97821	5.66566	5.97316
SN	120	49.09400	15130.67000	3.600	51.14002	48.02257	48.11835
SR	88	39.29600	6027.92000	5.600	38.80865	41.70760	37.37055
ZN	66	516.63000	53310.20000	2.100	523.73342	521.76549	504.39015
BI-1	209	76955.60000	0.00000	0.000	76161.95000	76393.04000	78311.82000
PB	208	15.56300	52359.47000	0.300	15.62172	15.51727	15.54947
TL	203	2.10200	2226.91000	7.500	2.21373	1.92074	2.17140
U	238	0.00200	20.00000	220.500	0.00701	-0.00257	0.00209
GE-1	72	47701.68000	0.00000	0.000	46801.84000	47614.80000	48688.40000
GE-2	72	2020204	0	0.000	2030017	2047502	1983095
TB-1	159	97519.87000	0.00000	0.000	96077.34000	96168.82000	100313.46000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:03:52
Tube Number: 15 Batch: 181061063907A
Sample Number: **9558715** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15727.41000	0.00000	0.000	15267.03000	15417.03000	16498.18000
SC-2	45	2575345	0	0.000	2656382	2584647	2485005
AL	27	0.10900	40.00000	2359.700	-2.34532	2.79826	-0.12496
B	11	31.15100	32907.96000	1.000	30.87175	31.10041	31.47988
BE	9	0.02200	43.33000	17.900	0.02527	0.02376	0.01773
CA	44	75974.46600	76531.52000	0.700	76136.96659	76401.11353	75385.31802
CR	52	-0.02100	296.68000	0.000	0.01298	0.11119	-0.18840
FE	57	2423.10600	26290.07000	1.700	2384.02755	2464.43207	2420.85691
K	39	2965.58100	47753.50000	1.700	2926.91847	3024.28434	2945.54124
MG	24	31856.36700	1079380.92000	3.100	32359.61663	32492.24177	30717.24263
MN	55	3079.88600	572375.45000	2.600	3136.67024	3115.51965	2987.46717
NA	23	4132.47900	330154.07000	4.300	4282.83532	4179.60852	3934.99384
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09600	46.67000	32.000	0.13113	0.08142	0.07509
IN-1	115	15853.19000	0.00000	0.000	15886.76000	15126.64000	16546.17000
AG	107	0.00900	16.67000	47.000	0.01166	0.01236	0.00434
AS	75	1.37500	70.00000	21.900	1.60913	1.47950	1.03569
BA	137	273.66900	18814.40000	3.700	266.40614	285.14811	269.45200
CD	111	0.03900	6.00000	158.800	-0.01118	0.10811	0.01998
CO	59	11.55800	14279.59000	1.900	11.30424	11.68553	11.68422
CU	63	0.22400	416.69000	29.500	0.15285	0.28348	0.23688
MO	98	0.18600	163.34000	31.400	0.11965	0.20896	0.22953
NI	60	11.01200	4177.32000	12.200	12.16451	11.33387	9.53864
SB	121	0.04500	10.00000	98.400	0.08934	0.04692	0.00000
SN	120	-0.11200	73.33000	0.000	-0.19428	-0.04084	-0.10188
SR	88	86.52900	12541.64000	3.900	83.47917	90.20520	85.90228
ZN	66	11.66400	1156.75000	16.000	11.20869	13.71787	10.06477
BI-1	209	73332.69000	0.00000	0.000	71762.38000	73469.67000	74766.02000
PB	208	0.00700	60.00000	83.500	0.00114	0.00707	0.01287
TL	203	0.03600	43.33000	13.700	0.03387	0.03292	0.04198
U	238	0.43300	1750.16000	2.300	0.42971	0.42463	0.44407
GE-1	72	47294.16000	0.00000	0.000	47393.82000	46642.80000	47845.85000
GE-2	72	1983341	0	0.000	2017852	1995252	1936919
TB-1	159	96617.56000	0.00000	0.000	95422.97000	96962.77000	97466.93000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:06:37
Tube Number: 16 Batch: 181061063907A
Sample Number: **9558715** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16371.37000	0.00000	0.000	15447.17000	16077.64000	17589.30000
SC-2	45	2583697	0	0.000	2649311	2513216	2588564
AL	27	184.50900	1560.12000	6.300	183.35678	173.49649	196.67235
B	11	125.07000	128184.06000	1.600	123.44156	127.35716	124.41116
BE	9	1.06400	1877.44000	7.500	1.00381	1.15515	1.03422
CA	44	69945.07400	73187.85000	5.200	73431.17134	70259.46636	66144.58416
CR	52	3.80300	2663.63000	7.100	3.72370	4.10269	3.58400
FE	57	2489.31200	28039.36000	5.900	2629.83440	2502.25128	2335.85048
K	39	3002.93900	50160.14000	7.500	3103.20455	3160.92138	2744.69117
MG	24	29768.10800	1048939.20000	4.300	30430.55844	30576.09970	28297.66634
MN	55	2788.62900	538814.81000	4.700	2853.45814	2873.88256	2638.54710
NA	23	4183.33100	347083.04000	6.200	4359.02777	4304.06311	3886.90128
TI	47	28.71300	256.68000	40.600	42.14766	21.37223	22.61984
V	51	0.96500	426.69000	23.500	1.11743	1.07299	0.70438
IN-1	115	15378.45000	0.00000	0.000	15215.04000	15655.73000	15264.58000
AG	107	1.03900	1430.13000	9.800	1.15188	0.95503	1.00888
AS	75	4.82100	232.67000	16.800	3.88834	5.26132	5.31303
BA	137	265.81900	17743.43000	7.900	246.46499	262.82099	288.17187
CD	111	0.89400	108.00000	5.200	0.93756	0.84499	0.90070
CO	59	12.31000	14749.87000	2.700	12.36045	11.95503	12.61491
CU	63	3.98700	4397.36000	5.000	3.85530	4.21482	3.88974
MO	98	1.22200	816.72000	26.700	0.86045	1.31436	1.49257
NI	60	15.47400	5694.49000	4.200	15.30680	16.19039	14.92595
SB	121	1.86500	403.36000	28.500	1.67923	1.45064	2.46418
SN	120	4.25400	1296.77000	12.900	4.88755	3.90023	3.97370
SR	88	85.72400	12064.61000	3.300	82.49226	87.29554	87.38302
ZN	66	41.92900	3990.61000	3.700	42.04814	40.33846	43.40138
BI-1	209	74765.28000	0.00000	0.000	73238.34000	75116.90000	75940.60000
PB	208	2.09000	6864.21000	2.500	2.05143	2.14921	2.06847
TL	203	0.98100	1013.41000	9.700	0.93876	1.08980	0.91470
U	238	10.62200	43538.32000	2.700	10.64295	10.33036	10.89288
GE-1	72	46732.53000	0.00000	0.000	45048.10000	47885.33000	47264.15000
GE-2	72	2018190	0	0.000	2044678	2015412	1994480
TB-1	159	94392.35000	0.00000	0.000	92779.45000	93203.14000	97194.46000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:09:22
Tube Number: 17 Batch: 181061063907A
Sample Number: **9558718** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16381.35000	0.00000	0.000	16107.74000	16458.13000	16578.18000
SC-2	45	2545073	0	0.000	2579610	2597900	2457709
AL	27	5.17900	83.33000	13.000	4.93944	5.93928	4.65866
B	11	25.74300	27116.81000	2.500	25.72250	25.12061	26.38570
BE	9	0.01600	32.67000	26.900	0.02154	0.01347	0.01437
CA	44	73418.67200	77043.48000	0.700	73650.47659	73786.98597	72818.55447
CR	52	-0.01200	316.68000	0.000	0.03433	0.13543	-0.20606
FE	57	2342.24700	26477.03000	3.000	2262.22486	2367.60177	2396.91435
K	39	2835.70100	47686.66000	0.900	2813.51926	2830.48920	2863.09462
MG	24	30498.07000	1077383.79000	1.100	30116.33342	30576.03673	30801.83859
MN	55	2909.82200	563768.66000	1.700	2859.66625	2910.39554	2959.40302
NA	23	3887.56700	325461.84000	1.100	3891.10035	3926.65068	3844.95105
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.08300	43.33000	41.500	0.07728	0.12055	0.05221
IN-1	115	15487.08000	0.00000	0.000	14936.88000	15927.38000	15596.97000
AG	107	0.02100	33.33000	36.100	0.01255	0.02567	0.02626
AS	75	1.32300	66.00000	17.600	1.58542	1.24020	1.14354
BA	137	274.81100	18473.94000	0.700	274.70647	276.88768	272.83895
CD	111	0.01600	3.33000	54.500	0.00608	0.02119	0.02188
CO	59	11.80000	14239.52000	1.000	11.92861	11.75128	11.71999
CU	63	0.13300	310.02000	31.800	0.15316	0.16117	0.08425
MO	98	0.09800	103.34000	49.700	0.06638	0.07352	0.15413
NI	60	11.09600	4127.31000	10.200	10.54928	12.39743	10.34126
SB	121	0.09100	20.00000	47.500	0.04751	0.13367	0.09100
SN	120	-0.14000	63.33000	0.000	0.03660	-0.16034	-0.29639
SR	88	84.29300	11937.83000	4.800	85.41866	79.76482	87.69407
ZN	66	11.62200	1133.42000	9.500	10.63185	12.81188	11.42163
BI-1	209	74168.83000	0.00000	0.000	74302.31000	74202.49000	74001.68000
PB	208	0.00500	53.33000	97.000	0.00994	0.00072	0.00385
TL	203	0.02300	30.00000	43.100	0.03248	0.01288	0.02279
U	238	0.41900	1713.49000	7.500	0.41739	0.38844	0.45116
GE-1	72	46515.07000	0.00000	0.000	45117.97000	47013.31000	47413.94000
GE-2	72	1970030	0	0.000	1997003	2004070	1909016
TB-1	159	94767.66000	0.00000	0.000	93827.22000	95655.25000	94820.50000

Run Name: 1811401E05
Tube Number: 18
Sample Number: **9558716**

Date/Time: 04/24/2018 4:12:08
Batch: 181061063907A
Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16024.28000	0.00000	0.000	16047.70000	16227.75000	15797.40000
SC-2	45	2629278	0	0.000	2694350	2606244	2587241
AL	27	2028.77400	16354.42000	2.800	2059.33101	1962.71241	2064.27717
B	11	284.89600	295251.06000	2.100	278.05780	286.97142	289.65919
BE	9	4.43700	7959.73000	1.200	4.38560	4.49567	4.42891
CA	44	80538.22900	82658.35000	3.300	78068.27993	80208.95279	83337.45311
CR	52	53.01500	32276.25000	1.500	52.33931	52.78666	53.91913
FE	57	3370.83200	37249.30000	2.600	3313.60080	3328.78393	3470.10997
K	39	13229.28500	207953.06000	2.900	13016.16710	12993.94281	13677.74389
MG	24	34654.00700	1197207.69000	4.100	33096.68097	35011.73980	35853.60129
MN	55	3038.06000	575549.50000	3.100	2975.99825	2991.65531	3146.52601
NA	23	15038.10900	1154948.08000	5.800	14288.94045	14818.88070	16006.50455
TI	47	269.33700	2386.91000	3.500	279.49780	267.48270	261.02900
V	51	52.54800	22631.53000	1.100	52.67015	53.05016	51.92422
IN-1	115	14954.20000	0.00000	0.000	14620.94000	15268.23000	14973.43000
AG	107	52.51400	70209.16000	0.500	52.47526	52.28810	52.77720
AS	75	12.94700	602.02000	6.800	13.89237	12.15954	12.78818
BA	137	351.34700	22796.24000	2.800	350.30318	341.94707	361.79210
CD	111	5.27900	614.02000	7.400	4.94295	5.18884	5.70438
CO	59	278.50000	324451.71000	2.800	277.78329	271.18055	286.53742
CU	63	53.74100	55587.13000	1.000	53.41820	53.44250	54.36186
MO	98	53.16800	32845.23000	1.300	53.01110	52.54164	53.95089
NI	60	65.58200	23349.29000	5.700	62.22071	64.87746	69.64673
SB	121	6.37600	1346.77000	18.100	5.04829	7.15856	6.92025
SN	120	52.32200	14383.34000	6.700	52.83151	48.56663	55.56892
SR	88	135.21100	18490.34000	4.400	142.03125	131.78234	131.81859
ZN	66	544.03900	50101.07000	1.000	537.90361	547.31720	546.89747
BI-1	209	74960.33000	0.00000	0.000	74947.18000	72897.44000	77036.38000
PB	208	15.35500	50316.54000	0.800	15.28447	15.49464	15.28669
TL	203	2.09300	2156.90000	5.600	2.08438	2.21318	1.98036
U	238	0.41500	1713.50000	4.400	0.43570	0.40546	0.40248
GE-1	72	46896.31000	0.00000	0.000	44938.39000	47403.80000	48346.75000
GE-2	72	2009769	0	0.000	2050039	1988790	1990478
TB-1	159	95632.32000	0.00000	0.000	93795.31000	96218.09000	96883.57000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:14:52
Tube Number: 19 Batch: 181061063907A
Sample Number: **9558717** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15997.62000	0.00000	0.000	15697.16000	15987.68000	16308.02000
SC-2	45	2652639	0	0.000	2691933	2625005	2640980
AL	27	2137.31600	17198.68000	1.800	2180.41007	2121.98953	2109.54864
B	11	293.50800	306920.37000	0.400	292.37284	293.45941	294.69183
BE	9	4.30000	7784.99000	0.900	4.34269	4.27131	4.28654
CA	44	81054.45300	83063.70000	1.600	81991.12587	79598.72459	81573.50908
CR	52	53.20200	32339.87000	1.500	52.57019	54.08713	52.94945
FE	57	3446.25500	38024.38000	1.300	3436.74490	3496.06803	3405.95344
K	39	13131.42400	206125.98000	0.800	13244.21945	13053.17208	13096.87956
MG	24	34433.89600	1187684.85000	0.700	34666.27483	34456.84377	34178.56974
MN	55	3109.64400	588231.32000	0.800	3116.92070	3129.25939	3082.75301
NA	23	15039.48000	1153339.41000	1.600	15272.09523	15053.86056	14792.48390
TI	47	265.74800	2353.58000	10.600	251.17186	247.74447	298.32771
V	51	53.04200	22801.84000	3.300	54.46420	51.11969	53.54345
IN-1	115	16016.49000	0.00000	0.000	15773.53000	16020.51000	16255.44000
AG	107	50.41200	72184.84000	0.600	50.73444	50.42212	50.08041
AS	75	11.79600	588.68000	6.700	10.90899	12.06933	12.41021
BA	137	326.25400	22682.81000	2.700	316.48293	328.33111	333.94693
CD	111	5.14100	640.02000	8.100	5.52885	4.70323	5.19018
CO	59	259.77300	324184.39000	0.200	259.80369	259.28687	260.22778
CU	63	50.22100	55660.50000	2.300	49.02376	50.30821	51.33228
MO	98	50.24700	33249.19000	0.600	50.14872	50.58680	50.00406
NI	60	60.11800	22918.63000	1.200	60.87221	59.43268	60.04982
SB	121	6.49800	1466.79000	6.600	6.61430	6.02497	6.85475
SN	120	50.37800	14843.58000	0.900	50.61126	50.68080	49.84220
SR	88	123.79100	18143.33000	3.900	125.06270	118.49138	127.81811
ZN	66	516.40400	50920.27000	2.500	530.81366	505.03571	513.36319
BI-1	209	73864.67000	0.00000	0.000	72826.39000	73841.63000	74926.00000
PB	208	15.44200	49865.46000	0.500	15.52542	15.39556	15.40516
TL	203	2.22300	2260.24000	2.700	2.15527	2.26376	2.25038
U	238	0.40600	1653.48000	6.800	0.40836	0.43237	0.37736
GE-1	72	46712.15000	0.00000	0.000	47173.53000	46240.59000	46722.33000
GE-2	72	2037919	0	0.000	2103329	2004630	2005799
TB-1	159	96604.90000	0.00000	0.000	94739.33000	97165.84000	97909.53000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:17:37
Tube Number: 20 Batch: 181061063907A
Sample Number: **9558715** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16394.61000	0.00000	0.000	15777.37000	16187.61000	17218.84000
SC-2	45	2582370	0	0.000	2613214	2547341	2586554
AL	27	6.80000	96.67000	58.500	10.19880	2.42917	7.77317
B	11	31.42000	33275.24000	0.800	31.13957	31.62281	31.49689
BE	9	0.00700	16.00000	44.500	0.00440	0.00573	0.01014
CA	44	14252.64200	14970.05000	3.300	14797.34176	13949.25043	14011.33435
CR	52	-0.09500	266.68000	0.000	-0.10555	-0.09981	-0.07905
FE	57	461.38900	5227.62000	3.200	475.98528	446.86859	461.31353
K	39	544.75700	11320.55000	6.000	550.46655	574.34921	509.45425
MG	24	5979.96600	211207.17000	3.100	6093.89950	6080.56908	5765.43028
MN	55	568.92200	110272.89000	1.100	569.59039	574.80330	562.37199
NA	23	741.16400	84029.96000	3.700	764.10868	748.49709	710.88534
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02400	16.67000	210.300	0.07922	-0.01515	0.00647
IN-1	115	15819.85000	0.00000	0.000	15687.40000	16015.70000	15756.45000
AG	107	0.00900	16.67000	88.100	0.01897	0.00456	0.00467
AS	75	0.14700	10.00000	26.500	0.14927	0.18535	0.10741
BA	137	51.93800	3583.86000	5.500	51.46574	55.01387	49.33527
CD	111	0.01100	2.67000	89.900	0.00526	0.00492	0.02154
CO	59	2.31000	2850.37000	2.500	2.24741	2.32147	2.35971
CU	63	1.25700	1543.46000	3.400	1.22910	1.23689	1.30585
MO	98	0.05900	80.00000	94.300	0.07562	-0.00289	0.10577
NI	60	2.32000	910.06000	6.800	2.50054	2.23702	2.22204
SB	121	0.06000	13.33000	173.200	0.18095	0.00000	0.00000
SN	120	0.01400	110.00000	2397.400	-0.26189	-0.09311	0.39789
SR	88	16.94300	2453.61000	7.600	16.65234	18.35901	15.81631
ZN	66	3.18600	333.35000	48.000	4.93220	2.08668	2.53765
BI-1	209	76075.29000	0.00000	0.000	74352.54000	75660.72000	78212.60000
PB	208	0.00600	56.67000	211.700	0.01917	0.00048	-0.00284
TL	203	-0.00400	3.33000	0.000	-0.00676	0.00287	-0.00676
U	238	0.06100	263.35000	7.600	0.06123	0.06496	0.05575
GE-1	72	46227.78000	0.00000	0.000	45098.59000	45980.26000	47604.50000
GE-2	72	2025223	0	0.000	2036435	2008814	2030421
TB-1	159	94389.70000	0.00000	0.000	90838.91000	95276.20000	97053.99000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:20:20
Tube Number: 21 Batch: 181061063907A
Sample Number: **9558712** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15924.14000	0.00000	0.000	15917.43000	16448.05000	15406.94000
SC-2	45	2609652	0	0.000	2684403	2601588	2542966
AL	27	5.00600	80.00000	43.500	5.05774	7.15720	2.80333
B	11	25.59500	27659.58000	1.300	25.22552	25.66387	25.89689
BE	9	0.00400	11.33000	36.000	0.00313	0.00331	0.00574
CA	44	98904.77900	100826.02000	4.000	95847.61070	97490.53786	103376.18889
CR	52	0.44800	583.37000	23.800	0.55872	0.34593	0.43940
FE	57	25.77500	296.68000	11.600	27.06186	27.91410	22.34882
K	39	3788.24100	61032.86000	1.200	3795.38659	3740.01349	3829.32185
MG	24	39084.77700	1340579.25000	5.000	38887.81656	37241.91312	41124.60159
MN	55	30.31200	5704.46000	5.500	30.16459	28.72787	32.04333
NA	23	5478.51600	434696.58000	4.600	5353.15173	5313.18403	5769.21252
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.19100	86.67000	77.700	0.17192	0.05274	0.34726
IN-1	115	15179.31000	0.00000	0.000	14486.14000	15176.21000	15875.59000
AG	107	0.00500	10.00000	152.400	0.01302	-0.00242	0.00462
AS	75	0.05400	5.33000	176.500	-0.05643	0.11367	0.10618
BA	137	214.59500	14146.46000	3.400	208.68342	222.60660	212.49469
CD	111	0.01700	3.33000	61.600	0.02441	0.02279	0.00506
CO	59	0.08200	100.01000	36.300	0.10354	0.04796	0.09424
CU	63	0.10400	273.35000	44.500	0.14282	0.05272	0.11653
MO	98	0.04200	66.67000	187.600	0.07042	-0.04745	0.10452
NI	60	2.13500	806.71000	3.000	2.16436	2.06129	2.17809
SB	121	0.04600	10.00000	101.500	0.00000	0.09352	0.04470
SN	120	-0.05300	86.67000	0.000	0.04915	-0.22229	0.01280
SR	88	56.95400	7908.79000	2.200	56.59838	58.34851	55.91469
ZN	66	0.68200	86.67000	72.600	0.42619	1.25220	0.36729
BI-1	209	75107.24000	0.00000	0.000	73520.06000	74252.57000	77549.08000
PB	208	0.00100	40.00000	1907.800	0.01640	-0.00854	-0.00572
TL	203	0.00000	6.67000	0.000	-0.00676	0.01287	-0.00676
U	238	0.22900	953.40000	7.800	0.24314	0.23580	0.20920
GE-1	72	46909.61000	0.00000	0.000	46451.83000	46531.98000	47745.02000
GE-2	72	2012267	0	0.000	2035700	2010289	1990813
TB-1	159	95723.01000	0.00000	0.000	94629.83000	95736.11000	96803.10000

Run Name: 1811401E05
Tube Number: 22
Sample Number: **9558713**

Date/Time: 04/24/2018 4:23:04
Batch: 181061063907A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16911.73000	0.00000	0.000	17258.65000	16267.81000	17208.72000
SC-2	45	2625335	0	0.000	2664421	2606256	2605328
AL	27	66.88600	613.38000	82.300	128.95978	47.70882	23.98844
B	11	18.77000	20802.17000	0.800	18.81395	18.60175	18.89294
BE	9	0.30600	551.34000	9.900	0.28271	0.29470	0.33983
CA	44	7059.74000	7655.26000	11.400	6157.92551	7311.50856	7709.78543
CR	52	0.09500	396.69000	123.700	0.04312	0.01247	0.23013
FE	57	46.68600	556.70000	27.800	54.28035	54.09257	31.68450
K	39	3544.82200	60809.07000	2.900	3503.56962	3662.99464	3467.90319
MG	24	4679.38500	170473.28000	4.500	4522.64099	4919.14257	4596.37193
MN	55	408.69300	81675.26000	3.900	392.74477	424.29136	409.04309
NA	23	4766.71500	405313.43000	4.400	4715.95761	4997.95238	4586.23492
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.10400	53.33000	93.100	0.02799	0.21365	0.07137
IN-1	115	16207.82000	0.00000	0.000	16638.47000	15457.32000	16527.68000
AG	107	0.01900	30.00000	79.100	0.00430	0.03376	0.01788
AS	75	0.08700	7.33000	101.200	0.13751	-0.01468	0.13881
BA	137	123.52600	8695.93000	2.300	121.31008	126.72234	122.54554
CD	111	0.29900	39.33000	32.700	0.37613	0.18894	0.33194
CO	59	1.02700	1296.77000	10.500	0.93065	1.14314	1.00682
CU	63	4.98600	5744.48000	4.000	4.99405	5.18119	4.78274
MO	98	-0.00700	36.67000	0.000	-0.04885	0.04633	-0.01943
NI	60	3.75000	1480.12000	19.000	4.14767	4.17294	2.92846
SB	121	0.04300	10.00000	100.200	0.04265	0.00000	0.08588
SN	120	-0.15000	63.33000	0.000	-0.16916	-0.01239	-0.26721
SR	88	36.54000	5414.40000	8.700	32.98024	37.55175	39.08879
ZN	66	28.85400	2897.02000	7.600	27.58766	31.39685	27.57763
BI-1	209	77592.60000	0.00000	0.000	79810.19000	76513.96000	76453.64000
PB	208	0.21500	766.70000	12.900	0.20637	0.24567	0.19198
TL	203	0.08400	96.67000	24.300	0.07543	0.10756	0.06951
U	238	0.01500	73.33000	11.000	0.01343	0.01650	0.01413
GE-1	72	48162.57000	0.00000	0.000	48456.46000	47644.90000	48386.36000
GE-2	72	2068132	0	0.000	2065323	2094750	2044321
TB-1	159	99478.21000	0.00000	0.000	96892.38000	101138.05000	100404.21000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:25:49
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15917.56000	0.00000	0.000	15477.36000	15176.71000	17098.60000
SC-2	45	2600164	0	0.000	2599681	2599299	2601512
AL	27	2639.75700	21096.09000	4.200	2628.91000	2756.03032	2534.33119
B	11	265.49700	272283.50000	0.400	265.27502	264.45302	266.76403
BE	9	27.19000	48224.63000	2.300	27.74482	26.49464	27.32977
CA	44	2435.72400	2490.26000	9.200	2680.56479	2384.08545	2242.52245
CR	52	263.69300	157907.79000	4.800	267.69861	273.82493	249.55495
FE	57	2566.09600	28105.91000	5.800	2620.91383	2679.57649	2397.79701
K	39	2607.15400	42707.23000	6.000	2630.11247	2751.00102	2440.34779
MG	24	2596.11700	88964.24000	3.800	2615.96793	2683.15665	2489.22722
MN	55	256.85200	48235.29000	6.000	256.13347	272.65996	241.76370
NA	23	2589.42500	219085.96000	4.500	2636.98455	2674.41542	2456.87556
TI	47	269.67900	2360.24000	15.100	262.92012	313.41640	232.70157
V	51	265.18800	113132.60000	5.800	268.95714	278.33313	248.27348
IN-1	115	15983.24000	0.00000	0.000	15513.30000	15942.53000	16493.90000
AG	107	25.78600	36840.21000	1.700	26.27822	25.47926	25.59937
AS	75	250.69200	12417.72000	1.100	253.88335	249.03077	249.16222
BA	137	253.61500	17589.65000	4.200	251.53983	265.03627	244.26934
CD	111	24.20300	3001.62000	3.700	25.14772	23.35456	24.10526
CO	59	255.59600	318170.76000	2.500	262.93753	252.04146	251.80789
CU	63	251.99600	277811.56000	2.700	259.91313	248.52370	247.55035
MO	98	25.74000	17008.97000	2.900	26.58563	25.45740	25.17810
NI	60	251.83400	95608.28000	4.600	264.98878	247.10358	243.40850
SB	121	25.24300	5684.51000	2.400	25.76026	24.57686	25.39093
SN	120	23.38500	6928.38000	3.900	24.27378	23.43849	22.44338
SR	88	25.70600	3757.22000	5.300	27.12724	24.40849	25.58079
ZN	66	251.69600	24781.30000	3.300	258.21783	242.27719	254.59251
BI-1	209	76373.61000	0.00000	0.000	76133.28000	74443.54000	78544.01000
PB	208	25.25200	84260.78000	2.100	25.38875	25.69712	24.67030
TL	203	25.03200	26229.01000	2.400	24.56071	25.70659	24.82905
U	238	25.16400	105277.72000	3.600	24.91160	26.16093	24.42067
GE-1	72	47136.88000	0.00000	0.000	46481.35000	47063.72000	47865.58000
GE-2	72	2017036	0	0.000	2012154	2009757	2029198
TB-1	159	96630.82000	0.00000	0.000	97425.09000	94811.21000	97656.16000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:28:33
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15400.34000	0.00000	0.000	15286.97000	15567.11000	15346.95000
SC-2	45	2545459	0	0.000	2604972	2505012	2526393
AL	27	1.09100	46.67000	249.400	0.25775	-1.11584	4.13180
B	11	26.98000	28364.63000	1.600	26.82616	27.47057	26.64199
BE	9	0.00400	10.67000	146.900	0.01005	0.00118	-0.00001
CA	44	0.50800	13.33000	2317.500	7.34322	-13.08299	7.26339
CR	52	0.03700	326.68000	39.500	0.02968	0.05382	0.02749
FE	57	1.96200	33.33000	74.700	3.55799	0.67766	1.64941
K	39	9.05300	2653.63000	130.400	10.19789	20.24251	-3.28137
MG	24	1.00900	36.67000	46.300	1.11552	0.49785	1.41297
MN	55	0.20200	40.00000	27.500	0.25903	0.19973	0.14774
NA	23	-0.82500	25461.63000	0.000	10.92745	-7.72491	-5.67811
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02500	16.67000	56.500	0.03355	0.00876	0.03336
IN-1	115	14982.45000	0.00000	0.000	15656.58000	14766.20000	14524.57000
AG	107	0.02000	30.00000	34.000	0.02615	0.01273	0.02068
AS	75	0.15900	10.00000	46.200	0.19089	0.07469	0.21017
BA	137	-0.18800	6.67000	0.000	-0.29368	-0.29368	0.02391
CD	111	-0.00600	0.67000	0.000	0.00529	-0.01118	-0.01118
CO	59	0.03100	40.00000	23.200	0.03821	0.03198	0.02373
CU	63	0.07300	236.68000	69.000	0.01849	0.11748	0.08212
MO	98	-0.05300	6.67000	0.000	-0.03246	-0.06342	-0.06342
NI	60	-0.00500	33.34000	0.000	-0.10163	-0.07313	0.15915
SB	121	0.15400	33.33000	92.800	0.31729	0.04806	0.09772
SN	120	-0.10500	70.00000	0.000	-0.33162	-0.03289	0.04805
SR	88	0.02500	3.33000	173.200	0.00000	0.07401	0.00000
ZN	66	-0.21000	3.33000	0.000	-0.24678	-0.13675	-0.24678
BI-1	209	74209.55000	0.00000	0.000	73569.97000	74876.16000	74182.52000
PB	208	0.01000	70.00000	51.800	0.00705	0.01589	0.00689
TL	203	0.01900	26.67000	28.400	0.01305	0.02244	0.02271
U	238	0.01000	50.00000	50.900	0.00983	0.00474	0.01464
GE-1	72	47019.80000	0.00000	0.000	46210.60000	48025.86000	46822.94000
GE-2	72	1995891	0	0.000	1999565	2014595	1973513
TB-1	159	94228.19000	0.00000	0.000	92458.54000	93353.90000	96872.14000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:31:17
Tube Number: 25 Batch: 181061063907A
Sample Number: **9558714** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16267.83000	0.00000	0.000	15987.50000	16027.74000	16788.24000
SC-2	45	2607732	0	0.000	2584341	2576888	2661966
AL	27	3.24800	66.67000	113.600	7.50737	1.25982	0.97828
B	11	26.38900	28457.43000	1.800	26.89960	25.96115	26.30756
BE	9	0.00900	20.00000	19.400	0.00788	0.00791	0.01089
CA	44	115348.48000	120181.47000	1.900	114081.33108	117942.15352	114021.95448
CR	52	-0.00200	320.01000	0.000	0.17155	-0.04580	-0.13092
FE	57	1706.15200	19147.58000	2.300	1751.54218	1676.47326	1690.44150
K	39	3863.50600	63534.45000	2.400	3971.74755	3819.82685	3798.94227
MG	24	44130.90200	1547702.06000	2.100	43640.53008	45192.46815	43559.70806
MN	55	414.69400	79760.37000	1.200	417.44581	417.87576	408.76004
NA	23	4685.08600	383935.11000	1.500	4651.72614	4767.71054	4635.82212
TI	47	0.75400	6.67000	173.200	2.26227	0.00000	0.00000
V	51	0.05400	30.00000	86.600	0.05470	0.10097	0.00702
IN-1	115	14592.79000	0.00000	0.000	14335.89000	14716.16000	14726.31000
AG	107	0.01300	20.00000	119.000	-0.00242	0.02798	0.01277
AS	75	1.65700	77.33000	19.400	2.01440	1.39078	1.56508
BA	137	627.80100	39744.51000	3.200	619.50238	650.78071	613.11908
CD	111	0.00000	1.33000	2030.900	-0.01118	0.00634	0.00633
CO	59	6.31100	7178.36000	0.400	6.31033	6.28678	6.33475
CU	63	0.12000	280.02000	32.800	0.07516	0.13813	0.14777
MO	98	0.00900	43.33000	577.500	0.05492	-0.04695	0.01887
NI	60	16.50900	5761.15000	2.900	16.19292	17.05908	16.27526
SB	121	0.09800	20.00000	51.300	0.14851	0.09645	0.04819
SN	120	-0.15400	56.67000	0.000	-0.13745	-0.14337	-0.18070
SR	88	86.98000	11617.68000	5.700	83.73687	84.54588	92.65695
ZN	66	1.27600	136.68000	22.100	1.34006	1.51987	0.96699
BI-1	209	74715.49000	0.00000	0.000	72795.25000	76403.67000	74947.54000
PB	208	0.00700	60.00000	87.500	0.00725	0.01235	0.00060
TL	203	0.04800	56.67000	63.300	0.01326	0.06956	0.06131
U	238	0.99300	4074.06000	6.000	1.04285	0.92658	1.01037
GE-1	72	46819.27000	0.00000	0.000	46220.60000	47033.30000	47203.91000
GE-2	72	2009420	0	0.000	2014681	1974730	2038850
TB-1	159	94137.55000	0.00000	0.000	91643.68000	95576.09000	95192.88000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:34:01
Tube Number: 26 Batch: 181061063907A
Sample Number: **9558719** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15934.22000	0.00000	0.000	15877.53000	15867.60000	16057.52000
SC-2	45	2600139	0	0.000	2550916	2675792	2573708
AL	27	2.55200	60.00000	50.700	2.57338	3.83364	1.24829
B	11	21.98200	23871.10000	2.300	22.19958	21.41551	22.33152
BE	9	0.01600	32.00000	30.100	0.01491	0.02068	0.01134
CA	44	76092.65100	77676.55000	2.400	77354.67460	73966.08569	76957.19147
CR	52	-0.09300	260.01000	0.000	-0.09147	-0.10795	-0.07980
FE	57	2463.73100	27081.26000	0.500	2476.19316	2453.01307	2461.98741
K	39	2880.89100	47081.93000	1.600	2833.24866	2881.47323	2927.95080
MG	24	31910.82100	1096491.83000	1.900	31614.62290	31494.35770	32623.48197
MN	55	3062.48500	577094.37000	2.100	2990.15946	3079.86140	3117.43443
NA	23	4079.19300	330885.85000	1.400	4029.75038	4144.60652	4063.22126
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07800	40.00000	59.900	0.03174	0.12560	0.07757
IN-1	115	15387.17000	0.00000	0.000	15447.02000	15307.09000	15407.39000
AG	107	0.00500	10.00000	150.300	0.00482	-0.00242	0.01209
AS	75	1.44000	71.33000	14.400	1.57298	1.54572	1.20019
BA	137	275.09100	18370.59000	3.100	267.26860	284.05004	273.95325
CD	111	0.00600	2.00000	300.000	0.02220	0.00566	-0.01118
CO	59	11.95800	14339.60000	1.600	11.94207	12.15178	11.78111
CU	63	0.16000	336.68000	30.200	0.19924	0.17408	0.10603
MO	98	0.08400	93.34000	126.100	0.01503	0.20575	0.03096
NI	60	11.20300	4133.96000	2.000	11.26001	10.95153	11.39878
SB	121	0.03100	6.67000	86.600	0.00000	0.04636	0.04606
SN	120	-0.22400	40.00000	0.000	-0.26026	-0.25929	-0.15338
SR	88	87.34600	12298.04000	2.100	89.46590	86.63941	85.93410
ZN	66	12.92500	1246.77000	20.900	12.27131	15.88890	10.61590
BI-1	209	75937.50000	0.00000	0.000	76935.38000	74795.16000	76081.97000
PB	208	0.00700	63.33000	26.800	0.00623	0.00980	0.00643
TL	203	0.04200	50.00000	102.800	0.01219	0.09070	0.02198
U	238	0.44200	1850.19000	7.400	0.41251	0.43658	0.47712
GE-1	72	47040.16000	0.00000	0.000	45840.34000	47214.23000	48065.91000
GE-2	72	1992217	0	0.000	1969429	1995418	2011805
TB-1	159	96886.80000	0.00000	0.000	95907.06000	95917.20000	98836.15000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:36:45
Tube Number: 27 Batch: 181061063907A
Sample Number: **9558720** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16381.34000	0.00000	0.000	16267.99000	16498.01000	16378.01000
SC-2	45	2623453	0	0.000	2624636	2648624	2597099
AL	27	8.01300	106.67000	37.600	8.51713	10.74444	4.77616
B	11	18.10900	20104.75000	2.800	18.42070	17.52417	18.38354
BE	9	0.01400	28.67000	61.800	0.02337	0.00763	0.01009
CA	44	37245.25100	39089.51000	2.100	37562.66524	36365.83966	37807.24787
CR	52	1.10200	1003.40000	16.800	1.12354	0.90722	1.27478
FE	57	746.61100	8445.69000	1.800	761.27872	735.68880	742.86683
K	39	5167.56100	84692.70000	1.500	5107.50625	5141.41916	5253.75762
MG	24	20562.80200	726311.97000	1.400	20483.34846	20331.30759	20873.75078
MN	55	2171.48200	420677.62000	3.100	2105.19230	2171.09533	2238.15874
NA	23	3735.61000	313801.56000	1.900	3720.17612	3672.68215	3813.97116
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.15900	76.67000	30.500	0.21365	0.12022	0.14394
IN-1	115	15350.13000	0.00000	0.000	15356.73000	15327.19000	15366.48000
AG	107	0.06800	96.67000	6.200	0.06313	0.07056	0.07037
AS	75	0.39200	21.33000	77.500	0.19572	0.23831	0.74155
BA	137	152.51800	10170.16000	9.200	136.42006	159.42037	161.71337
CD	111	0.06200	8.67000	31.600	0.07275	0.07291	0.03915
CO	59	4.39000	5254.32000	6.200	4.53623	4.07588	4.55844
CU	63	0.46600	660.04000	36.900	0.26743	0.56155	0.56914
MO	98	-0.02100	26.67000	0.000	-0.03186	-0.01598	-0.01610
NI	60	2.45700	933.40000	14.100	2.61143	2.69900	2.06192
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SN	120	-0.10500	73.33000	0.000	-0.11703	-0.15227	-0.04593
SR	88	205.84000	28911.29000	3.800	201.07468	201.60596	214.84020
ZN	66	4.30500	430.02000	10.900	3.98558	4.84190	4.08863
BI-1	209	77358.26000	0.00000	0.000	76263.05000	76775.58000	79036.15000
PB	208	0.01100	76.67000	57.800	0.01840	0.00627	0.00865
TL	203	0.05900	70.00000	28.400	0.05058	0.07869	0.04857
U	238	0.05400	240.01000	29.900	0.03571	0.06635	0.05976
GE-1	72	46879.65000	0.00000	0.000	45930.43000	46852.62000	47855.89000
GE-2	72	2048491	0	0.000	2061767	2060609	2023097
TB-1	159	97187.59000	0.00000	0.000	95926.40000	98099.87000	97536.49000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:39:29
Tube Number: 28 Batch: 181061063907A
Sample Number: **9558721** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16514.93000	0.00000	0.000	15707.20000	16658.77000	17178.81000
SC-2	45	2633374	0	0.000	2621647	2705491	2572983
AL	27	4.69700	80.00000	43.300	3.92339	7.00399	3.16281
B	11	22.24600	24455.22000	0.500	22.16969	22.19305	22.37394
BE	9	0.00300	9.33000	48.700	0.00214	0.00200	0.00451
CA	44	71611.44500	75721.29000	1.900	73133.56899	71091.86642	70608.89899
CR	52	0.63500	720.05000	37.500	0.65785	0.86146	0.38618
FE	57	23.29800	276.68000	34.500	32.05666	16.22729	21.60990
K	39	3561.53100	59621.42000	3.900	3721.89370	3488.49399	3474.20612
MG	24	23286.48400	828718.69000	2.800	23982.52996	22710.66971	23166.25228
MN	55	0.87800	173.34000	33.800	1.22077	0.69317	0.72088
NA	23	5111.33700	422436.69000	3.100	5279.01489	5084.51926	4970.47833
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.12000	60.00000	20.500	0.12703	0.14125	0.09319
IN-1	115	15383.47000	0.00000	0.000	15326.84000	15457.10000	15366.47000
AG	107	0.00500	10.00000	149.900	0.01217	-0.00242	0.00485
AS	75	0.05500	5.33000	43.200	0.02778	0.06883	0.06956
BA	137	224.91800	15020.48000	3.300	224.78156	217.65789	232.31360
CD	111	0.02200	4.00000	149.800	0.02246	0.05553	-0.01118
CO	59	0.01100	16.67000	156.400	0.03071	0.00552	-0.00278
CU	63	0.12800	303.35000	20.500	0.09796	0.14272	0.14449
MO	98	0.13600	126.67000	33.600	0.11053	0.10905	0.18893
NI	60	0.09900	73.33000	57.200	0.03565	0.11616	0.14483
SB	121	0.01500	3.33000	173.200	0.04630	0.00000	0.00000
SN	120	-0.22400	40.00000	0.000	-0.25943	-0.26033	-0.15282
SR	88	45.81500	6448.10000	3.800	47.07303	43.84753	46.52496
ZN	66	0.66900	86.67000	48.300	0.38928	0.59415	1.02216
BI-1	209	74852.54000	0.00000	0.000	72876.90000	75760.00000	75920.72000
PB	208	0.00600	56.67000	125.200	0.01037	-0.00256	0.00949
TL	203	-0.00400	3.33000	0.000	-0.00676	-0.00676	0.00284
U	238	0.29200	1206.77000	1.000	0.29289	0.29369	0.28825
GE-1	72	45225.14000	0.00000	0.000	43704.39000	45990.38000	45980.64000
GE-2	72	2056043	0	0.000	2070534	2069728	2027869
TB-1	159	96047.77000	0.00000	0.000	92185.64000	97588.01000	98369.67000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:42:12
Tube Number: 29 Batch: 181061063907A
Sample Number: **9558722** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16331.17000	0.00000	0.000	16528.07000	15477.03000	16988.42000
SC-2	45	2636960	0	0.000	2653584	2626009	2631288
AL	27	519.82700	4297.35000	3.500	508.61886	540.91718	509.94500
B	11	14.76900	16756.83000	1.800	15.05032	14.53164	14.72649
BE	9	0.03000	58.67000	23.400	0.03303	0.02224	0.03556
CA	44	17116.13700	17896.06000	5.600	16148.20268	18073.31426	17126.89391
CR	52	2.24300	1703.49000	5.600	2.36819	2.11821	2.24278
FE	57	441.88700	4984.24000	3.400	444.66170	455.25291	425.74624
K	39	1176.14600	21263.16000	3.500	1197.26021	1202.56239	1128.61477
MG	24	19068.71400	670537.54000	4.600	18608.42036	20084.51232	18513.21079
MN	55	10.02600	1930.18000	15.800	10.01156	11.62166	8.44542
NA	23	488.18600	64305.31000	9.300	477.86638	537.67113	449.01987
TI	47	3.43600	30.00000	123.500	0.00000	8.17911	2.12899
V	51	1.02400	456.69000	8.000	1.11092	0.94687	1.01467
IN-1	115	15653.78000	0.00000	0.000	15486.69000	15236.81000	16237.84000
AG	107	0.06400	93.34000	21.700	0.04813	0.07099	0.07336
AS	75	0.04000	4.67000	119.300	-0.01476	0.07064	0.06280
BA	137	763.16100	51804.01000	2.300	749.05668	782.44544	757.98072
CD	111	0.03200	5.33000	101.000	0.00547	0.02266	0.06820
CO	59	0.47600	583.37000	28.000	0.62711	0.37629	0.42406
CU	63	0.99100	1236.76000	13.700	1.06915	1.07023	0.83378
MO	98	0.17400	153.34000	25.100	0.12437	0.20699	0.19032
NI	60	0.56000	246.68000	31.800	0.36033	0.61647	0.70177
SB	121	0.28700	63.33000	40.100	0.41242	0.18630	0.26223
SN	120	-0.09900	76.67000	0.000	-0.18983	-0.07913	-0.02938
SR	88	27.50500	3940.60000	3.500	26.39729	27.97828	28.13866
ZN	66	1.95500	213.35000	30.800	1.95655	1.35287	2.55517
BI-1	209	75214.48000	0.00000	0.000	75891.10000	74031.70000	75720.64000
PB	208	0.65200	2180.16000	3.000	0.66105	0.66556	0.62930
TL	203	0.00600	13.33000	239.100	0.02205	0.00308	-0.00676
U	238	0.12900	540.03000	15.800	0.10562	0.13545	0.14443
GE-1	72	46618.90000	0.00000	0.000	46642.49000	45659.68000	47554.53000
GE-2	72	2023837	0	0.000	2034595	2032425	2004491
TB-1	159	96808.85000	0.00000	0.000	95926.97000	95011.85000	99487.72000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:44:56
Tube Number: 30 Batch: 181061063907A
Sample Number: **9558723** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16481.43000	0.00000	0.000	16508.08000	16197.96000	16738.26000
SC-2	45	2606672	0	0.000	2610148	2598599	2611268
AL	27	7.53500	103.34000	33.000	4.69948	8.57538	9.32886
B	11	32.01000	34193.59000	1.500	32.05041	32.45874	31.52178
BE	9	0.00700	16.67000	82.300	0.00553	0.01347	0.00216
CA	44	57933.46800	61173.96000	2.900	56058.70055	58447.84618	59293.85861
CR	52	0.45200	606.70000	5.200	0.47158	0.45786	0.42609
FE	57	25.58800	303.35000	30.700	21.65755	34.63099	20.47694
K	39	1561.39500	27631.66000	1.900	1560.17047	1532.65353	1591.36071
MG	24	29188.32200	1037281.73000	1.400	28733.36979	29422.24460	29409.35275
MN	55	0.97700	193.34000	32.500	0.75088	1.33987	0.84136
NA	23	2604.32200	228353.71000	1.700	2572.10917	2656.23175	2584.62534
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.27100	126.67000	34.300	0.16523	0.30656	0.34067
IN-1	115	15317.09000	0.00000	0.000	15327.15000	15136.89000	15487.24000
AG	107	0.01500	23.33000	103.600	-0.00242	0.01974	0.02646
AS	75	0.21100	12.67000	98.600	0.44885	0.11411	0.06858
BA	137	186.88700	12431.72000	7.200	171.61595	192.38039	196.66608
CD	111	0.01100	2.67000	345.300	0.05610	-0.01118	-0.01118
CO	59	0.04200	53.33000	60.300	0.04746	0.01418	0.06351
CU	63	0.21900	396.69000	51.400	0.31556	0.24487	0.09532
MO	98	1.58100	1040.08000	7.000	1.61273	1.45767	1.67366
NI	60	0.83900	343.35000	54.600	0.61223	0.53781	1.36574
SB	121	0.03100	6.67000	173.200	0.00000	0.09377	0.00000
SN	120	-0.08100	80.00000	0.000	0.09782	-0.14957	-0.18983
SR	88	57.87700	8108.84000	8.400	52.85032	62.61652	58.16452
ZN	66	1.91200	203.34000	14.900	1.66147	2.22215	1.85156
BI-1	209	76011.55000	0.00000	0.000	74835.62000	74545.34000	78653.69000
PB	208	0.02600	126.67000	97.000	0.04650	-0.00241	0.03494
TL	203	0.01600	23.33000	143.300	0.00298	0.04213	0.00251
U	238	0.50900	2130.23000	5.800	0.48268	0.54087	0.50320
GE-1	72	46421.49000	0.00000	0.000	45719.88000	46832.41000	46712.19000
GE-2	72	2022900	0	0.000	2040453	1994729	2033517
TB-1	159	97116.83000	0.00000	0.000	95423.37000	96972.08000	98955.03000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:47:40
Tube Number: 31 Batch: 181061063907A
Sample Number: **9558724** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16274.55000	0.00000	0.000	15557.14000	16287.90000	16978.62000
SC-2	45	2592617	0	0.000	2692009	2517960	2567883
AL	27	2.94700	63.33000	197.900	6.57024	6.05314	-3.78180
B	11	17.33100	19074.37000	2.300	17.20734	17.78003	17.00523
BE	9	0.00000	4.67000	869.900	0.00203	-0.00233	0.00110
CA	44	23453.36500	24460.72000	1.200	23316.01369	23766.37192	23277.71065
CR	52	0.05300	353.35000	180.500	0.10544	0.10972	-0.05708
FE	57	21.56800	256.68000	30.500	20.25709	15.73335	28.71316
K	39	1279.57300	22841.74000	1.900	1279.19220	1255.46760	1304.05842
MG	24	25246.93600	885455.53000	2.000	25736.46368	25267.99770	24736.34657
MN	55	3.06100	590.04000	13.700	3.46153	3.09777	2.62238
NA	23	603.05100	72904.14000	3.500	627.15364	594.44721	587.55310
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07700	40.00000	60.600	0.08055	0.12196	0.02870
IN-1	115	15253.74000	0.00000	0.000	14836.83000	14576.22000	16348.17000
AG	107	-0.00200	0.00000	0.000	-0.00242	-0.00242	-0.00242
AS	75	0.30300	16.67000	57.900	0.42205	0.38633	0.10148
BA	137	121.72100	8048.91000	6.200	123.78995	128.06702	113.30719
CD	111	0.00600	2.00000	276.100	0.00620	0.02419	-0.01118
CO	59	0.10500	130.01000	27.400	0.09238	0.08527	0.13854
CU	63	0.09100	260.01000	99.100	0.19436	0.03153	0.04652
MO	98	2.67800	1720.15000	8.200	2.82798	2.77987	2.42721
NI	60	0.13800	86.67000	12.900	0.12527	0.15822	0.13003
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SN	120	-0.26100	30.00000	0.000	-0.32969	-0.25391	-0.19914
SR	88	52.50400	7318.47000	3.100	53.34420	53.54846	50.61954
ZN	66	1.53100	166.68000	29.900	1.06746	1.98271	1.54229
BI-1	209	75311.90000	0.00000	0.000	74112.69000	75590.41000	76232.60000
PB	208	0.01100	73.33000	30.400	0.00691	0.01261	0.01240
TL	203	0.00300	10.00000	326.900	0.01291	0.00288	-0.00676
U	238	0.40800	1696.84000	8.700	0.37661	0.44645	0.40197
GE-1	72	47009.72000	0.00000	0.000	46080.63000	46742.14000	48206.39000
GE-2	72	2030604	0	0.000	2050328	2034609	2006874
TB-1	159	94978.97000	0.00000	0.000	91020.57000	94689.01000	99227.32000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:50:22
Tube Number: 32 Batch: 181061063907A
Sample Number: **9558725** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16448.10000	0.00000	0.000	15357.17000	16968.62000	17018.52000
SC-2	45	2645893	0	0.000	2737709	2652630	2547341
AL	27	34.02300	320.02000	18.600	40.45213	33.79180	27.82383
B	11	59.38800	63096.10000	2.200	57.95519	59.68438	60.52563
BE	9	0.00500	13.33000	50.800	0.00302	0.00430	0.00803
CA	44	73605.98400	77485.88000	2.600	75689.05299	71993.40656	73135.49245
CR	52	0.62900	716.72000	33.800	0.56370	0.86745	0.45725
FE	57	147.46200	1683.49000	3.900	153.70878	142.41868	146.25862
K	39	2560.52900	43422.65000	4.600	2693.12870	2473.77590	2514.68272
MG	24	29114.55900	1031056.00000	3.900	30411.16168	28536.22950	28396.28725
MN	55	9.95400	1933.53000	8.100	10.88630	9.55188	9.42459
NA	23	7423.89300	598379.30000	4.100	7774.42864	7206.38297	7290.86605
TI	47	0.35400	3.33000	173.200	0.00000	0.00000	1.06261
V	51	0.37000	170.01000	9.100	0.37267	0.40164	0.33481
IN-1	115	14756.51000	0.00000	0.000	14505.20000	14276.66000	15487.67000
AG	107	-0.00200	0.00000	0.000	-0.00242	-0.00242	-0.00242
AS	75	0.20600	12.00000	21.400	0.25502	0.16959	0.19359
BA	137	250.83200	16058.24000	2.000	251.53629	255.41006	245.55042
CD	111	0.00500	2.00000	527.200	-0.01118	-0.01118	0.03875
CO	59	0.06200	73.34000	97.500	0.03261	0.13207	0.02208
CU	63	0.08700	250.01000	36.000	0.07244	0.06597	0.12340
MO	98	0.36900	263.35000	7.900	0.33758	0.39492	0.37475
NI	60	0.12800	80.00000	63.000	0.21749	0.10470	0.06139
SB	121	0.08100	16.67000	70.800	0.14678	0.04971	0.04582
SN	120	-0.08600	76.67000	0.000	-0.25336	-0.09815	0.09300
SR	88	77.11800	10393.44000	7.700	75.37086	83.69975	72.28397
ZN	66	0.86100	100.00000	68.900	1.54557	0.54988	0.48758
BI-1	209	75830.33000	0.00000	0.000	73348.59000	76393.14000	77749.26000
PB	208	0.03600	156.67000	29.300	0.03207	0.02733	0.04727
TL	203	0.00300	10.00000	326.600	0.01311	0.00278	-0.00676
U	238	0.63300	2640.36000	2.000	0.64678	0.63045	0.62177
GE-1	72	46227.60000	0.00000	0.000	44907.33000	46501.67000	47273.80000
GE-2	72	2040326	0	0.000	2078551	2049236	1993192
TB-1	159	94405.26000	0.00000	0.000	92215.72000	96228.97000	94771.09000

Run Name: 1811401E05
Tube Number: 33
Sample Number: **9558725**

Date/Time: 04/24/2018 4:53:05
Batch: 181061063907A
Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 20.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16588.23000	0.00000	0.000	16608.23000	16478.11000	16678.36000
SC-2	45	2583006	0	0.000	2589454	2542775	2616788
AL	27	2.25300	60.00000	53.800	3.44171	2.29899	1.01737
B	11	13.10200	14720.49000	2.100	13.22400	13.30030	12.78044
BE	9	0.00100	6.00000	212.300	0.00333	-0.00118	0.00103
CA	44	4046.84200	4314.01000	2.500	4105.04106	3929.06613	4106.41904
CR	52	-0.12100	253.34000	0.000	-0.19064	-0.02669	-0.14424
FE	57	8.42300	110.00000	57.300	4.05387	7.61584	13.59810
K	39	152.15500	5157.61000	22.200	191.16180	133.84878	131.45398
MG	24	1735.34300	62074.78000	3.600	1667.16460	1751.78171	1787.08284
MN	55	0.83200	166.68000	22.700	0.69533	0.75228	1.04725
NA	23	432.68600	61111.55000	3.200	433.61874	446.20330	418.23479
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	0.000	-0.01515	0.03003	-0.01515
IN-1	115	15707.53000	0.00000	0.000	14966.58000	15567.46000	16588.54000
AG	107	0.00000	3.33000	0.000	-0.00242	0.00476	-0.00242
AS	75	-0.02800	1.33000	0.000	0.02981	-0.05643	-0.05643
BA	137	14.41600	1000.07000	12.000	16.19672	12.74469	14.30615
CD	111	-0.01100	0.00000	0.000	-0.01118	-0.01118	-0.01118
CO	59	0.01000	16.67000	220.900	-0.00278	-0.00278	0.03590
CU	63	0.02100	193.34000	269.300	-0.02184	0.08470	-0.00014
MO	98	-0.00800	36.67000	0.000	-0.01484	-0.03228	0.02424
NI	60	-0.03800	23.33000	0.000	-0.04540	0.03353	-0.10163
SB	121	0.04600	10.00000	173.200	0.00000	0.13676	0.00000
SN	120	-0.27700	26.67000	0.000	-0.33001	-0.33142	-0.16856
SR	88	4.28900	613.37000	19.700	5.25798	3.72107	3.88732
ZN	66	0.34900	56.67000	107.500	0.40459	0.69256	-0.05089
BI-1	209	75563.54000	0.00000	0.000	73007.45000	74324.15000	79359.02000
PB	208	0.00700	63.33000	117.500	0.01033	-0.00238	0.01434
TL	203	0.01000	16.67000	217.600	0.03317	-0.00676	0.00242
U	238	0.03300	150.01000	42.800	0.03242	0.01952	0.04801
GE-1	72	46535.28000	0.00000	0.000	45338.57000	46913.13000	47354.15000
GE-2	72	1987643	0	0.000	1992599	1946302	2024028
TB-1	159	93734.56000	0.00000	0.000	92387.44000	94961.01000	93855.23000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:55:49
Tube Number: 34
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15623.93000	0.00000	0.000	16107.64000	15186.85000	15577.31000
SC-2	45	2594241	0	0.000	2607605	2648281	2526838
AL	27	2635.26700	20698.96000	1.600	2587.77104	2671.43550	2646.59406
B	11	264.65000	270688.78000	2.800	266.13430	256.63100	271.18452
BE	9	27.87000	49295.35000	3.500	28.23774	26.77715	28.59588
CA	44	2455.64600	2466.94000	10.200	2352.21154	2742.38243	2272.34404
CR	52	263.97300	155345.15000	4.400	252.87493	276.26789	262.77559
FE	57	2527.99400	27238.17000	2.900	2519.23413	2606.07690	2458.67222
K	39	2595.20100	41799.04000	5.000	2465.37670	2727.31853	2592.90776
MG	24	2668.27200	89837.87000	3.200	2577.83681	2747.91227	2679.06563
MN	55	258.72000	47780.88000	3.100	249.63557	261.14643	265.37789
NA	23	2601.07400	216119.09000	4.000	2486.05739	2685.23564	2631.92765
TI	47	257.42100	2220.23000	8.900	236.91332	282.24354	253.10667
V	51	264.50800	110975.73000	3.500	254.01354	267.56936	271.94244
IN-1	115	14983.88000	0.00000	0.000	15059.34000	14629.73000	15262.58000
AG	107	26.54500	35560.87000	3.400	25.50001	26.96121	27.17288
AS	75	262.40300	12183.54000	2.200	259.60831	268.95439	258.64641
BA	137	275.78000	17926.92000	5.000	262.04657	289.64071	275.65132
CD	111	27.22200	3165.65000	2.000	26.62512	27.72455	27.31779
CO	59	265.58400	309978.10000	2.600	259.42512	272.86118	264.46439
CU	63	261.10400	269923.77000	1.700	257.48309	266.08912	259.73936
MO	98	26.33600	16314.97000	5.400	24.84404	27.68127	26.48312
NI	60	267.18900	95168.25000	0.700	265.16703	269.02576	267.37291
SB	121	27.20700	5744.51000	2.700	26.39546	27.41293	27.81135
SN	120	24.91100	6918.33000	2.900	24.14335	25.01272	25.57568
SR	88	25.81400	3540.51000	6.400	24.31543	25.55255	27.57322
ZN	66	264.23100	24387.48000	0.800	262.87575	266.71212	263.10484
BI-1	209	75906.99000	0.00000	0.000	75518.46000	75518.49000	76684.03000
PB	208	25.73200	85372.91000	2.700	24.94501	26.24850	26.00214
TL	203	25.40500	26462.66000	1.800	25.17630	25.92062	25.11718
U	238	25.63800	106670.05000	0.400	25.66408	25.52566	25.72451
GE-1	72	46094.11000	0.00000	0.000	44697.61000	46090.68000	47494.05000
GE-2	72	2004362	0	0.000	2066990	1971338	1974757
TB-1	159	93181.44000	0.00000	0.000	91402.53000	93361.87000	94779.92000

Run Name: 1811401E05 Date/Time: 04/24/2018 4:58:33
Tube Number: 35
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15473.92000	0.00000	0.000	14896.74000	15527.40000	15997.63000
SC-2	45	2521615	0	0.000	2588323	2553650	2422872
AL	27	0.19400	40.00000	1142.500	-0.94307	2.74314	-1.21917
B	11	23.95200	25099.37000	1.300	23.64689	23.92742	24.28039
BE	9	0.00200	7.33000	87.200	0.00333	0.00226	0.00009
CA	44	-2.74400	10.00000	0.000	7.87830	-3.02803	-13.08299
CR	52	0.00400	310.01000	2514.000	-0.00929	-0.09877	0.12127
FE	57	0.07300	13.33000	1951.100	-0.21207	1.61646	-1.18565
K	39	-8.54000	2400.25000	0.000	1.71866	-22.48953	-4.84921
MG	24	1.81100	63.33000	36.300	2.08128	2.29144	1.06161
MN	55	0.03600	10.00000	147.600	-0.01757	0.03690	0.08816
NA	23	-13.15900	24710.48000	0.000	-24.71942	-10.28140	-4.47667
TI	47	0.79300	6.67000	86.700	1.21396	1.16465	0.00000
V	51	0.02500	16.67000	149.300	0.05981	-0.01515	0.03139
IN-1	115	14546.13000	0.00000	0.000	14706.68000	14255.51000	14676.20000
AG	107	0.01500	23.33000	27.400	0.02039	0.01327	0.01282
AS	75	0.10600	7.33000	63.600	0.16298	0.12466	0.03152
BA	137	-0.18700	6.67000	0.000	-0.13685	-0.13189	-0.29368
CD	111	-0.01100	0.00000	0.000	-0.01118	-0.01118	-0.01118
CO	59	0.04100	50.00000	76.600	0.00594	0.05124	0.06718
CU	63	0.01900	176.67000	198.900	-0.01945	0.05613	0.02036
MO	98	-0.05800	3.33000	0.000	-0.06342	-0.06342	-0.04691
NI	60	-0.05300	16.67000	0.000	-0.07302	-0.04259	-0.04429
SB	121	0.22600	46.67000	53.100	0.24128	0.09956	0.33849
SN	120	-0.09300	73.34000	0.000	-0.10600	-0.36659	0.19303
SR	88	0.05000	6.67000	173.200	0.14863	0.00000	0.00000
ZN	66	0.19800	40.00000	110.200	0.19514	-0.01883	0.41748
BI-1	209	73797.35000	0.00000	0.000	72484.62000	73931.24000	74976.18000
PB	208	0.00200	43.33000	915.800	0.02312	-0.00543	-0.01162
TL	203	0.00300	10.00000	316.000	0.01335	-0.00676	0.00296
U	238	0.00700	36.67000	79.100	0.00498	0.01223	0.00229
GE-1	72	45953.99000	0.00000	0.000	43855.10000	45709.85000	48297.02000
GE-2	72	1963165	0	0.000	2005473	1968079	1915942
TB-1	159	95032.23000	0.00000	0.000	91563.79000	95463.88000	98069.02000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:01:16
Tube Number: 36
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16134.39000	0.00000	0.000	16408.05000	16277.85000	15717.28000
SC-2	45	2554256	0	0.000	2555672	2578796	2528301
AL	27	224.08200	1853.51000	6.200	223.33593	210.47143	238.43822
B	11	114.74500	116405.34000	1.000	115.21773	113.48564	115.53081
BE	9	1.09300	1908.78000	5.200	1.03953	1.15300	1.08677
CA	44	260.34500	283.35000	24.400	262.87010	322.63536	195.53024
CR	52	3.88900	2676.96000	9.900	3.49105	3.91509	4.25958
FE	57	195.92300	2190.22000	9.300	175.61161	201.08835	211.06811
K	39	406.62000	8982.57000	12.500	355.40480	407.17265	457.28294
MG	24	215.79300	7511.85000	1.900	220.42511	212.78131	214.17176
MN	55	4.28400	820.06000	9.500	4.41506	3.82705	4.60987
NA	23	395.52500	56594.03000	9.300	361.51782	390.39886	434.65890
TI	47	31.75000	283.35000	1.900	31.96441	32.22008	31.06692
V	51	0.98500	433.36000	11.500	1.05110	0.85381	1.05060
IN-1	115	15832.31000	0.00000	0.000	15496.09000	15694.41000	16306.43000
AG	107	1.14000	1616.80000	1.600	1.15980	1.13798	1.12263
AS	75	3.88000	192.67000	15.200	4.48315	3.85009	3.30769
BA	137	4.34900	320.02000	24.300	3.42740	4.11516	5.50582
CD	111	1.09500	136.00000	4.800	1.03679	1.13852	1.11117
CO	59	1.19200	1476.80000	15.200	0.98290	1.28941	1.30389
CU	63	4.10100	4654.10000	6.500	3.96969	3.92679	4.40503
MO	98	0.96700	673.38000	0.500	0.96884	0.97122	0.96212
NI	60	3.70500	1433.46000	7.200	3.40179	3.81339	3.89871
SB	121	2.14900	480.02000	19.300	2.33573	1.67316	2.43730
SN	120	3.08700	1000.07000	14.700	3.16682	2.59886	3.49494
SR	88	2.05700	300.01000	48.000	1.97486	1.11426	3.08321
ZN	66	28.68700	2813.68000	11.900	30.47897	30.81519	24.76613
BI-1	209	76256.77000	0.00000	0.000	73028.44000	76422.80000	79319.07000
PB	208	1.99400	6674.18000	5.500	2.12006	1.92954	1.93369
TL	203	0.87400	920.07000	10.100	0.96145	0.78490	0.87545
U	238	1.05400	4410.79000	4.700	1.10698	1.04814	1.00746
GE-1	72	46488.20000	0.00000	0.000	44927.54000	46230.79000	48306.28000
GE-2	72	1958189	0	0.000	1965678	1982125	1926765
TB-1	159	95599.13000	0.00000	0.000	92418.52000	96067.15000	98311.72000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:04:00
Tube Number: 37
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15030.20000	0.00000	0.000	14296.11000	15357.16000	15437.32000
SC-2	45	2460088	0	0.000	2484725	2471154	2424385
AL	27	102137.25900	770125.04000	2.200	104706.42945	100532.93091	101172.41545
B	11	20.95400	21599.73000	1.300	20.63724	21.12603	21.10002
BE	9	0.00900	19.33000	21.200	0.00711	0.00954	0.01097
CA	44	260532.12600	250641.36000	3.400	268687.86609	250940.17990	261968.33121
CR	52	1.03100	880.06000	5.500	1.09088	0.97910	1.02295
FE	57	250837.98600	2598178.87000	2.600	256532.27447	243682.97811	252298.70634
K	39	106520.73000	1552694.87000	2.400	109125.26181	103989.32616	106447.60181
MG	24	102215.72000	3310270.06000	2.900	105357.90411	99437.79103	101851.46492
MN	55	3.95200	703.38000	11.200	4.41915	3.89235	3.54332
NA	23	252074.62400	17755708.49000	3.500	262155.73522	246273.85878	247794.27829
TI	47	2031.85200	16868.48000	4.000	2123.66806	2000.52716	1971.36203
V	51	0.07600	36.67000	49.800	0.08900	0.03333	0.10541
IN-1	115	14052.27000	0.00000	0.000	13035.38000	14465.90000	14655.54000
AG	107	0.40300	506.69000	16.000	0.46096	0.41514	0.33341
AS	75	0.49100	24.00000	23.000	0.38915	0.61277	0.47200
BA	137	0.75700	63.33000	66.300	1.12179	0.18463	0.96531
CD	111	0.20300	23.33000	8.200	0.20634	0.18483	0.21747
CO	59	1.04500	1143.42000	8.300	1.13942	1.02648	0.96935
CU	63	1.06500	1186.76000	10.000	0.98832	1.18578	1.02000
MO	98	2131.51900	1233488.47000	4.900	2251.84690	2062.02385	2080.68727
NI	60	0.85800	316.68000	34.300	1.18972	0.62564	0.75980
SB	121	1.22400	243.34000	9.900	1.08889	1.32462	1.25906
SN	120	-0.08700	70.00000	0.000	0.09546	-0.13951	-0.21716
SR	88	10.95200	1406.78000	3.000	11.23574	11.03118	10.59029
ZN	66	1.82100	180.01000	28.200	1.49825	1.55044	2.41411
BI-1	209	68045.81000	0.00000	0.000	66981.35000	67091.44000	70064.65000
PB	208	0.16100	513.35000	4.600	0.15242	0.16580	0.16481
TL	203	0.13300	130.01000	30.100	0.15648	0.15621	0.08686
U	238	0.04600	183.34000	21.300	0.04919	0.03550	0.05472
GE-1	72	43500.89000	0.00000	0.000	42421.66000	44687.25000	43393.75000
GE-2	72	1916858	0	0.000	1905079	1934571	1910925
TB-1	159	90226.01000	0.00000	0.000	87712.28000	91412.29000	91553.47000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:06:43
Tube Number: 38
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14369.55000	0.00000	0.000	13905.84000	15126.84000	14075.97000
SC-2	45	2475041	0	0.000	2478162	2453830	2493132
AL	27	105361.09900	759165.51000	3.600	107057.67789	101028.62860	107996.99186
B	11	14.98000	15931.47000	1.000	14.82696	15.00060	15.11209
BE	9	0.00600	13.33000	118.100	0.00122	0.01320	0.00237
CA	44	270556.04100	248791.21000	3.900	270269.21859	260110.18701	281288.71627
CR	52	213.91400	115785.97000	5.500	213.15362	202.62481	225.96386
FE	57	259315.98300	2566156.21000	4.500	261392.37088	246728.75855	269826.81899
K	39	110165.57000	1534731.28000	2.900	111355.66881	106489.36333	112651.67782
MG	24	104823.31200	3244228.91000	4.000	105928.24029	100176.65643	108365.04029
MN	55	212.76100	36097.28000	6.600	212.97838	198.58527	226.71981
NA	23	263814.83500	17764520.57000	4.000	263945.01369	253175.32765	274324.16462
TI	47	2086.43100	16568.21000	3.400	2064.82159	2028.57093	2165.90120
V	51	222.86800	85965.21000	4.200	221.74669	214.10699	232.75027
IN-1	115	13862.14000	0.00000	0.000	12874.23000	13815.53000	14896.65000
AG	107	51.64200	63898.87000	3.700	52.81086	52.70665	49.40906
AS	75	109.14100	4686.65000	2.300	110.24221	110.95089	106.23112
BA	137	0.87500	70.00000	66.400	0.60206	1.54285	0.48045
CD	111	104.27400	11187.01000	5.400	109.30404	105.36565	98.15107
CO	59	211.64400	227843.06000	6.800	224.56402	214.23730	196.13209
CU	63	208.26600	198707.09000	5.800	218.16771	211.75780	194.87202
MO	98	2144.25200	1224047.69000	4.300	2216.74907	2176.77381	2039.23317
NI	60	207.24100	68123.27000	5.700	215.73112	212.18773	193.80485
SB	121	1.41900	276.68000	11.100	1.37814	1.59250	1.28632
SN	120	-0.18400	46.67000	0.000	-0.19649	-0.20808	-0.14607
SR	88	9.15600	1160.08000	9.100	9.84799	8.22773	9.39154
ZN	66	102.64500	8765.89000	3.600	106.93139	100.21794	100.78446
BI-1	209	67610.58000	0.00000	0.000	66068.31000	67954.91000	68808.52000
PB	208	0.15700	496.69000	2.000	0.15469	0.16018	0.15472
TL	203	0.11200	110.00000	7.500	0.10356	0.11122	0.12035
U	238	0.07000	270.02000	17.000	0.07752	0.05650	0.07698
GE-1	72	43173.59000	0.00000	0.000	40387.17000	44527.07000	44606.52000
GE-2	72	1918094	0	0.000	1898283	1911579	1944419
TB-1	159	87667.99000	0.00000	0.000	87238.74000	87862.84000	87902.40000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:09:26
Tube Number: 39
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15600.70000	0.00000	0.000	15066.78000	15677.63000	16057.69000
SC-2	45	2560425	0	0.000	2575502	2575896	2529878
AL	27	7.74000	100.00000	67.100	5.62306	3.94014	13.65631
B	11	9.25900	10734.45000	2.500	9.51609	9.07677	9.18318
BE	9	0.00100	6.67000	320.200	0.00678	-0.00233	-0.00001
CA	44	30.47500	43.33000	167.200	18.00410	86.50314	-13.08299
CR	52	-0.10600	246.68000	0.000	-0.08569	-0.08592	-0.14601
FE	57	27.59400	310.01000	23.200	22.88015	34.89463	25.00784
K	39	31.22400	3017.03000	55.800	51.18403	23.51814	18.96945
MG	24	9.71800	330.02000	5.700	9.75253	10.25618	9.14438
MN	55	0.07000	16.67000	216.500	-0.01757	-0.01757	0.24575
NA	23	47.90200	29340.59000	23.900	61.09795	41.78908	40.81816
TI	47	1.16900	10.00000	98.700	1.20026	2.30699	0.00000
V	51	0.02400	16.67000	52.700	0.00956	0.03234	0.03121
IN-1	115	14669.79000	0.00000	0.000	14325.87000	14756.65000	14926.86000
AG	107	-0.00200	0.00000	0.000	-0.00242	-0.00242	-0.00242
AS	75	-0.02800	1.33000	0.000	-0.05643	-0.05643	0.03004
BA	137	-0.24200	3.33000	0.000	-0.29368	-0.13738	-0.29368
CD	111	0.00000	1.33000	5917.700	-0.01118	-0.01118	0.02336
CO	59	0.02400	30.00000	67.000	0.04201	0.01461	0.01441
CU	63	0.04700	206.68000	88.600	0.09556	0.01939	0.02709
MO	98	1.26700	806.72000	14.900	1.07006	1.28335	1.44658
NI	60	-0.03500	23.33000	0.000	-0.07226	-0.04460	0.01113
SB	121	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SN	120	-0.25300	30.00000	0.000	-0.17550	-0.21819	-0.36659
SR	88	0.07600	10.00000	101.000	0.15258	0.07406	0.00000
ZN	66	0.31000	50.00000	75.400	0.54714	0.30375	0.07977
BI-1	209	72465.17000	0.00000	0.000	72586.42000	71410.74000	73398.35000
PB	208	0.00100	40.00000	527.600	0.00415	0.00441	-0.00538
TL	203	-0.00300	3.33000	0.000	0.00328	-0.00676	-0.00676
U	238	0.00100	13.33000	380.200	0.00245	-0.00257	0.00240
GE-1	72	45562.95000	0.00000	0.000	43684.64000	46411.86000	46592.35000
GE-2	72	1992861	0	0.000	2015591	2021939	1941052
TB-1	159	92762.50000	0.00000	0.000	89853.48000	92990.22000	95443.79000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:12:09
Tube Number: 40
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15774.13000	0.00000	0.000	15217.11000	16077.76000	16027.52000
SC-2	45	2585486	0	0.000	2632331	2556321	2567806
AL	27	2539.73000	20145.14000	5.100	2553.42501	2402.78375	2662.98099
B	11	246.25800	251238.78000	1.600	246.38565	242.23405	250.15533
BE	9	25.84800	45590.68000	0.900	26.06377	25.60744	25.87403
CA	44	2486.74400	2526.94000	5.200	2408.53196	2414.87200	2636.82828
CR	52	257.23300	152935.03000	1.800	260.71160	251.92902	259.05740
FE	57	2493.23500	27111.10000	3.800	2589.40661	2397.43789	2492.85973
K	39	2514.94900	40983.51000	4.000	2624.95831	2429.74045	2490.14925
MG	24	2508.66500	85297.04000	3.000	2560.30371	2423.51911	2542.17221
MN	55	255.74200	47714.32000	1.100	253.60617	254.69249	258.92800
NA	23	2532.66200	213194.95000	2.900	2602.58634	2454.77732	2540.62216
TI	47	258.29200	2253.57000	2.000	254.34427	256.48062	264.05220
V	51	260.95700	110533.34000	3.800	269.25253	250.10941	263.50779
IN-1	115	14988.02000	0.00000	0.000	14016.35000	15504.39000	15443.31000
AG	107	26.97900	36091.80000	4.600	28.40555	26.11242	26.41877
AS	75	263.50300	12228.26000	3.000	272.34186	257.44484	260.72161
BA	137	258.77400	16819.10000	3.500	266.24978	248.71193	261.35964
CD	111	26.79900	3115.64000	2.000	27.35645	26.27625	26.76420
CO	59	262.25900	306025.05000	2.500	268.53920	255.69136	262.54616
CU	63	262.43400	271074.55000	3.700	272.83107	253.43531	261.03419
MO	98	26.64600	16505.01000	2.200	27.32033	26.38174	26.23511
NI	60	261.51700	93017.29000	5.300	275.37158	247.70405	261.47663
SB	121	27.19800	5731.19000	7.600	29.01808	24.95102	27.62360
SN	120	25.11700	6968.41000	4.800	25.96715	23.72272	25.66241
SR	88	27.11100	3730.56000	9.800	24.33085	29.61077	27.39208
ZN	66	257.56400	23753.13000	3.200	267.13305	251.75657	253.80243
BI-1	209	74400.78000	0.00000	0.000	72314.01000	73761.34000	77127.00000
PB	208	25.97900	84461.74000	1.300	25.93767	26.33320	25.66490
TL	203	25.66600	26192.17000	2.600	25.98943	26.10260	24.90660
U	238	25.60000	104383.85000	0.600	25.69112	25.67768	25.43142
GE-1	72	46301.37000	0.00000	0.000	44245.84000	46832.41000	47825.85000
GE-2	72	1985122	0	0.000	2031657	1944673	1979037
TB-1	159	92773.06000	0.00000	0.000	90175.05000	92176.06000	95968.06000

Run Name: 1811401E05 Date/Time: 04/24/2018 5:14:52
Tube Number: 41
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15784.11000	0.00000	0.000	15467.31000	15537.12000	16347.89000
SC-2	45	2495744	0	0.000	2502773	2509247	2475211
AL	27	3.06600	63.34000	175.700	-1.09107	9.15087	1.13811
B	11	22.76300	23686.21000	1.300	22.87230	22.97638	22.43975
BE	9	0.00000	4.67000	440.000	0.00236	0.00001	-0.00115
CA	44	-13.08300	0.00000	0.000	-13.08299	-13.08299	-13.08299
CR	52	-0.03300	293.35000	0.000	-0.11430	0.05494	-0.03896
FE	57	2.19600	36.67000	28.400	2.56502	2.54816	1.47583
K	39	13.53800	2790.34000	95.100	16.79068	-0.65371	24.47772
MG	24	0.69900	26.67000	130.400	0.50170	1.69297	-0.09798
MN	55	0.00100	3.33000	5442.300	-0.01757	0.03686	-0.01757
NA	23	12.13900	27043.82000	176.200	-0.09998	36.83663	-0.31880
TI	47	0.77900	6.67000	173.200	2.33836	0.00000	0.00000
V	51	0.01700	13.33000	223.600	0.05705	-0.01515	0.00762
IN-1	115	15169.56000	0.00000	0.000	14705.20000	14576.06000	16227.43000
AG	107	0.01000	16.67000	40.900	0.01279	0.00525	0.01136
AS	75	0.07300	6.00000	66.900	0.07523	0.12067	0.02311
BA	137	-0.19900	6.67000	0.000	-0.29368	-0.29368	-0.00942
CD	111	0.00000	1.33000	68762.000	-0.01118	0.00651	0.00471
CO	59	0.02600	33.33000	121.100	-0.00278	0.05885	0.02095
CU	63	0.05400	220.01000	39.500	0.05945	0.07132	0.03017
MO	98	0.03100	60.00000	173.700	-0.03046	0.05297	0.07099
NI	60	-0.05600	16.67000	0.000	-0.07302	-0.04389	-0.04977
SB	121	0.35400	76.67000	41.200	0.38608	0.19475	0.48106
SN	120	-0.09200	76.67000	0.000	-0.25490	0.00906	-0.02917
SR	88	0.02200	3.33000	173.200	0.00000	0.00000	0.06735
ZN	66	0.06700	30.00000	405.900	0.19518	-0.24678	0.25385
BI-1	209	73161.90000	0.00000	0.000	71571.53000	73087.48000	74826.69000
PB	208	-0.00800	10.00000	0.000	-0.00522	-0.01162	-0.00856
TL	203	0.01300	20.00000	131.200	0.02379	-0.00676	0.02246
U	238	0.00000	10.00000	0.000	-0.00257	0.00242	-0.00014
GE-1	72	45880.19000	0.00000	0.000	45769.68000	45368.87000	46502.02000
GE-2	72	1985104	0	0.000	2026710	1993907	1934694
TB-1	159	92518.33000	0.00000	0.000	88235.17000	92597.61000	96722.21000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

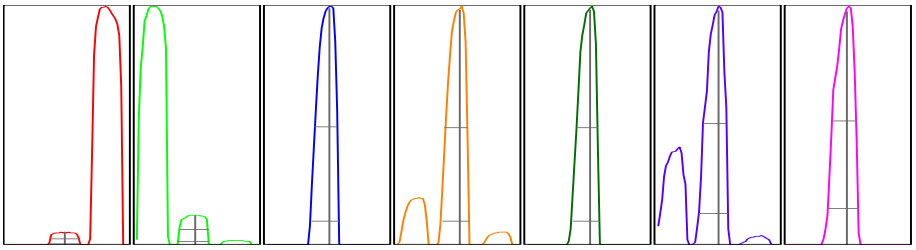
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		19719	19719.17			NaN	-	
24		49341	49340.90			NaN	-	
103		116950	116949.58			NaN	-	
115		109954	109954.39			NaN	-	
140		107300	107299.53			NaN	-	
208		46448	46448.03			NaN	-	
238		92249	92249.44			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.90	5.00				
24	0.55	5.00				
103	1.33	5.00				
115	1.11	5.00				
140	1.25	5.00				
208	1.72	5.00				
238	1.63	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	19588	19649	19558	19982	19820
24	49030	49488	49673	49411	49102
103	114273	117580	117206	118293	117395
115	107961	110204	110157	110133	111317
140	105205	107559	106887	108575	108272
208	45189	46201	46654	47221	46974
238	89710	92344	92464	93252	93477

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	2963.87	5.95	5.9 - 6.1		0.68	0.761	0.900	
24	7499.12	23.95	23.9 - 24.1		0.68	0.740	0.900	
103	21760.13	103.05	102.9 - 103.1		0.57	0.686	0.900	
115	20822.92	115.05	114.9 - 115.1		0.55	0.684	0.900	
140	20739.94	140.05	139.9 - 140.1		0.54	0.677	0.900	
208	8710.61	208.00	207.9 - 208.1		0.56	0.699	0.900	
238	16593.16	237.95	237.9 - 238.1		0.57	0.727	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1	0.0 V	Omega Lens	6.1 V	Deflect	16.8 V				
Extract 2	-160.0 V	Cell Entrance	-30 V	Plate Bias	-40 V				
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias	-75 V	Cell Exit	-50 V						

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18D26A00.E05

Run Name: 1811601E05

Analyst: 1242

Reviewed By:	Reviewed Date
Deborah A Krady	05/04/2018 14:18
Tara L Snyder	05/04/2018 14:22

Verified By:	Verified Date
Deborah A Krady	05/11/2018 07:47
Nina C Haller	06/14/2018 09:58
Parker D Lindstrom	05/06/2018 12:30

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-2		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
SC-3		45
	BE	9
	B	11
IN-1		115
	SE	78
IN-2		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
TB-2		159
	SB	121
	BA	137
BI-2		209
	TL	203
	PB	208
	U	238

Run Name: 1811601E05 Date/Time: 04/26/2018 4:18:46
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	6.00000	0.000	-0.00185	0.00180	0.00005
B	11	0.00000	22233.12000	0.000	0.38117	-0.39431	0.01314
NA	23	0.00000	23659.19000	0.000	4.25276	0.16085	-4.41361
MG	24	0.00000	33.33000	0.000	-0.54016	-0.07337	0.61353
AL	27	0.00000	33.33000	0.000	0.86612	2.73332	-3.59944
K	39	0.00000	4750.80000	0.000	28.90835	-10.39239	-18.51596
CA	44	0.00000	3.33000	0.000	-2.73249	-2.73249	5.46498
SC-1	45	606600.97000	0.00000	0.000	608270.11000	608549.91000	602982.88000
SC-2	45	19244.26000	0.00000	0.000	18379.97000	19441.01000	19911.80000
SC-3	45	2993084	0	0.000	2955868	3061233	2962151
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	20.00000	0.000	0.07903	-0.03952	-0.03952
CR	52	0.00000	100.01000	0.000	-0.00727	-0.05509	0.06235
MN	55	0.00000	6.67000	0.000	0.01596	0.01349	-0.02945
FE	57	0.00000	26.67000	0.000	-1.25682	3.33012	-2.07330
CO	59	0.00000	3.33000	0.000	-0.00233	0.00466	-0.00233
NI	60	0.00000	13.33000	0.000	0.01753	0.01547	-0.03301
CU	63	0.00000	163.34000	0.000	-0.03352	-0.02115	0.05468
ZN	66	0.00000	23.33000	0.000	-0.02532	0.14873	-0.12340
GE-1	72	760666.01000	0.00000	0.000	766960.30000	753699.68000	761338.04000
GE-2	72	58075.92000	0.00000	0.000	56661.43000	59339.96000	58226.36000
GE-3	72	2295562	0	0.000	2292250	2317844	2276591
AS	75	0.00000	2.67000	0.000	-0.04646	0.05792	-0.01146
SE	78	0.00000	1.33000	0.000	-0.00418	0.00412	0.00006
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000
SR	88	0.00000	6.67000	0.000	-0.03791	-0.03791	0.07583
MO	98	0.00000	43.33000	0.000	-0.01681	-0.00517	0.02197
AG	107	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	0.00000	5.33000	0.000	0.00573	0.00397	-0.00970
IN-1	115	552463.20000	0.00000	0.000	553290.66000	556542.31000	547556.62000
IN-2	115	18874.21000	0.00000	0.000	18390.07000	19171.54000	19061.02000
SN	120	0.00000	50.00000	0.000	-0.02674	-0.09091	0.11764
SB	121	0.00000	6.67000	0.000	0.01382	0.01165	-0.02547
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-2	159	115225.73000	0.00000	0.000	110737.85000	117222.68000	117716.66000
TL	203	0.00000	13.33000	0.000	-0.01124	0.00583	0.00541
PB	208	0.00000	110.00000	0.000	0.01297	-0.00752	-0.00545
BI-2	209	90596.99000	0.00000	0.000	91038.71000	89250.99000	91501.28000
U	238	0.00000	23.33000	0.000	-0.00286	0.00574	-0.00288

Run Name: 1811601E05 Date/Time: 04/26/2018 4:21:44
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18803.68000	0.00000	0.000	18439.92000	18970.54000	19000.59000
SC-3	45	2937336	0	0.000	2932922	2944077	2935008
AL	27	10000.00000	91657.68000	1.500	10161.06371	9984.34533	9854.59096
B	11	1000.00000	1223890.33000	1.800	1014.77825	980.43361	1004.78814
BE	9	100.00000	208250.03000	0.700	100.78416	99.31669	99.89915
CA	44	10000.00000	11524.12000	6.900	9950.12664	9336.02737	10713.84598
CR	52	1000.00000	712177.34000	0.800	1001.17934	991.25745	1007.56321
FE	57	10000.00000	125324.03000	0.900	10025.92204	9899.71226	10074.36570
K	39	10000.00000	192627.41000	4.000	9599.54435	10000.45313	10400.00252
MG	24	10000.00000	402492.34000	1.800	9994.44047	9822.38522	10183.17431
MN	55	1000.00000	225288.23000	1.100	996.22614	991.81221	1011.96165
NA	23	10000.00000	909327.36000	1.500	9979.81990	9865.14933	10155.03077
TI	47	1000.00000	10216.58000	4.100	1003.40013	957.86715	1038.73272
V	51	1000.00000	517857.54000	1.100	993.79845	993.63015	1012.57140
IN-1	115	545276.92000	0.00000	0.000	546404.14000	555294.79000	534131.84000
IN-2	115	19281.02000	0.00000	0.000	18825.50000	18782.08000	20235.48000
AG	107	100.00000	164930.09000	3.700	101.51744	102.71090	95.77166
AS	75	1000.00000	57776.32000	2.500	1007.58622	1019.85436	972.55942
CD	111	100.00000	14547.51000	1.500	99.85130	101.59370	98.55499
CO	59	1000.00000	1439508.00000	1.600	1004.12504	1013.92626	981.94870
CU	63	1000.00000	1210736.47000	2.300	1006.02626	1019.41472	974.55902
MO	98	100.00000	75394.37000	2.200	101.36076	101.19907	97.44017
NI	60	1000.00000	414619.43000	2.500	1019.07977	1009.63558	971.28465
SE	78	100.00000	15667.53000	0.900	100.75605	99.05086	100.19308
SN	120	100.00000	34021.43000	5.400	105.97193	98.62407	95.40401
SR	88	100.00000	17789.69000	3.500	96.86691	103.79349	99.33960
ZN	66	1000.00000	110553.45000	4.100	1012.37814	1033.50063	954.12123
TB-2	159	116118.75000	0.00000	0.000	112591.11000	117152.83000	118612.30000
BA	137	1000.00000	87908.91000	3.500	1037.63415	968.11991	994.24594
SB	121	100.00000	26701.71000	2.400	100.04783	97.60184	102.35033
BI-2	209	93644.69000	0.00000	0.000	92126.67000	94921.63000	93885.78000
PB	208	100.00000	393614.89000	1.800	99.93876	98.22029	101.84095
TL	203	100.00000	122935.40000	2.000	99.86216	98.10878	102.02906
U	238	100.00000	490191.62000	0.900	100.25681	99.04775	100.69544
SC-1	45	608059.20000	0.00000	0.000	607100.81000	610379.72000	606697.06000
GE-1	72	762968.64000	0.00000	0.000	762387.33000	777733.43000	748785.15000
GE-2	72	56242.87000	0.00000	0.000	55115.94000	56700.82000	56911.84000
GE-3	72	2269805	0	0.000	2302532	2240715	2266170
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:24:39
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19157.52000	0.00000	0.000	18600.49000	18790.25000	20081.82000
SC-3	45	2950458	0	0.000	3024004	2955219	2872150
AL	27	0.62000	40.00000	489.800	0.81318	-2.50743	3.55303
B	11	43.44100	74373.95000	0.400	43.43706	43.26526	43.62198
BE	9	0.00800	22.00000	32.200	0.00652	0.01056	0.00603
CA	44	-2.73200	0.00000	0.000	-2.73249	-2.73249	-2.73249
CR	52	0.31800	330.01000	8.900	0.30353	0.29908	0.34997
FE	57	1.05800	40.00000	150.600	-0.45970	2.71861	0.91584
K	39	-17.12100	4404.05000	0.000	-7.19966	-3.76928	-40.39533
MG	24	0.42600	50.00000	11.800	0.46159	0.44891	0.36895
MN	55	0.18700	50.00000	38.300	0.10518	0.23709	0.21994
NA	23	2.36100	23752.53000	609.100	-1.40466	18.25041	-9.76308
TI	47	0.32600	3.33000	173.200	0.00000	0.97949	0.00000
V	51	0.08600	66.67000	18.800	0.07762	0.07644	0.10515
IN-1	115	546196.27000	0.00000	0.000	535789.61000	544548.34000	558250.87000
IN-2	115	20112.99000	0.00000	0.000	19748.38000	20560.40000	20030.20000
AG	107	0.01700	30.00000	119.200	0.00000	0.03976	0.01166
AS	75	0.46100	30.67000	14.300	0.42640	0.53749	0.41975
CD	111	-0.00200	5.33000	0.000	0.01618	0.01406	-0.03751
CO	59	0.04900	76.67000	21.500	0.05869	0.04977	0.03778
CU	63	0.13500	343.35000	37.800	0.12859	0.08712	0.18843
MO	98	0.13600	153.34000	27.100	0.14868	0.16537	0.09469
NI	60	0.05100	36.67000	67.700	0.01406	0.05740	0.08300
SE	78	0.06100	10.89000	20.200	0.05657	0.05124	0.07471
SN	120	0.51700	236.68000	9.200	0.51028	0.56692	0.47268
SR	88	-0.02000	3.33000	0.000	-0.03791	0.01481	-0.03791
ZN	66	0.36000	66.67000	65.700	0.22634	0.63265	0.22013
TB-2	159	115693.05000	0.00000	0.000	112520.97000	116085.23000	118472.95000
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SB	121	1.64400	446.69000	37.100	0.97978	1.77343	2.17780
BI-2	209	92900.77000	0.00000	0.000	90114.68000	93916.70000	94670.93000
PB	208	-0.00900	76.67000	0.000	-0.00509	-0.00351	-0.01880
TL	203	0.04300	66.67000	93.800	0.03948	0.08610	0.00485
U	238	0.01700	106.67000	15.800	0.01412	0.01945	0.01724
SC-1	45	608588.99000	0.00000	0.000	605073.00000	609224.76000	611469.21000
GE-1	72	759533.74000	0.00000	0.000	747004.29000	767797.41000	763799.52000
GE-2	72	57072.99000	0.00000	0.000	55126.67000	58878.72000	57213.59000
GE-3	72	2295857	0	0.000	2339950	2288582	2259040
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:27:36
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19657.90000	0.00000	0.000	19701.33000	19951.58000	19320.80000
SC-3	45	2974896	0	0.000	3010141	2980683	2933864
AL	27	1.62500	50.00000	65.900	2.64965	0.51436	1.71070
B	11	21.11600	47812.26000	0.600	21.26537	21.05671	21.02455
BE	9	0.00600	18.00000	51.000	0.00563	0.00287	0.00873
CA	44	13.71900	20.00000	157.400	-2.73249	38.17317	5.71574
CR	52	0.20400	253.34000	53.600	0.07788	0.26049	0.27345
FE	57	-1.04600	13.33000	0.000	-2.07330	-1.32114	0.25686
K	39	-14.50900	4580.76000	0.000	-18.09853	-14.96131	-10.46751
MG	24	-0.16200	26.67000	0.000	-0.08290	-0.09182	-0.31071
MN	55	0.07000	23.33000	37.500	0.05529	0.05422	0.10016
NA	23	0.68900	24236.63000	1106.000	-6.09259	-0.77616	8.93574
TI	47	0.62500	6.67000	86.600	0.00000	0.92248	0.95259
V	51	0.02200	33.33000	191.500	-0.00265	0.06969	-0.00192
IN-1	115	543626.50000	0.00000	0.000	542611.28000	538768.28000	549499.95000
IN-2	115	19356.98000	0.00000	0.000	19320.16000	19680.17000	19070.62000
AG	107	0.01200	20.00000	86.600	0.01813	0.01780	0.00000
AS	75	0.06900	6.67000	126.500	0.16069	-0.01256	0.05847
CD	111	-0.01000	4.00000	0.000	-0.01007	0.00290	-0.02361
CO	59	0.01100	20.00000	58.500	0.01153	0.01808	0.00469
CU	63	0.04300	220.01000	67.600	0.07682	0.03246	0.02119
MO	98	-0.01000	36.67000	0.000	0.00766	-0.01954	-0.01829
NI	60	0.11900	63.33000	24.900	0.13537	0.08506	0.13757
SE	78	0.00700	2.44000	91.300	0.00873	0.01312	0.00003
SN	120	0.13100	96.67000	119.400	0.14340	0.28210	-0.03114
SR	88	-0.01900	3.33000	0.000	0.01819	-0.03791	-0.03791
ZN	66	0.35400	63.33000	27.500	0.41649	0.40494	0.24202
TB-2	159	117135.65000	0.00000	0.000	113849.71000	117433.31000	120123.93000
BA	137	0.11200	10.00000	100.800	0.00000	0.22485	0.10990
SB	121	0.33000	96.67000	79.700	0.24201	0.12271	0.62643
BI-2	209	92883.28000	0.00000	0.000	91813.48000	93956.40000	92879.96000
PB	208	0.00000	113.33000	3109.900	0.00743	-0.00099	-0.00579
TL	203	-0.00300	10.00000	0.000	-0.01124	0.01308	-0.01124
U	238	-0.00200	13.33000	0.000	-0.00496	0.00114	-0.00291
SC-1	45	616135.39000	0.00000	0.000	622752.69000	616004.09000	609649.40000
GE-1	72	768061.42000	0.00000	0.000	773582.18000	766141.39000	764460.69000
GE-2	72	58467.30000	0.00000	0.000	57092.52000	58888.68000	59420.69000
GE-3	72	2306121	0	0.000	2314565	2326514	2277285
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:30:33
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20075.27000	0.00000	0.000	19691.36000	20272.54000	20261.92000
SC-3	45	3029253	0	0.000	3001606	3050740	3035413
AL	27	4718.40700	46202.05000	1.000	4679.93209	4772.95166	4702.33730
B	11	486.93800	626201.25000	1.200	483.12084	493.51442	484.17880
BE	9	49.30200	105885.38000	1.800	49.79391	49.84157	48.26922
CA	44	4687.60200	5771.13000	5.000	4474.27215	4652.02984	4936.50405
CR	52	476.47200	362306.53000	0.800	480.61537	473.51319	475.28778
FE	57	4648.14400	62198.33000	1.500	4722.78008	4632.61670	4589.03640
K	39	4735.13200	99962.97000	2.300	4709.36576	4639.71437	4856.31536
MG	24	4777.03700	205257.14000	1.600	4855.46517	4769.33305	4706.31192
MN	55	463.13500	111405.50000	1.300	458.16889	470.13656	461.09981
NA	23	4520.74200	452393.66000	0.800	4527.41215	4479.45518	4555.35972
TI	47	518.50800	5654.48000	2.200	530.06237	518.50057	506.96019
V	51	476.03700	263192.53000	1.600	474.41636	469.37161	484.32441
IN-1	115	554866.58000	0.00000	0.000	550682.00000	553113.64000	560804.10000
IN-2	115	19403.95000	0.00000	0.000	19334.69000	19887.79000	18989.38000
AG	107	50.33600	83612.54000	2.200	49.76128	49.63447	51.61180
AS	75	499.49200	29048.96000	3.700	492.29136	485.48444	520.69935
CD	111	50.22700	7357.61000	2.200	49.17834	50.14319	51.35812
CO	59	488.70400	707952.59000	3.200	486.85175	473.88756	505.37361
CU	63	507.80200	619023.21000	2.300	501.97728	500.13326	521.29514
MO	98	49.41000	37528.12000	1.500	49.15730	48.84477	50.22713
NI	60	519.32100	216705.83000	4.500	516.79840	497.38198	543.78299
SE	78	49.94700	7964.67000	1.100	49.31179	50.27849	50.25107
SN	120	51.37200	17626.46000	3.600	50.07856	50.53613	53.50211
SR	88	48.50600	8679.14000	8.000	47.52018	45.21575	52.78288
ZN	66	513.56800	57186.01000	3.800	506.16008	499.10680	535.43748
TB-2	159	115433.62000	0.00000	0.000	114977.21000	115863.47000	115460.19000
BA	137	510.59100	44640.05000	3.700	522.36374	488.54596	520.86276
SB	121	52.48700	13936.19000	5.800	49.06771	54.93040	53.46292
BI-2	209	92726.21000	0.00000	0.000	90116.69000	95031.40000	93030.55000
PB	208	51.76600	201757.22000	2.000	52.77215	50.73747	51.78856
TL	203	51.00300	62084.34000	1.500	51.34733	50.13158	51.53034
U	238	50.18500	243531.58000	1.900	51.14875	49.19223	50.21459
SC-1	45	612561.71000	0.00000	0.000	615809.13000	610096.16000	611779.83000
GE-1	72	770363.45000	0.00000	0.000	765094.60000	774915.38000	771080.38000
GE-2	72	58129.65000	0.00000	0.000	57334.66000	56430.40000	60623.89000
GE-3	72	2308495	0	0.000	2309618	2313364	2302504
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:33:30
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19931.55000	0.00000	0.000	20351.95000	19911.37000	19531.34000
SC-3	45	2972165	0	0.000	2984346	2997574	2934576
AL	27	-1.17600	23.33000	0.000	-2.59122	-1.53839	0.60288
B	11	32.31900	61396.51000	1.100	32.70336	32.26621	31.98706
BE	9	0.00900	24.00000	37.800	0.01232	0.00660	0.00681
CA	44	2.73300	6.67000	346.400	-2.73249	13.66281	-2.73249
CR	52	0.26900	306.68000	31.800	0.29161	0.34087	0.17439
FE	57	1.68900	50.00000	194.600	0.13880	5.46428	-0.53661
K	39	-10.72500	4720.80000	0.000	-6.75042	-16.50112	-8.92460
MG	24	0.06900	36.67000	421.000	-0.10564	-0.09040	0.40173
MN	55	0.05400	20.00000	152.700	0.13461	-0.02945	0.05602
NA	23	-12.99700	23281.98000	0.000	-23.11656	-11.34290	-4.53122
TI	47	0.62800	6.67000	173.200	0.00000	0.00000	1.88465
V	51	0.11300	83.33000	58.900	0.10323	0.05167	0.18360
IN-1	115	552513.47000	0.00000	0.000	540144.55000	557762.07000	559633.80000
IN-2	115	19351.90000	0.00000	0.000	18567.73000	19208.53000	20279.45000
AG	107	0.02000	33.33000	18.300	0.01887	0.02432	0.01728
AS	75	0.25100	17.33000	33.100	0.16908	0.33552	0.24956
CD	111	0.00900	6.67000	200.900	0.01959	0.01769	-0.01137
CO	59	0.07800	113.35000	95.500	0.16355	0.03252	0.03728
CU	63	2.61700	3330.46000	18.900	3.02633	2.75499	2.06839
MO	98	0.09500	116.67000	55.600	0.05166	0.15450	0.08019
NI	60	0.03100	26.67000	39.100	0.01705	0.03957	0.03574
SE	78	0.05300	9.78000	27.500	0.05604	0.03735	0.06624
SN	120	0.46400	210.01000	18.100	0.36906	0.52884	0.49299
SR	88	0.03500	13.33000	231.900	0.02047	-0.03791	0.12245
ZN	66	0.18100	43.33000	111.300	0.34823	0.23874	-0.04298
TB-2	159	116040.54000	0.00000	0.000	112981.53000	115974.69000	119165.39000
BA	137	0.22600	20.00000	100.900	0.00000	0.45535	0.22158
SB	121	0.49600	140.01000	63.900	0.16706	0.79980	0.52216
BI-2	209	92343.98000	0.00000	0.000	90285.49000	91421.94000	95324.50000
PB	208	-0.00100	110.00000	0.000	0.00278	-0.00543	0.00110
TL	203	0.03800	60.00000	43.200	0.02251	0.05542	0.03671
U	238	0.00300	36.67000	115.800	-0.00073	0.00340	0.00506
SC-1	45	608159.58000	0.00000	0.000	604619.41000	612236.36000	607622.96000
GE-1	72	774474.41000	0.00000	0.000	772560.14000	776907.33000	773955.77000
GE-2	72	56949.01000	0.00000	0.000	55558.05000	59039.84000	56249.15000
GE-3	72	2273992	0	0.000	2282357	2296780	2242841
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:36:27
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19637.85000	0.00000	0.000	19030.46000	19461.07000	20422.02000
SC-3	45	2992817	0	0.000	3005918	2975481	2997052
AL	27	208.92400	2033.53000	6.300	200.20567	224.16843	202.39653
B	11	110.92200	158091.94000	0.600	110.09133	111.33974	111.33534
BE	9	1.03700	2206.82000	0.900	1.03336	1.03068	1.04772
CA	44	346.17300	420.02000	12.400	306.06092	391.48901	340.96839
CR	52	4.21100	3230.42000	4.800	4.44308	4.09744	4.09222
FE	57	189.49100	2500.28000	12.900	217.17528	179.93074	171.36661
K	39	370.44000	12117.73000	8.800	407.73376	356.69769	346.88784
MG	24	192.05900	8098.73000	4.200	194.68423	198.52532	182.96670
MN	55	4.05000	956.74000	13.500	4.57639	4.08841	3.48587
NA	23	390.81500	60272.40000	6.700	420.52981	381.37837	370.53745
TI	47	26.96900	286.68000	25.700	34.81847	21.75266	24.33490
V	51	0.85800	483.36000	17.900	0.99098	0.89354	0.68960
IN-1	115	563015.88000	0.00000	0.000	555430.77000	565448.42000	568168.45000
IN-2	115	19824.11000	0.00000	0.000	19375.82000	19858.36000	20238.14000
AG	107	0.98800	1680.15000	13.700	0.83784	1.02333	1.10224
AS	75	4.54000	272.67000	0.500	4.53223	4.52157	4.56768
CD	111	0.98500	153.33000	23.100	0.72862	1.16385	1.06272
CO	59	0.99700	1480.12000	12.800	0.91674	1.14389	0.93050
CU	63	4.33100	5571.09000	7.100	4.05297	4.27986	4.66126
MO	98	0.98800	813.39000	23.500	0.72022	1.12627	1.11669
NI	60	4.54200	1950.19000	7.300	4.88428	4.22647	4.51400
SE	78	3.77400	611.79000	5.300	3.88083	3.54516	3.89575
SN	120	4.42300	1596.81000	10.100	4.82476	4.50400	3.94034
SR	88	1.58800	296.68000	15.700	1.75253	1.70902	1.30124
ZN	66	29.78800	3410.47000	6.100	31.71406	29.53407	28.11460
TB-2	159	117444.17000	0.00000	0.000	117403.72000	115682.74000	119246.04000
BA	137	4.08000	363.35000	12.100	3.82356	3.76631	4.65019
SB	121	1.99200	543.36000	25.500	1.79024	2.56947	1.61626
BI-2	209	93940.43000	0.00000	0.000	91170.50000	95184.27000	95466.52000
PB	208	2.07500	8304.58000	1.700	2.07780	2.03898	2.10767
TL	203	1.08500	1350.12000	11.700	1.20041	0.94923	1.10601
U	238	0.99800	4927.64000	3.600	1.02616	0.95659	1.00979
SC-1	45	612504.92000	0.00000	0.000	613043.70000	611416.98000	613054.09000
GE-1	72	779211.66000	0.00000	0.000	781433.82000	780165.30000	776035.85000
GE-2	72	58487.03000	0.00000	0.000	58166.08000	57042.07000	60252.93000
GE-3	72	2301078	0	0.000	2304005	2314412	2284816
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:39:24
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18233.05000	0.00000	0.000	16978.55000	18770.27000	18950.34000
SC-3	45	2800715	0	0.000	2832747	2783867	2785533
AL	27	100184.43700	888892.67000	4.300	104794.94764	96245.28927	99513.07315
B	11	21.06800	44954.58000	1.700	20.71265	21.44443	21.04615
BE	9	0.00600	17.33000	35.900	0.00516	0.00429	0.00833
CA	44	271315.26800	302560.39000	4.200	284622.40769	265012.02173	264311.37596
CR	52	1.41300	1073.42000	10.200	1.26328	1.42513	1.54963
FE	57	245595.16400	2977978.50000	5.000	259750.93672	240161.46346	236873.09260
K	39	103245.50800	1882042.42000	4.800	108932.15338	100327.91236	100476.45738
MG	24	98565.59600	3839663.90000	4.500	103638.93788	95962.40364	96095.44628
MN	55	3.21400	706.71000	6.700	3.46134	3.12813	3.05403
NA	23	245302.73000	21068272.18000	3.900	256337.49246	239720.43502	239850.26165
TI	47	2042.19700	20185.25000	5.700	2176.87609	1980.86106	1968.85353
V	51	0.01300	26.67000	224.700	-0.01813	0.01853	0.03714
IN-1	115	516784.10000	0.00000	0.000	521044.16000	510123.35000	519184.79000
IN-2	115	17979.29000	0.00000	0.000	17928.72000	17579.05000	18430.09000
AG	107	0.37000	570.03000	18.000	0.29313	0.40526	0.41189
AS	75	0.56900	33.33000	33.100	0.47439	0.44681	0.78595
CD	111	0.14400	24.67000	23.600	0.11034	0.14344	0.17823
CO	59	0.94500	1270.10000	23.000	1.17763	0.91167	0.74595
CU	63	1.04100	1330.10000	5.200	1.04348	1.09412	0.98542
MO	98	2220.19000	1560716.49000	2.300	2171.08636	2274.95057	2214.53385
NI	60	0.81300	326.69000	13.600	0.82241	0.91873	0.69828
SE	78	0.04800	8.44000	19.100	0.04057	0.04619	0.05864
SN	120	0.34300	156.68000	30.400	0.22945	0.36601	0.43446
SR	88	10.69800	1783.49000	16.200	9.03236	10.56963	12.49167
ZN	66	1.84700	213.34000	21.000	1.82619	1.47031	2.24338
TB-2	159	111100.25000	0.00000	0.000	111212.16000	108905.51000	113183.07000
BA	137	1.02900	86.67000	23.600	1.30583	0.84858	0.93315
SB	121	1.47300	383.36000	14.100	1.50020	1.25286	1.66581
BI-2	209	84584.52000	0.00000	0.000	82894.85000	83680.50000	87178.21000
PB	208	0.19900	810.05000	15.200	0.22091	0.16453	0.21137
TL	203	0.11800	143.34000	31.600	0.15418	0.07979	0.11984
U	238	0.05200	250.01000	21.900	0.05035	0.06353	0.04106
SC-1	45	591220.80000	0.00000	0.000	587744.01000	591475.30000	594443.08000
GE-1	72	734662.93000	0.00000	0.000	735106.47000	741521.00000	727361.32000
GE-2	72	55196.87000	0.00000	0.000	54946.49000	54886.04000	55758.07000
GE-3	72	2165450	0	0.000	2219345	2181510	2095495
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:42:19
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18203.12000	0.00000	0.000	17649.43000	17759.33000	19200.61000
SC-3	45	2828621	0	0.000	2814304	2839602	2831958
AL	27	98230.20200	870739.44000	3.200	98112.39107	101419.09575	95159.11847
B	11	12.82800	35865.94000	3.300	13.27743	12.78008	12.42788
BE	9	0.00600	18.00000	49.000	0.00922	0.00613	0.00317
CA	44	267582.95000	298152.51000	3.400	266996.19117	277073.12716	258679.53140
CR	52	196.81100	135631.92000	3.600	197.19079	203.69714	189.54651
FE	57	238938.89300	2896152.98000	2.400	242616.91585	241759.07409	232440.68911
K	39	101195.28000	1843039.66000	4.300	101440.53084	105460.67426	96684.63394
MG	24	96197.09100	3743267.13000	4.200	97165.45093	99636.31702	91789.50478
MN	55	196.87800	42895.39000	3.500	198.98299	202.55694	189.09486
NA	23	241337.10300	20700437.19000	5.200	239488.17698	254633.12949	229890.00341
TI	47	1950.44800	19264.28000	4.300	2011.69021	1985.73351	1853.92027
V	51	204.46500	102386.13000	3.800	209.30787	208.68946	195.39711
IN-1	115	515379.61000	0.00000	0.000	509069.03000	514076.59000	522993.22000
IN-2	115	17652.41000	0.00000	0.000	17028.14000	17249.27000	18679.81000
AG	107	50.70600	76553.18000	4.500	50.71519	52.98183	48.42188
AS	75	106.13100	5606.92000	6.800	110.94355	109.67575	97.77239
CD	111	100.79200	13409.24000	4.600	102.52693	104.30366	95.54606
CO	59	199.81300	263201.40000	3.800	199.30339	207.60983	192.52598
CU	63	207.24700	229640.25000	4.600	212.41771	213.05714	196.26516
MO	98	2234.86600	1540657.01000	4.400	2259.60092	2318.72931	2126.26857
NI	60	209.52400	79509.23000	3.400	214.80910	212.37997	201.38385
SE	78	97.84500	14490.10000	0.200	98.04678	97.80974	97.67832
SN	120	0.16200	96.67000	61.900	0.11631	0.27727	0.09276
SR	88	10.53000	1716.82000	7.300	11.23119	10.64668	9.71242
ZN	66	97.88500	9909.82000	8.700	101.94012	103.66248	88.05280
TB-2	159	108981.32000	0.00000	0.000	105606.27000	111485.47000	109852.23000
BA	137	0.97000	80.00000	2.800	1.00010	0.94736	0.96145
SB	121	1.24800	320.02000	41.200	0.88082	1.02813	1.83590
BI-2	209	84291.93000	0.00000	0.000	82210.56000	85548.38000	85116.86000
PB	208	0.21500	863.38000	6.600	0.20852	0.20482	0.23116
TL	203	0.17000	200.01000	12.900	0.19262	0.14905	0.16776
U	238	0.05100	246.68000	15.700	0.05778	0.05310	0.04217
SC-1	45	582028.44000	0.00000	0.000	569173.00000	581437.22000	595475.11000
GE-1	72	723649.47000	0.00000	0.000	720172.18000	722039.29000	728736.94000
GE-2	72	54678.48000	0.00000	0.000	51826.60000	55477.83000	56731.01000
GE-3	72	2177854	0	0.000	2160335	2215318	2157910
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:45:15
Tube Number: 10
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18847.09000	0.00000	0.000	18670.15000	18279.82000	19591.31000
SC-3	45	2855917	0	0.000	2962825	2808122	2796802
AL	27	7.66400	103.34000	10.600	8.49109	7.62563	6.87420
B	11	5.16800	27257.69000	4.500	5.07457	4.99671	5.43334
BE	9	0.00100	6.67000	308.900	-0.00090	0.00222	0.00022
CA	44	12.08700	16.67000	154.000	6.01015	32.98482	-2.73249
CR	52	0.31100	320.02000	26.200	0.38676	0.22457	0.32172
FE	57	20.90400	290.01000	25.200	22.04117	15.16751	25.50407
K	39	16.71300	4984.22000	114.800	33.72405	-4.07724	20.49178
MG	24	5.68200	260.01000	22.700	6.21296	6.61819	4.21408
MN	55	0.03000	13.33000	223.700	0.10467	0.01621	-0.02945
NA	23	41.73800	26863.73000	28.000	45.99818	50.68964	28.52725
TI	47	2.32000	23.33000	101.300	0.98579	5.03420	0.93944
V	51	-0.01400	13.33000	0.000	-0.02006	-0.03952	0.01609
IN-1	115	537691.26000	0.00000	0.000	539834.25000	538173.44000	535066.10000
IN-2	115	18850.09000	0.00000	0.000	18440.09000	18810.78000	19299.40000
AG	107	0.00600	10.00000	173.200	0.00000	0.01862	0.00000
AS	75	0.06100	6.00000	103.600	0.09823	0.09538	-0.01189
CD	111	-0.01400	3.33000	0.000	-0.00876	-0.03751	0.00369
CO	59	0.00500	10.00000	147.100	0.00493	-0.00233	0.01155
CU	63	0.07900	256.68000	47.500	0.04388	0.07416	0.11829
MO	98	2.73000	2060.20000	15.100	2.34080	2.68781	3.16169
NI	60	0.09000	50.00000	79.900	0.09300	0.01640	0.15963
SE	78	0.05400	9.56000	52.000	0.02172	0.07354	0.06530
SN	120	0.07100	73.34000	210.000	0.00368	0.24179	-0.03255
SR	88	0.13400	30.00000	42.100	0.07966	0.19260	0.13059
ZN	66	0.40200	66.67000	16.300	0.44662	0.43359	0.32689
TB-2	159	110982.98000	0.00000	0.000	111100.88000	109963.43000	111884.63000
BA	137	0.08000	6.67000	173.200	0.00000	0.24012	0.00000
SB	121	0.01300	10.00000	502.000	-0.02547	-0.02547	0.09118
BI-2	209	89481.26000	0.00000	0.000	88135.78000	89883.05000	90424.95000
PB	208	-0.01500	53.33000	0.000	-0.02345	-0.01562	-0.00517
TL	203	-0.00300	10.00000	0.000	-0.01124	0.01419	-0.01124
U	238	-0.00300	10.00000	0.000	-0.00280	-0.00071	-0.00496
SC-1	45	590392.54000	0.00000	0.000	591651.67000	586443.16000	593082.80000
GE-1	72	743531.45000	0.00000	0.000	742784.52000	736944.21000	750865.61000
GE-2	72	55919.15000	0.00000	0.000	53280.84000	56349.93000	58126.68000
GE-3	72	2204787	0	0.000	2249052	2183230	2182080
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:48:12
Tube Number: 11
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18757.09000	0.00000	0.000	18700.30000	18500.22000	19070.74000
SC-3	45	2901303	0	0.000	2960905	2906530	2836473
AL	27	2504.61400	22924.95000	1.700	2482.24099	2553.52181	2478.07960
B	11	236.74000	302591.95000	1.800	231.88597	239.33413	238.99993
BE	9	24.80400	51022.51000	0.500	24.67774	24.82607	24.90877
CA	44	2431.52200	2800.33000	10.900	2301.86662	2256.21610	2736.48204
CR	52	248.91500	176900.70000	0.800	246.84928	251.01640	248.87818
FE	57	2439.73700	30513.41000	3.600	2370.53044	2538.35532	2410.32575
K	39	2526.14300	51985.37000	3.500	2436.57806	2615.88474	2525.96733
MG	24	2463.59500	98918.05000	2.000	2437.69488	2521.15408	2431.93555
MN	55	250.77900	56362.08000	0.600	252.11718	249.04835	251.17105
NA	23	2486.93800	242873.78000	1.800	2470.21071	2538.90160	2451.70290
TI	47	243.37000	2480.28000	5.800	227.37599	253.71632	249.01850
V	51	250.98000	129641.82000	1.600	248.27146	255.56266	249.10554
IN-1	115	549365.85000	0.00000	0.000	546120.83000	548599.95000	553376.76000
IN-2	115	19493.22000	0.00000	0.000	19588.66000	19007.01000	19883.98000
AG	107	24.92900	41610.73000	0.700	24.72336	25.01176	25.05086
AS	75	241.46900	14112.99000	5.100	227.32888	250.16233	246.91555
CD	111	24.59500	3623.07000	1.000	24.39099	24.52476	24.86824
CO	59	242.16400	352476.96000	2.400	237.98253	248.94353	239.56463
CU	63	250.97800	307419.84000	2.700	246.30399	258.76936	247.86178
MO	98	25.29600	19318.07000	3.700	24.51158	26.32752	25.04758
NI	60	248.90800	104369.01000	3.300	247.17102	257.90974	241.64213
SE	78	24.76000	3909.99000	2.500	24.62763	24.22441	25.42850
SN	120	24.05500	8315.66000	5.300	24.11100	25.30098	22.75211
SR	88	23.56700	4244.00000	2.400	24.09420	23.63476	22.97226
ZN	66	247.79200	27728.90000	4.600	238.80485	260.71736	243.85346
TB-2	159	114064.49000	0.00000	0.000	113355.89000	113929.99000	114907.59000
BA	137	249.10000	21521.12000	0.700	251.15615	248.61183	247.53110
SB	121	25.97600	6818.29000	2.600	25.23236	26.17453	26.52011
BI-2	209	94013.75000	0.00000	0.000	93836.04000	93342.55000	94862.65000
PB	208	24.58900	97259.80000	0.700	24.40691	24.63624	24.72297
TL	203	25.00800	30873.98000	3.100	24.51336	25.91030	24.60184
U	238	24.86100	122369.74000	2.200	24.29560	25.39947	24.88941
SC-1	45	593208.95000	0.00000	0.000	587836.79000	595045.85000	596744.21000
GE-1	72	759815.93000	0.00000	0.000	746868.04000	771504.29000	761075.46000
GE-2	72	56222.95000	0.00000	0.000	54694.93000	57272.96000	56700.96000
GE-3	72	2213483	0	0.000	2237894	2240053	2162502
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:51:10
Tube Number: 12
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18553.55000	0.00000	0.000	18850.54000	18189.89000	18620.21000
SC-3	45	2917554	0	0.000	3021880	2880138	2850642
AL	27	2.67900	56.67000	167.400	5.10874	5.42501	-2.49746
B	11	12.95400	37132.44000	4.400	12.46486	12.81051	13.58614
BE	9	0.00100	7.33000	267.400	0.00279	-0.00085	0.00016
CA	44	8.91800	13.33000	148.000	23.24446	6.24098	-2.73249
CR	52	0.23800	263.35000	50.600	0.14360	0.19732	0.37398
FE	57	2.76800	60.00000	56.900	2.70328	1.22674	4.37426
K	39	-2.07900	4550.75000	0.000	-9.86049	19.14050	-15.51774
MG	24	1.23300	80.00000	84.800	0.19707	2.28822	1.21303
MN	55	0.15100	40.00000	78.700	0.23623	0.19999	0.01538
NA	23	17.37100	24340.11000	55.900	11.27123	12.28251	28.55886
TI	47	2.33800	23.33000	89.600	0.00000	4.04727	2.96530
V	51	-0.00700	16.67000	0.000	-0.02025	0.00041	-0.00051
IN-1	115	545518.58000	0.00000	0.000	543624.87000	543098.65000	549832.23000
IN-2	115	18399.46000	0.00000	0.000	18470.01000	18008.24000	18720.13000
AG	107	0.02700	43.33000	92.900	0.03161	0.00000	0.04991
AS	75	0.05000	5.33000	80.400	0.02577	0.02762	0.09607
CD	111	-0.00900	4.00000	0.000	-0.02316	-0.02279	0.01913
CO	59	0.02900	43.33000	12.700	0.02667	0.02741	0.03343
CU	63	0.05300	220.01000	30.700	0.03497	0.05707	0.06668
MO	98	0.22800	206.68000	53.200	0.13533	0.18290	0.36498
NI	60	0.03500	26.67000	155.400	-0.00785	0.09602	0.01664
SE	78	0.01700	4.00000	66.200	0.03002	0.01295	0.00851
SN	120	0.15900	100.00000	55.400	0.12621	0.25926	0.09223
SR	88	0.02000	10.00000	285.900	0.02078	-0.03791	0.07790
ZN	66	0.26200	50.00000	100.000	0.06820	0.55924	0.15749
TB-2	159	113291.77000	0.00000	0.000	109712.59000	114190.33000	115972.39000
BA	137	0.04000	3.33000	173.200	0.12033	0.00000	0.00000
SB	121	0.44700	123.34000	15.100	0.37105	0.46983	0.49973
BI-2	209	88967.69000	0.00000	0.000	88062.69000	89520.81000	89319.57000
PB	208	-0.00300	96.67000	0.000	-0.00994	0.00836	-0.00754
TL	203	0.01400	30.00000	59.200	0.01471	0.00578	0.02287
U	238	-0.00100	20.00000	0.000	-0.00062	-0.00283	0.00145
SC-1	45	598874.43000	0.00000	0.000	593431.44000	600667.06000	602524.80000
GE-1	72	759926.86000	0.00000	0.000	740778.97000	765415.93000	773585.69000
GE-2	72	56149.67000	0.00000	0.000	54333.95000	57483.88000	56631.19000
GE-3	72	2240868	0	0.000	2299850	2210036	2212717
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:54:06
Tube Number: 13 Batch: 181131063906A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18903.68000	0.00000	0.000	19220.79000	19220.71000	18269.54000
SC-3	45	2957848	0	0.000	2949941	2930341	2993262
AL	27	6.00900	90.00000	151.800	7.07610	14.55012	-3.59944
B	11	7.69800	31291.22000	5.400	7.90884	7.96123	7.22251
BE	9	0.00100	7.33000	154.900	0.00006	0.00008	0.00191
CA	44	8.73800	13.33000	54.700	14.25188	5.75973	6.20186
CR	52	0.36300	356.68000	17.100	0.30306	0.35803	0.42714
FE	57	1.88500	50.00000	69.400	1.04975	3.39205	1.21236
K	39	-16.17200	4377.36000	0.000	-7.67204	-14.44115	-26.40395
MG	24	0.62100	56.67000	146.300	0.66414	-0.30819	1.50730
MN	55	0.40000	96.67000	41.700	0.40482	0.23112	0.56455
NA	23	11.26500	24233.29000	115.700	-0.49791	9.01269	25.28030
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.02100	10.00000	0.000	-0.02062	-0.00173	-0.03952
IN-1	115	551863.21000	0.00000	0.000	560436.76000	541335.68000	553817.20000
IN-2	115	19432.43000	0.00000	0.000	18557.68000	20210.15000	19529.45000
AG	107	0.01200	20.00000	98.300	0.01259	0.00000	0.02392
AS	75	0.06900	6.67000	36.300	0.09731	0.05256	0.05601
CD	111	-0.02400	2.00000	0.000	-0.00894	-0.02440	-0.03751
CO	59	0.01100	20.00000	210.100	-0.00233	0.03742	-0.00233
CU	63	0.04500	223.34000	39.900	0.03415	0.03588	0.06637
MO	98	0.06800	96.67000	75.700	0.02416	0.05536	0.12481
NI	60	0.11700	63.33000	55.400	0.04212	0.15095	0.15736
SE	78	0.00700	2.45000	208.700	-0.00839	0.02163	0.00839
SN	120	0.74800	306.68000	20.000	0.79708	0.57935	0.86608
SR	88	0.05600	16.67000	157.000	0.13733	0.06936	-0.03791
ZN	66	0.14100	40.00000	99.700	0.06686	0.30247	0.05284
TB-2	159	115661.07000	0.00000	0.000	113909.05000	113959.43000	119114.74000
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SB	121	0.11100	36.67000	116.200	0.12730	-0.02547	0.23019
BI-2	209	91569.34000	0.00000	0.000	90416.08000	91955.47000	92336.47000
PB	208	-0.01100	66.67000	0.000	0.00010	-0.01333	-0.02112
TL	203	0.00500	20.00000	156.000	0.01404	0.00533	-0.00299
U	238	0.00000	23.33000	0.000	0.00771	-0.00289	-0.00496
SC-1	45	601614.59000	0.00000	0.000	604991.63000	597338.16000	602513.98000
GE-1	72	763652.85000	0.00000	0.000	768328.74000	756389.68000	766240.14000
GE-2	72	56346.71000	0.00000	0.000	56009.19000	55828.93000	57202.02000
GE-3	72	2254021	0	0.000	2285539	2202852	2273673
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:57:02
Tube Number: 14 Batch: 181131063906A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18890.41000	0.00000	0.000	18860.29000	19290.78000	18520.17000
SC-3	45	2985822	0	0.000	2963372	3060865	2933228
AL	27	2089.49700	19267.37000	4.200	1990.58948	2116.48705	2161.41500
B	11	245.13200	321735.86000	1.100	247.67111	245.41947	242.30495
BE	9	3.97000	8411.93000	1.000	3.96875	4.01098	3.93162
CA	44	3962.46800	4584.10000	8.000	4056.91489	3610.84965	4219.63938
CR	52	51.78900	37135.59000	3.900	49.89813	51.53792	53.93166
FE	57	1014.64900	12801.70000	2.900	987.34075	1046.22721	1010.37945
K	39	10200.36300	197178.61000	2.700	9965.93169	10131.24586	10503.91277
MG	24	2073.31300	83826.79000	2.900	2053.28930	2024.71650	2141.93351
MN	55	51.55000	11670.85000	1.500	51.94764	50.65748	52.04558
NA	23	10131.68300	924834.85000	3.600	9951.71152	9892.49789	10550.84056
TI	47	250.41600	2566.96000	9.600	245.94105	229.00377	276.30378
V	51	50.80700	26433.38000	4.800	50.02056	48.84731	53.55175
IN-1	115	546895.87000	0.00000	0.000	552272.90000	548733.62000	539681.08000
IN-2	115	20108.26000	0.00000	0.000	19734.26000	19878.46000	20712.06000
AG	107	49.86900	85859.90000	0.900	50.41290	49.59846	49.59659
AS	75	10.16200	614.68000	9.400	10.26278	11.06041	9.16405
CD	111	4.97500	760.69000	6.400	4.65055	5.28329	4.99235
CO	59	240.33400	360903.99000	2.100	238.14957	246.11340	236.73800
CU	63	51.32800	64988.69000	3.100	51.35800	52.91341	49.71305
MO	98	49.57500	39011.37000	2.500	50.71889	49.75735	48.24753
NI	60	50.70100	21947.42000	1.500	51.43014	50.72918	49.94426
SE	78	10.19600	1603.41000	0.700	10.12555	10.18666	10.27596
SN	120	50.08200	17816.58000	0.600	50.29781	49.73147	50.21815
SR	88	37.37400	6945.00000	4.900	36.93947	35.79854	39.38338
ZN	66	502.01200	57955.06000	1.000	499.35540	507.51936	499.16051
TB-2	159	115678.03000	0.00000	0.000	113294.86000	115712.08000	118027.16000
BA	137	51.82900	4540.79000	2.100	52.79704	50.66692	52.02231
SB	121	6.53100	1740.18000	17.900	6.96362	7.41926	5.20885
BI-2	209	92890.03000	0.00000	0.000	91683.86000	92446.80000	94539.44000
PB	208	15.76800	61652.04000	2.000	16.08887	15.75229	15.46338
TL	203	2.15900	2647.01000	4.000	2.07450	2.24687	2.15661
U	238	0.00000	23.33000	0.000	-0.00080	0.00330	-0.00294
SC-1	45	610321.97000	0.00000	0.000	603324.25000	628093.82000	599547.84000
GE-1	72	757737.80000	0.00000	0.000	756767.02000	774759.29000	741687.10000
GE-2	72	57891.95000	0.00000	0.000	55066.22000	58857.98000	59751.65000
GE-3	72	2311563	0	0.000	2347550	2329682	2257458
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 4:59:59
Tube Number: 15 Batch: 181131063906A
Sample Number: **9569296** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19571.24000	0.00000	0.000	18960.57000	19921.69000	19831.46000
SC-3	45	2979623	0	0.000	3062798	2915802	2960269
AL	27	30.64900	326.70000	20.000	31.03330	36.57447	24.34005
B	11	56.07200	90504.40000	0.800	55.62610	56.49447	56.09604
BE	9	0.00500	16.67000	28.500	0.00456	0.00397	0.00672
CA	44	58753.18200	70450.83000	2.300	58561.08305	57503.87197	60194.59069
CR	52	1.16600	966.74000	7.500	1.07515	1.17577	1.24833
FE	57	120.89700	1603.46000	6.200	121.40741	113.18947	128.09308
K	39	1728.42600	38645.67000	3.200	1728.31821	1673.75245	1783.20645
MG	24	26619.09900	1114657.67000	2.300	27200.36499	25975.24537	26681.68749
MN	55	2.59000	613.37000	7.300	2.78823	2.56849	2.41191
NA	23	5877.49700	566096.88000	2.200	5924.62144	5732.17705	5975.69270
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.21900	140.00000	31.500	0.15201	0.21568	0.29011
IN-1	115	549007.10000	0.00000	0.000	552124.95000	541261.70000	553634.65000
IN-2	115	19592.21000	0.00000	0.000	18637.72000	20119.90000	20019.01000
AG	107	0.03400	56.67000	64.300	0.02506	0.05805	0.01750
AS	75	0.05900	6.00000	219.400	0.20406	0.01985	-0.04646
CD	111	-0.01000	4.00000	0.000	-0.00907	-0.01116	-0.01103
CO	59	0.07500	113.34000	51.000	0.04796	0.05756	0.11806
CU	63	0.64600	966.74000	11.600	0.56295	0.70917	0.66571
MO	98	0.93800	760.05000	18.500	1.13526	0.80581	0.87403
NI	60	0.31700	146.67000	32.800	0.39090	0.19797	0.36165
SE	78	0.18500	30.44000	14.000	0.21431	0.17165	0.16763
SN	120	0.49000	220.01000	28.900	0.64089	0.46991	0.35975
SR	88	243.37400	43959.66000	4.000	250.37741	232.36693	247.37837
ZN	66	2.48500	303.35000	9.200	2.59005	2.64322	2.22235
TB-2	159	117501.74000	0.00000	0.000	115593.15000	120525.13000	116386.93000
BA	137	130.64500	11627.76000	2.900	127.16406	130.07361	134.69754
SB	121	0.14500	46.67000	125.300	-0.02547	0.33551	0.12404
BI-2	209	93550.76000	0.00000	0.000	93412.86000	93111.35000	94128.07000
PB	208	0.13400	640.04000	6.300	0.12655	0.13217	0.14307
TL	203	0.00200	16.67000	713.800	-0.00309	0.02149	-0.01124
U	238	0.98800	4864.28000	9.300	0.95640	0.91642	1.09122
SC-1	45	609497.97000	0.00000	0.000	604760.77000	613937.92000	609795.23000
GE-1	72	757063.17000	0.00000	0.000	760326.63000	754321.08000	756541.79000
GE-2	72	57988.93000	0.00000	0.000	54895.56000	58175.41000	60895.81000
GE-3	72	2266948	0	0.000	2343480	2232572	2224792
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:02:56
Tube Number: 16 Batch: 181131063906A
Sample Number: **9569296** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19401.05000	0.00000	0.000	19481.00000	19441.06000	19281.08000
SC-3	45	2983871	0	0.000	3001237	3001135	2949241
AL	27	221.27900	2126.88000	8.700	238.68260	224.40287	200.75028
B	11	147.22900	201956.02000	0.300	147.53317	146.67356	147.48143
BE	9	1.03300	2190.81000	5.100	1.09326	0.99364	1.01118
CA	44	58858.09500	69958.83000	2.100	57467.72797	59692.45352	59414.10250
CR	52	4.72700	3573.84000	6.700	4.70322	5.05285	4.42464
FE	57	290.02900	3777.23000	9.600	322.29234	275.08221	272.71191
K	39	2096.25900	45434.40000	5.700	1974.15342	2101.00969	2213.61332
MG	24	26425.82300	1097239.07000	2.700	25675.59966	26496.65366	27105.21498
MN	55	5.50900	1286.77000	14.500	4.59837	5.85317	6.07523
NA	23	6146.38500	585789.18000	3.300	5914.30501	6219.93004	6304.92116
TI	47	30.05200	316.68000	13.100	25.50944	32.18969	32.45678
V	51	1.32800	730.05000	19.600	1.11629	1.24944	1.61802
IN-1	115	554379.99000	0.00000	0.000	552354.42000	555858.44000	554927.10000
IN-2	115	19561.53000	0.00000	0.000	19697.63000	20278.12000	18708.85000
AG	107	0.99000	1653.49000	11.500	1.01984	0.86392	1.08621
AS	75	3.91300	231.33000	14.900	3.78001	3.40733	4.55268
CD	111	0.94800	145.33000	9.400	0.85068	0.96905	1.02514
CO	59	1.08000	1580.12000	5.800	1.13963	1.01451	1.08547
CU	63	4.46200	5647.76000	3.700	4.34829	4.38474	4.65340
MO	98	1.75200	1380.11000	17.500	1.48650	1.68191	2.08764
NI	60	4.20600	1780.16000	10.800	4.47356	3.67986	4.46336
SE	78	4.03500	644.01000	5.600	4.09574	4.22427	3.78401
SN	120	4.24500	1520.13000	9.800	4.34044	4.60337	3.78983
SR	88	238.06400	42913.75000	5.600	227.03106	234.24918	252.91186
ZN	66	33.75700	3810.56000	7.200	31.10405	34.33292	35.83316
TB-2	159	117651.32000	0.00000	0.000	115721.51000	116576.53000	120655.91000
BA	137	131.65600	11721.14000	6.600	139.58201	133.11858	122.26645
SB	121	2.18200	600.04000	35.300	1.47831	2.06442	3.00337
BI-2	209	93087.57000	0.00000	0.000	92195.66000	92055.25000	95011.81000
PB	208	2.20700	8741.35000	3.900	2.27382	2.23596	2.11037
TL	203	0.96700	1193.43000	14.400	1.08778	0.99843	0.81464
U	238	11.39700	55556.43000	0.400	11.39101	11.44590	11.35386
SC-1	45	613085.34000	0.00000	0.000	612184.83000	613488.70000	613582.49000
GE-1	72	772348.71000	0.00000	0.000	771339.52000	774611.94000	771094.68000
GE-2	72	58383.33000	0.00000	0.000	56711.45000	59559.90000	58878.63000
GE-3	72	2281482	0	0.000	2304255	2286887	2253303
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:05:53
Tube Number: 17 Batch: 181131063906A
Sample Number: **9569299** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19197.42000	0.00000	0.000	19160.67000	19320.83000	19110.75000
SC-3	45	3033400	0	0.000	3080567	3024678	2994954
AL	27	27.05300	286.68000	16.400	31.74253	22.95228	26.46527
B	11	52.99100	88314.12000	1.600	52.04431	53.73913	53.19048
BE	9	0.01000	27.33000	41.500	0.01459	0.00745	0.00755
CA	44	59914.58000	70464.65000	4.300	57794.93684	59165.20476	62783.59923
CR	52	1.15100	936.73000	22.200	1.26924	1.32593	0.85835
FE	57	128.99800	1676.83000	7.000	118.55301	133.86496	134.57482
K	39	1759.40700	38504.59000	2.000	1719.68762	1785.40788	1773.12699
MG	24	27563.81400	1132576.75000	2.100	26931.17818	27702.68818	28057.57612
MN	55	2.82500	656.70000	5.600	2.80236	2.99486	2.67869
NA	23	5963.37300	563107.96000	1.600	5943.09178	5880.35080	6066.67575
TI	47	5.40500	56.69000	143.500	1.92111	14.29458	0.00000
V	51	0.17500	113.34000	37.400	0.11211	0.24244	0.16953
IN-1	115	555711.61000	0.00000	0.000	548472.60000	555815.76000	562846.47000
IN-2	115	19707.77000	0.00000	0.000	19511.30000	19911.39000	19700.61000
AG	107	0.01200	20.00000	99.300	0.01197	0.02346	0.00000
AS	75	0.16800	12.67000	10.500	0.15866	0.18804	0.15669
CD	111	0.00700	6.67000	281.900	0.03042	-0.01089	0.00285
CO	59	0.04700	73.33000	29.500	0.05257	0.05819	0.03165
CU	63	0.48400	770.05000	30.700	0.38474	0.65406	0.41204
MO	98	0.87100	716.72000	11.300	0.87209	0.96901	0.77229
NI	60	0.37600	173.34000	30.600	0.46719	0.24706	0.41521
SE	78	0.17500	29.33000	25.600	0.15234	0.14608	0.22658
SN	120	0.10800	90.00000	114.600	-0.03382	0.16316	0.19532
SR	88	239.53200	43555.07000	2.500	234.93582	237.47206	246.18747
ZN	66	2.87900	350.02000	22.000	2.37507	2.67315	3.58859
TB-2	159	119957.96000	0.00000	0.000	119225.96000	121189.72000	119458.19000
BA	137	128.74500	11694.54000	6.900	127.50263	120.53012	138.20147
SB	121	0.10700	36.67000	50.700	0.04751	0.15402	0.12020
BI-2	209	93952.95000	0.00000	0.000	90777.67000	96692.95000	94388.22000
PB	208	0.13400	640.04000	12.100	0.15203	0.12620	0.12242
TL	203	0.01000	26.67000	243.300	-0.01124	0.00452	0.03718
U	238	0.96300	4760.95000	2.000	0.95064	0.95345	0.98495
SC-1	45	616115.71000	0.00000	0.000	608885.26000	617033.86000	622428.00000
GE-1	72	779875.95000	0.00000	0.000	773774.52000	770934.60000	794918.74000
GE-2	72	59340.26000	0.00000	0.000	56400.78000	59760.86000	61859.14000
GE-3	72	2293588	0	0.000	2334337	2226181	2320248
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:08:50
Tube Number: 18 Batch: 181131063906A
Sample Number: **9569297** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19848.26000	0.00000	0.000	19631.41000	19731.57000	20181.79000
SC-3	45	3019968	0	0.000	3013358	3033150	3013397
AL	27	2027.95100	19654.51000	2.700	2038.85660	1969.17496	2075.82145
B	11	300.12900	393364.19000	1.100	303.65631	297.55894	299.17136
BE	9	4.16300	8918.83000	4.300	4.22037	3.96205	4.30742
CA	44	61144.16500	74366.65000	1.700	60199.18605	60956.43349	62276.87542
CR	52	51.05200	38481.84000	2.000	49.90023	51.40389	51.85316
FE	57	1099.38600	14569.78000	3.000	1062.45636	1127.09710	1108.60402
K	39	11494.14400	232881.09000	0.700	11436.99057	11579.66626	11465.77380
MG	24	28740.84500	1221195.30000	1.900	28241.17301	28672.95742	29308.40489
MN	55	51.92900	12361.35000	5.900	51.13972	49.31408	55.33195
NA	23	16207.48600	1540622.69000	1.100	16116.20191	16099.04704	16407.20765
TI	47	255.66700	2757.00000	0.800	255.97500	257.47113	253.55404
V	51	49.78100	27234.71000	2.500	48.36958	50.42797	50.54517
IN-1	115	557853.86000	0.00000	0.000	568759.91000	551327.04000	553474.62000
IN-2	115	19315.21000	0.00000	0.000	19152.22000	18938.47000	19854.95000
AG	107	53.56400	88583.45000	2.500	52.29406	54.92395	53.47507
AS	75	11.55100	671.35000	10.100	10.43660	12.77395	11.44310
CD	111	5.29800	777.35000	1.700	5.34665	5.35143	5.19614
CO	59	252.77800	364660.41000	0.700	251.62728	254.84811	251.85753
CU	63	54.19500	65925.04000	3.700	52.11338	56.14503	54.32699
MO	98	54.27400	41039.56000	1.800	53.13175	55.01808	54.67107
NI	60	53.65500	22301.36000	4.700	52.46013	56.56617	51.93773
SE	78	10.27700	1648.30000	3.000	10.09693	10.63533	10.09933
SN	120	51.38800	17553.01000	1.900	51.47579	52.29730	50.39132
SR	88	293.69700	52312.78000	4.100	287.01327	307.53388	286.54467
ZN	66	516.85800	57336.47000	2.000	509.25364	512.59851	528.72151
TB-2	159	120321.84000	0.00000	0.000	118058.78000	119880.79000	123025.95000
BA	137	175.98800	16038.28000	1.700	178.79166	172.76761	176.40617
SB	121	6.06600	1683.49000	5.400	6.34985	6.14417	5.70341
BI-2	209	94090.18000	0.00000	0.000	91260.44000	94348.39000	96661.71000
PB	208	16.02700	63462.47000	2.400	16.46960	15.73512	15.87777
TL	203	2.23700	2777.01000	2.900	2.24280	2.16905	2.29815
U	238	0.97500	4824.23000	5.600	0.97908	1.02789	0.91815
SC-1	45	623447.28000	0.00000	0.000	627846.32000	618597.02000	623898.51000
GE-1	72	788220.51000	0.00000	0.000	793348.04000	784271.71000	787041.79000
GE-2	72	59701.92000	0.00000	0.000	60093.24000	58298.29000	60714.23000
GE-3	72	2318914	0	0.000	2335754	2318302	2302685
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:11:46
Tube Number: 19 Batch: 181131063906A
Sample Number: **9569298** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19954.94000	0.00000	0.000	19180.78000	20161.83000	20522.21000
SC-3	45	3023627	0	0.000	3023101	3003666	3044113
AL	27	2060.02500	20061.65000	2.800	2109.34028	1997.38294	2073.35162
B	11	313.22200	410046.06000	0.500	311.70489	314.55143	313.40918
BE	9	4.22100	9054.24000	3.400	4.11060	4.38622	4.16751
CA	44	61973.06100	75747.86000	1.800	62475.68914	62743.70298	60699.79067
CR	52	50.12300	37981.08000	1.200	50.23533	49.47656	50.65616
FE	57	1149.45000	15323.73000	3.600	1102.33948	1178.97969	1167.03164
K	39	11606.33800	236331.16000	0.800	11699.74267	11601.85409	11517.41836
MG	24	28795.26700	1229638.52000	0.800	29037.93648	28770.13626	28577.72774
MN	55	53.11700	12711.67000	2.200	51.77640	53.81209	53.76329
NA	23	16243.74400	1551572.84000	1.700	16547.99102	16142.93224	16040.31022
TI	47	254.85600	2767.01000	6.100	237.03295	262.93362	264.60134
V	51	49.99600	27491.71000	2.800	50.68238	48.35841	50.94684
IN-1	115	567884.56000	0.00000	0.000	567095.24000	568849.52000	567708.92000
IN-2	115	20460.90000	0.00000	0.000	20153.60000	20195.73000	21033.37000
AG	107	49.80700	87246.74000	3.100	48.87488	51.56808	48.97824
AS	75	10.03800	618.69000	2.100	10.24685	9.82905	10.03829
CD	111	5.15200	802.03000	10.400	4.53985	5.38353	5.53312
CO	59	241.68200	369370.18000	1.200	238.70460	244.44130	241.90146
CU	63	50.98300	65714.77000	2.200	49.85059	52.09529	51.00293
MO	98	51.19600	41015.78000	3.000	49.48418	52.42613	51.67725
NI	60	52.40600	23095.67000	2.900	50.65952	53.04223	53.51747
SE	78	10.26600	1676.53000	1.500	10.09389	10.38088	10.32414
SN	120	52.74100	19084.52000	1.200	53.27430	52.88246	52.06625
SR	88	265.14800	50046.03000	2.300	260.98991	272.23479	262.21783
ZN	66	511.87200	60128.68000	0.800	516.63235	509.67258	509.31095
TB-2	159	117862.79000	0.00000	0.000	114471.90000	118329.58000	120786.88000
BA	137	181.98700	16245.00000	3.100	180.81269	188.09765	177.04933
SB	121	6.06700	1646.83000	14.600	6.70178	6.44559	5.05324
BI-2	209	94217.51000	0.00000	0.000	90906.90000	95173.10000	96572.53000
PB	208	16.06200	63718.54000	1.300	15.97510	15.91584	16.29493
TL	203	2.17300	2703.68000	5.600	2.05881	2.30227	2.15827
U	238	0.97200	4817.62000	2.600	0.98712	0.94264	0.98630
SC-1	45	635638.50000	0.00000	0.000	631967.53000	638836.51000	636111.47000
GE-1	72	794460.43000	0.00000	0.000	798704.75000	793818.19000	790858.35000
GE-2	72	58978.28000	0.00000	0.000	56098.79000	59710.39000	61125.67000
GE-3	72	2304866	0	0.000	2278842	2310980	2324777
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05
Tube Number: 20
Sample Number: **9569296**

Date/Time: 04/26/2018 5:14:42
Batch: 181131063906A
Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19898.31000	0.00000	0.000	18239.87000	20972.50000	20482.57000
SC-3	45	3017687	0	0.000	3045983	3075059	2932019
AL	27	17.39900	200.02000	48.500	26.77802	14.99090	10.42662
B	11	29.15400	58412.46000	2.300	29.03780	28.54523	29.87906
BE	9	0.00400	14.67000	33.500	0.00275	0.00545	0.00393
CA	44	11641.67100	14152.71000	6.400	12414.66938	10929.00337	11581.34123
CR	52	0.35400	373.36000	30.700	0.23986	0.36708	0.45649
FE	57	24.83600	356.69000	18.100	25.90185	28.69675	19.90811
K	39	308.05400	11000.39000	17.200	369.17222	277.32465	277.66624
MG	24	5177.44600	219800.43000	6.800	5573.94566	4898.71122	5059.68060
MN	55	0.60000	150.01000	53.200	0.65704	0.88599	0.25582
NA	23	1106.89300	127813.67000	9.200	1219.14412	1022.13668	1079.39967
TI	47	1.21400	13.33000	109.400	1.00905	2.63271	0.00000
V	51	0.04100	43.33000	103.700	0.07994	-0.00488	0.04913
IN-1	115	559630.44000	0.00000	0.000	562925.40000	559007.99000	556957.94000
IN-2	115	19802.84000	0.00000	0.000	20139.29000	20310.32000	18958.91000
AG	107	0.03700	63.34000	62.200	0.06379	0.02300	0.02464
AS	75	0.04500	5.33000	177.000	0.08602	-0.04646	0.09427
CD	111	0.01100	7.33000	399.400	0.04146	0.02775	-0.03751
CO	59	0.03800	60.00000	50.400	0.03756	0.05700	0.01886
CU	63	0.13800	343.35000	30.900	0.18666	0.10557	0.12288
MO	98	0.26600	250.01000	30.700	0.20814	0.23108	0.35964
NI	60	0.13800	73.33000	31.400	0.15159	0.17292	0.08955
SE	78	0.05200	9.78000	59.700	0.05343	0.02068	0.08328
SN	120	0.30600	160.01000	39.400	0.44116	0.26869	0.20883
SR	88	48.87600	8925.95000	4.600	47.07471	48.17240	51.38045
ZN	66	1.14000	153.34000	31.800	0.73689	1.24370	1.43957
TB-2	159	116080.87000	0.00000	0.000	113134.76000	116748.92000	118358.93000
BA	137	28.02100	2463.62000	9.900	27.19252	31.10152	25.76942
SB	121	0.13600	43.33000	55.300	0.05144	0.16084	0.19506
BI-2	209	95498.47000	0.00000	0.000	92940.19000	96611.60000	96943.61000
PB	208	0.01400	170.01000	36.300	0.01723	0.01549	0.00797
TL	203	-0.00300	10.00000	0.000	-0.01124	0.00453	-0.00338
U	238	0.16600	856.72000	9.700	0.16565	0.18290	0.15072
SC-1	45	619734.94000	0.00000	0.000	615996.40000	624681.12000	618527.30000
GE-1	72	789019.88000	0.00000	0.000	776951.16000	794779.36000	795329.13000
GE-2	72	59377.23000	0.00000	0.000	57062.81000	59551.86000	61517.02000
GE-3	72	2289925	0	0.000	2308034	2371616	2190126
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:17:39
Tube Number: 21 Batch: 181131063906A
Sample Number: **9569292** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19254.29000	0.00000	0.000	18700.21000	19571.26000	19491.40000
SC-3	45	3038746	0	0.000	3100167	3015966	3000105
AL	27	7.44600	103.34000	32.700	9.56893	4.78805	7.98062
B	11	74.54200	115256.95000	2.000	72.93382	74.79902	75.89360
BE	9	0.00100	8.00000	343.800	-0.00281	0.00281	0.00284
CA	44	68813.53800	81174.94000	0.400	68850.08752	68490.55702	69099.96989
CR	52	0.97800	810.06000	23.900	1.24738	0.86191	0.82538
FE	57	20.51600	290.02000	5.200	19.59571	21.69842	20.25521
K	39	1266.86000	29130.56000	2.600	1303.31426	1240.95477	1256.31027
MG	24	32042.69800	1320277.84000	1.400	32399.72256	31540.44920	32187.92188
MN	55	0.05700	20.00000	74.500	0.05982	0.09850	0.01337
NA	23	7144.96200	672026.28000	0.200	7142.11934	7134.42988	7158.33721
TI	47	0.32800	3.33000	173.200	0.98421	0.00000	0.00000
V	51	0.28700	173.35000	35.400	0.29063	0.38729	0.18407
IN-1	115	562576.19000	0.00000	0.000	561495.22000	568696.86000	557536.49000
IN-2	115	19884.79000	0.00000	0.000	18680.20000	19500.86000	21473.32000
AG	107	0.01000	16.67000	123.400	0.00625	0.02395	0.00000
AS	75	0.08100	7.33000	113.600	0.16778	0.09036	-0.01539
CD	111	-0.02300	2.00000	0.000	0.00506	-0.03751	-0.03751
CO	59	0.03800	60.00000	63.100	0.02634	0.06633	0.02261
CU	63	0.22200	446.69000	16.800	0.25459	0.22992	0.18136
MO	98	0.84000	696.71000	5.900	0.88611	0.84636	0.78707
NI	60	0.13200	70.00000	80.000	0.06650	0.25296	0.07520
SE	78	0.47100	77.56000	13.000	0.40070	0.50978	0.50348
SN	120	0.05600	70.00000	295.200	0.24453	-0.00469	-0.07085
SR	88	105.64600	19374.70000	2.300	108.36713	103.63877	104.93194
ZN	66	0.58200	90.00000	36.200	0.62467	0.76805	0.35319
TB-2	159	119656.26000	0.00000	0.000	115630.54000	120413.55000	122924.68000
BA	137	128.20500	11614.45000	2.400	130.78089	129.09555	124.73984
SB	121	0.04700	20.00000	75.700	0.01216	0.08292	0.04531
BI-2	209	94515.88000	0.00000	0.000	94397.57000	95134.13000	94015.93000
PB	208	0.23600	1053.39000	12.300	0.20308	0.25632	0.24958
TL	203	-0.00900	3.33000	0.000	-0.01124	-0.00323	-0.01124
U	238	2.10800	10457.31000	6.100	1.97901	2.23697	2.10907
SC-1	45	623307.27000	0.00000	0.000	623693.00000	631038.94000	615189.87000
GE-1	72	786354.29000	0.00000	0.000	783333.82000	789773.66000	785955.38000
GE-2	72	58169.26000	0.00000	0.000	58407.13000	57422.86000	58677.79000
GE-3	72	2326245	0	0.000	2351747	2312522	2314467
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:20:36
Tube Number: 22 Batch: 181131063906A
Sample Number: **9569293** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19861.56000	0.00000	0.000	20021.93000	18810.32000	20752.43000
SC-3	45	3005108	0	0.000	3025378	3019349	2970597
AL	27	78.43700	790.07000	17.900	69.16816	94.59014	71.55149
B	11	15.11200	40909.49000	3.600	14.93835	14.68006	15.71849
BE	9	0.01700	41.33000	35.200	0.02330	0.01308	0.01334
CA	44	29813.64700	36217.26000	6.200	28452.73974	31929.23530	29058.96721
CR	52	2.42200	1930.18000	11.000	2.30357	2.23609	2.72673
FE	57	939.87500	12444.74000	5.500	916.42943	999.55151	903.64390
K	39	2264.07600	49792.64000	6.100	2129.09541	2405.93393	2257.19927
MG	24	14572.43600	618574.55000	5.000	14099.93513	15419.69005	14197.68301
MN	55	5.37100	1280.10000	14.000	4.80690	6.22797	5.07914
NA	23	3669.73200	367402.53000	4.600	3654.11637	3847.53674	3507.54361
TI	47	2.74300	30.00000	53.400	1.83847	1.95689	4.43438
V	51	0.59600	346.68000	9.700	0.54090	0.65552	0.59048
IN-1	115	562467.28000	0.00000	0.000	558111.29000	565377.41000	563913.15000
IN-2	115	19594.17000	0.00000	0.000	18179.41000	19511.13000	21091.97000
AG	107	0.01000	16.67000	93.600	0.00000	0.01796	0.01107
AS	75	0.15400	12.00000	76.800	0.02692	0.26122	0.17491
CD	111	-0.00900	4.00000	0.000	0.00623	0.00325	-0.03751
CO	59	0.03100	46.67000	94.300	0.06395	0.01140	0.01671
CU	63	0.70000	1030.07000	3.000	0.70320	0.71926	0.67768
MO	98	0.24800	233.34000	22.500	0.27909	0.28226	0.18397
NI	60	0.45900	206.68000	16.700	0.45271	0.53865	0.38564
SE	78	0.18700	31.55000	12.600	0.19945	0.15985	0.20145
SN	120	-0.02600	43.33000	0.000	-0.08768	0.02429	-0.01565
SR	88	21.84800	3940.60000	12.400	24.83151	19.52206	21.19180
ZN	66	11.08100	1270.11000	8.000	11.67115	10.05597	11.51700
TB-2	159	118998.48000	0.00000	0.000	116124.63000	117404.26000	123466.55000
BA	137	29.02100	2616.98000	9.200	30.92742	25.97897	30.15751
SB	121	0.09600	33.33000	42.100	0.04946	0.12275	0.11547
BI-2	209	94703.97000	0.00000	0.000	94066.45000	93643.84000	96401.62000
PB	208	0.45900	1940.13000	10.300	0.46195	0.50483	0.41056
TL	203	-0.00100	13.33000	0.000	-0.00314	-0.01124	0.01247
U	238	0.10000	520.03000	17.000	0.08034	0.11133	0.10800
SC-1	45	621158.69000	0.00000	0.000	629501.51000	617442.14000	616532.41000
GE-1	72	789225.04000	0.00000	0.000	788440.93000	788271.71000	790962.49000
GE-2	72	57942.48000	0.00000	0.000	57564.75000	57604.69000	58658.01000
GE-3	72	2335546	0	0.000	2331350	2348551	2326736
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:23:33
Tube Number: 23
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18690.31000	0.00000	0.000	18490.09000	18350.07000	19230.76000
SC-3	45	2952107	0	0.000	2982235	2936522	2937565
AL	27	2546.12400	23232.14000	5.400	2387.16300	2627.08976	2624.11844
B	11	244.86400	317755.55000	1.300	243.47391	248.51277	242.60638
BE	9	25.30400	52965.83000	1.300	25.31981	25.63210	24.96053
CA	44	2575.47900	2953.69000	6.300	2389.88809	2648.33163	2688.21708
CR	52	249.49900	176576.05000	4.500	247.08957	261.76283	239.64415
FE	57	2503.94600	31211.56000	2.300	2442.20709	2554.26013	2515.37059
K	39	2538.59200	52011.31000	4.100	2515.90469	2651.30122	2448.57153
MG	24	2503.58200	100160.75000	3.500	2429.31479	2599.89350	2481.53902
MN	55	249.56300	55871.00000	2.500	246.42726	256.79510	245.46590
NA	23	2505.54500	243629.08000	1.700	2499.73767	2550.67249	2466.22619
TI	47	274.78100	2790.34000	0.900	277.74866	272.84311	273.75249
V	51	249.15300	128245.87000	1.800	244.96616	253.74821	248.74359
IN-1	115	558070.96000	0.00000	0.000	564194.60000	560861.34000	549156.94000
IN-2	115	20061.15000	0.00000	0.000	18928.24000	20740.87000	20514.34000
AG	107	24.17800	41487.62000	3.600	25.09788	23.38964	24.04726
AS	75	240.97300	14479.95000	3.800	251.30946	234.10539	237.50436
CD	111	24.89500	3770.44000	3.300	25.60750	23.99272	25.08519
CO	59	235.81200	353085.82000	2.500	241.62222	229.82806	235.98432
CU	63	244.68400	308118.63000	4.500	256.64086	235.17252	242.23870
MO	98	23.55600	18490.47000	6.300	25.01689	22.06038	23.59003
NI	60	245.78800	105971.29000	4.600	257.03020	234.42789	245.90632
SE	78	25.05000	4018.01000	0.900	25.20406	24.78288	25.16334
SN	120	24.47800	8712.56000	3.500	24.53794	23.58386	25.31122
SR	88	24.07200	4467.43000	4.700	22.93136	24.11293	25.17278
ZN	66	249.01500	28637.01000	6.200	266.22598	236.38026	244.43919
TB-2	159	118767.36000	0.00000	0.000	117353.47000	118803.15000	120145.45000
BA	137	246.86300	22208.80000	0.500	245.98114	246.20581	248.40269
SB	121	23.63100	6461.51000	5.800	22.40654	23.37824	25.10937
BI-2	209	95448.07000	0.00000	0.000	94166.95000	95957.95000	96219.32000
PB	208	25.17400	101080.27000	3.000	25.41046	25.77353	24.33771
TL	203	25.11700	31485.26000	0.400	25.01095	25.15596	25.18305
U	238	24.99100	124893.10000	1.000	24.90956	24.79363	25.27063
SC-1	45	616649.25000	0.00000	0.000	622915.19000	617367.41000	609665.15000
GE-1	72	774211.03000	0.00000	0.000	785884.83000	774939.68000	761808.58000
GE-2	72	57962.16000	0.00000	0.000	58176.32000	58316.18000	57393.99000
GE-3	72	2270574	0	0.000	2334240	2283913	2193570
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:26:30
Tube Number: 24
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19611.34000	0.00000	0.000	18910.55000	19601.44000	20322.02000
SC-3	45	2959162	0	0.000	2979894	2961744	2935848
AL	27	1.96100	53.33000	73.700	1.82590	0.58785	3.46849
B	11	15.23900	40441.81000	0.700	15.14275	15.35670	15.21858
BE	9	0.00200	10.00000	85.900	0.00098	0.00100	0.00392
CA	44	8.57300	13.33000	114.300	14.53052	13.92205	-2.73249
CR	52	0.25100	286.68000	32.600	0.33822	0.24064	0.17529
FE	57	-0.02200	26.67000	0.000	0.30741	0.22350	-0.59639
K	39	-7.69400	4707.49000	0.000	-12.73161	-12.33136	1.97993
MG	24	-0.01700	33.33000	0.000	-0.54729	-0.31763	0.81502
MN	55	0.08500	26.67000	32.800	0.10297	0.09830	0.05270
NA	23	-13.41700	22871.42000	0.000	-11.50043	-8.70003	-20.04961
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02300	33.33000	210.000	0.07570	0.01606	-0.02165
IN-1	115	549743.62000	0.00000	0.000	546851.64000	555323.60000	547055.61000
IN-2	115	19867.91000	0.00000	0.000	19221.76000	20311.60000	20070.36000
AG	107	0.01200	20.00000	100.400	0.00000	0.01150	0.02327
AS	75	0.25900	18.00000	60.900	0.43936	0.15058	0.18618
CD	111	-0.02900	1.33000	0.000	-0.03751	-0.02446	-0.02430
CO	59	0.03100	50.00000	35.000	0.01857	0.03722	0.03770
CU	63	0.10600	303.35000	2.700	0.10276	0.10554	0.10846
MO	98	-0.00800	40.00000	0.000	-0.04522	0.05479	-0.03304
NI	60	0.05200	36.67000	125.400	0.01535	0.12715	0.01330
SE	78	0.02800	5.78000	43.800	0.02133	0.02088	0.04250
SN	120	0.20100	123.34000	47.000	0.11541	0.18493	0.30195
SR	88	0.03500	13.33000	96.200	0.07488	0.01546	0.01610
ZN	66	0.59500	93.34000	78.700	0.05713	0.81460	0.91388
TB-2	159	117055.11000	0.00000	0.000	115691.39000	117806.15000	117667.78000
BA	137	0.03700	3.33000	173.200	0.00000	0.11207	0.00000
SB	121	0.43200	123.34000	51.900	0.23775	0.38077	0.67701
BI-2	209	94757.67000	0.00000	0.000	91874.14000	96119.57000	96279.30000
PB	208	-0.02000	33.33000	0.000	-0.02108	-0.01647	-0.02391
TL	203	0.01000	26.67000	167.000	0.03022	0.00461	-0.00333
U	238	0.00400	43.33000	78.100	0.00128	0.00696	0.00297
SC-1	45	614449.99000	0.00000	0.000	606896.36000	620033.90000	616419.72000
GE-1	72	768491.52000	0.00000	0.000	755393.27000	782886.08000	767195.22000
GE-2	72	58794.96000	0.00000	0.000	58938.90000	58969.12000	58476.85000
GE-3	72	2256828	0	0.000	2303088	2240798	2226598
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:29:27
Tube Number: 25 Batch: 181131063906A
Sample Number: **9569294** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20632.41000	0.00000	0.000	20372.07000	20872.56000	20652.60000
SC-3	45	3041913	0	0.000	3091912	2970622	3063205
AL	27	9.33700	130.01000	28.800	11.50992	10.16455	6.33598
B	11	18.63200	45789.21000	3.100	18.65885	19.19558	18.04115
BE	9	0.00500	16.00000	32.400	0.00632	0.00384	0.00364
CA	44	51380.45200	64950.17000	2.200	50804.29990	50645.08918	52691.96655
CR	52	0.88800	800.05000	8.900	0.97823	0.85028	0.83522
FE	57	58.55200	833.39000	14.900	55.38747	51.85345	68.41517
K	39	731.21800	20185.00000	2.500	712.67641	732.35793	748.61883
MG	24	22431.22600	990603.09000	1.300	22236.86705	22294.54334	22762.26686
MN	55	7.52300	1866.84000	2.900	7.38736	7.40955	7.77174
NA	23	4215.73900	435269.34000	1.600	4225.52837	4144.56844	4277.12077
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07200	63.33000	74.000	0.08526	0.11707	0.01324
IN-1	115	562852.07000	0.00000	0.000	571964.46000	558809.35000	557782.41000
IN-2	115	19587.83000	0.00000	0.000	19200.46000	20382.44000	19180.60000
AG	107	0.00200	3.33000	173.200	0.00000	0.00000	0.00609
AS	75	0.05600	6.00000	124.800	-0.01172	0.05172	0.12742
CD	111	-0.01500	3.33000	0.000	-0.02371	-0.01150	-0.00987
CO	59	0.04900	76.67000	74.100	0.03951	0.08964	0.01861
CU	63	1.18900	1633.47000	9.000	1.06475	1.25278	1.24857
MO	98	1.18700	953.40000	6.300	1.27343	1.14601	1.14146
NI	60	0.37800	173.34000	35.700	0.23325	0.40021	0.50004
SE	78	1.70700	277.34000	0.800	1.69946	1.72304	1.69715
SN	120	0.04300	66.67000	86.000	0.08617	0.01684	0.02730
SR	88	62.87500	11364.13000	3.900	61.07205	61.89183	65.65977
ZN	66	3.02900	363.35000	22.600	3.77833	2.43544	2.87403
TB-2	159	118924.50000	0.00000	0.000	116871.21000	119015.18000	120887.11000
BA	137	144.18700	12992.14000	3.000	141.37447	142.04619	149.13934
SB	121	0.05900	23.33000	195.900	0.01176	-0.02547	0.19045
BI-2	209	94029.13000	0.00000	0.000	93331.62000	93432.65000	95323.11000
PB	208	0.04300	283.34000	24.100	0.04764	0.05010	0.03106
TL	203	0.00500	20.00000	164.100	0.00508	0.01322	-0.00325
U	238	0.40700	2026.89000	2.800	0.41264	0.41424	0.39390
SC-1	45	623033.10000	0.00000	0.000	619406.59000	621094.68000	628598.04000
GE-1	72	787447.57000	0.00000	0.000	791558.27000	784462.49000	786321.94000
GE-2	72	57229.78000	0.00000	0.000	56500.27000	55879.42000	59309.64000
GE-3	72	2305306	0	0.000	2328807	2283524	2303588
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:32:24
Tube Number: 26 Batch: 181131063906A
Sample Number: **9569295** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19494.28000	0.00000	0.000	18850.17000	19861.37000	19771.29000
SC-3	45	3020608	0	0.000	3081113	2988035	2992677
AL	27	12.01300	146.68000	75.800	22.52779	6.73282	6.77885
B	11	14.73200	40646.92000	3.400	14.15859	15.08477	14.95135
BE	9	0.00200	9.33000	92.300	0.00177	0.00286	0.00002
CA	44	54747.21300	65378.44000	1.400	55184.31006	53850.44278	55206.88473
CR	52	1.22300	1006.75000	18.600	0.97017	1.28616	1.41283
FE	57	55.72100	750.05000	12.500	58.43523	47.79801	60.93089
K	39	718.50200	18823.79000	6.000	709.44630	680.88160	765.17860
MG	24	23554.97000	982569.80000	1.800	23903.78373	23086.83135	23674.29566
MN	55	7.62800	1790.16000	10.000	7.10041	7.28388	8.49948
NA	23	4523.83400	439534.08000	1.400	4556.45397	4451.92532	4563.12177
TI	47	0.32500	3.33000	173.200	0.97638	0.00000	0.00000
V	51	0.12100	86.67000	81.900	0.07607	0.23476	0.05232
IN-1	115	560803.54000	0.00000	0.000	561517.47000	563977.09000	556916.05000
IN-2	115	19110.84000	0.00000	0.000	18469.78000	18920.75000	19942.00000
AG	107	0.00600	10.00000	100.800	0.01265	0.00617	0.00000
AS	75	0.10300	8.67000	79.100	0.02577	0.09456	0.18768
CD	111	-0.00900	4.00000	0.000	0.00554	-0.00949	-0.02422
CO	59	0.06300	93.33000	17.200	0.05566	0.07551	0.05809
CU	63	0.27300	490.03000	29.400	0.30214	0.33373	0.18189
MO	98	1.17800	923.40000	4.600	1.22919	1.18500	1.12130
NI	60	0.33200	150.01000	46.400	0.21860	0.50736	0.26996
SE	78	1.79000	289.78000	6.500	1.66101	1.88824	1.82060
SN	120	0.05800	70.00000	239.900	0.18761	-0.09012	0.07739
SR	88	64.61200	11387.41000	3.700	67.30656	63.86689	62.66122
ZN	66	2.12500	256.68000	13.000	2.33244	1.81127	2.23176
TB-2	159	117347.17000	0.00000	0.000	114071.74000	117281.42000	120688.34000
BA	137	141.59900	12588.59000	1.200	139.63310	142.45707	142.70810
SB	121	-0.00100	6.67000	0.000	-0.02547	0.01163	0.01058
BI-2	209	94053.25000	0.00000	0.000	92608.07000	93000.28000	96551.40000
PB	208	0.03700	260.01000	35.300	0.05081	0.02488	0.03523
TL	203	0.00000	13.33000	0.000	0.00521	-0.01124	0.00454
U	238	0.41300	2056.90000	13.400	0.47574	0.39564	0.36903
SC-1	45	622240.21000	0.00000	0.000	630454.40000	617302.49000	618963.74000
GE-1	72	782451.97000	0.00000	0.000	786567.25000	783739.68000	777048.97000
GE-2	72	58329.76000	0.00000	0.000	57924.96000	57513.95000	59550.37000
GE-3	72	2301758	0	0.000	2345675	2271561	2288040
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:35:20
Tube Number: 27 Batch: 181131063906A
Sample Number: **9569300** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19891.52000	0.00000	0.000	19370.97000	20241.78000	20061.80000
SC-3	45	3063985	0	0.000	3052050	3102787	3037118
AL	27	8.39500	116.67000	43.800	5.93405	12.62088	6.62959
B	11	26.54900	56054.72000	2.400	25.92787	26.50862	27.21129
BE	9	0.00600	19.33000	68.100	0.00366	0.01083	0.00370
CA	44	57893.10400	70530.98000	2.900	59053.63794	55955.44952	58670.22340
CR	52	1.29700	1080.07000	2.900	1.25397	1.32461	1.31140
FE	57	19.03300	280.02000	12.100	18.07067	21.65235	17.37701
K	39	2456.31800	53739.77000	2.800	2500.59350	2490.45098	2377.90994
MG	24	24068.73900	1024643.68000	2.000	24112.60356	23568.41197	24525.20281
MN	55	0.44600	113.34000	22.800	0.44459	0.54791	0.34501
NA	23	4296.18600	427099.67000	2.300	4366.57278	4181.44399	4340.54228
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.26600	166.68000	35.700	0.33544	0.15785	0.30443
IN-1	115	558393.66000	0.00000	0.000	559638.43000	562777.70000	552764.85000
IN-2	115	20034.77000	0.00000	0.000	19861.50000	20121.25000	20121.55000
AG	107	0.00600	10.00000	100.400	0.01176	0.00580	0.00000
AS	75	0.07600	7.33000	91.100	0.05429	0.15244	0.01984
CD	111	-0.03300	0.67000	0.000	-0.02417	-0.03751	-0.03751
CO	59	0.03600	56.67000	22.600	0.04486	0.03094	0.03094
CU	63	1.34000	1860.17000	4.300	1.28121	1.39741	1.34200
MO	98	0.87000	726.71000	17.300	0.99732	0.70406	0.90743
NI	60	0.60900	276.68000	13.900	0.55196	0.56751	0.70609
SE	78	0.08800	15.56000	18.200	0.07867	0.10707	0.07976
SN	120	0.01000	56.67000	704.400	-0.06442	0.07536	0.01901
SR	88	90.96500	16822.04000	4.800	87.00517	90.24966	95.64093
ZN	66	1.03100	143.34000	26.500	0.83802	0.91102	1.34398
TB-2	159	119718.71000	0.00000	0.000	119536.90000	117584.45000	122034.78000
BA	137	135.05300	12244.91000	1.400	134.24315	137.14689	133.76854
SB	121	0.01000	10.00000	606.400	-0.02547	-0.02547	0.08148
BI-2	209	94231.80000	0.00000	0.000	90597.69000	94701.25000	97396.45000
PB	208	-0.00400	100.00000	0.000	-0.01572	0.00381	0.00047
TL	203	-0.00900	3.33000	0.000	-0.01124	-0.00320	-0.01124
U	238	1.33700	6611.67000	3.400	1.38709	1.32272	1.29972
SC-1	45	616124.13000	0.00000	0.000	612072.88000	620538.19000	615761.32000
GE-1	72	786569.21000	0.00000	0.000	778220.93000	793112.88000	788373.82000
GE-2	72	59239.82000	0.00000	0.000	58928.63000	57624.28000	61166.54000
GE-3	72	2310424	0	0.000	2331322	2318330	2281620
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:38:17
Tube Number: 28 Batch: 181131063906A
Sample Number: **9569301** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20031.82000	0.00000	0.000	19200.83000	20362.24000	20532.40000
SC-3	45	3054602	0	0.000	3137904	3065214	2960689
AL	27	18.29600	213.34000	18.600	19.91223	20.58661	14.39002
B	11	111.24600	161701.83000	2.300	109.08497	110.63399	114.01897
BE	9	0.00600	20.00000	31.700	0.00618	0.00456	0.00863
CA	44	63827.87700	78282.60000	2.800	65850.69705	63230.42468	62402.50942
CR	52	1.20900	1023.41000	13.900	1.03249	1.36785	1.22679
FE	57	61.28700	843.39000	16.100	70.61849	50.99324	62.24838
K	39	1012.44300	25198.13000	5.500	1075.50295	992.64609	969.18107
MG	24	36436.82100	1561014.40000	3.200	37797.26238	35778.52637	35734.67366
MN	55	7.67700	1850.17000	12.300	7.66594	6.73497	8.63055
NA	23	18212.71300	1743146.27000	2.500	18683.96346	17788.44138	18165.73495
TI	47	7.95600	83.38000	153.900	22.05994	1.80774	0.00000
V	51	0.23900	153.34000	4.700	0.24420	0.24585	0.22580
IN-1	115	543755.34000	0.00000	0.000	564305.97000	535062.24000	531897.82000
IN-2	115	19694.70000	0.00000	0.000	20001.81000	18669.25000	20413.04000
AG	107	0.01000	16.67000	127.900	0.00000	0.02502	0.00572
AS	75	0.03000	4.67000	224.400	0.05359	-0.04646	0.08425
CD	111	0.04700	12.67000	84.900	0.02875	0.01928	0.09235
CO	59	0.09000	136.67000	26.300	0.08469	0.06938	0.11573
CU	63	0.35700	613.37000	17.500	0.41173	0.28891	0.36947
MO	98	0.87300	716.71000	3.300	0.87483	0.90038	0.84350
NI	60	1.05200	456.69000	23.000	1.01256	1.31124	0.83213
SE	78	0.21800	35.33000	15.600	0.18077	0.24743	0.22717
SN	120	-0.01600	46.67000	0.000	0.04836	-0.02858	-0.06673
SR	88	79.54100	14436.56000	6.500	74.35240	84.71886	79.55043
ZN	66	2.57900	316.68000	15.600	3.00855	2.21189	2.51682
TB-2	159	118115.22000	0.00000	0.000	117534.30000	118049.14000	118762.21000
BA	137	65.65700	5874.58000	5.100	66.17427	62.08134	68.71508
SB	121	0.01100	10.00000	324.100	0.04856	-0.02547	0.01116
BI-2	209	93118.03000	0.00000	0.000	93522.10000	91562.56000	94269.44000
PB	208	0.07500	406.69000	39.000	0.10856	0.06211	0.05445
TL	203	-0.00900	3.33000	0.000	-0.01124	-0.01124	-0.00316
U	238	0.44500	2193.58000	3.700	0.42609	0.45410	0.45511
SC-1	45	607014.78000	0.00000	0.000	623667.18000	595645.07000	601732.10000
GE-1	72	763763.48000	0.00000	0.000	772272.02000	761749.60000	757268.82000
GE-2	72	58875.15000	0.00000	0.000	57764.96000	58336.23000	60524.26000
GE-3	72	2336717	0	0.000	2302433	2392597	2315121
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:41:12
Tube Number: 29 Batch: 181131063906A
Sample Number: **9569302** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20332.18000	0.00000	0.000	19611.48000	19941.73000	21443.32000
SC-3	45	3072396	0	0.000	3127843	3044749	3044597
AL	27	3.06100	66.67000	99.800	-0.46058	4.63223	5.01271
B	11	15.66600	42521.68000	2.000	15.32460	15.95525	15.71712
BE	9	0.00500	16.67000	76.500	0.00892	0.00368	0.00183
CA	44	61821.31500	76879.78000	5.400	63643.97650	63864.46891	57955.49929
CR	52	0.21400	270.01000	52.800	0.30778	0.08854	0.24518
FE	57	57.63500	810.05000	5.700	57.61673	54.37061	60.91635
K	39	1204.02800	29487.99000	1.800	1197.00918	1227.88272	1187.19139
MG	24	19127.47400	831292.04000	4.200	19746.85375	19408.16358	18227.40580
MN	55	1.98800	493.36000	27.200	1.37515	2.39841	2.18947
NA	23	822.66200	103695.35000	6.000	840.22395	860.81886	766.94241
TI	47	3.10200	33.34000	149.900	8.44814	0.00000	0.85830
V	51	0.08600	70.00000	44.600	0.12716	0.05154	0.07903
IN-1	115	566521.07000	0.00000	0.000	556177.95000	569883.73000	573501.52000
IN-2	115	21045.29000	0.00000	0.000	21449.80000	19851.84000	21834.24000
AG	107	0.01100	20.00000	173.200	0.03267	0.00000	0.00000
AS	75	2.16900	138.67000	28.000	1.66385	2.84310	2.00032
CD	111	-0.02500	2.00000	0.000	-0.01280	-0.02416	-0.03751
CO	59	0.04400	73.33000	37.900	0.05385	0.02465	0.05286
CU	63	0.27300	540.03000	20.200	0.23366	0.33570	0.24899
MO	98	2.13900	1803.51000	10.600	1.90878	2.36345	2.14356
NI	60	0.16600	90.00000	81.000	0.31366	0.13086	0.05213
SE	78	-0.00100	1.11000	0.000	0.01245	-0.00839	-0.00839
SN	120	-0.03400	43.33000	0.000	-0.04433	-0.06438	0.00574
SR	88	2792.12500	541153.08000	5.200	2694.90824	2960.67035	2720.79635
ZN	66	1.72000	233.34000	5.400	1.73485	1.80401	1.62072
TB-2	159	120784.88000	0.00000	0.000	119620.40000	121886.44000	120847.81000
BA	137	56.77500	5194.34000	3.200	55.74642	55.68453	58.89525
SB	121	0.03500	16.67000	60.300	0.04727	0.04592	0.01053
BI-2	209	96028.61000	0.00000	0.000	97900.47000	94309.03000	95876.34000
PB	208	0.17100	806.72000	7.600	0.17290	0.18311	0.15731
TL	203	-0.01100	0.00000	0.000	-0.01124	-0.01124	-0.01124
U	238	1.40900	7105.29000	3.900	1.35744	1.40324	1.46594
SC-1	45	634484.63000	0.00000	0.000	626714.52000	637807.22000	638932.14000
GE-1	72	795497.28000	0.00000	0.000	792262.72000	809607.10000	784622.02000
GE-2	72	59069.05000	0.00000	0.000	57463.11000	59871.76000	59872.28000
GE-3	72	2368008	0	0.000	2398141	2354845	2351038
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:44:09
Tube Number: 30 Batch: 181131063906A
Sample Number: **9569302** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: DRAPER ADEN

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20936.35000	0.00000	0.000	21513.88000	20993.07000	20302.09000
SC-3	45	3025793	0	0.000	3110698	2956580	3010102
AL	27	2.92000	66.67000	33.100	4.03069	2.26513	2.46473
B	11	2.45500	25512.58000	17.400	2.02415	2.87910	2.46119
BE	9	0.00200	9.33000	186.100	-0.00099	0.00483	0.00094
CA	44	7077.03000	9072.59000	5.200	6857.94789	6872.53044	7500.61256
CR	52	0.20000	266.69000	15.900	0.20712	0.16533	0.22763
FE	57	4.38100	90.01000	71.100	6.29791	0.78609	6.05840
K	39	113.50700	7545.20000	34.700	101.22496	81.73825	157.55845
MG	24	2140.35000	95861.67000	4.500	2054.81347	2122.12412	2244.11297
MN	55	0.23600	66.67000	19.400	0.20334	0.28864	0.21724
NA	23	66.78700	32312.57000	34.900	40.98313	86.33871	73.03864
TI	47	0.58400	6.67000	173.200	0.00000	1.75342	0.00000
V	51	0.00700	26.67000	516.700	-0.00576	-0.02222	0.04992
IN-1	115	574241.49000	0.00000	0.000	567213.93000	573184.88000	582325.65000
IN-2	115	19597.71000	0.00000	0.000	20221.12000	19060.77000	19511.23000
AG	107	0.00800	13.33000	86.700	0.01155	0.01225	0.00000
AS	75	0.21500	15.33000	60.700	0.11847	0.16351	0.36378
CD	111	-0.01900	2.67000	0.000	-0.03751	0.00421	-0.02393
CO	59	0.02300	36.67000	15.200	0.02416	0.01874	0.02512
CU	63	0.07900	266.68000	75.800	0.05153	0.03798	0.14815
MO	98	0.32800	296.68000	14.900	0.33354	0.27690	0.37402
NI	60	0.08600	50.00000	85.600	0.08190	0.16204	0.01463
SE	78	-0.00700	0.22000	0.000	-0.00428	-0.00839	-0.00839
SN	120	0.01400	56.67000	942.400	-0.06594	-0.06082	0.16958
SR	88	340.33100	61495.76000	3.500	326.63952	346.01278	348.34185
ZN	66	0.73300	106.67000	17.100	0.81929	0.79074	0.58892
TB-2	159	120126.75000	0.00000	0.000	117443.37000	121725.51000	121211.36000
BA	137	7.30200	663.38000	12.100	8.31912	6.83331	6.75338
SB	121	-0.00200	6.67000	0.000	-0.02547	-0.02547	0.04631
BI-2	209	95508.21000	0.00000	0.000	94841.76000	96952.64000	94730.22000
PB	208	0.00300	126.67000	232.700	-0.00376	0.00306	0.00883
TL	203	-0.01100	0.00000	0.000	-0.01124	-0.01124	-0.01124
U	238	0.13800	716.72000	6.900	0.12799	0.14677	0.14025
SC-1	45	634231.23000	0.00000	0.000	622969.64000	639690.58000	640033.47000
GE-1	72	808348.56000	0.00000	0.000	791325.38000	814704.13000	819016.16000
GE-2	72	59390.21000	0.00000	0.000	57062.37000	59380.13000	61728.12000
GE-3	72	2325898	0	0.000	2370560	2297474	2309660
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:47:06
Tube Number: 31
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19958.35000	0.00000	0.000	20682.31000	19371.05000	19821.70000
SC-3	45	3048120	0	0.000	3116791	3063764	2963805
AL	27	205.14900	2030.19000	2.800	201.78827	201.91865	211.73883
B	11	93.66400	139445.53000	2.900	90.55623	95.40768	95.02669
BE	9	1.05700	2291.49000	3.000	1.09154	1.03037	1.04998
CA	44	420.27900	516.70000	11.100	415.57158	469.17467	376.09016
CR	52	4.36000	3403.79000	10.100	4.54984	3.85805	4.67332
FE	57	191.92300	2576.96000	5.500	180.07058	200.14804	195.54975
K	39	366.56100	12264.57000	9.100	393.64159	329.52628	376.51615
MG	24	201.27600	8632.36000	0.600	202.35161	201.62454	199.85296
MN	55	3.65900	883.39000	14.400	4.12777	3.76278	3.08697
NA	23	370.15200	59318.84000	6.400	342.72523	381.61123	386.11854
TI	47	24.64000	266.68000	13.200	21.35810	24.70411	27.85747
V	51	0.80900	466.69000	12.400	0.87354	0.86036	0.69334
IN-1	115	565326.92000	0.00000	0.000	555786.51000	570215.51000	569978.75000
IN-2	115	19775.02000	0.00000	0.000	18683.13000	19585.65000	21056.29000
AG	107	1.01100	1706.83000	6.700	1.05021	1.04952	0.93184
AS	75	3.84300	230.00000	10.100	3.88068	4.21056	3.43807
CD	111	0.92200	142.00000	24.000	1.04079	1.05877	0.66748
CO	59	0.91100	1343.44000	15.200	0.90781	1.05046	0.77344
CU	63	3.97300	5104.28000	3.500	3.92713	4.13007	3.86223
MO	98	1.04900	853.39000	10.600	1.07760	1.14277	0.92527
NI	60	4.15900	1780.16000	4.900	4.34514	4.19082	3.93998
SE	78	3.94000	641.35000	1.700	3.88667	4.01601	3.91589
SN	120	4.38000	1580.15000	2.100	4.31113	4.48202	4.34695
SR	88	1.88700	350.02000	16.800	1.81891	2.23154	1.60959
ZN	66	30.44700	3463.80000	11.500	33.73711	30.83794	26.76559
TB-2	159	120133.00000	0.00000	0.000	118188.41000	119780.74000	122429.85000
BA	137	4.06800	370.02000	17.300	4.69192	3.30680	4.20576
SB	121	1.99100	556.70000	7.100	1.92549	2.15378	1.89340
BI-2	209	96168.44000	0.00000	0.000	95705.63000	95182.26000	97617.42000
PB	208	2.07200	8494.63000	6.800	1.97051	2.01152	2.23371
TL	203	1.01800	1300.11000	3.500	1.00768	0.98927	1.05795
U	238	0.99500	5034.34000	1.600	0.97730	1.00679	1.00114
SC-1	45	620004.05000	0.00000	0.000	610847.18000	627698.66000	621466.32000
GE-1	72	786336.45000	0.00000	0.000	792291.94000	775523.43000	791193.97000
GE-2	72	58547.40000	0.00000	0.000	58648.01000	57574.28000	59419.92000
GE-3	72	2347862	0	0.000	2409937	2318650	2314998
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:50:03
Tube Number: 32
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18333.18000	0.00000	0.000	18780.38000	17789.32000	18429.84000
SC-3	45	2781276	0	0.000	2830063	2756533	2757233
AL	27	97934.13800	874585.38000	3.700	93781.19332	100006.52254	100014.69964
B	11	5.91800	27401.89000	5.500	5.98275	6.20936	5.56246
BE	9	0.01100	27.33000	37.700	0.01015	0.01561	0.00742
CA	44	265061.74200	297569.76000	3.500	254480.00874	270265.42410	270439.79357
CR	52	1.40300	1066.75000	13.800	1.21334	1.60028	1.39665
FE	57	238844.37400	2915321.10000	5.000	226261.21213	249916.92563	240354.98534
K	39	100441.12800	1843017.89000	5.700	93842.29306	104160.44096	103320.65054
MG	24	95512.64000	3746019.94000	3.000	92199.90928	97586.34671	96751.66482
MN	55	3.59500	793.38000	18.600	2.90415	4.24073	3.63936
NA	23	241186.59000	20848164.27000	4.000	230225.99152	248057.67462	245276.10396
TI	47	2014.36700	20055.15000	2.900	1980.79529	2082.85186	1979.45247
V	51	0.02000	30.00000	96.600	0.01849	0.00131	0.03930
IN-1	115	513271.20000	0.00000	0.000	503362.14000	520143.13000	516308.33000
IN-2	115	17479.04000	0.00000	0.000	15567.29000	17829.13000	19040.71000
AG	107	0.52600	790.05000	5.100	0.49514	0.54369	0.53976
AS	75	0.33800	20.00000	32.300	0.42486	0.21542	0.37391
CD	111	0.14400	24.00000	38.300	0.16682	0.08143	0.18524
CO	59	0.94300	1226.76000	8.800	1.02117	0.95140	0.85556
CU	63	0.99300	1233.43000	14.700	1.15101	0.86257	0.96616
MO	98	2282.95600	1550600.18000	9.400	2517.51370	2235.58452	2095.76900
NI	60	1.07500	410.02000	29.300	1.42983	0.82716	0.96771
SE	78	0.06100	10.22000	35.400	0.08377	0.04065	0.05902
SN	120	0.21500	110.01000	58.700	0.35986	0.13614	0.14773
SR	88	10.94000	1760.15000	10.700	12.21898	9.93437	10.66632
ZN	66	2.00700	220.01000	21.600	2.47169	1.93532	1.61548
TB-2	159	109604.02000	0.00000	0.000	109478.92000	108895.50000	110437.65000
BA	137	0.96200	80.00000	53.800	0.60295	0.72742	1.55419
SB	121	1.17900	303.35000	36.200	1.64356	1.09314	0.80178
BI-2	209	84960.32000	0.00000	0.000	85227.37000	82896.81000	86756.79000
PB	208	0.19400	793.38000	18.500	0.15543	0.22664	0.19882
TL	203	0.11700	143.34000	12.300	0.13178	0.11742	0.10291
U	238	0.07400	353.36000	15.400	0.06677	0.06879	0.08753
SC-1	45	582224.13000	0.00000	0.000	576284.01000	581252.61000	589135.77000
GE-1	72	725030.22000	0.00000	0.000	713952.49000	726608.27000	734529.91000
GE-2	72	53839.06000	0.00000	0.000	53281.06000	54554.44000	53681.67000
GE-3	72	2152252	0	0.000	2168877	2122166	2165712
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:52:58
Tube Number: 33
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18066.34000	0.00000	0.000	16708.40000	18390.03000	19100.59000
SC-3	45	2856022	0	0.000	2866147	2865027	2836893
AL	27	96150.82900	844869.57000	4.500	100964.16074	94937.26411	92551.06107
B	11	1.33900	22785.81000	15.500	1.55044	1.32927	1.13614
BE	9	0.00800	22.00000	32.100	0.01097	0.00606	0.00714
CA	44	265151.75000	292768.00000	5.400	280762.87188	261660.19548	253032.18188
CR	52	194.04200	132616.10000	3.900	202.78098	190.70147	188.64503
FE	57	235827.45100	2833710.48000	4.300	247582.95441	230313.06466	229586.33268
K	39	100051.17200	1806641.95000	5.000	105720.59635	98085.07202	96347.84635
MG	24	94475.31500	3644486.82000	5.200	99996.27879	92950.34629	90479.32117
MN	55	195.73300	42327.53000	2.600	199.77779	197.29407	190.12769
NA	23	238320.34300	20268428.45000	5.000	252121.68731	232180.53167	230658.80934
TI	47	2048.28900	20068.47000	6.200	2173.47853	1919.62688	2051.76054
V	51	198.88700	98771.94000	5.100	210.12446	190.72710	195.80797
IN-1	115	509895.61000	0.00000	0.000	509744.46000	510123.77000	509818.60000
IN-2	115	17913.11000	0.00000	0.000	16508.50000	18610.21000	18620.61000
AG	107	49.36600	75512.01000	6.300	52.85891	46.93285	48.30489
AS	75	101.38200	5438.19000	4.000	105.99010	98.17407	99.98227
CD	111	96.45600	13013.61000	5.100	101.69018	91.85495	95.82154
CO	59	193.03100	257419.98000	7.400	209.33025	182.91979	186.84236
CU	63	199.27700	223998.70000	4.500	208.85111	191.11085	197.86805
MO	98	2138.32000	1493934.04000	6.100	2283.19595	2030.19309	2101.57079
NI	60	202.69400	77946.38000	5.600	215.74883	196.79752	195.53434
SE	78	96.18900	14093.55000	0.600	95.62535	96.20532	96.73648
SN	120	0.07000	70.00000	144.100	0.02166	0.00227	0.18487
SR	88	9.08400	1503.46000	6.100	9.68154	8.58366	8.98648
ZN	66	97.81300	10059.82000	6.700	102.30220	90.35049	100.78640
TB-2	159	109674.08000	0.00000	0.000	107887.89000	111624.70000	109509.64000
BA	137	1.24800	103.34000	32.700	1.71329	0.94618	1.08501
SB	121	1.15200	296.68000	11.200	1.14395	1.02682	1.28553
BI-2	209	82460.17000	0.00000	0.000	81809.79000	82744.95000	82825.76000
PB	208	0.15700	643.37000	13.700	0.17186	0.13220	0.16653
TL	203	0.11800	140.01000	32.000	0.15638	0.11766	0.08073
U	238	0.04100	196.68000	17.700	0.03240	0.04352	0.04578
SC-1	45	578041.01000	0.00000	0.000	576387.37000	587214.76000	570520.89000
GE-1	72	714711.97000	0.00000	0.000	718788.19000	712666.24000	712681.47000
GE-2	72	53247.28000	0.00000	0.000	51284.64000	54444.50000	54012.71000
GE-3	72	2165346	0	0.000	2204561	2149636	2141841
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:55:54
Tube Number: 34
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18570.16000	0.00000	0.000	18409.84000	18089.83000	19210.82000
SC-3	45	2962338	0	0.000	3001466	2898695	2986852
AL	27	11.23200	133.34000	71.500	19.80785	10.01212	3.87731
B	11	-3.99800	17161.21000	0.000	-3.96384	-3.83699	-4.19409
BE	9	0.00300	11.33000	109.700	0.00095	0.00595	0.00097
CA	44	32.83700	40.00000	142.700	85.93015	15.31373	-2.73249
CR	52	0.34700	340.02000	17.000	0.27940	0.38895	0.37203
FE	57	31.44800	413.36000	35.000	43.57859	28.62260	22.14365
K	39	17.59600	4917.54000	91.100	18.12694	33.34537	1.31453
MG	24	9.67900	413.36000	53.700	14.94170	9.53738	4.55649
MN	55	0.07400	23.33000	123.800	0.10657	-0.02945	0.14435
NA	23	44.46000	26733.52000	36.400	62.22484	30.58796	40.56738
TI	47	2.28300	23.33000	62.600	1.99946	1.01741	3.83218
V	51	0.01300	26.67000	180.700	0.03939	0.00063	-0.00171
IN-1	115	538519.55000	0.00000	0.000	550719.02000	532977.32000	531862.30000
IN-2	115	18843.87000	0.00000	0.000	18109.73000	18320.09000	20101.79000
AG	107	0.01500	23.33000	140.300	0.00000	0.03825	0.00581
AS	75	0.00000	2.67000	18505.200	0.02721	-0.04646	0.01991
CD	111	0.00500	6.00000	310.100	0.02104	-0.00857	0.00205
CO	59	0.03400	50.00000	66.600	0.03464	0.05614	0.01099
CU	63	0.04900	220.01000	73.700	0.09113	0.02769	0.02890
MO	98	2.68900	2026.87000	6.300	2.49758	2.81726	2.75320
NI	60	0.07500	43.33000	56.800	0.12096	0.06846	0.03635
SE	78	0.09900	16.67000	14.100	0.10536	0.10915	0.08322
SN	120	0.09400	80.00000	106.300	0.10040	0.19040	-0.00903
SR	88	-0.03800	0.00000	0.000	-0.03791	-0.03791	-0.03791
ZN	66	0.30800	56.67000	76.600	0.07383	0.54606	0.30526
TB-2	159	112101.29000	0.00000	0.000	109801.53000	114313.53000	112188.80000
BA	137	0.04000	3.33000	173.200	0.12024	0.00000	0.00000
SB	121	0.00000	6.67000	15250.300	-0.02547	0.01259	0.01331
BI-2	209	90389.06000	0.00000	0.000	89290.19000	89711.99000	92165.00000
PB	208	-0.02500	13.33000	0.000	-0.02885	-0.02620	-0.02111
TL	203	-0.01100	0.00000	0.000	-0.01124	-0.01124	-0.01124
U	238	0.00100	26.67000	483.900	0.00360	-0.00283	0.00126
SC-1	45	585433.19000	0.00000	0.000	579356.28000	588070.34000	588872.96000
GE-1	72	744384.73000	0.00000	0.000	746468.97000	744840.38000	741844.83000
GE-2	72	56012.26000	0.00000	0.000	54042.75000	56500.64000	57493.39000
GE-3	72	2260068	0	0.000	2274451	2226292	2279460
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 5:58:52
Tube Number: 35
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19511.12000	0.00000	0.000	18389.91000	20852.73000	19290.71000
SC-3	45	2961922	0	0.000	2988658	2925431	2971678
AL	27	2395.28000	22784.89000	6.400	2351.01181	2269.98466	2564.84219
B	11	221.39300	290345.59000	1.500	217.69841	223.99504	222.48671
BE	9	24.40000	51241.14000	0.600	24.26582	24.54869	24.38558
CA	44	2491.04800	2983.70000	7.900	2305.26079	2471.08168	2696.80258
CR	52	242.59700	179036.12000	4.600	247.92942	229.76508	250.09624
FE	57	2390.76600	31037.62000	5.600	2489.82783	2238.07574	2444.39304
K	39	2337.72000	50360.34000	3.800	2339.44688	2247.55077	2426.16159
MG	24	2362.69100	98495.16000	5.100	2434.89894	2222.23053	2430.94419
MN	55	237.32300	55359.54000	5.700	244.03628	221.79586	246.13733
NA	23	2377.36100	242094.12000	5.500	2474.14270	2227.12414	2430.81544
TI	47	243.34800	2580.29000	3.400	248.22852	248.04197	233.77499
V	51	237.65200	127483.42000	4.500	243.45543	225.34079	244.15986
IN-1	115	547331.46000	0.00000	0.000	543170.23000	555813.09000	543011.05000
IN-2	115	18791.21000	0.00000	0.000	17495.37000	19418.88000	19459.38000
AG	107	25.16700	40405.05000	5.700	26.81866	24.44529	24.23839
AS	75	253.76200	14274.43000	4.800	267.35405	243.58301	250.34853
CD	111	25.43800	3603.07000	6.400	27.23806	24.04489	25.03019
CO	59	252.39700	353659.79000	4.300	264.75296	248.51789	243.92102
CU	63	259.60300	306067.87000	4.800	273.72913	250.34047	254.74000
MO	98	25.90100	19061.10000	2.200	26.47050	25.88642	25.34588
NI	60	260.26000	105157.54000	2.400	267.07559	254.65579	259.04911
SE	78	24.65600	3878.87000	0.500	24.51791	24.76584	24.68322
SN	120	25.78600	8579.14000	5.200	27.30544	24.73192	25.32178
SR	88	25.18100	4364.07000	4.400	26.42404	24.80799	24.31040
ZN	66	259.40000	27949.29000	4.500	272.58916	250.51035	255.09939
TB-2	159	115584.93000	0.00000	0.000	112008.95000	116204.61000	118541.22000
BA	137	250.48800	21924.94000	1.900	255.35316	245.79328	250.31618
SB	121	24.48000	6511.47000	1.800	24.21504	24.98749	24.23760
BI-2	209	92501.38000	0.00000	0.000	90285.11000	93614.44000	93604.59000
PB	208	24.96500	97159.15000	0.600	24.87892	24.86742	25.14774
TL	203	24.97900	30342.82000	0.700	25.18167	24.89740	24.85929
U	238	25.38900	122951.31000	0.700	25.56713	25.20446	25.39674
SC-1	45	597139.46000	0.00000	0.000	592222.84000	604893.98000	594301.55000
GE-1	72	749006.58000	0.00000	0.000	738570.69000	763106.47000	745342.57000
GE-2	72	55831.80000	0.00000	0.000	54845.60000	56620.85000	56028.94000
GE-3	72	2253405	0	0.000	2286678	2259903	2213634
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:01:48
Tube Number: 36
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19030.65000	0.00000	0.000	19411.24000	18670.30000	19010.42000
SC-3	45	2913195	0	0.000	3004213	2833815	2901557
AL	27	2.85700	60.00000	72.600	4.85720	2.99474	0.71803
B	11	6.98400	29965.09000	8.100	6.93447	7.57262	6.44389
BE	9	0.00200	9.33000	91.800	0.00001	0.00317	0.00205
CA	44	19.97300	26.67000	86.800	39.31184	14.75266	5.85367
CR	52	0.27200	296.68000	73.800	0.46201	0.06144	0.29404
FE	57	1.89100	50.00000	87.500	0.24600	3.55318	1.87371
K	39	9.07000	4884.18000	83.400	8.02193	2.08884	17.09978
MG	24	0.03200	33.33000	1975.600	-0.55366	0.70714	-0.05704
MN	55	0.07300	23.33000	92.100	0.05655	0.01526	0.14618
NA	23	12.56400	24520.39000	116.000	-3.92691	17.88082	23.73701
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.03700	40.00000	91.500	-0.00210	0.05774	0.05600
IN-1	115	551840.46000	0.00000	0.000	541838.03000	559446.17000	554237.19000
IN-2	115	19029.84000	0.00000	0.000	18609.43000	19109.64000	19370.45000
AG	107	0.01600	26.67000	93.300	0.01883	0.00000	0.03014
AS	75	0.13800	10.67000	165.200	0.02523	-0.01155	0.40119
CD	111	-0.02800	1.33000	0.000	-0.03751	-0.02364	-0.02383
CO	59	0.02800	43.33000	82.400	0.05523	0.01168	0.01841
CU	63	0.04100	213.34000	95.800	0.06789	-0.00412	0.05983
MO	98	0.11600	130.01000	3.100	0.12013	0.11546	0.11311
NI	60	0.04800	33.33000	127.200	-0.00803	0.11290	0.03897
SE	78	0.02000	4.44000	49.800	0.02584	0.02477	0.00837
SN	120	0.37500	176.68000	23.300	0.27650	0.44335	0.40609
SR	88	0.00000	6.67000	20986.400	0.02034	-0.03791	0.01805
ZN	66	0.18400	43.33000	106.900	0.34697	0.24108	-0.03491
TB-2	159	114460.49000	0.00000	0.000	112187.36000	115672.79000	115521.31000
BA	137	0.07800	6.67000	173.200	0.23536	0.00000	0.00000
SB	121	0.26500	76.67000	66.500	0.20719	0.46348	0.12517
BI-2	209	90445.80000	0.00000	0.000	88354.83000	90294.29000	92688.29000
PB	208	-0.01100	66.67000	0.000	-0.00731	-0.01568	-0.01088
TL	203	0.03100	50.00000	73.000	0.04911	0.00563	0.03807
U	238	0.00200	33.33000	149.900	-0.00064	0.00138	0.00534
SC-1	45	603326.65000	0.00000	0.000	603300.66000	602688.78000	603990.50000
GE-1	72	766700.20000	0.00000	0.000	761123.58000	763824.99000	775152.02000
GE-2	72	57246.75000	0.00000	0.000	56360.80000	57193.24000	58186.21000
GE-3	72	2259260	0	0.000	2329502	2209744	2238536
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:04:45
Tube Number: 37 Batch: 181061063907A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19494.51000	0.00000	0.000	18349.83000	19661.45000	20472.26000
SC-3	45	2977838	0	0.000	3025174	2929539	2978800
AL	27	5.92100	90.00000	38.500	6.46458	7.88151	3.41662
B	11	1.24200	23630.82000	51.700	0.58080	1.86227	1.28314
BE	9	0.00000	5.33000	0.000	0.00279	-0.00281	-0.00091
CA	44	2.58300	6.67000	356.400	-2.73249	-2.73249	13.21362
CR	52	0.32900	343.35000	16.600	0.36712	0.26635	0.35359
FE	57	-0.54900	20.00000	0.000	-1.25548	0.21649	-0.60723
K	39	5.27600	4914.21000	385.200	26.08781	4.26127	-14.52089
MG	24	0.53300	56.67000	174.500	-0.53974	1.10672	1.03143
MN	55	0.47000	116.67000	17.500	0.42544	0.56495	0.41909
NA	23	13.43600	25178.03000	83.500	26.34509	6.09515	7.86701
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.01200	26.67000	415.400	0.05943	0.01589	-0.03952
IN-1	115	554082.80000	0.00000	0.000	559029.48000	555250.76000	547968.15000
IN-2	115	20037.85000	0.00000	0.000	19220.08000	20081.25000	20812.22000
AG	107	0.00900	16.67000	90.800	0.00000	0.01163	0.01683
AS	75	0.12000	10.00000	96.400	0.19647	-0.01324	0.17789
CD	111	-0.00700	4.67000	0.000	-0.00993	-0.02431	0.01343
CO	59	0.01300	23.33000	103.500	0.01857	-0.00233	0.02340
CU	63	0.02500	203.34000	251.000	0.04481	0.07662	-0.04562
MO	98	0.04400	80.00000	35.800	0.06122	0.03062	0.03977
NI	60	0.12900	70.00000	61.800	0.08789	0.22158	0.07864
SE	78	0.01200	3.33000	203.100	0.04141	-0.00006	-0.00414
SN	120	0.21500	130.01000	75.900	0.17445	0.07584	0.39480
SR	88	0.05100	16.67000	161.600	-0.03791	0.12403	0.06626
ZN	66	0.45800	76.67000	86.900	0.51043	0.82641	0.03635
TB-2	159	117018.40000	0.00000	0.000	114392.36000	116044.68000	120618.17000
BA	137	0.03600	3.33000	173.200	0.00000	0.00000	0.10945
SB	121	0.07200	26.67000	143.600	0.01256	0.01202	0.19093
BI-2	209	92688.71000	0.00000	0.000	92317.15000	92004.30000	93744.67000
PB	208	-0.01400	56.67000	0.000	-0.00823	-0.02368	-0.01108
TL	203	-0.00300	10.00000	0.000	-0.01124	0.01360	-0.01124
U	238	-0.00200	13.33000	0.000	-0.00496	0.00127	-0.00292
SC-1	45	617521.44000	0.00000	0.000	610160.58000	618107.18000	624296.55000
GE-1	72	765009.81000	0.00000	0.000	771539.75000	750709.60000	772780.07000
GE-2	72	58122.64000	0.00000	0.000	57523.68000	57634.13000	59210.12000
GE-3	72	2300503	0	0.000	2319094	2299850	2282565
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:07:42
Tube Number: 38 Batch: 181061063907A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19951.60000	0.00000	0.000	19581.23000	19861.50000	20412.08000
SC-3	45	3025208	0	0.000	3034243	3002356	3039026
AL	27	2072.42400	20191.87000	5.500	1956.00081	2181.74707	2079.52317
B	11	240.34400	320021.43000	1.200	239.90738	243.35064	237.77272
BE	9	4.10800	8816.78000	1.000	4.08247	4.15688	4.08532
CA	44	3724.83300	4557.41000	2.000	3640.61608	3753.59337	3780.29008
CR	52	50.99000	38638.91000	2.000	50.43410	50.35995	52.17475
FE	57	1017.08000	13552.31000	2.900	1023.77711	985.10986	1042.35336
K	39	10187.57400	208009.29000	1.800	10209.81204	10360.37936	9992.52962
MG	24	2047.23600	87457.40000	1.400	2022.76191	2079.70894	2039.23701
MN	55	49.62100	11871.01000	6.200	46.57848	52.69218	49.59231
NA	23	9907.38400	956037.36000	1.200	9872.14941	10039.36142	9810.63968
TI	47	256.10900	2777.00000	2.700	248.16885	261.35139	258.80662
V	51	51.66600	28406.52000	1.700	51.13136	52.69771	51.16849
IN-1	115	554316.77000	0.00000	0.000	551860.85000	549667.72000	561421.75000
IN-2	115	19135.41000	0.00000	0.000	18561.86000	19021.26000	19823.10000
AG	107	53.47900	87585.33000	2.300	54.31153	54.04860	52.07580
AS	75	11.54900	666.02000	5.000	10.94986	11.59601	12.10088
CD	111	5.14200	747.36000	5.900	5.08946	5.46740	4.87024
CO	59	264.89400	378511.13000	1.900	264.79073	269.99302	259.89708
CU	63	55.78400	67200.22000	2.200	56.28874	56.65636	54.40694
MO	98	54.23400	40628.82000	2.500	53.12557	55.74866	53.82822
NI	60	55.87300	23012.09000	3.200	55.58317	57.76238	54.27456
SE	78	10.28100	1638.97000	1.900	10.22141	10.11868	10.50184
SN	120	53.27400	18040.23000	2.500	51.80286	53.71025	54.30942
SR	88	41.94400	7405.19000	5.300	41.96266	44.14151	39.72847
ZN	66	543.95500	59760.66000	0.900	547.67775	538.29988	545.88625
TB-2	159	116642.00000	0.00000	0.000	114343.87000	117100.10000	118482.04000
BA	137	54.93600	4850.90000	6.500	56.81689	57.17160	50.81996
SB	121	7.28900	1960.19000	4.400	7.66052	7.10797	7.09820
BI-2	209	92724.79000	0.00000	0.000	90958.12000	94015.40000	93200.86000
PB	208	16.01500	62500.95000	2.200	16.41419	15.90502	15.72447
TL	203	2.09900	2566.99000	7.500	2.23356	1.92551	2.13868
U	238	0.00100	26.67000	767.000	0.00554	-0.00090	-0.00291
SC-1	45	615565.68000	0.00000	0.000	613931.79000	623352.18000	609413.08000
GE-1	72	773435.51000	0.00000	0.000	767516.16000	768864.91000	783925.46000
GE-2	72	58453.64000	0.00000	0.000	57364.07000	58085.48000	59911.38000
GE-3	72	2311793	0	0.000	2285942	2300962	2348474
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:10:39
Tube Number: 39 Batch: 181061063907A
Sample Number: **9558715** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20545.79000	0.00000	0.000	19881.51000	20302.30000	21453.55000
SC-3	45	3047849	0	0.000	3062340	3084866	2996340
AL	27	192.01400	1966.86000	17.700	178.06251	167.22154	230.75650
B	11	112.25200	162673.56000	1.000	112.51905	113.17106	111.06613
BE	9	1.05200	2277.49000	5.600	1.02716	1.00958	1.11859
CA	44	72109.01400	90703.39000	2.700	73790.76735	72608.28866	69927.98599
CR	52	4.08600	3283.76000	4.300	4.02122	4.28629	3.95039
FE	57	2353.02900	32223.13000	2.800	2428.43389	2329.87880	2300.77343
K	39	2871.57700	63975.91000	4.200	2959.23020	2922.40761	2733.09444
MG	24	29126.22500	1279830.89000	3.200	29536.01506	29786.69678	28055.96216
MN	55	2635.01600	648106.50000	2.900	2686.49724	2671.59662	2546.95452
NA	23	3958.14500	408146.26000	3.800	4087.12467	3993.36270	3793.94871
TI	47	24.96800	276.68000	35.600	35.17948	20.85133	18.87451
V	51	0.90700	536.70000	9.900	0.85554	0.85488	1.01004
IN-1	115	549715.79000	0.00000	0.000	549243.26000	550123.30000	549780.80000
IN-2	115	19903.34000	0.00000	0.000	19172.46000	19476.77000	21060.80000
AG	107	0.95000	1616.82000	3.600	0.98684	0.94145	0.92055
AS	75	5.48400	328.68000	17.200	6.56383	5.05644	4.83100
CD	111	0.96500	150.67000	2.800	0.95796	0.94241	0.99457
CO	59	12.01600	17829.61000	6.900	12.23845	12.70762	11.10281
CU	63	4.48600	5767.81000	7.900	4.57078	4.79160	4.09571
MO	98	1.49200	1210.10000	8.800	1.35543	1.50401	1.61724
NI	60	15.05500	6454.74000	5.000	15.91966	14.66781	14.57756
SE	78	4.01100	634.90000	6.600	3.72605	4.06177	4.24574
SN	120	4.20300	1526.80000	2.600	4.25641	4.27498	4.07674
SR	88	85.56800	15714.34000	2.400	84.13478	87.94479	84.62454
ZN	66	43.31400	4964.23000	4.800	44.41609	44.61374	40.91090
TB-2	159	117192.65000	0.00000	0.000	114280.82000	117426.52000	119870.60000
BA	137	264.37700	23460.39000	2.600	267.97702	268.68180	256.47091
SB	121	2.20400	600.03000	9.900	2.41093	1.97516	2.22470
BI-2	209	93050.49000	0.00000	0.000	89660.58000	92758.96000	96731.93000
PB	208	1.98900	7877.75000	8.200	2.07876	2.08790	1.80165
TL	203	1.02700	1266.77000	9.900	1.12735	0.92505	1.02836
U	238	10.82800	52703.38000	5.000	11.44604	10.62336	10.41463
SC-1	45	621012.89000	0.00000	0.000	618305.97000	621035.65000	623697.06000
GE-1	72	767084.08000	0.00000	0.000	771324.52000	767185.54000	762742.18000
GE-2	72	58654.39000	0.00000	0.000	58707.58000	58547.37000	58708.22000
GE-3	72	2327621	0	0.000	2405185	2347745	2229933
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:13:35
Tube Number: 40 Batch: 181061063907A
Sample Number: **9558716** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19357.63000	0.00000	0.000	19070.54000	19831.57000	19170.78000
SC-3	45	3078383	0	0.000	3098322	3136696	3000131
AL	27	2053.73600	19397.37000	4.200	2125.86045	1959.21490	2076.13380
B	11	263.89300	355306.59000	0.900	261.25658	264.58701	265.83415
BE	9	4.16200	9088.25000	1.100	4.19383	4.11191	4.17972
CA	44	82390.66300	97698.80000	4.400	79724.49105	80908.03612	86539.46318
CR	52	50.99200	37469.83000	5.500	49.29104	49.44891	54.23641
FE	57	3407.05500	43957.93000	3.400	3406.29337	3290.67964	3524.19176
K	39	12914.15300	254507.20000	2.800	12963.84447	12525.01953	13253.59526
MG	24	33797.16700	1399800.03000	4.800	33066.71801	32658.07390	35666.70962
MN	55	2958.05900	685832.93000	3.500	2913.05540	2885.58470	3075.53834
NA	23	14744.37200	1368380.14000	3.800	14678.44783	14222.70015	15331.96869
TI	47	245.19200	2576.95000	5.300	250.95323	230.18350	254.44032
V	51	50.21600	26783.97000	3.400	49.22141	49.23793	52.18812
IN-1	115	561190.11000	0.00000	0.000	553466.04000	566449.10000	563655.20000
IN-2	115	20184.49000	0.00000	0.000	19545.83000	19859.62000	21148.01000
AG	107	49.67300	85816.35000	1.800	49.93181	50.41370	48.67450
AS	75	12.01300	730.02000	2.200	11.72718	12.24647	12.06528
CD	111	4.87600	745.36000	15.800	5.68583	4.79448	4.14913
CO	59	254.11800	382917.79000	2.000	256.33200	257.71733	248.30591
CU	63	50.42200	64078.42000	2.800	50.30942	51.88519	49.07087
MO	98	51.75900	40862.09000	3.800	52.17781	53.49591	49.60307
NI	60	62.10900	26984.41000	2.000	61.49763	63.57122	61.25889
SE	78	10.29700	1662.08000	6.200	10.09949	11.00664	9.78500
SN	120	51.46200	18353.81000	5.200	51.56802	54.09474	48.72310
SR	88	127.24700	23663.37000	5.500	132.88688	129.52865	119.32651
ZN	66	502.05400	58142.12000	3.700	499.52119	521.99807	484.64352
TB-2	159	116916.05000	0.00000	0.000	117058.82000	116748.19000	116941.14000
BA	137	335.90300	29747.32000	1.900	336.05862	329.59551	342.05525
SB	121	6.07700	1640.15000	3.600	6.18141	5.82508	6.22474
BI-2	209	93097.69000	0.00000	0.000	91391.71000	94135.97000	93765.38000
PB	208	15.90800	62350.49000	2.400	15.86671	15.55035	16.30824
TL	203	2.07000	2543.65000	1.100	2.04785	2.06874	2.09321
U	238	0.43700	2153.58000	11.000	0.46959	0.45982	0.38218
SC-1	45	632869.25000	0.00000	0.000	626358.55000	635077.53000	637171.67000
GE-1	72	783322.95000	0.00000	0.000	781427.72000	789379.75000	779161.39000
GE-2	72	57804.77000	0.00000	0.000	58386.29000	56610.91000	58417.11000
GE-3	72	2346860	0	0.000	2358486	2392777	2289318
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:16:31
Tube Number: 41 Batch: 181061063907A
Sample Number: **9558717** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20298.62000	0.00000	0.000	20672.50000	20161.74000	20061.61000
SC-3	45	3041213	0	0.000	3042383	3025022	3056235
AL	27	1943.02100	19257.47000	0.400	1949.93514	1935.24716	1943.88194
B	11	276.48300	366701.20000	0.600	276.88783	277.95274	274.60736
BE	9	4.34200	9367.05000	0.900	4.34707	4.37856	4.29964
CA	44	79025.97400	98244.32000	3.300	76156.30422	79583.15741	81338.46090
CR	52	48.29800	37209.27000	6.100	45.38414	48.21689	51.29418
FE	57	3285.17000	44439.24000	5.200	3093.44575	3341.19109	3420.87380
K	39	12551.44700	259499.50000	4.200	11957.24988	12757.68188	12939.40984
MG	24	31995.44200	1389544.20000	3.600	30733.79815	32227.02540	33025.50197
MN	55	2890.78600	702672.59000	4.600	2759.13377	2890.95479	3022.26971
NA	23	14125.29000	1376017.38000	1.500	13894.96492	14167.81913	14313.08481
TI	47	252.46100	2783.66000	5.100	247.53446	242.84822	267.00122
V	51	48.34300	27027.80000	5.900	45.06995	49.98234	49.97819
IN-1	115	559290.53000	0.00000	0.000	558047.55000	561089.51000	558734.52000
IN-2	115	20607.87000	0.00000	0.000	20279.07000	20394.87000	21149.67000
AG	107	49.47600	87294.16000	1.100	49.98460	49.51644	48.92633
AS	75	10.70700	664.02000	8.700	10.34762	11.76032	10.01438
CD	111	4.75000	744.69000	3.600	4.55074	4.84963	4.85074
CO	59	250.64800	385803.26000	0.800	249.11423	253.06503	249.76385
CU	63	50.24100	65233.21000	0.900	49.84884	50.14429	50.72915
MO	98	50.04200	40391.26000	2.900	48.59614	50.01701	51.51396
NI	60	59.97000	26597.13000	2.700	61.22295	60.57840	58.10772
SE	78	10.25000	1648.53000	4.300	9.83770	10.20617	10.70606
SN	120	51.43000	18751.00000	1.400	51.68583	50.61145	51.99370
SR	88	125.20100	23810.39000	1.000	123.69166	126.02419	125.88650
ZN	66	505.39800	59808.02000	3.700	485.42195	522.51958	508.25372
TB-2	159	120545.88000	0.00000	0.000	117917.68000	123375.63000	120344.32000
BA	137	323.71200	29560.08000	3.000	315.89144	320.89098	334.35505
SB	121	6.51100	1810.18000	4.900	6.87412	6.39252	6.26492
BI-2	209	92363.60000	0.00000	0.000	91280.53000	93563.84000	92246.42000
PB	208	16.38300	63702.02000	2.200	16.13124	16.23125	16.78659
TL	203	2.23700	2727.02000	10.800	1.96688	2.30949	2.43347
U	238	0.41600	2033.55000	8.700	0.45552	0.40752	0.38441
SC-1	45	622510.08000	0.00000	0.000	620688.12000	611316.71000	635525.42000
GE-1	72	780195.90000	0.00000	0.000	778530.85000	781991.24000	780065.61000
GE-2	72	58607.26000	0.00000	0.000	58126.14000	59259.44000	58436.20000
GE-3	72	2313421	0	0.000	2301962	2310813	2327487
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:19:27
Tube Number: 42 Batch: 181061063907A
Sample Number: **9558715** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19497.77000	0.00000	0.000	18710.37000	19891.40000	19891.55000
SC-3	45	3055815	0	0.000	3029346	3085412	3052686
AL	27	6.89000	100.00000	36.900	5.17397	5.68462	9.81181
B	11	18.91400	46355.95000	2.500	19.44513	18.79040	18.50607
BE	9	0.00400	15.33000	11.300	0.00371	0.00451	0.00459
CA	44	15288.86100	18276.67000	2.500	14852.94139	15457.66865	15555.97269
CR	52	0.13900	203.34000	4.400	0.13158	0.14221	0.14221
FE	57	445.17500	5804.49000	4.900	469.63557	428.04016	437.84833
K	39	556.08400	15653.93000	3.000	574.18405	541.49694	552.56971
MG	24	5890.63000	245683.87000	3.000	6093.70107	5803.78158	5774.40779
MN	55	562.94100	131442.37000	2.100	575.76904	559.67862	553.37546
NA	23	754.47200	93283.67000	3.400	767.97659	725.10166	770.33638
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02800	36.67000	131.600	-0.00070	0.07002	0.01525
IN-1	115	565032.66000	0.00000	0.000	571846.93000	562051.45000	561199.61000
IN-2	115	19899.88000	0.00000	0.000	18899.20000	19689.42000	21111.02000
AG	107	0.04000	66.67000	74.000	0.07416	0.02372	0.02213
AS	75	0.20000	14.67000	20.000	0.23589	0.15680	0.20631
CD	111	-0.00700	4.67000	0.000	-0.03751	0.01634	0.00016
CO	59	2.31100	3440.48000	4.200	2.35695	2.20106	2.37621
CU	63	1.41200	1930.18000	10.900	1.55563	1.43106	1.25003
MO	98	0.11600	136.67000	50.800	0.04972	0.16228	0.13530
NI	60	2.39600	1040.07000	2.600	2.45067	2.32737	2.41061
SE	78	0.01800	4.22000	14.300	0.01595	0.02053	0.01641
SN	120	0.61300	266.68000	16.300	0.71997	0.59864	0.52137
SR	88	15.32300	2820.35000	3.900	14.81975	15.98571	15.16333
ZN	66	2.36600	290.01000	49.800	3.65759	2.08615	1.35345
TB-2	159	117799.57000	0.00000	0.000	116538.27000	116737.96000	120122.47000
BA	137	54.50600	4864.23000	3.300	52.46094	55.76476	55.29306
SB	121	0.12300	40.00000	61.600	0.19851	0.12360	0.04697
BI-2	209	96839.99000	0.00000	0.000	95384.77000	94378.32000	100756.87000
PB	208	-0.00300	103.33000	0.000	-0.00640	0.00140	-0.00523
TL	203	0.01200	30.00000	66.100	0.00473	0.02105	0.01144
U	238	0.08700	466.70000	16.000	0.08517	0.10233	0.07468
SC-1	45	623277.88000	0.00000	0.000	626144.05000	617318.23000	626371.36000
GE-1	72	782566.71000	0.00000	0.000	786646.47000	775363.66000	785689.99000
GE-2	72	59604.64000	0.00000	0.000	57975.69000	59841.81000	60996.43000
GE-3	72	2335898	0	0.000	2346397	2330780	2330516
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:22:23
Tube Number: 43
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	20255.31000	0.00000	0.000	19310.90000	21283.07000	20171.97000
SC-3	45	3055849	0	0.000	3031063	3080401	3056082
AL	27	173.24700	1746.82000	8.100	161.11315	169.95495	188.67154
B	11	98.51300	145891.43000	2.000	100.47131	96.45335	98.61421
BE	9	0.97900	2126.13000	2.400	1.00242	0.95609	0.97757
CA	44	404.77300	503.36000	19.800	496.00226	373.08681	345.22888
CR	52	4.02900	3200.42000	6.100	3.74743	4.18172	4.15775
FE	57	177.58500	2423.61000	6.800	172.79545	168.58251	191.37647
K	39	382.40100	12734.95000	7.800	414.30261	355.30591	377.59397
MG	24	198.61500	8629.03000	5.700	208.79322	186.51553	200.53713
MN	55	4.37700	1066.75000	17.200	4.25006	3.69667	5.18484
NA	23	379.66200	61037.80000	10.000	415.90975	340.49421	382.58343
TI	47	29.96400	330.02000	8.800	27.64030	29.40374	32.84813
V	51	0.75100	440.02000	5.100	0.78797	0.71127	0.75263
IN-1	115	566577.44000	0.00000	0.000	567111.45000	571638.50000	560982.38000
IN-2	115	20400.08000	0.00000	0.000	19919.18000	20358.39000	20922.67000
AG	107	1.02100	1783.50000	2.100	1.00262	1.04410	1.01594
AS	75	4.00400	248.00000	13.800	3.43608	4.54043	4.03416
CD	111	0.88500	142.00000	8.100	0.89403	0.80883	0.95071
CO	59	0.98400	1500.13000	13.500	1.09334	1.02365	0.83599
CU	63	3.89500	5167.59000	1.100	3.89872	3.93676	3.84967
MO	98	0.83800	713.38000	24.500	1.07130	0.68263	0.76042
NI	60	3.95500	1750.15000	1.100	4.00342	3.93921	3.92093
SE	78	3.87600	632.23000	7.900	4.20165	3.59192	3.83409
SN	120	3.94600	1473.47000	5.100	4.14826	3.74909	3.94200
SR	88	1.72800	333.35000	26.800	1.59479	1.34658	2.24195
ZN	66	30.30000	3570.50000	5.100	32.06792	29.14575	29.68670
TB-2	159	119169.02000	0.00000	0.000	117455.00000	117865.01000	122187.05000
BA	137	4.38300	396.69000	20.700	3.48468	4.36865	5.29471
SB	121	2.11900	586.70000	11.100	2.38212	2.04153	1.93282
BI-2	209	96889.90000	0.00000	0.000	94759.58000	98273.15000	97636.97000
PB	208	1.91400	7911.11000	3.000	1.86487	1.97639	1.89927
TL	203	0.95600	1230.10000	13.900	0.91332	0.84925	1.10458
U	238	1.02200	5211.11000	8.100	0.95687	0.99443	1.11446
SC-1	45	623715.72000	0.00000	0.000	627314.72000	625868.15000	617964.29000
GE-1	72	790914.50000	0.00000	0.000	793842.10000	792990.46000	785910.93000
GE-2	72	59303.60000	0.00000	0.000	58447.27000	57735.58000	61727.95000
GE-3	72	2301291	0	0.000	2333948	2250010	2319915
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:25:19
Tube Number: 44
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18173.06000	0.00000	0.000	17428.97000	18059.67000	19030.55000
SC-3	45	2813460	0	0.000	2820778	2797107	2822495
AL	27	98674.02900	873287.90000	2.600	101387.96165	98382.96167	96251.16498
B	11	12.49100	35286.22000	4.000	12.95701	12.54993	11.96672
BE	9	0.00900	23.33000	36.400	0.01119	0.01030	0.00519
CA	44	270543.47400	300856.62000	4.100	279232.60942	274365.69530	258032.11659
CR	52	1.19600	916.73000	3.100	1.21194	1.22333	1.15397
FE	57	242223.96000	2931144.33000	2.500	248085.72114	242636.26317	235949.89578
K	39	101544.20300	1846937.27000	3.000	104730.76743	101130.08170	98771.76025
MG	24	96749.25800	3759524.11000	3.600	100715.22820	95460.44943	94072.09583
MN	55	3.83600	843.39000	8.400	3.46686	3.99193	4.04994
NA	23	243018.52800	20814040.52000	3.600	252249.71596	242068.03807	234737.82885
TI	47	1989.10000	19621.27000	3.800	2076.21212	1954.74916	1936.33848
V	51	0.03300	36.67000	88.800	0.00216	0.06102	0.03681
IN-1	115	524255.06000	0.00000	0.000	529578.95000	519760.70000	523425.52000
IN-2	115	17438.39000	0.00000	0.000	16787.37000	17669.10000	17858.71000
AG	107	0.38700	580.03000	23.200	0.29219	0.39659	0.47085
AS	75	0.39000	22.67000	43.000	0.54954	0.40655	0.21499
CD	111	0.14000	23.33000	32.800	0.13618	0.18752	0.09608
CO	59	1.05900	1383.45000	7.400	1.02655	1.14951	1.00231
CU	63	0.91400	1150.08000	9.800	0.99099	0.93468	0.81635
MO	98	2278.24600	1553217.69000	1.200	2310.27107	2264.66813	2259.80006
NI	60	1.02700	396.69000	14.600	1.18508	0.88758	1.00792
SE	78	0.06300	10.67000	38.100	0.03544	0.07196	0.08024
SN	120	0.21500	110.00000	152.800	0.59298	0.04247	0.00868
SR	88	9.46300	1533.46000	15.700	7.84076	9.77916	10.76785
ZN	66	2.32400	253.34000	16.400	2.69151	2.34925	1.93176
TB-2	159	109391.04000	0.00000	0.000	109620.03000	108290.00000	110263.08000
BA	137	1.40800	116.67000	29.800	0.96349	1.46310	1.79612
SB	121	1.14000	293.35000	16.400	1.04606	1.01905	1.35548
BI-2	209	84422.90000	0.00000	0.000	82945.16000	83709.55000	86613.99000
PB	208	0.19000	780.05000	28.300	0.16911	0.15025	0.25140
TL	203	0.12300	150.00000	41.500	0.09897	0.08886	0.18226
U	238	0.05000	243.34000	16.100	0.04110	0.05666	0.05239
SC-1	45	598170.08000	0.00000	0.000	594051.44000	599969.29000	600489.52000
GE-1	72	745344.96000	0.00000	0.000	743501.55000	737155.07000	755378.27000
GE-2	72	55564.81000	0.00000	0.000	54344.68000	55648.27000	56701.47000
GE-3	72	2181583	0	0.000	2186734	2190639	2167375
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:28:14
Tube Number: 45
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18099.68000	0.00000	0.000	17799.55000	17849.27000	18650.21000
SC-3	45	2897347	0	0.000	2888227	2938748	2865066
AL	27	96485.68800	851006.13000	1.400	95801.89007	98055.69737	95599.47789
B	11	6.14300	28807.94000	8.400	6.68622	5.66462	6.07727
BE	9	0.00400	14.67000	13.600	0.00501	0.00391	0.00409
CA	44	265933.54900	294907.70000	2.600	258690.14662	272447.71580	266662.78380
CR	52	196.86200	134993.75000	2.200	195.46247	201.70390	193.41950
FE	57	239942.09900	2893153.19000	2.100	239029.36238	245400.43495	235396.50033
K	39	101760.12500	1844589.03000	3.100	99584.31329	105401.00343	100295.05959
MG	24	95836.80100	3712243.80000	1.400	95018.90176	97362.42006	95129.07987
MN	55	198.83100	43115.61000	2.100	195.84601	203.55262	197.09531
NA	23	238482.06800	20356665.11000	2.400	239722.72979	243564.62109	232158.85386
TI	47	2003.02000	19687.87000	3.000	2046.43341	2027.31080	1935.31693
V	51	202.59200	100978.27000	3.300	197.50790	210.23542	200.03141
IN-1	115	516453.42000	0.00000	0.000	505628.43000	524580.54000	519151.28000
IN-2	115	17696.11000	0.00000	0.000	17448.88000	18280.27000	17359.18000
AG	107	50.91600	77135.98000	2.700	49.94889	50.34045	52.45775
AS	75	105.05000	5574.25000	5.000	101.23167	102.93996	110.97987
CD	111	98.67900	13173.72000	3.400	97.66712	95.96604	102.40499
CO	59	198.39900	262095.30000	3.700	196.61806	192.18247	206.39767
CU	63	206.59000	229741.57000	2.500	205.55817	201.99338	212.21745
MO	98	2194.15000	1517491.12000	3.700	2180.58211	2119.98924	2281.88000
NI	60	203.34000	77400.50000	3.500	202.06197	196.97802	210.98070
SE	78	97.44400	14461.85000	1.100	97.25813	98.63554	96.43759
SN	120	0.14900	93.34000	35.300	0.10988	0.12911	0.20924
SR	88	10.16100	1666.82000	7.500	9.40611	10.93376	10.14196
ZN	66	99.38200	10113.27000	2.200	101.87510	98.09008	98.18227
TB-2	159	106510.48000	0.00000	0.000	104447.33000	107565.99000	107518.13000
BA	137	1.16300	93.34000	49.900	1.76973	1.10462	0.61395
SB	121	1.11500	280.01000	30.000	0.80758	1.06653	1.47166
BI-2	209	83877.67000	0.00000	0.000	82243.34000	84744.81000	84644.85000
PB	208	0.18200	743.37000	17.600	0.19974	0.14525	0.20169
TL	203	0.10400	126.67000	32.000	0.08139	0.08764	0.14176
U	238	0.04700	226.68000	43.500	0.04614	0.06718	0.02664
SC-1	45	582642.46000	0.00000	0.000	584236.67000	582775.69000	580915.03000
GE-1	72	730453.01000	0.00000	0.000	719880.61000	736753.27000	734725.15000
GE-2	72	54350.83000	0.00000	0.000	53271.04000	54203.43000	55578.02000
GE-3	72	2163253	0	0.000	2143227	2152877	2193654
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:31:11
Tube Number: 46
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18720.29000	0.00000	0.000	17989.52000	19631.25000	18540.11000
SC-3	45	2880808	0	0.000	2970686	2860449	2811289
AL	27	16.40000	180.01000	55.300	24.91724	6.85289	17.42988
B	11	0.86400	22413.36000	71.400	0.51766	0.49837	1.57640
BE	9	0.00100	7.33000	416.300	-0.00281	0.00410	0.00121
CA	44	21.01400	26.67000	105.700	24.48777	-2.73249	41.28734
CR	52	0.23300	263.34000	35.900	0.14233	0.30732	0.24799
FE	57	32.13900	426.69000	16.300	36.30157	33.85754	26.25825
K	39	14.90300	4910.85000	121.100	31.57437	17.39468	-4.25992
MG	24	8.48200	370.02000	16.500	9.85471	7.06014	8.53043
MN	55	0.09000	26.67000	58.700	0.06335	0.05559	0.15064
NA	23	60.28200	28309.09000	25.000	66.11551	43.19834	71.53149
TI	47	1.27900	13.33000	111.300	1.02309	2.81258	0.00000
V	51	0.00100	20.00000	8136.300	0.06142	-0.03952	-0.01993
IN-1	115	540274.82000	0.00000	0.000	538231.06000	539695.92000	542897.47000
IN-2	115	18733.68000	0.00000	0.000	18329.57000	19030.71000	18840.75000
AG	107	0.02500	40.00000	67.000	0.03823	0.00614	0.03099
AS	75	0.08400	7.33000	25.300	0.09910	0.09374	0.05975
CD	111	-0.02800	1.33000	0.000	-0.02305	-0.03751	-0.02344
CO	59	0.03800	56.67000	30.300	0.04880	0.02581	0.04031
CU	63	0.01000	173.34000	409.800	0.04497	-0.03702	0.02313
MO	98	2.54100	1906.86000	13.800	2.18788	2.54862	2.88706
NI	60	0.03400	26.67000	90.100	0.06841	0.01583	0.01632
SE	78	0.07800	13.33000	31.300	0.10367	0.07331	0.05572
SN	120	-0.03800	36.67000	0.000	0.03553	-0.15005	0.00041
SR	88	-0.03800	0.00000	0.000	-0.03791	-0.03791	-0.03791
ZN	66	0.34200	60.00000	24.200	0.26049	0.42609	0.34007
TB-2	159	114110.86000	0.00000	0.000	112228.42000	113998.91000	116105.24000
BA	137	0.03900	3.33000	173.200	0.11764	0.00000	0.00000
SB	121	0.03700	16.67000	209.300	-0.02547	0.01270	0.12441
BI-2	209	91548.60000	0.00000	0.000	90034.36000	91782.94000	92828.51000
PB	208	-0.01500	53.33000	0.000	-0.02092	-0.01589	-0.00834
TL	203	-0.01100	0.00000	0.000	-0.01124	-0.01124	-0.01124
U	238	-0.00100	16.67000	0.000	0.00140	-0.00080	-0.00496
SC-1	45	596913.25000	0.00000	0.000	592638.00000	589697.84000	608403.90000
GE-1	72	753776.58000	0.00000	0.000	748961.24000	753074.83000	759293.66000
GE-2	72	56356.84000	0.00000	0.000	56590.60000	57332.96000	55146.95000
GE-3	72	2217451	0	0.000	2287943	2189055	2175355
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:34:08
Tube Number: 47
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	19094.04000	0.00000	0.000	17919.43000	19861.40000	19501.29000
SC-3	45	2992389	0	0.000	2974628	3006541	2995997
AL	27	2363.58500	21990.41000	4.700	2493.09743	2295.51093	2302.14515
B	11	221.01000	292893.10000	0.700	219.38499	221.07232	222.57379
BE	9	24.11700	51169.64000	0.300	24.13693	24.04722	24.16680
CA	44	2451.37800	2873.67000	6.400	2402.27527	2627.46165	2324.39710
CR	52	243.69500	175949.97000	5.700	259.12986	232.32548	239.62939
FE	57	2345.63600	29808.94000	6.100	2490.67501	2204.55660	2341.67718
K	39	2381.05100	50109.71000	3.800	2447.14638	2277.09021	2418.91761
MG	24	2423.80200	98856.79000	6.400	2597.37128	2295.34209	2378.69143
MN	55	240.81000	55018.28000	4.100	251.84323	237.80243	232.78578
NA	23	2423.21800	241127.78000	5.300	2564.34128	2313.77473	2391.53949
TI	47	264.67200	2746.99000	1.200	260.91042	265.98510	267.12073
V	51	242.98500	127654.32000	2.800	250.37776	236.79089	241.78680
IN-1	115	550173.91000	0.00000	0.000	555186.09000	549867.30000	545468.33000
IN-2	115	18614.43000	0.00000	0.000	18377.63000	18986.34000	18479.31000
AG	107	25.84700	41183.45000	4.100	25.81144	24.81113	26.91722
AS	75	252.22200	14078.94000	2.200	248.99591	248.99241	258.67915
CD	111	25.90900	3645.08000	4.700	24.51486	26.39485	26.81879
CO	59	252.55200	351050.97000	3.100	251.67272	245.15956	260.82307
CU	63	258.18100	302014.07000	2.900	258.21355	250.78155	265.54714
MO	98	26.00900	18967.78000	3.700	26.10302	25.00777	26.91471
NI	60	262.63900	105197.68000	3.200	258.37579	257.17941	272.36054
SE	78	24.85300	3930.22000	0.300	24.94014	24.82695	24.79326
SN	120	24.71700	8162.27000	3.000	25.52450	24.10388	24.52378
SR	88	24.61600	4230.71000	6.200	25.09468	22.91794	25.83680
ZN	66	265.91700	28423.42000	2.800	266.42517	258.15373	273.17337
TB-2	159	113177.64000	0.00000	0.000	111544.79000	113505.14000	114482.99000
BA	137	250.17100	21444.24000	1.400	253.92739	247.21309	249.37183
SB	121	25.54200	6651.54000	1.600	25.48630	25.96602	25.17376
BI-2	209	92095.75000	0.00000	0.000	90466.61000	92779.63000	93041.02000
PB	208	25.08400	97195.60000	1.000	24.92400	25.37670	24.95132
TL	203	25.18600	30459.92000	2.600	25.50266	24.42229	25.63357
U	238	25.39000	122416.72000	1.300	25.64174	25.03072	25.49832
SC-1	45	601230.48000	0.00000	0.000	603891.28000	606842.41000	592957.76000
GE-1	72	760461.94000	0.00000	0.000	765130.77000	760622.02000	755633.04000
GE-2	72	56691.43000	0.00000	0.000	55698.35000	57383.42000	56992.53000
GE-3	72	2287568	0	0.000	2277286	2279286	2306131
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Run Name: 1811601E05 Date/Time: 04/26/2018 6:37:05
Tube Number: 48
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-2	45	18727.07000	0.00000	0.000	17008.65000	19461.13000	19711.44000
SC-3	45	2899293	0	0.000	2941292	2843939	2912648
AL	27	2.96200	60.00000	91.200	2.43256	5.88989	0.56448
B	11	9.85500	33231.85000	4.900	10.03932	10.21781	9.30642
BE	9	0.00200	9.33000	164.900	0.00007	0.00513	0.00010
CA	44	14.84800	20.00000	113.400	16.46086	30.81674	-2.73249
CR	52	0.18700	230.01000	7.700	0.17394	0.20265	0.18495
FE	57	1.83000	50.00000	118.200	-0.30869	1.78230	4.01732
K	39	11.27100	4830.83000	194.300	31.20324	-12.18147	14.79250
MG	24	0.60700	56.67000	74.400	0.30444	1.12629	0.39080
MN	55	0.03600	13.33000	315.000	0.16685	-0.02945	-0.02945
NA	23	29.35900	25558.27000	51.000	45.12223	27.62268	15.33120
TI	47	1.34400	13.33000	87.300	2.16418	0.00000	1.86743
V	51	-0.01500	13.33000	0.000	-0.03952	-0.00220	-0.00267
IN-1	115	542406.84000	0.00000	0.000	542070.60000	538218.16000	546931.76000
IN-2	115	18995.83000	0.00000	0.000	19190.18000	18798.09000	18999.22000
AG	107	0.01900	30.00000	58.700	0.01217	0.03106	0.01229
AS	75	0.19900	14.00000	1.300	0.19685	0.20192	0.19929
CD	111	-0.02800	1.33000	0.000	-0.00989	-0.03751	-0.03751
CO	59	0.01200	20.00000	120.500	0.01163	0.02616	-0.00233
CU	63	0.00800	173.34000	402.500	0.02850	0.02349	-0.02848
MO	98	0.11700	130.01000	24.100	0.11473	0.14555	0.08955
NI	60	0.10600	56.67000	53.500	0.13651	0.14004	0.04037
SE	78	0.03900	7.33000	10.500	0.03443	0.03901	0.04252
SN	120	0.34700	166.68000	25.900	0.32268	0.27222	0.44679
SR	88	-0.01900	3.33000	0.000	-0.03791	-0.03791	0.01914
ZN	66	0.21400	46.67000	91.200	0.14837	0.43402	0.06031
TB-2	159	112204.30000	0.00000	0.000	113868.52000	109580.82000	113163.57000
BA	137	0.28000	23.33000	138.700	0.00000	0.72287	0.11666
SB	121	0.35300	96.67000	82.500	0.20376	0.68916	0.16675
BI-2	209	89249.13000	0.00000	0.000	91673.52000	88233.50000	87840.36000
PB	208	-0.01600	50.00000	0.000	-0.00289	-0.02346	-0.02073
TL	203	0.01700	33.33000	101.800	0.03031	-0.00261	0.02345
U	238	0.00300	36.67000	41.000	0.00337	0.00153	0.00374
SC-1	45	589958.16000	0.00000	0.000	584434.76000	591651.44000	593788.27000
GE-1	72	747129.03000	0.00000	0.000	751138.74000	738523.90000	751724.44000
GE-2	72	56065.87000	0.00000	0.000	55628.34000	56259.83000	56309.44000
GE-3	72	2238099	0	0.000	2275535	2211826	2226935
RB-	85	0.00000	0.00000	0.000	0.00000	115.00000	2.00000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

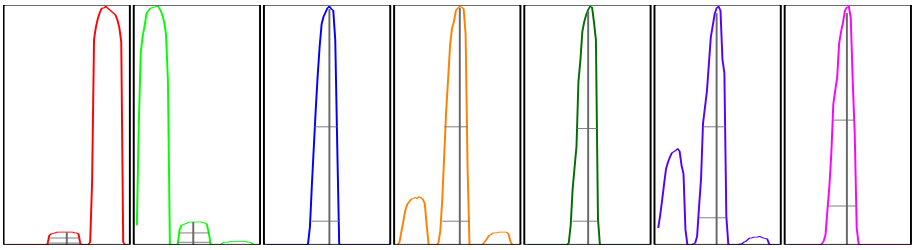
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		22502	22502.00			NaN	-	
24		50959	50959.10			NaN	-	
103		130236	130235.84			NaN	-	
115		126916	126916.18			NaN	-	
140		123677	123676.87			NaN	-	
208		57666	57665.61			NaN	-	
238		115261	115260.64			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	2.30	5.00				
24	3.79	5.00				
103	0.62	5.00				
115	0.72	5.00				
140	0.81	5.00				
208	1.21	5.00				
238	1.65	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	21610	22629	22627	22964	22680
24	48724	50057	50659	51432	53923
103	129437	129893	131175	131037	129637
115	127754	127957	126273	125854	126743
140	123980	124659	123801	123947	121997
208	58128	58120	58266	56914	56900
238	117457	115794	115927	114803	112322

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	3161.07	6.00	5.9 - 6.1		0.74	0.790	0.900	
24	7395.24	23.90	23.9 - 24.1		0.71	0.784	0.900	
103	24366.79	103.05	102.9 - 103.1		0.55	0.683	0.900	
115	24310.82	115.05	114.9 - 115.1		0.54	0.669	0.900	
140	24473.27	140.00	139.9 - 140.1		0.51	0.650	0.900	
208	11569.19	207.95	207.9 - 208.1		0.52	0.671	0.900	
238	22986.97	237.95	237.9 - 238.1		0.50	0.680	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	0.80 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		6.1 V	Deflect		16.8 V	
Extract 2		-160.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-75 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	200 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

Mercury Run Data Report

Data File Name: 1810703.M07

Run Name: 1810702M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 354

Method Reference Name(s):

Reviewed By	Reviewed Date
Katlin N Cataldi	04/18/2018 4:14PM

Verified By:	Verified Date
Nina C Haller	06/14/2018 12:32PM

LANCASTER LABORATORIES

Run Name: 1810702M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

1 Burn Date/Time: 04/17/2018 05:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	102.0

2 Burn Date/Time: 04/17/2018 05:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1681.0

3 Burn Date/Time: 04/17/2018 05:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3878.0

4 Burn Date/Time: 04/17/2018 06:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	7032.0

5 Burn Date/Time: 04/17/2018 06:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	17092.0

6 Burn Date/Time: 04/17/2018 06:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	34435.0

CorrelationCoefficient = 1.00000
Slope = 6821.4213400000
Y-Intercept = 243.8206100000

LANCASTER LABORATORIES

Run Name: 1810702M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

7 Burn Date/Time: 04/17/2018 06:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.3038	15960.0

8 Burn Date/Time: 04/17/2018 06:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0376	-14.0

9 Burn Date/Time: 04/17/2018 06:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1849	1504.0

10 Burn Date/Time: 04/17/2018 06:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9873	6978.0

11 Burn Date/Time: 04/17/2018 06:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0374	-13.0

12 Burn Date/Time: 04/17/2018 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9971	7045.0

LANCASTER LABORATORIES

Run Name: 1810702M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

13 Burn Date/Time: 04/17/2018 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0075	191.0

14 Burn Date/Time: 04/17/2018 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0406	-35.0		

15 Burn Date/Time: 04/17/2018 12:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8280	5891.0		

16 Burn Date/Time: 04/17/2018 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558715	U*********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0417	-42.0		

17 Burn Date/Time: 04/17/2018 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558718	D*********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0358	-2.0		

18 Burn Date/Time: 04/17/2018 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558716	R*********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8069	5747.0		

LANCASTER LABORATORIES

Run Name: 1810702M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 04/17/2018 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558717	M*********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.7916	5643.0		

20 Burn Date/Time: 04/17/2018 12:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558712	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0355	0.0		

21 Burn Date/Time: 04/17/2018 12:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558713	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0251	71.0		

22 Burn Date/Time: 04/17/2018 12:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558714	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0216	95.0		

23 Burn Date/Time: 04/17/2018 12:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558719	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0305	34.0		

24 Burn Date/Time: 04/17/2018 12:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
1.0150	7167.0

LANCASTER LABORATORIES

Run Name: 1810702M07

Instrument ID: 17384

Analyst ID: 354.00

CV Element: Hg

25 Burn Date/Time: 04/17/2018 12:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0194	110.0

26 Burn Date/Time: 04/17/2018 12:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558720	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2549	1981.0		

27 Burn Date/Time: 04/17/2018 12:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558721	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0351	3.0		

28 Burn Date/Time: 04/17/2018 12:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558722	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0269	59.0		

29 Burn Date/Time: 04/17/2018 12:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558723	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0318	25.0		

30 Burn Date/Time: 04/17/2018 12:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558724	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0398	-29.0		

LANCASTER LABORATORIES

Run Name: 1810702M07

Analyst ID: 354.00

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 04/17/2018 12:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558725	**********	40	40	1.00	181060571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0390	-24.0		

32 Burn Date/Time: 04/17/2018 12:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1849	1504.0

33 Burn Date/Time: 04/17/2018 12:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9967	7042.0

34 Burn Date/Time: 04/17/2018 12:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0119	161.0

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Mercury Run Data Report

Data File Name: 1812701.M09

Run Name: 1812701M09

Instrument No.: 23283

Element: Hg

Analyst Employee ID: 354

Method Reference Name(s):

Reviewed By	Reviewed Date
Damary Valentin	05/07/2018 11:10AM

Verified By:	Verified Date
Nina C Haller	06/14/2018 12:08PM
Tara L Snyder	05/07/2018 1:06PM

LANCASTER LABORATORIES

Run Name: 1812701M09

Analyst ID: 354.00

Instrument ID: 23283

CV Element: Hg

1 Burn Date/Time: 05/07/2018 06:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	356.0

2 Burn Date/Time: 05/07/2018 06:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1473.0

3 Burn Date/Time: 05/07/2018 06:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3944.0

4 Burn Date/Time: 05/07/2018 06:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	7588.0

5 Burn Date/Time: 05/07/2018 06:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	18354.0

6 Burn Date/Time: 05/07/2018 06:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	36865.0

CorrelationCoefficient = 1.00000
Slope = 7318.7305600000
Y-Intercept = 207.9464700000

LANCASTER LABORATORIES

Run Name: 1812701M09

Analyst ID: 354.00

Instrument ID: 23283

CV Element: Hg

7 Burn Date/Time: 05/07/2018 06:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4016	17785.0

8 Burn Date/Time: 05/07/2018 06:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0262	15.0

9 Burn Date/Time: 05/07/2018 06:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1696	1448.0

10 Burn Date/Time: 05/07/2018 06:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9625	7252.0

11 Burn Date/Time: 05/07/2018 06:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0090	141.0

12 Burn Date/Time: 05/07/2018 06:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0237	33.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Analyst ID: 354.00

Instrument ID: 23283

CV Element: Hg

13 Burn Date/Time: 05/07/2018 06:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9206	6945.0		

14 Burn Date/Time: 05/07/2018 06:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558715	U*********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0294	-8.0		

15 Burn Date/Time: 05/07/2018 06:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558718	D*********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0201	60.0		

16 Burn Date/Time: 05/07/2018 06:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558716	R*********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9107	6873.0		

17 Burn Date/Time: 05/07/2018 06:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558717	M*********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9072	6847.0		

18 Burn Date/Time: 05/07/2018 06:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558712	**********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0212	52.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Analyst ID: 354.00

Instrument ID: 23283

CV Element: Hg

19 Burn Date/Time: 05/07/2018 06:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558713	**********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0130	112.0		

20 Burn Date/Time: 05/07/2018 06:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558714	**********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0143	102.0		

21 Burn Date/Time: 05/07/2018 06:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558719	**********	40	40	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0102	132.0		

22 Burn Date/Time: 05/07/2018 07:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9435	7113.0

23 Burn Date/Time: 05/07/2018 07:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0113	124.0

24 Burn Date/Time: 05/07/2018 07:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9558720	**********	20	20	1.00	181240571301

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2612	2119.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

25 Burn Date/Time: 05/07/2018 07:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0281	1.0		

26 Burn Date/Time: 05/07/2018 07:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8863	6694.0		

27 Burn Date/Time: 05/07/2018 07:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585933	U*********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0291	-6.0		

28 Burn Date/Time: 05/07/2018 07:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585933	D*********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0213	51.0		

29 Burn Date/Time: 05/07/2018 07:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585933	R*********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8856	6689.0		

30 Burn Date/Time: 05/07/2018 07:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585933	M*********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8680	6560.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

31 Burn Date/Time: 05/07/2018 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585930	**********	20	20	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0291	-6.0		

32 Burn Date/Time: 05/07/2018 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585931	**********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1207	1090.0		

33 Burn Date/Time: 05/07/2018 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585932	**********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0278	3.0		

34 Burn Date/Time: 05/07/2018 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9422	7103.0

35 Burn Date/Time: 05/07/2018 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0150	97.0

36 Burn Date/Time: 05/07/2018 07:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9585935	**********	40	40	1.00	181220571305

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0265	13.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

37 Burn Date/Time: 05/07/2018 07:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0257	19.0		

38 Burn Date/Time: 05/07/2018 07:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8859	6691.0		

39 Burn Date/Time: 05/07/2018 07:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591477	U*********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0259	17.0		

40 Burn Date/Time: 05/07/2018 07:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591477	D*********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	94.0		

41 Burn Date/Time: 05/07/2018 07:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591477	R*********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9219	6955.0		

42 Burn Date/Time: 05/07/2018 07:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591477	M*********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9122	6884.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

43 Burn Date/Time: 05/07/2018 07:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590906	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0362	-58.0		

44 Burn Date/Time: 05/07/2018 07:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590907	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0270	9.0		

45 Burn Date/Time: 05/07/2018 07:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590908	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0257	19.0		

46 Burn Date/Time: 05/07/2018 07:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9405	7091.0

47 Burn Date/Time: 05/07/2018 07:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0153	95.0

48 Burn Date/Time: 05/07/2018 07:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590909	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0259	17.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

49 Burn Date/Time: 05/07/2018 07:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590910	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0272	8.0		

50 Burn Date/Time: 05/07/2018 07:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590911	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0247	26.0		

51 Burn Date/Time: 05/07/2018 07:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590912	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0212	52.0		

52 Burn Date/Time: 05/07/2018 08:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590913	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0232	37.0		

53 Burn Date/Time: 05/07/2018 08:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590914	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0231	38.0		

54 Burn Date/Time: 05/07/2018 08:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590915	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0254	21.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

55 Burn Date/Time: 05/07/2018 08:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590916	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0246	27.0		

56 Burn Date/Time: 05/07/2018 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590917	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0240	31.0		

57 Burn Date/Time: 05/07/2018 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590918	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0180	75.0		

58 Burn Date/Time: 05/07/2018 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9228	6961.0

59 Burn Date/Time: 05/07/2018 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0212	52.0

60 Burn Date/Time: 05/07/2018 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590919	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0197	63.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

61 Burn Date/Time: 05/07/2018 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9590920	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0180	75.0		

62 Burn Date/Time: 05/07/2018 08:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591478	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0173	80.0		

63 Burn Date/Time: 05/07/2018 08:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591479	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0164	87.0		

64 Burn Date/Time: 05/07/2018 08:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9591481	**********	40	40	1.00	181240571302

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0183	73.0		

65 Burn Date/Time: 05/07/2018 08:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0214	50.0		

66 Burn Date/Time: 05/07/2018 08:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8728	6595.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

67 Burn Date/Time: 05/07/2018 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9586131	U*********	40	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0306	-17.0		

68 Burn Date/Time: 05/07/2018 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9586131	D*********	40	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0203	58.0		

69 Burn Date/Time: 05/07/2018 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9586131	R*********	4	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6776	12486.0		

70 Burn Date/Time: 05/07/2018 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9236	6967.0

71 Burn Date/Time: 05/07/2018 08:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0224	43.0

72 Burn Date/Time: 05/07/2018 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9586131	M*********	4	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6764	12477.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Instrument ID: 23283

Analyst ID: 354.00

CV Element: Hg

73 Burn Date/Time: 05/07/2018 08:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9587496	**********	40	40	1.00	181220571304

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0369	-63.0		

74 Burn Date/Time: 05/07/2018 08:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	1	40	1.00	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0259	17.0		

75 Burn Date/Time: 05/07/2018 08:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8815	6659.0		

76 Burn Date/Time: 05/07/2018 08:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9582698	U*********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0292	-7.0		

77 Burn Date/Time: 05/07/2018 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9582698	D*********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0210	53.0		

78 Burn Date/Time: 05/07/2018 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9582698	R*********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8538	6456.0		

LANCASTER LABORATORIES

Run Name: 1812701M09

Analyst ID: 354.00

Instrument ID: 23283

CV Element: Hg

79 Burn Date/Time: 05/07/2018 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9582698	M*********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8677	6558.0		

80 Burn Date/Time: 05/07/2018 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9582696	**********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0265	13.0		

81 Burn Date/Time: 05/07/2018 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9589903	**********	1	40	1.04	181240571303

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0247	26.0		

82 Burn Date/Time: 05/07/2018 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9233	6965.0

83 Burn Date/Time: 05/07/2018 09:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0190	68.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 18 106 10639 07

Start Time: 4/17/18 16:45 **End Time:** 4/17/18 22:00 **Hot Block:** 13

Pipette ID: JU06758
Reflux Cap Lot#: 17122728054nm

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	191695	3.00
ICP/MS Spike	18040174	0.50
LCS	18040174	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.									Batch alone
2)	LCSW	.									
3)	9558712	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/F10	
4)	9558713	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E8	
5)	9558714	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/F9	
6)	**9558715U**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/C8	
7)	**9558716R**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET04/E1	
8)	**9558717M**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET04/E1	
9)	**9558718D**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/D8	
10)	9558719FD	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E10	
11)	9558720	04/26/18 11:50	WW	N8			Y	802D	1709027	WMET57/B10	
12)	9558721	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/B9	
13)	9558722	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/B8	
14)	9558723	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E9	
15)	9558724	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/A8	
16)	9558725	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/A9	

Prep Employee:8853 D/I _____

4/17/2018

v 1.1.0

Batch# 18 106 1063 907

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/16/18 11:23	8853
2)	Sample Vol		4/17/18 18:21	8853
3)	Final Vol	CLEAR	4/17/18 18:21	8853
4)	Trial		4/17/18 18:21	8853
5)	Upload Prep	US19PCC06789	4/17/18 20:44	8853

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Original Entry Data	Original Entry Units	Original Entry Analyst	Data Changed Date/Time	Data Changed Analyst	Data Changed Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 106 1063 907

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9558712	04/26/18	N8	R0701	RAF07-01	50.0000	50.0000	1
9558713	04/26/18	N8	R0702	RAF07-02	50.0000	50.0000	1
9558714	04/26/18	N8	R0703	RAF07-03	50.0000	50.0000	1
9558715U	04/26/18	N8	R0704	RAF07-04BKG	50.0000	50.0000	1
9558716R	04/26/18	N8	R0704	RAF07-04MS	50.0000	50.0000	1
9558717M	04/26/18	N8	R0704	RAF07-04MSD	50.0000	50.0000	1
9558718D	04/26/18	N8	R0704	RAF07-04DUP	50.0000	50.0000	1
9558719FD	04/26/18	N8	R0705	RAF07-05FD	50.0000	50.0000	1
9558720	04/26/18	N8	R0706	RAF07-06	50.0000	50.0000	1
9558721	04/26/18	N8	R0707	RAF07-07	50.0000	50.0000	1
9558722	04/26/18	N8	R0708	RAF07-08	50.0000	50.0000	1
9558723	04/26/18	N8	R0709	RAF07-09	50.0000	50.0000	1
9558724	04/26/18	N8	R0710	RAF07-10	50.0000	50.0000	1
9558725	04/26/18	N8	R0711	RAF07-11*	50.0000	50.0000	1

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 18 124 10639 01

Start Time: 5/4/18 17:15 **End Time:** 5/4/18 21:35 **Hot Block:** 15

Pipette ID: JU06758
Reflux Cap Lot#: 17122728054nm

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	191695	3.00
ICP/MS Spike	18040175	0.50
LCS	18040175	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1712272		
2)	LCSW	.							1712272		
3)	9558712	05/10/18 11:50	WW	N18				802A	1712272	WMET57/F10	Batching Error all elements, need special "R2" protocol - batch seperately!
4)	9558713	05/10/18 11:50	WW	N18				802A	1712272	WMET57/E8	Batching Error all elements, need special "R2" protocol - batch seperately!
5)	9558714	05/10/18 11:50	WW	N18				802A	1712272	WMET57/F9	Batching Error all elements, need special "R2" protocol - batch seperately!
6)	**9558715U**	05/10/18 11:50	WW	N18				802A	1712272	WMET57/C8	Batching Error all elements, need special "R2" protocol - batch seperately!
7)	**9558716R**	05/10/18 11:50	WW	N18				802A	1712272	WMET04/E1	Batching Error all elements, need special "R2" protocol - batch seperately!
8)	**9558717M**	05/10/18 11:50	WW	N18				802A	1712272	WMET04/E1	Batching Error all elements, need special "R2" protocol - batch seperately!
9)	**9558718D**	05/10/18 11:50	WW	N18				802A	1712272	WMET57/D8	Batching Error all elements, need special "R2" protocol - batch seperately!
10)	9558719FD	05/10/18 11:50	WW	N18				802A	1712272	WMET57/E10	Batching Error all elements, need special "R2" protocol - batch seperately!
11)	9558720	05/10/18 11:50	WW	N18				802D	1712272	WMET57/B10	Batching Error all elements, need special "R2" protocol - batch seperately!

Prep Employee:8853 D/I _____

5/4/2018

v 1.1.0

Batch# 18 124 1063 901

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		5/4/18 7:30	8853
2)	Sample Vol		5/4/18 17:14	8853
3)	Final Vol	CLEAR	5/4/18 17:14	8853
4)	Trial		5/4/18 17:14	8853
5)	Upload Prep	US19PCC0678	5/4/18 19:38	8853

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason
9558712	10639	1	Sample Vol	Initial Volume	5/4/18 17:09	50	(mL)	8853	5/4/18 17:14	8853	lim vol
9558712	10639	1	Final Vol	Final Volume	5/4/18 17:09	50	(mL)	8853	5/4/18 17:14	8853	lim vol
9558720	10639	1	Sample Vol	Initial Volume	5/4/18 17:09	50	(mL)	8853	5/4/18 17:14	8853	lim vol
9558720	10639	1	Final Vol	Final Volume	5/4/18 17:09	50	(mL)	8853	5/4/18 17:14	8853	lim vol

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 124 1063 901

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9558712	05/10/18	N18	R0701	RAF07-01	25.0000	25.0000	2
9558713	05/10/18	N18	R0702	RAF07-02	50.0000	50.0000	2
9558714	05/10/18	N18	R0703	RAF07-03	50.0000	50.0000	2
9558715U	05/10/18	N18	R0704	RAF07-04BKG	50.0000	50.0000	2
9558716R	05/10/18	N18	R0704	RAF07-04MS	50.0000	50.0000	2
9558717M	05/10/18	N18	R0704	RAF07-04MSD	50.0000	50.0000	2
9558718D	05/10/18	N18	R0704	RAF07-04DUP	50.0000	50.0000	2
9558719FD	05/10/18	N18	R0705	RAF07-05FD	50.0000	50.0000	2
9558720	05/10/18	N18	R0706	RAF07-06	25.0000	25.0000	2

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 18 106 05713 04

Start Time: 4/17/18 7:45 **End Time:** 4/17/18 9:45 **Hot Block:** 10

Pipette ID: W/1000

Reflux Cap Lot#: 1712272-8056-KA

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	P18-106A	3.20
5%KMnO4	P18-096C	6.00
H2SO4	178260	2.00
HNO3	191695	1.00
LCS 40ppb Hg	P18-099B	1.00
NaCl/NH2OH.HCl	P18-086C	2.40
Spike 40ppb Hg	P18-099B	1.00

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1709027		
2)	LCSW	.							1709027		
3)	9558712	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D5	
4)	9558713	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET57/F10	
5)	9558714	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/E5	
6)	**9558715U**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C4	
7)	**9558716R**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/A8	
8)	**9558717M**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C8	
9)	**9558718D**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/F5	
10)	9558719FD	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C7	
11)	9558720	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D7	
12)	9558721	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/F7	
13)	9558722	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D4	
14)	9558723	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/A7	
15)	9558724	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/E4	
16)	9558725	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D6	

Prep Employee:2807 D/I _____

4/17/2018

v 1.1.0

Batch# 18 106 0571 304

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/16/18 0:00	2807
2)	Sample Vol		4/17/18 7:57	2807
3)	Final Vol	CLEAR	4/17/18 7:57	2807
4)	Trial		4/17/18 7:57	2807
5)	Upload Prep	US19PCC06698	4/17/18 9:41	2807

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Data	Units	Analyst	Data Changed Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 106 0571 304

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
9558712	04/26/18	N8	R0701	RAF07-01	40.0000		40.0000	1
9558713	04/26/18	N8	R0702	RAF07-02	40.0000		40.0000	1
9558714	04/26/18	N8	R0703	RAF07-03	40.0000		40.0000	1
9558715U	04/26/18	N8	R0704	RAF07-04BKG	40.0000		40.0000	1
9558716R	04/26/18	N8	R0704	RAF07-04MS	40.0000		40.0000	1
9558717M	04/26/18	N8	R0704	RAF07-04MSD	40.0000		40.0000	1
9558718D	04/26/18	N8	R0704	RAF07-04DUP	40.0000		40.0000	1
9558719FD	04/26/18	N8	R0705	RAF07-05FD	40.0000		40.0000	1
9558720	04/26/18	N8	R0706	RAF07-06	40.0000		40.0000	1
9558721	04/26/18	N8	R0707	RAF07-07	40.0000		40.0000	1
9558722	04/26/18	N8	R0708	RAF07-08	40.0000		40.0000	1
9558723	04/26/18	N8	R0709	RAF07-09	40.0000		40.0000	1
9558724	04/26/18	N8	R0710	RAF07-10	40.0000		40.0000	1
9558725	04/26/18	N8	R0711	RAF07-11*	40.0000		40.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 18 124 05713 01

Start Time: 5/4/18 18:15 **End Time:** 5/4/18 20:15 **Hot Block:** 10

Pipette ID: W/1000

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	p180110c	3.20
5%KMnO4	p18109e	6.00
H2SO4	174051	2.00
HNO3	191695	1.00
LCS 40ppb Hg	p18123a	1.00
NaCl/NH2OH.HCl	p18115c	2.40

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1712272		Batch alone
2)	LCSW	.							1712272		
3)	9558712	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
4)	9558713	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Hg hold time expires 05/08 Batching Error need special "R2" protocol - batch seperately!
5)	9558714	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
6)	**9558715U**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
7)	**9558716R**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
8)	**9558717M**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
9)	**9558718D**	05/10/18 11:50	WW	N18				008a	1712272		Batching Error need special "R2" protocol - batch seperately!
10)	9558719FD	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
11)	9558720	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!

Prep Employee:8853 D/I _____

5/4/2018

v 1.1.0

Batch# 18 124 0571 301

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		5/4/18 7:27	8853
2)	Sample Vol		5/4/18 18:23	8853
3)	Final Vol	CLEAR	5/4/18 18:23	8853
4)	Trial		5/4/18 18:23	8853
5)	Upload Prep	US19PCC06785	5/4/18 18:23	8853

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason
9558720	05713	1	Sample Vol	Initial Volume	5/4/18 18:22	40	(mL)	8853	5/4/18 18:23	8853	lim vol
9558720	05713	1	Final Vol	Final Volume	5/4/18 18:22	40	(mL)	8853	5/4/18 18:23	8853	lim vol

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 124 0571 301

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
9558712	05/10/18	N18	R0701	RAF07-01	40.0000		40.0000	2
9558713	05/10/18	N18	R0702	RAF07-02	40.0000		40.0000	2
9558714	05/10/18	N18	R0703	RAF07-03	40.0000		40.0000	2
9558715U	05/10/18	N18	R0704	RAF07-04BKG	40.0000		40.0000	2
9558716R	05/10/18	N18	R0704	RAF07-04MS	40.0000		40.0000	2
9558717M	05/10/18	N18	R0704	RAF07-04MSD	40.0000		40.0000	2
9558718D	05/10/18	N18	R0704	RAF07-04DUP	40.0000		40.0000	2
9558719FD	05/10/18	N18	R0705	RAF07-05FD	40.0000		40.0000	2
9558720	05/10/18	N18	R0706	RAF07-06	20.0000		20.0000	2

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18093H	Hg 0.1mg/L Cal	15	4-10-18	H18-093B	0.20ml	1	6	191695
2		I					0.50			
3		J	Hg 1.0mg/L Cal			H18-093A	0.20			
4		K					0.25			
5		L					0.50			
6		M								
7	ICV	N	Hg 1.0mg/L Cont	15	4-16-18	H18-093C	0.25ml			
8	CCV	O	Hg 1.0mg/L Cal			H18-093A	0.20			
9	CRA	P	Hg 0.1mg/L Cont			H18-093D	0.20			
10	Hg 1.0mg/L InterCal	H18094A	Hg 10mg/L Cal	15	7-03-18	H18-003C	1.0ml			
11	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-11-18	H18-094A				
12	1.0mg/L InterCont	C	10mg/L Cont	16	11-03-18	MKH5157392				
13	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-11-18	H18-094C				
14	Hg 5701 ICV	E					0.25ml			
15	CCV	F	Hg 1.0mg/L Cal			H18-094A	0.10			
16	CCV	G					0.10			
17	CCV	H					0.10			
18	CRA	I	Hg 0.1mg/L Cont			H18-094D	0.20			
19	Std Cal	J	Hg 0.1mg/L Cal			H18-094B	0.20			
20		K					0.50			

Key – Manufacturer (M•)

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8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	3ml H_2SO_4	4	175000	3.2ml [illegible] 1ml KMnO4		H18-0340 H18-0472	100	0.2ug/L	DW354	4-03-18	4-10-18	RT
2							↓	0.50				
3							200	1000				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9							100	0.2				
10				To volume 1% HNO_3		H18-015A	10	1.0	DW354	4-04-18	4-11-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14				5ml Aqua Regia 15ml KMnO4		H18-0340 H18-0472	100	2.5ug/L				
15								1.0				
16								1.0				
17								1.0				
18								0.2				
19								0.2				
20							↓	0.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 Std Cal	H18-094A	Hg-1.0mg/L Cal	15	4-11-18	H18-094A	0.10 mL			
2	↓	M	↓	↓	↓	↓	0.25			
3	↓	N	↓	↓	↓	↓	0.50			
4	↓	O	—							
5	↓ ICV	P	Hg-1.0mg/L Cont	15	4-11-18	H18-094C	0.25ml			
6	Aqua Regia	Q	—					15	6	191695
7	Hg-1.0mg/L-InterCal	H18-096A	Hg-1.0mg/L Cal	15	7-02-18	H18002C	1.0 ml			
8	0.1mg/L-InterCal	B	1.0mg/L Cal	15	4-13-18	H18-096A				
9	1.0mg/L-InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG657382				
10	0.1mg/L-InterCont	D	↓ 1.0mg/L Cont	15	4-13-18	H18-096C	↓			
11	Hg-5700 ICV	E	↓			↓	0.25ml	1	6	191695
12	CCV	F	Hg-1.0mg/L Cal			H18-096A	0.20			
13	CCA	G	Hg-0.1mg/L Cont			H18-096D	0.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H18-096B	0.20			
15	↓	I	↓			↓	0.50			
16	↓	J	Hg-1.0mg/L Cal			H18-096A	0.20			
17	↓	K	↓			↓	0.25			
18	↓	L	↓	↓	↓	↓	0.50			
19	↓	m	—							
20	↓ ICV	N	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml	↓	↓	↓

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml 6M nitric		H18-0942 H18-047R	100	1.0ug/L	DW354	4-04-18	4-11-18	RT
2								2.5				
3								5.0				
4								0.0				
5								2.5				
6	45	6	1867L04									
7				③ 3.2ml H_2SO_4 6ml 6M nitric		H18-0340 H18-047R	60	1:3			4-4-18	
8				To volume-15%	HNO_3	H18-015A	10	1.0	DW354	4-06-18	4-13-18	RT
9								0.1				
10								1.0				
11	2ml H_2SO_4	4	1782260	3.2ml H_2SO_4 6ml 6M nitric		H18-0340 H18-047R		0.1				
12							100	2.5ug/L				
13							200	1.0				
14							100	0.2				
15								0.2				
16								0.5				
17							200	1.0				
18							100	2.5				
19								5.0				
20								0.0				
								2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 CCV	H18-096O	H18-1.0mg/L Cal	15	4-13-18	H18-096A	0.20ml	1	6	191695
2	CCA	P	Hg-0.1mg/L Cont			H18-096D	0.20			
3	ICV	Q	Hg-1.0mg/L Cont			H18-096C	0.25			
4	ICV	R					0.25			
5	Hg-5700 ICV	EE	Hg-1.0mg/L Cont			H18-096C	0.25			
6	CCV	FF	Hg-1.0mg/L Cal			H18-096A	0.20			
7	CCA	GG	Hg-0.1mg/L Cont			H18-096D	0.20			
8	Std Cal	HH	Hg-0.1mg/L Cal			H18-096B	0.20			
9		II					0.50			
10		JJ	Hg-1.0mg/L Cal			H18-096A	0.20			
11		KK					0.25			
12		LL					0.50			
13		MM								
14	ICV	NN	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml			
15	CCV	OO	Hg-1.0mg/L Cal			H18-096A	0.20			
16	CCA	PP	Hg-0.1mg/L Cont			H18-096D	0.20			
17	Stannous Chloride	H18-099A	$SnCl_2$	4	3-09-19	175798 #7	200.02			
18		B				#7+8	200.02			
19		C				#8	200.04			
20	Hg-1.0mg/L Inter Cal	H18-100A	Hg-10mg/L Cal	15	7-02-18	H18-002C	1.0ml			

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2mlH2SO4	4	178260	3.2mlK2S2O8 1mlKmno4		H18-034D H18-047R	200	1.0ug/L	DW354	4-06-18	4-13-18	RT
2							100	0.2				
3								2.5				
4	↓	↓	↓	↓	↓	↓	↓	2.5 ↓				
5							100	2.5				
6							200	1.0				
7							100	0.2				
8							↓	0.2				
9							↓	0.5				
10							200	1.0				
11							100	2.5				
12							↓	5.0				
13								0.0				
14							↓	2.5				
15							200	1.0				
16	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
17	200	Ic	186764				200	10.1	DW354	4-09-18	10-09-18	RT
18												
19	↓	↓	↓				↓	↓	↓	↓	↓	↓
20				To volume 1% HNO3		H18-015A	10	1.0	DW354	4-10-18	4-17-18	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg0.1mg/L InterCal	H18100B	Hg 1.0mg/L Cal	15	4-17-18	H18-100A	1.0mL			
2	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG157392				
3	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-17-18	H18-100C				
4	Hg-5700 ICV	E					0.25 ml	1	4	191695
5	CCV	F	Hg 1.0mg/L Cal			H18-100A	0.20			
6	CRA	G	Hg0.1mg/L Cont			H18-100D	0.20			
7	Std Cal	H	Hg0.1mg/L Cal			H18-100B	0.20			
8		I					0.50			
9		J	Hg 1.0mg/L Cal			H18-100A	0.20			
10		K					0.25			
11		L					0.50			
12		m								
13	ICV	N	Hg 1.0mg/L Cont	15	4-17-18	H18-100C	0.25ml			
14	CCV	O	Hg 1.0mg/L Cal			H18-100A	0.20			
15	CRA	P	Hg0.1mg/L Cont			H18-100D	0.20			
16	ICV	Q	Hg 1.0mg/L Cont			H18-100C	0.25			
17	Hg 1.0mg/L InterCal	H18102A	Hg 10mg/L Cal	15	7-02-18	H18-002C	1.0ml			
18	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-19-18	H18-102A				
19	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG157392				
20	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-19-18	H18-102C				

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To vol w/ 0.15% HNO3		H18-015A	10	0.1	DJ354	4-10-18	4-17-18	RT
2								1.0				
3								0.1				
4	2ml H2SO4	4	178260	3.2ml H2O2 1ml KMnO4		H18-037D H18-047A	100	2.5				
5							200	1.0				
6							100	0.2				
7								0.2				
8								0.5				
9							200	1.0				
10							10	2.5				
11								5.0				
12								0.0				
13								2.5				
14							200	1.0				
15							100	0.2			4-19-18 DJ354	
16							100	2.5				
17				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DJ354	4-12-18	4-19-18 ~~4-20~~	RT
18								0.1				
19								1.0				
20								0.1				

Footnotes

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B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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b

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 ICV	H18102E	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
2	CCV	F	Hg 1.0 mg/L Cal			H18-102A	0.10			
3	CCV	G	↓			↓	0.10			
4	CCV	H	↓			↓	0.10			
5	CRA	I	Hg 0.1 mg/L Cont			H18-102D	0.20			
6	Std Cal	J	Hg 0.1 mg/L Cal			H18-102B	0.20			
7		K	↓			↓	0.50			
8		L	Hg 1.0 mg/L Cal			H18-102A	0.10			
9		M	↓			↓	0.25			
10	↓	N	↓	↓	↓	↓	0.50			
11	↓	O								
12	↓ ICV	P	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
13	Aqua Regia	↓ Q						15	6	191695
14	Permanganate	R	Kmno4	6	10-23-18	177909 #2	100.01g			
15	↓	S	↓	↓	↓	↓	100.02g			
16	Hg 1.0 mg/L InterCal	H18103A	Hg 10 mg/L Cal	15	7-02-18	H18-002C	1.0ml			
17	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	4-20-18	H18-103A	↓			
18	1.0 mg/L InterCont	C	10 mg/L Cont	16	11-08-18	M2HG157390				
19	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	4-20-18	H18-103C	↓			
20	Hg 5700 ICV	↓ E	↓	↓	↓	↓	0.25ml	1	6	191695

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml Ammon		H18-1029Q H18-0496Q	100	2.5ug/L	DL354	4-12-18	4-19-18	RT
2								1.0				
3								1.0				
4								1.0				
5								0.2				
6								0.2				
7								0.5				
8								1.0				
9								2.5				
10								5.0				
11								0.0				
12								2.5				
13	45	6	180764				60	1:3			4-12-18	
14							200	5%			6-12-18	
15												
16				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DL354	4-13-18	4-20-18	RT
17								0.1				
18								1.0				
19								0.1				
20	2ml H2SO4	4	178260	3.2ml Na2S2O8 1ml Ammon		H18-1020Q H18-0496Q	100	2.5ug/L				

Footnotes

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

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	Standard/Reagent Prepared - Name (DV354 4-13-18)	Lot #	Standards/Reagents Used - Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	HNO_3 Used Vol (mL)	M•	Lot #
1	Hg 5700 ③ CCV	H18103F	Hg 1.0 mg/L Cal	15	4-26-18	H18-103A	0.20 mL	1	6	191695
2	CRA	G	Hg 0.1 mg/L Cont			H18-103D	0.20			
3	Std Cal	H	Hg 0.1 mg/L Cal			H18-103B	0.20			
4		I	↓			↓	0.50			
5		J	Hg 1.0 mg/L Cal			H18-103A	0.20			
6		K	↓			↓	0.25			
7		L	↓	↓	↓	↓	0.50 ↓			
8	↓	M								
9	ICV	N	Hg 1.0 mg/L Cont	15	4-20-18	H18-103C	0.25 mL			
10	CCV	O	Hg 1.0 mg/L Cal			H18-103A	0.20			
11	CRA	P	Hg 0.1 mg/L Cont	↓	↓	H18-103D	0.20 ↓			
12	Hg 5700 ICV									
13 (4-15-18 DV354)	CCV									
14	Hg 1.0 mg/L InterCal	H18105A	Hg 1.0 mg/L Cal	15	7-02-18	H18-002C	1.0 mL			
15	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	4-22-18	H18-105A				
16	1.0 mg/L InterCont	C	1.0 mg/L Cont	16	11-08-18	1M2HG6573D				
17	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	4-22-18	H18-105C	↓			
18	Hg 5700 ICV	E	↓			↓	0.25 mL	1	6	191695
19	↓ CCV	F	Hg 1.0 mg/L Cal			H18-105A	0.20			
20	↓ CRA	↓ G	Hg 0.1 mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	1782160	3.2ml $K_2S_2O_8$ 1ml KMnO4	0.5	H18-1022 H18-0490	200	1.0ug/L	DU354	4-13-18	4-20-18	RT
2							100	0.2				
3							↓	0.2				
4							↓	0.5				
5							200	1.0				
6							100	2.5				
7							↓	5.0				
8							↓	0.0				
9							↓	2.5				
10							200	1.0				
11	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
12												
13												DU354 4-15
14				5 vol in 0.1 5	HNO_3	H18-0154						
15							10	1.0	DU354	4-15-18	4-22-18	RT
16							↓	0.1				
17				↓	↓	↓	↓	1.0				
18	2ml H_2SO_4	4	1782160	3.2ml $K_2S_2O_8$ 1ml KMnO4		H18-1022 H18-0738	↓	0.1				
19	↓	↓	↓	↓	↓	↓	100	2.5ug/L				
20							200	1.0				
							100	0.2 ↓				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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b

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18105H	Hg 0.1mg/L Cal	15	4-22-18	H18-105B	0.20ml	1	6	1911695
2	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
3	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
4	↓	K	↓	↓	↓	↓	0.25	↓	↓	↓
5	↓	L	↓	↓	↓	↓	0.50 ↓	↓	↓	↓
6	↓	M	—	—	—	—	—	↓	↓	↓
7	ICV	N	Hg 1.0mg/L Cont	15	4-22-18	H18-105C	0.25ml	↓	↓	↓
8	CCV	O	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
9	↓ CRA	↓ P	Hg 0.1mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓
10	Hg 1.0mg/L TalerCal	H18107A	Hg 10mg/L Cal	15	7-02-18	H18-092C	1.0ml	—		
11	0.1mg/L TalerCal	B	1.0mg/L Cal	15	4-24-18	H18-107A				
12	1.0mg/L TalerCont	C	10mg/L Cont	16	11-08-18	MKHG5[illegible]3				
13	↓ 0.1mg/L TalerCont	D	↓ 1.0mg/L Cont	15	4-24-18	H18-107C	↓			
14	Hg 5700 ICV	E	↓	↓	↓	↓	0.25ml	1	6	1911695
15	CCV	F	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
16	CRA	G	Hg 0.1mg/L Cont	↓	↓	H18-107D	0.20	↓	↓	↓
17	Std Cal	H	Hg 0.1mg/L Cal	↓	↓	H18-107B	0.20	↓	↓	↓
18	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
19	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
20	↓ ↓	K	↓	↓	↓	↓	0.25 ↓	↓	↓	↓

Key – Manufacturer (M•)

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
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a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	178260	3.2ml KaS_2O_8 1ml $KMnO_4$		H18-1020 H18-0726	100	0.2ug/L	DW354	4-15-18	4-22-18	RT
2							100	0.5				
3							200	1.0				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
10				To value/0.15% HNO_3		H18-015A	10	1.0	DW354	4-17-18	4-24-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14	2ml H_2SO_4	4	178260	3.2ml KaS_2O_8 1ml $KMnO_4$		H18-1020 H18-0726	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot # DIGSY 4-17-18	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18072	Hg 1.0mg/L Cont	15	4-24-18	H18-107B (3) H	0.50mL	1	6	191695
2	↓	M								
3	ICV	N	Hg 1.0mg/L Cont	15	4-24-18	H18-107C	0.25mL			
4	CCV	O	Hg 1.0mg/L Cal			H18-107A	0.20			
5	CRA	P	Hg 0.1mg/L Cont			H18-107D	0.20			
6	Hg 1.0mg/L InterCal	H18109A	Hg 10mg/L Cal	15	7-03-18	H18-002K	1.0mL			
7	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-26-18	H18-109A				
8	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG057302				
9	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-26-18	H18-109C				
10	Hg 5701 ICV	E	↓			↓	0.25mL			
11	CCV	F	Hg 1.0mg/L Cal			H18-109A	0.10			
12	CCV	G					0.10			
13	CCV	H	↓			↓	0.10			
14	CRA	I	Hg 0.1mg/L Cont			H18-109D	0.20			
15	Std Cal	J	Hg 0.1mg/L Cal			H18-109B	0.20			
16		K	↓			↓	0.50			
17		L	Hg 1.0mg/L Cal			H18-109A	0.10			
18		M					0.25			
19		N	↓			↓	0.50			
20	↓	O								

Key – Manufacturer (M•)

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml HCl	4	178240	3.2ml H2S208 1ml HNO3		H13-1020 H13-07265	100	5.0ug/L	DJ354	4-17-18	4-24-18	RT
2								0.0				
3								2.5				
4							200	1.0				
5							100	0.2				
6				1ml vol/015% HNO3		H13-015A	10	1.0	DJ354	4-19-18	4-26-18	RT
7								0.1				
8								1.0				
9								0.1				
10				5ml Aqua Regia 15ml HNO3		H13-1019 H13-07265	100	2.5ug/L				
11								1.0				
12								1.0				
13								1.0				
14								0.2				
15								0.2				
16								0.5				
17								1.0				
18								2.5				
19								5.0				
20								0.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b

LLENS Worksheet for 0639 ICP/MS SW846 Water

Batch# 18 106 10639 07

Start Time: 4/17/18 16:45 **End Time:** 4/17/18 22:00 **Hot Block:** 13

Pipette ID: JU06758
Reflux Cap Lot#: 17122728054nm

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	191695	3.00
ICP/MS Spike	18040174	0.50
LCS	18040174	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.									Batch alone
2)	LCSW	.									
3)	9558712	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/F10	
4)	9558713	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E8	
5)	9558714	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/F9	
6)	**9558715U**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/C8	
7)	**9558716R**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET04/E1	
8)	**9558717M**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET04/E1	
9)	**9558718D**	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/D8	
10)	9558719FD	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E10	
11)	9558720	04/26/18 11:50	WW	N8			Y	802D	1709027	WMET57/B10	
12)	9558721	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/B9	
13)	9558722	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/B8	
14)	9558723	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/E9	
15)	9558724	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/A8	
16)	9558725	04/26/18 11:50	WW	N8			Y	802A	1709027	WMET57/A9	

Prep Employee:8853 D/I _____

4/17/2018

v 1.1.0

Batch# 18 106 1063 907

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/16/18 11:23	8853
2)	Sample Vol		4/17/18 18:21	8853
3)	Final Vol	CLEAR	4/17/18 18:21	8853
4)	Trial		4/17/18 18:21	8853
5)	Upload Prep	US19PCC06789	4/17/18 20:44	8853

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Original Entry Data	Original Entry Units	Original Entry Analyst	Data Changed Date/Time	Data Changed Analyst	Data Changed Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 106 1063 907

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9558712	04/26/18	N8	R0701	RAF07-01	50.0000	50.0000	1
9558713	04/26/18	N8	R0702	RAF07-02	50.0000	50.0000	1
9558714	04/26/18	N8	R0703	RAF07-03	50.0000	50.0000	1
9558715U	04/26/18	N8	R0704	RAF07-04BKG	50.0000	50.0000	1
9558716R	04/26/18	N8	R0704	RAF07-04MS	50.0000	50.0000	1
9558717M	04/26/18	N8	R0704	RAF07-04MSD	50.0000	50.0000	1
9558718D	04/26/18	N8	R0704	RAF07-04DUP	50.0000	50.0000	1
9558719FD	04/26/18	N8	R0705	RAF07-05FD	50.0000	50.0000	1
9558720	04/26/18	N8	R0706	RAF07-06	50.0000	50.0000	1
9558721	04/26/18	N8	R0707	RAF07-07	50.0000	50.0000	1
9558722	04/26/18	N8	R0708	RAF07-08	50.0000	50.0000	1
9558723	04/26/18	N8	R0709	RAF07-09	50.0000	50.0000	1
9558724	04/26/18	N8	R0710	RAF07-10	50.0000	50.0000	1
9558725	04/26/18	N8	R0711	RAF07-11*	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 18 106 05713 04

Start Time: 4/17/18 7:45 **End Time:** 4/17/18 9:45 **Hot Block:** 10

Pipette ID: W/1000

Reflux Cap Lot#: 1712272-8056-KA

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	P18-106A	3.20
5%KMnO4	P18-096C	6.00
H2SO4	178260	2.00
HNO3	191695	1.00
LCS 40ppb Hg	P18-099B	1.00
NaCl/NH2OH.HCl	P18-086C	2.40
Spike 40ppb Hg	P18-099B	1.00

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1709027		
2)	LCSW	.							1709027		
3)	9558712	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D5	
4)	9558713	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET57/F10	
5)	9558714	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/E5	
6)	**9558715U**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C4	
7)	**9558716R**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/A8	
8)	**9558717M**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C8	
9)	**9558718D**	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/F5	
10)	9558719FD	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/C7	
11)	9558720	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D7	
12)	9558721	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/F7	
13)	9558722	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D4	
14)	9558723	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/A7	
15)	9558724	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/E4	
16)	9558725	04/26/18 11:50	WW	N8			Y	801A	1709027	WMET16/D6	

Prep Employee:2807 D/I _____

4/17/2018

v 1.1.0

Batch# 18 106 0571 304

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		4/16/18 0:00	2807
2)	Sample Vol		4/17/18 7:57	2807
3)	Final Vol	CLEAR	4/17/18 7:57	2807
4)	Trial		4/17/18 7:57	2807
5)	Upload Prep	US19PCC06698	4/17/18 9:41	2807

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Data	Units	Analyst	Data Changed Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 106 0571 304

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
9558712	04/26/18	N8	R0701	RAF07-01	40.0000		40.0000	1
9558713	04/26/18	N8	R0702	RAF07-02	40.0000		40.0000	1
9558714	04/26/18	N8	R0703	RAF07-03	40.0000		40.0000	1
9558715U	04/26/18	N8	R0704	RAF07-04BKG	40.0000		40.0000	1
9558716R	04/26/18	N8	R0704	RAF07-04MS	40.0000		40.0000	1
9558717M	04/26/18	N8	R0704	RAF07-04MSD	40.0000		40.0000	1
9558718D	04/26/18	N8	R0704	RAF07-04DUP	40.0000		40.0000	1
9558719FD	04/26/18	N8	R0705	RAF07-05FD	40.0000		40.0000	1
9558720	04/26/18	N8	R0706	RAF07-06	40.0000		40.0000	1
9558721	04/26/18	N8	R0707	RAF07-07	40.0000		40.0000	1
9558722	04/26/18	N8	R0708	RAF07-08	40.0000		40.0000	1
9558723	04/26/18	N8	R0709	RAF07-09	40.0000		40.0000	1
9558724	04/26/18	N8	R0710	RAF07-10	40.0000		40.0000	1
9558725	04/26/18	N8	R0711	RAF07-11*	40.0000		40.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 18 124 05713 01

Start Time: 5/4/18 18:15 **End Time:** 5/4/18 20:15 **Hot Block:** 10

Pipette ID: W/1000

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	p180110c	3.20
5%KMnO4	p18109e	6.00
H2SO4	174051	2.00
HNO3	191695	1.00
LCS 40ppb Hg	p18123a	1.00
NaCl/NH2OH.HCl	p18115c	2.40

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1712272		Batch alone
2)	LCSW	.							1712272		
3)	9558712	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
4)	9558713	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Hg hold time expires 05/08 Batching Error need special "R2" protocol - batch seperately!
5)	9558714	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
6)	**9558715U**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
7)	**9558716R**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
8)	**9558717M**	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
9)	**9558718D**	05/10/18 11:50	WW	N18				008a	1712272		Batching Error need special "R2" protocol - batch seperately!
10)	9558719FD	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!
11)	9558720	05/10/18 11:50	WW	N18				008a	1712272	E08853/	Batching Error need special "R2" protocol - batch seperately!

Prep Employee:8853 D/I _____

5/4/2018

v 1.1.0

Batch# 18 124 0571 301

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		5/4/18 7:27	8853
2)	Sample Vol		5/4/18 18:23	8853
3)	Final Vol	CLEAR	5/4/18 18:23	8853
4)	Trial		5/4/18 18:23	8853
5)	Upload Prep	US19PCC06785	5/4/18 18:23	8853

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason
9558720	05713	1	Sample Vol	Initial Volume	5/4/18 18:22	40	(mL)	8853	5/4/18 18:23	8853	lim vol
9558720	05713	1	Final Vol	Final Volume	5/4/18 18:22	40	(mL)	8853	5/4/18 18:23	8853	lim vol

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 124 0571 301

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
9558712	05/10/18	N18	R0701	RAF07-01	40.0000		40.0000	2
9558713	05/10/18	N18	R0702	RAF07-02	40.0000		40.0000	2
9558714	05/10/18	N18	R0703	RAF07-03	40.0000		40.0000	2
9558715U	05/10/18	N18	R0704	RAF07-04BKG	40.0000		40.0000	2
9558716R	05/10/18	N18	R0704	RAF07-04MS	40.0000		40.0000	2
9558717M	05/10/18	N18	R0704	RAF07-04MSD	40.0000		40.0000	2
9558718D	05/10/18	N18	R0704	RAF07-04DUP	40.0000		40.0000	2
9558719FD	05/10/18	N18	R0705	RAF07-05FD	40.0000		40.0000	2
9558720	05/10/18	N18	R0706	RAF07-06	20.0000		20.0000	2

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18093H	Hg 0.1mg/L Cal	15	4-10-18	H18-093B	0.20ml	1	6	191695
2		I					0.50			
3		J	Hg 1.0mg/L Cal			H18-093A	0.20			
4		K					0.25			
5		L					0.50			
6		M								
7	ICV	N	Hg 1.0mg/L Cont	15	4-10-18	H18-093C	0.25ml			
8	CCV	O	Hg 1.0mg/L Cal			H18-093A	0.20			
9	CRA	P	Hg 0.1mg/L Cont			H18-093D	0.20			
10	Hg 1.0mg/L InterCal	H18094A	Hg 10mg/L Cal	15	7-03-18	H18-003C	1.0ml			
11	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-11-18	H18-094A				
12	1.0mg/L InterCont	C	10mg/L Cont	16	11-03-18	M2HG157392				
13	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-11-18	H18-094C				
14	Hg 5701 ICV	E					0.25ml			
15	CCV	F	Hg 1.0mg/L Cal			H18-094A	0.10			
16	CCV	G					0.10			
17	CCV	H					0.10			
18	CRA	I	Hg 0.1mg/L Cont			H18-094D	0.20			
19	Std Cal	J	Hg 0.1mg/L Cal			H18-094B	0.20			
20		K					0.50			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	3ml H_2SO_4	4	175000	3.2ml [illegible] 1ml $KMnO_4$		H18-0340 H18-0472	100	0.2ug/L	DW354	4-03-18	4-10-18	RT
2							↓	0.50				
3							200	1000				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9							100	0.2				
10				To volume 1% HNO_3		H18-015A	10	1.0	DW354	4-04-18	4-11-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14				5ml Aqua Regia 15ml $KMnO_4$		H18-0340 H18-0472	100	2.5ug/L				
15								1.0				
16								1.0				
17								1.0				
18								0.2				
19								0.2				
20							↓	0.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 Std Cal	H18-094A	Hg-1.0mg/L Cal	15	4-11-18	H18-094A	0.10 mL			
2	↓	M	↓	↓	↓	↓	0.25			
3	↓	N	↓	↓	↓	↓	0.50			
4	↓	O								
5	↓ ICV	P	Hg-1.0mg/L Cont	15	4-11-18	H18-094C	0.25ml			
6	Aqua Regia	Q						15	6	191695
7	Hg-1.0mg/L-InterCal	H18-096A	Hg-1.0mg/L Cal	15	7-02-18	H18002C	1.0ml			
8	0.1mg/L-InterCal	B	1.0mg/L Cal	15	4-13-18	H18-096A				
9	1.0mg/L-InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG657382				
10	0.1mg/L-InterCont	D	1.0mg/L Cont	15	4-13-18	H18-096C	↓			
11	Hg-5700 ICV	E	↓	↓	↓	↓	0.25ml	1	6	191695
12	CCV	F	Hg-1.0mg/L Cal			H18-096A	0.20			
13	CCA	G	Hg-0.1mg/L Cont			H18-096D	0.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H18-096B	0.20			
15	↓	I	↓			↓	0.50			
16	↓	J	Hg-1.0mg/L Cal			H18-096A	0.20			
17	↓	K	↓			↓	0.25			
18	↓	L	↓	↓	↓	↓	0.50			
19	↓	m								
20	↓ ICV	N	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml	↓	↓	↓

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8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
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XX – Other (footnote Manuf.)

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml 6M nitric		H18-0942 H18-047R	100	1.0ug/L	DU354	4-04-18	4-11-18	RT
2								2.5				
3								5.0				
4								0.0				
5								2.5				
6	45	12	1867L4									
7				~~3.2ml H2SO4 6ml HNO3~~		~~H18-0340 H18-047R~~	60	1:3			4-4-18	
8				To volume-15%	HNO3	H18-015A	10	1.0	DU354	4-06-18	4-13-18	RT
9								0.1				
10								1.0				
11	2ml H2SO4	4	178260	3.2ml H2SO4 6ml HNO3		H18-0340 H18-047R		0.1				
12							100	2.5ug/L				
13							200	1.0				
14							100	0.2				
15								0.2				
16								0.5				
17							200	1.0				
18							100	2.5				
19								5.0				
20								0.0				
								2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 CCV	H18-096O	H18-1.0mg/L Cal	15	4-13-18	H18-096A	0.20ml	1	6	191695
2	CCA	P	Hg-0.1mg/L Cont			H18-096D	0.20			
3	ICV	Q	Hg-1.0mg/L Cont			H18-096C	0.25			
4	ICV	R					0.25			
5	Hg-5700 ICV	EE	Hg-1.0mg/L Cont			H18-096C	0.25			
6	CCV	FF	Hg-1.0mg/L Cal			H18-096A	0.20			
7	CCA	GG	Hg-0.1mg/L Cont			H18-096D	0.20			
8	Std Cal	HH	Hg-0.1mg/L Cal			H18-096B	0.20			
9		II					0.50			
10		JJ	Hg-1.0mg/L Cal			H18-096A	0.20			
11		KK					0.25			
12		LL					0.50			
13		MM								
14	ICV	NN	Hg-1.0mg/L Cont	15	4-13-18	H18-096C	0.25ml			
15	CCV	OO	Hg-1.0mg/L Cal			H18-096A	0.20			
16	CCA	PP	Hg-0.1mg/L Cont			H18-096D	0.20			
17	Stannous Chloride	H18-099A	SnCl2	4	3-09-19	175798 #7	200.02			
18		B				#7+8	200.02			
19		C				#8	200.04			
20	Hg-1.0mg/L Inter Cal	H18-100A	Hg-10mg/L Cal	15	7-02-18	H18-002C	1.0ml			

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11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
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a

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2mlH2SO4	4	178260	3.2mlK2S2O8 1mlKmno4		H18-034D H18-047R	200	1.0ug/L	DW354	4-06-18	4-13-18	RT
2	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
3							↓	2.5				
4	✓	✓	✓	✓	✓	✓	↓	2.5 ✓				
5							100	2.5				
6							200	1.0				
7							100	0.2				
8							↓	0.2				
9							✓	0.5				
10							200	1.0				
11							100	2.5				
12							↓	5.0				
13								0.0				
14							✓	2.5				
15							200	1.0				
16	✓	✓	✓	✓	✓	✓	100	0.2 ✓	✓	✓	✓	✓
17	200	Ic	186764				200	10.1	DW354	4-09-18	10-09-18	RT
18	✓	✓	✓				↓	↓	↓	↓	↓	↓
19							↓	↓	↓	↓	↓	↓
20				To volume 1% HNO3		H18-015A	10	1.0	DW354	4-10-18	4-17-18	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 0.1mg/L InterCal	H18100B	Hg 1.0mg/L Cal	15	4-17-18	H18-100A	1.0mL			
2	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG157392				
3	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-17-18	H18-100C				
4	Hg 5700 ICV	E					0.25 ml	1	4	191695
5	CCV	F	Hg 1.0mg/L Cal			H18-100A	0.20			
6	CRA	G	Hg 0.1mg/L Cont			H18-100D	0.20			
7	Std Cal	H	Hg 0.1mg/L Cal			H18-100B	0.20			
8		I					0.50			
9		J	Hg 1.0mg/L Cal			H18-100A	0.20			
10		K					0.25			
11		L					0.50			
12		m								
13	ICV	N	Hg 1.0mg/L Cont	15	4-17-18	H18-100C	0.25ml			
14	CCV	O	Hg 1.0mg/L Cal			H18-100A	0.20			
15	CRA	P	Hg 0.1mg/L Cont			H18-100D	0.20			
16	ICV	Q	Hg 1.0mg/L Cont			H18-100C	0.25			
17	Hg 1.0mg/L InterCal	H18102A	Hg 10mg/L Cal	15	7-02-18	H18-002C	1.0ml			
18	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-19-18	H18-102A				
19	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG157392				
20	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-19-18	H18-102C				

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)		Storage
1				To vol w/ 0.15% HNO3		H18-015A	10	0.1	DJ354	4-10-18	4-17-18		RT
2				↓	↓	↓	↓	1.0	↓	↓	↓		↓
3				↓	↓	↓	↓	0.1	↓	↓	↓		↓
4	2ml H2SO4	4	178260	3.2ml H2O2 1ml KMnO4	↓	H18-034D H18-047A	100	2.5	↓	↓	↓		↓
5	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓		↓
6	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓		↓
7	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓		↓
8	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓		↓
9	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓		↓
10	↓	↓	↓	↓	↓	↓	10	2.5	↓	↓	↓		↓
11	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓		↓
12	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓		↓
13	↓	↓	↓	↓	↓	↓	↓	2.5	↓	↓	↓		↓
14	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓		↓
15	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓		↓
16	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	4-19-18 DJ354	↓
17	↓	↓	↓	To vol w/ 0.15% HNO3	↓	H18-015A	10	1.0	DJ354	4-12-18	4-19-18 ~~4-20-18~~		RT
18	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓		↓
19	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓		↓
20	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓		↓

Footnotes

Key (••) – Other Used

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B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
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RT = Room Temperature Storage

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b

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 ICV	H18102E	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
2	CCV	F	Hg 1.0 mg/L Cal			H18-102A	0.10			
3	CCV	G	↓			↓	0.10			
4	CCV	H	↓			↓	0.10			
5	CRA	I	Hg 0.1 mg/L Cont			H18-102D	0.20			
6	Std Cal	J	Hg 0.1 mg/L Cal			H18-102B	0.20			
7		K	↓			↓	0.50			
8		L	Hg 1.0 mg/L Cal			H18-102A	0.10			
9		M	↓			↓	0.25			
10	↓	N	↓	↓	↓	↓	0.50			
11	↓	O								
12	↓ ICV	P	Hg 1.0 mg/L Cont	15	4-19-18	H18-102C	0.25ml			
13	Aqua Regia	↓ Q						15	6	1911695
14	Permanganate	R	KMnO4	6	10-23-18	177909 #2	100.01g			
15	↓	S	↓	↓	↓	↓	100.02g			
16	Hg 1.0 mg/L InterCal	H18103A	Hg 10 mg/L Cal	15	7-02-18	H18-002C	1.0ml			
17	0.1 mg/L InterCal	B	1.0 mg/L Cal	15	4-20-18	H18-103A	↓			
18	1.0 mg/L InterCont	C	10 mg/L Cont	16	11-08-18	M2HG157390				
19	↓ 0.1 mg/L InterCont	D	↓ 1.0 mg/L Cont	15	4-20-18	H18-103C	↓			
20	Hg 5700 ICV	↓ E	↓	↓	↓	↓	0.25ml	1	6	1911695

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
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4 – Fisher Scientific
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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua Regia 15ml Ammon		H18-1029Q H18-0496Q	100	2.5ug/L	DL354	4-12-18	4-19-18	RT
2								1.0				
3								1.0				
4								1.0				
5								0.2				
6								0.2				
7								0.5				
8								1.0				
9								2.5				
10								5.0				
11								0.0				
12								2.5				
13	45	6	180764				60	1:3			4-12-18	
14							3000	5%			6-12-18	
15												
16				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DL354	4-13-18	4-20-18	RT
17								0.1				
18								1.0				
19								0.1				
20	2ml H2SO4	4	178260	3.2ml Na2S2O8 1ml Ammon		H18-1020Q H18-0496Q	100	2.5ug/L				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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** units are mg/L unless otherwise specified

b

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Document Title: Standard/Reagent Preparation Logbook		
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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared - Name (DV354 4-13-18)	Lot #	Standards/Reagents Used – Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	HNO_3 Used Vol (mL)	M•	Lot #
1	Hg-5700 ③ CCV	H18103F	Hg-1.0mg/L Cal	15	4-26-18	H18-103A	0.20 mL	1	6	191695
2	CRA	G	Hg-0.1mg/L Cont			H18-103D	0.20			
3	Std Cal	H	Hg-0.1mg/L Cal			H18-103B	0.20			
4		I	↓			↓	0.50			
5		J	Hg-1.0mg/L Cal			H18-103A	0.20			
6		K	↓			↓	0.25			
7		L	↓	↓	↓	↓	0.50 ↓			
8	↓	M								
9	ICV	N	Hg-1.0mg/L Cont	15	4-20-18	H18-103C	0.25 mL			
10	CCV	O	Hg-1.0mg/L Cal			H18-103A	0.20			
11	CRA	P	Hg-0.1mg/L Cont	↓	↓	H18-103D	0.20 ↓			
12	Hg-5700 ICV									
13 (4-15-18 DV354)	CCV									
14	Hg-1.0mg/L InterCal	H18105A	Hg-1.0mg/L Cal	15	7-02-18	H18-002C	1.0 mL			
15	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-22-18	H18-105A				
16	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	1M2HG645738				
17	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont	15	4-22-18	H18-105C	↓			
18	Hg-5700 ICV	E	↓			↓	0.25mL	1	6	191695
19	↓ CCV	F	Hg-1.0mg/L Cal			H18-105A	0.20			
20	↓ CRA	G	Hg-0.1mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓

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XX – Other (footnote Manuf.)

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Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	1782160	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$	0.5	H18-1022 H18-0490	200	1.0ug/L	DU354	4-13-18	4-20-18	RT
2							100	0.2				
3							↓	0.2				
4							↓	0.5				
5							200	1.0				
6							100	2.5				
7							↓	5.0				
8							↓	0.0				
9							↓	2.5				
10							200	1.0				
11	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
12												
13												DU354 4-15
14				To vol in 0.15	HNO_3	H18-0154						
15							10	1.0	DU354	4-15-18	4-22-18	RT
16							↓	0.1				
17				↓	↓	↓	↓	1.0				
18	2ml H_2SO_4	4	1782160	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H18-1022 H18-0730	↓	0.1				
19	↓	↓	↓	↓	↓	↓	100	2.5ug/L				
20							200	1.0				
							100	0.2 ↓				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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b

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18105H	Hg 0.1mg/L Cal	15	4-22-18	H18-105B	0.20ml	1	6	1911695
2	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
3	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
4	↓	K	↓	↓	↓	↓	0.25	↓	↓	↓
5	↓	L	↓	↓	↓	↓	0.50 ↓	↓	↓	↓
6	↓	M	—	—	—	—	—	↓	↓	↓
7	ICV	N	Hg 1.0mg/L Cont	15	4-22-18	H18-105C	0.25ml	↓	↓	↓
8	CCV	O	Hg 1.0mg/L Cal	↓	↓	H18-105A	0.20	↓	↓	↓
9	↓ CRA	↓ P	Hg 0.1mg/L Cont	↓	↓	H18-105D	0.20 ↓	↓	↓	↓
10	Hg 1.0mg/L TalerCal	H18107A	Hg 10mg/L Cal	15	7-02-18	H18-092C	1.0ml	—		
11	0.1mg/L TalerCal	B	1.0mg/L Cal	15	4-24-18	H18-107A				
12	1.0mg/L TalerCont	C	10mg/L Cont	16	11-08-18	MKHG5[illegible]3				
13	↓ 0.1mg/L TalerCont	D	↓ 1.0mg/L Cont	15	4-24-18	H18-107C	↓			
14	Hg 5700 ICV	E	↓	↓	↓	↓	0.25ml	1	6	1911695
15	CCV	F	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
16	CRA	G	Hg 0.1mg/L Cont	↓	↓	H18-107D	0.20	↓	↓	↓
17	Std Cal	H	Hg 0.1mg/L Cal	↓	↓	H18-107B	0.20	↓	↓	↓
18	↓	I	↓	↓	↓	↓	0.50	↓	↓	↓
19	↓	J	Hg 1.0mg/L Cal	↓	↓	H18-107A	0.20	↓	↓	↓
20	↓ ↓	K	↓	↓	↓	↓	0.25 ↓	↓	↓	↓

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a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	178260	3.2ml KaS_2O_8 1ml $KMnO_4$		H18-1020 H18-0726	100	0.2ug/L	DW354	4-15-18	4-22-18	RT
2							100	0.5				
3							200	1.0				
4							100	2.5				
5								5.0				
6								0.0				
7							↓	2.5				
8							200	1.0				
9	↓	↓	↓	↓	↓	↓	100	0.2 ↓	↓	↓	↓	↓
10				To value/0.15% HNO_3		H18-015A	10	1.0	DW354	4-17-18	4-24-18	RT
11								0.1				
12								1.0				
13							↓	0.1				
14	2ml H_2SO_4	4	178260	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H18-1020 H18-0726	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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b

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Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot # DIGSY 4-17-18	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18071	Hg 1.0mg/L Cont	15	4-24-18	H18-107B (3)	0.50mL	1	6	191695
2	↓	M								
3	ICV	N	Hg 1.0mg/L Cont	15	4-24-18	H18-107C	0.25mL			
4	CCV	O	Hg 1.0mg/L Cal			H18-107A	0.20			
5	CRA	P	Hg 0.1mg/L Cont			H18-107D	0.20			
6	Hg 1.0mg/L InterCal	H18109A	Hg 10mg/L Cal	15	7-03-18	H18-002K	1.0mL			
7	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-26-18	H18-109A				
8	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG057302				
9	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-26-18	H18-109C				
10	Hg 5701 ICV	E	↓			↓	0.25mL			
11	CCV	F	Hg 1.0mg/L Cal			H18-109A	0.10			
12	CCV	G					0.10			
13	CCV	H	↓			↓	0.10			
14	CRA	I	Hg 0.1mg/L Cont			H18-109D	0.20			
15	Std Cal	J	Hg 0.1mg/L Cal			H18-109B	0.20			
16		K	↓			↓	0.50			
17		L	Hg 1.0mg/L Cal			H18-109A	0.10			
18		M					0.25			
19		N	↓	↓	↓	↓	0.50			
20	↓	O								

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml HCl 6M	4	178240	3.2ml H2S208 1ml HNO3		H13-1020 H13-07265	100	5.0ug/L	DJ354	4-17-18	4-24-18	RT
2								0.0				
3								2.5				
4							200	1.0				
5							100	0.2				
6				To vol w/ 0.15% HNO3		H13-015A	10	1.0	DJ354	4-19-18	4-26-18	RT
7								0.1				
8								1.0				
9								0.1				
10				5ml HgCl2 Reagent 15ml HNO3		H13-1019 H13-07265	100	2.5ug/L				
11								1.0				
12								1.0				
13								1.0				
14								0.2				
15								0.2				
16								0.5				
17								1.0				
18								2.5				
19								5.0				
20								0.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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b

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 ICV	H18109P	Hg 1.0mg/L Cont	15	4-26-18	H18-109C	0.25ml			
2	Aqua Regia	↓ Q						15	6	191695
3	Hg 1.0mg/L InterCal	H18-110A	Hg 1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			
4	0.1mg/L InterCal	B	1.0mg/L Cal	15	4-27-18	H18-110A				
5	1.0mg/L InterCont	C	1.0mg/L Cont	16	11-08-18	M2HG150822				
6	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-27-18	H18-110C				
7	Hg 5700 ICV	E					0.25ml	1	6	191695
8	CCV	F	Hg 1.0mg/L Cal			H18-110A	0.20			
9	CRA	G	Hg 0.1mg/L Cont			H18-110D	0.20			
10	Std Cal	H	Hg 0.1mg/L Cal			H18-110B	0.20			
11		I					0.50			
12		J	Hg 1.0mg/L Cal			H18-110A	0.20			
13		K					0.25			
14		L					0.50			
15		M								
16	ICV	N	Hg 1.0mg/L Cont	15	4-27-18	H18-110C	0.25ml			
17	CCV	O	Hg 1.0mg/L Cal			H18-110A	0.20			
18	CRA	P	Hg 0.1mg/L Cont			H18-110D	0.20			
19	2.5	↓ Q	Hg 1.0mg/L Cal			H18-110A	0.25			
20	Hg 1.0mg/L InterCal	H18113A	Hg 1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			

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Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml HgCl2 + MeOH 15ml KMnO4		H18-109Q H18-0723	100	2.5ug/L	DV354	4-19-18	4-26-18	RT
2	45	6	③ 1867167				60	1:3	↓	↓	4-19-18	↓
3				To volume 0.15% HNO3		H18015A	10	1.0	DV354	4-20-18	4-27-18	RT
4								0.1				
5								1.0				
6				↓	↓	↓	↓	0.1				
7	2ml H2SO4	4	174051	2.2ml K2S2O8 6ml KMnO4		H18-102Q H18-0723	100	2.5ug/L				
8							200	1.0				
9							100	0.2				
10								0.2				
11							↓	0.5				
12							200 2.5 ③	1.0				
13							100	2.5				
14								5.0				
15								0.0				
16							↓	2.5				
17							200	1.0				
18							100	0.2				
19	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
20				To volume 0.15% HNO3		H18-015A ③ b	10	1.0	DV354	4-23-18	4-30-18	RT

③ 4-19-18 DV354

4-20-18 DV354

4-23-18 DV354

Footnotes

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B = CsCl (10%)
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D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 0.1mg/L InterCal	H18-113B	Hg 1.0mg/L Cal	15	4-30-18	H18-113A	1.0ml			
2	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG165292				
3	0.1mg/L InterCont	D	1.0mg/L Cont	15	4-30-18	H18-113C				
4	Hg 4702 ICV	E					0.25ml			
5	CCV	F	Hg 1.0mg/L Cal			H18-113A	0.10			
6	CRA	G	Hg 0.1mg/L Cont			H18-113D	0.20			
7	STD Cal	H	Hg 0.1mg/L Cal			H18-113B	0.20			
8		I					0.50			
9		J	Hg 1.0mg/L Cal			H18-113A	0.10			
10		K					0.25			
11		L					0.50			
12		M								
13	Stannous Chloride	N	SnCl2	4	3-9-19	175708 #8	200.00g			
14		O				#8+9	20.0.7g			
15		P			4-10-19	#9	200.05g			
16	Hg 1.0mg/L InterCal	H18-114A	Hg 1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			
17	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-01-18	H18-114A				
18	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG165292				
19	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-01-18	H18-114C				
20	Hg 5700 ICV	E	Hg				0.25ml	1	6	191695

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
14 – EMD
15 – Prepared in house
16-Inorganic Ventures
XX – Other (footnote Manuf.)

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To vol w/ 0.15%	HNO_3	HI8-N15 (20)	10	0.1	DU354	4-23-18	4-30-18	RT
2								1.0				
3								0.1				
4	5	6	1867647				100	2.5 ug/L				
5								1.0				
6								0.2				
7								0.2				
8								0.5				
9								1.0				
10								2.5				
11								5.0				
12								0.0				
13	200	6	1867647				2000	10%			10-23-18	
14												
15												
16				To vol w/ 0.15%	HNO_3	HI8-0154	10	1.0	DU354	4-24-18	5-01-18	RT
17								0.1				
18								1.0				
19								0.1				
20	2ml H_2SO_4	4	174051	2ml $K_2S_2O_8$ 1ml KMnO4		HI8-0340 HI8-0346	100	2.5 ug/L				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b

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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 - ICV	H18114F	Hg-1.0mg/L Cal	15	5-01-18	H18-114A	0.20ml	1	6	191695
2	CRA	G	Hg-0.1mg/L Cont			H18-114D	0.20			
3	Std Cal	H	Hg-0.1mg/L Cal			H18-114B	0.20			
4		I	↓			↓	0.50			
5		J	Hg-1.0mg/L Cal			H18-114A	0.20			
6		K	↓			↓	0.25			
7		L	↓	↓	↓	↓	0.50			
8	↓	M								
9	ICV	N	Hg-1.0mg/L Cont	15	5-01-18	H18-114C	0.25ml			
10	CCV	O	Hg-1.0mg/L Cal			H18-114A	0.20			
11	CRA	P	Hg-0.1mg/L Cont	↓	↓	H18-114D	0.20	↓	↓	↓
12	Blank - waters	H18115A						25	6	191695
13	↓	↓								
14	Blank - Soils	H18115B					H-25-18 DV354 (3)	~~12.5~~ 37.5	↓	↓
15	Stannous Chloride	H18-115C	$SnCl_2$	4	4-16-19	175798 #9+10	200.05g			
16	↓	↓ D	4-26-18 DV354 (3) 10	↓	↓	↓ #10	200.06g			
17	Hg-1.0mg/L Inter Cal	H18116A	Hg-1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			
18	5.0mg/L Inter Cal	B	1.0mg/L Cal	15	5-03-18	H18-116A				
19	1.0mg/L Inter Cont	C	10mg/L Cont	16	11-08-18	MDHG-657339				
20	0.1mg/L Inter Cont	D	1.0mg/L Cont	15	5-03-18	H18-116C	✓			

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XX – Other (footnote Manuf.)

a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009816; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	174051	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H18-0240 H18-0728	200	1.0 ug/L	DLI354	4-24-18	5-01-18	RT
2							100	6.2				
3							↓	0.2				
4								0.5				
5							200	1.0				
6							100	2.5				
7								5.0				
8								0.0				
9							↓	2.5				
10							200	1.0				
11	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
12	50ml H_2SO_4	4	174051	80ml $K_2S_2O_8$ 150ml $KMnO_4$		H18-0728 H18-0728	1000	0.0	DLI354	4-25-18	9-13-18	RT
13				60ml Hydrox		H18-0720	↓	↓				
14	27.5	6	186764	60ml Hydrox 150ml $KMnO_4$		H18-0720 H18-0728	1000	0.0				
15	200						2000	10%			10-25-18	
16	200	↓	↓				↓	↓	↓		↓	↓
17				5ml w/w 0.15% HNO_3		H18-0151	10	1.0	DLI354	4-26-18	5-03-18	RT
18								0.1				
19								1.0				
20							↓	0.1	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg5700 ICV	H18-111eE	Hg1.0mg/L Cont	15	5-03-18	H18-111eC	0.25ml			
2	CCV	F	Hg1.0mg/L Cal			H18-111eA	0.10			
3	CCV	G	↓			↓	0.10			
4	CCV	H	↓			↓	0.10			
5	CRA	I	Hg0.1mg/L Cont			H18-111eD	0.20			
6	Std Cal	J	Hg0.1mg/L Cal			H18-111eB	0.20			
7		K	↓			↓	0.50			
8		L	Hg1.0mg/L Cal			H18-111eA	0.10			
9		m	↓			↓	0.25			
10		N	↓	↓	↓	↓	0.50			
11	↓	O								
12	↓ ICV	P	Hg1.0mg/L Cont	15	5-03-18	H18-111eC	0.25ml			
13	Aqua Regia	Q						1.5	6	191695
14	Hg5700 ICV	R	Hg1.0mg/L Cont	15	5-03-18	H18-111eC	0.25 ml	↓	↓	↓
15	CCV	S	Hg1.0mg/L Cal	↓	↓	H18-111eA	0.20	↓	↓	↓
16	CRA	T	Hg0.1mg/L Cont	↓	↓	H18-111eD	0.20	↓	↓	↓
17	Std Cal	U	Hg0.1mg/L Cal	↓	↓	H18-111eB	0.20	↓	↓	↓
18	↓	V	↓	↓	↓	↓	0.50	↓	↓	↓
19	↓	W	Hg1.0mg/L Cal	↓	↓	H18-111eA	0.20	↓	↓	↓
20	↓ ↓	↓ X	↓	↓	↓	↓	0.25	↓	↓	↓

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a

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Document Title: Standard/Reagent Preparation Logbook		
Eurofins Document Reference : T-MET-FRM9079	Revision: 3	Historical Reference: 1-P-QM-FOR-9009818; Form 1105
Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				5ml Aqua-Regia 5ml KMnO4		H18-1160 H18-0726	100	2.5	DJJ354	4-26-18	5-03-18	RT
2								1.0				
3								1.0				
4								1.0				
5								0.2				
6								0.2				
7								0.5				
8								1.0				
9								2.5				
10								5.0				
11								0.0				
12								2.5				
13	45	6	186764				60	1:3			4-26-18	
14	2ml H_2SO_4	4	174051	32ml H_2O_2 1ml KMnO4		H18-0720 H18-0726	100	2.5			5-03-18	
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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* units are mL unless otherwise specified
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b

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	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H18116Y	Hg 1.0mg/L Cal	15	5-03-18	H18-116A	0.50ml	1	16	191695
2	↓	Z								
3	ICV	AA	Hg 1.0mg/L Cont	15	5-03-18	H18-116C	0.25ml			
4	CCV	BB	Hg 1.0mg/L Cal			H18-116A	0.20			
5	CRA	CC	Hg 0.1mg/L Cont			H18-116D	0.20			
6	Hg 1.0mg/L InterCal	H18117A	Hg 1.0mg/L Cal	15	7-02-18	H18-002C	1.0ml			
7	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-04-18	H18-117A				
8	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	MKHG1573V2				
9	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-04-18	H18-117C				
10	Hg 5700 ICV	E					0.25ml	1	16	191695
11	CCV	F	Hg 1.0mg/L Cal			H18-117A	0.20			
12	CRA	G	Hg 0.1mg/L Cont			H18-117D	0.20			
13	Std Cal	H	Hg 0.1mg/L Cal			H18-117B	0.20			
14		I					0.50			
15		J	Hg 1.0mg/L Cal			H18-117A	0.20			
16		K					0.25			
17		L					0.50			
18		M								
19	ICV	N	Hg 1.0mg/L Cont	15	5-04-18	H18-117C	0.25ml			
20	CCV	O	Hg 1.0mg/L Cal			H18-117A	0.20ml			

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Document Title: Standard/Reagent Preparation Logbook

Eurofins Document Reference : T-MET-FRM9079 | Revision: 3 | Historical Reference: 1-P-QM-FOR-9009818; Form 1105

Effective date : 02 Feb 2017 | Effective

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml H_2SO_4	4	174051	3.2ml $K_2S_2O_8$ 1ml KMnO4		H18-0341 H18-0726	100	5.0ug/L	DL354	4-26-18	5-03-18	RT
2								0.0				
3								2.5				
4							200	1.0				
5							100	0.2				
6				To vol w/ 0.15%	HNO3	H18-015A	10	1.0	DL354	4-27-18	5-04-18	RT
7								0.1				
8								1.0				
9								0.1				
10	2ml H_2SO_4	4	174051	3.2ml $K_2S_2O_8$ 1ml KMnO4		H18-0341 H18-0726	100	2.5ug/L				
11							200	1.0				
12							100	0.2				
13								0.2				
14								0.5				
15							200	1.0				
16							100	2.5				
17								5.0				
18								0.0				
19								2.5				
20							200	1.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 CCA	H181178	Hg-0.1mg/L Cont	15	5-04-18	H18-117D	0.20ml	1	16	191695
2	Hg-1.0mg/L InterCal	H18118A	Hg-10mg/L Cal	15	7-02-18	H18-002C	1.0ml			
3	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-05-18	H18-118A				
4	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	MKBG5739V				
5	0.1mg/L InterCont	D	1.0mg/L Cont	15	5-05-18	H18-118C				
6	Hg-5700 ICV	E					0.25ml	1	16	191695
7	CCV	F	Hg-1.0mg/L Cal			H18-118A	0.20			
8	CCA	G	Hg-0.1mg/L Cont			H18-118D	0.20			
9	Std Cal	H	Hg-0.1mg/L Cal			H18-118B	0.20			
10		I					0.50			
11		J	Hg-1.0mg/L Cal			H18-118A	0.20			
12		K					0.25			
13		L					0.50			
14		M								
15	ICV	N	Hg-1.0mg/L Cont	15	5-05-18	H18-118C	0.25ml			
16	CCV	O	Hg-1.0mg/L Cal			H18-118A	0.20			
17	CCA	P	Hg-0.1mg/L Cont			H18-118D	0.20			
18	Hg-1.0mg/L InterCal	H18121A	Hg-10mg/L Cal	15	7-02-18	H18-002C	1.0ml			
19	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-08-18	H18-121A				
20	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	MKBG5739V				

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a

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Effective date : 02 Feb 2017	Effective	

	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1	2ml HNO3	4	174051	3.2ml K2Cr2O7 1ml KMnO4		H18-0340 H18-0726	100	0.2ug/L	DJ1354	4-27-18	5-04-18	RT
2				To vol w/ 0.15% HNO3		H18-0159	10	1.0	DJ1354	4-28-18	5-05-18	RT
3								0.1				
4								1.0				
5								0.1				
6	2ml HNO3	4	174051	3.2ml K2Cr2O7 1ml KMnO4		H18-0921 H18-102K	100	2.5ug/L				
7							200	1.0				
8							100	0.2				
9								0.2				
10								0.5				
11							200	1.0				
12							100	2.5				
13								5.0				
14								0.0				
15								2.5				
16							200	1.0				
17							100	0.2				
18				To vol w/ 0.15% HNO3		H18-015A	10	1.0	DJ1354	5-01-18	5-08-18	RT
19								0.1				
20								1.0				

Footnotes

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C = KCl
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E = $Al(NO_3)_3$ (40%)
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Document Title: Standard/Reagent Preparation Logbook		
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Effective date : 02 Feb 2017	Effective	

	Standard/Reagent Prepared			Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 0.1mg/L InterCont	HI8121D	Hg 1.0mg/L Cont	15	5-08-18	HI8-121C	1.0 ml			
2	Hg 5705 ICV	E	↓	↓	↓	↓	0.25ml	1	6	191695
3	CCV	F	Hg 1.0mg/L Cal			HI8-121A	0.20			
4	CRA	G	Hg 0.1mg/L Cont			HI8-121D	0.20			
5	Std Cal 1	H	Hg 0.1mg/L Cal			HI8-121B	0.20			
6	↓	I	↓			↓	0.50			
7	↓	J	Hg 1.0mg/L Cal			HI8-121A	0.20			
8	↓	K	↓			↓	0.25			
9	↓	L	↓	↓	↓	↓	0.50			
10	↓	M								
11	ICV	N	Hg 1.0mg/L Cont	15	5-08-18	HI8-121C	0.25ml			
12	CCV	O	Hg 1.0mg/L Cal	↓	↓	HI8-121A	0.20			
13	CRA	P	Hg 0.1mg/L Cont	↓	↓	HI8-121D	0.20	↓	↓	↓
14	Potassium Persulfate	HI8123A	$K_2S_2O_8$	6	12-26-18	178265#4	100.00g			
15	Potassium Permanganate	B	$KMnO_4$	6	10-23-18	177909#3	100.02g			
16	Hydroxylamine	C	$NH_2OH \cdot HCl$	6	4-27-19	190903#4	240.00g			
17	↓	C	NaCl	6	12-4-18	177135#1	240.01g			
18	Hg 1.0mg/L InterCal	HI8123A	Hg 1.0mg/L Cal	15	7-02-18	HI8-002C	1.0ml			
19	0.1mg/L InterCal	B	1.0mg/L Cal	15	5-10-18	HI8-123M				
20	1.0mg/L InterCont	C	10mg/L Cont	16	11-08-18	M2HG165382	↓			

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	HCl Used			Other Used									
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #	Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
1				To vol w/ 0.15% HNO3		H18-0157	10	0.1	DW354	5-01-18	5-08-18	RT
2	2ml H_2SO_4	4	174051	3.3ml $K_2Cr_2O_7$ 1ml Kmno4		H18-0724 H18-1026	100	2.5ug/L				
3							200	1.0				
4							100	0.2				
5								0.2				
6							↓	0.5				
7							200	1.0				
8							100	2.5				
9								5.0				
10								6.0				
11							↓	2.5				
12							200	1.0				
13	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
14							200	5%	DW354	5-02-18	11-02-18	RT
15								5%			10-23-18	
16								12%			11-02-18	
17							↓	↓	↓	↓	11-02-18	↓
18				To vol w/ 0.15% HNO3		H18-0157	10	1.0	DW354	5-03-18	5-10-18	RT
19								0.1				
20				↓	↓	↓	↓	1.0	↓	↓	↓	↓

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified